



Research paper

Early IL-10 producing B-cells and coinciding Th/Tr17 shifts during three year grass-pollen AIT



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ABSTRACT

Background: Allergen-specific immunotherapy (AIT) is a causative treatment in allergic airway disease, comprising long-term allergen administration and requiring three years of treatment. Mechanisms and biomarkers that translate into clinical efficacy remain urgently needed.

Methods: In an exploratory observational allergy cohort we phenotyped 32 grass-pollen allergic patients with hayfever undergoing AIT for over three years and controls using local and systemic samples for ex vivo FACS, nasal transcriptomes and in vitro *phleum*-stimulation at critical time windows six hours after therapeutic allergen administration and during peak-season responses.

Findings: The up-dosing phase is marked by increased IL-10⁺ B-cells with allergen-specific PD-L1 up-regulation, while effector Th1/Th17 cells and CCR6⁺IL-17⁺FoxP3⁺T-cells decrease. The conversion phase exhibits Th17 recovery in the absence of Th2 cells. The tolerance-mounting phase after three years of treatment is characterized by induction of Tregs while Th2 and *phleum*-specific Th17 responses decrease. Notably, high ratios of circulating Breg/Th17 following initial AIT correlate significantly with clinical improvement after three years.

Interpretation: Our exploratory data hypothesize differential shifts in the hierarchy of tolerance in three distinct phases of AIT characterized by conversion of regulatory against pro-inflammatory mechanisms, of which the Breg/Th17 ratio after initial treatment emerges as potential early prediction of AIT efficacy.

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1. Introduction

Allergen immunotherapy (AIT) for allergic airway disease has been applied since more than a century [1]. Clinical efficacy and safety have been demonstrated in multiple sponsored studies, systemic reviews and meta-analyses [2–4], further in interventional academic trials and few long-term studies [5,6]. Allergy is characterized by the IgE-dependent allergen-specific degranulation of mast-cells in the early phase and predominant Th2 memory in the late phase response, where

T-cells produce IL-4, IL-5 and IL-13. The mechanisms of AIT have been dissected in different models, hierarchies and compartments and include B-cell derived shifts from IgE to IgG4 [7,8], the induction of IL-10 producing T-regulatory cells [9–11], reduced Th2 responses [12] and the presence of Foxp3⁺ regulatory T-cells in the upper airway mucosa [13]. However, the understanding of underlying Th2-suppressive mechanisms inducing tolerance towards allergens remains fragmentary and has yet to be translated into clinical applications. Mechanistic insight can improve our options for effective monitoring of therapeutic responses and prediction of therapy success [6,14]. A balance of allergen-specific Th2 and in particular Th2A cells against Th1 or Treg cells was hypothesized as therapy relevant mechanism, while Th17 cells were not yet considered in this equation [15,16]. Th17 cells are elevated in allergic patients, systemically and locally in upper and lower airways during pollen season, however, they have not been implicated in

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Research in context

Evidence before this study

With almost every fourth adult and every third child affected, allergic airway disease is an increasing global health concern. Allergen immunotherapy (AIT) with the aim to restore tolerance to allergen has proved clinically useful, effective and safe. However, despite great advances in the understanding of mechanisms, reliable molecular or cellular biomarkers that indicate restoration of tolerance to allergen and correlate with therapeutic efficacy of the vaccine are not available.

We performed a search in PubMed for clinical studies in human without language restriction with terms “specific immunotherapy” AND “allergy” AND “biomarker” AND “tolerance” OR “surrogate” or “prediction” for articles published between 1st of January 1999 and 1st of May 2018. We found heterogeneously designed a) efficacy studies with new allergen immunotherapy investigational products or new dosage regimens using conventional clinical endpoints, b) observational or interventional cohorts under standard treatment with related mechanistic data, using predominantly cultured T-cells, immune-phenotyping, cytokine-pattern or serum IgG4 responses, c) an increasing number of upcoming studies with targeted immune-modulation with e.g. biologics combined with allergen immunotherapy. Very few studies suggested surrogate or predictive endpoints using generic inflammatory serum biomarker or shifts in IgE, IgG4, IgA and IgE facilitated antigen binding, however mostly not reflecting the interaction of T- and B- cells in the induction of tolerance to allergen.

Added value of this study

This exploratory clinical cohort study hypothesizes an amended understanding of tolerogenic dynamics during AIT in vivo, suggesting three phases, characterized by an initiation, a conversion, and a tolerance mounting phase. In this cohort the ratio of IL-10⁺ B-cells and Th17 cells during the early initiation phase corresponded to symptom improvement after three years of treatment, representing a potential decision point for treatment adjustment prior to long-term therapy.

Implications of all the available evidence

There is an increasing demand for accurate surrogacy, prognostic and early decisive markers in AIT, ideally to identify those patients who benefit most and those who do not. Further, long-term immunological data for the rational application of booster AIT are required. Validation of these promising new exploratory data shall enable us to apply more precise personalized AIT, as this treatment is still time-consuming and expensive with however proven long-term beneficial effects.

AIT-driven responses [17–19]. Recently, it has been shown that Th17 cells can not only differentiate into regulatory T cells (Tregs) via an intermediary subset expressing FoxP3 and IL-17 simultaneously, but also, that Tregs carry the ability to transdifferentiate “back” into Th17 cells in experimental autoimmune animal models [20,21].

Current data has attributed an essential role not only to T cells but also to B cells in limiting excessive immune reactivity [22], while in allergic diseases evidence is rare. B cells with regulatory capacities are able to inhibit allergen-specific T cell proliferation mediated by IL-10 secretion [23,24]. This regulatory capacity was also demonstrated in mice lacking IL-10⁺ B cells, which exhibit aggravated allergic skin

inflammation revertible by adoptive transfer of these cells [25,26]. Furthermore, IL-10⁺ B cells are known to restrict Th1 and Th17 differentiation [27–29]. In line with this finding, regulatory B cells mediate induction of pulmonary regulatory T cell infiltration in the murine lung, controlling airway inflammation [30]. Not only regulatory B cells but also transitory IL-17⁺FoxP3⁺ T cells were implicated to suppress autoimmune diseases, like myasthenia gravis, multiple sclerosis and autoimmune thyroid disease [20,31,32].

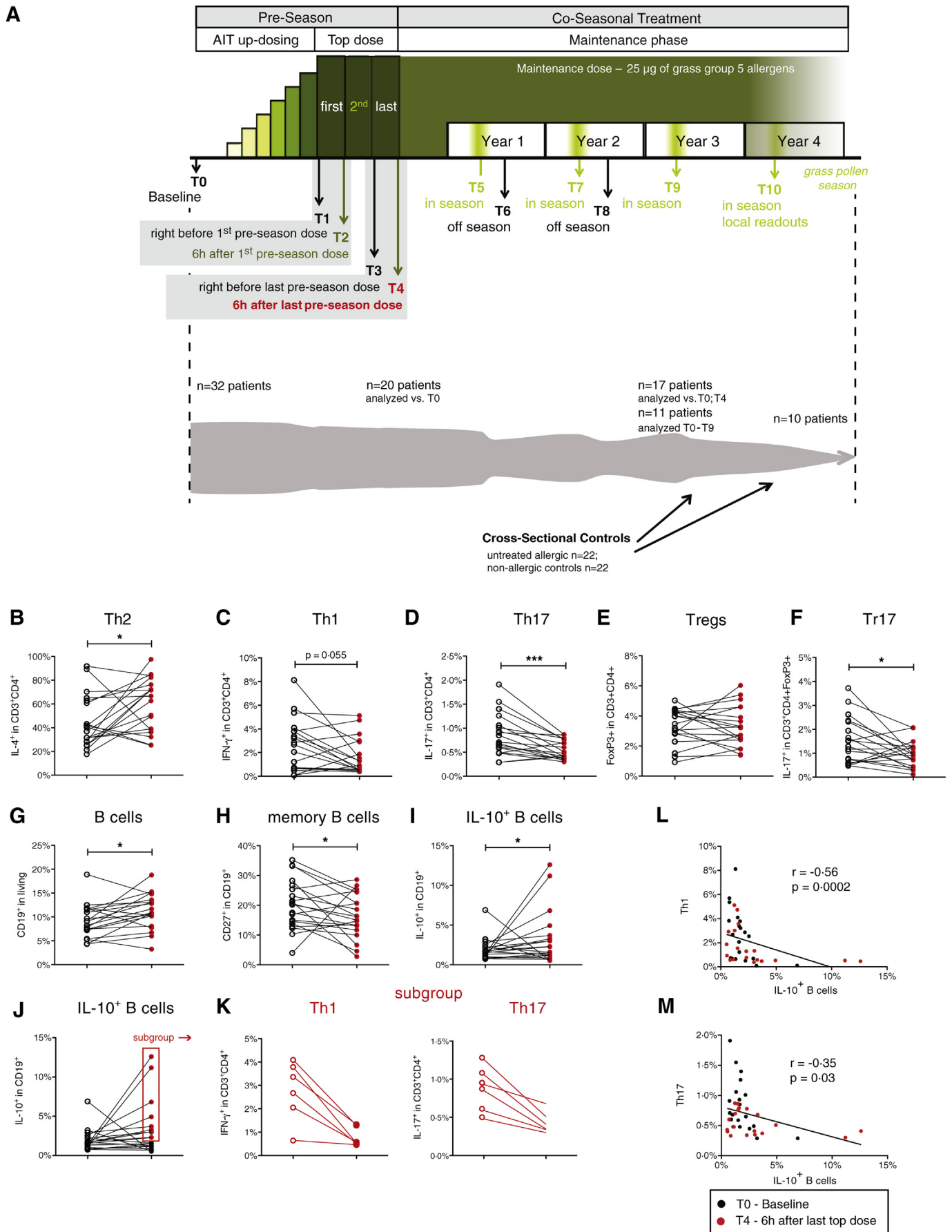
In this exploratory clinical cohort study with grass-pollen allergic patients undergoing AIT, we provide for the first time longitudinal data implicating the Breg/Th1/Th17 suppression axis early indicative for long-term therapy success, and demonstrating a shift of the Treg/Th2 balance late in tolerance induction during AIT.

2. Materials and methods

2.1. Study design and patients

This exploratory study was an open and observational real-life, case-controlled, long-term clinical cohort, aiming on (*Holcus lanatus*, *Dactylis glomerata*, *Lolium perenne*, *Phleum pratense*, *Poa pratensis*, and *Festuca pratensis*) mechanistic resolution of the allergen-specific immunotherapy effects, named *Prospective Allergy and Clinical Immune Function Cohort study* (PACIFIC, EudraCT 2015–003545–25). STROBE criteria were checked and respected throughout this manuscript. Thirty-two grass-pollen allergic patients with a history of moderate-severe and chronic-persistent allergic rhinitis as defined by ARIA (Allergic Rhinitis and its impact on Asthma) criteria [49] since >2 years during the grass-pollen season, a positive skin prick test wheal >3 mm in diameter and grass-pollen specific IgE-level above 0.70kU/l underwent subcutaneous grass-pollen AIT with a licensed grass-pollen allergoid (Allergovit®, Allergopharma GmbH & Co. KG, Germany) consisting of a 100% mixture of allergens from six grass pollen species (*Holcus lanatus*, *Dactylis glomerata*, *Lolium perenne*, *Phleum pratense*, *Poa pratensis*, and *Festuca pratensis*) chemically modified with formaldehyde and alum absorbed. 25 µg of grass group 5 allergens per maintenance dose was used in accordance to SPC and earlier published studies [50–52]. Twenty-two patients with defined grass-pollen allergy as described above but without AIT treatment and twenty-two non-allergic controls without a clinical history of chronic rhinosinusitis, a negative skin prick test and negative specific IgE-screening were recruited as controls. The study was approved by the ethics commission of the Technical University of Munich (5534/12). After written and informed patients' consent and in accordance with the Helsinki declaration, peripheral blood was obtained from patients at specific time points – at baseline levels, right before and 6 h after the first and the last pre-seasonal top dose injection in year one of AIT. All laboratory tests were conducted with blinded study personnel. Following the initial treatment phase, patients were treated with follow-up AIT injections every 4–8 weeks over a period of three years with reduction of the maintenance dose during grass-pollen season depending on symptom burden. Further blood samples were taken twice a year, once in (May – July) and once out of grass pollen season (November – March). This observational study used an open design to enable immune monitoring of as many patients at as many visits as possible: to reduce the rate of drop-outs and to make long-term monitoring feasible for the patients not every study visit was mandatory. This study was an exploratory biomarker study, but subjective outcome was measured using patient-assessed *Retrospective Assessment of seasonal Allergic Symptoms* (RAAS) by scoring overall hayfever symptoms in comparison to the season before and in year 3 in comparison to prior to treatment on a scale between +3 (much better), to 0 (no change) to –3 (much worse) as described recently [45].

Out of the PACIFIC cohort, peripheral and local samples from overall 32 patients were included in this study (Fig. 1A). 20 patients attended at least the initial visits during the AIT up-dosing and top dose phases and were used to analyse early treatment effects in Fig. 1. 17 patients



attended the initial visits and in addition visit T9 and were therefore eligible for the analysis of long-term treatment effects in Fig. 4A–F. Data from 15 patients were used for RAAS correlations in Fig. 7. 11 patients attended at least 9 out of all 10 visits and were therefore subjected to analysis of immune mechanisms during time trajectories in Fig. 2, Fig. 4G and H, and Supplementary Fig. 2, as well as to comparison with cross-sectional control groups in this longitudinal study in Fig. 3 (healthy controls $n = 13$, allergic rhinitis patients in grass pollen season without AIT $n = 14$). For Fig. 6 11 healthy controls, 8 untreated allergics and 10 patients, who had received at least 3 years of AIT, were included to analyse fresh local nasal samples. Longitudinal disposition of patients is displayed in Fig. 1 and patient characteristics including controls are summarized in supplementary Table 1.

2.2. Primary human nasal samples

Were taken during the peak-pollination season 2016 using nasal scrapings for nasal flow cytometric analysis and stained according to protocol. Frequencies of local T cell subsets of CD3⁺CD4⁺IL-17⁺ (Th17) cells, CD3⁺CD4⁺FoxP3⁺IL-17⁺ (Tr17) cells, CD3⁺CD4⁺FoxP3⁺ (Tregs), CD3⁺CD4⁺FoxP3⁺IL-10⁺ (IL10⁺ Tregs) as well as frequencies of local B cell subsets of CD19⁺ cells (B cells) and CD19⁺IL10⁺ cells (IL-10⁺ B cells) were assessed by flow cytometry using specific antibodies (Table 1.)

2.3. Freezing conditions

For cryopreservation, PBMC were resuspended at a concentration of 20×10^6 /ml in CTL-Cryo ABC Kit freezing medium A (Cellular Technology Limited, Cleveland, OH) at room temperature, according to manufacturer's instructions. An equal volume of freezing medium B, also at room temperature, was added dropwise, while gently mixing. The resulting cell suspension was pipetted in 1 ml aliquots into 1.8 ml cryovials (Sarstedt, Nümbrecht, Germany). Then, the tubes were placed into a room temperature Nalgene Cryogenic Controlled-Rate Freezing Container (Merck Chemicals GmbH, Darmstadt, Germany) that was directly placed into a -80°C freezer. After 24 h, the samples were transferred to a liquid nitrogen tank (Air Liquide, Paris, France) for indefinite storage until testing.

In Figs. 1, 2, 3, 4, 5, and 7, we used frozen samples from each patient, which were thawed and analysed simultaneously. In Fig. 6, we used fresh nasal samples, which were analysed immediately after isolation without culturing.

2.4. Culture conditions

For most experiments, cryopreserved primary PBMCs were used. Briefly, for intracellular stains cells were incubated in RPMI and treated according to protocol for 4 h including brefeldin A and then labeled for flow cytometry. For T cell ex vivo analyses in Figs. 1, 2, 3, and 7, we stimulated the cells for 4 h with PMA/ionomycin/BFA in order to allow

intracellular cytokine staining. For B cell ex vivo analyses in Figs. 1, 2, 3, and 7, we cultured the cells in RPMI supplemented with 10% human serum for 4 h in order to maximize intracellular IL-10 staining. For Fig. 4, we cultured the PBMCs in serum-free CTL-Test BTM Medium (Cellular Technology Ltd., Shaker Heights, OH, USA) supplemented with 2 mM L-glutamine at a density of 4 million PBMCs/ml and stimulated with either 5 µg/ml phleum (recombinant phleum p1, Allergopharma GmbH & Co. KG, Reinbek, Germany) or a specialized B-Poly-SE B cell stimulant (Cellular Technology Ltd., Shaker Heights, OH, USA) at 37°C and 9% CO₂ in a fully humidified atmosphere for 7 days according to manufacturer's instructions. CTL Human B-Poly-SETM is a stock solution containing recombinant human IL-4 and anti-CD40, which is used for generating IgE secreting memory B cells. According to manufacturer, seven-days prestimulation cultures were recommended.

2.5. Stimulation with phleum major antigen

PBMCs were cultured in serum-free CTL-Test BTM Medium (Cellular Technology Ltd., Shaker Heights, OH, USA) supplemented with 2 mM L-glutamine at a density of 4 million PBMCs/ml and stimulated with either 5 µg/ml phleum (recombinant phleum p1, Allergopharma GmbH & Co. KG, Reinbek, Germany) or a specialized B-Poly-SE B cell stimulant (Cellular Technology Ltd., Shaker Heights, OH, USA) at 37°C and 9% CO₂ in a fully humidified atmosphere for 7 days according to manufacturer's instructions. Cells were subjected to flow cytometric analysis, supernatants were concentrated to a 10-fold concentration by centrifugation through protein-binding Amicon columns (Merck Millipore, Billerica, MA, USA) and subjected to ELISA or MSD Mesoscale analysis.

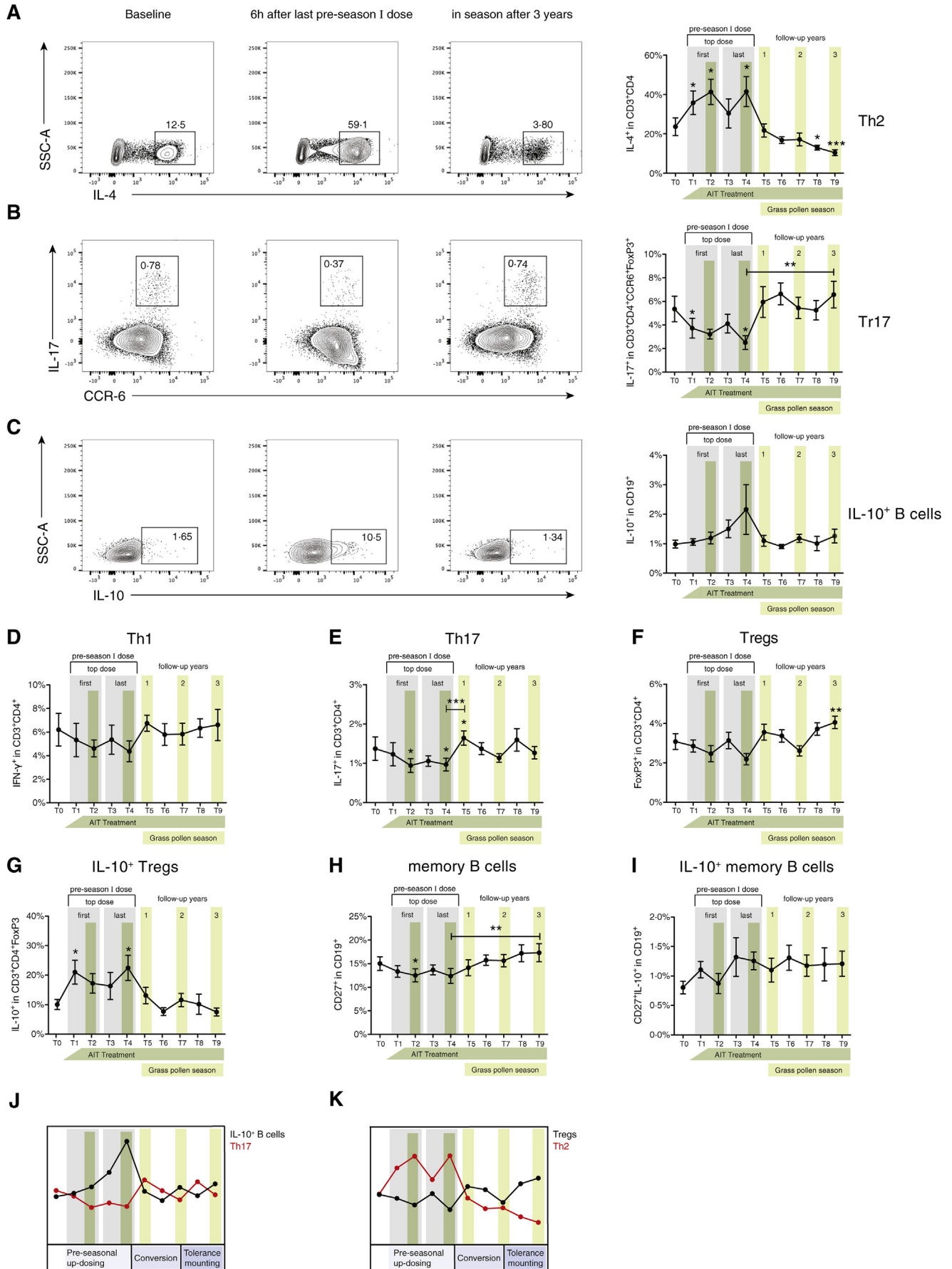
2.6. Flow cytometry

Following specific stimulation regimes, PBMCs or nasal samples were labeled for flow cytometry with specific antibodies using the Foxp3 / Transcription Factor Staining Buffer Set (eBioscience, San Diego, CA, USA) according to manufacturer's instructions. Flow cytometric analysis was performed using a BD LSRII Fortessa flow cytometer (BD, Franklin Lakes, NJ, USA). Flow cytometry data were analysed with FlowJo software (FlowJo, Ashland, OR, USA). Antibodies used for flow cytometry are listed in Table 1.

2.7. RNA isolation and whole genome microarray

Total RNA was extracted using RNeasy Mini Kit (Cat.-No. 74104, Qiagen, Hilden, Germany) with on-column DNase digestion (Cat.-No. 79254, DNase-Free DNase Set, Qiagen) for avoiding DNA contaminations [47]. RNA quantification was performed by ultraviolet-visible spectrophotometry (Nanodrop Technologies, Wilmington, DE, USA), for assessment of the RNA integrity by the RNA 6000 Nano Chip Kit with the Agilent 2100 Bioanalyzer (Agilent Technologies, Waldbronn,

Fig. 1. Increase of IL-10⁺ B cells following initial ait coincides with reduction of Th1 and h17 abundances during pre-seasonal up-dosing in year 1. (A) Study design scheme. Following a pre-seasonal weekly up-dosing phase, grass pollen-allergic patients were treated biweekly with three top dose injections of a standard grass pollen-specific immunotherapy. During the follow-up treatment phase, maintenance dose of 25 µg of grass group 5 allergens was applied 4–6 weekly with seasonal dosage adaption according to symptom burden throughout an observation period of three years. Sampling: T0 – Baseline, T1 – right before the first initial top dose, T2 – 6 h after the first initial top dose, T3 – right before the last initial top dose, T4 – 6 h after the last initial top dose, T5 – in grass pollen season year 1 of follow-up treatment phase, T6 – out of grass pollen season (= off season) year 1, T7 – in season year 2 of follow-up treatment phase, T8 – out of season year 2, T9 – in season year 3 of maintenance treatment and follow-up phase. At T10 (year 4) only local nasal samples were taken. Longitudinal disposition: peripheral and local samples from overall 32 patients were compared at distinct timepoints with cross-sectionally recruited controls. 20 patients attended at least the initial visits during the AIT up-dosing and top dose phases and were used to analyse early treatment effects until T4. 17 patients attended the initial visits and in addition visit T9 and were eligible for the analysis of long-term treatment effects. 11 patients attended at least 9 out of all 10 visits and were therefore subjected to analysis of immune mechanisms during time trajectories. 10 patients from the PACIFIC cohort, who had received at least 3 years of AIT, were analysed using local nasal samples at T10 in year 4. Analysis of systemic T and B cells using flow cytometry at time points T0 and T4 ($n = 20$ PBMC patient samples per group): (B) IL-4⁺ CD4⁺ Th2 cells; (C) IFN-γ⁺ CD4⁺ Th1 cells; (D) IL-17⁺ CD4⁺ Th17 cells; (E) FoxP3⁺ CD4⁺ Tregs; (F) IL-17⁺/FoxP3⁺-co-expressing CD4⁺ Tr17 cells; (G) total CD19⁺ B cell numbers; (H) CD27⁺ memory B cells; (I) IL-10⁺ B cells. Data are shown as median. (J) Identification of a subgroup of patients, which up-regulates Breg cell numbers following the initial treatment phase. (K) Changes in Th1 and Th17 frequencies of the selected subset from (J). (L) Correlation of Bregs with Th1 cell numbers of all data points (A in black and E in red). (M) Correlation of Bregs with Th17 cell numbers of all data points (A in black and E in red). Two-tailed Wilcoxon signed-rank tests were used to test for differences between data points. Statistically significant differences are depicted as * $p < .05$, ** $p < .01$, *** $p < .001$, **** $p < .0001$.



Germany). All reagents (one-color Low Input QuickAmp Kit, Cat.No. 5190–2305; Gene Expression Hybridization Kit, Cat.No. 5188–5242; SurePrint G3 Human Gene Expression 8x60K Microarrays, Cat.No. G4851C) used for RNA preparation for whole genome microarray were supplied by Agilent Technologies, Waldbronn, Germany. Total RNA was adjusted to 17 ng in a final volume of 1.5 µl. Subsequently, the one color spike-in mix was prepared and 2.0 µl were added to 1.5 µl of RNA on ice. In the next step, the T7-promoter primer mix was prepared and 1.8 µl were added to the RNA spike-in mix and incubated in a thermocycler at 65 °C for 10 min. Immediately after run, the samples were put on ice for five minutes. In the meantime, the cDNA master mix (5xFirst Strand Buffer, 0.1 M dithiothreitol, 10 mM dNTP mix, AffinityScript RNase Block Mix) was prepared and kept on ice. Afterwards, 4.7 µl cDNA master mix were added to the RNA T7 promoter mix and samples were placed in the thermocycler in a first step at 40 °C for two hours, followed immediately by a second step at 70 °C for 15 min. Hereupon, 6 µl of Transcription master mix (Nuclease free water, 5xTranscription buffer, 0.1 M dithiothreitol, NTP mix, T7 RNA polymerase, Cy3-CTP) were prepared protected from light and added to the cDNA, before incubation in the thermocycler at 70 °C for 15 min. Ensuing, the resulting labeled and amplified cRNA was purified using the RNeasy mini spin columns (Cat.-No. 74104, Qiagen) by adding 84 µl of nuclease-free water for a total volume of 100 µl and 350 µl of RLT buffer (Qiagen). Further, the RNeasy mini standard protocol was used and the purified cRNA was stored on ice. Afterwards, a quantification of cRNA was performed using NanoDrop ND-1000 ultraviolet–visible spectrophotometry (Nanodrop Technologies, Wilmington, DE, USA) to calculate the cRNA yield (in µg) as well as the specific activity (pmol Cy3 per µg cRNA). If the yield was below 0.825 µg or/and specific activity below 6.0 pmol Cy3 per µg cRNA, the cRNA was not used for hybridization and the procedure was repeated. Hybridization to SurePrint G3 Human Gene Expression 8x60K Microarrays (Agilent Technologies) was performed with the Gene Expression Hybridization Kit. Afterwards, the fragmentation mix was prepared and 6 µl added to 600 ng cRNA in a volume of 19 µl. This mixture was incubated in the thermocycler at 60 °C for 29 min and 30 s. Immediately after finished incubation, the mix was loaded onto the array slides, which was hybridized for 17 h at 65 °C. After hybridization, the slide was washed with the wash buffer I and II according to the Agilent's one-color platform, which has to be performed of necessity in a chamber where ozone levels are 50 ppb or less. Finally, the slide was covered with the ozone barrier cover slide. The slides were scanned immediately to minimize impact of environmental oxidants on signal intensities. Microarray experiments were performed by MIAME criteria. The data discussed in this publication have been deposited in NCBI's Gene Expression Omnibus [53] and are accessible through GEO Series accession number GSE118243 (<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE118243>).

2.8. Microarray data analysis strategy

Upon data import a standard baseline transformation to the median of all values was performed, including log transformation and computation of fold changes. Subsequently, a principle component analysis (PCA) was conducted and revealed a homogenous component distribution. Compromised array signals (array spot is non-uniform if pixel noise of feature exceeds threshold or above saturation threshold) were excluded from further analysis. Genes with an absolute log2 fold change larger than 1.5 and a *p*-value smaller than the testing level of 0.05 by using the Moderated *T*-Test were defined as significantly

differentially expressed hits. Based on previous statistical analysis strategies [54], plausibility testing of anticipated regulated genes was performed and is illustrated by e.g. *CCL-26*, which responds to seasonal pollen load. The significantly regulated genes were summarized in entity lists (supplementary Tables 2–5). Manhattan cityblock on entities (Ward's linkage) was used to cluster changes in gene expression.

2.9. Enzyme-linked Immunosorbent Assay (ELISA) and ImmunoCAP tests

ELISA was performed on conditioned supernatants from PBMC cultures using Human IgG4 or IgE ELISA Ready-SET-Go! Kits (eBioscience, San Diego, CA, USA) according to manufacturer's instructions. Absorption was visualized using an ELISA reader (Epoch™ spectrophotometer, BioTek Instruments, Inc., Winooski, VT, USA).

Grass pollen-specific IgE and IgG4 serum levels were analysed by the standardized diagnostic ImmunoCAP test (Phadia Thermo Scientific, Uppsala, Sweden), which determines antigen-specific IgE and IgG4 antibodies in the serum. The test principle is based on a sandwich immunoassay with high binding capacity of relevant immunoglobulins.

2.10. Data acquisition and statistical analysis

All experimental procedures and analyses of this exploratory study were conducted by blinded research staff. Data are included in parenthesis throughout the results section as mean ± s.e.m. The cohort dataset has clear limitations given the open study design with patients, who did not comply with all scheduled sampling visits. Therefore a statistical analysis plan was predefined and addressed the problem of multiplicity in the following analysis hierarchy: data were not normally distributed and therefore non-parametric tests were chosen. For single comparisons, two-tailed Wilcoxon signed-rank tests were used to test for differences between data points from the same patient for Figs. 1, 2, 4A (*phleum*(T0) versus *phleum*(T9)), 4E–H, and supplementary Fig. 2. Two-tailed Mann-Whitney *U* tests were used to test for differences between different patient groups for Figs. 3, 4A–D and 6A–F. For Fig. 2, Fig. 4E–H, and supplementary Fig. 2, Friedman tests were performed initially, and, only when differences in means across time points were considered significant, multiple single comparisons were performed using two-tailed Wilcoxon signed-rank tests. For Figs. 3 and 6, Kruskal-Wallis tests were performed initially, and, only when medians across patient groups varied significantly, multiple single comparisons were performed using two-tailed Mann-Whitney *U* tests. Spearman correlation was used to correlate RAAS at the last time point (T9) with immune cell frequencies at initial time points (T0, T4) in Fig. 7. Statistically significant differences are depicted as **p* < 0.05, ***p* < 0.01, ****p* < 0.001, *****p* < 0.0001.

3. Results

3.1. Increase of IL-10⁺ B cells following initial AIT coincides with reduction of Th1 and Th17 cells

In this study, grass pollen-allergic patients were prospectively monitored in a longitudinal AIT cohort in order to characterize the immediate and long-term immune response in the periphery and in the upper airways. Following an initial treatment phase using a standard AIT up-dosing scheme and three subsequent top dose injections, patients obtained maintenance shots every four to six weeks over a period of three years (Fig. 1A). A complex sampling procedure during treatment

Fig. 2. Longitudinal changes in immune subsets during course of treatment: initial ait induces il-10-producing B and T cells. Subsets were analysed by intracellular flow cytometry including all time points (*n* = 11 patients; except time point T8 *n* = 8) for (A) IL-4+ CD4+ Th2 cells, (B) IL-17+/FoxP3 + —co-expressing CCR6 + CD4+ Tr17 cells, (C) B cells producing IL-10, (D) IFN-γ + CD4+ Th1 cells, (E) IL-17+ CD4+ Th17 cells, (F) FoxP3+ regulatory CD4+ T cells, (G) IL-10-producing FoxP3+ Treg cells, (H) CD27+ memory B cells, and (I) IL-10-producing CD27+ memory B cells. Results are shown as mean ± s.e.m. Friedman tests were performed initially, and, only when considered significant, single comparisons were performed using two-tailed Wilcoxon signed-rank tests. *P* values are presented for comparisons to baseline, if not otherwise indicated. Statistically significant differences are depicted as **p* < 0.05, ***p* < 0.01, ****p* < 0.001, *****p* < .0001. A schematic overlay of the populations is shown in (J) IL-10+ B cells (black) versus Th17 cells (red) and (K) of Tregs (black) versus Th2 cells (red).

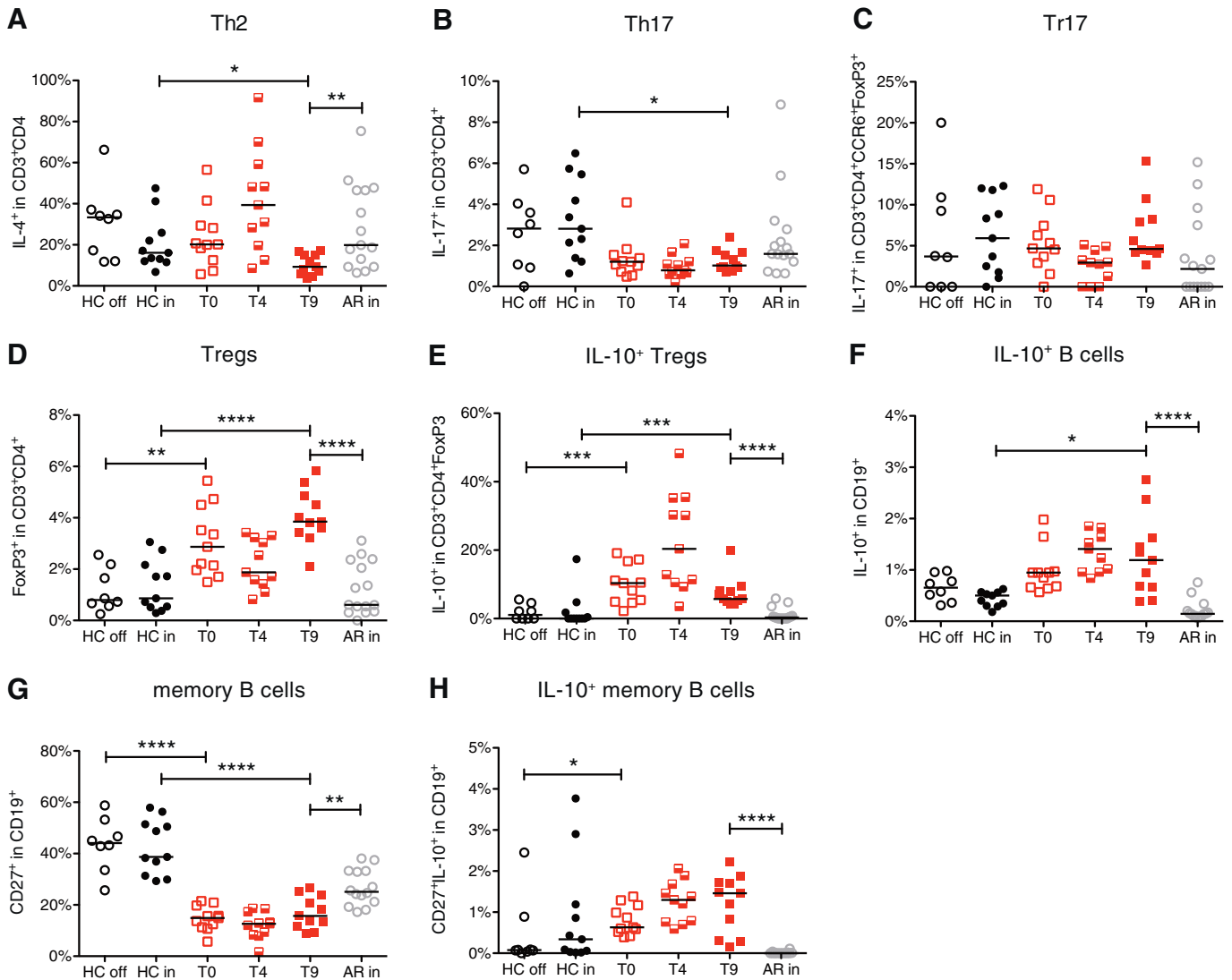


Fig. 3. Differential long-term systemic therapy effects on th17 and tr17 subsets. Intracellular flow cytometry analysis of circulating T and B cell subsets comparing healthy control subjects during off season (HC off; $n = 8$), in grass pollen season (HC in; $n = 11$), treated patients throughout course of therapy at time points T0, T4, and T9 ($n = 11$), untreated allergic rhinitis patients in grass pollen season (AR in; $n = 15$ for T cell analysis; $n = 14$ for B cell analysis): (A) IL-4⁺ CD4⁺ Th2 cells, (B) IL-17⁺ CD4⁺ Th17 cells, (C) IL-17⁺/FoxP3⁺ – co-expressing CCR6⁺ CD4⁺ Tr17 cells, (D) FoxP3⁺ Treg cells, (E) IL-10-producing FoxP3⁺ Treg cells, (F) IL-10⁺ B cells, (G) CD27⁺ memory B cells, and (H) IL-10-producing CD27⁺ memory B cells. Data points are depicted with median. Kruskal-Wallis tests were performed initially, and only when considered significant, single comparisons were performed using two-tailed Mann-Whitney *U* tests. Statistically significant differences between HC's and AR to treatment are depicted as * $p < .05$, ** $p < .01$, *** $p < .001$, **** $p < .0001$. Differences of treatment (in relation to baseline) are shown in Fig. 2.

course was chosen to assess allergen-induced immediate local and systemic immune reactions, including time points right before and six hours after pre-seasonal top dose injections. In addition, samples were analysed in and out of grass pollen season throughout the therapy course to identify the natural allergen-stimulating effect of grass pollination. The characteristics of the analysed cohort and controls are listed in supplementary Table 1. The analyses were performed in a subgroup of 32 patients out of the cohort, who completed at least five initial visits.

During the early treatment phase an initial induction of a Th2 phenotype (T0:45.02% $\pm$ 5.06 vs. T4:59.87% $\pm$ 5.08; $p = 0.049$; Fig. 1B) was observed, while Th1 (T0:2.62% $\pm$ 0.51 vs. T4:1.64% $\pm$ 0.34; $p = 0.055$; Fig. 1C) and Th17 (T0:0.85% $\pm$ 0.10 vs. T4:0.55% $\pm$ 0.05; $p = 0.001$; Fig. 1D) cells were significantly reduced systemically. Whereas the FoxP3⁺ Treg compartment remained unchanged at this early time point, we found a significant increase of IL-10-producing B cells (T0:1.90% $\pm$ 0.31 vs. T4:3.20% $\pm$ 0.75; $p = 0.036$; Fig. 1E,G,I) while, simultaneously, an opposing regulation in the memory B cell subset was observed (T0:20.30% $\pm$ 1.86 vs. T4:16.36% $\pm$ 1.64; $p = 0.036$; Fig. 1H). We further discovered a significant decrease of circulating IL-

17-expressing CD4⁺FoxP3⁺ T cells following initial AIT (Tr17 cells; T0:1.50% $\pm$ 0.22 vs. T4:0.95% $\pm$ 0.13; $p = 0.029$; Fig. 1F). IL-10 induction in B cells correlated with a simultaneous decrease of peripheral Th1 ($r = -0.56$; $p = 0.0002$) and Th17 cells ($r = -0.35$; $p = 0.03$; Fig. 1L, M). In particular, a patient subgroup characterized by an increase of IL-10⁺ B cells displayed a significant decrease of Th1 (T0:2.78% $\pm$ 0.52 vs. T4:0.79% $\pm$ 0.17) and Th17 cells (T0:0.86% $\pm$ 0.12 vs. T4:0.43% $\pm$ 0.06; Fig. 1J,K).

3.2. Initial immunotherapy induces IL-10-producing B and T cells

Following the initial boost, the Th2 response continuously decreased throughout the three years reaching statistical significance only during the last year of AIT (T0:23.67% $\pm$ 4.50 vs. T9:10.43% $\pm$ 1.51; $p = 0.001$; Fig. 2A,K). Surprisingly, we found a significant decrease of Th17 cells (T0:1.37% $\pm$ 0.30 vs. T4:0.97% $\pm$ 0.16; $p = 0.04$; Fig. 2E) and CCR6⁺ Tr17 cells (T0:5.36% $\pm$ 1.08 vs. T4:2.52% $\pm$ 0.59; $p = 0.027$; Fig. 2B) in the periphery following initial AIT, thus depicting inverse dynamics in comparison to Th2 cells (T0:23.67% $\pm$ 4.50 vs.

Table 1
Fluorochrome labelled antibodies used in flow cytometry analyses.

Antigen	Fluorochrome	Company	Clone	Dilution
CD1d	PercP-Cy5.5	BioLegend	51.1	1:200
CD3	PercP-Cy5.5	BD	UCHT1	1:200
CD3	APC-Cy7	BioLegend	HIT3a	1:200
CD4	V450	BD	RPA-T4	1:200
CD4	PE0Dazzle&594	BioLegend	A161A1	1:200
CD5	FITC	BioLegend	UCHT2	1:200
CD19	Brilliant&Violet&605	BD	SJ25-C1	1:200
CD19	APC-Cy7	BioLegend	HIB19	1:200
CD24	PE-CF594	BD	ML5	1:200
CD27	Brilliant&Violet&711	BioLegend	O323	1:200
CD27	Brilliant&Violet&605	BioLegend	O323	1:200
CD38	Brilliant&Violet&605	BioLegend	HB-7	1:200
CD45RA	eFluor780	ebioscience	HI100	1:200
PD-L1&(CD274)	Brilliant&Violet&650	BD	MIH1	1:200
IFN- γ	APC	BioLegend	4S-B3	1:100
IL-4	Alexa&Fluor&488	BD	8D4-8	1:100
IL-10	PE	ebioscience	JES3-9D7	1:100
IL-13	APC	BD	JES10-5A2	1:100
IL-17A	Brilliant&Violet&711	BioLegend	BioLegend168	1:100
TNF- α	V450	BD	MAB11	1:100
FoxP3	APC	ebioscience	PCH101	1:50
FoxP3	PE	ebioscience	PCH101	1:50

T4:41.50% $\pm$ 7.64; $p = 0.032$; Fig. 2A,K). The frequencies were restored in the first subsequent grass pollen season. The Tr17 phenotype was stabilized over time in comparison to initial treatment (T4:2.52% $\pm$ 0.59 vs. T9:6.58% $\pm$ 1.13; $p = 0.005$; Fig. 2B). Interestingly, Th17 cells showed an analogue pattern to Tr17 cells during up-dosing with a tendency to seasonal decrease (Fig. 2E). Further, a significant increase of tolerogenic FoxP3⁺ Tregs was observed, reaching significance after three years (T0:3.09% $\pm$ 0.40 vs. T9:4.06% $\pm$ 0.32; $p = 0.004$; Fig. 2F,K). During the up-dosing phase, IL-10⁺ B cells increased progressively (single comparison T0:0.99% $\pm$ 0.13 vs. T4:2.16% $\pm$ 0.84; $p = 0.032$; Fig. 2C,J), but vanished in the first pollen season. The induced B cell subset was characterized by the surface markers CD1d and CD5, while the proportion of CD24⁺CD27⁺ IL-10⁺ B cells decreased throughout initial AIT (see Supplementary Fig. 2). Similar effects were observed in IL-10-producing Tregs (T0:10.06% $\pm$ 1.71 vs. T4:22.46% $\pm$ 4.27; $p = 0.02$; Fig. 2G). In addition, we observed a slack of CD27⁺ memory B cells following the up-dosing phase (T0:15.02% $\pm$ 1.45 vs. T2:12.52% $\pm$ 1.38; $p = 0.032$; Fig. 2H) with subsequent build-up. A statistically significant difference to initial treatment effects was only observed after three years (T4:12.38% $\pm$ 1.58 vs. T9:17.33% $\pm$ 1.92; $p = 0.007$). Finally, we found an increasing trend of IL-10⁺ memory B cells initially during the pre-season (T0:0.80% $\pm$ 0.11 vs. T4:1.26% $\pm$ 0.15; Fig. 2I) with maintenance of higher levels throughout the three years of AIT.

Generally, following injection of the allergen (T2 versus T1 and T4 versus T3) we observed an immediate downward trend for Th1, Th17/Tr17 and Tregs, while IL-10⁺ B cells and Th2 cells rather increased. Seasonal changes had heterologous effects on most populations except of Th17 cells, which showed a zigzag trend with decreased frequencies during grass pollen flight (Fig. 2A–I).

3.3. Differential long-term systemic therapy effect on Th17 and Tr17 subsets

Comparing long-term treated (T9) and untreated (AR in) allergic patients in season, as expected, circulating Th2 levels (untreated: 28.77% $\pm$ 5.35 vs. treated:10.43% $\pm$ 1.51; $p = 0.0043$; Fig. 3A) were significantly decreased, whereas Th17 displayed only a slight downward trend between groups (untreated:2.38% $\pm$ 0.56 vs. treated:1.27% $\pm$ 0.16; $p = 0.12$; Fig. 3B). However, AIT induced a significant increase of CCR6⁺ Tr17 cells (untreated:3.75% $\pm$ 1.31 vs. treated:6.58% $\pm$ 1.13; $p = 0.019$; Fig. 3C) and Tregs (untreated:1.23% $\pm$ 0.26 vs. treated:4.06% $\pm$ 0.32; $p < 0.0001$; Fig. 3D) were detectable compared

to untreated controls. Additionally, a strong systemic increase of IL-10 production in Tregs (untreated:1.13% $\pm$ 0.50 vs. treated:7.51% $\pm$ 1.34; $p < 0.0001$; Fig. 3E) as well as in B cells (untreated:0.22% $\pm$ 0.05 vs. treated:6.09% $\pm$ 0.71; $p < 0.0001$; Fig. 3F) was monitored comparing treated to untreated patients. Reduced memory B cells were observed during AIT, but neither in untreated patients nor in healthy individuals (untreated:26.84% $\pm$ 1.88 vs. treated:17.07% $\pm$ 1.92; $p = 0.0034$; Fig. 3G), while IL-10⁺ memory B cells were significantly increased throughout AIT if compared to untreated patients (untreated:0.01% $\pm$ 0.01 vs. treated:1.21% $\pm$ 0.21; $p < 0.0001$; Fig. 3H). This pattern of exclusively treatment-dependent alterations of cell populations was also observed for Th17 and memory B cells, which were below levels of controls or even untreated allergic rhinitis patients. Interesting to note is that we observed also unexpected differences off-season between healthy controls and AR patients at baseline (T0): Both Treg subsets and Breg subsets were lower in healthy individuals than in AR patients prior treatment, which might be caused by a compensation mechanism antagonizing seasonal inflammation.

3.4. Allergen-specific lymphocyte activation in favor of immune regulation

Using in vitro stimulation assays of PBMCs for seven days with major grass pollen allergen *phleum p1*, we found a significant induction of IL-17-producing CD4⁺ T cells at baseline (medium (T0):3.56% $\pm$ 0.41, *phleum*(T0):13.22% $\pm$ 2.28; $p < 0.0001$; Fig. 4A). The antigen-specific induction of Th17 cells decreased strongly throughout course of therapy (*phleum*(T0):13.22% $\pm$ 2.28, *phleum*(T9):6.73% $\pm$ 0.66; $p = 0.015$). Tregs were also allergen-specifically induced, but only in cultures prior treatment (medium (T0):0.84% $\pm$ 0.30, *phleum*(T0):2.29% $\pm$ 0.55; $p = 0.046$; Fig. 4B). Similarly, we observed an even stronger effect in the Tr17 compartment, which was also antigen-specifically induced at baseline (medium(T0):6.74% $\pm$ 1.90, *phleum*(T0):36.65% $\pm$ 7.24; $p < 0.0001$; Fig. 4C). However, comparably to Th17 cells, the allergen-driven boost of Tr17 cells faded throughout the course of immunotherapy (*phleum*(T0):36.65% $\pm$ 7.24, *phleum*(T9):24.94% $\pm$ 6.16).

Further, we observed, that B cells from grass pollen-allergic patients up-regulate the tolerance-inducing surface marker PD-L1 (CD274) significantly after seven days of in vitro allergen stimulation and that this induction is maintained throughout the treatment course (medium (T0):1.51% $\pm$ 0.22, *phleum*(T0):10.37% $\pm$ 0.60; $p < 0.0001$; Fig. 4D). In addition, here, we report elevated levels of IgG4 following the initial up-dosing period in the supernatant of in vitro allergen challenge cultures (*phleum*(T0):19.09% $\pm$ 1.26, *phleum*(T4):23.89% $\pm$ 2.88, *phleum*(T9):17.85% $\pm$ 1.75; Fig. 4E), which coincided with a minimal decrease of IgE levels from supernatants (*phleum*(T0):1.48% $\pm$ 0.24, *phleum*(T4):1.38% $\pm$ 0.19, *phleum*(T9):1.53% $\pm$ 0.18; Fig. 4F). Both effects were abolished after three years of ongoing therapy. As our stimulation protocol did not include secondary stimulants in order to keep the protocol as physiologic as possible, IgG4 and IgE data might reflect production from B memory cells or plasma cells in culture. However, serum levels of grass-pollen specific IgG4 (sIgG4) were analysed throughout treatment course and support the data described above, as serum sIgG4 significantly increased during the first year of therapy (Fig. 4G). On the other hand, grass pollen-specific IgE (sIgE) serum levels increased significantly during the initial up-dosing phase (Fig. 4H) and were subsequently reduced back to baseline levels throughout the follow-up period and further fell below baseline levels after three years of AIT.

3.5. Local gene expression changes in the nasal mucosa

Whole transcriptome analysis of nasal scrapings identified several essential gene expression changes in the up-dosing phase and after long-term treatment ($\log_2$ FC > 1.5, $p < .05$; Fig. 5). To clarify, only mediators crucial to local airway immune processes are shown in Fig. 5B and

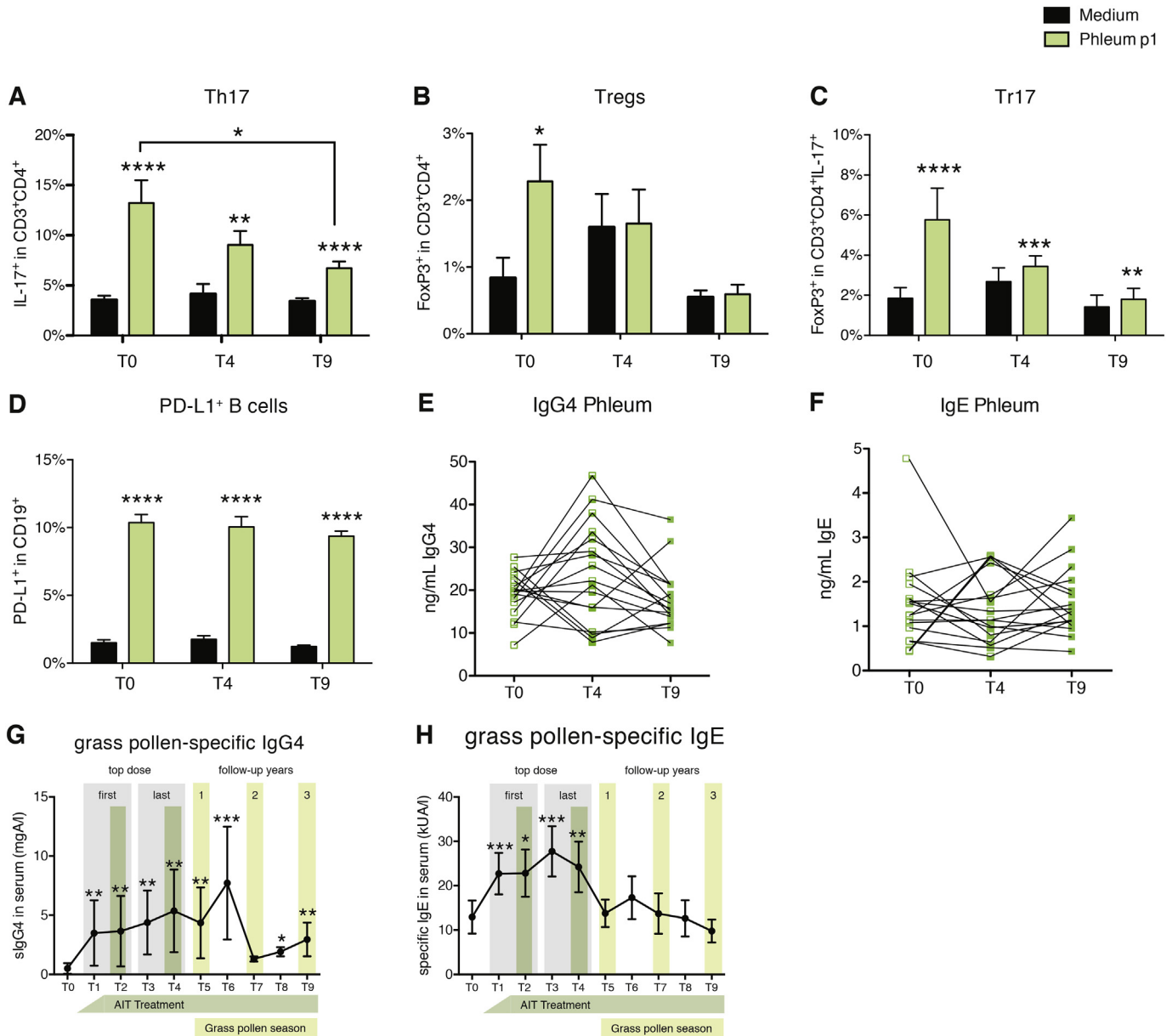


Fig. 4. In-vitro: allergen-specific lymphocyte activation in favor of immune regulation. PBMCs throughout therapy course time points T0, T4, and T9 ($n = 17$) were stimulated with medium (black) or 5 $\mu\text{g}/\text{ml}$ phleum p1 (red) for 7 days in culture and T and B cells were analysed using intracellular antigen staining: (A) IL-17 + CD4 + Th17 cells, (B) FoxP3 + Tregs, (C) IL-17 + FoxP3 + co-expressing CD4 + Tr17 cells, and (D) PD-L1 + B cells. Results are depicted as mean $\pm$ s.e.m. Test results are shown for comparisons to medium/untreated, if not otherwise indicated. Two-tailed Mann-Whitney U tests were used to test for differences between patient groups. In (A), a two-tailed Wilcoxon signed-rank test was used to test for differences between *phleum*(T0) and *phleum*(T9). Immunoglobulin secretion was determined by supernatant analysis using total IgG4 (E) and IgE (F) ELISA following medium (data not shown) or phleum p1 stimulation for 7 days at the same time points T0, T4, and T9 ($n = 17$). Longitudinal changes of (G) grass pollen-specific serum IgG4 (sIgG4) and (H) grass pollen-specific serum IgE (sIgE) levels were analysed throughout treatment course by ImmunoCAP test ($n = 11$ patients; except time point 1 $n = 8$). Results are depicted as mean $\pm$ s.e.m. Friedman tests were performed initially, and, only when considered significant, single comparisons were performed using two-tailed Wilcoxon signed-rank tests. Statistically significant differences are depicted as * $p < .05$, ** $p < .01$, *** $p < .001$, **** $p < .0001$.

D, a full list of genes is enclosed in the supplement. Hierarchical clustering was used to compare the short-term AIT effects (T4 versus T0), which involved changes of immune- and epithelial-cell origin in the nasal mucosa (Fig. 5A,B). The maximum expression of these genes was detected following initial up-dosing treatment (T4) with a strong decrease following long-term AIT (T9), where *IL10* and *CD274* fell below levels of untreated allergic patients. *CCL26*, a well-known IL-4-inducible epithelial marker, follows the systemic Th2 response over time, however on epithelial level in the upper airways. Notably, *RORC* expression resembles the contrary effect and therefore aligns with the systemic course of Th17 cells throughout AIT.

Long-term treatment effects were characterized by decreased local expression levels of multiple cytokines of the Th2 response, *IL4*, *IL5*, *IL13* and epithelial type 2 (E2) response, *IL24* (Fig. 5C,D). *IL17B* and *IL17C*, the latter a pro-inflammatory IL-17 isoform produced by the epithelial cells, and further, the up-regulation of *IL10RB*, were significantly reduced upon AIT.

3.6. Local shifts of immune cell compartments following AIT

In the local compartment, we observed changes in effector and regulatory immune cell subsets in the upper airways of allergic patients

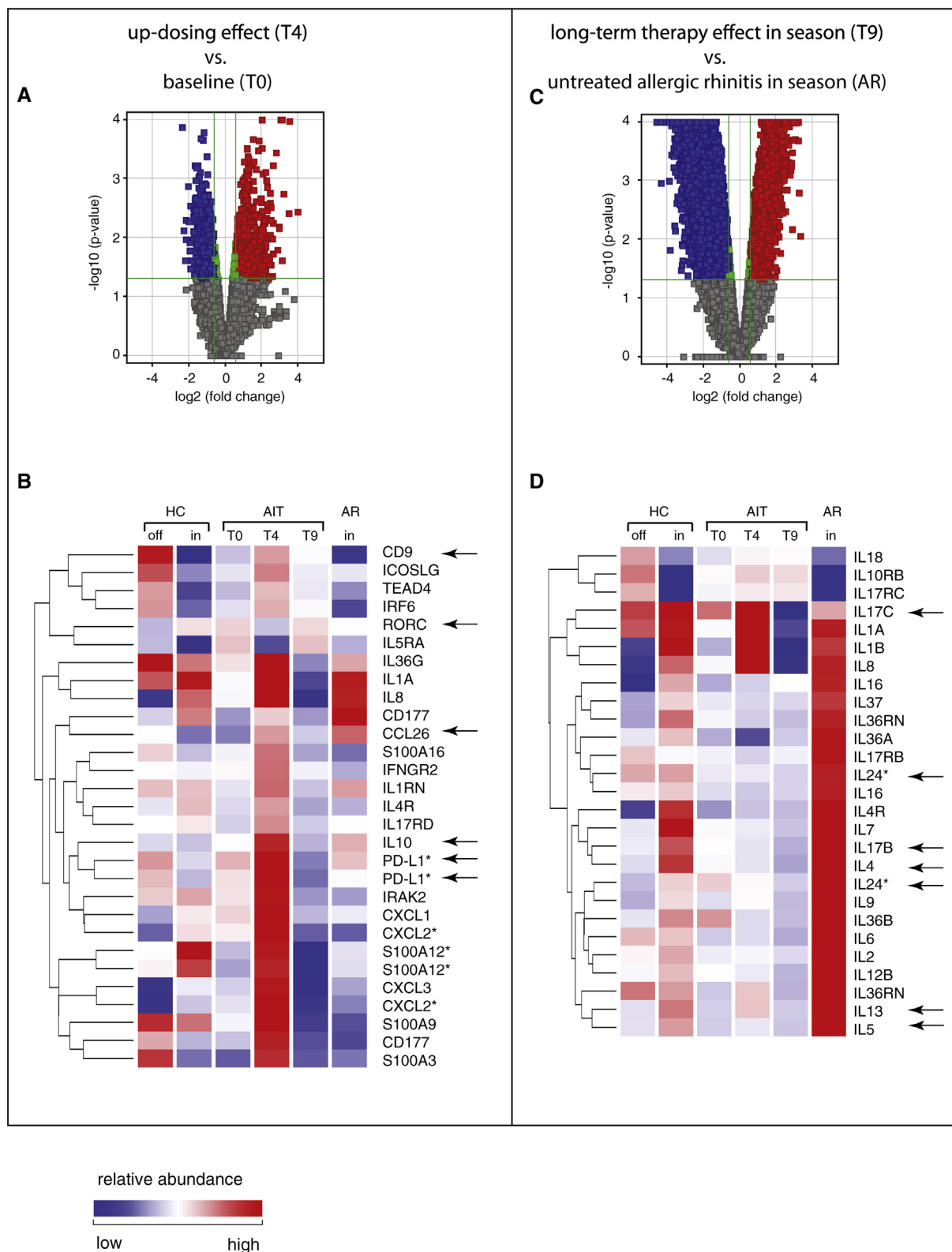


Fig. 5. Local gene expression changes indicate shifts in regulatory hierarchies in the nasal mucosa. Gene expression changes of nasal scrapings were taken from healthy control subjects during off season (HC off; $n = 3$), in grass pollen season (HC in; $n = 3$), treated patients throughout course of therapy at time points T0 ($n = 6$), T4 ($n = 5$), and T9 ($n = 9$), untreated allergic rhinitis patients in grass pollen season (AR in; $n = 5$) and subjected to RNA whole transcriptome microarray analysis. (A) Volcano plot of statistically significant entities ($p < 0.05$; $FC \geq 1.5$) comparing time point T4 and T0. (B) Comparison of T4 versus T0 depicts an extract of significant changes following initial AIT ($p < 0.05$; $FC \geq 1.5$). Selection of entities is shown, which are relevant for allergy. (C) Volcano plot of statistically significant entities ($p < 0.05$; $FC \geq 1.5$) comparing time point T9 and AR in. (D) Comparison of T9 versus AR in mirrors therapeutic effects on significant gene expression changes of interleukin family in nasal transcriptome. The color code indicates the abundance of transcripts ranging from low (blue) to high (red). *Asterisks indicate two isoforms that were present in the analysis.

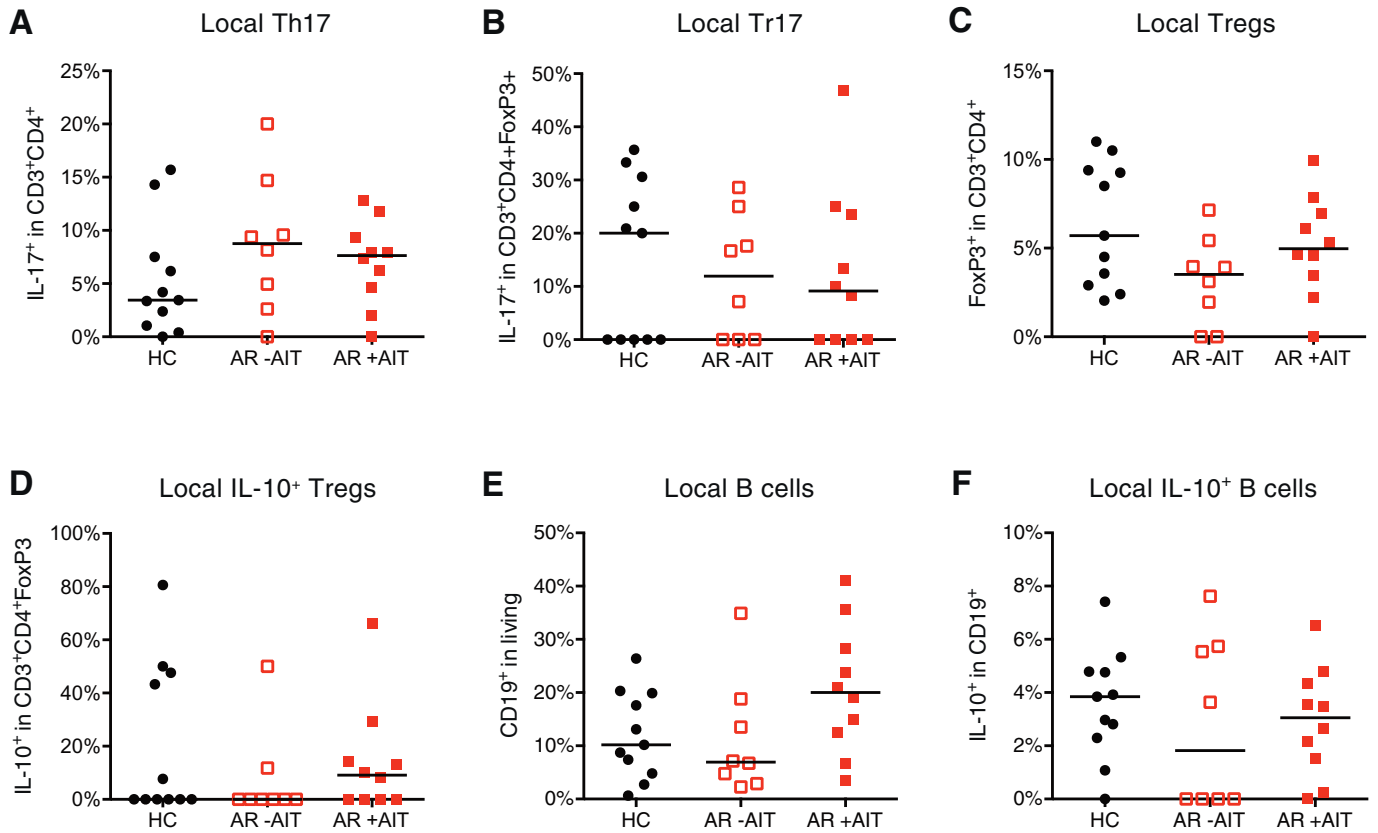


Fig. 6. Local shifts of immune cell compartments following AIT. Intracellular FACS staining of scraped nasal lymphocytes from healthy controls (HC; $n = 11$), allergic rhinitis patients without AIT (AR – AIT; $n = 8$), and allergic rhinitis patients with long-term AIT (AR + AIT; $n = 10$) in grass pollen season (A–F). Gating strategy for nasal samples; (A) IL-17+ CD4+ Th17 cells, (B) IL-17+/FoxP3+ –co-expressing CD4+ Tr17 cells, (C) FoxP3+ Tregs, (D) IL-10-producing FoxP3+ Tregs, (E) total B cells, and (F) IL-10+ B cells. Data are shown with median. Kruskal-Wallis tests were performed initially, and, only when considered significant, single comparisons were performed using two-tailed Mann-Whitney U tests.

using intracellular stainings in flow cytometry on nasal scrapings for the first time. Decreased Th17 and increased Tr17 populations became visible comparing treated with untreated patients during pollen flight (Th17: untreated: $8.67\% \pm 2.28$, treated: $7.43\% \pm 1.22$; Tr17: untreated: $11.88\% \pm 4.13$, treated: $12.61\% \pm 4.37$; Fig. 6A,B). As Kruskal-Wallis tests rendered non significant, we did not perform single comparison statistics. FoxP3+ Tregs tend to increase upon AIT (untreated: $3.19\% \pm 0.88$, treated: $5.05\% \pm 0.82$; Fig. 6C), and also displayed a higher frequency of IL-10 production (untreated: $1.69\% \pm 1.69$, treated: $15.54\% \pm 6.04$; Fig. 6D). Further, AIT-treated patients

had by tendency higher numbers of local B cells (untreated: $11.38\% \pm 3.90$, treated: $20.53\% \pm 3.45$; Fig. 6E) as well as of IL-10+ B cells compared to untreated patients (untreated: $2.82\% \pm 1.13$, treated: $3.10\% \pm 0.61$; Fig. 6F).

3.7. Early B- and T-cell responses correlate with retrospective symptom assessment

Total frequencies of IL-10+ B cells and the differential frequencies of the Delta (IL-10+ B cells (T0) – IL-10+ B cells (T9)) were positively

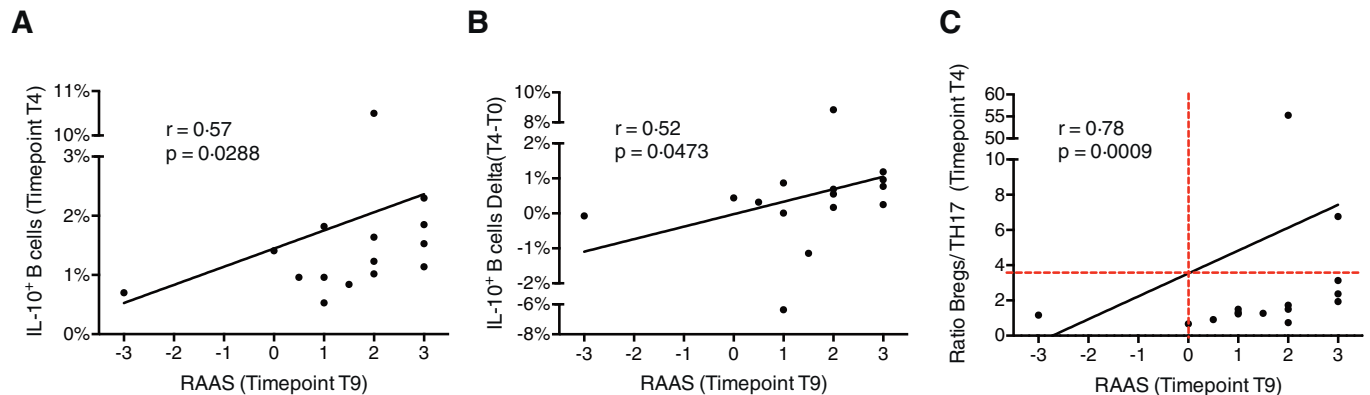


Fig. 7. Correlation of symptom score raas after 3 years of ait with early B and T cell frequencies. Spearman correlation analysis was performed comparing the RAAS at time point T9 with (A) total peripheral IL-10+ B cell numbers at time point T4 ($n = 15$) or (B) with the in-/reduction of peripheral IL-10+ B cells of time point T4 minus T0 ($n = 15$). (C) Spearman correlation of RAAS at time point T9 with the ratio of peripheral IL-10+ B cell percentage to peripheral Th17 percentage (Ratio Bregs/Th17) at time point T4 ($n = 15$). One patient was excluded from all correlations Due to clinically significant polysensitization after three years of treatment. Statistically significant differences are depicted as * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$.

associated with the Retrospective Assessment of seasonal Allergic Symptoms Score (RAAS), reflecting allergy symptoms at T9 in year 3 in comparison to baseline on a scale between +3 (much better), to 0 (no change) to −3 (much worse) ($r = 0.57$, $p = 0.0288$; $r = 0.52$, $p = 0.0473$; Fig. 7A,B). In order to quantify the suppressive potential of IL-10⁺ B cells towards the effector Th17 cell compartment, we computed the ratio of cell frequencies of IL-10⁺ B cells to IL-17⁺CD4⁺ T cells (Breg/Th17 ratio). Strikingly, the Breg/Th17 ratio at time point T4 following the initial up-dosing phase correlated strongly with RAAS after three years of AIT ($r = 0.78$; $p = 0.0009$; Fig. 7C), indicating a positive coherence of early induction of circulating IL-10⁺ B cells coinciding with a downregulation of circulation Th17 effector cells with a successful clinical outcome.

4. Discussion

Early prediction of therapy success would represent a breakthrough for AIT. In this exploratory study, we provide evidence for the first time that a shift in lymphocyte subsets is related to and possibly indicative for therapy success. Empiric evidence indicates that therapy success requires long-term treatment over several years [6]. AIT increased the Th2 cell population and specific IgE during initial treatment steps, which is an expected but unwanted side effect of the allergen exposure during up-dosing. We hypothesized that the initial phase as observed in the six hour time window after subcutaneous administration of allergen is characterized by a desensitization of the innate immune system (e.g. mast cells), while the specific immune system remains allergen-responsive [33,34]. In frame of this concept, immunological changes during AIT can be segregated in an early phase, characterized by IgG4 increase [35,36], which converts into a late tolerance mounting phase with suppression of Th2 responses. Functional IgG4 antibodies measured by the FAB assay have been shown to correlate with clinical responses after eight months of grass pollen AIT [37]. Allergen-binding IgG4 levels during AIT have been observed to plateau or slightly dampen [38,39], while we observed a decrease in year 2 in our cohort, that may be explained with prolonged treatment intervals between maintenance injections. We did not assess FAB or avidity of IgG4. However the IgG4 results fit the course of IgE levels and the significantly higher IgG4 levels at T9 compared to baseline undermine this known protective mechanism triggered by AIT.

Until now, it was not possible to connect the early and late phases of AIT, which, however, is essential to predict therapy success at an earliest possible timepoint. This study indicates that the early response to AIT involves IL-10 induction in B cells [40] as well as in trafficking T cells [10,41] both systemically and in the upper airways. Surprisingly, there are reports that hint to an effect of AIT prior to IgG4 changes [38]. The synergy of frequencies of IL-10⁺ Tregs with frequencies of Th2 effector cells, especially during the up-dosing phase, hints to a possible AIT mechanism involving IL-10 apart from IgG4 upregulation.

In addition, the regulatory B cell-derived IL-10 has been described to promote IgG4 expression by B cells of allergic patients by competing with IgE binding sites on allergens, at the same time preventing Fc receptor activation [23,35]. However, Breg-derived IL-10 does not only regulate IgG4, but was further described to interfere with MHC-dependent antigen presentation via downregulation of co-stimulation and thereby suppresses T cell proliferation in an antigen-specific manner [23,40]. In this context, it is important to note that this study exhibits for the first time restriction of allergen-specific Th17 and Tr17 responses during AIT using in vitro allergen stimulation experiments. This restriction aligns with the picture we see six hours after AIT injection during the pre-seasonal up-dosing period (T4), at which time point we expected to catch the immediate allergen-triggered systemic immune response by analysing peripheral blood lymphocytes. Total frequencies of unstimulated Th17 cells as well as Tr17 cells decreased significantly during this initial treatment phase and these data therefore support our assumption to truly catch the immediate systemic response at T4. The recovery of these cells during the conversion and the tolerance

mounting phase does not reflect direct responses to AIT injections, however, the in vitro stimulation data support that Th17 and Tr17 cells render unresponsive to grass pollen allergen throughout the maintenance phase. This novel finding supports the involvement of Th17 and Tr17 cells as pathogenic players in allergic rhinitis and hint to an important treatment effect of AIT.

In addition, it is interesting to note that the current study describes that the suppressive co-stimulator PD-L1 [42] was allergen-specifically up-regulated on circulating B cells and was also detected in the local gene expression analysis. Therefore, it could be speculated that the induction of PD-L1 could be one of the initial mechanisms of suppression, which is induced by the repetitive allergen administration.

Regulatory B cells mediate suppression of Th1 and Th17 differentiation by IL-10 secretion as shown in autoimmune disorders [22,27], which we presume to underlie the inverse dynamics of circulating Th17 and Breg cells observed in the current study. Notably, the recovery of the Th17 phenotype demarcates the conversion phase, as the Th17 subset surprisingly increases following reduction in the initial up-dosing phase. In addition, our data imply for the first time the induction of an intermediary IL-17⁺FoxP3⁺CCR6⁺ Tr17 subset with previously described transitory character [20]. On one hand, a pro-inflammatory differentiation arising from regulatory T cells inducing IL-17 was described in a murine arthritis model [20], while an anti-inflammatory transdifferentiation of Th17 cells into regulatory T cells was reported in experimental encephalitis and infection models [21]. We anticipate that this population demarks a fragile phase of conversion into allergen tolerance.

The current data propose that this conversion finally culminates in a significant increase of FoxP3⁺ regulatory T cells and strong reduction of Th2 cells after long-term treatment, which marks the final tolerance mounting phase. This therapy-induced shift of the Treg/Th2 balance is a well-established phenomenon following 24–36 months of AIT, which is assumed to lead to the suppression of seasonal re-induction of Th2 cells by Tregs [43–45]. However, this study implies that circulating IL-10⁺ Tregs are mainly induced during the initial up-dosing phase, while higher frequencies of both, IL-10-producing Tregs and total FoxP3⁺ Tregs were found in the upper airways following long-term AIT, which confirms previous reports [8,13,46]. On top of the early increase, the clear trends of higher local frequencies of IL-10⁺ Tregs and IL-10⁺ B cells we observed in the nasal mucosa after long-term therapy compared to untreated allergic patients and healthy controls match the data from the peripheral blood.

Further, the systemic Treg/Th2 shift during the tolerance mounting phase shows multiple suppressive effects on different cytokines, not only on Th2 cytokines like IL-4, IL-5, and IL-13, but also on pro-inflammatory cytokines like IL-1A, IL-1B, IL-6, IL-8, and IL-12B. Interestingly, the effect was not only observed regarding lymphocyte- but also epithelium-derived cytokines like IL-24 and IL-17C. These two cytokines are believed to play a role in the Th2-associated [47] as well as in the Th17-associated local epithelial response [48], respectively.

In conclusion, here, we hypothesize three sequential phases of AIT and, for the first time, link the late tolerance mounting phase to the initial up-dosing phase, as the ratio of circulating IL-10⁺ B cells to Th17 cells at the time point following the last top dose injection during the AIT up-dosing period correlates strongly with self-assessed allergic symptom score RAAS at the time point after three years of therapy. Future studies are needed to substantiate the Breg/Th17 ratio as clinical prediction marker of AIT success, also in other common allergies and dosage schemes. This study provides insight into novel AIT mechanisms already early during treatment, which may help to improve future antigen-specific interventions.

Author contributions

A.M.C. conceived of the project; C.S.W. and A.M.C. directed the research; U.M.Z., C.A.J., C.S.W., and A.M.C. designed the experiments and

evaluated the data; A.M.C. initiated the trial, A.M.C. and Z.H. collected samples from longitudinal cohort subjects; U.M.Z., C.A.J., F.G., L.P., K.S. and K.D. performed the experiments; U.M.Z. and C.A.J. prepared the figures; U.M.Z., F.G. and C.S.W. performed gene expression profiling studies; U.M.Z., C.A.J., C.S.W., and A.M.C. wrote the manuscript; J.A.A.-P., M.S., B.H. and G.P. helped with the manuscript. A.M.C. confirms that he had full access to all the data in the study and had final responsibility for the decision to submit for publication.

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Declaration of interests

U.M.Z. received payment for manuscripts from Deutsches Aertzblatt, funds for travel from the European Academy of Allergy and Clinical Immunology (EAACI) and Collegium Internationale Allergologicum (CIA). C.S.W. received support for research projects from PLS Design, LETI, Zeller AG and Allergopharma and accepted honoraria for consultancy and seminars from LETI, Allergopharma and Leo Pharma. A.M.C. has consultant arrangements via Technical University Munich with Allergopharma, ALK-Abello, HAL Allergy, Mundipharma, and Lofarma; has conducted clinical studies and received research grants via Technical University Munich from Allergopharma, Novartis, the German Federal Environmental Agency, Bencard/Allergen Therapeutics, ASIT Biotech, GlaxoSmithKline, Roche and Zeller AG; has received payment via Technical University Munich for lectures from Allergopharma, ALK-Abello, and GlaxoSmithKline; has received payment for manuscript preparation from Bayerisches Ärztblatt; and has received travel support from the European Academy of Allergy and Clinical Immunology, DGAKI, and SMI. The other authors declare no conflict of interest.

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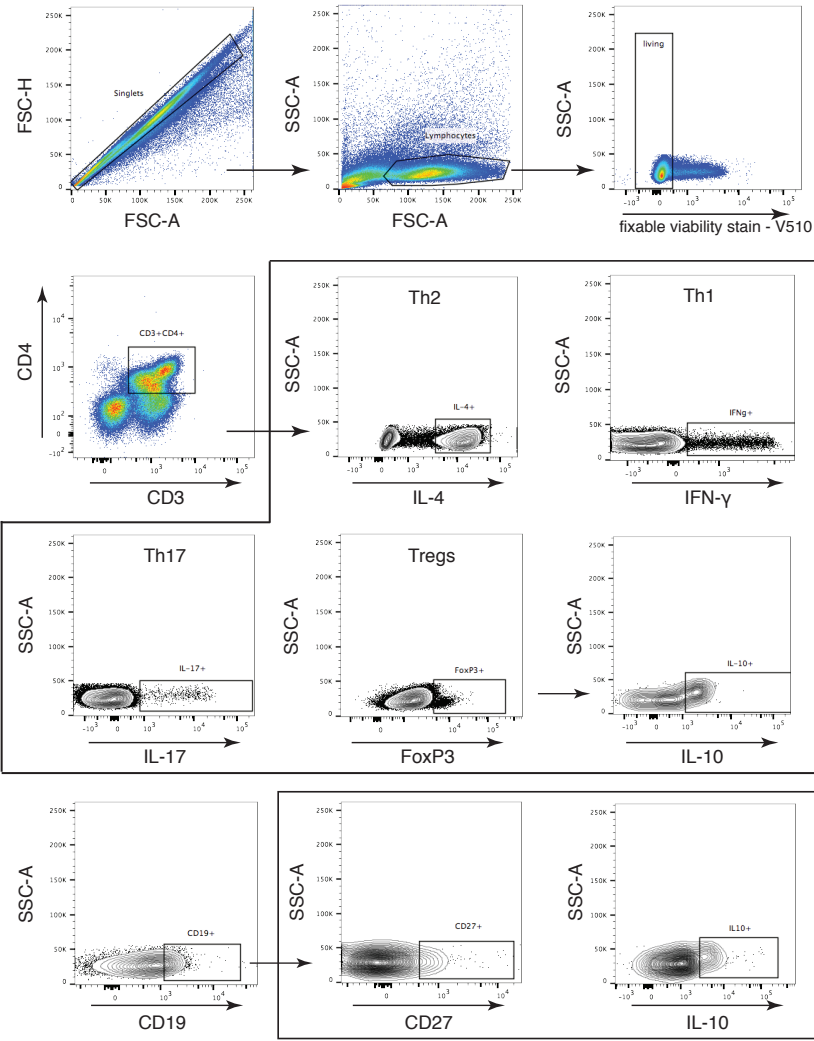
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References

- [1] Noon L. Prophylactic inoculation against hay fever. *Lancet* 1911;177(4580):1572–3.
- [2] Calderon MA, et al. Allergen injection immunotherapy for seasonal allergic rhinitis. *Cochrane Database Syst Rev* 2007;1:CD001936.
- [3] Radulovic S, et al. Systematic reviews of sublingual immunotherapy (SLIT). *Allergy* 2011;66(6):740–52.
- [4] Nelson H, et al. Network meta-analysis shows commercialized subcutaneous and sublingual grass products have comparable efficacy. *J Allergy Clin Immunol Pract* 2015;3(2):256–66 [e3].
- [5] Varney VA, et al. Usefulness of immunotherapy in patients with severe summer hay fever uncontrolled by antiallergic drugs. *BMJ* 1991;302(6771):265–9.
- [6] Durham SR, et al. Long-term clinical efficacy of grass-pollen immunotherapy. *N Engl J Med* 1999;341(7):468–75.
- [7] Wachholz PA, et al. Inhibition of allergen-IgE binding to B cells by IgG antibodies after grass pollen immunotherapy. *J Allergy Clin Immunol* 2003;112(5):915–22.
- [8] Nouri-Aria KT, et al. Grass pollen immunotherapy induces mucosal and peripheral IL-10 responses and blocking IgG activity. *J Immunol* 2004;172(5):3252–9.
- [9] Jutel M, et al. IL-10 and TGF-beta cooperate in the regulatory T cell response to mucosal allergens in normal immunity and specific immunotherapy. *Eur J Immunol* 2003;33(5):1205–14.
- [10] Akdis CA, et al. Role of interleukin 10 in specific immunotherapy. *J Clin Invest* 1998;102(1):98–106.
- [11] Robinson DS, Larche M, Durham SR. Tregs and allergic disease. *J Clin Invest* 2004;114(10):1389–97.
- [12] Ebner C, et al. Immunological changes during specific immunotherapy of grass pollen allergy: reduced lymphoproliferative responses to allergen and shift from TH2 to TH1 in T-cell clones specific for Phl p 1, a major grass pollen allergen. *Clin Exp Allergy* 1997;27(9):1007–15.
- [13] Radulovic S, et al. Grass pollen immunotherapy induces Foxp3-expressing CD4+ CD25+ cells in the nasal mucosa. *J Allergy Clin Immunol* 2008;121(6):1467–72.
- [14] Shamji MH, et al. Biomarkers for monitoring clinical efficacy of allergen immunotherapy for allergic rhinoconjunctivitis and allergic asthma: an EAACI Position Paper. *Allergy* 2017;72(8):1156–73.
- [15] Suarez-Fuero A, et al. Grass tablet sublingual immunotherapy downregulates the TH2 cytokine response followed by regulatory T-cell generation. *J Allergy Clin Immunol* 2014;133(1):130.
- [16] Wambre E, et al. A phenotypically and functionally distinct human TH2 cell subpopulation is associated with allergic disorders. *Sci Transl Med* 2017;9:401.
- [17] Ciprandi G, et al. Serum interleukin-17 levels are related to clinical severity in allergic rhinitis. *Allergy* 2009;64(9):1375–8.
- [18] Albano GD, et al. Th17 immunity in children with allergic asthma and rhinitis: a pharmacological approach. *PLoS One* 2013;8(4):e58892.
- [19] Wambre E, et al. Specific immunotherapy modifies allergen-specific CD4(+) T-cell responses in an epitope-dependent manner. *J Allergy Clin Immunol* 2014;133(3):872–9 [e7].
- [20] Komatsu N, et al. Pathogenic conversion of Foxp3+ T cells into TH17 cells in autoimmune arthritis. *Nat Med* 2014;20(1):62–8.
- [21] Gagliani N, et al. Th17 cells transdifferentiate into regulatory T cells during resolution of inflammation. *Nature* 2015;523(7559):221–5.
- [22] Blair PA, et al. CD19(+)CD24(hi)CD38(hi) B cells exhibit regulatory capacity in healthy individuals but are functionally impaired in systemic Lupus Erythematosus patients. *Immunity* 2010;32(1):129–40.
- [23] van de Veen W, et al. IgG4 production is confined to human IL-10-producing regulatory B cells that suppress antigen-specific immune responses. *J Allergy Clin Immunol* 2013;131(4):1204–12.
- [24] Boonpiyathad T, et al. High-dose bee venom exposure induces similar tolerogenic B-cell responses in allergic patients and healthy beekeepers. *Allergy* 2017 Mar;72(3):407–15. <https://doi.org/10.1111/all.12966> [Epub 2016 Jul 20].
- [25] Watanabe R, et al. Regulatory B cells (B10 cells) have a suppressive role in murine lupus: CD19 and B10 cell deficiency exacerbates systemic autoimmunity. *J Immunol* 2010;184(9):4801–9.
- [26] Jin G, et al. B-cell linker protein expression contributes to controlling allergic and autoimmune diseases by mediating IL-10 production in regulatory B cells. *J Allergy Clin Immunol* 2013;131(6):1674–82.
- [27] Lampropoulou V, et al. TLR-activated B cells suppress T cell-mediated autoimmunity. *J Immunol* 2008;180(7):4763–73.
- [28] Holan V, et al. Distinct cytokines balance the development of regulatory T cells and interleukin-10-producing regulatory B cells. *Immunology* 2014;141(4):577–86.
- [29] Tian J, et al. Lipopolysaccharide-activated B cells down-regulate Th1 immunity and prevent autoimmune diabetes in nonobese diabetic mice. *J Immunol* 2001;167(2):1081–9.
- [30] Amu S, et al. Regulatory B cells prevent and reverse allergic airway inflammation via FoxP3-positive T regulatory cells in a murine model. *J Allergy Clin Immunol* 2010;125(5):1114–24 [e8].
- [31] Duddy M, et al. Distinct effector cytokine profiles of memory and naive human B cell subsets and implication in multiple sclerosis. *J Immunol* 2007;178(10):6092–9.
- [32] Wang RX, et al. Interleukin-35 induces regulatory B cells that suppress autoimmune disease. *Nat Med* 2014;20(6):633–41.
- [33] Durham SR, et al. Grass pollen immunotherapy decreases the number of mast cells in the skin. *Clin Exp Allergy* 1999;29(11):1490–6.
- [34] Uermosi C, et al. IgG-mediated down-regulation of IgE bound to mast cells: a potential novel mechanism of allergen-specific desensitization. *Allergy* 2014;69(3):338–47.
- [35] Jeannin P, et al. IgE versus IgG4 production can be differentially regulated by IL-10. *J Immunol* 1998;160(7):3555–61.
- [36] Gepp B, et al. Monitoring the epitope recognition profiles of IgE, IgG1, and IgG4 during birch pollen immunotherapy. *J Allergy Clin Immunol* 2016;137(5):1600–3 [e1].
- [37] Shamji MH, et al. Functional rather than immunoreactive levels of IgG4 correlate closely with clinical response to grass pollen immunotherapy. *Allergy* 2012;67(2):217–26.
- [38] Francis JN, et al. Grass pollen immunotherapy: IL-10 induction and suppression of late responses precedes IgG4 inhibitory antibody activity. *J Allergy Clin Immunol* 2008;121(5):1120–5 [e2].
- [39] James LK, et al. Long-term tolerance after allergen immunotherapy is accompanied by selective persistence of blocking antibodies. *J Allergy Clin Immunol* 2011;127(2):509.
- [40] Stanic B, et al. IL-10-overexpressing B cells regulate innate and adaptive immune responses. *J Allergy Clin Immunol* 2015;135(3):771–80.
- [41] Gardner LM, et al. Induction of T 'regulatory' cells by standardized house dust mite immunotherapy: an increase in CD4+ CD25+ interleukin-10+ T cells expressing peripheral tissue trafficking markers. *Clin Exp Allergy* 2004;34(8):1209–19.
- [42] Khan AR, et al. PD-L1hi B cells are critical regulators of humoral immunity. *Nat Commun* 2015;6:5997.

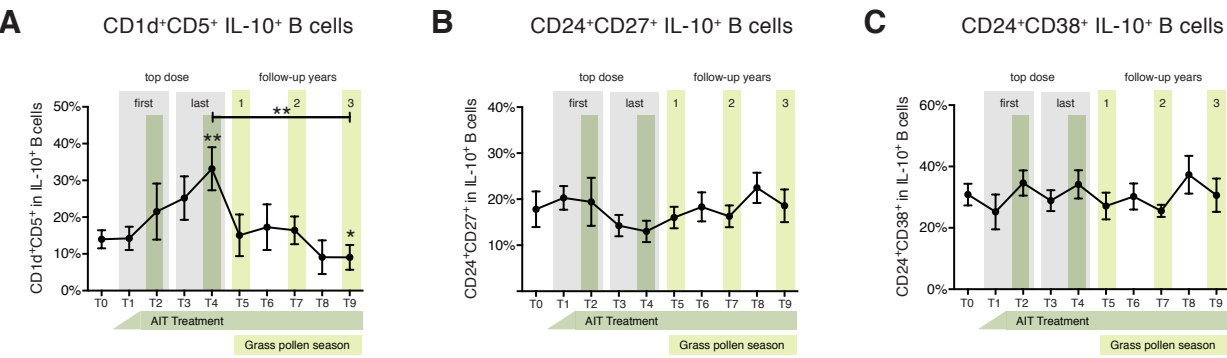
- [43] Francis JN, Till SJ, Durham SR. Induction of IL-10+CD4+CD25+ T cells by grass pollen immunotherapy. *J Allergy Clin Immunol* 2003;111(6):1255–61.
- [44] Ling EM, et al. Relation of CD4+CD25+ regulatory T-cell suppression of allergen-driven T-cell activation to atopic status and expression of allergic disease. *Lancet* 2004;363(9409):608–15.
- [45] Chaker AM, et al. Short-term subcutaneous grass pollen immunotherapy under the umbrella of anti-IL-4: a randomized controlled trial. *J Allergy Clin Immunol* 2016; 137(2):452–61 [e9].
- [46] Pilette C, et al. Grass pollen immunotherapy induces an allergen-specific IgA2 antibody response associated with mucosal TGF-beta expression. *J Immunol* 2007;178 (7):4658–66.
- [47] Zissler UM, et al. Interleukin-4 and interferon-gamma orchestrate an epithelial polarization in the airways. *Mucosal Immunol* 2016;9(4):917–26.
- [48] Ramirez-Carrozzi V, et al. IL-17C regulates the innate immune function of epithelial cells in an autocrine manner. *Nat Immunol* 2011;12(12):1159–66.
- [49] Bousquet J, et al. Allergic Rhinitis and its Impact on Asthma (ARIA) 2008 update (in collaboration with the World Health Organization, GA(2)LEN and AllerGen). *Allergy* 2008;63(Suppl. 86):8–160.
- [50] Chaker AM, et al. An accelerated dose escalation with a grass pollen allergoid is safe and well-tolerated: a randomized open label phase II trial. *Clin Transl Allergy* 2015; 6:4.
- [51] Corrigan CJ, et al. Efficacy and safety of preseasonal-specific immunotherapy with an aluminium-adsorbed six-grass pollen allergoid. *Allergy* 2005;60(6):801–7.
- [52] Rajakulasingam K. Early improvement of patients' condition during allergen-specific subcutaneous immunotherapy with a high-dose hypoallergenic 6-grass pollen preparation. *Eur Ann Allergy Clin Immunol* 2012;44(3):128–34.
- [53] Edgar R, Domrachev M, Lash AE. Gene Expression omnibus: NCBI gene expression and hybridization array data repository. *Nucleic Acids Res* 2002;30(1):207–10.
- [54] Konishi T. Microarray test results should not be compensated for multiplicity of gene contents. *BMC Syst Biol* 2011;5(Suppl. 2):S6.

Supplementary Figure 1



Zissler, Jakwerth et al.: "Early IL-10 producing B-cells and coinciding Th/Tr17 shifts during three year grass-pollen AIT", EBioMedicine 2018

Supplementary Figure 2



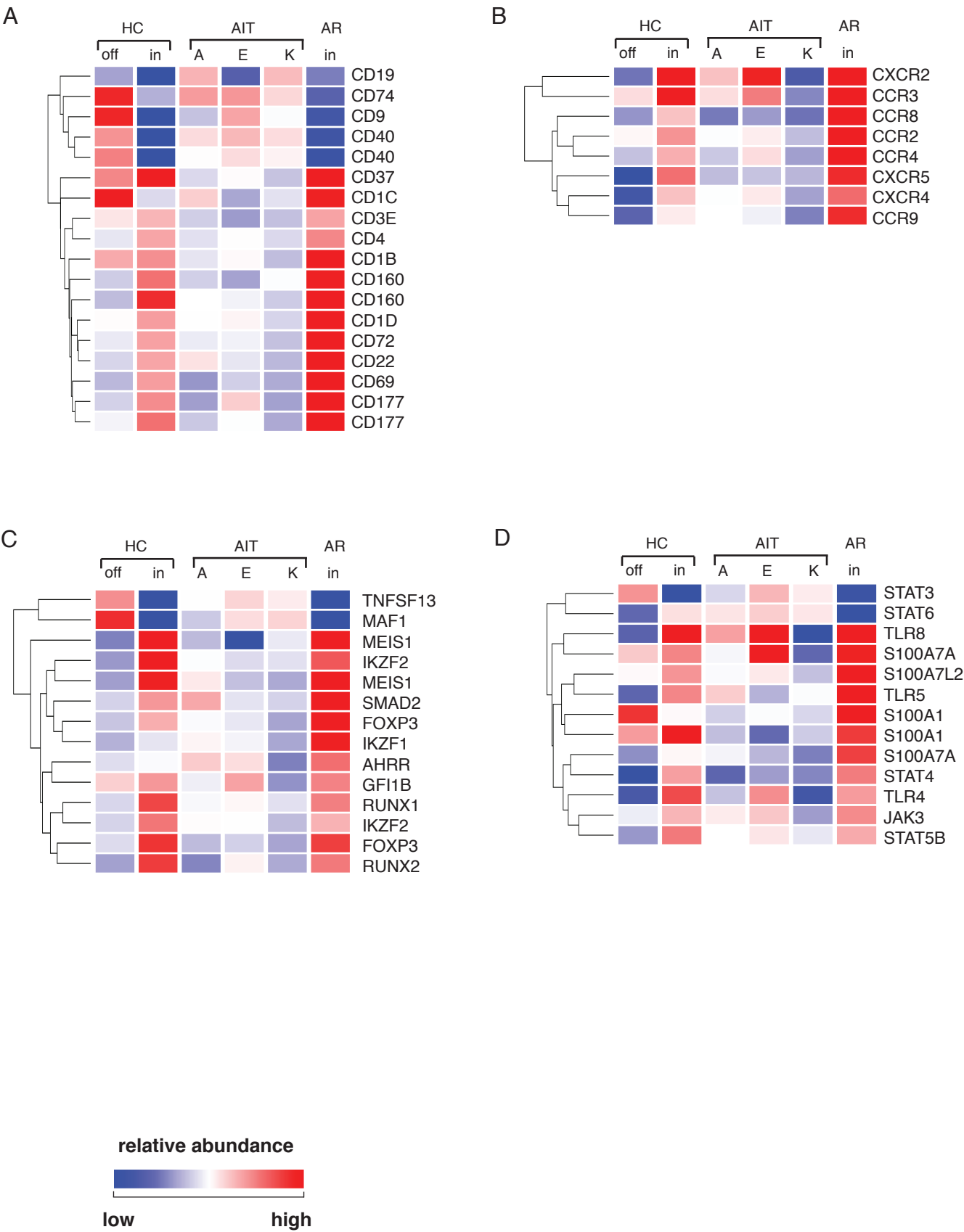
Zissler, Jakwerth et al.: "Early IL-10 producing B-cells and coinciding Th/Tr17 shifts during three year grass-pollen AIT", EBioMedicine 2018

Supplementary Table 1: Characteristics of the Patients in the PACIFIC Cohort (analysis set)

Characteristic	Immunotherapy Group n=32	Untreated Allergic Controls n=22	Non-Allergic Controls n=22
Age (years)*	25.59 ± 6.26	28,8 ± 7.90	26.36 ± 5.07
Male sex (%)	16 (50%)	13 (59%)	9 (41 %)
Skin Prick Test (positive %)			
-Grass	100%	100%	0 %
-Birch	63%	59%	0%
-House Dust Mite	28%	50%	0%
Total IgE	147.1 ± 167.1	224.9 ± 221.7	18.63 ± 19.67
Grass Specific IgE	32.74 ± 27.88	28.01 ± 33.73	0.00 ± 0.01
Birch Specific IgE	8.75 ± 15.9	12.81 ± 23.47	0.15 ± 0.16
House Dust Mite Specific IgE	2.85 ± 10.1	3.59 ± 5.46	0.10 ± 0.19
Allergic Asthma (%)	14 (44%)	10 (45%)	0%

Plus-Minus Values Indicate SD

*at informed consent procedure and inclusion into study



Supplementary Table 2.

ProbeName	GeneSymbol	Description	p	FC (abs)	Regulation
A_23_P156970	MEST	Homo sapiens mesoderm specific transcript (MEST), transcript variant 1, mRNA [NM_002402]	0,011607042	2,0149481	up
A_33_P3372084			0,00945053	1,5430456	up
A_23_P13438	BTBD10	Homo sapiens BTB (POZ) domain containing 10 (BTBD10), transcript variant 2, mRNA [NM_032320]	0,024133528	1,6203456	up
A_23_P79251	EHD3	Homo sapiens EH-domain containing 3 (EHD3), mRNA [NM_014600]	0,04195468	1,6344395	up
A_23_P165840	ODC1	Homo sapiens ornithine decarboxylase 1 (ODC1), transcript variant 1, mRNA [NM_002539]	0,008453772	1,7179368	up
A_33_P6803725		small nucleolar RNA host gene 1 (non-protein coding) [Source:HGNC Symbol;Acc:HGNC:32688] [ENST00000539303]	0,033918004	1,649444	up
A_32_P76720	NTSDC3	Homo sapiens 5'-nucleotidase domain containing 3 (NTSDC3), mRNA [NM_001031701]	0,014258123	1,8872323	up
A_24_P135322	NRP1	Homo sapiens neuropilin 1 (NRP1), transcript variant 3, mRNA [NM_001024629]	0,04305212	1,6097006	up
A_24_P65616	PVR	Homo sapiens poliovirus receptor (PVR), transcript variant 1, mRNA [NM_006505]	0,0449841	1,5047407	up
A_23_P97394	BCAR3	Homo sapiens breast cancer anti-estrogen resistance 3 (BCAR3), transcript variant 2, mRNA [NM_003567]	0,036321316	1,8436564	up
A_24_P391586	OAF	Homo sapiens OAF homolog (Drosophila) (OAF), mRNA [NM_178507]	0,012424463	1,9457822	up
A_23_P43415	HSD17B3	Homo sapiens hydroxysteroid (17-beta) dehydrogenase 3 (HSD17B3), mRNA [NM_000197]	0,033984438	2,1496146	up
A_23_P206077	AEN	Homo sapiens apoptosis enhancing nuclease (AEN), mRNA [NM_022767]	0,013253955	1,7656218	up
A_24_P213206		zinc finger protein 259 pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:13052] [ENST00000407656]	0,03588751	1,5062208	up
A_24_P102821	PTAFR	Homo sapiens platelet-activating factor receptor (PTAFR), transcript variant 3, mRNA [NM_000952]	0,014667489	1,7049115	up
A_24_P314179	ETS2	Homo sapiens v-ets avian erythroblastosis virus E26 oncogene homolog 2 (ETS2), transcript variant 1, mRNA [NM_005239]	0,004257246	1,711009	up
A_33_P3305840	SRSF7	Homo sapiens serine/arginine-rich splicing factor 7 (SRSF7), transcript variant 2, mRNA [NM_001195446]	0,014142474	1,6492505	up
A_33_P3279019	SERPINB13	Homo sapiens serpin peptidase inhibitor, clade B (ovalbumin), member 13 (SERPINB13), mRNA [NM_012397]	0,048209935	2,4990902	up
A_24_P411749	GPR126	Homo sapiens G protein-coupled receptor 126 (GPR126), transcript variant a1, mRNA [NM_020455]	0,036759283	1,7146261	up
A_23_P217379	COL4A6	Homo sapiens collagen, type IV, alpha 6 (COL4A6), transcript variant B, mRNA [NM_033641]	0,02245521	1,7589096	up
A_24_P303815	UHRF2	Homo sapiens ubiquitin-like with PHD and ring finger domains 2, E3 ubiquitin protein ligase (UHRF2), transcript variant 1, mRNA [NM_152896]	0,04004253	1,6141924	up
A_23_P94795	TEAD4	Homo sapiens TEA domain family member 4 (TEAD4), transcript variant 1, mRNA [NM_003213]	0,034516525	1,6951262	up
A_21_P0014911			0,008874301	1,9411974	up
A_23_P158318	ROR2	Homo sapiens receptor tyrosine kinase-like orphan receptor 2 (ROR2), mRNA [NM_004560]	0,036549076	1,8156828	up
A_23_P78871	KCTD15	Homo sapiens potassium channel tetramerization domain containing 15 (KCTD15), transcript variant 1, mRNA [NM_024076]	0,034340397	1,8956184	up
A_23_P134953	PLIN2	Homo sapiens perilipin 2 (PLIN2), transcript variant 1, mRNA [NM_0011122]	0,013506872	1,6275948	up
A_33_P3279526		argininosuccinate synthetase 1 pseudogene 11 [Source:HGNC Symbol;Acc:HGNC:761] [ENST00000441309]	0,030681308	1,6256175	up
A_33_P3219454			0,021728577	1,8627313	up
A_23_P216052	FAM83A	Homo sapiens family with sequence similarity 83, member A (FAM83A), transcript variant 1, mRNA [NM_032899]	0,013949309	2,1703916	up
A_23_P370989	MCM4	Homo sapiens minichromosome maintenance complex component 4 (MCM4), transcript variant 1, mRNA [NM_005914]	0,041488115	1,5869362	up
A_33_P3370226	RPL7	Homo sapiens ribosomal protein L7 (RPL7), mRNA [NM_000971]	0,032201573	1,5191872	up
A_23_P81492	RPS14	Homo sapiens ribosomal protein S14 (RPS14), transcript variant 1, mRNA [NM_001025071]	0,036798883	1,6282212	up
A_32_P135818	RPS3A	Homo sapiens ribosomal protein S3A (RPS3A), transcript variant 1, mRNA [NM_001006]	0,026075624	1,5720394	up
A_33_P3286481			0,01757361	1,9244163	up
A_23_P154643	BMP7	Homo sapiens bone morphogenetic protein 7 (BMP7), mRNA [NM_001719]	0,011206296	1,9913971	up
A_33_P6817603	IRF6	Homo sapiens interferon regulatory factor 6 (IRF6), transcript variant 1, mRNA [NM_006147]	0,03699362	1,5380913	up
A_23_P163682	RHBDF1	Homo sapiens rhomboid 5 homolog 1 (Drosophila) (RHBDF1), mRNA [NM_022450]	0,045325905	1,5389647	up
A_23_P42331	HMGAI1	Homo sapiens high mobility group AT-hook 1 (HMGAI1), transcript variant 3, mRNA [NM_145901]	0,0481459	1,5664438	up
A_24_P270814	CRK	Homo sapiens v-crk avian sarcoma virus CT10 oncogene homolog (CRK), transcript variant II, mRNA [NM_016823]	0,016590588	1,5138643	up
A_24_P928604			0,013856307	1,5167785	up
A_32_P230825			0,015586523	1,6557772	up
A_23_P212617	TFRC	Homo sapiens transferrin receptor (TFRC), transcript variant 1, mRNA [NM_003234]	0,0467698	1,5289218	up
A_24_P62615	CAP1	Homo sapiens CAP, adenylate cyclase-associated protein 1 (yeast) (CAP1), transcript variant 1, mRNA [NM_006367]	0,038603358	1,5537039	up
A_33_P3222783	SURF4	Homo sapiens surfet 4 (SURF4), transcript variant 4, mRNA [NM_001280790]	0,03855228	1,64193	up
A_23_P133814	HIST1H3C	Homo sapiens histone cluster 1, H3c (HIST1H3C), mRNA [NM_003531]	0,007785591	1,6841477	up
A_24_P82419	H3F3C	Homo sapiens H3 histone, family 3C (H3F3C), mRNA [NM_001013699]	0,010681438	1,6055875	up
A_32_P58074	RPS3A	Homo sapiens ribosomal protein S3A (RPS3A), transcript variant 1, mRNA [NM_001006]	0,021945622	1,5485743	up
A_23_P253029	BOK	Homo sapiens BCL2-related ovarian killer (BOK), mRNA [NM_032515]	0,040403374	1,6805	up
A_23_P42257	IER3	Homo sapiens immediate early response 3 (IER3), mRNA [NM_003897]	0,00532509	2,0654664	up
A_23_P118427	MAP2K3	Homo sapiens mitogen-activated protein kinase kinase 3 (MAP2K3), transcript variant B, mRNA [NM_145109]	0,021882765	1,6855791	up
A_23_P213153	HNRNPDL	Homo sapiens heterogeneous nuclear ribonucleoprotein D-like (HNRNPDL), transcript variant 2, mRNA [NM_031372]	0,008359366	1,5804733	up
A_24_P339071	CDR2	Homo sapiens cerebellar degeneration-related protein 2, 62kDa (CDR2), mRNA [NM_001802]	0,038994174	1,5899894	up
A_23_P200096	SPSB1	Homo sapiens spA/ryanodine receptor domain and SOCS box containing 1 (SPSB1), mRNA [NM_025106]	0,03567965	1,535261	up
A_24_P935782	ZNF121	Homo sapiens zinc finger protein 121 (ZNF121), mRNA [NM_001008727]	0,013230314	1,8048946	up
A_23_P168828	KLF10	Homo sapiens Kruppel-like factor 10 (KLF10), transcript variant 1, mRNA [NM_005655]	0,007321462	1,8980284	up
A_33_P3395321	HN1	Homo sapiens hematological and neurological expressed 1 (HN1), transcript variant 2, mRNA [NM_001002032]	0,006718831	1,8232956	up

A_33_P3337272	NRARP	Homo sapiens NOTCH-regulated ankyrin repeat protein (NRARP), mRNA [NM_001004354]	0,009642993	2,170234	up
A_23_P20494	NDRG1	Homo sapiens N-myc downstream regulated 1 (NDRG1), transcript variant 2, mRNA [NM_006096]	0,007238229	1,9955503	up
A_19_P00804020	TLE1	Homo sapiens transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila) (TLE1), transcript variant 3, mRNA [NM_001303104]	0,003527646	1,9258541	up
A_23_P121011	CSRNp1	Homo sapiens cysteine-serine-rich nuclear protein 1 (CSRNp1), mRNA [NM_033027]	7,68E-04	2,2397275	up
A_22_P00015052	SNHG15	Homo sapiens small nucleolar RNA host gene 15 (non-protein coding) (SNHG15), long non-coding RNA [NR_003697]	0,004074397	1,8917526	up
A_23_P29303	RRP7A	Homo sapiens ribosomal RNA processing 7 homolog A (S. cerevisiae) (RRP7A), mRNA [NM_015703]	0,014653273	1,7345017	up
A_33_P3361257	NOP16	Homo sapiens NOP16 nucleolar protein (NOP16), transcript variant 3, mRNA [NM_016391]	0,018523457	1,6491373	up
A_33_P3381265	CYB5R2	Homo sapiens cytochrome b5 reductase 2 (CYB5R2), transcript variant 1, mRNA [NM_001302826]	0,006575767	1,7266477	up
A_33_P3299761	KRT23	Homo sapiens keratin 23, type I (KRT23), transcript variant 1, mRNA [NM_015515]	0,023160817	1,9866947	up
A_24_P167642	GCH1	Homo sapiens GTP cyclohydrolase 1 (GCH1), transcript variant 1, mRNA [NM_000161]	0,008996061	1,7075541	up
A_23_P110879	TRAF3IP2	Homo sapiens TRAF3 interacting protein 2 (TRAF3IP2), transcript variant 2, mRNA [NM_147686]	0,028652495	1,5726397	up
A_23_P27167	RNASEH1	Homo sapiens ribonuclease H1 (RNASEH1), transcript variant 1, mRNA [NM_002936]	0,02218149	1,5226108	up
A_24_P376556	CYCS	Homo sapiens cytochrome c, somatic (CYCS), mRNA [NM_018947]	0,02423528	1,5958391	up
A_33_P3287815	DDX21	Homo sapiens DEAD (Asp-Glu-Ala-Asp) box helicase 21 (DDX21), transcript variant 2, mRNA [NM_001256910]	0,013285699	1,6800032	up
A_19_P00319981	LINC01503	Homo sapiens long intergenic non-protein coding RNA 1503 (LINC01503), transcript variant 1, long non-coding RNA [NR_120685]	0,038109355	1,7601373	up
A_23_P31896	ST3GAL1	Homo sapiens ST3 beta-galactoside alpha-2,3-sialyltransferase 1 (ST3GAL1), transcript variant 1, mRNA [NM_003033]	0,003308293	1,9403881	up
A_23_P311616	JMJD6	Homo sapiens jumonji domain containing 6 (JMJD6), transcript variant 2, mRNA [NM_015167]	0,0165786	1,5748429	up
A_23_P115375	HIST2H3D	Homo sapiens histone cluster 2, H3d (HIST2H3D), mRNA [NM_001123375]	0,013167881	1,5841205	up
A_23_P27133	KRT15	Homo sapiens keratin 15, type I (KRT15), mRNA [NM_002275]	0,04413291	4,3229403	up
A_23_P389897	NGFR	Homo sapiens nerve growth factor receptor (NGFR), mRNA [NM_002507]	0,042842895	3,611763	up
A_33_P3254460	DLK2	Homo sapiens delta-like 2 homolog (Drosophila) (DLK2), transcript variant 2, mRNA [NM_206539]	0,005096232	4,4961367	up
A_23_P138725	MARVELD1	Homo sapiens MARVEL domain containing 1 (MARVELD1), mRNA [NM_031484]	0,03536757	1,953652	up
A_24_P316489	NDUFA10	Homo sapiens NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 10, 42kDa (NDUFA10), mRNA [NM_004544]	0,028640263	1,5184101	up
A_23_P159227	ADAM15	Homo sapiens ADAM metallopeptidase domain 15 (ADAM15), transcript variant 1, mRNA [NM_207191]	0,036505647	1,5298797	up
A_22_P000169861	LRRC75A-AS1	Homo sapiens LRRC75A antisense RNA 1 (LRRC75A-AS1), transcript variant 27, long non-coding RNA [NR_045024]	0,048230432	1,5606402	up
A_23_P47077	BAG3	Homo sapiens BCL2-associated athanogene 3 (BAG3), mRNA [NM_004281]	0,001118159	1,9576869	up
A_33_P3268466	MPDU1	Homo sapiens mannose-P-dolichol utilization defect 1 (MPDU1), transcript variant 1, mRNA [NM_004870]	0,00918469	1,5951914	up
A_32_P119616	ETFA	Homo sapiens electron-transfer-flavoprotein, alpha polypeptide (ETFA), transcript variant 1, mRNA [NM_000126]	0,022448713	1,5150841	up
A_22_P00015377	TMEM265	Homo sapiens transmembrane protein 265 (TMEM265), mRNA [NM_001256829]	0,029513055	1,8339365	up
A_24_P194081	FXYP5	Homo sapiens FXYP domain containing ion transport regulator 5 (FXYP5), transcript variant 1, mRNA [NM_144779]	0,030881517	1,7249267	up
A_23_P149281	EPHA2	Homo sapiens EPH receptor A2 (EPHA2), mRNA [NM_004431]	4,67E-04	2,4136095	up
A_24_P241815	JUNB	Homo sapiens jun B proto-oncogene (JUNB), mRNA [NM_002229]	0,004860811	2,0173535	up
A_23_P212830	FGFR3	Homo sapiens fibroblast growth factor receptor 3 (FGFR3), transcript variant 1, mRNA [NM_000142]	0,008496546	2,2787576	up
A_23_P164011	SOX15	Homo sapiens SRY (sex determining region Y)-box 15 (SOX15), mRNA [NM_006942]	0,010604949	1,9789934	up
A_24_P379233	GJB3	Homo sapiens gap junction protein, beta 3, 31kDa (GJB3), transcript variant 1, mRNA [NM_024009]	1,66E-05	4,1059103	up
A_32_P231617	TM4SF1	Homo sapiens transmembrane 4 L six family member 1 (TM4SF1), mRNA [NM_014220]	0,040926944	2,4244816	up
A_23_P80832	TMEM41A	Homo sapiens transmembrane protein 41A (TMEM41A), mRNA [NM_080652]	0,001048801	2,0279741	up
A_24_P37409	DUSP2	Homo sapiens dual specificity phosphatase 2 (DUSP2), mRNA [NM_004418]	5,54E-04	2,6991255	up
A_23_P12147	C1orf74	Homo sapiens chromosome 1 open reading frame 74 (C1orf74), mRNA [NM_152485]	0,003324647	2,4551854	up
A_23_P252062	PPARG	Homo sapiens peroxisome proliferator-activated receptor gamma (PPARG), transcript variant 3, mRNA [NM_138711]	0,027422259	2,413961	up
A_23_P39185	RDH13	Homo sapiens retinol dehydrogenase 13 (all-trans/9-cis) (RDH13), transcript variant 2, mRNA [NM_138412]	0,013970641	1,666055	up
A_24_P210675	NDE1	Homo sapiens nudE neurodevelopment protein 1 (NDE1), transcript variant 2, mRNA [NM_017668]	0,023737988	1,8749943	up
A_24_P257971	SLC27A4	Homo sapiens solute carrier family 27 (fatty acid transporter), member 4 (SLC27A4), mRNA [NM_005094]	0,032222472	1,7952169	up
A_33_P3412143	RASSF10	Homo sapiens Ras association (RalGDS/AF-6) domain family (N-terminal) member 10 (RASSF10), mRNA [NM_001080521]	0,009070023	2,2262218	up
A_33_P3407937	PLCXD1	Homo sapiens phosphatidylinositol-specific phospholipase C, X domain containing 1 (PLCXD1), transcript variant 1, mRNA [NM_018390]	0,037215635	2,4209616	up
A_23_P76364	CD9	Homo sapiens CD9 molecule (CD9), mRNA [NM_001769]	0,020345954	1,8290863	up
A_33_P3412016	SEMA4B	Homo sapiens sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4B (SEMA4B), transcript variant 1, mRNA [NM_020210]	0,001912392	2,1134448	up
A_32_P44568	LDHA	Homo sapiens lactate dehydrogenase A (LDHA), transcript variant 1, mRNA [NM_005566]	0,011370267	1,8469297	up
A_23_P352870	PVRL2	Homo sapiens poliovirus receptor-related 2 (herpesvirus entry mediator B) (PVRL2), transcript variant alpha, mRNA [NM_002856]	0,001573643	2,044922	up
A_23_P140738	PIEZO1	Homo sapiens piezo-type mechanosensitive ion channel component 1 (PIEZO1), mRNA [NM_001142864]	0,04594216	1,6747665	up
A_22_P00015051	SNHG15	Homo sapiens small nucleolar RNA host gene 15 (non-protein coding) (SNHG15), long non-coding RNA [NR_003697]	0,005382456	1,8036618	up
A_24_P178093	TOMM40	Homo sapiens translocase of outer mitochondrial membrane 40 homolog (yeast) (TOMM40), transcript variant 3, mRNA [NM_006114]	0,016505742	1,5651994	up
A_23_P301877	MED27	Homo sapiens mediator complex subunit 27 (MED27), transcript variant 1, mRNA [NM_004269]	0,035910785	1,5128497	up
A_23_P254888	ZYX	Homo sapiens zyxin (ZYX), transcript variant 1, mRNA [NM_003461]	0,025079345	1,6939155	up
A_23_P148121	EHBP1L1	Homo sapiens EH domain binding protein 1-like 1 (EHBP1L1), mRNA [NM_001099409]	0,004407922	1,7575176	up
A_23_P163235	CKMT1A	Homo sapiens creatine kinase, mitochondrial 1A (CKMT1A), mRNA [NM_001015001]	0,043824732	1,5278958	up
A_23_P24311	ALDH3B2	Homo sapiens aldehyde dehydrogenase 3 family, member B2 (ALDH3B2), transcript variant 1, mRNA [NM_000695]	0,022667214	1,6964772	up
A_24_P50437		ribosomal protein S3a pseudogene 49 [Source:HGNC Symbol;Acc:HGNC:36810] [ENST00000472161]	0,033832036	1,5604613	up
A_24_P204244	ANXA2P1	Homo sapiens annexin A2 pseudogene 1 (ANXA2P1), non-coding RNA [NR_001562]	0,013328865	1,6427763	up

A_32_P230828	GASS	Homo sapiens growth arrest-specific 5 (non-protein coding) (GASS), long non-coding RNA [NR_002578]	0,014072452	1,683508	up
A_33_P3385488	RPS18	Homo sapiens ribosomal protein S18 (RPS18), mRNA [NM_022551]	0,010096754	1,723112	up
A_24_P135483	TSPAN14	Homo sapiens tetraspanin 14 (TSPAN14), transcript variant 1, mRNA [NM_030927]	0,023076419	1,8454384	up
A_32_P194115	SUN2	Homo sapiens Sad1 and UNC84 domain containing 2 (SUN2), transcript variant 2, mRNA [NM_015374]	0,012625909	1,8856288	up
A_33_P3366120	FLNA	Homo sapiens filamin A, alpha (FLNA), transcript variant 2, mRNA [NM_001110556]	0,004926413	2,247184	up
A_23_P258418	TNIP2	Homo sapiens TNFAIP3 interacting protein 2 (TNIP2), transcript variant 1, mRNA [NM_024309]	0,043506645	1,5387677	up
A_23_P95165	SEMA4B	Homo sapiens sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4B (SEMA4B), transcript variant 1, mRNA [NM_020210]	0,047495957	1,5314482	up
A_33_P3301095			0,0489078	2,221072	up
A_33_P3209591	AQP3	Homo sapiens aquaporin 3 (Gill blood group) (AQP3), mRNA [NM_004925]	0,032272153	1,9173737	up
A_33_P3268334	PGAM1	Homo sapiens phosphoglycerate mutase 1 (brain) (PGAM1), mRNA [NM_002629]	0,011508697	1,7577331	up
A_33_P3589217	SLC25A6	Homo sapiens solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 6 (SLC25A6), mRNA [NM_001636]	0,010689187	1,6529574	up
A_33_P3222210	ABHD17A	Homo sapiens abhydrolase domain containing 17A (ABHD17A), transcript variant 2, mRNA [NM_001130111]	0,044063885	1,5410627	up
A_24_P187651	CLN3	Homo sapiens ceroid-lipofuscinosis, neuronal 3 (CLN3), transcript variant 1, mRNA [NM_001042432]	0,036120705	1,6012694	up
A_24_P603890		solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 5 pseudogene 7 [Source:HGNC Symbol;Acc:HGNC:513] [ENST00000406156]	0,01958072	1,7383469	up
A_23_P351275	UPP1	Homo sapiens uridine phosphorylase 1 (UPP1), transcript variant 3, mRNA [NM_001287426]	0,04384489	2,2352982	up
A_33_P3259722	TMEM222	Homo sapiens transmembrane protein 222 (TMEM222), transcript variant 1, mRNA [NM_032125]	0,03892758	1,5309445	up
A_23_P70566	FKBP1	Homo sapiens FK506 binding protein like (FKBP1), mRNA [NM_022110]	0,03116547	1,7487029	up
A_23_P6398	AP1B1	Homo sapiens adaptor-related protein complex 1, beta 1 subunit (AP1B1), transcript variant 1, mRNA [NM_001127]	0,046850137	1,6931161	up
A_23_P92349	FGFRL1	Homo sapiens fibroblast growth factor receptor-like 1 (FGFRL1), transcript variant 1, mRNA [NM_001004356]	0,0475046	1,6486801	up
A_33_P3290403	IMP2	Homo sapiens inositol(myo)-1(or 4)-monophosphatase 2 (IMP2), mRNA [NM_014214]	0,020445228	1,7926259	up
A_24_P57367	AHCY	Homo sapiens adenosylhomocysteinase (AHCY), transcript variant 1, mRNA [NM_000687]	0,015274024	2,0521054	up
A_23_P397055	CHPF2	Homo sapiens chondroitin polymerizing factor 2 (CHPF2), transcript variant 1, mRNA [NM_019015]	0,0297718	1,5264707	up
A_24_P358131		keratin 18 pseudogene 52 [Source:HGNC Symbol;Acc:HGNC:37888] [ENST00000404956]	0,005805968	1,6880579	up
A_23_P38468	TAX1BP3	Homo sapiens Tax1 (human T-cell leukemia virus type I) binding protein 3 (TAX1BP3), transcript variant 1, mRNA [NM_014604]	0,014664833	1,8248665	up
A_24_P169843		keratin 18 pseudogene 28 [Source:HGNC Symbol;Acc:HGNC:33397] [ENST00000453838]	0,004266183	1,8575953	up
A_33_P3386723		keratin 18 pseudogene 64 [Source:HGNC Symbol;Acc:HGNC:48891] [ENST00000434946]	0,010965275	1,8717147	up
A_33_P3240295		keratin 18 pseudogene 26 [Source:HGNC Symbol;Acc:HGNC:33395] [ENST00000454475]	0,01819286	1,5046333	up
A_24_P256063		keratin 18 pseudogene 65 [Source:HGNC Symbol;Acc:HGNC:48892] [ENST00000439811]	0,010095356	1,6034863	up
A_24_P411121	TNFRSF18	Homo sapiens tumor necrosis factor receptor superfamily, member 18 (TNFRSF18), transcript variant 2, mRNA [NM_148901]	0,003219076	1,9945875	up
A_32_P156963	ACTG1	Homo sapiens actin gamma 1 (ACTG1), transcript variant 2, mRNA [NM_001614]	0,031592093	1,6175927	up
A_24_P168416	PRDX2	Homo sapiens peroxiredoxin 2 (PRDX2), mRNA [NM_005809]	0,033965338	1,5379373	up
A_33_P3408762	LMNA	Homo sapiens lamin A/C (LMNA), transcript variant 6, mRNA [NM_001282625]	0,016959287	1,7503483	up
A_33_P3222228	FUT6	Homo sapiens fucosyltransferase 6 (alpha (1,3) fucosyltransferase) (FUT6), transcript variant 1, mRNA [NM_000150]	0,033249978	1,9090841	up
A_24_P401601		keratin 18 pseudogene 40 [Source:HGNC Symbol;Acc:HGNC:33409] [ENST0000059859]	0,007002886	1,763251	up
A_24_P76546	WASF2	WASF protein family, member 2 [Source:HGNC Symbol;Acc:HGNC:12733] [ENST00000618852]	0,028282272	1,5492574	up
A_33_P3365002	TUBB2A	Homo sapiens tubulin, beta 2A class IIa (TUBB2A), mRNA [NM_001069]	0,010664565	1,6872818	up
A_33_P3398597	EPS8L1	Homo sapiens EPS8-like 1 (EPS8L1), transcript variant 1, mRNA [NM_133180]	0,03159498	1,57401	up
A_33_P3416767	MAFG	Homo sapiens v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog G (MAFG), transcript variant 2, mRNA [NM_032711]	0,01888118	1,668718	up
A_23_P80136	RRP1	Homo sapiens ribosomal RNA processing 1 (RRP1), mRNA [NM_003683]	0,04317259	1,5171347	up
A_23_P373708	KRT18P55	Homo sapiens keratin 18 pseudogene 55 (KRT18P55), non-coding RNA [NR_028334]	0,005821198	1,6788723	up
A_24_P247454		keratin 18 pseudogene 19 [Source:HGNC Symbol;Acc:HGNC:33387] [ENST00000395181]	0,005083944	1,6972775	up
A_33_P3423551	IER3	Homo sapiens immediate early response 3 (IER3), mRNA [NM_003897]	4,26E-04	2,3999455	up
A_21_P0012766	EVA1C	Homo sapiens eva-1 homolog C (C. elegans) (EVA1C), transcript variant 1, mRNA [NM_058187]	0,006444958	1,6135666	up
A_24_P42136	KRT18	Homo sapiens keratin 18, type I (KRT18), transcript variant 1, mRNA [NM_000224]	0,012756553	1,5140858	up
A_32_P155776	POTEKP	POTE ankyrin domain family, member K, pseudogene [Source:HGNC Symbol;Acc:HGNC:30182] [ENST00000397487]	0,044459987	1,5242507	up
A_24_P307065		activating transcription factor 4 pseudogene 3 [Source:HGNC Symbol;Acc:HGNC:788] [ENST00000433309]	0,009676216	1,6062417	up
A_24_P375683		ribosomal protein L7a pseudogene 11 [Source:HGNC Symbol;Acc:HGNC:35242] [ENST00000486538]	0,015744412	1,5918841	up
A_23_P202837	CCND1	Homo sapiens cyclin D1 (CCND1), mRNA [NM_053056]	0,028184133	1,5172812	up
A_23_P143662	PISD	Homo sapiens phosphatidylserine decarboxylase (PISD), mRNA [NM_014338]	0,012627221	1,9197557	up
A_24_P410017	POTEI	Homo sapiens POTE ankyrin domain family, member I (POTEI), mRNA [NM_001277406]	0,023091868	1,5745542	up
A_24_P76358			0,01944809	1,7170357	up
A_24_P238744	POTEM	Homo sapiens POTE ankyrin domain family, member M (POTEM), mRNA [NM_001145442]	0,022360826	1,5699248	up
A_32_P15320	EEF1A1	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1), mRNA [NM_001402]	0,033112105	1,5042075	up
A_23_P424561	RHOV	Homo sapiens ras homolog family member V (RHOV), mRNA [NM_133639]	0,041328978	1,5985779	up
A_24_P383330			0,020462105	1,5704387	up
A_24_P84048		ribosomal protein S3 pseudogene 6 [Source:HGNC Symbol;Acc:HGNC:36061] [ENST00000487417]	0,016957333	1,567579	up
A_32_P182941	RPS3	Homo sapiens ribosomal protein S3 (RPS3), transcript variant 1, mRNA [NM_001005]	0,014535103	1,5697213	up
A_23_P75811	SLC3A2	Homo sapiens solute carrier family 3 (amino acid transporter heavy chain), member 2 (SLC3A2), transcript variant 2, mRNA [NM_001012662]	0,028831823	1,5217894	up
A_33_P3210909	SEC13	Homo sapiens SEC13 homolog (S. cerevisiae) (SEC13), transcript variant 5, mRNA [NM_001278946]	0,021194087	1,5238111	up

A_23_P104318	DDIT4	Homo sapiens DNA-damage-inducible transcript 4 (DDIT4), mRNA [NM_019058]	0,03438697	1,6173018	down
A_23_P77529	MSLN	Homo sapiens mesothelin (MSLN), transcript variant 1, mRNA [NM_005823]	0,04537219	1,5663283	down
A_23_P42198	HIST1H3G	Homo sapiens histone cluster 1, H3g (HIST1H3G), mRNA [NM_003534]	0,03266457	1,656291	up
A_33_P3313401	CYCS	Homo sapiens cytochrome c, somatic (CYCS), mRNA [NM_018947]	0,018588917	1,6360325	up
A_33_P3357669			0,020861724	1,5057344	up
A_32_P193288	RPL18A	Homo sapiens ribosomal protein L18a (RPL18A), mRNA [NM_000980]	0,011407726	1,5474775	up
A_23_P76034	PVRL1	Homo sapiens poliovirus receptor-related 1 (herpesvirus entry mediator C) (PVRL1), transcript variant 3, mRNA [NM_203286]	0,013498321	1,9417315	up
A_21_P0011306	SYNGR2	Homo sapiens synaptogyrin 2 (SYNGR2), mRNA [NM_004710]	0,020610558	1,541575	up
A_33_P3280213	CTSA	Homo sapiens cathepsin A (CTSA), transcript variant 2, mRNA [NM_001127695]	0,034291223	1,5023845	up
A_24_P135501		Q5T8U4_HUMAN (Q5T8U4) Ribosomal protein L7a, partial (94%) [THC2577892]	0,02007561	1,5663446	up
A_33_P3378880	HIST1H4C	histone cluster 1, H4c [Source:HGNC Symbol;Acc:HGNC:4787] [ENST00000377803]	0,028897043	1,5361382	up
A_24_P48495	LYPD3	Homo sapiens LY6/PLAUR domain containing 3 (LYPD3), mRNA [NM_014400]	0,010576166	6,01013	up
A_23_P366936	KRT6C	Homo sapiens keratin 6C, type II (KRT6C), mRNA [NM_173086]	0,01630103	7,4602256	up
A_33_P3857239	KRT42P	Homo sapiens keratin 42 pseudogene (KRT42P), non-coding RNA [NR_033415]	0,004665856	4,882703	up
A_24_P887857		keratin 17 pseudogene 3 [Source:HGNC Symbol;Acc:HGNC:33697] [ENST00000420566]	0,01718749	4,4385314	up
A_33_P3345534	KRT14	Homo sapiens keratin 14, type I (KRT14), mRNA [NM_000526]	0,018453429	4,1524434	up
A_32_P62963	KRT16P2	Homo sapiens keratin 16 pseudogene 2 (KRT16P2), non-coding RNA [NR_029392]	0,021521728	5,0539894	up
A_32_P76627		keratin 16 pseudogene 6 [Source:HGNC Symbol;Acc:HGNC:50719] [ENST00000417510]	0,033760656	3,8790445	up
A_33_P3306264	LYPD3	Homo sapiens LY6/PLAUR domain containing 3 (LYPD3), mRNA [NM_014400]	0,029691791	4,1455836	up
A_23_P353524	IVL	Homo sapiens involucrin (IVL), mRNA [NM_005547]	0,04841345	5,1965485	up
A_23_P38537	KRT16	Homo sapiens keratin 16, type I (KRT16), mRNA [NM_005557]	0,0287398	5,4232097	up
A_33_P3221293	DFNA5	Homo sapiens deafness, autosomal dominant 5 (DFNA5), transcript variant 1, mRNA [NM_004403]	0,00996786	3,0402253	up
A_23_P139912	IGFBP6	Homo sapiens insulin-like growth factor binding protein 6 (IGFBP6), mRNA [NM_002178]	0,04476436	3,531218	up
A_24_P882732		keratin 17 pseudogene 2 [Source:HGNC Symbol;Acc:HGNC:6429] [ENST00000300992]	0,014788931	3,9292278	up
A_23_P96158	KRT17	Homo sapiens keratin 17, type I (KRT17), mRNA [NM_000422]	0,021618053	3,4261003	up
A_24_P91566	BMP7	Homo sapiens bone morphogenetic protein 7 (BMP7), mRNA [NM_001719]	0,00253111	3,9728656	up
A_21_P0011578		keratin 17 pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:6428] [ENST00000577449]	0,00534881	4,5764923	up
A_33_P3390086			0,036858525	4,625217	up
A_33_P3319900	PRG1	Homo sapiens p53-responsive gene 1 (PRG1), long non-coding RNA [NR_026881]	0,043162365	3,0231838	up
A_22_P00001128		Homo sapiens cDNA FLJ36047 fis, clone TESTI2017951. [AK093366]	0,034357272	2,1604178	up
A_33_P3313899	LINC01433	Homo sapiens long intergenic non-protein coding RNA 1433 (LINC01433), long non-coding RNA [NR_033917]	0,027862296	2,1126645	up
A_23_P34597	CDA	Homo sapiens cytidine deaminase (CDA), mRNA [NM_001785]	0,0336556	2,0943801	up
A_24_P131066	CD101	Homo sapiens CD101 molecule (CD101), transcript variant 1, mRNA [NM_004258]	6,73E-04	2,3782363	up
A_24_P925799		T cell receptor beta variable 7-4 (gene/pseudogene) [Source:HGNC Symbol;Acc:HGNC:12238] [ENST00000390369]	0,035878275	1,8615371	up
A_22_P00024766	lnc-EGLN1-1	LNCipedia lincRNA (lnc-EGLN1-1), lincRNA [lnc-EGLN1-1:4]	0,021429235	2,0552974	up
A_33_P3325502	ARHGAP29	Homo sapiens Rho GTPase activating protein 29 (ARHGAP29), mRNA [NM_004815]	0,042427294	2,1017926	up
A_33_P3280561	KRTAP16-1	Homo sapiens keratin associated protein 16-1 (KRTAP16-1), mRNA [NM_001146182]	0,046994757	1,7957838	up
A_23_P101905	APC2	Homo sapiens adenomatosis polyposis coli 2 (APC2), mRNA [NM_005883]	0,03217924	2,0437045	up
A_33_P3232080	CD177	Homo sapiens CD177 molecule (CD177), mRNA [NM_020406]	0,01262649	1,7881742	up
A_23_P92161	ARL14	Homo sapiens ADP-ribosylation factor-like 14 (ARL14), mRNA [NM_025047]	0,04191899	2,4141805	up
A_33_P3292769	NFAM1	Homo sapiens NFAT activating protein with ITAM motif 1 (NFAM1), mRNA [NM_145912]	0,04734148	1,9874051	up
A_33_P3331307	CDC42EP3	Homo sapiens CDC42 effector protein (Rho GTPase binding) 3 (CDC42EP3), transcript variant 1, mRNA [NM_006449]	0,011583241	1,8523734	up
A_21_P0006941	LOC102723337	PREDICTED: Homo sapiens uncharacterized LOC102723337 (LOC102723337), transcript variant X1, ncRNA [XR_424194]	0,04022304	1,6764148	up
A_22_P00013946	lnc-RSL1D1-2	Homo sapiens FP1523 mRNA, complete cds. [AF447869]	0,013666604	2,2435546	up
A_22_P00015211		602460147F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4577075 5', mRNA sequence [BG333495]	0,027288174	2,2392614	up
A_21_P0010727	FCGR1A	Fc fragment of IgG, high affinity Ia, receptor (CD64) [Source:HGNC Symbol;Acc:HGNC:3613] [ENST00000489479]	0,025893988	2,2422864	up
A_22_P00023703	LOC100130548	PREDICTED: Homo sapiens uncharacterized LOC100130548 (RP11-374P20.4), transcript variant X1, misc_RNA [XR_110579]	0,024015395	4,6450343	up
A_22_P00018877	lnc-PTPN3-2	Q2XDP3_PSEPU (Q2XDP3) Cation efflux protein, partial (7%) [THC2679866]	0,010672594	2,6082973	up
A_23_P39931	DYSF	Homo sapiens dysferlin (DYSF), transcript variant 8, mRNA [NM_003494]	0,002328805	2,361189	up
A_33_P3297415	NRP2	Homo sapiens neuropilin 2 (NRP2), transcript variant 6, mRNA [NM_201264]	0,00423565	2,3320389	up
A_22_P00015502	lnc-STAT1-1	w027e07.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2456580 3', mRNA sequence [AI921603]	0,041031167	1,9155134	up
A_23_P345118	PIM1	Homo sapiens Pim-1 proto-oncogene, serine/threonine kinase (PIM1), transcript variant 1, mRNA [NM_002648]	0,02116258	1,825511	up
A_33_P3223002	CSAR2	Homo sapiens complement component 5a receptor 2 (CSAR2), transcript variant 1, mRNA [NM_001271749]	0,018930076	2,661357	up
A_24_P406601	OLFM1	Homo sapiens olfactomedin 1 (OLFM1), transcript variant 1, mRNA [NM_014279]	0,044352114	2,465276	up
A_33_P3514487	VSTM1	Homo sapiens V-set and transmembrane domain containing 1 (VSTM1), transcript variant 1, mRNA [NM_198481]	0,031132959	2,4012358	up
A_22_P00014533	LINC00313	Homo sapiens long intergenic non-protein coding RNA 313 (LINC00313), long non-coding RNA [NR_026863]	0,02135107	2,0464973	up
A_23_P140928	TMC7	Homo sapiens transmembrane channel-like 7 (TMC7), transcript variant 1, mRNA [NM_024847]	0,017961103	2,2235596	up
A_33_P3269109	GUCY1A3	guanylate cyclase 1, soluble, alpha 3 [Source:HGNC Symbol;Acc:HGNC:4685] [ENST00000512983]	0,013939962	2,2477436	up
A_22_P00017169		BC024076 Mgea6 protein {Mus musculus} (exp=-1; wgp=0; cg=0), partial (8%) [THC2716325]	0,014156806	2,2621481	up

A_32_P113812	Inc-EIF2D-1	Q9HBY7_HUMAN (Q9HBY7) Regulatory erythroid kinase long form [THC2689950]	0,042006146	1,8588502	up
A_19_P00318848	MRPL23-AS1	Homo sapiens MRPL23 antisense RNA 1 (MRPL23-AS1), long non-coding RNA [NR_024471]	0,009648445	1,9700223	up
A_21_P0014614			0,044359848	1,7282802	up
A_21_P0010062	Inc-CBLN4-1	LNCipedia lincRNA (Inc-CBLN4-1), lincRNA [Inc-CBLN4-1:1]	0,039458703	2,027041	up
A_23_P3227329	AMER1	Homo sapiens APC membrane recruitment protein 1 (AMER1), mRNA [NM_152424]	0,04386821	1,87868	up
A_23_P398566	NR4A3	Homo sapiens nuclear receptor subfamily 4, group A, member 3 (NR4A3), transcript variant 3, mRNA [NM_173200]	0,04361587	1,942633	up
A_33_P3556532	DNAH17	dynein, axonemal, heavy chain 17 [Source:HGNC Symbol;Acc:HGNC:2946] [ENST00000587177]	0,029361142	1,7362833	up
A_22_P00007762	Inc-HMOX1-1	LNCipedia lincRNA (Inc-HMOX1-1), lincRNA [Inc-HMOX1-1:1]	0,04903053	1,558625	up
A_33_P3248354	OLFM1	Homo sapiens olfactomedin 1 (OLFM1), transcript variant 2, mRNA [NM_006334]	0,040806137	2,2994752	up
A_23_P126212	CLSPN	Homo sapiens claspin (CLSPN), transcript variant 1, mRNA [NM_022111]	0,023162434	2,4952822	up
A_23_P141505	CLEC10A	Homo sapiens C-type lectin domain family 10, member A (CLEC10A), transcript variant 1, mRNA [NM_182906]	0,023110991	1,9151704	up
A_23_P386320	MF12	Homo sapiens antigen p97 (melanoma associated) identified by monoclonal antibodies 133.2 and 96.5 (MF12), transcript variant 2, mRNA [NM_033316]	0,03273848	2,1042266	up
A_23_P119835	NLRC4	Homo sapiens NLR family, CARD domain containing 4 (NLRC4), transcript variant 1, mRNA [NM_021209]	0,031583667	2,4757528	up
A_23_P46936	EGR2	Homo sapiens early growth response 2 (EGR2), transcript variant 1, mRNA [NM_000399]	0,021253273	2,6422293	up
A_21_P0014836		Q5TBT5_HUMAN (Q5TBT5) OTTHUMP00000018489 (Fragment), partial (53%) [THC2608998]	0,002423097	3,313696	up
A_22_P00015532	Inc-STK24-1	LNCipedia lincRNA (Inc-STK24-1), lincRNA [Inc-STK24-1:1]	0,019496433	3,0962434	up
A_24_P110831	ANO1	anoctamin 1, calcium activated chloride channel [Source:HGNC Symbol;Acc:HGNC:21625] [ENST00000316296]	0,049719818	2,8569756	up
A_21_P0008156	Inc-TPT1-1	LNCipedia lincRNA (Inc-TPT1-1), lincRNA [Inc-TPT1-1:1]	0,012875601	3,1517828	up
A_21_P0008726	Inc-FSIP1-5	LNCipedia lincRNA (Inc-FSIP1-5), lincRNA [Inc-FSIP1-5:7]	0,02127589	2,5121095	up
A_22_P00002412			0,004480172	2,080854	up
A_22_P00016748		Homo sapiens cDNA clone IMAGE:4837974. [BC039108]	0,038756117	1,8711221	up
A_22_P00013971	Inc-RTN2-1	LNCipedia lincRNA (Inc-RTN2-1), lincRNA [Inc-RTN2-1:1]	0,021556187	3,2354498	up
A_22_P00007448	LNK1-AS2	Homo sapiens LNK1 antisense RNA 2 (LNK1-AS2), long non-coding RNA [NR_046827]	0,04542989	1,6165973	up
A_22_P00006364		AGENCOURT_7977260 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6215966 5', mRNA sequence [BQ707656]	0,00725492	3,4504395	up
A_21_P0001002	SLC16A1-AS1	Homo sapiens SLC16A1 antisense RNA 1 (SLC16A1-AS1), transcript variant 2, long non-coding RNA [NR_103744]	0,04135892	1,6361095	up
A_22_P00016351			0,045866802	2,047654	up
A_33_P3229918	PTCRA	Homo sapiens pre T-cell antigen receptor alpha (PTCRA), transcript variant 1, mRNA [NM_001243168]	0,01568072	2,5021577	up
A_21_P0012081		MIR4435-1 host gene (non-protein coding) [Source:HGNC Symbol;Acc:HGNC:35163] [ENST00000439494]	0,046175756	1,9097502	up
A_21_P0006940	Inc-GPR123-2	LNCipedia lincRNA (Inc-GPR123-2), lincRNA [Inc-GPR123-2:1]	0,02141394	2,1167886	up
A_21_P0014702	LOC102724791	PREDICTED: Homo sapiens uncharacterized LOC102724791 (LOC102724791), ncRNA [XR_426874]	0,025890607	2,0173671	up
A_33_P3650353	SNORA33	wm38b12.x1 NCI_CGAP_Ut4 Homo sapiens cDNA clone IMAGE:2438207 3' similar to gb:X53505 405 RIBOSOMAL PROTEIN S12 (HUMAN);, mRNA sequence [AI887274]	0,007567481	2,39547	up
A_22_P00002808	PCBP1-AS1	Homo sapiens PCBP1 antisense RNA 1 (PCBP1-AS1), long non-coding RNA [NR_033872]	0,014507763	2,1850448	up
A_33_P3212375	Inc-ZNF117-1	PREDICTED: Homo sapiens uncharacterized LOC441239 (RP11-797H7.5), mRNA [XM_006710182]	0,045461893	1,6740742	up
A_23_P301942	NPPC	Homo sapiens natriuretic peptide C (NPPC), mRNA [NM_024409]	0,042973317	1,5248302	up
A_21_P0014725		DKFZp78110659_r1 781 (synonym: hlcc4) Homo sapiens cDNA clone DKFZp78110659 5', mRNA sequence [BX954921]	0,018816281	1,6528828	up
A_33_P3365117	AKR1C1	aldo-keto reductase family 1, member C1 [Source:HGNC Symbol;Acc:HGNC:384] [ENST00000380859]	0,020836072	1,892169	up
A_33_P3333436	SGSM3	small G protein signaling modulator 3 [Source:HGNC Symbol;Acc:HGNC:25228] [ENST00000478085]	0,023472456	1,6152036	up
A_22_P00011278	LOC101927120	Homo sapiens uncharacterized LOC101927120 (LOC101927120), transcript variant 1, long non-coding RNA [NR_110136]	0,006608223	2,4560387	up
A_22_P00003769	Inc-CDK17-1	LNCipedia lincRNA (Inc-CDK17-1), lincRNA [Inc-CDK17-1:1]	0,018889576	2,9163854	up
A_23_P134835	CSGALNACT1	Homo sapiens chondroitin sulfate N-acetylgalactosaminyltransferase 1 (CSGALNACT1), transcript variant 2, mRNA [NM_018371]	0,034272052	2,6191456	up
A_33_P3404316	MIR100HG	Homo sapiens mir-100-let-7a-2 cluster host gene (non-protein coding) (MIR100HG), long non-coding RNA [NR_024430]	0,005391606	2,547211	up
A_23_P319557		long intergenic non-protein coding RNA 334 [Source:HGNC Symbol;Acc:HGNC:16425] [ENST00000328344]	0,027849803	1,7546375	up
A_21_P0013688	XLOC_I2_015418	BROAD Institute lincRNA (XLOC_I2_015418), lincRNA [TCONS_I2_00029647]	0,031591516	1,5257919	up
A_33_P3286754	SEC14L2	Homo sapiens SEC14-like 2 (S. cerevisiae) (SEC14L2), transcript variant 2, mRNA [NM_033382]	0,002997409	2,7635026	up
A_33_P3374258	NHLH2	nescent helix loop helix 2 [Source:HGNC Symbol;Acc:HGNC:7818] [ENST00000369506]	0,027409969	1,565404	up
A_33_P3334102	ARHGAP27	Homo sapiens Rho GTPase activating protein 27 (ARHGAP27), transcript variant 3, mRNA [NM_174919]	0,04265051	1,669092	up
A_21_P0011183	XLOC_I2_003992	BROAD Institute lincRNA (XLOC_I2_003992), lincRNA [TCONS_I2_00007201]	0,027053762	2,0087795	up
A_33_P3277373	OSM	Homo sapiens oncostatin M (OSM), mRNA [NM_020530]	0,015274134	2,3787184	up
A_22_P00024607			0,031884536	1,9910024	up
A_21_P0003892			0,019161833	1,7509024	up
A_22_P00020165	Inc-CTS2-1	LNCipedia lincRNA (Inc-CTS2-1), lincRNA [Inc-CTS2-1:1]	0,015763829	1,697418	up
A_22_P00001247	LINC01336	Homo sapiens long intergenic non-protein coding RNA 1336 (LINC01336), long non-coding RNA [NR_126375]	0,028958987	1,6790065	up
A_22_P00015588	LOC102724791	PREDICTED: Homo sapiens uncharacterized LOC102724791 (LOC102724791), ncRNA [XR_426874]	0,04497638	1,873375	up
A_33_P3236020	TIMD4	Homo sapiens T-cell immunoglobulin and mucin domain containing 4 (TIMD4), transcript variant 1, mRNA [NM_138379]	0,027269004	1,9438436	up
A_19_P00321383			0,010126105	2,6447039	up
A_24_P274814	TBXAS1	Homo sapiens thromboxane A synthase 1 (platelet) (TBXAS1), transcript variant 2, mRNA [NM_030984]	0,012184918	1,8102224	up
A_33_P3283044	MTCL1	Homo sapiens microtubule crosslinking factor 1 (MTCL1), mRNA [NM_015210]	0,042412594	1,903649	up
A_33_P3215198	CMPK2	Homo sapiens cytidine monophosphate (UMP-CMP) kinase 2, mitochondrial (CMPK2), transcript variant 2, mRNA [NM_001256477]	0,018199464	1,8052013	up
A_22_P00023168	Inc-SERAC1-3	LNCipedia lincRNA (Inc-SERAC1-3), lincRNA [Inc-SERAC1-3:2]	0,032335833	1,7536377	up

A_22_P00000636			0,033082414	3,0120761	up
A_23_P256821	CR1	Homo sapiens complement component (3b/4b) receptor 1 (Knops blood group) (CR1), transcript variant S, mRNA [NM_000651]	0,01988732	2,1879911	up
A_24_P348265	FCAR	Homo sapiens Fc fragment of IgA, receptor for (FCAR), transcript variant 3, mRNA [NM_133271]	0,03761398	3,3975067	up
A_24_P260101	MME	Homo sapiens membrane metallo-endopeptidase (MME), transcript variant 2b, mRNA [NM_007289]	0,030829038	3,010254	up
A_33_P3298810	FFAR3	Homo sapiens free fatty acid receptor 3 (FFAR3), mRNA [NM_005304]	0,047888074	3,4092836	up
A_23_P216225	EGR3	Homo sapiens early growth response 3 (EGR3), transcript variant 1, mRNA [NM_004430]	0,012373541	4,686115	up
A_23_P211039	ADAMTS1	Homo sapiens ADAM metallopeptidase with thrombospondin type 1 motif, 1 (ADAMTS1), mRNA [NM_006988]	0,011060637	3,763963	up
A_22_P00005079	lnc-DEXI-2	LNCipedia lincRNA (lnc-DEXI-2), lincRNA [lnc-DEXI-2:1]	0,017186	3,5398448	up
A_33_P3242453	HCG22	Homo sapiens HLA complex group 22 (HCG22), long non-coding RNA [NR_003948]	0,03110629	2,9588304	up
A_23_P133408	CSF2	Homo sapiens colony stimulating factor 2 (granulocyte-macrophage) (CSF2), mRNA [NM_000758]	0,00771232	4,223179	up
A_32_P189781	LINC00520	Homo sapiens long intergenic non-protein coding RNA 520 (LINC00520), transcript variant 1, long non-coding RNA [NR_026796]	0,007482023	3,9454072	up
A_32_P524904	C11orf86	Homo sapiens chromosome 11 open reading frame 86 (C11orf86), mRNA [NM_001136485]	0,03133485	2,870085	up
A_33_P3298206	PPP4R4	Homo sapiens protein phosphatase 4, regulatory subunit 4 (PPP4R4), transcript variant 2, mRNA [NM_020958]	0,028106812	2,6351101	up
A_33_P3390013	ADAMTS1	Homo sapiens ADAM metallopeptidase with thrombospondin type 1 motif, 1 (ADAMTS1), mRNA [NM_006988]	0,025936875	2,6759386	up
A_23_P132763	VGLL3	Homo sapiens vestigial-like family member 3 (VGLL3), mRNA [NM_016206]	0,01886959	2,1083543	up
A_32_P213831	STRIP2	Homo sapiens striatin interacting protein 2 (STRIP2), transcript variant 1, mRNA [NM_020704]	0,018907504	2,2234056	up
A_22_P00009038	lnc-LDHC-1	LNCipedia lincRNA (lnc-LDHC-1), lincRNA [lnc-LDHC-1:1]	0,013543624	2,4999502	up
A_33_P3226955		Q5JWQ5_HUMAN (Q5JWQ5) Neuropilin 1 (Fragment), partial (93%) [THC2768644]	0,047917716	1,8540843	up
A_21_P0000097	PAFAH1B2	Homo sapiens platelet-activating factor acetylhydrolase 1b, catalytic subunit 2 (30kDa) (PAFAH1B2), transcript variant 2, mRNA [NM_001184746]	0,004081552	2,023233	up
A_22_P00002373	lnc-C12orf62-1	LNCipedia lincRNA (lnc-C12orf62-1), lincRNA [lnc-C12orf62-1:1]	0,044790745	2,148887	up
A_22_P00007835	LOC101927942	PREDICTED: Homo sapiens uncharacterized LOC101927942 (LOC101927942), transcript variant X2, ncRNA [XR_249525]	0,040380236	2,6352417	up
A_32_P167076	CAPN14	Homo sapiens calpain 14 (CAPN14), mRNA [NM_001145122]	0,027740577	3,435375	up
A_23_P324754	CEMIP	Homo sapiens cell migration inducing protein, hyaluronan binding (CEMIP), transcript variant 3, mRNA [NM_018689]	0,029434336	2,9979227	up
A_23_P10206	HAS2	Homo sapiens hyaluronan synthase 2 (HAS2), mRNA [NM_005328]	0,015539394	3,660266	up
A_24_P335620	SLC7A5	Homo sapiens solute carrier family 7 (amino acid transporter light chain, L system), member 5 (SLC7A5), mRNA [NM_003486]	0,001343466	2,4841883	up
A_23_P34382	CLCA3P	Homo sapiens chloride channel accessory 3, pseudogene (CLCA3P), non-coding RNA [NR_024604]	0,009486448	4,066263	up
A_23_P4773	LILRB5	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 5 (LILRB5), transcript variant 2, mRNA [NM_006840]	0,017840927	3,1359422	up
A_23_P118392	RASD1	Homo sapiens RAS, dexamethasone-induced 1 (RASD1), transcript variant 1, mRNA [NM_016084]	0,013529775	2,136681	up
A_19_P00320996		microRNA 29b-1 [Source:HGNC Symbol;Acc:HGNC:31619] [ENST00000418546]	4,58E-04	2,4073217	up
A_23_P49674	ARHGEF15	Homo sapiens Rho guanine nucleotide exchange factor (GEF) 15 (ARHGEF15), transcript variant 1, mRNA [NM_173728]	0,043618336	1,824516	up
A_23_P368711	LILRA6	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 6 (LILRA6), transcript variant 1, mRNA [NM_024318]	0,020471187	1,7855527	up
A_24_P51909	CPLX1	Homo sapiens complexin 1 (CPLX1), mRNA [NM_006651]	0,03139059	1,8145242	up
A_23_P133739	HUS1B	Homo sapiens HUS1 checkpoint homolog b (S. pombe) (HUS1B), mRNA [NM_148959]	0,006727189	1,8419659	up
A_23_P365738	ARC	Homo sapiens activity-regulated cytoskeleton-associated protein (ARC), mRNA [NM_015193]	0,025118966	2,462235	up
A_24_P371281	SLC35G2	Homo sapiens solute carrier family 35, member G2 (SLC35G2), transcript variant 1, mRNA [NM_025246]	0,003619093	4,06006	up
A_23_P2745	GJB6	Homo sapiens gap junction protein, beta 6, 30kDa (GJB6), transcript variant 3, mRNA [NM_006783]	3,37E-04	3,5871658	up
A_23_P7866	GPR115	Homo sapiens G protein-coupled receptor 115 (GPR115), mRNA [NM_153838]	0,039104767	2,7522898	up
A_33_P3258617	PLIN2	perilipin 2 [Source:HGNC Symbol;Acc:HGNC:248] [ENST00000380464]	5,21E-04	3,007589	up
A_33_P3271455	PXDN	Homo sapiens peroxidasin (PXDN), mRNA [NM_012293]	0,016870925	3,6825378	up
A_33_P3238166	PXDN	Homo sapiens peroxidasin (PXDN), mRNA [NM_012293]	0,028888894	2,9186587	up
A_23_P74001	S100A12	Homo sapiens S100 calcium binding protein A12 (S100A12), mRNA [NM_005621]	0,042833738	3,2761095	up
A_33_P3385785	S100A12	Homo sapiens S100 calcium binding protein A12 (S100A12), mRNA [NM_005621]	0,042191297	3,2799456	up
A_22_P00000104	lnc-NDPIP-13	Homo sapiens cDNA: FLJ20903 fis, clone ADSE00222. [AK024556]	0,002471869	3,2870388	up
A_23_P214821	EDN1	Homo sapiens endothelin 1 (EDN1), transcript variant 1, mRNA [NM_001955]	0,005796804	4,5929594	up
A_23_P207058	SOCS3	Homo sapiens suppressor of cytokine signaling 3 (SOCS3), mRNA [NM_003955]	0,015984882	3,055215	up
A_23_P214080	EGR1	Homo sapiens early growth response 1 (EGR1), mRNA [NM_001964]	0,001109144	2,8744447	up
A_33_P3397599	LILRA6	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 6 (LILRA6), transcript variant 2, non-coding RNA [NR_104098]	0,011082497	2,7049856	up
A_23_P408094	MXD1	Homo sapiens MAX dimerization protein 1 (MXD1), transcript variant 1, mRNA [NM_002357]	0,040289253	2,299645	up
A_24_P418408	FAM89A	Homo sapiens family with sequence similarity 89, member A (FAM89A), mRNA [NM_198552]	0,011360649	2,522593	up
A_21_P0006537			0,004297671	3,8114963	up
A_23_P393034	HAS3	Homo sapiens hyaluronan synthase 3 (HAS3), transcript variant 1, mRNA [NM_005329]	0,00140936	5,0472403	up
A_24_P305933	TMCC3	Homo sapiens transmembrane and coiled-coil domain family 3 (TMCC3), transcript variant 1, mRNA [NM_020698]	0,002168046	4,0046096	up
A_33_P332388	SPRR2D	Homo sapiens small proline-rich protein 2D (SPRR2D), mRNA [NM_006945]	0,027781997	2,8543093	up
A_22_P00010261	lnc-MTHFD2L-1	Synthetic construct Homo sapiens gateway clone IMAGE:100018489 3' read CXCL2 mRNA. [CU677428]	0,042958252	2,1755805	up
A_33_P3218491			0,025951067	1,9075825	up
A_33_P3246418	MDFI	Homo sapiens MyoD family inhibitor (MDFI), transcript variant 1, mRNA [NM_001300804]	0,020560054	2,1550333	up
A_33_P3235213	TIGIT	Homo sapiens T cell immunoreceptor with Ig and ITIM domains (TIGIT), mRNA [NM_173799]	0,009428395	2,3285792	up
A_32_P163147	VSIG1	Homo sapiens V-set and immunoglobulin domain containing 1 (VSIG1), transcript variant 2, mRNA [NM_182607]	0,03732296	2,024168	up
A_33_P3294533	PRKCB	Homo sapiens protein kinase C, beta (PRKCB), transcript variant 2, mRNA [NM_002738]	0,04861883	1,9147062	up

A_24_P117029	LDLR	Homo sapiens low density lipoprotein receptor (LDLR), transcript variant 1, mRNA [NM_000527]	0,040508673	1,9522218	up
A_33_P3548860	SEC1P	Homo sapiens secretory blood group 1, pseudogene (SEC1P), non-coding RNA [NR_004401]	0,018269014	1,7218754	up
A_33_P3357431	LOC100128310	Homo sapiens cDNA FLJ40547 fis, clone THYMU2001819. [AK097866]	0,03139825	1,5114895	up
A_33_P3317618	SYN2	Homo sapiens synapsin II (SYN2), transcript variant IIb, mRNA [NM_003178]	0,04441627	1,8017702	up
A_32_P140139	F13A1	Homo sapiens coagulation factor XIII, A1 polypeptide (F13A1), mRNA [NM_000129]	0,0212672	2,1460214	up
A_21_P0008190	lnc-SLITRK1-1	LNCipedia lincRNA (lnc-SLITRK1-1), lincRNA [lnc-SLITRK1-1:1]	0,004078926	3,4573832	
A_22_P00003684	lnc-CDH1-1	LNCipedia lincRNA (lnc-CDH1-1), lincRNA [lnc-CDH1-1:1]	0,026340233	1,8920509	up
A_23_P143621	CRYBB1	Homo sapiens crystallin, beta B1 (CRYBB1), mRNA [NM_001887]	0,005647873	2,1834848	up
A_33_P3221432	ZNF284	Homo sapiens zinc finger protein 284 (ZNF284), mRNA [NM_001037813]	0,021371096	2,4427037	up
A_33_P3225610		Homo sapiens clone DNA86575 GRTR3118 (UNQ3118) mRNA, complete cds. [AY358225]	0,009411141	1,9918518	up
A_33_P3210605			0,037369896	1,5002722	up
A_21_P0000272	SNORD51	Homo sapiens small nucleolar RNA, C/D box 51 (SNORD51), small nucleolar RNA [NR_002589]	0,006110687	2,0929115	up
A_33_P3229221	TRAPP3	trafficking protein particle complex 3 [Source:HGNC Symbol;Acc:HGNC:19942] [ENST00000373159]	0,011961019	1,734204	up
A_23_P15832	OR1D5	Homo sapiens olfactory receptor, family 1, subfamily D, member 5 (OR1D5), mRNA [NM_014566]	0,04019823	2,0215328	up
A_21_P0010940	SLC9B1	Homo sapiens solute carrier family 9, subfamily B (NHA1, cation proton antiporter 1), member 1 (SLC9B1), transcript variant 2, mRNA [NM_001100874]	0,040490203	1,6178374	up
A_33_P3218694	PNN	Homo sapiens pinin, desmosome associated protein (PNN), mRNA [NM_002687]	0,03548242	1,5200559	up
A_33_P3422802	ULBP1	Homo sapiens UL16 binding protein 1 (ULBP1), mRNA [NM_025218]	0,037296638	2,0271094	up
A_23_P357717	TCL1A	Homo sapiens T-cell leukemia/lymphoma 1A (TCL1A), transcript variant 1, mRNA [NM_021966]	0,042737603	2,2123525	up
A_21_P0008473	LNCipedia lincRNA (lnc-GALC-3)	LNCipedia lincRNA (lnc-GALC-3), lincRNA [lnc-GALC-3:4]	0,047718324	2,0657902	up
A_22_P00020349	lnc-GTDC1-4	LNCipedia lincRNA (lnc-GTDC1-4), lincRNA [lnc-GTDC1-4:1]	0,022541568	2,0299292	up
A_22_P00007187	lnc-GOLGA8J-3	Homo sapiens, clone IMAGE:5221398, mRNA. [BC043570]	0,016789915	2,2197664	up
A_22_P00004665	lnc-CTD-2054N24.2.1-2	Homo sapiens cDNA FLJ35724 fis, clone TESTI2002453. [AK093043]	0,010521956	2,2644758	up
A_23_P25566	GPR183	Homo sapiens G protein-coupled receptor 183 (GPR183), mRNA [NM_004951]	0,03577036	2,0514572	up
A_23_P374844	GAL	Homo sapiens galanin/GMAP prepropeptide (GAL), mRNA [NM_015973]	0,011880225	2,8687565	up
A_23_P161352	PTPLA	Homo sapiens protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A (PTPLA), mRNA [NM_014241]	0,009015696	2,517728	up
A_24_P926960	MEGF6	Homo sapiens multiple EGF-like-domains 6 (MEGF6), mRNA [NM_001409]	0,001930151	2,2979777	up
A_21_P0000247	SNORD18C	Homo sapiens small nucleolar RNA, C/D box 18C (SNORD18C), small nucleolar RNA [NR_002443]	0,026050251	2,0280766	up
A_23_P331928	CD109	Homo sapiens CD109 molecule (CD109), transcript variant 1, mRNA [NM_133493]	0,005965568	4,300974	up
A_33_P3260014	TPO	Homo sapiens thyroid peroxidase (TPO), transcript variant 4, mRNA [NM_175721]	0,025366556	2,1168585	up
A_33_P3211229	SLC35F2	Homo sapiens solute carrier family 35, member F2 (SLC35F2), mRNA [NM_017515]	0,007439105	2,304133	up
A_22_P00016253	LOC101928227		0,034364834	1,6051098	up
A_23_P27538	CALR3	Homo sapiens calreticulin 3 (CALR3), mRNA [NM_145046]	0,031093247	1,596507	up
A_23_P77493	TUBB3	Homo sapiens tubulin, beta 3 class III (TUBB3), transcript variant 1, mRNA [NM_006086]	0,037617408	2,7576487	up
A_33_P3239102			0,049121372	1,8483382	up
A_33_P3267482	KIAA1804	Homo sapiens mixed lineage kinase 4 (KIAA1804), mRNA [NM_032435]	0,030081533	1,8189183	up
A_21_P0005689	LOC101929622	PREDICTED: Homo sapiens uncharacterized LOC101929622 (RP11-863K10.2), transcript variant X2, ncRNA [XR_426298]	0,048106585	1,7428466	up
A_32_P85330	ST20-AS1	Homo sapiens ST20 antisense RNA 1 (ST20-AS1), long non-coding RNA [NR_028330]	0,03103955	1,5938126	up
A_23_P100660	SERPINF1	Homo sapiens serpin peptidase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 1 (SERPINF1), mRNA [NM_002615]	0,048611734	1,5488243	up
A_22_P00012339	lnc-PRDM13-4	LNCipedia lincRNA (lnc-PRDM13-4), lincRNA [lnc-PRDM13-4:1]	0,042322595	1,5493246	up
A_23_P36397	CYP27B1	Homo sapiens cytochrome P450, family 27, subfamily B, polypeptide 1 (CYP27B1), mRNA [NM_000785]	0,013608299	1,7527335	up
A_33_P3260034			0,04011005	1,8788894	up
A_22_P00010241	lnc-MTA3-3	LNCipedia lincRNA (lnc-MTA3-3), lincRNA [lnc-MTA3-3:1]	0,024567254	1,8673918	up
A_33_P3245289	PTPRG	Homo sapiens protein tyrosine phosphatase, receptor type, G (PTPRG), mRNA [NM_002841]	0,02992936	1,9677461	up
A_23_P33326	ADRA1B	Homo sapiens adrenoceptor alpha 1B (ADRA1B), mRNA [NM_000679]	0,008830853	2,8181787	up
A_33_P3847514	C6orf141	Homo sapiens chromosome 6 open reading frame 141 (C6orf141), mRNA [NM_001145652]	0,007978248	3,3497875	up
A_24_P145066	KIF1B	Homo sapiens kinesin family member 1B (KIF1B), transcript variant 2, mRNA [NM_183416]	0,012597307	1,9086697	up
A_33_P3210900	SEC13	SEC13 homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:HGNC:10697] [ENST00000397099]	0,04168574	1,731457	up
A_23_P217621	TAF7L	Homo sapiens TAF7-like RNA polymerase II, TATA box binding protein (TBP)-associated factor, 50kDa (TAF7L), transcript variant 1, mRNA [NM_024885]	0,023217835	1,8744041	up
A_23_P215484	CCL26	Homo sapiens chemokine (C-C motif) ligand 26 (CCL26), mRNA [NM_006072]	0,011153276	2,2796807	up
A_33_P3227457			0,018995006	1,957582	up
A_33_P3335735			0,013189765	2,4555745	up
A_33_P3397743	MAPT-AS1	Homo sapiens MAPT antisense RNA 1 (MAPT-AS1), long non-coding RNA [NR_024559]	0,035737403	1,865297	up
A_23_P88691	CHRNA5	Homo sapiens cholinergic receptor, nicotinic, alpha 5 (neuronal) (CHRNA5), mRNA [NM_000745]	0,01589596	2,2689397	up
A_23_P360797	NTF3	Homo sapiens neurotrophin 3 (NTF3), transcript variant 2, mRNA [NM_002527]	0,016453942	1,6913148	up
A_33_P3235410	PTPLA	Homo sapiens protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A, mRNA (cDNA clone IMAGE:4304680), with apparent retained intron. [BC027709]	0,017558204	3,466513	up
A_33_P3279629	UCN2	Homo sapiens urocortin 2 (UCN2), mRNA [NM_033199]	0,032852817	2,9764013	up
A_23_P207850	TNS4	Homo sapiens tensin 4 (TNS4), mRNA [NM_032865]	0,0330733	2,3618035	up
A_23_P164057	MFAP4	Homo sapiens microfibrillar-associated protein 4 (MFAP4), transcript variant 2, mRNA [NM_002404]	0,02372799	3,9364023	up
A_23_P150693	FJX1	Homo sapiens four jointed box 1 (Drosophila) (FJX1), mRNA [NM_014344]	0,01713297	3,4262128	up

A_33_P3327852	NDEL1	Homo sapiens nudE neurodevelopment protein 1-like 1 (NDEL1), transcript variant 2, mRNA [NM_030808]	5,25E-04	2,0799394	up
A_33_P3374678	TMPRSS11D	Homo sapiens transmembrane protease, serine 11D (TMPRSS11D), mRNA [NM_004262]	0,013752492	2,0761757	up
A_33_P3244956	NRIP3	Homo sapiens nuclear receptor interacting protein 3 (NRIP3), mRNA [NM_020645]	0,03549738	1,8828506	up
A_33_P3229953	EEF1A2	Homo sapiens eukaryotic translation elongation factor 1 alpha 2 (EEF1A2), mRNA [NM_001958]	0,047040693	2,3915129	up
A_23_P102117	WNT10A	Homo sapiens wingless-type MMTV integration site family, member 10A (WNT10A), mRNA [NM_025216]	0,032957688	2,109216	up
A_33_P3313075			0,019251565	2,1920772	up
A_23_P70307	SMOC2	Homo sapiens SPARC related modular calcium binding 2 (SMOC2), transcript variant 1, mRNA [NM_022138]	0,031286817	2,376048	up
A_23_P209449	FZD7	Homo sapiens frizzled class receptor 7 (FZD7), mRNA [NM_003507]	0,005193775	2,755461	up
A_32_P313405	LAMA1	Homo sapiens laminin, alpha 1 (LAMA1), mRNA [NM_005559]	7,01E-04	3,2795174	up
A_23_P217528	KLF8	Homo sapiens Kruppel-like factor 8 (KLF8), transcript variant 1, mRNA [NM_007250]	0,046738278	1,6503762	up
A_33_P6805542	lnc-SERPINC1-1	LNCipedia lincRNA (lnc-SERPINC1-1), lincRNA [lnc-SERPINC1-1:9]	0,023041813	1,52908	up
A_23_P88731	RAD51	Homo sapiens RAD51 recombinase (RAD51), transcript variant 1, mRNA [NM_002875]	0,04151092	1,5879806	up
A_23_P138125	FAIM3	Homo sapiens Fas apoptotic inhibitory molecule 3 (FAIM3), transcript variant 1, mRNA [NM_005449]	0,023325251	1,5364878	up
A_23_P337934	FBLIM1	Homo sapiens filamin binding LIM protein 1 (FBLIM1), transcript variant 1, mRNA [NM_017556]	0,022503927	1,515908	up
A_23_P145569	SLC22A1	Homo sapiens solute carrier family 22 (organic cation transporter), member 1 (SLC22A1), transcript variant 2, mRNA [NM_153187]	0,018150752	1,5269051	up
A_23_P7361	ELOVL6	Homo sapiens ELOVL fatty acid elongase 6 (ELOVL6), transcript variant 1, mRNA [NM_024090]	0,035885904	1,6954846	up
A_24_P876408	C11orf95	Homo sapiens chromosome 11 open reading frame 95 (C11orf95), mRNA [NM_001144936]	0,017098457	1,5709474	up
A_24_P156113	EHD2	Homo sapiens EH-domain containing 2 (EHD2), mRNA [NM_014601]	0,006964989	1,8334757	up
A_33_P3280094	LRFN4	Homo sapiens leucine rich repeat and fibronectin type III domain containing 4 (LRFN4), mRNA [NM_024036]	0,03208321	1,5549123	up
A_23_P2181	CYB5R2	Homo sapiens cytochrome b5 reductase 2 (CYB5R2), transcript variant 2, mRNA [NM_016229]	0,017060341	1,7705477	up
A_23_P308032	NUP98	Homo sapiens nucleoporin 98kDa (NUP98), transcript variant 3, mRNA [NM_005387]	0,008394292	1,7773092	up
A_21_P0014606	LOC101929516	Homo sapiens uncharacterized LOC101929516 (LOC101929516), long non-coding RNA [NR_125979]	0,02238155	1,9303509	up
A_23_P4536	EPB41L3	Homo sapiens erythrocyte membrane protein band 4.1-like 3 (EPB41L3), transcript variant 1, mRNA [NM_012307]	0,038252708	1,7586192	up
A_33_P3349619		ATP-binding cassette, sub-family D (ALD), member 1, pseudogene 5 [Source:HGNC Symbol;Acc:HGNC:42662] [ENST00000445663]	0,014946819	1,5960724	up
A_33_P3380493	SH3BGR13	Homo sapiens SH3 domain binding glutamate-rich protein like 3 (SH3BGR13), mRNA [NM_031286]	0,04346757	1,6630467	up
A_23_P32454	TG	Homo sapiens thyroglobulin (TG), mRNA [NM_003235]	0,047396775	1,6106783	up
A_19_P00322898	CA5BP1	Homo sapiens carbonic anhydrase VB pseudogene 1 (CA5BP1), non-coding RNA [NR_026551]	0,039611567	1,5604717	up
A_33_P3292307	UBIAD1	Homo sapiens UbiA prenyltransferase domain containing 1 (UBIAD1), mRNA [NM_013319]	0,01962246	1,5055038	up
A_23_P360240	MYEOV	Homo sapiens myeloma overexpressed (MYEOV), transcript variant 2, mRNA [NM_138768]	0,023650518	1,906202	up
A_24_P102650	MUC5B	Homo sapiens mucin 5B, oligomeric mucus/gel-forming (MUC5B), mRNA [NM_002458]	0,014007203	3,805862	up
A_33_P3373403	PLEKHO1	Homo sapiens pleckstrin homology domain containing, family O member 1 (PLEKHO1), mRNA [NM_016274]	0,047052912	1,7124214	up
A_22_P00002496		PREDICTED: Homo sapiens uncharacterized LOC101930596 (LOC101930596), ncRNA [XR_248193]	0,008965225	1,8635182	up
A_33_P3280700	GPR157	Homo sapiens G protein-coupled receptor 157 (GPR157), mRNA [NM_024980]	3,11E-04	2,3348565	up
A_19_P00317871	PVT1	Homo sapiens Pvt1 oncogene (non-protein coding) (PVT1), long non-coding RNA [NR_003367]	0,020290744	1,6887923	up
A_21_P0001542	lnc-GBP5-3	LNCipedia lincRNA (lnc-GBP5-3), lincRNA [lnc-GBP5-3:1]	0,040061302	1,9443388	up
A_33_P3416366	CHAF1A	Homo sapiens chromatin assembly factor 1, subunit A (p150) (CHAF1A), mRNA [NM_005483]	0,031709965	2,0849667	up
A_22_P00007563	lnc-HBEGF-2	Homo sapiens cDNA clone IMAGE:4841343, partial cds. [BC030152]	0,012180466	1,8615595	up
A_33_P3299319	RPL28	Homo sapiens ribosomal protein L28 (RPL28), transcript variant 5, mRNA [NM_001136137]	0,002535841	2,2193685	up
A_33_P3339650	DST	Homo sapiens dystonin (DST), transcript variant 1e, mRNA [NM_001723]	0,04600034	2,298806	up
A_33_P3217213	PDLIM7	Homo sapiens PDZ and LIM domain 7 (enigma) (PDLIM7), transcript variant 1, mRNA [NM_005451]	0,042917214	1,6532712	up
A_33_P3343616	PHF12	Homo sapiens PHD finger protein 12 (PHF12), transcript variant 3, mRNA [NM_001290131]	0,012032265	1,8070437	up
A_24_P143138	FGD1	Homo sapiens FYVE, RhoGEF and PH domain containing 1 (FGD1), mRNA [NM_004463]	0,005460756	1,7702563	up
A_23_P23457	FBLIM1	Homo sapiens filamin binding LIM protein 1 (FBLIM1), transcript variant 2, mRNA [NM_001024215]	0,04323434	1,575918	up
A_23_P15727	FKBP10	Homo sapiens FK506 binding protein 10, 65 kDa (FKBP10), mRNA [NM_021939]	0,04836866	1,8587838	up
A_24_P342829	SLC16A14	Homo sapiens solute carrier family 16, member 14 (SLC16A14), mRNA [NM_152527]	0,024191527	2,3227773	up
A_24_P510377		Homo sapiens cDNA clone IMAGE:5268928. [BC031250]	0,01552573	1,8007243	up
A_33_P3397525	WNT4	Homo sapiens wingless-type MMTV integration site family, member 4 (WNT4), mRNA [NM_030761]	0,035807725	1,707996	up
A_33_P3290709	EGFL6	Homo sapiens EGF-like-domain, multiple 6 (EGFL6), transcript variant 2, mRNA [NM_001167890]	0,023805443	1,6804231	up
A_33_P3340682	ZNF276	Homo sapiens zinc finger protein 276 (ZNF276), transcript variant a, mRNA [NM_00113525]	0,01834551	1,6315024	up
A_33_P3319276	FAM178B	Homo sapiens family with sequence similarity 178, member B (FAM178B), transcript variant A, mRNA [NM_001122646]	0,047776677	1,9035459	up
A_33_P3392192		Homo sapiens MSTP131 (MST131) mRNA, complete cds. [AF176921]	0,010195972	3,6534424	up
A_24_P261417	DKK3	Homo sapiens dickkopf WNT signaling pathway inhibitor 3 (DKK3), transcript variant 1, mRNA [NM_015881]	0,010752429	2,2866402	up
A_33_P3279119		MGC5.5.1.1.G05.R.1 NIH_MGC_331 Homo sapiens cDNA clone MGC5.5.1.1.G05, mRNA sequence [DR007930]	7,84E-04	2,4489434	up
A_33_P3291097	BCAM	Homo sapiens basal cell adhesion molecule (Lutheran blood group) (BCAM), transcript variant 1, mRNA [NM_005581]	0,048499815	1,9241064	up
A_23_P19030	ARSI	Homo sapiens arylsulfatase family, member I (ARSI), mRNA [NM_001012301]	0,047683783	1,8853861	up
A_24_P236935	KLK6	Homo sapiens kallikrein-related peptidase 6 (KLK6), transcript variant B, mRNA [NM_001012964]	0,04889817	3,063767	up
A_24_P237270	ADORA2A	Homo sapiens adenosine A2a receptor (ADORA2A), transcript variant 3, mRNA [NM_000675]	0,003041215	2,6013157	up
A_23_P207774	KSR1	Homo sapiens kinase suppressor of ras 1 (KSR1), mRNA [NM_014238]	0,003069811	2,2259977	up
A_33_P3728698			0,027013062	1,6657801	up

A_21_P0006086	LINC01508	Homo sapiens long intergenic non-protein coding RNA 1508 (LINC01508), long non-coding RNA [NR_109795]	0,016456647	2,3159425	up
A_33_P3262022			5,96E-04	2,795149	up
A_24_P346855	MKI67	Homo sapiens marker of proliferation Ki-67 (MKI67), transcript variant 1, mRNA [NM_002417]	0,02341614	2,2293077	up
A_23_P30634	BACH2	Homo sapiens BTB and CNC homology 1, basic leucine zipper transcription factor 2 (BACH2), transcript variant 1, mRNA [NM_021813]	0,0397933	1,766133	up
A_33_P3284883	MOB3B	Homo sapiens MOB kinase activator 3B (MOB3B), mRNA [NM_024761]	0,049063463	1,7249591	up
A_24_P187970	PADI2	Homo sapiens peptidyl arginine deiminase, type II (PADI2), mRNA [NM_007365]	0,008326246	2,3004985	up
A_21_P0008354	lnc-TTC9-1	LNCipedia lincRNA (lnc-TTC9-1), lincRNA [lnc-TTC9-1:1]	0,010125286	1,8287835	up
A_24_P378402	ZNF597	Homo sapiens zinc finger protein 597 (ZNF597), mRNA [NM_152457]	0,001246337	2,0455456	up
A_33_P3393135	HIST1H2AI	Homo sapiens histone cluster 1, H2ai, mRNA (cDNA clone MGC:138459 IMAGE:8327722), complete cds. [BC112254]	0,022393964	1,8905356	up
A_33_P3296230	lnc-KLHDC5-1	HUMPTHL parathyroid-like protein precursor {Homo sapiens} (exp=-1; wgp=0; cg=0), partial (11%) [THC2730443]	0,009748385	2,0170374	up
A_33_P3358735	PCSK5	Homo sapiens proprotein convertase subtilisin/kexin type 5 (PCSK5), transcript variant 1, mRNA [NM_001190482]	0,046853162	1,7334237	up
A_33_P3350259	FAM129C	Homo sapiens family with sequence similarity 129, member C (FAM129C), transcript variant 2, mRNA [NM_001098524]	0,009446532	2,051414	up
A_33_P3236748		PREDICTED: Homo sapiens IFMQ9370 (UNQ9370), misc_RNA [XR_111551]	0,005745001	1,9927382	up
A_33_P3343872	SIRPG	Homo sapiens signal-regulatory protein gamma (SIRPG), transcript variant 3, mRNA [NM_001039508]	0,046481125	1,9275815	up
A_22_P00011561	lnc-PCDH19-1	Human early lymphoid activation protein (EPAG) mRNA sequence. [L22650]	0,04051438	1,7233832	up
A_33_P3226678	EVPLL	Homo sapiens envoplakin-like (EVPLL), mRNA [NM_001145127]	0,038073406	2,1587534	up
A_23_P368195	LSM11	Homo sapiens LSM11, U7 small nuclear RNA associated (LSM11), mRNA [NM_173491]	0,034374673	1,8233397	up
A_24_P389608	PROSER2	Homo sapiens proline and serine rich 2 (PROSER2), mRNA [NM_153256]	0,028273076	1,6166192	up
A_19_P00320814	LINC00160	Homo sapiens long intergenic non-protein coding RNA 160 (LINC00160), long non-coding RNA [NR_024351]	0,049803905	1,8954004	up
A_22_P00002982		Homo sapiens cDNA FLJ41792 fis, clone NESOP2002352. [AK123786]	0,016239582	1,7271314	up
A_21_P0009620	C18orf61	Homo sapiens uncharacterized LOC497259 (C18orf61), long non-coding RNA [NR_049896]	0,031033104	1,5375041	up
A_22_P00019374	lnc-RDH5-1	Q4RGA9_TETNG (Q4RGA9) Chromosome 12 SCAF15104, whole genome shotgun sequence, partial (4%) [THC2512746]	0,0451414	1,525486	up
A_33_P3405043			0,032169543	1,5663317	up
A_33_P3394853	LOC100132215	Homo sapiens uncharacterized LOC100132215 (LOC100132215), transcript variant 1, long non-coding RNA [NR_027069]	0,010905117	1,7656933	up
A_33_P3299309	RPL28	Homo sapiens ribosomal protein L28 (RPL28), transcript variant 4, mRNA [NM_001136136]	0,006646937	2,0197396	up
A_22_P00019569	C8orf87	Homo sapiens chromosome 8 open reading frame 87 (C8orf87), mRNA [NM_001242668]	0,035994276	1,5550334	up
A_23_P116642	SLC26A10	Homo sapiens solute carrier family 26, member 10 (SLC26A10), mRNA [NM_133489]	0,04085361	1,6634998	up
A_22_P00013558	lnc-RP11-43D2.2.1-2	LNCipedia lincRNA (lnc-RP11-43D2.2.1-2), lincRNA [lnc-RP11-43D2.2.1-2:1]	0,019220065	2,0045757	up
A_21_P0010072	lnc-YTHDF1-3	LNCipedia lincRNA (lnc-YTHDF1-3), lincRNA [lnc-YTHDF1-3:1]	0,036423218	1,9748236	up
A_24_P147242	RBFOX1	Homo sapiens RNA binding protein, fox-1 homolog (C. elegans) 1 (RBFOX1), transcript variant 3, mRNA [NM_145893]	0,030945681	2,0206363	up
A_33_P3296582	ARSI	Homo sapiens arylsulfatase family, member J (ARSI), mRNA [NM_024590]	0,011465948	1,9337912	up
A_23_P361419	DEPDC1B	Homo sapiens DEP domain containing 1B (DEPDC1B), transcript variant 1, mRNA [NM_018369]	0,04565099	2,261989	up
A_23_P86653	SRGN	Homo sapiens serglycin (SRGN), transcript variant 1, mRNA [NM_002727]	0,03854304	4,685948	up
A_32_P87013	CXCL8	Homo sapiens chemokine (C-X-C motif) ligand 8 (CXCL8), mRNA [NM_000584]	0,021068992	4,4754953	up
A_21_P0005628	CCAT1	Homo sapiens colon cancer associated transcript 1 (non-protein coding) (CCAT1), long non-coding RNA [NR_108049]	0,009165639	5,5776176	up
A_21_P0014214	CCAT1	Homo sapiens colon cancer associated transcript 1 (non-protein coding) (CCAT1), long non-coding RNA [NR_108049]	0,005156127	5,8046756	up
A_33_P3419190	AREG	Homo sapiens amphiregulin (AREG), mRNA [NM_001657]	6,06E-04	6,24053	up
A_23_P259071	AREG	Homo sapiens amphiregulin (AREG), mRNA [NM_001657]	3,70E-04	6,9721913	up
A_23_P41344	EREG	Homo sapiens epiregulin (EREG), mRNA [NM_001432]	0,029358663	5,7137065	up
A_23_P429998	FOSB	Homo sapiens FBJ murine osteosarcoma viral oncogene homolog B (FOSB), transcript variant 1, mRNA [NM_006732]	3,07E-07	8,37677	up
A_23_P161624	FOSL1	Homo sapiens FOS-like antigen 1 (FOSL1), transcript variant 1, mRNA [NM_005438]	5,39E-05	8,806525	up
A_23_P76488	EMP1	Homo sapiens epithelial membrane protein 1 (EMP1), mRNA [NM_001423]	0,006691978	7,7472835	up
A_23_P110531	FST	Homo sapiens follistatin (FST), transcript variant FST344, mRNA [NM_013409]	0,001827398	9,302498	up
A_24_P140608	HBEGF	Homo sapiens heparin-binding EGF-like growth factor (HBEGF), mRNA [NM_001945]	1,08E-04	11,551045	up
A_21_P0013865	LOC102725299	chromosome X open reading frame 49B [Source:HGNC Symbol;Acc:HGNC:34229] [ENST00000440412]	0,003734161	16,05271	up
A_23_P72096	IL1A	Homo sapiens interleukin 1, alpha (IL1A), mRNA [NM_000575]	0,010461283	4,7302303	up
A_24_P269062	SPRY4	Homo sapiens sprouty homolog 4 (Drosophila) (SPRY4), transcript variant 1, mRNA [NM_030964]	2,30E-04	3,6247895	up
A_23_P17053	IL36G	Homo sapiens interleukin 36, gamma (IL36G), transcript variant 1, mRNA [NM_019618]	0,0187796	6,3313484	up
A_32_P74409	C11orf96	Homo sapiens chromosome 11 open reading frame 96 (C11orf96), mRNA [NM_001145033]	0,003950975	11,28214	up
A_23_P91390	THBD	Homo sapiens thrombomodulin (THBD), mRNA [NM_000361]	0,006950111	7,7867775	up
A_23_P24104	PLAU	Homo sapiens plasminogen activator, urokinase (PLAU), transcript variant 1, mRNA [NM_002658]	0,002633365	5,499463	up
A_33_P3306146	PLAU	Homo sapiens plasminogen activator, urokinase (PLAU), transcript variant 2, mRNA [NM_001145031]	0,00568446	6,2078176	up
A_23_P45751	CLCA4	Homo sapiens chloride channel accessory 4 (CLCA4), transcript variant 1, mRNA [NM_012128]	0,048342776	2,6575	up
A_23_P23048	S100A9	Homo sapiens S100 calcium binding protein A9 (S100A9), mRNA [NM_002965]	0,019345092	3,107001	up
A_33_P3260426	SPRR2A	Homo sapiens small proline-rich protein 2A (SPRR2A), mRNA [NM_005988]	0,047438588	4,777399	up
A_33_P3260430	SPRR2A	Homo sapiens small proline-rich protein 2A (SPRR2A), mRNA [NM_005988]	0,022423418	5,3940063	up
A_23_P120883	HMOX1	Homo sapiens heme oxygenase (decycling) 1 (HMOX1), mRNA [NM_002133]	0,005888014	2,1176827	up
A_24_P12435	NCOA7	Homo sapiens nuclear receptor coactivator 7 (NCOA7), transcript variant 1, mRNA [NM_181782]	0,01085279	2,1823847	up
A_24_P257416	CXCL2	Homo sapiens chemokine (C-X-C motif) ligand 2 (CXCL2), mRNA [NM_002089]	0,017842755	2,6009972	up

A_24_P183150	CXCL3	Homo sapiens chemokine (C-X-C motif) ligand 3 (CXCL3), mRNA [NM_002090]	0,012001992	3,0735319	up
A_23_P315364	CXCL2	Homo sapiens chemokine (C-X-C motif) ligand 2 (CXCL2), mRNA [NM_002089]	0,004512833	3,496545	up
A_23_P306987	SOX7	Homo sapiens SRY (sex determining region Y)-box 7 (SOX7), mRNA [NM_031439]	0,004398685	3,143691	up
A_21_P0011752		CD177 molecule pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:34508] [ENST000000606252]	0,024091294	2,7611873	up
A_23_P147805	UPP1	Homo sapiens uridine phosphorylase 1 (UPP1), transcript variant 4, mRNA [NM_001287428]	0,012380788	2,6682773	up
A_33_P3393971	PKP1	Homo sapiens plakophilin 1 (PKP1), transcript variant 1b, mRNA [NM_000299]	0,014895411	3,2017622	up
A_24_P416346	ETV4	Homo sapiens ets variant 4 (ETV4), transcript variant 2, mRNA [NM_001079675]	0,044178355	1,7472672	up
A_32_P157213		CD177 molecule pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:34508] [ENST000000606252]	0,020225288	3,4896264	up
A_33_P3411075	FSCN1	Homo sapiens fascin actin-bundling protein 1 (FSCN1), mRNA [NM_003088]	0,01091991	3,1211278	up
A_23_P259863	CD177	Homo sapiens CD177 molecule (CD177), mRNA [NM_020406]	0,04671944	3,0734913	up
A_23_P104073	S100A3	Homo sapiens S100 calcium binding protein A3 (S100A3), mRNA [NM_002960]	0,019528074	3,849857	up
A_24_P299685	PDPN	Homo sapiens podoplanin (PDPN), transcript variant 2, mRNA [NM_198389]	0,007353417	3,9962702	up
A_23_P46429	CYR61	Homo sapiens cysteine-rich, angiogenic inducer, 61 (CYR61), mRNA [NM_001554]	0,004191061	2,8415298	up
A_33_P3310104	SERPINB5	Homo sapiens serpin peptidase inhibitor, clade B (ovalbumin), member 5 (SERPINB5), mRNA [NM_002639]	0,025013095	3,4236085	up
A_33_P3305571	TNFRSF6B	Homo sapiens tumor necrosis factor receptor superfamily, member 6b, decoy (TNFRSF6B), mRNA [NM_003823]	0,014037857	2,9160075	up
A_24_P66027	APOBEC3B	Homo sapiens apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3B (APOBEC3B), transcript variant 1, mRNA [NM_004900]	0,030562691	3,1741838	up
A_33_P3292886	KRT6A	Homo sapiens keratin 6A, type II (KRT6A), mRNA [NM_005554]	0,045636274	6,1497	up
A_33_P3348747	DSG3	Homo sapiens desmoglein 3 (DSG3), mRNA [NM_001944]	0,024890965	8,762486	up
A_23_P151975	RHCG	Homo sapiens Rh family, C glycoprotein (RHCG), transcript variant 1, mRNA [NM_016321]	0,014754945	3,3977978	up
A_23_P9711	HS3ST4	Homo sapiens heparan sulfate (glucosamine) 3-O-sulfotransferase 4 (HS3ST4), mRNA [NM_006040]	8,23E-04	4,250781	up
A_23_P23296	PKP1	Homo sapiens plakophilin 1 (PKP1), transcript variant 1b, mRNA [NM_000299]	0,008131419	4,373656	up
A_23_P16469	PLAUR	Homo sapiens plasminogen activator, urokinase receptor (PLAUR), transcript variant 3, mRNA [NM_001005377]	0,001078171	4,890589	up
A_23_P24129	DKK1	Homo sapiens dickkopf WNT signaling pathway inhibitor 1 (DKK1), mRNA [NM_012242]	0,001757412	5,576267	up
A_23_P204947	GJB2	Homo sapiens gap junction protein, beta 2, 26kDa (GJB2), mRNA [NM_004004]	0,002168435	3,8286533	up
A_23_P215956	MYC	Homo sapiens v-myc avian myelocytomatosis viral oncogene homolog (MYC), mRNA [NM_002467]	0,008331869	3,7520187	up
A_23_P76249	KRT6B	Homo sapiens keratin 6B, type II (KRT6B), mRNA [NM_005555]	0,009433895	3,8769102	up
A_24_P236753	DOC2B	Homo sapiens double C2-like domains, beta (DOC2B), mRNA [NM_003585]	0,029874114	2,509337	up
A_23_P150018	DUSP5	Homo sapiens dual specificity phosphatase 5 (DUSP5), mRNA [NM_004419]	2,20E-04	2,9121325	up
A_23_P338479	CD274	Homo sapiens CD274 molecule (CD274), transcript variant 1, mRNA [NM_014143]	0,011486784	2,7458174	up
A_24_P915692	PHLDA1	Homo sapiens pleckstrin homology-like domain, family A, member 1 (PHLDA1), mRNA [NM_007350]	0,006556326	4,2189403	up
A_23_P30126	FGFBP1	Homo sapiens fibroblast growth factor binding protein 1 (FGFBP1), mRNA [NM_005130]	0,014414295	4,656136	up
A_23_P254271	TUBB6	tubulin, beta 6 class V [Source:HGNC Symbol;Acc:HGNC:20776] [ENST00000417736]	0,00274253	4,9854746	up
A_33_P3258392	EDN1	Homo sapiens endothelin 1 (EDN1), transcript variant 1, mRNA [NM_001955]	0,003493513	4,9752855	up
A_23_P2271	PTHLH	Homo sapiens parathyroid hormone-like hormone (PTHLH), transcript variant 1, mRNA [NM_198965]	7,81E-04	4,744898	up
A_33_P3237150	BMP2	Homo sapiens bone morphogenetic protein 2 (BMP2), mRNA [NM_001200]	0,003074227	5,7095904	up
A_23_P138760	CLCF1	Homo sapiens cardiotrophin-like cytokine factor 1 (CLCF1), transcript variant 1, mRNA [NM_013246]	3,09E-04	4,0938973	up
A_23_P91512	CLDN14	Homo sapiens claudin 14 (CLDN14), transcript variant 1, mRNA [NM_144492]	0,04941211	2,9757378	up
A_33_P3381513	CD274	Homo sapiens CD274 molecule (CD274), transcript variant 1, mRNA [NM_014143]	0,03522332	2,4163525	up
A_23_P77859	TMEM88	Homo sapiens transmembrane protein 88 (TMEM88), mRNA [NM_203411]	0,002015923	2,2697444	up
A_33_P3619171	PMAIP1	Homo sapiens phorbol-12-myristate-13-acetate-induced protein 1 (PMAIP1), mRNA [NM_021127]	0,017756172	1,6207854	up
A_33_P3381318	FAM160A1	Homo sapiens family with sequence similarity 160, member A1 (FAM160A1), mRNA [NM_001109977]	0,014539218	1,710151	up
A_33_P3291279	SOWAHB	Homo sapiens sosondowah ankyrin repeat domain family member B (SOWAHB), mRNA [NM_001029870]	0,03394128	1,836539	up
A_24_P253723	MIR22HG	Homo sapiens MIR22 host gene (non-protein coding) (MIR22HG), transcript variant 1, long non-coding RNA [NR_028502]	0,041978214	1,6202987	up
A_33_P3289251	LOC644727	Homo sapiens cDNA FLJ38652 fis, clone HHDP2008843. [AK095971]	0,022754528	1,5096776	up
A_23_P253896	NPNT	Homo sapiens nephronectin (NPNT), transcript variant 2, mRNA [NM_001033047]	0,029363517	1,7298002	up
A_23_P385034	E2F3	Homo sapiens E2F transcription factor 3 (E2F3), transcript variant 1, mRNA [NM_001949]	0,046814285	1,5234102	up
A_24_P149713	ZBTB43	Homo sapiens zinc finger and BTB domain containing 43 (ZBTB43), transcript variant 1, mRNA [NM_014007]	0,011866796	1,5769366	up
A_33_P3275707	AP1S3	Homo sapiens adaptor-related protein complex 1, sigma 3 subunit (AP1S3), transcript variant 1, mRNA [NM_001039569]	0,027545543	1,5097599	up
A_33_P3349414	ZBTB43	Homo sapiens zinc finger and BTB domain containing 43 (ZBTB43), transcript variant 1, mRNA [NM_014007]	0,008383673	1,5804318	up
A_24_P166663	CDK6	Homo sapiens cyclin-dependent kinase 6 (CDK6), transcript variant 1, mRNA [NM_001259]	0,012943802	1,6003968	up
A_21_P0003853	Inc-FAM160A1-1	PREDICTED: Homo sapiens family with sequence similarity 160, member A1 (FAM160A1), transcript variant X1, mRNA [XM_005263199]	0,038640138	1,566184	up
A_23_P353316	SMURF1	Homo sapiens SMAD specific E3 ubiquitin protein ligase 1 (SMURF1), transcript variant 1, mRNA [NM_020429]	0,026832052	1,5805511	up
A_23_P135184	RALGDS	Homo sapiens ral guanine nucleotide dissociation stimulator (RALGDS), transcript variant 2, mRNA [NM_001042368]	0,013663846	1,5686642	up
A_23_P258493	LMNB1	Homo sapiens lamin B1 (LMNB1), transcript variant 1, mRNA [NM_005573]	0,024106491	1,802923	up
A_33_P3305472		Homo sapiens cDNA FLJ41999 fis, clone SPLEN2029683. [AK123993]	0,028529864	2,022218	up
A_33_P3508822	APP	Homo sapiens amyloid beta (A4) precursor protein (APP), transcript variant 1, mRNA [NM_000484]	0,026394982	1,6720213	up
A_24_P922252	SPATASL1	Homo sapiens cDNA FLJ12286 fis, clone MAMMA1001768, weakly similar to CELL DIVISION CYCLE PROTEIN 48 HOMOLOG MJ1156. [AK022348]	0,018986957	2,0489323	up
A_33_P3323298	JUN	Homo sapiens jun proto-oncogene (JUN), mRNA [NM_002228]	0,008795233	2,1524332	up
A_23_P127079	PPRC1	Homo sapiens peroxisome proliferator-activated receptor gamma, coactivator-related 1 (PPRC1), transcript variant 1, mRNA [NM_015062]	0,001932839	1,8916985	up

A_23_P78248	KRT23	Homo sapiens keratin 23, type I (KRT23), transcript variant 1, mRNA [NM_015515]	0,04062528	1,7382256	up
A_22_P00004432	Inc-CORO6-1	Homo sapiens full length insert cDNA clone YW04H08. [AF086010]	0,02484428	1,8124521	up
A_23_P165668	SLC35F5	solute carrier family 35, member F5 [Source:HGNC Symbol;Acc:HGNC:23617] [ENST00000498768]	0,04936733	1,5885644	up
A_24_P358305			0,028454037	1,5849406	up
A_23_P218111	SERPINA1	Homo sapiens serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1 (SERPINA1), transcript variant 2, mRNA [NM_001002236]	0,048916046	1,5500656	up
A_22_P00006449	Inc-FBXW5-1	Homo sapiens, clone IMAGE:4996962, mRNA. [BC019844]	0,021236394	2,0088623	up
A_24_P413126	PMEPA1	Homo sapiens prostate transmembrane protein, androgen induced 1 (PMEPA1), transcript variant 1, mRNA [NM_020182]	0,008184055	2,3281565	up
A_33_P3288246	MCC	Homo sapiens mutated in colorectal cancers (MCC), transcript variant 1, mRNA [NM_001085377]	0,037499446	1,7991313	up
A_32_P95462	STXBPSL	Homo sapiens syntaxin binding protein 5-like (STXBPSL), mRNA [NM_014980]	0,039439607	1,898155	up
A_33_P3238250	F11R	Homo sapiens F11 receptor (F11R), mRNA [NM_016946]	0,033325054	1,5047911	up
A_22_P00002592	lnc-C19orf26-2	lncCipedia lincRNA (lnc-C19orf26-2), lincRNA [lnc-C19orf26-2:1]	0,03971207	1,5488437	up
A_23_P90062	DNAJB1	Homo sapiens DnaJ (Hsp40) homolog, subfamily B, member 1 (DNAJB1), transcript variant 1, mRNA [NM_006145]	0,0348938	1,577266	up
A_23_P304450	GATA6	Homo sapiens GATA binding protein 6 (GATA6), mRNA [NM_005257]	0,017461065	1,5869187	up
A_33_P3323435	MAP3K9	Homo sapiens mitogen-activated protein kinase kinase kinase 9 (MAP3K9), transcript variant 1, mRNA [NM_033141]	0,020771682	1,5402026	up
A_23_P341443	MNT	Homo sapiens MAX network transcriptional repressor (MNT), mRNA [NM_020310]	0,008270919	1,62498	up
A_33_P3224307	SCARNA12	Homo sapiens small Cajal body-specific RNA 12 (SCARNA12), guide RNA [NR_003010]	0,015607317	1,693856	up
A_24_P340066	ELF4	Homo sapiens E74-like factor 4 (ets domain transcription factor) (ELF4), transcript variant 1, mRNA [NM_001421]	0,016702183	1,5330821	up
A_23_P110571	MAST4	Homo sapiens microtubule associated serine/threonine kinase family member 4 (MAST4), transcript variant 3, mRNA [NM_001164664]	0,010599062	1,6731917	up
A_32_P181103	GGCX	Homo sapiens gamma-glutamyl carboxylase (GGCX), transcript variant 1, mRNA [NM_000821]	0,025604364	1,5444589	up
A_33_P3248794	NAB2	Homo sapiens NGFI-A binding protein 2 (EGR1 binding protein 2) (NAB2), mRNA [NM_005967]	0,004104539	1,6718749	up
A_23_P76901	PLEKHG3	Homo sapiens pleckstrin homology domain containing, family G (with RhoGef domain) member 3 (PLEKHG3), mRNA [NM_015549]	0,006938203	1,6572644	up
A_23_P321354	TMEM71	Homo sapiens transmembrane protein 71 (TMEM71), transcript variant 1, mRNA [NM_144649]	0,033643447	1,5188202	up
A_23_P341223	KLHL21	Homo sapiens kelch-like family member 21 (KLHL21), mRNA [NM_014851]	0,0167713	1,544701	up
A_24_P365025	SPAG9	Homo sapiens sperm associated antigen 9 (SPAG9), transcript variant 3, mRNA [NM_003971]	0,004811912	1,6010375	up
A_23_P4662	BCL3	Homo sapiens B-cell CLL/lymphoma 3 (BCL3), mRNA [NM_005178]	0,030054709	1,6666306	up
A_23_P166280		inducible T-cell co-stimulator ligand [Source:HGNC Symbol;Acc:HGNC:17087] [ENST00000407780]	0,04774989	1,7593364	up
A_23_P90497	LILRA4	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 4 (LILRA4), mRNA [NM_012276]	0,048596762	1,8305781	up
A_22_P00002811	Inc-C2orf42-3	Q8TAW2_HUMAN (Q8TAW2) CD99L2 protein, partial (34%) [THC2498436]	0,025120454	1,9047897	up
A_24_P382319	CEACAM1	Homo sapiens carcinoembryonic antigen-related cell adhesion molecule 1 (biliary glycoprotein) (CEACAM1), transcript variant 1, mRNA [NM_001712]	0,03564387	1,826295	up
A_32_P210642	EGFL7	Homo sapiens EGF-like-domain, multiple 7 (EGFL7), transcript variant 2, mRNA [NM_201446]	0,013783984	1,745896	up
A_32_P46214	SLC9A9	Homo sapiens solute carrier family 9, subfamily A (NHE9, cation proton antiporter 9), member 9 (SLC9A9), mRNA [NM_173653]	0,049755912	1,735205	up
A_33_P3284197	POMGNT1	Homo sapiens protein O-linked mannose N-acetylglucosaminyltransferase 1 (beta 1,2-) (POMGNT1), transcript variant 2, mRNA [NM_001243766]	0,049892224	1,5004798	up
A_24_P355944	EFNB2	Homo sapiens ephrin-B2 (EFNB2), mRNA [NM_004093]	0,001919934	2,2484913	up
A_24_P365807	EFNB1	Homo sapiens ephrin-B1 (EFNB1), mRNA [NM_004429]	0,04096362	1,8280507	up
A_24_P8318	AFF4	Homo sapiens AF4/FMR2 family, member 4 (AFF4), mRNA [NM_014423]	0,020043576	1,7286216	up
A_33_P3407424	CDC42EP1	Homo sapiens CDC42 effector protein (Rho GTPase binding) 1 (CDC42EP1), mRNA [NM_152243]	0,014149571	2,0923595	up
A_23_P30254	PLK2	Homo sapiens polo-like kinase 2 (PLK2), transcript variant 1, mRNA [NM_006622]	0,007923599	2,0328896	up
A_33_P3323722	ARL4C	Homo sapiens ADP-ribosylation factor-like 4C (ARL4C), transcript variant 1, mRNA [NM_001282431]	0,0312535	1,538033	up
A_23_P129556	IL4R	Homo sapiens interleukin 4 receptor (IL4R), transcript variant 1, mRNA [NM_000418]	0,048311204	1,682463	up
A_23_P255104	LHFPL2	Homo sapiens lipoma HMGIC fusion partner-like 2 (LHFPL2), mRNA [NM_005779]	0,047172297	1,6078231	up
A_23_P131935	FERMT1	Homo sapiens fermitin family member 1 (FERMT1), mRNA [NM_017671]	0,026354482	1,5136056	up
A_24_P287043	IFITM2	Homo sapiens interferon induced transmembrane protein 2 (IFITM2), mRNA [NM_006435]	0,02648737	1,5136677	up
A_33_P3211924	RCOR1	Homo sapiens REST corepressor 1 (RCOR1), mRNA [NM_015156]	0,00342336	1,8421721	up
A_33_P3356886	DENND2C	Homo sapiens DENN/MADD domain containing 2C (DENND2C), transcript variant 1, mRNA [NM_001256404]	0,028753886	1,8182861	up
A_33_P3311285	LMNA	Homo sapiens lamin A/C (LMNA), transcript variant 1, mRNA [NM_170707]	0,023398625	1,9015782	up
A_24_P202567	ITPKC	Homo sapiens inositol-trisphosphate 3-kinase C (ITPKC), mRNA [NM_025194]	0,001767388	1,9611793	up
A_23_P400298	PRSS22	Homo sapiens protease, serine, 22 (PRSS22), mRNA [NM_022119]	0,049574714	1,7053907	up
A_33_P3353125		Homo sapiens, clone IMAGE:4337652, mRNA. [BC018676]	0,009603184	1,7835858	up
A_19_P00321739	LINC00472	Homo sapiens long intergenic non-protein coding RNA 472 (LINC00472), transcript variant 4, long non-coding RNA [NR_121614]	0,02832485	2,053522	up
A_23_P108265	OR7C2	Homo sapiens olfactory receptor, family 7, subfamily C, member 2 (OR7C2), mRNA [NM_012377]	0,003035391	2,1700182	up
A_33_P3246829	IL1RN	Homo sapiens interleukin 1 receptor antagonist (IL1RN), transcript variant 4, mRNA [NM_173843]	0,04802341	1,9047078	up
A_33_P3247022	CCNE2	Homo sapiens cyclin E2 (CCNE2), mRNA [NM_057749]	0,046909254	1,7572397	up
A_33_P3232945	F2RL1	Homo sapiens coagulation factor II (thrombin) receptor-like 1 (F2RL1), mRNA [NM_005242]	0,029072022	1,7923585	up
A_33_P3256680	MFHAS1	Homo sapiens malignant fibrous histiocytoma amplified sequence 1 (MFHAS1), mRNA [NM_004225]	0,003395271	2,0945218	up
A_23_P326204	SGMS2	Homo sapiens sphingomyelin synthase 2 (SGMS2), transcript variant 1, mRNA [NM_152621]	0,021846933	1,8462768	up
A_24_P252497	TRIB1	Homo sapiens tribbles pseudokinase 1 (TRIB1), transcript variant 1, mRNA [NM_025195]	0,003257319	1,8159208	up
A_23_P19243		Homo sapiens PRO2266 mRNA, complete cds. [AF119870]	0,046512	1,5807948	up
A_23_P7172	PGM2	Homo sapiens phosphoglucomutase 2 (PGM2), mRNA [NM_018290]	0,015638817	1,6654824	up
A_21_P0000241	SNORA33	Homo sapiens small nucleolar RNA, H/ACA box 33 (SNORA33), small nucleolar RNA [NR_002436]	0,023572292	1,746984	up

A_33_P3287972	RASA2	RAS p21 protein activator 2 [Source:HGNC Symbol;Acc:HGNC:9872] [ENST00000452898]	0,031066056	1,5828906	up
A_23_P131208	NR4A2	Homo sapiens nuclear receptor subfamily 4, group A, member 2 (NR4A2), mRNA [NM_006186]	0,003327671	1,8803846	up
A_33_P3363355	ICAM4	Homo sapiens intercellular adhesion molecule 4 (Landsteiner-Wiener blood group) (ICAM4), transcript variant 2, mRNA [NM_022377]	0,034931123	2,187971	up
A_33_P3361546	TFAP2A	Homo sapiens transcription factor AP-2 alpha (activating enhancer binding protein 2 alpha) (TFAP2A), transcript variant 2, mRNA [NM_001032280]	0,03694712	1,619287	up
A_24_P649624	KIF1B	Homo sapiens kinesin family member 1B (KIF1B), transcript variant 2, mRNA [NM_183416]	0,008471173	1,6395066	up
A_33_P3294509	CD44	Homo sapiens CD44 molecule (Indian blood group) (CD44), transcript variant 1, mRNA [NM_000610]	0,042059425	1,9112172	up
A_22_P00015419			0,021058805	1,6903454	up
A_23_P114903	HSPA6	Homo sapiens heat shock 70kDa protein 6 (HSP70B') (HSPA6), mRNA [NM_002155]	0,009809375	2,306779	up
A_23_P253350	C8orf4	Homo sapiens chromosome 8 open reading frame 4 (C8orf4), mRNA [NM_020130]	0,03701609	1,7636268	up
A_23_P250274	LRRC8A	Homo sapiens leucine rich repeat containing 8 family, member A (LRRC8A), transcript variant 2, mRNA [NM_019594]	0,008100811	2,028496	up
A_23_P26847	SOX9	Homo sapiens SRY (sex determining region Y)-box 9 (SOX9), mRNA [NM_000346]	0,009075709	3,1700287	up
A_23_P382811	SNX31	Homo sapiens sorting nexin 31 (SNX31), mRNA [NM_152628]	0,029948564	3,1026845	up
A_21_P0014306	CAPN15	calpain 15 [Source:HGNC Symbol;Acc:HGNC:11182] [ENST00000567216]	0,014879158	1,7488558	up
A_33_P3642648	ZNF460	Homo sapiens zinc finger protein 460 (ZNF460), mRNA [NM_006635]	0,02250202	1,7975711	up
A_23_P408768	DOT1L	Homo sapiens DOT1-like histone H3K79 methyltransferase (DOT1L), mRNA [NM_032482]	0,02889074	1,5104	up
A_23_P29769	WWTR1	Homo sapiens WW domain containing transcription regulator 1 (WWTR1), transcript variant 1, mRNA [NM_015472]	0,012387604	1,7719362	up
A_21_P0000227	SNORD35B	Homo sapiens small nucleolar RNA, C/D box 35B (SNORD35B), small nucleolar RNA [NR_001285]	0,017897505	1,6863201	up
A_23_P208880	UHRF1	Homo sapiens ubiquitin-like with PHD and ring finger domains 1 (UHRF1), transcript variant 2, mRNA [NM_013282]	0,031101424	1,7165134	up
A_33_P3338335	MIDN	Homo sapiens midnolin (MIDN), mRNA [NM_177401]	0,013843925	1,5526621	up
A_32_P104000	DCUN1D3	Homo sapiens DCN1, defective in cullin neddylation 1, domain containing 3 (DCUN1D3), mRNA [NM_173475]	0,02483786	1,5547912	up
A_23_P211047	BACH1	Homo sapiens BTB and CNC homology 1, basic leucine zipper transcription factor 1 (BACH1), transcript variant 1, mRNA [NM_206866]	0,035633493	1,5109583	up
A_23_P218463	SERTAD1	Homo sapiens SERTA domain containing 1 (SERTAD1), mRNA [NM_013376]	0,00398888	1,8492954	up
A_33_P3244141	NDEL1	Homo sapiens nudE neurodevelopment protein 1-like 1 (NDEL1), transcript variant 1, mRNA [NM_001025579]	0,019066857	1,5458252	up
A_32_P188860	IL17RD	Homo sapiens interleukin 17 receptor D (IL17RD), mRNA [NM_017563]	0,015738409	1,835648	up
A_21_P0013816			0,029945062	1,6944273	up
A_23_P81770	PTP4A1	Homo sapiens protein tyrosine phosphatase type IVA, member 1 (PTP4A1), mRNA [NM_003463]	0,030956388	1,5113949	up
A_22_P00020312	Inc-FKBP2-1	Q2ACG1_Q2ACG1 HrpW, partial (3%) [THC2716184]	0,04548666	1,5639327	up
A_21_P0000140	LEPROT	Homo sapiens leptin receptor overlapping transcript (LEPROT), transcript variant 3, mRNA [NM_001198683]	0,03828802	1,6232759	up
A_23_P17811	SEC14L2	Homo sapiens SEC14-like 2 (S. cerevisiae) (SEC14L2), transcript variant 1, mRNA [NM_012429]	0,008512926	1,8807799	up
A_23_P317667	ICOSLG	Homo sapiens inducible T-cell co-stimulator ligand (ICOSLG), transcript variant 1, mRNA [NM_015259]	0,040685907	1,769588	up
A_33_P3489675	ARHGAP8	Homo sapiens Rho GTPase activating protein 8 (ARHGAP8), transcript variant 3, mRNA [NM_001198726]	0,00552778	1,672081	up
A_24_P59220	POTEF	Homo sapiens POTE ankyrin domain family, member F (POTEF), mRNA [NM_001099771]	0,011057597	1,6515604	up
A_23_P50349	TRIP10	Homo sapiens thyroid hormone receptor interactor 10 (TRIP10), transcript variant 2, mRNA [NM_004240]	0,041179653	1,7309009	up
A_23_P121120	GPR87	Homo sapiens G protein-coupled receptor 87 (GPR87), mRNA [NM_023915]	0,014975545	2,0374408	up
A_33_P3311371	PDLIM2	Homo sapiens PDZ and LIM domain 2 (mystique) (PDLIM2), transcript variant 3, mRNA [NM_198042]	0,029875236	1,7923985	up
A_23_P425332	PPP4R4	Homo sapiens protein phosphatase 4, regulatory subunit 4 (PPP4R4), transcript variant 1, mRNA [NM_058237]	0,006733856	3,0491679	up
A_23_P394064	PTRF	Homo sapiens polymerase I and transcript release factor (PTRF), mRNA [NM_012232]	0,023177397	3,1813579	up
A_23_P128728	ARG2	Homo sapiens arginase 2 (ARG2), mRNA [NM_001172]	0,004791379	2,0395668	up
A_33_P3354464	LOXL1	Homo sapiens lysyl oxidase-like 1 (LOXL1), mRNA [NM_005576]	0,038326155	1,7168951	up
A_33_P3375528	MIER3	Homo sapiens mesoderm induction early response 1, family member 3 (MIER3), transcript variant 3, mRNA [NM_152622]	0,02085495	1,8554246	up
A_33_P3317523	STMN1	Homo sapiens stathmin 1 (STMN1), transcript variant 1, mRNA [NM_203401]	0,0333619	1,8829879	up
A_23_P95060	EPHB3	Homo sapiens EPH receptor B3 (EPHB3), mRNA [NM_004443]	0,025192998	1,9281018	up
A_22_P00017599	SNHG1	Homo sapiens small nucleolar RNA host gene 1 (non-protein coding) (SNHG1), long non-coding RNA [NR_003098]	0,04090271	1,5610849	up
A_23_P4899	NTF4	Homo sapiens neurotrophin 4 (NTF4), mRNA [NM_006179]	0,004953803	1,961828	up
A_23_P111672	TES	Homo sapiens testis derived transcript (3 LIM domains) (TES), transcript variant 2, mRNA [NM_152829]	0,010945822	1,59379	up
A_23_P109143	PRNP	Homo sapiens prion protein (PRNP), transcript variant 1, mRNA [NM_000311]	0,019580614	1,56681	up
A_33_P3234571	MAP2K3	Homo sapiens mitogen-activated protein kinase kinase 3 (MAP2K3), transcript variant B, mRNA [NM_145109]	0,013841643	1,6623042	up
A_23_P51231	RUNX3	Homo sapiens runt-related transcription factor 3 (RUNX3), transcript variant 1, mRNA [NM_001031680]	0,03435806	1,700105	up
A_22_P00014325		growth arrest-specific 5 (non-protein coding) [Source:HGNC Symbol;Acc:HGNC:16355] [ENST00000425771]	0,016101347	1,6342092	up
A_24_P506977	SNHG15	Homo sapiens small nucleolar RNA host gene 15 (non-protein coding) (SNHG15), long non-coding RNA [NR_003697]	0,00712154	1,7677264	up
A_23_P215517	KLHL7	Homo sapiens kelch-like family member 7 (KLHL7), transcript variant 3, mRNA [NM_001172428]	0,020662276	1,5494888	up
A_23_P402733	SON	Homo sapiens SON DNA binding protein (SON), transcript variant b, mRNA [NM_032195]	0,017624106	1,5301534	up
A_24_P107859	SPRED1	Homo sapiens sprouty-related, EVH1 domain containing 1 (SPRED1), mRNA [NM_152594]	0,012937509	1,6232147	up
A_24_P336759	MCL1	Homo sapiens myeloid cell leukemia 1 (MCL1), transcript variant 1, mRNA [NM_021960]	0,007662487	1,6387357	up
A_23_P418413	OXSRI	Homo sapiens oxidative stress responsive 1 (OXSRI), mRNA [NM_005109]	0,020762714	1,5822363	up
A_33_P3374085	LRRFIP1	Homo sapiens leucine rich repeat (in FLI) interacting protein 1 (LRRFIP1), transcript variant 3, mRNA [NM_001137552]	0,034666944	1,5077708	up
A_32_P219368	WTAP	Homo sapiens Wilms tumor 1 associated protein (WTAP), transcript variant 3, mRNA [NM_152858]	0,03159145	1,5008478	up
A_23_P334664	PML	Homo sapiens promyelocytic leukemia (PML), transcript variant 8, mRNA [NM_033247]	0,009048504	1,725692	up
A_23_P337917	PPFIBP1	Homo sapiens PTPRF interacting protein, binding protein 1 (liprin beta 1) (PPFIBP1), transcript variant 2, mRNA [NM_177444]	0,041454088	1,6663576	up

A_33_P3358641	LRRFIP1	Homo sapiens leucine rich repeat (in FLII) interacting protein 1 (LRRFIP1), transcript variant 3, mRNA [NM_001137552]	0,039358858	1,6382388	up
A_23_P65208	ZMYM5	Homo sapiens zinc finger, MYM-type 5 (ZMYM5), transcript variant 1, mRNA [NM_001039650]	0,030399108	1,5017424	up
A_33_P3312182	PROSER2	Homo sapiens proline and serine rich 2 (PROSER2), mRNA [NM_153256]	0,016405176	1,5183533	up
A_24_P271527	JOSD1	Homo sapiens Josephin domain containing 1 (JOSD1), mRNA [NM_014876]	0,011111907	1,5464019	up
A_33_P3324909	JUND	Homo sapiens jun D proto-oncogene (JUND), transcript variant 1, mRNA [NM_001286968]	0,012558772	1,5789069	up
A_23_P140256	PNP	Homo sapiens purine nucleoside phosphorylase (PNP), mRNA [NM_000270]	0,040642433	1,6623837	up
A_24_P116909	MALT1	Homo sapiens MALT1 paracaspase (MALT1), transcript variant 1, mRNA [NM_006785]	0,025206717	1,8217251	up
A_23_P63980	LRFN4	Homo sapiens leucine rich repeat and fibronectin type III domain containing 4 (LRFN4), mRNA [NM_024036]	0,019438228	1,5400963	up
A_24_P15765	RPS7P5	Homo sapiens ribosomal protein S7 pseudogene 5 (RPS7P5), non-coding RNA [NR_036695]	0,011928638	1,5456743	up
A_23_P66891	CDC42EP4	Homo sapiens CDC42 effector protein (Rho GTPase binding) 4 (CDC42EP4), mRNA [NM_012121]	0,00834884	1,7741599	up
A_32_P14744	RPS15A	Homo sapiens ribosomal protein S15a (RPS15A), transcript variant 2, mRNA [NM_001019]	0,0351976	1,5425781	up
A_23_P145024	ADRB2	Homo sapiens adrenoceptor beta 2, surface (ADRB2), mRNA [NM_000024]	0,014165555	1,926754	up
A_32_P91902	TSPAN14	Homo sapiens tetraspanin 14 (TSPAN14), transcript variant 1, mRNA [NM_030927]	0,040618397	1,5556096	up
A_23_P501822	JUP	Homo sapiens junction plakoglobin (JUP), transcript variant 1, mRNA [NM_002230]	0,02080515	1,5382017	up
A_23_P51853	ZDHHC18	Homo sapiens zinc finger, DHHC-type containing 18 (ZDHHC18), mRNA [NM_032283]	0,019421982	1,5029635	up
A_24_P341476			0,017701494	1,5198957	up
A_23_P46470	ERRFI1	Homo sapiens ERBB receptor feedback inhibitor 1 (ERRFI1), mRNA [NM_018948]	0,001791674	2,2330303	up
A_33_P3323463		heat shock 70kDa protein 8 [Source:HGNC Symbol;Acc:HGNC:5241] [ENST00000532091]	0,033089843	1,8111871	up
A_23_P205959	ALDH1A3	Homo sapiens aldehyde dehydrogenase 1 family, member A3 (ALDH1A3), transcript variant 1, mRNA [NM_000693]	0,001590399	2,2340724	up
A_32_P116840	CTAGE5	Homo sapiens CTAGE family, member 5 (CTAGE5), transcript variant 4, mRNA [NM_203356]	0,033210415	1,6835256	up
A_23_P68487	BMP7	Homo sapiens bone morphogenetic protein 7 (BMP7), mRNA [NM_001719]	0,008314639	2,2555268	up
A_23_P115064	CRABP2	Homo sapiens cellular retinoic acid binding protein 2 (CRABP2), transcript variant 1, mRNA [NM_001878]	0,034997527	2,167071	up
A_21_P0000210	SNORD4A	Homo sapiens small nucleolar RNA, C/D box 4A (SNORD4A), small nucleolar RNA [NR_000010]	0,027008971	2,0954194	up
A_24_P942630	KDM6B	Homo sapiens lysine (K)-specific demethylase 6B (KDM6B), mRNA [NM_001080424]	0,001235309	2,407786	up
A_23_P63209	HSD11B1	Homo sapiens hydroxysteroid (11-beta) dehydrogenase 1 (HSD11B1), transcript variant 2, mRNA [NM_181755]	0,00441158	2,5354345	up
A_24_P43810	FAM83A	Homo sapiens family with sequence similarity 83, member A (FAM83A), transcript variant 2, mRNA [NM_207006]	0,002383083	2,0160475	up
A_24_P50801	NRP2	Homo sapiens neuropilin 2 (NRP2), transcript variant 6, mRNA [NM_201264]	0,014358409	2,5517955	up
A_24_P9883	AP5B1	Homo sapiens adaptor-related protein complex 5, beta 1 subunit (AP5B1), mRNA [NM_138368]	0,026889596	1,5579787	up
A_23_P419714	BTBD11	Homo sapiens BTB (POZ) domain containing 11 (BTBD11), transcript variant a, mRNA [NM_001018072]	0,04799425	1,7238438	up
A_23_P100711	PMP22	Homo sapiens peripheral myelin protein 22 (PMP22), transcript variant 1, mRNA [NM_000304]	0,04568436	1,7905387	up
A_24_P396753	TRIB2	Homo sapiens tribbles pseudokinase 2 (TRIB2), transcript variant 1, mRNA [NM_021643]	0,04397416	1,9217379	up
A_33_P3299066	NR4A2	Homo sapiens nuclear receptor subfamily 4, group A, member 2 (NR4A2), mRNA [NM_006186]	0,022511534	1,5614902	up
A_23_P369701	ABHD17C	Homo sapiens abhydrolase domain containing 17C (ABHD17C), mRNA [NM_021214]	0,03615978	1,5256813	up
A_24_P351283	MREG	Homo sapiens melanoregulin (MREG), mRNA [NM_018000]	0,03331479	1,7850199	up
A_24_P50248	FAM110C	Homo sapiens family with sequence similarity 110, member C (FAM110C), mRNA [NM_001077710]	0,03835083	1,6826013	up
A_23_P47682	NRIP3	Homo sapiens nuclear receptor interacting protein 3 (NRIP3), mRNA [NM_020645]	0,04107836	1,7010486	up
A_23_P215634	IGFBP3	Homo sapiens insulin-like growth factor binding protein 3 (IGFBP3), transcript variant 1, mRNA [NM_001013398]	0,0440183	1,8794229	up
A_23_P147918	S100A16	Homo sapiens S100 calcium binding protein A16 (S100A16), mRNA [NM_080388]	0,008650441	1,7583063	up
A_23_P84189	PITPNC1	Homo sapiens phosphatidylinositol transfer protein, cytoplasmic 1 (PITPNC1), transcript variant 2, mRNA [NM_181671]	0,009995522	1,6235768	up
A_22_P00006547	Inc-FKBP2-1	Q2AC61_9BURK (Q2AC61) HrpW, partial (3%) [THC2716184]	0,026393147	1,6207657	up
A_23_P23221	GADD45A	Homo sapiens growth arrest and DNA-damage-inducible, alpha (GADD45A), transcript variant 1, mRNA [NM_001924]	0,005840519	2,291156	up
A_23_P32253	NFIL3	Homo sapiens nuclear factor, interleukin 3 regulated (NFIL3), transcript variant 3, mRNA [NM_005384]	0,029530302	1,5054868	up
A_24_P188071	TUBA1C	Homo sapiens tubulin, alpha 1c (TUBA1C), transcript variant 5, mRNA [NM_032704]	0,019360524	1,8244052	up
A_23_P373119	HMGB3P1	Homo sapiens high mobility group box 3 pseudogene 1 (HMGB3P1), non-coding RNA [NR_002165]	0,021686366	1,7927344	up
A_24_P67681		high mobility group box 3 pseudogene 27 [Source:HGNC Symbol;Acc:HGNC:39319] [ENST00000589177]	0,02035575	1,5487324	up
A_23_P100632	HN1	Homo sapiens hematological and neurological expressed 1 (HN1), transcript variant 3, mRNA [NM_001002033]	0,033636965	1,5394956	up
A_23_P150876	VPS37B	Homo sapiens vacuolar protein sorting 37 homolog B (S. cerevisiae) (VPS37B), mRNA [NM_024667]	0,024161797	1,5096569	up
A_23_P3342917	SYNGR2	Homo sapiens synaptogyrin 2 (SYNGR2), mRNA [NM_004710]	0,034810875	1,5558487	up
A_23_P34835	LMNA	Homo sapiens lamin A/C (LMNA), transcript variant 2, mRNA [NM_005572]	0,044064175	1,5098983	up
A_23_P29036	IFNGR2	Homo sapiens interferon gamma receptor 2 (interferon gamma transducer 1) (IFNGR2), mRNA [NM_005534]	0,04684811	1,6085312	up
A_33_P3290573	FAM46A	Homo sapiens family with sequence similarity 46, member A (FAM46A), mRNA [NM_017633]	0,043548446	1,5468771	up
A_23_P214798	SYNCRIP	Homo sapiens synaptotagmin binding, cytoplasmic RNA interacting protein (SYNCRIP), transcript variant 1, mRNA [NM_006372]	0,022545703	1,5280042	up
A_24_P6467	DENND2C	Homo sapiens DENN/MADD domain containing 2C (DENND2C), transcript variant 2, mRNA [NM_198459]	0,01228893	2,0636656	up
A_23_P112159	AGO2	Homo sapiens argonaute RISC catalytic component 2 (AGO2), transcript variant 1, mRNA [NM_012154]	0,04231568	1,5370997	up
A_23_P313389	UGCG	Homo sapiens UDP-glucose ceramide glucosyltransferase (UGCG), mRNA [NM_003358]	0,009664458	1,5623753	up
A_23_P202810	OVOL1	Homo sapiens ovo-like zinc finger 1 (OVOL1), mRNA [NM_004561]	0,005590736	2,8550103	up
A_33_P3352970	IRAK2	Homo sapiens interleukin-1 receptor-associated kinase 2 (IRAK2), mRNA [NM_001570]	0,008484537	2,3391511	up
A_23_P340333	ITPRIP	Homo sapiens inositol 1,4,5-trisphosphate receptor interacting protein (ITPRIP), transcript variant 1, mRNA [NM_033397]	0,047083836	1,72939	up
A_33_P3321293	IQGAP3	Homo sapiens IQ motif containing GTPase activating protein 3 (IQGAP3), mRNA [NM_178229]	0,041047145	2,0094197	up

A_23_P106002	NFKBIA	Homo sapiens nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha (NFKBIA), mRNA [NM_020529]	0,023785999	1,8046001	up
A_24_P235429	ABCA1	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 1 (ABCA1), mRNA [NM_005502]	0,039039712	1,9090132	up
A_33_P3259393	HAPLN3	Homo sapiens hyaluronan and proteoglycan link protein 3 (HAPLN3), mRNA [NM_178232]	0,010389301	2,0761864	up
A_33_P3325978		AY247741 TRB2 protein {Bos taurus} (exp=-1; wgp=0; cg=0), partial (55%) [THC2607344]	0,018617887	1,8331074	up
A_23_P52067	GRHL3	Homo sapiens grainyhead-like 3 (Drosophila) (GRHL3), transcript variant 2, mRNA [NM_198173]	0,00549301	3,0049293	up
A_21_P0000120	KCNJ18	Homo sapiens potassium channel, inwardly rectifying subfamily J, member 18 (KCNJ18), mRNA [NM_001194958]	0,038277794	2,3881865	up
A_24_P379750	MXD1	Homo sapiens MAX dimerization protein 1 (MXD1), transcript variant 1, mRNA [NM_002357]	0,016474284	2,201544	up
A_23_P51646	PLK3	Homo sapiens polo-like kinase 3 (PLK3), mRNA [NM_004073]	0,001583223	3,014282	up
A_23_P90311	TICAM1	Homo sapiens toll-like receptor adaptor molecule 1 (TICAM1), mRNA [NM_182919]	0,0027671	2,3251097	up
A_23_P103110	MAFF	Homo sapiens v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog F (MAFF), transcript variant 1, mRNA [NM_012323]	0,00153351	2,279955	up
A_33_P3285545	CLDN4	Homo sapiens claudin 4 (CLDN4), mRNA [NM_001305]	0,002362838	2,1424744	up
A_23_P156788	STX11	Homo sapiens syntaxin 11 (STX11), mRNA [NM_003764]	0,0227742	1,910745	up
A_32_P703	LOC646626	Homo sapiens uncharacterized LOC646626 (LOC646626), long non-coding RNA [NR_045484]	0,001344792	2,3332043	up
A_23_P32233	KLF4	Homo sapiens Kruppel-like factor 4 (gut) (KLF4), mRNA [NM_004235]	0,025251191	1,6683506	up
A_21_P0000846	SH3PXD2A-AS1	Homo sapiens SH3PXD2A antisense RNA 1 (SH3PXD2A-AS1), long non-coding RNA [NR_038940]	0,033596035	2,4291413	up
A_23_P156289	OSMR	Homo sapiens oncostatin M receptor (OSMR), transcript variant 1, mRNA [NM_003999]	8,99E-04	2,3872066	up
A_33_P3282075	SP6	Homo sapiens Sp6 transcription factor (SP6), transcript variant 1, mRNA [NM_001258248]	0,027860962	2,2868881	up
A_23_P22134	BNC1	Homo sapiens basoonuclin 1 (BNC1), transcript variant 1, mRNA [NM_001717]	0,013537962	2,3513656	up
A_24_P330303	FRMD6	Homo sapiens FERM domain containing 6 (FRMD6), transcript variant 1, mRNA [NM_001042481]	0,017509004	2,6207395	up
A_33_P3389286	SFN	Homo sapiens stratifin (SFN), mRNA [NM_006142]	0,026569275	2,7327816	up
A_24_P333697	KLK13	Homo sapiens kallikrein-related peptidase 13 (KLK13), mRNA [NM_015596]	0,04798203	3,0593667	up
A_33_P3231447	ITGA6	Homo sapiens integrin, alpha 6 (ITGA6), transcript variant 2, mRNA [NM_000210]	0,019547697	2,2758002	up
A_23_P210176	ITGA6	Homo sapiens integrin, alpha 6 (ITGA6), transcript variant 2, mRNA [NM_000210]	0,026252285	2,2536116	up
A_23_P401904	PHF19	Homo sapiens PHD finger protein 19 (PHF19), transcript variant 2, mRNA [NM_001009936]	0,02561448	2,2333145	up
A_23_P211212	COL18A1	Homo sapiens collagen, type XVIII, alpha 1 (COL18A1), transcript variant 1, mRNA [NM_030582]	0,022775011	2,0163002	up
A_23_P24716	TMEM132A	Homo sapiens transmembrane protein 132A (TMEM132A), transcript variant 1, mRNA [NM_017870]	0,004298809	2,3882978	up
A_23_P107421	TK1	Homo sapiens thymidine kinase 1, soluble (TK1), mRNA [NM_003258]	0,003737023	2,27475	up
A_23_P339098	SLC35F2	Homo sapiens solute carrier family 35, member F2 (SLC35F2), mRNA [NM_017515]	0,031178292	1,9325052	up
A_23_P2492	C1S	Homo sapiens complement component 1, s subcomponent (C1S), transcript variant 2, mRNA [NM_001734]	0,04160653	1,7653763	up
A_33_P3304212	PLEKHG3	Homo sapiens pleckstrin homology domain containing, family G (with RhoGef domain) member 3 (PLEKHG3), mRNA [NM_015549]	0,004942702	1,6484214	up
A_24_P91140	RPL23A	Homo sapiens ribosomal protein L23a (RPL23A), mRNA [NM_000984]	0,007745398	1,6539588	up
A_24_P22079	FOXO1	Homo sapiens forkhead box O1 (FOXO1), mRNA [NM_002015]	0,00787899	1,8160409	up
A_24_P785293	SNHG1	Homo sapiens small nucleolar RNA host gene 1 (non-protein coding) (SNHG1), long non-coding RNA [NR_003098]	0,020970037	1,6808282	up
A_23_P35293	GJB5	Homo sapiens gap junction protein, beta 5, 31.1kDa (GJB5), mRNA [NM_005268]	0,04432088	1,6088438	up
A_33_P3393821	C1R	Homo sapiens complement component 1, r subcomponent (C1R), mRNA [NM_001733]	0,00983611	1,6077895	up
A_23_P125423	C1R	Homo sapiens complement component 1, r subcomponent (C1R), mRNA [NM_001733]	0,012415674	1,6247894	up
A_33_P3330264	CXCL1	Homo sapiens chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha) (CXCL1), transcript variant 1, mRNA [NM_001511]	0,032687884	2,6495535	up
A_24_P122137	LIF	Homo sapiens leukemia inhibitory factor (LIF), transcript variant 1, mRNA [NM_002309]	0,004465004	2,649236	up
A_23_P102731	SMOX	Homo sapiens spermine oxidase (SMOX), transcript variant 1, mRNA [NM_175839]	0,01021203	2,4251628	up
A_33_P3381751	TIAM1	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1), mRNA [NM_003253]	0,00736689	2,275823	up
A_23_P127948	ADM	Homo sapiens adrenomedullin (ADM), mRNA [NM_001124]	0,005525479	2,6456904	up
A_23_P47614	PHLDA2	Homo sapiens pleckstrin homology-like domain, family A, member 2 (PHLDA2), mRNA [NM_003311]	0,003165371	2,8923287	up
A_23_P49338	TNFRSF12A	Homo sapiens tumor necrosis factor receptor superfamily, member 12A (TNFRSF12A), mRNA [NM_016639]	0,004155498	3,084583	up
A_23_P55706	RELB	Homo sapiens v-rel avian reticuloendotheliosis viral oncogene homolog B (RELB), mRNA [NM_006509]	0,02184985	1,9380804	up
A_23_P255653	TNFRSF10A	Homo sapiens tumor necrosis factor receptor superfamily, member 10a (TNFRSF10A), mRNA [NM_003844]	0,004613367	2,0761516	up
A_23_P22350	GRAMD3	Homo sapiens GRAM domain containing 3 (GRAMD3), transcript variant 2, mRNA [NM_023927]	0,013711777	1,8396552	up
A_24_P218265	TNFRSF10B	Homo sapiens tumor necrosis factor receptor superfamily, member 10b (TNFRSF10B), transcript variant 1, mRNA [NM_003842]	0,007817271	1,8550014	up
A_23_P52647	EHD1	Homo sapiens EH-domain containing 1 (EHD1), transcript variant 2, mRNA [NM_006795]	0,008437749	2,1365824	up
A_23_P46315	DENN2C	DENN/MADD domain containing 2C [Source:HGNC Symbol;Acc:HGNC:24748] [ENST00000393277]	0,015244804	1,8359199	up
A_23_P214330	SERPINB1	Homo sapiens serpin peptidase inhibitor, clade B (ovalbumin), member 1 (SERPINB1), transcript variant 1, mRNA [NM_030666]	0,04697053	1,7897432	up
A_33_P3311439	GCH1	Homo sapiens GTP cyclohydrolase 1 (GCH1), transcript variant 4, mRNA [NM_001024071]	0,03243211	1,671778	up
A_33_P3289356	CD58	Homo sapiens CD58 molecule (CD58), transcript variant 1, mRNA [NM_001779]	0,035256688	1,5397589	up
A_23_P3204	MAPK6	Homo sapiens mitogen-activated protein kinase 6 (MAPK6), mRNA [NM_002748]	0,029362047	1,6716359	up
A_33_P3356711	ING3	Homo sapiens inhibitor of growth family, member 3 (ING3), transcript variant 3, mRNA [NM_198267]	0,026365394	1,6643649	up
A_33_P3335845	WDR33	Homo sapiens WD repeat domain 33 (WDR33), transcript variant 2, mRNA [NM_001006622]	0,023165865	1,5595287	up
A_33_P3334548	BZW1	Homo sapiens basic leucine zipper and W2 domains 1 (BZW1), transcript variant 2, mRNA [NM_001207068]	0,032352626	1,5312681	up
A_33_P3237359	HMGCB3	Homo sapiens high mobility group box 3 (HMGCB3), transcript variant 1, mRNA [NM_001301228]	0,03119312	1,5836746	up
A_23_P218131	INF2	Homo sapiens inverted formin, FH2 and WH2 domain containing (INF2), transcript variant 3, mRNA [NM_032714]	0,03370308	1,651428	up
A_23_P166306	CBS	Homo sapiens cystathionine-beta-synthase (CBS), transcript variant 1, mRNA [NM_000071]	0,04161593	1,6011543	up

A_23_P49155	CDH3	Homo sapiens cadherin 3, type 1, P-cadherin (placental) (CDH3), mRNA [NM_001793]	0,028643964	1,6200033	up
A_21_P0001238	lnc-EGLN1-1	LNCipedia lincRNA (lnc-EGLN1-1), lincRNA [lnc-EGLN1-1:6]	0,032843646	1,5590858	up
A_24_P296698	MAP2K3	Homo sapiens mitogen-activated protein kinase kinase 3 (MAP2K3), transcript variant B, mRNA [NM_145109]	0,014565754	1,6788576	up
A_33_P3563369	SNORA10	CM1-HT1146-090101-713-g10 HT1146 Homo sapiens cDNA, mRNA sequence [BG987537]	0,025361452	1,5381397	up
A_23_P209394	CFLAR	Homo sapiens CASP8 and FADD-like apoptosis regulator (CFLAR), transcript variant 3, mRNA [NM_001127184]	0,035615455	1,5205345	up
A_33_P3251430	NRIP1	Homo sapiens nuclear receptor interacting protein 1 (NRIP1), mRNA [NM_003489]	0,038223904	1,6177721	up
A_23_P31873	RAB11FIP1	Homo sapiens RAB11 family interacting protein 1 (class I) (RAB11FIP1), transcript variant 3, mRNA [NM_001002814]	0,024489803	1,6091819	up
A_32_P212373	lnc-EGLN1-1	LNCipedia lincRNA (lnc-EGLN1-1), lincRNA [lnc-EGLN1-1:1]	0,015761007	1,6369839	up
A_33_P3263217	LRRC4	Homo sapiens leucine rich repeat containing 4 (LRRC4), mRNA [NM_022143]	0,002238986	2,202291	up
A_23_P126735	IL10	Homo sapiens interleukin 10 (IL10), mRNA [NM_000572]	0,034669235	2,2861886	up
A_24_P943997	ARL5B	Homo sapiens ADP-ribosylation factor-like 5B (ARL5B), mRNA [NM_178815]	0,008695865	2,012949	up
A_22_P00014972	LOC101928156	PREDICTED: Homo sapiens uncharacterized LOC101928156 (LOC101928156), ncRNA [XR_241404]	0,034633804	1,7831589	up
A_33_P3365432	NCF4	Homo sapiens neutrophil cytosolic factor 4, 40kDa (NCF4), transcript variant 1, mRNA [NM_000631]	0,03858685	1,7745991	up
A_23_P373598	MAFK	Homo sapiens v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog K (MAFK), mRNA [NM_002360]	0,004434645	1,7399175	up
A_22_P00016053	LINC01540	Homo sapiens long intergenic non-protein coding RNA 1540 (LINC01540), transcript variant 2, long non-coding RNA [NR_110428]	0,003781906	2,1447515	up
A_23_P58009	C3orf52	Homo sapiens chromosome 3 open reading frame 52 (C3orf52), transcript variant 2, mRNA [NM_024616]	0,004909999	2,026173	up
A_21_P0008807	lnc-OR4M2-7	HUMTNL12 ORF2 (Homo sapiens) (exp=-1; wgp=0; cg=0), partial (10%) [THC2577654]	0,007945313	1,9570619	up
A_33_P379775	TLE1	transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila) [Source:HGNC Symbol;Acc:HGNC:11837] [ENST00000376463]	0,019208813	1,8709486	up
A_23_P106194	FOS	Homo sapiens FBJ murine osteosarcoma viral oncogene homolog (FOS), mRNA [NM_005252]	0,025748037	2,3275523	up
A_23_P376096	TICAM1	Homo sapiens toll-like receptor adaptor molecule 1 (TICAM1), mRNA [NM_182919]	9,78E-04	2,1112764	up
A_33_P3224070	CSRP1	Homo sapiens cysteine-serine-rich nuclear protein 1 (CSRP1), mRNA [NM_033027]	3,17E-04	2,310496	up
A_33_P3357445	TDG	Homo sapiens thymine-DNA glycosylase (TDG), mRNA [NM_003211]	0,0176989	1,6410453	up
A_22_P00001124	lnc-ALX3-2	Q554H1_DICD1 (Q554H1) Lysozyme, partial (10%) [THC2668388]	0,029596075	1,6641858	up
A_21_P0000073	OSMR	Homo sapiens oncostatin M receptor (OSMR), transcript variant 2, mRNA [NM_001168355]	0,012575584	1,9471698	up
A_23_P86330	IER5	Homo sapiens immediate early response 5 (IER5), mRNA [NM_016545]	0,008897912	1,9259793	up
A_22_P00013618	lnc-RP11-582J16.5.1-3	LNCipedia lincRNA (lnc-RP11-582J16.5.1-3), lincRNA [lnc-RP11-582J16.5.1-3:1]	0,028171828	1,912298	up
A_24_P137897	IFRD1	Homo sapiens interferon-related developmental regulator 1 (IFRD1), transcript variant 1, mRNA [NM_001007245]	0,001252151	1,8093418	up
A_23_P405878	C12orf54	Homo sapiens chromosome 12 open reading frame 54 (C12orf54), mRNA [NM_152319]	0,032837965	1,7173302	up
A_33_P3210085	NET1	Homo sapiens neuroepithelial cell transforming 1 (NET1), transcript variant 1, mRNA [NM_001047160]	0,025988705	1,5056145	up
A_33_P3392560	LINC00871	Homo sapiens long intergenic non-protein coding RNA 871 (LINC00871), transcript variant 1, long non-coding RNA [NR_102701]	0,013390887	1,7269043	down
A_33_P3313796	CCDC34	Homo sapiens coiled-coil domain containing 34 (CCDC34), transcript variant 1, mRNA [NM_030771]	0,0194254	1,7863168	down
A_33_P3236177	ANG	Homo sapiens angiogenin, ribonuclease, RNase A family, 5 (ANG), transcript variant 1, mRNA [NM_001145]	0,018865233	1,548241	down
A_24_P751492	FAM221B	Homo sapiens family with sequence similarity 221, member B (FAM221B), transcript variant 1, mRNA [NM_001012446]	0,03341574	1,5035377	down
A_23_P212284	POC1A	Homo sapiens POC1 centriolar protein A (POC1A), transcript variant 1, mRNA [NM_015426]	0,03585413	1,5075487	down
A_23_P251881	NCR3	Homo sapiens natural cytotoxicity triggering receptor 3 (NCR3), transcript variant 1, mRNA [NM_147130]	0,032699674	2,0137608	down
A_33_P3258349	LOC6444145	Homo sapiens exocyst complex component 1 pseudogene (LOC644145), non-coding RNA [NR_003935]	0,028335406	1,7777959	down
A_33_P3400477	STIL	Homo sapiens SCL/TAL1 interrupting locus (STIL), transcript variant 3, mRNA [NM_001282936]	0,0213324	1,6250232	down
A_33_P3307144	GRIK2	Homo sapiens glutamate receptor, ionotropic, kainate 2 (GRIK2), transcript variant 1, mRNA [NM_021956]	0,005669336	1,9842551	down
A_33_P3381666	ABLIM2	Homo sapiens actin binding LIM protein family, member 2 (ABLIM2), transcript variant 7, mRNA [NM_001130088]	0,036181573	1,7331979	down
A_23_P254917	LGALS4	Homo sapiens lectin, galactoside-binding, soluble, 4 (LGALS4), mRNA [NM_006149]	0,024075674	1,7974336	down
A_23_P92860	CCNO	Homo sapiens cyclin O (CCNO), transcript variant 1, mRNA [NM_021147]	0,004530721	1,9246757	down
A_33_P3793307	LOC339803	Homo sapiens uncharacterized LOC339803 (LOC339803), long non-coding RNA [NR_036496]	0,029122146	1,7227179	down
A_32_P110472	IYD	Homo sapiens iodotyrosine deiodinase (IYD), transcript variant 2, mRNA [NM_203395]	0,01618247	1,6029407	down
A_23_P354798	COQ10A	Homo sapiens coenzyme Q10 homolog A (S. cerevisiae) (COQ10A), transcript variant 1, mRNA [NM_144576]	0,044361673	1,546243	down
A_33_P3238052	FAM216A	Homo sapiens family with sequence similarity 216, member A (FAM216A), mRNA [NM_013300]	0,01957282	1,746456	down
A_19_P00801506		Homo sapiens cDNA FLJ33446 fis, clone BRAMY1000095. [AK090765]	0,047425054	1,8922894	down
A_21_P0003940	lnc-CCDC125-1	Homo sapiens cDNA clone IMAGE:5298846. [BC039391]	0,01450748	2,203825	down
A_23_P127522	HYLS1	Homo sapiens hydrolethalus syndrome 1 (HYLS1), transcript variant 1, mRNA [NM_145014]	0,036530275	1,6690714	down
A_33_P3387115		Homo sapiens, clone IMAGE:3961600, mRNA. [BC021693]	0,04346412	1,663705	down
A_23_P162288	MYO1A	Homo sapiens myosin IA (MYO1A), transcript variant 2, mRNA [NM_005379]	0,004091231	1,9031477	down
A_23_P217704	GYG2	Homo sapiens glycogenin 2 (GYG2), transcript variant 2, mRNA [NM_003918]	0,023760773	1,8252431	down
A_23_P126486	CROCCP2	Homo sapiens ciliary rootlet coiled-coil, rootletin pseudogene 2 (CROCCP2), non-coding RNA [NR_026752]	0,009734444	1,8254318	down
A_33_P3379922	PROC	Homo sapiens protein C (inactivator of coagulation factors Va and VIIIa) (PROC), mRNA [NM_000312]	0,006921825	1,9872806	down
A_23_P250164	HGD	Homo sapiens homogentisate 1,2-dioxygenase (HGD), mRNA [NM_000187]	0,011075542	2,1894772	down
A_21_P0011848	LOC100506922	PREDICTED: Homo sapiens basic proline-rich protein-like (LOC100506922), mRNA [XM_005263848]	0,019256506	1,7038037	down
A_22_P00002829	lnc-C2orf72-1	Homo sapiens full length insert cDNA clone YZ88E12. [AF086098]	0,0141328	1,6769611	down
A_22_P00005031		DB035218 TESTI2 Homo sapiens cDNA clone TESTI2020522 5', mRNA sequence [DB035218]	0,034407713	1,938067	down
A_23_P168130	IP6K3	Homo sapiens inositol hexakisphosphate kinase 3 (IP6K3), transcript variant 1, mRNA [NM_054111]	1,68E-04	2,2662466	down
A_32_P210202	E2F7	Homo sapiens E2F transcription factor 7 (E2F7), mRNA [NM_203394]	0,006268334	2,3294654	down

A_23_P23611	AMY1C	Homo sapiens amylase, alpha 1C (salivary) (AMY1C), mRNA [NM_001008219]	0,007068815	2,473207	down
A_24_P194688	MICU3	Homo sapiens mitochondrial calcium uptake family, member 3 (MICU3), mRNA [NM_181723]	0,005353339	1,9974734	down
A_19_P00810806	SMIM2-AS1	Homo sapiens SMIM2 antisense RNA 1 (SMIM2-AS1), transcript variant 1, long non-coding RNA [NR_104064]	0,028839478	1,5995029	down
A_33_P3231267	lnc-ITGA2-1	LNCipedia lincRNA (lnc-ITGA2-1), lincRNA [lnc-ITGA2-1:5]	0,014615802	1,7835392	down
A_33_P3421611	lnc-PLEKHH2-1	Q96I88_HUMAN (Q96I88) THADA protein (Fragment), partial (8%) [THC2552587]	0,03759135	1,7464211	down
A_23_P377214	HEXIM2	hexamethylene bis-acetamide inducible 2 [Source:HGNC Symbol;Acc:HGNC:28591] [ENST00000592695]	0,034891818	1,526856	down
A_24_P944588	ZNF682	Homo sapiens zinc finger protein 682 (ZNF682), transcript variant 1, mRNA [NM_033196]	0,019726694	1,8767924	down
A_23_P304016			0,04018798	1,7804374	down
A_23_P82738	RAD54B	Homo sapiens RAD54 homolog B (S. cerevisiae) (RAD54B), transcript variant 1, mRNA [NM_012415]	0,025174234	1,7158481	down
A_33_P3301040	HHLA2	Homo sapiens HERV-H LTR-associating 2 (HHLA2), transcript variant 4, mRNA [NM_001282558]	0,04618502	1,7690123	down
A_21_P0002963	lnc-KCTD6-1	LNCipedia lincRNA (lnc-KCTD6-1), lincRNA [lnc-KCTD6-1:3]	0,020975275	1,7899096	down
A_22_P00001895	LOC100049716	Homo sapiens uncharacterized LOC100049716 (LOC100049716), long non-coding RNA [NR_122124]	0,021140605	1,5067723	down
A_23_P116173	COLCA2	Homo sapiens colorectal cancer associated 2 (COLCA2), transcript variant 3, mRNA [NM_001136105]	0,005169242	1,8101646	down
A_23_P151805	FBLN5	Homo sapiens fibulin 5 (FBLN5), mRNA [NM_006329]	0,02063484	1,8100536	down
A_33_P3363485	SOBP	Homo sapiens sine oculis binding protein homolog (Drosophila) (SOBP), mRNA [NM_018013]	0,044033136	1,731104	down
A_23_P110412	TMEM150C	Homo sapiens transmembrane protein 150C (TMEM150C), mRNA [NM_001080506]	0,006285004	1,8191524	down
A_21_P0011279		Q5TBT5_HUMAN (Q5TBT5) OTTHUMP00000018489 (Fragment), partial (22%) [THC2787468]	0,013299927	1,9097362	down
A_33_P3329652	ZFP90	Homo sapiens ZFP90 zinc finger protein (ZFP90), mRNA [NM_133458]	0,024819752	1,5225427	down
A_21_P0011877	LOC102725407		0,01874979	1,7333037	down
A_33_P3411090	ADAL	Homo sapiens adenosine deaminase-like (ADAL), transcript variant 2, mRNA [NM_001012969]	0,022251882	1,555081	down
A_22_P00014096	lnc-SASS6-2	Homo sapiens cDNA clone IMAGE:5211580, partial cds. [BC048339]	0,03387258	1,5569234	down
A_33_P3341494	ZNF658	Homo sapiens zinc finger protein 658 (ZNF658), mRNA [NM_033160]	0,008594945	1,5513961	down
A_24_P93309	CDNF	Homo sapiens cerebral dopamine neurotrophic factor (CDNF), mRNA [NM_001029954]	0,004927663	1,6206383	down
A_22_P00016353	LOC728730	Homo sapiens uncharacterized LOC728730 (LOC728730), long non-coding RNA [NR_037875]	0,01993478	1,5142623	down
A_24_P226210	CEP120	Homo sapiens centrosomal protein 120kDa (CEP120), transcript variant 1, mRNA [NM_153223]	0,011687073	1,6532326	down
A_24_P89891	TRAF1	Homo sapiens TNF receptor-associated factor 1 (TRAF1), transcript variant 1, mRNA [NM_005658]	0,021341734	1,5653849	down
A_33_P3289296	TMEM37	Homo sapiens transmembrane protein 37 (TMEM37), mRNA [NM_183240]	0,03764193	1,5694842	down
A_33_P3400248	FGF20	Homo sapiens fibroblast growth factor 20 (FGF20), mRNA [NM_019851]	0,029418064	2,5320258	down
A_32_P179998	DMRTC1	Homo sapiens DMRT-like family C1 (DMRTC1), mRNA [NM_033053]	0,003395084	1,876197	down
A_23_P40096	PROC	Homo sapiens protein C (inactivator of coagulation factors Va and VIIIa) (PROC), mRNA [NM_000312]	0,002293319	2,1025085	down
A_33_P3258061	PALM3	Homo sapiens paralemmin 3 (PALM3), mRNA [NM_001145028]	0,013516591	1,9353576	down
A_23_P168965	C8orf44	Homo sapiens chromosome 8 open reading frame 44 (C8orf44), mRNA [NM_019607]	0,04798224	1,6188022	down
A_33_P3380236			0,040018603	1,702446	down
A_23_P160886	TAS1R1	Homo sapiens taste receptor, type 1, member 1 (TAS1R1), transcript variant 2, mRNA [NM_138697]	0,044203606	1,6682293	down
A_24_P356509	RAD51D	Homo sapiens RAD51 paralog D (RAD51D), transcript variant 6, mRNA [NM_001142571]	0,002989808	1,776001	down
A_33_P3780123	lnc-CX3CR1-2	Homo sapiens cDNA FLJ33065 fis, clone TRACH2000081. [AK057627]	0,001289057	2,0423636	down
A_32_P95914	MMS22L	Homo sapiens MMS22-like, DNA repair protein (MMS22L), mRNA [NM_198468]	0,025880141	1,5148259	down
A_22_P00007236	lnc-GPN2-2	PREDICTED: Homo sapiens collagen alpha-1(III) chain-like (LOC101928728), mRNA [XM_005275879]	0,02468584	1,5759059	down
A_33_P3259736	AMACR	Homo sapiens alpha-methylacyl-CoA racemase (AMACR), transcript variant 1, mRNA [NM_014324]	0,005292276	1,7024994	down
A_23_P406785	C9orf50	Homo sapiens chromosome 9 open reading frame 50 (C9orf50), mRNA [NM_199350]	0,039497424	1,6473746	down
A_32_P125803	RBM26-AS1	Homo sapiens RBM26 antisense RNA 1 (RBM26-AS1), long non-coding RNA [NR_038991]	0,00821064	1,8842584	down
A_23_P51376	NKAIN1	Homo sapiens Na ⁺ /K ⁺ transporting ATPase interacting 1 (NKAIN1), mRNA [NM_024522]	0,04234379	1,7391487	down
A_24_P62800	KLHDC8A	Homo sapiens kelch domain containing 8A (KLHDC8A), transcript variant 2, mRNA [NM_018203]	0,030567762	1,9319056	down
A_33_P3214948	SPOCK2	Homo sapiens sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 2 (SPOCK2), transcript variant 2, mRNA [NM_014767]	0,046216477	1,8248785	down
A_22_P00014553		DBP5_CRYNE (Q5KBP5) ATP-dependent RNA helicase DBP5 , partial (4%) [THC2684548]	0,037018936	1,6647122	down
A_23_P307955	SIRT5	Homo sapiens sirtuin 5 (SIRT5), transcript variant 2, mRNA [NM_031244]	0,03124987	1,8194152	down
A_33_P3358621	LOC100506036	PREDICTED: Homo sapiens uncharacterized LOC100506036 (LOC100506036), ncRNA [XR_109916]	0,04571074	1,6220174	down
A_33_P3380211	AKAP9	Homo sapiens A kinase (PRKA) anchor protein 9 (AKAP9), transcript variant 2, mRNA [NM_005751]	0,023925686	1,5060999	down
A_23_P430670		Homo sapiens carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 5 (CHST5), mRNA [NM_024533]	0,043996118	1,5659156	down
A_22_P00020229	lnc-DALRD3-2	LNCipedia lincRNA (lnc-DALRD3-2), lincRNA [lnc-DALRD3-2:2]	0,038095724	1,8321351	down
A_33_P3245290	AQP7P1	Homo sapiens aquaporin 7 pseudogene 1 (AQP7P1), non-coding RNA [NR_002817]	0,04462279	1,7944897	down
A_33_P3216898	LOC286367	Homo sapiens FP944 (LOC286367), long non-coding RNA [NR_024011]	0,03179593	1,8543596	down
A_22_P00021758	LOC642366	Homo sapiens uncharacterized LOC642366 (LOC642366), long non-coding RNA [NR_046243]	0,007984416	1,8707443	down
A_33_P3324186	LOC642366	Homo sapiens uncharacterized LOC642366 (LOC642366), long non-coding RNA [NR_046243]	0,012620642	1,73671	down
A_21_P0009114	LOC101928659	PREDICTED: Homo sapiens uncharacterized LOC101928659 (LOC101928659), ncRNA [XR_243494]	0,006548504	1,7534283	down
A_33_P3386237	TAT-AS1	Homo sapiens TAT antisense RNA 1 (TAT-AS1), transcript variant 1, long non-coding RNA [NR_103851]	0,029215932	1,8432444	down
A_22_P00023553	lnc-RNF11-1	LNCipedia lincRNA (lnc-RNF11-1), lincRNA [lnc-RNF11-1:1]	0,027529167	1,6861197	down
A_32_P116556	ZNF469	Homo sapiens zinc finger protein 469 (ZNF469), mRNA [NM_001127464]	0,03394657	1,615363	down
A_21_P0007548	lnc-FAM113B-5	LNCipedia lincRNA (lnc-FAM113B-5), lincRNA [lnc-FAM113B-5:1]	0,026451299	1,6000144	down

A_19_P00317449	ZNF678	Homo sapiens zinc finger protein 678 (ZNF678), transcript variant 1, mRNA [NM_178549]	0,011833534	1,5868416	down
A_22_P00010650		Homo sapiens mannosidase, alpha, class 2C, member 1, mRNA (cDNA clone IMAGE:4329693), partial cds. [BC010081]	0,02474947	1,5406431	down
A_22_P00012112	LOC100287896	PREDICTED: Homo sapiens uncharacterized LOC100287896 (LOC100287896), misc_RNA [XR_132892]	0,020820407	1,5366547	down
A_33_P3310189	ADRB1	Homo sapiens adrenoceptor beta 1 (ADRB1), mRNA [NM_000684]	0,031795338	1,6005367	down
A_33_P3676515	SSR4P1	Homo sapiens signal sequence receptor, delta pseudogene 1 (SSR4P1), non-coding RNA [NR_027292]	0,022982005	1,6560832	down
A_33_P3385567	ARNTL	aryl hydrocarbon receptor nuclear translocator-like [Source:HGNC Symbol;Acc:HGNC:701] [ENST00000472842]	0,014603836	1,8804154	down
A_33_P3332724	ALMS1	Homo sapiens Alstrom syndrome 1 (ALMS1), mRNA [NM_015120]	0,034835108	1,61741	down
A_33_P3299279	ANXA2R	Homo sapiens annexin A2 receptor (ANXA2R), mRNA [NM_001014279]	0,006803355	1,7022438	down
A_32_P100439	MTURN	Homo sapiens maturin, neural progenitor differentiation regulator homolog (Xenopus) (MTURN), mRNA [NM_152793]	0,041043263	1,6783249	down
A_33_P3301221	MORN1	Homo sapiens MORN repeat containing 1 (MORN1), transcript variant 3, non-coding RNA [NR_125361]	0,004655658	1,9274222	down
A_21_P0008649	lnc-RPLP1-1	LNCipedia lincRNA (lnc-RPLP1-1), lincRNA [lnc-RPLP1-1:15]	0,007796772	2,0727718	down
A_33_P3214463	MESP2	Homo sapiens mesoderm posterior basic helix-loop-helix transcription factor 2 (MESP2), mRNA [NM_001039958]	0,022099044	1,8037223	down
A_33_P3386671	RORC	Homo sapiens RAR-related orphan receptor C (RORC), transcript variant 1, mRNA [NM_005060]	0,029776264	1,524479	down
A_32_P169505	KIAA2022	Homo sapiens KIAA2022 (KIAA2022), mRNA [NM_001008537]	0,024400616	1,5031104	down
A_33_P3357332	lnc-C9orf147-1	PREDICTED: Homo sapiens chromosome 9 open reading frame 147 (C9orf147), misc_RNA [XR_171816]	0,044273224	1,5139408	down
A_33_P3570208	LPP-AS2	Homo sapiens LPP antisense RNA 2 (LPP-AS2), long non-coding RNA [NR_036497]	0,035730645	1,536384	down
A_33_P3445679	LINC00548	Homo sapiens long intergenic non-protein coding RNA 548 (LINC00548), long non-coding RNA [NR_033877]	0,003966218	1,9356492	down
A_32_P21474	IRAK1BP1	Homo sapiens interleukin-1 receptor-associated kinase 1 binding protein 1 (IRAK1BP1), mRNA [NM_001010844]	0,005848735	1,9318941	down
A_33_P3378634	SLC25A30-AS1	Homo sapiens SLC25A30 antisense RNA 1 (SLC25A30-AS1), long non-coding RNA [NR_047031]	0,024180343	1,6584516	down
A_22_P00025189	lnc-FNBP1L-1	LNCipedia lincRNA (lnc-FNBP1L-1), lincRNA [lnc-FNBP1L-1:3]	0,014040312	1,5908962	down
A_22_P00018828	lnc-PARP11-1	Homo sapiens mRNA; cDNA DKFZp686B17245 (from clone DKFZp686B17245). [BX648417]	0,019747082	1,9082226	down
A_22_P00021224	lnc-PARN-7	Homo sapiens cDNA clone IMAGE:5266573. [BC036408]	0,012563062	1,8181753	down
A_33_P3213086		ankyrin repeat domain 20 family, member A5, pseudogene [Source:HGNC Symbol;Acc:HGNC:33833] [ENST00000577614]	0,034874197	1,6587622	down
A_33_P3276615	APOL4	Homo sapiens apolipoprotein L, 4 (APOL4), transcript variant a, mRNA [NM_030643]	0,036999837	1,6168729	down
A_23_P411335	SGOL2	Homo sapiens shugoshin-like 2 (S. pombe) (SGOL2), transcript variant 1, mRNA [NM_152524]	0,015772277	1,794884	down
A_23_P127565	LAYN	Homo sapiens layilin (LAYN), transcript variant 2, mRNA [NM_178834]	0,042973205	1,5561851	down
A_23_P70746	AH11	Homo sapiens Abelson helper integration site 1 (AH11), transcript variant 2, mRNA [NM_017651]	0,03336537	1,5347766	down
A_33_P3301316	ZFAND4	Homo sapiens zinc finger, AN1-type domain 4 (ZFAND4), transcript variant 3, mRNA [NM_001282905]	0,031407766	1,5616738	down
A_33_P3309414	LOC643770	Homo sapiens uncharacterized LOC643770 (LOC643770), long non-coding RNA [NR_038383]	0,04393101	1,5604277	down
A_33_P3346348	TBC1D31	Homo sapiens TBC1 domain family, member 31 (TBC1D31), transcript variant 2, mRNA [NM_001145088]	0,03525278	1,5112556	down
A_21_P0003110	lnc-GLB1-1	LNCipedia lincRNA (lnc-GLB1-1), lincRNA [lnc-GLB1-1:1]	0,030478062	1,5031984	down
A_23_P252641	GOSR1	Homo sapiens golgi SNAP receptor complex member 1 (GOSR1), transcript variant 3, mRNA [NM_001007024]	0,02209185	1,504565	down
A_33_P3227920	SLC16A4	Homo sapiens solute carrier family 16, member 4 (SLC16A4), transcript variant 1, mRNA [NM_004696]	0,03086639	1,7251933	down
A_24_P397386	LIFR	Homo sapiens leukemia inhibitory factor receptor alpha (LIFR), transcript variant 2, mRNA [NM_002310]	0,010996354	1,6675706	down
A_22_P00022364	LOC100507054	PREDICTED: Homo sapiens uncharacterized LOC100507054 (LOC100507054), ncRNA [XR_108535]	0,045102656	1,5411837	down
A_33_P3233160	CFAP36	Homo sapiens cilia and flagella associated protein 36 (CFAP36), transcript variant 1, mRNA [NM_001282761]	0,04968165	1,5492905	down
A_21_P0005196	LOC101927902	PREDICTED: Homo sapiens uncharacterized LOC101927902 (LOC101927902), ncRNA [XR_242326]	0,02461483	1,5682048	down
A_23_P105730	MDM1	Homo sapiens Mdm1 nuclear protein homolog (mouse) (MDM1), transcript variant 2, mRNA [NM_020128]	0,023361122	1,6941189	down
A_22_P00006590	LOC100129046	Homo sapiens uncharacterized LOC100129046 (LOC100129046), long non-coding RNA [NR_034091]	0,03444251	1,6021314	down
A_21_P0000820	NRAV	Homo sapiens negative regulator of antiviral response (non-protein coding) (NRAV), long non-coding RNA [NR_038854]	0,032877047	1,7893915	down
A_24_P118011	PRORSD1P	Homo sapiens prollyl-tRNA synthetase associated domain containing 1, pseudogene (PRORSD1P), non-coding RNA [NR_027258]	0,011968732	1,8334591	down
A_21_P0013213	ZNF727	PREDICTED: Homo sapiens zinc finger protein 727 (ZNF727), transcript variant X2, misc_RNA [XR_242241]	0,006047415	1,675445	down
A_33_P3306068	MYCL	Homo sapiens v-myc avian myelocytomatosis viral oncogene lung carcinoma derived homolog (MYCL), transcript variant 1, mRNA [NM_001033081]	0,003863185	1,8202142	down
A_21_P0013047	LOC100289495	Homo sapiens uncharacterized LOC100289495 (LOC100289495), long non-coding RNA [NR_040022]	0,026014592	1,5000198	down
A_22_P00025284	LOC102577426	Homo sapiens uncharacterized LOC102577426 (LOC102577426), long non-coding RNA [NR_108031]	0,04867682	1,506926	down
A_33_P3531979	LOC283352	Homo sapiens uncharacterized LOC283352 (LOC283352), transcript variant 1, long non-coding RNA [NR_104172]	0,029725153	1,5357918	down
A_23_P71503	RHPN1-AS1	Homo sapiens RHPN1 antisense RNA 1 (head to head) (RHPN1-AS1), long non-coding RNA [NR_026785]	0,01883535	1,7693578	down
A_23_P118	EXTL2	Homo sapiens exostosin-like glycosyltransferase 2 (EXTL2), transcript variant 1, mRNA [NM_001439]	0,010220953	1,8273889	down
A_24_P555510	PCM1	Homo sapiens pericentriolar material 1 (PCM1), mRNA [NM_006197]	0,03133816	1,5102054	down
A_22_P00001060	lnc-ALB-1	LNCipedia lincRNA (lnc-ALB-1), lincRNA [lnc-ALB-1:1]	0,049369693	1,5348772	down
A_21_P0011408	ULK4P3	Homo sapiens ULK4 pseudogene 3 (ULK4P3), non-coding RNA [NR_026859]	0,040112615	1,699752	down
A_22_P00021928	lnc-MTRNR2L3-1	Homo sapiens cDNA FLJ39107 fis, clone NTONG2005062. [AK096426]	0,021058481	1,7015193	down
A_22_P00025586	UBXN10-AS1	Homo sapiens UBXN10 antisense RNA 1 (UBXN10-AS1), long non-coding RNA [NR_110078]	0,01842561	2,012666	down
A_23_P170541	KCNH6	Homo sapiens potassium channel, voltage gated eag related subfamily H, member 6 (KCNH6), transcript variant 2, mRNA [NM_173092]	0,025212718	1,7563968	down
A_23_P26976	CHAD	Homo sapiens chondroadherin (CHAD), mRNA [NM_001267]	0,027090732	1,6061202	down
A_23_P170959	LMLN	Homo sapiens leishmanolysin-like (metallopeptidase M8 family) (LMLN), transcript variant 2, mRNA [NM_033029]	0,021431305	1,9341556	down
A_23_P96271	MYOM1	Homo sapiens myomesin 1 (MYOM1), transcript variant 1, mRNA [NM_003803]	0,021001047	1,7915404	down
A_33_P3266429	SAMD13	Homo sapiens sterile alpha motif domain containing 13 (SAMD13), transcript variant 1, mRNA [NM_001010971]	0,02215583	1,8458163	down
A_33_P3282740	LINC00869	Homo sapiens long intergenic non-protein coding RNA 869 (LINC00869), transcript variant 6, long non-coding RNA [NR_111950]	0,004657414	1,6938235	down

A_22_P00016064	LARP6	Homo sapiens La ribonucleoprotein domain family, member 6 (LARP6), transcript variant 3, mRNA [NM_001286679]	0,031130685	1,7301931	down
A_22_P00012483		PREDICTED: Homo sapiens uncharacterized LOC102724775 (LOC102724775), ncRNA [XR_424259]	0,010881804	1,596569	down
A_23_P320829	CEP128	Homo sapiens centrosomal protein 128kDa (CEP128), mRNA [NM_152446]	0,018725775	1,7004223	down
A_24_P319684	CCDC121	Homo sapiens coiled-coil domain containing 121 (CCDC121), transcript variant 3, mRNA [NM_024584]	0,016328163	1,8963888	down
A_23_P390726	TTC23L	Homo sapiens tetratricopeptide repeat domain 23-like (TTC23L), mRNA [NM_144725]	0,029532121	1,6446491	down
A_32_P395879	CCDC171	Homo sapiens coiled-coil domain containing 171 (CCDC171), mRNA [NM_173550]	0,030627845	1,720888	down
A_24_P224116	PLA2G1B	Homo sapiens phospholipase A2, group IB (pancreas) (PLA2G1B), mRNA [NM_000928]	0,037530966	1,5317777	down
A_33_P3222932	SHISA8	Homo sapiens shisa family member 8 (SHISA8), mRNA [NM_001207020]	0,014987436	1,7588826	down
A_23_P305205	KIAA0895	Homo sapiens KIAA0895 (KIAA0895), transcript variant 2, mRNA [NM_015314]	0,048002265	1,5773828	down
A_23_P14458	L3HYPDH	Homo sapiens L-3-hydroxyproline dehydratase (trans-) (L3HYPDH), mRNA [NM_144581]	0,03623038	1,6611364	down
A_33_P3287907	ZBED3-AS1	Homo sapiens ZBED3 antisense RNA 1 (ZBED3-AS1), long non-coding RNA [NR_024398]	0,045954153	1,9030786	down
A_23_P31124	COL21A1	Homo sapiens collagen, type XXI, alpha 1 (COL21A1), mRNA [NM_030820]	0,02841619	2,0708973	down
A_33_P3239278	OR4D10	Homo sapiens olfactory receptor, family 4, subfamily D, member 10 (OR4D10), mRNA [NM_001004705]	0,044066027	1,8693603	down
A_23_P121106	HESX1	Homo sapiens HESX homeobox 1 (HESX1), mRNA [NM_003865]	0,038771108	1,772743	down
A_21_P0000451	SNORD116-27	Homo sapiens small nucleolar RNA, C/D box 116-27 (SNORD116-27), small nucleolar RNA [NR_003341]	0,036394004	1,5444301	down
A_22_P00006978	lnc-GDF5-1	LNCipedia lincRNA (lnc-GDF5-1), lincRNA [lnc-GDF5-1:2]	0,011562484	1,9956055	down
A_22_P00022765	lnc-GABARAPL3-3	BX090607 Soares_testis_NHT Homo sapiens cDNA clone IMAGp998D024160 ; IMAGE:1639633, mRNA sequence [BX090607]	0,02291223	1,8527491	down
A_24_P333532	LINC00589	Homo sapiens long intergenic non-protein coding RNA 589 (LINC00589), long non-coding RNA [NR_026765]	0,014111173	1,6794248	down
A_23_P422718	POLH	Homo sapiens polymerase (DNA directed), eta (POLH), transcript variant 1, mRNA [NM_006502]	0,004772767	1,888153	down
A_33_P3238375	LOC730081	Homo sapiens cDNA FLJ40183 fis, clone TEST12018421. [AK097502]	0,049556963	1,766517	down
A_22_P00005136	lnc-DHX37-2	LNCipedia lincRNA (lnc-DHX37-2), lincRNA [lnc-DHX37-2:1]	0,049154684	1,7233874	down
A_22_P00017347	LOC100130950	Homo sapiens uncharacterized LOC100130950 (LOC100130950), long non-coding RNA [NR_034082]	0,024432551	1,7643455	down
A_33_P3304427	MCIDAS	Homo sapiens multiciliate differentiation and DNA synthesis associated cell cycle protein (MCIDAS), mRNA [NM_001190787]	0,018500704	1,8231102	down
A_21_P0013596			0,011186225	2,0760293	down
A_23_P377339	C4orf36	Homo sapiens chromosome 4 open reading frame 36 (C4orf36), mRNA [NM_144645]	0,0418166	1,5124259	down
A_33_P3232339	LOC102723640		0,039362207	1,6923845	down
A_23_P95851	TUBAL3	Homo sapiens tubulin, alpha-like 3 (TUBAL3), transcript variant 1, mRNA [NM_024803]	0,04799854	1,7249948	down
A_23_P93169	LGSN	Homo sapiens lengsin, lens protein with glutamine synthetase domain (LGSN), transcript variant 1, mRNA [NM_016571]	0,010840018	4,4526596	down
A_23_P65857	TMC05A	Homo sapiens transmembrane and coiled-coil domains 5A (TMC05A), mRNA [NM_152453]	0,011984052	2,910844	down
A_21_P00009153	LOC102723471	PREDICTED: Homo sapiens uncharacterized LOC102723471 (LOC102723471), ncRNA [XR_424817]	1,37E-04	5,1636	down
A_21_P0000196	SVOP	Homo sapiens mRNA; cDNA DKFzp761H039 (from clone DKFzp761H039). [AL359592]	0,012270728	3,8432004	down
A_22_P00011899	LOC340340		0,04678686	3,046289	down
A_22_P00014416	TCTEX1D1	Tctex1 domain containing 1 [Source:HGNC Symbol;Acc:HGNC:26882] [ENST00000448074]	0,045889527	2,7771037	down
A_33_P3224100	CXorf22	Homo sapiens chromosome X open reading frame 22 (CXorf22), mRNA [NM_152632]	0,04614602	2,6269946	down
A_23_P356425	AXDND1	Homo sapiens axonemal dynein light chain domain containing 1 (AXDND1), transcript variant 1, mRNA [NM_144696]	0,03300003	2,2512708	down
A_33_P3261222	MTMR7	Homo sapiens myotubularin related protein 7 (MTMR7), mRNA [NM_004686]	0,021936132	2,675953	down
A_33_P3351681	CCDC67	Homo sapiens coiled-coil domain containing 67 (CCDC67), mRNA [NM_181645]	0,030607117	2,4159148	down
A_33_P3258777			0,035423335	1,8413	down
A_22_P00012934	lnc-RCL1-1	Homo sapiens cDNA FLJ11677 fis, clone HEMBA1004778. [AK021739]	0,019559179	2,0864613	down
A_23_P126313	ADCY10	Homo sapiens adenylate cyclase 10 (soluble) (ADCY10), transcript variant 1, mRNA [NM_018417]	0,020922756	2,5892427	down
A_33_P3268304	LIMS2	Homo sapiens LIM and senescent cell antigen-like domains 2 (LIMS2), transcript variant 5, mRNA [NM_001161404]	0,018380372	2,5761607	down
A_32_P226186	KIAA1549	Homo sapiens KIAA1549 (KIAA1549), transcript variant 2, mRNA [NM_001164665]	0,033004314	1,5569496	down
A_33_P3401317	POTEM	Homo sapiens POTE ankyrin domain family, member M (POTEM), mRNA [NM_001145442]	0,0376838	1,9912457	down
A_33_P3310039	TVP23A	Homo sapiens trans-golgi network vesicle protein 23 homolog A (S. cerevisiae) (TVP23A), mRNA [NM_001079512]	0,020218277	1,8532194	down
A_33_P3303762	TTC23L	Homo sapiens tetratricopeptide repeat domain 23-like (TTC23L), mRNA [NM_144725]	0,041678853	2,0649686	down
A_23_P148327	CACNA1F	Homo sapiens calcium channel, voltage-dependent, L type, alpha 1F subunit (CACNA1F), transcript variant 1, mRNA [NM_005183]	0,038319763	1,7802539	down
A_24_P263910	LINC01588	Homo sapiens long intergenic non-protein coding RNA 1588 (LINC01588), transcript variant 5, long non-coding RNA [NR_126500]	0,006622238	2,1723049	down
A_23_P96590	GPRASP1	Homo sapiens G protein-coupled receptor associated sorting protein 1 (GPRASP1), transcript variant 1, mRNA [NM_014710]	0,041987915	1,6899245	down
A_23_P21376	MAGI2	Homo sapiens membrane associated guanylate kinase, WW and PDZ domain containing 2 (MAGI2), transcript variant 1, mRNA [NM_012301]	0,047509015	1,7178273	down
A_21_P0000858	LOC100506207	Homo sapiens uncharacterized LOC100506207 (LOC100506207), transcript variant 1, long non-coding RNA [NR_038979]	0,018850768	2,1052923	down
A_33_P3365995	MAST4	Homo sapiens microtubule associated serine/threonine kinase family member 4 (MAST4), transcript variant 4, mRNA [NM_001290226]	0,02070889	1,7790303	down
A_24_P148026	lnc-C1orf86-1	PREDICTED: Homo sapiens uncharacterized LOC100506504 (LOC100506504), mRNA [XM_006710074]	0,009908352	1,8324193	down
A_24_P251661	KCNMB3	Homo sapiens potassium channel subfamily M regulatory beta subunit 3 (KCNMB3), transcript variant 1, mRNA [NM_171828]	0,005875777	1,8582531	down
A_24_P245838	MGAT3	Homo sapiens mannosyl (beta-1,4-) glycoprotein beta-1,4-N-acetylglucosaminyltransferase (MGAT3), transcript variant 1, mRNA [NM_002409]	0,024849884	1,7293661	down
A_21_P0013652	XLOC_i2_015213	BROAD Institute lincRNA (XLOC_i2_015213), lincRNA [TCONS_i2_00029348]	0,00591711	2,1080244	down
A_22_P00016274	lnc-TMEM109-1	ALU7_HUMAN (P39194) Alu subfamily SQ sequence contamination warning entry, partial (4%) [THC2668034]	0,024129989	1,7551471	down
A_22_P00020945		PREDICTED: Homo sapiens uncharacterized LOC100506609 (LOC100506609), misc_RNA [XR_133139]	0,003318431	1,921185	down
A_23_P301360	ZNF572	Homo sapiens zinc finger protein 572 (ZNF572), mRNA [NM_152412]	0,005690445	1,7827121	down
A_21_P0005118	lnc-SH3BGR2-1	LNCipedia lincRNA (lnc-SH3BGR2-1), lincRNA [lnc-SH3BGR2-1:2]	0,040855065	1,778681	down

A_22_P00009691			0,011344632	2,3273063	down
A_22_P00007404	LOC100507557	Homo sapiens uncharacterized LOC100507557 (LOC100507557), transcript variant 1, long non-coding RNA [NR_038244]	0,025995318	1,6974393	down
A_33_P3338392	PRDM15	Homo sapiens PR domain containing 15 (PRDM15), transcript variant 1, mRNA [NM_022115]	0,04419766	1,7035198	down
A_22_P00009596	LOC100129973	Homo sapiens uncharacterized LOC100129973 (LOC100129973), long non-coding RNA [NR_102751]	0,010341261	1,7729146	down
A_22_P00022098	LOC100506286	PREDICTED: Homo sapiens uncharacterized LOC100506286 (LOC100506286), ncRNA [XR_109926]	0,027662499	2,4000783	down
A_22_P00001665	lnc-ASH1L-2	LNCipedia lincRNA (lnc-ASH1L-2), lincRNA [lnc-ASH1L-2:1]	0,007315888	1,8375036	down
A_21_P00000021	ADAL	Homo sapiens adenosine deaminase-like (ADAL), transcript variant 1, mRNA [NM_001159280]	0,039363977	1,9259628	down
A_33_P3368238		XM_366788 predicted protein {Magnaporthe grisea 70-15} (exp=0; wgp=1; cg=0), partial (11%) [THC2774951]	0,008574464	1,6896942	down
A_32_P103669	GOLGA6C	Homo sapiens golgin A6 family, member C (GOLGA6C), mRNA [NM_001164404]	0,031259116	1,7646362	down
A_21_P0006898	lnc-C10orf129-1	LNCipedia lincRNA (lnc-C10orf129-1), lincRNA [lnc-C10orf129-1:1]	0,015097396	1,7986741	down
A_22_P00015350	lnc-SPRYD3-1	RST18499 Athersys RAGE Library Homo sapiens cDNA, mRNA sequence [BG199219]	0,049552605	1,711532	down
A_23_P57474	OSBP2	Homo sapiens oxysterol binding protein 2 (OSBP2), transcript variant 1, mRNA [NM_030758]	0,049395036	2,0082943	down
A_23_P90542	ZNF540	Homo sapiens zinc finger protein 540 (ZNF540), transcript variant 2, mRNA [NM_152606]	0,019785678	1,648208	down
A_23_P58869	GSTM2P1	Homo sapiens glutathione S-transferase mu 2 (muscle) pseudogene 1 (GSTM2P1), non-coding RNA [NR_002932]	0,014688346	1,9878294	down
A_22_P00024329	MGC16275	Homo sapiens uncharacterized protein MGC16275 (MGC16275), long non-coding RNA [NR_026914]	0,019718628	1,7684392	down
A_22_P00013888	LOC101927060	AF493886 ADP-ribosylation factor-like protein variant {Homo sapiens} (exp=-1; wgp=0; cg=0), complete [THC2572135]	0,005208289	1,8685153	down
A_33_P3328903	LOC102724970	PREDICTED: Homo sapiens putative uncharacterized protein FLJ35883-like (LOC102724970), mRNA [XM_006711085]	7,90E-04	2,626842	down
A_21_P0001160	lnc-DBT-1	LNCipedia lincRNA (lnc-DBT-1), lincRNA [lnc-DBT-1:1]	0,007606946	2,2555225	down
A_24_P365679	RRP7B	ribosomal RNA processing 7 homolog B (S. cerevisiae) [Source:HGNC Symbol;Acc:HGNC:30454] [ENST00000357802]	0,010979117	2,2011762	down
A_21_P0010253	lnc-UMODL1-1	LNCipedia lincRNA (lnc-UMODL1-1), lincRNA [lnc-UMODL1-1:1]	0,02562667	1,6925044	down
A_22_P00005896	LOC101928441	Homo sapiens uncharacterized LOC101928441 (LOC101928441), long non-coding RNA [NR_120471]	0,021688372	1,9959347	down
A_22_P00012300	LOC101928595	PREDICTED: Homo sapiens uncharacterized LOC101928595 (LOC101928595), ncRNA [XR_243378]	0,04080217	1,8799616	down
A_23_P31725	BLK	Homo sapiens BLK proto-oncogene, Src family tyrosine kinase (BLK), mRNA [NM_001715]	0,04461867	3,178712	down
A_22_P00013252	ALDH1L1-AS1	Homo sapiens ALDH1L1 antisense RNA 1 (ALDH1L1-AS1), long non-coding RNA [NR_046602]	0,003125617	2,426447	down
A_21_P0011819	lnc-ZNF2-1	Q5QPL3_HUMAN (Q5QPL3) Novel zinc finger protein (Fragment), partial (15%) [THC2615552]	0,027859652	2,5881984	down
A_21_P0003164	lnc-KLF15-3	LNCipedia lincRNA (lnc-KLF15-3), lincRNA [lnc-KLF15-3:4]	0,003364654	3,0381014	down
A_32_P77098	TMEM200B	Homo sapiens transmembrane protein 200B (TMEM200B), transcript variant 2, mRNA [NM_001003682]	0,007871104	3,387242	down
A_23_P14157	DZIP1	Homo sapiens DAZ interacting zinc finger protein 1 (DZIP1), transcript variant 2, mRNA [NM_198968]	0,0316327	2,4553905	down
A_21_P00000002	ACBD7	Homo sapiens acyl-CoA binding domain containing 7 (ACBD7), mRNA [NM_001039844]	0,006189213	2,5881555	down
A_22_P00004838	lnc-CYB5R2-1	LNCipedia lincRNA (lnc-CYB5R2-1), lincRNA [lnc-CYB5R2-1:1]	0,001376188	2,4646652	down
A_21_P0014117	LOC100507210	PREDICTED: Homo sapiens uncharacterized LOC100507210 (LOC100507210), transcript variant X2, ncRNA [XR_241571]	0,030481284	2,2806792	down
A_22_P00002494	lnc-C16orf58-1	Homo sapiens cDNA clone IMAGE:4357834, partial cds. [BC059952]	0,028876835	2,057913	down
A_32_P56604	SPERT	Homo sapiens spermatid associated (SPERT), transcript variant 1, mRNA [NM_152719]	0,018070552	2,0881503	down
A_33_P3382860	RND2	Homo sapiens Rho family GTPase 2 (RND2), mRNA [NM_005440]	0,0355672	1,8684759	down
A_33_P3411328	LINC01136	Homo sapiens long intergenic non-protein coding RNA 1136 (LINC01136), transcript variant 1, long non-coding RNA [NR_034151]	0,006751572	2,0947194	down
A_23_P312300	SCGB2A1	Homo sapiens secretoglobin, family 2A, member 1 (SCGB2A1), mRNA [NM_002407]	0,037276216	1,590775	down
A_33_P3249072		Q711P0_HUMAN (Q711P0) 569272 protein, complete [THC2719494]	0,030037304	1,6484876	down
A_23_P104471	DUSP13	Homo sapiens dual specificity phosphatase 13 (DUSP13), transcript variant 1, mRNA [NM_001007271]	0,02083963	1,7064902	down
A_22_P00011719	lnc-PEA15-1	Q9Z0G8_RAT (Q9Z0G8) SH3 domain binding protein (CR16), partial (4%) [THC2569838]	0,044882175	1,6203411	down
A_32_P184464	ROPN1	Homo sapiens rhophilin associated tail protein 1 (ROPN1), mRNA [NM_017578]	0,012990033	1,7988442	down
A_22_P00019777	RMDN2-AS1	Homo sapiens RMDN2 antisense RNA 1 (RMDN2-AS1), long non-coding RNA [NR_102712]	0,016754512	2,0251913	down
A_33_P3412468	SLC25A27	Homo sapiens solute carrier family 25, member 27 (SLC25A27), transcript variant 1, mRNA [NM_004277]	0,045998048	1,6558079	down
A_23_P315964	UMODL1	Homo sapiens uromodulin-like 1 (UMODL1), transcript variant 2, mRNA [NM_173568]	0,012341794	2,3629475	down
A_21_P0013064	XLOC_I2_012899	BROAD Institute lincRNA (XLOC_I2_012899), lincRNA [TCONS_I2_00024638]	0,023017654	2,0601358	down
A_23_P45304	XK	Homo sapiens X-linked Kx blood group (XK), mRNA [NM_021083]	0,041320853	1,9541895	down
A_33_P3531204	C1QTNF9B-AS1	Homo sapiens C1QTNF9B antisense RNA 1 (C1QTNF9B-AS1), transcript variant 2, mRNA [NM_001135816]	0,02525886	1,5027882	down
A_23_P99771	PNMA1	Homo sapiens paraneoplastic Ma antigen 1 (PNMA1), mRNA [NM_006029]	0,04463872	1,5532157	down
A_24_P214231	STIL	Homo sapiens SCL/TAL1 interrupting locus (STIL), transcript variant 1, mRNA [NM_001048166]	0,046210922	1,5022029	down
A_32_P107493	SPATA33	spermatogenesis associated 33 [Source:HGNC Symbol;Acc:HGNC:26463] [ENST00000301031]	0,030443225	1,9442062	down
A_19_P00319413			0,046104267	1,9966129	down
A_23_P93973	TRPV5	Homo sapiens transient receptor potential cation channel, subfamily V, member 5 (TRPV5), mRNA [NM_019841]	0,016650647	1,9289728	down
A_19_P00813085	lnc-SNURF-1	LNCipedia lincRNA (lnc-SNURF-1), lincRNA [lnc-SNURF-1:8]	0,002110522	2,4503043	down
A_33_P3353662	C9orf66	Homo sapiens chromosome 9 open reading frame 66 (C9orf66), mRNA [NM_152569]	0,004034529	2,9941268	down
A_23_P368259	EID2B	EP300 interacting inhibitor of differentiation 2B [Source:HGNC Symbol;Acc:HGNC:26796] [ENST00000326282]	0,032176875	2,1383774	down
A_21_P0009345	LOC400612	Homo sapiens uncharacterized LOC400612 (LOC400612), long non-coding RNA [NR_126169]	0,040314842	2,2210464	down
A_22_P00002938	LOC648987	Homo sapiens uncharacterized LOC648987 (LOC648987), transcript variant 2, long non-coding RNA [NR_034086]	0,004629206	2,0517194	down
A_22_P00006911			0,01692103	2,1256187	down
A_22_P00013488	lnc-RP11-33N16.1.1-1	LNCipedia lincRNA (lnc-RP11-33N16.1.1-1), lincRNA [lnc-RP11-33N16.1.1-1:1]	0,045289528	2,4923606	down
A_23_P307968	CDH23	Homo sapiens cadherin-related 23 (CDH23), transcript variant 2, mRNA [NM_052836]	0,042229697	2,226727	down

A_23_P145606	CHRM2	Homo sapiens cholinergic receptor, muscarinic 2 (CHRM2), transcript variant 1, mRNA [NM_001006630]	0,02094017	1,8575346	down
A_22_P00005287		Homo sapiens mRNA; cDNA DKFZp586F1622 (from clone DKFZp586F1622). [AL110201]	0,031875778	1,9771606	down
A_24_P756289	SOX2-OT	Homo sapiens SOX2 overlapping transcript (SOX2-OT), transcript variant 1, long non-coding RNA [NR_075091]	0,032199923	2,1171641	down
A_33_P3237250	TTL13P	Homo sapiens tubulin tyrosine ligase-like family member 13, pseudogene (TTL13P), non-coding RNA [NR_104604]	0,012576743	2,3116071	down
A_22_P00023794	LOC102724351	PREDICTED: Homo sapiens uncharacterized LOC102724351 (LOC102724351), transcript variant X2, ncRNA [XR_424177]	0,03178192	2,3738186	down
A_22_P00003353	LINC00882	Homo sapiens long intergenic non-protein coding RNA 882 (LINC00882), long non-coding RNA [NR_028303]	0,032394066	1,8729973	down
A_21_P0007735	lnc-KITLG-2	LNCipedia lincRNA (lnc-KITLG-2), lincRNA [lnc-KITLG-2:1]	0,039931927	2,1064065	down
A_19_P00319225	ZNF300P1	Homo sapiens zinc finger protein 300 pseudogene 1 (functional) (ZNF300P1), non-coding RNA [NR_026867]	0,04664561	1,5307773	down
A_23_P210807	CSTL1	Homo sapiens cystatin-like 1 (CSTL1), mRNA [NM_138283]	0,035893787	1,878078	down
A_24_P153763	LOC101927588	Homo sapiens uncharacterized LOC101927588 (LOC101927588), long non-coding RNA [NR_125420]	0,005446426	1,8429571	down
A_32_P60716	CCDC158	Homo sapiens coiled-coil domain containing 158 (CCDC158), mRNA [NM_001042784]	0,0032331	3,3325667	down
A_23_P5853	SAG	Homo sapiens S-antigen; retina and pineal gland (arrestin) (SAG), mRNA [NM_000541]	0,015761644	2,9432065	down
A_21_P0005008	lnc-MBOAT1-3	LNCipedia lincRNA (lnc-MBOAT1-3), lincRNA [lnc-MBOAT1-3:4]	0,033134688	3,1232336	down
A_33_P3386935	KIAA1841	Homo sapiens KIAA1841 (KIAA1841), transcript variant 2, mRNA [NM_032506]	0,005781289	2,134852	down
A_21_P0007065	LINC01515	Homo sapiens long intergenic non-protein coding RNA 1515 (LINC01515), long non-coding RNA [NR_120647]	0,020421958	2,0643618	down
A_21_P0011820	XLOC_I2_007435	BROAD Institute lincRNA (XLOC_I2_007435), lincRNA [TCONS_I2_00013803]	0,001233185	2,1754382	down
A_33_P3417517	BRD8	Homo sapiens bromodomain containing 8 (BRD8), transcript variant 2, mRNA [NM_139199]	0,030912867	2,334665	down
A_19_P00316427	CDKN2B-AS1	Homo sapiens CDKN2B antisense RNA 1 (CDKN2B-AS1), transcript variant 13, long non-coding RNA [NR_047533]	0,038718786	1,7437221	down
A_22_P00019082			0,041568138	1,8571918	down
A_21_P0010482	lnc-C22orf26-2	LNCipedia lincRNA (lnc-C22orf26-2), lincRNA [lnc-C22orf26-2:5]	0,021060603	1,6674889	down
A_33_P3618561	LOC730961	Homo sapiens cDNA clone IMAGE:4826905. [BC034282]	0,001881136	1,9037205	down
A_33_P3330786	LOC728339	PREDICTED: Homo sapiens uncharacterized LOC728339 (LOC728339), misc_RNA [XR_425830]	0,040925357	1,8995078	down
A_22_P00014742	lnc-SLC30A7-2	LNCipedia lincRNA (lnc-SLC30A7-2), lincRNA [lnc-SLC30A7-2:2]	0,0136475	2,1215177	down
A_22_P00006478	PTPRG-AS1	Homo sapiens PTPRG antisense RNA 1 (PTPRG-AS1), transcript variant 1, long non-coding RNA [NR_038281]	0,02326101	1,9446772	down
A_22_P00010866		EST4699 human nasopharynx Homo sapiens cDNA, mRNA sequence [CD688177]	0,011860858	2,1644318	down
A_24_P126139	RAB9B	Homo sapiens RAB9B, member RAS oncogene family (RAB9B), mRNA [NM_016370]	0,017392375	2,3151112	down
A_23_P157793	CA9	Homo sapiens carbonic anhydrase IX (CA9), mRNA [NM_001216]	0,007646113	2,2947035	down
A_33_P7472345	TM4SF19-AS1	Homo sapiens TM4SF19 antisense RNA 1 (TM4SF19-AS1), transcript variant 1, long non-coding RNA [NR_046724]	0,030598192	2,1510186	down
A_23_P332584	KIAA1107	Homo sapiens KIAA1107 (KIAA1107), mRNA [NM_015237]	0,047434326	1,722603	down
A_21_P0005159	LINC00581	Homo sapiens long intergenic non-protein coding RNA 581 (LINC00581), long non-coding RNA [NR_103790]	0,031153625	1,7304826	down
A_22_P00003270	lnc-CALM2-1	LNCipedia lincRNA (lnc-CALM2-1), lincRNA [lnc-CALM2-1:1]	0,029944219	2,2305105	down
A_33_P3326767		PREDICTED: Homo sapiens uncharacterized LOC100996416 (LOC100996416), misc_RNA [XR_159010]	0,042045347	2,7589583	down
A_23_P48816	SLC28A2	Homo sapiens solute carrier family 28 (concentrative nucleoside transporter), member 2 (SLC28A2), mRNA [NM_004212]	0,024683975	4,5642405	down
A_24_P319374	GPA33	Homo sapiens glycoprotein A33 (transmembrane) (GPA33), mRNA [NM_005814]	0,005360473	3,9604113	down
A_23_P18518	TRAM1L1	Homo sapiens translocation associated membrane protein 1-like 1 (TRAM1L1), mRNA [NM_152402]	0,01115042	1,9643744	down
A_23_P127406	KDM4D	Homo sapiens lysine (K)-specific demethylase 4D (KDM4D), mRNA [NM_018039]	0,04489711	1,5411321	down
A_32_P155826	USP27X-AS1	Homo sapiens USP27X antisense RNA 1 (head to head) (USP27X-AS1), long non-coding RNA [NR_026742]	0,024053851	1,7943923	down
A_21_P0011143	XLOC_I2_003732	BROAD Institute lincRNA (XLOC_I2_003732), lincRNA [TCONS_I2_00006853]	0,04504058	1,5970243	down
A_24_P37253	LYPD6	Homo sapiens LY6/PLAUR domain containing 6 (LYPD6), transcript variant 2, mRNA [NM_194317]	0,03159062	1,6133772	down
A_33_P3351180		immunoglobulin heavy constant alpha 1 [Source:HGNC Symbol;Acc:HGNC:5478] [ENST00000390547]	0,03421621	3,7629914	down
A_33_P3365193	AMY1C	Homo sapiens amylase, alpha 1C (salivary) (AMY1C), mRNA [NM_001008219]	0,013768066	2,5121717	down
A_33_P3368506	SLC38A8	Homo sapiens solute carrier family 38, member 8 (SLC38A8), mRNA [NM_001080442]	0,03102384	2,4950309	down
A_33_P3257165	YPEL1	Homo sapiens yippee-like 1 (Drosophila) (YPEL1), mRNA [NM_013313]	0,030955408	1,8686458	down
A_23_P348281	TCEANC2	Homo sapiens transcription elongation factor A (SII) N-terminal and central domain containing 2 (TCEANC2), mRNA [NM_153035]	0,044553347	1,6412479	down
A_24_P184799	COCH	Homo sapiens cochlin (COCH), transcript variant 2, mRNA [NM_004086]	0,001362683	4,0852985	down
A_33_P3279353	AZU1	Homo sapiens azurocidin 1 (AZU1), mRNA [NM_001700]	0,009941036	2,3197596	down
A_33_P3217119	OSCP1	Homo sapiens organic solute carrier partner 1 (OSCP1), transcript variant 2, mRNA [NM_206837]	0,04928076	1,9030697	down
A_33_P3227676	C2orf72	Homo sapiens chromosome 2 open reading frame 72 (C2orf72), mRNA [NM_001144994]	0,010817776	2,5374796	down
A_21_P0010228	LOC284825	Homo sapiens uncharacterized LOC284825 (LOC284825), transcript variant 2, long non-coding RNA [NR_126011]	0,047140762	2,0588765	down
A_33_P3314659	SPEF2	Homo sapiens sperm flagellar 2 (SPEF2), transcript variant 2, mRNA [NM_144722]	0,041330248	2,163486	down
A_32_P140030	FOXN4	Homo sapiens forkhead box N4 (FOXN4), mRNA [NM_213596]	0,002157512	3,049109	down
A_23_P35219	NEK2	Homo sapiens NIMA-related kinase 2 (NEK2), transcript variant 1, mRNA [NM_002497]	0,016732797	2,5059679	down
A_24_P319613	NEK2	Homo sapiens NIMA-related kinase 2 (NEK2), transcript variant 1, mRNA [NM_002497]	0,011831163	2,4117799	down
A_22_P00018876	lnc-FNDC9-2	LNCipedia lincRNA (lnc-FNDC9-2), lincRNA [lnc-FNDC9-2:1]	6,53E-04	2,9989638	down
A_23_P374281	CDC20B	Homo sapiens cell division cycle 20B (CDC20B), transcript variant 1, mRNA [NM_152623]	0,002245467	3,1591148	down
A_33_P3318661	E2F7	Homo sapiens E2F transcription factor 7 (E2F7), mRNA [NM_203394]	0,03355885	2,256974	down
A_23_P40989	USP13	Homo sapiens ubiquitin specific peptidase 13 (isopeptidase T-3) (USP13), mRNA [NM_003940]	0,009811199	2,0705	down
A_33_P3231047	CCDC121	Homo sapiens coiled-coil domain containing 121 (CCDC121), transcript variant 2, mRNA [NM_001142683]	0,009728295	2,1459513	down
A_24_P22981	ZNF253	Homo sapiens zinc finger protein 253 (ZNF253), mRNA [NM_021047]	0,029191531	2,2393196	down

A_33_P3422213	NEK10	NIMA-related kinase 10 [Source:HGNC Symbol;Acc:HGNC:18592] [ENST000000341435]	0,033481143	2,293841	down
A_33_P3328254	ILSRA	Homo sapiens interleukin 5 receptor, alpha (ILSRA), transcript variant 3, mRNA [NM_175725]	0,02350914	2,3810234	down
A_33_P3269218	BAI2	Homo sapiens brain-specific angiogenesis inhibitor 2 (BAI2), transcript variant 1, mRNA [NM_001294335]	0,04727919	1,7865887	down
A_33_P3398513	LOC728819	Homo sapiens hCG1645220 (LOC728819), mRNA [NM_001101330]	0,04028879	1,9638202	down
A_23_P413180	MDM1	Homo sapiens Mdm1 nuclear protein homolog (mouse) (MDM1), transcript variant 1, mRNA [NM_017440]	0,02656869	2,338763	down
A_33_P3343976	ZNRD1-AS1	Homo sapiens ZNRD1 antisense RNA 1 (ZNRD1-AS1), long non-coding RNA [NR_026751]	0,039294705	1,9287974	down
A_22_P00009092	LOC101927902	PREDICTED: Homo sapiens uncharacterized LOC101927902 (LOC101927902), ncRNA [XR_242326]	0,045479458	1,615789	down
A_22_P00013911	lnc-RPS27A-1	LNCipedia lincRNA (lnc-RPS27A-1), lincRNA [lnc-RPS27A-1:1]	0,03566415	1,5518379	down
A_22_P00011823	LOC101927934	Homo sapiens uncharacterized LOC101927934 (LOC101927934), long non-coding RNA [NR_105045]	0,031099483	2,493507	down
A_33_P3326917	ODF3B	Homo sapiens outer dense fiber of sperm tails 3B (ODF3B), mRNA [NM_001014440]	0,047283832	2,1288698	down
A_23_P311713	CFAP46	cilia and flagella associated protein 46 [Source:HGNC Symbol;Acc:HGNC:25247] [ENST000000368585]	0,021641215	2,3675637	down
A_32_P133090		RST35951 Athersys RAGE Library Homo sapiens cDNA, mRNA sequence [BG216262]	0,004922803	2,3231277	down
A_21_P0010314	LOC102724800	PREDICTED: Homo sapiens uncharacterized LOC102724800 (LOC102724800), transcript variant X1, ncRNA [XR_425278]	0,03775838	2,91074	down
A_33_P3222630	FBXO43	Homo sapiens F-box protein 43 (FBXO43), transcript variant 2, mRNA [NM_001029860]	0,001095916	3,0455189	down
A_33_P3213822	KCNK2	Homo sapiens potassium channel, two pore domain subfamily K, member 2 (KCNK2), transcript variant 1, mRNA [NM_001017424]	0,007735443	4,800957	down
A_21_P0008352	lnc-EXD2-1	Q21RF1_9BURK (Q21RF1) Biotin--acetyl-CoA-carboxylase ligase, partial (6%) [THC2728144]	0,017665258	3,0435345	down
A_33_P3237260	C11orf53	Homo sapiens chromosome 11 open reading frame 53 (C11orf53), mRNA [NM_198498]	0,010825041	3,5144486	down
A_22_P00013335	LOC100507403	PREDICTED: Homo sapiens uncharacterized LOC100507403 (LOC100507403), ncRNA [XR_426301]	0,0431278	2,497915	down
A_23_P127840	ZNF214	Homo sapiens zinc finger protein 214 (ZNF214), mRNA [NM_013249]	0,043245538	3,1248101	down
A_33_P3340613	FAM95B1	Homo sapiens family with sequence similarity 95, member B1 (FAM95B1), long non-coding RNA [NR_026759]	0,046754405	2,4090183	down
A_33_P3304322	ZPBP	zona pellucida binding protein [Source:HGNC Symbol;Acc:HGNC:15662] [ENST00000465922]	0,020567477	2,3398647	down
A_21_P0001220			0,047430497	1,8382037	down
A_33_P3395547	HYALP1	Homo sapiens hyaluronoglucosaminidase pseudogene 1 (HYALP1), non-coding RNA [NR_002731]	0,01702183	1,7531486	down
A_21_P0010579	XLOC_I2_000643	BROAD Institute lincRNA (XLOC_I2_000643), lincRNA [TCONS_I2_00000862]	0,03314148	1,5448631	down
A_22_P00018593	lnc-TLCD1-1	LNCipedia lincRNA (lnc-TLCD1-1), lincRNA [lnc-TLCD1-1:1]	0,02234575	1,6361401	down
A_21_P0009856			0,00694903	2,910505	down
A_23_P321892	HRG	Homo sapiens histidine-rich glycoprotein (HRG), mRNA [NM_000412]	0,010438288	2,2721846	down
A_33_P3307147	GRIK2	Homo sapiens glutamate receptor, ionotropic, kainate 2 (GRIK2), transcript variant 3, mRNA [NM_001166247]	0,003822197	2,2482681	down
A_33_P3355739	UMODL1	Homo sapiens uromodulin-like 1 (UMODL1), transcript variant 4, mRNA [NM_001199528]	0,007968275	2,036824	down
A_21_P0014067	LINC01353	Homo sapiens long intergenic non-protein coding RNA 1353 (LINC01353), transcript variant 1, long non-coding RNA [NR_117097]	0,02580118	1,6108087	down
A_33_P3502305	HERC2P7	Homo sapiens HERC2P7 pseudogene, partial mRNA sequence. [AF071178]	0,022598663	1,8380115	down
A_21_P0011138	XLOC_I2_003674	BROAD Institute lincRNA (XLOC_I2_003674), lincRNA [TCONS_I2_00006780]	0,014150763	1,723427	down
A_19_P00081613	LOC101930048	PREDICTED: Homo sapiens uncharacterized LOC101930048 (LOC101930048), transcript variant X1, ncRNA [XR_428438]	0,040330537	1,8445333	down
A_21_P0012498	TUSC7	Homo sapiens tumor suppressor candidate 7 (non-protein coding) (TUSC7), long non-coding RNA [NR_015391]	0,033883862	1,700433	down
A_22_P00004022	LOC100506497	Homo sapiens uncharacterized LOC100506497 (LOC100506497), long non-coding RNA [NR_038965]	0,02932875	1,8698497	down
A_22_P00005117	CCDC144NL-AS1	PREDICTED: Homo sapiens uncharacterized LOC102724783 (LOC102724783), ncRNA [XR_424802]	0,030678079	1,8169336	down
A_33_P3357002	C1QTNF9B	Homo sapiens C1q and tumor necrosis factor related protein 9B (C1QTNF9B), transcript variant 1, mRNA [NM_001007537]	0,03165333	1,7985555	down
A_22_P00008964			0,012954781	1,8070867	down
A_21_P0003299	LOC102723877	PREDICTED: Homo sapiens uncharacterized LOC102723877 (LOC102723877), transcript variant X1, ncRNA [XR_427409]	0,040896773	1,8932233	down
A_32_P401091	CDY2A	Homo sapiens chromodomain protein, Y-linked, 2A (CDY2A), mRNA [NM_004825]	0,03540439	2,1007233	down
A_22_P00012931		DB448532 RIKEN full-length enriched human cDNA library, testis Homo sapiens cDNA clone H013037B22 5', mRNA sequence [DB448532]	0,03708305	2,482125	down
A_32_P874898		T cell receptor beta variable 5-1 [Source:HGNC Symbol;Acc:HGNC:12218] [ENST00000390381]	0,048779495	1,8194267	down
A_33_P3271001	NIPSNAP3B	Homo sapiens nipsnap homolog 3B (C. elegans) (NIPSNAP3B), mRNA [NM_018376]	0,03326433	1,9523741	down
A_22_P00011707	TLX1NB	TLX1 neighbor [Source:HGNC Symbol;Acc:HGNC:37183] [ENST00000425505]	0,03696397	2,1340742	down
A_24_P917306	ZNF385D	zinc finger protein 385D [Source:HGNC Symbol;Acc:HGNC:26191] [ENST00000494108]	0,027393414	2,204902	down
A_21_P0001163			0,040693875	2,024476	down
A_33_P3236698	ANKRD19P	Homo sapiens cDNA FLJ77364 complete cds, highly similar to Homo sapiens ankryrin repeat domain 19 (ANKRD19), mRNA. [AK292218]	0,020167023	1,7034421	down
A_21_P0003800	lnc-GPM6A-2	LNCipedia lincRNA (lnc-GPM6A-2), lincRNA [lnc-GPM6A-2:1]	0,045195654	2,0376482	down
A_33_P3259750			0,04809511	2,1825998	down
A_21_P0007401	lnc-USP28-2	LNCipedia lincRNA (lnc-USP28-2), lincRNA [lnc-USP28-2:1]	0,015403857	2,0556018	down
A_22_P00008305	lnc-ITGAX-1	LNCipedia lincRNA (lnc-ITGAX-1), lincRNA [lnc-ITGAX-1:1]	0,032613907	1,7859033	down
A_21_P0002999	lnc-CRYBG3-1	LNCipedia lincRNA (lnc-CRYBG3-1), lincRNA [lnc-CRYBG3-1:1]	0,04094263	1,773284	down
A_21_P0002354	LOC101928374	PREDICTED: Homo sapiens uncharacterized LOC101928374 (LOC101928374), transcript variant X1, ncRNA [XR_249308]	0,044052724	1,7413406	down
A_23_P102172	CPO	Homo sapiens carboxypeptidase O (CPO), mRNA [NM_173077]	0,033876717	1,6404047	down
A_22_P00019847		Homo sapiens cDNA clone IMAGE:4821006. [BC034423]	0,005591016	2,3070467	down
A_23_P18123	NLGN1	Homo sapiens neuroligin 1 (NLGN1), mRNA [NM_014932]	0,012133172	1,9947797	down
A_33_P3337609		immunoglobulin kappa variable 1/OR2-3 (pseudogene) [Source:HGNC Symbol;Acc:HGNC:5769] [ENST00000411475]	0,021840626	2,2002096	down
A_21_P0005817	LOC100507403	PREDICTED: Homo sapiens uncharacterized LOC100507403 (LOC100507403), ncRNA [XR_426301]	0,002531337	2,506889	down
A_33_P3477521	LOC284080	Homo sapiens uncharacterized LOC284080 (LOC284080), long non-coding RNA [NR_038230]	0,022898527	1,9735664	down

A_33_P3340385	ZNF43	Homo sapiens zinc finger protein 43 (ZNF43), transcript variant 1, mRNA [NM_001256648]	0,02307462	1,9585891	down
A_22_P00006123			0,041693952	2,4192994	down
A_32_P55293	LYZL2	Homo sapiens lysozyme-like 2 (LYZL2), mRNA [NM_183058]	0,003712137	2,1412714	down
A_22_P00016529	lnc-TMTC3-6	LNCipedia lincRNA (lnc-TMTC3-6), lincRNA [lnc-TMTC3-6:1]	0,026989989	2,1180038	down
A_21_P0009301	lnc-CDRT4-1	LNCipedia lincRNA (lnc-CDRT4-1), lincRNA [lnc-CDRT4-1:2]	0,032125592	1,6646706	down
A_24_P863775	EML6	Homo sapiens echinoderm microtubule associated protein like 6 (EML6), mRNA [NM_001039753]	0,015702244	1,9334067	down
A_21_P0006486	lnc-CXorf22-1	LNCipedia lincRNA (lnc-CXorf22-1), lincRNA [lnc-CXorf22-1:1]	0,009876831	2,7945895	down
A_21_P0010987	LOC100506127	Homo sapiens putative uncharacterized protein FLJ37770-like (LOC100506127), mRNA [NM_001282456]	0,005136455	2,0942445	down
A_22_P00013969	lnc-RTN1-1	HY018651 RIKEN full-length enriched human cDNA library, testis Homo sapiens cDNA clone H04D063D17, mRNA sequence [HY018651]	0,04614263	1,5896174	down
A_22_P00012818	lnc-RARRES2-2	DA432077 COLON2 Homo sapiens cDNA clone COLON2008799 5', mRNA sequence [DA432077]	0,008336198	2,0801375	down
A_33_P3382100	IGFN1	Homo sapiens immunoglobulin-like and fibronectin type III domain containing 1 (IGFN1), mRNA [NM_001164586]	0,001863527	2,1712008	down
A_22_P00002556	lnc-C17orf75-3	PREDICTED: Homo sapiens uncharacterized LOC100506629 (LOC100506629), misc_RNA [XR_109455]	0,015424306	1,945236	down
A_21_P0002527	lnc-ZSWIM2-4	LNCipedia lincRNA (lnc-ZSWIM2-4), lincRNA [lnc-ZSWIM2-4:1]	0,045611095	2,3172095	down
A_22_P00001166	lnc-AMZ1-1	DB071735 TESTI4 Homo sapiens cDNA clone TESTI4014626 5', mRNA sequence [DB071735]	0,04352004	2,1757588	down
A_33_P3401477	lnc-WNT8A-2	Homo sapiens cDNA, FLJ17535. [AK310493]	0,039428864	1,7988824	down
A_22_P00022235	LINC00544	Homo sapiens long intergenic non-protein coding RNA 544 (LINC00544), long non-coding RNA [NR_033889]	0,003311628	2,0381134	down
A_21_P0006076	lnc-FAM27E1.1-1	LNCipedia lincRNA (lnc-FAM27E1.1-1), lincRNA [lnc-FAM27E1.1-1:1]	0,037071817	1,8221633	down
A_21_P0001485	lnc-DNAJC8-1	LNCipedia lincRNA (lnc-DNAJC8-1), lincRNA [lnc-DNAJC8-1:2]	0,02787311	1,8941895	down
A_23_P402765	NRAP	Homo sapiens nebulin-related anchoring protein (NRAP), transcript variant 2, mRNA [NM_198060]	0,009443427	1,8977313	down
A_23_P48803	TMOD2	Homo sapiens tropomodulin 2 (neuronal) (TMOD2), transcript variant 1, mRNA [NM_014548]	0,032791242	1,8067589	down
A_33_P3273767			0,024968466	1,9444834	down
A_19_P00320066		GMDS antisense RNA 1 (head to head) [Source:HGNC Symbol;Acc:HGNC:48993] [ENST00000532564]	0,01313278	2,231203	down
A_33_P3423655	TCF24	Homo sapiens transcription factor 24 (TCF24), mRNA [NM_001193502]	0,0054852	2,121206	down
A_33_P3270271	LOC440386	PREDICTED: Homo sapiens uncharacterized LOC440386 (LOC440386), misc_RNA [XR_243473]	0,00327526	2,0555546	down
A_23_P30950	SLC26A8	Homo sapiens solute carrier family 26 (anion exchanger), member 8 (SLC26A8), transcript variant 1, mRNA [NM_052961]	0,019245118	1,78181	down
A_19_P00331853	LOC100131564	Homo sapiens uncharacterized LOC100131564 (LOC100131564), long non-coding RNA [NR_034089]	0,001961718	1,8846397	down
A_21_P0004521	lnc-CSorf27-1	LNCipedia lincRNA (lnc-CSorf27-1), lincRNA [lnc-CSorf27-1:2]	0,028085114	1,9773191	down
A_21_P0007978	LINC00572	Homo sapiens long intergenic non-protein coding RNA 572 (LINC00572), long non-coding RNA [NR_047501]	0,021754581	2,0167334	down
A_23_P109785	NR112	Homo sapiens nuclear receptor subfamily 1, group I, member 2 (NR112), transcript variant 1, mRNA [NM_003889]	0,044601478	2,291854	down
A_21_P0009613	lnc-TSHZ1-1	LNCipedia lincRNA (lnc-TSHZ1-1), lincRNA [lnc-TSHZ1-1:2]	0,01270996	1,9951411	down
A_23_P64980	SLC6A13	Homo sapiens solute carrier family 6 (neurotransmitter transporter), member 13 (SLC6A13), transcript variant 1, mRNA [NM_016615]	0,043968286	2,268697	down
A_22_P00008663		DA126874 BRACE3 Homo sapiens cDNA clone BRACE3049996 5', mRNA sequence [DA126874]	0,017389992	2,0647497	down
A_32_P114028	CCDC7	Homo sapiens coiled-coil domain containing 7 (CCDC7), transcript variant 5, mRNA [NM_024688]	0,018913489	1,7847971	down
A_22_P00002725	MACROD2-IT1	Homo sapiens MACROD2 intronic transcript 1 (non-protein coding) (MACROD2-IT1), long non-coding RNA [NR_104193]	0,04634002	1,7134607	down
A_21_P0007182	lnc-NUCB2-2	LNCipedia lincRNA (lnc-NUCB2-2), lincRNA [lnc-NUCB2-2:1]	0,038420748	2,0147133	down
A_22_P00009438	SVIL-AS1	Homo sapiens SVIL antisense RNA 1 (SVIL-AS1), transcript variant 10, long non-coding RNA [NR_110928]	0,045466766	1,7569915	down
A_21_P0011296	XLOC_I2_004594	BROAD Institute lincRNA (XLOC_I2_004594), lincRNA [TCONS_I2_00008478]	0,037414968	1,9503163	down
A_22_P00007891	PKIB	Homo sapiens protein kinase (cAMP-dependent, catalytic) inhibitor beta (PKIB), transcript variant 4, mRNA [NM_001270393]	0,007294886	1,827456	down
A_22_P00025475		Q3NN85_SHEFR (Q3NN85) Iron-sulfur-dependent L-serine dehydratase single chain form , partial (4%) [THC2642652]	0,011114469	2,3111944	down
A_33_P3385281	KCNG3	Homo sapiens potassium channel, voltage gated modifier subfamily G, member 3 (KCNG3), transcript variant 1, mRNA [NM_133329]	0,03210901	2,0791957	down
A_21_P0013053	XLOC_I2_012844	BROAD Institute lincRNA (XLOC_I2_012844), lincRNA [TCONS_I2_00024560]	0,038832642	2,2872746	down
A_33_P3389599	ANKRD20A11P	ankyrin repeat domain 20 family, member A11, pseudogene [Source:HGNC Symbol;Acc:HGNC:42024] [ENST00000451663]	0,034179904	2,2496128	down
A_33_P3256620			0,035599932	2,1082475	down
A_23_P97112	SELE	Homo sapiens selectin E (SELE), mRNA [NM_000450]	0,029004024	2,0854714	down
A_23_P332260	PBOV1	Homo sapiens prostate and breast cancer overexpressed 1 (PBOV1), mRNA [NM_021635]	0,026619244	2,102545	down
A_21_P0008042	lnc-USPL1-2	LNCipedia lincRNA (lnc-USPL1-2), lincRNA [lnc-USPL1-2:1]	0,039223004	1,8079723	down
A_23_P10936	KRTAP4-1	Homo sapiens keratin associated protein 4-1 (KRTAP4-1), mRNA [NM_033060]	0,045533698	1,5612437	down
A_33_P3282364	LOC102725343	PREDICTED: Homo sapiens uncharacterized LOC102725343 (LOC102725343), ncRNA [XR_424311]	0,04384931	1,6658646	down
A_22_P00016963	lnc-TSSK2-1	aj62b10.s1 Soares_testis_HNT Homo sapiens cDNA clone IMAGE:1394875 3', mRNA sequence [AA897512]	0,04749003	1,6039741	down
A_24_P924836	CRYZL1	Homo sapiens crystallin, zeta (quinone reductase)-like 1, mRNA (cDNA clone IMAGE:3632782), partial cds. [BC022827]	0,018993104	1,8841174	down
A_33_P3363445	LOC100506014	PREDICTED: Homo sapiens uncharacterized LOC100506014 (LOC100506014), transcript variant X2, ncRNA [XR_425355]	0,036128033	1,7478118	down
A_33_P3396326		ALU1_HUMAN (P39188) Alu subfamily J sequence contamination warning entry, partial (7%) [THC2739199]	0,030347308	1,56527	down
A_33_P3362933	GYPA	Homo sapiens glycophorin A (MNS blood group) (GYPA), mRNA [NM_002099]	0,047331728	1,6012807	down
A_33_P3403254	ZNF878	Homo sapiens zinc finger protein 878 (ZNF878), mRNA [NM_001080404]	0,047847785	1,710976	down
A_33_P3420043	CSRNP3	Homo sapiens cysteine-serine-rich nuclear protein 3 (CSRNP3), transcript variant 1, mRNA [NM_001172173]	0,02741963	1,7674049	down
A_33_P3246283	VAC14	Vac14 homolog (S. cerevisiae) [Source:HGNC Symbol;Acc:HGNC:25507] [ENST00000571759]	0,0469571	1,5752076	down
A_21_P0005746	lnc-GRHL2-2	LNCipedia lincRNA (lnc-GRHL2-2), lincRNA [lnc-GRHL2-2:1]	0,029875675	1,8756704	down
A_21_P0007960	lnc-FARP1-1	Homo sapiens clone IMAGE:2363394, mRNA sequence. [AF339799]	0,02268299	1,9572	down
A_21_P0002222	lnc-VRK2-1	LNCipedia lincRNA (lnc-VRK2-1), lincRNA [lnc-VRK2-1:2]	0,047529105	1,8636217	down

A_21_P0007531	LOC101928387	PREDICTED: Homo sapiens uncharacterized LOC101928387 (LOC101928387), ncRNA [XR_242921]	0,011171207	2,0278032	down
A_33_P3347241	ANKRD20A12P	Homo sapiens ankyrin repeat domain 20 family, member A12, pseudogene (ANKRD20A12P), non-coding RNA [NR_046228]	0,035653643	2,0123327	down
A_22_P00001635		K-EST0040859 S12SNU216 Homo sapiens cDNA clone S12SNU216-8-A12 5', mRNA sequence [BM760324]	0,011894944	2,3448093	down
A_22_P00019948			0,03838642	1,9135902	down
A_22_P00009713	lnc-MCCC2-2	LNCipedia lincRNA (lnc-MCCC2-2), lincRNA [lnc-MCCC2-2:2]	0,009351342	2,3158157	down
A_33_P3350913	TSEN2	Homo sapiens TSEN2 tRNA splicing endonuclease subunit (TSEN2), transcript variant 5, mRNA [NM_001145395]	0,00233201	2,845589	down
A_22_P00001260	LOC102724712	PREDICTED: Homo sapiens uncharacterized LOC102724712 (LOC102724712), ncRNA [XR_424263]	0,017228242	1,5709951	down
A_22_P00017729	KIZ	kizuna centrosomal protein [Source:HGNC Symbol;Acc:HGNC:15865] [ENST00000441136]	0,04225174	1,5326227	down
A_24_P229234	MYO16	Homo sapiens myosin XVI (MYO16), transcript variant 2, mRNA [NM_015011]	0,002177655	2,0189466	down
A_22_P00000165	lnc-ABCC11-1	zt99e08.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:730502 5', mRNA sequence [AA412392]	0,036121923	1,825585	down
A_22_P00008553	LINC00578	Homo sapiens long intergenic non-protein coding RNA 578 (LINC00578), long non-coding RNA [NR_047568]	0,03398237	1,6905605	down
A_19_P00315863	LINC00607	long intergenic non-protein coding RNA 607 [Source:HGNC Symbol;Acc:HGNC:43944] [ENST00000417922]	0,047206365	1,8641505	down
A_22_P00005729	LOC642366	Homo sapiens uncharacterized LOC642366 (LOC642366), long non-coding RNA [NR_046243]	0,00968687	1,8704505	down
A_22_P00022635		CLPP_DESPS (Q6AK59) ATP-dependent Clp protease proteolytic subunit (Endopeptidase Clp) , partial (7%) [THC2686348]	0,04971947	1,8442675	down
A_21_P0001303	lnc-PRKAA2-4	LNCipedia lincRNA (lnc-PRKAA2-4), lincRNA [lnc-PRKAA2-4:1]	0,011198452	1,73758	down
A_22_P00009802	LOC145845	Homo sapiens uncharacterized LOC145845 (LOC145845), long non-coding RNA [NR_024264]	0,039718144	1,6698294	down
A_21_P0012954			0,011178186	2,109061	down
A_21_P0005942	lnc-FAM92A1-2	LNCipedia lincRNA (lnc-FAM92A1-2), lincRNA [lnc-FAM92A1-2:1]	0,041964583	2,0296423	down
A_23_P131050	ACSBG2	Homo sapiens acyl-CoA synthetase bubblegum family member 2 (ACSBG2), transcript variant 2, mRNA [NM_030924]	0,020815339	1,919981	down
A_21_P0000638	LINC01225	Homo sapiens long intergenic non-protein coding RNA 1225 (LINC01225), non-coding RNA [NR_034112]	0,044418413	2,1718605	down
A_22_P00003609	lnc-CD38-1	LNCipedia lincRNA (lnc-CD38-1), lincRNA [lnc-CD38-1:1]	0,002359129	2,1977828	down
A_22_P00012627	LOC101928823	PREDICTED: Homo sapiens uncharacterized LOC101928823 (RP11-65M17.3), ncRNA [XR_246475]	0,048184093	1,8060256	down
A_21_P0002235	lnc-ETAA1-2	LNCipedia lincRNA (lnc-ETAA1-2), lincRNA [lnc-ETAA1-2:1]	0,019454611	1,9678055	down
A_22_P00007929	lnc-HTR1B-1	LNCipedia lincRNA (lnc-HTR1B-1), lincRNA [lnc-HTR1B-1:1]	0,03498552	1,8612548	down
A_21_P0003898	lnc-ANKRD56-1	LNCipedia lincRNA (lnc-ANKRD56-1), lincRNA [lnc-ANKRD56-1:1]	0,047634553	1,7542938	down
A_22_P00006313	LINC01570	Homo sapiens long intergenic non-protein coding RNA 1570 (LINC01570), long non-coding RNA [NR_110902]	0,03329197	2,0403674	down
A_32_P216734	SPDYE3	Homo sapiens speedy/RINGO cell cycle regulator family member E3 (SPDYE3), mRNA [NM_001004351]	0,009917292	1,9633602	down
A_22_P00024667	ADIPOQ-AS1	Homo sapiens ADIPOQ antisense RNA 1 (ADIPOQ-AS1), long non-coding RNA [NR_046662]	0,037421748	1,8907386	down
A_33_P3709317	SNORA28	Homo sapiens small nucleolar RNA, H/ACA box 28 (SNORA28), small nucleolar RNA [NR_002964]	0,003601152	3,2708066	down
A_33_P3364498			0,010976044	1,7682022	down
A_33_P3289661	OCR1	Homo sapiens ovarian cancer-related protein 1 (OCR1) mRNA, complete cds. [AF314543]	0,03166976	2,4213824	down
A_21_P0013152			0,045064557	2,0720365	down
A_22_P00006253	lnc-FAM65A-1	LNCipedia lincRNA (lnc-FAM65A-1), lincRNA [lnc-FAM65A-1:1]	0,001890978	2,6054757	down
A_22_P00005428			0,048365116	2,6336045	down
A_33_P3238479		Q86XV3_HUMAN (Q86XV3) DIP2C protein (Fragment), partial (24%) [THC2715287]	0,011546902	2,7322469	down
A_22_P00016134		ZBTB20 antisense RNA 2 [Source:HGNC Symbol;Acc:HGNC:42421] [ENST00000478301]	0,012969658	2,6110709	down
A_21_P0007533	lnc-PLEKHA5-4	LNCipedia lincRNA (lnc-PLEKHA5-4), lincRNA [lnc-PLEKHA5-4:1]	0,009156926	3,2070706	down
A_22_P00020850	lnc-MED10-5	BX105562 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGp998L215337, mRNA sequence [BX105562]	0,024967702	1,6081507	down
A_22_P00007136	VPS13A-AS1	Homo sapiens VPS13A antisense RNA 1 (VPS13A-AS1), long non-coding RNA [NR_026668]	0,024132073	1,9228318	down
A_22_P00008383		DA742716 NT2RP7 Homo sapiens cDNA clone NT2RP7006313 5', mRNA sequence [DA742716]	0,018433126	2,360265	down
A_22_P00009500			0,013878782	1,8467557	down
A_22_P00007701	lnc-HIVEP1-3	LNCipedia lincRNA (lnc-HIVEP1-3), lincRNA [lnc-HIVEP1-3:1]	0,014538934	1,8609151	down
A_21_P0001895			0,005274375	2,1040199	down
A_33_P3225978	OR14A16	Homo sapiens olfactory receptor, family 14, subfamily A, member 16 (OR14A16), mRNA [NM_001001966]	0,014123892	2,010845	down
A_33_P3313559	ORMDL1	Homo sapiens cDNA FLJ44364 fis, clone TRACH3008201. [AK126336]	0,04417493	1,7566946	down
A_33_P3310649	lnc-KLF7-1	LNCipedia lincRNA (lnc-KLF7-1), lincRNA [lnc-KLF7-1:3]	0,014365109	2,0620098	down
A_33_P3236436	C4orf51	Homo sapiens chromosome 4 open reading frame 51 (C4orf51), mRNA [NM_001080531]	0,020570284	1,6133193	down
A_21_P0004819	GMDS-AS1	Homo sapiens GMDS antisense RNA 1 (head to head) (GMDS-AS1), long non-coding RNA [NR_046229]	0,038804557	1,586267	down
A_21_P0000047	DISC1	Homo sapiens disrupted in schizophrenia 1 (DISC1), transcript variant g, mRNA [NM_001164544]	0,028171148	2,0419393	down
A_33_P3285799	AK9	Homo sapiens cDNA FLJ16163 fis, clone BRCAN2014229. [AK131244]	0,034500662	1,9840467	down
A_33_P3713035	LOC221814	Homo sapiens mRNA; cDNA DKFZp564C0371 (from clone DKFZp564C0371) [AL122087]	0,038640443	1,6624863	down
A_22_P00003413	LOC102725407	PREDICTED: Homo sapiens uncharacterized LOC102725407 (LOC102725407), transcript variant X1, ncRNA [XR_425532]	0,015329825	2,0282254	down
A_22_P00002067	lnc-BLID-3	LNCipedia lincRNA (lnc-BLID-3), lincRNA [lnc-BLID-3:2]	0,031805094	2,1344042	down
A_21_P0014322	LOC101928595	PREDICTED: Homo sapiens uncharacterized LOC101928595 (LOC101928595), ncRNA [XR_243378]	0,030130746	1,6211383	down
A_21_P0007695	lnc-ERGIC2-4	LNCipedia lincRNA (lnc-ERGIC2-4), lincRNA [lnc-ERGIC2-4:1]	0,024994684	1,7544488	down
A_21_P0002920	lnc-CPN2-3	BX102253 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGp998I07110, mRNA sequence [BX102253]	0,044653226	2,071234	down
A_22_P00005555	lnc-EEA1-1	BX104650 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGp998I2378, mRNA sequence [BX104650]	0,026474249	2,301486	down
A_19_P00808846			0,002633883	1,8410717	down
A_33_P3371402	FAM223A	Homo sapiens family with sequence similarity 223, member A (non-protein coding) (FAM223A), long non-coding RNA [NR_027401]	0,03689446	1,6551108	down

A_21_P0000230	SNORD107	Homo sapiens small nucleolar RNA, C/D box 107 [SNORD107], small nucleolar RNA [NR_001293]	0,040521495	1,8250371	down
A_33_P3243307	Inc-LSMD1-1	LNCipedia lincRNA [Inc-LSMD1-1], lincRNA [Inc-LSMD1-1:2]	0,045978267	1,9866827	down
A_33_P3267463	RFX3	regulatory factor X, 3 (influences HLA class II expression) [Source:HGNC Symbol;Acc:HGNC:9984] [ENST00000381984]	0,01797891	2,7027693	down
A_21_P0014632	LOC101928979	PREDICTED: Homo sapiens uncharacterized LOC101928979 (RP11-458D21.1), transcript variant X2, ncRNA [XR_426812]	0,012917057	2,9326566	down
A_21_P0004939	Inc-LAMA2-1	LNCipedia lincRNA [Inc-LAMA2-1], lincRNA [Inc-LAMA2-1:1]	0,035143934	2,7531695	down
A_33_P3255329	ACACB	acetyl-CoA carboxylase beta [Source:HGNC Symbol;Acc:HGNC:85] [ENST00000377854]	9,14E-04	2,6790466	down
A_32_P472875		long intergenic non-protein coding RNA 543 [Source:HGNC Symbol;Acc:HGNC:43678] [ENST00000567234]	0,033506174	2,3796964	down
A_19_P00811038			0,019616522	2,0806355	down
A_33_P3530314	C5orf42	Homo sapiens chromosome 5 open reading frame 42 (C5orf42), mRNA [NM_023073]	0,012940334	1,8014659	down
A_22_P00000918	Inc-AKAP1-1	Homo sapiens cDNA FLJ42449 fis, clone BRACE2003887. [AK124440]	0,047383517	1,6508603	down
A_22_P00013598			0,029815387	1,8341901	down
A_23_P66017	PRRT2	Homo sapiens proline-rich transmembrane protein 2 (PRRT2), transcript variant 1, mRNA [NM_145239]	0,019681497	1,9743029	down
A_21_P0000780	ZNF345	Homo sapiens zinc finger protein 345 (ZNF345), transcript variant 6, non-coding RNA [NR_038362]	0,007494649	1,9898256	down
A_21_P0009134	Inc-CLEC18B-1	LNCipedia lincRNA [Inc-CLEC18B-1], lincRNA [Inc-CLEC18B-1:1]	0,025925497	1,9103161	down
A_22_P00017737		Homo sapiens cDNA clone IMAGE:4793073. [BC037792]	0,027896661	2,4554014	down
A_22_P00017968	KCNMB2-AS1	Homo sapiens KCNMB2 antisense RNA 1 (KCNMB2-AS1), transcript variant 1, long non-coding RNA [NR_126560]	0,012870983	2,2003903	down
A_22_P00004996	FLJ46066	Homo sapiens uncharacterized LOC401103 (FLJ46066), long non-coding RNA [NR_040105]	0,036043126	2,210656	down
A_22_P00014855			0,044959333	1,7397583	down
A_22_P00022828	Inc-RLBP1-1	LNCipedia lincRNA [Inc-RLBP1-1], lincRNA [Inc-RLBP1-1:2]	0,037088443	1,8042911	down
A_21_P0010719	Inc-RP3-377D14.1.1-3	LNCipedia lincRNA [Inc-RP3-377D14.1.1-3], lincRNA [Inc-RP3-377D14.1.1-3:12]	0,01686359	2,325261	down
A_22_P00018411		cr08d08.x1 Human bone marrow stromal cells Homo sapiens cDNA clone HBMSC_cr08d08 3', mRNA sequence [AI753316]	0,03206191	2,1802785	down
A_22_P00003470	Inc-CCDC68-2	Homo sapiens cDNA FLJ27183 fis, clone SYN02322. [AK130693]	0,006834316	2,5379443	down
A_22_P00010093	Inc-MPZL1-1	LNCipedia lincRNA [Inc-MPZL1-1], lincRNA [Inc-MPZL1-1:1]	0,038153082	2,431967	down
A_21_P0008560		prostate cancer associated transcript 29 (non-protein coding) [Source:HGNC Symbol;Acc:HGNC:50895] [ENST00000558411]	0,034685187	1,9510276	down
A_21_P0012394	XLOC_I2_009886	BROAD Institute lincRNA (XLOC_I2_009886), lincRNA [TCONS_I2_00018857]	0,026537368	2,3831515	down
A_22_P00020049	Inc-C9orf103-2	LNCipedia lincRNA [Inc-C9orf103-2], lincRNA [Inc-C9orf103-2:1]	0,031602282	2,715936	down
A_22_P00002071	Inc-BMI1-1	LNCipedia lincRNA [Inc-BMI1-1], lincRNA [Inc-BMI1-1:1]	0,02187563	3,0966926	down
A_21_P0013548	XLOC_I2_014694	BROAD Institute lincRNA (XLOC_I2_014694), lincRNA [TCONS_I2_00028604]	0,021582302	2,5341144	down
A_22_P00008670		aa25d11.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:814293 5' similar to contains L1.t1 L1 repetitive element ;; mRNA sequence [AA459240]	0,01026914	2,368134	down
A_21_P0005132	Inc-LAMA2-1	LNCipedia lincRNA [Inc-LAMA2-1], lincRNA [Inc-LAMA2-1:2]	0,028212694	2,3154519	down
A_21_P0013547	XLOC_I2_014694	BROAD Institute lincRNA (XLOC_I2_014694), lincRNA [TCONS_I2_00028603]	0,04134541	2,7637799	down
A_33_P3382147	STARD13	STAR-related lipid transfer (START) domain containing 13 [Source:HGNC Symbol;Acc:HGNC:19164] [ENST00000487412]	0,045336602	1,9355141	down
A_21_P0006211	Inc-PALM2-AKAP2-1	LNCipedia lincRNA [Inc-PALM2-AKAP2-1], lincRNA [Inc-PALM2-AKAP2-1:1]	0,019133994	2,2528026	down
A_21_P0004246	Inc-AC114947.1.1-2	LNCipedia lincRNA [Inc-AC114947.1.1-2], lincRNA [Inc-AC114947.1.1-2:3]	0,043892078	1,8097616	down
A_33_P3249837	LINC00883	long intergenic non-protein coding RNA 883 [Source:HGNC Symbol;Acc:HGNC:48569] [ENST00000473550]	0,046898007	2,0406756	down
A_21_P0005899	LOC101927588	Homo sapiens uncharacterized LOC101927588 (LOC101927588), long non-coding RNA [NR_125420]	0,033681877	1,9154617	down
A_23_P216935	MIR600HG	Homo sapiens MIR600 host gene (non-protein coding) [MIR600HG], long non-coding RNA [NR_026677]	0,04488129	1,9686754	down
A_21_P0014441			0,013476404	2,2180195	down
A_22_P00016184			0,03793178	1,991134	down
A_22_P00009690			0,009479653	2,8245847	down
A_23_P64888	TAS2R10	Homo sapiens taste receptor, type 2, member 10 (TAS2R10), mRNA [NM_023921]	0,004377868	2,3418813	down
A_33_P3286774		phosphodiesterase 4D interacting protein [Source:HGNC Symbol;Acc:HGNC:15580] [ENST00000479369]	0,023733694	2,0450318	down
A_23_P39454	ZNF556	Homo sapiens zinc finger protein 556 (ZNF556), transcript variant 1, mRNA [NM_024967]	0,03764336	2,3998451	down
A_22_P00003377	CCDC102B	coiled-coil domain containing 102B [Source:HGNC Symbol;Acc:HGNC:26295] [ENST00000580292]	0,026706342	2,518117	down
A_22_P00024290	LOC101928441	Homo sapiens uncharacterized LOC101928441 (LOC101928441), long non-coding RNA [NR_120471]	0,02549521	2,8330004	down
A_22_P00012000	Inc-PLCD1-1	LNCipedia lincRNA [Inc-PLCD1-1], lincRNA [Inc-PLCD1-1:4]	0,024193909	2,1785133	down
A_21_P0004862	LOC102724851	PREDICTED: Homo sapiens uncharacterized LOC102724851 (LOC102724851), transcript variant X2, ncRNA [XR_427901]	0,024834067	3,570129	down
A_21_P0014779	PLIN2	perilipin 2 [Source:HGNC Symbol;Acc:HGNC:248] [ENST00000494753]	0,01055481	2,8963563	down
A_33_P3398356	WDR72	Homo sapiens WD repeat domain 72 (WDR72), transcript variant 1, mRNA [NM_182758]	2,09E-04	2,4867017	down
A_19_P00809030	LOC101929378	Homo sapiens uncharacterized LOC101929378 (LOC101929378), transcript variant 1, long non-coding RNA [NR_110250]	0,022717474	2,5693653	down
A_22_P00007063	LOC100505938	Homo sapiens uncharacterized LOC100505938 (LOC100505938), long non-coding RNA [NR_125740]	5,96E-04	3,121301	down
A_21_P0004269	Inc-CMYA5-1	LNCipedia lincRNA [Inc-CMYA5-1], lincRNA [Inc-CMYA5-1:1]	0,003309196	3,221888	down
A_23_P257803	DMGDH	Homo sapiens dimethylglycine dehydrogenase (DMGDH), transcript variant 1, mRNA [NM_013391]	0,04519291	2,0709562	down
A_21_P0000491	SNAR-G1	Homo sapiens small ILF3/NF90-associated RNA G1 (SNAR-G1), small nuclear RNA [NR_004383]	0,0272761	1,9267377	down
A_22_P00018620		RST30466 Athersys RAGE Library Homo sapiens cDNA, mRNA sequence [BG210915]	0,027324807	3,2807634	down
A_21_P0008332	Inc-FANCM-5	LNCipedia lincRNA [Inc-FANCM-5], lincRNA [Inc-FANCM-5:1]	0,01775597	2,597382	down
A_33_P3789069	LINC00939	Homo sapiens long intergenic non-protein coding RNA 939 (LINC00939), long non-coding RNA [NR_034132]	0,00146835	2,7743444	down
A_23_P44849	KCTD13	Homo sapiens potassium channel tetramerization domain containing 13 (KCTD13), transcript variant 1, mRNA [NM_178863]	0,006728291	2,240258	down
A_33_P3285815	WFDC6	WAP four-disulfide core domain 6 [Source:HGNC Symbol;Acc:HGNC:16164] [ENST00000372665]	0,021385156	2,3870816	down

A_19_P00316257	LOC101927668	Homo sapiens uncharacterized LOC101927668 (LOC101927668), long non-coding RNA [NR_110114]	0,045646038	1,8869208	down
A_33_P3287228	IQCD	Homo sapiens cDNA FLJ45209 fis, clone BRCAN2015757. [AK127152]	0,03974609	2,0624123	down
A_33_P3246193	CFAP46	Homo sapiens cilia and flagella associated protein 46 (CFAP46), mRNA [NM_001200049]	0,048937034	1,9250042	down
A_22_P00011011	lnc-NSUN6-1	Human EST clone 122887 mariner transposon Hsmar1 sequence. [U80764]	0,048240542	2,1816769	down
A_22_P00010237	lnc-MT1G-2	Q5VQ95_ORYSA (Q5VQ95) PE-PGRS FAMILY PROTEIN-like, partial (10%) [THC2738275]	0,002306581	2,2331774	down
A_21_P0000823	PAXBP1-AS1	Homo sapiens PAXBP1 antisense RNA 1 (PAXBP1-AS1), transcript variant 1, long non-coding RNA [NR_038879]	0,028914187	1,8192978	down
A_23_P4416	ZNF287	Homo sapiens zinc finger protein 287 (ZNF287), mRNA [NM_020653]	0,003975372	2,6945808	down
A_23_P133359	ZFP2	Homo sapiens ZFP2 zinc finger protein (ZFP2), mRNA [NM_030613]	0,004281023	2,3508036	down
A_23_P353614	C8orf46	Homo sapiens chromosome 8 open reading frame 46 (C8orf46), mRNA [NM_152765]	0,027174998	2,6384914	down
A_33_P3388486	LOC100129518	Homo sapiens uncharacterized LOC100129518 (LOC100129518), long non-coding RNA [NR_037166]	0,040406577	1,7567912	down
A_23_P20316	CA3	Homo sapiens carbonic anhydrase III, muscle specific (CA3), mRNA [NM_005181]	0,003088339	2,6762576	down
A_33_P3213888	SMIM5	Homo sapiens small integral membrane protein 5 (SMIM5), transcript variant 1, mRNA [NM_001162995]	0,03471305	1,8721985	down
A_22_P00022138	lnc-KRT81-2	603199502F1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:5265361 5', mRNA sequence [BI458978]	0,004253397	2,425988	down
A_33_P3233620		Homo sapiens mRNA; cDNA DKFZp313A047 (from clone DKFZp313A047) [CR749405]	0,016461909	3,0253177	down
A_22_P00004640			0,006296886	2,3372157	down
A_33_P3239417	TMEM200C	Homo sapiens transmembrane protein 200C (TMEM200C), mRNA [NM_001080209]	0,006942585	2,6687481	down
A_21_P0012386	LOC101929607	Homo sapiens uncharacterized LOC101929607 (LOC101929607), long non-coding RNA [NR_110039]	0,009616525	2,417491	down
A_33_P3381255	CLEC2A	Homo sapiens C-type lectin domain family 2, member A (CLEC2A), transcript variant 2, mRNA [NM_207375]	0,010730578	2,441943	down
A_21_P0008562	LOC101926928	Homo sapiens uncharacterized LOC101926928 (LOC101926928), long non-coding RNA [NR_110106]	0,046843447	1,6898816	down
A_22_P00018186		long intergenic non-protein coding RNA 1170 [Source:HGNC Symbol;Acc:HGNC:49542] [ENST00000520192]	0,005383631	3,1243043	down
A_21_P0005088	lnc-FRMD1-4	LNCipedia lincRNA (lnc-FRMD1-4), lincRNA [lnc-FRMD1-4:3]	0,013104848	2,7595384	down
A_33_P3420900	PATE2	Homo sapiens prostate and testis expressed 2 (PATE2), mRNA [NM_212555]	0,002950233	3,728519	down
A_21_P0002519	lnc-STK39-3	LNCipedia lincRNA (lnc-STK39-3), lincRNA [lnc-STK39-3:3]	0,003388956	2,7019768	down
A_21_P0000356	SCARNA11	Homo sapiens small Cajal body-specific RNA 11 (SCARNA11), guide RNA [NR_003012]	0,021348545	2,7794712	down
A_22_P00003612	lnc-CD38-2	LNCipedia lincRNA (lnc-CD38-2), lincRNA [lnc-CD38-2:3]	0,006729991	2,2757726	down
A_21_P0012998	LINC01339	Homo sapiens long intergenic non-protein coding RNA 1339 (LINC01339), long non-coding RNA [NR_120601]	0,009782166	2,0614507	down
A_33_P3635136		602018404F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4154136 5', mRNA sequence [BF346224]	0,048499268	2,52213	down
A_32_P46594	LOC145837	Homo sapiens uncharacterized LOC145837 (LOC145837), long non-coding RNA [NR_026979]	0,02945543	2,0985413	down
A_33_P3323323	ZNF497	Homo sapiens zinc finger protein 497 (ZNF497), transcript variant 1, mRNA [NM_198458]	0,041898638	2,2919636	down
A_21_P0014886	lnc-TMEM234-1	LNCipedia lincRNA (lnc-TMEM234-1), lincRNA [lnc-TMEM234-1:2]	0,007495986	2,7886515	down
A_21_P0010483	lnc-C22orf26-2	LNCipedia lincRNA (lnc-C22orf26-2), lincRNA [lnc-C22orf26-2:10]	0,008444714	2,7187304	down
A_33_P3218178	SLC25A53	Homo sapiens solute carrier family 25, member 53 (SLC25A53), mRNA [NM_001012755]	0,001320491	2,4269567	down
A_22_P00004477	LOC100507250	Homo sapiens uncharacterized LOC100507250 (LOC100507250), long non-coding RNA [NR_038930]	0,04864856	2,083544	down
A_24_P202522	AQP4	Homo sapiens aquaporin 4 (AQP4), transcript variant a, mRNA [NM_001650]	4,27E-04	2,0244298	down
A_24_P362881	IFT57	Homo sapiens intraflagellar transport 57 (IFT57), mRNA [NM_018010]	0,036766894	2,1239522	down
A_22_P00021273	lnc-MAP6-3	Homo sapiens mRNA; cDNA DKFZp434I192 (from clone DKFZp434I192). [AL117542]	0,015932478	2,3691916	down
A_23_P393620	TFPI2	Homo sapiens tissue factor pathway inhibitor 2 (TFPI2), transcript variant 1, mRNA [NM_006528]	0,0424639	2,2369606	down
A_22_P00004468			0,016161079	2,152118	down
A_33_P3400224	DZIP1	Homo sapiens DAZ interacting zinc finger protein 1 (DZIP1), transcript variant 1, mRNA [NM_014934]	0,030575043	2,0233226	down
A_33_P3467872	LINC00343	Homo sapiens long intergenic non-protein coding RNA 343 (LINC00343), transcript variant 1, long non-coding RNA [NR_046391]	0,003988245	2,0749965	down
A_33_P3424347			0,043967243	1,9610813	down
A_21_P0009847	LINC01523	Homo sapiens long intergenic non-protein coding RNA 1523 (LINC01523), long non-coding RNA [NR_109942]	0,034913268	1,687417	down
A_22_P00008952	KRTAP5-AS1	Homo sapiens KRTAP5-1/KRTAP5-2 antisense RNA 1 (KRTAP5-AS1), long non-coding RNA [NR_021489]	0,00813448	2,1015854	down
A_21_P0007184	lnc-NAV2-1	LNCipedia lincRNA (lnc-NAV2-1), lincRNA [lnc-NAV2-1:1]	0,047386434	2,06808	down
A_22_P00018827	lnc-MIER3-2	M3K1_HUMAN (Q13233) Mitogen-activated protein kinase kinase kinase 1 (MAPK/ERK kinase kinase 1) (MEK kinase 1) (MEKK 1) (Fragment) , partial (4%) [THC2676013]	9,77E-04	2,7350733	down
A_33_P3641427	MYEF2	Homo sapiens myelin expression factor 2 (MYEF2), transcript variant 1, mRNA [NM_016132]	0,048515055	2,47424	down
A_22_P00021116	lnc-MORF4L1-2	Homo sapiens cDNA FLJ40018 fis, clone STOMA2006398. [AK097337]	0,018368516	1,9303082	down
A_21_P0005813	lnc-DUSP4-4	DHAA_BRAJA (P59337) Haloalkane dehalogenase , partial (6%) [THC2715664]	0,029747883	2,162293	down
A_33_P3400057	TCEANC	Homo sapiens transcription elongation factor A (SII) N-terminal and central domain containing (TCEANC), transcript variant 2, mRNA [NM_001297563]	0,00626738	1,7725674	down
A_22_P00004776	SNAI3-AS1	Homo sapiens SNAI3 antisense RNA 1 (SNAI3-AS1), transcript variant 1, long non-coding RNA [NR_024402]	0,021613773	1,7761903	down
A_21_P0002284	lnc-TSN-6	LNCipedia lincRNA (lnc-TSN-6), lincRNA [lnc-TSN-6:1]	0,021147164	1,9698313	down
A_23_P80570	AADAC	Homo sapiens arylacetamide deacetylase (AADAC), mRNA [NM_001086]	0,037262887	1,8908949	down
A_23_P111724	RUNDC3B	Homo sapiens RUN domain containing 3B (RUNDC3B), transcript variant 1, mRNA [NM_138290]	0,015971415	2,0674384	down
A_22_P00010132	lnc-MRPL3-2	LNCipedia lincRNA (lnc-MRPL3-2), lincRNA [lnc-MRPL3-2:2]	0,015472886	1,9704981	down
A_21_P0005376		PREDICTED: Homo sapiens uncharacterized LOC102723446 (LOC102723446), ncRNA [XR_426177]	0,016598409	1,8770843	down
A_33_P3741678		Q2IMJ3_ANADE (Q2IMJ3) LigA, partial (5%) [THC2492227]	0,02902555	1,758159	down
A_21_P0011039	LINC01252	Homo sapiens long intergenic non-protein coding RNA 1252 (LINC01252), long non-coding RNA [NR_033890]	0,04735828	1,9482121	down
A_33_P3216207	LOC102724168	RST25498 Athersys RAGE Library Homo sapiens cDNA, mRNA sequence [BG206063]	0,016190557	2,1070895	down
A_22_P00002500	lnc-C16orf61-2	Homo sapiens cDNA clone IMAGE:4248887, partial cds. [BC017893]	0,003058084	2,6131418	down

A_22_P00014455	lnc-SH3BGRL3-1	LNCipedia lincRNA (lnc-SH3BGRL3-1), lincRNA [lnc-SH3BGRL3-1:1]	0,023177637	2,5043685	down
A_33_P3331125	SLC2A12	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 12 (SLC2A12), mRNA [NM_145176]	0,03235316	2,3335774	down
A_21_P0013943	LYSMD4	LysM, putative peptidoglycan-binding, domain containing 4 [Source:HGNC Symbol;Acc:HGNC:26571] [ENST00000496108]	0,04737128	1,8433119	down
A_21_P0000709	SEPSECS-AS1	Homo sapiens SEPSECS antisense RNA 1 (head to head) [SEPSECS-AS1], long non-coding RNA [NR_037934]	0,028738245	2,0134273	down
A_22_P117812	ZNF846	Homo sapiens zinc finger protein 846 (ZNF846), mRNA [NM_001077624]	0,04022364	1,9960761	down
A_33_P3306823	ZNF846	proline rich 4 (lacrima) [Source:HGNC Symbol;Acc:HGNC:18020] [ENST00000570814]	0,025665041	1,9661837	down
A_22_P00012369	TTN-AS1	Homo sapiens TTN antisense RNA 1 (TTN-AS1), transcript variant 2, long non-coding RNA [NR_038271]	0,020113422	2,074454	down
A_21_P0000745	LINC01268	Homo sapiens long intergenic non-protein coding RNA 1268 (LINC01268), long non-coding RNA [NR_038863]	0,019882599	1,8566839	down
A_33_P3867584	lnc-EPS8L2-1	AGENCOURT_8291079 Lupski_sympathetic_trunk Homo sapiens cDNA clone IMAGE:6193929 5', mRNA sequence [BQ723166]	0,042322855	1,7955129	down
A_22_P00005819	lnc-GNG11-1	602594336F1 NIH_MGC_79 Homo sapiens cDNA clone IMAGE:4721697 5', mRNA sequence [BG572799]	0,04281577	1,9872776	down
A_22_P00007161	LOC102725134	PREDICTED: Homo sapiens uncharacterized LOC102725134 (LOC102725134), transcript variant X2, ncRNA [XR_431880]	0,034317117	2,1483233	down
A_32_P156373	lnc-FANK1-3	LNCipedia lincRNA (lnc-FANK1-3), lincRNA [lnc-FANK1-3:1]	0,01474013	2,1639354	down
A_22_P00006349	AF015825 YisP-like protein [Bacillus subtilis] (exp=0; wgp=1; cg=0), partial (5%) [THC2531780]		0,0370201	2,4596608	down
A_21_P0014600	lnc-BMI1-1	LNCipedia lincRNA (lnc-BMI1-1), lincRNA [lnc-BMI1-1:1]	0,03907108	2,2938454	down
A_22_P00022987	lnc-BMI1-1		0,025599295	2,5160105	down
A_33_P3273802	lnc-NAIF1-2	AGENCOURT_10410033 NIH_MGC_82 Homo sapiens cDNA clone IMAGE:6621767 5', mRNA sequence [BU854474]	0,047616087	1,759278	down
A_22_P00022926	lnc-C5orf43-2	LNCipedia lincRNA (lnc-C5orf43-2), lincRNA [lnc-C5orf43-2:1]	0,024831923	1,8505712	down
A_21_P0004401	MAMDC2-AS1	Homo sapiens MAMDC2 antisense RNA 1 (MAMDC2-AS1), long non-coding RNA [NR_040076]	0,005261007	2,8253543	down
A_33_P3233956	LOC441728	PREDICTED: Homo sapiens golgin-like (LOC441728), misc_RNA [XR_109175]	0,010180349	2,0985546	down
A_33_P3259443	LOC102724609	PREDICTED: Homo sapiens uncharacterized LOC102724609 (LOC102724609), ncRNA [XR_425979]	0,013909165	2,1914606	down
A_22_P00009693	lnc-MAPK10-1	PREDICTED: Homo sapiens mitogen-activated protein kinase 10 (MAPK10), transcript variant X8, mRNA [XM_005263135]	0,018375782	2,077673	down
A_22_P00009581	AF204231 88-kDa Golgi protein (Homo sapiens) (exp=-1; wgp=0; cg=0), partial (4%) [THC2600547]		0,042838193	1,6547401	down
A_33_P3232273	LINC01372	Homo sapiens long intergenic non-protein coding RNA 1372 (LINC01372), long non-coding RNA [NR_108104]	0,013530354	1,8026503	down
A_19_P00322573	LOC100506368	Homo sapiens uncharacterized LOC100506368 (LOC100506368), long non-coding RNA [NR_038905]	0,015501048	1,7884173	down
A_21_P0000831			0,04557889	1,5892231	down
A_22_P00020362	LOC153684	Homo sapiens uncharacterized LOC153684 (LOC153684), long non-coding RNA [NR_015447]	2,23E-04	2,2819023	down
A_33_P3323760	FRAS1	Homo sapiens cDNA FLJ14927 fis, clone PLACE1009094, weakly similar to FURIN-LIKE PROTEASE 2 PRECURSOR (EC 3.4.21.75). [AK027833]	0,0291229	1,8024689	down
A_33_P3380642	LOC100507487	La ribonucleoprotein domain family, member 4 pseudogene [Source:HGNC Symbol;Acc:HGNC:21438] [ENST00000566382]	0,025860231	1,7701381	down
A_33_P3324687	CFAP69	Homo sapiens cilia and flagella associated protein 69 (CFAP69), transcript variant 1, mRNA [NM_001039706]	0,036004316	1,7919062	down
A_21_P0012739	lnc-FSIP1-1	LNCipedia lincRNA (lnc-FSIP1-1), lincRNA [lnc-FSIP1-1:1]	0,02886304	2,0329475	down
A_33_P3615922	ADGB	androglobin [Source:HGNC Symbol;Acc:HGNC:21212] [ENST00000326929]	0,02878972	1,9491965	down
A_22_P00006742	LOC153684	Homo sapiens uncharacterized LOC153684 (LOC153684), long non-coding RNA [NR_015447]	0,021485686	1,9891846	down
A_33_P3400309	lnc-CTD-2517M22.16.1-1	LNCipedia lincRNA (lnc-CTD-2517M22.16.1-1), lincRNA [lnc-CTD-2517M22.16.1-1:1]	0,03712441	2,053526	down
A_22_P00017995	ZNF404	zinc finger protein 404 [Source:HGNC Symbol;Acc:HGNC:19417] [ENST00000588094]	0,009726753	2,0196497	down
A_22_P00004697	SLC9A3R2	Homo sapiens cDNA FLJ43763 fis, clone TEST12048603. [AK125751]	0,008181848	1,9468786	down
A_21_P0009769	LINC00871	long intergenic non-protein coding RNA 871 [Source:HGNC Symbol;Acc:HGNC:47038] [ENST00000555246]	0,004236833	1,8514683	down
A_33_P3399428	LOC101928579	PREDICTED: Homo sapiens uncharacterized LOC101928579 (LOC101928579), ncRNA [XR_242662]	0,034243755	1,777292	down
A_24_P364838	LOC102723744	PREDICTED: Homo sapiens uncharacterized LOC102723744 (LOC102723744), ncRNA [XR_425718]	0,01975489	1,7905045	down
A_22_P00006348	lnc-MTERFD3-1	Homo sapiens cDNA FLJ31150 fis, clone IMR322001534. [AK055712]	0,014755214	2,5849278	down
A_21_P0006095	lnc-CD83-2	LNCipedia lincRNA (lnc-CD83-2), lincRNA [lnc-CD83-2:1]	0,005957049	2,511096	down
A_21_P0003587	lnc-CCDC54-2	LNCipedia lincRNA (lnc-CCDC54-2), lincRNA [lnc-CCDC54-2:9]	0,002096709	3,033077	down
A_33_P3461039	CASP14	Homo sapiens caspase 14, apoptosis-related cysteine peptidase (CASP14), mRNA [NM_012114]	0,032941222	2,3304408	down
A_21_P0004840	LOC100507530	PREDICTED: Homo sapiens uncharacterized LOC102723801 (LOC102723801), ncRNA [XR_426277]	0,003046833	2,4202683	down
A_22_P0003247	XLOC_l2_004381	BROAD Institute lincRNA (XLOC_l2_004381), lincRNA [TCONS_l2_00008028]	0,01703905	2,243874	down
A_23_P90407	lnc-LAMA2-1	LNCipedia lincRNA (lnc-LAMA2-1), lincRNA [lnc-LAMA2-1:3]	0,020700967	2,0124319	down
A_22_P00001181	C4orf17	Homo sapiens chromosome 4 open reading frame 17 (C4orf17), mRNA [NM_032149]	0,03187192	2,3945453	down
A_21_P0011265	lnc-EID1-2	BX097819 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGp998E174012, mRNA sequence [BX097819]	0,006146107	2,4050956	down
A_21_P0004940	SNX22	Homo sapiens sorting nexin 22 (SNX22), transcript variant 1, mRNA [NM_024798]	0,008304258	2,2379649	down
A_23_P167298	C16orf46	Homo sapiens chromosome 16 open reading frame 46 (C16orf46), transcript variant 2, mRNA [NM_152337]	0,023439111	2,7106876	down
A_21_P0001033	LOC284825	Homo sapiens uncharacterized LOC284825 (LOC284825), transcript variant 2, long non-coding RNA [NR_126011]	0,04126906	2,3925686	down
A_22_P00021041	RAPGEF4	Homo sapiens Rap guanine nucleotide exchange factor (GEF) 4 (RAPGEF4), transcript variant 1, mRNA [NM_007023]	0,027873946	1,7797521	down
A_33_P3212172	lnc-NAT2-1	Homo sapiens nervous system abundant protein 11 (NSAP11) mRNA, complete cds. [AY176665]	0,004845531	2,3823657	down
A_21_P0012502	SYNGAP1	Homo sapiens synaptic Ras GTPase activating protein 1 (SYNGAP1), mRNA [NM_006772]	0,034932487	2,130331	down
A_23_P410700	lnc-TMEM159-2	LNCipedia lincRNA (lnc-TMEM159-2), lincRNA [lnc-TMEM159-2:1]	0,003871619	2,501154	down
A_21_P0010155			0,02636893	2,2489924	down
A_23_P17192			0,041386757	2,07056	down
A_33_P3384045			0,013623091	2,4683912	down
A_24_P9346			0,002764538	2,9003506	down
A_22_P00023397			0,015714495	2,4195209	down

A_22_P00013890	LOC101927060		0,04116053	2,2434099	down
A_22_P00025397	lnc-OR1Q1-1	603073365F1 NIH_MGC_119 Homo sapiens cDNA clone IMAGE:5165105 5', mRNA sequence [BI830485]	0,049676485	2,309406	down
A_22_P00003954	lnc-CHADL-2	LNCipedia lincRNA (lnc-CHADL-2), lincRNA [lnc-CHADL-2:1]	0,019539528	2,6688805	down
A_21_P0014917	lnc-AC016251.1-1	PREDICTED: Homo sapiens uncharacterized LOC100507311 (LOC100507311), misc_RNA [XR_133091]	0,013304213	2,6807053	down
A_22_P00023611	lnc-NNT-3	17000599938603 GRN_PRENEU Homo sapiens cDNA 5', mRNA sequence [CN352709]	0,018426545	2,549693	down
A_21_P0003630	lnc-RAP1GDS1-2	LNCipedia lincRNA (lnc-RAP1GDS1-2), lincRNA [lnc-RAP1GDS1-2:1]	0,03602875	2,2215712	down
A_21_P0012755		Homo sapiens cDNA FLJ37590 fis, clone BRCCOC2006270. [AK094909]	0,017007954	2,2534218	down
A_21_P0000925	lnc-SCCPDH-1	LNCipedia lincRNA (lnc-SCCPDH-1), lincRNA [lnc-SCCPDH-1:4]	0,014642016	2,167099	down
A_33_P3267467	RFX3	regulatory factor X, 3 (influences HLA class II expression) [Source:HGNC Symbol;Acc:HGNC:9984] [ENST00000442560]	0,03460641	2,10344	down
A_33_P3309481	PTPRVP	Homo sapiens protein tyrosine phosphatase, receptor type, V, pseudogene (PTPRVP), non-coding RNA [NR_002930]	0,005363722	2,0339477	down
A_22_P00012484		PREDICTED: Homo sapiens uncharacterized LOC102724764 (LOC102724764), ncRNA [XR_424260]	0,002806234	2,951528	down
A_23_P342398	LINC00612	Homo sapiens long intergenic non-protein coding RNA 612 (LINC00612), long non-coding RNA [NR_034140]	0,008995493	1,9137306	down
A_21_P0002691	lnc-KLF7-1	LNCipedia lincRNA (lnc-KLF7-1), lincRNA [lnc-KLF7-1:6]	0,011519191	1,9742028	down
A_21_P0010537	GBP1P1	guanylate binding protein 1, interferon-inducible pseudogene 1 [Source:HGNC Symbol;Acc:HGNC:39561] [ENST00000394662]	0,021634419	2,4246373	down
A_21_P0003580	lnc-CD38-2	LNCipedia lincRNA (lnc-CD38-2), lincRNA [lnc-CD38-2:5]	0,039828926	1,8689998	down
A_23_P121144	LYZL4	lysozyme-like 4 [Source:HGNC Symbol;Acc:HGNC:28387] [ENST00000470991]	0,014534104	2,6831691	down
A_23_P433855	RGS4	Homo sapiens regulator of G-protein signaling 4 (RGS4), transcript variant 2, mRNA [NM_005613]	0,014856088	2,3517087	down
A_33_P3315959	LGSN	Homo sapiens lengsin, lens protein with glutamine synthetase domain (LGSN), transcript variant 1, mRNA [NM_016571]	0,043104228	2,316349	down
A_33_P3310293	PKIG	Homo sapiens protein kinase (cAMP-dependent, catalytic) inhibitor gamma (PKIG), transcript variant 1, mRNA [NM_181805]	0,029794136	1,8870364	down
A_33_P3610771	ARHGEF38	Homo sapiens Rho guanine nucleotide exchange factor (GEF) 38 (ARHGEF38), transcript variant 1, mRNA [NM_001242729]	0,002007374	2,2725732	down
A_33_P3216803		Synthetic construct Homo sapiens gateway clone IMAGE:100021372 3' read ZRANB2 mRNA. [CU691765]	0,03011698	1,9710617	down
A_24_P353103	ZNF599	Homo sapiens zinc finger protein 599 (ZNF599), mRNA [NM_001007248]	0,002790585	2,3745158	down
A_23_P322395	ZSCAN1	Homo sapiens zinc finger and SCAN domain containing 1 (ZSCAN1), mRNA [NM_182572]	0,031506572	2,363211	down
A_33_P3311663	MEIS1-AS2	PREDICTED: Homo sapiens MEIS1 antisense RNA 2 (MEIS1-AS2), ncRNA [XR_245014]	0,03762492	1,8438302	down
A_22_P00020408	lnc-INTS8-1	FOXE3_HUMAN (Q13461) Forkhead box protein E3 (Forkhead-related protein FKHL12) (Forkhead-related transcription factor 8) (FREAC-8), partial (5%) [THC2612246]	0,01767977	1,9019032	down
A_33_P3315729	ZNF382	Homo sapiens zinc finger protein 382 (ZNF382), transcript variant 1, mRNA [NM_032825]	0,03949478	2,0184357	down
A_21_P0013835	XLOC_I2_015830	BROAD Institute lincRNA (XLOC_I2_015830), lincRNA [TCONS_I2_00030617]	0,023831444	1,9989735	down
A_33_P3330791	LOC401220	Homo sapiens hypothetical gene supported by BC036933, mRNA (cDNA clone IMAGE:5243701). [BC036933]	0,011979444	2,5246751	down
A_22_P00022799	lnc-RIMS3-4	LNCipedia lincRNA (lnc-RIMS3-4), lincRNA [lnc-RIMS3-4:1]	0,014734115	1,8459537	down
A_23_P370544	ANKAR	Homo sapiens ankyrin and armadillo repeat containing (ANKAR), mRNA [NM_144708]	0,008993841	1,9590372	down
A_23_P28012	ZNF682	Homo sapiens zinc finger protein 682 (ZNF682), transcript variant 1, mRNA [NM_033196]	0,03885979	1,7913026	down
A_22_P00018911	lnc-TRAPPC8-2	ALU8_HUMAN (P39195) Alu subfamily SX sequence contamination warning entry, partial (4%) [THC2687512]	0,023949625	1,8593994	down
A_23_P313734	CEP295	Homo sapiens centrosomal protein 295kDa (CEP295), mRNA [NM_033395]	0,010182027	1,6430969	down
A_21_P0006808	lnc-GTPBP4-2	LNCipedia lincRNA (lnc-GTPBP4-2), lincRNA [lnc-GTPBP4-2:1]	0,009158127	1,8498927	down
A_24_P214598	PPM1K	Homo sapiens protein phosphatase, Mg2+/Mn2+ dependent, 1K (PPM1K), mRNA [NM_152542]	0,048143573	1,5386237	down
A_22_P00018895		1004868 Human Fat Cell 5'-Stretch Plus cDNA Library Homo sapiens cDNA 5', mRNA sequence [CB265963]	0,003905563	1,7509807	down
A_32_P232620	lnc-PARN-3	LNCipedia lincRNA (lnc-PARN-3), lincRNA [lnc-PARN-3:1]	0,04596452	1,7339096	down
A_21_P0013001	LINC00491	Homo sapiens long intergenic non-protein coding RNA 491 (LINC00491), transcript variant 1, long non-coding RNA [NR_103753]	0,002463233	1,6939831	down
A_24_P83787	DISC1	Homo sapiens disrupted in schizophrenia 1 (DISC1), transcript variant S, mRNA [NM_001012959]	0,005805382	2,0243988	down
A_23_P1170	ZFAND4	Homo sapiens zinc finger, AN1-type domain 4 (ZFAND4), transcript variant 1, mRNA [NM_174890]	0,028095383	1,5666481	down
A_22_P00006100		small integral membrane protein 11 [Source:HGNC Symbol;Acc:HGNC:1293] [ENST00000495363]	0,040554922	1,5571315	down
A_33_P3241393	SLC4A5	Homo sapiens solute carrier family 4 (sodium bicarbonate cotransporter), member 5 (SLC4A5), transcript variant c, mRNA [NM_133478]	0,025351774	1,7382128	down
A_24_P35228	GRHL2	Homo sapiens grainyhead-like 2 (Drosophila) (GRHL2), mRNA [NM_024915]	0,019667346	1,6761097	down
A_32_P179740	ATXN7L1	Homo sapiens ataxin 7-like 1 (ATXN7L1), transcript variant 1, mRNA [NM_020725]	0,0365241	1,8116531	down
A_23_P64617	FZD4	Homo sapiens frizzled class receptor 4 (FZD4), mRNA [NM_012193]	0,02270905	1,6596354	down
A_21_P0000694	NIFK-AS1	Homo sapiens NIFK antisense RNA 1 (NIFK-AS1), transcript variant 2, long non-coding RNA [NR_037858]	0,010637958	1,6552032	down
A_21_P0000651	HERC2P7	Homo sapiens hect domain and RLD 2 pseudogene 7 (HERC2P7), non-coding RNA [NR_036470]	0,011090009	1,6647134	down
A_23_P20876	PTPDC1	Homo sapiens protein tyrosine phosphatase domain containing 1 (PTPDC1), transcript variant 2, mRNA [NM_177995]	0,026885655	1,6754514	down
A_23_P65307	SLITRK6	Homo sapiens SLIT and NTRK-like family, member 6 (SLITRK6), mRNA [NM_032229]	0,024688192	1,5659031	down
A_33_P3219245	LINC00476	Homo sapiens long intergenic non-protein coding RNA 476 (LINC00476), transcript variant 1, long non-coding RNA [NR_023390]	0,012488208	1,5827832	down
A_22_P00018617	LOC101927027	Homo sapiens uncharacterized LOC101927027 (LOC101927027), transcript variant 1, long non-coding RNA [NR_110204]	0,006558988	1,7382617	down
A_21_P0014219			0,013102489	1,6862091	down
A_23_P163238	STRC	Homo sapiens stereocilin (STRC), mRNA [NM_153700]	0,023688387	1,9000533	down
A_22_P00024422	LOC101928047	PREDICTED: Homo sapiens uncharacterized LOC101928047 (LOC101928047), ncRNA [XR_249939]	0,04806189	1,6250583	down
A_21_P0014277	LOC100506606	Homo sapiens uncharacterized LOC100506606 (LOC100506606), long non-coding RNA [NR_103860]	0,028494125	1,7291343	down
A_21_P0007685	lnc-A2M-1	LNCipedia lincRNA (lnc-A2M-1), lincRNA [lnc-A2M-1:4]	0,016743109	1,7749184	down
A_21_P0000917	lnc-CHD1L-1	LNCipedia lincRNA (lnc-CHD1L-1), lincRNA [lnc-CHD1L-1:1]	0,021620113	1,6861224	down
A_33_P3296099			0,011279161	2,1015089	down
A_33_P3312807	IPW	Homo sapiens imprinted in Prader-Willi syndrome (non-protein coding) (IPW), long non-coding RNA [NR_023915]	0,018468231	1,8814092	down

A_33_P3214745	FBXO48	Homo sapiens F-box protein 48 (FBXO48), mRNA [NM_001024680]	0,002175869	1,9850361	down
A_21_P0009749	ZNF91	zinc finger protein 91 [Source:HGNC Symbol;Acc:HGNC:13166] [ENST00000593292]	0,011130575	2,0479848	down
A_21_P0004864	C5orf42	PREDICTED: Homo sapiens uncharacterized LOC102724851 (LOC102724851), transcript variant X1, ncRNA [XR_427900]	0,044214178	2,090352	down
A_23_P127557	KBTBD3	Homo sapiens kelch repeat and BTB (POZ) domain containing 3 (KBTBD3), transcript variant 2, mRNA [NM_198439]	0,005234002	2,12209	down
A_32_P226009	C5orf42	Homo sapiens chromosome 5 open reading frame 42 (C5orf42), mRNA [NM_023073]	0,047396876	1,5605211	down
A_21_P0003088	lnc-AC069257.9.1-6	LNCipedia lincRNA (lnc-AC069257.9.1-6), lincRNA [lnc-AC069257.9.1-6:1]	0,042871054	1,7034097	down
A_22_P00019588	ZC3H6	Homo sapiens zinc finger CCCH-type containing 6 (ZC3H6), mRNA [NM_198581]	0,032349143	1,601124	down
A_33_P3342111	ZNF169	Homo sapiens cDNA FLJ16440 fis, clone BRAMY3003026, highly similar to Zinc finger protein 169. [AK122832]	0,020582156	1,5751251	down
A_24_P149445	WEE2-AS1	Homo sapiens WEE2 antisense RNA 1 (WEE2-AS1), long non-coding RNA [NR_015392]	0,036395695	1,7350718	down
A_33_P3240538	TUBE1	Homo sapiens tubulin, epsilon 1 (TUBE1), mRNA [NM_016262]	0,021949265	1,6138444	down
A_23_P360744	RAG1	Homo sapiens recombination activating gene 1 (RAG1), mRNA [NM_000448]	0,013673808	1,8573103	down
A_24_P38143	AHI1	Homo sapiens Abelson helper integration site 1 (AHI1), transcript variant 2, mRNA [NM_017651]	0,024212087	1,6048428	down
A_21_P0013601	XLOC_I2_015033	BROAD Institute lincRNA (XLOC_I2_015033), lincRNA [TCONS_I2_00029054]	0,012936831	1,6731526	down
A_33_P3346338	TBC1D31	Homo sapiens TBC1 domain family, member 31 (TBC1D31), transcript variant 2, mRNA [NM_001145088]	0,04386315	1,7499162	down
A_24_P826348	ZC3H6	Homo sapiens zinc finger CCCH-type containing 6 (ZC3H6), mRNA [NM_198581]	0,004925793	1,8329523	down
A_22_P00007695	lnc-HIST2H2AA3-1	Homo sapiens mRNA; cDNA DKFZp686A01184 (from clone DKFZp686A01184). [BX648801]	0,033298053	1,5660408	down
A_22_P00025147	SLC25A30-AS1	Homo sapiens SLC25A30 antisense RNA 1 (SLC25A30-AS1), long non-coding RNA [NR_047031]	0,01686209	1,6148107	down
A_33_P3334535	GIN1	Homo sapiens gypsy retrotransposon integrase 1 (GIN1), mRNA [NM_017676]	0,035447236	1,6432505	down
A_22_P00018073	lnc-ZNF33A-2	LNCipedia lincRNA (lnc-ZNF33A-2), lincRNA [lnc-ZNF33A-2:1]	0,012734007	1,8545227	down
A_33_P3364904	ZNF662	Homo sapiens zinc finger protein 662 (ZNF662), transcript variant 1, mRNA [NM_207404]	0,019271998	1,5323906	down
A_22_P00010431	lnc-N4BP2-1	ALU6_HUMAN (P39193) Alu subfamily SP sequence contamination warning entry, partial (8%) [THC2533503]	0,01965325	1,6068252	down
A_21_P0004520	LOC102724720	PREDICTED: Homo sapiens uncharacterized LOC102724720 (LOC102724720), ncRNA [XR_425911]	0,039289158	1,6665227	down
A_22_P00008914	lnc-KLRF2-1	AGENCOURT_6817611 NIH_MGC_118 Homo sapiens cDNA clone IMAGE:5757336 5', mRNA sequence [BQ073030]	0,029606294	2,0770793	down
A_22_P00004283		PREDICTED: Homo sapiens uncharacterized LOC101927300 (LOC101927300), transcript variant X3, ncRNA [XR_428800]	0,042376142	1,8112992	down
A_23_P202750	C11orf54	Homo sapiens chromosome 11 open reading frame 54 (C11orf54), transcript variant 4, mRNA [NM_014039]	0,048787974	1,5113431	down
A_23_P28582		Homo sapiens cDNA FLJ14082 fis, clone HEMBB1002300. [AK024144]	0,042987917	1,5624396	down
A_23_P413303	DKFZP434I0714	Homo sapiens uncharacterized protein DKFZP434I0714 (DKFZP434I0714), long non-coding RNA [NR_033797]	0,01813762	1,5877907	down
A_22_P00008915	A2M-AS1	Homo sapiens A2M antisense RNA 1 (head to head) (A2M-AS1), long non-coding RNA [NR_026971]	0,030847022	1,5657532	down
A_21_P0005157	lnc-DTNBP1-2	LNCipedia lincRNA (lnc-DTNBP1-2), lincRNA [lnc-DTNBP1-2:2]	0,04150769	1,8932258	down
A_22_P00007727			0,04836965	2,1073544	down
A_21_P0011324	XLOC_I2_004640	BROAD Institute lincRNA (XLOC_I2_004640), lincRNA [TCONS_I2_00008616]	0,040274847	2,3034368	down
A_21_P0012911	LOC102725009	PREDICTED: Homo sapiens putative beta-glucuronidase-like protein MGC87375-like (LOC102725009), mRNA [XM_006725462]	0,018705476	2,2433841	down
A_23_P320225	EVC2	Homo sapiens Ellis van Creveld syndrome 2 (EVC2), transcript variant 1, mRNA [NM_147127]	0,003490039	1,911649	down
A_21_P0007124	LOC101927495	Homo sapiens uncharacterized LOC101927495 (LOC101927495), long non-coding RNA [NR_110189]	0,033766802	1,6767725	down
A_33_P3552465	ZNF852	Homo sapiens zinc finger protein 852 (ZNF852), mRNA [NM_001287349]	0,028761059	1,5148119	down
A_33_P3294583	LOC256880	Homo sapiens cDNA FLJ41932 fis, clone PERIC2004613. [AK123926]	0,028552122	1,5489246	down
A_21_P0000728	RASSF8-AS1	Homo sapiens RASSF8 atisense RNA 1 (RASSF8-AS1), transcript variant 1, long non-coding RNA [NR_038227]	0,021758754	1,8266903	down
A_23_P210445	L3MBTL1	Homo sapiens [(3)mbt-like 1 (Drosophila) (L3MBTL1), transcript variant II, mRNA [NM_032107]	0,03437223	1,6487945	down
A_22_P00021498	lnc-FAM184B-1	603025057F1 NIH_MGC_114 Homo sapiens cDNA clone IMAGE:5195415 5', mRNA sequence [BI755742]	0,031250414	1,5973438	down
A_23_P130158	WNT3	Homo sapiens wingless-type MMTV integration site family, member 3 (WNT3), mRNA [NM_030753]	0,014613268	1,5653014	down
A_32_P128209	LINC01554	Homo sapiens long intergenic non-protein coding RNA 1554 (LINC01554), long non-coding RNA [NR_026936]	0,026147854	1,7199311	down
A_21_P0014549		PREDICTED: Homo sapiens uncharacterized LOC100506110 (LOC100506110), misc_RNA [XR_110276]	0,015697349	1,5579515	down
A_33_P3441576	SRGAP2C	Homo sapiens SLIT-ROBO Rho GTPase activating protein 2C (SRGAP2C), mRNA [NM_001271872]	0,019844726	1,5553943	down
A_21_P0004953	lnc-PHACTR2-1	LNCipedia lincRNA (lnc-PHACTR2-1), lincRNA [lnc-PHACTR2-1:1]	0,024959179	1,6669729	down
A_33_P3360087	BBS9	Homo sapiens Bardet-Biedl syndrome 9 (BBS9), transcript variant 1, mRNA [NM_014451]	0,04022474	1,5888677	down
A_23_P31721	E2F5	Homo sapiens E2F transcription factor 5, p130-binding (E2F5), transcript variant 1, mRNA [NM_001951]	0,009410484	1,5715599	down
A_22_P00024075		17000531886861 GRN_ES Homo sapiens cDNA 5', mRNA sequence [CN285178]	0,018711822	2,2397473	down
A_33_P3363420	FRMD3	Homo sapiens FERM domain containing 3 (FRMD3), transcript variant 1, mRNA [NM_174938]	0,037256118	1,9897513	down
A_33_P3328312	HNF1A	Homo sapiens HNF1 homeobox A (HNF1A), mRNA [NM_000545]	0,02025323	2,194488	down
A_22_P00000858	GS1-24F.2	uncharacterized LOC100652791 [Source:EntrezGene;Acc:100652791] [ENST00000531701]	0,023519004	1,8208437	down
A_22_P00015273	lnc-SPATA17-2	LNCipedia lincRNA (lnc-SPATA17-2), lincRNA [lnc-SPATA17-2:1]	0,027731538	1,5498223	down
A_33_P3351189	LOC100129603	Q16673_HUMAN (Q16673) PMS7 protein (HPMS7 protein) (Fragment), partial (11%) [THC2638383]	0,022028368	2,0951562	down
A_21_P0000372	SNORD45C	Homo sapiens small nucleolar RNA, C/D box 45C (SNORD45C), small nucleolar RNA [NR_003042]	0,046485674	1,7054653	down
A_33_P3514859	LOC101929709	Homo sapiens uncharacterized LOC101929709 (LOC101929709), long non-coding RNA [NR_125822]	0,032959197	1,8017168	down
A_21_P0001226		BX114699 NC1_CGAP_Co3 Homo sapiens cDNA clone IMAGp998J242333, mRNA sequence [BX114699]	0,045786895	2,2178717	down
A_33_P3303945	OR52N4	Homo sapiens olfactory receptor, family 52, subfamily N, member 4 (gene/pseudogene) (OR52N4), mRNA [NM_001005175]	0,032592967	2,3446038	down
A_33_P3262191	CPNE7	Homo sapiens copine VII (CPNE7), transcript variant 2, mRNA [NM_014427]	0,040402509	1,6399912	down
A_23_P423074	FAM169A	Homo sapiens family with sequence similarity 169, member A (FAM169A), transcript variant 1, mRNA [NM_015566]	0,028013485	1,510926	down
A_19_P00810009	lnc-SNURF-1	Homo sapiens clone DKFZp762N022 mRNA, complete sequence. [AF319524]	0,030358912	1,7378784	down

A_22_P00004191	LOC101928617	PREDICTED: Homo sapiens uncharacterized LOC101928617 (LOC101928617), transcript variant X2, ncRNA [XR_246017]	0,03470355	1,5088917	down
A_33_P3276364	HSD17B7	hydroxysteroid (17-beta) dehydrogenase 7 [Source:HGNC Symbol;Acc:HGNC:5215] [ENST00000485405]	0,007037742	2,5720026	down
A_22_P00017315	LOC102723344	Homo sapiens uncharacterized LOC102723344 (LOC102723344), long non-coding RNA [NR_120375]	0,006395608	2,2254615	down
A_23_P379692	C14orf178	Homo sapiens chromosome 14 open reading frame 178 (C14orf178), transcript variant 1, mRNA [NM_174943]	0,015994303	2,0441902	down
A_24_P652700	CEP152	Homo sapiens centrosomal protein 152kDa (CEP152), transcript variant 2, mRNA [NM_014985]	0,02953154	1,7706904	down
A_33_P3265205			0,036811553	1,7833383	down
A_22_P00005978		Homo sapiens mRNA; cDNA DKFZp686G1922 (from clone DKFZp686G1922). [CR749847]	0,044199284	1,6181418	down
A_24_P497318	LOC100129973	Homo sapiens uncharacterized LOC100129973 (LOC100129973), long non-coding RNA [NR_102751]	0,015195899	2,1378667	down
A_33_P3285122	ZNF599	zinc finger protein 599 [Source:HGNC Symbol;Acc:HGNC:26408] [ENST00000587354]	0,001462024	2,4817533	down
A_24_P101800	NOL4L	nucleolar protein 4-like [Source:HGNC Symbol;Acc:HGNC:16106] [ENST00000485364]	0,02155006	2,3474035	down
A_22_P00019123	SLC35E3	solute carrier family 35, member E3 [Source:HGNC Symbol;Acc:HGNC:20864] [ENST00000399333]	0,027297918	2,4716322	down
A_23_P395404	FGF20	Homo sapiens fibroblast growth factor 20 (FGF20), mRNA [NM_019851]	0,022299064	2,0888128	down
A_21_P0000608	CDRT15P2	Homo sapiens CMT1A duplicated region transcript 15 pseudogene 2 (CDRT15P2), non-coding RNA [NR_033865]	0,003874208	2,0576417	down
A_23_P360754	ADAMTS4	Homo sapiens ADAM metalloproteinase with thrombospondin type 1 motif, 4 (ADAMTS4), mRNA [NM_005099]	0,012476556	2,9524622	down
A_33_P3236661	PCDH9	Homo sapiens protocadherin 9, mRNA (cDNA clone MGC:167030 IMAGE:8860363), complete cds. [BC150296]	0,027379308	2,334667	down
A_23_P151895	CILP	Homo sapiens cartilage intermediate layer protein, nucleotide pyrophosphohydrolase (CILP), mRNA [NM_003613]	0,023453645	2,0122287	down
A_21_P0011895	LOC102723927		0,048168197	2,1575215	down
A_21_P0002147	lnc-PER2-1	DB239893 TRACH3 Homo sapiens cDNA clone TRACH3036250 5', mRNA sequence [DB239893]	0,022138113	1,7153237	down
A_23_P399255	RNF182	Homo sapiens ring finger protein 182 (RNF182), transcript variant 2, mRNA [NM_152737]	0,021794504	1,7375103	down
A_33_P3329356	lnc-HADH-1	LNCipedia lincRNA (lnc-HADH-1), lincRNA [lnc-HADH-1:7]	0,041717123	1,8735046	down
A_33_P3253702	PPII4	Homo sapiens peptidylprolyl isomerase (cyclophilin)-like 4 (PPII4), mRNA [NM_139126]	0,006270654	1,8745635	down
A_21_P0014426	LOC100506472	Homo sapiens uncharacterized LOC100506472 (LOC100506472), long non-coding RNA [NR_040535]	0,021071846	2,881825	down
A_23_P24555	PHLDB1	Homo sapiens pleckstrin homology-like domain, family B, member 1 (PHLDB1), transcript variant 1, mRNA [NM_015157]	0,024639493	1,5257794	down
A_33_P3328087		Homo sapiens clone FLB9413 PRO2532 mRNA, complete cds. [AF130075]	0,03675647	1,767003	down
A_21_P0012650	XLOC_I2_011027	BROAD Institute lincRNA (XLOC_I2_011027), lincRNA [TCONS_I2_00021023]	0,017620407	1,9800893	down
A_22_P00008687	WEE2-AS1	Homo sapiens WEE2 antisense RNA 1 (WEE2-AS1), long non-coding RNA [NR_015392]	0,023108015	2,1747537	down
A_21_P0004790			0,033040207	1,9399168	down
A_33_P3214204	TRIQQ	Homo sapiens clone FLB3344 PRO0845 mRNA, complete cds. [AF130048]	0,011386679	1,9505702	down
A_33_P3357292	WBP2NL	WBP2 N-terminal like [Source:HGNC Symbol;Acc:HGNC:28389] [ENST00000329620]	0,038558677	1,6871346	down
A_23_P396981	CCDC66	Homo sapiens coiled-coil domain containing 66 (CCDC66), transcript variant 2, mRNA [NM_001012506]	0,04021342	1,5004337	down
A_22_P00004199		PREDICTED: Homo sapiens uncharacterized LOC101930023 (LOC101930023), ncRNA [XR_432865]	0,03448903	1,8288466	down
A_33_P3229215	ATP1A1-AS1	Homo sapiens ATP1A1 antisense RNA 1 (ATP1A1-AS1), transcript variant 3, long non-coding RNA [NR_024126]	0,029846735	1,7141017	down
A_32_P24709	ZFP69	Homo sapiens ZFP69 zinc finger protein (ZFP69), mRNA [NM_198494]	8,64E-04	1,9717814	down
A_33_P3238305	MAP3K7CL	Homo sapiens MAP3K7 C-terminal like (MAP3K7CL), transcript variant 3, mRNA [NM_001286617]	0,012795843	1,6919316	down
A_22_P00013211	ZNRD1-AS1	Homo sapiens ZNRD1 antisense RNA 1 (ZNRD1-AS1), long non-coding RNA [NR_026751]	0,021141455	1,7640791	down
A_21_P0000880	SPAG5-AS1	Homo sapiens SPAG5 antisense RNA 1 (SPAG5-AS1), long non-coding RNA [NR_040012]	0,027684862	1,6706872	down
A_23_P157109	ADCYAP1R1	Homo sapiens adenylate cyclase activating polypeptide 1 (pituitary) receptor type I (ADCYAP1R1), transcript variant 3, mRNA [NM_001118]	0,009027316	1,833797	down
A_33_P3397768	PPP6R2	Homo sapiens cDNA FLJ14086 fis, clone MAMMA1000143. [AK024148]	0,033856925	1,9129218	down
A_23_P133904	MCCD1	Homo sapiens mitochondrial coiled-coil domain 1 (MCCD1), mRNA [NM_001011700]	0,036689438	1,8729689	down
A_22_P00016878	lnc-TSC22D1-2	LNCipedia lincRNA (lnc-TSC22D1-2), lincRNA [lnc-TSC22D1-2:1]	0,001082816	2,7629833	down
A_33_P3269824	LRRC66	Homo sapiens leucine rich repeat containing 66 (LRRC66), mRNA [NM_001024611]	0,001607772	2,6027255	down
A_22_P00003086	LOC102723322	PREDICTED: Homo sapiens uncharacterized LOC102723322 (LOC102723322), ncRNA [XR_426337]	5,99E-04	2,8244517	down
A_22_P00018258	ZNF727	PREDICTED: Homo sapiens zinc finger protein 727 (ZNF727), transcript variant X2, misc_RNA [XR_242241]	0,002470396	2,4551742	down
A_33_P3356935	COLCA1	Homo sapiens colorectal cancer associated 1 (COLCA1), transcript variant 3, mRNA [NM_207429]	0,03635105	1,7722157	down
A_21_P0007011	lnc-PANK1-2	LNCipedia lincRNA (lnc-PANK1-2), lincRNA [lnc-PANK1-2:4]	0,005093982	4,3892965	down
A_33_P3307795	FAM124B	family with sequence similarity 124B [Source:HGNC Symbol;Acc:HGNC:26224] [ENST00000243806]	0,017923819	2,532271	down
A_21_P0008246			0,024406947	2,4214795	down
A_21_P0001774	lnc-ACTR2-3	LNCipedia lincRNA (lnc-ACTR2-3), lincRNA [lnc-ACTR2-3:6]	0,041735243	2,552549	down
A_22_P00023764	NEXN-AS1	Homo sapiens NEXN antisense RNA 1 (NEXN-AS1), long non-coding RNA [NR_103535]	0,03796678	2,2446926	down
A_22_P00020568			0,017641027	1,7532578	down
A_33_P3376350	SLC38A10	Homo sapiens cDNA FLJ46399 fis, clone THYMU3004632. [AK128263]	0,027539328	1,8716235	down
A_32_P115438	LOC100128239	Homo sapiens uncharacterized LOC100128239 (LOC100128239), long non-coding RNA [NR_027276]	0,023632748	1,7666802	down
A_23_P154962	RIMBP3	Homo sapiens RIMS binding protein 3 (RIMBP3), mRNA [NM_015672]	0,004461841	3,366404	down
A_23_P77908	SLC47A2	Homo sapiens solute carrier family 47 (multidrug and toxin extrusion), member 2 (SLC47A2), transcript variant 1, mRNA [NM_152908]	0,04937324	2,3782635	down
A_32_P149546	CROCC	Homo sapiens ciliary rootlet coiled-coil, rootletin (CROCC), mRNA [NM_014675]	0,028265437	1,754508	down
A_33_P6474088	HCG8	Homo sapiens HLA complex group 8 (HCG8), long non-coding RNA [NR_103542]	0,031611446	1,7952659	down
A_22_P00003435	lnc-CCDC37-3	LNCipedia lincRNA (lnc-CCDC37-3), lincRNA [lnc-CCDC37-3:1]	0,032375567	1,7595258	down
A_23_P125748	ZMAT1	Homo sapiens zinc finger, matrin-type 1 (ZMAT1), transcript variant 2, mRNA [NM_001282400]	0,0423042	1,8331888	down
A_21_P0002306	lnc-UPP2-2	LNCipedia lincRNA (lnc-UPP2-2), lincRNA [lnc-UPP2-2:1]	0,012096969	2,0823624	down

A_21_P0001700	TTF2	transcription termination factor, RNA polymerase II [Source:HGNC Symbol;Acc:HGNC:12398] [ENST00000369466]	0,03126537	1,9215378	down
A_22_P00022405		Homo sapiens cDNA FLJ35937 fis, clone TESTI2011480. [AK093256]	0,0264045	1,62609	down
A_24_P941625	ZNF70	Homo sapiens zinc finger protein 70 (ZNF70), mRNA [NM_021916]	0,023225216	1,8683441	down
A_22_P00022574	LOC645485	PREDICTED: Homo sapiens uncharacterized LOC645485 (LOC645485), misc_RNA [XR_242933]	0,04747555	2,2635467	down
A_22_P00000882	RPL34-AS1	Homo sapiens RPL34 antisense RNA 1 (head to head) (RPL34-AS1), long non-coding RNA [NR_026968]	0,01476027	2,0286198	down
A_21_P0003067	Inc-ATP11B-1	LNCipedia lincRNA (Inc-ATP11B-1), lincRNA [Inc-ATP11B-1:1]	0,041026838	2,2850983	down
A_21_P0010696	LINC00339	Homo sapiens long intergenic non-protein coding RNA 339 (LINC00339), transcript variant 3, long non-coding RNA [NR_109762]	0,006939675	2,3351588	down
A_22_P00018111		Homo sapiens cDNA clone IMAGE:4605966, partial cds. [BC071777]	0,001438342	2,3559508	down
A_19_P00803019		Prader Willi/Angelman region RNA 6 [Source:HGNC Symbol;Acc:HGNC:49129] [ENST00000552334]	0,026547723	2,2033522	down
A_22_P00008976	LINC00668	Homo sapiens long intergenic non-protein coding RNA 668 (LINC00668), long non-coding RNA [NR_034100]	0,016965477	3,8277876	down
A_21_P0006014	Inc-CBWD3-1	LNCipedia lincRNA (Inc-CBWD3-1), lincRNA [Inc-CBWD3-1:1]	0,014119481	2,1577349	down
A_33_P3247072			0,012265641	2,1270473	down
A_22_P00022223	BBOX1-AS1	Homo sapiens BBOX1 antisense RNA 1 (BBOX1-AS1), transcript variant 3, long non-coding RNA [NR_125768]	0,007585778	2,2877657	down
A_23_P126706	ANGPTL1	Homo sapiens angiopoietin-like 1 (ANGPTL1), mRNA [NM_004673]	0,008739286	2,4118664	down
A_21_P0004917	Inc-QRSL1-1	LNCipedia lincRNA (Inc-QRSL1-1), lincRNA [Inc-QRSL1-1:2]	0,03318769	1,9511594	down
A_19_P00319561	JPX	Homo sapiens JPX transcript, XIST activator (non-protein coding) (JPX), long non-coding RNA [NR_024582]	0,013994052	2,3228056	down
A_33_P3412488			0,03411159	1,7955991	down
A_21_P0008818	Inc-APBA2-2	LNCipedia lincRNA (Inc-APBA2-2), lincRNA [Inc-APBA2-2:1]	0,010984672	2,3024678	down
A_32_P28223	LOC101928837	Homo sapiens uncharacterized LOC101928837 (LOC101928837), transcript variant 1, long non-coding RNA [NR_120561]	0,0219063	1,9616698	down
A_22_P00008923	Inc-KPNA4-1	Homo sapiens cDNA clone IMAGE:5274427. [BC037882]	0,015080988	2,3782513	down
A_23_P54144	BMP4	Homo sapiens bone morphogenetic protein 4 (BMP4), transcript variant 1, mRNA [NM_001202]	0,033494283	1,7684935	down
A_21_P0010989	XLOC_I2_002433	BROAD Institute lincRNA (XLOC_I2_002433), lincRNA [TCONS_I2_00004704]	0,04204505	1,6541649	down
A_21_P0013922	Inc-PIIE-1	PREDICTED: Homo sapiens atherin-like (LOC101929536), mRNA [XM_005271373]	0,004273215	1,9810407	down
A_24_P696470	HEATR4	Homo sapiens HEAT repeat containing 4 (HEATR4), transcript variant 2, mRNA [NM_203309]	0,009787156	2,1447015	down
A_19_P00322418	OXR1	Homo sapiens oxidation resistance 1 (OXR1), transcript variant 1, mRNA [NM_018002]	0,00325147	2,4046247	down
A_21_P0003480		DB481620 RIKEN full-length enriched human cDNA library, hippocampus Homo sapiens cDNA clone H023090K13 5', mRNA sequence [DB481620]	0,017059814	2,5059469	down
A_21_P0009609	WDR7	WD repeat domain 7 [Source:HGNC Symbol;Acc:HGNC:13490] [ENST00000254442]	0,020156706	2,2053688	down
A_22_P00001594	Inc-ARMCX6-1	in01g03.y1 Human insulinoma Homo sapiens cDNA clone IMAGE:6123436 5', mRNA sequence [BU783273]	0,017751317	2,294694	down
A_22_P00008236		Homo sapiens mRNA; cDNA DKFZp686E19110 (from clone DKFZp686E19110). [CR936814]	0,024626639	2,8434215	down
A_32_P331052	RBBP8NL	Homo sapiens RBBP8 N-terminal like (RBBP8NL), mRNA [NM_080833]	0,018640205	2,3074324	down
A_22_P00017148	LOC643339	Homo sapiens uncharacterized LOC643339 (LOC643339), long non-coding RNA [NR_040096]	0,025929034	2,1981893	down
A_33_P3410351	GSTM2	Homo sapiens glutathione S-transferase mu 2 (muscle) (GSTM2), transcript variant 1, mRNA [NM_000848]	0,042765003	2,4566694	down
A_21_P0014166	LOC100506379	AF064804 transcription factor SUPT3H {Homo sapiens} (exp=-1; wgp=0; cg=0), partial (5%) [THC2635298]	0,002397088	2,7731721	down
A_22_P00004103	Inc-CKB-2	Homo sapiens cDNA clone IMAGE:5261375. [BC032902]	0,045463465	1,5437384	down
A_21_P0000447	SNORD116-11	Homo sapiens small nucleolar RNA, C/D box 116-11 (SNORD116-11), small nucleolar RNA [NR_003326]	0,04416895	1,6488402	down
A_21_P0012608	XLOC_I2_010816	BROAD Institute lincRNA (XLOC_I2_010816), lincRNA [TCONS_I2_00020732]	0,014587331	1,8999093	down
A_21_P0000618	EIF1B-AS1	Homo sapiens EIF1B antisense RNA 1 (EIF1B-AS1), long non-coding RNA [NR_033965]	0,00440653	1,988332	down
A_33_P3427239	LOC100134937	Homo sapiens cDNA clone IMAGE:5263734. [BC035129]	0,03223924	1,654372	down
A_21_P0008086	Inc-NDFIP2-2	LNCipedia lincRNA (Inc-NDFIP2-2), lincRNA [Inc-NDFIP2-2:7]	0,02695257	1,7028664	down
A_33_P3287760	RASGEF1A	Homo sapiens RasGEF domain family, member 1A (RASGEF1A), transcript variant 1, mRNA [NM_001282862]	0,027201451	2,147178	down
A_22_P00010577	RBM26-AS1	Homo sapiens RBM26 antisense RNA 1 (RBM26-AS1), long non-coding RNA [NR_038991]	0,004992241	1,9487607	down
A_33_P3384845	POFUT1	Homo sapiens protein O-fucosyltransferase 1 (POFUT1), transcript variant 2, mRNA [NM_172236]	0,046215486	1,8385991	down
A_22_P00021688	Inc-C2orf49-2	Homo sapiens cDNA clone IMAGE:5271447. [BC038780]	0,008518443	1,9682087	down
A_21_P0003785	Inc-SH3D19-1	LNCipedia lincRNA (Inc-SH3D19-1), lincRNA [Inc-SH3D19-1:1]	0,025228146	1,7696704	down
A_23_P422766	KLHDC1	Homo sapiens kelch domain containing 1 (KLHDC1), mRNA [NM_172193]	0,04497738	1,7660508	down
A_23_P6980	ZNF717	Homo sapiens zinc finger protein 717 (ZNF717), transcript variant 4, mRNA [NM_001290210]	0,04590175	1,5991023	down
A_33_P3323218	CARF	Homo sapiens calcium responsive transcription factor (CARF), transcript variant 2, mRNA [NM_024744]	0,025089003	1,6110785	down
A_21_P0002048	LINC01121	long intergenic non-protein coding RNA 1121 [Source:HGNC Symbol;Acc:HGNC:49266] [ENST000000427020]	0,026269564	1,6107613	down
A_33_P3348011	TOB2P1	Homo sapiens transducer of ERBB2, 2 pseudogene 1 (TOB2P1), non-coding RNA [NR_002936]	0,016217658	1,8945385	down
A_22_P00025809	LOC101927418	Homo sapiens uncharacterized LOC101927418 (LOC101927418), long non-coding RNA [NR_110050]	0,043941353	2,395568	down

Supplementary Table 3

ProbeName	GeneSymbol	Description	p	FC [abs]	Regulation
A_23_P76364	CD9	Homo sapiens CD9 molecule (CD9), mRNA [NM_001769]	0,02034595	1,8290863	up
A_23_P317667	ICOSLG	Homo sapiens inducible T-cell co-stimulator ligand (ICOSLG), transcript variant 1, mRNA [NM_015259]	0,04068591	1,769588	up
A_23_P94795	TEAD4	Homo sapiens TEA domain family member 4 (TEAD4), transcript variant 1, mRNA [NM_003213]	0,03451653	1,6951262	up
A_33_P6817603	IRF6	Homo sapiens interferon regulatory factor 6 (IRF6), transcript variant 1, mRNA [NM_006147]	0,03699362	1,5380913	up
A_33_P3386671	RORC	Homo sapiens RAR-related orphan receptor C (RORC), transcript variant 1, mRNA [NM_005060]	0,02977626	1,524479	down
A_33_P3328254	IL5RA	Homo sapiens interleukin 5 receptor, alpha (IL5RA), transcript variant 3, mRNA [NM_175725]	0,02350914	2,3810234	down
A_23_P17053	IL36G	Homo sapiens interleukin 36, gamma (IL36G), transcript variant 1, mRNA [NM_019618]	0,0187796	6,3313484	up
A_23_P72096	IL1A	Homo sapiens interleukin 1, alpha (IL1A), mRNA [NM_000575]	0,01046128	4,7302303	up
A_32_P87013	CXCL8	Homo sapiens chemokine (C-X-C motif) ligand 8 (CXCL8), mRNA [NM_000584]	0,02106899	4,4754953	up
A_33_P3232080	CD177	Homo sapiens CD177 molecule (CD177), mRNA [NM_020406]	0,01262649	1,7881742	up
A_23_P215484	CCL26	Homo sapiens chemokine (C-C motif) ligand 26 (CCL26), mRNA [NM_006072]	0,01115328	2,2796807	up
A_23_P147918	S100A16	Homo sapiens S100 calcium binding protein A16 (S100A16), mRNA [NM_080388]	0,00865044	1,7583063	up
A_23_P29036	IFNGR2	Homo sapiens interferon gamma receptor 2 (interferon gamma transducer 1) (IFNGR2), mRNA [NM_005534]	0,04684811	1,6085312	up
A_33_P3246829	IL1RN	Homo sapiens interleukin 1 receptor antagonist (IL1RN), transcript variant 4, mRNA [NM_173843]	0,04802341	1,9047078	up
A_23_P129556	IL4R	Homo sapiens interleukin 4 receptor (IL4R), transcript variant 1, mRNA [NM_000418]	0,0483112	1,682463	up
A_32_P188860	IL17RD	Homo sapiens interleukin 17 receptor D (IL17RD), mRNA [NM_017563]	0,01573841	1,835648	up
A_23_P126735	IL10	Homo sapiens interleukin 10 (IL10), mRNA [NM_000572]	0,03466924	2,2861886	up
A_33_P3381513	CD274	Homo sapiens CD274 molecule (CD274), transcript variant 1, mRNA [NM_014143]	0,03522332	2,4163525	up
A_23_P338479	CD274	Homo sapiens CD274 molecule (CD274), transcript variant 1, mRNA [NM_014143]	0,01148678	2,7458174	up
A_33_P3352970	IRAK2	Homo sapiens interleukin-1 receptor-associated kinase 2 (IRAK2), mRNA [NM_001570]	0,00848454	2,3391511	up
A_33_P3330264	CXCL1	Homo sapiens chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha) (CXCL1), transcript variant 1, mRNA [NM_001511]	0,03268788	2,6495535	up
A_24_P257416	CXCL2	Homo sapiens chemokine (C-X-C motif) ligand 2 (CXCL2), mRNA [NM_002089]	0,01784276	2,6009972	up
A_23_P74001	S100A12	Homo sapiens S100 calcium binding protein A12 (S100A12), mRNA [NM_005621]	0,04283374	3,2761095	up
A_33_P3385785	S100A12	Homo sapiens S100 calcium binding protein A12 (S100A12), mRNA [NM_005621]	0,0421913	3,2799456	up
A_24_P183150	CXCL3	Homo sapiens chemokine (C-X-C motif) ligand 3 (CXCL3), mRNA [NM_002090]	0,01200199	3,0735319	up
A_23_P315364	CXCL2	Homo sapiens chemokine (C-X-C motif) ligand 2 (CXCL2), mRNA [NM_002089]	0,00451283	3,496545	up
A_23_P23048	S100A9]	Homo sapiens S100 calcium binding protein A9 (S100A9), mRNA [NM_002965]	0,01934509	3,107001	up
A_23_P259863	CD177	Homo sapiens CD177 molecule (CD177), mRNA [NM_020406]	0,04671944	3,0734913	up
A_23_P104073	S100A3	Homo sapiens S100 calcium binding protein A3 (S100A3), mRNA [NM_002960]	0,01952807	3,849857	up

Supplementary Table 5

ProbeName	GeneSymbol	Description	p	FC (abs)
A_23_P104798	IL18	Homo sapiens interleukin 18 (IL18), transcript variant 1, mRNA [NM_001562]	0,02762182	1,7080911
A_24_P322741	IL10RB	Homo sapiens interleukin 10 receptor, beta (IL10RB), mRNA [NM_000628]	0,00126349	2,969677
A_23_P166775	IL17RC	Homo sapiens interleukin 17 receptor C (IL17RC), transcript variant 2, mRNA [NM_153461]	0,00123813	2,8011985
A_33_P3339625	IL17C	Homo sapiens interleukin 17C (IL17C), mRNA [NM_013278]	0,03381447	4,1084623
A_23_P72096	IL1A	Homo sapiens interleukin 1, alpha (IL1A), mRNA [NM_000575]	0,00306003	4,803143
A_23_P79518	IL1B	Homo sapiens interleukin 1, beta (IL1B), mRNA [NM_000576]	0,02919507	5,453929
A_32_P87013	CXCL8	Homo sapiens chemokine (C-X-C motif) ligand 8 (CXCL8), mRNA [NM_000584]	0,0113302	5,8698735
A_24_P73599	IL16	Homo sapiens interleukin 16 (IL16), transcript variant 2, mRNA [NM_172217]	0,04823891	2,3599265
A_23_P5654	IL37	Homo sapiens interleukin 37 (IL37), transcript variant 1, mRNA [NM_014439]	0,01491816	2,4168177
A_22_P00021230	IL36RN	interleukin 36 receptor antagonist [Source:HGNC Symbol;Acc:HGNC:15561] [ENST00000514072]	0,02605074	3,0617573
A_23_P348028	IL36A	Homo sapiens interleukin 36, alpha (IL36A), mRNA [NM_014440]	0,03290936	3,31892
A_24_P157370	IL17RB	Homo sapiens interleukin 17 receptor B (IL17RB), mRNA [NM_018725]	0,02899765	2,8413565
A_33_P3232692	IL24	Homo sapiens interleukin 24 (IL24), transcript variant 3, mRNA [NM_001185156]	0,03166669	2,8644247
A_24_P299423	IL16	interleukin 16 [Source:HGNC Symbol;Acc:HGNC:5980] [ENST00000560241]	0,04606691	2,9035048
A_33_P3395947	IL4R	Homo sapiens interleukin 4 receptor (IL4R), transcript variant 4, mRNA [NM_001257407]	0,00118211	4,4205637
A_33_P3295917	IL7	interleukin 7 [Source:HGNC Symbol;Acc:HGNC:6023] [ENST00000518982]	0,00375025	4,80457
A_23_P167479	IL17B	Homo sapiens interleukin 17B (IL17B), mRNA [NM_014443]	0,00325358	4,7336555
A_23_P213706	IL4	Homo sapiens interleukin 4 (IL4), transcript variant 1, mRNA [NM_000589]	4,70E-04	6,700801
A_33_P3290780	IL24	Homo sapiens interleukin 24 (IL24), transcript variant 3, mRNA [NM_001185156]	0,03505615	3,7956998
A_24_P320410	IL9	Homo sapiens interleukin 9 (IL9), mRNA [NM_000590]	0,01101675	3,9555898
A_23_P90925	IL36B	Homo sapiens interleukin 36, beta (IL36B), transcript variant 2, mRNA [NM_173178]	0,01014911	4,4306903
A_33_P3407013	IL6	PREDICTED: Homo sapiens interleukin 6 (interferon, beta 2) (IL6), transcript variant X1, mRNA [XM_005249745]	0,00463308	4,544772
A_23_P30122	IL2	Homo sapiens interleukin 2 (IL2), mRNA [NM_000586]	0,00914482	4,0611386
A_23_P7560	IL12B	Homo sapiens interleukin 12B (IL12B), mRNA [NM_002187]	0,00896488	3,9159741
A_24_P68783	IL36RN	Homo sapiens interleukin 36 receptor antagonist (IL36RN), transcript variant 1, mRNA [NM_012275]	0,00242502	4,953073
A_23_P251031	IL13	Homo sapiens interleukin 13 (IL13), mRNA [NM_002188]	0,00104781	6,3153234
A_24_P209047	IL5	Homo sapiens interleukin 5 (IL5), mRNA [NM_000879]	0,00107356	5,6927657

Year	Country	Population (millions)	GDP (trillion USD)	Life expectancy (years)	Urban population (millions)	Population growth rate (%)	Urban population growth rate (%)	Population density (per sq km)	Urban population density (per sq km)
1950	United States	150	200	72	100	1.2	1.5	30	100
1950	United Kingdom	55	100	71	40	0.8	1.0	250	800
1950	France	45	100	71	30	0.7	0.9	200	700
1950	Germany	50	100	70	35	0.6	0.8	220	750
1950	Italy	45	100	69	25	0.5	0.7	210	720
1950	Japan	90	100	46	10	1.0	1.2	330	1100
1950	China	550	100	45	50	1.5	1.8	150	500
1950	India	350	100	47	30	1.8	2.0	120	400
1950	USSR	160	100	68	100	0.5	0.6	80	250
1950	Canada	20	100	72	15	0.9	1.1	30	100
1950	Australia	10	100	71	8	1.1	1.3	20	70
1950	South Africa	10	100	60	8	1.0	1.2	20	70
1950	Brazil	70	100	45	10	2.0	2.2	100	300
1950	Argentina	15	100	45	10	1.5	1.7	20	70
1950	Chile	5	100	45	3	1.2	1.4	20	70
1950	Peru	10	100	45	5	1.5	1.7	20	70
1950	Colombia	5	100	45	3	1.2	1.4	20	70
1950	Venezuela	5	100	45	3	1.2	1.4	20	70
1950	Mexico	25	100	45	5	1.5	1.7	20	70
1950	Guatemala	5	100	45	2	1.2	1.4	20	70
1950	El Salvador	2	100	45	1	1.2	1.4	20	70
1950	Honduras	2	100	45	1	1.2	1.4	20	70
1950	Nicaragua	2	100	45	1	1.2	1.4	20	70
1950	Panama	1	100	45	0.5	1.2	1.4	20	70
1950	Cuba	5	100	45	2	1.2	1.4	20	70
1950	Haiti	2	100	45	1	1.2	1.4	20	70
1950	Dominican Republic	1	100	45	0.5	1.2	1.4	20	70
1950	Jamaica	0.5	100	45	0.2	1.2	1.4	20	70
1950	Trinidad and Tobago	0.5	100	45	0.2	1.2	1.4	20	70
1950	Guyana	0.5	100	45	0.2	1.2	1.4	20	70
1950	Suriname	0.5	100	45	0.2	1.2	1.4	20	70
1950	French Guiana	0.5	100	45	0.2	1.2	1.4	20	70
1950	Guadeloupe	0.5	100	45	0.2	1.2	1.4	20	70
1950	Martinique	0.5	100	45	0.2	1.2	1.4	20	70
1950	Reunion	0.5	100	45	0.2	1.2	1.4	20	70
1950	Madagascar	10	100	45	2	1.2	1.4	20	70
1950	Mali	5	100	45	1	1.2	1.4	20	70
1950	Niger	5	100	45	1	1.2	1.4	20	70
1950	Chad	5	100	45	1	1.2	1.4	20	70
1950	Sudan	10	100	45	2	1.2	1.4	20	70
1950	Egypt	20	100	45	5	1.2	1.4	20	70
1950	Libya	2	100	45	0.5	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
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1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
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1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
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1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
1950	Algeria	5	100	45	1	1.2	1.4	20	70
1950	Tunisia	2	100	45	0.5	1.2	1.4	20	70
1950	Morocco	10	100	45	2	1.2	1.4	20	70
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1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand the target audience's preferences and pain points. Once a need is identified, the next step is to develop a concept that addresses this need. This stage often involves brainstorming and prototyping to refine the idea.

2. After the concept is developed, the next step is to create a detailed business plan. This plan should outline the product's features, pricing strategy, distribution channels, and marketing approach. It also serves as a roadmap for the development process, helping to allocate resources effectively and track progress.

3. The third step is to secure funding or investment. This can be achieved through various means, such as seeking venture capitalists, angel investors, or crowdfunding. A compelling business plan and a clear demonstration of the product's potential are crucial for attracting investors.

4. Once funding is secured, the next step is to develop a minimum viable product (MVP). This is a simplified version of the product that allows for initial testing and feedback from users. The MVP is used to validate the product concept and gather valuable insights into user behavior.

5. The final step is to launch the product and monitor its performance. This involves implementing a marketing strategy to reach the target audience and track key performance indicators (KPIs) such as sales, user engagement, and customer satisfaction. Continuous monitoring and iteration are essential for the product's long-term success.

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