



Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins

Tristan Dorémus^a, Serge Urbach^b, Véronique Jouan^a, François Cousserans^a, Marc Ravallec^a, Edith Demettre^b, Eric Wajnberg^d, Julie Poulain^c, Carole Azéma-Dossat^c, Isabelle Darboux^a, Jean-Michel Escoubas^a, Dominique Colinet^d, Jean-Luc Gatti^d, Marylène Poirié^d, Anne-Nathalie Volkoff^{a,*}

^aINRA (UMR 1333), Université de Montpellier 2, "Insect-Microorganisms Diversity, Genomes and Interactions", Place Eugène Bataillon, CC101, 34095 Montpellier Cedex, France

^b"Functional Proteomics Platform" BioCampus Montpellier, CNRS UMS3426, INSERM US009, Institut de Génomique Fonctionnelle, CNRS UMR5203, INSERM U661, Université de Montpellier 1 et 2, 34094 Montpellier, France

^cCommissariat à l'Energie Atomique (CEA), Institut de Génomique (IG), "Génoscope", 2, rue Gaston-Crémieux, CP 5706, 91057 Evry, France

^dINRA (UMR 1355), CNRS (UMR 7254), Université Nice Sophia Antipolis, "Institut Sophia Agrobiotech" (ISA), 400 route des Chappes, 06903 Sophia Antipolis, France

ARTICLE INFO

Article history:

Received 25 October 2012

Received in revised form

21 December 2012

Accepted 21 December 2012

Keywords:

Venom

Hymenoptera

Parasitoid

Ichneumonid

Hyposoter didymator

Polydnavirus

Spodoptera frugiperda

Host regulation

Parasitism success

Insect immunity

Proteomics

Transcriptome

Microscopy

ABSTRACT

The venom gland is a conserved organ in Hymenoptera that shows adaptations associated with life-style diversification. Few studies have investigated venom components and function in the highly diverse parasitic wasps and all suggest that the venom regulates host physiology. We explored the venom of the endoparasitoid *Hyposoter didymator* (Campopleginae), a species with an associated polydnavirus produced in the ovarian tissue. We investigated the effects of the *H. didymator* venom on two physiological traits of the host *Spodoptera frugiperda* (Noctuidae): encapsulation response and growth rate. We found that *H. didymator* venom had no significant effect on host cellular immunity or development, suggesting that it does not contribute to parasitism success. The host physiology seemed to be modified essentially by the ovarian fluid containing the symbiotic polydnaviruses. Proteomic analyses indicated that the *H. didymator* venom gland produces a large variety of proteins, consistent with the classical hymenopteran venom protein signature, including: reprolysin-like, dipeptidyl peptidase IV, hyaluronidase, arginine kinase or allergen proteins. The venom extracts also contained novel proteins, encoded by venom genes conserved in Campopleginae ichneumonids, and proteins with similarities to active molecules identified in other parasitoid species, such as calreticulin, reprolysin, superoxide dismutase and serpin. However, some of these proteins appear to be produced only in small amounts or to not be secreted. Possibly, in Campopleginae carrying polydnaviruses, the host-modifying activities of venom became redundant following the acquisition of polydnaviruses by the lineage.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

The venom gland is a conserved organ in Hymenoptera, but questions about the evolution and functional diversity of venom proteins remain unanswered. The use of high-throughput technologies has made a large contribution to improving our knowledge of hymenoptera venom components in the last 10 years

* Corresponding author.

E-mail address: volkoff@supagro.inra.fr (A.-N. Volkoff).

(Asgari and Rivers, 2011; Formesyn et al., 2012). However, research has long focused on Aculeates such as bees, social wasps, ants or solitary hunting wasps (dos Santos et al., 2011; Piek, 1986; Wood and Hoffman, 1983) whereas Terebrant lineages (parasitic wasps) have been less studied. Parasitic wasps are a group of particular interest for investigations of the evolution of the nature and function of Hymenoptera venoms due to the extreme diversity of their lifestyles. Studies of phylogeny suggest that they are descended from an ancestor with a phytophagous lifestyle (Quicke, 1997; Sharkey et al., 2012) and they include ectoparasites and endoparasites that could be idiobionts (no regulation of the host) or

koinobionts (active manipulation of the physiology of the host). The generally accepted model is that endoparasites evolved from ectoparasites (Gauld, 1988; Whitfield, 1998). However, recent studies suggest a more complex picture with species evolving back and forth between the ectoparasite and endoparasite lifestyles (Sharkey et al., 2012). In parallel with these transitions in lifestyles, parasitoid venom may have undergone changes in function. Venom in Hymenoptera thus switched from its ancestral function in phytophagous species of being a lubricant during egg laying to a role in parasitic wasps of modifying host physiology to facilitate successful parasitism (Asgari, 2012; Gauld et al., 1988; Piek, 1986).

Host manipulation by parasitoid venoms displays great diversity between parasitoid species with different lifestyles (Asgari, 2012). Induction of host paralysis, that may facilitate oviposition and larval feeding, is a frequent effect of ectoparasitoid venoms (Piek, 1986; Quistad et al., 1994; Yamamoto et al., 2007). For example, a set of paralytic peptides has been described in the venom of *Bracon hebetor*, and these peptides also display insecticidal activity (Quistad et al., 1994). Endoparasitoid venoms may also induce transient paralysis; this is the case for the ichneumonids *Pimpla hypochondriaca* (Parkinson et al., 2002b) and *Venturia canescens* (Piek, 1986), and the braconids *Asobara* spp. (Mabiala-Moundougou et al., 2010) and *Chelonus inanitus* (Kaeslin et al., 2010). Venoms can modify host development, for example delaying in molting, altering pupation or reducing weight gain (Richards and Edwards, 1999). Such effects have been described for ectoparasitoid species from the genus *Euplectrus* (Nakamatsu and Tanaka, 2003) and the endoparasitoid *Pteromalus puparum*, whose venomous proteins may disturb the host endocrine system (Zhu et al., 2009). However, only a few venom molecules acting on host development have been characterized. They include a reprodysin-type metalloprotease from *Eulophus pennicornis* venom that induces developmental alterations in the host *Lacanobia oleracea* (Price et al., 2009), and a venom gamma-glutamyl transpeptidase of the braconid *Aphidius ervi* involved in aphid host castration by inducing apoptosis in the host ovarioles (Falabella et al., 2007). Venom components can alter host immunity. Indeed, the presence of large foreign objects such as parasitoid eggs inside the insect body triggers an immune response that leads to their encapsulation and death (Strand, 2012). This phenomenon generally involves the recruitment and adhesion of hemocytes that form a cell multilayer around the foreign invader (Aylin et al., 2011), as well as activation of the phenoloxidase (PO) cascade that leads to melanization of the capsule and production of toxic radicals (Cerenius and Söderhäll, 2004). Diverse venom proteins including the hemocyte anti-aggregation protein Vrp3 from *P. hypochondriaca* (Richards and Dani, 2008), the calreticulin from the braconid *Cotesia rubecula* (Zhang et al., 2006), and a RhoGAP from the figitid *Leptopilina bouvardi* (Labrosse et al., 2005) have been shown to inhibit the cellular immune response. Venom proteins that alter the melanization response include serine protease homologs and a cysteine-rich/Kunitz-type protease inhibitor from *C. rubecula* (Asgari et al., 2003a, 2003b), an extracellular superoxide dismutase (SOD) and a serpin (LbSPNy) from *L. bouvardi* (Colinet et al., 2011, 2009).

In numerous species, venom is the main source of factors regulating the host. However, symbiotic viruses i.e. polydnviruses (PDV), virus like particles (VLP), and teratocytes are also sources of such factors (Beckage and Drezen, 2012). Braconids and ichneumonids can harbor PDVs or VLPs that are both produced in a specific ovarian tissue, the calyx, whereas figitid VLPs are produced in the venom apparatus. PDVs and VLPs are injected into the host during oviposition whereas teratocytes, large cells from the serosal membrane found in Braconids and Scelionids, are released into the host upon parasitoid hatching. These different factors from diverse sources may have synergistic effects on host regulation as such

effects would confer a selective advantage on parasitoid species and therefore favor their emergence and maintenance through evolution. Complementarity between venom and other factors has indeed been demonstrated in a few models. For instance, venom from the braconids of the *Cotesia* genus (*C. glomerata*, *C. kariyai* and *C. rubecula*) and *C. inanitus* is required for successful parasitism and synergizes with the effects of the associated PDV (Asgari, 2012; Kaeslin et al., 2010; Kitano, 1986; Wago and Tanaka, 1989; Zhang et al., 2004). Also, a peptide in *C. rubecula* venom is involved in regulation of PDV gene expression in the lepidopteran host (Zhang et al., 2004). The venom of braconid wasps carrying PDV has thus retained functions in host regulation, at least as a co-factor for the associated bracovirus. Ichneumonid species are associated with symbiotic viruses from another PDV genus, the ichnoviruses (IV), whose ancestor is different to that of the bracoviruses (Volkoff et al., 2010). The venom glands of ichneumonid wasps appear to not necessarily produce host regulation factors: *Campoletis sonorensis* venom is not needed for parasitism success, whereas the calyx fluid containing the PDVs is essential (Vinson and Stoltz, 1986; Webb and Luckhart, 1994), and *Tranosema rostrale* venom is not involved in modifying host development (Doucet and Cusson, 1996). However, except for these few studies, there has been no rigorous analysis of the contents and physiological effects of the venoms of ichneumonid species with associated PDVs.

We report the first exhaustive proteomic analysis of the content of the venom of an ichneumonid wasp carrying PDV: the Campopleginae *Hyposoter didymator*, a solitary koinobiont endoparasitoid of Noctuid larvae, associated with the *Hyposoter didymator* Ichno-Virus (HdIV). We also analyzed the host (*Spodoptera frugiperda*) life traits following injection of venom, with or without calyx fluid. *H. didymator* venom did not affect host cellular immunity or development, or the number of parasitoids that succeeded in developing. This finding was surprising as proteomic analysis revealed a large set of proteins in *H. didymator* venom; they include both proteins previously described in other parasitic wasp venoms, some involved in parasitism success, and proteins of unknown function encoded by genes strongly transcribed in the venom gland. Possibly, in ichneumonids carrying PDVs, the host-modifying activities of venom became redundant following the acquisition of viruses by the lineage.

2. Materials and methods

2.1. Biological materials

2.1.1. Insect rearing and parasitism

S. frugiperda was obtained from a laboratory strain and maintained at 24 ± 2 °C, 65% relative humidity, and 16/8 light/dark on a semi-synthetic diet. *H. didymator* was maintained on *S. frugiperda* larvae in the same abiotic conditions, using 2nd instar larvae for parasitism.

For experiments requiring 100% parasitism, *S. frugiperda* larvae (2nd, 3rd or 4th instar) were individually introduced into a glass vial containing 10 2-day-old *H. didymator* female wasps. The host larvae were removed immediately after being stung and maintained in an incubator as described above.

2.1.2. Preparation of *H. didymator* maternal extracts

Venom and calyx fluid (containing the PDV particles) were extracted from *H. didymator* females anesthetized on ice and dissected in phosphate-buffered saline (PBS) under a light microscope. The venom apparatus (gland and reservoir) and the ovaries were collected separately and pooled in 250 µl PCR tubes. The volume was adjusted with PBS to reach the desired concentration in wasp equivalents (w.e., for example: venom apparatus from 10 wasps in

25 µl of PBS for injection of 100 nl containing 0.04 w.e./larva). The dose injected was chosen according to the egg load of 50 eggs at female emergence; each egg was considered to have been injected with 1/50 w.e. of maternal fluid (0.02 w.e.), and we choose to inject twice this quantity, 0.04 w.e.. Venom gland and calyx were disrupted by several passages through a 20 µl micropipette cone. Tubes containing the extracts were centrifuged for 5 min at 5000 rpm to eliminate tissue. Supernatants containing the venom or calyx extracts were stored on ice and injected within 6 h into *S. frugiperda* larvae. For injections with a mixture of venom and calyx fluid, equal volumes of the two extracts (each at double the routine concentration) were mixed before injection experiments.

2.1.3. Transmission electron microscopy (TEM)

Venom apparatus were dissected from female abdomen in PBS and fixed with 2% (v/v) glutaraldehyde in 0.1 M cacodylate buffer pH = 7.4 for overnight at +4 °C then post-fixed with 2% (v/v) osmium tetroxide in the same buffer for 1 h at room temperature. Samples were dehydrated through an ethanol series and embedded in Epon. Ultrathin sections contrasted with uranyl acetate and lead citrate were examined under an electron microscope Zeiss EM 10 CR at 80 kV.

2.1.4. Injections in *S. frugiperda* larvae

Injections were given to *S. frugiperda* larvae anesthetized with CO₂ using the Nanoject II™ Auto-Nanoliter Injector (Drummond). In all experiments, 100 nl of PBS (control), or 0.04 w.e. of venom, calyx fluid or a mixture of venom and calyx fluid in 100 nl were injected into 3rd or 4th instar *S. frugiperda* larvae, less than 1 day old. The *S. frugiperda* larvae were then kept individually in 24-wells plates at 25 ± 2 °C and fed with a semi-synthetic diet.

2.1.5. Isolation of *H. didymator* eggs for injection

S. frugiperda larvae (2nd or 3rd instar) were parasitized 2 or 3 times and rapidly dissected in PBS to recover the *H. didymator* eggs (2–3 eggs per larvae). The eggs were pooled in a Petri dish containing 20 ml of PBS, washed twice with 20 ml of PBS, and stored in PBS at room temperature for less than 2 h before being injected into *S. frugiperda* larvae. The cleaned eggs were screened by TEM to ensure that the egg chorion did not contain HdIV particles (data not shown). Similarly, 3rd instar *S. frugiperda* larvae were each injected with two cleaned eggs. After 24 h, ten *S. frugiperda* larvae were collected to test for HdIV gene expression by RT-PCR (using primers specific to two genes known to be abundantly transcribed, M24 and P30) to further ensure absence of HdIV contamination (data not shown).

2.2. Effect of *H. didymator* venom and calyx fluid

2.2.1. Analysis of the parasitoid larval survival

To analyze the effect of *H. didymator* extracts on parasitoid larval survival, two 2 h-old *H. didymator* eggs were injected together with 100 nl of PBS or female wasp extracts into 4th instar *S. frugiperda* larvae. As a control, single parasitized *S. frugiperda* larvae were injected with 100 nl of PBS containing 1 egg. The number of parasitoid larvae was verified 10 days after parasitism, i.e. 2 days after the normal time at which mature larva egresses from the host. In the absence of *H. didymator* mature larvae, host caterpillars displaying symptoms of parasitism (instar delay and low weight) were dissected to determine the parasitoid status (dead or alive, egg or larva). In every case, only one alive parasitoid larva was observed in each dissected *S. frugiperda* host. Parasitoid larva survival (L_10d) was estimated as the number of parasitoids still alive as a percentage of the number of *S. frugiperda* larvae injected. Both the larvae still inside the host and those that had egressed from the

host were counted. Egressed larvae were kept until day 19 to determine the proportion that reached adulthood (Ad_19d), also calculated as a percentage of the number of host caterpillars injected. A total of 116 *S. frugiperda* larvae were injected with PBS, 87 with venom, 135 with calyx fluid, and 116 with both calyx fluid and venom. As controls, 37 larvae were parasitized.

2.2.2. Measurement of bead encapsulation rate

To analyze the effect of venom and calyx fluid on the ability of *S. frugiperda* to encapsulate foreign bodies, 3 to 4 Sephadex G-75 beads (40–120 µm) were injected together with 100 nl of PBS or *H. didymator* extracts into *S. frugiperda* 4th instar larvae. As a control, single parasitized 4th instar *S. frugiperda* larvae were injected with 100 nl of PBS containing 3–4 beads. *S. frugiperda* larvae were dissected 12 h or 72 h post-injection (p.i.) in PBS to recover the beads. Recovered beads were photographed under a phase contrast microscope. The number of encapsulated beads was recorded for each condition and time. For each encapsulated bead, the sizes of the bead (B) and the hemocyte layer (H) were measured using ImageJ software. The bead covering factor (CovF) was calculated as: $CovF = H/B$. A total of 69, 46, 29, 39 and 46 beads were analyzed 12 h p.i. and a total of 122, 85, 69, 31 and 34 beads were observed 72 h p.i. for PBS, venom, calyx fluid, combined calyx fluid and venom injections, and parasitism, respectively.

2.2.3. Measurement of *S. frugiperda* larvae weight

To analyze the effect of venom and calyx fluid on the weight gain of *S. frugiperda* 3rd instar larvae, hosts injected with PBS (control) or with *H. didymator* maternal extracts were individually weighed 6, 24, 48 h, 6 and 7 days p.i. A total of 75, 151, 55, 36 and 42 larvae were weighed for PBS, venom, calyx fluid, combined calyx fluid and venom injections, and parasitism, respectively.

2.2.4. Statistical analyses

Both *S. frugiperda* 3rd instar weight gain and bead covering factors could be considered to be normally distributed. Therefore, ANOVA was used to compare average values obtained with different *H. didymator* maternal extracts. For *S. frugiperda* 3rd instar weight gain, one-way ANOVA was used to analyze venom, calyx fluid, combined calyx fluid and venom, and parasitism against PBS condition for the different post-injection times. For bead covering factors, a one-way ANOVA with interaction was used to test the effect of the conditions. For bead encapsulation rates and parasitoid survival, however, logistic regression with a generalized linear model specially designed for modeling binomial data using the logistic link function was used to compare average values (McCullagh and Nelder, 1989). For the effect of the conditions on bead encapsulation rates, differences between 12 h and 72 h p.i. times and the interaction between these two main effects were tested. The effects of the conditions on parasitoid survival rate (L_10d and Ad_19d) were tested. SAS software (SAS Institute Inc., 1999) was used for all computations.

2.3. Venom protein analyses

2.3.1. *H. didymator* reference transcriptome

Two *H. didymator* libraries were used for proteomic analyses. The first was a venom EST library. Total RNA was extracted from venom organs collected from adult wasps using the Qiagen RNeasy Mini Kit according to the manufacturer's protocol. The cDNA library was then obtained using the Creator SMART cDNA Library Construction Kit (Clontech) according to the manufacturer's protocol. A total of 3367 clones were sequenced by the Genoscope using Big-Dye Termination kits on Applied Biosystems 3730xl DNA Analysers. After cleaning to remove vector stretches and polyA tails, and

elimination of sequences shorter than 100 nt, 2994 EST sequences were obtained. These ESTs were then clustered using the TIGR software TGI Clustering tool (TGICL) (Negre et al., 2006); the 330 clusters identified constituted the first transcriptome database, DAT_Hd-EST, used for venom protein identification (see below). The second library was generated from total RNA extracted from eggs, larvae and adults using the Qiagen RNeasy Mini Kit according to the manufacturer's recommendations. This RNA was used to produce an equilibrated cDNA library, and sequencing was performed using GS FLX (Roche/454), Titanium chemistry (performed by GATC Biotech AG, Germany). The 451,267 sequences obtained were cleaned and clustered (GATC Biotech AG). The final database, named DAT_Hd-454, contained a total of 130,275 clusters.

All the sequences for both libraries were then submitted to TGICL for assembly using CAP3 Assembly software (Pertea et al., 2003). The resulting database (DAT_Hd-Contig) contained a total of 19,416 contig sequences. Despite the risk of chimeras, this approach was expected to maximize the total length of the available sequences and the probability of obtaining sequences of 5' regions to facilitate peptide matching and similarity searches with other protein-coding sequences.

2.3.2. SDS-PAGE and protein identification

Venom proteins were extracted from the whole venom gland as described above (section 2.1.2). The proteins were separated using Precast 15% READY GEL (BIORAD), under denaturing conditions. Samples equivalent to the contents of 10 venom reservoirs were loaded in each lane. Electrophoresis was performed in 25 mM Tris–HCl pH8.8, 195 mM glycine, and 0.1% (w/v) SDS at a constant current of 35 mA. Gels were stained with colloidal blue (Fermentas), and gel slices were cut out. Enzymatic in-gel digestion was performed according to the modified Shevchenko protocol (Shevchenko et al., 1996). Briefly, gel slices were destained by three washes in 50% acetonitrile, 50 mM NH_4HCO_3 and incubated overnight at 25 °C (with shaking) with 15 ng/ml trypsin (Gold, Promega, Charbonnières, France) in 100 mM NH_4HCO_3 . Tryptic fragments were extracted with 50% acetonitrile and 5% formic acid, and dehydrated in a vacuum centrifuge. Samples (1 μl) were analyzed on-line in a nanoESI LTQ_XL Orbitrap mass spectrometer (Thermo Fisher Scientific, Waltham, MA) coupled to an Ultimate 3000 HPLC (Dionex, Amsterdam, Netherlands). Samples were desalted and pre-concentrated on-line on a Pepmap® precolumn (0.3 mm $\times$ 10 mm). They were eluted from the capillary (0.075 mm $\times$ 150 mm) reverse-phase column (Pepmap®, Dionex) with a gradient of 0–40% B in 60 min, 80% B for 15 min (A = 0.1% formic acid, 2% acetonitrile in water; B = 0.1% formic acid in acetonitrile) at 300 nl/min. Nano-ESI was performed with a spray voltage of 2.4 kV, a heated capillary temperature of 200 °C, and a tube lens voltage of 140 V. A cycle of one full-scan mass spectrum (400–1600 m/z) at a resolution of 30,000, followed by five data-dependent MS/MS spectra was repeated continuously throughout the nanoLC separation. All MS/MS spectra were recorded using normalized collision energy (35%, activation Q 0.25 and activation time 30 ms), and an isolation window of 3 m/z . Data were acquired using Xcalibur software (v 2.0.7, Thermo Fisher Scientific, Waltham, MA).

Proteins were identified by searching against the entries in the three databases described above (DAT_Hd-EST, DAT_Hd-454 and DAT_Hd-Contig) with the Mascot v2.2 algorithm (Matrix Science Inc., Boston, USA). ProteomeDiscoverer v1.1 (Thermo Fisher Scientific, Waltham, MA) was used for data submission. Peptides with scores greater than the identity score ($p < 0.05$) were considered as significant matches. All spectra were manually validated for proteins identified. Considering only sequences where at least two peptides match, we identified 943

non-redundant sequences (927 assembled sequences from DAT_Hd-Contig, 15 singletons from DAT_Hd-454 and 1 singleton from DAT_Hd-EST) coding for proteins in the *H. didymator* venom extract.

2.3.3. Sequence analyses

All 943 sequences identified were automatically annotated by Blast similarity searches using the Blast2GO online tool (<http://www.blast2go.com>) (Conesa et al., 2005). The Blastx algorithm was used with a local non-redundant protein database (NCBI, release March 1, 2011) with an E-value $> e-05$ as the cut-off (Supplementary data 1).

The sequences were then assigned by manual annotation to the 22 functional categories usually found in transcriptomic and proteomic analyses of venoms (Supplementary data 2): hydrolases (peptidases, esterases, glycosylases and other hydrolases); enzyme inhibitors; oxidoreductases; transferases; isomerases; ligases; lyases; chaperones; substrate-specific transport proteins; storage proteins; mitochondrial proteins; nucleotide-binding proteins; proteasome complex proteins; ribosomal proteins; structural proteins; proteins involved in cell traffic; proteins involved in regulation of transcription/translation; proteins with other functions and finally, proteins with unknown function.

Sequence alignments were performed using the Multalin online tool (Corpet, 1988) and visualized by Jalview (Waterhouse et al., 2009). Peptide signal cleavage sites were predicted using SignalP4 software (www.cbs.dtu.dk/services/SignalP).

2.4. Characterization of Hd-VenA and Hd-VenB venom genes

For each gene, available EST sequences were aligned using Codon code aligner (Codon Code Corporation) to generate a full-length consensus sequence. For amplification of corresponding cDNA or genomic sequences, specific PCR primers were designed using Primer3 software (<http://frodo.wi.mit.edu>). The primers were located at the extreme ends, and when possible in the 5' and 3'-UTR sequences, of the available consensus mRNA sequences. Sequences of the primers are given in Supplementary data 3.

H. didymator genomic DNA was extracted from pooled males using Wizard Genomics DNA Purification Kits (Promega) according to the manufacturer's recommendations. Total RNA was extracted from ovaries, venom apparatus and head and thorax tissues dissected from 15 *H. didymator* females using RNeasy Mini kits (Qiagen) according to the manufacturer's recommendations. DNA was eliminated by treatment of 10 μg RNA with 2 U of TURBO DNase (Ambion) in a total volume of 20 μl . Then, cDNA was synthesized from 5 μg RNA in a total volume of 20 μl using 200 U of SuperScript III (Invitrogen), 40 U of RNasin (Promega), 500 mM oligo-dT and 10 mM of each dNTP.

PCR was performed in a total volume of 50 μl using 1.25 U of GoTaq DNA Polymerase (Promega) per reaction in a GeneAmp PCR System 2700 (Applied Biosystems). Each reaction contained 50 ng of genomic DNA or cDNA, 200 μM dNTP mix and 0.4 μM of each primer. Following an initial step at 95 °C for 2 min, the reaction mixtures were subjected to 30 cycles of denaturation at 95 °C for 30 s, primer annealing at 59 °C for 30 s, and DNA extension for 3 min at 72 °C. The reaction was completed by a final extension step at 72 °C for 5 min.

Amplification products were purified using the MiniElute gel extraction kit (Qiagen) according to the manufacturer's recommendations. Purified PCR products were ligated into pGEM-T Easy Vector System (Promega) and the resulting constructs were used to transform TOP10 electro-competent cells (Invitrogen). Plasmids were then purified with QIAprep Spin Miniprep kits (Qiagen) according to the manufacturer's instructions.

Insert DNA sequencing was carried out by GATC using the PCR primers. Intron sequences were identified by alignment of genomic sequences with EST sequences using ClustalW2 software (<http://www.ebi.ac.uk/Tools/msa/clustalw2>) (Larkin et al., 2007).

3. Results and discussion

3.1. Structure of the *H. didymator* venom apparatus

The venom apparatus of *H. didymator* (Fig. 1A) shows the typical tripartite organization of Hymenoptera (Piek, 1986; Quicke, 1997), with a venom gland connected to a large, transparent and bulb shaped venom reservoir, and a venom duct linking the reservoir to the ovipositor. The venom gland has a branched tubular structure as in other Campopleginae species such as *C. sonorensis* (Ferrarese et al., 2009), *Venturia canescens* and *Bathyplectes curculionis* (Ravallec et al., unpublished data).

Transmission electron microscopy (TEM) revealed that the gland is mainly constituted of large cells with few organelles but numerous secretory vacuoles (Fig. 1B). All cells contain intracellular canals, into which secretion products are released, probably by a fusion mechanism (Piek, 1986). Intracellular canals have been observed in venom glands of many parasitoid species and have been called end apparatus (Zhu et al., 2008) and vesicular

organelles (Wan et al., 2006). As described in *Leptopilina* spp. (Ferrarese et al., 2009), a portion named the rough canal, bordered with numerous microvilli (detail in Fig. 1C), extended as far as a second portion, named the smooth canal, lined with cuticle. This supra-cellular system of canals in the gland allows secretory products to flow to the cuticle-lined gland lumen bordered by a second type of small and narrow cell forming the intimal layer, and then to the reservoir.

There are secretory cells close to the junction between the gland and the reservoir, but further downstream they are replaced by epithelial non-secretory cells, as described in other parasitoid species (Wan et al., 2006). These cells contain very few organelles and resemble squamous cells described in other parasitoid species (Wan et al., 2006) that have a role in the maintenance of the chitin intima of varying thickness that covers the lumen intima (Fig. 1D and E). Putative aggregates of venom components are found within the reservoir lumen or covering the intima (Fig. 1D). The venom apparatus is surrounded by a thin muscular sheath (detail in Fig. 1E), similar to the “type 2” venom apparatus (Edson and Vinson, 1979) described in braconid wasps (Asgari, 2012).

The last part of the venomous organ is the primary duct (Fig. 1A) that allows venom transport to the ovipositor. The duct presents a spiraled chitin structure, which probably prevents it from collapsing.

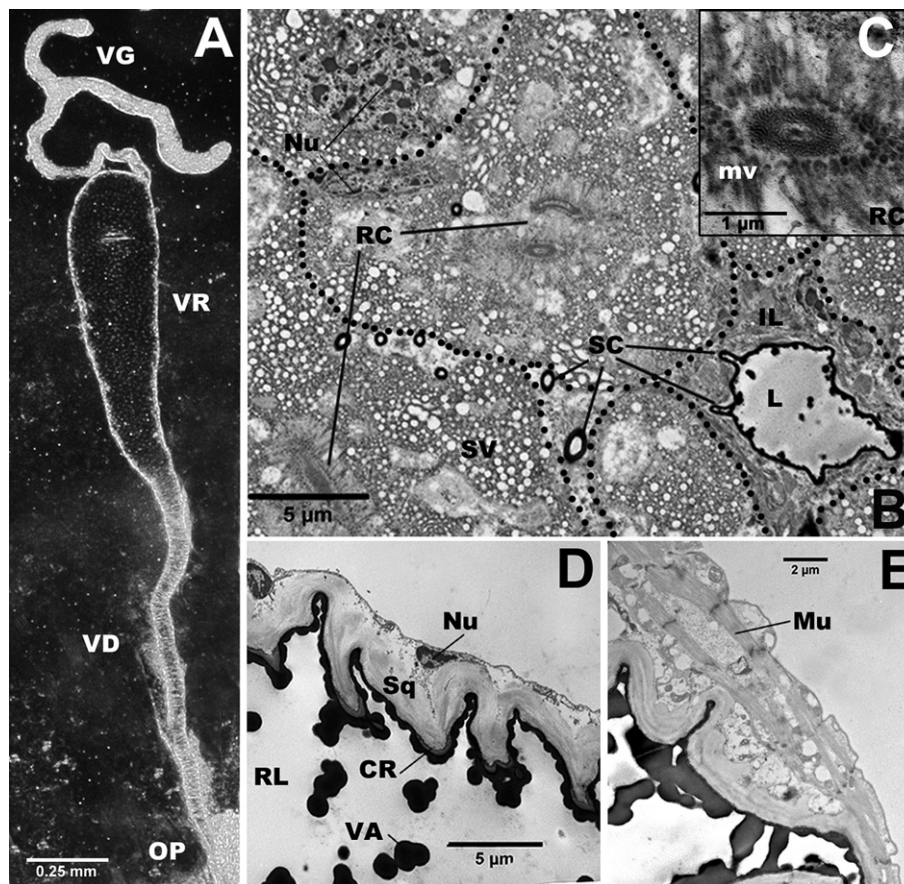


Fig. 1. Structure of *H. didymator* venom apparatus. A. Light microscopy overview of the venom apparatus of 2 day-old female *H. didymator*: venom gland (VG), venom reservoir (VR) and venom duct (VD) which opens into the ovipositor (OP). B. Venom gland observed by transmission electronic microscopy (TEM) showing ultra-structure of secretory cells (delineated by dashed lines): nuclei (Nu), secretory vesicles (SV), rough canals bordered by microvilli (RC), smooth canals lined with cuticle (SC), and lumen lined with cuticle (L) and bordered by cells of the intimal layer (IL). C. Details of the end of a rough canal bordered by abundant microvilli (mv), into which secreted products are discharged. D. TEM view of the venom reservoir showing the nuclei (Nu) of epithelial squamous cell (Sq), the uneven chitinous ridge (CR) lining the reservoir wall, and putative venom aggregates (VA) in the reservoir lumen (RL). E. Portion of the venom reservoir surrounded by muscle fibers (Mu).

3.2. Impact of venom extracts on parasitoid survival and host physiology

To assess involvement of *H. didymator* venom in parasitism success, we investigated the effect of venom injections (i) on parasitoid survival, (ii) on the host cellular immune response and (iii) on *S. frugiperda* larval development.

3.2.1. Parasitoid survival

Parasitoid eggs were injected with 0.04 w.e. of venom, calyx fluid, or both, into *S. frugiperda* 4th instar larvae, and parasitoid larval survival (L_10d) was calculated as the number of larvae recovered (inside or egressed from the host) as a percentage of the number of *S. frugiperda* injected (Fig. 2). Almost all parasitized *S. frugiperda* ensured survival of one parasitoid 10 days p.i.: survival was 95%. Survival was significantly lower (31%) in PBS-injected caterpillars, but similar (91%) in eggs injected with calyx fluid. Survival in eggs injected with venom (26%) was similar to that in eggs injected with PBS, and co-injection of venom with calyx fluid did not significantly change parasitoid survival compared to injection of calyx fluid only (venom plus calyx fluid: 84% vs. calyx fluid only: 91% survival). Thus venom extract, unlike calyx fluid, had no noticeable effect on parasitoid egg and larval survival and did not appear to complement the effects of maternal ovarian factors. However, in about 20% of the hosts, eggs were able to evade the *S. frugiperda* immune response and to develop in the absence of calyx fluid. This suggests either that they were injected in immune-deficient caterpillars or that PDVs are not the unique factors essential for successful development of *H. didymator* in this host. The numbers of parasitoid larvae that spun cocoons and of adults were proportional to the number of larvae that survived: injection of eggs with PBS or venom alone resulted in very few adults (0.8 and 2% of the hosts, respectively) whereas adults were obtained from 30% to 13% of the *S. frugiperda* hosts into which calyx fluid was introduced, whether by parasitism or injection (Fig. 2). However, only 4% of hosts co-injected with calyx fluid and venom lead to adult parasitoids, a value not significantly different from that for the PBS group. Thus the proportion of larvae that reached adulthood was much lower for the group with venom and calyx fluid co-injection than for the group with calyx fluid alone; possibly

venom has a negative effect during *H. didymator* preimaginal development. This finding requires further investigation. Interestingly, similar observations have been reported for natural parasitism by *C. sonorensis*: ablation of the venom apparatus resulted in 13% more offspring than from control females (Webb and Luckhart, 1994).

H. didymator venom extract clearly did not improve larval survival in *S. frugiperda*. This does not imply that the host caterpillar is not affected by the venom. Therefore, we investigated host life history traits classically affected by endoparasitic wasp venoms, such as the immune response and development.

3.2.2. *S. frugiperda* cellular immune response

Encapsulation by *S. frugiperda* was evaluated by recovering Sephadex beads 12 h and 72 h after injection into 4th instar larvae and measuring both a quantitative (percent of encapsulated beads; Fig. 3A) and a qualitative (bead covering factor, covF; Fig. 3B) indicator. As expected, almost all beads recovered from PBS-injected *S. frugiperda* larvae were encapsulated (98% and 94% at 12 h and 72 h p.i. respectively; Fig. 3A) and covered with a thick layer of hemocytes (covF = 1.2; Fig. 3B and C). For parasitized larvae, the percentage of encapsulated beads was significantly lower (62% and 75% at 12 h and 72 h p.i., respectively, Fig. 3A) and beads were only partially encapsulated or covered with a thin layer of hemocytes (covF = 0.5; Fig. 3B and C). Parasitism thus inhibited the *S. frugiperda* immune response. To investigate the involvement of venom in this phenomenon, beads were co-injected with 0.04 w.e. of venom, calyx fluid, or both. Injections of venom led to results similar to PBS injection, with up to 92% of the beads substantially encapsulated (covF = 1) at all times p.i. tested (Fig. 3A and B). After injection of calyx fluid, the number of encapsulated beads was initially much smaller (10% at 12 h p.i.); this value was much lower than that in parasitized larvae 12 h p.p., probably because the dose of calyx fluid injected may be higher than that females normally inject during parasitism. The percentage of encapsulated beads increased to 69% 72 h p.i., reaching a value and a coverage factor (covF = 0.45) similar to that observed in parasitized larvae (Fig. 3A and B). Addition of venom to the calyx fluid did not significantly change the results (Fig. 3B and C). These experiments indicate that the alteration of encapsulation observed in parasitized larvae is entirely due to calyx fluid factors with venom components making no significant contribution.

3.2.3. *S. frugiperda* larval growth

We investigated the effects of the venom on the development of *S. frugiperda* larvae by measuring the weight gain of parasitized and of injected caterpillars. Newly molted 3rd instar *S. frugiperda* larvae were weighed at various times after parasitism or injections of PBS or 0.04 w.e. of calyx fluid and/or venom extracts. Compared to PBS-treated larvae, parasitism significantly reduced larval weight gain from 24 h post treatment until the 7th day, one day before egression of the mature parasitoid larva (Table 1). Injections of venom extract did not significantly affect *S. frugiperda* weight gain compared to PBS injections (with the exception of time points 2 h and 6 days; Table 1). Even when higher doses of venom were injected (0.15 and 0.25 w.e.), the weight gain of venom-injected larvae was not significantly different from that of PBS-injected larvae (data not shown). Calyx fluid significantly reduced larval weight gain as early as 24 h post treatment and until the 7th day (Table 1). This indicated that calyx fluid, but not venom, slowed larval weight gain. The weight gain difference between parasitized and calyx fluid-injected *S. frugiperda* could have been due to the presence of the developing parasitoid larvae (hatching normally 48 h post parasitism). Finally, co-injections of venom extract with calyx fluid have the same effect on weight gain as calyx fluid alone, indicating that

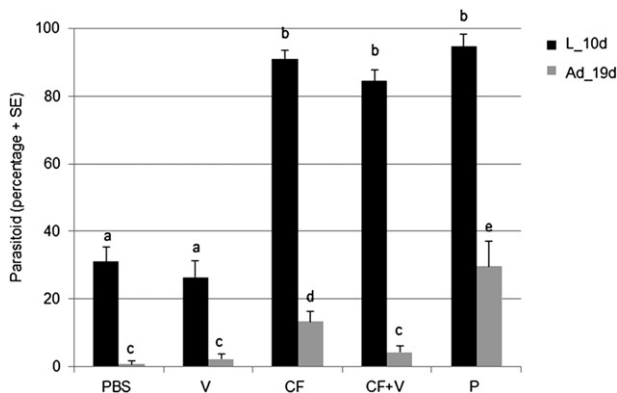


Fig. 2. Effects of venom and calyx fluid on parasitoid development. Mean percentages and standard errors of larvae and adults recovered after injection of *H. didymator* parasitoid eggs into *S. frugiperda* 4th instar larvae. The eggs were injected together with phosphate-buffered saline (PBS), or with 0.04 wasp equivalents of venom (V), calyx fluid (CF) or calyx fluid and venom (CF + V), or injected into previously parasitized caterpillars (P). Measures were performed 10 days post-injection (p.i.) to assess the number of larvae (L_10d) still within the host or egressed from the host. Adult emergence was checked until 19 days p.i. to assess the number of parasitoids that had completed normal pupal development (Ad_19d). Different lowercase letters specify that results are significantly different ($p < 0.0001$).

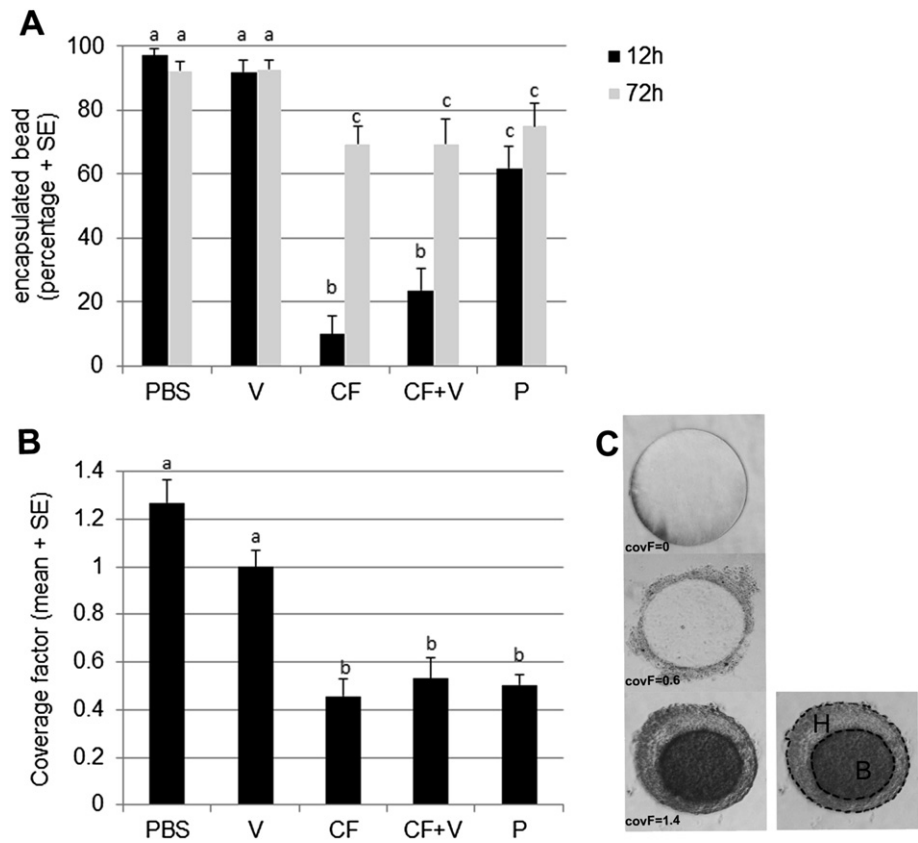


Fig. 3. Effects of venom and calyx fluid on the *S. frugiperda* cellular encapsulation response. A. Mean percentage and standard error of Sephadex beads found to be encapsulated in *S. frugiperda* 4th instar larvae 12 h and 72 h post injection (p.i.) when administered together with phosphate-buffered saline (PBS), or with 0.04 wasp equivalents of venom (V), calyx fluid (CF) or calyx fluid and venom (CF + V), or in previously parasitized caterpillars (P). B. Mean *S. frugiperda* hemocyte coverage factors (covF) of the recovered encapsulated Sephadex beads for the same experimental conditions as in A. Different lowercase letters indicate results that are significantly different ($p < 0.0001$). C. Left panel: Examples of Sephadex G-75 beads recovered from *S. frugiperda* displaying three different covF. Right panel: Hemocyte (H) and bead (B) areas measured to obtain the covF.

venom did not have a synergistic effect with calyx fluid on host growth. Thus, consistent with reports for another ichneumonid wasp of the Campopleginae family associated with ichnoviruses, *Tranosema rostrale* (Doucet and Cusson, 1996), *H. didymator* venom has no evident effect on *S. frugiperda* larval development. The calyx fluid of *H. didymator* appears therefore to be the main factor responsible for the slower weight gain by parasitized larva.

3.3. The *H. didymator* venom gland proteome

The physiology experiments described above show that *H. didymator* venom injections affected neither the pre-imaginal survival of *H. didymator*, nor the *S. frugiperda* cellular immune

Table 1
Weight of *S. frugiperda* larvae at different time post treatment. Mean weight (mg) and standard error of *S. frugiperda* larvae at various times after injection into 3rd instar larvae of phosphate-buffered saline (PBS), or 0.04 wasp equivalents of venom (V), calyx fluid (CF) or calyx fluid and venom (CF + V), or after natural parasitism (P). Values were compared to those for the PBS condition for each experimental time point. Numbers followed by asterisks are significantly different from the PBS control (* $p < 0.01$; ** $p < 0.0001$).

Condition	Time post-injection (pi)				
	6 h	24 h	48 h	6 Days	7 Days
PBS	5.3 ± 0.3	12.0 ± 0.3	24.4 ± 1.1	167.8 ± 4.8	244.6 ± 9.3
V	5.2 ± 0.2	10.8 ± 2.7*	23.1 ± 0.8	159.3 ± 4.9*	237.5 ± 7.5
CF	4.1 ± 0.2	9.7 ± 0.4*	14.5 ± 0.9**	82.3 ± 7.2**	132.6 ± 10.2**
CF + V	4.7 ± 0.2	9.2 ± 0.5	13.7 ± 1.0*	82.6 ± 8.4**	134.1 ± 12.8*
P	3.5 ± 0.2	9.7 ± 0.3*	9.1 ± 0.2**	51.6 ± 2.7**	61.2 ± 5.0**

response or development. This could be because the venom gland does not produce host-regulation factors, despite its structural characteristics typical of parasitoid venom glands. To assess the functionality of the *H. didymator* venom gland, we investigated its content using a proteomic approach.

3.3.1. Protein content overview

H. didymator venom was analyzed by SDS-PAGE. It contained numerous proteins ranging in size from 12 to 200 kDa (Fig. 4); although most of the proteins migrated between 20 and 100 kDa, high molecular weight proteins (>170 kDa), characteristic of parasitoids venom extracts (Leluk et al., 1989), were also present. For exhaustive proteomic analysis of the venom extract, the electrophoresis gel was divided into 11 sections. The proteins were extracted from each section and digested with trypsin. The resulting digests were analyzed by LC–MS/MS: 943 *H. didymator* DNA sequences matching 8946 tryptic peptides were identified (Supplementary data 1 and 4). Note, that these sequences result from the assembly of sequences from EST and 454 databases, and are not necessarily full-length genes. Therefore, there could be redundancy with more than one sequence corresponding to the same *H. didymator* gene. Consequently, the true number of *H. didymator* genes corresponding to venom peptides is probably lower than 943.

For an overview of the venom components, each of the 943 sequences was assigned to one of 22 broad functional protein categories based on Blastx searches performed against the NCBI non redundant database (E-value > e–05) followed by a manually-

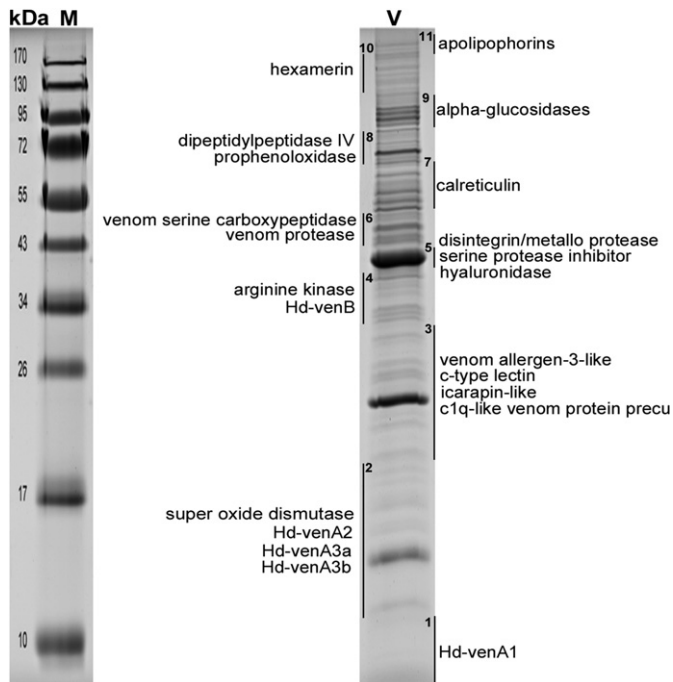


Fig. 4. SDS-PAGE profile of *H. didymator* venom extract. Proteins collected from 10 venom reservoirs were separated by SDS-PAGE (lane V) and the gel cut into 11 large sections numbered 1 to 11. Tryptic peptides extracted from each section were subjected to nano-LC–MS/MS analysis. Some of the proteins identified are indicated, including the five proteins encoded by the genes of the *Hd-VenA* family and *Hd-VenB*. Equivalent lane from the same gel (15% SDS-PAGE) showing the molecular mass markers is on the left (M), stained with Coomassie Brilliant blue R-250.

complemented automated annotation (Fig. 5). Matches were found for 925 of the 943 sequences, mainly (93%) with hymenopteran proteins (Supplementary data 1). According to this classification, the *H. didymator* venom extract contained a large number of enzymes, particularly hydrolases, oxidoreductases and transferases.

Hydrolases are often reported in venoms (examples and references in Supplementary data 2), including those of ichneumonid wasps. For instance, hydrolase activity has been detected using enzymatic semi-quantitative colorimetric analysis in the venom of the pupal endoparasitoid, *Pimpla hypochondriaca* (Dani et al., 2005). *H. didymator* venom contained a few protease inhibitors, a class of proteins also frequent in parasitic and social wasp venoms (Colinet et al., 2009; dos Santos et al., 2010; Yamamoto et al., 2007). The *H. didymator* venom extract also contained a large number of substrate-specific transporters and storage proteins (e.g. hexamerin, apolipoporphins found in the high molecular weight section of the gel, Fig. 4), proteins that are not commonly found in venoms. However, as for other abundant classes such as mitochondrial, ribosomal, chaperone and structural proteins, and proteins involved in cell trafficking (Fig. 5), it is unclear whether they are indeed true venom components.

This global analysis of the venom content revealed the presence of two categories of proteins which we examined in more detail: (i) a set of proteins not previously described in parasitoid venoms that were encoded by genes strongly transcribed in *H. didymator* venom apparatus and (ii) a set of proteins similar to proteins found in the venom of other parasitoid species that have host regulatory functions.

3.3.2. Newly discovered *H. didymator* venom proteins

Among the DNA sequences matching peptides described by the LC–MS/MS analyses, 17% had no similarity with other proteins in generalist databases (Fig. 5). In particular, five sequences corresponded to transcripts that were abundant in the venom EST library (2588 sequences of the 2994 of the EST library, 86%).

3.3.2.1. Gene sequence analyses. Sequencing following PCR amplification of genomic DNA identified these ESTs as corresponding to four distinct genes: three belong to a multigenic family named *Hd-VenA*; the fourth gene was named *Hd-VenB*.

The three members of the *Hd-VenA* multigenic family were named *Hd-VenA1* (GenBank accession # BankIt1561820), *Hd-VenA2*

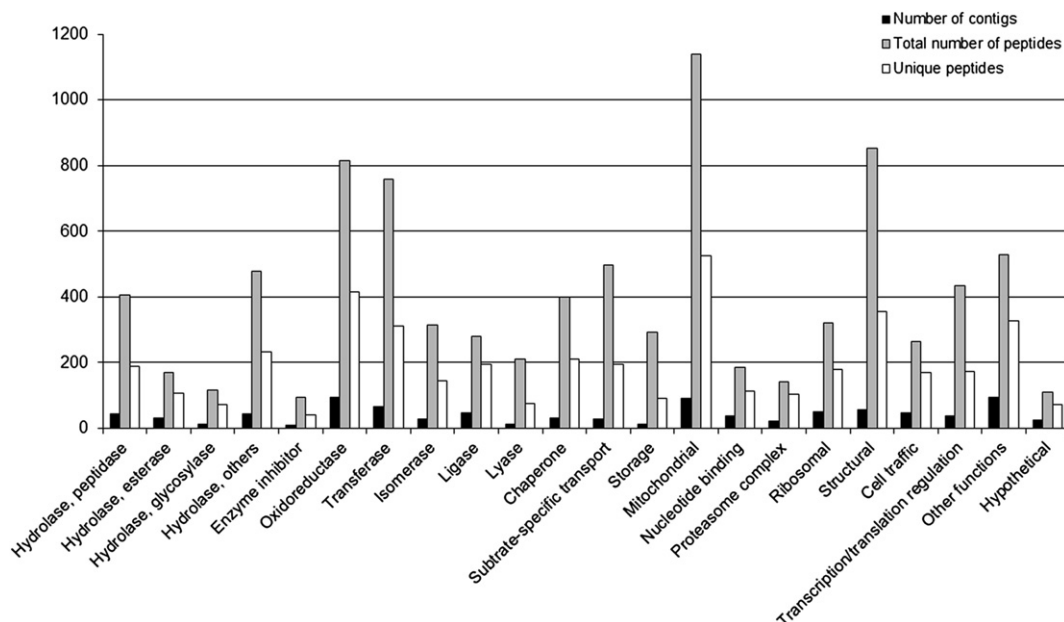


Fig. 5. Distribution into functional classes of the sequences matching with venom extract peptides. Each of the 943 contig sequences - identified by comparing the peptides generated by nano-LC–MS/MS to *H. didymator* transcriptomes - was manually assigned to a single functional class. For each of the 22 predefined classes, the total number of contig sequences and the corresponding total number of peptides and unique peptides are indicated.

(GenBank accession # BankIt1561824) and *Hd-VenA3* (GenBank accession # BankIt1561826). Alignment of their genomic and EST sequences showed that they all contained introns (1, 3 and 6, respectively) and that their coding regions were 342, 935 and 2164 bp long, respectively (Fig. 6 A). The *Hd-VenA* genes shared substantial nucleotide sequence identity along their entire sequences (Fig. 6A). In the first exon region, identity between *Hd-VenA1*, *Hd-VenA2* and *Hd-VenA3* was 67–73%; the 3'-region of *Hd-VenA2* and *Hd-VenA3*, encompassing three exons and two introns, absent from *Hd-VenA1*, was also highly conserved (identity >76% for the region overall). Intra-gene similarities between exons 3.3 and 3.7 (94% identity) and exons 3.6 and 3.8 (63% identity) were also found within *Hd-VenA3* (Fig. 6A). Accordingly, the predicted protein, Hd-VenA3b, contains a repeated domain "RKGRNAEAMNMDRER" (Fig. 6D). The complexity of the organization of the genes, with a variable number of related exons and the substantial sequence similarities, suggests that members of this gene family may have evolved through exon loss and/or duplication.

The coding region of the *Hd-VenB* gene was 1194 bp long and contained three introns in its 5'-region, as determined by comparing genomic and EST sequences (Fig. 7 A).

3.3.2.2. Transcription profiles. The available EST sequences indicate that there is alternative splicing for *Hd-VenA3*, leading to the production of two mRNAs: *Hd-VenA3a* and *Hd-VenA3b* (Fig. 6B). RT-PCR experiments indicated, in accordance with the large number of ESTs (1713, 413 and 331 for *Hd-VenA1*, 2 and 3 respectively), that all *Hd-VenA* transcripts were highly and specifically expressed in the venom apparatus, although a weak *Hd-VenA2* signal was also detected in ovarian tissue (Fig. 6C).

Similarly, the large number of related sequences in the *H. didymator* venom EST library (131 ESTs) indicates that the *Hd-VenB* gene is strongly transcribed in the venom apparatus. However, the specificity of its expression in the venom apparatus could not be clearly established: RT-PCR experiments gave numerous amplification products of varying size both in the venom apparatus

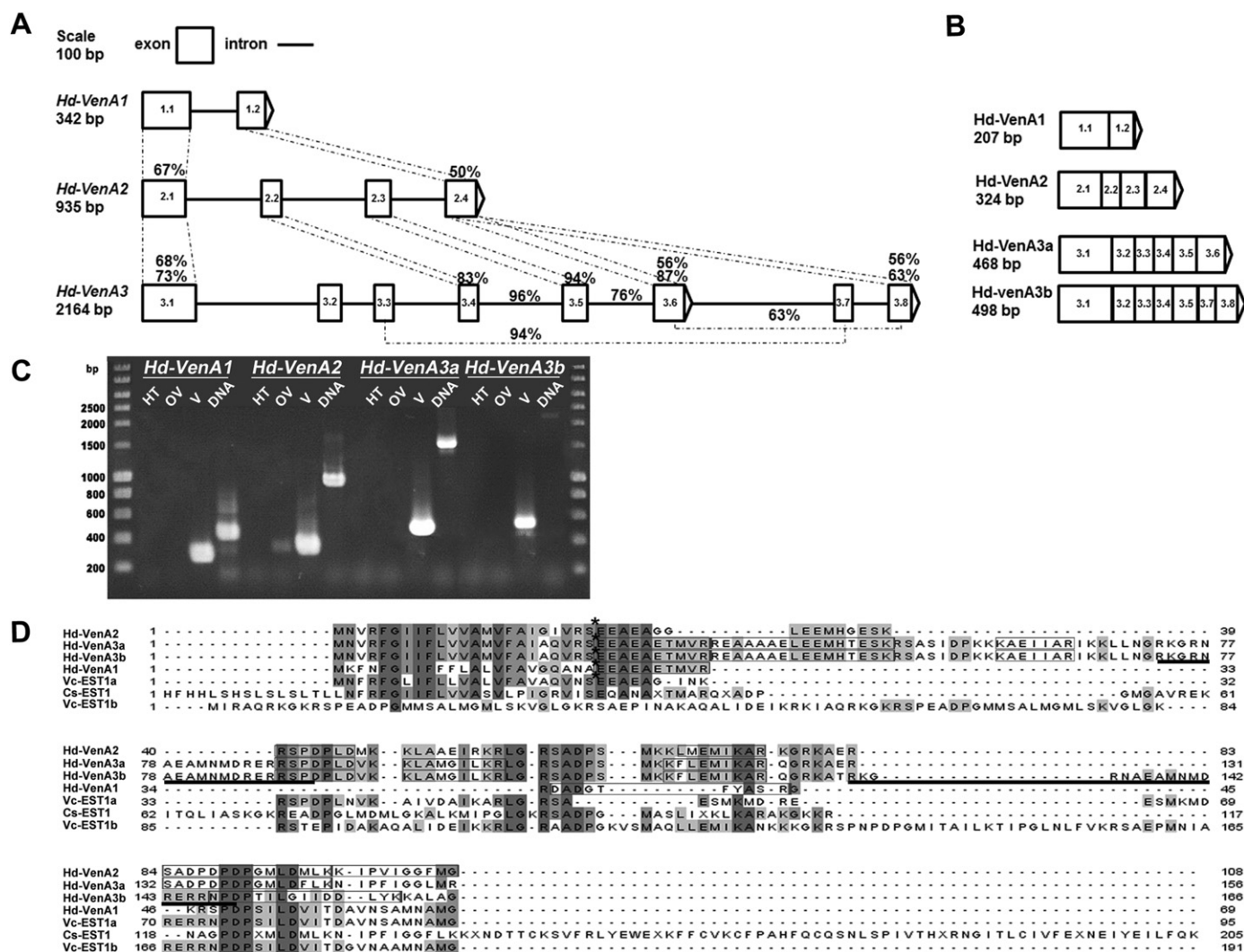


Fig. 6. Sequence and transcription analyses of the multigenic family *Hd-VenA*. A. Schematic diagram of the *Hd-VenA1*, *Hd-VenA2* and *Hd-VenA3* genes, from the initiation (ATG) to the stop codon. Exons are represented by numbered boxes and introns by plain lines. Percent of identity between paired sequences are given for regions sharing sequence similarities (regions for which there is less than 5% identity are not labeled). B. Schematic diagram of the *Hd-VenA1* and *Hd-VenA2* mRNAs and of the two *Hd-VenA3a* and *Hd-VenA3b* transcripts generated by alternative splicing; sizes (bp) are given from the ATG to the stop codon. C. Transcription patterns of *Hd-VenA* genes: RT-PCRs were performed with specific primers using total RNA extracted from dissected female heads and thoraxes (HT), ovaries (OV) and venom apparatus (V) for four transcripts: *Hd-VenA1*, *Hd-VenA2*, *Hd-VenA3a* and *Hd-VenA3b*. Genomic DNA (DNA) was used as a PCR control. D. Alignment of *H. didymator* *Hd-VenA* proteins and translated sequences of the Campopleginae *Venturia canescens* (Vc-EST1a and b) and *Campoplex sonorensis* EST (Cs-EST1) sequences sharing similarity with *Hd-VenA*. An asterisk indicates the predicted cleavage site of the signal peptide sequence. Repeated amino acid sequences are underlined. Boxed sequences correspond to the tryptic peptides identified by LC–MS/MS analysis.

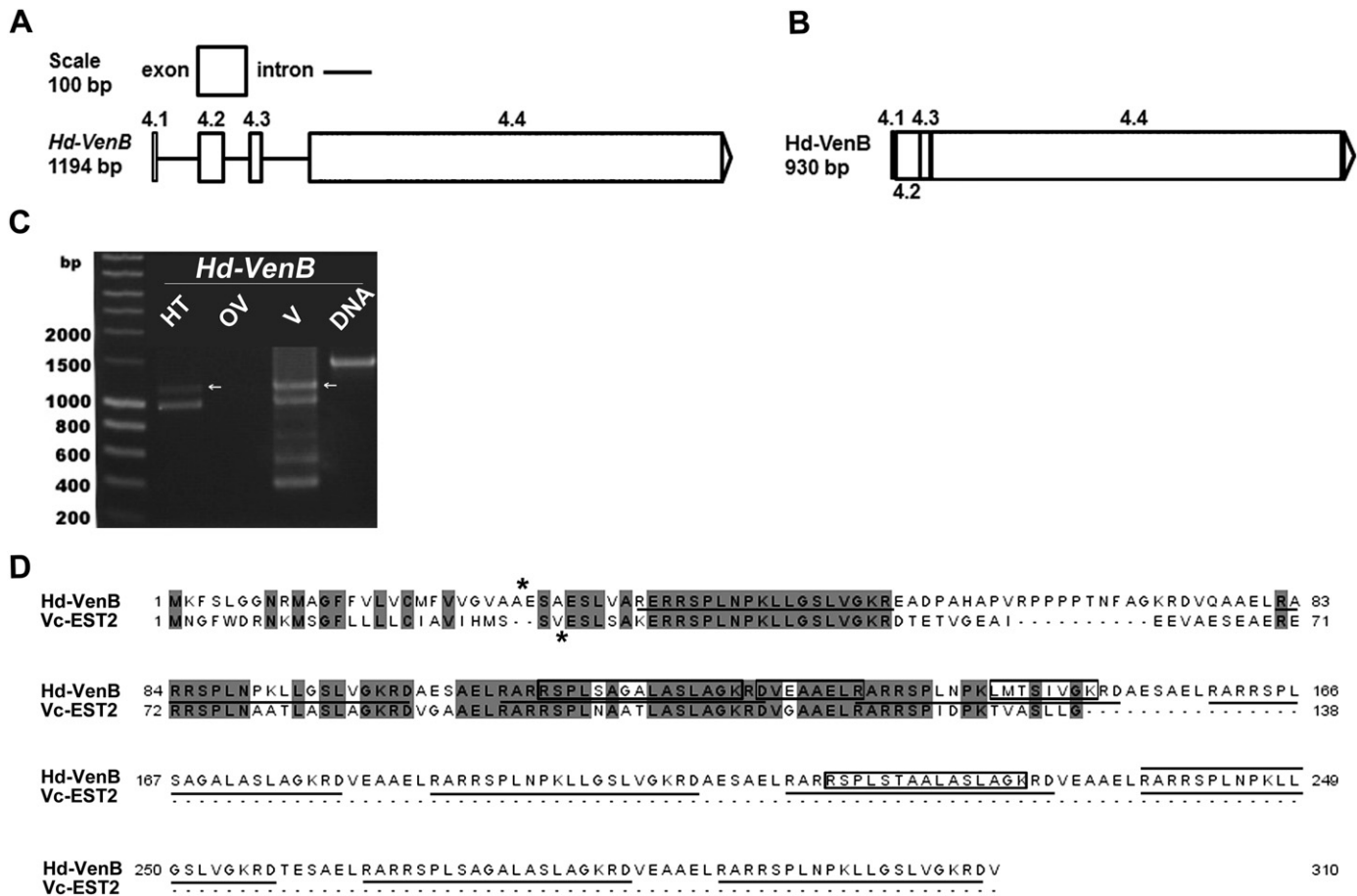


Fig. 7. Sequence and transcription analyses of the *Hd-VenB* gene. **A.** Schematic diagram of *Hd-VenB*, from the initiation (ATG) to the stop codon. Exons are represented by numbered boxes and introns by plain lines. **B.** Schematic diagram of the *Hd-VenB* mRNA; size (bp) is given from the ATG to the stop codon. **C.** Transcription patterns of *Hd-VenB*: RT-PCR was performed with specific primers as in Fig. 4. Genomic DNA (DNA) was used as a PCR control. The expected amplification products are indicated with arrows. **D.** Alignment of *H. didymator* *Hd-VenB* proteins and translated sequences of the Campopleginae *Venturia canescens* venom EST sequence (Vc-EST2) sharing similarity with *Hd-VenB*. An asterisk indicates the predicted cleavage site of the signal peptide sequence. Repeated amino acid sequences are underlined. Boxed sequences correspond to the tryptic peptides identified by LC-MS/MS analysis.

and in head and thorax (Fig. 7C). Further work is required to elucidate this presence of diverse amplification products.

3.3.2.3. Characteristics of *Hd-VenA* and *B* proteins. In agreement with the predicted presence of a peptide signal (Figs. 6D and 7D), mass spectrometry analysis detected the corresponding proteins in the venom extract (Supplementary data 1). *Hd-VenA* are proteins of predicted low molecular weight, 8–18 kDa, consistent with the sections of the SDS-PAGE gel from which they were identified (Fig. 4). The predicted *Hd-VenB* protein is 310 amino-acids long (34 kDa), in agreement with the detection of most of the peptides corresponding to the protein in Section 4 of the SDS-PAGE gel (Fig. 4). The protein sequence contains a putative signal peptide, and 10 direct repeats of 20 amino acids, as predicted by RADAR software (<http://www.ebi.ac.uk/Tools/Radar>) (Fig. 7D). None of the proteins displayed a domain conserved in sequences present in generalist databases.

Although they encode proteins predicted to be secreted and found in *H. didymator* venom extract, only a small number of peptides (4–18 peptides) matched with these proteins. In addition, no major bands in the molecular weight range corresponding to these proteins were observed in the electrophoretic profile of the venom (Fig. 4). Therefore, *Hd-VenA* and *Hd-VenB* may not be abundant in *H. didymator* venom. On the other hand, they may be

unstable or be processed/degraded very rapidly and thus difficult to detect using the above techniques.

3.3.2.4. Proteins conserved in Campopleginae wasps. Although *Hd-VenA* and *Hd-VenB* proteins have not been previously reported to NCBI/EMBL databases, sequences encoding similar proteins were found in EST libraries from two Campopleginae species, *C. sonorensis* (whole body mixed male and female EST library) and *Venturia canescens* (venom gland EST library, private library).

Alignment of *H. didymator* *Hd-VenA* protein sequences show 30–45% amino acid sequence identity with translated *C. sonorensis* (CsEST1, LIBEST_026437) and *V. canescens* (VcEST1a and VcEST1b, GenBank accession # KC012591 and KC012592 respectively) EST sequences. Two domains were found to be conserved in all *Hd-VenA* proteins and also CsEST1 and VcEST1a proteins: a “FGIIFxx-xAVFAxxxxxxEEAEA” motif in the N-terminal region, and a “RLGRSADPSMKKxxEMIKAR” motif in the C-terminal region (Fig. 6D).

Like *Hd-VenA* genes, *Hd-VenB*-related sequence was identified in the venom EST library from *V. canescens* (VcEST2, GenBank accession # KC012593), suggesting that this gene is also conserved in Campopleginae species and probably transcribed in the venom apparatus (97 of 3085 ESTs in the *V. canescens* library). The *V. canescens* translated sequence showed 53% amino acid identity

with the *H. didymator* protein. However, VcEST2 contained only four of the ten repeats present in Hd-VenB (Fig. 7D).

Thus these genes appear to be conserved among Campopleginae wasps associated either with PDVs or VLPs, and are expressed in the venom apparatus of these phylogenetically closely related species. The presence of the gene products in *C. sonorensis* and *V. canescens* venom extracts has not yet been demonstrated, but at least for *V. canescens*, the genes are strongly transcribed in the venom gland (1078 out of 3085 ESTs for VcEST1a and b). The function of these proteins in the venom apparatus or in the host/parasitoid interaction is unknown.

3.3.3. Proteins previously described in the venom of other parasitoid species

Some of the 925 *H. didymator* sequences identified by the proteomic analysis (Table 2) share similarity with proteins identified in the venom of other parasitoid species, including some implicated in altering the host phenotype. We examined this group to determine whether they represent functional venom proteins.

3.3.3.1. Potentially functional hydrolases. Although their function in host/parasitoid interactions is largely uncharacterized, hydrolases are common in venoms from many organisms (Vincent et al., 2010). *H. didymator* venom extract contained proteins (Hd-Ven1 and Hd-Ven2) similar to disintegrin and metalloproteinase with thrombospondin motifs (ADAMTS) from the reprotolysin family, and proteins (Hd-Ven21 and Hd-Ven22) similar to dipeptidyl peptidase IV (DDPIV). Both corresponded to a large number of peptides identified in the proteomic analysis (Table 2), suggesting they were abundant in the *H. didymator* venom.

Metalloproteases of the reprotolysin family have been found in many parasitoid venoms (Table 2) and one acts as a host development alteration factor (EpMP3) in the interaction between *E. pennicornis* and its host *L. oleracea* (Price et al., 2009). Venomous ADAMTS proteins are also commonly found in snakes or in social stinging wasps where they are major active components responsible for tissue damage (degradation of the extracellular matrix, bleeding or inflammation reaction) (de Graaf et al., 2010a; dos Santos et al., 2010). *H. didymator* Hd-Ven1 and Hd-Ven2 proteins showed low similarity to *Nasonia vitripennis* ADAMTS-16 (respectively 30% and 23% identity; Supplementary data 5, Fig. S1). It is not known whether these sequences correspond to a single gene, because they were not complete and correspond to the N-ter (Hd-Ven1) and the C-ter (Hd-Ven2) parts, respectively, of the *N. vitripennis* sequence (Supplementary data 5, Fig. S1). The *H. didymator* reprotolysin(s)-like protein migrated in the section 5 of the SDS-PAGE (Fig. 4), deduced from the number of corresponding tryptic peptides, and this is coherent with the reported size of the *P. hypochondriaca* (39.9 kDa) reprotolysin (Parkinson et al., 2002a). The available *H. didymator* sequences lacked the N-terminal region so we do not know whether it has a signal peptide and cannot therefore predict whether it is secreted. However, Hd-Ven2 contains the conserved catalytic domain HEXXHUGUXH suggesting that it may be a functional zinc metallopeptidase (Supplementary data 5, Fig. S1).

DDPIVs are membrane-anchored enzymes, sometimes associated with exosome membranes, and which cleave N-terminal dipeptides. They are found in the venom of snakes and stinging wasps and were recently reported in *N. vitripennis* (Table 2). Their function in venom remains unclear and may be limited to activation or inactivation of biomolecules within the venom reservoir (Mentlein, 1999) (Ogawa et al., 2008). For instance, in *Apis mellifera*, a membrane-anchored DDPIV activates pro-melittin into highly toxic melittin in the venom reservoir (Kreil et al., 1980). DDPIVs may thus be, as suggested by (de Graaf et al., 2010a), “venom trace

elements”. The *H. didymator* Hd-Ven21 and Hd-Ven22 were similar to DDPIV from the venoms of *N. vitripennis* (26% and 49% identity, respectively) and *Vespa basalis* (34% and 60% identity, respectively) (Supplementary data 5, Fig. S2). Hd-Ven21 covered the N-terminal region of the enzyme and Hd-Ven22 the C-terminal region making impossible to determine how many genes code for DDPIV in the *H. didymator* venom gland. The corresponding proteins were recovered from section 8 of the SDS-PAGE (around 80 kDa, Fig. 4), consistent with the sizes of other venom DDPIVs (86.8 and 88 kDa for venom DDPIV isoform 1 of *N. vitripennis* and *V. basalis* respectively).

Although less abundant in *H. didymator* venom, as indicated by the number of corresponding peptides, one sequence, Hd-Ven43, shared 50% and 45% identity with serine proteases in the venoms of the stinging wasps *Apis florea* and *Bombus ardens*, respectively (Supplementary data 5, Fig. S3). The *Bombus ardens* enzyme is a trypsin-like CLIP-domain serine protease, a family involved both in the activation of the Toll pathway that regulates dorso–ventral axis formation and innate immunity, as well as in the PO signaling pathway (Jang et al., 2008). The Hd-Ven43 sequence also shared 27% identity with *Cotesia rubecula* Vn-50, a serine protease homolog which suppresses the humoral response in the host *Pieris rapae* by competing with the host serine protease involved in the phenoloxidase (PO) activation cascade (Asgari, 2012). The *H. didymator* sequence contains part of the catalytic triad suggesting that it may be an active serine protease (Supplementary data 5, Fig. S3).

A number of esterases and glycosylases were also identified in *H. didymator* venom (Fig. 5). Proteomic analyses identified three sequences, Hd-Ven73, Hd-Ven74 and Hd-Ven75, with similarities with the venom carboxylesterase-6 described in *N. vitripennis* (40, 47 and 73% identity, respectively) (Supplementary data 5, Fig. S4). All *H. didymator* carboxylesterase-like sequences contain the catalytic triad (residues S–E–H) characteristic of the esterase-lipase family, suggesting that the enzymes are functional. Hd-Ven83 shows similarities with a hyaluronidase in the venom of the solitary vespid wasp *Anoplius samariensis* (56% similarity) (Supplementary data 5, Fig. S5) and was found in section 5 of the SDS-PAGE (Fig. 4). Hyaluronidases are enzymes that catalyze the hydrolysis of hyaluronic acid and other constituents of the extracellular matrix of vertebrates. They are common in the venoms of snakes (Kemparaju and Girish, 2006), honeybees, wasps and hornets (Schmidt et al., 1986). In parasitoids, hyaluronidase activity has only previously been described in the venom of *Eupelmus orientalis*, an ectoparasitoid of bruchid insects (Doury et al., 1997). Otherwise, an EST sequence coding for a partial hyaluronidase lacking a signal peptide was reported in *C. inanitus* (Vincent et al., 2010). The *H. didymator* sequence we report covers the N-terminal region of the protein and contains a signal peptide (Supplementary data 5, Fig. S5) suggesting that this endoparasitoid enzyme is secreted, like classical wasp venom hyaluronidases.

This analysis of the sequences available suggests that these various enzymes found in *H. didymator* venom extract may be functional hydrolases that could potentially be injected into the host at oviposition and act on the physiology of the host caterpillar.

3.3.3.2. Potentially active serine proteases inhibitors. *H. didymator* venom contained serine protease inhibitors (serpins). Their presumed role in venom is to interact with one or several serine proteases that activate the PO cascade; they thereby may inhibit PO activation, as demonstrated for a serpin (LbSPNy) which is one of the most abundant proteins in the venom of a strain of the figitid endoparasitoid *Leptopilina boulardi* (Colinet et al., 2009). Peptides from *H. didymator* venom matched a number of sequences displaying similarities with

Table 2

List of selected proteins identified by nano-LC-MS/MS in *H. didymator* venom extract that share similarities with proteins reported in venoms of others organisms. Predicted proteins are classified according to the nomenclature defined in Fig. 5. For each sequence, the amino acid length, prediction of any signal peptide (using SignalP4 software), the total number of peptides, the number of unique peptides, the peptide redundancy (total/unique), the gel section from which majority of the peptides were obtained and the number of *H. didymator*-related venom EST sequences are indicated. Species from which venom components are reported are: *Apis florum* (Af); *Apis mellifera* (Am); *Anoplus samariensis* (As); *Asobara japonica* (Aj); *Bracon hebetor* (Bh); *Cyphononyx dorsalis* (Cd); *Chelonius inanitus* (Ci); *Cotesia rubecula* (Cr); *Eulophus pennicornis* (Ep1); *Eumenes pomiformis* (Ep2); *Eupelmus orientalis* (Eo); *Leptopilina boulardi* (Lb); *Microctonus aethiopoides* (Ma); *Microctonus hyperodae* (Mh); *Nasonia vitripennis* (Nv); *Orancistrocerus drewseni* (Od); *Pimpla hypochondriaca* (Ph); *Polybia paulista* (Pp1); *Pteromalus puparum* (Pp2); and *Vespid basalis* (Vb). Cc, Ci and Cr are braconids which have associated polydnavirus; Ma and Mh carry virus-like particles. "Lep." corresponds to venomous proteins identified in urticating hairs and "cone snail" to proteins identified in the venom bulb of the respective organisms. Asterisks (*) indicate that only the transcript has been identified in a venom gland EST library; double asterisks (**) indicate that only the activity has been detected in crude venom by enzymatic tests or antibody-inhibition experiments; symbols (§) indicate that data originates from automatic genome annotation. (1) Abt and Rivers, 2007. (2) Asgari et al., 2003b. (3) Baek and Lee, 2010. (4) Birrell et al., 2007. (5) Cardoso et al., 2010. (6) Carrijo-Carvalho and Chudzinski-Tavassi, 2007. (7) Colinet et al., 2009. (8) Colinet et al., 2011. (9) Crawford et al., 2008. (10) de Graaf et al., 2010a. (11) de Graaf et al., 2010b. (12) dos Santos et al., 2010. (13) dos Santos et al., 2011. (14) Doury et al., 1997. (15) Kemparaju and Girish, 2006. (16) Lee et al., 2007. (17) Mabiala-Moundoungou, 2009. (18) Mentlein et al., 1999. (19) Padavattan et al., 2008. (20) Parkinson et al., 2001. (21) Parkinson et al., 2002a. (22) Peiren et al., 2005. (23) Peiren et al., 2006. (24) Peiren et al., 2008. (25) Price et al., 2009. (26) Rivers et al., 2009. (27) Safavi-Hemami et al., 2010. (28) Schevchenko et al., 2005. (29) Schmidt et al., 1986. (30) Undheim and King, 2011. (31) Veiga et al., 2005. (32) Vincent et al., 2010. (33) Wright et al., 1973. (34) Yamamoto et al., 2007. (35) Zhang et al., 2006. (36) Zhu et al., 2010.

Functional class	ID	Description	aa length	Sequence alignments in suppl. data 5	Peptide signal prediction	Total peptides	Uniques peptides	Peptide redundancy	Gel section	EST	Protein or family previously identified in						References
											Ichneu-monids	Braco-nids	Other parasitic wasps	Paralytic wasps	Other hymenoptera	Others organisms	
Metalloproteases	Hd-Ven1	Disintegrin	152	Fig. S1	No N-ter	13	7	1.9	5	5	Ph	Ci, Ma,	Ep1, Nv	Ep2, Od	Am, Pp1	Centipedes,	3, 9, 10, 12,
	Hd-ven2	and metalloproteinase with thrombo-spondin motifs	78		No N-ter	44	2	22.0	5	1		Mh				snakes	13, 21, 25, 30, 32
Dipeptidyl peptidases	Hd-Ven21	Dipeptidyl-	148	Fig. S2	No N-ter	23	5	4.6	8	—	—	—	Nv	—	Vb, Am	Snakes	5, 10, 16, 18
	Hd-ven22	peptidase IV	424		No N-ter	63	10	6.3	8	—							
Serine endopetidases	Hd-Ven43	Venom serine protease	219	Fig. S3	No N-ter	3	2	1.5	6	—	Ph	Ci, Cr	Nv, Pp2	Ep2, Od	Af§, Ba§, Am, Pp1, Af	Centipedes, Lep.	2, 3, 10, 12, 13, 21, 25, 30, 31, 32, 36
Esterases	Hd-Ven73	Venom	542	Fig. S4	Yes	7	4	1.8	8	—	—	—	Nv	—	—	—	10
	Hd-Ven74	carboxylesterase-6	57		No N-ter	3	3	1.0	8	—							
	Hd-Ven75		318		No N-ter	2	2	1.0	8	—							
Glycosylases	Hd-Ven83	Hyaluronidase	260	Fig. S5	Yes	14	5	2.8	5	1	—	Ci*	Eo**	As§, Ep2, Od	Am, Pp1, ants**	Centipedes, snakes, spiders**, Lep.	3, 5, 6, 14, 15, 22, 24, 29, 30, 32, 33, 36
Protease inhibitors	Hd-Ven390	Serine protease inhibitor	410	Fig. S6	Yes	58	13	4.5	5	—	—	—	Lb	—	Pp1	Lep.	7, 12, 31
Oxidases	Hd-Ven218	Super-oxide	219	Fig. S7	No	13	7	1.9	2	—	—	—	Lb	—	Am (whole gland), Pp1	—	8, 12, 24
	Hd-Ven219	dismutase	154		No	9	6	1.5	2	—							
Transferases	Hd-Ven204	Phenoloxidase	685	Fig. S8	No	41	21	2.0	8	—	Ph	—	Nv**	—	—	—	1, 20
	Hd-Ven236	Arginine kinase	179	Fig. S9	No	29	3	9.7	4	—	—	Aj	Pp2	Cd, Ep2, Od	Am (whole gland), Pp1	Cone snail	3, 12, 17, 24, 27, 34, 36
Immune related	Hd-Ven237		218		No N-ter	185	13	14.2	4	—							
	Hd-Ven392	Calreticulin	402	Fig. S10	Yes	13	10	1.3	7	1	Ph**	Cr, Aj, Ma, Mh	Nv, Pp2	—	—	Lep.	9, 10, 17, 26, 28, 35, 36
	Hd-Ven816	C1q-like venom protein precursor	138	Fig. S11	No N-ter	4	3	1.3	3	—	—	—	Nv	—	Am	—	11
Other functions	Hd-Ven831	C-type lectin	195	Fig. S12	No N-ter	6	4	1.5	3	—		Ci				Snakes, Lep.	4, 32, 31, 36
Venom allergens	Hd-Ven850	Venom allergen 3-like (Ag5 family)	80	Fig. S13	No N-ter	45	2	22.5	3	4	—	Ma, Mh, Ci*	Nv	—	Pp1, Ant, Vm	—	9, 10, 12, 19, 23, 32
	Hd-Ven841	Icarapin-like	250	Fig. S14	Yes	5	2	2.5	3	—	—	Ma, Mh	—	—	Am (whole gland)	—	9, 23

serpins, including an Antithrombin-III from the ant *Camponotus floridanus* (Hd-Ven383) and a leukocyte elastase inhibitor-like protein from *Bombus impatiens* (Hd-Ven384) (Supplementary data 1). However, only one of these serpin-like sequences, Hd-Ven390, contains a predicted putative functional reactive center loop (RCL). This protein was well represented in *H. didymator* venom extract (Table 2) and shares similarities with a neuroserpin-like protein in the bee *Microctonus rotundata* and with the LbSPNy protein (50% and 30% identity, respectively) (Supplementary data 5, Fig. S6). The deduced size of Hd-Ven390 was 45 kDa (42 kDa after peptide signal cleavage), consistent with the recovery of most of the tryptic peptides from the section 5 of the SDS-PAGE gel (Fig. 4). Preliminary data suggest that *H. didymator* whole venom extract does not prevent PO activation (data not shown), so role, if any, remains unclear. Hd-Ven390 may indeed be an active secreted venom serpin but which acts inside the venom apparatus rather than as a true virulence factor, as suggested for a venom serpin from the social wasp *Polybia paulista* (dos Santos et al., 2010).

3.3.3.3. Other enzymes. Superoxide dismutase (SOD) is an oxidoreductase found in many wasp venoms (dos Santos et al., 2010; Peiren et al., 2008). In many cases, an intracellular form of the SOD is detected, suggesting that the protein may be a cellular contaminant or act on the maintenance of the venom apparatus tissue (Peiren et al., 2008). One exception is the extracellular SOD abundant in the venom gland of the parasitic wasp *L. bouhardi* that inhibits PO activity *in vitro* (Colinet et al., 2011). The two SODs identified in *H. didymator* venom (Hd-Ven218 and Hd-Ven219; Table 2) display substantial similarities (more than 80% identity) with intracellular SODs of *Asobara tabida* and *L. bouhardi* and weaker similarities (33 and 50%, respectively) with *L. bouhardi* extracellular SOD (Supplementary data 5, FigS7). The *H. didymator* sequences do not contain predicted signal peptides and thus most probably correspond to intracellular SODs.

H. didymator venom also contains a proPO, the inactive zymogen form of PO (Hd-Ven204; Table 2). A PO containing a peptide signal allowing secretion of the enzyme has been described in *P. hypochondriaca* venom (Parkinson et al., 2001). No peptide signal was predicted for the *H. didymator* protein which shares some similarity (45% identity) with the secreted *P. hypochondriaca* PO and more similarity (71% identity) with *A. mellifera* proPO (Supplementary data 5, Fig. S8). Hd-Ven204 is therefore probably a classical cellular enzyme released by regulated exocytosis as described for PO found in hemocytes of many arthropods (Lai et al., 2002).

Another abundant enzyme in *H. didymator* venom, as evaluated from the number of peptides, was an arginine kinase highly similar (>70% identity) to other hymenopteran sequences (Table 2; Supplementary data 5, Fig. S9). Arginine kinase has been reported in the venom of several hymenopteran insects but there is only one report of a paralytic effect of this type of enzyme: a truncated (25 kDa) form in the spider-hunting wasp *Cyphononyx dorsalis* (Yamamoto et al., 2007). The arginine kinase identified in *H. didymator* was found in section 4 of the SDS-PAGE (around 30–40 kDa, Fig. 4) and was thus most probably a full-length enzyme and likely to be intracellular.

Therefore, according to the analysis of the available sequences, the three enzymes described above appear to be intracellular enzymes and probably are not injected into the insect host.

3.3.3.4. Non enzymatic proteins. Diverse non enzymatic proteins, as found in the venom of various parasitic wasps, were also identified in *H. didymator* venom. These proteins include immune-related proteins, such as calreticulin and a C1q-like venom protein, a C-type lectin and venom allergen proteins (Table 2).

Calreticulin (CRT) is a multifunctional Ca^{2+} -binding chaperone protein found in the venom fluid of the parasitic wasps *C. rubecula*, *P. puparum* and *N. vitripennis* (Table 2). In *C. rubecula*, CRT prevents encapsulation *in vitro* by inhibiting hemocyte spreading behavior, although the mechanism is still unclear (Zhang et al., 2006). One study on ichneumonidae *P. hypochondriaca* venom demonstrated a hemocyte anti-aggregation effect of the venom CRT (Rivers et al., 2009). A CRT-like protein, Hd-Ven392, highly similar (more than 70% identity) to other parasitic wasp CRTs was found in *H. didymator* venom (Supplementary data 5, Fig. S10). The number of corresponding peptides was low (Table 2) and although this CRT appears to be secreted and functional, the quantity present in *H. didymator* venom may be insufficient to cause a significant effect once injected into the host caterpillar.

The *H. didymator* venom extract also contained a protein with similarities to the Tumor Necrosis Factor superfamily member C1q (Hd-Ven816), a subunit of the C1 enzyme complex that activates serum complement. A C1q-like venom protein precursor has been identified in *N. vitripennis* and *A. mellifera* (61 and 57% identity, respectively, with Hd-Ven816; Supplementary data 5, Fig. S11) (de Graaf et al., 2010b). In *N. vitripennis*, the protein is also present in a number of tissues other than the venom gland and it was suggested that it is not a true virulence factor (de Graaf et al., 2010a). CRT blocks the interaction between C1q and immunoglobulins in humans, so the two proteins may interact in the venom gland where they are both found, such as suggested for *N. vitripennis* (Danneels et al., 2010).

H. didymator venom also included a protein with a C-type lectin (CTL) domain (Hd-Ven831). Venomous CTLs have only been described in braconid wasps carrying PDV as *C. inanitus* (Vincent et al., 2010) where the protein is believed to play a role in immune-suppression, in the same way as proteins with a CTL domain encoded by the PDV associated with the braconid *Cotesia plutellae* (Lee et al., 2008). The *H. didymator* sequence is dissimilar to the *C. inanitus* venom CTL protein (29% identity) (Supplementary data 5, Fig. S12), but resembles other non-venom specific secreted hymenopteran CTLs (89% identity with the CTL protein from *Acromyrmex echinator*).

Finally an abundant protein in *H. didymator* venom, Hd-Ven850, shares similarities with venom allergen-3 (or Antigen 5), a protein of the Antigen 5 family (Ag5) with a cysteine-rich secretory domain. This type of protein, commonly found in Hymenoptera venoms, has been described in ants (Hoffman, 2006) and in several parasitic wasps (Table 2). Antigen 5-like proteins generally have a signal peptide for secretion (Padavattan et al., 2008) but their biological function is still not known. The available deduced *H. didymator* sequence (80 aa) encompasses the C-terminal region of the protein and shares 25% identity with other allergen-3 sequences (Supplementary data 5, Fig. S13). Its predicted size of 20 kDa most probably corresponds to the major band in Section 3 of the SDS-PAGE (Fig. 4). In the allergen category, we also identified an icarapin-like peptide, Hd-Ven841, a novel IgE-binding bee venom protein of unknown biological function (Peiren et al., 2006). The available sequence has a signal peptide, typical of secreted proteins (Supplementary data 5, Fig. S14).

4. Conclusion

This first exhaustive analysis of a Campopleginae parasitic wasp venom proteome, that of *H. didymator*, reveals the presence of several components related to venomous proteins. This is in apparent contrast with the observation that injection of venom extract does not have any detectable effect on development or cellular immunity of the host, *S. frugiperda*. There are various possible reasons for the venom having no apparent effect on host

physiology. Firstly, many proteins that were identified in *H. didymator* venom are not commonly major components of active venoms of koinobiont species, although they are often reported in these species. The toxicity of many of these molecules, such as metalloproteases, arginine kinase or hyaluronidase, has only been demonstrated in stinging wasps, and most of them are allergen inducers in mammals (Crawford et al., 2008; de Graaf et al., 2010a; dos Santos et al., 2011; dos Santos et al., 2010; Vincent et al., 2010). Secondly, most of the POs, serpins, CRT and SODs, molecules previously described in other parasitoid species and shown to be deleterious for host development or immunity, appear to be either not secreted or present at only low concentrations in *H. didymator* venom (as estimated from the number of EST sequences or tryptic peptides). A third possibility is that venom components may have different activities in different lepidopteran host species. Indeed, *H. didymator* naturally parasitizes several noctuid species and we tested the venom extracts only on *S. frugiperda*. It may therefore be informative to assess the effect of this venom on several host species, including for example *Helicoverpa armigera* and *Autographa gamma*, and thereby investigate whether the venom may be involved in the determination of *H. didymator*'s host range. Finally, only two physiological traits were explored in this work. Although they are both major processes affected in insect hosts parasitized by koinobiont species and are important for successful parasitism, other processes may be affected by factors in the parasite's venom. Other physiological systems such as metabolism, digestion, the nervous system and behavior have to be investigated before it can be concluded that *H. didymator* venom makes no contribution to parasitism.

Our proteomic analysis led to the identification of four previously undescribed secreted proteins, three of them being closely related. The corresponding transcripts were abundant in the venom tissue and most were only found in this tissue, strongly suggesting that they constitute specific venom proteins. The function of these proteins remains however unclear. Interestingly, related sequences were found in other Campopleginae wasps, including *V. canescens*, a species devoid of PDVs but associated with VLPs; for this species, there is also no clear evidence of an effect of the venom on host physiology. Only a transient paralysis following venom injection has been reported (Pieke, 1986). Similarly, for *C. sonorensis*, which is associated with PDV and also contains homologs, no effect of the venom on parasitism success was reported (Webb and Luckhart, 1994). Further investigation is needed to understand functions of these proteins, which may be in the venom gland (e.g. venom storage or tissue protection) rather than during parasitism.

Our study strongly suggests that there are substantial differences in the evolution of venom components between the two families associated with PDVs, the Braconids and the Ichneumonids. In *H. didymator*, calyx fluid alone was sufficient to reproduce the parasitized host phenotype, which is not the case for braconids, where the venom synergizes with PDV (Asgari, 2012). Preliminary analyses also indicated that *H. didymator* venom had no significant effect on the transcription levels of four HdIV (P30, M24, Vank1803 and VankCR1) genes (data not shown). Indeed, the extensive analysis of *H. didymator* venom did not identify components related to proteins demonstrated to synergize with either the effects or expression of PDV in Braconidae venom. Most Campopleginae species studied to date are endoparasitoids that rely on PDVs or VLPs produced in the ovarian tissues to manipulate host physiology. In these species, "viral" host regulatory factors may have been acquired during evolution before specialization of the venom to have host regulatory functions or viral acquisition may have been followed by the loss of any such function of the venom. Braconids domesticated a virus independently, and consequently PDV acquisition appears to have led to a different evolution of the

relationship between the PDV and the venom, with venom molecules required for the success of parasitism. The reasons why the venom gland in Campopleginae species retains the capacity to produce a large range of molecules remains to be elucidated. It is possible that Campopleginae venom simply corresponds to a phylogenetic signal and no longer has a role, but it may still have an ancestral role in ovipositor lubrication or may have acquired new functions that have not been identified yet.

Many aspects of the evolution of the nature and function of venoms in parasitic wasps, and the consequences of the acquisition of symbiotic PDV or VLP in ichneumonid wasps remain to be elucidated. Analysis of the venom proteomes in a range of species in different branches of the phylogenetic tree of the Ichneumonidae would be informative. Ichneumonids display a great variety of parasitoid lifestyles and there may have been multiple shift events between ecto- and endoparasitism (Gauld, 1988). Investigation of the venoms of koinobiont species from the Cremastinae, Anomalinae and Ophioninae sub-families of Ichneumonids, which may not carry PDV or VLP, may identify venomous factors required for parasitism success, and contribute to our understanding of Campopleginae venom evolution.

The evolution of venoms in other groups, such as reptiles whose venoms only have a function in predation, is better characterized (Wuster, 2010) than that of venoms in Hymenoptera, and more particularly in parasitic wasps, with their enormous diversity of life cycle strategies. Currently, only a few venomous proteins have been demonstrated to play a role in the host–parasitoid interaction. Furthermore, they generally have been described in only a small number of genera, reflecting the limited exploration of parasitoid venom diversity. Following on from the pioneer work based on the study of venom apparatus morphology (Robertson, 1968), and venom protein and enzymatic profiles (Leluk et al., 1989; Schmidt et al., 1986), recent advances in the characterization of hymenoptera venoms should, as illustrated by our study, provide a better insight into venom evolution in the context of the highly diverse life-styles of hymenoptera.

Acknowledgments

We thank M. Jambart, A. Ausset, C. Gibard and G. Clabots for providing insects and/or reagents for this study. We also thank B. Duvic and M.A. Mannucci for preliminary PO activation assays and N. Cubedo for his technical advice. English language was revised by Alex Edelman & Associates, France. This work received support from the Genoscope ("Parasitoid venoms" project) and from the French National Research Agency (Paratoxose project, #ANR-09-BLAN-0243-01).

Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.ibmb.2012.12.010>.

References

- Abt, M., Rivers, D.B., 2007. Characterization of phenoloxidase activity in venom from the ectoparasitoid *Nasonia vitripennis* (Walker) (Hymenoptera: Pteromalidae). *Journal of Invertebrate Pathology* 94, 108–118.
- Asgari, S., 2012. Venoms from endoparasitoids. In: Beckage, N.E., Drezen, J.M. (Eds.), *Parasitoid Viruses Symbionts and Pathogens*. Elsevier, pp. 217–230.
- Asgari, S., Rivers, D.B., 2011. Venom proteins from endoparasitoid wasps and their role in host-parasite interactions. *Annual Review of Entomology* 56, 313–335.
- Asgari, S., Zareie, R., Zhang, G., Schmidt, O., 2003a. Isolation and characterization of a novel venom protein from an endoparasitoid, *Cotesia rubecula* (Hym: Braconidae). *Archives of Insect Biochemistry and Physiology* 53, 92–100.
- Asgari, S., Zhang, G., Zareie, R., Schmidt, O., 2003b. A serine proteinase homolog venom protein from an endoparasitoid wasp inhibits melanization of the host hemolymph. *Insect Biochemistry and Molecular Biology* 33, 1017–1024.

- Aylin, E., Olga, S., Ekrem, E., Fevzi, U., Rivers, D.B., 2011. Venom-induced Immunosuppression: An Overview of Hemocyte-mediated Responses.
- Baek, J.H., Lee, S.H., 2010. Identification and characterization of venom proteins of two solitary wasps, *Eumenes pomiformis* and *Orancistrocerus drewseni*. *Toxicon* 56, 554–562.
- Beckage, N.E., Drezen, J.-M., 2012. Parasitoid Viruses. Academic Press, San Diego.
- Birrell, G.W., Earl, S.T.H., Wallis, T.P., Masci, P.P., de Jersey, J., Gorman, J.J., Lavin, M.F., 2007. The diversity of Bioactive proteins in Australian snake venoms. *Molecular & Cellular Proteomics* 6, 973–986.
- Cardoso, K., Da Silva, M., Costa, G., Torres, T., Del Bem, L., Vidal, R., Menossi, M., Hyslop, S., 2010. A transcriptomic analysis of gene expression in the venom gland of the snake *Bothrops alternatus* (urutu). *BMC Genomics* 11, 605.
- Carrijo-Carvalho, L.C., Chudzinski-Tavassi, A.M., 2007. The venom of the *Lonomia* caterpillar: an overview. *Toxicon* 49, 741–757.
- Cerenius, L., Söderhäll, K., 2004. The prophenoloxidase-activating system in invertebrates. *Immunological Reviews* 198, 116–126.
- Colinet, D., Dubuffet, A., Cazes, D., Moreau, S., Drezen, J.-M., Poirié, M., 2009. A serpin from the parasitoid wasp *Leptopilina boulardi* targets the *Drosophila* phenoloxidase cascade. *Developmental & Comparative Immunology* 33, 681–689.
- Colinet, D., Cazes, D., Belghazi, M., Gatti, J.-L., Poirié, M., 2011. Extracellular superoxide dismutase in insects. *Journal of Biological Chemistry* 286, 40110–40121.
- Conesa, A., Götz, S., García-Gómez, J.M., Terol, J., Talón, M., Robles, M., 2005. Blast2GO: a universal tool for annotation, visualization and analysis in functional genomics research. *Bioinformatics* 21, 3674–3676.
- Corpet, F., 1988. Multiple sequence alignment with hierarchical clustering. *Nucleic Acids Research* 16, 10881–10890.
- Crawford, A.M., Brauning, R., Smolenski, G., Ferguson, C., Barton, D., Wheeler, T.T., McCulloch, A., 2008. The constituents of *Microctonus* sp. parasitoid venoms. *Insect Molecular Biology* 17, 313–324.
- Dani, M.P., Edwards, J.P., Richards, E.H., 2005. Hydrolase activity in the venom of the pupal endoparasitoid wasp, *Pimpla hypochondriaca*. *Comparative Biochemistry and Physiology Part B: Biochemistry and Molecular Biology* 141, 373–381.
- Danneels, E.L., Rivers, D.B., De Graaf, D.C., 2010. Venom proteins of the parasitoid wasp *Nasonia vitripennis*: recent discovery of an untapped pharmacopee. *Toxins* 2, 494–516.
- de Graaf, D.C., Aerts, M., Brunain, M., Desjardins, C.A., Jacobs, F.J., Werren, J.H., Devreese, B., 2010a. Insights into the venom composition of the ectoparasitoid wasp *Nasonia vitripennis* from bioinformatic and proteomic studies. *Insect Molecular Biology* 19, 11–26.
- de Graaf, D.C., Brunain, M., Scharlaken, B., Peiren, N., Devreese, B., Ebo, D.G., Stevens, W.J., Desjardins, C.A., Werren, J.H., Jacobs, F.J., 2010b. Two novel proteins expressed by the venom glands of *Apis mellifera* and *Nasonia vitripennis* share an ancient C1q-like domain. *Insect Molecular Biology* 19, 1–10.
- dos Santos, L.D., Santos, K.S., Pinto, J.R.A., Dias, N.B., Souza, B.M.d., dos Santos, M.F., Perales, J., Domont, G.B., Castro, F.M., Kalil, J.E., Palma, M.S., 2010. Profiling the proteome of the venom from the social wasp *Polybia paulista*: a clue to understand the envenoming mechanism. *Journal of Proteome Research* 9, 3867–3877.
- dos Santos, L.D., Pieroni, M., Menegasso, A.R.S., Pinto, J.R.A.S., Palma, M.S., 2011. A new scenario of bioprospecting of Hymenoptera venoms through proteomic approach. *Journal of Venomous Animals and Toxins including Tropical Diseases* 17.
- Doucet, D., Cusson, M., 1996. Alteration of developmental rate and growth of *Choristoneura fumiferana* parasitized by *Tranosema rostrale*: role of the calyx fluid. *Entomologia Experimentalis et Applicata* 81, 21–30.
- Doury, G., Bigot, Y., Periquet, G., 1997. Physiological and biochemical analysis of factors in the female venom gland and larval salivary secretions of the ectoparasitoid wasp *Eupelmus orientalis*. *Journal of Insect Physiology* 43, 69–81.
- Edson, K.M., Vinson, S.B., 1979. A comparative morphology of the venom apparatus of female braconids (Hymenoptera: Braconidae). *The Canadian Entomologist* 111, 1013–1024.
- Falabella, P., Riviello, L., Caccialupi, P., Rossodivita, T., Teresa Valente, M., Luisa De Stradis, M., Tranfaglia, A., Varricchio, P., Gliotti, S., Graziani, F., Malva, C., Pennacchio, F., 2007. A [gamma]-glutamyl transpeptidase of *Aphidius ervi* venom induces apoptosis in the ovaries of host aphids. *Insect Biochemistry and Molecular Biology* 37, 453–465.
- Ferrarese, R., Morales, J., Fimiari, D., Webb, B.A., Govind, S., 2009. A supracellular system of actin-lined canals controls biogenesis and release of virulence factors in parasitoid venom glands. *Journal of Experimental Biology* 212, 2261–2268.
- Formesyn, E.M., Danneels, E.L., De Graaf, D.C., 2012. Proteomics of the venom of the Parasitoid *Nasonia vitripennis*. In: Beckage, N.E., Drezen, J.M. (Eds.), *Parasitoid Viruses Symbionts and Pathogens*. Elsevier, pp. 217–230.
- Gauld, I.D., 1988. Evolutionary patterns of host utilization by ichneumonoid parasitoids (Hymenoptera: Ichneumonidae and Braconidae). *Biological Journal of the Linnean Society* 35, 351–377.
- Gauld, I.D., Bolton, B., Morgan, D., 1988. The Hymenoptera. Oxford University Press Ed.
- Hoffman, D., 2006. Hymenoptera venom allergens. *Clinical Reviews in Allergy and Immunology* 30, 109–128.
- Jang, I.-H., Nam, H.-J., Lee, W.-J., 2008. CLIP-domain serine proteases in *Drosophila* innate immunity. *BMB Reports* 41, 102–107.
- Kaeslin, M., Reinhard, M., Bühler, D., Roth, T., Pfister-Wilhelm, R., Lanzrein, B., 2010. Venom of the egg-larval parasitoid *Chelonus inanitus* is a complex mixture and has multiple biological effects. *Journal of Insect Physiology* 56, 686–694.
- Kemparaju, K., Girish, K.S., 2006. Snake venom hyaluronidase: a therapeutic target. *Cell Biochemistry and Function* 24, 7–12.
- Kitano, H., 1986. The role of *Apanteles glomeratus* venom in the defensive response of its host, *Pieris rapae crucivora*. *Journal of Insect Physiology* 32, 369–375.
- Kreil, G., Haiml, L., Suchanek, G., 1980. Stepwise cleavage of the pro part of promelittin by dipeptidylpeptidase IV. *European Journal of Biochemistry* 111, 49–58.
- Labrosse, C., Stasiak, K., Lesobre, J., Grangeia, A., Huguette, E., Drezen, J.M., Poirie, M., 2005. A RhoGAP protein as a main immune suppressive factor in the *Leptopilina boulardi* (Hymenoptera, Figitidae)–*Drosophila melanogaster* interaction. *Insect Biochemistry and Molecular Biology* 35, 93–103.
- Lai, S.-C., Chen, C.-C., Hou, R.F., 2002. Immunolocalization of prophenoloxidase in the process of wound healing in the mosquito *Armigeres subalbatus* (Diptera: Culicidae). *Journal of Medical Entomology* 39, 266–274.
- Larkin, M.A., Blackshields, G., Brown, N.P., Chenna, R., McGettigan, P.A., McWilliam, H., Valentin, F., Wallace, I.M., Wilm, A., Lopez, R., Thompson, J.D., Gibson, T.J., Higgins, D.G., 2007. Clustal W and clustal X version 2.0. *Bioinformatics* 23, 2947–2948.
- Lee, V.S.Y., Tu, W.C., Jinn, T.R., Peng, C.C., Lin, L.J., Tzen, J.T.C., 2007. Molecular cloning of the precursor polypeptide of mastoparan B and its putative processing enzyme, dipeptidyl peptidase IV, from the black-bellied hornet, *Vespa basalis*. *Insect Molecular Biology* 16, 231–237.
- Lee, S., Nalini, M., Kim, Y., 2008. A viral lectin encoded in *Cotesia plutellae* bracovirus and its immunosuppressive effect on host hemocytes. *Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology* 149, 351–361.
- Leluk, J., Schmidt, J., Jones, D., 1989. Comparative studies on the protein composition of hymenopterous venom reservoirs. *Toxicon* 27, 105–114.
- Mabiala-Moundougou, A.D.N., 2009. Mécanismes et agents de la virulence chez les parasitoïdes hyménoptères Braconides du genre *Asobara* le cas particulier d'*A. japonica*. UFR Sciences. Université de Picardie Jules Verne, Amiens, p. 166.
- Mabiala-Moundougou, A.D.N., Doury, G., Eslin, P., Cherqui, A., Prévost, G., 2010. Deadly venom of *Asobara japonica* parasitoid needs ovarian antidote to regulate host physiology. *Journal of Insect Physiology* 56, 35–41.
- McCullagh, P., Nelder, J., 1989. Generalized Linear Models. Chapman and Hall, London, London.
- Mentlein, R., 1999. Dipeptidyl-peptidase IV (CD26)-role in the inactivation of regulatory peptides. *Regulatory Peptides* 85, 9–24.
- Nakamatsu, Y., Tanaka, T., 2003. Venom of ectoparasitoid, *Euplectrus* sp. near *plathypenae* (Hymenoptera: Eulophidae) regulates the physiological state of *Pseudaletia separata* (Lepidoptera: Noctuidae) host as a food resource. *Journal of Insect Physiology* 49, 149–159.
- Negre, V., Hotelier, T., Volkoff, A.-N., Gimenez, S., Cousserans, F., Mita, K., Sabau, X., Rocher, J., Lopez-Ferber, M., d'Alencón, E., Audant, P., Sabourault, C., Bidegainberry, V., Hilliou, F., Fournier, P., 2006. SPODOBASE: an EST database for the lepidopterous crop pest *Spodoptera*. *BMC Bioinformatics* 7, 322.
- Ogawa, Y., Kanai-Azuma, M., Akimoto, Y., Kawakami, H., Yanoshita, R., 2008. Exosome-like vesicles in *Glyptotendipes blumhoffii* venom. *Toxicon* 51, 984–993.
- Padavattan, S., Schmidt, M., Hoffman, D.R., Marković-Housley, Z., 2008. Crystal structure of the major allergen from fire ant venom, sol i 3. *Journal of Molecular Biology* 383, 178–185.
- Parkinson, N., Smith, I., Weaver, R., Edwards, J.P., 2001. A new form of arthropod phenoloxidase is abundant in venom of the parasitoid wasp *Pimpla hypochondriaca*. *Insect Biochemistry and Molecular Biology* 31, 57–63.
- Parkinson, N., Conyers, C., Smith, I., 2002. A venom protein from the endoparasitoid wasp *Pimpla hypochondriaca* is similar to snake venom reprolysin-type metalloproteases. *Journal of Invertebrate Pathology* 79, 129–131.
- Parkinson, N., Smith, I., Audsley, N., Edwards, J.P., 2002. Purification of pimplin, a paralytic heterodimeric polypeptide from venom of the parasitoid wasp *Pimpla hypochondriaca*, and cloning of the cDNA encoding one of the subunits. *Insect Biochemistry and Molecular Biology* 32, 1769–1773.
- Peiren, N., Vanrobaeys, F., de Graaf, D.C., Devreese, B., Van Beeumen, J., Jacobs, F.J., 2005. The protein composition of honeybee venom reconsidered by a proteomic approach. *Biochimica et Biophysica Acta* 1752, 1–5.
- Peiren, N., de Graaf, D.C., Brunain, M., Bridts, C.H., Ebo, D.G., Stevens, W.J., Jacobs, F.J., 2006. Molecular cloning and expression of icarapin, a novel IgE-binding bee venom protein. *FEBS Letters* 580, 4895–4899.
- Peiren, N., de Graaf, D.C., Vanrobaeys, F., Danneels, E.L., Devreese, B., Van Beeumen, J., Jacobs, F.J., 2008. Proteomic analysis of the honey bee worker venom gland focusing on the mechanisms of protection against tissue damage. *Toxicon* 52, 72–83.
- Perte, G., Huang, X., Liang, F., Antonescu, V., Sultana, R., Karamycheva, S., Lee, Y., White, J., Cheung, F., Parvizi, B., Tsai, J., Quackenbush, J., 2003. TIGR Gene Indices clustering tools (TGICL): a software system for fast clustering of large EST datasets. *Bioinformatics* 19, 651–652.
- Piek, T., 1986. Venoms of the Hymenoptera: Biochemical, Pharmacological and Behavioral Aspects. Academic Press, London; Orlando; San Diego [etc.].
- Price, D.R.G., Bell, H.A., Hinchliffe, G., Fitches, E., Weaver, R., Gatehouse, J.A., 2009. A venom metalloproteinase from the parasitic wasp *Eulophus pennicornis* is toxic towards its host, tomato moth (*Lacanobia oleraceae*). *Insect Molecular Biology* 18, 195–202.
- Quicke, D.L.J., 1997. Parasitic Wasps, first ed. Chapman & Hall, London.
- Quistad, G.B., Nguyen, Q., Bernasconi, P., Leisy, D.J., 1994. Purification and characterization of insecticidal toxins from venom glands of the parasitic wasp, *Bracon hebetor*. *Insect Biochemistry and Molecular Biology* 24, 955–961.

- Richards, E.H., Dani, M.P., 2008. Biochemical isolation of an insect haemocyte anti-aggregation protein from the venom of the endoparasitic wasp, *Pimpla hypochondriaca*, and identification of its gene. *Journal of Insect Physiology* 54, 1041–1049.
- Richards, E.H., Edwards, J.P., 1999. Parasitization of *Lacanobia oleracea* (Lepidoptera: Noctuidae) by the ectoparasitic wasp, *Eulophus pennicornis*: effects of parasitization, venom and starvation on host haemocytes. *Journal of Insect Physiology* 45, 1073–1083.
- Rivers, D.B., Dani, M.P., Richards, E.H., 2009. The mode of action of venom from the endoparasitic wasp *Pimpla hypochondriaca* (Hymenoptera: Ichneumonidae) involves Ca²⁺-dependent cell death pathways. *Archives of Insect Biochemistry and Physiology* 71, 173–190.
- Robertson, P.L., 1968. A morphological and functional study of the venom apparatus in representatives of some major groups of Hymenoptera. *Australian Journal of Zoology* 16, 133–166.
- Safavi-Hemami, H., Young, N.D., Williamson, N.A., Purcell, A.W., 2010. Proteomic interrogation of venom delivery in marine cone snails: novel insights into the role of the venom bulb. *Journal of Proteome Research* 9, 5610–5619.
- SAS Institute Inc., 1999. SAS/STAT User's Guide, Release 6.07, vol. 1. 6.07 ed., (Cary, NC).
- Shevchenko, A., Leal de Sousa, M.M., Waridel, P., Bittencourt, S.T., Valle de Sousa, M., Shevchenko, A., 2005. Sequence similarity-based proteomics in insects: characterization of the larvae venom of the Brazilian Moth *Cerodirphia speciosa*. *Journal of Proteome Research* 4, 862–869.
- Schmidt, J.O., Blum, M.S., Overal, W.L., 1986. Comparative enzymology of venoms from stinging Hymenoptera. *Toxicon* 24, 907–921.
- Sharkey, M.J., Carpenter, J.M., Vilhelmsen, L., Heraty, J., Liljeblad, J., Dowling, A.P.G., Schulmeister, S., Murray, D., Deans, A.R., Ronquist, F., Krogmann, L., Wheeler, W.C., 2012. Phylogenetic relationships among superfamilies of Hymenoptera. *Cladistics* 28, 80–112.
- Shevchenko, A., Wilm, M., Vorm, O., Mann, M., 1996. Mass spectrometric sequencing of proteins from silver-stained polyacrylamide gels. *Analytical Chemistry* 68, 850–858.
- Strand, M.R., 2012. Polydnavirus gene products that interact with the host immune system. In: Beckage, N.E., Drezen, J.M. (Eds.), *Parasitoid Viruses Symbionts and Pathogens*. Elsevier, pp. 149–161.
- Undheim, E.A.B., King, G.F., 2011. On the venom system of centipedes (Chilopoda), a neglected group of venomous animals. *Toxicon* 57, 512–524.
- Veiga, A.B.G., Ribeiro, J.M.C., Guimarães, J.A., Francischetti, I.M.B., 2005. A catalog for the transcripts from the venomous structures of the caterpillar *Lonomia obliqua*: identification of the proteins potentially involved in the coagulation disorder and hemorrhagic syndrome. *Gene* 355, 11–27.
- Vincent, B., Kaeslin, M., Roth, T., Heller, M., Poulain, J., Cousserans, F., Schaller, J., Poirie, M., Lanzrein, B., Drezen, J.-M., Moreau, S., 2010. The venom composition of the parasitic wasp *Chelonus inanitus* resolved by combined expressed sequence tags analysis and proteomic approach. *BMC Genomics* 11, 693.
- Vinson, S.B., Stoltz, D.B., 1986. Cross-protection experiments with two parasitoid (Hymenoptera: Ichneumonidae) viruses. *Annals of the Entomological Society of America* 79, 216–218.
- Volkoff, A.-N., Jouan, V., Urbach, S., Samain, S., Bergoin, M., Wincker, P., Demettre, E., Cousserans, F., Provost, B., Coulibaly, F., Legeai, F., Béliveau, C., Cusson, M., Gyapay, G., Drezen, J.-M., 2010. Analysis of virion structural components reveals vestiges of the ancestral ichnovirus genome. *PLoS Pathog* 6, e1000923.
- Wago, H., Tanaka, T., 1989. Synergistic effects of calyx fluid and venom of *Apanteles kariyai* watanabe (Hymenoptera: Braconidae) on the granular cells of *Pseudaletia separata* Walker (Lepidoptera: Noctuidae): cell biology. *Zoological Science* 6, 691–696.
- Wan, Z.W., Wang, H.Y., Chen, X.X., 2006. Venom apparatus of the endoparasitoid wasp *Opius caricivora* Fischer (Hymenoptera: Braconidae): morphology and ultrastructure. *Microscopy Research and Technique* 69, 820–825.
- Waterhouse, A.M., Procter, J.B., Martin, D.M.A., Clamp, M., Barton, G.J., 2009. Jalview version 2—a multiple sequence alignment editor and analysis workbench. *Bioinformatics* 25, 1189–1191.
- Webb, B.A., Luckhart, S., 1994. Evidence for an early immunosuppressive role for related *Campoletis sonorensis* venom and ovarian proteins in *Heliothis virescens*. *Archives of Insect Biochemistry and Physiology* 26, 147–163.
- Whitfield, J.B., 1998. Phylogeny and evolution of host-parasitoid interactions in hymenoptera. *Annual Review of Entomology* 43, 129–151.
- Wood, C.L., Hoffman, D.R., 1983. Two-dimensional polyacrylamide gel electrophoresis of hymenoptera venom and venom sac extracts. *Toxicon* 21, 291–299.
- Wright, R.P., Elgert, K.D., Campbell, B.J., Barrett, J.T., 1973. Hyaluronidase and esterase activities of the venom of the poisonous brown recluse spider. *Archives of Biochemistry and Biophysics* 159, 415–426.
- Wuster, W., 2010. What's your poison? *Heredity* 104, 519–519.
- Yamamoto, T., Arimoto, H., Kinumi, T., Oba, Y., Uemura, D., 2007. Identification of proteins from venom of the paralytic spider wasp, *Cyphononyx dorsalis*. *Insect Biochemistry and Molecular Biology* 37, 278–286.
- Zhang, G., Schmidt, O., Asgari, S., 2004. A novel venom peptide from an endoparasitoid wasp is required for expression of polydnavirus genes in host hemocytes. *Journal of Biological Chemistry* 279, 41580–41585.
- Zhang, G., Schmidt, O., Asgari, S., 2006. A calreticulin-like protein from endoparasitoid venom fluid is involved in host hemocyte inactivation. *Developmental and Comparative Immunology* 30, 756–764.
- Zhu, J.-Y., Ye, G.-Y., Hu, C., 2008. Morphology and ultrastructure of the venom apparatus in the endoparasitic wasp *Pteromalus puparum* (Hymenoptera: Pteromalidae). *Micron* 39, 926–933.
- Zhu, J.-Y., Ye, G.-Y., Dong, S.-Z., Fang, Q., Hu, C., 2009. Venom of *Pteromalus puparum* (Hymenoptera: Pteromalidae) induced endocrine changes in the hemolymph of its host, *Pieris rapae* (Lepidoptera: Pieridae). *Archives of Insect Biochemistry and Physiology* 71, 45–53.
- Zhu, J.-Y., Fang, Q., Wang, L., Hu, C., Ye, G.-Y., 2010. Proteomic analysis of the venom from the endoparasitoid wasp *Pteromalus puparum* (Hymenoptera: Pteromalidae). *Archives of Insect Biochemistry and Physiology* 75, 28–44.

mmc4.txt

>AAR0AHA9YF14CM1|a disintegrin and metalloproteinase with thrombospondin motifs 3-like

AGATGCTAAGAGGAGCATTGCTGGTGATTGAGACTCTTATGATTGACGTTTTACTTTTTATCGGTTTTACCAAAATTTTA
TTTTTCTTCCAACCCCTTCCAGTTGATCCACTGGGGCTTTATAGAGACAAAAGAAGATTTGCTCCCCGAAGGGGAAGCTC
CCTGAGGTCGTTTATCCAGAAATTTTGTCTGTTCTCGATCATAACGCCGTTAGAAATCGTAAATAACCCAGACACTTAG
ATTTATGTTGGCTTTCTGGAACGCAGCAGACATGGTTTACA

>CL10-bisContig1|histone 2b

TTTCTCGTTGAAGGCTCGTACGAGACGGTTGTGTCCTTTGCGTACAAAACCTTTCTATCGTCAGTCGATCCGTGCAATTT
TTCTAAATCAAGAAACATGCCACCAAAAGCTAGCGGCAAAGCGATGAAGAAAGCTGGCAAAGCTCAGAAAAACATAACGA
AAAACGACAAAAAGAAAAAGCGCAAGAGAAAGGAGAGTTATGCCATTTACATCTACAAAGTATTGAAACAAGTACATCCG
GATACTGGAGTGTGAGCAAAGCCATGAGTATCATGAACAGTTTTGTCAATGATATTTTCGAGAGGATCGCTGCCGAAGC
ATCAAGACTCGCACATTATAACAAACGATCGACCATTACGGCCGGGAGATTACAGCCGCTGTGAGGCTCTTGTTACCCGG
CGAAGTTGCAAAACACGCTGTGAGTGAAGGAACCAAGCTGTACGAAATATACGAGCTCCAAGTAAACATTTCAATTAA
TCATCCATTTTATTACTGTGTGCCGAATCATGCGACGAAAAGTCTTCTAAGGACCTCTAATTGTTCCACCATCTTTGAA
ACACAAATCGCAATAAAATTTTACGAACGGCATAAAAAAGGCAATGTGCGGCCGAAAAA
AAAAAAAAAAAAAAAAAAAA

>CL1001Contig1|calnexin isoform 1

ATTCATGGAGACCGGAAAAAAGTAAATCGCTCGTGTAATAGATTAGATCGTAATTTATAAGTTAATTATATACAATACG
TGAATTCATTTGTTACGCGCCCTTTAAATTTAGCCACGGCCTACGAATCGAGTATTTGATGACCGTAACTTCGTAATC
GCAGGCAAAACAAATGGCGAAATTCGTGGTTTGTGCGTGATCCTGCTCCTCTCCGTTTTCGTCCCTATCTCATGGCAA
AAGAAAGCCATGACGAGGAGGAAACCATCTCTGTAGAATTACCGCTGTCTATGCCAGTCTGTACCTTCCGGCTTTGCC
TATCTTGCCGAACATTTTCGACGATATACAGAGGTTCAACAGCACTTGGCAAATATCACAAGCTAAGAAAGAAGAAATTGA
CGAGGACATCGCTAAATATGACGGAGTCTGGTGGTGGAGGAACCAACAAGAAGCATACAAGATGGTGACTTGGGTCTAG
TTCTGAAGAGCAAAGCTCGGCATGCAGCGATTTCAACGCTCCTAAGCAAGCCATTTACTTTCTCTGACAAGCCGCTGGTA
GTACAGTACGAAGTGAATTTTCAAGAAGGACAAGAATGCGGTGGTGCTTATTTAAACCTTCTGACACAACATCCCGAGC
ACGTCGATTTGAAAACTTTCCACGACAAAAACCCATACACGATTATGTTTGGACCGGATAAGTGTGGCAACGATCATAAA
TTACATTTTATATTCCGTCAAGAATCCATTGAACGGTACGATCGAAGAGAAACACGCCAAGAAGCCTAAGGAGAGACT
AGAGGACTATTTCAAGGACAAAGTCCCGCATCTGTACACTCTGGTATTGAAACCTGACAACACATTCTGTGATAAAAGTGG
ACAATAAAATCGTGAACGAAGGCTCGTTGCTCGATGATTTTACACCACCGGTTAATCCACCATTAGAAATCGAAGATCCG
GCAGACGTACAACCCGAAGATTGGGACGACAGAGAAAAAATTCCTGATCCATTAGCGGCGAAACCCGATGATTGGGACGA
AGATGCTCCCGCTCAAAATAGTTGACGAGGATGACACGATGCCCGATGGTTGGCTGGAAGATGAACCTCCCATTGATTCCTA
ATCCAGATTTCCGTTAAACCCGAAGATTGGGACGTGGATATGGACGCTGAATGGGAACCTCCAGACATACCCAATCCAAAA
TGTGAAGACGCTGTTGGCTGTGGCCCTATAAACAAAAAATCAAGAAAAATCCTCGGTACAAGGGAAATGGATGCCACGC
TTATAAATAATCCCAATTACAAGGAAATAGGAAACCCTCGACCTAATTCACAACCCCATTC

>CL1005Contig1|ump-cmp kinase

GGCACGACGTGTTCTGACATACAAAAAACAATTTGGTTACGTACACTTGTGACGCCGGTGATTTACTCCGCGAGGAAAGG
GCTAAGCCCGGTTCCGAATACGGTGAACCTATCGAAGGCCACATCCGCAATGGCACTATTGTCCCCGTGGAAATAACCTG
CAGCCCTTTAGAGCGCGCCATGAATTCCTCCGACACCCACATAAGAGATTCTCATCGATGGTTTCCACGCAACCAGG
ACAACGTCGATGGATGGACGAAGGAAATGGCGGAGTAAAGTAAATACTCAAGGGAGTGATATTTTGGAGTGCAGTGAGA
AGATTTGTACAGAGCGTTGTCTGAATCGTGGTCTGAAAGGTAGCGGTCTGTTCCGACGACAACGAGGAGTCTGTTGAAGAAG
CGGCACAAAACGTACATAAACGACACGATGCCGATAATCGATTACTACGAGAAATGGGCCTGGTTTACAAGTTCGATTC
ATCGCAGCCGACCAAAAAAAGTATTTTCGGAGGTGGAAGCGAAACTGAAGGAAATAGGATGGTAAGGCTCAGGGGCAAG
AGATGGCGTTGAGATCCTGACCGACGAAATGGACAAAATAAATCGAATGTCTTTTCTGCGGAAATATGGACTCGCGT
TGAATCGAAACGCGACGCCACGTAGATACAAAGTCGAGAATTTGGACAGGACAGTTACTCACTCATGATTTTTCTTTT
TATATAAATATAGTGTGGAATCGCGGGACGACGCGATTCAAAGAGAAACAAATCAGAGTTATATTTTTTCCAAGCTGCT
ACGAAGCAATATATAATTGAACAAACAAAACAAAACAAATAATCAAGGACAAAAAAGTAACGTGAGGACAGACGATAACGA
AAGAGATTAACCTTGATGACATTCCTTGTGCGAGGGTAGGCCATTGAGGAGCCAAGAAGCTGTTTACGCGAACCCCTAATA
ATCAAGATTACATTTTTTTTTCTTTTTTTTCTAATAAATGAGACAAACGTAACCTCCACGAGCCAATGAAGCCTTTTATC
AAGCGAGATATCTTTTATACACTATTATACACATAAAGTGTATATATTATATACGAAAAAATAGATAACGCAT
CGACGATGCATTTACCGTTTGGTTGCCATTATTAAGGGAAAAGGCCCTTCGATATTAATAATCAACCAATTATTGCGCTGTTA
TTTCAGAAGGTATTAGTACAATGATCGAATTATTAAGTTTTAGAGAACATGGCACTTGGTCTGCTAATAGAAAACGATGAA
ATATATTGTCAATTATCCGAAAAAAAAAAAAAAAAAAAAAAAAAATCATGTGCGCCG

>CL1006Contig1|endoplasmic-like isoform 1

ATACAGCACAAACATCAAGTTGGGAGTTATCGAGGACGCGCAGAACCGTGCGCTCTCTCCAAGCTCCTGCAGTTCAAAT
CGTCCAAGGAAAAATCTGACGAGCCTGTGCGACTACGTGTGCGGTATGAAGGATAATCAAAAAGCGATTTATTACATCGCC
GGAGCGAGCGAGGACGAAGTTAAGAAATCGCCGTTCTGTCGAGCGTCTCGACAAGAAAGGGTACGAAGTTTTGTACCTCAC
AGAGGCCGTGACGAATACTCCATCTCGCGTTTGCCTTGTTCGATGGCAAAAAGTTCCAGAAGCTTGGCAAGGAAGGAT
TCACCTCTGACGACAGCGAGCGCGCAAGGAGCGCTTGAAGAACTCAAGACCGCTTGCAGAGCCGTGACCAATGGCTG
GACGAGCAATTGGGCGAATTCATCAGTAAATCGACCGTCTCGAGCGTCTGACCGACTCACCGTGCGCACTCGTCGCCAG
CATGTTGCGATGGACCGGAAACATGGAGCGATTGGCCGTCTCGAACGCCACCAAAAAGCCGACGACCCACAGAAAAGTT
ACCATCTCAATCAGAAGAAAAACCTACGAAATCAACCCCGACATCCCTCATCAAGAAGTACCTCAGGCGGTACCGCCG
ACCCGCGNACAAGACTGCCAAAGACACTGCCT

>CL10079Contig1|kinesin heavy chain

AAGAAAAAGCAGCGCGTTTTAAGGGGAAGGTTGAAAAGCTCGAATCGGAATTGGCCCGTTGGCGCAAGGCGAAACCGTT
AAACCCGAGGGAACAAGGTCAATCTCGTTGAAGTTGCGGAAGTCATTACTCCAGTGGTTCCGCCTCCGGAAGGTGCTGTT
GAGGAGGACCGATGCCCGGATACCAAGAGGTGGCCTAATGGCTGGTTCCCTGTGCAACGAGGAGCGACAAAAAATTGG
AAGAAAGCGCGAGCGCTTGTTCGAACAGCTGGACGACAGGATGAAGAAATAAACACGCAATCGCAATATCTCGAAG
CTCAAGGAACAACCTTGAGGAACAGGAGGAACCTCATAGCTAGCGCTCGACGAGACTATGAACAATTGCAGCAGGAAATGAG

lagina p

TACGATAAACCTTGAGACTGAGAGCGCGAAAGAAGAGGTTAAGGAAGTTTTGCAAGCTCTCGAGGAGTTGGCAGTTAATT
ATGATCAAAAGTCCCAAGAGGTTGAAATAAAGAACAAGGACACGAGCGACTGGACAGAGGAATTGTTGGCGAAACAAGCT
GCCCTCAATACGACTTCTTCGGAAGTGCAGCAGCTGCGAGACAT

ATGTGGAGGCTACAGCTCCGCTGCGTTTTCTATCGCCGAGCTTCTCGCACAGAGTCTCGATGTAATTTTAAATCCCAGCAAT
TAAAAGTTTTCTCCTTTTCGATCGCGAGTTTTCGTATTTTTATTTATTTTTCTCTTCGTTTTATTCAATAAGAAAATACCTCG
TCGCACACACGAGACGTGAATCTCGATACCGTCGAAAAAACAGTCGGAATTATCGCGGTTGCTCTCGTAAAGTTCGAGT
CGGTGACCTTTTTCTTTTCGCTTTATTTTCGTTGCGGAATATCGACTCGCGAATTTGGATGCAATGTTGGTCTCGACCATT
GTCACGTGCCCTTTCGTCGGCGGATTCTGCTGTTGCGGGGCCATTTCCCAACCCGAGGATGAAGCGAAAAACAGAACTCA
GCACAAGGAGTTGAGCGCTCAAGAACACTTTATAAAATCTGAGCACAATCCGGAGTACGATCATGAAGCGTTTCCTCGGC
AAGAGGCCAAGACGTTTGACCAACTCACGCCGAGGAAAGCAGAGAAGGCTGCTCATGATCGTCGACAAAATCGACAAA
GACAACGACAGTTTCGTGACGCAGGAGGAACCTCAAAGACTGGATCAAATACACGCACCAGAGATACATTGCGCAGCAGCT
AGAGCGTCAATGGACGTGCGACAATCAAGAAGGCGAGGAAAAGCTCGCGTGGTCCAATACAAATCCATGGTTTACGGAT
TCATGGAAAAACAACCAAGGCGAAGACACCGACAACCCGGAGGACGAGAATTTCTCGTACGCGACGATGCTGAAACGCGAT
CGGAGGCGCTGGTGGTAGCCGACCAGGACGGAGACGACGCTTGACCAAGAGGAGTTTACCCTGTTTCTCCATCCGGA
GGAACTGAACATATGAGGACGTCTGTTGTTGTTGAAACCTTGAGGACATCGACAAGGACAAGGACGGCAAGATTTCTT
TGCTGAATATATCGGTGACCTGTACCGAGGCCAACGACGACGAGGAAGAGCCGGAATGGGTGAAGAACGAGAAGGAACAA
TTTTTCATCCTACAGAGACAAGAACAAGGACGTTTTCTTGACCCCGAAGAAGTCAAAAATTGGATAATTTCCGCGGATTT
CGACCACGCCGAAGCGGAAGCTCGTCACTTGATATACGAGGCGGACGGGGACGCTGATCAGAAGCTAACGAAGAACGAGA
TTCTGGAGAAATACGATATTTTTCTGGGTTTCGAAGCGACCGATTTGGTGAAGCTCTGGCGAGGCACGACGAATTTTAA
AAAAGAGACAACCGAGCTCCACCGATTCTCACGAGTTTTCTCTCCAATAAAAATCCATCAACAACAAATCATAAAAAGC
ATAATATATATTTATACCAATCGTTAATAACAAATTAGTCTCGTAGAAAAAACGTTAAATAAATTTTTAATACTCAGAT
GATGATTAATGAAAGAAAAATCGACAGATTTGCGTTACGCGAGGACGTCAACCTTTTNTCCAACATTTAGTTGTTTAAAC
CTTGAGACTCACACCTCCGATTGTGACGTAACAGCCATTGGGGGTGTTATCAACCGCACTCGCTTGGAAGGCGCCAAA
TGGTTGAAAAATCCTG

TCTTTTCGTCAGCCAGATCCGAATCAACGACAAGATTCACATGGATTGTTGACATATTTAATTACATTTGTGCTGTAACA
AGTGATTCCAAATAGTGTAATATTTCGTTGCAATAATCACGGAAATTAACCTCAAATCAGCCAAATGGTACTCTCGTG
TCGATTTTACAAAGAAAAATATCCCGAAGTCGAGGATGTTGTTCATGGTAAATGTACGAAGCATCGCCGAAATGGGGGCTT
ACGTGCAATTTACTCGAATACAAACAACATCGAAGGCATGATCTTGCTCTGTAGTTGTCGAGGAGAGCTATACGTTCCATT
AACAAAGCTCATCAGAGTCGGCAAAAACCTGAACCAAGTCGTTGTCTACCCGAGTTGACAAGGAAAAAGGTTACATCGATTGTAG
TAAACGTCGTGTTTTCTCGCGAAGACATAGAAAAGTGACACAGAGCGTTACGCCAAGGCGAAGGCAGTCAATTCCATACTCA
GACACGTGGCCGAATTGTTGCATTACGACAACGACGATCAATTGGAAGAGCTTTATCAAAGACGGCATGGCACTTTGAA
GAAAAGTACAAGAAGCAGAAAGCTTCGGCGTATGATTTCTTTAAACAATCAGTATTGGATCCCTCTATTCTAGCAGAGTG
TGGTCTGGACGACCTGACCAAGGACGTGCTCTTGGAACAACATCAAACGCGAAGTTGACGTCCCAAGCAGTTAAAACTCAGAG
CGGATGTTGGAAGTCGTTTACGGTTACGAGGGAATCGATCGGGTAAAAACTGCCCTTAAAGCCGGTTTGGCGCTCTCC
ACGGAAGAAATTTCCAATCAAGATCAACTTGATCGCTCCTCCTCTCTACGTATGACGACGCTGACTCCTGAGAAAGCGGA
TGGCCTGAAAGCTCTCAATAACGCGATCGAGGTCGTAGAAGCGAAGATCACAGCGCTGGGCGGTGTTTTCAACGTGCAAA
TGGCGCCTAAGGTCGTAACGGCAACGGACGAGGCCGAACCTTGCTCGGCAATGGAACGTGCTGAGCTCGAGAATGCTGAA
GTCGCTGGAGACGACGACGAGGAAGAAGTCAAGGAATGGGCGATTTTTAGCGGGGGGAAGGGAGACGACGATTTAAAAA
CAGACGACGGCCCCCGGAGGATGATTTAAATGGCCGCCACCTGTTTTTTTCTTCTCCCCGCACATAAACCGACATTTTCG
CATCGTTGTTGTTGTCGGGTTCTCCATTTTCTATTCTACGGATATGAAACAAATATCGCGCTGCTCGAAGCTCCGAAAC
GAATGTATAACCGGAATTTTACAATTAACAAAAACG

CGGCCGGGGACAATGAGAGCCGCAATCACGATACTTCTGCTTGGACCTTTGC CGCGGAAGGGCGTTTGGTCAAGGAATTT
TAGGCCAGGATTTACCAAAAAATTTACTGGAAAATATAAATCAATTGAACGCCGGCATTCAAGGCAATGTTCAGCGCATG
GTTTCATCAAATTCAGAAAAATGTT CAGGAACATTTGGCACGAATTGATCGTGTAATAGAGACATGGCGGCGAAACTCGG
TAAAACTGGTCTAAGCACGCTGTCGCTCGGCAACGGATCAACTATTTTAATCAACGGAGCTGGCGGGGTATCGAGAACGG
TTTTCTCCGGCCAAACATCGAATGGTGAACCTATTTTCGTGACAGCGAAGACCGAGTCTGTTGGTAACATTCTCCATCAT
ACCGACAGAATTTATAACCCGCAAAACACGAAAAATGGAAGAGTTCAGATACACTCTCGATCTTACCGATCCAGAGGCAAA
GCCTGTACCGGCTTAAAAAAAATAATTCAACTCATGGGGTAAACAAACAAAAGAAATGCAACTCTTTTGTAGATTGTA
GGAGAAAAAAAATGCATTTTTTCTCGTCCAATACCATGAGCTTCTGTAACCATTGATTCTGTGGAAGATGATTGCGTAT
ATTTTTCAGCTAAATAAATTTAGTTGCTATTGACCAAAAAAAAAAAAAAAAAAAAAAAAAAACCATGTCGGCCG

GTCTCTTTCAAACACG^{CC}AAAGATGTCGAAGAGAGGTAGGTTCTTGCAGATTTTCCGTA^{AAAT}CCATAATAATCGGCGTTA
TTAAGGAGCATCCGTTCTCGCGAGTGTTGAATATATAAATACAATAAAACGACGATGATTCTGTGGCACAAGATTTTTTTA
AAAAAACAACTGTTAATGAAAAAATAATGAAATGTGAAGTGACGGGTGCCGAATGGGCGCTGTGTGTTAATGTTATTTACG
TGCTTAACCAAACTTTTCATCGAGTCTCTATTTTTCCGTCATCACTAATTGTTGTTTTCTTTCCCAAGGACGTTGGTGA
TCAGCGGAGACCAAAATTCGGGATATCGCTGGGTCTTCAGTCGGTGCCGTAAATCAATTGTGCCGACAATACGGGAGCCAA
AAATCTGTATGTCATCGCTGTTACGGGAATCAAGGGACGTCTTAATCGTCTGCCTGCTGCAGGTTCCGGCGACATGATTG
TTGCAACGGTGAAGAAGGGCAAACCTGA^{ACT}CAGAAAAAAGGTAATGCCAGCGGTGGTTATCCGCCAGCGGAAACCATTT
CGGAGGAAGGATGGCGTTTTTATATATTTTCGAGGACAATGCCGGTGTGATTGTCAACAACAAGGCGAGATGAAGGGTTC
CGCGATAACGGGTCCCGTCGCCAAAGAGTGTGCTGATTTGTGGCCGAGAATTGCATCGAACGCGAGCAGTATCGCGTAAC
TTGATTAATTAATGAAATATCATCGACAATTACTTTGTTACAAACGCAAACTCTTTTTCGCCCTTGTGAATAAAAAAGA
AACACAAAAAAC^{CC}CAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATGTGGCCG

2agīna p

mmc4.txt

TCTCGATAATCGTAGATCTATAGTTTTAGTGGTAAAAAATCGTGATATTTGTTAGTCGATTGAAAAAAGCGATGATGC
GTTTTTCCAAGTGGGCGATAATCGCGCTGGCGTTTTTCATTGTCGATGTTAATTGTATCCATTGGTATCTGGAGCCGAAC
GATCAGAAATGCTTGAAGGAAGAGCTGCAAGGTGACGTTCTCTTGACCGGCGAGTACGAGATCTCGGAGGCGCCGGTCA
GCGAATCGACTACACGGTCAAGGACTCCAAAGGACACATCCTCGCGCAGAAGGACGACATTCCTTCGGGAAAACCTCTGA
AATTTTCATTTATCACCGAACTTACGACACTTTTCAAATTTGCTTTTTCTCCAGAGTTCCCGCCCATCAACGTGGCGCG
AAGCAAGAAGTAAAAGTACGACAAAGCATGGAATCGAAGCCAAGAGCTACGAAGGCATCGGGGAGCTGCCAACTCAAA
CCCATCGAAGTCAAACGACTGGAAGATCTTCTCATGCAATTGTTCAAGACTTTGCAAGGATGAGGAAGAGCGA
AGAGCAAATGAGAGACACTAATGAAACGACGAACGCCCGT

>CL1017Contig2|leukocyte elastase inhibitor-like

GTATTGATCGCATCGCATTCCATGACAATGGCATCCGTCCAAGAAAAGACTATTCAAAGATATCAACCGCTGTGCTAAAG
CTGTTGCGAGTTTTTATCCAAATTTACAGAGCTGTGGCACTTGGAACTGAGGAAAATGTTGTGGATTCTCCTCTGGGGA
CGCATCTTGCTCTGTCTTACCTTTTCCACGGCACGGATAATCACACTGCCAGAGAAATTGCAGCTGGACTTTGTCTGTCT
GACACCGAACAGCACCATTTTGAATATGCAGAAATCATAAAATTTTCAACAGTATCAAGTCGTTAGAGCTGACCTTGA
CTAATGGGATTTGCTCCAGAACGGTGTGCAATGCACGAGACATTCCAAACGAAAGGAATCGATTCTATAATTCACG
ATAGAAAATGTTGATTTTCGGTGACAAAAGTGGGCTCCACAGAGATAATAAATTCCTGGGTTTGAAGCAGACCAACGAAAA
AATAAAAAATATTGTTTCTCCGGATGACGTTGATGAATTCACGAAAGTTATACTCGCCAGTGCATATACTTCAAAGGCA
AATGGAGACAGCCGTTTCGATGCGGCGAAAAACGGAAAAAGAGAGTTTTCCACGCGACGAAAACAGCCAACCTTGAAGTTGAT
ACCATGTTCAAAGAGTACAAGTATCGACACGGAGAAATTCGAGTTTGAATTGTCGTTTCATCGAAATTCATACATGGA
CGTAATATCGACATGATTATACTTCTGCCAAAACGAGATCGAAGGATTGAAGCATGTGGAAGAAAAATTCGATTGGAAC
GCCGTTGTTAATGCGAAAGTTTGGAAACGCTTGACGAAATTTGATTTACCGAAGTTCAAAGTTGAGGCGACGATCGAATT
TGAAAGGACGTAAGTCTGCAAGCTCGGATTCATTCGATGTTGCAAGCAAACGCTGACTTGACGAAAATGTCTGAGCTTCCA
TTGCAAGTCAAACAAAGTCGTTACAAAAGCGTATATCGACGTTAACGAATACGGAACCGAAGCAGCAGCTGCCGAACGGT
CG

>CL101Contig2|thioredoxin-related transmembrane protein 1-like

TATATTTAGACGTTACTTGTATATGTATATATACTTATATTTATATATATATATATAGTAAGATCGCGCAGAGTGTGT
AAGTTACCGGTCCGATTTTGAAGTGCAGTAGAATTTAATAATATATTTCCGTCACGTACAGCATTTTAGAGAAAAAAGGATA
AATCGTTAAATATGAATGCATCGTCGAGGATGAGTTTTGTCTCGGTGGTCGCAACGCTTTTGTGCTGTTCTGTTTTGGTC
AGGAGCAAAATTACAACGTTCCGAAAGTGATGTCTCAGTATCGCGGCTCAACGAGGATAACTGGGATCTCATGTTAACAG
GAGAAATGGATGGTAGAATTTACGCGCCATGGTGTCTGCGTGCGAAGGCGCTCGAACCAATTTGGGAAAAATCTCGCCT
CTCAAAAGAGAGAGCTGGCAATAAACGTGGGGAAGGTGGATGTAAGTATTACCGGGCTCAGCGGCAGATTTATGGTC
ACCGCTTTTACCAACAATCTATCAGTCAAAGATGGCATGTTTCGTAGTACAAAAGTCCCGTGACAAGGATCTTTTGA
TCAATTTTGTGACAGAAAAAATTTGGAGCAAGGTGCATCCCATACCCAGTTGGAAGAGTCCCACCTCTGTGCAGATGTCC
ATTATCAGCCAGTTCTTCAAGATGTCTCAAATACTTCGGGGAGTCCACAATCAATTGATGGAAGACTTTGGTCTACCGAC
GTGGGGCAGTTACCTGATTTTTGCAAGTCGCAACGATTCTGCTCGGAGCGGTTCTAGGATTGGCGATCGTTTGCTTGATCG
ACTTCATATACCCGCCGAAATCGACAGGACCACAAGACAAAAAGAGAAAAAGACGGTTCCAGTGGTTTTATGCAAAATG
AAAAGTTTGAAGACGAAGATTTGGTAGAAAAATGTTAAAGACGATCTTGTGGATGAAGACGGCAGCGGTTTGAAGACCA
GAACGATGACAATGAGAAAGATTCCGCAAAAGGAACGACGAGCAGTCTAACGTTCTGTAACGTTAAACCTCGAAAAGCCG
ATTAGATATTTTCAACTACTGTTTTTTTTTCTACTTTTTCTGTTTCCATCCTTCTTTTCCCCCTTATGATTCT
CCGCCTGTCGTTTCTATTTTTATTTTTATGTTTTTCAAGTACTTGTCTGCTCGAACGAACTTCACT

>CL1022Contig1|ubiquitin-conjugating enzyme e2 n

GGAGGGCGTAACGTGTGCCGGAGCAGAGGAACAAAAAAGTCCGCACCACCGAGGATCGCCTGTGCGGTGACACGAGCATA
TTTGCCGAACGCAAAAAAAGAAACGAACAAGATAAACAAGTATGTTCAAAAAATGGCTGTATTGCCACGAAGAATTGTCA
AGGAAACACAGAGACTGATGACGAGGAGCCGTACCGGGAATAAGCGCGTACCCGAGAGACAAACGCTAGGTACTTTTAT
GTAATTTGTAACCGGACCGGACTCGCCGTTGCAAGGAGGATTATTCAACTGGAACTTTTTTGCCCCAGGATTATCC
CATGTCCGCGCCAAAAGTTAGATTTATTACAAAAATCTATCACCCCAATATCGACAGGCTCGGTAGAAATTTGCTTGACA
TTCTGAAGGATAAATGGAGCCCGGCGCTCCAAATAAGAACCGTTCTGCTGTCCATACAAGCACTCTTAGTGCCCCAAT
CCGGATGATCCGTTGGCGAACGATGTTGCCGAATTGTGGAAGTAAACGAGAGCGAGGCGATACGTAATGCCAAAGAATG
GACTCGTAGATATGCCATGGACAACCTGATCTCCGCCCTATGTGCGATTATTTTATCATTTACCGTACGCGCTGTTGTT
TAAACAAACAATATCTTTTAAACACTTACCTCTCGGACTGCGTAAAGAAAAATTTTAAACAAACAACCTTA
AAGAAACGCAAGAAAGACAAGAAATAATAAAACACTCGTGTCTCAGACAATTTTGTACGCAAAACAATAACGTTTTGT
AAGAGTGAAAAATGAAGAAAGAAACAAAAAGTCACAACGGTACTGATTTTTCTATAATAATGGCTTGTGCGCAAGTTTGA
TGATTTCTTTTATTCTCGTTGCAATGTTGTACGAACCTTACGAGATAGTATTTTTCTCGTGATACAAGTTTCTCGCGCTC
AGACCTCGGAGTTGTATAAAAAATGAAGAAAAAAGATTTAAGAGAAAAATCGATGTTTAAACAAAGAAAAACGCCATT
TGCTCCTGCAGACATTAATAAACGATGAATTTCCGAGGCAATTCGTTACTTTGCAATTTCTTTGCTCCCTTTATTCA
GCTCCATTCTACACGCAAAACGGATATTTGTTTTTTGTCTCAGCGACAAATACTCGGATCTTAATTCAAAAAATGTAGATT
TATATCTAATAAAAAATCAATAACTCGAAAAAACAATACTTTTTCTTACACTGACGCGAATGTCAATTAACGCGGG
AAAACGTTAGCAACGAACAAAAACCAAGAAGTTTCTTTGTTTTCTTATATTTTCTAAAGTAGACCAACCAATCTC
CGAGAAAAAGTTAGTTATTTT

>CL10266Contig1|spectrin alpha chain-like

AGTAGTGTACTGTACAGCGCCGGTGTGCAACGACATTTGTCAAATCGAACGAATACAAACGAAAAAGTGGTGACAGTAC
GCCGAACCTAAAACGAACTATTGATCGACCCAAGTCCATTTCCGTTTGGCACACCCGTCGGCCATTTTGACCCACTCGAA
CGCGAGTTGACAACTCGGCGTTTCGAGTAATTATCAGTTCTATCAAATCCATTCCATATCATGGATCAAATTACCCCAA
AGAAGTTAAGATCCTCGAGAATCCTGAAGATATTCAGGAACGTCGTGAACAAGTGCTCACTCGTTATGCCAATTTTAAAG
CGGAGGCTCATCACAACGAGAGAACTCGAGGATTCTCGTCGCTTTCAGTATTTCAAACGCGATGCAACGAGCTCGAA
GGATGGATTTACGAGAAGCTCCAAGCAGCTTCGGACGAGAACTACAAAGACCCGACGAATCTTCAAGCAAAGATACAGAA
GCATCAGGCTTTTCGAGGCTGAGGTGGCGGCCATTCCAACGCAATAGTCTTACTGGACATACGGGCCAAGAGATGATAGCG
CAGTATCGATTTTCTAGTCGACATTGATTCG

>CL10279Contig1|hypoxia up-regulated protein 1-like

mmc4.txt

AGGACCAAAAAATTAACAAAATGCAGGCAAAAGGAATTTTCGCTTTTTCGATCATTTTCTTTGTTGCCTCTTTTCCGAGGC
ACATCCGATGGAGTCGAGTCATGAGCATCGACATCGGCACCGAGTGGCTCAAAGTTGCTATTGTTTCCCGGGCGTCCC
AATGGAAATTTGCTCTGAACAAAAGAAATCGAAGAGAAAGACGCCGATGGTGCTGACGTTCCGCGGTAACGAGAGATCGTTTCG
GCGAGGACGCGGTGATCGACGGTCTGCGATATCCGAAATCGAGTTTTTCTCACTTTGTGAGCTCCTGGGAAAGCCACTG
GATCATCCAATCGTAAACTTTACAGCGAGAGATTTCTCATCAGAGTTGATCGAGGATGAGGAAACGAAGACCGTGGC
TTTTCGGGTGGACGAAAATACGACGTACACGCCGCGGAACGTGCTCGCACAATGTTGCACAAAAGTCGAGAATTCGCGG
AGAATTCAGCGCGGCAAAAAATCAAAGACGCGTTATAATCGCCT

>CL1027contig1|anamorsin homolog

GTTTATATTTGATATTTCGAACGAATGTGTACGCATTGTGCTTTGCCGTAAGTACGCAATTTCTGCAACTTGAAATCA
AAATCACCACAGTTTGAATTTCTTAATTAAGAGTGAAATCCTCGAAAGTACAAATTTCTCAAACATGACTAGTTTGCTAA
AGAAAAGTGATAGTGTGCAATTATTCTCAACAGCAACAACGTGATGCGAAAGAGTTCTGCGACGAGGTTAACCAATT
ACCGAATCAGCTGATCGTACTGCAATCGTGCAGTCATCGGACTTCCAAAAAGGCGATTACAAGTCGTCGTCTCTGGATGT
GATTTTTTTCATTCTCCAATGTTGACGATCATGTGCGACAAATATTACGAGTTTTAAACCAGGAGGTGCACTTGTGCTCT
ATCAAGCAATGCACCTCCAGAAGAACGACGTGCGAGCAGTTGTTGCCAGCTCTATTTCAAATTTGAAATTTAGGTGGC
TTTAGCATCAAAAGCACAAACAGCCGAAGCAGTACCTTCGAATATGACGAAGAAGGGACTTTTTGCACAAGTCAGGATGG
AGTCTGCAAAATAATTGCTGAGAAACCTGCCTTTGAAATTTGGCTCGTCAGTCAAATTGAATCTCACGCAGCCAGCTTCCA
ATGTTTGGAAAAATCGATGATGTCTGATAGAGGACGACCTGATAGACGAGGATAATCTTTTGGATGAGGAAGATATAATAAAA
CCTGAAGAAGCATCTTTGAGAGTGTGTGGAACGACGGGAAAAACGTAAAGCCTGTAAAGATTGCTCGTGCAGGATTGGCTGA
AGAATTGAACGGAACACGCCGCAACCAAAAACTGCTAATTCATCATGTGGAACCTGTTACCTCGGAGATGCATTCCCGT
CTGTGGAAGCTGTCCTTACCTCGGAATGCCAGCGTTCAAGCCAGGCGAGAAACGTGGGTTTTTGGCCCGAAGGGCAATTG
GCAGCCGATAACTAGCGACGACTGAGTGTGGGCGGGTTGTTTTTTTTTCGATTACAACCTTTGCTTTTAATTCCTACT
TTTCACTTGCTAATTTGACTAAGTTTTGTTATCGTATATTGAAC

>CL1031contig1|myosin light chain alkali-like

TTTCTGGTTCAAGCTCCGTTCCGTTGAACATCCAGAAGCCATCAACACATACTCAACAGCAATGGCAGTGGCGGATCTTAG
TCCCAGGAGCTCGAGAAGTCGAATTCGCGTTTTCCATCTACGACGCCGACGGCTCGAACGTATCGATGCTTTTCGACC
TCGGCAACGTACTCCGGGCCCTCAATCTCGCGCCGACCAACGCGACGATCGAGAAAGTCGGAGGTACCCAGAAACGAGGA
GAGAAAAAAGTCACGCTGGAGGAATTTTTGCCGATCTATGCCGATTTGAAGGTGAACGATAAGGACCAGGGTGGTTATGA
GGATTTCTCGAATGTCTGAAGCTTTACGACAAGGCCGAGAACGGAATGATGCTCGCGGCTGAAGTGTCCAACATGCTCC
TCACCGTCGGTGAGAACTTTGAAGATGCCGAAGTCAATATGGTACTCGAAGAGTGCATGGACCCCGAGGACGAAGATGGT
TTCATCCCTACGCACCATTTCTAAAGAACTCCTTGACGATAGATTACGAAGCGATGAGCGGCGAGCTGAATCGAAGA
TTATGTTATCCTTTTCTCGACGGATGTGCGACAAGGCCGCTCCGGTGAAGAGTTCTAGACCATGATAAGCCCGACGGA
GAATGTCGAGGCGCAACGACGATTACACAGCGGCCGTCGAAACGCAACCAACCTTCACAAACAGAAGAAAAAATC
GAACAATCTCGAAATTTCCCGTTGTTGAAAGTAATTTTTTGAAGGAACTCTCGATGCGACGTCTCCTTGAACGGCAAC
AACAAATAAAATATCTTTGACAATACTCCGACGAGCGTAACAGACGAAAGGTCCATCGCGAAGCAAAGATTGGAGCCACGG
AGTAGGGCGTCACGAGGAACTCGAAAAAGTGGCCCTTGTCTCTCTTATTCCCTTCCGCCCTCGCTCCGACCGATTTCG
CAAAAAAAAAAATGTCTTCACAAGAAACAAAAAAAAAACAAGAAAAAATAACAATTTTACTAACTAACAATTTTAGT
CAACGACATCGAGACGCAACGAACCAAAAAATAAAACAACGA

>CL10355contig1|heterogeneous nuclear ribonucleoprotein u-like protein 1

TATATTGACGAAAAATTTGTACATTCGAGTGTAACTTTGGCCAAGAGAAAGCCTGGTGCCAAGAAATTCCTCAAGGTTATA
TGCCCGTTGGTTTCGTCGAGTTGAAAAATCGCGTTTCTGGACCTCGTCGACCGGAAAAACGGAGGACTGTGAAATCATAA
TGATGTGTGGCTTGCCAGCTGCAGGAAAGACGTTCTGGGCGACCAAAATACGCCGAAAAATCACCTGAAAAAATGTTCAAT
ATTCTGGGAACCAACAGTTTAATTGAAAAAATGAAAGTAATCGGTTTACCGCGAAGACGAAATTACCATGGACGATGGGA
CGCTCTCATAGAAAAATGCACGAAATGTCTGAACAAATTTTGAATTTGGCATCGACGCGAAGAAGAAATACATTCTGG
ATCAGACGAACGTTATCCATCCGCTCAACGGCGTAAAATGCGTGGTTTTTACGGTTATCAACGACGAGCTATAGTGATT
GTACCAACGGAAGAGGAATTCAAAATCCCGGACGATAAAGCGAACAGCGAGCGAGGGTGAAGTTGTTCTGAAAGCGGGC
TCTTAGAAATGAAAGCAAATTTTCGGTGCTCCCGTGGTGGTGAACGTTTCGACGTCGTGAATGGGTGAATTTGCCAGCG
GAAGAGGCCAAAAAAGTTGATTGAAAAGTACAACAAGGAGGGGCAAGAGGCGGGATATGGACAACAACAACAACAAC
AGCAACAACAACAAGAGTAAACGACCGCGGTTTCGAGAGAAACGACAATCACAGAAGACAGTCGCGACAGCCGGCAGAACA
TCGGGACAACAGAGA

>CL10407-biscontig1|trafficking protein particle complex subunit 2-like

AGCTGTTTTTCGAAAAATATAATTAATGGTTTTATGCAGTAATTTGTCAATTTTTCTACCCAAATCTCGTCTATTTTCGA
TATTTCTTGACTTCTGATATTCCATGAACGAGTGCCTGACTTCTAGCAACAACGCCGTACGATAGAAATTCGATCAGA
AACAGTGGATGTTTCGCAAACTGTCAAATTTCTACGAACCTGCTCCGTGAGCTTGTCAACTCGACGATTATTTATCGGATT
ATGATTAATTAATATTTTTCAAAGCATCGAAATGGCTGTTTGTGTCGAGTTATTGGGAAAGACAATTTCCCAAAATATA
TCAAGTGCAATAACGAATCGAATGCGCTACAATTCATAACAAAGTCCACACCTCCATCGACATCATCGAAGAAAAGTTG
AATGTCGGAACCAAGCAGCGACCGATACACGAGAATATTTTTTGGGGCTTTTGTCTCCACGGAAGAACAACAAATATT
TGGATATGCAACTAATACGAAAAATCAAATTCGTCTGATGTTCTGCAGTCAACAAATCCATCGCTCAGAGACAACGACGTAC
GAATGATTTTTTCAGGAAATTCACGTCGACGATTCCAATGCAGTTTGCAATCCATTCTACATTCCAGGCGAACAGATAAAT
TCCAGGTCGTTTCGAGGCTTCTGTGNGGATNTTATGAGTGT

>CL1041contig1|catalase

AAATTTTACACGGAGGAAGGAATATGGGATCTCGTTGGCAATAATACACCAATATTCTTCGTCAAAGATCCATTGATGTT
CGCGAGCTTTATCCACACCCAGAAACGAAATCCTGTCACTCACCTCAAGGATTCTGATATGTTCTGGGACTTTTTGTCTC
TTCGTCCCGAGTCGACGCATCAAGTTATGATACTGTTCCGGCGATCGTGGTATTCTGATGGATATCGACACATGAATGGC
TATGGTTCCACACTTTCAAGCTCATCAACGACCGCGACAAAATGGTCTACTGCAAATTCATTACAAGACCGACCAAGG
AATCAGCAATCTTTTGGCGGAAAAAGCAGCACAGCTGGCATCATCGGATCCGGACTACGGTATCCGAGACTTGTCAACG
CGATCGCCAAGGGGAATTATCCAACCTGGACATCTATATCCAAGTGATGACGCTCAAAGAGGCCGAACTTTCCGATGG
AATCCCTTGCAGCTTATCGAAGGTATGGCCGCAACAAAGATTTCCCTTGATACCGGTGGGTAACCTCACCTCGATAGAAA
CCCAGGCAATTTATTCGCCGATGTGAGCAATTTGGCATTTCGATCCTGCTCACATGCCACCGGGAATCGAGCCGAGTGGC

mmc4.txt

ACAAAATGCTCCAGGGTCGTCTCTTCGCTTACGGAGACACGCACAGGCATCGTCTCGGGCCTAATCATTTGCAGCTTCCTGTCAATTGCCCTTACAAGGTCTTATCAACGATGAATACCAACGAGATGGTCTCATGACGTTAAACAGTCAGAACGGGGCTCCGAATTTATTTCCCCCAAACAGTTTTAGCGGGCCCGCAGAAATGTCGGGAGTGGCTTCTCCGACTTTCTACGTTGCTGGCAACGTAGATCGTCACGAGCCCGTTGGCGAGGATGATTTAGTCAGGCGGTACACTCTATCGTGACGTACTTGACGAGGACGCAAAGACGCGTCTCGTGAATGCGCTGGTCGGCAGTCTCCTTGGCGCCTCGAACTTCATTGTCGAGAGAGCAGTGAAAATTTTTGCTCAGGCTGACATTAACCTCGGCAGAAAGTTGACCGACGGTCTCAGACGAGGTGGCAAGAATATCAACATCTCCGAAAAATCTGCTAATCTCTGAACACGTTAATTCACCAAAAAAAATTTGGTGCTCGGGTCTGTATCTTTGAAATGCAAGAATATATCGATTTTTTGTAGTCTTTTTGTCTTGGCTCCTCGATTCTACGGAAGAAACGAGACATTTCTGGCAAATTAACGATAAAAACGCCAGTTTTCTTTGATTCCAACGATACAAACTTTTTGTACCGAAAAACGCAAATTCGCAAATCTGAAC

>CL1043Contig1|4-hydroxyphenylpyruvate dioxygenase-like

AGTATTCTTCCAATTGCTTTACGATACACTAGTGAATATTTTTCCCTTTTTGTCTTCGCTGGACAGTGTTTGTGTTGATAGTTGTTGAAATTTGTGGGATTTCTTGAACATGACTACTTACACCGACAAAGGGCCAAAGCCTCTCGGAGGAAACTTTGTATGCTTCGACCACATAAAACTATGGGTCGGAAATGCTAAACAGGCGGCGAGTTTTTATACGAGCAGATTTGGCTTCGAGCCGCTGTCTACCGAGGCTGGAGACAGTTCCCGAAAGATGCTTACACGCAGTAAACAGAAATAGATCATCTTCGTTTTCGAATCTGCTTATGAGCTGATAATCATGAAATGTCGACACATCTCGCACGCCACGGAGACGGCGTCAGGGAGCTGGCTTTTACCCTCGAAGACATCGAGATCATTTGTCCAAGTTGCTAAGAAACGAGGAGCCGAAATCGTGCGCGATATTTGGGAGGAAAAAGATGATTACGGGGTCTTAAAGATGGCAACCATAAAGACGTTTGGAGAGACACTTACACCCCTTGTAGATCGGACAGAATACCCCTGCCAGTCGATTCCTTCTGTTACGTTAACGAGAAACAGACCCAATATCCAGGTTGCTGCCAGACACTTACCTGGACTTTATCGATCATTTGTGTCGGGAATCAACCGGATCAACAAATGGAACAGTTGCCAAATGGTACGAAGAGATTTTCACTTTTACAGATTCTGGTTCGTCGACGACACTCAATTTGCACACAGAGTTCTCAGCACTGCTTCAATCGTAATGACCACTGGCAAGAAACAGTAAAAATACCGATAAACGAGCCAGCGCCAGGAAAGAAACGTTTCGAGATACAAGAGTTTGTGCGATTACGGCGGAGCTGGAATCCAGCATATCGCATTTGAACACTCATGACATCCTTGGAGCTGTTGAGAATTTGCGATCTCTGGAGTCGAGTTTCTCCACGTTTCTGACACGTATTACGAGATGCTAAAATCTCGTCTGAAGGGAAGCGCGACGAAAGTGCTCGAAGACATCGAGGTGCTTAAAAAAATTTGAAAATTTCTCGTTGACTTTGACGAGAATGGATATTTGCTGCGATATTCTCAAGGAACGTTCAGGATCGACCAACCCTCTTCATCGAGATCATACAACGCAGAAATCATACGGTTTTCGGAGCCGGAACTTTCAAGGCTCTTTCCAGGCCATAGAAGCCGAGCAAGAGAAACGTGGAACCTTGTAAAAAAACTGAACCATGTGATGGACCATGAATTCGAAAAA

>CL10448Contig1|plexin domain-containing protein 2-like

AATACTACCAGCAACAAAACCGTTATGGGACAATCAACGAATTCGACCGACGGTGAGCTCGGAGACATAACGATAACCAAATTCTCTGATGTCACGAACAACACCCTCGCCCAGAACAATATACCAAGACCGAGGAAGACACGCATCAGTATTACAACAGCACCTTCTTCAGCGATGAAAACATTGCCAAAAAGGAATGGGTGCATATGGACAATCATCCGACCGTCAAGTCAACGATTTGCTCAGTAAGAGTCACAGAAGAGCGGCCACGGTCAAGCTGAAATTTGATTTTCCGTTCTACGGTCACAAAGTTTCGCAACATCACGATCGCCACCGGCGGCTTTCTGTACACCGGAGAATACGTTTCATAGTTGGCTCGCTGCCACACAGTACATTGCTCCTCTGATGGCCAATTTTACACGCGTATATCAAACGACAGCTGGGTCAAATATGCTGACAATGGGACGGCGTTTACGGTCGAGTGGGAACGAGTCGTGCTTCAAGATCGGCCGGAAGCTGGAGGGTTACGTTCCAGGCGACGCTCCATGAAAATGGCAACATCGTTTTTGTCTATTCCAAGATTCACCTAACGGTCGAAGCAATCGAAGATACCGCTCATCTGTCAAGGTCGGCCTGAGCGACGCTACATAATGGATCGAACTATTTCTCGTTCGAGAAAACCATCTACGAGTACCAT

>CL1045Contig1|peptidyl-prolyl cis-trans isomerase

TTCAGTGAAGCAACAATTTTCCGGTTCATATCCCAAGGAGGATCCAGAGAGAATCACTTCTATCACTCTATATTTAGCGACCGGCGAGATCGCACTTGGGATTTATAGTAAGAATCGTAGAGAATTGCCAGCCAAGAAAAATGGGCCGACCAACCGTATTCTTCGACATGACAGTGGACGGACAGCCCGTGGGTCTGATCGTAATTGAGTTGCGATCTGACGTTGTACCAAGACTGCTGAGAATTTCCGTGCTCTTTGTACCGGAGAGGAAGTTTCCGGCTACAAAGGCAGTTTCGTTTCATCGTGTGATTCGGAATTCATGTGCCAAGGTGGCGACTTTTACCAACCACAATGGCACCAGCGGAAGGTGATTTACGGCAACAAATTCGAGGACAGAACTTCACGTTGAAAGCACACCTGGCCAGGAATAATGTGATGGCAATGCGGCCCGAACTCGAACGGCTCACAATTTTTCATACCACCGTCAAGACTTCTTGGTTGGACAACAAGCACGTAGTCTTTGGGGCAGTCGTTGATGGCATGGACGTCGTCAAGCAGCTCGAGAGCTACGGAGCTCAAAGCGGCAAGACATCCAAGAAAATCGTCATCGCCGATTGCGGTCAACTCTCATAAAAAACAATAATCTTCCAAAAATACACGAACACCTTTAACATCAACAAAAAACAACTAAAACGAACAATATATTGAACAACGTACTCTTGCTTCGTGGGCTTTTTTCTCCACGAGCTCGCGCTATTTCTCCATTCCCTTCGATTCTAATTAAGTCGCTTTAGGGAGTACCAAACTATTCCAACATTTTTCTTCTCTCAAAATGTGTAAAAAAATCATATGAAATACTAAATCTCAATACTACTCACATGATTGTTAATCCGACTTCCGGTCAATTTCCACCGGAATGTATTAATAATGGAACATGGAATTAATAAAGAAATATATAATTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGGCC

>CL1046Contig1|myosin heavy chain variant a

ACAGAACGGCTCTCTAACGGCCGCCTAGATCGCGCCGCAAGCAGTAGTTCTGTCGGTCGCGGAAATCCCCAAAGAACGCATACGAAACTGACGACATCGACGTGTAGCTATAACGCAGCATATAGCTGAAAAAACCGAAATTTGAAGGATCAAAAAATATCCAAAAGATATTTAAAAGCAGGAGCGAAGCAACGTTAATCCGTTCAACATGCCGAAGCCAGTAGTTCAAGTTGGGGAGGATCCGATCCAGCCCCCATACCTCTTCGTCACTCTCGAGCAGAAGAGAATCGATCAGAGCAAGCCTTACGATGGCAAGAAAGCTTGCTGGGTACCCGATGAGAAGGAAGGATATCTTCTTGGTGAAATCAAAGCCACCAAGGGCGATATCGTCTCCGTCCGCCTTCCAGGCGCGAGACAAAGGACTTCAAAAAGGATCAGCTGCAGCAGGTTAACCCGCCGAAATATGAGAAAGCCGAGGACATGTCCAACCTTGACCTATCTCAACGATGCTTCAGTTCTCCACAACCTGGAAGCAACGTTACTACCACAAGCTTATTTACACTACTCTGGCTTGTCTGCGTGGCCATCAATCTTACAAGAGATACCCCGTGTACACCGGCGGTGCGCCAAGCTGTACCGTGGTAAGAGGCGTAGCGAAGTGCCACCTCACATTTTCCGCTCTCTGATGGAGCTTACGTAACATGTTGACGAACCTTGAGAACCAGTCTATGTTGATCACCGGTGAGTCCGGAGCTGGAAAGACTGAGAACACGAAGAAGGTAATTGCTTATTTGCGGACTGTCGGTGCCTCGACGAAGAAGGTGAAGAGGGCCGATAAGAAGAAAGGATCTCTCGAGGACCAGGTGCTCCAGACCAATCCGGTACTTGAAGTCCTTTTAGGGTAAACCGCCAAGACCGTGCCTAACGACAACCTCCCGTTTCGGTAAATTCATCCGTATCCACTTCGGTCCCTCTGGAAAACTGGCCGGAGCTGACATCGAGACCTATCTGTTGGAGAAAGCTCGTGTAATTTGCGAGCAATCTTTGGAGCGGCTTACCACATTTTCTACCAATGATGTCCGGCTCGGTGAAAGGATTGAAAGAAATGTTGCTGCTGCGAACCAACCTCGTGACTACCACATTTGTTTCGCAAGGCAAAACACGATTCCTGGTCTCGATGACGGCGAGGAAC TGATTGCCACTGACCAAGCCTTCGCA

>CL10501contig1|long-chain-fatty-acid-- ligase acsbg2

TATTTATGGGCTACTTGAATGCACCGGAAAAAACCAGAAAGCAAGCAAGGATGGTTGCACAGTGGCGATCTC
GGAAAGAATAGATCCCGGCGGATTCTTTACGTAACAGGGCGGATAAAAGAACCTTGATCACAGCCGGTGGGAGAATAT
ACCGCCAGTCCCGATCGAAGAAATTTTATTGGCTGAATTACCGGCTTTGAGCTACGCAATGCTGATCGGAGATACAAGAA
AAATTCCTCACCATTCTCGTCACGTTGAAGACTGACGCAGATCCGGAACTGGTGCACCTCTGGACACCCTGACGGAGTC
GACAAGATTGTGGGCCAGGTCAATCGGCTCGAAAGCAACGACTGTAAACGGAAGTTTTGAAGACCCGAGACCCAGTGATTT
ACAGAGCTATCGAAGAAGCGTTGCAAAGAACGAACAAGCACGCGACGAGCAACGCTCAAAAGTTACAAAAATTCAAATA
TTGCCGCACGATTTTTTCGGTATCGACCGGGGAATTGGGACCAACGCTTAAAGTCAGAAGGAACATAGTCGCCAAAAAGTA
CTCGGACCTTATTGAGGAAATGTACAAATAATCCACATTGAATCGACATCACGAACCGAGTACGAAAGTGGTTTGAAAAA
GTGAAAAGAAAAACAACAACAAAAAATGAGAGAGAGAGAGCGATTGAGATATATTTATAGGTACATCGAAAAAGAGGCA
AAGAAAGAATGAAAGAATGAGGGAAAAGGAGACAAAAGATAACGAATGAATAATGAAT

>CL10515contig1|carboxypeptidase d-like

GACCTGGCTGTCACTCAAGGTGATTACTGGCGGCTGCTGGTACCTGGAACCTACAATGTCACGGCAAGTGCTCTCGGATA
CGAAGCTTCGACCCAAACCATCACCGTGCCGGAACCTGGCGCTCGCGAAGCCACGTTGGATTTACGCTAATGCGTGACG
ATAACGATCATTGGTCTCCGCTATGATTTCCGTCAGATGGTGAACATGAGAAAAGGATACATGAAAACTCTGAATTG
AGTGCCCGTATGAGCGAGTTGGAAAATCGTAACCCGGACGCGGCCGAATTCAGGCCGAGATTCTGTTGATCAGCATGGC
TATTCATTCTTGAAAGTTACTCACTCAATCGGCGCTCCCGAAGAGAACAAGTTCATATCGCGTTGATCGGCGGGTTGT
TCGCTGGCCAGCCGTCGGCCGTGAAATCATTCGAGAATGGCGACTCACCTGTTGACGGGGAGATCGTATCGGCGATCC
CCCGATAAAGAAGCTCTCGATAACACGGTCTGCATTCATACCCGGCCTGGATCCGAACCTCGACCAAGTAGCGGACA
ATTGCAACCCCTCGTTAAAGATCAAGTTGGAAAAAATTTGCTGACCGAAGATGATGAAGCCGCT

>CL1052contig1|peroxisomal multifunctional enzyme type 2

GGTTTGGGAAAAGCTTACGCGTTGCTATTGCGCTCTCGAGGTGCCAGTGTCTGTCATGATCTGGGAGGCGGGCGAGC
CGGAGACGGCAGTGATGGCAAAGTCGACAGTCCGTTGTCAACGAAATACGACAATCGGGAGGCAAAGCAGTCGCCAATT
ACGATTCGGTGATCAATGGAAAAAGCCTCATCAAAACGGCGATCGATGCTTTTGGGCGAATCGACGTTCTTGTAATAAT
GCAGGAATTTTGGGGATCGAATTTTGGGAAAATGACGGAGGCTGAATGGGACATCATCAAAATGTGCACGTCAAAGG
AGCCGTGAACGCGACTCAAGCTGCTTGGGAATATTTCCGTAAGCAGCGATACGGCCGCGTCATTTTACCTCGAGCAACA
GTGGCTTGTGTGGAACTTTGGCCAAGCCAATTATTCGCGGCCAAAGCTGCGCTCCTCGTTTAGCTAAGACCTTGGCG
ATCGAAGGACGAAGTCACAATATCAACGTCAACGTCATCGTACCGACAGCGGCTTCGCGTCTACCGAAGACATTCTGCC
TCCAGATTTTTTTCCAACAATTGAAACCGGAACTGATCGCACCGATCGTCGCATGGCTTTGCCACGAAGAATGTGAGGAC
ACCGGGTCCGTTATCGAATCAGCTGCCGGCTGGGCTTCGAAATGTCACTTGGTTCGGTCGAGGGGTTTCAATTTCCGACA
AAATTTGTCGGAATCCGTGACTCTGGAAGCCGTGAAAGAAAATTTGGGCCAAGTTACCGACATGAGTTCAACTTTCCATT
GCGACTCGATCCAAGAAGCTACAGGCGAATTGCTCAACATTTTGGAAACAAACGAAAAGTGGCGCCTCCAAAAAAGAGCCT
CAAACTTTATCGAGCACACTTACAATTATCGGGACGCGATTCTCTACGCTATCGGAGTCGGAGCGACAAGATCTGAGAC
GACTGATTTTCAATATCTCTACGAGAATCATGAAAATTTTCTCTCTTCCCAACTTTTTACGTGATATACGGACCGATGG
GTTGTATCGGGACGAGGATTATGGAAAACCTCATTGCCGAGAAACCGTGAACATGATGAACGTCCTGCATGGAGAACA
TATTTAAAGTACACAATCAACTACCTACAGATGCGACCGTGGAACCGCACTTCAAGGTCGCGGATGTCTGGACAAAAC
GAGAACGCGGTGGTTCTTATCAATCACGAAACGTTGACAAGAAAATCGGAGACAACTCGCTTCCGGTCAATGACTCT
GGTGGTTCGTGGAGTCGGAGGTTTTCAAAGGTCACAGGAAAATCGAACACGAAATTCGCGTTGCAGCGAAACCAACAGA
AAGCCCGATGCAACTTGTGCGGAAAAAACAGATCGAGATCAGGCTGTTATTTACCGATTGAACGGCGATTCCAATCCGTT
GCACATCGATCCGAATATGGCGACGATGAGTGGATTCAAAGAACCGATTCTTCATGGACTTTGTTCCCTTGGATTTGCAA
CGCGTTCACGTTCTCAAGACATTGCAAAACGGAATCCGGCGTTATTCGACGCCATCAAGGTTTCGGTTCGCTCAGCCAAT
TATTCCTGGCGAAACACTTCGAACGAACATGTGGCAGGATGGTACACGAATCCATTTTGAACGATCGCCGAAGAACGTG
ACGTTCCAGTAATCACAGGAGCTTACATCGATTGAAAAGAGTAGAGACTCGATCTTTGCAACCAACAAATGTTTCATG
AAGGAAAATCTCGAGACGACGCTATTTTCGTCGCCATCAAAATTTCCCAAGAAGAAATAGCGTCACGTCGAGAACCA
GCTGGAGGCATTCTTCTCTACGACGTGACGTCGGGCGGGGAATTAACACGACGATGGACCGTGGACCTCGATGAAGGGAA
AATTTTGAAGGTCTGCTTCCGGGCGTGGCTCCTCGGAGCACGATTTGTGTGACGACAAAATCATAATTCAGGTGGTTT
TGGGCAAATTTGAATCCTCGGCAATTGTATCTACAGAGCAACTGCAACGTTGCGGGAAATGTGAGCTTTTAGAAACATTG
AAACTCCTCAATGACAACCTGCAAGCCGAAGCTCTGAGAGAATTCTGCAAGTCTCTCGTCTCCAAGGACCGCGAAACTC
AAAATTCTAGTTTTTTTTTCTGAACTATTCTGCTCTTATTCTCACTAGTTTCTTAACGTTGAGCCAGT

>CL1055contig1|acylamino-acid-releasing enzyme-like

GCGGGGCAATGAGTACGTATTCAAGCCACATTGGGGCGAACAGTTGGTCCGCAACATCGTCCAGTGGTCTGTTGTTTTGG
ACACTAATGTTGATACGATAACAGTATTGCCTGGAATCGCGGAAAATCTTTCACCCGGTCAAGTAATCTGGACTCCCGAA
GGGGATGGTGTGCTTGGTGTGCTTGGCTGCACGAACCGAGATATCTTGGACTTATGCACTGCAGCAATCGAGAATCGTG
GATCTTTGTCTTAAAAAATGGAGAATACCGCAATTTGTCCGAGATAAATGCGCAGTTCTGTTCCCGGAGATTGAGTTTGG
ATGGAAAACATCTCATTGGCTTGAAGAGAATCCGGAGGTGCCACCACAATGCTCACCGGCTTATGAGTTTGCAGTGG
TCAACGGAATTGGGCAAGGACTGAGATTCTTATCGACATCGTACGCAGCAACAAAAACAATAAATTTGCGAAAGAAATTC
TACGGTTTGTACAATCGAGGCTTTCCGAAGCGTTGCTGGAGCAACGACTCGTCATATTTGTTCTTCAGCACTCCGACGCG
ATTCGTTGTGCGATCTTACGCTCTGAATATCGAAACGAAAGTTTTGACGGAATTCGAAAATGATTTGAAGACTCTCAGT
ATCTTGGACGTCCACAACAATATTGTTCTCTTTAATGGAACCTTCCATTATGGAACCTTCGGAGTTAATGATCGGCCATT
TTAAGGAACAGTCGCCCCATGAAATATGCAGAAAGTCAATAACGCAAGGAGTCCCACCGAGGATTGCAAAATCTTATG
TACGAAGCTCTCGAGCACGAGGCTCCCATGACGACAAAGTCCGGAGTTCAATTGATGTACTTCGGGCCGAAATCTGG
AGCTGACAAAGTCTCACCCGCTTGTGCTTGTATACACGGCGGACCTCACGGCGCGTATTCCAACCTATTTTTGCTCGAAT
CCGCACTCTTGGCTCTTTTGGGTTTTGCGATACTGCAAGTTAATTATCGGGGCTCCATTGGAATGGGCGCCGATAATGTT
GAATTTCTTCAAGGAAAAGTCGGCGACGTCGATGTCAAAGACTGCGTCAAAGCGGTGCAAGATGCCTTGAAGAAATATCC
GTGGCTGGATGCTTCGCGCGTTGCTATTTCCGGAGGTTCTCATGGCGGATTTTTAGTCGCTCATTTGAGTGGACAATACA
GCGATCGATACAGAGCGGTGCTGATGAGAAATCCTGTGATCGACATCGCTTCTGATTGTTTACTATCTCCGATACCCGGA
TTGGTGGCAAGCGAATGGTATTTCGCTACGAGGAAGGACTCCCGCAATGGATAGCCCAAGTCAAGTCAAGTCAAGTCAAGT
TTAAATGCTCAAAACTCGCCCATCATTCACGTTGATAAAGTCAAAGCCCCAACTTTGGTACAAATCGGCTCAAATGAT

mmc4.txt

CTTCGTGTTCCACCCTCTCAGGGTAAACATTGGTACCAACGGATCAAGGCCAATGGCGTCAAAACCCGAATGCACGTGTA
CGACGACAACCATTCACTGGCATCGATGACTGCAGAGATAGATGAAATAATTAACGCTGCCATATGGTTGATGGACCACA
CTGCCGAAAAGGAAGGACTCAATTTCGATTGAATAGAGGATCTGGCGATGTGACGAAAGGAATTGGAACAAATACTCATTT
GTGAATCGAGTGGAATTTTTTTCATTATCTCACAATTCTAGTGAGTTTGAATAGAGGAAATACCTCTTAGTATTTTAATA
CTTTTTACGTGGGTGTAAATAATATTTGGTAGAATTAAGAGAACGAATATG

>CL1056Contig1|60s ribosomal protein l31

CGGCCGGGACCTAGAGGCAGCGCGGGGCTTTCAAGTAGATCCATTTGTCGGAGAGGTAAAATGCCGAAAACGAGCGA
AAAGAAGGGCAAGAGTGCCATCAATGAGGTTGTGACTCGTGAATACACTGTCAACCTCCACAAACGACTCCACGGAGTCG
GATTCAGAAAACGGGCACCTCGCGCCATCAAAGAAATTCGCAAGTTTGCTGAAAAACAAATGGGAACCTCCCGATGTCAGA
ATTGACACCAGGTTGAACAAACAGCTCTGGTCCAAGGGAATCAGGAATGTACCGTTCCGCGTCCGAGTTCTGTCTGAGCAG
AAGAAGGAATGACGACGAAGATTCTGTCAACAAGCTGTACACTCTTGTAACCTACATCCCTGTTGCCACCTTCAAGGGTC
TCCAGACTGAGAACGTTGACGCGAGTCAAGATTAATTGTTCTGACAATAAATAATTATGTCTGGAACAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAACATGTCGGCCG

>CL10588-bisContig1|peptidyl-prolyl cis-trans isomerase nima-interacting 4-like

GTTACTGCAAGTTACGTCACTATCTTGTGCCGGCAATATCAGTGTTTACTTCGTTTCACTTCGATCGCTTCTAACCTCA
ATTCGTTCCGATGTTTTTGTGATGTGTATAGAAATATAGACAATTCGAGCTTTATATATTTTCAAATGCCACCTA
AAAAAGCCGGTGGAGCTAAAGCTGGAAAAGCGAAAGGCGGTGGTGACGAGGAGAAAGGAAAGGGCGAAAAGAAGGGCGGA
TCTCCGTTAAGGTCAGACACATACTTTGTGAAAAACAATCGAAAATCCTCGAGGCAATGGAAAAATTGAAAGCCGGCCA
AAAGTTCAACGAAATTGCGGCGACTTACAGCGGAGACAAGCTCGATCTGGGGGTGATCTCGGTTGGATGACGCGCGGTT
CCATGGTCGAGCTTTCAAGAAGCTGCGTTCGCTCTTCTGTTTCGAGTCTTGGAATCCCGTCTACACAGATCCTCCC
GTCAAAACGAATTTGGCTATCACATCATCATGATAGAGGTAAGAAATAGAAGGAAAAAAAAAACTGGAATCCATAAAAA
TCCAATAATGTTGAATAATTTTAT

>CL105Contig2|protein ergic-53-like

GAGTATCAAGATTATGCCAAGAACTAGAGCAACAGAAGGAATACTTGAAAGAGCATCCCGATGCCAAACCAGAAAA
AGATGAATTTGACGAATGGTTTGAACTGACAATCAACGAGAATTGCGTCAAATATACGCCGCACATTTCGCACATGTGAG
AGGTTCTTAAGGAAATGAATCGTAAGCTGGACGAACCTGTTGGCAGACAAGAGAGAATCTTAGTCTCATATCGCAGCTG
CAAGTCGGAGGTGTCCAAACGGTGGGGCAAACCGGACAACCAATGCTGATTGACACAATTCGTCTCAAGAAGTAGAAGC
TGTATTAACGAACCAAAATGTCATACTCAATACCGCACGGGAGATTAATCTTTCATTGGCGAAGTAAATCGAAGGCTG
ACACGATAGTAAATCATCAACTTCGAGCACCCACAGCACAGGTACAGCCCATCGGTTACGATTACCAATCGCTCATATCT
GAGATGAGAGATGGACTGAACTCGTTGAAACGAGACGTTGCGCAAACGAATGCCAAGCTCGGAAGTCAAGGTGGTGACTG
TCCGAGCGCAATTTGTGACGACAACGATGTTCTCTGCTTCTTGGCAATACAAATGGTTGTGTTGCTCGGTTACAATA
TTTACAAGGACAATAAGGAAGCGCAAGCAAGAAAATTTACTGAAGCTATATATGGAGTAGATGAATCGGGGATTTTCAA
AGAAACAGAAAATTTAAATGTAGGAAAGACCGAAAGAACGAAATAAGTACCGCGTGGATAAGGCGCGCCGCGGTGACTGT
GATGCCGCTGGCGATGGCAGCACCGAGGCGTTCGAAAAGTCCAACGGGTGTGCAAGCAAAGATCAATGTTTCTCTTTTT
GTATACAATATTATACGATAAAGTACAACGTAATAATAAATATCATCACGTTATAGACATAATTGCGTTTCGAACAAAT
CACCATTTCGAGAGTGCGGAAGATTCTGACGTAGGGACGTTGGTGCCATCTGCCGAAAACGTTTCAACTACACGACAGT
TCTCGGTTTCTATCTTCTTCTCGCATGATTGTGCTCAACTTTATTAGCAAAAAAATCGATGATTTTATTTCTGTT
ATTCTGTTGCAATCCTGACGACATATCAATTCATTTCAATTAATTGTCATCTCGAAAAGTGTTCCGCACGATTTTCCGTGGCG
TATATATATTTTTGTACTTAATCGGGCTAAATTGTCGTCGGTCATTTCTGTTTCTTCCGAGCTTTTTTTCGCGCACGACT
TTGACCGATATCCATGGGTTGTGTTCTGTCGTTATTTCTGTGAGATTTTTTTCATCCTGTGTGTTTCTGCATTCCGGGAA
TGATCGACTCTCGTTTGATCAAGTGAAGTGGTATGGTCTTTTTTTTTTTGTTAATTTGTAAGTCGCAGGTACTAGGAAAAA
TTAGAAAATTTCTCGAAATTGAAAGAATAATATATGTCAAAAGTATATATATGCAATTCATGAATACCTGGAAACGTCC
CATTCGGTTTCATTTGCAATTATCAATATACATTTATGTTTACAAACATATATAAATTGTTGTGAATTAGATTAAGATGT
ATT

>CL1061Contig2|Vitellogenin-6 [Acromyrmex echinator]

AATTTATGAAAAATAATAAACTCACAATTTAGTTGTTAGTAATCATGAATGAATGAATTAATTAATGAGAAACGATTGAT
TTCAGGCTCGCCTCCACCTGGAAGGATGCGACGAGTTGTTGTCAACGTTGAGTTATGTTTCATTTTCGAAAGGCGAAGAT
AGCATCCTAGATTCCGACATTTCCAAGCTCCTGAAACACGTCGCAAGGCGTGATTTCCGGTTTCGACTCCAATGAACGT
TTATTTAGTTTTGTCGTGGCGGGTCTGTGATTCTCGTAATCATTACAACGATCAAAGATCGACAACGCAATGAGAG
ATGTATTCAAAATAATTCAGCGATCGCGTTTCGAACGGGGCATTGTTAACACGATGAACGATCAGCGGATTACTTATGCG
AGACTCTACGAGAAACAAGTCACTTCCGAAATGGGACTTCCGTTGTTTTCGAAAACAGGGTTCCCTCGTTGTCTTCTT
CAGAAATCAGTGCCGACGGCGATCACATCGATCAATCAATGCTCTTGAGGTTTCGATCGAAGCCAAAGTCTGGCGCCATG
GAGATTATTCATTTCCGTTTACAATCCCTTCGCCGAACGTTGGCACTCGGTACGACGGACCACCGAGTTTCGATCTCAGC
TTACCTTTCCGTGCCACGATCCTTACAATCCCGAGAAAAATAGCGTCAGACTGACACTTCCACGACACCCACAACCCCGC
T

>CL1065Contig1|60s ribosomal protein l27

TCTTTTTTCCGGTTACCATAGCCGTGAGTTGCCAAAATGGTGAAGATTATGAAAACAGGAAAAGTCGTGCTGGTCCTTA
GTGGCCGGTACGCAGGACGCAAAGCCATTGTGATGCGCAACTTTGACGATGGCACTACGAAAAGCAGTACGGACACGCT
CTTGTCGCAGGCATCGACCGTTATCCCGCAAAGTTCATAAACGATGAGGCAAGGAAAACTTCACAAGCGCTCCAAAAT
CAAGCCTTTTGTCAAGATTTTGAACATACTTGTGATGCCAACGAGATACACGTTGATTTGCCACTCGACAAAGTTG
CCCCTAAGGATTTGAAAGATCCGATGAAGAGGAAAAAGGTGAGATTCCAGACCCGCGTGAAGGACCTGAGGAAAGGTACAAG
TCCGGCAAGAACAAATGGTTCTTCCAGAAGCTCCGTTTCTAAGCGATTTAAATAAAAAATAAACATTAACACTGAAAA
AAACGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG

>CL10667Contig1|low quality protein: filamin-c-like

GTTTCCGTTAGGTACGATCCCGGAGAGGAAGGTCTTCACGAACCTTGCTGTTAAATTCACCGTGAACACGTTCAAGGTTT
TCCGTTCAAGTTCCACGTAGACTCTCTCGCAAGTGTTTACGTGACGGCTTACGGTCCAGGACTAATTTACGGCGTTTGTG
GTGAGCCCGCAAACTTTACGATCTCGACGAAGGGTCAGGTGCAGGTGGATTGGCCCTCGCTGTGGAGGGACCTAGCAAA
GCTGATATTTCTGTGTCACGATAACAAGGATGGCACAGTTTCCGTTTCTTATCTCCCAACCGCTCCCGGAGAGTACAAGAT

mmc4.txt

CACCGTCAACTTTGGGGACAAGCCGATCAAGGGCAGTCCATATGTGCGAAAAATTACTGGTGAGGGACGCAAGAGAAAACC
AGATATCGGTTGGATCTTCGAGCGAAGTCCAATTGCCGGGTAAGGTAACGGATTCTGACATCCGTTCTGTTGAACGCTTCG
ATAACGGCACCCAGTGGTTTGGAGGAGCCTTGCTTCTGAAAAACATGCCATCGGGTAACATGTGCGTGTCTTTACACC
TCGAGAATCGGGAGAGCACGTAGTGGCGGTAAAGCGTATGGGAAAGCACATCGCTCAGTCGCCGTTCAAGATCAACGTCA
AGGATCGCGAGGTGGTGACGCGAAAAAGGTGT

>CL10697Contig1|probable maltase h- partial

TATGTGGTGGAAATGCTCTCAAGGTCATTAATACTATTTGGGCTGTTGAGCCTGGGGGCTGGGCGGATCGAGGCCACCAC
AAAGGCTGCTGGTGAATGGTGGACGGACACCTTTATCTACAAATCTATCCCCGGAGTTTCAAGGACAGTATGGCGATG
GAATCGGAGACTTGAATGGTATTACGAGCAAACTGGAACACCTGGCTGATTTGGGAGTGAGTGCATTATGGATCTCACCG
ATGTACCCGAGTCCGATGGTAGACTTTGGTTATGATATCGCCAATTTACTGATGTGATCCAGTGTGGAACTCTCAG
TGACTTCGACAACTCGTTGCAAAAGCCAAGTCCCTGAAGCTTCTGGTACTTCTTGACTTTGTGCCGAATCATAGTTCTC
ACGAACATCCATGGTTCAAGAAGAGTGTCCAGAGGGTCAAGCCCTATGACAATTACTACACTTGGAGGAACGGGACAGTA
GTGAACGGACAAAGACGACCACCTAATAATTGGTTAAGCACTTTCCGAGGATCAGCATGGGAATGGAGCGACACAAGGGG
TCAGTACTACTTGCATCAATTTGCTTCTGGCCAGCCAGATTTGAACTACCCGATTCAAACCTCGTGAAGAAATGAAAG
ATGCGCTGAGTTTTCTGGATGAAACGAGGTGTTGATGGCTTCCGAATCGACGCCATAAACCATATGTTTGAGGATGCCAAT
TTGCGTGACGAACCTGTAATTTCCGGTACTGGACTCCCGNGGATGACTATGACACCCTGAACCATTTATACAACGAAAA
CAT

>CL106Contig4|venom serine carboxypeptidase-like

AGACTTTGGTGGCAGCAACTTTGCGAGACATATTGTGAGGATATTGATGCAACGAGCAGTCCAAAAATCTAACGCGCTG
AGCGCAGTGATTTTTTTTTCTCAAGTCCTTGAAAAACCCATCGAAAAAATGATTTTCCAATCGAAATTTTTACTCGTTT
CGTCTTGCGAGCTTCGCGATCTTTTGCCAACATTCCAGGCGTTACCAACGTTTATCCCAAGTTGAAAAAATTCCTT
TTGAGCGAAAAAGACGCTAAAGATGCGGGCAATCCTCTTTTCTTACCCCGTTGATAGAAAACGGAACATCGAGGATGCA
AGGAAACAAGCCACCGTACAACACGAAGAAATGAAAGATGTCAATAGTTACGCCGATATCTCACCGTCAACAAGAATTA
CAACTCCAACATGTTTTCTGGTTTTTCCAGCTCAGGTTGATCCGAAACGTGCTCCCGTGGTCTCTGGCTGCAAGGT
GGTCCAGGAGCCTCTTCTCTTTGGCCTCTTACAGAGAACGGGCGTTCTTTGTGACGAGCAACAAAACGCTGCAAT
GAGAAAAATACACATGGAGCGCGCATCACAACTTGATTTACATAGACAATCCAGTGGGAACGGGTTACAGTTTACAGAGA
AAGACGCCGGGTACGCGAGAAACGAGACGCAGGTGGGTCTCGATTTGCACAGCGCGTTGATGCAATTTTTCCAGCTGTTT
CCGGAGCTGCGTCAAACGATTTCTTTGTACGGGAGAATCGTACGCAGGGAAATACGTGCCGGCGCTCTCGCTGACGAT
CCACGAGCTCAACCCGAGCGCAAAATCAAAATCAACCTCAAGGGCTTGGCGATGGGGAACGGCTTAACAGATCCGGTGA
ACCAAATGCTTTACGGTGATTATTTGTACCAATTGGGCCTGCTGGATACCAACGGCAAGGACCAATCCAAGCGATGGAA
AAGCAGGCACAAGATTTCTATAAGAAGCAAAAGTACGACGAGGCTTTTGGGTTTTCAACAACTCATTGACGGCGATCT
CAACGACGCTCCTTCTCTTCAAGAATTTGACCGGCTACAATTTTTCAATTATTTACACACCGACGACAGCGACG
ACATGAACTCCATGGCCGAGTGGATCCAACGCGTTGACGTTGACGCGCCATCCACGTAGGCAACTGCTCCTTCGATGTC
GAGGCCCAAAAGGTGAGGAGTTCTTGAAAAACGATATTGCGCGTTCTCAAGCAAGCTCCGTCGTCGAATTACTCAAACA
TTACAAAGTCTCGTTTACAACGGGCGAGCTGGACATAATCGTCGCTTATCCATTGACTGAAAATTTTGAATAATTTGG
CGTGGTCAGGAGCCGAACAATATCGCAAAGCTGCCAGAAAAAATGGCACGTGCGGGAGGTTCTCGCCGGATACTCGAAA
ACCGTCCAAAATTTGACCGAAGTTCTCGTGCGAAATGCCGACACATGGTCCCGTCCGATCAACCGCAATGGGCCCTCGA
TCTCATCACGAGATTCATTTATGGCAAAAACTTTCAAAACGCTTAATTTCAACATTTTTTATTCTTGAAAATCTGAAAA
TTACTTGTTCACAGTTTCGCCCAAAATTTGATACAAATTTTATCGAAAATTTGGAATTAACGATTTACCAACAAAGCTC
AAAATTTCTTGTGCTAGTTTTGTAAACGGCAAAGTATCGAAATTTGAAAATTTACCAACTTTTTTGGCGACCCCGTTAATTA
GCAGAATTTCTGGAGATCCAATTCATG

>CL1070Contig1|acidic leucine-rich nuclear phosphoprotein 32 family member
a-like

TTGGACAATTGTCGGAGTACGAACATCGTTGGGCTGACTGACGAATTCGTGGCTCTCGAGTCGTTGAGCCTCATCAACGT
CGGTCTCACAAGTCTCAAAGGATTTCCCAAATTAATACTTAGAAAGTTGGAGCTGAGCGACAACCGAATTTCTGGGG
GTTTGAATCTTTTGACACGAGCCCAAAGCTAACTCATCTTAATCTCAGTGGAAACAAAATCAGAGACCTCGACACGCTC
CAGCCATTAAGGATTTCAAGAATCTTAAGAGTTTGACTTGTCAATAATGAAGCAACAAACATGGACAATTATAGGGA
GAAAGTGTCAATCTCATCCCTAGCTTACGATATCTCGACGGATTTGACATGGACGAATGTGAGGTAGAAGACACCGAAG
GCGAGGACGACGAGGTCAATTATGGAAACGACGATGGACCTGGATCCCAACGAGGATGACAGCGAGAAGAATCTCGGAT
GACGAAGACGACGATGACCTTTGAAGACGGAGGTGTAGGATTAGAGGCCGTGTACAAACAGATTTGGAGGACGACAGTGA
CGAAGAAGATTACGTGGGCGGAGAAGAAGAGGAATTTGACGAGTACGACGAGGACGAGGATGAGCAGGACGAGGAGGACG
GTGAATGCGCCACAGAATCGTCTCCAGCCCGAGGAAAGAAGAGAAAACATGAGGACGAGGTGAATCGGGGAACATAAAG
AAAAAGAAGCGGCGAAGGAGGGGGAAGCAGCGCGCGGGTGTGATTTGGCTGCTGCTGCTGCTGCTGCTGAATGA
GTGTAATAATTCGTATATAAATAATGAGACGGTACATGCATCGCCGAGTGAGAGAGCGAGAGATTGAGATTGCGAGCGAGA
GAGCGTGAGCGCGTGAGAAAAAACAACAAAAAACAACAAAAATGAAAGCAAATAAATAAACAGCTGGGAATCAA
ACTTATTGACACCGACCAATGACAGACTCACAGTTTAGTGTGTAATCCATCAGTTTAACTCTCGACTGAACAACTAT
CGTCTGATTAACAACCAACCAACCAACCAACCAATTAATCGGTATACGCGTCAATATTGAGTTAAACAAAAAACAAC
CATTAACATACAGAAATGACAAACGACGATGGAAAGAAACGAGACGATGGAAAAATAGGATAAAATGGCATAAATAGGG
GCCGATTCAGCTAGACCAACACACACAGTTTAGTTANACTAACGATATTTATATAGAGTATATAGTTAGAGAATTA
GAGGTGTT

>CL10727Contig1|60s ribosomal protein l13 isoform 1

TTTTTTTTCCGGTGTGCATCGAATAAACAAGCTGCTCCGAAATGGGTAAGCGTAACAACATGATCCCTAATGGGCATTTT
CACAAAGATTGGCAACGCTTTGTCAAGACTTGGTTCAATCAGCCTGCTCGCAATTTCCGTCGAGGACGAATCGCGTCAA
GAAAGCTCGTGTGTCGACCAAGGCCGGTCAACCTCCTGAGGCCCATCGTCCACTGCCCCACATTCGGTTATCACACCA
AGGTACGTGCCGGCAGAGGATTACCCCTGGACGAGCTCAAAGCCGGCGGTCTTAACAAAAGATTGCGCAAGACCATCGGA
ATCGCGCTCGACCCGAGAGGCGCAACAAATCCGTAAGTCTCTTCAAGCAATGCCAGAGACTCAAGGAGTACAGAGC
CACTGCTCATCTCTTCCCGGTCAACGAAAAAGAGCCGAAGAAGGCCGACGCTACTGAGGAAGAGCGCAAAAGTGGCAACAC
AACTGAAGGGCGACGTGATGCCAGTTCGTCAACAGGCTCCGACCAAGGCGAAGGCTCGCGTAATAACGGAAGACGAGAAG

mmc4.txt

AAGTTCTCGGCGTACATAACTCTGAGAAAGGCCGCTGACGCTAGACTCGTCGGTATCCGAGCCAAGAGAGTCAAGGA
CGCCGCCGAAAATCCTGACGACCTTACCAAGGTCGCCGACCAAGGACACGAAGAAGCTCCCAAGAAGTAAATAACGT
CGCGGTTGCTGATTCATGCCTTTATTGAATAAAATTTAAAACAAAACAAAAANAAAAATAAAACGA

>CL1072Contig1|puromycin-sensitive aminopeptidase-like

ACACTCCAAAAACGAAGAAAGAACAAAGGGCGTTTCGCGCTGGAAGCCGCGGTCAAAGTTTTGCCGTATTACAACGAATAT
TTCGGTCTTTCTGATCCCCTGCCAAAAATGGATTTGATCGCAATTGCGGATTTCTCAGCGGGCGCAATGGAGAAGTGGGG
TTTAGTGACTTATCGAGAGACTTGTTCGCTCGTCGATCCGAGAACACATCGGCGGTCCAGAAGCAATGGATAGCGTTAG
TCGTTGCCACGAGTTGGCTACCAATGGTTCGGAACCTCGTGACAATGGAATGGTGACGCACCTTTGGTTGAACGAG
GGTTACGCCTCGTTCGTCGAGTTTCTCTGCGTCGATCACTTGTTCGCCGAGTACGATATCTGGACGCGAGTTCGTAACGGA
CACTCACGTGCGAGCGTTGGAGCTCGACGGTTTGAAGAACAGTCAATCCGATCGAAGTTCGGTGGGCATCCATCGGAAA
TCGACGAAATCTTCGACGACATTTCTGACAAGAAAGGCGCGAGCGTGATAAGAATGTTGCACGCTTGGATCGGTGACGAC
GATTTTCGCAAAGGTATGAATCTTTATCTCAAACGTCACAGCTACGCGAATGCCGAGACGGAGCAATTGTGGGACGCCCT
CGAGGAAGCCAGCCAAAAGCCTGTCCGAGCGGTTATGACGACCTGGACGAAACAGCAAGGTTTTCCAATATTGAAAGTCCG
ACCTCAAACAAGATCAGGACGATCGCGTCGATCTCGTCAGTACAGTATGATTTTTGTGATGTTTCGACCGACACTGCC
GACAGTTTCGTGGATGATTTCCGATAAGCGTCAGCAGCTCGAAAGCTCCTTCAGAAATCGTCACCAACACCGTTATGAGCGA
ACGTACGACAACCCCTCGTGATTAACAAACGAGCCAGTGGGTTCTGGATTAAATCAATCCTGGCACAATAGGATTTTATC
GTACGCGATACAGTCCCGAAGCCCTGGAGCTCATTGTCCGAGCGATTCTGCAACGAACCATCCGCCTCTAGATCGATTG
GGACTCCTCGACGATCTCTGCAATGGTCCAAGCCAATTGGCCTCGACCGTCGAGGTGCTTCGTTTCATGGAGGCTTT
CCAGTACGAAGACAATACACCGTTTGGTCCAGCATCGCAATCTTGGCAAAATTGGGGTTCTCGTTAGCGACTTGG
AAGTCGAGGATAATTTCAAACGATTCCGTAGAGCCTTGTTCAAAGATGTTGCCGCGAGACTCGGTGGGATCCGAAACCC
AACGAGAGCCATCTCGACACTCTTTTGAAGTCTCTCGTTCTCGGCAGAATGGGAGCTTACGGCGACGAAGCGACTATCCA
AGAAGCCAGAAGACGTTTCCAATTCATCTTAACGGAGAAGCTCTCTCCGCGGATTTACGCTCACCCGTTTATCGAGCTG
TTCTCTCCACCGCGCATCCCAAAATCTACACCGCCATGCTCGATCTCTATCGCAAGACAGACCTCCACGAGGAAAAAGAT
CGAATACTCCGAGCCCTCGGCGCCACTCGGACGGGACGACGAATACTCCCTACCTTACCGTTCCGACGT

>CL10755-bisContig1|polyubiquitin-a- partial

ACTCTTCCGATTACAACATCCAAAAAGAATCGACTCTCCATCTGGTTCTTCGTCTGAGAGGAGGAATGCAGATCTTTGT
CAAACTTTGACTGGAAAACTATCACCCCTCGAGGTTGAGGCTTCCGATACCATCGAGAACGTCAAGGCCAAGATTCAAG
ACAAGAGGAATCCCCAGACCAGCAACGTTTGATCTTCGCTGGCAAACAATTGGAAGACGGAAGGACTCTTCCGATTAC
AACATACCAAAAAAGAATCAACTTCNCCAA

>CL10764Contig1|pyruvate mitochondrial

ATCTTCTCCTCATATCTCCATACGTAGCTCACAATCAACAATCTTTATGCTCTGAAAAATTGGGGTGGTGCCACGTTT
GACGTTGCTCTCAGATTTCTTACACGAATGTCCATGGGAACGCTTGATCGACATGCGAAAAGCTATTCCGAATATTCTTT
CCAAATGCTCCTCCGCGGTGCCAATGCCGTTGGCTACACCAATTACCCCGACAACGTTGTTCAAAATTTTGCGAATTGG
CTGTGAAGTACGGAATGGATATTTCCGCGTTTTTATTGCTCAATTATCTGCCAATCTGATCCTCGGCATGGAAGCC
GCTGGAAAAGCCGTTGGAGTCGTGCAAGCAGCTATTTCTGACACCGGAGACGTTAGTGACCCAAGCCGCACGAAATACGA
TCTGAATTATTACACGAACTTGCCGATGAGCTCGTGAAGGCTGGAACACGTCGCTCTATAAAGGACATGGCAGGGT
TATTGAAACCAAAGGCCGTTGGTATTCTCATCGACGCGATAAGACAGAAACATCCTGATATTCCAATTACATTACACT
CAGGATACGTCCGTTGCTGGAGTTGCTGCGATGTTGGAATGCGCTAAAGCCGAGCTGATGTGGTGACGTTGCTGCTGAC
AGCATGTCTGGAATGACGAGTCAACC

>CL107Contig1|2-oxoglutarate mitochondrial-like

TTTGGAAGCGGTGATCCTATTGTCCAAGGAAAAACACGTGCCGAGCAGTTTTATCGCGGGGACGGAGAAGGCCAAAAAAG
TCATGTCCATACTTCTGCACGGTGACGCTGCTTCTCGGAGACAAGGTATCGTTTTCGAGACCATGCATTTGTCCGATCTG
CCCATTACACGACTACGGCACGGTCCACATCTGCTCGTCAACAATCAAATTTGTTTTACCACCGACCCAGGACACTCGCG
ATCCTCACCTTACTGCACAGACGTCGCTCGCGTTGTAACGCTCCGATTTTCCACGTGAATCCGACGACCCCGAGGCGG
TGATGCACGTGTGCAAAGTCGCTGCCGAATGGCGAGCAACTTCCACAAGGATGTGTAATCGACATAGTCTCGTACAGA
CGCAACGGACACAACGAGATCGACGAACCAATGTTACGCGAGCCTCTGATGTACCGAAAAATCAAGAAAACACCACCGGG
TCTTGATCTCTACGCCACCAAGCTCATACCGATGGCGTTGTCACTCAGGAAGAAGTCAAAGACGTCAAGGACAAGTATG
AGAAAAATTTGCGAAGAAGCTTACACCAACGCTCGACAGGAACTCACATCAAGTACAAGGATTGGCTCGACTCACCGTGG
TCCGTTTTCTCGAGGGTAAAGATCCCTGAGAGTGTGCCGACCGGTGTCAAGGAAGATACTCTGTTTCATCTCGGAAA
GAAATTTCTATCGCCTCCGCCAAACGCTGCGGAATTCTGTTATCCACAAAGGATTCGAGCGCATTCTCAAGGCTCGTATGG
GAGAGTGATCGAGTCCCGCGAAATCGATTGGGCACTCGGCGAAGCAATGGCTTTTGGATCGTTGCTCAAAGAGGGTATTC
ATGTGAGACTCTCCGTCAGGACGTCGAGAGAGGAACATTCTCGCATCGTCACCATGTGCCTCCACCATCAGACTGTGCA
CAAAGCCACATATAGACCTCTGTGTTACTTGTACCCTGACCAAGC

>CL1080Contig1|eukaryotic translation initiation factor 3 subunit f

GTTTTCAAGCGAAAAAGCGTCACTCCGAGTAAACATGGCGCTCGACCTCACTGTCAAGGTGCATCCGAGTTGTTTTATT
CCAAATAGTCGATGCATATGAGCGTCGGAATTCGGATTCCCTGCGAGTCATCGGAACTCTGCTGGGAAGTGCGGAAAAAG
GGTATCGTCGAAGTGACAAATTGCTTCTGCGTCCCGCACAAAGAATCCGATGACCAAGTCAAGCGGAACTCAATTACGC
CATGGATCTCTACGATCTCAATCACAGAGTCAACGCTCAGGAAAAACATTGTGCGATGGTGGGCGACGGGCAAGAAGTCA
CTAATCATTCTCCGTTATCCACGAGTATTATGCCAGAGAATGCAACAATCCAGTCCATTTGACTGTGATACGACTCTC
ATGAACACCACAAGAATGGGCATAAAAGCTTACGTTTGGTGCAACTCGGAGTCCCCAATGGCAACAAGGATGCATGTT
CACCCCTGCCAAAGTCGAGATAAAGTCTGCTACGAGCCAGAAATCGTGGGATTGCAACTCTGTGCAAAAACCAATCCCAA
CAACCTGACGACAGTAGCGAAGCCGAGCGGCGGCTCGAGCCAATGATGGATCTTGCTCAAATAGCCGAAGCGAGTACAA
AGTTGTTGGCGATGTTGGATCAAGTGCTGAACACGTCGAGTGGAGTCTTTTGAACAAACAGCCTCCGACAATCAGGTT
GGCCGAGCTCTTCTGGATATGGTCCATTCTGGTACCGAAAAATGAACACGGATCAGTTTCGACGAAATGTTCAACAGCAACGT
TAAGGATTTATTGATGGTCTGGCGCTCTCGCAATTGATAAAAACGCAGCTGCAGCTGAACGAGAACTGACGCTTCTGA
CGACCTCTGAGACTCGAAGGAACGTCACAATCGTCACATCGAGAAACAGCGACAGTGAGGATTTATAACGAGCGATAA
AAGTCAGAGAAATGTAATTCGATGTAAGGAATAATTTTATGGATTTTCCAAGGAATAACAAACCCATTTTCCGATAA
ATCATTTATTCTTATTTCCCAAACCTCGCATGAACCTCGCAGCAGAATCTTTCTCCGTTTTTCAACGTTTATTCTGTTGCTG

mmc4.txt

ATGAGACACGCCCAATCGGGTACTCGGTTGCTCTGCAAATACGTCTCTTTGGTCAAACATCTCGAAGGCAAATCCGCGAT
TCCAAATATCGCCCCACCCAGCCATGCCGTGTAATTCGCTTTGCTCGGCGCCGTGTGGAATTTCAACTTTTTTATCTTCA
GCTTGTCCGCGTACAAGTCGCTCGCCAGCAGGCTCATCAACTCTGATTTTTAAACGACTCGCGAAACCTTTGCCATCGTT
GTACCGCCTACCAAAATTATATTCTCAGCCAGTGGTCTCCTCGTGTGATTGGACATTTGACTATCGCATCGAGAATCAT
CGTCGGTATACTCAGATTATCGTTGTCTCGTTCCCACTACTTCAAACGCCT

>CL1084Contig1|4-aminobutyrate mitochondrial-like

AAAAAAGGCACGGCGCGCCATTACCCCGGAAGAAATGGAATCGTGCATGATGAATCAAAGTCCAGGCTCACCGCGATAC
TCGATACTCTCGTTCAAGGGAGCTTTCCATGGTCAAACTTTGGGAAGTTTGTCAACGACCCACAGCAAATATATTATAA
AATTGATGTCCCAGCTTTTCGATTGGCCAATCGCATCGTTTCCGATTTATAAATATCCTCTCGAGGAGAACGTGAAGGAAA
ACGAACGGGAGGATGAACGTTGCTTGGCCGAGGTAGGAAAAATCTGAAGAAAAATAAATCGAATGAACGAAAGAAAATTA
ATCATTGTTTTTGAATTGTATATTGAGATAGAAAAAACAAAACGTTTCATTAGGTGCGAAAGTCTGATCGTCCAGTACGA
TAAAGAAAAAGAGTTCTGTGGCTGGAGTAATCATCGAGCCGATTCAAGCCGAAGGTGGTGATAATCATGCTTCGCCTCG
ATTCTTCAAAAACTTCGAAGCCTCACGAAAAAATACGGCGCGGCTTTGCTCATCGACGAAGTACAAACCGGAGGAGGAC
CGACAGGGGAAAAATGTGGTCCACGAGCACTTTAATCTGAAACACCTCCGGATGTTGTAACGTTGACGAAAAAATGCA
ATTGGGTGGATATTATCATACTCCGGAGCTCAAACCGAAACATCGTATCGTGTCTTTAACACTTGGATGGGCGACCCAA
CAAACTCGTTCTTCTCGAAGCCGTAATCGACGTAATACAGCGTGACAACCTTGTCTGAGAATGTCACTAAAGTCGGCGAC
TACATGCTCGGCGAACTGAAAAATATTGAAAAAATTTCCAATCTGATCAATTCGTGCAGAGGTCTGGTACTTTATC
GCCTTCAATTGCGCGTCGCCTGAACTCCGAGACAAAGTAGTGAAGAAATTTGCTCACAAAAGGTATTCAAGCCGGTGGTTG
CGTCCCCGAGGCGGTACGTTTGAGGCGCGCTCTGACATTCGAAGCAACACGCGGATATATTTTTGGACGCTCTACGAG
CAGTGTCTAAAAGAATAACTCAAGGACGTAAGATGAATTCCTCGCCCACTTTTCGCAAAATCCATGTCTTCCAGAATTTAA
GCGACGATAATGCGATAAATATCTACGAACGAAAGAAAAAATAGTACTTACCAAAAAAGAAAAACCAACAAATAGTCT
TACCGAAATTTATCTGCGAACTTCCATTTGAAATATCGCAGTTTGTGTGTCAATGTGT

>CL1091-biscontig1|low quality protein: aminoacylase-1-like

TTTATTGTGAGTGAGCCACATGGATGTCTGACCAGTCTTTCGAGACAAGTGGACATATCCGCCATTTCGATGCGCACATGG
ACGAGGCTGGTAATATTTACGCACGTGGTAGTCAAGACATGAAGTCGTTGGTATCCAGTACCTCGAAGCGATACGTGCG
ATGAAATTGCAAAACGTGCGAGTCAAAAGAACGATTACGATATCGTTCTGCGCGGACGAGGAAATTTGGAGGGTTCTGGG
TATGCGAGAATTTCGTCCACACGGATGACTTCAAGAGTCTGAAGGTTGGATTGCGGTTGGACGAAGGTGTGCGCTGCCAA
CGAACGATTTCTATTTGTTCAACGGTGAAAGAGCGATTTGGCATCCATGGGTTTATTGTCCGGGTGATCCTGGTCACGGA
TCGCTCATGTTAGGCAACAACGCTGGCGAAAAAGTTCGCACCATCATCGATCGCTTCATGGATTTGAGAGCGAAGGAGAG
CGCCAAATTACGTACCGGTCAATACAAGATCGGCGACGTTATTTCACTCAATCTCACTCAACTGCAGGGTGGAGTACAAA
CGAACGTGATACCCGAAAAATTTGTTGGCAATTTTCGATATGAGATTACCGCTACCGTGGATCACGAGGAAATTTGAAAA
ATGATCAACGGATGGTGCAAAAGAAGCTGGCGAAGGTGTGACGTTGAGTACGAGCAGAAAAATCCAAAAGTCAAGCGAC
CAAACTCGATGCGACCAATCCATTTCTGGCTTGCAATTCAAAAACCACTTGTGACAAAAATCGGTATCAATCTGGAGACCGG
CATATTTCTGGAGAACAGACAGCCGATATGTGCGATCGGTTGGAATTCCTGCGATAGGTTTCTCGCGATGAACAACA
CAAAAATACTGCTCCACGATCACGACGATTTCTCAACAAGGACGTGTTTCTCCGAGGAATCGATATTTACACGAACTG
ATTCCAGCGGTGTGCAACGTGTAGAAGGAAGCAAAAGAAACGAGGAAAAATTTGGCCAAGTTTCTGGCGAACGCGTGATTA
GCGAACAAAGTTAACACGCGAAGCACATTATTTCTGTTACGAACAAAGAAAACTCCTGAATCCTAGAGAAGGATTGTCAAC
CGCAATA

>CL10928Contig1|dipeptidyl peptidase 4

AAATCGCATTCAACCTCGAAGAAATCTACCAAAGAAATTTTTCGGCACTTCCGTTTGACGGGGTTTTGGATATCTCGCAAC
GAAATCATTTTACGACAATTTAGCGAGTGGTGACATCATCAATTTCAATGTTGAAACAGACGAAAGTACCGTTATCGTTAA
CGGTACCGTTTTGAAAGATTATGGTGAGGACTATACGTACGAGTTGTGCGCTGATCGGAGTCACTTGCTAATTGGATACG
CTCCGCGAGTCCAATTCAGACACTCTCGATTGCGCAAGTTGCGAGTCTACAATCTAGACAAAAACGGCAGAGAAAAATC
GCTGATGGGGAGGATCTATTTATTGGCGGAATGGTCAACGGTTGGTAACCTCGTTGATTACGAGCGCAGCAATGATTTATAC
TACCGTGAGGTGGCCGAAACGGTACATGTGTCACTAGGAGATTGACTACCGATGG

>CL1093Contig2|adp-ribosylation factor 1

ATTTTAACATACGGGACCTTTTCGGGAGTGTTGGTTTTATGTTTATCGTTTTCTTGTGAAATATAATCTTTTACCGAAACGT
ATCGTAACCAACTCCGATCATGGGGAATGTGTTTGCAACGTTATTCAAAGGCCTCTTTGGCAAAAAGGAGATGAGGATCT
TGATGGTGGGACTGATGACGTGGTAAACCAACTCCTGTACAAATTAAGGCGAAATCGTCACGACAATTTCC
ACTATAGGCTTCAATGTAGAGACGGTTCGAGTATAAGAATATTAGTTTTACGGTGTGGGACGTCGGTGGTCAGGACAAAAT
CAGGCCGCTGTGGCGACATTACTTCCAAAACACCCAAGGACTGATATTCGTAGTGGACAGTAACGACAGAGAACGTATCG
GCGAAGCGCGTGAGGAACTCATGCGAATGCTGGGGGAGGACGAGCTCAGAGACGCGGTACTACTAATCTTCGCTAACAAA
CAAGATCTGCCAAACGCTATGAACGCAGCGGAAATAACCGATAAATTAGGCCTGCACTCGTTACGCAATCGTAATTGGTA
CATACAAGCAACGTGTGCCACGAGTGGCGATGGTCTGTACGAGGGACTAGATTGGCTCTCAAACCAAGTTGAAAAATGCAA
ATCGTAATTCGACAGTGGCGCGCCGACACTCAGTTGCTATAATAACATCGATACACTAAATGAGAGGAGAATAAAGTT
AAAACACACACACAACCTGCTAAAAATGTTGAATAATGAAAGGTAAAAAAGAGGCTAGGCAAAACCGGACTGGGGGGTTG
AATCTTTTACAAGAAGAGCAAAAACCTATCTCCCCACCCGAGTAAGCGATCCTCGATCGGGTACACCATAAATATCG
AAAATTCGAGCCGTCCGGCACCGAACCAACCTGCAAAATTCGGACATCCGATCCTGCTACCTCGTCGATCGAGATCCA
ATTAACAACAACAAAAACAA

>CL1094Contig1|probable enoyl- mitochondrial-like

GTCCATATCGATCGACCGTTCTTCAACATGGCAACCTCACAAATCGTCTCGTATTCTCGTCGGCCGTGTGCCCCAACAATC
GAGACAAATTTACACAGACTATTAATTTTTATTCTGCTCAGACAGCGAATTACGAGTATATCAAGATCGAGAAAGTTGGTG
AGAAGAAAAATGTTGGGCTAATAACCCTCAACAGACCAAAGGCTTTGAATGCCTTGTGCGACAAATTGATGACCGAAGTT
AATCACGCGGTCAAGGATTTTCGATGGAGACGAGAGTGTGCGTGCATCGTTTTAACGGGCAGCGAAAAAGCATTGCGAGC
TGGCGCTGACATCAAGGAAATGCAGAACAACTTTTGTCTCAGACGATCAAGGAACTTCTTACAAAGTTGGAACCCAGC
TTGGACAAGCGAAAAACCAATAATTGCTGCAGTCAACGGTTATGCTCTCGGCGGTGGATGCGAATTGGCAATGCTGTGT
GATCATTTTACGCTGGTGACAAAGCCAAATTTGGTCAACCCGAAATTTCCATTGGAACGATCCCGGGCTGGGGGAAC
TCAAAGACTTACAAGAGTTGTAGGAAAAAGCAAAGCAATGGAGATCGTACTACGGGAAATCAAATCACGGCACAGGAAG

mmc4.txt

CTGAGAGATCTGGTTTTGGTGAGCAAAGTTTTTCCCGCTGAACAACTCGTCGCTGAGGCTATTAAGCTTGGCGAAAAGATC
GCATCACATTCTCAATTGATAGTTTTCCATAGCCAAGGAGTCGGTGAACACAGCTTACGAAACAACACTGAAGGAAGGACT
GCACTACGAAATCAGAGCTTTTCACTCAACATTTCGCCACGGCTGATCGAAAGGAAGGCATGTCCGCCTTCGTTGAGAAAC
GAGCCCCCAAGTTTACCAACGAATAAAGTATCTCACGTGTGTGACCAGCCGAAGAAGATTATGTCCACGAAACTGGCCTT
TGAGTGGCAAAGCATTCGTTAACCTCCATTGTCCAACCGGCAAGATTTGTAAGTGTAAAATTTAAATCGTTAGAATAAACT
TACTAGAAAATGA

>CL1100Contig1|endocuticle structural glycoprotein bd-8-like

ACACTCGGCCATCTGAGATTAACAACGCAGCATGTACACACCATTGATTGCAGTAATCGCGCTGGCAGCGTGGGCCAGCG
CAGCGCCAGCTGAGGAGCCAATACCGATCGTCAGTCAGAGCCAGGACGGCCCAAATCCCGATGGCTCATACAAATGGCAG
TACGAATCGGGTAACGGAATAAAAGCTGAAGAGGAAGGTTCCGGTGGCGAACCGGGTAGCGATAACGAGGCGATGCAAGC
CAAGGGTAGCTATTCTGACAAAGGACGACCAAGGCAAAGAAATATCATTGACGTATACAGCGAATGAAGAAGGTTTCCAAC
CGTTCGGTGATCATCTTCCGGTTGCACCGGAAATCCCTCCATTGATACAGAAAGCTCTCGAATGGAACGCCGCCCATCCA
TCCAAGGAGGATGAACCGAAATGAACATAATCAATTCGCTTACTTTACGGACGGACGGAATGATGTTTTTCTTCTTAAA
TCATCCAAGATCTCAGCCTCGACCCACGCAACACTGCAATGACGATGAAAATAAATAAATGATTGATGCAAAAACAAA
AAGAAAGATAAAATACGTTTTAATCTTCGGAGACAATTAAGACGATTATTGAGGGGATGAACGTAGTGGATTACCTCA
TCCTCCACTCCGACACATTAATGAAATTTATTCATCAATTTATATAGCTCTTAATACGACCTACAACATCTACCACCACC
AATGATTATTCTCCGTACTCTCTGGTTCAAATTTGTTGTACATATTTATTAATACATTATCTTTATATTATATAATCTC
TGTATTATCAAAGTTCAATGAACATTGCAACCCTCGCATTGTAGCCCCATTTTTTATCAGGCTCAATGTGTAATTCTGCG
ATACGATTAGTCGTTCAATAAAAAATGTTGCATACCGAAAAAAGGATGTTGATGTTGATGTTGATGTTGATGTTGATGTTG
AAAAAAGGATGTTGATGTTGATGTTGATGTTGATGTTGATGTTGATGTTGATGTTGATGTTGATGTTGATGTTGATGTTG
CTTTTTTTT

>CL1101-bisContig2|actin-like protein 87c-like

ATCCCAGAAAAAACAGAGAAAAAGCCGCCGAGATATTCTTTGAATCTCTGAACGTACCTGCACCTTTTTGTCTCTATGCAA
GCCGTTCTCAGTCTATACGCAACAGGCAGAACGACGGGAGTGGTTCTCGATTCCGGGTGACGGTGTACGCACGCGGTACC
AATTTACGAGGGCTTTGCTATGCCTCACGATATTATGAGGGTGACATCGCAGGTCTGACGTACGAGGTACCTAAGGT
TGTTGTTGCGCAAAAGAGGTATAAATTTCAAACTACTGCCGAATTTGAGATCGTGAGAACGATTAAGGAAAGATCGTGC
TACCTCGCGAGCAATCCACAAAAGGAGGAGACCATCGACACGGACAAGTTTTCAGTACACATTGCCGATGGCAGTTGTCT
CGAGATCGGTCCAGCAAGATTGAGAGACCGGAAGTTCTCTTCAGACCCGATCTCATTGGCGAAGAATGCGAAGGATTGC
ACGAGGTGCTTATGTACTCGATCCAAAAATCGGATTTGGATTTGAGGAAAGTGCTCTTCCAGAATATCGTACTGTCCGGT
GGTTCACGCTATTCCGAGGTTTCGGCGATAGGCTTCTCTCCGAAATCCGTAAAATGTTAGCCAAGGATATAAAGATAAG
GATATCAGCGCCACAAGAACGACTCTACAGCACTTGGATCGGTGGTTCGATCCTCGCTTCGTTAGACACGTTCAAAAAGA
TGTGGGTACGTAACCGGAATACGACGAGGACGGTACCAGAGCGATACATCGCAAAACGTTCTGAGCAAAATATTAATAC
ATCGCCAAATAATTGAGATATAACGCATAACTTTTATCGAGAACCGAAACGAATAATGCTCGGCACAACACTCGCACTTA
ATCGTAGTTTAATAAATAAATACACACATCGAGAACTAAAACACACAGACGGACACAAAAAACAAGAAACACATAAAG
ACTTTTTTCGTCCTGGTGAGAAATTTGTACGATTTATTTT

>CL11083Contig1|-trehalose-phosphate synthase

TAGAGCGAGAGAGAAAAAGAGACAGGAGGGAAGTTTTAACTTGCCTAACGAACCGACATTGAAATCGACGCTATTAT
TTCAACCCGTGAACTCAGACTAAAGAATAAGAGTCTCTCAAAACACCCCTCGTCACAATGTCTACAGAATCCAGGAGCTT
TACTTCTCCGGGAGTATGATCGTCGTGAGCAACAGGCTGCCTTTCTGTTCTCAAGGAGGGACGAAACAACCTGGCCTATTG
GAACGTAAAGCCAGTGCTGGGGTCTCGTTACTGCTGTGCGACCAGTTGTCATCAGTGGCAAAGNGTCTGGGTAGGATG
GCCTGGCATGCATATGGAAAATCGCAACGACCGATCCCCGAGTCTGATCCCAACGATAAGACTCCGACGTCAAGTCTTTT
GCCAGCAAGGTCGTAGCTGTTTCATGTGGAGCCCGGATATTTCGATTCTGATTACAATGGATGCTGTAATGGACTTTTTGG
CCTTTTTCACTCGATGCTTGACC

>CL1108Contig1|clathrin heavy chain-like

TCTCTTTTATTTCTCGGCTCGATCGTTAATTTTCAGCCAAGACCAAGAAGTTCACTTCAAATATATTCAAGCCGCTTGCA
AAATCGGCCAGATCAAGGAAGTCGAGAGAATCTGTGCGGAGAGCAATTGTTACAACGCCGAGCGCGTCAAAAATTTCTTG
AAGGAAGCGAAACTCTCGGATCAGTTGCCTCTGATTATAGTCTGCGATCGATTGCACTTTGTTACGATCTCGTGCTCTA
CCTTTATCGCAACAATCTCCAAAAGTACATTGAGATTTATGTGCAAAAGGTTAATCCGTGCGGACTCCCCGTGGTCTG
GTGGACTCTTGACGTGACTTGTCTCGAGGACATAAATAAACTGATTTTGGTCTGATGTCGACAAATTTTCAGCCGACG
AACTCGTCGAGGAAGTCGAAAAGNGAAATCGCCTCAAGCTCTCTGCTTGGCTCGAATCCCGCGTTACGAAGGTTG
GTCGAGCCAGCGACTCACAATGCTCTCGCCAAATTTACATCGACAGCAACAACAATCCCGAGAGGTTCTCAAGGAAAA
TCAGTTTTACGACAGTCGCGTCTGTTGGCAAATACTGCGAGAAACGCGATCCTCATCTCGCTTGATCGCTTACGAGCGCG
GACAGTGCGATCGCGAATTGATCAGCGTTTGCAACGAGAATAGCCTCTTCAAGAGCGAAGCGAGATATTTGGTCAGACGT
CGGGATCCCGATCTCTGGGCCGAGGATTTGCTCGAAAGCAATCCTTACAAAAGACCGCTCATCGACCAGGTCTGCAAAAC
CGCACTTTCCGAGACTCAAGACCCCGAGGATATTTCCGTTACCGTAAAAGCTTTTCATGACTGCCGATTTGCCAACGAGC
TTATCGAACTTCTCGAAAAAATAGTCTCTCGACAGCAGCGTTTTTCAGCGACCATCGCAATCTTCAAAATCTTCTATTCTT
ACGGCCATCAAGGCTGATCGTACTCGCGTCATGGAGTATATTAATCGCTTGGACAATTACGACGCGCCTGATATCGCCAA
TATCGCTATCAACAACGAACTCTACGAGGAAGCTTTTGCCATTTTCAAGAAATTCGACGTCAATACTTCCGCCATTCAAG
TCCTTATCGAGCAAGTTAACAATCTCGATCGAGCCTACGAATTCGCCGAACGATGCAACGAACAGCCGTTTGGTCTCAG
CTCGCTCGAGCTCAATTGCAACAAGGCTTGGTAAAGGAAGCGATCGACAGCTTCATCAAAGCTGACGATCCATCCGCGTA
CTCGACGCTGTTGGAAACCGCCACCGAACTTCCCACTGGGAAGATCTCGTACGTTACTTGCAAATGGCGAGGAAGAAGG
CTCGCGAATCTTTTCATCGAAAGCGAGCTCATCTACGCCTATGCTCGAACCAACAGACTCGCCGATCTCGAGGAGTTTCATC
TCGGGACCGAATCACGCCGATATACAAAAGATCGGCGACAGATGCTTCGACGACAAAATGTACGATGCAGCGAAATTGCT
GTACAAACAACGTATCGAACTTTGCGAGATTGGCGATAACGTTGGTGCATTTGAAAGAATTCGAAGGCGCGGTGGACAGCG
CTCGAAAAGCAAATTTACGAGAACTTGGAAAGAAGTATGTTTCGCTTGCCTCGACAGCGGCGAATTCGCTCTT

>CL1109Contig1|alcohol dehydrogenase

GTCAATTACATAGGAATGAAAAAGTTACTGCTACTTACAGTCTTTTTGGACCATATAACGACTTTTAATGATTTAACACGA
AGTATCGTCGTAAAGCTGAAGTCACCGAAAGATTTAAATAAGGATTGGAGGTTTCTTATGCAATCGATTGATTGCGTGT

mmc4.txt

TTCTGACTTTTGTAGTTTGCCTCATTATGGTAACAGGCCATCGGACGTGGAGAAGTTTATAAACTTTCACTGGAGAATCTC
GGACTCGATTATCTTGACATGTATTTGGTGCACGTGCCAGTTGCGTTTGTTCAGGACGCGAAATCCTTCGCACCGGCGAC
GAACAAGGATGGTAGCTTCGTTTTTACATCGACAGCAACCCCGTCTCCGTTTGGAAGGAAATGGAGAAACAAGTACGTA
ATGGTCTCGCACGATCGATAGGATTGAGCAATTTCAACGAGAAACAGATTCAAGACGTTTGGGACAACGCTGATATCAAA
CCCAGCAATTTGCAGGTGAATTCACGCGTACCTTCAACAAAAGGGACTCCGAAAATTCTGTAACAAGCACCACATCGC
TGTAACGGCGTACAGTCCACTCGGTTGCCCCGAGCTAAAGCAATCTTTCAGTCCGAATACAATTACGATCTCGACATAT
TTCCCGATCTCCTGGGACATCCGGTTGTTCAAAAAATCGCGGGAAATCATAAAAAACAAGCGCTCAAATATTGTTGCGA
CAACTAGTACAGGAGGGAGTGATCGTCATACCGAAAAGTTTCATCGCCGAAAGAATCAAAAGTAACATCGATCTGTTGCGA
CTTTACGCTGACCGAAGATGAAATGAAGGCCCTCGATTCTTGGATCATGGACCGGGAGGAAGAATTTTTAATTTTCGCT
TCTTCAAAGGGATCGAAAATCACCCGCATTATCCGTTCAAGGACGAGCTTCCATGAGCGATGTTGAACTCGATAAACGC
AAGCGTACCAACAAATAAAAAACAATTACGAATGCGCATCGTCTAACAATGTTCAACTACCTACGGGAAAAAATTA
AAAAACACTTGAGGACTTTGTTAAATATTCATGACAGCTTATTGTAGTTTAAAGTGTTATCGGTCCTTGAACAAAAAGGG
AATTGCGACGAATTAATGTCTTTTCATCGTAAATAG

>CL110contig|atp synthase subunit mitochondrial

GTGTGGTGGTACGGTTTACGGAACGCACTGTCTGCTCCGGGGTCAGTCGAGTATATTCCGGTCGCTTACCTCACTTGAC
CGGCCATGATGTTGAGCGCCGTATCGAAGGCTGCCGCTGGCGCCCTAAGGGCCGTCAAACCGACGATTCTACAAAACGAA
GTCGCCAAAATATCGGGCGCTCTCTCCGTCAACAGCCGAGATTATGCCAAAGCTGCAACAGCTCAAAGACCGGCCATGC
CCAAGGCAAGGTTGTCGCCGTTATCGGTGCCGTGTTGATGTACAATTTGACGACGCCTTGCCGCCAATCCTCAACGCTT
TGGAGGTACAGAACCGCAGCCCGCTCTCGTCTCGAAGTTGCTCAGCACTTGGGAGAAAAACGGTGCGCACCATTGCGC
ATGGACGTTACCGAAGGTATCGTTCTGGGACAAACAAAGTTTGGACTTGGATTCCCCATAAGGATCCCGTCGGAGATGTC
CACCTCGGACGCATCATCAACGTCAATTGGTGAACCCATCGACGAACGTGGTCCCGTCAAACCGACAAACTCGCCGCTA
TCCACGCTGACGCCCCGTAGTTCTGTCGACATGTCCGTGAGCAGGAGATTCTCGTTACCGGAATCAAGGTGTCGACCTG
TTGGCGCTTACGCTAAGGGAGGAAAGATCGGTCTGTTCCGGTGGTGCCGGTGTGCGCAAAACTGTATTGATCATGGAGCT
GATCAACAACGTAGCTAAAGCTCATGGTGGTTATTCCGGTATTCCCGGAGTCCGGTGAACGTACCCGTGAGGGTAACGATC
TTTACCATGAAATGATTGAAACCGGTGCTTTCTCAAGGACAAGTCTCAAGGTAGCGCTCGTGTACGGACAGATG
AACGAGCCCCCGGTGCGCTGCCGTGTCGCTTGACCGGACTCACCGTCGCCGAATACTTCCGTGACGAGGAAGGACA
GGACGTGCTTCTTTTCATTGACAACATCTTCAGATTCACTCAGGCCGGTTCGGAGGTATCCGCTCTGCTGGGTGCTATCC
CCTCTGCCGTAGGTTATCAGCCAACTTTGGCTACCGACATGGGTACCATGCAGGAACGTATCACAACAACAAGAAGGGT
TCCATCACTTCGGTACAGGCTATTTACGTGCCTGCTGACGATCTTACCGATCCTGCGCCTGCGACGACTTTGCTCACTT
GGACGCCACCACCGTATTGTCCCGTGCCATTGCTGAGCTCGGTATCTACCCCGCGGTGGATCCCCTCGACTCGACATCCC
GTATCATGGACCCGAACATCGTCGGTGTGAGCACTACAACATTCGCCGTGCTGTCCAGAAAATCCTCCAGGACTACAAG
TCTCTTCAGGACATTATCGCTATCCTGGGTATGGATGAGTTGTCCGAGGAGGACAAACTCACCGTAGCACGTGCCGTAA
GATCCAGAGGTTCTGTCTCAGCCATTCCAGGTGCTGAGGTATTCACGGGCCATCCCGGAAAGCTCGTGCCCTGGCCG
AGACGATCAAGGGTTTCCAGAAGATTCTAGCCGGTGAACCTGACCACTTGGCCGAGGTGCGGTTCTACATGGTAGGACCG
ATCGAAGAGGTGCTAGCAAAGGCCGAGACTCTCGCAAAATCATAGAAGTTAATAATTGAAAAACGGGACACGCCATCAT
TGTAACATCCTCGCCACCCATCGTCACACCCGTGCTCTCGAATTAATCTTCGCGTCTCGTGTGCGAGGTAGAAAAACAG
AATATCCATCGTTGTGTGCGCTCTCAGCACGCGTCGACGGAGTCAACGACCGTGCGAATGAAATAAATATTTACAGTC
AGCGTAAAAATGAATAAAAAACAAAAACAAAAAGAAAGTTCGCTGCCACTCGAGGATTGGAGAACAGCTTTCCG
ACCATGCAAATTAGACGAGTGTAGTTGCGGTTAATAAAACTCGGAACGTTGGAAGATTCTCGTAAGCTCCTTTACTCTG
GAACCTTTTTATTCCCCTGATCGGGGAACGTACCACGTGGGCCGCGGTGTACCGAATCCTTCGAGGTGATACTCGACCTT
TGATAAAACGCGTTAACAAAAACAAAGCAACAAACGAGTCGTAATACATTGTTATCATTGAATACGTAATGTACACGTTA
AAACCGTGCTCTGCATTAGTAACAACGTAAAAAACAAGAAAT

>CL111-biscontig|ras-related protein rab-5c-like

AGTGTGGAGGGTGCCTGATTGAACTAGAGTGGATCGGAGAAATAAAAGTCAGCGAGAACCCGATAGTATAATCGTCCA
CACACAGTTTGTTTTTCCCGGTAACAATAAGTCTTACAGCTACATTCCACATCGAGCCACGTGCGGAATAAACGAATTC
TGGTCATCATGGCTAACCGGGGCACGGCCAGAGGCCAAATGGTACACAAGGCAAAATTTGTGCAATTCAAATTGGTTTT
ACTCGGCGAATCGGCGGTAGGAAAATCCAGTTTAGTTCTGAGGTTTCGTCAAGGGACAGTTCACAGATATCAGGAGAGT
ACAATAGGCGTGCATTTCTAACACAGACTGTCTGTTTGGACGACAGCACTGTGAAATTTGAGATTTGGGACACGGCAGG
ACAAGAACGTTTACCACAGTCTTGTCTCAATGTATTATCAGGAGGCCAGGCTGCTATTGCTGTTATGATATACAAACC
AGGACACATTTGTACGTGCGACAACGTGGGTGAAAGAACTCAACCGGCAGGCAAGTCCAAGCATAGTGATAGCATTAGCG
GGCAACAAGGCTGATCTTGCAACAACCGGGTGGTGCATTTTGAAGAGGCCCAAAGTTATGCGGACGCGAATGGTCTTCT
CTTCATGGAGACGTGCGCAAAAACCGCCATGAACGTCAACGACATATTTCTAGCAATCGCTAAAAAATCCCAAGAACG
AACAGCAGGAAACGCGGGTACGAGTGGTCAAGGACGTGCGCTAGTCGAAACGGAAGGTCAAAAAACTACGACGGGAAAC
TGCTGCAAGTGATTCAACCAAATTCGTACGTGTACACACGCGTTTTACATTGGTATATCTGAAAAACGAGAAAAGAAA
AAAAATGAAGAAAAGAAAAGCAAAAACAAAAACGAACAAAAAAGTAAAAACAAGAGCAAAAAAACAACAATAT
TCTTTGAACGAATTGAAAAATATCCGGGGGTGCCGGGGTGAATGATTTCTGCGATTCCGGTTTTTAAAGAGAACAGAATG
AAAAGTAAAAGGAGAAAAGTTGAGAAAAGAAAACACTCAATCACCAGAACATCGACTCGCTCGATCGCTCACACTTTTTT
CAAATACCTTCTTCTCCAGATGTATGTGCGTATTTATCCGGAGTCGGAGATTGAGTACGTAACGTGTGCGTTTTATTCTC
ACGGAACATGCACCGGGTAACAAAAAATTAATAATAAATTTAAACAAAAATTAAGAAACGATACCATAGTCGGAGAG
GGCGCGAGGACAAGAAGTAAGTGAAAAGTGAATGAACGCGATGCGAAAGGCTTAAAAATATTGAGAGTCAGAGAGGAAGA
GAGATCGAAAAAACAATAACGAAATTTTTAAAAATAAAATAAAATAAAGTTAGGGTGGCGGCAAGAAGCAGCGCAATA
GAACGACGAGGATGAAATAACGACGAAGACGACGACGACGACGACGAGGACGACCATTTGTGATCTGGCTGAAAATTG
GTCATCTAGAGCTATCTGGATTAAGCAAAAAACAAACACGAAAACAACAACAACAACAACAACAACAACATGAGCA
AAAAGAAAAGCGAAAATAACGAAAAAACAACAACAACAAGTAATCAGTATGTACAATGCATCCGACGATATCATCTA
TTTTGAGTATCGAGTCTGTTGGAGAATGGCGGTGAGTCCCGTTTGTATTCTAGTAGTAATGGGCGGTGTTGTTATAAA
TATATAAATATATATAAATACATTATACGATAAATCATATCCCAATATGATTTATTTTCAGGAGATATAATAATA
ACAATTTATTATTAACTATTGTCGTCAATTATTATTATTATTATAATAATAATAAATGCGATGATTTGAT
GAGGATGATACTACATTTACGTGTACGGTATAATAGCAACAAAAAAGATGATTAAGAAGATAAATGGAGAAAGAAATA

mmc4.txt

AGACGAACGAAAAAAACCCTTTTTAGGCACGCAAAAAATCTTGTAAGATAGTAGGGGCCATTCTGCTGCTATAATTAT
TATATATTTTCTTCGTCAGATTGTATCGTGTAAATAACAATTATAACTCTAAAGCATATTGTATTAATTTTATTGATTA
CTCATGATAAAATTATAATCTATTATAAACGTAAAAATAGAGAGAATAGAAGAAAAAAGAAACAGGGAGAT
>CL11101Contig1|microsomal triglyceride transfer protein large subunit
AGTCGACTCGTGAATCCCCTGGTTCACAATTCTTTCGTTGTGATATTAGATTCCCATGTGTTTTCTCAACTGTCCGA
ACAATCAACGAATTTTCAAGGAAAAAAATCAAAAATTGAGACAGGATTGAAAAATAAATGAAAATATTGTGCGATTGATGG
AAAATTATTAATTTTTCAAATCAGTGATCGATCGTTCGCGTTGAATGAAGAAAAATAATGATAAATATTAGTCGGATCGCT
GGTCTGTTGGTGTTCAGCGGTTGTCGGTGCAACGAGAGGATGGAACGTAGGAGTGGCTTTAAAGTATCAACTCGTTAG
CTCGATACTGTCCAGAGAAGCAGGAAACGCGATAGCTGGCGGTGATGTGGGTTTTCAATTGACCAGCGATCTCAACGTAG
CAGCTGTTTGGCATGATCCTAAGGATCCTACGATCGTACTCTCAAAATCCAGCTGAGCCAGCCACAACATATGGATAAAA
TCGAGACGTGCCCCAGAACCCGAAGTTTTCTGAGAGCACACTTCGCGCCTGGACGATTCAACGTCAAAGCCAATATTCTG
TCTCTGGGCAAACGCGCAAGTGAAGAAATATTTTTCGATCCGAACGGAAGTGTGACGGCGAAAAATTTGGGACGCGGTCT
CGCGCGTCTTTTTCAATATCGCACACTCGACGGTCAATATCGCGAATACGACACTTCCGGCTTCGCA
>CL11168Contig1|clathrin interactor 1
ATGGTGCAAGAATTAGCTCAGTCGACGTTACGTACGAACAATTTCCCGAAGTAATGTGATGCTGTGGAAGCGAATGTT
GCAAGAAAAACAAGCGAACTGGCGTCGACTTACAAGTCGTTCTGCTGCTGAATTATTTGGTTCGCAATGGATCAGAGC
GAGTGGTAACGTCGTCTCGTGAGCACATTTACGATCTCCGTTCCCTGGAGAATTATACGTACGTGGACGAGTTCCGTAAG
GATCAGGGGATCAACGTGAGGCACAAAGTTGGCGAGCTCATAGATTTTATTGAGACGACGACAAGCTTCGGGATGAGAG
AAAAAAGCGAAAAAGAACAAGGACAAATATGTGGGCATGTGAGCGAAGCGATGGGCATGAATTTCCGGCGTGGGGATC
GATGGACCGATAATCCAAAAATGGAACAAACCCAGCATAGAGATTACAACGATTGGGAAGAGAGAGTCCGAGGACGAG
AGGCTTCGAAGATGGAAACAACAGTGATGACGGGAAAGAGAAGATTCGACAACGACAATCCCTCGAGTCCAAAGAAAAG
CGATAAGGAATTTCCGACAACTCGACACTTTGGATAAAATAGGAGATACGAAATAGCAGCGAAGGTGCGCTCAAAT
TCGCCATCCGACAAGCACGGGCTGTAGAAAAAAGTCGACCTCGGAG
>CL11234Contig1|nuclear export factor crm1
ATCTGAGGAAAAATCTGTAATCCAGCATAATGACTACTTCGGCGGAGCAAGCGTCCAAACTGCTGGATTTCAACCAG
AAGTTGGACATAACGTTGCTGGACAGCATGGTGACTTGTATGTATTCCGGTGTGCGCGAGGAGCAAAAGATTTGCTCAAG
AAGTTCTCACATCGCTGAAGGAGCATCCTGACGCTTGGACGAGAGTAGACACCATACTGGAATATTGCGAGAATCAGCAA
ACAAAATTCTACGCGCTACAAATTTCTGAGCAAGTAGATAAAGACGCGATGGAAAGTGTACCGAGAAATCAGTGCGAAG
GTATAAAAAAGTACATAGTTTGCCTGATAATAAACACAAGCAGCGATACCGAAAACGATGGAGCGTCAAAGGTTTACTTG
AGACAAGTTGAATATGACGCTCGTCCAAGTACT
>CL1127Contig1|leucyl-trna cytoplasmic
ACACCGAGAAAAAGCAGCGAAAGGTAACCCAGAGGAGAAACCAAGTGGAAAAACCGACCTCCGGCACTATCTGGATCGCTAA
GAATTTCCCTCCATGGCAAAACACTGTTTTAAACAACAATGAAGGAGCTGTATGACAAAAATGACAGAATCTACCAGAAA
CAAAGTCATAGCAACCGAGTTGGGAGGAAAGAGCGATTTGAAGAAATACATGAAACGCGTTATGCCTTTCTGTTCCAGCAA
CTCGGAAAAAGATGGAAAGTGGTCCAGCTGCTCTCAATCTCACTCTCGATTTGAGCGAAGTCGATGTTCTCAATGGC
AGTATCGAATACTTGAAAAGTACCCTCGACTTGGACGAAATTGAGATGAAATATTCCGACGAAGCGCCAGAAAGGACGAA
GGAAGAATGCTGTCCAGGAGAGCCTTATATGAATTTCTCGGTGACGCTGGTCTCTCTGTAACCGCAGTAAATCCGCAAA
AATCGACCGGACTTTTTAGAACATCTGTGAACATTAGCGACGGCAATACAGCCGAAGGAATCGCGGCAAAAATCGCAAG
GAGAATAAGCACATCAAAGATCCAGCTTTGGTAACGCTCTACCGACACGTCGATCCGATTCTCGGGCTCGAACCATTCC
GACAGCTAACGATTTATTCAAAGGCAAACTCGAGATTCCAGCAAACGCGATTTTTACGTTAATTTAGATACTAAATTGA
TCCAAGTTCCGATATCCAATCAAGTGTGACTTAGGAAACGAATTGGTATATTTCTGACAGACAGAATGTAGACTGGA
ATGTTAAAGTTGAATATTTCAATATGGTGGAGAGAAAAAGAAATCGGACCTTATTTCCGCGAATTTTTTACATTAATTTA
TAATGTTAACTGAGCATATATGAAGTCATAAATCGCTCTCACCCTCTCTCGCTCACTTCATGTTCTTTTTTTCTG
TATTTTATACAAAGAAAAATTAAGAGCAATTTTTCTTTCAGTCAAGTTACAAAGGACGAAGCGTGAAGGCAAGT
ATCCGAGTTTGGTAATCCTCGGAAAGATATTATCACAGTGGCGTTTCTTTCTCCTTGTGTTTTGCCAAAGTTTCTATTTG
GGCTCGAATCTTTTGCATATCCTCGGCTTTAGTCCGGCAACAACACCGATGTAACGAATCCAAGATCGAGCCATTG
TGAAACGAAATCTGCCAACGCGATAGATTCACAATCTTCTTTTTCCATCCTTCTCCGGGATGTAACTTCCCCACTGTT
GGAATAAACACCAGCGGAATAGTCAAGTTACCGTCTCGTTGATACCTTTGAGCAGAGACGTGACGATTTTTGGGAAAG
ACAGTTTACTCCGATCGCGACAATTTGACCGGGCAAAGATTCGCGGTAACATCGGATTGCGACGTCTGAAAATTACTTC
CGTTAGCCAGGCTCGCT
>CL1128Contig1|gtp-binding protein alpha gna
ACATTTTCTTCTTCGCTATTCTTTCCCTTTACCTCTCTCCGCCATCACGTCCTTCGGTGAAAATCGAAGGTACACACAA
CTGGCCTGAATCATGGCGTGCTGCCTGTCCGAAGAGGCCAAGGAACAGAAGCGGTAATCGAATCAGGAAATCGAACGACA
ACTTCGACAGGACAAAAAAGATGCCAGGAGGGAATCAAACTATTGCTGCTCGGCACTGGCGAATCGGGCAAGTCCACAT
TCATCAAAACAGATGAGAATTTATTCACGGGTTCTGGTTACTCGGACGAGATAAAAGAGGCTTTATTAAGCTCGTTTACCAA
AATATATTCATGGCTATGCAGTCGATGATACGGGCGATGGACCTACTCAAAATCAATACGGAGAATCCTCGAATGTAGA
AAAAGCAGAATCGTGAGAAGTATAGACTTTGAAACGGTTACGACGTTGAGTCTCCATACGTGGAAGCCATTAAGGATT
TGTGGGCAGACGCTGGTATCCAAGAATGTTACGACCGTCGACGAGAATACCAGCTCACGGATTCTGCCAAATACTACCTA
ATGGAGATAGACCGAGTCGCGGCGCCAAACTACCTCCCCACAGAACAGGACATTTCTCGTGTGAGAGTGCCCAACTGG
TATAATTGAATATCCATTTGATTTGGAAGAAATACGATTTAGGATGGTAGACGTGGTGGACAGAGATCCGAAAGAAGAA
AATGGATTCTTTGTTTCGAGAATGTCACCTCCATCATTTTTAGTAGCTTTAAGTGAATATGATCAAAATCTGTTTCGAG
TCAGAAAACGAGAACCGAATGGAGGAGAGTAAGGCGTTATTCAAACGATCATAACATATCCCTGGTTTCAACACTCTC
TGTTATTCTGTTCTTAAATAAGAAAGACCTCCTGGAGGAAAAGATCATGTATTCTCATCTCGTCACTACTTTCCAGAAT
ACGAAGGCCAGAAAAGAGCGGCCACAGCAGCTAGAGAATTCATACTCAAGATGTTTGTGCAATTGAATCCAGATAGCGAG
AAAATAATATATTCTCACTTCACATGCGCCACAGATACGGAGAACATAAGATTTGTGTTTGGCGCGGTGAAGGATACGAT
TCTTCAATCGAACCTGAAAGAATACAATCTGGTGTAGAGGGACATCGATGTGATAAGTGAATAAATAACGAACACACA
AAAAAAGGTCGTAAAAAGGATAGAGGAATAGAGCGAGGGGAGGATTTGTGCAACGGAAGGCGGTGGATGGGGCTGTT
TTGGTAGTTCCGAGCAGGGGAACGGTGAGCGAGGCTAAGCTCGTTAGTTAGCGTGCTTAACGAAGAGAGAACCTGGATGA

[illegible]

mmc4.txt

AACCTCTTATTTCTCCATTTCGTCGGAAGAATTCTCGATTGGTACGTTGCCAACACCGGATAAAAAAGATTTACGAATCGAAGG
AAGATCCTGGCGTCGTATCCGTCACCTAAGATCTACAATTATTACAAAAAGTTTGACTACAAAAGTGTCTGTATGGGTGCA
TCTTTCCGTAACGTTGGTGAATCAGAGAGCTCGGTGGTTGTGATTATTTGACAATAGCCCCAAAGCTGTTGGAAGAAT
CGAGAAAAGTAACGAGCCATTACACAAAGTTCTGAACGTTGAGACAGCGAAGAAATCCGATCTCCAAAAAGTTTCATCTCG
ACGAAGCCCAATTGAGATGGTTGCTCAACGAGGATCAAATGGCCACGGACAAGCTCAGCGACGGAATCCGCAAGTTCGCC
GTTGACATGCGCAAACTTGAAAACTTTTGACCGAGAACTTCAAGCTTAAAGACAAATAGCTTCAAATATATTTTTATA
TATTTACAAGCAAGCGATATGCGCGTCAAAAACGTAATGCGTATCCAATGTAAAATAAAAAATTTACAAAATGGCGTTAA
TAATATGGTATTTTTGAGGAATGAAAAACAACAATTTGTTATTTGTTACTGAGCTTTGACACATTTCATCGGTGGTCAATT
GTCCAAAAGTTGCTAACTTTGTACCCAAAAACACTGAATGCGAATAAAATCGACTAAACTACCCAAATT

>CL1135Contig1|ras-related protein rab-7a-like

TCGTTGTGTTTCATTAGAAAAACAAGTTAAAATTCAATTAATGGCGTCCCGAAAGAAAGTTTTGCTCAAAGTTATCATTC
TGGGCGATTCCGCGCTCGGAAAAACATCCTTAATGAACCAGTACGTCAACAAAAAGTTGAGCAACCAATACAAGGCTACG
ATAGGCGCAGACTTTTTGACAAAAGAAGTTATGGTCGACGACAGGATAGTCACCATGCAGATCTGGGACACGGCAGGCCA
GGAAAGATTTCAGTCGCTCGGCGTGGCTTTCTACAGGGGAGCCGATTGCTGTCTTAGTATTTCAGCTCGCAGCAGCGA
GCACCTTCAAATCTCTCGACTCGTGGAGAGACGAATTTAATTCAGGCTCCCGACGGGATCTGACAATTTTCCCTTT
GTCGTGCTCGGCAACAAAGTTGATCTCGAAAACAGAGCTGTTTCCAGTAAAAGAGCACAACAATGGTGTGAGTGAAGAA
CAATATTCGCTATTTTCGAAACGAGTGCAAAAGAGGCGATAAATGTTGAGCAAGCTTTCCAGACGATAGCCAAGAACGCAT
TGGCTCAGGAGAGCGAAGTGGAACTGTACAATGAATTTCCGGATCAAATAAACTGACCAATGACCAGAGGGGCAATGGA
AAATCGAACGATTTCATGTGCGTGTAGAAATTGATAGAAAAAAGGATTTCTGGCGAATATCACGGAACCCAA
AATCGGAGAGCGAGAGAGGAGAGAGAGAGAAAAAGACAAATAGATACACGAAGGAATAAAAAATT

>CL11360Contig1|staphylococcal nuclease domain-containing protein 1

GGCTCCGGAGAAAAGTGTATGCCTGTGCAATATCACGGCTCCGAAATTAGGTCGAGAGGAAAGTGAACGCGGACGAAA
GCAGAGACGAGCCTTGGGCTTGGGAAGCGAGAGAATTCCTCAGGAGGAAAGTCAATCAGCGAAGATGTTACGTTTGCCGAA
GAAAAATCCGTCAGCGCTAGTCGAACTTACGGCTCCGTTTGGCTGGGAAAAGACGCGAATGGAGAAAACGTGGCAGAGTC
TTTGGTGTGCGAGGGTCTGGCGACGGTGAACGCGACGGAGTGCCTAATCCGAGTCCGGCGTTGATTGCTGTGAGGAAT
TGGAGGATGCGGCGAAAAGCGGCTGGCAAGGGTAAATGGTCCGGTGAGCCATCCTCGGAGCATGTTGCGCAGCTCAAATGG
AGCGTCGAAAATCCGCGCAGCATCGTCGACCAGTACGGAGGAAAACCCGTTAAAGCGATAATCGAGCACGTTGCGCAGCG
TTTCGACGGTTAAGGCTCTCTTGTGCGCG

>CL1138Contig1|cytoplasmic aconitate hydratase

TAACCTAGCTGCACGAACACGAGTAACCCAAAGCGTTATGCTCGGTGCCGAATGCTTGCCAAAAAGCTGTGCAAGCGGG
TCTCACAGTTGCGCCTTATATAAACTTCTATCAGCTGGTTCGGAGTCGTTACATATTATCTTAAGGAGAGCGGCGTT
ATTCGGTTTTTTCGACGCAACTTGGTTTCGACGTCGTTGGATGTTGTTATGTTATGACTTGTATCGGTAACAGCGGCCCTCTTCA
CGATTCCATGGTTCGAAGCGATCGAAAAGAACGAGCTCGTCTGCTGTGGTGTCTCTCAGGAAATCGAAATTTTCGAGGGTC
GAATCCATCCCAACACTCGAGCGAATTATTTGGCGTCGCGCTTTTAGTAATCGCTTATGCCATAGCCGGAACCGTTGAC
ATCGATTTTCGAAAAAGAGCCACTCGGTACAAAGCTCGATGGCCGAGCAGTGTATCTGCGTGATCTCTGGCCAACGAGAGC
GGAAATTCGAAGCTATCGAGCAAAAACATGTTATCCCGGCAATGTTCCGACAAGTTTACAGTAAGATTGAAAAAGGGAGCA
TAGCTGGTCGAGCTTGAACGCTCCGGATGGCAAACTTTATCCTTGGGATCAATCTTCCACGTACATAAAAAATCCACCC
TATTTTCGAAGGCCTTCAAAAACAATTGCCAGAAATCAAGCCAATCGTGGGAGCTCATGGAACCTCGGAGACTC
TGTTACCACGGATCATATAAGTCCAGCGGGGAGCATAGCTCGTAATTCGCCCCGAGCGAGATATCTGTCCAAGCGAGGAC
TTACACCGAAAAGAATTCAAACCTTTATGGGTCTCGACGTGGCAACGACGCCGTATGGCGCGCGGCACCTTCGCAATA
TTCGACTTGTCAACAAATTCATTGGAAACCG

>CL1139Contig2|conserved hypothetical protein [Culex quinquefasciatus]

GGCTCAGAGCTCGCCCCACTCGAGGACGTCGAAGTGAGTGACGATGAGAATCGTAACAAGAGATTTTTGAACTTTGGATT
CGGAGCTTCCGGGGGAGCTGCGGGGAGCTGGAACCGGAGGAAGCGCGGTGGGTGAGGAAATTTCTTTTCGACATCATCA
GGCTCGTCGCTGGAAGCGGGAGCTCTCAACAAGGCGACGTCGCGGCTGGAGCACCCACGCTGGACGCAACGATGGCACC
ACCGAAGCGGTTCTTGACCAAGTCAACAGGCTCTTCGTTATCGCTAATCGAGGAATCTCGAATCTCATCCAAGATCTCAT
TCTCCGTTTTGGCGGCAACGAGCGAGCGCATAGTAACTTCAAGGCGAGGCTCATCACGTCGATCATCTAAGGCGATCACC
AAAACCGACACGAACCTTCGTACAAAAAAGAATTTTTTCTACGACGTAATAAAAAAGGAGCGTGTGATGCGAAATAT
TGTATAAGCGCGCAAGAGTGTTCGACGATAGAAAAAAGAGAAAGAACAGTGTGAAGAAGTGCAGAAATGGGCCAA
GAGTCCGAAGGCGCTTCAAAAACAATTGCCAGAAATCAAGCCAATCGTGGGAGCTCATGGAACCTCGGAGACTC
AACC CGGAAAATACGTGAATAATTTTATGATTATTGCTGCCAGAGCTCAGGGAGGCAAAGAAGAAACCAACAAACGCTCG
AGAATCCAAAAGATTTGAGAATCTGACCTGGACAACGATTTTTTAGAAAACATTCAATCAGATTATTGCGAAACTCGAG
TACGACGTCGGCAACGTGCTTATAATATAAAAAAACAATAATGATTTTCATAAATTCGTTGCACCTTGACTCGAGATTC
CCAAAGATTGTTACACTATCGATAATCGATAATCGAACTAATCGATAATCGATAATCGAACTAATCGATAATCGAAAC
TAATCGATAATCGATAATCGAACTAATCGATCGATAAATCGATTATCGAACTAATCGATTGATGATAAATCGATAATC
GAAACAAATCGATCGATAAACAACGCCTTTTTAATAATCGATCGATAAATTTCTGTTGATCGTCGATAGATGTACTTGAAA
TTTCAATTTTGTTCATGTTCTCATTGAGTATCGATGTGAATCGATTTATTGGAAATCGATCGTAGCCTCGCTGAGCCTATTC
CTAATGTATCTACTCGATGATTCCTTGCCCTCATTTTTTTTTCTTCTTTTCTTCCGATTTTTTTCTTGGCAGCAGCTGC
TACGTTAAACGACACATTGGTCCAATAGAATCGAACATTGATCCTCTAATGCTGTGGATGTTTTTTCTTTTGTACATAC
ATTTAGTTTTATCGATTTCTTCTCTTTTACTCT

>CL113Contig1|aconitate mitochondrial-like

TCAGTTCTCTTGTGGCCGTTTGTAGAAGGACTGCCACGTCGGAGAGAAACAAACAAATTTCTATATTTGAGCTCGTCTTC
GCTGTTTGATTTATTTGTCGTCTCGACAACGTGTTACGACCTTATCGGAGTTACCAATATCTCAACAATGTCGTAATG
CGTTTCGAATTTATACGACTCAGAACTCACGAGCTTGGCTGGTGACATTGAGCAAGATGTTTTCAGCGTGAGCCCTTAA
GCTTCGCGGCGGCCAAGGTTGCCATGTCGAAATTCGATCAAACGCGTATCTTCTTACGACAAATTTGGAGAACAATTTAC
AAATCGTTAAAAAGAGGCTCGGAAGACCTTTGACCCTGTCCGAAAAAGTTTGTATTCTCATCTGGACGAGCCGAGCAAG
CAAGAAATCGAAGCTGGAAAAAGTTACCTTCGATACGACGATGACCGAGTGGCGATGCAAGATGCCACGGCTCAGATGGC
GATGCTTCAGTTTCATAAGCTCCGGAATACCAAAAGTGGCAGTACCGTCGACGATCCACTGCGATCATTTGATCGAAGCGC

mmc4.txt

AGATGGAGGGCGTGGCTGATCTCAAGAGAGCCAAAGATACGAACAAGGAAGTTTACAACCTTTTTGCAAAGTGCGGGAGCT
AAATACGGAGTTGGTTTCTGGAATCCTGGATCGGGAATCATTCAAAATTATTCTTGAAAATTACGCTTCCCTGGACT
GTTGATGATCGGTACGGATTTCGCATACACCGAACGGTGGAGGTTCTGGTGATTGTGCATCGGTGTGGGTGGTGCCGATG
CCGTTGATGTAATGGCCAACATCCCGTGGGAGCTTAAATGTCCCAACGTCATTGGTGTCAAACGACCGGAAAGATGAAG
GGCTGGACCAGCCCGAAGGACATTATTCTCAAGGTGCTGGCATCCTTACCGTCAAAGGAGGAACCGGTGCTATCGTCGA
ATACTTTGGACCTGGCGTCGACAGCATCAGCTGCACTGGAATGGCGACGATTTGCAACATGGGAGCTGAAATTGGTGCTA
CAACTTCCGTTTTCCCTTACAACGGTCGCATGCAAGATTATCTCAAAGCAACTGGACGCAGTGAAATCGCATCCGCCGCG
GATCAATATCGTAGCAGCCTTCTTACTGCGGATGCCAATGCAAAGTACGACCGGGTTATCGAACTTGATCTATCGACTCT
GGAGCCTCATGTCAACGGACCATTCACCTCTGATCTTGCACATCCGATCTCCAAGCTCGGACAAACAGCCAAGACGAGCG
GTTGGCCCAATGAAATCAAAGTTGGTCTCATCGGATCCTGCACGAACAGCTCGTACGAGGACATGGGCAGATGCGCTAAC
ATCGCCAAACAGGCTCTCAAGCATGGCCTCAAAGCCAAATCGACTTTCAACGTGACTCCAGGATCTGAACAGATCAGGGC
TACGATTGAGCGTGACGGAATTGCTGGAACCTTTCGTGAGTTTGGTGGCGTAGTTTTGGCGAATGCTTGCGGTCCGTGTA
TCGGTCAATGGGATCGCCAGGACATTAAGAAGGTGACAAAAACACTATCGTAACATCTTACAACAGGAACCTTACCAGGT
CGTAACGATGCGAACCCGACCACTACGCTTTTCGTACCAGCCCGAGCTCGTAACGCTTTGTCGATCGCTGGTCTGTTT
GGACTTCAATCCAGTCACTGATAAGCTCAAGGGCAAAGATGGCAAGGAATTCTTGCTGGACGATCCCTTCGGTGATGAAT
TGCCAACGCGTGGCTTTGACGCTGGCGTTGAACTTACGATCCACCACCAGCGGACGGTAGCAAAATCAAGGTTGACGTT
GATCCGAAATCTCAGAGACTTCAGCTCTTGGAACCTTTGAAAAATGGGACGGCAAAGATCTCACCGACCTCACAGTCCT
CATCAAGGTCAAAGGCAAATGTACCACCAGCACATCTCCGCTGCTGGTCCATGGCTCAAATATCGTGGCCATCTCGATA
ATATTTCCAACAACATGTTTTATCGGTGCTGTGAACCTGAGAACAACGAAGTAAATAAAATCAAAAATTTGTTGAACGGT
GAATGGGGTGGATACCGGACGTGGCTCGTATTACAAGAAAAATGGCGAGGTGGTGCAGGTGGTGCAGGACGAAACTA
CGGCGAGGGTTCTTCTCGCGAACATGCAGCTCTCGAGCCTCGTCATCTTGGCGGACGTGCCATCATCGTCAAAAGTTTCG
CACGTATCCACGAACTAATCTTAAAAAACAGGAATGCTCCCACTGACTTTTGCCAATGCCAGTGATTACGATAAGATCC
AACCGACCGATAAGATCAGCCTCCTCGGACCTCAAGGACTCTCGACCGGGCAAGCCGTGAAGCAGAGATCAAGCACAA
GATGG

>CL1140Contig1|40s ribosomal protein sa-like

ATACTTTTAACTATTTTTCTATTGTTTTATAGTTAATATTAATGATTTTTCAATATTTTTGACATCAAGTACCTCACTTCTT
CGTGCAAAGTTGAATCGTAATTCAACCACAACGTTAAGATGTGGGAGGATTAGACGCGTTGGCCCTCAAAGAGGAGGAC
GTTACGAAAATGTTGGCTGCTTGCACTCATCTCGGCAGCGAAAATGTAAATTTCAAATGGAACAATACATTTACAAATG
TCGTGTAGACGGTGCCGGAGTAAGCGTAATCAATCTCCGTCGTACCTGGGAAAAGCTCCTTCTGGCTGCTCGTGCCATCG
TCGCCATTGAACATCCCAGCGAGGTCTTCGTATCAGTTGCCGACCTCACGGACAGCGAGCTGTCTTAAATTCGAGCT
CACACCGGTGCAACCCCCATTTGCTGGTCTTCTACTCTGGAGCTTTTACCAATCAGATTCAAGGTGCTTTCCGCGAACC
TCGCTCTTGATCGTTACGGATCCCGCTTCCGACCACCAACCCATCACCGAAGCGAGCTACGTCAACATCCCGGTAATCG
CTTTCTGTAACACCGATTTCGCTCTTCGTTTCTGGACATTGCGATTCCCTGCAACACGAAGAGTCTTCACAGCATTGGG
CTCATGTGGTGGCTTCTCGCACGGGAAGTTCTCCGTCTCCGTGGTACCATTGCCCCTGAACTAAATGGGACGTTGTGCT
AGATCTCTTCTTCTACAGAGACCCGAAGAGGCCGAGAAGGAGGAACAAGCGGCCAAGGAAATTGCGCCGCCGCCAAAGG
ACTTCACCAGCTCTGCTGAACCGGCAGGAGCTGTTGAAACCGGTGGGCAACCGAGGTTGAAGCCCCTGGAGCCCCTGTG
GCTGAAGTTGTTCTGTCCAAGACCAGCGATGCTCGTGGTATCGAGGGAGAAAATGCCAATATCGTAATTGTTCCACC
CCATGAAGCCGATTGGGCTTCTCAGGTACCGGAAGAATGGTCCGCGACCCCTGCTGCACCCGCTGCTCAGAGCTGGGGCG
CACCAGCTTGCAGACAAATGGACGTAACCTTCTCTCATTGAAGTTTACGCGGACGCGCCACTTTGTACTAATCTTGTAA
AAAGTGAACGAGAAATCAATTAATAAAAAAGAATTCTTATTTTCTACGTACAGTCACATGTGGATT

>CL11462Contig1|kinesin heavy chain

AGGAGAATCTAGAAAACCAGAAAGAACTCTCGGGCAAATTTGTATCTCGTCGATTTGGCTGGTTTCGAAAAAGTTTCGAAA
ACTGGAGCCGAAGGAACCGTATTGGACGAAGCTAAGAACATTAACAAATCTCTTTCGGCCCTCGGTAACGTTATTTTCGG
TCTTGGGATGGCAAGACTACATACCGTATCGTGACTCCAAGCTCACGAGAATCTTGCAAGAATCTTTGGGTGGTA
ACGCTCGAACCCTATTATCATTGCTGCTCGCCAGCAAGCTTCAACGAATCCGAAACAAAGTCAACGCTGGATTTTCGGT
AAACGTGCAAAGACGATTAAAGAACGTTGTATGCGTGAACGAGGAGTTGACAGCCGAGGAATGGAAGCGCCGTTACGAGCG
CGAGAAAAGAAAAAGCAGCGCGGTTTAAAGGGGAAGGTTGAAAAGCTCGAATCGGAATTGGCCCGTTGGCGCCAAGGCGAAA
CCGTTAACCCGAGGAACAAGTCAATCTCGTTGAA

>CL114Contig1|annexin b11 isoform a

AATTCGGTACGTGCGTCCACGTTTTCAATAACAATGAAAACAAACGGGAATCGTTGTTTTGATTCTTTTTATCGACATTTT
GTCTTGATATTCGTTTTCTATCTGGTTAAAAATCCCTCTGACAATAATAAATCATTCTAAACGAACATTCGAGAATCTGA
TTTGTTGCTATTTTTATTTCTGTTGCTGCAATCTACTTCTGCGTCACGAGACCGTTACATTATTGTTATATGCTCGCT
TCTTTACGTTTCTTTGGGTGTGCGTCACTTTGAAACATTCCTCGCATTCGACAATAAGTTTCGAGAAACGCACACATACGTT
CGATTGTTTAAACAGCTCCCAATTGTAAACAACCTTCTCCGTTATCATTTTAGGTGTTTACGACCCAATTACATCG
CAACGCATCAACATGAGTACGGATATCAGCTGTCTCTACTGTCTGGCCAAACCCGAACCTTTGATCCACGCGTCGATGC
CGAAATATTGCGCAAAGCAATGAAAGGATTTCGGCACTGACGAGAAAGCCCTTATCGAAGTTCTCGCCAATCGTACCAACT
TGCAACGACAAGAGATTGCTACTCAATTCAAGACTCTTTATGGAAAAGATTTGATCAAGGATTTGAAATCCGAGACCAGT
GGAAATTTGAAAAGTTGCTGGTAGCGATGATGACACCGTTGCCGCAATATTACGCGAAAGAATTGCACGAAGCAATGGT
CGGCATTGGTACTGACGAAAACGTTCTCATCGAAGTACTATGCACTGTCAAATCACGAAATTCGCGTCATAAAACAAA
CTTACGAGGCCATGTACGGGAAATCTTTAGAGGATGTTTATGGAAGATACATCTGGAATTTCAAGCGACTGATGGTG
TCTTGTTGTTGTCGAATCTGACGAATCTTTTGAAGTTGATCCGGGGCGGTTTCCACAGACGCTCAGGAACCTTTTACA
AGCTGGTGAATTGCGCTTCGGAACGACGAGTCTGTCTTTAACGCGATTCTCGTACAACGACATACCACATTTGTCAAC
AGGTTTTCTATGGAATATGAACAAGGGGACGTGGCCGACAGTTTCG

>CL11522Contig1|general vesicular transport factor p115

TGAAGGATCAAAATTTAGTATTACGAGCAGCGCAAACCTAATTTGTGCGCGGAGAAAGCTTCGGCGGTGGTGAGCAGCGTG
GAGGCGACGAACGAAGAATTAGAAAAGCTAAGAAACACAGTCAAGGACCTGGAAAGTCGATTGGCCGAGAGCGAGTTAAA
AAAGTCAGGAAAAACGAGAGAAAAATAACAACTTTTCACAGCTACAGAGTCAACTGGAGGAAAAAGTCAAGAGCTCGAA
CGAATAAGAAAAGATCAGGAAGATTTATTAGAATTAATGGCGGATCAAGACAGCAAGATCATGTTGTTAAAGAAAAGCT

mmc4.txt

CGAAGCTCTAGGAGTCAAGGTTGAATCGGACGAAAGTTCAGGCGATCTCGAAACCGACGATCCCGAATATTCTCCACCAT
AAAAACNGTCAATCGATGCGGTTGCAGTTAGAAAAATAACGTGAAGTCGGCATGTTTTAGAACTGTAATTTTTGACGAT
ACAGAGAGAA

>CL1158Contig1|fumarylacetoacetate hydrolase

AGTTCTAACGGACATCTCGTGGTGTCCAAACGTTTCCCAAAAGAAGGAAACTGAGTGAAAAATTTCTGAGGATGAAGTC
GTTTCATAGAATACTCAGTGAACAGTGATTTCCCCATTGAAAAATTTGCCTTACGGGGTTTTCTCAACGACCGAAAACCCGA
AACGACGAATCGGAGTCGCAATCGGCGATCAAAATTTGGATCTCTTTGCCATCGCCCATCTCTTCACTGGACCGATATTG
GCGAGCAATCAAAATGTCTTCGCCCAAGAGACTCTTAACGATTTTCATGGCTCTCGGTAGAGATGCTTGGAAAGAAGCTCG
GAGCACGATACAAAAATTTACTCTCGGTTCGATAACGACACTCTGCAGAATTCGCCATTACGTTCAACGGCTTTCTGATCCC
AAGCATCGGCAACGATGCACTTGCCAGCAAAGATCGGCGACTACACCGATTTCTACTCGTCGATCCATCACGCCACCAAC
GTCGGAATAATGTTCCGCGGCAAGGAGAACGCTCTCATGCCAAATTGGAAACACTTACCGGTGCGTTACCACGGTCTGTC
CAGTCTCGTCTGCTCTGCGCACTCCCATTGTTAGACCCAGAGGTGAGACACTTCCGGTCTGAAGGTGCGGCACCGGTTT
ATGGCCTTTCCAGACTCATGGACTTTGAACCTCGAAGTTGCCTTCTTCGTTGGGGGACCACCAACCAAACTCGGCGATACC
ATACCCGCTTGCAAGCTTACGATCGGATTTTGGAAATGGTCACCATGAACGATTGGAGCGCTCTGACATACAAAAATG
GGAATACGTTCCGCTTGGTCCCTTTGGCGCCAAAAAATTTGGCAGCACCATCTCGCCCTGGATCGTTACGATGGAAGCTC
TCGAGCCTTTCAAAGTTCGAATATGCTTCAGGATCCGAAACCATCCCTTATTTGCAACACGAGAGCTCTTGCAACTTT
GACATCAAGCTGGAAGTTGACATCAAACCACCAACTGGACCCACGACAACCTGTTTCTCGAAGCAATTACAAATATATGTA
CTGGACTGCTCAACAACAATTGGCACATCATACAGTCACAGGATGCAATTTAAATCCCGGAGATTTAATGGCGTCCGGGA
CGATAAGTGGAGAGACTTCGGAATTCGTACGGTTCGATGTTGGAACCTTCTGGAAGGAACAATGCCGATATCCATGAAGG
ACGGCAGCACGAGAAAAATTTGCAAGATGGCGACGAAGTGTCGATTGCGGTTTTCTGTCAAGGCGAAGGTTTTCTGAATT
GGTTTTGGCTGCAAGGCCAGTTGCTGCCAGCTCATCCTGAATAACGAAAATCAATAAAA

>CL115Contig1|d-3-phosphoglycerate dehydrogenase

ATTTCAATAAAATTCACGATTGTGCAAAGACCCCCAGCGAAATTTGCATCGTTAAACGTTACGAGTATACTAACTGTCCG
ATGAAAAATAAAATTTTCTCCATTTTGGGTCAAAGGTCGGATCCCGCGGGGGTTTTGGGTTTGGATTTAAACATGCAATC
ATGTCGATCCAACGAGAAACGTTTTATCAGTGATCCGGTCCATCGCTCCTGCGCCGATCTTTGACCAGCTACGGTCT
ACCCGTCACGACCAAAATACAAATTTATCAAAAGGACCAATTGATCCAAGAGATACAGGATTACGATGCCCTGATTGTACGT
TCCGAGACCAAAGTTACTGCTGAAATAATCAACAGCGCGCCTAATCTCCGCGTTATTGGACGAGCTGGCACCGGCGTCTGA
TAATATCGATCTCCAGGCCGCCACGCTCGCGGAATCGTCGTTCTCAACACTCCCGGAGGCAACAGCATCAGCGCTGCG
AGCTCACGTGCGCTCTGATCTCGTCTCTGGCGCGCAACGTGGCTCAGGCCGCTCGGTGATGAAAGAAGGACGCTGGGAC
CGCAAGCTCTACTCCGATTTCGAATTTATCGGGCAAACTCTGGGTGTCTCGGATTTCGGACGTATAGGACGAGAAGTGGC
ACGAGAATGCAATCTTTGGAATTGAACATTTGTCGCTGTCGATGCTCACCAGAGAGGTTGCCACCGAACTCGGA
GTGACCAAAGCGGAAGCCTCGAAGAAATTTGGCCGTTGCGGATTACATTACCGTCCACACGCTCTCATCTCAGACGA
AAAATCTCATAAACGCGACTACTTTATCGAAATGCAAGAAAGGCGTGTACGTGATAAACGTTGCCCGTGGTGAATAATC
GACGAGGAAGCTCTGTTAGACTCTATAAAATCCGGCCATTGCGGAGGTGCCGGGCTCGACGTATTTATCGAGGAGCCACC
AAAACAACTCGGTCTCTCTCGAGCTCAATAAAAAACACCCAAAGGTTATCGCGACTCCTCATCTCGGGGCCAGCACCGCCG
AGGCGCAGACCCGGGTGGCGGTGGAATCGCGGAGCAATTCCTGGCGATATCGGGAGTTACGGAAAAGACAGCGTGACCG
GAATCGTAAACGCGCCGTTATTGGCCGCGCGATGCTCGGTGACAACGCCCGTTGGATCGAGCTTGCCAAGAGATTGGG
AAAAATTTGGGGAGCTACGCTTCTCCGGAA

>CL1163Contig1|40s ribosomal protein s3a

GTCTCTGCACTTCCGCCTGCAAGCAAACGGGATCTCTTTTCCGTTTGTAACTTAATCATGGCGGTGGGAAAAAATAAGG
GGCTCTCGAAAGGAGGCAAAAAGGGGAGTTAAGAAGAAGATTGTCGATCCCTTACCCCGTAAGGACTGGTACGATGTCAA
GGCACCCTGCGATGGTTACCACTCGCCAAGTCGGCAAGCACTTGGTCAACAGAACTCAAGGAACCAAGATCGGCCTCCG
GAGGGTCTGAAGTTCCGTGTTTTGAGGTTTTCCCTCGCGGATCTCCAGAGCGACAACGACGCGGAAGATCTTTCCGTAA
GTTCCGTTTGATCGCCGAAGATGTTCAAGGACGTGCGGTTCTTACCAACTTCCACGGTATGGACCTGACGACCGCAAGC
TTCGTTGATGGTCAAGAAATGGCAGACCCTCATCGAGGCCACGTCGATGTCAAACTACCGATGGCTATTTGCTCCGA
GTATTCTGCATCGTTTTACCAACAAGGACCAGATGAGCACGAGGAAAACGTGTTACGCTCAGCACTCGCAGGTCCGACG
CATCAGGGCGAAAAATGGTCTGAATCATACCAACGACGTAGCCAAGAGCGACCTCAAGGGAGTCGTGAGCAAACTTCTCC
CCGACGCCATTGCCAAGGACATCGAAAAGGCCCTGCCAGGTATTTACCCCTCCACGACGTTTACATTGCAAGGTCAAG
GTATTGAAAAAGCCAGTTTTCGAGCTGAGCAACTTTTGGAGCTCCACGTTGACGGAGGCGGTGGCAAGACGCGAGGG
CGCGAGTCCGGCTCGAAGGTTCGACAGGCCCGAGGGCTACGAACCACCTGTACAGGAACCCGTTTGAATCCATCAAAACG
CGAAATACTTTTTAAAAATAAAAAGATGAAAAAAACTACGAAAAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAACTTGTCCGGCCG

>CL117Contig1|hexamerin 70b precursor

ATCCAATCCTGTTTGGCCAGGAGTATTAGTGGGTTTTCAATAGTAAGTTTCGTACAGAACAACGAGGATGCAGAAAAATTC
TCGTGGTCTTCGCGACCGCCTTGGTCCGGCTCGAAATCGCCCATCATGGAGCTCCATTGTCACTGCTGACAAAAATTAC
GTCAACATACAGAAGAGCATCTACCAACTGTTCTGGCAGCTCGACCAACCGACACCGTGTCTCCCGAACTTTACCAGAA
GGCTCGGACCTTCAGCATTGCCGACCATTTGGACTCGTACCAACACGAGTGCAGTCCAAGAGTTCCTTGACCTCTGGA
AACACGGCATGATCCCACACGAAGAAATCTTCTCGGTCTTCTACCCTCATCATTTGGAAGAAGCCAAGGCATTGTTCCAT
GTCTTCTACTACGCCAAAGACTTCAACACTTTCTACAACACCGCTGTGTGGGCTCGTTTCAACGTAAATGAGAACTCTT
CACGTACGCGTTGTGCGTTGCGGTTCATCCATCGTCTGACCAAGTTTCGTTAAGCTTCCACCTCTGTACGAAATAATGC
CTCACTACTTCTTCAACAACGAAGTCATCCAGCAGGCTTACCACATCAAAATGGGTGACGTTGCTGGAGTCAAGAACGGC
GTTGTCTCAAGTATCACGAAGGTGGTATCAACGACATTATCATAAACGCCAACTACAGTGGATGGTACATGAGCCACGA
CTACCACAGCGAAGAGAAGCTGACCTACTTCACCGAGGACGTTGGTCTGAACTCTTTCTACTTCTACTTCAAGCACGAAT
TCCATTCTGGATCAGCAGCAGGACCTTCAATTTGCCAACGAACCTTCGTGGTGAGGTTTACTTCTTCGGACACAAGCAA
CTCTTGGCTCGTTACTATCTCGAGCGTTTGTCCAACGGTTTGGGAGAGATCGAGCACTTTGACTGGCACAACCAATCGT
CCCTGGATTCCACCCGTCATCGTCCATCCCAATGGTCTGCCCTTCCCTCACCCTCCATGCTGGTGGAAATCCCTGTTT
ACAAATACAAATACGTCAGGATACGAACATCGAGAATTTGTCCGCTGGCTATCGATGCTGGTTTTCTCTTCTCGAT
TCCAAACACAACCGCTCGACATCTACACTCCTGAAGGCTTCAACATGTTGGCCAACGTATCGAAGGTAACGCCGATTCT

mmc4.txt

CATAAACTACCGTCTCTACGATTCCATGGACCACGTCTGCAAGAAGATCCTTGGATTCAATCTCGAGCCTGTCCACAAGT
 ACCACATCGTCCCCAGCGCTCTGGAGACCTTCACCACGACCTTCGGGACCCAGCTTTCTACCGCATTTACGACAAGATC
 GTTGGCTATCTGCTCAAGTTCAAATCTCATCTTCCATCGTACACTCACGACCAGCTCGTCTTCCCGGTGTCAAGATCGA
 ATCTGTTGCCGTTGACAAGCTGACCACTTTCTTCGACCACTTTGACTCCGAAATCTCGAATGCTCTCCAGTGACATCCC
 ACAAGGAGGCACAGAACTTGAACGTCAAGGTCCGCCAGCACCGTTTGAACCACAAACCCTTCACTTACCACATCACCATC
 AACAGCGACAAGGACGTCAAGTCCATGGTTCGCATCTTCTTGGACCGAAATACGACTCGCACGGGCATGAATTGGAAAT
 GACTGAGAACTGGGTCAACTTTGTGGAACCTCGACCAATGGGTCTGCGACCTCAAACCCGGCGTCAACAAGATCGAACGCA
 GCAGCCACGCTTCCAGTACGCTTACCCTGACGAGGTATCCGGACCTTCTGTTCTACAAGAAAATAGAGAAGGTGCTGAA
 TCTGGCGAACAGTTCTCATATGCCCAACAATTGTACGGATTCCCGACCGCTTGTCTTCCCAAGGGTAAGAAGGAAGG
 CATGCCCTTCAAGCTCTTCGTCTTCGTACGCCAAATCGACGAGAACGTATGCACACCATTGAAACTCCGGTCTGGGGCT
 CGACTGTCGTTGATGGCCATTCTCTTGGCTATCCTTTGGACAGACCCATCAAGTCTCATATCTTCAACGTTCCCAACATG
 TTCTACAAGGACGTATGATCTACCACAAACATGCTGAGGAACTCAATCTCACCGTTTAAATCAAATCCTGTTTTTGATC
 GGTGCTTGTATCTTCCAAATCAGATGTTACACGAATCAATCAATAAATAAATACACATGAATAG
 >CL1186contig1|cytosolic non-specific dipeptidase
 GTTCTCTGTTGGATCCAGCTCTTCAAGGCTTCAAAGCGACCGGTCAAGAAATCCAGTGAACATTAAGTTCGTTTTTG
 AAGGGATGGAAGAAAGTGGGAGCGAAGGATTGGACGATCTTTTGATGCTCGCAAAGACACGCCGTTTATGAAAGAAGTC
 GATTACGTTTGTATATCCGACAATTATTGGCTGGGAACAACGAAACCTTGCATAACGTACGGGCTTCGTGGCGTTTGTTA
 TTTCCACATCGAGATAACTTGCCTGATAGAGATCTTCATAGCGGTACATTCGGTGGAAACCGTTTTCGAGGCAATGGCCG
 ATCTCGTTCACCTTGTCTCGGAACCCCTCGTCGACGTTAATGGACGCATACAAATCGATGGAATGTACGACAATGTCGCTGAA
 ATTACGATGTTGAATTGGCTTCGTACAAAGACATTTGAATTTGACGTTGACGAACTTCGGAGCACTGTTGGCATTCCAA
 ATTGGCTCACAAACGAGGATAAAGACTAAAATTCTAATGCATCGTTGGCGTTTCCCAAGTCTCTCGCTCCACGGAATCGAAG
 GAGCGTTCAGCGAACAAAGTTCAAAGACTGTGATACCAAGAAAAGTGAATGGTAAATTTTCAATTCGCATTGTTCCAAAC
 ATGACGCCGGACGAAGTCAAGCCAAGGTCAAAGTGCATTTGATAAGATTTGGGCGACGCGAGGCACTCCGAATGTTTT
 GAAAGTCTCAATGAATCACGGTGGAAAGGCGTGGACCGAAAATCCTGACCATCCTCACTACGTGCGCGCTCGTACCGCAA
 CCAAAATGGTTTATGTTGTTGATCCCGATTTGTCCAGAGAAGGAGGCTCAATTCGGTCACTCTCACCTTCAAGAAGTC
 ACAGGAAAAAATGTCTCTTCTACCAGTTGGCTGCGGCGACGATGGCGCACATTGCAAAACGAAAAACTCAATATTTCG
 CAATTACATAGAAGGAACTAAATTTGCTGGGTGCCTATCTTTACCAAGTGGGACAACTCTGAGAGAACAACCAACTTGATA
 TCATTTAAGAAAAACTGAAATAATTAATCTGAACGTTGTTAAACGCGGGTGGGGTTAACGAAAATCCAGAGCAAAGAAT
 TATATGGAGACTAAAATGGGACACAATGCGTTTTGCAGAAATTATAAAGAAGAAAAGAGCTTTGTATTACGGAATAAATA
 TTGGTTTGGTAATTTCAATGTAATTTCTGTCCGAGCGTCAACCACCGCGTAGTAATACATTTTTACTATTTTTCGCCATTC
 GCTCGCAACGCTATATCGGG
 >CL1186contig1|adp-ribosylation factor 2-like
 GCGAGGAGCGACAAGCAAGTGTGACGAAACGAGAAAAGCAGCGACAAACGAGCGCCAATCGTCCGACAATTCGAGGAACT
 GCTGTTGCTGCTGTTTTATTATCCAGTGTAGTCGTTTTCCGTGTGTAACGTTTACGTTTCTTTCATTTTTCTTTTCTC
 CCATTGACGAGGCGAGTCCCCGAAAAGTTAAAATACGAAAAATCGTGAGAAAAAAGACTCTGAGACGATCGCGTAGAAG
 AATAGAGAATAATTCAAAGGAGGTTCTATCGACGTCGTAGGATTGCGTGGTGGATTGCTCGAATTGCGTGGCTGTCAGAT
 CGGCCCTCAAGTGGATTGAAGAACGTGAGTGGACCGCTAAATTCCTTAGCTCCTGGGCGTATACCAACTGCCACAAGAA
 AAACACGTCATCGAGTGCCTATTTTGAGTTCTGAGCCCCCATCGTTCGTCGCGCCGCTCGTCCGACGTACATACCAAA
 AATCCTCGCGCAAAACATCGAATTACTCGAGCGCGAGTCGATGAGATCGTAAAATATCGAAAAAACAACCTTTTTGAC
 AAAAAAACGTTAATCACGATAAATCGATAAATCAGACGCAAGGATGGGCCTGACGATAAGCAGTTTGTACTCGTTTG
 TTCGGCAAGAAAGCAATGAGAATTTTGATGGTTCGATTGGACGCGAGCTGGTAAAACAACAATTTGTACAAATTAACAACT
 CGGAGAAATAGTTACGACCATACCGACAATCGGCTTCAACGTCGAACAGTGAATACAAAAACATTTGTTTCACCGTAT
 GGGACGTCGGCGGCCAAGGAAAAATCCGGCCGCTGTGGAGGCATTATTTCCAAAATACGCAAGGACTCATTACGTCGTT
 GACAGCAACGACAGAGAAAGAAATTTCCGAGGCTGAAAAAGAACTGGCCAACATGCTCAAAGAGGACGAATTCAGAGCGC
 CGTTCTCCTTGTTTTTGCCAATAAACAAGACTTACCCAACGCCATGTGCGCCGCCGAATTGACCGACAACTAGGCCTCA
 ACGCGCTCAAAGGACGTCACTGGTATATACAGAGCACATGCGCTACTCAAGGTGAAGGCCTTTACGAAGGACTCGACTGG
 CTGAGCAACGAACTCGCCAAAAAAGTGATCCACCATCCTAGAGATTATCGAGATCAAAATCTTGTCCAGAGTCATCCTAC
 CTCCCCGACGCCAACCATCTTTTTTCACTTTTCAACAGATTACCCGCCGTGCCACATCTGGACCGTGCCTTTTCCAC
 ACCCCGCGCCCTGAGTAATCTCCGATTTTTATTATTAATTTCACTTTTCTCCTCGAGCTCGTCCCCGTTTAAATTTCTT
 CCTCCGCTCTCGAGACTCTTTTCGGCAATCGTTCCAACACACAACCATTCACGATCGTATTCTATTTTGAATTCGCAACA
 ATCTACGAAATGGAATGTAACGATTATTTACTGATAACAGTAACGACGTTGATATCGTTTAAATGCAACAACATTTCTCT
 TTTCCAAACTCTTGCAACTTGGTCGACAAGATCAAGTTCGTTTTTCAATTGTCCTGAAAATCGGCAATTTTACGAAATTT
 CATCCCTACATTCTGTAACGAGAGTTGAACGATACAGAAAAAAGAATATGTTGATAAATCTAAACGATCCACTAGTCAAGG
 TCGTTTCCAATCGATCTGTTTACCAGCGTGGCGCTCATCGATCAAGCGCTTTGTACGATCGTGTTTTTAAGACTTATTG
 AAAAAATCACTTGTGTTGAGTACACAACGAGTGGCTTCGAGGACAGCATTCTGAAGTATTTCCCGGATAAAATTTTCGCTTT
 CGAAAGCCATCCGAGTGTGAGACACGCGCGAGAATATTAATTAATTGTACGAATGTGTGTGGGCCACCCAGTATCACGTTT
 TATCATCAACTTTTCTTTCCTCGATTACGGTTTAGCCGTTTGGGCAATGGAATAAATATTAATAAGATATTAATATATA
 TGAATATTTCAATTAACGTTACTTTTACCTTTCTGTTAAATACCGAGCTTCGCAACCTTGAATCCAACGATAAATAC
 GTTTTTCTATTAATCGTTTGTGATTTCGAGAAACGATGCAAAATTTTCTACCGAGCTTAAAAAATA
 ATCGTTTTATTGTCCTGACCAATATTGCATAAAGATTTTACATTTACGCAATAAAAAACGCAATTTTCTGTCATTCCA
 ATGATGCAAACTTCAACATCGTTACCTTTCTCATTAACAAACATATGGGAGAGTGAAAAAATCGTTTTTCTTTTCTGTA
 TCGCTGCCAGCTCGGCCTATCCCTTTCACTTTCTGTTGTTGATTGCTTAGACTTTGATAAACATTGTAACATACCTCG
 AGGAATAATTTTATATTTATAGACGAGTTTATAAAAAAATTTCCGAGGATCGAGGCTCGTACACGAACATGATTGTTCAA
 TAAATAACGATGACTCGTTGCACCGAAATCAGCAGCCAATCTCGACGAGATCCGTTTCCGGATCATTGATTTTTATTTA
 TCGAAAAATTAACGACGAGAATCAACATCAAGTTTCAATTAATAAATG
 >CL1190contig1|s-adenosyl-methyl transferase mraw
 TATTTGGAGCCTTCGCGGGGAAACTTTTGTGACATGACTTTTGGGCGGGAGGTCAATTCGTCAAGAATTTTGGAGCA
 TACGCCGGACGCAAGATCTTTGATTGGATCGTGACCCGGTGGCGCACGAGCACGCCAAGTCGATGGCTGAGAAATATC

mmc4.txt

CCGGACGCCTCGTTCCGTTGCTCGGTAGATTTTCAGAATTGCCGAGTTACTGCGTCGGCACAAAGTCCAGGCGAACAGT
ATCGACGTTTTCTCTTTGATTTTGGCTGCTCGTGCATGCAATTCGACGTCGCGAGTCGTGGTTTTCTCTGGCGAGGAAC
GGGCCGCTGGACATGCGTATGGACGGCGGTGCTGTCGGGAACAGCCAACCGCGCGGAGTTTTGGCTCGAGCGAGCGA
GGAGGATCTTTACAGGATCCTCAAAAGTTTACGGCGAGGAAAAGCAGGCGAAAAAGAATTGCTAGAGCGTTGATAGAGGC
TCGTTACACTTTCAAAAATCTGGAGACGACCGAGGAGCTCGCAAAGCTCGTGAATCGACGCTCGATGGCGAGAGCTTCA
TCGACGACGATTACGACGAGCAGCGGGTCATCAGGACCGACAAACTTGGCAGATCTGCTCATCTCGCCACCAAACTTTT
CAAGCCTTTTCTATATTCTGTTAATAACGAGTTGAATGAAATTAATTACGGCGTCGTCATCGCCCAGAATTACTTGAAAAT
AAGCGGTGCTTGATCACTCTGGCTTTTCACTCCCTCGAAGACACCATCGTCAAAAGACACCTCTCTGGCAACATCAACG
ACTCCATGATCAATCGTGCCCCCTCAAATATTTGAATCACAATAAAATTTTACAATAAAATGGAATGGAGAATCTTACC
GAGGCGCCATGGGCGATGCTCCACAAACATGTTCTGATACCCAAAGCCGACGAAGTCGACGCTAATCCACGTGCGAGATC
AGCCAAATTTGAGCTCTCATCAAAGTCAAAAAAAGCAAAACAAAATTCATCGTTACAAAATTCGTTTAACATTTTTT
TGTTTCACTAAATTTATTGTAATCTGTACATTTATAATAAATGTAGGAAAATAGAAGTGTGCTCTGTGCTCGACATCTTA
CGAACTTTTCTCCTGTTCTCACAAATATATTCGTAGCAAAAAATAAACAGCTCGTCAACACGCTCGACCTTGAAGCTG
ACGCAACTAAAAAGTCTCGATCTCATCGGTCTGTTTCCAGTATGTCGTAGACAGCCGGCTGTTGATGACAAAC
CGGCGATCATCATGATCTCTCCGACCATGGGAACACGAATTTAGCTCCGGTAGATACAAAATGTCGGTAATATGCAGA
GGGAATCCTGTGGGTGCTCCCTTGATCGCTGCATCACCAGTCAACGAGTTCGAAGTCTTCCCATGCAAAGAGCATACTT
GTCGTATCCAACTCATGGTAGCTCGCTATTTTTCTTACCCTATCCGCGAGAATCACTTCGCCAGCTCCGTACATTT
CCCGAGCAATAATATTTATTTTTCAACAATCCCAAGTCGCTGTCGTAGAGGAACTTGAATTTGCTCGGTTTCTCTATC
GCCTCTAATACGGCATCGGCTAAATCGAGAGCTCCTTCGCCACCTTGGCCCAAT

>CL1191-bisContig1|gtp-binding protein cg1354-like

GTGTGTGTTCTCCTTGTGGTGCCTGTTCCGGTCGACACGTTGTGCGTGAAAATTTATTAAGTATAAGGTTATCAAAGCCGG
TGTGAAAGCTACAAAAAAGCAGGATGCCACCTAAAAAGGTCGAGGAACCGGAAAGGAAACCCCTGATCGGGCGAGTTGGT
ACGAACCTCAAAGTTGGTATCGTTGGCATCCCGAATGTTGGAAAATCGACGTTTCTTCAATGTTCTCACGAAAAGTCAAG
CAGCTGCTGAGAACTTTCTTTCTGCACCATCGATCCGAATGAAAGTCGAGTACCAGTGCCAGACGCAAGATTTGACTAC
CTGTGCGAATACTTCAAGCCGGCCAGCAAAGTTCTGCTTCTCAATGTAACCGACATCGCTGGACTTGTGAAGGGTGC
TGCCGAAGGCCAAGGACTCGGAAATGCTTTCTTATCGCATATCAGCGCATGCGACGCTATTTTCCATCTTTGCGAGAGCTT
TCGAGGACGACGATGTTACTCACATCGAAGGCGAAGTCAATCCTGTTCCGGACCTCGAGATTATCAGCGAAGAGCTGCGT
CTCAAGGATATCGAATTTCTTGGCGTTCATCTCGAGAACTGGAGAACTCGTTGTGAGGGGCAACGACAAAAAGCTCAA
GCCGGAATACGAGGCCCTCCTTAAAGTCAAGAACATTTTGCAAGAGGAGAAAAACACATCAGATTTGAGATTGGAGCG
TCAACGAGATCGACGTGCTCAACAAATATCTGTTCTGACTTCGAAACCCGCTATCTACTTGGTCAACCTTTCCGAGAAA
GATTACATTCGCAAGAAAAACAAATGGCTGATCAAAATTAAGGAGTGGATTGACAAGAACGACCCAGGTGCAAGTTTGATT
CCCTTCAGCGGTGCGTTTCGAGAACAAAGTTATCGATATGAGGCGCCTGAAGCAGCGAGGTATTGTGAGGAACACAAAGT
TAACAGCGCTCTGGATAAAATCATCGTTCAGGGTTACAAGTCTCTTCAATTGCAATACTTTTTACCAGCCGGAGCTGACG
AAGTCAAAGCATGGACGATTGAGAAAGGACGAAAGCACCACAGGCTGCAGGCAGAATTACACGAGCTTTGAAAAGGGT
TTTATAATGGCTGAAGTATGAAGTTCGAAGACTTCAAAAACGAAGGCTCCGAGAACGGTGTAAAGGCGGCTGGCAAGTA
CCGACAACAGGGTCGAAACTACGTGGTCGAGGACGGCGACATAATATTTTTCAAATTTAACGCCGGCGCTGGACTCAAGG
ATGCGAAGAAAAAGTATGGCACGCCTCGTTGGTTCGCTGCTGGTTCACATGTACATCAATATGATTTTATTTATGTT
GCATAAAACAAACGCGTTTACTACTAGCCTTGTACTGCAAGTTTTCGACTATTTTTTTCTTTCTTTTTTTTACCAGTCT
TCCTAAGATATTTTCTTCTCATCAGATTGGAAGACATGCTCGTTAAATGAAACGAAAAATGAAAAAATTTAGATCCG
CATTTTCGTCTTCGAGGAAGAAAGAAATCCTCGTTCTCTTGTTCGTACGTAATTTTTTTTATAGTTGGAG

>CL1198Contig1|60s ribosomal protein l15-like

GTGATGATGTCCTTCTTTCTTTCTGATACATTGATCGTGACGGTACTCACGATGGGTGCGTACAAGTACATGCAAGAGC
TGTACAGGAAGAAACAGAGCGATGTGCTCCGTTCTCTCCGTCTGATGCTGGCAATACCGTCAGCTCACCAAAATG
CACCCTGCTCCAGGCCATCCCGCCCTGACAAAGCTCGTCTGATAGGATACAAGGCCAAACAAGTTTTGTAATCTTCAG
AATTCGTGTACGTGCTGGAGGACGTAACGTCGGGTGCCAAAGGTGCGACTTACGGTAAACCAAGAGCCACGGAATCA
ACCAGTTGAAACCCACGAGGAAATTGCAGTCCGTTGCTGAGGAACGCGTTGGTCTGCTGCTTGGGTTGAGAGTTCTC
AACAGTTACTGGGTAGCCAGGATTCCTCCTACAAATATTTGAGGTGATTCTCGTCGACCCCGCACACAAGGCAATCCG
TAATGACGCTAAGGTGAACCTGGCTGTGCAACGCTGTTCAACAACCCGTGAACCTCGGTGGCAAGACATCGGCCGGCAAAA
TCTCTCGAGTTTGGGTAAGGACATCGTTACTCGACAGCAATTTGGTGGATCGAGAAAGCGGCATGGCTCAGGACCAAT
TCCCTCTCTCTCCGAAGGAAACGATAGGTTACTTGACACTTGTATCTCACGCAAAATAAAATGTTTCATTTTCATCGGGA
CATTCATTTCTTGGCTCAAAGTTTGATCGACGATGCGAAAAATAAATATCTTAAAAAATTTTACTTGGCACCTAATCTTGT
TCGTCCCGGTGGTGGTGGTGAATGCAAAAAACTAAAAATTTTAAAGAGACTAAATTTTTTACTTGGCACCTAATCTTGT
TGCCAAGAAATCGTAAATATCGAATTTTCGTAATAAGAAAT

>CL12-bisContig3|elongation factor 1-alpha

TTTTCTGTGCGCATCTGGAGGTGAGTGGTTGTGCGTGCTTTGTCGCCAAAGATAGTCTCTTTCTGACGCGAGAAAGAT
AATCCAAATATTACGATACAACGAAATAACGATCGGCTGTGAGTTTTTATTGCCAGATTGATACAAAAACGAACACCAT
GGGTAAAGAAAAGGTTTCATATTAACATCGTCGTCATTGGACACGTCGACTCCGGCAAGTCCACCACCACCGGACATTTGA
TCTACAAATGCGGTGGAATCGACAAACGTACCATCGAGAAATTCGAGAAGGAAGCTCAGGAGATGGGCAAAGGTTCTTTC
AAGTATGCATGGGTATTGGACAAGCTCAAGGCTGAACGTGAACGTGGTATCACGATCGATATTGCGCTCTGGAATTCGA
GACTTCGAGATACTACGTAAACGATCATCGACGCTCCTGGACACAGAGATTTTCATCAAGAACATGATCACGGGAACGTCGC
AAGCTGATTGCGCGGTGTTGATCGTAGCAGCTGGTACCGGAGAATTCGAAGCCGGAATTTCAAGAACGGACAGACCCGT
GAGCACGCTCTTTTAGCTTTACGCTTGGTGTCAAACAACGATCGTTGGTGTCAACAAGATGGACTCGACCGAGCCACC
GTACTCGGAATCTCGTTTCGAGGAAATCAAGAAGGAAGTATCTTCTACATCAAGAAAATCGGTTACAATCCGGCCGCTG
TTGCCTTCGTACCGATCTCCGATGGCACGGCGACAACATGCTTGAGCCATCATCCAAATGCCATGGTTCAAGGGATGG
GCCGTCGAGCGAAAGGAAGGCAAGGCTGACGGCAAGTGCTCATCGAAGCACTCGACGCAATCCTGCCGCCCTCCAGGCC
GACCGCAAGGCGCTCCGTTCTCCCTCCAGGACGTTTACAAGATTTGGTGGTATCGGAACGGTACCCGTTGGCCGTGTCG
AGACCGGTGTCATTAAGCCCGGTACCGTCGTGACTTTCGCTCCAGCTGGTTTGACCACTGAAGTCAAGTCCGTCGAGATG
CACCACGAAGCCCTCGTTGAGGCCGTTCCCGGTGACAACGTTGGTTTCAACGTCAAGAACGTCCTCGTCAAAGAATTGCG

mmc4.txt

TCGTGGTTATGTCGCTGGTGA

CTCAAGAACAACCCACCCAAAGGAGCTGCCGATTTCACTGCACAGGTCATCGTGTGGA

ACCACCCTGGACAGATCAGCAACGGTTATACGCTGTGTTGGATTGTACACGGGCCACATTGCGTGCAAATTCGCCGAA

ATAAAAGAGAAATGTGACCGTCTACCGGTAACACGACTGAAGATAACCCGAAGGCGATAAAATCGGGAGACGCTGCTAT

GGTGATCCTCGTGCCGAGTAAGCCAATGTGCGTCGAGGCTTTCCACGAGTTCACCTCTGGGACGTTTCGCCGTGCGTG

ACATGCGTCAAACCTGTTGCGGTGCGTGTATCAAGGCCGTTAATTTCAAGGACGCCGGATCAGGCAAGGTTACCAAGGCT

GCCGAGAAGGCACAGAAAAAGAAATAAAATCAGTTTTCGCGCAATCGACGAGCCGCGGCATTATACGTCGCCGGGTGGAT

GCCGGCGTATAGTAGCGAATGTAATTTGTATTCTGACTTTGCGCCATACGGACGTGAAAAAACCATGAAAAACAAC

AGCAGCAGCAACAACAACAACAACAACAACAACAACAAGAAGACGGAGAAGGAAAAATATTATCATCATCGTCGAC

GCACTTGCCGTTAAACGGGCTCACCCGTTTTTCGCAAGATTACATCAGCAGCAAAAAGAACAACGGGAAATAAAGTATCGTC

GATCGTTGATAGCAGTGGAAGATACGAGATCGACGAGGAAGAACGATGTATCGCAATCCCTATACGTAGAGAACCAATT

GAAACATCCTTTTTTTTTCTGCACTCGTTTATTGCACCTCTTGAAACGATCGTTACGAAAATTATTTATCGCAAAGAGTT

TCGTAGGAAAGAACAACAAGATTTATTGTGACAACAAGACAGTGAGATGAGACACAAAATTAACATCCTTTTCATTGGCT

CAAACCCAAACCACTCGCTTTTAATACTTTATCTCTCATTCACTCAAGTGATGGCAGCAAGAAAGGACCCAAAATACGCG

AGCTATTTACACCTGATACAAACACTAAAGACATAAAAAACAACAACATAATTTAGCTCGGCTTAATTATATTTTTCT

AATTATTTATACGCAATAATAAATCCTATATCTGCGTACTCGAGAAAAACAAAAA

AAAAAAAAAAAAAAAAAACTTGTGCGCCG

>CL120Contig1|cathepsin 1-like

TTAGCTCTCGAGCGTTCCTCAGAGCCTGTTGTGCGTTGCGCTTTTCGAAGAGTTTCTACGTTTCGTTCTTTGTCTGACT

AAAGATAAACACGATGAAGGCCCTGCTTGTGCGTATTTGCGCTATTTTCGCCGTCGCCGTCGCCGTCACGCTCTCTGGAT

TTGTGGAAGCCGAATGGGGCGGTTCAAGATCGAACACAACAAAAAGTACGAGAGCGAAATCGAGGACAATTCGAAT

GAAAAATTTTCATGGAACCAACATAAAATAGCTCAACACAATCGCAAATACGGAACCTGGACAAGTTTCTTACAACTCG

GTATCAACAAGTACGCCGATCTACTTCATCACGAATTCATCCGAACGCTCAACGGTTTCAAAAAACCTTCGGGCAAGAAT

CTCCAACCTGGAGAACCAGCAGTCGGCGCTAAATTCATCGCGCTGCTAATGTTCAACTTCGGGCCGAAGTCGACTGGAG

AAAGGACGGCGCCGTTACCCCTGTCAAGGACCAGGGCCACTGCGGTTCTTGCTGGGCATTCTCTACCACGGGCGCGTTGG

AAGGTCAACACTTCAGACAGACCGGGGTTCTCGTTTCACTGAGCGAACAGAATCTTGTCGATTGTTCTGGTAAATACGGC

AACAACGGTTGCGAGGGCGGGCTCATGGATCAAGCCTTCAAATACATCAAAGACAACAAGGCCTCGATACGGAAAAAGTC

TTATCCTTACGAAGCCGAAGATGACAAGTGACATACAACGCCAAAAACAGCGGTGCCGAGGACGTTGGTTTCGTCGACA

TCCCGGAAGGTGACGAGGAGAAATTGAAAGCCGAGTCGCGACTGTCGGTCCAATTTCCATAGCGATCGACGCGTCTCAA

CAAAGTTTCCAGTTTTATTCCGAAGGCGTTTACAACGAGACCGAGTGTTGAGACACCGAGCTCGACCACGGCGTCTGAT

CGTCGGTTACGGTACCGACGAGGACGGCACGGACTATTGGCTCGTGAAAAACAGCTGGGGCGACAGCTGGGGTCTCAAAG

GATACATAAAAAATGTCGAGGAACAAGGACAATCAATGCGGAATCGCAAGCTCCGCGAGTTACCACTGGTCTAGAGTTTC

CCGAGCCTGGCTCTGGCTCGGAGCAGTCAACATTGCGTGAGCATGCCGATGAGAGATTATCAAGTCCCTTCGACGCTCT

GTAATACGAGAAAGCAAAAAAATGATTTTCTAAATTTCCAACACAAAATCGATTTTTCTATCGATTTTTTATTT

TTAACTTGTCAACTATTTTTATTTTTGTGCATGCGAACACATTTGACAATATTTGAGTTCAAAATTTAGTCGGAAAAAT

GAGAAATTCGTACGATTCCGGCTT

>CL12115Contig1|nitrilase homolog 1-like

ATAACCTAAAAATCATGTTATTAGGCAGACGTATAGTTGGCCAAAGCATATAGAAACATGTCGACATTTCTGTTAGGATTG

AATCGGCTTGGGAATTTGTGCAACATTTAACGCAATTACCGAAACCGCCGAAACATTTTCGCCACTTGTCTGACGTCA

CGTGACGTTGTCGTTTACCGGAATGTTTCAACTCACCTTACGGAACACAGCATTTTGAAGAGTACGCCGAGTCTATTC

CTGGAGGCGATACAAGTCGAGCGTTATCCGAAGCAGCGAAAAAGTCGGCGACTTATGTCGTGGGTGGTACGATACCCGAG

AGAGATAACGGGTCCCTGTACAACACAGCAACGGTCTGGGATCCTCAGGGAAATCTTGTCGCAAAACATCGCAAGATGCA

TCTTTTGACATCGATATCAAAGGGAATAACATTTTTTCGAGAGCGAACTTTGTACCCGGGAGATTGCTGACTACTTTT

GAGGTCAAGGGCCT

>CL12141Contig1|homocysteine s-methyltransferase

ATTCTGCTAATTATTATCGAACGTGCGGCAAAACATATTCGCTGCTTCGTAGCATTTGTACAAATTGCTCGCGGCAATAA

AGAGATTTGCGACGATAAATGCGGGAAAAAAGTGAAATAACAGGTGAATCCCGTCAATCTGGTGTCTTGCGATGTCTA

GAAAGGTTTCTCTGTTGGACGGTAGTTTCGCGACACAAATTTCAACGCGCGTTGGTAAAAATCCGGACGGTGATCCGCTA

TGGACATCGAGATTTATCGCTACAGATCCAAACGAAGTTGTTGCGACTCACTTGATTTCTTGCGCGTCGGTTCCGACAT

AATCGAAACAACGACTTATCAGGCTTCGATAGATGTTTAAAGAACACTTAGGAATGGATGAGAAGGAGAGATTTAGATC

TGATTCGCAAGGCGAGTCGAGCTCGCTAGGAAAGCTGTGAAACTTATAAAGATGAAGAGAAGAAAAAATGATGAGGAAA

AAAAATATTAGATCGCAGGTTCTTGCGGCCCTTATGGCGCTACTCTTCACGATGGTT

>CL1215-bisContig1|PREDICTED: c-factor-like [Megachile rotundata]

AAAGAACCGCAGAGTGGGGGCGAAACGGTCTGAGCAGTCTCTCGGTTTCGTTTACCTCAGAATCAAGAAGTTCTGCT

TGCGAGTTAAAATAACGGAAAAAGCGTTAGAGAAAAATTAGCCAAGGATGAAGTCGATACTCGTGAATGTAATCGTGG

AATCGGCTTGGGAATTTGTGCAACATTTAACGCAATTACCGAAACCGCCGAAACATTTTCGCCACTTGTCTGACGTCA

CCAAAGCCGGGAAATTAAGGCTCTCGCAGATACTGCTGGAATGTCCACATCATCGAGATAGATCTCAAGGACATTGGG

AGTTATGAAAAAGTGGTGGATTTCTGACCTCGAAAAATCGGCGACGAAGGCCTGAATGTCCTGTTCAATAATGCTGGCGT

ATCGAACAAAGTTCACCTCGTCTTGGTCTCGTCAAAGAAGAACAGCTTACCGACGTTTTTCTCGTTAACACAGTCGCACCAA

TTATGCTAACGAAAGCGCTTTTGCCCTTGCTAAAAAAGCTGCTGAAGGCAAAAAATGGTCTTGGAATCCATCGAGCTGCT

GTCATTAACATGACTTCCATGCTGGGCAGTATCGTGACAATCAACAAGGTGATTCTATCCCTACAGATGCAGCAAGGC

CGCTCTTAACGCAGCTACAAAAATCAATGAGCATCGATTTCAAGACGACGGGATTCTCGCAGCTTGCAATTCCTGGCT

GGGTTAAACGGACATGGGAGGTCCGAACGCTCAGCTCGAAGTTGACGATTGCGTGAGTGGCTTAATCAAAACGATGCAT

TCTCTTGGTCAAAGGAGAATGGTTGTTTCATACGTTGGGACGGTGAACCAATGCCTTGGTAACTTTTTCTTGCAATCTAC

GAACGCAGTCAGTTTTTTTTCAGTTATTTTTCAACGACAATTTACGATCTTTCTGTTTTCAAAGCGATTTTATTTCCC

AGTGTAATAAATATTGTTTTTGATAATTATTGAGTCGTGAGATTTCCATAGCCCGGGGTAAACGACCGAGAATAATATC

CTGCTCCACTCTCCGATCCACCTTGACCTCTTTCCAAACGCAATGCCCTCGGGGCGCTGTGTGAGGTAAAATGGAACCT

CACGAGAAGTTGTGGATGAAAACTCAAAAT

>CL1217Contig1|dolichyl-diphosphooligosaccharide--protein glycosyltransferase

GATTTCCTGTAAACCGTACAGCGAATCGTCCATTTTTCTTGACACGCGCAATGGGTAAAGACCGAGAGCCATCTTGCTTG
AAAAGCCGACGCGATAACCGGCTCCGGATCAACTTTTTCTCTGAAACGAGAAAACTCTGTTTATCAACGATATTACAGAG
AAGAAAAATATGGAGCGTCTGATATTGGGAATGGCGGTTGTAGCGGTACTGCTCGTGCCGACTATGAGCGTGGGAGCGGAA
GGGCGGACTTCCACAAGCTCTACTACGCCAGCTGACAAGCTGCATTTGAAAAAGTCATTGAACCCGGCTTCAAAT
CACGGACGTAGAATCCACCTTCTACGCCGTCTCGGCCAGCCGATTACTCGGAGAATCAATTCCAAAGACAAGGAAAGCT
CGGAATATCTCGTCGCCGAAGCCAATAAGGAACAAAGCCCGGAGAATACCTATTATACCGTCACGGCATGGCGAGCCCTG
GGATCTTGTCAAGCGGTGCCCGCCGCAAGCTCGCTCAGACATTGACAAAGGTCATCGAGAAGGAAACTTCAACGATTCC
GGAGCTGTATTACGCCGTATCGACTCTCGCGTCTCTCTCGCAAAAAATGTGCGCGGCAACCGTGTCCAAATTGGTGAAC
TAGTTTCAGGCCGCCCTCAAAAAAGACGACAGCATTTTTAACTTTGGGATACACTTTCCACATTGCTTCTGTTTTGGGACAA
GAGGGAAAAATTTGCGCGTGAAAAATCGCCGATGCGGATTTGTCAGGCCGACGAAACCGATGGCCGACTCTTGCACTTTGA
GGCGGACTTCCGCTACCGGAGTTTTGGTGATTGACGGAATAGCGAGACTGTGCAGCGCGCTCAAGGAGCATCCACCGGTA
AAGAACTCATCAAATCGTTAAATTTGGCCAATTATCTCTTGCTCTCGTATTGCTGACGAACGCCTAAAGGCGTGGTGAACT
TTTATCGGCATTGACCACGCTGGCCAACAACGAGCTCAACAAACCCATTTCCATCAGTCTCGCCGAGGGAGGATTATCG
TTTCGCCCAAACAGCCGCTCGTCAAAGTCAAAGTTTGCGATATTCTTGGACGACCGCTGCCCGCAAGCCCCGCCGTTGTT
GCCAATTCGGCCACGAGAGTCGACGACGATGTCTGTCGTTATCAGCAAACGAAATTTGAAGCTTCTCCAACCGACAAGAC
CCTGTTTACGACGAATCTCATGGAATCAAACCCCATCGCGGCTTCTACAAAATAGCCATTTCCGCTGGACAGGTTTCCA
ACGTCGTGACGGTGAAAGTACTTTCGAAGTGCGAGTCGATTATCTCGAGATCGGAACCGGCGATGCCGACCAAACACC
CAGCCT

ATGTGAAGATTTCATAAACGGAAGTGTGGGAAGACAGAGAAGGTCGTA AAAACATGTGCGAAGAACAAATCAAAGTCGTTGAC
ATCTTTGCGTCAAAAACTGCGAAAATACACAAAGATTTTTGAAGAGGAAATAGCGAAATTCGTGAGAATCCTGATCAGG
ATGACGACGGAAGAGGAGGAAAAAGCTGAGGAAGTTAAAGAATCGGACGAGGAGGAGGATGGCGCGGCCATGTTCAAGAAG
TCGAGCGCCGAGCCGAGCGCTCCGGACACATCGAAATTC AAGAAGGCTCTGACGCCGGCAGCATGCCAGTGAGAGCGCA
TTCCGATTGGGGAAGCGATAGCGACAGCGACAGCAGCAGCAGCAGCAGCGTCAATCAGAATCTTCGTGAACGTT
TCATAAAGAAAGCGACTGACAAGGAGGACGACGAGGATAAGACGAAGAAGAAGGAACAACGAAAAGAGCGTAAAGAAAAA
GAACGCAAGAAAAAACGCGACGAGGACGATGGGGAAGGCGAATGGGAAACGGTGAAAGGCGGAGTTGCAATACCATCGGA
AAAGCCAAAAATGTTGCTAAAGATGCAGAAATCAATGTACCGGCTGTATTGAAAAAATTGTGCGGAAGTAATAGCAGCGC
GTGGAAAAAAACGTACCGACAGACGAGAACAAATCGAGCTTCTCCACGAGCTTCAATCGATCGCTGAAACGCACAATCTC
GGAGCTGCTGTAGCAGTTAAATCAAGTTTTCCATAGTCTCATCGATCTTCGATTACAATCCCAAAGTTTCGGACGCCAT
GAAGCCGGAATATTGGTTCGAAACTACTGGAGCGTATATCGAAATGTTGGACATGCTTTTCGGCAACGCCGCGCATGCAGA
TCGCCGAAAAATATAACCGAAGACTCGGAGGAATTGAAACAGCACC GTTCAAGCTGCACGGTTGTGTTTTGACTTTGGTG
GAACGTTTGGACGAGGAATTCAGGAAATTATTGAAAGAATGCGATCCTCACAGTAACGAGTACGTCGAGAGATTGAAAGA
CGAAGACCAAGTCGCTGGTATAATCGACAAGGTC AAGAATATCTCGAAAGACAGCGCAGCGCTCGCCGAATTGTGTCGCG
TTTTATCTTCGTAATAATCGAACATCTCTATTATAAATCGATCCGACGGTCTGAAGCAAAAAGATGGTGAATCGGCAAG
GAAATCGTCACCTCGGTCCAGGTTATGGAAAAATTATGCAAGTACGTTTACGCTCAGCACAATACCGATCGTTTTCGTAC
ACGAGCTATTTTTATCCACATTTTATCACCACGCTCTCCACGACAATTGGTTC AAGCGCGCGACCTTATTCTCATGTCCC
ATCTTCAAGAGACCATTTCAGATTCTGATCCTGCAACGCAAATTCTGTACAATCGTACGATAGCGCATCTCGGTCTGTGC
GCCTTTCGTACACGCCGAATATCAAGGACGCCCAATTGTCTGGTTGACCTAATGGTAACGGGCAAGGTGAAGGAACTCTT
GGCACAGGGACTTTTTGCCACAGCGCTCAACACAGAGAGAAGCAAGGAACAGGAAAAGATTGAAAAACAACGACAGATGCCAT
TCCACATGCACATCAATCTTGAATTATTGGAATGCGTTTTATCTCGTCTCTGCGATGCTCATCGAAATCCCTTACATGGCT
GCGCACGAATTTGACGCCAGAAGGCGCATGATCTCCAAAACGTTTTACCAACAGCTGCGTTCCAGCGAGCGTCAGTCGCT
CGTTGGACCACCCGAATCTATGCGGGAGCACGTCGTCGCTGCTGCTAAAGCAATGAGAAACGGCAACTGGTCCGCTTGCG
ACAAAGTTCATCATCAATGAGAAAAATGAACGCCAAAGATGGGATCTTTCCATCAAGCTGACAAAGTGCGCTCCATGCTC
ACTCGTCTCATCAAAGAAGAGGCTCTAAGAACCTTATCTCTTCACGTAATCCCAAGCTACGATTCCATCATCGATGCCAAC
CCTCGCCGAAATGTTCCAAGTTAAACGTCGCCGTTGTCCATCGATCATCAGCAATGATCATCAATGAAGAAGCTCATGG
CTTCGCTCGACGACCCTTCCGAGACCGTTGTTATGCATCGCAGCGAACCGAGTCGCCTACAATCGCTCGCCCTCCAAC TG
ACCGACAAAAGTCAACAATTTTCGTCGACTCGAACGAGCGCATCTTCGAAATGAAGCAGGGCAACTTCTTCTCGAGAGGTGG
TAATCAAGGCAACTTCCGCGACCGCCAAAAATTACAATCGTCAAGGACAAGATTGGGGCAGGCAGAGGCGCGACCGCGAAC
GTAATAATCGCGAGGAGAATCGTAATTACTGATCTTCGATCAAAATAACAACATTCTTTTTCTATCAGTTTTTCACTC
CCATGGTTTTTAATCGAATTGTAGGAGATTTTTAAAAAAACTATGGCGTGAAAATCCTCATACGAGCGATTTTTTCCAAC
TCTTGATGGTCTGCTGCTAATAAATTATTCAGTTTTTTCATCTGGGATTATGTAAGAATCAACTTCTGCTGAATAAAAAACA

ATCTTAGTCTCACCCAATGGCATCATTCCCACCCTGTCTTTCTCAAGGACCACCACAACGTCTCAATTGTCAGTTTGG
CTGATATCACCGCCATCGATGTACCGAGCAGACCATACAGATTGAGTTGGTTTACTGTCTGTTGTCGTTTCGATATAAC
ACGCGCGTTTCGTGTGAAATCGTACACCGACGAGCTGACGCCGTGGAATCTGCTTGTGCTTGTTCGTTCAAAGCTGCAAAATG
GTACGAGCGTGAGGTCTGGGACATGTATGGTGATTTTTTTCGGACCATCGGAATTTGCGGCGAAATTTGACCGATTACG
GATTGAGGGTCTATCCATTGAGAAAGGATTTCCATTGACGGGCTACATGGAAGTTTCGATACGACGACGAAGTGAACGA
GTGGTCGCGGAGCCGTTGGAATTGGCTCAGGAATTCGCGCAGATTCGAACTTTCTGCGCCATGGGAACAATTCCAAATTT
CAGGAACGCTCCACCCGCCGCTCAAGAAGTTGAGGTTACCAAAAAAATTGAACTAACTCTCGCTGGATAGAATTTTGAG
GATGGATCCTTTTTAGGTAATAACTGTGTCGGACATTTGAGTCTTCACGGTAATTTATCAACTTGTAGTATATAAAAGTTAT
CACAATAAATAACCTTTAAGTAATTCGTGGTAAATGAACAGAGATTTGAAAAAGAAAATAAAAAACGGAAGAACATGGA
GAATGATATTGAGAGAAAAAACGTTGGGTGGATGGACATGTTTCTCGTATCATTTTCATACATTTCTCGCTCAAGGTACAA
TGATCGTTTCGCGTAATACGCGTGCGTACGAGCTAAACAAAAAGTGATGCGTCTGCGGAGAACAAACAAGAAAATTCCTC
GCTAGATTTTCGTTTCGCTGCACCGTCCGAATAACAATGATTTTTAATCGTTACATGACCTTTCTGACTTTGATTTGAGC
GCATCGACGGAATTTGCAGGCGACTGCCAAGAGTATTCGAACTCTTACGAATTATGTACAAATTCCTTGCTCACAGAGAA
CGTCGCAAGTTCTCGATGGAACGAGGCAAAAAAATAATCGTTGCGTTCTATTGACCCAAAACTCTCCCTTGACCCCA
ATTGTGACCTCTGAACAGCGTTTCGTCTTTGACCAGCCGGTTGCTGCGCTCCCATCCTCT

>CL1225-bisContig1|pre-mrna cleavage factor 25kd subunit

TTTTCAATTTTTCATCAACTCTTCCATCCACGAAATTCACCTCAACGTTTACTTGAAATTTGGCCGCCATGGGTTTTCA
GGCTCTCCGATTAAATTTCTGTATATCTAGACACGACAATAAAATCGGGAGCACGCAAACCTGGCAGTTTTTACAGAGCCAG
TATTTAGAGAAATTTGATTAGCAAGTTTACTGATCGCATAGAAGGAATTAGGAAAGAAGAATTGTGTAACGCTCTTGATT
TAGAAACTACGTTTGTAAAGAAAAACAACCTGAACACTGAAGTTTGTAAACAAGAGATTGTACAGAGAGCGAAGTAATTGGAG
TAAAAAGGAAAAGAATTATTTCTTTGGAATATATCCTTTGACAAACTATACCTTCGGAACGAAAGAGCCGCTCTTTGAGAA
AGATCCCTCGGTGCCAGCTAGATTTCAAAGGATGAGGGACGAATTTGACAAGATCGGTATGCGCCGAAGCGTCGAGGGAG
TTCTACTGGTGCACGAACATGGATTGCCGATGTTCTGCTCCTCCAGCTTGGAAACAACATTTTTCAAACCTACCAGGAGGA
GAGCTGAATGCCGGCGAAGACGAGGTAGAGGGCTGAAACGGCTCCTTACTGAGACGCTGGGAAGACAAGACGGAGTCAA
ACAAGAATGGGTGATCGAGGACACGATTGGAAATTTGGTGGAGACCAATTTGAGCCTCCACAGTATCCATACGTTCCAC
CACACATTACCAAGCCTAAGGAACACAAGAGATTGTTCTTGTCCAACCTGCAGGAAAAAGCGTTGTTGCTGTTCCGAAA
AACTACAACTGGTGGCTGCACCGCTGTTGAGCTTTACGATAATTCGCAAGGATACGGTCCAATTATTTGCTCCTTGCC
ACAATCGTTATGCAGATTCACTTTATTTACATGTGAGACGGTCGCTCCAGAACCGAGGAACTGAACAGAATTTTACTT
CGCTCGACCGAGGACAGATAATCGAATAACAAAAAAGATTAAAAACGAAAAAATAAATACCAACAAAAATAGAG
AGTCAACCTGCTCTAATCGTGTAAACGAGCATTACAA

>CL12272-bisContig1|lyr motif-containing protein 7-like

ATTCGGTATTCCACGGAATAATCGAGTATATTTGAAATTTGTGAGAGAGCTGAGAAGGTGCGAGCAGCGATGAGTGGAA
ATCTTCGTAAAGAGGCGCTGCGCGTATTCAAAAACTGCACAGGACTCGACTCAACACGTTCCAGGGTGACGATTTGCGG
TTGGATTTAACGAGACTCAAAATTAATGAAGAGTTCAAAAAACATAAAAAATGTTACGGACGAAGCAGCAATTGCGGAGC
ACATTAAATTCGCGAGGTGTTGAACACGAAATAAGAACGACAGTGTCCAGGCGGTGAGAAAGAGCCAGGAAAAATA
CGCACTGAGAATTTCCGATGACACGGTAAAAGTGAGCAACGAAGTTGTCCAGGCGCTACATACCAAAAGAAAAATTAA
AGAAATGTACAGACAGACCAAGATTGGGAAAGCTGAGT

>CL1227Contig1|eukaryotic translation initiation factor 3 subunit k-like

TTTTCTTTCTACGATTTGTAACCTGCGAAACGTGTATCTGTAATTATTGAGTAAATTTGCAATAATAAAGGAAATTAAG
AGAAATGGCGCCGCTATGAGACAGAACATCGCTGATATGCTCAAAAGCATCGAAAGATACAATCCAGAGAATCTTGCAA
CTTTGGAAAAATACGTTGAAATCCAAGTGCCTGAGAATGTTTACGATCTCGAGGCAATCTGGCTGTTCTCAAGTTGTAC
CAGTTCGATCCGACAGAGATTTAATCTCGATATTACTTGGCAGATTTTGTCTCAAAGCTCTGACAACTTGCCACACACCGA
CTTTGTTCTGTGCAATGTTTGTGAGCGAAAAAATCATGCAAGAGGATTCCATCAATCAATAATGTACCTGGCTGACA
TCCTAGAACAGTGCGATTTCCAAATATTTTGGGACAGAGTAGTGACCTTGGGCGATATTTGTGGCAGAATAGTGGGTTTT
GAAGATTCTATAAGAAAAATTCGTGTGCCACGTTGTTGGCATCACATTTCAAACGATAGACAAAAGTCTGTTGTCTCAATT
GCTCGGACGTGTCGATGACAATACGCTAAAACAGTGGGTGAAAAAATACGGTTGGAAGGAGGAGAACATGTCGTAATTT
TCATAGCCAAATCAGGACGAGAATATCAAGACGAAAAATATTACGGAAAAAATCGATTTGATAACGTCGCTGGCCTCATG
GCCTCGTGCTTGAATAAATTTCTCAATAAAAAATCCAATGATACATTTTTTAATAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAACATGTCGGCCG

>CL1229Contig1|hydroxysteroid dehydrogenase-like protein 2-like

AAGTTTACAAAAATATAGCCCGGCAATTGGTACGGAACGAGTGACAATGTTGAAACAAGCTGCAGTCGTATATGCCATT
AATTAATATCCTGAATATGTTTCAAGTGAAAAATGAATAATTAGTCTTCCCATTACCGATATCAGTAATGACCTCGGTA
TCTTGATGAACGGTCACATTTTGTCCCCTCCCCTCGTACTCCCAACTCGGGGAATAAACTTTGTACCGTTATGTTTATAGT
TTGACGTTCTGTCGACGCATTCTGATCACATTCGCGCACTGTCACTACGGGAAGAGGAAAAATACGGTTAAAAATAGCCAT
TGACTATTTTTCTGTTTCATCTCGTTTGAGAAATAGACGGAAAAATGTATCTGCATTTTATTTGTTGACGATCAGTGAGA
TTCGTTATTTTTTTTTTTTTTTTTTGGGTACACAAGTCGTACAAATATTCCGAGAATGATAAATACAGGGAAATTAGCCGGT
CGGACGATATTCATTACTGGAGGTTCAAGAGGGATTGGGAAAAAGTATCGCGTTGAAGGCTGCTAAGGATGGAGCAAACGT
TGTCATTGCGGCCAAAAACCGCTCAGGCTCATCCGAATTTCCCGCACTATATACACTGCAGCAAAAGAATTGAAGAGGT
CGGCGTTAAAGCTTCTCTTGTATAGTGGATGTCGCAATGAACCCGAAGTCTCCTCGGCTGTCGAAAATGCGGTAAAGC
AGTTCGGTGGAAATTGACATATTGATCAATAATGCCAGTGCTATATCATTGACGGACACGCTTTCAACAGAAATGAAAAA
TACGACCTCATGAATAATGTGAACGCCAGGGGGACGTTCTTGTGTGCAAGCTGTGTATACCTCATCTAGAAAAAAGTT
CAAATCCTCATATCGTGAACATTACGCCCCCACTGATCTCAATCCTTTCTGTTCAAATCATGTTGCCTATACTATGG
CTAAATACGGGATG

>CL12333Contig1|phosphoglycolate phosphatase-like

GATGCCAAAGCGAGTGGGCTTGCTGCAGTCGAGCTTGTGCCACACTGCTCGTGATTCATCGCTAGTGCTCAGTAGAGTTC
CCTACAATGGCTGCTAGAAGCTTGAATCGTTATCGAAGGAAGAATTGAAGAATTTCTGTTGATTGTTGACGTCGTTTT
GTCCGATTGTGATGGCGTTTTGTGGCGCGAAACCGAAGTGATCGACGGGGCTCCGGAACCTGTTGAAAACCTCAAAAAA
TTGGCAAGAAATCTTTTACGTCACGAACAACAATGGAAAACTCGAGAGGAACTTGTGAAAAGTGCAAAGGATTGTCA
TTCAATCCAACGAAGGAAGAAATCGTCTGCACGCTTTTCTGTCCGCGATGATTTGAAGGACGAAAAATCGAAAAA
AGTTTAACTGCTCGGGGGAACAGGTATAACCAGAGAATTGGATGCTGTGGAATCAAGCACACCGGGTTGGACCTGACC
CGATGACTGGAAATGAGACCGACCTAATGTCAACTTCAAGCCTGATCCTGA

>CL12340Contig1|PREDICTED: contactin-like [Bombus impatiens]

ATGAACCAGCCTGTTAGCAAAATTTTTGACGTTCCAAAACGTGGACAACCTGAACCAAGTCGCGCTGACTTGTATCGCCGG
TGGTTATCCAACACCGACGTACGAATGGTTCAAGGACACTTGAAGGATTGGCTCGTTTTGATTGCCACACCCATTGATCCA
TTGAAAAATCGGAGATACACAATCAGCGGTGGTTCTTAAATCATCAACAATCCGTCAGAGACCCGACCGTGGCTCGTA
TCATTGCAAAAGCAACCAACGAATACGGCAGCATTATCTCCGAGAGCTCGAATTTCTTTGTTTACGTTACATCGAATTCA
ATCTCAAACGTTCCGACGACGAGGCGAACAAAAATGGGGCAAAGCCATTTACTGCGAGCCTCCTCATCATTATCCGAGCG
TCAAATATTATTGGGNCNGTGATTACTTTCCAAATTTCTGTTGAAGAAGACAAGCGCTCTTCTCATCCAATGATGGAAC
GCTTTATTCNCTGCTCTGACCCATCGATCAAGGAATTATTGTGCAACGTTTCAGAGC

>CL123Contig1|t-complex protein 1 subunit epsilon-like

TTCATGACTCGTCGCGAGGACGCCGAACAAGACGACGATACAGCTATGGCGGCGATTTTACGAAGTGAAACATTCGTG
TGTGAATATTTCAGAAAAAATCTGCCACGAAATACGCGGTGTCGCTTTACTACTTTTGAAGTTTAATTCGGAAGAGCAGTC
ACGATGAATGCGATTCCGGGATCTATCGCCTTCGACGAGTACGGAAGACCGTTTATTATTCTCCGTGACCAAGACAAGCA

mmc4.txt

GAAACGGCTCACCGGCAACGATGCGATTAAGTCTCACATTTACGCGGCGAGATCCATCGCCAACACTCTCAAAACTTCTC
TGGGCCCCAAAGGCCTCGACAAGCTGATGGTTAGCTCCGACGGAGACGTGACCGTCACCAACGACGGAGCCACCATCCTC
AAGAACATGGACGTTGACACGAGATTGCAAAACTCATGGTGCAACTGTGCGAGTCTCAGGACGACGAGATCGGCGATGG
CACGACCGGCGTTGTCTGTTCTCGCCGGCGCTCTCATGGAGCAGGCAGAACGCTTGTTGGACAAGGGCATTATCCCATCA
GAATCGCTGATGGTTTGAACCTGCTGCGCAACACGCGACCAACATCTCGACAGCATCGCCGAATCTTTCCCTATCGATC
CCAAGGACTTGAATCCGTTGATAAGAACCGCCATGACTACGCTCGGCTCGAAAATTATCAACAAGTGTATCAACAAATG
GCTGAGATAGCTGTGAACGCAGTAATGGCGGTTGCCGATCTCGAGAAGCGTGATGTCAACTTCGAGCTAATAAAGATCGA
GGGAAAAGTTGGAGGGCGTCTGGAGGACACGATGCTGGTTCGAGGTGTCGTGGTCGACAAGGATTTTCAGTCATCCGCAAA
TGCCGAAGAGATTGGAGAACGTTAAGCTGGCGATATTGACGTGCCCGTTTGAGCCACCAAAAGCCAAAAACGAAACATAAG
TTGGACGTGACTTCGGTGGAGGATTATAAGAAATTGCGTGAATACGAACGCGAAAAATTACCGAAATGGTCGATCAAGT
TAAGGCAGCAGGCGCTACACTCGCCATCTGTCAATGGGGCTTCGATGACGAAGCAAATCATCTCTTGCTGCAAAAGGAAT
TGCCAGCCGTTTCGATGGGTGGTGGACAGCGATCGAGCTCATCGCCATCGCAACCGGAGGTCGTATCGTTCCGCGTTTC
GAGGAATTGACTCCGACAAGCTCGGCTACGCCGGGATCGTGAGAGAATCTCCTTCGGAACGACTAAAGATCGTATGCTC
GTCATCGAGGAATGCAAAAACCTCAGAGCCGTTACCATTCTCATCCGCGGAGGAAACAAAATGATCGTCGAAGAGGCAG
AACGTTTCGTTACACGACGCGATCTGTGACGTGCGCAATCTCGTGACCGACGAGAGGATCGTGACGGCGGAGGAGCAGCC
GAAATATCGTGCGCTCTGGCCTGCGCCCAACATGCTTATTCGATAAGTTGTTGGAACAATACGCTTTCCAAGCGTTTGC
GGACGCTCTCGAAGCGATCCCGATCGCATTGGCGGAGAACGCTGGCCTCTCGCCGGTCAAGACCCTGTGCGAGGTAAAAG
CTTTGCAATTGTGAGAGAAACATCCAGCGTTGGGCATCGATTGCATGTACCGAGGAACTTTGGGACATGAAGGCACAGCAC
GTGATCGAGTCTTTGAAGAGCAAGACTCAGCAATACTTTTGGCGACGCAATTGGTCAAAATGATATTGAAGATCGACGA
CATTCGATCTCCGCGGATCCCGGTGATTTCCGCTAACAAACAAAACCGAGATAACTTCTTTTCCCGTATATTCAAA
ATACGAATCGTTTCAATTAATTAACACAATATTTCCAAACAAAAAATAAAATCGTCGAAAAAATCGCGCGCA
AATACTTTTAACTCCAGTTGCGCTTCATTGTGAGAGTCACCAATTTATTTTACTACACAACGAAAAACGGTGAAAT
AGTGTGTTGATCGTCGAGTTTCAAAATTTGACTTTTCTTTTCTAATTAATTGCGGAGTTCATTTTTATTACGCCAAA
AAAAACACACGCATTTATATTTTCTACGCGATCGTAAAAAACGTCGCTCATGATGTTTCGTTCTGAAGGCATTAATA
CAAAACTTGGATCGCAAAAAAAAAAAAAAAAAAAAAAAAAAACTTTTCGGCCG

>CL12433contig1|luciferin 4-monoxygenase

ATCGTCGATCCAGAATCTGGAAGAATTCTCAATCCCAACGAGACTGGAGAAGCTTGTTCAAATGTGCAGACATGATGAA
AGGTTACTACAGAATCCCAAGGCGACCAGCGAGACGATAGATTCCGAAGGCTGGCTCCACACCGGCGATCTCGCTTATTA
CGACGAACAAGGCTACTTTTCTTCGTCGATCGTTTGAAGGAGTTGATCAAGTTCCGAGGCTATCACGTTTCCCCGACAAT
GATAGAAAACGTGATCCTGGAACATCCAGCGGTTTGGAAAGTCGCTGTCGTTTCGATTCTCACGAACCTCGACGAGGAAC
ATCCGATGGGATTCGTCGAGAAGAAACCGGGACTCCAAGTCACTGAAGAACAACCTCCAGAAAATGGTGGCCGACGTACTT
CCGATTACATGAAACTCAGGGCGGTATCAAGTTTGAAGAAATGCGGCACACCTCTTCGGAATAATCGCGCGCAA
GGAACGAAATTTAGCCAAGACCTACGTCCAGTAATCGACTTCGAGTTGATCGTGAATCTCTACACAGTCGAATAATAC
TCGCTCGCGACGTTTCGCTGAAGCAGCAAACT

>CL12446contig1|plasma glutamate carboxypeptidase

GTAGAGAGTCGCTTTGTGCGCTAGTATTGGTAGCCATGATAAGGACGTGTGCGAGGGTGTTCTTCCGACGCAATTACTCA
ACGAGATCGATGATTACGCACCCATCGTAGAGCAAATAAATAATGCGACGGTAAGGTCAGGCGGCGAGTTACCGGCTCG
ACGTGGCAGGAATTTGCAAAATTTGTTGACAAGTATGGCTCGCGATTACCCGGTACGAAATCTCGAAGATTCGATCGA
CTACGTGCTGAACAGATCGATAGCATTGGGACTGGAGAACGTGCATGGCGAGGCAGCAACAGTTCCGCGCTGGATCAGAG
GTCATGAGAGCGCTACTCTTGGAAACGAGAGTCAAGGACATAAAGATGTTGGGACTAGGATACAGCGTAGGAACTGGA
GAAAAGGGTATAATCGCTGACGCGATCGTGGTTGGAAGTTTCGATGAATTGCGAGCGAGAAGATCGGAAGTGGCCGGGAA
AATAGTAGTTACAATGAGAATTGTATCTTAACGGAAAAACGGTGGCGTATCGTT

>CL1246contig1|40S ribosomal protein s7

ATTGTGTCAACGACAATTTAATCTACGCGAGCGATTCCGAGGATATTTACGATGGCAAATCGTGAAACGGATTACACCGG
ATTATCGTAAACATTGTTGGTTGCGGGTCTCTGCTCAGTGTGGCTGGCGACAGCGAAAGCTCGTTTGTGCAGTAAGATGT
TTTCGGCGAACGCGAAAAATCGTTAAAAGCGGCGGCGCCGAGCCCCGACACGTTTCGAGGCTAGCATTTCGCAAGCTCTTCTC
GAGCTCGAAATGAACAGCGACCTCAAATCTCAGCTGAGGGAACGTGACATTACCAAGGCCAAGGAGCTCGAAACCAACAA
CAAAAAATCCATCATCATCTACGTGCCGATGCCAAACTCAAGGCTTTCCAGAAGATCCAAACGAGGCTCGTGCAGCAAC
TGGAAAAGAAATTTTCGGCAAGTATGTTGACAAAGTATGGCTCAGTAGGAGAAAGTAAATTTTACCAAACTTCGCGATAGCAGCGC
ACCAAGAAACAGCAAAAGAGGCCACGCAGCCGACCCCTCACGCCGCTCTACGACGCTCTCTCTCGAGGATCTTGTCTACCC
GGTCGAAATCGTCGGCAAGAGAATCCGCGTCAAGCTCGATGGAAGCAGCTCATCAAAGTGCATTTGGACAAAAATGAGC
AGACCAACATTGAACACAAGGTCGACACCTTCGCCTCCGTCTACAAAAATTAACGGGCGCGTACGTCGAGTTTCGAGTTTC
CCCGAATCGTATGTCTAATTCGTTAACAACGTTTGAATAAAAGATTTGAAAAATCAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAACATGTCGGCCG

>CL124contig3|v-type proton atpase subunit c-like

GAGTTGTCGGGCGGGTTCGAGAGACAGCAGCACTCCCATCACGTGAGAGACAATGGTATCGGCTACGAACGAGTAGGCAAA
TAGATATATTATTACGAATTTTCGCTGGAAATTCACGAATTACGGAGTCAACCGGAATTGAAACATCGCTAAGAACCA
CCAGGAGATAGCGGCTGACGATCAGTCAAAGCAATCGAGTAGAAAAATGACGGAATACTGGTTAATATCAGCGCCGGGAGA
CAAACTTGTGAGCAGACATGGGAGACGATGAACAATCTGACGTGGAAGCAGAAATTCGCTCTCTGCGAATTACAAATTC
ACATACCAGATCTAAAGTTCGGTACGCTCGATCAGTGGTAGGTCTGTCCGACGATCTTGCAAAATTTGACGCTTTTGTG
GAGCAAGTTACTCGCAAAGTAGCTGTTTACTTGGCGAGGTTCTCGAGGACGAGAGACAAGTTTCACGAGAATCTTAT
GGCCAATAACAGTGATTTGCCGACGTATATAACACGCTTCCAGTGGGATATGGCGAAATATCCGATAAAGCAGTCACTGA
GAAACATTGCTGACATAATCAGCAACAAGTCGGACAGATCGATGCCGATCTGAAACTAAATCAACGACGTACAACAAC
TTGAAGGGCAGTCTTCAAAATCTTGAGAAAAACAGACCGGAAGTTTACTGACGCGTAATCTTGCCGATTTGGTAAAGAAG
GAACACTTCATTTTGGACAGTGAATATTTGTCCACGTTATTGGTTATTGTGCCGAAGGCAAACTTCCAAGAATGGTACGC
AATTTACGAAAAATGACGGACATGATTGTGCTTCGTAGTACCAATGATAACTCAAGATGCCAATACGGTCTTTTCA
CTGTGACTCTGTTCAAAAAGGTCTTTGAAGAATTCAGCTTACGCCCCGAGAAAAGAAGTTTATCGTGCGAGACTTCACG
TACAACGAAGAGGAACTTGCCGCTGGGAAAAAATGAAATAACGAAGCTCGTTACGGACAAGAAGAAGCAATTTGGCCCGC

mmc4.txt

TGGTTCGTTGGCTCAAAGTCAATTTTCAGCGAATGCTTTTGTGCCTGGATCCACGTCAAAGCTCTCCGCGTTTTTGTGCGAA
TCGTTCTGAGGTACGGATTGCCGTAATTTTCAAGCTATATTGCTGCAGCCACACAAAAAGAGTACCAAACGATTGCG
TGACGTGCTCAATCAATTGTACGCGCACCTCGATTCTCGGCCACATCTGGTGACAATCGGCCAATCAGGATAGCGTGG
ACATCCCGGGACTGGGTTTCGGCCAGAACGATTATTTTCCATACGTGTATTACAAAATAAATGTGGACATGGTCGACAAT
AAGTTTAGTTCGGTCAACCGATTGGACAAAACTGAGGCGCACAGCCAACCCAAGATACTTTCTGTTCTGTTAAAAATCG
CAATTGTGCTGCATCGATCGATCGAAGAAAAACAAAACCAGATTTCCGGCGAGTGAATCAACGAAAAGGTATTAAAAAAC
AACAAAAACGAAGGAATTGTTTCGACCGTTTGGACACAAGACCAGGCAAAGAAATGACTCGAAATACGTGCGCATGAAAA
GCTTGAAAAATAAACACACACATTTGCAAATGACTTCGGTAAAAGGTGTTCTTATGCGAGTTTCCATGTTGATTTAAT
ATATATTTTGTAGCGGACTATAATCGCGAATCAAACAACGGCTAATTTTTCGGCGCACTCACGCATACACACACACACAG
ACAGACTTCG

>CL1250Contig1|utp--glucose-1-phosphate uridylyltransferase-like

AAAGCTGACGTTCCCTTGATTCTTATGAACTCTTCAATACCGATGCTGACACGAAACGTATAATCAGGAAATACAAGGG
AATCGACGTCAAAATTCACACTTTCAATCAAAGTTGTTATCCACGAATAAGCAGAGAGTCTTTTCTACCGATACCGAGAA
ATTGTGACGTGACGAGGATCCCGATGCGTGGTATCTCCGGGACGAGAGATTTTACGAAAGTTTCAACAATTCGGA
TTGTTGAAAAATTCATCGATGAGGGACGACAATACTGTTTCTTTTCGAACATCGATAACTTGGGGGCGACCGTAGATCTG
AAAATATTGAACATGATCATGACTTCTCGTGAAATTAGTCTCTCGAGTTCGTTATGGAAGTCACCGACAAAACAAAGGC
TGATGTCAAGGTGGAACCTTTATGCAGTACGAGAACAACCTCCGTCTCTTGGAATAGCTCAAGTCCCTAAAGAACACG
TTGACGACTTCCAGTCGGTGAACCTTCAAGTTTTTCAACACGAACAACCTTGTGGGTCAAATTGGACGCCATTACGCGA
TTATTGCAAGACAAATCGTTGGAATTGGAATAATCGTGAATCCAAAACTTGCAGAACGGAGCAAACGTCAATCAGTT
GGAACTGCAGTCGGAGTGCAGTAAACTCTTCGATGGAAGTTTGGGCATAAACGTACCGCTAGCAGATTTTGGCAG
TCAAGAAAACTCCGATCTCTTGTGTCATGAGCAATTTGTACAATCTCAAAAGTGGCTCATTGTTGATGAGTCCCAAT
CGAATGTTTCCCACTCTCCTACATCAAGCTCGGCGACAATCATTTTGCAGAGTGAAGATTTTCTCCGGCGTTTCGG
AACGATTCGGGACGTGCTGGAGCTCGATCACTTGACAGTTTCCGGCGACGTTACGTTCCGGCGTGGCGTATCGCTCAAGG
GAACGGTCATTAGTAATCGGCGAACACGGCGATCGAATCGATCTCCCATCGGGCAGCACATTGGAGAACAAAATTGTCT
CCGGAATCTGCGTATACTGAGCCACTAGAGGTAAGAATATCGGGAATAGCAAAAAAATGAATCTAAGATCCTGAGGC
CACGAGGACACGCGGAGGAGAGCCGTTGGTGAATCTCACGCGACGATCGTCCCAAGAACGCGAATCCACGGTCTGTAA
TTAATGTTAAGAAATATTATCGAAATTGCTGTTAAATATCGATAAGTGGAATTTTTCGATCAATCGGAATCGCCAGTTCTG
TTGGCGCGTAAGGAATTTACCACATTTTTTCTATTTTTTGAACAACTTGATGAAAAACCTCAATCCAGACCATTCTGTG
AGCTCATTGAATCCTCGAAGAACCAGAAAACAAAAACGGCAACAAATTAGATGAATTATCGATACGAGAAAGGATTTTTC
GTTGTACCGCAACAAGGAAAACTCAATCATCGTCAATTTACACGTGTACAAAGTCTTTCTTTATTTCTTGGACGATTTTT
TTGTAGGTCAGATTATTATTAATGCTGTGCATGAAATATATATTTTTTAGCAACGACTGAAGGTTAGAATGTAATCGATG
CAAATAACGAGCACACTGATTTATCACGAATCCCAAGCGTAGTTTCTTTAGCGGAATCGTGTATTCCAAATTTTGAATAA
ATACGAGATCAACATCTCCTCGTTACTTTTTAAGG

>CL125Contig1|lysosomal alpha-glucosidase-like

AATATGGCTACGGGAGTTTGGAAAAGACGATAAACGTTTGAACAGAACGAGGGCAGCCGGTATTCCATTTGATACTCAA
TGGAATGATTTGGATTATATGAAAGACAACAACGACTTTACGTACGACAGCGACAAGTTTGGAAAACCTGCCGGAATTTGT
GAAACACCTTCACGAGATCGGAATGCATACGTGCCGTGATCGATCGGGCGATATCGGGTTCCGAGGTGAACGGTTCTG
ATCGTCCGTGGGACGAAGGAATCCGTCTGTGACATTTTATCAAGGAGGCGAGACTCGGATTCCGCTTCCAGGAAAAAGTT
TGGAACAGGAAATCGTCGGTTTGGCCTGATTTTTCAAATCCAGCGGCTCTCGATTATTGGCAGGACATGATGAGCGATAT
GTGGCAAATGTTTCCCTACGACGGCGCTGGATCGATATGAAACGAACCTTCCAATTTTTATAACGGTAAGATCGAAGGT
TGTGGAATAAACCATCTTGACAATCCGATCTATGTGCCAACGTCGTGGGCGATCTTTTGTGACCAAGACGGTGTGTAT
GAGTGCGAGACATCATCTGGTCCGCACTACGACGTCCACAATACTTATGGGACGAGCGAAGCCATCGCGACCAATCGGG
CTCTCACAAAAATTCGAGGACTCCGACCGTTTATTTCACGATCGAGTGGTCCGTGATGAGGCTTCCAGGCTACCGGGACA
CTGGTCCGGCGATATTTTCTTTTGGCAGCAGATGAGAATGAGCGTCCCACAATTATTGAATTTCCGATTCTTCCAAA
TTCCCATGATGGGCGCGGACATTTGTGGATTGATGGAACACGACCGAAGCGCTGTGCAATCGTTGGTCTCAGCTCGGA
GCGTTCTATCCGTTCTACGCAATCACAACAGCGACGACACTATCGAACAAGATCCCGTTGCCATGGGTCCGCTGGTTGT
CAAATCAACCAGAAAAGCGCTCATGATTCTGTTACCGATTTTGGCCCATCTCTACACTCTATTTTTCCGAGCTCACATGT
TCGGCGAGACCGTGGCGCGGCTCTCTTTTTCGATTTCAGCGACGATCCAGAAACCTGGGGATCCGACTCGCAATTCCTA
TGGGGAAGCTCCCTGATGATCATCCCGGTATTGTAAGAGGGAGCGACGCAAGTTACGGTTCAGTTCCAAAGGCACTTG
GTACGATTTTTACGACAACACAGCGTATCGTCTCAGAAGGTAATATTACACATCCACAGCACCCCTGGACACAATACCGT
TGCTCGTCCGCGCGGATACATTCTCCAGCTCAAACGCCGCGCCAAACAACGACCGAGAGTCGGAAGAATCCTTTCGAA
CTTTTAATCGCCCCGATAGTCTTGGCAAGGCGGAGGGTGAATTGTATTGGGACGATGGCGATAGCCTCGATTCTATCGA
GACGGCGAATATCGGTGGCTGCGTTTCAAGCTTGCGAACCAGACGCTTCTCGAGTGAAGTCAAGCCTGGAAAAATACG
GAGGAAAAATGAAGCTTGGAAAAGTCCAAGTGTGGGCGTCTCGAGCCGTGAAGGAAGTTTTCGTAATGGGAAAACG
ACAGCATTCGAATTACGATAAACCGCGATCGTTTTTGACCGTGAAGAATCTCGCAGTGGACTTGACAAGAAAAATGGAGCT
TTCTTGGCACTGAACAGTCTTCTGCTCGAAAAAATTGTGATATGCACGAACCTCCCACTACCGACAATACCAAATAATT
ACATACTTTTTAAACGAGTAGGTTTTTCTACATTTTTTACTTACGATTACTCAATTTCTAACCGATTGTAAGTGCTTGA
TCCGCACAGGGAGTGGATATTTGGAAGGTTAAATGTTGAACGATACTGATCTGTTTTTTTTCTTCCACAAAGTAAAAGAG
AAACATTTTTTATTCGTACAGAATAGTTTGTGTACATTATACAGTCTGTCGTAAGCTGTAATATTCAACATCTACATA
TGGCAACTTATGACAAGAAAAAATAATAGAGGAAAAAGAAAGATTTCTGTTGAACCCCAAGATATCGATGCGATAG
GGAAGGCGAAGGGAGGGGTCGAAAAGCTATTGGTACGATGTCGCGCATTTGCTATTCCGCAAGGATTATCGATACA
GGAATAAAAGGCTGACAATTGTTTCCCGTCTTTGTGTGTCGCCCGGAGAAAAATGTTGACCCCGATACTTGTGAATGGT
CCCTCCGGCTGACCTCAATTTGCATGCGAACGCGCGCTGTACAGAACGTAAGATTCTTGTGCTCGTATAAATTTAAA
AATCCGATAAGCAACTCCCTCCCTTCTGCCTCCTCCGTCTCGCTACTTTTCTGAGGCAACGATCTCATCGCTAACT
CGACGTCTGTTGAGTTAAGCTGCTAAATATTCACCGAGAATAATCACAGTATGGCAGCCACGTGGTAACCTTCGAGTGCG
ATACTATTTTTCAGTGACATTTTATACTCGCTTAATTCACCACAGATATATTTCACTGGAGAACCCCTTCGTGACGCACTT
TAATGCTGCACAGTATTGCAACACTGGGTCAAATTCACCCGAATCGAGCAAGATTGACCTAAAAAATTTCTCCATAC
GTGAGCATCGTAAAAAATCGCAGAATATCAAATTCATTCTGTACAAAAACAAATTACGAAAAATAGTTCAATTTTACGAAA

mmc4.txt

AGTTAAACAATTTTCGCTGCTTTTCAAGTGCTATCGAACTTGAGTTGCGGTGCGAAATGACCCAGTGCCTCAACCAAGAGTC
AACTTTGGATTTCGTAATAGAAAAAACAAGCTACAGGATTATTTCTTTGATTGATTAGTATCAGCTACCACTT
AATTAATCATCCAACTGGCAGTGTGAATGGATGCTATTTGGTAATCAATAACGAGCCAACGATGGGAAATGAAATATTC
AATTAATTCCTACTACGTTCTACACGTTTTTTTTCTTATAATCATGTTATATTCTTCCAATCCTCCTGAATTATTGTCTT
TCACATTTTAG

>CL1261Contig1|PREDICTED: hrp65 protein-like [Bombus impatiens]

GGTGGACCAGGAATGATGCGAGGCGGCAGAGGAGGCGGTGGAATGCGTGGAGGAGACCGCGGACCAATGGGCCAAAGATC
GCAAGACGATCGCTTGATGGAGCGAGTGATGGCTTTGGCAGGCCGACCCACGAGCTGCCGACCCAGGACACGACGGAGA
AAAAATTCAGTGGGCGTAATCGCTTGTACGTTGGAAATTTGACGAGCGACGTAACGGAAGAAGAAATCACACGATGTTT
AGTCAGTACGGGGAAGTGTGAGAAGTATTCGTCAACACTCAGAAGAACTTTGCTTTTTTGAAGAATGGATTTTCGCGTAAA
CGCCGAAAAAGCGAAGCACGAATTGAACGGAACGATGCGCAAAGGACGCGCTTGAAAGTTTCGTTTCGACCAAACTCCT
CGACCATCAAAGTCAAAAAATTTGACTCCATGGGTCTCGAACGAATTGCTAGAAAAGTCTTTCAGCGTTTTTCGGTGAAATC
GAACGCGGATCGTCATCGTCGACGACAGAGGAAAAACCACTGGCGAAGGAATCATCGAATACAGCCGCAAGCCATCGGC
CATGCTCGCTGTACGAAAATGCACGGATGGCTGCTACTTCTCACCGCCTCTCTGAGACCAAGTGGTCTCGAGATGTTTCG
AACAAATGGAGGAAGAAATTCATCGACGACAACAAGAAATTTGGCCCGCAAAAAGCCCGAGTTCTACAAAGCTCGCGAAGTC
GGACCGCGTTTTTGTCTTCCAGGCAGTTTTCGAGCACGAATATGGCACGAGATGGAAACAGCTCCACGAGCTCTACAAAC
AAAAGGAGGAAGCACTGAAACGCGAAATGGCTATGGAGGAAGACAACTCGAGGCTCAAATGGAATTCGCCAGATACGAG
CACGAGACGGAGCTCTTGCGAGAACAAATTACGTCAACGAGAAGCCGACCGTGAGCGTCAGAAACGCGAGTGGGAAATGAA
GGAACGAGAAGTCGAGGAACAGCGATCCCATGACGAAGAAATGCGGAGACGTCAGCAGGAAGAAATGGCCATACGGATCC
GCCGACGGAGGAAGAAATTCATCGACGACAACAAGAAATCTTTTCATGCAGGAACAAGCGATGAGAGGAGGCGGT
GGCGGTGGAGGTAGGTGGTGGAAAGAAATTATGACAACGTTAGTAACAGTGAACGTGACGTTATGGCGCGCCGATGGAG
GAAACAACCTTGCCAGTGGATCCAAAGTCTTTTCATGGATGCTTACAATAACATGGACCGTAGTGGCGGTAAACGGGGTGGT
GGGGGATATAACGACGATCGCGGACAGATAATGGATCTGATGGATATGAGGGTTGATATGGGCAACATGCCTAACAACCG
TGGTAACAACGCCGAGGAGGAGGTGGTGGTGGTGGTGGCGGCGGCGGCGGCGGAGGTGGTATCGGTGTTGGTGGAAACG
TCGGGGTGGCGGGTGGTGGTGGCAAGGTGGCAACGACAGAAACCGCCCTGACGATTTTCCCAACAGTAAGAGAAGAC
GATATTAACAAAACGTAACCAAAATAATGAATAAAGAAAAGAAACGAATTAATGAACGACAATGTAAACGATTAATAATCGT
CACGACTGGGT

>CL1268Contig1|eh domain-containing protein 1

TCGTGGTCTTATTTTAAACAGTTTATCGTCGGAATCCGTTGGTTTTTATCAGAAAAAAGTGTAGACTCCCCTTTTTT
ATTCTCCCAAAGAGAGATTCTCGCGGACCTATTTTTTTAGCGGCATCGACGATTTTTTTTTTCGCGATATCTCGGTCTTAA
CTGTGTGTGATTCATTTTACGTGCTGCTTTTATTTAGTGAACGAAAACGAATAAATCCTGTGGATACGAAGGAATTGAG
TGTGCTTTTTATTTGTGGCTTTTTCTCAATCTTGTTCATAAAGCGAAAAGAAAAATGTTTACGTGGCTATCCAGAGAGGAC
AAGGACAAGCAAGATCTTTTTGACACCGTGTCCGACGGCTTGATAAAAAATCTACAAAACCAAGCTCTTGCCGCTGGAGCA
GCATTACAGTTCATGACTTTTCTCCGCAACTGGACGACGCGGACTTTGCGGCAAAACCAATGATATTGCTGGTTCG
GTCAATATTTCCCAACGGGAAAGACGACTTTTCATAAATATGTTTTGGAGAGAGATTTCCCGGGGATAAGGATCGGCCCGGA
GCCGACGACCGACGTTTCATAGCGGTAATGTACGACCAAAAAGAGGCGTCATTCCGGGCAACGCTCTGGTCTGCGACC
CTGCCAAACAGTTTCAGGCCCTCTTTCCAAATTCGGCAACCGCTTTCTCAATCGTCTCCAATGTTCTCTGGTCTGCGTGC
CGTCCCTCAAGGGGATCTCCATCTGTCGACACTCTGGAATCTTGTCCGGAGAGAAGCAGAGGTCGACCTAGGCTACGAT
TTCGCGGGGTTTTTGAATGGTTCGCCGAGAGAGGTGGATAGGATAATATTGCTGTTGACGCTCACAAGCTCGATATTT
CGGACGAGTTCAAAAGATCGATCGAGGCGCTGCGTGGCCACGACGACAAAAATCCGAATAGTGTGAACAAAGCGGACAT
GATCGATCATCAACAATTGATGCGGGTTTACGGTGCATCATGTGGTCACTCGGCAAGTTTTACAAACACCGGAAGTCG
CGAGAGTCTATATAGGATCGTTTTGGGATCAGCCTCTGAGGTACGACGTCATCGTCTGATTGTTGGAAGCCGAAGAACA
GATTTGTTCAAGGATATGCAGTCTTTGCCGAAAAATGCAACCGTCAGGAACCTCAACGATTTGATCAACAGAGCGAGACT
GGCAAAGGTTCCACGCCTACATAATCAGCGCCTGAGGAAGATATGCCCGCAGTATTCGGGAAGAGGCGAAGAAAAAG
AGCTGATTAATAAATTTGGGTCAAATTTACGATCAAATACAAAGGGAGCAGCAAATATCGCCCGGCGACTTCCCGACCTC
AAGAAAAATGCAGAAAAATCTTGCCAATCACGATTTCACTAAATCAACGTTCTCAAACCGAGACTTTTGAAGTTGTTG
ACAAAATGCTTGCCGAGGATATTGCGAGGCTTATGGCGATGATTCCTCAGGAGGAAGTCTCCACGACCAACGATGCTCTT
ATCAAAGGCGGCGGTTTCAAGGCGTGGAAGACCAATCAGTCCCTTCGGCTACAACAGAGGAGAGGGGAGTTGGACGCC
GGTCTGGAGAAGTGAAGTATCGAAAATACGAGCTTGAACAAATTCGATAGGGTTTTCACTTGAATGTGAGTTCGAT
CGGAAAAATCACAGGAGCAGCCGCCAAGTCCGAGATGCTCAAATCAAATTTGCCGAAAATTTGCTCGGCAAGATTTGGA
AATTGTCGGATATCGACAAGGACGTTTTGCTCGACGCGGACGAGTTCGCTCTGGCGATGCATTTGATAAACGTTAATTGG
GAGGCTACGAACTGCCTGCCGATCTTCCCGACCATTTGATACCGCCATCGAAAAGAAACATCTGAACCTACGTACTAGAAA
CAATTTCTCTATAGAAAAAAGAAAAACAATCAATTTTA

>CL1273Contig1|tetratricopeptide repeat protein 27-like

ACTTCGCGACATCACAAACCACCGACTCAACACTCGAACCGGCTTCGAGTCTTGAAAAAAGATAACCAACCTAAAAAAC
TTCACATTCTCGTCTGTTGTCACTTGTGTTACTATTACTTTGTAAAAATAGAAAATGGCGCTGGCAGGAAAAAGTCGTGC
TAATCACCGGTGCGAGTTCGGGATCGGAGCAGCTACAGCAATCCATATGTCGAGTCTAGGGGCACTAGTCTCCCTCGCT
GGACGAAATATCGAGAATTTAAAAAAGTTTCCGAGCAGTGCAAAGGCCCAACCAATTCATTTGTTACCGGGGAGCTCA
CCAACGAGAAAAGACACTGAAAAATATCTTCAATCCACGTTAAGCACTATGGAAGCTCAATGTGCTCGTCAACAATGCT
GGGACCTTGAAAGTGAAGTATCGAAAATACGAGCTTGAACAAATTCGATAGGGTTTTCACTTGAATGTGAGTTCGAT
GTATCATTTGACGATGCTCGCGGTACCGTACTTGGTGGATACGAAAGGAAGCATTGTCAATGTTTCTGATGTCAATGGCT
TGCGATCGTTTTCCAGGAGTGTGCTTACTGCATGAGCAAAGCAGCAGTTGATCAATTCACGCGATGCGTGGCTATCGAG
CTTGCTGACAAACAGGTTGAGTGAATTCGCTAAATCCGGGCGTTACCGTTACGAATTTGCACAGAAGCAGCGGAATGAA
TGAAGAACAAATGAAGAATTTCTTCAACGTAGTAAACTACTCATGCCCTTGGCCGCCCGGGTGTGCACTGGAAGTCG
CCAAGCAATTGCATTCCTGGCTGGAGACGACGCCAGTTTTACTACCGGCGTCTGTTTGCCAGTCGACGGTGGACGCCAC
GCTCTGTGTCGGGTTAATGCCCTGTCACCTTTTTGATTATGGGACCTGCCATACACGACAACCAACCAACCAAAAA
TTTTATACGTTTTTTCTAATTCATGGTGGCAACGAAATCTGAAATTTAACTTCCACTTGTTTCACTCCCACTTTCTCA
GTCAAATCCACGGCAATCGTCTGATCGGTTGTGGATGGTCAAAAATAATCTTGTTTTTTCTGCAATATATTCAACGTTG

AGCAAAACGTTACAGTTCATCTTTATTCCCAGCACTTTCCATGCTTCCTCCTTCAAACGATATCCTGCTTCAAATATATT
CAGAAACATATCCCGACTTTGGTGGACACGAATCTTTCAGGTGTAATCAAGAGGGTCCCCAGTCGACGCTGCGCAGA
ACGTCTTTGATACCCAGATAATACAGCAGCTGGGGCATTATCTGGAATTCAAAGTTCCTTGTTGCGCGCACTCTTGACA
ATTTGGGATACTCGGTGGGTGACCCGTCGACGATATA

GTTCTCTGCGCCATGAATATCGGCGGAACAAACACACTTGCTTGATAAGCAAAATCGACAGTGACTTGAATCAGAGCGTC
AAAGTTTATCCTTTGCCGCACATGTACATAGTGAAGGATCTCGTGCCGGACATGAATAATTTTTATACTCAGTACAAGAA
CATACAGCCGTGGTTGCAGCGAAATGACAACAAAAAAGTCGGCACTCAACAGTACTTGCAGAGCGTTGACGATCGTAAAA
AATTGGATGGTCTTTACGAGTGCAATTTTTGTCGCTTGCTGCAGTACATCGTCCCGTCTTACTGGTGAATGGGGACAAG
TATTTAGGACAGCTGTGCTCATGCAAGCTTACCGGTGGATAATTGACTCAGGACACCCAGGCGCAACGAACGTCTAGA
CAAGCTGCGCGACGCCCTACTCCGTTTTATCGTTGTACACGATAATGAATTGTA CTGCACTTGTCCAAAGGGTCTGAATC
CTGGGAAAAGCTATAGCCGAGATCAAGAAGCTCCTGGGCAACGTGATCCAGAAGGGAAAAACCAGGACTCGACACGACTGCG
TTACATCATTGAAGGAATTAATTTTGATTTTTTTCCGACGAATAATGATCGGCCGTAGGAGAGCTCAAAGGATTTAAAATG
CCTCGACTAAATAATTTATAATGTCATTTCGGCGCGAAGCTGCGTAGAATAAACTTTCTAGAAGACAGTATCAAGGGACAA
AGAAAAAAAAGTTCTTTACTCGCTGGACGATTAATTGCGTCGTAATCATCATGTTTCCGCTTTCCTCTAAGATTTCTAT
TTTTTTTTTTATTATTTACGTTCTACTGCTATTACAATTATGATAGANACTCGAATAAGTTCATATAGTTAAGAGTTGTG
AAGA

GGTCAACTGTGAATGTGTGCGACACGTGCCGGAGGAACGTCCTTATAACGCGAAACAAGCGGGCTGTCAGTTTGAAACTGCCACAAAGAAGGAGACGCAGCCGTCAAGATGCCGAAGTCGCTGAATGTGAGGGTAACGACGATGGACGCGGAGCTGGAGTTCGCGATCCAGCACGCGACCAACCGGGAACAATTATTCGACCAGGTCGTCAAGACCATTGGACTTAGGGAGGTTATGGTTCTTCGGACTTCAATACACCGACATGAAGGCGCATCTGACCTGGATCAAACCTTTACAAGAAGGTGATGAACCAGGAGGTCAGAAAAGAAAACTCCACTTCAGTTTAAGTTTCCGGGCTAAATTTACCTCAGGACGTCGTGAGGAACATTCAGGAGCATTACTCTTCGTCCTTTTTACCTTCAGGTGAAAAATGCGAATTCCTTCGGACGAGATATATGGCCACCGGAAACATCCGGTCCTTTTGGCCTCGTACGCGGTACAAGCGAGACACGGTGATTTCCAAAAGTCGCTACATACCGCCGGATTCTTGCGAATGATCGTCTCTTGCCCCAGCGGGTTATGGACCAGCACAAAATGAGCAAAGAGGAATGGGAGAGCTCGATAACAACATGGTGGCAGGAACACCGTGGAATGTTGCGGGAAGACGCAACTATGGAATATCTCAAGATTGCCAAGACCTTGAGATGTACGGCGTCAATTATTTTGAGATTAGAAAATAAAGGGCACCGAATTTATGGCTCGGCGTTGACGCGCTTGGTCTCAATATTTACGAAAAGGAGGACAAGCTCACACCCAAATCGGTTTCCCATGGCTCGAGATACGTAACTTTCTTCAACGATAGAAAATTCATCATCAAACCGATCGATAAGAAAGGCGCCGATTTTGTCTTCTTGACCTCGCGTCAAGATCAACAAGAGAATTTTGGCACTTTGCGATGGGTAACCACGAGCTTTACATGCGTAGACGCAAGCCCCGACACTATTGACGTACAGCAGATGAAGGCTCAAGCTCGTGACGAAAACTCGCGAAGCAACAGCAGCGCGAAAAAGCTTCAGCTGGAAATTGCGGCGAGGGAAACGCGCTGAGAAGAAACATCAAGAGTATGAGGAAAGGCTGCGAACCATGGCTGAAGAAATGGAGAGACGGCAGGCCGAGCTAAGCGAGGCACAAGAAATGATCAGACGTCTCGAGGAGCAAACCTCAAACAGTTGCAGGCTGCTAAGGAGGAGTTGGAGGGTCGCCAGAAAGAATTGACTGCGATGATGGAAAAAATTGGAAACGTTGCGACGAAATGGAAGCAGCCGAACGGCCAAAATTGGAACAAGAAATCCGAGCCAGACAGGAGAAGTGTTGCGCATTTCAGTCGGAAGTCGAAGCTAAAGGACGCGGAAAGCCCCGACGGTTGCAAGAGGAAGTCGAAGCGG

TTAATCTCGTTTTAAAGCCAACGAGTTCCTCCAATTTTCATCGATTGAACATGCTCTCCCCGGAAGGAATGTGCAAAAGCC
TTCGACGTCTCGGGAAACGTTACGTCCGCGCAGAAGCTGCGGTTGTTATATTTTTACAAAAGTCACGAGACGCGAAAAG
AGTGTACGCGACGGTGGTCAACTCCAAGACGAACGTGATGGCAACAAGGAACAAGGAATCACTTTCCCGAGCGGCGCGA
TGCAGAAACAAGCTCATGAGGGAAGTCTACGCCGAGGCTGGAGTCGACCCGAAGGAAGTCGTCTACGTGGAGGCTCACGGA
ACTGGAACAAGGTCGGCGCAACCTCAGGAAGTTAATTCGATCGTGATCTCTTTTGCAAAGATCGCAAGAGCCCGTTGCT
CTGGGCTCCGTTAAATCCAACATGGGACATCGGAACACGAGCGAGCGGTCTTTGCTCGATCGCGAAAATACTCATTGCCA
TGGAAAGTGGCGTTATTTCCCGCAAATTTGCACTTCAAGGACCAACCC

TATCTTTTGGCCAGCAGACTCTATCGCTTGCAGGGAAACACGCAGAGTATTATCGCACTGCTCTCAGGTATCTTGGCTG
TATCGAACTCGACACGCTGAGTAAACGAGAGCAAGAACAGCACGCCTTTTTCTGGGTCTGGCGGCACTCCTCGGCGAGG
GAGTTTACAATTTAGGCGAATTCGTTGCTCATCCAGTCCTACAATCTCTCAAAGAGACAGCCAACCTCTTGGCTCGTGGAT
CTTCTCCACGCTTTTAAATGCGGGAGACATAGCAGCGTTAGAGAACTGAAACCAATGGAGCAAGTAGCTGATCTTGC
AGCTCAAGAGCTTTAAATTAGGCAAAAAAATTCGCTTCTGTGTCTCATGGAAATGACTTTCAAGAGACAAGCTAATAATC
GACAACCTCACTTTACGGAATATCCCAAGAGACGCGTTTGCCGATCGGGGAAGTTGAGCTTCTGGTGATGAAGGCTCTG
GCCAAGGACTCGTCCGTGGAGCGATAGACCAAGTGGCTGGAACGGTCAACATGACTTGGGTGCAGCCGCGAGTGCTCGA
TCGCAATCAAATCGCCAATATGGTGCAGCAGCTCACCGGCTGGTGCAAAGCTGTAGATTGATGGAAAATCTTCTCGAAT
CACGCGCTCCGAAATTTTGACGCTCTAATTAATATTTAAATCGCGGCTTTTTCCGAATATATGCGTTTTTGCGAAGTTGC
ATTTTCATCCGGCTATTTTGTTTTTGCGTCCCTCCGAACNTTACNTCATTTTAAACGTCTAAGGTTAATACTCATTGACGT
TTT

CGGCGGGGACACACAAATCTTTACCGAGTATCTATCAGTGAAGAACGAAGTGTCTGTTTGCATCAACGGACTACAAAG
AAGCTTTTTTCGTCGGTTACAAAATGGGAGACAAAGGAACATCATCCCCGAGTGGTAGCTGAGTCGGCGGAAAATAGC
GCTCCGACAACGGCCGCAACGAAAAAACCAACGAGCGCGAAAGCCAAGACCGCGGCGCCACGGGCCAAGGCTTCGACCC
GAAAACCGCCGATATGGTTACATCCGCCATCAAGGATCTCAAGGAACGCAATGGCTCTTCCTTGCAAGCCATCAAGAAGT
ACATGGCGAGCAAATACAAAGTCGACGCCGAGAAACAAGCGACTTTCATCAAAAAGTATCTCAAGGCTGCGGTGCTGCT
GGCACTATAGTACAAACCAAAGGCAAGGGAGCTGCGGGATCGTTCAAGCTCGCAGTCAAGAAGACCGAAGCGCCCAAGCC
CAAGGCTAAAAAGCCAGTGAAAGTTGCAGCTCCGAAGAAATCTCCGAAGAAACCTGCCGCGTCTCCGAAAAAACAGCAA
TCCGAAAAAAGCAGTTGCCGCTAAAAAAACCAGTGCCAGCGCTGTGCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
ACATGTCGGGCGCGCTCGGCCCCCTCA

26aquina p

mmc4.txt

GGAAAAACCCGTTAAAAAGCGATAATCGAGCACGTTCCGCGACGGTTTCGACGGTTAAGGCTCTCTTGTGGCCGACTTTTAT
CACATAACTTTGATGATCTCGGGGGATACGATGCCCGCAAATCAAGTCCGAGGGCGGCTGGGACGAGCCCTTCGCCAAAG
AGGCGCAGTACTTTGTGCGAGTGGCGTCTTTTGCAGCGCGAGGTCGAGGTCATTCTCGAATCGGCCAACAACAATTTT
GTTGGCAGCATCCGTCACCCGAAAGGTAACATCGCGGAACCTTTTGTGAAGGAAGGTTTCGCTCGGTGCGTCGATTGGTC
GATGAATCACATCAAATCCGAGTGGACAAGCTCTACATGGCGGAAAAGTTTCGCCAAAGAGAAGAGACTGCGAAGGTGGC
AAGACTGGGTTCCGTCGGGACCTCAGGTCGAATACACCGGGACCGTGATTGAAATAGCAAGTGCCGATGCGATCGTTATA
AGGACTGCGAATCTAAGAACTAAAAAATATTCTTGAGCAGCATCCGGCCACCGATGAGAGAGAAAAAACCATCCGAGGA
ACAAAAACGCTCCGAGATCAAAAGATTTCCGTCCCCTCTACGATATTCCGTTTCATGTACGAGGCGCGCAATTTTTGCGA
AAAAAGCTCATCCGCAAAACAAGTCAAAGTTGTGCGAGGATTACATTCAACCGGCAAGGGACACGTACCCGGAGAAGGTCTG
CTGCACCGTCACCGTCGGTAAAGTCAACATCGCCGAAGCAATGGTGTCAAAGGTCTGGCAACCGTCGTGAGATACCGGC
AGAACGACGATCAACGTTCTGTCCTTACAACGAGCTTCTTGCCGCGGAGAACAAGGACCGAAAATCGCAGCACGGTCTC
CACGACGAAAAACAACCTCCGCCCAAAGGATAATGGATTTGTCCAACGATCAGATCAAGGCCAAGTATCACATGTGCGCG
TTGAAGAGAGCACGAGGGACCAAAGGCGTCGTTGAATTTGTCAACAGTGGATCGCGTCTCAAGCTCTTTTGGCCAAAGGA
AAATTTGCTGATCACGTTGTTGCTGGCGGGGTGAAAGCGCCGCGGATCGCGACCGCGGAGGCGGTGGCGGCA
TGATCGAGGAGAAAAAGTACGGAGAGGAAGCTTTTCGTTTCATGAAGGAGCACACGTTCCAAAGGGACGTAGAGATCCA
GGTCGAGACAATGGAATCAAAGGGAAGCGGTTTTATCGGTTGGTTGTTCTGTCGATGGCGTCAACATGGCAGTTGCCCTCG
TCGAGGAGGTTCTCGCCGAAGTTTTCGACCTTTACCGAAAACGGCGAGTACCTGAAACTGCTCAAGGCGGCCGAGGAGCGA
GCAAAGGCCCAAAAATTGAACATCTGGAAAGACCGCGTACAGGTCGAGGCTGAAACGGAACAAATCGAGGAAGAAAAGGA
AGTGACCGAGCGTAAGTCGATTACCGCGAAGTCGTTGTTTCCGAGATAACGGAGGCTCTGCATTTTACGCTCAGTACG
TCGACAGCGAAGTATGGTCAAGGACTTTTGGCGAGACTACGTCAGGAGCTTGAGACTAATCCACCGTTGCTGGTTCT
TACAAATCCCAAGAGGGGGGAGCTCGTTGCGCGCATGGTTAACGGAGACGATCAGTGGTATCGCGCAAGGTTGAGAAATA
TCTGGAAGCAAATGTGAGCGTGTCTACACCGATT

>CL1290contig1|Filamin-C [Harpegnathos saltator]

GAAGTCAGAGGGCCCTCACAGAGTACGTGTGCTCTTCGGTGGCCGGGAAATTCCAAAGAGTCCGTACACAGTTATGGTTG
AAGGACATCCGGGAGACCCGAGCAAAGTTTCTGCCAGTGGACCGGGTTTACAACCGGAAGGCGTCGTTATTAATCGTCCA
ACTTACTTCGACATTCACACCAAAGGTGCGGGACGCGGTGACCGGAAGTCATTATATTGGACCCTCAGGGTTGCAAAAC
AGCAGTGCCAGTGAAATTGCGTCAGACTTCACCGGACGTTTGGAGATGCGAATACGCTTACCGATCACCGGTTTGCATT
CGGTCAATATATTTTTCGCCGGCAAACCTCATACCCGGAAGTCCAGTCGGTGTATGATCGCACAGTTTCTGACGCGAAG
AAATGTCGTGCCTATGGACGTGGATTATTGTCTCCGGTGTGAGAGTCAAGGATATTGCTGATTTACGATCGTCACTAA
GGACGCGGGTGAGGGAGTTCCCGAGGTTTCGAGTCATCGGTCTCGGGGCTCTAATCTGCCGATTGATGAAGAAAAAAG
ACGCTACGACTTACGATTGTCTTACCTGCCCGTAAGGATGGCAGGACGTCGGTTCGTCAGGTCGGTAAAGAA
ATTCCAAATCACCGTTGCAAGTGAACGTTGGACCTTACAAAGAATCAGCATCCGAGTCTTCGGGCTGGACTGCACGG
AGGCGTTGTTGGCCATCCGGCAAATTCACCGTTGACACGAACGGAGAGACGGGAGGTCTTGGTTTTTCGATCGAGGGAC
CTTCAAAGCGAAAAATCCATTGTGACGACAATGGCGACGGGACAGCCGATGTTTCTTATTTTCAACAATGCCTGGACAT
TACGCCGTTTCATATTCTTTGCGACAACGAGGATATACCAAATCTCCGTATATCGCTCACATTCAACCTCAATCTGACTT
CGATCCCAGCAAGGTCGAAGTTTACGGACCTGGAATCCAACCGGAAGGCATTGGTCGAGACAAACCAACGCAATTTACTA
TTGACGTTAAAAAAGCTGGACAAGCTCCTCTCGAAGTTTCCATTGAGGATGGTCTCGGACGTGAGGTCGGCTCAAGCTC
GAGGACAAACACGATGGCACTGTCTAGCGAACTACGTTCCAACTTCCGGTTACAGCACGTTGTTATGGTGAATTACGG
AGGCGTCGCAACCAAGAAATCTCCGTACAGAGTCAAGGTCGCTGCGCCCTTGAATCCAGCAATGGTATCAGCGTTCGGTC
CAGGACTGGACAACGGAGTAAAATCGAACGCAGCGACGATTTCAACGTCGATTGTGAGAAGCGGGTCCCGGTGACCTT
GAAGTTGCAATGGCAAGTCCGGATGGTCATGACCTTCCGGTATCTCTGACTGATAACGAAGACGGTACCTACACCGTAGA
TTACGTGCGCCCTCAGCCTGGTCCTT

>CL1292contig1|atp synthase subunit mitochondrial-like isoform 2

CGGCCGGGGTAGCAGACAGCGCAAGTCCGACATCCTCTTTATCGGGGCGAGTGGCGAAATTTTCGTTGAAAAGAAAACTA
GCGAACGACCGGTGACAGGATTCAAAAATGGCCACTCTTGACGTACACTTCGTCCCTACTTGAGGTCCGTTGCGAGCCA
GATCAGAAACTATGCCGAAGCCTCTGGTAGCGACATGAAGTTTACCTTCGCCGGAGCTAATCAAGTTTTCTATGAATCCG
CCGATGTCAAGCAAATCGACGTGCCGTCTTCTCAGGAGCTTTCCGTCATCCTTCATCACGTGCCGACCTTGCTGTC
CTGAAACCCGGTATCGTCACTGTTTACGAACAGAGCGGAGAGGTGAAGAAAGTATTTGTATCTTCGGGCACAGTCAACAT
CAATGAAGACTCCAGCGTTGAGATTCTCGCGGAAGAAGTCTACCTTCGGAACCTTGAGAACTTGAGCGGATCGGCGATC
TCTTGAGCAAGGCTCAACAGCAGCTTTCTTCTGCCTCGTCGGAGCAAGATAAGGCCGAAGCCGCGATCGCGGTTGAAGTT
GCTGAGGCGCTTGTGGCAGCAACTCCATAAGTTTGAATAGAAGATTGCAAGAATCGTGAACGAGATTTGAATTGGCTAC
CGAGTCTTTAGCGATTAGAAATGTTGAGCCATCTGCCGTGAACGGTCGAGAGTTGTTACACACTATTGTATAAATAATAC
GATCATTTTCGCCCGTGAATAATTTGCCAACACGTTTATCGTTTACTACCTTGTGATAAAACTACAAATGAAAGCTGAGTG
TTCCTCAGCAGGGGCTTGTCTATGGAAATGAAAGAAAATTCGATCAAAAACGTTGTTTATTGTAGATTAGTTAATCAAC
ATTTAAAAACAATTTGTTTATTTTCCGTTAGATGTACATCAAGCTTCTAATTCTTTCGTGATGATAAGTAGCGTTCTCTG
AAGTACGTGAAACAGCCACTAAATCGTCTTCAACCAGCAACGCCCGTAGGTGAGGAACGATTTTTCATTTTTCTATGAA
TTTTCAAATTCATTTCAGTACAATTTCCGTTATCGATTTTCATATAAATATATATTTAAAAATATACTCGTTTGTTTAT
TTTACACGGTGTAGAAGCGCGTATATAATTTGAATCGCGTACGAAAAACGTACGCGAATAACACTCGATATATAAATTTG
TGACAAGGCAAACTTTGTCACCGTGCTCGCCGATTTGTTTCATTATTTTTTGTCTTTTCTATTATTTCACTATTATGA
ATGTTTCATCTTTGTTTGGTATTATACGTAATAATGTAACAAAATATGAAAAT

>CL1293contig1|ubiquitin-like modifier-activating enzyme 1

ATCGTACAGCTCGTCTCAAGATCCCCCGAAAAGAGTATACCGATCTGTACGCTGAAAAACTTTCCAAACGCGATCGAGC
ACACGCTCCAGTGGGCGAGAGACAGCTTCGAGGGACTGTTTCTGTCAGGCGGCCGAGAATGCGGCCCAATACATCGTCGAT
CCACAATTCGTGAGAGAACTCTCAAGTTGCCGGGCGTTCAACCGCTCGAGGTATTGGAATCGGTTTACACGGCTCTCGT
CGAGGAGCGACCCCGCAGTTTCGAGGATTGCGTTGCTTGGGCTCGTTGCCATTGGCAAGAACAAATACAACAATCAAATTC
GACAATTTGCTCTTCAATTTTCTCCGATCAGATAACATCGAGCGCCAGCCTTTCTGGTCCGTCGGAAGCGCTGTCCC
GTACCTCTCGAATTCGACATCAACGAGTCCCTCATCTGGATTACGTGCTCGCAGCGGCAACCTCAAGCGCGCGGTTTA
CGGTATCCCGGCTAATCGCGACAGGAAATACATCGCCGAGGTGGCTTCGGCGGTGGAAGTACCAAATTCACACCGAAAT

mmc4.txt

CCGGTGTGATGATAGCCGAAACCGATTTCGACAGTTTCAGGTCTCGAACCGCGGTGGAAACGTCGATCACGAGAGACTGGTC
 CACATACAGGAACAATTGCCGAAACAGAATGAGTTCAGTTCGATAACGATTATACCGCAAGAATTTCGAGAAAGACGACGA
 TACGAATTTCCACATTGACTTTATCGTCGCTTCGTCAAATTCGCGAGCGGCTAATTACAAAATTCACCTCGCCGACAGAC
 ACAAGAGCAAAATTGATCGCCGGTAAAATAATACCCGCGATCGCTACTACGACGTCGGTCGTGCGCGGTCTCGTCTGCTT
 CGAACTCATTAAATTGGCCAGAAACCGTAACCGACCTTGCCATCTACAAGAATGGCTTCGTTAATTTGGCACTGCCGTTT
 TTTGGCTTCTCCGAGCCAATATCAGCTCCGAAACTCAAGTATTACGATACCGAATGGACCCTCTGGGATCGTTTTCGAAGT
 CAAGGGCGAACTAACGCTCAAAGAATTTTGGAACTTCAAGGATCAGCACAAGCTCGAGGTGACGATGCTCTCGCAAG
 GTGTCAGCATGCTGTATTCAATTTTTCATGGCCAAGGCCAAATGCCAGGAACGTCATGGCTCTACCGATGTCGGAGGTTGTG
 AAAAAAGTATCGAAGAAAAAGCTCGAGCCCCACGTTTCGAGCCCTCGTGTGTTGAATTGTGCTGCAACGATTGCGACGGTAA
 CGACGTCGAGGTTCCCTACGTACGGTACACTCTACCTTGATTGATCGACGGGAACAACGAGAATCTATCGAGTCGCGAGC
 CTATTGTCATCGAGCTTTAACTTGAGCATCGATTGCTTCGGAATACACTCGATGATTATCATTTTAAATCATCAAAAT
 AGTAAGAAAAAGCAAAACAAACGAAAAAACAATGAAAAAACAACGAGGAAGAATTTAGCCTGTAGTAATTTCTACAAAT
 TTCTATTTACGATACGGGAAATGAAGAAATAAAACCAACGAAGTTGGAAAAAATACAAAGTAGATAAGCAAGG

>CL1296contig1|ap-2 complex subunit beta-

AAGTGGCGCAGGGCGTTTTCGCGTCTAGATATTTCGCTGTGTCAGTCGGCAGCCAGCTTTTCGATTTGACATTTATTTTCAC
 CAACTCAAGAGATGACCGACTCCAAGTACTTCACCACTACCAAGAAGGGAGAAATCTTCGAACCTTAAATCCGAGCTGAAC
 AATGACAAGAAAGAAAAAGAAAAAGAAGCCGTCAAGAAGGTCATTGCTTCATGACCGTGGGCAAAGATGTTTCGGCTCT
 CTTTCCCGACGTCGTGAATTGCATGCAGACCGACAATTTGGAGTTGAAGAAGCTCGTGACCTCTATCTGATGAATTACG
 CAAAAAGCCAACCGGACATGGCGATAATGGCGGTCAACACGTTTCGTCAAGGACTGCGAAGACCCGAATCCTCTCATACGC
 GCTCTCGTGTACGGACCATGGGTCGATACGCGTCGACAAGATCACCGAGTATCTGTGCGAACACTCAGAAAATGCCT
 CAAGGACGAAGATCCCTACGTTTCGCAAAACCGCGCTGTCTGCGTCGCCAAATTTGTACGACATTAACGCCGCCCTCGTCG
 AGGATCAAGGATTTTTGGATCAACTCAAGGATCTTCTGTCCGACAGCAATCCTATGGTTGTGCCAACGCCGTTGCTGCT
 CTCTCAGAAATCAACGAAGCCAGCCCCAGTGGACAACCTCTCGTGGAAATGAATGCCAGACGATCAACAACTACTTAC
 CAACTCAACGAGTGTACGGAATGGGGTCAGGTCTTCATTCTTGATTCTTTGGCCAACCTACTCACCGAAGGACGATCGTG
 AGGCTCAGAGCATTTGCGAACGTATAACCCCGCTTTGGCTCAGGCCAACGCTGCAGTCGTCTTTCCGAGTCGAAGTT
 CTCATGAAGCTCATGGAAATGTTACAATCGGAGTCTGACTTTGTGCGGACATTGACCAAGAAATTTGGCTCCTCCCCTGGT
 AACTCTTCTCAGCTCCGAGCCGGAAGTACAGTACGTCGCACTCAGAAACATCAATTTGATCGTCCAGAAACGTCCCGACA
 TTCTCAAACACGAAATGAAAGTATTTTTCGTAAAATACAACGATCCGATTTACGTGAAACTCGAAAACTCGATATCATG
 ATACGCTTAGCGTCGCAGGCAAACATCGCTCAGGTTCTCTCGGAATTGAAAGATACGCGACCGAGGTGGACGTCGATTTT
 GTCAGGAAAGCCGTCAGGGCTATCGGTGATGCGCTATCAAGTTGAACCTTCCGCCGAAAGATGCGTCTCTACGCTTTT
 GGATCTTATTCAAACAAAGGTGAACACGTTGTCCAAGAAGCGATAGTAGTATAAAAGACATATTCGAAAGTATCCGA
 ACAAGTACGAGAGCATAAATATCGACGCTTTGCGAGAATTTGGACACTCTGGACGAGCCTGAAGCGCGAGCTTCGATGATT
 TGGATAATCGGTGAATACGCGGAGCGTATAGACAACGCGGACGAGTTGCTGGAGAGTTTTCTGGAAGGTTTTACGACGA
 GAACACACAAGTGCAGCTGCAGTTGTTGACAGCGATCGTAAAACCTGTTCTCAAGCGTCACCGANACCANAGTGGTGCAG
 CAAGTTCNGAGTCTGGCGACCGAGT

>CL1298contig1|malate mitochondrial

ACACGTACGACCGAGTAACCGAACGACGACATCGACACACAGTTTATTTCCCTCCGAAAAAAGAAAAAAGTAATTTAA
 AACAAACATTTGCCACGATTTGTGAAACCGACGATCGTCGTTGCTCAGCAGGGCGCCAAACAATTGTCAACGAGTGCTC
 AGCGAAATGCCAAGTCTGCTGTCATGGGCGCCAGCGCGGCATCGGCCAACCGCTTTCCATGCTCCTCAAAAATCTCCC
 CTCGTTACCGAATTGTCTCTTTACGACATTGTCAACACTCCTGGCGTCGTCGTCGACTTGTGCGACATCGACACACCGGC
 CAAGGTCAAGGCCTTCAACGACCGGATCAGCTGAAGGATTCCTACGCGGAGCGCAGGTGTCATCATCCCGGCTGGAG
 TTCCCCGCAAGCCTGGAATGACCCGAGACGATTTATTCACACAAACGCATCCATTGTGCGAGATCTTGCCGCGCGGATT
 GCCGAAGTAGTCCAAAAAGTCTTTGTCGCCATTATTTCAAACCTGTTAACAGTACGGTCCCTATTGCCAGCGAAGTATT
 GCAAAAAGCTGGAGTTATGATCCCAACAGGATCTTCGTTGTCACCACTCGACATTTGTCAGGTGCAATTGCCTTCATCG
 CCGAAGCCAAGGGTCTCGACCCCCAAAAAGTGTCTGTTCCCGTAATCGGTGGACACAGCGGAATAACGATCATTCCGTTG
 ATCTCTCAAGCCAAACCGAGTGTCAACTTCCCGGATGACAACTGAAGGCACTGACGGAGAGAATTCAAGAAGCTGGAAC
 CGAGGTCTGTAAGCAAAAGCAGGTACCGGCTCGGCGACGCTTCGATGGCCTACGCGGGCGCTCGTTTCGGTTTCTCGC
 TCATCCGAGCTCTCAACGGCGAACAAAACGTTGTCGAGTGTTCGATCGTCAGATCGAACATCAGGACGCGAAATACTTC
 TCAACTCCCGTCTCTCCGCAAAAATGGAGTCGAGAAAATCTTGGACTCGGCAAACTCAGCGCCTTCGAGGAGAACT
 TCTCAAGCAGCGATCCCTGAACTCAAGAAAAACATCCAGAAGGGCGAAGACTTTGTAATAAAAAAGTGAACAAACAAAA
 TCGACAGTCAATGGTTCTTAGATCGTAACTGAAGTATTTTCACGAAAATTCGTAAGAACGAATTCGTGCAACATCGGAC
 CATCCAAACCAACAAAACCCCTCAACCATTTTTTCGAGCGATTANACTCTGCAGCA

>CL129contig1|t-complex protein 1 subunit alpha

GATTGCGCTCACCTGTTCTCGCTCGTTTAGGCTGATCCTCGTTCCTTCATCTCGTCCAAGTGAATTCGGAGCAACGTC
 CTGTTTTTATTACTTTACATTTTGTCTGAAATAATAAAAAATACAACGTAAGTTTGCTCGTTTATTGAAACGGGAAAAAT
 GTCGACTGTAGCGAGTGCTCTAGCCGTTGGCGGTAGTCGACAATCCGGAGCCCCGTTTCGACGCAAAATGTTATGGCAG
 CGTGTGCGATTGCCAACATCGTCAAGAGTTCTCTGGGTCCAGTCGGCTTGACAAGATGTTGGTTCGACGACATTGGGGAT
 GTGACGGTGACCAACGACGGCGGACTATTCTGCGTCTCCTGGATGTCGAACATCCGGCGGCAAGAATTCTCGTCGAATT
 GGCACAATTGCAGGACGAGGAAGTCGGCGACGGCAGCAGATCTGTTGTGATCATAGCAGCCGAGCTGTTGAAAAACGCAG
 ACGAACTTGTGAAACAAAAGATTACCCGACGTCGGTGATAAGCGGATACAGGCTAGCTGCAAGGAAGCCTGCAATAAC
 ATCCAGGAACATTTGACTGTGACCGTCGACGAACTCGGACGAGACTGCTTGGTGAACGTTGCAAAAGACTTCCATGTCGAG
 TAAAAATCATCGGAGCTGACGCGAATTTCTTTGAAACATGGTTGTTGATGACGCGAACGCCATAAAGATCAACGATGGCA
 AAGGAGGACATTTGTATCCCGTAAAGGCACTCAACGTTCTCAAAGCTCATGGAAGAGTGTTCGAGAGTCGGTTCTCGTT
 CATGGCTACGCACTCAATTGTACAGTTGCTTCAAGCCATGCCGAAAAAGATAATGAACGCAAAAAATCGCTTGTCTCG
 ATTTTTCTCTTCAAAAAGCAAAAATGAAGTTGGGAGTCGAGGTCCTCATCACGGACCCCGAGAACTCGAGGGTGTTCGT
 CAGCGTGAAGCCGACATCAGAAAGAACGCATCCAGAAGATTCTCGTGTGGAACGAACTGTTCTTCTCTCTGTTGG
 AATCGACGATTTGTGCTCAAGTATTTCTGTCAGGCGGCGCAATGGCAGATACGAGATGCAAAAAACCGCATCTGAAAC
 GTATCGCCAAAGCAACTGGAGCTCAATTTCTTACGTCGCTCACAACATGGAAGGTGACGAGAGTTTCGACTCCAATTTG

mmc4.txt

CTTGCGGAAGCTGCCGAAGTCGTTTCAGGAATACGTTTGCGATGACGAGCTCCTTTTGATCAAGGGACCCAAAGCCAGGAC
CGCAAGTTCGATTATTCTGCGTGGACCAAACGACTATTATTGTGACGAAATGGAACGTTCCGTCCACGATGCCTTGTGCG
TAGTGAAGCGCGTTCTGGAGAGCAAAAAATGTGGTTTCCGGTGGAGGACGCTCGAGGCTGCTCTCTCGATCTATCTCGA
GAACTTTGCGACTTCCCTCAGCTCCAGGGAACAATTAAGCGATCGCTGAATTTGCCGATCTCTTCTCGTTATCCGAACT
CTCGCGTCAATGCTGCTCAAGA

>CL1304Contig1|apolipoprotein-iii-like protein precursor

TTTTTTCATCAGTCTGTCCGAACATCCAGTCCCGGAGAAAGCTCGTGGTGTATCAGAATTTTTCCAACAATTGTCAGACA
TACGTAGTTAATCGTATACGATGATGAGAGCTGTGGGAATCGCGTTGTTTTCGTTGGTGGCTATGGCCGTTGCTTATCC
TTCAGGGTCTGGAGAATCCCCGGCCGCCCATCGACCCAGGAGCTGCTCAACCCACTCAGCTCGTCGACCTCATTAACA
CCGCTCAGCAGAACATTAACAACCTTGGAAAGCAAATTCAGAACAACCTCAACCTTCTGACCAAGAAACCGTCGTTAAT
ACCATCAAGACACAAAGCACCGATCTCGTCAAGAATGTTCAAACCTTACATGACACAAGTCTCCGAGGAGATCAAGGCCAA
GAGCCCCGAACTGGAACTTTGTGGACCGACATAAAAAGCAAATTTAGCAAAAGCAGTGGACGACATCAATGCTCAAATCC
CGAACGCCCCAAGAACAAGCCGCTCAGCTCCAAGCCAAGTTCAGCCAAGGTGTGAGCGTGCTTGTGAGCGAATCTGACAAG
GCTGCAAAGGCGATCGGTCAAATTCGCCAAGGCCAAGGACGACATTGCCAAATTTACGAAACAGGCTGTGATATCGC
AGTTACAGGCCACGCAAAATCTGAACACCCAGCTTCAAACAAGCCCTCCGCCGCTCCGGCTGCTTAAAAAGTAAACGAAA
CAACGCGTAGTTTCGATCGACCAATGCTGGTAAATCTCTACTTCTGCAATAACACGAAGCTCTGTGGGCGAGGTTCTTA
ATAACTGCATGCACCTCATCAAGCGAACCCTGCGACCCCGACATCGAAAACATGTACAAAGTTGCGGAGTAATAAAATTT
CAACATATTTACCACAGGAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCCGCCG

>CL130Contig1|heat shock 70 kda protein 4l-like

GCAGTCTATATCCGAGAGTCTATCGCATAGCATCGAAAGGCATTAGTTCCAATTCTTCGTATATTTTTTCGTGGTTTTT
TTACCGCAGCAAGTAATTTTGAATAAAAAATTCATCTGACGCGAAGATCGAAAAAACTAGAGAAAATCTTAGTGATACG
GTTTGCCGAGAAACGAGGACAGGAAAAAAGAAAAAATAGGCTCTTGAACAGGAGAGTTAAACGCGCGATCGCCTATCAAC
TGTTTAAACACCGCAGCCACGGATAGAAACAATCAGTCATGGCTGCTATGTCCGTGATTGGAATTGACTTTGGTAACGAGA
GCTGCTATGTCGCTGTTGCCAGAGCCGGCGGTATTGAAACTATCGCCAACGATTACAGCCTACGCGGAACACCATCATGC
GTCGCATTAGTGGAAAAATCGAGTTCTTGGTGTGCGACGCAAGAACCAATGGTCACGAACATGAAAAATACCGTTTTAT
GGTTCAAGCGATTGCTAGGAAGAAAAGTACAACGATCCACAGGCCAACGAGAATTTCACTCGTTACGTTCAAACTAG
CCCACAGCCGGACGGGTGATTGGCATTACGTTCAATACTTGGGAGAAGAGCAGGTTTTTTTCGCCGGAGCAGATAACGG
CGATGTTGTTTTCAAATTTGAAAGAAATATCAGAAACGGCGCTGCAAACTGTGGTGAACGATTGTGTGATTTCCGTTCTT
TCGTATTTCACTCAAAACGAGCGACACGCTCTTTTGGACGCCGCTCGTATCGCCGCTCTCAATGTTCTTCGTCTTTTAA
TGAGACAACAGCTACTGCACTTTGCTACGGTATTTACAAGCAGGATTTACCCGCGCTCGATGCACCGCCCCGAAACGTTG
TTTTCGTTGATGCCGTTATGCCAGTCTTCAAATCAGCGTTTCCGCTTCCACAAAGGAAATGAAGATGTTGGCAAGTGC
AGCAGACAGCAACCTCGGTGGCGTGACATCGATATCTCTCGCAGATCATTCTGCAAAAGATTTCAAACCGCGTTACA
AAATCGACGCTCACACAAATCCACGTGCCTATCTCCGGCTGCTTGCCGAAGTGGAAAAGCTCAAAAAACAAATGTCCGCT
AACTCCACAAAACCTCCCGCTCAACATCGAGTGTTCATGGACGAAAAAGACGTCCACGGTGACATGCAGCGCGTCGACAT
GGAACAGATGTGTGCTCATCTTTTCAAACGCGTCGAGACGACGCTCAGACAATGTCTTGCCGATTCAAAATTTGAAACTCG
ACGAGATACATTCCGTGGAATTGGCTGGAGGCTCGAGTCGAGTACCTTTGATTAAAAAGCTGGTAGAGGAAGTTTTCTGC
AAGGCGCCCTCAACGACCTTGAATCAGGACGAATCTGTGGCTCGTGGTTGTGCTCTTCAGTGCAGATGCTCAGCCGAGC
GGTGAGAGTTCTGTAATTTCTCGGTACCGACATTTTACGCTTATCCGATCAAGATCGTTTGGGAACAGAGTCAAGGAGAA
AAAGAGAAATGGAAATCTTCGAAATATAATCACCCGGTCTTATTCCAAAATCTGACTTTATATCAATCGAGTCCGTT
CAGTTTGATAGCCAGTTACGTTTTCGCTCCGCCACGATCTCTCAAGCTCACATAGGTGTATTCAAATAAACAACGTAA
AGCCAACGCCCCGAGGTGAGCCCTCAAAGTGAATCAAGTTGCGCTTGAATTTGAACGGAATTTGACAATTTGCTTCG
GCATCTTTGGTGGAGAAGCGAGAGTTGACGACGAGGAGAAGGAGGAAGAGGAAAAGCAACAGCAGGCGAACAACGTGGA
CATGGACGGGCACAGGAAAAAGAGAGACAAAGCGGATCAAGAGGCTCAGGCAACGAGCCCCCGGCTGAGGGCGATG
CAAAGTGGAGATGGCAAGGAAAGAAAAAGTACCTCTTCGTATGGTTGAGTACCGGTTGAGCTGAGCTGGTGGTCTC
TTGCCAGCGTGATCTCGATGCCGCTGTTGAGAAGGAGTGCAAAATGATCGCTGAGGACAAACAGGAGAAAGAACGTATC
GATGCCCCGAAACGCCCTTGAGGAATACGTTTACGATCTACGTTCCAAGATTACAGGACGAGGATCAATTGGCGACATTCTG
TGTAGATTTCCGAGAGAGAAGCATTGTGTGCTACCTCGACGAGACGGAATTTGGCTGTACGAGGAAGGCGAAGAATGTA
ACCGACAAGTGTATAGCGACGGCTGTGCAATCTCAAGGCGAAGGAGAACCGATAAAGGAAGAAAAATGGAATTTGAG
GGTAGAAATTTGCGCTTGAACGAAGTGTGCGTCTTACGACGCGAAATGGGTTACGATCAATAAAGACATCACACA
AGGCAAGGAGGACAAATACTCCACATCACCGACGACGAGCTCAAACAGGCTGGAAAAGCGATACAAGAAAATGGACGT
GGTTGGACGAAGCTCATGTTGTTTTCTGCTGGAACACCTCGTACTCAGCTCCCTAGCATCACCGTAGCGCAGATTCTGTC
GGCAAAACAGACTCTGGAAAACACCGTAAAGCCTATTCTCAACAAACCAAAACCAAAAGTTGAAGGCTCCCAAGGCGAA
GAAAAATCAAAGGACAAAGCAAACGA

>CL1319-bisContig1|regulator of microtubule dynamics protein 1-like

CCTTCGATTGTCTCTGTGAAAAATTCGTAGTTTTTTCACGATGCTTTGTATTTCCAAATGAGCGGTAGTTCTGTGCTGTTA
CTGTGCAACTATTTCTTTCTTTTTCACGCTGACAATTCGTGGGACGATCAACGCTCTCAATTAGTCTCAAATTTGCCATGTA
CACATTAAGGTTGAGTGGAGTCCAACTCCACGATCTTGTCAATCAGAACAATAAGTCATTCTCTGAGGGATTAGAACA
TTGAAATAAACTTTGACAAGAGTCTCACTTTCTTTGACAGCAGTCGCTGCGTTTGTGTTAGCCTCGGCGTTCTTAACTT
TTGACAAACAATAATGATCTTTCAAATGTCAATTCGCGTCTGTCAGGACATCGGGATTATTGACGCGAGCTTTTCTTCATC
AATTATTTATCGCGTTTCGAAAAGTCAATTTTGTGCCGAAAAAATGATTCTGGGAGCTCCGTTGGTCCGCGAGCTCAAA
AAAAATGGATTTCACTGCCACAAACGGATGTGACCAAAAGGCTGTTGGCAGAAGCTGACGCTCTTTTCAACAAGGAAAAATA
TTCGAACATCTACGAAGAATTTCAAAAAACTACAAAGATGGAATAGTACAGAAATGTTGTGGAGGCTTTCTCGAGCACTG
TACCACATGGCAAAGACTGCCAAAGCCGACGAAGCCAAAGCAATGATTTACGAAGCTTACGATCTTGTCTGCAAAGCATT
GGCGCTCCGGGAGGACGTTTTCACAGGTTTCAAAATGGTACACGTTCTCTAGACAGTAAATCTGAGTACGAGGGTACGA
AGGCACGAATTTCAACAATTTGCAAACAGTGAAGGATCATATGCTGACGGCGGCCAAATTTGGATCCCAAGGATGCAACGATT
CTCCACATGCTTGGCAATTTGGTGTACCAGTGGCCAGTCTCTCTGGTACCAAGAAAAATCGCATCAGTATTTTGTG
AGCTCTCCGTTTCTTCTGTCGTAAGAGGCTTTTACAATTTTACTCAAAGCCGAAAGAAATCGATCCCAATTTTATAG
CCAACAATTTTACTTTTGTGTTGGCAAACTTACCTGAACTAAATAACAAAGAAGAAGTTTGAATACTTGAAAGAGC

TTCGGAATATCCGGCGAAAAACACGATGATCAGG

>CL13196Contig1|esterase fe4

TCAGCTGTTTTACCAAACTCCGCTGCAACCTCATCAACGAAATCTCGCGGTCAAACAGGCCCAATTTCTTGTTGTCCGCA
TGAAACCAACGCTCAAATTTTCGACTGTCTTAAGACAAAAGACGCGATAGAAATGGGAGCCACTTTGGGTCAATTTCTTG
AATGGCACGGCGATCCTGTTTTAGTTTGGGCACCAGTTATTGAGCCGGAAGTTCCGGGAGTCGAGAGATTCTAACGGGT
CAGCCTTCGGAGTTAATTC AACGTGGACAATTTGCTCACGTTCTTTGATCACTGGAATATGTAAGGACGAGTTTGGTGG
TGTCGTTGTTCCACGGTCGAAGCTGCTCGGAAGAATACGTCGGTTTCGACGATCTGAATCAGAACTGGAACACAATCGCG
CCGATAAGCTACTTTTATGAACGAGACACTCCACGCTCGAAGCAAATCAGCGAATCTCTCAGACGATTTTATTTCAAGGG
ACAACCGATTTCCCTTGACACCGTTGATGATCTTTTCGAGGGTACACGGTTTCATTACAAAACAAT

>CL13253Contig1|dihydrolipoyl mitochondrial

GACCGGGAGTGAAGTAACGCCTTTTCGCGGGCATCGAGATCGACGAGAAGCAAATCGTCTCGTCGACGGGAGCCCTTTCTC
TCAATCCCCTGCCCCAAGAGGCTCATCGTTATCGGAGCTGGTGAATCGGTCTGGAGCTCGGATCCGTCTGGCAGAGGCTC
GGTACCGAAGTCACAGCCGTCGAGTTCATGCCATCGATAGGAGGCGCCGGCATCGACGCTGAAGTGAGCAAGTCTCTGCA
GAAAAATATGAGCAAGCAGGGCTTGAATTTCAAGCTGGGTAAACAAAGTTACCGGGGACCCAAAAAATGCTTCGGAAATC
CAAGTTTCTATCGAGGATGCGAAAAGATCCGAGACAAAAAGAACCTCGGCTGCGACGTTTCTTTGGTCTGTGTCGGAC
GAAGCCGTACACGAATAACCTTGGACTCGAGGAAATGGGTATCGAGCGTGACGAGAAGGGAAGGGTCCCCGTACAACA
ATAGATTCCAGACTGTA

>CL13269Contig1|3-hydroxyacyl- dehydrogenase type-2

GATGTGGCGCGCGCTGGCCCTGACCAAGCAAAGTTTCAGCAAATTTGGACGTAGTGGTGAACGCTGCGGGCATCGCGGT
TGACACAAGACTTACAATTTCAACAAGAATTTGCCGCACTCGCTGGAGGATTTTGCTAGAGTCGTGAATGTCAATACGA
TCGGAACGTTCAACGTGATAAGGCTGTCGGTTGGATTGATGGGAGAGAACGAGCCGAACGTGGACGGTCAGCGGAGGCGT
GGTGGTGAACACGGCGAGTGTGCGGCGTTCGACGGGCAGATGGGCCAAGCGCGTATTGGCGTTCGAAGGGAGCGATC
GTGGGAATGACATTGCCATTGGCGCGCGATCTCTCGGGCCAGGGAATCCGGGTGGTGACGATAGCGCCGGGTCTGTTTCA
CACGCCGTTGCTGCGCTCGTTGCCGGACAAGTTTCGAGCGTTCCTCGCGAAAACGNTTCCGTTCTCAGCGACTGGGCACT

>CL13272-bisContig1|glycolipid transfer protein domain-containing protein 1

AAAGATGGCGGAAGGCACGACCGGATGGTTTTTCGATCTACGAACGGTTCACGATCATTTTGATCGAGCCCTTATCCAGG
ATGATGACGTTAACCTCAAGGCTTATCTGGAAGCTTACGATGAACTTTACAAATTTTTCAGCTGATGGGAAGTATTTTA
GTTCTGATCGTCGGATCTGAAACAAAGATCGACGTGCTCAATGAGCTCGTGAAAAAGACGAGCAAAATTACGACACGAT
AAAGACGATGATCCAACACGAGAAAGAGAATAAATTGTTGCAGAAGTCGGATTTTGTCAACGGTAGCAGAACATTGTTGA
GATTGCATCGGGGTCTCGACTTTATCAGAGAATTTTTTTCGGCAACTTGGCGACCTTGGCGACGTCGATAAACTTCGAG
CTGTTGTCAAGACGCTTATGGCAAACGCTTGCCAAACATCACCCCTGGGTGATAAGAACAGCTGCTAACACTGCCATGT
ACACAATGCCAACTAAACAATTTTATTACAAAAGGTTTTCGGCGAAAACGTGCAACGAAACATTGACGTGTTGACCAA
AAATGTTGGAAGTGACAGCTGTACGTTTTTCGACCGTACTACTAATTTGTTTCGAGACTCACCAGCTGCACAATTCGCA

>CL1327Contig1|spectrin beta chain

GAAATGGGCGGAGCTGCGCGAAAAAGGCCGAGGGCAAACGAGAGGCTCTCAATTCGGCTCACGGTGACAAACTTTCCAT
ATCGAGTGTGCGGAGACCGTATCCTGGATCGAGGACAAAAACGTATTCTTCAACAGACCGATAGCCTGGAATGGATCT
TACCGGTGTAATGACTCTGCAACGTAGATTGAGCGGTATGGAGAGAGATCTCGCTGCGATTACGGCCAAAGCTCGATGCC
TTGAGAAAAGAGGCTCGGCTCATCGAGGACGAACATCCCGAGGAGGCTGCTCTTATACGCGAGAGAATCACCCAGATTAC
ACAATTTGGGAACAATTGACGCAAATGCTCAAAGAGCGTGACGCCAAGCTCGAGGAAGCCGGTGATTTGCATCGTTTCT
TCGCGATCTCGATCATTTCCAGGCTTGGTTGACCAAGACTCAGACGGACGTTGCCTCCGAAGACACTCCGACCAGTCTCG
CCGACGCTGAAAAACTTTTGACCCAGCATCAAAATATCAAGGAAGAGATTGACAATTATACCGACGATTATCAAAAGATG
ATGGAATACGGGGAACGTTTGACCGCCAAAGCCGGCGACGGTGACACTCAGTACATGTTCTGCGGGAACGTTTGAACGC
ACTGAAAATGGGTGGGAAGAGCTCCACCAGATGTGGGCCAATCGACAGAATTTGTGTCCTCACTGTTGAATCTTCAAT
TGCTCGATCGCGACGCCGACAGGCGAGGATTGCTCTCGCAACAGGACACATACGCCAAGGACGAGACACCCGCC
AACTTTGAACAGGCGGAGAATCTTATAAAACGTACGAGGCGTTCATGACGACGATGGACGCCAAGCAGCAAAAGATCAA
TTCGGTGGTACAATTTGCCGGTACTCTGGTTCGACGAGGGACACTTTGCCGCCGACAAGGTTAAGAAGAAGGCCGAAAACA
TAAGCGAGCGTAGAAACGCGAATCGAGAAAAAGCTAATCAGCTGATGGACAGACTCAAGGATCAATTGCAGTTGCAAAATG
TTTTTGCAAGATTGCGAAGAGTTGGGCGAATGGGTGTCAGGAGAAACACATTACCGCGCAGGACGAACTTATCGCAGCGC
CAAGACCGTTTACAGCAATGAGCCGTCATCAGGCTTTTCGAGGCGGAAATCGCCAGCAAGAGATCGTCTTCAACAGTT
GCAGCAAGCCGCGGACGAGCTCGTCTGCTCAAAAGCCCGAATTTGAGCGAGATAATAAGTCCGAAGGTGCTCGAGTTGGCG
ATCAATTCGAGGAACCTCGAGACGACACCCACGACAAGGGCGAACGCCTGTTTGACGCGAATCGCGAAGTTCTCATTAT
CAGACCTGCGACGACATTGACTCGTGGATGAACGAGCTTGAGAAACAAATCGAGAGTACCGACACCGGCTCCGATCTCGC
TTCCGTAAATATTCTCATGCAAAAGCAACAAATGATTGAGACGCAAATGGCGGTCAAGGCGCGCCAGGGTGACGGGAATT
GGACAAACAAGCGGAACATCTTCAACGCACCGCTCCCGACGGCAAATGGAAGAGATCAAGGTAAGAAGGAAAAGGTTG
CACAACGTTTTCGCACAATTGAAGAACCCTTAGGTCGATCGTCAGCGTC

>CL13289Contig1

AATAACTTTCAATTTTTTTGTGCATGGGACGATTATGGTGATTTAATTAATCAAATGGTACGTGAGTCGAGAAATAATTG
CAAGAAGGAATCATCCAACCGTACGCTTGCGAATGGTTATGGACTTTTGTGACGAAAAAGCTGTGATCCAATAAAAAATCA
AAGCATTGATCGCAGCGATGGCGAACGAGCAAGAGAAAAATGTTACTATCGACGGTGACTTGTTCATGAAATATTGCAT
CGAGTTATGCCTGACGAGATAATTATGATGACTATAAAAAAGTCAAGCCCCGCTGACTCAGAAAGGTGACAATTTAT
GAGTGAAAAATGCGCAGATATATTTTGAATATTCGTCCATGAAAAAAAAGTGTGTCAACGGTGAATCGGATAAATCGGTC
GGG

>CL132Contig1|troponin t-like

TATTAACATAAAAGAAATACACCGTTTTTTTCCAACCTACCCGGTCACACTTAATCACCCGCAAACATGTCTGACGACGAGG
ACCAATACTCCAGCGAGGAGGAGGTGAGGAAGTGAAGGGTAGGGCGTCCCAAAGGACTCCGAGAACCCTGAGTTTATG
AAGAGGCAAGAGCAGAAGAGAACGATCTCGACGAACAGCTCAAAGAAATACATCGCGGAATGGCGGAAGCAGAGAGCCAA
GGAAGAGGAAAGAACTCAAGGTTCTAAAGGAAAAACAGCCAGCGCAAAGTCAGCCGCGCCGAAGAAGAGAAGAGATTGG
CCCAAAGAAGAAGGAGGAGGAAGAACGTGCCAACGTGAAATCGAGGAAAAGAAACAGCGCGATATCGAGGAGAAGAGA

mmc4.txt

AAACGCCTGGAGGAATCGGAGAAGAAGCGTCAAGCGATGATGCAGGCGATGAAAGATCAGAGCAAGAAAGGACCGAATTT
TACGATCGCCAAGAAACAATTGGGTGGAGCTTTGTCTGCTGGCTGCCCTTGAGCGTAACAAGACGAAAGAACAGCTCGAGG
AAGAGAAGAAAATATCGTTGAGTATTTCGCATCAAACCCCTCGAAATTGACAATCTCTCGATCGAAAGACTTCGCTCAAAG
GCCACCGAACTTTGGGAAGCCATTGTTAAGCTCGAAACTGAAAAATACGACTTGGAAGAGCGTCAAAAACGTGAGGACTA
CGACTTGAAAGAATTGAAGGAAAGACAGAAGCAACAGCTGAGGCACAAGGCTCTCAAGAAGGGTCTCGACCCGGAAGCCC
TCACCGGAAAATACCCCCCAAGAATCCAGGTCGCCTCGAAATACGAGCGTCTGTTGACACCAGGTCTATGACGACAA
GAAGAAGCTTTTCGAGGGCGGTCTGAACGCGCAAATCAAGGAGACCATGGAAGAGGCATGGACCCAACAGAAGGAACAGT
TCCTTGGACGCCAGAAAACGAAGCTGCCGAAGTGTTTCGGTGAGAGGCCAGGAAGAAGAAGGACGACCCCGAGTCACCG
GAAGGTGAGGAAGACGTGAAGGCAGCAGCCGACGACGACCTCGAGCCCCACCTCGACGAAGAGGAAGAAGAGGAGGAGGA
GGGAGAGGGAGGCGAGGAGGAAGAGGAGGAGGAGGAAGAAGAAGAGGAAGAGGAGGAAGAGGAAGAAGAAGAGGAGGAAG
AAGAGGAAGAGGAGGAGGAGGAAGAAGAGGAGGAATAAAAAATGTAATATTTATCATTAAATCGACGGATCTTCTTCACACC
AAATCGTTCTCTATCGAGACTCATAACGCAAGAGCAGCGATTCAAAAAATGAACAAGAAACACCGAATAATCAAAGAATC
AAAAACAAAAACAATAAAAAAAAAAATAAGCAGCTAAAAAGTTGGAGGGGTTTCGACGAATTCGCTTCCGGTATCCGTG
CAACGATCACCCAGAGACTCTCAAGCACACAACACAGCGCACAAAGATGGCCGCCGCGCTCCCTTTATCCCTTCCA
TTTCTTCGACCAACGAAGCAGAATATCGTTTCGAATTTTTCTGCTCCATCTTCCCACAGCCAAATAAAAAACCGATACAA
AAAGTCACCAAACCACTTGCATATGAATAATGAAGGAAAATATTTAAATTTGAAAAAAAAAAAAAAAAAGTTTAATAAACAA
AACAAATAAACATATTTATGGAAAATCCGAAATTACACATAAGTTGTTTATGTTATATATGCGAACGAGACAAATACTAC
TACCTTCTACTACTTCTATTATTATTAACGATTATTACTATTATTATTATTAATATATTATTATTATTACTGTT
AAATTATTACGAAAAAGAACACATGCACACGTACACATT

>CL1331-bisContig1|PREDICTED: hypothetical protein LOC100120720 [Nasonia
vitripennis]

TTCGGTTCTCATCGGTGAGACTGAAAAGTCATAAGCATTTCGATTTTTCTACGATAAAAGAAATTTGAGAGATGCCGGAG
AAGTCATTGCCAGTGAAAATCTATCGTCGTTGCTGCGGCAAAAAGTTGGGTGACGATTTAAAGATCGTGAAAGTGGAATTGG
AAAAATTTGACAGATCCGGGTGAGAATTACGGGAGTTTGATAATCGCGGTGAACGCGACAGTGGCGTTAGGAGGGGAGAAC
GGAAGTTCATAATCTAGTGGTAAAGCTATCACCGCGTCGACATGGTGCAGAGTTTCAACACGCGCTTGTACGTTT
TTGAAGGTAATTCGTAATTTCTATCGAGACCTGACACACGCGTTCCTCGCATTCGAGCGTGAGAATGGAATCACTGAAGCA
GAAAAACGTGGTTGGGTGCGAGTTACTACGGCGGACGAATGGGTTTGGGGGAAGGAGAGGAATTCGACGAGCAAGCGGC
GATAGTATTGAAAATTTGAATTACGCGGGTTACAAAACGGTCGATCGTTTGGTGGGTTGAACGCGAGTCAGGCGGATC
TGGCGGTTTCGTAACCTGGGAAAATTCACCGGTCTTGCATCGCGATGCGAACAAGAAAACCGCAAGTCTTTGAAAACGTG
ATTTTGGCCTCGCTGGCTCAACCAGCCAACGAAACTGCCAAAAATTTGTGTCATGGACATGATAAAAAAGCTCTTGACGA
TTTGACAGATTTGCCAGGATGTGAAAAGTATTTAACGACCATCGACAAGACGATGCAATATTTGGAGAGCGTCGAACGTT
CCATGGCGAAACGAGCCCAAGACAAAATGGGCGACTCTCGTGACCATGACTTTTGGATCAACAATATGATGTTCAAGTAC
GACGAGAAAAACAAGAACGTCGTTGACATGAAAATCGTTGACTTTCACTTTACATCTACGACTACGGCGTCAACGATCT
CATTTTTTTTCTCATCTCGAGCCCCGAGACTGCGGTTATCGAGAAAGAATTCGATCACCTGGTGGATCGTTATTTTCGAGG
CGTTCGTCGACACTCTCGAGTCCCTCAAGGTCGACGCTACCGATTATCCCAAAAGTGAATTCCTCGCGCGTCTCGACGAG
TGTGCAACCTCCAAATTGCCACAGTGTCTCATGATGAATCAGGTTATCAAATCAAAGCCCCGACGTCGTGCCCAAGATGGA
GGACATCAAGAGCAAAGAAAATTCCTGGCGATTGGCAGCGGCGAAAATTTATCAGCAGAAAATGCTCCACACCGTTCAAT
TCTACGACAAGCGTGGATGGCTCAAAAAATGTTAGACAACTCCACCACAAATCGATCTAGTCGAAATACAAAAGCAAGTT
AAACGTGGAGAACCCTTNAATCGCAATGAAAC

>CL13349-bisContig1|programmed cell death protein 5-like

GGGAAGGCCGGAGAAGGCAAAAATGGTGGAAGAAATGTTGGTCAATATGGCACAGCGTGGGCAACTGCCCGGCAGGCTGG
GGGAGCAGGAATTGATCGGATTGTTGGAAAGCGTTAATCAACAGACAAGAAGAAACACAACAGTAAATTCGACAGGCGC
AGAGCAGCTATGGATTCCGACGACGATTTATAGCCTTGAGAAAAATCTAGCGATTCTGACGATTTTCTATCGATCGTCA
TCGAAGACTAATTTAATCGTAAATTTTTAATTTATTCGCAATCCGTTAATAAATTCGCAATTTTTAGTCTTTTTTTCCG
ATAACTCAACGTTTTTTGTTTCCGTTGCCCGGAAGTGAGCGAAAAAGTGAATGAAACTCGATTTTTTCATTTTTCTCTA
AGGAAACTATTTAAGGACTGCGACCATCCCTGGGAATCGATAATTTTATAAAAAGTAACAAGTGCATAAATATTCAGTGA
AATGCTGCACATTTCTTTATTTTCGCAATAGCTTCAATTTGTTTGTGAGAAAAAACACGCGACATTATCGAGGATTATT
TATTAATATTTTTGTATTTTCACTCAATCACGCTT

>CL133Contig1|tyrosyl-trna cytoplasmic-like

GGATTTATGGCTGCATTTGTAAGAAATTCAAATAATTGTCGTCCGTTATTTAAATAAAAAATTGGAATCATCAATTTTTCA
CTCCAATTTTTTCGACAAGAAAAATAAACTTGTAACGAGCAAAACTCGACTCTTTAAAAATTTATATATCGCTCGCGATC
GGAAATATATTTTAACTGACGATCACAAAAGTTGATATCGCCCAACTGCAATTTGGACACATCGTTTATCACGAAGAT
GAAGATTTTTAGAGCCTGGTGGGTTTAACAAAAATACAGTGCACCACACGATACATGACTCGAAACCAAAAGTTAGTCCG
GTCAGTTCCTCCCTCTCTGTTCCCGAGTGCAATACGTCCCATCTTCCGCAACACACATTTCCAAACAGCTGGAAGAAAA
TTACGGGAATCATGACCAACTTGACAGCGGAGGAAAAATTTAGCCTAATAACGAGAAACCTTGCCGAGTGGCTCGGCGAG
GACAGACTAAAGGCAGTTCTCCAAGAGAGAGACTTGAAGATTTACTGGGGCACGGCAACAACAGGCAAAACCGCACATTGC
CTATTTCTGTCCTGTCAGCAAAATAGCAGACTTTCTTCAAGCAGGTTCCAACGTGACGATCTTTTTTGTGACCTCCACG
CCTATTTGGACAACATGAAAGCTCCTTGGGATCTCTTGTCTTGAGAGTTCAATATTATGAGGCAGTTATCAAATCTATG
CTCAAATCGATCGGCGTTCCACTCGACAAACTCAAGTTTGTCAAGGGAAGTATTACAGCTGTCCAAGGAATACACACT
AGACGTGATCGCTTGAGTTCCACGGTAACGGAGCAGCAGCGCAAAAAAGCGGGTGCCGAAGTGGTGAAGCAAGTAGCGA
GTCCCTGTTGTGCGGACTTTTTATCCAGGACTGCAGGCTCTTGACGAGCAGTACCTTGGAGTAGATGACTCAATTCGGG
GGTGTGACACAGCGGAAAAATATTCAGTTCGCGAGAAAAATACCTGCCGATTCTCGGCTACGAGAAACGTGTGCATCTCAT
GAATCCGATGATTCTGGATTAAACGGGAGCGAAAAATGTCCTCGTCCGAGGAAGAATCGAAAATCGATCTTCTGGACGACG
CAGCAGCAGTTAAGAAAAAGCTGAAGAAGGCGTTTTGCGAACCAGGGCAATATCGTTGACAATGGAATCCTCGCGTTTTTCG
AAACACGTTATATTTCTCTGATGAAGGAAGGAGAGTCGTACAGGGTTCCGAGAAGCGCTGATTTTCGGAGGAGATGTTTC
TTATGAAAACTACGAACAGCTCGAAGCGGCTTTTCGCGAAGGAAGAAATCCATCCTGGAGATTTGAAAGTCTGTGTAAGT
TTTACGTCAACAGATTGTTGGATCCGATACGCAAGAGTTTTCTGCGATCAGAAGCTCAAAAGTTTTCGAGCGCAAAACGCG
TATCCGGCTCCTTCGAAAAACAACAACAGCCCCAGCGAACGCGGAGGTCGATCCATCGAGGCTCGACATTCGCGTGGG

mmc4.txt

AAAAATCGTTGAGGTTTCCAAACATCCCGATGCCGACGTTTGTACGTGGAGAAAATCGATCTCGGAGAAGAAAATGGAC
CTCGTACCATCGTCAGTGGTCTCGTTAACTTTGTTCCCATCGAGCAGATGCAAGATCGAATGGTTGTCGTCTTGGCCAAT
TTGAAACCAGCGAATCTGCGCGGTGTGCTTCTCACGGGATGGTTCTTTGCGCCTCTGTTGACGAACCGGAAAGGCGAGT
GGAGCCTCTGAGACCTCCGGCAGACAGTGTCCAGGAGAACGCGTTTTGGTGAAGGCTACGAGACCGGAACCTCCGGATG
CCGTTCTGAACCCAAAAAAGAAAGTGTGGGAAAAGTTAGCAGTGGATTTCTTGTGGACGCGAAAGGCTTGGCAGCCTGG
AGCGGCAATGTGCTCGTGAATACTCTGGTGGAAATTTGACTGCTGATTCTCTCAAGAACGTTCCCATCAAATAATCGCT
GCATTTTAATAAAATTAATACTCTCACTTGGAAAAATAAACTCCATTTATTTAACTCGTACTTTCTTCAAGGACACACT
GATGAGGAATAAATAAAAAATAAGGATACGGAGAGCAATGTACATTCTGCAATTCTGAAGTTTCCGTCGTCAAACGGGC
AGAATTTTTTTTTCCATCCGACAAAAATCCCTTGTTCGCAAACTGTCAATTTTTGCTGCTTTTTATAGACGTAACCTTTT
TATGAGCTTATTTATTCAGGGGCTAGAAATTGTGAGCTTAATGGTCGATGATAATTAGTTCGTCTATCCCCCAATCTTCG
TAACTGTTGTCCGGCAAGTATCGTCGAATGACGATAGGAATTTTGGCGTGTGAGCTCTTTCATGGCGATTTGTAAAGG
ATCGGTTTCTCCTTCGAGTTCCACCATTACTGGAGCACACATCGCTATTTGGAGAGCCCGAGTACCCAAAACCTCGCGCCC
TTTCGTAATTGGTCATGTATCTCGTTGTGATGCGTTTCGATTTTGAACCCCTCCGGAAC

>CL13432Contig1|pyruvate mitochondria

TTCTTACAAGGAGCGATCGGCGAACCTCATGGAGGATTTCCCGAGCCCTTCAGGTCAAACGTGCTCAAGGACATGCCACG
CATCGTCGGCAGACCCGGAGAGAGTCTGGAGCCTCTGGACTTCAAGAACTCGAGAAAGATCTCAAGCAATCTCATCTC
ACGTGACGGAGAAGGACTTGATGTCCGCAGCTCTTANCTCAAGTTACCGACGAATATCTGACTTTCAAAGAACTTAC
GGTCCCGTCGACAACTCGACACAAGAATATTCCTCACTGGACCCAAAGTTGGCGAAGAATTCGAAGTTACGATCCAGAA
AGGCAAGACTCTTTGCATTAAACTCTCGCGATGGCTGAAGATCTCACGCCGAGGGCGAACGCGAAGTCTTCTCGAAA
TGAAATGGACAACCTCAGTGGTCTTATCATCAGGAGCAAGGAAGCGGTGAAGGATTGCACATTCATCCCAAAGCCAA

>CL1343Contig1|alpha-tocopherol transfer

GGAAAAACAATTTCAATTTATTTTTACCCACTAATTAATCCAACGATTGTGAATTTTATTCTGTGATTGACCTACGTTTCC
TGCCCTTAAGGAGCACCAACCGTTTTTCTACAACGGTCGTTTAAATAAAAGGGAAATTTCCCAAACCTGCTCAGAAACCAT
GTTGACCGACCTGGATCAGATGCCGTCTTAAAGCTCGGGGACTTTACTCTCGAGTTTGAGTTGGGACCGCCGAGTGCTG
AAATCAAGAAGTTGCGAAAAAGGAACCTCCGCGAGACTCCGGAGCTGCAGAAAGAAGCGGTGCACAATTGAGGGAATTG
CTCGGAGCTGAGAAAGATTTGCTCTGTCCACTGGACAACGAGGCTTGGCTGATAAGATTCTGAGACCATGCAAGTATTA
TCCAGAGTCTTCGGTCAAGTTGGTGAAGGAATACTACAGTTTCAAAGTGCGTCACTCGAACGTATACGAGGGATTGAAGC
CAAGCAGAGAGAGGAACATATTCGAGCAAAACATTTTGACAGTTTGGCGAATCGGGACCAGCACGGTCGTCTGATTTTG
ATAATTGAGCTCGGTAAAAAGTGAAGCACAAATGCAGCCTGGACGAAGTTTCAAGGGATGCGTTTTGTACCTGGA
AGCTGCGATGCTCGAGCCAACGACCCAGATCGCTGGAGCGGTAGTTATTTTCGACATGGACGGTCTGAGCATACAACAGA
CGTGGCAGTTCACTCCACCTTTGCCAAGAGAATAGTCGATTGGTTACAGGACGCTGTGCCATTGAGAATCAAAAATATT
CACATCATTAACCCAGCCTTATGCTTCAACGCTGCTTTTCCCTTTTCAAGCCATTCTCAAGCCAAAACATAAAGAGCCG
AATCATATTCCATGGGACCGATCGAAAATCTCTTCATCAGCACATGTCGCCCAAGAGTCTTCCCGAATGTTACGGTGGTA
CGTTGTCAATCCCTCGTGTACTGGACCGCAGTGGCTCGAGCTCCTGCTCATGTGCGACAAGGAATACGACGCGATCAAC
TCGTATGGCTACAAAAAATGAGACAGTGCAGTGCAGAAAGTGAAGCCTCAGTGAGAGTTCGTATTCTAGTACAGTGA
GAAACGATATTAATTATAAATATATTTATTATTATTATTATTATTATTATTATTATTATTATTATTATTATTATTATTATT
TAATTATTGTTGTTAATTATTTTCGTATTATTTATTTT

>CL134Contig1|heat shock 70 kda protein cognate 5-like

TCACAAGATCATCGCGAGCGGCGAGAGTTGCATCATACACGTGAAGCTATTCGCGTTTTTCAGTCGCACATTAATAATCTA
ATATCGGAATAAATTGACGATTTATAAACGTTATTTATCTATTAACCGAAATGTTGACTGCTGCGAGATTATTGTCA
CGCGGGTGTAGCGGTGTACCCACGAAATAGCCAAGAAAAATCAGTTCAACGCGATCCTCAAAAACCTCTATTGCACCAAC
CTTGAGCACCGCAAGATCTCACGATGTGCATCAGTACAGATACGCCTCCGACGGAGTCAAGGGTGCGGTATCGGAATCG
ATCTTGGCAACAATTTTATGCACCGCCGTTATGGAAGGAAAAACAAGCAAAAAGTTATTGAAAATGCAGAAGGTTGAGG
ACGACGCGGTCTTACGTAGCCTTCAAAAGGATGGCGAACGATTTGGTTCGATATGCTGCAAAACGCCAACGAGTCACTAA
TTCGGCCAACACTTTTTATGCGACAAAGCGTTGATAGGACGCAATTCGAAGACAGCGAAGTCAAGAAAGACATGAAAA
CGTTTTCTGACAAAATCGTCCGAGCGTGAACGGTGACGCTTGGGTCCAAGGCGGCGACGGAAAAATGTATTCTCCAGT
CAAATCGGAGCCTTCGTATTGATGAAAATGAGAGAAACCGCAGAGGCTTATCTCAACACGCGCGGTGAAAAACGAGTTGT
CACGGTCCCGCGGTATTTCAACGATTTCCAGAGACAAGCGACGAAGGACGCGGGTCAAATCGCGGGTCTCAACGCTCTCA
GAGTAATCAACGAGCGACTGCAGTGTCTGCGCTTACGGAATGGAATAATCTGAGGACAAAATAATCGTGTGTTACGAT
CTCGGTGCGGGAACCTTCGACGTCTCGATCTTAGAAATTCAAAAAGGAGTTTTCGAGGTAAAATCAACCAACGGCGACAC
ATTCTTGGGGGGCGAAGATTTGACAAACGCTTTGGTCAACTATTTGGCCAACGAATTCAAAAAGATCAAGGCATCGATG
TCGCCAAGGACGCGATGGCGATGCAGCGCTTGAAGAAGCAGCTGAAAAAGCCAAAATCGAGTTGTGAGCTCCTCGCAA
ACGGACATCAATCTGCCATATTTGACGATGGACGCCAGCGGCCCAACATTTGAATCTCAAACCTTTCACGAAGCAAAAT
CGAGAGCCTCGTCGGAGATTTGATCAAACGGACGATTACGCTTCCAAAAAGCTCTCACCGATGCCGAAGTCGCTAAAT
CCGACATCGGCGAAGTTCTCCTGGTCCGAGGCATGACTCGTGTCCCAAAGGTCCAAGCCACCGTTCAGGAAATCTTCGGA
CGAACGCCCTCGAGAGCTGTCAACCCGGACGAAGCTGTGCGGTGCGTGTGTTCAAGGTGGAGTTCTTGCCGGTGA
CGTACCGATGTCTGTGCTCGACGTACACCGCTTTCTCTCGGAATCGAAACTCTCGGTGGCGTATTACGAGACTCA
TTTCTCGCAACACGACCATTTCAACGAAGAAAAAGCCAAGTTTTCTCAACTGCAGTGCAGGTCAAACCTCAAGTAGAAATA
AAAGTACATCAAGGCGAACGCGAAATGGCCAATGACAACAACTCCTTGGACAGTTCACTCTGGTGGTATTTCCACCTGC
GCCTCGTGGAGTGCTCAGATCGAAGTTACTTTTCGACATCGACGTAACGGCATCGTCCATGTGTGCGCGAGGGATAAGG
GAACCGCAAAGAACAGCAAAATCGTAATTCATTCAGCGGTGGTCTGAGCAAAGACGAGATTGAAAATATGGTGAATAAT
GCGGAGCAATACGCCAAGGAGGACAGAATAAAGAAAGAAAGAGTGGAGGCGGTGAACCAGGCGGAGGGAATAGTGCACGA
CACCGAGGCAAAGATCGAAGAGTTCAAGGCTCAGTTGCCACAGGACGAGTGCACAAACTGAGAGAGCTCGTCGCCAAGA
TGCAAGAGACTCTGGCCAAGAAGGACGAGACCGATCCCGAAGAAATAAAAAACAACCAACGAATTGACAACAAGACGAG
TTTGAAGCTTTTACGAAATGGCTTAACAAGAAAATGGCAGCCGAGCGAGAAGTGGCAGCAGTCAAGGAGCCCAACAAGAC
CAGCAGCAGCAGCAACCA

>CL1351Contig1|electron transfer flavoprotein subunit beta

TTTTTTGAACCCGTAAAGTCAACCGAGCGATCACTGCTCCAGATTGCTTTTCATTAACCTTATTAACATACTTCGCTTTTC

mmc4.txt

CAAACTTGAAAAAATAAGGCTCGCGTACTTGGTGTAAAAAGAGTCGTCGATTATGCAGTCAAGATACGGGTCAA
GCCGGATAAAACCGGAGTCGTTACCGAAGGAGTCAAGCATTCGATGAACCCCTTTTGACGAAATCGCCGTCGAGGAAGCGG
TGAGAAATGAAGGAGAAAAAATAGCTCAGGAAGTTGTCGCGGTGAGTCGCGGTCCGGCCAGGCTCAGGAAACCTGAGA
ACGGCTTTGGCGATGGGCGCCGATCGTGGGATCCACGTGGAAGTTTCTGGCTCTGAATACGAGAATCTCCAGCCGATACA
CGTTTCTAAAATCCTTGCCAAAATCGCTCAGGACGAAAAAGCTGACTTAATCATCGTCGGGAAACAAGCCATTGACGACG
ATTGCAATCAAACCGCACAGATGATTGCGGGCACTCTGGACTGGCCGGCGGGAACCTTTTGACGAAAAATCGAGCACGGC
GACGGCAAGTTGACAGTGACGCGCGAAGTCGACGGCGGCTTGGAAAGTGGTGAACATCAAACCCCGGCCGTCTGAGCGC
GGACCTTCGGTTGAACGAGCCGCTTACGCGACTCTGCCGAACATCATGAAAGCGAAAAAACCATTAAAAATTAACA
CCCAAAGACCTGAACGTCGACACCGCTCCGAGAGTAGAAAATTGCTCCATCGAGGAACCGCCGTAAGACAAGCCGGATC
TATTTTGCCGGATGTCGACGCTCTCGTTGGCAAATTGAAAGAGGGAGGTACGTATGAGAGCGAATTATTGAAAATCCA
GCAAAAGCCAGCCCTCGAGTCCCAACAATTGTTACGTTTCAAATGAGCAACGATTTTACTGTTAATAATTAAGTAAAC
AAAAGTTTATTTAGTACTATTTAATAATGGACAATTAATTTATG

>CL1353-bisContig1|single-stranded dna-binding mitochondrial-like

GTTTTTTTGAAGAAAAATCAGTGGGAAGATATTCTGTTGAAATTTCAAGGCATTTAAATTTCTTTGTCTATTGTCAATA
ATCGTTGATTCCGTCATAATGGCACTGAATAGAGTTATGTTGCGCAGCTGTAGACAAATAAACCAAATTGCCGGCGCGAG
GTTTCATGGCTTCTGAAGGTCGTGAGACAAGCAAAAATCGAAAAACGCTGAACCAAGTGACGTTACTCGGAAGATCCGGC
GGCGATCCTCAGAAGAGAGGCTCCGAAGATCATCCAGTCGTCTTCTCTTTGGCGACACATACAACTACAAATACGA
GGGTGGTGATTTTCATGCAGAGAACTGATTGGCACAGAGTGTGCGTTTTCAAGCCCTATCTGCGTGACACAGTGTACAATT
ATTTGAAGAAAGGTCAAAGAGTGTTGGTAAACGGACGACTGAGTTACGGCGAAATAAAAGACGAGGAAGGTGTTGCGAGA
CCAACGACAGCGATCATGCCGACGAAGTGATATTCTTCAGTATCAGAGCTAAGTGAAGAGAAAGCTCGATGAAAACAA
AGAGTATGAAAGTTTGCAGGATCGGAACGCAACGAAGACTTCTCCAGTAATATTTAAAAAATAATTTGGATCTTGTGAGT
CATCCACAATATTTGCAGTGTAGATTTTTCAGTGAGCAATGAAAAACGAATAATTCTCGTTGCATTCCAATGGTGAAGCT
CCGATACCACGAAGGCGACATGTAAAGACTGCTTCTCAGTAATTTGTGACTATTTTCCAAGTTTGTAATCTGCAACG
AATCCAGGTGGGAGCGACCCAAAGGACAGCATGTTTTGTATCACTCTTTAAGTCAGTGTAAGGATCAGTTGAATAGTT
AGAATCAATGGAAATAAACACGTTTATGTTCTTAATAAGTATATAATTCTATATTTACATCATTTCATCGTTTCGTAATCTC
TCCAATAACAAGTTACATAATAAACGCGTA

>CL13557Contig1|domon domain-containing protein cg14681-like

TATTGGACCATTGAATTCATTGGGCGAGGCCAATTCGCACTTAGCGTTTGATAAACTACCGAGGATATACGCATCGATT
TTACATCGCAGAACGTCCACGAGTGCCTAATTCGTTGTACGATATTCGGACAGGAACGAGATAGATGCCTGGCCTCAG
CCTGTTATCGAGGACGAGACCAATTTCAACGTCCGAATTTGGCCAGCCGGTGGAGACAGAGGATACTCTCGTTTTACTGG
TCAACCTTCTTGGGAATCGCGTGGTACGTGAACGACCTTCTGATACCGGAATTGACAGTCGAAAGAGGACAGACTTACA
CGTTCATCGTCGAGGGTGGAATGACCCAGCAAAATCCAGCCAGATATCATCTTTCTACATAACCCAGCAGTCCGGAAGGC
GGCTACAGCCAAAAAATTGAGAAACAACAATGGAGCAAAAAGTATTTGCCGGTGTGTAATTCGATTCTGATGGATATC
CGTATCCAACGGCTGCAGGACGTTACTGCGAATGGGAACACAAAATGTTGATATGAGTAACCAAT

>CL13577Contig1

AACTTCCTATCTGTTTTACACGTGGCTGGGCATCCCCAACAATCAATGTGTTGAAAAAGTCGGAATGCAAGCACTCATCG
ACGATTTGGCAGATTACGACCGATCAGAACTGAATTTGGCCACAGGTGTATTGCGATCACCTCGAATGCAGCTGTGCCCC
GCATTCGTGACGTGCTACAAAGGGATTTTCGTCAAGCATCAAGAGAGTTGACTTTGATAGCGTGTCCGAAAGAGGGAAA
TTCGTAAGAGCATGGTGCCGTAGCAAGAAGCATCTCAGAGCTATAAATTTACGATGTGATGTGCCCCACATACCGCAAT
GAGCTTAGCTATCATGAACGCTCTTTACTTGAACGTCAAGTGGTTGCATGAATTTCAAGTCAAGGATACGAGAATGCGCT
CATTTCTCGATGCTAACGGAATGCAAAATCATTGGTCATGATGAAAACACCGGATATTTCCGCAT

>CL1363Contig1|soluble nsf attachment

AGTGAGACACCGGACCATCTCCGTAGTCGGAATATATCGTACGTCGTGTTAATAATACGCGCAACGTAGCATCGTCG
AATGAAATCGAGAAAGTAAAGGATATTGTTACACGTGTGGAAAGTGATCGTCAATAGAAAATATTAATAATAATAAAGA
TCGTGAGAATGGCGGAGAACGAGCAAAAGGCGATGCAGCTAATCGCGGAGGCGGAGAAAAAATTTGGGCTCATCAAGGGA
TTCTTCGGCTCTCTGTTCCGCGGATCGTCCAAAGTGGAAAGAAGCTGTAGAATGTTATCAACGAGCGGCGAATATGTTCAA
GATGGCAAAGAAGTGGGCTTCGGCCGGTGGCGCTTTCTGCGAAGCTGCTACCCTCCATTCCAAGGCTGGCAGCCGTCACG
ACGCTGCTACCAATTACGTTGATGCCGCTAAGTGTACAAGAAGCCGATCCAAATGAGGCGGCGAGTTGTTAGTAAAA
AGCCAATAGAAATCTACCGGACATGGGAGATTCTCAATGGCCGCAAGCATCACCAAAACATAGCCGAGGTATGACGAA
AGCGAAGCGATCGACCTAGAACTAGCGGTCCATCATTACGAACAAGCGGCCGATTACTTTCTGTTGTAAGAAAGTAATCT
CTTCTGCCAACAAATGTTTGCTGAAGGTTGCTCAGTACGCGGCTCAGCTGAAGAATTACGAAAAGGCGATACAGATCTAT
GAACAGGTTGCAGCCGATCCTTGGAGAGTCCGCTGCTTAAATATAGCGCTAAGGAATATTTCTTCAGGGCAGCGCTCTG
CAATCTCTGCGTCGATCCTCTGAATGCTCAGCATGCGATCGAACGTTATCAGGACCAATATCCAGCATTCCAAGATTAC
GAGAATATAAACTCGTCAAGTCTTTGATCGATCTGTTGGAAGAGCAGGATCTTGAAGGTTTACCAGCAACCGTAACAGAT
TACGACTCGATTTCCCGATTAGATCCTTGGTACACGTCGATGTTGTTACGCATAAAAAACAGATCAACGACAATCCCGA
TTTGCGCTGATCGCACCCAATGGCGAAACAATGTGTTATATCGTCGTTACTCTTCTCTACCCCCGTGTGATTCTTCTC
CGTTTTTCGGATTCTCTTCTCAATTAAGTTTCTCTAAGTAGATTATCTCTTGTGTCTATAGCTTCGAGTTCCCTCGCCC
CGCCTGCCTGCTCCACAATAATCCCTTCCCCAAAATGAAAATGCAATTTAAATAACAGTTAACTAGCCGACGTTGTA

>CL13662Contig1|aminopeptidase n-like

TTATCGTGTACGCGACGAGTGATTTGCACAGTTTATCCATGATATGACCCAATCTCGCGAAGTCTTGGCAATGATGGACC
CTCACAGACAACGTTTTGGTCGAAGCACGGTGACAGATATCACGATGCGGAGGTTTTCTGCTGGGCGCGGTGTTTCTG
CTTTGTCTGGTTGCAACGGGCTTGTGGTTTATCACTTCGCACCGTGTCTCGAGGGCAAGCAGTGAGGACGTTGGACGAG
TTTGGGGAACGCGGTCCTTCAATCGGCACGTAGTTTTGCAACGGCGACAGTAAATAAAAGAAAATTTGATGTTGCGTTG
CCCAAATCGGTGGTTCTGACTCTTACAAAATCAGTTTGATGCCGTTTCAATTTGGGAGGGAAATTTACGTTCAACGGAGA
GGTCAGCATCGTCGTGAACGTGACGATGGACACTAAAAATATTAGTCTCCATGCCGTGCGATGAAAATCGATGAAAAAC
TCACCAGCGTACGGAGTACTCCGGCGATCTTAACAAAAATCAAAGGGTCATCAAAGTCGTGGATCAAGTCAATGACACTG
CCAGACGTTCCACGTCCTANAAATGGCGAAACTCTCAAAGCGGGAACAGATTTTGTTCAAGCTCAAGTCAAGTATC

>CL13663Contig1|probable alpha-ketoglutarate-dependent hypophosphite dioxygenase

mmc4.txt

GTCCAATTATTTCCGCGATCAATTCTAAAAAACATCCAACGAATATGAGTCTCTGAAATATTTGACGCCGGAACAACAG
AAATTCTGGAAGGATAATGGATACATTAATAATTTCCAATATTTCTCTGCGAAAGAGATGAACGAAATTTCCGAAGCCTA
CGACGAGTTGTTTCGAGAGAAAAACGACGCGAAAAATGTTGAAGTTTGGAGGCTGCATGGTTGGCAATGATATAGAAAAAA
GCAGCCGGAATATCGACTACACGGTCAAATCGATTCACAATCTTCAAATGCACAGCGCAGTTTTTACTCGAATGATAAC
AAATCCAAATTATTAGACGCTTTGGAAGACGTGATGGAGACAGGGGACATTGTTTTGCATCATACCAAGGCACACTAGG
AACT

>CL136Contig2|transcriptional activator protein pur-alpha

TATTAGCAAAGACAAAAGTCATTTTGAACAAAAACACTTTTTTAAATACCAAATAAACGAGATAGAGAAAAACA
AAACCAAACGGAGTTTGGAGCTATGTCCGACCGCGAGAGCCTGGACGATCAGCCACAAAAGTATGGAAATCCCGGCGGA
ATAGATGCTGGCGGAGCTGACTTCGATTCCGGTTCAGCAAGGCCAACAGGCGAGCAGGAATTGGCGACGAAAATGTTGCA
AAATTCAGAGCAAGCCGATTCTACCTCGATGTGAAACAGAACAGGCGGGGAAGATTTATCAAAGTAGCCGAGATCGGAGC
AGATGGCAGAAAGTCAAATATTCTTGGCTCTCAGTACAGCCTCAGAATTTCTGTGACCACCTTTTCATCATTTAGCGATT
ATTATGCATCTCTTGGTCCACCTAATTCGGAGAAATTTGCCGGACGATGGGAAGCTCAAGTCAGAAATGATGGTTAAGGAC
AACAGACGATATTATCTGATCTTAAGGAAAAATCCCGTGGCCGTTTCTGCGGTTTCGCAACGATAACCGCGAGGCGG
GCCAAGGACGCAGATCGCGATACCAGCACAGGGAATGATAGAATTTGAGACGCCTTGACGGATCTTCTCGAAGAATTCG
GCACCGACGACGGGGTTTCAAGGGCGATTTGCCCGAAGGTCGCTACATGCGCGTCGACAACAAGAATTATTATTTGAT
ATTGGT

>CL13708-bisContig1|tryptophanyl-trna cytoplasmic

AAAAACAAAATGTCAGCGAGTGATCTCAATTCGGCTATTTTCTCACCGACACTCCCAAACAAATAAAAAACAAAGTAAA
CAAACACGCTTTTTTCCGGCGTTCGCGCAACTGTTCGAGGAACACAGACAATTCGGTGGCAATTGCGAAATAGATATTTCT
ATCAGTGGCTTAGATTCTTCTCGAAGATGACGATAAACTCCAAAAAACTCGAAAAGGGCTACACGAGCGGAGAAATTC
TAAACAGGAGAACTGAAGAAAGAGCTGATCGATGTAATACAAAAAATAGTATCGGAGCATCAAGTAGCGAGAAGCAAAA
ATAACCGACGAGATAGTAGAAACAATTCATGGAACACGAGATCTCGGTTTTGTACTCGCGAACAATGTGTAATAGGAAA
TAAAACTACTCAGAAGCGGCGGACGAGTACGCACGATCTTTCAGGCTCTAAGAAGGAACGCACCCGTTAAATGCTAAA
GATGTTATTAATAACGATATTTTAATTAATCAATAAATATATTAT

>CL1372Contig1|coatome subunit gamma-2

AACGAGGGCGGCGAGTTGTTGGAATTCATCGAAGCGTGTCTGCGCCACAAGTCAGAAATCGTAGTTTACGAGGCAGCGCA
CGCGCTCGTGAATCTCAAGCGCAGCGGAAGTCGCGGAATAGAGCCAGCGATAAGCATTTTACAGCTTTATTGTGGTTTCGC
CCAAGCCAGCGGTGCGTTTCGCGAGTTGTTTCGTACGTTGAACCAAGTGGCGATGACGCACCCAACGGCCTTGACAGCCTGC
AACCTCGACCTGGAAAACCTGATAACCGATCCAAACAGATCAATCGCGACTTTGGCGATAACGACTTTGTTGAAAACCTGG
AGCGGAGGTTTCGGTGGATCGTTTGATGAAGCAATCGTACGTTCTCGGAGATCTCGGACGAATTCAAAGTCGTCTG
TAGTCCAAGCGATCAGGACGCTTTGCCAGAAATCCCGAGGAAACACTCGGTTCTCATGAAACTTTTGTCCGCAATGCTC
CGCGACGAAGGCGGCTCGAGTACAAAGCCGCGATCGCTGACACCATCATCGCCGTATGGAAGGCAACGCCGAAGCCAA
GGAAGCCGACTCGCTCATCTCTGCGAGTTTCATCGAAGACTGCGAGCACACTTCCCTCGCCGTGAGAATTCCTCATCTCC
TGGGACAAGAAGGCCCGACCTCCAAAACAACCTCTCGTTACATTGCTTCATTTACAATCGCGTTATCTCGAAAGCGC
GAGCGTTCTGCGCCGCCGCTAACCCTCTCGCTCGATTGCTGCTGCTTGCCTCGATTTACCTCCCAAACGTTCTTGGTC
CTTCTCTCCGTTGTCAACTCGACTCTGACGACGAAGTACGCGATCGCGTCTTACTATTGCACCATCTCCAGATGCA
AAACGATCCTACCATCTTGCCACTCGTCCATCCACTCTCTCTCCATTCCAAGCCTCGAACGAATCTTCGAAGTTACA
TACGAACCAACATGGACGAGCCCTTCGATATTTCTCAGGTGCCACCGGCCAGGCGATCGAAGAGCCGATACAGGCAGAA
ATAAGTTTGTGACACAAAATCGCAACAGCCGAGGTTATCGAGAGAAGAAAGTTACGCAGAAAAATTGTCCAGATTCCAC
AATTGGCATCGGTAATAAACGAATTCGCGCTTTTTCAAATCGTCGCGGATTCGAGCTCACCGAATCCGAAACCGAGTA
CAACGTCAAGTGTAGTTAAACACACTTTCCGCCGAGTATCTCGTTCTCCAATTCGACTGCCTCAACACACTGTCCGATCAG
CTTCTCGAAGACGTGACTGTCTGTGCAAGCCCTGAGGGTATTCGATAGTCTGCGAAGTTCTTGTCCACGTCTGGC
GTACACGAGCCAGGACGTAACGTAACAGTATTGGTCTATCCCGAAGACATCCACGCGAGTGTAGCGCAATTCGAAGCA
CTTTGCGATTATGCTCGGCTCGGACTGCGATTCTGCGACTGGATTGCCGGAACAGAGCAAGGCTATCATGACGAATATATG
CTCGAAGACTTGGAAGTTACGCTGGCAGATCAAATGCGTGGAAACAGGTGGTCGAGGAATGGATTTCAACGCTGCGTGGGA
AGCGGACAAAATACGCGTGGTTTACGG

>CL1374Contig1|juvenile hormone esterase

GTCAAATAAGAAAACTTACTTGGGGGACAAAGCGATCGATCGCGAGACCGTGAACGACGTTATTCACATGATCGGTGAC
CGTCAATTTTGTCTGACGAGTGTGAGAAAGCCGCGAGGAGCATGGCGGCGGCGAACGATAAACCCGTTTCGATTCTATCGTTT
CAGTTATCGGGGAGAACACAGTTTGTGAGCGATTTGTTACCCGGCAGCAAGAAGATTACGGTGTTCGCACGCGGATGACC
TCGCTTACATATTTAGCGAGTGGAACTCGGCGCTTGTAGATGAGAAAGATATTGAGTGAATCGAGAAATGGTGAACCTC
TGGACCTCTACGCGAGAACCGGGATTCCAGAAGTGGGAATTCAGTGGCCGACGTTGATCCGGTGGATGAAAATTTTCGA
GTATCTTTTCGATCCCGGTTCCAGGGAAAAATGAAGTTCGAGACGAGCTCGGATCTTGGAGAGAAGAAATCTGGAAAAGCA
TTGAATTCGACGAAAAACAACTTCTGCAAAATTCGGAGCGACGGGACGCGATCAGGGACGAGGCAGACGATTTCGAGCTG
CGAAGACGATAAGGACCGGCGGAGTGGGACTCATCGAGTCAACGACGAGGCAACTTGTGATATTTGAATTTGCGACTTCG
TAGCTGGAACATAATTATCTCCGTCTCCCTCTCCGACGTAAGGAAAAACAGTTGAATATAAACGCGGTTTACAAGC
ATTAATATCTGTT

>CL13762Contig1|venom carboxylesterase-6-like

CAAATGGAAACAGTGAGAACCTCCAGTCTGGAATATCTTACATAGGAGGATCAAAGGATCTTCACATGGCATCTGAGC
TGTTTTCGGATCGAGTCAACTTCTGGGAGAAATATTCACATCGTGGCAAGGTCCAGGTGAGCGCGGAAGGTGATCGGCCA
AGAGACGAACTCTAGAAGTTCTGCTCAGGGATATTCAGTGGAGCTTAAAAAACCAAGAAAAAAGTGAAGATTT
TCGTTTTGTCGAAAATTTCTGAGGAATCGGAATTCGTTTTCTAATTTTTCCCAACGTCTGCCCTGGACTCTGGTCGA
TAAGAA

>CL1380-bisContig1|na(+) h(+) exchange regulatory cofactor nhe-rf2-like

GTGAACCGTGAGCGCGGAAGAAGAAAAAGTGTGGCATCCGTGATCGTAGCAGAAAAATAGAAAAGGCTCAAACTTGT
CTGTTTACTGTTGGTGAATTTTTAGTCGTTTGTGTTTGGTGCCGTACGGCATTACAAACGCTGAATAAATGTTTTATTT
ATTTAATTAAGTTTTTCGGGTGCTTAATCGCGGTGGGAAAAATGTCGTCCCTGAAGGGGATAAAGTGGTTTACGCTCGT

CTTTGCCACATTGTCAAGTGGGACGATTTTCGACGGTTACGGTTTCAATCTGCACGCGGAACGTGGCAAAACCGGTCAGTT
CATCGGGAAAAGTTGACGATGGCTCACCGAGTCAAGCCGCTGGCTTACGTCAAGGCGATCGTATTATTGAAGTTAACGAAA
TAAATATATCGAACGAGACACACAAACAGGTGGTTGATCGCAATTAAAGGCAATTTCCCAATGAAACCAAATTGCTCGTCTGTT
GATCAAGAAGCCGACGATTATTTCAAGGCCAACAGTTATTATCAAGGGCACTAAGTACTAACGTCGAAGTGATCAAGAC
CCCGGAGAGGAATCCAGCGAGTCTCGAACACGAGGCCAGATCCGATGGAAGCGTCAGCTCGATCGATGATAATATACACA
AGTCGATCGGCTCGAACGACACGTCGTCGAACAGCGGCAGCACAGCAGCTGCAACGGCGACACCGACGAACGACGAGGCG
AACTCGAGTGACGAGACGACCCGTGAGAATGGACGTGGCAGTACCAACAACAGCCTAACTCACGAGACGAACAACGAGAC
GAACAACGATTTCCAGGCGAGTGAGAACAGCGACGACACAACGTCGCAGCACCACGGCAACGGAAATCTCAACGAGAATT
CCAATCAGAACGACCAACGGCTTAATTTGAAAAATGAGCGCAAGGAGCTCGGGCAAGATTGGCAGCGGTAAAAAATA
CAGCCCGAAGAAAGAGTCTGATCGGTTTTCAAAGACAAATTGCAGCTCGTCCAAAAAATTGTAATTTTTTCGAATTCACGAA
TATTCGACAAATTGTAACAAAAAACACACACGCTAAAATAATGAGAATCGTTCGCGGTATGTGCAGTGATGCAGAAAGAAAA
TAATTTTTTAATCGATCGATCACGCGCTATCGATGTACTTAAAAAATTCGTCACTCGCCAACCTTCTTACTTCTCAACTTTC
GATCAATCGCTCCGTTCAATTTAGACAATCAAAAAATTATCATCGAACCAGCAAAATCTTTATTTCTCGCGAAAAATTTTCTT
GTTTTTTTTCGAATTTTTAGTACAAAAAATTTGTCGAGTCTACAATTTTCGCCAAAAATTAATATTTTTTTGTTTGTTTTCT
TCTCTCTCTCTGCTCCCGAGTGGTCTGAA

TTTCATACGGGCTGTGTACAAGAGTTTCGGAGTAGGTAATAATTTTAGCGTATTTACGTCGAAAGACTGCGATCGAATTA
AAATAAAGTTTTTCGCGTTGTTCCTTTTGGTATGTGCCCGTGACAATTCGTTTAAATTTTCAATCCATCGATTCTGATTAA
TGGATGTTTCGTGGATAATTTCTATCGCCTGTCTTACTCGGGTTTCATGTGTTTTCCAATGGCCGCTGTACCCAGTCATCT
AGGTCACTTTTCTCGACATTTTCTTTACGAACTCGAAACTAAAGCTCCTTACATGGCTTTCCGCGTTCTTTTCGCTTC
GTTCTCGATCTTTTCCATTCTGTAAACTCTTTTTTCCATTTTTTCGGTCAATAATTCTACGGAGTGTTTCCCTTCTTTTCAG
TTCGCTAAAAAATGGCACCGAAACGAGGAAAGGTACAGAAAGAGGAAGTCCAGGTTTCCCTCGGACCTCAGGTTTCGCGAA
GGTGAATCGTCTTCGGAGTTCGCCCATATCTTCGCCAGTTTCAACGACACTTTTCGTCCACGTTACGGAGTTGTCCGCGAG
GGAACCATTTGCCCGAGTTACCAGTGGCATGAAAGTCAAGGCTAGCTGTGACGAGGCTTCGCCCTACGCCGCTATGTTGG
CTGCTCAGGATGTGCTGTAAGAGTGCAAAATCCCTTGAATCACAGTCTGCACATTAAGCTGAGAGCAACCGGTGGCAAC
AAAACAAAGACGCCAGGACCAGGTGCGCAGTCGGCGCTCCGTGCTTTGGCTCGATCGAGCATGAAGATCGGTGATCGA
AGATGTCACGCCAATTCATCAGATTCGACGCGCAGGAAGGGAGGTGCTCGTGGACGCAGGCTTTAAGCTATTACTTTAC
GCGCTACGTATGGTTTACTACTGTACAAAAAATAAACATCTAAAAAACCAACAATAGAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAATGTTTCGCGCG

TCTCGTCATCGGTCACGAATTTGCTCACATGTGGTTTTGGAAATCTGGTAACAATGGCCTGGTGGAACGATCTCTGGCTGA
ACGAGGGCTTCGCGACGTTTCATGCAATACAAAAAGTTCCGACGCGATACTGCCTGATTGGGGATTGATGGATAAATTTTT
GCCGGACACTTTACATCCTGTATTGGTCACGGACGCAAAATTAAGTTCTCATCCAATAGTCCAACTGTGAGTAATCCCG
ACGAGATAACGGCGATTTTTGATGTTATCACTTACAACAAAGGCGCATCGGTGCTTCGTATGTTGGACAACTTCATCGGA
TCCGATAATTTTTATTGCCGGCGTATCAGCGTATCTGAAATCAGTTCGCTTATCAAAACGCAGTGACGGCCGATCTTTTC
GGGATTTTTGCAAGGTGCTTTACCAACAATAACGTAACCTTCGATAATGGATACGTGGACAAGACAAATGGGATATCCTG
TGTGAAAAATCGTTAGAAATGGACTGAATTACA

GTCTGCACGATGAGAACGTGATTTACCGAAGCAATCGTTTGGTAAATTGGTCGTGCACTCTGAAGAGTGCGATATCCGAT
ATCGAGGTAGACAAAGTAGAATTAACGGGCAAAAACATTGTTGGCGATTCTGGATACAGCGAGAAAATCGTATTCGGTG
TGTTGGTGCATTTTGCCTACGAAGTTGAAGATTTTGATGAAAAAATTGATCGTCGCAACTACGCGAATCGAGACGATGCT
CGGAGACACGGCCGTTGCTGTCCATCCGAAAGATTTCTCGGTAATTCATCTCGTTGGA AAAATTCGTTAAGCATCCATTTT
GCGAAAGAAAAATCCCATTATCGCTGATGACTTTGTTGACATGGAATTTGGCATTGGGCTGTCAAATAACGCGTCT
CATGATCCTAACGATTACGAAGTTGGA AAAACGCCATGATTTGCCGTTCTACTATTTTCATGAAGAAGGCAATGTCA
CTGGGAATTGCGGCAAATTTACGGGCATGAAGAGATTCCACGCGAGGAAAGCTGTTCTGGAAGAGTTGACGAAACTGAAT
CTTTTCGTGAAATAAAAGACAATCCAATGGTCGTGCCGATCTGCAGTCGTTCCAAGGACGTCGTCGAGCCTTTGATAAAG
CCTCAATGGTACATAAAAGTGTGACGACATGGCCAGCAATGCTATGGATGCCGTGAATACCGACGAGCTCAAATAAATTCC
CGAACAGTACAAAAAAACGTGGTTCCACTGGATGGAAGGCATTGCGGATTGGTGCATCTCACGACAATTATGGTGGGGTC
ATCGTATTTCCCGCATATTATGTGAATTTCAACGACAACGCTGTCCCGAATTC AATGGCAACGATGACGATCGCTGGGGTC
AGCGGACGAAGCGAAAAAGAGGCTAAAGAAAAAGCTGCGAAAAAGTTCAATCTCGCTGTTGAACAAATAAGTCTGAACA
AGATCCAGACGTTTTGGACACTTGTTCTCTGCGGCTTTGTTCCCATCTCCATTTTTGGGTGGCCAGATAATACCGAAG
AGCTGAAAGCTTTTTATCCCGGCACACTTTTGGA AACTGGACACGATATTCTGTTCTTCTGGGTAGCTCGGATGGTGTTCT
TTCGGACAAAACTCCTCGGCAAATTGCCATTCAAGGAAATTTATCTTCACGCCATGGTACGGGATGCGCATGGCAGAAAA
ATGAGTAAATCTCTCGGTAACGTGATCGACCCGATGGACGTGATTGCGGGCATAAGTTTGCAAAACCTACACAAACAAC
AGAAAAATTCAAAATCTTGACCCGAAGGAATTGAAGCATGCGATCGAGGGACAAAAACGCGATTATCCACAGGGAATTCCC
GAATGTGGTAGCGACGCATTGAGGTTTCGCACTTTGCGCTTACACCAGTCAAGGACGTGACATCAACCTCGATATAATGCG
CGTTGAGGGGATATCGCTTCTTTTGCAACAAAAATTGGAACGCGACGAAATTCGCGCTCATGTATCTCGAGGATTTTCAG
TACGAGGGCGAAAAATGAGTCAACGGGAAACGAAGTAACGTGCACTTGTGGATGCTGTCAAGAGTCAGCCACGCCGCTAAG
TCTGCGACGAAGGAATGCTCAGTACGATTTACGGCAGCTACGACCGCTGTTACAATCTCTGGCT

GTGGACGAGGAGGAGGAGGAGGACGAGGCGGACGTGGAGGAGGCGGATTCAAAGGTGGCAAAACTGTAGTTATCGAACCT
CATCGTCACGAAGGTGTTTTTATTGCCAGGGGAAAAGAAGATGCTCTAGTCACTTTAAATTTGGTTCTGGATCGGAAGT
TTATGGAGAAAAGAGAATCAGCGTCGAGGGCGAAAATTGGAGAGAAAATTGAATACAGAGTGTGGAATCCGTTCAGATCGA
AGTTGGCAGCTGCCATACTCGGTGGAGTGCATCAAATCCACATGCCACCCGGCAGCAAAGTATTGTACCTTGGAGCAGCA
TCTGGCACGACAGTTTTACACGTAGCCGACGTCGTTGGTCCAGAAGGATTAGTCTACGCGGTGCAATTCTCACAGATC
CGGCCGAGATCTCATAAACGTAGCGAAAAAGCAACAACATAATCCGATAATCAGGAGCGCAAGACATCCCCACAAAT
ACAGAATGTTGGTCGGTATGGTCGACACTGTATTCTGTCAGCTTGCGCAGCCCGATCAAGCGAGAATCGTCGCCCTGAAT
TCGCAATATTTCTCAAAAATGGTGGACACTTCGTAATTTTCGATAAAGGCGAGTTGCATAGACTCGACAGCCCAGCCCCGA

mmc4.txt

AGCCGTATTTCGCAGCAGAAGTGAAGAAGCTCGTAGCCGACAAGCTGAAGCCTCAAGAACAGATAACGCTCGAGCCGTACG
 AGAGAGACCACGCCGTAGTGGTTGGATCCTTCAGGCCACCAGCGAAGGTTGCTGCATGAGGCTTAATACGTTAAAAACCA
 ATTTAGTGAAGTGGATCCACTTGAATCCATATTTTCCATACCTGAATTTCTAACGAAAAGAAAAGAAAAGACGAGA
 TGGACGGGAGATTTGTAACATGTTTACTTTCTTTTTTTTGTCTTATTTTTTTTTTTTAAATAAACTTGTCTACTAGTT
 GTGTATTTCGCTAGAGTCTTATCGCGACAATTCCAATTGCCACACGTGCGCATCCAGT

>CL13Contig2|myosin heavy muscle isoform 3

TGGTCATGCATCAGCTCACTTGTAAACGGTGTGCTTGAAGGAATTCGTATCTGTCGTAAGGGATTCCCCAACAGGATGAAC
 TACCCCGACTTTAAGCTCCGGTACAAGATTCTCGCCCCTGGAGCCGTGATGCACTTGGCGGAGATCCGCAAAAATCTGC
 CGGAGCTATTCTGGATGCCTCTGGTCTCGATCCTGAACAATTCGCGCTTGGACACACCAAGGTATTCTTCCGTGCCGAG
 TCCTCGGTCAAATGGAAGAATTCGCTGACGAACGTCTGAGCAAAATTGTATCATGGATGCAAGCCTTCATCCGAGCTTAC
 ATCGCTCGCAAGGACTTCAAGGCCCTCCAGGAACAACGTTTGGCCCTTCAAGTCGTCCAGAGAAATCTGCGCCGATACCT
 CAAGTCCCGTACCTGGCCCTGGTGGAACTGTGGTCCAAAGTCCGACCTCTTCTCAACGCTAGTCGCATTGAGGATGAGT
 TGGCTGAACCTCAAGAACGTGCTCGCGCCGCTCAAGAAGCTTTCGAACGCGAAGAGAAAATGCGCAAGGAATTGGAAGTT
 CTCAACAGCAAATTTGCTCGTGAGAAAACCGATCTTCTCGGCCAATCGCCGGAAGCTGGATCGCTCCAAGAATCCA
 AGAGAAATCCGTCAAATTTGGTGGCCAGAAGATGGATCTCGAGTCCCAGTTGTGCGACATTTCCGACAGACTGCAACAAG
 AGGAAGACGCGCGCAACAATCTCTCCAGAACAAGAAGAAATTGGAGCAGGAAGTGTCTGGATTGAAAAGACATCGAGG
 ACCTCGAACTCGCCATTGAGAAATCCGAACAGGACAAATCCTCCAAGGACCATCAAATCCGCAACCTCAACGACGAAATT
 GCCCACCAGGATGAACCTCATCAACAACTCAACAAGGAGAAGAAGAACCAAGGAGAAGTCAACCAAGAAAAGTCTGAAG
 AACTTCAGGCTGCTGAGGACAAGGTCAACCACTTGAACAAGGTTAAGGTTAAGCTCGAACACACTCTTGATGAACCTGAG
 AATCCCTCGAGCGGAGAAGAACTCCGTGCTGACGTGAGAGGGTAAGAGGAAGACGGAAGGAGACCTCAAGCTCAC
 CCAAGAGGCTGTTGCCGATCTTGAGAGGAACAAGAAGGAACCTGAGCAACGATTGAGCGCAAGGACAAGGAACCTCGT
 CTCTCACTGCCAACTCGAAGATGAACAATCCCTGGTTGGCAAACCTCCAGAAACAGATCAAGGAACCTCAGGCCCGCATC
 GAGGAACTCGAAGAAGAGGTGGAAGCCGAACGTCAAGCCCCGCGCAAGGCCGAGAAACAACGAAGCGATCTTGCTCGCGA
 ACTCGAGGAATTGGGCGAGCGATTGGAAGAAGCTGGTGGTGCACCTCCGCTCAAATCGAACTCAACAAGAAGAGAGAAG
 CCGAACTTAGCAAACCTTCGAGAGATCTTGAGGAGGCCAACATCAACACGAGGCGTCCCTTCCAGTCTTCGCAAAAAAC
 NCAACGATGCTGTCGCCGAGATGGGAGAGCAAAATCGATACCCTCAACAACTCAAGGCCGAATTGAAAAGGAAAAGTTT
 AGTACTTTAGCGAATTGAACGACCTTCGCGCATCCGTGACCACTTGAGCAACGAAAAGGCGGCTCAAGAAAAGATTGCC
 AAACAATTGCAACACCAATTGAACGAGACTCAAGGCAAGCTCGAGGAAGTGAACCGTACTGTGAACGATTTGATGCCGC
 GAAGAAGAAGTTGTCGATTGAGAACAGCGATTTGTTGAGACAATTGGAAGAGGCCGAATCGCAGGTTAACCAATTATCGA
 AGATAAAGATTTGTTGACGACGCAATTGGAAGACACAAAGAGATTGGCCGACGAGGAAGGACGCGAGCGTGCACACTC
 CTTGGCAAGTTCCGCAACCTCGAGCAGATTGGAACAACATTCGTGAACAGGTTGAGGAAGAGGCCGAAGGCAAGGCCGA
 CCTCGAGGCAATTGAGCAAGGCCAACGCCGAGTCAATTGTGGCGCACCAATACGAATCTGAAGGTGTTGCCCGCG
 CCGAAGAACTCGAGGAAGCTAAACGCAAACTCCAGGCTCGCTTGCCGAAGCTGAGGAAACCATCGAATCCCTCAACCAA
 AAGGTCATCGCTCTTGAGAAAACGAAACAACGACTCGCCACCGAAGTCAAGGACTTGCAGATCGAGGTGACAGAGCCAC
 TGCCATTGCCAACGCCGCTGAGAAGAAACAGAAGGCCTTTGACAAAATCATTGGCGAATGGAAGTCAAGGTCGATGACC
 TTGCTGCTGAGCTCGATGCCAGCCAGAAGGAATGCCGCAACTACAGCAGGAACTCTTCAGGCTCAAGGCTGCCTACGAG
 GAGAGCCAAGAAGCTTGAAGCCGTTCCGCGTGAGAACAAGAATCTCGTGCAGGAAGTCAAGGACCTCCTCGACCAGAT
 CGGTGAAGGTGGCCGCAACTCCAGAACTGAGAGAGGCGCGCAACGTTTGAGGCTGAGAAGGAGCTCAAGGCTCAAGCAG
 CGCTCGAAGAAGCTGAGGCTGCTCTTGAGCAGGAGGAGAACAAGGTTCTTCGAGCCAGTTGGAAGTCAAGCAGGTGAGA
 CAAGAGATCGACCGACGCATCCAAGAGAAAGAGGAGGAATTCGAAAACACAAGAAAGAACCAACGCGCCCTCGACTC
 CATGCAAGCTTCCCTCGAGGCCGAAGCTAAGGGCAAGGCTGAGGCCCTACGCATGAAGAAGAAGCTCGAAGCTGACATCA
 ACGAGCTCGAAATCGCTCTGGACCACGCCAACAAGCCAATGCTGAGGCACAGAAGAACATCAAGAGTACCAGCAGCAA
 CTCAAAGGACGTTGACAGCCCTCGAGGAGGAACAACGCGACGTGACGAAGCTCGTGAAGCTTCTGGAATTTGGAAC
 GTCTGCTAATCGCTTACAAAACGAACTCGAAGAGAGCCGACCTCTTGAGCAAGCCGATCGCGGCCGCTCGTCAAGCC
 GAACAGGAATTGGCTGACGCTCACGAACAACCTCAATGACATCGCAGCACAAAACGCTTCGATCTCCGCCGCCAAGAGGAA
 ATTGGAAGCTGAACCTTCAAACCTCTCACTCCGATCTTGATGAGCTTCTCAACGAAGCCAAGAATTCCGAAGAGAAGGCCA
 AGAAAGCCATGGTTCGACGCTGCCAGACTCGCTGACGAACCTCAGAGCCGAACAGGATCACGCTCAGACGCAAGAGAAATTG
 CGCAAGGCACTCGAAGGCCCAATCAAAGAACTTCAAGTACGACTCGACGAGGCCGAAGCCAATGCACTCAAAGGAGGCA
 AGAAAGCTATTGCAAAATTTGGAACAGCGAGTACGCGACCTCAGAGAAGCTTGGAGCGCGAAGAGAGAGACCGCCGAT
 GCCGAGAAAGAACTCCGCAAGGCCGAGCGTCTGATCAAGGAACCTTAGCTTCCAGGCCGACGAGGACCGCAAAAACACGA
 GCGCATGCAAGACCTCGTTGACAACTGCAACAGAAAATCAAAACCTACAAGAGACAAATCGAGGAGGCGGAAGAAATCG
 CTGCCCTTAATCTTGCCAAGTTCCGCAAGGCCAACAAGAGCTCGAGGAGGCCGAAGAGAGAGCAGATCTCGCCGAACAA
 GCCATCACCAAGTTCCGCACAAAGGGACGTGGAGGAAGCGCTGCACGCGGTCTCAGCCAGCGCCGACCGACCTGCGTT
 CAAGCCCCAATTTGATGGTTCCGCATTTCCCTCCACGTTTCGACCTCCAGCCAGACAGTGAATTTAAAGATATCATAACC
 ACCAAATCGCAGCTCGATCATGTTGAAAAAATCACTATTGAGCCATCCTCGCAACAAACCCGATGATTATTTATCCATAT
 GCTCGATCGTTTACCTAAATATTGCAATTTACGTTAAAAACAAATTTGTAACAACAAGAAAAAAGAAAAACACAGCATCT
 TCAATATTAACCGGAACATAAAAAATCGAGACGATTTTCATTTTGTGTTTTAGTTTTTTTTTTCTTCTTAAACGACGTAGGAA
 ATATCATGTTGTATTACGA

>CL14-bisContig5|actin

GTAATCGACAGTGTGCGAGCTCGCTCCAACCTCGACTTACGAGAGAGTTCTTTACCGCCTCGTTCAACGTTTCGTT
 GCTACAATTTATTATACCGAGACTTGCAAATAGCATCGAGAATTCGTGTTTATAACCCACGAATCTTTTGTATTTATATTA
 ATTAGAAAGAAAAAGCGAACAACAACTCGTGCGTCCGTTGAGCTCGAGATCTTATTCATCGTTTCGTAAAGAGATAAAA
 TCACCACAGACCAAAAAATGTGTGACGAAGAAGTAGCCGCACTCGTCTGTTGACAATGGATCCGGTATGTGTAAGGCCGGT
 TTCGCGGGTGACGACGCCCCAGGGCGGTGTTCCCGTCTGATCGTTGGTAGGCCGCGTCATCAGGGTGTGATGGTTCGGTAT
 GGGACAGAAGGACAGTTACGTAGGTGACGAGGCTCAGTCAAAGAGAGGAATATTGACCCTGAAATATCCGATCGAGCAG
 GAATCGTGACGAATTTGGGACGACATGGAAAAATTTGGCATCATACTTTCTACAACGAGCTCGTGTGGCACCAGGAGG
 CATCCGGTGTGTTGACCGAGGCCATTGGAACCCAAAGCGAATCTGAGGAAGATGACGCAATGATGTTTCGAGAGGTT
 CAACACCCCGGCAATGTACGTGCAATCCAGGCAGTACTGTATTGTACGCGTCTGGTCTGACGACCGGTATCGTCTTGG

mmc4.txt

ATTCGGGTGACGGTGTGTGCGCACACGGTCCCGATCTACGAAGTTAGCGCTTGCCACACGCTATTTTGCCTCTGGATCTC
GCCGGTCGCGATCTTACCGACTATCTCATGAAGATCTTACCGAGAGAGGATACTCGTTACGACCACCGCCGAGCGTGA
AATCGTGCCTGACATCAAGGAGAAGCTCTGTTACGTCGCTCTGGACTTTGAGCAGGAAATGGCGACCGCTGCGTCTTCT
CGAGTCTCGAGAAGAGTTACGAGCTTCCGGACGGACAGGTTATCACCATTGGTAACGAGAGATTCCGTTGTCCCAGGCC
CTCTCCAGCCGCTCTTCTGGGAATGGAAGCCTGCGGCATCCACGAGACAACCTACAATTGATCATGAAATGCGACGT
CGATATCCGTAAGGATCTCTACGCCAACACCGTACTCTCCGGAGGTACCACCATGTACCCTGGTATCGCCGATAGGATGC
AGAAGGAAATAACAGCGCTTGCACCTTCGACCATGAAGATCAAGATCATCGCACCACCCGAGAGAAAATACTCCGTATGG
ATCGGTGGCTCCATCCTCGTTCTCTCGACCTTCCAACAGATGTGGATCTCCAAGCAGGAGTACGACGAGTCTGGCCC
ATCCATCGTACACAGGAAGTGCTTCTAAGCGCTCATTCTCTCAAACTTTTCTTTTTTTTCACTTTTTTTTTCTTTT
TTTTTACTTCTTACTCTCTCCACTCGTATTTTCTCGACATTACTTCATCCGTGTAGATGCTCGATTTACGCTACCGAG
AACAGCCTGGCCACGGAGAGAGTTAGGTTACACACCTACACGATAATCGACACACACACAGACACACTCACACTCGAA
ACATT

>CL14004Contig1|c-1-tetrahydrofolate cytoplasmic-like

TTTCCCGCTTAATAACCTACAAAACCTTGAATTGAAAGAAAAACAACAAATTCTATTGTGTTACCACGTGGCCGCGTA
GATCGATCGACAGGAGAATGGCAACGGACGTTCTGTTGTTGCTCCTCTCAGGAACGAGCTTCGCCAAGGAAGTTCGTCAA
TGTTTGGCAAAAGACGTAGCAGCAATGAAGGAAAACTGCCAACTTTGCTCCTGGATTAGCGATCGTTCAGGTCGGTGG
CAGAGAAGATTCCAACGTTTACATTTCGTATGAAGATGCAAGCAGCCAATGAGATAGGAATCAATGCCTGTACGTGAAGC
TGCCCAACACAACGAGATTGAGCTTTTGAAGCAAACTCAACAACTCAACACAGACCCAGCGATTATGGAATTATT
GTGCAAAATGCCCTCGATACAGTCAACAAAGTTAATCCCATTTGATCAGGACACGGTCTCTCCGGACAAGGATGTGCA
TGGACTCAACACATCAACGGAGGGCAGAGTGGCGATAGGTGACATGAGCGGTTCCACGTGTACACCGATCGGATGCATC
AAGCTCATTACAAAAAGCGGCGTACG

>CL140Contig1|grpe protein mitochondrial-like

TTTCTCATGCGCCTCGCCGATTTCTGTCATTCTCTCGGAGTATTTTTCTGTCTCTTGTGTTTGTGAATTGTAGTCAAAA
TTTGTAACTGCGAGAAATGGCATCAATCGGTTTGCCGGTCATAGCAAGATTCAATAAATTACTATTGAAACGATCTGCC
AAATTACTCGAAACAATATTGCGAGAACTTCGACGCTCTCTGTATACAGCGAAAACAGAAATATGGCACAGTTCGCGAA
GAGAAAAAACTGACAATCTGAGACGCCAGAAAATAACGGAGAATGAAAAAAGCTCAAATCCGAGATAGAGATGTTGAA
CAAAGATCTTACCGATCTCAAAGAGCGAAATAACGAACCTTAATGACAAATACAAACGAGCTCTTGCCGACAGCGAAAATC
TCAGAGTCAGACTTTGCAACAAATCGACGACGCAAGCTCTTTGGGATTCAAGGCTTTTGTAAAGACCTCTTAGACGTC
GCTGATATTTTGGGAAAAGCTACAGAGAGCGTTCCCAAGGATCAACTCACAGAGAGAAATCCACATTTAAAAACTCTCTA
CGAAGGTCTGACCATGACGGAGGCGCAACTGCACAAGGTCTTCAAGAAACATGGTTTGGTATCGTTCAATCCTCTCGAAG
AGAAATTTGATCCGAACCAACACGAGGCACTATTTCAACAGGAAGTAGAAGGAAAACAGCCGGGCACGGTCTGATGTT
TCGAAAGTCGGCTATAAATTGACGAAAGAGTCGTTGACCTGCTCTCGTGGGTGTAACCAAAAGGATAATGAAAGTTAAA
CAAGGGGCTTTTAGGAAATGGGCTTTTGA AAAAATCGTACATCAGATTAATGTTAAACGTGTTAAATAAACAAACAAACA
AACAAAAAACAGTAAGAAAGCTTGATGTGGTACGTTTTTGAATATCTAACGTTAACGTTATTTTATTACCAAGAAA
TTTAGTCGCTGACATTTGCGCCTTGAGAGGTACAAAATTTAATGATGTTGAAGTTTGCATCATTGGAATGCAACGGAATC
CCTCATTTTATTGATTTTGTCTCTCATAAACAAATCTATGTGACGGTGATCATTTTTTTTCCAGTTTTTCAAGTGTGAT
GTGCTTAAAAAGTCCGAACATGGAAAAATCGAATCTAGAAAAATGTCGGATGTGTATGTGTATGTTCTGGCATTGTA
AAATTCAAACGTCCACAACCTCGAGAACGTTTGTGTTGGGTTTGAATGCAATTTTGAATGTTTGAATGTTTGAATGTTTGA
AAGTTCGCAAAATTTTGAATTTTACTCATTTTTTTTTTGAAGAGCCAAGAATTCACATGCAATGTCCGTCGATGACA
ATTATTGGCAATGAGAAAACGAATGTCATAGAAAAATGGAGGAGATTCTAAAAATCTAATAAATTGTGAGTGGATAAAA
AATTATTGGGATCCAACGACGCGAATTTCAATGTCGTTTAAATTGTCAAATCTCGCTGACGTCCAAAAATAATATTGATT
TTGACTAATGAAGAAAAACAAGCCGAAGTACGTGAAATATAAATATGAATTTATTA AAAA

>CL1412Contig1|26s protease regulatory subunit 7

AATTTGCGTTCCGACAGCGTTTATTATCGTTGATTAATAGTAATAATTAACGGAGTAACAATGCCGGATCATTTGGGAG
ACGACATGAGGAAAGTGAAGGGAGAAGAAGAGCAGGAAGAGAAGGAGATCAAATCTCTCGATGAAGGCGACATCGCTTTG
CTGAAGACTTACGGGCAAGGCCAATACACAAAAACCATAAAAAACCATAGAAGAAGACATCCAGACGATAATAAAGCGAGT
CAACGAGTTGACGGGCATAAAAGAATCGGACACAGGGTTAGCTCCGCCGGCGCTTTGGGATTTGGCGGCGGACAAGCAAA
CGCTTCAGAACGAACAACCTCTGCAAGTCGCGAGATGCACAAAAATAATAACGCCGATTCGGACGATGCCAAGTACATC
ATCAACGTCAAGCAGTTTGC AAAAGTTCTGTCGATCTTGCCGACTCTGTGGCTCCCACGGATCGAGAACGGTGTGATGA
GGGTCGGCGTCGATCGCAACAAATATCAGATTACATTCTTTGCTCCCAAAATCGATTCTACCGTCACGATGATGCAA
GTCGAAGAAAAACCTGACGTTACGTACAGCGACGTGCGAGGATGCAAGAGCAAATCGAAAACTTAGAGAAGTCGTTGA
AACTCCGCTTTTACACCCTGAGAAATTCGTGAACCTTGAATCGAGCCACCGAAAGGAGTATTGCTGTTCCGGCCTCCGG
GAACCGGCAAAACGTTGTGCGCGCGTGCAGTCGCCAACAGAACCGACGCTGCTTTATCCGAGTGATTGGTTCCGAATTG
GTACAGAAATACGTGGGAGAGGGCGCTCGAATGGTCAGAGAATGTTGAAATGGCTCGCAGTAAAAAAGCGTGTGTTGAT
TTTCTTCGATGAGATCGACGCCATTGGCGGAGCGAGATTGACAGATGGAGCCGGTGGTGATAACGAAGTGCAGCGTACGA
TGTTGGAGCTAATTAATCAATTGGACGGATTGATCCCCGAGGAAACATCAAAAGTTATTAATGGCGACGAACCGACCGG
ACACTCTGGACCCGGCGTTGATGCGACCAGTCTGCTGGATCGTAAGGTGAGTTGCGTTTGGCGGACTTGGAGGGTCTGA
ACGCACATATTCAAGATCCATGCTCGTCCGATGAGCGTCGAGCGTGACATAAGATTGAGCTGTTGGCTCGTCTCTGTCC
GAACAGCACGGGAGCTGAGATTCTGTTCTGTTTGCACGGAAGCTGGAATGTTGCGGATAAGGGCGAGACGCAAAAGTGGCAA
CGGAGAAAGATTTCTCGAGGAGTAAACAAGTTCATCAAATCTACGCAAGTTCTCGGCAACCCGAAATATATGACA
TACAATTAATTTCTTTCTCGTTTCCGAGGGGAAAGAAAAAAGACGAAAAAACTTACACAGACTTTAGTCTGCAACTGT
TCATTAGATTCTGTTATTTTCTGTTTTTGTCTCGCCGCGTCTGCGAGGCGCGTTTCTGCTGATTATTCAATAAATACATTT
TTTTACAGA

>CL1417Contig1|probable medium-chain specific acyl- mitochondrial-like

ATTCGAGGACGTGAGAGTCCCGGAGGAGAATGTGTTGATAGGGGAAGGTGCGGGATTCAAAATAGCGATGCAACGTTTCG
ACAGTACGCGGCCGATGGTGGCTTGTGGGCGGTGCGTTTACGCGAGGGCGATGGACGAAGCGTTGAAATATTGCAA
GAGCGAAAAGCTTTTCGACGACTAATCAGCGAGCATCAATCAGTGCGGCTTTATGCTCGCGGACATGGCGATCGGGATTGA
AACTGCTCGGCTCGCTTGGATGAAAGCAGCTTGGGCGGCGGACCAAAAGCTCCCGGAAGCGACGATGCTCGCGAGTATTG

mmc4.txt

CCAAATGTTACGGCGCCGATGTCGCCAACAAATGCGCGACCGACGCCGTACAAATCTTCGGTGGCGCTGGATTCAACACC
GAATACCCCGTCGAAAACTCATGAGAGACGCCAAATCTACAAATCTACGAAGGAACCGCGCAAATCCAAAGACTCAT
CATTTCTCGTAATCTTCTCAGAGGAAATCAAAAAGGCTGATCGAGAAAATAATTCTTGTGTCAAGGCACGTGACGGCGA
CGGTGCCGTTTTTCTTTACTCAATTTAATGATAAGCAACGAGAATTCGAAATTCAAAAAATCTCTCGTTGTTTGCC
AGTGCCAAAAAATCTGTTGTTGAAAATTTTTTAAATTTCAAAATTCAAATTAATTCGTGCAACCAAGTTTTTTTCCAA
TTTGAAACAAAAATGTGATAAATTTTCTCAAAATAGATTTCTCGTTGCTCCCGATCGATGCAATTTTTTAAATCTTTGA
TTTTTTTTACGCAGAAAACTCTTATGACACAATTTTTCTATCAAATATATATCGTTGGAACAAAGCGTTGAATATACAGA
AACATTTTTTTGAAAGATTGTTACGTATGGAGATTATTACGAAAAATAAT

>CL1421Contig1|probable trans-2-enoyl- mitochondrial-like

TCAAGCCCGGAGACAGGTCGTACCGAATGGGACCAATCTCGGTACTTGGACTTCTTACGCTACTTACGCCTCCGATAAG
CTGCTGAAGATTCCACAAAGTATCGCAACGTTGAGGCTTGCATGCTCAACGTAAATCCCTGTACCGCATACAGAATGCT
CAAGGATTTCTGAAAAATTAGAAACGGTGACTGCGTGATTGAGAATGGTGGCAATTCGGCAGTCGGACAGTTCTGTTATCCA
ATTGTGCAGAAATTTGGAAGCTCGAGAGCGTTAATATCGTTCCGGATAGGCCAGACATCGATAAACTGAAGTCTGAGCTCA
GTAACCTAGGCGCGACGTGGTGGCTCAGGGAGCAAGAAGTTCCGTAAGACGGATATATTCAAAAGTGGCAAGTTCTGTA
ACCATTTCTGGGGCTTAATTTGCGTTGGAGGTCAGAACGCGCTGGATCTTCTCCGACAAATTTGGTATGGTGGGACGATGG
TTACTTATGGAGGAATGTCGCGAGAACCAGTGACCGTTCCAACGTGGCTCTCATTTTCAAGGACATTGTTATTGCGGGA
TTTTGGATGACCGCGTGGACGAATGCGAACGCGAAAAAGTCAGCAGAGAATGGACATGATCGAGCATCTTGGCAAATTTGT
CGAATCCAAAGAAATTACAAGCTCCACCTTATAAACTTTTGCTTTGAGTGAATATCACGAGGCAATTGAGAAAACGCTCA
AGCTCGATGGGAAACGGAGTCAAGTATATTTCTCGATCTTTCTAGTTGAACCGAACGTTGATGCTGCCAGTAGAATCTCC
ATTCCGTTGTCCGCAATGAGGCGGAGTTCCACGCGTCAGGACACTCAGCGATACAAGACATTTTGGCAACTTTGGCTTA
TTCGGCGGTGTCAACGTCCGCCAAATTGAGACGCAGAAATTCGCATCAACTCCATTCGAACGGTGAGGCTCTGTGATCAG
CCATGATGACCCGTAAGTAATAGAATCGGGGTGACAAATTTACATTTCTATGAATTTGAGCTCACGGCCATATCGTTCAA
CTTCAGTCAAAATTTTATGCATAAACTTAAAGAAATAAATAAACGAATTTTCGCGGAAAATAGTACAATAGCTGGACACT
CGTTACTCCATACGGAGATTTCTTCTCCGCTTTTTGTCACTGAAACGTTTAAACGTTTTATTTCCAGTCTCACAATTCAT
TTTTTTTCTATAAAAAAAGAAATATATGTTTCCAATGTTTCAAAAATCGAATTTCTGACAGAGGGTTGAAAAATATCGA
TTTGAGGGAATAATGTCGGGCTCTCAAGGTTAAACAAAGTTTCCGCAATTCGCTGAGTTCAAGAGATTAGAAATGCAGT
GCATGCATGCATCGCAGTAAATAATACGAGAGGAAAGAAATTTAGACAAAAGACGACGAGCTTGGCTCAAAGTTTCTTTG
TTATTGCGTCTACTACAGTATCCTTTGTTATGTTTGCTTTGAATTACATTATCCTTGAATTACATCGATTATCTGCGC
TGATACGATCGTTCTACGTCACAAT

>CL1422Contig1|synaptic vesicle membrane protein vat-1 homolog-like

GGTTTGACAGCAATCGAAGCAGGAGCTCAAAGCTGTTGGAACGATTGACCATCTCCTTGAGCGTGGCAGCGACTACA
GTCACGAAGTCAGAAAAAGTGTCTCCGAGGGTGTGGACATTGTTCTCGACTGTGTCGGCGGCGAGGAGTGGAACAGAGGA
TTTGCCCTTATTGAAACCCATGGGAAAATACGTTCTTTACGGATCAAGCAACGTCTGACTGGCGAAACGAAGAGTTTCTT
CTCTGTTGCTCGATACTGGTGGACGATGGACAAAGTTTCCCGATAAAGCTGTTGAGGACAACAAAATTTGTCTGGAC
TAAATCTGCGTCTGATTGATGCACACGACGCTGCTCAGCTTTCTGAGGAGAGCAGTGAAGCAAGTGTACCAATTTGTGG
GCCGATGGAAAGATCAAGCCGCGCTAGACTCGACGTGGGCACTGGAGGACGTCCCGGAAGCGATGCAGAAGATGCACGA
CCGCAAGAACATCGTAAAAATCGTTTTGGACCCGAGTCTCGAGCCGAAGCCAAAGCCAAATGACACCAGCGAAGGGCAAG
GCAAGGACAAGAAGGCGGCAATCAGGAGGACAAGAAGCATCGAGCTCGACTCTGAGGAAGGCGAGAAGAAGAAGGAG
CCGGAATTGACAAATGGAACGTCCGAGGACAAATCCGACAGCGATTGGAAGGAGAAGGAATCGAGCTGAATTACCAACGG
GTCTGAGAAGAATTAACGCAAAAGTCTGATCGAGGCAAGAGCGTAGGGTATAAGAAAAAAAAAAAAAAAAAAGTAAAAA
AAACCGAAAAACGACACGACACAAGGAAACACGGAGGGAAGAAAAATTTAATATTTTTCTTTGTTTACATTAGTTCCGAGTC
ATAGGACCATTTGTTTCGAGTTCTAAAGAGAAAAACCAACACAGCATCTTTTGGCTGAGAAAAATAATTTTCAACGCCGAA
ACCCTCGGAAAAAATAAATAAATGACATTTGACCGGAAATAATATCGAAAAAGCGTGTGGGAGCTAAGATAAGTA
ATACAAACAAATAAATATCAATTTGACGTGGTCCAC

>CL143-bisContig1|ankyrin repeat domain-containing protein 39-like isoform 2

AGTAATGTAGTAAAAAGTGGAAGAAGGTACACAAGGTACATTTAAGCCGAACGGAAGTACATTTTCCGTAAAAAAACC
TTTGTCAATTTGTAATGTTTTAACACGAATCACAGATGCCATACATTCTGGTACGTGGTAACCTCACCTCCTACAGTCAA
AACTGTCCCTGGAGAGTTCTTGTTCGGGTTTTAAAGCATCGGATTTTGAACAGTTGAGTCGTTTCGCAAGCGGAGGATA
TTGCGATAATTCACCGCTTTATCTGCAGCATCTTGTGTGATATTGACCGCTTTGGAGGTCCTTGAGGTACAGATGTTG
CATCTTCCAGCGTCAGCGTCAAGCAAGATTACAACGAGTATATGTGGACTATGAGAAAAGATTTTTCCGAACCAAGAACCT
GATCCTGTACCTGATACAAAGAAGATCTGAAAGTCGAGCAGATTCAAGAGCGAGAAAAATCTTCCAATTTGTGAATATC
GCCGCGCAAGGGTCTCTGGAATAATGACGGAAAAATTTCACTCTATCGGAACCGAGAATTTTACTACGTGGCCGTAC
AAGGCTCACCTTTTGGCTTCCGATTGCTCGGTCTTTGGATTGGCCAACGATGAAGTTTTGGCACTCATCAAACGATTTCC
AACTCTGGGACGGAGTCTGCAATGGCGTTTTGATAAAAGGACCGCGGATTGCCGTGATAAACGCCCTAGCAGAGCTTG
GATATAAGATCGTAACCAGCACCGGAGAAGCTGACATCCTCTGGACGATGACGCGAGAGATTTAACAGCGAACGTAATGA
TTCCCGACGCCTTCAATTAGCATTTCTCTGGGCGAATGCAAAAAAATTTTGTAGAGAGTTATCGTCTATTGAGTGTA
TTATCATGGAGTATATGGCAGCACCGTTAATTATCGACGAGTATCCAAGTATTTTTTCAATCATTACATCGCAAGCTAAA
CATTTTTTCGCAATTCGAATTAACATAAAAAATTAACAACCTAAATGCGCAGCATTCCAATGAAATTTTCAATTTTCGCGCAT
TTCGTCAAATGAGATTTTCCATCAAATCAGCAGCTTTATTCGGTTTTACAAATTCATCATTTCCAGTGACCAATGAGAT
CATTTCTGAGATCGCAGAAACGATTAAATTCATGCCGATCAATTTGCTGTTCCCAATGAAAACCTTTGCAACGCTCTCGGC
TCACTTCCATCGTCCGATAGTCGATAAAATACAAATAAAAAATTTCAATATTTTTCTGTAATCACAAGGTCGCAAAATG
GTAGAAAAAATAAATAAGTAAACGATATTTGACTGGAACCTTACGACGGTCAATGGCCAAATACTTTTGCTATCAATATT
ATTTGATTTCTTATTATTTTGTCAATTACTCAACGACTCGGATGATTGTGTACAGTCTGGTTATTGGCTACGAGTAAATG
CATGTTGCAACTTCCAACAAAAATAATTTTACGTTCCACTACCGTGTATTATTATTTTCTATTTATATATCAATATA
ATATTAATAAATCAAAAGATATGAACAACAAATAATAGACCAAAATTTTCTCTGTGATGGTTTTTTCGGCCAAGTGGCAATTT
TTGTACGAGGAAAGCGACAGAAGCAATATTTTGAACAAACCCAGTGAGTTGACTTTTGTGAAAAGCAGAGAAAAACATTAGA
TTTGCTACGCAATAGTATTTTCTACTCCAACTATTTTGGTGCAAAAAACAAAACTTAGAGTGACACTTCCTAT
GAGTGATATTGGGTCAATATGACCCAAGGCCTTTTTTCAAACCGTTGGATTCCGGTGAATGTGCATTTTTTTTTTTTTT

mmc4.txt

TTGTAGTAAACATCCAAATTTTTATGGCCCGAAATTTTGTGTTTACGAAAAATTAATTGCAAAGCGTTTCGTTGCCATTGG
 ATGACAAAGATTTGGCAATTTTTGGGGTCAAAACGACCCAGTATGCACTCGAAGGGTTGACATGTATCCACTTAAACGAG
 AAGTAATCATTAATCGACATATATTTTTGCACTGTTTTATCCCGTGAAAAATTGAAATAGAAAAATAGAAAAAAAATG
 AAAAAATTGTAAATGCATTCAACGCTATGGTACGTTTGGATTTTTATGGTGCATATTATACGCGTGTATTTGTGTAATAAA
 TATGATATATTATTGATGAAAATGTGTAGAAAGTATTTGGAGCATGCGGAAGTCACAAATCATACGAAAGTTGTGGAGAA
 AAGTTTGTGATGATTGATGAAAAAGGAACAAACAGAATGTTAACTTTTTGGTCGACGTTCCCGTTTGTGTTGGTG
 >CL1434Contig2|transmembrane emp24 domain-containing protein 7
 TGCTAGAAGCTCCCAACAAGGAAATCATTATCATCAAGTCAAAACGCAATTCGACTCTCATGTATTCACGGCGCCTCTC
 AGCGGCGAATACAAAGCTTGCTTTAGCAACGAATTCTCAACTTTTTTCGCACAACTAGTCTACATGGATTTCCAAGTTGG
 CGACGATCAAGCTCTCCCTGGTCTGGAGGAACACGTACAGTCATGACGCAGATGGAGACATCTGCTCAAGAGATCCACC
 AGAATATGGACAGAATTGTGGAATACCAACGTACCACAGTTGCGTGAAGCGCAGGGTCGAAAACGCGCGGAAGATCTC
 AACGAACGTGTGCTGTGGTGGTTCGATCATGGAACAGCTGCGATTCTCATAATCACAGTGGGCCAAGTGTTGGTTCTCAA
 GAACTTTTTACCAGACAGAAACCTTACCAGCGGCTCTAATAACTTTGTGCCGATGCAATAATGTGCAGTCAACGAGTGA
 ATTTGCGGAGAACCTGCTAATTTTATCTTTTGTTCGGGCAAAATTTCAAGCCGAAACAACTGGCGTTTATCGA
 GCCAAGTTTCAGGAATCTCCACACGTAGAATTATCTTTTCCAATTCTTTCTCTTGTATCGAGTACAAAAATAATTTGTGT
 CGTAACTAAACGGAACGAACCTCAGGAAAATCCTTCTGTCGTCCTAGTTTCAAGCATAGTCCAAAAATCGAGGAGCCGTTTA
 TTCTGTTGGACGACATTGGAGATTGCATCGTTGGAACCTAATTAATTTCTTGTCTTTATTTATCCATTTCTTGGTCTA
 GCAACCTTCGGTGCACGTTTTCTTCTTGGTCCCGAACAAATGGCGAGCCAATTAGAGTCACTGCCAAAATAAAAAATAATTT
 CTTTGCTCTCCGGCAGTGGAAACTTCGGCTTTGTTATGTTTCAGTAGACTGTGGGCATTTTTCAACATTTTTTTTGGCAG
 TATGTAATCGAAGGACAACTCGTACTCGAACCACTATTGGCAGGATTGTTCTCACCCGATCAGTTTGTCTCATGGAACCG
 CGCGCATCGTTTTGAATCGCTTTTGGATTGTCTCCGAACGTTTTTACCCTGTCGTACGATGAAATCGCGCTTTTACACA
 ATGTACATGTAACATAATTCATTAATAATGTTTGTAGT
 >CL1440Contig1|adenylate kinase
 AGTGACTCGGTGGTCTGTTTATCGAATACTCGAGTCCGTTTATCAATTTTCCGTTGTAATTATCTCATTAGGTGTATAT
 AAAGCATTAATCTGAGGAAAGATTGGAGAATGGCCCCAACCGCAACGGAACGATGCTCAAGGAGCAGAATCGGGAGAAA
 CCATCACGAGGAGTAAATGCGGTCTTATTGGGACCGCCTGGCAGCGGCAAGGAATCAGGCGCCGTGTTTCAAGACCG
 TTACGGAGTTTGTCTATCTACGACGGGGATATGCTCAGAGCGGAGGTGTCTTCCGGCTCGGCACTGGGAACCCAAGTCC
 AAGGAATAATGAACGAAGGAAATTTGGTGAAGCGACGATCTGGTCTGTCAGCATGATTAGCAAAAATTTGGACAAGCCAGAG
 TGCAAAAAGAGTTTTCTGCTGGACGGCTTTCCCGGAGGAGCGTGCCGCAAGCGGAAAAGTTGGACGAGATGTTGACCAA
 GAGGAAAAGAAAAGTTGGACGCGGTGATAGAGTTTGAATAGACGATAAATTTGTTGGTAAAGAGAATAACGGGACGACTC
 GTGCATCCGGCGAGCGGACGTTCTTATCACGAGGAATTCGCTCCCCGAAAGTGCACATGAAGGACGATTTGACCGGAGA
 CCGCTGGTGAAGAGATCGGACGACAATGCGGAAGCGTTGAAAAAACGGCTAGCGACGTATCACAATCAGACGCGCTCTC
 TGGTCGATTATTACGCGATTTCAGGGAATCCACAATTATGTGAACGCGGCCAAGACGAGCGAGCAAGTGTTCAGGACATT
 GACAGCATTTTTCTGAGGTCCATCAAGCAGGAGGAGAAGAAAAGCTTGGGTGGATTCTTTAGTAAATTTTTCTAAAGCCG
 CGAAAGCGCGTCTCGATGCCGTGTCTGATCGCGCCCAATGTACAAAATTAACGAAAGCAAGAAATAGGCGCACGCATAGA
 CTCGCAACGAATTATAGTTACGAGTGTGAAAAACACAAGAACTCCGATACGCGCACACTCAAGTTATGTATTTATTAAT
 CTTGTTGGATTTTGCCTTTCCGAGTTGCTGCAACTCTGTGCGGTGAACCCCGCAACGAAACGAGATATCATTCCGTTGT
 TGAATTAGCTTGATTCTGCGGTACGGCGGGCCAGCAGGCGCGCGGTGTAACGTAACGTAACGTAACGTAACGTAACGTAAC
 ATATAATGCATACAGACGGCAAGGATTTATCAAACAGAAATTCATCTTTTGAATAGTACAAAACGCCTAAATGTACAT
 ATTACGATACAATATTTTAGATAAATGGAACATTGTGAGACTATTTTACACCGATGCGCGCGGGCAGCAGCGCGCGGT
 CTGTATCTGCGTGCACATTGCAGCAACGGCCGAGATCAAACCTGTAATAATACATTAT
 >CL1442Contig1|eukaryotic translation initiation factor 3 subunit g-like
 GGATGGCAGGCGGGTCTAATCCAGTACGACTGTTGGGGCTGAGGATGTGTTTATGCAGTTTATATCGAGCAAGAGG
 AGGAAAAATGAGGTGAGGATGATTCTTTGGACAAGCTAAAGAGCATGGGTGACAAGGGTATCGTCAAGTGTGTAATTGC
 AACGGCGAGCATTGGACTTCAAAATGTCCGTACAAGGACACAGTTTTGGCTGGCGGCAAGTGCCGAGCATAAGAAACC
 CGCTTTGGGTCCGGTGGTACGCCGAGCGCTGTGAGCGACATCGGCAAAGCTCAAGGCAGCAATACGTTCTCCGAGCA
 TGCGAGACGGTGGCAATCGTCGCGGTGACGCTATGCAAACCTCAACGACGCGATGACACGACCGCTATTCGTATTTCCAAT
 CTTTCCGAGTCCACCAACGAAGCTGATCTCGAAGAACTGGTCAAGCCATTTGGATACGTTCAGAAACAGTTTCTTGCCAA
 GGATCGCACCACTAATCTGCAAGGCTTCGCTACGTTTCAATTAACGAAAGGCGAAGTGTCTGCTGCTGCTGCTGCTGCT
 GTCTCAATGGCTATGGCTACGATCATCTTATTCTCAGTGTGATTGGTCCAAACCTCCCGCCCAAGCAATTAATTTTCG
 ACCAACTTCGCTGCTGTTGATACGATTTTATTAATAATTCATTATTAATACTGGTGCACGGCTTTTGTAAACATCCTTAG
 TCCATCGACACGTTGAATTCCTTTGGCCCAATCCATCTTTCTACACTGAGACTACTTTACCGCAGGTCCAGTTTCT
 TGCACTATTGAATCAAATATAAACACAACGGAGATAA
 >CL1443Contig1|2-oxoglutarate mitochondrial-like
 TAGGAAGTAGGAATCGTCGGCGGCGTACCTGCGAGTTGCAATGGTGGACGGGCTGTACACTTGCATCGTTAACATCA
 GACCAAAAATGTATAGGGCTAGAACGGTATTTAATTCCTTGACCCCGTTGGCCCCAAGGGTCTGCGGGGCCGAAAGATTC
 GCCTCTTGGCTGGTGCAGTAACCCACTCACCCGCACACCCAGTCATCGGTGTTGAATCATTGAAGCGTTACACAAG
 CCGTGCAGCCACCGAACCTTTCTCAATGGCAGCTCCAGCTCTTACGTGCAAGAAATGTACAACGCGTGGCTCCAGGACC
 CGCACAGTGTCCACGTGTCATGGGATTCCTTCTCCGGAACAGCAGCTGGAGCAGCACCTGGTCTGGCCTATCAAGCA
 CCACCGCTCTCGCACCGAGCTACAACCAAGTACCGTCCGATCTTTGCTCCCTCTCGGCGGCGGATCGCAGCTGAGTCA
 AATGCCCTTTAATGAAAAATCATTGACGATCATCTCGCGTTTCAGGCGATAATCCGATCTTATCAGATCCGTGGCCATCA
 TATCGCGAAATTGGATCCACTTGGCATCAACAGCGCTGATCTTGATGATAGACATCCTCAAGAGTTGGACTCTATAATCA
 TTAATCTTTGAGGACTCGGACATGGATCGCGTATTCAAGCTGCCATCGACGACCTTCATCGGTGGAAGGAAAAATCTT
 TGCCTCTTCGGGAAATTTTGAACGCTCTGGAATGCTTATTGTGGACATATCGGAGTTGAATTCATGTTTCATCAACTCG
 TTGGAACAGTGCAATTGGATTGCTCAGAAGATGGAACACCCCAACATCATGGACGTGACCAACGACGAGAAGAGACTCAT
 TCTTGCCAGTCACTCGAGCCACGGTTTTGAAGCTTCTCGCGCGTAAATGGTGTGTCGGAAGGCGTTTGGTCTCG
 AAGGCTGAGAAATTTTATTTCCAGCGATGAAGCAAGTTATCGATAAATCAACGAGCTTGGCGTCAATCAGTCGTCTATG
 GGAATGCCTCATCGTGGTCTGCTCAATGTTCTTGCCAACGTTTGTGCAACCTCTCAGCCAAATATTCAGTCAGTTTGC

mmc4.txt

TGCTCTCGAAGCCGCGGATGACGGATCCGGTGACGTGAAATACCATTTGGGAACCTACATCGAGCGTTTGAACAGAGTAA
CGAATAAGAACATCCGTTTGGCTGTTGTTGCCAATCCATCTCATTTTGGGAAGCGGTCGATCCT
>CL14567Contig1|coatomer subunit beta
ATCAAGGCGAACGTTAAAGTTGCCTCGACGGAAATGGAATTATTTTGGAAATATCGTCTACGATATCTCTGGGCGGGCTC
GGATCGCAGTGTCTGCTTCTCAATGACATTTCATATCGACATAATGGATTATATCGTTCCCGCGACATGCACCGATACGG
AATTCGGTCAAATGTGGGCCGAATTTGAATGGGAAAATAAAGTCTCGGTAAACACATCGCTCGCCGATTTACGAGAGTAT
CTCGCCCATCTCCTCAAATCTACGAACATGCGATGTCTCACTCCTGAGAAGGCACTCTCCGGACAATGTGGATTATGGC
TGCGAATATGTACGCCAAGTCGATATTCGGTGAGGATGCATTGGCAAATTTATCGATTGAGAAGCCCTCAATAAACCGG
ATGCTCCGGTCTGTGGTACATAAGAATACGAGCAAAGAGTCAAGGAATGGCTTTGTCCTTGGGTGATAAAAAAATTCGG
CGAAAAAGNTAGCTCAGAGTAAAGTGTGCAAGCAGCTTGAGAATATTAATCCGCTCT
>CL1458Contig1|sepiapterin reductase-like
AGTCGAGGTATCGGGGCTGAAATAGCACAAACAGTTCTCCAGATTATTGGCTCAAGGATCGCGCATTCTTCTTTTAGCACG
AGACAGCGAAAAATTGATAAAAAATGCTGAAAAATGCCAAAAACACATAGCAGTCGATTGTGAAAGCGTTGATCTTGGA
ATCTGCGACTAAAGAGGAACTTAGAGGAATAATCGAAAAATCTTTGGGACCCGAAGGTGCAAAAAATTATGAGAAAGCAGT
TATTGTTACAAATGCCGGAACGATCGGTGATCTTTCAAAAAAGAACCATAGACATGGACGATCTCGACGAATGGCGAAAAT
ACTGCGATCTCAATTTGTTCTCGCCCGTAATATTGAACAGTGTATTATGAAAATCTTCACAGACGAGACGAAAATTGCA
AGGTTGGTGATAAACGTGACGTCGCTCTGTGCTATAGAGCCTATGAAATATTCGGCTTTTTACAATACCGGAAAGGCAGC
CAGAGAAATGTTCTTCAAGACTTTTCGCTGCGGAATTTCTGGAGTCAACGTTCTGAACTGGTCGCTGGTCCGGTCGATA
CGGATATGTTTGACACTTTAACGAAAAATCCGGTGATGTTGAATTGCGTGCGAAATTTAACGAGCTACGAGACAAAAAG
GAAATATTGTCACCCGCAATCTACCAACCGACTGATATTGTTTCTCAAGCAACAGAATTAACAAGTCTGGTGATCATGT
CGACTATTACGATCAATTGTAATGCGGCCTCGTATCTATTTTTTTTCGTCGATTTTTTAAAATCTTGCAAGATTTTT
CGTGAATTTTTCTTTTTATAAATTTTCATGCTATGGTCCGGTCAATACCGACTTGCTTAACAGACTCTCGTATGAATGAAT
CCAATGACACTAAAAATCGACCGGTGCGTTGATTTTATCTCGAGGGACCAAAAGTATGAAATCGAAACTTATCGTTCCGGA
AAGTGTAACAAACATTTATGTCTTGCTCAGTTCGAGAGGG
>CL1459Contig2|peptidyl-prolyl cis-trans isomerase-like
ATCTCGTCCATAGCGGAGAAAAAATACCACGTGCTTCGTGCATAGGTCCAATTTAGCCGGTTTTCGAAAACTCAACTGA
GCAATTTTCGAAAGATTATTGTTGTTTTCACTGATTTTTTAAAAATAATATTAATTTTAAATAAGAAAAAGAGGGATAT
CTCGTTCTGTTGAAACTACACATTAATGCGTGGCATCGATCTGCCGGCTGTCAATTGATTGACCTTCAGCCATT
TGAACCATTTGGGAGCCACCGCCCGCCGAAGCAGACCGTCTTTGCATCGTTCTGAAAAATTTTGGCGCTGCTGCTGGA
AAGATGAGTCTTCCTCGTGTTCCTCGATATGACCGCCGACAATAAACCGGTTGGTCTGATCGTTATGGAATTGAGAAA
CGACGTGGTCCAAAAACCGTGAGAATTTCCGTGCCCTCTGTACCCACGAGAAGGGCTTTGGCTACAAGGGCAGCAGTT
TCCACAGAATAATCCCAACTTCATGTGCCAAGGGGGTATTTCACGCACCAACACGCGACGGGCGGCAATCCATTTAC
GGCAGCAAATTTGAAGACGAAAACTTCAAATGAGGCACACGGAGCCGGGTCTATTGTCCATGGCAAATGCCGGGCCAAA
AACCAATGGGAGTCAATTTTTTATAAATTTGCGCCAAGACCAGCTGGCTGGACGACAAACACGTGTTTTTGGCAAAGTCG
TCGAGGGAATGGACGTCGTAAGAAAGCTGGAAGCCATGGGCGATCAAAGTGGCAAAAACCTCCAAGAAGATAATAATTTT
TGACTGTGGCCAAATTTGTAAGGCGAAACGAACGAAAAAAGAGATTTACAATCGATATGGCATTTTGTCTTCCCTTAAG
CGTATCGTTTACACAATTTGCTACTCAGACTCAAAAGTTGAAAAAAAAGTAGAACTCGTCT
>CL147Contig1|alpha- sarcomeric-like isoform 1
GGGCAACAAACGTTCCGGCTGAACAGCGCTGTGCTTCGGTCAGCGATTGAGTTTGTGAACTACGGCGAGAGAGGCAG
GAGGAACGTGCAGTTGAAAAATNTTGAACGCGATTATTGATAACTACGATAACACACGAAAAGGGACATTTACCGGCCTA
AGGATGAACGACATGGAGGCATACGGTGACGGATACATGGAACCCGAGGAGGAGTGGGAACGCGAGGGATTACTGGATCC
GGCGTGGGAGAAACAAAAAATTTACAGCATGGTGCAATTCGCATCTACGAAAAGCTGGAACAGCTATCGACTCG
ATCGAAGACGATTTTCGGAATGGGCTGAAATCATGCTCTTACTCGAAGTCATATCCGGCGAGACTTCGCCGAGACCTGA
TCGTGGCAAAATCGCTTTTCCACAAGATTGCCAAATGTCAACAAAGCCTTAGATTATATCGCGAGCAAGGGCGTCAAATCG
TCTCCATTGGTGCCGAAGAAATCGTGGATGGAAATTTGAAGATGACTCTCGGAATGATCTGGACGATAATTCTACGTTTC
GCCATTACGACATTTTCGGTGGAGGAAATGACCGCGAAGGAGGGTCTTCTTTGTGGTGTGAGAGGAAAACCGCCGTACA
AGAACGTAAATGTACAAAATTTCCATCTCTCTTCAAGGATGGTCTCGCCTTTTGGCTCTCATTATCGTCATCGTCCC
GATCTCATCGATTACAACAAGCTCAGCAAGGACAATCTCTCGAGAATCTCAACACGGCCTTCGACGTGCGCGAAAAGTA
TCTCGATTTCTTCGCATTTGGATCCCGACGATTTGATCAACACCCCAAGCCGACGAAAGAGCAGCATGACGTATGT
GTCGTGCTACTACCACGCTTTCCAGGGTGCCGAGCAGGCCGAGACCGCGGCCAACAGAATCTGCAAGGTTCTGAAGGTGA
ATCAAGAAATGAGAGGCTCAGTGGAGGAATACGAACGTTTGGCCTCCGATCTCTCGAATGGATCA
>CL148-bisContig1|ras-related protein rab-14-like
AAGTTGTTGAACGTGAGCGATTTTTCTGAGTATCAAGTTAGTTGACAGGTGGTTTACGCTTTATACGCCCCATCGTTG
TTAGTCCGTCATCTAACAGGGAACGAAAGAGTGAGAAAGAGAGGAATAGATAGAAAAAGAGAGTTATAGAATCATCTGCC
ATATTGCGTGGTGAATATACAAGTTGTACAACAAATTACTTTATTGAAAACGGAACAACACCCCTGAGACATTTCCATG
GAAAAGTGAAGTGATTTTTGCCTCATTTTCCAATTTTTTTTACGACTTGTCAACGCGTTTATTGCGACGAGTTTATCCTT
TCGTTCCGGGCCCTCATTAGAAACACACATAAAAGATTCAAAATGTCTGCGGGCCCGTACAATTACTCGTACATTTTCAAA
TATATCATCATAGGTGATATGGGAGTGGGCAAATCCTGTCTACTCCATCAGTTACCGGAAAAAAGTTTATGGCGGACTG
TCCCCACACGATCGGAGTCGAATTTGGCACTAGAATAATCGAGGTAGCGGGACAAAAATCAAGCTACAGATTTGGGACA
CGGCGGGACAGGAACGATTACGGGCGGTAAACAGGTCTACTATCGGGAGCTGCCGGCGCTAATGGTTTTATGATATT
ACTCGTCGATCGACTTACAACCATCTTAGCAGCTGGCTCGCCGATACGAGGAACCTTACAATCCAGCAGTATGATATT
TATGATTGGTAACAAAAGTGATCTGGAAGACCAGCGCAGCTTACGTACGAAGAAGCAAGAAATTCGCTGACGAGAACG
GCCTCATGTTTGTGGAGGCGAGCGGAAAAACGGGCCACAACGTAGAAGAGGCATTTTTGGACACGGCCAAAAAATATT
CCAGAGTGTCCGAGATGGACGTTTGGATCTCAACGCAGCCGAATCCGGAGTTCAACACAATCCGAATCAGCCAGGTCGTA
CTAATTTACAAGGAGTCTCGTGCGAGCAGCCCGGAGGCAAGGACTCTTGCTCCTGTTAGACCAACTATTTTGTCTGTATA
TAGGCCCTACCAATCATATTTACTGATACGCATATATGTGCTTTAGACATATAAATACGTATATGTATGGGCACACTT
GTATGATTTACACCGAGAATATTAATAGTAAAAACCGAAAGAACGTTTATACCCAGCCAGGAACACAACACACACAAAA
CACACATTTCTCCGAACACTGCTGCCCACTTGGATCGTGATAAAAAGCTAATAACAATAACACTAATAATAAACATTAA

mmc4.txt

CAACAATACCGTTGGAAAAAGATTGAAGATAACGATAATCTAAATGCACCGTAAGTTCGATTACGATGTGCAAACCGGA
ACGACACGAGGCAGAGGTTGCAGTAACATTTCGTAATCCTTCCATTTCTTTCTAAGTTTACCCCAAGAATCGTAGCACT
CATCAAACCTTATCACTTTCTAACGAGACAACCTATCCACCGACTTTACGAAATACAAGAAATACGCGTATCCCATTAT
AAAACAAAAATGGTACCGTCTTGATGACTTTGAAAAACGAAGTAGACAGAAATATTCTTTTCGCGCAGAGATATTGCG
ACGTCTCAAAGACTGCTCGAATATCAAACACGAAAATCCTTGGTGGCTAAGACAAAAAATACATAAATTATGCTCTGCTC
GAGTCCCGAAATCACATTTTTAGGTATAATTTTTGTTTTAACCACCTCGCCAGTTATTTATTTTGAGCGTTATATTGATA
TTTGACTTTTGGAACTTGATCCTTTATCGGAATTGGGCCTAACGTAGCAGAATAAGCTTTGCTTACCAGGGAGAATGAC
CTTGAGAGAGAATCATGTTTTAATCACTGATATTTTTCGTTGTATCGAGTCTGTATTTTCTCACCGAATCGTCTATT
CTCAACTAATTATTATACTTTTTCTCATAAGAGTTTTTTAATGTAAAAATTTTTTGCAGTTATCGATTGTCCATCTT
TTTTATTTCATGCAATTTTTTTTTCACACCTCGAAATATCCTTGGCGACGAGTTTTATGGCGAATTTAATTGTAAGAGCAAT
CTGTTTTTTCGGGACTATGACTTAATATTTATAATATACAAACAACAAGGGTCGGAATATTTCAATTTAATATATATCT
ATATATATGAATATATGCCTTTTCTTTATATTCAAAGGCACTCCCGATACCTCGTTTTTGTATGTTGCAACTCAATACCA
ATATCTATGATCCACATCTATTTTCCCTTACATGTTGAACCTTTTCGGCACCGGGTCTTTCTTGTGTCAGGCAAACGTT
CACGCTTCAAAGCCTGTGCTTTTTCTCCACTATTAATGTTTTTTCAGTTACGTAGTGAACATATTTGTTTACAAGCTA
TCACAGGCTGGGGGTGATACCCACGAGCTCCGATTGTAGACGATATTTTCGAGACGAAAAGTCTGGTACTATTTTTTTCAT
TAGACTTCTCGAC

>CL1481contig1|protein takeout-like

GACCTTGTCTGTCACTCAATGAATTACATGCTCGGGTTGATGATAGTGACGTTCTGTCGTGCGTGGAAACAAATGCGGCGGA
TTTACCCAGCCATTTACGAGATGCCATCCAAAACAGCTGACTTTAAGGATTGCTTTCAAAATCGGTTGAAGGAGCCA
TTGCCTCGATGGCGGATGGTCTGAAGAGTTTCAAGATTCCACGGCTGGAGCCATTGGCAGTTGAGAGTGATCGATAGGT
GACAACGGAGGCGTTGTATCGATAAAGCAAGAGTACAAGAACATCGAGGTCCATGGACTACTAAAGGATTGAAAATTGA
ATACAAACATGTCGCTCCTGATTTTTTACCTTAAATCAGTGACGTACAACGATCAAGTTGATTTCTGTCGAGATTACG
TTATGAGTGGGAAAAATTTGCTCTTGCCAATTAGCGGAAATGGTTCGAGCCAACATTTCCATGCAGGGTCTGACATGCACA
AATAACATCAAGTTTGAAGAGTACGAGAAAAACGGAGAATCGTATTTGAAGATGACAGAGTACGAGATCAAATTCACACC
GAAAAAAGTCGGCTTCTATTTTGAGAATCTATTCAACGGCGATCCGGTTCTGAGTACACAAATGAACAAATTTTTGAACG
AAAATTCGGAACCTGCTTCAAAGAACTCAAGGGCCTTTTCGAGGAGACATTTGGCCTGCTTTTCATCAACATTTGCCAAC
AACATCTTCAGTCGAGTTCCCGTGAATCGGATTTATCCCGACTGATCAACATTTTTCAACCATATGAAAAATATTTTAC
CCATTCGCGTACCATCGTCGTTTTCAAATCGACACTTTGTCTGTAAACCTTTTTGTCTGCAGCTTCGGACAGGTTTACA
GAAAAATGTGTGGGAATTGGAATAAACGTGGAAAAATGGATTTTCATCGTAGTTTCCGGCACAAAAGTTGACCAGAGCAAAAA
TGTATATTGATGTATATATGCAACGG

>CL14843contig1|lysophospholipase-like protein 1-like

GTTTCTAGTTTGAACGCGTCAAAGTTCAAATTCCTCACATTAAGTTGTCTATCCGACTGCTCCGTGCGAACCGTACAC
ACCGTTGCGCGGGATGGTAAAAAATTTGGCGAATTTGAAAAAATTTGTAACCTTTGGCAAAGTGTTTGAACATTC
GCTTTGCTCTTTACAGCGAAGTAACGTTTGGTTTCGATAGAAGCTCAGTAGCTATAAGTGCGCCAGAAAAAATATCTTCC
ATCGACTTCATGTCCGAAGCGATATCAGAACTGATAGAAAAGAGGTAGAGACTGGAATTCGCTTCAGAGGATAGTAGTC
GGTGGTTTTTCCATGGGTGGTGGCTTGTCCCTTTACATGGCTTACAGGCAAAAAAATCATTGGCTGGCTGTTTCTGTTAT
GTCTTCTTTCTTAACAACAATTTCTGTGGTTTACGAGGCTCTGAAGGACAGCGCGGCCAGAACAGCACACCGTTGCTTC
AATTTCTGGAACGAGCGATGATCTTGTGCTTTGAAATGGGGAATCACCCTCACAAATACCTTCAAGAGCTTGGAGTA
AAAGGTACTTTGACGACTCTTCAAACGTTGGACACGAGCTGGTCAACGAAGAAATCGAACACCTTGAAAAAATGGTTGG
CGGATATAGTGCCGGAACGGATGATTAATTATTTAATTTTCTCTGCGTAACACAGCGGATAAGC

>CL1486contig1|PREDICTED: importin-5 [Apis florea]

CTCATTCTGTTTCGGCGACAATGGCGGCAGACCTCGATCAGTTTCAACAGCTTTTAAGGACCCTTCTTAGCACGGATAACGA
TGTCCTGAACACAGGCAGAGGAAGCATACAGAAATATTCCTGTGGAGAGCAAAGTCACTTCTTGTCTGGATCAATATGCA
ACTCCATCTTTCGGAGGAGATGCGAGCCATGGCAGCGGTGCTGCTGCGACGGCTATTCTCTCAGAATTCATGGACTTC
TATCCAAAAATTTCTCCAGAGGCTCAAACCTGAGTTGAAAAAGCAAATACCTTCTGGCCGTGCAAAATGAACAAAGCGACGC
ATTGAGGCGCAAAGTATGCGAAGTAGCAGCCGAAGTCGCACGAAATCTTATAGACGATGATGGCAATAATTTATGGCCAG
AATTCCTTCAGTTCTTATTCAGTGTGCAAACGGTCCAGTCCCAGCGCTCAAGGAAAGCGCCCTTCAATGTTTACATCC
GTCCCTGGTGTATTTGGAAACCAACAATCACATTAATCTCGATTCAATCAAACAATGCTGCAGCAATCGTTGATGGACGC
CGCAAAATATGAAGTGGGTTTCCAAGGGTTCGAGTAATCGGTGCTTCACTTCTCACGAGAAGGAGCGACCATAC
AGAAGCATTTTTTCGGAGCTTTTTGCCAGGCGTGGTGAAGTAACAATCCAATCGGTTGAAAAACGAGAAGACGAAGCGCTT
TTGAAAGTTTTGATAGATTTGGCAGAAACGACACCAAAATTTTTGAGGCCTCAATTAGAGGCAATAATGGAAATGTGCAT
GAAAAATTTTTTCGGACGAGCAAATGGGTGACTCGTGGCGACAATTGTCTCTCGAAGTTTTGTTGACACTGGCAGAGACAG
CGCCAGCCATGGTTCTGTAAGTTCGGTGGCAAATACATCGTCGCGCTTATTCACCTTGTTTTGAAAAATGATGACCGACCTC
GAAGAGGACGAAGAATGGAGCTTCTCGGACGAAATAATCGAAGAAGACAACGAATGCAACAATGTTGTCGCCGAGAGTGC
TTTGGATCGACTCGTTGCGGTCTTGGTGGCAAAACCATGCTGCCCATATCGTTCAAACATTTCCGTCGATGTTGAGCA
ACAGCGATTGGAAATACAGACACGCTGCACTCATGGCCATTTCCGCAGTCGGCGAAGGTTGTACAAAAATGATGGAAGCC
ATGTTGGGTCAAATAATGGAAGGAATTATCCACTATCTCCAAGATCTCATCTCTGTCGATACGCAGCCTGTAACGC
AGTCGGACAAATGTCTACCGATTTTGCACCAACGTTCGAAAGAAAATCCACGACAAAGTTATCCCGGGTTTTGCTGATGG
TGCTCGATGACAAATGCCAATCCAAGAGTTTCAAGGCTCATGCTGGTGGCGCACTTGTCAACTTTAGCGAGGATTGCCCCAAG
AACATTCTACGCCTTCGC

>CL1497contig1|40s ribosomal protein s6-like

CGGCCGGGATATACACGGGTAGTGGCAGCGTTTAGATCATCTAACGATGAAGCTCAACGTGTCCTTCCCGGCAACGGGAT
GCCAGAACTATTGGAAATTTGTCGACGAGCACAAGCTCCGCATGTTCTACGACAAGCGAATGGGTGCCGAGGTCTCCGCC
GATCCTCTAGGTGACGAATGGAAAGGCTACGTCGTCCGCGTCGCCGAGGCAACGACAAACAAGGCTTCCCCATGAAACA
GGGCGTCTCACATCAGGACGTGTACGACTTCTCCTTTCCAAGGGGCAATTCGTGCTACAGACCCCGGCGCACCGGAGAAC
GTAAGAGGAAATCCGTTTCGGGATGCATCGTCGATGCCAATCTCTCGTTTTTGGCACTCGTCATTATAAAGAAGGGAGAA
CAGGAAATTCCTGGACTCAGATCAAAACCTCCCCCGTCTTTGGGACCGAAAAGAGTCGGAAGGATTGTAAGCTTTT
CAACCTTACGAAGGACGACGACCCGCGTGCATTCTGTTGTAAGCGCCCTGTCCAAAAAGAGGGAAAGAAAGAAAGTTGA

mmc4.txt

AGGCGCCGAAAAATTC AACGTCTCATCACGCCTTTGACTTTGCAACGCAAAAGGCATCGCATTGCCTTGAAGAAACGTCTG
TGCTTAGCACGCAAAAGAACAGGCTGCCGATTACGCCAACTTCTCGCTCAACGCCAGAAAGGAAGCCAAGGCTAAGAGGAA
GGAAGAACTCAAACGGAACGCGAGCGCTCCATGCGCGATTCTAAATCATCCAGCCACTCGAACACTCTCACGGCCGCTA
AATAAACGCGTGAAAACATGAATTTTCCATCTGTTCCATCATTCTTGTGTACTGTTTGAGCATTAAGAGAAAATCTTTC
ATTCGAAAATGAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG

>CL1498Contig1|cytochrome c subunit

GAGTGCCTTCTGGGAAAGACAGAAGAGCCGTAGCAGAGCAGAAGAAGCAGAGAGCAGCCAGATACAAATTTTGTTCGCAA
AATGGCCTCGTTGTGCAGACGAGTGATTTTCCAAGCAATTCTGTCGCCGCTCCACTGCAGCGCAGTGACGTCTGCAAGAA
AAACGCTTCCGGACCCCTCTGGAGTTGGCAACTGGCATTGAGAAACGCGAACTTTTAGCTATTCAAGCCGGCAACGATGAT
CCCTTCAACCTGAGAACGATCAAGCACGCCGCTGGCACAAAAGAAGATCCCAATCTCGTTCCAGCGCCTTTGACAGCCG
AATGGTCGGCTGCGTTTGCAGGAAGACTCAACAAGCATAACTTGGATGTGGCTGCACGAAGGATCCCCGAGACGTTGCG
AGTGGCGCCAATGGTACAAATTGATCAAGAAACCTCCAGTATAAAAAACTGTTATCGCGCGCGAGCTAGTCGATTATTT
GAAACAGTTTAATAGAAAAATTTGTTACAATAACGCGAACGTCGAGACTTGAGAAAGAGAAAAAGAGAGAGACGGAGGA
TAAAAAAGGAAAGAGGGTGCTGGATTAATAAAAAATCATATCCAATTTCCCGTTCCGGAATCCTTTGGTCGTTATTTGC
CTTTCCACGAGCAGATTTTATTCTCTGTGTCAATGCCTCAATGTAAATACTATAAGCTGTTTCTTAAATTCTGAATAAAC
GAGAAAAACAAACGTCAAGCACATTACGATATCCAGGCAACCGAATTAATGGCAAGTTATTGAAAATCAACTCTGAACGTC
CCTCAACTCTTACGACACTAAAGTTGCAACGTTGTAGCCCATGAAAATTTTGTACCGATTTTGTGTTCCGATCCTAA
AAAAATATCGATTTTCAATCTTTGCGTGTATGAAAAATATTTACTGGACTTCGCGTCAGTTTTGTTTTCTTTATCATTTA
TTTTTCGAAGTCTGTTACGCGAATCTTGCGCCGAA

>CL1499Contig1|short branched chain specific acyl- mitochondrial

AGAAGGAAGGGAAGATCGACGACACGATCCTCAAAATGTTGTTGATAATGGGCTCATGGGGGTAGAAATTCCTGCAGAT
TATGGTGGCACAGGCAGCAATTTTATGACGACAATATTGACAGTCGAGGAAATAGCTAAAGTCGATGGTGCAGTCGCTGC
GCTTGTGACATTTACAAACACCCTGGTCAATTCGTTAATCATAAAAATAGGCAACGAAGAACAGAAGGCTAAGTTTTTAC
CGAAACTTGCTGGGAACTACGCCGGAAGTTTTTGCCTGACCGAACCGGGCGCAGGCTCGGACGCTTTTTCTGTTGAAAACC
GAGGCCAAGAAGGACGGTTCCGATTATGTGATCAACGGAACATAAATGTGGATCTCAATTTCTGATATTGCGGGCGTTTT
CCTAGTCTTTGCCAACGCGAATCCTTCGGCGGGTTATCGGGGAATTTCAACATTTTTCTGGAGCGGGATACGCCAGGAT
TGACCGTGGCCAAGCCCGAAGACAAATTTGGGAATAAAAGCGTCCGGAACCTGCATGGTTCACTTCGAAAACGTTAGAGTT
CCCGAGTCTAATCTACTCGGCGAGTTTGGACACGGTTATAAATATGCAGCTGGATTTTTGAACGAAGGAAGAGTCGGCAT
AGGGGCGCAAAATGATTGGAATTGCCAGGGTTGCCTGGATGCAACGATCCCTTACACCCTCGAGCGCAACAGTTCCGGC
AGGACATTTTTTCTGTTCCAGTCCATGCAACATCAAATCGCTCAAGTCGTACGGAGCTCGAGAGCGCACGATTGCTGGTT
TATAACGACGCGAGACTGGTCGACGCGAAACAAGACTTTTTGCAAGCTGCTGCCATGGCTAAGCTCGTTGCTTCAGAAAC
GGCTCTCAAAGTGACAGCGAAATGCATTGATTTTATGGGAGGAGTTGGATTCATACGGACTTTCCCAAGAGAAATTTCT
TCCGAGACTGCAAAATTTGGAACAATTTACGAAGGAACGAGTAACATGCAACTGTGACGATAGCCAAATGTATTAGAAAG
AAGTACTCAACGTGATGTGAATTTTGGAGCTGTGACAACGAATCTTCCACGCATTCCAACAAATTGCTCGTGTTTTAT
TGATCATATATTTTATGAGTACAATTTTACTCTGCAATGAAAATTATAT

>CL1500Contig1|dihydrolipoyllysine-residue acetyltransferase component of
pyruvate dehydrogenase mitochondrial-like

TGTTACCATCACAGTTTCAAACCTTGGGAATGTTTGGGATCAAAAACCTTTTCGGCCATAATCAATCCACCCCAATCGATCA
TTCTCGCTGTTGGTGGAACTGAGACGAGGCTCATACCAGCCGATAATGAGAAAGGATTACGACTGCCCAATTTATGAGC
GTAACGCGAGCTTGGATCATCGTACTGTGACGGTGCCGTTGGAGCTCAATGGCTCGCAGCCTTTAAGAGTCTCCTCGA
GAACCCCAACGACCATGTTGTTATAAGTTCTGTAGGACCGATGGAAGAAAGAAAAGAGAAAGGGTGAAAATGAGCCAAATTA
GTACAATCGATTCTCGTGTCAATTGGACACCGCAAGGCGGCACTGTGACGAGGATCGTCCTTCGATAGCGACACGATAAAT
TTGCGAAACGCTGTTAATAAATCGATTGCTGCCGATGAAAAATTCGTAACCTGCCGTTTTACGGGTTTTAATTTGCGTGGGT
TATGGCTTCTCTTCTTCGATCTGATGATCAATAATATTTTAAATAGAGAAAATAATGAATCAACTTTTCAATCCACG
GCTCTTCGATCGCGAGAGTTGATTTCCGGGTTTGTGGCCATAATCGATACTCGTCAAACCTCATGAATCATTTTCAATGAT
TTCCGTCAACAAAATCAACAAGAATAACAAGGTGGCCCGAATCATAACGAAATATTGCAATATCCATGGTTAGAAAAATA
TATGTTCCCGGAGAAACAATGTCCGAACCATGTGGTTTGTAAAACACGAATAATTAATATATTAATAATTATGTCATCAA
GACACTCGCGTCTTTTGTAAATCGATCCAGATCGTTATTCACCATATCGATTCACTCGATCGTCCGATCTGTACATAAT
ACACGAATCTGTGAAATGTTTTATGCGCCGAATAAATAATTGTTACGATAATCGCGCATCGGTATCGGAGAAAATGTAAT
TGCACGTTGTTATTAGTTAACGAGGTTGAGAGAACTTGCTGCGACTCAATGTGCGCGGATCGAAT

>CL1502-bisContig1|60s ribosomal protein l7-like

GACCTTGGCGTCACTCAGTAAGTGCGTGAACCTCGGTTCCGAGCTTCTTTTACCAGACGCAAGAATGGCGGACGCAAAAA
AGAAGGAAGCTGCGCCTCCCACGAAATTTGCCAGCAGTACCCGAATCTGTACTGAAAAGGAGGAAGCGACGTGACACCGCC
AAGGCTGCACGGAGTACAAGTTTCCATCAAGCAACGTGCCGCTCATTATAAGAAGCGGAAAGAAATCTTCAAGCGTGCTG
AGCAATACGTCAAAGAGTACCGGACAAAGGAACGCGATGAAATTCGCTTAAAGAGACAAGCGAAGAATCGCGGTAACATAC
TACATTCCGGGTGAGGCGAGGCTCGCATTCTGTCATCCGATTCTGTTGTTAATCAAATCGCCCCGAAGCCCCGTAAGT
TCTTCAGTTGTTACAGCTGAAACAAATCAACAATGGCGTGTTCTGTCAGTTGAACAAGGCGACAATCAACATGCTTCGCA
TCGTGAGCCTTACATCACTTGGGGATATCCAAACTTGAAGTCGATTGCGGAGTTGATCTACAAACGTGGATTGCGCAAAA
GTCGACCGTCAACGCATACCCATTACGAGCAATACGATCGTTGAGCGTAAACTCGGGCGTTCCGGAATCATCTGTACCGA
AGACTTGATCCACGAAATTTTACCCTTGGACCAAGTTCAAGTACGCCAGCAACTTCTCTGGCCGTTCAAGCTCAACA
CCCCGAACGGTGGATGGCGCAAGAAGACCAATCACTACGTCGAGGTTGGTGACTTCGTAATCGTGAAGACAAAAATCA
ACGAGCTTCTCAGGCGAATGGTTTATGATTATACGAACTTGAAAAATAAAAAAACTTACCATCCGAAAAAAAAAAAAAAAA
AAAAAAAAAAAAACATGTCGGCCG

>CL15028Contig1|chitinase-like protein idgf4-like

GGCATTAAAACTTTTGGTTACGGAAATTC AAGGACGACAAAGAGACCGAACATCGCGAAGGTTTTACCGCTCTTGTTTCG
GATCTCAAAATTC AACTAAGATCCAGAAACAAGGCACCTACGCTTGACCATTTTACCTCATGTCAACGCCACCGTTTA
CTACGAGCCGAAAATTTTGGCAGCGAATATCGCGCTGTTCTCATCTCATGACTTTTCGATCAGAAAACCTCGACGCGTAATC
CCAAGGAAGCTGATTATTCGGGCCCAATTTATGAGAGCTACGACGCGTTGCTCAGGAGAATGTCGATTTTCCGTCAGA

mmc4.txt

TACTGGCTCGAGCATGGAAGTCCAGGTGGAAAAATCGTCGTTGGAATTCAGCTTTTGCACGCACTGGAAGTTGACCTC
GGAGAGTCAAATTTAGGAGTGCCACCGATAGTCGCGGACGGTCCGGGACAGGAGGGGACCGCACACAGATCCCAGGA
TTTTTGCCTACGGTGAAGTTTGCCTGCGTTTACCAGAAAGCGTAGTTGGTCTGTCCGAAGGGTTACGACCTTCCAAAA
TCGGAAGTTACGCGTATCAGTCGTACAATTCGGAGACGGGAGCTGATGGCTATTTGGATCAGTTACGAGGAT

>CL15065contig1|protein carp-like protein

GTATTCAAAAGATGGGCACAGGGCTTTTATTTTCAGCGCGGAGGAACCAACTGCTCTTGTTGAGACAGAGGGTGGACCTTG
TGCGGTGATTGCACCCGTGCAAGCATTATATTGAAGCAGCTGTTGTTAGAGAGTCAACCGGATGTTTGGGCATCCGTCG
ATACGAAAAACAGGATAGACTATTAGCCAGAGCGGCCACCGAAATAATATCTCAATCGGCAATGCGACGGAACCCACT
TACCGCATTTGTTATGTGGAAGAAACGCCAACCGGTGCGAAGCGCTCGACCCTCACCCCCCGCAATCTCATGGAAAT
AGTCAAGTCCGGCAAGAGTCTGACGCTTCGACTCTTGATTCTGCTCATGCGGAGGAACATAGCAACGCCAAGTTGAGCCC
AGAGAAAGTCCAACCGGCCCTTGATTGCGAATCATTTCACTCGAGATTGAGAATACTCGAGGTGCGAACACGGCACAAG
CTGAAAAAGTATTTTCATGGACCGGATTGAAATGCTTAAAGAGCCATTGCGGTGTTCTCTTGCTTCTGTATACCGTTGTGTGT
ACAAAGGATATCAGGAATGCGCTCAGAGATATCTGATCCGACGGAACCT

>CL1509contig1|fatty acyl- reductase 1-like

TGTACGTTTCGACTGCATATTTCCAATTGTTGGAACAAAGTTATACTAGAAAAATTTTACGAACCGCCAGTCGACGAGGAAG
GTGCGAGGAAGATAATCGCCGAGATTTGGCTTCTAAAGAAGGCCTGAGCGAAGCAGAGATCAAACGAATTGTTGGGCAC
TTTCCAAATTCGTAATGTTTACAAAAGCAACGGCCGAAGGTTTGGTGAACAAATGGGAAAAAGAAGTCTCGTTTCCGT
GCACCATCTACCGTCCGTCGATCGTGACATCCTCGTGGAAAGAACCTTTGCAAGCTGGTGGGTAACCTCAATGGACCA
GCTGTTTATCTCGGATATGCATTAGGTATATACCGTGTTCGTACCTTTTAGACTGTGTTATGGATTTTATCCCGGTT
GATATGTCGATCAATTCGATGATCGCTTCACTGTGGGACATCACCAAAAAATCGACCAGCAAAATCCGAGCTTTTGTGTA
CAACTACGGAAGCAGCAGTCTGAAGCCAATGACTGTAAGAAAAATCAAGAAATTTGTGCTTCCGAATGATCCTTATGTGC
ATCTACCTTCGATACACACTGTCTGGCCACAGTCGGTTATATTGACCGAATGCAATACCATTTTTTACTTCTCAACATT
TTCTTCCATTACATACCAGCGTTGATGGTTCGATGGCTATTTAACGTTGACTGGAAAAAAGAATGGCTATTGCTGCCTA
CAAAAAAGGAATGTTGAATTTGACGCGTTGCTGGAATTCGCACACGGTGACTGGAGAATAGAGGTTACGGCTATTACA
ACGCGGTAGATCGAATGTCGCGACTGATCGTCGATTATCAACTGTGACGTGAGGCGTTAGACTGGGCAAAATTAAGT
GAAACCTACTGGGAAGGACTTCGTGTATATCTTCTCAAAGATCCTCTATCAACGGTACCAGAGGCTACCAAGAATTTGAG
AACTTTTGATGTACCAGAGAATCTTGAGGTACACTGTGATAGCGATCTTTCATATTTCTTCTTCCATCATTGGAAT
CCTGTAAATTCGATTCATTGCAAAAAATTACATGCAATTTTTGTTTTCTTGTATAATTTTATTTCTGGCTCGCCTGGGG
ATTCTAAATATTTGGAGAACTCAAAGTTAAATGAGTTAATAACGTGCAACATATACACTGCTTCAATTATCTTGTACCAC
TTGGGAGCCCTTAACGAGTGATAAACGACGATTCTTAGAATTAAGAAAAAACAACGATTCTCTCATCGAATTGTACT
CCATGAAAAATGAAGTTTTTTTAGACAATCTGTAGAAGTAGAGTATCTCGAAGAAATAATGCGGAGCAATCGAAAAATG
CGCCGAATCGAAAAAGTTATCGGAACGTGCTTCGCGCTTCAATTTCACTCAACGAATTATTATGCAACAAGTTAACTAC
TCGCATTTTACCTTTTCAAACTTCGTGCCGATCGTGGGATATGGATTCAAAATTAATCAAAACGGTGTAATTTTTTA
CAAACGATTGTTACGTTCTTGTGCTCTCGAAAACGATTTTATGGCAATACGACAATAAAAACTTTGTAACGTAACGTAAC
CTTGATTTTTTCAAACGTTTCGACATTACAGTGCGAATGGAATATTTGATGAGCGTAATAAATTGTG

>CL15125contig1|fatty-acid amide hydrolase 2

TGTTGGGAGCCGAGCTTCGTTGATCGGCATAGGTTCCGATGTCGCCGTTCAATCAGAATTCGCGGACTCTTTAACGGA
GTTTTCGGCATAAACCGAGTCCCGGCATCGTCCCATCGACGACACAATCCGATGAGCGACGACGAGACCTTTACAA
GTATCTGACGATCGGTCCGATGGGCGGATACGTCCAAGATCTCGTTATGGCGATGCGAATAATGGCGGGCGGCGAAAGT
CGAAAAATCTTCGACTCGACGAGGGCGTCGACTTGAAAAAATTGCGAGTTTTTTATAGGGAAGACGCTGGAAAAATCGTT
TGCGGTATCGTCCGTTGATACGAGCACGAGGACCGTCATCAAAAGAGCGGTGACGCATTTGAAAACCTTGCGTCGGCCACA
TCCAAGAGGCACCGGTGGGATCGCTGACCGAGACTCTGGAATGACGGTTGCCATGTTCTTTGTATAGGAAAAATGCC
CGCTCCTCGTCGATCCCCA

>CL1513contig1|low quality protein: nidogen-2-like

GTTTTCAAATTTGGCCCCATACCCGACGGCGAGAATATCAGAACCCCGACGACGTGCAAGTTCTTAACGAATTGTTTAC
AGACTCGAGCATGCAGAACGGAGAGACTTGTTCCTCCGGAGCAACCAGTTGCCACAGCAAAGCAAATGCATCGATTACG
AGGTTGGCTATTGCTGCGAGTGTAACCTGGATTTTTTGGAAATGGAAATCTTGTGAGCCAAACGATTTGCCGCTCCGA
GTGATCGGACGAATCGAAGGAAAAATTGAACGGGGAAGAAATTCACCGGAGAGATCTTCAGTGCTACGTGCAAAACCAAGA
TGGAAGAATTTACACAGCGATCTCGAGAGTCTTCAGACGATTTGGCCGAGCTTCCAGTTGCTGGGACCGCTCGGCGGCA
TCATTGGTTGGCTTTTTCGCTAAACCGATTGGCTCAACGAAAAATGGTTATCAATTGACCGGTGGATTATTGAATCACAG
ACCGAGCTCGTTTTTGAACGACGGGCGATCGAGTTACGATAAAAAAGTATTTATCTGGGTCTCGATGTCTTGGGCAATT
GAAAAATGAACGCCGAGATCCAAGGATCGATTCCGAAACTGAGTTACGACGCGAAAGTCGATTACGGGGACACGACGAAT
TGACACGAAAAAGTCAAGCAGGAACGATCCGATCGCACAGCACGAGATCGTACAAGCTCGTCGGGGATGCCAATACCGAA
TATCCCTTCACGAGGACCAAACTATCACTTACAACGACTGTCTTACGACAAGGAAAAACGCCGAGGAAGACACGACGCG
ATTGAAATTTCTACGGGGCGTGACAACCTTACGAATCTACCGAAGGAATTATCCGATTTGCAATGAACACCAAAATCGCTC
CTCTCGAGGAAGAAGATCCTTGTATTTCGAGGACGTGCCTCCTGCGGGGTCCACAGCTCGTGCAATTATCGATGGAGATGAT
TTCAAATGTGTCTGCAATCCAGTTTCCAATATCTCTCGAAGAAGACAACACAGCGAATTGCGTGGATGTCAACGAATG
CACAGCCGAGTTACATGTGCTACCCGATGCCAATGTGTCAACAACGAGGGTAGTCACACCTGCCACTGCCGACAG
GATTCAAGTGGCGATGGAAGAATATGCGAGAGACTCCAACTTGCAGGATACCCGCTGTGGAAATTACGAAGAGTGCACG
ATGATCAACGAACAGCCGTTGCTCGTGCCTTCTGGATTGATGAATACCCAGAGAGGATGCTATCCCGTTCAAGGTC
TGCCCAAGCTGCTTGAATCTTGGCAACAAATTTGTCACCTTACCGAGGTTGATTTACGATGATCGACAGGACGACG
TTTGTGTCTGCCATCCAGGATACATCGGCGATGGATACACTTGCCACCCGGAACCGNGTCGACGACCCACGAGAGTTT
CTCCACCGACGTCCTCGATGTCACGATGGCATGTGCTGGTGTCCACGTGGTTGGGAATACCGCGACGATATGTGCGT

>CL15150contig1

GCCCCACAGAATTGAAAAATGAAGGCTTCAGGCTTTTGCGGGATATCGTCTTGAATCGAAATTTGTTGGAAGATAACGA
AACAGCGGTGAAGGTTACGATTTGAATGAGATGATGCGAACTGGACGAGTAGTTGCTTGATCCATATTACCGATGACT
ACACGGCTGAGACCATTTTAAATGGCTGCTATAAACTCAGTGAACTTTGAACCTCCACTACACGGGACGAGAGGATAAC
AAAACTTGTGGAGATGAATTCACACCAGTTTATGGAACGTTCACTTACGTTGGTGAGGAACCTGAGAAATCGATCGTAC

mmc4.txt

GTAAATGGAGGCACATTTTCGAAAACATTGTGAAAATGACTTCGACATTCACAATCCTCAAGGGCTTCCTTCCTGTACG
AATGATGTAGAAGGTAGCGAATCATCCACCACCGACATGCACCTTCGAAAGATGATATTGCACAGTTTCATCCAGGAGCG
GCAAGAAAGATTTCGACGGAATCCCTATATCGGATTCTCGGACAGAACTTTCTGAGCGCGATTGAAGACAATTTGAACG
GCGTCACTACCCCTGCAGACTCAGACGACAAGCCAGCTCCTCCCTACATGCCATTATGAATGTCTTTGATTGTGTTTAC
AGTTACGGTTAACTTCTTA

>CL15186Contig1|glutamate synthase

TGACAAAAGACTCTCTTTGTTTTCTACACCCTCGAGACCATCAATATGCTCCTAGTGCCAATGCTCCAGACAAAGAAAG
AAGCTCTTGGATCCATGGGCAATGATGCACCTTTGGCGTGCTTGTACAGTTTCAACCATTGATATACGATTACTTCAAG
CAGCTATTTGCCAGGTAACGAATCCACCGATCGATCCGTTCCGAGAAAAGATCGTAATGTCTGTTGCTGTGTCCAATTGG
ACCAGAGAGCAATATCCTTGAGCCGAACGAGCTTCAAGTGCATCGATTGTTCTCCCGCATCCGATAGTATCCCTCAGAG
ATCTCGAAGTCATAAAACAGACGAGCTATCGAGGCTGGAAGACAAAGGTCATTGACATCACTTATCCAGTGTCTGAAGGA
CCATCGGGCTTGGTCGACGCATTGAATCGCATCGATAACGAAGCCAACAAGGCAGCCAGGGAGGTCTGATCAAATTTTAG
TCTCTCCGATCGNAAGCCGGAGCTGAAAGGGTCCCTGTGAGCATCATGCTTGTCTGGCTCAGTACATCACTTCTCA

>CL1518Contig1|cytochrome b-c1 complex subunit mitochondrial

AATTTGCGGAGGTTTCGTTCCCGAGGGGCTGTTATTTTTTAAGACCCCGTATTTAAATATCGTTGGAAAAAAATGAACGT
GATTGCGAAGTCGGCGAATATAGCGCCGTTTGGCCGGGCCACGGTGCCGTAGTTACGAACGGAGTTGACACAGTTGCTG
GAGCAAGTAAGGGAAATAAAGAAAAAGTCGTTGTGCCACCTACAGTCGCCCATTGTTCTTCCCTGGTCGCTCAACCAAAT
CTGCCCTCGAGGATCAATTCGATTTTGTCTGGACCCATAGCGAGCAGCAGGTCTCCAGACACGATTGGCACATACGGA
CGTTCGAGTGCCCGATTTTTCTTACTATCGCAGAGATGTTAACCAGGACCCGACCACAAAGTCTCGCGAACGAGTGGCGG
AGAAGCAAAACTTTTTCCACCTCGTAGCGGCCGTACCGGAGTGATGGCAGCTTATATCGCGAAAGCAAGTCCACAGTA
TGGTGGGCATGTTGGCAGCGTCGAAGGATGTCTTGGCTGTTTCCAAGATCGAGGTGCACTTGGCCAAGATCCCTGAGGGA
CAGAGCATGGTCTTCAAGTGGCGTGGAAAACCGCTCTTCATTAGACACCGAGGTGCAAAGGAAGTGGCTAGAGAGGAGGC
GGTGAATCTTGCCGATCTTCGCGATCCTGAGCCCGATTACGCGCGCGTCAAGCGTTCGAATGGCTCATCGTAATCGGTG
TTTGCACCTCATTTGGGTTGTGTGCCGATTGCGAACGCCGCTGACTTTGGTGGATACTACTGCCCGTGTACCGTTTCGAT
TACGATGCAAGCGGAAGAATAAGGAAGGGACCGGCCGCTCAATCTCGAAGTACCGGCGTACGAGTTTCGTCGAGAACAC
GGTAGTTGTCGTTAACTTTCTCCTTTCCGACTCTCCGACCCGAGGATAAACGTAAGTATAGAGAAGGCGAAAGA
GGATGAAAACATGATTTAATAACAGCAACATCGTTAACGTCGAATTACATCCTCGACGAGCGTTCATTTTATTTCTTAAT
ACACGTTGATCAACCGTGACGACAACGAGTTTCAGTGGGAAAGAGATCCTACGGATAATGCCGTTGCTCCGTTCTCAGAT
TTCGACTCGATTTCAATCCGCGCACCTCCAACAGCAGGATCATGAATATAATAAAGAAAAACTCATCGTAAACGCTGC
TGATAAATTGTTTCAAGTTGTAACAGTCACTAGAATAAATTGAAATTATACGAGAACACCAT

>CL1519Contig1|phosphoglycerate kinase-like

TCGTGCTGCTCTCGACACGGTCAAATATGCTCTGGAATAAAGCAAAATCCATCGTCCTCATGTCCCATTGTTGGGACG
ACCGGACGGTTCGAAAACTTGAATACACGATGAAGCCCGTTGCGGACGAGCTGAAAAATCTGTTGGGCAAGGAAATCC
AGTTTTTGGACGACTGCGTCGGCCAGCCGTGGAAGCCGCTTGCAGCAGATCCCGCTCCAGGAACGATAATTCTTTGGAG
AATCTTCGGTTCACGTCGAGGAGGAAGGCAAGGGCGTCGCGCGGACGGCAGCAAAATCAAGGCGGACAAGGACAAGGT
CACGGAATTCGGAGCGTCGCTCAGGAAGCTCGGCGACGTTTANATAAACGATGCGTTCGGCACCGCCCATCGCGCGCAC
AGCTCCATGATGGGCGACGTTTCGACGTCGAGCCGAGCGGCTTCTCTTGAATAAAGAAATTGGAATATTTTGCCAAAGC
TCTGAACAATCTGACCGTCCGTTCTGGCCATTCTTGGCGGCGCCAAAGTCGCCGACAAATTCATTGATCAACAAC
TTTTGGACAAGGTCAACGAAATGATCATCGGCGGTGGAATGGCCTACACTTCTCAAGGTACCAAAGACATGAAGATC
GGCAACTCGTTGTTGACGAGGAAGGCGAAAGATCGTGAAAGATTTGGTGGAGAAGGCAACGAAGAACAACGTGCAGAT
TCATCTGCCGTTGATTTCTGTCACCTGCCGACAAATTCGCCGAAAACGCAGCAGTCCGCGAGCGCCGACGTTGCTTCCGGCA
TTCCCGACGGATGGATGGGCCTCGACGTCGGACCCAAAGTCCAGCGAATTGTTGCCGGAACCGATAAAACGAGCAAAAGTA
ATAATCTGGAACGGCCCGCGGTTGTTTTGAGTTGCAAAATTTAGCAAAAGGAACGAAAGCTTAATGGACGGCGCTCGT
GGAAGCAAGACCCGCGAGCATCAGCATCTCGGAGCGGAGACACAGCGACTTGGCGGCCAAATGGAAACCGGAGG
ATAAAGTGAGCCACGTGAGCACGGGCGGTGGGGCGAGTTTGGAGTTGGCTGGAAGGAAAGTATTGCCAGGCGTCGATG
CTTTGTGCGCGTCTTCTAGAACTTCGTAATCACGTACACAAACGATGCACAAGATCGTTCCGCGAAACGAGCGCAACGA
TAGACCGGAAGCGCGAAAAATTGCGGCACAAATTCATGAACAATAGTCAAGCCCTCCAGAAGCGCGAATCTATTTTTTCC
CCGAATTCGAGACTCGGCGAGTCGCTCAAATTCGAGACGACGATCAACGGTTTAAAGTATACGTATATTTTATTTTAT
ATACATACAGAACTACTTCCGGCTTAACGAATCCATCGTTCAAATAACAAGAGCATCAAGTTTGAACGTTGGAAT
CCAACGAAATCTCTTTTTTCTGAGCAGAGTTGAAAAAATCGAAAAATCGCGATAATTTTCAAATTAATAAATAAT
ACGAAAAGGAAATGGAATTGTTCTGTTCAATTTGGACGTTGCAAACTTCTGGCTCATGCAAAAGCATGACGGTGAAGTTG
TAACGTTGGAATCCAACGAAATTCCTTTTTCCCGATCAGAATTGAAAAACTCGAAAAATCGTAGATTA

>CL15233Contig1|Phosphoglucomutase [Camponotus floridanus]

ATTCGAATGGCTGCTGCCAATGGGGTGGGCAAGCTGATCGTTGGACAGAATGGAATTTCTCGACTCCGGCTGTCTCGAC
AATAATACGAAAGTACAACTCTCGGTGGAATAGTTTTTGACAGCTTCGCACAATCCTGGCGGGCCGATGCCGATTTTCG
GGATCAAATACAATTGCGAAAACGGTGGTCCAGCTCCGACCACGTGACCAACAAGATTACGATATAACGACGTGCATC
AAGCAGTACAAAATCGTGCCTGGTATCGACGTCGACATCGGCAAAAATACAAACGAATACATTGAGTGTGCATGGAAAAT
CGTTCGTGTTGACGTCGTCGACTCGGTCAATGACTACGTCGCGCTCATGAAAGAAATATTGATTTTCGAGAGCATCAAA
AAAGTTGCTGCAAGGAAGTAACGACCGAGCAAAATTCGAGATTCTCATCGACGCCATGAACGGAGTTACCGGGCCCTACG
TGAAACGTATTTTTGGCCAGGAACCTCGGCTCGATGAGAAGAGCCTCGTGCATTCGACTCCCTCGAAGATTTCCGGAGG
CTCCATCCGATCCGAATCTCACTACGTCGCGATCTCGTAAATACCGTGAAGAACGGTATTACGATCTTGGCGC

>CL15266Contig1|hypothetical protein EAI_11330 [Harpegnathos saltator]

AGATTTCTATGGTTCGCGTTTGTGCTCTCGGGCGCGGCTTCGACGACGATGCGCTAATTTTAAATGGAAAAATTTGAAAA
CACGTGGCTTTTATACGGGCGATCGTTACGGCGGACTCGATTTGGAGCATGCGAAACTAGCGTTTACGCGATGGCGCGA
TTTCACGCTCTCGGAATAGCAATTAACGAAGCGGCCAGAATTTTTCAAATTTTAAAGTTTCGCTCGAAATGCTTGGGA
AATGAAAACCCCGATGAGTGGAAGACGCCATGGTGAATGTACAAAAACATCAAAGAGGATCGAGTCTCGCTGAAC
ATTACGACAAATGTTTACAAGCTTTTGAAGCCGAGCTGGAAGAACGAGTTGGTTTGGCCCGCGGTCGAGCCCTGGGC
GACGATAATCCACGCCGACTTTTGGGTCAACAACATTATGTTCCACAGCGACGAAAAAACCAAAACCCGACGACGTCAA

mmc4.txt

ATTCATCGATTTTCAAAATTATTTGTTTCTCAGCCCGACGCGAGAACTTTCTTTTTTCTCGGCGCGGGCGTTCACTACA
 GTGTAGGAATCGACGACCAATATTTTATCGATCATTACCACGAACTTTCTGTCGAGCGATTGAGGCTCATGGGATGC
 GACGCGACGCCTTACAGACGTGAT
 >CL1526Contig1|pyruvate dehydrogenase e1 component subunit mitochondrial-like
 AATTTCTCGATGCAAGCGATAGATCAGATAATAAATTACAGCGCAAAGACATTTTACATGTCGGCTGGAAGAGTGAACGT
 GCCGATAGTATTTCTGTTGGCCAAATGGAGCAGCGCGGGTGTGGGTGCTCAGCATTGCGAGTGTTCGGAGCCTGGTACA
 GTCATTGTCCAGGATTGAAAGTGGTTTACCTTACACGAGCGAAGATGCTAAAGGGTGTGAAAGCAGCGATACGCGAT
 CCGGACCCTGTAGTGGTATTGAAAAACGAATTGCTGTACGGTGTCCAATATCCGGTTTCCGACGAAGTACTCTCAAAGGA
 TTTCTGCTTACCATTGGCAAAGCAAAAATCGAACGCGCCGGCAAACACGTGACTATTGTCTCACATTTCAAAGGAGTGG
 AACAGGCGCTAGAGGCGGCCAACGAGTTAGCCGGTAAAGGTATCGAGGCCGAAGTCATCAATCTTCTGTTCACTCAGGCCT
 CTCGACACCGAAACCATTTTGAATCGGTTGTTAAACTCATCATATTATTACGGTCTGAACAGGGCTGGCCCCAGTCCGG
 CATCGGCGCTGAAATTTGCGCCAGAATCATGGAAGTGAGGCTTTCTACCACCTGGACGCACCGGTAATCCGTGTAACGG
 GCGTGGACACACCAATGCCATACAGAAAAGCTTAGAAGCAGTTGCTTTGCCAAGAAAGGAAGATATCGTGATGGCCGTG
 AATAAAATTTGGGGTATCGCAGTAGCCAAATGAAATAACAATTAAGAAATGTGTACATGCTGGACACTAGAAAAACCGGA
 TATAACGCCGAATCATCAAAAATATCTCTCCGTGCGCTTGTATTCCCTGCGGTGTCGTATTTTTCTGGTCTTTGAAA
 GTGAACAAAAAGAAGAACGAAAAAAGCGAAGAAAACCTACCTACCTAAAAAAATTG
 >CL1537Contig1|probable phosphoserine aminotransferase-like
 ACTTTGCAAGCGGATCGCTACAGATCGATTTGACCACTCGAACAAACATGAGCAACACCGGTGAGGTTATCAACTTCGGC
 GCTGGACCGGCCAACTTCCCAAGAGGTTCTTAAACAAGTCCAGGACGAGTTGCTGGCTTATGCGAACACGAAGATAAG
 CGTTTCCGAATTGAGTCAGATCTCTGATTTTGGCAAAATCGTCAAGATGCACAAGCAAGCGTGCAGCGTTGTATG
 ACATTTCAAAGCAACTACAAAATTTTATTCCTCCAAGGAGGAGGTACAGGATGTTTCTGTTTCACTCCCTTTGAATCTTATG
 AGCAAACTGGCTCAGCTGATTACATCGTAACGGGATCGTGGTGGCCAAAGCAGCGAAGGAGGCCGCGAAAAATATGGGA
 AAAAGTTAACATCGTGTGCTTAAAGCAAAGCAAATACATTGATATACCCGAAGCCTCCACCTGGAATCTCAGTCTGACG
 CATCTTACGTTTATTATTGTGCCAACGAGACTGTTTATGGAATCGAATTCGACTACGTACCTGAAACGAACGGTGTCCCT
 CTGGTCTGATGACATGCTGCGAACGTTCTCACTCGGAAAGTCGACATTTCAAATTCGCTGTGATATTTGCCGGAGCTCA
 GAAAAATATCGGCCCATCGGCGTTACGTTGGTGATCGTTCCGGACGACGTTCTTGCAATGCAATGCCAACTTGTCCAA
 CGGTTTTCGATTTTACTGTATGGCCAATGACAATTCACCTCCACAATACGCCACCAACGTTCCAAATATACGTCTGCGG
 CTGGTTTTCAAATGGATCAAGGCTCACGGTGGTGTGAGGGCATGGAAAACTGGCGATCGCTAAAAGTAAAATATCTAT
 GGAGTTCATTGACGAATCGAAGGTTTACACTTGCCGGT
 >CL1541Contig1|synaptobrevin-like isoform 1
 ACTTCTCGTTTATCCAAGTGCTTACGGCAGCACTGCCATCCAATCTGCTACTTACAGAAACGTCAAAAATCAGTCGCGGT
 CCAACATTTTTTATTCATTTTCCAACATAGTTTTCTCGTAAGTGTTTTTTTTTAAATCTTCGACATATCGCGACGGAACT
 GTTGCTTTGGCCTATATTTCTTGACGATTTTAAATTGCGCAGCAAAATGGACGCAGGTGGATATTCGGAGACGGAGATTT
 GGGAGGTCCCGAACGCCTCAACAGGCCGTCTCGACGAAGAACTCCAACAAACGCAAGCGAAAGTAGACGAAGTCGTTG
 GAATAATGAAAGTGAACGTTGAGAAAGTCATGGAACGCGATCAAAAGTTGTGCGAGCTTGACAACAGAGCAGATGCGTTA
 CAACAGGGCGCAGCTCAGTTGCAACAACAGGCTGGAAAACTTAAGAGAAAATACTGGTGGAAAAATCTTAAATGATGAT
 CATCATCGGCATTATCTGCGTCGTTATATTGATTATTATCATCACTTCCATATTGCCGAGTTTATCGAGTGACGAGCCTA
 CGAAGCCGGTAGAGAGTGGAAAGTGAATGGAAGGATTTGGAGAAGATAAAGGACGAGGACGAGCGTATCGTAGCGC
 CATCGATCGGCAACAAAAACCGCACGTGCCTCAACGGTTCTAATTTTTTCTTGATTTTCATATCCGCCAATTTGAGCCA
 AGTATTTAAAATAAAATAACAAAGACAATAAGAGAATAGTCGTAGGTCCGGACTAGGGAGGGATCGAAAAAAGTTGAAAA
 GATACGCACGATTTAGCGCTCGTTAAAAAAGAACCAAAAGTCAAAAATGAGAATAATTGAAGCGAAAAAGCAGCACAAAT
 ACCGTTTAAAGTTCGAAAAACAATTTAAATAAGCGAAGGGCTAAAAAGTTTTCTTCCGCACTTCGTAACCTTTGTATTTT
 TACACGAGAATCCAGATAAAATTTGCTACTATTATGTTAATAATTAACATATTGTTCTATACGAATGTTGTCAAGGGAATT
 CAGGGCTTGAAAGAAAATAAGAAATGAAAGTTAAAGGACCGTGAACGTCAGTTCA
 >CL1543Contig1|nadh-cytochrome b5 reductase 2-like
 AAATCCTACCACCAAGTACAAATTACCTCTGATCGAAAAAGAAGTGATTAGTCATGACACAAGGAGATTGAGTTTGGCT
 TGCCAGCCCCGATCATGTCTGGGTCTACTGACCGGCCAACACGTTCTTCTGACTGCAACCGTGAATGGCGAAGTCGTG
 ATTCGTGCTTACACTCCAGTTAGCAGCGAAGAGGAACACGGTTTGTGGATTTGGTTGTCAAGGTTTATTTCAAAAACGT
 GCACCGAAATTTCCGGAGGGTGGGAAAATGTTCTCAGCATCTGGAGATGCAAAATCGGAGACGAGCGTATCGTCCGTG
 GACCCAGCGGTGTTTTGGTATACAAAGGTGCTGGCAAATTTCCATAAAGCTGCTTCGCAAGGATCCGCCAATAGAACAC
 GTCGTGAACCAGGCGATTATGATAGCTGGTGGGACAGGAATAACGCCAATGCTCCAGCTTGTCCGAACCATACCAAAGA
 CCCGAACGACCACACGAAAAATGGCTCTCCTTTTCGCGAATCAAACGGAAAAGGACATTTTGTGAGAGAGGAATTGGAGG
 AATTGGCTGCGAAATATCCGGAACAATTGAAATTTGTGGTTCACTCTCGATTGAGCAGCGACACGTGGAAGTACAGCACG
 GGACATGTCAACGGAGAAATGATTGCTCAACACACTTTTCTACCTTCTCCTGAAAACGATCGTTCTCATGTGTGGCCCC
 CCACCGATGATCAATTTTGTCTTGCACTCCTAATCTCGACAAATTTGGGATACGACACGAACTGCGATTGCGGTATTAATC
 TTGCCCACTCAGCAACTAATAATTTTTTTTTTCAAAGTTGAGATATTGAGAAAATCTAAAATTTGTGTGTTCTCGGTG
 CGGAGATTCAAACTTGTTTTTTTTTTAGATTACGGTCAAAGTTGAAATTCATCGAATTTTTTTTTTTGTTAGAATTTGAG
 CAAAGGAGATAAAATTTGTTTTTTCATATAAAGACGGAATAAATCAAAGTTGAAAAGGCAAAAATAGGATTTTTGCCTTTGA
 AGGGAACACCAGGAATAGTCCCTAATTATTGATTGCCAAAAAGAGGATAAAAATCTCATGCGACTGA
 >CL1544Contig1|proteasome subunit alpha type-3
 GGTCTGTTTCATCGTTTCTGTGACAATTGTAATTTGCTTTCGCTATTACGCGCGGATAGCGTATACAATAACAATTAT
 TTTTCTCTTTCTTAATTGAGAGCATTTTTTGAACAATCCCTTCGAGATGAGCTCTATCGGGACTGGGTACGATCTTTC
 GGCATCACAATTTTCCCGGACGGACGGGTTTTCCAAGTGAATATGCACAAAAGCTGTGAAAACAGCGGGACTGTAA
 TTGGGTTGCGAGGCAAAGATGGAGTCGTTTTGCGGTGGAGAACTCATCACATCCAAATTGTACGAACCGGGTGACGAAT
 AAACGCATTTTAAACATCGACCAACACGTAGGAATGGCTGTTTCCGGTCTAATATCCGATTCTCGACAAATCGCCGAAAC
 TGCAAGATCCGAGGCTGCCAGCTATCGAACTCAATACGGCATTGGCATTCCCGTGAATATTTAAACGACCCGGGTGGCAA
 TGTACATGCTAGCTTACTCTACTCTCGGTGAGGCCCTACGGGTGCTCCGTCTTCTCGGCGCTTTGGACGAACCTT
 GAGGGACCGGCCATGTACATGATCGACTCTCAGGAGTCTCGTACGGCTATTACGGATGCGCTATAGGCAAAGCGAAGCA

mmc4.txt

ATCGGCGAAAACTGAGATTGAAAAGCTCAAAGTGGCCGATATGACCTGCAAGGAGTTGGTGAAGGAAGCAGCCCGGATTA
TTTATTTGGTACACGACGAGTTGAAGGACAAACATTCGAATGGAGATGAGCTGGGTTGGTGGCCACACCAAAGGAAAG
CACGAGCGTGTACCGCAAGATGTCAAGGCCGAAGCGGAATCGAAAGCTCGTCAAGCGATGGCTGAGGATCCGACAGCGA
TACGGAAGACATGTGAAATCATTAAGTGGGACAATATTTGATAATTTTATCCGTTACATCAACAATGTCCAAATTTCTAC
TCGAATACCAATCGAGTTGCGTTATTACATAAGTCATTGAATCTTTTTGTCACTGGTAAGATGAACATATTAAGGTA
CATTTTTTCTTTATTTCTTCTATTTCTGTTAGATTCACTGTGACCTCATCATTAGCTCGACGTAACAAAAGCTTCGTTTTTC
CAATTTACTGAGGATTTTCATATCGAAACAGTAACAAAGAAGATTAAGAAAAATCGTCGGTTTTGTTCGAATGACGATAA
TCCTCGGATAACAAGCATAATCTGGATGCACGCTTCACAATTTTTCTCAATTAGTACGAGAAGGCTTTAGGGACTGGCG
GGGCGATACAGAGGCCCTTACACGATGACGCAATATTGTTGAGCATTCTGTTATAAACGTTTCGTTTCAAAAATTTATAAAAA
ATATTCATCTCTCAGTCGAGAAGAATAAAGCGATCGAATTGTTTGCGAA

>CL1547contig1|inositol oxygenase-like

GTTTTATTCTGTTATTCTCGATCCGGAACGTCACATAACTTTTTATTTATTTGCAACCATGTCATCTACACTAGCCTCCCA
GCATGGCCAGACCGTCAGCATACTCGACCCGTCAGAGAAGCTCCGACCGGAGGCGGTTTATGCGGGAAAAATGGAGAGTC
AGTTCAGAAATTAATCCGAAGATCCAACCGACCAATTAAGGAGAGATACAAAGAACTTATCGCGCATGACACCAAT
CAAACGGTTCGATTTTGTGCGATCTCAAATGACCAAGTGGCTAAAATTAATAAATTCAAGATGAGCGTTAAAGATGCACT
CGTCAAACCTTAACGATCTCATCGACGAGAGCGATCCGGATACCAGTATGCCGAACATCGTTACGCTTTTTCAAACCGCCG
AAGCCGTCGCGGAAAAATCATCCCGACTTGGATTGGTTCACCTCGTTGGACTCATACACGATCTTGGCAAAGTGATGGCA
TTTCACGGCGAGCCGCAATGGGCACTGGTTCGGCGATACTTTCCAGTCGGCCTGTTGCCGTGGGGGGGATTCCATCGTC
TACAGGAGCGACGCTTCGACAAAT

>CL15514contig1|vesicle-associated membrane protein 4

GTTCAAAATCCGCGAGGTGACCGACGTGATGCGTGACAATGTACAAAAAGTGATGGAACGCGGCGACCGACTGGAGGATC
TTCAGTTAGCGAGCGATCGGCTGAACATTGCTGGATCAGAAATTCGAAATTCGGCACGAAAAGCACGTTATTTGGCCTGG
TACAGGAACCTCGTAGCAAAATTTACAATCGTAGGGATTATCGTCCTCATTTTTGTATCATCTTGGTTATGATTTATTT
CAAAAGTACTCCTGAACATGGAGATGACGAGCTTCAGCAGGTTTGCAGCGTTGCACTTCACCACAACACGAGTCTGTCCA
TTTACAAGGAATTTATAATTATATACATATATATACTGTTTAATAATATATACTTTTTTAAT

>CL15539contig1|eukaryotic translation initiation factor 3 subunit b

ATACACCACGATCGGACGGCGGCCCGGACGCCAAGCGTCTCGTCATATGGGACATTCTTACCGGCCTTGAAAAACGATCT
TTTATTTCCCGACGGCTCTTCCGTATGGCCCATTTTCCGCTGGTCACACGATGACAAGTATTTGGCGTGCATGGGCGAGGA
CGTTCTCAGTGTTTACGAAACTCCCTCATTCGGCTTGTGTCGACAAGAAAAGTATCAAGATTCGCGGAATTAGAGATTTCA
GTTGGTCGCTTACCGACAACATTCTCGCTTATTGGGTCCCTGAGGACAAAGATGTTCCAGCCAGAGTAAACTCTCCTTGA
AATTCACGTCGTACCGAGGTTTCGTAACAAAAACCTTCAACGTCGCTGACTGCAAAATATTTGCGCAAAAAATCCGGT
GATTATCTCTGCGTCAAGGTCGACCGCTTTGCCAAGAGAAAAAGAAAAACCGAGCAGAAATATACCACCTTCACTGGATTA
GTATTCAGGGTATGACTTACAACCTTCGAAATCTTTCATATGAGAGAGAAACAATTCGCGTGGACAGCGTTGAATGAAAG
AACCTNTTCATGCGTTTCGCGTGGG

>CL1560contig1|proliferation-associated protein 2g4-like

ATATCACGTGACCCCGTGCAAGTGCCGTGTAGTAAAAGTAGTGCTAAAACCATGGCGGACAAAGATGAGGCTGAGAAGA
CGATCGCGGAAGATTTGGTTGTAAACCAATATAAGATGGCTGGGGCCATCGTGAACAGGTTTTGAAACAGGTTCTGGAC
AAGTCGCTCGCCGCGCTTCCGTGAGAGAAGCTTGCAGTACGGCGACAAGTTGCTACTGGAAGAGACTAGCAAAAGTTTT
CAAGAAGGAAAAAGATTTGAAAAAGGGAATCGCGTTCCTACCTGTATATCGGTCAATAACTGCATCTGCCACTTTTCGC
CCATTGCCAGCGAGCCGGATCTTATTTTGAAGAGGACGATGTTGTGAAAGTAGATCTTGGAGCCCATGTGATGGATTC
ATCGCGGTTGTGCTCATACAATCGTCATCGGATCCTCCAGTGAGAAAAAAGTCACTGGAAGGAAAGCCGATGTCGTGTT
GGTGCTCACTACGCCTCTCAAGCAGCATTGAGGCTCTTGAACCCGGAACAGAGACGTACGCGATAACGGGAACAGTGG
AAAAATCAATGTGGAGCTTACAATTGTAAGCCGATCGAAGGAATGCTGAGCCACCAAGCAATTAAGTATGACGGTG
AAAAGACCTGATACAAAATCCCAATGACGCCCAAAGAAAGAACACGAGAAGTTTACTCTTGAAACTCATGAAGATAC
GCGATGGACGTGCTCGTGAGCACGGGCGAAGGCGTCGGTCGGGAACAAGATACCCGGGTGACCATATACAAGAAAACCGA
AGAACTTATCAACTCAAGTTGAAAACGTGCGCATGTTTTACAGCGAGTTGAACAACAACACGGTCTGATGCCCTTCA
ATTTGCGCACTTTTCGAGGATGAGAAGAAAGCCAAAAATGGCGGTGTCGAGTGTGTGCATCATCGATTAATCGAGCCGTT
CCAGGTTTTGAACGAAAGCCAACCGAATACACGGCGCAATTCAAATTCACAGTTTTGTGATGCCCAATGGGCCTCACAAA
TACCCGAATTCC

>CL1563contig1|glycyl-trna synthetase

GCTGAATACGTAAAGATCGGTGACGCGGTGCGGAGCGGTCTCGTGGCCAACGAGACTCTGGGATATTTATGGCGAGGAT
ACAACAATTTTTACTCAAAGTCGGCGTCGACCCGATCAAATTGCGTTTTCCGTCAACACATGAGCAACGAGATGGCTCATT
ACGCTTGCGACTGTTGGGACGCTGAATGTCTGACGTCTTACGTTGGATCGAGTGCCTCGGTTGCGCAGACAGATCGGCG
TACGACTTGACCAACATACCAAAGCGACCGGAGTGCCTTTGGCAGCGGAGAAGCGATTGACCGAACCAAAAGTAATCGA
CGTCGTCGAGGCTGCTCCTAATCGAAGTGTCATTGGCAAATCCTTCAGAAAAGAAGCAAAAATCGTCTCGAAGCCTTGA
GCGCTCTCGACGAAAAAGCTGTGATACTTTGGAGAAATCTTTGGAAGCTGCTGACGTTTATCTACTCGCCTTGCCCGAT
GGCAATACCGTCAAAATCACGAAAGACATGGTCGCCGTTAAACGCTATCAAAAACTCTACACGTGCAAGAAATCATTCC
GTCCGTATCGAACCTTCTTTGGCATTGGACGCGTCATGTACGCCATTTTCGAACACAACCTTCAAAAAACGAGACGGTG
ATGAAATGAGAACTTTCTTGAGCTTGCCACCCGTCGTCGCACCATTTGAAATGCTCCGTCTTGCCACTCAGCAGCAACAAC
GACTTTTGTCTTTCTGTCAAAAGTTGTCTCAAGATCTGACGAGGTCGATGTTTCGCACAAAGTGACGATTATCGGG
CAGCATTTGGCCGAGATACGCTGCAACTGACGAAATGCTATTCCCTTTGGAATTACCATCGATTTTGACACGTTGAAGG
AACCGCATAGTGCTACTCTGCGGGAAAGAGACAGCATGGGACAAGTGCGAATAAATTTGGACGAACCTTCGGGTGTCGTT
AGAGATCTGTCCTTCGGTAAAATCACTTGGGCCGAAGTGAAGCGAAATATCCGAAATTCGAGCAACAAGAATCCGCCGA
GGCTTGAGCGAACAGTGTGTAATATTAGGCATATTTATCCGGGTAATTTAAACATCGATCAAACCTTTATTAACGAGGT
TACTCCCTCACGTTTTGCATTCATTTGTTACAACATTTTTTACCAACGCTTCAGCAATAAATGTAGATTTAGAA

>CL1570contig1|peptidylglycine alpha-hydroxylating monooxygenase-like

ATTGTAGGATTTTACGCCCTTGTTCGGAATCGTTCAATCGTATACCACCGAAAATACTCGTGTGATGCCCAATGTC
AAACCAATTCGCCGGAATTGTACTTATGCACGCCTGTAAAAATTGATCGTAGAAGTAGCTATTACATTGTTGGTTCCA

mmc4.txt

ACCGAATGCAACATCGGACACAGCTCACCATATACTGCTATACGGGTGCAAGGAACCCGGAACCTACCAAGTCGGTATGGA
ATTGCGGAGAAATGAGCCATGCTTCAGGCTCCGAAGATAATGTGGCAAGTCCATGTGCGGATGGATCGGAGATATTGTAC
GCTTGGGCGAGGGACGCTCCGGAATTTGATTTTACCAGACGGCGTGGGTTTCAAAGTGGGCCTTGGCACTCACATAAAGTA
TTTGGTTCTGCAGGTGCATTACGCTCATATCGACCGTTTCCAAGACGGTAGCACTGACGATTGCGGAGTAGTGCTGCATT
ATACGTTAGAGCCGTTGAAAAAATGGCTAGTGTTATTTTGTGGGTACCGCTGGAATAATCCGACCGGAATCGACCGAA
TACATGGAAACTGCGTGCGTGTTAAAAGAAAAATAAACGATTATCCATTTGCGTACAGAACTCATACGCACGAGCTAGG
AAAAGTAGTTTCTGGGTACCTAGTAAAGCCGAACGGGCAATGGATAGAACTGGGAAAACGAGACCCCTTGACCCCTCAA
TGTTTTATCCAGTGCATAAATATGTTACGGCTGAACGGGGAGATACGCTTGCCGCCCGATGTACCATGGTGAGCAATCGT
AGCACTTGGACCCGTATCGGTAACACAAAACCTTGACGAAATGTGCAATTTCTATTTAATGGTATACGTAGAAAACGACGA
ACCACCCGACATGAAGTACTGCTTCACAAGCGGCCCCCCCAAGTACTACTGGCAACTGGATGGCCTCCCAAACATTCCGG
TTCGCGAAGCTTCGACTTTGGACATGTAAATGACAGTCCGATCCCCCATTCTCATTGAAAGCCCATGAAAAACGTTTAA
AGTCCGGACAACTAACGCGTAATACGTAAAATTTACAGACTGCTCACCCAGTTACAATAAGTTTCATCTGATATGTTTCG
TTCGTCAAGAAAAAACTTCCAACAATCTTTTACGATAATGAATATATCGATGTATAGTTTTCTATGTAAAGACTCGTC
ATTGCGCAAAAAAAATAATTCACTCTGTAAGAATCAGGAGCAGCCGGAAGTTTCGAAAAATACTTATTTTACGTATT
TTATGAATCAATTTGATTTTTTATTTCCGCAAATATTACCTCACGTAATTATACGAAATTTGCAGAGTACTTAATAAAATAA
TGTCTTAGAAAAAT

>CL15751Contig1|protein transport protein sec31a

ACAAGAACAGGACAAACAGAAATTTGGCAACTGACGCTAAACCTTTAGATAGTAATTTCAAATAAATACGTGCAATGACG
AGGAGGGACTCATAACCCAAGCAATTTTGGTGGGGAACATCGAAGCTGCGGTATCGCTTTGTTTCTCAACGAAAAGATAC
GCCGATGCGATTATTTTGTCAATGGCTGGTGGTCCGGAATTTGCTGGCTCGTACGCACTACAAATTTTGTCTCAGCACAG
TGGGGCCTTGAATTTCTCTATAAATTTCTTTAGTCAGCGAGAATTGGAGCGACATCGTTAAAAAATTTGCGATATTAATTGT
TTGAAAAGAAACGCTCATGGGAATTTTACACATTCTCAGCCCGAGGAGCGTTACTCTCTGTGCGACATGCTGGGCGAT
CGTTTGGCATCGTGCGAAGATCCGAAGCTGAAGAAAGAGGCGCGAAATATGTTACATAAGTTACAGGAAATCTGAACAAA
CTGATCCAAGTATCAGAG

>CL15801Contig1|40s ribosomal protein s19a-like

TTTTTCCGCTCGAGCGGCCATCTTGTTTTAGCTCTTCCGGTTATCGCCGTGCGAGAGATGCCTTCCGTAACCTTTAA
GGACGTTGACCAAAACAAATTCGTCAAGGCTTTTGGCGGTTTCTCAAAAAAACCGGCAAAATGCCGTTCCCGAATGGA
TCGACATCGTCAAGTCGGCTCGTTTCAAGGAACTCGCTCCCTACGATCCAGACTGGTATTACATCAGGTGCGCAGCCCTG
GTCCGTACATTTACATCCGCAAGTCCAATTGGCGTTGGCGCAGTGACCAAAATCTTTGGTGGACGCAACGAAATGGCAC
GCATCCGAGTCAATTTTGGCGTTCCGCCGGCGAGTGGCGCGCAAGGCACTCCAGAGCTTGGAGCACATTAATTTGATCG
AAAAAGCTCCTTGGTGGACGCAAGCTGACGAGCCAGGAGCCGAGACTTGGACCGAATTGCCGCCAGGTCAAAGCTAA
GACGAAGAAACAACTGAAATTTGACAAGAGACTCTTAGTACTTTAAGATTT

>CL15802Contig1|protein disulfide-isomerase a6-like

ATATTTGGCTCTACGCGTTTCTCGGCGTCTCTCGGAGAAAGCCAGTTTTTCCAGAGTGAAAAAACCTCATTGTGACAGT
GTTTCTTTTCGAGCTTCGCGCAGCAATAAGTAACAATCAAATGTGGAGTTTTTTCGGTCTTTTGGCGCTGATCGCCGGAG
CCAATTGTCTGTACCCGTCAACGTCCGACGTGGTGGACTTGACGCCGAGCAATTTTGACAAATTTGGTGACGAACAGCGAT
CACGTGTGGATCGTAGAATTTACGCTCCCTGGTGGTGGTCACTGTAACAGTTGACGCCAGAGTATGAGAAAGCAGCCAC
CGCGCTCAAGGGCGTGATCAAAGTTGGCGGGTAAACGCGACGACGATCATCAATCTCTGGGCTCGCGTTTCGGAGTCAGCG
GTTTCCCGACCATAAAGATTTTACGCCGGGCAAGAGCAAGCCGGAGGATTACAAAGGCGCGCGAACGGCGCAGGGGCTT
GTGGACGCGAGCGTTATCAGCGGCGGAGCAGAAAGTGCGAGCGACTCTGGGAGGCGGAAAGAATCGTCTTCGGACTCAAAG
TCCAAAGACTCGAAGGACGT

>CL1582Contig1|ubiquitin-like modifier-activating enzyme 1-like

CGGCCGGGAGAGCTCCGTTGATCCCCCGCTAAGAAGCGACGCGTTGCCGCTGCTGCAGCTACGTTGGCTGGTGGTGACG
GAAGGACAAACAGAACGGGTAACATGGCAAAGAACGGTTCGACGTCCAAGGCCAGACGGAATTTGACGAGGGGCTTTAC
TCGCGACAGCTCTACGTTCTGGGTACGACGCTATGCGACGATGGCAAATTCGACGTTTTGATCTCGGGATTGGGAGG
TTTGGGTGTGCAAGTTGCTAAAAACGTTATTCTCGGCGGAGTCAAGTCCGTGACGCTTCACGATAACCGCTCGACCGAAA
TAGCCGATCTGGGTACGCAATTTTATTTGACCGAGAGCGATATCGGCAAGAATCGAGCTGTGCGGTGTTCCCAACGTCTC
TCGGAATTGAACAGTACGTGCCCCACGCGTTATCACGAGGGACAATTGGACGAGGAATTTTAAAGAAATTTCAAAGTTAT
CGTCGTGACGGATGCGACTTTTGAAGAGCAACTCCATGTATCTCGCATTCGCTCGGAGCAATTTTGGTCTTTATAATCG
CGACACTCGTGGCCTCTTTTCCAGAGTATTTTGCAGCTTTGGAGAAAAATTCGTGGTGGTGGATCCGACCGCGGAGCCA
CCGGTCCGTGCGATGGTTCGCGAGCATCTCCCGCATGCCCAAGGAATCGTTCGCGTGTCTCGATGACACCAGACACGGCAT
GGAGGACGGGGATTACGTCACCTTCTCCGAGGTGCAGGGAATGACCGAGCTCAACGTTGCCAACCGAAGAAAATCAAAG
TTCTCGGTCCGTACACTTTTACGATCGGTGATACTTCGGAATACTCGGAATACGAGCAAGGAGGCATTGTCACTCAGGTG
AAAAATGCCGAAAACCTTGAGCTTCAAGAGCCTCGAGGAATCCATCAAAAATCCCGAGTTTTCTATTTCCGATTATGGGAA
ATTCGATTATCCGGCGCAACTCCATCTCGCGTTTATCGCCCTCGACGAGTTCAAGAAAAACAAGGAACGTATGCCTCGTC
CGTGGAAACATCGAGGACGCCAAGGAACCTCGTGGAAATTGGTTAAAAAAGTCAAGGAAGAATACGGCAGCTCGGATGTGCA
AATAAACGAGGAATTGATCGAGACTTTTGGCAAAGTCTCGTCGGGCGATTTGAATCCGATGGACGCAACGATCGGCGGTA
TCGTTGCTCAGGAAGTGATGAAAGCTTGTTCGGGCAATTTTACCGATTTATCAATGGTTTTATTTGACGCGATCGAA
TGTCTGCCCCGCCGATCGTTCCGAAATCACCGAGGACGATTGCAAACCATTTGGAAACGCGTTACGACTCGCAGGTTGCTGT
ATTCCGTCGTAAATTTCAATCGAAAATCGGCAGCCTAAAGTATTTCTCGTGGGAGCGGGAGCGATCGGCTCGCAATTGT
TGAAGAACTTTTGCTATGCTCGGCGTGGGAGCTGAAACCGTTGCTGCTACTATAACCGACATGGATCTCATAGAAAAGTCG
AATTTGAATCGTCAATTTTGTTCAGACCGGCGGACGTACAAAAGCCAAAATCATCGACCGCCGCTCGAGTCGTCAAGGG
AATGAATCCACAGATGACGGTGGTGGCCACGAGAATCGCGTTTGCGCCGAGACCGAGAAAGTCTACAACGACGAGTTCT
TTGAAGTATTGGACGGTGTGCCAACGCCCTGGACAACGTCGATGCTCGTATTTACATGGATCGTCGTTGCGTGTATTAT
CGAAAGCCGCTGCTCGAGTCTGGCACGCTCGGAACAAAAGGCAACACTCAGGTGCTCGTACCGTTTATCACCGAATCGTA
CAGCTCGTCTCAACGACT

>CL1587Contig1|nadp-dependent malic enzyme-like isoform 2

ATCGTCAAGAATCGTCCGAGTGGAGGAATATCAGAGCACAAGATTCATTTGCTCGTGATGATGCTCCGATCGATACCTT

mmc4.txt

CGCTGAAGTTGTCAATACAGCGAGACCGTCCGTTACTCATTGGAGCAGCCGCAATCGCAGGAGCATTACCACTGAAATTT
TTGCAAGCGATGGGCAAATTCATAATAGACCCGTCATATTTGCTCTCAGTAATCCGACCAGCAAGGCCGAATGTACAGC
CGAACAGGCTTTACACAGCAACAGAGGGTCGATGCGTTTTTGGAGTGGATCACCATTGATCCCCTCACTGTGAATGGTA
AACTTAATCATCCCGGTCAAGGCAACAACAGTTATATTTTTCCCGGAATAGCACTGGCCGCAATATGCGCAGGTATGC
GCGTTATACCCGAAGAACTTTTTCTAATTGCGGCAAACCTCGCTCGCCGATATCGTTACGGATGATGACCTCGACAGCGGA
AATCTTTATCCACCTCTGCAAGACATTCAAAAATGCTCTTTGAAGATCGCTGTCAAGATAATGGAGTATGCCTACAGGGA
ATCTCTGGCGACTGTTACCCAAAACCCCTCGGATTATGAGGAATTCATCAAGGCACAGCGGTACGACACAAAATACAAG
ACTGCTATTCCAGCGACGTATGCTTGGCCGAGACTTTAAGAAAACAAAGTGAGAATATGAAAAAAGCGTTCTGCTTCGGA
AAATTTATTAATTTTTGTTGATCCGCACGATACCCATGCGTATACGGAACGTCATCTCTCGCGTCATTTCGATGCAGAATAA
ACAACGAGTCACAATATTTCCGTCGAGATTTCTGTCTATTTATAATTTTTCGATCGCTGATTGTGCGCGACTAAATTCGA
AGAAAACTACGTGGAAGTTGATTGAGTTGGGGCTGGCCCGATTACGAATGCTGAGAAAGCCGAGTAACCTCAAATATTAA
TATATTATATTACACATGTACTGAGTGTATTAAGAAAGAAAGCAAAAGAAAAATAACAAGACGTGCGAATTGATGGGAGG
ATTAATCCAGTTCCTGAATTTTTAAATTTTGAATATTAAATCCCCGGCAGGATCGTGATGGGGACGCCGGCTGTCAATTT
AAGTAAAAATACCGCAAGCCTAAAT

>CL158contig1|transferrin

GTACAACCTCGACGATTTCGTTACTCTCATCTGCTCGAACAAAACGCTCTCAATAATTGCTTTCAACGACACTTGCTACGCGA
GTGCCACATTTTTTTCTCTTTGAGTTTCAAGGTCGATCAAAAGATATTACTTTTTTTTTTTGTGCACCATGTTCCGAGGA
CTCGTCTTGTCTGCTCCTGGTGGCAACGTTACCCAGGACTTGATGGCCGATGAACCAACACCGACAGCTCCCGAATTTAA
ATATGCGTACCCGAGATATATTGGAAGGACTGTTTGAATGATGGAAGATTGAAAGCGAAAGGTATGCCAATATCTCTG
CGTATCGGGTCGTGACAGATTTCGAGTGCATTGACAAAAGTTGGCAAAAAAGAAGCTGATATCGTCGTGTTGATCTGAA
GACATGTATCTCGCTGCTAAGAGCGAACTTGCCGATCAAGCAGGCTTCAACATTGTGCAACAGGTTGCAACAAAGGAAG
AGCCCGATGCAGTGTATCGATACGAAGCGGTTGCGGTGATTACAAAGGACTTGAAATCAACGATGTTCAAAGTCTTCGA
GGCCTTAAATCTTGTACATACCGGTGTTGGTCGTAACGTTGGCTACAAGATCCCCATAACTAAGCTCACAGAAATGGGTGT
TCTTGCCAAATATAAACGATCCTGAATATTCAGCCCGTGAATATGAGATTGAGCTCTCAGCACTCTGTTGACAAAAGGAT
GTCTCGTTGGCACTTGGTCACCAGACCCAGCGATCAATCAAAGGCTCAAGGAAACCTACAGCAACATGTGCGCACTCTGT
GAAAAAACCGAGTGTTTGTATTACCCTGACAATTATTCGGGTTACGAGGGTGCCTTGAGATGTTTAGCACACAACGGTG
GTCAAGTCGCTGGACGAAAGTCATTTATGTAAAGAGATTCTTCGGTCTGCCTGTTGGCGTGACGCCGGCAGTCCCCACC
AAAGAAGACCCAGCAATTTCAATTATTTCTGTCTGATGGTACCAAAGTACCCATCGATGCAACCACCAAGCCTTGCAC
CTGGGCTGCCAGACCCTGGCAGGGATACATGACCAATGGCCAAGTGAACAAACGTCGACGCCGTCCAGAAGGAATTGACTG
ATTTGGGTGCCCTTGGTGAGAAGGAAAAATGCTCCATGGTGGAAAGACATAATGTTATTGGACGAGAAAAACAAAGGCGGT
TCCGCACCTGCCGTAACCCCTCAAGAGCACTTGAACAAAGCAAGTACTTGGACGTAATCGAAAGGAATTGAGGAGCACC
GAAAGAAACGCACGTTGGTGCGTCTCCAGTCTCAACGCTTATGCAAGCTCAAGCTCTCGCCAAAGCTGCTCAATCCA
GAGACGTCAGGCCCCGAATCGAATGCATTTTGGAAACGAGTGACGACGACTGTTTGACCGCCGTTGCAACGAAGGAGCA
GATCTCGTTGACTTGATGGCAATCTAGTGAACAAACGCGACCAATAACTTCAATGTCAAGCCATTATCTCTGAAGACTA
CGGCAAAGGAACTACGAAAATGGGCGAACGACCTGCTGTGCTGTCAAGAAAGGACAGCTCGATCAAAAAATTGGACG
ATCTCCGTGGCAAAAAGTCTTGTACAGTCAATACGGTACCAATTTTCGTTGGATGGATGGCTCCCCTCAAAGTATTGAAG
AAAGCGAATCTCGTCAAATCGAGCGATGAAATGATGGAGTTTTTCGGTGGCTCCTGCGCTCCCGAGGCTCCAATTGGATC
AAAGCTCTGTCAACAGTGTGACGAAATCTCGAATCCAAAGACGAAAGGTATCGAAGCAACAAAGTGCAAAACGGACG
AAGGCGAATCTTACGCCGGAGGCAAGGAGCTCTGAAGTGCCTTATCGCCGACAAAGGAGATGTTGCGTTATGCCCTT
ACAGACCTCATCAAAGCCAGTGAACGACCGATGGCTCGATCAAGACTTCAGACTTCATGCTCCTTTGTCCCGATGGAAC
AACCACCTCGGTTGACGAATGGTCCAAGTGAATTTTCGGGCTCGAACCACCTCGCGTCATCGTAAGTTCAGCTACGAAGA
GTCCAGGTGCTCTGGAAGAATTGACTCACGGTGTGTTGGCTGCGAGCTCGCTTTATCCAAGAGACCAGATCTTTTGCAC
GTCTTTGGAGTTTGGGGCGGTTCAACGAAACGTTTGTTCAGGACGATGCCAAGAGTCTGATGCTCATCAGTACCGA
ATGGGACCATTTGGGACGATTGGGAAACGACGGAGAAAGATAATGATTGAATTAATCAAGTTTAAAAAATTTATTAC
AACTAAAGTTTCGATGTGTCTAGTTCGTAAGTTTGTGAGCAATGAAAAATGCACTGTAAACCTTGATACCTTGAAAAA
TAAGTATTTTNCATCAAGAAAC

>CL1591contig2|enoyl- delta isomerase mitochondrial-like

TATAGATCGAGTCGTTTCGTCGCGAGATTGAATGAAATTTGGTGCTAAAAAATTTTTGCACATACGACGTTCTTCTATATG
GTGCGACGTCGATGATCCAAAGTCCAAAGTGCCTGCAGAGTTCAGGTGATAGATACTAGTACTTAAAAGTTGGCTAC
TAACGAGAAATAAGCGAAGCACCTGAAAAGGATTTTAAATAATGTTTGCACACGCAAGTGAAGAGCAGTTAGTCATACG
AGCAATATGTCGGGTCAACGTTACTCCAATAGTGCAGCATCCAACTTTTGGAAATAACGAAGAACGACAATGGAATTAG
CGTTATTTCCATGGCAAAAGCTCCTGTGAATAGCTTGAATCTTCCCATGTTGACCCAATTAAGAGAGGCTTGGTGGCTG
TACAGAAAGATGACAGTGACGGTGTGATTCTGACCTCTGCTCTCGACACTGTCTTTCTGCTGGACTCGATATCATGGAA
ATGTACAAACCTCAAGACTCACGAGTCGTTCAATCTGGACTGCCCTCCAGGATGCCTGGATAGCTCTCTATGGCCTTGG
TATACCAACCGTCGCCGCTATCAACGGCAGCAGCCCTGCAGGAGGATGCCTCCTAGCCATGGCCTGTGATCACAGAGTTA
TGGTCGATGGGAAATTTACCATTGGATTAATGAGACAAAACCTCGGTCTTATGGCTCCAAAGTGTTTCATGACTAATATG
ATCGATATTATTGGATCTCGAAAAGCCGAAGACGCTCTGTTGAGAGGATCATTGTTACACCCAAAGAGGCTCTCAGTAT
CGGATTAGTGGACGAACTCGCTGCTGATAAGCAAGAAGCAATTGCAAAGTCCGAGGCATACATCGAATCGTTTGAATGA
TTCCCGCGCTTGGGAGAAGAGTCACGAAATTCAACTACGTCAAGACAGAATCGCTTGGTTAGAAAAAATCGAGAAAAT
GACACCGCAGTTTTCGTCAAAGCTAGTAAAAATCCGCAGGTACAAACGGGATAGAATTTACATCGAGTCTCTTAAGCAG
AAGAGCAAATTTGATAGATAAAC

>CL1596Contig1|glucosamine-6-phosphate isomerase-like

AGGTTGGTCAGCTGATAATACGCGTCCGACTGGAAGTATAAATTGTGTAAATTTTGTATCGTCAGACAGTAGCTGTGCG
CTTGGCAACTCGGAACTAGCGTCTTAGAACATTACTCTGATTGTTACTATTTTCGAGAGTGAATCGCAAGGAAATCCA
TAATGCGTCTTATAATTTGTGACACCATCGATTACGTGGCTGAATGGTCAGCAAAAAATATGTCGTCAAAAAGGATCAATG
ATTTTCAGCCCAATGAAAAAAGTACTTTGCTGGGATTACCAACCGGTGGTACTCCACTGGGAATGTATAAGAAGCTC
ATAGAATATTACAACGCTGGAAAAGTCTGTTCAAATATGTTAAGACTTTCAATATGGATGAGTACGTGATTTTGGCAGC
TGATCATCCAGAGTCTTATCACTATTACATGTACAACAGTTTTTTGAAGCACATAGACATTGAGCCGAAAAAACGTTTAC

mmc4.txt

ATATTGGATGGTAATGCGGAGGACCTTGTTTTGGAGTGAATAAAATTTGAGGATCAGATAAAAAGAAGCTGGTGGGATTGA
GCTGTTTATCGGTGGGATTGGCCCTGACGGTCACATAGCGTTCAACGAGCCTGGTTCTCGCTGGCTTCGCGCACGCGAG
TCAAGACGTTGGCTCAGGATACTCTGGAAGCAAATGCACGATTTTTTCGGCAACGATATCGAGAAAGTACCGAAACAAGCG
TTGACCGTTGGCGTTGGCACTGTCATGGACGCCAAGGAAGTTATGATTCTCATTACCGGTGCGACAAAGCTTTCGCTCT
CTACAAAGCTGTCGAGGAAGGCGTCAACCACATGTGGACCGTTTCAGCTTTTCAACAACATCCCAGAACCCTCATTGTGT
GCGATGAGGATGCGACCCTCGAACTGCGCGTCAAAACAGTCAAGTATTTCAAGACACTGTGGAATATTTCACTGCAAACCTG
ATTCAGAGGATGTTCCAACGCATGAAACCGTA

>CL1598Contig1|eukaryotic translation initiation factor 3 subunit a

CGCAGCTTCAAGAGCTTTATTCTTTGCTCGAGGTAGAATTCATCCTCTTGAACCTTGCCTCGCTTAATTCTGTCATC
ACAACATTACAAGTCGACGAAACATCGCCGCTGGCTCAATACGTAACCGCTTTGCAAGATGTTACTTTGGTACGTCTCGT
GCATCAAATCTCGCAGTTTATCAGACGATCCAGTTCTCCCGTTGATCGAATTGGCCAAATTCACGACTGACTTCCATC
TGGAACGCTTGTGGTACATTGCGTCCGTTACAACGACATGCAGATCAGAATTGATCACGGCAAGCGTTGCATACATTTT
GGAGTTGATCTGAGCGAGGCCAACGCGAAGATCATCCGGACGGGCGGTGTTACAAGCGATGCCTTCCGAGCAGATCCG
TTGTCAATTGGTCAACATGGCGACTGTGTTGCACCGCAATCAACGTCATTTGTCCGAACAAGCGCAAGCAGGAGAGAG
AAAAAGTGAGAGCATCCCTGGTGGCTCTCTACCACGAGACCAAGGTCAAAGAGCATCATCGTGTCTCGGACGACAGCAC
ATAATCGAGAAACGCAAGGAATACATCGAGCAGATAAACACGATAAGAGAGGAAGAGGAAATGCGACGACAGGAGGA
CCACCGGCAACAAGTTTTGGCAGAACAGAAGCGCCTGGAACAGGAACGCGAAGAACGCGAAAGAAAACGCCAACAGAGCG
AAATACAGCAGATCAAGGATCGTCTGTAAGGAAAAAATGCAACAAATATCGCAAACCTTCCCATGGACAAAAAGTTCTG
AAGAAATGGACGAGGACGAAATCAAGAAGTTGGATGCCGAACAGATCGCCGCGAGGAGGCCGAAGAATTGCAAAAAGA
ACGACGCGGATGCAACAGAACTCAAGTCCCAAGAAAAAGAAAGGTCGATTACCTCGAACGCGCCAAAGAAATCGAAGAAA
TTCCGCTTTTGGAAAAGGCTGTTGAGGAGAAAAACCGAGCAGGCTAAACAACGCTGGGAACAACAGGAACAGGAGAGA
CTCGCTGCGATTGAGGAACGACGACAAGCCGTTGCAACTCGCGAAAGAATGGCTCGAATGAAAGAAGATCACGATCAATT
CCTCGCGAAAAATTCTCGCCGAACGTAAGAGCGTTTATCTCGAAAAACTCCACGATTTGAAAAATGCTCAACGAAGAGAG
AGCCAAGAGATTGTTGGAGCGTAAGATCCAACGGAAGCCGAGAGAAAGGCCAAGTGGGAGAAGGAAGAGCCGAAG

>CL1599Contig1|vitellogenin-5 [Camponotus floridanus]

AGCATGAAAGTTTTGCTGGATTTGCCCAATGAGAAAAATATCTTGGAGGTCGGAATACTGGCATTCTTACGTTTGGGAC
ACTGATTTACAAAACGTGTTTGGTCTACTGCCCTTACGAGACGTTGGATGATTATGTTGCGCTGTACCTCGACCGATTTA
CAGAGACGTCTGATTACGACAAAAAATGGTTTGGCTAGAGGGTCTCTCGAACATACAACCTGGGAAGAGTGGTTGAATTT
TTGGAACCGATTGCAAGTGGCAACAGCGTTGAATCCAGACACTTGAGGGTTTTAGCCGCTGGGCATCGCTGCCTACAGC
ACCATTGAGGCCGTGACGTGATATATCCAGTCTATTGGCCCATTTTGTAAATCGTACCGAACATTTGGAGCTCAGGATCG
CAGCCTTGACACTGTTGATGGTCTCGACCCCTTCGGCAAATCGAATGATATCCTTGATTGGTACATGCACGACGAACCT
GATCGACATCTGTACAATTTTTTCTACACCACATTGAAATCTCTAGAAAAGAAACAATTTCCCATGCTACAAGCACTTAGG
CGGAATCGCTGCTCAATTTACACGTGTTCTTCGCAAACCATACCCAATGAGAACATTGTGACGGGCAACTATTTGTTG
ATTACCAAGACACGAAAAGACACTTTGGGGCGATGGTTCAAATCTCATAATCGCCAATCCTCGCACGAATGTTCTGAA
GTCGTTTACATGACTCTGATCAGTCATGGAAGTGGTACGAACCTCAATCACATATCCCTGTACGTCAAAGCAGAGGGACT
GCCAAACGGACTATCCACTTATTTAGAAAAGTCCAACACGAGTCATCGACATTTTGAAGGACTTTAAATAGAAAGAAAC
CACGTGGAGAAGTGCATTTGGAAATAATTGCTCGCGTTCAACAGAAAGCCGTTTTTGTCTGCACTTCAATCAATCGAGCA
TCGAGAAGGGTCTCGACATGCTTCGGAATTTTTTGGCAATCTATGCTCTTCCCGTTCAGTACAATGGAATTCACATT
AATCAGCAAAGAATCAATATTCGCTCATAATGGAATCTCTACAAGTTACTGACCTCGGGACTAACGTTAGACTGGCTGT
AACTGCAACGTCACTTTTCTCAATGAGAGGAACTTTACGGTTACAGAGGAGTGGTCGCAATTGTACGTCATTATCCGCT
CGGTTATTCACGGAAGAGAACTATCGAATCCTACAACCCGTTTCATCGACCTTTGGCACGGAGC

>CL159Contig1|protein transport protein sec23a

GGATATGTTGGAAATCGGCGCGGTACCAGGTCAAAACCCAAATCAGCAGAGAGGGCCCCACCGGTCAACCAATACCAC
CGGCTAATCGAATTCCTCAACCGGTTCACAAGTGCACATGAGCTTGACTGATTTGCTCGGAGAGCTGCAGAGGGATCCT
TGGCCCGTTGGTCCAGGAAAACGATCTCTGCGATCAACCGCGTTGCACTGGCCGTTGCTACTGGCCTCCTGGAGGCAAG
CTACGCCAACACGGGTGCCAGAATCATGCTCTTCGTCGGTGGGCCATGTTCTCAAGGGCCCGGTCAAGTGGTAACGGACG
ATCTTCGTGAGCCGATAAGATCGCATCACGATATCCACAAGGACAACGCGAAGCACATGAAAAAGGCGACGAAACATTAC
GACGGGTTGGCAGCTCGGGCTGCGACGAATGGTCATATAATCGACATTTTATCATGCGCCCTCGATCAAATGGACTTCT
CGAGATGCGCAATTTTGCAATTCACCGGTGGTCAATGTTGAGATTCTTTCAATTCCTCGCTTTTCAAGCAAA
CTTTCCAGCGTGTTTTTACCAAGGATCCGAAAAGAGATTTGAAAATGGCCTTCAACGCGACCTTGGAAATTAACCTTCG
AGAGAAATCAAAGTTTCCGGTGGGATTTGGCCCGTGGCTTTCGCTCAACGTCAAAGGACCTTGTGTGGGTGAACAAGAAGT
CGGTCTTGGCGGTACTTGTCAATGGAAATCTGCTCACTCACACCTTCAACTACAACCGCTATTTTCTCGAAGTTGTTA
ATCAACACGCTGCTCCAATTCGCGAAGGTGGCCGCGGTTGCATACAATTTATTACGCAATATCAACACAGCAGTGGACAG
CGAAGAATCCGCGTAACGACGGTTGCCGCAATTTGGGCGGATGCATCGATTTGTTGCAACACATAAGTGCAGGATTTGA
TCAAGAAGCTGCAGCGGTGCTGATGTCAAGATCGGCAGTTTTCTGTCGGAGAGTGACGATGGGCCGACGTGCTTCGAT
GGGTGACAGGATGCTCATTAGACTGTGTCAAAAATTCGGCGAGTACTCGAAGGACGATCCAAACAGTTTCAGACTTGCT
GAAAAATTTCTCACTCTATCCTCAGTTTATGTATCATCTGCGTAGATCACAATTTCTTCAAGTATTCAACAATTTCCCGGA
TGAAACAAGTTTCTACAGGCACATGCTGATACGCGAAGATTTGACGAATTCCTTGATTATGGTTCAACCGATATTGTACA
GCTATGGCTTCGGCGGTCTCCCGAGCCTGTGCTCCTAGACACGTGCTCTATTACGCTGATAGGATTTTACTCATGGAT
ACTTTCTTCAAATTTCTATCTTTTATGGCGAGACGATAGCTCAGTGGCGGACGCTCAAATCAGGATTTTGGCGGAATA
TGAAAAAATTCCTGCAACTTTGGCTGCTCCGCTCGACGACGCGCTGAAATTTTGGCCGACGTTTTCCAGCTCCTCGT
TACATTGACACCGAACAGGGCGGCTCTCAGGCTCGATTTTTGCTCAGTAAAGTAAACCCGAGTCAAACGCACAACAATAT
GTATGCGTACGGATCGGAAAGTGGAGCGCCCGTGTGACCGATGACGTGAGTCTTCAAGTATTATGGAGCACCTCAAAA
AATTAGCTGTATCATCGACAGCTTAGGCTATAAGATAACGATAGCAAAGATAAACAACAAAAATACGTTTCAACGAATATTA
ATTGTGCGCTTTTATATTGCAATGGAGGGAGCATTGTATAAAAAACAGAAAAAAGGAAAAACGGTGTTCGCGTTGCTTA
TTAAGTGACAGAGAGGAGAACACGACCAATGGCATTTCTTTTCGAGGAACTGACGCGAATACATTTACGATACGGAATA
AATGAAACGAAATAAAAAAATAACGAATTTTCAGTAAACGAGGAGCTGATGCATATTTCCGTTATAATAAAGAAAA
ACTGAAATATTTTAAATTGTAAATGGATAAAAAATAAGCAAATAAACCGGATCCACATGTTCAATTCATTGGCACNAAAA

mmc4.txt

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAANA

>CL15Contig1|low quality protein: apolipophorins-like

AGGAGTGCCGGACTCTCACCAAGCGAGCGATGGCAACGCCGAGGTGACGCTGACCTGCTGGACAATGCGCCGTTGACGG
 TTGCCACGTCGTACAAGTGCACCCGACCGGTGAGCTGAAAAAAGGCAGTGGAACGCTCGACGTAAAATACGGGAAAAAG
 GCTGCAAGCCTCGAAACCGAAGTAACCTTCAGCGAAGACCTTAAGACCGTGAAAATCGACGCAAAAGCGACGACACCGAT
 CGAGAAATTCGCAATGTGCAACTCAAGCTGCACAGGAAAAAGGCCAGGACGATATCCACGCCCTGGAAATTCAAGTGG
 TTGCTGACAACGCGAAATATACCCTCGACAGCCAAGTCAAATTGAGTCCATCAGCATCGAGCGTGAGCATCGTATTGACC
 TGTCCGAGCGGCAAGACCGAGCTCATCAGCAAGTTCAAAGTTCTGCCGACAACGCTATGTTGGTGAATGGAAGATCGA
 CTCGCCAAAAAGTTTTCTGGCTGCGGATGGCCGCGTGAATAATGGACAACATTGACAGTTTTCTCATCGAATTTAACTTCG
 ACAGTGACAAAAATAAACACAGGAAGATTTCATGCGGAAATAGGAACGAAACCGGCAGTTAAATCCGGAAAAAGGATCCTC
 GTGACGGTCACCAAGTGACGGGAAGAACATCGTAACCGGAAGTACGAACTACAGTAAACGCGACGAGGCTGGAAAGGTGAT
 CGTTGAGGGTAACGGTAATCTGAAAAATTGGTGAATAACGAGGACCTCGAAATTCACCTATTCTCGAAAAACAGTTGACT
 GCCGAGGTCGATGGTGAGGTGCGGGTTGCTATTCTTCTCAATACCACTTTGGACCTTCCGCTGTGTTGGTGAATCAA
 ACTTCCAAACAAGGAGTTCACGTTTTTAACAGCTTACTGCGAACAGCAAGGATTGCGCGTACTTCAATCTTCAGTCTG
 CTTTCGAAACTGATGTCAACGCCCAAGTCTGCCACGGACTGACGGTCAAGTGAATCTCAAAAAGTTCAACGTCCCCGTT
 GAATTTGGCCTGAAACAACACGAAATACCTCCTTAAGGAACCGACCTTCGATCACACCGCCAATCTGTACGTCCATACCG
 CCAAGGACAAGACCCAGTACTCTTCCCAAGTGTATCTCCACGCCAAGGACTCCGCGATCGTTTTGACTCTGCCGAGCCGC
 GAAAGTTGCGATCGTAGCTTCTTATGAGATTCCAAAATCCCGTCATTCCGGTGCCGTCAAGGTCGATGTTTTCTTCTACCT
 CGACAGAAAGAACAACCAATGACAAAAGTCTCGTCGCCAGTGGCGATATCAACATCGAGAAAAATCGGCTTCCG
 TCAACGGCGAAGCCAAGTTTACGTATCCGACGCAACCAAGGATATGAGCGTCAACGGCCGGTTCCATTACGGCGGTGAC
 CATCTGCTGGATGCGTCTCTGGACCTCGACGCTTTCGCCAAGAAGACTCAGAAGATTTGCGTCTGCGAAAGTCGACCG
 AGTTCCTGTTCAACAAGACAGAGGGTACAACGTGACGTGCAACGTGGAGGTTACAGCCGTGGCCAACAGCTCAAGGTAG
 ACCTGAAGCAACACGTAGTCGTGACAACGCACGAGCTCGGTTTCGGTTCGTCTCTTCTACACCGATCAGCATCAAAAA
 CCAAGTCCGTCGGTGTTTTCTTTGTAAGTCTACGGAAGTTCAACTGAACGTCTACGTGCCGAGAAAGAGCTCTT
 GGAGTTTGCCGCGGGATACAAGCTCATGAAAGGCCATCAGAGGGCCAGCATTTATTACAGCATCTGGACAATCCAGACG
 TCGAAATCACCTACGAAGGACATGGCCTCAATGACTTCAAGTCCAAATGGGCGACCCGAGAGGATCCCAAGAACAAGCTG
 GAAGCTAATGGCCGCGTCGTTTACGGTGAATTGGCCGAGATCCACGCCGACGTTTTCAAGAATGGCGAAAAGAAGGATCT
 CTTCAACGCGCTTATCCATCTCGATGACAGTAAATTCCTCAAGTCTGACTTCGGCTACAACAAGACAACATCGTCGCTT
 TCGTCGATCACACCCGAGAACGAGGAATCAAGCTGGCGAGACAAATGAAGGAAGTTGGTCAAGCTGTGCGTCAAGAAGCA
 GTCGTGAACTCAAGGATCTTCTGCTACATCTTAAAGAGCATCTCCCAACCTAAAACCTCTTGTGCACTACTATCAGGG
 CGAACTCGAAGAACTCAAGAACGAGCTCCATGCCGATGAGAGATTAAAGGAGATTCAAGCGACTTTGCACAAGATTTTCG
 GTGGCGTCGTGCTGTCGACCGAAACTCTTAAACAATTTGGTGGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAG
 ATTGTAGCCAAGGTCAGCGAAGCGATTAAATCGACGTATCCTGTTCTCAAGGAATCTTTCGACAAAGTTTTCCAAGCTGG
 AATCGAAATCTTTGACGCAGCAAGCAAACTCGCCACCACCTATCTCAAGGCCATTCTTACGGTCTGTTAACGAACATCAGA
 AAGAGATCAAACTGCTCGGCGTCGCTGCTGAAATAGCACAAGATATTGTTAAGATTATTGCCAAGGGTGCCTCTCAG
 ATTGAGAAAGAAATTAAGGACTTTGTCGTTCTCGTCCGAGCAGTCAAAGCCTTGCCCATCTATGAATTCATCAAGA
 AAAATTCGCCGAACCTTTCAACTACCAAGTTCCCGATGCCGTTTTGGTGCCGATCGAAGAAGCTTACGTCCAATTTGAAA
 AGATCCTGCCACCGAAGAACTCAAGAAATTTCTTACCCTCACTTACGACTACATCATTTAAACACGTCAAACGTGAGAAG
 GTCGACGATCCTGTGGAGATAAAGAAGATTTGGGGTGCCGGAATCGAGGCAATCCAATCGCTGCTGTCCCTCATCCAAG
 CCGAACCACCTTCGATAAGCTCTTTGGTTTTCTACATCGTTGCAATTCCTAGTGATTTGAGTGCATTACGAAACTTCGGG
 GAGTCGCGACCCCTCAAAGTGTCCCTTATCAATCTCTTGCAAAATCGCGAGCTTCCCACACCGGCTGATATATATTACGCC
 TACAGGCCAACGCTCCATCCAAGTACTGATTCCACCAATTCAGTAAACTGGTTTTCTTCTCGAGGGTGGCCACTTTTT
 CACGTTTTGATGGACGCCACGTGACATGGCCGGAAGCTGCGACTACATCTTGCCCAAGATATCGAGACGGTAATTTCT
 CCGTAGTGGGAAATTTTGCAGCTGGTAAATTGACGAGCGTGACTGTCCTGCTCCAGGCGAGAGCATTAACAATAAATCC
 AACGGAACATTCTTGCAACCGGAAACCCGCCGAATATCCAACGAGCAGCAAGAACCTCCACGCTTTCTTGATCCCACC
 GATCGTTAACGTCAAATCGGACTTTGGAGTACATCTTATGTGCACTCTAAATCCCCGATGAGCTGCGGGCTTCACATAT
 CCGGCTTCTACCTCGGAAAAAGTCCGCGGTATCCTCGGAGATGGCAACAACGAGCCCTACGACGATTTCACTCTTCCATCC
 GGCCATATAACGGAAGATGAGGCAGAAATCGGAAACGCTTACAACTGAATGCTGGATGCGCCGCTGCGCCGGCTGTGCA
 TCACAAATCTCATGAACGCAATCCAACCTGCACCGAATCTTTCTGGAAATTTCTGCAATGAGCTCGTCTTCAATTACG
 TTGATCCGTCAAATTTATCGTTCAAGCTTGTGATCACGCCGTAAGTGCTGGTACTCCACAGGCTGCTTGTCTCATTTCCGG
 TGCTTACTGGGCCGCTTGTCTCAAAGACGTGTCTTCATTTCCATTTCCCTGACGCTTGTGGAAATGCAAGTCAAGAACGA
 TGAATCGCTGTTGGCGATACGTTCAAGCTGAAGG

>CL1600Contig1|peptidyl-prolyl cis-trans isomerase 5-like

ATCCGTAATCGTGCGAGTTGCAAACGTTGCGAGCCGTTGGTATCGTCGACGTCGACTTTGTGCGAAGAGTCTCTCCGCA
 TCCACGAAATTTTCAATTTTCGAGGATTTTCAGTATTGCTTAAAGTTTGCAATTTGCCAATCAATCTTGTGAGACAATTGTT
 TCGTTTGATTATAAAAAACCGCGGGAATAATTAACGTCAAAAATGATACTCGCTCTTTTGTTCGGCCTCATCGTGGCTG
 CATCGTGCTCCGGCAGCAGTGCCGACAGCAAACCAACGGCCCGAAAGTACACACAAAGTCCATTTTCGCGATGGAAATC
 GACGGTCAGCCTGCCGAGAGATCGTGATTGGTCTTTTTGGTAACACAGTCCCAAAAATGTTGAAAATTTTGTGCTTTT
 GGCTGACAAGCCCAAGGGCGAGGGTTACAAAGGCAGTAAAAATTCATCGTCTCATCTCCAAGTTTCATGATCCAAGGAGGAG
 ACTTACCAAGGGCGACGGCAGGGAGACGACGATCTGGGGCGAACGTTTCGACGACGAGAACTTCAAGCTCAGACAT
 TACGGACCCGGTGGGTGTCGATGGCCAATGCTGGCAAAAATACCAACGGCTCTCAATTTTTATCAGCTCGCGCAGAC
 CCCGTGGCTGGATGGCAACACGTAGTATTTGGAAAAGTTCATCGAAGGAATGGACCTGGCCAGAAAGATGGAAAAGATTG
 GCAGTGACGCCAGAGACAAGCCAAACAGTCGATGGTCATTGCGGACAGTTGGTCAGAAATAGTGAAGAGCCTTTTGCA
 GTTTCCAAGGACGGAGCCGATTAAGAATCGATTTTCTTCCACATCTCCTTAAGGACTCATATCCATGCTTACAAAAAAT
 GGCTCAATTTTCAAGAACTTGTCTCCACCATCAACAGCTAGACATTTCAATTTTTCTACGAGCATAAAAACTGCATTTTT
 TCAACGTTCAATAAAAGTGACAAATTTTATCAGTTTTTTTCCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACCTGT
 CGGCCG

>CL1601Contig1

mmc4.txt

GTAGTCTTCTCTGCACAAGCAAGGAAGCTTGTGCGATATACCTTCGACGACGCGTCGTTGCGTTAGATATTTAACATTTGTT
GGTGTTGAATTTTTTTGTTTCGAGATGTCAGCAAAATCATCAAATCTGCGCTTTCTGTTGTTTCATCAACATGGGTGGA
CTTTTTAATGTTTTTCGTGTCGAGTATTTTACCTTGAGCCACACCGGAGAATACCCAGCTTTACCGACGCTTGGCCATC
AACGAAGCCGTACATACTGCGTAACAATCAAACGTACAGTCCGGCCGGATGTTTCGATCGACGAAACCCACAAGGACCTAT
ATTCGGCCTTCAGTCGGGTCCATGGCGAAATAATCGCGAGCGTCTCCCGAAGAGAGCCGCTCGATTTTCGCCATTTCTCCG
CTTGCTATTACGATCGCTTTGGCTGTGGTGACTTCGAAACCGGTACGACAGCAAGGAGAGTGTTCGATAAGATGGGAGC
GCAGCCGCTCATCGATTATTTAACAGGTTACAGGAAGACGGGGCTGATCGTGGCCGGCGGTGTATTCGTATCTCCGAAAG
TGGACCTCCGTCGCGATTATAGAAACCGTGACAAAACCTTCCGCAGTATACTGCGGAGGCTCGATTTTCGAAGACCC
ACTAGAAGGCAGGAGTTTCATAGAGCGTT

>CL1603-bisContig1|elongation factor 1-beta

CGGCCGGGGACCGGAACAACGTCACGCTTTACAAGATACGTGTATGTGTGCGATGTGTGTTAACGTAGGTGACGTTACAC
AGTGATTCTCGGTGTGAATATATTTCTCTCTTCCGGTAAGACGACAAGACAGGCTTGTAGCGTAGGATTCAAGTGTGCCGT
ATATATTTACCCGATTGAAGAAAACATAAAAAATGGCAGTCGGTGATCTCAAACCTGAAAAAGCGCTCAAGGATCTTAACG
CTTATCTCGCCGAGAGAAGTTACATCGAAGGATACCAAGCCTTCAAGCGGATGTGCTGTTTGAAGCTCTCGGAAG
GCGCCGAGCGCGCAAAACGCGCATGTGCTCAGATGGTACAATCACATCAAGTCGCACGATTTGAAAAAGTTGCCCGGCGA
GAAGAAAGCGCCTGCCATTTTACCCTGCGCAAGCTGCTGCGGCGACGCCAAAAGCCGAGGAGGAAGATGACGTCGATC
TGTTTCGGATCGGACGAGGAGGAAGACGCGGAAGCGGCCAAGATCCGAGAGGAAAGACTAAAAGCGTACGCGGAGAAAAAG
TCTAAGAAACCGACTATCATAGCCAAGTCGAGCATCGTCATCGACGTCAAGCCCTGGGGCGACGAAACGAATATGGCGGA
TATGGAAGCAGCCGTGATCCATTGTGTCATGGACGGTCTGGTTTGGGGAGCTTCAAACCTCGTACTCGTTGGTACGGCA
TCAACAAACTGCAGATAATGTGCGTCGAGGATGACAAAGTATCCGTAGATTTACTCACTGAGAAGATCCAAGATTTTC
GAGGATCTCGTACAGTCGGTCGACATTGCAGCCTTCAATAAGATTTAAATAAGTCTCTCGTCTTTTACTATCGAATTAAT
AAATATAAATTGTTTGAACGCTAATGTTTTCTTCGTTATTATTATTAATCACTTGGTAATCATAGAAACTCCTGAGAGCT
CCATCATTCGTTGCGATATTTCTTGATAGCAGTTTCGATTATTCGTTGTTTTTAAAGATAATAATCCATACGCTCAA

>CL1608-bisContig1|lysosomal aspartic protease-like

AGTATATACATTTTTGTTTCAGTGATGACTGGCTGAGTTCGAGTTTGGTGATCGACAAAGAAAGCGGCCAAGGAAATTTAAA
CTAAATTTCTAGACATAGTATCCGTTTGAACAAAAGTAATCATTATCAGGGAGAAATGTGGCGTATTCTAGCATGGATCG
CCCTTTTCGGCGCGGTAACAACAGCGAGTCTCGTACGTGTTCTCTGCACAAAATGCAGAGTTACGCGAGAAAGTTCCAA
GAGGTGGGCACAGAAGTCAACAGCTCCGAATGCGTTACGGCAGTGGGCCAACCCCTGAACCACTCTCAAACATACATGGA
TGCTCAATATTATGGGGACATAACGATCGGCACCTCTCCGCAAAAGTTTTCCGTTGTTTTGACACCGGATCGTCCAATC
TTTGGGTGCCGTGCAAAAAATGCCACTACACGAATGTTGCATGCCTGATCCACAACAAATACAACAGCAAAATGTCAGT
ACCTACAAAGCCAACGACACGGAATTTCGATATTCGTTACGGATCTGGCAGCCTTTCAGGATTTTTGTCAACCGATGTTGT
CAATATCGGAGGTATCGACGTGGCTGATCAAACATTCGCTGAAGCAATGAGCGAGCCGGGTCTCGCCTTCGTAGCCGCTA
AATTCGACGGTATCCTCGGAATGGCTTATTCTCGCATAGCGGTGATGGGGTTACTCCACCGTTTTATAACATGGTCAAG
CAAGGATTAGTCCCTCAGGCGAAATTCAGTTTTTACTTGAATAGAGATCCACAGGCAAAACCCGGTGGTGAATTTATTCT
TGGAGGTTCTGACCCTGACCACTACCACGGAGAAATGACCTACGTTCTGTGATCGCAAAGCTTACTGGCAATTCAGA
TGGACGAAATGAAATCGGTGACAAAACATTCTGTGTAACGGATGTGAGGCTATTGCCGATACGGGCACTTCCCTCATC
GCTGGACCGTCAAGGAAGTCGAGGCAATAACAAGTATTGGAGCCACTCCCATAATGGCTGGAGAGGCAA

>CL161-bisContig3|isocitrate dehydrogenase

TGCGTACGAGAGAGGCGATAGGCTGCAATTGATAAAACAAAGACAGAGAGTACAAGAGAGTGGGAGTGAGTGAGAGGCAAC
GAGAATCACCGGCAAAGCAAATACAAAACGCTACGCCCAAATTTATCACTTTTATCCTCATCAGTACTCAGTGCCGATCG
AACGAGCTATTTCACTTGTGAGGAGTTTCAGCGTATCGTCTGTTGTATGGCCAAAATTAAGGCAGGACCGGTTGTGGATG
TTCTCGGAGACGAGATGACCCGGATAATCTGGGATTCGATAAAGGAAAAATGATTCTTCCGTATTTGGACATTGATCTT
CATACGTACGATTAGGAATCGAAAATCGTGACGCGAGCTCCGACCAAGTGACGTTAGGATGCGCAGAGGCGATAAAGCG
TTTCAACGTCGGTATAAAATGCGCAACTATAACCCCGGACGACGACAGAGTAGTGAATTCAAAATTAAGCAAAATGTGG
AAGAGTCCAAACGGGACGATTCTGTAATATTCTCGGTGGAACGGTATTCCGAGAGGCAATAATATGTAAAAACATTCTC
GTTTGGTGACCGGATGGAACACTCCGATAATAATTGGAAGACATGCTCATGCGGATCAGTACAAAGCTACTGATTCATTG
TTCCGGTGCTAGGTAAGCTGGAAATATCGTGACGGGTNAGAATGGCCAGAANTTCATCACACCGTGC

>CL1615Contig1|calponin transgelin

TTTTTTTGTCTTACTTGCCTGCAACTCAGCTCTCACCGCACGAAACGTCATTTTTTTAACACGCACACGCGCACACA
CACAAGCACGCACACTTTCCAAAGAGATTTTTCTCTGCAATTTTCGATCGAGAACTCACCGGAAAAACAAATAAAACAACAAA
GAAATAATGGCGCCACGCAATAAGGAACAGGAAGCCGAAGTTCTGGCCTGGATCGAAGGTGTCTTGGGGGAAAAATTAC
CGGGCTGGTAATTACGAAGACATTCTGAAGGACGGTGTAGTCCTCTGCCAGCTGATAAACAACCTGGCGCCTGGTTCCGT
GAAAAAATTCATTCGAAGGGTACCAACTTCCAACCTCATGGAATAATGTTTCAGAGATTCCAAGCAGCTATCAAAAACCTACGG
TGTACCGCAGGAAGAAATTTTCCAAACGGCTGATCTTTTCGAAAGACGCAATATTCCTCAGGTCAACCTTTGCCTTTACG
CCTTTGGAAGGATCACACAAAAACATCCCGAGTACAACGGACCAACTTAGGACCCAAAATGGCCGATAAAAAACGAGAGA
ACCTTCACGGAGGATCAGCTTCGAGCCAGCGAGGGTCACCTCAACTTGAGATGGGTTTCAATAAAGGAGCCAGTCAATC
GGGACACGGTGGTTTCGGAACACACAGACACATGTGAACACATATGAACATTTGTATATTATATATAAATATTATATA
TCTGTACATATATCCGAAAGAAAATTGACATTATCTCGAAAATTCAACATTAATTAGAATCCAATGACAATTACAACCTC
TTTCATTTTCCCTACAAACACAACGTTCAATCTTTTCGCAACAAATTTTACCACACTGCTATATAGCAAGATATTCGTC
ATCGAATGTTTTTTTCCACTTTTTTCCAGCCTTTTGAATAAATCATATATTTTACACTGCTTTCCAGAGTTTTCAC
ATGGAGAATACTTTTGTAGTATCTTTGTCTACGAAATAAAAAACGACTCTGCTGTTTTCTACGTCATCAATAATTTTTTCAATTA
ATTCCATCATTTGACTATAGTTTCCGATGTAAACTGATTCTAGTGACATAATTGGAAGACTTTTAGGCATTCCTCGGCTT
TCTTACTCATAAAAAATCGCGAGAAACTCGATAGAAACTCATACGACTAGTATGAGTTTTTACCCTCGTTCCGCTCATA
GAACAGAAAAATCAGAAAGCAAGAAAGAAAGAGAGAGGATACCAAATGAAACACTCGATTCTTGCCAAACATGGCGAGGT
TCTGGATTATGAAGATGGGCGAAAAGAAACTCTAAAAACTCGAGATTGTGTGTGTTTGAATAATTAGTAGCTGTGGAAC
GATTTTCTGCTAAAGAACTGAAATTCGATTTTCAAAAATTCATTTCAATTTATTTG

>CL16205-bisContig1|actin-like protein 87c-like

GGTGGCCTGTGAAAGAAGGAAGAAGGTGTGGAATTGTGTGGGATCGAGACTATTCCGGGGCAAAAAGTGTATGAAAGTG

mmc4.txt

AAAATTCTGACTTGGGAAGTAAAGTCTCGATAAAATAGAGCGAAAGTTACTATTCCGATTGAATAATGGAACCGTACGAT
 GTTATTGTGAATCAGCCCGTGGTTATCGATAACGGTTCGGGGTGATAAAAGCGGGATTGCTGGCGATCAAATACCAAA
 ATGTAGATTTTCTAATTACATCGGCAGGCCGAAGCATGTGCGTGAATGGCCGGAGCTCTGGAGGGAGACCTCTTTGTTG
 GTCCGATAGCGGAAGAACATCGCGGTCTCTCTCCCTACGCTATCCCATGGAGCACGGCATAGTAACAGACTGGAACGAC
 ATGGAAGAATCTGGAACACGTTTATGGCAAAGATCAACTTGCAACATTCTGCGAGGAACATCCAGTTTTACTAACGGA
 GGCGCCTCTCAATCCCAGAAAAACAGAGAAAAGCCGACAT
 >CL1621Contig2|succinate-semialdehyde mitochondrial
 TGATGTGACTCATGGCCTCTAATTAAGAAAAGCCAACTCGAAATCGTCCAGAAACTCGTCGATGACGCCGTTTCAAAG
 GCGCCACCATAACATTGCGGTGGCAAAGTCCGAAACGACTTGGGTCTTTGTTTTACGAGCCACCTTGTTGACTAACGTT
 ACCAAAGACATGGACATTTATCGCCGCGAAATATTCGGACCAGTCGCTGTTATTACAAGTTTGACTCCGGAAGAGGCTG
 TTCTTCGAGCCGCTAACGATACGAATGTCGGTCTCGCTGGATATTTCTTCTCGCGTGACATTTCTCAAATATTCCGTGTT
 GCCAAGGCGATGGAAGTTGGTATGGTTCGGCGTGAACGAAGGATT
 >CL16251Contig1|spectrin beta chain
 AAATTTACAACGTCGTGGCGCAGCGTTTGGCCTTTAACGCAATAATTACAAAGCACCGTCCCATTGATACAATTTG
 ACAAATTTGCAAAATCCAAATGCAATTTACAATCTCAACAATTTCTTCAACGTTGCCGAGGACAAACTCGGTCTTACCAAG
 CTTCTCGATGCCGAGGATATATTTGTCGATCATCCCGATGAAAAATCCATAATAACGTATGTCGTGACGTATTATCATT
 CTTCTCCAAGATGAAGCAGGAGACGGTGCACGGCAAGAGAATCGGTAAAGTCGTTGGTATCGCGATGGAGAATGATCGTA
 TGATTCACGAATACGAGAGTCTGACGAGCGATCTTTTTCGTTGGATCGAGAGTACGATCGACGCGTTGGGTGATCGTCGT
 TTCGCCAATTCCTCGTCGGCGTACAATCGCAATTGCTCAATTTCTCGAATTATCGTACGATCGAGAAACCACCGAAAT
 CTGGAAAAAGGAAATCTCGAGGTGCTGCTTTTACGCTGCAATCG
 >CL16267Contig1|peroxisomal n -acetyl-spermine spermidine oxidase-like
 TGCTGGCAACGAATTGGCAATTATTTTTTCATCAACATTTCTTCAATGAGACCGCCGGAGGAATACAAAAGTCGTAGTT
 TGGGCGATTGGTACACGCACTTAGTGGACGAGTATTTTACGGAGCATCCGGAATAAAGAGCGAGCAACGGGAGCCGTTG
 AAAAAATCGTTAGAGTTGTTGGAATTGGCTTTGGATAGTTGCGGACAGTTGGTTCGATGTCTCGACCGATGACGAATATG
 AGGAATGTGAAGGGGATCAATGGTGAATTGGAAGGACAAGTCGTACGGTTTCGTGCTCGATCTATTGACGAAAAAGTAT
 CCGAATCTGAGGAGAACTTCCGGTCCGCAACAAGACGGTGCTCAATGCGGAAGTGACGAAAAATAAATTACAACAATCC
 TGACGGAGCAGTTCTGTGACGACGAAAAAATGGTGACGAGTACGTGCGGACCACGTTATCGTCACTCCGTCCCTCGGG
 GTCTTGAAGGCTAACACGAGAACTTTTTAANCCTCTCTGCCTGAAACCAAGTCAAGGCAATTAAGGCAACTGGCTA
 T
 >CL1627Contig1|udp-glucose:glycoprotein glucosyltransferase
 ATCTATCCGTCCAACGAATCCTCCAAACCTTGATTTTCTTCAACGAATCACTTTTCTCAGCTTATTTGGCACCGTTGCG
 CGTCGGTTTCGTTTTTGTACGAATTACGATACTCGAAACTGGCCTGACCGATCCCACCGTCGCTATCAACAACGCGTA
 TCACTACTTTGCTCTCTCCAAGAGCCCCAAGGACGCCTTGACTTTTTGCAAGAATTAACCAAGTACATGGGTCCGCAC
 GGTACCGACGTTGACTCCGTGAAGAAAGCAATTAAGGCGCGCGATCCTTCAGCCAATATAAACTACATTCTTGGCGAGGA
 ATCCGAGTACGACGTTGGTCCGCAATTTGGCGAGTGACTTTGTCAAGCGTACGGGCTTCAAGAAGTTCCCTCAGGCATTAT
 TGAACGGCGTGCTTTTGGCGACCTCGATCTCGACGCTGATTCTTCAAAGAAACCGTTTTCGCCGCAATCATGGCACAAA
 CCCCTTTACTACAAAAAGCTGTTTACACCGGCGAACTTACCGAAGGCGATGATGTCGTGAGTATCTTATGAAACAACCG
 AATGTCTACGCCAAGACTGAACGAGAGGGTTCTTACAGACTGAGAAGAACAATGGTTGAACCTTATCGGTTCCGTGCCGAA
 TCATGAGGAATACACGACTTGGAATCCCCCAGGACACCACAGCCTGGTTAATGTCGAATACAAATTATTTGTCGGTCCCC
 CGAAGAACGAGCGTAAGACATTTGTATTCTGTCCTGGATCGTGGTTCGATCTCGAGAACGAATCCGGCAGGAAACTGTTGCG
 AGAAGCGCTCGAATATTTGGGAAGCAACACCGACGTGAGACTCATGATAATTATCAACAGCGAAGAAGCCTCCAGTCCCG
 ATGCGAATGTCATTAACAAAAATCGATTAGCCGCTTCGAAACATTAACCGGCGAGAAAGCTATAAACTTCATGAATCTC
 TTAATCAACGAAGACACCGTCAAATTGATCAGGAATGGCGAATTTGTGATCCAAGAAGATGAGGTGCAAAAGGTGATGAA
 AGAAGCAAGATTTACACTCGGGCTGCATCGACATTATGCCAAAAATGTTCTCGAGGTTGAGAAGGGAGGCAAGTCGTG
 TTTGCAAGTGGACGCGTCTCGGGCCGCTGGAGGACGATGAAGAATTTACTAGCGAAGATTTGCTCTTCTCGAAAGATT
 CAGTCAGAGCACTTATGGCGACAAATTGCTCACAATTTGATAAAGCTCCAAACTGTTGACGACGATGATGATTATGAGA
 AAAACGAAGTTTCGGACGACATGATAATGCAAATAGCTTCGCTTCTTGTTCGAGGGCCCCAACACGACGCGCTTACGAA
 GTTCCATTCCGACGCGACGAGTACAGTCAAGTAAATTCGGCTGCGAATCCCGACGAAGTAGCTTTCAATTTAATGGC
 AATCGTGGATCCAGTTTCGCGCGGCGCTCAAAAGTACAAATGTCAGACCATTTAGACAACCTTTGAGAAATCTTGAACGCAACA
 TCAAAGTTTTCTCAATTTGCGTCGAGAAGAACAGCGATATGCCGTTGAAAAGTTTCTACCGTTTCTGTTCTCGAGCCCGAG
 CTCCAGTTTTCTCCGGACGGACAATTGTTTCGGCGCGGTGGCCAAGTTCACCAATTGCCAACGTCTCGCTACTCACCCA
 GTATATTCACGCCCCAGAGAATTGG
 >CL162Contig1|serine protease
 TCGATTATTTAACAGGTTACAGGAAGACGGGCTGATCGTGACCGGCGGTGATTCTGATCTCCGAAAGTGGACCTCCGT
 CCCGGATTTATAGAAACCGTGACAAAAACTTTCCGCGAGTATACTGCGGAGGCTCGATTTTGAAGACCCACAGAAAGGCA
 GGAGTTTCATAGAGCGTTGGAGCAAGGGAAAAGCGGCAAGCATCGTTAAAGCAGATACAAGCGTGGCTTACGTGAACGCCA
 TTCGCTACAAGGGCGAATGGGTTCACAAATTCACGGGCTCGTACTCTGGGGGTGCCGCGACGCTGACGGGAATCATGT
 AACTATCGATGTGACGATGACTCAAGACGGAACATTCTTAAGTGGCTATTATCCAAGACTGGACGCAACATTTACCGAAC
 TCCCATTGAAGAGCCAAGATGGTCACAAAAATATGAGCTTCATCTTCGTATACCCGGAGTTGCTCTCGAGGTCCAAGCCT
 TCGTACGACGCTACGCATCGCATGGCAACATCAACATCACAGAGCTCAGGTCTTACGGGACGCTAAAAGAGGAGACTAT
 CTTCATACGCAATTCAAAGTCAAAAGTACAATCAATGTGACAGCAGTCTTAGAGAGTATGATGCTGGCAACTCGATTT
 TCGATCAACAGACGACAAAGTTGAGCCACGTTGCCAATTTCTCCCAACCTCATTGGAGACCAATTTGTACAAAGAGTTTCC
 TTTGAAATCAATCAAATGGCGTCGAAGCTATGACGATCGACGATGCCGCGGATGCTCCTGCACCCCGTGATCTAATCGT
 CCTAGGCTACGAGCGCCGCGCGTGTACGGTTGCTCGTACCGGGGACGATACTCCTCACATTGTCTTCTGCTGCATGCT
 CGTATTAAGCAGAAAAACATTTTTTCAATTTCCACCACGCGCCTAACACAGTGCAGAGAGCGACACGAAAAATATTAATT
 TGGTGATTCTGTTGCGGTGCGTGCCATTATGAAAAATGGTGGCTTTCCACGATTTTTTGCAGAGCTCGAAAGATGAATCTC
 TTTTGGCGAATATATTTTTATCCTCTGAAATGTAACATTTAAAAAAAATACAAAAAAGATGCATCGAAAAAATATAT
 AAAAAAAAAAAAAAAAAAACATGTCGGCCG

>CL1635-bisContig1|tryptophanyl-trna cytoplasmic

TTTCGTTTTCTGTTGTTTCATCACATACTGCAGTACACCTGCCGCAATGTTGCCCGTGACATAAAAAACGTGAATGTTG
 TTCCTCATGACATATCGTTTTATTATTTTACAAAATAAAGTATTTTCGCAACTGTGATTATCAGTATTTGAAAGCCAATAA
 TCGTTGAAACATGTCGGCCGAACTGACTCCAAGTATCGATAATTTGACGGTTACCGGTGGCGAGGACGACATAGTCACGC
 CTTGGACAGTAGAGAGCAAAAATGATAGTGAATCGATTGTGATAAATTAATACAACGTTTTGGTAGTTCCAAAATCGAC
 GATGAGCTTCTGGAACGTTTCACCAAAAATAACAGGAAAAGAGCCACATCATTTTTCTCAGGCGGGGAATATTTTTTTCTCA
 TCGCGACATGCACACCGTTCTGAATCTTTACGAACAAGGAAAACCGTTTTATCTCTATACGGGAAGAGGACCAAGTTCGG
 ACTCTATGCACTTGGGCCATCTCATTCCATTTGTCTTTTGCAAATGGTTGCAAGACGTTTTCGATGTTCCGCTGGTGATC
 CAACTGACGGACGACGAGAAAATTCATATGGA AAAATCTGAAAAATGGAAGACGCCATTAGCTCTCTTACACCAACGCCA
 AAGACATTATCGCGTGTGGTTTCAATATGAAAAAACTTTAATATTCTCGAATCTCGAGCACATCGGAAAGAATCCAGCT
 TTCTATCAGAACATGATAAGGATACAAAGATCTGTGACTTTCAATCAAGCCAAAGGGATTTTTGGGTTTCGGCGACAGCGA
 TCCTATCGCAAAAATCAGTTTTCTCCGACACAAGCAGCACCGGCTATCTGCAGCACTTTCCCTTTTCATCTTTGGCAAAG
 CCAAAGTTCCTGTCTCATTCTCTTGGCGCATCGATCAAGATCCTTACTTCAGAATGACCCGAGACGTAGCTCCTAAACTG
 GGATATCCCAAACTGCTCTTTACATTCTCTCTTTCTTCTTCTCTCAGGATCCAAAACAAAATGTGAGCGAGTGATCT
 CAATTCGGCTATTTCTCACCGACACCTCCCGTTCCG

>CL16355Contig1|alpha-methylacyl- racemase-like

ATGGAAGTATATGGCAGTCGGTGCCTAGAGCCACAATTTTATAAAGTGTGCTGGAAAAGCTCGGGGTGTCGGACGAC
 GACGTGCCGCAATATTCCGAATTCGATGAAAATCGTGAAAAGCTCGCAGCTCTTTTTAAACGGAAAACACAAAAGAATG
 GTGTGCGATCTTCGATGCGCAGCGATGCGTGCCTCAGCGCGTATTGTCGTTGAACGATGCATCCGCGAACAACACAACA
 GGACGTGAAAGAGTTTACATTCTCGATCGATGGAAACAACCACTCCGAATCCCGCTGCACGTTTTCTCTCAACACCTGGC
 TCTTCGCGGCTCATCTTTCAATCCCGACACCGGCGCAACACTCGAGAGAAATTCTAACAGAGTTTGGATTGAGCGCAA
 AAGACATTGATGATGCTGTCGCATCCGGCCTCGTTGAACAAGCTAAGAAACGAGCCAACTGTAATTCTCGTGAGACAAT
 CACGAAGAACGTTTCTCGGAGAACGAGCAATCTACAGAGATATTATGACACGATTATGTCCAACGTTGAATAGTTCT
 GATAGAA

>CL1639-bisContig2|signal recognition particle receptor subunit beta-like

GGTTACTGGTGACGTTTTTCGAATCCAACAATCCTGCTGCACAGATTTCCACATGTTACATCGAGGATTCACATTTGAAA
 TAAAACAAATCTGGAAGAATGAAAAACAACGTGAGCCGGTGTCAAGTGACCCGGACGAAGTTTTCTGTCCGGAATAATC
 GTTGCTTTCTGTTGTCGTCCTAGTGACATTAGCCTTCTTCTCATATGGAAGACGAAAATCTGTGCGGAGAAGTAACT
 TCTACCCGGTCTCAGCGACGCGAGGCAAACTGCATTGTTTACAAAACCTGGTGACTTCTGCAGTGAAGAAAACCTCAGACTT
 CCATCAAGGAGAAATGTTGCCAACATCCTTGTCAATGACAGATCCTTGACGATCGTTGATCTTCTGGCCACGAGCGGCTG
 AGATATAAATCTTTGACAAAACAAAAATTCAGCTATCGGCCTCGTCTACGTATCGATTCCACAACGTTGGCCAGAGA
 CGTCAGAGACGCCGCTGAATTTCTTGACAGTTGCTGTGCGATAAGACGATACAAAGACATTGAGATCCTGATTTGTGCT
 AACAAACAGGACCAACGCTAGCT

>CL16394Contig1|spectrin alpha chain-like

ATTCTCGATATCGTCGATCGAAATCGCGATGGATATGTTTCGTTGCAAGAGTACATGGCTTTTCATGATCAGCAAGGAGAC
 CGAAAATGTGCAAAGCTCCGAGGAAATCGAAAACGCTTTCCGAGCGATTACAGCTGCCGATCGACCTACGTAACGAAAG
 AGGAACTTTACGCGAACCTTACAAAGGAGATGGCCGATTATTGACCCGCTCGAATGAAACCGTACGTGGATCCAAAGACC
 GAGAGACCGTAACCCGCCCTTGGATTACATAGACTTACTCGCACTTTTTCCAAAACGATACAGGTTACTTGTGCGAGC
 ATAAACAAATACATATATATATTACTTTTTAATTATTTATATGTTTCGTGAAAAAAACAACAACAAACAAAAAATGAAA
 CAAAAAACACGAACAACGATACTCGAATTGCAAAATGTTGTTGAAGTAAAAAACCGTATTCCATTAGTCGAATCTCCA
 ATTA

>CL16406Contig1|26s proteasome non-atpase regulatory subunit 1

GTTTTTCATGTTACTGTGCGGTCTCATCCGAGTATCGTCTGTAAACTTTAACTTGTGTTGCTCCTCGGAATAA
 AAGTGCAACTCGAGTGACGTATTGAGCGAATAAAGATGATTATCACATCAGCAGCCGGTATCATCTCCTTGCTGGAGGAG
 CCAATGCCAGAGCTCAAAGTTTTTGGCTGCAAAAGCTCGATACAATTGTGACGAATTCTGGCCAGAAATTTGAGAAGC
 GATAGAAAAAATCGAAATCTTTACGAGGATACGGCGTTTACCCAGCACAAAGCTGGCGGCTTTGGTTGCGAGCAAAGTCT
 ATTACATTTAGGAAGCTTTGAGGATTCTTAATTTACGCTCTCGGAGCTGGAGAATTTTTGACGTCAATGCTCGCAAC
 GAATACGTAGACACGACCATCGCAAAATGCATAGACTTTTAACTCAACAACGAATTCTGCTTGGGAGAGCAAAACAAT
 TGGCAGAGCCGAAGGACATCGACCGAGATTGGAAGGAATTGTCAACAGGATGTTCCAGAGATGCTTGGACGACAATCAG
 TACCGTCAGGCACTGGACTCGCTCTGGAAGCTAGACGAATGGACATTTTCAAGCTGCGATAATGCAGTCGGATGACGT
 TGGTGGAATGCTGCTGACGTGCTTTACAAGTTGCGATGATC

>CL164Contig1|annexin-b9-like

ACGTCAACGCATTCACTCGGTTAACTCGATTAATAATTCTCCGACCACACCCCTCGTGAATCCAAATACAACGTGCAATA
 TGGCTGCCAACCAATACTACCACCTGCAGTGACACCAACGGTGTATCCTGCCGACCTTTTCGAGCCCGAATCCGACGCT
 GAGCTGTTACGCACTGCTATGAAAGTTTTGGAACCCGACGAACAAACCATCATCGACATTCTTGCCCATCGAGGAATCGT
 CCAACGTCTCGAAATCGCCGACAAATCAAACTATGTACGGCAAGGATCTCATTTCCGAGTTGAAATCTGAACTCGGTG
 GAAATTTTCGAGAAAGCCATTCTCGCCCTGATGACACCTCTGCCAGAATATTATGCCAGCGAATTGCATAATGCTATTTCC
 GGTATGGGAACCGACGAAGATGCCATTATCGAAGTTCTACGTCGCTTAGCAATTATGGAGTCAAGACGATCGCAGCAGT
 TTACAAAGATCTTTACGGCAACGACCTCGAGGATGATCTCAAGGGTGAAAGTTTCAAGAGACTCCTCGTTT
 CTCTCTCTTGCCCAATAGGAACGAAGATACCGACGTCGACGCACTGCAGCTGTGAGGACGCCGAGAGGCTGCTCGCT
 GCTGTTGGAAGACAATGGGGAACCGATGAGAGACCTTCAATGCCATTCTCATACCAAAAGATCCTCAGCTCAGAAG
 AATCTTCCACGAGTACGAAAACATCGCCGGACACACTCTTGAAGACGCCATCAAACGAGAATTCTCAGGCTCTCTCGAGG
 ACGGTTACCTCGCTGTTGTGAAATGCGCTCGTGACAAAACCGCGTACTTTGCCGAGAGACTGCACAAGGCAATGGCAGGA
 ATGGGAACAACAGACTCGACGCTTATTCGCAATTGTTGTGCAAGGTCGAGATCGATCTTGGTGATATCAAAGATGCCTA
 CCTACAAATGTACGGGAATTTCTTAGCTGCTGATATCGACAATGACACTTCCGGAGACTACAAGAGACTCTTGCTTGCTC
 TCGTCGGCCGCTAAGCGTTTAACTCTTCTCATGTGTGCATAATTATGTGTTTATCAAGTTAAATAAGAAAGCAAGGA
 AAAAGCACTCGCGAAAAGACACAATTTATTAACCTTTTTGTCATGTCAGTAATATCAGGATGTAGAGCTGTGCGGGAAC
 AAAATTATTTGTTAAATAATATTATGTCTTGGAATTTATTTTGTGTTATAACAATCAATACAAGTATTTTTACGTGTAATT

mmc4.txt

ATCTTCTCCCTTTTCTTTTCATCCTTGCCAGGTGAGAATTCTATCAATGAAAATCACTTTAATCTCAACGTGAATCTCACC
TTTTCTAGCTTTTTCCATCATTCTCTTATTCACCC

>CL1652-bisContig2|40s ribosomal protein s15a

CGGCCGGGGGATAACCAAACGTGTCTGTGGTGTGATAAACAATCACAAATCGCAGCCATGGTTTCGCATGAATGTACTC
AGTGATGCCCTGAAATCGATCAACAATGCCGAGAAGCGTGGCAAGAGGCAAGTCCTTCTGCGACCTTGCTCCAAAGTCAT
TGTCAAATTCCTCACCGTCATGATGAGGCACGGCTACATCGGAGAATTCTGAAGTCGTTGACGACCATCGCAGCGGCAAAG
TTGTTGTTAATCTTTCCGGAAGATTGAACAAATGCGGCGTCATCTCACCGAGATTTCGACGTGCCATTACGGACATTGAA
AAGTGGACCAACAATCTGCTTCCCTCCCGTCAATTTGGATACGTCGTTTTGACAACCAAGTGGTGAATCATGGACCACGA
AGAGGCGAGGCGGAAACATTTTGGGAGGAAAGATCCTTGGATTCTTCTTCTAAAATTTTATTAACGAAAAATGTAAAAAA
AACAAAATTCTGTTTGTATCGACAAGGACAATAAACGGTTGATGCAAATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CATGTCGGCCG

>CL1653Contig1|phosphatidylinositol transfer protein alpha isoform

GCTTATCCCTACTGCAAAACAGTCATAACCAATCCAGGATACATGAAGGACAATTTGTAATAATGATCGAGTCTTTTCA
CATCGGGGATATCGGTAACCAACAAACGTTTACGAATTACCGCCGGACAAGCTGAAAATACGTGAAGTCGTGCACATAG
ACATTGCGAAACGATCCGATAGCGAGCGCGGATTACAAGGAGGACGAGGATCCGACCAAATTCAAATCGCAAAAAACCGGT
CGCGGGCCACTGGTCGGTAAAGAATGGAAAAACCAGGTCAAGCCTGTTATGACGTGTTACAAATTGGTTACGTGCGAATT
CAAATGGTTCGGGCTACAATCGAAAGTCGAAAATTTATACAAAGAGCCGAAAGGCGTCTCTTTACCAACTTCCATCGAC
AAGTATTCTGCTGGATAGATCGCTGGTACGGAATCAGATGGAAGACATACGAGCCATCGAGGAAAACACCAAGGAGGAG
CTCGATATGCAAAAGGGCCACGGAGAGGTGCGAGGAATGCGTGCCGACGATTGAGACGTGCTAGCCACCATTGAATAAG
TCTAAACCAATTCTCCTTACACACACACACGAAACAACTCACACTTTTCGCGAAAGATCGCGCAACACACACACACACA
CATCCACGAATACCGAGACCGTAACAAAATAAAAAAAAAAAAAACGAAGAATCGCGAAGAAGAAGGGCAAAGAAAGAAAA
AAAAGTAAAATCGTATAAAAAATGGTAAATAAAAAATAAAATGCAAAGTAATTCTCGCTCAGCCATAAGCGATCTGCGGGA
TCGGGGGACAGTTTCCAGAATCCTTAAAAATCTGTCTTATAGATTCAAGTGTCTATTATTACATACTACTTACCAATTATA
ATTTATTTACATTTACAAAGGAAAAACGAGTTTTTATGATAAATGTACCTACAGTCAAAGAGTAACGTTAATTATAATACTA
CCGCGTGTGCAAATTGATAACGAGTGTGCGGACTGAGCCGAGAGTTTGGTGATACTGTAGATGACAAAAAAAATGTTT
TAAACTCTGGCGAACGAGCGACATAGGGCATAGAACAAGATGAACAAGAAACGAGAATACACACAGCCGAATAAATAAGT
GAAAAGGAAAGATGACAAAAAAAAGGTTTTAAATTCGATTTAAGTGAATAATGAACGAAGCAATTATTAATTGATTA
GTGTAGTAGTTAAATAGT

>CL16553Contig1|Vitellogenin-6 [Acromyrmex echinator]

GATGGCGATCTTTGACTGCGAGAATGGTGTCACTCCCGTCACCCTCAAGCAAGACTGGTTCAGAGCTTTTCGCTCAAACC
GCAAAAACTATTGGAACGATTGGTTAGCTCAGGATTAAATGGCGACGACCAAGCATGGAAGAATGATAATTTACCG
AAAATGGGAACGTGTGGGAATCTCATAAAGATTCTGCCGAGTGTCTGTTCTTCTACTTCGACGTCAACATCACGTTACG
TATGAATTACGAGGACGTGGACAAAAAATTTCCACGTACCACGTCTTTCGAGCGAGAAATACAGCCTCATCGAAAAA
TGGACGTGTTGCTGCTTCCACCAACGAAATTTCCCGCTCTGGGATCTGAACGTCAATGCTGACCTGAATCCGGAGCAT
TCGGATAACAGACTCAAAGTTACACTCACCACGAGAGTACCCGAGGAAACAATTACAAGATATGTTTGAAGGTCAAAA
ATATTAATTCGGAACCACCGCGGATCCTCTTCAGCTCGGCTCTTTAAACGACCGAACAGTCAGCAAGTTGTCAATCGCA
GCCGACCTACCGACGA

>CL1657Contig1|sorbitol dehydrogenase

ATTTGTGCAAGGATATGGTGTGTTTTCGCTACGCCACCGTTTCATGGAACCTTTGAGACGTTGGTACAAACATGCAGCTGAT
TTTTGCTACAGACTTCCAGACCACGTGAGTTTTCGAAGAGGGTGCTTTGCTGGAGCCCTTGTCGTCGACGTGCACGCATG
CAAACGTGCAAAATATAGTAATAGGCTCTAAGCTCTTGATTACTGGATCAGGTCCCATAGGACTTGTTTGTCTTTTGGTAG
CCAAGGCCATGGGTGCGAGCAAGGTCATAATTACAGACGTTGTAGAAGATAAATTGAAGGTGCCTAAGTCCCTTGGAGCT
GATGATACTTCTCTCAACAAAGGAATCACCAGGCGCAACCGTGAACGTATAACTCAATTTGTTGGTGAACAGCC
CGATAAGACGATCGAGGCTTCTGGTGCAGCCGAAATCCATCACTCGCCATTCTTGCAACTAAATCTGGTGGCAGACCG
TTTTTGTGCGGCTGCGGAGCTCCTGAGGTTCAAGTCCCACTCATTAATGCCTTAACCAGGGAAGTTGACATTTGAGGAGT
TTTTCGTTACGCTAACGACTACGAAGACGCCCTGGAACCTGTAGCTTCCGGCAAGATTGACGTCAAGCCACTGATTACTC
ACAACCTTAAGCTCGAAGAGTCCAGGAACGCGTTTGAAGTAACAAAAACAGGCAGCGGCGGAGCGATCAAAGTCATGATC
CATTGCTAGTGCTCAAGAAAGGAAGAAATTGAATTAATCATACCAAAAGATTTCCGAATTTTGGAAATTTCTAATCCTTGG
AACCCGACGCAACAAATGAAGAAATTCGTATCGCGCAATTCGAATATCTGGATATTTTGGCAGGATTTGTAATATTGTA
AATTACTAAAAATGGGTGTAGTCAACCAAAAAATTCGAAAAAGCTATTTCCAAACTATTTTTCGTCTGTATTTTGGTATTTT
TTACAAAACGTGCTGGTCAACAAGAATCCATATCGATCGGCGAATGCTTTTCAAACATTACAGAGAGACAAAGCGCTCTT
CTACAGACAAATACAAA

>CL165Contig2|fatty acid synthase-like

ATCCCGAAACAATGGGCAACAACGATACGGAAGTTGGTGGAACTTTACCGCAGCGAATGTCGAGTTGTCTGGCAACAAT
GGACACGTTCTTACAACAGCCGCATCCGGTGCTGGCGTGTATGGTGCTGGCCGACAAGCACAAGCCGGGGACGCTGCCA
ATCAAGTCGGCTTGCTCGAGGCGCTTGGAAATATCTTAGGAATCAAGGACGTCAAGACTGTCAACTGAACAACAGTCTG
GCGGATCTCGGAATGGATTCCCTCATGGGAACGGAATAAAACAGACGCTAGAGAGAAATTACGATCTCGTACTATCCGC
ACAAGAAATCCGGGGCTTGACGTTCCGGCAAACCTTTTGGAAATGTCGAGCGGAAGCTCCGAAGTTGCTGAGCCTGCTTCGG
ACTCGCCGGCTTCCCCCAAAAAAGTCTCTCCGCCAGCCCAACCAAGAGTCTCGATTCTTCTCTTCCGGTGTTCCGAT
GGCGAACTCGTGCCCAACAGGCTCTCGTACAATTGAAATCCCGAGGACCAAGGGCCAACTGTTTTCTTCGTCATGC
CATCGAAGGCTCCGTTTCCGCCATGAAAGCCTTGGCCATTGAAATCGATCGACCCGTGTGGGATTTCCAATGCGTCAAAA
ATATTCCTCTCGAATCGATGGAGCAGCTCGCGAGCTTCTACGTGCGCCAGATGAAGAGCCTCCAGCCCAAGGACCCTTC
ACAATCGTCGGATACTCGTTCGGCGCTTGCCTGCGCTTCGAAATGTCCCTCCAGCTCGAAGCCTCCGGCGAACGCTCCAC
ACTTTTCTTCTCGATGGCTCACCCGCTATCTCACTCTACACACCGCGACCATTTGGCAAAACACGCCACCGAAACCGGAA
GTGAACTCATCGCCGATGGTTTCCGCAAACTCTCGCTTCTTCTGTCGACAGTTCAACAGCAACGTTGGATTGCTCAAG
GCCTATAGCGACTTGAAGGAAGCCGAAACCGGATGACGCGATGATGGACAAGATGCTGGAGCTCATCGGGGAGACGCCCTT
CGACGCGGACGATTTGAAATGCGCGGCTTGTGTTTTCAAAAATTTGAGCGCCGCAATACCTACAAACCCGGAGCAAA
TTCCACGGAGGAATCACGTTGTTCAAGGCGAAGGACAACCTTCAATTCGCTCAGCAAAGATTACGGATTAACGGAGATCTG

mmc4.txt

CGAGGGACGGTGCAAGAGCTCGCAGGCGACCACAGGAGTATTCTCTCCGGCGAGACCGTCAAGGAGATTGCGCG
GTTACTAAACATTTGAGACGAGGATTTGAGGGGAGGACAAAAACATAAATCAAGTTCAAGAAGAAGCGA
GGAAAGAAATAAGAAACATCTTTTTGTACTGCGTAGGCTCGCGAGTGTGAGAAAGAAATACGGCAAGCGAAAAACA
ACAAATGAATAACTCTGACTCTTTCAACTTCGATAAATCATCAAGTTCCTTTGTATAAAACAAACGAAAACTATAAGAAA
GAGAAACATCATGACATTCGAGTAGAATTTTCAAGATTAACAACTAAGATAAATTACTTTAGTTTGTCAATTTTCCA
ATAAGTGTGTGAATGTTTTAGTTAATTAAGGCAACGATAAAGGTTTCGTCGTTTCAATTTCTAACGCCAACTATGAAAATC
AACAACTCAAATAAAAAACGAAACGAGAAAAAAGTAAATAATAGAATTGTTAGAGCGAGTGCAAATAACGTGGAAA
AACTATTTTCGCGTAATATTGCATTTTCGAGTAATTACAATTATCGTAATAATAATTATTGTAACAAACAAAAACACA
AAAAAAGGACTCCTCGTCTCGTGGGTCGTTTCTATGTGGATATTTTCTGTACATTTTTCATTTCCACACGA
TTACATTTTTCGACGTTACAAAATCAGTGGACAGTTTTTGTTCGTGTAAAAAATAACAAAGAAAGAAATTTGGG
AATCGTTTGGGATTATGAAATTTGGCGATTTTATTTTTATTTAATGAGGCGAGGCAACAGAGGCATTAATAATA
ATAAACTAAATGGCAAATATACAAAATTTAATACGCGTGTACGTCCTCCTCGTTATTGTCAATTCATTGTCAAAGA
ATTACGCGGATAAAGATTAGTAAACTGTGCAGTTTATATCGCTGGTCGATTTTTTTTATTTCGGCCCCAAAACGTCTCG
TCCCATTCATCGATACACATANATATATACATATACACATGTATATATGCGTGCATATATTTAGAAAAACGGT
AAATAATTTATTCAATT

>CL1660Contig1|hypoxia up-regulated protein 1-like

GTTATAATCGTCCCACCGTTTTTCAATCAGGCCGAGAGAAGAGCCGTTTTGCACGCAGCCGAATTGGCCGATTTGAAAGT
TTTGCAATTGTTCAATGACGACATTGCGATCGCACTGAATTATGGAATTTTCGACGAAAAGAAATCAACGAGACGAGCC
AATACGTTATGTTCTACGACATGGGAGCGAGCAGCAGCGGCCACCATCGTCGTTATCAAAAACGTCAAATCAAAGGA
CAAAGGCTACGCTCGGTTATTCCGCAATTGAGCGTCTCGGCATCGGCTACGATCGCACTCTCGCGGCCTCGAAATTC
AAATCCGCTTGCGCGATTATCTCGCCGCGAATTCGACAAAATGGGAAAAACCGATAAATCCGTTTTCAATAACCCTCGG
GCTATGGCGAACTTTTTCAAAGAAGCTGGACGCGTCAAAAACATCCTCAGCGCCAATTCCGATCACTTTGCACAGGTGGA
AGGACTCCTCGATGAAAAAGACTTCAGGCTCCAAGTCACGCGCGAAAAACTTGAAGAATTGTGCACCGATGTCTTCAAAC
GCGTCGGTGGACCCATCCAAATGGCTCTCGACACTTCCGGCCTGACGCTTGATATTATTCGCAAGTTGTGCTGGTCGGA
GCGGGAACGCGAATGCCAAAAATCCAAGACACTTTGACCGAGATCGTTAAGACTGAATTAGCTAAAAATATAAATACCGA
TGAGGCTGCAGTTTGGAGTCTTGTTTAACAAGCCGCCGAACCTCAGCGAA

>CL16646Contig1|utp--glucose-1-phosphate uridylyltransferase-like

TTTTTTTTCAAATATTTATCAATAAGTCTGTGCGAAAATCTTGTTCATTGCGCATATTTGTTTGACACCTCGAGACAC
TGAACCTGACGAAATGGAATATTTCTTAGGGCCAAGAGTCACCAACGCCAACCGTCCGACTCGCAATCGTTTCGTGAAA
AGACGAAACGCGATGCCGAAATCGATCTTGCGACCGAATCGGCAGACTCGAGGCTACTGCCGACCTGAATTCGCGAT
ACCGTCAAAGCCGAATTCGAGGGATTACCAAATTTATCAAAAAGGTTCTACAGGACCAAGCCCCCGCGTCGAATGGG
AACGATCCAGAACTTCCAGACACTGCCATTTCGGGAATATCAATCCCTCGAGGAACCGTCCGCGGAAGCTGCCGAACG
ATGCTGAATAAATTGATCGTTGTGAAACTGAATGGCGGACTTGAACGAGCATGGGCTGCCATGGACCAAAATCCGTCAT
TACTGTTGCAATGATTTTACTTTTTGGACTTGACGTCCAGCAGATCGAGTATT

>CL1666Contig1|PREDICTED: hypothetical protein LOC100120906 [Nasonia vitripennis]

GTGTAAGGTCCAACCCGAACCGAACGGTCATCCGAATCTAAGCGAACGAACGTGAAAGTAGCAGTAAAAGCATCAGGCG
TAGAGGGACAAGATGGACGCGGATTACAGGAGCAACCTCGCCATGATTGGGCGCAACGAGCCCATCACAAAAAAGCCAA
ATTTTGGCAAAGCTACGTACGCGCCCTTAAGGGCACCGACGACATGAGGGCACCGGAAAATACCCACAGACCACGTGGAA
TTTTCCGTTCCGATTATCCAGAGCTCCACTCCTCGTCGTGGCCCTATGGAAAATCCATCTTTGAGAATCCTATTCACGCT
GCTGATCGCATCAACGTACCGGGATACAGATATCTTCCGCTACATCGCGAGATCTACGGCTACTCTCCGAGACAACGTGA
TCCTCACCAGTACAAACCTGTGAGCGCTTCAACCCGGAGCCCTACGACTCGACCAAGCATGGAACGATCATTTAGACC
GATTGGCCGACATCGACAGGCTTTACCCAGCCCCGAGCCGTGCTCTCTGTCACAGGAGCCCCGGCGCTCACCAACCA
CTCTTGCACTTTCAGGTAACCTACTGGACGATTATCGCCAACGAGATGGCCCTCATTCTATCGAGAAGACGTTGAA
CGACATGCTCGAGCCGACGCCGACCGCCCCGGTGAGCGCATTCACCAGAGAACCCCTGGTGGTATCCGTGCATGGCGCCG
TACATACCGAGCTACGCTCAATGGAGCACCCCTTTCTATCTAAGGGACAGCTATCTGAGCCCGGTCAAGCGTAATTATCT
CTGGAGCCGACACCCTCTCAGGCCTTTGCCCCACGTACGTTAGAGACATTGGAGTCTCGGTGAGCGCTATTTTCGGCGA
GAGGACGGAATGAACGAAATTTAAAAAACAACAAACGACGAAGAAAAATCTACGCGCGAAATAAATGAAGGAAA
TGCAAAATTTAACTGAAGGACTCTGAATGATTTTAACTGATTATGCAGTGCTTCCGTTTTCTTTGAATTATTCAATCA
TTTGGCTTTTGTAA

>CL1668Contig1|cat eye syndrome critical region protein 5-like

GACGATGGCAAATTTGCGGTACCAACGGTATTCGTGACGAACAGCGGTAACGCTCTGAGATCACAAAAAGCAGAAGATTT
AACAAAAATGGATAGGATTCGAGGTGACGGAGGACCAGGTTTTAATGGCGCATTCCTCGTTGACGTTGTTCAAACAATTT
CACGACAAGCTAGTACTGATTTTCGGGACAAGGACCAACGGAGGCGATAGCGAACGAATTAGGTTTCAAAAAGACAGTGAC
GATGGACCAACTCGTGCGAAATTTTCCGAGTTTGATTACGTCATATAAAAAATAAAGAAATCCAAATGCGGACCTATCG
ATAAAAAATTTTCAAAGGATAGAAGGACTTTTGTATTGAGCGAACCAACGACGTGGGAAACTCCGTTACAACATGATGGTT
GATGTGTTGATGACGGACGGCATGCCTGCAGGATTGCCCCACACCATTCCTTATCCTCATATCCCCGTTTTTGGCCTGCAA
CATGGATCTCTTGTGGGTTTTCCGAAGCTCCAATTCGCGCTACGGACATGGAGCTTTCTTGGTCTGCCTCGAAGCTCTTT
ACAAAAAGTCACTGGCAAAGACATGAAATACTCTGCACTCGTTGGCAAACCCAGCGAAGTCACTTACTATCATGCCAATC
ACATGATTTGAAACATGCCAAGAAATTAGGCATTAACCAACATCGACACTATCTACGCTATTGGTGACAACATCAAC
ACGATATATTTCGGTGCAAACCTTATACGACAAATATTGGCTCGTTATTCCAAGGGCAAAGGTACAAAGTCACGAGGCAT
GGAAGCGCTGCTTGGCGATGATTTGCAATCACCGACAGTGAAAGCGTGACATAAGTATTCTAGTAGAGACAGGTGTGCAT
CGCCGTGATTCGCCATTTTTTCTCGGAGCACAATCCTCGAGATTTCTTGCCAATGGAAGAGGGTCTGTGCAAGCCTGCGT
TT

>CL1674-bisContig1|glutamyl aminopeptidase

TCAGGCTTCGGAGCTAGAATACAGCATTGCGATGAACATGAGCGGATATCTTCGGCTGGAAAAAAGTTCCGTCCTTGG
GCATAGCAGCCACGAAATTTATTATCCATTGATAAACTTTTATCTTTACCGATGCCGCATCGAAATACAGGGAATATGTG
AGAAATTTGGTAGACGGCGTTTACAAAGATGTGACGTGGAAAGTTGACGACTTTGAAGATCACGACATGCTGAGCCTTCG

mmc4.txt

TAAATCAGTTTTTGAATTAGCATGTGCCGTTGGCCATCAAGATTGTCTCGATGAGGCAGGAAAAATTTTCAAGGCATGGA
TCAACGACACGAATGACGTTAGACCACATCCAGATATTAGATCTCTGGTTTATTATTACGGAATGAGCCACGTGGGCGAT
GACCCCGAGTGGAAACATAATGCTGCGAAGATTCTGGAAGAATCGAACGCGAGTGAAAAGATCAAATTAATGAACGGATT
GGCTGGTGTTCGATCGAGCTGGATTCTCAAAAAATACATCGCAATGTCCGTTGACGAAAAATACGTGAGAAACCAGGACA
CGTTCAGCTGTTTAATATCAATTTCAAGAAATCCTGTGGGCACTCCGCTCGTATGGGACTGGGTCCGCGAGAAGTGGCAA
TTCTTGGTCAACAGATACACATTGAATGATCGTTATCTCGGTGTTTTGATTCCCAGCATAACGAGCAGTTTCGAGACAGA
TTTGAAGCTCAAAGAAATGTTGGCATTTCGATAAATACCCAGAGGCAGGTTCCGGAAAAACTGCACGAGCTACTGCTC
TTGAAACCGTTAGTAACAATATCAAATGGGTTTCAAAAAACAGCAAAAAATTTGGAAGATTGGCTAGATACTTCACCTTTA
GCGACGACAGTAAATAAAAATGAAAAGTAAAAAACGAATGAAAGGAACAAGTAAAAATCAAAGTCCTAACCAAGGTTGA
AGGAAAAAAAACACGAATGAATTTTCATCGAAATGGGAATAAAAACTCAAATAAGGAAGAAAAACAATAATACAACAG
CAACATTTTTACACGAAACATCTTTTTTACCAGCGTCAGAGATTGCAAGCCATGGCAACTTTCTGCCAAGAATAGTGAA
TAACCAGAAGTGACAACGATCGAACACACACGACG

>CL16813Contig1|cop9 signalosome complex subunit 4

GTTGCGGTGCGTGGCAACAGCTCGCAATTTGGCAGATTTCAGGCGGTTCCACAAAGGATCAAGCGGAAAAATATCGTAC
GATCTTGGACGCGGTGCTTTCTGTCGTCGCGGCGACGACTTGGTTGACACTTTGAAGCTTTTCATCGAGGCTATTGTCAATG
AAAATGTCAGTCTCGTCATTTTCGAGGCAAGTCTTTTCGGACGTGAGCAATCGTTTCGCCTTGTTCCTGACGAAATTTTCG
AAAGCGGTCTCTCATTACACATTGGACAAGGTGCAGCCTCGAGTGATTTCTTTTCGAGGAACAAGTTCGAGCATCCGTCA
ACACTTGTCCGCCATTTACGAAAGAAATCAAGATTGGCGACAAGCGGCCAATGTTTTTGGTGGGAATTCCTTAAGAACCG
GTCAAAAGCAATACACCGTCGATTTACAAATTTGGAACCTTATTTAAAAAATTCGCGAGACTCTATTTGGAAGATGACGAC
CCGGTACAGGTGAGGCTTTTATCAACCGAGCGTCTTTGCTGCAGGCAGAGTCAAGAACGAACAGTTGCAAATTTACTA
C

>CL16840Contig1|Vitellogenin [Harpegnathos saltator]

AAGGAAGAACCAGTGAATATCGCCAGCAGGAAAGTCTTTGAAATCGAGAAAGAGGGCAACGATATTATTATAAAAAAGCTC
GTCGCCCATGGTGGATCGAATTAATTTCCATGGAACGCCAGATCCGAGGCTCACTACATTCTCAATAACGCAACTTTTGC
GTTTCGAGCGTATGGTCTCCGCTCTCGGAAATAAGTTTGCCGGAGATTAACTTCGGGATATCTCGATAACGAGAGACCTCA
CTTACCCGGAAGCCGAATCGCTGTACGCGCAAGGTGCAGCGGTGGATGTCAACCAAGGCCGACGTGTCTCGATCAATCG
ACTTTGATAATTAAGTACGAAAAATGCTCGGTGAGGCTGTTGATTACCTCGAAGAAATCACATCGAAATGAAGGAGCC
TCAGTGGAAACACGGACAAACGCTCAACCGGATGTTGCTCACTATGAGTTACATGGATCTCGTTCCCTCCAACAAATGT
TCAATTCCTTTGAAAAGCAGTCAGAGTCGGAAGGATTCTTCGATCAAAAACATATTTTTGGAATGGTTCCTCAAGTCGGA
ACTGCAGCTTCCAGTTATTTTTGTTCTTGGTACTTGTATACGTGGAGAAAAATCTCGATGGCAGTTGCC

>CL1685-bisContig1|proteasome subunit beta type-4-like

AGTTTCAGTTCAAAGATGGAGTTGTCAATTGCCGCCGATATCCTTGCGTCGTACGGCTCGTTGGCAAGATACAGGAGTTGCG
AGCGCATCATGAAGTCAATGACAACATAATTCTGGGTGCCGGTGGAGACTATGCCGATTATCAGTACATCAAAAACATA
ATTGAACAAAAAACTCTGGAGGAACAATGTTTGGATGACGGTTTCAAGCTCAAGCCAAAATCCCTGTACTGCTGGTTAAC
CAGAGTACTGTACAACCAACGTTCCAAGTTTGATCCTCTGTGGAACAATTTTATAATTGCTGGCATAGAAAATGGAGAAC
CGTTTATGGGAACGGTAGACAAGCTCGGCACTGCTTATACCGACCCGGTAATCGCTACCGGCTACGGAGGCTACATGGCT
TCGCTCTATTGCGCAAAGCTTATGAAAACAACAAGGAAATGACTCAGGAAGAAGCTCTTGACGTTCTTTACAAAGCTAT
GCAGGTTCTTTACTACAGAGACGCGAGATCAATCCCAAAATACCAGTTGGCATAATAACAAGGAACGTTGGTGGAAA
TCAAGGGACCTATTTCTCTCGACAGCAATTGGGAAATAGCGATTCTTCAGAAATAAATAATTCACTTTTATTCTTTTCGCA
TTAAATAAGTAAAGCATTACATGTCCGAGCGATTCAACGATCGCATTTTCGTCAACGTGAATTTTCAATAAAACATTATTT
CGAAAAATGTTAAATATTCAACAAGTCAGAACGTCGCAACCGGCTTCGGTGATGAGTATCGTGTGTTCTATTTGCGCTGT
CCTAGCGTCGTGCGCAGTAACGGCGGTCCATCCATCTTCCAGTAAAACGCACTCTTCACTGCCCTGAGTCAGCAGAGGCT
CGATCGTGAAAGTCATGCCAGGCCGATCGTGCCAGGCTCGTCATTGCTGAATAATCACAATACAATTACAAAA

>CL16875Contig1|low quality protein: delta-1-pyrroline-5-carboxylate

mitochondrial-like

CGGGTTACATTGAGCATGCAAAGAAGTCATCGAACCTGGAAATCATCGGTGGTGGTGGCTACGATGATTATGCGGATAC
TTTATCGAACCAACGATCGTACAGGCCAAGGATCCGCTGGACAAAATAATGACTGAGGAAATTTTTCGGACCTGTGTTGT
CAGTTTACGTTTACAAAGACTCTAAGCTGGACGAGACGATGAAGCTCGTTGAGAGTTTCGACACCTTATGCCCTCACCCTG
GCTATATTTTCCCAAGACTGAACTGGGCGAAATAGCTTGAAGAAGTTCAAATACAGCGCCGGCACTGTTTACGTCAA
CGCAAAATCTACCGGCTCGGTAGTCGGGCAACAACCGTTTGGCGGAAGCAGAATGTCTGGCACAACGATAAGGCGGGCG
GTCCTCACTACGCTCTGCGCTGGGCATCGCCACAATCGATAAAGGAAACCTTCGTACCCATACAGGGTTGAAATATGAGT
ACATGAGTTCTGAATGCATTTACTTTGAATGGCTCTCGTAAACGAGGATGTAAACAAGGATTGGTAGAAATGAATTAA
ATAGACAAAAACAGGAAAAATATACAAAAGAACCAGAAATTCACAGATCGACGAAATCT

>CL16933Contig1|neurexin- partial

GACCCAGGTCGAGCGAATTATGCTCAATTCTGTCAGGAATATACAATCAGCTATGGCACCAATAATCGCGACTATGTGG
ACTATAAGGAGGCTGGAGGCAACGTAAAGATGTTCAAAGGAAATACCAATGCAGAATCGATAAACTCAACAAATTCGAA
GTACCCATAATCGCCCAATGGATCAGGATCAATCCAACAAGATGGCAGGATCGGATATCACTGAGACTCGAATTTACGG
ATGCGATTATGTATCCGACGTTTTGTCGTTCAACGGTACGTCACTCGTACGAATGAATCTGATGAGAGAGCCGATCGAGA
CCGATCGACACTCTCTCGTTTTCCGGTNAAGACCAACATGGCCGACGGAGTACTCCTTTATCTCGAGGAACCCAAGGCGA
CTTTATAGCAGTCCAATTACGAGATAATCGGATGTTACTGAAT

>CL1696Contig1|trans- -dihydrobenzene- -diol dehydrogenase

GCTCATCAGCTGTGGAAAGCCGCGAGAGCACCGATAACAGTTATCGTTATGCAACGTACGAGTAAGCTTCGCTCGACAT
CGAGGAGAACACATTTTCAAACGATCTGCTGTTGTTAAACAATTTTCGACACGATTTCCGCGAAATGGCTTTACGTTGGGGA
ATAGCGAGTGCGGGAAAAATTTCTCACGACTTTACATCCGCTCTGACAACGTTATCCAAAAAGGAACATTGTGCTGTGGC
TGTAAGCGGCGGAGACCCGGCGAGAGCAAAAGCGTTTGCCGAGATGCACGGCATTAAAAATGCTTACGGCTCCTACGAAC
AAGTGGCTCAGGATTCGACGTTGAGGTCGTTTACATCGGTTCTTGAACCCACAACACCTGCAATCGCTAAACTAATG
TTGCAAAATGGAAAAACAGCTTTTTCGAAAAACCGTTGACTCTGAACAAGAAACAACAGCGGAGCTGATCGCTTTCG
ACAAAGCAAAAACCTTTTCTCATGGAAGCCATTTGGAGTCGATGTTTCCCGGCTACGATTTAATCCACAAGGAAATAG

mmc4.txt

CAGCTGGAACGATCGGCGATGTCAAGCAAGTCATCGTATCCTTCGGATTTCGATTTGGGCGACGTCGAGCGACTCAATTCT
AAGGAACAAGGCGGCGGTACGATCCTCGATCTCGGTGTTTACACGATTCAATTCGCGAGCTTTATTTTCGGGGGCGAAAA
GCCACTGAGCATTAAAGCCGCGGGTACCTCAATAAAGAGGGAGTCGATATGAATATGTCTGCAACTTTACTGTACAAGA
ACGACCGACTCGCAACGATAACGACCAATGGGACAGTAGCTTTGCCAACGAGGGTATCGTATTGGGTACCAAGGGAGC
ATAAAGCTTCCCACTTCTGGTGTCCACGAGCGTGAATTACCATCGGGAACCGTTCAATTTCCATTGCCAGAGGCGCC
TCGTGAGAAATTCAACTTTGTCAACAGCGTTGGATTGCGGTACGAAGCGGATCACGTTCGAAGTTGATTTCGGGCGAGGCA
AAAAAGAGAGCGACCGTGTAACTCACGCGGAATCGTTGCTCATTGCGGAGATCGAAGACGAATTACGACGCCAGATCGGC
GTTACTTATTCGTCGATTAAATTTTCTCGACTTTGTTTTCTCTACACAAAATGCACCCGAAATGATTTGGTTTCTCAA
TGAATACTAATAAACATACTAAATCGCGATATGAATACAATTTGTTGCGAGAAATCGTCGTTAAACGGGAATCACGTAT
TTTTCGATCCAACAACTGTTCTATTTGTTTCTTTTTTATTTGTCGTTTGTTCGCGATCCTCTGGAATAAACGTTTGAAA
TGTTTATAAAGGTTAAATGTAACAAAACCTTCGGTTTCATTTCGTTACGCCGAACCTAACCTCGTTGCGTCATGGAACGAA
ATTTACGCGAGGAAATTAACAGTTTTTCGATATTTGTATTTCTTAGTTTTTGGCCT

>CL1697-bisContig1|glutamic acid-rich protein

GTCACCCGCGACACCAAGAGGAGAGAAGACGAGCCGCTGAAGAACGGCTCAAAGCCGGAAGCACGGTAGCG
GCGCCAGCGCATCCACAGCCGAAAGTATCGCCGCACAAATCAGAGGAACAGCCACAAATCAGAGCCGAGAATTCGGGCC
GACGAAAGTCAAACCGAGCGTTGCGGCGCCCGTGACGGTTCGAGCTCCAAAACGAACGTTGAGAATTCACGAGCCCTA
CGGCCCGCCGAAGACCGAGCAAAAAATAACCAGCACGCCGAGAACTGTCAAGAGAAAATCGCGGGAACCTCAAGGATCTG
AAAGGCGGCTCCGCCGAGGGAGGCAGCAAAACCCAAAAGGAATCGCGTCCAGACTCAACCTTATCAAAGCCCGTTGCCCGA
AGTCGCTCTCCTCGTTAGACATCTCAACAAACCACCTTCCCCAAAAATCCCGACGACAAATCATCGTTTTTACAAGAG
CGAATTTCTCGAGTTGAAAACCAAGAAGGAAGCTTTTACGTTCTGCAAGCGATGCAAAATATCTTCAAATCCAGCAGAC
GCATTCGCATTCTGTTGGCTCTCCAGGACAAAAATAACGGCGAAATTTATTCTCCCGATTTCTATGACGTCATCGAATTC
GATTGCATACTGACCAATCTCAATCTCAACAAAATCGACAAAAATAAATACCAGCTTACCAAGTTGAGCTTTTTCGTAC
AGAGAATATTCTCAAACGAGCCATCGACGTCGAGGCGGAGTCTCCGAGAAGCCTAGTGTACGAGGAGCATCCTGACG
GACTCGATCTCTCGCTCTACAAGGACGAATCACAGCTAAAAAAGGAGGAAACGCGCAGCGAAAGAGAAGCAAGATTGCG
CAGGAGGTCAAAGAGAGAATCCAGCTCGTCGGAGGACTCGTCGTCGAGTGAAGACGACGACGAGGACGATGACGATGATG
AAGACGAGGACGATGAGCACGAGGAGGCTGATAAAAAATCCTCGCCAAAACGAGTCGCGCGAAAAAACGCTCGACGAAC
AAAACCCCTCGCCCTTGCGAAATCCGTCGCGAAAGGACCCAGTCGAGAAAAAAGAGCGCTCAACAGAGCCGCGGCTTCAA
GACACCGGTCCCTGTCATTGGCAATAACGTCAGCAGCAGTTCTCCGAAACTGCCAAAAGAAATCCACCCGATCCAAACA
AGAAAATCGAACCAGAAAAAATCATCAGCAAAACCAAACTAGTAACATTGCGAGCGGACCATCTAGAACAACGAAACAT
CGTGGTTCGACGCAGATGGCGGCAGAGATAAGCAGTAGCAGCATAGCGGGGCGAGCCAAGAGATTGGCGAGCACAGGGCA
AACGGCGGCGGGGACTGCTGTTATCGTGGCGACATCATCAACGGAAGAAGCGTCTTCGCGTAAGAAGCCCCACACCGCCA
GGGCATAAAATACCCTTTTCGCGTTCTGTCGATATCACCAGAGAGAAATAAATCATGAGAAGAGTTAATTGCGTGAACGAT
AGGTATGCGCGCGCGCATGTGGTTGTGCTGTTAATACGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACTGTGCGCC
G

>CL16Contig1|high density lipoprotein binding protein

TTGTTCTGAATGGCAAAACGAATGAAGTACTCGAGGCTAAGCGTCGTATTTTGGCGACTTTTCAGACTCAAGCTAGCAAA
CAAAATATCCATTCCAAAGAGCATCATCGTGGTACTCGGCAAGCAAAGGGCTCGCCTTAATGAACTGGAAATTA
TGCAACGAAAAATAAATTTGCCTGTTGTCGATGTACAATCCGATATTATCACCATTACCGGCACTAAAGAGGGCATCGAAA
AAAGCAGAACACGAAATCAAAGTCATTTCCGACGAGCAGTCGAGAAAAGCGTTTGAACGGATAACCGTGCCAAAGATTTA
TCATCCGTTTCATATGCGGCGCTCATAATGAGAAGCTCAGTGCCATGATTGCCGAGACGGGGGCAAGAATAAATATTCCAC
CACCTTCCGTCAGAACGACGACATAACGATTGCTGGTGAAAAGGAGGGTGTGCGAGCGGCCAAACGAATGATTGAGAAC
ATTTACAAGGACATGGAAAAACGTTGCACGACTGTTTCCGTGGAGGTGCCAAAATCCCAGCACAAGTATGTTGTTGGTCC
TCGAAATAGTACAATTTGCCGAAATTTTGCAAATTTACTGGAGTCAGCGTCAAAATGCCACCAGCAGATTGCTGTTAGGAA
CGATCAAGTTGCGAGGACCTCAGGAAAACTGGGTCAAGCTCTGAATACCGTGTACGAAAAAGCAACACGCGTTGCGACA
GCCGTGGTGGAGGCTCCGTCTGGATCCACAAGTACATAATCGGCAAAAAAGGTGCCAACATTAAAAAATTGACGGGTGA
CTTGTTCCAAGTCCACGTCGAGTTCACGATGAAAGACGATAAAATAAAAAATCGAGGGACCGCCCGAAGACGTGGAAAAAG
TGAGTTCGGAGTTGGCAGCGGTTGCCCGGGATCTCATAAGCAAACTAACCTTCGTAGAACTTCAAGTTGACCAGAAATAT
TTCAAATACATAATAGGAAAAAACGGAGCGAATATCAATCGATTGAAAGAGGAAACGGGGGTTGATTTCAATCTCTCGGA
AATTTGGTGGATCGAGAATCGTTGCGATTGAGGGAATCCCGAGGAGTCCGAGAAGCTGAGACGAAATCATGGAATGG
TTAAAAAATCGGCAATGAAAAAGAAAAAGACGTGATCATTGACCATCGCCATTACGCGAGCATAATTGGCAGCAAAAGGC
GACAACATCAAAGAAATTCGTGACAAATTCATCAAGTACAAATCACGATTCCCGGACCTGGGGAAAAAGACGATATCGT
CAAAATTCGAGGCCCAAGAGGACGTCGACAAGTGCCATAAACATTTGATGACGCTCGTCAAGGAACCTGACGAAAAATA
CTCATGTCCTCGAGTTCCCGATATTCAAACAATTTACAAAATTCGTATCGGCCGTGGCGGTGGAATATTGAAAGATT
CGAGAGGAAACGCATACGAAGATTGACTTGCCAGCTGAAGGAGTCAAGAGCGAAGTAATCACGATAACGGGAAAGAAAAA
AACGAGGAGGAGGCGAGAGACAAGATTCAAAAAATCCAAAACGAATTGAGCAACATCGTCACCGAGGAAATATCGATCCC
ACCCAAATTTTACAATTTCTCTCATCGGCATCGGGGGCAAACCTTATACATTGATTATGGAAGATTGCGGAGGCGTGACCA
TCAAATTTCTCTGCGGATAGCAAAAGTGACAAGGTGAGTATCAAGGGACCCAGGACGATGTTGAAAAGGCCAAACAA
CAACTGCTCGAGCAAAACGAACGAGAAACAGTTGGCCAGCTTTACAGACACCGTTCTGTGCTAATCCCGTTTCATCAAAATT
TATCATCGGCAAAACAAGGTGCCAATATAAAAAAGTACAGAAATCTACGGGAGCCCGTATAGTTTTCCCTACGGACAAGG
ATGAGGACAACGAGGTGATAACAGTGATAGGAAAGAAGGATTCGTTGAAAAAGCAAAAGGCCGAATCGAAGCAATGATC
AAAGACATCAATAACAGTGTGAGGATGAGATCTGCATCGATCTGAAACACACAGGCATTTCTGGCAGCTCGAGGTGG
AGTTTTGTATCGTATAGCCGATGAATGTGGTGGCGTGCAAATATCATTTCCACGAGCTGGTATGGACAGTGACAAAGTTT
CGCTCAAGGGGCTCGCGAGTGTATCGAAGCTGCGAAACAACGCATGCGAGAAATTGTCCAGGAATTGGAATCAAATGGT
GACCGTAGAATGTGTATTCCCAAAAAACACCATAGAACCCTGATGGGAGCGAAGGGTTTCAAGGTTCAAACATAACTT
CCGAATTCGACGTACAAATAAAGTTCCCGGAGAGGGAACAACAGCAGCAGCAAAACAATATGAACAACGCGGAGAACGAG
CAGATAAACCGGAGACGAAAACGGGGAGGCTGTTGACGAAACACCGGAACATCCGTTGCTTTCGATATCGTCCGGATCAC
CGGACAAACCCGAAAGGTCGAGGCTGCAAAACAGGCCCTGCTCGACCTTGTGCGAGTCGTCCTTGAGGTGCAAGTGGCGT
TCGATCTCCATCGCCTCATCATCGACGCTCCGGACGAGACGTTGCACTTTGATGTGAAATACGACGTTACATTACT

mmc4.txt

CTCTCCTCCGCTGAGGAAAAACAAGATTTGATCAAGATCATCGGCAGGAGATCTTGCGTCGAAGAAGCCAAAGAGGCGGT
CCTCGAAAGATGCCGCGATCTCGAAGCCCCAAAAACAGGAACGCGAACTCAAATCTTACGAGCTGAAGCTCGAAGTTGAT
CCTGAATACCATACCAAAATTGATCGGTCTGCGCGCGCCGTTATCAAGAAAAATCCGTACCGACCATGATGTCCAAGTGA
ATTTCCCTCACAAGGGGAGACCCCGACGAACATATCATAACCATAACTGGCTTCGAGAAAAATGCCACGACGCTCGCGA
CGAAATACTGAAAATGATCAGCGACTTGAATGACTTGACCAAGGAAGAAATCAGCATAAACTCGGCGGTTTATTGCGCTC
TCATAGGCGCCAGAGGCAAAAACATTCGAAAAATCATGGAAGATTTCAAAGTCGATATCAATTTCCACGGAAGGATGAC
AGTGATCCTGACCTCGTGGTTATCATTGGGTCCGAGGATAACGTCGCTGATGCCAAGGATCATCTCCCTTAATCTCGAGG
ACGAATACTTGCAAGATCTCGAGGACAAAGACGCGTGAAGTTCGTTTTTGGTGAACAATCGAAAAAGTGAAGAGAACAC
GGTAACAGCGAGAGCGACCCCTGGTTTCGTAGTGAAGGGTGGGCCCTTGGGAGCAAGAGGGTTTCAAGATAGCGCCGAACAC
AGCGAGCGTCGAAGATTTCCCAAGCTTCCGTGGGCACGACTCGAGCCAGCCAGCAATCTCAACGCCCGATGGTCCTTGGG
GTAAGCGTTAAGGCGCTGCGCATCGATAAATCTCCGATCAACGACAATTTCTTCACTATTTTATTTCTCTCTCGCTAT
CTCCTTTTGGCCCGGACATAATAATTAACAACGGCGGAAAAATGAGCCTCGAGAAATTTCTCAGTAGCCACAAAATTTCCA
CTTAAAAATGAAAAGAAAAACGAGCGAAAGGGACAAGATAATAGACATCACTGACGAAAAATTCGCTGCTTGCATCCACCA
ATCCATCGCTGACTCTGCTGCTGCAAGCATTAAACGACCTTGCCAAATTTCTCCGACCTTCGATTCTGATTTTGTATGAGG
AAAAAACGAGAGGAGAGCAAAACGGAACAAAATTTGCCAAATTCCAAAGCGTAGGTCGTCTCAGCCTCAATTAACGAGC
TGTCGAATGCCAAATTTGTTCTGAATCCAACACGTTTATTCTATCCCCTCGATCATGTAGAAATTTCTTATTTTGTAT
ATTTCTCTTTGCTTCAAATAATTTACGTTTTTTCTCCAATCTGTATCGTCGTTGGCATTGCTGCGAAAGAAAAAACGC
TTTCTCCGCCCACTGCTTTGATCGAAGATTCGAGCGACTACAAACGTCAAATCTGGCAGCATGAATCATAGAAAAAAA
AACATCTCAATAGGTCAACTAATTTATCGCCAATTTATGTGTTTTTGTGTTTGTGTTGCTTGACATTAACGATGCTCAAATA
GTTTAGCTTCCGGGAATCACTCGTTTCAAGATGAAAAGATAAATATTTTCTCATTTGAGCAAATGTATGAGTTTGGCAA
TGCACTTTGACGAAAAATGGCTGGAAGAAATGTCTTTCCGAAAGGCATCGTCGAATCAAGTAATCATGGAACGAGCGT
AAATATATTTTTCCATTAACGCATGAAATCAGAGTCCGAAATAATGGCTTTTCTAACTCGAACGATAAGCTTCTGTTCTA
CGAGAACTAGGATGATTATTATCAATCAATTTATTTCTTCCATCTCAACTTCTAGATTCTTGATTGTAAAAACATC
CTAAAAAATTGAAGTTTCGAAGTAATTTGAAATGCTCAGAATAACAGAACTGCTAAAACGTTATAAATCATTGCCGGAAT
GCCTTTGCTATACAAATACGTTGTAACCTAAGGAGATTGGCTTTACCAAAAAGTATTAATCAATTTTTTCGCGGTTTT
CTGAAATAATGTATTTGTCATAGATATATATATATAATATATA

>CL17002Contig1|probable phosphoserine aminotransferase-like

GGTTTTCAAATGGATCAAGGCNACGGTGGGTGTCGGAGGGCATGGA AAAAAGTGGCGATCGCTAAAAGTAAAAATATCTA
TGGAGTCATTGACGAATCGAAGGGTTTCTACACTTGTCCGGTGAATCCACGTGCCCGGAGTCGCATGAATGTACCTTTCC
GCATTGGAGACAACGACGAAGAACTCGAGAAAAAATTCCTTGCAAGGGGCCGTAGCTCGCGGAATGCTCCAGCTCAAAGGT
CACAGGTCGGTGGGAGGAATTCGAGCGTCTTATACAACGCCGTGACTGAGGACGAAGCCGAAGCTTTGGCCACTTATAT
GCGAGAATTTCTACAAAGAAAACGTTAAAAAATAGAGCGTTCTCGTCCCGCAGACGCCGATTCCATAGAGAGTGGCAG
CTAATCTTATCTCCAGCAATCATATCGTATCGGGGTCACTTGTATTCTGTTGATTTTTCTAATGACGTTATATTTTTTAT
AATATGAATTT

>CL1700Contig1|translocon-associated protein subunit alpha-like

AGTTTGCCAACGGTATGCTCAGTTGAAGGCAGTTCTCGTTGTATTATAGTTTGTGCGGCGAGTGAATCGTAAGCGCGTTT
ACTTCAATCTCAGCTAACGGTCGATCTCTCGTTTACTGTCTCTTACGATCCATTTTATTCTGAGATCTTAGCTT
ATATAGTCTATTTTACAATGAAATACCTTCGTTTTATTTATTTCTTCTGTTTACCGGCGCTTCTATCCTTCGTCGATCAG
GAGTAGCTTTTGTCTCAAGATGATGATGTTAGTGACGACATCAATGACGTCGACGGAAGAGGGCCAGTGTTTTGTGAGAG
GATGATCCGGAAGAAAGAACTGTAACGCTGCTGCCGACGCGGACACCACAATTTCTATTACAAAGCCGATCCATCAGTC
GTTATCCACTCTCGAATTGCCGCGGGTAATTGGGTTGAATTTTTTGGTGGTTTTTACAAACAAGGGAAAAAAGTGAATTT
ATCCTGGAAACATTGGACGCATCTTCCGTTATTCGATGGACTTCAATTTCTACATCCAGAATTTCTCAACTCTGGCTGT
GAACAAAGTCGTGAAACCAATCACGAAGCGACCTTGGCATACTTCTGTCGCTGTAACGTTGACGAGTTTGGCGGCTCCCT
TTGGATTGAACGTCATCTTAACTACAGAGATGCGAATGGCTTAACGTTGACGGAAGCTGTTTACAACGAACTGTCCAA
GTTATTGAACTGGACGAAGGTCTCGATGGTGAAACGGTATTTTTGTACGTTTTCTCGCTGCTTGCGTTATCTGACCCT
CGTTTGTGGACAACAATTTCTGTATCCCTCGGACGCAATCTCGATCTTCTCTTTCGAGAAAAGTACCCGTCGAAATGG
GTACCTCCAACCCCAACAACGTTGATTTGATTTGCTTGGTTGCCAAGGACACGCTCAACAGACTCAACAAATCGCCCAGA
CTCAAAAACAGAGTCCCAGACAGAGGAAAGCCAAGAGATCGGCAGGCTCCGACGACTGAAGTGTGTTTATACGTTTATTTAT
AGGACTTATTTAAGAGAAATGAAGCAATGTGAGTGACAGAGGTACATTAATCTGAGAGACGTTTATTACGGCATCACCT
TTTTTTTATACGATTATGAAATATTCCAAGGTCCCAAAAACGTTTGTATTTAGAACAAACAAAAATCCATCGAATTAA
TGTTTTTG

>CL17137Contig1|ubiquitin-like modifier-activating enzyme 5

ATATGTCATACGTCAATTCTAACATATGGTTACACGTGTCGCTCGTTTGTACGATTGTTGTTTTCCGGAGCCATACAAT
TAAAGTTAAACATATAACGTCAAAGATAACATCTCAGAAATGTCTACCGTTGAAGAGCTGCAAGCTAAGATTCTGATTT
GGAACAGCAGCTTCTCGATGCTAGATCCAACGATGAGTGTAAACGTTAGACAAAAAATATCGAGTTTGTGAGTGAGGTTA
TCGACACGAATCCTTATAGCCGCTCATGGCCTTGAAACGAATGGGAATCGTGGACAATTACGAGCGCATCAGAGAGTTG
ACGATTGCTATTGTGCGGGTTGGCGGTGTTGGCAGTGTCACTGCCGAGATGCTGACCAGATGCGGCATCGGAAAACATA
CCTTTGATTACGACAAAGTTGAACTGGACGAATAATAGAAACAG

>CL1721Contig1|protein transport protein sec24c-like

CCTTAATCGACAGCAACCGCTCCTCTCGTTCCGCCACGGGCTATCCGACGCCGAGCAGCAGCCGCCATATCCGG
ATCCCTACATGGGTCAACAAAGAGCGCAGCATGAGTGGTCCGATACAGGAGGATTGCAGCAGCAAGGTGAGCAGCAG
CAGCAGCCGGCTCCGCAGCAACAAGCGCGTCGGTTAAGATCCGGATCAGATGCCGAGTCCGATCCAAGTGATGCAGGACG
ACGAGCGAAGCCGAGGCGGTGTTTCGTAACGAATCAAAGGTTTGGTGGCGCGGTTGGTTACGACGAATACACGGTTTCA
GATCAAGGCAACTCGTCGCTCGATTATCAGGTGACGATGTACACCGTGCCGACGAACAACGACATGATGAAACAAAC
GGGCGTGCCGTTCCGGCTTATCCTCAGTCCAATGGCTCAAGTCGCCGAAGGCGAATACGAGCCTCCGATCGTTGACATGG
GCGAGATTGGGCGGTTGTTGTTATTCGGTGCAAGGCTTACATGGAGCCGCTTATGCAATTCATGACGCTGGGAGACG
CTTCCAGTGGCGATTTTTGTGCGGCCACGAGCAAGTGCCCAAGAAATTTTTCAGCATCTCGATCACACCGGCCAACG
ATGGATCTTTACGAAAGGCCCGAAGTCTGTTCTCGGCACGTACGAATACACCGCAGCCGCTGATTACTGTGAAACAACG

mmc4.txt

TCTCCCGAAGCCACCGGCCATTATATTCTGTCATTGACGTTTCGTACAACAACGTCAAGTCCGGACTGGTCGGTCTCGTT
TGCGCTCAAATGAAGAAAATCATTAGCAAGTTGCCGATCGACGCGGGCCACGAACGCACGGGCATGAAGGTCGGATTCT
AACTTACAACAACACCGTACATTTTTTACAACGTCAACGCCTGTCTACGCAACCTCAGATGATGGTCGTCGGTGATGTTT
AGGACGTTTTTATGCCCCGTCTCGATGGCTTCTCTGCGATCCCAAGGAAAGCGAAATCGTTATCGATGCTCTTATGGCT
CAGATACCTGCCATGTTTGTGATACCCGGGAAACCGAAACTATACTCGCTCCCGCCATACAGGCCGGTTTGAAGCTCT
CAAGGCGTCCGACCGTGCAGGAAAGTTGATGGTGTTCATTCTCTCCCGATAGCGGAAGCGCCAGGAAAATTGAAAA
ATCGAGACGATCGCAAGGTGCTGGGAACGGAGAAGGAAAAAACGGTACTCGCTCCACAGACGAACGTGTACAACAATCTC
GGGAGGAATGCGTCGCGGCCGGATGCAGCGTCGATCTTTCCNCTTCAACAACCTCGTACGTCGACGTCGCAACCATCAG
CCAGATTTGTCTGGTT

>CL1723-bisContig1|1-cys peroxiredoxin

TTGTTTCATTCAACCCCTCGTAACTAATCTCTCCACGATATTACGCCATGGAAAAAATTGTAACACAAACAAATGTTGAG
TTGTGTGGCTCGTTTGTGAGAACAACTCTCGGGCTGCATTAACAAACAGTCCGACGCCATTATTCATCATCAGTTTCTCG
CTGACTCTGAGCGACGCACTCGCTCCAAAGCTCTCGACAGTTCCATATCAGTTCTAGTCCCCAGAGCCATCGTCACTTTT
GCTAAGAGAAAAAATAAACAATCGAACATCTCGAACAGTGAACCTCGATCGTGCCGAATTTCAAGGCGAAGAACG
ACTCAGGGTCCCATCGAGTTTTTGGGAATGGCAGGGAGATTCTGGGTCTCGATTTTTTTCTCATCCGGCAGACTTTACGC
CAGTTTGTACGACCGAACTTGGTCTGATTGCCGTCCATCACCTCATTTTTCTCAAGAGAAATACCAAACTCTCGCCCAT
TCTGTGACAAACTCGGAGATCACGTTCACTGGGTAAACGACATCAAAAATATTGCCAAGACATTCCCGGGGCTTTCCC
GTACCCGATAATCGCCGATGAGGATCGCAGTTTGGCTGTAAATTGGACATGATCGACGAAGCTAACAAGGACGATCCTG
AGCATGCTCTGACTGTTTGGTCTGCTCTATATTGTGAGCCCTGATCATCGTCTTCCGCTGAGTATGCAGTATCCAGCCTCC
ACTGGAGCTAACGTTGACGAAATTTCTCGTGTATTCGATTCCCTACAGCTCGTAGATCGCATTCCCGAGATTGCAACGCC
GGCGAATTGGGTCCCGGTGAGAAAGTTATGATCTTGCCGACCGTGTCCAACGAGGAGGCTGGCAAACCTTTCCCGGTG
GAGTCGACCAAGTCTTAATGCCTTCTGGCAAAGTTTACATTGCGACGACTACCGACTACTGATCCACGTTCCCGAATTGT
TTCTCGTCAATTATAAAATTTCAATAATGTACGATTTACAATTTTTCAAA

>CL17256Contig1|estradiol 17-beta-dehydrogenase 12-like

TAATATACATAGTGAATAAATAAATAAATAAATAAATTATAAATTTGATAAAAAAACGTTAACGTTTTCACGTGTAATTT
TATCAAGCACCATAGAGAAAACGGCGTGGACTGCAGAAGCGAACCCGCTCGAGCGAAGTGGAAAGCTAGACAAGGAAGAAA
AAAATGACACTTTTCTGTTGGGATAAATTATCGATCGTCTGTTAGCGGCGATTGGTCTCCGTATATTTATAAGGGCGAG
CGTATTAGCGTGGAAAAAATAAATTGCGCCGGCATTGGGTTTGGGGATCGACGTCGCGACGCAAGGAAAATGGGCGAGTCG
TGACAGGAGGAACCGATGGTTTGGGTAAAGCTTATGCAAAAGCTCTTGACGCTCGTGGCTTGACATCGTCTCTGTCG
AGGTCACAAGAAAAATTGAATTCGCTGGCTGCTGAAATAAAGGAAGCGTATGGTGTGACGATAAAAAACGGTCGAGGCTG
ATCTGACCGAGGGCAAGCCGTTTATGCCAAAATTTGAAAGCTATCGAGGAGCTCGAGGTGGCGTTCTGGTCAATAAC
GCTGGCGCGAGTTACGATCACCCAGAAATATTCACTCATGTTTCGAAGAAACAATCGCAAGGATACTCCAATTGAATGTA
GCGGCCGTTACGGGCTTTGCGCAGTG

>CL1729Contig1|hexokinase-1-like isoform 1

GGTCTTCAGGACGTAGAGCTTCCCTTAGGTTTTCACGTTCTCGTTCCCAATGATTGAGCATTCCCTCGACGCCGGTATACT
CGTCACGTGGACCAAGAGCTTCAATTGCCCGGACGTCGTGAACGAGGATGCTGTGAAATTGTTGCGACAAGCCCTTGCTA
GACGTGGTGACACGAGGGTCAACGTTGTTGCCATTTGAATGACATACCGGCACTTTACTCCAAGGGGCAACGCAAGAT
CATGATACCGCGATAGGACTCATTCTGGGTACCGGAAGTAACGCCTGTTATCTTGAGAGAGCTGACAAAGTTGAACATTG
GGAGCCGGAAGACACGGCGAGCGAGAAGTCATTATCGACATCGAATGGGGTGCTTTTGGAGACAACGGCGTCTTGATT
TTATCAGAACAGACTTCGATCGAGAAAATGATGCAAATTCATCTATTGTCAGCTCCTTTACATTGAAAAAATATATCGC
CGGCAAGTATCTCGGCGAAGTGGTGCGCGTTATACTCGAAAATTCATCAAAGACGGTCTCCTCTTTTCGAAACAGGACG
TCAGTAATATCCTTGTACCCGGACAGTTCACAACCGACTTCGTCTGACATCGAAGAGGATCCGTAAACGGTGGAAGT
GAACAAACGAAACGTGTGCTTGTCTAAATTTGGAATAGTCCCTGATGAGGATGACATCAGCATCGTCCAATACGTTTGTGC
AGTTGCTTCAAATCGTGGCGCTTCTCTGTTTCGATATGCGTTGCCGGAATTTGGATCGCATGCAACGTTGAACACTGCA
CGATAGCAGTGGATGGATCTCTTTACAAGCATCACCTCGATTGGAAACCTGGATGAATAATTACATAAGCTTGTAAACC
CCGACCCGCAAATTCAGCTGATCCACGCGCAAGACGGCAGTGGTAAAGGGGCTGCGATCACAGCGGCGATTGCTCTCAG
AATCCAAAAGAGATTGCAATGAAATTTGATAAATCGATAACGATTGTATGCCTGATCGATCGTCATGGTGTTCATGATA
TTTTTATGTAATGCACAGACGAAGAAAGAGGAAGTAACCAACTGGTCGAACGAGCGATTGCGGTTATGGTGAATAATGCG
ATAAAGCGAATCGTCAATTTAAATCAAAAAGAGCATTTTGAACCTCTTGTTGTCAGAGCTGACAAAGTTGCGCTTGG
GTGAGAAATGACCCAGCCATGTTTAAACGCTTGCCGCTCGTCAGTATCGTTCCGAACGACACACAAAAATTGAGGATAT
TAGTTTGAACCTTTGAGAGTGAGAATATCATGCCAACAAATTTTTATCCAATTTTTTAAATGGACGAAAAAATCAAGCAA
GGAGGCAATAGTAGTT

>CL172Contig1|v-type proton atpase subunit e-like isoform 1

ATAATGTGGTCATATGATCGTCTATGGGTGCAGTGCTTAGCGAGCCTTTCTGTTTTCATAGGCGTTGACTTTTCTCCGAC
GTTCCATTTTTCATCAGCAGTTTCGCGGCCGTTTATCTCTTCAGGAGTCTTCGATTAATTCTCATTCAATAAAGAATTTGGA
AAATCCATTTCATCATGGCTCTCAGCGACGCAGATGTTTCAAGAACAGATCAAGCATATGATGGCCTTCATCGATCAGGAGG
CCAATGAGAAAGCCGAAGAGATTGACGCCAAGGCGGAAGAAGAGTTCAACATCGAGAAGGGACGCTGTTTCCAACAACAA
CGACTCAAGATCATGGAATATTATGAGAAGAAAGAGAAACAAGTTGAACTGCAGAAGAAAATTCAATCGTCTAATATGCT
GAACCAGGCACGTTTGAAGTGCTCAAGGTGCGAGAGGATCACGTGCGTAATTGCCTTGACGAGGCGAGAAAGCGTTTGG
GCGAGGTGACGCAAAATCTGAGCGTTACCGCAAGTCTGAAGCTTCAATTATCCAAGCGTTGATCAGCTGATGGAA
AACAAATACAGATTAGAGTACGCCAATCTGATTGCGGCTCGCAGAAAACGTTCTCAACGAAGTGAGGAGCAACGACAA
ACAGATATCGAACAAAGGAAGTTTCAATCAAAAATCGAGCAAGAGAGTTTCTTGCTGCTGAGAGCTGCGGTGGTGTAGAAC
TCTTTGCTGCCAAGGGTCGCATAAAGATCAGCAATACTCTGGAGAACAGATTAGAATGATAGCCAGCAATTGGTACCG
GAAGTCCGTACAGCGCTTTTTTCGGACGTAACCCAAACCGCAAATTCACAGACTAAAGGAAAAAAGAGGGAGAAGAAACGC
TCAGCCGAAATGTTCTTCTGTTGCAATCCAAAACATTCCCTTCTTTTCGCGAACAGTTACATATT

>CL1741Contig1|upstream activation factor subunit spp27-like

ATCGCGCCCTCAAGGACGCCGACCTCAAAACTATGTGAGCTAAAAAGTGAGACAACCTGATCGAAGAAAAGCTCGAC
ATTGATCTCACGGAAGGAGAAGGAAGTGGACGATTTAGTTATGGAACATTTACAAGAGAAGCAAGACAGTAAGAAAAAG

mmc4.txt

ACGAAGAAGGCTGCGAGCGACGAGTCGGAGGAGGCGAAGAGGAGGGAAGAAGCTTCGGAAGAGGAAGAAGAAGAGGA
GGAGAAGAAACCGCGCAAACCGGGGCTCCGAAAAAAGCAGCGCCAGCGAAACGAGCAAGAAAACTCTTCGACGATG
AGGAAAGCGCGAGCGATGATGACGCGAGCGACGAAGAATACAGTCCGAAAAAAGCGCGAAAGCTACACCGAAAAAGG
ACCTGGCAAGAAGAAAGCGAAAAAGGGAAGCGACAGCGACGCGATGAGGATTGGGGCAAACTAAGAAAGCAGCGACTA
CCGGCAAAAAGGCGAGGCAAGGGCAAAGGTGGCGGTGGTTATACGCGCGCAATCACACTATCCCCCAACTCGCCGCA
GTTGTTGGTGCCAAACAGATGGCCCGACATGAGGTCTCAAGAAGGTCTGGAGTATCATCAAAGAGAGAGATCTTTATGA
TCCGAAGAACAAGCAATTCGCGATCTGCGACGACGAGCTGATAAAGGTATTCGGAATAAAGCGCTTCAGGACTTTTGGTA
TGATGAAATACCTCAAGGATCACTTCGTAGACTAGAAATAATCATTTCGCGACCCCAACGACATACCCCAAAATAATTTCA
CAAAGTTATAACATTATTATAACATTATTCCACGATGCTGAGTGAGAGAGAACCAAGAGAAAAGAACAAAAGATTTCAAAA
AAACGAGATAACGAAGAAGAACAAATGAAGAAAATAACAAAATAACGGGCATCACTCTCAGTCTCTTTTTGCGCGACA
GAAAAATTCCTGAATCATTTTTAATATACCAACAAAAAAGAAATAAAACAAAAACAGGACTAAAAGA
>CL17511Contig1|apoptosis-inducing factor mitochondrial-like isoform 2
CTTTGGTACAGCAAAGACCGAGTCGCAGCATCCCTGCTTAATTTTAGACAATGGAACGGAACCCAGAGAAGTTTGATTA
CGAGCCACCGGAGTTTTATGCAAATGTGGAGCAATTCGGGATCGGACAAAGGCGGCTGGCCGTTGCGTCTGGTTGGA
AAGTCAAAACAAATAGATCTTTAATAAAAAAATAGCAATCTGATGACGGTTATGAAATCAAGTACGACAAGTGTCTCGT
AGCTACAGGAGCTCAACCGAAGAATATTCGAATTTTTGAAACGGCTGATGAGGACGCGAGCGAGCAAAATTGTTGCTTTTC
GAACGAAGGAAGATTTTCTCGAGTTGGAGGAGAACGTTAATAATCCAGACGTCAAAAACATCGTTATTGTTGGCGGCGGT
ATTTTTGGGATCGGAATTGGCGTGTTCGTTGGCTC
>CL1752Contig2|eukaryotic translation initiation factor 3 subunit i
CGGCGGGATTCTAGACCGAGGCGGGCCGACATGTTTTTTTTCTTTTTTTTTCTTTTTTTTTGCTTTGGAGCAAATT
GAGCATCCCAGCGAAACGAGGGAGGACTACCGAATAATAAAGATTTTTCGAAGTGCAAAGACCACAATCAAATTAATAC
AAAATGAAACCTCTCATGTTGCACGGGCACGAACGTGCCATCACCACGATCAAGTACAACAGAGAAGGCGATCTAATATA
CTCCGCTAGTAAAGACAAAAATCCCAACGTCTGGTATTCTCTAAACGGAGAAAGACTCGGAACTTTTAATGGGCACAATG
GCTCCGTTTGGTGTATCGACGTTAATTGGGATACTACGAAATTTCTGTCCGGCAGTGGTGACAATACCCTCAGAGTTTGG
GACTGTCAAACAGGCAAAGAAATTGGCCAATTGCCGACAAACAGCTCGGTGAGAACTTGCCAGTTGAGTTATTTCTCCAA
CTTGGCTGTTTACTCGACCGACAAGGCTCTGGGTCTCAGTGCGAAATGTTTCATCATTGACACGAGAAGCGTTGACGCTG
TTCTCACTCAAGAAGACACAATCCGCAGAATTCCAATCAACGGGCGCGTATCTCGTCCATTTTGTGGGGAGCTCTCGAT
GAAACTATTATTACGGGCGACGAGGATGGAGAATTGGAACATTTGGGACGTGAGGACTGGAAGAAACCAAACTCCACA
AAGGTCACAAGGCGCAGATAAACGCATGCAGTTCAGTAAAGACGGAACCATGTTGTTACTGCCTCAAAGACCACACGG
CAAAGCTTTTCGATAGCGAATCGTTGA
>CL17544Contig1|spermine synthase-like
AAGATTTCTTGGCAGCTAGTAAACCGGTTTTTCTTCATTTTCATTTCCATTTTTCTCGTGTTTTTCAAATTGTCACGAT
TTAATTTACACCGAGCGACGGGAAAAATCAATATGGTGGCCCATACAGTATTGTTGGACTTCACAGTCTCCACCAACGTG
ATAGCGGATTTAGACGAGCGATCCAACCTGAAGTCAACGATCGCCAATGTGCTGGGAGACCATTTCCACGGTCTGAAAAC
CTTGACGGAATTGAACATTGAGCGAAGCTTTGTAATTTGTACGCCGGGCTAAAGGGAGTCTGATAACGGTCAGAGGAT
ATCCAGAGGGTTTGATCACCTCAATGTGGAATATTACAAACAGGACGACGAAGAAGCTCTCTTGACGTTGACTCGACC
AGAGACTTGGAGACGGCATTCGAGGACGAGCGACAGCCACAAGATCACACACGCTTACTCCGATTAACGCGGTGGCCC
CTTTGAGCGATACTTTCCGACCGCGGATGAACGACTCTCGAGTATGACATCGACAGACTCGTCTTCGAGGCAAGNTCGC
CCTACAAAAAGTCAAATCGTCCACTCGAAATCTCTTGGAATCTGCTCGTACTCGACGAGCTACAAATNTGTCCGAGGCT
GATTTGATTTACACGGAACCTCTGATGCAACGT
>CL17546Contig1|acyl carrier mitochondrial isoform 3
GAGGTGCACGATTGTTGGCTCGAAATACCGGCTTTTTAAAGAGTGCAGCGAATAGTTTCGTGTCTCAAACACCCGTAAGT
TTTCTCGCCCCGTGTTCCAACAGACTCATTCTCGATAATACGCGATTCGTGGAATGTCACAAGCAGCAAGGTTAGGAA
TTGTCGCGGGGAGTGGGACCTGGAGGAAAAACAGCGTATTTGACAACGGGCGCTGAGAAACCGGCAACGAAGAAGGAAC
TCGAAAAGCGGGTGCTCGCGGTCTGCGGGCTTACGACAAAGTTTACGCGGATAAGCTGAGTCTCGAGTCCCCTTTCTC
AACGACCTTGGTCTCGACTCGCTCGATCACGTGCAAGTCATAATGGCGATGGAGGACGAGTTCGGCTTTGAGATTCCGGA
CGTTGACGCGGATAGACTCCTCAGGCGCGGCGACATCGTTGTTACGTGCGGACAGAGAAGACATCTACGAGTAGTCGC
CTACGCAATGGATTAGTAGAATCTTCACTCTCTTGCCTAACGTCCGCGCGCTTTTATTCTATTATTATTATAAC
ACATTTTCGATATATAATCAATCGTATATGTAAATAGACAAACGGTCAATTGTACGAATAAATTATCT
>CL1758Contig1|short-chain dehydrogenase reductase family 16c member 6-like
GCAGTGATACCATTTCGAGTCATGGTCACGGCATAACGAGGGTGTGGTAATTGTTCTCGACGTTCTCCTCTACTTGTGAG
AATAGTATTCTGGACACTCGAGAGTCTTTACCGAACGATCGTACCGCCGAAGAGAGAAATGTTGCCGGAGAAGTCGTGC
TGATAACAGGTGCGGGTTCATGGAATCGGTGAGAAATCGCACTGAAATATGCGAGTCTCGGTGCCACGGTTGTATGCTGG
GATCTCAATCCTCAAGGCAATCAGGGAGACGAATCAATGAAATAAAGAAGCTTGAGCAAACTCAGTCAACGCTACCAA
TGCGACGTCTCGAACCAGGCGAGGTTGTTAAGGCGGCGGAACGAGTCAAGGCCGAAGTAGGAAATGTTACAATTTCTCAT
CAATAATGCTGGAATAATGCCGTGTATCCGCTCCTCAGCCACACCACCGAGGAAATTAGAAAAATCTTCGATATCAACG
TTTTGGCACACTATTGGATGCTGCAAGCCTTTTTGCCGAGCATGATCGCCAAGAACCATGGTCAGTTGTAGCGATGTCC
TCGATAGCGGGACTCGTCGACTGCCGGAATATCGTGCCTTATTGCGCCTCTAAATTTGAGTCCGAGGCCTCATGGAAG
CTCTCGGCGAAGAACTCCGAGCCGGCAAGAAAGGACAATCGAACAATGTCAAACCTCACTACTATTTACCCGTACATGGT
CGACACTGGAATGTGCAAGAAACCGAGAATCAAGTTTCCGACTTAATGGCTCTGGTGCCTCTCAAGAGGCGAGCGGAG
AAAATCGTCTCGTCGACAGGCGGAACACAGCGAAGTATCGATCCCTGGCTATTGGTACCCAGGTCAACACGTTGATCAG
AAATCTTCCGGAAGAGTTTGGCCACATTTGGTTCATTTCTCGACAGTGGAGTCTGACTCCGTTGAGTGAATCTCTCAGA
GATCCTACAAACATGAAAAACAAAATATCAACAATAATCACCGAAGCGTCTAACGACTTGGGTGGAATTTATTTTTCTA
AATACGCAACACAGGTCCTTACAGTGGCCTCGAATGACCAAGAAGAAAACGTTTCTCACAACACAGAGAGAAATAGT
CAAATAGATTTTTGTATCGTCTGATCGAATGCTTTTTCTCAAAGTCTCAAAGTTCCATCATCTGTTTCGATGTGAAGCG
AAAGTAAACAAAAAATGATGATCCCTGCGAGCATTTGAAACGAGATGTTTTATTGAGCGAATTTTTATACGAATTT
CCAGAAAAAATTCGATTTTTATCAGTTCTGGAATTTTTCTGTAAGTAACTAGAAATTTGAGCCTGAAATCGGTTA
TGATAGAAAAATTATACAAGATATCGGTTGTTATATGTATTATAAAAAAATATATATGATTCTTTACATAATGAAAA

CATGTGTTTCGCA

>CL175Contig3|ornithine mitochondria1

AATTAGCGAGACGATGGGGCTATAGGGTAAAAAGGTGAGAACAAATAAAGCAACAATTATTTTCGCGGCGAGGAATTTTT
 GGGGCCGTTTCGATAGCAGCGATTTCCGCATCGACCGAACCGATGTCTTACACCGATTTCCGGCCATTCTGACCGAATTTTC
 GAGAAAATTCATACAACGATCTTGAGGCTCTTGAGAAAAATTCAAGGAGAATCCAAATATTTGCGCTTTTATGTTTGAA
 CCGATCCAAGGAGAAGCTGGTGTAAATAATTCCAAAGGATGGATACTTGAAAGGAGTCAGGGATTTATGTACAAAGTATAA
 TGTTTTGTGGGTATCGGATGAAGTCCAGACAGGACTTGGGCGGACTGGAACGAGACTCGCTACTGATTACGAAAACTTA
 AACCCGACATTGTGATCCTCGGCAAAGCTCTTTCCGGTGAATGTATCCAGTTTCCGGCGTGTGGCGAGCGACCAGATA
 ATAAAATGTTTGGAAATGGGATCTCATGGAAGTACATTCCGGCGGTAGCCCAATGGCCTGCAGGGTCGCTTGGAAAGCGGT
 GAAAAATAATTGAGGAGGAAAAATTGGCGGAAAAATTCGCTGAGACTCGGTAAAATCGTTAAGAAGAATTGGAAAAAGTG
 CCGAAGGACATAGCGACGGAATTTGAGGTGCGGTTTGCTCGCTGGTCTCGTTATCAACAAAGAATTGACGAAGGCTG
 GAACGTGTGCTTAAATTGCGAGATGCTGGCTTACTGACCAGGCCAGCTCACGGACAAATACTTCGAATATCTCCACCCC
 TCACCATCAACGAGGAACAACTGAGAGAAGGACTTGACATCATAACCAAAGTTTTACGCAATAACTAGAAATTAGTCAGC
 CGCGAACGAACGTTTAAATTTTTGCCATCGAGGCGTATCGATGCTACTTTATTTCCATTAATAATTTATAAGAATGA
 GACAGAACCGAGAT

>CL1760Contig1|isocitrate dehydrogenase

AGTTTCGAAGGCCGACTCTGCCGACTCTTGTGAATCCGAAAAAGTGCTCCGGATCGATACAGAAAAAAATGGCTCTG
 CTCGTGAGGAACGTCTGCAAACTATATCCAGGCAGCCCAAAAAGGCACAGTAAGGACTCTTACATTAGCGCTGCTCG
 TCATCAAGAACTTTTANCGAGCAAGAGGGCAAAACAAATGCACCCCTATTCTTGAGATGGCGTCGGCCGGAATTGGTT
 GTATCTGTTTCAGCAGCTCTTCAAAGCCGCCAATGTGCCTGTGCAATTTAGCCCTACTTCTCTCCGAAGTAACTCCCA
 CTCTCAGCGCACCTTTAGGAAAAAGTGTCCAACAGCATTGCCAGGAATCGTGTGCTCAAGGGTATTCTGGCGACTCC
 GGATCACTCGCACACCGGAGAACTTCAGACGTTGAATATGAAGCTGAGGAAAGATTTAGATTTGACTCGAACGTGGTGC
 ACGTGAAATCATTGCCAGGAATAAAATCGCGGCATCAAAACGTGACTGCGTGATAATCCGAGAGCAAACGGAAGGCGAG
 TACTCTGCATTGGAGCACGAGTGCCTAACCGGAGTAGTCGAGTGTGAAAATCGTGACGCGTACCAAGTCCCAGAGAAT
 TGCTAAATTCGCTTTTCGACTATGCTGTTAAAAATAATCGGAAGAAGGTGACCTGCGTACACAAAGCCAATATCATGAAGC
 TCGGAGATGGTTTGTCTTTCAGTCTGTGCAAGGAGATTGCAACGCTTTATCCTAGAGTACAGTTTCGAGACGATGATCGTA
 GACAACTGTACAATGCAAATGGTATCGAATCCTCATCAGTTTCGACGTATGGTGATGCCGAATTTGTATGGCAACATCGT
 CGACAATCTTGCGTCTGGACTGGTCCGTGGAGCTGGTGTGCTTGGTGGGAGTTACAGCGCCGAATGTGTTGTTTTGA
 GCCGGGCGCGAGGCACACGTACGTCCGAGGCCGTAGGAAAAACGTGGCGAATCCAACGGCCATGCTCTTGTCGGTGTCA
 AGCTTCTCCATCATTGAATCTTCTGCTACGCCGAACAAATAAGAGACGCTCTGAACAGAGTTCTCAACGATGGTAAA
 GTTCGTACCAAAGATCTTGGCGGCCAGAGCTCGACGACCGACTTTACTCAAGCGTTATCAGCAGTCTGCGCTAAATCAA
 ACAATTCGCTGTTGTTGTTTTCTCGATCGTCCCAACGAGACCGGAATTAACGAGCGAAGAGTAGGTCAAATTAATGAA
 ACTTTACGACCAACCAAAAAGCCATGACGATTTGTATTTTTCTTGTTATCCAACATTTCTGCTACGAATAAATACTAATT
 ACCGGGCTTTGCGGCGTCAAATGAGAAGCATTTTCTGCTCTCAACTTTTTCTTCTCAAAGCCTCCAGGCTTAGACAGTCA
 TACTTAACTCTCTTCTGTTGGACACATAGCTCATCATTGTAAAATACCTGAAACTGTAAAAATAACCAATAAATTATACA
 AATT

>CL17729Contig1|eukaryotic translation initiation factor 3 subunit b-like

isoform 1

TACCGTAATTAACAAGTTTTTGGAAAGTTTGGCACTATCGTCAATGAGCATTATCCCAAAGAAGAAAAATGGGATGACCA
 AGGGGTATATTTTCTTGGAATATACTAATCCCATGAACGCTCTTGCCGCCGTGAAATCTACCAACAACATAAGATCGAC
 AAAATGCATACGTTCAAGGTCAACCTTTTACCGGACTTTAAAAAGTTTGAAGATATTCGGACGACTGGGAACCCCCCGG
 AACCACAGGCTTACACGGCAGCTGGCGATCTGCACAATTATCTTCTGGATGCTGACGCGTACGATCAATATTCGGTACTC
 TTTGGCAATGGAGGCAATGTTTCTGTGCAAAATTTGGCAGAATTTCTGCTGAGCCGACCGTGGTTGAAGAACGCGCTCG
 TTGGACCGAGACATACGTAATAATGGTCACCAATTTGGGCACTTATTTGGCGACGTTTACAAATTTGGGATGGCATTTTGGG
 GAGGACCGAAATTCATCAACAAGCACGTTTCAGTCAAAAAGGCGTGAATGCATCGATTTTTCACCTTGCGAACGTTAT
 CTCGTGAGCTATACACCACGATCGGACGGCGGCCCGGACGCCAAGCGTCTCGTCATATGGGACATTCTTACCGCCTTGAA
 AACGNTCTTTATTCGGTCTTTCGCACT

>CL17768Contig1|fatty acyl- reductase cg5065-like

AGTTTGAAGGTTCTGTAAGTAAAGAACCATTTCCACTGTGCAATCGATAAAATAATCGTTTCAGGTGCGGGTTTGCCTAAT
 TTGTTGTGTTTTCGGACCACCCCATAAACGCAGATCGAAACTCCCCATTGTAAATCTATGGGAACGCGAGCATCCCTATTC
 GAGTGCATTGCTATTCTCGCTGAAGAATATTTCAATCTTTCCCGTAATTTATCTCTAAAATTCGTTTCAACGGAATAA
 TGATGGAAAGCTTTTACAAGAGAAGTAGCAATGGGAAGGAAACGATTTCCGAGGATGTTGAAGAGAGTGAGATTGAAAAA
 TTTTACGCTGGTAAAAACGATTTTTCTGACTGGCTCGACTGGCTACATGGGAAAAATGTTTAGTTGAGAAGTTTTTACGAG
 GTTGTCCAGATTTGAAACGATATACGTACTTGTGAGACCGAAAAGAGGATCTACCTTGAAGAAAGGATAGAAAACTTC
 TTCGATGATGCGGTTTTTGGACCGGTGCTAAAAATGTATCCCGGTTGTGAGACAAAGATTATGTGGTTCGGGGTGACCT
 TNTGTCCGAAATT

>CL1776Contig1|transmembrane emp24 domain-containing protein 9

GTTCTTGGGTTTTGGAGGTGACGTGTGTTGTTTCGATCGGTGAGGACCACGATAATCGCGTATAAATTTTCATCAAAATTC
 CTAATAATTTAACGGGAAATATTCCTTTTCGGTCTGAATCACTCATTTCAAGAAAAATGATTAATCTATTGGAGTATTTTCGT
 AGTTGTTGCGATTCTATCGCAATGCTCTAGTGGCCTGTACTTTCATATCGGCGATACAGAAAAAAGTGTTTCATCGAAG
 AAATTCGGGATGATACGATGCTCTAATTATCTACAAAGTCGAGTTGTACGATCCTCGTAGCGGAGGATTATGCGCGAGC
 AGTCTTGGAAATCGGAATGCACGTGAGGTCCAAGATCCCGATGAAAAACAATTTCTATCAAGAGTTTATAGTTCCGAAGG
 TCGTATATCGTTCACTTCCCAACTGCACGGAGAACACGTCTGCTCTTTTCCAATAGCACGGCGTGGTTGAGCGGCA
 CCCAATTTGAGAGTCCATCTTGACATTTCAAGTGGGAGATCACGCCATTGACTACGCCAATATTGCTCAACAAGAAAAGTTG
 ACTCAGTTGCAGTTGCGATGCCGTCAACTTTTTGGAACAAGTCGCTCAAATTTACTAAGGAACAGAGCTACCAGAGGTATCG
 GGAGGAAAGATTGACAGAACTTCCGAAAGTACGAACAGCAGAGTCTGCGATGGTCTGTTGGCTCAGACTGCGATTCTCT
 TGGCAATGGGTGCTGGCAACTGCGCACTTGAAGAGCTTCTTCGAGGCGAAGAACTCGTGTGATTGAACGATGCAACGC
 GAATATTATCAACCGCGCTCATGCGTGCATCTTCTCATAATTGTACAGCCATTTCTACCAAACTCTACGTGTCTGTAATA

AATTCTGTTCCATCAAATATCGTAAAGAAATTCAGTGTGCGGTTGTTTTTTACGCCATTGATAACTGGT
 >CL177Contig1|acetyl- mitochondrial
 AGTGTATCTAGAGCGTCTGGCACGATTGATTGGCCACCGTGCATCCAATTTATGCAGCAACAAGTTCTCGATTCTTAACC
 AAGTTGTCATTTGTAAATACTTGTCTTAGGCTTAGAAAATGCTCTCCTTGAATGTAGCAAAGGGGTGCGGACGTGGAT
 TTCGTACATACAGTACAAAAGTCAATCTCAAAGATGTTGTTATCGTCAGCGCAACGAGAAGTCCAATAGGATCGTTTCTC
 GGCTCAATATCGTCGCTTTCTGCAACAAAACCTCGGTGCAGTTGCAATTGAGGCTGCTGTGGAACGAGCCGGAATCCCTAA
 AGAACAGATCCAAGAGGTTTATATGGGAAATGTTTGTGAGAGCTACTTGGGACAAGCACCGGCGAGACAGGCAACTTTAT
 TCGCTGGTCTGCCAAAATCCACGATTTGTACAACGGTCAACAAAGTATGCGCGAGTGGAATGAAAAGTGTGATGTTGGCG
 TCGCAGGCTATCCAATCCGGTCACCAAGACATTCTCGTCGCGGGTGAATGGAATCGATGTCGAACGTTCCGTTTATCTC
 AAAAGAGGTGCAACTCCATACGGCGGAATGAACTCGAGGACGGTATTGTCTTTGACGGATTGACTGACGTTTACAACAA
 ATTTACATGGGAAATTGCGCCGAGAATACCGCAAAAAAGCTCGGCATTTCCCGCAAAGATCAGGACGACTTTGCCATTG
 GCAGTTACAAGAGGAGCGCAGCTGCGTGGCAACAAAACGCATTCAAAGACGAGATCGTCCCGTTAACGTAGCTCAGAAA
 AGAGGCCAACCCGATCTCGTTATCGCCGAGGACGAAGAATACAAACGTGTCAATTTGACAAGTTTCATACTCTCAAAAA
 CGGTTTTTCAACCGGAAATGGAACGGTCACCGCTGGCAACGCGTCACTTTGAACGACGGAGCAGCTGTTTTGTTGTTA
 CCAGCTCCGAGGTGCGCGGAAAACTAATTTAAACCTTGGCGAGAGTGGTGGGATTTCAAGACGCAGAAACGGATCCCA
 TTGATTTTCCAATTGCTCCGGCACTGGCTATACCAACGTTGCTGAAAAATCGAACGTTAATAAGGACGACGTTGCAATG
 TGGGAAATCAATGAAGCCTTCAGTGCAGTTGCTGTTGCCAATCAAAAACTCTCGAACTGGATCCTTCGAAAATCAACGT
 TCATGGTGGTGCGGTTTCTCTCGGTATCCCATTTGGCATGTCCGAGCCCGAATTATCGTTTCATCTCGTTTCATGCTCTGA
 AAGCCGAGAAAAGGGCTCGCTTCGATTTGCAACGGTGGCGGTGGAGCGTCTCCATACTCATCGAAAAATTTGTGAGTG
 AGTGCTTTTCTGACACCGGTGCGAACCCCAAAATATCGTCCGATGAACCAAACTTCTCAATTTATAAACCTCTA
 TTTTATACGCATTGTATAAATCAACTATTTTTTAACCAACTTTCTACTCGTTATTGTTGCAATGAAAAAGTCAAATAT
 TTTTGTGAAATATAAAAAATATAAAATTTTTTTATTATAAACGAAACAAGCTACGAACTCCGAAAATTTTTATAATTTTAA
 CAAGAACTCGTCCCTAGCGAGGATAAAAAAAGGTTCACTACGATCGCCGATTAAATGTGCGAGATCGCATCGTGCTTCT
 TCGCCACCGAGGATCACACTCTTACCAAAAAATCCATGCCCGCTGTGTGACGTTTTGAAAGACGAATTAACACGCCATTT
 TCAAAATCGTTACCAGCTCGAGCAGATCGACATTAGCGCCAAGGGCAATGAATCTTTTTACCAATTGTACAAATGCGACA
 TACCCGTCCTGTTTTTTGGAGGGACAATACTTGTGTAAGCATCGACTCGATGCTCAACTTTTAGAAAAAAGACTCAACGA
 AATATCAGGAAAATAGTCCACACACACACACATTTGCGTAAACCTTTCTGTTTTTTAAATAAATATCTCTGGATA
 AGAAAAAAA
 >CL1788Contig1|bifunctional glutamate proline--trna ligase-like
 AGTATAGACTAGAGCAAATTTGGGGCACATGTAAGTTTCGACTAAATAAAGCTCGACAGCACACCCTGCTATTTTTTCAACA
 ACATTATCGTATTCTCTACATATTGAAGAAACAGCTGTGGCAAATAAAACAATTTTTGCATAAAGTTTCAGTCGAATCCC
 TCATAATGAGTCTCCGTTAATTGTGAAGCCAAACAATCCCGCATAGGCGCTTTGATAACTGCCGAGCTGATAAACGAA
 GAGAACAAAGCCGCGGTAGAAATCACGTCCAATAATTTCAATTTCTCCGGTGATGTTTCAAGTTAATCGCTGCCGATGGAAG
 TATCATTTGCGAAAGCTCCAATGAGGTTGGACGATATTTCCGTAGTAACCGTTTATCCGGAACCTTTATGGCGGCTCCGAT
 GTTTACGAACGAACGGAAGTGGATCATTGGCTTTCTGTTCTCCATCGGGCTCTCAAAAGTCAAAAGTCCATGAGCGATTCT
 GCTCCTCTATCTTGACAATATTCTAAAGCCCAAAAACGTGGCTGGTATCCAAGCGTCTGACCTTGGCAGATATTTTACGT
 TTTTCCCGCTTTTGGTGGATCATCGGCCTCTGGAAGCGATGGAATACTGTAACATAAGCCGATGGTACAAGCAAATG
 TTGGCCATGCGGCGGTCCAAAAGGCCCTTGCCGTTGTCCAAAGAACAGAGTGCAGGCTCTGGGAAAGTACAAAATC
 TTCAGGACGCCAAGAGGGCAAAGATGCCAAGAGGCCGTGCAGCACGGGAAACAGAAAACAAGAAGGAACCTTTGTTGAAC
 TTCCCGGAGCTGAAATGGGCAAGGTGGTCTGACGTTTTCCGCCAGAGGCGAGTGGTTTTCTTCATATTGGTCATGCGAAA
 GCAGCTCTGCTTAATCAATATTACGCAGATGCATTCAAAGGCCAATTAATAATGCGATTGACGATACGAATCCGGCTAA
 AGAAAACGTTGAGTTTGAACAAGCGATACTGCAAGATCTGGAGATGTTGCAGATAAAACCCGATCGTTTCACTCACTCTT
 CCGACTACTTGCACCTCATGCTGTCCTATTGCGCAAGCTGATCAAAGAGGGAAAAGCATTTGTGATGATACGCTGCT
 TTGCTGATGAAGGAACAACGGGAGCAGAGATTGCCATCGGCCAATCGAGACAATAGCGTCGAGAAAAACATGCAACGTTG
 GGAAGAAATGAAAAAGGCAACGGTCAAGGGGACAGAGTGTGCGTACGGGCAAAAATCGATTATCAATCGACCAACGGAT
 GCATGAGGGATCCGACGATTTATAGGTGCAAAGCGGAACCTCATCTCTGACAGGAACGAAATACAAGGTTTATCCAACG
 TATGACTTTGCATGTCCGATCGTAGATGCCCTCGAGGGTGTAAACGCATACGCTTCGTACCACCGAGTACCACGATCGAGA
 CGTTCAATTCTACTGGTTAATCGAGGCTCTCGAGTTGCGACGCTCTCACGTTT
 >CL1789Contig1|glucose-6-phosphate isomerase
 TAATTAACCGCTTTTTGAAGGTGCGAGCCGGTCAAAGACGAGAAAGCCCGACGCGTGAGATTTGCGAGAAGTAGAAATTC
 ACTCGGTGCAGTAACTTTGTTTTGAAAAAGTCAGACTTGTATTCGATAATCATGGATATTAAGGAAATTTGACCGAAG
 AAGCAGCGTGGGTTAAAGTCAAAGCTATTTTGACAGTAACGGTGCGAAAAATCAACATTGCTGATTTGTTTCAAAAGAA
 TCCCGATCGGTTTGATAAATGAGCTTGAGTTTGGAGACTCCCGAGGACGGACCAATACTATTGGATTATCCAAAAACC
 GCGTGGACAATGAAGTGCTCAGCCTTTTGTTCGAGCTGGCCCGAGCCAGGAAAATCGAACAAGCCAGAGACGCCATGTTT
 ACCGGAGAGAAAAATCAATTTACCGAAAAACAGGGCAGTTCTCCACACTGCTCTGCGTAACCGAAAAAACACACCCATCAT
 GGTGATGGTAAAGACGTCATGCCGGACGTCAATGCCGTTCTTGCTCATATGAAAGAATTCACCAATCAGGTTTTGTCCA
 AGGAATGAAAAGTTCATACAGGTAAGCGATCGAGGATGTCGTCACATTGGTATAGGAGGCTCGGATCTGGGTCCACTC
 ATGGTGAAGCTCTTAAACCTTACCAAGCTGGCCCGAGAGTTCACTTCGTGAGTAATATCGATGGTACTCATATCGC
 GGAACATTGAAAAAGTCAATCCAGAAACGACTTTTTATAATAGCCTCAAAAACGTTACGACGACGAGAAACCATAA
 CAAATGCGACTTCGGCGAAACACTGGCTCTTGAGACATGTAAGGATGATTCAGCAGTCGCAAGCACTTTGCGCTCTGT
 CGACGAATAATGACAAAAGTCAAGGAATTCGGTATCGACGAGAAAAACATGTTTGGATTTGGGATTTGGTGGTGGTACG
 CTACTCCTGTGGTCCGCAATTGGTTTTGTCCATTTCTCTTCTTCAATTTGGTTTTGACAATTTGAGAAATTTGCTTGAAGN
 GCTCTATTTTCATGGATC
 >CL178Contig1|proclotting enzyme
 AGATCAGTCGTAACCTTGACGGTCTTTGCGCTGTTTTCTGCTGTTTTTTCATATCTCCATTAATAATCATCAAGCCGGGTTT
 GACCAATTAACCCGACACACAAGTGAATATTTAGGAAGTAGAAAAAGATGTGGTCGAAAAATGCGGCGTTCCGGATAT
 TCCTGACAATGTTGGCACATCAACAGCCACGAGCAAGATTATGGTGAGTGACGAATCCACGAGGGCAAGAGGGTCGG
 TGCATTCCAATCAGATCGTGCGAACCCCTCATAAGTTCTCAAGAAACAAATGGCAGAGAAGGAAGTCAATTTTTGCGAG

mmc4.txt

AATCTGTCTGCGTTTTTCGAAGGAACAACCCATAGTTGTTGCCCTGATGACTTTGATTACAACGACAATTTCAACGTCGAT
AATGACAACAACAATAACAACAACAACAACAACAACAATACTCCGAACCCAGAACCCAAATCGCGATCAATTTTCTAATAA
CCCACCAAGTCCCACGAGGTATGGACCTCTGTATCCACCGGTGTGTGGCTACACCGATGCCAAATTCACGAGAGTTGTGA
ACGGAGTACCAGCCTCATTGGGCGCTTGGCCGTGGGCAGCACTTCTGGGTTACCGATCGAAGAGAAATCCATCGAAACCA
AATTTCAAATGCGGTGGTTTCGCTCATCTCAGCTCGACATATACTCACAGCTGCTCACTGTGTTACGGGTTCAACGATTT
GTATCTCGTACGCGTCGGTGAGCTCGATCTCGACGACGAGAACGAAGGCGCGACACCGATCGATTTATTAATTGAAAAA
AAACGGTGCATCCGAGATACGAGGCAAAATCTGTTTCCAACGACATTGCAATCCTCAGAATCGACAGAGACATCCAGTTC
ACAGATTTAATCAAAACCCATTTGTCTACCGGTGACTGAAGACATTCAACGACAAAATCTCAACAATGCATGGCCATACA
TCGTTGGATGGGGTTCCCTCGGTTACCGACGTGCCAGTTTCGGCGATCTTGACGCAAGTTCAAGTTGCCGATTGTGCCACA
GGATCAATGCAAAGCAGCGTATACGGGGAAGGTGTATTTCATCGATGAGCGTGTACTGTGCGCTGGTTATGCTCAGGGTG
GCAAAGACGCGTGTGAGGGTGACAGTGGCGGACCAATGATGTACCGGCTTGGCAAATCTTGGTACAGTCTCGGAGTAATC
TCGTTTGGCGTCAATTGTGCACTTCCAGGCTACCCCGGTGTCTACACGAAGACGAGTCTTCTGGACTTCATTATAC
AAAATTTGGATTGATTATTGTTGAGCTAACGACCGAACGTTAAGGCTGTACGAAACGTGAACGATTGAGATTAATAAATC
ATTGAGGTAGTCAACATTTGTTGAAAGTCGTAAACGGAAGCACTAAACTCAAATGTGATAGTTCCAACGACAGAGCTAA
TTTATAAAGTCGTGACTGTAGAGAAATTATCCTGTATTTTCAACACCGTATCCATTATTTTTTCAATTTTGTAGTCCGCAACA
TGAGCCACTCTTCCCTTCGTTCTAATCACCCCAATAACAATAGCGATATTATAAAAAATCTCCAATCTGATAATAACG
AAATCGAATGAAAAATCGGTGCAAAATCGACAGTACACTTTTGGAAAGATTACTGGAAATTCATTGGGAAATGTGGATGCA
CAGGAACTTTTTATAACTCTCTAGAAACCAAGAGCTGCGCTGCACAGTCCGTTCTAAGAATATTGACGTGCAAGTTTT
TGGCGAATAAATACCAATGCCGAACCCCTCAAAATCAACAATCCGATAATTACAAGGCTAGTTAAGGCTGAAAAGCTA
ATTAACCGTTTTACAAAAATGGAACCTGCACGCTTCTTGCTCTTTCGTACTTCGCGGTTTTGGGAATCGGAAACAAATC
ATCAAAAGATATAATTTCCCATGTGGAATGGGACTATTGGCAGCAGAGTATTTTTGCTGCTTCGCACTTTGTACGACAAGT
TTTTTGAAGTATGGCTGCTGTACCAATCAGTGTACCTACAGAATCTGTAAGGCTAAATCGTTTCATGTTGCAATGAAT
TGCTTAGCTATCGATGCAAAATTTAAGTGTCTGTAATAAAAAATGGAACGCTTGGAGAACAGAATTTTTCCCAAATAAAT
TTATTGACATGAAATATCGCCTGAATCTATTCTTTTCTGAGCTCGAATGCTAGTCTTTTTTTGGTGATTGTCAAGCTGC
AATTCAGCATCC

>CL1794Contig1|probable aminoacyl trna synthase complex-interacting
multifunctional protein 2-like isoform 1

AAATGGCCGACCACATTGGAACAGTGTGCGGGGAAAAAACGAGACGACGAATTTGACGAGATTGTGCGAAGGAAAAACGT
TTTCGGGCGACGAAAACTTTTCGAGTGTTCGAAAAATACAAAAAAGAATAAAAAATGAACAGTGAACGATGTACGCGT
TGAAATCTTTGATCGATACGAATTTGACAACGATCAACAAAAATAATTGCATGTACGCGATGAAAAATATTCAAGAAATA
TGTTTCGGGCGACGACCATGCGTCCAAATTTTTCGCAACAACGTACGAGACATACCAGAGCAGAATCCTTTGCCGGAGGTGCG
CGTCCCTCGAAGCCAGGCAGGAAAAAATCTCGCCAGTTGGCAGAGCTCAAGAACAAGTTTTGTGCTTTTGAACGTT
CTCAAATCCAACAACGTTGTGAGAAGCAACGGGACGCGCCGAAAGATCGAAAGCCAGTCTGCTGTTAATTTGATCGTCAA
AGCAAATCCCGAAAAACCTTGTGGCTCATTCTCGGGCTTCAAAAAATATGGAGGGACGTCAATTTCAACGTCAAATCTT
ACAGACACTCAGACGCCGAAGGAACGCCCCCGAACTCACGATACACGGCAAAAAAGAATTTACGACACTGTGAACGTT
ACCTTGATCTGGAATAATGTGAGGACACTGAAATAATTTTTCAGGAATTCACACTTACCCCTTGGTAGGAGAATCGAA
TTTGCTTCGTTATTTGAAAGAGCAATTTGTCGACGGCAGAGTACGAAAAGTTGTTGAACGAGAGAGAATTGAGCAGGCGAG
AAAATCTGTTGGATTTGTCGCATCGTTTGAATTACGAATCGCCAAAAAGAAATGCAATCGACGCTCATCGAGTGAAGTGA
AAGTTGGAGCAGAAAAATTTGGTTCTCCGGCGGAGACGAACCAGGAATGGTGGACGGTGGCAATTTGGTCTCGATAAAAC
GAACGCCCTAGAAAAAATTTGGCTCGGATCTCAGTCTCGTGGTTTCGAGCGATGCGAAACGAGGTTTTTTTATTATTGAA
ATCATTTGCCAATTTCTCGTTGTAATTTTGTCTATAAAATTTTCGTAAATTTTTATAAATGGATAA

>CL1796Contig1|60s ribosomal protein 112

ATCTCTCTCTCTATAAAACCTCGATACTTCGGGTTTCTATTTCTTGCTTTCTTTCCGAAACCAGGTTTCGCGAGTGCG
GTTCTCTCCCGTGCTGACGATTTTCCGAATCGTATTTCAATCCGTTAATCTAAGTATTTTATACTTGAAAAAATTTTCATCA
TGCCTCCCAAATTCGATCCCAATGAGATCAAGAAAGTCTACTTGAGGTGCGTGGTGAAGTGGTGAACCTTCTTCT
CTCGCTCCAAAAATCGGTCCCTTGGTTTGTGCGCCGAAAAAAGTTGGTGACGATATTGCCAAGGCAACCAACGACTGGAA
GGGTTTGAAAAATCACGGTCCAGCTGACCATCCAAACAGACAAGCGGCCATCTCGGTTGTACCGTCGGCAGCCTCGCTGG
TCATCAAAGCCCTGAAAGAACCGCCAAGGACAGAAAGAACGAGAAGAACATAAAACACAGCGGAAATTTATCGTTTCGAC
GATATCTTTCTCATCGTCTGCATCGTTGAAATGAAACCGAGATCCATGTCCTCGTACGTCGCGACGCTCAAGGAATTTCTGG
CACCTGCCAATCGGTTCGGTTGCACCGTCAAGGAAGACCGCCACATGACGTCATCGACGATATCAATGCCGGCGAGATCG
AAGTTCCAGAGGAATAAAGACTTTGATTTAACGAGAGGGT

>CL17993Contig1

AGCAGGGTAATAAACTCGAAAGATAAACGCACCCCAAAAGCGAATTTCCAATGGCCCTGTCAACGTCAACGCCGAACA
GTGGCGAATTTATATGCTCGATCTCAAGCAAGATATTGCGAGATCTTCTGAGGATCCTGCGATCCGACAACGACTGGAAG
CAGGTGGTCCGCCGAGCCAAGAGCAGGCTGATCAACTGCGCGAAATAATCGAATATATTTTACGTGGATGGCGTTACTGT
TACCGAGATTCATTTTTTCGGATCGAGGGGCACAGCTAAACACGCAGCGTCCAACAAAGTAACGATGACGGATCCTGCGAG
CTAGTAGGCATAATCGTATTGTTTTTATTAATTCATTGCCACAGTGTGAAACATTCAACGAAAAATCGATGGTTTC
CATCTTTGCATCGTAAGGACGCTGTGGAATCTTCACTGTATCATCAAACGTGTTTCGACGGTGAAGACGGAAGCACGCGG
ATGTTGATAATCGCTCACGACGTTGTTAGTTAAATTTTTATATAAAATAAAGCGTGTGAAAGATGTATAATGATTTTCAT
TTGTCGTTTAAACN

>CL17Contig1|eukaryotic initiation factor 4a-ii

ACAATTAACAGAGTGTGAGTGAACCGTTTTTCGGGATATCAAAAAATTTGGAAGCGTCTTAATTGGCGAGTCTATTA
AGACTTGAAAACTCGTTGTTGTGGGTAAAAAAGGTCCGAATCGGTGTGTTGGCAGCGCCATTGTGCGGCTTTTATAAACT
ATAATTCGTGTGACGCAATAGGAATTCGTCTTTCCGTGCGCTACCCGTGAGTGGAACATGTGCTATACGCCTGAACGA
AGGAACGAGGACCAATGGCAGGGCGAATCCAAAAATGGTCCAAGCGAAAAATGAGGAATCTGCCTACGATGGTCCCCCAGG
GATGGAACCCGATGGCGTTCATCGAGTCCACCTGGGAGGAAGTCTGTAACCTTCGATGACATGAACCTGAAGGAAGAGC
TGCTGCGGTGTTTATGCTTACGGTTTTGAAAAACCTTCGGCTATCCAGCAACGCGCTATCTTACCATGTGTGAAGGGA
CTCGATGTCATTGCCAGGCCAATCTGGTACTGGCAAGACCGCGACGTTCTTATTTCATTCTGCAGCAAAATTGATAC

mmc4.txt

GGCTGTCAACGAATGCCAAGCATTGATTCTCGTCTACCCGCGAGCTGGCTCAGCAGATTCAAAAAGTAGTCATTGCTC
TCGGTGACTTCATGAACGCGCAATGTCATGCGTGTATCGGTGGCACCATTGTGCGCGAAGATATGCGCAAACCTTGAATTG
GGCGTTTACGTTTGTCTGGTACACCCGGCAGAGTTTATGACATGATTAGTCGACGCGCTTTACGCACAACTACATCAA
GCTTTTCGTCTCGATGAAGCTGACGAGATGCTTTCTCGTGGTTTCAAAGATCAGATCCAGGATGTCTTCAAGCTCTCC
CCAACGAAGTGCAGGTCATTTTGTGTCTGCTACAATGCCGAACGATGTATTGGAAGTGTGGAAGCTTTTTCATGCGTTG
CCAATCACCATTCTCGTAAAGAAAGAAAGATTGACGTTGGAAGGTATCAAGCAATTCTTATCTACGTGCAACGCGAAGA
ATGGAAGCTCGAAACTCTTGGGACTTGTACGAGACTCTGAGCATCACCCAAGCCGTAATATTCTGCAACACTCGGCGCA
AGGTCGACTGGTTGACCGACAACATGCACACCCGCGATTTACCCTCTCGGCTATGCACGGAGACATGGAACAACGTGAA
CGTGATCTCATCATGAGACAATTCCGCGAGCGGATCCTCTCGAGTACTCATCACACCGATCTTCTTGTCTCGAGGAATCGA
CGTTCAGCAAGTTTCTCTTGTATCAACTACGATCTTCCAGGCAACCGAGAAAATTACATCCACAGAATTGGTCGCGGTG
GACGTTTTCGGTGCAGGGGAGTAGCAATCAACTTCGTGACCAATGACGACAAGAGGACGATGCACGATATCGAGACATTC
TATAACACCCGAATCGATGAAATGCCAACAAATGTGCGGGATTTGATCTAAATCGCATGAGCATTGGCTGAAAAATTTCA
TTATAATAAAAGAAAAAACAAAAACAAAAAAGAAAAATAACAAGAAAAAGAAAAATAAATACCGAAGCTAATAT
CAGCTAGATCTCTCATGGTGTGTGAGTATATCGTTATATAC

>CL1805Contig1|isoform a

AATTCATCAACAGATGCCGCAACAGCAACAAATGCACCAACAGCAACAGCCCCACCATCACCAACAACAACAACAACAGC
AGCAACAACAGTTTCAACAACAATTTCCCGTGCAACAAGTGCAGCAGCAGCAACAACAGCAACAACAGCTGCATCAACAA
CCTCCCGTACAACAGCAGATTCCGACGCGAGCAAGCGCATCACCGGGAGGACACGATCACGCTCACGCAAGAAATCCTCA
ACAGTTACTAAACAGCGCTAATTTGGAGCATGAAAAAGCTCACATCGTCGAGCAGATGGCCGTTCTATAGACACTAGCA
AAATGTCTGACCAGGAGTTACAGTTTCACTTCAAGATGCACGACGCCGACAACAACAACAATTTGGACGGATGCGAA
CTTATCAAGTCTCTCATCCATTGGCACGCGGAGCAAGGAACACTGATCCCAACGAGAGAAACAATGCCAACAAATTATTC
ACGGACGAAGAGTTGGTTTCGCTGATAGATCCGATACTGGAATGGACGACGTCAACAAGACGTTTTCATCGACTATCC
CGAGTTTATACAAGCCCAACAAAGTCAAGCAGCCACGGGGCGCCAGTAGTTTTCTCTCGATATAGTTAATTATTGAAGC
GAAGAAAAACAATTTACCATTTTTATTGGCGAGATCGATGAGACGAAATGTGAAGAGATTAAAAGAAGAAACAAAAATG
GGAAAAAAGTAAAGAAATTTGTTGATTGATTGTGCGGTGAGACGACAATTTTGTGGGGCAAAATTTTTCATTCCATT
AAATCATTTCCGATCAACAGCAATTTATACATACATATATATATATATGTTTATTTATTTATATAGTAAATATATATATA
TATAATTATGTAAATTTCAATTTTTTATGAAATATTTTGTAAATAAATTCTACAACGTATAGAAA

>CL180Contig1|rab gdp dissociation inhibitor beta

GTAGCAGAAGCGCGGAGTCGCGGAGTCTTCCGTTCCGGCATAATAGTAGTGCGAGGTGCGAGTTGGCATTTCGCGGGTTA
GCCACTTATCGATATCGATTCTTTTCCATTTTAACCGCAAAAGCAACAACAACAACAAACGCCTTGAAGAATCTTTCAAAGT
TTGCGATTCCATTGAGGATTCGTGGAGATTAATCGTGAGATACGGGAGTAGTAAAAATCGAAAAAGTTGAAGTTTCT
TCTGGTTCATCTCGGCAAGATAGCGTACTAACGGAAGCAGGATGGATGAAGAATATGACGCGATAGTGTGGGACGGG
TCTCAAGGAGTGCATCTTATCTGGCATGCTTTCGGTCAGCGGAAAGAAAGTTTTCATGTGCGATCGCAACAAGTACTACG
GTGGTGAATCCGCCTCGATTACTCCCCTCGAAGAATTTTTCGGAACCTTCAAGTTGCCACCACCGGATGCGATGTACGGT
CGTGGTAGGGACTGGAACGTGATTTGATACCAAAATTTCTGATGGCGAATGGGCTCTTGGTCAAGCTTCTAATTCACAC
TGGAGTAACTCGTTATCTCGAGTTCAAATCGATCGAGGGATCCTACGTCTACAAGTCTGGCAAAATATCCAAAGTCCCGA
TAGATCAACAAGAGGCATTATCCAGCGACCTTATGGGTATTTTGAAGAGACGTTTCCGTAATTTCTCATTTGGGTT
CAAAATGTTCCAGGAGGATGATCCTAAAACATGGGACGTTTTCGATCCATTCAACAACAGCATGAGTCTTTACAACAA
GTTACGCTCGATCCCAATACTCAAGACTTCACTGGTCACGCTCTTGCCCTTACAGGAATGACGACTACATCTCACAGA
GCGCAATAAAAACTGTCCGGCGTATAAACTCTACAGCGACAGTTTAGCTCGATATGGAATACCCGTACCTTTACCCG
ATGTACGGACTGGGTGAACTACCTCAGGGCTTTGCGAGACTCAGTGCCATTTACGGTGAACGTATATGCTGGACAAACC
AATCGATGAAATTTGTTATGAAGGATGGAAGGTCTGAGGAGTTTCTTGGGCGAAGAGGTAGCCTCGTGCAACAAGTCT
TCTGTGATCTCTACTACGTTCCCGATCGCTGCAAGAAAGTTGGCCAAAGTAAGATGCATTTGTCTTCTGAATCATCCG
ATTTCCGGAAACCAATGACGATTATCCACGCGATTAATCTTCTCAGAAGAGGTGAACCGCAAGTCCGACATCATCGT
GTCGTTGGTATCTCACACGCATCAAGTAGCCGCAAGGGTTGGTTTCAATGCAATGGTATCAACGACCGTTGAGACGAACA
ACCCCGAGGCTGAGATTAAGCCGGGTCTTGATTTGCTCGGACCAATAGCCCAAAATTCGTTTCTGTTTTCGGATTACATG
GAGCCAAACGGACGACGGTCTCGAGAGCCAGACCTTCATATCCGCGAGTTACGACGCTACCACGCATTTTCGAGACCACGTG
TCTTGACGTCCTCGACATTTCAAGCGTGCCACGGGCGAAGAAATTTGATTTCAACAAGTCAAGCAAGAGCTCGGCGACG
AGGATCGTAAACGGAGTGCAATTTTGAAGACTTCGTAACAAAGGCTCTCAGCCACAGCATGAGTGCATGCTTTCGCTCT
TCGATCGCCCGCGTTTCTGTTTACGATGAAAAATTTCAAATATGTGAACAAAGAAATTTAACACAATCACGATACACAAA
CACACACACACACACAGACACACAAAAAATGATTGAATAAAGACAAAAAGGACAAAAAAGGACAAAAAAGGACAAAAAAGGAC
AAAAACATGTCGGCCG

>CL18204Contig1|isoleucyl-trna cytoplasmic-like

GAATTTACGGCTGTCGCTATGATCTCTGGGTGCAATGAACAAATCAACGAAAAGAGTAATCTAATGAAACTTGATGGA
AAACGCATTTTTTGGGTGAAACAAGGCAAGTGCAGTGCCAAAAGCAACGTCGAAAATTGAACCTCCTGTTTTCGCTTTTCAT
CAATCGCGTAAATCTTGACGACACAGCAGGCTACACGGTTCTCGTCGAAAATCCGAGAGGGGATTTTCGAGTTGTCCGAAA
AGCAGGACTCACTTTTGTACTAATTTTATTTGCAAAACCATTCATTTTGAACCTTGAATTTGTTTCTGCTTTCGTTTTCGA
ACTGTATGGCTAGCTTAGATATTAGAGAATTGTGTTTGAATGTGTTTCGGCGTGTGCTATTTATCTAAATCTTTTTGTTT
TAACGCGAGAACATGTAATACAAGTTTTCATCAGTATTGAACGAAAAATACAGTTTTCGAAATAATGGAACGTCGTG
TAACACAATCCTTGAATCAATGAGACAGTTTCACTCGATCGCCATCCGAATTGTTAATAAATTTGTTTGGTAAGGTAA
CAACAATATTTTCGAGATATCGAATAAATAAATTTATATGAT

>CL1828Contig1|proactivator polypeptide

GTGTTTACATGAAATCTGTAATCCTGAAAAAATCCAGGAACGGAATATCTCACGCCGTTGGCAAGGACGGAGAAATT
CTTTCGAACGAAATTTCCCGGGTCTCAGTCGCAACAAAGGCACCGATTAGGAAGACACTGAGTGCGTCTGTTTTCGAATT
TATCATGCAATATCTCGAAAAAGCATTGAGGAATAAATCGACCAAGACGAGATTGAAAAAATAGTTTACGGAGTTTGCA
ATCATCTTCTCACTCGGTCTCGAAGAGTGAACGGGTTTGTGATCAGTACGCTGACCTCGATCGAATTCGCA
CAAGAAGTCAGTCCACAGAAATTTGCACCATCTCATGCTTCTGCCAGAACACATGCGGCGTTTGCACGAATCCATTGC
CGAATGCGCTCTCTGTCAAGGAGTCATTTTCGGCGCTCGACAGTCTCCTGACCAACGCCAAAGTTGACCAAGAAATCGAAG

mmc4.txt

AGGTCGTGTCCCAGATTTGCAAATACATCGCTCCCGCGAAGCGTGGCAAGTGCCTCATGATGATGGAAGTTTATGAGCAA
AGTATCATAAACATGTTACGCGAACACAGCGATAGAATCAAAATTTGTAGTCGAATGGCTCTGTGCTCCGCTGGCGATTA
CTATGCCATGATGACCCGACACAGGAGCATGGCAAAGGCTTCGGATAAATCAAAAAAGCGTTAACTAAAAAAGGAAACAA
ACAAAAAATAAACAGCGATCCTCGGAGGCTGAATCGTCGACGGGGACTCTTACATTAAATGTGCAAGATCCAATGGAAG
GAGAACGTATAAACGATTATTTCTCATCATCCGCTTGTGTTAGAAAGTCACGAAATCTCGGCGAGGGAAGTAGAGAAATT
TTTTTATCGTAAGGATTACAAAATTGAGTAATTTTTTTTTTTCATTGACTAATTATTACTCACTTAACATGAAGATGTTAG
AAAAAATAACACACTGTAGTGGTAACTTTTGAATTTTTATTATTCATCGGTCATAGCCGTTACCTTTTTTATCTTGCTT
GTG

>CL1835contig1|proteasome subunit alpha type-4-like isoform 1

ATTCTTCTATGTACGTCTGAATTCGTTGCCTATACAGGCCGCGAGAGTCGCGAACGAGTTTACTGTATCGAAAGTGCCGA
AATTTTCATTTTCATCAAGAAAGTTGTAATTACTATCTACGAATATCCGCAAATAATTACAAAAATGGCTCGAAGATACG
ATACTAGAACGACGATATTCTCGCCGGAGGGGCGATTGTATCAAGTCGAATACGCTATGGAGGCGATAAGTCACGCAGGT
ACTTGTCTCGGTATCCTCGCCAACGACGGTATTCTCTTGGCGGGCGAAAGACGAAACACCAACAAACTCTTGGACGAAGT
ATTCTTCTCCGAAAAATTTCAAACCTCAACGACGACGCTGTTGTTCCGTCGCCGGAATAACGTCGACGCTAATGTGCT
CACCAACGAGTTTGGCGCTCATCGGTACGCGCTATTGTCTCCAGTACGGCGAAACCATTCCTTGGCAGCAATTGGTCTCTT
GGCTGTGCGACGTCAAACAGGCCTACACGCAATACGGCGGCAACGACCTTTCGGCGTCTCCATCTCTACATGGGCTGG
GATCGTCACTACGGCTATCAGCTCTATCAATCCGATCCTAGCGGCAACTACGGCGGCTGGAAAGCCACTTGCATCGGCAA
CAACTCTGCCGCCGCCATTTCTCCTTGAAGCAGGAATACAAAGAGGGCGAAACTACCTTAAAGACGCCCAAGCACTGG
CCATCAAAGTTCTCTCCAAACACTGGACATGACCAACTCTCGTCGACAAAGTTGAGATGGCGACACTAACCGCGAGAA
AACGGAAAAACAAAAATCCGTATTCTACCAGCAAAACGAGGTGACGGCGCTCATTGACAGACACGACAAAGTCGAAGCAGCG
GCCGAACAAGCCAAGAAGGAGAAACAAAAGCTCTAAATCTCAAGTTTCATAGATTAATATCTGCCTGAGTTTTGATGCGG
TGCGAAGGAATCAAAGTGATTTGGTATCAATAAAAAATATTCAATTTTTTCAACATAATCCTCTGTATCACTATATTTAC
ATCACCGTCCAATACGGCCGAGTCTTTTGGCTATAAAATCCATTAATATTATTTTCACTTTTACTCAGACTTCGATTTTT
ACATACAAAAGTCAACTTTTTCTTTTCTATTTAAGAATTCAACGAAATCCTATTCTGTTACGCGTTTGATTTTCGATTTTT
AAAAAATTTGATAAATAATTAACAGAAAAAAAT

>CL183contig1|60s ribosomal protein 15-like

CGGCCGGGGGACTGCGCGGGGCTAAACGTAAAGAACATTTCCCTTTTCTGACGGAAGCCGATTGTGCGAGAAGGTGTCCCG
TAGCGGCGTCTCTTCGATAAATCTTTAAATGGGTTTCTGCAAGTTTGTCAAGAACAACAGTACTTCAAGCGTTACCAG
GTTAAATTCAGAGGCGTCGCGAGGGCAAACTGATTACTATGCTCGCAAACGCTTACCATTCAAGACAAAAATAAATA
CAACACCCCCAAGTACAGGCTGATTGTTCTGTCTGTCACAAAGACATAACGTGCCAGGTGGCGTACTCTCGCATAGAGG
GAGACAGAATCGTGTGCGCCGCTACAGCCACGAGCTACCCAAGTACGGAGTAAAAGTTGGACTGACCAATTACGCTCT
GCCTACTGACAGGACTCCTCTGGCCAGAAGGCTCCTGAAGAACTGGGATTGGACGCGTTGTACGCAGGTTTCGACAGA
GGTAACCGGCGACGAGTACAACGTGGAAGAACTCGACGATGGACCCGGAGCTTTAGGTGTTACCTTGACACCGGGCTCA
TGCGCACGACCACGGGTGCAAGAGTTTTCGGGGCGATGAAGGGCGCCGTCGACGGTGGCCTCAACATTTCCACACAGCACC
AAGAGGTTCCCTGGCTACGACGGTGAGTCGAAAAGCTTCAATGCCGACGTTACCCGGCAGCATATCTTTGCCAACACGT
CGCCAACTACATGAAGACCCTCGAGGAAGACGACGACGAGGCTTTCAAACGCCAGTTCTCTCAATACATCAAACCTCGGAA
TTACCGCCGACAGTATTGAAGGAATTTACAAGAAAGCCCATGAGGCAATCCGAGCTAATCCCGACCACACCAAGACCGTG
AGGACGAAGGAGCCGGTGAAGAAACGCTGGAACCGCGCAAACTCACTCTTTCCGAGAGGAAGAATCGCGTTGCCAGAA
AAAAGCCTCTTTCTTAAAAAACTCGAAGAAGCTGAAGCATAAATATATTTATCGAGATGGAGATGATTCTGACGAAAAC
AATCGAGCCGTCGTTTACATAATTAATATGGAATTTATGCCTGTATCGAGCATGGACGGTGGTACGAAGAAAATCCAAT
AAAATTCGATTTATATAACGAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGGCCG

>CL184-bisContig1|triosephosphate isomerase-like

AGTCTTCTCTCGGCAACGCTCAAGAGCACTCGATTGAAGAAATCTTATACGTCCTCGAATTTGAATTAACCTCCAAATCC
ATTAACATGTGCGCGCAATTTTTCTGTCGGTGGTAACTGGAAGATGAATGGAGTGAAAAAGAAATCGACGAAATTGTGCG
TTTCTCTCAAAGCCGGACCACTCGACCCCAATGTGCGAGGTTGTGCTGGGTGTACCCTCGATCTATTTGGCATACGCAAGA
GCATTTTGCCAAGTACAATCGCCGTGAGCGCACAAAACGCTTACAAAGTCCCAAGGGTGCCTTACCAGGAGAAATAAGT
CCGGCTATGCTTGTGCGACAACCAAGTACCCTGGGCCATTCTTGGACATTCCGAGCGTCGTAACGTTTTTGGTGAAAAAA
CGAACTCATTGCCGAAAAAGTGGCTCATTGCTTGGAGGCTGGAGTCAAGGTAATCGCGTGTATCGGTGAGCTGTTGGAAG
AGCGCGAAGCAAGCAAAACATTTTTCGTCAGAGGAGTATCGCGGAGCAAGAAATCGCGTTGGGACAAAC
GTTGTTCTCGCGTACGAACCAAGTGTGGGCGATTGGAAGTGGAAAACTGCGACGCCGCAACAAGCCCAAGAAGTTACGA
CAAGCTGAGGGCGTGGTTCCGCAAAAACATTAGCCCCCAAGTCGCCGAATCTTTGAGAATCATTTACGGAGGTTCCGTCA
CAGCTGGCAACGCCAAAGAACTCGCCAAAGAAAAAGACATTGACGGTTTCTCGTTGGCGGAGCATCCCTCAAGCCTGAT
TTCGTACAAATTTGTCAACGCTAAGCAATAAGCAACAACTACTCGATTAACGATATTTTTCTCTCTGCTCTTTGTTCC
CACCATTTACAATTTCTGAACATACTTTTCGCGATTTAAATCACATCTCTTGAGACAACGATCGAAATGAATATTGTACGA
GCAGGAAAACTCAAATTAATCCAAGGAAGAATCAATCATTCGAACTCTTGTACGCGTCGCGAATAATTTTCTGACTCTG
TTACGTATCGCGATCAATCATCGTATTTAGCGATTAGTAATTTTCATCTTTTTCTGTTAAACGTTGAGTTTCGCGGCGCTCTT
CGAGACGGGAATCGCAATGATGACACAAAGAAACCAATGAGATTAGTTGGATAGAGCAAAATAAATGTGACAGCCC
CAATTTCAATGTCACGATTTTCGATGATTTTACATTATTTTTAAATCGTCATTTATTATATGAGAGGAGCATTTTCGATT
ATTTTCTTTCTATCGCTAACAATCTCTAGTCCTGGTCATTCCGGAGTAGCTGTTGAATGGAGGATCAATGAATCAAGATT
ATATCGTTGTTACTGGTGTGTAATCTATAAAAGGGTCATGTTACAGATTATTTCTATGACTTGATGAAATAAAATCAA
GTGCGCAACAAAACAAACATTTTTTTTTCTATTTATATTTTTTTTTCTGTTTTTTCATTTTTTGGGAGACGCACTATT
TATGTGGCAATCGTGGCCTTCACCTTGAGCATTCTCGGGTCACAACGCCAGCTGGGAAAGCCAAATCCCTCACGACGTTA
AGTCCATCAGTTTTTGGCCTTGGCCATGCCAAGCTCGTCAAAGTCTTAAACGTTCTGGCTCCACATTGCCAGATCTAC
GAGAGTTTTCTTGCTTAAGAGTATCTCGCATCTCCCAAAACCAACCATCAAAATGTACGAAGTTATCCATGCTGTTGCG
ACGCCGCCGTAAGTCTCATATCCCAGAGGTCTCTCATTGCTTGTTCCTCAGTTTTCTTCAAAGTGTGCGTTGGTCAAA
GCACGTTGAACTGCACGGATTGCATTACTGTAAACAATTTCTCGACGCCCGTAAATGACTACGATCCGGAACATTTCT
TCATTTTTCTCCAAATTCATCGGGCCCTTGTTCGGGGCAAAAGGGTGATTGAACGAAAAACCAATTTTTCACAACTCAAC
ACGACACTGTTGATTGTCAATCGTGTCTAGTTCGATAATTATCCGAACCGGCAGAGTGTGCGATTTGCTGGAATTCG

ATCAAGCTAGGTTATCGTTGAAAAAGTGATATAATAT

>CL1848Contig1|receptor expression-enhancing protein 5-like

AAAAGAGCTATTGGTGCGACAATTATTGAGAAGGTAATAAAAAATGGCGAGGGTTACGGCAATGAAGGAATCGCTCGACAA
AGCTTTGCGGGACGAAAATAAGCCATGGACGAAAATGTTTGCCACGGCCGAGGCAAAAACCGGTTTCGATCGACTGTACA
TCGCAATGGGAACCTTTGGCCCTTCTGGCTGTTTATCTGTTGGTTGGTGTGCGCCAACAGTTAATTTGCAACATCATTGGA
TTCGTTTATCCCGCTTATTGCTCTATGAAAGCATTGGAATCACGCAACAAAGACGACGACACCAAGTGGCTCACTTATTG
GGTGGTTTTTGTGTTTTTACAATCGTCGAATCTTCTCTGAGTACATTGTATGCTGGTGTCTATGTATTGGCTCCTCA
AGTGTATTCTCTATGTCTGGCTCATGGCTCCGATAGAGTACAACGGTTCACTGATACTCTATCGCCGTTTTATTCTGTCGG
CAATTTGTCAAGTACGAGACGAACATCGATAAATTGCTGTCTGAATGCTCGAGAGGCAGCTGTGAAAGCCGCGTCCGATGC
TATACTCAACCAGAAAAAAGATTGATCAGGAGATAAGTAAAGAGCCGAGATTTCGACGTGAGACCAACAGCCACTTTGAA
GCTTGGATCCGAGATAAGGGAAGGAGAGTTTTGGTGCTTGTTCGCGAGGGAATAATGCAAAGGAACGGGATGTTGATCTG
ACGAGCATTTTGAACGTGTGGACATTTTCTAGGTGTGATTTAGCACAAATTACCATTTGCCTTATTCCAATCCCGATACGA
GCTGACGAAGCAATTATTTCCGCTGCTTGTATTTCCGCCAGAAAAATCACTAGTCTCTACTATTTAACTCGAGGTATCGGGG
ACGGAATCGTGA AAAATCGCGGTATTGCCATCTGTAGAAACAGAAAAAGAGGATGAGAAATAGTCTGACCCAGCGAAGA
AGCAAATTCCTTGTCAAATCTTTGGAGCGAATCTCATTTGAAAAAGATACATGGAACGATTTATACAGTGTATAGTTTT
TGTTGACTCGCTCAATTCTCGTGACTCCGATTAATCACTCGCACAAATCAACTTTTTAAGCATGTTTACTCATCGAGGT
TGTCGGGTACGTTGATTTTGTGTAATACATTGCGATTGAGGAACATTGAGACATTCTCCGATCTCGATGGGATAACGCT
CTTGTTTTTGTGCGTATTTAGTTCTAATTTACTCTTTTTGGTTTTCGCGTTTTTCTCAAATACATGCTATTTTTTGGATC
TATCATTGTCTCATGGTAAGACGTGTGAAAAATGAACAAAGACATTACGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

>CL1876Contig1|arginyl-trna cytoplasmic

GATTCTGAACCGTGTATCCACGTGGAGCAGATGACAGTATTCTTCGTGAAGGTGTAAAACGCGAACAATATTAATGTCT
TTGCCAACTTGAAGTATTTAACAAAGAGCAGCGGATGCGGAGAAGGAGATTGAATTTTTGAAGAAGGAAATTGACGGT
TTGAAAAAATGTTTAAATCGATCGACGCTCGCTTTCTGAAGATGATTCCGTCAAACGCAACAAGAAAAATACCAAATGA
AACACAGGGTGGCTATTCTTAAGAGGTACGTAGACAGTTTGAGGGAGAAAGAATCTTCTGCTCCTGGGTGCGAAGATAAC
AAGATGATCAGCATCTCGCAAAACATTGAATAAAATCTTTGCCGATGCGATCGCCGAAGCATATCCGGATATTCGGATCC
TCGGTCTGTTGTGACGACCTCGACCAATCTAAATTTGGAGACTATCAGTACAACAGTGCAATGGCACTCAGCAAGCTAA
TAAGCAGTCAAGGCCAGAAAGTAGCACCTAGAGACGTAGCAACGAAAAATTAATGGAGAAAAATCAAGGATTCTCCGCTGATT
GAAAAACTGGAGATCGCTGGTCCAGGCTACATCAACGTATTCTGAAGCGTGATTTTGGCCATGAAGAACTGAAGGAGAT
TTTGATATCGGGTAAAGTTCCAGCACAAAAGTGGCGAGGCAAGAGTGGTGGTTGATTTCTCAAGTCCGAACATCGCGA
AACAAATGCACGTCGGTCATCTGAGATCGACGATAATCGGTGAAAAGTATTTCTCGTCTTTTGGAAATATCTTGACACG
ATGTAATCTCGCTGAATCATCTGGGAGACTGGGAACTCAATTTGGAATGTTGATCGCACATCTCCAAGAAGAATTCCT
GATTACCGCACGGTTTTCTCCACCGATTGCTGATCTCCAAGCGTTTTATAAAGAATCTAAAGCTCGATTCCGACACTGACGA
TGAATTCAAAAAACGAGCCTATGATTGCGTCGTAAAGCTGCAGGCTTTTCGATCCTGACATCACAAAAGCTTGGAATTGA
TTTGTGACGTTTACTAAAAAAGATCTCAGCAGATTTACGAGCGTTTGGACATAACGCTGATCGACAGAGGGAATCGTTTA
CCAAAAGCGTATGGA AAAAATAGTAAAAGAGTTGGAGGCTGGAATATTTAGAAAGAAGATGAAGGTCGTAAAA

>CL187Contig2|adenylyl cyclase-associated protein 1-like

GACCTTGGTTGTCCTCACTCAGCTGGAGAATCTTCAACTTTCTAATAACGTGGAAATAATGTCGGTGACGAGTTACGAGGACC
TCGTGGCTGGTCCGGTCAGCGAATATTTGAAACTGAGTGAAAAAATCGGTGGCGATGTGGCCACGCACAGCAAACTCGTC
GAAAAAGTATTTCAAATCCAATTGCAATTCATAAAAACAGCATCGAGTCGTCCAGCTCCGAGCAGCCAGCCGGAGCAAGT
TTCCCTTCTTGGTCCGACCTCGACGACGATCCAGGAGATCCAAGAATACCGTGAGAAAAATCGTGGCTCCAGTTTTTCA
ATCACTTGTGACGATCAGCGAGAGCATTCTGCTCTTGGTTGGGTGCGGGTACTCACCGACCCCGGCTCCTTACGTCAA
GGAAATGAACGATGCTGGGCAATTCTATACCAACCGTGTAAGGACTGGAAGAAAAAGACAAAACCTCACGTCGAGT
GGTGCAAAGCGTGGGTGCAACGCTCTCGGATTTGCAACAGTACGTACGAAAGCATCACAGCATGGGCTGGTATGGGCG
AAATCGGGCTCGGCCCTTCCACCGCTCTGTTGGTGAATGCCTCTCTCCGCTCCTTCGATGCCCATCGGCGATGT
TAGCGCAAACGTTGGCGACGACAGGAGCGCTCTCTCGCCCAATAAATCAGGGCGAAAAATATAACGAGGAGCTTGAAAA
AAGTCACTTCCGATATGCAAACTCACAAAACCTCGTCCATACGCACCGGACCAGCTCCTTTCAAAGCTCCCGTACCACC
AACTCTGCCAGCTTCAAATCCGTACCATCTGCCAACTTACCCATCGACAAACCACAGTCTTCACTCGCGATGGCAAAAA
GTGGCTCATCGAATACCACAAAGGCAACAAAGATTTGCTGGTGAGAGCTCGGAGATGAACAACGTGGTTTACATGTTCC
GTTGCCAGGACAGCATCTGGTGGTCAAGGGAAAAATAAAGTGGATCGACTCTTTCGCAATCCTCCATAGATT
TTTGACTCTCTCGTCTCGAGCATCGAGTTCTGCAACTGCCAAAGCGTCCAGATGCAGGTGCTGGGTAAAGTGCCAAACAT
CTCGATCGACAAAACCGACGTTGCCAAATGTATCTGAGCCCTGACTCTCTCGACGTTGCTCTCATCAGCAGTAAATCCA
GCGAAATGAACGTCCTGGTTCCCAAAGGAAACGGCGACTACACGGAGCATCCAGTGCCGGAACAATTCAAAACAACCATA
GGCAAAAAATGGACTGAGCACGACCGCCGTAGACGCGCTGGGAT

>CL1890-bisContig1|vesicle transport protein got1b-like

TTTAAATAAAAAAATCGCGATCGCCGCAAAAGTATTATTAGTGTTACGATAATCGGTAATAATTTATTTCTTCGAGTG
AGATAAAAGGAAAGCAGCTAAAAATGTTGAAATAACGGATACACAGAAAAATGGCGTTGGCCTTGCCGGATTTGGCATTG
CCTTTCTGTTCTTGGAGTTCTTCTCATCTTTGACAAAGGTCTCCTCGCAATAGGCAATCTCTTGTATCTCTGGTCTG
GCGTGTGTCATCGGGCCGAGAAGGACGCTAAGTTTCTTTTCCAGAGGCACAACTGAAGGCCAGTGCGGCGTTCTTGGG
CGGAGTTCTGGTGGTTCTCATGGGCTGGCCATAGTGGGCATGATTCTTGAGACTTATGGTTTTGTTCTTCTCTTCAGTG
GATTCCTGCCGGTAGCGATAAACTTTTTGCGGAGGGTTCGATCTTAGGAACGATGTTGAACATCGCGGGAATCAGTCGG
ATATTGGACATGTTAGCCGGAGACTCTAACAGGACAACAGATGACCCAGCCTTTAAAAAAGTCGTTGTTTCGAGTAAA
ACAACAAAAAAGCTCGAACGCTGTACATAAATCTTGCACTAGTACCATCTGGGCCCTGTTCCCACTTTGTATCTTTCT
CTCTTCTCGCGCTCCATGTCTCTCCGCTCGTGAACCCCTTTCTTGTCTTCTCATTTTTTACTTTTTCTCCCAATCGC
GTTTCATTCCATGATAAACCTTACGGAATAATTTGTACGAGAAAAACAAAAGTCACGAGGAAAAAATAATATGCTAGGAT
AAATGTGTGTAATATATACAGGCTGAAGTATATACGCTTAATGTAAACAGAATAAGTATGTGTGTGTCCAAAGAATA
AGACAGACATGGCTGTGTCATCCGATTAATTAGCTTGGCTGTTTCCACAGATTTTTTCACTTACCTTATTGTTTAA
TCTCGCATACGTACAAAAGCTTTACAATTGCCAGAGTTCATTGCGACACATTTAAAAAACGTTTCCATTGAAAGT
GTACGAAATAGTTGAAGAGTTTTGATGGAATCGAAATTCGATGAATCGCGTTTGAAAAAATGTGCTTGTTTAAACGAAGA

mmc4.txt

TTATAACATTGCTGTGGTGAAGAGTAAAAATAATAAATATTGGAACGCGTGGCCAATGTGTTTCTTCAATTTCTATCTCGTCATTTACACAAGATTGATAACAAAAACAGACGCGGGACAGAAGAATCAATCGTGTTCTTCTGTGTATCTAGGAAGTTTTTTGGTTCTGTGAACAGTGGCGTTTCTCCAGCTGTGAGTGGAAGAAAAAAGAAAGGAACAACGTATAAAAGATCCGGAGGGGCTACAAGTGCTTGATGAACGCGCGCGATTCTCGTTGCTAAATTGTGGTGGTGTGATTGAAATAAATATTGAGGTTATTCGTACGTCGGTTTTCTCGTTGTTTCTAGTTGTAGGCACAACCTCGCGCACAGCTCTGCTCAACATCGGAGCTTTTCAGCAACAAGCGCCTTTCTGTTAAAAATAAAAAATAATTAATAATGGCAAAAACGTATGACTACTTGTACA AATTGTTGCTTATCGGAGATTCTGGGGGTTGGTAAAACGTGTGTTTTATTAGTATTCTCTGAAGATTGCTTTCAACACGA CTTTCATCTCCACCATTGGTATCGATTTCAAGATACGCACAATAGAGCTGGATGGCAAGAAAATTAATTGCAAATATGG GACACGGCTGGTCAAGAAAAGATTTTCGGAACAATCACAACGGCGTATTATCGTGGAGCTATGGGTATCATGTTGGTCTACG ACGTTACCAATGAAAAAGTTTTGAGAACATCAAGAACTGGATTCTGAACATAGAAGAGAATGCCTCGGCGGATGTAGAAA AGATGCTTTTTAGGCAACAAATGTGAACCTCACAGACAGGAGACAAGTCTCTAAAGAGAGAGGGCGAACAATTAGCCATTGAA TATGGTATCAAAAATTTATGGAACATCAGCAAAGTCCAGCATCAACGTGCAAGAAGCCTTCTTACGTTAGCCCCGTGACA TCAAAGCAAAAATGGAGAAGAAATTTGGAGGCCTCGAATCCACCAAAGAGCGGGGGCAACCAATTGAAGGCTTCGGAACCA GCAAGAAAACCCAGGATTGGTCTGGACGTTGTTCCATCTCTCAAGCTCCAGTCAATAATTTCTTCCACACCTTAA TCAACAGACGTTTTCTTTCTGTCGAACAGAGTCTGCAGCATTCAACGATTCTCCCTCGGAGCCCTCTCATTCTGGGCCATGT GATTTCTCGTCCCTTGATGCTCGGGGACACCCTCCTCATCATTTGGTGGTTTTCTTTTTAACTATTATCTATTTTTTT GTTCTTCTTTTACATTTATTTAATTATTCGTATTTTATTTCTGTATTCTGGGATCAAAGGGTGGGTAAGCGAACGAGGGT TTCCGTTGACCGAATGCGCTATTGCACAGTACTCTTACGTTGGACTAGCCGCGATAAATCTCGAGTCTTT

>CL1926-bisContig1|myelin p2

CGCAAAGCAACGATAACCATTTCCCGATTGTTCATTGCAAAAAGAAAGAAAAATAATTGAAATTCATCAACTTGGGAAAA AATAAATTTTTAACTCTCGATTTTATTTTATGAAATTTAAAAACGCGATGGCGAGCACACTGAAAAGTTATTTGGGCAAA CAATACAACTTTTCGAGTAGCGATAAGTTTGACGAGGCCCTGAAAGCTTTGGGCGTGGGCCTGGTGAATCGAAAAATGGG AGAAAAAGTGAGCCCGACTGTGGAGCTTTTGGAAAAACGACGGTGAATACACGATGAAGACATCGAGCACCTTCAAAAATT CCGAAATAAAATTCAACTCGGTGAGGAGTTCGACGAGGACACTCCCGACGGTCGCAAAAGTAAAGAGCATCATCACTGTC GAAGGCAACAAATGCTTCACGTGCAAAAGGGTGACAAGGAGACAATCATCGAACGAGAATACGGTCCCACGGAAATGAA GGCCATAATGAAAGTCGGCGACATCGTCTGCACCAGAATTTACAAGCTCCAGTCAATAATTTCTGCACATTCTCGAGGAA AGAATCTCCACGAAATAATCTCCGCAACACGCACATTTAATGATCTGTTGAAACGCCTGAAAGTCGTCCACGTGCATT CATGCGCCATGGATATTACGATTCTTTGTTACAATTAACACTGCTCGATCAAATCGTACAATTCTGTACTCTGACAC GCTTCACAAAATGTCAACAGTTCTCTGACTCCTACAAGGAATTTCTATCCATTTTGTATGTTGAACGAATAAATAACTT TAATT

>CL1933Contig1|low quality protein: trehalase-like

GATTTTCGCGATCCGCGTTTCGAAGAGCTCGCTGGCTGAGCTCTTCCGTCTGTATTAATTTTTTCTCGATTTTTCGAAAC GTTAAACATCTGTTAAATTTATTTATTTCAATTAGTGAAACGTCGCGCCGAAAGTGAAAAAACATATAAATATTTATA AACATATATATGAATATATATTAATTCGAGAACTTCAAGATGGCGATTCCACGTGTGTTTCGATTATCTCAACTTT CTTCGACCTGTTGATCGGCTGTTTCTTACTGGCAGCCTCGTCAATGCTGCTAAGCTGGGAAGGTCCACAATTCGAAA AGATCTTTGTGACAGCGAGATCTACTGCAAAGGAGAATTGTTGAAGACTGTTAGCTCGCAAAAATTTTCAACGACAGCA AAAGTTTCGTTGATCATTATCAGTCAACGATCCAGCCGTTACACTCGCAAAATTTGAAAAATTTGATGTCCCAGACCAGT GGAACCAAGCAAGAGATCAAGTCGCAAAATGTTAAATGAGAATTTCCGATAGAAGACGAATTAAGCAACTGGACGAT TTCCGACTGGCAAGAAAATCCGCCCCCTTCAAGAGATCGAGGATCCATATTTCCGTGAATGGGCGAGAGATTTGAACGAC CTGTGGAATTTCTTGGCCAAGAAAATTTGGACCTGACACACTGGCTAATCCAGAACGACACAGTCTCATCCCTGTGATAA TGGTTTCATTGTGCCTGGTGGCAGATTCCAAGAATTTCTATTACTGGGACAGTTACTGGGTAATCGAGGGTCTCCTTATCT CAGGAATGAAGAGCACGCCCAAAGGAATGATTGAAAATCTCTTATCGATGGTCAACCGTTTTGGTTTCATTCTCTAATGGT GGCAGATTTTATTACCTCATGAGAAGTCAGCCACCTTCTAGTGAACATGGTCGAGACGTACCTCCGCTACACTCCGA TATGCAAGTTTCTGATCGAACCTACCAACGCTGGAAAAAGAAATTCGCATATTTCCAACGAGAAAAGCTTGTGACGTTG TCGTGAACGGAAAAACATACAGAATGGCGCGTTACTACGTCGAGAGCGATGGCCCTCGTCCAGAAAGTTACAGAGAGGAT TACGAACTCGCTCAAACTTACCGCCGGGCTCAGATCATAGACGCTTTTACGAGGACGTGAAGGCTGGAGCCGAGAGTGG TTGGGACTTTTCAACGCGTTGGTTTCATATCAGCTGATGGCGGAATTTGGTAATTTATCCAGATTAGACCCCGGAACATCA TTCCCGTCGAGCTTAATGCACCTTTACAGAAAAACGCCAGGATGCTCGCCAAATATAACATCATGCTTGGGAATGATGCG AAAGCAAAATTTACGTCGGCATTGCTGAAGAATTTACGAGGAGCATAGCAGAGGTACTGTGGAACGAGAAGGAAGGCAT TTGGCTGGACTACGACGAAACGAAAAATTCATTCCAGAACATTCTATCCCTCGAATCTCAGTCCACTCTACA

>CL1937Contig1|probable pyruvate dehydrogenase e1 component subunit

mitochondrial

GCGTTCCCAAGATTTCAGTGATAACTGCGTACAGAGCTCACGGCTGGACATATCTAATGGGAATTTCTCCGGTGGGAGTGCTCAGCGAGTTGACAGGACGTACAGAGCGGTAACGCCCGTGGCAAAGGAGGCTCCATGCATATGTACGCCAAAACTTTTACGGTGAAAACGGTATCGTCGGAGCTCAGGTACCGTTGGGCGCGGGCATTGGTTTTGCTCACAAGTACAAAGGCGACGGTGGAGTTTGTATAGCTCTCTACGGCGACGGAGCTGCCAATCAAGGACAAATCTTCGAGGTCTAACAATATGTGAAACTGTGGGATGTTCTTGTATATTTGTGTGCGAGAACAATGGATACGGAATGGGAACCGAGCTGGACCGTGCCTGTGCCAGCACCGAATACTACACACGAGGAGACTACGTTCCCGGAATTTGGGTTGACGGTATGGACGTAATGCTGTGAAAGAAGCAACTCGTTTCGCTCTGGATTACTGTTCTCGGGCAAAGGGCCTCTCGTGATGGAAGCGATGACTTACAGATACAGCGGTACAGTATGTCCGACCCTGGCAGGACTACCGCACGCGAGAAGAAATCAAGAAGTCCGACGACTCGTGACCTCTGACGAGTTTCAAGGAAAATTTCTCAACGCTAATCTCGTAACCGCGGACGAGCTCAAGAAATTTGAAACTGACATCAGGAAGAAAGTGCACGAGGCTGTCAAGGTGCGGAAAGCGGACAAAGAGATTCCGCTGCACGAGTTGACGACGGACATTTACTCAAAGAGTCTGGAGCCCGAGATCCGAAACACGACGCCGTGGTCCCGTTGAAACACGCGAATTTAGGGCCTGCGGTGAACGCTTGAAAAACCGAGACCGGATCGATCCGTATGTTTTTTCCCTTACCAAAATCTCAGTTAGTTAAATAATCGCACGCGATAATATCCGAGGCGATAGAATCGCCTCTTGTACAGAGAACGGGACTAAATTTCCGCCGACGATCGTCTCTCGGTTTGGCCAATTTCAAGTCTGCAACGAAAGAAAAATAGGAAATTCAAAGGAAAAACGATACGAGAAGAAAAACGTTAGTTTCTCGCTCGCTCCGTCTTCATCGCTGCACGAAACGACCGTTACGAGCGTTTACTGCCAAATTTATACGTACCAAAAGTCGAACGCTGTAAACAAAAACAAGAGAACAACCCATCGACCCAGCTGGAGAAACGAAATAATTGTGCTTGTATTATGCGCGTACC

TGAGTCACATCGTTCTCGTAATATCGAGTGAGAAACAGGCTCCGCGAGGAAACAAGAGATTGTGTATTATACGAATAAATC
 TATGCGGGACT

>CL1949-bisContig1|c1q-like venom protein precursor

TTTCAACACCGGACGCCCGGTGATATTTCCGAAACGACGATGAACAAAGGGGTCGGTTACATCGCGGAGACTGGAATAT
TCACGACACACTGTCCAGGACTTTATCAGTTCAGTTTCGCCGGTTACGGTAGCGACGATTTGCGAATAAGTCTCAAGCGC
AAATTTGAACAAATCGGAAACGTGGACAACCGTCTGAGTGCCGGACCACGCGGCGGAGCAAATTTGATTTCTTACAAATGC
CGACGCGCGGACGACAGTTCTGTCGTTATGTCGACGCGGAAAGGCCATCGAGGGTACAACGTTACGCGGCTATCGATTTCG
ACCAAAAAAGTAAAAAGTTTCTGAGTCCCTCAGCATATTACGAATCCCGATCATCTACGACTTCCAAAACCCGGAAAA
TTCTCCAGAACAAAGTAAAAAGACAAAATCGAAATTTTCCATCGCCGAAATGACTTCTGTGACGAACGACCCAGCAG
AAGAAACAACAACGATTTCTAACTCTCAGATCTCGACGAATTCACAAATGGATCAACGCCTATCATCATCGACGATTTAT
TCTCAAGATTTCGACGTTTGTTTCATCGTGTGAACGCTCAGGCCAATTTTCAATTCGTTTCTTTTCTTTCTCTCTCTCT
TCTCTTCTCGTTTCTCTAACTTTCTCTCTTACCTACTTCTTTCTACACTTTTCTGTATCTTTTCTCTTCTCTTCTCTCA
TTCTTTACTTTTCTGTTCTTCAACGATTTTACGACTTTTCTCTGTTCTCTTCTTCTCTTCTGTTCTTCTCTTTGTACCG
AATCTTTCTCTAACTCTTGAAGTTTCGCAACCTTTTCTTTTCCGTTTGAATCTTTTTTCATTTTCTGTTCTTTCTCT
GTTTCTCTCTTTTCTTTTCTGTTCTGCTCTCAATTTCTTTTCTATTCTTATTTTTTCTTTAACTTCTTCTCCCTTTT
TTCCATTTTCTGCTCTATTTGCGTTCTTTCTAATTTTTTCTTTATTCTCTTGTCTTTTCTCCCGTTTCTTTTCTGTTCT
TTTTCACTTACCCTAG

>CL195Contig2|atp synthase subunit mitochondrial

ATAGAGTGGGGGTTAGCGAACTGGTTACGGGTCGTTCTTCTAGCTCTGATCGTGTCTACTTGGAGCGTTCTTCATCTTCG
AATCCGCAGTCCGGTCGACGGGCGTTGAACGAAGAAAAATGGCCCTGTTATCCCTTCGCCTGGCTGCCTCCGTGGCGAAA
CAACTGCCAAATGCAACCGTGCAGGTCCAATGGCCAGCAAGCTGTCTCGCTGCTCGAAATACCATGTTTCTCGAGCTCG
CCGATCCGCGAGATCTCCGATCTCTTGAAGAGCGGATTTTGGGGCAGCCCGGAAAGCCAACTGGAAGAGACTGGCC
GAGTACTCAGTATCGGTGACGGTATTGCTCGAGTTTACGTTTTGAAGAATCCAAGCCGACGAGATGGTGAATTGAGC
TCCGGCCTCAAGGGCATGGCTTTGAATTTGGAACCCGATAACGTGGGTGTCTGCTCTTTGGTAACGACAGACACATCAT
GGAGGGCGACATCGTCAAGCGTACCGGTGCTATCGTCGACGTTCCCGTCGGTGATCAGCTTTGGGACGTGTAGTCGATG
CTCTGGGAAACCCCCATCGACGGTAAAGGCCCGTTGAACAACAAGCTCAGATTCCGATCTCGGAACCAAAGCTCTCGGTAT
TATTCCTAGGGGAGTCTGTCAAGGAGCCCATGCAAAACCGGAATCAAAGCCGTCGATTCCTCTGTCGCCATCGGTGTCG
ACGCTGAGTTGATCATCGGGGACAGGCAGACTGGTAAACCCGCTTTAGCCATTGACACGATAATCAACCAGAAGCGTTTT
AACGACGCTGGCGATGAGAAGAAGAAATTGACTGTATCTACGTCGCTATCGGACAGAAACGTTGACGGTCGCCAGAT
CGTGAAGCGTTTTGACAGACAGCGGAGCCATTGGGTACACGATCATCGTATCGGCGACAGCGTCCGATGCCGCGCCTCTGC
AGTATCTCGCGCCTTACTCCGGCTGCGCGATGGGTGAATTTTTCCGCTGACAACGGAACACGCTCTCATCATCTACGAC
GATCTGTGCAAAACAGGCTGTTGCTATCGTCAGATGTCCTGCTCAGGACGACCCCCGGGTGCGCGAGGCCTTACCC
CGCGCAGCGCTTTTCACTTCACTCTCGTCTGCTGAGCGAGCAGCCAAGATGAACATCA

>CL1962Contig1|programmed cell death 6-interacting protein

ACACAGAGAAGGATAGAGAATTCTGTGCCCCACACAACGGTTTGAAGGTGAACGTAATAAAACTTGTCTATAATTATCGT
 AAACGGAGAGCTGCGTAGATCGAGCGAAGGATTCAAGAGTATAATTACTGCAAATTGCATACAGAGAAAGAACTAGACGT
 CAAACGTGTAGAATAATATTCTCGTGTATCTCGTGTTCCGTGGTCCAAGATCTATAAGTCATCGAAGAATTTCGAAATGG
 CTGAACTTATCGCGATACCGCTTAAAAAGCCGTCGACGTTGACGTTATAAAACCAATTGACAAACGTCATTAATTCGAC
 TATAATTTCGGCTACTAATCAAAAAGACTACACCGAAGCGATAAACGATTTCAGCAAATTCGAAACAACGCTTTGTGGCG
 AGCTTTTCGAGAAATACGAAAGCTCCTTGGAGGTTATTTACAGTATTACGATCAGTTATGCGCGCTCGAATCCAAAATAC
 CGGCCACGAGCTCCAGATCCCGTTCAAATTGGAAGACGCGTTTCGATCGTACGATATTTGGTGGAAACTGAGTTTGACA
 ATCAGCACTTTGGCTTACGAAAAGCTGTGTGTCTTTTCAACATTGCGGCCCTCCAGAGTGCAGTCGCATCCATCCAGTC
 CCTGGAAGTGATGAGGGCCTCAGGCTCGCCGCCAAACTGTTTCAGCAATCAGCCGGAATTTTCAATTATCTGAAAGCTA
 ACGTGATGCTGGCGATACAGCAAGAACCAACTCCCGACATGAGTCCCGACACTCTCGGTGCTCTTTCTTCGCTGATGCTC
 GCACAAGCCCCAAGAGATATTTGTGTACAAAGCTATTACGACTCCATGAAAGAAGGAATCATCGCGAAATTAGCTGCTCA
 GACGGAGGAGCTTTTATGCCGACACGATGAAACAATTCGAGAAGAAATTTCCGTTCTTTCTGGGACAAGGAGTGGGT
 CCATTGATCGCAGGCAAGCAAGCTGGCTATCGAGCAATGCGCGGAATTTCTACAAAGTCTAGTTTGCAAAAAACAAAA
 ACCATTGGCGAAGAAATTTCCAGACTAGACCACGCTGTGCAACTCTTCAAAGCTGCGCAACAACGATCGAACAACCCGTC
 ACTCTTTCAAAGAATTCGCCAACAGAGCTCAAAGAAATTTGACAGAAGTTAAAAAGGATAACGATTTCAATTTATCAGAAA
 GAATCCCGGATGTCAAGAGTCTCGATCCTATTGGAAGAGCGAGCGTTGCTAAACTCATACCACCCGCACACCCAATGAGC
 GCAAACCTTCAAAGATTTGTTTGAAGATTTGCTCCAGTTATGGTCCATCAAGCTCTATCTTCTACGAAGTCCGTAAGAA
 CGAGCTCGTGAATTCGGAATATCAAAATTGCGAGAAATGACACAAGTTTTGAACAGCGTGTTGGCGAGCTTGAACCTTAC
 CGGCGGCTATCGAAGACATGAGTGGCACAGAATTGCCACAATCTTTGCTGGAGAAAGCAGCTTCCGTGAGAGTCGCCGGC
 GGCATAAAGGCCCTGGAACTGCCATGAACGAATTACCGGATTTGCTTCAACGGAACAAGGATATTTGGACGAGTCGGAA
 AGAATGA

>CL196Contig2|carrier protein 2-like

ACTCGTCGTCGCGCGCGTCCGATACAGGAGTCAAAAGTCTCTCCTTTCTTCCTTTTTGCTAAGAACCCCTTGTTCA
CACACATACTAAAACCCGAACACACAAAATGTCTAATCTCGCGGACCCCGTGGCTTTTGCCAAGGATTTTATCGCCG
TGGTGTTCGCGCGCTGTGTGCGAAAACCATCGTTGCGCCGATTGAGCGTGTCAAGCTGCTGCTCCAGGTTCAGCACATCT
CGAAGCAAATCGCTGAGGATCAACGTTACAAGGGAATGGTCGATTGCTTCGTCGTCTCCCAAGAGAACAAGGATTGCGC
AGTTTCTGGCGTGGTAACCTTGCCAAATGTATCCGTTATTTCCCCAGCGAGCTTTGAACCTTGCCCTCAAAGACAAGTA
CAATGCAAGTCTTCTTGGGAGGTGTCGACAAAAACACGCAAGTTCTGGCGCTACTTCGCCGGAATCTCGCCTCTGGTGGTG
CTGCCGGAGCAACTTCTCTTTGCTTCGTCTACCCACTCGATTTGCCAGAAGTCTAGGTTGGCCGCTGATGTGGTAAGGCT
GGAGCTGAGCGTGAGTTCTCCGGTCTTGAAACTGTCTGACCAAGATCTTCAAGTCTGACGGTCTTGGTGGACTGTACCG
TGGTTTCGGAGTATCCGTACAGGGTATCATTATCTATCGTGCATCCTACTTCGGTTTCTATGATACCGCAGCTGGTATGC
TTCCCGACCCCAAGAAGACGCCGTTCTCGTATCTCTGGGTATCGCGCAGTGCGTAACGACCGTTTCCGGTATCGTGTC
TATCCCTTCGACAGACTAGTAGGCGAATGATGATGCAGTCTGGTCGTCAAAGGGCGACATTTGTACAAGAACAACGCT
TCACTGCTGGGTACGATCCACAAAACTGAGGGTACTGGAGCACTTCTCAAAGGTGCATTTCCAACATTTCTTCGTGGTA

CTGGTGGTGCCCTTGTGCTTGTACTTTACGACGAGATCAAGAACCTCCTTTAAGAAACCGAATAACGAAATAATTACGGG
GACAAACTAAAAAGAAAAATAGAAAAACCAAGAAAAAGTAAACCCTACCCTACGTAAGAAATACCCTCACGTTTCATCGAA
TACCAA

>CL1975Contig1|nucleoside diphosphate kinase-like

TTTCCTCGAGTCCTGTAAAGTCGTTTCGCATCTGCCACCGGCTCGTCTTTCCACTTTTTTATTCCATTGTTAATTCATTAG
AATTTTTAAATACAAATATGTCGAACACCGAACGTACTTTTCATCATGATTAAGCCCGATGGCGTTCAACGCGGGCTCGTTG
GTAAAAATAATCCAACGTTTCGAGGAAAAAGTTTCAAGCTCGTCGCCATGAAAATGACTGTGGCTTCGGAAGAGCTGTTG
AAAAAACATTACGCCGATTTGTCAGCGCGTCCGTTCTCCCTGGTCTCGTTAAATACATGGGCACCGGTCCAGTCGTTCC
AATGGTCTGGGAAGGTTTTGAACGCTGTAAAAACCGGCAGAGTGATGTTGGGTGAGACTGACCCGAAGGATTTCCAAGCCAG
GCACCATCCGCGGAGACTACTGCGTGCAAAATCGGTGCGCAACATAATCCACGGTTCGGATTCTGTTGAGGCAGCCAAGAAG
GAAATAGCTTTATGGTTCGGCGAGAGCGAGCCGAAGGAACTTTTGACTGGTCTTCGTGGGCGGAGAAATGGATCTACGA
GTAACTTGAAAAATTGCGAGAAACTCGTGTGTTTTGATCGCGAAGAAAAAACGTTGAAAAAAATAATTAATTAACAGACTG
ATGCAACGCCGATGGGCCTTAGGAACGTTCTAAGAGAATTGTACGGGTGTGGAAAGATAATAATAAAAAATGCGAAGAACA
AACGCCATTTCT

>CL1977Contig1|ubiquitin carboxyl-terminal hydrolase 14-like isoform 2

TCTCTCATAGAGCAATACTTTGGTGGGAAGCTTCGAAACGGAATTGAAGTGCCTCGAAGTCGAGGACGAACCACCAACAAA
AGGCAAAGAAGATTTTTTGAATTGAGCTGTTTCATATCGACGGACGTCAGATACATGCACTCTGGCTTGAGGAACAAGT
TGCAAGAGCAAATAACTAAAAATGTCTCAAACGCTTGACGCGACGCGGTTTATACAAAAACGTCGAAAAGTCAGTAGGCT
GCCAGCTTATCTCACTATCCAGTTTCGTTTCGTTCTTTCTACAAAGAGAAGGGAGCGATTAACGCCAAGATTCTCAAAGATG
TTAAATTTCTTCTGAGTTTGAAGCTTTTGAAGTTTCTTGAACGAAACGAGCTCCAGCAAAAACTCACACCGATGCGTGAAAA
ATTCAAGGCCCTCGAGGACAGTCAAGTGGAAGATTCTCTCGATAGTTTAAAGGAAAGGAAGGCCAAGGCCAAAGCTGCAA
AAGAAAAATGAGAAGAAGAAAAACGTTAAACAAGAACCTTTCTGGTTCGAAGATGATTTGGGCTCCAACAACAGCGGGTAC
TACACTTTGCAAGCGGTTTTGACGCATCGAGGACGATCGAGCAGCAGCGGTCATTACGTCGCCTGGGTACGGCAAAAAAG
AGGATACGTGGTTAAAAATGTGACGACGACAATGTTAGTATGGTCACGAGTGAGGAAGTATTGAAACTGAGCGGCGGTGG
TGACTGGCATTGCGCTTACGTTCTTCTCTATGGGCCAAAAAATCTGGAGACGCTTTACCCGAACAAAGTGAATAATCG
CTTGGACTGCTTACATACTCTACGACATTCAATTTCTTTAACTTGGCAGAAATCCTCATCTTTTGTACGAAAAGTTTCG
GAGACTTCGGATAAGAGTAAGCGAAAGAAAAATAAAGGGAAAGCATTGCAATCGTGTACTAGGCTCGACACAAACAAGA
CGTGTGAAACGTTGGAAAAGAATGTGCGATTCACTTCTCGAATGGGAAATGTTTTAATAAATGTAACTTTGCTACAC
AAACAACGAGCGAGACGACTCGCAGCGAGATTATGGAATTCATTATT

>CL1979Contig1|coproporphyrinogen-iii oxidase-like

TTTCATTCAACAATTGATCTGAAATTGTATTCCGAGTGAAAAACCGGCTCGATGGCGTCGAGGATTTGCTACAAAATT
GGAGGACGATAAGCACGGTGGTTGTTTCAGAAATACGGAATAAAATACTGAGCAGTGGAAGATTGAGATTTTTTCGCGGCT
GGTGTACTAACAACGAGTTACGCGTTGTATCATGTTTCGGGAAACCAAGCGGAAGCAGCAAAGTCCCGTTTGACATAAG
CAAATTTATGGGAGAGCCGGTGAGTGATTTATCGAAAGTTGGAAAAAACATCGGGGAGATGAGAACGAAAATGGAATT
AATGATCATGAAGATTCAATCGGATGTTTGCAAAATCGTTGGAATCGATAGAGGGAGAGGAGGCGGTTTTCAAGGTCGATC
GGTGGTTGAGAAAAGAGGGCGGCGGTGGTGTACGTGCGTGATGCAAGATGGTACGATATTTGAAAAAGCGGGTGTAAT
GTTTCGGTCGTAAACGGGCCAATCTCCGCTCCTGCTGTCCAGCAGATGAGATCGCGGGGAAAAACAATGGACGAAGTTTC
TTACCGTTTTTTCGACGTGGCGTGAGCGCCGTTATACATCCGCGAAATCCCATGGTCCCCACGATCCATTCAATTATC
GGTATTTTCGAGGTCGTCAATAAAGACGGCTCGACCCAATGGTGGTTTCGGCGGCGGCACCGATCTCACGCCTTATTACCTG
AACGAGCAAGACGCCATACATTTTTCATCAGACCCTCAAAAATGCTTGCGATAAACACGAACCTACGTATTACGCGAAATT
CAAGAAATGGTGCGACGATTATTTCAACATTACACACAGAGGCGAGAGACGCGGCGTCGGTGGTATTTTCTTCGACGATC
TCGATACACCCAATCAGGAAGAAGCTTTCAAGTTTCGTTACTTCTTGC CGGAATCCGTTGTTCCCTCGTACGTACCTTTG
GTCGTCAAAACACAAAGACGATCCTTATGGCTACGCCGAACGACAATGGCAATTGTTGAGACGAGGACGCTACGTGCAATT
CAATCTTATTTACGATCGTGGCACCAATTTGGCTCTACACACCCGAGACTCGATACGAAAGCATTCTTATGTCTTTAC
CGTTGTTGCCAAATGGGAATACATGCACAATCCCGAACCCGATTCCAAGGAAGGCATTCTTATCGAAGTTTTGAAAAAC
CCTCGCGATTGGCTCAATATCGAGTCCAAAAAATAAAGAGAATTACCACGTTGTTACTTCGATGTTTACGGTGAAGGCTC
TTATCGTATTTTTGTATGAAAAGCAATGAAGAATTTGTACATTTTAATAATGCGTGT

>CL197Contig1|inosine-5 -monophosphate dehydrogenase-like isoform 1

AATTAATAAAAAAGAAAAACGGGATAAATATCGCGTGTGTGCGAAATCGAAATCACAGCAACTTCGATAACGC
CACCTTTTTTGTATTTATCGTGGTTTTTTTTAAACGCTTGAGGAAATGGCAGATTGTGTGATCGGTGATGCCGCGCCGG
GTGAAGTTCCCATGGACGATGGATTGTCCGCCGATCAACTCTTACTAAGGGTGACGGATTGACTTACAACGATTTTTAT
CATTTTGCCGGGCTACATCGATTTGCAAGCCGACGAAGTCGAATCAATTCTGCTCTCACTAAAAAATCATTCTCAAAAC
ACCCCTCGTCTCGTCGCCCATGGACACCGTCACTGAATCCGACATGGCCATTGCCATGGCACTTTGCGGTGGAATCGGAA
TTATTCATCACAATTGCACTCCCGAATATCAAGCCAACGAAGTTCAAGGTAAAAAAATAACAAGCACGGATTATCAGAG
GATCCGGTGGTGTGTCACCGAGCCATACGGTGGGCGATGATTGAGCGTGAAAGCTGAGCACGGATTTTCGGGTGTGCC
GATAACGGAGACCGGTAAGATCGGTGGAAAGTTAGTGGGTATAGTAACGTCGAGGGACATAGATTTTTTTGGAGGACACG
AGTAACCAGCAGAGTTTAAAGTTGGAGAACGTGATGACGCGTTTGGAAAATCTGATAACGGCTAAATCGGGTGTGACTCT
GCAGGAGGCGAACACGATATTGGAAAAATCAAAAAAAGGCAAAATTGCCGATCGTGAATGACAAAGGAGAGTTGGTGTCTG
TGATGGCACGTACCGACTTGAAAAAGAATCGGAGTTATCCGATAGCGAGCAAGGACGCGAACAAGCAATTGTTGGTCGGA
GCTGCGATCGGAACGAGGGAATCGGACAAGGAAAGATTAAGTTGTTGGCGGCTGCGGGTGTGATGTGCTGTTTTGGA
TTCGTCCCAGGACGCTCCGTCTATCAAATTAATAATGATAAAACACATAAAGAGCGAGTATCCGAGCTCCAAGTAATAG
CGGGGAATGTTGTGACGATACCAGCTGCTAGTGATTTGATTAAGGCCGAGCTGATGGACTGAGGGTTGGTATGGGCTCG
GGATCGATATGTATAACGCAAGAGGTGATGGCCGTTGGAAGACCTCAAGCTACAGCGGTTTACAGGGTTTCCAATACGC
TCGAAGCCGCGGAGTGCCAGTTATCGCCGACGAGGAATCCAGTCGATAGGGCACATTATCAAGGGACTAAGTTTGGGAG
CGAGTACAGTAATGATGGGTTCCCTCTTGGCGGGAACCTCGGAAGCCCTGGAGAGTATTTCTTCAGCGATGGTGTCCGT
TTGAAAAAATATCGTGAATGGTTCCCTCGAGGCGATGAATCGCAAAGACGCTAAAGGTTACGCGATGGATCGTTATTT
TCACAACGAAATCGACAAGATCAAAGTCGCCAAGCGCTGACGCGATCAATCGTCGATAAAGGACGCGTTCTTAAATTC
TGCCTTATCTCCAATGCGGCATAAAACACGGTTGTCAGGACATCGGAGCGAAATCCTTGTCTCTTTGAGGTGCTTGATG

mmc4.txt

TACAGCGGAGAGCTAAAGTTCGAGAGACGCACGCATCCGCACAGCAAGAAGGAAATGTCACAGTCTTTTCTCTTACGA
 AAAACGACTCTTTTAAAACTCATCCGGACAACCGTTTACTTACCTATTTCCACCTTCCGCATCGTTCCAAGTCTCCTGAA
 GAATGGCGAGGTGCGGATACTTTTGAGGGAATTCCGTTAATGTTAATTTGTCAATAATAACGATCGGGCATAATACAACG
 ATGGGGAAGCAACAAAAAACGCTCGAAACCTTTGTTTTCTAAGAAAAATTTCAATTGATTGTTAATTAGTCAATCTAA
 TTACATCACTTGGGCTGATTATTTTTATTGAGGAACTGTCGCAGCGTAATCACTCAAAAAAATTTCCCACTATCGCGA
 TTTTTCTGTCGGTTACACTGAGAATGCTCCCTTACCCGACAGTTCCTCAATACTTTCTTATTATTTCTTATTCTCGTA
 ATTGTAACATTTGATAGAGCAATCGTAATATTTAATGATCGAGCCTGACGAAAATATAATTAATGTTGAAGAAGAAAGA
 TAGAATAGAATGTAAACAAGCGTGGACTATTCACCTCTCGTGAGAATCCAAAAATCAAATTTTCAAAGTTGTCGTCACTGAG
 AATTTAAATCGACAATTTATTTATCTGACCAGATTATTAACAAAAACAACTGTACTGAACTATTTTTGTATACACTCCTC
 CGAGAACCACGTGTCAATGTACTTTGTAAACAAAAATATGTAAAAAATGTCGATATGTAGACGCAAGGGAATCATGTTAT
 AGGTAGTAAATGTTTTACATGTGTTCTGCCAATGAACATTTTTACGTTGAGCCATGGACGATTTACCAGACGAAATAAA
 AGTTAATAAAGAATCAATTCATTTCGATCGCCCACTTCTTTATCGTCAATTCCTCTTTCTCTCAATCTGCAGTGATTGTG
 TCTGTGTGTGTACAGTCTATTGA

>CL198Contig2|actin-interacting protein 1-like isoform 1

GGGCAAGAACTTTTTATATACCAATGGAAACAGCGTGATAATCAGAAACATAGAAATCCAGCAATATCCGATGTTTATA
 CGGAGCATTCTGTCGCGAGTGAACGTTGCAAAATACTCGCCGAGTGGTTTTTACATCGCTTCAGGAGATCAATCTGGCAAA
 GTTCGTATTTGGGATACGGTGAATAAAGAGCATATTTTGAAAAATGAATTTTCATCCGATCGGCGGTCTATCAAAGACAT
 TGCTTGGTCTCCCGATAGTCAGCGAATGGTTGTCGTGCGCGAGGGACGCGAAAGGTTTGGCCACGTTTTCATGGCGGATA
 CTGGCACATCGGTTGGCGAGATTTCTGGCCAGAGCAAGTCCATCAACTCCTGTGACTTTAGACCAAGCCGACCCTTCAGA
 TTGATTACTGGGAGCGAAGACAATACTAATTGCAATATTCGAGGGCCCGCCCTTCAAGTTTAAATGACGAAACAGGAGC
 ACACGAGATTCTGTGCAAGCGGTGCGTTATTGCCATCCGTAATCTTTTTGCATCAGCGGGTTTCGATGGCAAAGTTTTTC
 ATATACGACGGAACGACATCGGATCTTGTGGCGAAGTAGGCTCACCTGCCCATCAGGGCGGCGTTTACGGGGTTCGATG
 GAAACCTGACGGAACCCAATTGCTCACTGCGTCCGGAGACAAAACCTGCAGACTGTGGGACGTTGAAACCCGAGCTCTTA
 TCACGGAATTCATATGGGAACTACGGTCGACGATCAGCAAGTCAGTTGCTTGTGGCAAGGTGAACATTTACTCTCCGTG
 TCGCTGAGTGGTTTTATTAATTATCTCAACGTCAACGATCCATCAAAACCTCACAGAATAATAAAGGGACACAACAAACC
 AATAACAGTATTAACGCTCAGTCCGGATCGAGGAACAATTTACACGGGCTCCACACGCGCCACATCACCATTGGAATG
 CAGCAACCGGTGAAAACGATCGCGTTAAGGGTCAAGGTGATGGAATCAAATAAATGGAATGAAGGCCTCCAAGGATTTG
 TTGTATACAGCAGGAATCGACGACACTCTCAGAGCTGTTGATATCGCGACAAATACTTATACCGAAACAGCGATGATCAA
 ACTTGATTCGCAACCTCGAGGCCTTGATTTTCATGGGGACCTGGTTGTGACAGCTTCTATTGACAGATAAATCTAACGC
 AAGGCGGTAGAAAAGTGGCCAAATTACCGATCGACTATGAGCCCTCGTGCGTGAGCATAAATCAAGAAAACGGAGACGTC
 GCAGTAGGATCATCATCCGATAACAAAGTCTACATTTACGGGTAATCCGGAATGCTTTGTGCTGAAACTCGAGTTGGA
 ACATCTCGGCCCTGTGACTGATGTTTTCTTTCAGTCCCGATAATAAATACCTCGTTGCCTGCGATGCTAATCGAAAAGTTG
 TCCTCTACGTAGTTCTCTGAGTACAAGCTTGCGCACAATCGAGAATGGGGCTTTCACAACGCTCGAGTGAACACGGTAGCG
 TGGTCTCCAGATTCGATAATGGTAGCGAGTGGTAGCCTTGACACGACCATTATAATTTGGAGCGTGACAAATCCCGCAAA
 GCACACCATCATCAAAAATGCACACCCACAGAGCCAAATAACGCGGATTGTCTGGCTCGACGAAGAACTTTGATTTTCAG
 TCGGTCAAGACTGCAACACGAAGATGTGGCGTGTGAAAAAATCTAAATCATCGGTTGTTTTTTTTTTTTAAATTATTTT
 TTTCTTTGGTTGTATGTGTGACGCACGTAATCTCCGCCCTATTCCGGCTCACACTTATTGTGAAAGGCTTCATT

>CL19Contig1|coatmer subunit beta

AGGATAAATTACTTCGTTGGTGGTGAAGTTGTGACAGTCTCCCATCTGGACCGTCCGATGTATTTGTTGGGTTACGTGCC
 AAGGGACAACAGACGTGTATCTTTGCGACAAGGAGCTAGCCGTCTGTCGTATTCTGCTGTTACTGTGCGTCTTGGAGTAT
 CAAACAGCGGTGATGAGAAAAGATTTGAAAACAGCGGACAGGGTATTGCCGACAGTGCCGAAAGAGCATCGCACGCGTGT
 CGCCCATTTCTGGAGAAACAGGGCTTCAAAAAACAGGCCCTTGAAGTGTGACCGATCCAGAGCACAGATTGAGCTGG
 CGTTGCACTCGGCGATTTGACGACCGCCACACTCTTGCAAGCAAGCGAATAGTCAACAAAAGTGGCGCAACTTGTCT
 ACCCTTGCGACGACGAGGAAAGCTTCGATTAGCACAAGAAATGTCTCCATCATGCTCAAGATTTGCGTGGGCTTTTGT
 GCTCGCTACGAGCACCGGCAACTCAGCGATGATGGAATACTCGGACAAAACAGCCGACGACGCTGGCAAAAAACAACATT
 TCTTCTCTTTCACATTTCTGCTCAGCGACGTGACAAAATGCCTAGAAATTTTGATCAAAAACCGACAGAGTGCCGGAAG
 CTGCTTTCTTGACGTGCCTACGCACCCAGCAAAAATTTCTACGTTGTCAAATTTGTGGAAGAAAAATTATCCGCCGT
 AGCGAAAAAGCAGGACAGAGCTTGGCCGATCCCGAACAATAGAAAATCTTTTCCCTGGATACAGGGAAGCTCTCAAAGT
 CGAACAAATCTCCGAGAAGATAACAAGAAGAAATCCCTGCCTCCGTTTTCCACGCTTCAGCCCAAGCTTGAACGAA
 AACCGGCGGAGGAAATGTTAGCAGCTGAAAAAATTGGGAACTTCGTACCTACGAAAAAAGAGTGTCTAGGCGTGGCTG
 AAAATGCGGACGGTGAACGAGCGATGTTCTAACCAAGAGACTGGAAAATTTGGAATTAATCGATCTGCTGATCCCGCA
 GTCGTGTCCAATCCAGCCGAGAACCATACGAGACAGCGAAGCACCTCCAGACCACTTACCATGGATGAGGACGATCTGGA
 ACTCGATCTTGAACCTCGATGAGAACATTGACACTACCGACGTGAACCTTGGACGATGATCTTCTTGAAGAGGACTAACCCAG
 CGGACGAGAAAAACAAGAACAAAAATAAGGAGAATCTAGAAAACAGAAGAAAGAGAGAGAGAGAGAGAGAAAAACCTGTA
 GTATCAATTAACCGTCGGTCATCTCAGAAGACTATAAAAGTCGACAT

>CL200Contig1|arylphorin subunit alpha

ACTCGTCTTCGCGAACGTGCATAGTCTGCACAGCTTCGTCTTCTCGTTTTCTGTTTTCCGCGCCCAAACTTTCTGTCTTC
 AGTTTCTTAAGGGGCTTGAATAAATTATTCATCAGCCCTTGACTCGGGTTTGCTTTAAAAATGTCAAAACACACGGTGTT
 CGTCTTTTATGGGCTGATAATAGCCACAGCCACTGCATCCAGCTACTACGATAAGAAAACACCGACAAGGACTATCTCC
 TCAAGCAAAAAGAAAAATTTCAATCTCATCTATCAGTGCCTCAACCGGACATCGTCAATCCCGAATTTCAAGACAGGGT
 CAGGCTTGAACATCGAAGAAAAAATTGATTTGTACACGAACAGGATGCCATCAAAGACTTCTTGAAGTTTTATCAGCA
 TGGAAATGCTGCCAAGGGGTGAAATGTTCTCCATATATTATCTCAGCTTTTGAAGGAAGCTAACGCCCTGTTTCGCGTCT
 TTTTCTACGCCAAAGACTTCGACACGTTTTTCAATACCGCGCTCTGGGCACGAATTCACGTGAACGAGGGAACGTTCTTG
 TGGCTCTGTATCAAGCGTTTTTACGTGCGCCTGACACCCTTTACATGCGTCTGCCACCCCTTACGAGATCTACCCTTA
 CGCGTTCTACAATTCGAGGTCCTCGAAAAAGCGAAGACGCGCATCTGTACCGAGAAATGAGCGCGAAAGATGCCGAAC
 CTTCCGAAATGATAATTGATGCAAACTATTCGGCTGGTACATCGGGCGGACTACGACACTGAAATGAAACTCAAGTAC
 TTATCGAGGATATTGGACTCAACACTTTCTACTTTTACTTCAGACAGGACTCGCCCTTTTGGCTAAAGAGCGACGAGTT
 TGATTTTGACAAGAGTGTTCGAGGCGAGGAATATCTTTTCGGTCACAAACAAATATTGGCTCGTTATAATCTCGAGCGAA

mmc4.txt

TCGCAAAACGGCCTGGAACGCATCGAAAACCTTTGACTGGAACAGTGAATTCATCCCGGCTATTATCCTACCATGACTTAT
 CACAATGGACTGCCGTTCCCCCAGCGACCCCACTGGAGCAAGATTCCTCCACTACAAATACATATACTCGAGAGCTATCCA
 AGATTACGAAATGAGAATCTCGGCTGCAATTGATCTCGGATACGTCATCGACGCCGATGGCAAACAAGTGAAAATCTATA
 CTCCTGAGGGTCTCAATATTCTTGGCAATTTGATCGAGGGCAACGAAGACTCGTGCAACAAAGATTTCTACGGAAGCATC
 GATGCCTTGGGACGTAAAATCCTCGGCTTTAATCTCGAGCCTAAAACCTCTTATCAAATAATTCCCAGTGCGCTCGAATC
 CTTTGCTTCCTGCGATGAGAGATCCGGCTTTCTATCGTTTGTACAAAAGAATCGTCCAGTACTACTTCAGGTACAAGTCCC
 ACTTTGAGCCCTACACAAAGGAGGAAATAATTTACCCTGGTATAAAAAATCGAGTCCGTCGCTGTGGACAAATTGTTGACG
 TACTTTGACGATTATGACACGAACATAAGTAACGGGCTTCTGGTTGCGAACCAGAAGGAGTGACACCTTTATGGTGAA
 GGTGCGACAAGAAGCATTGAATCACAACCACTTACCCTACATATTAGTATCGATTTCGGATAAAAACAACAAAAGTCGCGT
 TGAAATTGTTCTTGGACCGAAATACGATGGAGCTTGGAAATCTTCTCGATTTTCAGCAAGTCTTACAAATATTTCTACGAG
 CTGGACAGTTGGATCGTGAACGTGACCGCCGGAGCCAACAAGATCGAACGAAACAGCAACGATTTCTTCTCGTTATTCC
 CGACGACGTGCCCAGCGACACTTACTACAAAAGATCGAGAGCTCGATCGGAAGTGGAGAGAATTTTCGAGTACGAAGAGC
 GTATCTATGGCTTCCCAAGACGTTTGTCTTCCCCAAAGGACGAAGAGCCGGAAGCCCTTACCAATTGTTGTTTACGCG
 AGCCCCGTGAAGGCCGATTCGAGTACTACATACGCTCGGAGCTTGGGGCAGTTATCACTTCAACAAAACCACTTTGGTTT
 CCTCTCGACAGGCCGATCGAGTATTCCAACTTCATTGGTCCCAACGCTTCTTCAAGGATGTCACTATTTACCACAAAT
 TCGATTATGACGCAACGCCACTGTTTGAGAATATTTTTACGCTCTCGAAATCCTTTACCAACGCGACCACGATACACAG
 CAACCGTCGATTGAAAATTTTCATGTCCAACACGTTGTCAATGAAACAATAAAGCATCCCAATAATTCTGAAT

>CL2013Contig1|sodium potassium-transporting atpase subunit beta-2

GCTTCTTAATCGAGAGTGTTCGCGTCTCCCGAAATCGTTTTGTCCGGAACCTCAGTCATTTTTGTCTTCGATGTGT
 TTACTTTTCGAGTCGGGTCTTTTACGAAAAAGTCCCGCGATCGCCGGGGAAATAAATCGATTTTAAATCCATCGTTTCGT
 TTGTTGATTATTTTTAACGATTTAAAACCTCTAAGATTAATAAAACAGTTTAAAATGGTCGCTAAAGATCCATCGAGAAGC
 TTGACCACGGAGTCGATGAACCCGTACGAGAAACCGCCAGTGTGACGCTGGAAAATCCTTAAAAACTTNTTACAATCG
 TGAGACTGGTGCCTTTATGGGGAGGACCGCGAGTAGTTGGGGAAAAATTTGGTCTCTTCTATTTGGTATTTTACGGAGTCT
 TAGCTGCCTTGGTAGCGATTTGTTACTGGGGATTTTGGCAAACCTCTGGACCCAAAGATACCGAGATGGCAGCTGGATCGT
 TCGATCATAGGAACCAATCCCGGGCTCGGATTCGACCGGCTCCACCGCGGACAATGTGAGAGCAGCTCATTTGGTT
 CAAGGGAAGCGATCGACGAAACATTACGCCCTGGGTCGAGTCTTATCGGAGTTCTTCGTGAGTACAGAAAGCCTGGCG
 AGCATCCAGGTCTGGTGCAAATATAAAAACTTGTGATTACAATCAACCTCCGGCTCCTGGTCAGGTCTGCGTCCAGTCC
 GTCGACGACTGGGACCCGTGCATCGAGCGCAATCTTACAATTATCACAATCTGCGCCTTTCGTCTTCTGAAATTGAA
 CAGGATTTATGGCTGGATGCCCGAGTTTTACAACGACACAAACAGCTTGCCCGACAACATGCCACGATCTCTGAAAGAAT
 ATATAACGAGTGCGAAAAAGTCTGACGCAAAAGCGCTGAACACGATTTGGGTTCTTTCGAGGGTGAAAAATCCAGCGGACA
 GTGAAAAACGTTGGGCCAATTCTGTTACATACCGCGTCAGGTTTTCCCCGTTATTATTATCCGTTTGAAAAATCCGTCGG
 GTATCTGAGTCCCTTGGTAGCCGTGCATTTTCGAGAGGCCGAGACTGGCGTCTGTATAAACATCGAATGCAAAAGCTTGGG
 CTAAAAACATCATACACAACCGAAACGACAGACTAGGCTCCGTGCATTTTCGAGCTACTGATCGATTAGAAACGGAGAAAC
 GACGAAGAAGAAACGGAAGAAGATTGAGAAGCAAAAGCAGGAAAAGAGGGCGGAAGGAGCGCGTTCCGGCGCTTTTCTTC
 CCCATTTTTTCTCCAACACCCAGAGCAGCCATCAAGATATTATCACTGAATCTCAAAGCGAAAGAAAAATTGAATTGCG
 CTCAGTTTTTCAATAAAAAAAAAGGGAAAAATTGCCAAAGACGCGGAAAAAACGCGTTCCGGCGCTTAATTCCATTTTTT
 TTTTCGTCGACATCATTTTTGTTGTTGAATCTCGAAGCGAAT

>CL2014Contig1|dipeptidyl peptidase 3-like

TACCATTTTTGTTCGGAGGAGGATCAGGCGCTTATGAACAAATCCGTATTGCAAGTTTCGACGTTCAAGTTGGACTCCAC
 GAATTGCTCGGACACGGAAGTGAAAACTGTTTAGAAAGCTCGCCAACGGCGAATACAATTTTCGACAAAGAAAAAGTGAA
 AAATCCATTGACGAACAGCCGATCGACAAATGGTTTCTGGACGGTGAGACTTACGATTCCAAATTCGGAGTTATTTTCGT
 CATCGTACGAGGAATGTCGTGCCGAGGCCGTTGGCTTGTACTTGAGCATCGACAAAGAAGTCATCAAAATATTTGGCTAC
 GAAGGACAAGACGCTGATGATATTATTTATGTTAAATGGCTGTGCTTTTGTGGAACGGTTGTGCCAAAGCTCTTGAGAT
 GTATCAACCATCAACGAAAGTTGGCTGCAAGCTCATTCACAAGCGAGATACGCTCTTCTCAAAGTTTGTCTCGAGGCCGG
 CGAGGATTTTCGTCAAAGTCGAGGAACTCGAAGCAGGAAAAATTTGCGAATGACTCTGGACCGTTGAAAAATTCCTACAGT
 TGGGAAACGCGCGATAGGTGAATTTCTCAAGAACTCCAAGTTTACAAAAGTACAGGAGACGTGCAAGCGGCCAAAGCTA
 TGTACGACAAATACACGGACGTGCCAGCTTCCGGTACCCATCCGTGGGAACAATGGAGACAGATTGTTCTTGCTCACAAA
 CAACCGAGAAAAATATTCGTTCAATCCAACATTTCTGTTGATGACAAACGCGAGCAAAGTGACCTGAAGAATTATGA
 GGCCACCTTCGAAGGACTGATTCAGTCGTGGATCGACAGATTTCCCTCGTCCCAACATCAACGATCTTTTTCGAACCTT
 GGGAAAACTGCAAAAAATATTTTGCCTAATTCAAGTATCAAAGTAATTCGCCCCCTTTTTTCTACATCAATGGAACATC
 ATGATTATTGATTTTTCTCATTTTTTCCATTCTTATTTACGCGAACGCAATATTGTCAATCTATTAGTTCTCTGTTGAGA
 GAATCTTGGAATCTCCAGGTGCTCTATATTCTTCTGTTGTCGTTTCGACCTATCGATTTTCATATTGACATGGACTGCAA
 CACTTTTGTAACTAAATACAACAAATTAATGATTTTT

>CL2016-bisContig1|26s protease regulatory subunit 8-like

ATCACGAAAAATCGAAGAATTGCAACTCATCGTCCGCGAGAAAAAGTCAAAATTTAAGGAGATTGCAAGCTCAGCGTAATGA
 ACTCAACGCCAAAGTTTCGTATGTTGAGGGAAGAGCTCCAACCTTCTCCAAGAGCAAGGCTCGTACGTCGGCGAAGTCGTGA
 AGCCGATGGACAAGAAAAAGTTCTCGTCAAAGTCCATCCAGAAGGAAAAATTCGTTGTGGATATCGACAAGAACATAGACA
 TCAACGACGTGACTCCAAACTCGAGAGTGGCTCTCAGAAACGAGAGTTACACGCTCCACAAAATTTTGCCCAACAAAGTC
 GATCCTCTGGTGTCTCTCATGATGGTGGAAAAAGTTCCAGACTCCACTTACGAGATGGTCGGCGGCTTGGATAAGCAGAT
 CAAGGAAATTAAGAAGTCATTGAGCTCCCTGTTAAGCATCTGGAATCTTCGATGCTCTTGGTATCGCTCAACCTAAGG
 GCGTTGTTGCTTTACGGACCACTGGAAACAGGAAAAAATTTGTTGGCTCGTGGGTTGCTCATCACCCAGGTGCACCTTC
 ATCCGGGTTTCCGGTTCGGAGTTGGTACAGAAATTCATTGGAGAAGGATCCCGAATGGTGAGAGAACTTTTCTGTCATGGC
 GAGAGAACACGCGCCGTCGATTATTTTCATGGACGAAATCGATTCTATCGGAAGTTCTCGTATAGAGTCTGGTTCCGGAG
 GAGACAGCGAGGTACAACGAACTATGCTCGAGTTGTTGAATCAATTGGACGGTTTTGAAGCGACTAAGAATATCAAGGTC
 ATCATGGCTACCAATCGAATTGACATTTTGGATCCTGCACCTACGTCCTGGTCGTATTGACAGAAAAATTGAATCCC
 ACCACAAACGAGGAGGCCAGGCTCGATATCCTGAAGATCCACTCGAGAAAAATGAACCTCACGAGAGGAATAAATCTGA
 GAAAAATGCTGAACATCGCTGGAGCTTCGGGTGCTGAAGTCAAGGGTGTATGCACAGAGGCGGAATGTACGCTCTG
 CGAGAGCGACGAGTTCACGTTACTCAGGAGGATTTGCAATGGCAGTAGCCAAAGTGATGCAAAAAGATTCTGAGAAGAA

mmc4.txt

CATGTTCGATCAAGAACTGTGGAAGTAAATCGTGGCGACCATCGGCAATATCGAGTTTTATCGCGCCTTCGATCCTTCAC
TTTTCCCTCAATTATCGCCTTCACCGGATGAGAGTTCGTACACAAGATCCTGGTAAACGAAAACCGATTTCTATTATATAT
GCAAATGTATTATGTGAATGTCTCAGAAGGGATGAACGTTTGAGGTGTTTCAACGCACGCCTTCGGGTTGTATCCATGT
TGGAGCGACGCACATATATTCGGTAAACTTGGCGGCAATATATCAATGTG

>CL2020-bisContig1|low quality protein: venom allergen 3-like

CGGCCGGGTACCAATATCAATGTTGATTGACGTGTGGTACGACGAAGTTGACAGTGTCAACGAGGACATAGTTTCGTTTCAT
ATATTGACATCGATGTGTACAATCATTACACCCAAATGGTGTGGGCGAAAACGACGGAAATAGGATGTGGCGTTCTTCGT
TACATCAGAAGCAACAGCGAGGACAAGGAAACCTTCCTCGTATGTAACACGGACAGTTGGAAACATGAAGGGTGAACC
TGTGTACGAAGTCGCCCAATAAGCTGATAATCTACGCAGCTGTCAACTTAACCAAACGTGGACTTTTGCGAATAATTTTT
AAATAATGGGGAGTTTCGTTCTTTTCTTATTCCTGATGTACAGCTTTGATTTCTCAGTCGAGCCGATAAATTCAAGTCT
CGTGATTCCTCGAAGCACAAGATCGTTAAATATTTTGGTCTAAAAAGGGCAAATTGTTCAACTGTCCACGTTTCGAGCACT
CAAATCGCGTGAAATTTGATCAAAATGACGGCAGCAATAGCAGAAGCCGCGAAGATATCGATAATTAGATAAACAATTG
AAAATTATTTATCCCGAAATGTTTTCGACAGTTTACCAAATATTTAGGAGGTTAGTTGCGAAAAGCGTTGAGTTTCGCGT
GGAAAACTATTGTTGCCGAATTTTCTGGCGCTTGGAGTCTGCTGTAGACTTTGTCAATTATTTTCGTTTCGTATGTA
TTCAAGTGATTTCTAGTTTTCTCTGTAATCAGAAAATTTGAAAAAGCACTACCTTAACCTGCAACGAGGAACCGGGAAAAATC
CTTGGGAAAGGATTAAGCGTGTGTTGAGTAAACAATTTTGTGTTCTGTTCTGGAAAGCAGGATGATACCAAGTTGGGAA
GATCCTCGTTGTTAAGATTTTTTATACAGCTTTGTTCCGGAGAAAAAACGACAAACCCATTTCAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAATGTGCGCCGAAAAAAAAAAAAAAAAAACCAAAAAAAAAAAAAAAAAAAAAAAAAAACTTGTGG
GCCCCCGCCCCCAAAAAGCTTTCT

>CL2028contig1|ica_apime ame: full=icarapin-like ame: full=venom

carbohydrate-rich protein flags: precursor

GAACGTAACAGTGGTTAACGTGTGATAGCGCGTCCGCGAACACATCGTAAGTGTGCAAAAATAACGAATTTACGAATTG
AAAAAACGAAAAATTAGATAATTGATTAAAAATCGCTATAAATAAATAAATAGTACGTGTTGAATATTGCGTGGGTATAC
GACATTCGCGTGGGAAATAGTAGTCGGTGACCTTGAATCACCAGCTCCAGACTTCGAATTAATTTTGAATTTTGTGCAAT
TTAGTTATTTCTCCTGATTCCATCGTGTCTTTTCTAACTTTGTGAATAATTCCTGTGCAACGATACTTTGGTGACTGA
AGAAAGTTAAAAAAAACGTGTTACAGTTTTGTTGGAGGTTGAAGGAGAAAAAACCGGAGAGAATCTACGCGAGGAAAGAAA
GAGTGAAGTTTCCAAAATCAACCCAGCGGCATAATGAAGAGACCACTTTTTCAGCGTTTTTTCATCTTGGCGAGCCTCATGGT
CGCGATTGCGCACTGTTTCCAGGTCCGGCACGTTCCGATTGACAGCGAAACGATAGAGATGGCATCGACACCGTTCTCG
TATTGCCAGAACGAAATCCCTTCTTGTACCCCGGCCCTTCTCCGGATGCCAGCATTTCCAATGTTGCAAGACGATTCC
GACGATGACACTGCAGAGGATCCTTCCGATTTCCGGCTCAGTCCATGGGGGACAGCAAAGTCTTTCCGTGGTTTTCTGGA
CAACCTCCAGGTTCTCATGAACAGGATCCAGGCACAGATGAGCGGTGTTCTGTCCGTTTTACCCAGACCAGGATCCTTCG
GCTTCGGAGGCGAAATTCGGAAGGTGGAAACACCACATCGACCACCAAAATCATCAACGGCCACGTTGTGACAATAAAC
GAGACGACTTACCAGAGCAGCGATAACGATTCCAACATTGTACTTCGCGTCAACATCGTCGATGTAAAACCTGTCAACTC
GACCGATGATGCAATCGAAGAAGTCGAGGTTGAACTCGATGACAGCGATGAACGCGAGACCGTTACCACTCGAGTCAATG
GCTCAACGAATAACAACAAAACCAACCGGAAAAAGAACTACCGAAGAAACGACCCAACCAGCTCGTAGCGTCGAAA
CTGTCGAAGATTCTGTTGGAAATGAGATCCCGATGAAGGACGAAATCGACAACCTCAATGCTTAAGGAAAACGAAATTAT
TCTCTCGTTATACACATGATTTTTATTTAAGAATATAATTCGTATCTATATGAGGCATTCGGCAACCTGGATGT
TATTAATTTTTCTTTAACTTTTTCTTTCTGTTCAAAATTTGGTTTTCCAGTCCACAAATTTACTCCAATTTTACAATCTCAG
CCCTTCAGGAATAAAATATGTACGAGCGATTTAACGAACATATCGATTTGTCAAACCGATTGAGATGTCTGGAATGAAAA
GCATCTATTGTGAC

>CL2033Contig1|proteasome subunit beta type-7-like

ATTTTGGGCGCGGACACGAGAGCCACGGAGGACAGATCGTCGCCGACAAGAATTCCTGCAAGATTCACCTTCCTTGCCTC
CAACATTTACTGCTCGGAGCTGGCACAGTCTGTGATACAGAAATGACGACTCAAATGATCGCCAGTCAGTTGGAACCTTC
ATCGTCTCAATACCGGACGCGTTCCTGTTTCCACTGCAATATGATGCTGAAACAATTGTTGTTCCGTATCAAGGA
CACATCGGGAGCTGCGTTGATCGTCGGCGGCGTTGACATCAACGGCCCTCATTTGTACTCCATTTTCCCGCACGGTTTCGT
CCGAGAAACATCATTACACAACGATGGGCTCTGGTTCTCTCGTCTGATGGCGGTTTTCGAGAGCAGATGGAAACCGGAC
ATGACGGAGGAAGAAAGGAAAAAGCGTGGTGGCCGATGCGATTCTGTGCTGGTGTTCACACGATTTGGGATCCGGTTGAA
CGTGGATTTGTGTGTGATACGAAAAAGCGAAATTCGAGGCATCGATTTCGACGCGAGAGCGGTGATTATCTGCGTCCGT
ACGACGAGGCCAACATAAAAGGCAAAAGATTGGGTTTCGTATCGGTACAATCGTGGCAGCATCCGTTCTCAAGAGGAA
GTGCGTCCGATAATCTGTCGAGGAGGAGACGGTCCGTAAGGTGATTTGGAGTCCATGGACACGTCGTCGTAACGAATTT
TCCCATTGCGGGCAATCACCTCTTTCTTAACGATTTATTAATTTTTTCTCAAATTAATTCATTGTCCTTTTTTTCAATC
GATTCAAAATAAATGATATTACGGT

>CL2035Contig1|spermidine synthase

TTGACGAGCCGTGCACGAGTTTCCTCAATTATTACGTGAAAAAGTTTCTTCGTGTCCGAGGAATCATAAAAACGAG
AAAAGTTTTTTTTCTATTTTATTCATTAATAAAGATCCTTCTGAATGGATGCTCTCAAGGCGGGTTGGTTGAGCGAGATAAA
CGATCTGTGGCCGGGCATAGCGGTCTCTCTGGAGGTGAAAAAAGTTCTTCATAGAGAAAAGTCACAATTTCAAGATATTT
TAGTCCTTGAAACTAAAGCTCACGGGCGAACTCTGTACTTGTGGAATAATTCAGTGCACAGAAAAACGATGAATTCCTG
TATCAGGAGATGATAGCATTTCTGCCGCTTTCAGTTCATCCGAATCCGAAGAATGTTTTGATCGTAGGCGGTGGAGACGG
AGGTGTTGCGCGCGAAGTTGCAAAACACCCGGAGGTCTGTAAGATAGTACAAGTTGAAATAGACGCGAGTGTATTGGAAG
TATCTAGAAATATTTGCCATTTTATGGCGTCGGGACTTGATAATCCCAAGGTAACCTCAAGGTCCGTGACGGATTTGA
ATTTATGAAGCAGCACAGCAACCAATTTCGACGTTATTATTACCGACAGCAGCATCCGGTTGGACCTGCCGAATGTTTAT
TCCAGGAGGAATATTTCAATTTTAAATGCGCACAGCGCTAAAACCTAATGGCATAATTTGCAGTCAGGCTGGAACAGCTTG
GGGGAATCTGGATCACGTTGCCAGACAATGAAGCATTGTCGATCAGCTTTCAACGTAGTAGAGTACGGCATAGCTGCAG
TGCCTACATATCCGACCGGACAAATAGGTTTTGTCTGGGCGAGCACGAACGACTCGACAAATTTCAAGGAGCCAATAAGA
ATATTCAGCGAGGAGGATCTCGAGAGAATGGAAATGTGTTACTACAGCGACCGGGTGCACAGAGCGGCGTTTCGTATTGCC
GAGGTTTCGTGCAAAAAGCGTTAAAACAGAAAAATGAGTTTTGCTGCGAAAAGTGCAATTGCGACCAATGATTTGCGCTA
CGAAAAAATCCATCAATTTTCCAGCCCCAGGAAA

>CL2036Contig1|myosin heavy non-muscle

mmc4.txt

AAAATCAAAAAGCTCGAGGAAGATCTCGCCCTCTCGGAAGATACCAATCAAAAATTGCTCAAAGAGAAAAATGCTGGAG
 GAGAGACCAACGACTTGTGCGAGACTCTCGCCGAGGAGGAGAGAAAGCTAAACATTTGGCGAAATTGAAGGCCAAGCA
 CGAAGCCACCATTTGCCGATCTCGAAGAGAGATTGCTCAAGGATCATCAGCAACGCCAGGAAGTCGACAGATCAAAGAGAA
 AGGTCGAGACCGAGGTTTTCCGACTTGAAAGAGCAGATTCAAGAGCGCAAGACTCAGGTGGAAGAATTGCAGTTGCAACTG
 GGCAAACGAGAGGAGGAGCTCAATCAAGTAATGTTGAAAATCGACGACGAAGCAGCCGAAAAGCGCAAGCGCAAAAAGC
 TCTCCGAGAACTCGAGTCCCAACTGGCCGAGCTCCAGGAAGATCTCGAGGCTGAAAAAGCCGCGAGAAGCAAAGCTGAAA
 AGCACAACCGTGACCTGAGCGAAGAACTCGAAGCCCTGAAGAACGAGCTGCTCGATTCTCTCGACACGACCGCCGCCAG
 CAAGAACTCCGCGAGCAAAAAGGGAACAAGAGTTGGCAACCCTCAAGAAAAATCTCGAGGAAGAGACTTCGTGACGAAGG
 AACGTTGGCTGACATGCGCCACAAACATACGCAAGAGCTTACCGCCCTCAACGAACAATTAGACACGCTCAAGAAAACTA
 AAGCGAGCTTGAAAAAAACCAAGGGCAGCTCGAGGCCGAGGGCGCGGATTTGGCCACGGAAGCTGCGCTCCGTGCTAGCG
 AGCAAGCAAGAGTCGGATCGTCTGCAAGCAAGCGGAACAGCAACTCGCCGAAGTCACTGCAAAGCTCAACGAAGTTGA
 GATTTTCAAAGCAAGAAATTTTCGAAAGAGTCTCCAAACTCCAACAAGAATCCGAGAGCATGTCCCAACAAGCTGGAACCGG
 CCGAACTACGAGCCGAGCTGCTATCAAAGCATCCCAACTTTGAGTCAACAATTCAACGAGATGCAGCAACAGCTCGAG
 GAAGAGACCAACAAAAAATTTGCCCTCAGCTCCAACTCCGCGCATCGAGAGCGAAAAAGNTGCGCTCCACGATCAACT
 CGAAGAAAGGGAAGAACTTAAACGCGCTTTTGGAAAAACAATTACAAACTCTGCTCGTTCAATTGGCCGAGGGCAAAAAAC
 GCGGCGATGACGAAGCCGAAGCTGCTGCCGCACTCGAGGAAGCCAGAAAACGTATCATGAAGGATATGGAAGCCCTCATC
 AGACAGGTGGAAGAACTCAAAGCCGCCAATGACAAACTCGACAAATCCAAGAAGAAAATTCAGGCTGAAGTTCGAGGACAG
 CACCATCGAGCTTGAGGTGCAACGTTTCAAAGTGATCGAGCTGGAGAAGAAGCAGAAGAATTTGACAAAGTGTGGCCG
 AGGAGAAGGCGGTGTCGGAGAAATTTGCCGAGCTCCGTGACGCGGCGGAGAGAGAAGCTCGCGAGAAAGAAAACAAAAGTG
 TTGTCGTTGACGCGGGAATTTGGACGAGCTCAATGACAAGTTGAGGAACCTGGAACGTGGAAGACCGGATTACAGGCGGA
 GCTCGACGAGCTGGTCAACAATCAAGGAACAGCCGACAAGAAGCTGCACGAGTTGAAAAAGCGAAACGAGTGTGGAGC
 AACAATTGGCAGAGCAAAGATCACAAGTCGAAGAGCTCGAGGACGAGCTGCAATGCACGGAGGATGCGAAATTGAGACTC
 GAGGTAAACATGCAACATTGAAGGCGCAATTCGATCGGGAATTGCAAGCCAAGGAAGAGCAGGCCGAAGAGAAACGTGCG
 CGGGCTTGTCAAGCAATTGAGAGATTGGAGCGGAGCTCGAGGACGAGAGGAACAGAGAGCTGCGGCGATAGCTGCG
 >CL2040Contig1|adp-ribose mitochondrial-like
 ATTCGGGGAATGGCGATACCAGGTGGCATGGTGGATGCCAATGAGAACATATCGGCGACGCTGAAAAGAGAATTCATA
 GAAGAAACGATGAACGCGTTGGAAAAAAGTGAAACCGAGTTGGAGGAGCTGGAAGCGTCGATAGCAAAGTTTTTGTAG
 TGGAGACGAAATCTATAAAGGATACGTGGACGATCCCAGGAACACGGACAACGCGTGGATAGAAACATTCGCGTCCAAT
 TCCATGACGAAAAATGGCAATACACTGGGCAACATGAAACTGCAAGCCGGAGACGACGCGACGAACGTCCGATGGGTGAC
 GTAAACAGAAAACTCAATTTATACGCGAATCACGTAAAGTTATTGAGCAGGTTGCTCATGTTGAAACGCCCCTGGTG
 ACAACCTCACGCACATTCTTATCAACGTCAATCGATATGAATGACGATCATCGATATTTTTCAAAGTGATTGACTATTC
 GACTCAAAGCCCTGAGATGAAAAAGAAAAATCTACATTTGCCTATTGCTTTATATAATATATATACGTCAAAATGAAGAA
 AACAAAAATATGCCACAAAAGTGTTTTAACCTTAAAGTACACACTGGGTCATTTTGACCCCAGCAATATTCTGTAACCA
 ATTGTTTACCATTTAATGGCAACGAATGCATTGGCATTTAATTTTCAATTTCTTCAAAAAATAAATTTAACGCCATAAAA
 TTCCTAACGGTAAAAAAAACGCCTCGGGTCAGATTGACCCATTATGCACTTACAGGATGTGTGCACTCGAAGGGCTGAAC
 AGAGTGAAATCTTCTGATAATATTGCTATTTCCATTGACGCGCTTTTTTCGCACGTCCTTGATTTTTATAACCGATATTT
 CATCGGCAGTCAGCGGCAGCTATTACAATTTTATAATAGTATTGCTTTATATAATATATGACCTTGAATGAGAAGCAAA
 AATATGCCACAAAAAGTGCTTTAAACAGAGTGAAATTTCTGATAATATTGCGATTTAAATGCGCTTTTTCGACG
 TCCATGTATTTTTGTAACCGGTATTTTATGGCAAGTCAGCGGCAGTTGTGAGTACATAAGAAAAATTATTGAAACTCGC
 TCCTGCTGTTCACTGCTTCATAAATAATAGCCTTGACTTACAAGTTAATCAATAAATCACTTGTGACATAAAAAATA
 CACGAATTCATGAACACGTGATAACTAGAGATTTAACATATTCACAGGAACAAAAATGAACCTTGAG
 >CL2053Contig1|cathepsin d
 AGTTGGCCAGGAACCTTTTGATACGAGATTTACGTGCTTGCCGGACACCGTTTATTGAGAAACAAAAATGGGGACCTTAGC
 AAAGAGTTTTCGATATTTTGGTGAGCATTTCTTGCTTGGGCTTCGTTTCTACGACCGGAGCTTTAGAATTCGACATTT
 ACCGGCATGTCCAAGTACCACACACTAAATATGAGAATAAGTCCGATACAGTCGTCTCTACAAATACATGAACGCTGAA
 TATTACAGTTTGATCGGCGTTGGTCAACCGAGCAACAATTCAAAGTTACTTTGATACGACTTTGGGGTGATACTTTGGCT
 ACCGTCTCAACATTGTTTATACATCCAAAGTTGCCTGCTTAATTCACAACAGATACGACAGCTCTAAATCATCGACTTATC
 AACCAGGACGGGCGTCTTTCAATCTTTCCAACAGCGAAATTCGCTGAAGGGATTTTGTCCATGGACAATTTCCACCTGC
 CTACGTGCAAGATTAGCAATCAAACTTTTGGAAAAATAACGCAACATGCGAATTCGTTCTCGACGACCAAGCGGAT
 GGAATTTATCGGATTAGCCTTCGATTCTTTAAGCGTTACAGGAAGTGTGCTTTCTTTTACAATCTTGTTAAACAAAAAAT
 CGTGGAGGAACAAGTTTTCACTTTCTACATGAATCGCGACCCGACGACCGAAAAAGCTGGAAGACTCATTCTGGAGGAA
 CAGATCGATCCTACGCTAAAGGAAATCTCACTTTTCTTCTGTGACTCAAAAAGTGTACTGGTCCGTACACATGGACAGA
 ATCGAGATCGGAGAAGCGAATCAAACACATACCTTCTGCGACAAAGGCTGCGAAGCAATGTTGATACAAGCACCAATCA
 AATAATTGGGCCAGCTGCTGAGATTGAGAAAAATAAATTTATCTGCTGAAAGCTAAAGAATTTTCACTACGTGGCCGCACA
 GATATATGGTCGATTGGCGGGAATTTGCGAAATTTGCCGACGTGCACTTCATACCTTGGCGGGAAGGATCACATAATCGAG
 TCCAAGTACTACATTCAACACCTGACCTGGCAAGGTTTACAGTATGCTTATCGCCGTTACGACGAGCAATGGTGATAA
 TTGGATCTTGGGTGGTGCGTTTTTATGCAATTTTACTCGGAATTCGACTTTCAAAATGGCCGCGTTGGCTTAGCAGAGA
 CCAAGTTTTTAACCGGACCAATATAAACTCACAGCAACAACGCTATGCAAGAGTGCATATTTTTATACCGCTTTGTACGAA
 CTTGCAACGATCAATATAT
 >CL2073Contig1|26s protease regulatory subunit s10b
 TGTACTATCGTTTTGTGAGCGTTATACAGCAAAATACGTGAAAATGGTCTCGATCATGGAGCCGATTAGGGAGAAAGCG
 CTTCAAGGAATATAGGAAAAAACTGCTCGAGCACAAAGAAGTCGAATCTCGTCTCAAAGAGGTTGAGAACATCTCAAAGA
 TCTCACCAAGCAATATGACAAGTCGGAGAACGATTTGAAAGCTCTGCAGAGCGTAGGCCAGATTGTTGGCGAAGTTTTGA
 AACAGCTGACCGAGGAGAAATTCATCGTCAAGGCGACCAACGGGCTCGCTACGTGGTGGGATGTGCGCGTCAATTGGAC
 AAAGCCAAGTTGAAATCTGGCACAAGGGTGGCTCGTGGACATGACGACGTTGACGATAATGCGTTATCTGCCTCGTGAGG
 TCGATCCCTGGTGTATAACATGTGCGACGAGGATCCGGGTGACGTGACATACCTGGAGATCGGTGGTGGTGGTGGGAGAG
 ATTCGTGAGCTGCGAGAAGTATAGAATTGCGCTATTGATGATCCAGAGTTGTTCCAGCGGGTGGGAATCACTCCGCCGAA
 GGGTTGTCTGCTGTACGGGCCGCCAGGAACAGGAAAAACCCTTTGGCTCGTGAGTAGCGAGCAATTGGACGCCTAACT

mmc4.txt

TTTTGAAGGTCGTCCTCGAGCGCGATAGTCGACAAATACATCGGAGAATCGGCTCGACTGATTGCGGAGATGTTCAATTAC
GCGCGCGACCATCAGCCTTGATAATATTTCATGGACGAGATCGACGCGATCGGGGGCCGAGAATTTTCCGAGGGAACGA
GTGCCGATCGTGAGATCCAACGAACTCTGATGGAGCTGCTCAATCAAATGGACGTTTTGATTGCTGGGCCAAGTGAAA
ATGATAATGGCGACGAATCGGCCGACACGCTGGACCCTGCTCTTTGCGTCCCGGCAGATTGGACCGTAAGATCGAAAT
CCCTCTGCCGAACGAGCAAGCTCGGCTCGAAATCTTGAAAATCCACGCGGCAGGAATATCGAAACACGGAGAAATCGACT
ACGAGGCGGTCTGTAACCTCTCGGACGTTTTCAACGCGCGCGATCTGAGGAACGTGTGCACCGAAGCCGGTGTTCGCA
ATTCGCTTGAACGCGAGTACGTAATCCAGGAAGATTTTCATGAAAGCCGTTTGGAAAAGTTTCCGACAACAAGAACTCGA
ATCCAACTTGATTACAACTGTCTAGCTTTATGTTCTTCTTTTCATTTATCGCGTATATCACTAGCATAGGCACATCT
TATAACAACACGAAATAATTACAAAACCCACGTTTGTAATTCGAGGTTCCCGTAT

>CL2081Contig1|histone -like

GAGTGTTGCTTGGCGCTTACTGCGGTTGACCGTGTGTGTTGAACCGTTCCTCCGTGTGCCTTTTGGTTAGAGAGCCGC
TACGACACAAACGTCGACGAATAAAAAAGAAAGCCAAAAAAGATAAGCTAATAAAAAAACACAGCTCGTTCGGTGT
CTTTGGTGCTCGTTCATTCTGTTCCCTACGTACATAATTTCTCGCGATTTAGACTGAAACACGAATTGTTGGCAGAATGG
CTGGCGGTAAAGCGGGCAAGATTCCGGTAAGGCTAAGGCGAAGGCGGTCTCGCTTCCGCGAGGCGAGGATTCAGTTT
CCCGTCGGCAGAATCCACAGGCATCTGAAAAACAGAACACGAGTCATGGTCGCGTCGTTGCCACAGCCGGTCTACAG
CGCTGCTATCTTGGAGTATCTCACTGCTGAGGTTTTGGAGTTGGCGGGGAACGCGTCGAAAGATTTGAAAGTCAAACGTA
TCACCCCGAGACATTTGCAGCTCGCGATTTCGCGGTGACGAGGAACGATAGTCTTATCAAGGCAACGATCGCCGGAGGA
GGTGTAATACCACATATCCACAAGTCCCTTATCGGCAAAAAAGGTTCTCAAAGCCGGCATAATTACGCTAAATGAAGA
ATAAGCTAACAAATAGAAATCACCAGTGCAGACAGAGAGAGTGAGGGAGAGAGAGAGACAAAAGGACGACGATGTGCG
AAGATTTTCAATGGACAGTAGG

>CL208Contig1|lysyl-trna synthetase

GCTGAACAAAAAGAGAAAGAAATTTAGAGAATGCCGCTAAAGCCGCCGCTCAACCCCAAATCAGTCCAAAGAAAAGAAAG
GATGTCTATCAAAGAAGAAGAAATTTAGTCTCATGAATATTTCAAGCTGCGCACGCAAGCGATAAGCCAATTGAAAGCGTC
GGCGGATCATCCGTATCCGCACAAATTCACGTGTCTACGTGCTGGAAAACTTTATCGAGAAATACAGCGAAAAGTTGA
AAGATGGAGAAGTTGTGGAGGAGAGTCACAGTATCGCCGGCGAGTACACGCGATTGAGAAATCCGGCGCGAAGCTGATA
TTCTATGATCTGCGTGCGCAAGGAGTTAAAATTCAGGTGATGGTGAACGCGAGAAATTACGAAACGAGGATATAAATTTT
CGTGACACTGCGAAAAATTCGAAGAGGCGACATAATCGGAGTTGTGCGTAATCCCGGTAAAAACAAAGAAGGGCGAATTCT
CGATAATGCCACGCAGTATAAACTCTTGAGTCCCTGTTTGCACATGTTGCCACATTTGCATTATGGGCTGAGGGACAAA
GAGACGCGTTTTTCGACAGCGTTATCTCGATCTCATTCTAAAACGACAAAGTGAGAGAAAAGTTCCACATCAGAGCCAGGA
TAATCGCTTACGTGCGTCTTTCTCGACGAGCGGGCTTCTCGAGGTTGAAACTCCGATGATGAACATGATCGCAGGT
GGTGCAACGGCCAAGCCATTCGTCATCATCACAACGACCTTAACATGGATTTATTATGAGAATCGCTCCGGAAGTGA
CCACAAAATGCTCGTTGTCGGTGGGATCGATCGGTTTACGAAATCGGTAGACAGTTGAGAAACGAGGGTATCGACATGA
CCCACAATCCGGAATTCACAACCTGCGAATTTCTACATGGCCTACGCCGATTATCACGATCTCATGACCATAACTGAGAAC
ATGGTGGCCGGTATGGTGAAGATTTACGGGACTTACAAAGTGATTTATCACCTGACGGACGAGGGCGAAGCCGCT
TGAAATTTGACTTTACGCCGCCCTTCAAACGAGTCAGCATGATGCAAACTCTCGAAGAAAAACTCAAGGTCAAATTTGCCG
GAGCTGAACAACTCAACACACCCGAAGCTGTGAAAATCCTAAGCGACATTTGTACCAAGCAGCAGCTTGAGTGTCCACCA
CCCCGAACCGGAGCTCGTTATTGGACAAGCTGGTCGGCGAATTCATTGAAGAACTTGTATAAATCCAATTTTCTTCT
CGATCATCCGCAAGTTATGTCTCCTCTTGCCAAGTGGCATCGATCAGCCAAAGGCCTCACTGAAAGATTCGAGCTTTTGT
TTATGAAGAAAGAAATTTGCAACGCCTACACCGAACTCAACGATCCTCTCGTGCAGAGGGAAAGATTGAGCAACAAGCC
AAGGACAAAGCAGCCGGCGACGACGAGGCTCAATTGGTAGACGAAAATTTCTGCACGGCATTGGAATACGGTTTGCCTCC
GACTGCTGGATGGGTTTTGGGCATCGATCGTCTACCATGTTCTCACCAGCTCCAACAATATTAAGAAGTATTGCTAT
TCCCAGCTATGAAGCCGGACGATCCGAACAAGAGCAAGGATACACCGGAAGACGAAAAATCGACCATGTCTAATAACGTA
GAGAAATATCTCCGAAAGAAAAACAAAGCAATGTACGACGCGCAATAAAGTCGATCGGACAAAAACATAACTCATACG
GAGTCGTTGCTATTCGATCTTCTTCAATTTCTAGTTTTCGTGAAATAATTGCATCCAGAGACGAAAAATTTGTCAGAA
AAAGGTCGTAGTTTCTCTCAACATCTAAATTAATGTAATCGAATGCCACATGAGTTTTGGGGTCCCCCTGGATTTCA
GGATAGACCGGAATTTATTGACGTTTCGGTAAATAAGAAAAATTTGTTTTTACCCGAATTCGTTTATTTTCCCACTCG
TCAAACACAGCTTACAATTTTGCAGCAAATCTCAATAAACTCTCAATTTGCCATCGACAATTCTAGTTTCGTTTTTTA
TATTCTAACGGAATGAGATGGCGTTAATTTTGGCAGTTAATTTTTTACAATC

>CL20Contig2|sodium potassium-transporting atpase subunit alpha-like

TGTTGACAAGATGGCGTCCAAAGGCGATCTCGACTCCGAGCATGGCCGGTCAGATTCATATCGGGTTGCCACATTACCCA
ACGTTTCGCGACGACAACAAACCGCTGATGGAATGTACAAGTCGCGGCGGAAGGCCCAACAAGCGAAAGGGGGACAAT
TTAGATGACTTGAACAGGAGTTGGATATCGACTTTACAAAATAAATCCTGAGGAGCTTTACCAGAGATTTACAGCGCA
CCCGGAAAACGGCCTTAGCCATGCGAAAGCAAAGGAGAAATCTGGAGAGAGACGGTCTAATGCTCTACGCCACCGAAG
CAAACGCCCCGAATGGGTGAAATTTTCAAAAAATTTATTCGGAGGTTTCGCCCTGTTGTTGTGGATCGGCGCGATATTATG
TTTCATCGCGTATTTCGATTCAAGCCTCGACGAGCGAAGATCCGAACGATGATAATCTCTATCTCGGTATAGTACTTTTCGG
CGGTGGTAAATAGTGACGGGTATATTCTCGTACTATCAGGAAAGTAAATCGAGCAAAATCATGGAATCGTTCAAGAACATG
GTCCCCCAATTCGCGACTGTATTGCGAGAGGGTAGAAAAATAACTCTACGAGCGGAGGATCTTGTGCTGGGAGACGTGGT
AGAGGTTAAGTTTGGCGATCGTATTCCAGCGGACATAAGGATCATTGAGTCACGAGGTTTCAAGGTGGACAACAGTTTCGT
TGACCGGTGAGTCGGAGCCGCAATCAAGATCGCCGGAGTTTACGAACGAGAACCATTGGAACGAAGAATCTTGCAATTT
TTCTCGACGAACGCGTCGAAGGTACGGCAAGGGAGTTGTCGTCTGCTGTGGCGATTGACCGTCATGGGTAGGATCGC
TGTTTTGGCGTCTGGCTTGAACACCGGCGAAACNCCATCGCCAAAGGAAATCCATCATTTTCATCTCATCACCGGAG
TCGCTGTTTTTCTCGGTGTAACGTTTCTCGTAATCGCCTTCATCCTCGGATATCATTGGCTCGACGCTGTCAATTTCTC
ATTGGTATCATCGTAGCGAACGTACCGGAGGGCTTGCTCGCAACCGTCACGGTATGCTTGACCTCACCGCCAAGAGAAT
GGCCTCGAAGAATTTGTCTCGTTAAGAATCTCGAAGCTGTGAAACTCTCGGCTCAACGTCGACCATTTGCTCCGATAAAA
CCGGCACCTTGACCCAGAACAGAATGACCGTTGCTCACATGTGGTTCGACAATCAGATCATCGAGGCCGACACGACCGAG
GATCAGTCGGGTGCTCAATACGATCGCACCAGCTCTGGTTTCAAAGCACTTGCCAAAATCGCCACTCTCTGCAATCTGTC
CGAATTCAAACCCGACAGACAGCGTACCCATCTCAGACGCGAAGTAACGCGCATGCCTCCGAAGCTGCCCTTCA
AATGTATGGAATTTGGCCCTCGGCGATGTTATGGGAATCCGTAAAAAGACAAGAAAGTTTGCAGAGTACCTTTCAACTCTA

mmc4.txt

CCAACAAATATCAAGTTTCCATCCACGAATCCGACGACGCAATGATCCTCGTCACTTGCTCGTTATGAAGGGAGCACCC
GAGAGAATCCTCGACAGATGCACCACCATTTTCATCGGCGGCAAGGAAAAGGTTCTCGACGAAGAGATGAAGGAAGCTTT
CAACAATGCTTACCTCGAGCTTGGTGGACTTGGAGAGCGGTCTTGGGTTTCTGCGATTTTATGCTACCGAGTGACAAAT
TCCCTCTTGGATTCAAATTCACAGCGACGACCCCAATTTCCCGTGCAGAAATCTTCGCTTCGTGCGACTCATGTCCATG
ATCGATCCTCCGAGAGCCGAGTACCCGATGCTGTTGCCAAGTGTCTTCAGCTGGTATCAAGGTCAATTATGGTCACCGG
CGATCATCCAATCACTGCCAAAGCCATTGCCAAATCCGTCGGTATTATTTCTGAAGGTAACGAGACCGTCGAGGACATTG
CCCAGCGTTTAAACATTCCCGTATCGGAAGTTAATCCTCGCGAAGCTAAAGCGGCCGTTGTTACGGTGGTGAACCTCAGG
GATCTCGATTCTGACCAACTCGACGAGATTCTAAGGTATCATACTGAAATTGTGTTTCGCACGTACATCGCCGACGAGAA
ACTCATCATTTGTGCAAGGCTGTCAACGAATGGGTGCCATCGTCGCTGTAACCGGTGACGGTGTGAACGACTCGCCAGCTT
TGAAAAAAGCTGACATCGGTGTGCTATGGGTATAGCCGGCTCCGACGTCTCGAAACAAGCCGACAGATGATTCTGCTC
GATGATAATTTGCTCTCCATCGTAACAGGCGTCGAGGAGGGCAGGCTGATTTTCGACAACCTTGAAAAATCCATTGCCTA
CACTCTGACATCCAACATTCTGAAATCTCGCCATTCTTGGCTTTCATCCTCTGCGACATACCGCTGCCACTGGGAACCG
TCACAATTCTCTGCATCGATCTGGGAAGTACATGGTACCCGCCATCTCGCTAGCCTACGAGGAGGACAGAGTATGATTT
ATGAAGCGCAACCAAGCAAAACCCCTTCACTGACAAGTATGTTAACGAAGGCTTATCTCGATGGCTATGGACAAATCGG
TATGATCCCAAGCTGCTGGATTCTTCTGCTACTTCTGCTATCATGGCTGAAAATGGTTTTCTACCGCAGCATTTTTCTG
GTATCCGAAAACACTGGGATTTCGAAAGCCATTAACGATCTCACCGACAGCTACGGCCAGGAATGGACGTACAGGGATCGT
AAATCATTGGAGTTTACCTGCCACACTGCGTTCTTCTGATCAATCGTAATCGTGCAATGGGCTGATTTGATCGTTTGTA
AACACGTCGTAAATTCGATCGTTTCATCAAGGAATGCGAAATTTGGGCACTTAATTTCTGGTATCATTTTCGAAACGGCATTGG
CTGCGTTCTCAGTTACACGCCCCGGCATGGACAAGGCTCTCGCATGTATCTCTCAAAATCGTCTGGTGGTTGCCGGCC
CTTCCATTCTGATCGAATCTTCAATTTACGACGAGACGAGACGGTTCTATCTGCGTCGAAACCCCTGGTGGCTGGCTCGA
GCAAGAACTTACTACTAAATACTACGAGTAAAGAATGATAAAAAATACAAAAAAACAACAACAACAACAACAACA
ACAACAACAACATACATCAATCACAACAACAACAACAACAAGCGAAGGGAAAGAGTGAAGACTTACGCGGGAACATAC
ATGAGCGTGAAATAAAAAATAATTATGATGGAAGTAGATAAAGTAAGGAAAGGCTAAGAGTCACCCACATAAACACATTAA
ACACGGGGCGTGCTATCCGGATCTAACCGTACTGTGCGACGAAATGCTGCAGTAGAAGAGTTAATTAACGCCGTTAGAA
ATACACAAAACAGAGTTTGTCAACCATGGCTTTAGGATATATCTGATCTGTAATCAACAACGACGAGGACGAGGGGACT
AGGCACGACAGGAGACGTTTTAGCGGATAGCCGAGGATGCTGGAGAAAAAATAAATGAATAAATAAACTGTACGAATCAACG
GAATCGCGAGGATTTTTCTGTCATCATCACCATCAGGAGTTCATCATTGCGAGATAACAACACGTCACTATTCGAGCCT
TCGATCCGCTACGAGAGCGTGGAGTTAAATAGAACACAACAACAACAACAACAACAACAACAACAACAACAACAACA
CTTTACGACGAGTACGTCTGGAGTCTCGAAAGTGAAGAATCCAAATGATCGGGATATCGTGGTTTTTTGTTCCGGTAAT
GCCCGAACTTTGCACCCCTCATTATTATATTCCTCGTCCGCCACACTCTCCGAAAAATAAAAGTAATTATAAATTTAAAAA
AGAAGCATAGAGTTCTCTCAGATTACGACCAGATCGAGAAGCTTTAGTGTCTCTCGTTTATGAGTCTTTTCAAGTGAG
CTCAAAACCGAGAAAAAATAAATAAAAAACAACAAGAAAGTATTATAACGAGGATAGTGGGTAAGATTCACTGCCCT
TTGATCGACAGTCAACGTTTTATCTGTGTTTGTCTGAAATAAAGGAGCCCCGAGACCGGACACCGTAAGCAACAACAGCA
ACAGCAACAAGAGAGATGAAGAAATATTGGTTTTCAATGCTACTGCTAGATTGAGGAGATAATTGCTAGTGCACAGTAGA
AAGTGCAAAATCCGAGTCAGCGCGTAATCGTTTGAGAATCGCGCCATAGACAGGGCCTAAAGGTATGGACGGTTTACGGA
GAAACAAATTTATTTAACTCACACTCACACACACACGCGCCCCGCGCACACACCAATTTCGAAAAGCGCCATGGAAAAA
ATATCGTATTAAGCAGGACATTCAATAAATAAGAAAGAAGTTCATCACTTGGATGTCCCATACGTTTTTTGACTTCAT
CGTTTCGAAATAAGAGGAAATAACAACAATAAATATTGGCAGCCAAACGGTATGGAACGTACGAAACGATTTTTCAG
CATCGATGAAGTCGGAGCGTCACTAACGATCCATGCAAATTTAAGTAGCAAACGAATGAATTGAAACAAAAAACAAGAA
ATACCTACCAATAACCTGTGGCTGACGAGACGGGACT

>CL210Contig1|fumarylacetoacetate hydrolase domain-containing protein 2a

TGCACGCAAAGCTTCATTCATCGACTGAGAATTATCTTTCTTTTCGAAAGGAGAGAAAAGATTGAAAAATACCTTCGATA
AACCAGTGTGTTGAACTACACGGCTTATCGCGAGTCGTATACAACCTTACAGAAATCCCGAAATTTGTAAAGATGCCG
TATCGCGGAAGATTTTCGCGTTTTTTCGGAAGGCGTGCCTGTTTCATCAGCGTCAACTCCACGAGTGATAACAAATCGTT
ATTAATCGCGAGTCTCGGAACACGAATCGCAGTTAGAAATTTTGCATCCAGCAAGACGTTAAACATGAGGTTCTGCTCAAT
TTGTAACAAGAATGGAGTCCCCAACACCTCGGAGTACAGTTACAACCAGGTGGCGATATTATTGACGTATCTGCTGTT
AATTCACGAATTCCTAACAAATTTGAAAAAGTTCCTCGAAGGTGGAGACGAATTTTGAACAAAGCTAAAAGGATCATAGC
GGAGGGACGACGAGCATAGCAGAGTCCGAAGTAACTTCTTGCCTCCATAGACCGAATGGACAAATTTGGCTGCGTGC
CGCTCAACTACGAGGGAAATTGCAAAAGAGAACAATTTGACGCTCCCGAGAGCCCCGTTATATTACGAATTTCCCGAGC
AACATTATAGGGCCACGGAACAATCTTGTATTGCCATCGGTGCCGGCGAATGTAGACTGGGAGGCCGAGCTCGCGATAGT
TATCGGGAAAAAGTGCAAAAGGTCTCAACAATCACGAGGCCGAAGATTACATATTGCGTTACACAGTAGCCAGGACATT
TCGGCTCGTGATTGGCAAAAGAAAAAAGCGGTGGACAATTCCTTCTGGGCAAGCGATGGACACTTTTTGTCCTCTTGG
ACCAGCCGTCGTCACTAAAGAATCGATAGGCGATGTCAATAATCTGAGTGTCAAAACGTGGGTCAATGGCCAACCTGAAAC
AGGACGGTAACACGAGCGAATTGATTTTCAAGCCTCGAGATATCGTCGCCTACCTTTACAGTTTATGACGTTATTGCC
GGTGATGTTATTCTTACGGGTACTCCAGCCGAGTAGGAGTAGGGCGCAATCCTCCAGAATTCCTAAAGAAAGGAGATGT
TCTCGAAACGGAATCGGGAGTCTCGGTCTGTTGAGAAACAACGTCTGTTGATTGAAGAATTTTCAACGTCAAAATTTT
TGTCTCAAAATCTCCTCAGACGAGTCGACGCACAGAACGAGAGCGATGCATCGGGATCTCCGAAGATAAATAACGATCT
GGCGAACAAAAATTTACGATTTAATGCGAAATGTTTTTTTTTCTTTTTTCTTTTCTACGGTAGTCAAAAGTAACCTT
TGAATTTTTGATGAGCACAAGAAATTTGTGCTGACATCGATATCGCACT

>CL2110Contig1|protein kr-h2

CGGCCGGGACTATTAACCTCAGCAAATATCGAGTGTGGTTAGAATCGGTGCAATTAAGAGCTCCACAAAAGAATGGCGG
ACGCTCCGAACACAGGATCCGGCGAATCGTCGCCGACGTCGAGAAAGGATGGGGCGCGTTGAAACAGCACGTTATCGAC
AATAAAGTACAAGTAGGATTGTGGGTCACTAGGATCTTCAGTATTTTGTGTTACCATAGGATATATCATTCCATTGTTTGG
AAATCGTTATAATGCTTATTACAAAGTGCTCATGAGCAGCGCAGCGACAAGCGCCTTGAGGCTTCATCAGAGAGTACCGA
GAGTACAATTTAATATGCAATTTGTGGAACACTTGCTTTTGAAGATTGCTGCCACTATTTGCTATACTCTCTTATATTC
CTTACGCTCGCCGGTGTGTTGGTTTTGGCCCGTAGTCCTCTTTCGAATTAATGCAATTCGCGAGTATTCTCTCAC
GTTGTTGGACTGTCTAGTCAAAAACAGCTGGTGGGAGCGAGACTTTTCGATATCCCTCGTCAATTCAGTACGACGGAATA
TTCTCCGTTTTTGCACATTGTGCGAAATCTTGGTTTTGCCTTTGACTATTATCTTGTTTTTTTCAGGACAAGCCGGTCTG

mmc4.txt

TTCACGCCGTTTTATTTATTACCAATTTTTGAAAAATGCGTTTGTCTGTCGAGGCGAAATCCATTTACTCGAAATCTTTTCCA
CGAGATGAGAAGCGCATTGACGGCGGTGTCGGCGAAGCGCGATGCCTGGCATCCTGCGATGGCTGACGAATCTCCTGT
TGACTGTGACACAGCAAATGGTCCCGCAATACGTCCAGCAGCAGCAATAATATCGTTGAAAAAAAAAAAAACGAAAAA
AATACGAAAAAATCAACGAGAAATTCGAACGAAAAATTTGCGTTTCCGTACGCAAAAAAAGCGACGAGTTCCTTTATTT
CCTCGTTTTTACAAGTTTGAACCGAGAAT

>CL2112-bisContig1|multifunctional protein ade2-like

GATCTCAGTACGGTGAAGCGAAATTTCAAATGGGTGCGCGAAAAATCTCGATTATCTTGTTCCACCCCGAGTTCCTTGG
TGGTGATCCTGATGGGTTCCCGTCGGACGAAGAGCACTGCAAAAAAATAGCACATCATGCCAAATTGCTCGGTCTCAAT
ACGCAGCTCCGAGTCAGCAGTGCGCACAAAGCTACAGAGGAAACTTTGCGAATTCTAGCTGAATACGAAGGCAGTTCGGA
GAAGGTGGTGTGGTCTGCTAGCCGGCAGAAGCAACGGTCTGGGTCCAGTTCCTCTCCGGCAACACACCGTTCCTCGGTCA
TCAATTGCCCTCCGTCAGGCCTGATAACGTGGCACAGGACGTTTGGTCTTCCCTCAATGTTCCATCCGGTCTGGGTTCG
ACAACGGTTCGTATCCGGAGAGTGCGGCTCTCGCAGCTGCCCAAATCCACGCTCTTCACGATCACATCGTTTGGTTCGCG
TCTGAGGGTAAAGCAACTGACGAATTTTCATCAGCCTCAAGAAAGCCGACATCAAATTACGCAATCTGACAATTTAATTGA
GACATATTTACAAAGAAATTTTAAACAATATAAATGTTTTATGATAGCGTTATTGGTCTATACCATGCTCTTGTGTTGCTCGT
TTGTGAAAAAATTTTAAACAATATAAATGTTTTATGATAGCGTTATTGGTCTATACCATGCTCTTGTGTTGTTGCTCGT
GTTTTGTACTGGGTACAAATTTACAACATTCGCTTATTTCCACGAGACAAGTTTTCGAGTGAACTTGAGCGAAGCTGC
TGATCCTCGGATATGATAAACTTTGCTACTCTAAGCCATTTATCTCGTTTGTACAGAATTTTTTTGTTATTTCAAATATT
TACATAAAACAAAATCGTCATATACTT

>CL211Contig1|phenoloxidase subunit a3

ATCACTTGGTGAAGTCAATTTGTGAGTACACTTGGAGCTTGCCAAAACTCTCCGTCGTCTCGTCAAGTGGTAGAAGTT
GTTTGCGCTGATTTTTTCGATCGTTTTCCACTCTCGGTGATTTGTAATTCGATCATCCAACGTTTCTGAACCTTTGAAGAC
AATCGCGTTAAGAATTTTGGAAATCCAACTTTTCCGATAGTTGGCAAAAAATGGCGGACGACAACCTCTCCATTTTGTAT
CTTTTCGATCGTCCGGCGGAGCCCGTGTACGTTCCGAAAGGAGAGAATAAAGTCGTTTTCGACATCCCTGCCGATTATCT
GCCTGACAGATATCGTGGAGTCGCACCCAGGTGTTCAATCGCTTCAGGATGACGAGGAAACCCGAATTCGATAAGTC
AAATACGACTTCCCGATTTGAGTATCCCGATGCAATTTGGGTCTCGAGACCCCTTTTCTCTTTTCTGCCTCGACATCGC
GAGATTCGAGGCCGTCTGGTTGACATCTTTATGGGAATGCGAACGTACGACGACTTGTGTCTAGTCGCGGTTTACTGTCTG
CGATCGTCTCAATCCGCATCTATTCTGTTTACGCTCTATCGGTGCGGATTTCTCATCGCGATGATACTAGACATCTTCCGG
TTCCCTCGCTCGCCGAAATATTTCCCGGACAAGTACATCGATGGAGGAATTTTCTCGAGAGCCACGGAGGAGGCTAACGTG
GTACCGCCAGACGCTCGCGTTCCGATAACTATTCCGAAAAGACTACACGGCCTCGGATCTCGATGAGGAGCATCGCGTCG
CTTACTTCCGAGAAGATCTCGGTGTGAATCTTCATCACTGGCATTTGGCATCTTGTCTATCCGTTACGCGGTGACAGAAGA
ATCGTCGACAAGGATCGTCTGGCGAGCTTTTTTATTACATGATCAGCAAGTAATGGTCTGATAACAATGCGAACGCCT
GTGCAATCGTCTGTACGTTACCAAAACGATTCAACAACATACGAGACCCCAATCCCGAAGGCTATTTCCCTAAGCTGGATT
CCCTCGTGGCGAGCCGAGCTTGGCCATCACGTCCGAGTGGTACTCAACTCAAGGACGTCAATCGACCAGCCGATGGGATC
CAACTGGATCTTGAGACCTTTGAACGTTGGAGGGACTCGATATTCAATTGCATTACACTGGTATCGTCACGGATTCCCG
TGGTCAGACAAGCCAACCTACCGAGAAGGACGGTATCAATGTTCTAGGTAATATGTTGGAAGCTAGCATTCTGAGCCCGA
ATAGAAGTCTCTATGGAGATCTTCACAACCTTTGGACACGTGCGATCTCCTATTGCCACGACCCTGATCACCGTTATTTG
GAAAGTTACGCCATCATGGGAGATTCTGCAACGGCAATGAGAGACCCAATATTCTATAGATGGCAGCTTACATCAACAG
CATCTTCTTGGAGCACAAAGAGCCGTCTACCCGCGTACAGCCTTGACACGTTGCGATTCACTAATTGTGACATCTAGGAC
TTGGGATAAACCACACCTAGCGGTCCAGCTAATACGATCATGACCTTTTGGAGCCAGAGTGACCTCGATCTCTCGAGGGGT
CTTGACTTTACCCCAACCGGACCTCTTTTGGTGCGACTCACGCACCTCAATCACGCCCCGTTACGTACAGAATTACGGC
GAACAATCGATCTGATGCGCCGCAAAGAGGCACCGTGAGAATATTATAGGACCGAAGAACGACGAGCGTGGACTACCGT
TCAATTATCGCGCGCAAAAAGACTTGTATGATCGAGATGGACAAATCACCGTAACGCTTCGTCCCGGTGATAATACGATT
GAGCGCAAGTCTACCGAATCTCGTAACCATCTCTTTCGAAAGAATCTCCGCAACTTAGACCGTATCGACCAAGTGG
TGCTCAACTCGAGAGTTTCAATTTCTGCGGTGCGGATGGCTCAGCATATGCTGTACCACAAAGGCGAGTAAGGAAGGCT
TCCCCATGGATTTGTTCTGTCATGATTTCTGACGCCAAAATCGACACTATTGAGCAGCCAGATGCTGAAGGATGTAGCGAC
GCAGCGAGCTACTGTGACTCCGAGATCGCAAGTATCCTGACGCTCGTCCAATGGGCTTCCATTGATCGTCTCTCCACG
TCCAATGTTGAAAGTTTGGCGCAGTTTCTCACCAACAATATGGCTATCACCCCGATAATAATTTCTATTTCGGACACCG
TAGTAGCAAGGACTAACACGCTTGATCGTTCCGTTTCGACATGGAACATCTGGACTTGTCTATAGGCTCTTTACCCGGAA
ACGACCGTTTAGCGATTTCGAAAACCATTCATTCTATTGTCTTACCAATTATTACTTTATTATCATCAATAACTAATATCC
AGCATTCGCACTGATGACAGG

>CL2121Contig1|3-hydroxyisobutyrate mitochondrial-like

TTGGTCTCATATCCAGAAGACTGCGGAGCGAGTACGATGAACGTCCGTATATTGACACGTGTTATTGGGTCTGAGATGG
CGAAAAGACACTTCTCGAAAGTTGGCTTCGTTGGACTCGGCAATATGGGCAGCAGGATGGCGAGAAATATTTTAAAAAGG
GTTATCAAGTGACTGTTTACGACATAAAACAAAAATGCTGTTTCGAGCTTGATTGAGGCTGGAGCTACCGGTGCTCCGGAT
CTTCGTGCTGTCTCGGACGATTCCGATGTTATAATTTCCATGCTCCCAACCAATCAACATGTTCTCGATTGTTACGTCAG
TGAACATGGAATTTCTCAGTGGGGTGAAAAAAAATGTTTTACTGATAGATAGTAGTACGATAAATCCTTCAGTTTCTCAAC
AAGTGGCAGCTGAAGCGACAAAAAAAACAAGTGAATTTTATCGATGGCCAGTTTCAGGAGGAGTCAACGCCGCCGCTGA
CGAAACTTTGACCTTCATGGTCCGAGGTACGGAACGAACCTTTGACCGCGCAAAACCGATTCTCGAGACCATGGGCTCGA
GAATTTTTCACTGCGGCGATATCGGCATGGGACAAGCTGCTAAAATTTGTAACAATATGCTTCTCGCTATCAGCATGATC
GGCGTCTCCGAACTTTCAATTTGGGATCCAACTTGGACTCGATTGCAAAAGTTTTAGCGAGCATTAATAACGAGTAC
AGGAAGATGCTGGTCTTCGGAACAGTACAATCTGTCCAGGGGATACTCGACAACGTACCCAGCTCCAACCGGTACAAGG
GAGGTTTTGGGGCCCCCTCATGACCAAAGACCTTGGACTCGCTCAAGAAGCTGCTGCATCAGTTGGGGACCTATTCC
ATTAGGGTCATTGTCTCATCACTGTACAGAACCCTTTAGCGTCCGGATACTCCGAGAAAGATTTCACTGTCTGTTTACC
AATTTTTAAGAGGTGTGGAATTGATGATTTATTTTCAATTAATAAGAA

>CL212Contig2|n-alpha-acetyltransferase auxiliary subunit-like

ATTGTTGCTTTACCAAAATCTGGTGATCCAAGAGTCCGGCAGAGCGAAGGCTCTCAAGCATCTTGACAAGTACGGCG
ATCAAATATCGACAAAGTCACTGTGAAAGAACTTATGGAATAATTGAGGCTCGAGCTCGGACAACACGGGAAGCAGTT
CAAGTTTACAAGGATTTGTTGAACATTAATCCTGAGAATACGACGTATTACGCTAAATTAGCCGAAGCTGAAAGACACGC

mmc4.txt

GAGCCCGGAGGACACGCTTCGTATGCTCCAAAGATACGAACAACCTGTTTCCTCGCGCTCTCGCCCCACGTCGTTTGCAAC
TGAATTACGCTACCGGAGACCAATTCAAACAATTGGTCGATCAATATTTGCGAAAAAGGCTTTCACAAAGGCGTGCCACC
TTTATTCGTCAATTTACGCTCTTTGTACGTCGATCAACAAAAAGTTGACACGATACAATCCCTGCTGCTCGAGTACAAGG
ACGCATTGAAGAATCATGGCCATTTAGTGACCTTGATAAGGCTAATCCACGGGAACCAGCTTCCGCGCTCTTGTGGACTT
ATTACTATTTAGCTCAGCATTACGATCACCTTGGAATTACAGAAAAGGCCCTTAATGAAATCGACGCTGCTCTAGCTCAT
ACTCCTACACTTATAGAACTTTTTCGTTACCAAAGGTCGCATTTACAAGCACGCAGGCAACGTTCAAGATGCGTACAAAT
GGCTCGACGAAGCTCAAGGACTGGACACGGCCGATCGCTACATCAATTCAAAATGTGCCAAGTACATGCTACGAGCGAAT
CTTATAAAAAGAAGCCGAAGAGACTTGGCGCAAATTCACGAGGGAGGGAGTACTCGCGATGGAAAACCTTGAACGAGATGCA
ATGCATGTGGATCCAAACGGAAAGCCGCGAACGCTTATCGAAGACTTGGAAAGTACGGAGATGCCTTGAAAAAGTGCCACG
AAGTCGATCGACACTTTTCGGAGATAATCGAGGATCAATTTGACTTCCATACGTACTGTATGCGAAAAATGACACTGCGT
TCGTACGTCGGTCTTCTGAGGCTAGAGGACGTGCTGCGCTCTCACCCGTTTTACTTCAAAGCCGCCAAATGTGCAATGGA
AGTTTTATCTTCGGCTCCACGACAATCCCTTGCCGGACCCGACGCAGATTCAAGAGATCGATACCGAAAAACCTGGCACCG
TCGGAATTGAAGAACTGAGAAAACAAGCAGAGAAAAACAACGCAGGAAGGCTGAACCTGAGCGACAACAAGCTGCGCAAGC
TCAAGAGAAGAGAGAACAGCAACAAGTCAAGGACAGGCTGATCCTGACTTGAACAACCACTCTTGACGAACCTCAT
ACCGGAAAAACTGGAAAGGTCGATGATCACTGGAACGACCAT

>CL2131-bisContig1|cytochrome c-like

ATTATTCACGGTTCGGACAAGCATCAGATCGTTCAACGTTATCACACGCGTCAGGTGTCTCACGCAGAAGCAAATTCCTC
AATCATGAGTATTCGGCTGGAGATGCTGAGAAGGGAAAGAAGGTCTTCGTGCAAAGATGTGCGCAGTGTACATACCATCG
AGCCCGTGGTAAACACAAGTTCGGTCCGAATCTGCACGGAATGGTGGGCCGAAACGGGTCAAGGCTCCCGGGTTTCGCA
TACAGGAGGCGAAACAGGAAAGGAATCACCTGGAAACAAGGAAACGCTCTTCGCTTATTTGGAAAACCCAAAAAATAC
ATTCCGGGTACAAAAATGGTGTTCGCCGGTCTGAAGAAGCCCCAGGAACGCGCGGACCTCATCGCGTACCTGGAACAAGC
TTGCAAGTAAAAAAGCAACCAAAACGTCGCGAACTCGAAGTGATTTCTTGAGAAATCACGAAAGAGGAAAAAGAGGGA
CGAGGAGGATGGAACGAGATGGCGGAGCTGACGACGAGGACGACGAGGACGTTGGCAACGCGAGAGGAAGGAAAAAACG
AATTTAGCAAAGTGCAATTCGACGCCTCGAAACCTCCGCCGGAAGCTCAAGAGCAGCATCATCTCACTCACTCATCAT
CAAAAATAACAAACAACATCCAGCATCTTTGGAATCCATCTCGGAACTAAAACCGCTGCTGCAAAAACGCCACTCGTCTC
CATCATTAGTACGAATTTGTTATTGTTAAACAAAAGTAGGCAAACTACGTCGTAATTTAAACTCTTAATCTTACAATGAA
GAAAAAACGAAGACACCGCGAGAAGAATCGTCGACGGGCATGCGAAAATCGTCTGGTTTCGAAATTTATGCCCCGTACA
GCGCAATTCTTTCACCGACGATATTGGCGTTTGGCGTCTCCTGGTTGATACTCCTGCCGCAAAACACCGTCTCGC
TATTATTTATTTGTTACCGTGTACAGTACGAAAGAGATAACAAAAAAAACCTAGGATCAATACATCGATGTGTAATGTCC
TATATATATATATTAAGAATTTAGTAAAAAAAACCAATACATAGCCATAGGGAAAAGTTACACT

>CL2135Contig1|calcyphosin-like protein

GTTTCGGCTTTTTAATACAAACGTTAGCTATACAATGTTCAATCGACCACAGAGCGCGACTACGAGGCAAGAGGCGGAG
ATGATCAATAAAGCGCAGCGGCCCTTATCCGGTACTACGGATATTATCGAAAAAATAAGATTGCTTTGCTTAGCAAGAGG
CGCTAACGGAATTCTCGGTCTTGCCAGGGTTTTTCGACGCATGGACGACGATGAAAATAAACAATTGAGCCAGGAGGAA
CTTGACAGCTGGTTTGACCGAAGTTGGTTTCGATGTGAGTGAAGATGAGATTGCTGAACGTTTACGAAATTTGGATGAGGA
TGAAAGCGGCGGGGTCGATCTTACGGAATTCATAAAAGCTCTGCGACCTCCCATGAACGAAAGTCGAAAAAAGTCGTAC
ACCAAGCCTTTGAGAACTCGACAAAACCTGGCGATGGAGAAATTAAGTGTGCGCGATTTGCGCGCGGTTTTATAACGTCAAA
TGCCATCCTCGTTACATCAGCGGCGAAGAGAGCGAAGAAAAACATAATGAAAAAGTTTTCTGGCAATTTGCAACAAGACAA
CACCAAGGATGGTATCGTAACGGAAGAAGAATTATGAATTACTACAGTGCAATCAGCGCAAGTATCGATCACGACGCCT
ACTTCGACTTAATGATTGCAACGCCTACAACTATAAACTAGCACGTATAATAAAAAATAAATAAATGTAATAAATAAC
AAAACTAATATCACATCGGTTGAGGAAAAACCTGTTATTTACGTTTTCAAGACGATTCTGTTATTGAAAAATATAAAG
TCTATTGTGTGATGGGTTTTGGAATAATTTTAAGCGACGATTATCGTCAGAACTTTATTGAACAAATCGGTAACATTCTGTG
CTACGATTGAAATCATTGAACAGAATTAATCAATCTATTGGAGAATTTCCATGAATTTGCTGCTGTAATCTTAAGTAATT
TATAATCTTATTGACATTTATGAATAAAGTGTATCAAAAGATATTGATGCGTCGACGTTGGAAATTTCTGGTTGA
TGTTGTTGATTCTATCTCCCGAACAAATTTTCGTCGTTTTCTTTTTTTAAATTGTAATTTTCTTTGCG

>CL2138Contig1|glutathione s-transferase omega-1

TTATTCCTTGCTTTTTAATAGGATAAAGGAGCAACAACCGGAATAAGAAAATTCAACTGTGCTGCAATTTAATTGATAAAG
AAAATAGAGCTCGACGAATTGCGGCAAAACGCTCTGATGAATTTGAATGCCATTAGTGAGGATCCTGTAGGGCAGAGCGCG
GGGAAGGAGGGGCTGTCTAGCAGTTAAAAAAGCTCGTTTCTCCGGCAGTGTACGACGTTTTCTGCCGATGACAAACC
GCCTTTGCCTTTGAAACTGCGTTTTACGTTCCACAGGAAAAACACGGGATCATATAATTTCCAGCACACGATGAATACT
ACTAAGCATCTGAGCACGGGATCAACTGCCCCGCCCTAATCCGGGCAAACTACGTCTTTACAGCATGCGATTCTGTCC
CTATGCGCAACGAATCCACCTCGTCTTGACGCCAAAAAATACCGTACGACGTCGTTTTCTGTAATTTAACCAAGAAGC
CAGAAATGGCTTCAGAAAAAAGTCCCCGTGGCAAAGTTCCTTGATCGAACTGAGAATGGCGATGTGCTTTACGAAAGC
CTCATTGTTGCGGACTATCTCAACGAAGCCCATCCCCATAACAATCTCTATCCTGACGATCCGCTGCTCAAAGCAAAGGA
CAAAATTTCTATTGAGATTTTCAATACAGTCATCGCCACAATGTTCAAGTTGTTACAGCCCCGGACGCGAGTGAGGAAC
TCTTTGAAGAAGCCCTGGAGGGTTTTGTAGTGTGAGAAAGAATTGGCCCTACGAGGATCGGCGTATTTTCGGAGGTGGC
AGGCTGGAATGTTGGATCTGATGATTTGGCCCTGGTGCAGAGAGCAGACATTGTGAAAATTTATCGTGGTGAAAAATA
TTCGATTCGCGCGCAACGTTTCCCCAGATTGCTGGAATGGAGATCGGCTATGAAGGAAGACCCGGGAGTAAAGTGAGCT
ATCTGGAGCCGGAATTCATGCACGGTACATGAGAAGCCGTGGGAGCGGCACTCCCGACTACGATTTTTTGTAGGAAACC
CAATGTTTTCTCCATCAAGAACTTCCAATTCATAGCTACATATTTTTAACTACAGAATTTTCAAATTTTCTATGACA
AAGTCGGTTAGTAAAGTTTCGGACAAAGATGTAATCTACG

>CL2140Contig1|14-3-3 protein epsilon-like

GTATCTGTCTCGCTCGGTTAGTGTGCATCTCCTATAATCAGGAAAGGAAGAAAGAAGGAAAAAGAAAGATTTCTTTCTGTCG
TCCCCCTTTCCGTTTTCATCATCGTGTACCGCTCGCGAAATACAACGGCGCAACCGGAAAGCGAGAGAGAAGCCGAG
AGGAATAATAAACGATTAAAACTCTCAAACGATTTTCATCGGTGGAGTTTCATTTGAAATCCGCAAGCATCCAGGATGTGCG
GAACGGGAGGACAAATGTCTACAAGGCGAAGCTGGCCGAGCAGGCTACAGCTATGACGAGATGGTTCGAGGCGATGAAAAA
AGTCGGCTCCCTCGGTATCGAGCTCAGAGTCGAGGAGAAATTTGCTCTCGGTGGCGTACAAGAATGTTATTGGAGCGA
GAAGGGCTTCTGGAGAATAATATCCAGTATCGAACAGAAGGAAGAAACAAGGGTGCCGAAGATAAACTCGAGATGATT

mmc4.txt

CGTCAGTACAGATCTCAGGTCGAAAAAGAACTCAGAGACATCTGCGCCGATATTCTCGGTGTA CTGACAAACACTTGAT
TCCTTATGCATCCACCGAGAGTCCAAAGTCTTCTACTACAAAATGAAGGCGATTATCATCGTTACCTGGCGGAATTG
CAATCGGCACCTACAGGAAGGAAGCTGCTGAGAAATCGCTCATAGCTTATAAAGAAGCGAGTGACATAGCGATGATAGAA
CTACCACCAACTCATCCAATTCTGTTTAGGATTAGCCCTCACTTTTCTGTCTTTATTACGAGATATTGAACAGTCTGA
TCGGGCATGTCGCTTAGCGAAAGCGGCATTGACGATGCAATCGCCGAGCTCGATACCTTGTGCGAGGAGAGTTACAAAG
ATTCCACGCTTATAATGCAGCTCCTCAGGGACAATCTCACCTTATGGACCTCGGATATGCAGGGCGATGGTGAAGGTGAA
CAGAAAGAGTTAACGCAGGATGTGGAAGATCAGGACGTATCGTAACTCTAGTAGCAGTGAGTGTTATTGCGCATACAAAT
GAGACACGAGAAGAAGAAAAGAAAAGAAAACAAACAACAACAACAACAACAACAACAACAACAACAACAACAACAACA
AAAA

>CL2144Contig1|3-hydroxyisobutyryl- mitochondrial-like

GTTCCGACCGTGTGTTAGAAAATCGTGCCACGTGCAAGTTATTTAACAACAAACGAATATAAAATCTCTGTGCAAGTATAG
TTAAACGTCGCGATTTGCATCGAATTAACCAAAATGATAAAAATTATAACTCACAATTCAGGCTTGCTCAGAGGGAAGGC
ATTCCTCCAAATTACCAGTTTGTTCAATGTCGGCGCAAGCTCCCAGTCCGAGTGAGCAACACGACGACGTATTGTTGCAAG
AGGCGGGAGACAAAGGGCTCATAGTCTTGAACCTCCCAAGCGTTGAACGCGCTCAATCTATCGATGGTCCAAAAAATT
CAGCCGACATTGAATAAATGGATAAAATCAAAGAGCGCCATAGTCTTGAAAGGATCCGGCGACAAGCCTTCTGCGCCGG
GGGTGACGTCAAGACGATTGTTCTGGCTCTGAACGAGCCGAGTAGAAGCCTTCTTGACAAGAATTCTTCAGACACGAAT
ACAAGCTGGATTATACTTTGGGAACATGTAAAAAGCCTATCGTGGCGATAATCCATGGAATAGTGATGGGTGGTGGCGTT
GGGTTATCCGTTTCATGGTAAATACCGAGTAGCAACGGAAAAACACACTTTTCGCGATGCCAGAACTGCCATAGGCTTG
CCCGATGTCGGTGCAGCTTATTTCTTACCTCGTCTACAGGGAAGCTCGGTCTGTACCTCGGCTCACGGGACACAGAT
TGAAAGGAATGACGTTCTACATGCTGGTATCGCGACACATTATGTTCCCGCGGAGAAAATAGGCGTTTGTGCGGAAGCC
CTCGTAGCCCTGGATCGCAAGACGTGCGCCAAATCTCGATAAATTTCAATCGAAAGATATCGACAAAAGTTTACCCT
CCAAGCGAATATGAAGCAGATCAATGAATGTTCTGTCAGCGAAGACTGTGGAAGAAATAATACGACAGGCTAAAGAA

>CL2146Contig1|chloride intracellular channel exc-4-like

AGTGTACCGTGAGCTTCCATCGTTTTCTGTCGTGAGAGAGAGAGATCGTAAAAGAAAAAGAGAAGGAAAGATCAACGA
CAAAGGTCGTGCGCATAACAGTTCTCGTTCCGAGCACTTGTGAGTGTTAAAGTTGCTCCGTTTAAAAAGTGCCTTT
ATTTCTACGCTTTTATAAGCGTATTTCCCATTTATAAACTCGCGAAAAGTTGTGCTTTTTCGGATTTCTTTGGACGCTTGTT
GTTGAAAAATGGCGGACGAGGGCCACGAGAATGGCACGAGCAACGGTGACGTGCCGAGATAGAATTATAATCAAGGCA
TCGACTATCGATGGCAGAAGGAAAGGCGCTGTCTTCTGCCAGGAGTACTTTATGGATTTGTACTTGCTAGCCGAGCT
AAAAACCATATCGCTCAAAGTCACAACGGTCGATATGCAAAAAACCTCCACCAGACTTTTCGTACGAATTTCCAGGCGACA
CCGCCACCGATTCTCATTGACAACGGCGAGTCGATCCTCGAGAACGAGAAAAATTGAGAGACACATCATGAAGAATATTC
CTGGTGGTCATAATCTTTTTGTACAGGACAAAGAAAGTTGCTACACTCGTGGAAAACCTTGTTCAGTAACTGAAGCTTCTG
CTGTTGAACGCAAAAGAAAAGGATAAGGATCCAAAATCGTCGTCTTTAATGGCACATCTTCGAAAAATCGACGAGCACCT
CGGTCGCAAGGCACGCGTTTTCTTACGGGCGACACGATGTGTTGTTTCGATTGCGAGCTGATGCCACGTCTCCAGCCAC
ATCAGGGTCGCTGGCAAATATTTTCGCGGAATTTGAGATTCGGGAGGTGCTCGTTAACCTCTGGCGATACATGCATCACAT
GTACAGACTCGACGCTTTCTCCAGAGCTGTCCAGCCGATCAGGACATAATCAATCACTACAAGTTGCAGCAGAGCATGA
AAATGAAGAAACACGAAGAGTTGGAGACGACCAACATTTACGACCAGCATCCCAATCGAAGTGAACGACGATTAGAGGCT
GTGCTTCGCGACTTCACGGTCCGCGACCTTGGGACATCGCGCTCTCACACAAACGTCCGCGAGCTTCGTTTAGTGAAA
ATAAAAAATACAAGAACGCTGAACAAGCGAGCACGTTGACGATCGAACAACCTCTGGAAGAAGGAGACAAAAAT

>CL214Contig1|inorganic pyrophosphatase-like

ACGAAATGGCGCACCACTCAACGATTTATTTGGCATACCGTATACCACTCAACGACCACCTACTGTTTCATAGCAATTAA
AACTAAAAACAATTAATACAAGGGGCAAATTTACTAGAGGTGATGTGATGACGCGAAGGTCATTTGAGATTGTTGGGAGG
ACTTTACACAGATGGCAGGATGGCGGTAGCGGCGTTGCACGTGTTCCGGCGATTCACTCTGAGAAGTGCTCGTTTCAAT
CGAGTTTAGTTGCTGTGCGAGGTATCAACGTAGCAAGGTGTACAACGAGTCGAGAAATAAAACGATTAATGTCTGATAC
AGCACGGTTGAAGTGGTGGCGCCAAACACCAAGGATACAACTTTATTTTAAAAATGATAATGGCTTCTGCTCACCCAT
GCACGACATTCCATTGTACGCGGATGAAGCCAACAAAGTTTTTAACATGGTGGTTCGAGGTGCCACGATGGACCAACGCCA
AGATGGAGATTAATCTGAAAGAGCCCCCTTAACCCTATAAAGCAAGATGTGAAAAAAGGGCAAAGTGCATTGCTCGCCAA
CTGCTTTCCTCATACGGATATATTTGGAACCTACGGAGCGTTGCCTCAGACTTGGGAAAATCCGGAAGTGTGGACGAAG
CGACGGGATTTCGAAAGGAGACAACGATCCAATAGACGCTCTCGAAATGGATACAGGGTAGCAAAAACGAGGTGAAGTAC
TGAAGGTCAAGTCTCGGAACTGTTGCATTATCGACGAGGCGAGACTGACTGGAAGATAATAGTAAATCGATGTTAAT
GACCCATTGGCCGAACAAATGAACGATATCAGCGATGTGAAAAAAGTCTATCCAGGCCTGCTGAAAGCCACGATCGAGTG
GTTCAAAATCTAACAAAATACCTGACGGCAAGCCAGAAAATCAATTCGATTACCGTNAACCAACGCGGACTTTGCTCT
GCACGTTA

>CL2155Contig2

AAGCGGGGGGAAGCATACATCTCATCGGATTCTCGGGCAGGACGTATCCTGAACGTGATTGAAGAAAAATTGAACGGTGT
CACTCCCACTGATGACTCGGACGACAAGTCAGAGCTTATCTACATGCCATTTCATGAATGCTTTTGATGTTTTTCATCGGGA
ACTCTTCAACGGAATTGAAGGAGGAGGGTTACAGGCTTCTGCAAGATATGATTTTGGAATTGAAATTCATGGATGATAAC
AAACCAGCAGGTTGGGAAGGTTACGATATGGACGCGATTAAAGACGCGTGGTGGATGAATTGCTTGAAAGATATTTTCGA
TAATTACACGGCTGAGAGGATTCTGATTGCTGCCATCAAAGTTGCCGAACATATAGACCTTCACTATTCGGGATTGGACA
GTGGAIAAAAAATGTGGTAGAACAAATTCACGCCACGTATGGAACGTTCACTTACGTTGGTGGCGCACCAAGAAAAATCTC
TCGTTCAACGATGGAGACACATTTCAACGCTATGGCTAAATGTACTTTAAATGTACAACCTGAAGTGCTTCTTAAT
TTGAATTGCAAGAAGAACTTCGCTGACGAAAAACACACAGGAGAGACTGTGAGCCGTTTGGGCAACGCTCAATCGG
CTATCCGAGTCGAAAAATCCGGTGAGTAAGTCGAGTACGAAATTTCCATCGTAAATAAAATGCTTCCGGTAGAAACAAGAC
CACGAAATTTCTATCGTAGACAATTCGTTGGACGTGGATGATAAAGATTTAGGAAATGACGATAACGGACAAGTGAAAAA
AGTGAGACTGGACCTCGATGCGGAACCGCGGAATTTGATTTGTACAAGATTGTTTCATTGATAAAATGGAATGTTGT
CAGCTCACATTGATCGTCTTCATGATATGTATCAAAGTATAACGAACCTCAATGATGATTATGTGTACCGAAGTAATTT
CCCGTTGACCGAACATCGAATTAC

>CL2163Contig1|aldehyde dehydrogenase mitochondrial-like

TTCTACGCCCAATATCAAGCCGCTCATCCGAATTACGCGCTCAGGATATATAAAGAAGAGCGAGGATTCGAGGCTTCCCT

mmc4.txt

GTTCGTCGAAAAACGTCCGAATAATCAGCTGATTTTTAGTATTTTTTGTTCCTGTAAGTTGACATTGATTTTCGACGAAA
TGGCAGACCCAAATCCACTCATTAAATACACACAGATTTTCATTAACAACGAATTCGTTGATTCTGTGAGTGGAAAAAAA
TTTCAAACGATAAAATCCAACCTAACGAGACTGTTATCGCTGAAATATCAGAAGGAGATAAGGCCGATGTCGATAAGGCAGT
GGCTGCAGCTAAAAAAGCATTTTTCGAGAGGATCAACATGGCGGCAAATGGATGCATCCGCCAGAGGTTCTCTGATCAACA
AGTTGGCCGATCTTATCGAACGTGATCACGAATACATTGCCAACATCGAGACCCTTGACAATGGAAAAACTTTTTGCCAGT
TCCCTTGGCGATATAGAGGCCAGTGTAGCAACTTTGCGATATTATGCTGGCTGGTGCAGATAAAATACATGGGAATACAAT
TCCGACTGATGGAGGAAATTTGTCGATGACTATTAAGGAACCCGTTGGCGTTGTTGGACAAATAATTCCATGGAATTATC
CCTTAATGATGCTGTCTGGAAATGGGACCTGCACCTGCAGCCGGATGTACGATAGTTTTGAAACCAGCTGAACAACT
CCCCCAGTGCACCTTTACGTTGCATCCCTTTGTTAAGGAAGCTGGATTCCCACCAGGTGTGATCAACGTTGTTCTGGATA
TGGACCGACTGCTGGTGTGCACTTGTGAACATCCTGATGTTTCGCAAAATTGCTTTCACTGGTTCGACCGAGGTGGTC
ATAAAATTATGGAAGCTTCAGCGAAGAGTAATTTGAAGCGAGTAACCTGAGGCTCGGTGGCAAGAGTCCGATCGTCATT
TTCGACGACGCCGATGTGACCGA

>CL2165Contig1|1-cys peroxiredoxin

GTCCTCTCATTCCTCTTTTCAATTACGTAGATAAAAGCCATTACATTATACGATAGAAAACAAAGCAATCCGTATC
AAGTGCTCCATCGACAAGGTGCTCTGGCTCGTTCTATTTGTATTTTTTTTTCATATGTCGCGTTGTACGCGTAAACAGT
CGTGTTTTTCGCCGCCGTAATTTTCGAGTCAGACAATTGCCAAATTCATCCGACTGCATATAAATTATTAATCATG
GTTTTACTCGCGCAAACCTTTCCCAAATTTCCAAGCTTCGACGAATGTTGGAGTGATCGATTTTCACGAATGGCTCAACAA
TTCCTGGGCAATATTGTTTTCTCATCCGAACGACTTTACACCAGTTTGACCACAGAATTAGCTAGAGTTGTCAAGCTGA
TGCCAGAGTTCAAAAAATTAGGTGTGAAAACAATTGCCATTTCTTGCAACTCCCTCGATTCCCACATCCAGTGGATTGA
GGACATAAAAAAGTTATGCCGTTGCCACAATGGATGGATTTCCTATCCGATTATTGAAGACGAGTCAAGAATCATAGCGA
CGCAGCTTGGGATGTTGGATCCTGACGAATTGGACAAAGATGGAATTCATTGGCTGCTAGAGCCGTGTTTGTATCGAT
CCCAAGAAAAAATGAGACTGATGATTCTGTACCCAGCCACAACGGGCAGGAACCTTTGAAGAAATTATAAGGGCCATTGA
ATCTCTCCAGTTGACTGATGCTTACAAAGTCGCAACTCCCCTGGACTGGAAGAAAGGGGACGACGTGATGGTGCATCCGG
CAATGTCGAATGACGAGGCCGCAAAAGATGTTACCTCGAACATAAAAACTCTGAATTTGCCATCGGGAAAGCAGTACAT
GAGATTGTTGCAACAACCGAGGCCTGGACCAAAAAACATGAAAAATAAAAAAGTACAAATTTATACTCGAAATTTCT
TCCACTCGCATTTTCGCCACAATTGTCACTATTTTTTCAAACGTTT

>CL216Contig1|t-complex protein 1 subunit

ATTGTCTTGGAGTGAATTTCTTGGGCGATACATGTGACAAAGTTTTTCATCCTCACAAAAAATGGCTTTACACGTACCAAA
AGCGCCAGGAATGGCACAATGATGAAGGAAGGATCACGATACTACTCGGGTCTGGAAGAAGCTGTTTACAGAAACATTG
CCGCTTGCAACAATTTGCACATACGGTGCGCACTGCTTACGGCCCAAATGGAATGAACAAGATGGTCATAAACCATCTG
GAAAAATTGTTGTTACCAGCGACGCTGCGACCATTTATAAGAAGCTGGAAGTGAACATCCTGCTGCAAACTCATGGT
ACTCGCTTCGGAAATGCAAGAGGCTGAAGTTGGCGATGGAACAAATTTCTCATCATTTTTGCTGGAGCTTTGCTCGAAG
CCGCCGAAGAACTTTTGCCTTTGGGAATTACAACCTCCGAGATCGTGGAAGGGTACGAGGCTGCTTTGGAGAAAGCATTG
GAAGTACTGCCGAGTTTGGTTGTATACGAAGTGAAGACATAAGAAACGTGGATGAAGTAAAAAGAGGAATCAGGACATC
GATAATGAGCAAGCAGTACGGAAATGAGGATTTCTTAGCCGAGCTTGTGAGTCGGTCATGTGTATCGATATTGCCGGAGA
AAACAACATTCAATGTGGACAACGTACGAGTGACGAAGATCCTCGGTGCGGGTTTACAATCCTCGCAGATTATTCAGGGA
ATGGTATTCAAGAGACACGTGAGGGCGACGTTACCAAGAAAAACGAGCGCAAAAAATCGCAATTTTACGTTGTCGGTTGA
CATAACACAAACGGAACGGAAGGAACTGTCTTGATAAAAAACAGCTGACGAATTAATGAAATTTTACGAGGCGAGGAAT
CGCTTTTGGAGAGTCAGATTCAATCGATCGCCAACACCGGAGCGACGGTGGTTGTTCCGGCGGTAAATTCGGTGACATGG
CGCTTCACTACATGAACAAATTCGGGCTGATGGCTGTACGAATTCGAGTAAATTCGACATCAGACGTCTGTGCAAAGCG
GTCGGCGGCACAGCTCTCTCTAAATTTGATTCCACCGACGAGCGAGGAACCTCGGTTATGCCGATTCTGTGCACACTGCTGA
GCTCGGCGACACCGCAGTCGTTGTTTTCGATCTCGAGAGCAAAGAAAGTCGCATCAGCACTATCGTCATTCTGTGGCTCGA
CCGAAAACTTCATGGACGACATCGAACGCTCTATCGACGACGGTGTCAACACCTTCAAAGGCATGTCTCGCGATGGACGA
TTCTTACCTTGGTCCGGACCGACCGAAGTCGAATTTGGCCGCAAAATTTCCGAATACGCCGACACTCTGCCTGGCTTTGGA
CCAATACGCCGTGAGAAAAATTCGCAACTGCTCTCGAATCATTCCCTAAAATCTCGCTGAAAAACAGCGGCAACAAAGCCT
CCGAACTTTTATCGAACTCTATGCAGCTCACAAGGAAGGCAAAAAAATTTATGGATTCAATATCGACGGAACCTGGAGC
AGCGATGATCGACGCGAACGAGGCACAGATAATCGATGCTTTATCACAAAATCATGGGGTCTCAAGTACGCCGTTGGTG
CAGCTTGTACGATTCTCAAGTTCGATCAAATAATAATGGCGAAACGAGCTGGAGGGCCAAAACCGCTGCTGGCAATGCC
AACAGTGACGACGAGTCGTAACGCTACAGAAATTTACTTACTTCTCACCACACCGCTACATTTTTTATGAACCTCC
AATATATTTTACAAGCTTGAGACCTTATTTTTTCTCGCTCGCTGATAAACAGTCAAGTTCTCGCAACATCGTTAAGTTTC
TTACGAACGAACTCTAATTTGTACCGTTCTTCATCTTTTATTAAATAATAAAAAACAAAAACAAATTCATT

>CL2171Contig1|pyruvate kinase

GGAGGGAAGGTGAAATAGTGTGGGGTGACCTTTCTCGCGTCCTCAAACGTCAGTTTCATCACGAGCTGCTATTCGTAAG
AGCGTTATAAGTGCATCCTTAATATTTTCGTGTGTTGAGCATTTGAAAAGCCAGAGAGAAGGGAATAATTGATTTTTTCGG
GACAAAATAACGAAAGATGGCAGGTACACCGAACACGGTAGCGTTGAACGCGCAAAACCAACTGGACCATATTTGCGCTC
TGGACGTTGATTCTCACGCGTCTTTGTCCGTTTGTCCGTTATTATTTGTACCATTTGGACCAGCATCGAGATCGGTTGA
AATGCTCGAGAAAATGATTGAAACGGGCATGAACATCGCTCGAATGAATTTCTCATGGTTCCACGAGTATCACGCTG
AAACAATCGCCAATGTTGCGCTGGCACAACAAAAATCTTTAGCTCGCAACAAATCAACGTTCTGTGGCCATTGCTCTT
GACACGAAAGTCCCGAAATTCGAACCGGGCTCCTCGAGGGTGGTGGAGCTGCAGAAGTTGAACTTGTGAAGGGTCAAGC
CTTTAAGCTCACGACGGACAAAGCTGTGATGGAGAAAGGAAATGCCGAAGCTGTATGGTGCATATGAAACATCTCGA
AAGTTTTGAAAGTCGGCAACCGCTGTTCTGTCGATGAGGCTTATTTCTTCTTATCTGTAACACCGTCAATTTTATGACCTCC
ATTATGTGCACCGTCGAGAACGGTGGCACTTTGGGTTCTCGCAAAGGCGTCAATCTTCCGGTGTTCGGTGCATCTTCC
AGCGGTATCCGAGAAGGACAAATCGGATTTGCAGTTCCGTGTCGATCAAGAGGTCGACATGATATTTGCTTCGTTCTTCC
GTAACGCTCGGCGCTCACCGAAATTCGTGGTATTCTCGGAGACAAAGGAAAAAATATAAAAAATCAATTTGAAAATCG
AGAATCAAAAAGGGATGACGAATCTCGATGAAATCATCGAAGCCTCCGATGGTATAATGGTCGCTCGAGGCGATCTTGGC
ATTGAAATCCACCGAGAAAGTAATTTCTCGCACT

>CL2180Contig1|venom carboxylesterase-6-like

ATCTGTACCCAGCGAAATATCTACACCCATCAGGAGGAAATCGTTGGCATCGAAGATTGCCTCTATCTCAATGTTTACAC

mmc4.txt

TCCGGAATTAGGATCGAATGAGATTGATGGATCTCAAACGAATTACCCGGTGATGATCTGGTTCATGGCGGTGGATGGG
 TCACCGGAGCTGGCCATTCCGAATTCTACGGTCCAAAGTTTCTTCGATCATGAGGTTATCTTGGTAACCGTGAATTTT
 AGACTCGGCCCCGTTGGGCTTCTGAGCACCGAGGATCTCGTGCTCCTGGTAATCAGGGAATGAAAGATCAGGCGCAATC
 CATCAGATGGGTACATGAAAATATCGTTCATTTGGTGGTGATCCTAATCGCGTAACAATCTTTGGCGAAAGCGCTGGTG
 GAGCGAGTGTCCATTACCACATGATGAGTCCCCTTTTCGAAGGTCTTTCCATCGTGGAATCTCACAAAGTGGCACAGTC
 TTATGCCCTGGGTAAGTACGACAGACAGGAATCGCTAAGAATCAAGCGAACAACTTGGCAAACCTTCTCGATTGTCCAAC
 TGCCACATCCACCGAGCTTATCGAATGCCTGAAGAAAAAGACGCCACCGACATCATCGGCACTGATCGGGCTTTTCAGG
 TCTTTGATTATTGCCCAATGATTCCATTAGACCTGTCTCGAACCCGATCATCCAGGTGCATTTTTGAAAGAGGAACCA
 GCACAGTCTCTGAAATCTGGAACTTGGCTGACATTCATGGATGACAGGCATTACGTCCACAGGGGTCAATTCGTGC
 TGCAGGAATCTACGGACTCAAGGACAAAGGACTCGACAACTACTCGATAAAAAGTTTCATGGAACCTGCTCCAGTCAGTC
 TACTCTACGAAGACACGTGTCTGATCAGCTCAGGAATGAAGTGAACGAAAAAAATTCGCCAATTTTATTTTCGGTGAATA
 AAAAAATCGAACGAAACCACGAGATCCAATCTCATTGACTTGTACACAGACGCGTTGGTTTTATATCGCGGTGACAATG
 CTGTGAGAGACCATCTCGAGGCACTCAGTTCACCGGTTTATTATTACTATTTTCGTCTGACAGAGGAAGTTCCTCGTTTCAG
 CAAATATTCCGCACT

>CL2187contig1|probable phospholipid hydroperoxide glutathione peroxidase-like
 ACAGTTTGGCTCGACACTTGGAGCGCGTACCGCAGAGTCCGTAGTCCGTTCTGCTGCTTCAGTACCGGCACAATCGC
 CGAACCGGAAGGAGCAGTGTGCACTCATCTCCGCTGCCCGAATCGGAAATTCGCCGACTCATCGTGCGGCATTGTTTTT
 CATCGTTTTTCAACTGATTGAGAACTTCATCGAATTTTTCTGTTATGAGCGGAAACCAGGATTACAAATCGGCCAAGTCG
 ATTTACGACTTTGAAGCAACCTCGATAAAGGGCGATGTCGTACCTTTGTCAAATTACAAAGGCCACGTTTGTGTTGATCGT
 TAATGTGGCATGAAATCGGCTCTCACAGCCACTAATTACAAGGAGCTTAATGAGCTTTTCGACAAATATGAGAATCCCA
 AAGTTTTGAGAATCTGGCTTTTCCGTGCAATCAATCAACGGCCAAGAGCCAGGTGGATCGGAGGACATTTGCAGTTTC
 GCTGATCGTCAGAAGTCAAGTTCGACCTTTTCGAGAAGATCGACGTCAACGGCGATAGCGCGCATCCCTTATGGAATA
 TTTGAAAAAGGAGCAAGTTTCGATTCTCGGCAACTTTATCAAATGGAATTTACCAAATTCATCGTTGACAAAGAGGGAA
 AAGTTGTGAGCGTCATGGACCTGACGTAGATCCTAGCAAACCTGACTTCCCATCTCGAGAAGTACTTTTAAGTCCAGCGA
 ATCATCATTAAATTATCCACGAGATTATATCGCGCAGCCTTTTCGCGTAAATGGACCAAATTTTTTGTTCATTTTCTT
 TCGACAAACCAAATTTGAATATTTTTTCCAAAAGACGAAAAAGATTTTCATTCTCCAGCATAAATTACAATACAAAAGTAAAT
 TCTATAGTTGTTAATCGCTTTTTGTAGTAGCGAGTTAATTAGTGAGCAGATTGAGGGGAACAATGTAATTCCTTGATAG
 TATCAATAAAATATTTT

>CL219-bisContig1|succinyl- ligase
 AGTCAGATGCTGGGCAAATTTGCTCATCACCACAAACAAACCGCGAAGGTGGAAGAATATGCAACGCTGTGATGGTGGCTCA
 GAGAATGTTTCTCGAAAAGAATATTATCTTGCTGTTATGATGGAGCGTGCCTTTGGTGGGCTGTGATAATTGCTTCGA
 GTCGAAGGGAGGCGTTAACATCGAAGAGGTAGCGGCGACCAATCCAACCGCGATAATGTACGATCCGATCGACATAACGAA
 AGGAATAACGAAAGAGCAAGCAGAAAGAATCGCCGTTAAGCTCGGATTGGAACCGTCAAGGATTATATATCGCAAATAA
 TTCTGAGCCTCTATGCCATGTTCTGAAGAAAGACGCTCTTTTGTGGAAGTGAATCCATTGGCCGAGGATATCAAAGGA
 AATTAATTTGCCCCTGACTGCAATGCCGTTTCGACGACAACGCCGAATTCGACAGAAAGAATTGTTTCGCCCTTCGGGA
 CTGGACGCAAGAAGATCCGAAAGAGGTGCAAGCTGCCAAGTTCGATCTCAACTACATCGCTCTCGACGGCAACATCGGTT
 GTATGGTAAACGGCGCTGGTCTGGCTATGGCTACCATTGGACATAATTAAGTGCACGGTGGTGAACCGCAATTTCTCT
 GACGTTGGTGGCGCGCAACCAAGATGCTGTCAAGGAAGCTTTCAAATCATAACTTCGGATCCCGGGTACATGCTCT
 GCTCGTCAATATTTTTCGGTGGAAATCATGCGATGCGATGTTATCGCCGAGGGAATCATCGCTGCGACTAAAGAAGTTCGACC
 TCAAGATACCCGTTGTTGTTAGACTACAGGGAACCAACGTTGATGAGGCGAAAGCGCTTGTGCGAACGCCGACTGAAG
 ATCGTGCCGCTGGACGATTTGGACGAAGCGGCGCGGGTGGCGGTGAAGCTTTTCGACCATTTGATAAATTAGCCCAATCTGC
 CAACCTTAGTGTCAACTTTGAGATTCTCCGATCTCATAGATCTCCGCGTCTAGATTCAAAGTAAATTGAAGACAAAGAA
 AGAAATTAAGGTAAACAGAGAAAAAGATAAGAAAAATGGCGTATGAATATTAGATAGCCGACGAGCAGCAGCGCGGAG
 CGAGAGCTTTTCGCTCTAAATCTCAAGAAATACCCCACTGACGTAAAGCAAAAGAGCCTCGTTTCGTCAAACTTCGATTAAAT
 CTTCGATCCGATCGATAAATCGTGTTTTTTTCGCGCTTTTCGTTTCGAAAGACTCTTAGCGGCGTTTTTCGACTCAATCTCT
 CTCTTCTTTCTCTATCTGTCTGTAAACATTAACGCTACGAAATGTATTTCTCGGCTGTTGGGCGAGCCCAGAATCGCGA
 GACGATCAAGAAACCATGAAAAATTAATGGAACGAAGAAAAAGTTAAAGATTTCCCAAGAGGAAAGGAAGTTTGCAATCTC
 AGGCTGGTTATATGATTATATAAATTTGTATACGGTTATATAATTTGTATATTTAACATTTAGTGAATGTTCTCGGCGG
 TTAACCTCGGAGAAACAAAAAGCATACAGGTAATTTGTTGAAGAATAAAAAAGTATATTCGCTGGGCTGCTTGAA
 ACTGAGAGACAAAAACAAACAGAAACGCGCGCAGCTTAAAGTTGAAGAAAAAGAAAAATGATAATTTGTTAAGATACACA
 GATTTATTTTTATCCCGTCTCATAAAACAAAGAAACATGTTGAAATGGCTGTTCTGCTCGAGGCCACCGTCATTAGTA
 TTAACGAAATTTATTTATAAATATTTAAGATTTTTTCTCCGCTAATTTTCTTGATACCTTTTGAATATTACCAACT
 ACTCGGACCCGAGTTTCTTCGATCATAACCATTTTGAACAACCTCAGAATGAGGAAGCGAACGAATAAATGAGCAGCAG
 AGTTTACCGTACATTTTATTTAATGCTACAACACATACAGACAAATTTAAGTCACGGAACAAGCCTGTCTATGTATC
 ATAAAAATCTTATATACAAATCTGTATACATAAATTTATTTTACATAAATTTAGTTCTTTTATTTTCATTTTTTATCT

>CL2190-bisContig1|40s ribosomal protein s8-like
 ATTTTCACGCCGGAAGCCCGACGCGATCTTGTGACTGCCTAGTTTGTGTTCTTTTAGACCTGTGACACGATGGGTAT
 CTCACGCGACCACTGGCATAAAAGACGTGCCACCGGAGGCAAAAGGAAGCCTCTTCGTAAGAAGAGGAAGTTTCGAGTTAG
 GACGTCCCGCTGCCAACACCAAACTCGGACCCCAACGTATCCACACCGTTTCGTACACGCGGAGGAAACAAGAAGTACAGA
 GCTCTGCGTCTCGACACCGGCAACTTTTCGTGGGTTTCGGAATGCTCAACCCGCAAACTCGTATAATCGATGTCTGTTT
 CAACGCTTCGAACAACGAGTTGGTTCAGAACCAAGACCCTCGTTAAAAACGCCATAGTGACGATGACATGACCTTTCA
 GACATGGTACGAGAGTCACTACATTTCTCTTTGGGCGCAACCGTGGAGCGAAATTTGTCGAGGCTGAAGAAGAAACC
 CTGAACAAGAAAAAGATCCAAGAAAACCGAAGCCAAATACAAGGCCGACAACGATTTGCCAAAGTTGAACAAGCTCTGGA
 AGAACAATTCGCGACCGGTGCGTTTTAGCCTGCGTGCAGCCGCTCCCGACAATGCGGCAGAGCTGACGGATACATTC
 TCGAAGGCAAGAACTCGAGTTCTACATGAGGAAAAATCAAGAGCAAAAAAGGCGAAGTAAACTTTGTAATCGTACGAGTG
 AATAAAAAATAAAAAATAAAAAACAGTAATTCGAACAAGTTTCGA

>CL2194contig1|sorting nexin-2-like
 GAGTGGAGCAGGTGTCATGAGATTGTTCAACAAAGTTGGAGAGACCGTGAACAAATCACGTACAAATGGACGAAATG

mmc4.txt

ATTCGTGGTTCGAGGAGAAAAACGCAGCAAATCGAATTCGCTCGATTGCCAATTGAGAGCCTTGCAATTCGCGGGTCGAAAC
TCTGACGAATCAGAGAAGAGAATTGGCCAAATTGTACCGGAGCAACCGCGAGAGCGATCGCTGTTCTCGGGCATGGAGAA
GTCGGCGTTTTCTCTCGGGCGAGCTCTCGCCAAATTGGCTGAAACTTTGGAAAAAGTTGAGGCTGTCCGACGAGCTCAGAG
CAACAGTGATCTTTACCAATTTGGCGAAATGCTCAGAGACTACGTGGCTCTCATCGGAGCCATCAAGGACGTGTTTCACG
AGCGCGTAAAAGTCTTCCAAAACCTGGCAACACGCCCAAATGATGTTGAACAAGAAACGCGAGCAAAAAGGTGCGATTGGAG
CAATCGGGCCGAAGCGACAAGACAGGCCAAGCTGCGACGGAGGTCATTGAATGGGAAGCAAAAAGTGGAGAGAGGTCAAGA
AGAATTTGACAATATATCAAAAAATGATAAAGAAAGAAGTGGAGCGTTTCGAACTTGACGAGTGGACGATTTCAAGAAGC
AGCTGACCGAATATTTGGAAGTAATGCTCCAACATCAGAACCAGCTGATCAAACACTGGGAAAGTTTTTATCCGGAAGCT
CGAGCTGTCTGATATAAAATTACGAATTTATAGAAAATATATAAAATATAAAATATTATACATACTTATATATATATACCTCTCA
AAATATATATATATATACACAGTTTCGTTCTTTTTTTCATCTTATTATGCATATTATTGGATTATTAGTGCACCTTTGTAA
TAAGCAATATTGTTGAATATTATTATCGAAATGCA

>CL2202contig1|serine protease inhibitor 3 4-like

TTCGTATCTCCGAAGGTGGACATCCGTCCCGAATTTATTGAAACCGTGACGAAAACCTTTCGTACTCCACTGCGGAGGCT
CGACTTCGAAGAAGCCGAAGACAGAATTTTCATACAGCAATTTGGAGCGAGGAAAGGCGCAAAGCCTTGTCAACGCGG
AGACGAGCATGGCTTTTCGTCAACGGGATTCGGTACAAGGGGCGAATGGGTTAGAAAATTTGACGTGAGTACACATTA
TTCTTCACATACTGACGAAGCAGGCAACGAAATAACGGTCACCTCGATGCATATGCGAGGATACTTCTCCATGGATTCC
ATCCGAAAATCAACGCCAACTTTGTCCAACCTCCATTGAAGAGCCAAGATGGTCAGAAACCTATGAGCGTGTTTCGTCATA
ATCCCGACTTACGTCCACAAGTCTCTCTTTGTTTCGACGTTTCGCATCACATGTCAAACATCAGCATCGAAGAGCTCGA
GTCATACGGAATCGCAGCCAATATTTTCGTGACATACCAAACTGAAAATCGAAAGTACAATCGATGTGATGACGCA
TAGAGAGTATGATACCGGACACTCGATTTTCAATCAGACAACAAAGTTGAGGCACATTGCCAAGACTCCTGACCTCCTT
GGTGACAAATTTGTAACAAGAACTTTTCATAGAAATCAATGAAGATGGCGTCGAAGCTATGACGAAAGATAGTTCCCGGA
TCCTGGTCTGTACCTGCTTCTGCAACACCACGAGGCTGGGATCCCCAGGCTTTCTACCTGTTGCTCGTCGCGGGACGCG
ACAATCCTCAGATTATCTTCTCTGGACGCGCGTACCGTTAAACAGAAAACGCATTTTCCCATTTCCTACCGAGCCCTAAC
ACGATGAGAGCGGAAGGAAATAAATTCATTTTCGATAAAACACCGATCGTCATTTGTCCGTGGCATTATGAAAAACAAGTG
CACTCCATTTTGTCAAGAATCTCGAAAGATGCGAATCTTTCTTTGCAAAATGTTTTTATCCTTATCGTGTTTACTCAATT
AATTACAAATATCGATGGAATTCACGGTGATGGAATATCCCTGGTAGATTAAATGTAACATTTCAAGAAGATCCTGGTG
CAACCGGAAAAATACAAATAAAT

>CL2203contig1|fatty acid binding protein

GATATCCGGCAATCGGGCTCGATCAGTTTTAATCCGTGCGAAAGAGAGAGGGATAAAAAAGCGACAGCGGAAGAGAC
AGACAGATGAAACGAAAGGAAATGAAAATAATAATAATAATAAAAAACGAAACTGCTTCATCGTGAAAGAGTTCGTAGT
ATAAATCATTATTACAATTAACAATAAAGCAAAAAACAACACCAAGAACTTAACGTTTTCTATATTTTTAATTTAT
ATGTCCATTATCTCATTGACACACAAAACAACAGCATGAGAATCGTTTGACCTAAACGAGAGTTAATAACGAGACGCCT
AATATTTATTTTTATTTTGTTCCTAAACTTCAAAGAGTTCAGTACATAAAGAAAAATTTCTTAAATCATACAAAGAACGAGA
AAATTAATTTTTGAAAAATATGTGCAACCCTACTATTATGATATTGAATAAAATACCGTCGTATGTACAGCTCTTTAAT
GATTTTCATGTGATACCTTGATTCAATAAATTTACAAAGTGAAAGAAAAAAATGAAAAATTATCGATAAAACAGCCTCGC
GAGGGAGATCGAAAGGGGGATGGGGGTGAAATGATATTTCAAAGATTGTTGAAAAAAACCTTTATTCGATACGTGCGTAG
AAAAAAGTAAGAAAGAAATCATTTTCATTGAACTTTTCCAAGGATTTTCTTCTTAGACTCTGGTGTAGTGACGAACAGC
CTTGACGCCCGTTTTTTTGTCCGACAAGTGCACAGTCACACCGGCGTCGGTGAACCTCGTACACACGAACGATTGTTGC
CATCGGGCAAATCGGTTTCGGTCGTGAGTTTGTACCATCTCGGCATGTACGCTCTTGAGTACAGCTCCATGAGGCATC
GTCTCGTCATAAGGAACTCCGAGTTTGAAGGTGGTGTGGCAGTTTTTCCCTCGTTGGTGACGGTGATAACGAATTCATC
GCCTTTTTTCGACGACCTCGAAAGTCGTTTTGCTGCTAGCGAAAGCCTTGGCTGCTTCGGCTTGAGCAGCACCACCGACGG
TTTTCAAATATTCTTCGAAACCCCTCGCTCTTAACGTGCTCGTATTTTCCCACAACCTTGACCATTTGACTAGCGTTGTTT
TTTCAAATTTCTTTGATAAAAGAAAGAACGGAGGAGGAAAGATTCCGCACGAATAACCGAACGTCGATGTGTCTCGAAAA
TCGTTCAACAACGAATGAAGC

>CL2220contig1|probable methylmalonate-semialdehyde dehydrogenase

GTTGTATGGCATTATCGGTTGCGATATTTGTCCGTAAATCGAAAGAATGGATACCCGAATTGGTGGAGGCTGCAAAAAGG
CTCAAAGTGAATGCCGGTCATGTTCTCTGGAACGGATCTTGGTCCCGTTATTTCCGCCACAATCGAAAAAACGAATCTGCGA
TCTCATCGAATCGGGAGTTACGATGGCGCTCGTTTGGATCTCGATGGTCGGGGCATTGTGTTCTCTGGTTATGAAAACG
GCAACTTCGTTGGCCCTACTGTTCTGACGTCAAAGCAACATGAAATGTTATACCGACAGAGATTTTGGCCCTGTG
CTCGTTTGCATGTTTCGCCAATACCTTTGACGAAGCGATAGAGCTTATCAATAAAAGCAAATATGGCAACGGAACCTGCGAT
CTTTACGAACAACGGCGCAACTGCTAGAAGCTTTACAAATAAAATTTGAGGCTGGTCAAGTTGGTATAAATGTACCGATCC
CGGTCCCTCTTCCGATGTTTCAGCTTCACTGGAACAAAGGCTCATTCTCGGTGATAATCACTTTTATGGAAAATATGGA
ATCAATTTCCACACGCAAAACAAAACCATCACGCAACTCTGGAGATCCGGAGACGCCACAGAAATCGATTCTCCACGGC
TATGCCCAGATGCAATAAATTAGCGTAGATTTGTGTTTCAGGGAAAGCAAAAAAATCATTTTTGACATTGAAGTCATCGT
TCTATGCGTTAAAAATAAAAAATTTATTGATGCAGCATCAACAGCTTAAGTGATAAAAAACGAAACAAGCTTTCCACGCAA
TTTTCAATTTTCTACGGATTTTTCGAAAATCTTTCACCCAACGAAATAATACGAANAGGCTAAAAATTCAAACAAGCGAC
GCTAGGTCTCGCTGTATGAATTATTCTCAACAAAAACTTTTC

>CL2221contig1|protein transport protein sec31a

GAATCTAAGGAAATACCGATCGACGGTAATATTGCTGCGGTGTTGTGCAATTACGCGGAGATATTATCAGCCGAAGGAAA
TTTGGAAGCAGCTCTAAGTTATTTGGGCAACAGTCAAGAAGAGAGAATCAATGTTGCGCGAGCGTCTTTGCACAGCTC
TGGGATACACGACGAGCAGCAGCAGCAAACTGCTGCCAGAGCCCCGGTAGCGCAAAATTAACGAGCAGAAT
GCCCCGAGGAAATCTTACGACAACAACGTCTACGGAGGACAAGTTACTGGCCAGAGTTGGAACACCGCACCGATCAAAAG
TTCTTACGGTAATTCAGTGGCGAATGTCCAACAATCGCCGAATATCGGACTGACGCCGATTGAGCAACAGCCAACGGTCC
AGGATCAATATTCGGGAATGAATCTTACGGACAAGTCCCCGCTCAAGTTCCACCTCCGTTGCCCACTACAGCGACGAGC
CTCGGTGGCTCGAGACCTTCCAGCGTCGGGCCTCAATCTCGATCCAAATATATTCTCGATCCTTCGGTCAAATCAACGCC
TTCTACCCCGCTATCAAAATCAAACTTCCATGTACAATCCCGTGTCCCGTCGCCGCTTATCCATCCCAGACCTCGT
ACCAACCTCCAGCTCCGCTCCCGTCCCGCTACCCCAATCAACCCCAAAATACCATGTACAACCTCTCGAGAATGAT
CCCTTCAAAAAACAACACGACGAACATTATGACTCCTGCTGTTCCGACTCCACAATTACCACCGACTCAGTCTCAACTCTA

mmc4.txt

CGATCCCCATCGGTCTCAACCTTCTCAGCCGACACAAAATTATAACGAGAATGTTTTATCAACCTGCACCACAACCGTCCG
GATGGAACGATCCGCTGTTGGAAAAGCCAGCAGAGCTCAAGCGAAAACGGAATTCTCTCACAAAATCCCATTGTGCAT
CCCCTGACAGGGGCGGTGCCACAACCGGATTATAACAGCTGCTCCTCAGGATCTAGTTTTATCGTGATCCACAAGTCCGT
ATAACCCGCGAGCAATACAATCAAACGATTCCACAACAAGGAATGCAATTCAATAAACCATACGAAGCCCT

>CL2229contig1|mrna export

AAATTTCTGGGACACACGCAGCCCCAACCCCTATGCTCACTATCAATTTACCTGAAAGATGTTACTGCGCCGATGTGGATTA
TCCAATGGCGGTAGTTGGCACGGCTGGTCGGGGTTTGATAATTTATCAGCTGGAAGGAACACCGCAAGAGTTTAAGCGCG
TGGAGTCGCCCTTGAAGTATCAACACCGTTGCGTGGCGATATTTCTGACAAAAAGAAAGTGCCGAACGGTTACGCTCTA
GGGAGCGTGGAAGGGGCGGTGGCGATTACGTACGTGAATCCGCCGAACCCGAAAGACAATTTACCTTCAAGTGTCATCG
TTCGAACGGTGCGCCGAACGGCTACCAAGACATTTACGCGGTCAACGACATCGCGTTCCACCCGGTGACGGGACCCTCG
CGACCGTTGGCAGCGACGGGACTTTTCACTTTTTGGGACAAAGACGCTCGCACCAAGCTGAAACCTTCGGAGCCGATGGAA
CAGCCCATCAGCTGTTGCTGCTTCAATCACAACGGCCAAATATTCGCTTACACAGTTTTCTTACGATTGGTCCAAAGGTCA
CGAGTTCTACAACCCGATGAAGAAGAATTACATTTTCTTGCATCTCTGCTACGAGGAGCTCAAGCCAAGGAGCAGCTCCT
AAACGTGCTAAATCAAGCAAAATTCGACAAAACGACAAATGCATGAACAGAAGCAACAAAACGATTCCGAGGCGATTT
CATTCACGCGCCATTTTCTCTACTTTTCTGTATTTCGGCGATCAACTTAGTCTCCCCAAATATAATCATCGAGGCATCACC
ACGTTTTTGTACTAAAATGTACAATCCCTCAACATTAATCTCAATGACACTTTGTACAGAATCCAGATTTATCCTTTTCG
ATCGAACGCTCCGGTCCAACGATTCAATGTAAATATATTACGAACTATTAACCTTTTTTTTTATCTTCGATAATTCACCTA
TTTTCA

>CL2241contig1|vacuolar protein sorting-associated protein vta1-like protein

ATTCAACGTTCAACCATTACAGAGTTATTTAACCGTGACGCAATAATCACTGCAGTATCATTGCTCGCTGCAGAGCC
ATAATATACGCGTCAAAAAAAGTGACTCCACATCGTAATCTGTCTGATAAATTTATAATTTATTAACCAAGATCA
CTACGGAATCATACTTTTGAACGATGCCTGGGCCAGATTTACCTGAAGTACCCGCTCCACTCAAAGGAATACAGCATT
TTTGAATAATGCATCCGAACATGATCAACGTGATCCGGTTGTCTAGTTATTGGGCGCGATTGTATTGCTGCAACCGGGCC
TGAAAAATCTCCACGAAAACCCAGCAGAGAATAATTTTTTGTCAAATTTGATGGACTGGTTGGAAGCTACAAAAAATC
GTTGACCGACAACGAAGCAATAACTAACGAAGTAGCTGCGCAGGCGCACTTGAAAAATGGGCTCTCAAGCTGTTTTTAT
ATGCCGACAAGAAGCATAGAGAAGGAACTTTCAACAAAAGCGTTATTCAAAGTTTTTATACCCCGCGACTTCTCTATGAC
GTTCTTACAACTTTTGGCGAACTCACGGAAGAAGCAGTACAGAATAGAAAGTATGCCAAATGGAAGGCAGCCTATATTCA
CAATTGTCTTAAAAAACGGAGAGACTCCTGTTCTGACCCATGAAAACAGAGGGCGAGGACGACGATGACAATCCAAC
TTTGATGTGCGGCCCGGACCGCTCCTTCCCAACCGACTCCACCACCGAATACCCGACGTTACGGATTTCCATCAGTTCC
AGGCAGCACGACCCCTCAACCATCTGGAAACTCACCTTATCCCGGTCTCCCTATGCCAGTTACTCCGAATTTTACAATC
CTACGCCAACGCCAACCAAGCCCAAGCGTTCCATCGGATTTTCGACAACACCAAGTTACAGGAGTGCGACCCCTGAATGC
GGAGCAGATGCTAAAGCCGAAAAATACAATAAAA

>CL2263contig1|probable elongation factor mitochondrial

AGAATGGGCGCGAAACCTTATCGCGTTCTTCATCAAATGAGAACCAAAATGCATCACAATGCTGCGTTCTTCAAATTC
TATCGGCCTGGAAGCCGACACCAAGGGAATCGTCGATCTCATCAGCCAAACTGCTCTTTACTTTGACGGCAACTTTGGGG
AACATGTACGAGTCGACGAAATTCGGCGGACATGAGAGCCGAATCGACCGATCGCCGTCAAGAATCATCGAACATTTG
AGCAACGTGACGATACCTTCGAGAATTTTTCTCAACGAAAAAATCCCAGCGAAAATGATATCGCTGATGCCGTTG
ACGAACCTTGCTACAACGAACTTTTACGCCTGTTCTCGTTGGCACTGCCCTCAAGAACAAGGGTGTGCAACCTTTGCTCG
ATTCTGTCTTACGCTACTTGCCACATCCGGGCGAAGTCGAAAACACGCGATCCGCCAACTCCAGAGGGAAAAACAGAA
AAAGTTTTGTTGGATTGAGCGAGAGACGATAAGAAGCCTTTCTGTCGTTTGGCCTTCAAACCTGGAAGCGGGAAAGTTGCG
TCAACTGACGATTTTCCGTTGTTATCAGGGAAAAATAACGAAAAGCGATACGATTTACAACACGAGAACAAGAGGAAAG
TTCGAATTTGAGACTGGTGCGTTTGCAATCCAACACGATGGAGGACGTGAACGAAGTCTATTCCGGCGACATTTTCCG
CTTTTCGGAGTTGATTGTGCTGCGTCCGTTGACATTTTACGAACAACGCCAAGTTGGAATATCCATGGAGTCGATTACG
CGTGATTCCTGTTTATACCATGTGATCAGCCCAAAACACTAAAAGATCGCGACAACCTTCGCCAAAGGCATTACGAG
GTTACCAAAGAAGATCCGACCTTCAGATTCCAATACGATCCGGATAACAAAGAAAGTGTGGTTTCCGGAATGGGCGAGC
TGCACCTTGAGATTTATGCGAAAAGGCTCGAGCGGGAATACAACTGTCCAAGTGAATATTGGGAAAGCCAAAAGTAT

>CL226contig1|tubulin alpha-1 chain-like

GCAGTTTCTCGAGAGACAGCAACGTTAGCATTTATATTGGTTTCGCGATCCTCATCACCGGCTCTGCTGACCCGATATTTG
CAACTCTTAAGTAACTACCCGTAAAACTACTCTTCAAAATGCGTGAGTGATCTCAATCCACGTTGGACAAGCTGGA
GTCCAGATCGGTAATGCCTGCTGGGAGCTTTACTGCTTGGAGCATGGCATCCAGCCGACGGTCAAATGCCGTCTGACAA
GACCATGGGTGGCGGAGACGACAGTTTCAATACTTTCTTACGCGAGACTGGAGCTGGAAGCACGTACCGCGTGGGTCT
TTATCGACTTGGAGCCGACCGTAGTCGACGAGTTTCGTACCGGAACATACCGTCAGCTGTTCCACCCGGAACAATTGATC
ACCGGCAAGGAAGATGCAGCCAACTACGCCGAGGTCAATTACACCATTTGGCAAGGAAATCGTCGATGTTGTATTGGA
CCGCATCCGCAAGTTGGCTGACCAATGTACAGGACTTCAAGGTTTCTTGATCTTCCACTCGTTCCGGCGGTGGTACCGGTT
CCGATTACCTCTTACTCATGGAACGTCTCTCCGTGCACTACGGAAGAATCCAAATTGGAATTCGCCATCTATCCCG
CACCGCAAGTCTCAACCGCGTTGTGAGCCGTACAACCTTATTCTGACGACGCACACGACCTCGAACACTCCGACTGC
GCTTTTATGGTTCGACAACGAGGCTATCTACGATATTTGCCGGCGTAACTTGGACATCGAAAGACCAACTTACACGAACC
TCAACAGACTGATTGGACAAATCGTATCGTCGATCAGGCCTCTCTCCGTTTCGATGGCGCTCTCAACGTGATCTTACC
GAGTTCCAGACCAATCTCGTACCTTACCCACTTCGCA

>CL2276-biscontig1|ras-related protein ral-a-like isoform 2

ATGAAGTTCTGTTTTGATATCGTCGATCACATAATCGTAACGAGAAAAATCGATCATTCTCTTTCTTTTCTTTTACGTGC
TTTCTTCTTTTAAATCTTCATTCCGGTTTATTCTTTGGGAGTGAAGAAATATTGAAATCTTGAAGTGATGTTCTCGCCA
GGGACGCGGAAGACTATGGATTTCTTGCAATTGAGGTTAGCTCCCGGAGGAAATAAAGAAGAAAGAAAATAACGAAGGA
ACGGGGGTAAATTTATAGACGTTGAAAAATGTGCAAGAAACCTGGAGCAACTCAGGCCCTCCATAAAGTCATTATGGTAG
GTAGCGGAGGAGTTGAAAAATCGGCGCTGACGTTACAATTCATGTACGACGAGTTTGTGGAAGATTATGAGCCGACAAAA
GCAGATTCGTACAGGAGAAAAGTCGTGCTGGATGGAGAAGAAGTACAAATAGATATTTTAGACACAGCGGGCCAAAGAAGA
CTATGCTGCGATTAGGGACAATTTATTTCCGTAGCGGAGAAGTTTCTGTGTATTTTCGATAACGGAAGACGACGAGCT
TTCAAGCCACGCAAGAATTTAGAGAACAAATCTAAGAGTAAAGAACGACGAAAACATTCCCTTTTTATTAGTGGGCAAT

mmc4.txt

AAGAGTGATCTACAGGAGAAGAGAAAAAGTGAGTCTTGCGGAAGCTCAAGGAAGGTCACAACAGTGGGGTGACCTTATGT
GGAAACGAGCGCTAAAAACAAAGAGTAATGTCGACAAGGTATTTTTCGACCTGATGCGTGAAATAAGGTCACGCAAGATCG
AGGACAATCTGCGAGTAACGGTCGTGGCAAAG

>CL2277Contig1|bis(5 -nucleosyl)-tetraphosphatase

ACTTGTGCGGGTTTCGAGAATCATGTGATCTCGGCAGTTCAGTCGTCAAAACAATAATAAGCATTTTTCTTGCCGAATT
TTTTTTTTTGTAAACTAAAAATGGGCAAACGTGCTTGTGGCCTTGTTATATTTTCGTGCTATTACAGGGACATGTTGAATA
TTTGTTAATGCAAACGTCTTATGGAAGTCATCATTGGACACCACCAAAAGGGCACGTCGATCCCGGTGAATCGGACATGG
TAACGGCGCTTCGTGAAACCGAGGAAGAAGCAGGATTCTGTAAGATGATTTGCGAATATTTGAAGACGCTAAACAAGAG
CTCGTCTACAATGTCAATGGGAAATCGAAAACTGTTATTTATTGGCTTGCCGAGCTCATTAAAAAAAATAAAAAATGCCA
GGTTGTCCGAGGAACATCAAGACTTCAAGTGGCTGGGCATTGAGGATGCTTGCAAAATCTCCGGATACGAAGAGATGAGA
CGAGCATTACGATATTTGACCAATACATTGCATCGAAAAATTTTAATAATTGTTACCCCTTACCCGTTATTTTTCTCA
TTCCAGATCTTTTTCTTGTTGAAAAATGTTCTTTCCCTCAAACCTGCCCATTGCAGCCATATTTTTTGCAACCTATTT
TTTTCCATCGATACATTTTTTTGAAATCCCCATTTTAATCAGGCACACTGACAATTCGTTCTGATCGAATACGTTTT
TGGGAATGTAATTAACGAAATAAAAAAACGTTTTTGTATTCTAAATACCAATTTCTGATAATTTCTAACGAAACA
GCAACACTCTGAATGTCAGAGGGTCAAAAGATTGTTTGATGAAACGAAATTGTCTCGGAACGAAT

>CL227Contig1|tropomyosin 1 isoform b

GGTCTGACTCAACGTGCAACTTAAACGCACCATTTCGACGGACGATCAACGAGGCTTGCCAATTAATTTTTCTTGAG
CGAGAAAAAAATCAAAAATCCACCATGGACGCGATCAAGAAGAAGATGCAGGGAATGAAGCTGGAGAAGGACAATGCGA
TGGACCGTGCAATTGCTGCGAGCAACAGGCTCGCGATGCAATGCTCGCGCAGAAAAAGCTGAGGAGGAAGCTCGTTCC
CTGCGAAAAAAGATCCAGACTATTGAAAAACGACCTTCGATCAAAACGCAAGAGGCTCTCATGCAAGTCAACACCAAGCTCGA
GGAGAAGGACAAGGCTCTCCAAAAACGCCAATCCGAGGTGCGCGCCCTGAACCGTCGATTAGTTGCTCGAGGAAGAT
CTCGAGAGGTCCGAGGAACGTCTCGCCACAGCCACCGCCAAATTGGCGGAGGCTTCCCAAGCCGCCGATGAGAGCGAACG
AGCCCGCAAGATTCTCGAGAACCGAAGCTTGGCCGACGAAGAGCGTATGGACGCTCTTGAAAATCAGCTCAAGGAGGCTA
GATTCTTAGCTGAAGAAGCAGACAAGAAATACGATGAGGTTGCCCGTAAATTGGCCATGGTTGAGGCTGATCTCGAACGT
GCTGAGGAGCGTGCCGAGGCTGGAGAGTCTAAAATCGTCGAGCTGGAAGAAGAACTTCGCGTCGTTGGCAACAACCTGAA
ATCCCTCGAGGTGTCGAGGAGAAGGCAAAACCAACGTGAGGAGGATACAAGAACCATAAAGACCCCTCAACAATCGTC
TCAAGGAGGCTGAGGCCCCGCGCTGAATTGCTGAGAGATCGGTGCAGAAGCTCCAGAAGGAGGTCGACAGGCTCGAGGAC
GAACTTGTCCACGAGAAAGAGAAGTACAAATACATCTGCGACGACCTGGACCTCACCTTACCCGAGCTCGTTGGCTAAAT
GGAATTTTCTTCCATTTTACAACCTTTTGCCTTCGATTGATCAACAGATTATTTATATATATTTCTATATATATATATG
TAAATACCAAACACCACAAATCGTACACTACATACACGCGTCACAAGATATCCAGCCCGACCGATACGGGCCAGTTAAA
TGTTTACTTGTATTATTGTAATTAATAATTAATCTACGAGAAAAAATATATATATATATATATATATATATATATATATG
>CL228-biscontig2|gtp-binding nuclear protein ran

GATTCTTTTGTGCAACGATGGCACCGGTGTGAAAATTTGATTTTTAACACAATTAATATCAACTCGTCCGGTATATAT
TGGATATTTGTGTCGACGAGAAATTTGAGTCTCGTCCGGCGGCTATTGCTCGCCCCGAGGAACGCCATTGTGAGCCATA
ACGACTGTGCACCACGTAATTTTATCGTCCATTTTACGTCCTGTGATATTGTAACCCGGGAAATTTTCTTCTCGCCT
CAAACATCTTTGAAAAATTCAGAGCCGCTCCGTAGACAATAAACATCTAGAAAAATGGCGCAAGAAGTGACATGCCTA
CGTTCAAGTGCGTTCTAGTCGGGGACGGAGTACCGGTAACACGACGTTTCGTAAGCGCCACTTGACGGGAGAATTTGAA
AAAAAGTATGTCGCTACTCTGGGGTGGAAAGTGCATCTCTGTTTTCCATACCAACCGCGGCCCTATACGCTTCAACG
TCTGGGACACCGCCGCCAGGAAAAATTTGGCGGCCTTCGCGACGGCTACTACATTACGGGACAATGCGCCGTATCATG
TTTGACGTAACGTGCGCGTCACCTACAAGAAGTACCAAACTGGCATCGCGATTTGGTCAGGGTTTGCAGAAACATACC
CATTGTACTTTGCGGCAACAAAGTCGACATCAAGGACAGAAAGGTCAAAGCCAAGAGCATAGTCTTTCATCGCAAAAAGA
ATCTCCAGTACTACGACATCAGCGCCAAGAGCAATTACAACCTTTGAGAAACCGTTCTGTGGCTTGCAAAAAAATTAATC
GGCGATCAGAATCTCGAGTTTGTGCGATGCCGGCGCTCGTGCCACCGAAGTCACCATGGATCCTCAATGGCAACAACA
AATTGAAAAGGATCTCAAGGAAGCGCAGGACACGGCCTTGCCCGAGGACGACGAGGAGCTAGTTGATTATTAATGTA
GGAAAAATCAACACACACACACACGAAAAACACGCAAAATGTCATCTCCGATTTCTTGTTTTTTCTTTTTCTTTCTTA
CTTTCGTACCGCGAGGCGGGCCTGGACAGAAACGCAAAATGTCTTTGCCACGGTGAAAAAAGAAATTCACGTTATCG
ACTGGACCGAACGAAACATTTGTTATTACCGGAAATTGAATTGATTGCGATCGCAAGAGTGGCTGGCTGGTCTTTTTTTC
CTAAATCCAAGAGAAACGAGATAAAGTTGCAGAGACAGTTTGTAGTCCGTTTGCCTCTCGCCCCCGAAAGNGTTATTT
C

>CL229Contig2|prolyl endopeptidase-like

GTTACATCCAGGACGTCAAGGACGTTCTCCAACCTGCACAGCTTGAAATCTGGCGAACTTTGAAAACTTTGCTCTCGAC
GTTGGCACAATCGCTGGATTTTCTGGGGACAAGAAATATTCGAAATTTTCTACAAATTCACGTCGTTCTGACCCCGGG
AATTATCTACACGCTGGACTTAGCCAAGGACGAGGAACCGAAGATTTATCGGGAAATCAAGGTCGACAACCTTTGATCCCA
AAGCTACAAAACGACCCAAGTTTTTTATCCGAGCAAGGACGGAACCAAAATTTCCATGTTTATTGTCACTAGAGCGGAC
GCTGTGTTGGACGGATCGATGCCGTCTTCTGTACGGATATGGCGGATTCAACATCAGTATTCAACCCTATTTTAGCGT
CACGAGACTCGTCTTCAATTCAACATTTCAACGGCGTTCTCGCAATTGCTAATATTGGGGAGGAGGGGAATATGGAGAGC
GATGGCACAACGGTGAAGATTTTTGAACAAACAAACGTTTTTCGACGACTTCCAATACGCTGCCAAGTATTTGATCGAA
AATAATTACACGACTCCGTCCAAGCTGACGATCCAGGGAGGACGTAACGGAGGATTGCTGTTGCTGCGTGTATCAACCA
ACGACCAGACTTGTTCCGGCGCCGCAATCGCCCAAGTTGGCGTGATGGACATGTTGCGATACCACAAATTCACCATCGCT
ATTCGTGGGTCTCGATTACGGGACTTCCGAAGTGCTAAACATTTGAAAACTTGTGAAATATTTCCCTCCCAAT
GTCAAGCCACCAAGTGGAGTTCAATTTACAGCGCTATTTTACTCACTGCCGATCACGACGATCGCGCTGTTCCCT
GCACAGCCTCAAACCTCATCGCCACGCTTCAACATCATCTTGAAATCTTCTAATCAGAAGAATCCGATTTTGGCGAGAA
TCGAAACGAAAGCTGGCCATGGAGGCGGAAACCGACTGCCAAAGTGATCGAGGAGAACACGGACATCTTGACGTTATA
ACGCAAACTGTTGGGCTTAACGTTACGAAGTAAGAGGATAAGGCGACGAATTGGAGGGAAAAAATGAGGAAGGAGATGTT
TGTCGAAGCTTCAAGTTGTCTCGCGTCAGAGCGACGAGGCTGTTCCGGTGTGATAAGCAACGAAACGTGTCCCGAGACAC
GTTCCCAACGTTTGAATCACGAGACGAGCGCTGAACATCGATAGCGAGGATTGTGAGTGAGAAGAAGAGAGAAAGG
CAGACGAAAGTTTCGAGCGAGGAGGTGATTGACATTGTGTAAGAGAAAAAAGCGCTGGAGCGTGATCGTTATTG
ACTTGGATTTTTATTACGCGACGTCTAGAATAGTATTTTTCAAAAAAGTCCATTTTTCCATGGATTCTCGTTAAAAAAC

TGACGAAATATTCCACAGCTCGGGAAGCCATAAAAAATCGTCAAATTTTTTGTCAAAATCAACGGTTGCAAATATTGAC
GAAAAATTTCAACATCGAGCGAAAAAAAAAAAAACAAAGTCAAGCTTTTCCATTGTTTACCCTCGATCACTTTTTTATGTC
AATATTTCCAGTTACGATTGTATTTCCAAAACAGCGCGAAATTATTAACAAATAAAAAGAAAAGAAAAAAGCAGAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG

TTTCTATCATCGGTTCTGACAAACTCGACAATCCCTCCCTTGACATACGGCGATGGTCGCTACTTGTAACCTAACGAAGAC
GAGTGTGAAAAAGCCAAAAATAAATAAATAACACAAGATATAAAAAACGATACGATACCGTATTTAGAATAGCCGACAA
ATTTCCAAACGAAAAACAACATCTTTTGTAGTGACACAAAAGAACCTTAACCTCAATTCAAAAATGAAAAAGTCTTTTT
ATCGTTATTGTTGTTAGGCTTTTTAACAGCCAAGCCGATGCGTATTTTATAACAGTCGATGCACACGCTGAAGAATGCTTT
TTCGAAAAGGGTCGCAGTTGGCACTAAAATGAGTCTCACGTTCGAGATAGCAGAGGGAGGGTTTTTGGACATAGACGTAAA
AGTGACCGGTCCCAGCGCGTGGCAAGACTGCAGGGTGAACAGGAAGGCCACGGAAGATACACTTTTGCAGCGGATGTTT
CCGCGGAATATACTTATTGCTTTGGCAACCAAAGAGCAGCTGACACCTAAAACTCGTCATGTTAACATGGATGTGGGT
GAGGCACCGATGCCACCTGCGGAACACGAAAAATCCGCGGACGGTCACGAAGTTACGGAAGGCAATCCAGCAAGCTTTGGA
TAGCATGATCAAGGATCTGAGCTCCAGCTACGAGGAGTAAAAAGCGAACAAGAGTACATGGAGATTGGGACCGCAATTC
ATCGATCAATCAACGAGAGTACGAATTTCCGTGTCGTAAGTGTGGTCCATTTTTCGAGGCTACTGTGCTCTTGGCAATGACG
TTGGGACAGGTATACTACCTCAAACGTTTTCTTGAAGTCGCGCAGAGTAGTCTAGTGTGATTTTCAAATAAAATACATACA
TAATATAATATTACGAGAATAAATCGAGTGGAATTTTTCTAAACCAAGTTTTGTTCTTCTTACATGCTTTGACAAATATGCTTT
CATTTCTACTTCTCTCTGCGTATAAGCTTTAAATTTGACAAATTTTTTACGGATTGAAACGATGTAATTTGTCTAAA
AATAAAACTGTCTCTGTTGCTATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACGGTCGGCCGC

TTGAGTTCGGAGATAGTAGGTGCTATAAAGATGAGAGTTTATCTTTCTGGAATGCCGGAGCTGAGGCTGGGGCTTAACGA
CAAAGTACTGTTCGAATCGACTGGGCGTGGAAAATCAAAAATCGGTAGAGCTCGAGGACGTGAAATTTTCATCAATGCGTA
CGACTCTCGCGTTTCGAGAACGATCGTACGATATCGTTCATACCACCGGACGGTGAATTTGAGCTAATGTCCTATCGCT
GAATACTCAGTCAAACCTCTGATCTGGATAGAATCAGTGAATCGAAGCTCATGCTCAGATCGAGTGAATACATGATCA
AAGCGAGATCGCAATTCAAACGCTGTTTCAACAGCCAATAACGTTGAGATCGTAATCCCCGTGCCGAACGACGCTGATTCT
CCTAAATTCAAAACCACCATCGGTAGTGTCAAATATTCACCCGAACAGAGCGCCATCACATGGTCCATCAAGTCATTCCC
AGGCGGCAAAGAGTATCTCATGAGAGCCCATTTTCGGTCTACCCTCTGTGCTTGGTGAAGACGTGGAAGGAAAGCCGCCA
TTCAAGTCAAATTTGAAATCCCTTATTATCTACTACTTCCGGCATACAAGTCCGATACTGAAGATCATAGAGAAATCTGGT
TATCAGGCAGTTCCTGGTGGTGTATATCAGCGAAAAACGGGGATTATCAACTCAGAATAATTAAACGGAGCAACTCAT
ATCTTCAGCGAATTTATCAACTGCTCCAAATCCCTGCGAGGATTATCTTCGGCTGGGACAGTCTTCTAGAATTTATCTC
GAGGCAAAATCTCGAGAAACAACGATGACACGGCGAGCGACTTTTAACATTAAGATTATTCTTATTATTTCTGTTATCGCCC
TTCGACGCTAAATGGAAAAATCATCGTTTCTCGACCACGCTGCTGTGATATACTCTTTCCTTCTGTTTTTCTTCTCTTT
ACCAATCATTTGTTCCAACTTTTTCCCAAATAAAAAAACGTACGACAAAAGTTTTAGTAAATGTTACCAAATCACGACT
TGAGAGTTTCGCTCCATCGACGCTCTCTCTAATATTTATAGTCATTCTATCATCATCCGTGACCACGATTATTCTTC
ACTGTATGTACGCTGTTTTGAAAAAGTTTAAATAAACAGTATTAACCGT

>CL2310Contig1|hypothetical protein G5I_09762 [Acromyrmex echinator]

ATTTCATCGATAATCTCAGTGGTTCGATCATGGTCTCGAGCAAATACGGTATCGTGACCGCTCTTTTTGGGCTTGTCTCGTA
CTTCATCTTCTTAACGAACGCGGAGACAAATTGTGACCCAACAACGTGCACCGGTCTCTGTACTACTATCAGGAACCTCG
GCTGTTTACCGATTTATGATAATTTCTCTGCTAGTGTTCGCGAAGGAAATATAATTCGCACTCACTGGAAAGTTTTGCCCA
TTCGAAATGTTACGTTAACGGACACGTATACGAGAGTGCCGAGGTATTTCTTCGCAAGAAATTTGGTGGTGGATGTACCA
GATGTATATGTGCTGGTGGTACGAACCGCGCACCTGTGTGACAAGCTCGTGCGCAGGACCTGGACCGGGTTGTTACTTG

mmc4.txt

GAGGGGAGGTCCATTAGCATGTTGCTCGAAAGATAAAGCTGTCCGGAAAAAGAAGATATTCACACGTGTGAAGTCG
ACGGAACAAACGTACAAGGACGGTGAGGACTTCATGCCCGAGCGGAGCCAAAAAAATCTGTACTTGGCGCCAGGATAC
TCAGGCATCAACGACGAAACATTCTGCATTACCATGGGGCCAGGTTGGTGTGGCAATGCTATATGGTCGATTGAAAAAAT
CCAAAGAAATTGTGCGCCTGTTTTCTTTTCGGAGAAGAGCCGCGAAATAATTGCAACGTGATTACCGATGTCACTTGG
GCAGTAAAGATTCCGTCATCGACACAGAAATAGTTTTCCGAATCCGAAGACCCGACATGATGTGCAAGTTCGGAAATCTA
ACATTGAAAGTTGGCCAAATGCTGAATCAACCTGAGGACGAAGACCGACCTATGCAATGCGTTTTCGACGTGCCACCTGT
GGTTACGTGTCGCTATTTAGCGGACGTCCAGCTGTAAACCCCTAAAACTGCCGATTGAGTTTACGAGCGCGGGTCTCG
AAAAACGTGATTCCACTTGAAGTTTCGACCACAAAAACGTGTATACCTTTCTTTATTATTGCCAAAAATTTAACTCTGGAA
CGTAAACCTTCTTTTTTAACTAATCCGGAAACGTGGAGGTCGAAAAATTTATATCTCGGGTAAAAATTTAACGAAAAGAG
TTCGACTTGGGCTCATTCTTTTCGTTTTTCAATGCAGGATCACGCGAGCCTGGGGGCAATTTTGTGGAGTAAAAAAT
CAGTAAAAAATGGGGTAAACGAATTTCAAAAAAGGGGTAGAACGAAAGGGAGAAAAGGCGCGGGATTTAAAGTTCCTG
AGGTCGTTTTTGACCCAGGTTAGCGTTCTAGGGTTAAAGAACATTTGTTCCAAAGTGACCAAT

>CL232Contig1|very long-chain specific acyl- mitochondrial precursor
TCGTTCCACGTAAACGCAGTTTCAGACCGTCGTTAGCTTTTCCTCGTTCAAAGTCCGCGACGGTATTTTCTTTTCTTTT
TTCTTCATTCTTTTTTTGGTGTGTACAGTTTTTCTCAATCGGGCGTCATTGCTGCGCGAGAACGTGAAGCGTCAAAAT
GATTTTCGAGCGTGTCAAGCACTCTCCGTGGATTACCCAAAAATTTCAACAAATTCGTCAACCTGCACTCGAGATGTCTCG
CTACACAAGCCGCGCCGAAAGCTCGAACGGAGAAAAAGTCCGCAACGAAGGAATCTCACTCCTTCGTGACGAACATGTAT
CTCGGGGGAATGGAAACCAGTCAGTTTTTCCCTTTCCCTGAACCTTTGACCGTCGAGCAAAACGACACTCTTCGTATGCT
CATCGATCCCATCGAAAAATCTTCGAGGAAGTAAATGATCCGGTTAAAAACGACGATACCGCGCAGCTCGATGATAAAA
CGTAGCAGCGATGTGGGAACTCGGAGCATTCTCGTCCAAGTGCCCGAGCAATACGGCGGTATGGGTTTGAACAATACT
CAGTACGGGAGATGCGTAGAAATAGTCGGTTCTCAGCATCTCGGAATCGGCAATTGCTCTCGAGCTCATCAAAGTATCGG
ATTCAAAGGAATTTTGTGTACGGCACACCGGAGCAAAAGCAAAATATTTACCGCGCGTTAGCAACGGCGACATGGCTG
CGTTCGCTCTGACCGAGCCGGGCTACGGTTCGGACGCGATGTGATCAAGACACGGGCTGTGAAATCTCCGGACGGTTTCG
CACTACGTCCTCAATGGCAGCAAAATTTGGATTTCGAACGGAGGAATGGCTGAGATCTTCACTGTTTTTGCCAAAGTCCC
AACGAAAGATCCGATCACTGGAGAAATGACTGAAAAATCTACAGCCTTTATTGTGAGCGCGGGTTTGGCGGCGTAAACGA
GCGGACCTCCGGAAGAAAAATGGGCATCAAGTGCAGCAACACCGCCGAAGTTTATTTGAAAGATGTTAAAGTCCCGCGG
AGAATCGTTTGGGCGACGAAGGACAAGGATTCAAAGTCGCCATGAACATTCTCAACAACGGAAGATTGGAATGGCCGCT
GCACTCTCCGGAACACAGAGATATTGCATAAAACGAGCAGTCGAACACGCAACGACGCGCGTACAATTTGGCAATACTCT
CAATACCTACGGAGGCATTTCAGGAAAAATAGCTCGTATGTGATGCTTCATTATATCACCGAATCTCTCGCGTACATGAT
TTCTGGAACATGGACAAAGGCAGCACCGACTACGAGCTCGAAGCGGCTATTTGAAATGTTTCGCTTCTGAATCCGCCT
GGTGGGTGTGCGACGAAACGATCCAAATTTTCGGAGGAATGGGATTTCATGAAAGACACGGGACTGGAAAGAAAACTGCGA
GATCTGCGTATATTTCCGTATTTTTGAGGGCGCGAATGATTTTTCGCACTGTTTCATCGCTCTGACAGGAATCAAACACGC
TGGTGGACATTTGAACGAGTTGCAAAAAAGCCTTCAAAAAATCCAGCAGCCAATTTGGGCCTCATTGTGCAAGAGGCAGC
CAGACGAGCAACCAGAGCCGTGGGGCTTGGCTCGACACCCAGTATTTTCGCATCTCGTTTCATCCCGAATTTGGTGGAAAGTG
CAGCTTTGTGCTCCAAGAGCGTCGAGAATTTTGGAAAAACTATCGAAAATGCTCTCATCAAGTACGGACGTGGGATCGTC
AACGAACAATACGTTCTCAACAGAATAGCACAATCCGCTTTTCGATATATACACGATGAGCGTGTACTGAGCAGAGCCAG
TATGTCGGCGAGTAAAAACCTTCTTCTGCTTCCCATTGAGATTCTCATGACCCAGGCTTGGTGCACCGAGGCGGCGAGCC
GTACCGCGTTCAACTTGAAGGTCGAGGCTCTTCAAAATACATCGATCTGTTTGGCAAGTTTGGAAAAATTTTCAGAAAC
GTTTGGCAGCGCGGCGGTACCGTTCAAGTTAATCCTCTGGGTTATTAACGCAGCCCAAAAAGCTTTGAAAATTTTGTCTCT
GCAGCCTCGAACCATTGCCTTGGAGAATCATTTACAATTGTGAATATATATTGAGACATTTTTTTGGTTTCTGAAGAAT
TCACAGAGTGACAGCAATAAATAGTAATAATTTTGTAAAACAATTTGTAGGATATAAATTTGTAAAATGTGAATACGTTA
ACAAAAATGTTAATCATCGTCATCATCGTCATAATCATCGCCAAGTTTCATGGAACAAAAAACCATAGTAAATAAA
ATTTTTAAATTAATACTTTACGATTATATGAATAATAAAGACCCAAAAATAGTAAATAGGAATTAAT

>CL2339Contig1|PREDICTED: profilin-like [Bombus terrestris]
CGGCCGGGTATAGCGTGTGCAGAAACGACGAGAGGTTTAGTCGCGAGACGTGAGTCGAGAAAGACGGTGACGGGTTGTGG
TCTTAGTGTCTAGCGAAAAAAGTTAAGTACGCCCTTCCCTCCCCCACCAGTGTGAAAATATGAGCTGGCAGG
ATTACGTTGACAAGCAGCTGCTTGCCTGAGGTGCGTCACAAGAGCAGCGATCGCCGGACATGATGGAATCTGTGGGCA
AAGTCGGATGGCTTCGAAGTCAGTAAAGAGGAATGGCGGAAGCTTCTACAGGGCTTCGACGAACAGGATATATTGACGTC
TCGGGCGTCACATTGGCCGGCAACAGGTACATTTATCTGTGGAACAGATCGCGTATTTGGGAAAAATTTTCAGCAAGG
TCGGTGTACATGTCATGAAAAACGACGAGGCGGTTGTGCTTCCCTCTACGAAGATCCAATTCAACCACAGCAGGCTGCA
TCGGTCTGCGAAAAATTTGGGCGACTACCTCTTGTCTGCGGCTATTAGTAACCTCTGGGACCCAACACAAAATATCTAAT
AATTAATGATAATGATACGATCGATTATTTTAAATGACAGCGAACGGAATATAAAAAATGCGCCCATGACGCGCAACGGA
AAGGAGGGAGAGAGTAAGATAGAAGCAAAGATAAAAAAAGAGATAGATAGAGATCGAGAACAGCGCCGGACTGAACCGTC
GTCGTCGTCGTCGTCGTTGCCGTCGTCGTCGTTGCTTCTGTCCTTCATCGTCGTCATCATCGTTGCAGAATTTTT
CGCAGCAACCTAATTTGTAATGTAATACAATGTTGGCCGCACCCTCTGCGACTCGATGTAAAAAATTTGCAACGTGTTTG
TTGACTCGAGTCATCGTCTCTCTCTTACGT

>CL2341Contig1|dipeptidyl peptidase 3-like isoform 1
ATCCACCATAAAATGTTGCACACCCGGCTACGTACACAACGCAAAAGTCGATGTTCAATTTGCCAAAGTCACGACTGTT
GTTGCGATTTTCGCCAAAGACACATCTGGTGCGTTCTTTCTGCTGTGACACACGTTACGAAGGAACTTCTAACAGATTGC
TGAATTCACACAACATCACTGAAAGGAGACACGAGGATTATCCACTCTCGCCCAACAGTATTGGCAAAATTTTCTCTG
CAACAAAAAGTTCAAAACAAATGACCGACGACAAATATTATATACCTACCCCAATGATCAACCTGTCGTTATTCTGGACTG
CACGACTGCTTTTAAACGCTTTATCGCTTAAAGAAAAACTTTATGCTCATTACTTGAGTCGGGCATCTTGGTACGGGGGTC
TAATAGTATTGGTTCAGACGTGCGCCGAATCGCCACTGATATTGCTCTGTTTCATAAAATATTTTCCGCCGAGTCGATA
GAGAACTAAAAAATCTGCTATAGCTGCTGGGATCAGCGAAGACGAATATACCGCATTCTTAGTATACGCGTCGACGCT
TTTTCCAATGCTGGTAATTACAAGAGTTTCGGAGACTCCAAGATCAATCCAAATCTGCCAAAGGAAAGTTCGAGACAATA
ATCAAGTTGTGCAAAAGTCAACAGAAGAATTCGCAAGATATAGTAAATATTTGGAGCAAAAATAGAAAAAGATGTTTAAAC
TCGTTGGAGGAGAGTAAATCTTTGGGTTTGGGAGAAAAAGGTATAACAACGATTTTCTCGAGAAATTTGTGACACGCA
AGATTCAGAGTTGGTCAACGAGTTTATGCAAGTAAAGGATTGGAATGTTACAACACAAGATGTTTACAAAACCTACGGAA

mmc4.txt

ACGTACGTAGAGTCGGGTGTAGAAAAAACGNAAATTTGTACGANATAAGTT

>CL2344Contig1|nadh-dependent malic enzyme

GGAAATTGCCGATCTGTGTGTAAAAAGCGATGGAGGCTGATGGGTGTACGGAGGAAGAAGCGCGAAACAACATCTGGATGA
TGGACATTGATGGACTTTTTGACGAAAAGTCGTAAAGACGGTAATCTCGATGGGCATAAAGTTTGGTACGCCAAGGATCAT
GCACCGATGAAAAAACTGGTCGACGTCGTCCGAGAAATAAAACCTACTGTACTCATTGGCGCATCGGCTGCCCGGGTGC
ATTCACCCCCGAAGTCCTCCAAGAAATGGCCAAGAACAACGAGAGACCGTTGATCTTCGCACTCAGTAACCCAACCAGCA
AAGCCGAATGTACGGCCCAGCAAGCCTACGACAACACGGAGGGTCGCTGCATATTTTCGTCCGGATCACCGTTCCGGCGAA
GTTAAATATGGCGGCAAAATCTACAAACCAGGACAAGGAAATAACGCCTACATATTTCTGGAATAGCGCTGGGCGTCAT
TGGCACCGGCGTTTCATCATATTACCGAAGAATTATTTTTGATATCCGCTCAGGCTGTTGCCGATCACGTTACGGACGAAG
ATCTCGCAGCCGGAAGTCTGTATCCCCCTCTGAACATCATTTCGCGAGTGCTCGATCGATATTGCTGTTTGAATCGCCGAT
TACGCGTATGGACAGTGTGGATTGGCTAGCGAGTATCCGGAGCCAAAGGACAAACGACAATTATTGTGAACAAAATGTA
CAACGCCAATTATGACAGCCCACTGCCAAACCTGTACGACTGGCCCCGGCGAATACGCCAAACCCCGAAAAATTCCTGAAA
AATTATGACGTGTTGGAGAGTCGAAACAAAGGGAAGACAGCTTTCCTATACGCAAAAGCGTTCTAGATTGAAACAATTTT
GTTTTTCCGCTAACCAATTCATACGACGTCATTGACCTTGTCTTTTTGTGCTAAAAATNTACAAAGAGAAAAAGAATA
CAGGAGGAGATAAAAAAAGGAGAA

>CL234Contig1|t-complex protein 1 subunit zeta-like isoform 1

ATGATTTCTCTGCTATCGAGAAGGCAGTGACGGTTTTCCAACGAAAGTGTGGATTTTTTGGACATCGTTAGATTATTATAT
TTACGTTAAACGCAAAATTCACGAAAAATGGCAGCGATAAGTTTATTAATCCGAAAGCTGAATTCGCCAGAGCGGCAC
AGGCGTTTGGCGTTAATATTTCCGCGAGCCAAAGGAATTCAGAAGTGATGAAAACCTAATTTGGGTCCGAGAGGCACCATG
AAGATGTTGGTATCGGGAGCTGGAGACATAAAGATTACTAAAGACGGCAATGTACTTTTGCACGAGATGCAAAATCAACA
TCCGACTGCGTCGCTCATCGCTCGAGCATCTACTGCCAAGATGACATGACCGGCGATGGTACAACCAGCACCGTTCTCA
TAATCGGTGAACTTTTGAAACAAGCGGATCTTTCATAGCGGAGGGACTTCATCCAGGGTACTGACAGAAGGCTTTGAG
CTGGCCAGGGCGAAAAACCATTGAGATCCTTGATTCAATGAAGATTCCCATCGAAGTGACGAAGGAAGCGCTTCTCGATGT
TGCCAGGACTTCTTTGAGGACAAAGATTGATGTAACCTGGCTGACAACTGGCGTACGTTTGCCTTGACGCTGTTCTTG
CTGTTAGAAATGAGGAGCAACCGATCGATCTTCACATGGTTCGAAATGATGGAAATGCAGCACAGAACAGCGGCTGACACT
ACACTGATCCGTGGTATCGTTATGGATCATGGTTCCTGTCATCCCGATATGCCGAAGAACTTGAAAAACGTTATATTTT
GACCTGCAACGTCAGCCTCGAGTACGAAAAGAGCGAAGTGAACAGCGGCTTCTTCTACAAAACCGCGGAAGAGCGTGAAA
AGCTGGTGTCTGCTGAACGTGAATTTATCGACAACCGAGTCCGCAAAATAATCGAATTGAAGAAAAAGCTTTGTGATGGT
ACCGACAAATCCTTTGTCGTTCTCAACCAAAAAGGCATTGATCCACCTGCTCTTGATATGCTTGCCAAAGAAACATCATG
GCGCTCCGACGAACCAAGCGACGAAATATGGAACGTCTGGCCCTCGCATGCGGCGGTATGGCTATGAATTCGCTCGATGA
TCTCCAAGAAGAACATCTCGGATGGGCTGGAGTGTGTTACGAGCATGTACTCGGCGAGACAAAGTACACCTTCGTGCAAG
AGTGCAAGAAACCGAATTCGGTGACGATTCTGCTGAAGGGACCAACAAATACACTCTGGTACAGTTGAAAGATGCTGTT
CGTGATGGGTTGAGAGCAGTAAAGAACGCGATTGACGATCGCGCCATAATCCCGGGAGCTGGGGCGTTTCAAGTTTCTGC
GAGCCGTGCTCTTGGCCTTTACAAAGACGAGGTGAAAGGCAACAGAACTTGGAGTTCAAGCATACGCCGAAGCTCTTC
TCGTCAATCCAAAAACGCTCGCGGTGAACAGCGGCTTCGATGCTCAATACACCATAGTCAAGTTGGTCGAGGAAACAACC
GCACTCGGTGAGCCAGTCGGTTTTGGATGTAACCTCCGGTGAACCTTTGATACCAAAAGATGCTGGTATCTACGATAATTA
CATCGTCAAGAGACAAATCATTAAATCCTGCACCGTATCGCAAGCAACCTTCTCCTGTTGACGAAATCATGAGAGCCG
GACTTTCATCTCTAAAAATAATGGTCCCGAGCTGCGGAAGCTTTTATTTAATCGATATTGATAATCGATAATATTTT
TTCACAACTCTGTTAATTACTCATTTTCGCAACAAATAGACGTAACGACGCTATTTTTTTCATCATTGAGTGTCTTTATT
TCGTTTAAGTACACAATCTTGTAATCTGCGCTCGCTTTTCAATAACAATAAACTTTACAAAAAAAATATATGAACAG
TCGGAGTTGATATACATTACTCGGGACTACCCGTAATTTTCGATTAAATAATTCGATACAGCATAGGGATGTTGTTTTT
CTAGAGCTATGATTTTCGGAGCTTCGCATTTGAAACCTTTGTAAAAATCAAAAAAATNTTTATCTTAATGTTTATGAT
GTACAGTTATTTACTACTTTTTACGTTAAAA

>CL2361Contig1|circadian clock-controlled protein

GAGTTAACATTTTAAAAAGCGTCGGTAAAGCAATGTCGCTCGTTTACGTACTATCAATCGCGTTTTGCGCGATCAACCTA
GTCACGGTCCACGCCGAGGATGTCGCTCTTCTTCATCGGTGAAAACGTGCAAAAAGGATTCCGATGATTATTCGTCTTG
TTTGAGACTTGCTTTGCAAGAATCCTGGCCAATATTTGTTCAAGGAATACCGGAATGAATGTTCCATCGCTCGAGCCAT
TCTTCGTGGATTTCCAAAGCAACACCTATAGAGTAGGCGAAGTTAACGGTCAGATCGTCACGAAAAATGTAAATCGTAC
GGAATCTCGAAATCTGATTCCTCTCGTTAAGCCTCATGATAAAGGGCCGATTCTCCCTAATGATTGATTCTGAAT
GAGCAAGGTATTCTGTCGAGGGTGACTTCAAAGCCGAAGGAGCCGTCGGATCTTCAAGGTCGAGGAAAAGGGTCAATTC
AACATTTCAATGGAGGATGTACGGTCCGTTTGGGAGATCGAAGGTCGGTCGTAACGATAAATGGATCATTGAAAGTTT
CCGTCTGACTCCTGATGTCGGAATAATGAAGATTTGGGCGAGCGACCTTTTCAATGGCAATGCCGAATTAACATAAGCAG
CCTTGGCATTTCGCGAACGAATACTGGCCAGTTCTCTATCGCGAAATGTTGCCATACGCCGCGGAATCCTGGAACACTCAT
CTCCGCGAACTCGTCGGAATATATTTTCAAAGCTTTGTTTCCAAGACGTTTCCATGATTGAGGAAAACGCGAGGGAAT
CGATGCGATCAAAAGCTTCAAAAACTAGTTTCATAAATTTCTGTTTGTCTCAAAAAAATCAAGCGTCGAGTGATGATCGTG
AGTTTATGTTGAAGCCAATCGAATCGCTGCTTCCAAGTCTTTCATTAATAAAAAACAAAAAATGTATAAATTAAGAAAAA
TGTTTTCTCAGTCGTAAGGAAATGATTCGGTTCGATTGGCTCAAAGTTTTCTTTTTGTGCTAAAGACTGAAGTCATTTTT
TCTAATGAAGGAACACGCAAAAGTTATTTCAATGATGGTCTTCATCATTTTTTATTCAATCAAGCCACCGTAGTTTTATT
ACATTACTGTGGCTTGCTCACAATACACATCCCGATGAAAATATGACATGTTTGAAGGACGAGAAACGCATGTACAGACC
TTCGCACTGATGACAGG

>CL2379Contig1|atp synthase subunit mitochondrial

ATTCGGCCCCCTCTCGCTCGATTCTGCGGGGCTGCCATATCTTTTTTTCGCACAGGTGCTGGACGTCGTTCTTCGGGCGA
GTGCAGGAAGAGCAGTCAAAATGTTGTCGAGATTAGCATTGAAAAATGCTCAGGCGTTGCCTGCCATGGCTCGCTCCTCG
CCGTGCATGTCAACCCTGCTTCCGGGATTCGAACGCAGGAAGAGACCCATCGATCCGGCACCCGTTTCGTATGGTTTTAT
TCCGGAAGGGTGGTTTACGATGTTTTACCAAAAACTGGTGTAAACGGTCCCTACATGTTCTACGGTGGTCTCGCGACCT
ATCTCGTTTCCAAGGAGATTTACGTATTGGAACACGAATACTACACGGAGTATCGATTCTTAAATGGCGATAATTGGT
ATAAGAAATTCGGTCCACAAATCGTCGATATATTGATAAAAAATGGATGAGGAGGAAGCTCAATTGGCTGCTGACG
AACTGATCAAATTAAGAATGTGAAGAAATGATTGCAAACGAAAAGAAACAACAATGGAGATCGGAAGTTCAACAGCTTA

mmc4.txt

TTCTCGAGGCTAAAAAAGAGAATATTCTCATGCAATTGGAAGCGACCTATCGCGAACGACTAGCCACCGTCCACGCTGAG
GTGAAGAAACGTTTGGATTACCAAACCCAAATTGCTCAGTTGAGCGTCGCTTGGCACAGAGGCACATGGCTCAATGGAT
CATAAGCAACGTAATGAAGGCCATCACTCCGACCAAGAAAAAGCATCCTTGCACCAATGCATCAAGGATCTTCAGGCAA
TGGCTCCGCGAGCGTAAATTTCTTACGGAAACATTAGACGAAGTAGATTAATAATAAATACTACAGGAAGCAGCAGCGC
CTTGGCTGAGAGTCGATGCAGCCCGACACAAAATCGAATATCCGCGTTCAATTGTAATTTCTGTTGCGTCGATCTATCCAT
GTACAATGTCAAAACAATAAATCATTGAACAATACTAACTT

>CL2383Contig1|nascent polypeptide-associated complex subunit alpha

GCTTTTCTAAGTTTACGTTGTTGGTGTATACCGCAAGAATATCGTTTGGTCATTGAACGAGACGCCGCTCGAGATACCC
ACAAAGATGCCAGAACCTTACGGAATTGGACAAGGCAGCGAGCTCCGAACCTACCAAGGTCGAAATCGCAGCTGCAGGCTC
AGGTACAGACTCCGACTCCGATGATTCCAGCCAGACCGTGAGGAATCTGGCCAGAGCGGCGCCGTCGGCTTTTCCGGTC
CCAATGTCGCCGACTCCCATGGATCTTATTTCCAAGGCCAAGCAAAGTCGCAGCGAAAAGAAGGCCAGGAAAGTCATG
AGCAAGCTCGGACTTAAATTTGGTTCAAGGAGTCAACAGGGTGACCATTTCGGAAGTCGAAGAACATTCTGTTTCGTCATCAA
CAAGCCAGACGTTCTGAAGAACCCGGCGTCCGATACGTACATCGTATTTGGTGAAGCCAAGATCGAGGACTTGAGCCAGC
AGGCTCAGGTTGCCGAGCCGAGCAGTTCAAAGAACCTCCGTTAATTTCTGCGACCGAAGCCGTTGGCAGCAGCAGGTT
GTGCGACCAATTCAAGAAAGAAATCGGAGGAGGAAGTGGACGAGACGGGCGTCGAGGAAAAAGACGTTGAGTTGGTGATGTG
CCAAGCCAACGTGTCTCGAGGGAAAGCCATAAAAGCGCTGAAAACAACGAGAATGACATCGTCAATGCCATTATGGAATT
GACAATGTGATGAAGCTATTTAGGAGTAAGACGCGTTGCGCGTTATCCCGCGCGCTAAGAGTAATAATAATAATAATAA
ACAAACAAACAAAAAATAAATAGAAATAGAAAGCAAAAAAATAAAGAAATAAATACAACACAATACTCATCAGCCACA
CTACGCGGACCGTCATTAATTTTTCTCTAGTTTCTCATCAGCGTTGCAAACGGAACAAGAGAAAACGAAGAGAC

>CL2394Contig1|alpha- -mannosyltransferase alg2-like

GCGATTTCGCATATCTTTCTGGGTCTGGAGCCAGACGTAGTATTTTTCGATCTCGTATCCGTCTGCGTACCAATTCTCCG
CCTCTTTGTCAAATACGTCATATTTTACTGTCAACATCCGGATCAGTTGTTGACGGACAACAAAGGTTACTGGAAATCTT
TGTACCGCATGCCGTTGAACTACCTGGAGGAGGTGACGACCGGCAAAGCGGACAAAGTGTTGGTCAACAGCATTTACACT
CGCTCGGTGTTCAAAGAACTTTCAAGAAATCTGAGAACGGAACGAGCGTGCTTTATCCCTCGATAAACACAAAGTGGT
TCGACGTCGCGCAGCCAATCGATTTGGCAGAAGTTTGGGTGCGCAATTTGCCGACGATGCGATTATCCTTTTGTCTATA
AATCGATACGAACGGAACAAAAAATTTGAATCTCGCCATCGAGGCCCTTAACGAACCTGCGCAAAGTCTTGACGAGCAAAA
TTTACAAAAAAGTCTTTCTCGTCATGGCCGGTGGCTACGACAATAGGGTCCAGGAGAACGTGCAACATCATGCGGAGCTC
GTAGAGCTACCAAGCAATTGGATCTTGAGGAGAAAAATCATTTTCTCAAGTCGCCGTGCGACCTCGCTAAAGTTTCTC
TTCTCGCTCATTGCTCTCTATTGATTTACACACCGGTCAACGAACATTTTGGCATCGTTCCCCTGGAAGCGATGTACTGC
AGGAAGCCCGTCATCGCTCAGGACTCTGGCGGCCCCACCGAGTCCGTGCTTGACGGCGAAACCGGTTACCTCGTCGGACC
TTCTCCCCGAAAATCGCCGAACGTATCGCGACTCTTTTGAACAACAAAGAATTATTAATCTCCTTCGGGAGGCTGGACA
CAAAAGATTCTGCCAAAAAGTTTCAAGCTTGAAGCCCTTACCGGACCAACTCAATTCTGCCATCAACGATGCTTTGCTAATTG
ACGTTGTCAAGTCAGCAACATGCACATGACGAGATTGAGCGCTGAGCTTAATTGTAATAAGAAAAATCGTTAGAATCCA
ATGACTGGCTCATTTGACAATATTTCTGAAGCTTTTTCATCGTTTGTCTTCTGTTGCAACGATCGAACCNCGTGCTGAAC
GATGATTTCTCCATTTTTCGATTTTTTTTTCAGCCAAAAAAGTGATTATCCATTTTGCATTTTTTCCACGTACCATGAGTG
GAATCCCAAGACGAGTTTTCATCGAAAACGCTGTATGTATAAACAGGAAGTAACGAAAT

>CL23Contig2|elongation factor 2-like

GTGGCAATTCGAGTCCCTCTACCGTTCGAGTCGACGTTTCATCATCCACTATCGTTGAAGCAAAATTCCTGTTCTTTC
CCAGGGAGTCCGCCATTGTTGGCGCACGTATTATTCGACTAGGCCGACAAATATCGGAAAACATCCAAGATGGTGAAC
TTACAGTAGATGAGATCCGTGGCATGATGGACAAGAAGAAGAACATCAGAAACATGTCCGTATCGCTCACGTCGATCAC
GGAAAGTCAACTTTGACCGACTCCCTTGTATCCAAGGCGGGTATCAGTCGCTGGCGCCAAAGCCGGCGAGACTCGTTTCA
CAGACACCCGTAAGGATGAACAGGAACGTTGCATCACCATCAAGTCGACCGCCATTTCCATGTACTTCGAGCTCGACGAG
AAGGATTGTGCTTTCATCAAAAATCCCGATCAGCGCGACAAAGAGGAAAGGTTTCTTGATCAATTTGATCGATTACCC
TTGGGCAAGTTCGACTTCTCCAGCGAAGTAACAGCTGCTCTTCGTTACGGACGGAGCTCTCGTTGTCGTTGACTGCGTAT
CTGGCGTGTGCGTCCAAACGGAACGTGACTCCGTGAGGCTATCGCTGAGCGTATTAAGCCCGTTTTGTTTCATGAACAAA
ATGGACCGTGCGTCTCTGAACTTCAACTCGAAAGCGAAGATCTTTATCAAACCTTTCCAACGTATCGTTGAAAACGTTAA
CGTCATTATTGCCACGTACTCTGACGACGATGGTCCCATGGGTGAAGTTTCGCGTCGACCCGAGCAAGGGTTCCGTTGGTT
TTGGTTCCGGTCTTACGGCTGGGCTTTTACCCTCAAAACATTTCTCGGAGATGTACGCTGAGAAATCAAGATCGACGTT
GTGAAACTGATGAACCGACTTGGGGTGAATCTTTCTCAATCCCAAGACCAAGAAGTGGAGCAACAAAAAGACGCCGA
CAACAAAGCGTTCTGTTCTGTATGTACGTGCTCGACCCTATCTACAAGGTGTTTCGACAGCATCATGAACTACAAGAAAGAG
AGGCCGATAGCCTCCTCCAGAAAATGGGAATCTCCTTGAACCCGAGGACAAGGACAAGGACGGAAGGCTCTCTTGAAG
GTCGTATGAGAACTTGGTTGCCCGCTGGTGAAGCCCTGCTTCAGATGATAGCCATTATCTTCTCTCCAGTCGTTGC
TCAGAAAATATCGTATGGAGATGCTGTACGAAGGACCCACGACGACGAAGCCGCTGTGGGCATCAAGAACTGCGATCCTA
ACGGACCACTCATGATGTACGTTTCGAAAATGGTACCGACCTCCGACAAGGGACGTTTCTACGCCTTCGGACGTGTTTTCT
TCTGGCAAAGTATGCACCGGAATGAAAGCACGTATCATGGGACCCAAATTTCACTCCCGGAAAAGAAAGATTGTTGACGA
GAAGGCTATCCAACGTACGATTTTGTATGATGGGACGTTACGTCGAGGCCATCGAGGATGTTCTTCCGAAACATCTGTG
GTCTTGTGCGGTGTCGATCAATTCTTGGTCAAGACCGGTACGATTACAACATACAAGGACGCTCACAACATGAAGGTGATG
AAATCTCCGTTTTCGCTGTGCTGCGTGTGGCGTCGAGCCCAAGAATCTGCTGACTTGCCGAAACTCGTCGAAGGTCT
CAAGCGTTTGGCCAAGTCAGATCCTATGGTCCAATGTATTATCGAAGAATCTGGCGAGCACATTATCGCCGGAGCTGGTG
AATTTTCATCTTGAATTTGCTGAAGGATCTCGAGGAGGATCAGCGTTGTGACCGATCAAGAAATCCGATCCCGTCGTT
TCTTATCGTGAACCGTCTCCGAGGAATCCGAGCTCATGTGTCTCTCGAAATCCCCAACAAGCACAAATCGTTTGTTCAT
GAAGGCTCAACCGATGCCCGATGGTCTTGTGAGGACATTGACAACGGCGAAGTCAACCCACGTGACGAATTCAAAGCTC
GTGCCGTTATCTCGGCGAGAAATACGATTACGACGTTACTGAAGCGAGAAAAATCTGGTGTTCGTTCCCGATGGCACT
GGCCCCAACATTCTCATCGATTGTACCAAGGGAGTACAATATCTTAACGAAATCAAGGATTCGTCGTTGCTGGTTTCCA
ATGGGCGGCCAAAGAGGGTGTACTCTCCGAAGAGAACTTGAGAGGCGTACGTTTCAACATTTACGACGTAACGCTGCACG
CTACGCGATTTCAGAGAGTGGCGGTGAGATTTCCAACAACGAGACGTTGTCTGTACGCGTCTTTTGAACGCTGCG
CCACGTCCTTGAAGCCTGTCTATCTCGGAGATCCAATGTCGCCGAGTTGCCGTGCGTGGAAATCTACGGAGTTCTCAA
TCGTCGTCGTTGGTCACGTATTCGAAGAACAACAAGTTACTGGCACGCCCATGTTCTGTCGTAAAGCCTATCTTCCGGTCA

>CL2461Contig1|hydroxysteroid dehydrogenase-like protein 2

ATCTCATATCGTGAACATTAGCCCCCACTGAATCTCAATCCTTTCTGGTTCAAAAATCATGTTGCCTATACTATGGCT
AAATACGGGATGTCCATGTGTGTTCTCGGAATGGCGGATGAATTCAAAGCAGATAATATCGCTGTTAACGCCGTTTGGCC
AAAAACGGCGATTTCATACTGCGGCAATCGAGATGTTGAGTGGACCTGACAGCAAAAATATTAGCAGGAAACCAGAAATCA
TGGCTGATGCGGTCTATTCAATTGATCTGCAAAGATAGCAAAAGCGTGACCGGGCAGTTTCTCATAGATGAAGACATCCTC
CGCGGTGAAGGCATCAGTGATATGAGCCAATACGCTTGAATCCCGATTACCACGAGAAGCTGATGCCGGAATCTTTTT
GGATTGCGATGTAGAAGACGTTGGGAAGATAAATGGAAGAACAGCTGAAAACCTTTGGCGATGGTCAAGTGGCTCGAATAT
TTTCGGCTATAAATGAGAATATGACTCCAAATCTCGTAAAAGCGACAGGGGCGTATATCAATTCAACGTTAAAGGAGCG
GAAGAAGGTACATGTTTTTGGATCTGAAAAATGGCGACGGAATAACCGGAAAAGGACAACCGGAGCAAAACGCCTGATGC
GACCTCACCATGGATTCTAAACATTTCTTCGACATGTTTTCCGGTAAAGTAAAGCCAGCAACAGCTTTTCATGACGGGCA
AACTTAAGGTGCGCGGAAACCTGCAAAAAGCCATGAAATTGGAGAAACTCATGAAAAGTTTAAAGTCTAAACTATAACGA
GTTCTAAATTTGAATTTGCTATTACGCAAGTAATTCTGCAACCCCTTTGTGTCTCGATTTCTACACTTTTGTACACTACA
TCGTTTTTATGAATACTACAGTGGTTATCTCAAGACTAAAAAAGAAAATTGTATTTTGCGAATAAAAGCCTGAATTATT
ATGATCATGACGATGATCTAAATTTAGAGTGCATATTTTCTCACTTTCTGTTGAATTTTATTTTCAAGTTTTT
TAATCTATTTTTTATGCCTAACGATAGTTCTCCAAGAATTTTGTAGTTATTGAGAAAATATTCTCGTTTATTGAATGTA
TTGATACGGAAATTAATTTTTTACAAGGGTATTTCTGCTACTCC

>CL2464Contig1|mitochondrial f0 atp synthase d

AAATATATCGAATCAGCTGTATCGACGAGCAGGCGAAAGAGACCGCGGACGAAAAAGACTGTTCTTCGGCCGACCCGAAG
GATCGTGCTCTGCTTTTCTCGGTCATCTTTTAAATTCGGCTAAAAAATATAATTTAAATGGCTCGCCGCGCTCAAGG
GAATCAATTTGGTCCGGAATTCGCGAAAGGTGTTCCGAAGCGGACAGAAGACATCTTTGCTAGCTTTAAATCGAAATCCGAC
CAATATCTCCAAAGGTTATGTCCCTTCCGACAGCCCAAGAAAATCGATTGGGCTATTACAAGCAACATGTCCCTGC
GTCCGGAATGGTCGACAAATTCAAAAGGAATACGAAGCTCTGAAGTCCCGTACCCACCGGATAATTATACCGCGCAGA
TCGAGGCCGAGGGCCAGAAAATTTTGGACGAAGTTAAACGGTTCGTGCAAGAGTCCAATAAGCGCATAGTCGAGTTGGAA
GCGGAGGCTGAAAAAGCGCGCGCATCTTTGCCCATCCCGGAGATGACGATGGAAGAATTTGCCGAAGCGTATCCCGACCA
CGCACTCAATATAGACAAGCCGACCATTTGGCCCCATTTACCCGAGGAGCAACCCGAGACGAGCCGAAAAGAAACCCG
ACCCAGAGGCTCATTGAAAGTTCACCTCCGAGCTGTAGTTTATTCTACGCAGGAAGAAGATGAGAACGTTTA
ATCAAACCTCAGTTTGAAATATCCGATTATTATCAAGAATGA

>CL2469Contig1|bleomycin hydrolase

GGTATTCGTGATTCGTGTATCTCGCGAGTGTAGAGTCTCGTAGAAAGTAGCCCGCAGCAATCATTCTCTC
TGCCAGACAAGAAGTGCAAAGAGGTATTATTCTACCCGGGCTCCGGCGTACATTCTCATACAGAGGAGCGAGCAAAACAAA
CGACAACTTTTATCAATCCAAAAAATCACCATGGCTGATTCTGCAGGTGTTTTGACCGTGGAGGCAATAGCGCAAATG
CGGAAAAAATTTTATGCCGACGAGAGAAAATATCCAAGCGCAAAATGTTGTCAACAAAAACAGATCCTTTTCGAGGCTTGCA
TTTCACGCAGGAAGATGCAAGAAACGCATTACGTATTTTCAAACAAAATTGAATTGGAGGGGAAACCGATAACGAATCAA
AAAAATTCTGGCAGATGTTGGATTTTTCGCGTGTCTCAATATCATGAGAATTCCTTTTCATGAAGCGATGGCACTTGGAGGA
GTTTGAGTTCAGCCAGACGTATCTCTACTTTTGGGACAAAATCGAGAGGAGTAACATTTTCTACACAACATAGTTAAAA
CTGCGCGAAAGGGTGAACAAGTGGACGGTCTGTTTGTGTCGTTTTTGTGAACGATCCAACGTGCGACGGTGGCCAATGG
GACATGTTGGTGAACCTGATAAACCCTTACGGTTGGTGCCAAAGACGTGCTTCGAGAAGCATGGACGAGCGAATCATCG
AGTCGTATGAATGCAATATTGAAGTCGAAATTACGAGAGTTTGCGAAAGAGCTTCGCGATGAAGTGAACAAAATTCGTC
GGAGCAAGCGATACAAGATAAAATATACAGAGCAGATGAACGTCTGTTCCGAATCGTTGGTATTTGCTTGGGCATACCG
AGCGAAAAAGTAACTTGGGAATATTGCGACAAATCCAAAGAATTAACCACTCGGTGCGCCCGATCACCGGATTGGAATTT
TACAAGCAAATATGTCCAGCCGTGCTACAACGTGACGACAAAATTTGCCTCGTCTCAGATCCCAGGCCAGCAATCCTT
ATGGAAAACTTTACGAGCTCGATTACCTTGGCAACGTTGTGCGTGGTCGCAAAGTTTTGTACAAGCT

>CL2470Contig1|PREDICTED: hypothetical protein LOC552534 [Apis mellifera]

AGTGTGTTGGGAAAATTTCTAGGGGAGATTGTAATTTGCCGTGGTCCGGTGAGGTTACGTTATCCGTACAATATCAGTTT
TTTCGCGAAATAGTTTCTTTACCCTTCGTGTGGATTAATATATCAGTAACAGGAAGTGAACGATTACATTGCTCAGGTT
TTTCTGTGAATTCGTAATAATGGCTGGCACTGGAAATTCGGGACCTGCTTCAATTTTGAAGTAACTGGGCTTACAACCG
GTGACTAAATGCAGCCTCGTTAAGTTCTACGTTCCGGCAATTTGGGGTTGGATCTTACACCGCTTTGTCCGTCAATGTCAT
GAACCCGAGCCTCGTTATCAGAATATTTCCCAAACGAGACATCACAATTTCTTGCTGGGCAGCGCACTTGTGGAACTG
CGTCGTACATATACAGAGGAACATCTCAAGAGTCACCCACAGATCTCGAGTCAATGAGTGAAGTGAACAAAATTCGTC
CTCTTGAGTTTTTGTTTCAAGTGTAGCCTGGGCAGTGCTTCTGTTTCGATCGTTCCACCGAACCCTTATGACGAGTTGC
CGGAATTTGGATCAGGCTGGCTTTGATAAAGATCGGCTCGAGCTATCTCGACTTCATCGACCAGCAAAATCGTAAAAAAA
GTAGAAAAAAGAAGAAAAAACAAAAACAGACAAGTTACTAAAATTCACGATATTCTAAGAGTTTCTGTCGACT

>CL2471Contig1|succinyl- ligase

GAGAAGTGTGACTCGCCCCGTGTGGTGTGCTCTCATTTTTCTCCCCTGTTTCTTGCCATTTTACGATTTTCTCTCTAT
CCTCTGTCCCCTCCCACAGTAGATAGAGTCTCTCATGGTGAATAAAACTCGGGCAGTAGAACGATTAATATACGTGTA
AGGAACATTTTCGGTTATTTCTGTAAGAAATTTATTTTATAGATAAAAGAAAAAATAGGCTGTTGCTACCAGAGCATTGTCA
AAATTCACAGCAAGGACACCAAGCAGCCTTTTGGGTAGCCAAATAAGATTCAATTACAGCAACGAGAAAAAATTTAG
AAAATCGATTCCAACACGAAAGTAATCTGCCAGGGTTTTACGGGAAAGCAGGGAACCTTCCATTGTCAACAGGCAATTGA
TTATGGCACTTAAAGTCGTTGGTGGTGTGAGTCCCAAGAAAGCAGGCAACCAATCTGGGCAAACTGTTTTCAAGACT
GTCAAGGAGGCAAGGACGCCACGGGTGCTACAGCTTCGGTAATTTATGTCCTCCACCTGCAGCTGCCAATGCAATCAT
GGAAGCTCTGGATGCTGAAATGCCCTTGATTGTTGTCATACGAGGAGGCTATCCCAACACGATATGGTCAAGGTCAAGA
GGCGATTACTGGAGCAAGGCAAAATCTCGTCTCATAGGTCCCAACTGTCCTGGAATCATAGCACTGAACAGTGTAAATC
GGCATCATGCCCGGACACATTACCAGCGAGGAAAAGTCGGTATCGTCTCGAGATCTGGAACCTTGACATACGAGGCTGT
CAATCAAACGACATTGACCGGACTTGGGCAACACTGTGCGTGGGTATCGGCGGAGATCCCTTCAACGGCACCGACTTCA
TCGATTGTCTGGAAGTTTTCTTGCTGATCCGATTGACGCGGCAATATCATGATCGGCGAGATCGGTGGCAGTGCCGAG
GAGTCTGCTGCTGAATACCTACCGAGCATAACACTGGAGCCAAAGCCGAGCCGAGTATCGTTTATTGCCGGTGTAC
TGCCCCCTCCAGGCGTAGAATGGTACGCGGAGCTATAATTTCCCGAGGAAAGGTTGGAGCACAGGACAAAATACTC
GCTCTAGAAAAGGCTGGTGTGATAGTAACGCGAAGCCCTGCACAAATGGGCCGTGAATTATTGAAGGAAATGACTCGTCT

mmc4.txt

GGGACTGGCTGGAAAAATAAATTAAAAAGAAGGCAAAATGTTACTAGTAAATATAGTAGTTTACTCTCCGTGTCCGTG
TATCTTCGAAGAGAAGAAAAGAAATTATACAACATAAATCTGTACTGACGACGAGAAAGCTAACGATAAAGGAG
>CL2479Contig1|cytochrome c oxidase polypeptide iv
AGTACAGACAGTAACCCCTTTTTTATTCCTCTTCTTCTGCTCCATTACTCTCGTAATTTGATATTCCAACGTTGAGTCTT
TCCATAGCAGGAAAAATCCTTTTCCAATGATTTAACAGAAAACCAACTCGGCGACGAATTTATTGACAAGTTCGTAGTA
CGTTTCTCGCGATTAGAATACGATGGCAGGTAAACTTTTGGCAACCTGCCTGCGCGGCGTGCACACAATGCAAAATTGCTC
GCATGTCAGGAGAAGGTCCTCCAACCTCGTTCACCCGCAAGGTTGGAACCCGCAAGTAGTCGGTTGGGGAGTTAACGGC
GAAGCTGCTTACCACGACCATGAAGCCTGGCCAATGCCGCTGTCCGCTTCAAGGAGATCACTCCCGACCTTGCGATATT
GAAAGAGAAGGAAAAAGGAGACTGGAAGAAATTGACATTGGAAGAGAAAAAGACTCTGTACAGAGCGAGTTTTTGCAGTA
CGTTTGCAGAAATGGAAGCGCCAACGGGTGAATGGAAATCGATCACAGGAATCGTGCTGATGTTGGTATCGACGAGTCTG
TGGTTGTTTCATAGGCATGAAAGTATTCTGTAACGGAGCCGCTTCCGGAGTCTGTCAGCGAGGAGTCTCGACTGGCCAGTT
GGAGCGTATGCTCGTAATGGAGGTGAATCCAATCACAGGAATTTCCAGCAAGAAATAAACAAAAAACACCGAAAAAAG
TACTACTAAAAAGAAGACGATTAGTAAATAAAATTAGTACGTTAGAGTGAAATAGTGTTGTACGCAAAACAAACTAGTT
AG

>CL2483Contig2|importin-4-like

ATAGTCGACGTTCTGTACGAACTAATGTCAGCAAAGGTGGACGACGACGAAGACGAGGAATTATTGATGACGAGAATGA
GAAACAACTCCTTCCATTTCGAGCAGCCCATACAATGCACCTCCTGGGTCTTCATATCCAGCCCAGAAAGCTGTTCCCTC
ATTTGCTTCGCTGCATCAAACCGGGATTGGATGGAACGACGTTTACGCGAAGAAAGCTGCGTACTTGACGATGGCAGTT
CTGACCGAAGGTTGTTTCAGAGTTCATTGCAAGAAATTTATTTGCCAGATTTCTTGAATACGTGCTGTCCGCGGTGTTGCA
CGATAATCCAAATGTTTGCAACGCGGCTCTACGCAGCTGGCAAAATTTGCCGAGTTTTTGCAACCGGATTAAGTCGAT
TCTCGGATCAATTGATGCCGCTGCTTTACCATTATTTGGATTTCGAGTTTACGAGTGCAGGCAACGAGGAGAAAGATTTGCC
AAGGGGAGTCATACAAATGTTCTACGCCTTGGAAACCTTCTGCGAGAATTTGGACGACGCCTTGTGCCCCGAGCTCCCCG
AACTTATGCGACGACTCATCGACTATCTACAACAAAGGACTCCTTGCAATCCGCGCTTGTCTTCAGCGCTAGTTGGCGCT
GCTGCCAATCGCCAA

>CL2499Contig1|60s ribosomal protein l23a

GTCCCCGTGTTTTCTCCGTACGATTCTTTTCATCAAGATGGCTCCCAAACCGAAGCCGACGGAGAAAACAGGCAGCAAGT
CTGCCGAGAAGAAACCTGAGAAGAAGGCGGAGAAGAAGCCAGCAACGGCGGCGACTCCTGCAGCCTCCACTTCTTCGGCA
AAAGTAACGAAACCAGCAGCGGCCAAGCCGGCGGCGAAGAAGCCAGCAGCTGCCAAACCCGCGGCCGCAAGGCAGCGAG
CAAACAGCGGCGAAGCCTGCGGTCAAAGCTCCCGCCAAGCCAGCGGCACCCAAGCCCAAGAAGAATGTTGCGGCCGTC
AAGAAGACACCCAAGGGTGGCAAAGCTCCTGCTGGCCCTGTCCAGAAGGCCCTCAAAGCACAGAAAAAGATCTTGAAGGG
CGTTTCATGGATCGCGCTCAGGAAAAATCCGTACTTCGTTACATTTCCATCGTCCCAAGACCTTCAGACACCCAGGAACC
CCCAAGTACCCGAGGAAATCGGTACCAAACAGGAACCGGATGGACGAGTGAACATCATCAAATACCCACTGACCACTGA
AGCAGCCATGAAAAAGATCGAAGACAACAACACGTTGGTATTTCATCGTTTACACCAGAGCAAAACAAATATCATATCAAAG
CCTCAGTAAAAAACTTTACGACATCGACGTCGTAAGGTCAACACCTTGATCAGGTCTGACGGCAAGAAAAAGGCCTAC
GTACGTCTCGCTCGTGATTACGACGCCCTCGATGTTGCCAACAAATTTGGTATTATATAAACTGTACCGTTTTTCATCT
ATCTGTACAAAAACAAATTCNGTACTGATTGTCAATAAAATCTGTAACAAAG

>CL249Contig1|threonyl-trna cytoplasmic-like

AAGCTTGAGCTTTTTGAAAAATCGACGATGCAGAAGCTCAGCAAGTATTCTGGCACTCCAGTGCTCACATTTTGGGCGAAGC
GATGGAGCGTGTTTACGGAGGTTGTCTGTGTTACGGGCCACCGATAGAAAATGGTTTTTACTACGACATGTTCTCGGTG
AGAAAGGAATTTCAATCTCGATTTCCCCTACTTGGAAAGTCTCTACAAAAACATTGTAAGGAAAAGCAACCGTTTGAG
AGATTTGGAATGAGGAAAGAGGATTTGTTGGAAATGTTCAAGTACAACGAGTTCAAAGTTCGTATATTGAAGGAGAAAGT
AACGACTGACAAGACGACTGTATATCGATGTGGTCTTTGATCGATTTGTGTGCGCGACCTCATATCCGCCATACCGGAA
AAGTAAAGGCTATAAAAGTACGAAAAACTCGTCAACTTACTGGGAAGGCAATGCGAAGCCGAGTCTGTTGCAACGAGTG
TACGGAATAAGTTTACCGGACACGAAGCAACTGAAAGAGTGGGAGAAATTCAGGAGGAAGCTGCAAAAGCTGATCATCG
AAAAATTGGTCGTGAGCAGGAGTTATTTCTTCTCCACGAAATGTCTCCGGGCTCTTGTTTCTTCAGCCTCGCGGAGCTC
ACATTTACAATACTCTGGTCAATTCATACGCTCTGAGTACAGGAAACGTGGCTTCCAAGAAGTCGTACGCCCAACATG
TACAACTGCAATTTATGGCAGACTTCCGGCCATTGGCAACATTACGCCGACAACATGTTTTCTTTGACATTGAGAAGGA
AACTTTTCGCGCTTAAGCCGATGAATTTGTCGGGACATTGATGATTTTCGATGTTTCGGAATCGTTCTTGGCGAGAGTTGC
CGTTGCGCATGGCGGATTTGGAGTTTTGCGATCGTAACGAGTGTCCGGCGCTTACCGGGCTCACCCGAGTACGAAGA
TTCCAACAGGACGATGCTCATATTTTGCACGAATGAGCAAAATCAGAGACGAAGTTCTTGGCGCTCTCGAGTTTCTCAA
GCATGTCTATGGCGTTTTTGGCTTCACTTTCGATCTCTGCCTCTCTACGAGACCCGAAAAATATCTCGGTGACCTTGCCG
TCTGGGATCAAGCTGAAAAAGATTTGGCCTCCAGTCTCGATGGATTCCGGCGCAAATGGACTATCAATCCTGGTGATGGT
GCCTTCTACGGACCCAAAAATTGACATTACCATCAGGGATGCACTCCGACGATCTCATCAGTGCAGGACCATCAACTCGA
TTTTCAACTACCCATCAGATTCAATTTGAATTTATGTCAATGAAAAATAGCGAAAAAACGCGACCGGTGATAATCCATCG
AGCAATTTTGGGATCGGTGGAGCGAATGATTGCAATTCTGACGGAATCGTACGCCGTAATGGCCGTTCTGGTTGTCCC
CGAGACAAGTGATGGTCATTCCCGTTGGCCCACAATTCGACGAGTACGCGAATCAAGTGAAAGAAAAAGTTGTACGCATCG
GGATTTCATGGCTGAGTTGATACCGATTTCGAGCGATACGATGAACAAGAAAAATTCGAAATGCTCAGTTGGCGCAATTCAA
CTTTATCCTCGTGGTAGGAGAAAAGGAACGAGCTGGTAACACCGTAAATGTTGCGACGAGAGACAACATTGTCCACGGAG
AATTGACGGTCGACGAATTTGATTAATAATTCATCATTTTCAAGGACACGAAAGATCGCAACTGCGAAGACAAATTTAAG
AATTTGCGTTGCAACGTCAATCTCTCAATATGCTTATGCCACAACCTTACTGTTAGAGCAATTTTTCGGGTGTAATCAC
TGACATTTATGATTTTATAATTTTATATCTGCTCAATTTTCACTAAGAAAAACCTTTTTTCCCGGATCTCTGGGTTT
CACGAATGTGCAATAAAGATGGGAATTTTATAGAGCAAGAGATGAGAGTTTTGACTATGTGTAACGATCTGAAAA

>CL251Contig2|probable fumarate mitochondrial

TCGGAGACACATTCGAGCGAATGCCGTACGGAGTCATTGTGGCAATGGGAATCCTGAAAAAGCTGCGGCAGAGGTGAACA
AGGAATTTGGGCTGGACCTAAAGTGGCTGACGCCATAAGCAAGGCAGCGGATGATGTGATAAGCGGCAAACTGTACAAC
GATCATTTTCTTTAGTAATTTGGCAGACGGGTTCCGGTACTCAATCGAACATGAACACAAACGAGGTGATTTGCAATCG
TGCGATCGAAATTTTGGGAGGTGAACCTGGCTCGAAGACACCGGTTTCATCCGAACGACCATGTCAACATGTCGAGAGCT
CGAACGACACTTTCCCAACAGCTATGCACATCGCGGTTGCTCTGGAATCAACAAAGTCTTGTGCTGGATTGACGAAA

mmc4.txt

TTGCACGAGGCTTTGAAACAAAAGTCGAACGAATGGAAGACATAATTAAGATCGGCAGGACACACACTCAAGACGCTGT
 GCCTCTCACTCTCGGACAAGAATTCTCGGCCTACGCGACTCAAGTTGAATATGGAATCGCGCGAGTCAAGGACACACTGC
 CGCGATTGTACCAAGTTGGCACTCGGAGGAACAGCGGTGGGTACCGGATTGAACACGAGGAAAGGATTTCGCGGAGAAGACT
 GCTGCGAAGATCGCGAGTCTGACCGGTTATCCTTTCTGAACGGCACCCAACAAATTCGAGGCTCTTGCCGCTCATGACGC
 AATCGTCGAGGTCCACGGTGCCTTGAACACCGTCTGCTGTATCTATCATGAAGATCGCGAACGACATAAGATTTTTGGGCA
 GCGGACCTCGCTGTGGATTGGGCGAGCTTTCAATTGCCGGAACGAGCCTGGAAGTTGATCATGCCTGGCAAAGTCAAC
 CCGACACAGTGCGAAGCAATAACGATGGTTTGCCTCAAGTGTGGGCAATCACGTGCGGACTACGATAGCCGGAAGCAA
 CGGACATTTGAACTGAACGTTTTTAAGCCAGTTATGGTTGCTAATACCCTGCGATCGGCGAGACTGCTGGGCGATGCTT
 CAGCAGCTTTACCAAAAAATTGTGTCGTCGGTATCGCCCCGAATGTCGATAACATTGCCAAGATTATGAACGAGAGTCTC
 ATGCTGGTGACGGCTCTGAATCCTCACATCGGTTACGACAAGGCTGCAAAAAATCGCGAAACAAGCGCACAAAGAAAACT
 CACGCTCAAGGAATCCGCCCTGAAGAACGGACTCACCTCGGAACAGTTTGACCAATGGGTGAGGCCCGAACAAATGTTGG
 GACCCAAAGTATTATCCACCTGATATTAAATGGAAAAACAACCTGGAGTTGTTTTCTGCTTTTATTGGAAAGAGACAACA
 ACGTGTAAATCGACGTACGTGACGAAAGTTGAAAGTCAGAAGCAATATCGAATAAATTGTTTGAGTAATAAAAAACACAGC
 >CL252Contig1|60s ribosomal protein 126-like
 ATATACCACACTGCACAACTTTTAATAATTCTTCCGTTTCCCTTGCGGTTGTATCTCCCATCATCGGAGACGAGACAGC
 AAAAAATGAAGTTCAACAAATTGGTTTTCTTCTCGAGGAGGAAAAACCGCAAGAGGCATTTTACCGCACCTTCTCACATCA
 GAAGACGTTTTAATGTCCGCTCCACTCTCCAAAGAGCTTCGCCTCAAGTACAACGTGCGTTCCATGCCATCCGCAAAGAC
 GATGAAGTACAGGTGGTAAGAGGACATTACAAAGGTGAGCAAGTGGGCAAGGTGATCCAGGTGTATAGAAAGAAATTCGT
 AATATACATCGAAAGGATCCAGAGAGAAAAAGCCAACAGCGCCAGCGTTTACGTGCGCATCGATCCTTCCAAGACCGTCA
 TCGTTAAACTGAAGATGGACAAGGACCGTAAGAAAAATCATCGACAGACGTAGCAAAAGTCTGCTCGCTGCGTTGGCAAG
 GACAAAGGGCAAGTATACCGAGGAACTACAGCCGCCATGGAAAGCTCGTAAATGTCTCGTGTCTGTACATGTTTACAAA
 TAAAAACGTGAAAAAACCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG
 >CL252Contig1|neutral alpha-glucosidase ab-like
 ATTTAACGGCGAAGGGTAGGAAATTGGTGGTAATAATTGATCCTCATATCAAGCGAGATACGAATTATTTCTGCACAAC
 GATGCGACGAATCTTGGATATTACGTGAAGACCCGGGATGGTAAGATTACGAAGGTTGGTGTGGCCCGCGCTCTTC
 GTACCTCGATTTCTTCGATCCGAAGGTCCGAGAATATTACGCGACGCTCTATTCTCTCGAGAAATTCATGGGACAACGA
 ACGACGTTTACATATGGAACGACATGAACGAACCGAGCGTTTTCAACGGTCCGGAAGTTACGATGCCGAAGGACGTGGTA
 CATTACGGATCTTGGGAACATCGAGATGTCCACAACATCGTTGGACTTTATTTACCTCTGTCACTTACGACGCACTGTA
 CAAAAGATCCGGAGGGTCTCTGAGACCCTTTATCTTGTGCGGTTCTTTCTCGCTGGCAGTCAAGATACGTGGCCATTT
 GGACCGGCGACAATATGGCTGAGTGGAGCCATTTGAGAGCGAGTTATCCAATGTGTCTCTCGGTGCAATCTCCGGAATT
 TCTTTCTGCGGCGTCAAGTCCGTGGCTTTTTCAAAAATCCAGATTCCGAGCTCTTAATCAGATGGTATCAAGCCGGGGC
 TTGGTTACCTTTCTTCGGTCAACATTTCTCATATCGAGACCAAGAGACGCGAGCCGTGGACTTTCAATGACGAAACCAAGC
 AAATCATTCTGTGACGCGCTACGAATGCGATATTCATATTTGCCTTTGTGGTACACTCTCTTCAAGGAACACGAATCTACC
 GGCGACCCTGTAACGAGACCTCTCTGGGCCCCATTATCCCAGCGAACCAGCCACGTTACCATCGACGACCAGCTTCTTAT
 CGGCGATTCTATCCTCGTGCCTCCGTTTTCTGAGCCATCGGTCTACGAGGTCAAGGTCTACTTCCCCGGCAACGGTGACG
 TCGTTTGGTACGACGTCGACACGATGCAGCCTCACACGCAACCCGGAGCTCGATCCATTCTGTCACTCTACAAAATC
 CCTGTTTATCAACGCGTGGTCTGATAGTCCCGAGAAAAATCGGTATCCGTCTAGTACCGGTTCCCATGAAAAACGATC
 CTTACACTCTCGTCTGAATCGCCGGAAGAGATGGCACCCGCAAGGCACTTTTACATCGATGACGAAGTCAAGTTCTGAA
 TATCGTCATGGAAATATCTCCATCTCCAATTAACCTTCGACGGACACAATCTGACCTCCAATTCATCAGCAACAACAC
 ATCTTACGAAACCAAGAGCTGGCTCGAAAGAGTCGACATCGTAAATCTACCGCACGAAGTTACGGCAGCAACCCCTTTATT
 CGCCAGGATTGGGAAGAACTCCTTTGGTCTGTAACAAACAATACCAACAACAACGTGCTCACACTGAGAAAACCCGCTGTA
 AATATGGGCGAGGAATGGACCATCCAAGTAGTCCAATAGTTGATATTTCTATCTTTTTTTGGTTCTTGTCAAATTATTCA
 CGAGAGACTGCAAGACAGTCTCGTTGTCTATCCCTGTGATCTTGTAAACAATCTGCTCGTGAAATGTAAGACTCGAG
 ATAATCTCTCGGATTGTGTGATGGAGAACGAAAGAGCATGGAACCATAACCCGTCGAGTACGCGGATGATATGAAA
 TTGTGGAATTTTAAATGAGATAAGAACAACGCGACCTGGGCTTGAAAAATCGTTTGTTAATGTTTGAGCGTAGGGATTATT
 ATTGAGCAAGAATTAATAGGTAAATCCAGCAATCGTGGCGAATCGTGGACGAGGATAGAAAGAGGAAAGTAGATTAGTGA
 TCAGCATGTGCGATGAATTTATGTTTTTCAATGTTTTTGTATCTCACACAGCCATTGATAGAAGCTGACTCAATAAAC
 TTCTAAAACATCAGGAGAATACACATTTTCTTACAAGTTTTTGTGAAACGCGTTTCTGATTTCTCTCCCTCCGAGG
 CTCGTTATTCCGTTGTTTAANGGGAAATGGATCGCGTTTGGCTCAGGCACGGTTCGGTCTGTGCTTACGCGCCTTCG
 CAGTGAGTG
 >CL254Contig1|eukaryotic translation initiation factor 3 subunit 1-like
 ATAGTTTACGTTCCAACTCTCGGCGTCCACCATTTTCAATCCCCCGTGTCTTTACGCCGCCGCCGCCGCGTTACGTTG
 AAACGATTCTCTAGAAATAGGTTATTTGTAATCAGGACCATACATTTTCGACACTTGTATCAGGATGTACGAGGAATAC
 GAAGAGCAGTACGACAGTTACGATGAATATGCTCCGGTGGAAACATGTCGAACCTTATGACAGATATCGTCAGCCTGTTCC
 ACAGGCCGTACAAAAGTTTCTCGTCTATTTTCTGAATGCATCAACGACGGTTTGATCTTCGAGATTCAAAACCTCTACG
 AAAACACGTTTCTTAAAAATATCTGAACAATTGTTGACAAAACAATCGTGGCCGGAGGAAGCGGACATCGCTCACATCGTC
 GACGACGATCCAGTCTTCTCATTCTCTACAAGGAGCTTTATTTCCGTCTATTTACGCCAGAGCTCAAGGACCGACGTT
 GGAGCAACGTTTTCAGATCCTTTTTCAATTATTGCGATCTTTTTCAACTATATTCTCAAGCCGGACAAACCGGTGACGCTC
 GAGTTGCCCCGACCAGTGGCTTTGGGAACTCATAGACGAGTTTGTCTATCAATTTCAATCTTTCTCACAGTATCGAGCCAA
 TTTTGACCAACAAAACTCAGAAGAAATTGAAAAATCAACACCCATCACAATAATGGGACGTTATTTGCCTTCTCAATG
 TTTTCTATTATTTGGTCTGAGAAATCCAAGATCAAGAGCCAATTGGAGGTGTACGCCAGCGCGGTGATCCAGATTGCGTT
 GCCGGTCCATTCCGCAACATTCCTTGTACAAAATGCTTGGTTACTTTGCTCTGATCGGTCTCTGAGACTTCATTCCCT
 GCTGGGTGATTATTATCAAGCGATCAAGGTCCTCGAGAAGCTGGAGCTTTATAAGAAAAGCGGTATTCCACGTGCCCG
 GTTGTCAAGTATCGACCGCTACTACGTTGGATTTGCTTACATGATGATGAGACGATACACCGACGCGATAAGAACCATT
 TCCGGTAGTCTTTTGTACATAACAACGTACCAAGCAATTTTACGACAAGGAGTTGCCAAAAACGACAGATTAAACAAGC
 AAACCGAGCAAAATGATCATTTGCTAGCAATTTGCCTTGTTCTCCATCCTCAATGCATCGACGAGGTTCCAGCAAGCC
 CTCAGAGCGGAAATTTACAGAGAAAATCTACGAAATGCAATACGCGCATAGTCAAGTTCAATCTTGCTTCTCTTTT
 CGTTGTCCCAAATTTCTGTCCGCTACACCGCCCGCACCTGACGCCAAGATAGACGATTACTTCAGAGACGCTGTCAAAC

mmc4.txt

ATCAGACTCAAGTTTTTCATGGACGAAGTTGTTTCAGCAAAAAATGCTACCGACCATCCGCTCCTATCTCAAACCTCTACACC
 ACTCTCCCTCTCAGCAAACCTCGCGACTTTTCATGTCAGCGGAAGCTAGAACCGAAGACTGGGACCTCGATAAGGAAGTCTC
 TGGCCTCAGGATTCATCTTTTGTGCTTCAAACACAAAAATGAAAAATATTGTCTGGACCAAGGGAGCTTCCGGATTGGAAG
 GAAAAATCCAGTCAGGCTCGGAGCTCGATTTTTACATCGACCACGACATGATTCATATCGCCGACACGAAAGTCGCTCAT
 CGTTACGGCGATTTCTTCATTCGAAAGATCCTCAAGTTCGAGGAGCTCAACCGTAAGCTCCGTACATCAAGATCTAAGG
 AAATATTTCAAAGAAAGAAACCGCGATTTTGAACAGTGTGCGAAACATTTAATAAACGTCAACGGAAACGTGGGAATCAT
 CGT

>CL255Contig1|glutamine synthetase 2 cytoplasmic-like isoform 1

GGTTTTCGTTGAATTTATCAAGACGCGGAGGCTGCGGAGTCGCAGTAAAAAAAATCGAGTTTAAAGAGTATCAAATTTTA
 TCGCTACGTTTTGCCCCGTGGCTCGATAAGAGACTCACTGAAAACCGGGATTTGCAAGTCGCCACCACCAACATCGCTAA
 AAACAACGCGAGAACAAAGTTTTCGCTCTCGTTCTCTTTTATTTTCGCCACGAGAAACACGCCAACGAAAGTGTCT
 CTCTGACAGCCAAATTTGTTTCAGGCACGAAAATGAGTTGCAGAATTTAGTAAAAGTGTGTGAAACTGGCATCTTTCGACG
 TTCCGTTGTTGGAAGTCAGAAGAAATGGCTCATGCTTGGCAGATGCATCAGCACCACCACCATGTGCGAAGACCATGTTGA
 AGGATTGCGCGAACCGCGGCTCGACAAAACCTCTCGAACGATGATGGATTTACCACACCGGATAATATGGTTTCAG
 GCGAGATACATCTGGATCGATGGAAGTGGTGAAGGACTTCTGTTCCAAATCGAGGACCCTCGACTTTGTCCCAAAGACCC
 GAAAGATTTACCAACGTGGACGTACGACGGTAGCTCGACTATGCAGGCCGAGGGCGAAAACAGCGACATGTTCTTTATC
 CCGTAGCGATTTACAAAGATCCTTTTCAGACGTGGCAACAACAAGTTGGTCTTTGTGACACTTACAACCACGACCAGACC
 CCAAGCAAGACGAACCAACGCTTCCGTGCCAACGAAGCGTTGGAAGCTGTCAAGAGTCACGAACCTTGGTTCCGTATCGA
 GCAGGAATACATCTTCTTGACTTTGATGGCAGGCCATTGGGATGGCCGAAAAAATGGTTTCCCCGGACCCCAAGGTCT
 TACTATGCGCGTTGGAGCTGACAAAGTCATCGGACGTGAAATCGTCGAGGCTCATTACAGAGCCTGCATCTTCGCCGG
 TGTCAACATCGCTGGTACCAACGCCGAAGTCATGCCTTCCCAATGGGAGTTCCAGGTCGGTCCATGCCTGGGAATCTCGG
 TAGGAGATGATCTCTGGATGGCAGTTTCATTCTCCATTATATCGCTGAGGAATACGGAGTGATAGCGACCCTCGACCCG
 AAGCCGATGCCCGGTTCTGTGGAACGGGGCTGGGGCACACGCCAACCTCTCGACGAAGGCGATGAGAGCCGAGGGTGAAT
 CTCTGAAATTGAAAAGGCGATTGAAAAGCTGAGCAAGAAACACGTTCTGCATCCAAGCCTACGATCCTCGTGGAGGAA
 AAGACAACGAACGTCGTCTCACTGGACAATGCGAAACGAGCAGTATTCAGATTTTAGCGCTGGAGTTGCAACAGAAAC
 GTCAGCATAAGAATTCCTCGTGGCGTTGCCGAGGTCAAGAAAGGTTACCTCGAGGACAGAAGACCCGAGCAGCAATTTGTA
 TCCTTACGCAGTTTGGCAGCCCTCGTTGCACTTGCATTCTCAACGAATAAATGCAACGCTCTTCTCATTCTGTTTCATC
 AAAAAATTTCTCTTTTGTGCGAAGACGAAAACCTCATATTTTCCATTAACTATGTGCAAAATTTGTTGCGGTTTTTGGTA
 AAATCGAGCTTTGTTTCACAAAACCGATGCATTGCAACTTTGCGATTTCCAATGCTCCAGAAAAGTTGATGAATCCGTG
 AGGCATAATACAGAAAACGTCCATTATTTTCGACAATACTGTAAAAAANAAAAACAATAAAAAACAGAGAACGTTAAA
 GTACGAAAAAC

>CL2575Contig1|glutathione s-transferase 1

AGTTTTGGTCGACGGAGACCTCGTTATGGGAGAGAGCAATGCCATTCTGCAATATCTCGGAGACAAATACGACGTGGGCG
 GAAAGCTGTATCCCAAAGATCCAAAGCACGTGCAGTCGTGAATCATCGTCTCTGCTTCAATTTGGCGATGTATTATAAA
 AGCATATCCGAATACGTGATGGCCCCGATTTTTTTTCGCTTACGAGAGAACTCCACTGGGTTTGAAGAAGCTGAAAATGGC
 TCTGGACGTTTTTCGAAACTTACTTGAAACGTGAAAAAATCGTTACGCAGCTTCAAATGACTTGACTTTGGCCGATTTTC
 CTCTAATAACTGCAACGATGTGTCTGGAGGCGATAAATTTTTCTCTGAGCCCATGGCCTCTCGTGAACAATGGTACGAA
 GGATTCAGACCGGAAAAATCCCGCCTGTGGGAAATAGCAGCAGGTGGAATGCGAGAGATCAGTGAATTTGAGAAAAATCC
 ACCAGACTTGTGCGACATGGTCCATCCCATTCATCCCATCCGTAAGGTGCGCTAAATAAAAGGACGAAAAGGAGAAAAAA
 GGNTTAGGAAAAGCTTTTTTTCATTTTTTCTTATTCGCTNTTATAATAATATTATCTTTACTATCAACACATCACATTTGC
 TA

>CL2576Contig1|nadh-ubiquinone oxidoreductase 75 kda mitochondrial

GATTGCAAGACCAGATGATGGCTTTTCGGCAGTGACAGAAGTCGTTTCTGTCGACATGCAATTCAGTGGGAAACGCGCAGT
 GGAGGATAAGGATATTGGACCTTTGGTGAAAACGACGATGACGCGATGCATTCATTGCACGCGTTGCATTAGATTGCTT
 CCGAGGTTGCCGGAGTCGATGATTTTCGGAACACGGGACGAGGCAACGACATGCTGGTCGGAACGTACGTGGAAAAAATG
 TTCTTGTCCGAACGTGTCGGGCAACATAATTGATCTCTGTCCCGTGGGTGCACTCACCAGCAAACCTTACGCGTTCTGTCG
 TCGACCTGGGAGACCAGACGAACCGACAGCATCGATGTTTGGATGCTGTTGGCAGCAACATCGTAGTATCGAGTCGAAC
 GGGTGAAGTCTCAGGATACTTCCAAGATTGAACAGAAGAGGTGAACGAAGAATGGCTCTCCGACAAAGCTCGCTTCGCTT
 ACGAGCGTCTCAAGCGTCAACGGCTCATAACCCGATGATTAATAATGACGGAATAATTGGAGAAATGGAGTGGGAGGAC
 GCCCTTGTAGCCGCTGCGAAATCCTTGACGACGTTCCATCAAAACAAATGTGCGGCTATCGCCGGAACCTCGCCGACGC
 TGAAGCTCTCATCGTTATGAAAGACTTCTCAACAACTGGGCGGCGAAGTACTCGCTACAGAACAGAGCTTCCCGAAGG
 ACGGCGCAGGAATTGATCTGCGGAGCAGTTATCTGCTTAATAATAAAATCATCAATATCGAGGAAGCCGACGTGGTTGTA
 CTGATCGGCACGAATCCTCGTTTTGAAGCACCGTTGGTCAATACTCGTCTCCGCAAAGGATATTTGCACGGAGAGCAAAC
 GATTGCCCTTATCGGACCGAAAGTCGATTTGACGTACGAGTACGAACATTTGGGCGAATCTGCAGACCTCATATCGAAGC
 TTCAGAGCGGTAACCATCCATTCTGTGAAACTCTGAAGAACGCTAAAAAGCCGTTAGTAATTTCTTGGTGCTGAGCAACTG
 GCGAGAAAAGATGGAGCCAAGATCCTGGCCGAGACCCAAAAATTTGGCGAAATCTTTGGGGGAGAACGCGAAAGCCCCTGC
 TGAATGGAAAACGTTGAATATTCTGCACACGAACGCGTCGCAAGTCGCTGCCTTGGATCTTGGTTATGGGCTCGGACTGT
 GGAGGATGTTAAACCAACGAAACCAACCCCTAAAAATTTCTTTTACCTTCTTGGG

>CL2581Contig1|tubulin-specific chaperone e-like

TCTGTACCCGCGCGATCTCTTATCGCAGACTCTTTCATAAGAGATTATCAACGAGATAAAAAACAGTGATAAATCAGC
 TCGACGTTTTGTAAATTCGTACATTGTTTCAAGTAGACGAAATTTTATTTACAAAAATCAATCCACAAGGGATTTTGGAG
 TATTTGCAAGATGGGCGAAACCTGCGGTCTGTCCAACAGCGAGGCTCGTGATTTATGCCTCGCTCCTCCTGCTCTTTCCA
 AAGATTGGATAATGCAACAAACCATGTATCGCATTAAAGACCCAAGAATATCATTGCCTTTTTACACCGGAGTCTCTGGC
 ATGAGATTGCTCCAAAACTTGATTTTCCAGAAAACAAATTTCTCTTTACTTTATGGGTTACGAGAAACAGGAGGATAT
 ACCAACCGACAAGAGAGAATCTATCGAATGGACTTTTAGCAGAAAAGGCCACCATAGAATTGACCCACAATTTGGGGAACG
 AAATGATCCGGATGCAACGATACACAGGGGAACACAGAGCCCCGGGATACGGACACATTTGGAATCGCAGTGCAAGAC
 GTGGACGAGGCTTGTGCAAAATTCGAACGTTTGGGAGTGCAGTTTGTCAAGAAACCAAGATGGAATAATGAAGGGAAT
 CGCTTTTATCAAGGACCCTGATGGTTATTGGATCGAAATATTCAGCCCTCGCACTATCGCGGATATCGCGATGGCACACT

mmc4.txt

AAAAAGCTCAACGTCGAAAAACGTTCCCTTAAAAACATTGCAGATCCAATAATGTACGAAAAACACAATGAAATATTTGAT
TGTAATTTTAAATAAATTAATTAATCATACGNTCTTATCAATGTACGGCTGTTGTTTGATTTTATCTGAGGAAAATTCAAT
ATTTTTTCGACGCTTACGTGTGGATGGTATTG

>CL2593-bisContig1|general odorant-binding protein 56d-like

ATTCTTCATAAAAAAGTTAAATTACATAATTAAGATGAAGAGCTTCGCTATCGCCTTTGCTTTCTGCCTCGTGCTCGCT
GCTAGTGCTCTTACGGACGAGCAAAGAACCAAGCTCACGGAGCACAGAGATCACTGCATCACGGAACAGGCATTGACAA
AGCAAAGGTTGACACGGCGAAACTGGGTACTTTTGACGAAGCTGACGATAAGCTTGGCTGTTTCAGTGCCTGTCTTTTGA
AGCGTATTGGAATCATGAACGCTGATGGCACTTTCAACGAGAGAAGCTACTCGGGATAAGATTTCCGCTGACGTCCCAAGG
GAGAAAGCCGAAGAATTAATCACCAAGTGACAAGGACATGACTGGAACGACGGACTGTGAGACTGGAATGAAACTCTTGA
AGTGTACATGACAAACAAACTTTCTCAGTTCTTGTCTAGTTACCGGAGCCATGGCCCTGACGT

>CL2596-bisContig1|60s acidic ribosomal protein p2

TCTTCTCGTTTTCTTTTCGAGGAACGTACACACACTCGACATTTTCAGCGAGTTCCACGTTTTCGTGTCGTGACGACTTAAA
AATGCGTTACGTGGCCGCTTACCTTTTGGCTGTCTCGTGGCAAAGCTGCACCCAACAGACTGATATCGAGAAGATCT
TGCTTTCGTCGGTATCGACTCCGAGAAGCTGTCCAAAGCTCATCAGCGAGCTCAATGGCAAATCCATCGAAGAT
CTGTATGCCCCAAGGTCGTGAGAAGCTGTCTCGATGCCGCTCGGTGGTGCAGCTCCGGCTGCGGCTGCTGCTGGTGGCGG
CGCCGCTGCACCTGCGGAGGTCGCGAAGAAGGAAGAGGAAAAGTCTGCGAAGGAGGATTCCGATTCCGAGGACGACAAC
TGGGTTTTCGGTCTCTTCGATTAAGAAGCAACTTGCCCAAGCGTATCCGACGAGGGGAGAATAAAAAACACTTTGTTTCGAC
ATCTGAGACTCTGGCGTTACGCGGCGTTATTAATTTAACAATAGAATGTCCCGTTGTGGTCCCAATTGACGAATAAATACT
TTTTTCACTTTTTTACCCGAAAAA

>CL2599Contig1|s-phase kinase-associated protein 1-like

GTTTCGTTGTTTCAAACGCGGGAGTACGTGACACAATATCTCGAGATGCCGATGATAAACTGCAGAGCTCCGACGGCGA
GGTTTTTCGAGGTCGACGTTGACATTGCAAAATGCTCCGTCACCATAAAAACCATGCTCGAAGATCTCGGCATGGACGAAG
ACGAAGAAGAAGTCGTCCCTCTGCCAACGTCAACTCTGCCATCCTCCGCAAAGTTATCCAATGGGCCACTTACCACAAA
GACGATCCGGCGCCGGCCGAAGACGACGAGAACAAAGAAAAACGCACCGACGACATCAGCTCCTGGGACGCTGATTTTCT
CAAGTTCGATCAAGGAACGCTGTTTCGAGTTGATTCTAGCTGCGAATTATCTGGACATAAAAGGACTTTTGGACGTGACGT
GTAAAAACAGTGGCAACATGATAAAGGGAAAGACGCCAGAAGAGATCCGTAACGTTTAAACATAAAGAATGACTTTACA
GCGTCGGAGGAAGAACAAGTTCGCAAAGAGAACGAATGGTGCGAGGAGAAATAGAGGAGGCGTTGCTATCGGATATCGAT
CGAGCGAGTCTTGTAACGTCCCATACGTATTTTCTTTTTTCTTTGTGAATTTTGATTTAAGTTGTCCCGGTCTCGAA
ATTAAGTCCACAAAGCGTCGACATTTGTACAGCAAACCTTGACGCCACAAGCACATGCGAGTTTATCTGTCCGGAGGAAA
ACTCTATTCTGCTCTGTTCTATACGTAATACCAATTTAAATTGTGTACGGTGTGTGTCATCTAGGATTTATCTCGTAAC
CAAGCTTAGCTTAGAAAAATCAAAAAATTCGAAGTGATAGCGTTTAAAAAGTTTAAAGATTTGTGGTTATCGTGGCGAATAT
CTCTCATCCCCAAAGTTATTACTTTTATCTCACTATTCTATTACATCCCAATCGCCTTTAATGAGCTAATTATCGAATA
AATTATTATTAATTTGTTTGTAGTCTTTTTCTTCGTAACCTGGACAGACT

>CL259Contig1|aldehyde dimeric nadp-preferring-like isoform 2

AGTTTGATTCTTGACAGTCGATGTTGTAGAACGATTTTTCTAAACATCCTCCGACTGATTTGTAATAAATTTTCAATTGG
AATAATTTTTTTCAGTCCAAATGAACGGAAGTAACGATGGGGAATTACGGTGACCTCGTCGAAAAACGAGGGAGCCG
TTTTACAGGGGGAAAACTCGTCCCTGGAATTTCTGATAAAACAATTGAAATTTGCTGATAAAATGCTGGAGGAAAAATTA
TGCAAAAAATAAACTCGCACTGAATTCAGATCTGCGAAGGTGCAAAATTCGAAACGCTGTCTTTGGAGATCGATTATTGCA
TAAATGACATAAAGTACATGTTGATGCACATTAAGAATGGGCAGCTTCCGAAAAGCCATCAAAGATTTTCGTTAACATG
CTCGACTCAGTCGAAATCCACAAAGATCCTTACGGCGTTGTGCTAGTAATTGGTGCTTGAATTATCCTCTCCAATTGTG
TATCGTGCCCATGATGGGCGCGATCGCTGCCGGAATTGCGTAATCCTTAAACCATCCGAAGTCTCAGCAGCAACAGCGG
CACTACTCCATCGACTTATTTCCCAAGTATTTAGACACTGAATGTTACCACGTGGTTTTGGGAGGAGTGCCCGAAACAACA
GAGCTATTGAAGCAAAGATTGATTACATATTTTACACGGGATCTACGACAGTCGGTAAATCGTTCCGGGAAGCTGCAAA
CAAATTTTGACACCTGTGACGTTTGAATTTGGGTGGAAAGGCCAGGTGATACATCGACAGTACGGCTGATTAATTACTCG
CCACGAAGCGAATTTCTTTGGGAAAAATTCATAAACGTAGGACAAACGTGCATCGCGCCCGATTACATTTTGTGCAGCCCG
GAAATTCATCAAAATTCATTGAAAAATGCGGAAAAAATAATAAAAGAAATGGTACGGTGATAATCCAAAAAGAGAGCAA
CGACCTCTGTCGTATCGTCAGCACGAATCATTTCAACCGCCTGGTAAATTTCTTGACCGGAAATGGCAGAGTTGCCGTTG
GCGGTGATACGGATGCGAGAGAAAAATATATACGCCGACGATCCTCGCCGATGTGAAACCCTCGGATCCCATATGAA
GAGGAAATTTTTTGGTCCAAATTTTCCAAATCGTTAATGTGCTAGTACGCTTACGAAGCAATTAATTTATCAACGAACGGA
AAAACTCTAGCGATGTACTTATTTTGGCAAAAATATGGAACCTATAAATCTGATCAATCAGAACACATCTAGTGGTGGAG
TACTCATCAATGATTGATGCTGCATGCCGAGTTGACTCACTACCCTTTGGAGGCGTTGGATCGTCCGGGATGGGAGCG
TATCACGGGCAACGCAGTTATGACACTTTTCGTTTCATCGGAAAGGTTGCCTCGTTAAGGATTTCAACATAATCGGCGAAAC
ATTGGCTTCATGCCGATATCCGCCGTACACCGATCGCAAGCTGTCAATCCTGAGATTGTTGCTGGCCAAGAGGCCAGACA
TACCGGGAGTCCGTTTTCTGCCTCATCTGGTCATGTTTGGTTTGGGTATTTCTCGCGACAATTGGTTTCCGAGCCGCGATG
AAGGAATACGGCGGCCCGGAACAGCAATCTTAAGGCTTCGTTGCTGTTTATCCAAAATCAACCACGCACTGATGTTGAAA
ACAAAAAATATATATTCTCGTTCCCGGAATTTCCGCACAGGATGTACATTTTTTATTTAATGTCCACTCTGTTGCAACAT
TTTCAAGGAATTTGTTTTTTTTTTTTCTTTTCGTTTCGTATCCCTAATATTGTTTTCAGGGGGAAAAACGATTGAAACCAA
ACAACGGAACGTCAAGCTACGATAATACGCTTAATTAATAAATATTTCGATGAGCTGGCTGTTTTCAAAAAATATAATGTTA
TTACGTAAGTAGTGAAGAATATTGAGGANATCACGATTTTTATAAAAGTATTTTATCAACAGGAATAAATATCAA

>CL25Contig3|low quality protein: filamin-c-like

GAAAAAGGTGAAAGTTAAAGGGGACGCTCAAGGAGGTAAGACTCAACAGGAGAATACTTTCTCGATTGACACGAGGG
ACGCCGTTTTCGGTGGGTTGTCTTGTGCTGATGGAAGGACCGAGCAAAGCCGAGATCCAGTGCAAAGACAACCTCCGATGGA
TCGTTGAACGTTTCTACAAGCCAACCGAGCCTGGTTACTACATAAATGAACCTCAAGTTTTCGGGACCATCACGTTGAGG
GTTCCGCCCTTACCGTCAAGGTCTCCGGCGAGGGCAGCAATCGTCAGCGCGAAAAGATTACGCGTGTGCGAAGCTGTC
CCGATAACTGAGGTCGGAAGTCAATGCAAGTTGACCTTCAAAATGCCAGGCATCACGTCCTTCGACTTGGCTGCCACGGT
CACTTCCCCCGGTGGCGTCACCGAGGACGCTGAGATCAAAGAAGTCGAGGATGGACTTTACGCCGTGCTTTTGTTCCTCA
AGGAATTTGAGTTTACACAGTCTCTGTCGCTACAAGGAAATGCACATACCTGGATCACCTTTTCAATACCGTTTGGGA
CCTCTTCGCGATGGTGGAGCTCATCGAGTCCACGCTGGTGGTCCCGGTCTCGAGCGGGGCGAACAGGGCGAACCTTGCGA

mmc4.txt

ATTCAACATTTGGACCAGAGAAGCTGGAGCTGGAACCTCTAGCCGTTTCTATCGAGGGCCCTAGCAAAGCACAAATTGACT
TCAAAGATCGCAAGGATGGAAGTTGCTACGTTAGCTACACCGTCGCTGAACCTGGTGACTATAGAGTGGGAATTAATTC
AACGATCAGCACATTCCCGATTCTCCGCATAAACTCTACATCTCACCGCGATGGGAGACGCTCATAAGCTCGAAGTAGC
ACAATTCCTGACAGTGGAGTACAGCCTGACAAACCTGCGACTTTCCTTGTTCGTAAGAACGGAGCAAAGGGCGAACTCG
ATGCCAAGATCGTTTACCAGAGTGAATAGAGGACGATTGCTTCATTAGTCGATCGACGCTGAAGAATATTCGGTGAGA
TTTATGGCCCGTGAGAATGGAATCCACAACATCCACATCAAATTCACCGGAGTTCACATAAACCGAAGTCCCTACCGCGT
CAAGGTAGGCAAGGTCGATGCCGATCCTGCTGCACTCCACGCGTTCGGCAATGGCCTCAAGGAAATAAAAACCGGTCAA
AAACCGATTTTATAATCGACACGTGCAACGCTGGCTCGGGAGCTCTTCCGTTACCGTTGATGGTCCTAGCAAAGTTGCT
ATGGATTGTACCGAAGTCGAGGAAGGTTACAAGGTCAGGTACACGCCTCTCTACCCGGTGATTATTATATCAGCATCAA
GTACAACGGATATCACATCGTTGGATCACCATAACAAGGTCACCGCGACCGGTGCGGAACTCGCTGAAAGGGGAGCTCAAG
AAACAAGTTCAATAATCGTGGAGACGGTATCAAAGATTTCAAAATCGAAGCAGACTGGTCCAGTTTTGCCGCTGTTCAA
TCGGACGCGAGTAAAGTAACGAGCAAGGGAATGGGATTGAAGAAAGCGTACTTGGGAAAGCAGAATCAGTTTACCGTGAA
CGCAGGCGATGCCGTAACAACATATTTTTCGTGGGAATTCACGGACCGAAGGGACCCTGCGAGGAAGTTTTCGTCAAGC
ATACTGGTCGCAATAATTACAACGTGAGCTACTTGGTCCGAGAGAGGGCGAGTACATCGTAATAGTCAAATGGGGAGAC
GATCATATTTCCCGGATCACCTTACAAGGTCGACGCTAGACATTTCCAAAAGTCTCAGCAACGTCGCCAAGGCAAATCGT
TATTTCAAAAAGTAGCAACACCGAGTCCGATGGAATAGTTATTTACACGACAACAAAACAACAAATGATAAATATT
TTGAGAAACTATTTAACTTA

>CL2602Contig1|troponin i

AGTTAGCCACCGAGGAACCGTTCAACCAACCTCGTGTTCTTCTTAGATATCCCAACTAGCAGAGTACTTAGCACCCCG
ACTTCAAAATGGCCGTCGACGATGATAGAAAACGCATCGAGGATGAAAAGAAGAGGAAGCAGGCGGAGACCGACAGGAAA
AGGGCCGAAGTTCGAGCCCGCTGGAGGAAGCCTCAAGGCCAAAAAGCCAAGAAGGGTTTTCATGACTCCGAGAGAGAAA
GAAGAAGCTCAGGTTGCTGTTGCGTAAAAAAGCAGCGGAAGAACTGAAAAAGAGCAGGAAAGAAAAGCTGCGGAACGAA
GACGCATAATTGAGCAGCGTTGCGGAAAGCCGAGGCCCGTGGACGACGCAACGAAGATACTCTAAAGCGCGTGTTCGGA
GAGTACCACAATCGGATCATTGCGTTGGAGGAGCAAAAAATTCGACATCGAATATATCGTTAAGAAGAAGGACTACGAGA
TCTCCGATCTCAACGGACAGGTCAACGACCTCCGAGGTAATTCATGAAGCCGACCCTGAAGAAGGTCTCGAAGTACGAG
AGCAAATTCGCCAAGCTCCAGAAGAAGGCTGCCGAGTTCAACTTCGCAACCAACTGAAGCAGGTGAAGAAGAAGGAATT
CACCTCGAGGAAGAAGACAAGGAGCCGAAGAAGTCCGAGAAGGCAGAGTGGCAGACGAAGAAGTAAAAATCTCCGACG
ACGTAAAACTCCGCCGAAATATAAATACGAATATTGACAAACGATCATGCGTCCAATTCCTTAATCGCGAACGATCGCTC
GCAGGTCGACGTTTTTTTTCTCTATTTATCTTTCGTAATTCGTCTCAATATTGATTTTGTTTTAC

>CL2603Contig1|probable udp-glucose 4-epimerase-like

GAGATACTTCAATCCAGTGGGAGCTCATTCTTCAGGCGAATTTGGGCGAAGATCCAAGTGGTATTCTAACAATCTGATGC
TTTTCATTTGCTCAGGTGCTGTTGGCAAGAGAGAAGTGTGCAAGTTTACGGAAACGATTACGATACTCCCGATGGAAT
GGCGTTTCGGGATTACATTCACATAACGGATCTCGCTCTGGGCGACGTGAAAGCCATAGTCTACCAAAAAATCTCAAGGAGC
GACGGGCTTCAATCCGATAAACTTTGGGAACAGGGAAAGGGAATTCGGTGCTCGAAGTGATACACGCGTTGAGAAGGCTT
CCGGAAGAGTAATCTACTTTCAAAATAGTCGCTCGTCCAGGAGACATTGCTGCCAGTTACGCGGACGCTGGTCTTGC
GAAAAAAGTGCTTGAAGTGGACAGCGACGAAAAGCATGGAAGACATGTGCGCGGACACTTGGAACTGGCAACAGAAAAATC
CTAACGGCTTCAAACCAAAGTACAAATTAACAAAAACAAGTACGAAGACG

>CL2609Contig1|PREDICTED: hypothetical protein LOC411955 [Apis mellifera]

AGGCTTCCAGGGAATTGTCAACATTACGAACTATGAAATATTGTTTGGAACTGAAAATCCTCCAGAGAGCTTGCGGAAC
GTCATCTGGCGATTGCAGGCGTTATACAATGTATTAGGTGGAAACAGTAGTCGCGTGACGAATTCGAATAAATTCCTGGT
TGGGCTCACTTTCCCAAAGAACTCGAAAACCGCAGAGATCGAAGTGAACCACGACAAAATTTGATCGGCTATGATCCAA
GTATTATCGATCTACTGCTCGTACGCACAAGGTTGCACAGGTTCTTGGAATAATCTCTGCTTCGCACAATGTTCAGCGTT
TGTTCTCTTACGAGGACAGTTGGCACCTCAGCAGCAACATTACGTTCCCGTTCCCGAGGATCGTGAATAATTGTTGCT
CGGGCAGTGTTCAAAAGAAAATCCAAGATTGCGGTTAAGGCGATAGGAACATCGAGCGGAATAACGATAATGTGCGACG
ACGATTTGGAAAGTATAAAAAATCGTGCCCGACCGCGACGGTGGAAAGGTTTATAATTTATCGAACCATTGCCTTTCAAG
AAAGACTTCTATGGAACGCTATCAACTCGAAGAGAATCCGAATGGACGGGAAGTCGATTATCTGTTCTTCTCCGATCA
CCTCATTTTTCATACACGTCACAGCTGATCAAGTACTTGTAGTTTTCCCAAGCTATATGAAAGAATTGCCATGCGGTGTTT
GCACCGTGACCAGCCGCGAGGAAGCGAAATTTGTTGAGAAGGATTGAGCAATCGAAACGTTTACCATACGTTTTGACAGC
CTTTTGGTCTTGTGATTGAAATCCAATATTTTTTACTTTATTAATTAATGAGACGAAAGTGAGAGTCGTTTGTGTTTA
TGATACATAGCCACGATCACGTAAGTCCCTTCTTCTTCTTTAGACTATATCAACTATATTCTTACCGTAATTATC
GAATACGTAACAGAAAATGTCAGTCT

>CL2623Contig1|vacuolar protein sorting-associated protein 35

ATTTTGGAGCAAGTTGTGAGTTGCAGGGATGCAATAGCTCAAGAATATTTAATGGAATGTATAATTCAGGTCTTTCCCGA
CGAATTTTCACTTCAAACCTTTGAACGCCTTCTCAAGTCTTGTGCCGAGTTACACAATGGCGTCAACGTTAAAAATATAA
TAATATCGTTGATCGACCGTCTCGCGACTTTCAGTCAAAGATCCGACGGAGTTGGTGGTCCGGGAGTCCAGTCAGATT
CCTGGTATTCCACAAGATGTTAAGCTCTTCGATGTATTAGTGTATCAAGTTGCGACCATATCCAGACCAGACAAGACAT
GCCGCCCCGAGGATATCGTTTCATTGCAAGTGGCTCTCATCAATTTGGCACATAAATGTTATCCCGAAAGAGTTGATTGCT
CGACAAGTATTATCACCACCGTGCAAATATTACGAAAAGCTACAACGTTGAAAGTTGGAATACAA

>CL262Contig1|upf0160 protein mitochondrial-like

AAATTTTTTTCACGTCCTGAATGTTCTGAATGTAATAATGGTGCAAAATCGATAGGAATAATAAGAGTAAAAAATTGTTA
TTTGATATTGTGTGGTCAGCAACTATATCAGCAAAAGATTAAATGATATTTAAATTTTTTCAAAGCGTATTGACGACGTC
CGTAAGTTAACCACGTGCCTTGTGAGTTTCTCGTCGATATTCAACGCAACAGACTCGGCTAACTTTTTTACGCAAAAC
ATATTTGATGGCATCGTCAAACGTAACGATCGGAACCCACGATGGTTGTTTCCATTGTGACGAGGCGCTGGCTTGTTC
ATGCTGAAACAATTGCCAGAGTATAAAAAATGCCAAGATTGTGAGATCGCGAGATTCCAAGATATTAGATACTTGCATAT
CGTTGTAGACGTGGGTGGTGTTCACGATCATGAGAAACAACGCTACGACCATCATGCGCGAATTCACGGAAACCGCGA
GCACCGTTACGAAGAAAGAAGCCCTCTGTGGGACATTAATTTGAGCAGCGCTGGTCTAATTTTTGCCATTACGGCCATC
GAGTCGTTAAGCAATTGGTACCTGAAGTTTGGACGATCGGATATCGACCGTATTTTCAGGAGAGTGACGAATCGTTG
ATCAAGGAAGTTGATGAGTGGACAACGGCGTGCCGATGTTGATGGGGAGCCTGTATACCGAATTGTTACTAATCTGAG

CGACGCTGTGGCGAGATTGAATCTCTGACTGGAACAGTGTAGGCCTTGACAGTGACGAACCTCTTTTTAAAGCAATGGACC
TCTGTGGCGAAGAGCTTAAATATTTTCGTTACAAATGCAGCGAGTACTTGGCTACCAAGTGAAGGCAATTGTCAAGGAAGCT
GTTTTCAAAAAGATTGGAAGTCGATCCCAAGTGGTGAATCATCGAGTGGTAAAGAGCCTTGCCTGGAAAGATGCGTTGTT
CGAATTGGACGAGGAGGCTAATCGAGCCCCGATCAAGTACGTGATCTTTGCCGACAACTACAGAGTACAGTGGC
TACCGGTGCACCGCAAGTTTTGTATGCAGGATGTTCTTGCCAGAGGCTTGGGCTGGATTGAGGGACGAGGAATTTGCC
CGCGTCGCTGGTATCGAAGGCTGTGATTTCTGTACACGGGCGTTTCATCGGTGGAAACAAAACGCGAGACGGTGCCT
CGCCATGGCTCGAAAAGCTCTGAAAATTGGCAAATCAGCGGAGAAATGAAGAATTGAGACGAAAAATTAGAAAAATGGAA
ATCTAAATCAATTACCGTTTTTCGATCGGGCCGAGGGCGTAACAATTTTTCTTCTGATGACGAGAGAAAAACAAATTCATG
TTTTTTTTAATGACTGGCGGCGGCGTGTGCGGCAAGGTGAGCAGCTTTGGCGTGAGCAACTTCCGGTGTATCGATCACACG
ACCGTCGTGTCCAAAGCGCAGCAGACGCTTCCGTAAGCGTAGACGGCGAGTACGAGTAAGTAAGAGCTCCGTAAAC
CGTGTCCAGCAGCATTTGGCAGCTCTGAGCGTGAACGAGGAGTGGCGGCTTTGGCATGGGCAACCTCGGGGGTGTCT
ACGACGCGTCCGTGAGCGGCAAGAGGAGCGGGTTGGGCATATGCATGGTGAACCGGGTAGCTGGCGTAGGGGGATGCTGC
GTACGCGAGAGCTGGGGCATAAGCATAGCCGTAAGAGTTTCTTGCTGCTTCTGCTGGCATGAGCAGCCAAGTGAAGTGTCT
TTGCGTGTCTCGATCTCCGGTGTATCGACTACTCGACCATCGTGACCGATTGGCGCTCCGGCGTGATAAGCGTAATGAGAG
TAAGCCGGGGCGAGGTTATCCCGGGCAGCAACGCTACGGCCACGAGGGCAGAAAGAACAAATGAAGGTTTGCATGATTTT
GGTGAGTGAGTTTATAAGCGCTGCTGGAATTCAGTACTCGCTGACAGACTTGAAGTGTATGCTGTACCAAGTTGACG
GTACACCTTTTATACATGAGAAATCGAGTAGGGAGTCTGCTGATTTCTGTTATCGAGTGGGGAT

>CL2637Contig1|hydroxymethylglutaryl- synthase 1-like

ATCGGTGAAATCGGTACTGATGCAAATATTTGAAAAATCGGGTTCAACGGACATCGAGGGAGTGGATTTCGACGAACCGCT
GTTACGGAGGAACAGCGGCCCTTTTCAATGCGGTTTTCTGGGTGGAGAGCAGCGCATGGGACGGAAGATTGGCGCTAGTG
GTTCGCGCGGAACACGCGATTTACGCGCCGGAAGTGACGCGGCCAACCGGTGGCGCTGGTGGCGTAGCGATGATCGTG
GGCCGGGAAGCGCCGCTCGTATTCGATCGCGGACTTCGGCTACGTGCATGAGACACGTTTACGATTTTTTACAAGCCTG
ATTTGCGCTCGGAATACCCGGTAGTCGATAGCAAATTAATCGATCCAATCGTACCTGAGCTCGCTGGACGAGTGTACAAA
AGATACAGAGAAAAAGTTAAATCGAAAGATGCTAAAAACTCTATGAGCTTGGAAAAATTTCGACGCTGTATTGTTCCACTC
GCCTTACTGCAAACTCGTACAAAAATCATACGCCAGATTGGCCTTTTTGGATTTTTTATACTTTCCGATAAAAAACAACAGC
AAATACAGCCAAGAGATTAAAAAATTTTCGAGACTGCAAAACCGGAAGATACATATTTTCATAGAGACTCTGGAGAAAGCTTT
CTTGCGCTGAGTGGAGCAGATTTTTCGATGAAAGCCCAACCGAGCTTGATGATCGTAAATCAAGTTGGCAACATGTACA
CGCCTTCGTTTTACTCTGGCCTGGTCTGTTTACTCATAAAACAACCTCTTGCCGAATTGGCCAATGCCAGAGTCGGTATTT
TCTCGTATGGCTCTGGTCTCGCCTCCAGCATGTATTCATGACCATCAGCTCCGACGCGACCAAGATTTCGAGCTCGCT
CAACTCGTTTTCGAAGCTTTCTTACGTCCGGCCTCTTTTGGAAATCACGAAAATCCGCTACTCCTCAAAAAATTCACCGATG
TTTTGGCTCTGAGGGAAAAAAATTTGTCATACCGTTCCATCTCCCTCAGAGCTCCATCGAAAAATCTTTTCCCTGGAAT
TACTACCTCGTCCGTTATCGACGATAAACACAGAAGAACCTACGAGAGAAGCCCAAGGAATAACTCCCCCATCATTATAT
TAATTAGCTGAATTCATGATGGCTGCTCCCAACCAATGTCTGCTTTGATTTTTCTTCCATATAAATGAGTCAGATTTG
TCCCCCGATTGCCAAGTTCCACAATATTGAACTAATCGGAGGGTCCAAACTGCTGAACTAATTCTTGATGGTATGAATAT
CTGAGCCAGGCAATTTGTGGGCACAGTATCCTCAATCAACCACTCTCTTGTTTGAAGGAGC

>CL263Contig1|26s proteasome non-atpase regulatory subunit 2

AGCTTGACGGTTCACACAAAATTTTTTACAATACACCTCCGTGCTTTGGGTTTCGATTTGTGAAAAATAACAAGAATCAAGC
AATACTTCAAGTATGCTTGAAGCAGCAAGAGTAGAAGCAGCGAAACCGCAAGGAGGGCGACCAAAAAATGGCAAGAGGA
GGAGAAAAACGATCTCTCGGAAGAGGATAAAATTTATGCAAGAAGAACTGAGCAATTTGGTGAGCGTCTTCAAAAGCGGA
AACACGAAACAGCATTTCACAGCGCTGGAAGCACTGTGCGCTCAAATTCGTGCGTCAACGACGTCGATGACGAGTGTGCC
AAAGCCGTTGAAATTCATGAGACCGCATTACGACACGATGAAGCAAGTTTACGAAGGGCTGCACGACACGAAAGCGCGGG
AATTGTGTTTCGGACATAAATATCCGTTTTGGCAATGACGATGGGCGAAGGGGAGGGAGTGTGTTGAAATACAGACTGACGGG
CTCGGCTTTGGAGTTGGGAGAATTGGGCGACAGTACGTGAGACACTTGTGAGGAGAAATGGCCGGTGAATGGGACGAAT
TAACGGGCGAAGATTCGAAATAATGAGCAAAATTTGATCGGCCTTGTACAGAGATTTGCCCTTACAACATGGCGCACA
ATGCCGAGACCGAAGCTTTCGATTTGCTCATGGAATCGAGAGACTCGACCTCCTCGAACAATACGTGACGAAAGCGCT
TATCAAAGAGTTTGTCTCTATCTCACGAGTTGCGTCTGCTTACGTGCGCGATCCCGAGAACCCTACGCTTCTCCACGAAGC
TTCCAAACTTTTACAAAAAATTCATCAGTATCCTCAAGCTATGAGACTCGCGATTGAGCTCAACGATCGACCGCTGATTG
AAAAACTTTTTCTCAATTGCAAAGACTTATCGATTGAGAAGCAGCTGGCTTTTATGCTGGGTGCTCAACAGATATTCATC
GAGTTGCCGGAATCGAGCCAGAGTACGACGATCTCGTTGAGATAATGTCAAATCGCATCTGAACATCACTTTTGA
TTTTGGCTCGAGAGTTGGACATAATGGAACCGAAGACACGAGAAGAGCTGTACAAATCACATTTGGAAAACTCGCGACCTC
CCTTCGGAGGCGGGCAATTGGATTGCGCGAGACAAAACCTTGGCGGCGAGTTTCTGCAACGGTTTTGTCACGCTGCGTTT
GGACACGACAAAATTATTGATCGAAGATGGCAACAAGTGGTCTGACAAGAACAAGGAGCATGGAATGTTGAGCGCGACGGC
TTCGTTGGGTTTTGGTATTGCTCTGGGACGTTGACGAGGGCTTAACACCGATAGACAAATATCTTTATTCTCCGAAGATT
ATATAAAGTCCGGTGCCCTCTTGGCTTGGCGTATCGTCAAATTCGGCGGTGAGAAACGAGTGGCATCCGGCATTGGCGCTT
CTCTCCGATTACGTTCTTACAGCAGCAACCAATGAGAATCGGTGCAATTTGGTCTTGGCTTGGCTTATGCGAGTAT
GAATCGCGAAGCTGTTCTGAGTCTACTCGCGCTGTACTTACCGATCCAAATCGAGCTGGGAAGTAATCGGTGTAGCGG
GTCTTGTCTTGGAAATGGTAGCTGTAGGCTCTTGCAACGCTTACGTTACAACGACAATAATTACACGTTGATGGAGAAA
ACGAGAAACGATTTGAAAGACACTTACGCGAGGTTTTTGCCTCTCGGACTCGGTCTTTGTTTCTTGGGAAGCAAGAAGCT
GCCGAAGCGATAATAGCCGCACTGGAAGTTGTGCCAGAACCATTCAAGTCGATGTCCACGACTCTCGTCAAGTGTGCGC
TTACGACGGAACCGGAAACCTCTCAAGATCCAACATCTTTGACATATGTTCCGAGCACTACGAACCGCAATGAGA
AAGACGACAAATCCGATCGCAAGGACAAGGACAAGGACAAGAAAGACGAGAAAAAGGAGGATAAAGAAAAAGACCTCAGC
TCGCGTCAAGCTATCGCCGTTCTCGGGATCGCTCTCATTGCCATGGGCGAAGAAATCGGTGCCGAATGGCCTACAGAAC
TTTCGGACATTTGCTCCGTTATTGCGAACCCTGTTATCCGCCGTTCCGTTCCCTCGCTCTGGGCTCATCTCCGTCTCTAA
TCCAAAACTCAATATTTCTTGATACACTGTGAAAATTTCTCTACGACAGCGATCCCGAAGTTGCTCACAAATGCTATTTTCG
CCATGGGCCTTGTGTCGCGCCGGCACTAACAAACGCCCAGCTCGCTGCCATGCTCCGACAATTTGGCACAATTTCCAGCCAAA
GATCCCAACAATCTTTTCATGTTTCGATCGCTCAAGGATTGACCCATCTCGGCAAGGACGCTCACCTTTCTCTTA
TCACGCGATCGACAACTCTCAGCCCTGCTGCTCTCGCTGGGCTCTTGCTACCTCGTCGAGTGTCTGATGTTAAGC
ACATAATCCTGGGACGTTCCCATTTATTTGCTGTACACTCTTGGCGCAGCAATGCAGCCCAGGATGTTGGTCACCTTCGAC

mmc4.txt

GAAGAGTTGAATCCTCTGGCGGTACCTGTACGAGTCGGTGTAGCGGTGACGTCGGTGGACAAGCCGGTAAATCCAAAA
CAATCACCGGCTTCCAGACCCACACGACTCCGGTTTTGCTAGCGTTCCGTGAGAGAGCCGAGCTCGCGACCGAAGAATAT
CTCCCGCTGACACCCATCATGGAGGGTTTCGTAATCCTCAGGAAGAATCCGAATTCGTTCCCTAATTACTCCATGATAA
ACAATTGCTAATAGAAAAAGAATGTACCAACTTTAATTCTAATAAATAATTGCGT

>CL2641-bisContig1|protein fam151b-like

ATTCTCGTGGGTCCGGTCGAGGCAAATCCGAGCGATCCGCTGCCCGTGGATCCCACCGTTTTCTTGGCCGGTGCGGCTGC
TTCCTTCCCGGAGAGCAGCTCTCTGTTGGTTGGACGACGAGATACGGTGCCCAATTCAACATTACCTCGGGAATTACA
CGCAGGAGCAGATTGCAAGATGATTGACGTTGTCCGTCAAAGTGATACGAAACAGTCGATAACTTATCCCGTGAGAGCC
GGCTTAGCGGCTGGCGATGTTCAACTCTTTAAAGATTTATTGAAGGACACGTCGGCTCACAAAGCCAACGTTGACCGTTTG
GTCGAGTGCCGACGACACCGTCGACGTCGCTGCTCTTCCAAATTCATCAAAGACGTCGGGGTCGAAAACGTTTACGTCG
ATGTACCCGAACAAGTTTGGAGCAAACCTCAACATTTCCGGTGCAAACCTCTTTGCCACCGATTCCATCGTCCTCTTCGTT
TCACTCGTCATGAGCTTTGCCATCACCAATTAATATAAACGCGCCGCCGAGGTTCCACGCGTATGCAGATTTTCCCAAC
AACAAACAACAACAACAATAATTTATTGACCGATTAATGAGCTATTTATTTTGGCGTTACCATCGCATGGCGAAGCA
CCAATCTCAATTACAAAATAAATCTTTCCATCGCGAGTTGTTGGTTTTCTATTTTCAATCACACACTATTT
CAATCGAGTCAATGAAATACAAATTTTTTGGCGTTTAGTTTCAGACAAAGATTCAACATTTCTGTTGTTATTATGACAA
ATATATTTTCTTTAGTGTCTAGAAATATTTTTACCATCTGCTATACGATATACACACATTTACGATCTTGTGCACGCA
GCGGCGATCGTTTTTTCNGTGGCACTCGTTTGCAGGATTGAAAATGACAATTAATGCCGTGCATTGAAAAATTTTCATCAT
AGAGTTGATTCCGTGTAAGCCCGTGAGTTTAT

>CL2660Contig1|oligopeptidase a-like

AAAGCGTCAAGGCGCGCTCGGAGAACAAGAAAGCAGAATTGACGGAAAGTCAGAGGAGGATTCTTGCTAAAATAGAGT
TGGAAGGTCGTCTGAACGTTTTGGAGTTGCCAGAGAACTCAAAGAAGTTTTGACTTTTCTACGCGTAAGATAATTGCC
AAGCAAGATGAGGTCGGCAAAAAGNTTAAGATAACAACAAAATTAGTCAAACACGAGATAACCGATCCACATATCGTGAG
AGACTTCCCTGAGGAATACTTGAACACGATCGCTGTTGATCCCGCGAACGCCAAGACCGGTCCTTGAAAATAACGCTCC
AGCCACACGTCGCGGTGCCATTTATGGAGCTTTGCCCGTGTGCGGAACTCGCTGGAACCTCTGGCAAGCTAAAGTAACG
AGATGCTTCCCGGAGATGACAACAATCTGCGCACGAGTGGTGCCATCGAAGACATTAGAGATCATCGCATGATCCAATC
GAAACAACTCGGTTACAAAATCGTACGCGCACTTGAGCATGGAAACGAAAATGGCTGGGAACCTCGAGCACGTTTACGACG
TTTTGGACACGCTTCTGGACGCTGCGTATCCGGCTCAGGTCAACGAACTCAACGAATTAACGACATTTCGACAAGAAGCT
GGATTGACGACTTGCTGCGGATTAGGACATTGCTTATTGGGCGAGAAAGCATCGACGATCCGTTCTCAATGTCAAGGA
CGAGCTCCTCAGGAATATTTTCCACTACCGAACGTCCTGAAAGGACTTTTCGACCTCGTGGAGCGACTCTTCGACGTGC
AAATGGTCGAAACCCGAAGAAGGACGCTCTGGCACGCCGACGTGCGTTTTTCGATGTTATCGATTTGAAAGGATCGAGCG
ACGAACCAATAGCAAGTTTTTATCTCGATCCATACGCGAAACGTGACATTGGTCTCCGGATGGAAAGAGACGCCGGCTGG
ATGGTTGCGATGAGGAATCTCAATGTTTACACTTCGACGAAACCACTGGCTGCCTTGGTATTCAATTTCCAACGGCCAAC
CAACGACAAACCTTCGCTTTTGTCTTCAAGGATGTGCGAGTTTTGTTGCAACAGTTCGGTTACGCTCTGCAACATTTAT
TGACGAAAGCCGAGTTCTCTGGAGTCGCCGAAATGTCGAATATCGAATGGGATGCGTCAGGAATAAGTGGCAGATTTTTG
GAAAATTTGGTTATACGAACCTTCGGTCATCCGCCAAGTTTCCAGCCACTATGAAACATCGGCACCCTTGCCTGAAGATTT
AGTACAGAGTTTAACAAACATAAGGTCCACATGGCTGGCT

>CL2669Contig1|s-formylglutathione hydrolase

ATTTAGCACCGAACCGCGAGACATACGTTGATCGTGTGCACAGGATTTCCAGCACTTGTGCAACTATGACGGAAATAG
AGCAAGTTTCTTGATGCAAAATCGTTCCGGAGGATGGCAAAAAGTGTTTTCTCACGTGAGCAAAGAGCTCAAGTGTAATAG
AACTTTGGCATTCTTCTGCCGGCTGAAGCGGACGAACGCCCTTTGCCTGTTATTTATTATCTTTCCGGGTTGGAATGCAA
CGAAGTAGTTTTTGGCCAGAAAGCTGGTGCTCAGAGATACGCAGCTGAGCACAAAGTCATTATCGTTACTCCGGACACCA
GCCCCCGGGGACTGAATCTTCCGGGGGAAAAATGACAGTTGGGATTTTGGGACCGGGGCTGGTTTCTACATCAACGCTGC
CAAAGAACCTTGGAAAAATCACTATAGAATGTACAGTTATGTTACCAAAGAGTTACTCGAGTTGGTGAACGAGAAATTTT
CAGTGATTCCCGGGCAGCAATCCATCGTGGGACAGTATGGGAGGCCATGGCGCCCTCATATGTGCCTTGGAAGAATCC
TTATCTCTATAAATCCGTGTCCGCCCTTCGCGCCCATCTGTAATCCGAGCAAAGCCCCCTTGGGGCAGAAAAGTATTACCG
GTTATTTGGGCGAGAAAGAGGAGGACTGGGCGGAATGGGACGCGACGCTTCTCGCTAAGACGTACCAAGGCCCGATTCTT
CCAATCTTGATCGACCAGGGCAGCAAAGATCAATTCATGCATCAGCTGATGCCAGAAAATTTCTGCGCCGCGACTCGAGA
CGCAGACTTGACAGTGACGTTGCGACGTCAAGAAGAATACGACCACGGATATTTCTTCTGTCGACGTTCTGTCGAGGACC
ACATAAAGCATGATGAAAGATTGAAGAAAAGCGTTTCACTCGACGCTCTAAAGTGCTTCTTACGCTCTAGTTCCCGA
GGAGCCTGCTGTGAATTTCCACATCGGTAGGAACGCTATACTCAGCATCGTTTCGGGATACTGAGTGCAAATGAAACCGA
TCACTCCCATTATCGCTCCGACTGAAAGGACGAAATGAAATTATCAATGACCAATTCGATTCTGACCCTACAATTGGCA
GTTTACGAAAAAACGTATTTTTTTTGTGACGAGAAACGTGAAACTCGATTTTTTCATGCGACACGATCG

>CL266Contig1|ferritin precursor

ACTCTTATTCGGTTTACAAAGTAAGAACTAATGGATCGTGAAATATCGTCGTTCCGCGCATGTGAACCTTTAGTCGTTGC
ACGATATATATCGAACGTTTCATACGTTCTCTTTATTTTTTTGTTATCTGCTGCTCCTCCGTTGACTCGTTACAATTAAG
CGGATCTGATACGCTGGTCGAGTCGAGGCTAATCGTCATTGACGAACACTCGACGAACAAACCCAGTAACAATACAGCCT
TCTATACCAGTGCGTATAAAGGTTGATTCCCTTTCTCGAGAGAACATCGATTGTCTACATTTTCCAAATCTCACCTTTA
TTCTATACCCTTATTCAATAAATTCCTTAATCAATAAATATTTGAACATAAATATATACAACGTTCTTTCCCGAGAAA
CATTCAAATAAATCTCATCGAGATAATTCGCGACTCAAAGTTCTTCCCAATAACCTCTACGAAGACTGTTTTCTGTCGGCAT
TCGCAACCCCGACAGTACCACCGGAAAACTCACAATGAAGTACCTTTGTGCTATTTTTCTTGGCCTTTTTAGCGCCAC
TGCTGTCGCTGGTGATTAAAATGCACGCTCCAGCCAGCGGATATTCCTTCATCATGGCTGGACATGGTCGATCCTT
GCATCAAGATTTTGGAGGCTCAAGTGAATAATCGAGATCGAAGCAGCTATGACTTACTTGGCTATGGGTGCTCACTTCGCT
CGAGACTCGGTCAATCGACCTGGCTTTAGCAAACCTCTTTATTGAAAGTGCAAGCGAAGAGAGAGCATGCAATGAAGGT
GATCGAGTATTTGCTCATGCGTGGGCAACTCACCCTGATGTGACGAAATTTGTAAGTTTCCACTGCTACCTATCCGCG
AGGAATGGAACAGCGGTGTCGAGGCCCTTAAAGAGGCTCTGAATTTGGAAGCCCAAGTGACTCGCAGCATTCGCGACATT
ATTGACACTGCGAGGCACCAAGAACTCCAAGTATCAACGATTACCTTGGTCGATTATCTGACTCGGCACTTTTTGGA
CAGCAATACAAAGGCCAAAGAGATCTCGCCGTTAAGATTTCAACTCTGGGTAATGATGACAACCCACGGCGCACTCG
GCGAGTTCTTGTTGACAAAGAAATTTGTTGGACAACACCATCGAAGCTTAAAAAGTGTAATCAACACCACAAAACGCAT

ATATTGTATGATAAAAAATTAAGCGGCATGCGAAGAGAGATTTTCATGATTGTCAGCCAATACGCGAACAAATTGTTTTT
TTTTTTGTTTCAATGTAATTATTTTAGAAATATAGAAATTTACATACTTAGTTATTTTCAAATGAATTTCTTTACTCGAG
CAACTCTCTGCATAGCCCCAACAAATGTTTTTGTGGTTATAGCGTATCGATTATCATTGTGTATATGATCGAAAAATATA
TATTATATTACGT

GGTTTCTTTCCACTAGCCGCTGCTGGCTGTCGCAACGAGATGACGTGTAACGCAGGAACGGAGGACGCGCCAAACATGG
CCGCGGTACAGTAAATCCTGTACGTTGCACAACTGTGCCCGCTGCGTTCCTAAGGACAAGGCTATCAAAAAATTCTGTA
TTCGTAACATCGTCGAAGCTGCCGCTGTTCTGTGACATCAACGACGCCAGCGTGTATGACGCCTACCAAGTCCCCAAACTC
TAGCCCAAGTGTGCACTACTGCTATCTCGCTATCCACTCCAAGTTCGTCGTAACAGGTCGAAGGCAGATCGAGAAT
CAGGACCAACCTGCACGCAACTTCCTCAGGGATATGCGTCAAGTCAGCAAAACAGGAAGTGAAGCGTTAATATGTAAC
TTTGGTACATAATAAAAAAAATGTGAAAAATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG

AGTTAGTGC GGAAACAAGCCAGCGAGAGTCTGTAATCTATACTTGACCGTATTCCACGTTGAGCTACTCTAGAACACACAG
TAGCTCGCCACTACGAGTACCTCTATTTAGACCGTTTCGAAACGTCCTGAACAGTCATTAGATACCATTTGACACACACG
TGCTGAAAGAGCAATAATGGCGACAACCTCGTGAAATGGTTGAGCAAATGGTCAAAGGCCACAAGGTTGTTATCTTCTCCA
AATCTTACTGCCCTTACTGTAAGATGGCGAAAGAGGTGTTGCTAAATTGAACGAAAAGTACGAGGCCTACGAGTTGGAT
CAGCGCGACGACGGCGACGCGATTCAAGCCGCGCTGGCCGAGATTACGGGGGCGAAAACCTGTTCTCGAGTTTTCTGTTAA
GGCGGAATGTCTCGGAGGTGGTACGGATGTGAAGAAATTTCTCGAGGACGGTGAATTACAGAAGAACTTTAAAGCTTGG
TTTTATTTTTGCACCAACCATAGCCCGGAATTGTTTTAATTTTCTAATGTATTCAAGTTATGTCGTAATAAAAAAAGTGTC
TATTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATGTGCGCCG

GACCTTGGCTTGTCACTCATTTTTTGGGACGCCATCAAAGCTAGCACGGTATAGGGAGCTTGGACTCCTTCTGTATAGTC
TCCATGATTTTTAGCCACAAGATTTTACATAAECTTCGGTTAATATACTTGACAACATCTTGAGATACTTGCTCATTTTTCCGA
AGCGTTTTATTGGATTTTGACCCAGTAAAAATGCAGGCCGCTCCCGACCGGTCTGCGAACCCATCTCGAAAAGGTAATGCAG
CTTCTACAAAAGGCTCGCGTAATCTCGAGATTTGGTACACCCTCTTGACCAGTACAGAGAGCAAACTGTATTTTGC
GAAAAGAAATCGATGATAACCGCAATATCAAAGATCTTAGAGTGGCAAAGGAGCTTCTGCGAAAAGGGGAATACATCCTA
GAAGCACTTCAGCATCCACAGCCAAAGAAATTTCCCGACTTCGCCGGGAGGCGTTGCTTACGAGAGATACGTTGAGCCTCC
GGATTGGATTCTCGACTTTTTGGGACCCGATCGAGAAGGCTCATTATCCAAAATACTTTGCCCTTCGTGAAAAGCGCAAGT
TGGAATACATTGAATTTCTACAACAAACATTTACAAACGCCAAAAGCACTGGGAGGAACATCATTTGATAAAATAATCACA
GCAAAAATGAATTTATCTAGATTTTCGTTGAATTTGATTAGTCTGTTGAGAAATATATCCGTTCTGACGTTTTTTTTCTCT
TCTAATCATTTATTTCTTTAAAGTCATATTAAGTTAATCGTCGGTTAACAATGATTTTCTTAGGTCCCGATTTCTAAGTTAT
CTCCGTTATAAAAAAATTGCATTCTATAACCCATTTGAGCGCAAACCTGGGTGTTGTGACCCCAACGATTTTCTGTACCG
ATAGTTCGGCATTTCGATGGCAACATAGGGTCAAAATAGAGTCGATTACCACGAAAAACGTCTCTACAAAAAAAATGCAG
CTTTACCGAAATACTACAACGATTTGCAAAATTCCTTGGGTGAGTTGACCCCGAGATGCACTTTTTAGGAGGTGTGCAC
TCGACGGGATGCATTAGGAAATGAATTTCTCGAGAATTTCCAATTCAACTAACGAAACGCACTTGCTTGTTAGTTTTTCG
AGAGAA

ATCGTTGGAGCTCAGGCCGTCGTCTAGGCAGAAGCAAAATCGTTGGGAACACCTGTGGCCGAATTACTCAAATGGCACA
ATGCAACTGTCACAGTTTGCCACTCGAGGACCAAAGATATTCGAAAATCGTATCGCAAGCGGACATCCTCGTGGTCGGC
ATCGGATCGCCAGAATTTGTTCAAGGATCCTGGATCAAGCCAGGCGCGGTCTGTTATCGACTGTGGAATAAATTCATTCC
CGACGCCACGAAGAAATCAGGCTCTCGTCTGGTGGGCGACGTTGCTTACGCGGACGCTGCTAAAGTTGCGTCGTACATAA
CGCCAGTTCTGTGGTGGAGTGGACCTGTCAACCGTGCCATGTTGATGAGGAACACAGTCATATCGGCACAGCGCTCGTTT
GACAAATTGTTCGAAACGAAATGGAGCTCGCAGCTCTTCTCTAAAAATAACGGAGCCAGTACCGAGCGCATAGAAAT
ATCGCGCGGCCAAGAGCCCAAGCCGATCGGAATGCTGGCCGAAGAAATTGGCTGTGGCGAACGAGCTCAGTCCCTACG
GAGCAAAAAAGGCAAAAAATCAGTCTGAACGTTTTGAAAAGACTGGAAAATCAAAAAGACGGTAAATACGTTGTTGTCGCC
GGAATCACGCCGACCCCTTCGGCGAAGGCCAAAAGCACCAACCACCTCGGACTCGTGCAAGCCCTTTCTGCTCACAAAAC
AAAAATCCTTCGCCACACTCCGGCAGCCGAGCATGGGACCCACGTTTGGCGTCAAAGGCGGCGCTGCTGGCGGAGGCTAC
TCCAGGTCTAATCCCATTGGAAGAAATTCATCTCCATCTGACCGGCGACATCCACGCAGTCACCGCAGCAAACAATCCTCC
TCGCGGCTCAATTCGACGCGAGATATTTACGAATCCGACCCT

AGAAGACCCCTTTGGAATTTCTTGCTCTTGGCTGGTTTTGATTACGATGGAGTTCTCTATCTTTATCAGACGGAGCCTTC
AGGCATCTATTACGAATGGAAGCAAACGCAACAGGCCGCAGCGCCAAAACCTGTTCGGAATTCTTAGAAAAGTACTACA
CACCTGAAGAAGTAGCCACAGAGAGAGGCTCCATCAAATTGGCTATAAGAGCGTTACTGGAGGTGGTGCAATCCGGGCAG
AAAAATTTAGAAATAGCAGTGATGCGTCGTGGTCAGCCTTTCAGATGCTGGATACGGGACACGATAGGTGAAATACGTA
ACGGAATCGAAAAGGAGAAGGAAGTCGAGGCCAGAGAAAAAAAACAGAAGAAGTGATCTAGCGATATAAACAACTTTTT
TTTTAN

GTTTTCGAAGATGCTAACGGTTAGTAATAAAAAAGTTTATTCATATTTTGTGAGCTAAATATAAAAAAGATGATGAATGAT
TTTTCATTCAGATTTTACCGAAATTCCGAAAGAATAATTGCAAATAAATGCAACATCAATAATTTGTAGATATTTTTAAA
AATTCGCACATTTTCATCGAAATAATTTAGAAAAAGAAAAATCAATTTGATTGCAGTTGCACATGCTGCGTTGCTGGCCCA
CCATGCACATTTATTTCAATGCTGGCAAGTGTCATAGCAGCGTCACGAACATTGTCGATTCCAAGATATACGACGAGT
TCGTGAGTATTTCGAAAGAAATGGCAACAAAAAATTACTGTAGGCGATCCGTTTCATGCGAAAAACGACCCAAGGACCTCAG
GTCGATAAAGACACGTACGATAAAAAATTTTGAGTTTTGATAGAATCGGGCATACGGGAAGGAGCTGTTTTGGAAGTGGGA
GGTAAACCTGCAGGATCGGTGCGTTACTTCATCAAGCCCACGTTATTTACCGACGTGACAGACTCCATGACAATCGCGAA
GGAAGAAATATTTGGACCTGTCCAATCGATTTTCAAATTCGATACCTTCGAGGAAGTGATGAAACGTGCGAATGACACTT
CTTATGGTCTGGCTGCCGGCGTCGTGACTAAAGACATAAACAAAGCGATTCAATTCGCCGAGGCGATCGAGGCTGGAATT
GTGTGGTCAATAACTGGGCAGCGATAACGCCATTAACGCCATTACGAGGATAACAAGGACTCGGGAATAGGACGCGAAAA
CGGATACGGAAGGACTGGAATAATTTTGAAAAACAAAAACCATCTCCATCAAATCGGCCAGCCGAATTAATGAGTATCCG

mmc4.txt

TAAAATAATAATTGATAATATAGCAGTAAGATTTTTCAACTTTCTAACTTGATGCCTACACAATTACGAACGATATTCAA
CTCCAAAAAATAATGAAAAAATCAAGAAACGAATTTCTGTCACGACGTAAGGATTACGAATTTCTGTTCAAATAAT
AATTCCTACAAAACGACCGCT

>CL26Contig2|calreticulin isoform 1

ATTATCGGCTAGTTCGTCGCGCTATAGGATCGGTGGAGGTTGTTTTTTTTAAAAACAAGTCTATGATCATATAGACTCG
TGTATTCAAGTGTTCGGGAAATAGTTAAAAATCCAAGTTGCGGCTTTTCGAAATGCGTTCCGCGTGTGGATTCTCTTG
TTCCTGGTGATCGGCGTCGCCTACGCCAAAGTTCACCTCGAAGAGAAATTCGATGACGACAAATGGGAAGAACTTGGAT
TGCCTCGGAACATCCGGGCAAAGAATTCGGAAGTTTCGTCGACCCCGGAAAGTTTTACCACAATGAAAAGGACACAG
GTATCAAGACTTCGGAAGATGCACGCTTTTATGCTATAAGCAGAAAATTCACGCCCTTCAGCAACAAGGACAGTCCACTC
GTTGTCCAGTTCAGTGTCAAGCATGAACAAAACATCGACTGCGGTGGCGGCTACGTCAAGGTCTTCGATTGCTCCTTGA
CCAGAAAGATATGCACGGAGAGACGCCCTATCTCCTCATGTTTGGACCCGATATCTGCGGACCAGGCACCAAAAAGGTTT
ATGTCATCTTCAACTACCAAGGCAAAAACAATCTGATTA AAAAAGACATCCGATGCAAAGATGATGTTTCATACTCATCTGT
ACACACTCACCGTTAATCCCGACAACACTTACGAGGTACGCATCGATAACGAAGTTGTCGAGTCTGGCGAGTTGGAAAGC
GACTGGGACTTTTTGCCACCGAAAGAAATCAAAGACCTGAAGAGAAGAAACCCGAGGATTGGGAAGACAACCCGACCAT
CCCTGACCCAGAAAGACGAAAACCTGAAGACTGGGACAAGCTGAACACATCCCTGATCCTGAAGCTAGCAAACTGAAG
ATTGGGACGACGAGATGGACGGTGAATGGGAAGCACCAGTATTGACAACCCGACTACAAGGGCGAATGGAAACCCAAA
CAAATCGATAATCCGAACACAAAGGACCATGGGTTCATCCTGAAATCGACAATCCCGAATACAGTCCCGACCCCGAGCT
CTACAAACGCGATGAAGTTTGGCGCTATTGGTTTCGACCTGTGGCAAGTTAAGTCCGGTACAATATTCGACAACGTTCTCA
TCACCGATGACCCAGAGTATGCCTCCAAAGTCGCCACTGAAGTCTGGGCCCCAACGATCGAGGGCGAGAAGAAGATGAAG
GTCGCGCAAGACGAGGAGGAGAAAGAAAAAGAGAAAGAGGCTAAAGAAGTGCCTGAAGACAAGGCCGAGGACGAAGATGA
TGATGAAGAAGCGGAAGACGACACCGCCATTCTGAAACCGAGGAACACGACGAATTGTAATACGCGTGTCTCGAGGGA
GGAATAATTGAGACTGTATTCAGGAGCTGTCTGGCATTGACAGACGCACCAGCCGACACGGAAGAATAAATAAATAAA
TACAAAGAACGTACACGAAAGAAAGAGAAAGAAAAATCGAGTCTTGAACGCGCTCACGGGGTTTAAATCGGCAACAAAAAC
AACTGCTCCCGTGGCTATTTTTCTGCTAGTCTTTGCTTCAACGTACAATAAGAGATGATTCATTACCTCTCGCTTC
TCGAGTTTATCGTTTTGCAAGCCTCGAAATGTCGAAGAATTAGTGATGTACGTGGTACTTAAAATGAAAGACTAAAATGC
CGGAAAAATTGATGAATGTTGAGTCATGACGATTATTCCTCAATGTCAAGAAAGTGGGTGTCCGAATCCGTTGGTCGACTCTT
GACCCCTCAGCATTTATCTAGTCTTTTGAATCAGATTCTTCGTATCCAGCATGAAATGTGGAATTAAGAGCACAGAT
GCGTTCAAAAACAAAAATAGTGTGAATCGTTTATTTGTGAGAGTTGCACTCGAACAATGATTTTTAAAATCAGAATAA
TAAGCGATCTTGGACTTGCCGACTTCTGCCCTCCTCCACCTCCCGTCCCTCTCAACCCCTTGTATCCGTGTCTGCGAA
AACCGCCACAGCTCCAAAAAAAACATAAGTTGTTCCGTTTTTGTGTTGCAAGTGTGTTTATATGAAGGTAAAAGAAAA
AAAGTAATTTAATATCGCTATATATGAATATAGAATAAACGTCATTTTCCCTACGGGTTTATGTCCGTCAATCCC
CTCCCGGATCCCTTATCCGGAATAAATTGGCGGTGAGATGATGGGTATGAGCGCGTGAAAAGTTGACTGAGTGAT
TAAATGATTGATAAATTATATAAAAAACAAAATTAGAAAAAATGACCACCTTCGAGTGAGT

>CL2700Contig1|carboxypeptidase d-like

GTGGCGATGATGACATGGATAGTGTGCGAGCCTTTCTGCTCTCTGGAACTTCCACGGTGGTGCAGTGGTGGCCAGTTA
TCCTTATGATTCTGGGATTCTGCGAGAATGTTGCGAACAGAGCAAATCACCGGATGACAAGCTCTTCAATCATCTGGCTC
ATGTCATATGCGGACAATCAGTTGAAATGACTCGAGGCGACTCTTGCCGCCGATAGTTTCAAAGGTGGCGTTACTAAC
GGAGCAGAATGGTACAAAGTTGAGTGGTATGCAAGATTTCATACGTTTCAATCGAACGCCATGGAGATTACGTTTGA
GCTGAGCTGCTGTAAATATCCCAATGCCTCTGAGATGCCAGAACATTGGCGCATGAACAAGGAACCTCTCCTCAAGTATT
TGGAACAGGCTCATATTGGAATCAAAGGTCTCGTTCTCGATGAGAACAATCAACCAATCGAAGCGGCCCAAATCGCGATT
CGAGGAATCCCGCGAAACGTTAGCACGACGAATCGCGGTGAATACTGGCGTTTACTACTCCCTGGAAATTACACGGTCTA
CGTCAGAGCCTGGGGATACGAATCGAGCGAGCCGATAAACGTGACAGTACGAAAAACGGACCGAGTATCGTCAACGTTG
TGCTGCGCCGCGATTCTTCGTTGAACAAGCAACATATCGGTAATCTCATACACATTGGATCTCATGCATCTGATATTC
TCGATTTTTATTTTCTAAATCGTGAATACCGCCTGCATCCCGGACTTTGTTTTGTAGTCGCTACTT

>CL2703Contig1|hydroxyacylglutathione mitochondrial-like

TTTGATCGTTGATCCAAAGACAAACGAAGCTGCGGTCTGCGACCCGGTTCGATGCCGACGTAATAGATTCCGCGGTAAAGG
AGCACAACGTTAATCTAACAAAAATACTCACCACCCATCATCATTGGGACCATGCCGGCGGCAACGGCAGCATGTGCAAA
AAATTTCAAAAACCTGAACGTCTATGGCGGCGACGACAGAATCGAAGCTGAAACTGCAAAGTGAAGCAGGCGGATATCA
TCAACATTGGAGAATGAAAGTTGAGTGTCTGAGAACGCTTGCACACGACCATGCAATGTTGTTATTATGCTACTGGA
CCGAGAAAAGACACGCCGTCTGTATTACAGGTGACACTCTTTTTATTGGTGGATGTGGAAGATTTTTCGAAGGAACCTC
CGAGCAAATGCACAAAGCTCTTAACGAAGTTCTTGGCTCATTACCAGACGAGACGAGAGTGTGTTGCGGCCACGAATACA
CATGTTCTGAATTTGAAGTACGGTCTCGCGGTGGAGCCGAACAACGAGGCGATTACAAAAAGTTGGATTGGGCAAAAAAAG
CGCGTGAACGCAACGCGGACGGTGCCAAGTTGATTGCCGAAGAAAAGCAGACGAATCCGTTTCATGCGTGTGACGCG
ACGAGTGTGATGGAACATGCTCGAGCAACTGATCCCATTTGAAACGATGAGGTCTCTGAGAAGGANAAAGATAATTTCAA
GCGTAAAAATGGAGTTGATATACGTCGTGTCTCCAGTATTTTTTCGTTCC

>CL270Contig1|alanine aminotransferase 2-like

AAAAATCTTCGAACGGCAATGTCGCATGCTAGATTACGAGGCGCGCTATGGTAGGCGGAATTTACGTGCCTGGGAGC
ACGGTGGCAGGCCTTACGCGACTCGCACAGCGGGGTAAATAAGCGATACAGCTGCTGTTGTTCAAAGGGACTCGAAAGG
CCTGGAGCCAACTCGACGTCTCTAGTTGAACCGGTGACCGGCGTAAATAACGTTGTTCTGTACGCACCATGTCCTCATC
GCCGTCTGACAGAATTTGACAGAGGACAATGTTTATTCCAATTTACGGAGAATGGAGTACGCCGTGCGAGGCCCTCTTC
TTCTCCGCGCCCTTGAGATCGAGAAGGAGCTCCAAAAAGGGAGTTCAGAAGCCGTTCAAAGACGTTGCAAGGCGCAACAT
TGCGGATGCCCATGCCATGGGTGAGAGGCCGAATCACGTTCTCCGTCAAGTATTAGCGCTGACCGTGTCTCCGGAGCTC
ATGGACGATCCTCGGTATCCGGAGGATGTCAAAAATCATGCTCGGCAAGTTTTGGGCGGTGCAAAGGTTGCAGCGTCGG
TTCGTATTCAGAGTCGACGGGAATCGAAGTTATTCGCAAGCATGTGCGCAATTATATTACAAACGAGACGGCATTCCCA
GCGACCACAACAACATCATTTTGTCCAACGGCGCGTCGGACGGAATCAAGAGTTTCTTGAAACTTTTCAACGAACATTTG
AATGGGAACCCGTCGGAGTGATGATTCCCATTTCCCGATCCGCTGTACTCCGAGCTCTTGGGAGTTTGGGCTTTTC
CAAAGTTGGCTATTATCTCAACGAGGACAACAAATGGGCTGTGGATATCAGCGAATTGGAACGTTCTTATCAAGAATCTC
TGAAAACTTGCAATCCACGCGTCTCGTTGTCATAAATCCTGGCAATCCTACCGACAAGTTTTGACGAGAAAGAACATC

[illegible]

GGGTGGCAGACAGAAACGCAAACGCCAGAACAGGTAGAACCGTGGCAAACCTTGGTGTACGTGCGGGTTACATTTTTTCT
TGCTTTGCTCCGTTTTTAAACATTTTTAATCAAACGTTCGGAAATTTTCCATTCTTCTCGATTAACTTTGTTATTCTA
TAAAACGACGTCAAGTTTTAATTAAGTCTCGGCTATTGTTCTGTGTGCGGATCATTCTAAACCGAATGCGAAACATATTTT
TCTTTCAAACAACTTTCCCTCGTTGCGGTGTATCCAAGTTGCTCGGAGACGTCAAACGAACGGAAATAAAAAATTTCTCT
CCAACGCGATCTCGTGAATCTTCAACGAGTGTGCGGAAAGTTTATCCGTTCTTACGAACGCGGATTCAAGTGCCAAATTTT
TCAAAATCATCCGATCGCTCTTTTTCCGAATTTCCCGTTTTAATGTCTGAGTGTGCGCAACAAACCAAGAAGCTACAGTG
AAAGGAAGAGTGAATCCCTCAAGCGCATTCTGTACACTGGGTCAATAAAAACTCTGGAGATACTAGCCTGGATTTTTTCT
GCCGAAAACCGTTTTCTTCTTTTTAGTGAAGGCAGGGAAAAAGTGCAGATTGCGTTTTGGGACCTACCCTTCGCCGCA
CTCCCGGTGTTCTTCTCCTCGAGCCACTATTGCCCAATTCGGCTCATCTCATAGACGGAATGTCTGTCGAGTCTGCGGAA
TTACTCACCACGCACACCGAGCACACATCGCCCGCCTATCATGTCAAATAAGCACCCGACGCGGATGGGACAATCCGTT
CAGGCCGGACGGTGATCTGTACGCGAGGCTGACGAGATCGTGCAGTTGATTAAAGGCGGCAAGCCCAATAACACCGACAC
CCGGACAAAATGCACCGGCTTGCCCGTTGCGAGACAACCGGTAATAATCAACGACAACGATAATCTCGACTCGAGTACG
AGACCATTTGTTGGATGCCAACTCGACGAATCCTCCGACGAATCGCCAAATCGGCACTGAGGCCAATCGTCTCAATCAGGG
CAATGGAAACGCTCATGGTACACCCGGAAAAGGAGGAAACGCGATATCTTGAACAAGCAACAACAGCCCGTCAACGAGA
AGGTTGGTCAATCGACGAATACGGCAACCGTTGAAGTTGGCAGAGTAACGGCACAAGGTCCTGGTGACGCATCGCAGGTC
GAGCACGTTACATTGAAGAAGAAACCCAAGTGCAAGTGTTGCGTTCTCCAGTAACGCGAGATATCATATTTTCAATATTT
ATATACATATAAAACCGGTATATATGTATATAAATATAAATGTGTTGACCGTGAGGTGGGAATGAAGACAGATGT
ATTATCTCGGCGCTGACGCGATACTACGAGACTCTGCCAGTGGCGATCCGATAATCCGATCATTCTGTCGCAAGCAAT
TGCAACGAGATGGGAAAAGCGAAAGAAAATCACGAGGATAACGAGCGCGAGTTA

ATGATGGTTTTCAAGAACAAAGGGAAGATCAGGATGAAATGAGAAGAAGGAGAAACGAAGTGACTGTGCAATTGCGCA
AAAAACAAACGCGAGGAGACTCTACAAAAGCGACGAAACGTACCTATTACAGACTCGACGGATGAGGACGACATTGAGAGA
ACACTCTCAAAGATTAACTTGATAGAACTTGTTGAAAAAAGCGGCTAGTTCCAACCCGACCGAACAATTGCAAGCTGTAC
AATCGGTTTCGAAAGTTACTTTTCGTAGATCGGAATCCACCAATCGAACCCCTTATCAAGAGTGGAAATATTGCCGATTTTG
GTACACTGCCCTTGAACAGGAAAAATAGTCTTCCCTGCAGTTTGAAGCAGCATGGGCTTTGACGAATATTGCCAGTGGGAC
ATCGGAACAAACGCAAGCAGTGGTAGCCGCTGGTGCTGTGCCACATTTCTCCATCTGCTGTTATCGAGTCAACAAAAATG
TTTGTGAACAGGCGAAGTTGGGCGTTAGGTAATATTATCGGTGATGGGCGCGCGCCGAGAGATTACGTGATTAATCTTGGC
GTCGTAGAACCTCTGTTAACGTTCAATTAAGCCTGACATACCAATAACGTTTTTACGCAACGTCACGTGGGTAATCGTAA
CTTATGTAGAAAATAAAGATCCGCCACCACCGTTCAAACGATAAAGGAAATATTGCCAGCTCTCAACATCCTTATTATC
ATACGGACGTCAACATTTCTGTGGACACGGTGTGGGCATTGAGTTACCTGACTGACGGCGGTAACGAGCAAATCAAATG
GTCATTGACAGTGGAGTCGTTCCACAATTGATTCCTGTGCTATCGCAACAGGACGTAAGCTGCAGACCGCTCGCGTAA
AGCAGTTTGGAAACATCGTGACCGGCACTGACGAACAGACTCAAAACAGTTTTGAAGTGTCAAGCACTTTGCGACTTTCCCA
ATTTACTTACGCACTCGAAGGACAAAAATTTGCAAAGAAGCCGCTGTTGTTCTTTGCAACATAACAGCGGGAAATCAATCG
CAGGTTGAGGCTGTACTAGAAGCCGCTCTCTTGCCGCTCATCATACGCACTTATCCAAGTCGGACTTCCAAACTCAAAA
GGAGGCAGCATGGGCAATTAGCAATATGACGATAAGCGGCAACAGGGACCAGGTGCGACGGTTGATACAGTTGCGCGTCA
TCGAACCTTTCTGCGAGCTTCTCTCGTGCAAAGACGTTACGGTCTTACAGGTGCTACTCGATGGCATCAATAACATGCTC
AAGCTTGCTGGACCCGAAGTTGAACAGTTGGCTAACATGATCGAGGAGTGTTCGGTTTTGGACAAGATCGAAGCATTGCA
GACCCAGCAAAACCGTAGAAATTTACAAATTAGCTTACGATATCATTGAACAATACTTTTCGGAAGAGGCTGACGATACGA
ATCTTGCACCGCGGTTGGAGAAGGAGCCTTCGAATTCGATCCCACGACGACTATTCGAAGCGAAGGTTTTAAATTTCTGA
GAGGACCTCATCGTTCCTTATCCAATCGTGCCGTCCCCGACAAACATAAAAAAACAACAACAACAACAACGAAGCG
ATATTGCTTCTTCTTCTCCACCGATACGAATTTCTTTGTTCCGATGATATGACAAAGTGACGGCCACGGGCATCGTAAC
AATTGAGAAATTGAAGAATCTCATCGTTTCATTTCTGTGCGGTGCATGCATCGACGCATGAAATAATTATGGGAATAAATAG
CAAGAACGACTAAAAATCATAGGTAACAAACAAACGAAACACACAACAAACAAATCGAAAAATAATAATACGGGGGCT
TCTTGAACGCTTTGTATCACCGAGAAGAACGACACAGAGACTCCGTGGCCATCAGTCGAGATAAAAAAGCCCTGAGAAAGT
AATGAACCGTAAGTTTTTACAAAGAGGACGAAGTTATCATAAACTTTACGAATCGACCGTGTCTTTTGTCTTTTCAATTC
TCTTCTACTTCTTCTTCCATTTTAATTTACTTGATAAACATTACATTTTTATTGTCATATTATTATC

GGGATGCTCATAAATTCGGTTCCTTACTTCGTTGACATACCGAAGCAGACACTCTTTTGTTGGGACCCTGAAACAGGAAAT
GTGACGACGCGCTTACATAAAAAAATGGTCAGTTGGGCGTCGTGGTTCGGTGTGCGAATGGAATAACATTCGTTGGCGG
TGCTGGCACTGAATTCGTTCAAATAACTTTGGGATCGAAAAACAATAATCCGAACCCTGACGTCAAAGTCCTTGCGACCGT

mmc4.txt

GGACTCCGATCGTAAAGGCACGAGATTCAACGATGGAAGGTCGACCCAAAGGGCCGCTTTTGGCGGGTACAATGGGCA
TCGACTCGAACCTGGATTGGGCTCGCTCTACAAAATTGGTTCCGACAATGTGCCAAAGAAAATGGTGTACCGGTGACG
ATCAGCAACGGTCTAACTTGGAGTCATGACAACAAGACTTTCTACTACATCGACTCTCCGACTTATAAGGTTTCGGCTTA
CGACTACGACAACGATGCCGGCGAAATCTCAAATAAACGCACTGTGTTGACTTCAAACGAACAATGTTCCCGGAATTC
CGGACGGCATGACGATCGACAGACATGGGAATCTTTGGATCGCGTGTACGACGGTGAAGAGTAATCTCGGTGATCCA
AAAACCTGGAATAATTACTGAGAACCATTGAAATGCCAGCGCGACAAGTGACGAGCGTCGAATTTGGAGGTAAAAACCTCGA
CATATTGTTCTGTGACGACCGCGAAGCAAGGTCTGACGAGCGAAGATCTCAAATCGCAGCCAACCGCCGGTTCGGTATTCC
GAATCGAAGGTTTAAAAACCTCCGGATCACCGTCGCTCCGCTACAAGCTGTGAGATCGACCAACAACGCGAGATGCATTT
CCACTGCTCCTGCAAAACAGAGCAAAACGAATTATAAAAAACGAACCACAGACATTTCTGCATCCTAAGAGTATTTCCCAATGA
CAAAAAATCAAAGCGAATGACACGAAAAATTAATGTAATCTAGGTTCTGTACAATAAACTTAACATCGCCGAAGGAG
TTCTGAGATTTCAATTGAACAACTTCCAACGATAATTAATTTCACT

>CL272Contig2|aspartate mitochondria1

ATTCAACAAAAATCGTGCCCATGGAATCGCCACGAGGCTCGCGAGTTCTCGTGGTCTCACGTAGAGATGGGGCCTCCGG
ATGCAATTTTGGGAGTACGGAGGCTTTCAAACCGGGGACCAAAAACCCCAAGAAAATAAATCTCGGTGTGGGAGCATAAC
AGAGACGACAACGGAAGCGTTCTTTTCCGAGCGTTCTAAAAGCCGAAGCAAAAATCAAAGCAAAGTCGCTGGATAA
AGAATATTCTCCGATTTCTGGTAACGCTGAATTTCTGTGACGACAGCATAAACTTTGGCCCTGGGCGACGGCAACCAAACGG
TCGCCAACAACTGAATGTGACGGTTCAGGGAATTTCTGGAATGGCTCTCTCTGCATAGGAGCATTCTTCTCGCTCGC
TTTTTCCCTGGAGCCAAAGACATTTACCTGCCACGCGCTCTGGGGAAACCACACGCCCTCTTCAAGCTTGCCGGTCT
AAATGTTAAATCTTATCGTTACTACGACCCCAAACTTTGTGGATTGGACTTCAGGGAGTTTGAAGACATTTGCAATA
TGCCAAAGAAATCGATCGTTCTTCTGCACGCTGTGCCACAACTCTACGGGCGTTGATCCGCGACCTGAACAGTGGGCC
GAACTTTCCGCTCTCATAAAGAAAAAATTTGTTTCCATTCTTCGACATGGCCTACCAAGGATTTGCCTCTGGCGACGTGA
CAAAAGACGCGTTGGCGGTGAGATTGTTGTTAAGGAAGGCCACGAAATCGCTCTGGCTCAGTCGTACGCCAAGAACATG
GGACTTTACGGCGAACGAGTCGGAGCGTTTTCTTGTGTTACAAACAGTGCGGACGACGCTGCTCGAGCTCTCTCGCAAAT
AAAGATCCTGGTACGGCCAATGTACTCGAATCCGCCGATCAATGGTGCTCGTATCGTCAGCGAGATTCTGGGCGATGCC
AGCTCAAGCAAGAATGGTTGGGCGACGTCAAAGGCATGGCCGATCGAATTATTTCCGTGCGAACCAAGCTTCGCGACAAT
CTTAAGAAAGAACGGAAGTTCTCGGACTGGAGTCACATCCCGATCAGATTGGAATGTTCTGTTTACGGGCCCTCAAAGC
TCCGGAGGTTGAAAAGCTGACCTCGAACTTTAGCATTTATCTGACCAAAGACGGAAGGATATCGATGGCGGGAGTGACTT
CGAAAAACGTGCAATACCTCGCCACGGAATCCACGAAGTAACCAAATAAATTCGTTGAGTAATTGCCAGGAAAAAAAAT
GAAACGAATTCAGTGGAAAAACGCCTTTTTAGGCAAATGCATTTGTTTTTTTTTTCTATAGTACAATCTTTATTTTTC
TAATTACACTGCCGGCAGTGTGTACGAGTCATTCCCGCATCGGGGATCCAATTGCAGATCCACGCTCTTTATAAAATCA
AACCGAATACGTTGCACGTGCGTTTTTGCACAAATATATCGATGCAGCTTTGTTTTCTTGTGGAGTCTTCAGCTTATT
ATTCGCCAATNTACATACACACTGTNAGATATATATAT

>CL2730Contig1|microsomal glutathione s-transferase 1-like

TTTTTCGTAGTTTCGCTGGATATCCGCCGTGGCACTTGAGCACTGTGTTACGGACGGACGGCCAGCCGGCTGTTGATAT
AAGAATAGTCCCGCTGCGTTTGTGCGTGTGAGTCGAGTGTAGCGATCTCTCGTAAACGATCACCATTAAATAATTGACG
TTTCGTGCAATCTTCGCGTTACAATAATAAACCGAGAAATAAAAACATGGACGTTAATTCGGAATTGATGAAAGTATTTG
CGTTCTGGAGCGCGTTCTCGTGCTGAAAATGATGGCGATGGTTCCGTTGACCGGTGACACCGTTTTTGGAAAAAGATA
TTCATAAGTCTTGAGGACTTGCGGATCCTCAAGTCTTCCAAGGTCTGACCAACGATCCCGAGATCGAACGCTGAGGCG
CTCCCATTTGAATGACCTTGAGAATATTCTTCCATGGTTTATCATAACATACGTGTATCTCGGAACGAACCCGTCTTTCT
ACGTGGCCAGCATGCTCATCCGAGTTTCGTTCTTTCTCGAATCGCTCATACTTTGCCTACGTCACTTTCAGGCTCAA
CCATGGAGGGCGATCGCCTTTTTCTGTCGTTACGGCATTACGGGTTATCAAGTTATCTCTAGTATGCTGTACTACATGTA
AACATTCTCAATCTATAAATAAATCCTTTGTATTATTTTTTGTAAACAATAAAACGAAATCCGATAGATCAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAATGTGCGGCCG

>CL2735Contig1|proteasome subunit alpha type-2-like

GGTATAGTTGCAAAGTAATTGTGTCATGGCTTCGGAAGATACAGTTTTTCGTTAACAACCTTTCAGTCCTTCGGGCAAGCTT
GTGCAAAATTGAATATGCTCTGGCGGCAGTTGCGGCCGGTGCCCGAGCGTGGGTATCAAAGCGTCCAACGGCATCGTTCT
TGCCACAGAGAACAAGCACAAGTCCATTCTCTACGAAGAACATAGCGTCAACAAAGTGGAGATGATTACCAAGCACATTG
GGATGGTTTACAGCGGAATTGGGTCCCGATTATCGACTCCTGGTTAAACAGGCTCGTAAAATGGCTCAGCAGTATCTTCTG
GCTACCAGGAGCCTATTCCGACCGCTCAGCTTGTCCAGAGATCGCCATGCTCATGCAAGATACACGACGCTCGGCGG
TGTTCTGTTCAATTTGGAGTATCTCTTCTGATCTGCGGTTGGGACAACGGCAAGCCGCATCTTTCCAATGCGATCCATCGG
GCGCATATTTGCGATGGAAGCAACTGCGATGGGTAAAACTTTGTGAACGGAAAAACGTTTCTGGAAAAGAGGTACAGC
GAAGATTTGGAACCTGGACGATGCTGTTACACTGCCATTCTCACACTGATCGAAGGGTTCGAGGGTCAAATGACCGCGGA
TAACATCGAAGTTGGAATATGCGATGAAAATGGTTTCAGACGGCTCGATCCTTCAAACGTCAAGGACTACCTCGCGAACA
TCCCTCAATGATAGTTAGGTTACGACATTTCTTTTTTATACAGCACTTTTTTGTGCTATCATGTAATAACATTGGCGCTC
GTGTTGATGCAAGAAATCGGGGTAATCCGAATAAATTGTTCTTTTCGACAAAAAATTTTTTTTTTTTTTTTTTTTTTAAAC
ATGTCGGGCCG

>CL273Contig1|cytochrome p450 4g15

AGTTCTGGTGGTTGCTCATCGACGGTAACGCGTCTACGTGAATATAACACCAGACTTTTTCAACGAGAATCGAAACAACGAG
ATGTTCCACAGCGGGACCGGAAATGATCGCCACCGGTGCGGTGGCCGGAGCCACGGCCACCGGACTCTCAGCAACCTCCGT
TTTCTTCACTCTTCTAGTCCCTGCGTTGTTCTCTATCTCATCTACTTCAGGCTCTCGAGGCTTCACATGCTCGAGCTTG
CCGAAAAGATTCTCTGGACCTGAGGGATACCCGCTCATCGGAAACCGCTAGAGTTCTCGGAAGTGCCGACGATCTTTC
CGTAACGCTCTACAAACGCTCCTTCGAGTTTGACCAGGTTGTCAAGCTATGGATCGGACCGAAACTCATCATCTTTCTCGT
CGATCCCCGTGACGTAGAGGTGTTCTTTCCAGTCACGTTTATCTCGACAAATCCAACGAATACAGATTCTTCAGACCGT
GGTTGGGAAATGGACTTCTCGTCTCTACCGGATCGACATGGCGTGCACATCGTAAACTGATCGCCCCGACGTTCCATTTG
AACGTTCTCAAGAGTTTCATCGACCTTTTCAACGCGAATTCGCACGCGGTGCTAGAACGTATGCGCAAGGAAGAAGGAAA
GCCGTTCAATATCCATTACTACATGTCCGAGACGACGGTCCAAATTTCTCTGGAAACTGCAATGGGAGTTTCGAAGAAAA
CTCAAGACAGGAGTGATTTCGAATACGCAATGGCTGTGATGAAGCTCAACGGAATCATTCTTCGTACACCAAAAGTT
TGTTTGAGGCTGACTGGCTTTTCAACTTGTCCAAGTATGGCAAGGAGCAGATCAACCTTCTCGAGATCATTCACGACT

mmc4.txt

GACCAAGAAGGTTATCCAAACGTAAGAAGGAGGACTTCAAGAGTGGAAAGAGGAATATCATCAGCACGACCGTCGAAGAA
GCTAAGAACGCGGACACTGTTTCAGGGACTTTCTTTCCGCCAGTCCGCCGTTTGAAGGACGATTTGGACGTCGATGACAG
CAACGACGTTGGCGAGAAGAAGAGATTGGCTTTCTGGACCTTCTCGTTGAGGCCAGCCAGGACGGAGTTGTCTTACGG
ATGAGGAAGTCAGGAACCGAGTTCGACACCATCATGTTTGGGGTTCAGACACAACCGCCTCCGGATCCAGCTTCTTCTC
TCGGTGATGGGATGCCATCCCGAGATCCAGGAAAAAGTCATCCAAGAATTGGATCAAATATTCGGGGACAGCGATCGTCC
AGCCACTTTCCAGGACACTCTCGAAATGAAATACCTCGAACGTTGCCTCATGGAGACTCTTCGTATGTATCCACCTGTGC
CTCTCATCGCTCGCCAGATCAAGACCGACCTCAAGCTCGCTTCCGGTGACTACACCGTACCAGCTGGATGCTCAGTCGTA
ATTGGAACGTTCAAGATGCACCGTCAACCGCACATCTACCCGAACCCGGACGCTTTTGACCCGGACAACCTTTGCCCGA
GAAAACGCGGAGCCGTCATTACTATGCGTTCTGCGCTTCTCCGCTGGACCTCGTTCTGCGTAGGCCGAAAATACGCCA
TGCTCAAGCTCAAGATCCTTCTCTTACCATCTTGAGAACTACCGCGTTAAATCCTGCGTCAAGGAATCCGATTTTCAGA
CTCCAGGCTGACGTCATCCTCAACCGTGCCGAAGGCTTCAACGTTTCAAGCTTGAACCCAGACGACCTATCAAAGCGTAAAA
GAGTTGTGGATTCCGTATCGATGCGATATTTATTTTTCTGTCCGTTTTATTTTCCACCGTTAGCGATATTTAATAATT
ATTATCATTTATACCATATTTATCACGTGCAATAATTTATGACGCGTACACGCTGC

>CL2751contig1|phosphomannomutase 2-1-like

TAGATCGCAAAAATCTTGACGCTTCGGATGTACGAAAAACAATTCATTATCGTTTCGATGAACTTTTGAATTATCTTCG
ATTGTTTTAATGCTGTTGCATCGAATTTAATCACACGGTGACTTTTGAAAATAAGAGAATTTAAAAATTACAGAATTCCA
TCGTGTAAACATGACCCAAAAGATCATCTGCCTGTTTGATGTTGATGGCACTCTCACAGTACCCCAACAGGAAATAGAGC
CAAATGTGGAAAAAGCAATTTTTGACATAGCCAAGAAGGAAGGATTCGACGTGGGTGTGATCGGTGGATCGGACATCGAG
AAAAAAGAGACAATTTGGGTGGGAACAAAATATCCACAAGTACAAGTATGTCTTTGCGGAGAACGGTCTTGATGCTTA
CAGGGATGGAAAGAAGCTTTCGAGCGATACTATCCAGGGCTTCATCGGCCGACGATGGTCTCCAGGATTTTATAGCTATT
GTCTCACGTATATCGCCAATTTGAAGCTCCCTTGTAACGAGGCACGTTTATCGAATTTTGAAGTGGTATGCTCAACATT
TCGCCAGTTGGTCTGAATTCAGCCAAGAGGAGAGGATCCAGTTTTACGAATACGACAAGGAACATCGCATACGAGAAAA
ATTCATACTTGCTTGAAGCAATTTCTGAGCTTGCCTGACTTACAGCATTGGTGGACAAATATCGTTTCGATGTGT
TTCCGATCGGCTGGAACAAAACCTACTGTCTGCGGCACGTCGACGAATACGACGAGATCCATTTTTTCCGTGACAAGACG
ATGGAAGGCGCAACGATTACGAGATCTACGAGAGCGATTTGACGGTCCGCCACCGGGTACAGGACCGGAGAGTCTTCT
CAAGGAACTCAAAAATCTGAGCGCTGTTTTGCAAGAGAAGCGTATGGCCGAATAAAGAGAAAAACAATCGCATGCTAC
TTTTATAAAGGAAATTACCACCAAAAATACGATTTATTATGAGAAAGTTAACGAG

>CL2755contig1|muscle-specific protein 20-like

CGGCCGGGACTTCAGTGAATAATCGTTTGACGACGAGATACACTACGAAATAACGAGAAATGGCTCTAGAACGTCAAGT
CCGCGCTAAGATCGCTGCAAAGCGCGATCCTCAGCAAGAGAAGGAAGGCCAGGAATGGATCGAGACTGTCTCGGCAAGA
AATTCCTCGTGGCGAAGCTTTTCGAGGATGTTCTTCGTGACGGACAAGTTCTCTGTCACTTGTATGAACAAAATTGCTCCG
GGATCAATCCCCAAAATCAACTCCAGCGGTGGACAATTCAAGATGTGGAAAAACATCAACATGTTCCAAAGAAAGCTCTGA
AGGATTATGGAGTCAACGACACTGATGTCTTCAAACCGTCGACCTCTGGGAAAAAAGGACATAGCGCAAGTCATCACA
ACGCTTTTCTCCCTCGGACGCACGACATACAAACACCCTGAATATAACGGACCTTCCCTTGGACCGAAACCATCGGAGGA
ATGCAAACGTGACTTCACCGAGGAACAATTCGTGCTGGACAAGGTGTGATTGGTCTCCAGGCTGGTTCCAACAAAGGAG
CAACCCAAGCTGGACAAAGCATCGGCGCTACACGCAAAATCCTCCTGGGAAAGTAAATTTACGAAATCAGCAGAAGATT
CATTTCCGAAAAAAACCTTCGTTGTCTGACGAAATCCCCTTTCTCCCTGTTGCCCTCATTGTACGTATGTGTATTTAT
TTTACTCTTTTTTGTAACTGGATAATATAATTTTACGTTATTATTTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAT
GTCGGCCG

>CL2764contig1|ubiquitin-like modifier-activating enzyme 5

AGTCGTGGACAATTACGAGCGCATCAGAGAGTTGACGATTGCTATTGTTCGGGTTGGCGGTGTTGGCAGTGTCACTGCCGA
GATGCTGACCAGATGCGGCATCGGAAAATAATCTTTTCGATTACGACAAAGTTGAACTGGCGAATATGAACAGACTTT
TCTTCCAACCGAACCAAGTGGGATACAGCAAAGTCAGTCAGCTGCAAAAACGCTGCAATTCATTAATCCTGATGTAACG
ATCGAATCACAATTACAACATTACAACCGTTGAAAAATTTTGAACATTTTATTGAAACGATTAAGAGTTCCAGCCTCG
TTGGTAATAAAGTTGACTTGGTTTTAAGTTGCGTTGACAATTACGAGGCACGAATGGCCATCAATGCAGCCTGCAACGAG
CTCAACATGAAATGGTACGAAAGTGGCGTTTCTGAAATGCTGTTTCCGGACACATACAATTTATAGTGCCTGGAGAACT
GCATGTTTTGCTTGTGTTCCACCTCTAGTGGTAGCGTCGAAGATCGATGAAAAAATTTGAAACGCGATGGTGTCTGCGC
GGCATCTTTGCCAACGACGATGGGAATAGTTGCGGGATTTTGGCAAAAATGCGCTCAAGTATCTTCTGGATTTTGGAA
CACCGATTTATTATTGGGATACAACGCTTTTGCAGGATTATTTTCCAACGCTAAAATTACGTCGAATGAAAATTTGCGAC
GATGCCAATTTCAGAAAACTGCAGCAAGAGTATGCGGCTAAACCTCGAGTTGAGAAGCTTGAGGAACCGAAGGAAGAAGA
ACCAGTCCACGAAAAAATGAATGGGGAATATCCTTGATCGACGAGACCCAGTCGATGAATCGGACGAAAAATGCTTGT
CGAGCAGCTGCGAGGGCGTTAAACATGCTTATACGACTCCAGCCCTAGACTCAGAGGCCGCTGCGCCTCCAGACACAAT
GGCAGTACATTGGAAGAATTTATGATGCAATGAATCTATTAATATGTAACAACGTAATTTA

>CL2770contig1|circadian clock-controlled protein

ACAGTCGTTGTGGCGGAAATTCCTCATACATAAAGGTATGTGTCGGAAGGATCCAAATTTGGATGCATGTGTTCTGAA
AAGCGTTGAGGGCTTGCGGGACAAGCTCCGCGAGGGAATGCCAGAATTTGATGTTCCGCCGTTAGAACCGCTTTTTCTAA
AAGGATTACCTTTATCGGACACGGAACGTTCCGAGCCACGCTGATAACGTTACAGTTTGGGGACTGACGAATTTCGAA
GTGATCAAGTTTACGATGATACCGAGAAAGACATTCTAAACATCGATGTTTCGTTTCAAAAAAATCGAACTGGATGCCGA
CTACGATATAAGTGCGAAAAATCTCGTTCCAATTAAGGGAAGGGACCGATACACATCGTCTCATACGATGTCAACGCTC
AGTTGTGATGCATAGGAAATTCACGGAGAAGAACGGAAGAAAAATACATATTTCTCATCAATGACGACAAAGCTCGCA
ATCAAGGATTACGAGGCCAGTTCAAATCGAACGATGGTGCTGACAGTCCAATATCAACAGCGATAAACCCAGGCTCTTGA
CGGTGGACGTCAAGAAATTTCTGGAATTTGATTAAACCGACTCTGGAAAAAGCTATATCCGAAAAGGTTCTCGAACTTTGGCA
ACAAAGTCTGTAAAAATTCACCTACGACGAGCTATTTCCCGAGACACTATAATAAGAACGATCTCAAGTTTCAATATTG
TTGAATAGTGGATGGAAATAAAGACGAAAAAACCCTAAATCTGTTTCAAGAAAAATAAAAATCGACATTTGATACGA
AACAAAAATAGTTGCGCAAGTCTGTGTGATAGTCGGAATGAATGTTGAAATTAAGCCATTGGAAATCCGGTGTAATTTG
TATCTCGGCACAAGTTATTATTTCTGCTCAATAAAAAAGAACATAGATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CTTGTCGCCCCCGCCCTCAAAAACCTTTC

>CL277contig1|4-hydroxybutyrate coenzyme a transferase-like

GATCCCTGACGCTGTATTGTCCTCCTTACGACTCATAAAAACTGGGTATTACAGCGAAATGTTACGCGACGGTGTC
GTTGATCTTGTC AACAGAGGATGCATACGAATAGTATGAAAACATATGCATCGCGGAAGAATCGTTGGTTCTGTTCTGCGT
TGTTTACAGAAACTCTACGATTTTCATGGACAACAATCCGTTTCATAGAAATGTTGGCGGTGGACTACGTCAACGACCCAC
GGATAATTCGAAAACAGCCACAAATGACCTGCATTAACTCTTGTCATCGAGGTTGACCTACCCGGACAAATTTGTTCCGAC
AGTATTGGAACGAGAATGATTCGGAGTTGGAGGTCAAGTTGATTTCTCACCGGTGCTGCATCAGCGAAGACGGGCT
TGAAAAACCTATTGTCTGCTCTTAATTTACGACTGCTGATGGCAAAACGAGCAAAATTACGCCAGTGCTTAAAGAAGGAG
CCGGTGTCGTAACGAGCAGAGCTCTGGTGAATTACGTAGTAACCTGAGCACGGAATTGCAAGTCTATTCCGCAAAACGTTG
AAGCAGCGAGCTCACGCCTTGATCCAAGTTGCGCACCCGAACCACAGAGAAGCATTGAAAAGGCAGCGTTGAGCGTCT
CAAAGGAATGCCACAACCTTGAACAGAAGCTTCCAAGTTTATCAACACATTGAATTAATAATGCGAAGTAACGATAAAGA
AAAAAATCCAATAACAATTAGTTTATGTCAAATACACGTTCTGTTAGAGTGTTCTTCCGGGCTTGATCAATGCTCGGAGCCG
ATTTAATTGCCACAAATTAACGAGAGAGAGAAAAATAACGTTGCCGTACCAAGATGCCATTGTAAAGGACGAAAGTT
CAATCTCGAAATCCGATACTGGAACGAAATATTTTCTATCCACACCGATGTGATTTTTCTTGCCGAAATAATTTTCAT
CGGCCAATTCGCTATTTCGATTGTAGATCGAGTATGAGCAAAAAATTAGGGTGAAAAACCGAAATATCTTTGAAAAAGATC
TTTTTAAAAAGTTGAAGAAATTCGAAGATAACAAAAAAATGGTCGTTAGTCGATAAGTACCGCAAAAGGGGAAATTCTAT
TCAAACAAACGTTTACGTATCTTTAGTAAAATTGTCGACAGCTCAACAACAGCGAGTCAAGTTGAGCGGAGTATTCTTAC
AAGCGTTTTATCTGTAGCGAGCTTGTGCTTTATTTTTCTCCTTCTGCTCTACATACTTTGCTATTGACCAACACTC
TATAGTTGCGAAAAAAAGGAACGTTCAATCACTGCGGTATAAAGAACGATGTTAACGAGGCTCATTAACGTAACAAACG
CGAAAGATTTTATGTTTTAGATTATACAGTGGAGGAATTAATGAACCGTTGACGATTTTTATACATCATCGATCGATGTC
ACTTTTGTTGTGTGGCATTTAAACATTTTAAACAGCGGACTAATGATCTGTTCAATGTAATAAGAACTTTATTTTGA
ACGAAATAATAAAGGAAAAATATTATTTTTTTGCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGGCG

GAGAACAGCTCGAATCGTTGAGTCGTGTTGCGAAAACGATAAAATAAGTGGCAAACATGGCAGCGCGCTCGTTCATCAGGT
ACGTCCAACCGAAAAACGATAACGCCGCAAATCTATCGATGTGCGAGCGGTACCTCGGCTTTTGAGATTGAGCACAAAGACT
CCAATCATCAAAAAAGGAATGCCTATTCCAAAGGCTCACTACGGAGGGCGCACACAGTTTCACTTTTGCCCGGTGCTGG
TATCGGCCCGCAACTGATGGCTACGTTAAGGAAGTGTTCAAATTCGCCGGCGTGCCGTTAGACTTTGAGGACATGCACA
TAGATCCGAATGCGCCAAACACAGTATGATCTGGATTACGCGATAACGTCGATCCGTGTAACGAGTGGCGTTGAAGGGA
AACATCGAGACGCGAAGTCGAGAGGCAGGAGTGTATCGCGAAACGTAGCGATGCGAAACCAGTTGGATCTCTACGTGAA
CGTGCTGCATTGCGTGTCTGACGCGGGGTAAAGTTCCTGTCAGAACAACATTGACATCGTGATCGTTCGTGAGAATACGG
AAGGAGAAATACGCGATGTTGGAGCAGCAGAGATGTACGCGGAGTTGTGCGAGAGTATGAAAGTGATAACGAGATCGAATTC
CGAACGAGTGGCGCTTACGCGTTCGAGTACGCCAACGCGCAAGGCCGCAAGAAGTAAACAACCGTCCACAAGCAAAAT
AATGAAATTTGTCGAGCGTCTTTTTCTCGAGACTGCGCGCCAAGTAGCCAAGAATTTCCGACATAACGCACAGCGACA
TGATCATCGACAACACGTGCATGCAGCTCGTGTGCAATCCTCACCAGTTCGACGTAATCCTAACGACCAATCTGTACGGT
GCCATCGTGTCCAACGTCTGCTGCGGTCTTTGGGAGGCGCAGGACTCTTGTCCGGTAAAAACTACGGCGACCATTACAC
GATCTTCGAGCCTGGCACTCGCAACACAGGCTCCAAAATCGCTGGCAAAAATATCGCTAATCCAATCGCAATGCTCAACG
CCGTCTGTCGACATGTTACTGTCTTTGGCCACAACGATCACGCCACCATCATACAAAACGCGATCAATAAACCATCAATG
CGAGATAACACACGCTGACTTGTATACGGTGATACCGTACGAGCAGAGACGTCGTTGACAATATTCTCAAGCACATCAAAA
GGGCGCAGGAATAAGTTCAACCTTTACCCCGCCCCA

ATGGCTTGATGCGAACAAAGCCACACGACTCTCTGGCATTCTCTCGCGTGTCTATACAGCTCGCAGTCGATTTTGTGCC
GT CAGCAGAGAATCGCGAGCGTTGAAATTTAAATCCTCTCCTTGCAACGAGATAATTACATTTTAAATGGCTCTGAAAAA
TAACAATTTCTCACATCGTATCGCGAGAACTCGCGACGAGTATAATTTGAAATAAAAAGAATTTTTCTACGCGTCCATCGCA
GCGGAATATTTTTTTCTCCCAAGTGCAAAAAACAAATTAGCAGAGCTGATCAACCAAGATGATGGGAATGCGAAATCTC
TGCTCTTTTTTGGCGGACTCTGCTCCGTGCTCGCTGGAAATATGGCTCTGTCAGAGCCCGTGTTTCAGCGACGGATA
CATCGCCAAGGGAACTCTTTACATTTCCATACGCGGAAATCCGTGAACCTTTCTTTGCCTGGTACGACAAGAGCGAAGGTC
GCAGCAGGATCGACTATTACGGAGGAATGGCAAAAACGTATCAGCTCGCTCACGACGGTCCGCACGGATCGAGCATAAAA
ATAGTGCCGGTGACCAACCGAGAAGGAACTCAAACAAAGCCACTTGCTGAAAGTCGAAGGAAATGCTGACATGCAATTCA
AGCCTCAGACGATCGTTCCAGACACAACGGGAATGCAGTGCGTGGGAGAGGAAATGATCAATGGATTGCTCTGCGAAAG
TGGCAGATGCACGAAATGATTGGAGAAAAATCCAACAAGTACACGCTGTGGATTGCTTCAAGAAGATCGACCAAGTTCTG
TGGAGCGATGGAGCCGATTTCCGGTGAGATACGAAATGCGTGGATTCAATAGTCTTCTCGGTTGCGACTACGACCATTATT
ACCTCGAGTACGATTGGTACTCGTTCGAGACACCGAACAGCGACGTTTTCCAGATCTCCGAGAACATGACGTGCGAAGGT
TTTCTTGACCTGGCGACAAACACATTTACACGTTCAATCCCATGCGCGAATTCATTACGGTCACGATGCTCACGTCAA
CGAGGAATTTGACAAATTTGTCAAGTCCACAACAAAGACTACGAGGCCATTTGAACCAACGAAACGCAAGGAAATCT
TCAGACAAATCTTAGATTCTATCCATTACGAACTCGCGCCAAATTTGGGCTACGAATCGAGTTGAATCAATTTGGCCGAT
CGCAGCGAATTTGGAGCTCAAGGCACTGAGAGGAAATCCGTTTCAAGGCTGGACAAATAACGGAGGCAA

GACCTTGGCTGGTCACTCAACCACAGTCGAGTTTACAGTTTCGTTCAATTGTAATCCAACGGGAAGTCGCTACTAACCAT
GAGGCTTTTGGCTAGCCTTGTCTGCCTTATTCCGTTCTGTA CTGCTCGCAGGAGTCGAACATCTTTACGTCAAAACCTTCCCTCG
TGGAATCAAGGGACAGATACAAATTCCGAACAACGGACGACCTACTACGCTTTTGAAGGCATTCTCTTATGCCAAACCT
CCCGTCGAGTCGTCAGATTCCAGATCCACCACAACCGGTGCGAGGATGGACTGGTGATCTCATAGCAGCAAAAACCTGGAGC
GTCGTGTCCTCAATACTCCACGTACCGATTACCCCAAGGAGAGGGTGTAGGTGCGGAGGACTGTCTTTACCTCAACG
TTTACGTTCCCGAGGTGCGATCGTCAAAGAAATTACCCGTTATTGTTTGGATCCATGGTGGAGCTTCCAATGGCACATG
GAGTACGACTACTATACTGGTGACTTGACCAAAACCCGATTACCTTATGGACAGAGATGTTATTGTCTGTTACCTTCGACTA
CCGCTCTTGACCACTGGGATTCCTGAGCAACCGGCAGCGGAGTTGTGCCCGTAACATGGGTCTCAAGGATCAAAACCTTG
CTCTCAAGTGGGTCAAAGAACACATCAGTGCTTTCAACGGTGATGCCGACAGCATAAACATTGACTGGTTTGAGCGCAGGT
GGCGTTAGTGTTCACTATCACTATCTGTCTCCCCTGAGTCGTGGTCTGTTTGCAGAGGAATATCGTTCACTGGTTCACTG
GTTTCGATTGCTGGGCCAGACTGAAAACGCCTCAGAGAAGGCTAAGAAGCTGGGAAGCCTTCTGGGTTGTCCGAGCGGAA
GCAACGCCGAATTGGTTAAATGTCTGCAAGAACCTCAGCTCGTAGCATCTTCAAGCTGATTGACAGCTTTATGCCATGG
GGCTACAATCCCTACACTCCATTCCGACCACTCGTCGAAAAAGGCAGCAACGCTCCCTTCATTGACCGTTCAACGATCGA

mmc4.txt

AATCGTGAGCAGCGGTGATGCCAAGATCTCCCTTGGATCACCAGGAGTCGTGAGCGAAGAGGGTCTCTACCCAGCTGCCG
ATTCGTCGCCGACAAAGTTCTTCTGAAGGAACCTCGATCACAACCTTTGAACTCATCGCTCCATTCTCTCGACTACAAC
TACACGATTTCCTCTGTCTAAACAAGCTGAAGTTTCGAGGCTCATCAGAAAACACTATCTCGGATCAAAGAGCATCGACTC
TACAACCACCGCACCGGTTATCCAAATGGTTGGCGACCGAATCTTCGTCTGGACGGTGTCAAAGCTGCCAACTTACGG
CCAAGATCAACAAGAGCCAGTCTGGTATTACTACTTCACGTACAGAGGTGCCAACAGCGCCAGTGATGCGATGAGCCGT
ACTACGCAAACTTTGGCGTAGCTCATGGAGACGACACGTACTACGTAGTAGGATCCCCCTCGTTGATCCGACCACAAC
AGCCGATGACAGAGCCATGCAGAGATACTTGCTCGACTTCTGGGTNTCCTTTGCCACTTACCGGTATTCCCCCAGTCGG
CATCGAATGGCCAGGCTGGATGGCTC

>CL27Contig1|eukaryotic translation initiation factor 4 gamma 3

ACGAAAGAACTCCGGTGCTGCGGCAGCTGCTCTGAGCTCGGTGCTTACCGCACAAGCTCTTAACGCCGACGAGCAACAA
GCGACGACGCAACAGAATAATAAAGAAATCCTCGCTAAAGAGACTTCTGCACCGACCATCGAGGACACTGACAAGACGAA
CCAGGGATCATGCAATTTGCCGGCTAAAACGTTACCCAATGACATTGTGCGACCATGCCAAGGCCGCTGAGTGTCAAAGAC
GAAATCGATGTGAGACGATAGTCGCTCAGAAAAATGAGGAAAACGCCAAAGTCTCGGCTCTCCACGCAACCTCCAATGA
AACCACCGGATCTGAAAGCCCTGTTATCGATAAACAGGACGACCAAGTTCGAGTGAGAATGATGTTGGTAGCGCGA
CGAAGGCTCCTCTCGCTTGAATATCCCTACGATGATAATCAATGGAGCCCGATCAACGTACAGGAAAACGCGAGTAT
GGACGTGAATTCCTCATGAGACTGCAAGACGATCCTAAAAGTCGGGTACGACCGAGTAATTTACCCGAAATGGACGTTGT
CCTCAAAGAATGTATAAAGACTCGTAGCACCGAATTCAGGCCGTTCAAGGACCCGAGCGCGGGCCGTACGACTCGTTGT
TGCTCCGTTTCGCAAAATCGTCTTACAACGCCAAACCGCCAATATTGACGAAAAAGAGTTATCAAGGCAAGTCCAAACCG
ACTAAACCTAATGTGATTCATTTGTGCTGTGCTTCGCGAGGATGTCAAACCTTCGCGAGACTGAAAATGCCTGGCGACC
GGCAGCTCTCAAGCCGCAATCTGGCGAGGACGATGCCGAGACTCTCGCTCTTTATAAGAAAGTACGAAGCGTACTGAACA
AACTCACTCCACAGAAATTCGACACTCTCGTGTGCGAGGTGAGTCCCTGGAAATCGATACCAAAAAAATTTGCAAGGAG
TCATTGATTTGGTCTTTGAAAGGCTGTGATGAACCAACTTCTCCGTGCGGTACGCCCTCATGTGCAAAGAATTGGT
CAAATGAGTGTGCGCTCTGATGACAAAAAGCCTGAACCGAATGCGGATGGTCAGCCAGCGAACCACCCACTTCTCAACA
GCAATCGGGACAAGTTAATTTCCGCAATTTGATCATAGAACGTTGTGAGAAACAATTCAGAAAAATAATGACGACGAAC
ATGCGAGAATTAGCAAAATTAAGACATTGACGAATGTACCGACGAGGAAAAAAGACCTCCAGACGAGTCTCGAGGA
ATATGATCGTCGACTTCGCGTTTCGATCAGTCGGTACAGTTAGATTCATCGGTGAACTTTTCAAGAAAGGAATGCTCGGAC
CGAAAAATCATGCATATTTGCATAAACCATTTGTTGGCCAGTCCCAGCAAGAGAACCTCGAATGTTTGTGTAATTATTG
ACGACAGTCGGTAAAGCTCTCGCGAACGGCCAGTCCAAAAAGCGGGAACCTCTCAAACCAAAAGGACGGCAACTCGAA
ATCGATGAAAGAAAAGCCTATGCCCTCCCTCGATGACTATTTCAAAGAATTACAGCATTTTGTGGAAAGCAAGGCATCC
AACGGAAAAATCAGCTCAAGAATACGTTTCATGATACAAGACGTATGGACTTGAAGGCAAAACCACTGGGGTGCCAGACG
AGACGAGGCCAAACCCAAAACCTATGGATCAAATCGAAAAGGAGGAGAGTGCGAACGTTCCGAAGTTAATTTGAACAACA
CACCGATGAACACGCCCAGGAAAGACGAACGAAGCAACGACGAGAGAAGAAATCGTGGTGGAGGTGGAATGGAAGAAGGA
GGCTGGAGTCAACCAATTGGCAAAGCGAGACAGCCTTATTCGCTAGAAGCCACCAAAATGTCCGTTAAAGTTCTTCCCCT
GTGCGAGACGAGTTGGGAAACAAAATGCCTATGCATGGGGAGCACAGTCTGCCGCCGCCCTTAAACGATAACGCCCA
ACAAATATGCCCTTCTCGATAGTCTGACCAGCGATCCCAGCGAAGACCGCCGCTACAAGTTTCCGGATCCAGATCCACC
GGACCCAGAGACTACGGACGACACGATTACAAATCCGGATGGGAGAACAAAGGATCTCGCCTGGGACGCCAACACATGAA
CAGTGGCCCAAGTGGACGAGAACTCTCATGGAGAGCGGTGGAAGTCAGAGCATATCGATGCCGCCGCCATCCATGAAAA
TGAAACCACAATCTACCTCGATCATTACTACCAGCAGCAGTAGCGCTTTTCAAGCATAGGAGTGAACAAACCTCGCAAA
ACCGAGGCCGAACCTGTTGCGGTTGTTAAATCAATCACCGACGGTGTCTGCTGCGAGCCCAACATCGATGTTTTATCAA
AACCCTTTGGAACAATCCAAGATCTCTTTGACAGTTCGACGACCGAGCTGTTTGTTCGTGAATCCATCAATGGCGTAC
TCGAGAGAACC GCCGCTGTGCGTCTACAGTTCTCCGCGTTATTTGCTCACATGATCAATCACAATATTCTCCCACTTTG
CTCATCCAGACCGAATTCGAAAAAGTTCTGGAGTCTGCGGACGACCTAGTCATTGATATACCTAAAATCTGGACTTACTT
CGCCGAACCTATTGTCGTGTATGGTAGTCTCAATGCCCCATCCCCTAGCCGAAATAAAAACCCAGCGAGTGTGCTCAAGA
GCACCGGCAAGGTGGAATAATGAGGTGAGTGTCTCGCTAAACTTGCAGAGATCAAGGACCAATGGACCCGAGAA
AAATGGGACCAAAAGTGGACTTCAATGGAGCGATCTTACCGATACGACGATAGAGAACATCGACGATATCATTAAACAATA
CAAAATGGAGTTCATCAGCGCGAGTGCAAAAGCTCGGACGTCACTTCTTCCGGTAGTCAATTAACGAATGACCAGATCC
ACGATCATCTCGTTAACCTCATGCGTGATAGCGACTTTGACAACATTTGCAGCTGGATTCTGGCGAATGTTGGCAGCAGA
GTAGCGCAACCTCAATTCATCAGAAATCTGATGACGGCCATCTCACTGTACCGTCCAACAACGTATGAAGTATGGAA
GCTCAATGAGAAGCCTTTCAAAAACTTTCAAACTCTTCAAGCTTTTACGCACTAGTATGCGAATTTGGAATTCGCAAT
GTCTTTTCGCTATTTCAGGCGTACGTTTCAAAATTTGGAACATCCACCGGGCTTGTGCTCACAATATTGACGTCGTTACAA
CAAAACGATGTTCTTTTCGGACGAAGCATTCTCACGTGGGAATCGCACACGGGCGAATTTCCCGGGCACGCGGTTGCGAT
AAAGGGAGTTACGTCATTTTTTACCAGGTTTTCGAGAACCCGACAGTGACGATGCGTGAGGCTCGGTACTACTGGACGCGC
TCGATGTGTGTATGATCGAAAAAGTTGGATCGTCACCAAGGACGAAAGGTTTGAACCAACAACAACAACAACATCAA
CAAGAAAAACAAGGAGAAAAAGGANGATGGAGAGAAAAAGAAGGAGTAGTCTAATAATTAGGATTTTTTATGCGATTATGC
GAAGGTGTATGTAATA

>CL2801Contig1|nuclear protein localization protein 4 homolog

ACCGCTGGAGCCTTTTCGACGAGGCTTACCTCAAAGAACAAAATATAAAACATTTGTCTTTTCACTCGTATCTCAGAAAAAC
TCACTGCCGGCGTTGATAGAGGAAAGTTCTTACAACCTGGAGGATATTAGTTGCCGTATAAAACGAGGCTGCAAGGATCAT
CCACCTTGGCCACGCGGCATTTGTAGCAAATGTCAACCAAACGCAATAACGCTCAATCGTCAACCTTATCGACACATCGA
TAACGTGGTTTTCGAAAAATGCTAATCTTTGTAAGATTTTTTGAATTTATGGCGCATCACTGGACATCAACGTATCGGT
TATCTATATGGTAGATACGAGATCCACTCGGACGTTCTTTTAGGTTATAGGTTAAGGGCCGTTGTTGCTGATCATCAAGCAACC
GCAGGAAAGCACGAAGGACACAATTTGTGCTTTTGCCTGACGAACGCGATTCCCTCGTCGACGAAGTTGCACGAATGCTCA
ATTTGCAACGAGTCGGATGGATCTTCACTGATCTTATTGCCGACGATGTGAAACGAGGAACCGTGAAACACGTGAGGAAC
ATTGAAAGTCATTTTTTATCGGCCAGGAATGCATAATGGCTGGAATTTTCAAAATCAGCATCCCAATCCATGTGCTT
TTCACCGAGCGGTTCTGTTTCGTTTCGAAATTCGTGACGCTTTGCGTAACTGGTGATGAACAAAAATCAAGTACATATGGAG
GGTTATCAGGTGTCGAATCAGTGATGCCCCCTGACGCGATGGATGTCTTGTCCCTACGAAGGATGCTCCGGAATCGG
TTACGTCATCGAGTCAACGGAACGACGATACGTTCCGACGCTCTACTATAAGGAAAAAGATTCTGACGGCAATGAAGTAT
CGAGATTAGCCAGACCTCTGCCCGTAGAGTACTTACTCGTGGACGTGCCAGCGTCTACTCCGCTCACGCCTCAATTTACT

mmc4.txt

TTTACGCAAATGAAAATATTACCCCGTTCCCGCTCGAAAATAGACTCGTGGATGGCCAGGTTAGGAATTTGGATCTCTC
TGCACATACATTGACAATTACCATTGATCAATCTTCGAGGCAGTCTCAGATTTTCATGTTATTGTTGTTTCATCGCT
ACAAATGGACATGCTACAATGAGGACCATATGGTACCGTTGATGGAAGCAATTCGGAGTCAATGATCGAGAG

>CL2806Contig1|superoxide dismutase

TTTCCAGTGTGAAATAAGCTTCACCTCCGCGATCGAATGTCATTATTGTTATGAGAAGTTAACAATTGATTGGGCTTTCT
TGTTCAACTGCAATTTTATCTCGACTCTACTGTTCAATTGCCACTGCTTTGCCGAATTACGAACAACAGAGATGTTTGCCT
TCAGACGAGCTGCTGCAAACGCTATTTGCAGGAAGTCCCAAACGGTCAGCAGATGCAAGCACACGCTTCCGGACCTTCT
TACGACTACAAAGCTCTGGAGCCGATAATTAGTGCAGAAATCATGCAACTTCATCATTCCAAGCATCACGCGACGTACGT
CAACAATTTTGAACGTTGCAGAGGAAAAACTGAAAGAAGCAGTTTCCAAGGGCGATGTTTCCACTCAAATCGCACTTGCTC
CCGCTATCAAATTCACGGAGGTGGACATCTCAACCACACTATTTTCTGGTCCAACCTGACACCCAGCAGTACAAAACCC
GACGACGCACTGCTGAAAAAAATCGAACAAGATTTTGGGAGCATGGAGGAGATGAAGAAACGCTTATCCGAGACGACCGT
TGCAATTCAGGGATCAGGATGGGGTTGGCTCGGTTACAACGCCAAGGACAAGAACTGCAGATCGCAACATGCGCCAATC
AAGATCCTCTCCATGCCACGACCGGATTGGTTCGGCTCTTCGGAATCGACGTTTGGGAGCAGCTTATTACCTTCAGTAT
AAAAACGTGAGGCTGACTACGTTAAGGCCATTCTTGACATTGCTAATTGGAAACGACGTGAGTCAGAGATTCAAGGCTGC
TGCTAAGTAAAAAACACCATTTTATATTCTGATATTATCGCAGTTATTTTTATTAGAAACGTAATACAATGTACGAGT
CTCTACGGCTCGTTATTATACAAATAAACGATCCAGAACTGGCAACTTCGCAACGAAGAAAAAATAAATAAATAAATAA
TAGATTAATAAT

>CL2807-bisContig1|l-xylulose reductase

ATAGTTCGCACTCAGCTCTCGTTCGTGATCATCGCGGATTAGCTAAGCCTTCGTGCTACTATCATGGAAATAAATTTT
TCCGGCAAGCGAATTCTCGTGACCGGCCAACAAAGGCATCGGTGAGGGATTGCACTAAGGTTATCAAAATACCAAGG
CAAGGTGATCGGTATGGGAAGAGACCGCGAGACATTGAATGATCTTGTAAGAGAGGATCCAAACATCGAACTGTTTGTG
TTGATATTACGGATTGGGAAGCTACGAGAAAAGCTAGTAAAAAGTATCTTGCCCATGATCTGTTGGTAAACAACGCAGG
GGTTGCTTGTCTCGCGCTTTCTTGAATCAACCAAGATCAATTCGACCTGACGTTGACGTCACGTTCTGTGCAATA
TTCAATGTATCACAGGTCGTTGCAGCTGATATGATACGTCGTAAAGTCGATGGCAGGATCGTCAACCTTCTCACAAGC
TGCACATGCAGCTATAAAGATCATTTCGGCCTATTGCGCCTCGAAAGGAGCAGTTGACATGCTAACCAAGGCCCTCGCAG
TTGAACTAGGACCTCATCGAATTCGAGTCAACTCAGTGAATCCAACGTCTGTTCTCACCGCGATGGTCTGTTTAGGCTG
GAGCGATCCAGAAAAGGCTCGTGCCATGTTTGAGAAAATTCGCTCGGTAGATTGCGCGAGGTGACGAAGTCGTGGACG
CTGTTGTTTATCTACTGAGCGAGCGTAGTTCGATGATAACCGGAGCATATTTGCCAGTCGACGGTGGATTTCTGGCAGGC
TGAGCCAGCTGTCACAGAGCTTTGCCGATCGGCATCGTTTTCTTCGTGCCAACGACATCAATATCGAAAATATCACGACA
ATGAATAAATCGATGCAAAATATTGAACATTGCCAAATATTAACCTGCTGTAATTATCTATCGGGCATGGTAATAAACGT
GGTGAATAAATAGCACATTTAAAGATGGCATGATCGAGCGCTCGTTTATTGGAGCAGGCTCGATCAGTTCTTTTTTTT
TCTTTATGTTTATTCTTTGACATGAATTCGAAGGCGTTTGTGTTTTCCATTTCTCCGTTACGTTAACCTTTTTTG
>CL2818-bisContig1|juvenile hormone epoxide hydrolase 1-like

AGGGCGGAGGAAAGAAAATCTTATTTTCGGGCGTATAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTC
ATTGAATTTTTTAAATTTATTAATAAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTC
GATTAATTTTCTTATTTTTTTTTTACTTAAAAAGGACAACAGTCTCGCGGATTCCGCGAGTGCTCTGGCGACGTACATTC
TCGAGAAATTCAGCACCTGGACGAATCCCTCGTGGTGAGTCGCGAGGATGGCGGTTTGTGGAAAAGTTACGCTGGAC
GAGCTTTTGGACAACGTAATGATGTACTGGTGACAAATTCATTACGACGAGCATGAGACTACGCGGAATGCTTTTC
GTGGGAGAATCACGCCATGAAATTCGACGAAATGTTGGTCAAGGTGCCATCGGCGTGTGCAGCATTTCTCACGAGCTCG
CTTACACGCCGAGAACTTTTGAATTCGCTACAAGAATCTCTTGCAAGTCAATCATTTACCGCGAGGTGGCCACTTT
GCAGCTTTTCGAAGAGCCGAAGCTCCTGGCCGACGACATTTGGAGCTTCGTGACAAAGTCCAAAATTCAAAGAACAATC
CTAAAGCAACGAGCTACGAATGAGACGTTCCGGCGGATGATGTTGAATAGTTAATTAATAAATAAATAAATAAATTAATTC
TTACACGAAATGTATCGCGATAAGCAACTTCCAAACGTGTTTAAATGAAAAAAGTNTTTTTCAATAAAGATAAGAAT
TAC

>CL281Contig2|myophillin-like isoform 1

AGTTGAGCAAAGTCTTTCGTACCGCAAGCACATATAATCGAGAGACGCTCGAATTTTCGATCTTGCGTCCGTTTACATTTCG
AATAAAGAAAATATCCGAAATAATCGCTCGTTGAAATTCATTTGCGCGATCAACCGCGATTTCGTACGATTACGCATTAT
CATTGTATATTTTCGTAATAAATATGGCTTGCAACCTGAGTACCAAGTCTGGATTGCGCGCCGAGGACAGCGCAAGATCA
ACAGCAAGTACAGCGAAAACTCGCTGAGGAATGTTGGGATGATACACAGCATACGAGGCTACGCGGAGATTAATTAACGAG
GGAGACATGGACAATTTTTATGAACTCTTGAAAGATGGCACTCTGCTCTGCAGACTCGTAAATCTGATAAAGGAAGGTTT
GGTAAAGAAGATCAACCAATCGTCATTGACGTTCAAATGCATGGAGAACATAAACGCATTTTTAGAAGCAGCGAGAGCGC
TCGGTGTGCCACCACAAGAAACGTTCCAAACGGTTGATCTTTGGGAAAGACAGAATCTCAATTCGGTCTGTAATCTGTTTG
CAATCGCTCGGGCGAAAAGCGAGCAATTATGGTAAGCCGAGTATCGGACCGAAGGAGGCGGACAAGAATGTACGTAACCTT
TACCGACGAGCAACTGAGAGCCGACAAGGAGTGATAAGTTTACAGTACGGAAGCAACAAGGGTGCCAACGAGAGCGGCA
TCAATTTTGGTAACACGCGACACATGTAACGAATGATGCGGAAATCCTCCGATTATTTGTTGCAACACTTGACGAAAT
CTTCCCTCGAATCGGCCTATTTTTTTTTTCTTCCGCATATGCCTTTTCTTTTTTCTTAAATTACGATATCTCTGTAATT
AATTTTCATCACTTTATTATTATACGACGCGACGATGATGAGAAAAAATGGTTAATTATCGACGTAGAGAATTTTAATTCA
TACTTCGTTATTACGAAGGGTCTGTTAATTATTCAACGCGAAAGCCGTCGAGCGGGCTTTTCCAAACTGACGTTAATGAC
TGACGAGTCACAAAAGAGAGTGGGCACGCTAAATTTCTGTTTACTTCGACAAATTATTCTATTTTGTGTTTTTTCGTCAA
AATATGTACAGCGTGTATTATTATTGTAACGCTGTTAATTACATACTACGCGAGTGCCGAGCTCCGCATAAGGTCC
>CL2828Contig1|-alpha-glucan-branching enzyme-like

TTTTTGATTATCGTCTCGCAATGGCAATACCGGACAAATGGATCAAATTTGTTAAAAAGAGGTCAAGGACGAAGATTGGAA
AATGGGGGACATAGTTTGGGTCTTGGCGAATCGTCGATGGATGGAAAAAACTGTTTCTTATACAGAGTCACACGATCAG
GCTCTCGTTGGCGACAAAACCATTCGCTTTTGGCTCATGGACAAAGACATGTACACTCACATGAGTGTCTGACGCCACC
GAATCCTGTTATCAGCCGGGGTATCGCTCTCCATAATATTATTAGGCTAATCACTCACGTTCTTGGTGGTGAAGCTTATC
TCAACTTCATGGGTAAACGAATTCCGCCACCCAGAGTGGCTGGACTTTCCGCGTGCCGTAACAACGACGATTAACATTAC
GCCGACGCCAATGGAAATTTGGTTGACGATGAATTTAAAGTACAAATTTATGAACAATTTGGGATCGCGAAATGAACCTT
ACTCGAAGAAAAATATGGCTGGCTCCATTGCGATCCTGCCTACGTCAGCTGGAACACGAGGATGACAAAGTCATCGTCT

mmc4.txt

GCGAACGAGCTGGTCTCGTGTTCTGTTTTCAATTTCCACAGCTAAATCTTTCCCGATTATCTATCGGCGTTTACACA
 CCCGGCACCTACAGAATCACCTCAGCAGTGATTCGCAATTTGGAGGTGAAGGACGTCTCGACTCTAATGTTGATCA
 TTTACGAAACCCGAACCTTACTCTGATCGTCCACATCGTATGATGATTTATACTCCCTGTCTGACAGCTGTCGTTTACG
 CTCGAGTGTCTTGAACAATTGATCATTGACGAGAGCCAGCCTCGTCGAGAGTCTGAAGAAGAGACTACCGTCGCATTG
 TTCACAGCTGATCGCAATTTATTTTCTCTCTATTGTTTCTCATAGATTATAGATTAATCGTGTGTTATCAAGAACCA
 AAAAAAACGNTATTTTTATAGAATATTGTTATACAAATATATACTCAGC

>CL2831-bisContig1|transmembrane emp24 domain-containing protein 5-like

AAGTGTAGAGTCAGTAGCCGAGTAGGAAAGAACGATGCTGGATCGTTATTTATCGCGTGAAAGCCGATTGTGATTAAGA
 AAAAAAAAAAACGCAATGTCCGTACTCGAACGGCGTTTTTCCGTTTCTTCATACTTTTCGTTGGACTGTTTGTGTTAGT
 TAGTCCAGAAGGAGTCACGAAACCATGGTACGAAACATTGCCGACTGTATCAATGGACTACAAAGTTCACATAGACGCCG
 GTAAAGAGGACTGTTACTTTCAATACGTCAATCCCGGAGCGACGTTCTACGTCAGCTTCCAGGTGTTGAGAGGCGGCGAT
 GGGAAAGCTGGATTTCGCGGTGAGAAATCCGGAAAACAGCTCGTACACCCGTACCAATGGCAAGTGAGCGCTGACTATCA
 AGACACAGCCTCGGTAGGAGGTTACTACAGCATTTGCGTGGATAATCAGTTTTCTAGATTGCTGCGAAACTCGTGAATC
 TCTACATCAGATCAGATCAGATCAATGGGACAAATCACCAGGAAGTGAAGAGTTGGATCTTTTCACTGTTGGAAC
 TTCACGAATACGATTGTGGGAGTGGAGAGAAACATCAACGAGATAATGCAGTACAGACATATAAGCAGAAGTCGGGAAGC
 CCGAGATCTCAATTTGTTGTTGGACAACAATCTTACGTGCAGCGTTGGTCGATAGTTCAAATGGCAGTAATCGCAGCGA
 CGACGATACTCCAAGTTTATTTTCGTCAAAAGACTGTTGCGACGTTAAGCCCTCGACTTATGCCAAAGTTCGAATATGATCG
 GAGCCTCAAAGTCCCGGATCGTTAGTTTTCCCTGCGAAAACGTGGCGACCCGAGCGTCGATTGCTCCTGCAAGTCGAG
 CACCGCTCTGTCGTCATATTTTATTTGACAAGAGCAACGATGACGAATCCAACGACGACGATACTCAAAGTGGGTAAAG
 CCGTGGTTTACTACTCCGACGAACACGGCCCACTCTTATCGCGAGCCAAATTCGTAATACCCGGTACGAGCAACTC
 TACTGCGG

>CL283Contig1|probable aspartate cytoplasmic-like

AGTGTGGTTCATATCCCGTACGAGTCGAGCCTACGCTTCTCATATCGCACGATTAACCCTGAAAATCTGCTTGAGAATA
 ATAAAATTTGAGACAAATCGTCTTGATTTTACATATCACCGATCGCCGAGGGTGCCTAACCGCAAATTTATAACCGTC
 GAGTACAAATATTAGAAAAATGAGTGAACGAGATTTGCGGGTGTAAATTTGGGACCACCTATTGAAGTATTTGCCCTTC
 AAAAGCTCTTCATCGATGATCCTTTTCGAGCTCAAATGCAGCCTGACGATTGGCGCTTACAGGACGAGCGAAGGCAAGCCT
 TGGGTTTTGCCGGTCTGACGAAAAGTGGAAAAAGCATTGGCCTCTGATGAACTGCAAAATCACGAATACCTGCCAGTTTT
 AGGGCTAGACGCTTTCAGCCAAGCGGCGGTTTAAATTTCTCTTTGGGCCCCGACTCACCTACCGTTCTCCAGGGTAAAG
 CGTTCGGTGTTCAGAGTCTTTCTGGTACCGGAGCTTTGCGAGTTGGGGCTGAATTCCTTGCTCGTATTCTTCACTTTGAC
 ACATTTTACTACAGCACTCCAACATGGGAAAACCAAACTGATTTTCAACAACGCCGATTCAAAAAAGCCTGCGAATA
 TCGCTACTGGCATCCGGAGACTCGTGGAGTTGACATCGAGGCGATGCTCCAAGATCTCCGAGATGCGCCAGAAAAAGCGG
 TTATCATACTTACGCTTGTGCTCACAATCCCACTGGCTGCGACCCCAACCCAGAACAATGGGAAAAAATAGCTGATGTT
 ATCGAGGAGAAAAAATTTTCACTTCTTTCGACAGCGCTTACCAAGTTTTTGCAAGTGGCGATTGGATCGCGACGCTTT
 TGCGGTTGCTCTTTGCTGAACGAGGCATGGAATTTCTGTGCGCTCAGAGCTTCGCCAAAAATTTTGGCCTTTATAACG
 AAAGGGCTGGCAACCTCGTCGTTGTTATGAACAACACCAAGAAGCTTGTTCAGGTCAAATCCCAATTGACTCTCATCGTT
 CGTGGAAATGTACAGCAATCCCCGAATCATGGAGCTCGTATCGTCGCAACAGTTTTGAACAATCCTGATCTTTTTGCAGA
 ATGGAAAGGTCACATTCGCGAAATGTCCTCCAGGATAAAAGCGATGCGAGCTAGTCTGTACGAGAAATTACAAGAATTAG
 GTACGCCAGGATCTTGGGAGCACATCACACACAAATCGGCATGTTTTCTTACACCCGACTAACCGAGAGACAAGTGGAA
 CACTTGAGGGAACACTTCCATATTTATATGTTACGCAGTGAAGAATAAACAATGTGCGGATTAACGAGAGAAGACATGGA
 TTACGTTGCCAAAGCTTTTTCATGAAACGATCCTCAAGTTTCCATCCTCGTAGAAGGTCTGTAAGAATTTGTTATACGTGC
 GAAAAGCATGAACGATAGATGGGCAAGGATTCTCGGCTCCGAATCGGTAGATTATACTAGATCGCGTTAATCATTCAAAC
 AATGAGAGCAGAAAGAAACAAGAAATCAAGCAATCAAAAAAATCTCAATTAATCCCGGGCAACGTGACTACCTCAA
 CAATCGAAGCGCGAGATTATTCGACAATTAATCAAGTTCAAAACGTAAGTTTACATACGTACATACATGACAAAACTC
 CAAATGCTAATGTAATTTTACTATCAAATGACGAACGGCCCTGAGTCTACGATTCAATCCAATATTTTCCCTTTAT
 TCTTTTCTGCTTTGAGCTTGATCCATCAGGCACGCGAGGTGCGAGAGAGAGTGCACAACAAAAAGTAATGAACGCTTT
 ATCGGAGATGATTATTTTGTGAAAATGAGGGATTTTCTGTTGTCATCGTCGGAGTCCAACGAAGAATATTCTATCCACC
 CACAATTTTGGATTTTTCGAATCGCTGCAATTTTCTTTGACATTGATTTTTTCAATTCGCAATATTGGCCAAATGGA
 TAATGCGTGTTAAGCTTTGACGCTGTTCCAAAAACGGATAAAATCATGGATTCCGTTGAATCCAACGATGCAAACTTC
 AACCTCATTTTTTATTTTATTTTATTCGCGTACAAA

>CL2856Contig2|coatmer subunit delta-like

AGATGGATTGCGACGAGGAAAGAGTCTACCAAGCTGTGAGATTACGCGAGGAGCGCGAGGCCAAGAACAAGATGAGAGAG
 AAGGCGAAAGAATTACAAAGACAACGAATGGAGGCGAATAAGAAAGGTGGCGGTGGTGGAGTCGGAGGAGGAAAGAACGT
 GGGTTTCGGCAGCGGTTACGGGAACAGTGGAATTTTACGAATTCGCCAAGCGTCGGTGACTCGGCAAACTTTATCCCGG
 AGCCTGTGAAGCCGAGTTACAATCCATCCCCGAAATCAGTGTCAACGGGGCCCGAGCGATGAAGCTCGGCGGAAAAGCT
 CGCGACGTGGATTCTTCTGTTGATCAATTGAAAGAAGAAGGAGAGAACGTCTGGCCACAACGATAACGAGCTCAAGCAC
 AAAAAAGTCGAATATCTCGAGTCACATAATATCGACGAATACCGAGCCGCTCCATTTGAAACAGGAGGAAAAAAGTGAACG
 TGAGAATTGGTCGAGACGGTGGTCTCCAGCATTTTCGAGCTCCACGGTCTCGTTACGCTTACATATCCGACGATAAATGG
 GGCAGGATTCGCGTTGAGCTTGAGAACAAAGGATACCCGCGGTGTACAGCTCCAAACTCCAACCCAAACGTTGACAAAGAA
 TTATTCAAATCGCACAGTCAAATTTGGCCTCAAGATTCCATCAAACNNTTCTCTGAATCCGATGTTGGCGTTTTGAAGTG
 GCGACTCAGGCACAGGACG

>CL285contig1|lethal isoform a

AAATTGGCTGCTGTGTGTAGTAGCAGAAGACACGGTCGTTGGTGAACCAATGACAAGTTAGGATTCTTGTCTCTTGTACT
 CTTTTCTTCGTCATTTATCGGGGCTGACGTGTGCGGTAACCTGAATCGCGAATATAGAGAAAGCTTTTATGATATCGTTT
 AATATCGTTAAATAATGGCGGCCAATGGATACGAAAAGCAATCTCGCCGAAACTCGCTGGTGTGCGTCTTTACAGTAGC
 AAATAACAAAAATGCACCTTATACAGGAGACGGTATTGGCCCCGAAATTTAGCCGCTGTACAAAAGATCTTCGATGC
 TGCCAAGGTGCCGATCGAATGGGAAAGCGTTGACGTCACCCCGTCAAAGGACCCGACGGTAGATTGGGAATTCCTCAAG
 CTGCCATCGATTTCCGTAACAGAAAACAAATCGGCTCAAAGGACCATGATGACCCCATCGGCAAGGTACAGATCC
 TTGAATCTTGCTCTCAGAAAAGAATTCAACTTGTACGCAACGTGCGTCTTGTGCGTCCCTGGAGGGCTACAAGACGTT

mmc4.txt

GTACGACAACGTGGACGTCGTCACAATCCGTGAAAAATACCGAGGGTGAATACTCCGGCATCGAGCACGAAATTTGTCGACG
GTGTTGTGCAGTCCATCAAGTTGATTACCGAGGAAGCTTCGCGCCGAGTCGCGGAATTTGCTTTTCAATATGCAACCGAC
AATAACAGAAAAAAGGTACACTGCCGTGCACAAGGCCAACATTATGAGAAATGTCGACGGAATTTTCTTGAGATGCTGTC
GCGAAGCTGCCCAGAAGTTTCCCTCGATCAAGTTCGAGGAAAGATACCTCGACACCGTTTGTGTTGAACATGGTGCAAGAT
CCTAGCCAATACGACGTCCTCGTCATGCCGAATCTTTACGGTGACATCCTCTCGGACATGTGCGCTGGTTTGGTCGGAGG
ACTGGGCTTGACACCCAGTGGAAATATCGGACTGAACGGAGCTCTCTTCGAGTCTGTCCACGGAACGCGCCGGACATCG
CTGGGCTGGACAAAGCGAATCCCACCGCATTATTTATGTCAGCGGTGATGATGTTGAAATACATGGGACTGAACGATCAC
GCGAGAATAATCGAGACGTCGGCGTACGAGACGATCAAGGAGGCGAAATTTGACGGGCGATCTCGGGGTTTCAGCAAA
GTGCAGCGAATATACCAACGAAATTTGCAAGAGAGTATCGGCTCAGACGAAGTAACAACTCGATAAAGAATCTTGCTCG
GAAGAGCAAAAGCGCCAAATACTCGTAGAATTTTGAAGTTCGCGATGGCAATTAGGATCGGTAACAAAAAACAACCAAT
CAATATTTTCTTAGTACCGTCGTCAGAATCGTTTAACTAACAAACACTCGATCGGCGGGAAATCGACACGAGCTGGCAAC
GTTGAATTTGTCCAATTCATCGCTAATTTCTCTCTCTTTTATTTTCAATTTCCCATAAATGTTTCGCAAAACCCGAGTCAA
GTACACTTTTGCTATTTTATCATCATGAATATTTAAATCTCTTTTCGATTCTCTCTAGTCTAACGACTCACCGATGATCTGC
AATCTTAATCCTGACAGCATTTAATCCACCATTTTATTTTAAATACAAAATGCGAAAAAGTCAGCCTCGTGAGCCCG
TTTTCGAAAAATCATTGAGCTTTTCGAGCTTCGAGCCAATTTGCGGAAGCAGTCCCTCGTAGTGTTCATTGTCAATTTCA
ACTTGACGTTATTTTAAATGTTATTATTATTATTATTGTTATTATTATTATTACCCTAGTACAATCTGCAATCGTGTAG
AAAGGCGAACAAGAGAGACAGACCTTAACCAATCCACTCACACAGATTCAATCAATACCTGTAAGATTATTGAATCAAGT
GAAATTTTCAATTCGTTTTGCGGAACGAGTCTCCTCAATGAGGACGAATTTAGAAACGTGCTGTGCAGTATTACAGATCA
ATAAAAAATGCAACAAATCCATTTAAATTT

>CL2862contig1|thioredoxin-dependent peroxide mitochondrial

ATTGAACATTCGAGCATCAGCAATTTACGAACTATTGCATAACCTGTTTTGTACATATAATCGTTTTAGATACAAAG
TATATAGAATATTTAAGTAAAAAAGAACAAAAATGTCTCGATTCTAGTCAGTTTGTGTCCGCAATGAAAAACT
CGTCACAGTCTCAGCATCTTCGATGACAAATTCGAACTTTACGCTGTTAAAAAACACACGTAACTTTTAGTAAGCTCG
AACTTTTTTGGCAGCTGGCCACAGATACAAAAACCTGCCCGGACTTTGCTGGTACCGCAGTCGTTAACGGCGACTTCAA
GGATATCAAGCTTTCCGATTACAAGGGCAAAATCGTTGTTCTCTCTTTTATCCACTAGATTTACATTTGTGTGCCGA
CCGAGTTGCTAGCGTTTCAGCGAGAAGGTCGCCGATTTTCAAGGCATTGAATACACAAGTAATCGGCGTGTCTACCGACTCG
CACTTCAGTCACTTGGCGTGGATAAACACTCCGAGGAAGCAAGGTGGACTCGGCGGTGATCTGGGCTACCCGTTGCTGTC
CGATTTCAACAAACACATCTCCTCCTCGTACAACGTCTTGATCGAGGATGCTGGAGTCGCGCTGCGCGGTCTCTTCATAA
TCGACAAGGACGGAATATTGCGACAATTGAGTGTCAACGACTTGCCGGTCGGACGAAGCGTCGAAGAACTCTGCGACTC
ATAAAAGCTTTCCAGTTGTTGAGAAACATGGCGAGTTTGTCCGGCCAATTGGCAGCCCGATTCCAAAACGATCAAGCC
CAATCCCAAAGAAAGCAAGGAATACTTTGAGTCGGTGAATTAATCAATTTCTTATCCAATTAATTAATATACACTA
CTTTATATACATCAATTTGGGAGCGAAATATATGCAGTTGTTAGAGCGTTTTTTTTCTGTTGAGGAAACTTTTAAACGCGCA
AACATCGAAAAACCGGCGGCAAAAAATCATTTTTCATCGTTTCTACTCTTTTTTTCTGTTTTTTCTTTTTTTTTGTTAG
TTTTATTTTTCTATTTCTTTGGTTGCTTAGAACTCACGACCTGGTTCTCGCTTTCCGGTAATTAGG

>CL2865contig1|pseudouridine-5'-monophosphatase-like

AAGTTCTACGATCTGTCCATAGAGTTTCTGATTCTAATCCAACGTTTCAACCTGGTTTCAACATCAAGATCGAGCGAGGA
ACTTCTCATTCCCTGACAGTCGGCAGTCCTGTTAGGAACAGTGACACTTTGACCATTTTGTGTTGAACTAATAACCTCTA
AATTCAACCGTTTAAACAAAAATGTCGAGTCCCACATATAAAAAAGGTGACACATTGCAATTTTCGACATGGACGGTCTGCTGC
TCGATACGGAACGCTTTTACACAACGGCTTATAATCGTGTGCTAACAATATGGCAAAACGTTTACATGGGAGATAAAA
GGACAAACGATGGGACTACAATCTCACGAGAGTGCAAGTGGCATTGTAAAAGCTTTAGATTTGCCGATACAGCCGAGGA
ATTGACGGAGCAACTTTTGCATATACGACGAAATATTTCTCAGGCTTCACTTCTTCCAGGGGCGGAGCGGATATTAC
GACACTTGAAGAGAGAACAACGTACCAATTGCTCTGGCAACGAGTTCGACCGAAAGAGCTACGAATTGAAAACGCAGAAA
TCAAAGGACGTTTGTGCTCTGTTTACCATTGCTGACTCGGTGGATCCGATCCCGAAGTGAAGGAAAGGGAACCGAGCCG
GATATATTTTGTGTCGGGCTAAACGTTTCCCGCAATCCGACCTTCGACGTGTCTGGTCTTTGAGGACGCTCCGAA
CGGGGTTCAAGCCGAGTGAACGCAGGGATGCAAGTGGTCAATGGTACCGGATGAGAATCTACCAAAAAATTTGACTGAAA
AAGCAACTCTAGTCTCAAGAGCCTCGAGCAATTTGAGCCCGAGAAATTCGGCCTACCAGCCTTCAAAAATTAGCGACAA
TCAGATCAATTTATTAATATCAGAAAAAAACCAGATACTAGGAGAAAAGTGAGAGTAAAGGGAAGATGCTGCGAGCAG
CATTTACACGTTTCCGTTGCCCTCGTGACAAAAAGAGATATATAGAAAAAGGTGAC

>CL286contig2|cytosolic purine 5'-nucleotidase-like

GAGAAGTAGATTGTTTGGCGAAGTCGACGCACTACGCCGAAAACGCCGGACACGTTGTGCTTCTTATTTTCAATTTTCTT
TCATTTTACGATTTCGATTTCGTGGTACAAAAAACAATAGGACTTTGGACTTTCGACGATTGAGTATACTAAATCGCGT
TTACGCGCTTACGTGAAAAATAATAAATTTTCAATTGACACTATATTTTACGATATCAGAAAAAATAAGCTTATCATGGAAC
TGGAAAAATTGTAATCCCGAGCAACTGAGCTCTGCAGCTTCTCACCCACACGAAAGATCCTAGTGACACAAAAAATGG
TACCGTCAAGCCAGCCAAAGAATATTCGTCAACAGGAGTCTCCATTTGGAGAATATCAAGTTCTATGGCTTCGACATGGA
CTACACTCTGGCAGAATACAAATCACCGCAGTATGAGCAGCTCGGCTTCAATCTTTGAAGGATCGTTTAGTCTCGTTGG
GTTATCCGCGAGAGATTGAGGCTTTCGAATACGATCCAGCTTTCAGTGCAGGACTCTGGTTTCGACACACTCTATGGA
AACCTTTTGAAGTCGATGCTTACGGAATATACTCGTGTGTGTTTACGGTTTTGAATTTCTGAAGCATTACAAAGTTTA
TGAGCTCTATCCGAACAAATTTCTCCAATGGATGAATCTCGAGTCTACGTGCTCAATACATTATTCAATTTACCGGAAA
CTTATTTGCTCGCGTGTCTAATCGATTTCTTTACGAATTCGCCGCAATACACGCGAGAAAAAACGGGCGTGAAAGAGGGT
GAATTGACGATGAGCTTCAAGAGTATATTCGAAGATGTGAGGAACCGGTCGACTGGATTACATCCAAAGCGCATCTCAA
GAGCAAAACCGTTGAGAAAAATTGACGAATACGTTTAAAAAGGACGAACAGATTGCCAATGTTTCTTACGAGGATACGCGAG
AGCGGAGCCAAAGTCTTTTACTCACAAACAGCGATTACGTTTTTACCAGCAAAATAATGACGTACTTATTGATTTTCCG
CACGGCGCTAGGCCGACGAACCTCACAGGAACCTGAAACCTACTTGACGTAATCGTCGTTGACG

>CL2884contig2|low quality protein: regulator of chromosome condensation-like

AGCATCACACATTGGCACTGGACGAAACGGGTCAAGTGTGTTTCTAGGACGAAAAGAATACGGTCGCCTTGGTCTTGGG
GAGGATTGCAAGACGCGAAAGAGTTGACGCTGGTGCCGAGTCTGGGAAGCACAATGCGTAGACGCTGGCAGCAGGAAG
TGCGCAATCGTTGCGGTCGACAGAAAAAGGGGATTTGACGCTTGGGGCATGGGGAGCAACGGCAATTTGGGAACCGCG
AAGAAGAGGATTTGCGGGTGCCAACTGTGATCAAAGGGAAGCGTGATGAAGGACAACAAAGTGGTCGTTGCGCTCGTT

mmc4.txt

GGCGGAGGCCAACACACTCTCATCCTGGCGAGCTCGCCCCAATCCGAGAAAGAAGTTACCGCGCCTTCTCTTAAGACGA
TGAAAAACAACCGAACAAAGAAAAATCGATCGATCGGGGTGCGAATTCGCAGTGAGTGACGAGGCC
>CL2891Contig1|endocuticle structural glycoprotein bd-8-like
AGTTCCAATATAAAAAGCCCGACTCGTCGTCATCGAGACATCAAGAAGCGTAGCGACAGCAGAAACGTCACCAACATGAGC
ATTCTGAGAGTAACTTTCTCGTGGCGATCGCGGTGGTTCGCGATTTCTGGAGCTCCCCTCGACAGCTCGGAACCCGTAGC
GATACTGCGACAGGACCAGGACGGTCCGAATCCTGATGGTTTCATACAGTTGGCGTTACGAGGCTGCAAATGGCATCCAAG
CCCAAGAAGAAGGCAATCTCGTAGCATCGAAGCAATCCAACGAACAAGCTCTATCCGCACAAGGAAGCTACAGTTACACA
GCTGATGATGGTACACCGATCCAAGTTAGCTACACTGCCAATGAGGAAGGATTCAGGCTCAGGGTGCACATTTGCCAAC
TCCTCCACCAATCCAGAGGGGATTATCAGAGCCCTTGAATGGATCGCAGCACATCCAGAAGAGGACGATCTTTAAATAT
ATAATACGATGTCAAATCCAATTTTAATTGCCATTACGTTCAAACCTGACGTGAAAATTTAGTTTTAAACAAAAACAAA
AAGGTTGAATGATTGTCAAACATACTGCATGTGATTGTTTTGGCTTCTTTGAAAAACAATTTGGAAGGAACGTCTTCA
AGTTATTGTTGACGAACTGTAACGATTGTTTCGTGATTCTAGATGAGTTGTAATTTAAATTAACGAGTGCTCGATAT
TTCACAGTGAAAGCTTAGTCTTTTTTTATTTTCTCCATCATCTCTTACCT
>CL28Contig3|fructose-bisphosphate aldolase-like
ACTCGTCGTCGATTCATTCAACGGTTCCCGTCGTTTCGCGCACAGCACAAATCTCCAAAGCACAAAATGCCAGTGACAA
GTATGACAGAGCCGATCCTGAGCTCAAGGCCGAGCTCAAGCAATAGCCGAACAAATCGTTGCACCGGGAAAAGGCATCC
TAGCTGCCGATGAGTCGACCACGACGATTGGCAAACGTCTCCAGGACATCAACGTCGAGAACAACGAGGCCAATCGCAAA
GCTTACCGACAATTTCTTTACCGCGAACAAGGAGGCCATCAGCAGCCACATTTGGGTGTGATTCTTTCCACGAGAC
TCTTTACCAGAGCGCGGACGATGGTACGCCGTTCTGTCGAATTGATGAAGGAACGTGGAATCCTGCCGGGAATCAAAGTTG
ACAAGGTTGTTGTACCACTTTTCGGAATGACGACGAATGCACCACCCAGGGTCTCGATGACCTTCAGGCCGGTGATT
CAGTACAAGAAAGACGGTTGCCAATTCGCCAAGTGGAGATGCGTTCTCAAGATCAAAAAGGACTGCCGAGCAAGCTCGC
TATCCTTGAACGCCAACGTACTCGCTCGCTACGCTTCGATCTGTCAAAGCGCGAGAATCGTACCGATCGTCGAACCCG
AAATTCCTCCCGATGGTGACCACGACCTTGACGTTGCCAACAAGTCACCGAGGAAGTTCTCGCCGCTGTTTACAAGGCG
TTGGCCGATCATCATGTCTATCTCGAGGGCACACTCTTGAACCAAAACATGGTAACACCCGGACAGAGTTGCCCGAAGAA
GGCCACGCCCATGGAATTCAGCGGCTACCGTGACCGCGTTGAGTCGTAATGTGCCGCCAGCAGTCACTGGTGTTACTT
TCCTCAGCGGTGGACAATCCGAGGAGGAGGCATCGGTCAATTTGGACGCAATCAACAAGTTCCCTGGCAAGAAACCATGG
GCCTTGACCTTCAGTTACGGACGTGCTCTTCAAGCATCCGTCTCCGGGCTTGGGTGGAAGCCGACCAAAATCGCGGC
TGGACAGGCTGAACCTATCAAACGTGCCAAGGCGAATGGTGCTGCATGCCAAGGCAATACGTGCTGGCAGTATATCGA
GCAAGGCTGCAGACGCCTCTCTCTCGTCAAAGCTCATGCCTACTAAAAAACAATAAGCAATCCTCGATTATCTCTGT
GTCTGTGTGACAAACGCACTAGAGCATTGTGTGCCAACAGCGAGTCTGCTCTCGAAATACGCGGTGGAGTTAGTGGTG
CAGCAGGAGACACAGCATTGTTGTTGCCAA
>CL2907Contig1|ap-2 complex subunit alpha
AAGGATGTTTCCGTCAGACAGCAAGCTGTGCACTTGCTTTATGCCATGTGCGACAAGAGCAACGCCGAAGAAATCGTTCA
AGAAATGTTGAATTATCTCGAACTGCTGATTATTCATCCGGGAAGAAATGGTTTTGAAAGTCGTATTCTAGCCGAAA
AATACGCCACGGATTACACTTGGTACGTCGACGTTATTCTGAACCTTATCAGGATAGCTGGTGATTATGTTTCCGAGGAA
GTTTGGTACAGGGTCATTCAAATTTGTCATCAATCGTGACGACGTCCAAGGATATGCAGCGAAAACAGTCTTCGAGGCCCT
CCAAGCACCGCGGTGTCACGAAAATATGGTCAAGGTCGGTGGATACATTCTCGGCGAATTCGGTAACCTCATCGCAGGCG
ATCAGCGCTCTTACCTTCCGTGCAAGTTCCAAGTGTACATTCCAATATCACTTGTGCTCTCCATGACACGAGCATTG
TTGCTCTCAACGTACATCAAATTCGTAAATCTCTTCCGGAATACGAGGCCAGATCCAAGACGTTTTTACGACAACACA
GCAATCTTCGTAGCGCCGATGCTGAATTGCAACAGAGAGCTTCGGAATATCTTCAACTTAGTATAATCGCATCCACCGAT
GTTTTGGCTACGTTTTTGAAGAAATGCCAGCATTCCCGGAAAGAGAATCTTCCATCTTGGCTGTTCTGAAGAAAAAGAA
GCCGGTCTGTGTCGCGGAAAAATGAAATTCGAGAGAGCAAGAGCCCTGCGCCAAATACGAATCATCACACCGAAGCTCCTT
CGGCCGATCTGTACGCGCAATAACAATTCCTCGGCAGATTCTCGGCTATCGACACCACTTCTCGCAGCCTACA
AGCAACCGGAGGTTCTACTCGACGTTCTAGGTGACATTTACAACACTCCCAACAAAGTCGGTGCTACCAACGCTGTCA
AAATACCTACAATCTAAAAAATTCGTTTGCAAAAACAACGGAGTCTCTTGAACACGACCTCATACAGATCGGTGTGA
AGTCGGAATTCGACAGAATCTCGGTGCGATAGGTCTGTTTTATGGTAACAAGACACAATTGCTTTGCACGGTTTTCAA
CCTCAGTTATCCTGGTCCGAAGAGAATCAAGCTAAATTTGGCGGTTACGGTGAAACCTGTAGATCCGGTTTTAGAAGCTGG
TGCACAGATACAGCAGATGATCAATGGGGAGTGATCGACGATTACAACGACACGCCAGTATGGTAATTCGTTATATA
CAACAACGTGCCACAGAAGATCACCATGAAACTCCCATTGACGATCAACAAGTTCTTCGAGCCAACGGAATGAATGGCGA
GTC
>CL2912Contig1|trans- -enoyl- reductase-like
AATCGGGAAAAGTTTCGAAATCTCTTGGGACTGTGAGTGAATCCCACCACCACGATAGGAGAAATAAAACAACAACGTGT
TGAAAAAGAAAGCCCTTACGTAGCACGACAAAGTTTGAGAACGGACCTTAAGGGCAAATCACTCGCCGATTGAGAACT
GTCAACAACCTTAGGACTCAAGGCTGGATCCAACTATATTTCAAGGACCTCGGACCTCAGATAGGATGAAAACTGTTTT
TCTTGTGTAATACGCCGGCCCTATGCTCGTTTTATTTATGGCTCTATCAGCGCCCATGGGTTTTCTACGGCACTGTTACCA
ATTCCATGCAACCGGTTGTCCACTGGGCTGCTGTTTGTGGACGATACACTACGCTAAACGTCTCTGGAACCTCTGTTT
GTTTCATCGCTTCAGTCATGCCACTATGCCCTTGAGAAATTTGTTTTAAAAATTTGTTGTAATCTGCTGTTTGCATGTA
CGTCGCTTATCAGTCGAACCATCCAGCCTTTACAGCGCCTTGCCAGTGCTTGTGCTACATCGGTCTCGCCATTTTCGCCG
TTTGCGAATTTGGGAAATCTGAGCATCCATTTGGCACTGAGAAATCTCCGACCGCCAGGCACAACAGGTGAGGGAAAAATTC
CTGTACCCACTGGCAATCCACTCACTTTGCTCTTCAATCTCGTTTCTGTTTCCAAATTACACTTACGAGGTGGCAGTTGG
ATCGGTTTACAAATCATGACCAAGTGTCTTCAGGCTGGTTTTCTTCATGCTCGCCGGAGCTTATCAGATGACGATGAGTGGC
ATTGGGAAACATCGAGCCTACAAGAAAGAATTCTCCAATACCCCAAAATCGCAAAGCTAATTGTGCCCTTTGTTCTTT
AAATCATTTGTACAATGAGTATTTATAATACAGTAGATGTCACCTTGCTCTTCTCAGTGGTAAAATAACGTACAACCTTT
ATTTACTTAATTTATAATGATTGATACACAAATTTATTTACAAATTCGTAAGAATATCTTTGGTAGACCGTTGGAAAA
GTTGAACTCGTGCTCTACTTAGCGAAAGAGCATTGACGAGGGAATTAA
>CL292-bisContig2|protein translation factor suil1 homolog
TTACTTCCGCCTACCAAGTTTCGCTCTCTCGCTGCGTCCAGAATTTTTTCGAGTTGAACGGTATTCTCGCGTAGTGCCT
GTGTTATCCCGGATCATCCGAACTTGACTCGTTCGAACCTTGCAATTTGCAGTTGTATATCTCCGAGGGATATATTTTG

TTTGTCTGATGTCCATCCAGAATCTTAACACATTTCGACCCCTTTGCAGATGCAATCAAGGGTTGAGATGATGACGTCCAA
GACGGTCTCGTGCAATATAAGGATCCAGCAGCGGAATGGTCGCAAGACCTTAACAACGGTGCAAGGATTATCTGCGGAATA
TGACTTGAAGAAAAATCGTACGGGCATGTAAAAAGGAGTTTGCCTGCAATGGGACTGTAATCGAGCACCCGGAGTACGGGG
AGGTGCTTTCAGTTCGAGGGGGACAGCGCGAAAAATATATGCCAGTGGTTGACTAAAATCGGGTCTGGCAAAACCTGACCA
GCTCAAGTTTCATGGCTTTTAAAAAGACAAAAAAAACCATCCATGCCGCCGCTAACCTAAAAAAATAACAACAACAAGAG
ACAAACAAACAGACAACAAG

GACCTGGCTGTCACTCATTTTCGACGACGCCGATGTGACCGAGGCTGCGAGTATTGCTCACAAACGCTCTGTTTCGATAACC
ATGGGCAAAGTTGCTGCGCTGGATCCCGCACATTTCGTGAGCTCCAAAATTTACGACGCTTTTGTCAAAGAAGCGACGAAA
TTGGCTGTTTGCAAAAAAGGTTGGCGATCCGTTCAACGCAAGCAACTGATCAAGGTCCACAAATCGATCAGGAAATGTTCAA
CAAAGTTATGGACCTTATCGATCCGGCAAAGCTGCAGCGCCACCCTGCAGACAGGTGGCGCTCGCGAGGGAACAGTCG
GATTTTTTCATCAAGCCCAACGGTATTTTTCGAAGCTGACCGACGATATGAGAATCGCGAAAGAAGAAATATTCGGCCCACTC
CAATCGATCCTCAAATTTGACAATATGGAGGAAATAATCGAAAGAGCAAACAATACATTCTATGGTCTGGCTGCAGCGGT
CGTACCAACGACATCAACAAAGCTTTGACATTTGCTCGATCCGTGGACGCAGGGAGCGTCTGGGTAACTGCTACGATG
CCATCACTCCGACAGACACCTTTGAGGAGATTCAAGAAATCGGGAATTGGCCGAGAACTGGGAGAGGATGGCTTGGCAGGT
TACATCGAGACAAAAACAATTTCCATCAAATTTACCAAAAAATCAAATTAAGACCCGTGAAATCTCCGATTTGACCAAAGAA
TTCCGACTGAAAACTCACACCGCTCTTCCCCGCTTCGTCTCGAAGAATTTAGAAATAATCTCAATCAACCGGAAATGTAT
TTTACAATAAAA

ATCCCAAAGTTTGTTGCGAGCTCGTTAGAGACGATACTAATTCTCTGTTGCCCCAGGACTGCGGTAAGATTTGTCATCC
AGAATCGTTCGGTGGAGAAATCTCTGAATCACCAGGATTTCTTGGATGGTTTTGCTCGAATATGACAAACCAAATGGCAA
ACAACATCGCTTGCGCGGGTCTCATAAAGTTTCGCGATACGTCCTGACAGCGGCTCATTGTATAAGGCGCGAGGTTGCG
CAGGACTTGGTCTTTGAACGCGGTCCGTCTCGGGAAATACGACATGACGACCGAGCGTGATTGTATGCGAGGATGGTCCG
GACAGTCAGATTTGTGCCGACCCAACAGTGACGGTCCGAGTCGAAGAGGCAATTGTTCATGAGTCGTACGGACCAAGCGC
TCGAGATCAGAAGAACGACGTGGCGTTGCTGAGATTATCACAGAACGTTCAATTCTCGGAATACATAAAACCAATATGTT
TGCCAAAGGCAACCGCGGTTCGGTCGCGAGAAATTGTGGGTTGCGGGTTGGGGAAAACTGAGACCAAGAGCGAGTCGAAC
ATCAAGTCGAAATTTGGGCATTTCTTTGGCCGATTCTTCGACATGCTCGCAGAGATACCGAACCGCTGGAATTAAATTTGGG
AACGAGTCAATTTGTGCGCGGAGGTCAAAAAGGCCAAAGATTCTGTGCGGGTGAATCCGGTGGTCTCTCATGTCCTCCG
AGAAGACAGCCGACGTTTTACAAAAAATGGACGGTCGTTGGAATCGTCTCGTTTGGGCCATCGCCTTGCGGCATGCAAAA
CTGGCCCGGCGTTTATACCAAAGTCTCCGACTATGTTCTTGGATCATGTCCAAGATTGACCATGAGATTGCACTCCA
TCGTCCAAACACCATCAAAAACCCAGACACTGCGATATCTTCGCGATGCAAACGTTTGAATTTTCCATGCATGCCAATT
TTTATTTCATACAGAAAAATATTCGATT

ATTCTGTTGGCGCGCGTGTCTCTCTCTCCGGTCTTTCTCGTTTAAACGAATCGTTTCGACGCGGATCGTTTCGATCGAATCCG
AAAACATCGAAGGGTTTTGAAGGTTGCACAAAAGTGCAAGATGAGCGAAACTCTTCAACTGAAGGGTACCCCTTCGCGGCC
ACAATGGATGGGTACCCCAAATTGCAACAAATCCGAAACATCCCGGAGATGATATTGTCTCTTCACGTGACAGGACTCTG
ATTGTATGGAAATTGACGCGTGACGAAACGAATTACGGTATTCCCCAGAAGCGACTCCATGGTCATTCCCATTATCATCAG
TGACGTTGTCTTTCTCGGACGGAACACTACGCTCTCTCAGGATCTTGGGACAAGACTCTTCGTTTGTGGGATTTGGCTG
CCGGTAGAACGACCCGAAGGTTTCGAGGACCACACCAAGGATGTCTGAGTGTGCTCTTCTCCGTGGACAACCGTCAAATC
GTTTCCGGTTCGCGGACAAAACCATCAAGCTATGGAACACTCTTGCCGAGTGCAAGTACACCATACAGGAGGAAGGACA
CAGTGACTGGGTCAGTTGCGTCCGTTTCTCGCCGAACACGCTAACCCGATCATCGTATCGGCCGGTTGGGATCGCGCTCG
TCAAGTCTGGAATTGACGAATTGCTGCTATAAAATCAACCACAATGGACACGGAGGATACCTGAACACCGTCACCGTC
TCGCCCCGATGTTCTCTGTGCGCATCCGGTGGAAGGATTGCAAGCCATGCTGTGGGACTTGAACGACGGCAAACATCT
CCACACCCTCGAGCACAATGACATTATTACCGCTCTGTGCTTCAGTCCCAACCGCTACTGGCTCTGCGCCGCGTTTCGGAC
CTTGGATCAAGATCTGGGATCTCGAAAGCAAGGAAATGGTCGACGAACCTTAAACCCGATGTTATTGTGCCACGAACAAC
AAGGCGGAACCAACCCAGTGTCTGTCTTTGGCATGGTCGACGGACGGACAACATTGTTTCGCGGTTATTCCGACAACAC
CATTCCGCTGTGGCAAGTTTCTGATCTTCTGCCACTGAGTACTCTGTAAGATGACCAAAAAAATACATAAAATAC
TTTGAAAAAATAAAAAAAAAAAAAAAAAAAAAAATGTCGGCCG

TCTGTGAGTGCAATTCAATTTTCCGGGTACAAAGTCCCCTACGATCTCGTTGGCAAAGTCGCTCCTTATCTATCCGGGTCC
TCCATACCTGCCACACCTTGCTGGTTCAATAATCGTCGGATTCTGTGCTCTGGGTCGCAACCATTATGCGTTGCGTTACGT
CCTTAAATATTGTTGATGTACAAAGGATGGATGTTTCGAGTCGAGAGCACCTGGACAAAAACCTTCCCTCGTCACGAGGG
TCTGGGTTCTGCTCGTTAAATTTATCTCCGGCTGGAAACAAACCATGCTGTACAGCTTCCAAGGTTCACTGCCTCGACTA
CCGTTGCCACCGGTTCTGAGACACGATGCAAAGATACTTGAGGAGCGTTCCGGCTCTTTTGGACAATGAAAATTATGCCCG
GATGAAAAAACTGGCGACGGAATTCGAGACGGGAATTGGCTCGAAATTGCAACGTTATTTGATCCTTAAATCTTGGTGGG
CAACCAACTACGTTTCCGATTGTTGGTGGGAAGAATACGTTTACCTGCGCGGCCGATCGCCCATCATGGTAAATTCGAATTT
TATGGGATCGACGCAATCCTGATGCATCTCTACAAAGATTCAAACGGCTCGAGCAGCGAGCATAAATCACTCCTGTCTGCA
GTACAGGCGACTTATCGAACGACAAGAACTCGAACCGCATCTGCTACAAAACCTTGTTCCCTGTGCTCATGGCAATACG
AGAGACTCTTCAACACGACGAGGATCCCCGGATTGGAAACTGACAAAATAGTACATTTCAACGACTCGAAACACATTGTT
GTTTACAACAAAGGAAGATATTACAAAGTTCTCATTTACCACAAAAACAGAATATTATTGCCTTGCGAGATCGAAATACA
AATGGCGTACATATTGAACGACAAAATCGCGGCCATCGCGGGGCGAAGAAAAGCTCGCTGCTCTACAGCAGCCGAGAGAA
AGGCATGGGCCCCAAGCGCGCAGGATTACTTTGCCAAGGTTATAAAACAAAAGCTCCCTCGACTTGATTGAAAAAGCAGCT
TTCTTCGTGCTCTCGACGATGTTCTTACGAATACGATCGGCACATCCCGCT

AAGCTGGGTAAACAAAGTTACCGGGGCCAAAAAACTGCTTCGAAATCCAAGTTTCTATCGAGGATGCGAAAGATCCGAG
 CAAAAAAGAAACCTCGGCTGCGACGTTCTTTTGGTCTGTGTCGGACGAAGGCCGTACACGAATAACCTTGGACTCGAGG
 AAATGGGTATCGAGCGTGACGAGAAGGGAAGGGTCCCGTCAACAATAGATTCCAGACTGTAGTTCCCAATATTTTCGCG
 ATTGGAGATTGCATTATGGGCCAATGTTGGCCACAAAGCCGAGGACGAGGGAATAATAACGGTGGAGGGTATAGCCGG

mmc4.txt

TGGAGCGGTCCACATTGATTACAACCTGCGTTCCGAGCGTCGTTTATACTCATCCCGAAGTCGGCTGGGTGCGCAAGACCG
AGGAGGATCTCAAGAAAGAAGGCATCGACTATAAGTCGGAAATTTCCATTTCATGGCTAATTTCCGAGCGAAAAACGAAT
CTCGAGACGGACGGTTTCGTCAAGGTTCTCGCTGATTCTGCGACCGATAAGATTTTTAGGTGTACACATGATCGGACCGG
CTGCCGCGGAGCTTATCAACGAGGCCGTAACGCGATGGAGTACGGAGCGAGCGCCGAAGACGTCGCCCCGAGTCTGTCAC
GCTCACCCACATGTTCCGAAGCCCTGAGGGAAGCTCATCTTGCTGCCTCGTTTCGGCAAACCCATTAAATTTCTAAGCCAC
ATCCAATCTCCGTTGTCGATCAACAAACAAGGAACAAAATAAATAAACACACAATCGTCTTAGCTTCGCAATCACCTAGT
CTACGATTTTGATCCAATTCAAATAGTTAGTCGCACCGGAACGAAAAACCCTGCCACGAGAAACGAGAGTTGTAAATAAA
CGTCGAACGAAGATTGAAAAATCACGATGTTGTGCGAGCGAAGCCAAATGAATAACGCGTT

>CL2962-bisContig1|guanine deaminase-like

AAAACTCAAGTTCGTCAAGAGTAACAAAGATGAGTTCCCATTTGTTCTGTTGGGTCCCTTGATTCAATTCGAAATTGCAACGG
TGAATTGTCGATCGTTCAACGTGCAGGCATTTTGGTCCAGGATGGAAAGATAATAAGCGTGACGGAGAATCCAAAACCGA
ACGAGGTGACGGCGGATTACGTGACGCTTTTGGGCGCTGGTCAATTCTTGTTTCTGGTTTCATCGACTGTCACATCCAT
GCGCCCCAAATGCCAAATCTTGGCACAGGCTACGACAAGGCTCTCTCGAATGGCTAGAGACGTACACGTTCCCATTTGGA
AAGGAGTACTCTGATGAGCAATTTGCCGAAGCTTATCGATGCTGTTGTCAAACGTACGCTGACGCTTGGAACTCAA
CGCCCTGCTATTTTGCCTCGTTGTACGCCAAAGCGTCTCTGATTTTGGGCAAAAAGCAGCGCTTATGGGCAACGCGCT
TTCATCGGCAAATTGAATATGAACCATCCGCGCGATGACGGATATTACGAGAGCATGGAGGATTGCTCGCGAGCACAAA
GCATTTTCATCAAAGAAATCAACAGTATTGGAAGCTCTTTGGTCAAGCCCGTTATTACACCGAGATTGCTCTCAGCTGCG
ACCTGCCGTTGCTGAAAGAATTAGGAAAATTAGACCCAAGAGTTGGATATTCATGTACAGACTCACGTGTCGGAG

>CL296Contig1|adenosylhomocysteine-like isoform 1

ATCGTTTTTTTCAAGTGCAGTGTTCGTCGCGCAAGCCTCATCACGCTTGCTGCTATAATCGAGTAATCTTGTTCG
AAGTGTCAATTTGAATCACCTCGTCACAAAAAACTCTATCAAAATGCCTGGCAAACCTGAATACAAAGTTGCGGATCTGAG
TTTGGCGGAATGGGGCCGAAAAGAAATAACAATGGCGGAGAATGAGATGCCAGGACTTATGGCGATTGTAACAAAAATACG
GTCCTAAAAAAGTTCTGAAAGGTGCACGAATTGCTGGTTGTTGTCATATGACTGTCCAGACGGCCGTGCTCATCGAAACA
CTCACTGAACTCGGAGCCGAGGTCCAATGGTCACTCTGCAACATATTCAGTACTCAGGACCACGCGGCTGCAGCAATTGC
GAAAACGGGGTCCGTTACGCATGGAAGGGCGAAACCGACGAGGAATATCTTTGGTGCATTGAGCAGACTCTTGTCTTCA
AAAACAACAAACCCCTGAATTTGATTTTAGACGATGGTGGTGATCTTACCAATCTCGTTCACTAAATTTCCAGAATAT
CTCAAAGAATGCCGAGGTATTTCCGAGGAAACGACTACCGGCGTTTCAAAATTTATATCGTATGATTAAGGCGGAACACT
CAAGGTTCTGCGATAAATGTTAACGATTCCGTAACAAAGAGCAAATTCGACAACCTCTACGGCTGCCGTGAATCACTGA
TCGATGGTATAAAGCGCGCGACGGACATAATGATCGCAGGGAAAGTTTGCCTGGTCCGCGTTACGGGGATGTAGGCAAA
GGTTGTGCTCAGAGTCTTCGGGCATTGGGTGGTGCCTTATCGTAACAGAGATCGATCCGATAAATGCTCTACAAGCGGC
CATGGAAGGTTACGAGGTACGACCATGGACGAAGCTTCTCAAAAGTCAAATTTATGTACGACCACTGGCTGCAAGG
ATATCATCACCGGCACTCATTTTCAGTGTATGCCAAACGATGCAATCGTCTGCAACATCGGCCATTTTCGATTGCGAAATT
CAAGTCTCTTGGTTGGAAAAAAACGCCGTTGAAAAAATCAACATCAAACCCCAAGTGGATCGCTTCAAATTTGAAAAACGG
AAGGCACGTGTTTTGCTAGCAGAAGGCAGATTAGTAAATCTAGGATGCGCAACTGGACACTCGAGTTTCGTAATGAGCA
ATTCTTTTCAAAACCGAGTTCTCGCTCAAATTTGAGTTATGGACTAAGGCAGATTCTTACTCGCTCGGAGTTTCATATGCTC
CCGAAAAAGCTGGACGAGGAAGTCGCCGCTTGCATTTGGATCACTTGGGCGTGAAATTAACGAAACTCACCGCCGATCA
ATCAAAGTATCTTGATATACCAGCCGAGGAGCCCTTCAAGCCTGATCACTACCGATATTAGTTCCAATTTCCAAAATCC
AGAACGACGTGAAATCATGTGTGACCAACGTTGTATGTAAGTTTTTATTTTTTAAACATTTCGAGATAATGCATTGATG
CATAATAACAATCAAACGAGTTTTTTGTTTTCAAAT

>CL297Contig1|bifunctional glutamate proline--trna ligase-like

ATGACCAACACGTTTTATCAAAACGAAGATTGACTTGGTTTCGTCGAGGAAGGATTGGTCAATGGTTGGGACGATCCGCG
TTTTCCAACCGTCAGAGGAATACTCCGCCGTGGAATGACCGTCGACGGGCTCAAACAGTTTATCATTGCTCAAGGTAGTT
CGCGATCGTCTGTTTTATGGAGTGGGACAAAATTTGGGCTTTTAAACAAGAAGGTCATCGATCTTATGGCGATAAGATAT
ACGGCATTTGAACGAGGCGGAAACTGTTCTGTTACGGTAGAGAACGCAAGGAAGATTTTTCTGACCGTACAAAATCATCC
AAAAGACCCGTCGAAGGTACGAAGCAAGTTAAAGTGGGACCTTGATTTCTAATCGAAAGATGCGACGCGGAAACCCCTCG
TAGAGGGTCAAATGCTACTTTTTATAAACTGGGGAATTTGCTCATAAAAAAAATCAAGAAAAATAATGGGATTATCACG
GGAGTTACGGCGAGCTTGAACCTCGAGAACAAAGATTATAAAAAATACGGTTAAACTTACCTGGCTCGCGGATAACAATTC
GTCCAATCAGGATATGGTCCCTTGCTATGCGGTCCATTTGAGCATATTTACGACAAACCTGTACTCGGCAAGGACGACG
ATTTCAAAGATTTTTGCGAAAGAGTGCAGGAACAAGGTGAAAAAGTGAGAAAGTTGAAAGCTGAGAAAGCGGAAGAA
GGCGAAATCATCCAACACAGAGAAAAAGGATTTTATCGTTGCGATGTTCCATACGCCCCCATCAGCCCTTGTTGCTCGCG
TGAACAACCGATCATCCTCTTCCACGTACCTGACGGGCACTCCACCGCTCAAGCAACCCCTGCTGCACCCACGAACGCTG
CAACCGGAACGATAAATAATACGAAAGACAGCGGCGGAAAGGATTTATCGTCTGTCACGAGAAAAATAACGGCCAGGGT
AACAAAGTGCGCGACGTCAAAGCCGCGAAAGCGGAAAAATCCATCATCGACGAGAAAGTGAAGAACTTTGCTAGCTTTGAA
GGCCGAGTACAAAGCAGCCGCGGAAAGGATTGGAACCGGAAGCAGCAGTGAAGAACTCCAGCGAGCGATTCTGGCAAAA
GTACGGACACGACGCTTTGAAAAAGAGTGCAGGAACAAGGTGAAAAAGTGAGAAAGTTGAAAGCTGAGAAAGCGGAAGAA
AAAGGTAATCGATCAAGAAGTCAAAGAATTTTTGAATTTGAAAGCCGAGTACAAAAAGATAACGGGAAAGATTGGTCAC
CAGCGGAAGTGATTCAAAGCTCAAATCATGCGAGACAGATGGAGCAGCGTTGTCGATAAAAGTAGCTAATCAAGGTGAC
AAAGTTTCGACAACTTAAGGCGGAAAAAGCGGACAAAAAGACGATTGATGCCGAGGTGAAGAATCTTTTGGCCCTTAAAC
CGAATACAAAGAACGCAACTGGCAAAGATTGGAACCGGAAGCTGCGACAGCAGTTTCGACAATCGTCGTACAAGCTTCAC
AGGCTTCGAACGAACAATTTGCAATAAAATTAACAGCAGGTTGATAAAGTGCCTGAGCTGAAAGTGCCTGCAAGCAGAG
AAAAAGCTCGTGGAGCAGGAAGTCAAAGTTCTATTAGCTTTGAAGGCCGAATACAAGAAGTCGTTTGGTGGAGATTGGAA
ACCCAAGAACCACGTTGACCTCCAAAAATGAGTACAGAATCGGCAGATTCCATCTCTAGCTAAAATAGCCGAACAAGGA

>CL3001-bisContig1|deoxyribonuclease tatd

ACGGGCTACCTGTGCAAGGATAAATCCGACAGCGGGTCAGACAAATATTGGAAGGTGGCCAAGCACCTTTGGATCGAAT
ATTGGTAGAGACGGACGCACCTTTATGTATCCGAATACGAGAGCTTCAAATTAACGCCGACGTCGCAAGATCTGTTGA
CCGAGAGATCCATGACATTTCTCATCGTTATTGACCTTTTCAAGCGAACGAGCCTTGCCTGCTGCCGCGGTAGTCGAA
ATGGTGCCTGCTTTTATGCATAAAAAACCCGAGGAAGTAGCTCTGCCACTGCTTTCAATGCTCTCAAAGCTTTTGGTCT
CAATCAATGATGAGTAACCATTTCTTTTGTCTTTTTTCTGTTTCGACAATCATCCCATTCGTTGTCTTTTATAAACGGTG

mmc4.txt

CTCTTGTTGGTGCTATGTTTTCTCGAGGCAGCTCTTTTTCTTCTTTTTTACACCATTTTTCTCATATATTTAAAAACAT
TGTTGCTTACATTTATTTTCAACCAGCCATTTCTATTGCCCGCTGCATCAGCCAAGAAGAAATATATATATTTTTTTTTAA
TCGCGAACCTCTCGATTATCCGAGAAATGGGTTTCATCCGTGCATGACATGCTTTATCGCGCTATTGAAAACTTTTTAAAGA
ATAGACCAGGAATTGTGTCGAGTCAATTGATACGAAACAACGCGTCCAACGTTTCAAATCATTTTTCTCATTCCCTTCGA
AGCAAACCTCTCGCTACTTGGATATTCGAAAATTGCTCATATCAATGCCTTTTATTTATAAATTGTGTGAAAAAGCGACAA
ATTTTGTAAATTTGAGCCATGCGTGGATGAGAATCGAGCAATAATTAGATAGACTAGCAATATCGTGTACTACGTTCCGGCT
CACTGGAAAACTTTGAAAAATTGAGCTAAAAAAAATGTATATACACACGGAATACGTTTTTTTAGATTTTTGCGTTTTTGA
TAAATGCCCAATTTTGGTATTGAGCGATAAACGAGCGGCTCGTTAAACCGAATCTATACGTGTGGCGCGTCTCATGTAAA
TCACAATTTGGAGCAATTATACAATGACTATATTTATTGTTGACATATGTACCTATTTTCATATAATAAACTAT
>CL3014Contig1|10 kda heat shock mitochondrial-like
AGTTAGGTTAAAATTTTCTTGAGGCACAACGTGCACGCGACATCGCCGGTTCAAAGCACCTGGTGCACCTACCAAACGTA
CAAAAAGCAATTAACAAAAACAAATGTCTGCTGCTGCATTAGCCAAAAGAGTTATCCCCTCTTGGACAGGGTTTTGGTT
CAGAGAGCTGAGGCAATTACCAAAAACCAAGGGAGGTATCGTTTTGCCTGAAAAGGCACAAGCCAAAGTTCACAGAGGAA
CGTTTGTGCTATCGGACTGGATCCAGGAATGAGCAAGGAGCACGTTCCGTTGAGTGTGAAGTCCGGGATCTGGTA
CTTTTGCAGAAATATGGCGGCACGAAAGTCAACTAGAAAGACAAAACAGAATTCATCTATTCCGTGAATCTGACATCCT
TGCCAAAATCGAATCCTAAGGAAGTTGCATTATCGGCTTCAATATAGAGATATGCACGGATCACAGAGGCGCCATGAACG
AACGCGATAAATCTTCTGATTGTGGGATATGACGGGATTTGCTAAAAACTTCGTGAATCAGGAGACAGCGGGAATGTTT
GACGGAAAAAATCTAAGAAAAAGCATTAAAAAGAAAAAACAAAATGGAACGTTTTGTCCGTTTACACATCGAGTTAC
GTTACTTTTTTTTTCTAAGTTCTGTTAGCACATAGGTCTCATTGTTTTCATACATGTTTCCATAATAAAATGATTATTCTA
TTATTTCGATCCACTTGGTGTCTCTCACGTTAATTTTAACTACTACGATGTCTCAGAGC
>CL3019-bisContig1|cdgsh iron sulfur domain-containing protein 2-like protein
GTAGTATCAGAAAAGATGGAGCCGATATCACATCTCGTCAAAGTTTCTATTCCGAATTATTTGTCGGGTTTGCCGATTCC
GGATACGATAGGCGGGTGGTTTAGACTCGGGGTTGAGATTGGTTTTCTTGATCCCTCCGAGCGCTCTCCTCGCAGGTG
TCGGATACATGTCCTATTTATCTTTTTGCCACATGGACGACCGCCACCGAAAAAAGCATCAACCCGAAGATAAAGAAG
GACTCTGCCAAAGTCGTTGACACCATCGACGTCGAGGACATAACGGACAAGGCTGTGTTTTGTGATGCTGGAGAAGCGA
CAACTGGCCTTATTGCGACGGAAGTCACGGAGACCAACAAGACACGCTGCGACAACGTGGGTCCCTTGGTCTGCCA
AAAAGGCGAAATAATTGAAAAAACACCGGGCGCCCTTGATCAACAGCAGTTTCCAGCGAAGCAAACGTGCGGGCTTTGA
AGACTTTCGCAAGATGATAACAAACGGAAATGATTGAGGTCAAAGAGACAGAGCGTGTAAATGCACTTGGCGAAAAAAA
ACGCGAAAAATTTAGTCTCGAGATAACATTTTCTGTTGGTTCATTCAAAGGAGAAACAAAAAACAAGTTTTAGCT
TGCACGAGATCGTAATCAAAGATGCTCTGGTGTGTAATAACTGATTACGCGAGACAGAACTTGTGTTTGTGTCGCTT
CGTTATATACTTTATAGGTAGCAGGTCAAATAAATAAATAATTACAATTTATAAAATAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACTTTGGCCCCC
CCTCCCCCCCCAAAAAATTTTTAA
>CL302Contig1|PREDICTED: hypothetical protein LOC100748595 [Bombus impatiens]
ATTGTTTGGCGTTTGTCTCTGTCATGTTCTGTTGGTGAAGCTCTAGGCGCGAGCATTAACTCTTCGATTAGTCG
AATATTAATTAGCGGAAAGCGTTTATCTACCGGTTAACGAAACGTTATTTGTTGCGTCGATAGTTTGTGTGTTCTGTTCC
GCGAGTGCCTGTGGCATAATCAGCAAAAATTTGCGCAAAGGGATCATGAAGAAGACGAAGGACGTATCGGACGAGGACG
AGTACTCGGCCGACGATCCGAGGAGGTGGAAGGAGCATCGGAGGAAGACTGGAACGCCGAAGCCGGGGCTGAGGGAGGA
GCCAAGAAAAGGCCACAGAGAGGATCTGCAAAGAAGCGACAGCATTCTGAAGAAGAGGAGGAGGAGGAAGAAGAAGAGGA
CGAAGAAGACGAGGAGGAAGAAGAGGAAGACGATTCTGATTTTACACCGGAAAGAAACCCAAGAAGAAGAGACGTTCCA
AAAAGGATGAGGAAGAGGACGAGGATTCCGACGACAACAGCTTCAACGAATCGTCCGGAATACCGCCAAAAGATTACACG
TCAGGAGCATTCTGCTGTTGCAAAAGCTGATGTTGGAGGCAGTACCGATCCGACCTTATGGAGGATAGACGGCAAGCGCT
GTTACAAAAAATCTTGCCTTCAAGGAAGAAGAAAAACATTTGACAAAAGCACATCCAGTATTCTGGATGGTCAATCA
ATAACAAAGACAAATACTTTAGCAGCTCAGGTAACGTTCAAGGTGCAGAATAGAATGGAGACCATAGTCGAACCTCACCTT
GACGAGCAGCAGCAGCAACAAGAAGTCGTAAAGGTAGAAAAAGAGGACTAAGTACCGTAGCAGAAGTGAAGTGTGTCATC
AGTTTGTATAAGTTTTAAGATACAATTAAGGAACACGGTTAAATAAGTGTGAGAAACGCAAAAAACATACGACGAGGCAA
AAAGAAAAGAAAATTTCTTTGCTTTTCGCGCCACTCATATTCAGAGAATAATTTGTTTGTAGCGTGTACCCCTCGAGATTC
GTCATTGATGGAGAACAATGAAAAATTATAGAAATCACATTTGTTGCGTGTGTTATGATTGCCTCAATATGTAAGTTGTTA
AATCGAAGATCATTCGAGAGAGGAAAAAGAGATAAGGAAAGAAAAACGGTTCCCTACTCTGACAAACCAACAATATT
TCCCCCACTGCTCCCTCTCGCCGTGTCAATTCGTCCCCATGGCTCACGATAAACACAAAATTAACAAAAAGAAACTTG
AAGCATTTACCACAAAAATGATTACGTTTAAAGTCACTGACTTCTTGCCTCGGCCCTTTGACGTTACGTATTTACGAGGA
CGAAAAAGAAACAAATATTTGACAAATGCGAATGATTGTGTTGTAGTAATTTTTTTTTTAACTATTTTCGCGGTGTGAATG
CTCCACTTGATTAACCGAAT
>CL3036Contig1|transmembrane protein 53-like
GGCCTGTCAAAGGAACAAGAGTGATAGCCCAAGATTTGTTGAGTTTCTTGATCAGAACAAGAACTACGACCAAAATAATG
CTGCACGGTTTCTCAGTCGGTGGTTACATGTGGGGCGAAGTTTTTGAATTTGGTACAGCAAGATCGTAAAAAGTACGATC
ACGTGATCGAGAGAATAGTTGGCCAAGTTTGGGACAGCGCAGCTGACATCAGCGAATTGACGATCGGAACACCACGCGCC
GTTTTCCCTAAAAACGAAGTCATGCAGAAGCTCCTGGCTAAATATTTGGACTATCATATGAAGACTTTTTACAATTTCTGC
GACTCAGTATTACATCCGTTTCGAGCCAGCAGTTCCACACGAATCTGGTCCGGACGCCAGCGTTGTTTTGCTCAGTAATA
CAGACCCGGTTGGTGGGTTCCAGCAACATGAGAGTCCGTGATTCTGGGGCTCCCTCGGTACAGAGACGTTCTGTGAAA
ATATTCAACGAGTCTCCGACGCTGGGCCACTTCCACAAGTACCCGAAAGAGTACGTGCACGAACGTACACATTTCTCGA
TAAGCTCAACATGATAAGTAACGAAGAAAAGATTGAGCGCGCTCTTTGATGCGAAAACGAGGCCCGGAGAGATCAACGA
CTTCCAAGCCACGATCCGAAAGTTTTTCCGTCTTTTTCAACTCCATCAATTTCTTCCGAGAAACGAACGACTTCCGGACA
CTAGTCCGGACGGTCAGGACTAAGTATCGATCGATCGCAAAGATCGTCGCGATCGAGCAGTATCCCAAAGCCGCGACTTC
TTCATTATTATTACTCAACGGAGCATTTCGATTGCGCTTTTTTCCAAAAACGAGCCCAAAGGAGAAGGTTTTTTCGTC
AAATTTTTACCGGAGATATGAATTTTTCAAAAAATGGGGTCCCTCAGACCCCGGGCTATCGGTTTATCGCATTTTCACT
ATTTTTTTCGCTCGAAACAAAACCGTCCCATGCTCACGTGATTCTGCATGAAAAAACGAAAGAATGAGCCCAAGGAGAA
GGTTTTTCGCAAATCTTACCGGAGAT

>CL3056Contig1|PREDICTED: hypothetical protein LOC100119642 [Nasonia vitripennis]

CTGCAGTATCGTTTCGCGTTCAAAGATCAGGACAAAGACAAATTTGGCAAGCTCGCAAAAAAGCTCGTCGAGACATACTT
TTCCGAGAACTGTGGGATTGGTACCGGAACTTTTCATGCCCTTTCCATACGCGTTGCCAGAGACGCAATGGAAAAAGAAT
ATCCTGGTCATCCGGCAGAAATAAAGTTGAAAACCTGATTACGAGCCAGCCAAGAACTGTGGGACAAGAGCGTCAGCTTC
TGCAATCGATGGCAGCACCCACCTCCGTCATTAACCAGGGCGATTCTTGGGCACCGAATTTTCTCATGCGGAGCAACAA
AGATGGCAGCGAGAAACAAGCACTCTTGCTCGATTTCCAGTTGGCCAGGGTTGCTAGTCCAGTCTCGATTTATCTTTCC
TCATCTACGCTGCAGTGGCAAGGATTCTTTGGACAATCACTTTGACGAAATGTTGAAAATTTATCATTCCACTCTCTCG
GAGGGAATCAAGGCTCTTGGCTCTGACCCTGAGAAAAATTTATCCTTGGTTCTTGTTCGAGGAGGAGGTGAAGGAGCAATG
GGTTCACGGGGATGAATTTCCGACTGGAAGCAATACCGTTTAGTATGCTCGACGAACTGAAGCTTTTCGATCTGGACGTG
ATAAAGGGGGATGAAGCTGTTGATATTGCCGATATATTCAAAGTTGAGAATCAAAACAGCCGAGGGTAGACATCGTCT
GGCTGATGTAATCGTGACAGTTATTCACGAGGATTATGTAACGACAACGAGATGGAAAAACACAAAAAGAGGACCAAA
CCAGATTCGATTTTTTCTACCTCGCCTC

>CL3063Contig1|probable alpha-ketoglutarate-dependent hypophosphite dioxygenase
CTCCTGAAAACGGTGTCTCTTATTTGATGCATCAGGATTATCATTACTTTCTCATGAGAAGCACAGATGCTCGCAATA
TTCTTGATCTCGACGACACAACACCGGAAAACGGTGGCCTGGCGGTATACCCCGGAAGCCACAACTCGGTCTCTCGA
AGACCATGGACTGACGGATGAAAAAAGGCGAAAGTTATCACTACGTCGATCCTCAAAAAATATCCGCTTTCGGGGCATC
GCCAGTCACAGCGAAGAAGGGCGATGTCGTTATGTTCTCGTACTTGTACTTCATGGCTCGTACTTGAATCTATCCACTA
AATCTCGGAGGATGTTCTGACTCAAGTTAAAGCAGCGGACGACCCCAATCGAGGATGTGCATAAATCGCCTTGCCAA
AATTTGGTACTCCGAGGACGAAACGTTAATCGTCCGCTTCCATGAACGCACGATTGATCATTAAATTAATTAATCTT
TTTGAGAGACAATAAAAAATGGATTTTGGCTTCTAGTTTCTCTCGTGATTTGTACGAAAATTGAGGAGCAATTATTTACA
TCGATAATAAAAAATAAATACGGCGATGACTTCAACGCGTTACATTTGTTTATTTGTTAATTCTCATTGCATCGCAACC
TTTTTGGTCGAGCGGAATTTCTAACCAATTTTTCTATTTTTTACACGTGTTTTCATAGGAAATATTTTTTATAAGATTT
TTGGACGATATGGAGGTCGATTCGAGGGTAAAACCTGAGGATCATTGAATTTGTGACATTTTTTCAAAAAATTTCTTCG
ATAACAAATTAATCGATTAAATAAACATTGAAATGTCAAGATCAAGAGGCTGACAGTGTGATAATGGGAGCGGACTGTC
ACTGGATATCATCACTTCTAATTGTGAGCAAAAGACCA

>CL3079Contig1|spectrin alpha chain-like
ATGAAGAAGGGCGACACTTTGACGCTCTTGAACCTCTAAACAACAAGGACTGGTGGAAAGGTCGAGGTCAACGATCGCCAAG
GCTTCGTGCCAGCTGCTTATGTAAAGCGGGTCGAACCCGAGGCCGGATTGAGCGCTTCGCAACAGAAGCTTGGCCCGAGAA
CAAAGCTCCATCGCTGCGAGGCAAGCACAGATCCAAGCCCAATACGACGATCTTATTCATTTTGGCAGCGAGCGTCAGA
ACAACTCAACGAGACCGCAAGGCTTACGTCTCGTACGCGAAGCAGCCGAATTGGCCACCTGGATCAAGGACAAGAA
AATCACGCGCAGGTTCAAGACGTCGGTGAAGATCTCGAACAGGTGGAGGTAATGCAAAAGAAATTCGACGATTTCCAGGC
TGATCTCAAAGCCAACGAGGTCCGTCTTGCTGAGATGAATGAAATCGCTGTACAGCTGATGAGCCTCGGACAAACCGAAG
CTGCTCTTAAGATACAAACGCAAATACAAGATTTGAACGAAAAGTGGAGCAGCTTGCAAACTCTCACCGCTGAGAGAGCC
AGCCAATTTGGGATCTGCCACGAAGTTCAACGTTTCCATCGTGACGTCGACGAGACGAAAGATTGGATCCGTGAGAAAGA
TGCCGCCCTCAACAACGATGACCTTGGCAAAGATTTGCGCAGCGTACAAGCTTTGCAAAGAAACACGAAGGTCTCGAGCG
CGATCTCGTGTCTCGGCGACAAAATCAAACAACCTGACGAAACCGCTAATCGCCTCATGCAATCACATCCGACACCGC
TGAACAGACTTACGCCATACGT

>CL308Contig1|gtp-binding protein sar1b-like
ATTTTGGAGCATCGAACATAACGAGAGAGCGCCAATTCGTTTCGCGATCTACGATTTTCGGGCAATAGAAAGAAAATAG
GAAAGAATATTCTTGCCCGTGTATTTGCCTGTCTGATGTTTATTTTAGCGTTTATTGCCTCCGTGTCTTTTGTTCGATA
ATTTCTGTTCTTTCCGCGTTTCCCTCGAAACACCCGTCGCTGCGCTCAGTGCATGGCCATTGATTGATTTTACAATCG
CGCCCCACTCCGTCCCTTCGGTACAACCTCAGGTATCAACTTATTTCTTTCCGCGTGGATAATAACAATAAAAAAACAG
ACACAAAAAATTTGTAATAAATAACTCCGTATCCGCACTTGGCCATCTTCTCAGACAACATTTTTTTCAGAGTC
ATCCGAGTATTGAGATAATTACGCGCTCGTTTACACGACACATCTTCAGAAGTGAAACATGTTCTTACTCGAATGGTTC
TCCGGGGTCTCGGCTACCTGGGCTTGTGGAAAAAGGTGGAAAGCTATTGTTCTCGGCCTCGACAATGCTGGAAAAAC
CACACTTCTCCATATGTTGAAGGACGATCGATTGGCTCAACACGTCCCCACATTGCATCCAACATCGGAAGAAGTGTCTA
TCGGCAATGTTAGATTACGACATTTGATCTTGGTGGTCATACACAAGCAGCAAGAGTTTGAAGGACTATTTTCCAGCT
TTCGATGCTATAGTATTTTGGTTGACGCTAGCAGACAGAAGCCGATTAGGAGAATCGAAAGCCGATTGGACGCTTGT
CGCCGACGAGCAGTTATGTTCTTGTCCGTAATCTGTTAGGCAATAAAATGATAAGCCTGGTGCAGCGTCCGAGGATG
AACTTAGACATTGCTTCAATCTTTATGGACACACGACTGGAAAGGGAAAAATGCCCCTGCAGACTTGACCAAGTCGTC
CTCGAATTGTTTCATGTGCTCAGTGTGTAAGAGACAAGGTTACGGGGAAGGATTCCGCTGGCTCGCCAGTACATTGACTG
AACCCACGTAATTATTATAAAACAACAAAAAGTTCAACAACAACAACAACAACAACAACAACAACAACAACAACAACA
AACGAACACACATACATCGATTTCTACGATCGACGATTTCCCTCTTTATCTTTTTCATCCGTTTCTCTTCTGTCGCG
AGGACTTTGATATCGAATGGTTCGAGAGTCGCTGTTTCGCAACGACAAAAAGAGGTACCTCGGATCTGATGACCGTTAGGAA
TGATTGTTCTGATATTAACATCCGATTTGAATTCGATTTATCGACAACAGCGATTTGAAACAAAGAGAAAGAAAAATATTG
GCTTGCCGACATCTCTGTTGATAATTTTCATGTGCAACATTGCTTCAAGACACAGCGACGACAAATACAGAGAGGGGATTA
AACAAATTTGATAAATAAATATCAACGAAATAAAAAATCAATTCATTAAAAAAGACGACCAAGTTTTAATCG

>CL311Contig1|peptidyl-prolyl cis-trans rhodopsin-specific isozyme-like
ATTCCCCAAGTTTCTCAACGTTGTTACACCATGAAGCTCATTTTCGGAATACTCGTCTGCTGGCGACCGGACATCC
TGCCAGGCAACTTCTTTCAAAGTAACCGATCAAGTCTACCTCGACATGATCGACGACTACCCAGCGGGCAGAATAGT
CATTGGATTGTTTCGGCGAAACCGCGCCGAAACTGTCAAGAATTTTTTGGATCGCCACCGAGGGTATCGCCGGACGAA
CTTACTCGGGCTCCAATTTTCATAGAGTTATTAATAAATTCATGATTCAAGGCGGCGATATCGACAAGGGCGACGGATCG
GGATCGCTCAGCATTATGGAATAACTTCGACGATGAGGGTTTCGATCTCAAACACGTACGGCCGGGCTTCTGTCAGCAT
GGCCAATGCCGGAGCCAACACGAACGGCTGTCAATTTTTTCATCAGCAGTTCGCGACCCCTTGCTCGATGGGCATCACA
CAGTTTTTGGAAAAGTATCGAAGGCATGGATGTAGTTTTTAAGATCGAGCAGACGAAACGAGCAGACGACGACGACGCG
GTTTTCCCAAGTCGTCTCATCTCGAGAGCGGATCGTGCCCTTAAGGAGCCCTATTTTCATCTCCGACGACTCTTACGAGTA
ATGAATGAAAAAAGAAAAGAAAAGCCAATCCTCGCACTTGATGTTCTCCGCGCGATTATTTTATTTTTCTTCAAACTTT

GACCAAAAGTGCCCTTAATACCGACCACTCCTCAACAACAAGCCAGCACAACCATGATCCTCCAAAAATTTCAGATGAAAATA
CGCGATTTTTTGGTAGCGAAGAAATTTCAAGCGTTCGTTGAAAAATCAATGCCAAGGACGGTGTTGGTCATTCAATCAACT
CGATTATCGCGGCTTTGCAGCGGATTGGGCGACCTACATACAAAAGCGTTCTATCCTCAGTCCCTCCTTCATTCTCA
TTTTATTACGAATTTGAAAGAGAGCCCGAGGAGGAGAAACAAGGGGGGGGGGGCGCTTTGTTGGGCTTCCACAGGCCGGTT
TAGTCAACGATTTTCGTCTAATTTACGTCCCTCCAGATACCCATTCCAATGTGTCTGCCAAATT

ACTCGAAGCTCTCAAATCTAGCGCCTCATCGAAGTCTCCGAAGATGGTAAAAAAATCAGACGCTCTCCCAACCATCCGT
GCCCCGTCTTTGACGAAGCTTACAGAAAGGCTCAAGCTGAGAGAACCGTCTACATCAAAGGATTTCCCCTCACCGACATAT
ACATTTCAGAACTCAAGGAATTTCTTCAAACCTTACGAACCTTATGAAATATTATTATGAGGAAATACCTGGACAAGAA
AAGAATCTGAAATTCAAAGGCTCGATCTTTGTACAGTTCAAACACATTTGAAGGAGCAAAAGCCTTCATGGCAAGAGAATC
CGTTAAATACGGTGATACTGAACTGATAAGAAAAATTCAGCGAAGACTATTCGCTGGAGAAGGAAAAAGAAAAGGAAGAGA
GGAAACAGAAAGAGGGCGAGAAAAAGGAAAGGAGACTGACGAGAACGAGCATGAATCGGAGGGAGCTGCGGAAGAAGCAA
ACGGCAAAATTCGAACTTCCGAAAGGATCGCTGGTCCATTTACAGGCCAGCTCTGCAACGACAACGAGGGAGATAATAAAA
AAAAAGTCTAATTGGAACTTAGGTGGCGAAGTGCCTTACATTGATTACGAAATGGGAAAAATCCGAAGGTTGGATTCTGCTG
CAGGATGCAAACTCGGAAAGGCTCTCGTTGATAAAATGACCCAGCAGATAAAGTGAAGGTGGGAGCGGATGAGTTTGACCT
TCAGAGCTCTGGAGGGCGAAGAGGAGACTAAATACCTTGCCATCGTCGAACAGACCATAAAAAATTTGCGCAACAGGAAC
AAGAATTCAAAGCGAAGCCGAGGCAGACGTGGCCGCACCGCCCAGAGAGGTGAAAAGAGGCACGGAAGTCCAGCTCGCG
GAGGATCCGCGGCGAAGAAAAGCGCCAACGAATAATTCCATCGACCAAAACCTTCAAGTATATACGAAAAATATATATAT
AAAAGCTAATCGTCAAGCCAAACTATATTTTTAATTGACGTTACTAAACCTTTGAGAGACCAAAACCAGTGACGATCGCC
GACGAAGCTCGCCGGCAT

TTTTTTGCCCGAGGCGAGGGCATGTGTTCCCGGCATTTTCGTGCAAACACAACGAAATAGCCGCGTTGTTTAGTCGCG
TTTTGTTGAGAAACTCACAGAAAAGTCAAAAGCCTCGACAATGTCGTACAAAGGACCGCAAAAAGTTCAAAAGTTATGG
TTCAACCCATAAACCTGATTTTTCCGATACTTGCAAAATCGCTCGAGAGTCCAAGTTTGGCTTTTCGAGAACATTAACTA
CGAATCGAGGGACATTGTGCGATTTCGACGATACATGAACCTCGTTCTCGACGATGCTGAGGAGTATCACACCAAAC
GAAAAACCGTAACACAACTGGGACGCATCATGCTCAAGGGCGACAACATAAACCTCATTCAAAACACCAATCCAACCGCA
AATTGAGATCGACTGTGGATTCTAACCTCGAATTTTGGGAACTGGTCCCAAACGTGGAACGTCATTTCTCGAGTTTCTA
CATCAAGTTTTTCGACCTAACCTCAACAATCACTTCCAACGTGAATCCTAGATCAATCTAAACATTGAAACCTTCCAC
CAAAGTTTTTCACACTCGCTCGAAAAACACTGAAAAAATCTGGATAAACGAAACAAAGGCCAGTGTGAACTTTACATCGCT
CCCATCGCGATATTAATAAACTATCGCATTTAAAAAATACGAAAAATCTAATTACAATAAAAACGTGAAACCTTTCATG
TTCTCCGTGTCGATAGTACTTCGGACATATACTCGCGATGAGTATTTTTGTATCGTTCCATGGATTTATGTCTGCGC
TGAATTTTCTCAAGGAGTAAATTAATTTTTTGAAGCGAAAAAATAAAAAAAAAAAAAAAAAAATATGTCGGCGG

TTTCGATCAACTTCATGGTATTCCTCTTCGTGTTTTCTTCCAACCTGTGCTGACGAGTATACAAGCGATTGGATTTCCCG
GCGCTGGCACCTGTGGCATCATCACAGCCATCAAAAATGTTGCTACTACGGCGGCGGAGGTACAATCGTCGGCGTTTTCAT
CCTGATAATTGCTTTCTGTTACTGCGCCGAGCCGCCGGTGATCTTCTGCTTCTGACAAAAATCCATCGCATGTATCGAA
CTTCAAGCGCAAGTGATCGAAAGCTCAGCAGGAGTTCGCAACGACGTTTTACGAAACGAGCAGCTGCAAAACGACGCG
GTAACCTGGCAGCGAGCGAGTGCAGAAATCAAATGGCAAATGCGAATCAACCGCTATTGAAGTCGAAAGTCTAGA
CACAACGTAAGCAGTGGACAGGAATGAAGAAGAAAAACAACGAATATAATTTAAACTAATAGGAACGAAAACGAGGA
AGAATGAAAAAAAAAAAACTGCACGAAGATTGGACGAAAATTACAAATGTAATTAACACATCAGGATTGATGAATTA
TAAATACGAGGAAGCGCTAATTATTCAGGTCTGACAAGTCTGAGTTTGTGAGAACAAAACGAAAATTACGATCCTGAAAA
ATACGCATGTCTTTTCATNTTCCGACCTCATTTTCTTCGTGCTANACGTCCTTTTTGTTGTTGTGTATAAAATTATTA
ATT

GCTCTCGGAAACAAACCGCCGTGTAACCCAGTTGCCGAGCCTCTGCCGAGCGTAGCCGTTGTTGTTCCCGCTCCTTATT
ACTGCTCAATCAGTTTACTTATTTTCGACCACGAGCGAGAAACCAACAGCCATAATAACCAAGATGGACAGTTATCACAA
CCAGAGTCCAAAACAAATTCAGAGCTCAAAGACATTGCGAATAAATTGAGAATTCATTGATCGAGGCCACTCAGGCGAG
CAAGTCCGGGCGATCCAACATCATGCTCGTCGATGGCAGAGATCATGTCCGTCCTCTTCTTCCACACGATGCGTTACAAAG
TTTCGGCACCTCGCGATCCGAGCAGCGATCGTTTCGTTCTGAGCAAAGGCCACGCGCTCCAATTTTATACGACGCGTGG
CGCGAGGCCGCGCTGTTTCCACGACGCGAGTTGCTGAATTTGCGAAAGTTTGAAACGATCTCGAGGGACATCCGACTCC
GAGATTGAATTTTCGTCGATGTGGGTACAGGCTCGTTGGGCCAGGGACTCTCGGTTGCCGCCGGAATGGCCTACGGTCGGC
AAATACTACGACAAGGCGAGTTATCGGGTGTACGCGCTTATCGGTGACGGCGAATCGGCCGAAGGTTCCATCTGGGAAGG
ACTTCATTTTCGTTTCGTAATAAGCTCGACAATCTTTCGCTCATTTTCGACGTGAATCGTCTCGGCCAGAGCGAGCCCA
CCTCGCTCCAGCACAAATATGGAATTTTATCGTAAACGAGCGGAGGCTTTTGATTCAATGCCCTCGTCGTGGACGGACAC
GACGTCGAGGAGCTCGTCAAGGCTTTCCACGAGGCGCAAAACGACCAAGGACGCTCGACCGCGATAATAGCCAAAACGT
TCAAGGGGAAAAATTTTCCGGGCATCGAGGACGTCGAGAATTGGCACGGAAGGCACTCGGTAAACAAGGCCAAACAGTG
GTCAAGCATTTGAGCTCGTTGCTACAAAATCCGGGGGCTCTCGGTCTGCATCCGCAAAAACCATGCTCGAGGACGCTCC
GGTGGTCGACGTGACAAACATAAAGCTCGATTTCGTGCGCGAGTTACAAACTCGGGGAGCAAGTGGCGACGCGATTGGCGT
ACGGCACGGCTCTGGCTAAAATAGCGAAAAACAACGATCGCGTTATCGCTCTGGACGGCGATACGAAAAATTCAACCTTT
GCCGACAAAAATAAAGAGCGTCGATCCGGCTCGTTTCGTCGAATGTTTCATCGCCGAACAGAATCTCGTCGGCGTAGCGAC
CGCGCGCGCTTGCCGCGATCGCACCGTTCCTTTGTTCCGATTTCGCCACTTCCTTCTACTCGCGCTTTGATCAGATTC
CGATGGGCGCGATATCCAGAGCAACGTTAAATTTGTGCGGCTCGCATCGCGGCTCTCGATCGGCGAGGACGGTCCCTCG
CAAATGGGTCTCGAGGATATTGCCATGTTCCGTTTCGATTCCCGGCTCCGACCGTCTTTTATCCGTCCGACGCGGTATCGA
CCGAGAGAGCGGTGCAATTGGCAGCCAACACCAAGGGCATCTGTTTCATTTCGTACCTCGCGGCCAAATACCCCGGTACTG
TACGACAACGAGGAGGTATTTGTCGCGGGCAAGGCTAAATAGTCAAGTCATCGTCGACCGGGGAAAAAGATCGCGCGCT
GATAATCGGGGCTGGAATAACGCTTCACGAGGCGCTCGACGCCGCGGAGAGATTGGCCAAAGACGGGCGTCAACGTTCCGG
TTCTCGATCTTTTACGATCAAGCCGTCGACGCGCGGACCATTCGAACACGCCAAGCAAGTCGGTGGTCCGGTCTGTT
ACCGTCGAGGATCATTATCCCGAGGGTGGTCTCGGTGACGCCGTGCGCTCGGCTCTCTCCATGGAGCCGAACGTACGCGT

mmc4.txt

TTTGAAATTGGCCGTTAAACACGGTGCCACGTTCCGGGCCACCGGCCGTTCTCGTCGACGCTTTTGGCATCGGCGCGCGCT
CCATCGTCCTCGCCGTCCAACAAATTCGACCTCTAAAATTAACCTTGTTCGGTCTTTTCTCATCCGCCAACAAATCTGT
AAATAATCCAACGTTTCAGAGTTTTTTTTTTTTGTTGTCTGTCATTTCCCGAGTTATTTTTTATAAAAAAACCGGTACACGAA
TGAAAAAAGNTATTGGAGAATAAACATTTTTTACAACACACGTTCT

>CL3166Contig2|adenylosuccinate synthetase-like

GGGTAAAGGAAAAGTCGTCGACATGCTCGCATCCGATGCCGATATCGTCTGCCGTTGTCAGGGAGGAAATAACCGCGGGTC
ATACAGTAGTTGTAGAGGGTGCCCAATCTTCTTTACCTTCTACCTAGCGGAATTATCAATCCAAGATGCAAATCCGTT
TTAGGTAACGGCGTGGTGATACACTTGCCGGGATTGTTTGAAGAAGTGGAGCAGAACGAGGCCAAGGGCTTGAACGATTG
GAAAGAAAAGATTAGTCATATCGGATCGTGCTCACATAGTGTTCGATTTCCATCAGCAGGTCGATGGTTTCCAGGAACCTG
AAAAAGGCACCCAGTCGCTGGGAACGACGAAAAAAGGCATTGGTCCAACCTATTCGAGCAAAGCCACGAGGAATGGACTT
CGTATCGGCGATCTCCTCGGTGATTTTTCGATAAAATTTCCGAAAAATTCATACCTCTGTTGCTTCTTACCAAAGAATGTT
TCCCGCTCTCCACGTCGACGTTAAAGCGGAACTCGAACGCTACAAGGGATACGCCGAACGCATCCGACCTCTGGTCAAAG
AGACGGTCCACTATTTGACACAGCGCCCTGAAAAGTGGCAAAAAGGTATTGGTGGAGGGTGCAAACGCGGCAATGTTGGAC
ATTGATTTTGGTACCTTACCCGTACGTGACGAGTTCAAACCTGCAGCT

>CL3168Contig1|cullin-associated nedd8-dissociated protein 1-like

AATGCATGGGAAGTTTCTAGCTGCTCTCGAGGACCCCGATCTCAACGTACGAAGGGTCGCCCTCGTTGCATTTAATTCA
GCAGCTCACAACAAGCCCATGTTGATCAGAGATCTTCTTGATTCTGTACTGCCACAACCTTTACACTGAGACGCGTGCAAA
GAGAGAGTTAATCAGAGAAGTGGAGATGGGACCTTTCAAACACACGCTCGACGATGGTCTCGATCTCCGAAAAGCTGCCT
TCGAGTGTATGTACACGCTCCTCGATTCTGCTCGAGTAGGCTCGATGTCTTCAAGTTTTTAAATCACGTGGAAAAATGG
TCTCAGAGATCATTACGACATTAATAATGCTTACGTATCTGATGACGGCAGCACTCGCACAGTTGTGTCCACAGCCGTTT
TCCAGAGGCTGGAAAGATTGGTCAACCTTGAAGAACACGTGCACAATGAAAAGTCAAAGCGAATTCGGTGAACAGGA
ATACGAGAAACAAGATGAGCTGAAGCGTTCCGCTCTCAGAGCGGTGCGAGCTCTGTTGACGATACCAGAAGCAGACAAAA
ATCGATCGTTGACCGATTTCTGGGCCAGATCAAAGCCACGCCCGAGCTGCAACCGCTTTTCGAGGTGATTCAAAAAGAC
TGTCGAGCAGTAGTATAAACGAAACGAACATAATGGATCAGAGCTAAAAAACTGGCGAAAATGGAGGAAATATCGCAGC
AGAAGAAACACGAAGTACGAAGACGAGAAAAGCAGAAATAAGGAATAATAATAATAATAATAATAATAACAATAACG
AAATAGCGCAGACGAGAAGATACGAATTAACGAAAAATACGATTTTAGTAATTTATAGATTGCTCCGAGAGTCCGTGCGC
TTACGGTCATTATTATTATCATAGTTTATTTTCTATTACGTTTATTTTTTCTATTTATCATTACCGAATTTACACGTAGTTT
GAAGTAAACAAAAAACG

>CL3169Contig1|leucyl-trna cytoplasmic-like

ACTTTCAAGGGTGACAAACCAAACCTCCTTGGCATAAAGGCTCAAGAAATGACTCCGGAAGTCTGGGACTATATTTTCTT
CAAAAACAGCCCGTTCCCAAAAACCTTCGATAAAGAAAGAAGCGTTTGAACGTATGCGCCGTGAATTCACCTTTTGGTATC
CGGTGATCTGAGGGTCTCGGGAAGATCTTGTACAGAATCATCTTACCTTTTTTCAATTTACAATCACGTGGCAATTTGG
CCCAAAACAACCAGACATGTGGCCCAAGGGTATTTCGAGCTAACGGACATCTGCTTCTCAATTCGGCAAAAATGTCAAAGTC
GGAAGGTAATTTCTTGAATCTCTCGGAAGCGGTAAAAAAATCTCAGCCGATGGAATGCGTCTCTGTCTTGTGATGCTG
GGGATTCGGTTGAAGATGCAATTTCTGTCGAGACTATGGCCGACGCCGATCTTTCGCGATTGTTCACTTTTATCGAATG
GGTCAATGAAGTATTGGCAACTGAAAGTTCCTTCAGAAAAAGGGAGAACCAGCACTTTCAATGACAGAGTGTTCAAAG
CGAAATGAATCTAAAAATAAGGAACTGGCGAAAACCTACTCGAAGATGTTGTTCAAGGAAGGCTTGAGAACGGGCTTTT
CGAACTTCAAGCAGCCAGAGACAAATATTTGCAAGTTGAGCGCATTTGAAAAAGTCAATTGGAATTTGATAATGCAATACA
TCGAGCTGCAACAATATTGCTAGCACCGATATGTCCGCACGTAGCGGAGCGAGTTCGTGAGACAATAGGAAAAAGGCAG
TGTTCTGAATGCTCGGTGGCCTACGGTTGGTCCGATCGATGAAATCTCGTCAAGTCGTCTCAATATCTCATGGACGCTG
CTCACTCGTTGCAATTTCTTTTGAAGAATCATTGCACACCGAGAAAAGCAGCGAAAGGTAACCAGAGGAGAAACAGTAG
GAAAAACCCGACCTCCGGCACTATCTGGATCGCTAA

>CL3190-biscontig1|dihydropteridine reductase-like

AGAGCACAGCTGGAAAGAGCAGGAAACCTACATTTTGAAGTCAAGTGAAGGAGTCTCAAAGAAGATAAACTCGATGGAA
TAATCTGTGTGGCCGGTGGTTGGGCTGGAGGAAATGCAGCGAGCAAAGATTTTCTTGGGAATGCCGAACCTCATGTGGAAA
CAGAGCGTGTGGAGCTCAGTGATTGCTGCGAGTTTGGCTGCCGCGAGTCTCAAAGATGGTGGTTTTCTTCACTGACCGG
AGCTAAAGCAGCTCTCGAAGGGACACCTGGAATGATTGGCTATGGAATGGCCAAAGCTGCTGTTTCATCAGCTCACAAAAT
CTCTCGTGGCAAGGACAGTGGCCTTCCAGCTGACTCTGTTGCTTCCATCTTACCGGTAACCTCTGGACACTCCCATG
AACCGCAAGTGAAGCTGATACCTTCCAGCTGGAGCCTCTCCAATTCAATTGCGGAATTTTCTGGAATGGTCT
ACAGAAACCAAGACCGCCCGCCAAACGGGAGTCTTCTGCAAGCTCGTGACGACGGAACAACAAACAGAAAGTCAATTGCAGCTT
GAACGTAAACGCTGGAATCTTTTCTCAAAAAAAATTCGATGCTCGTTCAATGTCTTTCGACTCCGACACACAGGCCG
AAAAATTTGAATCTCAACGAAATACCTCCACACAGTATCTGCATTAAGGACAAATAAATCACCGGCCACCATTTTGTGCA
TGAATTCATTATTATTTTTCTATTTTTTTTACGAGTCTTCTATTTTACCAGAATTCGCTATTTGCTTCGGCGTTTCAGA
ATATAGAATTGAACATGATTTGTATATTTTGTGTATCATAAAATGTATGTGTGTATATAAGTAT

>CL3202Contig1|dna binding protein

ATACACAGTGTCTCGAGATCGCGGCAACGTCTGGCTGCTCTGCATGCGTCTGTTGGTTTCGTATAGACGAAGTATTGACGAA
GAAAAACAAAGAGATATCGCTAGTACGTCGATAATATACTTGTAAAGCTGTGTTTGAATGATGAGGGCGATGTTTTGAT
GGTCTGATTGACGACGTTGGCCGCTGTGACAACGGCAGCAGCTTTGACCTTCAACGACCACAACATGCCGATTTATCTCG
TCGATACGAGTTTCCGGCAAGGTAATCGCGAGCGTATCGATCATCTTGAAGCTCGAATACACAATCGACATTTGACGACT
GGACAACGAGTCAACTTTCCAACATCCGTCGATGGAGACTATTACCAAGGATTTCGCGCGCCCGGAGACGAGCGCGG
ACATTTAGTCGCTCTCAGTTCTCAGGACCACCGATGGTACAATCTTTCACCGCAGAATGACCGGGTCAACCGGAAACC
TCGGATATCAATCCATCACGACCGATTGGTACGGAGCGGAATGCGAGGTTTCGACGATTCCTTCAAGGAGGTCCCAATCGC
GTCGTATACTGGACGGTCGATATGACTTACGTCGCCGATTCTAATAGACCCGATCGGTATCATCTCAGAGTCCGTTTTCGA
AGGGCCTGGCGGTTTCGACGCGCCGAGAAATCGACGCTTGGATTGCAAAACCCGTTGCAACATGAAGACAGCACTTTTGGGA
TTTGTGCACAATGCCGAGCAACCGACACGAACACGATGAATTGCGTCTGCGGACTTAATCCAGGGAGGCTGCTCCCGG
AGTTAACCAAAAGCAACTGATTTCCGGAATTTTATTCAATCTTTTATTGACACACCAACCACGCCTTGCCTTTGTTATT
TTCTTTGACAAATAAATTTTCGAAAGAAATACG

>CL320Contig1|nadh dehydrogenase 1 alpha 39kda

mmc4.txt

AGTCTTATCGGGACCAGCTGTAAAATTGTTCTTCGGAGTGAAGGCTCCCGAGGAGATTGCGACTCGATTTGATTAATTTGCTTTTTACTAACGTTTTAAAAATCATTGCGAAACAAAATAAACAATAGGCCGTCGTAGCTCGGGCTTCGGTCATTTCGACGAATTGTCTGCGAGCAACTCAGAGACTGGAATCGAAAAATGGTGGTAGTTTGTCTGTTCTGTTTTATTCTCCTCGACGAACGGACGAAAATATTCGAGCGAATCGTCGCCACGGGCGATCGAAGCTCCAGCACAGCGAGTTTGAGGCGAGGAACCGGAGGGCGGAGTTCGTTCAACGGTATAACATGCACAGTTTTTGGGAGTACAGGATTTTTAGGAACATACGTGTGCAATCGTCTGGGCAAGATCGGAACCCAGTTGATTCTGCCGTACAGAGGAGACTCGTACGATGTTCTGAGGCTCAAATTAGTCGGAGA TTTGGGTCAAGTTCTCTTCAACCCTTTCCATCTTCGTGACGAAGATCCATCACGGAATGCATCAAGTATCCAACGTTGTGGTTAATTTGATCGGATCAGAATGGGAAACGAGGAACCTTTAGTTTTGCGGACGTCAACATGGAGGGAGCGAGAACCCTTGCGAGACTTTTGCAAAAAAGCAAACGTTCCGCGATTCTGTTACGTGTCTTGTCTCAATGCGAATCCGCATCCAAAACCGCTTATGCTGAAAAACGGGTCCGGGTATTTGAAGTCAAAATGGGAAGGCGAATGCGCGGTGAGGGAAGAATTTCCAGAAGCAA CGATAGTAAGGCCTGCGGATATTTACGGGCAAGAGGACCGCGCATTATCGGTGCGTACACGCAATCGTGGAGACGTCAC TTCAGGGGCATTCCACTGTGGAAAAAAGGAGAATTGACTGAGAAGCAGCCGATATGGGCTGGCGATGTCGCTGCTGGAAT CGCCGCCATTGTCAAAGACCCGAAAACCGCTGGACAAATTTATCAGTTTGTGGACCTAAACGATACCAACTCGGCGAGC TCCTCGACTGGATGCCAGAAATGCAGAGACGAATCCGTGCAATGGGACATCGCCGATTGGATATAGATCACACTCCC CTCTTCTGGGGCAAAGTCTTTCTACCGAGCTAGTGAGAACCGCTGCTCCCATCGCCACTGTCCATTGGGAAGGCTTCGA ATTGGCACATACGAGCGACGTAGTGATCAATGGAATCCAACGCTGGAAGACCTGGGAATTGAGCCAGCAACGATGGAGT CCAGAATGCCTTGGGAAGTCAGGTCAACGAGGCGGAGGCCATTACATGGAACAGCTGGGAGAATTGATCCACCAGCAC CCCGAAAAACGATTCTCTCGCGTGATGAATTATTCGCAACGAGATCGTTAAATTTGTCGAAAAATGTACGACTCGTCGT AACTGCGGGACGATAGTCGATCATAGTAAAAAGAAGAACAGTACGGTAATACTTTCTAGTAAATTCGCTCTCCCTCT

>CL3225contig1|cytosol aminopeptidase

ATTTTCTCACATATTTGAACGAACAAGTTTGACGAGTATCCGGAATATGGGTTTCAAGAATCTTTCTCGTTAAATTCGCTCTTTATATACATCGCGCCCTGTAATCTGTGATACTTGGCTTTTCGGAATTTGCGCGACCAAGTGTGACAGAGCGGGGC AAGCGAAAGGGGACGAAATCTTCGATTTTGTCTCCGCTTTGCATAAAGGATTGGTTCTCGGAGTTTATGAGTCAGAGGGTA AAGATTCGGTTACCTTTACGCCTGCAGCAACAACGTACAACAACCTTGTGCGGGGAAAACTACTGACAAACATTACTCTG GCTGGTCCAAAACCTAAAGTCCCGGAGACTCGTGTCTTTGGGGACTGGGAGATGACGAGCATGTTGGAGTTGCAGTCGT TGGATTGGGCAAAACCGAATACCGGGTTCAACGAACTTGAGGAAATTCATGAAGGAAAAGAAAATGTTCTGAGGCTGCTG CAGCCGGTTGCCGGGCTTTTGGGATTTCCGTGACATCAAGGACATCAAAGTGGAAACCCCTGGGCGATGCTGAAGCTGCG GCCGAAGGCGCGTGTCTTGGCTCGTGGATCTTCCAAGAGTTCAAGAACAAGGACAAGCAAAAGAAATTGCCACCGTCTC GTTGACGCAAGAAAGGAGCGGATGCTTGGAAAGTGGGTAATAAAGCTGATGCTCAAAATTGGGCCCCGAAATTGA CTGACACGCCAGCGAACATAATGACGCCAACAGCATTCTGCAACGAAGTTTCGTGCGTTTTGAAGGGTTTGGGAGTCGAA GTAACAGTTCGAGATAAAGCATGGGCAGAGGAGAAAAAATGGGCTCGTTTTGAGCGTCTCGAGAGGCAGTGCCGAGCC ACCGAAATTCCTGGAGATTCATTACAACGGTACTGGCAATAGCTCAGCAGTACCGATTGCGTTTTGTGGGCAAAGGCGTGA CCTTCGACGCTGGTGGTATAAGCATAAACCCGNGGCTGCGATGGACGAG

>CL322contig1|alpha-galactosidase alpha-n-acetylgalactosaminidase

GGAAGGAGGTGGTGGTGGCGAGGGCCGCGCGCGCATATGCTTGGTGTGGTATAAAAATGAAATGGGGCATTGGGTGAAA GTACTCTTGGTTCGAATCGAGTCTTGTATCAGATCGGCTTGAGAAGTAGAGTCAGTGGTAAAAGTGCAAGGATGGAAATA TTTTCCGCCCACTCGTAAAAATACAAATAATCGCCAAAAATAAAAAATAACCTACGAGATTCTGTCATTGCCGCTGGCA TTTCTGTTTCTTTTCCGAAAGTTTATTTGACAGTTCTGTAATAAACCGCTTCCAATCGGTTGCAAGCGAAAGAATCGTCT TTCGTTACGATCAATCACGCCAAGATTTTGTCTGCGAGTGTAGAGAATTCCTTCGGAGAATAACCAGCCCGCGTTATTCAA CATGACGCGACCTCTCGTCGCGTTTATCTTCGCGCTCCTTTCTCTCGCACCTTTTTTTACCCTTGCCTCGAAAATGGA TTAGCAAGAACACCCCCCATGGGATGGCTCTCATGGGAAAGATTGAGATGCAACACTGACTGCAAAAACGATCCCGAGAA ATTGTATCAGCGATCGACTGTTTCGCACAATGACTGATATCGTCTGGCCGAAGGATATGCCGCGGTGGGATACGAGTAC ATAAACATAGACGACTGTCTGTTTGGAAAAGGAAAGAGATGCTCGCGGACAAGTGGTCCGCGATAAACAACGTTTCCCTTA CGGAATCAAGAGCCTCTCCGATTATATTCTTCAAGAGTCTGAAATTTGGCATTACGAAGATTTTGGAAATTACAGCT GTGCTGGATACCCCGGGGTTCTGGGATACTTGGAAAACGATGCAGCTCTTTTTGGCTCTGGGAAGTTGATTACGTCAA CTGGATGGTTGTTACGCACATCCGTCTGAAATGGACAGAGGTTACCCAGAGTTTCGTTTTCTATCTGAACCAGACGGGACG TCCGATGGTGTATTCTTGCAGTTGGCCAGTGTATCAAATTTACGCTGGAATGCGGCCAAATTTACATCGATATCGGAGC ACTGCAACGTGTGGCGCAATTTTCGATGACATTTCAAGACTCGTGGTTCGAGTTTGGAGAGCATAATCGATTACTTTGGGAAT AATCAGGACGCGATAGTGCCAAACGCTGGTCTGTTACTGTAACGACCCGAGATGTTAATCGTTGAAACTTCGGATT GAGTTACGAGCAGAGCAAAAACAGATGGCTTTGTGGGCGATTTTAGCTGCGCCGCTTCTCATGTCCGTTGACCTTCGAA CTATCCGACCCGAATACAAAGCAATTTTACAGAATAAAAAAATCATTGCCGTCGATCAGGATCTTTTGGGTATTCAAGGT CGCAGAAATTTACAAGCACAAAGGAATAGAAATCTGGGCGCGACCGATAAATCCAATCTTCGAGGACCCTCAAGACACTGT CTATTATTCTTATGCGATTGCATTTTTGAACCGACGTACGGACGGCACTCCCTCCGATGTTTCCGTACCCCTCAGCGAGC TTGGACTCCGTTATCCCAAAGGATATAAAGTAGAGGACTTGTACGAGGATGTGGATTACGGCGTGTGACTCCGCGAGACG AAAATAAAGGTCAAGGTGAATCCCTCGGGCGTTGTGATTCTACGCTGTGATCTCGAGCTCGATCTCAATCCTTGTATT GGAGAATCAGTTCTCGCGATACACGTCGCCGGTTCGATCGAGTTTTCAAATCCGCCAAAACCTCTTCGAGTAGAAGATAA AAAAAACAACAACAAATATCGCGATCAATTCGCTCCACTTTGTAATATTTTTGTACCAATAATTAACATTATGAGATTAC GTCGTTACCATGTAGATTTTGTAAAGATGAAATACTTCGCATTTAGATCGAGATACAAATCACTCGCTCAACCATCGCATC AAAATGCAAATTCGAAGCATGTGTTTGTATAGCTATGAGAAATAAAAAATAGAAAGAGAAAAGAAAAACAATGAAACTAG AGCGCAGCTC

>CL3235contig1|arginine kinase

GTTCTTGATAAAATTGGAAGCTGGCTTCACCAAGCTCGCTGCTTCTGACAGCAAGTCCCTCCTGAAGAAATATCTCACGAG GGAGCTGTTTCGATCAGCTGAAAACGAAGAAAACCTTCTTTCGGTTCTACTCTTCTCGATGTCATTAGTCCGGTCTCGAGA ACCACGACTCTGGCGTTGGCATTACGCTCCGGATGCTGAATCCTACACCACTTTTCGCTGATCTCTTCGACCCCCATTATC GATGACTATCATCAGGGTTTCAAGAAGACTGACAAGCATCCACCAAGGACTTTGGTGATGTCGACACCCTTGGAAATCT TGACCCGACCGCGATTACATCGTATCGACTCGTGTAAAGATCGGAGCATCAATGGAGGGATATCCGTTCAACCCCGTGC TTAACCGGAGGCCAGTACAAGGAGATGGAGTCAAGATTCGGGAACATTTGTCCGATTGGACGGAGAGCTCAAGGGAA CATTCTACCCATTTGACGGGGAATGAGCAAGGAGGTGCAGCAAAGCTGATCGACGATCA

mmc4.txt

>CL324Contig1|eukaryotic peptide chain release factor subunit 1-like

AGCGCGGAAGGAGGAGAGAATTAGTCGAGGAGGTAAAGAAAGAAGACGAGTAGTGGGCCACGCGATTTTGCACCACGC
GCAGCAATGTCCAACGAAGAACTTCCGCCGACCGCAATGTCGAGATCTGGAAAATCAAGAAGCTCATTTAAAGCCTCGA
AATGGCAAGGGGGAATGGAACCAGCATGATTTCTCTCATAATACCGCCAAAGGACCAAATTTCCAGAGTCAGTAAATGC
TCGCCGATGAATTCGGCACCGCGTCCAATATCAAGTCGAGAGTAAACAGATTGTCGGTACTCGGAGCCATTACGTCTGTA
CAGCATCGACTAAAGTTATACACCAAAGTCCCTCCTAACGGCCTGGTGATATACTGCGGGACGATTGTCACCGAAGAGGG
AAAAGAGAAGAAGGTCAACATTGATTTGAGCCTTTCAAGCCATAAACACTTCTCTATTTGTGTGATAACAAGTTTC
ATACCGAAGCGCTAACGGCGTTGCTGGCGGATGACAATAAATTTGGTTTCATTGTGATGGATGGAACGGTGCGTTGTTT
GGTACTCTGCAGGGTAACACGCGCGAGGTACTTCACAAGTTACAGTCGACTTACCAAGAAACACGGCAGAGGAGGACA
ATCGGCTCTTCGTTTCGCCAGATTGCGTATGGAAAAGAGACATAATTACGTTTCAAAAAGTGGCTGAAGTTGCGACTCAAT
TATACATCACGAACGATAAGCCAAACATAGCTGGTCTTATTCTCGCTGGTAGCGCTGATTTCAAAACGGAGCTTAGTCAG
TCCGATATGTTTCGATCCTAGATTGCAAGCCAAAGTAATAAACTCGTAGATGTTTCTTACGGTGGTGAAAACGGTTTTAA
TCAGGCCATCGAATTAGCAGCCGAATCCCTCCAAAACGTTAAATTCATTCAAGAGAAAAAGCTCATAGTTCGTTATTTTG
ATGAAATATCACAAGACAGGCAAAATATTGTTCTGGTGTGAAGACACGCTGCGAGCTCTCGAAGTGGGAGCGTCGAA
ACTCTCATCTGTTGGGAAAATCTTGATATTCAAAGATACGTGTGAAAAATCATACGAACGCGGAAGAAAAGGTGCTGCA
TCTCACGCCCGAACAAGAAAAGGACAAAACCTATTTCACTGACAAGGAGAGTGGCGTGGAGCTCGAATTGGTGAATGTC
AACCTTTGCTCGAGTGGCTCGCGAACAACCTACAAGAGTTTTGGCGCTACCTTAGAAATAATAACCGACAAATCTCAAGAG
GGTTCCTCAATTCGTGAGAGTTTTGGCGGTATCGGAGGTATTTTGGCGTACAAAGTGGACTTTCAAAGTATGAGTTGGA
TGACATCGAAATCGAGAATTTGATCTGGACGATTACTAAAGAAAACAAAGTAATCAAGATGAAAAGGTTTTGGCAAAT
CGAAATGATTTACGTTTAAATAAATAAGTGAGTAAGAAAAATGTTATCTGGATCACGGAGACACCGACCTCAGATGAA
AAAGAGGCGAGAGAGAGAGAGAGAGAGAGGAAGGAAAGAAGAAGAANACGACCAGACGACACTTACG

>CL3250Contig1|prostaglandin reductase 1-like

TCCCAGAAAGTCTTAGGCTTCATATACAGCCGGCAACTAGTATTGTATACGATGTCCTCCATATTTTCTCTGTCCAGTGT
TGTTTCGCGGCTGCTCAAAAGATCGTCGACGACAATTTCTTGTCTCGAGCTGCTTCTACAACAACATCATCAACAATGG
TGATTGACCAAAAAAATATGTGCTCGATAAACATTTCCAGGGTGAACCTAAACGATCGGACTTGAAGATTGTGGAAGAAG
AATTACCGCCACTACAAAATGGAGAATTCCTAGTAGCGGCTCAATACCTTTCCCTGGATCCTTACATGCGAGCTACGTT
GCGACAATGCCCACTGGAATAACAATGATAGGTGGACAAGTGGACGAAAAATAATCGAGTCGAAAAACCCTAAGTATCCA
GTTAGGAAAAAGCCTCATGGGATATTGGGGCTGGCGAACACATACGATAGTGAACATGGAGAAAGAAAAAACGCCACCC
AAGAACCGTACATAATACCAGACTTTGGAGGATTGCCTGATTGCTTCTCGGTGTTTTGGGAATGCCAGGAATACTT
CTTACTTTGGTTTACTGGAATTTGCAAACCAAAAAAGGGGAACTTTGGTGGTGAGCGGAGCTGCTGGAGCCGTGGGC
TCTCACGTGGGACAAATCGAAAAAATTTGGGTCTCAACGTCATTGGTATCGCCGGATCTGATGCCAAATGCGACTGGT
TGATAAAGACGTTGGGTTTCGACGCTGCTATTAATTAACAAAACCTGCGGCAAGAACTCAATAAAGCTGCTCCC
AACGGTGTGATTGTTACTTCGACAACGTGCGTGGGGACATTTGAGTGGCGTGATATATCGCATGAATCCTTTGGAAG
AGTTTCCGTATGCGGTAGCATTTCGTGTCACAACGCGGACCCGAATAAATTGCCAAAACTGCGCTCCTGCAACCAGCTT
TGGTGTTCATCAATCAATTGAAATTTGGAAGTTTTATCGTTATCGAGATGGCAGGATCGTTGGTTGAGGGGAATCGAAAAA
ATCTTGAAATGATACGAACCGGGAATTTGAAATATCAGGAAACCGTGATTGTGCGATTTGATAAGATGTTGACGCGTTC
GTGGAATGCTGAACGCGGAGAATACCGGAAAG

>CL3264Contig1|10-formyltetrahydrofolate dehydrogenase

GAAGTGAGTGACGCTCGATAGTTGTGAGACAGCAGTCGAAGCCGGGAGTAGATCGCGAAGCGTTGCTCTCGCTTTAAATC
GGAAAAATCTTTCCCGGATACGCGATTCTCATTACAGAGAAAATTCATGTTAAGCCAGCAGAGAATTCTCTTCGCTGTTT
TCCCGCTTTATTCCGATGCTGGCAACTCGGCGTTTTCTGTTTTCCATAAACGAACATTTACCCTGTACACCCAGTTTTGGG
AATTCGAGGTTTAGCAACGCACTCACGCACTTTAGTATTAATAAGAGAAGGCGACAATGGCGCAGCTAAAAGTTGCCATC
ATTGGGCGAGCAATTTCCGCGTGAAGTTTACAAGCTCTGAGACAGGATGGTCACAAGATAACGGGAGCTTCACGAT
ACGGACAAGGGAACCGCGAGGATCTCTGGCGAGCACCGCAAGCCGACAATACTCCGTTTTCAAGATCAAGGCAT
GGCGCAGCAAGGGAGTTCCATTGCCCGAGATACTCGCTCTCTACAAAGGCATCGAGGTCGATCTCAATGTCCTTCCATTC
TGCAGCCAATTCATTCCCATGGAAGTGATCGATCACCCAAGACATCGAAGCATTTGTTATCATCCTTCGATCCTTCCTCG
TCATCGTGGAGCGAGTGCCATCAGCTGGACTCTGATCCAGGGCGACAAGGAAGCTGGATTCTCGATATTCTGGGCCGACG
ATGGTCTCGATACTGGACCGATCCTCTTGAGAAATCGTGTCCCGTCAAACCGAACGACACGCTGGACAGTTTGTACTAA
GATTTTTTTGATCCCGAGGGGAATAAAGGCGATGGGAGAGCTGTGAACCTCGTGGCGAAAGGAAAAGCTCCAAAGTTGA
TTCAACCGAGCGAAGGGGGCGACGTACGATCCGATGCTGAATAAGCAGAATTGCAGCGTCTGGATTTGAGCAAAATAGCGA
AGGAGTGCAACAATTTTATTCGTGCATTGGACAGTACGCCAGGCGCGTGGACATTGTTGAATGGCGAAGAGTGAGGCT

>CL3279Contig1|nadh dehydrogenase

AAACCTGTACGGCAGACACGACTGGAGACTGAAAGGGGCGCTGAAGCGTGGAGATTGGTACAAAACAAAAGAAATATTGG
ACAAGGGAACGGACTGGATAGTGAACGAAGTGAAGTCTCGGGGCTGAGAGGCAGAGGCGGGGCTGGATTTCCCTCGGGA
ATGAAATGGTCCTTCATGAACAAGCCGTCGGACGGAAGGCCAAAAGTATTTGGTGATAAACCGCGACGAGGGTGAGCCCG
GACGTGCAAAGATCGCGAGATTCTGCGTCACGATCCTCACAAGCTGGTGGAAGGGTGTCTGATCGCCGGGCGAGCGATGG
GCGCGTGCGCCGCTACATTTACATCCGCGGGGAGTTTTACAACGAAGCGTCCAACGTCCAGGTGCGGATTGCGGAGGCT
TATCAAGCGGGACTGATTGGCAAGAACGCGTGTGGCTCTGGCTACAATTTGACATTTTCTGTCAGCGCGGAGCAGGCGC
TTACATTTGTGGCGAAGAGACTGCCCTGATCGAGTCTATCGAGGGCAAACAAGGCAAACCGAGACTAAAGCCTCCTTTCC
CTGCTGATGTTGGACTTTTCCGGTGTCCCAGCAGCTCACGAACGTCGAAACCGTCCGCGTTGCTCCGCAATCTGCGCT
CGCGGCGAAGCGTGGTTCGTTCTTTTGGTGGCGCCCGTAAACAGCGGCACCAAATTTGTACATTTTGGGACACGTAAA
TACTCCTTGACCGTTGAGGAAGAAATGTGATTCCGCTTAAAGAACTCATCGAGAGACACGCCGGCGGAGTTATCGGCG
GATGGGACAATCTCCTGGGTGTCATACCCGGCGGCTCATCCACGCCCATTATCCAAAAACCGTTTGGGATACCGTCTC
CATGGATTTGACGATCTCGTCAGAGTGCAAAGCTCGTTCCGTACTGCGGCGGTGATCGTAATGAACAAGACAAACCGAC
GTAATAAAAAGACGATCGCTCGTC

>CL327Contig1|beta tubulin

TTTTTCTTGCTGCTGCTAACGGTCTTTCGAGTTGTAACCGGCGCGGGTCTCTCTCTTTCCTTGGCCCTTCTCGGCTCCGA
TATATCGGGCATCATTCAGTCCGTGTTTCAGTGACGAACGAGCTTTTGGCGCTGTAAGACTATCGAAGGAACTCGAGCGCT

mmc4.txt

TAAAACTCCGTGGAATCAAAAGATTATTCTGTTCTTCTCAACGAGCTACGATAGTATCGAAAGAAAATGCGAGAAAT
 CGTGCATCTCCAAGTTGGCCAGTGGGTAATCAAATTTGGTCCAAGTTTTGGGAAATAATCTCCGACGAGCATGGCATCG
 ATCCGTCCGGTAACTACGTGGGAACAAACGATCTTCAGCTGAAACGATATCGATGTTTATTACAACGAAGCCAGTCGTAC
 AGATATGTTCCACGAGCGATCCTCGTGGATCTTGAGCCAGGAACAATGGACTCAATTCGGAGTGGGCCCATTGGAATGCT
 CTTACAGACCAGACAACTTCGTTTTCGGACAAAGTGGAGCAGGTAACAATTTGGGCCAAAGGTCAATACACAGAAGGCGCTG
 AGCTCGTAGACTCGGTTCTCGAAGTCGTGAGAAAGGAGTCGGAAAGCTGTGATTGTCTTCAAGGCTTTCAATTGACTCAT
 TCATTGGGTGGTGGAAACAGGATCGGGAATGGGCACCTTGTCTCAATTCAAAAGTACGAGAAGAATACCCCGATCGTATTAT
 GAATTCCTTCAGTGTATTTCCGTCTCCGAAGGTATCAGATACGGTCGTGCAACCCTACAACGCGACGTTGTGGTGCATC
 AACTCGTTGAAAAATACCGACGAGACTTTCTGCATCGATAACGAGGCTCTGTACGATATTTGCTTCAGAACACTCAAGCTC
 AGCTCACCGACGTACGGTGATCTCAACCATCTCGTCTCTTAACCATGTCAGGTGTAACGACATGTTTGAGATTCCCGGG
 TCAACTGAACGCTGACCTGCGAAAACCTCGCTGTAAATATGGTACCGTTCGCGCTGTGCATTTCTTCATGCCTGGTTTTG
 CACCTCTGACTGCAAGAGCCTGTCAGCAATATCGATTCTCTCGGTCCCAGAACTCACCCAACAATGTTTCGACGCGAAA
 AACATGATGACCGCATGCGATCCGAGGCACGGTCGCTACTTGACGGTGGCGGCGATATTCGCGGTCAAATGTCGATGAA
 GGAAGTCGACGAACAAATGCTCTCTATACGAACAAAACCTGGCTTACTTTGTCAATGGATACCGAACAACGTTAAAG
 TCGCTGTTCGCGATATCGTCCACGAGGACTCAGCATGTCGGCCACCTTTATCGGCAACTCGACTGCTATTCAAGAAATA
 TTCAAGCGCATTAGTGAACAATTCAGTGTATGTTTCAAGGAGAAAGGCTTTCCACATTGGTACACCGGCGAGGGAATGGA
 TGAGATGGAATTCACCGAAGCTGAAAGCAACATGAACGATTTGGTATCGGAGTACCAACAGTATCAGGAAGCAACTGCCA
 ACGACGAAGAAGCCTTCGAGGACGAAGAGGGGCTAGAGGAAGAGGACAGTAGAGTAAAAACAAGGATCCACCTATTTTCT
 TTATATTTTCAAAACGAATAACACTCCCCGCTAGTTGTGTCTGTTGCAAGAAGCGTATGAATCTACGGATAACTCGCGA
 CCACTATTTCTTCGATGGACATCAATTTGATCGAACGATATCTCCGTGGAGATGAGACCAGAAACAACGACTAAGAATG
 AAAAAACAATACGCCTCTAGCTATTTACCTTAATAAGACTGTCAACTCTACTACCAATTAATTTCTACGCTCCCCATAAA
 ACTTTAACCTCTTTTTTCAATAAATCTATGTTTTGAGACGTAAGATCAGTTTTATTTTGGCGGATATTAGTCGCGAAG
 CTCGCACCTCGATTACCCGATCCGGGGGATATGTATTTTTTTTTTAAATCACGCTTTCATTGCATTTCCGTTTAGAAACA
 TAGTCATAATAATTTTGA AAAATATAAATATGACTACG

>CL3292Contig1|venom dipeptidyl peptidase 4-like

GATTTTAGCCACGAGGAGAAAAATATTTATCATTTAAAGGCAAGAAACAACACGGCAAGGGGAAAATTCGAGCATGTGA
 CGAGTTACCAACTGGTTAATGGGACGTTGACCAACGAACGGATTTGACTCCATTTTCATTTTCTGTACAATCTTTGCTGA
 AAATCGATTGGAATATGGAATAATTTATTATTTGGCGAGTGCACCGAGCGCACCATCCCAGAGAAATTTGTATTCCGTA
 CGTGTCCGCGGTGAAAGGAAAGACCGACCTGCATATCCTGCAGCGTCCTCACACCGGAAGGCAACAATTCGACGTACGCT
 GCTGCAGTATTTTCCGAGGATGCCTCGCATTACGTCTCGTATGTTTCCGTCCGGATCCTCTCATCGCAGACATATATAA
 CCGTCAACACAGAAAAAGTCACTCTTGGGAGAACATAAAGTATTGAGAGCAAAATGAAAACGTTTGCCAGTGACTATC
 AAGACTGTGAATATTTTCATGTAAACGGTTTCACGACGAGCGAGAGATGATTTTGCCACCTGGATTTCGACGAGACTCGC
 GTATCCGATGATAGTCCAAGTATACGCCGACCAATACTGCCGCTATAAAGACGTACGAGTTTTAGTTACAATTATTA
 TTACGTACGAATCGCAGCGTAATTTGGACCGTAATCGATGGGCGAGGATGCGCCTACAGAGGAAGTGAATGCTTTTTTC
 AAATTTACAGACGCTTTGGTAGCGTCGAGATCGAGGATCAAATCGCAGTTACCAAGGAATTCGACGCCATGTATCCGTGG
 ATCGACTCCAATAGAACAGGCATATGGGGCTGGAGTTACGGAGGATTTGCAGCCGCAATGGCATTGGCTACCGACAACGA
 GACTGTCTTCAAGTGTGGAATCTCAGTGGCTCCGGTCTCGTCTGGATTTATTACGATTCAATTTATACGGAGAGATATA
 TGGGGCTGCCAACCCCGAGGACAATTTGATCGGATACAATCGATCCGACGTGACGAATACGTGACGAGACTCGTGGG
 AAAAAATACATGCTCATTACCGGTACGGGAGACGACAACGTGCATTATCAACAATCGATGGCACTTGCCAAAAGTTTGGC
 AATCGCTGATATCCCCCTTCGAGCAGATAAGTTATCCCAGCAGGCTCACAGTCTTTCAGGAGTAACCTCTCATCTCGCT
 CACACGATGGACCACTTTTTTGGGGCGATTGTCTTGAGCTTTCCTACGCTCGAAAGTCTCCAACCTGAGATAAAAGCTCCA
 GATTTGATGATGGAAAAAGGATTTAATCTGACGTGATATAAAGTGAAGAACGGAAGGGGAATATCTGGCAACCTTGAGCA
 TCTACACGTCTTTAGAGAGTGGCTTTATAAAGTCTGAGTATGGAAGAAGGGAGGAACCTCAAGGTGAGCGAAATCGTATC
 GGAGTGTGATGAGAAAGCGAAAGGTGGAAAATCTCACTTGACAATTTTGACGACCTTGAGCAATTGGAGAAGACTAG
 TAAAAAAGTCGNACATTAGAAAAGTTTTCTGTTTATTATTT

>CL3303Contig1|proteasome subunit alpha type-6-like

GGAGTGAACGACAGTCGCAAAACATGTCGAGAGGACAGCAGCGCAGGTTTTGACAGGCATATTACAATCTTTTCGCCCCAAG
 GCCGGCTTTATCAAGTTGAATATGCTTTCAAAGCCATCAATCAAGGAGGACTTACATCGTTCGCGGTCAAAGGCGTCGAT
 ACCGCGGTTTTTCGCGACTCAGAAGAAAGTTCCCGACAAGTTACTCGATGCTTCAGCGTCACACAGTATTCCAATTTAC
 TGAGCACATCGGTCGCTCATGACAGGCATGATCGCGGACAGCAAGTCTCAGGTACAACGTGCTCGTTACGAAGCTGCAA
 ATTTCAAGTACAAGAACGCTTACGAAATTCGGGTAGACACGTTGTGCAGGAGAGTGCAGGACATAGGTCAAGTGTACACT
 CAAAACGCGGAGATGAGACCTCTGGGTTGTTCCATGATGTTGATCGCTTACGACAAGGAAAAAGGACCTTGCAATTTACAA
 AGCTGATCCGGCGGGGATATTTCTGTGGCTACAGAGCGATATCGGTCCGAGCTCGTCAGACGGAGGCAAAATTTCTATTTGG
 AAAAGAACTCAAGAAGAAGCAAAATTACAGCCACGACGAACTGTACAATTGGCAATTACTTGTGTCCAGTGTCTTG
 TCCGTGCACTTCAAAACGACGGAGATCGAGATAGGGGTGGTTTCCAAGGACAATCCCAAGTTTCGAGTTTTGACGGAGGA
 AGAGATCGACAAACATCTGACCGCAATCGCCGAAAAGGNTAAAAAATATCGTCTCCGATCAGTTCATCAATTTCAAAC
 GCAATTATCTTTTTTTTTTTTACTATTCAATGGCGAGGATTCTGTATATCCAAGGAATAAAATAAGTACG

>CL3309-bisContig1|endoplasmic reticulum resident protein 29-like

ATTACTGGCTCGATGGTTGATAGTTGTGCTGAGCGTTTTGGCTTGCCACGTCGTCTGCTCGTCTCGCCGAGGATTGTA
 AAGGATGCGTTCCCTCGATTCTCTCTTCGACAAAGTGATATCAAAGTTCAAAGCATCGGTGGTAAAGTTTGACGTA
 CGTTTCTTTACGGCGAGACGAGGAATACGGAAGTATCAAGCGATACGAAAGACTCATTGGACCTTTTGTAGTGGC
 GGAGGTGGGAGTCAAAGATTTTCGGCAACAAAGATAATTTCGACCTTGCGCGACGTTACGAGATCGTGAAAGAGCAATTTTC
 CCGTGATATTGCTCTTCGTCCAAGGTCAAAGCAAGCCGCACAGATTCTCGCCCCGAGAAGGACGAGGACTTTTACTGCCG
 AAAACATAAAGCGTTTTATCAAAGCAAAATCCGGAGTTTATTTAGGTTTGCCCGTTGTGTGAGCAGCTCGACAGAATC
 GCTGAAGAATTTAAACCTCCAGCGAAAAAGNTCGACAGGGTTTATTGAACAAAGCCAAAGTGTTCGAAGAGACATTACC
 GGAGGAGCATCGAGCCGTGCTAAAGTATATGTCAAACGATGGAAGGATAATGGAGAGAGGGGACGTTTTCTGTCAGA
 CCGAACGACGCGAAAGCGGGCTTGCTCAAGGGCAATTTGTCCAAGGACAAAAACGCAATGGAGAAGAGACGAAT
 ATTTTACAATCTTTTACCCACAGGGACGAACTCTAACGCCCTATCTTGAAATTTTTTAAATGAAAAAGAAAAATAAACTT

GACGATCGATCGTAATCGTGCGCACGAAAT

>CL330Contig1|farnesoic acid o-methyltransferase

GAGTTGTAAATTCGGAACGTTTCGCATCGTCTTGTGAGGATATCAAACCTTTTCTTAGTCTCCAGTCAACATGGCTATTTCA
CTCTCAACCGAGGACAAGTTGGAGTACCAGTTCTACCCTTGTGCCAGTGGGCAGATCCAGTTCGCATAAAAGCTCCCAA
CGATGCCCATATCGCGCTGACCACTGGTCCCCATGAGGGGGAACCCATGTACGAGGTTTTATCGGTGGATGGGGCAACA
GCAAATCGGTAATTCGTA AAAACAGGACCAAGCCTGAGGTGCGGGAAGTGGATACTCCGGGAATCTTGACTGGCGATGAA
TCCCGTGGCTTCTGGATAAGGTGGCAGAGAATAACCTCGCCGTTGGCAAAGAAGGAGAATCTACTCCTTTCCTCGCTTA
CGTTGATCCCGAACCCCTTTGCAATTGGTTATTTTCGGTGTTCACCCGTTGGGGTGCTCAAGGCGAATGGCTCATCGAAG
CCAGGTGTATCGGAGGTTATGGTGGTCATCCCGGCACAACGGCTCCGTGAGCCCCGGCAGAAGTTTCGGGCGGAAGCGTG
TGTTGGGTGATGCTTCCGGAGGAATGGGTTCTCTGGAGCAGTGAAGGTGGACAAGACGGTGAGCCTCTGTTCTGATG
GACGTGCTCATCACGAAGGAGCTCTTCTTCTGGCAAACCTGAAAGCCTCTCATTCCGTCTGCTACGTACCTTGGGGTGGC
GAAGAACATGGAAAGAGCGACTACCAGGTTCTTTCGGGCTGCAATCCACGATGGGTACCAACCAGCGGTGGAAACATTCC
TCCGAATGCGATTCCCGGAGGTGAGACCGAAGATGGTGAGCCTCTATTATCGGGCGTGTCAACACGAGGGGCACACTTA
CCATTGGAAAGGTCCAGCAGTCCCAACAGCTGCTTTACATCGCTGGTACCGAGTTGCTTCCCGGAGTACGAG
ATTCTCGTCAGCGAATAAAATTCGCCTCGCCAATAACATCGAATCAAAAAGAGAAAAAGAAAAACGCAATCGAGTACTATT
CCTTTAAAAGTCACTTCTCAAGAATTCTCTCAATTCCCGGGATCATTGGTTCTCTCATTGTTTTGTTTTGCAATTGGAGCGA
CCATGTCCATTTTTTCTTCTGAGACTCGAAAAGTTACTGGTTAACTTTAGCTCCATTACCTCCAAGTTTCGTGATCC
ACAAAGACCCAGTCGAACAAAAAATCAACGAATCTCAAGTTCCAACGTTCTGGAGAATTTGTCAAATGCCTTACCCGC
AAGAGCAAAGCAGCTTATGCACAAAGTAAATTTAATACTGATAGAGCTCATTAGCGAATGCGAATGTTG
CTTTTCATGATATCAAAATAAAATATTGTACTTATTATTTAATTTTACATTAATGTTGAGCGTATTAAGAAAGTATTTA
TAAATGACTATATTTTCCATGCTAATTGCATAGTTTTCTAACGTTCAACACGAGCTCTGTTGAAATGATTGAGAAAATT
GTTTACTGTATTTTTTGGTCATCTATTATCAAAATGTTGCAAAGTATAAATAAACATTTGGAACCGTA

>CL331Contig1|elongation factor tu (ef-tu)

GATGCCGCAGACGCGGGAACATTTGTTGCTGGCCAAGCAAAATCGGTATCGAGCATATCGTCGTTTTATAAACAAGGTA
GACGCGCCGACAGCGAAATGGTTGAATTGGTAGAAATGGAGATTGGGAATTGATGGCCGATGAGGTTACGACGGTGA
AAATTTGCCGGTAATCAAGGGAAGCGCGTTGATGGCGCTCGAGGGTAAATCCCCGGAGATCGGTAGCGAGGCGATATTG
AAATTATTGGAGGCGATAGACTCGTTCATACCGACCCCGTGAGAGATCTCGACAAGCCATTTTTAATGCCGGTCGAGGC
GGTATATTCGATCGCCGCGCGGTACCGTCGTCACCGGTCTGTCGAGCGCGGTCTCGTCAAGAAGGGCATGGATTGCG
AATTTATCGGTTACAACAAGAGTATCAAGAGCGTCATCACCGGCATCGAAATGTTTCATCAGATATTGACCGAGGCCCAA
GCGGGCGATCAGCTCGGTGCCCTCATTCCGGGTGTCAAGAGGGACGAAATAAAGCGCGGCATGATAATGGCAAAACCCGG
TACCATGAAAGCCACGATCAGTTCGAGGCGCAGGCTTATATACTCAGCCCCGAGGAGGTTGGTCGAAAAAGCCCATTTG
GCAATTCAGTTTCAGCTTCAGATGTTTAGCAAAAACCTGGGATGCTCGACGATCGTAACCATACCCGAAAAAGAAATATGGCC
ATGCCCGGCGAAGACGCCAAATTGGAAATAAAATTGACGAAACCCATGGTCTGTGAGAAAGGTGAGCGATTACCCCTGAG
AGACGGTGTGCTCACGATCGGAACGGGGTTATTACGAATACGCTCAAGCGTCTGAGCGACAAGGAAAGACTGGCGTTGA
CCGAAGGGAAAAAGGCGAGAGAAGCACTCGCCGCGCGCGGCCAAAAGTAGCAATTAAGTTTTACCATATTACCAAATT
GTCGAATAAGCATTCTTCGTTGACCCTCCAGGAGTATTATTATCATCCGGTGTAGTACCAATTATAATCACATTGATCA
ACGCGGGTCTTGAGCAACGAATATTATCGGTCGAACCGAAACGGCATTTCCCGCTGATTATTGATGGAATGTTCTTTT
TTTTCTAGTTTTTTTTTTTTCTTTCTATTTTCGGTAGGTAATGGTTTTACACGTAGTCTCGACCATGAAATTATTCAA
CATTGTCACGGGCGCTTCTTCTCTCGTTTCGATCATTGAATAAATTTGTTTTTTTTTA

>CL3336Contig1|nad dependent epimerase

ATTGTTCTAGGGGATGTGGCTTCGTCGACGGAACCTTGTGGCTTACCTTGTGGAACACAGCTGGTATCGTTGGTGCG
AGTCGTTGACAAAGTCCCTCCGCAGACTGCCTGGCTCAACAAGAATCATCAGAAAATATTTGAAAACCTATCGTTGATT
TTAGAAGCGCAATCTTATCAATCCAGTCTCGTGCCAAAACGTTTTGCCAGTGACACTCCGATAGATTATGTGTTCAAC
TGACTGGAGAAAACAAGAGCGGTGACACGGATCTGTTTACAAGGAAGGAATCTACAAGCTGAGTATGAATTGTGCTCAG
CACGCTGCAAAAATCGGAGTCCGGCGTTACGTGGAATTTTCATCGGGGAATTTAAGTTCTGTGAAAAAGCTCCGCACAA
GGAAGACGACGCTTGTGACCCGTGGACTTTTGTGGCAAAGCACAACTCCAAGTGGAGCACGACTTGAAAAACGTTTCAG
GCTTGAAATATACGATACTGAGACCAGCGATTATTTACGGTCCAGGCGATAGGAATGGTTTGGCTCCTCGCCTGGTCGTC
GGCGCCGTTTACAAGCATCTCGGCGAAATGATGAAACTTCTGTGGGACCGGATCTCCACATGAATACCGTTTCATGTAAG
AGACGTTGCTCGTCAATGTGGCAGTTGGCGAGCTGAGGACCGTCGATGAAATTTACAACGTTGTCGACGAGGGAG
ATTGACCCAGGGTTCCATAAGTGCCACGGTCTCGGAGCTCTTCAACATCAATCACGATTACTGGGGAACAACATTGTCG
ACCTTTGCGAAGGCCGATATGAGCTCCGTGGTAGAAGAAGTAAACGACAAGCACATGGGTCCATGGGCGGAGGCATGTAG
CAAGGACGGGGTAGAAAACAGCCCTCTGTGCGCGTACATCGATCAGGAACCTCTTTACAATAAACATTTTACTTGTACC
CTGGAACCTACCAAAACAAAACAGGATTGCTTACTCGTATCCAAAACCTGACAAAAGACGCGCT

>CL333Contig1|coatomer subunit epsilon

ACATGAGTTACCGCAAACGTCATCGCAACGCACTTGGCCCAAGATGGCACGTGAGCAAAACCGATGTCGACGAGTTGTTG
ACGTTAAAAATCACTTTTACATCGGCAATTATCAACAATGCATCAACGAAGCTCAAAAAGTCAAGTCGACTTTGCCGGAA
GTAACGTTGGACAGAGACGTCTTTCTACCGGGCGTACATAGCGCAGCGAAAGTTTCGCGTGGTGCTAGACGAAATAAA
CAATTCGTGCGCGCCGATCTTCAGCCGTTGAAAACGCTAGCGGAATATTTTGCCTCCCAAATCGTCGCGAAGGGATAG
TAGCCGAATTGGACAAAGTGGCAAACAACGCGACAACGGATAATCAAAATTTATGATAGTAGCCGCGACGATTTACTAC
CACGAAAAGAATTTGGAGTCGGCGCTGAGAATATTGCACAATACCGATCATCTGGAGTGCATGGCGTTGACGCTGCAGAT
ATACTTGAAAATGGATCGTTTGGATTGGCGAGGAAAGAGCTGAAGGCGATGCAAGAGAAGGACGACGCTACATTGA
CCCAGTTGGCTCAAGCATGGGTAAACATTAGCAGCGCGGAGAAAAATTGCAAGACGCTTATTACATCTTTCAAGAAATG
ATTGACAAACACTCGAGCACGAGCATGTTGCTCAACGGTCAAGCGACTTGCTTCATAGGCCAAGCAAAGTACGAGGAAGC
GGAATGCTTTGCAAGAGTCTTTGGACAAGGATAGCAACAATCCTGACACGCTGATTAACATGATAGTCTTTCTCAAC
ACATGGGCAAACACCTGAAGTAGCGAATCGTTATTTGAGCCAATTGAAAGATTCTAATCTCGATCATCCGTTCTGTCAAA
GAGTATTTGCAAGAGAGTCAATTTCAAAGACTTAGAAAAAATATTTATCTTCCGTTGAATCGATCCTCCCCCGCG
GCGATTACCAAAAGGAACAATCGCGATTTTAAATCAGCTTAGAGTATCCGGTAACTTCGAGGCTGTTGGAATGACAAATC
TTACGAGAAATCACCGATTTTCAGTCTAGCCTTCGAATCTAATAATCATAACGATTTTATTATAAATCAAGTCCATGAAA

mmc4.txt

AATAGACCGTTGGTTATTTCGAGAGCTTTTACCACCTATTCTTTGTACCAACATCCAACCTCTATTTTTCTCTCTCTT
TTCTTCGGATATCTCGAGAGCTCAACATTTTCTTTTCGTGCGAATAAAAACTTTATTTTAAACTTGTTCATCATTTT
GTTTGTACATTTTTTGTCTCTCGTTTCTTACGTTTTCCATTTCGATCGAATATACCACCTGACGGTCTATCGATTTAG
AATAAGCTAAAGAAAAACAAACAAACAAAAACGTTACTTTACTATTACGAATAACGATATGGCTGCCATTTTTTAATCGT
CGGAAAAACATTGTCGACTAAATGACTTATTACGAGCATTCAATAACGAAAGTTTCATCTTTCTGTCGTCGTATTTTTTAC
CATAATATACGGTTTTAAATTAAGAGGCTCGAATTATTTGTTTGGCTCGCGTGGAGAAGGCAACATCGGAAAAACAACAA
GTGGCCAAAGGGGAGATCGTTGCGTTACTTCAACCTGGGCTCGTTGAAAAAAAACAACAAAAACATTGAATTTCTCTGA
AAGATTTGGATCAGCACTCCGAAGACGTAGCACACAGAATCGAGAAACAGTATAAAGTTTAATTCAATTAATAACGGTTTA
ATAAAATGAGCCTGAAGTTTGCATCGACGCTATGCCACGAAATG

>CL3342-bisContig1|activated rna polymerase ii transcriptional coactivator
p15-like

TTTTTTGAGCCTTTATATACACGAGGAAAAATAAGGAGCAGGAGAAAAACGGTCGCATCTGCTTCCACGCGTCCAATGCTC
TTACAGCGAAATTTTCAATTACTGAAAAGTATCCAAACAACAGTGTTCAAGAGATATTACGCTTATAAAGAGCCTTTTCT
CTTTTACGACGAAATGCCGAAAAACCAAGGAATTTGTGGCGAGAGCGAGAGGAGAAAAACCTGTGAAGA
GGAAGCGTGCTGCGGCGGAGAAAAAGTTGAGAAAGTCGAGAAAGCAGAATCGAGTAAAAAGTCAAAGAAATCTGGAAAA
GACGAGAAAGAAGATAAATGGGATCTCGGCAACAATCGTTTCTGTCATCTGTCGGAATTCAAGGGCAAAATGTACGTTGA
TATCCGAGAAATGTACTTCGACAAAGAAGGCGAATTGAAACCCGGAAAAAAGGTATCTCCATGAACATGATCCAATGGC
GCCAGTTTCATGGACCAAGTGGAAAGAGATTGACAAAGTTGCCAAATCAAAGTGTTAAAGTCTCTGTGCGAACGATCCAAAT
CCAAGAAAAATCTCGTCTCCGTTGTCTCATTCTACGTATATCTATGCATTTCTTCCAACATTCTAAATGTAAACCAA
TTAAATATTCTGTACCGAAACGTGGATTACTAAGAAAAATGTAAATAAATAAATAATATCAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAACATGTCGGCCG

>CL334Contig2|ubiquitin-conjugating enzyme e2 variant 2-like

TAGTTTCGGGTTTCGAGCGTTTATAGAGAAGGGTGTACGCGCACAACTCACGGCAGTCTCGCGGAGGTTGATTGAGGAAAA
AAGTTTCATTGCGCGAGTAAAAATCGGCATAAAAAATTGGCTAAAAACAATAAATAACAATAGTCGAGAAAAAAATCAT
TCAAGTTTGCAATAAATCCAAGACTCTCACACAGATCCAAGTACAAAAGTAAATACATGTACAAGACTCTGGTTGTGGCG
AGGTTGTGCATGAAAAAAGAAAAAACGTTCTCAAATCGACAGCAGGCATCGTTGCAAAATTCAAGAAAACTAAACCTCGT
GCAGTTTTGACGTTTTTTTTAACTCTCTCGTCAAAAGTGTTGTCTACTGATAAAGTGCTTGGCCAAATACGATAATATAT
ATTTAATAATACATAAATAAATAACGTGCTGCACGTAAATTCGTGATCATGGCGTTGCCCGGACCGGTGTAGTGGTACCT
CGAATTTTCGCTGCTCGAGGAACTCGAACAAGGCCAAAAAGGCGTCGGGGATGGCACCATCAGCTGGGGGCTTGAGAAC
GACGACGACATGACCCTCACACACTGGACCGGCATGATCATCGGACCGCCTAGAACTCCCTACGAAAAATAGGATGTACAG
TTTAAAAATCGATTGCGGTCAAAGATACCCGGACGAAGTCCCAACGTTAGATTTTTAAGCAGAATCAATATGAACATGCA
TCAACAGCACCCACCGGAGCGGTGGACAATCGAAGCGTGCCGCTGCTGGCAAAAGTGGCAACGCGAGTTTACGATCAAGACG
GTATTGCAGGAGCTGCGTCGTTTGTGACGTTGAAAGAAAAACATGAAATTATCTCAGCCCCCGAGGGAAGTACTTTTTTA
GCCCGGAGCGTCGAAAGCTCCAGTCGTCGAGAGTAAACCGAGTTGGAAGAGAATTTCAAAGCCGAAAAATGTGAAAAAG
AGGCGGCAGCCGTTTCGAAGAAGGAAGAGGAACCAAATAAAACGTTGAAATATCTGCCGCGAGCGAAGGGAACAACCGTT
GATAAGCACTCAACAAAGTCGAAGAAAGGATGGAGGAGGCGAGACGAAAGAATAATGAAAAATAAAAAACAACAAAAA
CAAAAGCTTAAATAAATAAATAATATTAAATTAATTAATTAATAATAATAAATTGTAATGAGAAATGAAAACGGTTTA
ATTAGTGAGTGGTTGCGATTGTTTTTTTTTTTTTCTATTCTAGTGCCCGCGTTCCGAGACTCTTTACCCGAGGCGG
AATACGTCGATCACACACCCACACACACACACT

>CL3356Contig1|multiple inositol polyphosphate phosphatase 1-like

GTCATTGTAATTATCGTGACCGTAACATATTCATGTGTTTATATAGATACAAGAATAATCGTATTAGACCGAACTGACAA
CATTTGAAAACGATCGGAATCAGTCTCACGTCTCTCGAAGCTCTTAACTGTGGCCGCGCCTGTTTACGACCGTAAATTAT
GCAGGTCATTGGACTTTTTGACTCTTCTTGTGTAACGGCAGCTGGCTCGACAGTTGACATTTGTTACGCCGAGGATG
ACGATCCGTTACTGTATCTCGCTAGTAAACGTCGTATCACTTCGTACACGGTGGTAAACCGGTTTCCAAACAGTACCA
GATTGTCAACCGGTCCAAATTTGGATGACGAGCAGACACGGTGCCCGTTATCCAAAAGTCGAATCTGTCAATAAACTTTC
GACTTTACCAAAATTTGAGAGAACAAATTTGTACACAATCATGAACATCGAGGAAACGGTCATTTGTGTAAACGAAGACTTGG
ACAACCTGAAACTATGGAATCCAAATCCAAATTTGACTCCGGACATGGCACTTAAATTGACTCCCGAAGGTGCCGAAGAT
TCTAAGCTTTTTTGGCAGCAGATTGCAGAGCAATTTTCCCGAGATTCTTCAACCAACATGGCCGATATAACAGCCGATAA
TTACAAGTTTCAGAAGCAGCAATTCGGAACGCACCTCGTGCGAGCATGGAATCATTTATGGAGGGAGTTTTCCGACGAAAA
ATGCGGTTTTGGCCAGTCGATGCTCCAGTGAGAACGATAATTTGTTGAAGGCGTATAGAACTGTTGAAATGGCAGGAA
AACGATCCTTCCGTGAATGAGGAACGTGACAAGTTTGCGGCGATGATGGACGTTTGCTACAAAATGTGAGCAACCGATTT
GG

>CL338Contig1|protein 5nuc

AGTTTAGTTTCCGTTGGTATAAAGACACTTTCGTATTCCAAGAGCAGAGTGTCTCAGTCGGTTCTTTCTGTAACCTCTCAG
CGATTTTCGCGTTTCGCTCGTTGTAGCAACGACGATATTTGGAATGTAAAAGTGTTGTGAATGTTCTGATGTTTCGGTAGTGC
GTGATTAACGAACTACACAAAATGCGGGCCTTCTCCCGGACATTTTTGCCGATCGTGTTGCTCTTCTGCTGGACGAATCA
TGTCGCGGGACATCCCTTGGCGGGAAAAAGAGACCGACTGGGTTTTGAACATTGTTTACACGAACGATATGCACGCGAGAT
TTGAGGAGACGTCCGTACTCTACAAAATGTTTGGGAAAAAGACATAGCAGAGAAAAAATGTTACGGTGGTTTTCTCAAGA
ATAGCGACCCCTCGTTCCGCAAGCCCGAAATTCACGACGCGACACTTTTTCTTAAACGCTGGTGACACTTATCAGGGCAG
CGTATGGTTCAACGTCCACAAGTGAAGATCGTATCAAAGTTCTTGAATATCTTATCGCCAGATGCCATTTTATTGGGCA
ATCACAGTTTCGACGATGGACCGATGGGTTTGTGCCGTTTATAGAAGAAGCAACATACCCGATAGTCACAGCAAAATCTC
GATTTGAGCCGAGAGCCAGAATTGGCAGCCTCGAAATTAAGAAGCAGCAGCATATTAGATGTGGACGGAAGCGGATCGG
TATAATCGTTATTTGACACCGGACACAAAGATAATAGCGGCTACGGGGAATGTCAAATTTCTGGATGAGCTGGAATCGA
TAAAAAGCCAAGTGGCTCAATTACGCGAAGAAGGTGTCAAACATTTTAATTGCTCTCGGTCAATTCGGGTTTCGCGATGGA
CAAGAAGATTGCCGCTGAGGTTGACGGGATCGATATCGTTATCGGTGGCCATACCAACACTTTCTTTACACCGGTAAACA
ACCCGATATCGAAGTACCGGAAGGCTTATACCTACGGAAGTGGTGCAAAAAAATGGGCGAAAAGTTTACGTCGTTCAAG
CCTACGCTACACCAAAATTTTGGGCAACATAACAGTTGTTTCGATGAAAAATGGCGAAGTCACGATATCCTTGGCAAT
CCTATTCTCGTCGACAGTAGTATCGAACAGGCACAGGACCGTTCTGGCAGAATTGGAACCTGGCGACCAGAGGTGACG

mmc4.txt

CCATAGTGAACATGGTGATCGGTACAACCAAAGTATTGCTCGACGGTGACAGTAAAAGTTGTAGACGAAAGGAATGCAAC
 CTCGAAATCTCATAACCGATGCAATGATCGATTACAATGCAAAACAATATGTTGAATACGACGGCTGGACCGACGCGGC
 AATTGCTATTTTACAATGGTGGATCGATTAGGACGCTATACGCAAAAGCTGAAGACGAGACGATCACCATGAGTGACCTCT
 TGTCAGTTATGCCGTTCACTAACACTCTCCAAAAGCTCAAGTGAAGTGGGAAAACGTTTCGCGAGGTTTTAGAATGGAGT
 GTCCACTCGCTGAAAGTAAACGACACTGCGGACTTGAATGGTGGATATCTTCAGTTTTCTGGTGTTGAGTCTGTCTACGA
 TTTATCGAAACCTGCTGGTTGAGAGTCTCTTCGCGCAGAAGTACGCTGCGCCCTCTGCGATATCCCGAGTTTTCACTGACC
 TCGTTGATAACGATATGTACACTATTTTATTATCTGACTTTTTACGAGAAGGTGGAGACGGTTATAGCATGTTGAAGAAT
 TCGACGTTCACTGCAGTTGGAGTGACCACGGACGAAATATTGGTTCGATTACTTCAAAAAAGAAAGTCCCGTCCATCCGGA
 CGTAGAGTGGAGAATCAGCTATTTGGTTAAATCTGGTGACCATGAGTCACTGAGTTTCGGAGCCAGACGCGCCAATGTTAC
 GTTCTGTGGAGATGGGGAACCGACCGAGGGCCACTCTCACTCTTGATCAAACCGTGCTTCTAGTTTTACAACGCTTTGTC
 TCTCTGTGCATACCAACTAATTCGCTGAATACCATTTTTCTGTGAATCTTTTTAAATCAAACGTGAAAAACCACTATTTT
 CGTGTTCCACGCCTCAAAGAGGTGCTTAAAAATATTCT
 >CL3391Contig1|troponin isoform 1-like
 CGGCCGGGGGATCCAAGAGGATCATTGCTCGACAAGCCAATTTATTAATTTTACGTTTTTTCATGAAAAGAAGAAAAAC
 ATTCAATTCGCTAAATTAATAAAATTAATTAATTACCAAATTTTATTTAAAAAAGAAAGTCAAGTCAATTTTGAAGTTT
 TCGACGTTGCTGAGTGCCATAGTTCCGGAGTTGTTAATTTTTTACGGCGGATCCAAAATGGAAGACTTGAACAAAGATC
 AAATCGTCTTCTCAAGAAAGCTTTTCGATGCTTTTCGATCAACAGAAAAAAGGCTGCATCGGGACTGCCATGGTTGGTACG
 ATCCTTACCATGTTGGGTACGAACTCAGTGAATCCACACTCGCCGACATCATCGCCGAGGTTGACGAGGATGGCTCGGG
 CGAGTTGGAGTTTGAGGAGTTTTGCACCCTCGTGCAGGTTCTCTGTTGAGGAGGACACGGAGGCGATGCAGCAGGAGC
 TTCGAGAGGTTTTCCGTTTTGTACGACAAAGAGGGAACGGTTACATAACGACCGACGTTCTCCGTGACATTTTGCACGAG
 CTGGACGACAAATTTATCGCCGGAAGAGTTGGACCTGATGATTGAGGAAATAGATGCCGATGGTTCCGGAATCTTGACTT
 TGACGAATTCATGGAAGTCATGACCGGTGGCGACGACTAAAAATTAATCGACACTCTGCGCAACTTGAGCAACAAAAATT
 AAT
 >CL3396Contig1|40s ribosomal protein s13
 TTTTTTTGTTTGTGTTTCTGCCGCGGCCACTGTTACGCTACCGTCTTTTTGGAAGAGAACAACCTACCGCCATGGGACGT
 ATGCACGCACCTGGAAAGGTATATCCAGTCGGCGCTGCCGTACAGACGCAGCGTCCCACTTGGCTGAAGCTCACACC
 GGACGACTGCAAAGACCTAATTTTCAAATTTGGCTAAGAAGGGTACACCCCCCTCACAATTTGGTGTCTGCTCCGTGATT
 CTCATGGAGTTGCCAAGTCCGTTCCGCACCGGAAACAAAATTTCTCAGGATTGTAAGAGCATGGGCCTTGTCTCCGAT
 CTACCGGAGGATCTGTATTATTTGATCAAGAAGGCGGTCAAATCCGCAAGCACTTGAACCGGAACCGCAAGGACACCGA
 CAGTAAATTCGCTTGTATTCTTGTGAATCAAGAATCCACAGACTCGGTCTGTTACTACAAATCCAAGGGCTCTCTTGCTC
 CCAACTGGAAATACGAGAGTTTCGACCGCCAGTGCTCTTGTGCGTAATTCATCATGCTTTATATTTACATTGTATCAAT
 AAATAACAGATATCGATCCACTTCCAAAAAAGAGGAAAAAAGAGGAAAAAAGAGGAAAAAAGAGGAAAAAAGAGGAAAAA
 >CL33Contig1|low quality protein: apolipoporphins-like
 AAGCAGCTCTGGGCAAGTTGCTGAGCAAAGTTGATGGTGCGAACAATTCGACACGAGAGAAAAAGAGAGCGTGCGCATC
 GCAGCTCTCAAGGACTCGGCAACGCGAGATATCACGACAAAACGACCGACCGAAAAAATCTCCAAAGTCGCTACCGACA
 AAAAAAGTAGAAAAACCGCGTCAGGGTCGCCGCCATCGAAGCTCTTCCCTCGACTTGCTCGACCACATGGCAAAAACCACT
 TCTCGACGTTCTCGGCAACCGGGAAGAAGACACTGAGATCAGGATCAAAGCTTATCTCGCTCTGGTACGTTGCGCGTGC
 CAAAGTCGCAAAAAGGCATAAAAAGACGTTTTTGACAAGGAAACAGTGAACCAAGTTCGTTTCTAATACCTCGCATCTG
 AGAAATTTACGCGGAGCACCGATCCAGCAAAACAGCACGCCAAGAGCCACTTGCCGAGATCAAGCCGAGAATCAAGTT
 CCCCAGGATTTCCGCAAGTTCTCGTACAACAGCGAATTGTCTTACAACATCGGAGCGCTGGGTTTTGGGCTCGAGCATCG
 AGAAAAACGTGATTTACAGTCAAAAGAGTTTCGTGCCACGTTCACTCACTTGAATCTTACAACCGAAATCTTTGGCCAT
 GCTTTCAACGTTTTTGAAGTGGACGGACGAGTCGAAAACCTGGACAGGCTGATCGAGCACTATTTTCGACCGAAAGGCGA
 GTTTAGGGCTCAGGAATTTGACCAATTCGCCGAAGACGGTAAACACACTTTGACGACGATGTACGAGCGCATTAAGAAGC
 GTTTTGGCGAATCGACCCGCGGCGTGCAGAGTAAAAACAAGAAATTTGAACAAATTCGTAATAAAGTAACTCGATTTC
 GGGCAAAGTTAACGACGACGATCTCGATGTCGACGTTTCCGTAAGATGTTTCGGCGTCAACTTGCCTATCTGGACTATC
 AGGGCGCCGAGTTCGTTGCCGATCCGAGCCACTTCATCGACACCATCTTCGACATTCTCGACCACGGACTCAAGGGCGCT
 AAACACTTTGACAAAAACGTCGAAAGCCACGTGCACTTCTCGACGCCGATCTTGTCTATCCAACGGGACTGGGAGTGCC
 ACTGTCTCTCGGGGTGACCGGTGACAGCGTGGTGCACTTCAAAGCATCCGGAACCTTCGATTTGGCCGCGATAATAAAGG
 AACCATCGAGCGCGGTGTGAATTTGGCGTGAACCCGACCGCAAGTCAAGATCGTGGGATGATGATGATGATGATGATGATG
 TTCGGCTCTCCCTCGGGTCTCCGTCTGGTCAAGCAGCTCCACACATCGACCGGTTCCGACGTTTCCATCAAGTTACTCGA
 CGGCAAAGGCATCGACGTGAGCATCGGAATCCCCAAGAGGAAACAAGAGATCGTAAAAAGTTCGCGAGCGAGGTATTTTTC
 GTGACGCCAGATTCTGTCGAGCGTTTCCCCAAGTTACCAAAGGAAAGAGACAAAGATTGCTTCGACCAATTCGCCTC
 ACTCTGGGCGTCACCCCTGTGCGGACATCTCACTTATCCTTACGAAAACCTCGAGTCTGTGCACAAGAAACCCGTCTTCC
 CACTCAGTGGTCCGGGAGTATTTGCCATCAGTTTAGAAAACAACGACGTCGAGAGTTACCACTTCAAGTTGTTCCACGAC
 AAAGACGACGAGGAGCAGATCATTGGAGATCGTGCTCGAGACACCAAAACAGTAAAAACGACAGGAGAGTCGATTCAAGGT
 CGCCGGGAACGTGGACCCTAATGGATTTTTCAAATCTCGCTCGAGTCTCCTTTCAAGAAGATCCTGGCTGAGGCGAAAC
 TGAACAACAACGACAAGGAGAAGAGCCTCTCGATCAAGGCGCTCAACGACGTCGACACTTACTTCATCCGCGTGGGAATC
 GCAGTTGAATCCGGTTTCGAAATACAAGCCATCCTCGAGTACAAAGTACCGGAACACATCGAGAAGTTGGCGAGTTCCAA
 GACCGGAACCAAAGGTGATAAGAAGGACGGACAATTGTACAAGGTCAAGGGTGACGTGGAGGTGTTGATTTTGACAGCG
 GCAAGAAATACAGTTTCAACAACGTTGTTTTACTGCTGGAGAAGTCCGCTGGCCAGTCTCGATGGTTTTGTCGCTGCGA
 AAACCGGCGTGTCTGTTGCTGTTAAATAGCTCAATGGCGATGAAACATCGCGGTCAAGATCGACGCGCCCAAAATTT
 GACAAGAACTCAATCTTGATCTCGCCGTCTGTCCTCCAGGGACCCGAACTACGGCTTCAAACACTGACGTTGACGATTACGA
 CAGACCCGCGGAGTCTCTGATCACCACCTGTTTTTCAATTTACGGTCTGACCTCGATTCCAAGGTCAACCGATTGACCA
 TTACCGACAAATTTGTCGTACAAGAAATCCGAGCAACCGGTTGCCGCGCTGCAGGCTCGTTCACTCCCGCTTACCTTAAG
 CACGTGACCGCAATGAAATGCGAATCAAAAAGTAAACCTGGCCGCGGAGGGTCTCGGCGAGCGAATTCGAGATCGAAT
 CTCGCCGACGAATCTCTGACCGAATTCGATTTTCAATATGGAATTTGAAATGAGGCTCAAGTCCGTCGAGAACCAAGTTGCCCTTGCCTGAAAC
 ACAAGGAACACGCAAGACGCGAGTCAAATTAAGGCTCAATTCGTCGAGAACCAAGTTGCCCTTGCCTGAAAC
 GCAAACGTCTCGGTGATCACAAGAGCAAAGTTGAGGCTTCTCTCGAGTTGCCAGGTGGCGGAAAGTACGAGGCCGATGCG

mmc4.txt

GAAGTAACTTACGACGTCAAGAAAAACGACGTCAACGTACAGGTGATGCCGATCTCGCTCTCAACGGGAAGAAGCTCAA
GATGGACTACGGTGTGCTGGCAAATCCCCATAAGACTGAGAGCCACGCTCTCGTAACCCTCGACTCAACCAAATACATCG
ATTTCCCTCATGGCGATCGAGTACGGTGGCGATCCTCACGGTAAACTCAATCTCCACGTTAAGAAAAATCTTGATGGTCGGT
GGTCAGTACAATTACCAGAATGGAAAAGGTACTGCGAACCTAAACGTGATATCCCGAGTCTGCATCGCAAGATGAAGGC
AACCGGCGAAGTAAAGGTGGAAGGCAAAAAGCATCTCGCCAACGTGAGATTCTTGTTGCGACGCGGAAAAAGACCCGAGCA
AACGGCTCAAGATTTCTTCCGATTCCGGATGTCACGAAGGAATCCATCGACTCGAAAAACATCGTCGAGCTCGGCAAAATA
CAAACTGAGGTCAACGTCAAAGGCACCTTGAAAAATAATGGCAAGAGCGGCTACGAGGCGGACGGCAGTGCTGAAATCA
CTCTCCCGAACGATCACTTTGTCTCTCAAGGCAATCCAGGTACGTTGATTGCGGATGGTAAGAAGAATCGGCTGAAC
GGAGATTACCAAATTAAGCGACTCCATCACCAAAGGTGGCCAAACAGCGAAACTCTCTATGGAACGGAACCTCGGCTGGGT
CGAGGGCCCCGACCACGAGTACATCGGCAAAACACAGCCTCATGGCTCAAACCTACGAAGGAAAGAATTTGAAACTCGACG
TTTCTGGCAGTACGAACGCGTCCCTAACTCCGATAAAAAGAAAAAGCGAAATCGTCGTCGGTCTTGATGGATCCTGTGTC
CCCAAACGTTCTGTTTTCGCCCTCTCCGGCAATTACAATACCCAGGATGGTGATTGGAAGCTCAAGTCTACGCTTGGAAC
AGATCTTGGTGTTAAGGGTCACGGAAGTTACGTGCGAGGAGATAACGTTGACAAAGCAACGACTAGCGAGTCTGTTGTAG
AATTTAAATTTCCCGATGAGAAATGAGTTCTCTGAAGTTAGAAACGAGCCTGAATGCTTGGCTGCGCCGATGAACAC
GGCAAGTTCTCGTATACGGGAGTAAAGAGTTTGAGCTTACAATGGGGACAAAAAACTGAAAGCCGAGGTGGCTATTCTGTC
ATTCAGGAGTGCCGACTCTACCAAGCGAGCGATGGCAACGCCGAGGTGACGCTGACCCTGCTGGACAATGCGCCGTTG
ACGGTTGCCACGTGCTACAAGTGCACCCGACCGGTGAGCTGAAAAAGGCAGTGGAACGCTCGACGTAATACGGGAAAA
AGCTGCAAGCCTCGAAACCGAAGTAACCTCAGCAAGACCTTAAG

>CL340Contig2|3-hydroxyacyl-coa dehydrogenase

TATTCTGAGCGCAAGCCTGGAAATTTCTTGGCGGAGCAGAGCTGACGATGTTGCAAAAAGTAAAGAACGAACAGGAA
GCTTACGAGATCTCGAAAAGTTGTACGAAATTTTGAACACGATAGCCGCCAGTCGGAAGCCTGTGGTCGCGCGATTCA
AGGAACCTGTTGGGCGCGGCTTGGAGTTCGCCCTCGCTTGCCATTACCGTATCGCTGTCAAAGACTCCAAGACCAAGTT
AGGACTACCAGAAGTGATGCTTGGTTTGTACCAGGCGGTGGGGGTACTCAAAGATTAAACAAACTTACTGCACTGCCGA
ACGCCCTGGACATGACGTTGACAGGAAAGCAAATAAACGCGACACAAGGCGAAGAAATTTGGAATCGTCGATATGTTGGTT
AACCATTGGGACCCGGAGTCGCCAGCGGCGAAGAAAACACCCTCCGATACCTGGAGGAAAATGCAGTAAAAGTGGCCAA
AGATCTCGCAATGGAAAGCTCAAGCCAGACCCGCGGACCGAAATCTCTGACCGACAAAGTATGAGCTGGGCTTTTACTA
CAGAATTCGTAAAGAATCAGGTATTCTCTCGTGCCGAAGCACAAGTGATGAAAATGTCCGGTGGCCTTTATCCAGCGCCA
CTCAAGATTCTTGAGGTCAATCGGACCGGGCTCGACAAAGGTACCGAGGCTGGTTTTCGAGGCTGAAGCCCGTGGTTTTGG
CTACTTGGCTAATACACGACAATGCAAAGGACTCATCAGTCTTTTTTTCGGACAAACTGCCTGCAAAAAGAATCGTTTCG
GTGATCCAAAAGTGCTGTCAACAAAATCGCCGTTGTGCGGGCTGGACTTATGGGTGCCGGAATAGCTCATGTGAGCATA
GACAAAGGTTACAGTGTTGACTTAAAGACAGGAATAACGCTGGACTGTTTCGAGGGGTTGGACAAATCCAGAATGGAAT
GGAAAACCGCGTTAAGCGGAAACGGATAAGCGGTATAGCAAAAATCAAAGTTCTCTGCAAAATCTCGAGCCACGCTGTCGT
ACGATTCTGTTCAAGAACGCAGACATCGTAATCGAAGCGGTTTTCGAAGATTTGGGCATAAAACACAAAGTGATAAAGGAG
ATCGAAGCGAATGTCCCGAATATTGTGTCGTGCGACCAATACGTCTGCCATACCAATTACAAAATAGCTGCTGGTAG
CAGTCGACCAGAAAAGGTAATCGGCATGCACTACTTTTACCCCGTGGAACAAGATGCAGCTTCTTGAGTTGATAACGCACA
AAGGAACGTCCGACGAAACGATCAAAACCGCGTAGACGTGCGTTTTGAAACAAGGCAAAGTTGTTATCACCGTCGGCGAT
GGTCCCGTTTTCTACACAACGAGAATTTTGAGCGCGATGATGTCGGAATTTTTGAGGCTATTGCAAGAAGCGGTTGAACC
GACGGACCTTGATAAAAATTAACATAAAAAAGTTACGGTTTTACCGGTGCGAGTTGCAACGCTCAACCGTTTCGCA

>CL3415-bisContig1|60s ribosomal protein l28-like

TCGCGTGAACACGAAAGTCAAACGAAAACCTTATATTGTTCAAGTTATCTTGTTCAATAATTTGAAAAACAATTTTATT
AAAATTCAAAAATTTTTCAGTTGTTATTACCAATTAATTGATACCTTGTTGCAACTTCTGGAAGGTTTTCGAAATGATG
AAAGCTGTCGTTTGACCACGACGTTTCTCTTCTACTTTGTGAGTTTCTTTTCACTCGCTGCTCTTTCGACGCACGAGGT
TATTCATCATGTCGTTCCCACTTGAACCTGGATGATCATCCGCAACAACATGCGTTTTCTCTCAAGAAAGAACACAGC
AAACCTTCTCAACGGAACCAAACTCTGACCAACCTCAGTAGTTATCGTTACTCCGGCCTTGTCACCGTAAAAGCGT
CGGCATCGTAGACACTCTGACAAGAAAGGTTTACGGTCGTCTACAAGAAGCCGAAAGCGGCGCACAAAGCCGGCTAAGG
CAACGGTCCGGCGCACCATGAAAGCTGGAGCCCGCAGATCGCTCTCAAGTTGAAAACACTCCTCGTCGCCAACAAGTAC
CGTCGGGATCTACCAAGGTTGCGTTGCGTCGTGCCAGTGCTGTTCTGCACTCGCAAAAGCCTTTACCAGCCAAGAAGAC
TCGTGCTCTAAAAAGGCTGATTAATTGATACCGTCAATAAAATATTTAACAAAAAATAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAATGTCGGCCCTCGGCCCTCAA

>CL3418-bisContig1|40s ribosomal protein s28-like

GTGTTGAACGCGTGCTTCGGCTGGTCGCTTGACGAACGCCGTTACAAAACCTCTTTCATTTCTCGAAGCATTCTTTTAC
GGTTGCATCGAAGCCACGTGAAAAGTCATGGAGAAACAGTGGTACTTGACGCTGTTATTAAGTTCTCGGTCGTACCGG
CTCGCAGGGACAATGTACCCAAGTAAAAGTCGAGTTTCTTGGTGAACAAAATCGTCAGATCATCAGGAACGTGAAGGGCC
CGGTGCGCGAAGGAGACATCTAACCTTACTCGAGTCCGAGCGCGAAGCGAGAAGACTCCGGTGAAGAGACGAAGATCCT
ATTTTTCGACACCAAAATCAACATCTTTCGTGGGATGGGGAGAAAAACTTGGGAAGAAAAATGCGGCTGTCAATCTGGAG
GTTTCTGAAGATTTTCTCATCGCTATCGAGTTCGACATCAACAATCAACTTTGAGATGGCATTCTCGACTCTACTCTCG
TGGACCACCACATCGAAGGCGATTCTCGTTGACGCTACATCTCCGTGCAATCACACGAACCTGAAAAAACCGATGC
TAAATATCACAATCTTCGAAAATCTACAATAAATCTCCACTGGTAACCTCACAAAAAATAAAAAAAAAAAAAAAAAAAAA
AAACTTGTGCGGCCGCTCGGCCCTCAA

>CL3445Contig1|nadh dehydrogenase

GGTGAACCATGGCTAGGTGTGTTGAGGACAGTTTTACGCAATCCACCGGATTTTCGGGCGACGGAAGATTTTATTG
CAGAATGGAGCTCCTCTGCATTTTGCAAATCAAAAACGATCAGCGGCAAAATGGTATCCGGACTTGGAATACCTGAAAAC
CTTCAATGGCCCGGTCTGTTTCCCACTGACGGCGTCAAATGGAATAATCCACCGGTTTTTGGCGCTGCGGAGGTCCAGA
GAAACATAAAAAATGTAGAAAATCAATTTTGGACCTCAGCATCCGGCAGCTCACGGTGTACTGCGTCTGGTGCTCGAATT
GGAAGGAGAAAAACGTAGTTTCTGCCGATCCTCATATCGGTCTCTGTCATCGAGGCACCGAGAAGCTGATCGAGTACAAA
CGTACATGACAGGCTTTGCCGTACTTTGATCGTCTGAGTACGTCTGATGTGCAACGAACAGTCTTCTCGTTGGCT
ATTGAAAAGCTTCTCAACATTCAAGTTCCCTTGGCGGCAAAATATATTCGACGCTTTTTTGGCGAAATTAACCTCGATCCT
GAACCACATAATGGGCATTGGAACCTACGCATTGGACGTGCGCGCATGACGCCCTTTTTCTGGCTCTTTGAGGAGCGTG

mmc4.txt

AGAAACTGATGGAGTTTTACGAACGCGTTAGCGGTGCTCGGATGCACGACGCTACATTCTGCCAGGCGGTGTGTCTCTG
GATCTTCCGCTCGGACTGATGGACGATATTTACGAATGGGCGTCCAAGTATGCCGAAAGACTCGACGAGGTGAGGATGT
TCTCACTGAAAATCGAATCTGGAAACAACGTAAGTCAACATCGGCGTCATGACTTCCGAAAATGCTCTCAATTGGGGCA
TGAGTGGCGTCATGCTTCGCGGATCTGGCATCAAATGGGACATAAGGAAATCCGCACCTTACGACGCTTACGATCTTGTC
GATTTGACGTGCCAATCGGAATCAACGGCGACTGTTATGATCGGTATATATGCCGCATGGAAGAGATGCGTCAATCTCT
GCGCATAATCAATCAGTGCCTGGACAAAATGCCTCCGGGTGAGATAAAGACTGACGATGCGAAGATCACACCTCCCAGTC
GGCAGGAGATGAAAACGAGCATGGAAGCGTTGATCCATCATTCAAGCTTTTCAGTCAGGGCTTCCAAGTTCGCGCTGGA
TCGACGTACACCGCATCGAAGCTCCGAAAGGTGAATTCGGAGTGTATCTTGAAGCGACGGAAGCAGCAAGCCTTATCG
TTGCAAAATCAAGGCTCCCGTTTTCCGCATCTTTCGCCATGCAAGAAATGGCCCCGGGACATTTCTTGCTGACGTCG
TCGCAATCATTGGTACCCTCGACGTCGTATTCGGTGAATCGATCGATAAAAAACAAGCTCCTTGATCTAGTGTCGAT
TATTAATGTATCCTTAGCTTCGGAATCTTGATATTAATAGCGACTT

>CL344Contig1|phosphatidylethanolamine-binding protein homolog -like isoform 1
ACAATTCCGAGATTTTTCAATTTATCTGCCACGAAAGTAGTCAACATCAACAGCTTACAGCAGAAAACGTAAATTTCTA
ACGATCGCGACAAACATAAACCTCCAGTTGTGCAATAAAGAGGCGTAAATCCACAAGTCACTATGAATTGAATTGTTG
GCACTGTAGTAACCCGGCTCCACTTATCGTGTCTTGTACTTTTGTACCAGTCGAAAGTTAATCGGCGAATCGTGCAAT
GCACAAGTATCGAAAAAAATTTGTTGCGATCCCAGCTGTGGTGGCTTCTAGATCATTGTTAAAGCCGGAACCTGACTTT
TATCAACAATGACCGAAGCACTCAAACTCATGGCGTTGTTCTGATGTCATCGATAATCTGCCCAAAGATGTACTCGGC
GTCACATATCCTGGCGATCTTTCGCTGGCAATTGGCAAAGAATTTACTCCACGCAAGTCAAGGATAAACCTTCTGTA
GTGGGTGCGCGATTCTGCTTTCTACACTCTTGTATGACTGATCTGATGCTCCGAGTCGTAAGAGCCGCAATTTACC
GGAAATGGCATCACTGGCTCGTAGGAAACATTCTGGTAAACAAGTTACTGAAGGAGAAGTTCTTCCGATTACATCGGT
GCGGGTCCACCACCAATACTGGTCTTATCGTTACGTCTTCTGCTATACAAGCAGCCTGGCAAATAAACTTTGATGA
GAAACGCCTGACCAACAGAAGCGACGAAAATCGTGCGAAATTCGCCATCAAAGCATTGCTGCAAAACACAACTTTGGCG
AACCGATTGCTGGCAATATGTTCCAAGCTGCCTATGATGATTACGTTCCCATTTCTTACAAGCAACTCGGAGCGTAAAAA
GTTGAAACTTTAACGTACATAAAAAATGAGATCTTCCAATTTTCCAGTTTCGTTAGATTCCAAACCTCCGTTTATTATC
CGAACTTTCCCGAAGAAATATTTAGAAAAATGTATCGATTGGCTTTGGCG

>CL345Contig1|glyoxylate reductase hydroxypyruvate reductase-like
TATGGGGTCATGTGGACATAAACTCCGCTTTTCTCGATCGTGCCGACTGAGCCTCAAAGTCGTCTCGACCATGTCAGCC
GGCTACGACCATCTCGATGTACCGGAAATCAAACGAAGGGGCATCAAGGCTGGACACACTCCCAATGTTTTGACTGCCGC
CGTTTCCGAGATTGCTGTCATGCTTATGCTCGACGCTGCGAGACGTGCGCACGAAGGACGACTCCAATTGAAGCTGGTC
GAACGGAGAAAAGGCCGCAATGGCTTCTGGGTGAGGAATTACGAGATTGCGTAGTTGGAATAGTGGGTTTCCGGAACATC
GGTCACGGGGTAGTGAAGAGACTCTGTGGTTTCAAGTCAAGAGTTTCTTTACACGGGGCATTCCCGTAAGAAAGAGGA
ATTGGGTGCGAAGTTCTGTCTCTGGATGAACCTTTCGCCAGAGTGATTTCTGTTGTCGTAGCAGTTCCGCTGAACAACG
AGACCCGAGGACTTTTCAACGAGACGCAATTTTCAAAGATGAAAAAAAACGCTGTATTCTGCAACGTAGGCCGAGGCTCT
GTCGTCAATACGAATGACTTGGTAAAAGCTCTTCTGAGCGGGACCATCTTCTGCTGCGGGACTGGACGTACGGATCCTGA
ACCATTGCCAACTGATCACGAGCTCTCAAACCTCCCGAACGCTGTCGTGCTGCCTCACATAGGAAGCGCAACGGTCAAG
ACCCGAAACGAAATGTCGAGAGTCGCAGCAGTCAACATACTGAACGCCTTGGACGGCGTCGACATGTTATATCTCTTTG
AAGACGAAGAATGGCAAAGATAAAATGGCAAAGCTCCACGGATCACCACGGAATTAATATGCAACGTTTTAAATCTTTAT
CTTATAATTTTATAATGGAAAAATCATTTTTATATCGATTCTTTTTCTGTAAAATGTAGATAAATTTGTATAATATACA
TATACATACTATAAGTT

>CL345Contig1|ribosomal protein 17a
TTTTACGCGCTTAGCCTCCGTACTTCGCGTTTACGTTTCGCGAAGTTGATACTTTTTACTTCTACTTTGTGCTAAGGAATC
CTACGGATCCTTGACCGGTAAAAATGGTCCAGAAGAAGCCGAAGAAGAAGGTAGGAAAGAAGGTAGCCGCTGCTCCTTTGG
CTGTCAAGAAAGTTGAGCCAAAAAGCAAAACCCCGTTTGTAGAAGCGAAGCGCAACTTTGGCATCGGCCAAGAT
ATCCAGCGGAAAGCTGATCTGAGCAGATTCTGCAATGGCCCAATATCGCATCCAGAGACGAGCTGTTCTCTC
CAAGAGACTCAAGGTCCACCTCCGATCAACCAGTTCACCCAGACCCTCGACAAACAGACTGCCACCCAGCTCTTCAAAA
TCTTGGAGAAGTATCGTCCCGAGTCGGCCGATGCTAAGAAGAAGAGGCTGAAGGCTAGAGCCGAAGAAAAGGCTGCCAAG
AAAGAGGACACCCCGACCAAGAGGGCCGAACACGATACGCAAGTGAACCAACACTGTTACGACTCTCGTGGAGCAGAAAAA
AGCTCAGTTGGTCGTGATTGCCCCACGACGTTGACCTTATGAGGTCTGTTCTCTTCTCTCCCGCGCTCTGCAGGAAATGG
GTGTCCTTACTGCATCATTAAAGGAAAAGCTCGTCTTGGAGCTCTGTTGAGACGCAAGACCTGACCCGGCTCGCTCTC
ACACAGGTTGACTCTGGCGACAGGGCAAACCTTCGCAAAGGTCTGCAAGCAATCAAGACCAACTTCAACGATCGTCACGA
CGAGATCAGACGCCACTGGGGCGGTGGACTTCTCGGCAGCAAATCTGCCGCCAGGATCGCCAAGTTGGAAAAGGCCAAGG
CTAAGGAACTCGCTCAGAAACAGGGTTAAACGCGAGAACGATTCTTAACATCTTAGAATTGTACACGCGACTGGCCAAA
CAATAAAAACTGAAAAAAAATCGAAAAAAAACATGTGCGGCCG

>CL346Contig1|phosphatidylethanolamine-binding protein homolog -like
GTAGTCGTACGCGTGACGTATCCAGGCAAGATGAAGTGTCTTCTCGCAGGTATCCTTTTATGTGGCATCGGATTCGTAT
GTGCTGATGTCCAGTCTGCATTCAAGGAAGCCAAAATTGACAAAGACATCAAAATCACAGCACCGCTCGAAGAAATTGAG
GTTAAATATGATGGCAAAGCAGTTGAATTGGGAAACGAATTCGCGCCAACAGCAACTAAAAACATCCCGGAAGTTCTTA
CAAACACGACGGTGGAGTTCTTTATACCCTCGTACTCACAGATCCCGACGTGCCGATAAAATCATACAATCGCGAATGGA
AACACTGGTTAGTCGGCAATATCTGAGGACAAAGTCGCAAGGGTGAAGTACTCGCGGAGTATGTTGGTCCGGCACCA
CCGAACGGCACTGGCACCACCGGATACATTTCTTCTCTCAAAACAGAAATCAGGGTGCCATTACATTACCCGAGCGCG
TCTCAGTACGAGAGATAAAGCAAGGAACAGATTTCCATCAGGCAGTTTCGCCAGAAGTACGATCTCGAGGGCCCAATCGC
CGGAAACTTTTTCACAGCTAAATACGACGATTACGTACCAGTAATACACAAGCAAATTTGGCTTGTAAATGGGGTCGTTGGAA
GACTTTCCATTAAAATTATCCAGTAATTATTAAGCGCAAATGCTAAGATTTTCCAACAGATTTTTTAAAATTGTTCTCG
CGTTGTTCTTTAGTGTTTTTTCATGAAAGGTTAGTCGTACGAGAAATGAAATACACATTTTATTCAATTTGTTCAAGGAA
CATTCAATTTATTTTCGATACAAAACACTTATTTCTGTTATTGGAATCGAATACCACAGTTAAGAGATTGCGATTGCTCTTT
ACGCGCAAAACGATTACGCAATTTCCCTGGGCGTTTTCTCTCTCACGCACTCACTCTCGCTCTGTCATATTTTCAAT
CCAACTTTACGGCGTGATGCATATACATACACAACAGCCTTTGGTGAATCCCTGTTATTGTTTTTCTTCTCGATCGCT
CGATGTTTTCGGTTTAGTGAACCGTTGATTTTTTTTCGACAGAAGTCCGCCGCGTTATTTTAATAACATAAAATTGCAA

mmc4.txt

TCGAAAGTCTCCTGCTGATTCCATCTATATTTTTTCATTTTGAATTACAATTTGAAATCTTAACTTTCCCTCT
>CL3488Contig1|26s proteasome non-atpase regulatory subunit 8
ACATTCGGTTCGCGATGGTTCGAAGCAGCAAGTACAGACATGGCCGCGCTCAAAGATATCGTCCCCTGATATCAAAATTTG
AAACGAGAATGGACGAAAAATCCACCGAATTTGAAGAAGTGTGGCGAAATACTCGATCAACTCAAGTTAGCACTCACGCA
TCTCATGTTTTTACCAACTTCCAGCAGCGTCGCGTCGCCAAAAGAATTGGTTATCGCACGCGACACTTTGGAAATCGGAG
CTCAGTGGAGCATAGCGTCGGAAGATATTCCCTCGTTTCGAGCGTTACATGGCTCAGCTGAAGTGTATTACTTTGACTAC
AAATCGGACCTGCCAGAGTCGGCGTACAAGTACCAACTGTTGGGTCTGAATCTCCTGTTCTTACTGTGCGAAAACAGAGT
AGCAGAATTTTCATACGGAATGGAGCTCTTGCCGTCGGATCAGATTCAATCGAACGTGTACATAAGGCATCCGTTGAGTT
TGGAGCAATGTCTCATGGAAGGATCTTACAACAAAATATTTCTAGCCAAAGGAAACGTGCCTGCAGCTTCTTACAATTTT
TTCATTGACATATTGTTGAACACGGTACGCGACGAAATAGGCGCATGTATGGAGAGCGCTTATGACAAAGTGTCTTAAA
AGATGCCTCGAGAATGCTCAACTTGAGTTTCGGAGAAAAGAAACAATGGCGTTTTCGACGAAGAAAAATTGGACCCTCAAAA
AAAGATGGAACTTTTACTTCACTGCTCAGAACGAGAAAAATCCGAGGACCCGATTCCCAGCTCCGATCTCGCAACCCT
GGCGATCGATTACGCCCCGAGAATTGGAAATGATCGTCTAACGAATTTCTTTCTTTGTTTGTCTTTCCCAACTTTTCTCA
TCTCACTCATCCTACGTTATTTTTTTTTTTTTTTT
>CL3497Contig1|serine threonine kinase
AAGTTTTAGATTCAAATTTTATTTCTATTCCAATTTCCAAGTTTCTGTTTCCAATTTTTTATAATAAAATATATATATTT
TTTGTCTTCTGTTCCATAGAAATGAAGCTCGTGTGGCATTTCGTCGCTGTGGCGATCATCGCTGTTTCAGCAGCTCCCCA
GTAATCAACCAAGTACGACGATATCGATCTCGATGAAATCCTCAAGAGTGTATCGTCTTCTTAAGAATTACGTGAAGTGT
TGATGGATCGAGGAACTGTACCCCTGACGCCAAGGAGCTGAAAAGCGTACTTCCCGATGCGATTGAGACCGGTTGCGAA
AAATGTAACGAGAAGCAAAAGACCGGAGCAACCAAGACGATTTCGTTACATCGTTGACAACAAGCCGACACTTGGAAAGA
ACTTGGCGGACAAATACGACCCCGACAAGAAATACAGGGTCAAGTGGGAAACCAAATCAAAGGAATTGGGAATCAAAGCTT
AAAGCTGAGCTCATCCGACTCAACGATCGAAATATCAACGCACGATAAAGCCCCGAAACGCTGTTGATGATATCGTCA
GTGGACTATTTTTTTTTATAATCAAACTGTTGTGCATATTGTATACGCAAAAAAAAAACAGAGACATAAAAAATACAATGT
GGAATTAATGAAAAGATATCGAGTTAATAAATTGTCAACACAAAACGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC
TGTCGGCCG
>CL34Contig1|importin beta-
ATTATTTGATTTCGGCTTGGGCTCGTATTTGCAAAATCCTCGGCAACAATTCGAGCAATATTTGCCTTTGGTGATGGGT
CCGGTGCTTCGCACAGCAGCTATGAAACCTGAAGTCGCGTTGCTGGACAACGAGGACATGGAGGGTGTGAAGGAGATCT
CGATTGGCAATTCGTGTGCTCGGCGAACAGCAAAATTTCCGTTATCAAACTGCTGTTTGGAGGACAAAGCATCAGCGT
GTGAAATGCTCGTCTGCTATGCTCGGCAACTGAAAGAAGGTTTCGCTGACTACGCCGAAGAAGTCGTTAGGCTCATGGTG
CCCATGCTCAAGTTCTATTTCCACGACGGCGTCAGAATCGAGCTGCTGACAGTTTCCCGTGTCTTCTCGAATGTGCCAA
GATCAAAAGGCCCTCAATACCTCGAAGGCATGTGGGACTACATACGCCAGATTTGTTGAAAGCAATCGACACAGAACC
AAGCCGAAGTGTGCGGAGCTACTGTATTCACTAGCGAAATGTATCGAAGCTCTCGGGCCAGGCTGTTTGGCGGCCGGC
CCAATGACCGAGCTTCTGCGTATACTGGACAACTTTTGAACGAACATTTTCGAGCGCGCGGTGGCGGATTGGAAAAGCG
GAAAGACGAGGATTACGACGAGGTGTTGAAGAACAATTTGCTGCTGAGGACAACGAGGACATATACACTCTCAACAAAA
TAGCTGACATTTTGCACGCTCTTTTATAACCCACAACCTGCGTTTTATCCATATTTTCGATCAAATATGCGGACATTT
GTAAGCTTTTGGCACCGGAACGCGCTTGGTCCGATCACCATTGGGCGTTGTGCGTGTTCGATGATGTATAGAATACGG
TGGCCCGGAATGCGCCAAATACCAAGAATACTTCTTGAGGCGGATGATCCAATACGTAACGAAAACCTCCGAAGTAA
GACAAGCAGCTGCTTACGGCTGCGGAGTACTGGGACAATTCGGTGGCGAAGCTTTGCTCAAGCTTGCGCCGAAGCACTT
CCGAGACTTATGAAAGTTATCAACGATCCGGAATCACGATTGCAGGAAAATGTTAATCCGACCGAAAACGCCATATCGGC
TGTTACGAAAAATTTCTTAAATACAACAATAAAGCTATCAACGTTGACGAGATACTTCCACATTGGCTCTCTTGGCTACCGG
TAGTAGTTGACGAAGACGAAGCGCCTCACGTTTACGGTTATCTGTGTGACTTGATAGAGGCAAACTATCCAGTAGTCTTA
GGACCAGACAACGCAATTTGCCACGACTTATAAGTTTCTTCGCTGAGGCGTTAGTTACAAAGGGAGGCTGTACCGGCGG
ATAATCCAGTGATGGGTAGAAGTTCTTAGTATTGTACAGCAAATCCAGAGCAACGAAACAATGTCCAGCATGTATAAGCG
ACTTAACGGCAGATCAGCAGC
>CL3501Contig1|dna-directed rna polymerases and iii subunit rpabc1-like
GGTTGACACGAGTTGTAGAAAAGCAGACATAAACCCGGCAGGCGTGTGGTGTTCGACAGTTTGTTCATTCGATTAA
TCTCATAGAAAAGATCGCGGAAAAAGTATTTTTTACAGAGTTCGTCACGAAATAGAAATTTTCGATTAAACAACGATGG
ATGACGAGGCGGAAACCTACCAACTCTGGAGAATCAGAAAGACGGTATGACAGCTCTGTACGATCGAGTTTCTCTG
ACACAGAGCAATTTGGATCAGACGTTGGAACAATTCAAGGAACAATTTGGCGACAAACCCAGTGAAAAGCGGCTTCCCG
GAGCGATTTAATCGTGTCTGTTGCCACAATGACGACCCTACTGATCAGCTCTTCTGTTTTCGCGACGAACCAAAAA
TCGGCATCAAAACCATCAAACTTATTGCCAACGATGCAAGAAGAAAAATACACAGGGCAATCATCGTCTGTCACACAG
GGCATGACACCGTCCGCCAAGCAATCCCTAGTCGACATGGCGCCCAATACATATTAGAACAGTTTCTCGAGTCCGAGCT
ACTGATCAACATAACGGAGCACGAGTTGGTCCCGAACATATAGTCTTGACGCTGACGAGAAAGAGGAATTGCTAACGA
GATACAAGCTCAAGGAAAAATCAATTGATGCGCATTCAGCGGGTGATCCAGTCGCCAGATATTTTGGTCTCAAACGAGGA
CAAGTTGTGAAAAATCATTCGGCCGTCGGAGACGGCTGGGCGTTACATTTCTTACAGGCTGGTTTGTGAAGGAAATTTTC
AACAAAGTCTTTAAGAATAATTATTATCGATTTAAGTCTCTATATTTTGTACAACTTAGTGTAAGTGCCTGTGAAGAGA
AATTAACCT
>CL3503Contig1|glutathione synthetase
CCCCATATGCATACGTCACCAAGTCAACAAATATCTTGTATATACTGTACATGTTATCTCTTCTCATTATTTGATTT
CTAAGTATTTTTAATGATAAAACCGAGTGCAAGTCTTTCGGAATCTCAGTAGTTTGTACAAAAAATCTTCTCGTATTTCGA
GAATCGCGATCATACGTTGAATTTTTATTTGTCGTGTAAAAAATTAAGTGCACAGCCCTCGACACTTTCTGTCACTTG
TTCGATTTCTTCGACAATAATATAAAAAATAATAAATATGAATACTTCGAGACTGGAACCGTGCATCGAGTTGCCACTGT
CGACCGATACTCTTAGTGAGACTGTGCGCAAGGCCAAAAGACTACACTCTCATGCACGGCGTTTCTATGCATTCCAAGTC
ACCGTTTCGACAGGGATCGAGTGACAATCGTGCCCTTCGTTCTCGTGCTTCTAGCTTCCCAACAACAGAATTCGACAAAG
CCATCAAAATTTCAACAATCTTTAATGCTCTGATACACAAGTCGCTCATGATCAGACTTTCTGTCCGAAAAATTTAAC
GATGCACGACGAGTACCGGATTCACCGCAAAATTTGTTGCAATCTACAAAACAGTTTCATACGGAAGTTCAGCTCTCAGCCGCT
GAGTCTTGGCCTGCTGCGCTCGGATTACATGTTACACGTAGACGCAGAGACCAAAATAATTCAAGTCAATTGAACACGA

TAGCGTCGAGTTTCGGCGGAI | FAGCGGCTCAAGTTTCCGAATACCAAAGATACATTTTAAATGAAITGGGCCACTCGGAT
AAGATTAATAAATATTCCAGAGAACTCTACAGCGACCGGACTTGCGCGTGGATTGGCCGACGCCTGGTCGATGTATGGCGA
CGAAAAGCGGTTGATACTATTCTGCTGTTGGAAGACATCACGTACAACATTTGCGATCAGAGATCGCTCGAGTTTCAAGTTC
GACGATTAACCCAAAGATAAAGATAATTAGACGGAGCTTTAAGAACTTGACTGCAGAAGGAACGCGCTTGGGATCGAAC
AAGGAGCTCATTGTAGGTCAAGACGCGGTTGCCGTAGCTTATTATCGAACGGCATACCAGGAAGAAGCGTACGCACGTCC
GGACGATTTGGTCCATGAGATTACTCATTGAACGTTCCCGACGATAAAGTCCCCTCGATTAGTATCAATTAGCCGGTA
CGAAAAGATTCGAGCAAGTTCTGGCTCAACCGGGAGTGCTCGCAGAGTTCTCAACGAGGAAGATGCGCAGTCGATACGA
CAGTTTTTCACGGGACTCTATTCTCTTGATTTAACGAGATGGAGAGAAAGCTGTGGCAATGGGAATAG

GGCTTCATTGCTGGAGCAGAGTTTCGAGAGCAAACAAGTCGTGAAGATTGCCAAGTTTTTCATTGCAAAATCCTTGAT
TTTTCACTCAAACCTTTATTCTGTTTTAATATTTTTCCAATCGAATAAATCAGGCTCGTTGCGACGTTTTTCATTTTAGAAT
CAGTGCCAGTGAGTGTGTTGAAGTGGAAAAATCGCCGATCACAAAGAAGACCGGGAGATTAATAAAATTAATTTGGCAA
AAAAGGATCGAATTAATAAAATCAAGAAATGGCTGACAATAGGTATCAAGCGATTAACATCCCATCAAATCGGTGACTTC
AGCGTCATCGACACCGAATTCTCAACATACGCGAACGTTTTGACGCGAGATGAGGAAGATGGAGACGAGATGTCGAA
ATTCCGAAGCGAACTGATGAACCGGGAAAGCAACAACCTTTTTCAAGAGCACTACGAGCTCAACGACCCAACAAAGCACTC
AGAACAGTTCTCTCAGCCCAACACGACTCTCGACCTGGTTGGACGGTCTCAACAGCCCGCTCATCCAGGACGAAGGT
GACAACAAAATGCTTAAACTCAGATTCGACGTATCGCAATACACGCCCAGGAAATCGTCGTCAAGACTGTGCACAACAA
ACTTTTTGGTTACGCGAAAACGAGGAAAAGACCGAGAGCAAAATCAGTCTACAGGGAGTACAACCGAGAATCTTTGCTGC
CCAAAGGAACCAATCCCGAAAGCATCAAATCTTCTCTCAGCAAGGACGGTGTCTGACGGTGAAGCTCCACTTCGGGT
ATTTGGATTTCGGGAGAAACTCATCCCATCTCCCACTAATTATCAAATTACTATATATATATATATATA

AGTCGGTGTTCTCGAGTTGGGAGTGTCTGATATCTTCTTTTCAAAAAACGGACGACGTTTGCCCTGGGCTTCACGTC
GGAGCAGCTGTCACGTTGTTTCGTATCCGTTTCGTTCCGGCCAATCAAAAAATTTCTTTGTTTTTTTTTTTTGACGTAGTCAA
ACAATAACGAACGAAAAATAGTACGCGGGGTTGGTATATCGCGCGGTCCTCGAGGATCTCGAGTTACCAGCTATTAAGGA
GAGTCGCCTCAACTGTCTCGGGCGAGTGGATCCATCATCTGCAGCCCGGTAAACCGAGTGGAATTCGCGAGAGAAGTTCA
AAGCTGATGATAGAACAGCAGCGCAACATTTCGGAACGAAATCAACTGAAGTACGCGAGACGCTCTTGCTGCGTAAACTCG
GGAGTGCGGTTATCACGAGAGAGGATGAACACGGTTTGGCACTTGGTCTGCTTGCATCGATTGTTGAACAAGTTGCCGAA
TGTCAGCTCGGAGGGCCGCGAGTGCATAATGGTGACGAGCGGTGCAGTTGCGTTCGGAAAACAGAAGCTCACGCAGGAGC
TTCTTATGTCACTCTCAATGAGAGAAAACACTCAGTCCAACCGATCCCACTCGAGAGCATGTTGGGACTCTTCTCGATCCA
AGAGCTGCAGCCGCGTCGGCCAATCCGCTTATGTCTCTGACGACGCAATGTTTGCCAGTACAAAGTAAACTTACCTGCC
CAGGTTCTCGTGACCAAGCCTGATTTCTACAACGAGCAAAACGCGCAAAAAATATTTTTCAGCAGTTGAGCGAATTGATAAG
TCTCAATATCGTTCCTATAATAAATACGAACGACGCTGTCTCGCCGCCCCACAGGCCGACGAAGAGGTGTCTGGCGGCG
GTGGCCGTGCGGTATTTCCATCAAGGACAATGATTCCCTCGCGGTATGTTAGCTGCTGAAATTCAGCCGATCTCTTG
ATTCTAATGAGCGACGTTGATGGCATTACAATCTTCCGCTTGGCAGGATGGAGCTAAGATGCTTCACACCTTCACCTT
CCGATCTTCGCGGACCATCAAGTTCGGTCAGAAATCTAAGTCCGACGCGGGGCATGGACTCAAAAGTCAACGCGGCTC
TCTGGGCTCTCGATCGCGGGTCCGTGTCATTTGCAATGGTACT

GGAGATGGAAAAAATATTCACGTCGATGTCGTCGGTGGTTTCGGACATTCTGACGGTGCCAAACTCTGGTTGGAGGTT
TCGGCCTCTGCGGCATACCCGAAAATCTCATTAAAGCCATTTTAAAAAAGGCTCTAAAGATCTTACCGTAGTTTCAAAT
AACGCTGGGATTGAGGACTGCGGTCTTGATTGCTGTTGCACGAACGCAGGATTAAGAGAATGATCTTCTTACGTGGG
AGAAAAAGCTGACTTTGAAAAGCAGTATCTCAGCGGGCAACTTGAAGTTGAACTGACGCCACAGGGGACTTTGGCTGAAA
GAATAAGAGCAGGAGGCGCAGGGATCCCAGCGTTTTATACGCCGACGGGATTTGGCACGATAGTACAGGAGGGTAACGTC
CTCGTGAATAACGACGATGACGAGCAACGCTGAGATATCAGGTGATCCGAGAAGCGTGCAACAATTGACGGTCGAGACTA
CGCTGATGGAGACAGCGATAACCGGGGGGATTACGCTATAATAAAAGCGTGGAAGCTGACAAAGCTGGAACTTGATATTC
AGAAAAAGCAGCGCGAAACTTTAATCCGGTAATGT

ATATTCGTTTTCTGGTGCTCACAGCGGATCGCACAGTAACGCAATCCAGTTGCTAACCAGAGCTTCGTTGCGACCAGACGCA
CACGACTCTGCGCATTTAAAGATCCAAGTTTGCTAAAGAAAAAGAGTTGAGCAGCAAACATGAGGGAAATCGTGCACATT
CAAGCTGGCCAGTGCGGTAACCAAATTTGAGCCAAAGTTTTGGGAGATAATCAGCGACGAGCACGGCATCGACCCGACCGG
CGCTTACCACGGAGACTCGGATCTGCAGTTGGAGCGCATAAACGTTTATTACAATGAGGCATCGGGCGGCAAAATACGTGG
CCCCGGCGATTCTGTCGATCTCGAGCCAGGAACGATGGATTCCGTGCGATCGGGTCCCTTTGGCCAGATATTCCGACCG
GACAACCTTTGTGTTTGGTCAATCGGGAGCGGGAACAATTTGGGCAAAAGGGCCATTACACGGAAGGACGCGAGTCTGTCGA
TTCGGTACTGGACGTTGTGCGAAAAAGAGGCCGAGAGCTGCGACTGTCTTCAGGGATTCCAATTGACGCACTCGTTGGGAG
GCGGCACCGGTTCCGGAATGGGAACCCCTCTCATATCGAAAATCCGTGAGGAATATCCCGACAGAATAATGAACACGTAT
TCGGTAGTACCGTCGCCCAAGGTATCCGACACGGTCGTGAGCCCTACAACGCCACCCTCTCGGTTTCATCAATTGGTTCGA
AAACACCGACGAGACCTATTGCATCGACAACGAAGCCCTCTACGACATTTGTTTCCGCACGCTCAAGCTCTCGACCCCGA
CCTACGGCGATCTCAATCATTTGGTCTCGTTGACAATGTCCGGCGTCACCACCCTGTCTCCGATTCCCCGGACAATTGAAC
GCCGATCTACGAAAACCTCGCTGTAACATGGTACCTTCCCCGCTCTTCACTTCTTCATGCCCGTTTCGTCTCTCTCAC
TCCCCGCGTGAGGAAACAGTACAGAGCCCTCTCCGTTCCCGAGCTTACCCAACAATGTTTGACGCCAAGAACATGATGG
CCGCGTGCGATCCCCGTACGGACGTTATCTCACCGTAGCCGCCATCTTCGTTGGCCGCGATGTCCATGAAAGAGGTTCGAC
GAGCAATGCTCAACATTGAGAACAATAATCTCTACTTTGTGGAATGGATCCCCAACAACGTGAAAACCGCCGTCTG
CGACATTCTCTCCGCGCGGTCTCAAAATGTCGGCCACCTTTATCGGCAACTCTACCGCCATTAGGAGCTCTTTAAACGCA
TCTCCGAACAATTTACCGCCATGTTACGGCGAAAGGCTTTCTTGCAATTGGTACACGGGCGAGGGTATGGACGAGATGGAA
TTCACCGAGGCGGAATCCAACATGAACGATCTCGTTTCCGAGTATCAACAGTACCAGGAGGCAACCGCCGACGAGGATGC
CGAATTTGACGAGGAACAAGAGGGCGAGGTCTAAGCCCCGCGACCCGATCGCTCTTTCTTTGCCCCC
CCATTCCCTTTCTCGCTAATACACACACACACGACAACAACTATTATCTCTCCCTTGCGCCATTATTATTCCTTG
AAAGTAAATACATTTCTTTGACACAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG

124agina p

mmc4.txt

AGTGGGCAAGTTAAGATGGCGGCGGATGGGAATGACCCGATCCCCGATGCGGCAAAAGTGCGAATAGTTTCCGATTTTAT
ATTGCATTCAACACCGGGTGAATTCAACGAGGTATTCAACGACGTTAGAGTACTTCTCAACAACGATGTACTATTAAGG
AAGGTGCCTGCGGAGCATTTCGCTCAGTACAATAAGGATCAGCTCAGCCTGTTAAGGTGACGCGGAGTGAATATCCGGCA
TTGATAACGGAGCACAATGACTTGGGCGGGCAGAGGTTTTACGACGCGCTAGCAAGCAGAGCTTCAAGTACGATCATCT
CAGAAAGGAGGCTCAGGACTACGAAAGTTACGAACCTGACGCAACCGCGGAGCCATGGAGATCGGCGCTTCAGGAAGAAA
TAACGAATTACACTCAGAGTCATTATAGACACGGTGCTTCTCCGTTTTTGGCAAGAGCCAAGGAGGAAATATAACGCTA
ACGGCTTGCATAGAGGATCATCAATTTACGCCGAAGAATTTTTGGAACGGACGTTGGCGATCGGTGTGGAACGTGAGTTT
TAGCCCGAGTTCGGGAAGCGCGGAATTGCGGGGTAGTCTAAAAGTACAAGTGCATATTACGAGGACGGTAACGTCCAGT
TGGTGAGCAGCAAAAGAGGTAAGGAGAGTTTTGCCGATAACGAATGAGAAGCAAACGGCAAAGGAGCTGATTCGTCTAGTG
GAGGAATCGGAGAACGATTATCAGACGGCTATTTGCGAAAATTATCAAACAATGTGCGACACAACGTTCAAGGCTCTACG
ACGGCAATTGCCCCTGATGCGAAACAAAATCGACTGGAACAAAATCGTCTCGTACAGTATTGGCAAAGAGCTTAAAAGTC
AATAGAAGATAGATTTTTATATAATTATTAAGAGAATTAATATACATTACGAGAGGAGAGAGAGAGAGAGAGAGAGAGA
GAGAGTCGN

>CL3544Contig1|estradiol 17-beta-dehydrogenase 8

GTACCGTCAACCGAGTCTCCGGTGACTTTTTATCGACGCGCCGTTACATAGAACTTTTTGTCACTCGCCAAGAAGAGAATC
AGTCCGCGACTTCTCCGCTCTGCCAAATCTTCGTAATGGGATTTTGTGAGAAACAAATTTTTTACATTGTCCGGAAC
AGTTTTCAACATTTTCGGTGTCAATCATTCCGGGCAGGACTGCGTTTACACGAACACCGAATCTTGAAAAAAGAAAAA
GTGAGCACCGTCAACTAAAATGTCAATTGAGCGAAAAGCCAACATCGTCAAGCTGAACCTTTCAGTCGAGCGAAAAGCAAA
GACCGTCGACCAGAATTCAGCCGAGCAAAAAGCCAAGACCGTCAACTAAGCTGTGAGACTTGTGCTCAAGAAATTTTT
GCCTCACTTTCAAACCTCCATGGCGGCGCTTTTGGTCAGAGCTTCGACCGCGGCTTGGAAAGCAATAATTTGCATTGTC
CGATGTTGCCAATTGTGCCAACGATGGAGCCAAGTTGACGACTGAAGCTCCGCTGGCAAAATTGGCATCGATCATTTTT
TGAAGTCTTTCTGGGTCAACATAAATGTTCTGTCAAATTGACCTGAAGAACTCTCTCAAAGTCCAGGAGACTCAATTT
CAGAAAGAAAATTGTCTCTGGTTATGCCGGCTGAGTTGATTAATAATGGTTGGCGGTTCCGGTGTAGAAATTGTCAATTTTT
TGAAAGCCTTCTCCACGCTCTCGAGCTCGGAAACATCGATTTTTAGAGCCACGTGGGTTTGGCCTAAATAGGAATTTTT
TTTATTATTTTTCTGAAAATCGACGAATTTATGATTTTTGATCCGCCATTTTGTATTATTATTTTTGTAATTATAGTCA
ATTAATAAATTTGTCTCTCATTAAATTTGTAAATTTTATGAAATAAAAGTAAAAAAAAAAAAAAAAAAAAAAAAAAAA
ACATGTCGGCCG

>CL354Contig1|myosin regulatory light chain 2-like

GATGAATTTTCCGAGCCAACGACTCGACTCAATTCAATTTTTCTTCATTTCTTCCACGAGCCTCGTCAAGATGGCGGAT
AAGGAGAAGAAGAAGAAGCCCAAGAAGAAGGAAGAGGCGGCGAGCCCCACCTCCTGAACCTGAAAAGGAACCAACACCAGC
TCCTGAACCAAGCAAGTCAAAGACCCAGACTCCTGAATCTCGCTCGGAAAGAGCGAGCAGTCGCGGTAGCCGAAAGGCTA
AACGCTCTGGCTCCAGTGTTTTCTCTATGTTCTCACAGAAACAGGTCCGCGAATTCAAAGAGGCCTTCCAGCTTATGGAC
CACGACAAGGACGGAGTTATTGGCAAAGAGGATCTTCGTACAGCCTTCGACTCGGTTGGTCTGTTAGCGACGGACAAGGA
ATTGGACGAGATGATCGGGGAGGTTCTGGACCAATAAACTTCACGCAGTTGCTCACTTTGTTGCGGGCTCGTATGTCGG
GAGGATCGGATGAGGACGACGTGATCATCAACGCCTTCAGCACCTTCGACGTCAACGGAATAATGACGGCAAAAGACTG
AAGCACGCACTCACCACCTACGGTGAGAAGTTCACCGCGAAGGAAGTAACCGAAGCCTTCGACAATATGTACATTGATGA
CAAGGGAATGATCGACACCCCGAGCTTATCGCCATGTTGACCGGAAAGGGAGAAGAGGATGACGACTAAACGGCTGGCC
CCGATCTGGTTCAGTAAATAAAAAAATAAAAAAACACATGCACACAAGTACACAACACACATTTACACACAAAAACACATTG
ACACGTGCACATTTGAACACTTACACAAACATATGTACACGAACACATAAATAATGTATCATTACAAGCATCGTCTCGTT
TTAACGGCAGGCCCGCTTGTGCCACGTGGACTCACAGAACATCGGAAAACACCCCTTCCCAAAATATAATTGTACAGCAA
AGGACAATAAACGATTAGCGTTTCGCGTAAATCGCCCATCGATGAGACTACAACTAAACTGTGAGACGAAGAAAAAATA
AGAATAAATTCAACAACTGCAACGGGTACATCTCTATTCTGTAAATACATATATATATATGCACATGTATATCTATTT
AGCGATTAGCGTGTACTCCACCTCAGATTATATTTCTCAACTTTTTTTTTTTCGAATAATATAAGCGGGCCTACGTNAA
TGGAGTTTTCNCAATCCTTA

>CL3554Contig1|laminin subunit gamma-1

GACCTTGACTGTCACTCAAGGATTCCATTGCGAAGACTGTTTGTCCGGATATTGGGGCGATGCGCTTTCGGAGAGGAAGG
AGGACAGCTGCAAGTTGTGTCAATGTTATCCACCCGGGACGGTAGAGCTCGAGGACGGATCGGTAGCTCCTTGCAATCAA
CTTACCGGACATTTGTCCTGCAAGTCTCAGTTATTGGCAGAAATTTGTACAAGTGCGAAGACGGTTATTACCAATATT
GAGCGGTGATGGTTGACCCGCTGTAATTGCGACCTGTAAGGCTCGTACAATCGAATTCGACGTCGACGACCAACCGACAAT
GCGAGTGTGCGACCCGGAATCACCAGGAAACGCTGCGACACCTGCTTGCCCTATCAGTTCGGATTTCGACGCGACGGATGC
AAACATTGCGATTGCGACACCATCGGCTCACAGGATTTACAATGCGACGCCAGTGGACAATGTCCCTGTTTAAACGAACGT
CGAAGGACGACGGTGCGATCGTTGCAAAGAAAATAAGCACAACAGACAATACGGCTGTGTGATTGTCCACCGTGTACA
ATCTTATCCAAGATTCCGTCAACCAACATCGCAGAAGGCTCAACGAGCTCGAGAGCACTCTCAGAAAAATAAACAACAGT
CCGACCGTCATGAAGGATTCTGATTTTCGAAAAAGAATTGAAAAATGTGGAGAATCGCGTGAATCATTGCTCCAGGTGCG
CAAACAAGGATCCGGAACGAAAAATAAACCGCTGGTGGAACAATTGGACGAGTTGCGCGAGCAATTGAATCAGATTGAAA
AAATATCGCAGAGCGTCGACGCGACGGCCGAGGATGCGCGACGAACGACCAACGAAGGTCTCACCAGCATCGACGAAGCG
GAACGTGTTCTCGATCAGATTTACGAACAATTGACGGAAGCGGAAGATTTTCTCGGACTGACGGGGCGCGAGCGCTTGC
CGCAGCCAAAAAGCGAGCCGATCAAGTTGGTCAACAGAATCAGCAAATGACGATTATCGCCAGGAGGCTCGAGTTCTCG
CCGATCTCAACACGAACGAAGCCAAAAAATCCACGTGCTCGCTGAACAGGCGCGTAACACTTCCCTGGAAGCGTATAA
TCTCGCCAAAAAGCTATTGCCAAGTATTCACACATCAGCGACGAGATCAGAGGCCTGGAGAACAAGTTGGAACCTCTGG
AAGATCGTTTTCAACGAAGTGAATAATTTGACGACCGCC

>CL3558-bisContig1|vesicle-trafficking protein sec22b-b-like

ACGATGATTGCGAGGATCCCCGATGGCCTGCCACTCGCGGCTACAATGCAAGAGGACGAACAGGCTGGCAAAAATATTCT
CGAGTATCAAAAACAGGCCAAGATGTTGTTCAAAAAACTGAGGCCGAGTCTCCTGCAAGATGTACCATAGAACTGGT
CCGTTTCTTTTCCATTATCTGATTGAAAACGAAGTCTGTTACCTGGTCTCTGTGAAAGGAAGTGGAGCAAGCGTCTGGC
CTACAGTTACTTTGGAGGACATTGCTCAGGAATTTACACGCAATATGGAAGCGAGTTAACACAGTCACGAGACCATACA
CTTTATCGAATTTGATACTTATCCAGAGAGCGGAAGACGTTTTTCGGACGGTCGATCGAGAAGAAACATGAATGCT
CTGAACAGCCAATTGCGAGGATGTGCAAGAATAATGGTCCAAACATCGACGATGTCCTTCAAAGAGGAACGGTGCTTTC

mmc4.txt

GGAGCTCGATACAAAAACGCAAAACCTGTCGATGTTGTCCCAGAAATATCGGAAAGATGCAAGTCATTTGAACAGCAAAT
CGATGTACGTAAAAGCGGTTGCCGGCCTCGTTGCGTTCTCGTCTTCTCTCTATTTCTTCATTCTTTAGTCTCACGAA
CAAAACTCTACCAAACGCCGATAAGAGGGCAATAATCGCGCGAGTTTTATTACGCGACATAAAAAATTTCTGTAAGGTCTT
ATGGAGCCTCGCAGATTCATGTGCATCAAATTTATATTTTTTCCCTCCCCGTCCTTTTGCAAATTTGCTTGCAATCCA
GGTCTTTGGACGA

>CL3562Contig1|unknown [Hyposoter didymator]

CGGCCGGGATCGCGACGAACCTACATCGAAGCCAAGCACGTCATAGTGAGTTTTATCAAAGGCCTCTGGCGATACAGTCG
CAGATAAACAGTTCGGTTCTGGAATTTCTCTCGAAGCAATGGCTGAGCAATATTTATAGAGGATTTTGCCAGTTTACGTC
AAAAGAGGCTTTCTGCATGTTCTTCAACAACGTCGGCATCTTCCAATTTTACAGCACATTATGTTTTACGTGCCTAACG
CCCACGGCAAGTTTACCAGTAGGCTTGTTATCCCCGAGAAGTTTATCCCGAACGCGGAAGAACAAGCATCAGCAACGGA
AGAAATCCGTCATACACGGTGCCCGGAAGACCCCGACGAAGGAATCTCTGACATTCTGGGCGGAGTCTGTGGCTTCAA
ACTTTCCGATGATGTAGCCATTTTACAGAGATGGACACATTGGCGATGAAGAAGCTCAACCGGATACCATCAATGATTATAC
AGATGTGTCCATCGAGTGAGGGTGCCAATTTCTCTCAGCGATGGTCAGTTTCAAGAACAATTAGCGAAATATTGCGCGGACTC
GGAAATCATCGCATGTGAAAGGTTCTCGCAAAGTTGGACGTATTAACATGATGATGAAGTGGATGAGGACGATGACTA
CGACGAAGACGAGGTCTTTTGAAGTCAATGTACGTCGGAATTTGAAGAAGCGTGTCAAGTTCTGTTGAAGACAATGGA
CAACAAAAACGTTTCTCTGACTGTGTCTACCTTTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CATGTCCGCGC

>CL3564Contig1|alpha-aminoadipic semialdehyde dehydrogenase

GAATACATTGATATTTGCGATTACGCAAGTTGGGTTGTCGAGAATGTTGCCAGGAAGTATTTTCCCTTCGGAGCGAAAAAA
ATCACGCATCATTGAAAAAGTGAATCTCTCGGAGTCGTTGGCGTTATTTTACGATTTAATTTCCCGTTGCTGTCTAC
GGATGGAAACAGCGCAATAGCTATGTTTTGTGGTGACGCCGTAGTGTGGAAGGCTCACCCACTACGCCCCTTGTCTCAAT
AGCTACGACGAAAAATAATTGCCAATGTTCTCGAACGAAATGGAATTGCTGGCGCGATCGCTTCTTTGGTTACCGGCGCAG
CGGATGTTGGCGAGACTTTGGTCAGAGATAAACGGCTTCCCTTATTTCTGTTACGCGGCAGCACAAAGTGGGCAAAACAA
GTTGCTCTCAGGGTTTCAAGGAGATTTGGCAAGTCGCTTCTGGAGCTCGGAGGCAATAACGCGCTCATAGTCGCTGCCGA
TGCCGATCTCGAAATGGCTGTCCGAGCTGCTGTGTTTTCTGTCGTTGGAACCGCTGGACAAAGATGCACAACGACCAGAC
GTTTGATTCTCGACAAGAAAAATCAAGGAAGAATTTTTGGCAAAATTGAAAAAAGCAATTCAAAAGTATACGTGGAAGGAT
CGGCGATCCTTGACGAGTCTAC

>CL3567Contig1|PREDICTED: hypothetical protein LOC100115890 [Nasonia vitripennis]

AGTAACCGAGAAAGAAACGTTGATCTTCAAAGTTTCGTTACGCAAGGACAGTCCAGCTGGTGATTTGGGCAACGAGTGCG
AAGTGTTGAAACGGAATCGAAATGATGACGAAAACCTCTGGAGAGCATGACCGCGATTTTAAACGAGAAAAAATTATCGT
TTGAGTGCTCGAACTTTTATACGGAATTCGGAGATCCTTCGTACTTGGTGCTGGAGGATTTAGCAGCTCGAGGCTTTTCG
CACCGCTGATCGACGCGTCGGTCTCGATCTCGATCACTGCTTGTCTGTCATGAGAGGATTGGGGCCAAATTTTATGCCA
GCTCCGTAGCAGTTTACGAAAAGGATCGAAATTCATAAAGAATTATAACAAGGGAATTTATCACAAAAAATGCCCCGAA
AGAGTCAGGAAAAATGGTTGCTGATGCATTCAAAAACATGAGTACGGAAGTCAAGGATTGGCCAGAGCTCGGGTCGAGTTA
CTCAGAGAAATATTTAAATTTGTGCGAAATTTGTTACGACAAAGGCGTGGAATTTGCTGAGCCTCAACGAAGATGATTTT
AACGTGATAAATCATGGCGACACTTGGGTCAACAATTTGATGTTCCGATACGACGACGAGGGGCAAGTCTTTGATCAAA
TTTCCTCGATTTTCAAATTCCTGTCTGGAGTTCTCGGCGTACGATCTCCATTATTTTTTACACGAGTCCAGTGGACGA
GGTAAAAATTCGTCATTGGGACGAGCTCATCGCCGAGTACACGAGAACGCTCAACGAGACGATGTTGAGAATAAAGTGCA
AGACCAAAACCACCGAGTCTTGATTGGATAAAAGAGTGTGTAAGAAACGTGAATTCCTGGGTGATTAGCTTCTGTACT
GACTTTACCTTTCTGTCCTCTCGACAAAGAGAAAGTTGTAAGTTTGTGAGATCTCATTTCCACTAGCGGTCAAACGAGCA
GTCCAGGATTCAAGGACGAACGTTATCGTGAGATCATGATAAGACGATCGAAATATTGGAACCTCAAGGAATCCTCGAC
AATTAGTCCCCACCAAAAAGCATCTATAATTAATTTTCAAATCTATTGTTATTTATATTTTACACTGCCCTTTGGTTGT
AATTGAAAAATAGAAAAAATAGTCTCGAACAATAATTTCTAATACCAATTCTATTCTTTTATTTATTA

>CL3575Contig1|thioredoxin-like protein

AGTCGCACCGCGTTCTTCTCGCGTTAACGTTGCTCCGTAACAAGCTCCAAGCAGAACATTTTTTTCAACGTCCGAAAGG
GTGTTAGTGAAAGAACAAAAACAGAAAAAATCTTCTCAAGATGGTCCACATCGTCAAAGACGCAGAGGATTTGCAGG
CACAGCTCGCTAGCGCTGGTGACAACTTGTGTCATCGATTTCTTTGCAACATGGTCCGCTCGTGCAAAGCTATCTCG
CCGAGATCGAAACCTCGCCGAAGGACGCGACGTCGTTTCTGAAAGGTCGACGTCGATGAGAAGCAGGAATCTCGC
TGCCGAGTATAAAATCGCGAGCATGCCTACCTTCTGTTTTTATCAAGAATGGCAAAACAGGTCGACATTTCTCGGGAGCAA
GTTTGGACAAGCTTGTGGGCATGATCGCGAAGCACGAGTGAATGTTGCAAAAATCATGTCGCTGTGTATCTATGAAGA
ATCGACGTTTAAATTTGTAATAAATAAATTATTTGAAATATTTTCTCAACGTATTATGTAGAAAAAACAAACATAA
TGTTTATCGCAGAAAAATTGAATATTGAGTTTTTACGCTTCAATCATTATTGTTTGTTCACGCAAAAGCTCTAGAGATGTTT
TTACAACACAAATTTGGTCTACTCGTGTTCTTCTGACGGAATAACATTTCTTCCCTTTTTTGGTACATTTTTCTGGCGCCA
CGATTTTTTAAACGAGAAATCTTCGGCTTAGTAAAAAAAACACACAATAAACATTGCGAATTATAACGAAAACG

>CL3579Contig1|succinate dehydrogenase

AATCTCAGTTATCGACCATTTTTTATTTTTTCTGAAAAATTAATAATTCTTATTTTATTCGTGGGTGATTCCAGAATAC
GATCTACGACAACGTAGCAGCCTCAAAATGAGTGGAATACTCAAGCTCTCGTGCCTGCTAGCGCGAAAGCCTAGCGTCGC
TTTGAAGAAATTTGGGACTTCCGGTCTGGGCAATCGCGACTTTCACTATACGCCGAATGGAATGCTGCCAAGGTTTCGG
ACGCTATTTCTAAGCAATACCCGGTGGTGACCATTTACGACGCTGCTGCTAGGCGCAGGAGGAGCCGGTCTCAGA
GCAGCTTACGGAACCTCGCCGAAGGATTCAAAAACGCGAGTCGTGACAAAACCTTTTCCAACAAGATCTCACACGTTAGC
AGCTCAGGGCGGTATCAATGCTGCGCTGGGAAATATGGAGGAAGGACAAATTGGCAGTGGCACATGTACGACACCGTCAAA
GGCTCCGACTGGCTCGGCGACCAAGACGCCATCCATTACATGACTCGAGAGGCTCCCAAGGCTGTAATCGAGCTGGAAAA
TTGTGGCATGCCCTTCACTGCTACCAACGACGGAATAATCTATCAACGTGCTTTCGGCGGACAGTCCCTGAAATTCGGAA
AAGGTGGTCAAGCCACAGGTGCTGTTGCGTGGCAGACAGAACAGGACACTCACTTCTCCACACTCTTTATGGTCAATCG
TTGAGTTACGATTGCAATTAATTTGTTGAATATTTTGTGTTGACTTGTGATGGAAAAATGGCAATGCAGGGGGCTTAT
TGCTCTTTGTCTCGAGGATGGAACGATTCTCGCTTCCATGCAATAACACCGTCTCGGACTGGTGGCTATGGACGTG
CTTATTCTCGTGACTTCAGCTCACACTTGCACTGGCGATGGTACAGCTATGGTCTCTAGAGCTAACCTGCCCAACCAGG

ATCTCGAATTCGTGCAATTTTCATCCTACCGGTAATTTACGGTT

>CL357Contig1|v-type proton atpase catalytic subunit a-like

AGACTCGTTGGGTGGGTTTCGTTTCAGTACGTGCGACGTCTCTATTAATAAATCCAAGATGAGCCACGGCTTGCCAAAGTT
GAGCAACGTTAGTAAGGAGTCCCAGTTCCGATATGTGTACGCGGTGTCCGGACCCGTCGTACGGCGGAGAAAATGTCTG
GATCCGCTATGTACGAGTTGGTGCAGTCCGATATTACGAGCTGGTCCGAGAGATCATTCTGTCGAGGGAGACATGGCG
ACGATTCAGGTTTACGAGGAAACGAGCGGTGTACCGTCGCGCATCCCGTTCTAAGGACAGGCAAACCTTTGTCCGTTGA
ATTGGGTCCCGGAATTTTGGGCAGTATTTTCGACGGTATTCAACGTCCGTTGAAAGACATCAACGAACCTTACCAGCTCCA
TTTACATACCAAGGGCGTCAACGTTCTGCACCTTTCTAAACTGTGAGCTGGGAATTCACCCCTCTCAACATAAAAAAT
GGCAGCCATATCACCGGAGGCGATCTCTATGGTATCGTTCACGAAAATACTCTCGTCAAACACAAAATGATGCTCCACC
CAAAAGCAAGGGCACCGTCACCTTACATCGCTCCTGCTGGCAATTACACCGTCGACGACGTCTGTCGAGACCGAGTTG
ATGGAGAGAAGAGCAAATACACGATGTTGCAGGTGTGGCCAGTACGTACGCCGAGACCGGTGACGGAAAAGCTGCCGGCG
AATCATCCCCCTGCTGACAGGTCAACGAGTCTGGACTCGTTATTCCTGCTGCGTGCAGGGCGGCACAACCGCCATCCCCGG
AGCTTTCGGCTGCGGCAAACTGTCAATTCGACGGCGCTCTCAAAATTCAAATTCGAGGTATCATCTACGTGCGTT
GCGGTGAACGTGGTAACGAGATGTCCGAAGTATTCGCTGATTTCCCGGAGCTCTCGTCGAGATCGACGGGTGACGGAA
TCGATTATGAAGCGTACAGCTCTGGTTGCCAACACCTCGAACATGCCTGTGCGAGCTCGTGAAGCTTCCATTATACATGG
CATCACCTTGTGCGGAATATTTCCGTGATATGGGCTACAACGTGCGGATGATGGCCGATTGACGTCCCGTTGGGCGGAGG
CTCTTCGTGAGATTTCCGCTGTTTGGCTGAGATGCCTGCCGACTCTGTTACCCCGCGTATCTCGGTGCGAGGTTGGCC
AGTTTTTACGAGCGCGCGGTGCGCTCAAGTGTGTTGGGAATCCGGACCGCGAGGGCTCCGTGAGTATCGTCCGGCGCGGTG
TCGCTCCCGGTGGAGATTTCTCCGATCCTGTTACAGCGCCACCTCCGTATCGTCCAAGTCTTCTGGGGACTCGACAA
AAAACGACAGAGAAAACACTTTCCTTCCATCAATTGGCTCATCTCGTACAGCAAATATCTTCGCGCTCTCGACGATT
TCTACGACAAAACTTCCAAGAATTCTTCTCCTCCGACCAAGGTCAAGGAAATCCTCCAGGAGGAAGAAGATCTCTCC
GAAATCGTGCAATTGGTCCGCAAAGCTTCTCTCGCTGAATCCGACAAAATCACTCTCGAAGTTGCCAAGCTACTCAAGGA
CGATTTCTTGCAACAGAACAGTTACTCGCTTACGATCGGTTCTGTCCGTTCTACAAGACCGTCGGCATGTTGCGCAACA
TGATTGCCTTCTACGACATGGCCAGGCACGCGGTGAGTGCAGAGCCAGTCCGACAACAAAATAACATGGAACGTATC
CGCGACAGCATGGGCAACATTATTTATCAATTGAGTTCGATGAAATCAAGGATCCCGTGAAGGACGGCGAGGCCAAAAT
CCGGGCGGACTTTGACCAACTGTTGGACGACATTCAGCTGGCGTTCCAGGAGCTCGAGGACTAAGAGGGCCGCGTGGTAA
AATTTGTTGCTCGATCATGAAGCGATTAAATCGTAAATGTTGCAAGTTCCCAAAATTAATTTATGGGATTGTTCCATT
AATGTTTCAAGGTTATCGAGGGAGAAAAGGAAAAGAAAGCAAAAAAATACTGTGGATTTACCGAAGTAAAA
AAAGGAAAAAATAACAAGACAGACTCTTCGTCTTTCGCATTTTCGTAATTCACGTAAATGATT

>CL3588Contig2|bleomycin hydrolase-like

GTTTTGTACAACAATCAATCGCCGAACTGCTCATCGCATTATGTGCCGAAAGCATTAAAAAACGAGGCCGTTTGGTTC
GGCTGCCAAGTCTCCAAACGCATCGCTCTAAGGCCGAGACTCCAAGATCTCGAAATTCACGACTTTAAAGCGTTGTTCAA
TACCGAGGCGTTTCATCGGCTTGTCCAAAGCTGACAGGCTCATTTATGGCGATTCCATGATGACTCACGCCATGGTTTTCA
CTGGATATTCGTCACCAATTACGAGAAATCACCAAGTCCGTTGAGAATTCGTGGGGTATGATCGAGGTGAAAAA
GGTTATTCAGTATGACCGCCGACTGGTTCAAGGGAGTTTGTATTTGAAGTAGTAGTCGACAAAAAATTGGCTCCGCCGG
AAGTGATGGCAGTTTTTCGAGCAAGATCCGATTCTCCTGCCGGCATGGGACCCCATGGGAACGTTGGCTCAGTGATGAAGC
AGCTCGAATGAAATATTGATCGAGAAGCGAATAAATAGTTGGGCGATTCTGTGCTCGCGAGAATGGAAAAATAACGATCG
CGTAATCGGAATAAATCTCGTGACTCGGAGTACTTTTTTTCATTAGTGATATAGCGATAAGCTAATTTGCTAGGTTTTCAT
GTCCAGATTCTCATTCTCGTCTCATTAGCTTCTTTTTAGGAAAATTTCAATTAATTCGTAACGTTTCGATATCCATGGA
TTCTCTTCGTGG

>CL3595Contig1|6-phosphofructokinase-like isoform 1

ATTCTTCGAAATGAAAATTGCAACTTGAATTACAACACCGACTTTATGCAGAGGCTTTTCAGCGAGGAAGGCCAAAGGATT
GTTTCAGTTGCAGATCCAATTATTGTTGCATGCAACAAGGTGGCTCGCCAACACCATTCGATCGTAATCTGGGCACGA
AAATGGGTGCCAAAGCCGTGGAATGGTTCCAGCAAAATGAAAAAATACACAGGCCCGATGGCGTAACCGTGACGAAA
CATCTGAAAGCGCCGTAATGTTGGGTATCATTGACGTCAATACAGATATACGCCGTTTCGAGCAACTCATCGATGTTAC
GAATTTGAGCAGCGAATCCCGACGTACCAGTGGTGGATGAAGCTCCGTCCCTTGTGAAGGTGCTGGCCAAGCACGAGT
CGACTTACGAAGAGGAAGGGCTTTACATAACGGTGGAGGAGATAGGAAAAAGACACCGACGCAACACTCGTTTAACTGG
TGGCGGTAAGAGCGAAGGAATCGTGAAGTAAATTCCTTTTTTTTGTATTAATTCGTTTTTTGTTATTTCG

>CL3596Contig1|heterogeneous nuclear ribonucleoprotein a2 b1 homolog

TTTCGGGCTACATCCAGCACTCAGCTCTGTGTTCTTGCCGCGAAGTTTGCTTGCCTGCGCCGACACTGCATCGTTAT
TCGGATCGAAAATTTGTCCCTATTTTTGAAGCTTCAACACTCGAGGTTGGGCTTCTGAAAAGTAAAACAGGGGGCTGAGC
TTGGCCCGTTTTTCAACTCAATTTTCGTCAATTTTTTGCAGACCTTCGTGCCCACGAGGCCATCAAGAATGGTGAAAAT
GGAGCATGAGGATAATAAGAACGAACCGGAACATGTACGCAAACTATTTCATCGGAGGTTTGGACTACAGAACACCGGACG
ATTCGCTGAAGAAGCATTTTGAAGCAATGGGGTGAATCGTAGACGTGGTCTGAATGAAGGACCCAAAAACCAAAGGTG
CGAGGCTTTGGTTTTCATCACGTATTCTCGTGGTCATATGGTCGACGATGCTCAAAATGCGAGACCTCATCGCTTGACGG
ACGCATAGTCGAGCCGAAGCGGGCTGTGCCGAGGCAAGAAATAGGGACGACCCGGAAGCGGGAGCGACGGTGAAAAATG
GTTGTTGGTGGTTTGAAGGACGACCATGAAGAAGAAGATTTGAGACAATATTTCCAAGGCTATGGAAGCATCAATTCGAT
AAGCATCGTGACCGACAAAGAAACCGGAAGAAGAGAGGTTTTCGTTTTCGTGAGTTTCGACGATTACGATCCGGTCGACA
AGATTTGTCTCCAGCGTAATCATCAAATACGTGGCAAGCACGTTGATGTGAAAAAGGCAACTTAGCCGAGCGGAATGGCC
TCAGCGAGCGGGGT

>CL35Contig1|heat shock protein 90

ATATTACAAATAATACTGCGAGACTGCGGATCGTACCGCTGAAACATAACCCACGAGCGAATTTTTTCTCACAAATCGC
GTTTGAAGAGAGACACAATCAAGATGCCTGAGCAAATGGAGACTGGTTCGGGTGAGGTGGAGACGTTTTCGTTCCAGGCG
GAGATAGCGCAGTTGATGTCTTGATCATCAACACGTTCTATTCCAACAAGGAAATCTTTCTTCGTGAGTTGATATCCAA
CTCGAGCGACGCTCTTGACAAGATACGTTACGAGTCTCTGACAGATCCGTCGAAATTTGGACAGCGGAAAGGAACGTACA
TAAAGATAATACCGAACAAAGATGACGGTACGTTGACGATTACGACGCGGTATCGGTATGACGAAGGCTGACCTGGTA
AACAACTTGGGAACGATCGCCAAAGTCCGGAACGAAAGCTTTTCATGGAGGCTTTGCAAGCTGGTGCAGATATTTTCGATGAT
TGGTCAGTTTGGTGGTGGTTTTTACTCGGCTTACCTGGTGGCTGACCGAGTGACCGTAACGTCCAAGCACACGACGACG

mmc4.txt

AACAGTATCTCTGGGAATCGAGCGCCGGAGGTTCTGTTACGGTTCGAGCTGACAACACAGAGCCGTTGGGACGAGGAACG
 AAAATCGTTCTCCACATCAAGGAAGACCAAATGGAGTACCTGGAAGAGGCGAAGGTGAAAGAAATCGTGAAGAAACATT
 CCAATTCATCGGCTATCCCATCAAGCTCGTAGTGCAGAAGGAGCGTGAGAAGGAGTTGAGCGAAGACGAGGCTGAGCCTG
 AGGCCGACGAGGAGAAGAAGGAGGAAGAAGAAGGCAAGCCAAAGATCGAAGACGTGGGAGAGGACGAGGAGGAAGATTCC
 AAGGAGAAAAAGAAGAAGAAGACGATCAAGGAGAAATATACGGAAGACGAAGAGTTGAACAAGACCAAGCCCATATG
 GACAAGGAACCCCGATGACATCACCCAGGAGGAGTACGGCGAGTTCTACAAATCCCTTACCAACGATTGGGAAGATCATT
 TAGCCGTCAAGCACTTCTCCGTGCAAGGTCAGCTCGAATTCGGTGCTCTTCTCTTTGTCCCAAGGAGAATGCCTTTCGAT
 CTCTTTGAGAACAAAGAAACGCAAGAACAACATCAAGCTCTACGTAAGGAGAGTCTTCATCATGGACAACCTGCGAAGAGCT
 CATTCCCGAGTACCTCAACTTCATGAAGGGCGTGGTCGACAGCGAGGATCTCCCTCTCAACATTTCTCGTGAGATGTTGC
 AACAGAACAAGATTCTCAAGGTCATTTCGTAAGAATCTCGTGAAAAAGTGTCTCGAGCTTTTGAAGAGCTCACCGAGGAC
 AAGGAGAACTACAAAAAGTTCTACGAGCAATTCAGCAAGAACATCAAGCTGGGAATCCACGAGGATGGCACCACCCGAG
 CAAACTCGCTGACCTCCTGCGCTACAACACCTCCGCATCCGGCGACGAAGCATGCTCGCTCAAGGAATACGTCGGCAGAA
 TGAAGGAGAACCAGAAAACATTTACTTCATCACTGGCGAGAGCAAGGAACAAGTCGCCAACAGTTCCTTCGTGAGAGG
 GTCAAGAAACCGGTTTCAGGTCGTTTACATGACGACCAAGTTTCAGCAATACGTCTTCAGCAGATGAAAGAATTGCA
 CGGTAAACAACCTCGTTTCCGTACCAAAGAAGGTCTCGAGCTTCCGGAGGACGAGGCTGAGAAGAAAAAGAGAGAAGAGG
 ACAAAGCCAAATTCGAGGAACTCTGCAAAACCATGAAAACCATCCTGGACAGCAAGGTGAGAAAAGTCGTCTCTAAT
 CGATTGGTCGACTCTCCCTGTTGCATTGTCACCGCTCAATACGGCTGGACCGCTAACATGGAAAGAATCATGAAGGCCCA
 AGCCCTCCGAGACCCCTCGACCATGGGATACATGGCTGCGAAGAAACACCTGGAAATCAACCCCGACCATCCGGTCATCG
 AAATCTCAGACAAAAAGCTGATGCCGACAAAAACGACAAAGCCGTCAAGGATCTCGTCGTTCTTCTCTTCGAAACCGCT
 CTCTCTCTTCCGGCTTCAGCCTCGACGAGCCACAAGTTTCAGCTGCTCGTATCTACCGCATGACCAACTCGGTCTCGG
 CATCGACGAGGAAGACCCCATTTCCCGATGAACCAAAACCGTCGACGACGTTCCACCCCTCGAAGGAGACAGCGAAGACG
 CATCGCAATGGAAGAAGTCGATTAAACGATTGATCGATTTTATCGAATGAATGGATTACCAGAATGAATGAATGAGCTC
 TATTTTGTCTCTTTCTGTGTGCGACAAAAGTACAATTCATCAACTTTGCGTTAAGTTCCATCTAAACGAAGACTGCTT
 TTGCAACCGCGTTTTATGTGTTTTCTCCAATTCATCCTCATTTTTCCCAACCTTTTTCTTCATTCTTTATTTTCGCTT
 ATTCCTCTTTTTGTATTATAACGTAAGTCACTCGATTAAACACCAACACCAATGACTCTTTTTTTATTGTTTAG
 CTTTACACAGGTTGTACAAACCCCATACGTTTTATTTAATTCATCCTGCCACCGACCCCAATGTCTCTGTTTGAAACTAAG
 ACGAAAAATCGTGGATTCTTTTAAAAATGAGAAATAAAAAAAACATGTAAATTAAGAGTTTTATTATTAAGTATGAAAT
 AAATTGTCGGAATAGTCAACTACCAAAAAAACACTGTCTTCATTTCTTCATTAATTATCCCTTCGTTATCAACTCGCGAG
 ATTTGAGTCCATTGGAATTCATCTCCGAAAAACTTCTACAACCTCGAAATCTCAATCAGAAATAATAGAAAAAACAT
 TTTGACGTTCCATTTGAAAGAATTAGCCATTTCCGTGCAATTAATTTGATCATATATTC

>CL361contig1|aldehyde mitochondrial-like

TTGCCCGACGAATGTCGCAGTAAACTGTCCACACTTTGTGTGAGCTGCGGCGTTGTACATACGAACAAATAATCTATAA
 TTAGTGCTCTTTAATCTATAAATCTGTAATATAGCTAAACGAACACAAGCACAAAAGTTTTAAAGTGTTTAGTTTTTCATC
 GAGTATCAATAAAATCTAATAATCCTTGCTTCCAATATGCTTCGGCTCGTGAATACGACCTTGAGGCTTACGAGGTTGTT
 TTCCTCGGCAGCTTTGCCGGCTCCGGAGACCAATCCTTCAGTTTTATACAGCGGAATATTCAATTGACAACGAATGGCACA
 AATCAAAGTCAAGAAAACTTTTGACACGGTAAATCCATCGACGGGTGAAATTATATCAGAGGTCCAAGAGGGCGATGCT
 GCGGATATCAACGACGCCGTTGAGGACGAGACGCTTTTCGATTGGGATCACCATGGAGAACCATGGATGCTTCGCA
 GCGAGGATTACTGCTCAATCGCTTGCCGATCTCATGGAAGAGATAGAACATATTTAGCGTCGCTGGAGACACTGGACA
 ATGGGAAGCCCTATTTCAGTCGCGTATGGTTTTGACGTTCCAGCGAGCATCGGGACTTTGAGATATTACGCCGTTGGGCA
 GACAAAAATCAGGGCAAAGTAATTCCAATGGACGGAAGATTTTTCGCATATACGAGGCACGAACCGTTGGCGTTTGCGG
 TCAAATAATACCATGGAATTTTCCAATTCGATGATGGCGTGGAACCTCGGGCCGGCTTTGGCCACCGGTAATTGCGTCG
 TTCTTAAGCCAGCCGAACAACTCCCTTGACAGCACTTTACATTGCTCAATTGAGCAAGAAGCCGTTTTCCGAAAGGT
 GTCGTCAACGTCGTGCCGGCTTTGGTTCCGAGGAGTGCTCTCGTTCTCATATGGATGTTGACAAAGTCGCTTTCAC
 CGGATCTACCGAAGTCGTCGACTCGTCAAAACAGGCGCAGCCATGAGCAATCTCAAACGCAACAATCTCGAATCTGGTG
 GAAAAATCTACCAACATTATTTTTCAAAGACACTGACATCGATCATGCCGTGCAAACTGCACATTTCGGCCTATTTTTCAA
 CATGGGACAATGTTGCTGCGCCGGCTCTCGAATTTTTGTCGAGGATGACATTTACGATGAGTTTGTAGAGAAAAGCGCAA
 TACGAGCGAAATCACGGACCGTGGGAAATCCGTTTGATCCGAACATCGAACACGGTCCCAGGTCGATCAAGACCAACTG
 AACAAAGATTTTGAGCATGGTTGACACTGGCAAAAAGGAAGTGCCAAAGTTGCTTACCGGTGGCACCAGAATTGGTCACAA
 AGGCTATTTCTGTTGCTCAATCGGTATTTCGTCAGCTCAGTCAAGATGACATGACGATTGCGCGAGGAGGATTTTCGGGGCC
 CGTTCAACAAATTTCTTAAATTCAGCAAAATCGACGAAGTAATAAAACGAGCGAACGCCACCGATTATGGATTAGCTGCCG
 CGATATTCACAAAGGACATCGATAAGGCGAATCATATGATCCAGGGGCTTCGAGCTGGCACCGTGTGGGTCAACACGTAC
 AACGTTTTGGCGAATCAAGTGCCTTTCCGGTGGCTACAAAATGTCTGGACATGGACGTGAGCTCGGTGAATATGGTCTCGA
 CGCATATACAGAGGTCAAAAGTGTCAATTGTGAAGGTCAACGAAAAGAACAGTTAGTAAATGACGCCAAATTTGATCAGT
 TCAGAAAAAATCAAAATTTTTTAATGTTTTTTTACTTAACCGTCCCAATTTTTTGCTTCACATAGAATCAAACATGTTG
 TCAGTCAATGAACACTCGGAGTTTATCATTGCCAAATGAAATTTATACTAGTCTCTG

>CL3628contig1|sorbitol dehydrogenase-like

GGATTGTCAGCGGTCAGGACCAGCGATGGAAGCTGCAGTTCCATTGTTACGCCGAGGTGGTCTCTGTGTATTCCGT
 GTCGCTAATCCCAAGGCCACGTTGACGTTTGAAACCATTTGAGATTTACATGAAAGAATTAACGGTGATGGGTGTGAATA
 TAAATCCTTTCACGTTCCCTAAAGGATTGGCTCTCGTCCAAGCGATGGCCGATCGTTATCTGAACTACGAGAACCTGGGA
 ATACGGATTTTCAAATATCACAAATACCAACAAGCTTTAGAAACCTTTAAAAAGGCGAGGCGAGTAAAGTTGTTTTGA
 AGTGTGAAAAAGTTGGTTAAATCATCCGGTAGGTCGTTTCATATTTCCAATGGTTCACTTATTACCATGTAGACTCCAAATG
 GTACTAAATTTTTTCAACAGTTATTATCATCGGAGCCTAATGACCTTCGCATAATGTGAATTAATTGTCCGAGGAACTAT
 TAACTCAATAAAATACTTGTCTCCATCGTTCTATCGATTTGCATGAATGTTTCAACGACAGAAAACGAAGATCTCGTACG
 ATGCGGTGACGTTTGGTTTGTGCGACAGCTCAGTGCCCTAAGCTCACTGAAACTTAGAATCCGAGTGAAAATACAAATAA
 TG

>CL3631-bisContig1|transcription elongation factor b polypeptide 2-like

AGAGCTCTACAATAAAGACGACACGCTGATGTTGGATGGAAGATATTTGGCGGATTACGGATTAAATCAATGACGGCAA
 AAGCTCAGTCGCCGGCTTTGATAGGATTAGCGATTCTGTCAGGAGAACGGTTATTTAGAGCCTCTGGAACGACGCCATTC

mmc4.txt

TCGCTACCTCCCCTGATCTGCCGATGTTATGAAATCTCAAGAAGCCAACGGGCAAGAACAGTCTCCCTGAACGCAAAGGCT
CGCCGGTGATATAAACTCTAATATAAAACCTTGGTAAAAAAGAAAGAAAAAATACTGTGAAACAAAGAGCATCAATTGT
CGATTTTTTTTTCGTGTTTTTTCATCGATAGTCGACGCGCTTCAAATCGTTTACATTTTTTTCATTCAAACGAAATATTTGAA
ATAACAAAAATCCAACAAATAAAAAACAAGTCATATTCAAACGGGGGTTTCCCTGGCAACTTATTTTTTCNCGCTAAATAAA
AACCAACTGCTGTATCAAGATTACCGNGAATCGAATAATT

>CL364-biscontig2|rna-binding protein rsf1

ATTCCGGTGCTGCGTTTGTGAGGCATCTGTTCTGCTCCTTTTTTGTCTAAACAAGTGATTATTAATTGTTCTTCGG
AAAATTAGGAGTAACCATAAAAAAGAAAAATGACACCAGAGGGCTATACGAGGGTGTACGTGGGAGGTTTGAACGACAAAA
TAAAGAAGGACGATCTACAGATGGAGTTTGAGAAGTTTGGCAAGTTGAACAAAGTGTGGATGGCGTTCAATCCGCCGGGT
TTTGCGTTTATCGAGTTTTTGTAGTATGGACGAGGCGGAGCTCGCTTGAATAACATGAACGGAAGTGAAGTATGGGCGC
CAAACTGAGGGTCGAAATATCACGTGGACGTGGTTCGCGGTGGTGGCCGCGGTAGCTCGGGAAGTTTTCTGTTAGTTCGA
GGTTCGGGGAGCCGAGTTTTTCTTCGCGGGGAAGTTTCATCGGGTGAAGCAGCGGCGGTTACAGGGGCTCAAACCTCTTA
CAACGATCACGGAAGTAGTAGCGGTGGCTACAGTACAGGCAAGGGTGAAGTAGGGGACAGAGTCTGTTACGATGACTCGT
ATTCATCGATCGCAGCAGTGGCTATGTCAGTCGCGAGTATTTCGCAAGATAGCTACGGGCGAGCGGCGACACCGGC
GAGATTACTACTCCGGCAAGGATTCATCAACTGCGAGATATCGCAGCCGTTACCGGCAGGACGTGGCAGTCTCGTCA
TCTTCGTGAATGCACATAAAAGAACTACGCTACGTTGCCAACTGAAGTGCAGGCGCGATCAGCCACCCGCTCGACGACT
ACATTCTGTCCAATCTACGCAGCGACGTGTACATATACAAGAATTATTCTAACGATATATATTACGAAATACTTCTCTT
ACAACGTACGATTTGGTTTTATAGCCTGAAATTCATGCTGAACATTTTTTTTTCATTCTAAAAATTAACAAAAAGACACAC
AAGTTTTTAGCATCTCCTTTGAATACAAAGGACGAAAAAAGAGAAAAAGGAGAGAATAAAAAATGAAAAATGCGTTGAA
TAAACGGCGAGGTAACGAAAAAAGCGGAGATTGGCAATCGATGAAAGACTGACAGTTTCGCGGATCGCGAGCTTGAG
CAAGGACTAAA

>CL365Contig1|hexokinase type 2-like isoform 1

AAAGTATACAAATTGTCGTGAAATCTTTTCGGAATGGGAATCCACAATGCGGCTGATCAGGATTGCGAGAACGTCAGGT
ACGTTTGCTCGGTGCTATCAAGGAGAGCCGCCATTTGGCTAGCGCAGGGATCGCAGCCCTGCTCAATAAGATCGGCGAG
GACAACGTTACCGTCGGTATCGACGGCTCGGTTTACAGATTTTCAATCCACACTTTTCATGATCTCATGACCGAGAAAAAATAC
TCAATTTACAAAAATTATAAGTTTTGACCTGATGCTCTCGGAGGACGGAAGTGGACGTGGTTCGCGGCTGGTAGCCGACGTCG
CAGCGCAAAAACGGTGAAGACGAGCGGCGTGTCTGTTTCAACACATTTTTTAGATTAAATTATACAAAGTAAACGAAAC
TATATATATATATAAATGTGTGTATATGGACATATATAAATATTGATAAATAAGTTCTGTAATTCGGTGTCTGTAC
CAAATACGGAATATCTTAATACACATTTATATATCTACATGTACATACATCAATACAAAACAAAGAAAAAGAAAAAGA
ATATAAAATTAACATACTTCTGTAAATAGAGCACAAAAGATGCGTAGCTTAGGTCTGTTGGTGTGATGTGAGTGAAGTGCAG
AGTACCCGCGCATCGTCCATTTTCAATTTCTCTTTTCCCCGAACCCCCGCAATCCTCATTGAGACTCGATTGATTCCC
AACAGGCCCTCGTATTTTTTCTCATTCTCGGTCTCGTATCGTGGTCTTTTTTTTCTATATCACACCGAAGACAAAACCCA
GAGACAAAGAGAGAGATAAAAAAATGTGAGCATTAAATAACAGAGGCGAATATTTTTTTAACGTACGCCCGCGTCTTTG
TCTGCCCGGACAAAGGATCGATATGAGAAAACGAGAATTCGAGAGTCTGTTTTCCCTTTCTTTTCTTTCTTTCTTTCTTTG
CCCTTCCCCTTCCGCC

>CL366Contig1|puromycin-sensitive aminopeptidase-like

GTAGTAGTAGTACAGTTTTCGGTGCTAGCAGTCTCCGAACACGGTTGTGTTTCATCGTGGCAGTTGAGAACCCTTCGTGCG
AACATTTGTTATTAGAAATTTATTGAATTTATTCATCACGCTCATTATTTAACAATTTTTCTACGTCTAATTACGAAATAT
TGAAACTAGTCAACGACAAAGAGTCAGAAATGAGTCCGGTGCAGAAAAAGCCTTTTCGCCGGTTACCCACTGACGTTGTA
CCTTATCATTATGAAATATCGTTGACGCCGATCTCGTGAATTTCACTTTTATAGGCAGCGAAGATATTCACATCGAGGT
GAAAAATTCACCCGACACGGTTGTTTTGAATTTCTCTGGAATTTGACATCAAATCCATAACTTTTTAAAGTTTCGGAATG
GCAAGATTTAACCAGGCAACAAGATTACATTTCCGTCGAAGAGGAACTGTACCCCTCGTGTCCAGAGAAACTTCC
CGTCGGCAAAGTCGGCGACTCAGTTTGGATTTTGTGGGAAAAATCGACGACAAAATGAAGGGATTTTACCGCAGCAAT
ACACCGAGGTGGATGGGACGTCAGATATGCCGGGTGACACAATTCGAAGCAACAGACGCAAGGCGTTTCTTTCCCTTGC
TGGGACGAACAGCTCACAAAGCAACTTTGACATTACACTCGAAGTACCGAGCGGTCTCGTGGTCTCTCGAACATGCC
GGTGGAGAGTACGAAAAAAGGATGATGGTCACGACATTCTCAAGTTCCAACGTACACCGATAATGTCAACGTACCTGG
TGGCGTGGTGTAGTCGGTGAATTCGACTACGTCGAGGACAAGACGTGCGACGGTGTGTTGGTCCGAGTTTACACTCCAAA
AAACGAGAAAGAACAAAGGGCGTTTCGCGCTGGAAGCCGCGGTCAAAGTTTGCCGTATTACAACGAATATTTCCGTCTTTC
GTATCCCCTCT

>CL366Contig1|signal peptide peptidase

GACCTTGGGCTGTCACTCAAGAGAGATCGTGGTCTGGTGCAGCGGTGCAGCGTGTATAGTCTGTTGTCGTCTGCTGCTA
TATAGACGACATTTTTATTTAACAAGATGGAAGCGTCTGCGGAGGATATCGTGATTTCAAGCAGCTGAGAATTTGACGGA
AAATGTGAATTCACGACAGGCAGAAATCCTGCTACACCCGAGGGAATGGCAGTCGCTTATGCCAGTCTTATCGTTATGG
CCGTTGTGCTTATTTTTCTTTGGCAGTTACCGGTGAGTCAAGCACCATAAGGAACAGCAGGAATATTTGAAAGTCAAGG
CGAAAAAGCCGGAACATTGTGCGACAAGGAAGCGCAATGTTTCCAATTTTCCAGCGTCGCACTCTTCGGGCTGTAC
ATATTTTTCCAGGTATTTTCCAAAGAATACGTCAATCTCTTGTGACCGGCTATTTCTTCTGGCTCGGCGTCTGAGCCCT
CTGCCATTTGACGAGTCCCGTTCTCTGCTCTGGTGCCGGCGGCGATACCCAAAACGAAATATCGATTTTCGTTTACCG
AGGGAGATGACGACAAATCGGAAGACGTTATTAATTACAAATTCATCTTCACGACGTTGTTTGGTTCGGATGTTGCACC
ATCGTCGGAATTTGGTATCTTATGCAGAAACACTGGATCGAAACAATCTTTTCGGCATCGCGTTTCGGATCAACGCCGT
AGAGTTGTTGACCTGAACAATATCGTGACCGGTTGATTTCTCTTTGCGGACTGTTCTGTACGATATTTTCTGGGTGT
TCGGAACAAACGTGATGGTGACAGTGGCGAGATCGTTTCAGGACCCGATAAAGCTCGTTTTTCTCAAGATCTTTTGGAA
AGAGTTTTTTCAGCGAGTAACTTTGCCATGTTGGGCTCGGCGACATCGTTGTTCCCGGTATATTCATCGCTTTGTTGCT
GAGATTCGATCACAGTCTCGGAAGAAAAACAAATACATATTTTTACGCAACGTTCTTCGTTACTTCATGGGCTGCTCG
CGACCATGTTTATCGTCCATTTGTTGAGCACGCTCAACCGGCGCTCCTGTACTTGGTTCCCGCGTGTTCGGAACTCCG
TTGTTGCTGGCGATCGTCAAGGGCGATCTCAAGAGGATTTTTCTGTACGAAGATCATCCGTCAAAGGCAGAGGAAACACC
GGCAGCGACTCAGATAGACGCGAAGAAAGAAAAATAAGATTTTAGGCAAAAAAGACGAAGAAATGAGAGAAAAATTT
GTCCTCGTGAATGTTGGGACGCGAGTGGGCGAACCTCGTGGAAACGTGAGAAAGAATATCCCGCGAGTGTCTATCG
CGCTGTTTGTTTTTTCTTCTTTTTTTTTAACTCCCTATCGTCTTCGGGCCAAAAATAGGTCCTCGAAAAATCTTCGAT

mmc4.txt

TAAATAGCACGCCAATCCAATGAATGTAATTTGCAAATTTGGTTGCAACGTCCAACGTACTTCTGTATCGTGTCTTGCA
CGCAGTCACTCAACTGTTTGTCTTTTCAGATTCTTCCATTTCTTCTTACTGCCCTCCAGGAATGAATTTCCGATTTAT
AATAATTTTTCTCCCCCTCTTTTTATTTCGCTCATCGAGAATTTTAGCGCAAACGAAAAAAGATTTCTCACGTTGC
TGCAATATTTCCCGACGACAACTGTCGTTCCCTTTGAAAGAATAATTCTGCGGGGAATTTTCTGTAGGAAAATCAAAA
AAGACTCTTGAGAGAGTTTGAAGAATCAATTTGACGCGAAACTTCATTCCAGCTTCGATAATGAACGGTCAGCGAGACT
CGATGCAATTTGAAAAACACCCACGAGCCGAATTATTGAAAGAAACTTGGAAAAACGAAAAGTCGCAATAATTCGTTGGTT
TTTCGCTCGCGCAACGTCTCGTTGCATTTAGTCGATAATTTATTATCAACGCACAAAAACGTAATTTGTCTCGGAGTT
AATTTATAAAAAAGAAAAGCTTTTATCTGTTTTATTGGATTTATTGTATTTTCAAGTTTGAATGATAATTTTGAAAA
CGAGGAAATATATAGACGAGAATATATTTTCGAGTGCCAATGATTTTGGTATTTGAGGATG

>CL368Contig1|thioredoxin reductase mitochondrial-like isoform 2

AGTGTCTCTACGACTCGTACTTGTAAATTCTCACTTCTTTACATCGGTATTCAGTGCAATTTCTGTTGCTCCTACAAAG
TACATCACTAACCCTCACTGCGCTTACGTGCTCGGAAAAACATACTTGTGGAATTTGAAAGGAATCGCGATCATTGA
GAAGTTACGAGTGTGATTCTACGTGAAAAAATTTGTGAAATAAAAAAATTGACTGTTCAAGAAAATGGCGCCTATTG
CGGACCAAAAGTTTACTACGACCTGGTGGTATTGGCGGTGGATTCGCGGTGGACTCGCGGATGCCAAGGAAGCTGTGAG
CTCGGCGCTAAAGTCGCGTTTCTCGATTATGTTACTCCGTGCGCTCAGGGCAGCAAATGGGGCTTGGGTGGTACGTGCGT
CAATGTCGGTTGCATACCAAAAAAGCTCATGCACCAGGCTGCGCTTCTCGGTGAAGCCATTATGAAGCCACTGCCTTCG
GGTGGCAAATACCTGACCCAAAGGGAATCCCAACGATTGGGAGAGTCTGAAAACCGCGGTGCAGAATCACGTTAAATCG
GTGAACTGGACAACGCGAGTGGATCTCAGAAACAAGAAGCTGGAATACGTTAATGCCAACGGATATTTCAAGGATCCGCA
TACGATCGCCGGTGAACGCCCAAAGGCGAGGAGAAAGTTTAAACAGCAAAAACGTGATCATTGCTGTTGGAGGAAGGC
CGAGATATCCGGATATTCTGGAGCCCTGGAGTACGGAATAACGAGCGACGATATTTTCACTCTTAATCGAGCGCCCGGA
AAAAACGCTCGTTGTTGGTGGTGGATACATCGGTCTTGAGTGTGCCGTTTCTCAACGGGCTTGGCTACGACGCGACGAT
CATGGTTCGTTCCGTAATACTCAGAGGATTCGATCAGCAAATGTCGAATATGGTGGCGAGCGAAATGGAACAACGTGGTG
TTCATTTTGTCTATCAGGCGAAACCAAAAGCCATTGAGAAACAAGAGGACGGTCGTTTGTCTGTTCACTGGGTGACAAA
GAGGGTGAAATACATCAGGACGTCTACGACACCGTACTCTTGTCAATCGGCAGACAAGCTCTTACGAGAGAATCAAGCC
TGAGAACGCCGGCTTGGAGCTTGTCCAGAACTTTAAATCGATGCCATCAACGAGCAAAAACAACGTTCTCACATTTA
CGCCGTTGGGGATGTTCTGCACAAAAAACCGGAACCTACCCCGTGGCCATCCACGCGCGGAGATTACTCGCTCGTCGTA
TCTTCGCCGGTTCCCTCGAGACGATGGACTACACGAATGTTGCCACAACGTGATTTAGCCCCCTGGAGTACGGTTGCGTC
GGCCTCAGCGAAGAACAAGCGATCGTTGCCTACGGCGAGGACAATCTCGAAATTTATCACGGTTTCTACAAACCCACTGA
ATTTTTCATACCCCAAAAGAACATGTCGCATTGCTACCTCAAGGTCGTTGCTTTGAGGACCGACGACGAGAGGGTCTGG
GCCTGCACTTCTCGGACCTCATGCTGGTGAAGTCATCAAGGATTCTGCTGCTGCTATGAAATGCAAACTGACATTTCCG
ATCCTGAAGTCTACGGTGGGTATCCATCCGACTAGTGCCGAGGAATTCACCAGGGTGACATAACAAAGCGATCAGGAAT
GGATCCGACACCGCAGACTTGTGCGAGCTAAATCAGCCGATTTCAAATTAATTTCCGAGCGAGTTTCGATCGAACGAT
CTCGTGAAAACGTCCCGCAGTATCGACGCGACCAATCAACGAGGAACCTTTCGCTGAATTCGAAAAACTCGTTTCAACTC
CAAGTAGAATCGACACGAGCCTAACGTTTAGTTGCAAAGTAATAACGCTTTTTATTTTCGATACTCGAGAGAAAATTTGG
ACAAAGGGCACAAAACCTACTGAAGCATTTCGAGCCACTTAGTGGCTCGAATACGTTTAGAAAGACGTATCTTTTTTACC
TTTGACAGTCTCTCTCGGATCGCCGCCAGCCTTTAAATTTTCTATTCTCACTGGCTGAATCCAAGGAAAAAAGTATTTG
CGGGCAAACTCAGTGAAAAAAGAAAAGTCGATTATTTGGAAAAATAGTTTATTCTTATTGTTGATGAAAAATGCCTGTGATG
AAGCCCTCGTTGAAGATTTTTTGTGCGCGCGCTTGAGCGTCTGCTTATACACAGTAATTTACGTTTTTTTTTTATAC
TACTTTTAAATCGCTATTCCATTTTTTCTTTTTCTTCTTCTATATTACAGTAAGGTGGATCTGTTATATTGCTGTC
GAGACCAATAAAA

>CL369Contig2|glycine n-methyltransferase-like

GTAACATTTTGTGGTCGAGTGTTCGGGCGCGCGCTCGATTGGAGGAAAACTCGTGGCGGAGCAGTCTCTCGAGTAGCGA
CCGATAGTTTTTCAAATTTCTCGAATTCGCGATTAAAAAATAAAAAATAACATGGTCGACTCGGTTTTTTC
ATTCTCGATCTCTGGGCGCGCGCCGAGGAGTGTGAGACCAATACGCTGATGGGAAAGCTGCCAAAGTTTGGGAAGTT
TTCATCGGCGACAAGAAGCAACGAACGAAAAATTACAAGGAATTCCTCGTTGGCCTTTTTCGGGAAAAAGGCTGCCGGAG
AATCCTCGATGTTGCCTGCGTACTGGCGTCGATTCCGTCTCTCTCGAGGAAGGATTCGACGTTGTGACGCTCGACG
CTTCCGACAAAATGCTCAAGTACGCGCTCAAGTCTCGATGGGAAAGACGCAAGGAACAGCTTTTCGATAATTTGGGTGATC
GAGGAAGCGAATTTGGCTGACTTTACCAGAAGATATAAAACACTTATTAGCCGGTGGTTTCGATGCCGTAATTTGCTTAGG
CAACAGTTTTTGTACATCGCCGATTCTGTTCCGTTGATCAGAGGGAACGAAAGCCCTTGCAGTTTTTCGACGTTTGGC
TTAAACCCGGCGGTCTGTTTTCTCATCGACCACAGGAATTACGATTACATCATGGAGACTGGCAACACGCCGCCAAAATGC
ATTTATTACAATAGTGACCACATGACTGATATAAAGACGTCGGTGTGTACGTGTGTGAAAGCCAGCGATGGTGACCCT
CGATTATCTAATAACATTGGAGCCAAGTAAGAGCAAGAACGACCCCGAAAACCTCGAGCGAGTTTTCGACTCTCGTATTATC
CGCACAAGCTCAACGTTTTTTCGAGACATGTTGGACGAGATTTTACGGCTTCGATAAAGCACAGGATATACGGAGATTTT
AAGCCTCTGGACGACGTGGAGCATCCAGGATTTTACGTGCACGTGATGGAGACGGGAGTCTAGGCAAAAAAAGCGTCCA
ATTAATTTCCCGCAATTTTTAAATTCGTGAAAAATCAAAATTTTCGAAAAAACCACAAAAAATCAAAATTT
TTAGAAGACCAAAAAAATGGGTGGCTTGGCGGATGAATTTTTAATTTCCAACAAAAACGAAATCTCGAGCGTGGATGAC
AAAGATTTTGTGAAAAACGAAAAACCAAGAAATTGCATTTACCTGTGAATTTTTCTGCCCTCGTTAGCAGCCGA
GGCTCGGCCTAAAATTC

>CL36Contig1|hexamerin 110

TTTTTGATTATTGAATCCATAAGACTGCAAGAGTTGGTATGAAAAAATGAGAAAATGAATGAAATTGAAATTTCAACG
TTTCATAGTTTTCTGTAGTCGTTGCAATTTGTTTTATTTCAAATTTATCACGATCTGCTTGATTAACTTTGCTTTTCAATGT
GTCACGGTTTGCCAGCTGACCAGGATCTTCTGAAAAAAGCAACAAGATGCAATTTATCTATTGGAACACATAACCCAGGA
CTTGCCGAACCAAGGAAGTGTACAACCTTGGCTTCCACTATGACATCGAAGCGAATGTTTCACTTATCACGAGCCCCAGA
CCGTTTTGTAATACTACGGTATGTTCAAGGCTGGTTCATGTACAGCCCAAGGTACCGTCTACTCCAACCTCGGTCACTCAA
TTGCGCAAAGAAGTCGCTCTTCTACGAGAGTCTTCTGGCGGCAAAAGGCTACCCGGTGTCTCTGCAGACCGCTGCATGG
GCCCGTGTGTACATAAACGAAGGACAGTTCGTCAAGGCTTACATAGCCGCCATCTTCAACGCGAAGACACCGTCGGAGT
CATTCACACTCCGCTGTACGAGATCTTCCCGACACTACTTCGATTCCAGGATCATCCACGAGGCTCAGCATGTCTACA
CCGAAGGATACGAGGCTGACAAGACCCACTACATCCAGTAAACTACACCGATTACTTGCCGTTTCGGCGAACATCAACTT

mmc4.txt

TCGTACTTCACCCACGATATCGGCCTCAACGCCTACTACGTTACGTTTCTTGGCTGGATACATGATCCCTGAATTCCA
CAAGTCCGCCGGTTACCAACAGGTGCATGGATCCGACTACGAAAAGGGCCACCACATCGGTACGGTTCGTAATACTACT
ATCTCCACCAGCAGCTTCTGGCTCGTTACAACCTCAACCGTCTGGCGACCGGGCTCGGGCCCATCGACAGCGTCGACTTT
GAGCACGTGAAGGCTCCGTTCAAGCCTCATCTGCACTACGCCAACGGTCTTGAATACCCTGGCCGTCAAATGACCTCTA
CCTGACTCCCTACCACCAAGATCTCATAAAGAAGCTTTACGCTTTTGAAGAAGGGCTAATGAACGCCATTGACTCCGGCT
ACGTAATCACTCCCCAGCAACAATTCTCTCGCTCTACCAGCCCCAGGGTTTGAACATCCTCGGTGACATAATCGAAGGT
ACCGGCCGCAGTGTCAACCCCGTTACTATGGCAGCTTCCAGGCTGTGGCTCGTCAACTTCTCGGCAACACTCCCGAGTT
CCACGACATCTGGAGCTACACTCCGTCCGCCCTGGAACCTCAGTGAGTCCGCTGTTTCGCGACCCAGCTTTCTACCAGCTCT
ACAAACGCATCATCAAGCTCTTTCGTTTCGCTACCAACAATCCCTGCCGGCCTATCAATACAACGATCTCGTTGTTCTGGT
GTCAAAATCGAGAAAGTTGTTTTCCCAATCTCGTCACTTACTTCGACCAGTACCACGTGATCTCGACAACGGCTACGT
TCACTCCGTCAAGGAAGAACATCACGACCAACACATCAAGGCTCAACTCCATCGCCTCAACCACCAAGCCTACGAATACC
AGGTCTGTCGTACAGAGCGAGAAAACCTACACCAAACGCCGTGTTTCGCGCTCTACCTCGGACCTAAATTCGATTACGATGG
ACAACCCATCGACATTAACCATCACAGACACTACTTCGTGGAGCTCGACCACTTCGTTTCATGACCTGAAGGAAGGCGAGA
ACGTATCGTCAGACACTCCCAACAGGCTCCGATCTTACGCCACGACTACCCATCCGTCCACAGATCAAGGTTACCTC
GACAGTGGCCCTTTCGTTCCCAAGATCCGTTCTACATCACCGAGCCACAACAGATCTTCGATTCCCGCCAGGTTGGCCCT
CCCCAAGGGTACCTACGGCGGATTCCCACTCCAGGTCTTCGTATCGTCAGTGCTAACGAGGAATACCACGTTCCCTACG
GTCCAGTCATCCCTGCTGAATTCCAAACCTACCAACAGCATCAGTACCAGATCGTCGATGGTGAACACTACGAGCAGTAC
AGCCAGCCCGGATACCATCAACCTCAGCAAGGAATCTACCACGGTGGATACCAAACCTCGAAGTTCTTCTCACTACGA
GAGCCACGGAGTCTACGGAACACAGATCAACAACTCCACGCTTACTACGGTCACTACTTGTACAAGAAGTACCCGCACC
AGTACCCCGTCTACCATCACTACCAGCACTACCAGCACGGCATAGAGCACGGACAACAATACCACCATTCGGAGTGATC
CAACACCAAGCTGTTACGGGATACGGCCAACAATACGCCGGGACCAGCAGCAGGTGGTTCGAGAAACAAGGTGAGTACGT
CCATCAAGGACAAGTTCATCATGGACAAGTGCATCAGGGCCAACACCACGAGGAACAGTTCATCAAGCCCAAGGACAAT
TCTACGAGCAAGGTACCAATACCCGCAAGTACATAACGCACCCGAAGAACACTTCGAGGCTGGAAAACACCACGGAGCT
TACCAAGGCCCTGTAGAAGGACACCAGTCGGTGGAGTTTACCCTGGCAGCGTTCCTGCAGAGATTGTTGGAGGCCAACA
CATCGCTGGAGAACATTCGATCCACGCTGGCGAAGAAATCTACAAACATGGACATTTTCGCCCACTCCGAGTACCTCAAGC
ATTACTACGGCAACAAACACATCAGCCACATCATCGGTGGAGCTCTGAGCCTTGACAGCAAGCCTCTGGGCTACCTCTT
GAACGACCTCTGGCTCCGAGCGCTTCTACGTTCCCAACATCCACGTGCGCGACGTATTGTTTCATCACGTGACCAACC
CATCCGAGAGCGTCTACTAAATCCATCAGGCACCCTGATTAGCTTTCTTGAACGTAATCAACGTGCTTCTTTTTTTTAA
CTCTTTTAGTTAAAAAATCGAAAATCCTCTATTTTTCTCTTTTATAATACCACCTTTATGCTCTGCAATTATTTTACC
GGAAT

>CL37-bisContig1|serine protease inhibitor 3 4-like

GAACGATCGGCTCTTGCTCATACTTTCTTTTCGGGACTTCAAGACATTTTCAATCTCGCACAATGCGTTTCCTTTTGTTAA
TCAGTATCGCCGTTTGGTGCCTGTCAAGTTCGGAAGCCATGGCAGTCCAACCTGCCAGTCCGAGGGCTTCCAAGCCGTC
ACAAAAAGCACAAACGCTTTCTACCAAATTTTTATAAGCATGTGCTGCGGATACGAAGGGCAATCTTATTTGCTCGCC
GCTAAGTGATCGATGGTTTTGTCGATGGTGGCGTACGGTGTCTGCGGAAATACCGCGAAGCAAATGCGATCGGTTCTGG
CACTTCCGGAAAAAGATGAACTTGCGAAGAGCGGATTCCAGGCTTTCGTGACAGCTTCAAGAATAACAAGCAAGTCGAT
CTGCGTTTGGCCAACAAAGTATTCCTCAACGAAGGCGTCAAGCCCAAGCCGAATTCAGCGCGATGACCAAGAGGGCTT
CCGGTCGGAAGCGCAAAATGTGAATTTCTTAAATCAGCCGAGGCGCCGAAGACCATCAACGACTGGTGCGAGGCTCAAA
CCAACAATCGCATCAAGGATCTCATCAACCTGACGATCTCGACGCCTCGACAGCGATGGTTCTCGTCAACGCCGTCTAT
TTCAAAGGCAATTGGTCCGATAAATTTGACCCCGCAACACGAAACCACGTCTTTCAATGTGACGCTACCACGAAGAA
AGATGTGCCGACGATGTTTCAGATCCGGCTCCTACAACCTTGGAGTACTCGATGATCTCAAGGCCAAATTCGTGAAATCC
CATACAAGAGCGAAGGCCCGAACGATGCCATGAGTATGTTTCGTATAGTGCCCGACGCGGTTGACGTTTGGCCGAATTG
GAGAAAAACATTGAAAAAGTATCGATGGACAGGCTCTCAATAGTCGGAAGCAAGACGTTAATCTTTACCTCCGAAAT
CAAAATCGAGAGCGACATTTCCCTCAACGCGGTTCTCGCAAAATGGGAATGACCGACATGTTCTCGGACGCTGCGGACT
TCACTGGCATCATCGATTCCCCACGTCTCGCAGTTAGCAAAGTTGTCCAGAAAGCATTATCGAAGTGAACGAGGAGGGT
AGCGAAGCCGCTGCAGCGACTGACGTGGGAATAATGCTGCTCAGTATCCGACCCACATATCCTGTATCAACTTCAACGT
TGACAGACCAGCCCACTTCATTATCGCAACTAAATCGAATGATCAGAATGCCATTCTTTCAGAGGATCTGTTACAGACC
CGCTCGCAATTGAACTAACTAAACGATCCTGACTCCCTCACACTATTACGACCAAAATCAAAGAGTTTTATGAAAACTT
GAGGCCGGCCATCCAACGAGTATCAACTGTTGACAAAAACCACTTTTTAATCATTTTTCTGACCGAGGCTTTTTT
ATAACGATTTGATCGTAAATTTAAAAATCAAATTGCAATTTTCTTCGTGAATCTTTCGAGCGATTCTTTTCATTAATTAT
CATTTATCATTTTCTCTCGCAACTGATCAACGTCTCCGTACATCTTTAAATTTCAAACCTGCGGTTCTCTTTCGCTTCTT
GCCAACTGTTCTTTTGAAGAACTATGGGCCTTGATGACTTAGTGTTTAAATGTGATGTACGAAAGAAATAGCGCGTTC
TATTCTGTGTTTACGAATAAATGGGTATGAACATTGACTCGAAATTCGGCTCCGGTTCCTTGATCCACCCCCCGTTT
GC

>CL370Contig1|mitochondrial-processing peptidase subunit beta

TTTTCGCTAGAAAAATGGCGACTCGTATGCTGAAAATCGGTAACGCGCTTCGTACATATTCAGACCGAACGAATTTATTA
AAGACTCGAAACAATGGAGATCCACCGCGGCTTCTCTCAAAGAGACGCTGATAAATCAGCCACCGACGAGGGTCACCGC
CCTCGACAGCGGCATGAGGGTCGCCAGCGAAGACAGCGGAGCGGCCACCGCGACCGTCGGACTTTGGATCGACTCCGGCA
GCCGATACGAGACGGACAAAAATAACGGCGTTGCCATTTTCATGGAACACATGGCCTTCAAGGGCACGGCAAAACGGTCG
CAGACCGATTTGGAGCTTGAGATTGAAAACATGGGAGCCCAATTTGAACGCGTACACCACTCGCGAACAAACGGTTTTCTA
CGCCAAAGTGTCTGGCTCAGGACGTTCCCAAAGCCATTGAAATCTTGAGCGACATAATAACAACTATTAAGCTCGGCGAGA
GCGAAATCGAGAGAGAACGTGGTGTGATTCTGAGGGAAATGCAAGAAGTTGAAACCAATCTCCAGGAAGTAGTTTTCGAT
CATTTGCACGCGACTGCTTACCAGGGAACCTCCCTTGGGCAGGACGATCCTTGGACCCACGGAAAATATCAAGTCGATCAC
ACGCGACGATCTGGTTTCTTACGTCAAAGAGCACTACGGACCACCAAGATTTCGTCTGGCAGGTGCCGGAGGCGTGGACC
ATGCCCAACTGGTCGACCTCGCGGACAAACACTTTGGAAAAATGAAGGGACCGATTTACGATGAAATCCCGTCGCTTCCA
AAACCTTGCCGTTACACAGGGTCAGAAATCCTCGTGTGATGTTCCATGCCCTTGGCACATGTGGCACTCGCCATCGA
GGGAGCCGGATGGACCGATGCGGACAAACATCCCTTGATGTCGCCAACACTCTGATGGGCGCGTGGGACCGTAGCCAAAG
GAGGTGGCGTCAACAACGCCAGTAATTTGGCCAGAGCTTCGCCGAATCAAATCTCTGCCACAGTTATCAAAGTTTCAAC

mmc4.txt

ACGTGCTACAAGGACACTGGTCTCTGGGGAGTTTACTTGTGTGCGATCCTATGGAGCCGAGAACATGGTCTGGAACATTA
CAAAAAGATGGATGCGGCTGT

>CL3730Contig1|t-complex protein 1 subunit beta-like

TGAACCCGGTGAGAATATTGAAGAACGAAGCGGAGGAAGAAAAAGCCGAAGTTGCTCGTTTGAGTTTGTTCTCGGGGCG
ATAGCCATCGGCGATTTGGTCAAGTCCACCCTGGGACCCAAAGGCATGGACAAAATATTGGTAGCTCATGGCCGCACCGC
CGGCACGGTGCAAGTCACTAACGACGGAGCCACTATTCTCAAAAAGCGTCGGTGTGACAATCCGGCAGCTAAGATTCTT
GTCGATATGTCCAGAGTACAGGACGACGAGGTGCGGCGACGGTACCACGTCCGTACCGTCTTGGCTTCGGAGTTGTTGAG
AGAAGCAGAAAAATTGATCGACCAGAAGATTATCCGCGAGACGATAATAGCCGTTGGCGTAAAGCATTGACTGTAGCGA
GAGAATCTTTGATGGCAGCAGCGCGTGATCATTCCGCGAGATGCGGAGCGTTTCCGCGAGGATCTGTTGAACATAACTCGA
ACGACTTTGAGCTCGAAAAATTTGTCGCGAGCATAAAGAGCATTCTAGCAAACTCGCGGTTGACGCGAGTCTTGCCTCTCAA
GGGTTCCGGCAATTTGTCAGCTATCCAAATAATCAAAAAAACGAGTGGTACCCTGGCCGATTCTTCTCGATGCTGGCT
TTCTGCTTGACAAAAAACCTGGTGTTTCATCAACCCCAAAAGATCACGGACGCTAAAATTCTCATCGCTAACACGCCCATG
GACACCGACAAATCAAAGTTTTTGGTTCCCGCGTACGCGTCGATTCCATGGCCAAGATCGCTGAGCTCGAGACTGCTGAG
AAGAAAAATGAAGGACAAAGTTGAACAAAATCAATCAAGCAATGGCTGCTAACGTTTCATACAACCGACATTCGCGAGT
A

>CL3741Contig1|coatomer subunit beta

CTCTTTCTTACTTGGCTGCTTGTGTTGGACCTCGTGCCAACCTTTCGGTGACATTCTTCAGCTCGTCATCGTCAACTGATT
TACAAAGTTTGTCTGGCGAATCCGTGCGAACGAGCAGATTATACGCTGCATTTACAGTCTGTTGAATTCGCCGAGTG
GGCTGTGCGATACGAAGCGGCTGGAACGTTGGTGACCCTGTGAGTGCACCAACAGCGATAAAGGCTGCAGCTTCGTGTT
ACATCGAGTTGGTGGTAAAGAGAGCGACAACAACCGTGAAGCTCATCGTGTGGATCGTTGATCGCGATGAAGGACAGT
CCATCGCACGAGAGAGTGTCTCAGGACCTGGTGATGGATGTTCTTCGCGTTCTTGGCTCGCCAGCCCTCGAAGTGCGCAC
AAAAACGTTGGCGCTCGCGATGGATCTCGTTACTACACGAACGATCGAGGAAATGGTACAATTGTTGAAAAAAGAAGTG
ATGCGAAGCGCCGGTGGAGAACACGAAGATGCTGGCCGTTATCGCCAACCTTCTGTTAGAACGCTGCACGCTTGTCCAT
TAAATTTCCCGACGTCGCTGCCACCGTCATTCCCGTACTCGTGATTTTCTCTCCGAAACCAACGAAGCCGCTGCCACCG
ATGTTCTCGTCTTTGTTGCGGAAGCTATACAGCGTTTCGAGAATCTTCGACCTTTGATAATCGAAAAATTTGTTGGAGGTA
TTTTTGCAAAATTCGTTTCGGTCAAAGTGCACAGAGCTGCTCTTTTGGATTCTCGGTGAGTACGCGACATCCAAGGAAGACA
TTGAAAGCCTCATGAGTCGAGTTCGAGCCGCGCTGGGCGAGTTGACCTCTCGTGAAGCGGAAAAACAAACGTCAGGCTGG
CGAAAAATCGCCGGAGGATTCCAACGCTCAAGCTGCACCTGCACAACCTCGTTACTTCCGATGGAACCTACGCCACCAGAG
CGCCTTCAGCACTTCGACGAGCGGACAAAAAAGAGAAAAACGTCAGCTTGGTGCAATACATGAT

>CL3746Contig1|phosphatidylinositol phosphatase sac1-like

AATGTGTGATTTTACTTGGCTCTCGTGTGCCTGTGACGTCTGGGTGAACAACGTAGGAAAGAGGGAACGTGATGATTC
GTGTGATTCGATGCCACCGTTTAAATTGTAATTAATTCGATAGCTCTCGAGACGCTGCACTAACTTGTCTTTATGTC
CAAGGAAAGAGAGTTTTGTGATTTCTTTCGTTATATCGTCTAGTCATTCTGTGATACGATATTATCCGGGACAAATTTTC
ATATGTGTACATACGAAGTGTATATGTGTTACAAACGTCATAAGGTTCTACGTTCTCGCTTTATTACTCTTGCTATAC
AGGTTCTTCAAACCTCCATTTATCCCAAGTATTTTCATTGCCGCGAGCAATTAATAACGACTTGCAAAATATGACCTTG
AACACCGACGTTTACAATGACTTATATCTATACGCAACTCCAGAAAAATTTTATGTGAGCCGGTGGGTACGAAAGTTTT
GCTGGTGATTGATCGTGTGAGTCAGCAAACTACACGCAAGTTGGTACTGCAAGTCAAATCCCACAAACCGCCAGCCGAC
GTAAATATGGGGCATCATTGGGACCATTCGTCTTCTGGCTTGGCGCTATATGATGTTTAAACAGAAGCAGAAAGAGTC
GGCAGCATAGCCGGTCAGGATATCTTCAAATAGTGGCTACCGAGATTCTACCTTACTCGAGATCTCTGCTTCATTTGAG
CGAAAAACAGATCCAGAATAACACAACCTTACCTTGAAATGATTAAGCTCGTTTTGAACGAGCCGTTATTTTACTTTAGTT
ACACGTACGATCTCAGTCACACGATGCAACGTTTGCATAACACGCCGCCGAATTTCTTCAGATGCCCTCATGATCGGC
AGATCCGCGATTTCG

>CL375Contig1|26s proteasome non-atpase regulatory subunit 12-like

GCATTGTGTTCTAAGCGGACTGGTCACAATTTTACATTTTACATTGTTGAATGAAATTTTGTGATCCGCAAGGATTAAC
CATTTGCTAATTATTTGTCTTTTCGTTTGATCGACGCTTCTCACTGTGAATCGCTGAAAACCTGAAATAGCAATCATGGTGG
ACTCGGCTAACGATACCGGCAAGATAGTGATGATGGATGTGCACTACGCAACCAACTGCGACACAAAAATCCCGGAGTGT
AAAAAATTTGGCGCAGGAGGGAACCTGCACGATGCGCTGGACCAGTTGTTGGCTCTGGAACCACTTGAAGAACGGCAAG
CGACATGCCATCGACCTCGAGGATTCTGGTGGCGATAGTAGAAATATGTTTCGAAGCTAAAAATGGTCCGCCTTGAACG
AGCATATCGTCTTGTTTCCAAACGACGATCTCAACTCAAGCAGGCGTGAAGGAATGTTTCAAGGATTTGTACTTAT
ATCGACAAAACTCCGGACCGCGAGACGATGATTAACTCATCGAGACATTACGCTCGGTGACTGAAGGAAGATTTATGT
GGAAGTTGAACGAGCTCGCCTGACTCATCGTCTGGCGAACTGAAAGAAGAAGACGGTGACCTCACAGGAGCGACGACCG
TTATGCTCGAATTGCAGGTGAGACTTACGGCAGCATGACTCGTCTCGAGAAAGCTTCTTGATCCTCGAACAAATGCGT
CTCTGTCTCGCCAAGCAGGATTACGTTTCGTACACAAATAATAGCAAAAAAGATAAACATCAAGTTTTTTCGACGACGAGAA
AGACGTGGAGACCAATTACTCAAACCTGAAATATTACGATTTGATGATGGAACCTAGCCCGTACGAGGGATGGTACTTGG
AGCTCTGCCGTACAAATCGTGCGTCTTGAACCTCCGGCGGTGAAGGAATCCCGGAAAAACGTAAGCAGCAATGTCC
CGAGCAGTTATGTATCTCGTACTTGCCGCTCACGAACCCGAGCAAGCTGACATGACACACAGACTATTGGCTGACAAATT
TATCGACGATATACCGACCTACAAAGAACTGCTACGACTTTTTGTTAATCCCGAGCTCATCAAATGGTGGGTTTGTGCG
AAATTTACGAGAAGGAGCTCAAAAGCACCGAAGTCTTACGCACTCGACCGAGGACGGTCGCAACGTTGGACCGAATCT
CGAAATCGCGTCGTGCAACACAATATTGAATAATGGCAAAGTACTACACGAAAAATAACTCTGACGCGAATGTGAGATT
GCTGGACCTTCCGATCCAAGAGACGGAGGCGAGTTTGTGCAAGCTGGTAGAATCGGGAATAAATGCTCGTACGGACC
GACCGCGGGCGTGGTTAGATTACCGGAACCGCAGGAGCGAGCGCTTCTCGATGCCTGGCTGCGTCTGTTCAAAA
CTCATGGGTCTCGTTAACAACACAACCTCATTTAATTACCAGGAAGAAATGCTCGCCGTCGCTCATTTATAATACATTCA
AAATCAACTATTTACCTTTTTTTTTCTTACGATCCACGTCGATTATATTTTCTCTGCAACTCGCAATTACGATTTGTC
TATCTCGCATTATCGTACAGTGTATTTGCAACGCTCGAGGCTGTTACTAAAATACAATTTG

>CL3765Contig1|protein transport protein sec24c-like

ACTCTATGCTCAATTGCTTCAAGAGCGACGCTATTTCCGGCGCCGACATGACGATCGACGACCGTTTCGTACGTGA
TGCAGGCGGTATCAACAATGCCTCTGTACACCTCGGTAATATACTTTTTTCTCTCGATTGTTGCCACTGCACAGTATCGA
TCCTCAGGGGAGCAAACTGCCTCAACAGCTTCGATGTTTATTCGACAAGTTTTCCGACGACGGAGCCTATCTGCTGGAA

mmc4.txt

AATGGAATTCACATGTTCTTTGGCTGGGGCTTGCTCTGTCTCGGAATGGCTGAACCAAGTATTTGGGGTTGGACTGGT
TGATACCGATCGCACGACCATTCCCGTCCTCGATACATTTATGAACAAACGCGTGAGAGAAACGATCGCGCAAGTGAGAG
CGGAACGGCATCATTGTATGAGTTGACGATTGTCCGTAGCGAGAAAAAATTGAAATGGTATGCGCTAAGTTTTTTGGC
GAGGACAGAGGAAACGACGGGAGTCCTAGTTACGTCGATTTTTCTTGTCACATGCACAAGGAGATAAAGACGCTTCTCAG
T

>CL378Contig2|60s ribosomal protein l4-like

TTCTTTACGGCCAGGCAAGGCGTGTTAACTGCCTGGTTAGTGTTTTCTCTGATGCGCCAAAAGTGGTAATAAAAGCCACG
AAAAATGTCGTTATCAACAGCTCGACCTCTGGTCACCGTCTACACGGACAAAAATGAGGCATCCGGGGATTCCATCTCCT
TGCCAGCGGTGTTCAAAGCTCCGATTCTGTCCTGATGTCGTGAACTTTGTTTCATCAGCAGGTCTCCAAGAACAGCAGACAG
CCGTACTGCGTTTCCAAGGAAGCCGGTCATCAAACCTCGGCCGAGTCATGGGGTACCGGACGTGCCGTGGCACGTATACC
TCGTGTACGTGGTGGCGGTACTCATAGATCCGGCCAGGGTGCCTTTGGCAACATGTGTGAGGTGGACGTATGTTTGCCC
CGACGAAGCCTTGGCGCCGTTGGCACCGACGCGTCAACGTCAACCAAAACGTTACGCCATCGTCTCGGCTATCGCCGCTT
CCGGTGTTCCCGCTCTCGTTCAATCCAAGGGTCACATGATCCAAGAAGTGCCGAATTCCCGGTCTGTCGTATCCGACAAA
ATCCAGGAATACAACGAAGACGAAACAGGCAGTAATCTTTTTACGCCGTATCAAGGCCTGGAATGATATCCAAAAGGCTCA
CAAGTCGACGCTTTCCGCGCAGGAAAAAGGTAAAAATGCGTAATCGTCGTCGCATCCAACGTCTGGACCTTTGATCGTGT
ACGGTCAAGATCAGGGAATTCGTAAGCTTTCCGTAACATTCGGGAGTCGATTTGATGAACATCAACAAGTTGAATCTA
CTGAAGCTCGCACAGGTGGCCACGTAGGACGTTTTGTTATCTGGACGAAATCGGCTTTGATCAACTCGACGCCCTCTA
CGAACTTGGCGCAAAGAAGCCAAACTCAAGGCCGGCTACAATCTACCTTTCCCAAAAATGGCCAACACTGATCTTTCCA
GACTTCTCAAGTCTGACGAGATTCTGTAAGTTCTCCGAACACCGAGGAAGAGGATTGTACGCAGCGTAAAGAAATGAAC
CCGCTACCAACACCCGGGCGATGCTTAAACTCAATCCTTACGCCGTGTGCTCAAGAGGTCCGCAATTTCTACCGCTCA
AAGGCGTCAACGCGAGAAGGAACTAGCCATCGCCGAGAAACGTGGTGTGTTCTGCCAAGAGCGCACCAGCGATGAAGG
CGAAGAAGCTACAAGAAAGACGCAAGAAGCAAATTTCTCGCTGCGAAAGTAGACGAAACCGAAGAAAATTGGAGCCCCGAAA
AAGCGGCAGCGGCACCGCGCAAAGCGACCAACCCGTAGCAGCAGCGAAAACCGGCAAAGCTAGCACCAGCCAAGAAATA
AAACGGA

>CL379Contig1|prohibitin

GACCTTGCTGTCACTCAGTTTTCTACGTGCACGCCGGGTGCGGAGTTTTTTTCATGTGCACGTTTTATCGTCCAACCTTAATC
ACGAAAAATCGATTGAATCAATAGTAATAATATCGTGTGAAAGTTCAATAACAATAAATAGTTAAAAAATGGCTCAGAGC
AAGTTAAACGATCTTGCAGGACAATTCGGAAGACCCGAAAGGCCTCAACGCAGGCCTGAAGTTTCTTGCAGTGGCCGG
TGCGGCTGCCTATGGTGTCTCGCAATCTATGTACACAGTCGATGGAGGTACAGAGCCATCATTTTTTACGGCTCGGCG
GAATCCAGAAAGACATCATGACGGAAGGTCTCCATTTCCGTTTGGCCTGGTTCCAATATCCCATCATTTACGACATTAGG
AGCAGACCCAAGAAAATATCCTCGCCTACCGGTTCAAAAGATCTCCAGATGGTCAACATATCCCTCAGAGATTGTACG
GCCTGACGCGAGTGCCTGCGGATAATGTATCGTCAATTGGGAGTCGATTACGACGAGAAAGTACTTCCGAGCATTGGA
ACGAGGTGTTGAAATCTGTCGTGCGCAAAATTCACGCGTCGCAGTTGATAACTATGCGTCAACAAGTTTCCAATATGGTG
AGAAAAGAGTTGACCGAACGAGCCAAAGATTTCAACATCGTACTCGACGACGTTTCCATTGTGAGTTGAGCTTCGGTAA
AGAATATACAGCCGCGGTGCAAGCCAAACAAGTCGCACAACAGGAAGCACAACGAGCAGCTTTTGAGTGGAACGGGCTAA
GCAGGAGAAACAACAGAAAATCGTACAAGCTGAGGGAGAAGCAGAAGCAGCAAGAATGTTGGGTATAGCTGTTAGCCAGA
ATCCCGTTATTTGAAGCTGAGGAAAAATCCGTGCAGCGCAGAGCATTTCTCGCACGATCGCAAATTTCCAGAACAGAGTT
TATCTCAACCGCAACAGTCTGATGCTGAACATACAGGAATTTGGGCTTCGACGATTATGCCGAGATTATGCCGAGATTGCGA
CGAGCCAGGCTGGAAAACCTGGAGCGAAACGACGGAACAAGCGGTCAAATCCCTCAATGTTGATAATCCCACGAATGCC
TGAGAAGCGACGATAATTCCTCGTCTTCTTACGACTATGAGAATGGAATAATCCCGAAGATCCCGCTCCAGACTTCTC
AATTCGGCAGCTGACGGTGCCAACTAATTGTTCCCTAAAACCTGGATGTTTAACATTT

>CL3800-bisContig1|dephospho- kinase domain-containing

ACTGGTGCACATCGAACATCGAATAGGCGCAGTGTAAATTAACAACAGTGATGAGCATTTTGACAGATCGGTTGTCAAACAC
CCCGTATATTTGTGCAACACATGAAAAAATGTTTATCGTAGGATTACCGGTGGAATTGCCACTGGAAAAAGCACAGTCG
CTGCAATATTTCTGTAACATGGAATACCAAGTATAGATGCTGACACAATAGCTCGTCAAGTTGTTGAGCCGGGAAAGCCA
GCCTGGCGAAAAAATACGAACGGAATACGGCGAAGGAGTTTTCCAGCAGGATGGCTCTCTGGACAGAATAAATCGGCG
ATTTAATATTTAACGATGTGGAGAAGAGGAAAAAATTAATGCCATTACTCACCCAGATATATACAGGGAAATGTGCTGG
CAAACCTTGAAATATTTTTTTTCCAAGTCAATCAATTTATGGAATTTACCATTTGTTGTTGAAACCGGCTCAATGT
TGAATTAACACACAAATCTTGTAGTCACTGCGAGGAAGATCTCCAGCTGACGAGATGCCGAGAGATTGAAATTCGCGA
AACGAAGAAAAAGCCAAAGTGAGAATCTCTGCTCAAATGCCTCTGGACAAAAAAGTTGAGATGGCGAATTTCTGGTGG
AAAATTCGAGTACGGAGCAGGACACGAAGGAACAAACAATCAAGATTATAAACGTTTTGAAATATTCGAAGCATCATTTG
CGATTACGTTTCG

>CL3805Contig1|microtubule-actin cross-linking factor 1-like

GGGTGCTGACCCGAAAGAGCGTAAAGCGATAGAGAAACAACCTGAACGATTTGGTCGGCCGGTTTGACAACCTGACGGAGG
GTGCGTCTGAGAGAATGGATGCTCTTGAGCAAGCGATGGCAGTCGCGAGAGAGTTCCAGGAGAACTTGTACCCTTGGCC
ATTTGGTTGGACAAAACGAAAAAGAGGTCAAGGACATGGAATTAAGTGCCGACTGACGAGGAGAAAAATACAACAACGCGT
TGCGGAGCACGACGCTCTCCACGACGATATTCTCTCGAAGAAACCCGATTTACGCGAACTCACGGAAATCGCTAGTCAGC
TTATGAGTCTCGTTGGTGAGGACGAAGCTGCGACCTTGGCCGATAAGCTGCAGGACGCTGCTGACCGTTACGCTGCGTTG
GTCGATCGTTCCGACGCGTTGGGCAATCTTCTGCAAAGATCACGACAAGGTCTTCGTCAATTTGGTACTCACGTATCAAGA
TCTACAAGCCTGGATGGAGACATGGAAGTAAGACTCTGAAATATCGCGTACTCGCGTACACACCGAAAAATGTTGC
AACAAATGGAAGATCTTGCTGATCTTACGGAAGAAGTCTCAGCGCGGACAGCCGAAGTCGACAGCACTGTTGATTGCGGG
CTTGAGTTGATGAAGCACATCTCGAGCGACGAGGCGATAAGATTGAAGGATAAACTCGATTCCCTTCAGAGACGTTTTCA
ACGATCTTGTAACACGTGGCTCTGATCTTCTCAAGCACGCTCAAGNGGCATTACCGCTTGTCCAACAATTCACGACAA
TCACAATCGTCTTATGGAAGTGGATGCAAGGTGCCGAAGCAGCTCTCCAGTCGGCTGAACCACGCGAGGAGGAGATTATTC
GGTTGGAGATGGAATATCTGAATATCGACCTGTTCTCGAGAACTCAACACCGTCGGTCCCCAGCTTTGTCAAATATCA
CCCCGGGAGAAGGCGCCGCAACCATCGAGGTC

>CL380contig1|flavin-containing monooxygenase fmo gs-ox-like 3-like

CAATTCGAAAGGAAACTCGCTGTATAATTTCCACCGGACCACATTTTTGAGAACGGACCATTTTTCAAATACGTCTTCCA

mmc4.txt

AAGTGAAATCCGCTCCAGCTCACCACCAATTGAAATCGAACATCACTGGTGGCGAACCCAGGACTTTTTTTTGAATAAAA
 AAAAAAGGAAAAAATCAAGGATGCGTGTGGCTGTGATTGGCGGGTTTCGGCAGGACTCGCAGCTCTCCGACATTGTAC
 TGACAGCACTTTTCAGTCGGGATAACAAATCCATCAAAATCACGGAAGTCGTATGTTTCGAAAAAACTGACAAAAATCGGTG
 GTACCTGGGTTTACGAAAAAAACGTTGGCCTCGATGCTTATGGCTTACCCATTCACTCGAGCATGTACGACAGCCTGAGA
 ACGAATCTGCCAAAGAAGTGATGGGTTTTCTGATTTCCCTGTATCGATAACTGAACCAAGAAGCTATTTGACTCGGAC
 TGAGATCCTCGATTTTTTTGAATCGTTATTGCGACAATTTTAACTTGGAAAAACACATTGCTTTTCATCACAACGTCGAAA
 GCGTGGAGCCACTCGGAGTTGCCGGTGAGACCGGAAGCAACCTCGCAGCTCCAAAATGGTCGGTCAAGGTCAGGGACTTG
 ACGAACAAAGAAATATTGAAGGACGAGGTATTCGATGCAGTTATGGTTTGAATGGTCATTATTTTCGAGCCGAGTGTGCC
 TTCCATAAACCGGTCACGATGTTTTCAAAGGCCAACAGCTTCACAGTCACGATTATCGTGTGCCTGATACGTTTCGAGGGAA
 AAAGTGTGGCGTTATCGGTGCCGGTCTTCGGGCATGGACTTGGCTCTGGAAATATCGAAGAAGGCTAAACACGTGATA
 CTCAGTCACCACAGCAAAGATCCTATTGCGACAATATTTCCAGCCAACGTTGTCCAAAAACCGGATATTAAGAGCTGAC
 AGAAAAACGGTGTGATTTATTGTGATGGAACGAGTGAATCGGTGGACATGATATTTTACTGCACAGGCTACAAATACAGTT
 TTCCTTTTCTGGCGGAAAGTTGTAAAGTTAAGTTCGACAATAACATGGTAACTCCACTGTGGAACATTTAGTCTCCATA
 GAAAATGTGACCTTTGCTTTGGTGGGTTTCCCTTCTACGTGTGCGCTTCAGCATGTTTATTACAAGTACGATTCTCT
 GCTGCGATTTTGGTTGGGAGAGAAGAAATTTCCGTGCAAGGAAACGATGTGGCTGAGGAGAGTCCGGAGCTCGTAGA
 AAGAGAAGCGAAGGTCTTGACAAGCGTCACTTCCACATGATGGGACCGGAGCAAGCTCAATATTACGAGGATCTCGCAA
 CGTAACAGGAATAACTCCGCTGCCGCCTGTACTGACGAACCTGCACAACGAGAGTAGCAAAAGATTTCTCGACGATCTTG
 TTAATTTATCGAGAAGATCGTTACAACTTTTGGACGATTACAATTTTATTAAAGCTGTAAATTATAAAGAAAAGATAATCG
 AATAATATGAAGCCCATGAATTTTTTCAAATCATCGAATTATCTCTATTCAAGATAGATAAAAATACAATATTTTTCTCTA
 TGATGATGCCACCGTTTTTGGACAAATGATATAGTACAATAAAGCGAGTGGTATAGATTATTGTTCACTACGAGATTGAT
 CATTTATTTTATTCACTTAATCGCATATATATTATATATCTATACGATGTATATGAATATATATATATACACACAC
 ACTCAGCATTTCTTTGTTTTTTGTTTTTTTTGTTTACTTTTCTGTTGTTAATTTTATCTATTGTATTTATG

>CL3818-bisContig1|cyclin-dependent kinase 10-like

ATCGCATAGGCGAAGGTACTTACGGAATTGTTTATCGCGCAAGAGACACCAAAAGCGACAAAGTTGTGGCTTTGAAGAAA
 GTGCGAATGGAGCACGAGAAAGACGGTTTGGCGGTGAGCGGATTGCGCGAGATAAGCGTTTTACTGTCTTGTCTGCACGA
 GAATATCGTCCATCTGAAAGAGGTGGTAGTAGGAAGAAGTCTGGAGAGTATATTCCTTGCATGGAGATTGCGAACAAG
 ATTTAGCAAGTTTGTGGACAACATGCAAGCGCTTTCTCCGAGAGTCAAGTCAAATGCATCGTGTCTCAAGTCTCTCAA
 GGCCTTCGCTATCTCCATCACAATTTTATTGTCCACAGAGACTTGAAGGTTTCTAATTTGCTTATGACCGATAAAGGCTG
 CGTCAAGATAGCTGATTTTGGTCTTGCAAGATGGTTCGGATTGCCTCTGAAACCCATGACCCCGAGAGTCTGCACGTTGT
 GGTACAGAGCTCCAGAATTATTACTCCAAGCAAAAACCTCAAACGACGTCCGTGACATGTGGCTGCCGGATGTATATTGG
 GTGAATTGTTGGTCAAGCCTCTCCTACCAGGACGATCAGAAATCGCTCAGCTCGAGTTGATCGTCGATCTTCTCGGA
 ACTCCGAGTGAAGCGATATGGTCCGAATTCAACTCGTTACCAGCACTCCAAAATTTCACTCAAACACAGCCTTACAAT
 AATCTCAAAACAA

>CL382Contig1|endoplasmic reticulum resident protein 44-like isoform 1

ATTGATATGACAATAGCGTCAAACGAATTAGTATTTATTAACCTTCTATGCAGAAATGGTGCAGATTTAGTAATATTTTGG
 CGCCCATCTTTGACGAGGCTGCGGACAAAGTGACGAACCTTTCTACCCCGTTGAAGGTAGTGAATGGGCAAAGTGGA
 TTGCGACGCGGAGGCATTGGTCGACTGCCCCGATACCACATAACAAAGTACCCGACGCTGAAAATCATAAGGAACGGCCA
 ACCGACCAAGAGGGAATACCGGGGACAACGCTCCGTGATGCTTTTTGTTGAATATGTGAAAAAATTTTTGGAGGACCCGA
 TACAAGAGTTTCAAGATTTGCAGGCATTGCCTGTTCTCGATGACAAGAAACGCATGATGATTGGATTTTTTGTACTAAG
 GATGTTCCGGAGTATGAAACATTCCGACGCGTCTGCTACTAATCTAAAGGACGACTGCCAGTTCCACGTTGGCTTTGAAA
 CGCCAGCGAGCCGATGCGTCCACCCGCGAGCGACTGATCGTCTTTCGGTTCGGACAAGGCCTTGTCCAACGACGAGGACG
 AAGCCTTCAAGGGAAGTTTACTTAATTACGACGAGTTCAACATTTGGGACAGGAAAAATGTGTGCCACTCGTTAGGGAA
 ATAACGTTTCGAGAATTGCCGAGGAATTGACGGAGGAAGTTTGGCTTCTGTTTCTGTTTCCATGCCCCCTGACGACCATGA
 AAGCGTCAAGGCGTACAAGATATCGTGTGCAAGCATTTGCTCGACGAAAAACAAAACATCAATTTCTTGAGGACCCGATG
 GCCACAAATTCGCTCACCCGCTTCATCATTTGGACAAACGATCGAGCGATTTGCCATTGATAGCCATCGACAGTTTCCGC
 CACATGTATCTTCTCCCAAGTTCCAGGACATTACGTCGAAGGAAAAATTGAAATCGTTCTTACAAGATTTACATACCGG
 TAACTGCATCGGGAGTTCCATTACGGTCTGACCCGAGCTCGATCGAGGCGTCCGACCAAAACCAACAAGCCAAAACCTC
 CGACGACGCCCCCGAATCGACTTTCAAGAACTCGCTCCCAAGTAAAAACAGGTACACCTCTCTCAGAGACGAATGTAA
 CAAATTTGAGAGAAAAAAGTTTGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA
 CGCTGGTGCCTGAGATTTAGCGAGCCTATTTTTCCAACCCCTTCGTCTGCTGTTTTACATATTTTTTACGAAAAAACGAA
 ACTCCATTTAAATTTATAATTAACGTGCGTCTGACGTTTTCATCAACTTCCACAATTGTAACATTGCAATATATACATAT
 GTATTTATATTTATATATTGGACTGACAAAAAAAACACACCAATTTTTCAATCATTTTCTGACGAGATAATTGTTTGA
 TCTGATTACGAAAGAACTCGAATTTTCTACGAAACTGAGTCTCGAGAAGCGAAAAACGTTACAAAAGTTCCATTCCCCC
 AATTTTTTTCTCGTACAAATGTTTCCGAAAGTTTTCGAGAATTTCTGCGGAATCTCGACGATAGAAAAACAATTTTTTGA
 CGTAGAAAAACAAAAAAGATTATTTTACAGAGAAATTTATCGAAATTTTCTAAATACTCCGATACCGCAATGTCCCATGG
 ACGTTCAACGTAACGTGCGTGAGTTCTGCATGGACGAAAAAAATCGTTTCTGTATTTTTTCTGCCAAAAATATAATTTT
 TTTTTTTTCATGTCGAATTTTGTAGGAATCTTGNGAAAAACGTTTATTGAACAACGAATG

>CL3831Contig1|dipeptidyl peptidase 3-like

GGTGAGCGAAGATCCAAAAATCACGCTGCCACCAGAACTTTTAAAGACGCCGCTTTCAAAGTGAGTCGCGGCGACTACA
 GCAATTTGCTTGGTTCACTGATCGAAAATCTTGAAGGCAAAAGCGTATGCCGCTGATGACAACCAGAAACATGCTG
 GACAAATACATAAGCCATTTTGAACGGGATCGTTGAACGATCACAAGAGTGGTTCGAGATTTGGATCAAGACAAAGGG
 ACCGGTCTGGAGCTTTACATCGGTTTTCATCGAGACTTATCGCGATCCAGCAGGTCAAAGAGGAGAATTGCAAGGTTTTG
 TTGCCATGGTCAACAAAGAAATGTCTCAGAAATTTGCGACTCTGGTCAGCCGAGCTGAGCAATTATTGCCACGTTACCG
 TGGGGAGCAGATTTTCGAGAAAGATCAATTCCTCAGACCGGACTTTACGTCGCTGGATGTTCTGACTTATGCGGGTTACGG
 AATTCCTTCTGGAATAAATATACCAAAATATGACGAGATACGGCAGAACGAGGGTTTCAAACGTCAGTCTGGCACGTA
 ATTCAGCAAAATATGAACAAGACGTCATACCATTTTTGTGCGAGGAGATCAGGCGCTTATGAACAAATTCGTAATTGC
 TAAG

>CL3853Contig1|upf0670 protein cg4666-like

mmc4.txt

AATTTATGCTGAGATCAGCAAACGAGGTGGAGGGGAGTACAAGGTGCATCTTCTGTTGCGTACAGACGTGTGTTACCCA
TTTTTACGCCGTACAAGGTCACCTACAAAGTTACTCTACTGGGACGACAAGAGCTTTTATCTCGAGCACCAGTTTCATCACT
CTTTGCGACAATTTTGTGCGAGCAGTAATTTTGTAGCAAAACAGGGTGTAACGGGGCTGAAAGTACCAAGTGCCCGAAATAAT
TGCAGCAATCGAGCCAGACACTAAATGTCCTGCAGTTTGAAGGAGCTTAAGTTGTGGCTCGATTCTATGGAAGAATCTT
CGCAAAGGCTCAGAAAAGCCAATTAACCGAAGAAAATAAAAAAGAAAAATTATTTCAACCAAAACAAAAAAAATCGAGAC
AACTGCTTAAGCTCGATTTTTCTACTCCAAATGTTTTCCCTTCTCGATAGACTGATTCAGTGATTGTTTCATGGAGCCAA
AAGCGGTACGAAAAATTGTCCACAAGTTTGAATAATTGACTGAATATTCATAAAATTATTAACCCGAAATATCGTTAATTT
ATTAAGAATTCAA

>CL3856Contig1|thioredoxin peroxidase 2

ATTCGCGTACAGTAGTGCAAGGCGTAGCTATTCCTCTGAGAAGCATGGATCACGTCCGGCCTTTTTATTTATTTAATCG
CATTTTTCTGAGCTTTGAAAATGGCGCTCTCGCGGAAATTTATCGAGAAGATGAATCGTGTTATTCATTGCGGGGTGGAA
GCGTTTACCCACCGGCACAAAGCACGCCGACACCAGCTGCACACGACGAAAGCCGTCATCGGGAAGCCAGCGCCATAC
TGGAAGGCACTGCGGTGCTAAACGGAGAGTTCAAGGACATCAAGCTTGACCGATTACAAGGGAAAAATATCTCGTAATTT
TTCTTCTATCCTCTGATTTACGTTCTGTGTGTCGACGAAATATATCATCCCACTTTTGGCATTTCGACGAGTCCAGGTTTGC
TTGGACACCGAACTGGTTCGCGGCTTCCGTCGACTCTCATTTTACCCACTTGGCATGGACTCACACATCCAGGAAAGAAG
GAGGCTTGGAAAAATCAAAATTCCTCTTCTCTCCGATCTGACCCACAAAATATCCAAGGACTATGGAGTTTACCTCGAA
GATTTGGGCCACACACTTCGTGCCCTTTTCATCATTGATGGGAGAGGAATTTTACGACAAATAACAATGAACGATCTCC
CGTGGGACGTTTCGTCGATGAAACGCTGCGATTGGTGGCAAGCTTTCCAATATTACCGACGAGCAGGAGAAGTTTGTC
CGGCTGGATGGAAGCCGGGCAAGACACGATTATTCGAATCCGGTGGACAAGAAGAAGTTTTCGCTAAGAATCGCGTG
GGATAATGTGTTTCACTTTAATATTTGCACAAGAAGATACGAGTGAATGTATTTGTACAGGAAGGTCTGTTTGTA
TTGAAAAATNTAATTA

>CL387Contig1|ubiquitin-conjugating enzyme e2 13-like

ACCTCTGTACGCGCGCGCGCAAGCCTGACTATCATTCTAGTGAAATTTATTTTCAAAATGGCAGCTACGAGAAGGTTGC
AGAAGGAACTGGGTGACCTTCGGGTTTCGGCCATGAAAAATTTACAAATATCCAAGTAGACGATTCCAATATCCTCAAT
TGGCAAGTCTCATATTACCGGACAGTCCGCCGTACAACAAAGGCGCATTCGCGATCGAGATCACTTTCCAGCGGAATA
TCCTTTCAAACCGCCGCAATAACTTTCAAGACAAAAATATATCATCCCACTTCGACGAGAAAGGTCAAGTTTCTTGC
CGATAATTAGCGCCGAGAATTGGAAGCCGGCAACCAAACTGATCAAGTTATCCAAGCTCTGATAGCTCTGGTCAACGAT
CCAGAACCAGAACATCCGCTGCGCGCCGACCTTGCCGAAGAGTTTTTAAAAGACAGGAAAAAGTATCTGAAGAATGCGGA
GGAGTTTACAAAAAACATGCGGAAAAGAGGCGAGAGACATCGTCCACGGAATAACGTTGATTAGCTGTTACTCACCGAG
ATGCCTAACAACCGCCCGTCAACTCGATACGTAAGACGCAAGAAGAAGATCCAAGAACTTGGCCCGTGCCGATTGATC
CGGAATCAGGCAGATAGAGAGCGAGGAGAGCGAGAAGACGAGGGAAGGTAGATAGAGATAGAGCGAAAGATCCCTGT
GTACAGTATTGGTTGATCGACGATGAGAACATGCAAAATATAATTTATATAAGGTGACAACAACAAAAACAACAACA
CAACAACAACAAAGCAATGAGAAGGAGAAAGGCTGAAGAAAGAAAGGAAGAAATAATAATAAACTCTTAAGATTATC
ATTAATTAATAATAAATAATTGTACAATGATATAACTCGAGTGTGCACGTCTGCTGCTCTGTTCCACACAACACACGATC
TATCCACGTACAACCTCTCGTACGTGTTTCTCGTTGTATCTTCGTTAGAATTAACGATCCAGCGATTGGTCAATATTCGT
CATTCGAATAAGTAGAATTTGGAGACAAGTTTTTTCGTTCTTTGGCATAGGCTCCACGTATTATCGCGTGTACGATTAA
TCAATGTGCTTGAATTTTTGTACTACTTTGAAAAATCACGAAACATCGTCCAAGGACGAAAAAAACGAGTTTTACGTC
GACGACGTTGGCCGACTTTGTCTCGATCGTTAAATTTTCATTTGAAAAAGAGTCTCGATGGCGAGTAGCGCAGGAAATAA
TATCCAACGCTCGAGGCGCGCGCATTTAATTTTTTTCATAAACGCTCTTTGTGGATTCTCGGGAATGATGAAAAGCGTTG
TTTGAGGAAAGGTGAAAGAACGCGTGTGCCAAATGTTTGATAAATTAATCGAACGTCTAAATTTGCTTGTTTACTTCAGA
GCTAGACGCTCGTCCACTTTTCTTTCGCGTTCTATGATCTCAGTATGTAGTGCGGCCGTCAACCGTCAACCTAATTCGTC
TCGTTTGTACGTTAGAGCTACGCCGCCCTCCCTCCCTTCTCATTAAATAATTGAGTGCCAAATGTAGAAATTTCTTATT
GGCAATCGAATCTCCAGACAAGAAGATAAAATGTAGAAATTTCAATCGATTATTATTCTGATGTTTGTAGTATTATATGT
ATATAATAATCCAGAAAGCAAAATAATCGTCTAAAGATGTAGCTTTGCTTTCAGTCCGTTCCAGGATCATGGATTCA
ACAACAATAACAATAAAGTTGACTATTTTAGTAG

>CL388-bisContig1|trifunctional enzyme subunit mitochondrial-like

AATTTACAAAAAAATATGTCTGTGTTGCTGAGGAATTTCCCCCGCGTTAAGCAAGGTTTTCTCCGTCCGGGAAAC
TCGAATTTCTCTCGTGTCTCACAACCTCAACCAACATTAATGTTACAAAAAGTAACACCCCGTCCGGCAAAGACATTGT
TTTTGGAGGAGTTGAGCTTGAAGGCGGTTTCTGAGTGGGAGGATGATTAACAACTGATGGTCCAGTCTACACAAC
ATGCACTTTTTGAGTTTGAAGAAAAATTAACCTACCAAAAGAGTTATAGACTACATTATTTATGGGACGGTATTGCAA
GAAGTTAGAACTTCCAATATTGCGAGAGAAGCTGCTCTAGCTGCTGGATACAGCGAGCGAACGCCGCTCATACCGTGAC
AATGGCTTGCAATTAGCAGCAACGTAGCCATGACCACCGGAATGGGCTTGATAGCCTCTGGAGTTTACGATACCATTGTCG
CAGGAGGCGTCAATTTATGTCCGACATTCCAATAAGACACAGCAGAAACATGCGTTCCCTCATGTTAAAAGCCAACAGA
GCCAAATCTTTGCAACAGAAAATGGCTCTCCTTGCGACTATCAGACCATCCCATTTTGTCTGACTTACCAGCGGTTGC
TGAATTTCTCGACCGGAGAGACGATGGGACACAGCGGTGATCGATTGGCCGCTGCTTTTGGAGTTTCCCGCGCCGAGCAAG
ACGCTTACGCCCTCAGATCTCACACTTTAGCTGCCCAAGCACAGCAAAAGGATATTTGTCCGACATCGTTTCTTACAAA
GTGCCCGGAGTTAACGAGCTTGTGGACAAGGATAACGGTGTTCGAGTCTCGTCGAGCGAACAATTGGCCAAGTTGAAACC
AGCTTTCTGTAAGGCCCTATGGAAGTGTACAGCAGCCAACGCATCCTTCTGACAGACGGCGCTTCCGCTGCCTTTATAA
CGACCGAAGAAAAAGCCAAAACAGCTTGGGCTCAAGCCCAAGCGTACTTGAGACAATTACGATGTTTTCGAAGATCC
CGTCGATCAACTGCTACTTGGCCCTGCGTACGCAATTCCTCAAGATTCTCGAAAAAGCTAATTTGAGTATGAAGGATATCG
GTGTTTGGGAAGTGACAGAGGCGTTTGTGCTCAGATATTGGCAAAATTTGAAAGCACTCGATTCTGAATGGTTTCGCAAAA
GAATATTTGAAGAAATCAACTAAAGTTGGTACGCCGATATGAATAAATGGAACACGTGGGAGGCTCGTTATCCCTTGG
ACATCCTTTGCGCGTACCGGAGTTTCGGTTAGCCACGCACACAGCAACCGTATGATTGAGAGGACCAACAATTTCGGAT
TGATCGCTGCTTGTGCTGCGGGAGGACAGGGCGTCGGAATGATAATGGAGAGACATCCTGACGCGAACTTTGAAAAGCC
CGGATTTTGTATTTTATGGTACGCCGATCGAGCGAGAACGCCGAATCGTTCCGTCGAACGATCCGAACGAGAGGAGCT
CGTGTGGAAGCAGTTGGACAGGAGGCTGAGAATGATTTTATTTTTTATGAGATTTATTGATCGGCGAGGATATTTG
GGAGGAAAAATGAAATGGCCAAATCGGTAATTCGTGATGTGATCGTGAGATTGAAAATATAAATCGAGACTTTATAAAAT
CGTGGATGGATATGTTGAATTTATAAATAAACCAAAACAACATTT

>CL3910Contig1|prostatic acid phosphatase-like

GAGTATTCCACAGGTTGCGGGTCTGGCGCGCAAGGGAGCCTTTCTCATCGATGCTCGCTTGTTATACTCGTTTGACGCGT
CTATTCGCGACTCACGACATCAACGAGTCGCGAATAGTGCGTTGAAACGTGGTTATTCGTTATTTCCCGATAAACGAGAC
AAAGAAAGTTGAGTGAGACATCGTCGTTCGAATTGGAACGAATTGCAAGTCGGAAGGAGAGAAAAGAACGAGCAAAAGGA
AAGTACGAGCAGGAGAAATGGAGTTTCGATTGGTGGGGGTTCTCCTCACGGTATTAGCAACCTCGCGTAACCTTTACGCC
GAACATATCGATCTTGGAACGTTATATTCGCAAATGTGATATTTAGACACGGAGATCGAACGCCGGTTGAGCCATACCC
GAACGACCCGTACAGCGATGAATCGATGTGGCCTGTACCTTTTGCCAGCTGACGACCTTGGGACAGCACGAGCATTGT
TGCTGGGTCGTTGGTCCGGAATCGTTACCAACAACCTTTGCTGAGACTTACTCGTTGTACGATATTTACGTGATGAGC
ACCGATTGCGATCGTACATTGATGTACGCCGAAGCGAATCTCGCCGGATTATATCCACCGGCTAACAAACAAATTTGGGA
TCCTGCGATTAAATGGATGCCAATACCTGTTACACTGTGCCAACGACACAGGATTATGTACTGGTTGGCAAGAAATATT
GTCCGAGATACGATTACGAGATGAGCAAAGTCTTACAGTCACCGGAAATGAAACGAATAGACGAAGAAATGCTCAACTG
TACGAATACCTCTCGAAGAAATCAGGACGTAATAAGAGAATTTTACAGAATCTCGAATACCTTTACAACACGCTGTGGA
TCGAGAGTCGTTACAACAAAACCTTTCCATCGTGGACGCGAGTCGGTATACCCGGAGAAAATGGAACCACTAGCTCGATTG
AGTTTCAGACTCCAGGCTTACAACAAAATCTACAAGGTTAAATCAGGCCCTCTGCTGGGAGAAATAATTGATCACAT
GAAAAGGAAAGTCGAAAAATGCTTTGGTGCCGGATCGTAAGGTTTGGATTACAGCGCACATGACG

>CL3912-bisContig1|histidine triad nucleotide-binding protein 1

GACATGAACTTTGACCTTGAATAATTTGAGGGAATCGTAATTATGTTTGGTAAAGTTTGATGGATTTTGAGGCCAAGTTG
TTGATTCTTCGGTAGAATGAAATTTCTCAGTCTTGCCAGAGACGCCAGCAAGTGCTTTTACACTTTTGATCGTACAGTTG
GCCACGGCGCCGCTCACCAGCTCAGAAAAATGGCGACCGAGGTGCAAAAATCGCAGTCAGTGTCTCTGGCGGTGATACT
ATCTTTGGAAAAATACTTCGAAAGAAATTCCTGCAAGTTTATTTACAGGATGACAAGTCGTGGCGGTTCAACGAGCT
GAATCCACAAGCGCCGAAGCACTTTTTGGTCATACCAGCTAAGCCAATAGAGCAGTTGTGAAATCCGAGGAATCGGATT
CGGAACTGTTGGGACATTTGATGTTCTGGCGCAGAAAGTGGCGAAACAAGAGGGTTTGGATAATGGTTTTGTTTTGGTG
ATAAATAACGGTCGTGACGGTGACAATCGGTTTATCACTTGACCTGCACGTGTTGGGTGGTCGGCAGATGGAATGGCC
GCCGGGTTAAAAGCCTCTGTCGCGCGATTCTGCTCGATTCTTTGTGGCGACCATTTTGGACGTCCGCCAAGACAAATAAAA
AATTGTTAACCTCAAAAAATCTTGATACAGCGAAATAAATGAGAAATGTACAAAT

>CL391Contig1|t-complex protein 1 subunit gamma

ATCTCATGATTCTGTTTCTATCTATCGAGTCCAGTGCCCAACAATTTTGGAACTTGACGCTTTCTTTTCGTCAAGTTA
AAGATTTTTGAATTACTGTTGAAACAATAACACACGTTCTCATCTCGTTGAAAGAAAAACAGAAGAATGTTGGGCCA
GGTTCTGCTCCGATCGTGGTTTTAAGCCAAAAACACAAAGCGTGATTCTGGCAAGAAGGTCCAGAAGGAAAAACATACAAG
CGGGCAAGGCGATCGCAGACGTAATAAGAACATGTCTGGGTCTCAAGCGATGTTGAAATGTTGATGGACCCGATGGGT
GGAATCGTCATGACCAATGACGGAACGCTATTCTTCGCGAAATAACGGTCCAGCATCCAGTGGTAAATCGATGATAGA
AATAGCGAGGACCCGAAGACGAGGAGGTGGCGCATGGAACAACCTTCGGTGATTGTCTGGCCGGCGAAAAATATTGGCCAG
TGCGGAAACCATTTCTCGAGCAAGGAATGCATCCGACTGTAATTATTCGCGCTTACCGACAAGCCTTGAGGATATGATC
GAGGCATTGAACGACAAGCTCAGTCTCGAGCTGGATCGCACCGACCGTAAGAAGCTGAAGGAGGTCTGGAGTCTTGCGT
CGGGACCAAGTTTCATCGGGCGGTGGTCAGATTTGGCTTGCGATATCGCTTTGGACGCTGTACACACGGTAATGCTGGAAG
AGAATGGACGTGCGGAAATCGACATTAACGATACGCCAAAGTGGAGAAAATTCCTGGAGGCAGCATCGAGGACAGTAGC
GTTCTTAAGGGCGTGATGGTCAACAAGGACGTGACTCATCCGAAGTAGAGCGTTGCATTAATAAACCCGCGGATCGTTCT
TCTCGATTGTCCGCTCGAGTACAAAAAGGGCGAGTCCGAGACCAACGTGGAGATCCTCAAGGACACAGATTTCTCAAGAA
TCCTCGAGCTCGAGGAGGAAAAACATAAAGAAAAATTTGCGACGAAGTTATTGCCGTCAAGCCTGATCTTGTTTTACCGAA
AAAGGCATTTCCGATCTTGCTCAACATTATCTTCTCAAAGCTGGCATCTCGGCCATTTCGAGAGTTTCGAAATCCGATAA
CAACAGAATCGCTCGAGCCTGCGGCGCCACCGTCGTTAATCGTACCGAAGAATCCGCGAGGAAGATGTGGTACCGGCG
CTGGTCTTTTCGAGATCAAAAAATCGGCGACGAGTATTTCTGCTTCATAACCGAGTGCAAGGACCCCAAGCTTGACCC
ATCATTCTTCGTGGCGCCAGCAAGACGTTCTCAACGAGACCGAGAGAAACCTGCAGGACGCTCTTCAGTTGCTCGCAA
TCTTCTCATCGAGCCTAAACTCGTTCTGTTGGAGGACCGTGGAGATGGCAGTCCGCCGTTACTTGAACGAGAAAGCTT
CCGGTATCGCCGGAGTTGAGCAGTGGCCGTACAAAGCGATAGCTCAAGCTCTTGACATTATTCGAAGAACTTTGGCGCAG
AATTGCGGTGCGAATATAATTCCGACGTTGACGGCGCTCCGTGCAAAGCACGCCGCGGTTGCACGACTTATGGAATCGA
CGGAGAGACTGGTCTCTTGTTGCGACATGAAAGAACGTGGCATTGAGGAGCCTTTGAGCGTTAAATTACAAATTTACAAAA
CGGCTATCGAAACCGCCATTCTTTTGTCTCAGAATCGACGACATCGTTTCCGGCACCAAGAAGAGGGATCTGAAAATGAT
CAACCTGCCAACCTCAAGTCACTGAGGAATCGATGAAGGAGTAATTCCTCTTCAATCTCATTACGAGTGGCATCTC
AAACGCTTTAATTGATAGATGCATCGCGCCTATTCCATACTTCCGCCACAACATTTTTTTATTCTTTGCATCTATACTCA
TTGATTAACAGTTGGGACCTCGTTTCCGGTCCCTTATGTATTACCGGTTCTTTGATCGTTACGAGATTGCGCATTTTTTA
CGGAATAAAGATTATCATTACAGAATTATGAGTCTAGCCAACGTTTTCAATTCTTCAAGAAATGAACCGTCAATGCTTT
CGCAATCTATCGACTAAAAATTTTTCTTGTTAAGCAGATTGATCACGAAGTCAAATGATTAGAATTTATTTAATTTGG
TGATAAGATCCTTTGGCATCAAGTACAGAAATACTCA

>CL3928Contig1|4-aminobutyrate mitochondrial-like

AGAGATCTCGCTCCCGCGAACGAAGGGTCAACGTGGTACCGAATTTTGTATTACAACCTTCGTGCTTTACGGAGCGTAAC
ACCTTTTCGTAATAAATTCATAATTACCACGAGCTACTTTCTCAGTCGTTTCATAGACAACCCGAGTTATTTCAAAGT
GTTTTAAAGGGTATTGAAAAATAGTAAATGCTCGTGAGGACTCGTTCTTCGGGCTGGCAGGCCGATCAATAGCCAGGA
ATCCTGCATCTGGCCTTTTTTGGAGAAATTTTTTTATCAACGACGAGTCATGCGGAGCCGAAAGGGCCAGAAGTCCATAC
GGAAATCCCGGGTCCCAATCGCGTCAATTGTTGACGAGCTGAATAAATTCAGCAAGCAGGTTCTGTTCACTTTTCG
TGATTATGAAATCAGTGGAAATTATATCTGTCGATGTGACGGTAACATTCTGCTCGAGCTTACATGCAAAATATCG
TCAATGCCACTCGGCTATAATCATCTGCAATGCTCAAGGCCCTCTCCGATCCACGCAATCTCTCAACACTAGTAAACAG
ACCGGCACTTGGTGTATTTCCAGTTCCGATTGGCCAGTAGATTGAAAAAGAGTCTCCTCAAACCTGGGGTGAGTCCTC
CGGGTCTCAACTGCTTAACGACGATGATGTGTGGCTCGTGTCCAAACGAGAACGCATTTAAAAACATGTTTCTCTGGTA
CGCCGAAAAAAAAGGCACGGCGCGCATTCACCCCGAAGAAATGGAATCGTGATGATGAATCAAAGTCCAGGCTCACC
GCGATACTCGATACTCTGTTCAAGGGAGCTTTCCATGGTCAACTTTGGGAAGTTTGTCAACCGACCCANAGCAAATAT
ATTCAATAAATTGATGTCCAGTCTTTTCA

>CL392Contig1|succinate dehydrogenase

mmc4.txt

TGCTTAATCACCGAGGGTAGTCGTGGCGAAGGGGTTACTTGATAAACAGCGAGGGCGAGAGGTTTCATGGAACGTTACGCC
CCAGTCGCAAAGGATCTTGCATCCCGTGACGTTGTTTCGCGTTCATATGACCATCGAGATCCGGGAGGGACGCGGTGTTGG
ACCGGAAAAGATCACATTTATTTGCAGCTGCATCATTTGCCGCCCGAGCAATTGGCAGCTAGATTGCCCGGTATCTCCGA
GACTGCTATGATTTTTGCTGGTGTGATGTACGCGCGAACCTATCCCGTTCCTCCACGGTACATTACAACATGGGCG
GAGTACCGACAAATTACAAAGGACAAGTCTTGACGACGGAGAACGGCCAGGACAAGGTTGTCGAGGATTGTACGCTTGC
GGCGAAGCCGGATGTGCCTCGGTTTCATGGTGCTAATCGTTTGGGTGCTAACTCTCTTCGATCTCGTTGTTTTCGGACG
TGCTTGTGCGAAAACTATTGCGGCTGAGAACAAACCGGGAGAAAAAGTTGCTCCTCTCAGCCCCAACGCTGGTGACGAAT
CCGTGGCGAATTTGGATGCTGTAAGGAATTCTGATGGCAAAATATCGACCGCAGAGTTGAGACTGAGTATGCAGAAAACG
ATGCAAAACGCATGCTGCTGTTTTCCGAGAGGCCCAAACCTCTCGAGGAAGGCTGTGCGAAAATGTCTGACCTTTACAAGAA
AATGGACGAGATCAAAGTGGCTGATCGTTTCGCTCATCTGGAATTCGACCTCGTGGAACCTCTCGAGCTTCAGAATCTTA
TGATCAATGCAATGCAAACGATTTACGGTGCCGAGAACCGAAAGGAGAGTCGCGGTGCTCACGCCCGTGAAGATTTCAAG
GACCGAATCGACGAGTTTCGATTACAGCAAGCCCTTGGAAGGACAGCAGCCTAAACCGATCGAACAACACTGGAGAAAGCA
CACGTTATCAACGATCGATCCGAAGACTGGAAGAAGTACGTTGAATTAACGACCGGTGATAGATCACACGCTGAATAAGG
AAGAATCGCTACCGTCCACCTGCAATTCGTTCTACTAGAGTTTCCACTTCACTAGTACCTTTGTAACCTTTAGTAAT
TTGCTCTGCTCACCGAAAAAGGGCGAGAAAAAAAACACGACGTTAACGAGAATCCGCGCCAGGATTTCGCGACGAGAAG
AAAAATATGAGAGTGTGGACAGGCGAAACTTTGTCCGAGATAATCATGAATGTCCGCAACTAGAGAGCAACTTTATTTA
TTTCTCCAAACCCCCCTGAGCCTTTTTTTCAAGTGAAAAAGACAAAAACAGTGAAACCTGACGTTCTCAGCGATCAAT
TCAAAGTCAGCTCGTTGAAAACTGCGATTATATCTTTTTGTTCTCGTGCTGAATCAACTGAGAGTTTTGAGCAATTGCAC
GACTTTGTATTTTTCTTTGCGTTTTGATAAAAAACTCGTGAAAACTGAACGATTGGCTCTCAGCCAGAAAGAGTTCTCGA
GAGGAAGCAAAAACGAATTTTTAAGTTAGAACATCTTGTTTTAAATATAAAACTACAGACACTCCGACCCGATTTTTT
CCAACAGAAAAGTAGCTCGCGATGCCTTGCCCAAACAACATTTTTGGATGAGAGATTAATAATTATGAGGGAGTGTGAGAAA
AGAGGAAGGAACGAACGTCAATCGAGATTGTGACGGCTCTGTACTTAAAAAGTCACTGCAATTGTTAAAAAGGCCGTTAA
CTTCTTCACAATTTTTACAGTGTTACTTTTTTTTTAACTAACTGTACCGTCTTATTCTGAATTTAACAATGTCCAGCGC
GAAAAATAAGTCACGGAAAGTGAAAGTTATTTTTTTTTCTTTTTCGT

>CL395Contig1|peroxiredoxin 1

TATCACCCCCACCCAAACCCATATAATCTATAGAAACCGGTTGCCGGTCGGCCGGGAATCTTGTTACGAGTTACGACTA
CCGTTACCGTTTTCCACGATCACTTCTCTTCGAGCAGCGTTGAGAAAACAGTCTTTTGATCAAACATTTCTGCGTTGA
TTACAATTGTTGAGCTTTGTTTACCAGAGTCGAGATTAACCTAAAACCATCAAGATGCCGGTTCCTGATTTGCAAAAAC
CAGCACCTGCCTTCAAGGGCACTGCTGTTGTCAACGGACAGTTCAAGGACATTTCTTGAGCGACTATAAAGGAAAATAT
GTTGTTCTGTTCTTCTATCCCTTGATTTCACTTTTGTGTGTCCGACTGAAATAATTGCGTTCTCCGACCGAGTGAAGGA
ATTCAGAGACATCGGATGCGAGGTGATCGCCGATCGAGGACTCGCATTTCAGTCATCTTGCTGGGTGAATAGTCCGC
GAAAAACAGGGTGGTCTTGGTGAAATGGCTATTCCTTGTGGTGATAAAAGCTGCAAAATAGCTCGTGAATGAGGATC
CTCGACGAATCAAGTGGCATTCCATTCCGTGGTCTCTTTATCATTGACGGCAACAAAATTTGCGTCAAATCACGATCAA
CGATCTACCAGTCGGCCGTTCCGTGACGAGACACTGCGTCTTGTTGAGGCTTTCCAGTTCACGGACGAGCACGGTGAGG
TTTGCCACGCGGGATGGAACCAGGCAAGAAAACCATGAAGCCCCGACGTTGTGCGATCCAAGGAATACTTCAAGGACTCG
TGAACGTGGAAATAACAGCCACGCCTCGTCATACATTGCCCCGTTTTCTGTCGTCGTTCTAATAACTTTGATTATTGA
TTCACAATACAAATTAACCTTGATATGGAAGAGAAAAATAGTAACAACATGATGAATTATGAAGAGGAACACGTGAGC
GATGCCCCCAAAAGCCTTTTAACTTAACTATCGATATACGATTGTGCGCTAATTTTTTGTGAGGGTTTGTACTTTGGTGT
GAGCTGCAAAGTGTGGTTTTTTTTGACCCGGGTTGTGGGGGTGCAAGTGGGGTGACCTTCTTGTAGAATAGAATCCGAAA
ATTTGGCCAACCGCATCTCCGTTTTGACCATACGGAGTGTGCAAAAACGTGTGTTCTTTTATTTCATAATATTTTATGT
TCTTTTTTACTTCCCACTTTTTTACAATAAACGTACGATAGTTTATTTTGAIAAAAAAAAAAAAAAAAAAAAAAAAAA
AACATGTCCGGCCG

>CL396Contig1|nadh-ubiquinone oxidoreductase 75 kda mitochondrial-like

GATCTTGGTTATGGCTCGACTGTGGAGGATGTTAAACAACAACAACCCAAATCTTTTCTTTCTTGGTGCTGATGACGC
TAATTTGAAGAAAGAAGATTTCCCTGACACGTTTCATTTATATTGGAAGCCACGGCGATCAAGGTGCAGCGATCGCCG
ATGTAGTTTTAGCTGGAGCAGCTTATACCGAAAAGACCGGAAGTTACGTAAACACCGAGGGCCGTGCTCAACAAACAGGC
GCGGCGATCACACCGCCGGGACAAGCTCGACCTGATTGAAAAATCCTCAGAGCCCTCTCAGAGATCAGCGGCGTGTATCT
GCCCTACGATACACTGAGCGACGTTAGGGCAGTAATAGGAAGTGCCTCTCATCTCGTTAGATACGGTGAAGTGAAC
CGGCAATTTCTTCTCGTCAAGCTCTCGAGCTATCTAAGCAAAACCGGAAGTTTCACTTCTGCGGGGTTGTGATGTGAAA
CAAAAGTCACTGGATCAATTTTTTATGACGAGCTAGTTTTCGCGAGCGTCTCAACGATGGCAAAATGCGTGCAAGCCGT
AATGAAGCAGCGACAGCAAGCCCAACCTTAGGGAGGATCCATGGAGTCGCGAAAAAGTACGATCGTGTAAATAGTTAGGA
TTCTGTTACGATAACATCGTGACTGATATTAACGCGTCAGATATTAACGTGTTTCTTTTATTGTTGATGGAAGGTAG
GAAAAAGGAGAGGAAATAAAGGAAAAATAGAGAAAAACAAGACAACATACTCTGTGCGGAAGATTTGAAATAGTATTAAT
CATGTAA

>CL397Contig1|transmembrane protein 214-like

TTCCACTGCAGCGAGCAATTCGGGAGTGCTTTGCCCTATTTTTATTATTTTTTATTCGACAAAAGTTCCGCGAGGAAT
AACCTAAAAAAAAGTAACAAGCAAAAATCGTCATTGTTGTTGACGTCATTCGTTTTCTCTATTCAAACGTGAAA
AAAACACACACACAAACAATATTGCCGCGTTATGTGTCGCGGTGGTTGGAATTTGGTAAAAAAAACAAGACAAGAAC
AATGGAAAAGCCACGAAACTCACAAAGGCTGAGAAGAAAACTTCATCATCAATTCACCAAACTCGAGGATTTTTCTTC
CTTTGAACGAAGTCAAGTCGTTTACGACAGTCTTGATGGCAATAAAGAGAATAAGCGACCGTCCAAGGAAAAGGATAAC
AAGTCCAAGGAGAATGAAGAAAAAAGAAACAACAAAACTCAAGCAACAGCAACAACATGCAGAGAAAAACAACAAAA
CTGCAGCAACAGAAATCCAAGGAAAAGGCACCAAAAGGACAAAAGCACAATGGGATTAACGGGGACGAGCTGAACGAATT
ACTGGAGAATGACAAGGCGAGGTTCCGGATGCTCCGTTGATATGGCTGAAGGACCTGGTGTGATTTTGACGCGAAGA
TTCCAGCAGAGAAAGACGAGCTGGCATTGTGAATAAGCCGGAACATATCCATTGAGTTTGATCTCAAAGTCGGTGCGG
ACGAGTTTAGAAAAAACATTAATAATAGCAGGTGCTGAAAATGTTTCGATTATGCTGGGAAGGAACCTGGCAACGATGGTG
AAAAATCTTTCCCAAGGAATTCGATCTCGGATGTAATAATTTCTCCAATTATTGGCACAACCAATCCCGAAATGAC
CAACGCCAACCTCCCAAAATTAGCCAGTCTACGCAATTTCTTCAAAAACAAAAAATCCATCGGAATTTCTTTGCTCTGGG
CCTTTTACAACAAAGTGGAACAAAAAATCTGGCAACTGGTTTGACCGTCTGGCACGAGATCATGGCCCCATGCTCGAATC

mmc4.txt

ACGAACTTACGCCTCTTACGTTCTCACTATTCTTCGCGATCTTCTCAACGCACCTAAAAATTCAAACCACTCACTGCCG
AGCGATTCTTCGACATTCTCGACGATCTGTCTGCCGGAATAATTACGTTCTGCCCATCTCGACAATGAAGTCGCCAAC
TGCTTGCAGCTTTTGAGGTTACAAATGGTCAAGAGCGAATCGATAAATCTGCAAAAAGATTTTCGAGAATCTTGTGGGAA
AAATAACTCCGAAAGTTAACGGAAAAACAGAGAAGAAATCGTACGATCTCTCGTGGCCTCGCTAAGTCGAGATCTCGG
TGTTTGTCCGTCTGGACGAGCTTGATCCGAAGAATCTTTATCAATCAGATCTTTTGTCTCAACATCTTTCTGCTGATTG
GAACACGTTTGGCCTCGGAATCGAACCGAACCTTTCAAAGAAACTTTGCAAACTTTCCGACGTTGGTCTGTTTCTCGA
AAAAAGGCAAAGAAGACAATCTCTGCTTTCTGCTCGAGAACTTCCGAGGCTCTAGTCGAGAAAAATGTCCGCGTCCAAG
AAGAAACAGAGCTCTTTCCCATTTAAACGGGAATTATCGTTCTGCTCGTACTCATCGGTGCTGTCTCACTTACGACTG
TCAGAAACACGGCTCGTACGAAGCTTCTAGCACTGGAACGTTTTTAAAGAACAGTGGCTTGGCTCAGTATGGACAAAATG
CAGTAAAGGCTGTAGTTCACTGCAAAGACACGAGCCTGTCTTACCTGGAAAAGATTTTCCGGAATATTACAAGCTTAGCG
CCGAATATGGTGAATAATTAACCGGCTCTTTGGCGATCTGTTTCTCGTCACTAAAAATCTCTGTGTCGCAAGCCTCCAT
CAGTTTGGCAAATTTTTGACCGCAAAAAAACCTTTGGTCACCGACAATATTGAATATTATTTTCCAGGATTCTAGAC
AATCTGCACAAAAGGAGCCTCATCGAGATCGAACGGGTGAAAACCTTATTCGGCCATTGTTTCAAGAACATGTGACTGTACA
AACAAATCGGCTTCGTTCCGTTGGTTGGAAACCAACGTTTTTGTGGGTAACCTTGAGTCGCAAAAATATGCGAGGCTATGCAA
CGCAAGCGGTGGAGACGACGAGATTTTTCGAGCCAGACTTACGACTGGGTTTACGAAAAAGTCCAGACGCTTTCCAAA
GTCCATTGATGAAGAAAAAGAGAAGGAACAACAGAAAAATTTCAAAAAATTTCAAAAAGTAATAAAATCGCTGAAAAAAA
AGCATACAAAATGGCGGAACGACGTTTGAACGAGTCCGTTGATTCCAACGACATCCATAAAAACTATCAATACAAATAA
ATGTGTGAATAAAATTTCTTCCACAAAATATTTTATTTATTTCAAAAAAAAATAAATATTTTGTAAATTTATTTACTTATT
TATTTGAAAAACGTATATTTATATTTTGGCATATTTTCTTTGCTTAGACCCGATTTCGGGCTTTATTTTAAATGCTGCAA
TAGTTTATTTACCGACTATTTTATTTTCC

```
>CL3980-bisContig1|ras-related protein rab-11a-like
```

GTCTTTTAGAGGGGCGTAGAAAGGAGGCCATATTGTACAGTTAAATTAAAAAGGAAAAAAAAAGAAAAATATAAAATTTGA
TCGGCTGTTGGTTGGTTGTCTCCTCCGTAATATCGTTGTGCGCTCCCCGCAAAGGCCTCTGTTACCTCGCAGTTTCGTTG
TAATTCAAGTGACAAGTTTTCGGGGGGGGTTAATATATTTTTTGTCTAGTTGATATTGACGGGCATTTGTGAATTGTAT
GCCAAAGTGCGTCCCCGTGTTGTCAACGACGGTTTAATACGCGAGCCACCTGACAACGAGCAAGAAGAAAAAGAGGGA
GAGACAGAAATAACCGTTTTTATTAGTCGATGTCATCGAAATAACGGACGTTATATCAAAAATCTGAGAGGACGTCCTCC
GACACACAGTCTATCTCGCTCTTACGGAAAAATCCAACCACTTACTCCTTGTATATAAATACAGTGATCTCTCACACCA
AACACATACTCACACACTCGACGGACACATTCACACATACATTGAAATTTCTTGTATCCCTTTCTTCTCTACTCGCACG
ATCCGGGGACACACATCAAGTCCCTCCGTACCACAAAAGCCGCGGAGAAGATTTTTCGGGCTTTATCGTTGAAGAGATGG
GCACTCGAGACGACGAATACGATTATTTATTTAAAGTTGTTCTCATCGGTGATTCCGGTGTGGGCAAGAGTAATTTGCTC
TCTAGATTACACGAAACGN GTTCAATCTCGAGTCCAAGTCAACGATCGGGGTTGAGTTTGCGACGCGCAGTATACAAGT
AGATGGAATAAACCATCAAGGCTCAGATATGGGACACCGGCGGGTCAAGAAGTTATCGAGCAATCACCTCTGCATATTAT
CGCGTGT

>CL3988Contig1|puromycin-sensitive aminopeptidase isoform 1

[illegible]

>CL39Contig2|arylphorin subunit alpha

ATATTCTCTTGGGGTAGTTGAAGTAACAACACACCAAGCAGAATACCAGTTTCGTTTGATTCTCCATCAATATCAGG
AAATCGTCGAACAGCTCAAACATGCTGCGAGAGCTCGTGGTGTGGCCCTTACGGGCTTCTGCCTTGCCAGGCTTTCGG
TTACGAAAGCCACACCGCTGACGTCGAGTTTCTTCATAAACAGAAAGAAATCTACGAGCTCTTCTTCTCATCGATCAAC
CCAAAAATCGTAGGAAGCGAATGTTACGAGGTCCGGATATGGCTACGACATCGAGAGCAACTTGGACATGTACACCGACAAG
ACTTACGTGCGGGAATCTCTGTACCGATTCAAGTACGGCATGCTGAAACGCGGTGCCCTCTTCTCGGTCTACTACAAGGA
ACACCGTCAATGAGCTTCTTCTTCTGTTCCGTTTGTCTACACCGCCAAGGACTTCGAGACCTTCTACAAGACCGCTTGT
GGGCTCGTTACTACATGAACGAGGGTATGTTCTGTGACAGCTTGTACAACCGCTGTCTGTACCGTCACGACTGCAAGTAC
ATCCAACCTCCGCCCTACTACGAGATCTACCCTCAGTTCTTCTTCGACTTCGAGGTATCCAACAGGCTCACTACATCAA
GATGATGATGGGTCAAAAGAAGACCGTGTGATGGACAATGTTGAGACTTACCTGATCGACAGCAACTACACGAGCCTGT
GCCACAACCTACGACACCTTCGAATCTGAATACAACTCGACTACTTTATGGAGGATATCAGCCTTTAAACAACCTACTACTA
CTACTTCCGGACCTCATTCCTTCTGTTGTGACCATGAAAGACATCCAGTTGTCCCGAAACAAATCCGTGGAGAGCTTT
CTACTACTCATCCATCAGCAACTCATAGGCCGCTTACTACTCTCGAACGTTTGTCCAACCGTCTTGGCCACATTGAGGAAC
TTTGACTTCTCCCACAAATCTTGGCCCTCGTACTACTCCAACCTCGTCTACCCCAACGGCGTCAGCGTACCCAAACGTGA
CTTCTGGAGCGACATTCTTTCTACAAATACAAATACGTCAAGGAAATTGAAAACATGGAAATGCGCATCTGGCTGCCA
TTGACTCCGATTCTTATGGACTACGAGGGCAAACACATTGGAATTTACACCGAAGAAGGTTTGAACCTGCTCGGAAAC
ATGATCGAAGGAAAACCTACGACTCGTGCAACTTGAGATTCTACGGTGCTGTGGATGCTCTGTACAGAGACATTTTCGGCTT
CAACTACAACCTGCAAGAGCAAAGAACTGCTTCGTACCAAGTGTCTCCAGTCGTACAGCACCAGCATGAGAGACCCAGCT
TTCTACAGACTGTACAAGAAATCATCAACTACTTCTTGAGATACAAGTGCAACGTGCCCGCTACACCCAACAGGAAC
CGAATTC AACGGCATCAAGATCGAGAAACGTTTACGCGACAAAGATCTACACCTTCTTCGAGAAAATACAACTATCTCA
ATCGAACAAACGCCGTACCGTTGACAGCT

>CL400Contig2|60s ribosomal protein 19

CGGCCGGGGT^{5'}CGGACAACTTGTAGAATTTTCAACGCGTGTTTCTATCGCTAGGTCCGCCTTTTCCGGTTGTACTGTAG

mmc4.txt

CGTGCGAAAGCTGCAGGATGAAGCAGATCGTTACGAACCAAACGGTCAAGATCCCGGAGGGACTTACCGTGTGCGGTCAAG
TCCCGAACAAATCACGGTCAAAGGACCTCGAGGAGTCTTGAACGATCCTTCAAGCATCTCGCCCTTGACATTGCGATGGT
TAACAAAGCGACAACCTCAAGGTTCGAGAAATGGTTTGGAAACAAAGAAGAACTGGCGGCGGTGCGAACCGTTTGCTCGACA
TTGAGAACATGCTCAAGGGCGTGACGAAAGTTATTTGTACAAGATGCGCGCGGTCTACGCCCATTTCCCATAAACTGT
GTCACAACGAAAAACAACAGCGTCATTGAGATCCGTAACCTTCTGGGAGAAAAGTTTATTCTGTCGTGTGAAAATGGCGCC
AGGCGTGACCGTCACCAACTCCACCAAACAGAAGGACGAACTCATTCTGGAGGGAACTCCCTGGAAGACGTTTCCAGAT
CGGCCGCTCTCATCAACAATCTACCACCGTCAAGAACAAGGACATCAGAAAGTTCTTGGACGGTCTTTACGTTTCTGAA
AAGACGACTGTTGTAACAGACGACGAATAAATATCTCTTTCAAACCGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAT
GTCGGCCG

>CL4022Contig1|atpase asna1 homolog

GTCATGCAAGAGATAGTTGGAGCGTTTCCTGGCATAGACGAAGCGATGAGTTACGCCGAAGTCATGAAATTGGTTAAAGG
GATGAAATTTCTCGGTGGTCGTATTTGACACCGCGCCGACCGGCCACACCCTGAGGTTACTGTCCTTCCCCCAGGTGCTGG
AGAAGGGTCTGGGAAAAATTAATGAGACTCAAATCTAAAACTAGTCCTTTGATCTCACAGTTGAGTTCTCTGCTCGGCAGA
AGCGACTTTAACTCGATGAATTTTCCAACAAAATGGAGGAGATTTTGGACGTGATAAGACAAGTGAATCAACAGCTTTCG
AGATCCCGAACAGACGACCTTCTGTTTGCCTTTGTATAGCGGAATTTTGTCCCTCTACGAGACCGAGAGATTGGTCCAAG
AATTGACCAAATGCGGAATCGATACTCACAACATAATCGTCAATCAACTGCTGTTTATGAAAGAGGGCGACGCACCTTGC
AGACTCTGTTGCCAGGCAACAAAGTTCAAGAGAATATTTGGACCAGATCAT

>CL4047Contig1|saccharopine dehydrogenase-like oxidoreductase-like

AAAATTCGAGGGTGAATCAACAGCGTAGAGACTTATTTGCAGGCTTGGTCGAGCGTCAACGTGGGCGGAGCTTCTTTGC
ATTATGGAACTATGGAGTCTGCGGTCTATGGGCTTGCTCATGCCAAACGAATTGCGAGGCTTACGCACGAAATTGTTCCCG
GAACGCTTGCCACAGATGAAGCCAAAACTGAAGCCAGATCCGTCATTATCGAGCGAAGTGACCGAAGGTTGGTCAC
TTCCATTCCCAGGATCCGATAAATCCGTCGCTCAACGCTCTCAAAGATTTTTCATGAGAACTATAAACAACGACCGGTTT
AGATTCAAACTTACGTGACTTTCAAGTCGCTGTTTAAATGTGCTGACGGTGGCGATCGTCGGGGCTGTATTTTCTATGATG
ACCAAATGCAAATGTGGCCGAAATCTGTTACTCAAGTATCCAAAATCTTTTTCGGCTGGTATGGCGAGCCACGAAGGCC
GAAGTCCGAAGCGATGGAGAACCTACACTTCTCCATAACTTTCAAGGCTTCCGGATGGAAGGAAAAGCTCGCTGAACCGA
GTGACGAACACGTGATCTCTCCGAACAAAGAAATCTGACAAAAGTCCAAGGAATTAATCCTGGCTACGGTGCAACTTGT
ACGACTCTGCTCATGTCCGCACTCAGATTCTCAGGGAAGCTGACAAAATGCCTGATCAAGGCGGAGTGTTGCGCCAGG
CGCAGCATTGCAAAGACCTCGATCATCGATCGTTTGAACGAGAACGGCTGAGATTGGAAGTTTGTGTCGATCGAAA
AGTAGAGGTAACGAGCAACCGCCAAACCGAAAATCAAGAGAAAAATACAATAGTACGAATAAACGGCGAACAACGAAC
CAAAAAAAAA

>CL406-bisContig1|26s proteasome non-atpase regulatory subunit 11-like

TTGTCCACTTGACTAGCGTAGCCAGCATGACACGAGTTTTATCGTTTGGAGCTTGAGTCGTCGAGTGTGAGAGACGAAA
TAAAAGGCGAAGCAAACGTTAATTTGGAAAACATCGAGAACGTTGAGGGGTTTATTTGTGGAAGAAAGTTCCGCGAGGAC
GAATACAAAGTTCGCGAAATATTGGGACGAGTGATTTTTCTATTTCTGTTGTGAAGTTGTGATTTTCCGGCGTTGAGTGA
GCGGGGGATTAAACGTTTTTTCGTCCTTTTTCCTTTTATCACTACGATTTGAGGTTTGGCCGTGGCCGACCGGCGAACGA
ACGTTTTTTTACCCTGAGCACACGGAATTTCAAAGAAAAGCAAAGTTATATACTCTCGGTGCACGATGGCAGGTGCGATG
TTGTTTCGAGCGCGCTCGAGCCGTTTCCGCTACAAATACCAGCGAAGGTATCTCCCTACTCAGTGAATTTGTTTCCGATCC
GAATATCGGGATCAACGAAGATGACGAAGAAAAAATTCGCGTCAAGGAACAAGGTATTCTCCAGCTCGGAGCTACATA
AGAAAGAAGGCAAAGCCAAGGAACCTGCTGAACCTTATCAAAGCAACACGACCTTTCTTGAGCCTCATCAGCAAGGCCAAA
GCCGCCAAACTCGTACGCTCACTCGTTGACTTTTTCTCGATTTGGAAGCTGGCATCGGAATCGAGGTACAATATGCAA
AGAATGTATAGAATGGGCGAAAGAAGAAGAAGAACTTTTCTGCGGCGAGTCTCTGGAGACGAGATTAATAGCGTTGTACT
TTGACACCGGGATGTTTCAGCGAGGCTCTGACATTGGGTTCTACTCTGTTAAAAGAATTAAGAAGAACTCGATGACAAGCAA
TTACTGGTGGAGTTCAATTACTCGAGAGCAAGACTTATCAGCTTTTGAAGCTTTGAGCAATTTGGCTAAATCCAGAGCGGCTTGAC
TAGCGCGAGAACCCAGCCCAACGCCATTTATTGTCCGCCAAGATGCAAGCCGCTCTCGACACTACAATCGGGCAGTACTAC
ACGCCGCTGACGAAAGAGACTTCAAGACTGCCTATTCTTACTTTTACGAAGCATTTGAAGGATACGACAGTGTTGACAAT
CCAAAAGCATTAAACGGCACTCAAGTACATGTTGCTATCAAAAATAATGATTGCGAACCCCGGAGGACGTACAATCGATAAT
GTCAGGAAAAATTAGCGGTCAAGTACGCAGGTGCTGATCTCGACGCGATGAAGGCAGTTGCGGAAGCGAGTCACAAGCGTT
CGTAGCCGATTTTCCAAGCCGAGTCAAGCAATACGCGAGGAGCTCGAGGACGATGTTATCGTCAGAGCTCATCTCGGT
TCCCTCTACGATACGATGTTGGAACGAAATCTCTGCTGCTGCTGAGGCTTACTCCCGAGTCTGAGGCGGACATGAGC
ATCCTGCAATAACGTTGCCAATCGCTCAAGTCGAGAAGAACTTTCTCAAATGATACTGGACAAGAAATTTGTTGGGTGTCC
TGGATCAAGGGGAGGGCGTCTGATAGTGTTCGAGGACACACCACGGGACAAAACGTACGAGATAGCTCTGGACACGATA
CACAGCATGGGCAAAGTCTGTCGACACCCTTTACCAGAAAGCCAAGAACTCACCTAGCCCGTTTTAATATGAATTTATAT
AAGTAAACAAACAAACAAACAAACAAACAAACAAAGAAAAAACAATACTATTATAAATATTACTAATGATAA
CGATTAGCTACTGTCATTAATAATATCGGATTAATCGTTGTGCTTTTCCCTTCTCTAACTTCGAATGGAAAAGGTCTT
AAGATCAGCAAAAAAATCAATTTAAAAATCGTAAGCTTCAATTTTTTTTTTGTAGTTTTTTTTTTTTTTTATTATTTT
ATTTGTTGATTGAACAACGAACCATTTCTTTTTTTCATCGATCCGATTCGTGGCGACGTTTTGTAACGAATAATNTTGTATG
CTTGAATC

>CL409-bisContig1|3-ketoacyl- mitochondrial-like

ATTATTGCTCCGTTCTGTTAGCGAAGATTACGCGCGCTCTAAAACGATGTCGGTCGCCACGAAAGGAATTTTATCGTCGC
TGCGAAGCGAACACCTTTTGGTAAAATGGGCGGAATGTTTGTGAACAAAAGCGCGACCGATTTGTCGTGATCGCATCCA
ACTCTGCCCTCAAGGAAGCTTCTCACTCCCGATAAAATCGACCACGCTGTTGCGTAATGTTATGAGCTTGACGTCC
TGCGATGGTATTTATTTGCCACGTACGTTCTCTCAAATGTGGAATACCATTTGAAAAGCCAGCCCTCGGTGTCAACAG
ACTGTGCGGTTTCAAGTTTCCAATCGGTGCTCAATGGAGCCAGAGCATCGCAACCGGTGAATCGAGAATCGTTTTGGCTG
GTGGAGCGGAGAATATGAGCCAGACACCGTTCTGCTGAGAAAACGTGAGATTTGGCACAGCTCTGGGACAAAAGTACGAA
TTCGAGGACGCTCTGTGGGTTGGACTTGGCGATACCTATTGCGGGCTACCGATGGGCATGACGGCTGAGAACTCGGTGC
TAAATACGGAGTGACCCGCCAAGAGGTCGATGAATTTGCTCTCCGAGCCAGCAGCTCTGGAAAAACGCCAACGATAAC
GGTCACTTCAAGGTCGAAATGGCGCAGTGCCATGAAAATCAAGGACGCTGGAAGTTGGTGTGCGACGATCC
TCGACCAGAAAACGAAATAGCCGATCTAACGAAGCTCAAATCAATTTTCCAAAAGGACGGTCTCGTCACAGCTGGTTACG

mmc4.txt

CTTCGGGCGTTTTGCGACGGAGCTGGGGCGATCATTCTCGCGAGCGAAGACGCCGTCAAATCCGAGGGACTGAAGCCTCTG
GCTCGGTTGGTTCGGATACAGCACCGTCGGCGTCGATCCCAGCATATGGGAATCGGTCCAGCTCCGGCGATAAAGAACCT
CCTAAAAACTCACAGGAAAGAGTTTTGAACGACATGGAATAGTGAGATAAACGAAGCCTTCGGAGCTCAGACTCTCGCC
TGTGCCAAAGACCTTGGCCTTGACATGAAGAACTCAATGTGAACGGTGGTGCAATCGCCCTGGGCCATCCTCTGGGTGC
ATCCGGATCAAGAATCACTGCCACATCGTTCACGAACCTCAGGAGAAGAAACGCCGCAAATTTGCAATAGGTTTCGGCGT
GCATCGGAGGTGGCCAGGGAATAGCGATTATGGTTCGAAGCGGTTTGAGGCGTAAGAGCAAACCTCGCGAAACTGGCATATA
CCGCTGAATCCTCAACTTTCCACCGTATATTTTTTTTTAAACATCCACATTTTTCTATTGCAATTTTTCAACTTCGTCT
GTGATGACAAATGCATTTTTATTAATAAAGAGAAAAAACAATCAGCGCTCTTTTCAAATTATTTCAAAGCGAATAAT
AGCCAGCGATCAGCGCGTGCGACTATTTCG

>CL41-bisContig1|polyadenylate-binding protein 1-like isoform 3

TCCATTCGTGAAATATAACTCTTCTATAAAAAACAAAAATTAATAAAAAAAATTAATAAACTAAGAAAATCCCCAAAAAGAAC
GAAAAACAACGTAACCAAAAAAATACGAAAACCGTAGACGAAAAAACCGTAACCTGCAGAACGAGACCGCAAAGTTAAT
TACGATATTAACCTAAGTTGTCAAGAACGACACACACGAGAAGAATCACCAAAGAAGAGACAAATAAAGACCGGAGA
CCAACGACGTTAAAGAAAAAAGAAAAATACGAAAACCTAACGAGTAAAAAGTAAACAAAGTTTAAGTAAACG
TTTTATTTTTCGTTTTTCGCGAGAGCGGATTGCGAGGAAAAACGTGTGCGCGACGTTCTACGAGAAAGCAATAGCCATATT
GAAGGGGAAAACGTAATCGTTTTTTTTTCTCTCTCTCTGTTTACACGCGTTCGAAACCTCGAGTGAATTGATTTGG
TACGAGAGCTCGTTTTCCCGGATAGGTCAACGGGAAAAGACACGAAAGTACGAGGAAAGGAAAAAGTGTGTTGTCAGTTCG
TTTTATCGCGTACGAAACTCGTCATCATGAATCCGGGAGCTCCCAATTATCCCATGGCGTCTCTTTACGTCGGCGATCTA
CAAGCCGAAATACCGAAGCTATGCTCTTCGAAAAATCTCATCGGCTGGCCCCGTGCTCTCGATCCGCGTATGTGCGCA
CGTATTACACGAGCTCTCTCGGCTATGCGTACGTTAATTTTTCAACAACCGGCGGACGCTGAGCGAGCCCTGGATACCA
TGAACCTTGATATACTGAGAGGCCGTCCGATTCTGATAATGTGGTTCGACGCGGATCCGTCGCTGCGGAGATCAGGGGTG
GGCAATGTGTTTATTAAGAATTTGGACAAGAGCATAGACAACAAGCGATGTACGATACGTTCTCTGCGTTTCGGTAATAT
ATTGAGTTGCAAAGTAGCTCAGGACGAGAACGGTTTGTCCAAGGGATACGTTTTGTACACTTTGAGACGAGGAAGCCG
CCAACAAGTCGATCGAAAAAGTAACGGCATGTTGCTCAACGGAAGAAAGTATACGTTGGCAAATTCATTCCGCGCAAAG
AGCGCGAAAAGGAATTTGGCGAGAAAGCGAAGCTGTTACGAAACGTATACGTGAAGAATTTTCGGCGAGGACATGTGCGAC
GAGAAGCTGAAGGAAATGTTTCGAAAAAGTACGGAACGATAACGAGTACAAAAGTAAATGAGCAAGGACGATGGAATAACACG
AGGTTTTGGGTTTCGTTGCGTTTGGAGTCCGGACGCGGCTGAAGAGGCGGTATGGAGTTGAATGGCAAAGAAATAGCCG
AAGGCAAGTGCATGTACGTTGGACGTGCGCAAAAGAAAGCCGAACGGCAACAAGAGCTCAAGAGGAAATTCGAAGAATTG
AAAAACGAGAGAATGAATCGCTACCAAGGCGTGAATCTCTACGTGAAAAATTTGGACGACACCATCGACGACGAACGCCT
CCGGAAGTCTTTATGGAATACGGCACCATCACATCCGCCAAAGTTATGCTCGAGGATGGACGAAGCAAGGGCTTTGGCT
TCGTTTGTCTCTCCGTCGCGAGGAAGCAACGAAAGCCGTACCGCATGAACCTGCCGTATCGTCGGCACCACCAACCGCTC
TACGTCGCCCTCGCCCAACGCAAGACGACCGCAAGCGCATCTCGCTCACAATATATCCAGCGAATGTCCAACCTTCG
CATGCAGCAAATGGGCCCCGATGTATCAAGGCGGCGGCTAACAACCTATTTCTGTAACGACTCTACCCAGACCACAAAACCT
TTTACGGTCCCGCTCAAATGGCCCAGATGCGCGCTACACCCCGTTGGGGAGGACAGCCCAACCAAGTACGCCCCGAACGCA
CAAACCGGCAACACTGGCTTCTCCGCTATGCAAGGACCCCTCAGAGCAGCTCCCCGAGCACCCGCGCTCAAGCTGGCGG
CATGCGTAACGCTATCTCCGCCAGACCAATCACCGGACAACAAGCCGTGCGAGGCGCCAACATGCAAAATCGCTCGATGC
CTGGCTCCGCGTTGGCGTGTGCGCTCAAAATCGCACTGCGAATTACAAGTACAACATGAACGTTTCAAAACCCACCACAC
GCGATGGCGATCCGACCTCTGACCGGTTCAACAAGCGGTTTATATTCAAGGCCAAGAACCCTGACCCGCTCGATGCT
GGCAGCTGCCCCAACCGCAGGAGCAAAAGCAAATGCTCGGCGAGCGTTTGTTCCTTATTGATTCAATGCATGTATCCGCAGT
TGACGGGCAAGATCACCGGCATGTTGCTCGAGATCGATAATTTCGGAGTTGCTTACATGCTGGAGCACAGCGAGTCTGTTG
AAGGCGAAGGTGGAGGAGGAGTCTGCTGTGCTTACGGCGCACCAGGCGAAGCAGGCGGTCAAGAAGGAGTAAAAACTCTT
CGCAACATCGATTTCTTCCCTCCGATCGATTTCTCTCTTTTTCGTTTTCCCGACATCGATCTAATCGATTTTTCTCT
CTTTTTCTTTTTCTCTCAATTCACTTTTCTGTTCTCAACTTTTTCAACCTTTTTCCCGGCTCTTTTTCGTTTTAAT
ATTTCTGTTGAATGATCTCTCGTTACCGATTCAATGCGGAGAAGAAGAAAAATATGAAAATGAAGAAAAAATAGGAAACA
AGGCACCTCATTTGATTTATTTTTTTTTGTTCCCATTCGCGCGGCCCAACAATCTACCCGCGGATGTTATTAACCTGGCCA
ATTTGTAAGAATCACTCTGACACGCTTGTTCACCTTTGAAACGAGCTCGTCAATCGGGTTTTTCTTCCAGTTTTAAGATG
ATGATTTTTTTTTCTTTCAAAAACGATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTGCGCCG

>CL410Contig1|glutamate mitochondrial

ATCAAGATCAATCCGAATGATTTCGAAACGAACTCGAGAAAATAACCCGAGATTTACTCTCGAGCTCGCCAAGAA
AGGCTTCATCGGGCCCGGCGTGATGTTCTGCGCCCGACATGGGAACCGGTGAACGCGAAATGTCTGGATCGCTGATA
CTTACGCCAAGACGATTGGTCATTTGGACATAAACCGCGACGCTGCGTAACCGGAAAGCCCATCAACCAGGGCGGTATT
CACGGACGTATCTCGGCGACAGGTGCGGAGTTTTCCACGGACTGGAGAATTTATAAACGAAGCGAATTACATGAGCAT
GATTGGCACGACACCGGGCTGGGGCGGCAAAACGTTTCATCGTCCAAGGGTTTCGGTAATGTGCGTCTCCACTCGATGCGTT
ATCTTACCCTGCGGAGCAGTTTGCCTTGGCGTGATCGAGCAGCAGCGCTCGATCGTCAACCCCGAAGGTATCGACCCG
AACTCCTGGAAGATTATCGTATCGAGAACGGCACGATCGTGGGTTCCAGGCGCAACCCGTACACCGGCGAGAATCT
TATGTACGAGCCTTGCGACATATTCATCCCTGCTGCTATCGAGAAGGTATCAACAAAGAGAAGCGCGGACGTATTCAGG
CCAAGATAATCGCGGAGGCTGCTAACGGTCCAACAACCTCCAGCTGCCGACAAGATTCTCATAGAAAGAAATATCCTCGTA
ATCCCTGATCTGTACATAAACCGCGGTGGTGTGACAGTTTCGTTCTTCGAGTGGTTGAAGAACCTCAACCACGTGTCATA
CGTCTGCTGACATTCAAGTACGAGAGAGAATCGAACTACCATCTTCTGGAGTCTGTGCAAGAGTCTGTCGAACGTCGGT
TCGGACGTGTCGGTGAAGGATTCCGGTGACTGCTGCGAGGCTTCCAGAAGCGTATTTCCGGTGCTTCGGGAAGGAC
ATTGTGCACTCTGGTCTGGATTACACCATGAGCGATCAGCGAGGCGCATGATGAAAACCTGCGATGAAGTTCAATCTTGG
ATTGGATCTCAGAACCAGCGCATACGCCAACTCGATCGAAAAATCTTCAACCTTATTCCGAGGCTGGTTTAGCGTTTT
AATTAATCGAAAAATTGATTCAATTTTCATGCTCCAAAAGCGAAAAAATATAAATCACGAAAAATCTAGAAATCACGAA
AAAGCCATACATTTTAATCGGCAAGAAAGAATAGTGTGGATGATGAGGGTGTGTGCTGTCCAAGTGTGAATGTGCTTGAG
CCAGTATTTTCGGAAGCCGTTAAGTCGACGCAACCCGCGCTACACGGTAACCGATCGATCATGTAATTATTGTTATCA
TTTCGCGCTCTCCGGTGATATGAATTTATATAACGAACGATAAACCGCAAGAAAGTAGAGACTGCGCGCGTCCATCG
AGACTTTTATCTTTCGGAACCAATCCCAATCGCTCGTGTGTTACAATTGCAAAACAAATTATGTCCACGCGCGGATATC
AACTGTCGAGATTGTACAATCGTGCAGCTGAGCAACGCCTCAGGGGCATTTTTTTGATTTTCAATTTTTATTGAAAAA

mmc4.txt

ATTCAACCAGTTGATCGTCCGGTGGTTTTGCTCAATTCCTGGCAGCAGATCGAGTAACGACGAATATAAACTTGTAC
ATTTTCATTGACTCTGCACTGAAAAACGAAATTGTTTTGAAAATCCTCGATATTTTTTCAAACACGATAAAACAAATTTTTT
TTGAATAATTTTCAAAATTTTTGTCATTTTTGGCAGTAAATTTTTGTTTCCGTAAGAGACTTTCTGGAATATTTCTTGCTT
GCGGTGACACAA

>CL4122Contig1|n-acetylglactosaminyltransferase 7-like

TATATCGAGAGATGGAGTGGAAAAGTAAGACTCGTAAGGAACACGAGAGACAAGGCCTGATAAGAACGAGATCCCGGGG
AGCGAGAGAAGCCAAAGGCCGAAGTAATAGTCTTTCTAGATGCTCATTGCGAGGTCAACGTCAATTGGTTGCCACCGTTGT
TGGCCCCGATTAACTCGACAGGACCGTGATGACGGTGCCAGTAATCGATGGCGTTGATCACGAGACCTTCGAGTATCGT
CCGGTATATCAAGAGGGTCATTTATACCGCGGAATATTCTGAATGGGGAATGTTGTACAAAGAAAACGAATTACCAAAGCG
AGAATCCAAGACTCGACCTTACAGCAGTATGACCATAACAAATCGCCAACTCACGCCGGTGGTTTATTGCGGATCGATCG
CAAATATTTCTCTCCCTTGGTGGATACGACGAAGGGCTTCTCGTCTGGGGAGGCGAGAATTTTGAATTTGTCATTCAAAA
TTTGGCAATGTGGCGGTAGTATTTTTGTGGGTTCTTGTTCGCACGTTGGTCACGTTTATCGAGGATTTCATGCCCTACAAT
TTCGGCAAATTTGGCCGAAGAAAAAGAAAGGACCTCTCATCAGCATCAATTACAAGCGCGTTATCGAGACGTGGTTTCGACG
ATAAGTACAAAGAATATTTCTACACTCGGGAGCCTTTGGCAGACTCTCGATCACGGAGACATTACGGAACAATTTCTTG
TTCGAAAGCGCATGAAATGCAAAAGTTTTCAATGGTACATGGACAATGTAGCGTACGACGTGTTGGACAAAATTTCCGGA
ACTTCTCCAAACATCCACTGGGGCGAGTTGAGAAGCGTAGCAACTTCCGCGTGTCTGGACACAATGAGCCACGCACCNC
CGAGCCTCATAGCAACGTCCCAATGTCATGGCTTAGGAAGTAATCAACTGATGAGACTTAACGCGAAAGGACAATTGGGC
GTTGGTGAACGTTGCATCGAGGCCGACACACAGGGAATAAAATTTGGCTTTTTGTGCGCTCGGAACAGTCAATGGTCCCTG
GCAATACGACGAGAAAAACGAAACTTTCTACATCGAGTGCACAAAAAATGCATGGCGCTTCATCTCAGACGCATCAAC
TGTCGTTAATGCCTTGGCAGCTCAACAATCTTATCAAAAGTGGAGCTTCACCAAAATTCATCCGCACTGGTAAAAAGNG
TCAGTCAGGAATCTTCGTTTTGCGTTCTTTCCAATTCCAATTG

>CL414-bisContig3|translationally-controlled tumor protein homolog

AATTTGGGGGCGCGTTTTTCACTCAGCACCCAAACCCAAGCTGGCAGCCATTCTTACCGTATCCTAACGGAGATCTTTT
TTCTTGCTCCGTTCCCTTCCGGTTCGCTCTGTCCGGTGACTGTGTCTTACTTAGTTTTAGCTCTAATTAATCTTTCTCC
ATCTTCCAAAATGAGGATTTACAAGGATATCTTACCAGGTGACGAGATGTTCTCCGACACCTTCAAGATCAAACATCATCG
ACGAAGTACTGTACGAGGTTTTATGGCAAGCTTGTGACGAGAAAAGCCGGTACGATCGAAATCGCTGGATTCAATCCGTCT
GCGGAGGAAGCTGACGAAGGGACTGACGAAACCGTTGAAACTGGTGTGGACGTTGTCTCAACCACAGTCTCCAGGAAAC
TTTTGCTTTTGGCGACAAGAAATCCTACACGCTCTACCTGAAGGAATACATGAAGAAATTGGTTGCCAAACTGGAAGAGA
CCCAGCCCCGATCAAGTCGAGCTTTTCAAGACCAATATGAATAAAGTAATGAAAGACATCCTGGGCAGATTCAAGGAGTTG
CAATTTCTCACGGGTGAATCCATGGACATCGACGTTTTGGTTGGTTTGATGGAATATCGTGAAATCGATGGTCAATCTGT
ACCAGTTCTGATGTTCTCAAGCACGGTCTCGAAGAAGAAAAATCTAAATAATTCTTAGATATTCAACAAATTGTAGGA
AAAATTTTATATGCCGGAATCAAGACTGCAAAATAACGCTCTATACTGAAGGGAATTTATTACCGAGCGAATAGTAACCT
CCAAAACGATAATAAAATAAAAGAAAATGTAACACGTTAGTAGCTTGAATTTGAGAAGAAAAGGGAGGAAGGAAAAATC
TGATGGACAGTGACTGT

>CL4143Contig1|delta-1-pyrroline-5-carboxylate mitochondrial-like

ACATCTCAACGCAGCGACTATGCTCGGACAGAGCAAAAACCGTCATACAAGCAGAAATCGACAGTGCAGTGCAGTTCGTT
GATTTCTTCAAAATCACTCGTACTTTGTCAAGGAGTCTCTCAAGTACAAACCCATTTCCCGGATCCCAAAGAAACACT
CAACTCCATGAGGTATCGTGGAATGGACGGTTTCGTGCTGCCGTCTCGCCTTTCACTTTACCGCGATCGGCGGTAATT
TGAGCTACACACCAGCTCTGATGGGTAAACGGAGTTTTGTGGAAACCTTCGGACACCGCGATACTGTCAAACCTGGTGGATT
TTCAAGATTTGTGAGAAGCTGGAGTGCCTCCGGGCGTAGTGAATTTCTGCCAGCTCATGGCCCCGATTTCCGTGACAC
GATAACCGCTTACCTTATTTATCCGGAATTAATTTTACCGGCTCTGTACCGACCTTCAATCGTCTCTGGAGCCAAGTTG
GCAAAAATATCGACAAGTACAAGAATTATCCAAAAGTTGATTGGCGAATGCGGCGGCAAAAACCTTTCACTTTGTCCATCC
GAGTGTCTGATCCCGACAGCGTCGTAATTAGTACAATCAAAAGTCTCTTCAATTCGAATTCGAATTCGAATTCGAATTCGA
GTAGAATGTATGCCCGGAGTCTTTGTGGCCTCACATCAAGGAAGGTTTGTGAAGATTCCGGATCAACTGAAAGTCGGA
GACGTCAAAGATTTACAGTTTTCACTGGAGCGGTGATCGACGCCGTAGCATTCAAGAGGATCACGGGTTACATTGAGCA
TGCAAAGAAGTCATCGAACCTGGAAATCATCGGTGGTGGTGGCTACGATGATTATGCGGATACTTATCGAACCAACGAT
CGTACAGGCCAAGGATCCGCTGGACAAAATAATGACTGAGGAAATTTCCGACCTGTGTTGTCTAGTTTACGTTACAAAGA
CTCTAAGCTGGACAGACGAT

>CL4153Contig1|contactin-associated protein 1

CGTTGACGATAGCGGAGAAGATTTCGAATTGGATTTACGACAACGAGTCCACGAGGATTTTTGCTGGGTCTCTTCTCCAA
CATATCCGGAGAATATATGACGATTACGGTCTCGAACAGTGGGCACTTGAGGGTCTGTTTTGATTTTGGATTTCGAGCGAC
AAGAAAGTTATTTTCCCATCGAAACATTTCCGGCCTCGGTGAGTATCACGACCTGCGGATCAGCCGAAAAAATTCAGGAGCA
ACCCTCGTAATGCAAGTCGATAATTACGAGGCGAGGGAAATCAACTTTAATATCAAAGAATCGGCCGATGCGCAATTCAA
CAATATTCAGTATATGTACATCGGGAAAAATGACACTAAGGCCGAAGGCTTCATCGGATGTATCTCGAGGGTTCGAGTTG
ACGATATTTATCCCTTGAATTTATTTGTTCCAAGAGAATGGACCGCCGAATATAAGGTGCTCGGCACTCCGGTGTTCGAA
GACTTTTGGCGGCTCGAGCCGGTACCCATCCTCCAAATATCGTTGAAACTCGACCGCCTCCGCGCGTTCGACGAAGATAT
CTTGAGATCGGCTTACAACGAAACCGACACCGCGATTCTCGGCAGCGTTCTTGGGTTATTCTCATCGCCCTTATAATCA
TGGCGATTCTCATTGGACGATACATGTCCAGACACAAGGGCGAATATCTCACACAGGAAGACAAAGGTGCGGAGGTGCGT
CTCGACTCCCGATTCCGCAGTTGTTCACTCCACCACGGGACATCAAGTTCAAAAACGAAAGAGTGGTTTATCTAATTAGC
GGAACCAAAACATTGCATAAGAAAAGACGCGAAGGAAAAGACTCTGCTGTGTTGTATCGGGATTTTACGCTCGAGGA
CAAATTTTTAATTTCCAAACATTTTCGTAACGAATTTGGATTCCCGTGAATCTCAAATTTTTGCAATTTTCTTCGTTTGT
TTCCCTGCGACGAAAAATTCGTTTTACCTGGAGACGAAAAACAATTGGAACGTTCAACGTTTATTTTTTCTCTATTTTGA
AATTTTTTAGTAATTTTCTTTAC

>CL417Contig1|placental protein 11

AGTCTCCAGGACGAACGAACCTTGGACAACCTTCGGGATCTGGACCAGGCCTCCGAACTGGTGCAGCTGTGCGCCGGCGG
TGCCGCGCTGCGCGTGGCGCCGTGCCGCAACGACTTACTCCAGCAATCCCATCTACAGCAAAGGCAACGGCGTCACCG
ATGACGATCTCATCAAACATTTCCGAAGCGCTTTTCATCAAGGATTCCAACAATGCCAATCGATACATCACCTTGAATCTG
CAGAAACAAACCACCGGATCCAACGCGGCGGATCAAGCTTCTCAACCATTGTTGAGCGTGGATCCTCAAGCTCTGCGGAT

mmc4.txt

TCCAACAATTGAAAAAGTCTTGACGATCTACGACAATTACAAGCTCGACAGTCGCGTGGGCGAGTACATAAGTCCGGCAC
AGCGCAACGAGGAGAGTTTGCTCGTCGACACTTTTCTCAGTACGAATGTGATGTCAGCGGCGATGCGTTTTCTCGCGGAC
AAAGGATTCGTACGCAAGGATTACTACGATTACAAAGACACGCTGAGAAGATTGTGGTTCAATCTCTACTCGCGCGGAGG
CGATGGCAAATTTGGCAGCGCTGGCTTCGAGCACGTTTTCTTGACGGAATTGAACTTGGAAGTGAAGTCAGCGGACTTC
ACAATTGGATTTATTTCAATGCTGAAGAAGTTGCCAAAAGAGCTGATTATCTCGGCTACATAAAAAAAGTTGATTTGGGA
AACAAAGCTTCGATCGTCAAGATCCACGCGAAATACAACAACATTGACAAACCGGTTACAACATATGTTTATCGGAACTTC
GCCAGAACTGGAAATGGCTCTTTACACGGTTTTGCTTCTTAACGAGACAGGATCGTCCATGCGGAGTCTCTTTGGGTGGAA
CAAAGTTTAACATCGTCACGCACAAATTCAGATATCGAGGATATGATCTCATCGGCTCGGCTATCCCGACATATAAACA
TTCATCGAAACTCTTTTTAATCGTTTTTATTCCATGTGTAGTCTACTATGTAAGAGGAAACAGCACGATGTTTGAATTGA
AAAACAAAGATGATTTTTCTTCGATTTTTTGTGCAAAACGATGTATTTTTTTTTAATTACCGCTGCAGACCAAACTTC
ATGTCGTTGTGAATGATGCGTTTTTCTGTGAATTCGAACATAGGAATGGAAAAAAGTCATTGCATTATGGAAATTCG
TTATTTGGAAAAATTTATTTTTTAAATAATTTTTGTTTCTCGTACTGCGAAGTTTTGTATCTTGCAATTCGAGCACGAGCG
ATCAAATATTCGAAAAAAGTCTCTGTACTGAAATAAAGTTTGATAGTT

>CL4198Contig1|nadp-dependent malic enzyme

GACCTTGCTGTCACTCAGGACTTGTTTCGAGGACTCGATCACATCAGAAACCCACAACCTTAACAAGGGAATGGCCTTCAAG
TATTCAGGAACGACAGATCCTTGGAATTCATGGCCTCCTTCTGCAGCCGTCAAGACTCAGGACGAACAACCTGGAGCTTT
GCAGACTGAATTTGGATCGATATACCGACGATTTATCGAAATATATTTATTTAATGAGTCTGCTCGATCGAAATGAGCGA
CTTTTTTATCGTTTTCTTGCGGAAAAATGTGGAAAAATGATGCCCTCGTGTACACACCGACCGTTGGATTAGCTTGTCAA
AAATTCGGTCTTATTTATCGGAGACCACGTGGTCTATTTAAGCATCCATGACAAAGGACACGTTTACGAGGTAATTAA
AAATTTGGCCGAAAAATGACGTTTCGTGCAATTGTTGTACCCGATGGTGAACGTATTCTCGGCTCGGTGACCTTGGGGCTC
ACGGCATGGGCATCCCGATTGGTAAATTTGTCGTTGTACACGGCGTTAGCTGGCATCAAACCCCATCAATGTTTACCAATA
ACATTGGACGTTGGTACAAATACTCAGTCTCTTCTCGACGATCCTCTCTACATTGGTCACCGACATAAACGCGTCACTGG
ACAAGAATACGACGATTTTCTTGAAGAATTCATGAAAGCGGTTGTACAACGTTATGGAACAAATACTCTCATACAATTC
GAGGATTTGCGTAACGCGAATGCGTTCAGACTCTTGATGAAATATCGCGACCAATATTGCACATTCAACGACGACATACA
GGGAACGCCGCCGTTGCTGTTGCCGGTCTCTTAGCATCGCTCAGAGTCACGGGTACGAAGCTGTGCGACAACACTATCGT
GTTCCAGGGAGCTGGAG

>CL4204Contig1|acetyl-coenzyme a

GTTTGTGGAGAGATACGGAATGACGGAACGGGTATGGTGCTCTCGAATCCCCTCGAGGGTGAACGTATCCCGGGAAC
GTTGGAACACCTTTGCCAGGTGTACAAGTTAGAATAACGAAGCGCGATGCTCACAGTAAAGAGAGACAAATCCTTGTGCA
AGGAGATTCGAAAGGCAGTCGAGAAGTTACTAAAACGAGCGGAACCTCGAATGGGAATCTGGAAGTCAAAGGCGACTCTG
TTTTCCGAGAATATTGGAACAAACGCGAAGAAACGGCCAAGGAATTTACAGCCGACGGATGGTTCAAACAGGTGACACC
GTGCAGTACGAAAAACGGCGTTTACAGTATTTTGGGACGCGAGTCCGTTGACATTATTAACCTGGAGGGTATAAAGTCAG
TGCATTGCAAGTGGAACTGCGATATTGGGTATCCGGACATCGTGGACTGTGCAGTCTGCGGTATTGCCGACGACACAT
GGGGTCAAAGGTTGCAGCGGTGATCGTCTGAGAGAAGGCTCAGAAATAATCCTCTCGCAGTTACGCGAATTTGGAAG
AAAACGCTGCCCGAACACGCGGTACCAACGGTGTGCGAGTCTGTTGATAAGATACCAAAAAACACATGGGCAAAGTAAAC
AAACCAGATCTCATAAGCTCCATGTTTCGAACGACCAAAACATAATTTCCGAACGAATAGAAAAGTGAATTTTCATAACTG
AGCAGCTGGTGTGAGAAGCAGCCTAACGAACAAATGTATTTCCGAATATTCTACTAATTATTTGACAAAAACAAACGCT
TGCAGCTAATGAGC

>CL421Contig1|mitochondrial import receptor subunit tom22 homolog

GGGGTTATGTGGTAATGCGTGCGGCACATAAATCACGAAAGAGGAAAAATAAGCGAAAAATCCATTTGATAATCGCGT
TATTATCAAAGATTTTTCAGCGAGTTAAAGTGTAACATTAGAAAACGATATTCTGAGTTTGTGCGAGTACAAGCGTTAA
GCAAAAGACGATATAAAAGTTGAACGTAACGTTTATTGAGTATCATATATGGCTTCGATCGAAGAAGTTGAAGTACTGG
ACAGCGGTATGGGCGAGCAGCGAAGTAAAGTACCCCGAAATAAAATCGATTCTCCCTGACGATGGTGAGGACGAGGAAGAT
GAAACTCTGGCGAAAGACTCGTCGGCTCACAGAAATGTTTCCCAACGAAGTACGCAACTTCGGTATACAATTTGGATC
CGGACTGTATCGTTGCGTCAAAGGTGTTTACGGATTATCGTGTCTCGGCTACGTGGTTGTTCTTCAGTTCTTCGGCGATCC
TCTTTCGCGCCGTTGATATTTGAGATCGAGCGATCACAATTGGAAGAAGCACAACGAGCTCAACAGAAACAAGTTTTGCTG
GGACCAAGTACGGCCATGTGCAACGTCAGCACAGGCATGCCAATGGCTCCGCCGGTGCAGCGATAAGTCTCCGGAATC
TAGTTACGAAAGCCCTCATCCAAGCATAAGCGAAAGACACAAATTCACCAGCAACAATTCAGTTTAAATCTCGTAACCTC
GAGAAAAACAACAAACAAACACTTTCTGTTCTCAAGTTAGACACCCGATACGCTCTGACGAACGAAATCGCCAGATCTTT
AAATCGTTGTGCGACTATTTATCCGAGTCTATAATTATTGAGAGAAAAACAATTGACCAATAGCAGCCACGTCTCGTTCCA
GATCCTTAAACATCGACTCCTTCTGTCTCCATTCAAATCATCCGTGCCAGCCAAAGAACAATGAAAAATAAATAGTTAA
TTATTTGGATTTATTATAAATGGTCAATTGACATTTTCTAACAATCACACGACGGCCGAAGAAAAATTCGACGAAATAGC
AAGCGAAATATTTTTTTGAATTTTCCCACTCAGAGAATTCATTTAATTTATCCGTCCAGAATAAAAAATCGGTGATCTC
AAATGTTTCAGCGATTTCTATTCTGAGAATTTTTTCATACCGAAAGAACCCCAAGCAAAAACTCTGCCGTCTTCCAAAAG
GGCCGCGTGTGAGAATCTCCGGCTGTTACTTGCACCGCTTTCCCATCCAACGACCAAGACCCGGAGTAGTTTCTGAAT
CTTCTACCGAGGTGTGCGGTCCCAAAGCACCCCTCGTCTGTTACATCCAAAGGTCAGTACAGTGCCTGATTTGGTCAAGCAC
ACGCTGTGCATACCGCCAGCCGTGATCGACACAACGTCACGCGAGTCTGGGACACCGGCCAGTGCCTTTTTTTCCATGTT
TTGTGTTCCAAGCCCAATTGGCCACGTCGCCTTGCCCGCGGAAAAAACATTCCCCCATGTTCTGACGTGCGTGTATC
GGGGCTCAACGAAATTGCAGCAACTTTTTTCATCGAAAAATAAAAGAAATTAATTTTTTTAAACAGTAAAAAAAAGAAAT
TTTACGGTTTTTTTTAACGTTCAAACGACGTAGAAATATTTTGAATGATTTTGGCGAAATATGGCAACGAAGTTGCAGT
CGCAACGTTCTCTC

>CL423Contig1|glutaredoxin 3

GTTTTGCGGCTGCGCGACGAGAAACATCTCGTTTCAAGAGAGTTTACACAGACATAGCGATTTCGCGTTGAAAAGTA
ATTTGTAACACGAACTCCATAAGCTCAGTGATCGAACTCGCGTATGCTTGTCCGCTCGTCTATTTCAACAGATTTA
AGATTTTGTGATATCAAGAAGTGCGATACCATAGAGAATCTGGATTTTTATTACATTCTGCTTTTTGTGTTTTTCCGAG
CGTTTATCGTCTATCTTTTGGGTTAAAAATCATCGAAATGACATTGAGAATCTAGGCACCGTGAAGAGTTTCGATGAAT
TTGTAAAAAGTAAAGATTTTGTGCGTTGTGCAATTTCCATGCGCAATGGGCGAGCTCAGTGTGCGCAGATAAACGATGTACTG
GAAGAAATAACAAATCGAACGAGTACAAAACGGCTAGATGCGCTAAAATAACTGCGGAGGATGTGCCAGCGATATCGTT

mmc4.txt

GAAGCACGGGGTGTCCGCGGTGCCGACGGTTCTTCTGTTGAGAAAACGGGCGGTGGTGGACAGAGTGGACGGCGCTAATC
CTCAGGCTCTGGTAGAAAAGATCAAGGAACAATTAGCGGATGAGAAGCGGACGTCGTCGATAATTCCAAACCTCAAATG
AGCTTGGAAAGAAAGATTGAAGAAGCTTATAAATCAAGCAACTTGGCTTCTCTTCATGAAAGGCGATCGAGCGAATCCACG
CTGTGGCTTTTCCAGAACGATTGTTTCTCTCTGACAGTTACGGCACGGATTATACAACGTTTGATATTCTCCAGGACA
ACGCGGTGAGGGAAGGTCTAAAGAAATTTAGTAATTGGCCAATTATCCACAATTGTACTTAAACGGGAGAATTACTGGGG
GGTCTGGACATCGTAAAAGAGATGAGTGAGAGCGGAGAGTTGGAAGGAATGCTACCAAAAAATCTGCAGAGAGCAGCAGT
TAGAGCCTATGAGGTGCGATGCTTTTTCCATCTTCCGAGCATGTAGCCAAGACGTGTAATATTTGTACGAGAGAGACGAT
GTCGAAGGCGATGCATCGAGCAAGCAGAAAAAGAATAAACGGAGTTTTTCATTGCAACGCAACTATTTTTTTTTGCACATTA
TCGAACTCAAGAGTGACCCCTTAATCCTCGTGGCTCGTGATTATCCCAGACGTCCGATTTATTTTCTCCAACATTTCCGG
ACCAGTGAGGAAAGTTCATAGTTTCATTAGAGCGCAAGAGATATCGATCCCAGGCTCTCGTGCATTGACTATATCTTATG
AGAGTGTGGCAATTCCCATTGTTGAAATTTGTGGCTTTTACCGATTTTTCTTCACTGTATTGACGAGCTGAATTTTCGC
TATTAATCGTCGAACGCGTTGCAACGAATTTTGAAAAACAAAACAACCAGAAATCGAGGAGATTCAAGGACAATGAAACA
AACATTTAAGGCTCACTGAAAAATGACTTTTGATTCGTTATTCAGATTCTCAATGTTAAATCTATATTACAAACGATAAAA
CACAAATTAAGGAGAATCTTTTTTAATTAGTTTTTAATTAATTTGATATAATTCGAACAATCTTATCGTACACCTAGC
GCAATTTTTCGTTTTCCGTTTGCTACCGACACGAGCTCCTTTCTAGCTCCGGAATGATGTTTTGAATCTACCGAGCTC
TTCATCTTTTTCTGTGCAAAAAATATTTCCGATTAATAAATTATTACTTTGTGATTGAGTCGGAGCAGAGTTTAGTC
CTTCGAGTGCATACTGGGTCATTTTGACCCCAACAATTTTCCGTCACCGATCCTTTGGCTTATATTTTCGTTTCGTCAAA
AAATTCAGGCAAAAAATATGGAAGACGGAATGCATATTTGACGTAATACAACGAATTGAAAAACGCGTCGGGTACAT
TGACCAATAGCAGC

>CL4268contig1|luciferin 4-monooxygenase-like

GATGTGGATGAAACAGCAAAAGGTGCGGACCGGTGACATCGTCGGAATTTGCACTCACAATCAAATGGACATGTACGTAC
CGTGTGTTGGCGTCTTTGTACATCGGCGCGTTTACAACGCGTGGTGGGACATTGGATTGACGAAAGAACTGGCGAAACAC
TTCATCGAACTGACAAGGCCGAAAGTAATTTTTTTGGCCGAAGCAAAAGCGAAAATAATCCTCGAAGCGATCGAGGAATC
GGGAGCGAAAATTCAGTCGTCGTTTTCGGTGAATCCACGAATCTTGTCTCTTTGAACGCGATCCTTAAATCGCAGGATA
CAAAAAATGTCAATGAGTTTCGTTGCACGAAATATCGAGCCTCGACGAACCCGCGGTCACTCTACACCTCGGGAAGC
ACTGGACTGCCCAAAGCGTTGTTTTATTCCAACAAATCTCTCCTCAAGAATATTTATCATTACGCCAATTTTACGCCTT
CGAAGATTCGCTGACACTTCTGTTCTCGCCGCTTGCTGGCTCACCGGCATTTACACGATGCTCCGGGGAATCGTCGTCC
CCGATCGACGAATCATTACCCGGAGTACACGCCAATAAATTGCCTCAAGCTCATTGAGAAATACAAAATAAATTGGGCT
TTGCTTGGACCCAGCGCGACGTTTGCAGTGGCGAAATGTTCCGAAATATCGAGATACGATGTGTCTCTGAGGGTTCT
GTTCTGCGTGGTTCAGCCATTAGATTGAAACGCAATGAGTCTGGCTCACTATTTTTCTCAAGTCTTTACATCTGC
CAGGGTCTACGGTTCGACAG

>CL4288contig1|acetyl- carboxylase

ACACCTCGAACCCGGCTGTGCTTTTCACTGGAATCAATCGCATGAGAACTTACGATCTCGAGGCTCTGCCAATATCGA
ATCAAAGNTGCATCTCTACCTTGGCAAAGCAAAAGTAGCCAAAGGACAACAAGTCACGGATTATCGATTCTTTATCCGTT
CGATAATTCGTCACTCGGATCTCGTTACCAAAGAAGCCAGTTTCGATTATCTTACACAACGAAGGAGAACGAGTCCTTCTG
GAAGCTATGGACGAGCTCGAAGTCGCCTTTTCTCATCCACTAGCCAAACGTACCGATTGTAATCACATTTTTTTGAATTT
CGTCCCTACGGTTATTATGGATTGGAAGAATCGAAGAGAGCGTTACTAGCATGTTTTGCGTTACGGACCGAGACTGT
GGAAACTGCGGGTCCGTCAAGCCGAAATAAAAATGACGATTGACAGCTCCAGTAGCAAGCCAACTTACGTACGGCTT
TGTATTTGAAACGACAGCGGCTACAGTATCGACCTTCATCTGTACACCGAATCGACGGATCCTAAAAACCGGAGTGATAC
GTTTCGAGTCATACAGCTCGGCGGTTGCTACGAGCAACGCCAATTGGAGGCCCGGGCAATGCACGGTCTTCCAATTTTCG
ACTCCTTATCTGACCAAAGATTATCTTCAAGCCAAGAGGTTGAGAGCACAGAGTGCGGGCACGACGTACGTTTACGATTT
ACCAGACT

>CL428contig1|glutaryl- mitochondrial-like

GTTTCAAGTTTCTGTATCGAATTTTTAACTCACGAACATGGCGTTACGTACTCGAGGCTTGTTACTCAAATTTGGTAGAT
TTTTCCAGCTAGAACTACCAGACCGATATCAGCTTCATCTCGCCTCAACAATAAATCATCCTTGAATGGCAGGATCCT
CTGAATCTGGAATCACAGTTAACCAGGAGGAGATAATGGTTCGCGATCAATTTCTGTCATATTGCCAGGAAAACTTTT
ACCGAGGGTTATCGAAGCGTACAGAAACGAGCATTTCGATAAGACAATAATGAAGGAATTCGGAATCTTGGAGTTCTTG
GAAGTACTGTCAAAGGTTACGGTTCCGCTGAAATTTCTGCTGGTTGCTTATGGACTTTTGACCCGCGAGGTAGAGGCCGTC
GACAGTGGTTACCGATTCGCTTCCGTGTCAGTCTCGCCACTACGTCATCGAGTCCAGGCTTACGTACGCAAAA
AGAGAGATTTTTTACCAAAGCTCATTAAAGGTTGACTTGTATCGGATGTTTCGGATTGACGGAACCGGACACGGTAGCGATC
CAGCTTCCATGTCAACCCGAGCAGTTTACGACGCGGATAAAAAAATTTACAACTCCGAGGCAGCAAAACATGGATCACG
AATTCACCGGTGCGCGACGTTGCCATTGTGTGGGCAAAGTGCGATGACGAAAAAATTCGAGGATTTATCGTCGAGAGAAA
AGGCAACGAAGAACGTCTCAACACACCCAAGATTTTGGGAAAAATGTCAATTGCGAGCATCCACTACGGGAATGATTTTAA
TGGATGACGTTGAGTTCCAGCAGAAAAATCTCTGCCCAATGTCCATGGACTCAAAGGCCCTTTTACAGCTTTGAACGGT
GCCGTTATGGCATTGCTTGGGGGAGCGTTTTGGGGAGCCGCTGAACTTGTATGAAATTAGCGTTTCACTATACTCTTG
ATCGAAACAATTCGGCAGGCCATTAGCAGCGAA

>CL42contig1|laminin subunit beta-1

ATATCATTTTTTACGCGGTTCCGGTCCGGGCGAAATGCGCCGCAAGAATACGACAGAAACGGTTGTAACGAGATATTCAA
CGACGTTGCGCGTTACAGTTCCAGGAAGCGGAAATTTGCGAAAAATATCGAAACAGCATCGGTTACTACGTTTTTCGACG
GTGCGCACTCTTGCGACTGTAATCGAACCAGTTGCGCAGCTCTTTGTGCCAGAACTACGGAGGCTCATGTCCGTGTAAA
ACGAACGTCGTTGGCAGACGTTGCGATCATTGTGCGCCAGGAATTTATGGCTTCGAGCCGAAGGGTGCATCGCTTGCGA
TTGTAACGCGGTGCGGCTTTGGACAATTTCTGCGACGTGAAACCGGACGATGCAATGTGACCCCAACACTTACGGCC
GCACTTGCGGCGAGTGCAATCCTGGCCTTCTGGAATTTCCACATTGCAAGCGATGCGAATGCAACGGACACGCCGAATC
GTGCGACTCGAAAACCGGCGCTTGATCAATTGTGCGGACTACACCACCGGACACAATTGCGATCGTTTGTATCGCGACC
TTCTATGGTGATCCACGGATCGGCGTCGACATACCTTGACAGAGCTTGCCCGTGTCCAGGAACAGAGAATCGGGACATTC
ATACGCGGACAGCTGTAGCTCGACTCCGTCAACCCAGCAGTTATTTGCGAATGCTACGAAGTTTACTCAGGACCTCGTT
GTAAACCTGCGCCGAGAAATTAACGGAATCCCGAGGATTGCAACGCGGGTGTTCACCTTGCAATGCAAGTAACAAT
ACCGACCTCGCGAGACCTGGAAATTTGCGACCCCAACACCGGAAGATGTCTGCAGTGTCTCTGGGATACCGATGGACCAA

mmc4.txt

TTGCCAGTATTGCCAACCCGGATACTTCGGTAACGCCTTGGAAAAAATTGCAAGATTGCATGTGCAACGTTCTCGGGAC
TGACGCCAGTGCCGGACCTTGCAATCATCGCAATGGCAATGTCTTGTCTCCCTCACGTCGTTGGTAATCTTTGCGACA
CTTGTGAAAAAGATCATTGGAGAATCGCCAGTGGACAGGGATGCGATCCTTGCGGGTGCGATCCGGTGGCAGCACTTCG
GACACGTGCAACCCGTACGATGGAACCTTGCAGTGTGATCAGGCTTCGGAGGTCTGCTGTTGCAACGAATGCCAAGCGAA
TTACTATGGAAATCCGAACGTGGAGTGTATGGCTTGCAGTGTGACGAGATTGGTTCCGGCAGTCAACAGTGGCAGCGG
AGACGGGTATTTGCGTCTGTACAAAAGGAATCGGAGGGGACAAGTGGCATCAGTGGCATCGCGGTTACATCGACGATGCG
CCGTCTGACGTCCTGTGGCGAGTGTTCGACAAATTGGGACATGATTCTCGACGGTCTGAGAAACAAGACGAATCTCGT
GATCGGAGAAGCTTCGAGAATACAAAAAGTTGGTACGACCGCGGTGTACAGTCAGCAGTTCGATGAGATGATCGATAATT
TGGACGTGGTACGAGGACTCATAACAAGCACGTCCGTCCGGAGTCAAGATCTCGACGTGCTCAACGATTTGGCGGAAAAAT
CTTGCGAGCAACATCACCTCGTCGGAAAAATCGTTGAAAGAAGTTGAAAACAAATTGGAGCTCGTGAGCGCTCGCGTTAA
TCTCGACGATGTGTCTCTCAAGGGCTGAAAAATCGAACCAACAGTCTCCACCAAGGCGCGGCACTTCTCAGCGAAGACG
CGATGAGGCTCCAGGAAGCCAACGTCCAAGGAGCTCTCAACGTTACTCAACAAATGGCCGAGCAGTCAAAACAAGCAGAA
AAAATGGCCAACGAAACAACGAACGTACTGGCTGATGCGGAAAGATACAGAAAACACACCGAGACTTTCTTGCCCAAGAA
CAGCGCGCAAGTCAATGACGCGCAAGAACGCGAGCCGAGTCTCTCCAAAGACTCGACCGAAAGTCCGAGAATTGCGAG
ACGAAATGCCAAATCTCAATCTCGGCATGTGCGGGCAGCAACGTACGCGATTGAGCAACGTTTGGGAGGCGCTGGCTGC
GGTTCTTGCGGCGGACTCTCTGCGACGCTGGAGCGATTACCAAAGCCAATCAAGCCCTCGACGTGCGCAAGAAACAAGC
GGCAAAAAATAAACTCCACAAGGACGAAGCTGAGCAGCTTCTCCGTAACATGCTCGACATCAACAAGACGCGACTGCTG
CCCGAGGAAACGCCAGGACGCGTTCAACGCGGCCTGGGACGCGAGGAACCGTTGCGACGCGCTTCCAAGTCGGTGACC
GAAGTACTGAGAGAATTTGGAGCATGCTGAACGAGGATCAACCCACTCCGTTATGGTGCGCATCTCGTGAAGAAGT
CTTAAGAAAAAATTATTCATCTTCGACCCGATGAGATAAAGGAATTTGCCGATAAAATCAAAGACATCGTCGGATCTCTGA
CAGATTCGACAGGATTTCTCGCCGATACCGCTAACGATAGGAAAAATGCGCATGATCTTGAAACTCGTGCCAAGAGAGCC
AAGGACGCGACCTTGA AAAAGCAGACGCGAGGAGGAGGTCGTTGAACTATTGGCTGACACTCAAGAAGCTCAAGGCA
AAGCAGGAGTCCGCGATTGATCAGGCTGAGCAGCAGATCGCTCTGTGCGAGAAGGATCTCAAGGACATCGTCGAAGTGAC
GAGAGAAGCTGCGAAGAAAGCCGCAACACAACCTGCCTCGGTAGACTCGTTGGAGGCTCTGTTGACCCAATCCAAGGAC
AATCGGTAAGAAACGATTTCTGCTCTAAAGAACGAGATCCGAAGCGAATTAGCAAAGGTGGCGAACAACGCGACGAGCGTA
AAGAGCAAGAGTGATCGTCTGGGCACCGAGTACAAAAGAGCCGCGATTCTGTTGAATTACCGAGTGACCAAAAGCAAGA
CGACATCCAGAGAGCGAAGCAATTGTTGCAACGAGCATCCGAACGACTGCTGACACGTGACGAAATTCAAGGACCTCG
ATGGCATGGAGAGCGTTTATCGTGACAACGACAGACTCTTGGGCGATCTGATGGGCGAGGTTGACGCCCTCACTGCCAG
ATGGAACGCCACCTCGCAGAGATCGAACGAAAAATCACAACACTCTCGTCACTGCGCGGCTGATGAGCTGGTCCATTTGT
TTTTTACGAACCAATCTTTTTTACACAACAACAACAAACGTCAGAGTACAATCCGATACTTTTTAATATTCGAGTATCGG
ATTTTTCTGTCCTGCGGCACTTAAAAATGCTACACAGAGGCTCTCTGAACATTGAAAGATAAATAAAAAATAACGCATA
CAAAATTAGGAAGAAAAACGACTAAATAAACGTGCCATAATTCCGACGAGTAGTCCAGAAGTCTCGTCATCCCTTAAATT
CTTTTTACCACCCAATCGAACGACCCTCGACAGCCCTTTGCCAAACGCAATACTTTGGGGCTGCGAGAATATTTCTA
ATCCTTTTTCTTACGATTCTCACTTTAATCATTTTTTACTAACTGCAATTTTTATGCATTTGATTTATGGCGTGAGCGAC
TGCAACAGAGTTGCGAGCCTCCCCCTAAAATCCACGATACGAATTTGCTTATTTTACACCTCATCGAATTTACACAAATT
TCCAGTTTGTCAAATTTACTTTCCAAGAATCGTCAATTTGGGCTTCAGCAAAAAATCAATTTTCTCAAAAAACTGTCATG
AAAAAAGCACTGATCGTATTTCCAACAGGCTAAGATACTTAACTCCATTACCAACCCCTGAATTTGACTCGAAACGAAA
CAAAAAACAACGAATTTGATCGAGTTCAAAAGTAAAGAGTCAGAAAAAACTTGGAAATTATGATGCACACGAAAAGAAGC
CTGTAATAAATGACAGTTCACGAAAATCTGTGTCAAATAAATTTACTTTGGACAAGAGCATCTCAACGTGGAGGAAAAA
AAATTGTTCAAATAAAACATGAAAATGACATTA AAAAAGGAAGTAAATGAATTTTTGAAAGTGAACGAAGGACCAAATTC
AAAGGACACAGTCTTTTATGCATTAGAGTAATGAATAGTGTATTTTTCGAGAAAGAATGAAGAAAAATAAAATAAAATGA
TATATATACAAAATTATAATATTAATAATCTATAGTCGTAAGAGAAATGC

>CL430contig1|malate cytoplasmic-like

ATTCCTTCGTTACGTCGTGTGTCCGTCAGCTGACCTTACAGACTTCGTATCATTCACTTACCCATATTCTGGACCAAGA
ATTCGTCGATCGAAAGCCTAAATTTCCCGGCACACATTTATCTCAAAAATGGCTGAACCAATAACCGTTGTGTCACGGG
AGCAGCTGGTCAGATTGCGTATTGCTGCTTTATCAGCTTGCAGCTGGGAGCGTATTCCGACCTACACAGCCGATAGATC
TAATGCTTCTAGACCTGCCCCATACGATAGGAGTCTTCAGGGTGTTCCGATGGAACCTGGAGGATTTGGCTTGTCCCGTT
GTTAGAGCAATTGTTCCAACGGCTGATCCAGCTGTGGCATTCAAAGACGAGCTTGGCTGTTTCTCGTGGGAGCCATGCC
CCGCAAAACAAGGAATGGAGGATCTTCTCGCTGCGAAGGATGAAATTTTCAAAGTCCAGGAGACGCAATGAGACA
AATTCGCGCGTAAGGACGTGAAGGTTCTGGTCTTGGAAACCCGCGCAATACCAACGCCTTGATTTGCTCTCACTATGCT
CCTTCAATACCCAAGGAAAAATTTTACTGCAATGACCAGACTGGACCAGAACCGTGCACAAGCGGCTTTGGCTGGTCTGCT
TGGCGTACAGCCCGACAAAGTCCAGAACGTGATAATCTGGGGCAATCACAGTTCGACTCAGTATCCCGATGCAGCTCATG
CTAAGGTCGATCTTCCAAGTGGCGTAAAAGATGTTGAGCCGTAGTCAATGACGAGAATTGGTTGAACGGGAGTTATTCC
TGGAATCGATCCAAAACGCGGAGCAGCTGTTATCGCCGCGAGACAAATGTCATCCGCAATGTGACGAGCGAAAGCAGCTG
GAGACCATATGCGAGATTGGTGGAACGGTACGAA

>CL4318contig1|fatty acid synthase-like

AACCGACGTTTCTTCTCTCAAGTTGAACACGCGTATATCAATGCCTTGGTCAGAGGCGATCTCAGCAGCCTCAGGTGGA
TCGAAGGACCTCTCAGCTACTATCAACCCGAAAAGTATCCCAACACCGAATCTGCAGCGTTTATTACGCCCCGCTCAAC
TTCCGAGACATAATGTTGGCAACGGGAAAACTGCCACCGGATGCTCTTCCCGGCGACCTCGCCGGTCAGGACTGCATTCT
GGGTCTGGAGTTTACAGGACGCGACAGCAAAGCCGACGAGTATGGGAATGATCGCTGCCCGAGGATTGGCCACGACCG
TCCTCGCTGATCCAGGCTTCATGTGGGAAGTGCCAGAAAAATAGGAGTCTCGAAGAAGCTGCGACGATTCCCGTCTGCTA
CGCAACCAGTTATTACGCTCTGGTGGTTCGCGGTGCGCTGAAACCCGCGGAGTCCGTTCTCGTGACGCGCGGAACCGGAG
GAGTCGGTCAAGCATGATTTGATCGCTTTACACGCGGCTGCAAAGTCTTACCACAGTTGGTTGCAAGAGAAACGA
GATTTCTTTAAAAAGACTTTCCCTCAGTTGACCGACAAGAATCGGATATTTCCCGAGACACGAGCTTCGAGCAGCTCGT
CCTCTCCGAGACGAATGGCCGCGGCGTTGACATCGTTCTCAATCTTTGGCCGAAGAAAAACTCCAAGCAGTGTCCGCT
GCCTCGCAAAGACGAGCTTTCTCGAGATCGGAAAGTTCGATCTTTCCAACAACAATCTTTGGGCATGTGTTTTTCT
CTCAAGAACACGAGCTTCCACGGTATCTTCTGGACGCTCTCTTCGACACCCGACACCCCGACAAAAAAGAGTCTGTC
CGACTCGTCAGCGAGGGAATCAAGAGCGGCGCAGTCCGGCCACTTCCGGCGACAGTCTTCTCCGAACAACAGATCGAACA

mmc4.txt

AGGCTTCCGCTTCATGGCCACCGGCAAAACACATTGGCAAAGTTTTGCTGAAAATCCGCGAGGAGGAATGCCGCAAACCAA
CCTACCCCGCAACAAAACCGTCGCCGCAATCCCCCGGACTTACATGAACCCCGACAAGTCTTACGTTCTCGTCGGTGGC
CTCGGAGGCTTCGGACTCGAGTTTGCCAACTGGCTCATC

>CL432Contig1|60s acidic ribosomal protein p0-like isoform 1

TCTCTTACGCGTCATCTTCCGACTTATCTGCCACTTCGCCCCGCTAACTTGCTCAGTCCTTAAATCTCCGCAAGGTATCC
CTACACGCACCGCAAGATGGGTAGGGAGGACAAAGCAACCTGGAAGTCTAATTACTTCACCAAACCTCATCCAACCTTTGG
ATGACTACCCCAAGTGCTTTATTGTGGGCGCGGACAATGTCGGCTCGAAGCAGATGCAGCAGATCCGTATGTCTCTGCGA
GGCAACGCGGTCGTGCTCATGGGAAAAACACGATGATGAGGAAAGCGATACGCGGCCATGTGCAGCGTAACGCCGCTCT
CGAAAAACTCCTGCCCCACATCAAGGGGAAACGTTGGTTTTGTTTTCACTCGTGGAGATCTCGTCGAAATCAGGGACAAGC
TTCTGGAGAACAAAGTTCGGGCTCCAGCTCGTAACGGCGCCATCGCACCCCTTGAGCGTCATCATTCCAGCGCAAAACACC
GGCCTCGGTCCCAGAAAACTTCTTTCTTCCAGGCTCTCAGCATCCCGACCAAGATTTCCAAGGGAACCATCGAAATCAT
CAACGATGTGCACATCTTGAAACCCGGTGACAGGGTCGGAGCTTCCGAAGCGACGCTCTTGAACATGCTCAACATCTCAC
CGTTCTCGTACGGTCTCCTGGTCGAGCAGGTTTACGATTCCGGCCTATTTTTGCCCGGAAATCCTGGACATCAAGCCC
GAGGATCTCCGCGTGAATTCCTTGGCGCGTCGCCAATCTGCCTGTCTGTTGGCAATCGGTTATCCAACCGTCGC
CAGCGCTCCGCACAGCTTTGCCAACGGATTCAAAAATCTTTGGCTATCGCTGCGGTACCCGAAGTCAATTTGCCGAAG
CTACTACCATCAAGGAGTTCATCAAGGATCCGAGCAAAATTCGCTTCCGCGAGTACCGCGGCTCTGCGAGTGGCGTGT
AGCGCCGCTCCAGCAGCCGAAAAGAAGAGGAAAAGAAGGAAGAATCCGAGTCCGAAGATGACGACATGGGTTTCGGTCTT
TTTGACTAATTTCCACGAGAACGACCTACAAATGACCTTGAGGCTGTAGCAATACAGCCGCGAGCTCGACCGACTCTGTA
CGATAACCATCAATCATCATCGCGACTTTTTTAACAACCTTCTTCTTGTGCGAGTTTGAATAAAGTACAGAAACAACA
AAAAA

>CL433-bisContig1|PREDICTED: uncharacterized protein LOC100879989 [Megachile rotundata]

CGGCCGGGGAAGAAATCGTAGTTCTCGACCAGTTGCGTACACGACCACGATATCAAGCATGTCTGCAGTTCGGATGTTTC
TTTGCTTCGCCTTCTCCTCGTCATCGCCAACGCGTGCTTATTTCCCGACAAGAAGGAAAATCAGGAGATACAGTTTTTC
CATATTGGCAGTCCGGAGAGCAAATCGGGGAGCGAACCGGATATAATAGAGTTGCATATCCCGGAGGGAAGAAGAAAGCG
TGGAGCGTCAAAGGATGACATTTGATTCTGCGCGAGTATCTGCAAGCAGGATTCGACTGTGCGCCGATTTCGAAATGTT
CATCAAAAACATCGTCTGCGTAAGATCCGCAAAATAATCTCGATCCAGCCAATCGGCAGAACTCTGAAGAATGGAAT
TTGGCTGGAGGGGTGTTGAGTATTTTATAACGAACAAATAATCAACAACTATTGAAAAATGTGTCAAAATTA
ATAACAATCAAAAGTGTAACGCTTCGGGGTCAATAAAAAATAACGGTAACGGAAAAA
AAAAA

>CL435-bisContig1|40s ribosomal protein s3-like

GAGTCGTGGACGCTGCTGTACGCTCTTTTCTTCTCGTGCCACCTAAACATGGCTGCCCGATCAATCTCAAAGAA
ACGGAAGTTCGTAGGAGACGGAGTCTTCAAAGCCGAACCTCAACGAGTTCCTGACTCGTGAGCTCGCCGAAGATGGCTACT
CGGGTGTGAGGTCCGTGTCACTCCGACTCGTACCGAAATCATTCTCATGGCCACACACACCCAAAGCGTACTCGGAGAG
AAGGGACGCAGAATCCGTGAGCTACCTCCGTAGTTCAGAAGCGATTGCACTTCAAAGAACAATCCGTGAGCTCTACGC
CGAGAAAGTTGCGACGCGTGGTCTCTGCGCCATCGCACAGGCCGAGTCTCTCCGTTACAAATTGATCGGGGGTCTCGCTG
TCAGAAGAGCGTGTACGGAGTCTCCGTTTCAATGGAGTCTGGAGCCAAGGGTTGCGAAGTGGTAGTGAGTGGAAAA
TTGCGAGGCCAGAGAGCAAAGAGCATGAAGTTCGTAGATGGACTTATGATCCATTCCGGTGAGCCGACCAACGACTACGT
TGACACAGCAACTCGTCACGTACTTCTGAGACAAGGAGTTTTGGGTATCAAGGTGAAAATTATGTTGCCGTGGGATCCTA
ACGGCAAGACCGGACCTAAGAAGCCTCTGCCCCACAACGTTTCCGTTGTTGAGCCTAAAGAAGAAATCCATCACGCTCAA
CCGTCTTCGGACATCAAGGTTGCTAAGGATGCTCCTCAAGGATACTCCGCCGCTCCTCTTCCATAAAGTGTAACCTTTAT
AATAAAAAAACATTAACATCAGGTCTCGTTGATTTTGGACTAACTACAAATTTTTCTTTCAATTTATTTCAATCCTTT
CCAATATTCGTCAACATCGTCAAGATCGTTAAGAAAAATCAAAATTTTCTTCTACATTTTTCAAGTCTTCAACGCT
TAAATTTGTTTTTTCTTTATTTCTCAAATTTTCTACCAATTTTTATTCGACCAACACATTATCAAGTTGTAATGTTT
TTTATCAACATTTTTTCAATTTACAAAAAACAACGATCCATTTGACCTTTGAAGCAATATTTTTTCCATGAAATTTTT
CAAATCTGCAGCATTTATCACAGGAAATATTTGAAAGTTCGGAAGAATGTGTTGGGCTAGAATTTTTGCAATGTAGGATC
CTCGAAATTTGCGAGTCTCTCGAACTCGAACAAAAAAGAGACGATCCGTGCGACGCGAATTATTATCATTGTTTTGAAC
GACGAANCTGCTTGCAAAGCGCGAGGACGTTAG

>CL4351Contig1|unknown [Hyposoter didymator]

TTCCCGAGGTAAACATGAAAAACATCCAGAAACCAACCAACAGCAAAGTCAGAGATTCCAGCTCGCGCAGAGTCAAGGAA
GGCAGTAACGAGGAAATTGGCGATGTTTTGGGACAAATATGCGGCTTCAAACCTTGTTGATGATGCTCCCGGTTCAAGAAAT
GGATTTAAAGGCGATCAATAAACTAAATCGCATACCATCGATGATCGTTTCGATGTGTCCAAACGACGATGATTCCTCAG
TCGGGGGTGGTAGCCAGTTGAGAACGGCTACCGAAATATTAGGTGGAATCGCGAAGGGAACCTTCGGGACGTTCAAAAAAC
AGTGCCATTGCTAATCACGCAAGTGTACCGGCAGGACGACGAAGTGCCAAAACATCTCGATTGAGGAAGTGACTTCCACG
AGGCAAGTTCGCGGCTTATCGAATGCTAAATTGCTAATTATGGCAAAGATATAAATAGAGTACATAAGGATGTTACTGT
GATCGTGGATGACGACAATGGAAGAACCCGACGTATAAATGCCAATGATTGAGTCAAGCAAACCTGTGCGAGGGACAGTG
AGAAACATAGATGACTTTTTTCAAATGACTTATCACTTGCCATTACAAGTTCTCCCAAGCGGAACCCGCAAGTTAAAAAC
AACGACCTCCAAACGTTGCGTCAGCTGCAACGTCACCGCAACCTTCGATGATAACGCAATCGCTCTCGCGTGTCTGTT
GTATTCTTTTGTGTGCGAACGTTT

>CL4365Contig1|insulin-like growth factor 2 mrna-binding protein 1-like

AAACGTGAGAAAGTATCGTCCCGTGATCTGACGACGACAGCGTCTCGTGAGTTATGAATCGCAGGATCAGGCACAGC
AAGTTGTGAACCAACTTGACGGATACCAAGTACGAAGTACTCCGTTGAAAGTTGAAATGTGAGCGCGGAGAGTCGACGA
AGGGCACGTAGCCAAAGAGGCGGAGGAGTGGCTTTTACCAGGGTGGCCAGGATCAGGTGTCGCAACCGGACTTTCCGCTT
CGTATACTCGTGAGTCGGACATGGTGGGCGCGATAATCGGACGACAGGGCTCAACGATACGTGAGATAACGCAATGAC
GCGAGCCAGAGTGGACGTGCATCGCAAGGACAACGTTGGCTCGGTGAGGAAGGCCATCACGATCTATGGCAATCCTGATA
ACTGCACCAACGCGTGAAGAAGATATTGGAAGTTATGACGAGGAAGCGAACAATACGAATAAAGGTGAAATAACGTTA
AAGTCTCGTCAACAATCTCATCGGTGATTTATCGGCAAGGTGGCAACCATCAAAAGAATCATGCAAGACAC
GGATACGAAATCACTGTGAGCAGCATCAATGACATTAATAGTTTCAATCTCGAACGCATTATAACGGTCAAGGGTACGA

mmc4.txt

TGGGCAGAATCACGAAACGTAGATAAGCATCTCTGTTATCTTTTCCCCCTTGAATCGAATTGTGACAGTTTGGCTGAGT
GTTTTGACTTAATTTACATAAACATGGCGATCGTAAAGTCAAAAGTCTTTTGACAATGGTCTGAAAAACGTGACTGC
TCCCCTCGATCGAATTCAGAATTTGGAACCGGAAGTTGGGATACGAATGATTTATAGTTTCGACCAACAGAACGCTTCGTG
TGGTCGTGTTGGTGCGAGGCATTTGCCACAGAATTTTGGATTACGAAAGTTAATAGTTACGTCGTTAAGATAAACTG
TTACCTGACAAGCAACAATTCGAAACCACATCCAAAAACGAATCTTGGCCACAATGGAACGAGGAATTTACGTTCCAGTT
GCGCAAAGAGACAAAATCTCGATTTAGCAAGTTGCAGACTAATAACGAAGACGACCTCAACGCTTCGAGATTCGTGATAG
CAACGTTGTACGCCATACTTGAAAAATAAGCCATTAATATCGAGCGAAAAAGAAAGAGAACGAAAAGGAAAAATAATTCAC
GAAACAATCGCCGAAAAAAGGCGAAACGACGAGCGGAGGTACAGCTCCAGCTCGACTGAATCAAAAACCAACAAAATCT
TCGGACATTTTTTTCGACAAGAAAAAACATCCTCCGAGGCACAAGCCGTTGATAAAAAAAATGTAGACAAAAGGCGAGTCA
TCGGTGCGACGACGATTTCACTAGATCCCAAGAATTTTGTACGAAACCACCGAAATCTAATTTTTCTAATGATGTTGCC
ACTGCGGATATGTGGAACCATTTGAGAGCCATCACCAGCGGAATTTCCGGTGCCGATGAACGAAGAGAGAGCCAAAAAGG
TCAAGTGGAACCTGATTCTGACGAGGGAGTTGACCGAAACGAAAGACGGTACCGAATCCAGATTGGTTCTGAGTCTCTCAC
GTTTGAGATGTTTCGCTTCAAATGATGCACGAGCAAGAACTTGAAGGGTCAGCTGTACATCAAGATGTCAGTTATCGAA
GACGGAATGTGACACAATTTTGGAAAAGTATCTGTTTCCGCCATCGTTTTCGTTTAAATTCGCACCTGAGGAGGCTAA
AGTTGTTGCTGACAATCCGATCGACGGCGTATTCAAGGATGCCAGTTTCTTGTAAAGTTCACTTTGAAAAACAAATGGC
AAGAAACGCCAATTGGTCAATTAATAATAGGACCAGACGTTGGTGAAGTTGCGTGACCAAGTGT

>CL443Contig1|60s ribosomal protein l22-like

CGGCCGGGGAACCGCGAGTCGGCGATACGCAACATGGCTCCTGTACCAGCGAAAAGGGCGAAAGGTACGATGGGCAAAAA
ACAGACCTTCGAGGCAAGGGCCAAAAAAGAAGTTGCCCTTAAATTTACCATCGACTGTACTCATCCAGTTGAAGACA
ACATTATGGACGTGCGCAATTTTGGAAAAATACCTCCAGGAGAGAATCAAGGTCAACGGCAAAACTGGAACTTTGGAAAC
AATGTGACCTTGGAACGCAACAAGATGAAGTTGTCTGTGAACAGTGACGTCGACTTTTCCAAGAGGTACCTCAAGTATTT
GACGAAAAAATACTTGAAGAAAAACAAGTTGCGTGACTGGCTCCGAGTCGTCTCCAAGGACAGAGATACCTACGAATCA
GATACTTCCAAATAACAAGTCAGGAAGATGATGACGAAGATGATGCAGAATAAGTGATTTTCACTTTCACTACGTTTACT
AGCTCGATGCTAACCGAAGCTATTTCTGTGGAATATGTGAATTAATAAATGACATCTCTTATACTGCAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAACATGTCGGCCGAAAAAAAAAAAAAAAAAACCTTGTGCGGCCG

>CL446Contig1|xaa-pro aminopeptidase 1-like

CACCGACAAAGAATTGTATCTTTGCGATTCTGGTGCACAATCTTGACGGGACGACCGACGTTACCAGAACTTTGCACT
TTGGCGAACCAACCGATTTTCAAAGGGAATGTTTTACCCGCATTTTCAAGGGCATGTGCTCCATGTCCACCGCTATTTTC
CGGGCTCACATCAAAGGGAATTACCTCGACACGTTGGCACGTAAAAGCTTGTGGGACGTTGGATTGGAGTATCTTCATGG
GACTGGGCATGGTGTGGCTCGTATCTCAACGTGCATGAAGGCCCGATCGGTATTTCTTGAGACCTTGTCCGGACGATC
CTGGCCTAGAACCACATGTTCTCTCAAACGAACCCGTTACTACGAAGACGGAAGCTTCGGAATGAGAATAGAGAAC
ATCGAATGCGTTGTGAAAAACGGAGACAAAGTACAATCGAAGAAACATGATTTTCTCACATTTGAGACCGTAACCTTTGT
GCCTATACAAACCAAGTTGTTTCGATCGTTCTCTGCTCACAGATTGAGAGATTGCTTATCTCAACTCTTATCACACGAAAT
GCTTGGAGGTTCTACGACCTTTGTTACAAGGCGAGGAAAACGTGCAAGCATTGCGCTGGCTCGAAAAAGAGACTCAACAT
TTGAGCGCGTAGCAGTGACCTTGCACCAAGTTGGCTCGAAGGCTCCGAATCCTAAATTTACCCGCTTCGGCTTCGAGCAAG
CTCATCTTTAAANCCGTTCTTTTTATTTTTCTGTACACGGAATCGCGGTACAATTAAC

>CL4478-bisContig1|non-specific lipid-transfer protein

AGTGTTCCGAGCTCTGTTGGCAGCTTCGCGGACAAGCGGGAAGCGACAAGTGCCGCGTGCCCGATTGGCCCTACAGCAC
AACATTGGTCTCGGCGGAGCGGTAGTCGTGCGCCTGTACAAAATGGGATTCCCAAACGCGGCGGTATCTCGTAACAACGT
CGCGGCGGCGGCGGCGGCGGTGGAGGCCAAGGACGTCAAGCCGGAATGTTTAGAGCCAACGCGCTCTTCGAGCTTTTCG
AGGCGGCGATGCAGGACGACGAGGACAATTTGATTGAGAAATCCGTGGTATTTACGGCTTTGAGATAATCAACGGGCCC
GGCGGTGCCAAAGGTTATTGGGTCTCAACGCGAAAACGGGCAAGGGAACGGTCGAATTTAACAGCAAAAACCAAACCGG
AAGTGACATTTACCATCAGCGACACCGACATACTCGACTTTATCTCGGCAAACTGAATCCGCAACAGGCATTCTTCAG
GGAAAGGTTCAAGATCAAGGGAACATGGGTCTGGCGATGAAGTTGCCCGAATTGCAAAAACGCGCTGCCCAAGATCGA
GGCTCTTCGCTCCAAGCTTTAAAAAATCATCCCTGCAATATCGCACACGCACGCATTCCACCGACAACGGGAGAACGC
CTCCGTTCCGTTTACTCTTTAATGACGACGCTCCGACAGCGATGATATCGACACGATTATTGACACGGTGCCCGTTGG
CGATCGGAGTCCCTTTTTTTTACCNCGTTGCGCACATTTA

>CL447Contig1|pentatricopeptide repeat-containing protein 2

TTTTCTGGAAGAATAACAATTCGAGTGTGTCAGTCTCCGGTTGTAAAGTCAAGTCGATAATAAAATAAGCAGCGCCAGGT
CAAAATTTTTCAGTAACGTGGCGCCATCTTCAACATCTCGAAATTTTTCTTGGCTCCGGAATCGTGAGTAGGGCGAGAGCA
CAAGACTCACGAAACCATAACCTCCGAATTGCCGATACTAGTTTCTTCGCAATTTCTCAAAGTGA AAAACCTATTGAC
AATTGTGGA AAAATGGCAGGAAGCGTGAGATGCTTTATGAAGTCAATTTAGGACTTTTGAGCAAGAATGTCACTCGTCAC
GTAGCCTTCAACCAATACGCACGTTGCTCAGCAACAGACGCTCGGGCTTCCGCGTATCTGAGCACACGCAAAACATTA
CAAGAATCAATTTTTGAATCTGGAGGATGAGTTCCGCAACAAAATGGAACGTACGTGCGCAACGAAGCGACCGGCATGA
TTTTTACAGAAGATTTGAAAAGTATGCTTCATCTGATTGAAAATACTCCGCGAGACACCGAATCATTGTCAAGATGTTG
AAGAAATTCACAGTCAGAACGGCGATCTAAGATTGCGCAGTTACATCTTCGGCCCATCGTCATGAGAGCTCTGTACACC
ATTAACGATTACCAACGCGCCTTGAACCTTTTCAATAAACAGAGTTTTCCACCTTCTTCAACCAACTCACCTCGTATCA
ACTTCTTCTCGATATGCTGTACGAGAATAAACAATACCCTGAGATGCGACAAGTTTACGACGTCATCAAAAAAGACTGA
CCGACGGTCAAGTACATCCCAGGAACGCTCTCATACTCGTGACCGCAGGCTGTTACCGCGAGAACACGCCAGAAAGTTTA
AAGTACGCTTTTGACCTTTGGTGCAATTTGAATCTGCTGATGATGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG
TCTCGCGTTGGCGCAAGGCTCATGTGCGCTCGAGATTAACAGGCGCTAGGAAACCCCGTTACATTGGGATAC
GGTGTGTTGAAAATAATGGCGTTGCGCGCAGATTGATAGACTTTACGATATCGTTCCGTTCTTCAGACACTCGCTGCAACG
GACGATCCTAGTCTCAGGAAAGAAACATACTTCAAAGACACGATCGAAACGGTCGAAGCTGCCATCAAGAAAAACAAGGT
TGCTCCTGATGCGGAAATCGTGAACCTTTGCAAAATGATAAAAAGCAGCAATTTAGTGCAAGCCGATACTTTGGACGATC
ACATAAACATAGAAATCGAAACGAAACCGGCTTTGAGATGCGCGAGCGTGGCGAGAATCGAATGTACGGACAACGTTCC
CAAGGAGCTCCACATTACGTTTCGAGACCTGGACTCCGGGATCTTGTGTTAAAGGTTACAATTGCTGTAGAACGATCGATG
CGTTCGATAAATGAAAAAGCGTGTAAAGTGTCAAGGAAGAATAATCGATCGATGCTGCGATCCGCTATAGCTACGAAA
ATGTGAATAAATCCGGTGACACAAAAATTCATAATTTGCACGAGAAATGGAAGGATTCAGTGAATTCGTAATCATTACA

mmc4.txt

GGAATCGGCCAAAAATAGAAGAAAAAAAGTGGGAAACCGTGGAAAAATTCACACTCGGTAGGAGACATGCTCCGTACAA
TAAATACCCGAGGCGAGTCTCAAATATTAATCGGACGAGCCCTTAATCAGCAGCATCGTTATAAAAAATCTTCCCGACAAA
GTTTCATTGTTTTTTTTCTAAAAACAATTTTTACACGTTTTAGCGAGGCAAAAACTCGCTCTGCAATAAACTCTTT

>CL448-bisContig1|26s proteasome non-atpase regulatory subunit 6-like

ACTTATCCCGTGAaaaaagTgTtTgTTCATCGTgTtTCCCGTgTtTtTCTTCAACCCCGAGGAAATTCGTCAACCGCATAA
CTTTGTTTTAAATTCAAAGAAAAACACGAAATGCCGCTAGAAAAATTTAGAGGACGATGGACTCGAGAAGAACCCCAATCTC
GAACTCGCTCAAACGAAATTCCTGCTCAGTCTACCCGAGCACAAGAACGACGAGAATTTAAAGACCAAGCTACTCGATGC
CATAAAAGCCGAAAAACATGACAATGTTTTACGAGGAAAGTTTTGTCGCGATCTCGACTGGCCCATAGACGAAGCATTGAGA
GACAAAAATGAGAGCTCACAATCTCAAACAAACTAAAGCGCTGGACGACGCGATCGAGGATGCGGAGAAAAATCTTGGAG
AGATGGAAGTTCGAGAAGCTAATCTCAAGAAATCTGAGCATCTTTGCCGCATCGGCGACAAGGAAGGCGCTATTTCCGCA
TTTAGAAAACTTATGAAAAGACTGTTTTCTCTCGGTACAGACTCGACATAGTTTTTACAATATTAGGATCGGCCTCTT
TTATCTCGATCACGATCACATCGTGAGAAATATCGACAAGGCTAAAAGTTTGATCGAGGAAGGAGGCGATTGGGACAGAA
GGAATCGCTTGAAAGTTTATCAGGGAACTTATTGCATCGCCGTGCGCGATTTTAAAGAAGCAGCCAATTTCTTTCTCGAT
ACGATAAGCAGATTACGAGTTTACGAACCTAGGATTACAACACTTTTGAAGATACGCAAGTTTACTTGAGTATGATCAG
CCTACCGAGGAACGAACTTCGCGACAAGATAATCAAAGGCTCTGAGATCCTCGAGGTTTTGCACAACAACAGGACTGCA
AGGACTATCTTTTCTCCTTATACAATTGCCACTATGCCGATTTCTTCAAAAATCTTTCACACGTGGAAGGTTTGTTCGCG
ACCGATTACCTCATTTTCCCTCACTATCGTTACTACGTGAGAGAAATGCGTATTCTCGCGTATACCCAGCTTCTGGAGTC
TTATCGATCTCTGACCCCTGCAATATATGGCCGATGCGTTTGGCGTCACTGTGGAATACATCGACCAGGAAGTGTGCGGCT
TCATCGCAGCCGCGAGACTACACTGTAAGTCGATCGCGTGGGTGGTGTGTGGAGACAAACCGTCCGACAGCAAGAAT
TGCAATACCAAGCAGTGGTCAAGCAGGAGATCTTCTTCTCAACAGAGTCCAAAAAGTTGTCGGAGTTATTAATATTTA
AGTGTACGAAAAAAAATAATAATTCAAGTGAACAAAAACAAACAAATAGGCTGACCCAACTAAAAAATACAATTAA
AATTAG

>CL4544Contig1|vacuolar atp synthase subunit h

ATCGCAGGAAGATTATCTTTTCATCGTGGCTTCGATACCAACGATTCTGCAGCCAAAGATGCCAAGTTGAAGGAAAAATC
CTGGTCAGGCTGCAAAACGTTTCTCAATCTTTTAGGCCATGTCTCCAAGGATCAAACCAAGTCCAATATATTCTCGTCATG
ATCGACGATATGCTCCAGGAAGACCGAAGCCGCTCGAGATATTCCGCGAACATTCAACTCGAAGCGCGAATCGGTTTG
GGGCCATTCTCAATTTGCTGAACAGACAGGACGGCTTCATCATGAACATGACTTCACGTATAATCGCCAAGCTCGCGT
GCTGGAGTCACGAACCTCATGGAGAAAAGTATTTGCACTTTTATCTCACGTGGCTCAAGGATCAATTGAAGCTGAGCAAC
AACGAGTACATTCAATCCGTAGCTCGATGCCTGCAAAATGATGTTGCGTGTGGACGAGTATCGATTGCGATTCTGCTCGGT
CGACGGTATCTCGACTCTTCTCAGCGTTCTCTCAGGACGTGTGAACCTTCAAGTTCAAGTATCAGCTCATCTTCTGCCTCT
GGGTACTCACGTTTAATCCTTTGCTCGCTGAGAAAATGAACAAATTCACGCTGATTCCGATTCTCGCTGACATACTCAGC
GACTCTGCTAAGGAGAAGGTCACTCGCATCTTCTGCGGTCTTCAGAAATCTGATTGAGAAGGTGGAGA

>CL4548Contig1|riboflavin kinase

ATGTTTCGTGTCACCAGCATTTCTTTTTATTGTTTTACGAGATTACATTTAACGAAATAATGAAATATTCATCGGACTCT
ATTTTTTTCTTTCTGTTCCCTCAATGCAATGCATTTTTGAAACGTTGTTTTGACTTGCGCAGTTGTCAAGTTGTCAAGTGT
GTCTCAACAGGTCGGCCTCCCGATCGTAGCGCATTTTTAATCTCCTCGTAAACTTTTATTTCTTTATCTCATCTCCACA
AGATAAATCTTGAAATCATCAGTTTCAAGTATTTCTCGGTGGCGCAGAGTGTCTCAGCAATTTATCGACCTTTAGTGTGCG
GATCCTTGATAACGCTTAATTGTCATTTTATGACGAAAAACGATACGCGAAACCTGCTGCTGATTTTTCTGTTTCTG
GACTCGCAGCGCATGCGCACTATGGCCTGCGACGCGTTTTGCCACATTTTTGCAGCTGGGCCAATCGTTAAAGGTTTTG
GCAGGGGATCCCAAGCCCTCGGGATACCAACAGCCAATTTTTCGGACGATGTCTGCGACAAACTGCCGAAAAATTTTTCC
CCCGGTATTTACTACGGCTGGGCGTCGATCGATGGCAATATTTACAAAGGAGTATTGAGCGTAGGGTGAATCCTTTCTA
CAAGAACGAGAAAAAATCGATGGAAACTCACATTTCTTCATCGGTTCCCGGACCGCTGCACGGCAAGGAACCTCGAGTCA
TCGTACGCGGGTTTCAAGCCGGAAAAAGGATTTTTCTGTCGATCAGGATTTAATAAACGAAATAACGAACGACATTG
ACATACCGGAAAAATCGGTGGAAAGAGCAGAAATGTTAAAAATACAAGGATCACGAATATCTCAAGGAAAAAGGAGAACA
AGTTGATCCCGAAATTACACTCAACGAGCTGAAATGGACAAAAAATCCAAAAATTTGGATTGCGCGAAGCGAAGATATTT
ATGATTAAGGAACGTT

>CL4549-bisContig1|26s proteasome non-atpase regulatory subunit 10-like

GGTGGTATATTCGCTCTCAAGAGAGGGCGCTTGCGCAGAAAAAGGATTAAGGAGATAGTGAAGA
AAAAGGATTAGCTGAGAGGCGCACAGCGTTGCTCTCTGATCGAAAGCGTTTTAGTGTGCGCGCGGGTTTTGTCAA
TTGTACTAAATCATCGCTGAAACAAGTACAACAACCTCGAGTACAATGGCACCGAGAGGTGAACCGACCGTGTACGATCT
TGCATATCGTGGCCAAACCGCCGCGATTGCAATTTCTATAACGAGAATGAGAAGCTCAAGACTCAGACTGATCCTAATG
GACGTATGCTGTGCGATTGGGCGCTCTCGGAGGACACGACGATCTTATTCGTTATCTGCTCTCTCTTGGCGTCCCGGCT
GATCCACCAGACGATACGAACATGACTCCCCTGATCTTGGCTTCGTCCGCCGGCCATGAGAAGGTCTGAAATTGCTGTT
GAACGAGGGCGCAACCCGAACGAGAAAAACCGACGATGGCCACTCCGCTTTGCAATACGCAGCGAGCAAAAAATGGGCTA
CCGTGCGCCTATTTGATGGAAAAAGATGCCGACATCAACATCACTGACAAGCGAGGTGCTACTCCTCTCCATCGAGCT
GCATCCAAGGGAAACTTGACCATCGTTAAGATGTTACTCGAGCATGGAAAACGACTTAACATTGATCAAACCGACATGTA
CGGAAATTCGGCACTGCATTTGGCATGCGAGGAAGATCGTTGCGAGGTGGCAAAGCTGCTTGTTTTCAACGGAGCGAACA
TCGAGATGTTGAACAAAGAGCGCAAGTCGCCGCTGGAGTTGGCGAACCCGACACTGGCTCGTCAAATCTGGGAGATCAAA
GCCAAGATGGGGGTAAAAAAGCGAAGGCTGTAAAGAAGAAAGCAAAATAAAAAAAGGAGAATAAATAAGAAAAGGAAAAA
GAAATAAATAAGTAGACAACCTACTTAACACAACAATTACAATT

>CL4559Contig1|probable methylmalonate-semialdehyde dehydrogenase

TCGAATCGAAGGCTACAGAATTTACGGATGTTACGACCCAGCGACGAATCAGCTTCTGTGTCGAACGCCAAAATCTACG
AAAGCAGAGATGGAAAGTGGGTGAGAGCGCAAAAAATGCTTATGAGAAATGGCGAAACACGAGCGTTTTAACGAGGCA
GGGACTTATGTTGAAATACCAAGCGCTCATCCGCGAACACTCGAAAGAAATTCAGAAAAATCTTGTTCTGTAAGATGGCA
AGACCATGGCAGACGCTGAAGGAGACGTGCTTCGAGGATTACAGGTTGTGCGATGCCTGCACCGCAATTCACCCCTCCAG
ATGGGCGAATCGTCCGCTAACGTAGCAACAGACATGGACATCGTCTTTACAAGTTCTCTTGGCGTGACCGCTCCAT
ATGTCCTTTTAACTTTCCGGCAATGATACCACCTTTGGTCATTTCCGGTTTCGTTGCGTGGCGCAACACCAACCTTTAA
AACCTTCCGAAAGGGTTCCCGGTGCTTCGATGATTCTTGAGATTTATTTACCAAGCTGGAGCTCCTCCCGGTCTCCTT

mmc4.txt

AACATCATTTCATGGCCAACACGATGCCGTTGACTTCATTTGCGAACATCCGGACATTAAGCCGTCCTCGTTTGTTGGCTC
GGATCAGGCTGGCACATACATCTACAAACAGAGCAGTGTACATGGGAAACGGGTCCAATGTAACATGGGAGACGAAAAA
AATCAATTGTCATCGTCATGCCCGATGCGAATAAAAAACAATATCGCAAATCAGTGGTGCGGCATTCCGGTGACGCTG
GACAACGTTGATGGCAATTATCGGTTGCGATATTTGTC

>CL4578Contig1|inositol monophosphatase 3-like

GCTCGGACTCATTTCACAACCCATCCACCGACCAAATGTTACGGCGGATTAGGGGCGAAGGTGCATTTCTCAACGGAAACC
GTTTGATGAAAGCCTCCAATGTTACCGAATTGAAAAATCGCTGGTTTACCTCGAGCCGGCAGAGATTGAGGGTCCGGA
AAGAATCGTGACATTATGTCCGCGAGATTGCAAGCTTTTGTCAACGCTGCTCAAGGGGTGAGGAGTATCGGTTGAGCGGC
ATTGGGATTAGCTTACATAGCTCTGGGCACTCTCGATGCCTTGTTCATCGACCGTTTAGGGCCCTGGGATGTCGACGAG
GAAGTTTGATCGTGGAAGAAGCTGGTGGTGAGTTATTGACACGAAAGGAGGTCCCCTCGATCTAATGAAACCGAAACG
ATCGCAGCCTCTACCAGAACTCTCGCTAACGAGATTTGCAAGCTACTCATAGACACGGATCTTCAAACCTCAACGTAAACG
TTTGAAGAGGATTCCGAGCTCGTCGAAACTTCTCTAAAAACTCGTTTCAATAAATGCCACTCGGATTTTAATTAGAGACT
TTCCAACCTCTATTAATGAGGCGCGATTTGACTTTTGTAAATGATTGTAGGTAAACAAAAATTATTTACGTACACTGGAAA
TTAAATTTTGTAAAAATTGTGATATTTTGTGAACACGGTGAACATAATTTCAAAAAACTTAAAAAGATAATTAG
CTCGAATCGTTA

>CL457Contig1|plasma alpha-1-fucosidase

GCTTGTTTCGAGTGGTACAATCCTCTGTGGCTAGCGGATTTTCGCGAACAATTTTACAACCAATGATTTTGTCTGTGACGAAA
ACATTGCCGGAATTGATGGAATTGGTGAATATTTACAAGCCGGAAGTTATTTGGTCCGATGGGGAATGGGATGCCCCGGA
TACTTATTGGAATCGAAAGAATTCTTAGCTTGGCTTTANAACCAAAGCCAGTGAAAGAACGGTCGTCGTTAATGATCG
ATGGGGCCATTGAAACGGGTTGTCTACACGGTGATTTCTATAACTGCGCCGATCGTTACAACCCGGGAACGCTACAGCCTC
ACAAATGGGAAAAATGCTTTGACAATCGATAAAGAATCCTGGGGCTATCGACGCAACGCAGATCTCTCTGATTATCTTAGC
CTCAATGAATTGATCAAAGAATCGTCGTAACGTGTCAGCTGCGGAGGTAATATGTTACTTAACGTTGGACCAACGAAAGA
TGGAATCATCGCGCCCATTTTCGAGGAACGTTTACGTCAAATCGGTGATTGGCTATCGGAGAATGGTGAAGCGATTTACG
ATACAAGACCATACTCCATGCAAAACGATACGGTCGACGGAATGTTTGGTGGACTCAGAACAGAGAAAAAAGACTCTC
TACGGCTCGATTCTTCAATGGCCAGAGGACAATATTTCTCGCGTCACTCCAATCAAATTATCCGAAGAATATCGAGTTTG
CCTCCTCGGGCCGGGATGCAAGACAGAATCAAATGGGCCAACACTAAAAACAGCTCTCGAAATAAAATTGCCGTTGAGG
CACACAGAGGAAAGCCTGCGTGGGTATTTGGGTTGAACTACGTTCTAAATAATCCAGCCAAGTTTTTCCCTCCATCTTT
GCCGTAATAATTCACGGTATTTTTTATCTTTTACGTATTAATTTTTATATTTGCG

>CL458Contig1|serine protease -like

GTGTTTCTCATAGATCGGGGGGAGAAGGGAGAGGCTAGTCCCAAATGGATGTCCAATGGTCAATGGCTCGAATCTGCCCG
GCAATACGGGGCCCTCTGCTTCCAAGTGGAACATCGCTTTTATGGAAAAAGTCATCTACACAGGACTTGAGTGTGAAAA
ATCTCGTGATCTTTCTCGTCCGAACAAGCACTTGGCGATTAGCTCATTTTCATCGAAATGGCGAGAGTGAAATATCAAATC
CCAGCTTCTGCAAAGTGGATCGCGTTCGGAGGTTCATATCCCGGATCCTTGGCAGCTTGGGCCCGATTGAAATATCCTCA
TCTCATTTCATGGTGCCATGTCCGCCAGTGGACCACTTCTTGCTCAAATCGATTTCCAACAATATTACGTTGTCTGTGAGA
ACGCTTTGCGAGGGCATTCCCAAGCTTGCCTGGATGCTGTAGCAGCTGCGAATCATCAGATTTTCATAATGTTGCGTCAC
CGCATAGGTCAGCAGGGGCTGACGAAGAAATTCACCTCTGCGATCCAATCGACTCGTCGCACTCGAAGCCCAACGACAT
AGCAAAATTTCTACGAGACTCTGGCCAGCGAATTTGCGGAAATAGTGAATACAACAAAGACAATCGAATCGGTGCGACAA
AAAAAGACTTACACGATCGACGAGTGTGCGATATTTCTCGTGGATGAGAAACGCGCGCTGCTGCGACCGATTGGCCGA
AATTAGCAATTTGCTGCTCGCAGCCAGTAACGAAAAGTGTCTCGACTACAAATACAGTAAATGGTTGATGACCTGAGGA
ACGTAACGTGGGCGAGCGAAATGGCAGAAGGAGGTGCGCAATGGATGTACCAGACGTGCACGGAGTTGCGATTCTTCCA
ACGTCACCGGCTCGGCCAAATTTGTTACGCGAGACTTTTCCCGTCTGATTTCTTCTGTCAGCAGTGCACAGACGTCTTTGG
TCCACGATACAATCTCCACCTGCTCGAGAATCTGTGCAACGTACAAATATATTCTACGGTGCGAAGGATATCGAAGTAA
CGAACGTGGTTTACGTCCACGGTCTGATCGACCCGTGGCAGCCCTGGGAATCACCAGTCGACGAATCCCAAAGCACCA
CGGATCTTTCATCAATGGCAGTGTCTACTGCGCAATATGTATCCAGCGTCGCCCAACGATTGGCCAGCTTGGCCAGGC
TCGTAAAAAAGTAAACGAGCTCATAGGAAAAATGGCTGATGGAGTAAAAAATTTCTCAAGGTCAATTGATTCAAAGTTTACA
CCGAGATTCATCAAATAATGTGATAACTTTATTAGCTCTCTCTCAGATTCATTCTGTACAAGTGTAAAAATCGCTTT
TGATTCGCGTCGAAATAGATTCGTTTTTACAAAATCAATTTGGCAACGCAATACATTTTTTTTCGAAAGACTGAACCAGCG
AGTTTTCAAATCACTCCCAACAACGGTCTGACGCGCTGGGAAGTGCGAAAAGCGAAAAGAAAACGTAAACGAGGGAGC
CGTAGAAATACGAGGTTGACCAAAATGGCAATGAGCCCCCAAAACGATTACAGCCGTGAGCGGAGAAACGAAAACA
TGAAACATTTTCCATCAACATTTGCTCTCTGTTAATTAATTAATTAATTTTATAATATTTTCGAGGTTTTTGTGAAAAACGA
AATGAGCTGCGTCGGCCTGCCCTTGAGTCGATGCACCGGCCGATTCTTCTCGGTCCGCACAATCCAACGAATATAAGAAA
ATTAGAAACAACACTTTGCAACTCTTTTTCAAGGTGAGGCCAAAGAGCTCATAAAAATTGAAATTTCACTGCGATTAGA
TCGTCTGTGAATTCCAAACGTTCTCGATACAAGTTTCAATATTTATATATGTATTAATAAATTTGCTAAGATATT
TCCCTTCGACGCGGAAACGAGCAATTTTCGTTAATTAGAAATTTTAAATTTCTCGCGAAATAAATCGTACGGAATTTT
CAATTTTTTTTACGTCAATTTATCGATCAGGATCGAAAATCTTTTTATTATATTTTTTAAACATCAAGCCTCGCCAAAATA
AAATGATGGAAACGATAGAATTTCTTTTCTATTGATGAGAAAAAAACNGGAAAAAAACGTTTTTGGTGAACGAAAT
AACGAAAAATTTCTATTTCTGCTTAGGAGGATAAATAATTTGCAAAATTTGAAATGACACTTTCATACTGGTTGTGCG
ACGTATAC

>CL4602Contig1

GGAGCAAAAAAGTGCGTTCAAGCGGCCGAGACAATGACACTTCTGGACAACAAATTCGCGGCCGAGGTTGTGCCGGGTG
AATCTACAAATTTCCGAAGTCAGACAGTTACGTGCGTTATTCAAGCCACATGCTCTGGTTTCAATTCACGATATCATCCAG
TACAAGAAAAGTATAAATCTTCCATCGGATATGTCAAGTCCCACCGATTTGACAGATGAGCAGTTGACATCTTATATGCG
CGACTTGAAACAAAAAATGCTACACTTTGCTAAATATACCGATCTTCGGACACAATTGGAGGATCGCCTTTCCCTACCG
CGGTGGAGATAAATCTTCTACGAGAAATGGTGGATTATTACTCATATGGATGAAAGTTGCACCGCGGCACATCTTGTG
GTGGCTTTAAATACGCGAAAAACAGAGCAGTCTTCATGGACCCACCTATTGTCTTCGTATGCATTTAAACGATGATGA
TGTACAAATTTATGCAAGAGCGAAGAGAACGATGGGATCGTTATGACCAGTCCATAATTGCCGACATTGGCACTGTGCGAA
TTCGTCCTTTCTGGACGCAATTGAAAAAGAGATTGAACAGCACTACGCCACCGAAAAATTCGACAGAGATATGGAGCC
TACCTATATGTCATACATAAGGGCTCTTAAGGTTTTTATGGGCAACGCCCAACAGAATTGAAAAATGAAGGCTTCAG

mmc4.txt

GCTTTTGCGGGATATCGTCTTGAATCGAAATTGTTGGAAAGATAAACGAAACAGCGGCTGAAGGTTACGATTTACATGA
GATGATGCGAAAACTGGACGAGCAGTTGCTTGTATCCATATTACCGTAGCTACACGGCTGAGACCATTTTAAATGGCTGTC
ATAAAAACTCAGTGAACCTTTGAACCTCCACTACACGGGANCAGAGGATAACAAAACTTGTGGAGATGAATCAACACC
AGTTTATGGAAACGTTCACTTACGTTGGTGAGGAACCTGAGAAATC

>CL4622Contig1|dihydrolipoyl mitochondrial

ATTATGAAAACGATATCAGGCACCAGCAGCAACTAGGGCCTGTCGTGTGTGCTGGGTTAACTTTTCAACATTTTCATCGC
AGCGAATAACCCCGAAATTTTCGTAATCATCAGCAAAGAGGGATAGAGGCACAAGATGCAGGCGAATTTATTGAATCTCGT
GACGAGCAGTGTCTTAGGTGCGGTGGCGTAAAAAATNTAGTAAGGCCACGACTGCCGGATCTCGATACCCAGCGAA
GATACGCGAGTAGCATAGATGCGGATGTCTGGTTCATAGGCGCCGGTCTGTTGGATACGTAGCTGCCATAAAAGCTGCT
CAGCTCGGCATGAAAACAGTATGCGTAGAGAAGAATCCTACGCTGGGTGGAACATGCCTGAACGTTGGCTGCATTCCGTC
CAAATCGTTGTTGAACAATTCGCACTACTATCACATGGCTCACAGCGGTGATCTGAAGAATCGAGGCATTCTGGTGGATA
ATGTGAAACTCGATCTGGAGAACTGCTGGAGCAAGAAAGATAACGTGGTGAAGGCTCTCACGGGCGGAATAGCCGGACT
TTTCAAGAAGAACAAAGTTGAATGGGTGAAAGTTCATGGGAAAATCACTGGGAAGAATCAGGTGAGCGCTTAGGGCCGA
GCGGCAACGTCGAAACGACCATTAAATGCGAAAAACAATAAT

>CL4626Contig1|atp-citrate synthase

AGATCTGTACTTCACGTACCTTGAAATAAATCCCTTGGTCTGTTACTGACGAGGCTGTTTATGTTTTGGATCTCGCTGCAA
AGCTCGACACCGCAGCCGATTTCTGTTTGTCTCCGGATTGGGGAGAAATCGATTATCCACCTCCGTTCCGACGTGACGCT
TATCCGGAAGAGGCTTACATCGCTGATCTCGATGCTAAATCTGGGGCTAGCTTGAATTTGACACTTTTGAATCCAGTGG
AAGGATTTGGACGATGGTTCGGGTGGAGGTGCATCCGTTATTTATCCGACACGATATGCGACCTCGGAGGTGCCAACG
AATTAGCAAATTTATGGTGAATATTCCGGGCGCCCGAGCGAGCAACAACTGACGATACGCGAAGACGATCCTGAGCCTG
ATGACCAAGGAGAAACATGCAGATGGCAAAGTTCTCATAATCGGTGGAGGTATCGCTAATTTACAAACGTCGACGCGAC
CTTCAAAGGAATAGTGAAGGCTCTGCAGGAATCCAGCCAAACTCGTGGAAACATAATATTTAAATATTCTGACAGCGC
CCGGGCCAAATTTATCAAGAAGGCTTGAGAATAATCCGAGAGGTTGGGAGAAGACTCGGTATACCGGTTACGTTTTTGGC
CCGAAACTCACATGACTGCTATTTGTGGCATGGCGTTGGGAAAAAAGCCAATACCTGATCCGGAAGCACAAGAATTTTC
GACCGCAAATTTTCTTCCCTCGGGACAAGACGTCGGACCAACTTCACCTTCTTCTTCCGGACAAGGCTCTTCTGTCG
AAGAACCAAAATCTCCCATCAAGACACAGGATTCCACCGATTCCACCGGCGCCCGACAATTATTTACCAAAACAACT
CGAGCGATTATTTGGGGAATGCAAACCTCGTGCCGTTCAAGGAATGCTGGATTTTGACTTTGTCTGTGCGCGCTTCGCA

>CL464Contig1|nadh-ubiquinone oxidoreductase 42 kda subunit

TCTTTGCAACTCGGCATGCTTTTCATGCGATGCAGCCAGTACATTGATGCTCTGGCGCATGTTTTATCTACCGGGGAAGG
AGTTGTTTTGCAAAGATCGCCTTGGACCGATCATGTTTTCATGGAAGCCATGGCTGCTCAAGGCTGGGTATCTAACTGG
CTCTCGATTACCATCGAGACGCTTGCAAAGGCACACTCACGAATTCCTGAGACCGCATCTCACTATTTACTTGGATGCT
CCTGTTTTCTGTATCAAGCAAAACATAAAGAAGCGAAATCGTCCCCACGAGGCAAAATCACCAGCTCTAACGGACGCGTA
CTTGACCGAGTTGGAATACTGTTACAAGACTCATCTTAGAAAAGTGACAGAATCCGGGAATTTGTTGATTTATGATTGGA
GCACGGAAGGTGATGTCGGTGTGGTGTGCGAGGATATCGAGCGTTTGGAGTTCGAATCTACCGGAAGAAACGACACGAGA
TTTTCGGATTGGCATTTCGATCCAGAATGGGATATTCAACAAAAAAGATACGATTATACGATGGAAAAATTCGGGCTTT
TGAGTACACTCCAGATCGCTCGTTTCGATATTCGGGAAATTTACGTCAGTGGACAAGATGACGAAGTTTTTGAGGAAGTT
ATGCTGGAAGTCCAGACGGAACAATACGCACCTGGTTATAATCCGGCATTCGACAAAGGAATCTTGTTCAAAACATAAGAT
CTCTGGGAAGATTGGCAGCCGAAGAGTAAAGTTCGTCAGAAAAGTAAATCCCTTAAGCTCACATTTATATATACAT
AGAGGAACAGAGAGAGTGAGAGAGAAGAAAAAATCCAAACGACAAAATTACCAATCGTCGGAGAGCAGATCGTTGGGT
AGCTCTGGAATACTGATGTTGAACTTTGCGGAAAATAAAACGTATCAGAAAGTCACCAGTACATTTACGATGTGAATTA
CTCATCGATGTATATGAAAAAGATAAACTTGTAAAGTTAATTTTTTT

>CL465Contig1|serine threonine-protein phosphatase 2a 65 kda regulatory subunit
a alpha isoform

TCTCGGTATCTCGAAGATCATTTTTGTGCCGCTGGTGCAACGTTTGGCCACCGGAGATTGGTTACGAGCAGAACTTCG
GATGCGGATTGATGAGCGCTTGTATCCACGAGTTGGTCTGCTTTCAAGCTGAATTGAGAAAGAACTTCGTTGGCCTAT
GTCAGGATGATACACCTATGGTGAGACGAGCCGCCGCTGCAAACTTGGGGAATTTGCGACTGTCTGTTGAAATCGAGTAT
TTGAAGTCTGATCTCATACCGATGTTCTGTAATTCGCTCAGGACGAGCAGGATTCGGTGCGACTTTTGGCAGTCGACGC
TTGCGTCAGTATCGTCTCTTTTGAACAGGAAGACGTTGAACAGTTGGTTCATGCCGACTCTTCGTCATGCGCATGCG
ATCAATCTTGGCGAGTCCGCTACATGGTCGCCGCAAAATTTACGAGCTTCAAAAAGCTGCGGACCGGAAATCACAAA
GCCGATTTGGTGCCAGCCTTCCAAGCCTTGTCAAGGACACCGAGGCCGAAGTTCCGGGACGACCGCCGACAAAGTTTCG
CGATTTTTGTCAAATCTGGACCCTTTCAATCAGGAAACCATAATCATGACCAACGTTTTGCCATATGTAAAAGATCTCG
TGGCTGATCCTAATCAGCACGTTAAATCTGCCCTCGCGAGCGTCATCATGGGCCTCAGTCCCATTCTTGAAAAACACAAC
ACCATCGAACATTTGTTGCCTCTGTTCTGTCAAACTCAAAGACGAATGTCCGGAAGTTGCGCTCAACATCATAAGCAA
CCTGGACTGCGTGAACGAAGTGATTGGGATCCAGCAACTCTCAATCTCTTTTACCGGCTATCGTTGAATTGGCCGAGG
ATTCTAAATGGCGCTTAGATTGGCCATTATCGAGTACATGCCCTGTGGCCGGTCAATTGGGAGTCGAATTTCTCGAC
GAACAATTGAATTTTCTCTCGATGAACTGGCTGGCCGATCACGTCTATGCGATACGAGAAGCTGCGACCTTGAATCTTAA
AAAATTGGTCGAAAAATTCGACCTGAATGGGCACAAACAACCATCGTTCCACGTGTTCTCGCAATGGCCAGAGACTCGA
ATTATCTTCACAGGATGACGTGTCTTTTCTGCATCAACGTTTTGGCTGAAGTTTGGCGACCAGAAATAACAACGAAAGTA
ATGCTTCCAACGGTGCTCGCGATGGCCAACGACACGTCGCGAACGTGAGATTCAACGTTGCCAAAACGCTACAACGCAT
CGGACCTTATCTCGAGCCTAGTGCGGTACAAACCCAGGTCAAGCCAGTCTTGAAAACTCAATACGGACCCGGACGTG
ATGTTAAATTTTCTGTTCCGAGGCAATCGCCGGAATCGCAGCGTAGGCTGAGCGAAATTTGAGCTGGAGTGCATTTATCA
AAGAGCCGAAATTTGCGCGAGATCGTAAACACACGTATTGTGCTGAGCCACAATTTGAAAGCCTCACAGAAAGCCCAATT
TTCAAGAAAAAACAAGAAAAAATAGCACACACGCAGAACGATTTAACCAAAAAGGAGACGATTTTTTTTATTATTAG
ATCTTTCGTAATC

>CL4678Contig1|eukaryotic translation initiation factor 6-like

TTATCCAATCAGGGCGTCTGGTGCATCCCAAACTTCTATACAGGATCAGGATGAATTTCTCTTATTACAAGTCCC
ATTGGCGGCTGGAAACAGTAAATCGAGGTAGCGACGTAATAGCAGCCGGTATGGTTGTAACGATTGGGCGTGTGTTTGTG
GTATGGATACGACGGGTACCGAGATTTCCGGTATCGAGAGTGTGTTCAAGTTAAACGAAGCGACACCAGCAGCGATAACG

mmc4.txt

TCGTCTATGCGGGCGTCCCTCATCGAAAGCATGTCTAGAACGAGCTCGCGACAACTTGTGTACGAAACAAGTAGACTCA
TCGTTACCTGTGTACGCCTACATAAAAAACCAACTTACTGAATTCATAATTGAAAATTTTATGGAAGCGATTCCAGGA
GACGATTTTGTACAGAGCCTTAAAAATTTCTTCTGTTTATACCCAACAGAAAAAGAATGAACGAGTTTGAAGAAAGATA
GAAAAAGCGAAGCTTTCTGCGAGGATAAAATCATGAATTCATAAAGATAAAAAATGAGCGGAAAGTGAATGAAAAGTCA
TAATAAATGTTAAGAGGTATAACAGTACATTTTATTGGAATCCAATGTTTGAGTTTCTGTTTGATGGTGAAACTGAAGAT
TCGCCGAGTTGTGCGACTCGTTATTTCTTGCGATCGTTAGAAAATCGGATCTTGTCGGTGTCTATCGCGTGTGTTGTTAT
TTTCGAGGATATTCATGAATTTGCAACTGAAATCGAACTTTCTGTCGGCTTCTGTTGATACGAAGACTTACAAACGCGTGT
TTGTATTTGTATCTCGAATATACTGCACGGTCAATAAATCATGCTGCCCGGTAAT

>CL468Contig1|plasminogen activator inhibitor 1

GGTGTGATGTGTAAACCGAGAGGGCCGGTTTAGAGATTCCACATTGTGTCCCGTATTAGCGAGCACGACGCCACACATC
GAGCATCTCGTAATTCCTCAGTGATTTTTTCAACGCGTTTCAAACGATCGAATATTCAGATCGTATTTTTTATTTACGTG
CAATTTGTTTTTCGCGTAAATTTATTTCTGTTTTTTTTCACGTTTGTCCGGTTTTCGCACATCGACTAGTGTCTTCTGGAGTC
ATGAAGAAAACACGTTTATTCGGGGAAATTTGGGATTTTGGCGTTTGGTGTCTGGCCGTGGTGTGCGAAGCAACACCTGT
ACCAGGGACAAGGAAGAAATGCCACACCTCCGACGCCCGGAGCTCGAGTTAACGGAGGAAGCTCAAAATATGTTCTGTCG
CGATTGAGAGGGAAAAATTCAGCGTTTTCTGATTGGAATTTATACAACTAATGGCCAATAAATACGACGGCAATCTTTTG
ATCTCACCGCTCTCCGCTAAATGCGCACTCGTTTTACTTTACGAAGGAGCTCAGGACGAAACAGCTAACAGCTCGCCAG
TGTCATGAATCTGCCTGATGGACGATGGGGCACTCGCGAAAAGTTTTCGCGTTATTTTACGATCTCTCAAGCCCGCAGTCA
ACGAGTACCGACTGGACGTCGGAACGCGAATGTTCTTGAATCTGGAGTAGAATTGGCGCAAAGTTATGCCGCAACCGTG
AAACAGTTTTACGGCGTGAAGTCGTAATGACGAATTTACAGACCTTGACGAAGCCGCTATGAAAATAAATCGTTGGGT
TCGTAACTGACGAACAAGGGTATAAAAAATATGATCACACAAGCGAGACTATCAGGGATTCCGTGATGCTGATACTGA
ACGCCCTTTACTTTCAGAGGTTCTGGCACAACAGTCCATTTTCAAAGAGCAACACAGCAGAGGGAGACTTTTAAATGTAGA
GCCAGACGTGACGAAAAAGTTTTGTTTCATGAATACCGAAGGGAGTTTTCGATTACGCTGAGTCGGTCGAGCTAGATGCCA
AGATTCTTCGTATCCCTTACGTCGGCCACAAATTTGTACATGTACTTCGTTTTGCCAAGGAATGCAACGGGATTGGACAAA
CTCGTGAGAAACATCGATCCCTACGTTCTGACTCGCCACGCTCGACTCATGCAGGAAGTGTGTTAAAGTTAAATCCC
CAAATTCAAATTCGAATACACCAGCCATTTGGTAGAGACGCTACAGGAAATGGGACTTAAAGATATATTCGAAAACTCTG
CGAATCTGAATTTGATTGCTCGTGCAAGAAAGATTACCCGAGCTCTCGGTGAGCGATGCTGCGCAAAAAGCTGCGATC
GAAGTGAACGAAAGAGGAACACAGCTTCTGGAATACCGAGGTCCAGATCGGCAACAAATTTGGGANAACAAACATTTCAT
CGCTGACCATCCATTCCTTTTACATCGAGGT

>CL46Contig1|glycogen phosphorylase

AGCTCTGAAAAATGGGCTAAAGATCCAACCTTCCAAGGAGCGTCGTCAAGGTCAAGCAGGAGAACAAATTCGCGCTTGC
CGAACTGCTCGAAAGCGAATACGGTGTAAAGTCAATCCAGCTTCGATCTTTGACATTCAAGTCAACAGTATTACGAGT
ACAAACGTCGAATTTGCTTAATTTGCTGACATCATACGCTGTACAATCGAATCAAGAAAAACCTTCGGCACCTTTTGTA
CCGAGGACCGTGATGATCGGTGGAAAAGCTGCTCTGGCTACTTGCTCGCCAAAAAAATTATAAACTCATCTGCAGCGT
TGCCAACGTCGTCAACAACGATCCCATCGTCGGAGACAACTCAAAGTCATTTTCTTGAAAATTACAGAGTCACCTCTG
CTGAAAAAATTTATCCCTGCTGCCGATCTCAGTGAACAAATCTCGACAGCCGGTACGGAAGCTTCCGGCACTGGCAACATG
AAATTTATGTTGAACGGCGCACTAACTATCGGCACTCTCGACGGAGCCAACGTCGAAATGGCTGAGGAAATGGGCAACGA
GAATATCTTCATTTTTTGAATGACCGTCGACGAGGTGAGGCTCTGAAAAAGAGAGGATACAACGCTTGGGACTATTACA
ACAAATTTGCCGGAAGCGAAACAGTGCATCGACCAATTCAGGAGGATTCTTCAGCCCCAATAATCGCGACGAGTTCAAA
GACGTTGCTGACGTTCTCATGAAGTGGGACAGATTTTTCTTCTCGCTGATTACGAGAGTTATATCAAGACTCAAGATCG
TGTCAGTGAAGTTACCAAGATGAAACCAAGTGGGTGGAGATGGCGATTACAAATATCGCATCGTCCGGAATTTCTCT
CAGACCGAACGATCGAAGAATATGCCCGAGAGATTTGGGGCGCGGAGCCGAAGTGGCAGGCACTTCCGGACCCGCATGAA
CCTCGTGATATTTAAACAAAGAAATTCAGCTTTAAAAAATGAAATACTCTTTCAGTATCGGCTATTTATTTGTTGAAT
ACGCTTTCATTTGTTTTCTGTCGAAGCCGCTGTCAAGGCGACCAATTATTCGTTTTGAAATTTATTTGTTGATTTTCATT
AATTTCATAAAAACTCGCACAGTGCAGAAAGCAATACGAGAGGCTGTAAACGAATTTTCTCGAATTACGTTGTGAAAAAA
TGATGGACGAGCGCAGAATTCAGTCACTAAATCCGTGACCCTCGAACGCTCATCTTGCAATGTTGTTTCAAGATGTTTGA
CGTTTGATTGAAATTTCTACGAATTATACGATATTATATCAAGACCAACGGTCCATAAATTTGATTGCGATGGATTTGTT
GATCAATCGTGTGTTTTTTTCTCAACAAAACGCAACTTGACCAAAAAAATAAGAAATAACAAGATAATCGTCCATAG
TCCTCAACGATGAGTGAGGACGCTCAGTGAAGAAATCTCAAACTTGAAAACGATGAAATATCGAGATGTATTTTTT
TAACGATCGCATTTACAAGCAAAAAGACAATGAAAAGGAACGAGGACTACGTGAGCCTCTGTACAATGCTCAAACCTC
AATCTCCCT

>CL4700Contig1|eukaryotic translation initiation factor 3 subunit a

TGGCGGAGGAGAAAAACGACGACGCTCGAAAGCAGAGTCAACAGGCGGTGATAGACATCGACGACCTTGATAATTTGGCA
ACGCCGGAGAGTATTTTGTGACGGCGGTGAGCGGCGAAGACGCTCAGGATCGCAGCGATCGTACGATTCTGACGCCGTG
GGTAAATTCCTCTGGGAATCTTATTGCCAAATGTCTCGAGCTGTTGCGTACAAACGCCCACGTCGAGACGCTTTATCACG
ACATAGCCCGCATGGCGTTCCAATTTTGTCTGGAGTACAATCGCAAGACAGAATTCGCAAGTTGTGCGAAAAGTTGCGG
AAGCATCTGGAGGAAATCTGCAAGTTGCCTCAATTGGTTTTCCAACGTGTGATGAACAAGGCGGAAACGCAACAATTAGA
ATTTGGAGACGCGTCTGAACCAGCTCGATTCCGCGATACAGATGGAATTTTGGCAGGAAGCTTACAAAGCCACCGAAGAT
ATTCACGGCCTGATGAATCTTTGAAAAAACTTCCAGTGCCGAAAACAATGGCGAATTACTATCAAAAGCTCGCGATGGT
ATTTTGAAGGACAGGCAATTTATTTGTTCCATGCAGCAGCTTTGTTCAAGCTCTTGCAACTTTCCCGGGAATGAAAAAGA
ACATGTCCCCGGAAGAGCAGCAAGAATGGCGAACAGAGTACTGTTGGCGACGCTCTCGATCCCACTGCCATCGGCACAT
CCGGAATTTGATCGTTTCATTTGAAACGGACAAGAGTCTTTGGAGAAAGCCAAAACTACGCTGTTCTCTCGGTCTCAG
TCAACCTCCGACCAGAGTATCACTTTTGCCTGACATTNTTCGTATGAACGTCGTAAATTT

>CL4706-bisContig1|protein lsm12 homolog

TTTTAGTGAATGGCCGGCGTCAGCGACTGGTTCAACATTGGGAGTACGGTGGCATGTAAAACCTGTTACAACAAGGAA
ATCGAGGGCGAAGTATTGGCTTTTCGATCCACAAACAAAATGCTAATACTGAAATGTCCGTCGTCCAGTGGCAGGCCCGAC
TTGACCGATGTCCATTTAGTGAATTTGTCTCTGGTGTCCGATGTTTCAGGTTAAACGAGAAGTTTATCAGACGCTCGGTGA
AGCACCAGTAGCCCTTAATCTGCAGAGGCTAAATAGGCGGGTAAATCAATCAGATAGAGGAGAAAAAGGAATGGTGAAGG
CTCTGCAGGCCGGAGTATCGCCTGAGGGACAAAAATTATACCTCGCTATAGCTAAGACCATACCGACGATAAGGCTTGCC

GGACAAAACATCATCGTCTGGGACAAGGTTACCATCTCTCCGCCTTACAAGCTCAATAACATTTACGGCAATGAAGAGTC
TAAGCCTTATCAACATGTTAGGAAAAATTGTTGACAAACACATGAAGGATACGGCATTGGCGTCGGAAACGCAGCAGCAGC
CGGATCAGCCGCAGCAGCAGCGGGAAGATTCTCAGCAGCAACCACAGACTCAAAAAAGCGGGGGCACGCAATAGACGAAT
GGAGGAATACTTGGAGGGATTGAAGAAGAGAAAGAAAAATAATAGAGAAGAGAAGAAAAAGGGGAAAAAAAAAAACAACG
TTACGCAAAAATAATGCGAGAGGGATT

TCGAAACTCAAAGAAAACCTT GCGATCGAATCGTAAGTTGTTACAGTCTTAGCAGACGTCGTAAAAATATCGCAACTTTA
GAAAATCGTCGTAAAAAGTCAGTTCATTATCGGAAATGGCTGTGCGGGCTACACCCAGGAACCTTCTGTTCAGCACTGGG
GTGAGAAAATGGTTCATGAAATGGCTGGCTTCAACAGATACGGGCTTATGCGGGACGATATTTTGTGGGAAAATGAAAT
AGTCTCAAAAAGCTCTGCAAAGATTGCCTCAAGACCAACTGGACGAACGCAACTTCGGTTGATCAGAGCGCGCAACTAA
ATTGTCAAAAAATAGTTTTGCCCAAGGAACAAATGGTCAAGTTCGAAGGAGGATGTTAGATATTTGAAACCGTACATTGAG
GAAGTAGAGAGAGAAATCAAGGAGAAGGAGAAATGGAACAAGGAATAAATCTGCCATCTTCCCTGTGAAAAACCATTA
AATAGATAATAAAAAATATTTCTTCTTAGTTTATTCTTGTGGAATTAGTAAATCTCTACCTTTCCAAACTTGAGTGAGAGTT
TCGTCGTGGATCATGACTCGGAAATTAATTGTGAGGAGCTGCGACGTTGTACGGAAATAATT

AATGACAAAGTTTGAAAAGCCGGGCGGTGCGCAGCACTTTGACTATCCGGATATGGCGAAAGAAGCGGTTGAAAAGCCT
TGCGAGACGCCGAATCGCTTATCCGGATGTAAAAGCGGCGTTCGTGGGTACGTCTACGGGGATTCTACCTGCGGCCAG
AGAGCTCTCTACGAAATTGGCATGACCGGCTGTCCGGTGTACAACGTCAACAACAATTGCGCCACCGGCTCCACCGCCCT
TATCATGGCTAAACAAATAATCCAGACGGGTGACGCCGACTGCGTTCTGGCTCTGGGATTGAAAAAATGGAAAGAGGCT
CGCTGACGCCCAAATTCATGGATCGCACCAATCCGTTGGACAAACACATCCAAGCGATGGCCGATATCGCCGGAATGAAC
GAGAGTCCGGTGACGGCGCAGTTGTTCCGCAACGCGGGGAATCGAGCACAATGAAAAAATATGGAACGAGGCCGGAGCATT
TGCAAAAATAGCTTACAAAAATCATCTCCATTCCGTCAACAATCCTATTCCGAGTTTCAAAGGAAATACACGCTGGAG
AGATAATGAATGCGCCAAAGGTATTCCGGCCCCGTACCAAGCTCCAATGTTGTCGACCTCGGACGGCGGAGCGGCCGT
ATCTTGGCGAACGAGGATTTCTGTCGCAGGCACAATCTCGAGTCGCGGGCGGTGAAATTCTCGCAATGGAATGACGAC
GGACGCGTCGACGACATTCTCCGAACGCAGCAGCATCAAACCTCGTCGGGTACGACATGACGAGAAACGCGGCGGAG

AATTGGAATCGCACAGAGAAGGAATGGAATTCTGAGTATGGACGAGAGTCAATTAAGCGGCGCGGTGCCACGGGATCG
GCTGTCCAAGAAAGTCAATCGTTATTTCGTCTGAGACAACCTCATGGAAAATGTGGAGACTCTCAAAGCCGAACGAGACGT
CATCGAGAGCGAGTTGAAAGTCTGCGACGATCGACATGAAAACACGTTTTTGTCTGCTCTCGCTCAAGACGGTGCATCG
ACGAGCCCCAATTTGTCGGTTGAAATATTTGGCAATGTTATGGCGCTCTGAGCAACCAAGTTCCGGACAGTCTCGCTCGA
CAAGAGACCCCTCATCACTAACGTTTCAAGACGCACACGCGCCCTTACTCGCGAGCAATCAGGATCCGGAAGTACGCGGGA
AACGATGCTGTGCAAGTTGGCAGCAGCTTATGACGCTTTCAAAGAATTGAAAAACAATTTACACGAGGGAGCCAAGTTTT
ACAACGACCTGACGCAGTTGCTCGTTGTTTTCCAAAACAAAATATCAGATTTCTGTTTCGCGAGGAAGACCGAGAAAGAG
GAATTGATGAAGGACTTGACGACCAACTTGAGTCACGCTGGTCCAGCCCAGACACCCAACATTCCGTCTCATCACAGCGG
ACCCAGTGGCATCAACCCATCAAACGAAAGTGCTCAGACGTTACCGTATCCAACATCGTACCAGGGCGGCATGCCTATTC
CGTATGGTGCGACTCCAGCTGCTCTTATCCGACGTATGTTCTCCACCGATGCCAGCAGCTACAATCTTACGCAACG
ATGCCATATCCGACGCAAGGTCAACATTACAACATCAATACCAGGGTCGCCACAACCGCCTTATAACGCTTTCGCAAC
GTTGCCTCGATACACCGGACAGAATCCACCACCACCGAATAATTCAATTTCTTCTAAATCGTACGTTATTATTATAAAAACT
AAGTATTTGGAGAAAAATCAAACCTGGCAACTAATCGCGGTGAATGCCGAAAGATTCTTCATTGCCACGAAGAAAGTACGTC
ACAAAAATTAAGAGTTCAGCCGACCGGCAATTGTAATTTATTTCTAAATGCGCCTTCTTTGTTTCGAGAATTTAAAAATGC
GATCCCAGAGAGCATTACATTAATTTTCAAAGGCCGATCTTCCGCGAAGAATTTACATTTCCCGCTCGAGGTTGATATTT
TTTTACCTGAAATAATATACAAAGTCTCAATTTGACGACAGCTTGAGTCTTGAACAACAAAGCTTTATCATGAATATTCA
ATCGATGGCCTTTGAGTTCGAGTTCGAGTATTTCTTTTCAAACAGAATTGTTATACTGATTCCATCAACGCTGTTAAATCA
TGATAAAAACTATTTTTAATCGACTATTACACGAGGAACATGATGACAAATGCTTGAGGAGCCAACGAGCAGCAAGAGAA
AATTATATCAAATATTAGTACGACATCAGAGTTCCCTGGTCCCGTATCGTCCCTCCGAGACATTTTTAGCAAATGCACAG
CAACTTTTTATCTGCTTGGACGAAAAATGAAGATTTCTGCTACTTTTCGATCGAATATGGATGAAAAATTTCTATGTTTTTG
CTAGAAATCCTTTTCAGAGGGATGACAGAATCGAAAAAAGACATTTGGCGAAAAATCAGTTTCCGCGATTTTCGATAGA
ATATTAATGAAGATTTTTGCTAAAACTCTTCAACAGGAGCGACATGGTATCAAGGAACCGTGCCACGGTAATTTGTTGAT
TATTTACTCTTCGTGAGGCTCTGTAGTCCGACCGTATTATTAAGATTGTTATTATTGCTTACAGATAACGCTAAAG

AACCAGGTACGACGTCTCGTCGGAGCGTTTTTCTAATTTTTCACTTCCAGTGAAAAACATCGCGTCGGAAATCGTAA
CTCAGTGTTTAATTATTTTTGCTATTTCTTCAGGTTCCAGGAGTTAATAAAAAACCGTCAAATGGTTGCCAGAAGAAACA
GAAAAAGGCCATGGAGAGCATAAACTCCAGGCTTGCTCTCGTCATGAAATCTGGAAAATATGTTCTGGGTTACAAACAAA
CTCTCAAGTCGTTGAGACAGGGAAAAGCCAAATTGGTCATCATCGCCAACAATACTCCTCCGCTTAGAAAATCGGAGATC
GAATACTACGCGATGTTGGCAAAAACCGGAGTTCATCATTACACCGGCAACAACATTGAGCTCGGTACCGCTTGCGGTAA
ATATTTCCGAGTGTTGTAACCTCTCGATCACGGATCCTGGCAACTCTGACATCATCAAATCCATGCCAACTGGCGATCAAG
CGTAATTTTTGTATAAAATAATAACAACTAATTTCGACAAAAACCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACA
TGTCGGCCG

TCGATTCATANGGTTTTTCTCTCTCTCTCTCTTGCTCTTACTCTCTCTCTCTCTCTGTGCGAGTGGAACAAAAATTT
GATTGGAAAAAATCTCGTGAGGTGTAGGTTGTTGTTTTCTTCCAATAAGAATGGCCGCTGTTCTCGGAAGAAAGTTCTG
GAGTTTCGGTGCCGGTGATCGGCAAAACGAATTGGCCGATTCTTACGGCCTGCCGATTCTGTGGCAAGGTCGTCTGGAACGA
CGAGACAGCAGCGAAGGATGGCTGAGCAAATTAGGCGTTAGGAAACTCGAACCAACCAAGGAATCGCACTCTCGTATGTT
GTCCGATAAAAGAAGTTATCTGGGCACTTCACACTCACAAATATTCGGCCAGATTCCATCGACAAATATCTCAAGAATTATG
AGGAACACGTTAAACCTCGTTTCATTTCCAAAAAGTCAGACTTGAAATGCGAATTGGTCGTTCTCTGGACCGTCCAGGTCTGGG
GATTTGGATCAAGCTCTTCACTTTGGCAATACACCGGAGGCTACGAGAGAATAGACCGTGGCCATCAAAATTTCTCCAA
AGATGAGAAATTTACAAAACTACTCAGAGAAAGGGGAAATTACCTGAGATCTCGTCACTGCAATATCTGTTGCATTCA
GTTATTGGCTCCCATCGTGAAGAGGGAAGCAAGAAACATTTACGAGATTCTAGCTACAGACTGCGGCCTGGCACCATG

mmc4.txt

ATCGAATGGGGAAACAATTGGGCCAGAGCAATAAACTACAGACGCAACAACGACGAAGCTTTGCGCCGGGTATTTTTTCGCA
GATTGGCCGGCTCTACAACGTTCAACCATTTGGTGTACAAGGATCTCCAATCGCGCAAAGAACTCGTGAGAGTGCTT
GGCGTTCTCCAGGCTGGGACGAATGTGTGCGTATACGGTTCATTGATACGAGAGATGCACAGTCGCATATTGAGTCCA
ACTTCCTTTTCTCCGACCCAGTAAAAAAACACACACATATCTATGAATTCGATGGATATGTATATTTCTGGGGGATATT
GTTGTGCATTTGTATATTGAATGTGGCTCCATAATCATGTAGGAACAACCGGAGTTGTATCCGAGGGAGCATAATCAACA
TTTCTTTTATACAAGTAGCTGTGAGTTCGCAACAATTTTACGGCCCTATCCTCGTGATGTCTGCAGCGGTGATCCATGG
CGGAGACGAAAAATATTCTTCTAGCTGACAAAAAGCTATTTTTCTTCTTTCAATGGGATCTTCGGAAAGGNGGCTC
GCGAGAGAAGAAAAATCAATGATCGCGTGTACAATTATGTAACGAAACGTACAAACTTG

>CL478contig2|acyl-protein thioesterase 1-like

AGTGGGAAACTTCTTTCCCTCTTGCCTCAGTATTCGATATTTATACCAATTTGATTGAATTGTTGGCAATTTTTTCGTAA
CAAGAAAAGTAAGAGCACGAGTCTCCGTAGTGCCGTTGAAACGTAAGAAAGCGTCAAAGATGACGACTCCGGTGGTTATT
GCGGCGACTGCACGCCACTCAGCTACGCTCATATTCTTCCATGGTCTGGGCGACACCGGGCATGGTTGGGCGACTCCCAT
GGGAGCGGTTTCGATCCTCCCATATCAAAGTAATTTGTCGACCGCGCCGACGATGCCGTAACGTTGAACGCCGATTCA
GGATGCCGTCCTGGTTCGATCTCAGATCGTTGGATCCCAGTGGGCCAGAGGATGAGGAAGGAATCAGACAGGCTGCGAAA
ATGGTTTCAACGCTAATAGCCGAAGAAGTAGCAGCTGGAATCCCCAACAAACGAATAGTAATCGGCGGCTTCAGCCAGGG
CGGAGCTCTCGCCATTTATAGCGCTCTGACGTTTCCAGAACCCTCGCCGGAGTAATAGCGCTTTGGCGTGGCTTCCAC
TTCATCAAAAATTTCCCGCTGAAGCGATAGGAAATAAAAGTACGCCTCTGTTCCAATGTCACGGGGATTGCGATCCGCTG
GTGCCGTACAAGTGGGGCCAAATGACTTCGTCTGTTGCTCAAACAATTCATGACGGCGAGTGAATTCAAAAGTTATCGCGG
AATGATACACACCTCGTGCGAAGACGAAATGCGAGACGTGAAGAAATTCATCGAGAAAGTTCTCAAACCGTAATAACTTG
GGACTACTTCCGTAGCATATTTCAATCATTACTTCGATCAAGAGAAAACAAACAAACGTTTAAACAATTATTAATAAAT
AAATTCAGTCGCATTGTTTTATCTAGAGTCTCGTCTGTCGATGAGAATCTTCTTACGAAATAGAAAACCTCTATCGGT
CTGTTTAATTATCGCAGAACGCTAGTGTTCGAGCTAGCTTCCGAAGCAGTTTAAGATAAACATTCCGGTTAACGATTTT
TAGCGTTATGTGCGGATTCCTCAAAACAGCACGCGACAGGACCAATCTAATCAATTCCTTCCCCGACCTCCAAGGCCTAT
TTAGGATATTCGACTTACCCTTATTTCTGCCGTTCTGTCCTTCCGCTAAACCGTACGACAAGTCTCATCATTATTTTC
TACAACTAAACAGTATCCGCTT

>CL4791contig1|glutamate mitochondrial

AGTGTGCAATTAGCGATAACTGCGCACGGAGGGTTTCTCACTGTCGCCGGTTCAGTAGAATTGTCCAGTCGTTCCGGATC
GTCAGGCGGCTCGAGTCGCGTTTGAAGTTGAGAAAGAGCTCGTTCGATCGTTAGCAATAAATTCGCGATGTTTACGTA
AAGAGACTGTCGGGCTCTTTGAAGCAAGTTCGGGCTACGGAGATTACGGGTGTTTTGCTTTCGCGTGCATTGCCATCCGC
CAACAATTTACAATCGAATCGTGGCTATGCCGATCACCAATACCGGAGAGGCTCCAGGACATCCCGGTGCGCGAAAATC
CCAAATTCCTCAACATGGTGAATACTTTTTCCATCGCGCTTGTCAAGTCGTGAGGACAAACTCGTCGAGGACGTTGGC
TATCGGTACGATATGACCATCGAAGAACGCAAAAAAAGGTCAAGGGTATACTCATGCTGATGGAACCCCTGCGATCATAT
TCTCGAAACATGCTTTCCGCTGCGACGCGATTCCGGCGACTACGAGATGATAACCGGCTATCGGGCTCAACATTCGACCC
ATCGCACACCCTGCAAGGGAGGTATACGATTCTCCATGGACGTTTCCGCGACGAAGTAAGGCCTTGTGAGCTCTGATG
ACCTTCAAGTGCCTGCGTTGATGTTCCATTCCGTGGAGCTAAAGCCGGCATCAAGATCAATCCGAAATGTATTCCGAA
CACGAACTCGAA

>CL4793contig1|glucose-6-phosphate 1-dehydrogenase

CGGCCGGGAACGTTGGGACGGTGTGCCGTTTATTCTCAAATGTGGAAAAGCCTTGAACGAGCGCAAAGCGGAAGTAAGAA
TTCAATATCGCGATGTGCCGGGCGATATTTTGAAGGGAAGTGAAGAAAGAACGAGTTGGTAATTCGTGTCCAACCGGG
CGAAGCATTGTACGTTAAATGATGACAAAATCGCCGGGTATTACGTTGACATGGAAGAGACGGAGCTCGATTTGACTT
ACAGCTCTCGTTACAGAGACTTGAAACTACCGGACGCTTACGAAAGATTGATCCTCGATGTATTCTGTGGCTCACAGATG
CACTTTGTTTCGACGCGATGAATTGTCCGAGGCCTGGAGAATTTTACACCGCTTTTGCATCGTATAGAGGAAGAAAAAT
TCAACCGATCCCTTACGAGTATTCTGTCGCTGGACCGGAGAGCTGATGAAATGGCGAAACGAAATGACTTTATATACT
ACGGATCGTACAAATGGATAAAACACCATTAATCTGTGCTTTCGCGATAAATGAATTTTTTACACTGGGTCAACTTTCT
GCTGACAAGCGTACTTGTTCGTGTACATAATTCTGGATATGTATTTTCAAATAACTGCTACGATCGTGGTCCATATGGAT
GTTGAAGGAAAAAATAAATATTTTCAATTTTCTTACATTCTTAAAGGAACATTTTTTCAATTATTTACGAAAACCTAGAAATG
AGCCACTGGATGATTTTCAATATAATGTCGCCGATTTTTTGTACGTGTTTCAACTTGCTCTGCCCTGAATTTTATTATTC
GTAATTCGTTTACTAGCTCAATCGTCTTTTAGGAATAAAACGG

>CL480contig1|eukaryotic translation initiation factor 3 subunit e-like

GATTGTTGGTTACAACAGTGCTTTTCTGTAAGATTTAAAAACATCTTCACGAATATGTCAAAGTTCGATCTAACGTCCC
GTATCGGGCAATACCTTGACCGGCATCTCGTGTTCGCTGTTGGAATTTCTTTCGGCCAAAGAGATCTACGATGAGAAC
GAGTTGCTGCAGGCCAAACTCACCATTCTTAGCAAAACCAACATGATCGATTATGCCATCGACATCAGAATGATCCTGTA
TCCGGATGCAGAGGTTCCCGAGGAACTCAAAGCTCGTCTGCGCAAGTTGTGCAAGAGCTCAGTATTTTACAAAACAATG
TCGGAGTTGTTGTCGCTTTAATGAATAACGAGAAAGTGAAGAAAAATGGAAGAAATGAGGGACTCCAAAGCTCTCATT
AATTATCTTACTCAGGAATCCGAGTTCAGGGTAGAAATGATGGACAGTCTCGTGAAACTTGCTAAATACAGATACGAGTG
CGTAATTAATCCGTTACAACGTCCTATCTCTATCTCTACATGCTCATCATGCCCTCTACGGATAAGAATTACTTGAATG
TCCTTTGGGAAAAATTGGCGTCGGAATTTCTTGCCCAAAATTGGGAAACTGCATTGGAGGACGTGAACAAATTGCGCGAA
TACATTGACAGCAACGTGATCGGAAATTCGCTGCAAGTTCTTCAGTCAACGTAATTTGGCTCATTATTGGAGTCTTTTTG
TATTTTTCAATCACGTTAAAGGCCGAGATCTCATAATCGAGATGTTCTTTATCGTCTCTACTACTTGAACGCCATTCAA
ACAATGTGCCCGCACATTTCTTGTTACTTGGCTGCTGCGGTGATCGTCAATCGCTCGAGGCGATCGACCTCAAGGACCT
CGTCAAAGTAATCCAACAGGAATCTTACACGTACCGTACCGATCACCAGTTCCTCGAGCATCTGATCGTCAACTTTG
ACTTTGATGGTGCTCGTCAGAACTTCAAGAATGCCAAACCGTTGTTTTCAACGATTTCTTCTCATCGCTCTGTTGACC
GAATTCGTGAGAACGCGAGGCTCATGATTTTCAAAACATTCTGCAGGATTCATCAATGCATCAGCATCGGGATGCTCGC
GGAGAAGCTGAACATGAAAGCCGACGTGCGGGAATGCTGGATCGTAAACTTGATTGTAACGCAAGATTAGACGCGAAGA
TCGACAGCAAGCTTGGACACGTTGTGATGGGAGGTCAACCGGCATCGCCGATCAAACCTCTCGTTGAGAAGATCGAGACA
CTTAGTGTGAGGAGCGAAGCTCTGGAGAATCTTATCGAACGAAAGCTGAAAGCTAAGAATCAAGATCCAGTCAGTATAGT
TTGGAACCTAACGAAAGAAATTGGAAGCGTAAATACCGTAAATCTAGGGAATCAACATTTGCGGCTCGAACACAAG
ATAAATTGTAATATTAGCACAAATGTTGTTTTTCACTTTTAAACAACTCGCGTCAATAAATTGGAATTTTTCTCAAAC

mmc4.txt

ATATTTATTCTCTATTTGTACAAAAAAATGAACTCTCCAAAAAGACGCACAGTCAGGCGACAAAAAAACAAAAGTAA
GGTCGCGAAACGACTTCAGTGGAGGCTAAATAAAAAATAACAATTT
>CL4824Contig1|atp synthase subunit mitochondrial
AATCTTTACAACCAGAATGGCCGCTAGCAAAATGAATACCATCATCGCAAGGTCGTTTTCTCTTCAGCTTCACGGCTGC
AGATGGTCAAGCCGCCAATTCAAGTTTTTGGCTTGAAGGACGATATGCGACGGCGTTGTATTCCGCTGCCAGTAAACAA
TCATCTTTACCTGCAGTGGAAAAGGATTTGGTGGGTTTCCAGGGTTTGATGAAGTCGAATGTTGACTTGGCGGAATTCAT
AAAAATCCATCGGTCAAGCGCAGCTCGAAGGCAGCGGCGTTCAAAGCGATCGGTGGAAAAATAAGTTTGAAGTCAAGCGA
CAACCAATCTTCTGGAAGTAATGGCTGAGAACGGTCGTTTGGACAAGTTGGACCAAGTCATCAACGCGTTCAAGCTGATC
ATGGCCGCGAACAGAGGAGAAGTCGTGTGCGAAGTAACCAAGTCCCAAGCCCTGGATGCTGACACCAAATCCAAGCTGGA
AAGCACGCTCAAAGGATTTTTGACCCAGGGACAAACAATTCTGCTTACCACCAAGGTCAACCCGCCATCATCGGCGGTTT
GATCGTCTCGATCGGCGACAAGTACGTCGATATGAGCATCGCCAGTAAAGTCAAATGTACTCGAACATCATTTCTCTG
TCTAAAACGAATAGCAATTAATCGAAGCAAGTCACGACGTGATCGAAAGAGAGAAAGAGCTGTACAAAACAGTAAGAGA
ACCATATGTACGTGGACAAAATAAATAAATAACAATAAGTCCCACGATTA
>CL4825Contig1|alpha-mannosidase 2-like
TTGCTCGATCAGTATAGGAAAAAATCTCAATTATTCAAAAAGCAACGTAGTTCTCGTACCGCTCGGTGATGATTTTTCGAT
ACTCTCAGAGCACCGAGTGGGATGCCCAGTACGGCAATTATCAGAACTCTTTGATCAGTGAACAGCAACGATAATTTT
AACGTTTCGCATACAATTTGGCAGCTCACCGATTATTTCAATGCTCTGCGAGATGAGAAAAAAGATCTCGAAGAATTTCC
CATTTGTGGGCGATTTCTTCACCTTATGCCGACAGAGATGATCATTATTGGAGCGGTTATTATACCT
>CL4838-bisContig1|prefoldin subunit 1
GGTTAGTATCGCCGACGAGGACGAAAGCGTTGACTTGACATAACCTCAAACACGTGAACACGTCTCTTCGTTCAA
CAAACTGGTTTTCTCTCGTTCTCCGGACAAATTTATTCGTTTGCAAACGTTTCCGAGTGTAACAAACAGTTCTGTGTTG
TGGTTTCATCGAAACCGAATATCATCGACTGAGAACTCAAATCAACGTGGAAGAATGACGTCTGCATCGAGAGTACCGG
ATCAAGAGTTGAAAAAAGCGTTACCGAGTTACAAGAAAAGATGATCGACACATCGCAGAAATTAATTTCTCCGATGTA
CAAATCGAGTCTTTAAACGATCGAAACAACGAGCCGAGTTGACGATCAAAGAGATGGCGACCTTGAGGCCAGCACGAG
AACCTATGAATCAGTTGGGCGAATGTTTCTTCGATGACATCAAGAGCATCAAACCGACCTCGAAACGAGGATTAATA
CCGCTGACGAAAAAATCAAAACACTTGACAACAACAAGAGTTACTTGCAGCGAAGCCTCAAGGAAAGCGAGGATAACCTC
CGAGAAATGGTACAACAACGACAAGGCAGAGAACTGCTTCCGGCTGAAAGCCCTGCACAACATCGCCTTATACGGCTA
CGAACATCGATCGCCTCACTTTTTCTTCTCCGCCATCACCTCTTACACGATTAACATTGTACAAATAAATCATTTTT
TTCATTGTTATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG
>CL483Contig1|hsc70-interacting protein
CTCTCTTGGCGTAATTCAGCCTCGCTTTATTTGGCATCACGTGCAGTTCATGTACGAGTCCATTTTTGAAAATCCAC
TGTTTTCTTATTGTCCGGAGAAAAATGCGGCAATCAATAGGGTGTTATCATATACATACATGTATATGTATATATGCAT
ACACTTGTGTGACACTCAAAGGCCACCGTGTCTGCGGCAGACACGTTGACCACTGGGTCCCACCATGCAACCAAAT
CCCCCTGCTTGCCACGACGACGCAATATCCACGAATTTGTACACACCTACACACACATTTGTATGAATACTTTTTGTTT
TTGTATTGTACACAAAAAATTCGAGAAATTTGTGATTAATTTACGAAGCTTATTCAGCCTCGTACGAGATCACTTATTC
GCAGTTTCAATGGGAAATCAAAGAATAATTATCATAATTGCATCGACACTACGGCTTAGCCTACTTGCTCAATATGATA
AATAAACAAAGTTTTCTTATCATATTCGTTACGTGGAATCGCATAAATTCGGAGCAGGAAAGAATGAGAGTAAATTATG
AAAAATTTTTCAAGTTTGCATGCCGTGCTTCTGCTTTCTTGACGAAATAAATTCGAGGCTCTCTGTCTCGTCCGAGGTT
TCGTGTTTTTGAACCTTTCTAGCAAAGCCCTCTCGCGGTTAATCGCTGAGTCACTTTTCTTACCAAGTGCAGAAAGTTTT
ACTCCGATTGTTGAACTGGTTGAAATAATCGTACCGAACAAAAAGCTTAAAAATGTTGCCCCCATAACCAAGGAACAA
ATGGTTCATGTTTCTCGATGCGTTGAAAAGCAATCCTTCCCTTTTGTACACTCCCGATTTGAGTGTCTCAAGTCATTG
TCGAACACTTTGGTGGAAAAATTCACCAGCTGCCAAACCCCAAGCAACCGACCGAACGGCTGACGAGCCCGAGGGAAAA
AAATCCAAACCCGAAACGAGGTGGAAGCGAAGAGAGCGAGGAAAGCGACCTTGAATTTGACATGACCGGAGTTTTGGA
ACCAGCAACGATGCTCCACAAAAATGGGAAATCAACGACCGTCCCAACGAGGAGAGATTGACAGATCGCAGGCAA
AGCGTTCCGAGGCAGTGTCTGCATTTGTGGAGAAAGATTACGAAAAAGGCTTTGGCTCTGTACACCGAAGCGATTGTTTT
GAATCCACAGGCGGCTCTGCTTTACGCCAAAAGAGGGCAGATCTATCTGTTGTTGGGAAAGCCTAACGCTTGCAATTCGCG
ATTGCGACAGAGCGTTGGAGCTGAATCCGGACAGCGCGCGGGTCAAAATTTCTGGGCGAGCCAAACAGCTTCTGGGA
CATTTGGAAGAGGTGCGATCGATCTTCGACTCGCTTGCAAGTTTCGACTTTGACGAGCAAAACCGGAGTGGCTTCGCGAA
GTCACGCCAAACGCTCAAAAGATCGAGGAACATAAGAGAAAGAAAGAGCGGAAAAAACCATGGAGAAAGCGAAGAA
TCAAGCAAAAGGAAAGGCTACCAAGGAAAAAGCTTAATGCAGCAAAATCTGAGGGATCGACATCAGAAGGTGATGCCGCTG
CTGATGCTGGCAAGAAAAAATGGACTTTACCGAGATTCTCCAAGCCTTTAAGGATCCGGAGATATCGAAATGTTCTTG
GACATTACGGCGAATCCAGGAAACATTAAGAAAGTACGAAGACAATCCGAAGATGATGGCACTGATAAACAATTTGTGTGG
CTCGGATGGTTAGTAGCAGCGAGTGTCTTCTCGGATTTTTGGGACGTATGGCCGGCGGGCGAGGAGCAGGAGGAGCAG
GAGTTTTGGGAGTTTTGGGTGGACTTTTTCTTGGGGCTGGTGGTGCAGCGGCACTCCACCGCCAGCCGCCGAGCCGAAA
CCATCAGTCCAAAGGCGAGCGACGAGGTTGAGCTTGACTAATGAGAAAAAAGAAATCCAGCTTTTTCGCCCGTGCTTT
TGAGATCGTATCCAAAGACCTGCTGATTTAAGAATATCCCGCAAAAAATGAATAATTAATTTATTGATACTGCCTCATAA
AACGGTGATTTATAAATTACCGAGTAATTTCCGAAGCACATTTCTTTAGTTTTACATCATTGTTCTTCAACGATTCTCC
AACTGCGAGAAAAAGG
>CL4841Contig1|fatty acid synthase-like isoform 2
TTGGTCGTTTTATTGCAAAACCGTCATTGAAAACTTTGGCGCTTTGAAGATCAAAGCCGTGCAAGTCACCGGAGATCGCAA
TCCGGAAGCTCTGCTCGCTCCACTCGTTATCGACACTCTTCTCAGCGAACCTACTCTCAGCGTGACATGCAAAATAGCGT
CAATGGTACCGGACAATTTATGCGACACTGGCCGAACAGTGGGGAGCGAAAAACGTAGCCCGGGACGTGCACAAAGTGGCG
GCAGGTCAAGATTTGCAATTGGTTATTGCGAGCGGACGTGTTGAGCAACGGAGGAATCGGGGATATTGAAAAATTTGGCAG
CTGCTCTGAAACAGGGGTTACGTGCTTCTGAGGAGACGGGAGTTTTGCAAAAGTCGATTATCCGGGGAAGTGGACTG
CTGCTCGTCGGAAAAACAAATGGCGCCCGGAAAAACTTACATCTCTTTTGAACAAACGAGGAAAGCAACGCCGAGCCGATTAT
CATTGATCAGACAGAAAAAATCTCGTGGCTGGAAGCGCTCAAAGCCGCTTAAAAATCCGAGACCGAGGGCGACA
AAGTCTTGCTCGTCAGCGAGGGCGAAGAACTTCTCGTCTCATCGGCTCATGACTTGCTGCTCAGACGCAAGCCGAGGA
ATGAACGCCCGATACGTTTTTCAATCAAGACAAAAACGCTCCCAAGTTCAGCCCAACTCCAAGTTTTACAGCGATCAGCT

mmc4.txt

TATAATTAATAAACTTGTATTATGAGGATAATAAAGCCTTGTAAACACAAAAA

>CL4889-bisContig1|proteasome subunit beta type-1

GTGTCGTATATATCGTATAACCGAATTGTCATCGTTCTTGGCTGGAGTTAGGTTAAAAATACGAAGATTTTCGAGTCATC

CTTCGAGAACAAAGATACACAAATAAAAAATGGCAACAATGAGCGAATACCAAGGGCGTTCTCTGCCGGATTACGATGTCC

AAGGAGCAAGGAAGCACCATTTTGTCTTACGCCGATAACGGAGGGAGCGTTATTGCTCTCGCTGGTGATGATTTCTGT

GTATCGTCTGCTGATACTCGCCTGAGCGCCGGCTTTTCGATCTATACTCGTGAGCAACAAAAATTGTTTCCCCTCTCGTC

GACAACCGTTTTGGGATGCTCGGGATGTTGGTGCGATGTTTTGACACTTTCACGAATCTTAGCCGCTCGTATGCAGATGT

ACAAGCACGAGCATCAGAAAAGCATGACAACCTCCGGCAGCCGCTCAAATGCTCTCGACCGTACTTTTACTACAAGAGATT

TTCCCTTACTACGTTTCCAACTGTTCTTGGCGGATGGAGAGAGCAAGGCAAGGCTGATTTATAGTACGATCCGATCGG

CCATTCGGAAGATCAAACTACCGCGCGGGTGGTTGCGCCGAGCCCTCTTGAACCTCTTCTCGACAATCAGGTTGGCT

TTAAAAATCAGGAAGGTGTAGAGGCAACTCCGTTGACCCAAGAAAAAGCCCTGGTCATAATCAAGGACGTTCTCATATCC

GCGGCCGAAAGGGACATTTACACAGGAGATGGAATCAGCATCAACATCATAACGAAAGAAGGCAATAAAGACGGACAGCT

TTGCTCTCCGAAAGGATTAATAACGCCCAATGATTANGTTAACAAAATGTTGCACCGAAGAAGGAATAAAAAATAAGTTG

AAATTTTTGAAGAAAGT

>CL488Contig1|ap-1 complex subunit sigma-2

TTTTTGGCAATCTGGAGTCGAGGTGCGGGTACATATTTATTTGATGAAAACCTTGCGGCCGACGTGAAGCCACCATCAAGC

GATGCTGTCTGAAGAGTGCAAGCAGGGTTCACGTTACCTGCGGATGGGCGGGGCTTATCTTATTGTTTAAATTTGTTTT

TATTGAGGTTTTCGATATGCTGTATGAGTGATAAAATAGTTATTTATTTGATTCCGCTCGTTTCGTATCAATTAGTAAGCC

GCAAATCATCGCATACGTGTAAAGAAAAAATCTGACGGAAAAATTAACAAGGTGGCGTCAGATACCTGTGATATTTTATTG

TCGACGTTGCAAATTTGGAAGAGACATACAAGAGTGTGAAAAGGTAAATACACAGCGGCTAAATCTTCAACTGCCCAAAAA

TGATGCAGTTTATGTTGTTGTTGAGCCGTCAAGGCAAACTACGAGTTGCAAAAGTGGTACGTGCGCCATCCCGACAACT

GAAGAAAAATTTACAGAAATTTGATACTACTTCTCGTGAAGAACCAAAATGTCAGTTTCTTGGAGTGGAAGA

CGTCAAAAGTTGTTTACAGAAAGATACGCGAGCTTATTTTTTGTGCGCGATTGAACAAAACGACAACGAGTTACTGACTC

TAGAGATCATCCACAGATACGTAGAATTGTTGGACAAATATTTTGAAGCGTATGCGAATTGGACATAATCTTCAATTTT

GAGAAGGCGTATTTTATCTTGGACGAATTGTTGGTAGGAGGAGAAATTAAGAAACGAGTAAGAAGAACGTATTGAAGGC

GATAGCCGCTCAAGATCTTCTCCAGGAGGTTAGTTATGGCAATGTACCCCTAGAATTGTGACTTGTCTATCCTCACAAAT

CGTACTTCTCTGACTATCAAAGCCGCGTTATTTAATATGAGCGTCGATGCGATGATTACGAAGCGTTATTTACGTT

GGGCACTTGAAGATGTTTGTCTTCTGGCGCTGCTCTCTCGATCTAAGAATCTCCATGTACCAACGTTCTCTCTTTT

CCTTCGGGCAATTTATCTGTTTTTTTTTCCACAGCCAAAAGCTGCATTCGTATATCTGATCTATCGAGGTTTCATCGGACG

ACTATTGTCGATATGATACCCGATCGCGTAGAACAAAAAGTACAATGTCCGCTTGTTAGAGGCTCTTTGTTGTATTCA

GAC

>CL4897-bisContig1|dehydrogenase reductase sdr family member 11-like

AGTTTCGTTGTTGGATTGCATCGAAGATGGATCGTGGTCGGGAAAAGTTGCGATAGTAACAGGCGCGAGTGTGGGATTG

GATGTGAAAATAACTGAAGCATTTGTGAAAAAATGGAGTCAAAGTTGTGGGGTTGCTAGGAGAGTGCAAAAAAATTCGGG

ATCTCGCTGCTAAATTTGAAGGGTCAAAGAGGCGTTCTTCATGCCTTGAATGTGACATGAGGAAGAAGAGGATATTCTC

AAAGTTTTTCAATGGACGGAAAAAAGAACTCGGTGGTGTGATATACTCATTAAACAATGCTGGAGTTCTCGTATCAGAAAC

TATAATCGATGGTACGACGGAAAACTTTGAAAAATCATGGACGTTAATGTGATTGCTGTGGCGATATTGCCAGGGAAG

CGGTTTCGTTTCGATGAAGAAACGCAAGGTTTCCGGTCACATAATTAACATCACGAGCGTTGCCGGACACAATGCCGAGGTG

ATTACGATTCCCCCTCAGCCTTTACAGTGCCAGCAAAATGCGAGTCATTGGCATGTCGATTTCTTTCGAAATGAATTAGC

GACTGCTAAATTTGAACGTCAAAGTACGTCATCAGCCCTGGAGCAGTGAAGAACGCATGATCGTTGAAGCTGGTGTTT

CTGAAGAGATGTTTAAATAAAATGCCATACTCATGGGAAAAACATCGCTGATGCTGAATCTACGCTCTGTCTACACCC

CCGAATGTTTCAGGTGAAGGAACTGATAATCACGCCTATCGCCTCGGCGTGAGGTTATGGAAGGAGCTTGAGAAGACGCAA

CGCTGTGTTGGCATCGCTTTTTGTTCAATACAATAGTTTTTTATAATGGGATGTTAGTCTTGACTCGGTATGAGATGATG

GGCGGAAAAAATATCAGTGGGACTATGTTCTAGACTGCGTTCCATTGTATCC

>CL48Contig2|transitional endoplasmic reticulum atpase ter94

AAGCGCATCCCCATCAAGCGAGAGGAAGAAGAGGCCCTGAACGCAAGTGGTTACGATGATATCGGCGGCGTGCGCAAG

CAGCTGCCCAAAATCAAGGAAATGGTGGAAATTTGCCCTTGCGGCATCCGTCCTTGTTCAAAGCTATCGGAGTGAAGCCACC

TCGTGGTATTCTCTTGTACGGACCTCCTGGTACCGGAAAGACCCTCATTGCACGTGCCGTTGCCAACGAGACTGGAGCTT

TCTTTTTCTGATCAACGGTCTGAAATCATGAGCAAACCTTGCCGGCGAATCGGAAAGTAATTTGCGTAAAGCTTTTGAA

GAGGCTGAGAAAAATTCACCGGCAATTTATTTTATTGACGAGCTCGACGCCATTGCACCGAAAAGGGAAAGACTCACGGC

GAAGTGAGAGGCGTATAGTGTGCGAGTTGTTGACTCTTATGGAATGGAATGAAGCAAAAGTTGCGACGTAATTGTGATGGC

GGCAACGAATCGGCCCAACAGCATTCAGGAGCGCTGCGTCTGTTTCCGTCGATTCGATCGTGAGATCGACATTGGTATTC

CGGACGCGACTGGTCGTTTGAATAATTTTTCGTTATTCACACTAAAAATATGAAGCTT

>CL491Contig1|eukaryotic translation initiation factor 5a-like isoform 2

GGGGGGAGCAATGTGGCTTGGCCGGATCTTTCGCGCCATCTTCGAGCATTTAATTAATGAATAACGCCTTTCCATTTATT

TCCCTTGACAAAAAATCCAACTTTTCGGCCGGTACGATTATTCCAAACCTTTGATAAACCTCCGATCCACTTTATCGCC

CGAGAGTCCGCGAGTTCCGCCACCGGAAACGACAAAAAACTTGACGATTTGACACAGCCTCAAATTCAAAGATGGCAG

ATATCGAGGACACTCATTTCGAGACCGGAGACTTGGCGCTCGTGACCTATCCCATGCAATGTTTCGGCATTCGCTAAA

AATGGTTTTGTCATGCTGAAGCCCGGCTTGAAGATTGTTGAAATGTCCACTTCCAAGATGGCAAGCAGCGCCACGC

CAAGGTCCATCTCGTTGGCATCGACATATTCTCATCCAAGAAGTACGAGGATATCTGCCCATCCACACACAACATGGACG

TGCCCTTTGTCAAGCGAGAGGACTATCAGTTGACGGACATATCTGACGACGGATACTTGTGCTGATGGCTGATAACGGA

GACCTCCGTGAGGATCTCAAGATTCGGACGGCGAGTTGGGTACCCAGTCGCGTTCCGACTATGACGCTGGAAAAGAACT

GCTGTGCACTGTACTGAAAGCCTGTGGCGAAGAAGTGGTCATTGCCATCAAAACCAACACTGCCCTCGACAAATAATTGT

GTTTCAGTTGCAACCGTACACAACCTCACAAACCGCTTAATAGCCAAATCGACACCTTATCATTGGTCAAAGGAATAAAGAG

GGCAAGGGAGAGAGGAGGAGAGAGTGAATAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG

CTTGAAATAAAAAACCAACCAAGAAAGCTAAACAGGACGACAC

>CL4923Contig1|hypothetical protein EAI_13159 [Harpegnathos saltator]

156agina p

mmc4.txt

TAAGCAGAATATTGTGTCCTGTAAGTCCTGTTGTCCTCGAGCGTCGTAGACGTTTGTATATTTTTCTTGACGCGAAG
CAGGCAGTAGTGATGCTAACGAAGGAATAAAAAACATTTCCATCGTTATTTTCGGTTTTGTATCGACGTTTCGTATAAAA
AACGAGAAAATTTGACGGTTCCGCAACGCATTCCACAAGTGATTTCGAGATCGCGAATTTTGATTTTCGTAATTTTCGCGTT
TATTACAAGATCGGTTTTGAAATCAAGATGAAAAAGATTTATCAGAGCTGAAGAGAGTGAGCAACTTGTTCACCGAAGC
AACGCTGCAGGAAATTTACGACAATCGAGTGGCGAAAAGAATGTCAATGTGACCGGATGGACGTTTGAACACGAGCTA
ACAGTGGTGACAGTTATTGTGAGAAGTTGACAGAATTACTGTTTCATGGAGAATCTGAGGGGAAAGCTATCGATATCAAGC
TGGTTGTCAAGTCGCTTCCCAAGAATATCGGTGCAAGGAAAACCTTACAGAAGCACAGACTTTTTCTACAACGAGATCACT
TTTTACCAAGATGTAATAAAAAACATAAAAAATTACACTGAAGTTTGCAAAGTTGGACCAAAACGAAAATTCCTTTTTCTAT
GTATTATTTTGTCAATTTTGAGAACCAGGACAATTTTCTCACAATTTTGTCTTTGGACTTGAAAAAAAATCGTTTTATT
GTCCGGACCAAATATTCAATGAGAATGTTGAGATTTGCCAAGCAAAAAGGGAATTTCTCTGCATCCCAACGATGGAAC
TTCAACATCGTAATAAAACATCCATCGCAACTTTTTATTCAAGGATTTTGTACGAGAAGAAAAAACNCTTGATATTTA
>CL4925Contig1|clathrin heavy chain-like

GTTCAAAATGGAAGGAAACGCCGAAGCGAGCAATTTGTTTTCCTTCGCTGTGCGCACCGTCCAAGGTGCTAAATTACATA
TTATCGAGTTCGGAACAACCACTGCCGTAATCATCCTTCCCAAAAAAGCGGTTCGATGTTTTTCCACCTGAAGCGG
GAAACGACTTTTCCGTTTGCTATGCAAGTCAGCTCCAAATACGACGTTATTTATCTAATCACTAAATATGGCTACATCCAC
ATGTACGACATCGAATCAGCGACTTGTATATTCATGAATCGCATTTCCGGCGAAACCATCTTCGTTACTGCTCCCCACGA
AGCCTCCGGTGGAATAATCGGGGTGAATCGTAAAGGCCAAGTTCTCTCGGTATCGGTTGAAGAAGAAAACATCATTCCGT
ATATTAACGGCGTTCTTCAAAATCCCGAATTGGCCCTGCGCATGGCAGTCAGAAACAATCTCTCCGGCGCCGAAGATCTC
TTTGTCCGAAAATTCAATATGCTCTTTCAAAATGGCCAATACGCCGAAGCTGCTAAAGTTGCTGCCAACGCGCCCAAAGG
GATCCTCCGAATCCCGCCACCATTCCAACGATTCCAACAGGTGCCGGAACCTCAGGGACAGACATCGCCCTCTTACAGT
ATTTCCGAAATCCTTCTCGACCAAGGACAGCTCAACAAGTACGAGTCTCTCGAGCTTTGTGCGCCAGTTTTGGTCCAAGGA
CGGAAGCAGTTGCTGGAAAAATGGTTGAAAGAGGACAAAACCTCGAGTGCAGCGAAGAATTGGGTGATCTCGTAAACAA
GCTGATCCTACACTCGCTCTCAGTGTTTATCTTCGCGCAAAACGTGCCTAACAAAGTAATTCAATGCTTTGCCGAGACCGG
ACAATTCAAAAAGATCGTGCTTTACGCCAAAAAGTCTCGTACACACCGGACTACGTTTTCTTCTGAGAAACGTCATGA
GAATCAATCCCGATCAAGGTGTCGCTTTGGCTCAAATGCTCGTGAGGATGATGAACCTTTGGCTGATATTAATCAAATC
GTTGACATATTTATGGAGCAAAATATGGTGCAACAATGTACCGCATTCCTTTTGGACGCCCTGAAGAACAATCGACCGAG
CGAAGGAGCTTTGACAGACGCTTTGTTGGAAATGAATTTGATGTCAGCTCCAC
>CL493Contig1|probable g-protein coupled receptor 158

ACTCTACACGGGGACATAGGCTACGGAGCCCCAGAGTTTTTCGAGAATGAAGCCAAAATGGCCACGAGATTAGCAAATTT
CATAAGCGCATTCCTCCAATATCCGATCCCCAAGAAGTTTATTCGGGCAAACGAGTTGCCGATCGTCCATTGACCGAGGA
TCAAATGATCGGCGAGACTCTGGCGTCTCTGCTCGGCGATACGAAAATTTGGTCCGCCGGAACATATTGGGAACGCAACA
AATTCACCAATCGAACGTTCTTCGCTCCTTTCGCCCAAGACACAACCTCAACGCGAGGAAATTCAAACTCGAAGACTTG
GCGAGACTCAACGATACCGATCAAGTTTACACCAATAAGCCTTGGTTCCAGTTCTCAAGCAACGGTGGGCCACCAACTT
TGATGAACTGGAAAAGTACTATTTAAAAATAAATATTCGGTACAACGAGACCGGCGAGCACAAGAAAAAATATAGAACAC
TATCCGACCAACTATAGAGCGGCGAACCTGAACCACGGGCATTGGACAACACCGTACTATGATTGCGAAGGCAAAGTAAA
ACAGTGGGTAACTACGTTTACCATTTTTTCGGTCCGGATCGGCTCAAGGATAAAATCGAATTCAGGGGTGTGGTTG
CTGTGACGATGAATTTACGTCAATTTGGATATAAACCAAGTCGCGAGACAAAATTTTATGTTCCCAATGCATTTAAAAACACT
CACAAGTGTGACAGGAAAACCTTACACTGCGTTCCAATATTGGGACGAGTTTCGAAACCGGAGGATACAAGTGCGAATG
TAAACAGGGCTTTGAATATCCGTTTCAAGATTACATCACGTACTACGACGGTCAATTGGTCAAGCCGAATTCAGTAATA
TCGTCAACGATGTAGAACTCGATATGACATGTTCAAATGCCGTCTAGCTGGAGCAGCCTCCGTCCAATCAAGCTGGTTA
CTCGTTTTCTCAGTTTTAGCTATTTTTTTTTACCGTTTTTACATTTTCGAGATAAATTCCTACGTACGCGTTTTTTCGTA
CGTAATCCAGGGATAGTACGTGGAACATAATTTTTCAGTACGAATCTATCTCGAACACAAACCGTCCACAGAAATCAAG
AATCTACTTTTGAAGCTTGACAAAAATAATCTTTTACGATTTTGTAGTAGATTTGATATGAAATTTCAATCAATGGAAT
TACGCTGTTTTGCGATGCAAGAAATTTCAAAGATATCGGATCTTGTGAAAAGGAAATTTGAGAAATTTTAAATTTTCTTGA
ATTAATGGAATTTTCAATGAAAATTTATTCGATATTTCTTCAATTTCAATTCACCATCTCAATATTTTCGATAACTCTCCAT
GTGTTCATTTTTTTTATTTCAACGTGAGTGTTGCTTCCAAGTTCTCACAGAACTCAGTTTTTTACGATTCACGTACAAAA
TACAGCTCGAGTGCTCATTCTCGATGGCGCGAGAACGAAAATCCTTTTCGCCTTCTCGCGCGAGTCTCTCAGCAAACGCGA
TAGACTTTCAATCCGAAAAATACCAACTTTTGAATACATAAAAAATGAGGAGAATCTCAAATGAATCATTAGTCCCAATCGA
TCAGGATTCGAGAGCAATTTTATCGTATTTTATATTTCTTTTATGGCGAAACAGCCTTTATGATATTTTCTTTCGACG
GAATTCGCCCAAGCGAAGCAATTTTTTGGGAGCGACGAAAATCGTCCTTTTTTATTGATTCTGAGGGGTGCGAAACCGTGAAT
CATGAACATCGCTAACGTCACTAAGTGCCTTTACAAAACGCGATCCAAAGTGCTGTATTTTTAATTACTTTTTAATCACG
TATCATGAGTTATACATTTCCGTATCAACTTTAATGAGAACGAGGCAGATTTTATATTTCTTTAACAAATTTCTACACA
CGCGCGGCCT

>CL4958Contig1|cytosolic 10-formyltetrahydrofolate dehydrogenase-like
AATCTCAAGAAAGTCTCCCTCGAACTCGGTGGTAAAAGTCCACTCGTCATTTTCGACGATGCCGACATTCAACAAGCAGT
CAGACTCGGAATGGGAGGCGTTTTTTTCATAAGGGCGAGAACTGCATCGCTGCTGGTCTGTTTATTCGTGGAGGAGAGAATT
CACGACGAATTCGTGAGGCGAGTGGTGGAGGAAGTAAAAAATTTGAAGATCGGTAATCCGTTGGATCGCAAGACTTCGCA
CGGGCCCCAAAACCAAAAGGGCACTTGGAAGTGTGTTGGACTTTGTGAGACGCGGTGTGAGGAAGGAGCGACTTTGG
TCCACGGAGGAAAACGTTTGGAGACTCCGGGCTGGTACTTCGAGCCGGCGATATTCACCGACGTCAAGGACGACATGTAC
ATCGCAAGGAAGAATCCTTCGGCCCGATAATGATAATCTCAAAATTCGATCAGAAAATTTTCGAGTCTTTAATTTACG
AGCAAAACACAGAAATTCGTTTGGCTTCGGGAATACTCAAGAAAGACATAAGCAGAGACATGAGATTCTGTTTCTTCGACG
TCGATGCTGGCACGGTCTTTATAAACACGTAACAACAAAACAGACGTCGACGCTCCTTTTCGGAGGTTTCAAACAGTCCGG
ATTTGGCAAGGATCTTGGCCAGGAAGCCCTCAACGAGTACCTACAAAACAAAACAATCACGATCGAGTACTGATCCCCA
TCGACCCACATTATTTATAATTCCAATCATTTTGTAT

>CL495Contig1|rab proteins geranylgeranyltransferase component a 1
TGATAGCGTTTATAAAACGCGTAAAACGAAAGACAGAAAAATAAGAGTAAAAATCGATATCGGAATTTTTAGTAGACGAA
TGATGCGTTTAAACGAGGCGTGTGTGCGGAGTGAAGTGATTGAATTTTCTGTTCTAGTTAAACCGTAAAACCCAAAAC
ATCTTGAGATCGCAGATTGTGCGAGAAAGCCATGGAGGACGATCTTCGACCGAGTACGATGTGGTCTGCTGGGCACAGG

mmc4.txt

AATGACCGAGTCCATTGTTGCCGCCGCTGCTAGCAGCAATCGGCAAAAAGGTTCTTCACCTTGACAGCAACGAATATTACG
GTGGTCTTTGGGCAACATTCAACTTTGACGGCCTCCAAAAATGGATAGAGGATCTCAAAGCATCGAAAACCGAAAAACAGC
GATGTTGGTGCCGAAGTGGAAGAAGGAGAAAAATTCCTTAAGGCTAGCAACCAATATTCTACAGTTGAGAATATCGAGGA
AACATGGTTCATCGCTAACGATGCTGATTTGCCTGTGCTGTGACGAAGGATACCCAAACGGATGGAGCAGGGAGAAGGA
GCTTCGAGCGAAGATGGTAAAAAATCGGGACGAAGAGCGAGCGGAGAAAAAAGAGCTGACCAAGCATTGGTCGATAGAT
CGCATAAAGAAAGAGTACAGAAGATTCAACATTGATTTGGCACCAAAACTGCTGTTGCGGAGAGGCGAACTGGTAGAACT
TTTGATATCGAGCAACATTGCGCGTTACGCGGAGTCCGCGCTGTGTCGAGAGTCCGCACTTTTCATGGAAGGCAAACTCA
CCCAAGTACCTTGTTCAGGGCTGACGTATTTGCCAATAAGACTGTGAGCGTCATTGAGAAGAGAATGTTGATGCAACTT
CTCACCTCTTGTCATGGAACAAGGAGCCGATAGTCCTGAATTTGACGGATTCCGTGACAAAACGTTCTAGAAATATCTCAA
TACCAAAAAATTTAACACCAATCGTAAAGCATTACGTGATGCAAGCTATCGCAATGGCGACCGACAAGACTTCATGTCGCG
ACGGAGTTGATCGTACGAAACATTTTCTGAATAGTCTCGGTGATATGGCAATACTCCATTCTTGTGGCCCATGTACGGA
AGCGGTGAATTTGCCTCAATGTTTTTGGCGTTTATGCGCCGCTCTCGGCGGTGTGATTGTCTGAAACGCCAACTGGACGG
TGTCGTGCTTGGGGGAGACAAGTGCAAAGCTATAATAACGGGAAAAACAGAGATTGGCGCTTGAACATCTGGTGGTGGTC
AAGGACACTTGGCGCTGAAATCGTTGAATCTTTGGCGAACAGCAGATATCACGTGGTATCTTTATCACGGACAGATCT
ATAATGCAAGGGGAAAAAGAGAATTTGACTCTTCTGTATTATCCACCGGAGGAAGCCGGTCAAGAAGCCGTTACTATTAT
CGAATTAGGACCATCGACCAACGCATGTCCTCAAGGACTTTTTATGGTGCACATGACGTGCAAGCGAACAACAACTGCTG
CCGAAGATCTCGCGTACGTATTGAAAAAATCTTACGCACCGACCCCGTTGAGCCAACCGTCTTCTGTTATCCGACGGAT
TCTCACACGCAAAACCCTCCTCGCCGGACAACAAACATCTTCAGGACGCTAAGAAAGATGGAAGAGACGCTCTCGAAAATC
TTAAGCCTCACGTACTTTGGTCACTTTACTTTAACTTACCGGCTAGCGATATAAAGCTCAGCAACTCTGCACCGAACAAC
ATTATTTTATGTTCTGGACCGGATCTAGACCTTGACTTTGATTTTGTCTGTTTAAATCAGGTAAGGAAATATTTCAAGAGCAT
GTATCCGGATGACGATTTCTGCCACGAGCACCAGGATCCCGAGGAGATTTGTATTGGAAGGCGATGAGACGCTGGTCCA
AAGTTCGAGGGTGACACCGCGGTGAGTGACGGAAGCAAGACGTAGAGAAAGCAGAAAAGGATGAATGAGACGGATA
AAAATAAGAAGAAAAAAGCAATAAACAACGACAAAAAATTACAACAAGAAAAGAAGGATCGAACGTACGATTAATTC
GACAAACGATTACGAAGGAAGAAAAAAGCAAC

>CL4967Contig1|phosphoglucose isomerase

TGTCGCTCTGTCGACGAATAATGCAAAAGTCAAGGAATTCGGTATCGACGAGAAAAACATGTTTGGATTTTTGGATTGG
GTTGGTGGACGCTACTCCCTGTGGTCCGCAATTGGTTTGTCCATTTCTCTCTTATTGGTTTCGACAATTTGAGAAATT
GCTTGAAGGAGCTATTTTCATGGATCAACATTTCCGTTCCGCTCCGTTGGAGAAAAACGCTCCTGTAATACTCGCGGTTT
TCGGAATCTGGTACCACAATTTTTACAAAGCCGAGACTCACGCTCTGCTCCCGTACGATCAGTACATGCACCGTTTTCGCC
GCATATTTCCAACAGGGCGATATGGAAGCAATGGAAAATATGTCACGCGTTCCGGAGCAACCGTCAACTATTCCTGG
TCCAATCGTTTGGGAGAACGAGAACGAATGGCCAACTGCTTTACCAATTGATCCATCAAGGCACGAGAGTTGAGT
CCGACGGATTTTCATTTGCTCTGTAATTCGACAAAAACAAGGTCGAAGGAACACTTCACCACAAAATTTCTACTGGCGAAT
TTCTTGGCCCAAACGGAGGCTTGTGTAAGGGCAAAAGCGCTGCTCAGGCCAAAGACGAATTGGAATACTGGCATCAG
CGCCGATCCAGGTTAAACAGTTGTTGCCTCACAAGTTTCAAGGCAACNGACCGACCT

>CL4977-bisContig1|a disintegrin and metalloproteinase with thrombospondin motifs 16-like

CGGCCGGGCTGCCGTCACGAAGCAGCTCACTTATTCGGTGTGCAACACGATGAGGGCTATAATTATGGGGGCAATAACG
AATGCGACATGGAAGGATACGCAATGACACCAGCCGCACAACCTCAGCCGTACGCGTTTCAGATGGTCCAGATGCAGT
AAAAGATATTTCCAAAAATACTTCAAGTCCAGTGGGTCCGAGTGTGGACGACAAGCCACTATGGATGACTATCAGAGG
TGAAAAATTTACCAGGTAGATGGTTAACTCTAGATGGACAATGTAGAAATCTGGGATGGAGAGAGGCTGCGAGGTTCCGA
ACTTGCCGTTTTGTTTTGTCAAAGTTGCAAAGCTGAAAACCTCGGACGAATGTGTTCCCGATCAATGGCAAACCTCTGCCA
GGTACTAAATGCGGCGATCACAAGATTTGCGATGCCAATAGGGTCTGCGTAAAAGTGTGACGACCAACTTATTCGCTAAT
GAACAACCTTTTTCTTTCTCAATATCATCTGTTCACTGATTTTACCATTACGAAGATTATTATTGATGAGATAATTTCA
TGTAACAATAATCTGGCTGTATAACATTTCAATAAAACAATATTTCTCAGCTGTGCAACGCCAAAAAAGGAAAAAAGG
AAAAAAGGAAAAAAGGAAAAAAGGAAAAAAGGAAAAAAGGAAAAAAGGAAAAAAGGAAAAAAGGAAAAAAGGAAAAAAGG
CCTTGTGGCCCCCCCCCGC

>CL497Contig1|glutathione s-transferase s3

GCCACTGTACGATACATTGAGATAAATAATTTGTTATTTATTTATTCGTTCCATGTTGTATTCACTTAGGATTGATAAA
CTGAAGCTCTCTGATGAAACGTTTGTGTTAAACACACACGACGAATGAGAAAAATGCCAACTACAAGCTTACGTACT
TCCCGTTAAGGCTCTCGCCGAACCTATTCTGTTTCATCTTCGCCCATGCTGGGGTGGAGTACGAAGATGATCGCTTCGAC
CGCAACGATTGGCCCAAACCTGAAGCCTGAAATGCCATTCCGGCAAGTCCCGGTTCTCGAAGTGCACGGAAGGAGATTCA
TCAATCTTCGCAATTTGCCGCTATTTGGCGAAGCTTCATGGACTTGCGGGCAAGATGACTGGGAAAATCTTGAGATAG
ACGCTGCCGTGACACGATCCATGACTTGCGTTGCAAAATAGGGGCTTATCACTACGAAGCGAACGAAGACGTAAAACAG
AGCAAAATACGAACCTCTGACCAAGAGATAATACCTTATTACACGGAACGCTTGACGCCCCAAGTTAAGAAAAACGGTGG
TTATCTCGTTGGCGTAAATTTGACCTGGGCTGATTTAACTTTCTGCTGCTCTTCTCGACTACATCAATTTTATGACCAAGT
TCGACATAACCGAGAAGCAGGAACTCAAAGCCTTGGTCAAGAAAGTACTCGAATCTCAAAGATCAAGGCATGGGTT
GAGAAACGTCCCAAGTCCGAGTGTGATTGACAAGACCAACCACTAAATCGAGTTGTCAAACGTTCCACCTTTTTTTAT
CCATTTCTGCGAGTTAAATATATTCTTATAAAGTTGATCGTAACCATCAAATGGGTGAGCGTAAACAGATTATAAATTT
AGTATAGAAACCTTCCATTGTATTTTCCAATTCATAAACTAATTTTCAGATAAAAAAAAAAAAAAAAAAAAAAAAAAGG
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCGCTCGGCCGGAGCGTCAACATGAAAAAGCGTTTGTCT
AATTGGCATGGGCAACGGTCGAGAATATCGTGATGGAAAGATTTGGTTCCAAAGCAGCGAGAATTTCCGATTAGTTGCGA
AGCAGAAGTTTCATAGAGCAAGAGCAATACAGCAGTTGGCGATGATTCCTGCAAGGAAGCGAAACACCTGACTTTACA
CGTTGCTGCAAGAGAATTATTTGCAAATGCAAGAAATGAAGAAAAGTGGTGCAGCTGCCGCGCCCCAAAAAGCCTTTTTTC
CTTTCCACATCGATCTCCATCAGGTGCTGCGTATGGAGGTGAGCATTGTTACCACGCGCTTTATAACATGATGCACAGG
AGGAGCACGAGTCAGCAGTAAATCGACGAATGATCGACAAGCAATGC

>CL4992Contig1|glyoxalase domain-containing protein 4-like

AATGAAGCTCAACCTTCTGGCCAAGATCTGTTCAACACGTAACCTTGGAAGCTCCAATCTCGAAAAAGTATAGCCTA
CTGGAAGGATGTTTTGCAAATGAAAGTTTACGAGCAGAACGAGTCGAGTGTGCTTTGGGATATGGCGATCAACAAGCAA

mmc4.txt

AATTGAAGCTGGAAGCGATTGGAACGACAGTTGAACGTGCCAAAGCCTACGGTCAATTCGCTTCGGAGTTCCGCGATGCC
GAGCAGCCGGACATTAAGAAAAGAATCACCGATACAGGCAACACGATCTTGACGGATTTAATTACTCTCGATACTCCGGG
AAAGGCTTCGGTTCGCGTCATCATTCTCGCTGATCCGGATGGCCACGAAATCTGTTTCGTCGACGAGGAAGGTTTTCGCC
AATTATCAGTTCGGGACTATCCGAGCGAAGCGATTCTCGATAAATGGATCATCAAGGAAGCTGCGAGGACACTCGAGCAA
GCATAGACCCAAAAACCCGCAACGGCGATCTGCTCGTAAGATAATAAGCAAATAACTATTTCTTACAACAACAAAAACCG
AAGGTGATGGTTTTGTTTTTTTTTCGTTTAAACTCGAGTCTCGTTAAACGCGGTACTTGACGTGTACAGAATTATTTTCTT
GTTAATAAAATATTGAAAAAATGTCGGCCG

>CL4995Contig1|chitinase-like protein idgf4-like

AGTTTGTCCACTTGCATCGATAGAGACGTTTTTGTTCCTTAGGGCACGAGGATGAAATCTTTGATCTGTTTGGGCTGTT
GGCCTTCTGCATCGGTTTCGACCGTTGCGGTTGATATTACGAGCACAACAAAGTCGTTTGCTTCTGGAATTCACGTCAT
TCGAGCGACAAGGACCCAGTAAATTTCAAGTTGACGATCTCAGACCCGCTCTTTCTACTGCACTCATTTGGTGTATGGG
TATGCTGGAATAAACGCTGAAAAATCACGAAGCCATGCCCCTGAATCCGAATCTAGACACAGGAGCAGGCTACGCCTTCTA
TCGACTCGTTCCACAGCTCAAGAGATCCTTCCCGGACCTCAAAGTCTATCTGAGTATCGGGGGAACGCTGATCCTTACG
AGGAGACTCACAAAGTATCTGACGGTGACCGAGACTCCAGAGGCACGGCACAGATTCACTCAATTCATCGGTCGCTTTTG
AACGATTACGAATTCAGGCGCATTTGATCTCGCTTGGCAGTTCCCGAGGTCAAGGTCAAAAAACACCGAGGCACGTTTCGG
CTCGCTCTGGCACGGCATTAAAAAATTTGGTACGAAAATTCAAGGACGACAAAGAGACCGAACATCGCGAAGGTTTAC
CGCTCTGTTTCGCGATCTCAAAATTTCAACTAAGNTCCAGAACAAGCACTCACTCTGACATTGCGAGTGA

>CL4999Contig1|ribosomal protein s17

AGTTGATTGTTACGCGTCAGAGAGACGCGCGTTGCTGTTTCTCTTTCAAGTTCGGTCCGTGCCTTTTTCCGGTGCATT
TGCAAACATGGTTCGTGTCAGGACTAAGACGGTGAAAAAGGCCGACGGGTCATCATCGAGAAATACTACACTCGGCTGA
CCCTCGACTTCCACACGAACAAGAGGATATGCGAGGAAATCGCCATCATCCCAGCAAACCCCTCAAGAACAAAATCGCC
GGTTTCGTACGCATCTGATGAAGCGGCTGCGTCACAGCCAAGTGCGCGGCATTTCCATCAAGCTGCAGGAGGAAGAGAG
AGAACGCAGGGACAACCTACGTCCCCGAAGTTTCCGCTCTGGAGCACGACGTCATCGAGGTGACCCGGAGACCAAGGAGA
TGCTTAAGATGTTGGAGTTCAGTAACATTTCTGTTCTTCAACTTGTACAACCGTCGACTCATCAATACAGAAGAAATTA
ACGCGTTAACTCTCTCCTTACACGAAAATCTGTATGTTTTTACAATAAATACGAAACTTGCCAAAAAATGCGGCGG

>CL49Contig1|heat shock protein 60

GTTTCATGAAAGTGGAGGGGAACGTGCCCATGTGATAACGCAAGATCCTGTCCGCGCGACTATCTTCTCATTCTACTCAC
GAAACAACGTGCGGCCACGCCGTGACGATTTTACATATTTCTTTTCGATTTTTTCATCGGCTCTTCGTTTCGTCAAGCT
CCTAACAAAGATCCAAGATGTATCGGCTACCGAGTATGATGAGAACCCTAGCGACGCGCCAGATGCAGCTCCAGGCTCGT
CTGTACGCGAAGGATGTCGTTTTGGTCCGGAGGTACCGCCCTCATGCTTCAAGGAGTAGATATTTAGCGGACGCGGT
AGCAGTTACCATGGGGCCCAAAGGACGCAATGTGATTTGGAACAAAGCTGGGGAAGCCCAAAAATCACAAAAGACGGTG
TAACCGTCGCTAAGGGCATCGAACTCAAGGACAAATTCAAAACATTGGAGCCAACTCGTACAAGATGTTGCCAATAAT
ACCAACGAGGAAGCAGGAGATGGAACGACGACTGCGACAGTTCTGGCAAGAGCGATAGCCAAAGACGGTTTTGAGAAAAT
CAGCAAAGGAGCTAATCCTGTTGAAATAAGACGAGGTGTTATGTTGGCTGTTGACACGGTAAAAGCAGAGCTGAAAAAT
TGAGCAAGCCGGTAACGACGCCGGAAGAAATAGCGCAAGTTGCAACGATATCGGCGAACGGTGACACGGCAATCGGCACC
TTGATATCGGACGCGATGAAGAAAGTGGGCAAGAGGGGGTAATAACGGTTAAAGATGGTAAAACGTTGACCGACGAGTT
GGAAGTTATCGAGGGAATGAAATTCGACCGCGGATACATTTCCGCCGTATTTTATTAATTTCGACGAAAGGTGCAAGGTG
AATTTCAAGATGCTCTGGTGTGTTTGTAGTGAGAAGAAAATATCGTCGATACAGAGTATCGTCCCGGCACTTGAGATGGCA
AGCTCGATGCGTAAGCCATTGGTAATTATTGCTGAAGACATAGACGGTGAAGCTTTGACGACTCTGGTTTACAACCGATT
GAAAAATCGGGCTTCAAGTAGCCGCAGTTAAGGCGCCAGGCTTTGGGGATAACAGAAAAGCAAACGCTTCAAGACATGGCT
ATCGCAACCCGGCGGTATCGTTTTCCGAGACGATGCGAATCTTATTAATAATCGAGGACGTACCCGCCAACGCACTTTGGACA
AATCGGCGAAATCGTTATTACCAAAGAAGACACACTTTTGTGAAAGGCAAAGGAACCAAAAGCAGATTGACAGACGAG
CCGATCAACTGAGAGACCAATCGCGGAACACCTCCGAATACGAAAGGAAAGAACTCCAGGAACGCTCTCGTAGACTG
TCCGCTGGTGTGCGGTTTTGAGAGTCGGTGGCAGCAGCGAGGTGCAAGTTAACGAGAAAAAAGATCGTGTTACGATGC
CCTTAATGCTACACGTGCTGCTGTCGAGGAAGGCATTGTTCCCGGAGGTGGTACCGCTCTTCTCAGATGTATTCCCGCTC
TCCAAGCCCTGAAGCCATCGAACAAATGACCAAGCAATGGGAATCCAAATCGTAGCGAATGCTCTGCGGATGCCTTGCCAA
CAGATCGCCCAAAACGCTGGTGTAGACGCGAGTCTGGTGGTGGCGCAAGATCTGAAGGAAAATGGGCTACGACGCAAT
GAACAACGAATACGTAACATGATTGAGAAAGGAATAATAGATCCTACGAAAGTGGTGCATACGAAAGTTGACCGACGCG
CTGGTGTAGCGTCTCTGCTGACGACTGCCGAGGCTGTAGTGGACTGAATTACCGAAGGAAGAACTCCGGGAATGGGTGG
TGGAATGGGTGGCATGGGAGGAATGGGTGGAATGGGTGGTATGGGCGGCATGGGAATGTAAAAACCATTTGTTCAAAGACT
GAAAAACTTTCAGAAAGAAAACAAAAAGTTGGTTGACGAAAAAAACAAAAGGAACAGTTGCATTGGTGAAGAAATCGAA
ACCAGGAGCGCATTTGAGTTACAGTCTTTTTATTTTCTTTTGTTCACGAGTTCAACCAAACCTTGCCATTTGTGCGGAG
TCTTACGTCCATCTGTTTCATTAACACAATTTTTCTTTTTCTACGACAACGCTACATTCTCGAGTCACCGGAAGTCG
CTTTCAATCACAAAGAGTTTCAAATAAAAAACAAAACAGCTTCGTTTTCCGCCCATTTTAAAAACTCACTGCCCATCGACGT
TGTTCATTTTACCAAGTTCCCTTGTAGATTAACACACGGAGTCGTAGCTCGAGTTTCTGTTGGATAACTTTAGTCAAGC
ACAAAAAAACCCAGAACAATGGCAGCAACTGATGAGAAACCTGGCTTCAGGTCAATCATGTGCAAGCTTCTTCTCGCCA
AACTAAAAGAGTCTCGTCTGTAAATCCTTGAATATAAACAAATAATGCCTGTGCGCCAGGACCTTACCGATGCATCGACAA
CGTTTAAGTAAGATTGACAAATTTTGTAGTCCCTAGATATCTGTGTCGCGATATTGAATAGCATACCAATCTCTCGCCGG
TCATATACATTTATAAACGTAAGCTAAGAGTAGTTTAAAGATTGTTTGGAAAAAGAAAAACACAAACCCCAATCCAGGA
AATCGCATCGTCTGTATTTTCTGTGTTTTTAAATTCATTTTAAATGCAAAAAGAAAAATGGAATTCGTAAACGA
ATGAACGGTATACTGTTGAGAATGCAAGTGTAATAATGTTATCGTGTGCTACTTGATATGACATGAAATAGAGGACTCGA
GTTCTATGTTAACTTTTTTTTAAACCATTAATGTTTATTTTTCACATTTAAGTCTAAATAAATGTACGTTTAAATTA
AAAGAAAAAATGTCGGCCG

>CL4Contig8|60s acidic ribosomal protein p1

TTGGATCGTCGCAAGACGGACAGAAGCGAAAGCAATTTGCCAAAAATGTTTTCATTAATCAAGAACGAAAGTTAGAGGTTT
GAAGGCGATCAGATACCGCCCTAGTTCTAACCATAAACGATGCCAGCTAGCGATCCACCGAACGTCACCCAATCAACAA
TAAATGTGACCAAGGCTGAGCTTGCTTGCCTTACTCCGCACTTATCTCACCAGTACGATGTGCGGTTACTGGCG

mmc4.txt

AGAAAAATCCAGACCATCTTGAAAGCCGCCAACGTTGATGTCGAACCTTACTGGCCTGGCCTTTTCGCCAAATCCCTCGAA
GGTGTCAATGTCAAGGATCTCATCACCAACATCGGCTCCGGAGTAGGAGCTGCACCAGCTGCTGGCGCCCCAGCCGACG
TGCCGCCACCGCAGAGGCTGCGCCAGCCAAGAAGGAGGAGAAGAAGGAAGAACCCGAAGAGGAATCCGACGACGACATGG
GCTTGGGTTTTCTTCGGTTAAACTCAGGTATCGTCGGTGACATCATTTTTACATTGTAAATGACAAAACAATAAAAAACA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACTTGTGCGGCCG

>CL5029Contig1|udp-glucose:glycoprotein glucosyltransferase-like

ACATGGATTTGTTGTGGGAGGACGAAAAAGCTCGGGACTGTGGGACTCGATTTTCGAGGACCTTCACCAATGCCGACGAG
TCTGGAGAATCGGAAGAGAAGCTCAATATTTTCTCTCTCGCTTCGGACATCTGTACGAGAGATTCTTGAAAATTATGAT
GCTCAGTGTCCATAAAAAACATACCAAGACACCTGTTAAATTTTGGTTTCTAAAGAATTACTTGTACCCGACCTTGAAGAATT
TCTTGCCCCAAATGGCCAAAGAATATGGTTTCGAGTATGAGCTCGTTCAATATAAATGGCCCAGATGGCTTCACCAACAA
ACCGAGAAGCAACGAACGATCTGGGGCTACAAAATCTTGTTTCTCGATGTCTCTTCCCGTTGGACGTTAAGAAATCATT
TTCGTCGATGCTGATCAGGTGGTTTCGAACCGATCTCAAGGAACCTCGCTAGTCTCGATCTCGAAGGAGCTCCCTACGCTTA
TCCACCGTTCTGTGACAGTCGAACAGAAATGGATGGTTTCAGATTTTGGCGACAAGGTTACTGGCGAAATCATCTCCAAG
GACGTACTTATCACATAAGCGCTCTTTACGTCGTCGATTTTGAACGTTTCCGTCGTATAGCCGCCGAGATCGTCTGAGA
GGACAGTATCAAGCCCTCAGTCAAGATCCCAACAGTCTCTCGAATCTCGATCAAGATTTACCAACAACATGATCCATCA
AGTTGCCATAAAAACTACTGCACAGA

>CL5042Contig1|aldose 1-epimerase

GATTTATCAGAACACGCAGCCTGAACACATAATAACGAACGTAGTTTCAGGGCGTAAAATGCGTGTGCAGAAGTACAATT
TCCCGGACACCGTTGTCTGGAATCCTTGGCAAGAGAAGCTCGAGATATTCAGATTTTGGTGACGACGAATTTCTAAT
ATGATTTGCGTCGAGAGCGGACAGTCAGTAGCCCCGTTATTCTTTTGCTGGCACGGCTTTCGAAGCTAGTCAAATACT
TCAGGTGATGTGAGTGGAGGGTTGCCGGAGGAGCCTCTTCCAACTCCCAACAACCCGAATCGTCAAGCAACCAACAGCA
GCAGCAGCAGCAGCAACAACAACGCGACTAACACACCAGCAGCAGCAGCAGCAGCAAAAACAATAATCCAACAATATCT
GCGTCTTCGTTGTCCACGGATATTGGAGGATCGTCCACCGGACTGTGGGGACCCAGACCACCGGGATGGCTTTACGGTCC
ACCACCGACCGAACCAATTCCATCGAATCCCTCTTCCCATACACCCCATCATTTGCATCATCATCACCATCATCATCATT
ACGCTCATTGCATTGCTCAAACCTTGCACTATTTGCTCCCTCAACCTGTGAATTTTAACTCTAACTTTTTTTTTCTTCTCA
TCTTTCGTTATTTTGGTTGGAAAAGATCGATATTTTGTGAATTGCAAGAAATTTCTGGAACGCTCTCTGAGGAAAGAAAAT
TCTTGCCATTCCAATCGGGAAATTTCTAAAAATATTTTCAATTTACGTGCTCAACTAAATATCGACGATGGATCTCTCTTC
TTAATTATACAGCTCAAGCTTCTCCAACAGATTTCCCG

>CL5063Contig1|60s ribosomal protein l24-like

CGGCCGGGGACGAACGATTTTCTAGTAGCGGATTCTCTTCTTGCACTGCCCCATCGATCTTGAGATGTGGCATTTTG
GCGGTACGCTTTACAGGGGTACGTCGTAGTGTTCCTGCCTAAAGCAAGATGAAGATCGGGCTTTGCGCGTACAGCGGAT
ACAAAATTTTATCCGGGCCATGGCAAGACCATGGTCAAAGTTGACGGAAGTCATTCACTTTCTCAACTCGAAATGTGAG
TCCGCCCACTTGATGAAACGCAACCCAGAAAAGTGACATGGACTGTCTTTACAGGCGCAAGCACAAGAAGGGGCAAGA
GGAGGAGCAAGCCAAGAGGAGAACACGCAGAACTCAGAAGTTCAACCGTGCCATCGTCGGTGCTTCTCTCGGACATCC
TTGCCAAGCGTAACATGAAACCAGAGATCCGTCAGGCTCAAAGAGAACAAAGCTATCAAGGCTGCAAAAAGAACAGAAGAAG
GCAGCCAAGGCGACGAAGAAAGCCGACGACCAGCCAAGGCAAAACCAGCGCCAAAACAAAAGATCTCGAAAATGCAAC
CGAAATCCGCCCCCAGAGTCGGAGTAAACGATAAACTTACTGTGAAGCTTGGAATGAAAAAATAAAGTGATTAGTCA
CTTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTGCGGCCG

>CL5067Contig1

CGGCCGGGGGTGATATTTATTAGCGCGCAACTTGTACAGCAGCAACAATGAACTGGATAATGATGAACGTGATAACCGAC
GCCCTGAGAAAAGTTACTGTGCAATGTATTGAGAAGAAAACCTTGAACATAGATGGGAGGATGTTCCGAGTTAGAGTGCC
GGAAGACAAAGATAGACGCAAGTTTGTGGAATCTTGTGTAAATGTGTGCCAGCGCTGAAAATTCCTGATACTGTGTTG
GCACCGACCAACCATCGAAAGATATATTTTCGTTTCTGTTAGTGAATTTCCCGAACGATTGACCATGTTAAAAAATTAC
GAAAACGCAATGCCAGTCCCAAGTGAAAGTCTACCAAGTACTTGATCCAAAGCCGGTCTATACATTATGAGAGTGAATCCCAT
TGATAGATGCATTCACTAAAGTTGCTGTTGACTCAAACCTTGATTCGTTCAACGACATACTGCGAGCCGTTTCTGCCACA
TCGCGGATGAGGCGCCGGGCGAGGTAGCGAAATCATTGAACTTGGATCTCTTGATGGTCGGAATATCGGAATAGTTGTC
GACGTCGCGAGCAAAAGTTATATAAAAGGATCTACGAACATATGGGAAGCTGTGGAAGTTGATCGTTAGGATCTGCGGAT
TTCGTAACCTCGTTGGAAGCGAGACTGACGGGGTTACGTCGCGCTGAATTTCTGGAAGTCTCATAATCGAAATCGATG
CTCTGCATCGGATCGCGGACATCTATTCTGCTGATCTATTTATACAGACTCTTTGGTGGAAGAATAATTCGCTCCCCATGA
AATCATCGCTTGTCTTCTTCGTTGAGACTTCTGCAATGATTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAATAAAAAAAAAAAAAAAAAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACCTTTCGCCCCCT
CGCCCCG

>CL506Contig1|plasminogen activator inhibitor 1

AATTTGCGTCGAGCTCCGATCGTCTCCACACACAAAAATCATTTTTGTTTCTCGCTTCAATGAAATTAATTGGCGCGTCG
TACTGGGTAACGGTGCTACGAATATTTTCGAGCTCATAAAAACAAAAGAGTGATTGATTGTTGTTCAAAATTCGCGAC
TCATCGAGAGGAGAAAAAAATGTGGATTTTTCTGTCATGCTCGTTTGTGTGTTGCTGCTGTTGACCGGAAGTC
GCAAGTCCAGTTCGCGATAATTACTTCAACGTCGAACTATTGCAGGAGGTGAACGAAGAGAACGACGGAATGTATCGT
CTCTCCGTTGAGTGTAAGTTGCTTGTGATGACTCTCGTCGAAGGAACCGGTGGAAGAACTCGACAAGAACTCTTGTGCA
CTTTGAGACTGCCACGGAAGTTTCGCAATACGAGAAGCTGCCGATCGCGCTTTGGCACCGTTTCGCGAACCCAATCAG
GGAACGGAATTAATTTAGCAACGCGGATTTGGATAGCTAAAGGGCATCAAGTTTCCACCAATTAATCACAATGCCCTGCA
GACTTATTACTCCGGGACATGAGATCCCTCAATTTAGAGATCAATTCACGCGGCAACACCACTCAACGAATGGGTAC
GGTTCTCGACAAGAAATAACATCCGTTCTTGTGATCGCACCAAGTTCTATAAGTGAGGACACTTTATTCTTGTTGGTTTCC
GCGATTCAATTTCAAAGCCAATGGCTCAAAGCTTTGACGAAAGCGCAACAATGTCTCGTTGTTTACGGTGCCCGAGCT
CGGGTGCCGACACGTCGCGATGATGCAAAATACCGCTACGTATAAATTTGCTCGATGGCGTCTCTGCAGGCTGAAGTCC
TCCAACTTCCTTATGCGGATGGAAAATTTGTCGATGCTCATTTTTCTTCTTATCGCGAGGGGCTTCAAAACTTGCAGGCT
CTTTGAAAGACATGTCATTCCTCACTCCACTATCTCGCAACCTAACCGACACCGAATTAATCTCGTGGCTTACC
CAATTCAGTATACCAACCAATTCGATTTACGAACCTGCACGCGTATGGGAATCAAAGATCAATTTTCGATCTGAGCG
CTAATCTTCGTGGTATTGTGCCAAGAAGTTCTACGCGAGTCGAGAATGTTTTGCACGACGCGAAGATTGAAGTGAACGAG

mmc4.txt

GTCGGAACTGTCGCCTCGGCAGCAACAGGACTTGCTGCTACCTTTGATGGGCAGTTCTTACGAGACTTTCTTATCGA
TCGTCCATTCTCTTACGATCGTGGATCATGCATCTCCATGATACTCTTCGCTGGTCGCGTAATTTACCTTGAGATG
CCATCACGATAAACTCCAACGTTTTTATTCACTATATTTTTATTGATACGCTTAGGACGACGAATTTTTTCGGTGAATAAA
ACCTCACGAGAAATATTTAAGAGAAAAAAGAAAAATCAAAGGCTACGGGAAAGGATTGTCGTTACAGTTATAATCGAA
AAAGATTGTAAATGTATTTTTGACGACAAATCCATATTTGTAAGACACTGTGACAAAAATAACACAACAACAAAAACGTT
>CL5081Contig1|aminopeptidase n-like

AGGAGCGATGGAAAAATTGGGGTTTAATTACTTACAGAGAACTGCAATGCTTTTTGAAAAAGGCATTTCCACGAGCAGCA
ATCAACAGCGAGTCGCTACGGTCGTTGCTCACGAATTGGCTCATCAATGGTTCGGAATCTCGTTACTCCGAGCTGGTGG
ACCGATCTATGGCTCAACGAAGGCTTCGCCAATTACGTGCAATACCTCGGAATGAATTCGGTCAACACAGAATGGAAGGT
CCTCGAGCAGTTTATCGTCCACGACTTGCAACCTGTTTTATCTCTCGACGCCCTCGAATCGTCTCATCCAGTCTCGGTG
AGGTTGGACATCCGGAAGAAATAAGTGAAATCTTTGACAGGATTTCTGACGCTAAAGGCGCCTCGATCATTCCGATGATG
GATCACTTCTTAAACGACAAAAGTCTTCAAGCAAGGTCTCACAAATTAATTGCGCACCAAGCTTATGGGAGCGCCGAACA
AAACGATCTCTGGGAAGCATTGACGAAACAAGCTCGGAAGGATCGTGTTTTGAGCCGCGATGTTACGGTCAACAAATTA
TGGACACGTGGACTCTGCTAACTGGTTTTCCCGTTATTACCGTTACAAGGAATTACGACGGTGGCAGCGTGAAATTTATG
CAAGATCGATTCACCATTGCAAAATGCAACAACCAACGTACGAAGAATCCGAAACCTTTCTGGTGGGTTCCCATTAACAT
ACACGAAGCGAGGCTGTTCTGATTTCAATCGCACTCAACCATCCACATGGCTGCGAGCTCAGANATCGATGACTTTGCA
AAATNTCGGTGCGAGTCGATCGCAGTGGG

>CL50Contig1|long form-like

AACCACTCGTCTCTCTCTCTTTTTCTCTATTTATCCGACTCTCTCACTCTCTCTTTTTCTTCTCTATATATTTTTGTT
GCTTCGAATCCACACAAACAGATAGACGCTCCATATCTCGGTACAGAGAAGAATTTGACGGCGGAGGGACGGTCTCTG
GTGAAAAAGAAAAATCAACGATAGGATACGAGGAAAGGTGAAAAAGCGAGGATCGAGGAGAAACAGGAAAAATGTG
TCTTCAGCGGTGCATCAAGCTAAATCATCCAAGTACACTTACCGCTCAAGCGGGGTGGAGGATCGGCCGACGTGAGCAT
CGAGTACAGCGCCGACCTGACCGCTCTCTCCAGGCTCGAGGACAAAATTCGCCTGCTTCAGGATGATTTGGAGTCCGAGA
GAGAGTTGCGTCAGAGGATCGAACGTGAGCGCGCCGATTTAAGCGTGCAAGTAATTCAGCTGTCCGAACGCCTTGAAGAG
GCCGAGGGTGGCGCCGAATCTCAGTTTGAGATCAACAAGAAGCGAGACACGGAACTTTTGAAGTCCGTAAGCTTCTCGA
AGATGTACATCTCGAGAGCGAGGAAACCGCTCACCATTCTGCGCAAGAAACACAGGAAATCGTGGTCGATTTCCAAGATC
AGATCGATCAGCTGTCAAAGGCTCGTGCTAGATCTGACAAGGAAAAATCGAAATCCAACAAGAAGTATACGAGCTCCTC
GCCAGCTCGAAAGTCCACGAAGGAGAAGTCCCTTTGATGAAAACGGTTGAGAACTGGAGATTCACGTTTCTGAAT
CAATGTCAAATCGAAGAATTGAATCGCACGATAATCGACATCACGAGCCACAAGACTCGTATCTCACAAGAGAAATATT
GAATTGGTCAAAGAAGTTCAGGACTTGAAGGTCAATATGGAGAGCATAGTATACACGAAGACCCAATTAGCTAGCCAATT
GGAAGACTCGCGCGTCTGCTCGAAGACGAAGATCGTCTGCTCAATGATGGAAGCATCTTTCACCAAGGTGCAAAATCG
AATTGGAATCGGTACGCGTTCAACTTGAGGAAGAGTCTGAGGCTCGTCTGGACCTCGAGCGTCAATTGGTCAAGGCTAAC
GGTGAGGTCTCCATCTGGAGGTCCAAGTATGAGACCGAAGCTAACGCCCGTGCTGAAGAGGTGCAAGAATTGCGCCGCAA
ATACACCTGCCGATCCAAGAACAAGAGGAACAAATTGAGAATCTTCTCGTTAAGATAAACAATCTTGAGAAGCAGAAAT
CTCGTCTCCAATCCGAGGTGCAAAATCTCATCATTGACTTGGAGAAGGCAAAATCAACTGCTCGGGAGCTTCAAAAGCGC
GTGGAGCACATGGAGAAGGTCAACATCGAATTGAAATCGCGCATTGAGGAAACCGTCACCTTTACGAACAAAGTCAACG
CGATCTTCGCAACAAACAACAGGAACTGATGCGTTGCAGTGCTGAATTTGAAAAAACTCGTGACCTCAAGGACAACCTTG
ACGTGAAAAACAAGAAGCTCGGAGATGACTTGAACGACGCCAAGAACCAACTCGCTGACATGAACCGTAGACTCCAGAAC
TGGAACCTCGAACTCCGTCGCTGAGAGAACGAGCGCGAAGAACTTGTGCGCGCTACAAAGAAGCTGAAGCCGAGCGTAAA
GTCGAGGAACAACGTTTCGAGAGATTGTCTGCTGAATTGAGCCAACCTCGTCATGAAGTGGAGCGTCTGCTCGCCGAGAA
GGACGAAGAGATCGAAGCTATTCGCAAGCAAACGAGCATCGAGATCGAACAGTTGAACGCTCGCGTTGTCGAAGCTGAAA
CGAAACTCAAGACCGAAGTACAGCGAATCAAGAAGAAGCTACAGATTAGATAACTGAACCTTGAGCTTTGCTCGATGTT
GCAAAACAAGAACAATCTTGATCTTCAGAAGACGATCAAAAAGCAGTCTCTCACACTCACGGAATGCAATCTCATTACGA
CGAGTTTCAGCGCCCAATTGTCGTTGACCTCGATCAACTTGGCATCAGCCAGCGTGCCTACAATCTTTGACTGCTGAGC
TCGAAGAAATTCGCGGCAACTATGAATCCGCACCTCGGGCCAAGAGGACCGTCGAGCAGCAGTACGAGGAATCGGTGAT
CGAATCAACGAACCTTACGACGATAAATGTTAACATTGCGTCTGCTCAAAGGCAAAGATTGAACAAGAATTAACAGCTCTTGC
CGGTGATTACGAGGAAGTCACAAAAGAACTTAGAGTCAGCGACGAAAGATATCAACGTGTACAGAACGAGTTCAAGCACA
CCGTGCAAAATTTTGCACGAAGAGCAAGAAGCTATCGTCAAGATCGAAGCTATCAAGAAATCTCTTGAGATCGAAGTGAAG
AATCTCTCAATCCGTTTGAAGAGTTCGAGGCTAATGCGATCGTTGGCGGCAAGCGCATCATCAGCAAGTCTCAGGCTAG
AATCCGCGATTTTGGATTCACCAACGCTCCCGATGCCAATGTTCTCGTCTGCTATGCACGAACCGATCCCAACGCCTC
TAAACCGCAGCACGGCATCACTGCCTTTATCGTTGAAAAAGACATGGAAGGCTTCAGCACGGCCAGAACTCGATAAAC
TTGGCATGCGCGGATCCAACACAGGAGAATTGGTCTTTGAAAATTGCAAGTTCCGATTGGCAACGTCCTCGGAGAAGTG
AATAAAGGAATTTACGTTTTGTTGAGTGGCTTGGATTTGGAACGACTTGTATTAGCAGGTGGTCCGCTCGGCGTCATACA
GGCTTGCTGCGATGTTGCCCTCGAGTACGCTCATACGAGAAAAACAATTTGAAAAGCGAATAGCGGAATTTCACTAATTC
AGGGAAAAATTCGGATTTGATACAAAGTTGAGCACAGCACGAAGTTACTTGATTTCCATAGCACGTCATGTGACAAC
GGACACGGAATCGTAAGGATTGTGCCGAGTGATTCTCTACGGTGCTGAAACAGCAACGAAAGTTGCTTTGGATGCGAT

>CL510Contig1|isovaleryl- mitochondrial-like

AATTGGGGGACTTGGGCCTGCTGGGAATCACAGCAAAAGCTGATTACGGCGGCACCGGTGGTTTCGTAATTTGGACCACGTG
ATAGTCATGGAAGAACTCAGTCGTGCTTCGGCAGCGATAGGCTTGAGTTATGGTGCCCACTCGAATCTATGTTTGAATCA
GATTCACAGAAATGGAACGGAGGAGCAAAAGCTCAAGTATCTGCCAAAGCTGTGCAGCGGAGAACACATCGGTGCTTTGG
CGATGTCGGAACCTGGCGCCGCTCCGATGTCGTGTCGATGAAACTGCGAGCAGAAAAACAAGGAGATTACTACGTTCTC
AATGGCAATAAAATTTTGGATCACCAACGCTCCCGATGCCAATGTTCTCGTCTGCTATGCACGAACCGATCCCAACGCCTC
TAAACCGCAGCACGGCATCACTGCCTTTATCGTTGAAAAAGACATGGAAGGCTTCAGCACGGCCAGAACTCGATAAAC
TTGGCATGCGCGGATCCAACACAGGAGAATTGGTCTTTGAAAATTGCAAGTTCCGATTGGCAACGTCCTCGGAGAAGTG
AATAAAGGAATTTACGTTTTGTTGAGTGGCTTGGATTTGGAACGACTTGTATTAGCAGGTGGTCCGCTCGGCGTCATACA
GGCTTGCTGCGATGTTGCCCTCGAGTACGCTCATACGAGAAAAACAATTTGAAAAGCGAATAGCGGAATTTCACTAATTC
AGGGAAAAATTCGGATTTGATACAAAGTTGAGCACAGCACGAAGTTACTTGATTTCCATAGCACGTCATGTGACAAC
GGACACGGAATCGTAAGGATTGTGCCGAGTGATTCTCTACGGTGCTGAAACAGCAACGAAAGTTGCTTTGGATGCGAT

mmc4.txt

ACAAATTTTGGGTGGTAATGGCTACATCAGCGATTACCCAATGAGCGCCTTTTGGAGGACGCAAACTCTACGAAATTG
GAGCAGGAACTAGTGAAATACGAAGGATGGTGATAGCGAGAGCAATAACCGAAGAATATTCATAAAATTTGATCGCCAC
TGAATCCCACACAAAATTTGTCTAAAACAACTACCGCTGAGTCTATTTTTTTACAGTGCAAATAAAAGTTTCATGATTTT
TGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCGCTCGGCCCTCAAG

>CL512Contig1|PREDICTED: endoplasmic-like [Nasonia vitripennis]

AGTGTGAGAAAAACAACGGCGCGTTGCGTTTATTTTCATCGCGAAAAGTAGCCAAGCTTCCAATATTTTGGCCCGCGTGGC
TTTCCTCCGCTCTTTGCAGTTTTAACATTCGCTTTGGTTATTCGATCCTCTCGAAAGAGGAGAAACACGAGCTATGAAAA
AATTAGCGTTCTTAGCCCTCGGCTTGTCTCGTCGCCGCTTGCCTGTGCGGAGGAGGAAGCTATAGAGGATGAACCG
ATCGAGCTTGAAGCGGCGACCGTGGACGGGGATTTGGGAGCGAGCAGAGATGCCTCAAAGACCGATGACAACGTCGTGAA
GAGGGAAGAGGAAGCAAATAAAATTGGACGGCCTGAACGTCGCGCAGATAAAGGAACTTCGAGACAAGTCGGAAGGTTT
ACGTTCCAGACGGAAGTTAATAGAATGATGAAGCTCATCATAAACTCGCTCTACAGAAACAAGGAGATTTTCTCAGAGA
ATTGATTTCCAACGCGTCCGACGCTCTGGACAAAATTGATTGCTCTCGTTGACGGAGAAGAAGCTGCTCGACACTAATC
CCGAAACGACAATAAGGATAAAGGCGGACAAGGAGAACAAAGTGTGAGTATCACGGATTCGGGCATCGGCATGACCAAG
GCCGACCTCATTAACAATCTGGGCACCATCGCCAAATCGGAACCGCCGAATTTCTGGGAAAAATGCAAGACTCCGCAAA
TGCCAGGATATGAACGACATGATTGGACAGTTTGGCGTTGGATTCTATTTCGGCCTTCTCTCGTCGCAACAAAGTCGTCG
TCACCACCAAAACACAATGACGACAAACAATACATTTGGGAATCGGACAGCAGTAGCTACAGTATCGTCGAAGATCCTCGC
GGCGACACGCTCAAACGTGGAATACCATCAGCCTGATGCTGAAGGACGAAGCAGCAGATTTCTGGAGCCGGACACGAT
AAAGAACTCTGATAAAGAAATATTCTCAATTCATAAACTTCCCGATATACTTGTGGAACAGCAAGACGATCCAAGTGGAGG
AGGAGGAAGAGAGTGAGTCTTGAAGGCGGAGAAAAAGAGGACGAAGCTGTGGAGGAGGACGAGGAAGTTAAGGTTGAG
GAATCGAGCGACGAGGATGAATCTTCAAAGAAAAAGAAACGGTGGACAAGACGTTTGGGACTGGGAGCTTCTGAACGA
TTCGAAGCCGATTTGGACGCTCAAGCCCTCGGAGGTCGAGGACAAAGATTACAACGAATTTTACAAAGCTCTGACGAAGG
ACACGCGAGGAGCCGCTCGCGAGAGTGCACTTTGTGGCCGAAGGCGAAGTGACGTTCAAATCTTGTGTTCTGTCGCCAAA
GTACAGCCGAGCGACAGTTTCAATCGTTACGGCAGCAAGCCGACAACATAAACTGTTTGTGAGGCGCGTCTTCATAAC
CGACAAGATAAACGACATGATGCCAACTATTTGTGCTTCATCCGGGAATCGTCGACAGCGACGATTTGCCGTTGAACG
TATCGCGGAGAATCTCAACAGCACAAGCTCATCAAAGTTATTAAGAAAGAAATTGATTGCAAGGTTTTGGACATGATT
AAGAAAAATCTCGAAGGAGGACTACGAGTCTTCTGGAAGGAATACAGCACAACATCAAGTTGGGAGTTATCGAGGACGC
GCAGAACCGTGCGCGTCTCTCAAGCTCTGCAGTTCAAATCGTCCAAGGAAATACTGAACGAGCCTGTGCGACTACGTG
TCGCGTATGAAGGAT

>CL513Contig1|low quality protein: staphylococcal nuclease domain-containing protein 1-like

TTATTTCCGAGATAACGGAGGCTCTGCACTTTTACGCTCAGTACGTCGACCAGCGAAGTATGGTGAAGGACTTTTTTGGC
GAGACTACGTCAGGAGCTTGAGACTAATCCACCGTTGCCTGGTTCTTACAATCCCAAGAGGGGGAGGCTCGTTGCGGCGA
TGTTTACGGGAGACGATCAGTGGTATCGCGCCAAGGTTGAGAAAATATCTGGAAGCAATGTGAGCGTGTCTACATCGAT
TACGGCAACAGGGAAGTCGTTAACGTAACGAGAGTGGCGCCACTGCCAGCTGAATTCGCCGGCGACAAGCCGTACGCCCA
CGAGCACATCATCGCTTTTGTGCAACTTCCCGAAGACAACGATGACAAGAGAGCAGCGATAACAGCGCTCCAGGAAGATC
TCGAGGACAAGACTTTTGTGCTGAACGTTGAATACAAAGTCAACGGGATTCAGCTGCGACGTTACTGGACGCTACGACC
AAGGACGATTTGGTGAAGGCTCTGGTATCGGAAGGATATCTCTCGTGAGAAAAGGGACAGAAGAAGTTCCGCGAAATT
GCTGAGCGAGTATCGAGCGGCAATTGCAGGATGCTAAAAAGAAATCACCGGCTGATCTGGCAGTACGAGACATAACGGGCG
ACGATGGCGGTGAGTTTGGTGTGAGAAAATAAAGGCCTCTGACAGAATGAAATCTCGAGATGGCGTGAAGGAAAAATAAA
ATTGAGAAAATAAAGGAGATAAAAAAAGAAACGTTAAATACTTTTGGGGAAGAAAAAAGAAGGAAGCAGCATAACTAT
AAATAACAAGGAGCAATTCGGAAGGAGGATCAAAATACTATAGACAGCATAAATCATAAATAT

>CL515-bisContig1|c-type lectin 27kd

ATCGATTTTGGCTTTTAAATAGCTGCGGAAAAATCATGGAAGACGTTTCTCAACTGCTTCGCTATCCTCTTGGAGTAAAAA
ATCGACGAAATTCGATTGATGTTAAGACGAAAGAGTTTTTGGACTGAATATTCATAAATAATGAATTTTTATCAAAAAAT
TTCAAACCTCGAACGATTGCCTTGAAGTATTTACTGATTTTGTGTTTCCCCCTTTGTGAGGACCGAAACAGTTCAATTT
CAGAGGCCACAATACTTCTTACGCGGCCACGTGCCGACCCATTGGAAGCAAAAGGTTGATTGGCTCGACGCCCGAAACA
TCTGCAGAGAATATTGCATGGACCTTGTCTCGCTGGAGACTCAGGAAGAGAACAAATATGATCTTCAAGCTCATCCAACAA
AACGATGTACCTTACATCTGGACGTCGGTCTGTGTGATTTCAAGGTTGCGAGAACCCTGTCGACCTCGAGCCGAA
GGCGATCTCGGATGGTTCTGGTGGCAAAACCGTGAAGAGATATCGCCGACGAACCCAGACCGGTTGGACGATACA
ATCCATGGTTCGAGACTGGCCACAAGAAGGTTCTGTCAGCCGACAAATGCAGAGTTGACATCAACGGAACGACCGAAGCT
TGTCTGTGCGTTCTGAACAATGTTTACAACGATGGTATCGCGTGGCAGCATGTGCGGTGTTATCACGAGAAACCTTTCTG
TTGTGAAGATTCGGAAGAGCTCTTGAAGTACGTCGCAAGCACCAACGCTGGACTTCGCCTTTAACGACTTAATTTTGTG
TTCTTCAACGATCACCTTTTCCACCTCGACAGTCTCAAAATTCCTGCAATTTCAATGACTCAAAGTCGAAAATCGGTTG
ACCAAATCCTCATTTTTATTTGAAAACCAATTTTTTTATCATTTACCGGTTCTTCTGCTCAAAAAATGGGATCCAATTG
ATTGGCCTCTTCTTCTTCTTCTTCCACCCTCAACTGTGCTGCTATTCTTCTCTCTATTCTCTAATTAACGTGTTATTC
ATAATGACGCGACTAATTAATTTATGTACAGTATTTATTGATAGAAAATTCATGCCTGCTGTCCCTCTGTATATTTGCG
ATAAAAAACAAACAAAAACAACAAAAATAAACGAAAAAATAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG

>CL5158Contig1|lysosomal aspartic protease-like

TCGCTGGACCGGTCAAGGAAGTCGAGGCAATAAACAAAGCTATTGGAGCCACTCCCATAAATGGCTGGAGAGGCAATGGTC
GACTCGGTTTTGATTTCCAAATTCGCGAAAAATCGAATTCGTCCTTGGGGCGGAGACGTTTTCTTTACTGGTGAAGACTA
CATTCTTAAGGTCACCTTCAATTCGGCAAAACAATTTGTCTGAGCGGTTTTCATGGGCATCGACATCCGCCACCCACGAC
CACTCTGGATCCTGGGAGACGTTTTTTCATCGGACGGTATTACACCGAATTCGACATGGAGAAAGATCGCGTTGGTTTTGCA
GTAGCAAAATAGTTGATCTGAATCTTCTTACGATCAGAAACGATCGAAATAAATTTATTTTTACTCAGGGAGAGAGTCGC
CGAAGCTGCTCGTACGTTAGGCTCCCAATGCAATAGTTTTTCCAAAGTTGAACAAAAAAGACGTAACCTTTCTGTCGG
TTCATCGACTCTTTTACTATTTCACTGTAATAAACATTCGAATGTTAAATCTGAGATTATTGCGTTATATCATCGATGA
ATTGTGATAGAAATGAAAATACATTTAGAAAAATTTGTAATAAAAAAAAAAAAAAAAAAAAAAAAAACATGTGGCCG

>CL517Contig1|lipid storage droplet 2

GTGTTTCCCGGTCTATCGTGACGAACGGATCAGTTGCTACCACGAGTCTCGCTTTGAAATAAAACAATTCGGTAACAAA

mmc4.txt

TATTAATCGACTGGGAAGGATTTTTTCAACCAAGTGACAAAGCAAAACATAATCGCAAAGAATGGCAGATCCAGCTCAAAGT
CCATCTGCGCCAACTGCTGGCCACACTTCGAAGTACTCGATCGTGTAAAAATATACCGGTCGTACATTGCGCAATCGA
GAAAACGGGATCGACGTATTTCGTATCTCAAGGACTCGCATCAATTGGTCAATTGGGCTCTCAGTTATGCCGAGGCCGGAT
TACACTATGCCACTGCAACTGCAACACCCATAGCAAAAAAATTTGAGGACCAGATCAACACGGTCGATCAAAAAATTGTGT
CAGGGCCTGGACATCGTTGAGAAGAAAGTACCTATCGTTAAGGAACCAACGAGATTTACGACGCGGCTCGTGCAGT
AATGAGTACTTCCCTACAACCGACAATCGAAAAACTCGTTGCCATGAAAGAATCGGCGGCTCAACAAGCTACGACACTGA
AAGATGTCAGTATTGGGAAAGCCAACGAAATTTTAAATACACACTACGGATCACTTGCTATTCAAGGAGTGGACAATACG
AGCGTTCTCGTCAACAGATTGCTCGACCATTACTTCCCTGATGTTGAGAACGAAGACGAGTACCAGCACCTGTTTCTGC
GGATGAAAAACAAAGTACTCCACGCCGTTCAAACAGTTGGACAATTATCATCTAAAAACGGCGACTCGCGTTTACCACTCCG
TGTCGCGCAGCTGAAAACGTTGAAAAAAGAGGACGTCGCTGCTTACATTTCCAGTGTGTTTTGATTCTACACTTGACT
CATTTCTCAACACCGGCAACAAGGAAATTACCGACCACACCAACGAGACGAGCAATATAGCCTCGAGTCCAACGTCCGA
GAAGAAAGATCAAGAGAAAAGAGTAAACCAGCATCCGAAACTCAAATCCCGTTGCATTTTCGTATGGGAGAAAAATTTACA
TTTTTCTATATCTTTACGACACAAATTTTATGAGATATTTAGATTTTTTCTATATTTTTACACATCTTGAGACCTTACCTC
AGCCCCAGCTTTCGATGAGGATTGAATATTGTCATTCAAATCACGAGCTCGAACCTCCTCCATCGATCAGTTATAATTA
GGGGCTCAAAAAACAAAGCAAAAAACAACTTACAATACCGATGCCAAGAAAAACAATATAGTTTACAAACGTACTTGTAAA
TTTCATGTTTACCGTCAGTTTGAATAACCATGACGAGCACTACGTTCACTAACTCGA

>CL5186Contig1|f-actin-capping protein subunit beta

GGAGTATCTTCGGTCTATTTGTGGGACTTGATACACGTTTGTGGAGTCCACGAGAGAACGACCGGACGAATGGCTCATTAC
CAAGAAAAATCAAAGTTGCTGGGACTCGATACACGTTGTGGAGTCCACGAGAGAACGACCGGACGAATGGCTCATTAC
AACTCACTTCCACCGCATGCTGTGGCTACAAACGAATAAGCATGGCTCGGGGACCATGAATTTGGGAGGAAGTTTGAC
CAGACAGGTTGAGCAAGACGCGACGATAAGCGAAACGTCGCCGCACATTGTGAACATTGGTCGTATGGTTGAGGACATGG
AAAAACAAATTCGAAACACGTTGAACGAGATATATTTCGGAAAGACGAAAGACATTGTGAACGGTCTGCGGTCGTTGCAG
TCGTTAGCGGATCAGAGGCAGCAGGCGGCACTGAGGCAGGATTTGGCAGCGGCGCTTCAAAGGCGAAATGCGAACAACG
ATCCGACGTAACGCAAGAAAACTTCGATTACGATTGTGATTAGGGCCGAGAGAGGTAAAAAAAACGTAGGGAGGAGGGG
TGGACAAAAATAGCGGAGAGAAGGAAAAAATAATGATACAACAGAAATAACAGGAG

>CL519Contig2|pyruvate kinase

GATTTGCAGTTCGGTGTGATCAAGAGGTCGACATGATATTTGCTTCGTTCACTCGTAACGCCTCGGCGCTCACCGAAAT
TCGTGGTATTCTCGGAGACAAAGGAAAAAATATAAAAAATCATTTGAAAATCGAGAATCAACAGGGGATGACGAATCTCG
ATGAAATCATCGAAGCCTCCGATGGTATAATGGTCGCTCGAGGCGATCTTGGCATTGAAATCCCACCGGAGAAAGTATTT
CTCGACAAAAATGCATGATCAGCAGGTGCAACAAGGTCGGCAAAACCGTTATCTGCGCCACTCAAATGCTCGAGTCGAT
GGTCAAGAAACCTCGTCAACAGAGCCGAGTCTTCTGACGTTGCTAATGTCAGTTCTCGATGGCGCTGATTGCGTTATGT
TGTCAAGGTGAAAATGCCAAGGGTGAATATCCTCTGGAATGCGTCGCAACAATGGCGAATATTTGCAAGGAAGCTGAGGCT
GCAATCTGGCAAAATCAAATATTCTCCGATCTCTCCGCAAAAGGCATTGCCACCGATTGACGCAACCCACGAGTCGCAAT
CGCTTCGGTCAAGCATCCGCCAAATGTTTGGCAACGCGATTATCGTTATCACTACTTCTGGTCGGTCTGCTCATTTGA
TCTCCAAGTACAGACCCCGCTGTCCAATTATTGCCGTTACTCGGTTCCATCAAGTCGCGCGACAGGCTCATCTCTATCGC
GGTATTTTGGCGCTCCATTATTAGAGCCGCGTTAGCCGACTGGGTGAAAGACGTTGATGTTGCGGTCCAGTTCCGGCAT
AAGTTTCCGCAAGAGCCGCGATTATTTGAAGACCGGTGACTCGGTGGTCGTTGTTACCGGATGGAACAGGGTTCCGGTT
TCACAAATACTCTTCGTATCGTAAATGTTGACTGAGAGGACTCTGCTTTGGTGAGAACGTATGATGCTCTCGAGCATGT
AATAACCATAAATGATCTGATGTCAGCGTTTACCATGAATCCGCACTAAATCGTCTTTCGTTCTTACAAACTTGAA
TCGCCCTACACGCCGCATCGAAATGGCGATTAAAAGAAAATAAACTAAACGAAAATGACTGTTTGGGTAGATTCACTATT
ATCCGGTCACAGCATCCATTTCTTGGCT

>CL51Contig1|heat shock 70 kda protein cognate 4

ACTCAGTTGCGAATCGCCGAACGAGAAACACCTTCGCCTTCACTCTTTACACTCGATCAATTTTAACGAAAAGACAAAC
GAGAAACTAAAAATGGCCAAAGCACCCGCGAGTCGGTATTGATCTCGGAACGACCTATTCTGCGTTGGAGTTTTCCAGCAC
GGAAAGGTCGAAATTATTGCAAACGACCAAGGTAACCGCACCAACGCGGAGCTATGTCGCGTTACCGGATACCGAGCGTCT
CATCGGAGACGCCGCAAGAATCAGGTCGCCATGAATCCGAACAACACCATCTTCGATGCCAAAAGACTGATCGGCAGAC
GTTTCGAAAGACGCCACCGTCCAGGCTGACATGAAGCACTGGCCCTTCAATGTAGTGAGCGACGGTGGAAAGCCAAAGATC
GAAGTACAGTACAAAGGGGAATCGAAGACTTTCTCCCGGAGGAAGTAAAGTTGATGGTATTGGTAAAAATGAAGGAAAC
CGCAGAGGCTTACTTGGTTCGAAATGTGACAAACGCGGTGACAGTACAGCTTACTTCAACGAGTATGATGCTCTCGAGCATGAG
CAACCAAGGACGCCGCTACGATCTCCGGCTTGAACGTCGTCGAATAATAAACGAACCAACAGCGGCGGCGATAGCTTAC
GGACTCGACAAAAAAGCCTCCGGTGAACGAAACGTTAATTTTCGATCTGGGCGGCGGTACCTTCGATGTTTCAATCCT
GACGATCGAAGATGGAATCTTCGAGGTCAAGTCGACCGCCGAGACACTCATCTCGGTGGTGAAGATTTGACAACCGAA
TGGTCAACCATTTCTGTTCAAGAATTCAAGCGCAAGTACAAGAAGGAGCTCACCTCGAACAAGCGGGCGCTCAGACGTTTG
AGAACCGCTTGCAGCGGGCGAAGAGAACGCTCTCGTCATCGACGCGAGGCCAGCATCGAGATCGACTCTCTCTTCGAGGG
TATCGATTTCTACACCTCGATAACCAGAGCGCGCTTCAAGAGCTTTGCGCCGATCTTTTCCGAGGTACCCTCGAGCCAG
TCGAGAAGTCGATCCGAGACGCTAAAAATGGACAAGGCCCAAATCCACGACATCGTACTCGTCGGCGGATCGACCCGTATC
CCCAAAATCCAGAACTTCTCCAAGACTTTTTCAACGGCAAAGAATCAACAAATCGATCAACCTGACGAGGCTGTGGC
TTATGGAGCGGCTGTTACAGGCCGCCATTCTCCACGGCGACAAATCCGAGGAGGTTGAGGATCTCTTGCTCCTCGACGTTA
CGCCCCTTTCCCTCGGTATCGAGACTGCCGGCGGTGTCATGACCGCTTTGATCAAGAGAAACACCACCATTTCCACCAAG
CAGACCCAGACCTTACCACCTATGCCGACAACCAACCGGTGTCCTCAAGTTTACGAAGGCGAGCGTGCCATGAC
CAAGGACAAACAACCTTCTGGAAAATTCGAACCTAGTGAATTTCCACCGCGCCACGAGGAGTCCCGCAATCGAAGTCA
CTTTCGACATCGACGCTAACGGCATCTCAACGTCCTGCCATCGACAAATCCACCGGAAAAGAGAAACAAATCACCATC
ACCAACGACAAGGGCCGTCTGAGCAAGGAAGACATCGAAAGAATGGTCAACGAGGCGGAGAAATACAGAAGCGAAGACGA
GAAACAAAAGGAAACCATCTCCTCCAAGAACGAGTCAATCCTACTGCTTCAACATGAAGAGCACCGTCGAGGACGAGA
AACTCAAGGACAAAATCAGCGCCTCCGACAGACAAGTCGTCCTGGACAAATGTAACGACATCATCAAGTGGCTCGATGCC
AATCAACTCGCGACAAAGAGGAATACGAACAACGAGGAACTCGAAGCCATCGAATCCCATCGTTACCAAACT
CTAACAGGCGCTGGTGGTGACCAAGGAGGCTTCCCCGGTGGTATGCCCGGTGACCCGCGCTGGAGCTCCCGAGCCG
GAGCACCAGGCGCTGGCGGAGCTTCCGGACCGACCATCGAAGAGGTCGATTAAATTCATCATTTTCCGCAAAAAA

mmc4.txt

AAAAAAAAAATTCAAAATCATTCTTCGCTCTGTTACATCTTACCAAACACACAGCCTCCCTCCTCTTCTCCACGATTT
GATGCCTATTATTACATCAACGCGTTAAAACTCAAATGGAATAATAAAGAGAAACAAAAAGAACCGATCATAGAACCA
AAAAAAAAAAAAAAAAAAAA

>CL521Contig1|asparaginy1-trna cytoplasmic-like

GGTTATTGCGAAATCACGCCACCGACGATGGTGCAGACGCAGGTCGAGGGTGGATCGACCCTCTTCAAGCTCGATTACTT
TGGGCAAGAAGCCTATCTGACTCAGAGTTGCAATTGTATCTGGAACGTTGATTCCAGCGATGGGGGACGTTTATTGTA
TCGCGCAGTCTTACAGAGCTGAGCAGTCGAGAACTCGTCGTCATCTTGCCGAGTACGCTCACGTCGAGGCTGAATGTCCT
TTCATAACTTTCAACGATTTGCTCGATCGCCTGGAAGATCTTATTTGCGACATGGTCGAGAGAGATTGAAGTCGCCTTT
CGGGCATATCGTGATGGAATTGCATCCAGAGTTCAAAGCTCCAAAGAGACCGTTCAAACGAATGGATTATACCGAAGCGA
TAGAGTTCTTGAGAGAGCACAACTCACTAAAGAAGATGGAACTTTTACGAGTTTGGCGAGGACATTCCCGAAATGCCG
GAAAGGAAAAATGACCGATTTGATAAACGAGCCGATAATGTTGTGCCGATTCCCTGCTGAAATAAAATCGTTTTACATGTC
TCGTTGTCCCGAAGACAAACGGCTCACCGAATCGTTGATGTTCTCATGCCAACGTCGGCGAGATCGTCGGAGGCTCCA
TGCATCTGCGGACTTTGATGAGCTACTCGAAGGCTACAAGCGCTCGGAAATAGATCCAGCTCCTTACTACTGGTACACC
GATCAGCGCAAGTACGGAATTTGTCCTCCCGGTTTACGGGCTGGTTTGGAGAGAATTCCTGCTGGATGCTGAACAG
ATATCACATTCGAGACGTGTGTCTCTATCCCGGATTTCTTGACCGCTTGTGCGCCCTTAAATCTAAGGCTCCGATGAAACGA
TTAAAGCAAAACGTTCAACAGCATAATCTTTGTTTGTCTTTCTTCCGCATTTTAAATTTCTTGGCATCGTTGAGATA
TAGTTACAATACACTCGCGTACGCATCGCGAACGATTAGTATTTCCGGTTCATCTCCTCCGCGTATCGTTCCATCATT
TTGTAGATACATATATATTTCAATCTGTGTATGTATTAATAATGTGCATTTGCAACAATGTGTACAATACTGTGAGTT
CAACTAAGCTAAGACTAAAAATTTCTTTTATTATCTCGCTCGATCTCGTTTCTTTCATACTCTAGGCTCAAACAACCA
ACAATATAGTATATTGTTTATACACAAATATATTATCAACACTTTATATTATCTCTTTTTCAAGCGATCTGAAG
TTTGCATCGTTGAAAAACAACGAAAAATCAATTTTTATTCAATTATTTGAAATTAACGCGATTCTTCAAGTTTTCTA
GTTCAATTCAGTTTTCAATGGCAACAAGACTCTCCGAATATCGTTGACCTCTGCTAGAATGCTCTGCTAGAAAAAATA
TCACGTTTCGTTGCATTCCAACGATGCGAGCTTCAACATCCTTTTTTCAATCGTCCTTGCGCACCCGCGCG

>CL523Contig1|phosphate carrier mitochondrial

GTCAACGCGTTCAGAGTGACTCTCGCGGACGGTGGCGCTCGAGGACTCGCCAGAGGTTGGGCACCGACCTTCTCGGTTA
CTCCATCCAAGGAATGTTCAAGTTCGGACTCTACGAGGTTTTCAAAGTGCAGTACGCCGAGATGTTGGGCGAGGAGCTCG
CCTTCGAGTACAGAACTGGATTGTATCTCGCGGCTTCTGCCTCCGCTGAATCTTTGCCGACGTGGGGCTTGCTCCCTC
GAAGCAGCCAAGGTGCGAATCCAAACGATGCCGGGATACGCAACAATCTGCGGGAAGCCTGGCCAAAGATGTACGCGGA
TGAGGGAAGTGGGAGTTTCTACAAGGGTCTGGTGCCGCTTTGGTTCCGCCAGATTCTTACACGATGATGAAGTTGCGCT
GTTTCGAGCGAACACTCGAGCTCCTTTACAAATACGTAGTCCCTAAGCCTCGTATGGAGTGTACCAAGGGCGAGCAGCTC
GTTGTGACCTTCGAGCTGGTTACATCGCCGGTGTGTTCTGTGCCATCGTTTCCCATCCGGCTGATTCTGTGCTGTGAA
ACTGAATCAAGAAAAAGGGAGCGACTGCTGGCGGATTTTGAAGCAACTCGTCCCATGGGAGTTTGAAGGGTCTCGTGC
CCAGGATCGTCATGATCGGTACCCTCACCGGCGCCCAATGGTTTCTACGACGCTGTCAAGGTTTATCTCCGCATCGCC
CCCGTCCCCCTCCACCAGAGATGCCTGCCAGCCTCAAGGCGAAATACGGCATCGCTTAGAAAATTTCTCGGGTGTGGGCG
CTTGAGTAAAAACATAAAAAAAAAAAAAAAAAAATCTAGACGAAAAGAAAAAACGGAGAGAAACGGGAACGACGCTGATT
ACGAAGAAACGAGGAAGAAAAATAGATTTTCTGACGTTTGGAGAATCACCTTCCATGATAGAGAATGATCCACGCTGCGTC
GCCCGCGAGCCATTTAAATTCACGAACGTCGAGGCTCTCGGCGACGCGAGGCGATGAAAAATTTCTTAGAAATACATTT
TGTTGTTGCTAATATTTTACGTATTTCTCGCGACAGGTCAACGTTGACAAACCGTCCGATGTTTTTCAATCCCCG
CGTGATCGCGTTTCTATCGAGAGACTCGAGAACTCGATTTTTAACGAAAAATTTCTGCAAAAACGATTTTACGTCTCGCG
CGAGTTTCCAGGCAAACTTTCTTTCAATCATCAACATTCTGATCAGCCTCGACGAGGATAGTAAGTTGATAAGATTTAG
ATCGAGGAACGAAACTGTCCTGCTGCCGTTCAAGTCTCCGATTAAGATTTTCTGCTTATGGAGACTCTACACACAGGAGA
AAGGAACAAAATGTATGTTACTTCTTGTCTGTACATAGATTGAGCGCTCATAATAAAATAACGACGCTCCTCAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAACATGTGCGCGC

>CL5250Contig1|3-hydroxyacyl- dehydrogenase type-2

TCTCTGGAGCACACGCGGACAAAGCGAGCGAGGGAGCAGTCAGTGTGGAAGAGACGAGCGGCACGACAACTTGCGATACT
TTTAGCCAGCGACGCGGACTCGAATTTCTAGCAATTATTTCCCCAGTGACTTTTTATTGTTTTCTGAAAAATTTTAAAT
ATCTGAAAAATTCCTCCAAATGCTGAAGGGAATTGTTACTCTCGTGAAGTGGAGGTGCTTCCGGCCTGGGCGGAGGCACTG
CAGTGAGGTTTCGTAACACAGGTGCCAAGGTGCTGATGCTGAGTTGCTTACCTCCCAAGGCGAAGCCATCGCCGACGAA
CTCGGTGATAACCGATTTTCTTCCGTTGATGTGATCTCGGAGAGGATGTGGCGGCGGACCTGTCCTGACCAAGCA
AAAGTTGACAAATTTGACGTAGTGGTGAACGCGTGCAGGCGAGTCGCGGTGCTCACAAGACTTACAATTTTAAACAAGAA
CTTGCCGCACTCGCTGGAGGATTTTGTAGAGTCTGTAACGTCAATACGATC

>CL525Contig2|6-phosphogluconate decarboxylating-like

GAGCTCGAGAAAGAAAGGAATCTGTTTGTGGGTAGCGGAGTGAGCGGCGGCGAGGAAGGAGCCAGATACGGACCGTCTCT
GATGCCCCGAGGTAATCCAAAAGCATGGCCACACATAAAGCCAATATTCAGGCGATATGCGCCAAAGCAGGTGGAGAGC
CCTGTTGCGATTGGGTTGGCGAAACAGGCGCTGGTCATTTGTTAAAATGGTACATAACGGTATCGAATACGGCGACATG
CAATTGACGTGCCAAGCTTATCACATCATGAGAGACGGCCTGGGCTTGAGTCTGACGAGATGAGTGACGTTTTTCGACGA
CTGGAACAAAGGAGAACTCGATTCAATTTCTCATTGAAATTACACGAGATATTCTCAAGTACAAAGATTCCAAAGGCCATT
TGTTGGAGAGAATTCGTGACACCGCTGGACAAAAGGAACAGGAAAAATGGACCGCCATTTCCGGCCCTCGATTATGGCGTA
CCCGTCACTCTAATCGGTGAATCCGTATTCGCAAGGTGTCTCTCGGCTCTGCAAAGCGAACGTATCGAAGCGAGTAGAGT
CCTCTCCGGCCCTAACGAACTTACAAGGCGGATAAAAAACAGTTCTGGAGCATTTGAGAAAAGCTCTGTACGCCTCGA
AAATCATTTCTGACGCTCAAGGATTTATGCTGCTTCGAGAGGCGCTAAAATTCACAAATGGAATCTGAATACGCGCGT
ATTGCTCTCATGTGGCGAGGAGGATGTATCATCAGAAGTTGTTTTCTGGGCAACATCAAGCAGGCCTTTTGACAAAGAA
TACCTAAACTGTACGTAATTTATTGTTGATGAATCTTCGACAAAGGCGAAGTTAGG

>CL528Contig1|aldose reductase

GTAAAAAAACCGGCCAGATCACGAAGTTGCCATCGGTTGCCGCTCTTGCTTATATAAAAACGTCGTGAATAATTTGTT
CACTGTCTAGTAGCTTACTGAACGTTCTTACGAACATTAGAGCCTCATCAAATTGCTAATCGACACTGACACTGCGTTT
GTCTCGATTTGCTTCTGATCAAGTCCCTTTTCGCGATTCTTATTCAATCTCAATCGCCTGTTCAACGTTCTCATCAAT
CGCGTGTGTTCCACAACAAAATCCCGTTGAAAAATGTCTCTTAACGTGCCTGCAATTAATTTCTACAACGGCAACGAGAT

mmc4.txt

CCCCAGCTTCGGGTTGGGAACCTTGGAAAGTCAAAACCCGGTGAAGTAACGCAAGCCGTAAAAGACGCGATCGACATTGGCT
 ACGGTCACATCGACTGCGCCACGTTTACGGAACGAGAAAGGAAGTTGGAGAGGCGATAAAAAACGAAATCGCGGAGGGT
 GTTATAAAACGGGAAGATCTGTTTACATAACGAGCAAGCTTTGGAACACTTATCACAAAGCCGAACCTTGATCTCACGCGAT
 CGAACAAACCTTGAAAAATCTCGGTCTCCAATATCTCGATCTTTATCTTATTATTGGCCGATCGCCTACAAAGAAGGCG
 ACGATCTCTTTCCAAAAATGCGGACGGTAGTCTCTCTGAGCAACACCGATTATCTCGATGCCTGGAAAGGCATGGAA
 AATGTCCACAAAAAAGGTCTCACCAAAAAATAATCGGCGTCAGCAATTTCAACTCCGAACAGATCGAAAGATTGCTCAAAA
 ACTGTACGATCAAACCTGTCACGAATCAGATCGAATGCCATCCGTACTTGAACCAGAAGAAGCTTTGCGAGTTCTGCAAA
 GCTCGTCAAATCGTTATAACGGCTTACAGTCCATTGGGTTACCAGACAGACCATGGGCTAAACCCGATGATCCTAACT
 CCTCGACGACCCAAAGCTGGTGGAACTAGCAAAAAAATACGGCAATCCGGGGCCAGGTGCTTTTGCCTTATCAGCTCG
 ATCGTGGCCATGTCGTGATTCCGAAATCCGTACCAAGTCCCGAATTGCTGAAAACCTCCGACATCTTCAACTTCAAATTG
 ACTGCAGAAGATATCGCTACATCGACACTTTTCGATTGCAACGGCAGAATTTGCCCGATGACTGGGTCCGAATCGAGCGC
 GTACTTCCCATTTCCACATCCCTTTCTAAAAGCTCATTGGGAAAGCGTGAGTTTTGCAAGTTTTATTCTAAGTACCCCG
 TTCTTGAAGACTCGGATTACGTTATGATTATGATCAACTACAAATGCTTTGTGTATTTACAACCTCGGTAATCACGTCTCG
 AATTCACCGCAAATATTTTACACATTGTTCAAATATTGATAATAAATTTCTACACCAAAT

>CL5309Contig1|spermine oxidase-like

ACTTTTTACTCCTCGTCTGCCTGATACAAAAGTAAAAGCGATTACAGGGCCTGGAATTTGGAAGTATAGCAAAAATTTACC
 TTTTCTATCCAAAACCTGGTGGCCGGAGAGCGACGTGCAATCACGCAGCTTCACATTCTACTGGACCGAAGAACATCGC
 AAAGAATTGCTAACGACCCAAAGAAATCGTGGCTCTTGGGTCTGGCTGCTGCTGACGTTGAACACAAGCCAGGCTT
 ATTGTGCGGTGGCTGGCAGGACGCCATGCTCGGGAATGGAAGAATTTGGGAGGATGAAGTTTTGAACGGCATGAAAG
 ATTTCTGCGACGATTTTTTAGGCACGAACCTTAACTCACCCGAACCCACTGCTGTTCTGAGGACTCAGTGGTTCAGAA
 TAAACACTTTAGAGGCACGTACAGCTATCGCAGCCTCAAAACCGACGCATCTGGCGCGACAGCGACTCAACTCGCGGAGC
 CGATAATCGACCAGAAAAACCAAGTGTCTTGTTCGCTGGCGAAGCGACCTGCTCGTATCAGTACGGAACGGTGAACGGA
 GCAGTCTCTTCAGGATGGCGAGAAGCTGACAGGTTGATAAGTCTGTACAAGCAATAAAAAATTGCTGAATAAACAAATC
 ATGAGGAGAGATTTATAAAAAATTCATTCTATTTTTTTGCTTCCAAATTTTTCCGAGCGTATTGATAG

>CL532-bisContig1|death-associated protein 1

TTTTTCAACTTGGTCTCCATTGCGTCGCTCATGTTCAATCTGTGACGATCCCTCGACAAAGACGTACACGCAGCTGTTA
 ATCCATATTGTTGAAAAGCTCAAAAATTAATTAAGAACAATTATAAATTTGAAACGACATTGTTTTCAACTGATTAA
 GTAACAATGTCGAGTCCCGATGAGTGTAACCTAAAGGAGGCCACCCACGGCGGTCAAAGCTGGTGGCATGAGGATAAC
 TCAGCACAAAAGTCCCAAGGAGGAAAAGGAAGTCAAGGTGGACAAAGACGCAGAGGAGAGCAAAGCCCCTGTCAACCCGC
 CCAAGACAATGTTGATCAGTGGGGCAGTTGCTAGAGGAAACGCGGACTTCCCACCGGAGGCTGTGCAGCATTTCCACGAG
 AAGCCGCGCGGACTCACGACGCACGTCCGGCTCATTTGTTCTCGTCCCATTGTAATCCAACAGCCAAGAAAGTGAAGTGA
 GACAAATTTTGTTCGGTTCGACGAAGGAGGCTGAAGAAGTGCAGGAGTGGGAGGAGGATTGAGCGCAGGATGTGACAA
 GGAGAGGAAAGTGGTCCGGAGAGGGTGTGAAGAAGAAATTTCTAATGTAATAAGAAATTATCGATTTATGAGAGTAATT
 ACCAATTCCTATGGGAAGGAAAATGAAAGTTTATAAAACAAAACGAAAATGTAAAAATAGATTTTGAATCTCATTTCAA
 GATGAGATTTGAGATTGAATTCAGCATGTTTTTTCAGTAGAAAAACGTCTTTCGGGACTGTCCCGAAATAAGCATTAT
 TCTTCATCATTTCCACATTTTGTATTGTTAAAACTGTGAAAAATTTCCATACATACTTGAGAAACATTGCAATATTAT
 TCTCTTTATTTTTTAATCGAGATACACTTGATCAAATAAATACAAAGAAATATTTCTTTTGAATCTGGTTGTGGGTGA
 AAATTGAATATTGTCCATGGTCGAGCTGTGTAAGTAGAGTTTGTGACTCTCGCACGCATGCAAAACTACCTAAGCTATT
 GTATGGTAGAGTGGAACACTAAATAAATACATTTTGGGACAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAA
 G

>CL534Contig1|importin subunit beta-1

TTTGGCGATGGAGGAGGGCGAAGCCTCCGAGGGAGGTGGCCGCCGTGCAAGTCTCTCGGCATTACGCCAAAAGGAGCC
 CTGCAATATCTTGTGCCGTGATGAAAAAATGACAAAGCAAGAGGAATTCGACGACGAGGATGATTGGAATCCTTC
 GAAATCCGCGCGCTGTCTCATGTTACTCGCTCCTGCTGCGAGGAAGCCATCGTCCCCTTCTGCTTGGCCTTCTGCA
 AGGACAACATTAATAATCCCGACTGGCGGTTCCGCGACGCCGCACTCATGGCGTTGGGCTCGATCCTCGGAGGCTTGGAT
 CAAAACACTTTGAAGCCGCTGGTGAACAAGCGATGCAAAACCTCATCGAGCTCATGTACGACAACAGCGTCTGCTCGC
 GGACACCGCCGCTGGACCTTCGGACGAATCTGCGAGATAATTCCAGAGGCCGCGATAAAACCTCCTTACCTGAAACCTC
 TTTTGAATCATTGGTCAACGGCCTGAAAGCGGAGCCTCGAGTTGCCGCCAACGTTTGTGGGCGTTACGGGATTTGGC
 GAGGCGAGCTACGACGCTGCCCGCTGGAGGAAGTACGACGCCGAGACTTACTGCATGCTCAAACTACCTGATTTCAT
 CGTTCAACGACTGCTCGAAACGACCGATCGTCCGACGCGCGACAGGCCAATTTACGCTCCGCGCTTACGAAGCTCTCA
 TGGAAATGGTGAATAATCACCACGCGATTGTTACGTACCGTGACAAAAACACGATGGTTATTCTCGACAGACTGCAA
 CAGGTTTTGACAGATGGAAACGCACTTTCAAAACCACTCCGACCGCGCTCAATACCATGACCTTCAATCCCTCCTCTGCGC
 CACTCTCCAGTCCGTTCTTCGCAAAGTTACCCCGAAGATGCTCCCAATCTCCGATGCCATCATGACCGCCGTTCTCG
 CCATGTTTCGCTCAAATTCCTGCAAAGTCCGCGCGCTCAAGAAGATGCCCTCATGGCTGTTTCCACCTCTGTCGAGGTT
 CTCACCGACGATTCTCAAGTACATGGACGCCTTCAAACCGTATTTGATATCTCGGGCTGAAAAACACGCCGAGTATCA
 AGTCTGCTGCGCCGCTGTGCGCCTCACCGGCGACATTTGTGCGCTCTTCGCATCAAAATGTTGCCTTATTGCGACGAAA
 TCATGACTTTGCTGCTTGAGAACCTCGGCAACGACACTGTCCATCGTTCTGTCAAGCCGAGATTCTCTCAGTCTTTGGC
 GACGTCGCCCTCTCATTGGCCCCGAATTCAAAAAATATCTCGACGTCGTTCTCCAGACTCTCGCTCAAGCCTCCCAAGC
 CAACGTCGACCGCACCGACTACGACATGGTCACTATCTCAACGAACTCCGGGTCCGCGTCTCGAAGCTTACACCGGAA
 TTACCCAGGCTCTTCGCGCGCAGCGCAACCCCCGAGCCCCGACGTTGCTCTGTCGAACCTCAGGTTCTTTTCATCATC
 ACATTCATCTCGATCGCGCTCGATCGCAACTATCCGAAGAAGCCATGTCCGCTCCATCGGCTTCTCGGCGCTTCTCGGCGCT
 CGTCTGCTGTTTTCGGCGCCAACTCTTACCCGTCGTCGAACTGAACCTCTCACCGAACTACTACCAAAGGCCGACGCG
 CCAGAAACAGCAAAACCTAAACTCTCGCCACGTGGGTTACCAAGGAAATTAGGAACTCAAGACCGCCAATCCTGCTTC
 GAGTTGGATGGAAATGAAACCTCTACAGCCAATGTACACGGTATGACATTGACTGGTCCGATATCGCAAGTCAATGATC
 CTACGAGTATCAACATAACTGTGGGAAACACATCTTGGCCGTTATTCCGTGTGACCATGGATGGGAATAC

>CL537Contig1|Exportin-1 [Acromyrmex echinator]

CTTTCGAAACGAACTTATTACAACCTCATATTTAAAGTTCTTGAACGTTCCAATCTTCAGAAACGTGACGTTGAAATGC
 CTGACGGAAATAGCGGCAGTAACGGGTCCGAATTACGACGAGATGTTTGTCTTTTGTTCGTAACACGATGCAACAATT

GGAGCAAAATGTTGTCCCTCGAGACAAACATACGCGAGGCGTATGCGATGGGCCAGGATCAGGAACAGAAATTATCCAGCA
 ATCTGGCCATGTTTTTGTGCACCTTACCTCAAGGAGCAGCGCCAACCTGGTAGAGAAGAAACAGTTGAACGAAGTTTTGGCC
 AAAGCGTTACATTACCTCGTTTTGATATCGGAAGTCGAGGACGTTGAAATATTTCAAATAATGCTTGAATATTTGGAACGG
 CTTTGCAGCCGATCTCTACAAGGAAGTCGTTCTCTCCACCCACCTTGATCTTATGCGCGAAAAGAGAAATTCTAT
 TGTCCCTTATTGACTAAGGTTCTGTTACATCATGATAAGCCGAATGGCCAAAACCGGAAGAAGTTTTGGTTGTAGAAAACG
 AGAATGGCGAAGTTGTACGAGAATTCATGAAGGACACGGATTTCGATTAAATTTGTACAAGAACATGAGAGAACTCTCGTT
 TATCTGACGCATCTCGATTACGTCGACACCGAGAGAGTTCATGACGGAAAAGTTGCAGAACCAAGTAAACGGCATGGAATG
 GTCTTGAAGAATCTTAAACAGTTTGCTGGGCCATTGGCAGCATTTCCGGAGCGATGCACGAAGAAGATGAGAAGCGTT
 TCCTCGTGACGGTGATAAAAAGATTAACTGGGTCTGTGCGAGCAGAAAAAGGCAACAACAAAGCCATTATGCGAG
 TAACATCATGTACGTCGTTGGGCAGTATCCGCGCTTTTTCGAGCTCACTGGAATTTCTTAAAAACAGTTGTAATAAAA
 CTGTTTGAGTTTTATGCACGAGACTCATGACGGTGTTTCAGGACATGGCTTGCATACCTTTATCAAATCGCAATGAAGTG
 CCGGCGACACTTTTGTACGACACAGGTCGGCGAGGCAATGCCGTTTATTGAAGAAATTTCTCTACCATTAGCAGTATAA
 TCTGTGATCTGCAGACCCAGCAGGTTACACGTTTCTACGAGGCTGTCGGCTACATGATCAGTGCCAGGTCGACGGCGCC
 ACGCAGGAATATTTAATCGAGAAGTACATGCTTTTTGCCCAATCAAGTCTGGGACGACATAATCAGTCAGGCATCAAGAA
 CGTCGATGTGCTGAAGGATCAAGAGGCTGTTAAGCAACTAGTATGTTCTCAAACATAAGCTAAGAGCATGCAAGGCC
 TCGGGCATCCGTACGTCATGCAATTTGGGAAGAATATATTTGGACATGTTGAATGTTTATAAGGTTATGAGTGAAAAACATA
 AGTGCTGCGATAGCTTTAAAAACGGTGAAACAGTGACGAACCAACCGCTGATCAAGAGTATGAGAGTTAGTAAAAAAAAGA
 AACGTTAAAAATTAAATCGGACTGGGTCAGTAGATCGACCGATCATCAAATGGTCTTGGAAAACCTTCATTCCACCGTTGC
 TCGACGCGATGTTACTGAGTTACCAAAGACGAATGTTTCAATGTCGCTCGTGAGCCGGAAGTACTGAGCGCGATGGCAACC
 ATCGTCAACAAATTTACAGGACCACATCAGAGCGAAGTGCCAAAATATTGCAGCTGTTTTCGAGTGCATCTCGAAT
 GATTAAACAAAGACTTTTGAAGAATTTCCCGAGCATAGGACAAACTTCTTTCTCTTGTTCAGGCAGTCAATGGGCATTGCT
 TCCCCGCGTTCCTCTCGATACCACCGGCTCAATTCAGCTGGTGCTCGACTCCATAATCTGGGCCTTTAAACACACCATG
 AGAAACGTTGCAGACACTGTTTTGCAAATTTCTCTATCAGCTGCTGCAAACATCGACCAACACGAGCAGGCAGCGCAGAG
 TTTCTACCAGACGTATTTTACAGACATTTCTTCAACACATATTCAAGTGTCTGACGGATACGTCGCACACAGCGGGTTAA
 CGATGCATGCGACGATTTTTGGCTCACATGTTTACGCTCGTTGAATCGAATCGATCCTCTGTCCTCTCGGTCCTCTGCC
 TGA AAAACACACTGTACGTTCAAGAGTTTTGCGCCAGATTACTCAAGGCAGCGTTCCACATTTATCGGACGGCCAGATTA
 AAATAACGGTGCAAGGATTGTTCAACCTCGACCAGGACATTTCCGCGTTCAAGGAACACCTGAGAGACTTCTCTGTGGAA
 ATTCGGGAATACACGGGAGAAAAACGATTCTGACCTCTATTTGGACGAGCGTGAGAATGCTCAGAGAACGGCCCAGAGAGA
 GAAGAGGAGGGAGCAAATGGCAGTCCCAGGAATCTGAATCCCCACGAGATGCCGGAGGAGATGCAGGACTGAATAATCA
 TGGAGAGAAAAAATCAAGTTACGGAAGAAGCAACAACACATCAAGCCTGCGTGCGTCAATTTGAAAAAACCGAATAAC
 TCGTGAAGTAAAAATCGTATCTTTTTGCTGCAAGAAGCATCTCACCAGCTAAATCCACGAAAATCACAATCGCAACGTAA
 ACAAAGATAAGAAACGAACATAAAATACAGAAACCCTC

[illegible]

GCTTGTCTGGGAATTTGCTACCGACGGATACGACATCGGCTTTGGCGTTTATTTGCAATGGTCCAAGCCCGACACGAAT
CAGGTGTCCGTTACATCAGCGAATCCGAGGACGACGACGACGAGGACGAGGATTACGAGTCCCAGAGGATCTCGA
AACCGAGCGATCGACGGGGACCAACGTGGAAAATACAATTGCCAACACCCCCACCCATCAGCGTCATCGTCCCCGTTT
ATCGTAGGGATTGCGAGGAAGAAGTTTATGCAGGAAGTCACGAATATCCCGGACAGGGCGTTTATCTCTCAAATTCGAC
AATCGTATTCGCTCTGGCGCAGTAAAACTCTTATTCGAGTATACTACACGACGACGAGTTTGGCCAAAGACTAGGC
CCCGACTCAACCCCTCATTCTGTGAATCGACGACGAGCTACAAAAGCCCCGAAATGGACGAGAAGCGAACGTGTCAA
AGAGAAATCAAGAAAAATATAAAAAGAAAAGGAATGCGAAGTAAGAATCGCAACGAGTTTGCAAAACAAAAGCTGCTCCGCA

mmc4.txt

CTGAAAAACAATATTTTTTACCCGAGTCTCTTGGTCAATGCTAGTCTACTCTTAGTTACTCGTGCAATACAAACACAA
GCCACACAGACAACCAAATCAATGAAAAAAATGGCGAAAAAATATTTTTATTTATCGAACAAACGGAAAAATCAATTATT
TCGACAAATTTTTTTGAAAAATCGCCATCTCTCTCTCCCAAAATGTGAAAAATCAATACTCTCGAGTTTCAATCCCACGA
AAATCGAGTCGATCGAGAAATCAATCGGAAACGAGAATCACGAGATCGAAAAACATTTCCACTCCGGCCT

>CL542Contig1|alanyl-trna cytoplasmic

TGCCAAAAAACACATCGATTGTGGCCTCGGACTGGAACGTTTGATCTCAGTGATACAGAACAAGCGTGCCAACTACGAT
ACTGATTTGTTTGTCCCGTTATTCAATGCTATTAGAAAAGGCACCGGTGCTCCGCTTATCAGGGACGAGTCGGAGACGA
CGATGTCAATGGTATCGATATGGCGTACAGGGTTTTGGCTGACCATGCTCGCACGATCACAATTGCTCTTGCAGACGGTG
GCATGCCGGACAATACTGGCCGAGGGTACGTTTTGAGAAGAATCTTGAGAAGAGCGGTGCGTTACGCGACTGAAAAATTG
AACGCAAAGCCAGGCTTTTTCGCAAGCCTTGTAACGTCGTAGTCGAATTACTCGGCGAGGTATTTCCCGAGTTGACGAA
AGATCCGCAATCGATAATGGACGTAATTAACGAGGAAGAGACTCAATTTTTGAAAACCTTTGTCTCGCGGTAGAAATCTCC
TTGATCGTACGATCGCAAACTTGAGAATCTGAAAATCGTGCCGGGCGAAGTCGCTTGCGGATTGTACGATACGTACGGC
TTTCTGTTGACCTTACTCACTTATGAGCGAGGAAAAGGGTCTGACGGTTGACATGGCAGCCTACGAGGAATCCAAAA
AATTAGCACAGATCGCGTCGCAAGGTAATCGGGGGTCCGACGACAGATAAATCTCGACGTACACGCGATAACGGAA
CTTCAAAACAAAGGAGTTCCACCAACGAGCAGTATTTCAAATACAAATACAAAGCTGGCTCGTCGGACAGAGATGCCGA
GTACGTTTTCGAGTCTTGCGACGGCAAAGTGATAGCGATTCCGCGTGAAAATAAATTTGTGATGTAGCTTCGTCCGGCG
AGGAAGTGGGCGTACTTCTCGATCGTACCACTTTTACGCCGAGCAAGGTGGTCAAATATACGACGAAGGATTTCTCGTC
AAAGTGTGCAACGACGGTAACGACGAAAAATACGGAATTCGAGTGAGCAACGTCGAAGTACGTGGTGGTTACGTTTACAC
GTAGAACCCGTGGGTACCGGAAGTTGAAGATCGGGGATCGTGTTCAATTGAACGTGGACACTGCTCGAAGGGCCCTCGT
TATGAACAACCGACGCGACGACGCCCTCAATTACGCGTTGAGAAGCGTCTCGGCACGGAACCTGATCAAAAAGGCT
CCCTCGTCGCGCCTAATCGATTGCGCTTCGATTTTACCAACAAGAGCGCCATGAGCCCCGTCGAAGTAAAAAAACCGAG
ATATTATTGGCGAAATTGTTGAGAAGAACAACAATAATTTGCCAAAGAAAGCAACTTGGCTGTGCTAAAATCTCTG
GGTTTACGCGCCATGTTGCAAGAAGCTTATCCCGATCCTGTGAGAATCGTCAGCGTTGGCGTTCCCGTTGAAGAGTTGGA
GAAAAATCCGCTGGGCGATCGCGGCAACCACAGAGTGTGCAATTTTGCAGTGGAAACGCAATTTGCACTACACCAGCCACA
TCGGGGATTTTGTATAACAGCGAAGACGCCATTTCCGTTGGAATCCGAAGAATCGTTGCGCTGACCGGGCCAGAAGCG
AGCAAAGCGCTAAAAAAGGCTGATCTCTGCAAAATCGTTTAAACAAAATAAAAACCTGACGTTGAAGCGGACAAAACATG
CGCAGACTCGAAGGAACACATCAAGCGAATCGTAGAAATGACCGAAGATGTCTCTCACGCTACGATTCCTACTGGAGAA
AGGACGAGATGAGAACGACGTTAGAAAAATTTGAAAAAGTCTCTCGACGACAAACAACGCGCTGCCAAGGCAGCGATCGC
CAATAACGTCGCCGAAGTCGCTTCGCAACTCATCCAAACACAAGTCGGAACGCCGGTGCTTGTGAACAACCTCCAAGCTT
TTAGTAACACCAAGGCTTTGGATCTTGCACTGAAAAAGGTCAAAGCCGTGTCCCCGAGACGAGCGCGATGTTTGTCACT
GTCGATCCTGAACTAAGAAAAATTCGACACTCGGTGCTGTTCCCAAGAGCGCTGTGAAAAAGGATGAAAAGCAAA
GACTGGATAAAGTCGATCGCGACGGTGATGAATGGAAAAGCGGTGGCACGCCGGAATCTGCCCAAGCATCGGGCACAAA
TTTCGACAGTTTGCAAGAATGTTAAAAATTTGCTCGAGACTTTGCGACGACGAAACTGGGTTTGGAAGCGGCAGGTAAAGG
AGCATGAAAAATAGGCTACGAATCTTGACGCAAAATGATTCACAATATATTCGAATCA

>CL544Contig1|probable gdp-1-fucose synthase-like

AGATGATTTTGAGGTTATGCCACGTTAATCTTATTGTTATCGCGGCTTTGAACCTTCGTATTGGTTATCGAGTGTCAAGTA
CGCACCCTCTGAATCTTTTCCGACCACATCTGTACAGCAAAATGCAAAATTTTTCTGAGACAAGAAGATGTTGGAAGAAAA
AGTTATTCTGGTGACCGGTGGTTACGGTCTTTGGTGGAAAAGCCATTGATGCCGTTGTCTCCGCGATGCGAGGCCGATG
AGAAATGGATTTTCTGTTGGTTCCAAAGATGCGGATCTCTGCGACAAGGAGAGCACGGTGAAACTTTTTGAAAAATACAAA
CCGACGCATGTGATTCACTTAGCTGCAATGGTCGGTGGATTATTTTATAACATGTGCGACAATTTAGATTTTCTGAGGAA
GAATTTACACATAAATGACAATGTGTTGCAAACTGCTCATGAAAGCAATGTTGTCAAAGTCGTTTCTGTCTCTCCACGT
GTATATTTCCCGATAAACTTCGTACCCCATAGACGAACTATGGTACACAATGGTCCACCTCATCCTTCCAACCTACGGT
TACAGTTATGCAAAACGATAATAGACGTGGCGAATCATGGATATCATCAGCAACATAATCGAATGTACACGAGTGTTAT
TCCCTGCAACGTGTTCCGACCTCACGATAATTACAGTCGGATGCAATGACGTCAGTGATTCCTGGATTAATGAGAAATTTAC
ACGATTTAAATGAAAAATGGTAACTCAGGAAGACATGGAATTCAAAGTTATGGGCTCTGGGAAGCCGCTGCGACAATTTA
TCTACAGTTTGGATCTGGCTAAGTTATTCGTCTGGGTTTTGCGTGAATATAATTCCGTGCAACCGATCATTTTATCAGTG
GACGAAACCGAAGAAGTGACGATAGCACAAAGTTGCGGAATCCCTCACGCAAGCTTTCCGGTTCAAAGGCAAAATCGTTTT
TGACACGACGGCTGCAGACGGTCAATACAAGAAAAACGCGAGCAATGCTAAGCTCCGACATCTCTCCCGGTACTTTAAG
TTACGCTCTTCGATCGTGGTTACGGTGTGTTAATTTGTTACCGAGAGAATTATGAGACGAGAACTGAAAACT
TTAACGAGCTTTTCCCGCAAAATCTCTCAAATGCACGTTGTACTAATCAAAATCAATCGAACTCTACGAATTTCTACGGC
ATAGGAAAGAAGAGTCGAAAAAGTGTCAAAGAAAAATCGAGTTTTTTCCAACATAACCCGGAATTTCTCTCACTGCAAAGAA
AACGAAACGAACGGGAGGGAAAAATGTTTCCAAGATTGGAAAAATATTTTTCTACGAACAATATTTTATCGTTTCCCGTTA
AATCGAAATATTTAATACAGCAAAATTTTCAAAAATCAATGGAGGAAAGATGCAACGAAAAAAATCGGCTCGTTGCCTAA
TAAATCACGGTTTCAATAAATATGCGAAGAATAAAAAATGAAAAATCTCAGGGCAATGGAAAAATAAATTTTGGTTGATT
TGATGATTTTTTCAACGAGTTTGTCTAAAAATATTTTAAATTTTCAATGGGTGATGAGATTTTAAAAACGTTTTTTTCCA
AGAGATAAAAAATATCGAGCGAGAAATGCAACGTTATTTTTAGTACTGGTAAATTGAATGTGTCAAATTGAGCAAAATTC
GATTTGAGTAAACTGAGAATTGGTACGACGCGAGAGAACGAGAAGGAAAGTAGCAATTATATGAGAAAAATAGTGATTTA
ATGTGAAAGAAATTAACGAGCAATTTCTCTGATGGAGTTTATTGTCTGGGCGTCGCGCGGTCAATAAATTGTACAGT
AATTTAAAGTCGACGATCTTAGCAGCGACGGATGATTTTATGTCCTGCGCTCGAGGTGCACGAATGCACGACCAGCTCGT
ATACAGGTTTTGGCACACTCGTGTAACGAAAAATAATCAGCGAGAGTAAAGAGCTTGGGTTTCCGCGATTAAACAAAG
AAAAATATAGTCCGACTGACAATGTGATTTGTTTTTATTTTAAATTCGTTCTATTGGTCAATTTTATGCTCTC

>CL547-bisContig1|uv excision repair protein rad23-like protein b

GATTTACGGTACATCATTGTGAAGAACCAACCACAGTGCCGACTCATCGTCCCAAAATTTAACGCCAAAACATCATTCT
ATACTTTGCCTTATATGTACAATTCGGCAAAATAGAATCTGTGCTGAAAACGCTTTTTTCTAAACTCTATACAGACACAAT
GATTATCACATTAATAAAAAACCTGCAACAGCAAACGTTACCAGTTGAGATCGATGCCTCCAAAACGGTTAAGAAGCTCAA
GGAGAAGATTGAGGCACAGAAGGGATTTTCCGCCCCGATCAAAAGCTGATTTACGCTGGAAAAATTTAAGTGACGATC
AACCATTGACGGAAATACAAACATTGATAGAAAAGAGTTATTGTTGTTATGTTTACAAAGCCAAAGGCAGAGGCCAGCTC
GAATGCATCGGGCGAGCAAGCTGCTGATAGCGACAACAACAAGAGAACACGAATACCACCAGACCTGCTGCTGTATCGA

mmc4.txt

GTTACCCCGCGGTAGAACCAGCTCGTCTCGTCCACCTACAATCGCGTCAGACGAGCTCAGATCCCAGCAGGAGCCGTA
GGGATTCAAGCTGAAAGTGCTTTGCTCATGGGTGAAGAATAATAACAATGGTGAACAACATAATGGATATGGGGTATGA
TCGCGAACAGGTTGAGCAGGCTTTACGTGCAAGTTTCAACAACCCAGACAGAGCCGTGGAATACCTGTTGACTGGTATCC
CGCCTCAACTGCTGGAAGATCCTCTCGAGGATCCTCCGAGGGGCAAGATCAAGCTCAAGATCCAGGCGCGGACCAAGCT
CAAGATCCTCTCGCCTTTTTACGGACACAACCCGAGTTCAGCAAATGCGACAAGTTATACAACAGAATCCGCAACTCTT
GAATGCTGTACTGCAACAGATCGGCCAATCGAATCCTGCTCTACTGCAGCTCATCTCGCAAAACCAAGAAGCCTTTGTAC
GCATGCTCAACGAACCTGCCGGAGCAACCGGTGGAACCTGGGGCCAACATCCCCTGCGGTGCGTGACCTCAGCGGCTACT
GCTCAAAGTGGTGAACAGGAAGAACGAACACTAGTGGCGGAACAACCTGGGATTCAAGTATCTCCGCAAGACCCGATGC
GATCGAAAAGGTTGAAAAGCTCTAGGATTTCCGGAACCTTGTCTCCAGGCGTATTTGCGGTGTGAAAAAATGAAAACC
TTGCAGCTAATTTTCTGTTATCACAAAATCTTGATGATTGAGCTTCCATAAATAATGTGTTTGAGACTTAGAGCTTACCG
AACGAGCAGAGAGTGGAGTCTGTGATTTTAGTTGGAGACTTACCGTTCCGCTAGCCAAAATACCAAGATCTGTTGGCGG
CGGCACGCCTTATTCACGTTGATCCCGATCAACCTGTGTAACCTCTACTTCCACCGGCTCTTATCACATTTGCAACTTG
TACAAAAATCAAACCTTTCTGCACCGCGTTGTAAATTTACTGAGCATTTGCTTAATTTTATGCGCTATTAATAATCTATCAG
TTCTCATGTAGTCTTCTTATTTGTAACGTGTTGACTGCATACCAACCGTTATTTACCATGGGACTTTTATTGTTTTTTA
ACGCGTATCTTGTATTCTTACTTCTGCTATACCTGCGTACATTGCGTACATTATTTTATTTGTTAACTGCAGAAGAGACTCT
TCTGTAATAATGTGTTACTATTCTGACGGCAACTGAGCTG

>CL5484Contig1|hydroxypyruvate isomerase

TTTTTTTTCTTCCCTAACCTCGAATTCACAGAAAATGTAAAACCTGCGAATGTACGATCGAACTGGAAGATCAATGAA
TAAAAAGCTATCGAATTTGCCATTTCTAAGGAAAACACTGGACCCGGAATGCAATTTCTAGCAGATAAGTCCGATACGA
TAGTTGCTAAGATTCTTCGAAGAGTAAAAGTCGATCAGCGAATTTCTCCAGGATTTCAATTCGAATACGAAAATGGGT
TTCAAATTCGCGAGCAATCTTTCTTTTATGTTACCGAGTGCCCTAATATTCTGGGGAGATACAAATAGCTAAGGAGGC
TGGATTTACAGCTGTGGAAGCGGCTTCCCTTTGGGTTGCAGCATCGAACAGGTTGTCCAAGCCAAAACAGCGCCAACG
TCAATCAAATTCATCAATGTTTTTACCAGGGGACGTCACCAAGGAGAATTGGGTTTTGCTGCTGTTCTGGCAAGGAG
ACTGAATTTAAAAAGAGCGTAGAACTGACCATCGAATATGCGAAGGCTCTGAAGTCAAAAAAATTCATGTATGTCTGG
CAAAGTGAATCTCCCAATGACATAAACGACACTAGTTTATCGTTTGAATCTAGAAATACGCCGTGCAGAGATTGCAATC
AACAGGAATCGGTT

>CL54Contig1|protein disulfide-isomerase a3-like

AGGATAGAGACTCATCGTTCGGAACAAGAGCCACGTCTCGCAAGTCCAGCGCGCATTGCCTCCTCGAAAAGTTGGCCTCT
GAAGGCGATTGAATATTAGAGACTCGGAAAGTTAATAAAACCACAAACAGGAATGTTGGCGAAGTACCTGATTTTTTGCT
TCCTCGCTGTGCGAGCCTGGGCGCGGAGGAAGATGTCTCGAATTGCTCGACGCCGATTTTCCCATGTATTGAAAAAC
CAGGAAAAACTCTCGTGATGTTTTACGTCCTTGGTGCGCCACTGCAAAACATCTCAAACCCGAATATGCCAAAGCCGC
GGAATTTACTCCAAGGCAACGATCCTCCGATAACTTTGCCAAAGTCGATTGTACCGAAGGCGGCAAGAAACTTGTCAAA
AATATTCCGTGAGTGGTTATCCTACCCTCAAGATTTTCGCTAAGGGAGAAGTCTGTCAGCGAATATAACGGACCCAGAGAA
GCCGACGGCATCGCCAAATACATGAGGTCTCAAGTTGGTCTGCCTCAAAGAGCTCAAGGGACCGGACTGCAAGAAAGC
GTTCTTTAACACGGACGAAGTCAGTTTCAATTGGTTACTTTGAAAAAGACGATTCTCCTTTGGCTGCTGCTTATCACGCGG
TATCCAAGAAACTCAAAGAAAAAGCAAGATTCGCTCACACCAGCAACAAGGATCTCCTGGCTCAAGAAGGCTTTTCAAAT
CACATCGTGCTTACCGTCCGAAGAACTCCAGAATAAATTCGAGCCCGCTAGCCTCGTGACAAAGGTGGTGACAAGAT
TGCCGAGGTACGCGACTTCGTGACGAAGAAGTACTTCGGTCTCGCTGGCGTACGTACAAGAGACAACGCTCAGAGCTTCA
CAAATCCATTGGTCTGTTGCCTACTACAACGTGATTACAGGAAAAACCCAAAGGGAACAAATTACTGGCGCAATAGAATA
ATGAAGGTGCTCAGGGCTTCCCGAACATAATGTTGCGGATATCTTCCAAGGATGACTTCCAGCAGGAGCTCAATGACTT
TGGAATCTCGTTTGTCAACGCGGACAAACCCACGATTTTGGCCCGTGACTCCAAGAGCCGCAAAATTCATTTTGCAAGACG
AATTCTCCGTGAGAACTTTGAAAAGTTTTTGAAGCTTTTGAAGCCGACGAGCTCGAGCCATTCTTAAATCCGAGCCA
ATTCCGAGGACAACAGCGCCAGCGTCAAGTAGCTGTGCCCCAAAATTTGACGAAGTCTTATCAACAACGACAAAGA
CAGGCTCATAGAAATTTACGCTCCGTGGTGCGGACATTTGCCAAACAAATTGGCACCGATTTACGACGAATTCGGCGGAG
TGCTCAACGAAGATGTCGAAATCGTCAAAATGGACGCGACAGCCAACGACGCTCCCGCCCAATTGGAAGTCCGCGGATTC
CCCACTTTGTTCTGGCTCCCAAGACTCAAAGGACAGTCCCGTCAAGTACGAGGGCCAACGACAACCTCGACGACTTCGT
CAAATACATCGCTAAACACGCGACCAACGAACCTCAACGGATACGATCGCAAAGGCAATCCCAAGCCCGCAAGGAGGAGC
TGTAATACCTACGTACAACACACACTAAATCTTGATGAACAAAAAACCGAGAAATATCATCATTAACCTTCCGAACT
TTGTTAATTTCCAGCAATTTAATAATTAACCATTAATCTTCAAGGAGTTTACGAACTACGATTTTCAACGTCGTTATA
TTTTCTCATTACGATTAATGTCGCAAAACGACTCTATTCACTGTACAAACGTTCTTGGCACTGAACATAACAATTTTC
TTCTATGAAGACGAATTTTCTGACTTTTATGATTTTTCGGATATTTTATATCCAATTTCTGTTGTCATTCGTCCGTAAACGG
TTTTTTCTGCACGTTCCGTGCGTAAACCCGAACACACCATTCCCCTGTTATTCCATTCAAAAAATTATTGAAAAAAGC
AGGCTACTGTTTCAACTTTTGAAGTGGAAATTTCAATTATAAAATTTGAAAAAATGAATTTTTTCATTTTTGATCGAATA
AATGGACCGATCGTTGCGGAACACGAATTACCCAATTTACAGACGAAGTGTATTTTTCTCATCGAAACGCGTGTA
TCGAAGTCGCGTTTTCTTTTCTTGCTAACTTTTAAATGGGAAAAATGGAATTAATACTCAGATGCCAAGAGTCGAAAAATA
TTTCTTCGCAAGAGAAAAATTTTATGTTTTTTCATGCCAAGAAGCTTTGTGCTAAATTTTGAAGAAATAAAGTCTGTTTCTGCT
GTTGTAATAGCTCAACATCTTGCCTTGAATTTTTCGAGAGTTTGTGTTGTCGACGATGTGATTACAGAGATGAGGAAGC
AGAATAAAAAAGAAATAAGAACTCAAGAGATTTTAGNGAGCGCAACGACGAGTTGCTCGGATCTTACGATTTTCTGTT
CAATTCGTTCACTCGCGACAGATCCTCCCTCCACGGATCACAGACATCATTCCGTTTTTTTTTATCACATCATCGAATGA
AAAGAAAAAAGAAATAACTCTAGATTTAAGGAGTAAATTTTATGTTTATGTTAACGAAAAAAGNGTAAATAAAAAAT

>CL552Contig1|translation initiation factor 2 gamma subunit

TCCTTTCCCATTTACCGCAGCTGTACCGCGTGTATTATTTGCAGTTTTATATATTTAAAAAATAAGGAACTGCAACAATGG
GGGGCGAAGAAGGTCTAGGAGTAACAACCTGGTCAACCAATCTTTACAAGCAGGACTTATCGAAATTGGATGTTACCAAG
CTGACGGCATTGTCCCCTGAAGTCATCAGCAGGCGAGCGACAATTAACATTGGTACGATCGGTGATGAGCGCATGGA
ATCAACGATCGTAAAAGCCATTTCCGGTGTGACAGACTGTTGTTTTAAGAATGAGCTCGAGCGCAACATCACCATTAAAC
TGGGATATGCTAATGCGAAATCTACAAGTGCAGACTAGAAAAATGTCCGAGACCCTCTTGCTACATTTCTGGTGGTTG
AGCAAGGACGATGCTTTCCCGTGTGCGCCAGCATGTCCAGGACGTTTCCAGCTGTTTCTGTCACGTGCTTCTGTCGA
TTGCCCGGTGTCAGATATTCTTATGGCTACCATGTTGAACGGCGCAGCTGTGATGGACGACGACTTCTTCTTATCGCTG

mmc4.txt

GAAACGAATCGTGTCCGCAGCCTCAAACCTTCGGAGCATTGGCTGCTATTGAAATCATGAAACTGAAACATATCGTGATA
TTGCAAAACAAGATCGATTTGGTGAAAGAAGGCCAAGCTAAAGAACAGTACGAGCAGATCTTGAAATTCGTTCAAGGTAC
GGTAGCAGAGGGTGCGCCGGTGATTCCAATTTCCGCCAGCTCAAGTACAATATCGAAGTTTTGTGCGAATACATCACGA
AAAAGATTCCAGTGCCCTGAGGGACTTTACTTCGGAGCCTCGTTTGATCGTAATCCGTTCAATCGACGTTAACAAGCCA
GGTTGCGAGGTCGACGACCTTAAGGGTGGAGTAGCCGGAGGAAGTATTCTCAAAGGAGTACTCAAGGTCGGTATGGAAT
CGAAGTACGTCCGGGTTTTGGTGTCGAAAGATGGCGAAGGAAAACGACTTGTCTCGTCCGATATTTTCGCGCATTGTGTGCG
TATTCGTGAGCAAAATGAGCTGCAATTTGCTGTACCCGGTGGTCTTATCGGTGTTGGAACCAAGATAGAGCCAACGTTG
TGTCGTGCCGATCGTTTGGTCGGTCAAATATTGGGAGCCGTTGGCGCACTCCCAAAATTTTTATCGAGCTTGAAATATC
GTATTATCTTCTCAAGCGTTTTGTTGGGAGTTAGAAGTGAAGGTGACAAAAAGGGTGCTAAGGTGCCAAAGTTATCGAGGA
ACGAGGTTTTGTTGGTGAACATTGGGTCACTGAGTACCCGGTGGGCGGGTTTTAGCAACGCGAGTCGATTTAGCTAAAATC
AGTTTGACCAATCCAGTGTGCACGGAATCGACGAAAAGATCGCGTTGTGCGGACGTGTGAAAAACATTGGCGTCTTAT
CGGCTGGGGACAGATCCGCGGAGGCGAGACGATCCAACAGTCGTTGATCGTAAATAAACAAAAACAACGAATACATT
TAAAAAAGCGGAAATAACACGTGAGCACGAACACTCGTGACATTTATCCAACACAAGAACTAAACATGAGCGTGACG
GTGTGGAGCGCATTGTACCAACTTTCCAATAAAGTCAGGCTTTATAAACA

>CL554Contig3|ap-1 complex subunit beta-1

ATCCAATTGAACAAAAACAGTTTCGGCCTGACGACAGCCGCTCCTCTCCAAGTTGCTGCTCCTCTCGCCCCAGGCGCGAG
CATCGAAATCAGCGTCGTCTGTCCACCGCTGGAGCAGTACAGCGTATGGATCCCCTCAACAACCTCCAAGTAGCCATTA
AAAACAAACATCGACGTTTTTATTTTCGCTGCATTGTCCCGATGAACGTTTACTTCACCGATGACGGACAACCTCGACAAGA
GAGTCTTCTTGTGACGTGGAAGACATTCCAGCTCAGAATGAAGTTCAATACACACTGAACGGAGTGATGCTGACCGCC
GATCAAGTGGTTCAGAAAGATGCAGCAGAACAACGTGTTTACGATCGCGAAAAGGAACGTGCAAGGACAAGACATGCTTTA
TCAATCGTTGAAACTTACCAATCAAGTTTGGGTTCTCAACGAATTGAAGATCCAACCAGGAAACCCTGATGTAACCCTCT
CACTCAAATCGCGCTCCGTGCAAGTCGCTCCCGGAGTATTCCAAGCCTACAACGCTATTCTACACTCTTGAATCAATAAT
ATCGCCGAGAGTCCGTTGAATGTATGAAAAACGAATTTATATGCGCGGAAATTGATGTAAGAAATTGAAAAAGTTGAACA
AGATTGATCGCCGTGAGCCAGTGGCGATGCAGGCACGAGAAGAAATCGGGAAGGATTGTTTTATCAAGTTTTATTCTGTT
ACCCGCGTATTTCCAGTTTCTTGCTCGCTCCAATTTAGACCTTACAAAGTTGTAACA

>CL5582Contig1|uncharacterized oxidoreductase yrbE-like

ACTGTTTTCCGCGTTCAATCGACGCTTCGATCCGAGCTACAGTGCAGTACGTGACCGAGTTGCAAGGGAGAAGTCGGTC
ATGTTACACCATCAAGACAACGTCCCGCGATTACCCTTGCCGACGATTGAGTATCTCTCTCATTCCGGGGGAATTTTC
CATGACTGTATGGTCCATGACATCGATATGATCACATGGATCCTCGGAGAATACCCTATCAGAGTGACGGCTCAAGCTTC
AGCGAACATACCTGAGATCAAGGCGATCAATGACTTCGATACGGTAGTCGCAACGCTTCAATTCCTTCAGGATCATTGG
GAATGATCGATCTCTCGAGAAGCTCGAGCTACGGTTACGACGAGAGACTCGAAGTGTTCGGCCCGAAGGGCATGGTAAAA
GCGGAGAACGAGCAGCCGATACACTGTGATCGACGATGTTTCGATCTGAACGCGCCGAACGAAGCGCCGATCTGGTATTCT
CTTTCCTAGTCGTTTTATGAGAGGCTACAGAGCAGAATTCGACCATTTTTCTGGACGTTTACTCTTGGAAAATGTGAATC
GTCAGTGCAGCCAAAGAACGATGGCGGTACGAAATAGCGTCGGCAATCGAAGAAGCCGTACGTTTATCCAAAGTTGTC
GAACTGAAATGGGCTCCGAACGAATTTCCACCTCAACAATAAATAGTCCAAGAGACTTTTTTATTCAGGTATAACTGAAA
AATTTTCGTTTTCGCATATAAATACAAAAATCTCATGCGTCTCCTGGTATTTTCTGTTCCATTTCGACGAACCTTGATAGAAA
AAATGTTCTTTTTGTTTTTGGGACGTTGTATCGCGAAGTTAAATCTTAAATTTTTGTTTTAAATTTTTCTTGCATAGA
AAATGGTTTTCTAGCCCAAGTTCTTTAGGAAAAGTTGTTAGAAATAGACTGAAAAACAAGATACTTAAATCCAAGATTG
TCCGAGGTGATCTGTATTGGTTGTATGAATAAAAAAATTCGAAAAATAGTTGCGACCGTATTTTTTAGGAAAAAGTAA
T

>CL55Contig1|serine-arginine protein 55-like isoform 2

ATTACACTCGGAACGCTCGCACGGTCTCAATGTCCATTTATTGCGAGCTTTGTTAAATACGCGTTAATTCAAGTTCCGT
GTTCTTGGGTTGCCGTTGATTAAATAGAAAAAAGTGTTAAACAGTGAATCGAATAAACAACGAGACATCGACAGAGAAA
AGCAGTTTTTCCAAAATGAGCACCCGAGTAAATCGTTGGTGATTAAACGTACCGGGTGCGAGAGCGCGACCTTGAGAAGTT
CTTCCGGAAATATGGTAGAATCAAGGAGGTCGCTATGAAGAATGGATTTGCCTTTGTGGAATTCGACGACTACAGGGACG
CCGACGACGCGGTCTACGAGCTCAACGGAAGGAACCTTTTGGGCGAGAGAGTGGCGGTGGAGATAGCACGTGGTGTTC
GGGGAGGCGAGGCGACCGTGGCTACGGACGCTCACGCTCCTGGAGAGACAATCGGGACGATATGCGACACGACAGAGATA
GTGTGAACAGAAACACGAGGACTGCATCTAGCTACAAGCAATGATTGCCAGATACCGGACCAACCTCCGACCCGAAT
ATCGCTCACAGTGGAGAATCTCTCGAGCCGTGTCAGCTGGCAGGATTGTAAGGATTACATGAGACAAGCCGCGCAAGTA
ACTTACGACAGCGACACAAACAACGTAGAAACGAAGGTGTTGTGGAATTTGCCACTTACTCCGATCTGAAGAACGCTAT
TGACAAATTGGACGACACCGAGCTGAACGGTCGCCGAATTCGTCTGGTTCGAGGACAAGAGGCGAGGACGTCGTTCCCGCT
CCTCAAGCTCGAGATCTCGTTCCAGGTCCAGATCTCGTTCCCGTCGTCTGTTCTCGTTCAAGGAGCCGCCGAGC
TCTCGTAGCCGTAGTCGCCGACGAGCCGTTTCAAGTCAAGGGCACCCACGATATCCAATCAAAGTCCAATCCAAGTC
TCCTGAGCGTGGTCGCTCTCGTTCCAAGTCCAATCCAGAGATCGCTCCAAGTCCAAGTCCAATCCAGATCTCGTTCCA
GATCCAAGGTCGAGAGATCCAAGTCGAGGTGCGAGTCCAAGTCCAAGGCAAGTCCCCTTCAAGGAGCGATCGAGCCGC
GAGCGGTCTACGGGGGCGACGAGATCGAGATCACGTTTCAACAGTCAAGCACAGCAAGAGTCGAGTCGTCCTCGTTGCCG
ATAAACGGNGACAAGTCACCGG

>CL5607Contig1|translocon-associated protein subunit gamma

AGAGCGTTGTTAGTCGAACGAGCAGCAACCTGACTTTTCTTCCATCTTCGATTGTCACTGTGACGCTATTGAAATCTC
GTGTTTTATCAGAATTAATGAACGTTCAACGATGTCTGGAAATCAAAAGCATTCAAAAGGAGGAGGAATTACTTCTC
CAGGATTTTTTCAGGAACGTATCCAATAACTTCCGCTATGTTTTACGGCAATGCCTTATCATGTTTTCTGTATTCCAAT
CTGGCTCTTCTGGAGGATTACCTCATCGATTTGTAATCCAACCTGATCTCGTTCTGCTCTGGTCACTTTAGTCAGCACAT
ATGCTTTAGCCATGGCATAACAGAAACACCAAGTTTGTCTGAAGCATAAGATTGCGGTGAAACGCGAAGATGCGGTAACC
AGGGAATGAGCCGCAAAATGGCGGAAGATAAAAAAATGAGCAAGAAGGAAAAGGACGAAAGAATACTGTGAAAAAGA
ACGAGGTTGCGGATTACGAAGCGACGACATTCTCAATTTTCTACAATAATGCTCTCTTCTGGCTCTCGTAATCGTCTCC
TCTTTCTACATTCTCAAAACATTACACACAGCCTTCAATTTACGTTCTTTCGTTGTCAGCCACGAGCCGCTTTTGGCC
TTATTGTCACAGGTCGCAATAATATGGTCCGAGAGATTTTTATTGACGAAATTCGTGCGAAGATCGTTGTTGTAAGCT
AATCCCTAAGAAATCATGCGAATGTTCAAGATTGTCTTTTGATACGTGCGAGTGTGCAAGAACAGTAAATCCCTT

>CL560Contig1|chromobox protein 5

CGGCCGGGGAGCCGACAACCGCCCAACACCGTGTTCGCGAGCGTTTACGTTGTACCGGAGGAACAAAAAACTCGGAATC
GATTGGAAAAAGAAAGAACTGCGATCGGATAAGGAAGATCCATTATTCTGTTTTTCAACTCATCACGACATTATAATCG
ACAACCACAATGAGCAAATCTAAAGACTCACCGGTAACAGAAGGAGAGACGGAGGAAGAATTCAAGTGTGAAAAAGTTTT
GGAGAGACGCGTCGTCAGGGCAAGGTGGAATATTACTTGAAATGGAAAGGATATTGAAACGAGGAAAAACACGTGGGAAC
CGAAGAGAATCTCGATTGCCAGATTTAATCGCCAGTTTGAGGAAGCTCGCAAGAAAAAGAAAGCAGCTTCCAGCGGT
AAACGCCACGAGGAGAAGGAACAAAAGAAACGGAAAAAGCTCCAGCACACCAACACCGACACAACCAAAAAAAGTTAGC
CGAAGAAAAAGAACTAGAAGTTTTGACCGGAACTTGGACCCTGAGCGTATAATCGGTGCGACAGATCCAGTGGAGAA
TTAATGTTCTTGATGAAGTGGAAGGAACGACGATGCGGATCTCGTGCCAGCACGCGTAGCGAACGAAAAAGTGTCCGCA
AATTGTTATTCTGATTTTACGAGGAAAGACTGACGTGGCACAGTCCCACACACGATGAGGAAGTTCCACAAAGCCTGATG
CCGAGTAGCCCTCCGCCTTCCGATCCTACGTCCCAGATTGTCCGTTCAACGTTTGGTCAGGTTGCGGTGATGAAAGACTCG
CGAAAAACAGAGATCCACGAAAGAAGGAAAAAAACATAGAAATACTAAATGACAAATAAAATGATATCTAAGCGTAATG
AGGTGGATAAAATAAATGTTTTTACACGGCAATTTATGCCAACAAAGCGATGAACGGAAGACAAAGCAGAGTAAGAGAGAGA
GAGTGGAGAGAAAGTTCTGACGCGTGAAGCAAGTTTTGTTTGGAACTGCAGAACTTTACTTTTCATAGATAAAG
ACCGTCGATTTCTGTGTCGTTGATCGAAAAATGCACAAATGGAAGAGAGCGACAAAGCCGACAAATAGTTATAAACTAA
ATTTACAAAGTTGGAATGCACTTTTTCTTTTTTACCCTTTCTATTTAATTCCTTCTTACGAAGTCATACAAATCGGTC
GACAAATGAAATAGTTTTGTTTTAAACGATTTACACTTGAAGCACTATCTGGTAAAACGAATCTAGAAAAAATTGTTTAGC
ACTATAAAAAACATTAATTCGGACAAGCACATAAAAAAGTACCAATTTTTTCCGTAGTTGACTCGTACATGGAATCCTTC
GAGTCTTTCGATTACAAAAAAGTAAACGAAAGAGTTGGATTTTTTCATGTGCCAGTTCGTTTCG

>CL563Contig1|proteasome subunit alpha type-5

ATTTCCATACCCCGTTTGAACCTAATTGCAATCTTCGTTCTGACTGGCGATTGTGACAAGTCGGCTTCGTTTACAGTC
AAATTTCAATTACTGTACGAAATAAAAGCTCAACATCAAGATGTTTTTGAATCGTTCCGAATACGACAGAGGCGTCAACA
CCTTTTCCCCCGAAGGTCTCTCTTCCAAGTGAATATGCGATCGAGGCCATAAAATTGGGTTGACCGTCATTGGAATT
TCGACGTGGAGGGTGTGTTTGTGGCCTCTGAAAAAGAATAACATCGTCGCTCATGGAGCCGACGACGGTTGAGAAAAA
ATATTTGAAGTCGACAAGCACATTGGGTGTGCTTCGTCGGCTTGATGGCTGATTGCGAAGCATGGTGCACCGGCGAG
AGCTGAATGTCAGAATCATTGGTTTCATTTACAACGAAAAAATGACGGTCGAATCGGCGACACAGGCAGTCTCAATTTAG
CTATTCAATTTGGCGACAGCGACGACGCGGTAGCGCCATGTCCAGGCCCTTTGGAGTGGCCATTCTATTTGCCGGCATC
GACGAAAAAGGACCTCAGCTTTTCCATATGGATCCTTCCGGTACTTTTGTACAATTGACGCCAAAGCTATCGGCTCGGG
TAGCGAGGGAGCTCAGCAATCCTTACAGGAAGTCTATCACAAATCGATGACCTTGAAGGAAGCAACAAAGCTGCCCTCA
CCATCCTGAAGCAAGTGATGGAAGAAAAACTGAACGATTTGAACATCGAGGTGATGACGATGACGCCCGGTGCCCTGTTT
CACATGTTACGAAGGAAGAATTGCAGGAGGTGATTAAGATAATTGACTTAAAAATAAAAAACAAAAACAAATAA
CGCATTTACCGCGATTTTCGTCGGCTTTATGAATTTTTACTAAAAATTACTATTATTAATAAAATAAATCTGCCGATAAAGG
ACAAAAAAGAGATAAAACATTGTGACGGAGACTCCCGAATTGTACAAAAACGTGACGATACCAAAATCATTGGACAAC
AATTGTGCTCAAGTGGTGGAAAAATATTGAATCAGCAATCCGAAGCAGATCGAATATTACGAAGACGAGATGTC
GACAAATGCTTTTATGATCCCGATCTCAAGTGGGACGGCAATGTCAACACTTTGAACGTTCTGGCAATCTCAAGGAA
GAAAAATCAACTCTATAAGGGATTTGAACGCGAGCCATTTGACTCTGCTAAAAAATATAAGAGACAAAGGGACCGAGGCTA
TCGTCAAAAAATACGACATAAGCTCGTCGAAGCTGAGGATATTTTTCCATTATTTACCGTCTTATTATCATCTCCATGTG
CACTTTACGCAGCTGTCCGTTGAAGATGCTGGAATTTATGCAGAAAAAGCTCATCTCCTTTCCAGCGTGATAAGCAACAT
AGAATTATTCGCCGATTATTATCAGAAGGCAACTCTTCAATTCGCTGTTTTCAAACCTGAATTTGGTCGACGAATATAAC
GAGCAATCGAGACCAAGAGAAACGAAACGAGCCGAGGAAGAGTGTGATGACAAACAAACAAATAAATCAATTTTTAT
TTTCATACGACGAAATGACTAGTTTTTTCGAAACATTTGGATCGCCACGAATTCGAAAAATAAAACAAATAAATATAATT
ATCTCAGAAAAATTATTAATTTGACAAAAAATAGTATTTTTGACGACAACTCTTACCACCAAAATAGTGCAATACAA
ATGCAATGAGATTCGATAAAATAATATGAGACTTGCATCATTGTTATAAAAAACAATTTTTAATTCAAATGGAATTGAAATAC
AAGTTCTCGATCGCAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCCGGCCG

>CL564Contig1|scavenger mrna-decapping enzyme -like

ATTCGATTCGCCGCGTCTGCCAAGGACCTCGGCAAGCAAAAAGCAAAATTGTGTAGTGTGTTCTTTTATCTCGCCGATT
CGTTTTTACGCACGCACACCAGGCGCGGATTGAAAGATTGCCGAAAAAGCCGATACAAGTAATAAAAAATAAACATGGCC
GAAGTGAAGCGGCATGAAAAAATGAGACAGTGAATTCGCCAGCAAGAAAAATCAAGCTGGACGTAAAAGACGAAGACGA
GCAAGGGAAGACGATTGCCGTGATAGACAACGGCACAATTTTCAGGTCAAGCGTGACTTAATAACAACATCGTGCGTA
AACAAATATGGCTCGAAGGAACATTCAAAGGTGACGAAAAGACGGCAATCGTTTGTAGAGAAAAAACTTTTCTGACG
AATCCGAATCTCTGATTAATTTCTTCGACGATGAAACACTCCTCAATCATGTTTTCGGCAACGATGCTTATGGATCTTAC
GAATGCTTTCCCATAGAGAATACAATGGACTCAACGCGACCGTCATATATCCCGCGACGCAGCAACATTTGGACAAGTT
TTCCAAAAAAGAGATAAAACATTGTGACGGAGACTCCCGAATTGTACAAAAACGTGACGATACCAAAATCATTGGACAAC
AATTGTGCTCAAGTGGTGGAAAAATATTGAATCAGCAATCCGAAGCAGATCGAATATTACGAAGACGAGATGTC
GACAAATGCTTTTATGATCCCGATCTCAAGTGGGACGGCAATGTCAACACTTTGAACGTTCTGGCAATCTCAAGGAA
GAAAAATCAACTCTATAAGGGATTTGAACGCGAGCCATTTGACTCTGCTAAAAAATATAAGAGACAAAGGGACCGAGGCTA
TCGTCAAAAAATACGACATAAGCTCGTCGAAGCTGAGGATATTTTTCCATTATTTACCGTCTTATTATCATCTCCATGTG
CACTTTACGCAGCTGTCCGTTGAAGATGCTGGAATTTATGCAGAAAAAGCTCATCTCCTTTCCAGCGTGATAAGCAACAT
AGAATTATTCGCCGATTATTATCAGAAGGCAACTCTTCAATTCGCTGTTTTCAAACCTGAATTTGGTCGACGAATATAAC
GAGCAATCGAGACCAAGAGAAACGAAACGAGCCGAGGAAGAGTGTGATGACAAACAAACAAATAAATCAATTTTTAT
TTTCATACGACGAAATGACTAGTTTTTTCGAAACATTTGGATCGCCACGAATTCGAAAAATAAAACAAATAAATATAATT
ATCTCAGAAAAATTATTAATTTGACAAAAAATAGTATTTTTGACGACAACTCTTACCACCAAAATAGTGCAATACAA
ATGCAATGAGATTCGATAAAATAATATGAGACTTGCATCATTGTTATAAAAAACAATTTTTAATTCAAATGGAATTGAAATAC
AAGTTCTCGATCGCAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCCGGCCG

>CL565Contig1|cytochrome b-c1 complex subunit mitochondrial

AGATTTGGGAGGTTTCAAAAAAATGGCTTGCTCGGCGATACGATCCCCGATTTTTCGTAATCAGACGGTGCGCCACTACG
CACTCGCCGCAACCGCTCAACATGCGCCAGCCACTCTCTCCGACGTCCAAGTTTTGAGCAACAAGGTTTCCCTTGCCGCG
GTAGAAAAACAACAGTCTTATTGCTCAAGTCTCCGTCGTATTCTGTCGGCTCTCGGAACGAGACTTACGACACTCAGGG
CATAAGTCATCTGTTGCGTCTCTGCGCGGGTCTGACAACGAGCCGAGCCACGACCTTCGGGATAACTCGCAATCTCCAAC
AGATCGGAGCAAATCTGACCGCGACGGCGGATCGTGAGACGCTCTCGTACACGCTCCAAGTACCAGAGACAAGCTCGGA
GAAGCCCTCCAATATTGGAAGATGTTGCTACACATCAGGTTTTCAAGCCATGGGAAGTAGTGAACAATCAAAACGAT
GCGCTACGAACCTCTACTCTTTACCAGAGACGACGCGCATCTTGAACCTTTGCAAAAGCCGCGTTCAAGTCCGGATTGG
GTTATTCTCTCTATTTCGCCCAAGCGTCAAATTGACAAAAATATCTCCGAACTTTGCAACATTTTGTCAACACTTGGTTC
TCGGGTTTCGAGATGCGCAGTCGTATCAACCGGAGCCTCGCTCGGAGAAGTGTCTGCGTTTCGCGGCCAACCTGAAGCTTGC
CGGTGGCAATGCTTCCAGCCCTGCGTCCAAGTTCTGGGGCGGCGAAGTCCGCAAGAGCGTAATTCTGAGCTCGCAACTG
TCGCGTTGGCCGTGCAAGGCTCTGGCCTCGATAAGGAGAAGATGCTCTGGCGTTTGCCGTTTGAACAAGTCGCCGGT
ACAGGCCCTCGCGCTAAATGGGAAGCAGCACTGCTCCGCTTACAAAGCCGTTGCATCCGCTGCAGGAAGCGATCCTTT
TGCAATTTCCGCTTTTAAATGCGAGCTACTGACGCTGGATTGTTGCGTTTGTCCGCTCCCGCTCCCGCAATGTCTG
GCTCGTTGACCAAGCCGCTTACAAGTGGCTGCGTGACCGACTCTCAGCGACGCCGACATCAATCGTGGCAAGAACGAC

mmc4.txt

CTCAAGGCTGCTATTTTGTTCGCCAACGACAACAACGCCTCGCTTTTGGAAAGTCTCGGTCAACAAGTAGCTCTCAAGGG
TCGCGTAATTTCTCCTCTCGCCATCGCAAACGAAGTAGACAAAATTTCTGCCAACGATGTCAAGAGCGTCGCCACTCGTC
TCGGCGGAAAAAGTTGCGATGGCATCGATCGGTGATTTGTCTGCGTTCTCACATAGATCAACTGAGTTAGATATCGTTG
AATCTAACATTTTCGATGTCTGTATTAGTAACAACTTTCTCGTATTTATGAATAATAACCGAGAGAACGGACGTATTGG
CAGAATACGTAAAAACGAGTGCACAAGGCGTTTCATCCCCTACAATTCATGTAATTGTGTACATACTAAATAAAAGTTTC
GAATAGCCGATGGGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
GGCGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATTTGGGCCCCCCCGGCCCG

>CL5672-bisContig1|epoxide hydrolase 1 precursor

AGGAATAATTTGCGCGATGCTCAAAGTAGCCGGTTTCGTATTTCTCCTTGGCTTGGGAGCGACTTACATTTTCGATTATA
TCGACAGTGATGCGGACCTCGAAGTGCCCAAACCTGCCCGAACTTATTGGGGGCTCTGGAACCTCGAAAAGTCGACAAC
AGCATCAGGCCTTTCAAGATCGACATTCTGACGAGGTGATTACGAACTTGAACACGCGATTGTGACGAAACGGAGATT
CGTTGCACCGCTCGAGGCGACCGGATGGGAATACGGAATAAGCGGAAAATACATGGAAGCGTTCTAGAGTATTGGAGGA
CAAAGTACGATTGGAAGAACGAGAAGCCTTGCTGAACAAGTATCCGCAGTTCTCACACGATTCAAGGTTTGGACATT
CATTTCTGACGTGAAACCGCAAGAGGCGAAGGTGGAATAACGAAAGTCTGCCGCTCTGATGGTGACGGTGG
CCAGGATCGATCGTCAATTTCCAAAAATAATTCACCTTTGACAAACCCAGAGACGATCGCGATTACGTTTTTGAAGT
AATTGCTCCCTCGCTTCTGTTATGGATTTTCCGACGGTGCGGTGCGTCCGGGACTCGGTCCGGCTCAAATGGGCGTCA
TTTTGAAAAACCTCATGACGCGACTCGGCTTCAAGAAATTTTACCTCCAGGGAGGCGATTGGGGCAGCATCATCACTGGC
AACATGGCATCCATGTTTCCAGACATGGTAATCGGAAGTCACGCGAACATGTGCTACGTCAACAACGCGAAAGCGATGAT
TTACAACTCGCCGCTAGTTACTGGCCTTCCCTGGTCTGACGACGAACACGCCTCCAAAGTCTTCCCTCTTAAGGACC
CATTTCTCCTTTATTTGAGGTAGAGCGTTACATGCATTTGCAGGCGACGAAACCCGACCT

>CL5679-bisContig1|pupal cuticle protein

GACCTTGGCTNTCACTCAACATCAGTCGTCAATCGTACTTTCTGCGAAAAGCAACCATGTGCAAAATCTTCGTTCTTTTG
GGTCTGGTTGCCGTGGCAGCCGAGGCGCTTTACCGGAAGAGCCGTTCCGATCCTTAGTCAGGATCAGGAAGTAAACCC
GGATGGAAGTTTCCACAACAAATTCGAGACCGGAAATGGAATAAGTTATCAGGAGTCCGGAGTTCTGAAGAACGTTGGCC
AAGAAAACGAAGCTCTCTCGTCCAGGTTTCGTCAGCTATAACGCTCCTGATGGTACCCCAATCCAGCTGACCTGGGTC
GCTGACGAGAATGGATTCCAACCTCAAGGCGCTCAGTTGCCGAGTCGACCTCCAGACCGGAAATCCCACCAGCGATCC
CTCCGGGCTCTCGAATACATCGCTGCTCATCCCTACGTGCAACCCACGAGGAAGAAGTATTTATCAACCCGCTATATCC
ATCGGCAATATCCTCAAACATGCTTAGTCAATAAGTCCGTTGTATGACCAAAGTATATGTTCTGAACAAATAATTAAC
AGACC

>CL5688Contig1|4-hydroxybutyrate coenzyme a transferase-like

GCTATAACAGTTTGGTCATTCACGAGACCTTGGCTCGTGCTGTTCTGTCATCAGAGTTCGTACCTTCGTCACTGACAGTA
CGATTTTTTTTTAATTCGCGACAGTGGCCGTGGCGCGAATTGACCCAAATCCATTGGGATCTATCAGAGCGTTGTACCAA
TGGAACCTCTGGTCTTAGAAAAAATAGCAATTTTTATTTATTTACTGGCGTTCACTGTCTCGCTGTGTTTGACAGGTGT
TTGTGGGATCGATTTATCGTTATTCTGTGATTAAGGTGAACAAACCACAAAGATCAAATTTACTCGCTAGTCTACGA
AACCGAGGAAAGGAAATTTGAATAAACATTTATTCGCTAAGAATTTAAGAAGCAAAGCAAATCATGGCTGCACTAAAC
GAATGACACAACCTTACGGGACGCTTAAAGGCCCTGACCGCCTCGAATACTCACAGACTGCATCTTCCAAAACTTACTAC
ACGTACGTCAATGAACCATCCATGCTCATCCCCGACAAAGAAGCTGTTGGGTCAAATCCGAGAAGAAGCCGTGCAAC
AAGCTGGATTGGCATCGGATCAAGTCGTTTTCTGTCGAAGGAGCTGACGCAACTCCATCGGAATTGCTTCGAGGTTCACC
GAAGTTGGACGTTAAAAAAGACGTCCGGAATGTGCGATTGTGCCACATGCATCTCGAAGGACCAGCTCCATTGCGGAATA
AGGAAAATGCGAAGCACTTACGTCCATCAGCTTCTTCATCGGAGGTAACGTGAGGGCTGCAGTGAACGCTGGAAGTCC
GATTGCATACCAATATTCTTGAGCGAGATACCAAAGATCTTCGACTATGGTTACATGAAACCTGATATTGCGTTGATCCA
AGTGACACCACCGGACAGCCAAGGATATTGTTCTGTTGGGTACAAGTGTGATTGCGTGCGATCGGCGTTAATAAAATCGA
AGAAAAATCGTCGTTCAAGTGAACAAGCATCTGCCAAGAAGCTTCGGTGATGCTCTTGTGCACAAAAGTCACTTGGATTTT
CGGACCGAATTCATCAACCTGCCAACCTCACGCAGTC

>CL570Contig1|14-3-3 zeta

ACGAAATAAAAAAATTTGAAAGAACGTAAAAAAGTACGAATCGCGATAGATTTTAAAGAGTCGCGAAGAGAAAAAAAT
AAGTTTTTCGAAAATTTATTTAACGTGTTTATCCGCGGTCAACGAGGAGATACTAATACGAGAGAGAAATACGAGACACT
GTTTCGCGGTCAATTGCTGCGTGATTTTTTATTTAAGTAATTTATGTAACAAGGAATTTTAAATAGCTGACACAATGT
CCGTGGCAAGGAGGAATGTTGACGCGCTAAGCTCGCAGAGCGGAAAGGTACGATGATGGCAGCCGCGATG
AAGGCGCTACCCGAAACGGGAGTTGAACTCTCGAACGAGGAGAGAAATCTTCTCTCCGTGCTTACAAGAAGCTCGTAGG
TGCGAGGCGTAGCTCGTGCGAGTTATTTCTCCATCGAGCAAAGACCGAAGGCTCTGAACGCAAACAGCAGATGGCAA
AGGAATATCGGGAAAAAGTCGAGAAGGAATTGCGCGAAATTTGCTACGACGTGCTGAGTCTCTCGACAAGTACCTGATC
CCCAAGGCCAGCAATCCCGAGAGCAAAGTATTCTACCTCAAGATGAAGGGTGACTACTACAGGTATCTCGCGGAGGTGGC
AACTGGCGAGACCAGAAACGCCGTAGTAAACGACAGCCAGAAGGCATACCAGGACGCATTGAGATCAGCAAGGACAAGA
TGACGCTACCCACCCATCAGGCTAGGTTTAGCGTCAACTTCTCGGTCTTCTATTACGAGATCTGAACCTCGCCGGAC
AAGGCGTGCAACTGGCCAAACAGGCGTTGACGACGCGATCGCGGAGTTGGACACACTGAACGAGGACAGCTACAAAGA
TTCCACGCTGATAATGCAGCTGTTGCGCGACAACCTCACTCTTGGACCAGCGACACGAGGGGACGAGGACGAACCAC
AGGAAGGGCGGCGACAACCTAACCCTCCTAAATTTTAAAGTCTAACCCTTTCTAAACCTAATAAGAATCCTATTCTCT
ATCGTTCCCTTCTTCCCCCATGTCCCATGTCCAAAAAAGGAAAGAAAGAAAAAAGCCTCCCTCAAAACACGAGCAGA
CCTTCTCGAGCCTTCTCCTCCTCCTCCTC

>CL5714Contig1|ubiquitin thioesterase otubain-like

GCACAGAAGTGAACCAGGATGAATTGATACTGCAGCAACAAAGGCGTATCGAGAAAGAGATCTCGGAATCCATTGCTCTA
GTCGCGGAAAAGAGTCTCTCAAGGGTCTCGAACGCGAGTACGAGGAGGACCAAGTTTATCTCTCAAAGGCCAAAGCTCTC
GGACAAAAATATTCATACTTCCGGAGAACCAGGCCGACGGAATTTGCTTTTTCCGCGCTTTCAGCTATGCTTATCTCGA
AAGACTCATCAACAACAAAGAGGAATACGAAAAGTTCAAGGATCTCGCTCTCAAGAGCAAAGACAATTTAGTCGCTTTGG
GTTTTCTCAATTACCGTCGAAGTATTTTACGACACGTTTCATGGAGTTATAGAAAAAGTCGGGGAGGTACAGAGAC
GAGTTACGCGGAATTTGACAAAATTTTCAACAGCAAGGCTACTCGGATTACGTCGTGATCTCAGATTATAAATCTT
CTGGTCAGTTGCAGAGCGAGGACAGCTTTTTCCAGAATTTTATTGAAGGCGGACGCACCGTTACCGAATTTTGTCTACG

mmc4.txt

GAAGTGGAGCCGATGTACAAAGAATCGGACCACATTACATAATAGCAATGAGTACAGCATTGGGTACGGGTGTTTCGAGT
TCGTTACATGGATCGTGGAGCTGGAACGGAAGTGACGGCCACGATTTCCAGAGGGATCGACACCGGCGGTGCATTTAC
TTTATCGTCTGGTCATTACGACATTCTTTATCCCTGATGTTCTCGTCCATCGAGTACGATCATGAAATTCACCTTGATCGA
TCAGCTCAGTTTCGTCATATTAATTCCAAATCCCTTGCCACGCTGTCCGACTTCTCGTACGTAACCAATCAGAACAA
CATCATCAAGAGTTTGCTTGTA

>CL5724Contig1|atp-citrate synthase

ACAATTGGGCGCGGAATTGGGGCTCATAAGGAAGCCAGCTTCCTTCATGACTTCGATCTGCGACGAACGGGGTCAAGAA
TTGTTGTACGCGGAATGCCAGTTACCGAAGTTCTCAAACAAAACGTTGGCATCGGTGGTGTGTTTCTCTGCTCTGGTT
CCAGCGATGCTTGCCCATAACTTACTGCAAATTCCTCGAAATGTCTCTGATGCTGACTGCTGATCATGGACCTGCAGTGT
CCGGCGCACACAATACGATCGTTTGCGCTCGAGCCGGCAAAGATCTCGTCTCTTCCCTCGTGTGGGCTTACTCACGATC
GGCGATCGCTTCGGTGGCGCCCTTGACGGCGCCGCGAGAATGTTCTCCGAAGCTTACGACGCCGGACTGCATCCCCAAGA
GTTTGTTAATAATACTAGGAAAAAGGGAAAGCTCATCATGGGCATTGGACATCGCGTTAAATCCATTAACAATCCCCGACA
TGAGAGTCAAACCTCATCAAGGAATTCGTTCTTGAGAACCTCCCGGCCAAGCCTCTCGTGCAGTATGCTCTCGAGGTGAG
AAAATCACCACCAGCAAAAACCTAATCTCATTCTCAACGTCGATGGTATTATCGCCTGCTGCTATTCGTCGATGCTCA
GGAACAGCGGCAGCTTTCACGAGGGAAGAGGACAGGAATATATCGAAATTGGATCGATCAACAGCCTTTTCGTCATGCTCA
AGAAGTATAGGATTTATCGGTCACTACATGGATCAAAAACGACTAGAAGCAAGGTCTCTATCGACACCCGTGGACGACAT
TTCCTACGTTCTTCCGGAACAGTACAACCTAAACGGCGAATGCCGAGTCAAAAGATGTAAAGAAAAAAGAGAAGAAGAAAA
TACCAACGAAATAACCAGATCTAAGCTCCGATTTTCGAGTAATTCTCGTAAT

>CL573Contig2|acyl- delta desaturase

TTGGGCTCACCGTGCGTACAAAGCAACTTGGCAACTACAACTATACTCATGCTGTTCAACACTATGGCGTTCAGAACA
CCGTAATCGAGTGGGCCAGAGATCACCGAGTTCATCACAAGTACAGCGAGACTGATGCCGATCCTCACAACGCCAAACGC
GGTTTCTTCTCGCCACGTTGGCTGGTTACTTTGCAAGAAGCACCCGGACGTCAGGTCCAAGGGCAAGGGCATCGACCT
CAGCGATCTCGAGCAAAATCCGATTCTTGCCCTCCAGGAGAGATATTACGCCTACTTGATGCCTTTGATGTGCTTCATTC
TACCGACTGTCTTACCTGTTTATCTGTGGAACGAAACATGGACCAACGCCTTCTTCTGTTCAACCGTCTCCGTTACGTT
TTCCTCTTAATATGACGTGGCTCGTCAACTCTGCAGCTCACATCTTCCGCAACAAACCATACGACAGGTTTCATCAACCC
AGCAAAAAACAAATTCGATACGATCGGTGATGGCTTTGGGCGAAGGATGGCACAAATTATCATCACGTAATTTCCATGGGACTACA
AAACCGCCGAGCTCGGAAATTACAGGTACAACCTAACGACCGCTTTCATCGATTTCTTCCGCGAGGATTGGTTGGGCGTAC
GATCTCAAGAGGGTCTCGACAGACATAATCCAGAAGCGCTGGAGAGAACCGGAGACGGAACCTCACGAGGTTTGGGTTG
GGGCGATAAGGATCAGAGTCCGGAGGAGCGAGAAAGTGCATATTGGTTTATCCAAAAGATCGGAAAGAGCAATAGAAGA
AGAGCGCCGCTCGTTTTCACTCGATGACGCGTATAAGTCAAGAAATTTTCAATCACTTTTTTCCGCCTCATTCCAA
ACATCGGGAAGAAAAAGATGAATGAAAAACAAACAATAAAACAACACAACGATCAAAATATTGTGACTAAAAACGAAA
AAACAAAAACACACAAACAAATTTTAAATACGTCTGCGCAATAGGTGAGTCGAATGGCTAACCCGATTGGCGTCGAAC
AAAACG

>CL574Contig1|cytoplasmic aconitate hydratase

AGTATTGTTTTAAACAGTGAATGCGTCCGTTATTAATTTGATACTTTTTACGCGAAAAACATTGAAATTATTGGATTATT
TGTTTTTAATTTATTTACACTACGGAATTTCTCAGTGATCGTTTCAATGTTTATATTTACGCTGTATATAATACACATCGT
ATATGTTTGACATTAAACACCTACAAAACTATCGTACATTTGCAACACTGCCAGTTTATGTTAATTTATTCTGAAAGT
TGCAATTTTTTTTCGATACAGATCGAGCTTGCGTTGCGATGAAATTCAGAAAAAATCTAAAAAACACGACTTTTCGTTCC
AGGTCGCAAAAACATTTACAGGGTCAAATCCGTTTCTGGATCTTGTCAAGAGTATCGAGGTTGGCGGCAAGCCTCGGCG
TTACTTCGACATCTCAACTTTTTGGTAAAAATATGAGCGATTGCCGTTTTCCATCAGAGTTCTCTTAGAAAGCGCCGTC
GGAACCTGCGACGAATTTCCAAGTCAAACAAAAAGATGTTAAACAAAGATTTTAGAATGGGAAGCAAATCAGGCCGTGAGGG
CGGAGTCGAAGTTGCCTTCAAGCCCGCTCGCGTTATCTCCAGGATTTTACTGGAGTACCAGCGGTGGTGGATTTCGCAG
CGATGCGAGTAGCCGTGAAGAACCTTGGAGGTGATCCACAAAAATCAATCTGTGTGTCGTCGATCTAGTCATCGAT
CACTCTGTTCAAGTAGATTACATAAGAAGTGGAGATGCTCTAGAAAAAACGAAGAGCTCGAATTCGAACGGAATAAGG
AGAGATTCAATGTTCTCAAATGGGGGTGCCAAAGCTTTGAAAAATATGTTGATAGTGCCACCAGGAAGTGAATCGTTCA
TCAAGTTAATCTCGAGTATCTGGCAAGAGTTGTGTTTGACAGCAACGAGTTACTTTATCCGGACAGTGTCTCGGAACAG
ATTCACACACAACGATGATAAACGTTTTAGGAATTTCTGGATGGGGTGTGGTGGCATAGAGGCCGAAGCTGTAATGTTG
GGTCAAGCGATATCGATGCTTTTTGCCTAAAGTCGTTGGTTTACAACTCGTAGGAAAAATGAATCAGTACGTTACATCGAC
CGATCTCGTGCTCACCGTACAGGAACCTTCGCAATTTGGGGTCTGTGGAAAAATTCGTTGAATTTACGGGCCCGGTG
TAGCTGAACTTTAGCATTGCTGATCGTGCCACGATCTCGAACATGTGCCCGCAATATGGCGCCACCGTTGGCTTCTTCCCT
GTTGATCAACAGAGTTTGGTCTACCTCAGGCAAACGAATCGTTCCGAAGAGCAAATCGAACGGATCGAGAAATATTTGGA
AGCAGTGAAAAATGCTTCGTGATTACAATAACCCGGCGCAGGATCCGATATTTCCGAGACAGTGACATTGGATTGTCAA
CAGTCGTATCGAGCGTCAGCGGACCGAAACGGCCTCACGATCGAGTATCCGTAACGGACATGAAGATCGATTTCAACAAT
TGTTTAAACCAACAAAGTAGGATTCAAGGGATTTGGTTTGCCCCCGAAAAGCTGGCGGCCGAGGGTATTTCTCTACGAA
GGAAAGGACTATAAACTGAAGCATGGCTCGGTGTAATTTGAGCAATAAACAGCTGCACGAACACAGAGTAACCAAGCGT
TANGCTCGGTGCCGGAATGCTTGACCAAAAAAGCTAGTCGAAGCGGGTCTCACAGTTTCGCGCT

>CL575Contig1| 37cc

TAAAAAGTATCGTACCGGTGAATTCGCACTGGGATTTTCCATTACAGAGACTTTTCCATAATTTCAATTTTTTACCAAA
TCTTGCGTCATCTCCCCAGTCATCGGCGACTCGCCATCTTTAGGTTATGTTCTACTTTCCCAACAGTTAAATACGAGAT
TTTACGTAACAGGTGCCGGCTCCGGGAGAGCCGAATTTAGGAAAAATGGCATCAAATCTTCAACAGAATGGGTGAGCT
GGGTCTCGGCGTTGCTCTACGGGCAGCGTCATTAATTTCTGCCCTTTACAACGTTGACGGCGGCCATCGCGCTGTAATCT
TTGATCGATTTGCTGGAGTCAAAAATGCAGTAGTTGGCGAAGGAACGCATTTCTCATACCGTGGATACAAAAACCAATT
ATTTTTGACATCCGATCGAGGCTAGGAACGTTCCGTTGTGACGGGAAGCAAAGATTTACAAAACGTCAACATCACTCT
CCGTATATTGTTACAGCCCATACCAGACTCTTTGCCAAGGATTTACACCATCCTCGGCGTAGATTACGACGAAAGGGTTC
TCCCATCCATCACTACAGAAGTCTCAAAGCTGTCTGCGACAATTTGACGCTGGAGAATTAATCACCAGCGAGAAATG
GTGTCCCAAAAAATAGCGAAGATCTACAGAAAGGGCATCCCAATTCGGCGTCATCTCGACGATATTTCCATCACACA
CTTGACATTTCCGCAAGAAATTCAGTCAGGCGATTGAATTTGAGCAAGTAGCACAGGACGAGCAAGAAAGGCTCGTTTC
CTGGTAGAACGAGCGGAGCAGCAGAAAAAAGCGTACGATCATAAGCGCGGAGGGTGACGCACAGGCGGCCAGTTTGTGG

CGAAATCTCTTGGAGACGCGGGTGACGGTCTCGTCTGAATTGAGGAGAATCGAGGCAGCGGAGGACATTGCTTACCAATTA
TCGCGTTCAAGGAACGTTGCTTATTTGCCTTCGAACCAAAGCGTCTTTTGAACCTCCAGCAGTAGAAAAAATGACTAA
AACTTAACACAGGGAGAAAAGTATAAAATGCAGAAAGAAATGGACGTGAAAGAAAATCATGTGCAGAGGAAAAGCATTGGT
CGCAGTTTTCTTTTTTGGTTGCACAGAAAACATTTTTCCAACAGTTAGGAAAAACGGGACGGAGAAAAATTGATTTTCT
GGAGTTCGAAGTTTGAATTTTCGCAGACACAGAAATCCGACATTATTTTGTAGATTACGCTACTTCGTCTCACTTGTTTT
TCTTTTTAACTATTCTTCTACGTAACGTTTCGATGAGTATTTCCAGTCTAGAATTCAAAG

GAGTACGAAAAAACCGAAGAGAATCATTCAATTTTTCTCAATTTTTTAATTTTTCTCTTAATCTTTTTTTCTGTACTTCGA
AAAAAATTACAGTGAAAGATAGAAATCAGGAAATTCGATCGATTTATAATCGAGCAATTGGACAAACTTGTTAGTTTTCGT
GAGAAAAAGTCATCGACAAAAAGCCGCCACCATGGACGCGATCAAGAAGAAGATGCAAGCGATGAAGCTTGAGAAGGACAA
CGCGCAGGACAAAGCCGATACCTGCCAAGGACAGCGCCAAAGGAGGCCAACTGAGAGCCGACAAAGTTCTCGAGGAAGTTG
GAGACTTGCGCCAAAAATTGCAACAAGTCGAAGCCGATCTTAACACCAACAAGGGCAACTTGAACAAGCTAACAAGGAC
CTTGAGGAGCGCGAAAAAGTCTTTGACCAACGCCGAGTCCGAAGTGGCTGCTTTGAACAGGAAAGTCCAGCTCATTGAGGA
GGATCTTGAGCGTTTCGGAAGAGCGTTTGAACACCGCATCGAGCAAGCTCGCTGAAGCTTCCCAAGCTGCTGATGAGTCCA
GCCGTATGTGCAAAGTATTGAAAACCGTGCTCAACAAGATGAGGAACGAATGGATCAGCTGACGAACCAACTCAAGGAA
GCTCGTCTCTTGGCTGAAGACGCCGACGAAAAATCTGACGAAGTTTCTCGCAAGCTGGCCTTCTTTGAAGACGAACCTCGA
GGTCTGCTGAGGACCGTGTCAAGTCCGGTGAAGCTAAGATCATGGAATTGGAAGAGGAACCTAAGGTCTGTTGGTAACAGCT
TGAATCTTGGAGGTGCTCCGAAGAAAAGGCAAAACGAAGATCGAGGAATTCAAACGCCAGTTGAAGACTCTGACCGCTC
AGCTAAAAAGAGCGCGAGGCTCGTGCCGAATTCGCGGAGAAGACAGTCAAGAAGTTGAGAAGGAGGTTCGACAGGCTCGA
AGACGAGCTTGGAATCAACAAGGACAGATACAAGTCCCTGGCGGACGAGATGGACTCGACCTTTGCGGAATTGGCAGGAT
ACTAAGGAAAAGGAGACGATGAATTCTCCACTCCTCCGTCTATATATATATTTATATATGTATGTATTTATATATACATAT
GAATCCACGTGTACGAAGATTATGGCTTTGTTTACGAATGTATAACTGAGCCACGAATCCAATCACTTAATTACGACAAG
AGAAACAAACGGATGACACCTCGTCGTTATTTAATATATATATGTATACACATACTATAAATATACTGTCCATTTTCCCT
CACATTTTTTACGTTGTCCACGACACAAAAAAACCACACACACACTTATAACTATTGCGATAACTAAATATATATCTTACT
AATTTAAAAAAATTAGTACGAAATGTTATAACGAAAAGTACTAATAAAAATCGATGTAAGTGTTTTAAAGAAAACGAACA
ACAAT

GAGAGGTTATCGAAGACGATCTTCACAAAATCATCGGTGTCTGTGACGCCTGTTTCAAGGAAGGCAACGAAGCAGAAATCG
AGACCATACTCAACGATATCGTTTCCATCATGATTCACATTCCAGTTGAACGGGCTGAAAATTTGATCCTGGCATTCTGC
GAAAAGTTGAAGAAAGCTCCTGGACAAAAATTTGGGGCTGTTTTGCTCTCAAAGCTCTCTGGCTGCTTTTTCCAATCGCTGGA
GGAAAAAGTCACCGATGAGGTATCAGCTGTACTATCACTTGGTCCAAGTTGCTAGAAAACGTGGATCAAGTAAAAGCTGTTT
ACAACGAGTGTGAACAAATTCAAAGATCAATTCAAAGCGTTTCCGGCAACGAACGAACAAATGCAAAGCTGTTGCGCTTG
TTACACGAAGTTCTCTTGAGCTGCAAAACAAGGCGACCAAGCTGCTGCAGTGATGGTCGAGCTACTCGGCACGTACACGGC
GGAAAAATGCATCAGCCGCGAGAGAAGACGCACAACATTGTATCCTCGCAGCGCTCGCTGATCCAAACACCTTCTCTCTCG
ATCCGTTGCTCGCTCTCAAACCAAGTTAGATTTTTGGAGGTGAAGTATCCACGATCTTCTTTTGATATTCTGTGCAAGAGA
AATTGCCGGCTTATATGACGTTCTACAAAAACCAAAAGAAATTTGTCAACACACGCTTGGTCTGAACCATGAACAAAAC
ATGAAGAAAAATGAGATTACTCACTTTTCATGCAACTCGCCGAAACTAACCCGAAATGTCTTTCGATGTTATGCAATCAGA
ACTCCAAATCGAAGGAAGCTGAGGTGGAAAGTTTCAATAATCGATGTTTTGAAAACGAAGCTCGTCCGAGCGCGTATGGATC
AATCGGGCCGAAAAAGTTTTAATTTTCGAGCACGATGCACCGAACTTTTCGGACGACCACAGTGGCTCCAATTGCGTGATCTA
CTCGCCGCATGGAAGACGAACTTGTTCGGCGGTTCAAGACGGCATGAAATCAGTGGCGGCTGCGCAAGTAGATCTTGCTAC
CAAGGCGAAGGTTCTTTGGCTCACTGATCTTGGGAAAGGTTCTTAGGTGCATTAACTGAAAAAAGAAAAACATGATGTA
ATCGTTGTGAAAAAACGAAAAAGGATGAAAAAACAGTGAAAAAAACGAAATCGGCTGGAAACATAAACTCGTGATCGT
AATTGAAAAATGAAAAATAACCCGGAACAAACCGATATGGTAAAAATTTTGAATAAATACCGTATTTTTACCGTCATTTCA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATGTGCGGCCG

ATACTGAGTGCATCGGACGACCAAACGATAAGGATTTGGAAGTGGCAGAGTCGAACATGCATTTGCGTATTGACCGGTCA
CAATCATTACGTAATGTGTGCCCAATTCATCCATCGGAAGACATGATCGTGTGGCATCGCTCGACCAAACGGTACGAG
TTTGGGACATTTCCGATTGAGAAAGAAAAACGTTGCTCCTGGGCCAGGAGGCCTGGAGGATCATTTGAAAAATCCTGGG
GCAACGGATCTCTTCGGACAGGCTGACGCGGTCTGAGGCACGTTTTGGAAGGTCACGACCGTGGTGTCAACTGGGCATG
TTTCAACCCGACCATGCCATTGATCGTTTTCCGGTGCCGATGATCGGCAAATTTAAATGTGGAGAATGAACGATCTCAAAG
CTTGGGAAGTCGACACTTGTCTGGCCATTACAACAACGTTTTCTGCGTCTTTTTCCATCCTCGACAGGATCTCATACTT
TCAATTCGGAGGACAGAACGATTCGCTTTTGGGACATGGCCAAACGCACCTGTCTCAATACTTTCAGAAGAGAACACGA
AGATTTTGGGTTTGCCGCTCATCCCATCTCAATCTTTCGCAGCTGGACATGACTCCGGAATGATTATTTCAAACCTCGAGT
AGAGAACGTCCCGCTTACGCTGTCCACGGTATCTCTTGATTACGTCAA

GAGAAGAAAAAGAAAAATGAACGAAGAGGAAAAAGAAAAAATACGAAAACGAGCTCAAAGCTTTAGAGGAAAAGCACAAGAA
ACATAAACCTTTTACATCACCCGGGAAGTAAGCAACAGTACGAGAAGTTTGGGAAAAACAGGATCATCATGGAAGACCAA
AGTTGACCTCCGAACATTTTTCAATCTTCATGATCTCGATGGAACCGCGCTTTGGGATCCCGTCGAAGTCAACGCCTTG
TTCTCAAGGAACCTCGACAAAATTTCTGCTCAGGAGGTCGCCGAAACCGACATACGCGAGCGCTCGAAGAAATGGAAGA
ATGAGAGAGCACGTGTTCAGTGAAGCAGATTTGAACAAAGATGGACTTATCAGTTTCGCCGAGTTTATCGAACAATCGAA
ATCTTCTGATTTGAGAAAAGATGAGGGTTGGAAAACGTTGGACGAACAGGAGATTTACACGGAAGAGGATTACGCGAAAT
TCGAGAGGCAGCAGCGCAGGAAATGAAAAGAAAGATTGCCAATGGAATTTGCCACCGGGCTACGGTAGTTACGATCCT
GGGCACAACCAAGTCAGTTCTGCTCCGCAATACGCTGGGGTGCTCACCAGGAGTTCTGCGCCGATGGGTAAATCCGCTCA
TCCGGCGAATCAGCAGGCCAGTACCAAGGTCAAGTACCGCAGTACCAAGGTCAAGTACCGCAGTACCAAGGTACAGTTT
CACAATATCAAAACATCCCTCAGTATCAAGGATATGAGCAGCAAGTACCGCAGTACCAAGGTATCCGGCGCAGGGTCAA
CTCCCACCGCAACAACATTACCAACAAGGTCAAGTGCCGCGAGCATCAAGTTCAGATACCGCAACATGCTCAAGTACCTCA
GCAACAATTAGCAAGGTCAATGCCTCCACAAGCTCCCATCAAGTCAAGTACCTCAACAAGCAGCCGATCAAGGTC
AAGTACCTCAACAAGCAGCCGATCAAGTCAAGTACCTCAACAAGCATCCATCAAGGTCAAGTACCTCAACAACCATCC

[illegible]

ATTTTCCAATATTTCGTCGAGTCATCGGCCGATTATTTCTGTTGGATAAAAAAAAAAATTACACGTTTGTTTGAATCATGAGTCAAGGATTTCGCTACCAAGGCCATCCACGCGCGGACAAGATCCTGAGCAATTGGCATCACCGCTCGGTATTCCGCCGTTTAAATGTCAACGACTTTTCGTCGAAGCGCTCCGGCTCAACACAGGGGATTTCGAGTACGGAAGAAGCGGAAATCCAACGCGAATATGTGTTGGAGGAATGTTTGGCAGCTTTGGAAAAACGGAAACATGGATTAGTCTTCTCGTCGGGTTTAGGAACAACCACGGCAATCACAAGTTTGTGAGTTCGGGCGATCACATCATTTGCTGCGACGATGTTTACGGCGGCACTAATCGTTACTTCCGTCGTTGCGCCTCCAAATTCGGCATCGAAACCTCCTTCTGTTGATGCCACCGATCTTGACAACGTTATTAACGCTCTGCAAAAAATACCAAGATGGTATGGCTCGAATCTCCGACGAATCCGTTGCTGAAACTTATCGACATCAAAGCCATCGTGATCTTCTGAAATCAAAACGCCCCGATCATTTATAGTCGTCGACAATACTTTCTGACTTCTATTTCCAGCGACCGTTGGATCTTTGGAGCTGCATCGTTATGTACTCGTTGACCAAGTACATGAATGGCCATTCTGATATTATAATGGGCGCTGCGATATTACGCGACGACGAGCTGGCGAAACAATTACGATTTCCTGCAAAATTCCTTGGTATCGTGCCATCGCCGTTTGATTGTGCTCAGGTTAATCGAAGTTTGAAAACTTTGGAAATCCGAATGCAACAGCACATGAAAAATGGCCTGGCAGTTGCCAAATTCCTGGAGACTCATCCGTTGGTAGAGAAAGTTATGCACCCACTTCTTCCGTACATCCGCAACACGAACTCGCCAAAAACAACGATCGGCGACAGTGGGATGGTGTCTGTTTATCTCAAAGGGAATGCCGACAAGTTTTTCAAGGCCCTAGAAAATTTTCGACCTTGCGAATCCCTCGAGGCTT

TTTTCTCTTTCTCGTCAGAAAAAGTTGCCGAGACCGTCTGAATCATGTCTGACGTTGAAACCGACGATGTACCCTCGGCG
GTAGCTGGTGGAGGTCCCATGGATGTCAATACCGCGCTCCAAGAAGTCTCAAAAACGCTCTCATCCATGACGGTGTCTG
GCACGGTCTTCATGAAGCTGCCAAGTCCCTTGATAAGAGACAAGCCATGCTCTGTATCTTAGCTGAAAAATTGCGACGAA
CCAATGTACAAGAAGCTCGTACAAGCGTTGTGCAACGAGCATCAAATCCCTCTTATCAAAGTGGACAACAACAAAAAGCT
TGGGGAATGGGAGTGGTCTCTGCAAAATCGACAACGCTGGCAAAAGCGGAAAGTTGTCTGGTCTGCTCTGCGTTGTGTAATA
AAGGACTTTTGGTGAAGAGACTCCCGCCAAGGATGTGCTTATGGAATACCTGAAAGGAATCCAGTACACTAAGGAACTTT
TAATAAAATATCAAACACCACAAAAAATTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT

GGTCTACGAGAATGACAAAAATCTCAGTTTCGTCTTCGACCGCCCAACCGGTAACGTCGTAGGTCGGTGAATCTTACGCG
CCATCCAAGTTTTCCGTC AACATTATCGATTGCATTTGAAAATCACGTTTTCTTCAACGGCATCATGCTCAAAGAGTCA
TCGGAATTCGGTTCTTGTTAATTTCCAATATTCATCGGATCTCTGGCTCTCTCGGCACCTGGCAAACCTAAGCTCAGAGT
TGTTCACTCATGGAAATCTCTCGACTTTGACTTTTCCAACCTCAGGCGGATAGAGATGCTGCCATTCGGTCCAAGCTTTTA
TTCGGTTTGGCGTGGTACCGATAGACGTTGACGTTTTATACAAAAGGCAATAACAAATAGGGGCCACATATTCGTTACG
GTTCCACGATTTCAAATGGAGTCCCGGTACGCTCGGATACGTACGAAACAAAACAAACCTCTGAAGGCGATGCCTTAAT
CGCTCCTTTTCCGAACTGGAACATGCAGACACCTGGAGAAGACTGTTCCGGATTTACCAGCATTTTTAGAATAGCGATCG
ATTCTTGCGACAGGTTGTGGGTATTGGACACTGGCAAGATCCTCGAAGAGCAAAAGTGCCACCAAGATTTCCGTCTAT
TCGTTAGAAACGAATGAATTAATGAGGAGCTACGCCTTTCCAAAATCTCTGTACAAAGACGTTTTCGCTATTATTACACC
TGTCGTTGACATTCGTGGTTCTTGCAACGATGCAATTCGTTATACATCGCCGACGTTGCTTCCTTTAGTTTGATCGTTTACG
ATCAGCACAATTCTCGATCCTGGAAATCTCTCAACAAGCTCTTTTATCCCTATCCTCACTCTGGAACTTTTGAGATTAACG
GAGAATCGTTCGATCTTATGGACGGTATTTTTGCTCTGGCTCTTGACCCATCAAAGCGAATGGTGATCGCATCCTCTAC
TTCCATTCAATGGCCAGCAATGTTGAGTCTTATGTACCAACATCCGTTATACGAAACGAAGCAATGTTGCCAGTAATCC
AGAAGCTTCACCAAGATCTTTCAAATCGTTTTACACCCAAGACCATCGCAATCGTCAGCCGAAGCCATGGACCGCAATG
GTGTTTTATTTTATGGCCCTCACCTCTCAAGTCTCCCTCGCCTGTGGAACAGCCAAAGATTTTCTCAATTCCGAGGACAC
AATAGTGAACAGTATGCTACTGACCGAGAGAAATCTACAATTTCTTCTGGAATGAAGGTTATAACTTCGAAACGCAACA
CCGTC AAGAGCTTTGGATGATGACGGATTTCTTCCAGAAATTGATGACCGGTTCCCTGCAGCCGGGAGTAACAAATTTCC
GTATACTAGCAGGATACATCGATGAACTAGTTCGAGGCACCAAATGCGAACTTTGCAAAAGGGAACCTTACGATAAAAAAT
CGCATCATTTTCAATCGCCAGATTCCCGGTTATCATCGATTTTATTAAATCGTTCATTAGCAAAATGGAATATAACGGCC
AAGAACTTTGGTTCGCCCCGTAAGTTAAAAACAACATTTTGAAGATTACACATTTGAAACGAGACTTTGAGGGAGGCGTCT
CGCCTTATAAAAAAAAATTGCAAAATTTTGAAAAAATACATTGCATCGTGTTGACATACTGGCAATCGCGAGCGTTCTT
TTCGGGAGCAGGATAAAAAATCACTTTTACGGAATAAECTCCGAAACTTTGCTACCGTATTTTTTTTATTATTTTCTCTCA
ATCATGGCGAGAAAC

GAGGTTAAAAAAGATGGAGTGCCTGCGCATTTCTGACGACATGACGGAATTACCTCGGGCACCGAATCCTCGTGAAGTCATCGA
TCTCGAAGCGCATATAGAAAAACCGAAAACGACATACTCGAACTGAGTCACAATGCTGTTAACTTGAAAAGCAATTATCT
TGAACCTACCCGAGCTCCGACACGTTTTGGAGAAAACCTCAAGTTTTCTTTACCGAGGAAGAGGCCAACGATTGATAACCA
GAGCACTCATTACCGAGGAACCCAGTATCAGGGACCGGCAGCTCGTGGACGCTTTGAATTCGTTGCCGGTGTGATCAAT
CGCGAACGAGTGCCAGCCTTCGAACGGATGCTTTGGCGAAATTTCTCGTGGCAACGTTTTCTGCGCAAGCTGAACCTCGA
TAAGCCACTCGAGGATCCCAACACGGGCAACGAGATTTACAAAACCGCCTTCGTTGCCTTCTTCAAGGAGAACTCA
AGAGTCGTATCAAAAAAGTATGACAGCGTTTCCACGCTTCTTGATCCGTGCCCAACAGCAGCATGCCGAACGATTGGAC
ATGGTCAAGGGTGTTCTGTACACGCTCTCGAGGATCTCAACCTGGTTCTCAATCAAACCCAAGATCATCGTCAACGAGTGCT

CCACAATGTTGCAAAAAGAGC T GCCAAATTGGAGCATAATGGTGAGGAAAATGAAAGCGATTTATCACACGATGAATTTGT
TCAACATGGACGTTTCGAAAAAATGCTTGATCGGAGAGTGCTGGGTCCCCATGGCTGACCTTGCATCGTGACAGAGCTGC
CTCACCGAAGGATCCCGTTTATGTGGAAGCTCGATACCTCTTTCCAAACGTCATCCACACGGACGAAGATCCACCGACG
TTTATAGGACGAACAAGTTTACCAAAGGATTTCAAACCTTGATAGACGCATATGGCGTCGCCTCGTATCGCGAGGCCAA
TCCGGCCCTCTACACCATCGTAACATTTCCATTTCTCTTTGGTATCATGTTTCGGCGACGCTGGACACGGCCTGATAATGA
CATTGTTTCGGTGCCTGGATGGTGATCTGGGAAAAAGGTTTGTCCCAGAAGAAAAATGGTGGCGAAATTTGGAACATATTC
TTCGGTGGACGTTACATAATCCTTCTCATGGGATTTTTCTCCATTTACACCGGAATCATTTACAACGACGTTTTCTCCAA
GTCCGTCATATATTTCGTTTCAAGTTGGAAGTCATCATCTGTTCAATGCGCAGCATGTTGCTACTAATGAGACGATGACTC
TCGACCCGCGCATGATCTTCAGTACAGCCAGGTGCCATATCCCTTGGGAATGGACCCGGTCTGGGCATTGGCCAAAAC
AAAAATCATTTTTTTGAATTTCTTACAAAAAGAAATTTGTCCATTATTTTCGGAGTCGTTCATATGATGTTTCGGCGTGTGCGT
CAGTGTGTCGTAACATTGTCCATTTCAAGAAATATTCGAACATTATTTCCAATTTCTGCCACAATTGCTCTTCTCGTCC
TTTTGTTCACTTACATGGCGGCGCTCATGTTTCATCAAATGGGTCACTTACGCCGCAACGACCAATCCTGCTGAGTTTGGC
ACATCACCGACGTGTGCTCCCTCCGTCTGGTGACTTTTATCAACATGATGCTCTTCAACAAGGCAAAAAGTTTCCGAGG
GCTGCTCGGAATACATGTTCCCTGGTCAGGAAATACTCAAAGGTTTTATATTCTGTCGCACTTGCTGCTGATCCCCCT
GATGCTTTTTTGGCAAGCCGTTGTATATCTTGGCGACGAAAAAGAGCCTCGTAACAATCAACAACACGAATGGCTCGG
CTTCTCAGGATATCGAACTCCAAGGTGAAGCGCTTCTGTACCTTCGACAAGCGATTCCACGCGAGCT

ATATAATCTGAGTGACCCGTTGTCGTGATCGGTTGCGCAAGCAGGAACGAACGATGCCATCTTACCAGTTCAACAATTTCA
CGGGACGTCTCCGTGAATCTACACATTTCCAGCCTCTTTACCCCTCTCTGCAATCCGTTGCATACCGCAGATCCACCA
AAAATGGTGTACGACACGATTAACACGAAACCAGCGACGGTCAGCGGCGCTCGGTGAGCCAGCAGCGTGGTACAGGAAGG
CAAGCTTCCTGAGAAAAATGTACAAAACCATGAAATTGTTCCAGAAAGATCTGGAGGCGCCTGTATTCCTTCTCAGGGGAA
CCCCCGACAAAAATATTGTTCGGAATTACCTGCGTGGGCACTGGCATAGGCCTGACTTGGGGCTTGCTTTCTGTCCTCGGG
AGAGCGTTCCTCAGCTCAATAAAATAAATTGACAAGGCTGCGGATCATAGGCTCGCGTAGATCAATTAAGATGCAACGAT
GATTCAAAAACAAAAGTGGCGCAGAGTCTGTTGAACGAATATTCGTTTTGCATCGTTTGATAAGATCGCTGCATCAACTG
ATAAGGCCCAACAAAGTTATTATCCATGTTACTCATCGAATACAAGTTCAATTGTGAAATACAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAACATGTCGGCCG

AGTTGCGAGCGTGACGTTTCGCTCCAGACAACCGTGTAGGGTTAATCGTTCTCTCTGGGCAAAATCCGACTAGCCGTCAAGT
CGATTCCACGTGTAAAACGTGAAAAGTTGCGTCATTTGAGACAGAAATTTAGCACAAAATCAACAATGGTTTTGGACCTC
GATCTCTTCCGCGAAGACAAGGGCCACAACCCGGAGAAGGTGCGCGAAAAATCAACGAAAGCGTTTTCAAAGACGTTGCCCT
GGTGGAGCGGGTTATCGAAAAGGACAAATTTCTGGAGGACGCTGCGACACCGTGCCGACAATTTAAACAAATTAATAAATG
TCTGTAGCAAGAATAATTTGGAGAACCGATGAAGAAGAAAGAAGCTCTGGGTGACGATGACACAGTTCCCAAGAATAATCTCC
GAGAATCTCGACGATCTGACGATCGATAACCTCAAACCTTTGACGGTCTGTGCAATAAAGAAAAATTCGTGCTCTCATCGA
CGATGCGATCGTTGCGAACGACGAGGAACGTTTGAAAACNGAATCTTCGAGGAATTCGCTCTCCGCGAAGTTGGAATC
ATCTGGATGCTTCCGTGCTGTACGAACGACGAGGACGAAAAATAAGGTGCAAGAAGACCTTCGGCGACTGCGAACAGCGC
AAAAAGTATTTCCACGTCGATCTCATCCACATGATCGACGGAATGGACGCGCAACGAGGAGCGCCGCTCGCAGGAGGCG
TGTATATTTCTCACCGCCCTCCGCTCTTTCTCGAACACGCGCTCATCCAATACGCGCTACGGAACCTTTTCGACAAG
ACTACAAGCCTCTCTACACTCCGTTCTTCATGCGCAAGAAGCGCCATGCAAGAAATCGCTCAATTTGGCACAATTCGACGAG
GAATTGTACAAAAGTCACTGGCAAAGCCAGCGAGAAAGGCGACGAGAAAGACGCGGAGGAGAAATATCTGATCGCAACTTC
GGAACAACCCATCGCTGCTTTCCACAGAGGCGAATGGATCCCGGAAGCCAGTCTGCCCATCAAGTACGCCGGGCTCTCCA
CGTGCTTCAGGCAGGAGGTTTGGATCTCATGGACGCGACACCAGAGGCCATTTCCGGGTCCATCAGTTTCAAAAAGGTGGAA
CAATTTTGTCTGACATCGCCGCGATGACAAACAAGTCTTGGCAAATGATGGAGGAATGATTGGCAACGCGAAGAGTTTTT
ATCAGGACCTCGGCATTCTTTATCGCATCGTAAATATCGTCTCAGGTGCACTCAATCAGCTGCATCGAAGAAGCTCGAT
TTGGAAGCTTGGTTCCCGGGCTCCGGAGCTTTCCGCGAGTTGGTCTCGTGCAGCAATTGCCTTGATTACCAAGCTCGGC
TTTTGTTGGTCAGATACGCCAGACGAAAAAGATGAACGCAGCTGTGGATTACGTGCACATGCTGAATGCAACGATGTGCG
CAGTGACTCGGGTTATTTGCGCGATCCTCGAAGTCCATCAAACGGAACGGGGATCAAAGTTCAAAGGCAATTTCTCT
TTTTATGCCGACGAAATATCAGGAAGAAATTTCCATTTCTCGTCAAGCTGCTCCGATCGAGGAGGCGAAGAACGAAGAAGCAAAA
AAGACCAAGAAAGAAAACATAGGCTAAATAACCGCCAGGATGGCCTTAACGAGTAAAAACAAAAATGAACAATATCGAC
ATTTTCGATTGTATCGATTATTTCGCTATTCTTTTTTTCATTGTCTATTTTTAAGGAGTCATTTTCAGTCGT

[illegible]

GGACAAGGATGGAAAGATCGAGGACGTCGTCCTGGGTTTTCGACAACATGGAAGAATATCTTGCCTCTGAGAATATGTGTT
TCGGTGCAACGATCGGTCGCGTTGCCAACCGAATTCGTAATGGGCGTTTTACCCTCGACGGGGTCGAATACAAGACTGGA
AAAAATCGCATAACGTACACACTTCACGGTGGGATGAAAGGATGGGGGGCGAAAGTTTGGTCTGGA AAAAATCGTCGACGA
CAAGGTCGTGATGACTCTTACGAGTCCAGACGGTGACGAGGGTTTTCCCTGGTGAGGCAATGGCTACTGCGACCTTCAGTC

mmc4.txt

TCGACGACGAAGGAAAACTGACCCTCGACATGAAAGTCACTGTGAACAAAGCTTCGCCGATTAATCTGACCAATCACGTC
TACTTTAACATCGCTGGACACGGAGAAAAATGCAACGGAATCTACAAGCAAACAGTTATGATAAATGCTGATCGTTGGAC
CGCGGTGACGAGGAAAAATTTCCAACCGGAGAAATGAAATCCGTGGCAAACACGGTGATGGACCTGAGAAATCCGGTGG
TTTTGGGGGACGTTATCCACAAAGTTCGGGGTGGTGGTTACGACAACAACCTTTTGTACCAAATGACAATGCGGAGAAG
AAAATGAGCCTGGTCTCAAAAGTAAAGCATCCGGGCTCTGGCCGGTATCTCGAAATTCATTGAATCAGCCAGGCGTACA
ATTCTACACGGCGCTTTTCTTGGCCGAGGAAAGCACGCCTGGACTGAAGGGAAAAAGATGGCAAAGATATTTCAAACATG
GCTCCATGTGCTTGGAAACCCAGAATTACCCTGACGCAGTAAATCACCCCACTTCCCGGACAGCATTTTGAACCGGGC
CAAGAATATCATCACGTCGTGACTTATAAATTCGGAGTGGAGGCCTAAGAAATACGATCGAGTGTCTAACGAAGTGAAT
TTCTTTCTATTAACGTTCATTTTTTTTATTGAGCATTTTACACATTTCTCCGACGAACTTAATTCCTCCAAAAAGCTAC
GCGTGAATCGTTACGATGTTGCATAATTGTACGGAACAAGAAAACCGCAATAAACCCACGTCAACGACATTGTCGTTTTT
TTAATGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCG

>CL607Contig1|v-type proton atpase subunit d 1-like

GCGTTTCAGAATGATCCTCGGCAAGATCATCGAGACTAAACCTCTTATGGGCGAAGTTATGAAGGAAGCTGCCTTTTCTC
TGGCAGAGGCAAAGTTTGAACGGGTGATTTCAACCAAGTAGTCTGCAGAACGTGACAAAGGCCAGATAAAAAATTCGC
TCCAAGAAAGGACAACTGGCTGGAGTAAATTTGCCAGTTTTGAGTCTTATCAGGACGGAACGTACACGTACGAGTTGGC
CGTTTTGGCGAGAGGTGGACAGCAGCTGGCAAACTGAAGAAAACTATCAGAGCGGCGTCAAATTCGTCGTCGTTCTGG
CATCTCTGCAAACGAGCTTCGTCACTCTCGACGAAGTCATTAATCACTAATCGTCGTTAATGCGATCGAGCACGTT
ATCATTCTCGGATCGAAAAGACTCTCGCATACATTATATCCGAACCTCGACGAACCTCGAGAGAGAAGAATTCTACCGTTT
GAAGAAAATTCAGGACAAGAAGAAGCGGTCAAGGCTAAGGCCGAGGCTCGTCGCCAGGAAATGATTCTGGCTGGAAAAG
ACGTGATTCGCGAGTAGTATGTTGGACGAGGGAGACGAGGATCTTCTCTTAAGCGACCAAGCTTGTAAATCAAGACGGTC
GTCACATTTCGCACATTTGAAATGTCCGAAAAAAGTTAAGAGCAGAAAAACGTATGTTCCGAGGAGAAATTTGGCCTGG
AAAGAAAGCTGTTGTTTAAATTATTGAAATTTAAAGAGAAGTAAAAAAGAAACGTTGAGAAACGGCGAGTCTCTGACTT
GGAAGGCGAGCAAGCTCCCGCGCTTCTTGGCACAGACTCGTTCCATAATCGATTAACGAATGCAGAAGAAATTTTGT
ACAGCCAAAACTGTTAATTCGGTCAGCCAACAGCTCAGTCGCAAAATAGTATTCGACCGCGTATTCCTGTTCTGATCG
AGAATCCTAAACATAAATTTATCAATGTCTGGATTTTATTAATAAACCGACAAGCAAGAGCAACAAAATCTTGGAG
GTTTTAGATGTAAGCAAAAAGGTGTAATAGTGACGATATCCCAAATGTTACCGGATTCATTGATTCCGTGGATTCAGC
ATCGCCGTTGTTCTGCTCCAAAAACATAAATCATTATCGTTTTTCTTTTTTAAAGTCGATAAATTTACTCTGAGTATTCCA
ATCCTGTCGTCTGTCGCTCGCTCATGATGTGGGTATTTAAACAACAACAACAACAACAACAATCATTTTATCTCGTAT
CTCACTCCTTGGCTTGCCTATATTTTAACTCTAAATATTACTGTACTATACATAAAATAATCGAAAAAGAAAAATAATCT
TGTAAGATACAAAGAGAGGTATTAATGAAATAATAAATACGAAATAATTACG

>CL609Contig2|golgi reassembly protein 1-like

ATATTTATCGTGATTACATTTTGTTCGATGCTTTTCGATTTTTGGAGGGCATAGTTTGACGAATAAAGAATTATCAAAAA
TGGGAACCTCCACAGCGTAGAAATACCGGGTGGTGGTACCGAGGGTTATCACGTAATCCGGGTACAAGAAAACCTGCCA
GGACAAAAGGCTGGACTGGAAGCGTTTTTCGACTTTATTGTTTCCATCAACAACACAGTTTTGGATCAGGATAACGACAC
TCTGAAGGAGATCCTAAAAAGCCGAGTGGGCAAAGAACTCACAATGACGTTTTATAACAGCAAGACTCAGTCCGTTAGA
CAAACGGTAATAGAGCCGAGCATGACTTGGGGAGGCCATGGTCTGCTCGGCGTGAGCATTGCTTCTGCTCGTTCTGAAGG
AGCGAACGAAAAATGTTTGGCAGTTCTTGAAGTGCATCCATCCTCGCCGGCAGAATTAGCCGGTTTGAGACCATTACCG
ATTACTCATCGGTCGGATTTCAGCCCTCACGAGCGAGGACCTTTTTCTCTCATAGAGG

>CL60Contig2|heat shock protein 70

ATCCGCCGAGGATAAAGGAACCGGAAACCGTGAGAAAATCATCATCACGAACGACCAAAACCGTTTTGACTCCCGATGACA
TTGAGAGGATGATCAAGGACGCCGAAAAGTTTGGCGACGACGACAAGAAGCTCAAGGAACGCGTCGAGGCCCGCAACGAA
CTCGAGTCTACGCTTATTCCTCAAGAACCAACTCTCCGACAAAGAAAACTCGGCGCCAAGGTGACCGAGGAAGACAA
AGCAAAAAATGGAGGAAGCGATCGACGCCTCGATCAATGGCTCGAAGAAAACCAAGACACCGCCCGAGGATAACAAAA
AACAGAAAAAAGAAATTTGTCGACATCGTCCAGCCATTATCGCGAAGCTTTATCAAGGAGCAGGCGGCCCTCCCCCAC
TGGCGCCGACGAGGACGACCTCAGAGACGAGCTCTAAGCCCGAGACCCACTAAATTCACACTCTGAAAACATTTGAAACG
CATATGCGAACTTTTCTGCTATAACAGACTGATTAATAACGTTCTGCTTTCTCTACCGAGCCGGGGGAAAGAAATTTAACGC
GATAAAAGGCTCGCGGCGATGTCACTCCCAAAATTTCCCGCTAAACATTCTCGAGAGCCTTCTCATTTTCTTTCTGCT
CTCTGAACCTTAACCAATCGGGAGGAAAGGAAAGCTCTCAATTCAGGCTCTCGCATCGAAGAAATTTCTTCTTCT
GCCTCGGGGAGCGTAGTCGCGCAACGCATTTTATTAATTTATCATTTAAATTTCTTCTGCTACTCGCAATCTCGTC
GACCCCGCGAGCGACTTTCATCTCACGCTCTGACGAGGAAAAACAGTAACAAGAAACGCTAGCTAAACGGGCAAAACC
ACCTTGCCCCCATCGACTCTATCGTTATTTATTTATTTCTTTTTTATCGTCCCATTAATCTGTGTGAAGCAACTTGC
GTCATTGAGCCTTACACTCGCGACTTACCCCCCTCCCTCCTTACGTGATTCTACCGTGTGCGTCAATGAGAGATTG
TCAACGAGAATTCGTTACCCCAAATAACTGTATCGTACTGTGTACTATACGTGTATACTGTGTGCGTCTGTGAATGAT
TGACATTGTATCAGTATCAGGATAAATAAACCAATTTTTCAGTATTTTTACGTTTTTCTTTTTTCCCCGACTGCTCGGA
ATTTTTGAGGAGTTTTCTGTGCTAAATTTTTCATCGATAGAATTCCTCAAATTTCCAACACGCTGAGAGAATTATTGAGAG
ACGTGGCAGCGTCTTGACGATTAGAACATAGCGATTTANCGCGCAATTTAAAT

>CL6137Contig1|unknown [Hyposoter didymator]

CGGCCGGGACACTAGTAAACCTCAAGATGGCGACGACGGCGATAATGAAAACAAACACATGTCTCGCTTATGACACCGT
GACACTGCCATGTGCCACGATCAAGAGCCCGAAAAATGATTAAGTTTTCTGGGAACACGACCTTTGACATCAGCTTTATTC
ATCCGGGACAAAAAGTTCAGTCGGTTGATGAGGCTCTCCGTTTTATACGAAACGATAGTCTCTTGGACGACTTCATCCGT
GATAAAATTAGGGAGATCCTACGAGCACTCGGCACCTTGGAAATTTCTACGCCACGTAGGAGTTCTAATATATTGAAAT
AACGTACAGATTTGCTTTACAGCACTTTTATCGGTATTGCTGTATCAGCGATGGCTCGAAATTAATCTACGATGAGACTT
ACTTCGATGACCTGAACGATTACATGGGTGAAATGGCTATGTCAACGGTCAAATAATGTGGCTCCCGCCGGCCTTAATC
TGTGAAACACTGTTGTTTCAAAAAGAATACGATGAGAATATCGATTACCAGCCGGAAGACGATCAGGAAAATGAAAACCTA
TTCGATGAGCGATAACCTGGATGGGAACTCCGTTAACATATCGAAGCTCCCATCGGTTCCACAGAGTCGTCAAGATTCCA
AAGCCATAAAAACTTTTCGAGGTCATGTCGTTACTACGAATTACACAGAGGCCAAGAACATCATACTGAGTTTTATCAAA
GAGGTTCTCACCGTGAACGTGCAAGTGAACACTTCGG

>CL6177Contig1|secretory carrier-associated membrane protein 1-like

mmc4.txt

AGTCGTAAGTGTGTGTTTCGCGACGACGGGACGACGTGCTCGTGAGCCTTGAGCACTCAAAAAAGAAGAGTTGATATAAAAT
CGCACAGCATATGTATATGTATGCGTGTGTATTGACAAAAACATATATGTATATATAAAATTTGGTCGCGGCGAAGAAACG
CGATGTCTCGTCTGGTTTTAGCATTGTAATAATAAAAAATTATCGTCAGCCATAAAAGTTTTCTGTTCCATTGACACTCC
AAAGGACCGAGTGACGTTTTCCGATATAAAATTAAGTGTAAAGGCGATAAAAAACGACTGTGCAATGTGGGCTTCGACGAAA
ATCCCTTTGGCGAGCCAACTGTCAACGATCCGTTTCGCGGACCCTGCGGTGAGGAAAGCCGAGCTGCCACTCCGGCCAAC
AGAGGAATGGAAGATTACAATCCGTTTGGCGAGCCAACCTCGCAAGGAGCTACCCAAGTGCAGGAGCGGCCAATCCCC
GATTTATGGCGGCGTCGGAGCAACTCCTATACCCGCAACTCTGCAACCAACGACTCAAGAAGTTCCTCCTCCGGCTTACG
CTCGAGCCCCCAGCAAACNTTCCCTCTGCAAAATTTGGGAGCACTTTGTCTCCGTCCGAGAACAAACGGGCGAAGAA
GAATGGAAGACGAAAGAGAGGAAACATGAGAAACGAATATTATCGACGAAACAACCTGGCTCCCTTGGCGGACAAGTG
TTGCTTTCAACCGTGTTTTTACCAGGACATCGATGTGAAATCCACACAGACTTTCAGAAGATTGTGAGACAACCTTTATT
ATTTATGGATGTTCCACAGTCTCGTTCTGATATTGAACGTCGTTGGT

>CL618contig1|fk506-binding protein

ATTTCCAACGTATATCTATAACAAGTATACATACATTTTTAGTCGCAATAAGTTGGCGAATAAATACTCGAGTTGGAAC
TAAATCAATTATCTACGATCTTTGACACTTTGACATTTCTCATCATTTTCTCTACTCTGTGTAATCAGATTCT
TGTGAATTTGTTTTATTTTCGAGAAAAAGTACAATAAGCAGCAATGGGCGTGGATGTAGAAGTTATTCGTGCCGGGGACGG
ACAAACCTATCCGAAAACGGGACAAACCGTCGTCGTTTATTACACAGGTACTTTGAAAGCGGGAAGAAATTCGATTCCA
GCAGAGACCGTGGCGTTCCCTTCAAGTTCAAAATTGGCAAGGGCGAAGTCATCAAAGGCTGGGATCAAGGCGTCGCACAA
ATGTGCGTCGCGGAGCGATCCCGTCTCACCTGCTCCCCGACTTTGCCTACGGCAGTCGAGGCCATCCTGGAATTATCCC
GCCAAATCTGTTCTGATCTTCGACGTGGAGCTGCTAAAGTTGAGCATGAAAACCTGCGCGAAGCTCTCAAACCTGA
CGAAACACGTCGATTTAGAACAAAGCGAAAAAGAAAGAAAGAAAAAAGTGAAGAGCTTGCAGAAAGTCC
TTAACTCGAGTGACTAAAAACCTTTGATTTTCGTAATCACTACAAAACGGCACAATGTACACATGGAACCTTGATTCAA
TCGCTCGTTTCTTCTACGGAGTTTAACTAAATATCGAACAAAGCAACAGAACAAAAACGTACATTTTTACCCTNTTTTTA
TCATGTTTTTCAATATTAATAAAATTTAGGCTCAGAATTTTTCAAACCCATTTCTCTATTCTG

>CL619Contig1|atp synthase subunit mitochondrial-like

TGTTCTTTATTTTTGTTTCGAAACAATTTGTTTCTCGAAGACAGTTGGTCCATCATGCTGCGACAAACACTGAGCCTCGT
TCCGCTGTCTGCTGCTCAGCAGCAGCAGCAACGCGCATGGCTACCCTGAAAACGATTTCTCTGCGTTTGAAATCGGTAA
CGAACATCCAGAAAAATAACAAAATCGATGAAAATGGTGTGAGCAGCAAAATACGCGAGGGCTGAGCGCGACTTGAAACAA
GCGAAGCCTCTCGGTATCGGGACCAAAACGTTTTACGAACAAGCGGAAATCACCGCTCCCGAGGACGACCCGAAACGCCT
GATGGTCGCTGTACCAGCGATCGTGGTCTCTGCGGCGCTGTACACACCGGCGTCGCCAGAAGCATTGCGGATGAATTAC
TCGCTGATCCTAAGAAACGCGAAAAACAGAAAATCATCTGTATCGGCGACAAATCCAAAGCCGTTCTACAGAGAATGTTT
GCCGATAATATTCTCTTCTGTTCCACTGAAGTCGGACGCAACCTCCCACCTTCCAGGACGCGCTCAAGTCCGCGCCGA
AATTTAGAAAGTCGGGATCTTTTCGGATCGGGCCAAATGTTTACAACAAATTTAGTCCGTCGTCGTTTACAAGTCTG
ATCAATTGCCATTGTACAACAAAGAGTCGGTAGTGAAAGCGCCGAAGCTCTCGGTGTACGATTCCGTCGACGAGGACGTG
ATCCAAAGTTACTTGGAATTCTCTCTGGCGTCGCTGCTTTTTACTCGATGAAGGAGGGCGCGTGCAGCGAGCAATCGAG
CAGAAATGACTGCGATGGACAACGCGAGCAAGAACGCTGGGGAGATGATCGACAAGTTGCGATTGACGTTCAATCGTACGC
GACAAGCGGTCATCACCAGAGAGCTCATTGAAATTTATTCGGGAGCTGCTGCTCTGGAGTAAAGGGCGTTGGCCAGGAAA
ACGTTTCGTTAGAAATCGATAGTCCGCGAGGATCGACGCGTGAGAGTTTTAAAAAATTCGTTGAAAAATAATCAAGAG
AGAAATAAAAAACGATTTATCGAGAGAGGCAATTTTTAAAAATCTGTCCCATAGCAAAAGTCTCATTTTTCTCGACAGCGAT
TTGAGAAAAATCTTGTCGATTTTCTCGTCTGTAAATAAAAAACTGGCTCCGCGTTGATGGAATTTTTCCACTCGAGGAAT
CCTCAAAACCTTTTTGGCGATCCAGTCTCTCAGTTTGTAAAGTCGAGGGATCGAAATAAATCTCTTGCTATGAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAACAGTCGGGCCG

>CL620Contig1|nucleosome assembly protein 1-like 4-like

ATTTAACAGAAATCGCGCATCCCGCAGGCACAGGTTCTCGCTCGAACCGTTTTATTTCCGTTCCGGCTTCGATACTGAAGA
GTATCTCGTTATTTGGACACGGCTAATCCGATCGAGCCTATAACCATGGAATCCATAGGAGACGACGACGATCGTCGGAC
TTCCAAAGTGTCCTCCGAGAAGGTTGAGCAATCCGACATTATCTGCTCTACGCTCTATCAAGATAGACAATGTTGAGT
ATAGCGAACCGGTGAAACGGCGAATCAAGGCGTTGAAGCAACTCCAATTGGATGTTCTGAACATGGAAGCCAAATTTCTAC
GAAGAAGTACACGCTCTCGAATGCAAATACAACACAATGTGCGCACCGGTGTACGAAAAAAGGAGTCAAATTTGCTGCGGG
AGTTTACGAGCCCACCGACGAAGATGCGTCTGGGACAGCGACGAGGAGGAAGACGAACAAGATGCAAAGACCAACGTCA
AAATTTAGGAAGTGACGAAACAAAACCGAGATGAAAACGTTAAAGGAATTCAGAATTTCCGATTTCAAGATTTCAAG
AACGTTGGAAATAACGGGCCGAAATGGTTGAAGAACACGATGAGCCAATCCTCAAGCATCTTTACGACATCAAAGTCATATT
CCTAGAATCAAATCCAATGGGCTTCGTTCTCGAGTTCCACTTCGAGCCAAACGAATACTTTTTCAACTCTGTCTCACC
AAGAGTACATAATGAAATGTGCTCCGGAAGAGCGATCCCTTCAAGTTTCGAAGGTCGGGAGATTTACAAAAGCAAAGGC
TGCACGATCGATTGGAAGAGGGGCAAAAACGTGACGGTCAAGACGATTGAGAAAAACGAGATATACGAGGGTCTGC
AACTCGCACCATCATCAAAACCGTACCTAATGATTCTTTCAATTTCTTTAGCCCTCCAGTTGTGCCAGATGATGCTG
ATGCCGAACTGAACGATGACACGCATCGGCTTCTCAAAAGTGACTTCGAAATCGGTCACTACATCAGAGAGCGCATCATA
CCCCGAGCAGTCGTTTACTTTACGAGGCGAGGATGGAAGACGAAGAGTGAGGATTGGGACGAAGGAGGGCGATGGAGGAC
GAGATGACGACGAAGA

>CL6215Contig1|tppp family protein cg4893-like

GAGTTGCGGTCTATGCATTCTCCGTATAGCAAATTCGCGAATGAGTATTCATGAAATTTTCTCGATTTATTGAAATTTCA
AAAGTAAAAATGATGTTACGATTATTTTCACTAAAAGTTTAAAGTTTTACATGGTCGACGACGAAGTACAATCGTTTTT
GATTGTTTACATCTGTTGTAACGGAGCTGAAGAAAGCAACGGGAAAAAGATGGAAGGAGCCGTAGAAAAACGGGACGACGA
CGGTAATGAAAAGCCAGCGGTGACGAACGTGACGAACGAAGTGGCTAATTTGAAGCTGGAAGAAACGTCAAACGGAAAA
TCAGCACCCGCAAGTCCATCGGCCGGAAGTGGTGGATCATTCTTTGAGTTTCAAGGCTTTCTCTAAATTCGAGATCC
AAAAAGCGACGGGAAACTCATTACGCTTAGCCAGAGTGACAAGTGGATGAAACAAGCTAAAGTTATAGATGGCAAAAA
TTCAACAACGGACACTGGCATTATTTCAAGAAGCACAATTTCCAACAATTTGGGGCTCGAGCAATACAAGGGTTTCTC
GAAGAGTTATCTAAGAATAAAAAAGTGGAGCTGGTGAGATGAAGAGCAAGATGGCGAAGTGGACCACTGGATTGATC
AGGAGGAACATCCGGGGCCAGCAAGACTGCGTGGCGGTGATCGGTTGACGGATGTGTCGAAGTACATGAGTACCTGGT
AGCAACGCTTCGACGAGACCGGCAAGGGTAAGGGTATAGCCGAGTAAAGCCTGCCGATCAATCGGGCTACGTGCAGG

TTATCAAAACAGGACACGTACAAAGCGCAGTAGCTG

>CL629Contig2|peptidyl-prolyl cis-trans isomerase fkbp4-like

GCGAATAGGTACTCGCGCACCCGACAAAAGTTAATACTTAGCGCAAAAACGAGACTTTTTCTACTGAAAACATCGTTTTTA
AAGAAATTGATTGATCCTCGAACATGGCTGCCGAAGATATTTCTCCGCTGAAGGACGGCGGAGTATTGAAGGAAATCATA
AAGGAAGGCTATGGGGAGGAAGTTCCAACCGCCGGGAGCAAAGTGACTGTTTATTACACGGGGACCTTGTTGGATGGAAC
GAAATTCGACTCCAGCAAGGACCGTGATAACCCGTTCCAATTCAGTTTGGGGCAAGGGCAGGTATCAAGGCTTGGGACA
TCGGAGTAGCGACTATGAAAAAAGGCGAAGTAGCGATGCTTACATGCGACTCGAAATATGCTTACGGCAAAAACGGGCTC
CCCGCCAAAGATTCCGGCTGATGCGACACTCAAGTTCGAAGTGGAATGATCGACTTTACCGGAGAAGATTTGAGTCCCG
ACGACGATGGGAGCATTACAGAGATTTCCAAGAAGAAGCAGGGGAAACCCGGTGGTTATCCTACCGATGGATCGATAGTAGA
TATACATTTGATTGGCAAGTACAATGACAAAGTCTTTGAAGAGAGAGATGTTCAATTCGCGCTTGGAGAGGGTCAGGAGT
TTGGCATTGTCGAGGGTATAGAGAGAGCATTAGAAAAATTCAGTAGCGGTGAAAAATCGAGGCTTAAGATTGCGAGCAAA
TTTGCATTCAAGGAGGAAGGAAAAATCAGAATTCGGCATACCTCCGAATGCGGACGTAGAGTACACGATACGGTTGAACAA
CTTTGAGAAGGTAGCACAGCCTTGGTCATTGGAGGGTCCCGAGAAAGTCGCCAAGCAAAGTTGTACAAAGAGAAAGCAA
CGAATTATTTCAAATGTCGACATTCGGACTTCCTCATCTTTACATAGACGGCGATTACGCGATCGACGGACGCTTATTGTT
AGTTTCGGGGGCGATTTGAAAAGTTGAACGCGACGAGTTGATTTTATCGGTTTATTTGAATCTCGCGCTGTTTTATTGAA
AACTGAGCAGAATTCTGAGGCAAAGGCCGAGTGCGATAAAGTCTGGCAATAAATCCAGAAAACGAAAAAGCTCTGTTCC
GACGAGGGCAGGCTCAGCTGGCTCTGGCGTCGCCGGAACAGCCGTCAAAGATTTGAGGCTGTATTGAAGGTGGAGCCT
AAAAATGTCGCTGCAGCTAAACAAATAACGATCTGCAATGCTCTCATCAAGCAAAACATTGCGAGAGAGAAGAACTTTA
TGCAACATGTTTGACAAGTTCGCGCAAGCTGATAAACAGTAATATCGCAGAAGGAAGAAGAGGAAGTTCGACAGCAGCC
GGAGTGTAGTCGGGGAACGTTGGGGTGAAGGGGGACAGGAGGAGCGACCCGGAGGCAGAGATGCGACAGCGTTTAGAA
AAGAAAACCCCAATATCCTCATGCTCAACGCCAA

>CL6336Contig1|circadian clock-controlled protein

TTTATCAAGGTCTGCAACCGGAACGATCCGAATCGCGATGCCTGCATCACTGATAGTGTGGACCACCTGAAGCCTTACCT
TGTGAAAGGTGTTCCAGAATATAACTTGCCAGCCTAGAACCTCTTGTTTTGGAGCATCTCGTTGTGTCCGAGGGCTCGG
GAGTCAGAATCACGGCTACAAACATCAGAGCTCACGGGGCGAGCAACTTCTTCGTCAGAAAGTGAAGTCCGACTTGGAT
AATCTTCACTTCAATGTCGACATCGGACTTCCTCATCTTTACATAGACGGCGATTACGCGATCGACGGACGCTTATTGTT
ATTGCGATCACTGGATCGGGGCCACTGAACGGTAACTTCACCGATTGCTTGGGCGAAGTCGTTTTCGACGGTGAATCT
ACGACGAGGGTGGCGAGCAGCACTTCGCGTGAAGGCCTTCGAAATGAAGATTAAGATCGGCAAAAGGCAACATTCAACT
TGACAACCTGTTCAATGGCGAAAAAAGTTCTCGGCGACGTGGTGAACAACGCAATAAATGCTAATTTGATACATTGTA
CGGGAACTTTTGCCTCTCATCGAAAAAGCACTTTCTGACTTTTTCTTAAATCTTGGCAACAATATCGTCACGCCGTTTAC
CTTCAGTCAACTCTTCCCTGTATAAAGTTTTCTCCCCACGACTACATCAACCCTAATAACAGTTTTGAATAAATATTGAA
GGAAAAATTTGCATCAACTAATTTCCAAATTTAGTAATAATTCGTACGCCAAAGAGCGTATCACGCCAAAATGTAATGA
AAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGN

>CL6339-bisContig1|rna-binding protein 14

GATACAGTCAGAGCGTGAGCCAATCGTCGATGGGAGGATACTCTTCGAGCGCATCTATGGGAGGCGGATACGGACCAGCC
AGTGGCACAGTCGGTGGTTATGGTGCATCCACCGCTGATTACGGAAGGACAGCAGATTACGGACGTTCCGTTGATTATGG
TCCCAGAACAGATTATAGCACAACGGCCTATGCTCCCGTCAGCAGCGACTATAGTCGCAACGCTCCAGTCGATTATGGAC
GTACCGATAGTTATGGAAGCGGCGGAGCCGTGATTATAACACTTCAGAAACGATTACGATCGCAGTTCTGCCGGACCA
ATGAGAAACGGTGGAAGCGGAAGCACCAGTTGTTATGGAAGTGGATATTCGACGCTGGCTACGGACCCATGAGCGGTGG
ACCAAGCTACAGCACTGGAGGACCCAGTTACAGCACCAGCGGTCCCCAAACCGACGCGTACAGCAGGCGAGCGGGAAGTG
CCGGTGGCAGCGGTGGATATCCGCCAGTCAGTGGAGGTTACGCCGATGCTTACGACAGAGCCGATCCCTACGGACCTCCT
CGCACTAGCAACCGATCGACACCCCGATGAGGATTTTCCACCGCGGACACATTGAGATGAATCAATCCTGGATTTCAAC
CATCAATCGTGTTTCTCGACACGCGCTCCTACTTACGAACAACGTTTGTCTGGCTCTCCGAGTACCTCAGGCTTTT
CGCATAGTCTGAGAATTTTTTACGAAGAAACAACTTCTGACCAGACGAGAAGGAACGGCGACCGCTACT

>CL635-bisContig1|heat repeat-containing protein 2-like

GCCCCAAAGTTGCCTTCAATCAAACGTAACACGGAGCGGCTTTTTATTCTTTATCTCCCTCATCTCCCTCGCTGAAAAG
GAACCCGGATCGTTGATAAAACACTTTGAGAGTGTCAATCCTCGTGATAATAAAATAAATACGCCGTATATTTTAATTCC
GCCAACATTGCATACAGTTTTATATCGATATTTCAATTAATAAAGTGAAGTGAAGGAAAACAACGAAATTAATCATGGC
GGAGACGGAGCCGCAACACATTTGGAGTTCCCGAAGAAGAGCTCGAAGCCGAATCCAATCATCAACCTCTCCGGAAAAAT
CCATCGAAACAACTTCTCGAAGCGGACAAGGAGGACGAAAGTCTGAGAAAATACAAGGAAACTTTGCTCGGTGATGCCAAG
TCCGGCGGTCTTATAGTTGATCCCGACGATCCGCGAAAAGTGATTGTGAAGAAATTGGCGCTGTGCGTAGTCGGTCTGCC
GGATGTGGAACCTCGATCTTACGGGTAATCTTAGTCAACTGAAAAACAGACTTTTGTGATTAAGGAAGGTGTGAGCTACA
GGATACGTATTGATTTCAATGTACAACGTGAAATCGTTCACGGTTTGAAATACGTGCAGAAAACATTCCGGCTAGGAGTA
CTTGTGCAAAAAATGACCCACATGGTTGGCTCTTATCCACCGAAAAAAGGAGATACAATCGTACACGACACCGGCTGAGGA
TGCCCTGCAGGCATGATAGCGCGTGGTTTACATCTCGTCACTTCTGTTTTCACGGACGACGACAAGCACGACACCTCA
ATTGGGAATGGTCGTTTACATAAAAAAAGATTGGAAGAATAAAAAATGGCAACAAGAGAAAAATCCGTTACACAGCAC
CGCAGCTGATTGAAACGTTTCTTGGACGGAGCGCAGTGAGAAATTGAAAAGAAAAAGAAAAAATAAACAGCAATTGGGA
GCACGAGAAAAACGCAAGAGAAATTGCCAAAATATTGAATTCACAAAGCAAAAATCAACAACATCAATCATTCTTATT
TCATTTATTTTCTGCCCTCAAAAATAGTTAATGCCTGATAGTTGGGTTGTACGCTAGTTACAAACGATGAATCCGCGAC
GATAAAATAGAAAAAAGGTAATAAGCGATTGACGTTGCCAAACGAACAAGACAATAATGAAATTTGTCTCGCTA
TTTTTTGACAAATCGTTTTTTCGCGGAGTCCCGTGTGATGATTTTTTACGAGCTCTCACGACCAATGAATTT
CTTTTCTCCAGCGTGAGTGAGATCGATTATGAAAGCGAGAGTGTGGTGGTATTTTTTACTTCATACGAAAAATTTTTAT
AACAGCTCAATGTTTATCGAATTATGTAACCCTGTGTAGCTCGTCTAAGAACTAAAAAATTTTTGTTTTATCCTCCT
CGAGCAAGTCAGTCTTTTCTAGTCTTTTTTTTTTAAACAGTAGTAATCGTAACATAGCTATAAATTGTAAC

>CL640Contig1|eukaryotic translation initiation factor 3 subunit h

CGCCCGGGGATAACCTCTTTTACAGCGCGCAATCTAGCACTTGGCGTGCTGGAGTAAATTTGTAATAAATAGAATTAT
CGACTCGAATAAACAGAGATGGCTTCGTCAAGAGGACAAATACGAAGAATTCGGATCTGGAATCGCAATTGATTACGTA
CAATGCGATGGTTTGGCGCGCATGAAAATAGTGAAACATTGTCATGAAGAATCCACGAGTAACATGGAGGTTGCACAGGG

mmc4.txt

CGCTCTGTTGGGTCTCGTTGTTTCAGAGCCGGCTTGAAATCACCAACTGTTTTCTTTTCCAAAAATGATGAATTGATGG
AAGAAGAAGAATACCAGTTGGCTGTTATGCGTCGTCTTCGAAGAGTAATGTGCGATCATTTCCACGTCCGATGGTACCAG
AGCGCGGACGTTGGAACTTCTCGAGTTTTCTTTGCTGGAGTCGAGTACCATTATCAGACGTGCATAGAAGAGTCTGT
AGTGGTGATTTACGACACTGCCAAATCGGCGAGAGGATTTTTGACCTTGAAAGCGTATCGTTTGACGCCCCAGGCGATTC
AAATGTACAAAGAAGGAGAATATACTCCGGAGGTGTTGAGAAATCTCAAGATCGGATACGAGAGTCTTTTCGTCGAGATT
CCGATAGTCATAAGGAATAGCAATTTGACCAACATCATGATGTCCGAGCTGGGAGACATGATTCCCGAAGAAGAAGGCAC
AAAGTATCTCGACCTTGGAACAGCCAGCGTACTCGAGAATCAACTGAGATGCTTAATGGACCGTGTGACGAGCTCAACC
AAGAAGCCATCAAGTTCAATCGTATCAGCATCTCGTCGTTCTGTCACAAACAAGACAAAAATAGACTCTTGACAGAAAAGG
GCCCAGGAGAACGCCGCCAGAGCGGCCAAAGACGAGCCACCATTACCCGACGACGACATCAACAACTTATGCGTCCTCT
TCCTGTCCCACCAAGGCTCAACCCGATGATCGTTGCTGGACAAATCAACACTTACAGTCAACATATATCACAATTCTGCG
CTCAGAGCTTAGCCAAATTGTACATCACGCAAAGTCTCCAGAGCGCCAAGGAAGCCAAATCTACGAATTGAATGAAAACC
CGAACCATTCAGTGTAATTTTGAAAAAAATGGTCAAACGAATAAGGCAACGAATAAATGAACTGGCGAAAAATCATTTTC
ATCGACACAAATTTATCCCTTA

>CL6413-bisContig1|alcohol dehydrogenase class-3-like

TACGTGCGCTGTCTGGGGTCTCGGGGCCGTTGGTCTCGCCGTGGGTCTGGGCTGCAAGCCGCTGGCGCATCTCGTATTA
TTGGCATTGACCTTAATCCTGGAAAATTCGAGCAAGCCAACTGTTTGGATTACCGAATTCGTCACCCCCAAGGACCAC
AAACGTCCAATTCAGGAAGTACTCGTTGAGTCGACGGACGGTGGTCTCGATTACACTTTTGAATGCGTTGGAAACGTCAA
CACATGAGAGCGGCTTTGGAATCTTGTACAAAGGTTGGGGAACGTCCGTAATAGTTGGCGTCGCTGCAGCTGGACAAG
AAATCAGTACGCGTCCGTTCCAATTGGTGACCGGTCTGTTTGGAAAGGCACCGCCTTCGGAGGATGGAATCGAAAGAA
AGTGTTCGAAATTTGGTACAGCTTATCAAAAAGAAAGAAATGATGCTCGACGAGTTCTGCTCACTCAATATGCTTTTCGA
GAAAATTAACGAAGGCTTCGAGCTGCTCCACTCGGGCAATTGCTTGAGAGCAGTTCTGCATTACTAAACGACCAGCCCCA
ATCGCTCATCCATGGATTCCGAGCCTGATCAGTACCAATTTTTCCAAGAGAACCCTACTGCCCTGTAAATG

>CL643Contig1|ist1 homolog

GTCCAGTGTAATAATCTCGTCCAAGTTCCAATCGCCGTTTTAAACGTTTTATCTCTGTACATCGTTCCGCGTAATTCGCCG
CAAGATATAAAACAAAGCAGGGCGTAAAAATGTTTTCGAGTGGGCGCAATTACACAAAGTTGAAGACGAATCTTCGACTCG
CGATAAATAGGTTAAAACTTTTGGAAAAGAAGAAAACCTGAATTGGCGCAGAAAGCCAGAAAGGAAATTCGCCATTATATT
GCGGCGGGCAAAACCGAGAGAGCCAAGATAAGAGTCGAGCACATTATTAGAGAAGATTATATGGTCGAGGCTATGGAAT
TTTGGAAATGTATTGCGATCTCTTGTAGCAAGATTCGACTTGATACAACAAATGAAAAATCTTGACGACGGATTGGCCG
AAGCGATATCCACCGTGATATGGGCTGCGCCGAGAATCCAAACGGACGTTCCAGGAGCTCAAAGTCATTGCCGACATTTTG
ACCTCGAAATATGGCCGTGAGTATACGGAGGCTTGCCGCGAGGAGGCAGTTCAAAGTATTTAGAAAAGCTCAAACACAA
AATGAGCATTCAAATGCCGGCAAACTTTTGGTTGAAAATATTTGATAGAAATGCCCCAAATTAATTTGGAGTACG
AACCCGATCCGCAAGTGATGGCCGAAGGTCAAGATGCTGTTGATCGACGTGGGAAGTAGCGGCGGGAATCTGCCAAC
AATTTGGATTTGGCCAGCGGCGGAGCCCCACAGCCCTTGGGATTATCGGCTTTCCACAGCCTCCGCTCTTGCTGACCC
GTCCTCAAATTTGAACGTATGGGTCCGACCACAGCAATCATCAGCCTTTAGGATTCTGTCTCCGGGTTCCAGTCCAG
TGACTAAGAAAGATCAAAACGTACCATTCAATCCCGCAGCGTTCTCGTACAATATTCACCTTGACAATGCGAACGCGAAC
AAAGAGGACGACCAACCGCCTCCGTAAGTCTGTTCCACACAGCTCAATAAACAGTCCGATCAAAAGCCAAAACCTCA
ACCACGATCAAAAAACCAATGAACGATTTCCAGTCCCGGATTTACCGGCAGTCCCGTCGGACCAGGATCCAGTCCAA
ATGCCGCGCACAACGACGACATCGATTTCCAGACCTCATGAAACGTTTTCGAAGATTTGAAAAAACGAAAGTAACCCCGT
AAACTGCACATTGTTTTTTTACTAACGAACACGAGGGAGAGGGAAAGAGAAAGAAACAATATAATTAGCATACAGCTTCA
AGCGGATCGGTGATTCTTCTGTACTTTTTTGTCCATCTGCGCTTTGAATCCGATTTTCAACTCGGAGAAACGACCGCCC
GGTTTCCTCACATTTTTTGAATGTAATGCGGGCATGAACACAACCTTCACACTCAACACATAACAATTCGTATTATTAT
TATGTATATAAAAAACGTCTGTACAGAAAATATCGGACTGATTAAGTGCTTTAGAAATTTTTCTGTTTCTTTTTTAAAGAA
TATAATGAATATTTTGTCTTGAACCTTCCAGTATTAATAAATCTTGATCACATTGATTTCCGTTTTTAGTAATTATGC
ACTTTTATTTTACTGTAACGTTTTAGACAAAAGTTTCAACACTTTTCATGCAATTTTTTAGATTCCACGAATATTTT
CGAAATCTTATCCCTCGGTCTCGTTTTTCCACTTTTTTTGCTATCTATTGATTCT

>CL6442Contig1|atp-dependent rna helicase bel

TTCTGGTAAAACGGCGGCTTTCTAGTGCCAATATTGAATCAGATTTACGAGTCGGGTCCACGTGCACCACCGCCGAGG
CTGGTTCAGGTCGACGGAAGCAATATCCCTCGGTCTGGTTCTCGCTCCAACGAGAGAGCTCGCACTCAGATTTACGAC
GAGGCGAGGAAATTCGTTATCGTCAAGAATCGCAGACCGCTGTTTACGGTGGCGCAAGTATGGTTGATCAAATGCG
CGAACTTGACCGCGGTTGTCTTTGCTTGTGTCACACCTGGAAGATTGGTCGATATGCTTGACGTGGAAAAATCGGCT
TGCACAATTGCCGATACTTGGTACTCGACGAAGCCGATCGTATGTTGGACATGGGTTTCGAGCCACAGATCCGACGAATC
GTAGAGGAGGACACAATGCCACCGACCGGGGAAAGACAAACCTCATGTTCTCTGCAACTTTCCCTAAAGAAATTCAAAT
GTTGGCGCGTGACTTTTTAAGCAATTATATTTCTTGCAGTTGGCCGGGTCCGATCGACTTCCGAAAATATACACGCAAA
AAATCGTTTGGGTGAGGAACACGACAAACGCTCGTATCTGCTCGATCTCTTGCAAGCGAGCAACGTATCGAACCGAGT
GCGGAATCGTCACTCTCGTATTCTGGAGACAA

>CL6454Contig1|pyridoxal kinase-like

TACACAAGACTTGTATACTGTATAGTTATGGTTTTCTTTACCGACAGTCGATAATCAGCTGATTCTGTGTTGGATGATGTAA
TCAGAATTTCAACTTGACTCGAAAACGCAATCTTATCGCTGTTATCGGAAAATCATTATAACACACATATGAATGGATCA
GAGGCTCGAAACACTCTAGTACGCGAAACAGTCATGCGCGCGTGACCCGTCGATCGATCTCGGGCCTTCATCGCAACCCA
GATTATAAGGCGTTTATAGTAGTCGAGGCTTTTTCTTCCCTGCTGCTAAGATTTCTGTTTATAGAAGCTGATTTTCTT
ACCACGAGTTGAACGTTGAATCAACATGTGCGAACAACCAAGAAATCGTGTCTATCGATTAGAGCCACGTCTTTTTCTG
GATATGTCGGTAATAAAAGTGCAACATTCCTCTACAGTTACTGGGCTATGAAGTTGATGCGATCAATTCTGTTCAACTA
TCCAATCACACCGGATACAAAGTTTTCAAGGTCAAATATTGAATGACGAGGACTTGGGTGAGAGCTTCTAATCATTATA
AATTTTTTCCAATGAAAAGTGGATGCAGACGTTTATTATTCACGTAAAAATGAATATCCAGCAAGATTGCTATTGCGAAC
AACTTTTCAGGCTCCGCACATGAAATGATTTGGTTTTTCAGGTAGTTTTGG

>CL6463Contig1|40s ribosomal protein s18-like

TTTTAGATCGTGACAGCTCGGCAACATGTCGCTCGTATTCCAGAGAAGTTCCAGCACATTCTTCGTGTCATGGGACG
AACATCGACGGTAATAGAAAAGTCATGTTGCCATGACCGCGATCAAGGGAGTTGGTCGTCGTTACGCCAACATCGTCCT

mmc4.txt

CAAGAAGGCTGACATCGATCTGGACAAACGCGCCGAGAGTGCTCAGAGGAGGAGGTTGAGAAGATCGTGACCATCATGG
CGAACCCAGGCAATACAAAAATCCCTGACTGGTTCCTCAACAGACAGAAGGACATTGTTGACGGAAAAATACTCCAGTTG
ACCAAGTTTCAATTTGGACTCGAAACTCCGTGAGGATCTCGAAAGAATGAAGAAGATCCGCGCTCACAGAGGTCTTCGTCA
CTACTGGGGCCTGCGTGTACGAGGTCAACACACCAAACTACCGGACGTCTGGACGTACCGTGGTGTGTCCAAGAAGA
AGTAAATTTTTATTCTTCTTTGTATTATCAATAAAATATGAATAAGAAAACGAAGAAAAAAGAAAAAAGAAAAA

AAAACATGTGCGGCCG
>CL6466Contig1|low quality protein: apolipophorins-like

AAATTATTGACCGGAGTGAGAAAAATAAAAGCAAAGACATCATGGGACATACACCCCGCTTATGTGCGCGGGAATCGT
CGCTTGTCTCCTCGTCTCCTGGCACCCCTCAACTGCAGCGAACAAATGTATCGTTGGCTGTATGGCATGAACCCGAGCA
AATCGTATTGGAAGGGCACACGTACACCTACGATTTAAAGGGCACGTCACTAACGTCACTGAGGACACAAGGTGAA
TCGAAGCTCGAACTGAGTGGTATCGTCAATTAGCGGTAAAGCCCGATTGTCTTACCAACTGAAAGTAAAAATCTTCG
CGTCAATGGAGCGCCGGTTCGCACTCAAGGACGTGGAGAAACATGCTCTTCAGTACAATTATCACGATGGACATATCGACA
CAAGCGTATGTGCCGAAGCTGGAGACTCTCAGGCTTCTCTCAACATCAAGAGAGCCGTTGTTTCCCTCTTCCAATCGGCC
GTCATGCAAGATGCCGCTGTCATCTCCACACGAGACGACGATCTTCGTTGGTGGTGAAGACGAGATTTGCTTCCACA
AGACGGTGACGTTGTCGTAGTGAACAAATACCGAAACCTCGCGGATTGTGCGTACCGTGAGACGATACGTCAAGGTTTGA
TAACCGCAGCATTGATCCAACCTGCAGAGACGAAATCGTCGCCGCTGCTGTCTCACTTGAAGACGAGCAACGTTTC
CTGAAGGGTGTTCGAAAAGGCAAGTGTGAGCGGAAACTATTTGCTGCGGCATTAGTATCGGGGACTCAGGTGCCAAG
ACAACGGTGCGTATGGAGTTGAACCTGAAGGATGAGAAGCCGACAGCGAGTCCAGCCGGTCCAGTGACTCAACCGAAT

>CL647Contig1|ras-related protein rab-32

TTTTGGGTTTCTCTTTCTTTCTGAGAGTATCGAGTTACACGAGTTTTTTTTCTGTTCTCCTCGATTTGAGTGATGGCGCAGC
TGATCAGCGTCAAATTTGTCGCTTCGATGGCTCACCTTGGGGCTTTCGCCTTACGGGCGGAAAGGATTTTGGCACTCCG
CTCATTGTTCAAAGTCGTACAAAAACAATGCTCCGAATACGGGGATCGGCGAGAAGCGAGAACACCTGTACAAGATTCT
GGTGATCGGTGAACTCGGGGCTGGAAAAACGTCAATTATAAAGCGTTACGTTACCAGTTTTTTTTCGCAACATTACAGAG
CGACGATAGGCGTCGATTTGCGATTGAAAGTTCTCAACTGGGACCCGCACACGATCATCAGACTTCAACTATGGGATATC
GCCGCGCAAGAACGATTTGGCAACATGACCAGAGTCTATTACAAAGAAGACGGTCCGTGCATTATAGTTTTCGACGTCA
CGAGAAGCGCCACTCTCGAGGCTGTCGTGAAGTGGAAACAGGATCTTGACTCTAAGGTCCAACCTGCCGATGGCTCGCCA
ATCCCCTGTGTACTCTAGCCAAACAAGTGTGATCAGCAAAAAGAAGGACTGGTAAATACACCAGCAAAAATGGACGATTA
TTGCAAGGAAAAGAATTTTTCTGGATGGTTTGAAGTTCGGACCAAAGAAAATATCAATATCGAGGAAGCTGCGAGATTT
CTCGTACAAAAAATACTACCAAAACGATACAAATAATAGAAAGGCAACGGAT

>CL647Contig1|vacuolar atp synthase subunit b

AATCGTGTTACGTAATATTCGAAAAACTCGTGACTCTGTTCTCCTCGAGGATTTGGAGAAAAAGGGCGAGCTCTCGGGCG
TAAACCGTGACTCTGACAACTCGTGGCTCTCGTTGATGAGAAAATTCCTTTTCTTTTTCTCGCACAGCGTACAAAAAC
CGTCTCCGGCGTCAACGGACCTCTCGTATTCTCGACGAAGTTAAATTTCTAAATTCGCCGAAATCGTTAGCTCAAAC
TTGCCGATGGATCTCTACGCTCTGGCCAAGTCTCGAGGTCTCCGGATCCAAAGCCGTCTGTCAGGTCTTTGAAGGAACT
TCCGGCATCGACGCCAAAAACACTCTTTGCGAATTCACCGCGCATATCCTCAGAACTCCCGTCTCTGAGGACATGCTCGG
GCGCGTCTTCAACGGCTCCGGCAAACCCATCGACAAAGGACCTCCCATCCTTGCCGAAGACTTCTCGACATTCAAGGTC
AACCCATCAATCCATGGTCTCGTATCTATCCCGAGGAAATGATACAAACCGGCTTGTCCGCCATCGACGTATGAACCTCC
ATCGCCAGAGGCCAAAAAGATTCCAATCTTCTCCGCCCGGCTGTCGCCGACAAACGAGATCGCTCGCAAAATCTGTCTCA
AGCCGGTTTTGGTAAAAACTCCAGGAAAATCGGTTCTGGATTGCGACGAGGACAATTTGCGGATAGTATTGCGGGCGATGG
GAGTAAACATGGAAGTGCAGTCTTCTCAAACAAGATTTGAGGAAAACGGTTCGATGGAGAACGTTTGTGTTGTTCTTG
AACTTGGCCAACGATCCGACCATCGAGCGTATCATTACGCCCGTCTGGCTCTCACAGCCGCCGAGTTTTTTGGCCTATC
AATGCGAAAAGCACGTGCTCGTTATTTTGACCGACATGTCGTCTACGCGAGGCTCTTCCGCGAGGTCTCTGCCGCTCGT
GAAGAGGTTCCCGACGTCTGGCTTCCCGGATACATGACACCGATCTTGCCACCATTTACGAACGCGCTGGACGCGT
CGAAGGTGCGAATGGATCCATCACAAAAATTCCTTCTGACTATGCCCAACGACGATATTACTATCCCATCTCTGACT
TGACGGGATACATTACCGAGGGACAAATTTACGTTGATCGTCAGCTGCACAACCGACAGATTTACCCACCGATCAACGTG
CTTCTTCTTTGTCGCGTCTCATGAAATCCGCCATCGGCGAGGGCATGACTCGCAAGGATCACTCTGACGTTTCCAATCA
GCTGTACGCTTGCTACGCCATCGGCAAAGATGTGCAGGCGATGAAAGCCGTGGTTCGAGAGGAAGCTCTAACCCCGACG
ATCTTCTCTACCTCGAGTTTCTCTCGAAATTCGAAAAGACTTTATCTCGCAAGGAAGTTACGAGAATCGAAGCGTGTTCG
AATCCTTGGACATTGTTGGCAACTGTTGCGTATTTTCCCGAAGGAAATGCTCAAGCGTATTCGCCCATCTGACCCCTGCCC
GAGTTCTATCCACGAGACTCGCGTCTTAATCCTCATGGGACCCGTGACTACTGACACTGGTTGTATCTCATCGACGGT
GCAGGACGCGAACGAGGCGCCGAAAAGAAAGAGAAAACAAAGAAAAAAGAAAAAAGAAAAATACGTACTACATACGGCCC
T

>CL6487Contig1|threonyl-trna cytoplasmic-like

GTCTTGAGAGTCGGAAGCGTGACGCCGATGGCAGAAAAATCGTTAAATAATTAATACAAAGAAGTAGTAAATCTCGG
GAACGAAACAATCAGCTTCGTTTTCTGTGACGAAAAATAAGCGAAAAATGAGCGACGACGTTATCACTGGGATAGAGAGC
CTCAATGTGAAAGCTGAAAAGACCAAGATGAAACACAGAAAGACAAGAACAATGCCTCGGAAAAGAGTTCTGTAC
GGAGCTGAAACCGTGGCCGGCATTTCATCCAGGATCGCATAGTAATGTGGGACAAGTTAAAGCCGAGTACGACGCGGATT
TGGCTTCGAAAAAGCCGGAAGCCATAACGGTCACTCTTCCGGATGGAAGAAGTGCCGGCGGAATCGGTGGCGCACGAC
GCCGTACGAAGTAGCAAAGAACATCAGCCAAGGTCTGGCGGACAACAGGATAATAGCTCGAGTGAACAACGAGCTCTGGG
ACTTGGATCGACCTCTGAAAGCAATTGCAAGCTTGAGCTTTGAAATCGACGATGCAGAAGCTCAGCAAGTATTCTGGCA
CTCCAGTCTACATTTTGGGCGAAGCGATGGAGCGTGTTCACGGAGGTTGTCTGTGTTACGGGCCACCGATAGAAATGG
TTTTACTACGACATGTTCTCGGTGAGAAAGGATTTCAATCTCGATTTCCCCTACTTGAAAGTCTCTACAAAACATTG
TAAAGGAAAAAG

>CL6489Contig1|phosphoribosylformylglycinamide synthase-like

GTCAGTGACGGTGGACTGATAACTTGCATTTTGGAAATGTCGTTGCTGGAATTTCTGGATTGGACGTAAAGATTGATCA
CAAAACCGGGCCAGCGATCGAATTTTATTCGCTGAGGAAGTTGGTTGGTTCTCGAGGTTGAAGAGCGACCGGGACTA
CGTGATTTAAACATTTTAAAGATCTGAACGCTCCGATCTTTGCTATTGGACAATCGACCGGATCGGTCTCGGCTCGAAGG
TCGTCATGTCGGTCAATGGAAATATTTTGTAGACTCGACGGTATTGCGTTTGTATGAAATATGGGAAGAAACGAGTTAT

mmc4.txt

CAGCTGGAACCTCCGGCAAACGAATGTCGAGTGTGCCAAGCAAGAGTTTCGAGGGTTTTAAAGATCGAAAACTCCAGCCTA
 CCAATTGACTTTTCGACCCCGATGTTCTGCCGATTTCAAAGCTTCTCCAGTCTCTCGCCCCAAGTGAAAGTCGCGGTCA
 TCCGTGAAGAAGGAATCAACGGTGATCGCGAAATGTCAAGTTTCGCTCGTCGAGGCTGGATTCTGAAGTGTGGGACGTTACG
 ATGCAGGATCTACGTTGCGGCGACGTCTCGATGGACGACTTCCGGGGGCATTATATCCAGGAGGTTTCAGTTACGCCG
 ATGTTCTCGGATCCGCCAAAGGCTGGGCCGCAACTTTGCTCTTTGACGATCGTTGCGCAAACAAGTTGATCACTTTTTTG
 GCTCGCGACGATACGTTTCAGTTTGGGCGTTTGTAAACGGCTGCCAGCTGATGAGCCATTTGGCTGGATCGGCAGCGACTTT
 AACGACAAAGGCGAT

>CL649Contig2|dolichyl-diphosphooligosaccharide--protein glycosyltransferase
 subunit 2-like

TTTGGTGAAATTGTTACGTTTTCGCAGAGTCGCTTACCCGAAAAATTGGCCGAAAAGATCGAAGCCGATTTCGCAGCAAAAA
 CTCGTGATAAGATTCTTGTTCGCGGATTCTGCCAACGAAAAGCCAATGCGAGTTCATCAAGCCTTTGTGCGCTTGTATTC
 CGTTTCGGAACCGAAACAAGGTCGAGAAATTGAATTTGTCGCCGAGCCCGATGCGTCTCACGTCTACAAATTCGACATGC
 CCGTGAGCACAGCGGCTCAGACTTTTGGCCATCAGAGCGGCGATTATAACGTTGAATTGATCGTGGGCGACGCAACCCTC
 AGCAATTTCTTTCGCTGGCCATTGGCCACCGTGAAGTTCTCAAGTTTCGGAACCTTCGGGCTCGGACTTGCAGAGCGCGC
 GAAAAAATCTGTCGTCGCGGTACAAGCAGAAACCAATGTGTACAGCGCCGAAACCGGAAATCCAGCATGTTCCGCGAAC
 CCGAGAAAAGGCCACCGGTCTTTGTGTCCAATCTCTTACCAGGACTCTGTCTCGCGCCATTCTCATTCTGCTCGGTCTC
 TGGGCCAAGCTCAGAGTCAACATTTCCAAATTTCCATTCTCACTCAGCGCCATCGTTTTTCATCTCGGACTAGCGAGCAT
 CTTTATTTCTCTTTGGAATTTCTGGCTGCGACTCGACATGTTTGTACTCTGCGGTATCTTCTCGGCCTTGGCGTCGTCA
 CGTTCCTCGCCGCGAGCAATTTGCTATCGCAATAGCTCAGAGTCACAAATCAACGCGCTAATCATTGGCCAATTTTTTT
 TTTTTTTTTTAANCCTAAAAAATTGTTCACTCTTTCTTTTCATATTTCGAGCGCGGGGGGACTCGAATTACCATTTCTATAC
 GAAAAATTCCGTTTCAAGCTTTCTGTACGTAATAATTTCGCAACGCCAATGATCGGAGAATCCAACAGCCT

>CL65-bisContig1|probable citrate synthase mitochondrial-like

AGTTCAGTCAGCGAGCTCGAGTTGGGCGCCAGAGTTTAGCGCGTTTCGGTCGGTTCGGCATTAAAAATAAATATATATCTA
 CCAAGATATACAGAAATATAAATAAATAACGTACATCGAAGTTAGGATTGTATAACCCGTTTGAAATCGTAGGAATAA
 TAAAAACAAGGAACCATGGCACTGTTTCGATTGAGCGCAGCGCGTTGTCTGGAAGTGCAGAAATGACGACATCCATA
 GCCCTCCGACCATTTGTCAGATGCGTCGACCGATCTCAAGAAGGTACTCTCCGAAAAGATACCGAAAGAACAGGAGCGCGT
 CAAGGCTTTTCGTAAGAGTTCATGGAGCGACCAAGGTCGCGGAGGTTACTGTAGACATGATGTACGGTGAATGAGAGGAA
 TCAAAGTTTTGGTGTGGGAGCCATCAGTTTTGGACGCTGACGAGGGAATAAGATTCCGCGGCAAATCGATTCCGGAGTGT
 CAAAAACTATTGCCAAAGGCACCGGTGGTTCCGAGCCATTGCCAGAGGGTCTTTTCTGTTGTTGATAACCGGGGACG
 TACCGAACGACGCTCAAGTGAAGCGATATCGCAAGAATGGTCGCGGAGGAGCGCTCTACCCAGCCACGTGACGAAAGCA
 CTGAATGATTTTCCCAAGTCACTCCATCCTATGACTCAGTTTTCGGCGCGGATAACGCTTCTGAACAGCGAGAGTGAATT
 CGTCAAGGCTTATTCTTCTGGCGTCCACAAGTCGAAATCTGGGAAACCGTTTACGAAGATTCTATGAATTTAATTGCCA
 AATTACCAGCTGTTGCCTCAACGATATATCGTAATGTTTATAAAAAATGGCAAAGGTCTTGGCTCGGTGATACCAGCAAA
 GATTGGTCTGGAATTTCCCAATCAACTCGGCTACGACAATGCCGAATTCATTGAACTCCTCAGGCTCTACTTGACCAT
 CCACTCGGATCACGAAGGTGGAAATGTTTCTGCTCATACAACCTCATCTCGTTGGCTCTGCCTTGTCCGATCCTTATCTCT
 CCTTGGCGGCGGGTATGAACGGACTTGCCCGACCTCTTACGGTCTCGCCAACCAAGAGGTGCTCGTCTGGCTCCAAAAG
 CTCCGTTCCCAAGTCGGTGACAACCCGAGCGACGAAAAAATCAAGAATTCATCTGGAACACCCTCAAGAGTGGTCAAGT
 CGTACCGGCTACGGACACGCTGTTCTCAGAAAAAATGATCTCTCGTTATGCTTGGCAGCGTGAATTCGCTCAAACT
 TGCCGAACGATCCTCTCTTCAAGCTCGTATCTCAAGTGTACAAAATGTACCGCCTGTACTTCTTGAGACCGGCAAAGTG
 AAGAACCCGTGGCCCAATGTAGATGCTCATTCCGGCGTTCTTCTTCACTACTACGGTATGAAGGAGATGAATTACTATAC
 CGTCTGTTTCGGAGTGTCCCGAGCTCTCGGTGTGCTCTTCCCTCGTTTGGGATCGGGCGCTTGGTCTGCCGATCGAAA
 GGCCAAAATCCCTCAGCACTGATCTCCTCATGAAAGCCACCAAGCTGCCTAAATTCATAAAAAATCTCTCATCTCACCAC
 GAATTCATGCAAGCAACAAAATCGACAGCAATCAGACAGCGAAGAGAATAAATAAATAAACCAGCGAATCATGGA
 AGCTTAAACGAGGAAAAAGAAAAAAGACAGTGAAGAAATGGACGATATCATCTCGTATTGCTCAGTTTAAATATATAA
 CATCGAAATCGATAAGCAATTATGTAACATTCGACAATTACTCCGAACACCTTCGTCTTTTATTTCCCTTTTTTTTATAT
 ACTGGCATATTTGTTGCATTATGCGGTGAGAACAATTGTAAAAAGAGAAACAGAGAGATCAGGGTGAAGAAGATCATGTG
 TAAAGAGAAATCATGGAACCTGTGCCAATTACGTACGCAGGCAATTGAACGGGAAGAAAAATATTATCCGAAGGGTATCG
 AGAGTAAAGAAAAAAGGAAAGCGTCGGTAGAACGATTTTCAGTCTGTTATCGCGAATTTATAGTACAAGGACAAGTTCCC
 AAAACTGCCCTTTAGTCAATAATTCTGTATATAATCAGATACGATGAATCCGAGTACATTGGAACTGTTGCGCTCAACGAT
 CAGAAATTGATCTTCTTACGATGTGTATATATTACTGAAAAAAGAGAAAAATGAAATCGTACGCTAGCGTCAAGATT
 GTGGCGCTCAATGAATCTGTAGACGAATTGTTTGATCATAGAAAAAAGAAAAAAGAAAAAATAAGACAAGTGTCCCG
 AGAGGGCGTGATATAGCGAACAAATAATTACGTACGTACGTTGTTGTAGGAAAAGTAAAAAGAAAAATTAAGTATAAATGT
 GGTGCGAGGGTTGCCCGCGTCACTAATGCCAAATATATATGATTTTTGGTGCTAAACTAGTCTGGTGCGACGACGTTAG
 ACTCTCGTCAATTAAGAAATAACGTTATACCATCGTCACAGGGGACCCCTTCAAATTTTTTCTTTTTCTTTTCCGAGCTA
 CCAATTTTTCCATCATACACTCATAAGAATCCGGTAGTTTCGCTCGGTCTGCGAGGACACACGAAAAATCTTAACAAACGAA
 TTGTTGAAGAAATATGTGCTTAACGCGCACTTACCGTGTAGATCTCCCTCCCCCTCCTCCGAGACGAATAAATCATGGCT
 ATTTAACTACGTAAAGTCACTATGATTTGTATAAATTAACGAAACATTTGAACAAAACAAAAGCGAAATGACCGG
 TGGTAGATCCATCGTTATGAGTGTGAATGAGCGTTTGAATATCTAATTTATAATAACGAATGAAACAAATGATAATA
 AATAGAAATCCAAAAATACGT

>CL6519Contig1|prolyl endopeptidase-like

AACCTCCGAACTTCGCGCATCTGTTTTATCCAAAACTTTGTTCTTCACTTTTTATTTTCTCCACTATTTGCCAATGT
 GCCAACGTTTCGTGAAATCACTGTGACTCGAGAGGATCCACCGTGTCCGACACTCGATACTCATCGTCTTGTGACAATTC
 TGTCAATCGAAAAGGAACCATGACCAAGATTCACTATCCCGAAGCTCGACGAGACGAAACGGTCATCGACAATCATG
 GTTTTGAGGTCAAAGATCCGTACAGATGGCTGGAAGATCCGGATTCCGAAGAGACCAAGGCGTTTCGTGCAAGCGCAAAAC
 GCATTGACGACTCCATTTTTGTCGTGCTGTCCTCGTTTCGTAAGAAATAAACGAGAGATTGACGGAGCTCTGGGATTTCCC
 TAAATATTCGTGTCGCGGAGACGCGGACAAATACTATTCTACAAAAATACCGGGCTCCAGATCAAAGCGTTCTGT
 ACGTTCAAAATACTTTGGACAGCGAACCCAAAGTCTCTCGATCCCAACTCTCTCAGATGACGGATCGGTGCCATT
 ACCAATAGCAAATTCAGCGAAGATGGCAAAATCTTTGCTTACGACTATCGCGCAGTGGCTCGGATTGGAGCACCATCCA

CTTTATGAATACCGAACAGGTGAGAAGTATCCAGAAG

>CL651Contig1|glutathione s-transferase

GACCTTGTCTGTCACTCATAAAGTTACTTACTCGGCTCGCATCGAGCAGTGTCTACTTCCCGTCGACAGTCGCACACGCA
AGAAAAAAACCATGTCGAGCTATAAACTGACGTACTTCAACCTCACCGGCTTGGGTGAACCAATCCGTTTTCTGCTAAG
TTATGGAGGTGCTAAATTCGACGACGTTCTGTTTAAAGTTTTGAAGATTGGCCCAAGCAGAAAGCTGATATGCCAATGGGTC
AAGTCCCCGTGCTGGAGATCGATGGCAAGAAATACCATCAGTCCAAGGCTATTGGACGTTATCTATCCAAGAAATTCAT
CTGTATGGCAAGGACGACCTCGAAGCCTTGAAATCGATGCTGCTGCTGATTGCGTCGACGATTTGAGAATAGCGTTGTC
GACCGGCCGGGGGAAAAAGGATCCAGCTTTCAAGGCCAAACTTAAGGAAGCTGCTTCCAGAAACTTGGAGGTTCTCTTG
ACAAGTTGAACGCCCAAGTGAAGAAAAACGGTGGCTATTTTCGTCGGCGGAAAGCTATCCTACGCCGATGTCTTGTACGCA
GCTTTCCATGGTTATCTCTCGCACGTACTCGGCTACGATATCAACAAGGATCATCCCGAGTTGAAGAACTCGTCGAGAA
GGTTTTCGCTAATCCTGGCATCAAGGCCTATCTCGAAAAGCGTCCAAAGACTGATTTCTAAATTGCAGCACGCGTCTCAT
GTGAAACTTTCAACGAAACGTAACAATTTCTTAACTTTTGTACTTTATTTTACTTATTATTACACACGAGATCTGCGTTGT
TCTCCATTTCAGGACAAAAAACATGAGCAATGTATACGTTTGCTTATTTGTATTTTTTTTTCTCACCACCAATACACAAA
AACACAAGTTTATGAGCAGAAAAAATATGAGCAATGTATACGTTTGCTTATTTGTATTTTTTTTTCTCACCACCAATACACAAA

>CL6524Contig1|low quality protein: translocation protein sec62-like

ATACGAAACAGTGTGAGACACGCACGCAAGTGCAACCGAATCTACAATTTACAACATGGCTGAACGACGGAAAAACAGG
AAGCGCAAAGACGATGCTCCAAATGCGGGTGACGGAGCAGGAGCTGTGGCGGACAAGCCGACGAAGGGGGAGTATGCGGT
AGCGAAATGGATACGGGATAACGTGCCGTGCAAAAAACAAAATTCCTCAGTCACAATGTGGAGTATTTACGCGGCTCCA
GAGCAGTTGGAGCTTTGCTGGAAAAATTCGCCTTGGAAATAAAGTCTCTTTGAGACGCGAGAACAAGTGGTCGATTTCTT
GACATCATGCTCAGACACAAGTTTTTCCACAGAGCTAAGAAAAATCGTTGTGTGTCGAGGAGGAATGAATAAAATTCGTAA
CTCGAAGAAAAAGGGCAACAAGGAAATCAAGGACGAAAAGAAATCTCAGGAGAAAGAGAAGGAAGAAGGTAAAGACGTCT
CCAAGGATTCTGGCACCAGTGGAAAAGAGGGCAAAGACAAAAGAGAGGAGGAAGAACGAAAGGAACCCAAGAAAAACCA
AGTACGTTTAGGAAATGCACATAGATCAGTA

>CL6534Contig1|transmembrane protein

TGGAAAAACGCACACATGCAGTACATATACAGTCGCGATATTATAGATGCAACGAGGCTCCACGAGTTTACATTGAC
TTAGCACGAGCGTTGCCGTTTGTAGAAGTCGCGTTGGCAATTTCTGTCCATTCTCACAGCGGAACAATGTTACGCTT
TTTATTTTCGTTGCATTATGCACATTTTTTCGGGACAGAATCAGCTGCCCTTGGCACAGTGAACGACGATGATTTGCTCAT
TACATCAAAACNGAGCCATACGTCGTCGCACTCTTACCAAAAAGCTGCGAATTATGCGAACAATACGAAAACGAGTTG
ATCATGCTGCGAGACGATTTGGTCGAGTCGCTCAATGCCTGGGTGGTCAAGGTCTGGACAGTCAAATGTTGAACTTTA
CAGCCACAACGCAGAGCCCGCTCTGGTATTCTTCAGAAATGGAATCCCTCTTCTGTATGACGGTCCGTTGAACGACGATG
AAATTTTCAACACTTTTCATCAACAACAAGGAACCCGTTGTCAAAGGAATTGACCGACGACAATTTGAGCATCTGACTCA
AGCGAGCAGCGCGCAACGACCGGCGATTGGTTCTGTCATGTTCTACAGCACAGATTGCGTCGATTGCCAACGCTTGGGAG
CTCGGGTGGGAAGCTGTGCGGAGCTAAAACCTCAAGCAAAAACGTTAACGTTGCCCGTGTGAACAAATACACAACAGGAGC
TTCCACAGCGAGAAGATTCAACGTTTTTCGATGTTCCAGAGTTTATTCTATTCAAGAAAAAGGAAAAATGTATAGATATCA
AAATCCCGAAATAACGACGTCAACGCGTTTGTCTCGTTCCGACAGAGATTGGTGGAAAAACGCGCATGGAAGAAAAA

>CL6552-bisContig1|heat shock protein 67b2-like

GCAACGCTACGTCTAACCTCGCAATGATAGAAGCTGTTGTTGCTTTTTCTATACACGATAATATTTCATCGCTGCAGAT
AAATCTGTCCATCGATTCTCAACGTCAACCGATCCATCCGAAGTTCTAAGATTATGGACGGTGTGGTGATCGCAAAAT
TTTGACCACCGATTACAACGAACTGCTTGAAGCACAGAAAAAAGGCGACCTTATTATCGACGTGAGAGGACAGTGAAA
TAAACGAAACTGGGAAGCTGCCCGAAGCATCCATATTTCCATGGCCAACGTCACTAATTTCTGACGAGCCTCTCGGAC
GAAGCTTTTGAGAGCAAAATTCGATAAAGCAAAACCATCCAAAGATACGAAAATTATACTCAGCTGCAGATCAGGAATGCG
AAGTGGAAAAAGTCCAAGAAGAAATGCAGAACTAGGCTATGAACATGTCTACAATTACAAGGGAGGATGGCTCGATTGGG
AGAGCAGACAGAAGATTGAAAAACATAACAAAAACATGGAAACCGAGTGTCAAAGTTTATCTCGAGAACGTAAGCCGCA
TCCTTTTACAACAATGGAAACGTGAATAACTTGCAAAGGATGTTTACAAAAATACGAACACAATAAATATTTTACTAACT
AACCG

>CL6565Contig1|mannose-1-phosphate guanyltransferase beta-like

GTTTATGGCGAGGATGGACAGATAGAGAATTTCAATTGAAAAGCCTCAGGAATTCGTTTCCAACAAAATCAACGCTGGCAT
GTACATATTGAATCCTAGCGTACTGAGCAGATAAGAACTCCGCGCATGAGCATAGAGAAGGAAGTATTTCCAAAAATGG
CAGAAGACGTTCACTCTTCGCGTTGGAATTTGTCAGGTTTTGATGGACGTTGGGCAACCAAGATTTTCTCAGAGGT
ATGTGCATGTTACCTCGCATCATTGAGGCAAAAATCGCCAGAGAAATGTACGACGGGCCGGCGTGGTTGGCAACGTTTT
GGTCGATCCGACTGCAAAAATCGGTAAGGATTGCCGAATCGGTCCCAACGTAACGATCGGACCAGGAGTCACGTTAGCGG
ACGGTTGTTGCGTCAAGAGAACGACGCTTCTCCGATCGTCGACGGTGAAGGAACACGCGTGGCTCGAAGGGTGCATCGTC
GGCTGGAGAAGCGTAGTCGGTCTGTTGGGTTTCAATGGAAGGCACGACTGTACTCGGCGAAGACGTCATCGTCAAGGACGA
GCTTTATATAAACGGTGGACAAGTTTGGCCCCACAAAACATTTGGCGTTTTCCGTGCCAGAGCCTCAAATCATCATGTGAC
GCGACTGAGCGCCGAATCGTCTGAAACAAGAGACAGCATAATGTTGTGACTATCTTACGAGCACAATTTCTACTCCGAGC
TTTTCTTCTGAAATCTTATTCTTTTTTATCATGTGCGAAACGAAAACACTTGTACTATAGCCATTTA

>CL656Contig1|troponin i

TTCTAGTAACTTTATTTCTCTAAACCGTTAGGGTCTTTTGCTCTCGCACCAGGCCATTAGGCGTTGCCCGAAGGAGTCAT
CATGGCTGACGATGAGGAAAGAAGAGGAAACAGGCGGAGACGGAGCGGAAAAGGGCGGAAGTCCGTGCTCGTCTCGAGGA
AGCCTCCAAAGCTAAAAAGGCCAAGAAGGGATTTCATGACCCCTGACAGGAAGAAGAAGCTCAGACTTCTCTTTCGTAAAA
AAGCAGCGGAAGAATTTGAAAAAGAGCAGGAGCGAAAAGCTGCGGAGAGGAGGCGCATAATCGAGGAGCGTTTCTCGACAA
ATGAAAGACGTTGAAAACGTCAGCGAAGAGTCCCTTAAGAAAAATCTGCGCGACTACCACACTAGGATCTCCGAGTTGGA
GGACAAGAAATTCGATGTCGAGTATATCGTAAAGAAAAAGGATTACGAGATCTCCGAGCTGAACAGCCAGGTCAACGACC
TCCGAGGAAAAATTCATGAAGCCAACCTGAAAAAAGTCTCAAAGTACGAAAACAAATTCGCCAAGCTCCAGAAAAAGGCG
GCCGAGTTCAACTTCAGAAATCAGCTGAAGCAGGTTAAGAAGAAGGAGTTCACCTCGAGGAGGAAGACAAGGAGAAGAA
GCCCGACTGGTCAAGAAGGGCGAGGAGAAGAAGGTAAGGAGGAGGAGGTGAGGCATGAGAAACATCCGTCCCAGTCT
CCCTCGAGAGCCAATAATATCTTAACAATAATAACAACAATAACAAAAACCGAAAAAGAGGTACAAAGA
AAAATGGAGTGACTGAGTCGCTCGCCGAACCAAACTATTTTTTTCTGTCTTAACACGTACGAATGGAATTTCTTAATTT

mmc4.txt

TGTCTCCATTAGCAAGAAGAGAGCTCGTCGTTTTGACCTTGTGAAATATAGTCAATTAACCGGTTACGTAATTAAAAAG
AAAAATCCTTGTCTGTATTGAAATGTAAAAATGGAAAAATCTTCGGATATTCCAACGTCAATAATTTCTGTCATTTTCT
CTCCCAACCTCGATCAACCGATTGACACGCGAATCCTCGACGAGTATTATCTCTGGTCATCGATGTGCTACCAATTTT
AANCATAATTAAGATTTCTTATGTATAAAGTTCAAAGAATGTAGAAAAAAAACGAGCAGACC

>CL657Contig2|low quality protein: 6-phosphogluconolactonase-like

GTCTCTTCTGTGATTGTGACACGTGCATTTGATAAAACATATATACAACCTGCTGCATATCTATAAATAAAAAATAAAAAACG
TCATTACGATTAAGAAACTCGATAAAAAATGAATGCAGAGATTTCCGGTCGAGCCGGATGTGAGCGGCGTCGTTCGAAAATT
GGCAAGTGTGTTGAGCAAAGTGCTAATGAGGCGATAGAACGCGATGGAATCTTCAAATTTGGCTTGTGAGGTGGTTCCT
TGGTTCAATTCCTCTGCGAGGGTTTGCCGACCATCAATACCGATTGGTCGAAATGGCGTTTTTCTTCTGCGACGAAAGG
ATCGTTCCCTTTGAAAGCCAAGATTCAACATTTGGCATTACCGGGCTAATTGATCCCCAAAATTTCAAATTGAGGAGAG
TCAATTTGTTACCGTCGGCGTTGAGCTTTCCGCGGAGGAGGCAGCCAGAGATTACATAAAAAAATGTCTGTGTATTTTG
CGCCGCACAGTCTGCCCAAGTTTGATGTTTTGTTGTTGGGAATGGGACCAGATGGTCACACTTGTTCGCTGTTTCCCGGG
CACAGGCTGTTGGAGGAGAGTCTTTTGTGGGTTTGTCCGATAACGGATTCTCCGAAGCCTCCGCCTTCGAGAATCACGTT
GACTTATCCGTCATAAAATACGCGGCAAGATGTTTCCCATTTCCGGCGCTGGCAAGGCAGAAATGGTCAAGCGAA
TCTGGAAATTTGGAGAAAAATTTGCCGGCCTCTCTGGTCCGTCGATCGATGGAAAACTTTGTGATATTGGATGAGGAA
GCTGCTGGACAGTTGTCCACAGATGAACCCAATTTTCCGCTCAGAATCAATTGCTACATGCGCAATATTTTCATCAT
GAAGAATGTTA

>CL66-bisContig1|PREDICTED: hypothetical protein LOC100644161 [Bombus terrestris]

TTACTCTCCGGTTCACTCGTCGCACAACCGTCAACGGCTTTACACAGACTTAAAAATTTGACTGATTTTCAATAAAT
CACAAAGTCACGCGTTCAATTATCGTGTCTTCCGATTTTCTTAACCACAACAACAAAAACAAATCAACAATGGCAGACG
TTGAAACAAAGGAAACCAAGTCGTAGCCTCCCCGGAGAAAAAGTTGTGAGGAGGAGAAGAAGAAGTTGTGGAGGAA
GCGGAAGAAGTTGACGAAGACTCGAGAGCGTCTGAGAACGGTGACTCCAAGGAAGCCAAAGAAAATGGCTCTGCCGAGGA
GAAAGATTCTGAGGAGAAAGAAGCTGAATCGACGGGAGAACGGCGACTCCACAGACACACCAGCAGTCGATGCCTGCAGCA
TAAAGAGGAAATCAACAGCGGGCGTAGAAGCGGCCGAAGAGTCAGCGGTGGATGGTGTGAGTCGGGAGAAGAAGCAAAA
CTGGAAGAGAAGCCAGCGGTGAGGCCGAGAGCAACGGAGATACGGAACCCGCGCCTAATAATCTCATCTCTTGCCC
TCCTCCTTAACCCCTCATTCCCTGTCTGCTCCTAAATTCCTAATCCGCCCTCTCCAAGACTAAACATAATATCCCAGACCT
AAATCTATGAGCAGAGTTTACAGTTCAGAGCGCACGCGAGCGAATTACAGACTGCAAAGAGCGAAATTCATCATCGCGGG
GAGCGAGTCTGATAAAATAAAATAAAACAAAGAAAAACGAGCAAGAGGATTGAGAGGCAAAGCGAAAGAGACACTCGA
GATAATAAAAAAGAGAGAGACGTAGAGCAAACGAGAGAGAGAGAAGCTCGAATGGACGACAGCGACGAAAAATCGTAAAGAA
AATTAATGAATAGTATTATTAATAAACAAACAAATGGAATATATTTACATATTAGATTGACACAGTTCTTAGTTATTAA
CGAAACTAAATCTGTGCGAGTCCGACTATTTCCCTCTCGCTCTTCTCTATTTTTCTCTCTCTCTCCAATAAATCTCTC
AATCCTCGTCTCGTCTCTCACACGTGCTAACCACCCATTAAACACATTTACCTGTTACATTGTTACAATAAGAAAAG
GAAAAGAAGAAAGAAAAATAAAAAAGAAAGAAAAACAACCTGAGACTAAGACGCGATATTATAAGTATAAACACATATATTT
GTAATTTGAAAACAATTACCAAGTTCCGAGTGATTTTCCATCATTATTTTGCCTTCGCGCGCCTTCGTTACGCCTTTGA
TTTCATGCGGACGTTGGAAATGTGATTTTTGAGACAAATAATATCGATCACTGAATCTCCTCGGTGCGGTTACGCTTTT
TTCTTTTTGTTTTCTAGAGAAAACTAAAAATACAACTTGACCTAAGTAGCAACGCGATTTCCGCGGCAAAAGCACTTATT
TTTATTATTTCTTTCTTTCTTTCTGTCAAGTTTAAGAACATTTCTGTATTACAAATTTGGCCAACCCCAATATATTATC
TTTTTACTACGAACGACTCTGTTTCATCAGAAGTATCACTAAAAAGCATTTACGATATTTAGTCCGTGCTGACTGTGTA
CGATAAAGTATATGTTTGAAGAAAACGAGACAACAAGGAAAACACACTGATTGTAGATTACCAACACACTTATGTAATCT
TCTGCTTCGTCCGTAGGTGTTCTGTGCTTTCTTTTCTTTCTTCTGATTATATATTTATCATATAGAATCAATCTTATTG
TATTTGAGAGAGGAATGAACGAACGTACGACCGAATCTCCATTATTTTTCGTGGACTCGATGTACAGACACTTACAACAT
GCAAAAAACAAAGATAAAGAAAAAATGATTTTAACTTACGAAAACTGATACGTTTAAATGTAAAAAAAACAAACGATTGAC
TTTACATATAAATCTTTTGACAAGCAACTTTGGCGTTCCGTAATCTCTCTCTCTCTCTTCAACGAGCTCGCTAACTT
CAGCTTCTTCTCACTTTTTTACCTCGATCTTCAATTCGCACAGTCCATTATCGATCCTCGAAGTTTTCGATCGTTGTTTA
TTTTCTCATTGATTTAACGTGAGTTTAAAAAGTGTGCAATTTGCAGCTAAGGATCCAAATGAAACGTAAAAATGAATTA
ATGTTTTCTCTATTTGTGAGGCGCGATTCAACAGATGTTATTAATATTACAGGAACGTTATTTAAATTGCATTATTAATA
AT

>CL6607Contig1|counting factor associated protein d-like

CGCCGCGGGAAGGCGCATATTTCTGTTAAATATGGTAAACTCGTCAGATTGTGCAACAGGCTCTGATCGATTGCTCCTGG
GGCGAAGGAAACAACGGCTGTGACGGTGGCGAAGACTTCCGTTTCGTATCAGTGGATCATGAAGCACGGTGGACTGCCGAC
CGAGGAGGAATACGGCGGTTACATCGGCCAGGACGCATATTGCCACGTGGACAACGTGACACTGACGGCAAAAATGTCAA
GCTTCGTGAACGTCACCCCGGGCAGCGCGGACGCGATGAAAGTTGCGATTGCGAAACATGGACCGATCTCGGTGCGGATC
GACGCTTCTCAAAAACCTTTACGTTTTATTCCAAGGGCGTTTACTACGATGAGGCCTGCGGAAACGGCGAGGAGAGTCT
GGACCACGCGTCTGGCGGTGGGCTACGGAACGATAAACGGCAAGCTTATTGGCTCGTGAAGAATTCGTGGTCGAATT
ATTGGGGCAACGACGGCTACATACTGATGGCGCAGAAGGACAATAATTGCGGAGTTTTTGACGGTCGCTACGTACGCCG
TCATGGCGTAGAATTTTTTTTTCTTT

>CL662Contig1|high mobility group protein dsp1

TTATTCGAAGCTGAGAATCCTTTTAGCTGTAGAAGACTGTTACGATCAGATACAACAGCTACCGCAGCAGCAAAATAAT
CTTCAACAAAAACAAATGCCGAGAGGAAAGACAACAGACGAAGCCAGGGGCGAATGACCGCTTATGCGTTCTTCGT
TCAAACATGCCGTAGGAGCACAAAGAAGAAACACCCGGAAGAGAAACATCGTCTTCCAGGAGTTTTCGAGAAAGTGCCTCA
TGAGGTGGAAGACAATGTCCGATAAAGGAGAAGAAACGTTTCCACGAGATGGCCGAAAAGGACAAGAAAAGATACGACGCC
GAAATGCAGAAATTACACACCTCCCAAGGGAGAAGAAAACCTACCGGACGAGGCAAGAAACGCAACACATCAAGGATCCCA
ACGCGCCCAAAAGATCATTGTACGTTTTCTTCTGGTTCTGTAATGATGAGCGTGGCAAGGTCAAGATGCTGAATCCCGAA
TACGGAGTAGGTGATATCGCTAAAGAAATGGGCAAGAAATGGTCAGACGCCGATCCCGAAACCAATCCAAATACGAGGC
TATGGCAGAAAAGGACAAAGCTCGATATGAAAGGGAATCGACTGCATACAAGAAGAAAATGGCGGACGCAACGGGAGAAA
TTTTATGATCAGAATTTTCGATTAATGAATCACTGAGTGTAGCGCATTTGCGGGGACTTTACAAAGATAAGATTAGAGACGT
ACGAGTCGATTCTTTCTTTTGTTTTTTTTTTTTTTATAAAAAATNTTTTTTTTGTTTTTTTTTTCGAGACTAATTTCTTTT

TCTTTTCCAAACAAAAAACAACGTTTTATTTTCTTTCTATTTTCTTGCTCGATTCCAAGTATCGTGACCATCGTA
TCAATCGAAAAAACAAAAAACAACGAGAAAGAAAAAAGAAAAACAAAGAAACAACGTTTAAACAAAGTAAACAA
CGCCGTCGTATCAACTCCGAGCGCCTTAATCGTCCAACATGCAAATGTTTCTTACAGTGAAAATAGTAATGCGTA
>CL6634Contig1|pyridoxal-dependent decarboxylase domain-containing protein
1-like

ATTTTCTTGTTCTGCTAGACTCTCGGAACGCTCTGGTCGCTTACTCTTTCCCCGGAATAGACGTAACGATCCATCATGTTTAA
CGGTAGAAATCCGTCGGTCTTTTCCAAGACTATGTACACGCCGAGGAGACCTTACGAGAAGGCTCGTCTCGACCAAGAAT
TAAAGATCATCGGAGAGTACGGTCTCCGCTACAACAGCGCGAGGTCTGGAGAGTAAAAACATCTTGGCAAGTCCGTA
CCGCGTCGTGAGCTGCTTACTCTTGAAGAAAAAGACCCCAAGCGTCTTTTGAAGGTAATGCACTCCTTCGTCTGTTTGGT
GAGGATCGGAGTTTTGGACGAAGGTCGCATGAAGCTCGATTACGTGCTCGGTCTGAAAATCGAAGATTTCTTGGAGAGAC
GTCTCCAGACTCAAGTCTTCAAAGTTGGATTGGCCAAGTCCATCCATCAGCGACGTGTTCTCATTCTGTCAGAGACACATC
CGAATTAGTATTTTCACTGTTTTTTTTGTTTTTACCAAAATTTTGACGAAAAAAATGGAATTACGCTTAAAAATTTGGGCA
GGAACGTCTGCTATTTTACAGGCGGTTTTCTAATCTTTTGAGGCAAAATTAATTACCTGGATTAAATCAATGGTGGAGTTA
ATTATCCTCCTCGCATCTTCATGACCAGGAAACATTTTTATCCTATAAATCGTTGTTTTTACACGATATTTTCGCACGAA
ATGATCAATTTGGAATTTTTCACTTGCAACTTCGTCTGCGAAACTGACGCCGCAAGAAAATAACGTAGAAAAAAAAC
AAAAATCGTAATGTTTTACGATCTCTGAATTTGATTTCCAGATACGAGGAACCTCGCTGACCACCCCCGACAGTCTAACG
AATCTGAATAACGCTTGAATGACTATTCTGAATGGCCACTGAAACCGTACGACGTTTTAACGCCGTGTTTTACGCCGTCGTTTACGCCA
CGAAACAAAAAACATTTAATTGTTTTCGGGCCGTGTCCAGTGTCAAGGC

CTTTTCAACGCTGGTTCGGAAC TGCCGAAAGACTCGTACGTCGAAGAAGGACGTTTGTATGGCAAGGACGAGAAACCTT
GAATCACAGTTCCTTCGGTACGGAGGGTCATTCTATACAGAATGGTTGGATCTATGGAAAAGACATGAAACCACTTGCTC
GAGGAACCTTTTGGGCATGATGGTAGTTACATTACAGGAGGGCTCGATCTTCGCAACGGACGGCAAACCTCTCAAATAACAA
ACAGCGTTTCAACAATTACAATTTCTTCGTCAGTTACGGTTTGATATGCGACGAGAATGGCAAGCCAGTGAATCCGGAG
CTTTCGACAGCGTCGGAAGCGTCATTAATAAATGGGCGAATCTACGACTCGACCGCAAACCGTTGGACCTCCATTCCTTC
GGTGACAATTACACCGTCAAGGAAGGTCTGGTCCATGGCACAAACGCGAAACCTTGAGCCTCGGAAAGCTAAGCCCAGA
GACTTCGTACGTCAAAGGTGGCAGAGTTTATGGCCCCGATGGAAATTGCTCACTCAGGAAGCTTTCGGGCCCGAAGGACT
CAAGGTAGTCGATGGCGTCGTCGTCGACAAAAATGGCAGCCCTTGAAAAAAGCTGCTTTGATAACGAAGGAAACATCGT
CAAGAGGGCGTCGTCGTCGCGGAAATGGGAGACCGCTCGACAAATATTACACGATCATACGATAACTTCGTGAGA
AAGGCGCTCATTTTGGCACAATCTGGCAAAACCCATAACTCAAGCACCTTCGGCACGGATGGAAGTTTCGTTAAGAATG
GCAAGATCTACGAGAAAAATGGCAAACCTCTCGAATCAAGAGATCTTCGGCGACGACGACAGTTTCATCAAAGAGGGGTGTC
ATTTATGCCAAAAACCGGACAACCCGTGATCTCGACGAACTCACCGAACAATGTCTCGCCACGCCCAAAAATCTCGCTGG
CAAAACGAAAAAAGCGCTGTATGGCCACCGCACCGACCATCGTCAAACACCACCAACAACATCCGTCTGCAAGGATC
ACGAAGGACTTTGTACAAAATTATTGAAGAAAAAAGTTGAGGATCTCACGCCGGTGGCACTGGACAAATTGTGTTTCGAC
CCAAGTCAATAAAGGCCGAAGCACCGGGAAGACAGTAGAGCTCTTACATGACGGCGCATGCCG

[illegible]

GACCTTGACTGTCACTCAAGAAGCCAGTATACCGATTGCACITTCGGTAAAGATATTTTGGCTCGGGCCAAAAACGGTA
CCGGCAAAACTGGAGCGTATTGTATTCCGGTTCTCGAACAGATCGACCCACAAAAAGATGTGATT CAGGCATT AATAAC
AGTGCCGACGAGAGAGTTGGCTCTGCAGACATCCCAAATTTGTATCGAGCTCGCCAAACACATGGACGTCAAAGTAATGG
TTACGACCGGTGGAAC TAACTTGCGCGACGACATCATGAGGATTTATCAAAAAGTTCAAGTGATTATTGCGACACCTGGA
AGAATTTCTGATCTCATGGACAAGAATGTTGCGGACATGCATCACTGCAGAAATTTTGGGATTGGACGAGGCGGCACAAGT
TCTTTCCCAAGATTTCGAGGCGCATGTTGAATCACTGATTTCCAGTATACCGCAGGAACGTCAAATATTGCTGTACTCGG
CCACGTTTCCCTCTGACCCGTA AAAACATTTTATGGA AAAAGCACTTGAGAGACCCCTATGAGATTAACCTGATGGAGGAATTA
CTCTGAAAGGTGTTACTCAGTACTACGCTTTTCGTCCAGGAACGCCAGAAAGTTCCTGCCTCAACACACTATTTCC

TCTGACGTAGAAATAGTTATAGAGAAGCAATCTTCCATTTTCTTGA^{CC}CTTTCGCGGCCAACAGTGAGCACGTGTTTAGTT
GCCGGCCGCTTGGGTCTGTCTTGATTTTTTTCCGAATTGGTATAAAATCCTGTGAGCGATTAGCATCGCGTCAGTGTTCGA

mmc4.txt

TTAATTCATTTTTCAAGCGACTTTATATCGAAATGAATCCCGAAAAGTTGAAGAACTCCAGGCACAAGTGAGAATCGGTG
GCAAGGGTACACCCCGTCGTAAGAAGAAGGTCGTCACGCGACCGCCGCGACCGACGACAAGAACTGCAGAGTTGTCTG
AAAAAGTTGTCGGTCAACACGATTCCCGGCATCGAGGAAGTGAACATGATCAAAGATGACGGAACGGTCATTCACTTCAA
CAACCCAAAGGCCAAGCGAGTCTGTCCGCAAATACGTTTGCCATCACCGGACACGGCGAGAACAACAAATCACAGAAA
TGTTGCCAACATTCTCAGTCAGCTCGGCCCGAGGGATTGAACCAGCTCAAACAGCTCGCCAGAACCCTCGCCGGCAGC
ACAGTCGGCAAAGCCACTCTCGCGGAGGACGACGAAGTGCCCCGATCTCGTGGAGAAGTTTGACGAAGCGAGCAAGGAGGA
GGTTGCGCCAAAGAAGGAAACGGCGGAGGAAGCGAAGCCAGCGGCCGTAGAAATAAAGAAGTGATTCCGGTTCGTTGG
AATCAAAGAAAGATGCTCCATTGGCCAAGCCAGAAGCTTAGAGAGGCCGATAAGATAAACATGCTCAGCAAACAAAAACA
CACACAAACACAAATTTCCACACACACACACATAAAAAACACAGTGGTGATTGGCGGGCCATGGAGGCGCGAGTTGCAAAA
AAGCAGCTGCGAGCACAGAGCTGAAAGT

>CL672Contig1|t-complex protein 1 subunit beta-like

TTATTTTCGCAATTTGTCTAGCTATCCAAATAATCAAAAAACGAGGTGGTACCCTGGCCGATTCTTCTCTCGATGCTGGCTT
TCTGCTTGACAAAAAACCTGGTGTTTCATCAACCCCAAAAGATCACGGACGCTAAAATTTCTCATCGCTAACACGCCCATGG
ACACCGACAAAATCAAAGTTTTTGGTTCCCGCGTACGCGTCGATTCCATGGCCAAGATCGCTGAGCTCGAGACTGCTGAG
AAGGAAAAAATGAAGGACAAAGTTGACAAAATCATCAAGCATGGCTGCAACGTTTTTCATCAACCGACAATTGATTTACAA
CTACCCGGAACAATTGTTCTGCTGATGCTGGAGTAATGGCGATCGAGCATGCCGATTTGACGGTATCGAGCGATTGGCTC
TCGTACCCGGAGGTGAAATCGTCAGTACTTTTCGATCATCCCGAAATGGTGAAACTCGGCAAATGCGATTTGATCGAACAG
GTCATGATCGGAGAAGACACTCTGCTACGTTTTCGGGTGTGGCTCTCGGTGAAGCTTGACAGTCGTGATCCGTGGTGCG
ACGCAACAATTTCTCGACGAAGCGGAACGTTTCGCTTCATGACGCCCTTTGCGTGTTGACCGCAACGGTACGAGAATCTCG
TATTTTTCGTTGCTGGTTGGTTGACGCGAAATGATGATGGCTGTGCCGTCAACAAAGCCCGCGCTGTTCTGCCGGTAAAG
AAGCCGTTGCTATGCAAAGCTTCGCCCGAGCTCTTGAGCAGTTGCCAACGTAATTGCTGACAACGCCGGTTACGATTCC
GCGGATCTCATCAGCAAATTGAGAATCGGCCATAACGCCGGAGACTCCACTCTTGGCCTCGACATGAACAACGGAGAGCT
CAAGAGCATGGAGGAACTGGGAATAACAGAATCATGGGCGAGTGAAGAGACAAGTGCTTCTGAGTGCGGCTGAAGCAGCAG
AAATGATTTCTCCGTGTGGACGATATTCTGCGTGCGGCTCCGAGAAAGCGAGCGCCCGATCACGGACGTTGTTAATCGTCG
AGAATCGCAAAATTCATATTTTCCACCGTTATTTTACGTTTAAAAACCGTGCGTTTGTCTTTCGATTTTAAAGTTAT
TTTTTCTTCGTCGTTTTTCTACTTCTACGCGTTGTAACAATTCATTAATTTCTGTTACTAAAAACAAACAATACCGAC
ACGTTTCATAA

>CL6743Contig1|mitochondrial 2-oxoglutarate malate carrier protein

ACACAATTATTGCTTCCGCGGTGTTTCCGCCTTGATAATAAAATCCTCCACGATACGTTATTATTATCGCATTGTATTTT
CACGTCCGTCAAACCTTCGTAACATTAATAATGGCCAGCAGCCAAAAATCTCCACCCACCGTCCCAACGGCGTTAAATT
TTGATCGGTGGAACCTCCGGAATGGCAGCCACCTGCTTCGTCCAACCGTTGGACCTAATCAAAAACCGCATGCAGTTGAG
CGGCACCAAGACTTCGACGTTGAGCGTTATTTCTCGATATGCAAAAACGAAGGCGTCATGGCCATGTACTCCGGCCTCT
CGGCCGGTCTTATGAGACAAGCGACTTACACAACAACCAGACTGGGAATTTACACCTGGCTGTTGAGCTTGGCTCAGCA
AATGGCCAACCGAATTTCTGACCAAAGCCGCACTGGGAATGGCTGCTGGCTCTGTGCGAGCGTTTGTGGCACACCAGC
AGAAGTTGCACTCATAAGAATGACCGCTGATGGAAGATTGCCGCTCGCTGAGAGACGCATGTATAAGAATGTTTTCGATG
CACTATTTCCGTATAATAAAAGAGGAAGGATTATTTACTCTGTGGCGAGGGGCGATTCCACGATGGGACGAGCCATGGTG
GTCAATGCTGCACAATTAGCTTTCTTATTCGCAAGGCAAGCAAGCTCTACTGGACACAGGTTACTTGAAGAAAAACATTA
TGCTCCATTTTCGCAAGTTCAATGATTTCGGGATTAATCACGACTGCAGCTTCGATGCCTGTGGATATCGCAAAAACTAG
GATCCAAAAACATGAAGATGGTCGATGGTAACCCGAGTTCAAAGGAACGATTGACGTCTTAATCGAAAGTAGTAAGAAA
CGAGGGTATATTTGCTCTGTGGAAGGATTCTTCCCTTACTACGCTAGATTGGGGCCTCACACTGTCTGACGTTTATTT
CCTGAGCAAATGACCGCCGCCTATAAGCAACGTTACGCGTAAACTAGGACAATAGAAATAATCGAAAGAATACGCGTGC
CAGAACCGCAT

>CL6749Contig1|glutamate synthase

TTCTGCTCGGTTATGGTGCGGATGCAATTTGTCTTATCTCGTTTTTCGAGATGGCGAGGAATCTGAGAGAAGAAGGAGTC
TTGGATCAATCGTTCAATGACGAAATTATGTACAAGAATTACAGCGAAGCCATGGAACGTGGTATTGCAAAAGTTATGGC
AAAAAATGGGAATATCCACTCTTCAATCTTACAAAGGAGCACAAATCTTCGAGGCCGTTGGTCTCGCTGACGAGGTTGTC
GATAAATGTTTCAAGGGAACGCACTCCCGCATTGGTGGAGTGACTCTTGACATCCTTGGAAGGAGGCATTTGTACGTCA
TCAATTGACATACTACGACAAGCTCCCGATATGCTGGTGTGTAGGAACCCCTGGAAGTTTCCACTGGCGATCTGGCGGTG
AAAAACACATACGATCCCGTCAATGCTGCAATTTGAGGAATCGGTTGTCATGCAAAAATTTGCGGATACGAAAGT
TATCGGAAATCAACGATGGAGGCGGTTTCAAGATTGTACACTGCGTGGGCAATTGGAGCTGGTGAAATCGAAAGAATCGGT
GCCGTTAAACGAGGTGGAGGCGGCGGAAGAAATAGTGAAGCGTTTCGTAACAGGGGCGATGAGTTTGGTAGCATATCCC
TCGAGGCTCACACAACACTGGCGATTGCGATGAATCGTATAGAGGAAAATCCAAACACTGGAGAAGGTGGTGAAGACGCA
GACAGATATTTGAATCAAGATCCCGATTTCAACAAACGTTCCGCGATAAAGCAAGTGGCGAGTGGACGTTTTGGAGTAAC
TTCGAGTTATTTGGCGAACGCGGATGATCTTCAGATTAATAATGGCGCAGGGGGCGAAACCGGG

>CL676Contig1|unknown [Hyposoter didymator]

CGGCCGGGGATACGTATGACGACACCGGTGTGGTGGACCGTATGGTGACCGGGGGATATAGCTTGAGACTAAACAGCAAC
ATAATATCAATGATGGACACAGCGCTTACGCGGGAATAAGGCTGTTGCCCCCTACTAAGCTGTTGGTTCTCGAGCCAAA
GCAAGCTGCGGTGCTCGTTTACCTATTCCGCATTTACTACTCGAATAATACCGGCATTGACGATTGCGCTGTACGTAAC
TCATGGGAATGTTGGAAAAAATAGACGAGAGCATACATGGCTCGGTTTTCTGCAAGAGAATCAGACTTCAGACCGGTGAAA
AGCGCCTCGGAAAAAATATTCTAGCAACTCACCAGGACGCCAGTTTGGTTGTAAGAAAATACATAATGGGTCAATACTC
ATATATTTCTCTATGCTGAATCAATGTTTCTGCAATGATGACTTCTCAACAATACAGAGGCACTCACCTCGATATC
AAACAAAAGAGCTCGTGCTCAACTATCTCTCTCATTGATGGGACTACCTGCGAACGCCTGCGAAGAGCATGTATGGACT
ACGTACGTAAATGACGTGCGAGCCGTGACATCTCTACCAGCATGTTGGACAGTGGCGCAACGAACATGGAGTTCCTAAC
GTACATTGTGCTGCAGTCTCTTATGTTGGTCCAATCGGCCAGCAACGAAGGACAGAGTTACCACGAGCAATATATGAAAC
TGCGCGGAACGGTTGCGGAGCAATTACGCATGGGAAGGTAATCGAAAGAAAATCCATACGATCCGGGCGTGATAAGAAAA
GACGACGCGTCTGTTGAACATCGGTCCGGAGAAAATTAATGTCTCCAGGCTTTGAATAAAACAATAGAGAGTCAAGGACC
GCGAGGAGTTAGTTTTCTAAAGTATCAGTAGCATGACAGCAACCGCGCATTTGGTCGAAAAAACAATACATCA
ACGACATCATTATAAATCGTCTCCGACATTAGACATTGTGAAATTTGTTTCGTTGCTCCGCTTTTTTCATGGGCTCTGCAA

CGCGCGATTTAGTTTTTTTATGTCGTGAATTTTTCTCTTCGATTTTACGCATTTGCTTACTATGGCGTGCAGTTTCCACG
CTTTACACGTCATCATTTTCGGCGAATGACAACATGGACTTCAGCATCATCCTCGTCTGTGGAAGAAGCCTCGGAGTTGAG
ATCCACGAATCGTCGTTTCCGACGGGAGCGTTTGCAATCAGCGCTCTCTTGATGACGATCCGTCGGTTTCGGTTTCGCT
CGTCAACAGATCCATCGGACAGTTCCAGGAGCTTGGGCATCGGTTTCGACCGTTTTGAACTTCCACCGCATCCGTATCA
GTGTGCGACGGATTTTCACAATGTTTATAGCTTCGTTCAAGCAATGGAGCCCACTGAATAATCCGACGCTGGCCAAAAC
TATATTGTTGAACAAGTCGAGCGTTTCGTTGGGTTCTAGTTGCTCCGAAAACATGTTTCATCAAAAACGATATGGAATTTA
AGCTATTAGGTACCGTCGCGGATTTCCGCAATGATGATTGGATAGTATTCTCCATCGTTGTTGAGAAAAGATCTGAGCGC
AGAGCACAATTAGCGAGCAGGAAACGATGTTGAATTTAGCGATTGTTTATGTTTACTCTGCAATGCATTTCCCGCGG
>CL6782-bisContig1|mitochondrial import inner membrane translocase subunit
tim44-like

>CL6792Contig1|protein dj-1-like

>CL679Contig1|rna-binding protein squid-like isoform 1

>CL67Contig4|leucine rich

187agina p

mmc4.txt

CTTTCCAACAATTTAAAGAAGAACTAGACGTTTTAAACAAATTCCTCAGTCGAGCAGAATTGAAGCAATTGGGAGTGAAA
AATTCCTGGACAATCTTGAAGCGAAATTGGAGACATCGACGGACT

>CL6805Contig1|ornithine aminotransferase precursor

ATTTGGTCTTTTCATGCCGGGTTTTGAAGTCATCCCTTACAACGATCTTGAAGCCCTGAAGCGGTCAATTAGCTGATCCGA
ATGTTTGCCTTTTATGGTTGAACCGATACAAGGTGAAGCCGGTGTGTAGTCCCAACGGATGGTTATTGAAAGGCGTGA
GGGATTTGTGTACGAAGAACAACGTAAGTGTGGATAGCCGATGAAGTACAAACCGTTTTAGCGAGAACAGGGAAACGTTTG
GCGGTTGATTACGAAAAATGTAAAGCCGGACATTTCTATATTGGGAAAAGCATTGTCCGGTGGTTTTATCCAGTATCTGG
AATCCTATCCAACGATGAAATAATGCTGAGCATAAAGCCAGGCGAGCATGGTTCACGTACGGTGGAAATCCTCTCGGTT
GTCGGATCGCTCTGGAGGCTCTGCGTGTACTCGAGGAGGAGAACTGGCCGAAAATGCCGCAAAAATGGGAGAATTGTTG
CGCGGGGAATTAATAAATTTGCCCAAGGACGTGGTAAGTCTGGTACGTGGTAAAGGACTTTTGAACGCCGTGTAATAAA
CGAGAAATTCGACGCAATGAAAATTTGCCTCGAGCTAAGGGACAAGGGATTATTGGCGAAAACCAACCCACGGACACATC
ATAAGACTCGCCCCACCTTTGGTCAATCAACGAATCCCAGATTCTCGAATGCGCTCAAATTATTTCTAATGTTATTCTCGA
TCATGCCAAATGTAGTTTTTTTTTTTTTTCTTTTCTTGTTATGCATATCTTCGGTGAAAAATCTGGCTAATTGAGATTTT
AGCATTCCGAGCCAGGCC

>CL6813Contig1|probable adenylate kinase isoenzyme

AAATGATTGCCAAGTACGGACTCCTTCATCTGAGTAGTGGTGATCTCCTTCGTGAAGAAGTTGCCAGTGGTAGTGACGCT
GGTGCTTCGCTACAAGAACTCATGTCCAAGGGCCTCTTCGTTCCAAGTACGCTAGTGCTCAACCTCATCAAGGAGAAAAT
GGCTGCTGCACGTGCTGATGGTACCGCGAAAGTTTTCTCATAGACGGTTATCCACGTGAGCTGGATCAGGGTCTCCAGT
TCGAGAAAGACGTTTACCCGGTGGATTTGATAATATTCTTCGACGTGGCAAACGAGACCCTGAAGAAGAGATTGCTCGGA
AGAGCAGCAGTTCACAGCAGCTGACGACAATGAGGAGACGATAAAGAAGAGGATCGAAATTTTCAATGTGAAAAATGG
GGAAATCGTCGAGCATTACAAAGCCAAAGTCGTGAGGATCAATGCCGAAGGCTCGGTGACGATATATTGCCGAAGTGA
GCAAAGCTCTGGATCCTTTGATGGCCTCGTAGATGAGAAAAAACATAGTCTCTTGACATTATGTAATTGATGTTCTCC
GGCCTCGACCAAACATTCTTCGGAATCAACGCACTGCAGATGTAAGTGAAGAAACAAGAAGATTGCCACTATTAACACGTC
CAGATCCGACGCACGTATCCGTTGAAAAAACACGCAAAACGTTGTCCGCTACGGTCTGTTACGTCTGTACATATAAAGA
GAGATTTTTTGGAGCAAGATTCAAAGTGGCGCAGCACTTGGCACACACACAAACAATTATCTTGTTGAACGAACAATTT
GTTGAATAAACTATATTTTT

>CL6818Contig1|malate dehydrogenase-like

GGAGGAAGAGAGTGCGTTATGAGTGGCAAGATGTTAAAAAGCCGGTTGATGCTTGAAAAATGTTTCAGTGGAATTTGCAA
CGCCATTGCGTCCATCCGACGTGGCGTACTTCAGGCTAAACATTTCGAGAATAAACTTGAGTGGCACGAGTGTCGCTTGTA
AGCAAGATTCTCAATCCTCAAGGACATTTCTCACCGCCTCAAGGGCAATGACGTGTCGGAAGCTCGAAGCCGGCACGTG
AGCCAGGTCGACGACCTCGTCTCCCTAAGGACGAGGTACAAAGGTTTCATCGTACTGATGAGACGCGTCGGCACGAA
ACAAGAGGACGCCATTACCGTGGCTCATCTTTAATGACTGCCGATTACCGGGGTCAATTCAGCCACGGTATGAATCGTA
TGCAGATGTACGTCCACGACATCAAAACCAGGATCACCGATCCTACCGCCGTGCCGAAATCGTCACTGATTTTCAGGCT
ATAGCTCTGGTGGATGGTAAGAATGCTCTAGGCCAAGTGGTTGGAAGTTCTGTATGGAATGGCGA

>CL6830Contig1|c-1-tetrahydrofolate cytoplasmic

ATAATGGCGATTCTTGCACTTGCGACTGACGTGCGGACATGAAAAGACGATTGGGCGAGATTGTCGTTGCATTACGAA
GAGTGGAGAGCCCCTGACTGCCGAAGATTTCGGCATGACCGGGGCAATGGCCGTTTTATTGAAAGACGCGATCGAGCCGA
ATCTCATGCAAGTATCGAAGTACTCCAGTCTGTTTCATACAGGGCCATTTCGCAACATTGCGCACGGTTGTTGCTCG
ATAATTGCGGACGCGATAGCCCTGAAGCTGGTCCGGCCTGAAGGGATCGTTGTCACCGAAGCAGGATTCCGGTCCGACAT
CGGAATGAAAAAGTTCTTCAATATCAAGTCCCGACTTCCGGTACGTGCCTAACGCAATCGTCTTTGTTGCGACGGTCA
GAGCACTCAAGATGCACGGTGGTGGACCAACCGTGAATCCCGGTGCGCCCTTGAAGAAAGAGTACACCGAGGAGCATCTC
GACCTCGTGGAAAAAGTCTGCCAAACCTTCTCAAGCATATCAGCAACGGCAACAATTTGGGGTCCCCGTTGTCTGTCGC
AATCAACAAACACACAACTGATACTCCAGCGGAATTGGAATTAGTTAAAGTGGCAGCTTTGAAAGGAGGTGCAACGAGCG
CGTTG

>CL6861Contig1

AATTTGCAGCGAGAGTCGCGAAAGCGGCGAGCGAAGATTCCGACACGAGTTTCACGTGCTCGACGTTATCGGCGATATCG
ACGTGCGTTTTGACTTTCGTCACCGCCAGCGACGACCCCGGCGGCGGTAGCGGCGAGTTGCTGCTCCGAGCGT
GACGAACGTTGTAGCCGAGAAATTTAGCCTCATCGACGCAAACTACTCAGGTACAAGCGAGTGCAGCGGCGAAGATGGCGC
CGAGCAAAGAGGCTACGGGCCAGAGCAACAGCGGAACATCGTCACTCGGCGACGACGCTCAAAATGCTCACTCG
ACAGCTCCGTTGACGACGCAAGTTCCGGAGGCTTGCCTTTCCAGAAAACCGATTGCAAACTTTGCAATTGCTGCTCA
AGAATTTTGGCCACGCGGCGAGACAAAACCGCCGAGCGTGGCACAGCAACCGGCAGGTGCGGTTGTGTTGACGAACAGA
AGTCAATGTCTCGGCAACACCGAGTCCAATCGTTCTCGCAAAACAAAGACGCTGTCTCGGTCTCCTCGAAAATCGATTCT
GTTCTTCTGACGCTCCGAGCCTCGTACAATCGAGCATGGAATCAAAGAGCCTACGAAAAACGCTCCTAAATCTGCCAC
CGTCGCTCTATCGTTTGAACACATCGATTCCCTCGAACATCATCCCGAACACCGGCCCTAACGTTACCGAAGTTCTT
CACACCCGTTGAACACTGCCAATCAAGTTTCACTTGTCTCCGCAACCTCGAATATCCATCGGCTGCTCCTTCTGCTACC
GGCGTTGCTCCAGCAACTCCCAACGCTGCTCCAACCGCGCAAGGAGCCTCCAGCTTTCTGGACCCATACCGAGTCGCC
GCCGCTCTCCCTTCTNCTGCTCCTTCACTTCTCATCTTTTCCACTCTCGTAGT

>CL6864Contig1|lambda-crystallin homolog

ATTCCGATGAAAACGAAGGAAATATGACGGAGATTGGCCAGGCGCGGTAGTTTTGTCTCGTGAAATCGATGGTTTTGC
GTTGAACAGGATTAGTATGCGATACTGAATGAACTTGGCGTCTCGTGCCTGACGGAATCCTCGATGCAAGATGTGG
ATCTAGTTATGAGCGAGGCTTGGTATGCGTTATGCAATTTTTGGGTGATTGAGGCGGCTCACCTCAACGCCGAAGG
GATGAAGAAATACTGCGAATCATATTCGAAGAGCATATAACAAGTGAAGTCAAGTCTTTCGACCAACGCCGAAATTCGAAG
GTCCAATGGCAGAAGAGATTAGCAATCAGCTCAACGCGATTTGTCCATTGGATAAGCTGCAAGAGAGACGAGCCTGGCGA
GATACAGCATTGACGAAATTTGCTGTTGCTCAAGAAGGAACTCAACGAATCTACGAAATGAAGTCGATCGGCTGAACGTAA
AATAAGCAAAATTTGATTTATTTCTTCTAACTTGAAAAATGTGTTCAATTATTAGGAGNTACGAAATTATAATCAGGTGT
CCGCTCATGCAATTGGAATGACTGAATAAATTATCGTANAT

>CL69-bisContig4|protein extra bases-like

GCTGACAATCGACCCATCAAGGACATTGTACTCGATCTTAAGGAGATGGCACTCAGATGTGGCATACCCGAGCATGAAGT

mmc4.txt

TATCGGACTGATCTGGTGGTGGTATGGGTCAAGCCGAATGGAACAAGAAGGAAGAGTTGGTGGCCGAGCAAGCGCTGA
AACATTTAAAAATCTACACGCCGTTATTTCGGTGCATTCACATCCACTGCCAGATCTGAGCTCGCTCTAATCCTCAAAGTT
CAAGAGTTTTGTTACGAGAATATGAACTTTATGAAAGTCTTCAGAAAGATCGTTTTGTTATTCTACAAAAAGGACGTAGT
TTCCGAGGAAGTGATTCTGAAGTGGTACAAGGAGGGCCACTCGCTCAAGGGAAAAATGTTGTTTTGGACCAATGAAGA
AATTCATCGAGTGGCTACAGAACGCCGAGGAAGAATCCGAATCGGGGGAAGACGAAGATTAATAAAAAATATACGAAAGAAA
AAAAAAAAAAATTAATTTTTTTTTTTTTTACTTTTTTTTTTACTTTAAAGTTAAAGTTTTTACTTAAGTAATTACTACTTACA
GGTACAACGACGAAC

>CL6910Contig1|hypoxia up-regulated protein 1-like isoform 2

GTGACAAGATCAACGCATTGAACAAATTTGATCAGGAGAAAACGCGTCGCGAAACCGCACTGAACAATTTAGAGGCATTC
GTGATTGACGCGAAGCAGAAAATCGATTTCGGAGGAATACCAAGCGGCGTCGACGCCGAGGAAGTGGAGAAAATAGCCGC
AGCATGCGACAAGGTTTCAGGATTGGCTTTACGAGGACGGTTTCAACGCCGAGGCTGAGGTTTACGAGAAAGAATTGAAA
CGATTAATAATCCTTGACCGACGATCTTTACGACAGAGTTTTCGAGCATCGTGAACGACCGGACGCTCTCAAAGGAATGGC
TACGATGGTCAACGGGAGCATCATTTTTCTTGGCGAATAGAGAAATCTTACCGACGCCGAGGAATATTCACGGTCTGCG
AGATGGAGACTTTGGAGCGTGTCTCAACGAGACTAAGGACTACTACAACGAGATAAATAGTTACATGAAAGTATCAGCA
CTTTTCGAACCGGTTAAGTACCGAGTCCGGGATATTGCGAATAAAATGGCACTTCTAGATCGAGAAGTCAAGTATTTGGN
GAACAAGCAAAGATCTGGAANCCGAAACTGGAGAAACCAGCGACGAATACGTCCAAGACATCGGAAGCAGTGGACCGG

>CL6958Contig1

CTATTTTAAATGGCTGTCATAAACTCGGTGAAACTTTAAATCTCCAATATACGGGAGCAGAGGATAACAAAACTTGCGG
CGATGAATTCACCCCGTTTACGGAACGTTCACTTACGTTGGTGAGGAACCTGAGAAATCAGTGGTACGTAATGGAGGC
ATTATTTTTCGGAGGCATTGTCAAACGTACTTCGACATTCGTAATCCTCAAGCGCTTCTTCTGCGCGAATGATGGAG
AAGAAAGCGAATCATCCACTACCGCGACATGCGCCTCGAAAGACGATACTGCACAGTTCGACCAGGAGCGGCAAGAAAGA
TTGGATCGTCACAATCGGTCCGAAAAAACATCGTGTGGATTCTCGGACAGAACCTCTTTTGGACGCGATTGAAGAAAA
ATTGAACGGCGTCACTCCCACTGGAGGCTCAGACGATAAGCCAGTCTCTCCCTACATGCTATACATGAATGCTTGTAATG
TTTTCGTGGCAACTCTCCACGGACTTGAAGGAGGAAGGCTACAGGCTTCTTCGAGATATTGTTTTGGAATTAATTC
ATGGATGATAACAAGCCAGCAGCTTTCGAAGGTTACGAAATGGCAACGATTATGGTATCCTGGATGGCCAATTGCTTGAA
TGATATTGGCAGTAATTACACGGCTGAGACAATTCGATTGCTGCCATGAAAGTTTGCCGAAGGTATAGATCTTCACTAT
TCGGGATTGGGCAGTGAATAAATGTAATGAACAATTCACGCCACGATGGAACGTTTACCTACGTTGGTCAGGCACCA
GAAAAATCCCTCGTTAGACGATGGAGACACATTTTTAACAGTATGGCTAAATTTGACTTCAG

>CL6966Contig1|26s proteasome non-atpase regulatory subunit 7-like

CGGCCGGGGGACGAGCAGTAGCGTTGCGTCGAGACACAAATAAAATTTGTTCAAAAATGCCGAGTCAAGAAGTAATCACGA
CGAAAGTTGTGGTGCATCCTCTGGTGTACTGAGTGTGTCGATCATTTTTAATCGCATGGGAAAGATTGGCTTCAAAAA
CGTGTGGTGGTGTGTTTTGTTGGGCTGCTGGCGCGGAAAAGGAGTTCTCGATGTGTCAAACAGTTTTGCAAGTCCCCTCGA
CGAGGATGACAACGACAAATCCGTGTGGTTCTCGACCAGATTACCTCGAAAATATGTATGGAATGTTCAAAAAAGTCA
ATGCCCGTGAAAAAGTCGTGGCTGGTACCACACCGGCCCAAAATTACAACAGAACGACGTAGCGATCAACGAATTGATC
CGGAGATATTGTCCGAATCTGTTCTCGTTATAATCGACGCGGTGCCCAAGATTGTTGGTCTCCCGACGAAAGCCTATCA
AGCCATAGAGGAAGTTCACGACGACGGCTCGCCGACCTCCAAAACGTTTGAACACATTCCGAGTGAAATCGGAGCGGAAG
AGGCGGAGGAAGTAGGAGTGGAGCATTGCTGAGAGACATAAAAGACACGACGGTAGGAACGCTGAGTCAACGGGTGACG
AACCAAGTTGCTGGGTCTCAAAGGTCTTCACTCCGATCCGAGAAATAAAGAATTACCTTCTGAGGTCCGCGAGTGGGA
GTTGCCGATAAATCATCAGATCGTTTACCAGCTGCAAGACATTTTCAATCTTTTGGCCGACATGGGTCAAAACACGTTG
TCGATTCTTTGTACGTTAAGACGAACGACCAAATGTTGGTCTGTTATCTCGCGGCGTTGGTCAGGTCGATCATAGCCCTC
ACAACTTGATAAACACAAGCTGACGAATCGCGACGCGGAGAAAAAGG

>CL6969Contig1|hypothetical protein SINV_08321 [solenopsis invicta]

GACCTTGGCCGTCACCTCAATTTGGCGTGTGTTGGCTTGGCTGAACGTCGTTGGCTAAAATCGGGAAATCCGTGGAGGACAT
CCTGAAAGGATCATTGGCAAAAATTCGGTTCGAATTTTTTCACTCGTTACGATTACGAGAATTGCGATTCTGACAAATCCA
ACGAAATGATGAAACAACTCGAAACCGCCATCACCGATCCGTCTTCTGTTGGTAAAAAGCTCGGCGAGTACGAGGTGAG
AAAGCAGACAATTATTCGTACAAGGATCCCATTGATGGGAGCGTCGCGACGAAGCAGGGTCTCCGAATACTGATGAAGGG
AGGCTCAAGAGTTATTTTCCGTTTGTCCGGGACCGGAAGTTCCGGAGCAACAATTCGTCTGTACGTCGAGCGCAACGAAA
CAAATGCAGAGAATTTTGAGAAGGATGCACAATTGGTTCTGAAGCCCCTGGTAGAAATAGCTCTGGAGCTTTCTTCCCTC
AAGAAATTCACAGGCGTCAAGCCGACCAACCGTATTACGTAAGCTGTTTGGTGAACAGCAGATAACTTTTTTCTCAGT
TCTTATTTTTCATGTTTACGTAACGACCAATTATCTTTAACTGTTTGGTTCGAGCAGATGTTTAGTCAGGATCGAGTCTA
GATTTTGTAAACAACGAATAATATCTCGAACGGGTATTCGTATGCGTATTTATATTTAGTATTATAGATAGCATAGTGA
TCGATAGTTAAATATTTTCAATTTGAAACGGAGCGATCGTCTCGAATGTTTAAAGTTACGAACAACGATTACGTCGAGCT
GAAAAATCGACGATTTTTCTCAATTTCCAAATCTTCGCCAT

>CL6971Contig1|ran gtpase-activating protein 1

GTTGCTGAATTTCTCAAAGCGCCGACCGGCGAAAATTTACTTCTCATACAAGGCGACAGGATCAAGGCTTTTTTCGGGATC
ATGCCAAGAACTCTTCCGAGAACGNTAATTCGCAACAAAACCCAAAGTATACCGAAGAATTGTCTCGCATCGTTATGAAA
GTTTCAGCTCTATGCGGAAGTGGTTACGGGGACGTTAGAGTAGAAGCTGAAAAATTAACCAATCTCTTGTACGCCGATCT
GTTTGCATACGCCACAAGTACCAACCAAACCTCAAACATCGACAACACATTGCTCATCAATCTCGGTCTCTTGAAGAGCG
AGGACAAGAGCGCCAACAAAATAGACTGGAATTTGGATGGCTGTTTCAAGGCTCTGGAGCAAGTTGCTCAGCAAGATTAT
TTCCCCGAAAGACCAAGGACGCTTTGAGAGTATTTTCGAGCGACCAATCAAGCCAGGCAAAACCAACCAATTCGTAGA
TCCACATCTGGAGGCGAAAACCTTCGCTCAAAGCGTTTCTCGATCGATTGCAAAAACGTAACATCAATCAATCATTTTCTG
TACATCATTTTTTGGCCATAAACATCGGCTGATTCCATTCCAAATATATGTATATTATTAACATATATATATTATTTATGA
TCGAGGGTTCCAATTTACGATACTTGGACGCATCGCATCATCTTCCGCTAGAGCG

>CL699Contig1|ribosomal protein s15

TATTGCGAACGCACCGTTATTCGGGAATCAACTTTTCAAAGGCTGTTTGCCATTCTTGATTGTTTTTTTTTTCATGACTGT
CGCCACCTTCCGTGTTTGACTTCTTTTACCGTGTTCACCGAAACAAGCGCAACATGGCCGAGGTTGACGAAACTCTCAA
GAAGAAGGAGCCTTCAGGAAGTTACCTTCCGCGGTGTCGACTTGGACCAACTCTTGACATGTCCCATGAACAACCTCA
TGGAAGTATGCACGCCGCGCGCAGGCGTTTCTCTACGGGCTCAAGCGCAAGCCAATGGCTCTTGTAAGAAATTG

mmc4.txt

CGAAAGCCAAAAAGGAAGCGCCACCAAATGAGAAGCCAGAGATTGTAAAACTCATCTTCGCAACATGATCATCGTTCC
GGAAATGGTTGGCTCAATCGTCGGCGTTTACAACGGCAAGACTTTCAATCAAGTGGAAATCAAACCCGAAATGATCGGCC
ATTACCTCGGCGAATTTTCCGTCACCTACAAACCCGTAAAAACACGGTAGGCCAGGTATCGGTGCCACTCACTCTTCGCGT
TTTATTCCTCTCAAGTAAATTGTATATCTCGCCGAATAAAATGGTTTAAAAAACAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAACATGTCGGCCC

>CL6Contig1|maguk p55 subfamily member 6-like

ATCGGACACTGCCAACCGAGACCAAAGAAAACATCGCGATCACAATGCCTAGCGACGAGAGACAAGAAGCTGTGAGAAT
GGTCGGACTCAGGAGACAACCCGACGAACCACTCGGACTTACCGTTCAAGTTGACGATTTCCGGCAATCTCATAATCGCC
CGGATCCTCGGCGGAGTACAGCAGCTCGTCAGGGTCTTCTCAGATCCGGTGAGGTCATTATGGAAGTTAATGGAAAAGC
TGTTACACACCTGACGAGCTTCAGCAAGCCATACAAGATGCCAAGGAAAATCTATCGCTCAGAGTAGCTCCTGGTATAT
CGAGTGACAGCACGAGACAACCAAAATCAACGTGTTACATGCGAGCGATATTCGATTACGATCCCTCGGAAGATACTCTG
CTGCCGTGTGAGAGATTGGGCTTCCCTTCCAAAAGGGCGACGTGTTGCAGATCGTAGATCAGGCCGATCCAAATTGGTG
GCAAGCGGAAGGGTCGAGGGCGATGGACTCGGTCAACCGGTCTCATCCCGTCTCTCGAGCTGGAAGAACGTAGAAAAG
CATTTGTCCCGGAGGCGAGATTTCTGTTACAAAAATAGCATATCGGGCAGAGAATCTGAAAAAGAGAAAACGAAAG
ATGTACGAGTCAAAATCAAACGGGGAATTTGACAGCGCTGAACCTTTTATTGTACGAGGAAGTTGCCAGGATGCCACCTT
CCGACGCAAAACCTGGCTCTGGTTGGGCCACGNGGAGTTGGAAGGAGAACTCTGAAAAATCGTCTCATCAATAGCGATC
CAGAAAAATTTGAACTATCGTACCGTTTACTTCTCGGCCACCGAGAGTTCTCGAGGAAGATGGCAAAAGTTATTGGTTC
ACTGATCGAGATTCGATGGAAAGCGACATCAGGGAGCATCGGTATCTCGAGCACGGTGAACACGGTGGCCATTCGGCCGG
GACGAGACTCGATTCCGTGAGAGAACTCATCAGGGCTGGAAAAATGTGTGTCTGGATTGTAGTCCAGCAGCTTTGAAAA
CTCTTACAAATAGTACCGAATTTATGCCTTACGTTATTTTATCTAGCTGCCCTGGAATGGAACAATTTGAAACTCTGTAT
GATCTCGGAAGAACCACCGGAGCGAGCAGTCGAAATTTGACGTTGACCGTCAGAGTTCCATCAGGTACAGTTTCGAGAAG
AGCGAGGACCTCGAGTCCCTGGCATCGTTGTACGAGGAGGACGACCTGAAATCAACGCTCGAAGAATCCGCAGCGCTGC
AGCGAGCGTACGAAAAATACATCGACTTGGTAATCGTCAACGAAGATTTTGACAATACATTTAGGCAAGTGGTGGGCGCA
CTGGATGCACTCGCGATCGAGCATCAGTGGGTACCGGTCAATTGGATATACTGATCAGTATCAATCACCGGATCGAAAA
AAAAAAAAAAAAAAAAAAAAAAAAACATGTCGGCCGATATTGTCGTCGATTTTTTCAATACCGTGTGAGCGAATCAATG
CAATTGATTCATGTCATTACTTTTTTATTCTTTTTTCAATCCATTTTTCTGCTACTGCCGAAATATTTGAGAAGGAAAA
CCCAAAGAGAATTGGGCCCGAAGAATGGATTTTGAAAAATGAACGAAAAAGTACAAGGCTCGACGAGGAAGCACTTGA
GTTTATCGGAGAATTG

>CL7009Contig1|cytoplasmic aconitate hydratase

CGGCCGGGGCAAATATTCGACTTGTCAACAAATTCATTGGGAAACCCGGACCCCGAACTCTGCACATTCGAAGCAAAGAG
GAGATAGACGTTTTTCGACGCTGCTGAAAAATACAAGGCGGAAGGCACACAATTAATAGCTCTAGTAGGGAAGGATTACGG
GGCAGGCTCTTCGAGGGACTGGGACGCAAGGGACCTTCATACTAGGTATACGAGCGGTATAGCCGAGTCGTACGAAA
GGATTCACAGTTCGAACCTCGTTGGTATGGGGATAGTTCCGCTGCAATACATGCCTGGCGAGAATGCCGAGAGCCTCGGA
CTCACCGGTTACGAAAAGTTCAACATAAACATACCCGAGAATTGTCAGCCGCTTGAAAAATCTCAGTAACAACGGACGA
CGTAAAAAATTCGAAGTATTGTTCTGTTTCGACACCGAAGTCGATTTAACTTACTTCAGACACGGCGGTATCTTGAAT
ACATGATACGAACGATGATCTGAGTTTAGTGTGGTCAAAAGTGACGGAAGACTCTTGTA AAAAAGTCCGCTGCAGATGTGT
AAGCATTTAAGGCATTTCTTCCGAAGCGGAAAAACAAAAAGGATTTTAAGTAACGGGACAAAAAGGTTTTCAAAGTTTA
ATCCTCCAATGCGAAAAATTTGTGAACAAAATATTAGAGCTTTATTATAGGTGAATATGTTATTTTTGTTTTATGGCATAA
AATGGGTCTTGACAGATGGTTGTGTCATCTTGACTTTATGTAAAGAACTTAAAAAGTGC GTTTTCAGCCATACGCATTT
TTTATCAAAATATATATATATATATACAATAAAAA

>CL7057Contig1|estradiol 17-beta-dehydrogenase 12

AAGGATACTCCAATTGAATGTAGCGGCCGTTACGGGCGTAGCAGTGCTGTATTGCCCGCATGATGGAACGCCGAAAAG
GAATAGTCGTCAATATAAGCTCAACGGCAGGTGCGATGCCAGTCCCTATCTCTCGTTTTATGCAGCAAGCAAAGCCTAC
ATCGACAAATTGAGCGCTGATCTTGCGGCCGAGGCTGCACCACGTGGAGTCACCATCCAGTGTGTA CTCTCCGGACCACT
CGCAACCAAAATGTCGAAAATCAAAAAAGCAACGTGGATGGCACCGACAGCCGATAAGTTCGTAGAGGCTTCGTTGAAGA
CGATCGGAATTGAATCGAGAACGACGGGCTATCCGCCGCACTCGTTGATTCTTGGCTTCATAAATGCATTGCGTTGCGTG
TGTGAAAAAGGCGCAATTTGGCTGGTGGTAAGAACAAATGTTGAATATTCGGGGTCTGTCAGTCCGAAAGAAAGACTTGGG
TGACGAGGGCAAGAAATTTGAAAGTTCGAGGAGACGCAATTGGCAGCTAGTAATTGATTGGAAGATCTCAGTCTCCTGTTGA
AATTACATTTGAACTCAATTTTTTTGTTATTTACTATTTCGAAAGAAAGAAAGAAAAAATAATTGAAAGAGA
GAAAAATAATATAAGCAAGTAGTTTTAAC

>CL705Contig1|spectrin alpha

TACTTATCAACAATTTTTGGCCAAGGTCAAGAGGAGGAAGCTTGGATCACGGAGAAACAACAATTTCTCTCCGTCGAGG
ATTACGGCGACACGATGGCCGCGGTGCAGGGATTACTGAAGAAACACGACGCTTTCGAGACCGATTTTCGACGCGCACGGT
GAACGTTGCGTTGACATTTGCGACGCTGGCGAAAACTCATATAAGCGGGTAATCATCGTGCCGATGCGATAGGCCAACG
TTGCATCAGTTGCGCAACAAGCTCGAGCAGCTCGGGGCTTTAGCCGCAAGAAGGGAAAACTCGTCTCAACGACAACCTCG
GCTTATCTCCAATTCATGTGGAAGCCGATGTCGTCGAGTCATGGATCGCTGACAAAGAGACTCACGTTCTGTTCCGAGGA
GTTTGGCCGAGATTTGTCGACCGTCCAGACTCTCTTGACGAAGCAGGAAACCTTCGACGCGGTCTCCACGCGTTTGAGC
ACGAGGGAATTCAAAAACATTACCTCGCTCAAGGAAATGCTCGTTGATTCCGGACACGACCAAACTGCGAGCATCCAGAA
ACGACACGCTGACGTCATAACGCGCTGGCAAAAGTTGCTCGCCGATTCCGACTCGAGGAAACAACGATTGTTGCGCATGC
AAGATCAGTTCCGTGATCGAAGAATTGATTTGACCTTTGCTAAAAAAGCTTCCGCTTCAACTCTGTTGTTGAGAAC
GCCGAAGAAGATCTCACCGATCCCGTCCGTTGCAACAGCATCGAAGAGATTGAGCATTCGCGCAAGCCCAACGACAATT
CCAAGCTAGCTTGTCTCCGCCGAAGCCGATTTCCAAGCACTCGCTGCACTCGATCGTCAAATAAAAAGCTTCAACGTTG
GACCCAATCCTTACACCTGGTTACCATTGGAAGCTCTCGAAGACACGTGGCGCAACTTGCAGAAAATCATCAAAGAACGT
GATGTGCAACTCGCCAAGGAGGCCCAACGACAAGAAGAAAACGATAAACTCAAGAAAAGAATTGCCAAACACGCCAATG
CTTTCCACCAATGGCTCGCAGAAACAAGAACGTCCATGATGGAAGGTTCCGGCTCCCTGGAACAACAATTGGAAGCAACG
AAACGTAAGACCAAGAAGATTGAGCACGACGTGAGGATTTGAAAAAATGAAGATCTCGGAGCCATCTCGAGGAACA
CTTGATCTGGCAACTGTTATACCGAATAGTACCGTTGCTCGCCCAACAGTGGGATCAATTGGATCAACTCGGTA
TGCGAATGCAGCACAATTTGGAGCAACAGATACAAGCGAGAAATCAATCTGGTGTTCGAGGACGCTCTCAAGGAATTC

mmc4.txt

TCCATGATGTTCAAGCACTTTGACAAGGACAAGAGCGGCCGTTTGAATCACCAAGAATTCAAATCTTGCTTCGAGCTCT
TGGCTACGACTTGCCGATGGTCGAGGAAGGACAACCTGATCCGGAATTCGAAAACATTCTCGATATCGTCGATCGAAATC
GCCATGGTTATGTTTCGTTGCAAGAGTACATGGCTTTTCATGATAAGCAAGGAGACCGAAAACGTGCAAAGCTCCGAGGAA
ATCGAAAACGCTTCCGAGCGATTACAGCTGCCGATCGACCCTACGTAACGAAAGAGGAACCTACGACGAACCTTACAAAG
GAGAT

>CL7066Contig1|delta()-delta()-dienoyl- mitochondrial-like

ATTGCGAGAAAAGCTAAAAATCATGAAAAAACAATTCAGAGATATCAAAATACTTTACCGCTTTGGAAAAGTGCGACAA
GCCAATTATCGCTGCGGTTACAGTGCCTGTGTGGGAGCAGGAATCGACATGATTTCTGCGGCCGATATGCGTTATTGTA
CCAAGGACGCTTGGTTCCAAATAAAAGAGGTGGATTTGGGTATGGCAGCGGACGTTGGAACCTTTACAGAGATTCCCAAAA
GTAGTAGGATCCGATAGCCTTGCCAGAGAACTTGCCCTATACCGCGCGTAAGTTCCATGCCAGGAAGCTTTGACGTGCGG
TTTTGTGAGTCGCGTCTTTGACACCAAGGAGCAACTTTTGTGCGAATCGATAGCGATCGCGGAAGAAATATCAAAAGAAG
AGTCCGGTGGCGATACAGGATACGAAAAGTGAGCATGGTGTACTCTCGAGATCATACCGTTCAAGAAGGACTCGATGACAT
AGCACAACGGAATGCGGCGATGTTACTGAGCGAAGACTTTATAAACGCGGCGATGGCAGCCGCAACAAAGGGGGATCCTC
CTGTTTTTTGCCAAGTTATAAACTTGATGGACACTGCCCATCGAATTTTGTACATTTTTTCAATGGAATCTGTAGCGAG
AT

>CL710-bisContig2|PREDICTED: hypothetical protein LOC725148 [Apis mellifera]

GTTTAAAAAAGCCCCGACAAGCTCTCGAGCGTTGAAAAGAGCCAGAGCGAGCTGAATCGTTGAGCAAAAAAAAAAACA
AAAAACGAAAAAATATAAAAAACAACATGTCGAGACCGATATTCAGCAGACCAAGGACCCGCGTCTACGGATGCAATTAC
GACAAGGGAGAGTCTTATTACAAGCCGATGGTCGATCATCTCGATCGAAAGTCAGCTCGCGTCCCTGTTGAGCGAGCCAA
GAAGTCGTTTCGCGGACGAGATAGCAGCGAGACGTAGCGACATCGGTAACATCCTCAGTCGTTTACAAAGTGTTTTGA
GATGAATTGTTAAAAAGCCTATGCGTTTATACCAAAATATGAAAAAGTGACAAATCAGTCGCAAAAAATATTTTCGGTAAA
TCCGTATAGAAAAATGTCTCTGTGTTTGAATGTTCAATGTTTTTCTTCTCTCCAAAATTTCCAAAAACCATAAAAAA
GAAAAGTTGCTACGAAAAAATCTCGAATAAAAAAATAGCAACGAAAAATTACATTTTCCGATCGCGTGTT
GTTCCGATTTGCTCAGTATCGAAAAATATGTCAAAGTCGAAAA

>CL7129-bisContig1|clathrin coat assembly protein ap17

GACCTTGTCTGTCACTCAACACACAGACACGGTGTCTGTCGTGTCAAAACGGTTGTCAACCTCTCGGGCCAATCTAATCAA
TAAACAATGATACGATTTATTCTCATACAAAATCGAGCCGGAAGACGAGGTTGGCGAAATGGTACATGAATTTGACGA
CGACGAGAAACAGAAATTAATCGAAGAAGTGCACGCTGTGGTCACCGTCAGAGATGCCAAACACACGAACCTTCGTTGAGT
TTCGGAACCTTCAAAATCGTCTATCGACGATACGCCGGCCTCTACTTCTGCATCTGCGTGGATGTAACGACAACAACCTA
TGTTATCTAGAGGCAGTTCACAACTTCGTGGAAGTGCTTAACGAGTACTTCCATAATGTCTGTGAAGTGGATCTAGTTTT
TAACTTTTACAAGGTATACACCGTAGTTGACGAGATGTTCTGGTGGTGAGATCCGAGAGACCAAGTCAAAACCAAGTCC
TCAAGCAACTATTAATGTTAAACTCGCTCGAGTAACGATCGCACTGTAATAAATCAATATCATTATTTCTTCCAATGGAA
AATGTCTCTCTCTTTCTGTTTTTCTCCTTGTCTTTGAAATGTTTAAAGAGCTTTAGAAAAAACAACCCACTCA
AAATGTATAAATATTGTATCGTATGAAAAACAAATAGACGCTCTCGTAACGATCAAGGTCACGAGAGATTAATCATCATG
TCGAATGTTACGCCATAAGCTATTCAAGTTGAAATAAAATTTACCTAATTGCGGTAATCGCAAGGAAA

>CL7144Contig2|glucose-6-phosphate isomerase

TTGATGAAGGGCAAAAGCGTGCTCAGGCCAAAGACGAATTTGAAAAATCTGGCATCAGCGCCGATCAGGTTAAACAGTT
TTGCTTCACAAAAGTTTTGCAAGGCAACAGACCGACTAACAGTTTACTTGTCAAGTCAGTCACCCCATTCACACTCGGCG
CCATGATCGCAATGTACGAACACAAGATCTTCGTCCAGGGCGTTATGTGGGACATAAACTCGTTGATCAATGGGGTGTG
GAGTTGGGAAAACAATTGGCAAAAGCGATCGAGCCGAGTTGAACAATGCAGAAAAGATCACGAGTCACGATTGTCGAC
AAATGGTTTTGATCGTTTTCATAAAACTCATAGTGCTTAAACTTTGGAGCAGCAGAGATTGTTTTGATTGACATCACGT
GTGTAGCATCGAAAGTCGAGGCGAAAAAATGAAACCGCTGGCTAGAATACTAATGGCGGGGACGAATTTTGAATGCTAAG
ACGATGTCCCATCGAATTGGTAACAGACGAACATGCAA

>CL716Contig1|nadh--cytochrome p450 reductase-like isoform 2

TAATTATTTGATACAGACGGCGGCCGCTCACAGGCAGTAAGAATGGCAAGTTCAACACCGATCGTAGAATTAATGAG
ACCAGCGAGCTCAACAAACTCGAGGAACCACTCTTCAGTACCTTAGATATTGTACTTTTGAGCGCCCTGTTATTCGCGGC
TGATGTTGGTGGCTCATGCGTCGCAATAAAAAATGACGACTTCACACCAAGTCCCAAATCTTATTCGATACAGCCAACCTCGT
ACACCGCGGTTACGCCTTCGGAGAAATCTTTTCGTCAAAAAGTTGAAGACTTCGGGACGAAGTCTGGTGGTTTTTACGGA
AGTCAGACGGGAAGTGTGAAAGTTCGCGGACGACTTGCCAAAGAGGGTCTGAGGTATCAGATGAAAGGTATGGTCGC
TGATCCCGAAGAATCCGACATGGAGGAACCTATTAATTTGAAGGATATTCCAAAGAGCATGGCAGTATTCTGTTTAGCGA
CGTACGGTGAAGGCGACCCACCGATAATGCTATGGAATTCGTGAGTGGCTCAAAAATGGAGACGCTAACCTCACAGGA
TTGAACTATGCGGTTTTTCGGAATCGGAAATAAACTTATGAACATTACAACGAAGTTGCCATTTATGTGGATCACAGACT
CGAACAACTCGGAGCCACCCGAGTCTATGAACTTTGACTCGGTGACGATGACGCCAATATCGAGGATGATTTTCATAACGT
GGAAAGACAAATTTTGGCCGGCGGTCTGCGAATCTTCGGAATCGAGGGAGCCGGTGAAGATGTTAACATTGTCAGTAC
AACTTACCGAACACCTGGAGTACCAGCGGAACGAGTTTACACGGCGGAAATCGCTCGTCTCCATTGCTCAAGTCACA
GCGGCCCTCCCTACGATGCGAAGAATCCGTACCTGGCGCCCGTAAAAAGTTAATCGCGAATTCACGGTCCGACTTCCGAAA
GATCGTGCATGCACATAGAATTTGATATCGAGGGATCGAAGATGCGTTACGAGGCAGGAGACCACCTCGCTATTTATCCG
GTCACAGTGAGGAACTGGTTGTTAAATTTGGGCGAAATTTGCGGCGTCGATTTGGACACGGTCTTTACTCTCACCATAAC
CGATGAGGAATCAACGAAAAAGCATCCTTTCCCGTGCCCTGTTTCGTACAGAACGGCACTCACCCATTATCTCGACATAA
CGAGTAATCCCAGGACGCATATTCTCAAAGAATTGATCGAATATGCGACCGATCCAGCAGACAAGGAAAAGTTGAAACTT
ATGGCTTCGACAAGCGCCGAGGTAAGGCTCTATCAACAGTGGATAGTTTACGAGAGAATAGAAATATCGTACACATCGT
CGAAGATATTCCGAGCTTGAAACCGGCTCTGGATCATCTCTGCGAGCTTTTGCCACGATTGCAATGTGATATTATTGCA
TTTCTTCTTCTTCAAAGCTCTATCCGACCTCGGTCCACATTACGGCGGTAGTCGTGAGTACAAGACGCCAACCGGACGT
ATTAACCGAGGAGTGACAACGAGCTGGCTGAAGGAAAAACACCCGACCGATCCGCCGAGCGTCGTGCCAATTTTTCGTACG
AAAATCCCAATTCGTTTGGCCACGCGTCTACGACTCCCGTGATAATGGTGGACCGGGTACGGGCTTGCTCCTTTCCG
TGGTTTCATTACAGGAGCGGACCTCGCCGAAAAACGAAGAATTGGCGACGATTCTCTACTTTGGATACCGT

>CL718Contig1|protein disulfide-isomerase a4-like

GAGCTAAACTCAAGCAAAACGTTAACGTTGCCCGTGTGAACAAATACACAACAGGAGCTTCCACAGCGAGAAGATTCAAC

mmc4.txt

GTTTTTCGATGTTCCAGAGTTTATTCTATTTCAGAAAAAGGAAAAATGTATAGATATCAAATCCCGAAATACGACGTCAACGC
 GTTTGTCTCGTTCGCCAGAGATTGGTGGAAAAACGCGCATGGAGAAAAAATCCAGTACCGCAGAGTCCATTTGACGACT
 TTGTGCAACTGTGTGTGAATTTCTGCGAGGAAATCCCTGGGTGTTGAAGCTCGGCAGTATCCTCATTTGCGTGTTGCTC
 ATCGTGTGCGTTCGTTTCCAAGCTCCGACGCAAGCCCGACGCCGCTCACTGAAGATCGATTAAGCCCGAAATGCGACGT
 TGAAGTTCGCATCGTCCGAAAGCGTTCATTTTCTATTTTATACGATATCGAAGTTTGCATCGTTGGGAGTTCAACGAA
 AAATATTCACCTTTTTTTTCGGAATCACCTCAATTTTTCTTTGTACATTCAATTCAGTCTCTCAGACCCAGTGTGGA
 ACAGACCAAACCTGGTCTCTTAGGCCAGTGTACAATAGACCACACTGGGAAACAAAATCTATCGAACCAGAAACATTCC
 GTATTTGATTTGCAAAAAATTTTCATTAGACGGACCACCGCGTGTTAATTTTCGCTCCGTTTTCGAAAAATGAAATAAATC
 ATCATTCCGTGTATTCCAACGACGCAAACTTCA

>CL7235Contig1|6-phosphogluconate decarboxylating-like

ACAGACGGTCCGCTGACATTGTGCGAGTGAGTACTATCCTCTCGTTCGCTCATTAGCATCGCTCACTATCGTCCAATTCTT
 TGACGACTTCACAAGCTTTCTTGAAGCTACTTGTTGCTAGAACCTGAACCTTGGTCTTCCGGAACCGACGAAATATTTAC
 GCAGTTTTTCGCATTACATCGTCGCACCATGAGCAAACAGTGGCTGATATTGCATCATCGGTTTGGCTGTCTATGGGCC
 AAAATCTCATTCTCAACATGAACGATCACGGCTTCGTATGTGCTTACAATCGTACAACGGACAAGTCAAAGCGTTTT
 GTGGATAACGAAGCCAAAGGAACCAAAGTCTGCGAGCCTACAGCCTCGAAGAAATGGTTAGCAAGTTGAAAGCGCCCAA
 ACGGGTGATGATGCTGGTCAAAGCTGGTTCGGCAGTGGATGCTTTCATCGACAAGTTGGTGCCTCTATTGGCTCCGGGTG
 ATATTATCATTGACGGCGGTAATCCGAGTACCAGGACACACAACGACGCTGCGAAGAGCTCGAGAAGAAGGAATTCTGT
 TTGNGGGTAGCGGAGTGAGCGG

>CL7265Contig1|esterase fe4

TTTTGCAGGAACAATAGAATCGTTCACGAATCTTATCGAAGTGTAGCACCCCATTAATATACGCAAGCATACTGGCCAC
 AAAAGATGCATTTTTTTTCGTTTCATGGTCAAAATAATGAACTAATTTTTTACGATTCATTACGGCGTTGTCCATCACGAT
 GACCTTCTGTATATCTTCTGGGACGATTATTTCCCCTACTTCAAAGTAAATGATCCAGAATACGAAACGGTGAAAACGTG
 GACGACGATATGGGCAAATTTTCGCGAAAACCTGGTGAGCCTATTCCTCGGAACGATCGTAAATTTGAAAATGTCGTTTGGA
 CTCCATTTACATGTGAAAAATAACAAATATCTGGAGATCGGAAACGAGCTCGTTATGAAGAGCAACCTTTACAAAGATCGA
 ATGGCGGAGTGGGAACGTCATTTCCAATTCGACAATACCCACGCCAGGGAAAGTCGTAACATTAACAAATTTAATC
 CCCAAGTTCACTTGGCAAAAGAATTTCCATATTATGATATTGACAATACCGAGTAAGTACAAAAACGTTTCCAACGAGAA
 TCGTATCCTCGAAACTTTTTTTTCGTTACATCGAGTAGGGATGTTAAGAATATTTTACAAAATTGAAATGTCCTTATGAAA
 TAGAACAACCGAAAGCTCATGCGTGATATTTGAAAAATAAAATCTTTCATGCTCTAC

>CL7267Contig1|60s ribosomal protein l14-like

TCTTTTCCGGTAAATCATGCCGTTTCGAAAGGTACGTGGAGACCGGGCGGTTGCCTACGTGAGCAATGGCCAGCATCTGG
 GCAAACTCGTTTCCATCGTCGACATCATCGACCAAAACAGAGTTTTGGTCGATGGTCCGGCGAGTAAAATTCACGTGGT
 CAGATGAGACTGAGCGACCTTCATCTCACCAAATTCGTTGCGTTTTCCCCACACCGGCTCGACCAGAGTCGTGCGTAA
 AGCATGGGAAGCTGCCAAAGTCGATGAGAAATGGAGCGAAACCATGTGGGCCAAGAAAGTCGAGGCCAAGAAGAAGCGAG
 CGGCCCTCAGCGATTTTCGATCGTTTCAAGTTGCGCAAAGCTCGTCAAATTAGAAACAAGCTGAGAACCGATGCGTTCTTC
 CGTTTGAAGAGGGCCTCAAAGAAACCCAAGGCTGCGGCTGGTGCCAAGCCCAAAAGCGTCGCAAAACCAACTGGAAAGGC
 CGCGAAAGCCGCTAAGCCAGCCAAACCGGACGAAAAAGTAATAGTACGCACCACTGACTAAAATATATATTTGAAAAAAA
 CACAATTTCAGAAATTGGGTCGCGAGTCTTATGTCCTGCTCCCTCGTTTTCTTCCACGAAATCCAAAATATTTTCGTTA
 GCCACGGAAGTTGTATCACGACGATACAATGTCGCCATGAGAAATTATGTTAAAAAACAAAAATTTCAAAAAAATAAGA
 ATTTTAAATAAATTTTTTAGGC

>CL72Contig1|antithrombin-iii-like isoform 1

GAACTGGAGGAAACGGATTTCCGTGCTGATCCAAAACCTGCACTCGATCGCATCAACGAATGGGTGAGCAACGCGACAAA
 GGGTCACATAAAGGATCTCATTCAAGAAGATGACATTACCGCAGATACCGATCTCGTGCTTGCCAATGCTGTTTACTTCA
 AAGGACTCTGGACAAGTCGTTTCGACAAGGCCAATTCAAAACGTGACATTTTCTATGGAATCAAAAAACATCTCGTCACT
 TTCAATGCGTCAAAAAGGAACTTTCAATCATGTTATTTTCGGAACCTCTCGGCGCCACATCTTGAAATTGCCCTACAAAGG
 CGACGATGTCTCAATGTATATTCTCTTGCCACCATTCGCGATGTGCGGATCCGTGACAACTCCGGAGAGCGTATGAACT
 CAACGATCGATCGTGACGGGATTCATCAATTGATCGAAAGAATAACAAAGACGAAGAAAGGAACCGATGAACTTTATGAC
 ATTTTGGACGGCGGTATGCCACCCAGGGAAGTCGAAGTTTCTCTCCCGCGATTGAGTATCGAGCGGGAACCTTCAAATCGC
 ACCTCTTCTCCATGCTCTCGGAGCTGGTGATCTCGTCACACCTGAAAAAGCTGATCTCCGTGGTTTTCTAGCCGACGGTC
 AAGGAACTTTGATCTCTCGGAGTCCGTTTCATCGCGCAAAAGTGACGTTAGCGAGGAAGGAACAACCCGACGTGCCGCA
 ACAGCTATTTTCACTTTTCCGTTCTGGCAGACCCGCCGAACCTGAACTTTTCAATGCCAACCATCCGTTCTCTACATCAT
 CTACGATCGACCCAACCGGGAATCCTCTTTACCGGCATTTACAGAATCCGCCGACACCGAGCGAAGTCACGAGTTCTG
 AAAACCCGCGCGGGGAATTCAAACAATTTTAACTAATTTTTTTTTGCAATTTAAAATAGTTCTCGTGCAAAATGTTTACAC
 GTTAAAAATACAACCTCACTTTTGAGCTGGGCTAATCGACAGCAATTTTCGTGGAGATCTCACGATGTTAACTTTCAAAAGA
 ATTTTTAAAACTCGCGCCAAATGTCATTATTTTCTGCAACATGGAATCGCAGTGACGTGAAAAAATCTTAAGAAAGAC
 AATTGCGCGCTCGTCTCTTAGTTCTCGACTTTTTTTTTTCCACAAATTTCCACGACACGCCTCTGATGAAATTTTGATC
 GCAAAACTTTTTCGAGCTTTTTTACTTGATCGCATTTTCGGAGTTGGTGGTTTTTTCGAATTTTCGGCTCGGAGAAAAAAA
 ACGATCGAAGAAATGTTGATGTCATCGTGAAGTGGAAATTTGTATAAATTTTGACCAACGAACACTCTCTGCATGACAA
 TCCTCTGGATACTAAATAATCGAGTTAATTACATTTTTCTTGAATTTTATTCGAGAGAAAAAGTCACTCGTGCTAAGCAC
 TTGGAATGTTGTTTTCACTTAGAAACACATTAGCATAGAATTTCTCATTTGTTTAAAGATTATTGTATAATTTTTAAGGA
 TCAAAACAAAAATGCAAAAGTGTGACAATAAATATAGATCTGCGGAGGACTCGAAGAGAAAAATCGTCCGCGGCGATCG
 ATCTGTCGAAGGGAATGATTATTTTCACTCTCAAAAAAAATTTCAAATTTGACAGATAATGTAGCTGATATTTATTTTACGGC
 TATGAATAAATGAAGCCATTTCACTTAACGTTTGTATTTACGAATTTTACATTTTGAATAAAGCTCCAAACGCTTTTC
 TATGGGGGANAACAAATTATCGCAATTGTTTGATAG

>CL7322Contig1|vacuolar protein sorting-associated protein 35- partial

ACAAAGTATTATTACACACCGTGCAAATATTCGAAAAGCTCAACGTTGAAAAGTTGGAATACAACAGTGCCGTGCCGA
 GAACTGGCAAGATTGATGAAAAATCCAGTCGACAATTAACAAGATATAGTACAGTATTGAAACTCGAATTTTCGACC
 TCTCTCGAATATTTTATTTACGAGGGTAGAAAACTTCTCGCTGTATATAATACAGATAATCTCGAGATGAAACTC
 TCATACCAACCCAAGAACAAGTCGACGCTATACTGTCCGTCGTATCTCCGCTGGTCCAGGATCAACCCGATCAACCGAGT

mmc4.txt

ATCGAAGAAGATCCCGAAGATTTTGCAGAGGAACAGGGACTCCTTGAAGGCTCATTATCATTTCAAATCGGAACTGC
TGATCAACAATACATGATACTAGTGCAGCGAGAAAAACACTTTAGTGCTGGAAGGAAACAAAGAATCAAATACACGCTTC
CGCCTATCGTCTTTTCAAGGCTATCAACTCGCATTTACTTACAAAGCTCTTCAAAGACCCAGGATGAAATGTGCAGAAAA
TGTCAAAAAATNTTCCAATTTTG

>CL733Contig1|ubiquitin family protein

AGATCAGCAGAGATTGATCTTTGCCGGAAGCAGTTGGAAGATGGTCGTACTTTGTCTGGACTACAACATCCAGAAGGAAT
CCACTCTCCATCTGGTCTCTCGTCTTAGAGGAGGAATGCAAATTTTTGTCAAGACGCTGACCGGAAAGACCAATCACCTT
GGAAGTCGAAGCCTCCGACACAATTGAGAACGTAAGGCAAAATCAGGACAAGGAAGGAATCCCCAGATCAGCAGA
GATTGATCTTTGCAAGAAAAACAGTTGGAAGATGGCCGACGCTCAACGACTACAACATCCAGAAAGAATCGACTCTCCAT
CCTGGTCTTTCGACTTCGTGGAGGAATGCAGATTTTCTGAAAACCTAACTGGAAAAACCATCACCTTGGAGGTGAGG
CTTCGGACACGATTGAAAATGTAAAGGCAAAAATCCAGGACAAAGAGGGAATTACCTCCGGACCAGCAGAGATTGATTTT
TGCAGGAAAAACAACCTGGAAGACGGCCGACGCTCAT

>CL73Contig2|low quality protein: water dikinase-like

ATTGTTGACGTTTTTATTCGATATATTTGCTCGGGAATATAATTTGAGAAAAATAGAAAGAAGACGAGAGAGCGGAAATC
TCAATATCGCCGGAGACTACATCGAGAGTGCTTTTCGATAAATCATTTTTTCGCGTTTTCTTACTTTTGAACCGGCTTTG
TCGCGAGTTGCCCTTTTTTTTTCTTTATATTGTTGTTGAAGACAGTTTCAAGATTTTCAAATGGCGGAACTCCAGGGAAC
CCCTGTTTCCAGGACGCGCTCTCCGTGGGACAACCTCGAAGTGGGAAACAATCCTAATGCCCTTGCCCTTCGTAGACCTT
TTGATCCTGTGGCTCATGATCTTGACGCGACTTTCCGTCTCACGCGATTGCTGATCTTAAAGGATGAGGGTGTAAGTC
CCCCAGGAGTTCTTGGGAACTCCTGGAGGGACTACAGGCTGATGACGGTAGCGCTCAGGATCATGAACATGCCACTT
CATGCATATGGCGATACCGCAATTGGCATTGGCATTGCTTCTCCGTGACTCCGTTGAGACACGGTGGCTTGAGTTTGG
TGCAGACGACGGACTTTTTCTATCCACTGGTCGACGATCCTTACATGATGGGTAAAATAGCTTGCGCGAATGTGATAAGC
GATTTGTACGCGATGGGAGTGACGGAGTGACAAACATGCTTATGTTACTGGGAGTAAGTACAAAAATGACGGAGAAGGA
ACGAGACGTTGTGGTGCCGTTGATAATGAGAGGTTTCAAAGACTCAGCTCTGGAGGCCGTTACAACGTTACCGGAGGTC
AAACGGTCGTCAATCCATGGTGTACCATAGGCGGAGTTGCTTCGACGCTTGTGACGCCAACGAATACATTGTACCGGAC
AATGCGGTCTGGGTGACGTTCTTGCTGACTAAGCCGCTCGGAACCCAGGTGGCCGTGAACGCGCATCAATGGCTCGA
TCAACCCGACCGTTGGAACAGAATCAAGCTCGTAGTGAGTGAGGACGACGCTGAGAAAAGCTTATCAACGTGCGATGGACA
GCATGGCCAGACTCAACAGAATAGCCGCTCGTCTGATGCACAAATATAACGCTCACGGCGCCACGGATGTACCGGCTTC
GGGTTATTGGGTACGCACAAAATCTCGCTAAACATCAGAAAAACGAAGTCTCGTTCGTATTACAAATTTACCGGTTAT
CGCAAAAATGGCCGAGTCGCTAAAGCCTGCGGCAACATGTTCCAGCTGCTGCAGGGCCATTCCGCGGAAACGAGTGGTG
GCCTTTTGATATGTTTACCACGAGAACAGGCCGCGGCGTACTGCAAAGACATTGAAAAACAAGAAGTTATCAAGCCTGG
ATAATCGGTATCGTGGAGAAGGGTAATCGAAGTCAAGGATAATCGATAAGCCCCGAGTCATCGAAGTACCAGCGAAGGA
GAAGGACGGTGAAACTCTGGTAAAGAAAAAACAACAAATCAACAATAAGCAAAGAGAAGAATCGATAAATCGTACGCAG
TCGCTGCGTACGAGTTATTCTGTACCAAGTGAGAATAAGCATTTTTTTATTGTCTGTTCTGGAATGCTCCTAACGATGGGC
CAATCGTGGCTGAGGAAAAATAAACTCATTAGGGAGAAAAAGAGAACGAACGAGGGGAGAGAAAGAAGAAAAAATAAA
TCGCTGGAGCAACGAAAAATTTCTCACTAACAGCTGGAACAATCATTGCAATAAGTGACGAACGAATCCAGTCCCATT
GGATTATTTCTTGGGCACTGGAGCTTTCTGCTTAAAAACAACAAACGAAAAATTGGGTTCTTGGCCGAATTGAATATT
TTTCTTTATTTTTTTCTTTCGACTCTTCAAACGATTTTTCTTTTCTTTTTCGAACTTTTTTACACGTGAGAAAAATT
GTTTACCGACTCGGTGCTTCCCGTAGTCGCGGCTAATCGCCGAGTCTTATTTTTTTTTCTGGCCTTCGAGTGA

>CL740Contig2|low quality protein: mesencephalic astrocyte-derived neurotrophic factor homolog

TGCTCTGTGTTGAAAAAATAAGTCTCGTTACTCTATTTTCGCGCTTTTACAGCGATATTCTTCGTCCGAAAAATATCGAAA
CAATTATAATCGAAACGTCGCGGTTTTATTATTTCTTTTGTCTGGTCACGTTTCGAGTGTTTCTTCAAAGAAAAATAGTGCTT
ATAATCCGAGATATTTCTTACCAAAGACTTTAGTAAAAATTCGAAAAATGAAGCTCGACACGTCGATTTTGCCTACT
CTTGGTGGCTCTTGGGTAGCGTCAACAGTTTCCGCACTCAAAGCCGGCGATTGCGAAGTCTGCATAGCAACGGTGAAGA
AATTCGCGGACACGCTGAGCGACGAGGTTAAAAAAGATCATAAAAAGATCGAAGACGCGTTCCGAGCTTTTTGCCTTAAG
ACAAAATCCAAAGAAAAACAGATTCTGTTACTATTTGGGTGGTTTGAAGAATCGGCAACAGGAATTCTTGTGGAGCTCAG
TAAACCGCTCTCGTGGTCTGCGGGCTGACAAAATTTGCGAAAAACTCAAGCGAAAAGATGCGCAATCTGTGACTTAC
ACTTTGAAAAACAATAGATCTCGATACGGTCGATTTGAGGAAGCTCAAAGTACGGGATTTGAAAAAGATTTTGAACGATT
GGGACGAGACGTGCGACGGTTGTATCGAGAAGAAGTATCATAAAACGGAATCGAAGAATCAAAGCCGTGAAATACAC
CCGAGCCCCGAAAAACCGATCTCTGAGCTGGTAAACCATCAGGTGACCTCGAATAATCGGAGCTTCGTTACGACGCTGTC
GCTGTTCAACAATTTCTTCTTGTCTTTCTGTCTTTTTATCTTTTTTGTCTTCTTCTATTTTCGTTGTAATTTCAA
CAGAAAAGCAGAGTATGAAGATAATACAACGTGTA

>CL7446Contig1|beta-lactamase-like protein 2

GAGCTTTTTCCCAATCAACAGAGCAGTATCAAAACATTTTTTACATACGCCGTCACCACTCGTCATTGATGACGCGGTG
ACTCCCGAGCAATCAGCTCTTGCAAATAATTCGCTCGTGTGTGCTCGTTAGCGAAATGTCTCTACCGCGATTCCACT
CGTTTTCAAATTACCAAATGTTATTCGAATTTGGGATGCAATCCCGGTCCTATGACACTTCAAGGAACTAATACGTATC
TCGTGGGTACCGGCAAAAGGCGAGCCCTTATTGATACAGGGGACGAACACACCGCCCCCGATTACATTAACCTTCTTGGC
CAAGTGTTGAAAGAGGAAAAATGCGACGATAGAACATTTGATAATAACGCATTGGCATCACGATCACATTGGCGGGGTTAA
TCCCGGTCAAAGATCTCTTGAGTTCTGATCCCGGCTCCAGAGTTTTTGTCTGGAAGTTTTCCACGAACGGATGAGAACGA
AAATTACGACATAGATCATTTGGAGTCTCTGTTGGACGACCAATCTTGAAGTAGAAGGAGCGCATCTCCAAGTAAAGT
TCACTCCGGGACACACAACGGATCATGCTTGCCTGCTGCTGGCGAATGAAAATATTTTATTCAAGCGGATGATTCTC
GGAGAGGGAACGTCAGTTTTTGAAGATCTTGCAGATTACTTGGTTCTTTGGATAAAATCCTGCGTATGGAACCGAAAAAC
CATTTTCCCTGGCCATGGCCCGGTGATCCAAGACCCTGCACCCAAAATTAAGTTTACATTCAACACAGATTAGAAAAGAG
AAGCAGAAATTTTACAAGTATTGACGGAGCAATGGAAAAGGCAAAGTTTGTACCGAAATGGACATTGT

>CL7449Contig1|atp-citrate synthase-like

AGTACAGTCGGTCAGAACCAGACGTTTCGCTTACTTCAATCCGCGAATACGTTTAAACCGGAGGTGCCATAATCCGTTT
TATCATCAGCGAGAAAAAGATTTCGTTCCGTCGCTAAACATCACACAAGCGAGAGAAAAAATTTGGAGGCGTGTGAGCG
ATGTCGGCAAAAGCAATTCGCGAAGCCACCGGCAAAGATCTGATCAATCGTAAACTTACGTTTGGCACTAATGCCGCTAA

mmc4.txt

ATGTCGTTTTCTGCTCGACTATCGACGAAAAACACCAATTGGACTACCATCGTCTGATCACCCATGGCTCAAGACCGAGAAAA
CTCGTCGTTAAGCCCGATCAGCTGATCAAGAGACGTGGAAAACTTGGCCTCATAAAAAGTCAACGCAGATTTCCCTACGGT
CAAAACAATGGGTTATGGAGCGTATGAACAAAGACCAAAAGCTCGAGAAAGCTACGGGGAAATTGAGGAATTTTCATCATCG
AGCCTTTCTGACCTCATACGCCGGAAGAAGAAGCCTATGTTTGTATTTATTTCCACCGGAAAGGCGATACGATTTGTTCC
ATCACCAGGGTGGAGTCGATGTAGGGGATGTGATGCCAAAGCTCTGAAACTCGAGGTGCCTGTGGGTGCCGACATACCC
AGCAGTTCCGAACTCACTGAAAAAGTTATTGGTTAATGTGGCCGATGATAAAAAACCGGTTATCGCAAAATTCATCGAAGC
TCTTTACAAGCTTTTCTGATGCTGTACTTCACGTACCTTGAAATAATCCCTTGGTCGTTACTGACGAGGCTGTTTATGT
TTTGGATCTCGCTGCAAAGCTCGACACCGCAGCCGATTTCGTTGTCTGTCGGATTGGGAGAAATCGATTATCCACCTCCG
TTCGGACGTGACGCTTATCCGGAAGAGGCTTACATCGTCTGATGCTAAATCGTGGGCTAGCTTGAAATTGACTAC
TTTTGAATCCCACT

>CL744Contig2|gtp-binding protein 128up-like

TTCGTGTTTTGTAGTATGTGCACTCGTGCACGTGTTGATTCCGCTTTATATCAGCGTTAAAACAANAATGCCGGTGGTTGA
TTAAAAATAACACGCCAAATTCATGAAATATTAGTCAAATATATTTTCTCAAACGCAAGTTGTAGCAAGGCTTCA
CGATGAGTACGATTGCGGAGAAATTCGGCGGATCGATCCGAGATGGATCGGACTCAAAAAACAGGCAACTTCGGGC
ATTTGGCCATGCTCAAGGCCAACTGGCCAAGCTCAGACGAGAATTGATAACTCCCAAGGGTGGCGGCGGCGCGGAA
GCCGGCTTCGAAGTTGCCAAACTGGCGATGCCAGAATCGGCTTTGTAGGCTTTCTTCGGTCCGCAAAATCCACTCTGCT
GAGTACGCTGGCGGGTGTCTATTCCGAGGTTGCCGCGTATGAATTTACCACCCTAACAACCGTGCCAGGATGTATCAAGT
ACAAAGGCGCCAAGATACAGCTGTTGGATCTGCCGGGTATCATCGAAGGTGCCAAGGACGGAAGGTAGAGGGCGACAA
GTAATCGCGGTAGCCAGAATTCGAGTTTGATTTTCATTGTGTTGGACGTGTTGAAGCCGCTCGGTACAAAAAACTCAT
TGAACACGAGTTTGGAAAGTTTCGGGCTCAGGCTCAACAAGCAGCCTCCCAATATCAATTTCCGAAAAAAGACAAGGGCG
GCATTAATCTACAAACGATGTGCACTCAAACGGAATCGATCTAGACACGGTCAAATCGATTCTCTCAGAGTACAAATC
CACAACGCCGATATAACTCTACGTTACGACGCAACATCGGACGATCTGATCGATATTATCGAGGGCAATCGAGTTTACGT
GCCCTGCATTTATCTCCTAAATAAATGATCAAATAAGTATCGAGGAACTGGACGTTATTACAAATACCACATT

>CL745Contig1|40s ribosomal protein s2-like

TCTTTCTTTCTGTCGTCATTACCGTAAAGAAGTAAACAATGGCGGACGCTGCTCCAGCCGCTCGTGGAGGTTTTCCGAGG
AGTTTTTGGTTCCCGTGGAGCCGGCGGTGGTGATCTGTGGAGTCCACGCGGTCTGGTGGTTCGAGGCCGCGGACGCGGAC
GCGGACGTGGTTCGCGGCAAGGAGGATCAGAAGGAATGGATCCCGTGACCAAGCTTGGACGTTTGGTTCGCGATGGTAAA
ATTCGTTCTCTCGAGGACATTTTATCTGTTCTCTCTGCCCATCAAAGAGTACGAAATCATCGATCAGTTTCATCGGACCAT
CCCTCAAGGACGAAGTACTCAAAATCATGCCCGTCCAGAAGCAGACCCGTGCCGGTTCAGCGTACTCGTTTCAAGGCATTC
GTCGCCATCGGAGACGCCAATGGTCACATCGGTCTTGGAGTCAAGTGCTCCAAAGAAGTTGCGACCGCGATTCTGTGGCGC
GATTATTCTTGCCAAAGCTCTCCGTAGTGCCGGTACGTCGAGGATATTGGGGCAACAAGATCGGAAAGCCCCACACGGTAC
CTTGCAAGGTCACTGGCAAGTGTGGATCGGTCCAGTGCCTTTGATCCAGCAGCCAGAGGTACCGGCATCGTTTCTGCT
CCGGTACCCAAGAAGCTTCTCCACATGGCTGGTATCGAGGACTGTTACACTTCGGCTCGTGGTCTACTTGTACTCTTGG
TAACTTTGCCAAAGCAACTTACGCCGAATCGCCAAGACTTACGCGTACTTGACGCCCAGTCTCTGGAAAGATCAACCAC
TCTCATCGGCTCCTTATCAAGAACATGCCGAATTCCTTTCCAAGAATCATCGCACCGTAGCTGGTTCAGAGAACCCTGAA
GTAACTAAAGGATAATAAACCTCGTCTCCACGGAGATTTAAAAATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAACCTTTTGCCTCCCGCCGCCCCCAAAAA

>CL7462Contig1|cytosolic non-specific dipeptidase-like

GCATGGCCAGAGAAAAAGGCAAGAAATAGTGAGAATGATGAAATGGGCGGAAACGAGATTGAAGGAAGTTGGGAGCACCA
CCGAATTTGGTTCGACATTGGAACGCAGACTCTGCCGGATGGCAAAGTCATTCTCTGCCACCTGCGCTGATGGGCACCTTG
GAAACGATCCTAAGAAAAAAGACTGTTCTCTGTACGGACACTTGGATGTCCAGCCTGCGCTTCTGGAAGACGGCTGGG
ACACTCTCCGTTGCAACTTGTGGAAAAGGATGGGAACTCAGCGAGAGGCAGCAGCAGCAAGGGTCTGTTCTC
TTGGGATCCACGCTCTTCAAGGCTTCAAAGCGACCGGTCAAGAAATCCAGTGAACATTAAGTTCTGTTTTGAAGGAT
GGAAGAAAGTGGGAGCGAAGGATTGGACGATCTTTTGTGCTCGCAAAGACACGCCGTTTCATGAAAAGAGTCGATTACGT
TGATATCCGACAA

>CL74Contig1|60s ribosomal protein 13-like

ATTATGGTTCGAGTCTCGTCACGAAAAACATGGCCGTTGGCCACGCGGTCCCAACAACATAATGATGATTTAGATATTA
TGTTTATGGTTTAACTGATTAAACATGAAGATATTATTCTAGGGCGGTCTGAAATAATTTCCATTTCATCAAATAAAT
TGTTTAAATGTTGCTGCATTTCTCACGATGCAATTCGCGGTGATTTAGTCTCACAGAAAGTTAGTGCGCCCCGTCA
CGGGTCTATGGGATTCTATCCCAAGAAAAGATCCCAACGTCATCGTGGTAAAGTAAAGGCTTTCCCAAGGATGACCCGA
GCAAACCTGTACATTTGACCGCCTTCATCGGTTACAAAGCTGGTATGACTCACGTGTTCTGTAAGCCGATCGTCTGGT
TCAAAGGTAAACAAGAAGGAAATCGTCAAGCTGTGACGATTCTGGAAGTCCCGCGATGATCGTTGTGCGGTGTAGTTGG
CTACATCGAGACTCCCCACGGTCTCCGTGCCTTGACAACCGTATGGGCCGAGCATCTTTCGGAAGATTGCCGTGCTGTT
TCTACAAGAACTGGTTCAAGAGTAAGAAGAAGGCTTTCACCAAGGCATCCAAGAAATGGCAAGACGATCTTGGACGCAAA
TCCATCGAGAAGGACTTGAAGAAAATCATCAAGTACTGCAAGTCTGTTTCGCGTCAATTGCTCACACTCAGATGAAGCTCTT
GAGACAACGTCAGAAGAAAGCCAACATCATGGAATCCAACCTCAACGGTGGAAACCATCGAACAAGGTTCCAATGGGCTA
GAGAACATCTCGAAAAACGATTCCCGTTTTCGAACGATTCGCGCCCCGATGAGATGATCGACGTTATCGGTGTGACCAAG
GGAAGGGATACAAAGGTGTGACGTCCCGTTGGCACACGAAGAACTTCTCGCAAGACGCACAAGGGTCTGAGGAAAGT
CGCTGTATCGGAGCGTGGCATCCGAGTCTGTTTCTTCCAGGTTGCTCGTCCGGTTCAGAAAGTTATCACCACAGAA
CCGAGATGAACAAGAGATCTACAGAATTGGACAGGAAATCCACACCAAGGACGGAAGGTCGTGAAGAACAACGCTTCC
ACGGAGTACGATCTTACTGAGAAGACCATACCCCCATGGGAGGTTTTCCCCATTATGGTGAAGTTAATAACGACTACGT
TATGCTCAAGGGATGTTGCATGGGACCAAGAAACGTGTCTACTCTCCGCAAGTCACTCTTGGTACACACGAAACGCG
CCGCTCTGGAGAAGATCAACTTGAAGTTTATCGACACGAGCTCCAAGTTCCGTCATGGTTCGTTCCAAACCGCTGCCGAC
AAGGCATCCTTCATGGGACAACTCAAGAAAGACCGTATTCGCAAGAACAAGCACAGAGTGCTGCTGCATCAGCCGCACC
AGCGGCTGCTGCTGCTCCGGCACTGCTGCTGCTC

>CL752Contig1|60s ribosomal protein 121

AGTGGTGAATCGATAGTCGCGCTGGATCGATTGTAGCGGATGAGAGAGGAGCAAAGCGAAGCTGCTGCGGCCAATCTT

mmc4.txt

TCTTTTCACGGCGACATTTCGGCGCAAGAATAAGTCACCGAAATGACGAATTGAAAGGTTATCGCAGAGGCACAAGAGACT
TGTTCTCACGCAAGTTCCGCAAGCATGGAACGATTCCGCTGTGCAGTACATGAAAGTGTACAAAGTTGGTGACATTGTC
GACATCAAGGGCAACGGAGCCGTCCAAAAGGGTATGCCGTACAAAGTATATCACGGAAGACCGGACGAGTATTCAACGT
GACTCCGCACGCTTTGGGTGTAATTGTAAACAAGCGAGTTCGTGGAAGGATCATCGCCAAGCGCATGAACATCCGCATCG
AGCATTGACCCACTCCAAATGTCGCGAAGATTTTCATCAAGCGAGTCAAGGAGAACGAGAGGCTGAGGAAAGAAGCCAAA
GAGAAAGTGTCCAAGTTCAACTGAAAAGACAACCGGCTCAACCCAGCGAAGCTCACATCGTTTTCGGGACGCGAAGCACC
CACCTTCTTGCCCCGATCCCTTACGAATTCATCGCTTAAATGGAGTCAATAAACATCATTTTTCTTTAATCCCAAAAAA
AAAAAAAAAAAAAAAAAAAAACATGTCGGCCG

>CL7537Contig1|oxidoreductase glyr1 homolog

GGTTCAGGGAAGCAAGACCCATGCGCAAGAAGGAAGTCTCGTTATTTTAGCAGCGGGTGACAGGTCTCTCTTCGACGATT
GTCAATCGTGCTTCGAGGCAATGGGTAAAAACAGCTTCTATCTCGGGGAAGTAGGCAATGCTACCAAAATGAATCTTG
CTTCAATTGATGGCTGGCGTAACCTTGCGCCGGTCTTGCGGAAAGCATGGCTCTTGCTGATCGTGCTGGACTGCAACAAA
AGACGTGCTCGAAGTACTCGAAGTACGCTCGTTGGCCTGTCCAGCGATACTCGACAAAGGGCGAGCAATAATCGAAGGAG
GTTTCCGACGATTAACCGTGCAGCATATGACAGAAAGACTTGAGACTATCGTTGGGAATGAGCGATCAGCTTGAAACA
ACCATTTGCTCTTGCGGCAGCAGCAACGAGGTTTACAAGCATGCGAAACGTTTGGGATACGGGGAACACGACGCTCGG
CGGTTTACATCAGGGCCAGGTTCTAACCGGGGCTAACAAATCGAACGGGCTTTTGCTATAAGATATTTATTGCAATATCTG
ACGTTGTTCTCCCGTCTCTCGACCGTCTGCGTGACCAAGAACGTATAAACTAGGGAGAATATATAAATAGAAAAGATTTA
GCGAAAAACAAAAAAACAGGAGAGGAATGATGATGATAATGAAGGACGATGTCAAAGCCGTAAGGAAGAAAAACAAGA
AAAACTAGGAAAAAGAACAAGAAGAAAGAAAGG

>CL753Contig1|beta-galactosidase-like

TCAGTGAGTCCAAAGTCACTTGGACAACGTGCGCAGAGGGAACGGTTGTGACCTAATGGTTTCCATTGCTTTATTCCTGAG
CACAAGATCGAAGTGAAGCAGCCATGTGGAAGTATTGCATTTTGTGTTTAGCTATTGCATCTCGGCATTAGAAACCATC
TCTTTCCCAGATAATGACGATAGTCGAGCGTTGGGAAACTATGGATTGCAAGTTGATCATAAAAACAATCAGTTTTTACT
CGACGGTAAACCGTTTCAAGTATGTTTCTGGAAGCTTCCACTATTTCCGCACCCACGACAGTACTGGCGAGATAGATTGC
GAAAAATGAGGGCAGCCGGCTGAATGCAGTATCTACTTACGTGAGTGGAGTCTTCAACCTAACGTCAACACGCTGG
GAATGGTCTGGTGAGGCAGATGTCGTGCAATTCATTAGAATCGCACAAAGAGGAGGATCTACTGGTCTTTACGGCCTGG
TCCTTACATATGTGCCGAAAGGAATTTGGGTGGCCTGCCACCTTGGCTGATGACTCTTGACCGGATATAAAAATGCGAA
CGAACGACACCCGCTACATGCAATATGTCGAAGTATATTTACGAGAACTATTGATAAGAATGGAACCGCTTCTGAGAGGC
AATGGAGGTCCGATAATAATGGTCCAGATACGAAAAACGAATAACGGAAGTTTCCATGCGTGTGACGCACCTTACAAAGC
AAGTCTCTTCAACATTATCAAAAGATATGTTGGAAGTAAAGCACTATTGTATACAACCGATGGCTCATCTTTATCGATGT
TACGATGTGGCTATGTCCCTGGGGCATATGCGCACTGTTGACTTCGGGAACTAGTGGGAATCTCACTCGGAACCTTTGAAATA
ATGCGGCAAAATTCAGCCAACGGGCCCTTTAGTCAACTCAGAGTTTTATCCAGGATGGTTGACTCACTGGGAGGAACCGTT
CCAAAGAGTTAGTACAGCAAATGTTGTCCGAGTGTCTGACCAAATGCTTGCTTTAGGTGCATCGGTAACATATACATGT
TTTACGGCGGTACAAATTTTCGATTTACATCAGGTGCAACGGGCCTCAGAACTACAGTCCCGAGTTGACATCTACGAC
TACGATGCACCGCTTACTGAAGCGGGTGACCCGACGGATAAATACTTCGCGATTCTGGAAGTATAGGCAAGTATCTCCC
TCTAACAAATCTTTGCTGCCAAATGTCGCACCGAAGGGGAATTACGGTCCAGTTATTTTGCAACCGATTGTAACAACTGT
TCGATCCACTTGCAAGACAATCGATGGCTTCGGTCAGCGGAAATACAAAGAGGCACCGACATTTGAACACCTCGGAATT
GCTACCATCTGGTGCTTTACGAACTTTTTTGCCAAACTTCCAAAGAAATCTTCAATCCTTAATGCGTTTACAATGGA
TCGAGGTCTCGTTTACCTAGACTCGAATCTCGTGGAATGACGTCTCGGATTGCGGAGGTGTACAGCGTTGCCCTTGAAA
AACCTTCCGGAACAGTCTCCAGATTCTCGTTGAGAATCAAGGTCATTTGAATTTTGGCTAATATCACCGAAGATTGGAA
GGGCTTGCTGAACTCAAATCTTGACAGCATTCCTACTGTATTCATGGAATGTTACGGGATTGCAATTGAAAGACATCGAAC
CACTCAAAAATTTGAATAATAGTATCACAGTAGATTCCGGAATTTCTCAAAACGAGTCCAATTTTTCTACTGGGCAATTT
ACCGTCACTGGCAAGCCCTAGATACTTTATCTGATACTACTGGTGGGGAAAAGCGTTGCTTCATAAACGGCTACAA
TCTTGATGATATTGGCCTCGAGCTGGAACCAAAATGACCTTTACGTACCATCCGCTTACTTGAAAAGCGGGGATAATG
AACTCATTATTCTCGAACTCGAGTTTTTGCCATCAACGAAAAGAAATGAAGTTGCAAGATACGGCAAAATATTGGATAAAA
TTGCCAGTTGAACTTTCTACGAAAAATTTTAACTTGAAATTACTTGTGAATGGAATGGAGTTTGTTCAGAATCAT
CAACACGTAATCGACAGTTTCGATCAACTATATTTGTCCAAAGAGGTCTAGCCTACT

>CL7540Contig1|Apolipoporphins [Harpegnathos saltator]

AATATTGATCTCCGATCCGCTGCTGGATTCTGCTGGTGGACGCGATCGTCAAGGCTTTGACAGCGGTGAAGGAGCAAT
GCCCCGAATCGGCAGTGAAAGAGCAGCGCCGCCACCAAGTTTCGCGGAGCTCATAAAAGTCTCGGAGTGTCAAGCAAGAAC
GACATTCTGAGCGTTTACAATCGCGTCAAGTCCGGCGCTGGTTTCGACAAGAAATCCGACAAGAAAATTTCTCTGGATGC
TCTTTTCCGGACGGGAAGTGGCGAGGCGCCGAAGTAGCTGTGGAATTGATTAAGAGTACGAGATTTAGGCCTCGAGG
CACTCGCGTATTACGCCAGTTTGGCTCTCGTTGCCACGTCCATTTGCCGACCGTTACATCGGTGACGAGCCTCCTCGAG
CAATCGTCTGCTGCCGCGCATTGGTTACCTCGGAATTGGTCACGTAATCGGGAAATACTGCGACCAACACGAGTGCCACAA
CGTGCCCGAGGTCAAAGCAGCTCTGGGCAAGTTGCTGAGCAAAAGTTGATGGTGCGAACAATTCGACACGAGAGAAAAAGA
GAGCGTGGCGATCGCAGCTCTCAAGGGACTCGGCAACGCGAGATATCACGACAAACGACCGCCGAAAAAATCTCCAAAGT
CGTTACCGACAAAAAGTGAAAACCGCGTCAGGTCGCGGCCATCGAAGCTTTCCCTCGACTTGCTCGACCACATGGCA
AAACCNCTTCTCGACGTTTCNCGGCAACCGGGAAGAAGACACTGAGATCAGGATCAAGCTTATCTCGCTCTGGTACGTTGC
GTCGTGCCACAAGTCGCAAAGGCATAAAGCGTTCTTGACAAGGAACAGTGAACCAGGTC

>CL756Contig1|PREDICTED: uncharacterized protein C05D11.1-like [Nasonia vitripennis]

GATTGTTGTACAACAAAGACAGCAATCATTACAACACGAGCTTGTTACGACAGCATAAATTCCTTACGAAGATGGTGGAA
CGATTAAACACCGAAAAACGGACAGAAAGAAGTACTTGCAGAAATAGAATCGGTGAGGAAAAATTTTAAACAGCCCCAAAAAG
TATGACTCTGGCGATCGCCGTCAACGTGACAAACTAACGACCCAAGTACCTGACGTTTACGAACCTTGAGGCTCCTCA
AAGACTTTGACAACGAGAAAAAGCAGAAGCTCCACGTGACCAAGCGTGGGAGTTGATGAACAAACCCGAGCAAGTTCCA
GTCCAAGGATGTGTTTGGGTCTCGGTGGCATTGATTCCGCGTATTTTGTCAATGCACCAAGGCGATCGACGATTACGA
TCAACCGGACCTTTCGCGCTTGAACGTTTGTGTAATCTTGACAGTTGGAAGGTCCAATGTGGAAGCAAAATTCGTG
GACAGGGTTTGTGCTACAGTTACGACGTTTCTTGTAATTTGACGAAGGTCTCATGATTTGACCTTTTTCGGGGCTACC

mmc4.txt

AACATCGTCGGCTCTTACAAGGAAGCTAAAGCCATTGTGCGAAAATCATTTGAAAGACAACAAATGGGACCAACTATTGTA
CGAGTCTGCAAAGTCGTCGTTAATCTTCAAGATAATCGAGGAGGAGAAGAGCGTGGGTGACCTGGTATCTCAATCGTTGG
CTTCTTACTTCAAGAACGTTTTCTCAGCACTATAAAGCAAATGGTGCAACGAGTTTTACGCCGTTACGATCGATGATATG
AGTCGCGTGGCTGCCAAATATCTCAAGGATCTCTTCGACCCTAAAAATCTCACACTACGCTCGTGTGTACCCGATGAA
AGCTCCCGAAGTTGCAGAAGCTTTAAAAACATTCAATCACGATTTGAAGGTGTTTACTGGTTTGAAACGACGTATCTGA
GCGATTTGGTGATCCTGAGATTTTCGGGGATGTTGCCGTGCTCCGGCAGTTAACGAAACGGTATTTTGTCTAGCAACTTGCA
ACTTTTCCATTTTCCAAATGATATTTATATTAATAATGGCCTACGCGATTACNTCGACTTTCAAGTGCACACT

>CL75Contig1|dnaj homolog subfamily a member 1-like

AGAGAGCACGGTCTTACATACAGGTCTGGACCGTGCAAGAGCGCTTGCCACCACGTAACATCGACGTCCATTACGGC
ATTACCCGTTGGGAACTTTTCGAGAAACGGCGGTGTGCGGTACTTTGCCAGTTGCGAAAAGGTGCCACGTTTTATCGTAT
TCTAGAGTCTCGAGCGCGAACACTCACAGATACTTCTGTCCGAAAGCATTTCGGCAATCGTCGCTAGTTTGTGGAACTC
AAAGGATCGAGCACACGCTTTGACAAACACGTTTTGCACGAGCATATACGTATATACATATACATCCGTTGCTCGAAGGC
CCAGGCTCCAAACTGAGAAGAAGCTCCGCTTTGGAGAGTCGATGTCCATTTGAGGCAATCGGTGTGTCAATACGGCAACC
ATGGTGAAGAACACCATTTTATGACATATTGGGCGTTAAGCGTGGGTGCGATGACGAGGATCTGAAAAAGCCTACAG
AAAGTTGGCCCTCAAGTATCATCTCTGACAAAAATCCTAATGAAGGAGAAAAAGTTCAAACAAATTTACAAGCTTATGAAG
TTTTGTGCAACCCGGACAAAAAACGTATCTATGATCAGGGTGGCGAACAAGCTTTGAAAGAGGGTGGTATGGGAGGCGAT
TATTCTTCTCCGATGGACATATTCCAAATGTTCTTCGGCAACAGGAGGAAGGAACGCAGGGGGCAAGACGTTGTGCACCA
TCTTTCTGTGACGTTGGAAGAATTGTACAAGGGGACAGTGAGGAAATTTGGCTCTGGAGAAGAAGCTCATCTGTGATAAAT
GCGAAGGTGTGGGTGGGAAAAAGGATCGGTTCGAGCGCATGCCCGTTTGCCAAGGCTCCGGTATCCGAACGTTGGTCATAC
AACAGTATGGACCATCGATGGTTTCAGCATCTGCAACGTCCTGCACCGATTGCCGGGGACAAGGTGAACGTCATCC
CGAGATCGTGCAAACATTGCAACGGCAAAAAGACCATCAGAGAATAGAAAAATCTTGAATTTCATGTTGAC

>CL765Contig2|aldose reductase-like

CGGCCGACATGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGTTATCGTTGCGATTTGAGTCCTCAGTTATTCAAC
GTAATCGAGAACCCTGAACAACTAATCCAACAGTCAGCAAATTCACATTTGGTTAATTTTGAATTAAGCTTCTTCGTTA
AAAAATGGAATCTGTGAAATTTTATAATGGAAATAAGGCTCCAGCCTTGGTCTCGGCACGTGGAAATCAAAACCCGGC
GAAGTGGAACAGGCGGTAAAAGACGCGATCGACGTTGGCTACAGGCACATCGATTGTGCACCTGTTTATGGTAATGAAAA
GGAAATTGGTGCAGCCCTTACGGCGAAAAATATCGGAAGGTGTAATCAAACGCTCGGAAATCTTCATCAGAGCAAGCTCT
GGAATACGAAACATCGTCCGGAAGTTGTGCAATCCGCTTTGAAAAAACTCTCGAGGATCTCTGCATAGATCATATCGAT
CTTTACCTGATACATTGGCCGTTTCGCGTTCAAAGAGGGTGAAGAATTATTCCCAACCACCGCGAGCGGTGAAATTGAAAC
GATCGACATTGACTACGTCGAGACGTGGAATCGATGGAATAATCTGGTTGACAAGGGCCTCGCGAAGAATATCGGCATCA
GTAATTTCAACTCGAAACAGATCGATCGACTTCTTGCTAATTGTAGAATTAAGCCGTGACCAATCAAGTAGAATGTAT
CCTTTCCTGAGCCAAAGTTAAACTATCAGAGTTCTGTGCGTCCAAAGGAATAACTATAACAGCTTACAGTCTCTCGGTTT
GCCGGACAGGCCATGGGCCAAACCAGAAGATGCTTTGCTTCTCGAAGATCGTAAGATCAAATCGATCGATTAAAGTACA
AGAAACACCAGCTCAAGTCGTCCTACGTTACCAGCTCGAACGTGGCCACATCGTCATTCCAAATCTGTCTCAAAAAATC
GAATCCAAAGAAAACCTTCAACATCTTCAACTTCAAACCTCTCGTCTGAGGATGTCCAACAGATTACACCTTCGACTGCAAC
GGTAGAATTTGCAGCATGTCAAGCTCCGTGAAACACAAGTACTATCCTTTTCGAAAGGACGTGCAATTCTGATTGGGCCC
CAAAATCGATCTTCGTGCCAGCAACGGTGGAAAAATACGTCAACTTTTCTCAGGAACGGAAAAAAAACGTTTCGCTACT
TGTAACTTTGAACCTTATAGTGCAAGTCTCTGCCCTTTA

>CL775Contig2|serine hydroxymethyltransferase

TTGTGCGAGCAAGCAAAGTTGTTCAAGCCGAAAATCATAATCGCAGGAATCTCGTGTTACAGTAGATGTTTGGATTACAA
GCGTTTCCGTGAGATTGCGGACGAGAACGGTGCGTACTTGTTCAGCGACATGGCTCACATATCGGGATTGGTTGCTGCGG
GAGTTATTCCGAGTCCGTTTCGAGTACAGCGACGTCGTATCGACCACGACGCACAAAACGTTGCGAGGTCTCGGGCCGGC
GTTATTTTCTTCCGCAAGGGCTGAGGAAAAACGGAAAAACGAGAGAAAAATATGTACGACATTTGAGACGAGAATCAA
TCAAGCTGTTTCCCGGGGCTCCAGGGTGGACCGCAACACGCGATTGCCGAATCGCAACAGCCATGAAACAAAGCGA
AAAGCCAAGAATTTCATCGATTATCAAAAAACAAGTTGTGCGCAATGCACAAAAATTTGTGCAAGGCTTGCAGGAACGGGGC
TACAAAAATTTCTACCGACGGTACGGACGTGCATTTGGTGCTCGTGGACCTCCGCAACACCGGGATTACCGGATCCAAAGC
CGAACGCATTCTCGAGGACATTTTCGATCGCTTGCAACAAAAATACCGTGCCCGGAGACAAAAGCGCTCTCAATCCGAGCG
GCATAAGGCTCGGAACCCCGCGTTGACGACGCGGGGTCTACGGGAGAAAGATATCGAACGAGTGGTCGATTTTCATTAT
CGTGGCTTGCTCCTGTCGCAAGGAGTCACTTCCAAATCAGGCCCCAGCTCTGAGAGTATAAAAAAGTCCCTCGACACG
ACGAGGAGATTTCGAGGCAAGTCTGCTGCCCTCCGAGGCGAGGTGGAAGCGTTTTCCAAACAGTTTAAACTTCCGGGACTC
GGGGGAATACTGAACATTTGATTTTTGGTAGAAAAATATCAAGTTTGAACGTTGAGATTTAACGAAAAATAACGTTTTCT
TTTCTATTTTTCTATTTAATACTGAATTCTTGCCATTTTTCTGCTCATTTTGTATCAAGATCCCAA

>CL776-bisContig1|achain complex of erk2 with norathyriol

ATTTTCGTATCAGAATATAACCGAGTGTTCTCGTAGCTTATAATTCGGAGTTTAAATCGGTCCGGTGGCTGAGTTTATTGG
TGTTGTAGCGTAGCAGCTCTGGTTTAGGTTCGAGTTGCAGATTGCAGATTTTTATCTGTAAAATAGTTGTTAAAATGGCGA
GCGAAGGTTTCGGCCAGCGTTATTCCAAGAGCTGAAGTGGTGCCTGGACAGGTGTTTCGAGGTTGGTCCGCGTTACACCAAT
TTAGCATACATGGGCGAGGGGCATATGGAATGGTTGTATCCGCTTACGACAATGTGACCAAGACAAAAGTAGCCATAAA
GAAAAATATCTCCTTTTCGAGCATCAAACATACAGCCAAAGGACTCTGCGAGAAATCAAATACTGACCAGATTCAAGCACG
AGAATATTATCGATATACGAGATATATTAAGAGCACCTTCGATCGATCAAATGAGAGATGTGTATATTCTGTTCAAGTGT
GATGGAACGGATCTCTATAAGTTGTTGAAAACTCAGGCTATCAGTAACGACCATATGTTACTTCTGTATCAATAAC
TTCTGGAGCTAAAAGTATATACACTCTGCAAAATGTGTTGCACAGAGACCTTAAGCCCAGACATCTTCTTTTGAATACGAC
GTGTGATCTCAAGATTTGTGACTTTGGTCTGGCGCGAGTTGCCGATCTGACCACAATCATGCCGTTTTCTCACGGAAT
ACGTCGCTACACGGTGGTACAGGGCGCCAGAAATAATGCTCAATTCAAAGGGCTATACAAAATCCATAGATATATGGTCG
GTGGGTTGTATTCTCGCTGAAATGCTGTCCCGGCGAGCAATATTTCTGGAAGCATTATCTTGATCAACTTAATCACAT
TCTTGGAGTTCTAGGATCGCCATCGTCCGAAGATCTTGAATGTATAATCAACGAGAAGGCACGAGGTTACCTCCAATC
CTTGGCCTTAAAGCCAAAAGTCCCGTGGACAAGTTTATCCCAAAGGCAGAGTCTCGGGCTCTTGATCTTCTCGATAAAA
GTTGACCTTTAATCCGAACAAAGAATTGTGGTCAAGATTGCCTTGGCACATCCATATCTAGAACAGTATTATGATCCAG
CTGACGAGCCAGTGGCGGAAGAGCCTTTCAAATTTGACATGGAGTTGGATAATCTGCCGAAAGAGATTCTCAAACTTAC

ATATTTGAAGAAACGGCACACTTTTCGCACAAACAAGAAATTCATCTAGTTTTCTGGAAC TTGTACAACGACGGATGA
CTCGACTTCGAGAGGAGAAGAAAATATGTGACACCGCAAAACGGAAAGAATTACGAGATTGATCAAAGGAGCACGCCAA
GTTCTGCAAATACGAGACGCGGAAT

ATGGTCACCAATTGGGTACTTATTTGGCTACGTTCCACGGTCAGGGAGTCGCTCTTTGGGGAGGACCGAAGTTCAAAAAA
TTGCTCGGTTTCAGCCAGAGAGCCGTCGAGTGC GTTGACTTTTACCCTGCGAACGCTATCTCGTAACCTATACTCCACGA
TCGGACGGCGGCCCCGACGCCAAGCGGCTAGTAATATGGGACATACTCACCGGCCTGGAGAAACGATCCTTCATCCCCTG
ATTGCTCTTCCAGTTGGCCGATTTTCCGCTGGTCTCACGATGACAAATACTTGGCGTGTATGGACGAGGATGTCCTCAGT
GTTTATGAGACACCTTCTTTTCGTTTTGCTGGATAAGAAAAGTATCAAGATTCTTGGAAATTAGGGATTTTCA GTTGGTCACC
GAGCGACAATATTCTTGCCATATTGGGTCCCCGAGTACAAGGATGTACCGGCAAGAGTAACACTCCTCGAGATTCTTAGCC
GCACGGTAGTTTCGTAAACAAAAACCTTTTCAACGTCGCAGACTGCAGGATCTTTCTGGCAAAAAATCCGGAGATTATCTCTGC
GTCAAGGTTCAGCCGTTTTTGCCAAAGGAGGAAAGAGAAAACCGAACCAAAAAATATACCACTTTTCACTGGATTAGTATTCAGGG
TATGCTCTTCAAACTTCGAGATCTTTTATTATGAGAGAGAAACAAATTTCCCGTAAGACAGCGTTGAAATGAAGGAACCTAT
TCATGCTTCGCGTGGAAACCCNTTGAACAA

TTCGGTTGACCGGTGGCGAGGTTTACAAATACACGTAATTTTCAGGCGGACACGGAGGGTGAGCGACTGGTTACCGACATAG
TTAACAAACATAAGCAGGCCGATAGCGTTTCGACGCGGTAATGCGAGTCCGCACGTCTACCGGAGTCCGAGCGACCGATTTT
TACGGCCACTTTTTTCATGTCGAACACGACCGACATGGAATTGGCGAGCATAGACTGTAACAAAGCGGTTCGCATACAGGT
CAAGCACGACGACAAGCTCAACGAGGACGAGGGGGTGACGTGCAAGCGGCGCTGTTGTACACTTCGTGCGGAGGAGTAC
GAAGGCTTCGGATAATAAATCTGAGTCTGCGGACGTCTCCCAAATGGCGGAGCTGTACAGAGCTTTCGATCTCGACGCG
ATTATCTAATTTCTTTTCCAAGCAGAGCGTCGTACAAACTCATCGAATCGTCGCCGAAGAGCGTCAAGGATGCTCTGGTC
GCTCGATCGGCTACTATACTCGCCGTTACAGAAAACATTGCGCATCACCTCCAGCGCCGGACAACCTCATACTTCGGGA
ATGCATGAAATTGCCTCCACAT

TTTTATCGGGATACAGTTTAAAGATTTCTGTGCTGGTCGCAGCCGATCAGACGACCGCGCAGTCGATTATGGTGATGAAAA
CCGACGAGGAAAAAATCCACAAAATTTCCGACAAGCTCGTCATGGCAGTTTTCGGAGAGTCCGGCGATACGACTCAATTT
TCCGAATACATTGCCAAGAATATTCAGCTGTACAAAATGCGAAATGGCTACGAATTGTCACCGAAGGCTGCGGCCAGCTA
CACAAGGCGAAATCTTGCCGACTATCTGCGTACGCGAACTCCCTATTACGTCAACCTTTTGATGGCTGGACACGACGACG
AAACAGGGCCTCAACTTTTCTTCATCGATTACATGGCGTCCTGCGTCAAAGTCCCTTACGGCGCTCATGGCTACGGCGGC
TTCTTCTCTCTGAGTATCCTCGACAGATATTACAAACCGAACATGAGCGAAGCAGACGCGTACATTCTGATGAAGAAATG
CGTTCGTGAGATTCACAAGCGACTCATAGTTAATCTGCCAAATTTCAAAGTGCAGAAAGTCTCTAAAGACGGTATAGTAA
CTTTGCCATCGATCACGGCTCAAAAATTTGGCTGTGGAGGACGCAGCTAAGGCATAAAACATTCTGTTGGAATCGAGCTTTG
TGCGCTTTTTTGAAAAATTAGATAATCACTTATTGAATAAATAAAACAAACTTAGTAAAT

[illegible]

GTGGCTTCGAGATACTCGCGTCGACTTTGGCGCCGCGGAATATCTATTGGATTGTGCTCGGTTGGCCAGCGCAAACGGA
AAAAGCTCTTTATCGTGTGGACCCTCTCCCACTTATCGCGCTCCCACTGAACGAACACGCCAAACGTAATTGTCTGGAA
TCCTATCCACTTAGTGGCTAAATTGCAGTCGAAGTCGAAACAACATCGAAAACACTGTGTGAGAACCCTAAACATGGATT
ACACGAGATTTTTTCAGCAGAAGAACGGCCAGACGACGTGAAATTTGATTTCGAAAGTTTGCGGAAATGCGCTTTAAACAT
CCACAGTCCATCTCACTGGCTGTGGAATGCCAAATCCTGAGACATTTCCCGTCACAGCAATATCAATCACTTACAAG
AAGACATCACTAAGAAATTTTTCTCTCCCGGATATAAACACTTCTCTTCAGTATGGACCTTCGAAGGACACGCTCCTCTG
CTGGCAAAGTATCGAGAATTCAGCAAAAATGGCATAGTCTCTCCCGCCAAGGATTTGGACATTGTATTATGCCTGGCTC
GCAGGAAGGCTTCTGCAAATCTTTGATCTCTTCATGAACGAAGGTGACCCCATCATGGTTCAAGTACCAACTTATACAG
CAACGCTTGGTGCGATTTCGTCCACTGGACCCTGACTTTATTGGTATCCAACAAGATAGCGATTGGTATTATTTCCCGAAGAA
ATAGAAAAATTTTCAGAAATCGAGTTGAAACGAACAAGACTTTACCAAACTGCTGTACGTGAATCCGATTGGTGCTAA
TCCAACCGGTACAGTCTCACTTACGAGAGAAAACTTCGAGTTTACGAACCTTGAAGGAAATTTGATTTTCTTATCATCG
AGGATGATCCCTATTATTTTGTCCAATTTCATGGGCAAGCAGCCAGCTTCTCTCTCTCGATGGACACCGAAGGTGAGTT
ATACGTCTCGATTCTTTTCAGTAAAAATATTGAGCGGTGGTATTTCGATTGGGGCTGTGACAGCTCATAAAGATGTTATCAA
GCCCTCATCATTCAGATCGAAAATACAGTTTACATCCGTCAGTCTTCTCAGGTAATGAGCGTTACAACCTTTTCGAGA
TCTGTAGCCCCCGAGAAATTCGAACAACACTTCAAAAGACATTCAAAACTATTACGGCAGAAGCAGACCTCATGTGGC
TGCAGTAGAAAAACATTTAACTGGTCTAGCCAAGTGGACCGTTCCGAAGGCTGGTATGTTCTGTGGATTGAAGTCCAG
GAATCGAGAGTGCATTGAATTTGGCAATGCAGAAACTAGCGCCCATAGGAATTTTCGTTATACCCGGTAACGCTTTTACT

mmc4.txt

TGGGACACTGATAAGTTGAGCCAACACTTTTCGACTTTTCATACAGCTTTGCATCGGCCGATGAAGTTGATAAGGCTCTTTC
GATTATGTCGAGACTGATCAAAGAAGAAGTTCACTCAAAGAAGTAGACTGGTCGCATCGAGTGCTTCACGAGTTTCCAAA
AAACGAATCCGAACCTGCCGCATTACGGAATATATGGAAACAATAAAAAATAATCGCTAAGCAATTATCCAATTATTTTCG
AGCTGTTTGTGTAACAATTTGGTACAGGCCTCCCGCACCT

>CL788Contig1|nuclear autoantigenic sperm protein

GATGCTGAGGAAGAAGACGATGACGAGAACGAGGAGGACAAAAACAAGTGAGGCCGATGGAAAAGAGGCGGTAGAAGGTG
GCGATGCTGGCGAGTCCGAAGAAAAGAAAAGTGAAGAGAAAAAATCGAGCTCTGAGAATGAAAAAGCCAAGGTAAGC
AGTCCGAGCGATGAGAAGAAAAGAAAAATGCGACAGTCGAAACAAAAACAGATGACAAGAAGATCGAAGAAGCAAAG
AAAGAAGTTTCGAGTAGCAGCGAAGCAACCCAAAGAGAATAGTGTGCGCCGGAACGAGCGCGGATGCCAAAAAGAACGGTGT
CGAGAAAGGAGAATCCAGCAATTGCAACGGCACAGCAGCTGGCACTTCATCAGGAAACGTCGATGATGGAGAGGATGTAA
ACAAAGAGGACGAGGAGGAAGATCCAGGTCTGGTATCGACCTACAAGTAGCTTGGGAAGTTCTTGAAGTCTGCTAAAATA
GTCTTACCAAACGTTGGCGAATCTGGCCTCAAACATTTGGCCGAAACTCACAGATTGCTCGGCGAAGTTGCAATGGAAAG
TGACAATCCACAAGGCGCCATTGCTGACCTCGAAGGAGCCCTCGTTTTACTAGAAAAATTTAGCCCGTCGAGCCACGTGC
TCTCGCCGATATTGCTACCAACTCGGCCTCGCTCACTATTGTCAAATGATTTTCGACGCGATATCAACAATTTACCG
AAGCTACTAATCTATTGGAAAAGAGAATCAAACAGTTGGAAACAACCCGAACCCATCGTCAAAAGCGACGATCCCTTC
TATTCGATCGAGGGCGAAATTCGCGAACTCCGTGAAGTGTTCCTGCGATACAAGAAAAAATCGCTGATATGAAGGATTT
CAAACAAGAAGCCTGTGCGCTGCTTATCGAGGGAATAAAGAACAAGTCTGCGGATGGTTGCACCAACAACGCTGCCG
CGTCTCTTCTTCTTCTGTCGACTGTTCAAACGGCAGTGGACCCTCGAGCTCTTCTCTCTCCGACCAAGCTTCCGCCTGT
CCGTTGACCAAAACAGCGAGCGATATTTCCCACTTGATCAGAAAGAAACGCAAAACAGATAACGAAACGGAGGAACC
GACATACTCGCTTGTAAAAAATTGACGCCCTGAAAACCCAGAGAAATCAAACGAAACACGATATTGAAGTTTGCATCA
TTGGTAAACAACAAAATATTTATTCATCAGTGCCCAAATCCGTTTGCTACTTGAAGCTAATAATTTTGGGAATCTCAA
GAATCGAAAGATTTCATCAATTAATGAA

>CL7Contig4|arginine kinase

GCTTAACGGAGGCCAGTACAAGGAGATGGAGGACAAAGTATCGGGAACATTGTCCGGATTGGACGGAGAGCTCAAGGGA
ACATTCTACCCATTGACGGGAATGAGCAAGGAGGTGCAGCAAAAGCTGATCGACGATCATTTCTCTTCAAGGAGGGTGA
CCGTTTCTTGCAAGCGGCGAACGCCTGCCGTTTCTGGCCGACCGGACGTGGAATTTACCACAACGATGCCAAGACTTTCC
TCGTCTGGTGAACGAGGAAGATCACTTGCGTATTATTTCAATGCAATGGGTGGAGATCTTGGACAGGTTTACCGACGT
CTCGTAAGTGTGTGAATGACATTGAGAAGAGAATACCATTTTCGCACAACGACCGCTTTGGATTCTTGACTTTCTGCCC
GACGAATCTCGGCACAACGGTGCCTGCTTCCGTCCACATTAAGGTCCCGAAACTCGCTGCGAACAAGGCCAAGCTCGAGG
AGTTCGCTTCCAAGTTCAATCTCCAAGTTCTGGGCACACGCGGTGAGCACACCCGAAGCCGAAGGTGGTATTTACGACATT
TCCAACAAGCGCCGTCTCGTTTACCGAGTACAAGCCGTTAAGGAGATGCACGACGGAATCGCCGAGCTCATCAAGAT
CGAGAAAGAACTGTAAAAAACCTTACCGACTCTCGTATCACGATTCTCTTCAAAAACCTCCCTCTTCTCCCTCAACCAAC
AAACAACGATGATTTTTTCCAACACTCGAGTCATACTAATCCCTACATCAAAGTTTGACAAGTTCTTTTTAATAAGCGTA
TACCAAATAATAAATGTGAGGCAAAGAAGGTAAAACAAGAAAAACAATCGAGCAATTTAGGAGGATTGTAAAGAAGCGAG
CGAGCGAGGACCTTGAGCCAACCGAGAATCGAGCATTGAAGAGAGCAAAGCCCTTTGCTTTCGTATTAAAAACGTTGTT
TATCGTCAGTATTTTTCTTCTTTTGTGCTTTCTTCTCCTCATTACACTCTACGCAATTCTCCGTTATTTTATCAAAAAAC
GATTGTTATTTTTTTCTCTCTGCCCCTTGCTTTCTTTCTTTTTTTTGTGCTAGCGT

>CL8009Contig1|heterogeneous nuclear ribonucleoprotein 27c-like

TTCTGTTCACGAAGTCTCTCCGCGGTGCTCGGTTTATTGTGGGAAGCCATTAGCCTCTGTGTCCGCGTATTCGCATCGT
GCCATATTAGCCACGCGCTCCCTCGAACTTGTGAGCTCGAAATAAATCTTGAAGAAAATACGAACGTACGCAACTG
ATCGCGGTTTTATTTTTAAGGTGATAGAAAATATTATGAGAGTTAAGACCGAAATGGACGACGACGAAAAGGGAAAACTGT
TTGTGCGTGGTTTGTATGGGAAACGACTCAGGAGAATCTTCAGCGCTATTTCAAGTCTGTTACGGCGATGTAATAGACTGC
GTAGTGAAGAAGACGAGTCTGGTCGACGAGAGGATTTGGGTTCTGAACGTTACGCGACCCGGCGAAGCTGTGAG
CTGCTGCAAGAACTCCGCAACCAATTGGACGCGCGGACGATTGACCCGAAACCGTGCAACCTCGCACTCTGCAAAAGC
CAAAACGAAGCGGAGGCTTTCCGAAGTTTCTCGGCGGTTTACCGAGCAACGTACCCGAGACCGATATGCGAACGTAC
TTCACTCGTTACGGCAAAGTAATGGAGGTCTGATGAATGTACGATCAGGAGAAAAGAAATCCAGAGGATTTGGCTTTCTC
AGCTTTGAGGACGAAGACGCTGTGATCGATGTGTTGCCGAGCATTTCGTCTGACTCAATGGAACAGGTTGAGATAAAA
CGCGCAGAGCCAGTGACTCGTCGAGCAAAATGAACGACGGACATCAAGGACAATGGGGTCCACCTCAGCAAGGTGGACC
GCCGATGGGATGT

>CL805Contig2|voltage-dependent anion-selective channel

TCCCAACGCGCAGAGCTCCCGAGCGAACCTCACACATTCGCCCCGGTCCATCGCTTTACGAAGAAAAAAGAAAAAATACA
AAATGGCTCTTCCACGTACGGTGATTTGGGAAAGAACGCCCGCGATGATTTGGCAAGGGTTATCACTTTGGGCTCTTG
AAATTGGACGTCAAGACCAAGACGGACTCGGGAGTTGAGTTTTCGAGCGGCGGAGTGTCCAACAGGACACCGGGATGGT
CGTCGGTACTCTGGAGACCAAGTACAAGATCAAGGAGTACGGATTGACCTTTGCCGAGAAGTGGAACACGGATAATCTCT
TGGGAACGGACATTACCATCGCGGACAAGCTCCCAAGGGTCTGAGCATCGTTACAGCTGCACGTTCTCTCCGAGAC
CGGGAGCAAGACTGGAAAACCTCAAGACAACGTACAAACACGAAAACGTTTTCTGCCACTGCTGATTTGACTTTGAGCTTGA
ACGCGGCCCCCTCTCGTCAACGCCACCGGAGTCGTTGGCTATCAAGGATGGCTGGCCGGTTATCAGGCCAGTTTTGATTCC
CAGCGGAACAAAATCACCAAGAACAACCTGGCTCTTGGTTTACAGCCTCTGACTTTGCGCTTACACCGCCGTCGACAA
TGGCCGCGAGTTACGCGGCTCGATCTATCAAGGTCAAGCCTGGACTCGAGGGAGCCATCAACCTCGCCTGGAACCTCA
GCAACAACGTGACGCGAGTTCCGCTCGGTTCCAAGTACGATCTCGATCAGCAGCCTGTTGAGGGCAAGGTCAACTCA
CAGTTGCAAACTCGTTTGGGATATCAGCAGAAACTCCGTGACGGAGTGACTCTGAGCCTTTCAACCAACATCGACGGCAA
GAACTTCGGTTTCGGGAGGTCACAAGATCGGTTTCTGCTCTCGATCTCGAGGCTTAAGCGTTTCGCGGACGGGACACGCAGAG
GAGGCGGGCGCAGAGAGAAAGAGAAAAAAGCGCAGCAGGAGAATTTTGGCTGAAAAAATGCGCCGATTGTCCGAGAG
AAAAAATGGAAAAAATAAAAGAGCGAACGGACGAAGGAATTTTCGAGTATTATCTCCGCGAAAAATGGCAAAAAACG
CAGGAAACGAAACGATTGGATCGTAGATAGTTTTACCCGTAAAAAATGCGAAACTAAAATGCAAGCGGGAGTTTCGAAAA
AGCGACACGAAAAATACGCGACCGG

>CL8129-biscontig1|PREDICTED: hypothetical protein LOC100113974 [Nasonia
vitripennis]

ATCCAGTCGTAATTTTCAGTTTCGTTTGTGCTTCCAACATGGCAGAACGCAAAACTCGTATATCAGGTCAAATGATGAC
TCGTTTTATGGGCCAAAACGTTGTGCTTGTGGAAATTTGACTAAAGTGGATCCCACAGGTGAATGTGTAGAAGTGACGA
CTTTTCGATAATGTA AAAAATCAACGCAACTCTTCCAACCTCGTTTGGAGGTTAATCCCGAAGGAATAATTGAAGTTTTCCGT
ATCGTCAAATCTAAAGGCACTATCCAAGCTGATCAATATGTACATTTTCTGCAGAGAATTCACCGATTTGATCCAAA
AGTTTACAACAATCTTTTGGTGATTATCATGCTCTGGGGCATAGAAAGTGGGATCTGAACCCTGAGGGTCAAAGACAAT
AACCCTGAGGAAGAGAGAGAGAGAGAGACATTTGTCTGGTGGTGCAGCACATTGACCGCATTTAATTTCTAAGTTGG
CAAACTTAGAAGGACCCATTTGGCGTGCTCCATAATAACGAGAGATAAATCAAGGAATCCATGTGTTATTTTGATA
CTGATTATTCTAACAAAGTAAAAAATTAATTGTACTTACATACGAAT

AAGTTTGTGCGGTATTCTTCGTGAGAGGAAAAATGAAGGGCAGCGGAATGCCCTCGTTAATATATTTTTATGTTCTCTCTGTATTTTACCAGTTGCTAATGCCGGTGGCCCTACTCTAGTGTTACTCGATAATCTAGCAATCAAAGAGACACATTCCATATTCTTCAAATCTTTGCAAGACAGAGATTACTCGCTGACATTCAAATTGGCAGATGACGCCAACTTAGTATTGTCAAAGTATGGCGAAATTTCTGTACAAACATTTGATAATATTCGCGCCTGGCGTGGAGGAATTTGGCGGAGCTTTGAACATCGAAGCGTAGACGAGATTTCTAGACAGCGAGGTGGAAACGTGTTAATCGCCGGTTCTGTCCAAAGCGGAGAGCTCTAAGAGAATTTGGCATCGGAATGTGGTTTCGAATGCGACGAGGAAGGCGCTTCGGTTATCGACCACATGAATTACGACTCCTCCGATGCCGGATACCATAACCACCATCGTTGCAGATCCGTCAAATCTCATTGACTCACCCGTATCGTCGGTGACAGAAATGTGCCCCGCTTCTCTATCGCGGCACCGGACTGATCGCCGATTCTGATAATCCTCTGGTCTTGAGACTGTTGACCGCTTCTAGCACCCGCATATTCTTACAATCCAAATCTTCGGTCAAAGAATATCCCCATGCCGTAGGCCAAAAATACTCTTCTCATTGCCGCTTGCAGGCACGAAACACGCTAGAGTTCTCTTCGCGATCATTTGACTCTTCGAGCAGGAAGCTTTACCAGTCTCTGTTCAACAACGCGCAAGGAGGACGAGTTCGAAAAATCTGGCAACGAGGAAGTCGCGAAATCCATTGCTCAATGGGCTTCAAGGAGAACGGTGTGATTCTGTGTCTTTCGGTTCATCACCAAGGATCGGTGAGCCACAGCCACCCCGGCATATACGATCATGGAAGACGTTGTTTACACCATAGAGGTCGAGAACTTTCCAACGACAAGTGGGTTCTTACGAGGCGAATGATTTGCAACTCGAATTCTGTGAGAAATCGATCCGTTCTGTTCTGATGACAATGAAGCATGTGGGCAACGGTCGTTACGAAGCAAAATTCAAGATTCCCGATGTGTACGGAGTCTATCAATTTAAGGTTGATTACACGAGGATCGGACTTACTCACTGTACAGTTCAACCCAAGTATCCGTTCTGTCGGTCCCAACACACTCAATACGAGATTTCATACCGAGCGCTTACCCTTACTACGTGAGTGCCTTCTCCATGATGGGCGGTGTTTTCTATTCTCGTCTGCTTCTCCTTATTACAGGAAATACAAGTCCAAGCCGAATGAGTTGGCATTTTTGTGTTGAAACAAAAAGACTCGATTCAACATAAAACGTTTAAATTGTGGGCTGAAATAAATAATATT

ACGTCCAAAGACCTCGGCGGCCTTCGCCAGCCGCTTCTCGACCCGGTGCTCCTGCCGCAACTTCCTTCACTGGTTTTCC
CGGCGGT CAGGACATTCTGTCTCTTCTATTTCGCGCCGTTATCGCAAAACGCCTCAGCGAAAGCAAACAAACGATTCTC
ACTATTATCTGACCGTCGACATAAAAAATGGACAGTGCTCTTGCTATGAGAGCGCAGTTCAATAAAATGCTCGAAAAGGAA
AAAGTCAAGCTCAGCGTTAATGACATTATTATCAAGGGAATGGCAATGGCGTGCAAGAAAGTTCCTGAGGGCAACAGCGC
TTGGCTCGGTGACGTCATTAGACAATACGATCACGTGGATGTCAGCGTTGCCGTTAGCACGGAAAAATGGATTAATAACGC
CGATCGTATTCGCCCGAGACGCCAAAAAGAAAAAGTCGAGATAAGTAAGAATGTCAAGGAGTTGGCAACACGAGCCAGAGA
AGGAAAGCTCCAGCCTCAAGAGTTC AAGGTGGTACCATCACAGTTTCCAAC TTGGAATGTTGGATCAAAACTTT CGGCCA
TAATCAATCCACCCAATCGATCTTCTCGCTGTTGTGGAAC TGAGACGA

TTTTGGACATCGACATACAATTTCAGTGATTACAGGCGCGGCGGAGGAGGTGCGGGAGGTGCGGGGGCCGCGGAGCTCGT
GGCGATCGCCGAATCAGCGTGGCTTCGGTGGAATCGTGGAACACCGCGTGATGCTGCTCCAGGCGAGCCCCGCACCGG
AGGATTGCCCGATACCGCGAAGCCGGTATCTCAAGTCGAAACAAAAGTCGCCTCGCGGACGTCAAAACGCCCCGAAGGTGCG
ATGACGAGCAGATTTCCTTCATTGGTTAGACGAGACGCGCCGAATCGTCCTTTCGTGTCCTGGCAACACGGGAA
TAAACGAGCAAGCAAAAAACCAGACGAAACGAGGAGGAAGAAAAAAGGAAGAAGAAAAACAGAAGCAAATACAAACAAACA
ACTAAAGTCCCACTACCACCAGCAAGCCATCATCAGTTGTATCACATACCAGCTATTATTACTTGTACTATTCTACTACT
CTACTACTACTACTTCTACTACTACTACAAAAAGAATGAAAAAACA AAAAGAGAAAAA AAAAACACACACACA
CAAAACAAAACGGAGTCTATATTGATCAAGAGGCTCGAAGCATCGATAATAATCAGATTATTGCGTAAATACAGTACGCCA
TTGCAGAATTGAAATATCACTGAGACTAAAAAACCAAGAAAAACCGGATAAACGAAACAAAGGAAAGAAAAAGAAATGGA
AAAAAGAGATTAAGACAAAAAGGAGCGACTCTCAAAGTCCCGAAACGTAAAAACGATAACAAAATGAAAGAAAGCGTTGCG
CGAATAACTAGACACACCGGAAATAACGCGACGTCCAACCGTGTACTTTTATCTTGTGTCTATTTTTTTTTATTTTACCCCT
TCGAATTGAGCCGAAATTATTTTTTTTCGTACAATCTTTGTGATGCAAATTCGAAAATTATTGTACCGAGATGAACGA
AGTG

AGACGAAGAAGGGGAAAGAAGAAAAACGACATTTTGGCAGATCGGTGGAGATCGCGACGGCATTAACTTTCTGTTGCTG
ATGCCGCTTGTGCAAAAAGCAGAGCTCAGCCGTTTCAAGAAATCCAGATCTTGATCGACCAATTGCTAAACAAGCAGCAGGA
CAATCCTTCGGAGCATTCCGAGTGGACAGAGGGTCTGACAGACCCGGTAATCAAGCTGAAGAAGCAATTGGCAGAGAAAG
AAAAAGCCCTGAGCGAGGAACACGAAGCGAGCGCCACTTTCCAAAACAAATTGAAAGAATTTCGCGCCGAATTGAACGCG
GAAAGATCCCGATCCACTGGCCAAGTAAAAACAGCTCGAAGAAGCTCTAAACGCCAAAAATAACCGAAGCCCCAAACCCTCC
ACACTCGCCATGCAACACATCTCTGAATCTCACGCCGCCGAGAAACCAAGGATTGCTCGACAAATCGAACAGCTCCAGG
CTAAAGTCAACGAAGATGCGGCCATCTCACCAAAAATGCAAGAAGAAGCAGGAGCAGACTCAAGGCCAAATGCAGACAAGAA
CTCATCGCTCAGAGAAAAACAACTCGAAGTTCAATTTCGACAAATGCGAGAAAACGAAAATGCTCTCAAAGGACAATTGGC
CCAGAAAACATATAGAAATTCAGGAACTTCAGAATGTTAATGTACCCGTGACCAAGAATTACAAGCCACTTGCG

AGTCATCCATCGCGCAACAGCGACACTCGCCACAAGTATCACGAGCGTAATTGCGCATTTATTTAAACAATCACTGTGTC
ATATTGAATAAAAGCCTAATTATGGGTTTAGTAAGAGTTGTTACAGGATGATAATCAATTTCTAGTGAATTAGCTAGCGC
CGGGACGAAGCTCGTCGTCGTTTGATTTCACTGCAACATGGTGGGCCCTTGTGAGAGAATAGCTCCGGTATTTGAGCAAC
TGTCGGGAAAAATACCGAAACGCCGTTCTCTGAAAGTCGATGAGACAAGTCGCGCGAGACTGCCGCTCCCAAGGAGTG
AGCGCGATGCCGACGTTTCATATTTCTATCGAAACAGAACGAAGCTCGGCTCTTGTCAAGGCGCGGATTCAACCGCGTTGGA

mmc4.txt

AAACAAGATCGTCCAGTCTTTACGGCTCGGGGACGGAGACGAGACCCGTCGCCGGACATATGGATCTATCGA
CTTTTCATCGCGAAAGGGGAATGCGAATGTCTCAACGAGTCTGACGACCATTGTTTCGAGCATTGTCTTACATCGGAGGGT
GGATATTTGACAGCGATTGCGACGAGCAGCTCATTATTTCTTTGGCTTTTCGACAACCGGTCAAATCCATTCTCTCAA
ATTCAAAGCTCCTGCTGACAAGGGACCAAAGAATATTAATTTGTTTCATCAATCAACCGAGAACGATTGATTTGACGCGG
CGGTCTCAAACACGAGCGTCCAGGATCTAACATTAACCTCCAAGGACTTGGAGGAAGGGAATCCGGTGGCTCTGCGTTAC
GTAAAGTTCCAAAACGTGCTGAACCTGCAGATCTTCGTGAAGGACAATCAGTGCGACGCGCAAACGACCCAGGTGATCA
TTTGGTTGTGATAGTTTCGCCGATATCGACAACCAACATGGACGATTTTAAGAGAGTCTGAGGAAAAGGGGCGAAAGTCA
CTGAGCTCGAATAACTCGTCGAAATAAAAAATTCAGCAAATGTAACGACCGTTGTGTTTTTTTACCGTACGAGAAAAAA
AACACAACACGCGTGGAATACGAACAACGTAAATTTGACGAAACATTTTCAGCAGCATTTTTGTTGTCCACCAATTTTT
CTACCGACATTTTTCTTACGGTTGCCTTTCAAATCGTTTCGATCATTATTTTCGACTCTTCACCATCCTTACGACTTA
TCCGAGACATCGATGTGCAAGCGGAACGAAAACCGAGCAGTGTAATTAACGCAATTCGATCCATGTGCCG

>CL820Contig1|tricarboxylate transport mitochondrial

GTTTCAGAGGATTTTTCCATGGCGTGGGACTCATCGTCAAGGAGCATGGATTGAAAGGAGTTTATCAGGGAGTTGTGCCAA
CAATAATGAAACAGGTTCTAATCAAGCCATTCTGTTCTTCTGTTTGGAAACGATGAAGGACTGGTATAGAGGCGGCGAC
AATAATAAGGCGGTACCAAACCTTTGTCGTTGGTGTTCGTTGCTTGGCTGGCGCGGCATCTGGTTTTTGGTAACACGC
CGATCGACGTTGTGAAAACGAGATGCAGGGTTTGAAGCTTCGAAATACAAGGGAAGCGTCGACTGTGCTGTACAAATA
TGGAAGAACGAGGGACCGAGCAGCTTTTTACAAAGGAACCGTACCACGATTAGGAAGAGTTTGTCTCGACGTCGCAATAAC
TTTCATGATTTACGACTCGTTTATGGATCTCTTTAACAAATTTTTGGCCTTTGAGGGATCCTCTCGAGCAAGCAACATAT
TTTCATAGTGTCTGACGAGCGACATTTTCATGTACATATGAAAGAAATTTGTATACACACGCTCTATCGGAGAATATACAC
ACATAGCTATATATACACACACAAACATAAAACCTCCGAGACAAGATCGAGAAATGGAGTCGATTACGTGCAACGCA
GGCTGTTCTCGAGTTACGCGACGGAACGTTGAGTATCGATCGAAAAATCCTACAGTCAGGACTCCCTGCAGTTACTGAGA
GCCTAAGAAAAAATCTGACTGAAAGTTTCATAGTATTAAGTCCCCGAGATTCCAATTTTATCAGGGTAAAAACTTTCCA
ATGCATTTATCGGAATAGTTTCGATTTTTCGATGAGTTCCATAGAAAAACGAAGGGAGTAACGAATCGAACGAATCTCTG
GCGCTTAATTAATTCGAAACAACGAGGATCGCGAGAAAAATCGAGTTTTCTCGCTTTTTTCAAAAAATCCGGCAAATAAAA
AAAAATGCTATGACTTTTTTGTGGGTTTCGTGAAAAATAATGCGATTCCGATCCACCAAGAATTATCGGTGTATCGAAAT
TCGGAGCAACGACGTTTTAAAAGCAATTTTTTACGAGTTGGATCGAATTTTTTCTAAACTTTGGAATCGGATCGTGAAAG
CAATTTTTCTAAATTTATGATACGTGTGGGAGGAATTTAAAGGAATGTGCAATCTGTTTAGATTTACTGGACCAGCCCGT
AGACCTTGTGGTTCGAAATTTTGAAGGAAACGTCGAAATCCACGATGGGAAATGAAAGCGAAGCCTAAAAAGGAAAGAAA
GTGAAAAAAAATCAAGTTACAGAGAGCGAGACTTGGTCGTTTTTGTAAAGGAAATTTTTCATATGCTCAATGTGCCTACGA
ATGCATATTGATCGAATTTCTCGGAGTTGAATCGAGTGCCACTGTGTTTTAGAGTAAATGTTATAGTTCTGTGTTAGGAAAA
CTGGAAATATCGTCGCCCAATGATGTCTGAGAAATGATATATCGAAATTAATATATTGATGAGCCAATGTAACGATCG
AGCATGTACAAAAAGTGTAAATTCATACGAGAGAGAAACATTCAGCACAAATCGTCAATATTGATGCAATTTTGTATAAAC
TTTAAGGAGATATTATTGTATATTTTTTTCATGATCCATTGCTTCGAGAAACCGCGAGTCTCGCGCCTCGGGCCGAGAAT
GTTATACACTAAATTTTACAAATATTATTTACTAAGGAAACATATGAATTCGTCTAATGTCAAATTTTACAGAGGA
GAGTGTTCGCTACCTTTTTTTTTCTGCGATTTCTCCTGATTTTTTAAACNGAATATTACAATAAGAGTGGTAAT

>CL8216Contig1|phosphoglycolate phosphatase-like

GGATTGTCATTCAATCCAACGAAGGAAGAAATCGTCTGCAGCTTTCTCTGTCGCGATGATTTTGAAGGACGAAAAATT
CGAAAAAAGTTTTACGTCTCGGGGAACAGGTATAACCAAGATTTGGATGCTGTGCGAATCAAGCACACCGGGGTTGGAC
CTGACCCGATGACTGGAATGAGACCGACCTAATTGTCAACTTCAAGCCTGATCCTGAGATCGGTGCGGTGATCGTCGGT
TTTGATATCGATTTTAGTTACCCCAAGCTCATTAAAGCTGCGACTTACGCTGCTAATCCTAACGTGCATTTTATTGGCGC
CAATCCGGACACCGCTAGACCTTCTCCCAACGCAATATGTTCCAGGAGCTGGATGTTTGATAAGAGCGGTGAGGCGAG
CAGCTGGAAGAAAGGCTGTAATTTATTTGTAACCCGAACCCCTACATAAGCCAGTACGTCGTCAAACTTTATGGTCTAAAA
TCCCGTTGCGACCCCTCATGATCGGTGATAATTTGCAACACAGACATTCTGCTCGGCAACGTTGTGGTTTTCAAGACTGC
TCGCTTTCGAGGCGTCACGTCGGAATGACGTTGCGAATTCAGCAAAATAACAAGGCAAGACGACAAACAAATCGTT
CCTGATTTTATACTGATCGGTTATCAGATGTTTTCTAATTGTTAGGCAATAATTACGGAATATTTTCTGTCTACGTTGA
GTAATCTTTGACCAACAGGGTTGAGTATTTTATATTTATCTTCGTTT

>CL8239-bisContig1|multifunctional protein ade2-like

ATTAGCAGGCAAGCATCAGAACTGCGATCATGGCTGGATTGAAACCGGAAAACTCATAATCGAGGGTAAGACGAAGCAA
GTTTTGAAAGTTTGTGACGATCCGACGTTGTCTGCTCCAAAGAAAGATCGCATAACTGCTGGGGATGGCGTTAAATC
TCACGCTCTCGAGGGCAAAGCCGCGATCAGTACAGCCACCACGCGCAAGTATTGAACTTTTGAATCAAGCAGGACTGA
AAACTGCTTTTGTCAAAGTTGTGAGTAAACTGCTTTTCGTGCTAAAAATGCGAAATGGTGCCGATCGAGTGGGTACG
CGAAGATTGGCGACTGGAAGCTTTTTGAAAAGACATCCAGGTGTACCGGAAGAATTTTCGTTCAATCCTCCTCTGCAGGA
AACTTTTTTCAAGGACGACGCGAACCACGATCCCCAGTGGTCGGAGCAGCAGATAATCTCAGCGTCGTTTAACTGAATG
GAGTTGTAATTGGGAAGGACGAGTATGACATAATGAGAAGAACAACGCTGACGGTGTTCGAAGTGTGAGAGAGCATGG
ACGACGCGAGATTGTGCGTTGATCGACATGAAGATCGAGTTCCGAGTGGACTCGAGCGGAGAAATAATGGTCGCGGATAT
AATCGACAGTGATTCTGTGGCGTTTGTGGCCCTCGGGCGACAAGAATTGATGAAGGACAAGCAGGTTTATAGAAATTTGGC
AACGGTCACCGAGGCTGATCTCAGTACGGTGAAGCGAAA

>CL825Contig1|probable glutaminyl-trna synthetase

AATGGTTTGTGTTACTTGCGTTACGACGACGAACCCGAAAAAGAGGAAGAGAAATTTTTACAGGGATACGAGAAAT
GGTCGAATGTTGGGTTACAAACCATCGGCGATAACGCATTCGTCGACAACTTCAGCAGCTTTACGAGTGGGCGAGTCA
AGTTGATCGAGAAGGGAGAGCGTATGTGTCTCAGAGTAGCAGACGATGAAGGATTTAATCCTCCCCAAGTCCG
TGGAGAGACAGGCCTGTATCCGAGAGTCTACAATTGTTTCGAGGACATGAAGAACGGTTTGTCTGAGGAGGGCGAAGCGAC
TCTTCGAATGAAAGTGAATCTGGAAGAAGGAAAAACAAGATCCAGTTCGCGTATCGAATAAAATACGCTCCTCACCATAGAA
CTGGCGATACATGGTGCATTTATCCAACCTTACGATTTCACTCATTGTCTCTGTGACAGTATCGAGAACATAACGCATTTCG
CTGTGCACGAAAGAGTTCCAAACACGAAGATCCTCTTATTATTGGCTCTGCAACGTCCTCGATGTTTATTGTCCCGTGCA
ATGGGAATACGGAAGATTGAACGTCGGTTACACGGTCTGTCGAAAGGAAATCGCGAAACTTACGACGAAGGCGTTG
TTTCCGATTGGGACGATCCAAAGATTGTTACGTTGACTGCACTCCGAGACGCGGATTTCCACGGGCGCCATAAACAAT
TTCTGTGCTCAAATGGGCGTCACGGGAGCGCAAGCGGTTGTGATCCCGGCAATCTCGAAGCCTCCGTTTCGCGACGTTTT

mmc4.txt

GAACAATTTCGGCGCCTCGTCATATGGCTGTTCTTGATCCTACAAAGTGACGATTAATAATTTCCCTCAAGAAGATTGCA
TCACATTGAGTGTCCCGGATTTTCCCAATGATCTTGAAAAAGGACCACTCGATCGTCTTCTCGGACGTCGTTTATATC
GAAGCTTCTGACTTCAAAGAGGAAGAGGAAAAAGGATTCCGTGATTAACGCCGAAACAATCTGTGCGTTTGAAACACGC
CGGGGTTGTTTTGACTCTCGAAAAAGTGGAGAAAGATTCCAGCGGAAATATAACGAACCTTGACGGTGAAGCAAGAGCCTG
TTTCGGACAAGAACAACCAAGGCGTTTCTTCACTGGGTGTGGAAGCCGAAATCGTCTTGTGAGGCTCTACGAACGA
CTATTTCAACCACAAGAATCCTGAAGATCCGAACCAAGTGCCCAACGGATTTTTGAGTGACATCAATCCCGCAAGCAAAAA
AGAAGTCGTGCTTACGTTGACGAAAGTTTGACTCATTTGGCAACTCCTTCACTCAATTTCAATTCGAAAGACTCGGAT
TCTTCTCCGTTGATCCAGACACTTTGCCGGGCAAGCTCGTGTTCACAGGACAGTGACTTTGAAGGAGGACGCAGGGAAA
TAATGATCTAGAAAAAAGCGACTTACGACCTCCGTGAGGCAAGAATTTTTATAAAATTCGCTAAAAAATTTGCAGCCGT
AACTGCCGATAAAGAAACACACCAACTGCATTTTTCTACTATATTTTCTCCACGTTTGATACGATGTTTGCATACGCTT
TTGAAACTTCGGCAATAAAGTTTGAAGGTGAGAAAAAATGATTATTATCTCGTTGACGAAAAATCCCGGTACAAGCGCAA
GTTCAAGACGTTTTTAAAAAGTCATAAAGAAATTGTAAGCCACGTAAGAATCGTAAATGGCGAGAGATCAAAATTTAGAAA
CAGCCGATTGCTTATTTCTGGTATAAAAAAGAAAAGAAAACTCGGAATATCGATAAAAGCCTCGAAAACGTAAATTTGCC
TTTTTTTAAATAAATATTTTATCATTCTGTGAAAATTGAATCGAAAATTTTCAATCAATTCATCATGAAGATTGTAAGT
CGGCACCAT

>CL8261Contig1|fatty acid synthase

AGAGCGACCAATCATGCCCAAAGAAGGAACCGTCAAGATTCCCTCGTAAACATCTTCGAGGGCACCGGAGACTTTGAGATC
TGCGAGGGCGGATCACCGGCGGTTGTGCGAAAGATTGCGCGCTCCGAAAACATCGAAAAGGATCAGCTCAACTTGCCCAT
TCCCGTAACTAAGAACGACCCCGAACTACTCGAATTTCAACCGGCGAGCTTTACAAGGATCTTCGTCTTCGAGGCTACG
ACTACTCCGCGATATTCCAAGGTATAAAAACTCTGACAACTCGTGGCTCGGCCGGAAGACTCGCTGGGTGACAACTGG
GTTTCTTTCATCGACACGATGCTCCAATTTAGTATTACTTGAAAAAACAACCTCGGGACCTTTATTTACCGACGCGTATTG
CAATACGCGGCGATCAATCCGGTAATGCACCAACAATTGGCAGCCAATTTATTGAAGGACGAAGGCATCCCGGTCTACAG
TTACCCCAACATCAGCATCATCAAATCCGGCGGCGTGAATTACGTGGAATGAAAGCTTCGTGGCGCCTCGACGTCAGC
AGACGCGAGGCGGCCCCAAANCGAGCGATACGTTTCTGTCGCTACGAAACTCGCAGGTCTCTGTGGAAGCCCGACT

>CL827Contig1|enoyl- hydratase domain-containing protein mitochondrial

TTTATTTATTTTAAATATAAACTCGAGTTTTGTAAAAAGCAGTGCAAAGGCTTCGTTTTCAAACTTTACAGCGCGCATA
CGTGCTCCACCCTGTGAACACAAAAATCCATCAAAGAAATACGTTTCCATCTGGAATTTGGAAGATAAACCGTTGTAGT
ACCAAAGTTGCTGCTAATCTAGTCGGCGGATAAACAGCGCGAGGGTCCAACAAAGTCATAAAGAGAAGGACAGAAGAAAC
GAGAAAGAAATAATGGCTTCGTTAACGTCAAAAGTTCAAAATTGCTGTGTCAACGTACAACGCCGGTATGAAGCTGATCGAG
GTTCTGTGGATTGACGACAAAGACAATGCCGAATGCTCGAGAAGGAGCCGCGCGATGTATTGCTCAAATACCTCGATGGCAA
AGACAAATGGGATTGTTGTTCTCGGCTTGAATCGGCCAGAGGAGCAAAAATTCATTACGCAAAAGTCTCGTCACTCAATGT
CCGATGCGTTGGCGAGCGTAAGAGAAAAATGATCAAATTCGTGATTAAATAATGCGAAGTTTGATACCGAAGATTTTTTGC
GCTGGTGCTGATCTACGCGAGAGAGGAAGAATGATGAACGACGAAGTTGTTGAATTTGTTGATTCTTGAGGGATCTCAT
GTGCCAGGTGAAGCGATTCCGGCCCCCTGTTATCACAGCGATTGATGGTTTTGCTCTCGGTGGCGGCCTGGAACCTGCAC
TCGCTGCTGACATCAGAACAGCGGCGAGCGAGGCCAAAATGGGCCTCGTCGAAACCAAATAGCCATAATCCCGGTGCT
GGGGGTACGCAGAGGCTCCCAAGAATCGTTGGACCTGCCGTGCCAAGGAACCTATTTACACCGCCAGAGTTCTTGACGG
CGATGAAGCCAGTTCCATCGTCTCGTAAACCGTTCACTTCCACAGAATAAAACCGGTGATGCAGCTTACCAGGAGGCAC
TTTCGATAGCACGAGAAATTTTACCCAATGGACCCATTGGCGTGAGAATGGCCAAGGTGCGGATATCGAAAGGAATCGAA
GTGCCGCTTGAGAATGGCTTCGAGATCGAGAAGCGATGTTATGCCGAATTAATTGAAAACGGAAGATCGGATCGAGGGATT
AGCAGCTTTGCGACTAAACGAGTGCCCGTTTATCGTGGTGTATAATCGATTTAATCGAATTGTTTTACGCCTTTATCT
TAATCTCCCAAATACCGATTGTCCAAGACTATTTTTTTACGAAAAGAGCAACAAAGTGAAGAGAGAAAGAAGCAAGTGC
GATGGAATGACGAAAAATTTCCATATTGCATATTAAGAAAGAAAGGAATGATAAATCTTTGAATAGTTTTATACC
AAGAGCAGGTGAAATAATCGATTGTTCTTTTTTTGTTGTGCAGTCAGCGGGAATTTTCTTATCGCTCATAGAAATAT
TTTTTTAGAACTGTTACTACTTTCAAAGTTTAACTGGTGTTCCTCCGTTCAACCTGTTTTTTTTTTATCTACGTATTT
AAAAATAATGATTTGGTGTATCGTTGATTGTTACAGCGAATAAAGAAACGGATTGAATAAAAAAAAAAAAAAAAAAATG
AAAAAAAAAAAAACAAAACAAAAATTA

>CL82Contig2|atp-dependent rna helicase wm6-like

GAGTTGTGCTTCTGAAGTCGCTTTCTCAGTTTAGCATCTCAACCAAAAAACCAAAATGGCAGATAACGACGATCTTTTG
GATTACGAAGATGAGGACAGACAGAGGCGGTTGTAGACGGATCGGGAGACGTTCCCGCCAAGAAAGAAGTCAAGGGAAC
TTACGTTTTCCATACACAGTAGTGGTTTTAGAGATTTCTTCTGAAACCTGAAATCTTCGTGCCATCGTCGATTGCGGGT
TCGAGCATCCCTCCGAAGTCCAACACGAATGCATTCCCAAGCGGTTCTGGGTATGGACATATTGTCCAAGCCAAATCC
GGTATGGGAAAAACGGCGGTATTTCGTATTGGCGACGCTTCAGCAGCTCGAATTGACGGAACCAAGTTTACGTCCTCGT
TATGTGTCACACGCGGGAGCTCGCTTTCCAGATAAGCAAGGAATACGAGCGCTTTAGCAAATACATGCCAGCCGTAAAGG
TTGGTGTATTTTTCGGTGGTTTGCCAATACAAAAAGATGAGGAAGTACTGAAGACAACGTGCCACACATCTCGTTGGA
ACACCGGGCGAATTTCTGCCCTCGTCCGAAGCAAAAAACTCAACCTCAAACATCTCAAGCATTTCTGTCTGGACGAGTG
CGATAAAATGCTCGAATTATTAGACATGAGAAGAGACGTGCAAGAAATATTCGTAGCACGCCGACGGCAAGCAAGTCA
TGATGTTACGCGCAACATTGTCCAAGGATATTCGGCCAGTTGCGAAGAAATTTATGCAAGACCCCATGGAATCTACGTC
GACGACGAGGCTAAACTTACTCTTACCGTCTTCAACAACATTACGTCAAACCTCAAGGAAAACGAGAAGAACAACAAAGTT
GTTGAACTCCTCGACGTCCTCGAGTTCAATCAGGTCTGTTATTTTCGTAATTCGGTGCAAGATGTATGGCACTTGCTC
AATTATTGACCGAGCAAAATTTCCCTGCCATTGGAATTCACAGAGGCATGACCAAGAAGAAGCTTTGTCAAGGTACCAA
CAGTTCAAAGATTTCCAGAAGCGTATTCTGGTGCAACGAATTTATCGGAAGAGGTATGGACATATCGAAAGCAATGTAATAT
CGTATTTAATTACGATATGCCCGAGGACTCTGACACGATTTTGATCGAGTCGCCCGAGCTGGTCTGTTTTGGTACCAAAG
GTCTCGCCATTACGTTGGTGAGCGACGAGAGCGATGCTAAAATTTTGAATGACGTACAAGAAAGTTTTGACGTTAACATC
ACCGAATTACCTGACGAAATCGATCTCGCTTCTTACATTGAAGGACGATAAAGAGCCGACGCAGCTGCCCGCAGTCCAGC
AGCTATGAAATAATCTTCTGCCGAAAAGGCAACCGGAGTATGTTCCATACGAGCAAAAAACATGGGATCGAAGTACCGGTC
GTGAAAAAAGCGAATAAAGTCCCGTCATTCCGAAAATCTCGTCTCCGCCTCAACAAACACTTCGAAAGACGATTCAAC
GAGTTTACACCGCATTCAAACACACATTTAAATCATCGAAAGACGAAAAATAAGAAGATACAAGAGATCAAAAGATCAAAATCA
CGAAAGAATACGCTGGAGGGGGGACTTGATATTGCATACTCAAGTCAACGATAATAATAAATAACCATTTAGTACGTACA

mmc4.txt

CGGATATTTATCTTTTACTTTCACACCATTAGTATTAACGTAATAGTAATGACAAACGAGAAGACAAAAATTACGTAGTG
TGTAGCACCGACGTATGTATTAGTGAGAATGATTGAAAAATAATTTTTTATAAGTAACGT

>CL830Contig1|cytosol aminopeptidase-like

TTCGACGCTGGTGGTATAAGCATAAAACCCGCGGCTGCGATGGACGAGATGCGTGGTGATATGGGCGGCGCTGCATGCGT
CGTTTCATCGATAAAAGCCGCTGCCGAATTGAAGCTGAAAGTGCGGATAGTCCGGCTGATACCGTTGACGGAGAATTGC
CTTCGGGGACAGCGACGAAACCAGGTGATTTGGTTGTCGCGATGAATGGAAAAACGATTATCGTTGATAATACCGACGCC
GAGGGTCGCCTCATTCTCGCCGATGCGCTTTGTTACGCTCAAGAATCAAGCCACGCTTCATACTGGACATTGCTACGCT
TACTGGTGCCATGGGCATCGCACTGGGTGGCGCAGCTTCCGGAGTCTTACCAACAGTAATGAAATGTGGAAAGTCATCC
AGAGCGCTGGAGTCGTTACGGGTGATCGTGTCTGGAGATTCCCACTGTGGCAACATTATAATGACAAAATGACGAAAAT
GTGAAAGCTGCAGATTTGAATAACATCAGCCGACGCAAGGGTGGCGGTTCTGTGTACCGCAGCCGGATTCTTGAAGGAATT
TGCTGGAACCGAAAGGCCTTGGCTTCATTTGGACATCGCAGGCGTGGCGGGACCAAGCAACGACGACGCTGCTGCGAATT
ATCTTGCTCCCGGAATGACCGGACGACCGACTCGTACTCTCATCCAAATGTTGCAATCACAGCAGAGCTAGATTCCGCCA
ATTATTCCGAAAAATTGTGCAATTTATAAATAAACAACGCTGTGGGTTGTGTGTGTGAGTTTGTACAATAGAATTTGCAATC
CGCCCATTTCTGTTTCAAACAAGAAAAAGAAAGATTATCCCATCTGCCAACCGCATGTATATTTACGTTGCTG
CTGCTTACACAAGGAAGTACGAGAATCCAAGCAAATGATTCCATTTTTCTTCTCTCAATAACCCACCAATTTTTTT
TTTCCCCACCTTTTCTAACAACAGAGCACAGAAAAAGTTTTAACTGTCGTATCTACGAAATTTCTCTCCAATTGTACA
GCTATACGATTCTTACTAATGATTTTTCTTCTGTCAAACATTGAAATTAACCAACCACGTGGCTTCACGGGGCCTTTTTA
TACTTTTGAATAGCTTCTGTCTAGCGACAAGCGCCAATTCACTTTCTACGACGCTTTATATGATTATGAAAAAATTTG
ATATCGATGAATCGAGGTGGAANCAAACTGAAGAAGAAAAAATAGAAAACACGCAATATCTGCGTTGTACAGGACGAGA
GAG

>CL8339Contig1|15-hydroxyprostaglandin dehydrogenase

AATTCTGGGTGGTTTGGACATTCTTATTAACAATGCTGGAATCCTGAACGACGCAGCTTGGGATAAAAAACGATCGACGTT
AATTTACCGCTGTTGTGAAAAACACACTGTTGGCTTACGATATCATGGGCAAACACAAAGGCGGAAAAGGTGGCGTTGT
CGTAAATATTGCATCCGTCGTTGGTATCAATCCCTATCAGCATCTTCCGGTTTATTCGCCACCAAGTTTGGTGTGTGCG
GTTTCACGCTCTGTCTCAAGGAACACTTGGCAACGACTGGAGTCAGCGTGAGAGTCATGTGTCCCGGGGTGACTGATACT
CCGATCTTAGGTGGACTCGCCAACGTCAACAATAAGTTTTTGTAGCTTCATCGACAACGAATCGGCCGCTAAAACGTTATT
GGAGTTGCCTCGACAACCGGCCGAACGAGTCGGGGAAGCGGTGGTCGAGCTGATCGAGAAGGGAACGAATGGGGCAATCT
GGGTCAGTCAGACTAACGAACCACCCTTCGAGATCCACGTTGGCCAGAACGAGCAAATCAAATGTAGAAAAATCTCTAC
CAC

>CL8341Contig1|ddrgk domain-containing protein 1-like

GAAGAAAAAGAGAGAGGAGCAGGGAATACTTGAAGAAAGAGCCTTTAGCGTAGAGGAAGAAGGTTTCAACGA
AAACGAAGCCGGCGACGAGGAAAAATCTTCCAAAGAATTCTTGCATACATAAAAAGCAACAAAGTCGTAATTTCTGGAAG
ATCTCGCAGCTCATTTTTTGGCCTCAAACTGCAGCTGTTATCGAGCGAATTCAAGAACTACGGGCGAACGGAATCTGAC
CGGCGTGATCGATGACCGTGGTAAATTCATTTACATTTGCAAAGCGAACTCGAAGATGTTGCCAAATTCGTTGACAAC
GCGGCAGGGTGAGCATCACCGAACTCGCTGAAAAATCCAACAGGCTCATCAATCTCAACTCCGGAACCTAGTCCCGAAATC
GTCCAAGCCAATTAAGAAAGTTTTTGTCAACAACAACAACAAAAAGAAAAAATATCACATTTCTGTCGGGATTTTTTTAAA
AGGGTCGAAACGAGATTGCTTGTTTTTAGCGAGAATAGCTCCGATTTTTGTTGCAATTCATTTTTGCGACCTTCAGATC
CAATTTACACACTCGAGCTTAAAAATCATTTGGAAAAATCCCAATTTTAAACGGCTAATCGATCGAAATGAGGCGATTCAA
ACGTTGGGGTTACTCGGTTGAAACGGGCTCCGGAAGATCCAATAATTGGAAGAACCGAATTGTATTC

>CL8354Contig1|probable maltase h- partial

ATCATGTGTATACGATAGATCAAAATGATACCTACGACGTCGTACAATCCTGGCGCGTACTTCTCGATAGTCACACGAAT
AAAACAAAATCCGCAGCAAAGATCCTTTTAAACCGAAGGATACACCATCCTGCCGTTGGTCATGAAGTACTACATGACGG
AGTCGATGCACCATGAATTCATGTTTCATATCCGATTGACTAATGATTCAAAACCGATTGATTTCAAACGTAATTCG
AGCGCTGGACGAACGGCATGCCGGAAGGTTCTCTGGCTAATTTGGGTCGTAGGGAATCATGATAATCATCGGGCAGCATCG
AGATTTGGTACTAAACGAGCGGATCAACTTTCTATGCTCTCAACCGTTCTGCCTGGAATCGGCATAATCTACAACGGCGA
TGAAATTGGCATGGAAGATATGTGGCTGTCATGGAACGAGACAGTTGACCCGGNTGGCTGCATTGCTGGTCCAAGCAGAT
ATCACTTGAAGTCTCGAGATCCAGAGAGGACTCCATTCCAATGGGACTCGACGATGAGCGCTGGCTTCTCCTCAGGCAAC
AAAACCTGGCTTCCCGTCAATCCTAATAACAAGACCTCAACTTGGCAGCCCAGAAAAATGCAACCCGTTGCGATTATTC
CATTTTCAAGAACGAGTGGCATTGAAGAAAAACCCCTCTGAGAGATGGCACCAGGAGTGACTATCTGTGACCGATGA
TGTTTTAGCGCTCGTCCGAAGGTTGCCCCAACACCGTGCCTGTCTGCTACTCATAAATTTCTCCGAGTCAGCAGTCAAGA
TCGACGCC

>CL836Contig1|60s ribosomal protein 16

TGAGACGACGACGTGATCCCAGCCGAACGGAGAGGACCACGAGAATTGGAGGCGACGGGAATTTCTTTTAGGCGATCGGT
GCGTGATGACTGATAAAAAGGCACCCACGAAACCCGCGGCGGGTACGCCCAGCAAAACATCAACAACAAAGAAACCA
AATCGTAGGAATTACGATTTGGGAAACGGAGTTTACCGGTTACGCCGAACGCGGATGTTCCAAAAAAGGCGATTTACAA
GTTTTTGGACAAGAAGACTAAAAAACGGTCGAGAATAAAAAACCAAAACCGTGGTGAAGAAAAATTAACGGCGAGAAAA
ATGGAGAGACCCGCGTTGTGCGCGTTCAAAAAACGGGCATTCTATCCACATCGGATCCCGTTACCGTACACCACGCG
AAAAAGTGCTTCCGCGATCACACCCGCTACACCAGGCCGTCCTCGTCCCAGGAACCGTGTGTATTCTTCTCGCCGGACC
ACACAAGGGGAAGCGCGTTGTTCTGCTAAAACTCTGCCGAGCGGTCTCCTACTTGTGAACGGACCGTTTCTCATCAATG
CGTGCCCGCTCCGGAGGATGAGTCAGCGTTACGTTATTGCGACCTCCACAAAGGTGGATGTTTCCGGAGTGAAGTCCCG
GAGCACATCGACGACGATTATTTCAAAGGAAGCGCGACAAGCGGGCTAAAAAGGAGGAGGGCGATATATTCTCCAAGAA
GAAGGAGAAATACGTTCCGAGTGAACAAAGGAAAGCCGATCAAAGGCAGTAGATAAGCAACTGATCGCGCGCATCCGGA
AGCGCGAAGACAAAAAGCTTCTCTACGCGTACTTGTGCGCGATGTTCCGGCTCCGAAGCAGCCAATATCCGCACAGAATG
AAATTCGTATCTGTATCATCGCGGAAATAAAAAAATATTAACATGCAAAAAAATATATATATATATATATATATATAT
GTCGGCCG

>CL838-bisContig1|6-pyruvoyl tetrahydrobiopterin synthase-like

TTCGAAGAACTTTAGAAAAACGTAGAAAAATCCATTTTTATTTCTGTCAAATACATCGAAGAAAAACTGATTTTCGACG
AAAAATTACGTAATTTTTTTGGTCAATTTCAAATAACGGCGCCACTTGTCAATTAATCTCGCTCGGTAACAACAATATTT

mmc4.txt

TTGTCAGTTTTCATAAATCTTAACTTCGTACATTAAGCTCGGATCGGGAAGCAAGATTTTCAGCTCGTTAAAAATGTATAT
AGCGACATTTTCCGTGGTCTGAAACGACATTTTTGAAGTAATCGACATCTTTGTCTAAATTTTTGTATCCAAACGATTCA
TAAGAACTTCGTTTCATGTAGATCTTCAAATCGGAGATGTTTCATGACCATTCGGTTTTGGGATCGACTGGTCCACGTACT
GTAACCTCGATGGTGAATTTATGGCCATGTCCCAATAATTATTGCACTTGCCATAAACTTTTTATTTTCCTCCTCACT
CAATTGTTCTGCTATGTAATCGATGACAAGACGAAATCGATTCTTTTCGAGTCAGATATGCAATGGCCATGGTCTGCTCGT
TAAAATAGCAATAAAGGAATTAACCTCAAATTTAACGTCGAAATTAAGGTTACGCAGAGATTACGATTGCATATGGCTG
ATCGATCGAGTTCAGTACAATCTCGCACGTAATAATAAAATCTCCCACCAATAATACACTAGTTCATGGATAAGATAACG
TTTTTTCTATTTCGAAAAATTATGTCGATTTTTAGTCAAGCCAGTGTGGTCCGGCATAAAATTCATTTGCATTGTTTCAT
CGATGTTTCATTGAAACGAAAAAATAGAAGAAATTTTTTCATCAAAGAGTAGAAACATGGATTTTATCCCCCGCGACGATT
ATTATTCATGTGACAGCTGTTGGATTATTTGCTCGATTGAGATACACAGCGAGAATAACAGACACCTGTCTTCCGAACA
GTCGATCGACCAGAAAGAGAAACCGATGAGGAATAATTCACTCATCATCGTCACTATTGTCTGACGAGGCTTCCTCAG
ATCTTATTATCAATTATTCAAAAATAATAAAATGCATTACGTTCAAAAAAGAATCATAAAAACGCGTGCAGAGCCTAGAA
ATACGTACGAAGGGATGAACCTTGACTCGCCCCCCTCTATGGCCGAATCAGTCACGCGCCGAGCAATCGCGTGGCGCCA
CAGCAACCAAGCGCGGTTGCTGTAATCTTTGTTTTTCATTAATGCAAAATGGCTGTTTCGCTCTCAGCCGGGTATTA
TTGCGATTAAACAAATGCGAGAAATGTCGTGCGAAGTATCAATAACCATGTCAACATCGCACCCACTTTTAATAGCAATTT
GGTGAGCCATTTAATCATCACGTTTTTAACAAACGTCTCTCATCACTTGTGTGCCAAATCTCTCCGAATAAATGACTGA
CCTAACCTCAAAAAAGTGTACACTCGCTCCAATGTTTAAATTACTGTTTAAAGCTTCTTTTAAATGTTGATACACTTTTCG
ATACGTTGTGTTTCGTTCTTTTCACAGTCTTTTTGTTACGAGAAAAATATTCTCTTGACATAAATGCCATCATTGACACCG
AAGAGGATACGGTCAAGCCTAAGAAAAAATGAGCAAAGCAATGAAAGCTTATTTAGAAAGAGCTGAAGAATATGACTCG
TTTATCAAAAAGGAAGCAATCGAGTATGAAATTTGAAAGCGTCAATTTGGCAAACATGATGGGCAAAATCCAGAGACCTT
TTCGAGGAAGACGTAACCAATCCATACAATACCTTTCCCATCCAGTCTCTACGACAAAAGAGCAAGGCCGATAATGG
AACCACCAGAAAAAATATTCCCATCCAGGAAAGAGGCAGAAATTTGACGAAACCGGTGGCCTCATCACTCCATGTTTTA
TACGTGCAACCAAAATTACCATCAATTGCTTCATGATATCGTCACGCAAAATAATCACTTGAACGATATCGAGGATAAAT
CATTGAAGAAAGGAATCCTTCCTCATCCGACAATGAATTCGATTCCATAAGCTCCAGATGGTTGACGAAAACCTGAATTG
GAAGATTTACGCTGGAATATCTACGAGACTACGAATACGACAAATTTATCGCAGCGGCTGAGAGATTACTCGAGCATCC
CTACGCTTTTCAAATCAAAGNTTTTCTCATGAAAATTCGGAAGTTAAGATTGCACGGGTACCGCGGGTTTGAC

>CL83Contig2|protein hu-li tai shao

GTCAACACGAGGAGCTCTCGGAGCCACATACCAATGGAGTAATGGACGGCCTGACCGAGGAGGAGAAAAAGCAAAATGAGA
CCAGCCGATATCGATGCGGACATGAGAGAAATGGAGAGAAGGAAGAGAGTCGAAATGATGATGAATTCGAGATTATTTTCG
AGAAGAGTTGGAACGAATTATCGAGACGCAGATGAAGGATGGTTCCGGGCCCTCGGGCTTGTTGCAACAAATATCTGAAA
TGATGGGTGCCAAGGAGCTCGATTCAACGCCAATGTGTTCAAAATTCAAATTGCGTCGTGCCAATAAACGACATTCGA
GGTGTGAGAGCATGGGTACGCAAAAGGGTGAAAAAAATTTCTCGCTGTAAACTCGTCCGCTCTTTCGATTGTTGACC
TTTACGGATGGACTCAAGGGGTGCGGGCCAAAAAACAGCTCGTCTCAATCAGGACCAGGAACATTTTCTCGTGAATCCTT
ACGGGCTTCTTTATCACGAGGTTACCGCGTCGAGCCTCGTAAAGATCGACATGAAAGCCACGGTCGTGCAACAGGGCACG
ACGAATTTTCGGTGTTTCATGTTACTGGATTCCAACCTACACTCGACCATACATGCTGCCAGACCAGATATTAAGTGCATCAT
TCACATTACGACACCCACTGTTACCGCCGTATCGTCTGTTAAAAATCCGGCCTTCTTCCGCTAGGCCAAGAGAGCATAGTGA
TTGGTGAAGTAAGCAGCCATCGGTACATGGGTGAAAGCGTACTGGAGCAGAAGAGCGCGAAAAAATAACGCGAAATCTT
GGGCGAGTGAACAAAGTGATGCTACTTACGAATCGTGGTGCGCTTTGCTGCGGCGAGACTGTGCAAGAAGCTTTTACAA
TGTTTACAATACGGTATTGGCCTGTGAAACTCAGCTGAAATTAATGCCCCGTTGGCCTTGAAAATCTGAGTCTTATTTTCGG
ACGAAGAGAAGAAAGCGATATACGAAGCCTCGCGAAAAGGGCTCGTGACACCGGCCAGCGGTGCAGCTTCTACTGCCGCT
GCCGTCGAGCCTTCTCCTCTCGCTGAAAAACTCGAAAAACGTTGGAGGATCGGTGGCACGGAATTTGAAGCTCTTATGAG
AATGCTCGACAATGCTGGATTCCGAACCTGGTTACATCTACAGACATCCGCTGATCAAAGGTGAACCACCGCGTCCCCGTA
ATGACGTGGAAGTCCCTCCGGCCGTGCTCTCTTTGGGATATCTCTCGAGGAAGAAGTAATACAAACAAGGACTATGG
AAAGGTGGTGCAGAAAGGCACCGACAGATCACGTTGGCTCAACTACCGAAGCTGTATCAAAAGATCGAAATACAAGAAAC
AGGAACGCAGGATCCGAAAAAATACCAAGGTAGAGATCATAACTAATAATTTCTTTTGAAGTTCGCATAATACTGTGCG
ATAATGATTGCTGATAGCTTCCGCGCGATAAAAAACGACATTTTCTTAGTAATGTACGATCCGAGAGTAACAGCCCGCTTT
TCTGGGGATAGTCAGCGATTGCGATAAGAAAAGCCATTTATCTTTAATCAACATTCCACAACGACAGAGACTAAACATTA
GTATCGTGGTGCGTTGAT

>CL8409Contig1|soma ferritin

AGGACGCTATGATCGAGGCATTGAATCTCGAGAAAGAAGTCAATTCGAGCCTACTCGAGCTCCACGCCCTGGGATCGAGC
CACAAACGATCCAAATTTACTGGATTTCTAGAGACGGAATACTTGCAGGAACAAGTCGATGCGATAAAAGAGATTTCCGA
CCACATTACAAATCTCGAGAGAGTTGGCGAGGGTCTTGGAGTTTTATCTTCGACAAAGAATTGAAGGAGTAATTTTCGA
TCTCTGGAATGTTTCCGGGTGCTCAATGCAATCCTCCGAATTGCGATGCGCAAATAATTTTCATGAAAACCTTGCTTGAAC
TTTTCTTTCTTTTGTGATTTTGTATTTAAGAAATTTATTAGCACATTTCAAGACTGGATAAAATGTGATAGCGCGATG
TTCACCTTACGGCAGTATTGAAACTTGTAATTATTATTACGTGTACCGAAGCTTTTGGAGATTAAATTGTAAGAATCGCT
GAAGTCAA

>CL844Contig2|v-type proton atpase subunit h-like isoform 1

TTCTTGCGGTCTTCAGAAATCTGATTGAGAAGGTGGAGGACAATCAGGTCGCGAAAGAGCACTGCATCGCAATGGTACAG
TGCAAAGTATTGAAGCAGCTCTCGATTCTTGGGCAACGTAAATTCGACGACGAGGATATAACGGGTGACATTGAATTTCT
GAACGACAAGCTCCAGGCTTCGGTGCTGGATCTCAGCTCTTTCGACGAATATTGACCCAGGTGAAATCCGGACGTTTGG
AATGGTCGCGTGTTCACAAATCGAGCAAATTTTGGCGCGAAACCGGAGTCGTTTGAACGAAAGAATTACGAGCTTTTG
CGTATTCTCGTTTCATTTGCTCGAGACGAGCAAAGATCCGTTGGTTCTTAGTGTAGCGTCCTTCGATATCGGCGAATATGT
TCGTCAATTATCCTCGTGGCAAGCATATCATCGAACAACCTTGGTGGCAAGCAACGAGTAATGCAACTTCTTGGCCACGAAG
ACCCCAACGTACGCTACGAAGCCCTCATTGCTGTTCAAAAGCTGATGGTGCACAATTGGGAATACCTTGGCAAGCAACTG
GAGAAAGAAACGGGCACAACAGGAGCATCCGGTTCCAAGCCCGGTACGCAAGTACCGACGAAAGCGTAGAGTCGTATTCC
GAGTACTTTGCTATCGTGTGCGACCCCAACCAAAAAATCTAAAAAAGAGTGAATATAATCCAAGTGAATGTTCTTACAAT
CCGCTGCGGTGAAGTCGACGTTAAAAATCCATAAACCGATTGGACCCAAATTCGACGCCGTTACATTCCATTAATTTGCG
GTGCCGTACCGGTACCCCTTCAAATTCGAAAGTAGCGAGTGAGAAAAGCGATCGGCGACGTCGATCGTGGAAACAAAAAA

mmc4.txt

AAAATTCAATTAGTAAAAACAAAAAATAGTCTCAAGACAAATTGTACTTCTGGAGCTTGTG
>CL8477Contig1|spectrin alpha chain-like
GTTCTGGCGATGGGGGAAATCTGATAGAAAAACATCAGTGCGCCGGCTCCGAGGACGCCGTACAAAAGCGTTTGTAGCTTC
GATCGCCGATCAGTGGGAATACTTGACGCAAAAAACGACGGAAAAATCAATGAAGCTGAAAGAAGCGAACAAGCAGCGGA
CTTATATCGCGGCTGTAAAAGATCTCGATTTTTTGGTTGGGCGAAGTCGAGAGTCTCCTCACCTCCGAGGACGCTGGTAAG
GATCTCGCTTCTGTACAAATCTCATGAAAAAGCATCAACTCGTCGAGGCTGATATACAGGCCACGAGGAGCGAATAAAG
GACATGAACGCACAAGCCGATTCTCTGATCGGTAGCGGACAGTTCGATGCGGCTGGCATAACAAGAAAAACGTCAAAGTAT
CAACGTGCGTTACGAGAGAATCAGGAATCTCGCGGCTCACCAGCAAGCTCGTCTCAACGAGGCCAATACTCTCCATCAAT
TCTTCCGTGACATCGCGGACGAGGAGTCTGGATAAAGGAGAAAAAACTGCTCGTCCGCTCGGACGATTACGGACGTGAC
TTGACGGGGGTTTCAGAATCTAAAGAAAAAGCACAAGCGTCTCGAAGCCGAACCTCGGCAGTCACGAGCCTGCGATTCAAGC
GGTTCAAGAAGCTGGTGAAAAATTGATGGACGTCTCGAACTTGGGTGTACCGGAGATCGAGCAACGTTTGAACTTCTCA
ATCAAGCCTGGGCCGAGTTGAAACAATTGGCTGCTAATCGTGGACAAAAGCTCGACGAGTCGCTTACTTATCAACAATTT
TGGCCAAGGTCGAAGAGGAGGAAGCTTGGATCAGGAGAAACAACAACCTTCTCTCCGTGAGGATTACGGCGACACGATG
GCCGCGTGCAGGGATTACTGAAGAACACGACGCTTCGAGACCGATTTCGCAGCGCT
>CL848Contig1|eukaryotic translation initiation factor 4 gamma 2-like
GATGTTATCGAGTTGCGTCGAGACGGTTGGGTGCCGCGAAAAGCGACGAGCAACGAGGGCCCGATGCCGATCAATCAGAT
CCGCAACGACCACGACGATTCTCTGAGGGGCGGAGGTGGCGGAGGAGGAGGTGGCGGAGGCGGAGGAGGCGGGGGTTG
GCGTCGGACCGGGCGTTGGTTTTACAAACAGACGAGGCGAGGATCGTCTCGGCGGAGACTTTCTCATCAGAAAAATGGGC
CGTCTCGACATGGACATGGTCGGGGGCAGCATTCCCTTGACATCTCCCTCTTTGGCATTATATCGCCCTTCGGATCCAA
CGGATTCAATGCCAATCCCGTGGCTATCTGCACAAATCAGCGAAATCCACCGGGAGGCTATTATCCCAATCAGAATCGTC
ACCGAAACAATTTATCAGGCAAAACACAATCCACAGCAACACAACCTCTCCTCAGAATTACAACAACAATGGCAATAAAGAA
CCACTGAGATTCAACAAGAGCAAAATGCTCATTGGACATCTGGAGGAAGTGTCTCTCAGACCATCGGCCACTTCAATGTT
CAACAAAGCAAACATCAAGCCCAATTTACCTCTCAATAGTGACATGTTTACAGGACGCATAGCGGAGACTCCGATGCTGC
GTGCAGCAACAATAAAACCAAGTCCGCCTCTGTTGCCGAAAGAATCAGCTCCGGCAATAGTAATAAAGCAGGGACCGGTG
GACAAGCGAGACAAGGCTCGGGACAGAAAAAGATAAAGGGCCGACGCGTGAGGAAGTATTGAAGAAAGTGAACGCTCTGAT
GGACGATTTCTGTGTCGACAGCAACGTCGAGGACGCGATAACCCGCTTCAAGGATCTCAAGATCCCGGAGCGTTTTTTCG
GTCACGCTGTTTATACGATTTACACGAATACGTTGGATCGCGGAGACGGCGAACGCGAGCTCGCTTCAACTTTGTGATG
GACTTGAAAAAGGAAAACGTGATAACGGGGCAACAGCTGACCGAGGGCTGGAAAGAACTGGTGGCGAGCATCGCCGACAA
AGACAGCACCGTGCTTGCATCGCGTCTCACGTCGCCTCCATCACAGCCAAGGCAATAGTTAATAATCTGGTGCAGCTGC
AGGACCTCGCAGCGATAACGGAAAAACGGCCAGCACCATCCGCTGTTCTGTTGACGTTGCAGCAGCTTCACAAGAGCCAG
GGCAAAGCGAGACTGACGCAAAATATTCAACGAAAGCAAAAAATAAATACTCATGAGCCAACCTGCCCAGGCGGAAAAACA
AAAGAAGAGACTCGGCGAGATACTCGAAGATCGGGAACCTACTTCTCTATCCACTCCTCAGGATCCAGGGCGATATGT
GGCGCCAACCTCGAATCCGATCCAGCCCCAGGCTCTCAGACGTGATC
>CL8495-bisContig1|PREDICTED: hypothetical protein LOC100115890 [Nasonia
vitripennis]
ATTTTCAAATGTGCGTCTACACGTCACCAGCCATCGACTTGCTCTACTTCTGAACACGAGTTGCAGCGACGACGTGGAC
CTCAATCACCGGGACACCCTCTGGAAGAATACTTGTCACCTTTGAAGCAGACGATGTCAAAGCTCGGCTGCAAAACGAA
GCCACCGCAGATGGCAGAGCTGAAGAAATCTCTGATAGAAAGAGAGTTCTAGTGGGGCACTCTCAGCCTGTACGATTTTG
CCTGTGGTGCTGGTTGAAAAAAGCCAAGCCAAGGGTCTCGACGAAATAATGCTTCCGGACGGAAGTTACGACAATCCTGG
ATACAAAGCTCCCTTGTCCGCAAAGTGATGGTGAGAAAATTAGGGGGATGGGATTCTCGAAAACCTGTTTGATTGAAAAT
CCGCTAAGCACGAAAAATCAAGAATGAAAACCTTGTAACCGGAAGTCATCGAATTAGCTTTAATTCTAAATACGAAAAAATG
GTACAAAAAAGTTGCAACACTTTGTTATTTTTTGTATTTATCAAACCACGTTAAGGAAGGCATGGTATTTTGGAGCTGT
G
>CL8537Contig1|maltase 1-like
GCATGTGCCATTCAATTTCAAGTTCATAACTGACGTCAATAACACTTCGCCTCCGAGTGAATCAAAGAATTATAGATA
CGTGGATGGCAGAAGCTGACAAGAGGAATGCCACAGCGAACTGGGTGATGGGAAATCACGATCGTGTACGAACAGAAACG
CGTTATCCTGGTTCGAGGTGATCAGATGATGATGCTGGAGATGATCTTGCCAGGTGTGTCTGTGACATATTATGGCGAGGA
GATCGGTATGGTTGACAAGGACGATATATCGTACGCGGAACTCAAGATCCACAAGGCTGTCTGGCTGGTCCAGATCGTT
ATAAACTAAAATCTCGAGATCCGTGCGAAGTCTTCCAATGGAACGCGGAAAAAGAACGACGAGTTTCAGTTCCGGCA
CAAAACGTGGATACCGGTGAACGCAAACTACAAAACGTTGAATCTGGCTGCGCAAAAAGCGACCCCGGTGTCCTGGATCA
ACTTGTTCGAAATCTTACGACACTGAGAAAAAACTCGCCAGCTCTGAGCAGTGGAAGTGTCAAATCGTTCTGTTTCTAAC
AATAATCAAGTTTTTAAACGATCGTGCAGACCAACCGACGAATTACCCTGGACGGAGTTACACGTTGTCTTGTCTCTCA
ACTTCAATCTGTCTCAGGCACAAACTGTCAACTTGACAAATATCATTCTTACGCTGGTAATGCAACGGTTACGATCGCG
ACCCTCAAATCTCCGTTGCAGCAAGGAGCACGAGTGAATCTCGCAACTTGCTCTGGCACCAAAAGCTGGACTTGTCTT
CGATATCAAGTAACGTAATAAGGAAATCGAGCTGTGGGCAAGAATTGAATTTACGTACCCAAGGCCTTGGCCTCCTGCA
CTTGTTACTTTATATTGATTACTTTTCAATTATTTAATTC
>CL8545Contig1|eukaryotic translation initiation factor 4h-like
AAAGAGACAAATAAACAAGCGAGATTTTGGCACTCGATTATCTCTGTCAATTAATTGTCAATTGAAATGTGTTTATCGTT
TGATTAATAAAAACTCGAATCTCGGCAAGTTTTCGGACGGAGAATTTTCGCGGCGAGACGGATGCTTCGTAAAAATTGCCA
TTTTTATAAAAGCGAGGAGAAGAGCGCGTGAGCTTAGCGCGACTCGCGCGTCCCGGCCAGTTTCGTGCATCCAACATG
GCTGGTCGAGGTGCTTATGATGATTTCGAGAGATTACAAAGGAGGTGGATTTTCGACCAACACGACGAAAAACCTCTGCTAC
GGAGCCTCCTTACACGGCTTATGTGCGCAATTTACCCGATGGCGTTGTCCAACGTGATATCGACACAATATTCGAGCAAC
AAAAAGTGAAGAACGTGAGTTAGTGAAGATCGTGAGACCGATAGGTTTTAAAGTTTTCTGTTATGTGGAGTTTCGAGGAA
TTGGACGATTTGATATCGGCTCTCGAACTGAACAACGTTGTTGTGGTAAATGGAACCGATTAAAGTGGATGTAGCAGA
GGGCAAGAGAAATGACCGAGGTGGCGGATTTCGACAGAGAGGAGGAGGTGAGGTGGCCCGGGGGGCGGCGACCGTGGAT
ATGGAGGAGGAGGAGGAGGAGGAGGTGGCTTTGGCGATCGGAGACCCCGGGCGGTGGAATGGGTGCCCAAGACAA
AGAGCATCAGGTTTCAACGATGCTCGAACCAATCGCGTAATTACGGGAATTTCAACGAGGAATCTGGCGGTGGATCCGG
CCGAGAATGGGGCTCGCGCGGTGGCAGTGGCGGTGGTGACCTCCGAGATCTCAGGGTGGACCTCCACGTCTGCTCGTG

mmc4.txt

ACGGGAAAGAAAAAGTTATACAAGATTTCGTACCCAAAGAACCACCTCCAGATACGACGGTCT

>CL855Contig1|ras-related protein rab-1a

AGTTACATAAGTACGATCGGAGTTGATTTCAAATCAGAACCATCGAGCTTGACAAAAAACAATAAAGCTACAGATTT
GGGACACCGCCGGACAGGAGAGATTTCAGGACTATCACGAGTTCTTACTACAGAGGAGCCCACGGTATTATCGTCGTTTAC
GATTGTACGGATCAAGATTCTTCAACAACGTTAAGCAATGGCTCGAGGAAATTGACCGCTACGCATGCGACAATGTCAA
CAAGCTGCTGGTCGGCAACAAGTGCATTTAAACCAACAAGAAAGTCGTTGAATATCCCGTCGCCAAGGAGTACGCGGACC
AACTGAACATTCCATTCCCTCGAGACATCAGCGAAGAATGCGATGAACGTTGAGCAAGCTTTTCATGACGATGGCGGCTGAG
ATTAACACGCGAGTCGTTTCGCCCTCAAGTGCAGGCGTTGAGACAGCGAACAATCTCAAAATTACCCAAGGACGCGACGT
CGATGCACCAAAATCCGGATGCTGCTGAAATCGTTAACGTTTCTCTCTAAATAAACTAACCAAAATAACATCGTGATGCAA
AAAAGCTTAGGCCGCGGATCGAGAGCGTAGCAGGATGGAGGAAGTAAGAAGAGGCAATGAAAAAGGAGAAAGATTAGGG

>CL8568Contig1|glutathione synthetase

AAGATGCGCAGTCGATACGACAGGTTTTACGCGGACTCTATTCTCTTGAATTTAACGAGGATGGAGAGAAAGCTGTGGCA
ATGGGAATAGCGAATCCAAAGGGATTTCGTCCTGAAGCCGACAGAGAGAAAGGTGGCGGACATAACGTTTACGGAGAAAAAT
TGATCGGTTCTTGAATCAATGAAAAATTCGGTGGATCGAATGGTGGATTCTGATGGATCGTATTAATTCCTCCCGTTC
AGAAAAATTTATATAATACGTCGGGGGAGGAACCCGTGCTTGTGGATACAACGACGGAATTGGGAATTTACGGAATCGTC
ATTGGTGACCATTCGAGGATCAGCGTCAATCGCCAAGTCGGTCATGTTTTGCGATCGAAGCCGTTAACTTCGAACGAGGG
TGGAATATTGGGAGGGGACGGTGCTCTCGACGGTCCGTATCTCGTCGCGTGAATATTCAACGAGAGGAGTAATAAAATAA
ACGATGTTGAAGTTTGCATCATTGGAATGCAACGAAATCCCTTTTTTCTTGAGCAAATCTCAAGATTCTCATTGATTT
TTTGGTCAGGACAGGAAACGATCGTTTTTTTCCGGTCCAAATACAAAATCGGTAGGAAAGTTGTAATGATTTTTTTAAA
TCGAACAAACAAACGAATGGAATCGTATTTTTCTGTTGGATGCCAACGTTGCGAATTCAGTGTCAATGTAATAATATA
TTTTTCTCACAAAACGACAAATCAGCGGTGGAGTAGGCAATTATGGTTTTCTATATTTTATCCAAGTTTCAATATACAAG
TGGCATCGATCGATTTAATT

>CL856Contig1|low quality protein: leucyl-trna cytoplasmic-like

ACATGAATGGACGTCGATTTGGGACACAGTTTTCTCTGTCAAATGTGAATTTGCTGTCCGCTACAATCGTCTACTG
GGGAAAAAGTTTTATTTCTTTTCGGATTCCNTTGTACCGGTATGCCGATCAAAGCCTGTGCCGACAAGCTCAAAGCGAG
AATTGGAGGACTACGTTATCCCCCAAGTTTCCACAGGACGAGGCGAGTCGTTGAAGAAGTTGTGGATGACATTGTTATG
AAGGACAAGAGCAAAGGGAAAAAGAGCAAAGCTGTTGCCAAGGCCGGCTCTGGCAAAGTACCAGTGGCAAATCATGCAGA
GTCTCGTTTTGAAAGACGAGGAAATAAAAAATTTGCAGACGAAGCTTATTGGCTGGATTACTTTCCACCGCTCGCTGTA
CAGGATTTGAAATCCATTGGCTTACACATCGATTGGCGGCGAACTTTTCATCACTACGACGCTAATCCGTTTTACGATTC
TTTCGTAAGGTGGCAATTTCTGCATTTGAAAGCTCGAAATAAAATCAAGTATGGAACGACATACGATTTATTGCGCAA
AAGATGGTCAGCCCTGCATGGATCACGATCGTTCTCCGGTGAGGGTGTCCGGCCTCAAGAGTATACGCTCGTAAAGATG
AAACTTTTTGGAACCATATCCGGAATACTGAAGAGCGCAACGCGCAACCAAGTTTTCTTGGTCGCCGCAACACTCCGACC
AGAAACCATGTACGGACAAACCAATTTGTTGGGTTTCATCCGACATACGATACATCGCTTATGAAATAGCAAATGGCGATG
TTTACATCTCGACGAAGAGAGCCGCACGGAATATGTCGATCAAGGATTTCATGCAAATCGAAGGCGAAATTTCCAATAATT
GCTGAATTCGTAGGCCAGGATATTCTTGGCTCGGCTCTCGCAGCACCATTACGAGCCATCAAGTTATTTATACCCTCCC
AATGTTGACTATCAAAGAGGACAAGGGAACCGGAGTCGTGACCTCCGTTCCAGCGATTCTCCGGACGATTACGCGGCTC
TGGTTGATCTTAAAAAGAAACAGCCCTTCCGCGAAAAATATGGTATCAAGGACGAAATGGTGTTCCTTACGAGCCTATT
CCCATAGCGAAATTTCCCGAGTTTCGGAATCTTCAGCTCAAATTTTGTACGACAGGCTCAAGATTCAATCGCAAAACGA
CAAAGCCAAACTCTTGAAGCAAAGAAATGGTTTATCTGAAAGTTTTCTACGACGGGATACTTTTGGTGGGTGAATTCA
AGGGTCAAAAAGTGCAGGATATTAAAAACAAGTACAGCAGAAATGATCGACAGCAAGGAAGCTGATATTATATGAACAAG
AAAAAACTATAAATGTACAAGAT

>CL857Contig1|40s ribosomal protein s4

CGGCCGGGGCTCTTTCTCGTGTGATGACCCGGTCTCTGTGAGGTCTTTTCCGTTTAGAAAACCAAGATGGCTCGCGGACC
CAAAAAGCACTTGACGCTTTAAATGCGCCGAAGGCATGGATGTTGGACAAAATGGGGGGTGTCTACGCCCCAGACCAT
CCTCCGGACCGCACAAAGCTTCGGGAATCCTTGGCGCTGGTCATTTTCTACGTAACAGACTAAAGTACGCGCTGACCAAT
TCAGAGGTCACAAAGATTGTCATGCAACGTTTGATCAAGGTCGACGGTAAAATCCGTACCGACCCGAACATATCCAGCTGG
CTTCATGGACGTTATCACCATTGAGAAAATCGGTGAATTTCTCCGTCTCATCTACGACGTCAAGGGACGTTTACCGTTT
ACAGGATTTCCGCTGAGGAAGCCAAATACAAGCTTTGCAAAGTCAAGCGAGTACAGACCGGACCCAAAGGGAATTCATT
TTGGTCACACAGCAGCGGACCATCCGTTATCCCGATCCCGTGAATAAGGTCATGACAGATTACAGCTCGATATTGT
TTCCGGCAAAATCATCGACTCGATCCGTTTCGATTCCGGTAATCTGTGCATGATCACGGGCGGAAGGAATTTGGGACGTG
TCGGTAACGTTGTGAGCCGCGAGCGTCATCCAGGATCCTTCGACATTTGTACGTCAGGATTCCGAAGGTCACACCTTC
GCGACCAGATTGAACAACGTGTTTATAATCGGCAAGGGAGCAAAGGCGTACGTCAGTTTGCCGCGAGGCAAGGGTGTCAA
GCTCTCGATCGCTGAGGAGCGTGACAAGAGATTGGCTGCCAAGGGAGTCTAAGTTTATTACCAATGTAATAACGAAGAAA
AAAAAGAAAAAAATAAAACATTCTGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGTCCGCCG

>CL8642Contig1|-trehalose-phosphate synthase

TTTTCCACATCCAGGATTATTGTCTCAATTTCTGGATTGTTGTCAAAGAAGTTTGGGTGGCCGAGTGGACCGAAAGAAT
CTTTTGGTCGAGCACGGTGGCAGAACAGTGCAGTTCGTCATTGCCAATTGGAATACCGTTTCGACAGATTTGTTTCATT
GGCGGAGACAGCGCCGAAAGTAATGTTGACCAATCAGAAGATCGTCCTTGGGGTGGACCGTTTGGATTACACGAAAGGAC
TGGTGACAGATTGAAGGCGTTTGAGATGTTGTTGGAGAAGCATCCCGAGCATCGTGAGAAAGTGACTNCTTTCGAAATC
GCCGTACCATCGAGAACCAGTGTCCGAGAGTATCAAGATCTGAAGCTCGAAATCGACCAATTGATTGGTAGCATAAACGG
CCGTTTTTACCACGCCCAATTGGTCGCCAATCCGTTACATTACCGCTGTGTGAGTACAGGACGAATTACAGCTCGATAATC
GCGATTCCGCGAGTCGCACTCGTCAACCCCTTAAGAGATGGTATGAATCTTGTGCGCAAAGAATTTGTGCTTGTCAAATA
AACTCGCCACCTGGAGTGTGATCGTGTACCGTTTCGCCGGCGCCGGAGAAATGATGCACGAAGCTTTGATTTGCAATCC
CTACGAAATCGATGAAGCCGCCGAAGTCATTACAGAGCTCTGACGATGCCCGAAGACGAACGTACACTGCGCATGAATC
ATCTCCGTCGTGAGAAAAACNGTACGACGTGAATATTGGATGAATCGTTTTACAAGTTAT

>CL8683Contig1|long-chain fatty acid transport protein 4-like

TGACGTTTTAGATGGATTTACGTTGCCTTGCGAACTGCACCTCGTGATATACGAGCTCTGTACGCTACTTCAGGCTCG
TTTTAACGATAAAAGGTCATGAAAAGAAAAATCGTAGCGTCGCCGACGTTTTTCAACAATATGTCGCTCGTCATCCAACC

mmc4.txt

AAACCGTGTTCATCTTCGAGGATAAGGAGTGGTCTGTTCCAAGAGGTGGAAGACTTCAGCAACAAAATTGCAAGCGTTTT
CAAGAGTCATGGATACCGAAAAGGCGACACGGTCTGCTCATGGAAAAACAACCAGAATACGTAGCGACGTGGCTCGG
CCTCAGCAAATTTGGGAATCATCGTTCTCTCATAAACATAATTTGCGAAAACTACGTTCTGCACAGCCTCAACGTTG
CTAATTGTCAGGCTCTCATTTATGGCAGCGAACTATCCGAAGCTATCAAA

>CL869-bisContig1|eukaryotic translation initiation factor 4e

CGGCCGGGGGAAGCAATGTGGACGATGAAGATGCCTGTCAAGTTCTACACAGTTGCGGAGGTAGAGAAGACTGAGCAGGA
AGCTACTAGTCTGGAAGAATATCCGCCTGAATTACTCATCAAGCATCCTCTCCAAAATACATGGACCCTGTGGTACTACG
AGACGGATAGAAAATAAAGTTGGAAAGAGAATCAGCGCGAAATCATCAGTTTTGATACCGCAGAAGATTTTTGGAGTTTA
TACAATCACATAAAAACCGCATCCGAGCTGAAACATGGGACGGACTACAGTATGTTCAAACAAGGAATCTACCGATGTG
GGAGGACGACGCGAACAAACGCGGAGGTAGATGGCTACTGCAGCTGGATAAGAAGCAAAGAGGCACCGATCTCGACCACT
TCTGGCTCGAAATAATATTGTGCATGATAGGCGAAGCTTTCAACGGATATTCCGATGATGTTTTCGGGAGCGGTAGTCAAT
GTTAGAAACAAGGTGATAAATTAGGTGTCTGGACCACCGATAGTAGTAGATCGCAAAACGTTGTGGAAATTGGACGGAA
ATTGAAGGAACGTTTGAGAATTGCATCCAAGGTTACGATAGGCTATCAAGCGCATCACGACACCATGGCCAAGTCGGGAA
GTAGTACGAAAAACATGTACCAAGTTTAACTCGGTCTTACATTTTAAATGTTTGTCTGATGTTATTTAACTAATCTCCATCAACC
AAGATCGATTATTTTTGCTTTTTCTTTTCATCTTTTTTATTTCGACGATTGCGAGCCGGATCGAACGCGCACTTTCGAAATCG
TCGACTAACGTTCAAATTGATGAGTAACTGCTGGCAATTATGTGGCAAAGCATTGAAATATAATATATATTGTATGCGA
GACAACTTTTTGGCGCGACGAAAAATGCAACCACAGCGATAGGAAATCCTATTGTTACTTTTTTTGTTTGTTTTTTTTTT
CACTACTTCTCGAGAACTTTATTCTCCTTCGAGTGTGTTGCTCTGCAAGTCCTCTAGATCTTTTTTATTACAGACAGA
TCAACGTGCATTGAAAAATGGGAATAAATGATTTCGTCTATCATGTACGAATGATTGAAAGATAGACAGCGAGAGGGAATAG
AAATAAAATACTAAATACCAATGTGTAATAAAATGTAATATTATTTT

>CL870-bisContig1|canopy 2 homolog precursor

GATGTTTCATATTCGGTTCCTCACTCTCACGGCAAGATCGCAGGTTATGCGCGGGGCAAGCTGATTCGTCACTCGAGATTAC
ACGTGTCCAATGTTAATTGATGCTCAAAAAATCTGAGGCGGCCATTGACAGATATTGAGTTCGACTCGAGGCTTTAAAA
AGAATCAACTCGTCTTCCGAAATTCATTAATTACGTCAACTCGAGATTACAGGAAACACGTTTCTCTAAAAATTCAT
CGCGCTAAATAACAAATACAATTTGGTATTTTCAATAAAATGCGTTTTTCGATTATTGTTGCTGTCTTGTGTTTTGCTGT
CGCGCTAAACGCCGTGAAGTTGACAACAATTATTTAAATGTTTATGTTTGCAGGACAACGGTCAAAGAAGTACAACAAG
AACTGGCAAAGTCGATCCAAAGCGAAAGATCGATATCGGCAACTACCGATTGGACGCTGCAGGCAACGAAATTAATAAAT
CGGTACATATGGCACGATCAGCCGTACACATATCCGAAGTTTTGGACGAAATTTGCGAAAAGTTCAGCAACTATGTCAGA
GCGACTTACAAGCAGTCAGGAAGACTGACACTTCTAAATCTGATGTCACCCACAGGTGGCATGAATCCTGAAATTAGCAA
AGTCGACATTGTGCAAGATGGTGATTTGAACAAAAGTCTCGAATATTTGTGCAGGGAAGTCGTGCGCCGACGAGGAAGAAG
AAATAACGGAATTCCTTCAAAAAGAAACAGCAACGACGACGACGAGTGTGACGAATGTTTGCAGCAATCTATGATCT
TCGAAGCACCAAGAAGAAGTAACCGACGAATATCTGGAGAAGACTGAATTTGTAATCAGGAGGAGAAAAAAAACGGG
AAAAAAAATTACTCCTTCGTATAGAACAAAGTCAAGAACTTTTGGAGATTGCCATTATTCTATTTTTCTCGTGGTGCATG
ACCCTGTGGCACATCGAACCAAATATGGAGGAAAGGAATTCAGTGAGCTGAAATAAAGCGAATTATTACTTAAACC

>CL8703-bisContig1|probable small nuclear ribonucleoprotein sm d2-like

AATTCGTTGACGGCGTCTGTCGTGGTGAAGCATATAGCAAACTTGTGTATTCCGAAGTCCGCGCGACGTCGTGTGTAC
GATCGTCAAGATAGTCGCTTTTTCTGATTTTTCTACGAGGATCAACTCAAAAAGAAGCAAAAATGTCGCTCGCAAAACCA
AAATCTGAAATGACTCCCGAGGTTGGCGAAACGAGAAGAGGAAGAAATTAACACAGGCCCTCTCCGTATTGACCCA
GTCCGTCAAGAACAACACGCAAGTTCTCATCAATTGCAGAAACAACAAAAATTACTTGGCAGAGTAAAGCCTTTGACA
GACACTGCAACATGGTCTCGAAAACGTCAAAGAAATGTGGACCGAATTGCCAAGAACGGGAAAAGGAAAGAAAAGGCG
AAACCAAGTCAACAAGGACAGATTCAATTTCCAAGATGTTCTTCGAGGGGACTCTGTGATCTTAGTCCTAAGGATCCACTG
GGCACTGCATCAGCGAAATGAGCGAAAAATTCAATTTACCAAATTTCAATTTATCGCTCAACGCATATTTAATAATCTTA
TATCTTGANATAATAAGCACAT

>CL8716Contig1|protein transport protein sec31a

GTTTGGTAGTTGGGAGTAGTTTCGATGGGCACGCGGTCTGATATTCGTTATTGGGTGGCCAGCAGCACGGTACGATCGAA
ACTTCGAACAAGATAGTCGATTCTGTTTCCAGGCATGGATCCATTACGCAACCTCCGACGGCTGTGCAAAGCGAGCCAGC
GGTGGCTTTGAAAAAAGGCGCCGAAATGGCTGAAGCGACCATTCGGAGCATCGTTTCGGTTTTGGTGGAAAACCTCACGATA
TTCGAGAACGAAGCAGCGGATCCAAATTCCAACACGTTCCCGAGTCGCAAAAGTCATCGTTTCCCAAGTAATTACCAACTC
CGATTGTGATAAAAGCTCCAGGAGTCTGAAGAAGCTCTCAAGAGCGACAGTTCACTGATTATTGTAAGGGAAAAGCCA
GCGTAGCGAAAAACGAGCATGAAAAAGAAATTTGGAAGTGCCTGATGCTTACTTCAGCGAAGATGTTACAAAAGGATTG
ATACAATTATTAGACTACGACTTGGACGGTATTAATCAAACCTCAGGCAGTACGTACCTCAGGAAGATCTCGATGCTCT
GGCGGATGGCATCGCCAAAATGGATAACATTCAAAATGGAAACACTCTCGATGGGAGTGCAACTTTTCGATGCCATTGCTC
AACAGAACAGGACAAACAGAAATTTGGCAACTGACGCTAAACCTTTAGATAGTAATTTCAAATAATACGTGCAATGACG
AGGAGGGACTCATAACCCAAGCAATTTTGGTGGGGAACATCGAAGCTGCGGTATCGCTTTGTTTCNCAACGAAAAGATAC
GCCGATGCGATTATTTTGCAATGGCTGGTGGTCCGATTGCTGGCTCGTACGAGT

>CL8718Contig1|PREDICTED: uncharacterized protein LOC100875886 [Megachile rotundata]

AAAGATGGAAAACTCGTTAAAAATGAAAGTTTTAGTTCCGACGGATCCGTCATCAAGGACGGCTTGTTTTACGGCAAAGA
TGGAAGCCTCTGAGTCAAGTTCTCTCCTTCCCAACGGCTCGCACCTCAAGGATGGTAAAATCGTTGGTAAAGACGGTA
AAGCATTGAACACGCTTTTTACAAGCCCGACGGTAGTTTTGTTTCGAGAAGGAATAATCACCCTAAAGACGGTAATCCT
CTGAGCCAAATTCGGTTTTGGCTGATGGAAGTTTCGTCGAAGGAAGTTTCGATTACGACAGAAACGGTCCGCCATTGAA
TCAAAGTCTTTTCAAACCCGATAACATTGTTATCCGCGAAGGACTCATTTGCAATGCCGAAGGTATCCGCTCGCTCATG
GCTACCTGGGTACGATTCTTTCGATCAAGGACGGTGTCTGTTCTCGGCAAAGACGGTAAACCAGCGAAGCAAGAATCC
TTCGTTTCGAACGGAATTTACATAAGGAAAGGCGTCTTTATGGTAAAACGGAAGCCTTGAACCAAGATTCCCTGGTGC
CCGAAGGTGCAGCGATCAAGGATGGCAGAGTTTACAACAAAGATGGAAAGCCGATGAAAGCCTCTTTCTTCAAGCCCGAC
GGTAGTTTCGTCAAGGACGGACAAGTTTATGGCAAGATGGTAAACTCTTGAATCTCAGTTGCTCGCTTCGGACGATAG
TTTCATCATGAACGGCTGATTTTCGATCGAGCCGTTAAA

>CL872Contig2|mitochondrial-like

mmc4.txt

ATTGCTACTACGTTTATCGCGATATACCACTCTCTCGAATCATCTCGCGTAGCCGCGTTAAGTCATTCCGATCTTTCAAC
GAGCTGTGCAATTCCTATGGACCAGAATCTCCATCGGCTCATCGATTTTTCTGTCAGTTTTCTGCTCTAGACCTTGACGCG
AACCGAACATGTTACGTTCTCGGAAATTCACCTCGGTGTTTTAGCTCACGAACAATTGGATAAATTACTTATAACTAAATGC
AATGTTAGTCACGTCACCTCGTGATCGCGAAACTCTAGCCCTTGCTCGAAACTCTCATCCGGAAGTCCGTGGAAATGAATT
TTCAACCGATGCTTCCGAACCGAGAAAACTTGCTGTCACGATCTACACCTCGCCAAAAAATGGAAAAATCGTGAATTTCT
TCTGGCTGGCTCTTGCTGTGCAATATCGCGATGCAATCGCAGTTTTCTCATCAGCACACGAGAAGTTACGCATCGTTGTT
CGATGTTGGCCACATGATGCAAACTATAGTGACGGGCAAGGACGCTGCCGAATATTTGGAATCATTGACGACCATGATC
TGAAGAATCTCGTCTCTGGGGTCCAGTTTTGACAGTATTCACCAATGAGGATGGTGGCATTCTGGACGATCTCATAATC
ACAAAAGATGACGAGGACAAATATTTCTGTTTCTAATGCCGGAAGAAGGAACGAGGACTCGTTTCTGCTGAATCAGCG
AAAAGTTGATTTTCAGAAAAATGGAAAAATCGTTGATCTCCAATATCTGGATCCTTTGGAACGAGGCTTGATTGCTTTGC
AAGGGCCGACAGCAGCTCGAGTGCTGCAAACTGCTGGTGGACTTTGATCTGAAAAAGCTCAAATTCATGAATCCATCCAG
ACAAAAATTTCTAACATCGAGACGAGACTATCCCGATGCGGATATACAGGCGAAGACGGTTTTGAAATTTAGTCGGTG
GAAATGAGGCTGCAAGTTTGGTGAATGATTCTCGAGAACACAGACGTCAAGCTCGCAGGGCTTGGGGCACGTGACAGCTT
GAGGCTCGAAGCCGCCCTC

>CL87contig1|t-complex protein 1 subunit delta-like

AGTTCTCACCGACAACGGAAACCTCGTGCTTCTGTTGAGGATCGTCAGTTTTTTCTCCTTTGAAAGACAGTGTGACGAAGA
GTTTCTAACGAAACAAAAGTGTGCGAAACAAAAGTACGACGTTGAAAAACGAAGGACTCCTTTGACAAGAGACAAAG
AACTCGATCGAGTCACAACGATTGAATTTATTGGGATTGATTAATTGTAATCAAAGCAAAAGAGAAAAATGACCGGACT
TTCGTTGCGAGGAATCGGTGGCGGAGGCGGAAAGGTCGCGTGGAGGCCATGCTTATAAAGACAAGAGCAAACTGGCG
ATATTGCGACGCAATATCAACGCTGTAAAGCTGTACGCGATGCGATTTCGACGAGTCTTGCTCTCGTGAATGGAC
AAGATGATACAGCCGGTAACGGAGAAGTAACCATCACCAACGATGGGGCAACGATACTCAAAGAGATGAACGTATCCA
TCCAGCAGCAAAATGTTGGTAGAATTGTCAAGAGCTCAGGACACCGAAGCAGGGGACGGAACGACCAGCGTCGTTGTTA
TCGCCGCGCGCTCCTCGAAGCGGCAGAACGACTTTTGCAAAAGGGAATTCATCCCCGCTCGATAAGCGACGCTTTCCAA
AAAGCTTCAACAAAAGCTGTGGAGTCTCAGCTGGGGAATGGCGACTCCTCTCGATTTAGCGGACAAAGCTTCGCTGAT
TAAAGCCGACGTACGTCTTTGAACTCGAAAGTCTGTGCGAACACTCGAGTCTCTTGCTCTTTGGCTGTCAATGCTG
TGCTCAAAATCACAGAGCCCCGCAAGAGAGCGCCACGGATCTCAAGGACATCAAAGTATCAAGAACTCGGAGGCACC
GTCGAAGACACGGAGCTCATCGACGGCCTTGTCTTTACTCAGAAATCGTGCAACGTCAACGGGCCGAAGAAAAATCGAGAA
AGCGAAGATCGGCCTCATCAATTTTGCATTTACCACCGAAAAGTATGATATGGATCACAACTAATCGTGTGCGATTATT
CGGCCATGGATCGAGTCTGAAGGAGGAACGTGCCTACATTCTCAACATTGTCAAGCAGATAAAAAAATCGGGATGCAAC
GTCCTCCTCGTCCAAAAGTCAATTTCTCGGACGCGATCAGCGATTTGGCCATCCATTTCTTAGACAAAATCAAAGTTAT
GGTCGTCAAGGACATCGAAGCGGAGGACATTTCTAGTGTGCAAGACTCTGGCTGTGGCCGATCGCTTCGCTCGATC
ATTTCTTACCGGAGAATCTTAGCAACGCCGAACCTGTGCGAGGAGTCCAGACCGGCAATTCGAAATTTGTCAAGATAACC
GGAATCCAGAATCCTGGACGAACCATCACCGTGTGTTCCGCGGTAGCAACAAGCTCGTGTGGAGGAAGCAGAACGTTT
TCTCCACGACGCCCTGTGCGTTATTGTTGTTTGGTAAAGCAGCCAGCACTGATCGCAGGTGGTGGAGCTCCAGAAATCG
AATTGTCAATAAAGCTGTCTGCTTACGCGCAAACTTTGACGGGAGTCTGATGCTTATTGCGTAAAAGCATTTCGCGGACGCT
CTCGAAGTGATCCCCCTCGACGTTGGCTGAAAACGCGGGCCTGAATCCCATCGCAACGGTCACCGAATTCGCGAGTCGTA
TGCTCAAGGAGATACGACGACCGGTATCAATGTCCGCAAGGATGATCAGGACATCATGGAAGAGAAGCTTGTTCAGC
CTCTTCTCGTCTCGATAAGCGCAATAACTCTTGCTCTGAGACGGTGCATGAGCAATTTTAAAGATTCGACGACATCGTAAAT
ACTATGCAATAATCAAATTCATCACCCAGTGAATTTAATTTCTCAATTTTATCGCTTTTTTAAATTAATAATAAAC
TCCAGCTGAAGCTGTTGCGGCTTCATTTGTAATTTTATACTGTGTAAGCCAGTTGTTTCATTTTCATTAACATTACGCT
TTAATAATAAAGAACGATTCAACACCGATTATTAATAATTCGGTCCATTTGCCAATGATTTTTTCCACCGTATTCCTTT
AGCTCTATGAATTTTTAATTCGCCTCGCGCAATTTTTCTGTTTCCATGGCCAAAGATATCGAAGCTTCGCCGGTAGAGAT
CGACGATGTATTCTGAGCTTAATAAAGGACG

>CL880contig1|nodal modulator 2

CTTCAAACTATTTTCATCATCGGAAATCGTCTGTCGATAAACTGCCTCGACTTTCCATCAAGAAATCGAAACTGACCCC
AAAAACTGGACAATATTGCGTTTATCTCCGACCTGGAAATATCAGCTTAGCGTTATCGTCAGCAACGTACGAAAAAGAC
CAAAAGGGCTCCAGTTTTTCCCTCTTCAGCAAAACGATCGACGTCGCAACGAAGCCGGTGAACGATAATAAAATTTCACTC
AGCTGAAAAGCGATCGTTGAGGTTCTGTGCAAGTCTGAAAACTCGGACTCGGTCAGATATCCGTTACGTTGAAAT
CCTTGACGGTGTGACTGTGAAAACTTCAAGCGAAAGCAGATGGTCTTAGGATTCACGAGCTTTCGCTGCTATT
ACGAGGTTTTTGATAGACACGGACGCTTCTGTTGAAAAACGGCGTGCATCGAGTTTCCATAACGTCGCAACGTCGCGAG
GTTCCGCCGTTTCGAGCAAAACCGCTTCTCCGCGATGTTCAATACGTCACGCTACGGCAGTCAATACGTCGAGCCTGA
AACTACCAAGAGCATTAAATTTGGAATTCGCGTGGTAGCAGGAGGCACTGCGTTTCTAAATCCGGAATAATAAATTCG
TACCGATCGGCTGTCACATCTTCAAAAATCATTACAACTGGGACACGAACAATCTTTCGCCGATTATTTTCTCATCGACG
AAACATTATCATTATGGAAAAATCGTCAGTTCCGCTGCTCTCGATGACGTCCAAGTCAACATAAAAACTGCAGAGACAAA
CACGGTCGCTGGACCTTTGAAATTCGTCAAAGAAGGCGAACTCTATCGTTACGATTTTAATTCATCGCTGGCGCCGATAT
CGTTTTTCGAGATTACTCCCTTGTCCAATATCTTGTGTTCAATCCACCGACCGCCAAGGTCATTGGAATTGACGATTGTG
CCAAAGACGTGGCCGTTTTCAACGGCGAATTGGGAAAAATCGTCAGCGGAAAGTGCCTCCAGTTTTGGAAGGAGTCACA
ATTCGCATATTTGGCAAAGACAAAGACGCACCGATCCATACTCTCGTTACCGACAAGGACGGAGCTTACAGAGTTGGGCC
GCTGGATGGAAAGCTCGAATACACTGTCACCGCCGAGAAAGAAAGTTACGTGATCACCGGACCCGATGCCACGGCGTAT
TCCTCGCTCACAACTGGCCGAAGTTATTGTGCAAGTCTGTCAGCAAGCTAATCAAGAATCTCTTCGGGTGTATTGCTT
TCGCTCTCCGGGGTCAAAAGCTACAGGAAAAACGAGCGTACCGGCGACGATGGCAAACTCGTATTCACTCTTGTCTCC
GGGCGAATATTTCTTGAGACCAATGATGAAGGAATATCGTTTCGAGCCACGTTTCAAGGTCATCACCGTGGGAAGAAGGTC
TAACCGTCGATGTTAACTTTCCGGTACGAGAGTCGCTTTCAGCGCTTACGGGTCTGTGACTTCTTGAACGGCGAACCC
GAACGCGGATTGCTCGTGAAGCTCAGGGACAATCCGATTGTTGCAATCTTCAGGAAGAAGCCACGACCGAGGACAACGG
ATCGTTCAGGATCCGGGGACTCCAACCGACTTGATCTACGCGATTGCTTGAACCCAGAAGCAGAAGCGAATGGCCATA
TCCAACCGGTTGCACCGTCTCGACAGCCATAACAACCAACGAGCTTGGGGCTTGAGATTGATCGCATCTTATCCA
ATTTCCGACGAGTTTGTGATCCACGTCGATCTCTCGAACCGGAGCATTACAGAAATTTACGAGTGAACCTTTGTGCG
CGAGGATCAACCGGAATCGCCCATTCACACGTACAAATTTGGAATCCCATCCGACGAAATAGGAGCCACATACAATTACG

mmc4.txt

GTTTCTATCCATTTTCTCCGTTGCAAGCGAATGGCAAAAAATATTCGTCCAGTTGGAATCGACGCTCTCGCAATCCTTG
TACAAGTACAAAACCGTCCAATTATTTCGAGGCAACNCCT
>CL882Contig1|dolichyl-diphosphooligosaccharide--protein glycosyltransferase
subunit 1

TGTACGGACCGTTTCGACAAGAAATCGCCGCTGACGGAGCAAGAATTGATGGTTCACTTTGAGAACAACAATAAATTCCTTG
ACGGTAAAGCGGCTGGAGCGCGTCATAGAAGTTTCTCACTGGGGAACATCGCCGTGGAAGAACTCTGGACATCGTTCA
CACCGGAGCTCTCCTCAAGGGCTCCTTCTCCAGATACGAGTATCAAGGTCAACCAAGGTGCGCCAATCGAGCGTACACA
GTTTTGACACTGTTCTACCTGCGGCAGCTTCCGATATTTATTATCGCGATGAAATCGGCAACATTTCACTTCCCACACC
AGGGTGAAGAAAAGATTCTGTGAGGTCAACCTCAGACCCAGGTTCCCGCTCTTCGGAGGCTGGAAGAACTCATTATATTCT
TGGCTACAACGTCCCGAGCTACGAGTATTTGTATCACAACAACGACGAGTTTGTCTGGAGATGAGACTCCTGGACCACG
TGTTGACGACATGATCGTCGACGAACTCGTCCTCAGAGTTATCCTGCCGGAAGCGCGCGGAATTTGAGCTCGTTCTG
CCTTATCCCGCGAGCAGACTACCCGATTCTTATCACTATGCGTATCTTGATGTTGCTGGTCTGCTCCCGTCTCTCGATCAC
GAAGAAAAATCTCGTCGAAAATCACATTAGCAACTTCCAATGAAATACCAATTCCTCGGGTTCTCATGCTCCAAGAAC
CGTTGCTCATTGCCATTGCTCTCTATTACTTTCTTATGGTCATCGTTTACGTGCGCATGGATTTCTCCATCGACAAGG
ACGAAGCCTCCGAGAGCAAGTTGAGAATCGCCGAGTTTGGCAGAAAATCCTTGCCGCCAAGATCGCAGAGTCACTTCT
TACAACGAGCTCGACGATCAACTCGTCTATCTCAAGGCGAATAAAGACGCGAATGCTTTCTCACCGCTGTTAAGAGCAT
CAACACCGAATACAAAAACGCTACCAACGCCGTGAACGAATTTGCTGCTAAATTGAAGTCCGAGTCCCCTGACGTTTACG
ATAAAGTTCAAGAGCTCCAAAAGTTTCGATAGGAACCTCAAGGAACCTTACAATCAACAACAACTCTCTACGTCGAAAAA
CTCGTGCCCGGAAAAATTTGCGAGACCCGAATTCGTCCACGCGGAAGCAGCCATCGCCAAGAAAAAGGAAGAATGTGTTAG
AAAAAATTAATTGATCGTCAAATCGTCCAAATCGGAGCAGCTCGAAGACTGCCGAAAATTTGGTCATTTTTCGTTG
AAATAAGCCAAATTTGGAAGAACTACTCAATTTCTGATAAATATCTCGTTTCTTTTCGACGATTTATTTTCTCCATTCCA
TTTGGCTGCTTTTTCCATTGCAGAGAGACAACCACATTCTCGAAATCAGTGCATTTGTTTTGAGTACTTGACATTCTA
CACCCATGCCAGGGCAA

>CL884Contig1|coatomer subunit alpha

AAGCAGGAGGCGAGGGCGAGGATGGTGGCGCTGGGAAGTGAAGACGTGACCTTCCGCCCGAGCTTGAACTTCGGTG
CCAACAGCCGAGGACGTTATTATTTCGGCGCCAACGAAAGGCGTGCCAACGTGCGAGCACTGGGTCAACAACCTCGCAGCT
CGCGGTGACCCACATACTCGCAGGATCCTTTGAATCCGCTTTCGCTGCTAAACGATCAAGTGGCGTCAAGAGTTTCG
AAGTTTATCAAGCACATTTTTTGAACACTTCTCACGCGCTCGTACGAGCTACGCTTCGTTCCAAGTATTCATCGCTG
TACGCTTATCCCCAGAGAAATTTGGAAGACGCGACTCCGAAAACCTGGACTGCCAGCGGTGGGCTGCATCTCGCGGAACT
GGTGCAAAGATTACAAGTTTGTATCAATTAACAACCGGAGGAAAAATTCATCGAAGCGATTGAAAACTGCAAGCGATT
TTCTGAGCGTTCCCTCTTGGTCGTCGACACCAGACAGGACATTCGCCAAGCTCAACAACCTCATAGAAATCTGTGAGAA
TACATTTTGGGCTTGAAAAATGGAAACCGAGCGGAAAAAATCACCAAAAGGCACTCTCGCCGAACAAAAACCGCTCTGCGA
AATGGCCGCTTACTTCACACATTGCAATCTACAACCCGTTTCATCAAATATTGACTCTTCGCACTGCTGTTAATATGTTCT
TCAAACCTCAAAAAATTACAAAACTACCGCTTCGTTTGGCAGAAAACCTCTGGAACCTTGACCTCGTGCGGAAATCGCTCAA
CAAGTCCGCAAAATCTTACAAGCATGCGATAAGAATCTCGTAGACGAGCATCAATTGGCTTATGACGAGCACAATCCTTT
CTCGCTGTGCGCTGCCACCTACACGCCGATTTATCGTGGAAGCCGGAATCAAGTGTCCGTTGTGCGGTGCGAGTTATC
ACCCTCAGTACAAAGATTAGTATGCAAAGTATGCGAAGTTTTCGAGGTTGGCAAAGAGTGATTGGACTGAGGATAAGT
TCCTTGCAATTTTCGATAAATTCACAATCCTCAAAGATTATAAATTAATTAATGATTATGATTGATTGATTGATTGCG
ACTATTATTCTTCAGTCAATCAGCTCTCGAGCACATTGCTGTTGAGGAAAAAATGCTGCGATCAACATGTTGACGCGAA
TCATCCCAACGTGTCCGCATAATCAAGATTGTAACAAAAAACAGGATAAGCATTTTGGCTGAATAATAAAGTTTTCTCTT
TGGATATACGATCGTC

>CL88Contig1|protein disulfide-isomerase

GTTCCTTTTCTCGTCTCGTCTCGTTCTGTTCTTCTCGGTCAATTGGCTCGCGGCCGTGCTCTTTCGCTCCGCGT
TGCTCTTCCCTCTTCTCTTACACACGCGCGCCACGCCACATAGACAAAAACACACAGAGAAAGAAATAATCTCTCGC
GACGCGCGGTTTCTCTGCCACGGCAGCAGCAACACATAGACGGTGTAAATCACCGCACGATATAGGACAACCGCAC
AGCTAAATCTCGTTTCATTCTGTCGCGGACACTCGAGCTCAACGCATCGAGCACCATCGCGAACGTTTTTTTTTTCAT
TTTCAAATTTTTCTATCGATCCAGCTCCGGCTCGTCTCACCGCACGATATCAATCGGAACCGCGATTTTTTACAATATC
GTCGTAACCTTATTCATCGCTTAATCCTCGTAATAATTACGTGAGAATGAAGTTTGCCGGCTTAATTGTTGTGGCGTTGTT
TTATATCGCCGAGTCGACAGCAAGTAAATCAGGAGGAAGGAGTTCTCGTGATTACGAAGAGCAAGTATTGAAC
AAGCAACCAAGGACCAAGTATTTATACTTTTCAGTTTTACGCGCCATGGTGCGGACACTGCAAGAGCTCGCTCCGAG
TTCGCAAAGGCTGCTCAAGCCCTCGCGGATCAAAAGTCCCGGTCAAACCTGCCAAAGTGCACGCGACCAAGAAGGAGA
ACTCGCGGAAGAACAACAAAGTGCAGGATACCCGACGCTCAAATCTACCGCCGACCAACTTCATCGAGTACACGGGAG
GAAGGCAAGCGGATGATATCGTCGAGTGGGTCTTAAGAAGACCGGACCGGCGGCAAGACTCTGGAGAGTCTGGAAGAA
ACGACTGAACTTATCGAGTCCAAGGACGTGCGCATCGTCGGTTACTTCAAGGACACCGAGTCTGCGGCCGCTAAAGCGTT
CTTGGAAGTGCAGCGCGATCGACGACCACGTTTTCTGATCTGACGACCCAGGAAGTATTGACGAATACAAGGCAC
AAGAGTGGACGACGTGATTCTGTTCAAAAAGTTTCGACGAAGGTAAAGCAGTCTTCGAGGGCGAAGTTGACCCGGTGAAT
TGAAAAAGTTTCATCAGCGTTCAATTCGCTCCCGTTGCTCGTTGATTTCAACCACGAGACTGCGCAGAAAAATCTTCGGAGGA
GAAATCAAGAGTCACTTGTGGTGTCTCTGAGCAAAAAGGCCGCTCACTTTGAACAGTACAGCGACGCCATCAAGGAGCC
GGCCAAGGACTTCCGTGGCGAGATTTTGTTCGTGACGATAAACGTGGACGAGGACGATCACGAAAGAATTCTCGAGTTCT
TCGGCATGAAGAAGGACCAAGTGCCATCGATCGGGTGATAAAACTCGAGGAGGACATGGCGAAATACAAGCCCGAGAAC
GCCGAGCTCTCCAGCGAGAATTAAGAATTTCTGTCTTCTGTAAGGAAGGAAAACTAAAACGCCATTTGTTGACTCA
GGAGCTTCCCGAGGATTGGGACAAAACCCCGTCAAAGTTTTGTTGCGGACCAACTTTGCCGAGGTGCTTTCAACAAGG
ACAAAGACGTTCTCGTCGAATTTCTACGCTCCTTGGTGCGGACATTGCAAGCAACTTGTCCCATCTACGACGCTCTCGGT
GAGAAATTCAGGACACGAGAGCATTGTCAATGCAAAAATGGACGCGACAGCTAACGAGCTCGAGGAGGTAAAGGTGCA
GAGCTTCCCCACCATCAAGTTGTACAAGAAAGGAGAAAAACGAAGTTGTGATTATCTTGGCGAGAGGACGCTGGAGGGTC
TCACCAATTCCTAGAAAGTGGCGAGTCTACGAAAAAGGCCCGCAGAAGTCCAAGAAGAGGACGAGGATGACGATGTG
CAAAGAAGGACGAGCTTTTAAACGACGAAAGTAAACATCAAAAAACAAAAACGATAAAAAGCGCAAAAACCTCCATCA
AAATGGGCGAGGGACATAAAAAATTTTCAACAACCTCGTCTCTCTCGAGCTGGCTCGCGCGCAATTTTTAAACGTGAGAG

mmc4.txt

AAATTATCAAAGAATTGAAAAAAAAAAAAACACAACACAATAAGACGTTCAAACCTTACCAAGGAAAATACTTCTTT
TCCGCATCATTATTTTCCGGAACGTCTGTCTGGG
>CL897Contig1|cofilin actin-depolymerizing factor homolog
AGTGTACCGTTGAAACCGCCCGAGATTCTCAGTTCTACCAAAGCCACCCTTGGAGTATACGCGAAAAGTTATCGGGCA
GTGCGCTTGTCTACTCGAATAAACAAGAAAAACAAGTACCGCCTTGTAAATACACGACTGAATCCTCAAAAATGGCATC
CGGTGTGACCGTGGCCGACGTTTGCAAGACGACCTACGAGGAAATAAAGAAGGACAAGAAGCATCGATACGTAATATTTT
ACATCAAGGATGAGAAGCAGATCGATGTCGAGGTGATCGGACCCCGCATGCCGCTTATGATGCCTTCTCGAGGATCTC
CAGAAGGGCGGAAGCGGCGAGTGCCGTTATGGCTTGTTCGACTTTGAGTACACTCACCAGTGTCAAGGCACCTCTGGAGG
CTTCCAAGAAACAAAAATTGTTCTGATGTCGTGGTGTCCCGACACGGCCAAGGTAAAGAAGAAGATGTTGTAATCGAGC
TCGTTTCGACGCTCTGAAGAAGTCGTTGGTGGGTGTACAGAAGTACATACAGGCGACGGATCTTTTCGAGGCATCCGAAGA
GGCGGTGCAAGAGAAGCTGCGAGCTACCGACAGGAATTAACACCGCCT
>CL899Contig1|fructose-1-bisphosphatase 1-like
GAGTGGACTGTTGGGTTCCGACCATTCCGCAAGCGCAATCGATCGTCTTTCTTTGTCTTCAATTATTTTCAAAGTCTCG
ATCCATCATGACTTCTCGAGGACCATTCTTCGATTCCGATTGCATGACATTAACCGGTTCTGTTCTAGCCGAACAGCGAA
AAGTACCAACGGCAACTGGAGATTTATCACAACCTTTTAAATTCATACAAACAGCTGTGAAAGCCGTTAGCTCCGCCGTA
AGGAAAGCCGGCATCGCCAATATGTATGGAATTGCTGGCAACACAATATTCAAGGAGAAGAAGTAAAAAGCTGGATGT
GTTGAGTAACGAATTGTTTATCAATATGCTGAAATCGTCGTACACAACGTGCCTTCTCGTGAGCGAAGAGAACGAGCAAG
TGATCGAAGTAGAGACAGACAAGCAAGGAAAATATATCGTTTGCTTTGATCCCTGGACGGATCATCGAACATCGATTGT
TTGGTGTCTGTCGTTTCGATATTTGGTATTTACAAGAAGCTCGATACATCGAAAACGCCATCGATTACAGACGCTTTGC
AAAAAGGTCGTCAATTGGTTCGACGCTGGTTATGCTCTTTACGGTACCGTACTATGATCGTGTCTCGTATCGGCCAAGGG
GTTAAGGGCTTCATGTATGATCCGGCTCTCGGAGAATTTATTTTGACGGAAGAAACATGCGTTTGCCAAAAAGAGGAAA
AATTTATAGCATTATGAAGCAACGAAGCCACGTGGGATCCTGCGATCAAGGAATACATTCAATCGAAAAAATACCCAA
CCAGTGGCGCAGCGTATGGAGCGAGATACGTTGGTTCGATGGTGTGTCGACGTACACAGAATTAAGTACGGTGAATA
TTTTGTACCCAGCATCGAAGAGCAACCCAAATGGCAAGCTTCGTCTTCTCTACGAATGCATCCCAATGGCCTACATCGT
TGAACAAGCTGGAGGATCAGCGACGTCTGGGGAAGTCAACATCTGGATATTACGCTTCGGCTATACACCAGAGGTAC
CAATTTATTTAGGATCGACTGACGATGTACCCGACGTGCTAGATCACATTAGAGAAGCAAGAAAAATGTCTCATGAAAT
CTACCAATCAGTTCATCACGGAACCTCTGTCGTATTGTACAACCGAACGTTACGATTTTTTTCTATTTGAGCACTTGTA
ACAAA
>CL9049Contig1|coatamer subunit zeta-1
ACACATAAACATTCCACGATGGACGGAAAGTTGTTGGAACCGACGTTATACATCGTCAAGGGTATGGCGATACTCGACAA
CGATGGAAATCGCATACTAGCCAAGTATTACGACAAAAATATATCCCAACTTCGAAAGAACAGAAAGCATTGAAAAGA
ATTTAGTTCAACAAGACGCATCGTTCCAATACCTGAAATAATAATGCTCGACGGACTGACTTGCCTATCGCAGTAACGT
TGATTTATATTTTTACGTCATGGGCAGTTCTCACGAAAATGAGCTCATACTGATAAGCGTTTTGAACTGCCTTTACGACT
CGGTGAGTCAAATCCTGAGGCGGAATGTAGAAAAACGAGCAGTTTTTCGACAGCCTTGACATCGTGATGTTGGCTATGGAT
GAAATATGCGACGGCGGAATCATTTTGGATGCCGATCCAGTGAGCGTAGTTTCAAGAGTAGCTTTGAGAACGGATGACAT
TCCTCTGGGCGAACAACCGTCGCACAGGTCCTGCAATCCGCCAAGGAGCAACTCAAGTGGTCTCTGTTGAAATATTCAA
AGATATCATTGCATTCACTTTTCGACTGTACATTTATTATTAACGACAAATAT
>CL904Contig1|xaa-pro aminopeptidase 1-like
GGCGATGTTTACGGACGGTCGTTACTTTGTGCAAGCGAGCCAAGAGCTGGATCCGAAGGATTCTGGAAATTGATGATCG
ACGGAGCTCCTTCAACGCCGACGAATATAGAATGGTTGATAAGTGTTTTACCAGCGAATTCGACCGTAGGAGCAGATCCG
AATTTATTTAGTTACATGGTTTGGGCACGTATGCACAAAAGCCTTAACAGCTGCCGGGCACCGTTTACTGCCATTGGAGG
AAAACCTGGTTGACCGTGTCTGGGGCGACGAACGTCAGAGCTTTTCGCTCAATCCAATCGTCGCTCATCCCTTGATCTAT
TCCGGACAAAAAGCCAGCGCAAGAAAGATAAGCCACTGTCTGCTGAAATGGAAGAAATCGTACGAGCGCTCTCGTTATTGC
AGAACTCGACGAAGTTGCTTATCTTATGAATCTTCGAGGCTCTGACATTCCTTACAATCCTGTGTTCTTCGTTACGTCG
TACTCACACAAGACGAGGTACATTTCTTCGTCGATCAATCAAGAGTTACTGCCGAAGCGGATAAACAGATGAAAGACGAA
GGTGTGATGTTATTTACCATCCGTACGACCAACTGCGACCTTACCTTCGCCAAATTTCCAGTAACAACGAAACAATGAG
AATATGGATCAGCAACCAATCGAGCTACGGACTTCATGCCGATTGCGAAAAATCTCCTAACATACCGCTGTACCCCGG
TCCAATTAATGAAAGCTGTTAAAAACGATGTCGAAGCAGCTGGCATGAGAGCTGCTCACATACGCGATGCTGTTGCTCTC
GTCAAATATTTGCTTGGCTCGAAGACATGATCGTCAACAAGAAAGAAAGGTCACCGAAATATCGGGTGCAAAACGCTCTC
GAAAAATTTCCGACAAAGAACAAACAAATACGTGGGTTTGGCTTACGACAAATCTCGTCGGTTCGGACCTCATGGCGCAT
CATCCACTACGAACCTCGCCGAAACTGACGCAACCATACCGACAAAGAATTGTATCTTTGCGATTCTGGTGACAAT
TCTTGGACGGGACGACCGACGTTACCAGAACTTTGCACTTTGGCGAACCAACCGATTTCAAAGGATGTTTTACCCGCTT
>CL9075Contig1|hyaluronidase- partial
TTTTTATCGCCGAAGATTACGAATGCTCCGATCGCATCAACCACGAGATTCACTGCCAACAAAATGTTTCCATTTACAAA
GACGATCCATCTCGTACTCGCGTTTTTATTCTGTCCTGAGATCGAGGCTATTTTCGTTTTAGGAAATATTTTCGGTCCAA
CGACGACATCCGTTAGGGATTATCAAGTTTACTGGAACGTGCCGACGTTTCATGTGCCACAAATATGGGATGAACCTTTGAG
GAAGTATCGCGTGATTACGGAATAATACAAAATCCTGACGACGAGTTTCGTGGTAGCGAGATAGTGATGCTGTACGATCC
AGGGATGTTTCCAGCCTTGCTGCAAAGTGGAAACGGCTCCGTTCATGATGAGGAACGGTGGAGTGCCTAAAAAAGGCAATT
TGACGGAGCACATAGAAGCAATTTAAAAAAGACGTTGTTTCAATATATCCGGACGCGGGGTTCCAGGGACTGGCCATCAT
CGATTTTTCGAGAGTTGGCGCCGATCTACCGTCAAAATTTGGGCGTCTGCTGCTCAGTACAAAGTCTTTTCGGAACAACCTCG
TGAAAAAGAAAGCATCCACCTGGAGCGACGCCAAAGTGAAGGCGGAAGCGACTAGGCAATTTGAAATATGGGCAACATTA
TTCATGGACGAAACTCTGAAACTGCTCAGTCGCTGAGACCGCAAGCAACTTTGGGGCTATTACGCTTTTCTTATTGTTT
CAATCTCACTCCTAATCACACTGTTACGGATTGCGACGCGAAAGCCATGGAAGAGAACGACAGCATGGCTTGCTCTTCA
CCAAAAAAGGAAATTTGCGGCGG
>CL90Contig3|caprin-like protein
AGTTCGCGTTGTTGCCGTTGAAGGATGCCTTCTGCCAACCTTAAACAGGCCACGGAGGCCGAAGATCCGATACGCCAAG
CGATCAAGGTTGATCGAGCACAAATAAGAAATTTGGAGAAGCGAAAGACCAATTAAGAGACGTACAAAGGAATCCAAGACA
GCGGCAAGGAATTGAATCAGGACCAGAAAACGGCGGTTGCCAAATATGACGAAGTATTGACAGCGTTGGATATCACTCGA

mmc4.txt

GAGCTTTGCAAAGGTGTCGTCAGTATCGCCAATGACTCTGCCAAACAAGAAGAAAATGGCGCGCAAGGAGGCGCTCGA
ACGAACGCAGCAGGACATTGCTAAGGTTTCGCGAAGTTTGTCTCGTTCAAGATGTCTTGATGAACATGGGAGCGGACTCGG
TACGCGATGATTTTCTCAACGGTTTGAACGGCGCACCGAAGTTGACCGACGAAGATCTCAAGACTCTGGACAATTTGTAT
AACGAAGTAGAAGTTAAACGGCAAACGGAGGCTGCGGAAGCACCGTTCGCCGTCGTGTTACAAAAGGCGGCTGAACATTT
TGTTTCCATTGTCGATGGCAAACAAAAGGAATTCATCGGCACTACGTATCTAAAAATCAAGGAGCTCGTTACGACCATCA
ATTCGTCCGGTTACTTCGATCAGACTCGAGAAGCCGAAGTTCCTGCTCAACAGACCGAAGACGCGTCGACGGAAGGACGA
ATTTCAAACGTTCAAGCACCGCAACAGCCGACGGAAGATTACAATGCTGGGAAGTACACATTCAGCCTCGGAGTCGAA
CTTGCAAGCACCAAATTTCCCGTTCAAGTGTCTCAAGTACCGGTCGTTCCGGCCGGCTCCCGTTTCCGGTTCGTTACCC
GTCGTAGCTCAGCCATTCCGCCACATCAGGCTTCGAATCTCGAAAATGCTTATTACGTTAACGCCCCGAGTTACGTACC
GACCTCGCAGCAAACCTCAACCGGCTCCGCTGCCTCCGCAACAACATCAACAACAACCGACTCAGCAACAGCATCCGTGCG
CAACAACCACAACAACAACAAAATCAACAACCCCCCAACGCCCCCGCGTCTCAATGACGTATTGGAAATCCAGA
TTTTTTTTCTTCAAGAATCCGAGCTTGATTCTCCCGATTTAAACCGGCCAGACCGCACCCATTTCGAGTGAGTGACCAAG
GCC

>CL9187Contig1|proteasome subunit beta type-5-like

GGATTGCGTTTATTGGGATCGTGTCTAGCCAAGCAGTGCCGCGATGTACGAGCTGCGAAACCGTGAACGTATTTCCGTCG
CTGCTGCTAGCAAACCTCATGTCAAACATGGTTTACAATTACAAGGGAATGGGCTTGTCATGGGAATGATGTTGGCTGGC
TGGGACAAACGTGGACCAGGATTGTACTACGTTGATTCCGGAAGGTACACGAACCCCGGGAAAGGTTTTCCAGCGTCGGTTC
GGGATCGGTGTATGCGTTTGGTGTGTTTGGATTCTGGTTACCATTGGGATTTGACCGATGAAGAAGCGTACGATTTGGGTG
GTCGTTTCGATTTATCAGCCCACTCACAGAGACTCGTATTCGGGAGGAATCGTCCGAGTTTACCACATGAAATCTACCGGA
TGGGTTACATTTCCGACGAGATTGCAAAGATCTTCACTATCGTTACGCGGAAGAGAACTTGCAGCCATTGCCGAATA
AACAAAAAATATGTTATAAAGTATCTTAAGATTGGGTGATTTTCAAAAATTCATTTTTCGTTTCCGATGTCTTTTGAAC
TGAAAAATATTCAACGTAAAAGCAAATAAATCGACTAAAAAATGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACATGT
CGGCCG

>CL9201Contig1|nadh:ubiquinone dehydrogenase

GATTTTCTTACCCCCGAACCTCCCTGCGCCCCCTAATCGCTAACGTTTTTTCACGTAGACGACGGATAGCAGACGGTGA
ATAATTTTTGCGTTGCGATTGTACAGTAATAATCACAGCCTCAAGATGATGGGCCTTTCGATAAAAGATCTTAAAAAACA
CCCTGCGCTCATACCTTTATTCTGTGTGTTTTGGTGCCGGAGCGTTGGGATCAGCCTACTACATTTTACGTCTAGCCACTC
GCAATCCTGACGTTTCGTGGAACCCCTAAGACGAAGAAAGAACCCCTGGCAGGAATATTCCGACAAACAGTACAAGTTTTAC
TCCAACGAAGATTACTCCAAGTATGCAAATCCAGCACCAAAGTACTAATGCGCTGGATGTTTTAGCGGCGAATTGAATGT
AGTAACGGATGGATGTTTGTGTTCAATAAATTATGCTTAATTGTATCATTTAAGCGTAAATATAATATTGCAGTGAGCGAA
ATATAATACAGTTAAATTCTAACTTACT

>CL926Contig1|superoxide dismutase

AGTCGTTTTTCCGCGCACGGCAGCACGGCACACAGCTCGGGTATACCTCCGTCATCGTTTCGTGATTAGCAAAAAGCATAA
AATAAAAAAATATATCTCAAGCGCAAATCAGTCGTACAAGTATATCGTTGGCTATCACGTTTCGTCCGAGCGAACATTCTC
GATCAAAGTATCCTCGCGCACACACAAATAAATCTTGTGAAAATGACCGTGAAAGCCGTTTTCGTTCTTCAGGGCGAAGT
CAAGGGGACTGTTTACTTCGAACAAGCGGGAGATTGCAATCCCGTCAAGGTCACCGGCGAACTAACCGGCTTGAAGAAAG
GCCAACACGGCTTCCATATCCACGAATTTGGCGACAACACCAATGGATGTACCAGTGCCGGTCTCATTTCAATCCATTG
GGAAAAGAGCATGGCGGTCCGGAGGCTGTAGTTCTGTCACGTCCGAGATCTCGGCAATGTTCAAGCCGGGATGATGGCGT
TGCCAAGGTCAACATCACGGACAACAGATTCAACTGGAGGGTGCGCACAGCATCATTGGCAGAACTCTCGTGGTTCATG
CAGATCCCGATGATTTGGGAAAAGGAGGTCACGAGCTTCCAAGACAACAGGCAACGCGGGTGCCCGATTGGCTTTCGGC
GTTATTGGAATCACAAAAAGGACTGAATCCGCACTCCCTCTAAGTAATGTGCTGTGCGTATATAAAATGAAGAACTA
AAAATGTAACACACAGCGGCGCTACTCTATTGCCCTTGAAGCCATAGATTTTGAATAGTGGTTCGAAATGTACAAAAA
AAAAGAAAAATCATTTCCACCAAATTGTAATATCAATATAATTGATTGTATGTCCGAAAAAAAAAAAAAAAAAAAAA
AAAAACATGTCGGCCG

>CL9277Contig1|glycerol-3-phosphate dehydrogenase

GGTTTCGTAGACGGTCTCGGCCTCGGCGACAACACAAAGGCCGCTGTCATTGCACTGGGTCTCATGGAAATGGTCAAATT
CGTCGACACATTTTTCGGTGGAGCAAACTTTTCGACTTTCTTTGAAAGTTGTGGCGTTGCTGATCTCATTACCACCTGCT
ACGGTGGCCGGAACCGTCGCGTTTGGCAACAATTCGTAAAACTGGAAAAACAATCAAAGCTCTTGAGGACGAACCTCTC
AGTGGCCAGAAGTCCAAGGACGAGCGACCGTCAAGGATGCTCAAGGCAAAAAATTTGACTGATCAACAATT
TCCAATTTTCACTGCTGTACATCGCATCTGCAACGGAGAATTAAGAGCCTCTGATCTCATCGATCAAATCCGCAATCATC
CGGAACACCAGAAGTAAAGAGGAGGAGGACGCACAACAAGAGTCAAGAAAGTATAAAGAGGTAGAAGAAGAAGTACT
ACATGACGTAATCGACCTTGTAATC

>CL9294-bisContig1|ras-related protein rab-11a-like

AGTTTTCGACGCGCAGTATACAAGTAGATGGAAAAACCATCAAGGCTCAGAGTATGGGGACACCGCGGGTCAAGAACGTT
ATCGAGCAATCACCTCTGCATATTATCGCGGTGCTGTTGGGGCGTTGCTAGTTTACGATATAGCGAAACATCTGACGTAC
GAGAACGTGCGAGAGATGGTTGAGGGAATTGCGAGACCACGCTGATCAGAACATCGTGATTATGCTTGTGGGCAACAAATC
CGATCTGAGGCATCTCCGAGCAGTTCCGACAGACGAGGCAAGACTTTTCCGAGACGAACATGCTCTCTTTTCATCGAGA
CGTCCGCCCTCGATTCAACCAACGTTGAGACAGCCTTTCAAAAATATCTTAACGGAATCTACAGAATCGTATCGCAGAAA
CAGATGCGAGACCCACCGGAAGGTGAACACGATCCGGCCACAGAACGTAGAACCATAACAACGTTAAACCAACAATGAAC
TCGGATGGTATGCGTAAGCAATGTTGCCAGTGACTCGCCACGCTGTTGACAAGAGCAGCAGCAGCAGCAGCAGCAGN

>CL932Contig1|PREDICTED: uncharacterized protein LOC100880959 [Megachile

rotundata]

AGTACAGGCGCGTGAGTGCCTTCTGCTCGATCCAGCCCCACAGATACTGCTCGTGAACCTCCCAAAAATTGCTTCGAAGA
TCGCGTAACGAAAAAGTGGCGAAAAATGAAGAATTCGCGATTACTTTTAAACGTGGGTCTCGGACTCGTTCTTCTTTGTGA
AGTATCAACGATTCAAGCCAGTACGAGTGTGCCAGTTTTAATATGGGGCGGTGATTTGCCTGCTACTCCCAACAAAAATCC
CTGTCAATCCCTTCGAGCGAACTTCGCAAGAAGATTTACGAAAAATTTGTGACAAAATTCGTGGGCGGATCCCTCAAGCCT
TCTCTCGTCTTCGTAAGGATGATCTTTCGTCGAAGATTGGCCAACAGTAAAGAGAGTCTCAGCAGCTTTGATGGACAC
CGGATCCTTGGTATATCGTCCCATGGTTCGACGCTCCAATTTCAAGTATTCGAAGAGCTGACGTACTATAACTTCACCACCG

mmc4.txt

AGGAAGAGTTGGATTCTTGACGGAAGGTCAATTGAACCTGCGTAGCGTTTCCAATTTGGAGGGAATTGTGAAAACATAT
AACGCCGTGAGAGAATCGAGTCCAAACTTAGTGGCGGCTCTAACAGGATTATTTGCCGTTTCGCTCGTCCGGACAGAAT
AAAGAGAGCGGCAACTGACGAGCCAACTCCGGCGCCACCCGCGGAGCTATTGTTATCAATAGTTTCGAGAATTTTGATGT
ATGCGAGCGAAAAACCAACCTTGGAGTTCGCGGTGAGAAAGACGTAGAAGTGACACTGGACAAAGATCCGGTGCCAGAA
GGCAATGGAACCGCGGAATCGCCACTGCAAGTGAATTTGAGTACACAATAAAGAACGGCACAACGACTTCAACTGCGAA
CATACTTTTTCGCTTCCCTGAGAGATATCCAGGTTATTATACGCCCGAAATATTGTACAAGCGCAACGACGAGAATATGA
CTCTCAAAACAAGCACCGACACTTCGTTTCCCTTCACATTCTCTTACCATTGCTCACAGAGCGTTAAATTCGCGTCTGGA
AATGACGTTAAATTCGATTGAAAGATTTCCAAGTACAAATCGATGCCCGAGATTCCGGCATGCCTACGATTGCGTTGG
ATTCATGTCCATCCCCATATGGGCTGGGATTTTCGTACCCGCTATCCTCGCCATTATCATGACCTGGGGCTTAACATATGA
TAATGGATATTCGCACGCCGATCGATACGACGATCCCAAAGGAAAAACCATCACGATCAACGCTTCGGTTGATTAAATT
CACACAAAAAATGTACATCTGTTTTATTACGTAATATGTAAATATAACTCATGTAAAGTTCTGTATATTTTCGATAGCTG
TAAAACGTCGATTTTTTCTTTTCATTTTCGAGAACGAACTTGTTTTCCGTATTGCAATGATGGAAATTTAACATTGTTGA
GTATTTGATGTCTTACGAAACGTCGATGACGAAAAACGTAAGAAAAAGAATCATTTATCAATTGTAACGAGGCT
>CL9330Contig1|60s ribosomal protein l18a-like
ATTTCCGCGCTAAACGCGCGTGGCGCTCTTTTTCCGGTTCACCTTTGCGTAGGACACACGAAACGATGAAAGCAAAG
GGTGAATTGAAGGAGTACGAGGTGATCGGGCGCAAGCTCCCCACCGAGAAGGAGAAGACTACTCCTCTACAAAATGAG
GATATTTGCTCCCGACGCTATCGTAGCGAAATCTCGTTTCTGGTATTTCTTGAGACAGCTCAGAAAATTCAAGAAAACTA
CCGGCGAAATTTGTTTCGCTTAAACAGATAACGAGAGAAGACCCGACCAAAATAAAGAACTTTGGTATCTGGTTGAGATAC
GATTCTAGATCGGGAATCACAACATGTACAGAGATACCGCATCTTTAGTAAGCGGAGCGGTAACCTAGTGTACAG
GGATATGGGTCTCGTCTATCGGCTCGTCTCATTTCCATCCAAATCATCAAGGTGGAGGTCGTAAGGCTGCTAATTGCC
GCAGGCCCGAGTCAAAACAATTCACGACTCGAAAATTCGATTCCCTCTGCCAAAACGCATCCAACATCGCAATCGTATG
CCACTCTTCAGCGTACGCAAGCCCCGACTTTCTCTTTAAACAACAACCTCACGAGATCTGTTATCTTTTCAACGATACT
TTGTATTCTTGGGACATCTTCGAGTTGAAGGAAATATACGC
>CL9346Contig1|dolichyl-diphosphooligosaccharide--protein glycosyltransferase
subunit 1-like
AAAAAGTGAAACCGCCACGTCCTACAATAACTGTGCGCCACGTCCATGTTTTCTCAACAAAAAGCCGGTCGACGAAAGC
CGTGCTGAAAAATAGTATTAATAAAATCTGAAAAAACCCAGTGAGAGGCGAAATCCGAGATCGAAGCCGAAAAATTTGTTG
AAAAACCGTTAAAAACCGAAATATCGAAGGGCCACAAAAATGTGGGGTTTTGTGAGATGTTCTGTGTTTATTGATAGCG
TTGTTGCTTCAGATTCACGAGAACTATGCTACCCTCGTGTGAGAGGATGTATCCTTGAAAAATGTGACCGTACCATCGA
CATTCAAGTCGCAATTGACGAAAAATAACGACTAAAAATGGTCATTGAAAAATGCCGGGAAGACGCCAGTGAGGAGCGTGCTG
TTTGCCCTTGAGGAGAGCAAGGAAGGACGCATGAGTTGGATATCGGCCACACGAGAGACGCATCGCGAGGAGAATTGA
AGGTAAGCTGCGTAAGGTTCGAAAAACCTGGAATTTTTACGAGATAGAATTGAGAGACGTGCTCCAACCCGGGNGGACG
ACCGCAGTGGAAGTGGAGACGGTATTGACGCACGACTTGGAGCCGTATCCCCGTCAAATCACCCAGAAGGACAAGCAGT
TGGTGCGTTACACAGGAAT
>CL9350Contig1|ef-hand protein nucb1
GACCTTGGTTGTCACTCAAATTCAGACGTTTGTCTTCCGTATTCTGCTCTGTTTCCCTCACAAAACCTTTACGTCATGGG
AACATATCACATATCTACCAATAGTGCAATTTTCTAGAGTTCAAAATTTTTAAACCATTATTGTTGTCAGTGTAGTGATA
GTAAATTTTTTTAAATCTACATTCGTTGTTTTGTTTTCCCTAAATTTGATTGTTTGGAGGAAAACATGCGATTTCTAAT
TTCCCTCGGGCTGGTATTTCTGCTCGCCCAACAATGTGTGCGCGCCGCGTAACCAAGAAAAAGCCGCGTCCGAAGACG
AACAAAAAAGATGATGATCCCGACCATGAATCAGAAGATGGTACGGTGCCTGAGAATATCACAGATATTTGCGAGAAGT
CCTCCAGGTTATTGAGAGCGACCCGACCTTCTTAGCCAAGCTCCAAAATGCCAGCGAAGACGCTATCAAATCAGGCGACA
TAGCCAATGAGCTCGATTTCTGTCACCATGGTTTAAAGATCTCAGCTCGATGAAATCAAGAGAAAGAATTAGCACGTTTGC
GTAAAACAGCGACTCAGCAATTCGAGATGGAGCAAGGTCTGGATCCGAATCAACCTGAAATTCAGCAACACGTAGGAAT
CATGAGAACGAGACGCTTCGAGGTGGTTCGATCTAAGAATTGATTCTCAAGACCACGGCGGA
>CL9371Contig1|phosphoribosylformylglycinamide synthase-like
TGGGAAGAGAAAAATGTTCCGTATCCCAGAACCTCGCGTCGCCGTTGGATATTCTGATCGAAGCGAGCAACGGGGCATCG
GATTATGGAACAATAATTCGGCGAGCCCGTAATTTGTGGCTTCGCGAGGACCTTCGGGAGGACGTTTGCCAACGGCGATCG
ACGGGAATGGATAAAACCGATTATGTTTCAGCGGAGGGCTGGGCACTGTGGATGCCAACATGACGGAGAAAAATTTCTCCG
AAAAAGGAATGGAAGTGCATTCGATTCGGTGGTGCAGATCGGTGTCGAGTGGGCGGCTCGCGATTTCTGCGA
GGTTCAAGGGGACAAACAAGTCCGAATTAGATTTTCGGCGCCGTGCAACGTGGGGACGCAGAAATGGAACAAAAGTTAAATC
GAGTGATCCGTGCGTGCGTGGAATGGGTGCAAAAAATCTGATCCTCAGCATCCACGATCAAGGAGCCGGAGGCAATGGA
AACGTGCTGAAAGAAATAGTGGAGCCTGCCGGGGCTGTAATTTTTACAAAGAATTTGAGCTCGGTGACGAGAGCATAAG
CACGATGGAGCTCGTGGGGGAGCCGAGTATCAGGAGAACGTTGCAATATTGTGCAGAAAGGGGGATCGCGAATTGTTGAC
AAAGATTGCAAAGCGTGAGAAATGTCCGATTAATTTGTGGGGACAGTGACGGGATCGGGAAGATTGTTCTTTTCGGAAG
AGGAACATTGCGATGCGACGAGATATTAACCGGCACGGAAGATCGTTGATAAGAAACCCGGT
>CL9385Contig1|hypoxia up-regulated protein 1
ATATCGACGGCAAACTAAACAGGTGCGAAAGACCCTGTTCCGCAAAATGAACCTGTATCCTCAGAAAAAATAATTACG
TTCGACAAGCACAAAGGAAGATTTTCAATTTATCGTCACCATTGCTGAGCTCGATCATCTGCCAAGCACGAGCAACTGGC
TTTGGGTAAATTTGACACTATCGCGGGGTAAAACTAAGCGGAGTTGCTGAAGCGTACGAGAAGCACGCCCAACAAAAAAG
CGGAAAGCAAAGGAATAAGAGCACACTTTAAATGGACGATAGTGGAAATTTGATCTGCAGATGTAGAGATTGTCTCC
GAGAAATCCCGTCAGGTCCGCTCGATGAAGAAGAAGGTACCTTTCTAAACTTGTTCAACGATAAGCAAGCTCTTTTC
AGGCTCGGACGAAAAACGAAGGTGCTGAGAAAGTTGAGGTCAACCAGAAAGATGATGTGAAACCAAGTTACGAGGAAGTCC
CGGAAACCCAGAGCGAAGGGGAAAAATCGACTGCGCAGAATCAAATAAACCGAGCGAGGAAAAAGCTTCGAATCGGACA
GAAAAAGTGGAAGAAAAACCAACAATTACGAACCATCACCGACACCATCGAAGCGATCGAAACGAACTCGGGCCCCAGA
TCTTCCAGGGAGAAAAACTTCAAACT
>CL93Contig1|dihydrolipoamide succinyltransferase component of 2-oxoglutarate
dehydrogenase
ATATAAAACCTCGTGATTGAAATAATTTGAGAAAGGAAAAAGGGAGGAAATTAATGGTCACGTGACCGAGTTTCGAA

mmc4.txt

GAAGAAGCTACGGGCGCTGCTGCGTTCTCATTGGGCTCCGCGCGCGGGTCTTTGGCAAACATACATTTTACGCGG
ATCCGAGGATTGCGACAATTCCTCGGTTCCACACCCATCGTCCCCTTTTTCTGCTCTCTGTATCACGGGGCTCCCT
TCAACGAGAGTGTTAAAAACGCGCTTTAACTTTAGTCCCCGAGGATGGCCGCGATGCTGTCCAATTGTTGCGGGATCGTT
CCGCGGGCCCTGGCGCGTCTGGCAGCTTCACGAGCCAAGATCGTGAGGACCTTTTCATCAGGAAGGTATTATTGGAATTCT
TGAAAAAGGATTAAAAATATTTCTTTGGAATTTTGAGTTTCTGATTTTATTTTATTTTACTGCTCCCCAGGCCGATTAT
TCTGCTACAACTAAATGCAGGGACAGCGTTTCACCTTGCGTGAACAAAGACGGGATCTCCTATTGCTGGAACGTCCAGA
CGCGGCAGATTCTGTCGACACAGGCGTTGTGGGAGATCAAAGAGGTGGTGGTTCTGCTTTGCGGGACAGTATCAGCGAG
GGCGATGTCAGGTGGGAAAAGAAAGCTGGGGACCAAGTCAAAGAGGATGATGTTTTGTGCGAGATCGAACTGATAAGAC
CTCCGTTTCTGTGCCATCACCTGGACCTGGTGTGATAAAGGAATTGTTTGTAAAAGATGGAGATACAGTAAAACCGGGTC
AGAAAGTTTGTAGCATCGATATCGGAGCAACTGGAGGAGCTGCAGCCGCTGCTCCGCCTAAAGATGCACCAGCAGCAGCT
GCTGCTCCACCGCCACCGCTCCACCACCGCTCCTACTGCCTCAGCTCCAGCTCCGCCCCGAAACCGGCTCCGGCCGC
TCCACCAACTCCACCGGCTGCAAGACCTCCACCACCTCAAGCACCCACTGCCTCCATGCCGCTGCTGCCATCAAACACG
CTCAGTCTCTGGAAGGAGCAAAAGTTCAACTGCCTCCGAGCGATTACACTCGTGAGATAATTGGTACGCGAACGGAGCAA
CGTGTCAAGATGAATCGTATGAGACTACGTATTGCGGAACGTCTCAAAGACGCCAAATACCAACGCAATGCTGACCAC
TTTCAACGAGCTTGACATGAGCCGTATCATAGAATTCGTAATAACTAATCAAGAGGCTTTTCATGAAAAAGTACGGTTTGA
AATTGGGATTTCATGAGCGTTTCATAGCCGCAAGCGGTACGCTTGAAAGATCAACCTGTGCTGAATGCAGTTATCGAC
GGCGGCGAAATAGTTTACAGAGACTATGTGACATCAGTGTGCGCGTTGCGACACCCAAAGGCCTCGTTGTGCCGTTCT
ACGCGCGTCGAGAACAAAAATTTTGCCGAAATTGAGATTGCACTCGCCGCCATCGGCGACAAAGCAAGAAAAGGCAAAA
ATATCCGTCGAGGACATGGACGGTGGTACTTTCACGATAAGCAACGGTGGAGTCTTTGGATCCCTTCTCGGAACCCCAT
TATCAATCCACCAAAAGCGCTATTCTCGGTATGACCGGCACTTTCGAACGACCAATCGCCGTCAAGGACAGGTTGTAA
TTCGGCCGATGATGTACATCGCTCTGACGTACGATCATCGATTGATCGACGGCCGCGAGGCTGTAATGTTCTGCGAAAG
ATCAAAGACGCGGTGCAAGATCCTCGAATCATTTTACCGGGCTGTAAAAAGAAAAGAAAATATTTGAAGAAAAAAGG
TCAACAAGCAACAAGCGACGCGCAACATTCTCGTCACTTGCTTCGGAGGCGCTCTCATCCCTTCCAGGACGATTGTA
CAGTAACTATAATAATATTACGTTTCATCGAGTTCCGTTTCTGCTCTCAGACTCGAATTTCTTTCTTTTATTTCCAC
GCCGAGAATTATCATTTTTCATTGAAAAATTTTCGATTCTTAACACACGTTGCTTTTTCTCAAGCATCGATACTTTTCA
ACGAGCCTCGATAAACTTTCGACAGCTCAATCCCCATTTTTCAGCCATCATTTGACGTTGTTGTTTCTGTTGTACGTTT
GCTCGTTCCTGCAGATT

>CL940Contig1|proliferation-associated protein 2g4

GGTCTGCGAGTGTGTGCATCATCGATTAATCGAGCCGTTCCAGGTTTTGTACGAAAAGCCAACCGAATACGCGGCGCAAT
TCAAATTCACAGTTTTGTTGATGCCAATGGGCCTCACAAAATCACCGGAATTCCTTTCGAACCTCGAGTCTTCAAGTCG
GACTGCGTAGTCGACGATCAAGAATTAACAAACGCTGTTGAATTCCTCGGCGAATCCGAAGTCTGCGAAAAAGAAAAA
GAAGGCGGAGAAAAGCGGTTGGGGAAGTTACGATGGAAGTGGACGCGAAAGGCTTAACACAAGAATGAATTGTTCTATGAGT
TACTGACCCATCTCGTGACCGAATCAACATTTCATATGGAGCATCGCAACGATCACAGCGACATTGATTTTCCGAATGTG
CACTATGTCCGAGACATTTCCGGAGCTAAACATTTCCATGGTTGGCCGTAATTATTGTCGTTACAATTACATTATCT
TCCTCATTTTCGGAGAGTGTGCAAAAATTTTTTAAACCCCTTTTTCAACCACATAAAAAACACACAAACCAATTTCTATCAT
CCAATTTAATCCATTTATTATTTCTTTTTATCGTCTCTCATTCCTTCAGCTTGATTAGAAAAAAT

>CL940Contig1|upf0326 protein fam152b

AAAGAGGAGAAGGAAGAGAAGAAAAGAAAAGGAGAAGAAGGAAAAGCGGAGCCGAGAAAGCGGGAGCGA
AAGCAACAGCACCGGAAGTAGTAATAATTGTTCTGGGATGGCGGACGAAGGTACGTTGAGCGAAGCCCAACCGAGCAATG
GAGATCTCGGAGCTGAGATGTTGCCCTCGGAAAGAGTATTGCAAATGGAAGCCGAGGAGAACTCGAAATGGAAGAGAAA
AAACGACAACGCGATCCACCGATAGTCTTTAAAAATCTAATCGACGTAAGCACTGAATTCGACGCGCTGAGCCGTCTTCT
CGAGGGCAAACCTAACGACGCGCAAGTACGAATCTCGATGAATTGCGACAATACATTTTGGAAACGAAGGCTCCTGGGC
GCTCGGTGACAACCTCTTAATTTTCATCGGTGCAATTTTGTACGACAAATCCTTGGAGACGGAATCAGACTCAAATCTC
TCAATATCCTATCCGTTACCGGATTGAAGGACGATGTATCCCTTTTGTGTCATCAAGACAGACGCGAACACACAAATGAT
GAACTTTGCATTTCGACATCGATCGTATCCGAGCGAAGAACAATTGGCCCTCGCACAGTTTATGGCTAATATGTTGAGA
ATCTTAGCAGCTCCGAATGGTTGCTTTACATATCCGAGTGGCAACATAACAATCAAAGCATCAGTAACATCAGAGTAACA
ACCAAAGTTGCTGTACATTTCTTTACTTTTCGATTTCGCCGATCTCTCGTCTCGGGGCGCCGCATAATCCACAACCTTGC
CTGCAAGGAGGTAACAACTGTGGTTTTTCGATGACGTGCGCGTCAATGACAATGGCGTTGCTCCAGTTCTTCAACGGCA
ATCCACCCGAGGAACGTTTACGCGTGCATGAAAGCGCTCGCAAGATTCACTCAAATCAGCGGTCAAGAAGTGGCGCA
CTTGTGCAAATGATCGGTTCCAGAGCCCAAGTTTTCGAGGCACATCGCCGAGAATCGATGAGCTCATCGACCAGATCAA
CAAAAAATTACGTTAAATTTCTCCACTTTTAAACCGCGTCACTTTTTTTTCTAAACCAGCCGCTGTTTCGAGTATCTCG
AGTTAACGCAGAAATCCTTTCCACGA

>CL941Contig2|ubiquitin carboxyl-terminal hydrolase 7

TATACAGCTCAACATCAAGGGCAAGAAAAACATTTACGAGTCTTTCCGGGATTACGTTAGCACCGAAATATTGGACGGTG
ACAACAAGTACGACGCGCGCAACACGGCTCCAGGAAGCCGAGAAAGGTGTCATTTTCCAGGCTTTTCCACCAGTCTTG
CATCTCCATCTCATGCGATTTCAATACGATCCCGTAACCGATTGTTCCGTCAAGTTCAACGACAGATTTCGAGTTTCATGA
AAAAAAGTCTAGGACCGTATTTGCAAGCGGAGGAGGCGACTAATGCGGACTACACTTTGACGCGGTTCTCGTCCACAG
TGGCGACAATCACGGTGGTCATTACGTGTTTTATCAACCCCGCGGTGATGGAAAGTGGTGCAAAATCGATGACGACGT
CGTGTGAGATGCACGAAGCAGGAAGCGATCGAGCAAAATACGGGGGACAGGACGAGGACATGTCAATGGCGGTGAAAC
ATTGCACGAACGCTTACATGTTGGTCTACATAAGAAATTCGGAGCTCGAGAATGTGCTGCAAGAGGTCAAGGAAGAGGAC
ATACCTCAAGAGCTCGTGGAGAGGCTACAAGAGGAGAAGAGGCTGGAACAAATTCGACGAAAGGAAGAACCGAGGCATA
CTTGATATGACCGTCAACGTTCTTCTCGAGGATAGCTTTGACGGTCACCAGGGCAACGATCTCTACGATCCGGAACGTG
CTCTCTATCGAGTTTTTTCGCTTTCGAAAACAGGCTTCGCTTACGAGTTTTCTCGAATTGCTACGCGACAGTCTGAAATAT
CCCATCGAACAAATTCGAGTGTGGCGTTTCAGCGTGCATCGAATCAGACCTGCAGGCCTGCCTTGATCGAGCCGGACGG
TGATTTGCAAAGACCAATGAGCGTTTTCGCCGAAAACGCAATCCGTGGAACGTTTTCTGCGAACTCGTCCCACCGGATT
CGGGCTCACGGCTTTCGCCCTTTTCGACAAAGACACCGACGTTTGTCTTCTTCAAGCTTTACGATCCTAAAAACAAA
AAGATTCACTATTCGGGCTCACTACATGCGCGTACCGGTAAAGTTTCAGGAATCATCCCGATCCTGAACGAGCGTGC
CGGATTTCTCCCGACACCGAGCTCGCCCTTACGAGGAAATAAAACCCAACATGGTGAAAAAATTGAAAAATTTGACC

mmc4.txt

GAGCCGCTTGAAAAAGTACTCGAGGAACTGATGGACGGCGATATAATAGTTTTTTCAGAAAGAAGAGCGCGACAACGACA
TGTACGAGCTACCGACTTGTGCGGATTATTTCAAGGACTTATTTCTACAGAGTGAAGTTACATTTTTGCGATAAAAAATAT
TCCCAACGATCCGGGATTACAGATGGATCTTTCTTGAAGATGACTTACGATCAAATGGCAAAAAGCTGTGCGACAGAGG
GTGGGAACTGATCCTTATCTCATACAATTTTTTCAAAGTTGTCAATTACAAAGATTGCGCGGGTTCATCCGCTGAGGTGCA
CTTACGAGGGAACCTTGAAGGATTTGGTTGCGTATTGCAAGCCGAAGATGAAGAAAATGTTTTAACCAGCAACTCAGTAT
TCGCGTGAACGAGCTCGAG

>CL948Contig1|long-chain-fatty-acid-- ligase acsbg2

GTAATCGAATTTATTTTCGTAATCAACCATCGTTCGTGACGATTTTCTTACAGAGTGTGTTTCTCCCGAGATATTA
TAATACGAGCTCGTCGCTTGTCTTACTTGCAGCAAATTTCTCCATTTCTAGCAGATAACATGTCCGGGGTGCAGTCTTA
TCTGTGCAACGGAATCTTAAATGGATTGCTCGGGAGGACAAGGTAGCTCCGTCCGAACTTCTCCCAATATGCCACAC
CGAGCGAACTGGTCTCGATGGTCCGAACCAAGTTTTAGCATCGGACGTTAACAGAACGAGCGAAGCTAATGGAAGAGTC
AGGATCAAATACGAGAAAAGCAGATCGTAATCACGAAGTAATATCGGTTCTTGGTCTCTTGACGAAAATTGCGAAAACTA
TGGGAATCATACTGCCCTCGTATCCAGACCTGGCCTCGATGGTACAAGGAAAACGTGGACCTACAAAGAATACGAGAACG
ATGTGAGGACCTTGTAGAGCTTTTTGAAATTGGGACTCGAGCGTTATCACAGTGTGCGGATTTCTGGTTTCAATAGTC
CGAGTGGTTTCATGCTGACATTGCTGCCATATACGCTGGGGGATTTGCGGCTGGAATTTATACAACAAATTTCTGCGCAG
GCGTGTCTATTATTGTGCCGAAAGTAGCAGAGCCAATATTTTGGTGGTAGAGGACGCAAGCAGTTGAAAAAATATTGGA
AATTAGGCACAAATTTGCCACATTTGAAGGCGATTGTTTCACTACGATGGTGTTCACCGGAAAAGGCATCATCAGTTGGG
ACGAATTTGTTGGACATTTGGACGAGCCGAATCTGACGACAACTTGATGCGGTGCTAAAAACCATCGGTGCTAACGAATGT
TGCATTTAGTTTATACGTCGGGAACCGTTGAAAAACCAAAAGCCGTGATGCTAAGTCACGACAATTTATTGCACGATAT
GGAAGGAATTTTCGAAGCTGTGCAATTTTGTGCAAGCCCAAGAAATAATAATCAGCTATTTGCCACTCTGCGACGTGGCAG
CGCAGGTCTGAGACATTTTACATCGATGATAGCCGCTGGTACGTTTTACTTCGCTGACAAGATGCGCTCAAGGGTTCCC
TGGTGGACACTCTCTTAGTCGCGAGGCCGACAGCCTTCTTAGGCGTCCCGAGAGTGTGGGAAAAAATTTACGAGAAAATG
ATGGTTGTTGCTCGCAACAACGACCAATCAAAACGTGGATTGCAACGTGGGCCAAGGCACACGAGGGTATAGG

>CL9502Contig1|domain protein

AGGAGCCTCGATCCGAAGCATCGGCTGCTGCGAAGGCCGAAGCTAAACCCGCTCTTGAAATTGCAGCAACTAAGGCCGA
GGAGAAGATTTCCGGAAGCTGCCGAGCGGCTGAAGGATCGCTCGAGAAAAGAAAAGCATCGCTGAAGTCTCGACCGCACCG
GCAGTCGCAGCAGCGGCCGAGGCAGTACCAGCGTTGAAGAGTTCCGATCGAACCCGCGCCGAAGAATCGGCATCGCCAA
AAGCGCAAGAGAGCCCCGTAGCGAGCGCCAAATCTGCCGAAATTTGCGGAGAAGGTAGCAGAGCCAATTGCATCGGCCGAA
GCCAAGCAACAGCCGGAAGCGAGCGCGAAATCGGCACCCAGTGAACCCGAGCAAGCACAACCCGGCGAGTCAGCAGCCAGC
CACGGCGTCGAGCGAACAGTCGTGCGAGAAGCAACAACGAGTGATCGAAGCAGTAGTAGCTGAGAATAGCGAGGCCGGCA
ATAAGGACGAAGAGAAGAAAACCTGAAGTGCAACAGGAACAAGGAGTAGCGGCTGAGAAAACCCGCGCTGACGCGCGAGA
CCGAAGATGCCGCTGCTGCGAGCCGCTAAAGCAGTAGAGGCAGCAGCAGCCGCGATTCCGGCTGCTATCGCAGACGACGCT
CCTGCCGCTGAGGCAAGTTTAGCCGCGACGAAGAGGCTGCAGCCAAAGTGCCACGATATCGAAAGAATCGG

>CL957Contig1|protein disulfide-isomerase a6-like

AGAATGTGCGAGCGACTCTGGGAGGCGGAAAGAAATCGTCTTCGGAATCAAAGTCAAAGACTCGAAGGACGTGGTCTGTC
TTGACGGATGAAAACTTTGACAAGCTGGTGTGGACTCGGAGGACATGTGGTTGGTAGAGTTCTACGCGCCGTGGTGGC
GTCAGTGAAAACTTTGGAGCCAATTTGGGCGAAAGCGGCTCCGAATTTGAAGGGAAAAGTGAAGCTCGGCGCGTTGGAC
GCGACGGTGAACAAAGCGAAAGCGAGTCACTACGAAATCCGAGGCTATCCGACGATAAAATCTTTTGGCCTGGCAAAAA
AGACTCGGACTCTGTGGCCGAGTACGACGGAGGCCGAACGACCGACGACATTGTCAATTGGGCGTTGGAAGGCTAACGG
AGAATATTCCAGCCCCGGAAGTTGTGACGATCGTTGACGAGGCTTCGCTCAAGGAAGCATGCGGAGAAAAACCTCTTTGC
GTTGTCTCGGTGCTGCCCCACATTTCTCGACTGTCAATCCGACTGCAGAAATTCGTATCTCGAGACTCTTCGCTCTCTGGC
CGACAAATACAAGAAAAAATGTGGGGCTGGGTCTGGTTCGAGGCGGGAGCCCAAAACAACGTCGAAGAAGCTCTCGAAA
TCGGTGGCTTCGGTTACCTTCCCTCGCCGTTGTCAACATGAAAAAATCAAATATTTCCCTCTCAAGGGCAGTTTCTCG
CGAGACGGAATAAACGAGTTCTCCGAGACTTTGAGTACGGACGAGGCGGCACTGCTCTCTGAAGGGAGCCCAATTTGCC
CAAAATCCACAAAATCACACCCTGGGATGGCAAGGACGCCGAACCGCCACAGGAAGAAGACATTGATCTGAGCGACGTCG
ATCTCGACGAAAAAGACGAACTCTAAACCTTTGAAATCTTTCCACCAAAACATTTTCATCGAAGATTCTGCCATTTTCGCA
GTTTTCTCGATCGAATGCAACGAAAAAATTTTTCTCCCTTTTTTTTGTATTTTTCTAATTTTATCGAGAAAAAATGA
ACTTCGTTGCATTTTCGATAGTTCCAACGTTTCGAGGAAACAATTTGACGAAAAGGAACTGGAATCGAATTTGGAAGACGCG
CGAGAGGCTCTCGGATTACTATTTTCTGTTGCAACGTTCTTCTCCCTCGCAACGCTGTTTTTTTATTCTTAATGAG
AAAAATCGAGAGAGAGAGAGACAAAGACATCGTGTGACTTTTTTTTACCAACAAAAGTGACCAACCCCTTCCATTACGA
TTTTACCAACGAAACAAACGCCTCGGACCTTTTTTACATTACATTACTCTCGTAAACACACGCCTGAGTTCCCAATGCA
AAACGCAGTCCGAGTTGCACGAGGAAATCCAAAAATCACGTTTTTTTTAGCGCGGAATATAAATTTTCAAATTTTCTA
CAATTTTGTGAAAAATTTCTCTCGGACTTTTTGCGTTGGGAACCAAGTTTCATCGCCGACTAGCCGAATTTTCATTGCAATTC
ATTTTTTTTTCGAATTTTTATTGAAATTCGAATTTTTATTTCGATCGAAAATAAAAAATAAAAAATCTCGTGTCCACACG

>CL958Contig1|60s ribosomal protein l10

TATTTTTTTTTTCCCCGCTAGAGCTCGTGAGGGATCGGTCTCAAAATGGGCCGCCGTCCAGCTAGGTGTTACCGCTACTGC
AAAAACAAGCCGATCCCAAGTCACGTTTCTGTCGTGGTGTTCGCCGCCGAAGATTCTGATTTTTCGATCTTGGCAAGAA
GAAAGCCTGCGTAGAGGATTTTCTCTATGCGTTTCATCTCGTGTGAGTACGACAGCTCAGCTCCGAAGCCCTTG
AGGCAGGACGATTTTGTGCAACAAATACATGGTTAAGAATGCTGGAAAAGATCAATTCACATCCGATGAGGCTTCAT
CCTTTCCACATTATCAGAATAAACAAAGATGTTGCTGCTGCGGAGCTGATAGGCTCCAACTGGAATGAGAGGAGCGTT
CGTTAAGCCGCAAGGAACCGTGGCTCGAGTACGATCGGTCAACCAATCATGACGTCGCTTCTTCGCGCTGCAAGG
CTGCGGTGATCGAGGCTCTTCGACGTGCCAAGTTCAAGTTCCAGGACGTCAAAAAATTTACGTTTTCGAAAAAGTGGGGA
TTCACCAAGTACGAACGTGCTGAATACCAGGACCTGAAGAATTCGGTCTGAGGCTGACGTTTGAACGTCAAATA
TTTGCCTGAGCACGACCTCTTGCCAAGTGAAGAAGTTCAAGGAATACTTGGCATCTCTCTAAACTGAATACTGACCTA
TTACAATAGAAAATCTTTTGTAAATCTTGGTATTCAATAAAAAAAAAAAAAAAAAAACGCAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAACATGTCGGCCG

>CL959Contig1|phosphoglycerate mutase 2-like

CTCGTAACCGCTTGATTCTCGAGCAGAGCAGTAGGAGCCAGAGAGCAGCCAGATAAACCGATCTAATTTTGACGTATTGT

mmc4.txt

TAATTCGAAATAAAAAACATGTCCAAGTATAGAATTGTTATGATTGCGCATGGCGAGAGTGAATGGAACCAAGTTGAATCTC
TTTTGCGGATGGTTCGATGCCGTTTGTGAGAAAAAGGAGCGAAGCTCTGGCTGCGGGCAAAGCGCTCAAAGACGC
AGGTTACACCTTCGACGTGGCTCACACGTGAGCCTTGACACGAGCTCAAGTGACATTGGGAACGATTCTCAAAGAAATTG
GTCAGGAAAACATCCCGATCAACAAAACATGGCGTCTCAACGAGCGTCATTACGGCAATCTCACTGGAATGAACAAAGCG
GAAACAGCTGCCAAGTACGGCGAGGAACAAGTACAAATTTGGAGACGATCGTTGACACTCCGCCACCACCCATGGAACC
GGGACACAAATATTACGACACCATCGTCAAAGATCCTCGTTACGCCGAGAACCTAAACCTGAAGAATCCCCAATGTTT
GAATCGTCAAGCTTACGATCGAGAGAACTTTGCCCTATTGGAACAACGTCATCATTTCCCAACTGAAGGAAGGCAAGAA
AATCATTATCGCCGCTCACGGCAACAGCTTGGCAGGAATTGTCAAGCATCTCGACCAATTGAGCAACGACCAGATCATGG
GCTTGAATCTGCCACGGGAATTTCCATTTGTATACGAACTGGACGAAAATTTCAAGCCAGTTGTCTCTATGAAGTTCCTG
GGTGACGAGGAAACCGTAAAAGCAGCAATTGGCCGAGTGGCTGCACAGGAAAAGCCAAATAAAGTGTAAGTTCGATCAAG
AAACGAGAAGAATCACATTGATCGTTGCGTTATTCTGTTTGTACACTCGAAAACCACGAAAAAAACGTTCATAGATGCA
TTGAGAAAAAGTTAACAGTAAATTCGTAGTTAAAAACGTTTTTGCAGTGGAATGTGGAAAAAAACAAGAAGATACACTC
GTAATATATTTTATTCATTGGTTATCTGATCATTTCCAGAGTAATGCTGGTTCATCAAAACAAGAAATGTGTAATTAGAA
GTGTACATAAAGCGCACAGTGTTTCATCGATCGTAAACAAAAAAACATCGTCTCAGAACCCGTTTATTATTAAAAATA
TACTCAACCCTATTTTCAGGCGATCTATTGATGCAATCATTAGTTTTGTGCAATGTAAACCTCACGCCGGTAAAAAAATC
TGTACAAAAACAAGAATTAATAAAAAACGGAACCTTTGAGTAGAACT

>CL95contig1|bifunctional purine biosynthesis protein purh

AGTTCAATCAGAACTTTTTGAGTGGGAGCACGTCTCTTCAATCGCCAACGAAATTAAGTACTGACTACTCATTTGAAGAGTTG
TAAACCGTGAATTGATCTTTCTCATATTTTAATCAAAACCGCACACAAAATGTCTGGAGGAAAAGTACTGCTTTGTTAAGTG
TTTGTACAAAAACCCATCTTACCGCTTGTGAGAAAATGGACAAGCTTGGTTTTACACTAGTAGCATCGGGTGGTACC
GCCAAATCACTCAGAGACGCTGGCCTCGCTCCCAAGGATGTGTCCGACATCACGGGTGCACCGGAGATGTTGGGAGGTG
AGTTAAACTCTTCATCCAGCTGTTTCATGCCGTTATTTTGGCGAGATCGAGAGCTTCCGATCGTGCAGATTTGGAGAAGC
AGGGTTTCGATTATGTGCAAATTTGTAGTCTGCAATTTGTATCCTTTCTGTCATACGGTCAGCAAGCCCGGAGTTAGCATC
GAAGACGCGGTTGAAAAACATCGATATCGGCGGAGTCACGCTTTTACGGGCGCTGCAAAAAATCAATGCTAGGGTTACTG
TAATCTGTGACCCCTGTGATTACGAAAAGGTCTGGGTGAAGTCTGCTGACAAAGATACGTGCTTGTCTACT
AGGCAATCCTTGGCCCTGAAAGCGTTTACTCACACAGCAGAATACGACAACGCAATATCCGATTATTTCCGTAAGCAGTA
TAGCGCAGGTGTGTCCCAATTGACCTTCGTTACGGAATGAATCCTCATCAGAAGCCAGCGCAGATATTCACAACCTTTGG
AAAAGCTGCCAATTACCGTGGTGAACGGTCTCCAGGTTTCATCAATTTGTGCGACGCTTTGAACGCTTATCAATTGGTA
AAAGAATTGAAAAACTCGTTGGGCTTGGCTGCAGCAACTTCGTTCAAGCACGTGAGCCCCGAGGAGCCGCGGTGGGGAT
ACCATTGGATGGGATTCAAGCGAAGCTCTGTCAAGTGGACGATTGTGATCGATCAATTGACGCCATTGGCCTCGGCTTACG
CGCGTGCACGGGTGCCGACCGCATGTCGAGCTTCGGTGATTTTGTGCTCTCTCCGACCCGTGCGATGCCATTACTGCG
AGAATTTATTTCTCGTGAAGTCTCCGACGATATCATTGCTCCCGTTACACCCGACGAGGCTCTACAACCTTTGAAGAAAA
GAAAAACGGTTCTACTGCGTTATTCAAATAGACCCTAATTACGAACCATCTCCGATAGAACGCAAAGTTTTGTTGCGTT
TGACCCTCGAACAGCAACGCAACAATGCCGTTATCGATAAATCAACGTTGCTGAAACGGTTACCAGCAACAAACACTTG
TCCGAAGATGCCCTCAGGGATCTTATCGTCGCGACTATAGCCGTTAAATACACTCAGAGCAATTCGTTTTGTTACGCCAA
GGATGGACAGGTGATTGGAATCGGCGCTGGACAACAATCTCGTATTCACTGCACGAGACTCGCCGGCGACAAGGCTGATA
ATTGGTGGCTCCGACAACACCCCAAAGTGACTGGAATGAAATCAAGAAAGGTGTCAAACGGGTGAGATAGCGAAGCCG
ATTGACAACTATGTCACCGATCGATTGGCAAAGATATGGACGAGCGAGCTGGACAGCGTTCTATGAAGTGGTTCCTGA
AAAATTGACTGAGAAGGACAAAATCGACTGGATTAAAAAGTTGGACGGTGTGCGGTTAGCAGCGATGCATTCTTCCCGT
TCAGGGACAACGTGACCGAGCTAGATTGAGCGGTGCTCGTTACATCGGTAGTCCGGCCGGATCGACAAATGACCAAGCA
GTTATCGAAGCTTGCAATGAGCACAACATCATTCTGGCTCACACCAATGTGAGATTGTTCCACCACTGAATCAACCATCG
GATCCAGTGAAATTTCCCGTCTTCCAATTTTTAATTATCAACAAAATATTTGGGTGCGTTCCCAAAATGTCTATTTTCTCA
TACGACTCCCAAGATATAAAATTTTTCTTATCAAAATTAAGAAAGTTTATCACGTTTTTCTGTCAGTGCCAAGTTA
GAAATATTTCGATGGAATTTTTCTTTTTTATAAAACAGTTTATTAATAACAATACATTACTAATAAAATACATACGTA
TTGAAGCTTTTTGGAAGAAAAATTTCCCAACGTAACGATCTTTCACGATTATATCGTTCAATATATATA

>CL9624contig1|heat shock cognate 70

CGGCCGGGCAATCGACTCTGAAACCAAGTGGAGAAAGCGTTGAATGACGCTGGGATAAAGAAGAGAGCGATCAACGAGGTA
ATTCTCGTCGGCGGTTCCAGTAAAAATCCCAAAATTCGCGAAGCTCGTTGCGAGTTTCTTGGCGGGGAAGACACTCAACAC
TTCGTTGAGTTCCGGACGAGTGGCTTTCCGGGCAAGCAATCAAGCCGCTGTCTTGGCCGGAAGACCAAAAGCAACC
CTGTGATCAGGGAACCTCTCCTCCTCGAAGTAATTCCCTTTCCATCGGAGTCAAGGGCCAGAGAATACCATGAGGAAC
ATAATCCATCGGAACCTCTGCAATTCCTGGAAGAACTCGACGCCATTTACCACCAAGCACGACAACCAAGGAAATTAAT
GATTAATAATTTACGAAGGTGAATATTGCTTAGCGGCGAAAAATTCATGGATGACAAGTTTCAAGTCACCGGAATCGAAC
CTGCTCCAAAAGGCACTCCGAAAATCGAGCTACAGTTCCAACCTCGATCTTAACGTTTTCTCCAAGTTGCTCCAGTCCAA
CCAGCCACTGGACACGCTTACGAATTGACCGAGTCCAGCTTTGACGGCCCCCTCGATCAAGCCGAAGCTGCTGAATTGCT
CTCGGAGGATGAGTCCGACGAGGAGGACGACTCGGAGGATGAGAAAACTGTGACGAGAGAAAAAACTAAATCTTAATG
TTAGCCTCCGTCAAAGCAACTGCTCGAAACTCAAATTTCTCCGAAGCAGTTGAGAACCAAGTCATCAATTTGTGCGACGA
AGTTCTCGTTGGGTGACAAACATCCCGACGCCAGAGTCCAAGACTACAAGTGCCAGATTGCTTCCGTTAGTGACGAC
TTCCCGGTTGGAAGTAAAAAACTTAT

>CL9649contig1|sorbitol dehydrogenase-like isoform 1

ATTCAATTGCCGAGCGTTCGTCGAGAAAGGCTGACTGCTCTTCCACCTCGTCGATTCAATTTCTTTACGGTCAGTCGTCG
CTGTTTCAACCCCGAAACCATGGCAGAGGATAATCTCACCGCGATACTGTATGGTATCAACGATTTGCGTATGGAACAAA
CGCCTATCGAAGAACCTAATGACAACGAAGTTTTAATCCGCGATGAAGTGGGTTGGAATTTGTGGATCCGACGTGCATTAT
CTCGTAAACGGAAGGATCGGCGATTTTCATCGTAACGTACCCATGATCGTGGGCCACGAGTCATCGGGAGTCGTTTCTAA
ACTCGGAAAAAATGTCAAGAACCTGAAGTTGGCGATCGAGTCGCTATCGAACCAGGCGTACCTTGAGAACATGCAGCA
CTTGCAAAACAGGGACGATACAATTTGTGCAAGGATATGGTGTGTTGCGCTACGCCACCGGTTTCATGGAACCTTTGAGACGT
TGGTACAAACATGCAGTCGATTTTTGCTACAGACTTCAGACACGCTAGAGTTTCAAGAGGTTGCTTTGCTGGAGCCCT
TGTCGTCGAGTCAGTCAGCATGCAAACTGCAAAATATAGTAATAGGCTCTAAGCTCTTGATTACTGGATCAGGTCCATAG
GACTTGTGTCCTTTTGGAGCCAAGGCCATGGGTNGAGCAAAGGTCATAATTACAGACGTT

>CL9661Contig1|myosin heavy non-muscle

GAAAAGCGTCGCCTCGAAGCTCGAATCGCCACGCTCGAGGAAGAACTCGAGGAGGAACAATCCAACGGCGAAATTCTCAC
CGATCGTGC GCGCAAGGGCCAAATAACGATCGAACAATTGACCACCGATTTGGCGACCGAAAGAACCGCCACGCAGAAGC
TCGAGTCCCAGAGACTTCTCCTCGAAAGACAGAACAAAGAATTGAAGGCCAACTCGCCGAATCGAAACCAATCAACGA
GCCAAAACATAAGCAACGATACAGGCCCTCGAATCCAAAATATCCAATCTCGACGAACAACCTCGAGACCGAAGCTAAAGA
ACGTCTTGCCCAACAAAAATCAATCGGAAATTGGACAAGAAGCTCAAAGAAGCTCGGCCTGCAGCTCGAGGACGAGAGAA
GAAATGCCGAACAATTCAAGGAACAAGTTGAAAAGGCCAACATCAGAGTCAAGACCCTCAAGAGACAACCTCGACGAACT
GAAGAAGAACTCAGCACGCACAAGTTCTCAAACGAAACGCCAAGAGAAGAATTTGAAGAAGTTGTGAAACGAACGAGA
GTCTCACTCGCGAAGTTGCCAATCTCAAGACCAAGCTCAGACGTGGCGGAGCTCCGATAAGTCTGAGCACGACGAGGCTG
ACGAAACGNGGATCAGTTCAACCGGTGGTTCGGGTGACGATTTGACAGTGCAAGCGANGCAGTGACGGTGACGAGATCG
TAAA

>CL9686-bisContig1|mitochondrial hydrogen-transporting atp synthase coupling factor f

ATGTCAAATCCGTGCAATCGTTTTTCCACAGCGCTTTTGGCTGCCAGTCCCATATATTACGATACACGTTAGTCTTGGTT
GCCCATCGTCGAGGGTCGAGGAACTCGTTCTTGTCTGATTAGAAATATTCTGTGCAGCCGTCATGGCTGAGGGAATGA
AATTGAATTGGGGACTTTATCCTCCAGAGTACAACAAAGCTCTGCACGGAACATACGATCCAGCTCGCTATTATGGCAAA
CCCGACACTCCCTTCGGCGAAGTAAAAATCGGCGAGCTTGGGGCTTGGTTGCGACGTCGTCAAAAACTCCATCCGCTGC
CGTCGCTGCCATTTCAAGAGCTTGGTGGCGTTGGCAGCACGCTTACGTGCTACCCAAACGCGCTGGAATCGCCCCGTTG
CCCAGCTGACTTTTGCCGGCATGGCACTCTTCTACTATTTCAATTATGGCAGAATCAAGCACCACAAGAATTACAAATAC
CACTAAGGAATACAATCAAGTTGCCTTCGTCTCTGCAATCAGTAATAATCTCCAAAGTATCGATAGCCGAGATTGTATG
GTGGAACGTTATGGCGAATAACTCCAGCTGAGATAGTGTACAATTCGACGTGAGT

>CL9686Contig1|mitochondrial hydrogen-transporting atp synthase coupling factor f

ATGTCAAATCCGTGCAATCGTTTTTCCACAGCGCTTTTGGCTGCCAGTCCCATATATTACGATACACGTTAGTCTTGGTT
GCCCATCGTCGAGGGTCGAGGAACTCGTTCTTGTCTGATTAGAAATATTCTGTGCAGCCGTCATGGCTGAGGGAATGA
AATTGAATTGGGGACTTTATCCTCCAGAGTACAACAAAGCTCTGCACGGAACATACGATCCAGCTCGCTATTATGGCAAA
CCCGACACTCCCTTCGGCGAAGTAAAAATCGGCGAGCTTGGGGCTTGGTTGCGACGTCGTCAAAAACTCCATCCGCTGC
CGTCGCTGCCATTTCAAGAGCTTGGTGGCGTTGGCAGCACGCTTACGTGCTACCCAAACGCGCTGGAATCGCCCCGTTG
CCCAGCTGACTTTTGCCGGCATGGCACTCTTCTACTATTTCAATTATGGCAGAATCAAGCACCACAAGAATTACAAATAC
CACTAAGGAATACAATCAAGTTGCCTTCGTCTCTGCAATCAGTAATAATCTCCAAAGTATCGATAGCCGAGATTGTATG
GTGGAACGTTATGGCGAATAACTCCAGCTGAGATAGTGTACAATTCGACGTGAGT

>CL9698Contig1|fatty acid synthase-like

CCATCAAGGAACCAACGAGACCGTTTGAAGAGCGTACTCAGCAGCTTCGTCTCGATCGCCGCGATCCAAGTAGCCCTGGT
CGATGTCCTGACCATGATCGGCATCAACCCGACGGTATCGTTGGTCATTGCGTCGCGAGCTCGGCTGCGCTTACGCCG
ATGGAACCTTCACCGCGGAGCAAACCGTCTCGCGGCTTATTGGCGAGGTAATCGATCCAAGAATCGAACTGCCTCCC
GGTGCAATGGCCGCGATTGGCTTGAGCTGGGAAGAGACTGCGAAACGTTGTCCTCCCGACGTTTCTCCGGCTTGTCACAA
TTCCGCGGATTCCGTACGGTCTCCGGGCCGTCGACTCGATCGCCGCTTCGTGAGACCCTCAAGAAGGAAGAAATAT
TCGCCAAAGTTGTAACAGCTCCGGCGTCGCTTTTACAGCAAATACATCGCCTCCGTCCGACCCAACTCCGTGCGGTT
CTCGAGAAAATCATTCCCAACTCGAAGCAACGCTCCGCCGTTGGATCTCGAGCTCGATACCCGAGAGCGCTGGGGAAC
TCCCCTCGCCAGCACAGCTCGCCGCTTATCACGTCACT

>CL97-bisContig1|ferritin 2-like protein

AGTTTCTTTGAAAGCTCAAAAAGTTTAGTTATCATTTTCGAGTCTCGTAAAAAAATTAATTTTTTTTTTTTTTAATA
TTGTAATTGTCAGATTGCTGCGAAATTCGTTTTTGAATAATCAAAAATAAATGGATTATCCTCCCGGAATTTTCCA
TTCAGTGATGACATAGAAAGTTACGCAATCAGAACAAAGTCGGAATCGGAGGAAGCCCTAAACCTCGAGTGATTATT
GTGACTCGTCTTCGTGACGCCTCAATTATCGTCTGAGCATCATTTCTGTATTTTGAATTTCTGACGAACGTTTACCGA
TCGACGATAAAACGGTGTGGGAATATGGCTGAGTCGTTTCAAGATCGAGATTGAATTGAAAAAGTAAAAACAATGTACAT
CCTTGCGCTCCTGTGTACGCTGCTCGTGGCAACCTCTGCCGAGTATTGCTACAGCGACGTCAAAGAAGCCTGCAGCTCTA
CACCAACGCCAACAGATGGTCCACTCCTGCCGACCTGTAAACGAAAGTACGGCTCGTTGAGGCCCCTGCAAGCGGAACCT
CAGGCTTACGCAACCGTCAGATAGAAACGAGTTTCGAGTTCCTTTGATGTCAACTCACTTTGGCAACTCAGGCTAA
TCGGAAGGTTTCAAGAGTCTGTACCGCAAACCTTTCCGATCAAGCTTGGGCGCATGCAATCGAGCTTATCCAGTACATAG
CGAAGCGAGGTGGCAAGATGAACCTCAACCAGCCTCCGCGTTCCAAAAGACAGTAAACACGAAAGGAAAAGTGTTCAG
CTGAACGAACTCAACAGTTTGGCCAAAGCATTGGACACGGAGAAGCAGCTCGCGGACGAAGCTCTTCGTCTACACGCTCA
GGCTCAGCATCACACGAACTCGATTCTCGGTTGCTCACTACCTCGAGGAGAAGTTCTTCGAGTCTCAAGCCGAGACCA
TTCGCAACTTGGCCGGACACCAACGATCTTAAGAAATTTATGTCGACCGCGATGCTTCCGTTTCCATCTTCTGTT
GATGAATACCTCAAAAAAATTTGTGTAATTTGTCAATTTCCCTTGGTTCCATCGAGCAGGAACAGGAAAAAAGAAAGAA
ATTGAAAAATATTATATTTTCCACTTGGATTATTTTTATGGCGATCTACGCCCATCGATAATTATTACTTGTACAATGTA
GAGTCATTAACCTTTAAATATAGCCTTGATTGCTCCTTGTCTATTTCTTGGTTTCAATTCGATTTTTTTTAAAGCCT
CCGGAGACAATTTTTATTTTATAGTATCCAACGTCGTTACAGTTGATCTGCGAGACCAAGAGTTTCTGGCGGTGTAAC
TTGCAACCAATGCAACGGTCCATGAAAAGTTGTGGCGTCCGGACGAAAAATTTGTGCTGGAAAAACGCGGAAAAATGCAGT
TTTTGAGGGAAAAAGCTCGGGAATTTACTTTGTGAGTAAAAAGCTCTGTTGATCAGTCCGTAATAATATTGTACCGCAT
TTACTTCGATACAGGAGGAAATTC

>CL972Contig1|glycerol-3-phosphate dehydrogenase

AGTCTTCTCCTGTCCGTTGACGAGGAAAAGCAGACCGTCCACCATCTTTGACTCCAGCTCGTTGGGCTGTTGTTGGGCC
GTGTTATTCAGTCGATCGCAGTCCGCGAAACTGTAAGCATCGTGCCTCCAGAGTCGTTCTTCTGTTTCAACATTTGAGGA
AATCGAGAAAAACAATGGCTGGAAAACTACGAGTATGCATCGTTGGATCGGGCAATTGGGGCTCTGCAATCGCCAAA
TAGTTGGCGCAATGCGAAACGTTTGGAAAACTCGAGGACCGTGTACGATGTACGTTTACGAGGAGATGATCGAAGGG
AAAACTCAGGAGATAAATAAACGAAACACGAGAACGTAATATCTGCCAGGACACGCTTTACCTGAGAATGTGCTC
GCTGTCCCTGACGTTGCCGATGCTGCCAGAGACGCTGATATCTTGATATTCGTTGTCCACATCAATTTATACGACGGAT

mmc4.txt

ATGCAAAACCCTTTTGGGCAACATAAAACCTACAGCGGTTGGGCTTTCTCTCATTAAAGGATTGACAAGAAAGAAGGCG
GTGGCATAGAACTCATATCACACATTATTACCGAACCACTCAATATTCCAGTCTGCGTTTTGATGGGTGCAAATCTCGCG
TCGGAGGTTGCTGATGAAATGTTCTGCGAGACAACAATAGGCTGCAAGGACAAAGCGATGGCTCCGATTCTTAGGGATAT
AATTCAGACTTCTTTCTCCGGGTCGTCGTCGTCGACGACGTTGACTCGGTGCAATGCTGTGGTGCACCTAAGAATATAG
TCGCGTGTGGTGCGGGATTCTGGGACGGTCTTGGACTCGGTGACAACACAAAAGCCGAGTCATAAGGCTCGGGCTCATG
GAAATGATCAAGTTCGTAGACGATTTTTTCCCTGGTGGAAAGCTCGCGACTTTCTTTGAAAGCTGCGGCGTTGCTGATCT
CATAACTACTTGTACGGTGGCAGAAATCGCAAAGTCTCCGAGGCTTTCTGTTAAACTGGCAAGTCGATCATCGAGCTCG
AGAAGGAGATGCTGAACGGGCAGAAGCTGCAGGTCCTTTACAGCGGAGGAAGTGAATTACATGTTAAAGCTGAAAAAC
ATGGAGGACAAATTTCCGCTTTTACAGCGATCCATCGAATCTGCATCGGAGAGCTCAAGCCGAAGATATGATCGACTG
TATCCGCAGCCACCCTGAACACATGTTTCGACACCGATAACAGCAGCATTGCACAAGCTCTAACATCTCCAAGTGTGTCCA
TCTTTGAAGTTTGCCC

>CL9761Contig1|fatty acid synthase-like

TTCCACGAGGCCCTCAAGCAGCTGCCCCGAAAATGCGATTGTCTGAGATCGCTCCGCATTGTTTGCTCCAAGCGATTCT
TCGCCGATCGTGCACCGTCACCAACGTCGGTCTCCACAAGCGCGACCACACCGACAATCTCGTTTTCTTCTCT
CGAGCATCGGCAAACTTTACAACGCCGGGGCTCAGCCAACGATCAGCAGCCTCTATCCGCCGGTGAGTTATCCGGTTGGC
CGAGGAACTCGAATGATGAATCCCTGATAAAATGGGACCATGCGATCGAGTGGCAAGTCGCTGATTTCTCTGGACGCTC
GGGAGGCTCGGGCGAGACGGTCTGATAGATCGATCTCTCGAAGGAGGAGCAGCGCATCTCGCGGGCCACACGATCGACG
GAAGAATTTCTTCCAGCGACCGGCTACTTGACCATCGCTTGGAAAACTTTCTGCTAAACTGAGAAACGCGGATTACGAA
AAGTTGCCGGTCATCATTGAGAACGTGCAGTTCATGAGAGCGACCATCATGCCCAAAGAAGGAACCGTCAGATTCCNCGT
AAACATCTTCGAGGGCACCAGACTTTGAGATCTGCGAGGGCGATCGACCGGC

>CL977Contig1|alpha- sarcomeric-like

GGTTTATCAGTACAAGGCTCACCTTGGAGGAATTGGAAAAAATTACCAGGCTGTCCAAGAGGGAATGATCTTCGAAAAT
CGTTACACTCAGTACACGATGGAGACACTGCGAGTTGGTTGGGAACAATTGTTGACTTCCATCAATCGCAACATCAACGA
GGTTGAGAAATCAAATCCTTACCCGAGACTCCAAGGGAATAACTCAAGAACAGTTGAACGAGTTCCGCAGCAGCTTCAACC
ACTTCGACAAGAACCGAACCGGCAGATTAGCGCCGGACGAGTTCAAATCGTGCCTCGTCTCGTTGGGCTACTCGATCGGT
AAAGATCGACAAGGCGACATCGATTTCACACGTATACTCGCCATCGTAGATCCCAACAGTTCCGGCTACGTGCACCTTTGA
CGCCTTCTCGATTTTATGACCCGCGAATCAACCGACACCGATACCGCTGAGCAAGTTATCGACAGCTTCCGCATCCTTG
CCGGCGACAAGCCCTACATCCTGGCGGACGAGCTCAGGAGAGAATTGCCGCCGATCAGGCCGAATATTGCATCCAACGA
ATGCCCTCCGTACAAGGGCCAAAACGCACAGCCCGTGCCCTCGATTATCGTTCTGTTCTCGACTGCCCTTTACGGCGAATC
CGATCTCTAAAAATCGTAAAAACAAAAAAATCGAAAAAAGGGTAAAAACATCGGTGACGACGTCCAAGATTCAAGGACA
CCGAGCTTTTTTTTTTACACGCACAATAAATAACAAGAGAAATAAGAGTTGAGATGATGAGAGACGAAAAATGTCTCGAC
AACGAAAAAGTCCATCGTAACTTTTTCTCGATTTCTGCTTCCGAAAAATCGCCAAGGCTTCTTTTCTTTTCTGACTCTC
TCTCTGCGCGCCGACCCAACGAACGTCTGGCCCAACGCCAATTATTTTAAAAATCAATAATTGCAAAACAAATATTACG
ATAAATTTCAAACGAACTGAACCTCCGATTCTCTGTCGAGATTGCAAAAGGGTTTTAAAAGTCATTTACGAAACGCAGA
AATTCGTAACGGCCTCCGGCTAATTTTGTGCCAAAAAATTGAGTGATCGAATTTAAAGAAAAAACCCTAAAACAGT
AGCGGTTGAAAATTGATAAAAAAAGGGAATTAGTACGAAAAATACATCAAGTTTTGCCAAATCGAAATCAATT
GAGAGGAAGATCGAATGGATATCGACGAAAAAAGTTTTTACAACTTTATTGCTTTTTTACGCTAGAAAAAAGTC
GAATTAGTCGCCTAAACATCCAAAAG

>CL9794Contig1|vinculin-like isoform 2

GAGTTGTTGAAGACTTTATCGATATTTCTACACCGCTCAAACAATTACCGATGCTGTTCTCACTCCGGAAGGAACCTCT
GGACGCGAACAAAATTTCAATGATAAGACTCATGCGCTTCAAACCTTTCTCCAACCGGGCTGCGAAAATGCTAGAAATGGT
CGTGCTGGTGGAAGCGGAGGTAACAAGAACTCGCGGAGGCGCCTTTGAGCAGTGCGTGCAGGTGCAATCGCTGACTC
CTCAGTTGGTGAACGCCGTCGGATCAGAATGACGTATCCGGAAGTAGAGCAGCTGACGATCATTTTGAAATTTACGA
CAACAAATACGCCGAGCATGCAACGGGCGAGAGCTCTGTGACGAAGCAGCAGCGCCGATTTCTGTCGAACATC
CGAAGAACAATGCAAAAGCATTCTGTTCTCTGCGAAGAAGCCATCGCCAAAACGCACCCCCAAAAAATGGTGCACAACA
CTGCGGCGATTGCTCGGCTCGCTAATCGCGTTATTCTAGTCGCAAGCAGGAAAGCGACAACAGCGAAGATCCTGCTTTC
ATCCAACGCGTCAACCATTTCTGCGGACGTTCTCCAGCAAAATGTGCGGCCCATGGTCCAGGACGCCAAAGCCGTGGCAAT
GAACATTACCGACGCTCCGTCGATATCGCGTTGGCGAGAGAGCAATCGAGCTCTTTGAATACCGTTGGTCAAGTTGAA
AGGCCCTCGTCACTATCCGATCAGCGAAGCTCTGATCTGTCCCACTTCCAGTGAAGTGAACAGGCC

>CL980Contig1|adipocyte plasma membrane-associated

TTTCACGTTATCTTTACCTCTTCTTCGACGCTCGCTGCTTTTTTCTCGTTATTTTCTCGAGCTTGTGGTAGCCGG
TCTTCGCCATTTCAATCAGTTGCGTTTCGACTGCTCATCACACCGCTACAGACGGTCGCGACTGTAAGTACCTCAAGCC
GTCAGATTTAATTGTCTTCGCGGCAGTCATCGAATTTGAACATTTTCCAAGGTCACTGGAATATTCGTGAGTGCAGAT
GAGTTACCTCAAGTCACTGGGACTTCCGTCGTCACGTTGCTTTTTTCTCGCCGTAATAACATTTTCCCGGGGATTAC
CACCAAATGTGCCTTTTACGGAGTACAGTATAAAGCCTCTACGGCTCTCGTTGGTGTGTTTTGCTCCTAACGACCGACTC
AACGACCCTGAGATATTATTTCAAGGTCAAATCAAAGGACCCGAGTCTTTTACTCTTACAATGGCCAACCTTTACACAGG
AATGCAGGGTGGATTTGTCGGCAGGGTCGACAACGACAAAGTTGTGCCCGTCGTTGCTTTCGGCAAAGATTGCGCTGGTG
CCTGGGAGGAAGATAAATGCGGACGACCTTTAGGACTCAAATTTGACAAACAAGGTCTCCTGTACGTCTGGACACTTAC
TACGGCATTTTCAAGGTCAACGTCCACTCTCCAAATACGAACAACCTTTTCTGATCCAGCAAAACCCATCGACGGCAAAGT
TGCCAAGATATTCAACAGTATTGACGTTGCTAGTAACGGCGACGTGACTGGACCGACAGCTCCACCGACTTCAAATTAT
ACGACGGCATATTCTCATTCTTCGCTGATCTGCTGGAAGATTGATACGTTATAACGCGAGCAACGAAGAAGAACGAAGTA
CTGGTGAAAAATCTTGATTTGCAACGGTTTGAACCTAAGCGACGACGAGAGTTACGTCCTGGTGGCTGAAACGCTGAA
AGCAGTGATCGTCAAGTATCATTTGAAAGGTGGGAAAGCAGGAAAGAGCGAAGTGTTGTACGAAGGACTTCCAGGAGCAC
CGGACAACATCCATTTCCGACGGTTTGGGCAACTACCTCGTGAGCATAGTGTTGCCAGCTGATCCGGAACATCCTCAACTC
GTGACAGCGCTCATACCGCATCCTTACTTGAGAAAAATGGTTGCAAGGCTGTTGGGTCTCGTAGAACTGCCCTTCAAAGT
ACTGGAAGATCTTTATCCGAAACGATATCGCTAAGCGAGCTATCCACGCGATTGGATCTTTGCAATCTTCTCATTATCT
TCCCGAAGAAATGTTGACGGTGTTGAGAGTAACCGGCCATGGAGAAATCTTGAACGCTCTACAACTCGGACGAAAGCT
TACGAGTATAAGCTCGGCCTTTGTTACGACGATTATCTCTGGCTCGGCTCCCTTACAACGAATATCTCGCCCGCGTTT

CCATCAAAACAAGCTTTCCCCGACGTAGACTTTTGTACCCGCGGCGAAAAATAACGCAAAGATTGTCCTGAGGCCACACCG
AAAGTTGTAAACACGTCGAAACCCCAACCAACGACGACCACTCAAAACACGAC

TTATCAGGTCCTACCCGAGAAGT TACCGGGATAGCGATGGTGACGGTATTGGGGATCTCAATGGTCTAGCGGACAATTTGG
ACCACCTGAAAAAGCCAACATTGATGCATTCTGGTTATCGCCCTTTATCCCAGTCTATGGTCGACTTTGGATACGACAT
TTCAAATTTTCGTGCGACGTGGATCCGATTTTCCGGCAGTCTCGATGACTTCGACAAACTCGTGGCTAAATCTCACGAATTGG
GCATCAAGGTCGTGCTGATTGTTTGTACCCCAACAGTTCGACAAACATGACTGGTTCAGAAAAAGTATTAGAACATC
AAACCCCTACAACGAATTTACATTTGGAGAAATGGCACTAAGCTTTCCAATGGAACAATCCTGCCACCTAATAAAGTGGAT
CAGCGTATTCGGTGGTTCAGCATGGCAGTGGAAACGAAGAGAGACAAGCTTTCTATTTCCATCAGTTTGCTCCCCAACAGC
CTGATTTGAATTACTACAGCGACGCGCTCATCAAGGAAATGCAGAATGCCCTGAGATTCTGGTTGGACAAGGGAGTGGAT
GGTTTCAGGATTGACGCGATGCCGCATCTGTGTGAAGATCCAAGATTCTCGACGAGCCTTTGAGTGGCTTGAGCGATGA
TCCCAACAACATTC AATTATCTTGACCACATTTATGTGAAAGATCAGCCAAAGATTGTATGAGATTGTACAGGCTGGAGAG
GAGTGCTTGACGAATACAAGCGAAAGATGGCGAACCCAGAGTTATGATGATCGAGGCATACACGGATAATGAGCACACC
ATGGAGTATTACAGAGCCGGTGCAGATTTCCCTTTCAACTTTCCGGCTTATTACGTGGGTCAACGAATACTCGTCGGCCGC
TGAGTTTAAGGGATCGTTGACAGCTGGATGGCAGAGATGCCGAAAAATGCGACACCCAACCTGGGTGCGGGGAAATCACGA
CAACAATAGAATTGTTTCGCGCTATGGACGTCGACGTGCTCAAGCAATCACAGCGATGACTCTCTTCTCCCTGGCATCGG
GGTTACTTATTACGGGGATGAAATCGGAATGGCAGACACTGGATCTCGTGGGAGGATACCAAGGATCCTCAGGGATGTG
GTGCAGGCCGGAAGGATTACGAGGCACTATCCAGAGATCCTGAACGATCGCCGTTCCAATGGAACAATTTCTACTTCAGCA
GGATTCTCCAACAAAACGAGACGACGTGGCTGCCTGTCAATGACAATTACATGACCATCAATCTCGAGGCAGAAACTGCT
GCTGAAGACTCGTACTTCAAACTTTACCAAGACATTTCTGCTCTGCGACAATTGCCAGCTGTCCGAGAGGGCAATCTCAA
CACTCGTCTACTCAACAACGACGTCTTTGCCTTCTCCAGGGAACGTGCGGGTGAGAAATCGTTTACGTCGTTCTGAAC
TTGGTGAGCAGGCACAAAATCGTTGATCTACGAGCTTTTGATAAGGTTCCCTCCGAACCTGAAGTCTATCGAGCGTCATTG
AATTCAGCGTAGCTCGAGGAGATAAGGTCGATGTGTCTGCTGCGAAAATTCGGCGAGCGGCGTCGTTATTTACGTTTGC
GCCGAAAAACGACATAATTATCAGCTCGCGATGATGGAAGGCTGTCTCCACCCAAGTTTTCCATATCGATCGTTCCAATGG
TCAGTCATGACCGCAGCAGGCAATTTATTCGGCACTTCCATGCATTGAAATGTCTTTTCTTACGATTAAGATTCC
CATGAAATAATAAATTTAGCAATAAATAAATAAATCTGTAATGTATTCTCGGAANCCGATGGAAG

AGTTTCGGGAAAAAGTTGCGTGTGCTCGGCAAGTGATTAATAATGCAAAATTTATCAATTTATATATCGAAATTCGTTGTTTCGAAATTCGTTTCATCGTGGAATCTTTTCGTACGTGCAACACAAATTTGCACCACGGCGTCAAATGATAACGGTAAGCCGTTCTTCGATGTGTATGTTTGTAATCAACGCGGAACGGAGAAGCGCGTGATGAGCTCTTGCGTGCGGCCTCCGGNAGTCCCAGCGTTCGTTAGTTACAGTTCAGCCTCGACCGTTGGCGAGGAACCTTCGTCCCATTAGAGCAGATTCCTCGTCTTCCGGACAAACATCCACGTGCCCCAGAAATGGACCGGAGTCGTCTGGGCTATGTGACAGCGTTGGCAGTGGGAGTAGGATCTCAGCTTCGTATTCTGTTGGTGGTGTCTCGCAAGCAAAAGATGCCACCTCCAAATGGCGTAAAGTTGGTGAACTCAGCGATTGGTAGTTTTCGGTTTAAATCGCTCGACCTGTACGAGAAAATTCAATAGAGTGACACCGCTTGGTCTCAAGTCTGGCTGGCTCAGAGATCGCACACTCATGGTTATCGACCTCGATGGAACTTTAAACAGCAGCACAATACCCCAGAATGGTTCAGGTGTCTCCGAGCGTAGCTGGCTCGGTGTTGACTCTTCGTGCGCTGGAATGATGTCGATAAGTATCGATCTCGCTCAATTAATAAGCAAAATATAATAAGCGACCGTTTGGGGACAAGCGGTGACCGCTCGAGACTGTGGCGATGAAATAGCGCGCTGGCTGTCCCGTTTTCTTCTCCAAGAAGACGACGCGTTTCAGACTGGTCTACTATCCGTTAGATCAACCACTCGCCAAGTCCGACCGTATAACCAACCGCTTCCCGCTGACCGTCGAGCCGACGTGGGTGCATTTCCGGATGCAACGAGTCACTGCTCATCAACGAAGCATCAGTTTCCGACCTCAATACCCGCGTCGAAGATCTGTTACTCCACAACATTTTCGACCCAATTCGTCTCGTCCGAGGCGCACCTGCTCTCGAGGAGGACGAATGGGATTGGGTGAAAATTGGAACGTTGTATTCCGCAATATCAAGCCATGTACTCGATGCATTTTTTACGACTATCGACCCGGAGACTGCCAAGAAACATCCCAAGCTCGAGCCCTGAAACTCTGAAAACGTACAGACTGATCGACGATCCTGTGCTGAAACCATTACCCGGAGACAGTCCAGTGATGGGGATACATTTGGGCCTGAAAGGTCCCAACGGGACGGTGCGTTTGGGCGACCCAATTTACGTGCGAGTTGCTGAGACGAGCGAGCCTTTAGTATCCCCGCCGTAGCTAAACGATGGGATTCTGTGCGAATGTCACGCGATCCCTGAAGAATGTTGTCGTTGCTGGAAAATTTGGGAGCGCTGTGAATCCTCGAAAAGAGGAGCAGCGAATGCTGAAGAAAATCTGGACATCGAATTCGTGACAAAATCGAACCGCTCAATACATTAAACAGTACTTCGTTTATTATATTTTTTTAATATTCCTATCGAGTTTCGATTATACAAATAATAATATTTTATACACCCTT

mmc4.txt

GGCTCTCATACTTTTGGCTTACAAAGTCTCCAGTAGACACGGAAATGGCCAATTTTATCCGTTTGAGATCCTGGGAA
TTTCAGCGGGAGCATCTCAAGGGGGAAATCAAACGAGCGTACAGGAAGCTCTCTCTCATTCTTCATCCTGACAAAGAAAC
CGGAGATGAAAAAGCTTTTCATGATACTGACCAAGGCTTACAAAGCATTGACGGATGATGAAGCACGAAAGAATTTGGGAGA
AATACGGTAATCCGGACGGTCCCGGTGTCATGAGTTTTGGAATAGCTCTGCCTTCATGGATCGTCGAGAAAGAAAATCTCT
GTATGGGTTTTGGGCTCTATGCCCTTGCTTTATGGTTGCTTTGCCAACTGTCTGGGCGATGTGGTGGTACAGAAGTAT
CCGATACACCGGGGATCAAGTCCTGCTAGCAACTACGCAAATGTAACGCGCGCTTCGGCAAACATCGTCAGCAACGC
TCAAAAGGGTAATAATGATCCTGGGAGCTTCTTGAGTTTTCCAAGCGTTGCAACGCCGAAATCGTAGAAAGACAATCC
GACCGAGAAGAAGTTCGTCGCTAATTAATAAAAAATCAGTAATTTAGGAGAGAAAAACAAAGAGTCATTTTTGTGCAACAG
GTAATCGATAAAAAGCTCGAGCAATAATTCACGCCCATTTATCAAGAATTCACCTTAACCTGAGACTCTCGAGAAGGACA
GACAGTACATAGTAAAAAATGTCCTTACTTAATACAAGAAATGATCGCGTGCCTCAATCAACTGATCTTTTTAGCGTAC
AGCAGACGAATTGCGAGACTTTTTGCGAATTCAAACGATCGAGAATTGCATGAGGCTGAGCTCGATGATAGTCCAAGGATT
TTGGGAATTCAAAAACCTCTCCTGCGAGCTTCCCCACATCGAAGAGGAACATTTGAAATATTTCTCGACGAAAAAACGA
AAATAAAAAAGTCTCCAGCAATTTGCTCAACTCAAGGGCGAAGAGAGACGCCAAATTTTAAGGAATTTGTCTGATGAACAG
TACGAGGACATTAGAAAGTGTGGTAACATGCCTTACGTCGATTTCAAAGTTTCAGTCTGAAGTATTGACGACGAGAA
TCCAACGGTTTTACACGGCAATGCGATAGTAACGGTGACGGTAATTTCTCACTCGTAAAGATATGAAACAATTTTGTGG
TGACGATACGATCAAGGAGCAAAACGACCATAGACGAAGATAACCAAAATGGCGAGGCTAAGGTGAACAACGTACCAACG
GAAGTGGCGACGGAGGAACAAAACATCACAGCGGAGAAAAGGCCAGCGTGGTTAAAGCAAAAGAAAGGAACGAAGAAAGC
GCATAAGAAAGAGTCCAAACAAAAAGTTGTAGACCGACGAAGAGTGCCACG

>CL99Contig1|lamin dm0-like

AAAAGTGTTCGCTTGTAGTAGTAGTACAAATCGAGGACGCGCGCAGTGCCTTAATATAACCGTAAAAAAAAG
AGGAGTCTCAGAACCTTGTACGAGTATATACACACGACCCACACACACACATTACACACGGTGCGCTGCTGTT
ACCGCCGAAGTTCGCTGCCGCAATTTTTCGCCTCCATGATTCGATAAAACAAAAAACACGTTTTAGTAACGGACTAGTA
ACGAGGAATCACTCAGTGTATTTTCGTGCTACGATCTCACCAGAAATCGTAGCGATACGAACGCCTGTAAGGGACTTGTC
AGTTAAATCTTCACAGTGCCTTTCCATCTTCGCTTCATTCTGGTTTCGTTTATTTTTCGCTTACGTTCTTTACCGAACC
GATAACTCTTTGTGCACAACCAAGTACAAAGAAATAGCGATAAAATGTCGACTAAATCGAGCAAGAAAACCGCGGCGACG
TCTTCGCTTTCGAGCGCTTCGGCACAAATCACCCGAACCCAGCATATCCACGCCAATTGGACGTCGTCCCGGTAGTCTCT
CAGCCCAACGCGTTATTCAAGACTTCAGGAAAAACAAGATCTCGCCAATTTGAACGATCGTCTCGCCTGTTACATCGACA
AGGTTTCGTCAATTTGAAACCGAAAACCTCACGCCTCACTCGCGAGGTACAAACCTCTCAAGAAATCGTCACTCGTGAAGTT
TCTAATATCAAGTCTATGTACGAACACGAATTGTCCGACGCGAGAAAAATTAATCGACGACACCGCCAGAGAACGGGCCA
AACTCGAGATTGACACTAAACGATTGTGGGACGACAACGAAGATCTTAAACCAAAATGGATAAAAAGATCAAAGACCTG
CAAATCGCAGAGAGAAATTTGAGCGTCTACGAGAGTCTGTGGGGATCTTCAGTCTCAGTACAATCAGTCGCAAGCCGA
GAGGAAAAAGCTTTCGGGAAAGAGAGCGAGAGTTGGAAAAGGAAGTCGAAAGGTTGAAGGGACTTTTGGTCGATGCCCGCA
AACATCTTGAGGAGGAAACCTTCAACGCATCGATCTTGAAAATAATATTCAGAGTCTCAAAGAAGACATCAGTTTCAAG
GATCAAGTTTACCAGCAAGAACTCTCTGAGACTCGTACAAGACGTGAGGTGAAATATCGGAGATCGATGGCCGTCTCGC
TGAACAATACGAAGCGAAGCTCCAGCAATCCTTGCAAGATTTGCGGGATCAGTACGAAGCTCAAATGCGAGCAAAATCGCG
AGGAGATCGAAATGCTTTACGAGAACAAAATCAAAAACCTTGACTTCGCACGCTCAGCGAAACAGCGGCGCGGCGAGCATC
GCTGTCGAGGAACCTTCGTCAAACGAGAACCAGAATCGATGAGTTGAATCAGCGCATCAATGAGCTTGAGGCTAGCAACAA
CGCGCTTAATTCGCGCATCAGGGATTTGGAAAATTTGCGAGAGGGCGAAAGAGCTCGTCACGCCGAAGGTTTGGCTTCGT
TGGAGGCCGAACCTGGCTCGTATGCGCGACGAAATGGCTCAGCAGCTGCAAGAATATCAGGATCTTATGGATATCAAGGTT
GCTCTCGATCTCGAAATCGCTGCGTACAGGAACTTCTCGAGTCCGAAGAAGCGAGATTAACATCACGCCAATGCAATC
GCCAATCTTCTACCATGTGCTCGATGACGACGCGAAGCACACCGTTCGCGCCACACGCCGATCCGAGGGGGAAACGCAAGCG
AACTCTTCTCGAGGAGAGCGAAGAGCGCAGCAGCAGCTACTCGGTGTGCGGAACAGCGCGAGGCGACGTTGAGATCA
ACGAGTTGATGCCAGGGACGTTACGTCAAATTTGACCAACAAGGGAATTAAGGAAATCGTTCTCAGTGGTTGGCAAATA
ATTCGCAAGCCGGAGCATCGAGACCGTATTCAAATTTACAGAACAGTGAAATCGAGGACGAGCAACATAATGGT
TTGGTCAGCAGATATCGGGGCGACTCATGAGCCGCCATCGAACATCGTTATGAAGGGACAAAAATGGTTTATCGCTGACA
ATATGACGACCATTCTTCTCAACAACGAGGGAGAGGAGATGGCAACTTCGGAACGCAAAAGACAACAACCTTTCGACGACG
TTGTCTCGACACAGAGAAAACTTGAGATCATCAGAGGAATTGCACCATCAGCAGGTTGACCCAAACGGTGAGGAACGCTG
TCGTATTATGTGAGAGATACCCGATAAATAATAATAATTAATAACGAAGAAAAATGAGTGGAAAGAGGAACAAACAAAA
CACACAAGCTTATGTCTACAAAAAGAGGTTTTTAAATTAAGCTTATTAGAAATATCGGCGTTTTAAAGTGATGAATCAATC
ACCTCGAATGTTTTGAAATTTGAAATTTTCTCATGGATTGACTGATGACAAAAAGACTCCGTCGGAGAACGAGGACCAC
GCCGAAAAATTCAGTCCAGAGGCTCTTTCTAATCGGCAAGCCTGTCTGAAAATTTTCAATTTCAATTATTACAGCTT
TCTCTCACAGTCACAGCGTCGGGATCCCGATTGATTCATCACCTCGAGCTGCAAGAGTCTGAAGTGAATCAAATAAATA
TTATAATTATACTTATTATTATTATTATTACAGATAACGTGGGCTTTTCCAATGATTCGCCTTTTGAAGCCTTCCCGCGA
GGAGTCTGCGGCGTCCGTACGAGATGCTCCAATCAAACAAACAGTTTTTTTTANCAAATCAAATCGTCAGCCTCTGAT
GCAGTGAAGTAAAAAGTTTTCAAGTTCCATTT

>F609GQ401A9WC1_x2|prolyl endopeptidase-like

AGATGACGGATCGGTGCGCATTACCAATAGCAAATTCAGCGAAGATGGCAAAATCTTTGCTTACGGACTATCGCGCAGCG
GCTCTGATTGGAGACCATTCACCTTATGAATACGGAACAGGTGAAAAGTATCCGGAAGTATTGAAAAAATAAGATAC
TCGTGATAATGTGGACGAAGGACAGTAAAGGAATTTCTATGGGACGTATCCCGAGCAAAAAGGGGTGACGGACGGTTC
GGAGACTCAGGGAGTCAGAGATCAGAAGCTTTTGATCACA

>F609GQ401ARVSL_x4|hypoxia up-regulated protein 1

GATATTATTTTCGCAAGTTGTGCTGGTTCGGAGCGGGAACGCGAATGCCAAAAATCCAAGACACTTTGACCGAGATCGTTAA
GACTGAATTAGCTAAAAATATAAATACCGATGAGGCTGCAGTTTTGGGAGCTGTTTACAAAGCCGCCGAACCTCAGCGAAG
GCTTTAAAGTTAAAAAATTCATCACCAAGGATGCCGTACTCTTTCCATTCAAATTTGTTTCGATAGAAATATCGACGGC
AAAACTAAACAGGTGCGAAAGACCTGTTTCGGCAAAATGAACCTTGATCTCTCAAGAAAAAATAATTACGTTCAACAAGC
ACAAGGAAGATTTGAAATTTATCGTCACCATTTGCTGAGCTCGATCTGCCAAGCACGAGCAACTGGCTTTGGGTAAT
TGACACTATCGCAAGGTAAACCTAGCGGTAGTTGCTGAAGCGTACGAG

>F609GQ401B2F83_x1|Plastin-2 [Acromyrmex echinator]

mmc4.txt

GGATTTCATTGACCTGACGGAATTGCGTAATGCCCTGGACAGGGTTGGCTTCAAAATGCCAGGTTACAAAGTTTCGCCAAAT
GATCGAGGAATACGACGACAAGGACACCCGAACACAAAGGACGATTGTCTTTGAGGAATTTGAGAACTTTGCAAAGA
GCTCAAAGCCAATGAACTCGGCTCGACTTTCAAGGCGGTTGTCTCGGAAGAAAGAAAACCTCGAGACTCTCGGGGAATT
TCTGAGGCTTCCAGCGAGGGCACTACTCATTGCGTTCGTCTTGAGGAACAATTGGCTTTCAGCGATTGGATCAATACCAA
TCTCGGTTCCGACCCTGATCTC

>F609GQ401BA8ZW_x3|cytochrome b5

GTGAACGGCGACGCATCCGACGACTTTGACGACGTGGGACACTCGGCGGACGCGTTTGAGTTGATGGAAAAATATCTGGT
CGGGGAGCTCGTCGAGTCCGATAGAAAATACAAAGCCACGAAAGGTTGGATCGCGGGAGGTGGCGATTTCGAAAAAGTT
GAAAAATACGTGCAAGGACCTGGACTCCCTTTTTCTACTAGTCGGTGGCATCATCGTCGATTTCTCGCTGTTTTANA
TTTCCAATAAATACAAATCGCATTTTTATAAATTTTCTACGTTAATGAATTTTCTATTTTTTTTTATTTAATTCAATTTTC
GCGAATTTTTCTCATTTTTTAAATTTATTTTTCTATTTTTCTCGTCATTTGGAGCTCGTTTCGAGTTGAG

>F609GQ401BZJPJ_x2|regulator of chromosome condensation

ACTTGTAGTAACCGTTTATCGAATTGTGTGCGAACAGCGAATTGAATGATGCCGGCGAGAAAAGCATCGAAAAGAGCAGC
CGCTACTCCAGCCAAAAGCCACAAACCGGCTAAAATAATAAAACAAAAGACCGTTGCTGAAATTTCTGTTGAGCCCGATT
TACGAACTGACCAACATGGCGGAATGGTTTTGTGCGTTCGGGCAAGGCGACGTGGGCCAGTTGGGCCTTGGCACCGAATAC
ATGAAAAAATGCGACCGGCCCGCTCCAGACTGCGTGGACGTTGTGTCGATCGCGGCTGGCGGTATGCATAGCGTGTG
CTTGACCAAATCAGGCACCGTACTGACCTTTGGATGTAACGACGAGGGCGCTTTGGGACGTGACACCTCGATAGAAGATT
CAGAACTACTCCGGGTCTTGTGCAAGTTGGATGGGAAAGCGGTGCAAGTCACAGCTGGCGAT

>F609GQ401C2E40_x3|soma ferritin

AACGTGTGAGGAGTGTTCACAAATTTTTAGTCGCTCTCCCGTGTACTACGAGCAATATATCTGTATTTTTATCGCTTCG
AAAAAACAACGAATTAACGGGCAGTCGCTAAATAACAGAGCGGGATAAATCGGCGGAGCTTGCAAAGAAAATGAGCAA
AATGAGCAGACCGAGGCAAAATTTAGTGAAGAATGCGAGCGAGCCATCAACAAACAATCAATATGGAATATACGCCA
GTTACGTTTACCTGTCAATGGCGTATCATTTGATCGCAGTGACGTGCGCTTGGCAGGACTGCACGATTACTTCAAAAAG
GCTTCGGACGAAGAAGCTGGACACGCTATGAAGTTGTTGACTTATCAAAACAAAAGAGGCGGCACCATTGTTCTCGAAGA
CATAAAAGTTCTGGAAGGCGATTGGGTACCGCAAGGACGCTATGATCG

>F609GQ401C5NUU_x1|protein disulfide isomerase

TCACACCGTCAAATACACAGAGGAACTTTTCCATTGAAATTGCTAAAAAATCACTTCATAATGTTCTACGCACCTT
GGTGTGACCATTGCAAAACCTTAGCACCGACGCTCGAACTTTAGCTGAAATGTTGAACGAAGAAGAGGACAGTTTGTG
AAGATTGCCAAGTTGACTGTACACAGGAAGTCGCTATTTGTTGCGAGCAGCATGTACCCCGGATTATCCGACATTGAAG
TTTTTCAAAGTTGGAGAAAGGAGGGCATCAAATCCGGAGGACTCGTGACTTACCGTCGTTGACTGCATTCATTAACGAA
>F609GQ401CAT00_x3|sumo-activating enzyme subunit 1

ATTTACCGGTGCTCGCGCTCGCTTTGTACACACAGTAGCGTAATCCCGCGTTGCGGCTTGTGAGTGCCTTAGAAATCG
AGAATTCTCTGTACCATTTGAATCCCGTACGAAATGGTTGACGTGAAAAATAATTGGAAGTGTGACCGATGCGGAGGC
CGAGTTGTACGACCGCAAATCGTTGNGGGTTGATTGCGAGAAACGCTTGAGGGCTGCGAGAATTTTACTCGTCGGACTC
AATGGCTTCGGTGTGAAAGTTGCCAAAAA

>F609GQ401CIJUU_x6|aconitate mitochondrial-like

AATCTTAAAAACAAGGAATGCTCCCACTGACTTTTGCCAAATGCCAGTGATTACGATAAGATCCAACCGACCGATAAGATC
AGCTCTCGGACTCAAGGATCTCGACCGGGCAAGCCCGTGAAGGCGAGAGATCAAGCACAAAGATGGCAAAGTCGAAAC
GATCACTCTGAACCACACATTGAACGAGCAACAAATTGGTTGGTTCAAGGCAGGTTGCGCTTTGAACAGGATGAAGGAAA
TCGCATCTGGACGCTAGAGAACTTAATTGACTGGAACTTAGAAAATCGAAAAAGAAACAGAACTAACAGTGCGAGTTCC
AGGGCTCTACGTTATCAGAGATCGAGCTAAAAGCAGTACACTTTCCGACATGCCAAGCACCGTGGGTATCGAGATTATC
GAGATTTCAGAAATCAGGAGGAAAAATCGTTTAAAAAATCAGGAAGCTCTCGTTACCTTGTTGAAAAATCGCCACGCGAGA
TAGTTGACAAT

>F609GQ401CMKMR_x2|transitional endoplasmic reticulum atpase ter94-like

AATTTTAATATTCCATTGTGTAACTAGCGTCAATTTTCAATTTCTTCTGTAAGATGGGTGATGGAAAGAGCGAAGA
TTTAGCGACCGCGATTTTGCAGAAAAAGGCAGGCCAAACAGGCTCTTGTTGACGAGGCCATCAACGATGACAATCTGT
GTTGCTTTGTCTCAAGCAAAAATGGACGAACTGCAGCTCTTCCGTGGAGACACGGTATTGCTCAAAGGCAAAAGGCGCA
AAGAAACNGTATGCATTGTACTGTCCGAGAAACTTGCCCAATGAGAAAAATTCGCATGAACAGAGTCGTTAG

>F609GQ401DAH4I_x3|vacuolar protein sorting-associated protein vta1 homolog

GGCAGCACGACCCCTCAACCATCTGGAACTCACCTTATCCCGGTCTCCCTATGCCAGTTACTCCGAATTTCTACAATCC
TACGCCAACGCCAACAAAGCCCAAGCGTTCCATCGGATTTTTCGACAACACCAAAAGTTACAGGAGGTGCGACCCTGAATG
CGGAGCAGATGCTAAAAGCCGAAAAATACATAAAATGGGCAGGAAGCGCAATAAACTATGACGACGTGCCGACAGCGATT
GATAATCTGCAGAAAGCACTTCACCTTTTAAACAACGGGTCAAGATTCTAGGGACCTAAAAAGAATAAAAGCCTGCTCCG
CTTTTANCGAAATTTCAAAGAATTA AAAACAAGAACGATCGGTACCCCGTAT

>F609GQ401DISXB_x3

GCGATTGAAGACAATTTGAACGGCGTCACTACCCCTGCAGACTCAGACGACAAGCCAGCTCCTCCCTACATGCCATTCAT
GAATGCTTTTGATGTTTTATCGGTAACCTTTCAACGGACTTGAAGGAGGAGGTTACAGGCTTCTGAAAGATATGATTC
TGGAATTTGAAATTCATAGATGATCACAGACCAGCAGTTTTCGAAGGTTACGATATGGACGCGATTAAGGAAGCGTGGTGG
ATGAATTGCTTGAAGATATTGTCGATAATTACACAGCTGAGAGGTATTTTGATTGCTGCCA

>F609GQ401E6I53_x2|e3 ufm1-protein ligase 1 homolog

ATCTTCAGGCGACAACAGTTTCGGAACGTTCGCAATATCACGATCGAGTCTCGAGTTTTTGAGTTCAACGGACGATGAT
TCGAGAGAGGAAGCGCGAAAGCTTCTCGACACCGATCTCTCAAAATCAAGGACATCGAAATAACTTCAAGATCCATCT
GAAATCTGACAAAATTCACGAATGATTTGCATCTCAGCGAATCATCGAATCGACTAAAATTATGTTTTATTGTAATTTAC
AAAATTTCTATTTTGTATTTGTTGATGGGAATTGCAGATTCTATTCAATCCGTCCATTTTTTATATTATTTTATCTGTA
ATAGAAAAT

>F609GQ401EEM0_x10|protein wos2-like isoform 2

AATGCACGAGTTGACGATCAATCTCTACAAACATTGACCCGAGAGAAGACCGTACGGAGTCCCAAGGAGCGAGTTATCGAG
CTTGACTTTACAAGAAGAAGAAGTCTTATTGGCCGCGTTTGACCAAGGAAGACAAAAGTTCCATTGGCTCAAGAGCG

mmc4.txt

ACTTCAACAAATGGAGGGACGAGGACGACAGCGAAGAAGATAGCGAGAGCCAACCGCAAGACATGGAATCGGTGATGCGA
AACTTGGGATACATGGGTGGGGCTCCACCTCGAAAGCCAAGTCTGGACGATTTGGAGGACGGTGCAGGACGGAGGCGA
GTCGGACAGCGACGACGACGAGTTGCCGGATCTCGAGTGAAGCGAATTCGCCCAAAAAAATCAAGATTCGATAATAAACT
CACTTTAATCCTCGTAAAAGAACAACCTTCAGCAAAAACTAACAAGACAGAAAGAAATTTAGGAGACGAACGAAAAACA
ACCAGCTTA

>F609GQ401EL129_x3|pyridoxal-dependent decarboxylase domain-containing protein
1-like

AAATCTTACTCGCAACAGTTGAGCACAAAGATACTTTCTGTTCTGTTCTGGTAACGGACAATGACTGTCTTCATCTGGTTGAT
ATGCCCCGTTGGGCAGGTCTGGGTGGTGTACGTTATGCTCCACCGACTTGGATTACGTAATGACCGATCAAGCGAAAGA
AGAATTGAACAGGCTGAACATACAGCTCGTCGAGGCGCTTCGACGCACGGACGCAGCGTTTTCACTCGGTGAAGGTGCTG
ATGGACTGGCCTGTGTTCTGTTTCGGCATGGTCACTCAGGACACAGATGTTGCCGAATTGCTGTATTGGTATTGCAATTC
GGTCAAGACGTCGAAGCGACCTCAAACTTCTTGACACGATGTCGGAAGTCGTGAAGCGAGGTATCGAAGCAGCACAGAC
GGATCTCGAACGCGAGAACGCTGAGAACTTTGGCAGGAGGGAATCCTGCGTCATGTGCCGGT

>Hd-ven4

TCGACAGAGGTACTTCGAGCAGATCAATCATGAAATTTTCTTTGGGTGGCAACAGGATGGCAGGGTTCTTCGTCCTCGTG
TGCATGTTCTGTCGTTGGCGTCGCTGCTGAATCTGCGGAATCTCTGGTGGCGAGGGAACGCCGATCGCCACTGAATCCGAA
ACTTTTGGGTTCTCTGGTCGGAAAACGTGAAGCTGACCCTGCCCATGCCCTGTCCGCCACCGCCGCAACGAATTTTG
CTGGCAAACGCGACGTCCAAGCTGCCGAACTCCGAGCTCGCCGATCGCCACTGAATCCGAAACTTTTGGGTTCCCTGGTT
GGAAAACGCGACGCCGAATCCGCCGAACTCCGAGCTCGCCGATCGCCACTGAGTGCCGGGGCATTGGCCTCATTGGCTGG
CAAGCGTGACGTGGAAGCTGCCGAACTCCGAGCACGCCGATCGCCACTGAATCCGAAACTTATGACTTCCATAGTTGGAA
AACGCGACGCCGAATCGGCCGAACTCCGAGCTCGCCGATCGCCATTGAGTGCTGGGGCTTTGGCCTCATTGGCTGGCAAG
CGTGACGTTGAAGCTGCCGAACTCCGAGCTCGCCGATCGCCACTGAATCCGAAACTTTTGGGTTCTTGGTGGAAAACG
TGACGCCGAATCAGCCGAACTCCGAGCTCGCCGATCGCCACTGAGTACTGCGGCTTTGGCCTCATTGGCTGGCAAGCGTG
ACGTTGAAGCTGCCGAACTCCGAGCCCGCCGATCGCCACTGAATCCGAAACTTTTGGGTTCTCTGGTTGGAAAACGCGAC
ACCGAATCTGCCGAACTCCGAGCCCGCCGATCGCCACTGAGTGCTGGGGCTTTGGCCTCATTGGCTGGCAACGTCACGT
CGAAGCTGCCGAACTCCGAGCTCGCCGATCGCCACTGAATCCGAAACTTTTGGGTTCTCTGGTCGAAAACGCGACGTCT
AA

>Hd-ven2

ATGAACGTTCTGTTTTGGAATAATTTTTTTAGTGGTGGCGATGGTCTTCGCCATTGGCATAGTACGCTCTGAGGAAGCTGA
GGCCGGAGGGTTGGAAGAAATGCATGGAGAAAGCAAACGAAGTCCCGATCCACTGGATATGAAGAACTCGCGGCAGAAA
TTCGAAAACGGCTAGGTCGCTCGGCCGATCCAAGCATGAAAAAATTGATGGAAATGATCAAAGCCCGGAAAGGAAGAAAA
GCTGAGAGAAGCGCTGATCCTGATCCTGGAATGCTCGATATGTTGAAAAAGATAACCGGTATTGGCGGTTTTAT
GGGATAGTGCCGGAAGCGCA

>Hd-ven3a

ATGAACGTTCTGTTTTGGAATAATCTTTTTGGTCTGTCGCGATGGTCTTCGCTATTGCCCAAGTCCGCTCTGAGGAAGCTGA
GGCCGAAACGATGGTCCGTCGAGAGGCTGCTGCCGCCGTTTGAAGAAATGCATACAGAAAGCAAACGGAGTGCCTCCAT
AGATCCGAAGAAGAAGGCTGAAATCATTGCGAGGATTAATAAACTACTAAATGGAAGGAAAGGCAGGAACGCTGAAGCAA
TGAATATGGACCGTGAACGTGGAAGTCCCGATCCACTGGATGTCAAGAAACTCGCAATGGGAATTCTAAAACGACTAGGT
CGCTCGGCCGATCCAAGCATGAAAAAATTCCTAGAAATGATCAAAGCCCGCAAGGAAGAAAAGCTGAGAGGAGCGCTGA
TCCTGATCCTGATCCTGGAATGCTCGATTTCTGAAAAACATACCGTTCATAGGCGGACTCATGAGATAGACAATCGGTG
CAGAACGC

>Hd-ven3b

ATGAACGTTCTGTTTTGGAATAATCTTTTTGGTCTGTCGCGATGGTCTTCGCTATTGCCCAAGTCCGCTCTGAGGAAGCTGA
GGCCGAAACGATGGTCCGTCGAGAGGCTGCTGCCGCCGAGTTGGAAGAAATGCATACAGAAAGCAAACGGAGTGCCTCCA
TAGATCCGAAGAAGAAGGCTGAAATCATTGCGAGGATTAATAAACTACTAAATGGAAGGAAAGGCAGGAACGCTGAAGCA
ATGAATATGGACCGTGAACGTGGAAGTCCCGATCCACTGGATGTCAAGAAACTCGCAATGGGAATTCTAAAACGACTAGG
TCGCTCGGCCGATCCAAGCATGAAAAAATTCCTAGAAATGATCAAAGCCCGCAAGGAAGAAAAGCTACAAGGAAAGGCA
GGAACGCCGAAGCCATGAATATGGACCGTGAACGTGTAATCCTGATCCAATTTTGGGTATTATCGATGACCTCTAC
AAAAAAGCCTTGGCTGGTTAAGGAGTAGCCCTGGACTTGA

>Hd-ven1

ATGAAGTTCAACTTTGGAATCATTTTTCTTTTTCTGCTTTGGTGTTCGCCGTTGGTCAAGCTAACGCTGAGGAAGCCGA
AGCCGAAACGATGGTTCCCGAGACGCAGATGGAACATTCTACGCATCCAGAGGAAAAAGGAGCCCCGATCCAGCATTC
TGGACGTTATCACGGACGCCGTTAACAGCGCAATGAACGCTATGGGCTGA

B5AJT2 MDLFI LTRFILFLSFFMKSLHCQYSESQESGHNRRNAPDKELTTSEFQLFHQSQTYDIEYDFINITTEMIETERKVSFTIDGKEYHLSTLPAASQSVLPYGTIKS 106
NP_001155006.1
Q8WPC7 MTRF IGWI ILFCVAILVGLCDATTSNEAIFRNMSSEEIRSF FATEDGSVPKFLVYKLT KPAQSNRAANVLYIPFSYHGIRTTAILSLVPDQDLISTTTAVWF AKTNREARQVA 115
XP_001604431.1 MLFLFSSFVTLTVSSHGSKLHEQMTAEVHSIFRTTHDVEPYEVVPIAHAIHENS PKDSIHRILQIKSFKRDMRLYLEPTEGILAA5DLRMWTAEGDEDS PWGIK 107
E6ZCL2
Hd-Ven1
Hd-Ven2

B5AJT2 AIIWTDNDTHHEEDYS DERWDSRAIYENLEIMATILV R TENGTSYYDGVFVKYSNEG.....RSLPGRLMNIYGANYHFVYDSNGSVYDVVLNGQDEPAVPADMA 208
NP_001155006.1
Q8WPC7 VT....DKSYINGVFYDDAEFMATLLATYSEDETQIRYNGVVGVTKAHTVVSYPEKWW.....KPVVPVDNDDVEDNSSEVKEKSEETKEEILKL RSA.VYVGEKT 176
XP_001604431.1 YTPRPDILDGIGTFEFYQNEYECSAITIFRRSRSEVSMISILKQDYYVRSLPRGYENGFRYVNSS..HIIVSRSVDSSESQDQEDPPLYLVIYKNEKPSQKYFRRT.SVIYDQKP 227
E6ZCL2 YTKISKGMKE..RMFFYQDPYNLAFTSTHDEHGEILFDGTIGDDFVVRPLPARLRKVFSAKRSIHEEDFPQFNRTVYHPNLKDTYHHMIYKKKEVSFDGIREKIGSVLKNKT 220
Hd-Ven1
Hd-Ven2 RFFYRFYQNFIFLPTL EVDPL 22

B5AJT2 SKIIFYS.....ETPCTCRLLIQ....DLLMKTSRRLSSISTIFWNVNLRF RFPVQHKKVNIITLTVAKNEA AFQHV.....YRARYSKNSKL VHTGRVIDNGR 301
NP_001155006.1
Q8WPC7 GKLEEL.....SILHFKVYVVDYTLFEKL GKDIQKTVKYVATFWSIDLRYSKLYSPYVKTIGTOIVIV.TEAGTGLL.....EKARDYFTEEFIK..... 263
XP_001604431.1 PYWLLLELVQAP..FFPPNNVYPKLLIAPAYDVVSSEG.SVEAYIMLLIAQLNALDMMYRQMKNNVDRLKIGGIIIPRDP SAMFYI....RPGTNGFDDAKHSLLTNDFFKKE- 333
E6ZCL2 ESESSRTKRSTKKTYNKIIVYRQIVIVDYNEYLSLH.NFAEVKRYIISEWNVADLRVYVFNFEVRLNIADIIIVATDDPGTPYTNHRTRPVDDGIIDADKALDNMAEYFEEEL 334
Hd-Ven1 LVYWNVLMFASMKSEIYINIAFILLPSSKYAFPL.....ENDPGTKFVDFYDAIEG IQ 57
Hd-Ven2 GLYRDKRRFAPRRGKLPEVYFEILVLVDHN..AVRNRKITQTLRFMLAEWNAIMVY..... 78

B5AJT2 YFFGTNFDPPYDNVDASFTMASMDOPTGKGATVI.....GGICSSSNN.....IAYIRDVGSYSQVKVTHELGHLNGQH..SDTTCSEKINDNIYTIKAKQGS 396
NP_001155006.1
Q8WPC7 DTEHTNVDASFTMASNTKT VQQGSH..L.....GSI CNRQYS.....TAFVEDDASFGGLLTATHELGHLNLPHD.GSDEAESCKVESGDSTTVMAPST 351
XP_001604431.1 DMRLQNTTSAVIVLATKQVVEYNGGVANFVGLSLEYP..GTNCE TSI.....AMVKYSRGFGSVLTIAHELGHVFSAPRD..GAT....VFPADNNGYTVQDVN 426
E6ZCL2 MNKDLOREAI DRDQDMVMLMTQLNL CNLEPNDDHDFDCTTLGYAVRGGAGT VNI RETK..MEAVGLVEDNGGYVGIIPAAHEVGHLLGAPHD..GHEQEDKTTCPAYGGYIMTQMLM 446
Hd-Ven1 EFFEYKRDQISIDNIIYAMTGAKLCVKPTRANPVMNCINGFSEGKPDITNKFDDHETVDSAIIHFDNGI SSFTNAQKIDFMFTGEFT.RKKEQKKCP.....GIMEEYR 165
Hd-Ven2 GRAVYHGAALHFGVEHDEGYNYGGNNECDMEEGYAMTPAAQ 41

B5AJT2 TKASKEYVSSTLTAANFSKTTSAACCKDITYRKQ..... 431
NP_001155006.1
Q8WPC7 VDAIVDWDQSRVILNEFSKTEAAQCLKSTYRYE..... 386
XP_001604431.1 LAR.MLKWATTSQRIFFSAFFRSLVARCTHSRPVGVPGVHSMPSGWSMLEGQCENHMWTSVRPCYYANDCSRIICRDLWASECHFMSEPPLEQSLSWDGMRC.VNHTWMNV RDW 539
E6ZCL2 LTKNVEMWSSSMEYFEDEFFHSQRAQCLVDTPRKVRAMPRLPGQILSVDEQCDRIKGTYACN.KDETA CVHLDCFIPDSGGQCLPVA.PAAEGSSCGKGRHC.INGQCVS RNTS 558
Hd-Ven1 RGKFSLSMTTQKKIAHYLESFPAKALMSFPKYILKKERD...QVIPTPPKPSGWL SNLNNWLPF..... 230
Hd-Ven2 VSRWGERLRSKRYEQKPKSSGSECDKPLWMTLIGENLPRWLTLDGCR.....KENS-DECVPDQWTLPTTR 152

B5AJT2
NP_001155006.1
Q8WPC7 EVLLQFAPPPEEERYSNNIGVDVGLNIPFNIERN
XP_001604431.1
E6ZCL2
Hd-Ven1
Hd-Ven2

593

Fig.?S1 Alignments of selected *H. didymator* sequences with similar sequences from other insects. An asterisk indicates the predicted cleavage site of the signal peptide sequence (using SignalP4 software) and boxed sequences corresp...

Tristan Doramus , Serge Urbach , Vronique Jouan , Francois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid
Hyposoter didymator (Hym. Ichneumonidae) despite the presence of numerous novel and conserved
venom proteins
 Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

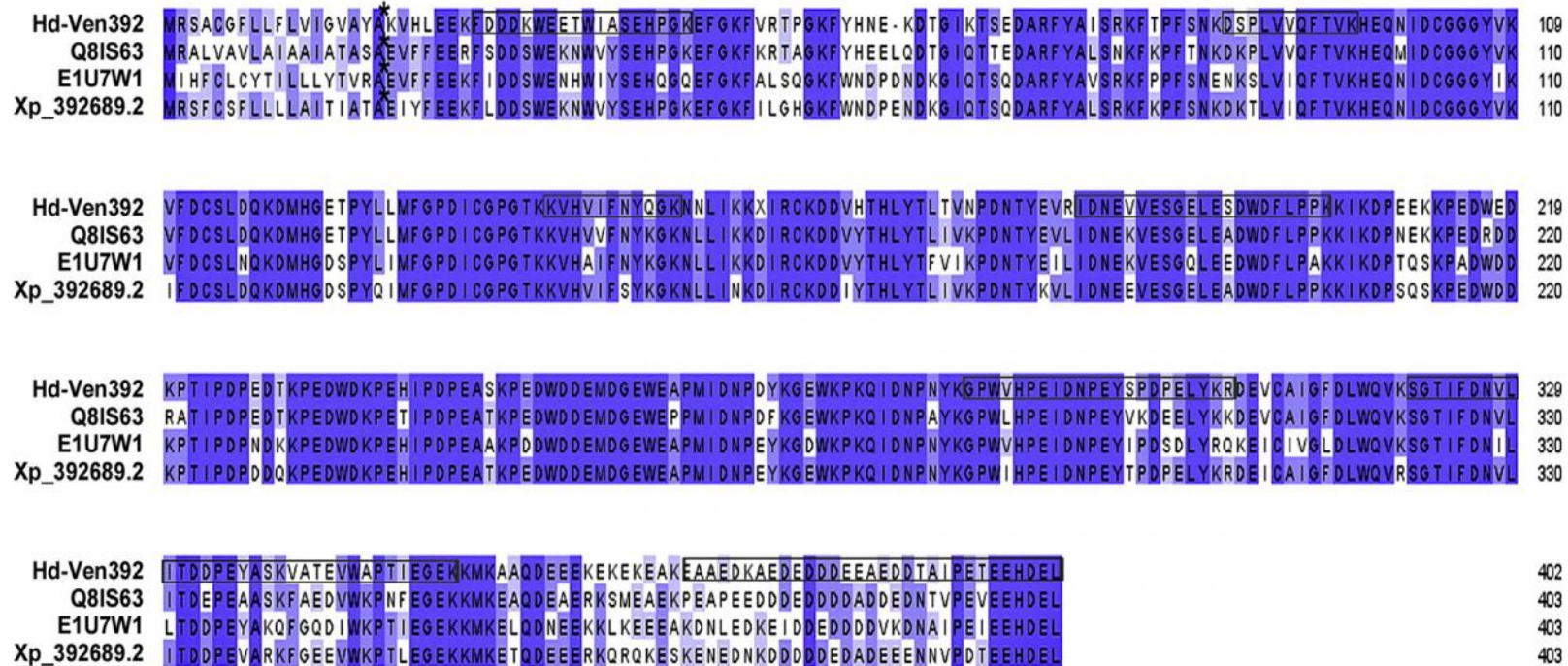


Fig.?S2 Amino acid sequence alignment of Hd-Ven21 & Hd-Ven22 with Hymenoptera DDPIV. The sequences Hd-Ven21 & Hd-Ven22 were aligned with sequences of DDPIV from the following species: *V.?*basalis [UniProt: A4UA14], *V.?*basalis...

Tristan Dor?mus , Serge Urbach , V?ronique Jouan , Fran?ois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins

Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

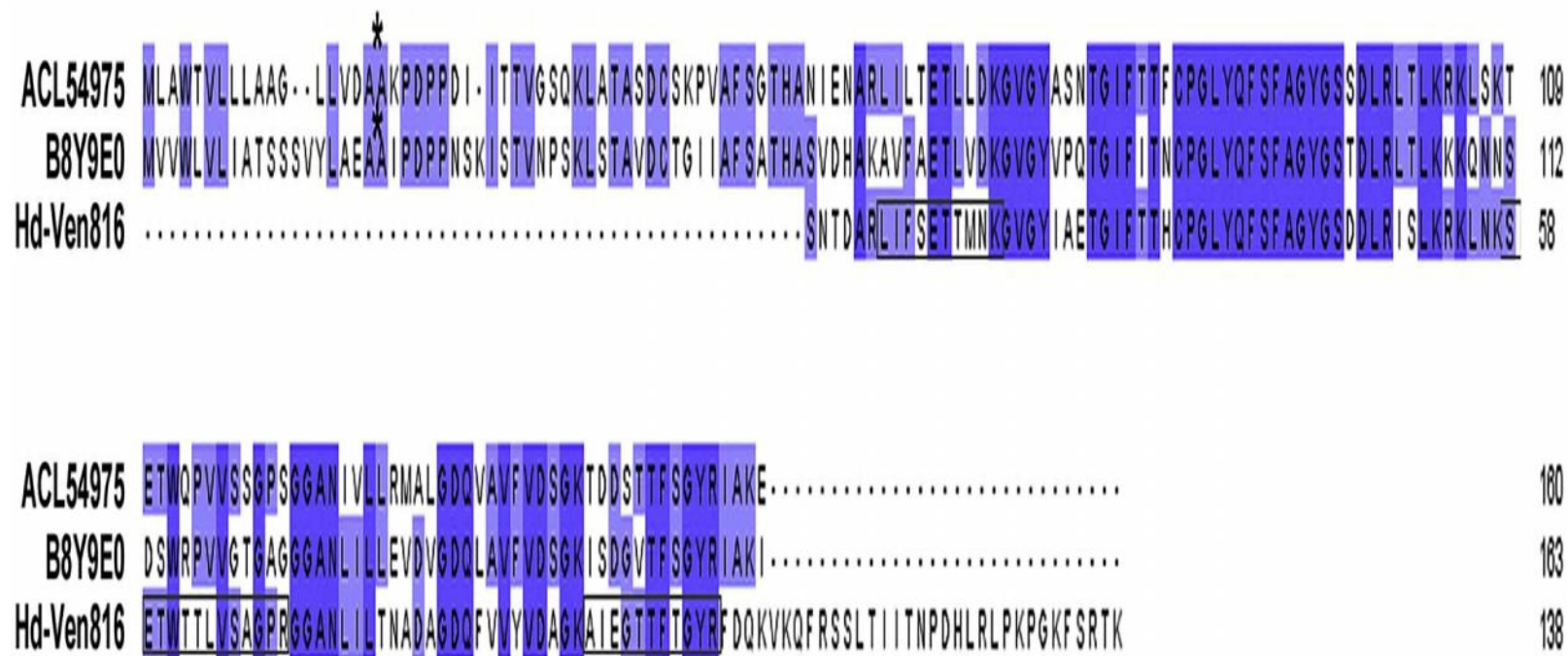


Fig. S3 Amino acid sequence alignment of Hd-Ven39 with Hymenoptera serine proteases. The sequence Hd-Ven39 was aligned with sequences of serine protease from the following species: *B. ?ardens ardens* [UniProt: G3LTW4] and ...

Tristan Doramus , Serge Urbach , Vronique Jouan , Francois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins
 Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

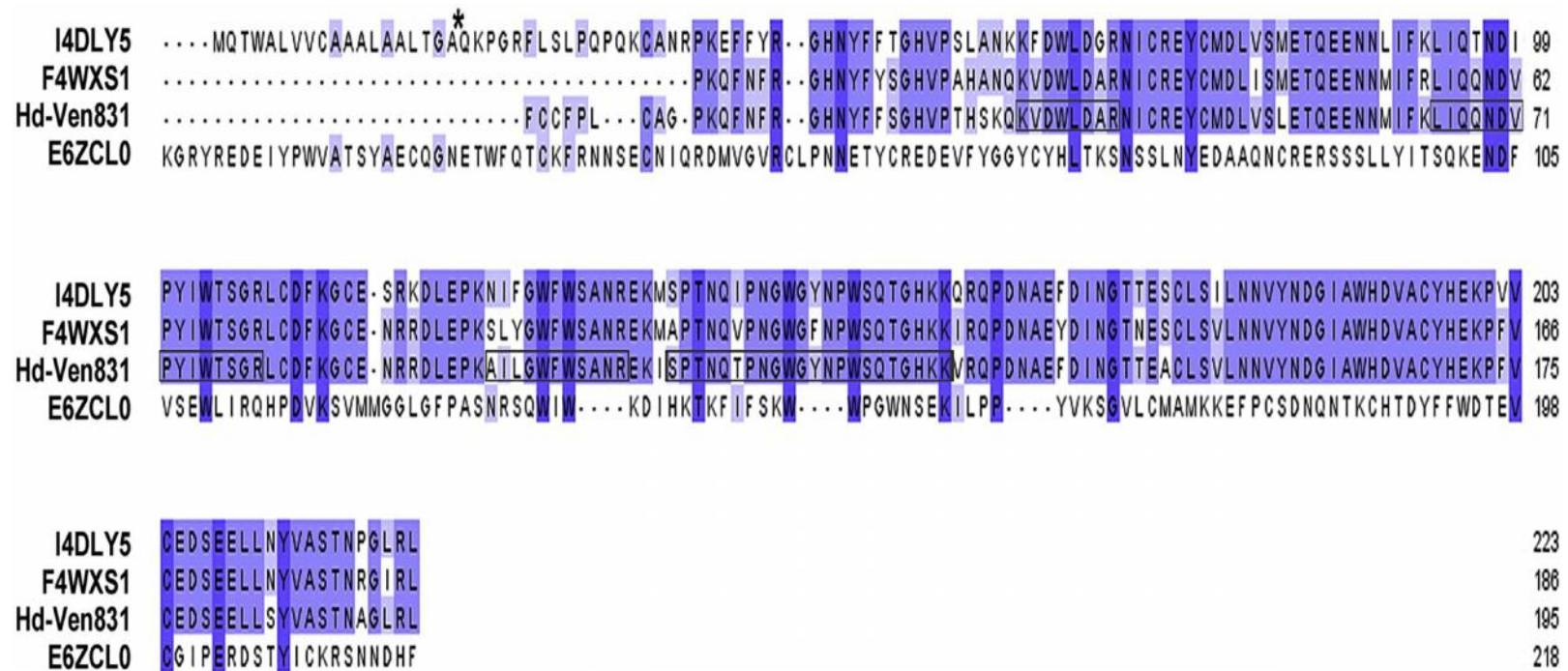


Fig. S4 Amino acid sequence alignment of Hd-Ven73, Hd-Ven74 & Hd-Ven75 with Hymenoptera carboxylesterase. The sequences Hd-Ven73, Hd-Ven74 & Hd-Ven75 were aligned with sequence of serine protease from *N. vitripennis* [NCBI R...

Tristan Doramus, Serge Urbach, Vronique Jouan, Francois Cousserans, Marc Ravallec, Edith Demettre, Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins
 Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

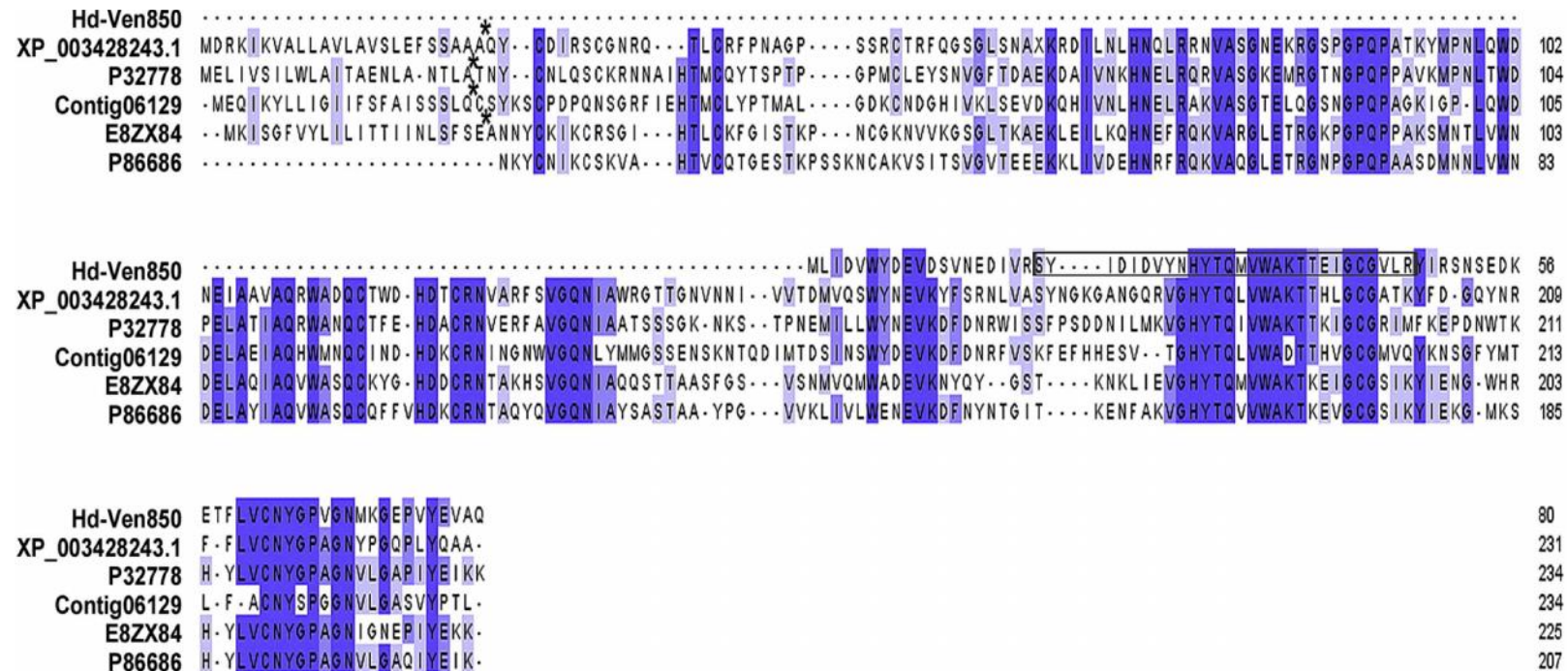


Fig. S5 Amino acid sequence alignment of Hd-Ven83 with Hymenoptera hyaluronidase. The sequence Hd-Ven83 was aligned with sequences of hyaluronidase from the following species: *A. samariensis* [UniProt: A9EDG0], *E. pomifo...*

Tristan Doramus, Serge Urbach, Vronique Jouan, Francois Cousserans, Marc Ravallec, Edith Demettre, Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins

Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>



Fig. S6 Amino acid sequence alignment of Hd-Ven389 & Hd-Ven390 with Hymenoptera serpin. The sequences Hd-Ven389 & Hd-Ven390 were aligned with sequences of serpin from the following species: *L. boulandi* [UniProt: C8YIV6] and...

Tristan Doramus , Serge Urbach , Vronique Jouan , Francois Cousserans , Marc Ravallec , Edith Demetere , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins
 Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

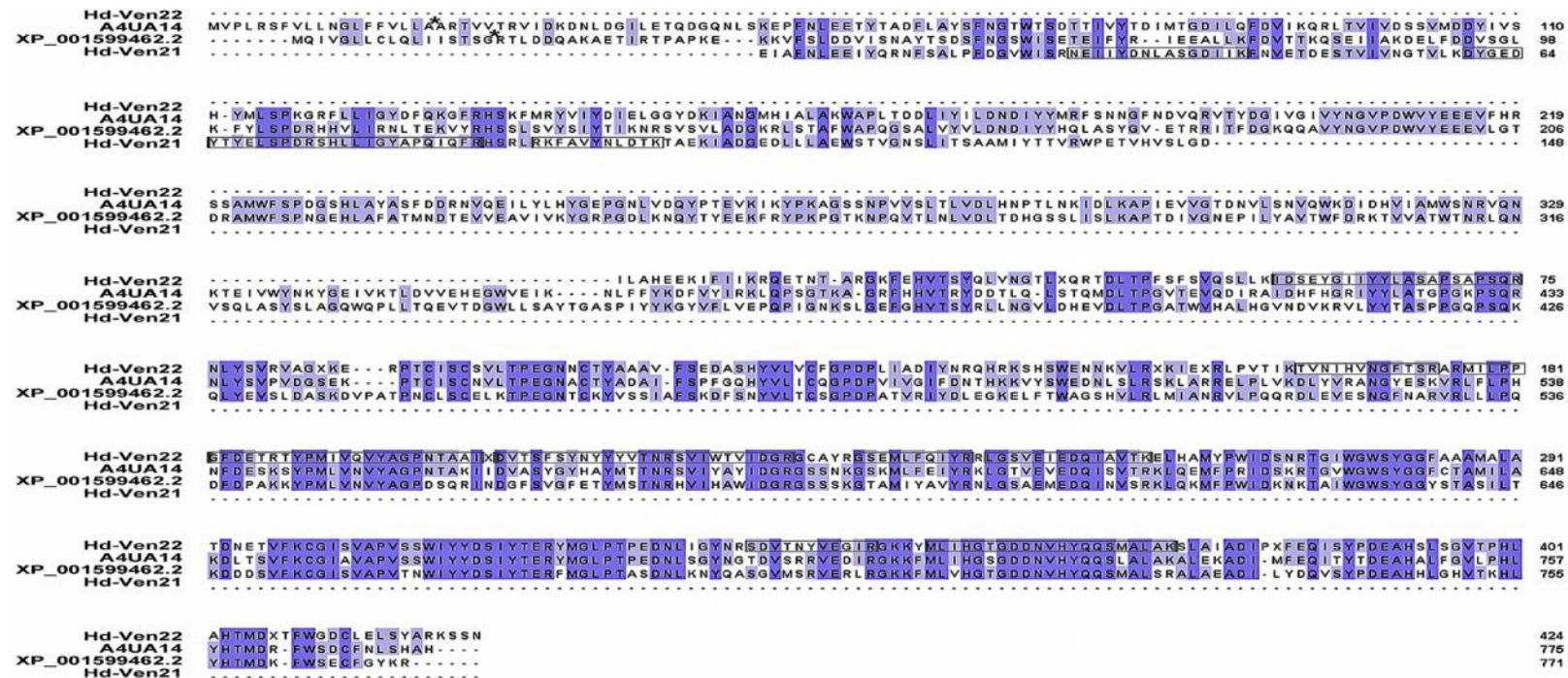


Fig.?S7 Amino acid sequence alignment of Hd-Ven218 & Hd-Ven219 with Hymenoptera superoxide dismutase. The sequences Hd-Ven218 & Hd-Ven219 were aligned with sequences of superoxide dismutase from the following species: *L. ?boulardi*.

Tristan Dor?mus , Serge Urbach , V?ronique Jouan , Fran?ois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins
 Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

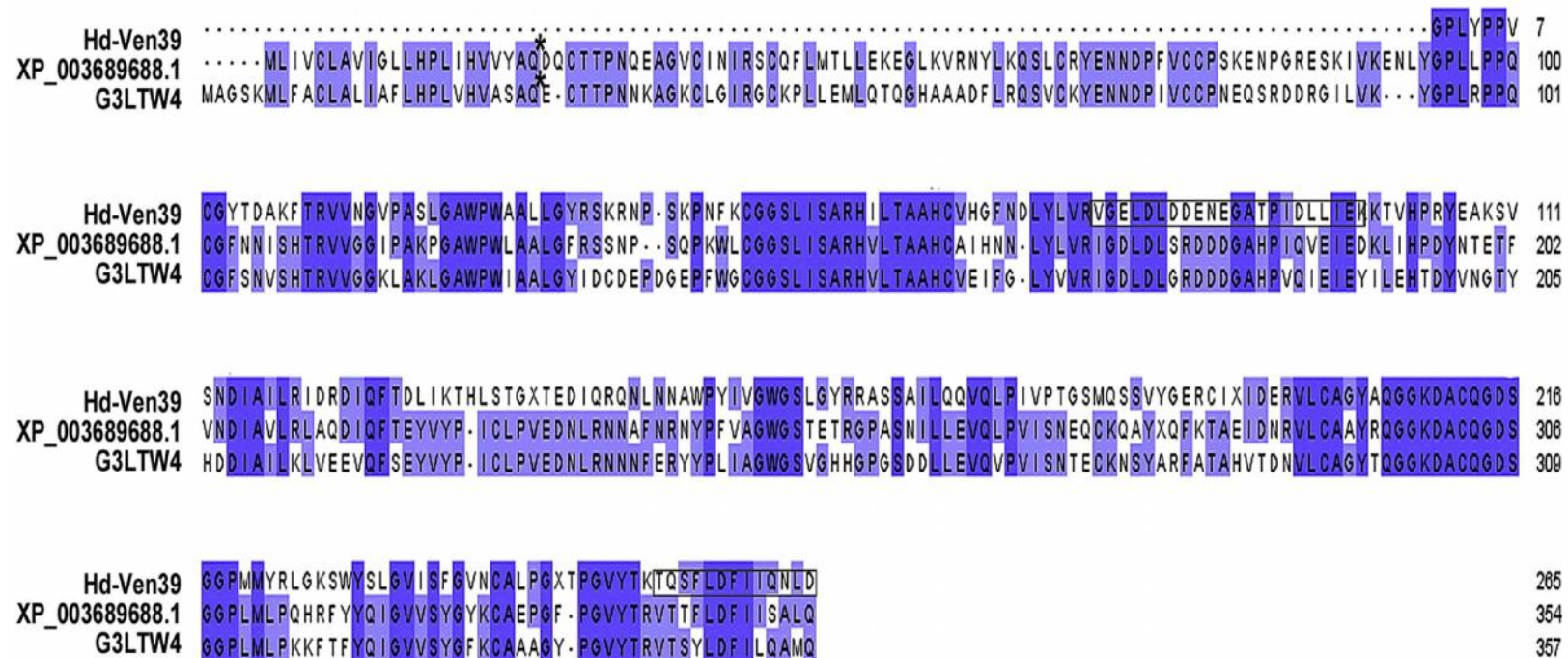


Fig.?S8 Amino acid sequence alignment of Hd-Ven204 with Hymenoptera phenoloxidase. The sequence Hd-Ven204 was aligned with sequences of phenoloxidase from *P. hypochondriaca* [UniProt: [ce:inter-ref href="ncbi-p:Q9GVA5"](#) type="simple"...

Tristan Doramus , Serge Urbach , Vronique Jouan , Francois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins
 Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

XP_001599255.2 MRGFLYL¹LLGTFLLAD²SALAYKPLAHIKN--GTLEGTVMKSRKGRFY³YFRGIPYALPPISELRFEPPKPA⁴AAWAGVRS⁵AKEDANICTQ-RNIYTH-QEEIVGIED 102
Hd-Ven73 ---MRLLALFCLIPFVLAGVEHLYVKTSLGGIKQYKYSEHGRPYAFEGIPYAKPPVGS⁶LRFQPPQPV⁷EGWTGDLTATK⁸TGASCLQYSHVPIHPKERVVQ⁹AED 102
Hd-Ven75 ICTQ-RNIYTH-QEEIVGIED 19
Hd-Ven74

XP_001599255.2 CLYLN¹VHTPKLPGRN-EANYGAYPVMVWFHGGG²VWTGAGHSEFYG---PKFLLDHDVILVTVNYRLG³PLGFLSTEDLVT⁴PGNNGMKDQAQAI⁵RWVHENIADFGGD 203
Hd-Ven73 CLYLN¹VYVPEV-----ASSKKLPVIVWIHGGAFQWHMEYDY²YTGDLTKPDYLM³DRDVIIVVTFDYRLG⁴PLGFLSTG⁵GVVPGNMQLK⁶QNLAL⁷KWVKEHISAFNGD 202
Hd-Ven75 CLYLN¹VYTPELGSNEIDGSQTNYPVMIWFHGGG²VWTGAGHSEFYG---PKFLLDHEVILVTVNFRLG³PLGFLSTEDL⁴VSPGNGMKDQAQSI⁵RWVHENIVHFGGD 121
Hd-Ven74

XP_001599255.2 PNRVTLFGESAGGVA¹VHYHMTSPLSRGLF²RGISQSGTALCPWALTRPGLARKKAQ³RVALLGCPKDDSRKLV⁴DC⁵LRTEAVDII⁶IGTDRA⁷FQVFDYCPMI⁸PFRPVI 309
Hd-Ven73 ADSITLTGLSAGGVSVHYHYLSPLSRGLFARGISFSGSAFDCWAQ²TEN--ASEKAKKLGSLLGCPSGSNAELVK³CLQERPARSI⁴LQADSD⁵FMPWGYNPYT⁶PF⁷GPV 306
Hd-Ven75 PNRVTIFGESAGGASVHYHMTSPLSRGLFARGISQSGTALCPWALTRPGLARKKAQ³RVALLGCPKDDSRKLV⁴DC⁵LRTEAVDII⁶IGTDRA⁷FQVFDYCPMI⁸PFRPVI 227
Hd-Ven74

XP_001599255.2 EPDHPGAF¹LKEDFAISLKNR²LS³DI⁴TWMTGITSHEGTLRVPGLYGLNNGELIKRLDKDFENLAP⁵TTLFEDTC⁶PQ⁷QNYKNVSKAIR⁸EYFEGDKPLDKSTKYEVINM 415
Hd-Ven73 EKGSNAPFIDRSEPIEIVSSGDAQDL²PWITGVVSEEGLY-PAADFVADK³VLLKELDHNFELIAPFL⁴LDYNYTIP⁵LSKQAEVSR⁶IRKHYLGSKSIDSTTAPV⁷IQM 410
Hd-Ven75 EPDHPGAF¹LKEEPAQSLKSNLADIPWMTGITSHEGAI²RAAGIYGLKDKGLDKLLDKKFMELAPVSLYEDTC³PDQLRNEVNEKNSPILFR----- 318
Hd-Ven74

XP_001599255.2 YSDAWFN¹YAADAVRDHLKLFSSPIY²YYYFSYRGSASF³SRIFGDPTE⁴DYGVSHADELQYLF⁵VPGEQLFQDIPLSKEDNRI⁶IDIVTALWYNFAKSGNPTPEIT⁷PDTP 521
Hd-Ven73 VGDRI¹FVVDGVKAAKLTAKINKSPVWY²YYFTYRGANSASDAMSRT³TQNF⁴GAHGGDDTYV-VGSPLV-DPTTTADDRAMQRYLLDFWXSFAHL-PVFPQSASNG 511
Hd-Ven75
Hd-Ven74

XP_001599255.2 TKWKPVHTPALEYLNIGNSKDIHMSKNL¹FPERLK²FWSDLMP³SI⁴RDIDGV⁵TYQYKPIRDEL 581
Hd-Ven73 PGWMA----- 516
Hd-Ven75
Hd-Ven74 -KWKPVRTSSLEYLHIGGSKDLHMASEL¹FS²DRVNF³WENIPH-RGKVQVSAEGDRPRDEL 57

Fig. S9 Amino acid sequence alignment of Hd-Ven236 & Hd-Ven237 with Hymenoptera arginine kinase. The sequences Hd-Ven236 & Hd-Ven237 were aligned with sequences of arginine kinase from *P. puparum* [UniProt: E1U7W2] and *C. i.*

Tristan Doramus, Serge Urbach, Vronique Jouan, Francois Cousserans, Marc Ravallec, Edith Demetere, Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins

Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

Hd-Ven83	MFPFTKTIHLVLAVLVREIEAIFGLGNIFGPTTTSVRDYQVYWNVPTFMCHKYGMNFEEVSRDYGIIQNPDEFRSEIVMLYDPGMFPALLQ...SNGSVMMRNGGVPKK	110
BAF93867	..MWKLGVALVAVTVIDA*..KFFSFGPTIGGQQRKEFNVYWNVPTFMCHKYGMNFEEAHRDFGIIQNRNDAFRDRFAI LYDPGMFPALLK...DKSGEVVKRNGGVPQK	105
D1MEJ6	-MILAVQLVLLLLYPVIRAGITDICGFYCTPEYRV-KRHFIYWNVPTFMCHKYGLDFSEV-KDFNIMQNKDGLFHGDVVTIMYDPGSFPAMLPLNKTTKDKYKRRNGGVPQM	111
B2ZP63	MILLVAQLLLVLIYFPVHAGLVLDLGLNCFPAATPPKRFHYIYWNVPTFMCHKYGLDFSEV-KTFNIIQNNDDKFRGDIIMYDPGSFPAMPVPEQYPGQDKYKRRNGGVPQM	113
E3PQY4	MSFFIRMICFFNYSVFIHIIILISLVMIIETRYKYIYWNVPTFMCHRHGMKEEVSKVYDMVQININDFNGNEIALYHAGYFETYEY...HNNDSPLMINIVPQK	103
Hd-Ven83	GNLTERIEAXFKKDVVQYIPDAGFQGLAIDFESWRPIYRQNW-ASLAQYKVVEQLVKKKHPTWSDAKVKAETROFEKWAKLFMDETLKAQSLRPQATWGYAFPYCFNLT	223
BAF93867	GNLSRHLET-FTQHLKTQIPNEDFFGIGVIDFESWRPIFRQNW-ASLKPYKDLSEIKLVHKEHPQWSDKAVEREAAARFEKNGVKFMFETMLAKSLRPNATWGYAYPYCFNLT	217
D1MEJ6	GNYQKHRTA-FIEDLDKYVPDQYDGIQVIDFEHKKPIFRQNW-6TQKLYKDLSEYDLVKQMHLWSRPTIESEAIKKFEKNGRYFMEETLKTAKKYRFKGDWGYGYGYPCYNLS	223
B2ZP63	GKFNKHKTA-FIEDLDQIIPNVNFSGIGVIDFEKWKPIFRQNW-GETRIHKNISIELVKQVHSLWSYSTIKSEAAKQFEKHARYFMEETLNVAENRVKADWGYGYGYPCYNLS	225
E3PQY4	GNIQKHLNQ-LEIDLNGNVDPNFSGIGILDYERWRAVFRQNFKNNRVYREYSIALERNEFNILTYDQARTLAALAFNYSQIIFFEETIKLIKRRPYAAWGYDYKCFYLT	216
Hd-Ven83	PNHTVTDCAKAMEENDSMAWLFTK.....	248
BAF93867	PSQPGSKCDARTMDENDENTWLFKDEDVFLPSVYIRKELSKSERVLVEGRVREATRVAKKLHPNALILAYHWFKYQDDRDSYLTTEDEATMQMISRAGAHGAIIWGSSDDVN	331
D1MEJ6	PGHPGIDCNQKAMSDNDKNSWLFNNQDLLMPVYVYKFMQAFERAAALVQGRVKEAVRISNNHKNLPRVIPPYWWYKYTDQMDVFLSEKDVKNFTREILYNGGDI IWGSSADVN	337
B2ZP63	PGNPGSDCDSTAMSENDKNSWLFNNQNVLLPSVYVKFFLKAERVLVRGRVKEAVRIMRNTKHKPRVIPPYWWYKYTDQTNVYLSQKDVENTFKEILFNDGEGIIIWGSSADVD	339
E3PQY4	SKDSATPC-GEVHEENDKMK.....	235
Hd-Ven83		
BAF93867	TKEKCKQLKEYLNDVMGPIIVKVRKSAQAQSLDYADGNALENVNTNSD	379
D1MEJ6	SESKCKRLRKYLIEMLGPLAAKLHSANEGTFLDY.....	372
B2ZP63	SRSKCKSLRSYLTTLVGLPIALAVENAANNGTPLTF.....	374
E3PQY4		

Fig.?S1 Alignments of selected *H. didymator* sequences with similar sequences from other insects. An asterisk indicates the predicted cleavage site of the signal peptide sequence (using SignalP4 software) and boxed sequences corresp...

Tristan Doramus , Serge Urbach , Vronique Jouan , Francois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins

Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

C8YIV6	MMFTHLSSFFLIGTCSIYAVIAYGNVNYFSEELVQPLDFHQALEKFNNDLYKNAASNGSIQNVLLSPLSINILLAILAVGAAQRTSEIVTGINQPLQSGAQILNNYKLMVEN	113
XP_003706254.1	...MRILKESFLGVVCLVLI-AMAKAENVSAALSA...VSQGSNQFSSALFQTVAEQNS-DNLIMSPLSAAIVLAMAAYGSRGETENQFRKVLHLP-SPDSLGTSGYQALIDN	104
Hd-Ven390	...MRFLLLSIAVWCVSSEAMAVQPAQSEGFA...VTKSTNAFSPNFYKHVAADTK-GNLICSPLSASMVLMSVAYGARGNTAKQMRVLAALP-EKDELAKSGFQAFVDS	105
Hd-Ven389		
C8YIV6	LMNVTDELQMSNAIFVDHSIRLKKSFQDELFNFKAEFSVNFKTIPTVDKINGKISEQTNNKINNMLSTKDIDERSTKVITNAIYFKGEW-KYKF--ANVTNLVFHDYH	223
XP_003706254.1	LNSVKENKLDIANKVFAAEKFSVNPEYKKLTESYFRSITQLVNFPAKSEAASTINQWVEQNTNNRIKDIISPGLDE-STAMVLVNAVYFKQW-KKKFDPENTKNRPFHINA	215
Hd-Ven390	FKNYKQVDRLANKVFLNEGVPKAEFSAMTKEGRSEAQNVPVKSAAAKTINDWCEAQTNNRIKDLIKPDDLDA-STAMVLVNAVYFKGNW-SDKFDPANTKPRPFNVDA	216
Hd-Ven389	FVSPKVDIRPEFIETVTKTERTPLRLDFEAEERQNFQHWSEGAQSLVNA.....ETSMAFVNGIRYKGRMGXRKFDVSDTLNSSHTDEA	88
C8YIV6	GQTKIVPTMTKTGPYRVSGDTAIAKRMIELPYKG...DELSMLIVIP...YEMNGLDDVESSLERYNLRNHIKSLMPFEVKLNLPKFRVEATTDLYDALNKM-GINEAFTD	328
XP_003706254.1	DTVKDVPTMFVQSSFRYQELPN-LQAKFIVLPYKG...DELSMVIILP...NEINGLAEEVKKLQNTNIDILNEGVRDVHLYLPKFKVESKMEKELCKL-GLTDMFTP	319
Hd-Ven390	TTKKDVPTMFRSGSYNFGVLDD-LKAKFVEIPYKSEGPNDAMSMEVIVP...DAVDGLAELEKNIKVSMDRLLNSRK-QDVNLYLPKFKIESDIPLNAVLAKM-GMTDMFSD	323
Hd-Ven389	GNEITVTSMHMRGYFLHGFFPK-IANFVQLPLSQDGGKPMSEFVIRITYVHKSSPLFDVSHHMSNISIEEESYGNRSQYFVSIPLKLESTIDVRSIESMIPSNIFNQ	200
C8YIV6	IANFSRITDGN-LSVSKMMHKTLEVNENGAEEAAASVAVLGFRSMKSDPP--EFNANHFFHYKIKSIDKNHHVVLFAQNVKHIQ..	411
XP_003706254.1	RANFSGIADAF-LMVSQVQKAFIEVNEESSEAAATGV...LFEARCLTYQTDVIIDRPFVYNIVRHINEQTPISIFAGHIVEPSVN	403
Hd-Ven390	AADEFGLDSFRLAVSKVVQKAFIEVNEESSEAAATDVGIMLLSIRPTYPVINFNVDRAHFIIATKSNDQNAI-LFRGSHDPLAN	410
Hd-Ven389	TTKLRHIAKTFDILLGDKFVTRTFEINEDGVEAMTKDSS...PDPGPVPASATPRGWDQAFYLLLVAGRDNPQIIISGRAYR....	280

Fig. S1 Alignments of selected *H. didymator* sequences with similar sequences from other insects. An asterisk indicates the predicted cleavage site of the signal peptide sequence (using SignalP4 software) and boxed sequences corresp...

Tristan Doramus , Serge Urbach , Vronique Jouan , Francois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins
Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

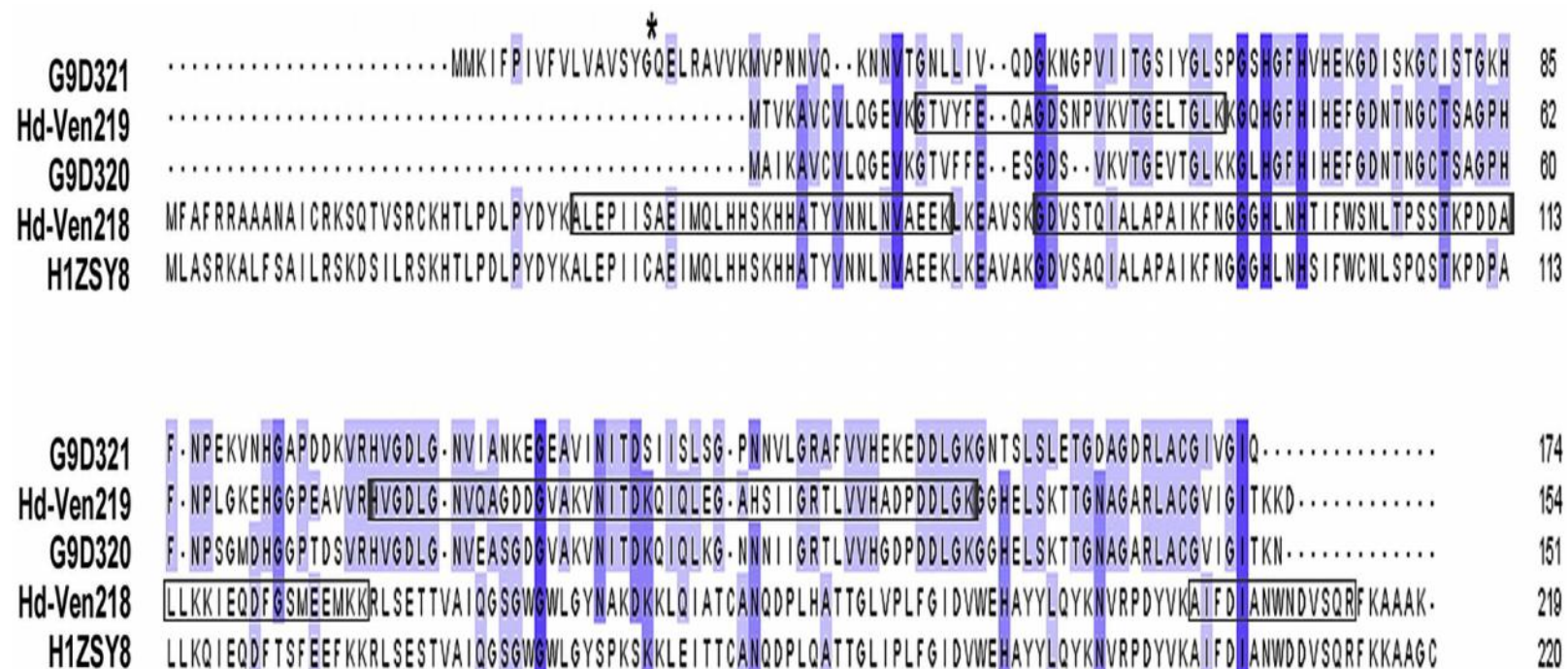


Fig. S1 Alignments of selected *H. didymator* sequences with similar sequences from other insects. An asterisk indicates the predicted cleavage site of the signal peptide sequence (using SignalP4 software) and boxed sequences correspond...

Tristan Doramus , Serge Urbach , Vronique Jouan , Francois Cousserans , Marc Ravallec , Edith Demetere , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins

Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

Hd-Ven204
Q86MV4
Q9GVA5

```

-----MADDN--SSILYLFDRPAEPVYVPKGENKVVFDIPADYLPDRYRGVAPQVFNRFQDDEETRIPI SQIRLPDLSIPMQLGRRD---PFSLFLPRHREIAQRLLVDIF 100
-----MASDKSGILYLFDRPSEPVIYVPKGDNKVAFDIPDYLDPDRYSVATQVFNRFQDDTESKLPVKAITLPDLSIPMQLGRRQ---PFSLFIPAHRKIAARLLIDIF 100
MVRRLRILLLSLALIASIAGDETDRDINQEILDQFTQPRTLLVGSVAQEENHKNTIPGNSQEVKNVPEQKKLAYDIPKDLYKDLRFIDWAFSAIEQGQLAGKLIQVL 113

```

Hd-Ven204
Q86MV4
Q9GVA5

```

MGMRTYDILLSVAVYCRDRLNPHLFVYALSVAILHRDDTRHLPVPSLAEIFPKYIDGGIFSRATEEANVVPDARVPIITIPKDYTASDLDEEHRVAYFREDLGVNLHHWHW 213
MGMRTYEDFLSVAVYCRDRLNPHLFVYALSVAILHRDDTRHLPVPSLAEIFPKYIDGGIFSRATEEANVVPDARVPIITIPKDYTASDLDEEHRVAYFREDLGVNLHHWHW 212
LAAPTKDDISAIVKKYINTLNRAALTAVSVTAMHRDDMRDFRIDLSLSNPSLVDGRQISTMQKAIHVNEQVGNFSIWA--KYSTATNSDDEHRLAYFREQVGINLHHWHW 224

```

Hd-Ven204
Q86MV4
Q9GVA5

```

HLVYPFSQDRRIVDKDRRGELFYMHQVMARYNCERLCNRLSRTKRFNNIRDPPEGYFPKLDLSVASRAWPSRPSGTQIKDVNRPADGIQLDLETLEWRDSIFNCHTGTI 320
HLVYPFEGDIRIVNKDRRGELFYMHQVMARYNCERLCNRLGRVKRFINWHEPIPEAYFPKLDLSVASRTWPFPSGTQIKDVNRPADGIQLDLETLEWRDSIFNCHTGTI 325
HLVYPFEGSLDIVKDRRGELFYMHQVMARYNCERLCNRLGRVKRFINWHEPIPEAYFPKLDLSVASRTWPFPSGTQIKDVNRPADGIQLDLETLEWRDSIFNCHTGTI 337

```

Hd-Ven204
Q86MV4
Q9GVA5

```

VTDNRQTSQDLTENQINVLGNMLEAS-ILSPNRSLYGDLNFGHVAISYCHDPDHRYLESYAIMGDSATAMRDPIFYRWHAFFINSIFLEHKSRLPAYSLDTIRFTNCDITGL 438
VINTNRQERIQLTEKNQIDVLGNIMEAS-ILSPNQNVYGDLEHFGHVAISYCHDPDHRYLESYAIMGDSATAMRDPIFYRWHAFFINSIFLEHKSRLPAYSLDTIRFTNCDITGL 437
MTDKASALVPFDEKTDIDVLGNMLEASPVLSPNFGYYSIHNRGHMAISYCHDPDGRYLEQFAVMGDSATAMRDPIFYRWHAFFINSIFLEHKSRLPAYSLDTIRFTNCDITGL 450

```

Hd-Ven204
Q86MV4
Q9GVA5

```

GITTPSGPANTIMTFWSDSLDLSRGLDFTFTGPLVRLTHLNHAPFTTIRITANNRSDAPQRSTVRIFIGPKNDERGLPFNYRAKDKLMIEMDKFTVTLRPGDNTIERKSTES 551
KLTT-NQQRNINLNTFWTKSDVDLSRGLDFTFTGAVLARFTHLNHAPFTTIRITANNRSDAPQRSTVRIFIGPKNDERGLPFNYRAKDKLMIEMDKFTVTLRPGDNTIERKSTES 540
RVISDCGKENHLETFWNTFTVDLAKGLDFTFTKSNVGAIFTHLDHCSFKYEIKATSSLAEAKKGVVRIFIAFRIDNKKPYSLEDARALMIEMDKFNITIQGANNIERQSINS 563

```

Hd-Ven204
Q86MV4
Q9GVA5

```

SVTIPFERTFRNLDRNRFSGAQ-LESFNFCCGWPQHMLSPKQSKEGFPMDFVMISDAKIDTIEQDAEAGCSDAASYCGLRDRKYPDARPMGFPPDRPPRNVESLAQFLTIN 863
SVTIPFERTFRNLDRNRFSGAQ-LESFNFCCGWPQHMLSPKQSKEGFPMDFVMISDAKIDTIEQDAEAGCSDAASYCGLRDRKYPDARPMGFPPDRPPRNVESLAQFLTIN 862
VTNPFETTGRELGEKKTDPIDIE----EFCCGWPQHMLSPKQSKEGFPMDFVMISDAKIDTIEQDAEAGCSDAASYCGLRDRKYPDARPMGFPPDRPPRNVESLAQFLTIN 871

```

Hd-Ven204
Q86MV4
Q9GVA5

```

NMAITPIIISHSDTVVARTNNA----- 885
NMAVTEVTVRFSDTIVPRSRSGSISNTLTFM 893
NMASTIKVQFIENN-PKTAANKNPQTAAP-- 899

```

Fig.?S13 (ex-XIII) Amino acid sequence alignment of Hd-Ven850 with Hymenoptera allergen . The sequence Hd-Ven850 was aligned with sequences of allergen 3 from <ce:italic> N. vitripennis</ce:italic> [NCBI Reference Sequence: <ce:inter-ref href="ncbi-p:XP_...

Tristan Dor?mus , Serge Urbach , V?ronique Jouan , Fran?ois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid <ce:italic>Hyposoter didymator</ce:italic> (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins
Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>

E1U7W2	MVDQAVLDKLEAGFTKLSTSDSKSLLKKHLTKEIFDALTKKTSFGSTLLDVIQSGIENLDSGVGIYAPDAESYTTFADLFDPIIDDYHGGFKKTDKHPKDFGDVDTLGNLD	113
A5HUI6	MVDQAVLDKLESGYAKLAASDSKSLKKYLTKEIFDQLTKKTSFGSTLLDVIQSGLENHDSGVGIYAPDAESYTVFADLFDPIIEDYHGGFKKTDKHPKDFGDVDSMGNLD	113
Hd-Ven236	VLDKLEAGFTKLAASDSKSLKKYLTRELFDQLTKKTSFGSTLLDVIQSGLENHDSGVGIYAPDAESYTTFADLFDPIIDDYHGGFKKTDKHPKDFGDVDTLGNLD	108
Hd-Ven237		
E1U7W2	PTGEFIVSTRVRCGRSMEGYPFNPCLTEAQYKEMEEKVSSSTLSGLEGLKGTFFPLTGMSKEVQQKLIDDHFLFKEGDRFLQAANACRFWPTGRGIFHNDDKTFLVWCNEED	225
A5HUI6	PAGEFIVSTRVRCGRSLDGYPFNPCLTEAQYKEMEEKVSSSTLSGLEGLKGTFFPLTGMSKEVQQKLIDDHFLFKEGDRFLQAANACRFWPTGRGIFHNDAKTFLVWCNEED	225
Hd-Ven236	PTGDYIVSTRVRCGRSMEGYPFNPVLNGGPVQGGGGQSIGNICPDWTESSREHSTHLTGNEQGGAAKLIDD.....	179
Hd-Ven237	GTEAQYKEMEDKVSGLSGLDGLKGTFFPLTGMSKEVQQKLIDDHFLFKEGDRFLQAANACRFWPTGRGIYHNDAKTFLVWCNEED	88
E1U7W2	HLRIISMQGGDLGQVYRRLVTAVNDIEKRIPFSHNDRLGFLTF CPTNLGTTVRASVHIKVPKLAANKEKLEEVASKFNLQVRGTRGEHTEAEGGIYD ISNKRRLLGLTEYQAV	338
A5HUI6	HLRIISMQMGDLGQVYRRLVAVNEIEKRIPFSHNDRLGFLTF CPTNLGTTVRASVHIKVPKLAANKAKLEEVAAKFNLQVRGTRGEHTEAEGGIYD ISNKRRLLGLTEYQAV	338
Hd-Ven236		
Hd-Ven237	HLRIISMQMGDLGQVYRRLVTAVNDIEKRIPFSHNDRLGFLTF CPTNLGTTVRASVHIKVPKLAANKAKLEEVASKFNLQVRGTRGEHTEAEGGIYD ISNKRRLLGLTEYQAV	201
E1U7W2	KEMHDGIAELIKIEKEL	355
A5HUI6	KEMHDGIAELIKIEKEL	355
Hd-Ven236		
Hd-Ven237	KEMHDGIAELIKIEKEL	218

Fig.?S1 Alignments of selected *H. didymator* sequences with similar sequences from other insects. An asterisk indicates the predicted cleavage site of the signal peptide sequence (using SignalIP4 software) and boxed sequences corresp...

Tristan Doramus , Serge Urbach , Vronique Jouan , Francois Cousserans , Marc Ravallec , Edith Demettre , Eric Wa...

Venom gland extract is not required for successful parasitism in the polydnavirus-associated endoparasitoid *Hyposoter didymator* (Hym. Ichneumonidae) despite the presence of numerous novel and conserved venom proteins

Insect Biochemistry and Molecular Biology Volume 43, Issue 3 2013 292 - 307

<http://dx.doi.org/10.1016/j.ibmb.2012.12.010>