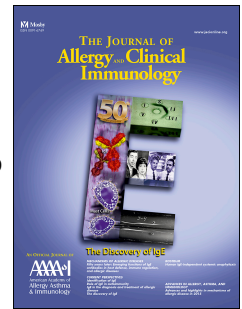


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**Preservation of epithelial cell barrier function and muted inflammation in
resistance to allergic rhinoconjunctivitis from house dust mite challenge**

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Abstract

Background: An emerging paradigm holds that resistance to the development of allergic diseases, including allergic rhinoconjunctivitis (AR), relates to an intact epithelial/epidermal barrier during early childhood. Conceivably, the immunologic and genomic footprint of this resistance is preserved in nonatopic, nonallergic adults and is unmasked during exposure to an aeroallergen.

Objective: To obtain direct support of the epithelial/epidermal barrier model for AR.

Methods: Twenty-three adults allergic to house dust mites (HDM; M+) and 15 nonsensitive, nonallergic (M–) participants completed 3-hour exposures to aerosolized HDM (*Dermatophagoides pteronyssinus*) powder on 4 consecutive days in an allergen challenge chamber (ACC). We analyzed (1) peripheral blood leukocyte levels and immune responses and (2) RNA-seq–derived expression profiles of nasal cells, before and after HDM exposure.

Results: During HDM challenge (1) only M+ persons developed AR symptoms and (2) peripheral blood leukocyte levels/responses and gene expression patterns in nasal cells were largely concordant between M+ and M– participants; gross differences in these parameters were not observed at baseline (pre-exposure). Two key differences were observed. First, peripheral blood CD4+ and CD8+ T-cell activation levels initially decreased in M– vs increased in M+ participants. Second, in M– compared with M+ participants, genes that promoted epidermal/epithelial barrier function (e.g., filaggrin) vs. inflammation (e.g., chemokines) and innate immunity (interferon) were upregulated vs. muted, respectively.

Conclusion: An imprint of resistance to HDM challenge in nonatopic, nonallergic adults was muted T-cell activation and inflammatory responses in the peripheral blood and nasal compartment, respectively, coupled with upregulation of genes that promote epidermal/epithelial cell barrier function.

Clinical implications: Therapeutic strategies that improve epidermal/epithelial barrier function and dampen inflammation, especially in the local (nasal) compartment, could help mitigate symptoms related to AR.

Capsule summary: Persons allergic and nonallergic to house dust mites (HDM) were studied. After exposure to HDMS, nonallergics manifested adaptive (healthy) responses characterized by higher expression of genes related to epidermal/epithelial barrier function and reduced inflammation compared with allergics.

Abbreviations:

AR – allergic rhinoconjunctivitis; ACC – allergen challenge chamber; CyTOF – time-of-flight mass cytometry; GO – gene ontology; GWAS – genome-wide association studies; HDM – house dust mite; TSS – total symptom score; M+ – HDM sensitized; M– – HDM nonsensitized; DE – differentially expressed; SPT – positive skin-prick test; RNA-Seq – RNA sequencing. Abbreviations of gene names are listed in File E1.

Key Words:

Allergen challenge chamber, house dust mites, rhinoconjunctivitis, RNA sequencing,
epithelial barrier.

Introduction

Substantial evidence indicates that defects in the skin barrier and cutaneous allergen sensitization are early, critical events in the pathogenesis of atopic dermatitis. In addition, data from genetic and other studies implicate defects in the skin barrier in the development of diseases that manifest in other organs, including food allergy, asthma, allergic rhinoconjunctivitis (AR), and eosinophilic esophagitis.¹⁻⁵ For example, the filaggrin (*FLG*) gene has an important role in skin barrier function, and polymorphisms in this gene are associated with atopic dermatitis and other allergic diseases.^{2, 4, 6-12} Additional human and mouse studies support skin barrier impairment as a critical requirement for allergen sensitization.^{4, 12-18} In this emerging paradigm, resistance to the development of allergic diseases requires the generation of a balanced response to allergen challenge during early childhood that is dominated by a higher expression of genes that promote epidermal/epithelial integrity coupled with a blunted inflammatory response. We tested the hypothesis that the imprint of this balanced response is preserved in adults who remain non-atopic and free of allergic diseases. This hypothesis predicts that the major immunologic and transcriptomic features of this imprint are not evident at baseline (constitutively), but are unmasked during allergen exposure, and thus is an adaptive (i.e., healthy) response to allergen challenges.

Exposure to precise quantities of aerollergens in allergen challenge chambers (ACCs) is an incisive experimental system for studying genomic and immunologic responses following allergen exposures.¹⁹⁻²³ To test our hypothesis, we performed exposure studies with aerosolized house dust mites (HDMs) in an ACC using persons who were non-allergic (non-sensitized, non-atopic) vs allergic to HDMs. We examined (1) leukocyte and immune responses in the peripheral blood and (2) transcriptomic responses derived by RNA sequencing (RNA-Seq) in cells obtained by nasal brushings before and after exposure to HDMs.

Methods

Study Participants

We recruited 25 participants with HDM allergy and a positive skin-prick test (SPT) wheal reactivity to *Dermatophagoides pteronyssinus* (designated as M+) and 15 individuals with no history of perennial or seasonal allergies and negative SPT wheal reactivity to HDMs (designated as M-) who met the inclusion/exclusion requirements (**Table E1**). All M- participants also had negative SPT wheal reactivity to an additional 16 allergens tested (**Table E2**). The IntegReview Institutional Review Board (Austin, TX) approved the study and all participants provided informed consent.

HDM exposure and scoring of AR symptoms

Delivery of HDMs, as well as collection and quantification of HDMs in the ACC, have been described¹⁹ and are summarized in the **eMethods**. Participants underwent 3-hour

exposures to aerosolized HDMs (*D. pteronyssinus*) powder on 4 consecutive days (exposures/challenges 1 to 4, **Fig. 1A**), commencing daily at 6 pm, and during months when environmental confounders (seasonal allergens) in the atmosphere were low (**eMethods**). The mean concentration of HDMs (Der p1 levels assessed by enzyme-linked immunoassay) delivered was 92 ng/m³ (**Table E3**). Total symptom scores (TSS, 0 to 28) reflect the sum of four nasal and three ocular symptoms, each recorded on a Likert scale of 0 (no symptoms) to 4 (severe symptoms) (**Table E4**). Participants were prohibited from taking specific allergy medications during the study period (**eMethods** and **Table E5**).

CBC, Flow cytometry, and Time-of-flight mass cytometry analyses

Levels of peripheral blood leukocytes were measured via the complete blood cell count (CBC), and activated CD4⁺ and CD8⁺ CD69⁺/HLA-DR⁺ T-cells and CD14⁺⁺CD16⁺ monocytes²⁴ were measured by flow cytometry (**eMethods**). These measures were available before and after exposures 1 and 4 (**Fig. 1A**). We also used time-of-flight mass cytometry (CyTOF) to perform immunophenotyping of peripheral blood mononuclear cells from 3 M⁺ participants with high TSS following HDM challenge (mean TSS = 21.7) and 2 M[−] participants (mean TSS = 0). Responses were determined in samples obtained before and after the first HDM challenge. A standard CyTOF experimental workflow, as outlined by Bendall et al.,²⁵ was employed (**eMethods**). Antibody panels and immunophenotypes are summarized in **Table E6**.

Transcriptomic analyses

Whole genome transcriptomic analyses (derived by RNA-Seq) were performed on cells obtained by nasal brushings. We sampled the region well above the vestibule (inferior nasal concha). RNA-Seq data from 13 M+ and 11 M– participants were available at three time points [pre-exposure 1 (baseline) and post-exposures 1 and 4]. Methods for nasal cell collection, RNA isolation and quality control, library preparation, and RNA-Seq on an Illumina HiSeq™ 2000 platform have been described previously²³ and are presented in the **eMethods**.

Study design, statistical and bioinformatic analyses

Features related to the study design, including validation and replication populations, as well as mitigation of confounding factors, including the heterogeneity in cell populations studied, are discussed in the **eNotes**. All leukocyte cell counts were log₂ transformed. Unpaired or paired t-tests were used, and significance was ascribed at $P < 0.05$. Bioinformatic methods for the RNA-Seq data are described in the **eMethods**. Ascribing a gene as differentially expressed (DE) indicates a false discovery rate (FDR) < 0.05 . **Table E7** describes the statistical methods for each figure. Longitudinal changes in gene expression among M+ or M– participants during HDM challenge were classified as earlier, later, and overall. Changes in gene expression that occurred between pre-exposure 1 and post-exposure 1 were designated as earlier responses, between post-exposure 1 and post-exposure 4 as later responses, and between pre-exposure 1 and post-exposure 4 as overall responses. Cross-sectional comparisons between M+ and M– participants were also made at each of three time points. Details on bioinformatic methods^{26, 27} and functional modules²⁸ for the RNA-Seq data are described in the

eMethods. DE genes (FDR <0.05) were used for further down-stream functional analysis using DAVID^{26, 27}, IPA®, and modular analysis²⁸ as described in **eMethods**. A list of 203 genes identified by genome-wide association studies (GWAS) that associate with allergic diseases or traits was compiled (**Table E8**).

Results

Discordant clinical responses in M+ vs. M– participants

Overall, 23 M+ and 15 M– participants completed the study.¹⁹ The M+ and M– participants did not differ significantly in age, sex, or ethnicity (**Table E9**). Despite four consecutive exposures to HDMs, M– participants did not develop symptoms; in M+ participants, mean ($\pm$ standard error of the mean) TSS was significantly higher than baseline levels on each challenge day (**Fig. 1B**). The reasons for the elevated TSS at pre-exposure 1 in M+ persons and progressive lowering of the TSS at pre-exposures 2, 3, and 4 have been discussed previously.¹⁹

Concordant leukocyte/lymphocyte responses in M+ vs. M– participants

The levels of peripheral blood lymphocyte/leukocyte populations studied were not significantly different in the cross-sectional comparisons between M– and M+ persons at pre- and post-exposures 1 and 4 (**Fig. 1C-I**; results not shown for neutrophils). Longitudinal analyses revealed that, in both M+ and M– participants during exposures 1 and 4, the levels of total white blood cells, lymphocytes, B-cells, eosinophils, CD14++CD16+ intermediate monocytes, CD4+ T-cells, and CD8+ T-cells increased,

achieving statistical significance in most cases; neutrophils did not increase (**Fig. 1C-I**; results not shown). CyToF data supported these inferences (**eResults**).

Discordant peripheral blood T-cell activation responses in M+ vs. M– participants

While the abovementioned data pointed to a large degree of concordance in leukocyte/immune responses between M+ and M– persons, a prominent discordant pattern was observed. During exposure 1 there was a trend toward increased levels of activated T-cells in M+ participants, whereas in M– participants, there was a decline (**Fig. 1J–K**). Consequently, at post-exposure 1, the levels of activated CD4+ and CD8+ T-cells were significantly lower in M– compared with M+ participants (**Fig. 1J–K**). During exposure 4, levels of activated CD4+ and CD8+ T-cells in both M+ and M– individuals were nearly similar to those at pre-exposure 1 (baseline) levels (**Fig. 1J–K**).

Overview of transcriptional changes in M+ and M– participants

We next examined genomic (transcriptomic) responses in cells acquired by nasal brushings. A total of 15,763 genes met quality control criteria for downstream analyses. **Figure 2A** depicts the number of DE genes in cross-sectional analyses at three time points and three longitudinal analyses designated as earlier, later, and overall responses (**Fig. 2A**). **File E2** provides a list of the genes in each comparison.

Longitudinal changes in M+ and M– participants

Only one gene showed significant differential expression *earlier* in M+ participants (**Fig. 2A,B**). This gene (*NR4A1*) is implicated in eosinophil biology.²⁹ A total of 411 and 999

genes were differentially expressed *later* in M+ and M– participants, respectively (**Fig. 2A**), and between these 2 gene sets, 1,041 were unique (**Fig. 2B**). Of the 1,041 genes, more genes were differentially expressed in M– compared with M+ participants (630 vs. 42), and 369 genes were differentially expressed in both groups (**Fig. 2B**). In contrast, of the 1,815 and 1,651 genes that were differentially expressed *overall* in M+ and M– participants, respectively, 2,235 were unique (**Fig. 2A,B**). Of these, 1,231 were differentially expressed in both groups, and 584 and 420 genes were differentially expressed only in M+ or M– participants, respectively (**Fig. 2B**).

The direction of change in expression (upregulation or downregulation) in the 1,041 and 2,235 genes that were differentially expressed *later* and *overall*, respectively, showed nearly 100% concordance in M+ and M– participants (**Fig. 2C**). The high degree of consistency in responses *later* and *overall* (**Fig. 2C**) suggested that transcriptional responses in nasal cells that may partly underlie the contrasting clinical phenotypes of M+ and M– participants must have occurred earlier. To examine this possibility and provide uniformity to the *earlier*, *later*, and *overall* comparisons, we determined the degree of changes in gene expression ($\log_2$ fold-changes) that occurred *earlier*, *later*, and *overall* in a uniform set of 2,254 genes in M+ and M– participants. These genes were significantly differentially expressed in at least one of the three longitudinal analyses (**Fig. 2A**). Three lines of evidence supported that (1) most transcriptomic responses differentiating M+ and M– participants occurred *earlier* and (2) the *overall* genomic response in M+ participants was skewed toward upregulation, whereas it was skewed toward downregulation in M– participants.

First, the correlation between the $\log_2$ fold-changes in the 2,254 genes in M+ and M– participants was lower in the earlier compared with later or overall responses ($r=0.55$ vs. $r=0.93$ and $r=0.92$, respectively; **Fig. 2D–F**, first and second rows). This lower degree of earlier correlation was attributable to 25% ($n=558$) of the 2,254 genes, which had discordant fold-changes (sum of genes in quadrants II and IV, **Fig. 2D**, first row). Of these genes, most ($n=498$ [89%]) were upregulated in M+ but downregulated in M– participants (quadrant II). The remainder ($n=60$ [11%]) exhibited the reverse pattern (quadrant IV; **Fig. 2D**, first row). Thus, the discordance was biased toward more genes manifesting increased expression in M+ participants but decreased expression in M– participants.

Second, among genes that were concordantly upregulated or downregulated earlier, a greater proportion of genes had larger changes in M+ compared with M– participants (**Fig. 2D**, third and fourth rows). Among genes that were concordantly upregulated or downregulated later, a greater proportion of genes had larger changes in M– compared with M+ participants (**Fig. 2E**, third and fourth rows). Overall, more upregulated genes had larger changes in M+ compared with M– participants (**Fig. 2F**, third row). More downregulated genes had larger changes in M– compared with M+ participants (**Fig. 2F**, fourth row).

Third, specific clusters of genes manifested contrasting temporal patterns earlier vs. later in M+ and M– participants (**Fig. 3**). The 2,254 genes were categorized into 4

temporal patterns (**Fig. 3A**). Patterns 1 and 4 comprised genes that showed increases and decreases over time, respectively, in expression levels. Pattern 2 genes showed an initial increase followed by a decrease or no change in expression levels, and pattern 3 genes had an initial decrease followed by an increase or no change in expression levels (**Fig. 3A**). **Figure 3B** depicts the clusters of the four temporal patterns among the 2,254 genes in M+ and M– participants; these clusters were designated by two digits, with the first indicating the pattern in M+ persons (e.g., cluster 1-3 indicates gene expression pattern 1 in M+ but pattern 3 in M– participants). **Figure 3C** and **Fig. E1** show that these genes clustered into distinct, non-overlapping gene ontology (GO) terms (FDR <0.05).

In M+ participants, 1,047 genes clustered in pattern 1, but in M– participants, 55% (n=578), 0.8% (n=8), 44% (n=459), and 0.2% (n=2) of these genes clustered in patterns 1, 2, 3, and 4, respectively. The top significant GO terms that associated with the 578 pattern 1 genes in both M+ and M– individuals related mainly to epithelial and epidermal cell development and differentiation (cluster 1-1; **Fig. 3C**, blue, and **Fig. E1**).

The 459 genes that clustered in pattern 1 in M+ but in pattern 3 in M– participants were significantly enriched in GO terms related to immune and inflammatory responses and leukocyte activation (cluster 1-3; **Fig. 3C**, orange, and **Fig. E1**). Although 583 (26%) of the 2,254 genes showed a discordant clustering pattern between M+ and M– participants, most (n=459 [79%]) clustered in pattern 1 in M+ participants, but in pattern

3 in M⁻ participants (**Fig. 3B**). Thus, differential expression of a broad array of inflammatory genes earlier appeared to distinguish M⁺ from M⁻ participants.

Of the 45 genes that clustered in pattern 2 in M⁺ participants, 80% (n=36) of these were in pattern 4 in M⁻ participants; these genes related to antigen presentation and processing as well as asthma and autoimmune processes (cluster 2-4; **Fig. 3C**, grey, and **Fig. E1**). Of the 69 genes in pattern 3 in M⁺ participants, 46% (n=32) were in pattern 1 in M⁻ participants. These genes included those related to enzymatic activities, such as trypsin-like serine proteases (cluster 3-1; **Fig. 3C**, purple, and **Fig. E1**). Of the 1,093 genes that clustered to pattern 4, 97% (n=1,065) clustered in pattern 4 in both M⁺ and M⁻ individuals (cluster 4-4; **Fig. 3B**), suggesting that the greatest similarity in temporal patterns between the groups occurred in genes with a progressive decrease in expression. These genes were classified to pathways that maintain cellular integrity (e.g., microtubule cytoskeletal and cytoskeletal; **Fig. 3C**, green and **Fig. E1**). However, 2% (n=26) of the 1,093 genes clustered in pattern 4 in M⁺ participants but in pattern 2 in M⁻ participants; these genes were mainly related to glycoprotein biology (cluster 4-2; **Fig. 3C**, yellow and **Fig. E1**).

Thus, in a uniform set of 2,254 genes that were differentially expressed in cells collected by nasal brushings, 74% (n=1,671 genes) showed a concordant expression pattern in M⁺ and M⁻ participants. The pathways showing differences in temporal patterns between M⁺ and M⁻ participants were related primarily to inflammation/immune responses (cluster 1-3), followed by antigen presentation and atopy/autoimmune

diseases (cluster 2-4), enzymatic/protease activity (cluster 3-1), and cell membrane function (cluster 4-2) (**Fig. 3C**). The trajectories of representative genes within these clusters, including those identified by GWAS, are depicted (**Fig. 3D**) to illustrate the (1) concordance in both pattern and amplitude (e.g., *S100A7*, *CAPSL*, *TMEM232*); (2) concordance in pattern but wide (e.g., *SLC26A4*) or modest (*OVOL1*, *TNFRSF6B*) discordance in amplitude; and (3) discordance (bottom row) in the pattern of genomic responses in M+ and M– persons. Several genes involved in epidermal/epithelial integrity, while showing an overall similar direction of change (upregulation or downregulation) demonstrated a contrasting pattern and/or amplitude in the genomic response (e.g., *CCDC80* in cluster 4-2 in **Fig. 3D** and *FLG* in cluster 1-1 whose levels increased prominently in M– but not M+ persons (plots not shown)).

Cross-sectional transcriptomic differences between M+ and M– participants

Cross-sectional analysis revealed that the numbers of genes whose expression levels differed between M+ and M– participants at baseline (pre-exposure 1), post-exposure 1, and post-exposure 4 were 28, 741, and 238, respectively (**Fig. 2A and File E2**). Thus, <0.2% of the genes (28 of 15,763 genes) differentiated M+ and M– individuals at baseline (**Table E10 and File E2**). Overlap between the differentially expressed genes at these three time points is shown in **Fig. 4A**. Several pathways were different in M+ and M– participants at specific time points (**Fig. 4B**): pre-exposure 1 and post-exposure 4 (extracellular matrix-receptor interaction and focal adhesion); post-exposure 1 (leukocyte migration, toll-like receptor, Jak-STAT signaling, and B-cell receptor signaling, among others); post-exposures 1 and 4 (chemokine and cytokine responses,

among others); and post-exposure 4 (pathways related to atopic and autoimmune diseases).

Among the three cross-sectional comparisons, 731 (84%) genes had significantly higher expression levels in M+ compared with M– participants (**Fig. 4C**); 140 (16%) genes had the opposite pattern in at least one of the three cross-sectional analyses (**Fig. 4D**). The top GO terms associated with the genes more highly expressed in M+ compared with M– participants were related mainly to inflammatory and immune responses (**Fig. 4E**). Genes more highly expressed in M– compared with M+ participants were related primarily to epithelial and epidermal cell development, integrity, and differentiation, including those involved in enzymatic activity, such as serine peptidase inhibitors (**Fig. 4F**). The trajectory of these genes showed contrasting patterns in M+ and M– participants (**Fig. 4G-H**). Congruent with the longitudinal analyses (**Fig. 3**), genes involved in inflammation/immunity levels increased in M+ participants, whereas in M– participants, the levels first decreased and increased thereafter (**Fig. 4G**).

Genes associated with AR symptomatology

The abovementioned approach elucidated pathways induced during HDM challenge in M– and M+ persons (Fig. 2, 3) and differences between M– vs. M+ persons during first and fourth HDM challenge (Fig. 4). We next investigated whether specific genes in M+ persons associated with AR severity during HDM challenge. To identify these genes, we applied five sets of criteria noted in Table E11 to the longitudinal and/or cross-sectional RNA-Seq datasets. We also cross-referenced genes differentially expressed in our

RNA-Seq dataset and those identified by GWAS for allergic diseases/traits. **eMethods** and **Figures E2-E5** describe how these sets were derived. The five criteria yielded 65 genes with higher or lower expression in M+ compared with M– participants in sets 1 to 5 and 47 GWAS-identified genes in set 6 (**Table E11, Figure E2-E6** and **eDiscussion**). Together, there were 106 unique genes (**Table E11, E12, and File E3**). Expression levels of 12 of these genes shown in **Table E11** correlated significantly with total nasal symptom scores at post-exposure 1 (**Fig. E7** and **E8**). Ten genes correlated positively (*CCL22*, *CD69*, *CISH*, *CLC*, *CSF1*, *CYBB*, *GAPT*, *GPR183*, *HLA-DOA*, and *HLA-DRA* (*r* value range: 0.73–0.81) and two correlated inversely (*r* values, –0.81 and –0.79 for *CCDC80* and *FTO*, respectively) with symptom scores (**Fig. E7**). These 12 genes categorized to the following clusters shown in **Figure 3**: *CCL22*, *CD69*, and *CLC* in cluster 1-1; *CISH*, *CSF1*, *CYBB*, *GAPT*, and *GPR183* in cluster 1-3; *HLA-DOA* in cluster 2-4; *HLA-DRA* and *FTO* in cluster 4-4; and *CCDC80* in cluster 4-2 (**Fig. E8**).

Modular analysis

We performed RNA-seq analyses on unfractionated (unsorted) cells obtained by nasal swabs. Differences in cellular composition at baseline between M– vs. M+ participants could confound analyses. To investigate this possibility, we used a modular analysis framework²⁸ to interpret the transcriptional response (**Fig. E9**). When comparing overall longitudinal response (i.e., pre-exposure 1 vs. post-exposure 4), many of the modules induced (upregulated) by HDM challenge in M– and M+ participants were similar (**Fig. E9**). These included inflammation/immune response (Module (M) 3.2, M4.2, M4.6, M4.13, M5.1, and M5.7), cell cycle (M3.3), apoptosis (M6.6), and cell death (M6.13)

modules. The plasma cell module was downregulated in both M⁻ and M⁺ participants (M4.11). The interferon/antiviral (M1.2, M3.4, and M5.12), monocyte (M4.14), and T-cell response (M5.15) modules were upregulated in M⁺ but not M⁻ participants (**Fig. E9**). The B-cells/immunoglobulin module (M4.10) was downregulated in M⁻ but not M⁺ participants.

Cross-sectional analyses revealed that interferon/antiviral, inflammation, T-cell, neutrophil, monocyte, and cell death modules were upregulated in M⁺ compared with M⁻ participants at the conclusion of exposure 1 (**Fig. E9**). In contrast, differences in these modules were modest at the conclusion of exposure 4.

Discussion

Consistent with our hypothesis, we found that, at baseline (pre-exposure), the immunologic and transcriptional differences between M⁻ and M⁺ persons were minimal. However, during HDM challenges, M⁻ participants mounted leukocyte changes in the peripheral blood that were largely concordant with those in M⁺ participants. This included expansion of CD14⁺⁺CD16⁺ intermediate monocytes, a leukocyte subset that is expanded in several inflammatory diseases, including asthma.^{24, 30} Mirroring this congruency, <10% of the 141 immunophenotypes (determined by CyTOF) differed between M⁺ and M⁻ participants at baseline (pre-exposure) and during the initial HDM challenge. Consistent with these results, there was substantial concordance in global transcriptional responses (assayed by RNA-Seq) in M⁻ and M⁺ participants during HDM

challenges. For example, of the uniform set of 2,254 genes that we examined, only 26% showed a discordant trajectory pattern between M⁻ and M⁺ participants (**Fig. 3B**).

Amidst this substantially concordant response to HDM challenges, we identified a key immunologic feature in the peripheral blood and two genomic features in the nasal compartment that differentiated M⁻ from M⁺ participants. First, during the initial HDM challenge, CD4⁺ and CD8⁺ T-cell activation levels in the peripheral blood decreased in M⁻ participants, whereas it increased in M⁺ persons; during subsequent HDM challenges, T-cell activation levels increased in both study groups. Second, there was evidence of differential genomic titration. That is, among genes that were upregulated, the proportion of genes with higher absolute fold-changes was greater in M⁺ vs. M⁻ persons and, conversely, among genes that were downregulated, the proportion of genes with higher absolute fold-changes were greater in M⁻ vs. M⁺ individuals. Third, there was evidence of differential genomic reprioritization. That is, genes that promote epithelial/epidermal barrier function (e.g., FLG) were preferentially upregulated in M⁻ vs. M⁺ participants, whereas those that promote inflammation were preferentially upregulated in M⁺ vs. M⁻ participants. Levels of the epithelial/epidermal barrier genes tended to increase progressively in M⁻ persons, whereas they remained largely unchanged in M⁺ persons. In contrast, expression of genes involved in inflammation or immune responses showed a tendency to decline during the first HDM challenge in M⁻ persons vs. an increase in M⁺ persons. Thereafter, during subsequent HDM challenges, levels of these pro-inflammatory genes declined, remained unchanged, or increased in M⁻ persons. In many instances, levels of inflammatory genes in M⁻ participants

eventually approximated those found in M+ persons. The decline vs. increase in levels of pro-inflammatory genes mirrored the decline vs. increase in T-cell activation levels in the peripheral blood of M- vs. M+ persons during the initial HDM challenge.

The abovementioned results derived by tracing changes in gene expression (**Figs. 2-3**) and cross-sectional comparisons (**Fig. 4**) were substantiated by the results of the modular analytical approach (**Fig. E9**). The latter approach showed that the modules induced (upregulated) in M+ and M- participants were similar (**Fig. E9**) and at the conclusion of the study, minimal differences were observed between M+ and M- participants (**Fig. E9**). This approximation reinforces the idea that our results were not confounded by differences in cellular composition that might have been present at baseline between M+ and M- participants. The modular analyses approach also substantiated that most changes following HDM exposure occurred early (**Fig. E9**).

Based on the expression pattern of representative genes shown in Table E11 and genes that co-localize, a mechanistic model is presented in Figure 5. We suggest that, during the initial HDM challenge, the distinctive patterns of genomic titration and reprioritization co-index, leading to a balanced or adaptive (healthy) vs. an imbalanced or maladaptive (unhealthy) genomic response in M- vs. M+ persons (**Fig. 5A**). Our results suggest a coordinated response in M- and M+ participants at multiple chromosomal loci and co-localizing genes (**Fig. 5B-E**). Most genes, including those identified by GWAS, showed similar expression values at baseline (pre-exposure), with differences between M+ and M- persons becoming apparent during the initial HDM

challenge. Additionally, in instances where the overall direction of the change (upregulation vs. downregulation) was concordant, there were differences in the amplitude of change between M+ and M– persons (**Fig. 3D** and **5B-E**).

Genomic features at the following loci provide insights into the key components of a balanced/adaptive vs. imbalanced/maladaptive response in M– vs. M+ persons. Several genes essential for maintaining the epidermal/epithelial barrier [e.g., filaggrin (*FLG*)] are co-localized on a region of chromosome 1q21 (genes constitute the “epidermal differentiation complex”) (**Fig. 5B, C**).³¹⁻³⁵ Following HDM challenge, expression levels of these co-localized genes in M– but not M+ participants increased. Another example is reflected by *SPINK5*; this gene plays an essential role in regulating epidermal protease activity, and polymorphisms in this gene associate with atopic dermatitis and cause Netherton syndrome, a feature of which is severe atopy.³⁶ Levels of *SPINK5* increased prominently after HDM challenge in M– individuals, but not in M+ persons (**Fig. 5C**). Conversely, levels of proinflammatory genes such as (1) periostin (*POSTN*) that has been used as proxy for IL-13 activity and associates with allergic diseases³⁷, (2) GWAS-identified pro-inflammatory/immune genes such as *IL-6R*, *IL-4R*, *IL-33*, *SOCS3*, and *DUSP1*, and (3) chemokines and their receptors (e.g., *CCL24* and *CCR3*) declined or manifested a muted increase in M– persons (**Fig. 3D** and **Fig. 5E**). Recent studies have highlighted the importance of A20, an attenuator of NF- κ B-mediated inflammatory responses, in mediating allergic disease.³⁸ In our studies, transcriptional levels of A20 (encoded by *TNFAIP3*) paralleled the overall inflammatory response in M– and M+ persons (**Fig. 3D**). Additional discussions are available in the eDiscussion regarding

representative genes that may play an influential role in this model and whether the barrier defect leading to respiratory tract allergic disease (allergic rhinitis) is present only in the epithelium layer of the nasal mucosa or whether it is a much wider defect within the epidermal barrier.

There are five caveats to our study. First, we challenged participants with HDMs, and our results therefore are not generalizable to other aeroallergens. Second, we did not compare transcriptional responses in the nasal compartment with those in the blood; however, we believe there are differences. Third, a larger sample size would have allowed us to stratify M+ persons based on other clinical characteristics that could have revealed factors that contribute to the heterogeneity in symptom severity as well as transcriptional and immunologic responses following HDM challenge. Fourth, while we did not sort cells sampled by nasal brushings, the analysis of a heterogeneous cellular mixture may provide a better representation of the epithelial and immune responses generated post allergen challenge vs. analysis of individual cell types. Indeed, cellular heterogeneity has advantages in transcriptome profiling,³⁹⁻⁴² and in our studies they provide insights into the complex interactions occurring in the nasal ecosystem, i.e., between cells and between cells and their environment (HDM challenge).

Fifth, while our results suggest that the use of unsorted cells has not confounded the major conclusions of our study, it remains conceivable that differences in resident non-epithelial cells in the nasal samples may have influenced the transcriptional response. Quantitatively small differences in non-epithelial immune cells could impact the outcome

of HDM challenge due to “amplification” of the local immune response by secretion of cytokines or other inflammatory molecules. This would be especially relevant if the phenotype of non-epithelial immune cells was skewed toward Th2 responses, a notion supported by CyTOF profiling of peripheral blood mononuclear cells. Specifically, slight discordance between M⁻ and M⁺ subjects was observed in Th1 vs. Th2 memory cells (as determined by IFN-gamma/CXCR3 vs. IL-4/CCR4 expression, respectively) and activated regulatory T cells (CD25^{hi} CD127⁻ CCR4⁺).

Thus, it is possible that, in M⁺ vs. M⁻ participants, an inflammatory Th2 response to HDMs and/or lack of a Treg-mediated control of nasal inflammation in response to HDMs contributes to the divergent epithelial transcriptional response. However, it is also possible that, in M⁻ subjects, the transcriptional response toward preservation of the epidermal/epithelial barrier may be sufficient to prevent the heightened inflammatory response observed in M⁺ subjects. This raises the question of causality: does an initial barrier defect lead to development of Th2-skewed inflammatory HDM responses, or do uncontrolled inflammatory HDM responses lead to defective barrier function? Our study cannot answer this question definitively. However the resilient transcriptional responses observed in non-allergic individuals raise the possibility that an initial defect in this barrier response may lead to inappropriate inflammation that feeds back over time to cause further barrier deficits, ultimately precipitating in development of HDM atopy. Similarly, genetic predisposition toward HDM atopy may lead to deterioration of epithelial barrier function over time. Hence, we envisage a complex, ongoing,

bidirectional crosstalk between non-epithelial immune cells and epithelial cells that confers resistance vs. susceptibility to HDM allergic diathesis.

Our findings have implications for biomarker discovery research as significant attention is typically placed on identifying biomarkers that distinguish individuals with divergent allergy endotypes (e.g., disease severity or therapeutic responses) via cross-sectional analyses at baseline (constitutively). However, our results point to the possibility that divergent allergy endotypes result from contrasting temporal responses to allergen exposure rather than baseline characteristics. Our results underscore that, while identifying genes with the greatest fold-changes between persons with and those without allergic diseases has merit, this approach obscures the fact that the summated induced response across multiple loci that confer similar functional effects (e.g., inflammation) is likely to confer overall phenotype, rather than the individual effects of fewer genes with the greatest differences in expression levels. Furthermore, the lack of a strong peripheral blood signature of AR in M+ subjects, despite the multiplexed capabilities of CyTOF, suggests that direct sampling of affected tissues and genome-wide methodologies (e.g., RNA-seq) may be best suited to identify clinically relevant signatures of allergy.

In summary, our study design allowed us to identify features of a healthy, balanced adaptive response in M– persons elicited following exposure to HDMs in an ACC. The key features of this response provide support for the emerging paradigm that a “resilient” epidermis/epithelium that retains and promotes barrier function, despite

repeated aeroallergen challenge, may play a critical role in preventing epicutaneous sensitization and downstream inflammatory responses and, consequently, allergic diseases.

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Figure legends

Figure 1. Study design, symptom responses, and peripheral blood leukocyte/lymphocyte changes. (A) HDM exposures and responses. (B) Mean TSS at 30-minute intervals during each HDM exposure. (C–K) Changes in leukocyte subsets and activated T-cells. * $P < 0.05$. ** $P < 0.01$. # $P = 0.056$. Black asterisks: cross-sectional comparison between M+ vs. M–; red and blue asterisks: longitudinal comparisons in M+ and M– participants, respectively.

Figure 2. Genomic responses in nasal cells. (A) Number of differentially expressed (DE) genes. (B) Number of unique genes in the longitudinal comparisons in M– and M+ participants. (C) Direction of change in the unique DE genes shown in panel B. (D–F) Correlation patterns and proportion of 2,254 genes exhibiting greater upregulation or downregulation earlier (D), later (E), and overall (F). Top row: scatter plot of mean $\log_2$ fold changes in M+ vs. M– participants. Second row: correlation rho and significance values. Third and fourth rows: genes with greater absolute fold-changes that clustered to quadrant I (third row) and quadrant III (fourth row); number of genes noted below bar plots. Direction of change in gene expression shown in the left-most column.

Figure 3. Temporal pattern of gene expression. (A) Temporal gene expression patterns. (B) 2,254 genes clustered by concordant vs. discordant patterns; in M+ (first digits) and M– (second digits) persons. (C) Top gene ontology (GO) terms for clusters in panel B. Top to bottom rows: strongest to weakest associations (P values and

proportion of genes for each GO term in **Figure E1**). **(D)** Trajectories of sample genes from representative clusters. *GWAS-identified genes.

Figure 4. Cross-sectional comparisons. **(A)** DE genes from cross-sectional comparisons. **(B)** KEGG pathways enriched in DE genes from cross-sectional comparison. **(C-D)** Hierarchical gene clustering expression heatmap of genes with higher expression in at least one cross-sectional comparison. **(E-F)** Top GO terms associated with genes from panels C and D (ranked by strongest to weakest). **(G-H)** Longitudinal expression pattern for genes in panels C and D.

Figure 5. Model of balanced/adaptive and imbalanced/maladaptive responses. **(A)** Pattern of changes in immune response (dashed line) and epithelial barrier (solid line) genes. Representative epithelial barrier **(B)** and immune response **(D)** genes with chromosomal (Chr) localization, and results from cross-sectional comparisons. Brown, significantly higher in M- participants; Green, significantly higher in M+ participants. **(C,E)** Trajectory of representative genes from panels B and D. * GWAS-identified genes.

References:

1. Platts-Mills TA. The allergy epidemics: 1870-2010. *J Allergy Clin Immunol* 2015; 136:3-13.
2. Leung DY, Guttman-Yassky E. Deciphering the complexities of atopic dermatitis: shifting paradigms in treatment approaches. *J Allergy Clin Immunol* 2014; 134:769-79.
3. Brough HA, Liu AH, Sicherer S, Makinson K, Douiri A, Brown SJ, et al. Atopic dermatitis increases the effect of exposure to peanut antigen in dust on peanut sensitization and likely peanut allergy. *J Allergy Clin Immunol* 2015; 135:164-70.
4. De Benedetto A, Kubo A, Beck LA. Skin barrier disruption: a requirement for allergen sensitization? *J Invest Dermatol* 2012; 132:949-63.
5. De Marchi F, Piacentini GL, Piazza M, Sandri M, Boner AL, Peroni DG. Correlation of skin barrier impairment in atopic dermatitis with aeroallergen sensitization. *Allergy Asthma Proc* 2015; 36:127-33.
6. Bonnelykke K, Sparks R, Waage J, Milner JD. Genetics of allergy and allergic sensitization: common variants, rare mutations. *Curr Opin Immunol* 2015; 36:115-26.
7. Portelli MA, Hodge E, Sayers I. Genetic risk factors for the development of allergic disease identified by genome-wide association. *Clin Exp Allergy* 2015; 45:21-31.
8. Multi-ancestry genome-wide association study of 21,000 cases and 95,000 controls identifies new risk loci for atopic dermatitis. *Nat Genet* 2015; 47:1449-56.
9. Marenholz I, Esparza-Gordillo J, Ruschendorf F, Bauerfeind A, Strachan DP, Spycher BD, et al. Meta-analysis identifies seven susceptibility loci involved in the atopic march. *Nat Commun* 2015; 6:8804.
10. Hinds DA, McMahon G, Kiefer AK, Do CB, Eriksson N, Evans DM, et al. A genome-wide association meta-analysis of self-reported allergy identifies shared and allergy-specific susceptibility loci. *Nat Genet* 2013; 45:907-11.
11. Dharmage SC, Lowe AJ, Matheson MC, Burgess JA, Allen KJ, Abramson MJ. Atopic dermatitis and the atopic march revisited. *Allergy* 2014; 69:17-27.
12. Spergel JM. From atopic dermatitis to asthma: the atopic march. *Ann Allergy Asthma Immunol* 2010; 105:99-106; quiz 7-9, 17.
13. Cork MJ, Danby SG, Vasilopoulos Y, Hadgraft J, Lane ME, Moustafa M, et al. Epidermal barrier dysfunction in atopic dermatitis. *J Invest Dermatol* 2009; 129:1892-908.
14. Fallon PG, Sasaki T, Sandilands A, Campbell LE, Saunders SP, Mangan NE, et al. A homozygous frameshift mutation in the mouse Flg gene facilitates enhanced percutaneous allergen priming. *Nat Genet* 2009; 41:602-8.
15. Jin H, He R, Oyoshi M, Geha RS. Animal models of atopic dermatitis. *J Invest Dermatol* 2009; 129:31-40.
16. O'Regan GM, Irvine AD. The role of filaggrin in the atopic diathesis. *Clin Exp Allergy* 2010; 40:965-72.
17. Oyoshi MK, Murphy GF, Geha RS. Filaggrin-deficient mice exhibit TH17-dominated skin inflammation and permissiveness to epicutaneous sensitization with protein antigen. *J Allergy Clin Immunol* 2009; 124:485-93, 93 e1.

18. Leung DY. New insights into atopic dermatitis: role of skin barrier and immune dysregulation. *Allergol Int* 2013; 62:151-61.
19. Jacobs RL, Andrews CP, Ramirez DA, Rather CG, Harper N, Jimenez F, et al. Symptom dynamics during repeated serial allergen challenge chamber exposures to house dust mite. *J Allergy Clin Immunol* 2015; 135:1071-5.
20. Jacobs RL, Harper N, He W, Andrews CP, Rather CG, Ramirez DA, et al. Responses to ragweed pollen in a pollen challenge chamber versus seasonal exposure identify allergic rhinoconjunctivitis endotypes. *J Allergy Clin Immunol* 2012; 130:122-7 e8.
21. Jacobs RL, Harper N, He W, Andrews CP, Rather CG, Ramirez DA, et al. Effect of confounding cofactors on responses to pollens during natural season versus pollen challenge chamber exposure. *J Allergy Clin Immunol* 2014; 133:1340-6, 6 e1-7.
22. Ellis AK, North ML, Walker T, Steacy LM. Environmental exposure unit: a sensitive, specific, and reproducible methodology for allergen challenge. *Ann Allergy Asthma Immunol* 2013; 111:323-8.
23. He W, Jimenez F, Martinez H, Harper NL, Manoharan MS, Carrillo A, et al. Cockroach sensitization mitigates allergic rhinoconjunctivitis symptom severity in patients allergic to house dust mites and pollen. *J Allergy Clin Immunol* 2015; 136:658-66.
24. Wong KL, Yeap WH, Tai JJ, Ong SM, Dang TM, Wong SC. The three human monocyte subsets: implications for health and disease. *Immunol Res* 2012; 53:41-57.
25. Bendall SC, Nolan GP, Roederer M, Chattopadhyay PK. A deep profiler's guide to cytometry. *Trends Immunol* 2012; 33:323-32.
26. Huang da W, Sherman BT, Lempicki RA. Systematic and integrative analysis of large gene lists using DAVID bioinformatics resources. *Nat Protoc* 2009; 4:44-57.
27. Huang da W, Sherman BT, Lempicki RA. Bioinformatics enrichment tools: paths toward the comprehensive functional analysis of large gene lists. *Nucleic Acids Res* 2009; 37:1-13.
28. Chaussabel D, Baldwin N. Democratizing systems immunology with modular transcriptional repertoire analyses. *Nat Rev Immunol* 2014; 14:271-80.
29. Hashida R, Ohkura N, Saito H, Tsujimoto G. The NR4A nuclear receptor family in eosinophils. *J Hum Genet* 2007; 52:13-20.
30. Moniuszko M, Bodzenta-Lukaszyk A, Kowal K, Lenczewska D, Dabrowska M. Enhanced frequencies of CD14⁺⁺CD16⁺, but not CD14⁺CD16⁺, peripheral blood monocytes in severe asthmatic patients. *Clin Immunol* 2009; 130:338-46.
31. Brown SJ, McLean WH. One remarkable molecule: filaggrin. *J Invest Dermatol* 2012; 132:751-62.
32. Hubiche T, Ged C, Benard A, Leaute-Labreze C, McElreavey K, de Verneuil H, et al. Analysis of SPINK 5, KLK 7 and FLG genotypes in a French atopic dermatitis cohort. *Acta Derm Venereol* 2007; 87:499-505.
33. McAleer MA, Irvine AD. The multifunctional role of filaggrin in allergic skin disease. *J Allergy Clin Immunol* 2013; 131:280-91.
34. Tang H, Jin X, Li Y, Jiang H, Tang X, Yang X, et al. A large-scale screen for coding variants predisposing to psoriasis. *Nat Genet* 2014; 46:45-50.

- 673 35. de Koning HD, van den Bogaard EH, Bergboer JG, Kamsteeg M, van Vlijmen-
674 Willems IM, Hitomi K, et al. Expression profile of cornified envelope structural
675 proteins and keratinocyte differentiation-regulating proteins during skin barrier
676 repair. *Br J Dermatol* 2012; 166:1245-54.
- 677 36. Hovnanian A. Netherton syndrome: skin inflammation and allergy by loss of
678 protease inhibition. *Cell Tissue Res* 2013; 351:289-300.
- 679 37. Li W, Gao P, Zhi Y, Xu W, Wu Y, Yin J, et al. Periostin: its role in asthma and its
680 potential as a diagnostic or therapeutic target. *Respir Res* 2015; 16:57.
- 681 38. Schuijs MJ, Willart MA, Vergote K, Gras D, Deswarte K, Ege MJ, et al. Farm dust
682 and endotoxin protect against allergy through A20 induction in lung epithelial cells.
683 *Science* 2015; 349:1106-10.
- 684 39. Kukurba KR, Montgomery SB. RNA Sequencing and Analysis. *Cold Spring Harb*
685 *Protoc* 2015; 2015:pdb top084970.
- 686 40. Alizadeh AA, Eisen MB, Davis RE, Ma C, Lossos IS, Rosenwald A, et al. Distinct
687 types of diffuse large B-cell lymphoma identified by gene expression profiling.
688 *Nature* 2000; 403:503-11.
- 689 41. Khan J, Wei JS, Ringner M, Saal LH, Ladanyi M, Westermann F, et al.
690 Classification and diagnostic prediction of cancers using gene expression profiling
691 and artificial neural networks. *Nat Med* 2001; 7:673-9.
- 692 42. Sorlie T, Perou CM, Tibshirani R, Aas T, Geisler S, Johnsen H, et al. Gene
693 expression patterns of breast carcinomas distinguish tumor subclasses with clinical
694 implications. *Proc Natl Acad Sci U S A* 2001; 98:10869-74.

695

M+ vs. M- @ Pre-exposure 1

Genes	Log ₂ FC	pvalsGLM	padjGLM
<i>CST1</i>	3.76	0	0
<i>PNMA2</i>	3.70	0	0
<i>HBB</i>	3.59	0	0
<i>HBA2</i>	3.18	5.95E-12	1.56E-08
<i>CD300E</i>	1.93	2.91E-05	0.018374
<i>COL1A2</i>	1.72	6.78E-08	0.000107
<i>COL6A2</i>	1.64	1.81E-06	0.001783
<i>COL3A1</i>	1.50	1.38E-06	0.001677
<i>BPIFA1</i>	1.24	9.25E-10	1.82E-06
<i>CD177</i>	0.96	2.64E-05	0.017343
<i>FCGBP</i>	0.87	1.42E-05	0.011774
<i>SPRR1A</i>	-0.88	2.35E-05	0.016087
<i>HLA-DQA1</i>	-0.94	4.88E-05	0.027492
<i>KRT15</i>	-0.98	1.76E-06	0.001783
<i>SCGB1A1</i>	-0.99	7.26E-07	0.000954
<i>CYP26A1</i>	-1.05	1.68E-05	0.012026
<i>MMP10</i>	-1.12	3.18E-08	5.57E-05
<i>CLCNKB</i>	-1.20	3.9E-05	0.023657
<i>LGALS7</i>	-1.24	1.67E-05	0.012026
<i>CD200R1L</i>	-1.46	8.5E-06	0.007885
<i>FOXE1</i>	-1.73	1.51E-06	0.001701
<i>AHRR</i>	-2.04	1.43E-07	0.000205
<i>BTNL9</i>	-2.05	1.19E-05	0.01045
<i>THBS4</i>	-2.43	1.67E-05	0.012026
<i>ARTN</i>	-2.53	6.03E-11	1.36E-07
<i>SYT13</i>	-2.70	4.26E-05	0.024888
<i>CYP1B1</i>	-2.99	0	0
<i>CYP1A1</i>	-31.36	0	0

M+ vs. M- @ Post-exposure 1

Genes	Log ₂ FC	pvalsGLM	padjGLM
<i>HBB</i>	6.71	0	0
<i>CLC</i>	5.06	1.36E-12	1.08E-10
<i>P2RY14</i>	4.66	0	0
<i>CST1</i>	4.61	0	0
<i>FCN1</i>	4.55	0	0
<i>FCGR3B</i>	4.54	0	0
<i>CASP5</i>	4.52	0	0
<i>CR1</i>	4.44	0	0
<i>CD300E</i>	4.39	0	0
<i>PNMA2</i>	4.36	0	0
<i>HBA2</i>	4.31	0	0
<i>LILRA5</i>	4.24	0	0
<i>MNDA</i>	4.13	0	0
<i>FFAR2</i>	4.12	0	0
<i>NFE2</i>	4.11	0	0
<i>CXCR2</i>	4.10	0	0
<i>TNFAIP6</i>	4.09	0	0
<i>LOC73142</i>	3.96	0	0
<i>CXCR1</i>	3.94	0	0
<i>HK3</i>	3.93	0	0
<i>CCR1</i>	3.91	0	0
<i>FCGR1B</i>	3.87	6.66E-16	6.6E-14
<i>DYSF</i>	3.80	0	0
<i>TNFRSF10</i>	3.80	0	0
<i>FPR2</i>	3.78	0	0
<i>FFAR3</i>	3.76	1.45E-07	7.25E-06
<i>CSF2RB</i>	3.74	0	0
<i>LILRB3</i>	3.73	0	0
<i>IL1B</i>	3.67	0	0
<i>MME</i>	3.66	0	0
<i>FCGR2A</i>	3.61	0	0
<i>PROK2</i>	3.60	0	0
<i>TLR8</i>	3.58	0	0
<i>FUT7</i>	3.58	2.76E-09	1.66E-07
<i>RASGRP4</i>	3.57	0	0
<i>EMR1</i>	3.56	2.89E-15	2.71E-13
<i>CSF3R</i>	3.54	0	0
<i>HRH2</i>	3.53	1.11E-16	1.18E-14
<i>CEACAM3</i>	3.50	0	0
<i>CMTM2</i>	3.49	0	0
<i>CLEC4D</i>	3.45	4.52E-07	2.12E-05
<i>MEFV</i>	3.45	0	0
<i>TREML2</i>	3.42	0	0
<i>LILRB2</i>	3.42	0	0
<i>FPR1</i>	3.39	0	0
<i>AQP9</i>	3.38	0	0
<i>ITGAM</i>	3.35	0	0
<i>FCGR1C</i>	3.35	7.99E-06	0.000307

<i>CREB5</i>	3.33	0	0
<i>PDE4B</i>	3.31	0	0
<i>NFAM1</i>	3.30	0	0
<i>CASS4</i>	3.29	0	0
<i>LIN7A</i>	3.29	1.3E-05	0.000477
<i>EDN2</i>	3.28	1.26E-11	9.38E-10
<i>TNFSF13B</i>	3.26	0	0
<i>TAGAP</i>	3.22	0	0
<i>GPR27</i>	3.22	6.72E-05	0.002165
<i>CCL2</i>	3.22	4.59E-09	2.71E-07
<i>LILRA6</i>	3.21	0	0
<i>MIR223</i>	3.21	1.02E-08	5.77E-07
<i>HCK</i>	3.17	0	0
<i>SIRPB1</i>	3.17	0	0
<i>TLR4</i>	3.14	0	0
<i>LILRA1</i>	3.13	3.15E-10	2.11E-08
<i>CLEC4E</i>	3.13	1.11E-16	1.18E-14
<i>P2RY13</i>	3.12	0	0
<i>CST7</i>	3.12	0	0
<i>CXORF21</i>	3.10	3.08E-08	1.64E-06
<i>PLEK</i>	3.07	0	0
<i>NLRP12</i>	3.06	8.81E-11	6.09E-09
<i>C19ORF35</i>	3.04	9.43E-07	4.24E-05
<i>GPR84</i>	3.04	9.77E-07	4.35E-05
<i>FYB</i>	3.01	0	0
<i>MMP25</i>	2.99	0	0
<i>SRGN</i>	2.99	0	0
<i>NLRP6</i>	2.99	1.66E-13	1.41E-11
<i>EGR2</i>	2.98	2.22E-16	2.33E-14
<i>GLT1D1</i>	2.98	0	0
<i>FCGR3A</i>	2.98	0	0
<i>SIGLEC9</i>	2.97	3.03E-11	2.17E-09
<i>CEACAM4</i>	2.95	4.21E-08	2.2E-06
<i>HCAR3</i>	2.94	0	0
<i>CACNA1E</i>	2.93	1.79E-05	0.000642
<i>SKAP2</i>	2.88	0	0
<i>RGS18</i>	2.88	7.33E-11	5.16E-09
<i>CPA3</i>	2.87	5.12E-07	2.38E-05
<i>NLRC4</i>	2.86	1.2E-08	6.68E-07
<i>FGR</i>	2.85	0	0
<i>CD69</i>	2.85	0	0
<i>G0S2</i>	2.84	0	0
<i>FCGR1A</i>	2.84	0	0
<i>GPR97</i>	2.84	0	0
<i>SELL</i>	2.83	0	0
<i>MRVI1</i>	2.82	8.99E-14	7.75E-12
<i>GIMAP4</i>	2.82	0	0
<i>APBB1IP</i>	2.82	0	0
<i>TPSB2</i>	2.80	1.2E-08	6.68E-07
<i>SIRPB2</i>	2.78	8.53E-10	5.46E-08

<i>PTHLH</i>	2.77	1.55E-06	6.7E-05
<i>EMR2</i>	2.76	0	0
<i>C19ORF59</i>	2.75	0	0
<i>GPR65</i>	2.74	0	0
<i>RGS2</i>	2.72	0	0
<i>SNX20</i>	2.72	3.89E-15	3.62E-13
<i>EMR3</i>	2.72	1.67E-15	1.61E-13
<i>NTNG2</i>	2.70	3.02E-08	1.61E-06
<i>CCR3</i>	2.68	3.51E-06	0.000141
<i>PTPRC</i>	2.68	0	0
<i>C10RF38</i>	2.67	0	0
<i>JAK3</i>	2.67	0	0
<i>NCF1</i>	2.67	0	0
<i>THBD</i>	2.67	0	0
<i>GNLY</i>	2.65	1.57E-08	8.6E-07
<i>HSPA6</i>	2.64	0	0
<i>SPI1</i>	2.63	0	0
<i>NCF1C</i>	2.62	6.36E-13	5.22E-11
<i>OSM</i>	2.62	0	0
<i>GGT5</i>	2.62	0.000237	0.00662
<i>CCL24</i>	2.61	8.09E-07	3.72E-05
<i>IL1R2</i>	2.60	0	0
<i>EVI2B</i>	2.59	0	0
<i>NLRP3</i>	2.58	7.77E-16	7.61E-14
<i>MMP12</i>	2.58	8.66E-08	4.39E-06
<i>LILRA2</i>	2.57	1.58E-14	1.41E-12
<i>PADI2</i>	2.57	0	0
<i>DOK3</i>	2.55	0	0
<i>SNX10</i>	2.54	3.33E-16	3.48E-14
<i>S1PR4</i>	2.53	4E-15	3.71E-13
<i>CD300A</i>	2.53	0	0
<i>CXCL13</i>	2.53	0.000208	0.005896
<i>IGSF6</i>	2.53	0	0
<i>SIGLEC5</i>	2.52	3.14E-13	2.62E-11
<i>IL1A</i>	2.52	1.67E-07	8.31E-06
<i>PHOSPHO</i>	2.50	1.11E-16	1.18E-14
<i>SLC2A3</i>	2.50	0	0
<i>LAT2</i>	2.48	0	0
<i>SIGLEC10</i>	2.48	1.11E-16	1.18E-14
<i>DNAJC12</i>	2.48	0.000815	0.019593
<i>LMNB1</i>	2.47	0	0
<i>FCER1G</i>	2.46	0	0
<i>GBP5</i>	2.45	0	0
<i>GZMB</i>	2.45	8.51E-10	5.46E-08
<i>EVI2A</i>	2.45	7.22E-15	6.54E-13
<i>CYTH4</i>	2.44	0	0
<i>MYO1F</i>	2.44	0	0
<i>RASSF2</i>	2.44	0	0
<i>NCF4</i>	2.43	0	0
<i>PLXNC1</i>	2.43	0	0

<i>LCP2</i>	2.41	0	0
<i>SAMSN1</i>	2.41	0	0
<i>ARHGAP1!</i>	2.40	8.9E-12	6.68E-10
<i>HAL</i>	2.40	1.34E-09	8.26E-08
<i>BEST1</i>	2.40	8.69E-11	6.04E-09
<i>GMFG</i>	2.39	0	0
<i>CDA</i>	2.39	5.54E-09	3.2E-07
<i>EGR3</i>	2.39	0	0
<i>GATA2</i>	2.39	0.000457	0.011833
<i>TREM1</i>	2.38	0	0
<i>BCL2A1</i>	2.36	0	0
<i>S100A12</i>	2.35	8.39E-13	6.82E-11
<i>FCGR2B</i>	2.35	1.05E-08	5.9E-07
<i>GAPT</i>	2.33	1.23E-07	6.2E-06
<i>TNFAIP8L2</i>	2.33	4.49E-06	0.000179
<i>CD53</i>	2.33	0	0
<i>SLA</i>	2.31	0	0
<i>LOC64380.</i>	2.31	3.8E-05	0.001268
<i>NCF1B</i>	2.31	3E-07	1.45E-05
<i>LOC10027.</i>	2.31	1.08E-08	6.06E-07
<i>LST1</i>	2.31	0	0
<i>LRRK2</i>	2.31	0	0
<i>BTG2</i>	2.31	0	0
<i>SLC8A1</i>	2.30	4.1E-08	2.15E-06
<i>AMICA1</i>	2.30	0	0
<i>FOS</i>	2.29	0	0
<i>ALOX5AP</i>	2.29	0	0
<i>LCP1</i>	2.29	0	0
<i>LRRC25</i>	2.28	9.88E-15	8.9E-13
<i>KIAA0226L</i>	2.28	1.89E-15	1.79E-13
<i>MS4A1</i>	2.27	9.28E-05	0.002887
<i>FGL2</i>	2.27	0	0
<i>IFIT2</i>	2.27	0	0
<i>WAS</i>	2.26	0	0
<i>AIM2</i>	2.26	1.25E-05	0.000461
<i>APOBEC3/</i>	2.25	0	0
<i>CYTIP</i>	2.24	0	0
<i>RGS1</i>	2.23	4.07E-11	2.9E-09
<i>CD93</i>	2.23	6.66E-16	6.6E-14
<i>RAC2</i>	2.22	0	0
<i>ZBP1</i>	2.22	5.54E-08	2.86E-06
<i>ST3GAL2</i>	2.22	1.71E-13	1.44E-11
<i>CCL4</i>	2.21	3.73E-09	2.22E-07
<i>CD48</i>	2.21	3.05E-12	2.37E-10
<i>WIPF1</i>	2.21	0	0
<i>KRT14</i>	2.20	0	0
<i>ARHGAP2!</i>	2.20	1.11E-16	1.18E-14
<i>PECAM1</i>	2.19	1.89E-15	1.79E-13
<i>GCA</i>	2.19	0	0
<i>PRKCB</i>	2.18	4.15E-14	3.64E-12

<i>CD274</i>	2.17	1.89E-15	1.79E-13
<i>TNFRSF1E</i>	2.16	0	0
<i>FCAR</i>	2.16	2.02E-14	1.8E-12
<i>TPSAB1</i>	2.15	6.05E-09	3.48E-07
<i>DGAT2</i>	2.14	0	0
<i>CCL26</i>	2.14	9.47E-05	0.00294
<i>CLEC10A</i>	2.13	7.96E-06	0.000307
<i>CLEC4A</i>	2.13	1.93E-09	1.18E-07
<i>AOAH</i>	2.12	2.11E-09	1.28E-07
<i>FLI1</i>	2.12	1.73E-10	1.18E-08
<i>NAIP</i>	2.12	5.09E-09	2.97E-07
<i>C3AR1</i>	2.11	9.14E-10	5.76E-08
<i>CLEC12A</i>	2.11	0.000186	0.005369
<i>SLC11A1</i>	2.10	0	0
<i>HLX</i>	2.09	8.75E-08	4.42E-06
<i>SOCS3</i>	2.08	0	0
<i>IFITM2</i>	2.06	0	0
<i>PILRA</i>	2.06	2.44E-13	2.05E-11
<i>TYROBP</i>	2.05	0	0
<i>ITGAX</i>	2.05	0	0
<i>FLJ45445</i>	2.05	1.11E-16	1.18E-14
<i>CD300LB</i>	2.04	2.07E-05	0.000735
<i>AIF1</i>	2.04	4.11E-15	3.79E-13
<i>ITGB2</i>	2.03	0	0
<i>GBGT1</i>	2.02	0.000516	0.013159
<i>ICAM4</i>	2.01	0.000175	0.005108
<i>GPR183</i>	2.00	5.37E-09	3.11E-07
<i>CHI3L1</i>	2.00	3.76E-13	3.12E-11
<i>SH2B2</i>	2.00	4.65E-09	2.74E-07
<i>LILRB1</i>	1.99	4.68E-06	0.000186
<i>PADI4</i>	1.99	2.02E-05	0.000721
<i>CCR2</i>	1.99	0.001585	0.035744
<i>GZMH</i>	1.97	5.24E-05	0.001723
<i>VNN2</i>	1.97	0	0
<i>RASGRP2</i>	1.97	1.51E-08	8.34E-07
<i>SIGLEC14</i>	1.96	3.68E-06	0.000148
<i>ICAM1</i>	1.96	0	0
<i>SERPINB9</i>	1.95	7.73E-14	6.73E-12
<i>CISH</i>	1.93	8.63E-10	5.49E-08
<i>CXCL9</i>	1.92	2.22E-12	1.74E-10
<i>ALOX5</i>	1.91	4.44E-16	4.61E-14
<i>CD37</i>	1.90	3.72E-12	2.86E-10
<i>CD163</i>	1.89	8.67E-11	6.04E-09
<i>KIAA1949</i>	1.89	2.22E-16	2.33E-14
<i>ICAM3</i>	1.89	1.11E-16	1.18E-14
<i>ZEB2</i>	1.88	1.77E-11	1.3E-09
<i>CCL22</i>	1.86	4E-07	1.89E-05
<i>SELPLG</i>	1.86	2.89E-15	2.71E-13
<i>TIGIT</i>	1.86	0.000485	0.012473
<i>COL17A1</i>	1.86	3.57E-07	1.7E-05

<i>TBXAS1</i>	1.85	6.41E-11	4.53E-09
<i>DNASE1L3</i>	1.85	2.51E-05	0.000873
<i>SLC19A1</i>	1.84	3.59E-09	2.15E-07
<i>SH2D3C</i>	1.83	1.04E-08	5.88E-07
<i>PTGS2</i>	1.83	0	0
<i>FPR3</i>	1.82	2.18E-06	9.11E-05
<i>FAM157A</i>	1.82	4.81E-06	0.00019
<i>PLAUR</i>	1.82	1.11E-16	1.18E-14
<i>ARHGAP9</i>	1.81	2.22E-14	1.97E-12
<i>SOD2</i>	1.81	0	0
<i>CYBB</i>	1.80	4.76E-13	3.93E-11
<i>KLRD1</i>	1.80	0.000741	0.018127
<i>BTB</i>	1.79	9.84E-06	0.000371
<i>LOC100501</i>	1.78	0.000387	0.010211
<i>FMNL1</i>	1.78	7.77E-16	7.61E-14
<i>CD209</i>	1.78	4.55E-05	0.001503
<i>PPP1R3B</i>	1.77	1.64E-12	1.29E-10
<i>EGR1</i>	1.76	6.66E-16	6.6E-14
<i>COL18A1</i>	1.76	2.42E-11	1.75E-09
<i>CFP</i>	1.76	9.32E-10	5.83E-08
<i>APOBR</i>	1.75	1.01E-13	8.62E-12
<i>C5AR1</i>	1.75	6.66E-16	6.6E-14
<i>NKG7</i>	1.75	1.22E-06	5.35E-05
<i>ADAM19</i>	1.74	1.37E-08	7.59E-07
<i>NCF2</i>	1.74	1.44E-15	1.4E-13
<i>OSCAR</i>	1.74	8.65E-06	0.000331
<i>ACSL1</i>	1.72	5.55E-16	5.68E-14
<i>CD1E</i>	1.72	0.000151	0.004469
<i>PLXDC2</i>	1.72	6.45E-07	2.99E-05
<i>MMP9</i>	1.72	2.74E-12	2.14E-10
<i>C19ORF38</i>	1.72	1.46E-05	0.000532
<i>LOC72973</i>	1.71	3.07E-12	2.37E-10
<i>S100A2</i>	1.71	6.66E-16	6.6E-14
<i>CD86</i>	1.70	2.08E-06	8.7E-05
<i>SERPINA1</i>	1.69	4.22E-15	3.87E-13
<i>LTB</i>	1.69	4.51E-10	3E-08
<i>ADAM8</i>	1.69	6.66E-15	6.07E-13
<i>PIK3AP1</i>	1.68	1.16E-12	9.26E-11
<i>DOCK11</i>	1.68	2.6E-08	1.4E-06
<i>MLKL</i>	1.68	7.67E-10	4.97E-08
<i>LOC100133</i>	1.68	2.97E-08	1.59E-06
<i>NAMPT</i>	1.68	5.55E-16	5.68E-14
<i>PLA2G7</i>	1.68	1.61E-05	0.00058
<i>RCSD1</i>	1.68	1.84E-07	9.06E-06
<i>ZEB1</i>	1.68	0.000305	0.008291
<i>GNG2</i>	1.67	3.47E-08	1.83E-06
<i>BIN2</i>	1.67	2.26E-11	1.64E-09
<i>PIK3R5</i>	1.66	1.46E-11	1.08E-09
<i>DOK2</i>	1.66	1.94E-06	8.17E-05
<i>NHSL2</i>	1.66	0.00012	0.003667

<i>GBP1</i>	1.65	9.69E-14	8.3E-12
<i>F13A1</i>	1.65	0.000282	0.007715
<i>RHOH</i>	1.64	1.86E-07	9.11E-06
<i>GIMAP8</i>	1.64	0.000271	0.007453
<i>CD1C</i>	1.64	0.000193	0.005528
<i>PFKFB3</i>	1.63	3.79E-14	3.33E-12
<i>IL7R</i>	1.63	0.000164	0.004806
<i>BTNL8</i>	1.62	0.000231	0.006503
<i>CFD</i>	1.61	1.62E-10	1.1E-08
<i>COTL1</i>	1.61	8.42E-14	7.29E-12
<i>CLEC5A</i>	1.60	0.000804	0.019388
<i>GBP2</i>	1.59	8.29E-13	6.77E-11
<i>SIRPA</i>	1.59	4.37E-12	3.34E-10
<i>IL2RG</i>	1.59	1.72E-11	1.27E-09
<i>KCNJ2</i>	1.59	4.12E-09	2.44E-07
<i>DOCK2</i>	1.59	1.09E-09	6.76E-08
<i>GIMAP6</i>	1.57	6.47E-06	0.000252
<i>POSTN</i>	1.57	1.88E-06	7.94E-05
<i>MS4A4A</i>	1.57	0.002202	0.047234
<i>FAM26F</i>	1.57	3.18E-05	0.001084
<i>IKZF1</i>	1.57	3.3E-09	1.98E-07
<i>CD14</i>	1.57	1.14E-12	9.11E-11
<i>WDFY4</i>	1.56	1.79E-07	8.83E-06
<i>FERMT3</i>	1.56	5.23E-11	3.71E-09
<i>SH2D2A</i>	1.56	0.000672	0.016698
<i>PREX1</i>	1.55	9.51E-13	7.69E-11
<i>HCAR2</i>	1.54	6.79E-12	5.12E-10
<i>HLA-DQA2</i>	1.54	2.66E-09	1.61E-07
<i>CD177</i>	1.53	8.49E-11	5.95E-09
<i>LOC28475</i>	1.52	0.001139	0.026493
<i>PFKFB4</i>	1.52	1.76E-06	7.45E-05
<i>LAIR1</i>	1.51	4.91E-07	2.29E-05
<i>SLC25A37</i>	1.51	9.54E-12	7.13E-10
<i>SLAMF8</i>	1.50	2.11E-05	0.000749
<i>HBEGF</i>	1.50	1.56E-06	6.73E-05
<i>IRF4</i>	1.50	0.001337	0.03063
<i>LAPTM5</i>	1.50	1.11E-12	8.89E-11
<i>GPR34</i>	1.49	0.001075	0.025196
<i>CORO1A</i>	1.49	4.48E-12	3.41E-10
<i>OBFC2A</i>	1.49	2.09E-10	1.41E-08
<i>IL10RA</i>	1.48	2.93E-08	1.57E-06
<i>LY96</i>	1.48	9.4E-06	0.000357
<i>UNC13D</i>	1.48	5.85E-10	3.84E-08
<i>FGD3</i>	1.47	6.26E-10	4.1E-08
<i>SEMA6B</i>	1.45	1.46E-06	6.35E-05
<i>FAM101B</i>	1.45	1.58E-06	6.76E-05
<i>CELF2</i>	1.45	8.39E-09	4.78E-07
<i>LILRB4</i>	1.45	1.09E-05	0.000401
<i>CDC6</i>	1.44	0.001286	0.029515
<i>ADAMDEC</i>	1.44	2.8E-05	0.000968

<i>C1ORF183</i>	1.44	6.67E-07	3.08E-05
<i>PTPRE</i>	1.43	5.14E-10	3.4E-08
<i>DSC2</i>	1.43	4.28E-07	2.01E-05
<i>CD83</i>	1.43	2.36E-07	1.15E-05
<i>SERPINB4</i>	1.43	1.16E-10	7.93E-09
<i>IL6R</i>	1.42	8.21E-10	5.3E-08
<i>PSTPIP1</i>	1.42	6.24E-06	0.000243
<i>IL4I1</i>	1.42	2.97E-05	0.001019
<i>TNFSF14</i>	1.42	3.74E-05	0.001253
<i>ZNF683</i>	1.42	8.76E-05	0.002751
<i>MPP1</i>	1.41	1.65E-07	8.25E-06
<i>MXD1</i>	1.41	2.09E-11	1.53E-09
<i>DPEP2</i>	1.41	8.8E-06	0.000336
<i>IRF8</i>	1.41	1.58E-06	6.76E-05
<i>LRFN1</i>	1.41	0.000775	0.018865
<i>IL12RB1</i>	1.41	0.000327	0.008808
<i>PMP22</i>	1.40	0.000623	0.015621
<i>ADAMTSL4</i>	1.39	8.74E-07	3.96E-05
<i>MYO1G</i>	1.39	1.29E-06	5.67E-05
<i>SP140</i>	1.39	0.000105	0.003224
<i>CCR5</i>	1.38	1.6E-06	6.83E-05
<i>GAB3</i>	1.38	0.000126	0.003791
<i>NCKAP1L</i>	1.38	2.35E-07	1.15E-05
<i>PIK3CD</i>	1.37	5.28E-10	3.48E-08
<i>SOCS1</i>	1.37	0.001076	0.025196
<i>ARID3A</i>	1.36	0.00105	0.024695
<i>MOBK12A</i>	1.36	1.92E-09	1.18E-07
<i>EMP3</i>	1.36	2.45E-06	0.000101
<i>SCARF1</i>	1.36	3.79E-08	1.99E-06
<i>CCL3</i>	1.36	0.00013	0.003916
<i>KCNJ15</i>	1.36	1.49E-09	9.18E-08
<i>CCND2</i>	1.35	0.000234	0.006565
<i>SASH3</i>	1.35	2.13E-08	1.16E-06
<i>SOCS2</i>	1.35	0.000584	0.0147
<i>CD84</i>	1.34	3.19E-05	0.001085
<i>MFNG</i>	1.34	0.000259	0.007147
<i>SLAMF7</i>	1.34	8.21E-07	3.76E-05
<i>OLR1</i>	1.34	0.000696	0.017149
<i>FAM65B</i>	1.33	8.73E-10	5.53E-08
<i>TMEM176E</i>	1.33	4.55E-05	0.001503
<i>SLA2</i>	1.32	0.000911	0.021701
<i>GRAMD1A</i>	1.32	6.14E-08	3.16E-06
<i>SERPING1</i>	1.32	6.15E-08	3.16E-06
<i>TLE3</i>	1.32	2.43E-09	1.48E-07
<i>EMILIN2</i>	1.32	3.36E-06	0.000136
<i>PARVG</i>	1.32	9.64E-07	4.31E-05
<i>CSRNP1</i>	1.31	9.19E-10	5.77E-08
<i>TRPV2</i>	1.31	0.000327	0.008808
<i>LOC10030.</i>	1.31	1.43E-06	6.23E-05
<i>PRF1</i>	1.31	4.17E-05	0.001382

<i>PLEKHO2</i>	1.30	6.07E-09	3.48E-07
<i>S100A8</i>	1.30	1.99E-10	1.35E-08
<i>ELMO1</i>	1.30	0.000242	0.006744
<i>GVINP1</i>	1.29	0.000563	0.014217
<i>JUNB</i>	1.29	3.21E-10	2.15E-08
<i>HAVCR2</i>	1.29	0.000433	0.011293
<i>CBFA2T3</i>	1.29	0.000417	0.010912
<i>MSN</i>	1.29	1.24E-09	7.72E-08
<i>COL7A1</i>	1.28	3.92E-07	1.86E-05
<i>PTPN7</i>	1.28	3.03E-06	0.000123
<i>VNN1</i>	1.28	1.65E-06	7.04E-05
<i>MPEG1</i>	1.28	6.98E-08	3.57E-06
<i>GPSM3</i>	1.27	1.23E-08	6.81E-07
<i>NOD2</i>	1.27	8.35E-07	3.81E-05
<i>SSH2</i>	1.27	1.73E-08	9.42E-07
<i>TMEM176A</i>	1.27	0.000993	0.02351
<i>TLR6</i>	1.26	1.42E-05	0.000521
<i>ANKRD44</i>	1.26	1.54E-06	6.67E-05
<i>CXCR4</i>	1.26	3.3E-08	1.75E-06
<i>AATK</i>	1.25	8.17E-05	0.002595
<i>PIK3CG</i>	1.25	2.84E-05	0.000979
<i>IL32</i>	1.25	9.26E-07	4.17E-05
<i>DOCK10</i>	1.25	1.6E-05	0.000579
<i>CARD8</i>	1.25	7.66E-07	3.53E-05
<i>S100A9</i>	1.25	8.56E-10	5.46E-08
<i>RNF149</i>	1.25	5.1E-09	2.97E-07
<i>IFIT3</i>	1.25	1.66E-08	9.07E-07
<i>TGFB1</i>	1.24	8.18E-08	4.16E-06
<i>ADM</i>	1.24	3.33E-08	1.76E-06
<i>QPCT</i>	1.24	5.63E-06	0.00022
<i>FAM49A</i>	1.24	2.29E-05	0.000804
<i>SECTM1</i>	1.24	5.28E-09	3.07E-07
<i>ARL11</i>	1.23	0.001417	0.032277
<i>TNC</i>	1.23	3.62E-07	1.72E-05
<i>LGALS7B</i>	1.23	1.09E-05	0.000404
<i>FCHO1</i>	1.23	0.000471	0.012153
<i>SERPINE2</i>	1.22	5.26E-05	0.001725
<i>SEMA7A</i>	1.22	0.000116	0.003545
<i>CARD16</i>	1.22	9.52E-06	0.00036
<i>RCN3</i>	1.22	0.000187	0.005385
<i>TLR2</i>	1.21	1.02E-07	5.16E-06
<i>CPVL</i>	1.21	3.41E-05	0.001151
<i>AGAP2</i>	1.20	0.000369	0.009778
<i>KDM6B</i>	1.19	1.88E-08	1.02E-06
<i>STAB1</i>	1.19	3.15E-07	1.51E-05
<i>ABI3</i>	1.17	0.000162	0.004759
<i>PHACTR1</i>	1.17	0.000197	0.005635
<i>CSF1R</i>	1.17	2.42E-06	0.000101
<i>STX11</i>	1.16	8.94E-07	4.04E-05
<i>IDO1</i>	1.16	4.96E-08	2.58E-06

<i>RGS19</i>	1.16	2.94E-06	0.00012
<i>FES</i>	1.15	5.13E-06	0.000202
<i>DDX60L</i>	1.15	4.7E-07	2.2E-05
<i>COL6A2</i>	1.15	0.000642	0.016042
<i>NAPSB</i>	1.14	3.14E-05	0.001073
<i>TRPM2</i>	1.14	0.000831	0.019934
<i>FLNA</i>	1.13	1.77E-07	8.8E-06
<i>GZMA</i>	1.13	0.000687	0.017003
<i>LIMD2</i>	1.13	2.7E-06	0.000111
<i>LPCAT2</i>	1.13	5.29E-06	0.000208
<i>F5</i>	1.13	0.000261	0.007179
<i>CSF1</i>	1.12	0.000326	0.008789
<i>C8ORF4</i>	1.12	5.4E-06	0.000212
<i>SIPA1</i>	1.12	8.65E-07	3.93E-05
<i>LITAF</i>	1.12	5.18E-08	2.69E-06
<i>ENPP2</i>	1.11	0.001182	0.027389
<i>PTAFR</i>	1.11	2.23E-07	1.09E-05
<i>DQX1</i>	1.11	0.002042	0.044529
<i>LGALS1</i>	1.11	1.46E-05	0.000532
<i>AKAP12</i>	1.10	0.001208	0.02797
<i>ASAP1</i>	1.10	7.46E-06	0.000288
<i>ITGA5</i>	1.10	1.88E-05	0.000671
<i>PAG1</i>	1.10	7.71E-05	0.002454
<i>CD3E</i>	1.09	9.06E-05	0.002834
<i>GNG10</i>	1.09	4.02E-05	0.001338
<i>SLCO2B1</i>	1.09	6.89E-05	0.002217
<i>MBOAT7</i>	1.09	2.62E-07	1.27E-05
<i>PSTPIP2</i>	1.09	8.46E-05	0.002678
<i>ATG16L2</i>	1.08	8.53E-07	3.88E-05
<i>RASSF3</i>	1.08	2.61E-06	0.000108
<i>NDRG1</i>	1.08	3.99E-07	1.89E-05
<i>CD52</i>	1.06	0.000117	0.003553
<i>TGFB1</i>	1.06	4.29E-06	0.000172
<i>MS4A7</i>	1.06	0.001006	0.023749
<i>CXCL10</i>	1.06	0.000183	0.005288
<i>PTPN22</i>	1.06	0.001698	0.038023
<i>DPYSL2</i>	1.06	0.001835	0.040388
<i>STAT5B</i>	1.05	1.51E-06	6.54E-05
<i>RNASE6</i>	1.05	0.001605	0.036151
<i>COL1A2</i>	1.04	0.000711	0.017475
<i>DNAJB9</i>	1.04	8.34E-06	0.00032
<i>ADORA2A</i>	1.04	0.000806	0.019398
<i>RELB</i>	1.04	2.9E-05	0.000998
<i>CHSY1</i>	1.04	6.85E-06	0.000266
<i>TMEM71</i>	1.04	3.52E-05	0.001187
<i>DENND5A</i>	1.03	3.69E-06	0.000148
<i>KIAA0040</i>	1.03	2.35E-05	0.00082
<i>CSF3</i>	1.03	0.002309	0.049189
<i>IL4R</i>	1.03	1.42E-06	6.23E-05
<i>CD207</i>	1.03	0.001354	0.030933

<i>CXCL3</i>	1.02	0.000323	0.008735
<i>CHST11</i>	1.02	3.71E-05	0.001243
<i>PLEKHO1</i>	1.02	5.54E-05	0.001811
<i>SLC15A3</i>	1.02	2.11E-05	0.000747
<i>PLB1</i>	1.02	0.000236	0.006604
<i>CLEC7A</i>	1.01	3.19E-06	0.000129
<i>CXCL1</i>	1.01	1.19E-06	5.29E-05
<i>SP110</i>	1.01	2.29E-05	0.000804
<i>MS4A6A</i>	1.01	8.69E-05	0.00274
<i>TMEM140</i>	1.01	9.52E-05	0.002944
<i>NOTCH1</i>	1.01	4.66E-06	0.000185
<i>HAPLN3</i>	1.01	0.000524	0.013351
<i>NR4A3</i>	1.01	0.000484	0.012462
<i>ANXA6</i>	1.00	9.06E-05	0.002834
<i>ZNF438</i>	1.00	0.001896	0.041573
<i>CD300LF</i>	1.00	0.000126	0.003804
<i>ZFP36</i>	1.00	1.08E-06	4.79E-05
<i>FN1</i>	1.00	6.31E-05	0.002037
<i>TRAF3IP3</i>	0.99	0.000724	0.017768
<i>SPN</i>	0.99	0.00063	0.015755
<i>CCL5</i>	0.99	1.04E-05	0.00039
<i>IRF7</i>	0.99	1.04E-05	0.000392
<i>SDS</i>	0.99	0.000308	0.008358
<i>MIAT</i>	0.98	0.002198	0.047234
<i>IFITM1</i>	0.98	2.75E-06	0.000113
<i>IL20RB</i>	0.98	2.63E-05	0.000912
<i>DUSP2</i>	0.98	0.000125	0.003775
<i>GPR132</i>	0.97	0.001528	0.034552
<i>NOS2</i>	0.97	9.42E-06	0.000357
<i>PLD4</i>	0.97	0.001684	0.037764
<i>IL2RB</i>	0.97	0.000383	0.0101
<i>DUSP1</i>	0.97	2.2E-06	9.17E-05
<i>HCG26</i>	0.96	0.001515	0.034302
<i>HAS3</i>	0.96	0.000844	0.020184
<i>WARS</i>	0.96	2.68E-06	0.00011
<i>OASL</i>	0.96	0.000444	0.011541
<i>FSCN1</i>	0.96	0.000174	0.005089
<i>KRT40</i>	0.96	0.0022	0.047234
<i>BPIFA1</i>	0.95	1.99E-06	8.38E-05
<i>CKLF</i>	0.95	0.002183	0.047213
<i>TRAF1</i>	0.95	0.00028	0.007657
<i>MX2</i>	0.95	1.06E-05	0.000397
<i>GLIPR1</i>	0.95	0.000596	0.014994
<i>CRLF3</i>	0.95	0.000464	0.011995
<i>COL6A1</i>	0.94	0.001347	0.030825
<i>ZDHHC18</i>	0.94	1.06E-05	0.000396
<i>DPYSL3</i>	0.94	0.001249	0.028747
<i>IL1RAP</i>	0.93	7.13E-05	0.002281
<i>COL3A1</i>	0.93	0.002198	0.047234
<i>TNFAIP3</i>	0.93	1.08E-05	0.000401

<i>IGFLR1</i>	0.93	0.000678	0.016818
<i>GK</i>	0.93	1.33E-05	0.000486
<i>SLC26A4</i>	0.92	2.52E-05	0.000874
<i>ATHL1</i>	0.92	2.5E-05	0.000872
<i>IL18RAP</i>	0.92	0.001125	0.026237
<i>DOK1</i>	0.92	0.000837	0.020049
<i>TACC3</i>	0.92	0.000185	0.005353
<i>CLEC2B</i>	0.92	0.000179	0.005193
<i>VASP</i>	0.92	1.06E-05	0.000396
<i>SEPX1</i>	0.92	3.02E-05	0.001033
<i>FAM129A</i>	0.92	9.32E-06	0.000355
<i>HMHA1</i>	0.91	2.34E-05	0.00082
<i>SMCHD1</i>	0.91	1.6E-05	0.000579
<i>INPP5D</i>	0.91	9.24E-05	0.002885
<i>NFIL3</i>	0.91	0.000138	0.004114
<i>CASP1</i>	0.91	9.29E-05	0.002887
<i>RSAD2</i>	0.91	0.000137	0.004107
<i>IFI30</i>	0.91	1.08E-05	0.0004
<i>MUC2</i>	0.91	6.88E-06	0.000267
<i>SAMD9L</i>	0.91	2.98E-05	0.001021
<i>C1QA</i>	0.90	0.000243	0.006751
<i>SLC5A5</i>	0.90	0.001785	0.039581
<i>IL19</i>	0.90	0.000883	0.021058
<i>CD2</i>	0.90	0.00067	0.016679
<i>VIM</i>	0.90	1.6E-05	0.000579
<i>ITGAL</i>	0.89	0.0001	0.003084
<i>DOCK8</i>	0.89	5.09E-05	0.001679
<i>RHOG</i>	0.89	5.58E-05	0.001821
<i>NPL</i>	0.89	0.000508	0.012982
<i>HLA-DPB1</i>	0.89	1.68E-05	0.000603
<i>DUSP6</i>	0.89	8.37E-05	0.002656
<i>TLR1</i>	0.89	0.000142	0.004227
<i>NFKB2</i>	0.89	3.28E-05	0.001108
<i>RNASE1</i>	0.88	0.000224	0.006333
<i>FGD2</i>	0.88	0.001092	0.025511
<i>C1QB</i>	0.87	0.000313	0.008485
<i>IFITM3</i>	0.87	2.12E-05	0.000749
<i>SLCO3A1</i>	0.87	0.000737	0.018071
<i>MTHFD2</i>	0.87	0.000539	0.013683
<i>PYCR1</i>	0.87	0.000776	0.018865
<i>ARHGAP4</i>	0.87	0.000113	0.003452
<i>ACP5</i>	0.86	0.000158	0.004651
<i>ARID5A</i>	0.86	0.000227	0.006405
<i>COL1A1</i>	0.86	9.52E-05	0.002944
<i>ANTXR2</i>	0.86	0.00023	0.006478
<i>TRIB1</i>	0.86	6.16E-05	0.001999
<i>FOSB</i>	0.86	0.000125	0.003775
<i>SNHG5</i>	0.86	6.98E-05	0.00224
<i>HIP1</i>	0.85	0.00114	0.026493
<i>IFIT1</i>	0.85	0.000341	0.009113

<i>ACAP1</i>	0.85	0.00036	0.009557
<i>RASAL3</i>	0.85	0.001088	0.025441
<i>PDLIM7</i>	0.85	0.000199	0.005659
<i>MYADM</i>	0.85	7.51E-05	0.002397
<i>C7ORF74</i>	0.84	0.000348	0.00927
<i>NMI</i>	0.84	0.000348	0.00927
<i>CXCL6</i>	0.84	0.000274	0.007514
<i>BCL3</i>	0.84	6.16E-05	0.001999
<i>MCL1</i>	0.84	3.88E-05	0.001292
<i>EHD1</i>	0.84	6.13E-05	0.001996
<i>SAP25</i>	0.83	0.002147	0.046587
<i>XPO6</i>	0.83	5.25E-05	0.001723
<i>PNRC1</i>	0.83	8.76E-05	0.002751
<i>MAST3</i>	0.83	0.000333	0.008927
<i>UBD</i>	0.83	0.000861	0.020554
<i>GCNT3</i>	0.83	0.000221	0.006265
<i>ARHGAP30</i>	0.83	0.000101	0.003096
<i>LPCAT1</i>	0.83	0.000341	0.009121
<i>IL16</i>	0.83	0.000503	0.012872
<i>BST2</i>	0.82	0.000157	0.004636
<i>MMP1</i>	0.82	0.000418	0.010915
<i>ZYX</i>	0.82	6.3E-05	0.002037
<i>BTN3A1</i>	0.82	0.000165	0.004835
<i>IL17RA</i>	0.82	0.000155	0.004588
<i>LPXN</i>	0.82	0.001747	0.038889
<i>B3GNT6</i>	0.82	0.001713	0.038298
<i>PTPRJ</i>	0.81	0.000148	0.00439
<i>ALPL</i>	0.81	7.03E-05	0.002253
<i>DENND3</i>	0.81	0.000217	0.006141
<i>FAM49B</i>	0.81	0.000196	0.005595
<i>RAB8B</i>	0.81	0.000987	0.023388
<i>FXYS5</i>	0.81	0.000645	0.016078
<i>ABTB1</i>	0.81	0.00019	0.005469
<i>CD97</i>	0.80	9.63E-05	0.002972
<i>C12ORF35</i>	0.80	0.000148	0.004391
<i>TRANK1</i>	0.80	0.000354	0.0094
<i>LSP1</i>	0.79	0.000128	0.003852
<i>RNF24</i>	0.79	0.001245	0.0287
<i>GMIP</i>	0.79	0.000294	0.007996
<i>LYST</i>	0.79	0.000528	0.013433
<i>CEBPB</i>	0.79	0.000147	0.004383
<i>C1QC</i>	0.79	0.000786	0.019088
<i>CNN2</i>	0.78	0.000149	0.004416
<i>FAM53C</i>	0.78	0.000404	0.010583
<i>CECR1</i>	0.78	0.000486	0.012481
<i>OAS3</i>	0.77	0.000287	0.007825
<i>PTPRCAP</i>	0.77	0.001659	0.037295
<i>PPM1F</i>	0.77	0.000696	0.017149
<i>MGAM</i>	0.77	0.000451	0.011693
<i>PIM2</i>	0.76	0.000763	0.018611

<i>TAP1</i>	0.76	0.0002	0.005688
<i>AMPD2</i>	0.76	0.000395	0.010383
<i>DSE</i>	0.75	0.001455	0.032989
<i>XAF1</i>	0.75	0.000545	0.013813
<i>CD44</i>	0.75	0.000255	0.007057
<i>IVNS1ABP</i>	0.75	0.000249	0.006923
<i>IL1RN</i>	0.75	0.000275	0.007535
<i>ACSL4</i>	0.75	0.001215	0.028075
<i>SORL1</i>	0.74	0.000258	0.007142
<i>CBL</i>	0.74	0.001663	0.037334
<i>TLN1</i>	0.73	0.000376	0.009947
<i>LPAR2</i>	0.73	0.00143	0.032538
<i>MANF</i>	0.73	0.000802	0.019358
<i>ENTPD1</i>	0.73	0.001795	0.039736
<i>HLA-DPA1</i>	0.72	0.000403	0.010582
<i>SERPINB1</i>	0.72	0.000502	0.012861
<i>NFKBIZ</i>	0.71	0.00069	0.017059
<i>DOCK5</i>	0.70	0.001782	0.039553
<i>PPP1R10</i>	0.70	0.001074	0.025196
<i>BACH1</i>	0.70	0.00176	0.039133
<i>STK10</i>	0.70	0.001223	0.028227
<i>RAB24</i>	0.70	0.001439	0.032685
<i>TMEM154</i>	0.69	0.001868	0.041019
<i>CASP4</i>	0.69	0.000985	0.023388
<i>TFF3</i>	0.69	0.000743	0.018156
<i>ISG15</i>	0.69	0.002268	0.048515
<i>ARRB2</i>	0.69	0.0008	0.019335
<i>ISG20</i>	0.69	0.002322	0.049403
<i>ACTB</i>	0.69	0.000583	0.014699
<i>HSH2D</i>	0.68	0.001915	0.041925
<i>PTPN6</i>	0.68	0.001171	0.02719
<i>KRT5</i>	0.67	0.001004	0.023721
<i>HLA-DRA</i>	0.67	0.000799	0.019335
<i>IER2</i>	0.67	0.000958	0.022769
<i>STK17B</i>	0.66	0.002164	0.046857
<i>TFF1</i>	0.66	0.001951	0.042661
<i>C15ORF48</i>	0.66	0.001718	0.038299
<i>ACTR3</i>	0.65	0.001581	0.0357
<i>RARRES1</i>	0.65	0.001411	0.032198
<i>OAS1</i>	0.64	0.001818	0.04019
<i>UC011MF+</i>	0.64	0.001278	0.029377
<i>CCDC88B</i>	0.64	0.002095	0.045539
<i>SBNO2</i>	0.64	0.001718	0.038299
<i>SEC14L1</i>	0.64	0.001833	0.040388
<i>KRT17</i>	0.63	0.002149	0.046587
<i>TYMP</i>	0.63	0.001842	0.040495
<i>PARP14</i>	0.63	0.002211	0.047355
<i>ZFP36L1</i>	0.62	0.002297	0.04907
<i>PRSS27</i>	-0.73	0.001823	0.040257
<i>SCGB1A1</i>	-0.73	0.000243	0.006751

<i>ALDH1A3</i>	-0.73	0.000331	0.008876
<i>HSPB8</i>	-0.74	0.000417	0.010912
<i>KRT78</i>	-0.76	0.001013	0.023877
<i>KLK13</i>	-0.77	0.002305	0.049162
<i>NDRG4</i>	-0.79	0.002089	0.045472
<i>EMP1</i>	-0.79	0.000123	0.003738
<i>KLK6</i>	-0.86	0.000443	0.011536
<i>TMPRSS1</i>	-0.88	8.56E-05	0.002705
<i>SPRR3</i>	-0.93	2.83E-06	0.000115
<i>PRSS3</i>	-0.97	0.000561	0.014184
<i>SPRR1A</i>	-1.01	9.46E-07	4.24E-05
<i>CYP26A1</i>	-1.03	2.22E-05	0.000784
<i>ASPRV1</i>	-1.09	3.57E-05	0.001201
<i>CNFN</i>	-1.10	2.87E-07	1.39E-05
<i>TRPV3</i>	-1.11	0.001978	0.043185
<i>PAMR1</i>	-1.12	0.00018	0.005226
<i>AHRR</i>	-1.13	0.002194	0.047234
<i>RNASE7</i>	-1.17	0.000183	0.005288
<i>FAM69B</i>	-1.17	0.000685	0.016973
<i>KLK12</i>	-1.42	3.23E-05	0.001095
<i>ECM1</i>	-1.42	2.57E-11	1.85E-09
<i>MAL</i>	-1.42	1.15E-10	7.93E-09
<i>RPTN</i>	-1.46	6.68E-12	5.06E-10
<i>RHCG</i>	-1.52	7.42E-08	3.78E-06
<i>SBSN</i>	-1.56	7.3E-10	4.76E-08
<i>KLK9</i>	-1.61	1.63E-05	0.000587
<i>ENAM</i>	-1.62	0.000609	0.015283
<i>ARTN</i>	-1.79	1.71E-06	7.28E-05
<i>RNF222</i>	-1.81	1.21E-06	5.35E-05
<i>LCE3E</i>	-2.04	0.002194	0.047234
<i>LCE3D</i>	-2.13	3.11E-07	1.5E-05
<i>CLDN17</i>	-2.15	2.54E-06	0.000105
<i>FAM25A</i>	-2.17	8.2E-09	4.69E-07
<i>CRCT1</i>	-2.30	0	0
<i>CRNN</i>	-2.49	0	0
<i>TMPRSS1</i>	-2.52	0	0
<i>SPINK7</i>	-2.58	0	0
<i>CDSN</i>	-2.82	0	0
<i>FLG</i>	-2.90	0	0
<i>CYP1B1</i>	-2.95	0	0
<i>HCG22</i>	-2.98	0.000795	0.019281
<i>KPRP</i>	-3.06	4.82E-06	0.00019
<i>CYP1A1</i>	-16.93	0	0

M+ vs. M- @ Post-exposure 4

Genes	Log ₂ FC	pvalsGLM	padjGLM
<i>HBB</i>	7.95	0	0
<i>HBA2</i>	7.13	0	0
<i>MMP3</i>	5.77	0	0
<i>HBA1</i>	4.89	8.79E-10	3.74E-07
<i>PDGFRB</i>	3.98	1.46E-10	7.42E-08
<i>CST1</i>	3.95	0	0
<i>CLC</i>	3.92	2.28E-08	7.49E-06
<i>IL11</i>	3.49	1.01E-10	5.49E-08
<i>BGN</i>	3.47	1.05E-07	3.01E-05
<i>COL6A2</i>	3.46	0	0
<i>MMP1</i>	3.27	0	0
<i>COL1A2</i>	3.00	0	0
<i>COL3A1</i>	2.94	0	0
<i>LUM</i>	2.84	3.36E-05	0.0043
<i>P2RY14</i>	2.70	6.17E-09	2.37E-06
<i>COL6A3</i>	2.61	1.58E-10	7.79E-08
<i>STC1</i>	2.47	5.26E-08	1.57E-05
<i>CCL24</i>	2.46	2.31E-06	0.000455
<i>GGT5</i>	2.42	0.000428	0.032556
<i>SPARC</i>	2.35	1.2E-08	4.1E-06
<i>CPA3</i>	2.34	9.68E-05	0.009875
<i>POSTN</i>	2.28	1.09E-10	5.72E-08
<i>CCR3</i>	2.20	3.09E-05	0.00402
<i>FN1</i>	2.02	1.26E-13	9.96E-11
<i>F13A1</i>	2.00	2.14E-05	0.002958
<i>PNMA2</i>	1.96	4.78E-06	0.000805
<i>LPL</i>	1.95	0.000204	0.017599
<i>PNMAL1</i>	1.91	1.67E-05	0.00244
<i>CCL22</i>	1.78	1.74E-06	0.000366
<i>CD1E</i>	1.74	0.000182	0.015954
<i>B3GNT6</i>	1.64	1.14E-09	4.74E-07
<i>SAA2-SAA</i>	1.63	0.000112	0.010955
<i>SLC5A5</i>	1.61	3.2E-08	1.01E-05
<i>CD300LB</i>	1.60	0.00052	0.037576
<i>AEBP1</i>	1.59	0.000414	0.031665
<i>MMP2</i>	1.58	8.64E-05	0.009393
<i>TNC</i>	1.58	2.36E-10	1.13E-07
<i>GEMC1</i>	1.55	0.000435	0.032965
<i>GAPT</i>	1.55	0.000242	0.020434
<i>CAPN14</i>	1.52	3.15E-08	1.01E-05
<i>COL6A1</i>	1.47	1.7E-06	0.000362
<i>CHI3L1</i>	1.47	4.47E-08	1.35E-05
<i>DQX1</i>	1.46	4.77E-05	0.005829
<i>GBP5</i>	1.44	6.04E-11	3.53E-08
<i>BPIFA1</i>	1.40	5.24E-12	3.31E-09
<i>CCL3</i>	1.37	7.47E-05	0.008233
<i>SERPING1</i>	1.34	4.27E-08	1.32E-05
<i>CD86</i>	1.32	0.000272	0.022452

<i>GIMAP4</i>	1.30	3.79E-05	0.004817
<i>CDH26</i>	1.30	1.69E-08	5.66E-06
<i>SLC17A9</i>	1.23	6.68E-06	0.001097
<i>CD69</i>	1.22	6.59E-05	0.007472
<i>CLDN10</i>	1.22	4.8E-06	0.000805
<i>CSF1</i>	1.21	0.00014	0.012946
<i>DPYSL3</i>	1.20	6.03E-05	0.007142
<i>SERPINE1</i>	1.20	0.000441	0.033273
<i>DPEP2</i>	1.18	0.000159	0.014417
<i>FCGR1A</i>	1.17	6.51E-05	0.007441
<i>UBD</i>	1.17	4.73E-06	0.000805
<i>COL1A1</i>	1.17	1.75E-07	4.84E-05
<i>CXCL9</i>	1.15	2E-05	0.002812
<i>EGR2</i>	1.15	0.000514	0.03734
<i>SIGLEC10</i>	1.15	4.35E-05	0.005403
<i>CYBB</i>	1.15	2.82E-06	0.000538
<i>GPR183</i>	1.14	0.000718	0.048601
<i>C8ORF4</i>	1.14	3.9E-06	0.000684
<i>EVI2A</i>	1.13	0.00016	0.014435
<i>NOS2</i>	1.13	2.86E-07	7.28E-05
<i>FCGR3A</i>	1.11	1.94E-06	0.000392
<i>HLA-DQA2</i>	1.10	1.96E-05	0.002796
<i>FCGR3B</i>	1.09	2.07E-07	5.64E-05
<i>NFAM1</i>	1.06	1.48E-05	0.002222
<i>TAGAP</i>	1.05	2.45E-06	0.000478
<i>FOS</i>	1.05	3.31E-07	8.29E-05
<i>SLC16A14</i>	1.05	0.000621	0.043089
<i>PHOSPHO</i>	1.02	0.0002	0.017337
<i>EGR1</i>	1.02	1.61E-06	0.000353
<i>NR4A1</i>	1.00	2.99E-06	0.000561
<i>FGL2</i>	1.00	2.33E-05	0.003136
<i>SLFN11</i>	0.99	0.000119	0.01141
<i>SDC2</i>	0.98	0.000646	0.044676
<i>SYT5</i>	0.97	1.33E-05	0.002023
<i>TFF3</i>	0.97	2.83E-06	0.000538
<i>SAA2</i>	0.97	1.97E-05	0.002796
<i>HLA-DOA</i>	0.96	0.000112	0.010955
<i>FCGBP</i>	0.96	2.01E-06	0.000401
<i>SAA1</i>	0.96	5.08E-06	0.000844
<i>MNDA</i>	0.95	1.05E-05	0.001675
<i>APBB1IP</i>	0.95	0.00017	0.015183
<i>LRRC25</i>	0.94	0.000724	0.048759
<i>WARS</i>	0.90	1.1E-05	0.001738
<i>C2ORF40</i>	0.90	5.19E-05	0.006249
<i>EVI2B</i>	0.89	0.000114	0.011114
<i>NCF1</i>	0.88	0.000395	0.030401
<i>IFIT2</i>	0.88	0.000123	0.011712
<i>LILRB3</i>	0.87	0.000325	0.025866
<i>CMYA5</i>	0.87	0.000571	0.04035
<i>EPPK1</i>	0.87	0.000187	0.016307

<i>ARHGAP2</i>	0.87	0.000538	0.038611
<i>WAS</i>	0.87	0.000338	0.026808
<i>MMP25</i>	0.86	6.9E-05	0.007768
<i>WIPF1</i>	0.85	0.000172	0.015184
<i>CXCR2</i>	0.85	7.1E-05	0.007941
<i>BPIFB1</i>	0.85	2.39E-05	0.003199
<i>CCR1</i>	0.84	0.00047	0.035269
<i>TNFRSF10</i>	0.83	0.000225	0.019067
<i>VNN2</i>	0.82	0.000159	0.014417
<i>GBP1</i>	0.81	0.000172	0.015184
<i>HLA-DPB1</i>	0.81	9.22E-05	0.009691
<i>VIM</i>	0.80	0.000117	0.011272
<i>CECR1</i>	0.80	0.000345	0.027228
<i>HLA-DRA</i>	0.79	8.77E-05	0.009417
<i>HLA-DPA1</i>	0.79	0.000129	0.012098
<i>SERPINB4</i>	0.78	0.000305	0.024627
<i>RGS2</i>	0.78	0.000161	0.014435
<i>CD177</i>	0.78	0.000733	0.049086
<i>SLC9A3</i>	0.78	0.000244	0.02047
<i>MYO1F</i>	0.77	0.000249	0.020789
<i>CXCR1</i>	0.77	0.00036	0.028086
<i>MYADM</i>	0.74	0.00049	0.036265
<i>OSM</i>	0.74	0.000656	0.045151
<i>ITGB2</i>	0.71	0.000692	0.047228
<i>CD74</i>	0.70	0.000496	0.036376
<i>MUC2</i>	0.69	0.000539	0.038611
<i>TMPRSS2</i>	-0.70	0.000547	0.039038
<i>PITX1</i>	-0.73	0.000359	0.028086
<i>PHACTR2</i>	-0.73	0.000718	0.048601
<i>GRB7</i>	-0.73	0.00055	0.039043
<i>GSTA2</i>	-0.74	0.000252	0.020907
<i>MRPS6</i>	-0.74	0.000603	0.042081
<i>DUSP5</i>	-0.75	0.000301	0.024588
<i>TMEM106E</i>	-0.75	0.000312	0.024929
<i>UPP1</i>	-0.77	0.000667	0.04568
<i>CDKN2B</i>	-0.77	0.000274	0.022522
<i>SCGB1A1</i>	-0.78	9.43E-05	0.009844
<i>SPRR2D</i>	-0.78	0.00031	0.024929
<i>KLK10</i>	-0.79	0.00021	0.018007
<i>CALML5</i>	-0.79	0.000489	0.036265
<i>PRRG4</i>	-0.79	0.000147	0.013443
<i>PMAIP1</i>	-0.80	0.000738	0.049086
<i>SEC14L3</i>	-0.82	0.00011	0.010899
<i>MUC21</i>	-0.83	8.78E-05	0.009417
<i>KRT80</i>	-0.83	6.3E-05	0.00735
<i>MAL</i>	-0.83	0.000128	0.012098
<i>IL1RN</i>	-0.85	2.54E-05	0.003368
<i>SCGB3A1</i>	-0.85	2.69E-05	0.003529
<i>SPRR1B</i>	-0.86	3.11E-05	0.00402
<i>AIM1L</i>	-0.87	0.000108	0.010819

<i>DEFB4A</i>	-0.88	0.000141	0.012995
<i>GPSM2</i>	-0.89	0.000496	0.036376
<i>PLAT</i>	-0.90	6.22E-05	0.00732
<i>PRDM1</i>	-0.90	9.49E-05	0.009844
<i>TIMP3</i>	-0.90	4.13E-05	0.005167
<i>ATG9B</i>	-0.90	2.22E-05	0.003042
<i>SPIRE1</i>	-0.90	0.000105	0.010524
<i>TMPRSS11</i>	-0.92	1.69E-05	0.00244
<i>CITED2</i>	-0.94	4.78E-06	0.000805
<i>SPNS2</i>	-0.96	1.87E-06	0.000383
<i>EFNB2</i>	-0.97	6.36E-05	0.007367
<i>HSPB8</i>	-0.97	3.88E-06	0.000684
<i>CDSN</i>	-0.97	0.000303	0.024616
<i>NCCRP1</i>	-0.97	3.08E-06	0.000566
<i>VWF</i>	-0.98	1.64E-05	0.002417
<i>SCEL</i>	-0.98	3.09E-06	0.000566
<i>LGALS7</i>	-0.98	0.000489	0.036265
<i>ABL2</i>	-0.99	2.04E-05	0.002847
<i>SPRR2A</i>	-1.00	7.69E-07	0.000187
<i>NR1D1</i>	-1.00	1.58E-05	0.002347
<i>EREG</i>	-1.02	7.37E-05	0.008177
<i>MERTK</i>	-1.02	5.75E-05	0.006865
<i>CHAC1</i>	-1.03	0.000743	0.049187
<i>DDIT4L</i>	-1.03	0.000103	0.01045
<i>SPRR2E</i>	-1.04	8.83E-07	0.000211
<i>CTSL2</i>	-1.05	7.52E-05	0.008236
<i>LAMA4</i>	-1.05	5.14E-05	0.006229
<i>CCNG2</i>	-1.06	1.45E-06	0.000321
<i>SPINK5</i>	-1.08	7.54E-07	0.000186
<i>DKK1</i>	-1.12	1.14E-05	0.001774
<i>YOD1</i>	-1.14	2.72E-07	7.13E-05
<i>GPSM1</i>	-1.14	8.87E-05	0.00945
<i>RNASE7</i>	-1.15	0.000117	0.011272
<i>GCOM1</i>	-1.15	1.87E-06	0.000383
<i>SPRR3</i>	-1.16	6.39E-09	2.4E-06
<i>TMPRSS11</i>	-1.16	2.28E-07	6.08E-05
<i>PLAC2</i>	-1.16	0.000133	0.012396
<i>GAN</i>	-1.16	9.47E-07	0.000223
<i>TMPRSS11</i>	-1.18	1.33E-05	0.002023
<i>C6ORF155</i>	-1.18	0.000584	0.041081
<i>ABLIM3</i>	-1.19	2.25E-05	0.003055
<i>FAM69B</i>	-1.20	0.000588	0.041162
<i>B3GALT5</i>	-1.21	3.72E-06	0.000667
<i>FBXO32</i>	-1.21	9.31E-09	3.34E-06
<i>TSPAN11</i>	-1.22	8.56E-06	0.001377
<i>CNFN</i>	-1.22	8.81E-09	3.23E-06
<i>AIF1L</i>	-1.23	1.41E-06	0.000318
<i>VSIG10L</i>	-1.28	1.7E-06	0.000362
<i>CYP1B1</i>	-1.30	7.65E-10	3.35E-07
<i>CAMK2N1</i>	-1.30	4.66E-05	0.005738

GLS	-1.33	2E-09	8.1E-07
PTGFR	-1.37	2.52E-09	9.92E-07
RNF222	-1.37	9.71E-05	0.009875
PRSS3	-1.42	2.82E-07	7.28E-05
KLK12	-1.42	1.28E-05	0.001979
CLDN17	-1.43	0.00051	0.03719
SLCO4A1	-1.44	2.63E-10	1.22E-07
RHCG	-1.46	1.35E-07	3.79E-05
SPRR1A	-1.47	1.23E-12	8.79E-10
CTH	-1.51	3.57E-06	0.000647
COL6A6	-1.51	1.05E-08	3.66E-06
CRCT1	-1.52	3.2E-10	1.44E-07
AKR1B1	-1.54	1.36E-13	1.02E-10
SLC5A3	-1.63	8.26E-14	6.85E-11
RPTN	-1.67	4.33E-15	4.55E-12
FAM25A	-1.67	1.12E-06	0.000259
TRPV3	-1.69	1.24E-06	0.000284
EEF1A2	-1.69	8.97E-05	0.009487
SLC26A9	-1.76	7.88E-06	0.00128
UCA1	-1.79	1.11E-16	1.25E-13
ECM1	-1.81	0	0
FAM180A	-1.88	0.000738	0.049086
SPINK7	-1.92	3.71E-12	2.54E-09
NDRG4	-1.96	3.21E-14	2.98E-11
SLC6A12	-2.02	4.87E-12	3.2E-09
ESRG	-2.08	9.67E-05	0.009875
CNNM1	-2.10	4.98E-14	4.37E-11
LCE3D	-2.13	6.41E-08	1.87E-05
RELN	-2.14	6.43E-05	0.0074
C6ORF15	-2.19	0.000215	0.018337
CRNN	-2.21	0	0
PLA2G2F	-2.32	9.55E-15	9.41E-12
CALB1	-2.33	0	0
PPBP	-2.36	4.06E-05	0.005115
LOC100501	-2.38	0.000375	0.029093
LOC646991	-2.44	0.000383	0.02958
LOC100502	-2.97	5.49E-12	3.33E-09
PNLIPRP3	-3.25	8.36E-11	4.7E-08
FLG	-4.12	0	0
CYP1A1	-6.04	0	0

Pre- vs. Post-exposure 1 within M-

Genes Log₂FC pvalsGLM padjGLM
No Genes Differentially Expressed

Post-Exposure 1 vs. Post-exposure 4 within M-

Genes	Log ₂ FC	pvalsGLM	padjGLM
<i>KRT24</i>	3.16	0	0
<i>FCGR3B</i>	2.77	0	0
<i>S100A2</i>	2.75	0	0
<i>MME</i>	2.72	1.313E-12	9.406E-10
<i>LOC731424</i>	2.67	4.911E-06	0.0002994
<i>KRT14</i>	2.64	0	0
<i>MKI67</i>	2.61	7.453E-12	3.916E-09
<i>BIRC5</i>	2.54	8.346E-10	2.436E-07
<i>LILRA5</i>	2.53	1.363E-10	5.24E-08
<i>FFAR2</i>	2.52	4.408E-14	4.342E-11
<i>FCN1</i>	2.50	7.017E-07	6.357E-05
<i>PROK2</i>	2.48	1.961E-11	9.971E-09
<i>PBK</i>	2.47	0.0002668	0.0071894
<i>RRM2</i>	2.47	8.595E-10	2.463E-07
<i>CLEC4E</i>	2.44	4.208E-07	4.044E-05
<i>AQP9</i>	2.41	1.11E-16	2.5E-13
<i>TREML2</i>	2.36	8.217E-09	1.639E-06
<i>RASGRP4</i>	2.34	6.205E-10	1.845E-07
<i>FCAR</i>	2.34	2.205E-08	3.583E-06
<i>AURKB</i>	2.33	1.653E-05	0.0007492
<i>CRNN</i>	2.32	4.703E-12	2.746E-09
<i>IQGAP3</i>	2.32	6.1E-05	0.0021755
<i>CSF3R</i>	2.28	0	0
<i>MNDA</i>	2.28	8.105E-15	1.065E-11
<i>TNFAIP6</i>	2.26	5.984E-06	0.0003456
<i>MYBL2</i>	2.26	2.298E-07	2.415E-05
<i>CXCR1</i>	2.23	7.079E-12	3.848E-09
<i>CR1</i>	2.22	1.032E-08	1.984E-06
<i>CREB5</i>	2.21	4.466E-09	9.777E-07
<i>GLT1D1</i>	2.21	7.886E-09	1.594E-06
<i>BCL2A1</i>	2.21	1.046E-12	8.677E-10
<i>C19ORF59</i>	2.21	4.588E-07	4.33E-05
<i>FPR2</i>	2.20	2.144E-09	5.364E-07
<i>GPR65</i>	2.20	8.997E-11	3.732E-08
<i>KRT13</i>	2.18	0	0
<i>G0S2</i>	2.16	1.232E-14	1.388E-11
<i>OSM</i>	2.14	2.496E-10	8.943E-08
<i>CRCT1</i>	2.14	4.204E-08	6.252E-06
<i>CDC45</i>	2.13	0.0008127	0.0174528
<i>GPR97</i>	2.11	2.872E-12	1.811E-09
<i>CMTM2</i>	2.11	6.452E-06	0.0003632
<i>NFE2</i>	2.10	2.21E-06	0.0001584
<i>FPR1</i>	2.10	1.161E-12	8.711E-10
<i>HJURP</i>	2.10	0.0006028	0.0137124
<i>MEFV</i>	2.09	1.147E-08	2.079E-06
<i>KIAA0226L</i>	2.09	1.052E-08	1.998E-06
<i>TREM1</i>	2.06	6.939E-11	2.956E-08
<i>GTSE1</i>	2.06	0.0009192	0.019062

<i>UBE2C</i>	2.06	8.475E-07	7.182E-05
<i>IL8</i>	2.02	5.995E-15	8.591E-12
<i>EMR3</i>	2.02	3.739E-06	0.0002415
<i>CEACAM3</i>	2.01	8.607E-06	0.000463
<i>SLC2A3</i>	2.00	6.378E-12	3.59E-09
<i>KRT16</i>	1.99	2.806E-12	1.811E-09
<i>FGR</i>	1.99	2.684E-11	1.322E-08
<i>LOC10030265</i>	1.98	4.931E-08	6.94E-06
<i>NCF1B</i>	1.97	0.0002551	0.0069456
<i>TNFRSF10C</i>	1.95	3.303E-09	7.889E-07
<i>HK3</i>	1.95	3.891E-05	0.0015035
<i>LILRB3</i>	1.95	1.777E-09	4.667E-07
<i>CXCR2</i>	1.94	4.76E-11	2.084E-08
<i>EGR3</i>	1.94	4.019E-08	6.034E-06
<i>ITGAM</i>	1.93	3.559E-09	8.25E-07
<i>IVL</i>	1.93	1.139E-07	1.366E-05
<i>LILRA6</i>	1.93	6.17E-07	5.687E-05
<i>CSF2RB</i>	1.92	4.093E-12	2.481E-09
<i>IL1B</i>	1.92	9.911E-10	2.693E-07
<i>CEP55</i>	1.92	0.0003418	0.0087172
<i>HRH2</i>	1.91	0.0002361	0.0065296
<i>CD300E</i>	1.91	0.0020795	0.0357078
<i>HCAR3</i>	1.90	5.04E-10	1.589E-07
<i>S100A8</i>	1.90	7.772E-16	1.531E-12
<i>NCF1</i>	1.90	4.569E-10	1.5E-07
<i>KRT6A</i>	1.89	1.854E-14	1.948E-11
<i>PKMYT1</i>	1.89	0.0006983	0.0153518
<i>FAM25A</i>	1.89	0.0002753	0.0073806
<i>CDA</i>	1.88	0.0008564	0.018194
<i>EMR2</i>	1.88	3.005E-10	1.03E-07
<i>SRGN</i>	1.88	7.844E-13	6.869E-10
<i>CCL4</i>	1.87	1.274E-05	0.0006236
<i>CASS4</i>	1.87	4.461E-06	0.000279
<i>TMPRSS11B</i>	1.86	3.792E-06	0.0002428
<i>PDE4B</i>	1.86	5.02E-09	1.055E-06
<i>E2F2</i>	1.86	1.204E-05	0.0006082
<i>CPA4</i>	1.86	1.155E-14	1.388E-11
<i>LILRB2</i>	1.86	1.241E-09	3.316E-07
<i>SPRR3</i>	1.86	2.22E-15	3.889E-12
<i>DYSF</i>	1.85	4.402E-09	9.777E-07
<i>ECM1</i>	1.85	3.105E-11	1.438E-08
<i>EGR2</i>	1.84	2.27E-05	0.0009543
<i>S100A12</i>	1.84	3.49E-05	0.0013822
<i>LILRA1</i>	1.82	0.0026732	0.0437461
<i>NCF1C</i>	1.82	1.261E-05	0.000619
<i>SPRR1B</i>	1.81	2.593E-12	1.777E-09
<i>FLG</i>	1.80	0.0007492	0.0162446
<i>IL1R2</i>	1.79	1.191E-06	9.455E-05
<i>PHOSPHO1</i>	1.79	7.588E-07	6.796E-05
<i>SIRPB1</i>	1.78	1.373E-07	1.569E-05

<i>LAT2</i>	1.78	4.286E-08	6.313E-06
<i>SIGLEC5</i>	1.76	0.0001326	0.0040492
<i>TLR8</i>	1.75	1.299E-05	0.0006301
<i>FCGR2A</i>	1.74	2.847E-10	9.973E-08
<i>CDC6</i>	1.74	0.0004018	0.0099886
<i>SPRR2E</i>	1.74	5.439E-10	1.656E-07
<i>KRT4</i>	1.74	5.551E-15	8.591E-12
<i>PTTG1</i>	1.73	8.347E-07	7.112E-05
<i>IL1RN</i>	1.73	1.117E-12	8.711E-10
<i>SLC11A1</i>	1.72	2.005E-09	5.099E-07
<i>TROAP</i>	1.72	0.0002855	0.0075893
<i>ABLIM3</i>	1.71	2.445E-06	0.0001721
<i>CXCR4</i>	1.69	2.268E-10	8.316E-08
<i>KRT78</i>	1.68	1.735E-08	2.88E-06
<i>NFAM1</i>	1.68	4.611E-08	6.668E-06
<i>SPRR2D</i>	1.68	1.456E-08	2.55E-06
<i>SKAP2</i>	1.67	2.526E-06	0.0001769
<i>MRVI1</i>	1.67	0.0001771	0.0050735
<i>SAMSN1</i>	1.67	6.147E-07	5.687E-05
<i>LILRA2</i>	1.67	7.309E-05	0.0024936
<i>RGS2</i>	1.67	1.342E-10	5.24E-08
<i>NUSAP1</i>	1.66	7.05E-05	0.0024264
<i>RGS18</i>	1.65	0.0008543	0.0181725
<i>SPINK7</i>	1.65	3.771E-05	0.0014641
<i>LMNB1</i>	1.65	2.366E-09	5.829E-07
<i>SEMA6B</i>	1.64	1.307E-05	0.0006321
<i>ESPL1</i>	1.63	5.506E-06	0.0003258
<i>PILRA</i>	1.63	1.883E-07	2.047E-05
<i>MAL</i>	1.63	1.449E-08	2.55E-06
<i>VSIG10L</i>	1.63	3.559E-06	0.0002318
<i>S100A9</i>	1.62	4.128E-13	3.827E-10
<i>RPTN</i>	1.62	1.087E-08	2.04E-06
<i>ITGAX</i>	1.62	3.193E-11	1.438E-08
<i>SBSN</i>	1.62	1.314E-05	0.0006336
<i>UHRF1</i>	1.61	7.949E-05	0.0026715
<i>EREG</i>	1.61	8.391E-06	0.0004541
<i>SIRPB2</i>	1.61	0.0020321	0.0351229
<i>NLRP12</i>	1.60	0.0031123	0.049157
<i>NLRP6</i>	1.58	0.0010548	0.021222
<i>NCF4</i>	1.58	1.496E-08	2.591E-06
<i>CALB1</i>	1.58	1.219E-05	0.000612
<i>HAL</i>	1.57	0.0006415	0.0143235
<i>CST7</i>	1.57	4.603E-05	0.0017328
<i>PLEK</i>	1.57	1.146E-08	2.079E-06
<i>HCK</i>	1.57	4.459E-09	9.777E-07
<i>MYO1F</i>	1.56	1.257E-10	5.08E-08
<i>PLA2G2F</i>	1.56	0.0001592	0.0046637
<i>RHCG</i>	1.55	3.32E-05	0.0013284
<i>APOBEC3A</i>	1.55	5.845E-07	5.451E-05
<i>SCEL</i>	1.55	1.778E-10	6.673E-08

<i>SERPINB13</i>	1.55	7.564E-09	1.549E-06
<i>KLK6</i>	1.54	1.654E-05	0.0007492
<i>EMP1</i>	1.54	4.301E-10	1.443E-07
<i>ADORA2A</i>	1.54	5.038E-05	0.0018385
<i>LCP2</i>	1.54	4.899E-09	1.044E-06
<i>SPRR2A</i>	1.52	9.796E-10	2.693E-07
<i>NCCRP1</i>	1.52	4.744E-10	1.526E-07
<i>CYTH4</i>	1.51	3.394E-09	7.984E-07
<i>LRRC25</i>	1.51	3.463E-06	0.0002284
<i>HLX</i>	1.51	0.0011559	0.0227189
<i>GNG2</i>	1.51	1.515E-05	0.0006921
<i>DOK3</i>	1.50	6.989E-08	9.258E-06
<i>MMP25</i>	1.48	1.61E-08	2.701E-06
<i>CAMK2N1</i>	1.48	0.0004933	0.011728
<i>SIGLEC10</i>	1.48	1.152E-05	0.000586
<i>CNFN</i>	1.47	1.109E-07	1.345E-05
<i>PHACTR1</i>	1.47	0.0001358	0.0041185
<i>KLK7</i>	1.47	8.411E-06	0.0004541
<i>CCR1</i>	1.47	3.225E-06	0.0002154
<i>P2RY13</i>	1.46	8.834E-06	0.0004704
<i>UPP1</i>	1.46	2.707E-08	4.268E-06
<i>LST1</i>	1.46	1.215E-06	9.578E-05
<i>TNFSF13B</i>	1.46	8.779E-06	0.0004691
<i>KIAA0101</i>	1.46	0.0008514	0.0181513
<i>ADAMTSL4</i>	1.46	1.51E-05	0.0006919
<i>PADI2</i>	1.45	1.094E-06	8.889E-05
<i>TK1</i>	1.45	1.714E-06	0.0001292
<i>ALOX5AP</i>	1.44	3.581E-07	3.528E-05
<i>SLURP1</i>	1.44	1.242E-05	0.0006161
<i>UCA1</i>	1.43	4.475E-08	6.532E-06
<i>BEST1</i>	1.43	0.0007652	0.0165463
<i>NLRP3</i>	1.43	0.0001884	0.0053594
<i>CST6</i>	1.42	0.0002626	0.0070881
<i>SH2B2</i>	1.42	0.0002853	0.0075893
<i>GMFG</i>	1.41	3.038E-06	0.0002055
<i>DGAT2</i>	1.41	8.127E-07	7.039E-05
<i>FYB</i>	1.40	1.443E-07	1.625E-05
<i>APBB1IP</i>	1.40	3.154E-06	0.000212
<i>OBFC2A</i>	1.39	1.238E-07	1.456E-05
<i>EVI2A</i>	1.39	0.0001017	0.0032729
<i>SPI1</i>	1.38	8.304E-08	1.069E-05
<i>TLR4</i>	1.38	2.305E-06	0.0001629
<i>C1ORF38</i>	1.37	9.853E-07	8.064E-05
<i>THBD</i>	1.37	4.411E-05	0.0016686
<i>PADI3</i>	1.36	0.0025501	0.04196
<i>KIFC1</i>	1.36	0.001524	0.0281295
<i>IL18RAP</i>	1.35	4.886E-05	0.0018036
<i>PRKCB</i>	1.35	3.907E-05	0.0015057
<i>KRT17</i>	1.35	5.645E-09	1.171E-06
<i>PIK3R5</i>	1.35	9.237E-07	7.664E-05

<i>HSPB8</i>	1.33	2.522E-07	2.598E-05
<i>CSTA</i>	1.33	4.884E-09	1.044E-06
<i>RAC2</i>	1.33	2.089E-07	2.21E-05
<i>KIAA1949</i>	1.33	2.632E-07	2.68E-05
<i>CYTIP</i>	1.32	1.329E-05	0.0006386
<i>PLAUR</i>	1.32	4.049E-07	3.915E-05
<i>FLJ45445</i>	1.32	3.317E-06	0.0002203
<i>CLEC4A</i>	1.32	0.0010007	0.0205121
<i>PRSS27</i>	1.32	5.751E-06	0.000337
<i>LCP1</i>	1.31	3.542E-08	5.474E-06
<i>C5AR1</i>	1.31	8.325E-08	1.069E-05
<i>SPRR1A</i>	1.31	9.215E-08	1.162E-05
<i>PTPRC</i>	1.31	1.292E-07	1.509E-05
<i>CCNB2</i>	1.31	0.0023314	0.0391798
<i>PECAM1</i>	1.29	3.299E-05	0.0013231
<i>IFITM2</i>	1.28	2.568E-08	4.089E-06
<i>TAGAP</i>	1.28	1.977E-06	0.0001457
<i>CD300A</i>	1.28	0.0001604	0.0046898
<i>TNFRSF1B</i>	1.27	9.874E-07	8.064E-05
<i>JAK3</i>	1.27	5.896E-06	0.000343
<i>SLA</i>	1.26	7.212E-06	0.0004003
<i>AOAH</i>	1.26	0.0010007	0.0205121
<i>PTGS2</i>	1.25	1.857E-06	0.0001374
<i>RASSF2</i>	1.24	2.799E-06	0.0001927
<i>FCER1G</i>	1.24	1.083E-05	0.0005592
<i>S1PR4</i>	1.24	0.000621	0.0140324
<i>EVI2B</i>	1.23	5.385E-06	0.0003208
<i>CD83</i>	1.23	0.0001324	0.0040492
<i>RASGRP2</i>	1.23	0.0018192	0.0321238
<i>CD48</i>	1.23	0.0004099	0.0101282
<i>SELL</i>	1.22	4.529E-06	0.0002811
<i>FOSL1</i>	1.22	0.0010958	0.0218092
<i>SNX10</i>	1.22	0.0005595	0.0129131
<i>IFRD1</i>	1.22	8.094E-07	7.039E-05
<i>DKK1</i>	1.22	8.842E-05	0.0029159
<i>TMPRSS11E</i>	1.21	1.436E-05	0.0006716
<i>HSPA6</i>	1.21	0.0001808	0.0051617
<i>ANO8</i>	1.21	1.937E-07	2.077E-05
<i>AMICA1</i>	1.20	1.122E-06	9.069E-05
<i>SULT1E1</i>	1.20	0.0003614	0.0091446
<i>CD53</i>	1.20	2.967E-06	0.0002025
<i>CKS2</i>	1.19	0.0004474	0.0108163
<i>CLIC3</i>	1.19	1.848E-05	0.0008205
<i>PADI1</i>	1.19	9.401E-08	1.176E-05
<i>LOC10013316</i>	1.18	0.0005027	0.0119168
<i>FGFBP1</i>	1.18	2.36E-05	0.0009843
<i>CD93</i>	1.18	0.0005238	0.0123051
<i>CHI3L1</i>	1.18	0.0002911	0.0076729
<i>FOSB</i>	1.17	0.0001138	0.003579
<i>ASF1B</i>	1.17	0.0012098	0.023572

<i>SPRR2F</i>	1.17	0.0021178	0.0360904
<i>CXCL2</i>	1.17	0.0001107	0.0035114
<i>FMNL1</i>	1.17	9.082E-07	7.612E-05
<i>MXD1</i>	1.17	1.327E-06	0.0001035
<i>MYEOV</i>	1.17	0.000317	0.0082729
<i>ASPG</i>	1.16	0.0002397	0.0065724
<i>TACC3</i>	1.16	9.727E-06	0.0005115
<i>C10RF170</i>	1.16	0.0021072	0.0359984
<i>CRABP2</i>	1.15	0.0001312	0.0040242
<i>LOC729737</i>	1.15	2.979E-05	0.0012135
<i>NFKBIA</i>	1.15	7.306E-07	6.581E-05
<i>SLC19A1</i>	1.15	0.0008521	0.0181513
<i>WAS</i>	1.14	3.372E-05	0.0013456
<i>UNC13D</i>	1.14	1.456E-05	0.000674
<i>FERMT3</i>	1.13	1.47E-05	0.0006754
<i>CALML5</i>	1.13	2.756E-05	0.0011312
<i>ARHGAP25</i>	1.13	4.622E-05	0.0017348
<i>ALDH1A3</i>	1.13	4.412E-07	4.215E-05
<i>MPP1</i>	1.13	0.0001484	0.0044184
<i>SLC5A5</i>	1.12	0.0008853	0.0186319
<i>CSRNP1</i>	1.12	4.721E-06	0.0002907
<i>S100A7</i>	1.12	0.0017825	0.031849
<i>AIM1L</i>	1.12	1.085E-05	0.0005592
<i>ASPRV1</i>	1.12	0.0005291	0.0124103
<i>FCGR3A</i>	1.12	4.399E-05	0.0016686
<i>SPINK5</i>	1.12	1.247E-05	0.0006161
<i>SH2D3C</i>	1.12	0.001248	0.0240189
<i>ARHGAP9</i>	1.11	1.422E-05	0.0006673
<i>CTSL2</i>	1.11	0.0007737	0.0167059
<i>CDH24</i>	1.10	0.0011339	0.0223709
<i>SLC7A5</i>	1.10	0.0006196	0.014032
<i>NR4A3</i>	1.09	0.0018234	0.0321501
<i>ADAM8</i>	1.09	4.988E-06	0.0003017
<i>SOCS3</i>	1.07	7.076E-05	0.0024301
<i>TUBB6</i>	1.07	0.0002695	0.0072501
<i>WIPF1</i>	1.07	3.426E-05	0.0013602
<i>TNNI2</i>	1.06	1.349E-05	0.0006425
<i>PLXNC1</i>	1.06	7.938E-05	0.0026715
<i>PKP1</i>	1.06	8.491E-05	0.0028357
<i>FAM101B</i>	1.05	0.0018068	0.0320364
<i>ADM</i>	1.05	6.383E-05	0.0022609
<i>SPTBN5</i>	1.04	0.0011767	0.0230126
<i>APOBR</i>	1.04	3.56E-05	0.001401
<i>FOS</i>	1.04	8.838E-05	0.0029159
<i>TYROBP</i>	1.04	3.851E-05	0.0014916
<i>IGSF6</i>	1.03	0.0013892	0.0259451
<i>ICAM1</i>	1.03	8.569E-05	0.0028555
<i>CFP</i>	1.03	0.0013416	0.0253256
<i>RELT</i>	1.02	0.0005131	0.0121066
<i>ZFP36</i>	1.02	1.296E-05	0.0006301

<i>KLK10</i>	1.02	2.97E-05	0.0012129
<i>PLIN4</i>	1.02	0.0003237	0.0084208
<i>PREX1</i>	1.01	1.915E-05	0.0008455
<i>LRRK2</i>	1.01	0.0001143	0.0035895
<i>SCARF1</i>	1.01	0.0001539	0.0045509
<i>C8ORF73</i>	1.01	1.937E-05	0.000848
<i>FAM46B</i>	1.01	0.0017067	0.0307809
<i>CD14</i>	1.00	4.722E-05	0.0017637
<i>LTB</i>	1.00	0.0008924	0.0187557
<i>ITGA5</i>	1.00	0.0004918	0.0117102
<i>PFKFB3</i>	1.00	5.417E-05	0.0019676
<i>CD37</i>	0.99	0.0005852	0.0133514
<i>CDRT1</i>	0.99	0.0002567	0.0069456
<i>SLCO4A1</i>	0.99	0.000416	0.0102626
<i>PTPRE</i>	0.99	0.0002101	0.005878
<i>AIF1</i>	0.99	0.000392	0.0098245
<i>PLEKHG2</i>	0.99	0.0008357	0.0178733
<i>NCF2</i>	0.98	4.679E-05	0.0017519
<i>SNCG</i>	0.98	0.0002379	0.0065327
<i>EGR1</i>	0.98	0.0001963	0.0055492
<i>DUSP5</i>	0.97	7.758E-05	0.0026186
<i>C9ORF169</i>	0.97	0.0001187	0.0036991
<i>SMTN</i>	0.97	0.0018116	0.0320695
<i>ICAM3</i>	0.97	7.045E-05	0.0024264
<i>NAMPT</i>	0.96	1.981E-05	0.0008615
<i>GDPD3</i>	0.96	5.028E-05	0.0018385
<i>PLEKHN1</i>	0.96	0.0010055	0.0205833
<i>TRIP10</i>	0.96	1.397E-05	0.0006579
<i>DOCK11</i>	0.96	0.0030777	0.0486972
<i>VWF</i>	0.96	0.000292	0.0076852
<i>MLKL</i>	0.94	0.0012436	0.0239928
<i>GCA</i>	0.94	0.0001678	0.0048542
<i>RASAL1</i>	0.94	0.0002947	0.007729
<i>ZEB2</i>	0.94	0.0029408	0.0470612
<i>ZWINT</i>	0.94	0.0021689	0.0368811
<i>GRHL3</i>	0.93	0.0003743	0.0094403
<i>BIN2</i>	0.93	0.0005378	0.0125223
<i>BTG2</i>	0.92	0.000118	0.0036846
<i>ALOX5</i>	0.92	0.0002378	0.0065327
<i>COTL1</i>	0.92	6.839E-05	0.0023744
<i>S100A14</i>	0.91	2.19E-05	0.0009279
<i>NEAT1</i>	0.91	1.755E-05	0.0007837
<i>KRT5</i>	0.91	6.447E-05	0.0022786
<i>NBEAL2</i>	0.91	2.494E-05	0.0010372
<i>GABRE</i>	0.91	0.0001368	0.0041404
<i>HOPX</i>	0.90	0.0009022	0.0188229
<i>SLC25A37</i>	0.90	0.0001455	0.0043556
<i>MLF1IP</i>	0.90	0.001978	0.0343388
<i>ASAP1</i>	0.90	0.0008058	0.0173276
<i>GLS</i>	0.90	0.0005518	0.0127918

LY6D	0.90	3.719E-05	0.0014548
SPNS2	0.90	0.0001053	0.0033669
ARHGAP30	0.90	8.389E-05	0.0028076
SOD2	0.89	0.0001338	0.0040785
PPP1R3B	0.89	0.0011085	0.0219798
CXCL1	0.89	6.506E-05	0.0022941
DOCK2	0.89	0.001689	0.0305669
PDLIM7	0.89	0.0003403	0.0087083
COL18A1	0.88	0.0015962	0.029189
ITPRIP	0.88	0.0006214	0.0140324
HCAR2	0.88	0.0007462	0.0162245
PLCB3	0.88	0.0001351	0.0041107
PP14571	0.88	0.0004028	0.0100001
SSH2	0.87	0.0004212	0.0103742
PIM1	0.87	0.0002134	0.0059444
ITGB2	0.87	0.0001725	0.0049711
ATG16L2	0.87	0.0002509	0.0068531
SIRPA	0.87	0.0007781	0.0167624
CLEC7A	0.87	0.0002275	0.0063016
PDLIM2	0.86	0.0002563	0.0069456
MXD3	0.86	0.002106	0.0359984
MXRA8	0.85	0.0002995	0.0078418
TRIB1	0.84	0.0004433	0.0107337
JUNB	0.84	0.000287	0.0076155
DOCK5	0.84	0.0005842	0.0133514
ACSL1	0.84	0.0002103	0.005878
GRB7	0.84	0.0003252	0.0084374
SASH3	0.84	0.0010664	0.0213855
TMPRSS11D	0.83	0.000678	0.0149693
KDM6B	0.83	0.0003378	0.0086597
DDIT3	0.83	0.0015436	0.0284475
GCOM1	0.83	0.0025165	0.0416673
ARRB2	0.83	0.0001676	0.0048542
AMPD2	0.83	0.0003541	0.0089888
LAPTM5	0.83	0.0002569	0.0069456
SFN	0.82	0.0001773	0.0050735
FGD3	0.82	0.0010421	0.0210592
KRT15	0.82	0.0001764	0.0050735
FGL2	0.82	0.0018043	0.0320364
VGLL1	0.82	0.0015696	0.0288029
HR	0.82	0.0025041	0.0416377
IER3	0.82	0.0003415	0.0087172
ABCA1	0.82	0.0009167	0.0190379
MAFF	0.81	0.0015029	0.0278372
PPIF	0.81	0.0004243	0.0103897
CYP4F3	0.81	0.0011665	0.0228573
LOC284454	0.81	0.0025382	0.0418516
FBXO32	0.80	0.0006303	0.0141537
TLE3	0.80	0.0010288	0.0208973
DENND5A	0.80	0.0010646	0.0213771

<i>CORO1A</i>	0.80	0.0004347	0.0105906
<i>DOT1L</i>	0.79	0.0007155	0.0156721
<i>CCDC88B</i>	0.79	0.0003888	0.009775
<i>CCNL1</i>	0.79	0.0004229	0.0103834
<i>PLAU</i>	0.79	0.0014714	0.0273517
<i>IL6R</i>	0.79	0.0018532	0.0326033
<i>LYPD3</i>	0.79	0.0006415	0.0143235
<i>NFKBIZ</i>	0.79	0.0005853	0.0133514
<i>ATHL1</i>	0.78	0.0006125	0.013912
<i>IER5</i>	0.78	0.0011326	0.0223709
<i>PRICKLE4</i>	0.78	0.001887	0.0330857
<i>C15ORF62</i>	0.78	0.0025114	0.0416673
<i>FXYS5</i>	0.78	0.0024399	0.0406982
<i>NFKB2</i>	0.78	0.0008237	0.0176406
<i>YOD1</i>	0.77	0.0017401	0.0311699
<i>PNRC1</i>	0.77	0.0010875	0.0216984
<i>GPSM3</i>	0.77	0.0012939	0.0245725
<i>BCL3</i>	0.76	0.0006324	0.0141806
<i>ZDHC18</i>	0.76	0.0009203	0.019062
<i>C17ORF91</i>	0.76	0.0007	0.0153681
<i>HMGA1</i>	0.76	0.0004077	0.0100888
<i>TLR2</i>	0.76	0.0025261	0.0417819
<i>C10ORF116</i>	0.76	0.0006241	0.0140737
<i>LOC645638</i>	0.76	0.000564	0.0129594
<i>EPS8L1</i>	0.75	0.0004659	0.0111781
<i>EHD1</i>	0.75	0.0012774	0.0243982
<i>MAFK</i>	0.75	0.0014977	0.0277752
<i>SLC12A6</i>	0.75	0.001165	0.0228573
<i>VASP</i>	0.74	0.0007581	0.0164154
<i>CBLC</i>	0.74	0.002427	0.0405263
<i>DENND3</i>	0.74	0.0017962	0.0319918
<i>HCFC1R1</i>	0.74	0.0024516	0.040851
<i>HSPB1</i>	0.73	0.0005317	0.0124533
<i>MOBK2A</i>	0.73	0.0022522	0.0380108
<i>SH3BGR13</i>	0.73	0.0008163	0.0175055
<i>MPRIP</i>	0.73	0.0009236	0.0190906
<i>WSB1</i>	0.73	0.0009316	0.0192207
<i>RHOG</i>	0.72	0.0020794	0.0357078
<i>TRIM25</i>	0.72	0.0013996	0.0261083
<i>ID1</i>	0.72	0.0010986	0.021838
<i>CLTB</i>	0.72	0.0010725	0.0214321
<i>ZYX</i>	0.72	0.0010412	0.0210592
<i>PROM2</i>	0.71	0.0009018	0.0188229
<i>ALS2CL</i>	0.71	0.000916	0.0190379
<i>RAB24</i>	0.71	0.0025151	0.0416673
<i>SERPINB1</i>	0.71	0.0010322	0.0209394
<i>CACNB1</i>	0.71	0.0013548	0.0254538
<i>TUBA4A</i>	0.71	0.0018064	0.0320364
<i>PLK2</i>	0.71	0.0030723	0.0486714
<i>MBD6</i>	0.71	0.0011059	0.0219545

<i>EHBP1L1</i>	0.71	0.0011209	0.0221973
<i>S100A16</i>	0.70	0.0010243	0.020842
<i>RASSF5</i>	0.70	0.0020174	0.0349066
<i>METRNL</i>	0.70	0.0028039	0.0453317
<i>TNFAIP3</i>	0.69	0.0028315	0.0456373
<i>GPRC5A</i>	0.69	0.0017296	0.0310877
<i>MALL</i>	0.69	0.001686	0.0305483
<i>VEGFA</i>	0.69	0.0022468	0.0379594
<i>TM4SF1</i>	0.69	0.0015123	0.0279799
<i>IER2</i>	0.69	0.0021327	0.0363036
<i>PPP1R12C</i>	0.68	0.0018199	0.0321238
<i>C20ORF111</i>	0.68	0.0028822	0.0462175
<i>DGKA</i>	0.68	0.0020665	0.0355613
<i>GPCPD1</i>	0.68	0.0029667	0.0473322
<i>SBNO2</i>	0.68	0.0020462	0.0352895
<i>AKR1B10</i>	0.67	0.0027193	0.0443733
<i>ZC3H12A</i>	0.67	0.003053	0.0484639
<i>SLC38A2</i>	0.66	0.0028521	0.0458292
<i>PRSS22</i>	0.66	0.0026065	0.0427983
<i>IVNS1ABP</i>	0.66	0.0023829	0.0399166
<i>S100A4</i>	0.65	0.001958	0.0341422
<i>LOC146880</i>	0.65	0.0028347	0.0456426
<i>TNFAIP2</i>	0.64	0.0028857	0.0462272
<i>PFN2</i>	-0.65	0.0029918	0.0476363
<i>C5ORF15</i>	-0.66	0.0030801	0.0486972
<i>GSTA1</i>	-0.68	0.0020846	0.035756
<i>C21ORF59</i>	-0.68	0.0023561	0.039514
<i>PTRH1</i>	-0.69	0.0027949	0.0452321
<i>ARL3</i>	-0.69	0.002466	0.0410469
<i>PIGR</i>	-0.69	0.0012698	0.0243494
<i>UBXN11</i>	-0.70	0.0016475	0.0299536
<i>CCDC37</i>	-0.70	0.0030184	0.0480107
<i>ZSCAN18</i>	-0.70	0.0029622	0.0473086
<i>ODF3B</i>	-0.70	0.0014417	0.026831
<i>IFT140</i>	-0.70	0.0019864	0.0344465
<i>TRAF3IP1</i>	-0.70	0.0019102	0.0334192
<i>PALLD</i>	-0.70	0.0013647	0.0255784
<i>PRSS12</i>	-0.70	0.0022878	0.0384867
<i>PCM1</i>	-0.70	0.0012579	0.0241816
<i>NBEA</i>	-0.71	0.0017388	0.0311699
<i>SNX29</i>	-0.71	0.0027805	0.0451846
<i>TTLL10</i>	-0.71	0.0021942	0.0371907
<i>ARHGAP39</i>	-0.72	0.0012192	0.0236974
<i>CD200R1</i>	-0.72	0.0016541	0.0300386
<i>MIPEP</i>	-0.72	0.0021177	0.0360904
<i>C14ORF135</i>	-0.73	0.0027927	0.0452321
<i>TMEM98</i>	-0.73	0.0019756	0.0343347
<i>CTNNAL1</i>	-0.73	0.0025459	0.041934
<i>KIF3B</i>	-0.73	0.0010086	0.0206215
<i>SLFN13</i>	-0.73	0.0026238	0.043038

DGCR6	-0.73	0.0013251	0.0250756
SCGB2A1	-0.73	0.0028682	0.0460398
SLC22A4	-0.73	0.0018929	0.0331531
LRRC56	-0.74	0.0013509	0.0254413
SLC27A2	-0.74	0.0014281	0.0266082
DZIP1L	-0.74	0.0024034	0.0401749
CD164L2	-0.74	0.0019612	0.0341604
LAMP3	-0.75	0.002231	0.0377331
ABHD12B	-0.75	0.0027701	0.0450616
CSPP1	-0.75	0.0015572	0.0286086
CYP4B1	-0.75	0.0007784	0.0167624
KIF27	-0.75	0.0031428	0.0495898
C11ORF92	-0.75	0.001238	0.0239152
ANKRD42	-0.75	0.0020363	0.0351576
ST6GALNAC2	-0.76	0.0010693	0.0214179
SAMHD1	-0.76	0.0007479	0.0162378
CYP2A6	-0.76	0.0012619	0.0242282
PRRT3	-0.76	0.0010221	0.020842
IFT46	-0.76	0.0012456	0.024002
ZDHHC1	-0.76	0.0011417	0.0224776
CCDC60	-0.76	0.0029803	0.0475009
MAPK15	-0.76	0.0007271	0.0158505
BEST4	-0.76	0.0012785	0.0243982
PPOX	-0.76	0.0008847	0.0186319
GLIS3	-0.76	0.0025373	0.0418516
SQLE	-0.77	0.0012746	0.0243982
RABL2A	-0.77	0.0012317	0.0238813
ATXN7L1	-0.78	0.0021745	0.0369364
KIF9	-0.78	0.0012378	0.0239152
VWA3A	-0.78	0.0008588	0.0182198
C1ORF201	-0.78	0.0015939	0.0291806
UGT2A1	-0.78	0.0011846	0.0231388
C18ORF1	-0.78	0.0023976	0.0401198
FAM125B	-0.78	0.0027576	0.0449514
IFT172	-0.79	0.0005061	0.0119598
TSPAN8	-0.79	0.0005959	0.0135743
MORN2	-0.79	0.0006504	0.0144815
TTC16	-0.79	0.0026753	0.0437461
CRIP1	-0.79	0.000436	0.0106054
SLC13A3	-0.79	0.0019252	0.0336438
IFT81	-0.80	0.0012183	0.0236974
CCDC147	-0.80	0.0025359	0.0418516
LRRC71	-0.80	0.001231	0.0238813
AGBL2	-0.80	0.0012892	0.0245131
BBS9	-0.80	0.0028267	0.0456069
C2ORF55	-0.80	0.0003963	0.0098846
GLB1L	-0.80	0.0006708	0.0148501
PTPRT	-0.80	0.0026965	0.0440467
LOC10050699	-0.80	0.0013543	0.0254538
KIAA1211	-0.80	0.002512	0.0416673

<i>FBLN5</i>	-0.80	0.0022026	0.0372929
<i>TEKT2</i>	-0.80	0.0007209	0.0157396
<i>NME7</i>	-0.80	0.0027923	0.0452321
<i>CDHR4</i>	-0.81	0.0005679	0.0130299
<i>WDR35</i>	-0.81	0.000864	0.0182814
<i>DLEC1</i>	-0.81	0.000484	0.0115486
<i>TSNAXIP1</i>	-0.81	0.0008472	0.0180957
<i>KIF3A</i>	-0.81	0.0013739	0.0257201
<i>CCDC151</i>	-0.81	0.0022614	0.0381249
<i>KIF24</i>	-0.81	0.0017922	0.0319573
<i>GRIN3B</i>	-0.81	0.0008986	0.0188229
<i>RABL2B</i>	-0.81	0.0004245	0.0103897
<i>OSBPL6</i>	-0.81	0.0013244	0.0250756
<i>MYB</i>	-0.81	0.0008776	0.0185441
<i>PTPRN2</i>	-0.81	0.0005193	0.0122184
<i>PALMD</i>	-0.81	0.0019325	0.0337342
<i>LOC400891</i>	-0.82	0.0005611	0.0129224
<i>SHROOM3</i>	-0.82	0.0002417	0.006614
<i>FAM149A</i>	-0.82	0.0015448	0.0284475
<i>FRMPD2</i>	-0.82	0.0016089	0.0293527
<i>TUSC3</i>	-0.82	0.0002903	0.0076722
<i>RABL5</i>	-0.82	0.0004843	0.0115486
<i>C1ORF87</i>	-0.82	0.0018287	0.0322082
<i>CDK20</i>	-0.83	0.0013582	0.0254865
<i>MAK</i>	-0.83	0.0017988	0.0320021
<i>CCL28</i>	-0.83	0.0028207	0.0455559
<i>C9ORF9</i>	-0.83	0.0011422	0.0224776
<i>MDH1B</i>	-0.83	0.0012762	0.0243982
<i>DNAI1</i>	-0.83	0.0004748	0.011357
<i>PDE6B</i>	-0.83	0.002639	0.043242
<i>CLUAP1</i>	-0.83	0.0005356	0.0125082
<i>TUBB2C</i>	-0.84	0.0001059	0.0033806
<i>MUC15</i>	-0.84	0.0003281	0.0084639
<i>CNTRL</i>	-0.84	0.000571	0.0130834
<i>SPEF2</i>	-0.84	0.0007158	0.0156721
<i>DPY19L2P2</i>	-0.84	0.0023564	0.039514
<i>CDC14A</i>	-0.84	0.0006837	0.0150731
<i>KCNH3</i>	-0.84	0.0009462	0.0194706
<i>LOC200772</i>	-0.85	0.0013472	0.0254021
<i>TMEM107</i>	-0.85	0.0010411	0.0210592
<i>SMYD2</i>	-0.85	0.000332	0.0085359
<i>CHST6</i>	-0.85	0.0001402	0.0042188
<i>BPIFB1</i>	-0.85	9.824E-05	0.0031732
<i>UNC119B</i>	-0.85	0.0001586	0.0046565
<i>ZNF704</i>	-0.85	0.0016008	0.0292392
<i>RHOBTB1</i>	-0.85	0.0015155	0.0280061
<i>DZIP3</i>	-0.85	0.0003297	0.0084913
<i>LOC646851</i>	-0.86	0.0009241	0.0190906
<i>FAM179A</i>	-0.86	0.0005595	0.0129131
<i>GPR162</i>	-0.86	0.0004263	0.0104015

<i>CDKL1</i>	-0.86	0.0027844	0.0452016
<i>RFX2</i>	-0.86	0.0002745	0.0073704
<i>TSGA14</i>	-0.86	0.0021783	0.0369605
<i>TNC</i>	-0.86	0.001698	0.0306942
<i>CCDC39</i>	-0.86	0.0004516	0.0108837
<i>AP2B1</i>	-0.87	0.0001617	0.0047213
<i>EPCAM</i>	-0.87	0.000138	0.0041672
<i>ANKRD37</i>	-0.87	0.0019667	0.0342173
<i>MAOB</i>	-0.87	0.0011293	0.0223359
<i>TCTEX1D2</i>	-0.87	0.0009001	0.0188229
<i>TMEM213</i>	-0.87	0.00063	0.0141537
<i>CCDC89</i>	-0.87	0.0016141	0.0294143
<i>CCDC17</i>	-0.87	0.0001208	0.0037489
<i>STX2</i>	-0.87	0.001478	0.027442
<i>CLMN</i>	-0.87	0.0001667	0.0048406
<i>CCDC11</i>	-0.87	0.000728	0.0158505
<i>GLB1L2</i>	-0.87	0.0001999	0.0056259
<i>KCNRG</i>	-0.88	0.0013125	0.0248967
<i>ENPP3</i>	-0.88	0.002058	0.0354532
<i>INHBB</i>	-0.88	0.0006654	0.0147926
<i>MUC13</i>	-0.88	0.0001249	0.0038384
<i>LOC402160</i>	-0.88	0.0006704	0.0148501
<i>WDR49</i>	-0.88	0.0012807	0.0244113
<i>LZTFL1</i>	-0.88	0.0001547	0.0045664
<i>APBB1</i>	-0.88	0.00035	0.0088988
<i>FAM164C</i>	-0.88	0.0029445	0.0470736
<i>SVEP1</i>	-0.89	0.0004257	0.0104015
<i>LRTOMT</i>	-0.89	0.0002369	0.0065296
<i>C17ORF97</i>	-0.89	0.0004548	0.0109454
<i>NUCB2</i>	-0.89	9.048E-05	0.0029776
<i>CCDC96</i>	-0.89	0.0001964	0.0055492
<i>DCDC5</i>	-0.89	0.0028384	0.0456544
<i>IQCD</i>	-0.89	0.0002146	0.0059663
<i>RUVBL1</i>	-0.90	0.0001247	0.0038384
<i>ARMC2</i>	-0.90	0.0004642	0.0111535
<i>RAMP1</i>	-0.90	0.0009092	0.0189319
<i>TEKT4</i>	-0.90	0.0008828	0.0186289
<i>METTL7A</i>	-0.90	5.839E-05	0.0020981
<i>STK33</i>	-0.90	0.0002906	0.0076722
<i>DTX3</i>	-0.90	0.0004225	0.0103834
<i>CCDC114</i>	-0.91	0.0001226	0.0037907
<i>ADRA2A</i>	-0.91	0.0015832	0.0290191
<i>TMEM190</i>	-0.91	0.000151	0.0044831
<i>SLC2A12</i>	-0.91	0.0003935	0.0098302
<i>BAIAP3</i>	-0.91	9.817E-05	0.0031732
<i>FABP6</i>	-0.91	0.0006672	0.0148129
<i>DYNLRB2</i>	-0.91	0.0007191	0.0157207
<i>DLG2</i>	-0.91	0.0010555	0.021222
<i>OSCP1</i>	-0.91	9.889E-05	0.0031877
<i>FBXO36</i>	-0.91	0.0002558	0.0069456

<i>MORN1</i>	-0.92	0.0002879	0.0076271
<i>TUBA1A</i>	-0.92	2.686E-05	0.0011056
<i>C9ORF117</i>	-0.92	9.671E-05	0.0031366
<i>USP2</i>	-0.92	0.0002123	0.0059234
<i>C14ORF50</i>	-0.92	0.000635	0.0142173
<i>RPGRIP1L</i>	-0.92	0.0011673	0.0228573
<i>PRUNE2</i>	-0.93	0.0008976	0.0188229
<i>PZP</i>	-0.93	0.0004505	0.0108752
<i>MPDZ</i>	-0.93	0.0010437	0.0210644
<i>CYP2U1</i>	-0.93	0.0017841	0.031849
<i>SGCB</i>	-0.93	0.0012835	0.0244344
<i>HAGHL</i>	-0.93	0.0001147	0.0035932
<i>CLDN3</i>	-0.93	4.849E-05	0.0017943
<i>USP13</i>	-0.93	0.0025906	0.0425812
<i>C20ORF96</i>	-0.93	0.0001359	0.0041185
<i>CDHR3</i>	-0.93	8.135E-05	0.0027284
<i>GSTA3</i>	-0.94	0.0018127	0.0320695
<i>OLFML2A</i>	-0.94	0.0002369	0.0065296
<i>WDR63</i>	-0.94	0.000535	0.0125082
<i>WDR96</i>	-0.94	9.473E-05	0.0030916
<i>PIH1D2</i>	-0.94	0.0004975	0.0118101
<i>MARCH10</i>	-0.94	0.0017324	0.0311028
<i>FHAD1</i>	-0.94	9.274E-05	0.0030391
<i>PCYT1B</i>	-0.94	0.0018688	0.0328406
<i>KIAA1908</i>	-0.94	0.000104	0.0033324
<i>SRCIN1</i>	-0.94	0.0004075	0.0100888
<i>PAQR8</i>	-0.95	0.0002222	0.0061671
<i>DIXDC1</i>	-0.95	0.000279	0.0074408
<i>EFHC1</i>	-0.95	3.752E-05	0.0014602
<i>RIBC2</i>	-0.95	0.0006277	0.0141347
<i>ENPP5</i>	-0.95	9.304E-05	0.0030427
<i>MAPK8IP1</i>	-0.95	4.013E-05	0.0015392
<i>LOC10050666</i>	-0.95	0.0001622	0.0047271
<i>CCDC40</i>	-0.95	7.24E-05	0.0024756
<i>PRR18</i>	-0.95	0.0009927	0.0204021
<i>RAB36</i>	-0.95	6.524E-05	0.0022956
<i>CX3CL1</i>	-0.95	6.686E-05	0.0023367
<i>DNAH2</i>	-0.95	5.661E-05	0.0020467
<i>CCDC13</i>	-0.95	0.0002777	0.0074193
<i>SPINLW1</i>	-0.96	0.0003972	0.0098901
<i>C22ORF15</i>	-0.96	0.0005398	0.012532
<i>CLCN4</i>	-0.96	0.0020033	0.0347019
<i>MNS1</i>	-0.96	0.0001222	0.0037843
<i>NCALD</i>	-0.96	0.0001984	0.0055957
<i>TIMP4</i>	-0.96	0.0015518	0.0285419
<i>TMPRSS3</i>	-0.96	0.0001246	0.0038384
<i>ELN</i>	-0.96	0.0010728	0.0214321
<i>DNAL1</i>	-0.96	3.39E-05	0.0013496
<i>DNAH12</i>	-0.96	6.611E-05	0.0023211
<i>C6ORF27</i>	-0.96	5.012E-05	0.0018374

<i>TTLL9</i>	-0.97	0.0005161	0.0121615
<i>TSPAN19</i>	-0.97	0.0003774	0.0095036
<i>CCDC80</i>	-0.97	1.079E-05	0.0005592
<i>C11ORF70</i>	-0.97	0.0001772	0.0050735
<i>KLHDC8A</i>	-0.97	0.0003269	0.0084473
<i>TXNDC6</i>	-0.97	0.0004402	0.0106761
<i>IFLTD1</i>	-0.97	0.0030443	0.0483747
<i>TXLNB</i>	-0.97	0.0021079	0.0359984
<i>KATNAL1</i>	-0.98	0.0027607	0.0449549
<i>CCDC135</i>	-0.98	0.0001116	0.003534
<i>RND2</i>	-0.98	0.000693	0.015257
<i>C1ORF114</i>	-0.98	0.0004746	0.011357
<i>CCDC81</i>	-0.98	8.807E-05	0.0029159
<i>PLCH1</i>	-0.99	9.542E-05	0.0031012
<i>ZMYND12</i>	-0.99	0.0013404	0.0253256
<i>MAP9</i>	-0.99	9.511E-05	0.0030975
<i>MORN5</i>	-0.99	0.0001125	0.0035546
<i>WDR31</i>	-0.99	0.0010896	0.0217141
<i>EFCAB2</i>	-0.99	7.141E-05	0.0024472
<i>TCTN2</i>	-0.99	2.262E-05	0.0009532
<i>CCDC78</i>	-0.99	2.017E-05	0.0008686
<i>CHST9</i>	-1.00	2.036E-05	0.0008722
<i>ALMS1</i>	-1.00	6.872E-05	0.0023808
<i>CCDC42B</i>	-1.00	2.131E-05	0.000908
<i>DNAJB13</i>	-1.00	0.0001136	0.003579
<i>DSCAML1</i>	-1.00	0.0012007	0.0234239
<i>CWH43</i>	-1.00	0.0003254	0.0084374
<i>C3ORF32</i>	-1.00	0.003063	0.048573
<i>C11ORF63</i>	-1.00	0.0003269	0.0084473
<i>IQCA1</i>	-1.00	0.0001892	0.0053737
<i>CASC2</i>	-1.00	0.0010101	0.0206244
<i>C5ORF4</i>	-1.00	0.0001192	0.0037045
<i>C3ORF25</i>	-1.00	7.346E-05	0.0025011
<i>LRRC23</i>	-1.00	1.449E-05	0.0006739
<i>SPAG17</i>	-1.00	4.822E-05	0.0017884
<i>NCRNA00094</i>	-1.00	4.606E-05	0.0017328
<i>C9ORF171</i>	-1.00	0.0001572	0.0046232
<i>DUSP18</i>	-1.00	0.0002087	0.0058546
<i>FBXL13</i>	-1.00	0.0017478	0.0312721
<i>NELL2</i>	-1.00	7.743E-05	0.0026186
<i>IFT57</i>	-1.01	1.246E-05	0.0006161
<i>TCTN1</i>	-1.01	3.5E-05	0.0013826
<i>AGR3</i>	-1.01	9.121E-05	0.0029952
<i>C11ORF16</i>	-1.01	4.996E-05	0.0018358
<i>RIBC1</i>	-1.01	6.226E-05	0.0022153
<i>CSMD1</i>	-1.01	0.0008603	0.0182276
<i>C13ORF26</i>	-1.01	0.0003211	0.008365
<i>SLC4A8</i>	-1.01	0.0001557	0.0045888
<i>SDK1</i>	-1.01	2.821E-05	0.001155
<i>TMEM151B</i>	-1.01	0.0009451	0.0194706

<i>SYNE1</i>	-1.01	1.398E-05	0.0006579
<i>CETN2</i>	-1.01	1.101E-05	0.0005655
<i>C21ORF128</i>	-1.02	0.001709	0.0307869
<i>C2ORF62</i>	-1.02	5.758E-05	0.0020769
<i>HSD17B13</i>	-1.02	1.671E-05	0.0007547
<i>PKIG</i>	-1.02	2.243E-05	0.0009478
<i>ZBBX</i>	-1.02	4.921E-05	0.0018122
<i>LOC10050684</i>	-1.02	0.0006184	0.0140253
<i>BAI2</i>	-1.02	0.0009028	0.0188229
<i>IGFBP5</i>	-1.02	3.564E-05	0.001401
<i>TNFRSF19</i>	-1.02	1.678E-05	0.0007557
<i>C3ORF67</i>	-1.02	0.0002555	0.0069456
<i>KIF6</i>	-1.02	0.0010247	0.020842
<i>MAP1B</i>	-1.02	0.0005041	0.0119323
<i>MMP10</i>	-1.03	1.995E-05	0.0008639
<i>RAB6B</i>	-1.03	0.0005589	0.0129131
<i>C9ORF116</i>	-1.03	1.359E-05	0.0006452
<i>ABC11</i>	-1.03	5.632E-05	0.0020407
<i>LRRC46</i>	-1.03	1.969E-05	0.0008598
<i>FLJ23152</i>	-1.03	0.0004366	0.0106054
<i>C19ORF51</i>	-1.03	1.553E-05	0.0007073
<i>PLTP</i>	-1.03	7.638E-06	0.0004181
<i>TPPP</i>	-1.03	1.697E-05	0.000762
<i>CYP24A1</i>	-1.03	0.0001456	0.0043556
<i>SHANK2</i>	-1.03	8.736E-05	0.002905
<i>EFCAB6</i>	-1.03	0.0001022	0.0032824
<i>LRRC43</i>	-1.04	7.567E-05	0.0025651
<i>IGFBP2</i>	-1.04	6.214E-06	0.0003561
<i>C3ORF15</i>	-1.04	3.004E-05	0.0012171
<i>SRD5A2</i>	-1.04	0.0001844	0.0052571
<i>NEK11</i>	-1.04	3.223E-05	0.0012995
<i>CTXN1</i>	-1.04	2.064E-05	0.0008818
<i>C6ORF103</i>	-1.04	6.272E-05	0.0022266
<i>CCDC74B</i>	-1.04	4.32E-05	0.0016529
<i>CACNG6</i>	-1.04	4.393E-05	0.0016686
<i>MORN3</i>	-1.04	0.0001942	0.0055057
<i>LRRC67</i>	-1.04	0.0018865	0.0330857
<i>LCA5L</i>	-1.04	0.0003935	0.0098302
<i>TEX9</i>	-1.04	0.0001687	0.0048715
<i>TCTEX1D4</i>	-1.04	1.124E-05	0.000575
<i>TMEM67</i>	-1.05	1.458E-05	0.000674
<i>C6ORF225</i>	-1.05	2.311E-05	0.0009689
<i>LPAR3</i>	-1.05	0.0005616	0.0129224
<i>FCGBP</i>	-1.05	3.161E-06	0.000212
<i>DYNC2H1</i>	-1.05	1.252E-05	0.0006167
<i>GBP6</i>	-1.05	2.513E-05	0.0010424
<i>C6ORF154</i>	-1.05	6.649E-05	0.002329
<i>FSD1L</i>	-1.05	0.0002929	0.007695
<i>C10ORF95</i>	-1.05	2.337E-05	0.0009771
<i>C1ORF158</i>	-1.06	0.0001094	0.0034761

<i>MLF1</i>	-1.06	1.186E-05	0.000601
<i>COL28A1</i>	-1.06	0.0003476	0.0088527
<i>C17ORF72</i>	-1.06	6.8E-06	0.0003788
<i>NME5</i>	-1.06	2.004E-05	0.0008655
<i>SYT5</i>	-1.06	1.925E-05	0.0008471
<i>AKAP14</i>	-1.06	3.573E-05	0.0014011
<i>MS4A8B</i>	-1.06	1.929E-05	0.0008471
<i>GAS2L2</i>	-1.07	1.243E-05	0.0006161
<i>DIAPH2</i>	-1.07	8.754E-05	0.002905
<i>C12ORF75</i>	-1.07	1.449E-05	0.0006739
<i>AK8</i>	-1.07	4.748E-05	0.0017652
<i>UCKL1-AS1</i>	-1.07	2.17E-05	0.0009218
<i>RFX3</i>	-1.07	3.998E-05	0.0015369
<i>FAM166B</i>	-1.07	9.032E-06	0.0004793
<i>IQCH</i>	-1.07	0.0001452	0.0043556
<i>RBM24</i>	-1.07	0.0003009	0.007867
<i>NPHP1</i>	-1.07	1.768E-05	0.0007875
<i>LRP2BP</i>	-1.07	0.0001087	0.0034615
<i>C4ORF22</i>	-1.08	0.0003733	0.0094289
<i>C10RF192</i>	-1.08	9.767E-06	0.0005115
<i>ANKRD45</i>	-1.08	3.252E-05	0.0013078
<i>WDR66</i>	-1.08	3.961E-06	0.0002508
<i>KLHL6</i>	-1.08	5.75E-06	0.000337
<i>FAM134B</i>	-1.08	0.0002062	0.0057937
<i>ATP6V0A4</i>	-1.08	7.778E-06	0.0004242
<i>SPATA4</i>	-1.08	0.0010498	0.0211602
<i>GNA14</i>	-1.08	1.89E-05	0.0008369
<i>NEK5</i>	-1.08	0.0001652	0.0048032
<i>CCDC74A</i>	-1.08	6.638E-06	0.0003711
<i>CCDC103</i>	-1.08	4.414E-05	0.0016686
<i>DNAH6</i>	-1.08	6.131E-06	0.0003527
<i>TUBA4B</i>	-1.08	7.368E-06	0.0004064
<i>KAL1</i>	-1.08	0.0016247	0.0295728
<i>LOC643037</i>	-1.08	6.818E-05	0.0023726
<i>LRRC34</i>	-1.09	5.269E-05	0.0019181
<i>FBXO15</i>	-1.09	0.0001486	0.0044184
<i>DYDC2</i>	-1.09	2.681E-05	0.0011056
<i>LRRC18</i>	-1.09	0.0001397	0.0042092
<i>PCSK1N</i>	-1.09	0.0003379	0.0086597
<i>SPARCL1</i>	-1.09	4.526E-06	0.0002811
<i>SPA17</i>	-1.09	6.563E-06	0.0003682
<i>C10RF194</i>	-1.09	8.657E-06	0.0004641
<i>KNDC1</i>	-1.09	1.348E-05	0.0006425
<i>RTDR1</i>	-1.09	0.000118	0.0036846
<i>C14ORF45</i>	-1.09	5.805E-06	0.0003389
<i>DNAAF1</i>	-1.10	4.551E-06	0.0002813
<i>PROS1</i>	-1.10	1.211E-05	0.0006098
<i>LCA5</i>	-1.10	2.648E-05	0.0010956
<i>DNAI2</i>	-1.10	6.235E-06	0.0003561
<i>WDR16</i>	-1.10	1.463E-05	0.0006741

<i>LDLRAD1</i>	-1.10	1.333E-05	0.0006386
<i>B9D1</i>	-1.10	7.374E-06	0.0004064
<i>DNAH10</i>	-1.10	5.519E-06	0.0003258
<i>FAM183A</i>	-1.10	1.045E-05	0.0005436
<i>DYDC1</i>	-1.10	0.0017153	0.0308663
<i>WDR38</i>	-1.10	3.76E-06	0.0002419
<i>RSPH9</i>	-1.10	1.29E-05	0.0006297
<i>C2ORF81</i>	-1.11	9.247E-06	0.0004891
<i>DNAH11</i>	-1.11	6.393E-06	0.0003612
<i>RP1</i>	-1.11	0.0001479	0.0044145
<i>C2ORF40</i>	-1.11	9.764E-06	0.0005115
<i>C15ORF26</i>	-1.11	6E-05	0.0021448
<i>NEK10</i>	-1.11	1.709E-05	0.0007653
<i>RGS22</i>	-1.11	6.972E-05	0.00241
<i>TP73</i>	-1.11	5.077E-06	0.0003054
<i>ROPN1L</i>	-1.12	2.668E-06	0.0001861
<i>C1ORF129</i>	-1.12	0.0012378	0.0239152
<i>LOC646903</i>	-1.12	0.0003608	0.0091428
<i>IQCG</i>	-1.12	3.01E-06	0.0002045
<i>XK</i>	-1.12	0.0013837	0.0258731
<i>WDR54</i>	-1.12	2.945E-06	0.0002018
<i>CCDC33</i>	-1.12	1.39E-05	0.0006579
<i>ARMC3</i>	-1.12	6.286E-06	0.0003577
<i>C2ORF77</i>	-1.13	4.734E-05	0.001764
<i>CRISPLD1</i>	-1.13	0.0002772	0.0074191
<i>SPEF1</i>	-1.13	3.534E-06	0.0002311
<i>LOC10013117</i>	-1.13	2.022E-05	0.0008686
<i>IQUB</i>	-1.13	4.376E-05	0.0016686
<i>C2ORF70</i>	-1.13	0.0022865	0.0384867
<i>TTC25</i>	-1.13	4.288E-06	0.0002704
<i>CXORF41</i>	-1.14	7.395E-05	0.0025121
<i>CCDC113</i>	-1.14	2.151E-06	0.0001555
<i>DNAH3</i>	-1.14	1.587E-06	0.0001203
<i>ANKFN1</i>	-1.14	0.0006442	0.0143631
<i>CAPSL</i>	-1.14	3.805E-06	0.0002428
<i>TMEM232</i>	-1.15	5.843E-05	0.0020981
<i>WDR69</i>	-1.15	7.933E-06	0.0004312
<i>FAM92B</i>	-1.15	1.857E-06	0.0001374
<i>SEC14L3</i>	-1.15	5.394E-06	0.0003208
<i>STOX1</i>	-1.15	6.325E-06	0.0003587
<i>CCDC19</i>	-1.15	1.384E-06	0.0001067
<i>KCNE1</i>	-1.15	4.995E-06	0.0003017
<i>TTC26</i>	-1.15	9.894E-06	0.0005164
<i>APOD</i>	-1.16	8.051E-07	7.039E-05
<i>ENO4</i>	-1.16	6.768E-05	0.0023603
<i>MAP1A</i>	-1.16	2.017E-06	0.0001479
<i>DTHD1</i>	-1.16	2.705E-06	0.0001878
<i>MAP6</i>	-1.16	2.729E-06	0.0001887
<i>RRAD</i>	-1.16	3.641E-07	3.565E-05
<i>ECT2L</i>	-1.17	3.488E-06	0.0002291

<i>PCDP1</i>	-1.17	3.326E-06	0.0002203
<i>RSPH1</i>	-1.17	7.745E-07	6.859E-05
<i>CXORF22</i>	-1.17	3.748E-05	0.0014602
<i>CCDC108</i>	-1.17	1.168E-06	9.344E-05
<i>HYDIN</i>	-1.18	7.642E-07	6.806E-05
<i>SLC26A4</i>	-1.18	7.414E-06	0.0004072
<i>CD38</i>	-1.18	3.122E-05	0.0012617
<i>DNER</i>	-1.19	4.884E-06	0.0002994
<i>FILIP1</i>	-1.19	5.959E-05	0.0021347
<i>EML1</i>	-1.19	3.684E-06	0.0002389
<i>ZMYND10</i>	-1.19	4.952E-07	4.646E-05
<i>C10ORF67</i>	-1.19	0.0003901	0.0097909
<i>SLC28A2</i>	-1.19	0.0016719	0.0303267
<i>CERKL</i>	-1.20	1.984E-05	0.0008615
<i>ERBB4</i>	-1.20	5.347E-06	0.0003205
<i>TTC29</i>	-1.20	4.919E-06	0.0002994
<i>ENKUR</i>	-1.20	2.063E-06	0.0001498
<i>C9ORF135</i>	-1.20	1.761E-06	0.0001322
<i>RNF150</i>	-1.21	0.0005389	0.0125298
<i>C10ORF107</i>	-1.21	1.803E-06	0.0001347
<i>WDR78</i>	-1.21	9.048E-07	7.612E-05
<i>NHLRC4</i>	-1.21	2.256E-06	0.0001609
<i>PROM1</i>	-1.21	1.572E-07	1.757E-05
<i>CASC1</i>	-1.21	1.129E-06	9.081E-05
<i>EFHC2</i>	-1.22	1.388E-06	0.0001067
<i>CAPS</i>	-1.22	1.43E-07	1.622E-05
<i>LRRIQ1</i>	-1.23	1.194E-06	9.455E-05
<i>C11ORF88</i>	-1.23	3.732E-07	3.632E-05
<i>TPPP3</i>	-1.23	1.914E-07	2.067E-05
<i>PACRG</i>	-1.23	1.406E-06	0.0001076
<i>NWD1</i>	-1.24	3.327E-07	3.298E-05
<i>SPATA17</i>	-1.24	3.836E-06	0.0002438
<i>DNAH5</i>	-1.24	2.089E-07	2.21E-05
<i>LRRC48</i>	-1.24	2.995E-07	2.988E-05
<i>PPIL6</i>	-1.24	9.601E-07	7.924E-05
<i>PLEKHB1</i>	-1.24	9.127E-07	7.612E-05
<i>SLC7A2</i>	-1.24	8.263E-07	7.079E-05
<i>EFHB</i>	-1.25	6.363E-07	5.831E-05
<i>APOBEC4</i>	-1.25	2.295E-06	0.0001629
<i>C20ORF26</i>	-1.25	1.149E-05	0.000586
<i>PRPH</i>	-1.25	2.999E-05	0.0012171
<i>C6ORF165</i>	-1.25	8.228E-07	7.079E-05
<i>C7ORF57</i>	-1.25	8.106E-07	7.039E-05
<i>C1ORF88</i>	-1.25	1.325E-07	1.524E-05
<i>TNFAIP8L1</i>	-1.26	1.313E-07	1.521E-05
<i>ZNF853</i>	-1.26	5.985E-06	0.0003456
<i>DNAH7</i>	-1.26	2.635E-07	2.68E-05
<i>DNALI1</i>	-1.26	1.188E-07	1.408E-05
<i>ZNF474</i>	-1.27	2.042E-06	0.0001491
<i>CTGF</i>	-1.27	5.858E-08	7.961E-06

<i>TCTE1</i>	-1.27	2.21E-06	0.0001584
<i>TAGLN3</i>	-1.27	0.0005368	0.0125182
<i>OXTR</i>	-1.28	1.556E-06	0.0001185
<i>C20ORF85</i>	-1.28	5.795E-08	7.943E-06
<i>FAM154B</i>	-1.29	8.081E-08	1.061E-05
<i>FN1</i>	-1.29	1.237E-05	0.0006161
<i>RAB3B</i>	-1.29	1.334E-06	0.0001036
<i>VWA3B</i>	-1.29	1.746E-07	1.911E-05
<i>C9ORF24</i>	-1.29	6.524E-08	8.715E-06
<i>RSPH4A</i>	-1.30	8.682E-08	1.104E-05
<i>AKAP6</i>	-1.30	1.29E-06	0.0001012
<i>REEP1</i>	-1.30	0.0017005	0.0307053
<i>CCDC65</i>	-1.30	1.706E-07	1.894E-05
<i>CCDC164</i>	-1.30	6.417E-08	8.646E-06
<i>TEKT1</i>	-1.31	8.342E-08	1.069E-05
<i>KIF19</i>	-1.31	1.144E-07	1.366E-05
<i>WDR65</i>	-1.31	4.351E-06	0.0002732
<i>FAM81B</i>	-1.31	1.025E-07	1.263E-05
<i>C16ORF71</i>	-1.31	2.519E-07	2.598E-05
<i>AK7</i>	-1.32	1.036E-07	1.266E-05
<i>SHISA8</i>	-1.32	0.0020934	0.0358682
<i>C10RF173</i>	-1.32	5.521E-08	7.634E-06
<i>EFCAB1</i>	-1.32	4.905E-08	6.94E-06
<i>C5ORF49</i>	-1.32	4.744E-08	6.798E-06
<i>SPATA18</i>	-1.33	3.837E-08	5.815E-06
<i>ARMC4</i>	-1.33	1.735E-07	1.911E-05
<i>DNAH9</i>	-1.34	3.712E-08	5.68E-06
<i>IL5RA</i>	-1.34	2.519E-07	2.598E-05
<i>C6ORF118</i>	-1.34	4.537E-07	4.308E-05
<i>IGFBP7</i>	-1.35	2.455E-08	3.949E-06
<i>SNTN</i>	-1.36	9.316E-09	1.813E-06
<i>TMEM231</i>	-1.36	8.76E-09	1.726E-06
<i>HHLA2</i>	-1.37	5.075E-08	7.08E-06
<i>GSTA2</i>	-1.38	3.094E-08	4.828E-06
<i>UBXN10</i>	-1.38	1.998E-08	3.281E-06
<i>LOC10028771</i>	-1.39	2.784E-07	2.795E-05
<i>CDC20B</i>	-1.39	9.502E-08	1.179E-05
<i>LPPR3</i>	-1.39	6.669E-07	6.076E-05
<i>CC2D2A</i>	-1.39	1.424E-08	2.55E-06
<i>STOML3</i>	-1.40	1.567E-08	2.657E-06
<i>POSTN</i>	-1.40	0.0006722	0.0148616
<i>CES1</i>	-1.41	1.852E-09	4.786E-07
<i>SPAG6</i>	-1.42	4.271E-09	9.758E-07
<i>YSK4</i>	-1.43	1.136E-08	2.079E-06
<i>C6ORF97</i>	-1.44	2.772E-09	6.722E-07
<i>LRRC10B</i>	-1.47	9.724E-10	2.693E-07
<i>ANKUB1</i>	-1.49	1.538E-08	2.636E-06
<i>C13ORF30</i>	-1.52	5.461E-10	1.656E-07
<i>FOXJ1</i>	-1.61	3.142E-11	1.438E-08
<i>COL1A2</i>	-1.66	0.0001524	0.0045161

ACCEPTED MANUSCRIPT

Pre-Exposure 1 vs. Post-exposure 4 within M-

Genes	Log ₂ FC	pvalsGLM	padjGLM
<i>KRT24</i>	3.47	0	0
<i>LCE3D</i>	2.71	1.34E-05	0.000366
<i>TMPRSS11B</i>	2.60	7.56E-12	2.38E-09
<i>PLA2G2F</i>	2.57	1.21E-11	3.3E-09
<i>CRNN</i>	2.57	0	0
<i>IQGAP3</i>	2.49	1.76E-05	0.000454
<i>SPINK7</i>	2.48	1.66E-10	2.81E-08
<i>FAM25A</i>	2.47	3.12E-07	1.53E-05
<i>HJURP</i>	2.42	9.69E-05	0.001973
<i>CRCT1</i>	2.39	2.79E-12	1E-09
<i>FLG</i>	2.36	1.74E-07	9.03E-06
<i>MKI67</i>	2.35	6.52E-10	8.66E-08
<i>CAMK2N1</i>	2.35	6.73E-09	5.73E-07
<i>RNF222</i>	2.34	7.46E-07	3.15E-05
<i>E2F2</i>	2.32	4.79E-08	2.98E-06
<i>AQP9</i>	2.32	0	0
<i>S100A2</i>	2.32	0	0
<i>CLDN17</i>	2.30	0.000117	0.002281
<i>IL36A</i>	2.26	0.001813	0.02175
<i>RPTN</i>	2.24	0	0
<i>PBK</i>	2.24	0.000583	0.008675
<i>CLEC4E</i>	2.24	2.66E-07	1.33E-05
<i>SLURP1</i>	2.24	1.22E-11	3.3E-09
<i>ECM1</i>	2.23	0	0
<i>LOC1005058.</i>	2.22	8.18E-05	0.001699
<i>KRT78</i>	2.21	1.33E-15	9.13E-13
<i>CPA4</i>	2.20	0	0
<i>TREM1</i>	2.19	1.68E-14	9.44E-12
<i>RRM2</i>	2.19	2.13E-08	1.48E-06
<i>TNFAIP6</i>	2.19	2.43E-06	8.48E-05
<i>IL1A</i>	2.18	0.000204	0.003634
<i>AURKB</i>	2.18	4.66E-05	0.001052
<i>G0S2</i>	2.16	0	0
<i>UBE2C</i>	2.16	5.46E-07	2.41E-05
<i>SPRR1B</i>	2.15	0	0
<i>SPRR3</i>	2.15	0	0
<i>FCN1</i>	2.15	2.47E-06	8.56E-05
<i>BIRC5</i>	2.15	9.76E-08	5.46E-06
<i>IL36RN</i>	2.15	2.4E-05	0.000597
<i>KLK9</i>	2.15	1.06E-05	0.000296
<i>C6ORF15</i>	2.14	0.004713	0.046114
<i>IVL</i>	2.13	1.54E-10	2.73E-08
<i>KRT13</i>	2.13	0	0
<i>PADI4</i>	2.12	0.000497	0.00762
<i>GTSE1</i>	2.12	0.000642	0.009395
<i>CALB1</i>	2.12	3.48E-10	5.15E-08
<i>ABLIM3</i>	2.11	1.42E-09	1.55E-07
<i>LOC1005071.</i>	2.08	1.48E-05	0.000398

PYGM	2.07	0.002902	0.031543
SPRR2D	2.07	1.07E-14	7E-12
TROAP	2.07	1.6E-05	0.000423
LILRA6	2.06	1.7E-08	1.21E-06
FCAR	2.06	1.66E-08	1.2E-06
FCGR3B	2.06	5.58E-14	2.75E-11
OSM	2.05	3.37E-12	1.15E-09
CD300E	2.04	0.000562	0.008473
FFAR2	2.04	3.82E-11	8.49E-09
KRTDAP	2.03	0.003714	0.038113
MYBL2	2.03	1.4E-06	5.38E-05
PROK2	2.03	2.96E-10	4.57E-08
MAL	2.03	4.6E-13	1.96E-10
CSF3R	1.99	6.66E-16	5E-13
KRT16	1.99	4.88E-14	2.48E-11
ASPM	1.98	0.00103	0.013953
TREML2	1.97	3.5E-08	2.29E-06
CDC6	1.97	4E-05	0.000923
ESRG	1.96	0.003261	0.034502
BCL2A1	1.96	7E-13	2.91E-10
UCA1	1.95	1.58E-14	9.44E-12
TRPV3	1.94	4.67E-06	0.000147
S100A8	1.94	0	0
KRT4	1.93	0	0
PKMYT1	1.93	0.000581	0.008654
SPRR2A	1.92	1.11E-16	1.17E-13
SCEL	1.92	4.44E-16	3.89E-13
RHCG	1.92	2E-08	1.4E-06
KRT6A	1.92	1.33E-15	9.13E-13
IL36G	1.92	7.26E-05	0.001523
S100A12	1.91	1.92E-06	6.93E-05
IL8	1.90	5.55E-16	4.38E-13
EMP1	1.90	3.33E-16	3.09E-13
HK3	1.90	2.43E-05	0.000605
PNLIPRP3	1.90	0.004829	0.046986
LOC731424	1.90	0.000326	0.005365
KLK7	1.90	4.38E-10	6.17E-08
ADAMTSL4	1.89	2.08E-09	2.2E-07
SPRR2E	1.89	2.47E-13	1.11E-10
FPR2	1.86	9.21E-09	7.48E-07
LOC646329	1.84	0.001419	0.017904
SBSN	1.84	5.46E-09	4.92E-07
SPRR2F	1.84	3.77E-07	1.8E-05
KRT14	1.84	9.9E-10	1.17E-07
ADAMTS1	1.84	0.000698	0.010082
SERPINB13	1.82	7.95E-12	2.41E-09
NCCRP1	1.82	1.12E-14	7.07E-12
GPR97	1.81	6.09E-11	1.23E-08
CDSN	1.81	7.14E-07	3.05E-05
CSF2RB	1.81	3.46E-12	1.16E-09

<i>IL1B</i>	1.80	9.21E-11	1.71E-08
<i>RASGRP4</i>	1.79	6.85E-08	4.06E-06
<i>NCAPG</i>	1.79	0.004005	0.040355
<i>KLK8</i>	1.78	0.001191	0.01566
<i>KLK6</i>	1.78	6.58E-09	5.7E-07
<i>VSIG10L</i>	1.77	2.76E-08	1.86E-06
<i>RNASE7</i>	1.77	5.75E-06	0.000175
<i>NRADDP</i>	1.76	0.004828	0.046986
<i>SPRR2C</i>	1.76	0.000167	0.003099
<i>CR1</i>	1.76	2.94E-07	1.45E-05
<i>AACSP1</i>	1.76	0.004125	0.041311
<i>PRSS27</i>	1.74	1.46E-10	2.62E-08
<i>EREG</i>	1.74	7.13E-08	4.18E-06
<i>ESPL1</i>	1.73	5.69E-07	2.49E-05
<i>LILRB3</i>	1.72	7.26E-09	6.12E-07
<i>EGR3</i>	1.72	9.42E-08	5.3E-06
<i>UPK2</i>	1.72	0.002785	0.030551
<i>IL1RL1</i>	1.72	0.005062	0.048768
<i>SLC5A5</i>	1.72	1.92E-07	9.89E-06
<i>CXCR1</i>	1.71	4.57E-09	4.29E-07
<i>HSPB8</i>	1.71	8.51E-12	2.53E-09
<i>GLT1D1</i>	1.71	6.74E-07	2.91E-05
<i>CREB5</i>	1.68	6.8E-07	2.93E-05
<i>S100A3</i>	1.68	0.003716	0.038113
<i>CYP27C1</i>	1.67	0.000675	0.009794
<i>DYSF</i>	1.67	4.09E-09	3.98E-07
<i>SPRR1A</i>	1.67	1.22E-12	4.69E-10
<i>KLK5</i>	1.67	0.000911	0.012676
<i>MEFV</i>	1.66	3.13E-07	1.53E-05
<i>ANO8</i>	1.63	9.02E-13	3.63E-10
<i>PPP2R2C</i>	1.63	0.00259	0.028756
<i>TMPRSS11E</i>	1.63	1.82E-09	1.94E-07
<i>ARHGAP40</i>	1.63	1.95E-06	6.98E-05
<i>FPR1</i>	1.62	1.23E-09	1.39E-07
<i>MME</i>	1.62	1.14E-06	4.63E-05
<i>TYRP1</i>	1.62	0.001905	0.022663
<i>ARC</i>	1.61	0.005159	0.049434
<i>C19ORF59</i>	1.61	2.84E-05	0.000685
<i>FOSL1</i>	1.59	6.68E-06	0.0002
<i>LOC1005070</i>	1.59	0.000565	0.008504
<i>IL1R2</i>	1.58	1.64E-06	6.13E-05
<i>CEACAM3</i>	1.58	0.000119	0.002316
<i>ITGAX</i>	1.58	2.03E-11	4.84E-09
<i>FOSB</i>	1.57	1.07E-09	1.25E-07
<i>EDN1</i>	1.56	0.004278	0.042472
<i>PADI3</i>	1.55	0.000244	0.004229
<i>LILRA5</i>	1.55	8.65E-06	0.00025
<i>CMTM2</i>	1.54	0.000268	0.004558
<i>ITGAM</i>	1.53	3.92E-07	1.85E-05
<i>IL1RN</i>	1.52	7.26E-11	1.41E-08

<i>ESR2</i>	1.52	0.004303	0.042662
<i>UPP1</i>	1.50	3.3E-09	3.32E-07
<i>GPR65</i>	1.49	3.44E-07	1.65E-05
<i>OLR1</i>	1.49	0.00079	0.011241
<i>SLC11A1</i>	1.49	1.54E-08	1.12E-06
<i>CNFN</i>	1.48	9.77E-09	7.86E-07
<i>CXCL2</i>	1.48	7.38E-07	3.13E-05
<i>TNNI2</i>	1.48	7.52E-10	9.49E-08
<i>CEP55</i>	1.48	0.003946	0.039928
<i>FGR</i>	1.48	7.61E-08	4.41E-06
<i>HRH2</i>	1.48	0.001575	0.019399
<i>SIGLEC5</i>	1.47	0.000293	0.004911
<i>KIAA0226L</i>	1.47	3.83E-06	0.000125
<i>CTSL2</i>	1.47	1.22E-06	4.84E-05
<i>HCAR3</i>	1.47	3.88E-08	2.51E-06
<i>APOBEC3A</i>	1.46	5.44E-07	2.4E-05
<i>CSTA</i>	1.46	1.79E-10	2.94E-08
<i>SIRPB1</i>	1.46	1.77E-06	6.46E-05
<i>S100A9</i>	1.46	4.83E-11	1.02E-08
<i>EEF1A2</i>	1.46	0.004696	0.045975
<i>EGR2</i>	1.46	0.000206	0.003664
<i>PADI1</i>	1.45	6.92E-11	1.38E-08
<i>CST6</i>	1.44	7.78E-05	0.001624
<i>EMR2</i>	1.44	1.42E-07	7.52E-06
<i>KIAA0101</i>	1.44	0.000918	0.012755
<i>AIM1L</i>	1.43	6.39E-09	5.57E-07
<i>SRGN</i>	1.43	2.14E-09	2.25E-07
<i>PTTG1</i>	1.42	5.51E-05	0.001202
<i>SH2D1B</i>	1.42	1.42E-05	0.000384
<i>OBFC2A</i>	1.41	1.68E-08	1.2E-06
<i>LOC1003026</i>	1.41	6.42E-06	0.000194
<i>EMR3</i>	1.41	0.000312	0.00519
<i>AATK</i>	1.41	6.65E-05	0.001425
<i>SLCO4A1</i>	1.40	1.53E-07	8.08E-06
<i>DKK1</i>	1.40	1.65E-06	6.13E-05
<i>RGS2</i>	1.40	3.74E-09	3.68E-07
<i>DIO2</i>	1.40	0.001241	0.016109
<i>CCL3</i>	1.39	0.000592	0.008775
<i>GABRE</i>	1.39	5.2E-09	4.76E-07
<i>NEAT1</i>	1.38	7.57E-11	1.45E-08
<i>ASPG</i>	1.38	1.26E-05	0.000347
<i>CDH24</i>	1.38	3.82E-05	0.000891
<i>PHOSPHO1</i>	1.38	1.76E-05	0.000454
<i>NCF1C</i>	1.37	0.000408	0.006463
<i>CASS4</i>	1.36	0.000112	0.002207
<i>LOC729737</i>	1.35	3.23E-07	1.57E-05
<i>PDE4B</i>	1.35	1.23E-06	4.87E-05
<i>FAM40B</i>	1.34	0.001546	0.019112
<i>S100A7</i>	1.34	1.58E-05	0.000419
<i>MNDA</i>	1.34	2.94E-07	1.45E-05

<i>PHACTR1</i>	1.34	0.000127	0.002445
<i>PLEKHG2</i>	1.34	2.02E-06	7.18E-05
<i>LOC90834</i>	1.33	0.001938	0.022973
<i>LRRC25</i>	1.33	2.68E-05	0.000654
<i>ADM</i>	1.33	1.04E-07	5.76E-06
<i>C8ORF73</i>	1.33	1.71E-08	1.21E-06
<i>TK1</i>	1.31	1.45E-05	0.00039
<i>PLEK</i>	1.31	1.31E-07	6.99E-06
<i>A2ML1</i>	1.31	3.95E-07	1.85E-05
<i>C1ORF170</i>	1.31	0.000371	0.005966
<i>SMTN</i>	1.30	1.79E-05	0.000461
<i>FGFBP1</i>	1.30	1.92E-06	6.93E-05
<i>PLEKHN1</i>	1.30	5.89E-06	0.000179
<i>SULT1E1</i>	1.30	8.88E-05	0.001826
<i>DOK3</i>	1.29	1.38E-06	5.29E-05
<i>HAL</i>	1.29	0.002184	0.025239
<i>TRIP10</i>	1.29	4.16E-09	4.02E-07
<i>TNFRSF10C</i>	1.29	8.01E-06	0.000234
<i>SEMA6B</i>	1.29	0.000313	0.005202
<i>LMNB1</i>	1.29	1.34E-06	5.2E-05
<i>TLR8</i>	1.28	0.000385	0.00617
<i>NCF1</i>	1.28	8.91E-06	0.000255
<i>FLJ45445</i>	1.28	1.64E-06	6.13E-05
<i>SLC2A3</i>	1.28	4.21E-07	1.94E-05
<i>LILRB2</i>	1.28	6.5E-06	0.000196
<i>CCL4</i>	1.28	0.00188	0.022401
<i>PIK3R5</i>	1.27	1.57E-06	5.94E-05
<i>CAPN14</i>	1.27	2.8E-05	0.000678
<i>PP14571</i>	1.26	3.35E-07	1.61E-05
<i>MMP25</i>	1.26	3.18E-07	1.55E-05
<i>CCNB2</i>	1.26	0.002891	0.031471
<i>PDE4C</i>	1.25	0.001858	0.022171
<i>CXCR2</i>	1.25	2.62E-06	9.02E-05
<i>IL1RL2</i>	1.24	0.00417	0.041633
<i>NUSAP1</i>	1.24	0.002347	0.026734
<i>FAM157A</i>	1.24	0.004253	0.042295
<i>PRSS3</i>	1.24	0.000102	0.002053
<i>LY6D</i>	1.24	1.53E-08	1.12E-06
<i>MXRA8</i>	1.24	1.11E-07	6.05E-06
<i>KIFC1</i>	1.24	0.004164	0.041596
<i>UHRF1</i>	1.23	0.001683	0.02053
<i>TUBB6</i>	1.22	1.94E-05	0.000493
<i>DTX1</i>	1.22	0.002913	0.031641
<i>CDRT1</i>	1.22	4.94E-06	0.000154
<i>CYP2E1</i>	1.21	0.000167	0.003099
<i>PLAUR</i>	1.20	4.52E-07	2.05E-05
<i>LAMA4</i>	1.20	5.05E-05	0.001109
<i>NLRP3</i>	1.20	0.000824	0.011647
<i>LOC1005061.</i>	1.20	1.61E-05	0.000424
<i>GDPD3</i>	1.19	4.21E-07	1.94E-05

<i>FCGR2A</i>	1.19	1.95E-06	6.98E-05
<i>GRHL3</i>	1.19	3.66E-06	0.00012
<i>COL6A6</i>	1.19	0.000138	0.00263
<i>GCOM1</i>	1.19	8.4E-06	0.000244
<i>SPNS2</i>	1.19	1.3E-07	6.96E-06
<i>SOCS3</i>	1.19	2.45E-06	8.51E-05
<i>CYP4F3</i>	1.18	1.82E-06	6.64E-05
<i>BMP1</i>	1.18	1.23E-06	4.86E-05
<i>LAT2</i>	1.18	0.000105	0.002081
<i>LOC1001331</i>	1.17	0.000261	0.00447
<i>CD83</i>	1.17	0.000185	0.003361
<i>AGAP11</i>	1.17	0.000495	0.007592
<i>ALDH1A3</i>	1.17	1.2E-07	6.5E-06
<i>VWF</i>	1.17	5.38E-06	0.000166
<i>MYEOV</i>	1.17	0.000251	0.004317
<i>RASAL1</i>	1.17	4.55E-06	0.000144
<i>HCK</i>	1.16	3.69E-06	0.000121
<i>MXD1</i>	1.16	4.92E-07	2.2E-05
<i>KLK13</i>	1.16	7.57E-05	0.001584
<i>LILRA2</i>	1.15	0.002606	0.028886
<i>YOD1</i>	1.15	1.95E-06	6.98E-05
<i>PLAU</i>	1.15	2.29E-06	8.09E-05
<i>C6ORF155</i>	1.15	0.003041	0.032652
<i>SPINK5</i>	1.14	3.2E-06	0.000107
<i>DUSP5</i>	1.14	1.65E-06	6.13E-05
<i>EGR1</i>	1.13	1.56E-06	5.93E-05
<i>ADORA2A</i>	1.13	0.001257	0.016284
<i>ZFP36</i>	1.13	4.24E-07	1.94E-05
<i>SAMSN1</i>	1.13	0.000117	0.002281
<i>HOPX</i>	1.13	4.07E-05	0.000933
<i>C9ORF169</i>	1.12	4.57E-06	0.000145
<i>CHI3L1</i>	1.12	0.000263	0.004488
<i>CALML5</i>	1.11	2.07E-05	0.00052
<i>ITGA5</i>	1.11	6.96E-05	0.001478
<i>CYTH4</i>	1.11	5.75E-06	0.000175
<i>CCR1</i>	1.10	0.000172	0.003167
<i>TMPRSS11D</i>	1.10	3.42E-06	0.000113
<i>CNNM1</i>	1.10	0.000366	0.005899
<i>KRT17</i>	1.10	2.77E-06	9.45E-05
<i>NFKBID</i>	1.09	0.000363	0.005874
<i>FOXM1</i>	1.09	0.000569	0.008542
<i>ABTB2</i>	1.09	0.000295	0.004942
<i>NBEAL2</i>	1.09	3.32E-07	1.6E-05
<i>PRC1</i>	1.09	0.000334	0.005483
<i>CXCR4</i>	1.09	1.51E-05	0.000405
<i>MYO1F</i>	1.09	2.76E-06	9.45E-05
<i>SLC7A5</i>	1.09	0.000239	0.004162
<i>LYPD3</i>	1.08	1.77E-06	6.46E-05
<i>LOC1001288</i>	1.08	0.000571	0.00855
<i>SNCG</i>	1.08	4.24E-05	0.000967

<i>PILRA</i>	1.08	0.000202	0.003623
<i>RASSF2</i>	1.07	1.82E-05	0.000464
<i>DGAT2</i>	1.07	4.77E-05	0.001068
<i>ALOX5AP</i>	1.07	0.000102	0.002054
<i>SH3D21</i>	1.07	6.79E-06	0.000202
<i>VGLL1</i>	1.07	3.34E-05	0.000794
<i>RELT</i>	1.07	0.000157	0.002943
<i>ID1</i>	1.07	1.08E-06	4.41E-05
<i>LCP2</i>	1.07	1.76E-05	0.000454
<i>TMPRSS11A</i>	1.06	0.000383	0.00615
<i>FBXO32</i>	1.06	3.85E-06	0.000125
<i>IL18RAP</i>	1.06	0.000674	0.00979
<i>CXCL3</i>	1.06	0.001478	0.018477
<i>CXCL1</i>	1.06	2.49E-06	8.62E-05
<i>IFRD1</i>	1.06	7.8E-06	0.000229
<i>NCF4</i>	1.05	5.18E-05	0.001135
<i>PRDM1</i>	1.05	3.77E-05	0.000882
<i>CACNB1</i>	1.04	2.37E-06	8.28E-05
<i>CXCL6</i>	1.04	4.05E-05	0.000932
<i>BCAT1</i>	1.04	1.68E-05	0.000437
<i>PIM1</i>	1.04	7.36E-06	0.000218
<i>IFITM10</i>	1.03	1.96E-06	7E-05
<i>ETV4</i>	1.03	0.002862	0.031209
<i>GRB7</i>	1.03	8.18E-06	0.000238
<i>ABCA1</i>	1.03	1.58E-05	0.000419
<i>ASF1B</i>	1.02	0.003856	0.039191
<i>CATSPERB</i>	1.02	0.001176	0.015515
<i>TNFRSF1B</i>	1.02	3.84E-05	0.000893
<i>PRSS22</i>	1.02	2.65E-06	9.09E-05
<i>GNG2</i>	1.02	0.001893	0.022535
<i>TACC3</i>	1.02	9.87E-05	0.002001
<i>LOC440434</i>	1.02	9.41E-05	0.001921
<i>SKAP2</i>	1.01	0.002298	0.026249
<i>TRPM6</i>	1.01	0.003335	0.035114
<i>TIMP3</i>	1.01	5.19E-05	0.001136
<i>PROM2</i>	1.01	2.8E-06	9.52E-05
<i>ASPRV1</i>	1.00	0.00063	0.009262
<i>PKP1</i>	1.00	0.000153	0.002874
<i>NFAM1</i>	1.00	0.000461	0.007181
<i>NMU</i>	1.00	0.000184	0.003346
<i>LOC284454</i>	0.99	0.000148	0.002791
<i>TSSK3</i>	0.99	0.002079	0.024303
<i>SYT8</i>	0.99	3.94E-06	0.000127
<i>UPK3B</i>	0.99	4.9E-05	0.001085
<i>DOCK5</i>	0.99	3.66E-05	0.000862
<i>CYP3A5</i>	0.98	0.000143	0.002731
<i>FOS</i>	0.98	2.36E-05	0.000589
<i>TINAGL1</i>	0.98	0.000569	0.008542
<i>PLCB3</i>	0.98	1.89E-05	0.000481
<i>C17ORF91</i>	0.98	1.23E-05	0.000338

GLS	0.97	9.39E-05	0.001919
IFITM2	0.97	1.54E-05	0.000411
HSPA6	0.97	0.001084	0.01455
CLEC7A	0.97	4.22E-05	0.000964
UNC13D	0.97	0.000112	0.002212
NOS3	0.96	0.003568	0.036906
ADAM8	0.96	2.46E-05	0.000611
EPHX3	0.96	0.002863	0.031209
SPI1	0.96	9.03E-05	0.001853
VNN1	0.95	0.000875	0.012288
ALS2CL	0.95	7.04E-06	0.000209
C15ORF62	0.95	0.000209	0.003714
ZWINT	0.95	0.001777	0.02141
LOC146880	0.95	1.1E-05	0.000307
MBD6	0.95	1.27E-05	0.00035
CRABP2	0.94	0.001914	0.02275
FYB	0.94	0.000184	0.003349
CLIC3	0.94	0.00054	0.008204
ARHGAP30	0.94	2.79E-05	0.000678
NFKBIZ	0.94	2.7E-05	0.000658
RHBDF1	0.94	2.61E-05	0.000642
SPTBN5	0.93	0.002387	0.027029
LCP1	0.93	4.54E-05	0.001027
TAGAP	0.93	0.000189	0.003407
PTGS2	0.93	0.000116	0.00227
LOC1004991	0.93	0.000104	0.00207
PRICKLE4	0.92	0.000204	0.003635
TM4SF1	0.92	1.89E-05	0.000481
RNF207	0.92	6.15E-05	0.00133
DGKA	0.92	3.3E-05	0.000785
PDLIM2	0.92	9.76E-05	0.001982
LOC1001333	0.92	0.000658	0.009597
DDX12	0.91	0.002252	0.025855
CD53	0.91	0.000244	0.004229
GMFG	0.91	0.001222	0.015949
GOLGA8A	0.91	4.73E-05	0.001063
PADI2	0.91	0.001513	0.018838
P2RY13	0.91	0.00338	0.035499
MLF1IP	0.91	0.001798	0.021583
NR4A3	0.90	0.005185	0.049561
CTSK	0.90	0.003091	0.03306
JARID2	0.90	0.000119	0.002316
SLC5A3	0.90	0.000276	0.004663
ZEB2	0.90	0.003319	0.034975
GAN	0.90	0.000516	0.007875
S100A14	0.90	2.56E-05	0.000631
FERMT3	0.90	0.000409	0.006463
PAQR6	0.90	0.001365	0.017383
NAMPT	0.89	5.95E-05	0.001292
MLKL	0.89	0.001587	0.019519

<i>CYP4F12</i>	0.89	5E-05	0.001104
<i>PLEKHM1P</i>	0.89	9.7E-05	0.001973
<i>FMNL1</i>	0.89	0.000119	0.002316
<i>WAS</i>	0.89	0.000781	0.011134
<i>E2F1</i>	0.89	0.004743	0.04635
<i>AIF1L</i>	0.89	0.001752	0.021215
<i>LYNX1</i>	0.88	3.68E-05	0.000865
<i>AGER</i>	0.88	0.002482	0.027844
<i>KLF8</i>	0.88	0.003813	0.038906
<i>TLR4</i>	0.88	0.001182	0.015564
<i>MDFI</i>	0.88	0.000388	0.00621
<i>CCDC88B</i>	0.88	7.03E-05	0.001492
<i>MALAT1</i>	0.88	3.49E-05	0.000826
<i>GPCPD1</i>	0.87	0.000103	0.00206
<i>KLK10</i>	0.87	0.000217	0.003835
<i>PLIN4</i>	0.87	0.001467	0.018356
<i>MAFK</i>	0.87	0.000145	0.002751
<i>CSRNP1</i>	0.87	0.000186	0.003362
<i>MPRIP</i>	0.87	6.7E-05	0.001433
<i>ATG16L2</i>	0.86	0.000181	0.003299
<i>HR</i>	0.86	0.001347	0.017239
<i>NR4A1</i>	0.86	0.000231	0.004053
<i>LAMB3</i>	0.86	7.17E-05	0.001513
<i>NFKBIA</i>	0.86	0.000144	0.002739
<i>AMICA1</i>	0.85	0.000412	0.006504
<i>CCNL1</i>	0.85	0.000113	0.002223
<i>CYTIP</i>	0.85	0.002573	0.028651
<i>RAC2</i>	0.85	0.000541	0.00821
<i>MPP1</i>	0.85	0.003055	0.032755
<i>REEP4</i>	0.85	0.000221	0.003897
<i>TNFAIP2</i>	0.85	6.52E-05	0.0014
<i>HMGA1</i>	0.85	8.74E-05	0.001807
<i>GPRC5A</i>	0.85	0.000115	0.002254
<i>FAM38A</i>	0.85	0.000173	0.003178
<i>WSB1</i>	0.84	0.000127	0.002443
<i>JAK3</i>	0.84	0.001722	0.020918
<i>LY6G5B</i>	0.84	0.004007	0.040355
<i>EVI2B</i>	0.84	0.00094	0.012978
<i>FCER1G</i>	0.84	0.002	0.023534
<i>SLC12A6</i>	0.84	0.0002	0.003594
<i>TGFB2</i>	0.84	0.003631	0.037411
<i>ARHGAP9</i>	0.84	0.000824	0.011647
<i>CYR61</i>	0.83	0.000415	0.006534
<i>PTPRE</i>	0.83	0.00092	0.012763
<i>S100A16</i>	0.83	0.000102	0.002051
<i>UC004COR.1</i>	0.83	0.004226	0.042077
<i>TMEM79</i>	0.83	0.000544	0.008242
<i>NFKB2</i>	0.83	0.000306	0.005105
<i>C15ORF52</i>	0.83	0.001028	0.013928
<i>MXD3</i>	0.82	0.0027	0.029782

ZYX	0.82	0.000155	0.002917
POLE	0.82	0.000416	0.006549
PTPRC	0.82	0.00047	0.00731
KIAA0907	0.82	0.000345	0.005615
MALL	0.82	0.000196	0.003518
HPSE	0.82	0.000803	0.011403
PHLDA1	0.82	0.001012	0.013769
TMCC3	0.82	0.00307	0.032856
SLC25A37	0.81	0.000491	0.007558
PDLIM7	0.81	0.000866	0.012171
RNF39	0.81	0.001	0.013635
DOT1L	0.81	0.000481	0.00746
ITPRIP	0.81	0.001079	0.01451
PMAIP1	0.81	0.002274	0.026034
C10RF38	0.81	0.002329	0.02656
PRSS8	0.81	0.000218	0.003847
SIRPA	0.81	0.001115	0.014906
GRHL1	0.80	0.000304	0.005066
KRT80	0.80	0.000356	0.005781
MSLNL	0.80	0.004343	0.042921
PLXDC1	0.80	0.000995	0.013593
DUOX2	0.80	0.000244	0.004229
BLNK	0.80	0.00375	0.038414
FCHSD1	0.80	0.000627	0.009241
PDXDC2P	0.80	0.000258	0.004428
FLJ45340	0.79	0.000256	0.004393
SCARF1	0.79	0.002387	0.027029
CAMK2G	0.79	0.000274	0.004647
ZNF83	0.79	0.000572	0.008555
SLC6A14	0.79	0.000246	0.004247
FAM83A	0.79	0.001647	0.020176
GPC1	0.79	0.000232	0.004056
EPS8L1	0.79	0.000211	0.003735
BPIFA2	0.79	0.003953	0.03994
MC1R	0.78	0.001418	0.017904
ARRB2	0.78	0.000317	0.005259
GCNT3	0.78	0.001409	0.017821
CBLC	0.78	0.001497	0.018695
CCDC84	0.77	0.004299	0.042646
ASAP1	0.77	0.003149	0.033474
AKR1B10	0.77	0.000686	0.009935
SELL	0.77	0.001797	0.021583
APOBR	0.77	0.001672	0.020441
CLCA4	0.76	0.003094	0.03306
KIAA1949	0.76	0.001786	0.021501
C5AR1	0.76	0.00098	0.013451
C10ORF116	0.76	0.000637	0.009357
JUNB	0.76	0.000691	0.00999
ANO1	0.75	0.003953	0.03994
TCIRG1	0.75	0.000369	0.005948

<i>TMEM86B</i>	0.75	0.003199	0.033956
<i>ZDHC18</i>	0.75	0.000985	0.013493
<i>CAPN8</i>	0.75	0.000891	0.012439
<i>IGFBP3</i>	0.75	0.000587	0.008727
<i>PTK6</i>	0.75	0.000927	0.012834
<i>KDM6B</i>	0.75	0.000953	0.013149
<i>ZC3H12A</i>	0.74	0.000918	0.012755
<i>PLCD3</i>	0.74	0.001421	0.017921
<i>ARHGEF16</i>	0.74	0.000638	0.009359
<i>OXSR1</i>	0.74	0.001565	0.019319
<i>PPIF</i>	0.74	0.001199	0.015739
<i>CARD14</i>	0.73	0.00241	0.027152
<i>FLNC</i>	0.73	0.001985	0.023425
<i>SFN</i>	0.73	0.000771	0.011011
<i>PAX6</i>	0.73	0.005043	0.048652
<i>LAD1</i>	0.73	0.001099	0.014731
<i>MAFF</i>	0.73	0.002662	0.029405
<i>KLHL17</i>	0.73	0.003486	0.036266
<i>PPP1R12C</i>	0.73	0.000822	0.011647
<i>LOC1002890</i>	0.73	0.002269	0.025997
<i>AMPD2</i>	0.73	0.001316	0.016902
<i>THOC6</i>	0.73	0.002162	0.02503
<i>METRNL</i>	0.73	0.00179	0.021533
<i>ACSL1</i>	0.72	0.001274	0.016478
<i>LOC645638</i>	0.72	0.000881	0.01234
<i>EHD1</i>	0.72	0.00151	0.018831
<i>EHBP1L1</i>	0.72	0.000772	0.011011
<i>NFIL3</i>	0.72	0.004954	0.047942
<i>CHTF18</i>	0.72	0.002408	0.027146
<i>ICAM1</i>	0.72	0.003527	0.036549
<i>PFKFB3</i>	0.72	0.00217	0.025102
<i>ALOX5</i>	0.72	0.003391	0.03559
<i>FXD5</i>	0.72	0.004533	0.044546
<i>HCFC1R1</i>	0.71	0.003473	0.03618
<i>VEGFA</i>	0.71	0.001347	0.017239
<i>HMOX1</i>	0.71	0.00252	0.028175
<i>IER3</i>	0.71	0.001711	0.0208
<i>FAM193B</i>	0.71	0.001079	0.01451
<i>FOSL2</i>	0.71	0.001353	0.017285
<i>SSH2</i>	0.71	0.003063	0.032798
<i>ATP13A4</i>	0.71	0.003744	0.038369
<i>TRIB1</i>	0.70	0.002358	0.026796
<i>C16ORF7</i>	0.70	0.001434	0.018066
<i>WASH7P</i>	0.70	0.002581	0.02869
<i>DENND3</i>	0.70	0.002421	0.027243
<i>DUSP1</i>	0.70	0.001411	0.017831
<i>CDK11A</i>	0.70	0.003253	0.034432
<i>FER1L4</i>	0.70	0.001309	0.016834
<i>MBOAT2</i>	0.70	0.001685	0.020539
<i>ZNF185</i>	0.70	0.001153	0.01524

<i>TIMP2</i>	0.70	0.002413	0.027164
<i>LPCAT4</i>	0.70	0.001026	0.013924
<i>CLTB</i>	0.70	0.001459	0.018312
<i>ZSWIM4</i>	0.70	0.003445	0.036009
<i>TAF1C</i>	0.69	0.001361	0.017371
<i>AKR1B1</i>	0.69	0.002334	0.026602
<i>IER2</i>	0.69	0.001533	0.019011
<i>LOC338799</i>	0.69	0.005236	0.049988
<i>MAN2A2</i>	0.69	0.001741	0.021093
<i>LAMA5</i>	0.68	0.001193	0.015665
<i>HDAC7</i>	0.68	0.001319	0.016913
<i>EPHA1</i>	0.68	0.003476	0.036185
<i>TRIB2</i>	0.68	0.002043	0.023959
<i>NR4A2</i>	0.68	0.002958	0.032028
<i>CHD2</i>	0.68	0.001572	0.019378
<i>KYNU</i>	0.68	0.003521	0.036536
<i>SLC38A2</i>	0.68	0.002515	0.028139
<i>TMEM184A</i>	0.67	0.001689	0.020573
<i>ULK1</i>	0.67	0.002192	0.025313
<i>PREX1</i>	0.67	0.003422	0.03582
<i>AMOTL2</i>	0.67	0.00346	0.036073
<i>XDH</i>	0.67	0.004081	0.040898
<i>MUC4</i>	0.67	0.001301	0.016763
<i>TACC1</i>	0.67	0.004009	0.040355
<i>TUFT1</i>	0.67	0.005081	0.048899
<i>FBXL19</i>	0.67	0.003992	0.040288
<i>TPCN1</i>	0.67	0.001851	0.022101
<i>NCF2</i>	0.67	0.003842	0.039102
<i>ATP13A5</i>	0.66	0.004763	0.046488
<i>ATG2A</i>	0.66	0.003201	0.033956
<i>S100A4</i>	0.66	0.001794	0.021572
<i>CRIPAK</i>	0.66	0.005169	0.049504
<i>FNBP4</i>	0.66	0.003016	0.032471
<i>SOD2</i>	0.66	0.003768	0.038544
<i>KRT15</i>	0.65	0.003452	0.036035
<i>EPS8L2</i>	0.65	0.001915	0.022752
<i>MAP3K6</i>	0.65	0.003657	0.037604
<i>INF2</i>	0.65	0.002625	0.029058
<i>PNN</i>	0.65	0.002968	0.032112
<i>FHOD1</i>	0.65	0.005144	0.049384
<i>SGK1</i>	0.65	0.002143	0.024854
<i>FUT3</i>	0.65	0.00259	0.028756
<i>C11ORF9</i>	0.65	0.00383	0.039045
<i>UC004COQ.3</i>	0.64	0.003018	0.032471
<i>RNF213</i>	0.64	0.002716	0.029874
<i>MYO9B</i>	0.64	0.003587	0.037051
<i>MLL4</i>	0.63	0.003804	0.03884
<i>MLPH</i>	0.62	0.003272	0.034596
<i>SLC4A11</i>	0.62	0.003101	0.033092
<i>RECQL5</i>	0.62	0.004983	0.04816

<i>ARGLU1</i>	0.62	0.003832	0.039045
<i>NKTR</i>	0.62	0.004927	0.047703
<i>SBNO2</i>	0.61	0.005043	0.048652
<i>AQP5</i>	0.61	0.00405	0.040666
<i>SPINT1</i>	0.60	0.004336	0.042883
<i>F3</i>	0.59	0.004646	0.045544
<i>ZNF664</i>	-0.60	0.005218	0.049851
<i>NGRN</i>	-0.61	0.005055	0.048731
<i>PTPRF</i>	-0.61	0.004279	0.042472
<i>TSPAN6</i>	-0.61	0.004033	0.040547
<i>PNMA1</i>	-0.62	0.005128	0.049291
<i>SEPW1</i>	-0.62	0.003972	0.040106
<i>CAT</i>	-0.62	0.00488	0.047424
<i>IFI6</i>	-0.62	0.004911	0.047604
<i>HLA-DPB1</i>	-0.62	0.004128	0.041316
<i>ITGA3</i>	-0.62	0.004557	0.044728
<i>AHSA1</i>	-0.62	0.004496	0.044241
<i>PRR15</i>	-0.63	0.004485	0.044154
<i>SCGB3A1</i>	-0.63	0.00387	0.039278
<i>RHPN2</i>	-0.63	0.005179	0.04954
<i>LRIG1</i>	-0.63	0.004132	0.041325
<i>CYB5D1</i>	-0.64	0.004825	0.046986
<i>TMEM123</i>	-0.64	0.002986	0.032221
<i>TMEM14B</i>	-0.64	0.004893	0.047492
<i>NFIX</i>	-0.64	0.004329	0.042838
<i>SPSB1</i>	-0.64	0.005175	0.049528
<i>SCRN1</i>	-0.64	0.004379	0.043196
<i>MFSD6</i>	-0.64	0.002975	0.032168
<i>BTBD9</i>	-0.64	0.004871	0.047365
<i>ITM2C</i>	-0.65	0.003525	0.036549
<i>CRY2</i>	-0.65	0.003516	0.036508
<i>PYCR2</i>	-0.65	0.003696	0.037983
<i>CCDC157</i>	-0.65	0.00465	0.045556
<i>ATP9A</i>	-0.65	0.002841	0.031036
<i>ACADM</i>	-0.65	0.004889	0.047479
<i>TRMT1L</i>	-0.65	0.004916	0.047629
<i>CTSZ</i>	-0.65	0.002726	0.029939
<i>MGST3</i>	-0.65	0.005072	0.048839
<i>DYNLT1</i>	-0.65	0.002406	0.027146
<i>ENPP4</i>	-0.65	0.003099	0.033091
<i>ABCA13</i>	-0.66	0.001975	0.023326
<i>RPS6KA2</i>	-0.66	0.004507	0.044319
<i>MTSS1</i>	-0.66	0.004075	0.040863
<i>CLDN23</i>	-0.66	0.003346	0.035213
<i>IFT122</i>	-0.66	0.004366	0.043093
<i>IL33</i>	-0.66	0.003454	0.036035
<i>CD74</i>	-0.66	0.001521	0.018905
<i>SLC41A3</i>	-0.67	0.00393	0.039788
<i>FMO3</i>	-0.67	0.001952	0.023097
<i>TCTA</i>	-0.67	0.003038	0.032648

<i>PAX7</i>	-0.67	0.00379	0.038741
<i>HMGN3</i>	-0.67	0.002243	0.025827
<i>WDR34</i>	-0.67	0.002	0.023534
<i>CYB561</i>	-0.67	0.001837	0.021969
<i>NDUFAF3</i>	-0.67	0.003303	0.034831
<i>FAM179B</i>	-0.67	0.003804	0.03884
<i>NKX3-1</i>	-0.67	0.005118	0.049222
<i>C16ORF48</i>	-0.68	0.003835	0.039054
<i>HLA-DRA</i>	-0.68	0.001326	0.016999
<i>IK</i>	-0.68	0.001691	0.020586
<i>C3</i>	-0.68	0.001531	0.018998
<i>ARSD</i>	-0.68	0.001836	0.021969
<i>MGC2752</i>	-0.68	0.003131	0.033394
<i>IGFBP4</i>	-0.68	0.002057	0.024078
<i>ANK3</i>	-0.68	0.002041	0.023954
<i>NPHP4</i>	-0.68	0.005005	0.048344
<i>PHTF1</i>	-0.68	0.003278	0.034634
<i>EMB</i>	-0.68	0.002058	0.024078
<i>EPB41L4B</i>	-0.69	0.002044	0.023959
<i>UFC1</i>	-0.69	0.001522	0.01891
<i>DNAJA4</i>	-0.69	0.001611	0.019778
<i>SLC46A3</i>	-0.69	0.003145	0.033449
<i>TSPAN8</i>	-0.69	0.002279	0.026067
<i>SYNGAP1</i>	-0.69	0.003648	0.037559
<i>RORC</i>	-0.69	0.002396	0.027072
<i>BBS5</i>	-0.69	0.002981	0.032209
<i>CRYM</i>	-0.69	0.001599	0.019643
<i>UBB</i>	-0.69	0.001088	0.014601
<i>EML2</i>	-0.69	0.002246	0.025843
<i>CD59</i>	-0.69	0.001149	0.015237
<i>ZFP90</i>	-0.69	0.004363	0.043092
<i>RBM38</i>	-0.69	0.002163	0.02503
<i>ACSS1</i>	-0.69	0.002398	0.027072
<i>ODF2</i>	-0.70	0.002573	0.028651
<i>ACCN2</i>	-0.70	0.004256	0.042295
<i>TEF</i>	-0.70	0.002471	0.027759
<i>SEPP1</i>	-0.70	0.003915	0.039684
<i>TOB2</i>	-0.70	0.001998	0.023534
<i>CYP4V2</i>	-0.70	0.0039	0.039562
<i>CECR1</i>	-0.70	0.003509	0.036464
<i>TTC21A</i>	-0.70	0.002104	0.024516
<i>C9ORF5</i>	-0.70	0.00177	0.021361
<i>GBAS</i>	-0.70	0.002011	0.023642
<i>CYP2A6</i>	-0.70	0.002747	0.030156
<i>EPHX2</i>	-0.71	0.004418	0.04353
<i>MB</i>	-0.71	0.00306	0.032793
<i>TSPAN1</i>	-0.71	0.000966	0.013307
<i>ALDH3B1</i>	-0.71	0.000984	0.01349
<i>CD4</i>	-0.71	0.003854	0.039191
<i>DYNC2LI1</i>	-0.71	0.002808	0.030738

<i>WRAP53</i>	-0.71	0.002921	0.031689
<i>HLA-DRB1</i>	-0.71	0.000885	0.012378
<i>BPHL</i>	-0.71	0.00476	0.046487
<i>P4HTM</i>	-0.72	0.001123	0.014987
<i>FZD6</i>	-0.72	0.001941	0.022982
<i>DALRD3</i>	-0.72	0.001758	0.021249
<i>KIAA1737</i>	-0.72	0.001239	0.016109
<i>CROCC</i>	-0.72	0.001561	0.019282
<i>EFEMP1</i>	-0.72	0.001318	0.016913
<i>TM9SF1</i>	-0.72	0.001133	0.015075
<i>P4HA2</i>	-0.72	0.003135	0.033395
<i>TNS1</i>	-0.72	0.0025	0.028031
<i>LRBA</i>	-0.72	0.001243	0.016109
<i>C1ORF110</i>	-0.72	0.001504	0.018765
<i>PTPLAD1</i>	-0.72	0.001309	0.016834
<i>WDR60</i>	-0.72	0.002001	0.023534
<i>MUC13</i>	-0.72	0.001237	0.016109
<i>MRPS31</i>	-0.72	0.003445	0.036009
<i>MKS1</i>	-0.72	0.002127	0.02473
<i>CELSR1</i>	-0.72	0.00088	0.01234
<i>C18ORF10</i>	-0.72	0.001219	0.015928
<i>NFE2L1</i>	-0.72	0.000787	0.011208
<i>VSTM2L</i>	-0.72	0.003651	0.037565
<i>C16ORF80</i>	-0.73	0.002111	0.024557
<i>SSBP4</i>	-0.73	0.001107	0.014824
<i>FBXL14</i>	-0.73	0.003297	0.034782
<i>PSEN2</i>	-0.73	0.00286	0.031209
<i>CALML4</i>	-0.73	0.001207	0.015818
<i>NUDC</i>	-0.73	0.000837	0.011815
<i>ABCC4</i>	-0.73	0.003925	0.039764
<i>SCCPDH</i>	-0.73	0.001201	0.015745
<i>UGDH</i>	-0.73	0.001048	0.014174
<i>FANCF</i>	-0.73	0.004206	0.041907
<i>RGL1</i>	-0.74	0.002708	0.029809
<i>BCL7A</i>	-0.74	0.002705	0.029796
<i>IFT74</i>	-0.74	0.002995	0.032287
<i>SCD5</i>	-0.74	0.003708	0.038082
<i>KIF21A</i>	-0.74	0.000642	0.009395
<i>SYNPO</i>	-0.74	0.001391	0.017654
<i>SERPINF1</i>	-0.74	0.001669	0.020424
<i>ARHGAP39</i>	-0.74	0.001002	0.013658
<i>ADSSL1</i>	-0.74	0.002718	0.029875
<i>HN1L</i>	-0.74	0.000629	0.009257
<i>WDR52</i>	-0.74	0.001214	0.015879
<i>TTC12</i>	-0.75	0.00124	0.016109
<i>LXN</i>	-0.75	0.002543	0.028404
<i>LY75</i>	-0.75	0.001834	0.021969
<i>LPGAT1</i>	-0.75	0.000816	0.011567
<i>BBS4</i>	-0.75	0.001762	0.02128
<i>PIGR</i>	-0.75	0.000433	0.006783

<i>AGPAT5</i>	-0.75	0.003357	0.035281
<i>HIBADH</i>	-0.75	0.001266	0.016386
<i>NT5E</i>	-0.75	0.004729	0.046246
<i>CCDC104</i>	-0.75	0.001005	0.013685
<i>SIX4</i>	-0.75	0.001221	0.015942
<i>C14ORF79</i>	-0.76	0.001933	0.022928
<i>CEP120</i>	-0.76	0.002218	0.025577
<i>LRP11</i>	-0.76	0.000485	0.007501
<i>PKIB</i>	-0.76	0.002083	0.024303
<i>DCBLD2</i>	-0.76	0.001466	0.018356
<i>CERS4</i>	-0.76	0.002359	0.026796
<i>PKN1</i>	-0.76	0.000661	0.009624
<i>METRNL</i>	-0.76	0.002629	0.029084
<i>RCAN3</i>	-0.76	0.002397	0.027072
<i>BCAS3</i>	-0.76	0.001375	0.017461
<i>CYBASC3</i>	-0.76	0.000689	0.00996
<i>HLA-DPA1</i>	-0.76	0.000519	0.007905
<i>AMOT</i>	-0.76	0.001281	0.01654
<i>CREBL2</i>	-0.76	0.001032	0.013963
<i>LBH</i>	-0.76	0.001406	0.0178
<i>SLC12A7</i>	-0.76	0.000514	0.007844
<i>ADH7</i>	-0.76	0.000389	0.006215
<i>CALM2</i>	-0.76	0.000419	0.00659
<i>NBEA</i>	-0.76	0.000736	0.010602
<i>SCARF2</i>	-0.76	0.003135	0.033395
<i>NQO1</i>	-0.76	0.000354	0.005755
<i>CCP110</i>	-0.76	0.001239	0.016109
<i>MAGED2</i>	-0.77	0.000386	0.006187
<i>SYTL3</i>	-0.77	0.000924	0.012802
<i>HLF</i>	-0.77	0.001406	0.0178
<i>LRRCC1</i>	-0.77	0.00515	0.049408
<i>HLA-DQA1</i>	-0.77	0.002795	0.030639
<i>RPGR</i>	-0.77	0.001578	0.01942
<i>WRB</i>	-0.77	0.001071	0.014438
<i>CYP27A1</i>	-0.77	0.001057	0.014282
<i>NCS1</i>	-0.77	0.001466	0.018356
<i>COBL</i>	-0.77	0.001111	0.014861
<i>BBS1</i>	-0.77	0.000935	0.012923
<i>SYT17</i>	-0.77	0.004318	0.042768
<i>PSENLN</i>	-0.77	0.000413	0.006508
<i>CD24</i>	-0.77	0.000323	0.005329
<i>BZRAP1</i>	-0.78	0.000738	0.010607
<i>ARHGAP18</i>	-0.78	0.00044	0.006875
<i>NOS2</i>	-0.78	0.000981	0.013452
<i>FDXR</i>	-0.78	0.000807	0.011456
<i>KIAA1797</i>	-0.78	0.001148	0.015236
<i>UTRN</i>	-0.78	0.000577	0.008615
<i>CHP2</i>	-0.78	0.001825	0.021882
<i>KIF27</i>	-0.78	0.002199	0.025374
<i>KIAA1456</i>	-0.78	0.002884	0.031419

<i>TSPYL5</i>	-0.78	0.001544	0.019098
<i>APOL4</i>	-0.78	0.002559	0.028549
<i>CES4A</i>	-0.78	0.000751	0.010758
<i>FARS2</i>	-0.78	0.002897	0.031513
<i>C16ORF45</i>	-0.79	0.002833	0.030973
<i>PCM1</i>	-0.79	0.000316	0.00524
<i>ZDHHC2</i>	-0.79	0.003054	0.032755
<i>MAPRE3</i>	-0.79	0.000567	0.008531
<i>ARL13B</i>	-0.79	0.00281	0.030738
<i>C11ORF92</i>	-0.79	0.000676	0.009797
<i>FLJ90757</i>	-0.79	0.000875	0.012288
<i>C16ORF55</i>	-0.79	0.002356	0.026796
<i>PARVA</i>	-0.79	0.0004	0.006355
<i>BTBD3</i>	-0.79	0.000465	0.007243
<i>ANKK1</i>	-0.80	0.004899	0.047522
<i>C3ORF39</i>	-0.80	0.000974	0.013383
<i>KLHDC7A</i>	-0.80	0.000935	0.012923
<i>HSPBP1</i>	-0.80	0.000335	0.005488
<i>KIFAP3</i>	-0.80	0.000974	0.013383
<i>C10ORF57</i>	-0.80	0.000739	0.010613
<i>SNTB1</i>	-0.80	0.000393	0.006266
<i>DMD</i>	-0.80	0.001243	0.016109
<i>SOX2</i>	-0.80	0.000276	0.004671
<i>WLS</i>	-0.80	0.000331	0.00545
<i>FAM46C</i>	-0.80	0.000618	0.009117
<i>UCP2</i>	-0.80	0.00021	0.00372
<i>ALOX15</i>	-0.81	0.000269	0.00456
<i>C11ORF49</i>	-0.81	0.000731	0.01053
<i>C5ORF15</i>	-0.81	0.00032	0.005286
<i>LY6H</i>	-0.81	0.004963	0.047993
<i>FAM107A</i>	-0.81	0.0004	0.006355
<i>ANKRD54</i>	-0.81	0.00032	0.005295
<i>BPIFB1</i>	-0.81	0.000151	0.002858
<i>KCTD12</i>	-0.81	0.000646	0.009442
<i>WDR19</i>	-0.81	0.000603	0.008922
<i>ARHGAP44</i>	-0.81	0.00144	0.018118
<i>FZD8</i>	-0.81	0.001968	0.023253
<i>IFT27</i>	-0.81	0.000461	0.007181
<i>ZNF607</i>	-0.82	0.003024	0.032518
<i>PTRH1</i>	-0.82	0.00057	0.008546
<i>HLA-DQB2</i>	-0.82	0.002664	0.029411
<i>PTPRT</i>	-0.82	0.00211	0.024557
<i>B3GNT1</i>	-0.82	0.004556	0.044728
<i>ORAI2</i>	-0.82	0.000279	0.004703
<i>LOC200772</i>	-0.82	0.002221	0.025594
<i>ANKRD5</i>	-0.83	0.002429	0.027307
<i>IFT43</i>	-0.83	0.00059	0.008764
<i>HLTF</i>	-0.83	0.001918	0.022768
<i>SLFN11</i>	-0.83	0.00335	0.03523
<i>SLC16A11</i>	-0.83	0.002324	0.026528

MYCBPAP	-0.83	0.003594	0.037098
TMEM150C	-0.83	0.001446	0.018168
KCTD1	-0.83	0.000359	0.005829
SPATA7	-0.83	0.003867	0.039278
DEGS2	-0.83	0.000227	0.004001
APH1B	-0.83	0.00225	0.025847
FAM116B	-0.83	0.000302	0.005036
STOM	-0.83	0.000228	0.004008
ZNF440	-0.83	0.000252	0.004342
PFN2	-0.83	0.000136	0.002598
ULK2	-0.84	0.001702	0.020704
TCEAL3	-0.84	0.000837	0.011816
C14ORF142	-0.84	0.000546	0.00826
NAALADL2	-0.84	0.004194	0.041811
SLC46A1	-0.84	0.003764	0.038525
RAGE	-0.84	0.000557	0.008404
C9ORF103	-0.84	0.003611	0.037256
SPATA6	-0.84	0.000494	0.007592
TUB	-0.84	0.001153	0.01524
LAMC2	-0.84	0.000152	0.002858
SSPN	-0.84	0.003415	0.03577
SPAG16	-0.84	0.000292	0.004902
NEK1	-0.84	0.001159	0.015299
KIAA1407	-0.84	0.0009	0.012548
FAM175A	-0.85	0.004319	0.042768
ORA13	-0.85	0.000715	0.010313
ANKMY1	-0.85	0.000263	0.004493
NRSN2	-0.85	0.001393	0.017666
IGSF10	-0.85	0.001776	0.02141
TCN2	-0.85	0.000247	0.004272
LAMP3	-0.85	0.000488	0.00753
SLC25A4	-0.85	0.000236	0.004133
LRRC56	-0.85	0.000263	0.004488
PHGDH	-0.85	0.000996	0.013597
FBLN5	-0.85	0.001026	0.013924
SLC41A1	-0.85	0.000334	0.005488
RABL2A	-0.85	0.000404	0.006402
C14ORF167	-0.86	0.001441	0.018118
TRAF3IP1	-0.86	0.000147	0.002778
IRX3	-0.86	0.000204	0.003634
TMEM68	-0.86	0.000673	0.009783
GPR172B	-0.86	0.003142	0.03344
FAM86C2P	-0.86	0.004017	0.04041
CLU	-0.86	6.51E-05	0.0014
DDAH1	-0.86	0.00024	0.004176
DPY30	-0.86	0.000189	0.003407
ZNF704	-0.86	0.001352	0.017285
CCDC34	-0.86	0.003285	0.034681
C14ORF135	-0.86	0.000378	0.006076
PAIP2B	-0.86	0.001679	0.020502

<i>SELM</i>	-0.87	0.002364	0.026831
<i>VWA3A</i>	-0.87	0.000339	0.00554
<i>TCTEX1D1</i>	-0.87	0.001521	0.018905
<i>STEAP3</i>	-0.87	0.000106	0.0021
<i>KIF3B</i>	-0.87	9.28E-05	0.0019
<i>PDE8B</i>	-0.87	0.000759	0.010851
<i>DMBT1</i>	-0.87	0.002602	0.028858
<i>TMCC2</i>	-0.87	0.000851	0.011997
<i>DNAL4</i>	-0.87	0.000212	0.003745
<i>TRIM32</i>	-0.87	0.000556	0.008404
<i>MAPK15</i>	-0.87	0.000197	0.003543
<i>MACROD2</i>	-0.87	0.002547	0.028439
<i>ZNF627</i>	-0.87	0.001132	0.015075
<i>PRDX5</i>	-0.87	4.89E-05	0.001085
<i>CBY1</i>	-0.87	0.000186	0.003362
<i>ABHD12B</i>	-0.87	0.000495	0.007592
<i>DZIP1L</i>	-0.87	0.000482	0.00746
<i>SDC3</i>	-0.88	0.004411	0.043487
<i>PCDH7</i>	-0.88	0.000259	0.004438
<i>CCDC146</i>	-0.88	0.000112	0.002211
<i>CFTR</i>	-0.88	0.001741	0.021093
<i>IQCE</i>	-0.88	0.0001	0.002028
<i>FAM174A</i>	-0.88	0.000101	0.002035
<i>RUVBL2</i>	-0.88	6.23E-05	0.001344
<i>ULK4</i>	-0.88	0.001239	0.016109
<i>ACSS3</i>	-0.89	0.00146	0.018312
<i>MFSD6L</i>	-0.89	0.001212	0.015869
<i>NDN</i>	-0.89	0.001153	0.01524
<i>LOC729013</i>	-0.89	0.000286	0.00481
<i>HLA-DOA</i>	-0.89	0.001023	0.013902
<i>CDKL1</i>	-0.89	0.002145	0.024856
<i>KIAA0895</i>	-0.89	0.000885	0.012378
<i>FAM161A</i>	-0.89	0.002085	0.024305
<i>LOC1005058</i>	-0.90	0.002503	0.028033
<i>ACAT1</i>	-0.90	0.00029	0.004868
<i>ATP8B2</i>	-0.90	0.004066	0.040799
<i>ZFP3</i>	-0.90	0.000571	0.00855
<i>GPC4</i>	-0.90	0.000594	0.008794
<i>UBXN11</i>	-0.90	7.23E-05	0.001519
<i>LEPREL2</i>	-0.90	0.002619	0.029009
<i>LRWD1</i>	-0.90	6.89E-05	0.001466
<i>CCDC138</i>	-0.90	0.00174	0.021093
<i>CCL28</i>	-0.90	0.001074	0.014471
<i>FAIM</i>	-0.90	0.000641	0.00939
<i>SLIT1</i>	-0.90	0.003401	0.035672
<i>SPAG8</i>	-0.91	0.000388	0.00621
<i>KLHDC9</i>	-0.91	0.000495	0.007592
<i>SNCAIP</i>	-0.91	0.001757	0.021249
<i>CTNNAL1</i>	-0.91	0.000146	0.00277
<i>SLC1A4</i>	-0.91	0.000176	0.003229

GRAMD2	-0.91	0.000338	0.00554
TTLL1	-0.91	0.00108	0.01451
PRSS12	-0.91	7.87E-05	0.001641
C21ORF58	-0.91	0.000339	0.00554
FAM164A	-0.91	0.000392	0.006258
B3GNT9	-0.92	0.000408	0.00646
DLEC1	-0.92	0.000145	0.002745
DNAAF2	-0.92	0.000174	0.0032
P4HA1	-0.92	0.000259	0.004438
STK32C	-0.92	0.003995	0.040294
ARL3	-0.92	5E-05	0.001104
FANK1	-0.92	9.17E-05	0.00188
ANKRD42	-0.92	0.000172	0.003166
ESRRG	-0.92	0.002958	0.032028
FAM104B	-0.92	0.000505	0.007727
PDK4	-0.93	0.002985	0.032221
ADPRHL1	-0.93	0.000739	0.010616
DLL1	-0.93	0.002385	0.027029
VWA2	-0.93	0.000973	0.013383
CCDC80	-0.93	2.57E-05	0.000633
SHROOM3	-0.93	3.97E-05	0.00092
C10ORF92	-0.93	0.000421	0.006613
IFT88	-0.93	0.000177	0.003237
DERL3	-0.93	0.001365	0.017383
IL27RA	-0.93	0.002132	0.024749
MIPEP	-0.94	6.75E-05	0.001439
RABL2B	-0.94	5.74E-05	0.001249
ZNF599	-0.94	0.003199	0.033956
LFNG	-0.94	0.000156	0.002922
IP6K3	-0.94	0.000498	0.007622
LEKR1	-0.94	0.004174	0.041638
KIAA1377	-0.94	0.000157	0.002943
FBXW9	-0.94	4.81E-05	0.001072
C21ORF59	-0.95	2.39E-05	0.000595
ABHD6	-0.95	0.000277	0.004675
CCDC30	-0.95	0.002389	0.027029
ATXN7L1	-0.95	0.000194	0.003502
IFT81	-0.95	0.00012	0.002321
IFT140	-0.95	3.74E-05	0.000876
HES6	-0.95	0.000179	0.003278
ADRA2A	-0.95	0.000638	0.00936
KIF3A	-0.95	0.000169	0.003133
CNTRL	-0.95	0.000102	0.002053
MT1F	-0.96	0.004793	0.046753
STOX2	-0.96	0.004818	0.046967
C8ORF47	-0.96	7.07E-05	0.001496
CCDC153	-0.96	0.000118	0.00229
USP13	-0.96	0.001957	0.023145
FAM125B	-0.96	0.000228	0.004001
CCDC148	-0.96	0.003587	0.037051

SCGB2A1	-0.96	8.88E-05	0.001826
PTPLAD2	-0.96	0.000308	0.005121
C6ORF108	-0.96	4.5E-05	0.00102
SEC14L5	-0.96	0.002016	0.023676
WDR35	-0.96	8.36E-05	0.001731
SLFN13	-0.96	8.8E-05	0.001815
SAMHD1	-0.96	1.81E-05	0.000463
PTN	-0.97	0.000167	0.003099
ZNF396	-0.97	0.00113	0.015058
RHOBTB1	-0.97	0.000361	0.005849
GMPR	-0.97	0.000183	0.003337
CCDC37	-0.97	7.12E-05	0.001504
FAM161B	-0.97	0.000856	0.012053
LRGUK	-0.97	0.000679	0.009836
LRR6	-0.97	0.000176	0.003229
PROC	-0.98	0.002285	0.026114
C16ORF93	-0.98	0.000318	0.005259
CHST6	-0.98	1.4E-05	0.000379
FRMPD2	-0.98	0.000239	0.00416
BTC	-0.98	0.001183	0.015564
DGCR6	-0.98	1.65E-05	0.00043
DYRK3	-0.98	0.003235	0.034271
KIF9	-0.98	5.16E-05	0.001133
TMEM107	-0.98	0.00016	0.002989
C10ORF93	-0.98	0.002132	0.024749
CDK20	-0.98	0.000156	0.002929
PAQR8	-0.98	0.000119	0.002316
ENO2	-0.98	0.00013	0.002496
CSPP1	-0.98	4.07E-05	0.000933
UNC119B	-0.98	1.32E-05	0.00036
LOC646851	-0.99	0.000185	0.00336
ABCB11	-0.99	0.00011	0.002182
DIXDC1	-0.99	0.000165	0.003073
PTGER2	-0.99	0.000591	0.008767
GSTA1	-0.99	7.68E-06	0.000226
RBKS	-0.99	0.000345	0.005615
GALM	-0.99	4.67E-05	0.001053
TSPAN11	-0.99	0.002925	0.031715
SAMD15	-0.99	0.00077	0.011003
SLC7A4	-1.00	0.000606	0.008951
CD164L2	-1.00	4.41E-05	0.001001
SOBP	-1.00	0.000891	0.012439
DCDC2B	-1.00	5.32E-05	0.001162
ANKRD37	-1.00	0.000344	0.005609
C11ORF74	-1.00	0.000234	0.004102
STARD9	-1.00	0.001844	0.022032
CWH43	-1.00	0.000454	0.007089
C14ORF37	-1.00	0.002504	0.028033
UBD	-1.00	0.000349	0.005677
C16ORF46	-1.01	0.000493	0.007592

<i>FTO</i>	-1.01	2.86E-05	0.000688
<i>TMEM98</i>	-1.01	1.45E-05	0.000391
<i>IFT172</i>	-1.01	1.33E-05	0.000363
<i>ABCC6</i>	-1.01	0.000268	0.004558
<i>TSGA10</i>	-1.01	6.26E-05	0.001348
<i>PPOX</i>	-1.01	1.58E-05	0.000419
<i>CAPS2</i>	-1.01	0.000576	0.008613
<i>TNC</i>	-1.01	0.000243	0.004219
<i>B9D2</i>	-1.01	5.04E-05	0.001109
<i>KIF24</i>	-1.01	0.000109	0.002167
<i>CYP24A1</i>	-1.01	0.000164	0.003049
<i>TTC18</i>	-1.01	3.86E-05	0.000895
<i>DMRT2</i>	-1.01	0.00011	0.002182
<i>PALMD</i>	-1.01	0.000121	0.002326
<i>SNX29</i>	-1.02	2.28E-05	0.000571
<i>ZDHHC1</i>	-1.02	1.56E-05	0.000415
<i>SLC2A12</i>	-1.02	6.68E-05	0.001432
<i>CDC14A</i>	-1.02	4.8E-05	0.001071
<i>PSPH</i>	-1.02	0.000364	0.005881
<i>DPCD</i>	-1.02	1.97E-05	0.000498
<i>RAMP1</i>	-1.02	0.000137	0.002621
<i>FAM47E</i>	-1.02	0.000578	0.008625
<i>TFF3</i>	-1.02	5.13E-06	0.000159
<i>SVEP1</i>	-1.02	4.92E-05	0.00109
<i>DPY19L2P2</i>	-1.02	0.000249	0.004292
<i>FBXO36</i>	-1.02	4.31E-05	0.00098
<i>CAP2</i>	-1.02	0.000423	0.006628
<i>TTLL10</i>	-1.03	2.06E-05	0.000519
<i>ARMC9</i>	-1.03	0.000271	0.004602
<i>C9ORF117</i>	-1.03	2.63E-05	0.000646
<i>CEP112</i>	-1.03	0.000911	0.012676
<i>CDHR4</i>	-1.03	2.83E-05	0.000684
<i>SYT5</i>	-1.03	3.76E-05	0.00088
<i>MYB</i>	-1.03	2.55E-05	0.000631
<i>PRRT3</i>	-1.03	8.71E-06	0.000251
<i>COL4A6</i>	-1.03	0.004149	0.041473
<i>ARL6</i>	-1.03	0.001568	0.019339
<i>BEST4</i>	-1.03	2.78E-05	0.000677
<i>AMACR</i>	-1.04	0.00353	0.036558
<i>CEP19</i>	-1.04	0.001146	0.015234
<i>LOC1005072</i>	-1.04	0.002651	0.029299
<i>DNAL1</i>	-1.04	8E-06	0.000234
<i>DDO</i>	-1.04	0.003001	0.032339
<i>ABHD14A</i>	-1.04	0.000668	0.009719
<i>LRRC61</i>	-1.04	1.18E-05	0.000328
<i>SLIT2</i>	-1.04	0.001365	0.017383
<i>WFDC6</i>	-1.04	8.19E-05	0.001699
<i>COL21A1</i>	-1.04	0.00017	0.003135
<i>BNIP3</i>	-1.05	0.00012	0.002317
<i>NRG2</i>	-1.05	0.001148	0.015236

<i>LRRC71</i>	-1.05	3.8E-05	0.000888
<i>TTLL9</i>	-1.05	0.000203	0.00363
<i>ZNF626</i>	-1.05	0.002917	0.03167
<i>CCDC39</i>	-1.05	2.69E-05	0.000656
<i>TTC5</i>	-1.05	0.000102	0.002054
<i>UGT2A1</i>	-1.05	1.18E-05	0.000328
<i>MIPOL1</i>	-1.05	9.47E-05	0.001931
<i>GLB1L</i>	-1.05	8.85E-06	0.000254
<i>AP2B1</i>	-1.05	4.51E-06	0.000143
<i>C2ORF73</i>	-1.05	0.001152	0.01524
<i>EPCAM</i>	-1.05	3.52E-06	0.000116
<i>CYP2U1</i>	-1.05	0.000363	0.005867
<i>RNF150</i>	-1.06	0.00281	0.030738
<i>GLIS3</i>	-1.06	3.67E-05	0.000863
<i>LOC400891</i>	-1.06	1.83E-05	0.000466
<i>ABCD2</i>	-1.06	0.002254	0.025855
<i>LOC1005069</i>	-1.06	2.86E-05	0.000688
<i>MAK</i>	-1.06	6.79E-05	0.001446
<i>ALMS1</i>	-1.06	2.32E-05	0.000582
<i>TRIP13</i>	-1.06	0.000105	0.002081
<i>NFASC</i>	-1.06	0.002082	0.024303
<i>FN1</i>	-1.06	0.00048	0.007451
<i>WDR93</i>	-1.06	0.000266	0.004524
<i>FAM149A</i>	-1.06	4.26E-05	0.00097
<i>C1ORF201</i>	-1.06	1.8E-05	0.000462
<i>DUSP18</i>	-1.06	8.87E-05	0.001826
<i>FAM81A</i>	-1.07	0.00053	0.008065
<i>CAND2</i>	-1.07	0.001278	0.016512
<i>AGBL2</i>	-1.07	2.64E-05	0.000647
<i>MORN2</i>	-1.07	3.85E-06	0.000125
<i>LZTFL1</i>	-1.07	4.79E-06	0.00015
<i>LOC402160</i>	-1.07	6.02E-05	0.001304
<i>CCDC102A</i>	-1.07	0.000541	0.00821
<i>C4ORF47</i>	-1.08	0.000265	0.004518
<i>DLG2</i>	-1.08	0.000101	0.002047
<i>KIAA1751</i>	-1.08	0.000204	0.003634
<i>DRD2</i>	-1.08	0.000563	0.008479
<i>ST6GALNAC.</i>	-1.08	4.3E-06	0.000137
<i>CMBL</i>	-1.08	4.77E-05	0.001068
<i>NUP62CL</i>	-1.08	0.003629	0.037411
<i>ODF3B</i>	-1.08	1.31E-06	5.08E-05
<i>FAM86B1</i>	-1.08	0.001128	0.015041
<i>KIAA1908</i>	-1.08	8.85E-06	0.000254
<i>CLDN16</i>	-1.08	0.000488	0.00753
<i>FAM201A</i>	-1.08	0.002255	0.025856
<i>SPEF2</i>	-1.08	2E-05	0.000506
<i>CCDC40</i>	-1.08	1.07E-05	0.0003
<i>CXORF30</i>	-1.09	0.001288	0.016621
<i>ZNF214</i>	-1.09	0.00074	0.01062
<i>TP63</i>	-1.09	0.000921	0.01277

<i>BBS9</i>	-1.09	3.99E-05	0.000922
<i>DNAI1</i>	-1.09	1.06E-05	0.000297
<i>MUC15</i>	-1.09	2.87E-06	9.71E-05
<i>PLA1A</i>	-1.09	0.001178	0.015524
<i>GNA14</i>	-1.09	1.39E-05	0.000377
<i>RABL5</i>	-1.09	3.62E-06	0.000119
<i>GLB1L2</i>	-1.10	4.05E-06	0.00013
<i>CLMN</i>	-1.10	2.88E-06	9.72E-05
<i>LOC390940</i>	-1.10	0.000444	0.006941
<i>DZIP3</i>	-1.10	5.61E-06	0.000172
<i>PRR7</i>	-1.10	1.11E-05	0.00031
<i>TSGA14</i>	-1.10	8.37E-05	0.001732
<i>TSNAXIP1</i>	-1.10	9.38E-06	0.000266
<i>ARHGEF26-4</i>	-1.10	0.003489	0.036279
<i>C11ORF63</i>	-1.10	7.72E-05	0.001615
<i>C3ORF25</i>	-1.10	1.68E-05	0.000437
<i>LOC344595</i>	-1.11	9.88E-05	0.002001
<i>HLA-J</i>	-1.11	0.00062	0.009149
<i>LOC1005066</i>	-1.11	1.21E-05	0.000336
<i>SVOPL</i>	-1.11	0.0003	0.005022
<i>C17ORF97</i>	-1.11	1.64E-05	0.00043
<i>DZIP1</i>	-1.11	0.00017	0.003141
<i>TXNDC6</i>	-1.11	7.19E-05	0.001515
<i>CCDC147</i>	-1.11	3.59E-05	0.000849
<i>EFHC1</i>	-1.11	2.58E-06	8.9E-05
<i>HHAT</i>	-1.11	3.61E-05	0.000854
<i>SLC13A3</i>	-1.11	1.31E-05	0.000359
<i>ADH6</i>	-1.11	0.000322	0.005311
<i>BBS12</i>	-1.11	7.35E-05	0.00154
<i>KLHL13</i>	-1.11	0.003452	0.036035
<i>METTL7A</i>	-1.11	8.49E-07	3.54E-05
<i>GJB7</i>	-1.11	0.002705	0.029796
<i>CLUAP1</i>	-1.12	3.83E-06	0.000125
<i>RFX2</i>	-1.12	3.57E-06	0.000118
<i>STX2</i>	-1.12	4.72E-05	0.001063
<i>ALS2CR12</i>	-1.12	0.000239	0.004162
<i>TUSC3</i>	-1.12	9.6E-07	3.97E-05
<i>FBXL13</i>	-1.12	0.000478	0.007428
<i>NCRNA00318</i>	-1.12	0.00066	0.009623
<i>SLC22A4</i>	-1.12	2.19E-06	7.72E-05
<i>USP2</i>	-1.12	6.7E-06	0.000201
<i>BTG4</i>	-1.12	0.002579	0.02869
<i>APCDD1</i>	-1.12	1.8E-05	0.000462
<i>KATNAL1</i>	-1.12	0.00052	0.007919
<i>C6ORF27</i>	-1.13	3.6E-06	0.000119
<i>CCDC17</i>	-1.13	1.55E-06	5.9E-05
<i>MAPK8IP1</i>	-1.13	1.18E-06	4.73E-05
<i>WDR49</i>	-1.13	4.73E-05	0.001063
<i>SMYD2</i>	-1.13	1.73E-06	6.37E-05
<i>PIH1D2</i>	-1.13	2.88E-05	0.00069

ZSCAN18	-1.13	1.89E-06	6.9E-05
C18ORF1	-1.13	1.04E-05	0.000293
RAET1E	-1.14	3.84E-05	0.000893
PTPRN2	-1.14	1.33E-06	5.17E-05
C2ORF55	-1.14	6.92E-07	2.97E-05
MAP9	-1.14	7.09E-06	0.000211
DIAPH2	-1.14	2.86E-05	0.000688
NME7	-1.14	2.04E-05	0.000515
ZC3HAV1L	-1.14	0.001543	0.019098
SQLE	-1.14	1.92E-06	6.93E-05
GRIN3B	-1.14	4.99E-06	0.000155
IFT46	-1.14	1.27E-06	4.96E-05
SLC4A8	-1.14	2.36E-05	0.000591
LRP2BP	-1.15	3.92E-05	0.000908
TTC30B	-1.15	4.05E-05	0.000932
OLFML2A	-1.15	9.23E-06	0.000263
WDR31	-1.15	0.000143	0.002717
TEKT2	-1.15	3.22E-06	0.000107
CCDC114	-1.15	2.78E-06	9.46E-05
RPGRIP1L	-1.15	5.71E-05	0.001245
TMEM67	-1.16	2.09E-06	7.39E-05
ASTN2	-1.16	0.002476	0.027796
C3ORF67	-1.16	3.37E-05	0.0008
NUCB2	-1.16	3.89E-07	1.85E-05
SRCIN1	-1.16	1.6E-05	0.000423
ACSBG1	-1.16	7.22E-05	0.001519
GRM7	-1.16	0.001867	0.022267
SGCB	-1.16	4.8E-05	0.001071
KIAA1211	-1.16	1.63E-05	0.000428
ERBB4	-1.16	9.86E-06	0.000279
TTC30A	-1.16	7.9E-06	0.000232
GRM5	-1.16	0.001513	0.018838
CRISPLD1	-1.17	0.00016	0.002991
CXORF22	-1.17	4.16E-05	0.000952
BAIAP3	-1.17	1.12E-06	4.53E-05
RTN4RL1	-1.17	0.001369	0.017414
MOBP	-1.17	0.001673	0.020445
RUVBL1	-1.17	5.77E-07	2.52E-05
DCDC5	-1.18	0.000105	0.002081
C9ORF9	-1.18	4.07E-06	0.000131
TNFRSF19	-1.18	1.03E-06	4.25E-05
CDKL2	-1.18	0.003564	0.036883
AMIGO2	-1.18	0.000601	0.008903
PLCH1	-1.18	4.15E-06	0.000133
KCNRG	-1.18	1.57E-05	0.000417
BAG2	-1.18	0.001373	0.017454
RAB36	-1.18	1.23E-06	4.87E-05
CCDC13	-1.19	8.63E-06	0.00025
C3ORF15	-1.19	3.03E-06	0.000102
CCDC60	-1.19	4.06E-06	0.000131

<i>GPR135</i>	-1.19	0.002574	0.028651
<i>LRRC49</i>	-1.19	1.66E-05	0.000432
<i>IQCD</i>	-1.19	1.17E-06	4.71E-05
<i>MPDZ</i>	-1.20	2.82E-05	0.000684
<i>CCDC89</i>	-1.20	1.58E-05	0.000419
<i>LRRC34</i>	-1.20	8.99E-06	0.000257
<i>SLC27A2</i>	-1.20	2.21E-07	1.13E-05
<i>DNAH6</i>	-1.20	1.22E-06	4.86E-05
<i>FHAD1</i>	-1.20	1.17E-06	4.71E-05
<i>BAI2</i>	-1.20	0.000103	0.002066
<i>TCTEX1D2</i>	-1.20	3.63E-06	0.000119
<i>ARMC2</i>	-1.20	3.07E-06	0.000103
<i>C20ORF195</i>	-1.20	0.000482	0.00746
<i>LOC1002874</i>	-1.21	0.000852	0.011997
<i>CNGA4</i>	-1.21	3.06E-05	0.000729
<i>EFNB3</i>	-1.21	1.52E-05	0.000407
<i>CLCN4</i>	-1.21	7.07E-05	0.001496
<i>IFLTD1</i>	-1.21	0.000205	0.003646
<i>GPX7</i>	-1.21	0.002358	0.026796
<i>PCSK1N</i>	-1.21	5.04E-05	0.001109
<i>FAM181A</i>	-1.21	0.001637	0.020062
<i>STK33</i>	-1.21	1.6E-06	6E-05
<i>CCDC151</i>	-1.21	8.85E-06	0.000254
<i>TPPP</i>	-1.21	5.9E-07	2.57E-05
<i>GSTA3</i>	-1.21	5.87E-05	0.001276
<i>LRRC43</i>	-1.22	4.8E-06	0.00015
<i>LOC728392</i>	-1.22	1.64E-06	6.13E-05
<i>PZP</i>	-1.22	5.47E-06	0.000168
<i>EFCAB2</i>	-1.22	1.55E-06	5.89E-05
<i>SERPINE1</i>	-1.22	0.000992	0.013573
<i>SPINLW1</i>	-1.22	7.57E-06	0.000223
<i>OSCP1</i>	-1.22	2.25E-07	1.14E-05
<i>GIPC2</i>	-1.22	0.00055	0.008325
<i>SPAG17</i>	-1.22	1.16E-06	4.66E-05
<i>TUBB2C</i>	-1.23	2.34E-08	1.62E-06
<i>GBP6</i>	-1.23	7.17E-07	3.05E-05
<i>MDH1B</i>	-1.23	2.34E-06	8.2E-05
<i>IFT57</i>	-1.23	1.07E-07	5.89E-06
<i>MORN1</i>	-1.23	1.74E-06	6.4E-05
<i>PDE6B</i>	-1.23	7.91E-06	0.000232
<i>IQCA1</i>	-1.23	4.66E-06	0.000147
<i>SDK1</i>	-1.23	3.65E-07	1.75E-05
<i>APOD</i>	-1.23	1.31E-07	6.99E-06
<i>BBOX1</i>	-1.23	0.00341	0.035741
<i>TTC16</i>	-1.24	4.49E-06	0.000143
<i>LARP6</i>	-1.24	1.72E-05	0.000447
<i>TMPRSS3</i>	-1.24	1.19E-06	4.76E-05
<i>CSMD1</i>	-1.24	4.14E-05	0.000948
<i>STAP1</i>	-1.24	0.00208	0.024303
<i>TCTN2</i>	-1.24	1.66E-07	8.67E-06

<i>TSPAN19</i>	-1.24	4.63E-06	0.000146
<i>ITM2A</i>	-1.24	0.001304	0.016789
<i>PTGFR</i>	-1.24	1.76E-06	6.46E-05
<i>TMEM212</i>	-1.24	1.05E-05	0.000295
<i>PRUNE2</i>	-1.24	9.19E-06	0.000262
<i>TMEM213</i>	-1.24	8.75E-07	3.64E-05
<i>DTX3</i>	-1.24	2.02E-06	7.18E-05
<i>C10RF189</i>	-1.25	4.83E-05	0.001074
<i>NEK5</i>	-1.25	1.64E-05	0.000429
<i>MYCT1</i>	-1.25	0.000403	0.006397
<i>TEX9</i>	-1.25	6.73E-06	0.000201
<i>MNS1</i>	-1.25	7.53E-07	3.17E-05
<i>PAMR1</i>	-1.25	0.001121	0.014981
<i>IQCH</i>	-1.25	1.01E-05	0.000285
<i>NCRNA00094</i>	-1.25	3.97E-07	1.85E-05
<i>C11ORF16</i>	-1.25	6.62E-07	2.88E-05
<i>IQUB</i>	-1.25	6.68E-06	0.0002
<i>XK</i>	-1.25	0.000296	0.004945
<i>C20ORF96</i>	-1.25	4.38E-07	2E-05
<i>APBB1</i>	-1.26	4.53E-07	2.05E-05
<i>C22ORF15</i>	-1.26	6.31E-06	0.000191
<i>DYNC2H1</i>	-1.26	2.73E-07	1.36E-05
<i>KCNH3</i>	-1.26	1.45E-06	5.54E-05
<i>C2ORF65</i>	-1.26	8.19E-05	0.001699
<i>KLHL6</i>	-1.26	1.82E-07	9.41E-06
<i>NAT14</i>	-1.26	4.94E-07	2.21E-05
<i>DTHD1</i>	-1.26	7.21E-07	3.06E-05
<i>ANKRD45</i>	-1.26	1.02E-06	4.21E-05
<i>RAB6B</i>	-1.27	1.85E-05	0.000471
<i>RND2</i>	-1.27	1.22E-05	0.000337
<i>TUBA1A</i>	-1.27	1.03E-08	8.13E-07
<i>HAGHL</i>	-1.27	2.39E-07	1.21E-05
<i>USP51</i>	-1.27	2.89E-05	0.000691
<i>SPARCL1</i>	-1.27	1.1E-07	6.03E-06
<i>C5ORF4</i>	-1.27	1.27E-06	4.96E-05
<i>CDC20B</i>	-1.27	1.59E-06	6E-05
<i>CCDC96</i>	-1.27	1.52E-07	8.06E-06
<i>FAM179A</i>	-1.27	5.43E-07	2.4E-05
<i>FHOD3</i>	-1.28	0.000432	0.006774
<i>LCA5L</i>	-1.28	1.37E-05	0.000373
<i>C10RF114</i>	-1.28	5.68E-06	0.000174
<i>RIIAD1</i>	-1.28	0.000117	0.002279
<i>C15ORF26</i>	-1.28	4.27E-06	0.000136
<i>SAA2-SAA4</i>	-1.28	0.005158	0.049434
<i>DNAH12</i>	-1.28	2.43E-07	1.22E-05
<i>C6ORF103</i>	-1.28	1.43E-06	5.45E-05
<i>NPHP1</i>	-1.28	3.97E-07	1.85E-05
<i>ENPP5</i>	-1.28	1.61E-07	8.48E-06
<i>LRR67</i>	-1.28	0.000104	0.00207
<i>LOC284276</i>	-1.28	0.000342	0.00558

<i>DNAH11</i>	-1.28	4.44E-07	2.02E-05
<i>DNER</i>	-1.29	1.27E-06	4.96E-05
<i>TMCO5A</i>	-1.29	0.004236	0.042157
<i>LRRIQ1</i>	-1.29	4.13E-07	1.92E-05
<i>CD19</i>	-1.29	0.000751	0.010758
<i>RFX3</i>	-1.29	1.04E-06	4.26E-05
<i>KLHDC8A</i>	-1.29	1.71E-06	6.31E-05
<i>DYX1C1</i>	-1.29	0.000116	0.002273
<i>C14ORF86</i>	-1.29	0.005133	0.049305
<i>EFCAB10</i>	-1.29	2.52E-05	0.000624
<i>FUZ</i>	-1.29	3.94E-07	1.85E-05
<i>FAM164C</i>	-1.30	1.3E-05	0.000357
<i>CCDC11</i>	-1.30	7.59E-07	3.18E-05
<i>DNAH2</i>	-1.30	1.26E-07	6.8E-06
<i>WDR66</i>	-1.30	4.54E-08	2.87E-06
<i>CRIP1</i>	-1.30	1.09E-08	8.51E-07
<i>DYNLRB2</i>	-1.30	1.37E-06	5.26E-05
<i>CCDC135</i>	-1.30	4.75E-07	2.14E-05
<i>C2ORF50</i>	-1.30	0.000194	0.003498
<i>RIBC2</i>	-1.30	3.03E-06	0.000102
<i>GPR116</i>	-1.30	0.004038	0.040569
<i>C19ORF51</i>	-1.30	1.04E-07	5.78E-06
<i>CHST9</i>	-1.30	2.58E-08	1.76E-06
<i>OSBPL6</i>	-1.30	2.89E-07	1.43E-05
<i>NEK10</i>	-1.30	6.86E-07	2.95E-05
<i>CCDC74A</i>	-1.30	7.39E-08	4.3E-06
<i>RP1</i>	-1.31	7.24E-06	0.000215
<i>C2ORF70</i>	-1.31	0.000369	0.005943
<i>REM1</i>	-1.31	8E-05	0.001667
<i>WDR86</i>	-1.31	3.65E-05	0.000861
<i>C3ORF32</i>	-1.31	0.000139	0.002657
<i>C14ORF50</i>	-1.31	1.12E-06	4.53E-05
<i>SYNE1</i>	-1.31	4.79E-08	2.98E-06
<i>FSD1L</i>	-1.32	5.68E-06	0.000174
<i>DNAAF1</i>	-1.32	9.05E-08	5.13E-06
<i>PKIG</i>	-1.32	4.27E-08	2.74E-06
<i>FLJ23152</i>	-1.32	8.31E-06	0.000242
<i>LOC1004992</i>	-1.32	0.000409	0.006463
<i>MARCH10</i>	-1.32	1.01E-05	0.000286
<i>TTC26</i>	-1.33	4.87E-07	2.19E-05
<i>C4ORF22</i>	-1.33	9.32E-06	0.000265
<i>SHANK2</i>	-1.33	7.5E-07	3.16E-05
<i>LOC201651</i>	-1.33	0.000169	0.003133
<i>CLDN3</i>	-1.33	1.56E-08	1.13E-06
<i>SPATA4</i>	-1.33	6.08E-05	0.001317
<i>WBSCR27</i>	-1.33	4.23E-05	0.000965
<i>ENO4</i>	-1.33	5.08E-06	0.000158
<i>TCTN1</i>	-1.33	6.95E-08	4.1E-06
<i>ZBBX</i>	-1.34	1.73E-07	9.02E-06
<i>LRTOMT</i>	-1.34	4.07E-08	2.62E-06

<i>CCDC121</i>	-1.34	6.74E-05	0.001439
<i>TUBA4B</i>	-1.34	4.75E-08	2.98E-06
<i>C11ORF70</i>	-1.34	2.14E-07	1.1E-05
<i>TMEM151B</i>	-1.34	1.39E-05	0.000378
<i>CERKL</i>	-1.34	1.93E-06	6.94E-05
<i>C14ORF45</i>	-1.35	3.38E-08	2.22E-06
<i>TP73</i>	-1.35	6.12E-08	3.65E-06
<i>C1ORF87</i>	-1.35	5.48E-07	2.41E-05
<i>WDR96</i>	-1.35	5.96E-08	3.57E-06
<i>CTGF</i>	-1.35	6.72E-09	5.73E-07
<i>C9ORF116</i>	-1.35	1.32E-08	9.82E-07
<i>NME5</i>	-1.35	7.17E-08	4.19E-06
<i>PLTP</i>	-1.35	6.14E-09	5.41E-07
<i>PROM1</i>	-1.35	6.78E-09	5.75E-07
<i>EFCAB6</i>	-1.35	4.98E-07	2.22E-05
<i>LRRC23</i>	-1.35	8.12E-09	6.71E-07
<i>HS3ST6</i>	-1.36	4.78E-06	0.00015
<i>WDR63</i>	-1.36	8.16E-07	3.41E-05
<i>ENPP3</i>	-1.36	1.9E-06	6.91E-05
<i>DMRT3</i>	-1.36	2.94E-05	0.000703
<i>TXLNB</i>	-1.36	1.7E-05	0.000441
<i>CCDC81</i>	-1.36	8.82E-08	5.02E-06
<i>C10ORF95</i>	-1.36	5.69E-08	3.43E-06
<i>CASC2</i>	-1.37	6.63E-06	0.0002
<i>SHISA8</i>	-1.37	0.001613	0.01978
<i>CCDC42B</i>	-1.37	1.07E-08	8.36E-07
<i>C1ORF141</i>	-1.37	0.00225	0.025847
<i>CASC1</i>	-1.37	5.7E-08	3.43E-06
<i>RIBC1</i>	-1.38	7.04E-08	4.14E-06
<i>MAP1B</i>	-1.38	2.48E-06	8.59E-05
<i>NEK11</i>	-1.38	5.14E-08	3.15E-06
<i>CETN2</i>	-1.38	4.28E-09	4.09E-07
<i>TMEM190</i>	-1.38	2.41E-08	1.67E-06
<i>CYP4B1</i>	-1.38	6.14E-10	8.42E-08
<i>PRPH</i>	-1.38	5.41E-06	0.000167
<i>NCALD</i>	-1.38	8.78E-08	5.01E-06
<i>C2ORF81</i>	-1.38	5.47E-08	3.33E-06
<i>ANKFN1</i>	-1.39	4.75E-05	0.001065
<i>LCA5</i>	-1.39	1.27E-07	6.84E-06
<i>HHLA2</i>	-1.39	5.28E-08	3.23E-06
<i>MLF1</i>	-1.39	1.2E-08	9.19E-07
<i>DNAH3</i>	-1.39	1.12E-08	8.63E-07
<i>MORN3</i>	-1.40	8.87E-07	3.68E-05
<i>LRRC18</i>	-1.40	1.04E-06	4.26E-05
<i>RBM24</i>	-1.40	2.69E-06	9.23E-05
<i>TCTE1</i>	-1.40	3.02E-07	1.48E-05
<i>C7ORF57</i>	-1.40	4.35E-08	2.77E-06
<i>KNDC1</i>	-1.40	4.75E-08	2.98E-06
<i>C14ORF132</i>	-1.40	4.78E-06	0.00015
<i>IQCG</i>	-1.40	7.75E-09	6.47E-07

<i>CXCR7</i>	-1.41	6.11E-06	0.000185
<i>C1ORF192</i>	-1.41	1.12E-08	8.63E-07
<i>STOX1</i>	-1.41	3.71E-08	2.41E-06
<i>C6ORF225</i>	-1.41	1.32E-08	9.82E-07
<i>C12ORF75</i>	-1.41	9.64E-09	7.79E-07
<i>C6ORF154</i>	-1.41	9.35E-08	5.28E-06
<i>UCN3</i>	-1.42	2.37E-06	8.28E-05
<i>CCDC108</i>	-1.42	1.5E-08	1.1E-06
<i>KIF6</i>	-1.42	5.46E-06	0.000168
<i>EML1</i>	-1.42	4.81E-08	2.98E-06
<i>IGFBP2</i>	-1.42	1.08E-09	1.25E-07
<i>C17ORF72</i>	-1.42	5.53E-09	4.95E-07
<i>CDHR3</i>	-1.42	1.12E-08	8.63E-07
<i>HYDIN</i>	-1.43	8E-09	6.64E-07
<i>CXORF59</i>	-1.43	0.001441	0.018118
<i>FAM134B</i>	-1.43	1.09E-06	4.42E-05
<i>CCDC113</i>	-1.43	4.57E-09	4.29E-07
<i>SPA17</i>	-1.43	6.06E-09	5.37E-07
<i>CACNG6</i>	-1.43	3.67E-08	2.39E-06
<i>ELN</i>	-1.43	1.26E-06	4.96E-05
<i>TDRD1</i>	-1.43	0.00029	0.004868
<i>RAB3B</i>	-1.44	8.29E-08	4.77E-06
<i>C10ORF107</i>	-1.44	1.46E-08	1.08E-06
<i>C10ORF67</i>	-1.44	2.52E-05	0.000624
<i>WDR54</i>	-1.44	3.49E-09	3.48E-07
<i>ARX</i>	-1.44	0.004589	0.045013
<i>C13ORF26</i>	-1.44	4E-07	1.86E-05
<i>LOC285419</i>	-1.45	0.000794	0.011292
<i>ZNF474</i>	-1.45	8.04E-08	4.64E-06
<i>LOC643037</i>	-1.45	1.19E-07	6.5E-06
<i>DSCAML1</i>	-1.45	3.38E-06	0.000113
<i>CCDC78</i>	-1.45	3.26E-09	3.32E-07
<i>RRAD</i>	-1.45	6.6E-10	8.66E-08
<i>MMP10</i>	-1.45	1.68E-10	2.82E-08
<i>TTC25</i>	-1.45	1.01E-08	8.05E-07
<i>CD38</i>	-1.45	2.74E-07	1.36E-05
<i>MAP1A</i>	-1.45	4.72E-09	4.41E-07
<i>B9D1</i>	-1.46	3.77E-09	3.69E-07
<i>LOC646903</i>	-1.46	3.63E-06	0.000119
<i>DYDC1</i>	-1.46	2.66E-05	0.000651
<i>C2ORF62</i>	-1.46	1.31E-08	9.82E-07
<i>DNAI2</i>	-1.46	5.6E-09	4.98E-07
<i>LOC284749</i>	-1.46	0.000896	0.012504
<i>DCDC2</i>	-1.46	6.24E-05	0.001345
<i>MAOB</i>	-1.46	2.81E-08	1.88E-06
<i>PCYT1B</i>	-1.46	1.36E-06	5.26E-05
<i>GPR162</i>	-1.47	5.23E-09	4.76E-07
<i>AK8</i>	-1.47	3.17E-08	2.09E-06
<i>FILIP1</i>	-1.47	6.75E-07	2.91E-05
<i>LDLRAD1</i>	-1.47	1.02E-08	8.05E-07

<i>DNAH7</i>	-1.47	4.42E-09	4.2E-07
<i>CCDC74B</i>	-1.47	1.27E-08	9.63E-07
<i>GAS2L2</i>	-1.48	5.28E-09	4.79E-07
<i>C16ORF89</i>	-1.48	0.000132	0.002539
<i>DNAJB13</i>	-1.48	2.04E-08	1.43E-06
<i>C9ORF135</i>	-1.48	5.19E-09	4.76E-07
<i>AGR3</i>	-1.49	1.01E-08	8.05E-07
<i>SRD5A2</i>	-1.49	9.58E-08	5.38E-06
<i>CX3CL1</i>	-1.49	3.68E-10	5.32E-08
<i>INHBB</i>	-1.49	1.27E-08	9.63E-07
<i>ECT2L</i>	-1.49	3.65E-09	3.61E-07
<i>WDR65</i>	-1.49	2.14E-07	1.1E-05
<i>C20ORF201</i>	-1.49	0.001543	0.019098
<i>UCKL1-AS1</i>	-1.49	6.72E-09	5.73E-07
<i>ATP6V0A4</i>	-1.49	6.86E-10	8.87E-08
<i>APOBEC4</i>	-1.49	1.49E-08	1.1E-06
<i>WNT9A</i>	-1.49	1.68E-06	6.22E-05
<i>DYDC2</i>	-1.49	1.3E-08	9.82E-07
<i>FBXO15</i>	-1.50	2.23E-07	1.13E-05
<i>PACRG</i>	-1.50	8.25E-09	6.77E-07
<i>C1ORF158</i>	-1.50	5.66E-08	3.43E-06
<i>CCDC19</i>	-1.50	7.75E-10	9.62E-08
<i>WDR69</i>	-1.50	6.24E-09	5.46E-07
<i>ENKUR</i>	-1.50	4.27E-09	4.09E-07
<i>FAM154B</i>	-1.50	7.2E-10	9.23E-08
<i>SPATA17</i>	-1.50	2.52E-08	1.73E-06
<i>LOC1005068</i>	-1.51	3.69E-07	1.76E-05
<i>DNALI1</i>	-1.51	7.68E-10	9.6E-08
<i>TEKT4</i>	-1.51	2.81E-08	1.88E-06
<i>PCDP1</i>	-1.51	3.29E-09	3.32E-07
<i>FAM166B</i>	-1.51	1.1E-09	1.27E-07
<i>C9ORF171</i>	-1.51	2.54E-08	1.74E-06
<i>RGS22</i>	-1.51	1E-07	5.58E-06
<i>CTXN1</i>	-1.51	1.33E-09	1.47E-07
<i>CCDC103</i>	-1.51	1.79E-08	1.27E-06
<i>SH3RF3</i>	-1.51	2.31E-06	8.12E-05
<i>SEC14L4</i>	-1.51	0.000217	0.003836
<i>C2ORF77</i>	-1.51	6.2E-08	3.69E-06
<i>SPEF1</i>	-1.52	1.21E-09	1.37E-07
<i>RTDR1</i>	-1.52	8.47E-08	4.85E-06
<i>CXORF41</i>	-1.52	1.67E-07	8.71E-06
<i>ROPN1L</i>	-1.52	3.52E-10	5.15E-08
<i>LPAR3</i>	-1.52	4.43E-07	2.02E-05
<i>YSK4</i>	-1.52	2.22E-09	2.32E-07
<i>MORN5</i>	-1.52	5.07E-09	4.7E-07
<i>TMEM121</i>	-1.52	0.000239	0.00416
<i>EFHC2</i>	-1.52	2.67E-09	2.74E-07
<i>LRRC48</i>	-1.53	9.41E-10	1.12E-07
<i>OXTR</i>	-1.53	2.7E-08	1.83E-06
<i>TTC29</i>	-1.53	8.5E-09	6.94E-07

<i>C2ORF40</i>	-1.53	2.27E-09	2.35E-07
<i>LRRC46</i>	-1.53	6.33E-10	8.61E-08
<i>RSPH4A</i>	-1.54	3.95E-10	5.6E-08
<i>SPATA18</i>	-1.54	3.53E-10	5.15E-08
<i>EFHB</i>	-1.54	1.32E-09	1.47E-07
<i>CAPSL</i>	-1.54	8.03E-10	9.81E-08
<i>C1ORF194</i>	-1.54	5.67E-10	7.91E-08
<i>C6ORF165</i>	-1.54	1.76E-09	1.9E-07
<i>LOC1001311</i>	-1.54	7.45E-09	6.25E-07
<i>EFCAB1</i>	-1.54	3.8E-10	5.44E-08
<i>ZNF853</i>	-1.55	2.73E-08	1.85E-06
<i>CCDC164</i>	-1.55	3.16E-10	4.75E-08
<i>DNAH10</i>	-1.55	8.19E-10	9.93E-08
<i>CH25H</i>	-1.55	3.03E-05	0.000724
<i>REEP1</i>	-1.56	0.000177	0.003236
<i>AKAP14</i>	-1.56	1.5E-09	1.63E-07
<i>MAP6</i>	-1.56	6.57E-10	8.66E-08
<i>TMEM232</i>	-1.56	5.03E-08	3.1E-06
<i>ARMC3</i>	-1.56	6.73E-10	8.77E-08
<i>ARMC4</i>	-1.56	1.33E-09	1.47E-07
<i>CCDC65</i>	-1.56	6.53E-10	8.66E-08
<i>IL5RA</i>	-1.56	2.41E-09	2.48E-07
<i>ZMYND12</i>	-1.57	2.27E-07	1.15E-05
<i>TCTEX1D4</i>	-1.57	1.09E-10	1.99E-08
<i>WDR16</i>	-1.57	1.16E-09	1.32E-07
<i>CD200R1L</i>	-1.57	0.00012	0.002316
<i>FAM92B</i>	-1.57	2.22E-10	3.6E-08
<i>SLC23A1</i>	-1.57	4.95E-08	3.06E-06
<i>C1ORF173</i>	-1.57	2.56E-10	3.99E-08
<i>TIMP4</i>	-1.58	1.13E-07	6.17E-06
<i>FAM183A</i>	-1.59	3.16E-10	4.75E-08
<i>WDR78</i>	-1.59	1.74E-10	2.89E-08
<i>KAL1</i>	-1.59	2.99E-06	0.000101
<i>KCNE1</i>	-1.59	5.9E-10	8.16E-08
<i>CC2D2A</i>	-1.59	1.62E-10	2.8E-08
<i>KIF19</i>	-1.59	2.99E-10	4.58E-08
<i>C16ORF71</i>	-1.60	7.94E-10	9.77E-08
<i>AK7</i>	-1.60	2.39E-10	3.81E-08
<i>PRR18</i>	-1.60	3.14E-08	2.08E-06
<i>DNAH5</i>	-1.60	8.4E-11	1.58E-08
<i>UBXN10</i>	-1.60	1.58E-10	2.76E-08
<i>RSPH1</i>	-1.60	4.96E-11	1.03E-08
<i>CCDC33</i>	-1.60	8.93E-10	1.07E-07
<i>PROS1</i>	-1.60	1.64E-10	2.8E-08
<i>HSD17B13</i>	-1.60	1.86E-11	4.59E-09
<i>C1ORF129</i>	-1.60	2.87E-06	9.71E-05
<i>C20ORF26</i>	-1.60	3E-08	1.99E-06
<i>TMEM146</i>	-1.61	5.19E-07	2.31E-05
<i>FXYS1</i>	-1.61	0.00016	0.002991
<i>TAGLN3</i>	-1.61	8.59E-06	0.000249

<i>TMEM231</i>	-1.61	2.76E-11	6.39E-09
<i>ZMYND10</i>	-1.61	2.27E-11	5.34E-09
<i>WDR38</i>	-1.62	4.79E-11	1.02E-08
<i>COL28A1</i>	-1.62	4.32E-08	2.76E-06
<i>LOC1002877</i>	-1.63	1.79E-09	1.92E-07
<i>SLC7A2</i>	-1.63	2.51E-10	3.95E-08
<i>C21ORF128</i>	-1.63	3.93E-07	1.85E-05
<i>FOXI1</i>	-1.63	0.00011	0.002182
<i>TNFAIP8L1</i>	-1.63	1.94E-11	4.71E-09
<i>C1ORF88</i>	-1.64	1.23E-11	3.3E-09
<i>FAM81B</i>	-1.65	3.92E-11	8.58E-09
<i>RSPH9</i>	-1.65	1.37E-10	2.48E-08
<i>VWA3B</i>	-1.65	7.07E-11	1.39E-08
<i>TPPP3</i>	-1.65	1.01E-11	2.88E-09
<i>IGFBP5</i>	-1.65	3.42E-11	7.71E-09
<i>ITIH5</i>	-1.65	0.000993	0.013573
<i>C6ORF118</i>	-1.65	7.45E-10	9.47E-08
<i>PPIL6</i>	-1.66	7.88E-11	1.5E-08
<i>C11ORF88</i>	-1.66	1.61E-11	4.03E-09
<i>AKAP6</i>	-1.66	9.87E-10	1.17E-07
<i>SNTN</i>	-1.66	5.51E-12	1.81E-09
<i>C6ORF97</i>	-1.67	1.44E-11	3.72E-09
<i>C5ORF49</i>	-1.67	9.99E-12	2.88E-09
<i>SPAG6</i>	-1.68	1.05E-11	2.95E-09
<i>KCNJ16</i>	-1.69	0.003227	0.034213
<i>GAS1</i>	-1.70	0.000398	0.00633
<i>FOXI2</i>	-1.70	0.00012	0.002321
<i>SEC14L3</i>	-1.70	1.53E-11	3.9E-09
<i>MS4A8B</i>	-1.71	4.06E-11	8.77E-09
<i>CLCNKB</i>	-1.71	4.18E-07	1.93E-05
<i>FABP6</i>	-1.72	2.31E-10	3.71E-08
<i>C20ORF85</i>	-1.72	9.22E-13	3.63E-10
<i>C13ORF30</i>	-1.73	6.26E-12	2.01E-09
<i>DNAH9</i>	-1.73	7.93E-12	2.41E-09
<i>ANKUB1</i>	-1.73	5.11E-11	1.05E-08
<i>NHLRC4</i>	-1.73	3.04E-11	6.95E-09
<i>PLEKHB1</i>	-1.74	1.35E-11	3.55E-09
<i>CES1</i>	-1.75	2.15E-13	9.95E-11
<i>NWD1</i>	-1.76	1.27E-12	4.75E-10
<i>TEKT1</i>	-1.78	1.31E-12	4.81E-10
<i>CAPS</i>	-1.79	4.32E-14	2.27E-11
<i>NELL2</i>	-1.80	3.35E-12	1.15E-09
<i>C9ORF24</i>	-1.80	1.06E-13	5.06E-11
<i>POSTN</i>	-1.83	1.49E-05	0.000399
<i>STOML3</i>	-1.84	4.52E-13	1.96E-10
<i>NR2E1</i>	-1.85	0.000198	0.003559
<i>LRRC10B</i>	-1.88	3.5E-14	1.9E-11
<i>BSND</i>	-1.90	0.001071	0.014438
<i>IGFBP7</i>	-1.91	1.62E-14	9.44E-12
<i>FOXJ1</i>	-2.03	3.33E-16	3.09E-13

<i>GSTA2</i>	-2.04	5.55E-16	4.38E-13
<i>PNMAL1</i>	-2.14	1.73E-05	0.000448
<i>LPPR3</i>	-2.42	0	0

Pre- vs. Post-exposure 1 within M+

Genes	Log ₂ FC	pvalsGLM	padjGLM
<i>NR4A1</i>	1.12	2.35E-07	0.003708

Post-Exposure 1 vs. Post-exposure 4 within M+

Genes	Log ₂ FC	pvalsGLM	padjGLM
<i>FCAR</i>	3.47	0	0
<i>HBB</i>	3.47	3.16E-08	4.74E-06
<i>OSM</i>	3.45	0	0
<i>PROK2</i>	3.13	0	0
<i>G0S2</i>	2.98	0	0
<i>LOC10030.</i>	2.78	1.19E-14	6.46E-12
<i>IL8</i>	2.78	0	0
<i>FCGR3B</i>	2.76	0	0
<i>KRT24</i>	2.75	0	0
<i>CXCR1</i>	2.73	0	0
<i>TREM1</i>	2.70	0	0
<i>FPR1</i>	2.68	0	0
<i>FPR2</i>	2.65	0	0
<i>SLC2A3</i>	2.60	0	0
<i>TNFRSF10</i>	2.59	0	0
<i>BCL2A1</i>	2.59	0	0
<i>PADI4</i>	2.55	8.78E-06	0.000791
<i>FFAR2</i>	2.51	0	0
<i>MNDA</i>	2.51	0	0
<i>IL1B</i>	2.50	0	0
<i>GPR97</i>	2.46	0	0
<i>CRCT1</i>	2.43	2.54E-12	9.52E-10
<i>RGS2</i>	2.42	0	0
<i>TREML2</i>	2.42	7.07E-12	2.47E-09
<i>CXCR2</i>	2.42	0	0
<i>AQP9</i>	2.41	0	0
<i>HCAR3</i>	2.39	0	0
<i>GLT1D1</i>	2.39	5.06E-11	1.48E-08
<i>MEFV</i>	2.38	7.36E-13	3.05E-10
<i>C19ORF59</i>	2.35	7.35E-09	1.3E-06
<i>FAM25A</i>	2.33	9.58E-07	0.000109
<i>CSF3R</i>	2.29	0	0
<i>MME</i>	2.27	9.22E-11	2.42E-08
<i>SRGN</i>	2.26	0	0
<i>KLK6</i>	2.25	7.9E-13	3.19E-10
<i>DYSF</i>	2.23	2.25E-13	1.04E-10
<i>EGR3</i>	2.21	6.2E-12	2.22E-09
<i>CMTM2</i>	2.20	3.5E-07	4.45E-05
<i>IVL</i>	2.19	2.96E-10	6.75E-08
<i>LILRA2</i>	2.18	4.1E-08	5.88E-06
<i>KRT13</i>	2.15	0	0
<i>RASGRP4</i>	2.14	1.89E-10	4.66E-08
<i>NLRP12</i>	2.13	5.22E-05	0.003743
<i>PDE4B</i>	2.12	6.77E-14	3.44E-11
<i>SIGLEC14</i>	2.12	2.42E-05	0.001925
<i>SPINK7</i>	2.11	1.05E-08	1.82E-06
<i>PLEK</i>	2.10	1.11E-16	6.73E-14
<i>KLK7</i>	2.09	8.14E-12	2.79E-09

<i>GPR65</i>	2.08	4.1E-11	1.24E-08
<i>NTNG2</i>	2.06	0.000224	0.012424
<i>CSF2RB</i>	2.06	3.33E-16	1.88E-13
<i>KLK9</i>	2.05	4.22E-05	0.00314
<i>SIRPB1</i>	2.05	1.5E-10	3.76E-08
<i>TLR8</i>	2.04	2.11E-08	3.36E-06
<i>TMPRSS11</i>	2.04	2.91E-09	5.53E-07
<i>CR1</i>	2.03	1.08E-09	2.33E-07
<i>MAL</i>	2.02	1.09E-13	5.2E-11
<i>LILRA5</i>	2.01	1.53E-09	3.2E-07
<i>SIGLEC5</i>	2.01	3.16E-06	0.000313
<i>EMR3</i>	2.00	1.83E-07	2.39E-05
<i>CLEC4E</i>	2.00	4.95E-06	0.000473
<i>CRNN</i>	1.98	3.69E-11	1.14E-08
<i>HRH2</i>	1.95	5.43E-05	0.003859
<i>SPRR3</i>	1.95	3.33E-16	1.88E-13
<i>PTGS2</i>	1.94	5.53E-13	2.36E-10
<i>ECM1</i>	1.94	1.49E-14	7.82E-12
<i>NLRP6</i>	1.93	1.44E-05	0.001216
<i>CDA</i>	1.93	0.000169	0.009779
<i>LOC73142</i>	1.93	0.000105	0.006754
<i>PRSS27</i>	1.92	1.58E-11	5.17E-09
<i>LILRB3</i>	1.92	1.09E-10	2.83E-08
<i>NCF1C</i>	1.92	8.8E-07	0.000102
<i>NCF1B</i>	1.91	7.75E-05	0.005245
<i>PHACTR1</i>	1.89	1.41E-07	1.88E-05
<i>SBSN</i>	1.88	5.58E-08	7.86E-06
<i>KIAA0226L</i>	1.88	1.97E-08	3.17E-06
<i>S100A12</i>	1.88	3.05E-06	0.000306
<i>TNFAIP6</i>	1.86	1.42E-05	0.001205
<i>SLC11A1</i>	1.86	1.42E-11	4.77E-09
<i>EREG</i>	1.86	9.11E-09	1.59E-06
<i>IQGAP3</i>	1.86	0.0004	0.019644
<i>HK3</i>	1.85	8.41E-06	0.000765
<i>CEACAM3</i>	1.85	3.13E-06	0.000312
<i>FCGR2A</i>	1.84	1.96E-12	7.73E-10
<i>KLK8</i>	1.84	0.000971	0.040182
<i>CPA4</i>	1.84	7.63E-14	3.76E-11
<i>ADAMTS1</i>	1.83	0.001053	0.042679
<i>PHOSPHO</i>	1.83	6.81E-08	9.41E-06
<i>PLAUR</i>	1.82	2.39E-13	1.08E-10
<i>IL1R2</i>	1.81	3.4E-08	5.01E-06
<i>KRT78</i>	1.81	5.19E-11	1.49E-08
<i>MMP25</i>	1.81	2.36E-12	9.08E-10
<i>SLC5A5</i>	1.79	2.17E-08	3.41E-06
<i>LILRA6</i>	1.78	9.82E-07	0.000111
<i>NFE2</i>	1.78	1.96E-06	0.000204
<i>IL1RL1</i>	1.76	0.001094	0.043974
<i>FGR</i>	1.76	6.74E-11	1.8E-08
<i>HAL</i>	1.74	5.72E-05	0.004027

<i>IL36RN</i>	1.74	0.000495	0.023022
<i>CREB5</i>	1.73	1.85E-07	2.39E-05
<i>NCF1</i>	1.73	2.8E-09	5.39E-07
<i>MKI67</i>	1.73	6.15E-07	7.63E-05
<i>SIRPB2</i>	1.72	0.00042	0.020323
<i>MYBL2</i>	1.71	3.45E-05	0.002613
<i>LOC10050</i>	1.71	0.000145	0.008795
<i>EMR2</i>	1.71	2.91E-10	6.75E-08
<i>KRT16</i>	1.70	1.72E-09	3.51E-07
<i>CASS4</i>	1.69	1.02E-06	0.000113
<i>THBD</i>	1.68	2.53E-08	3.87E-06
<i>APOBEC3A</i>	1.68	1.74E-08	2.82E-06
<i>SPRR1A</i>	1.68	5.89E-11	1.6E-08
<i>FOS</i>	1.67	1.13E-09	2.41E-07
<i>SOCS3</i>	1.67	4.95E-11	1.47E-08
<i>RNF222</i>	1.66	0.00031	0.016138
<i>TROAP</i>	1.66	0.000134	0.008235
<i>TAGAP</i>	1.66	3.77E-10	8.38E-08
<i>S100A8</i>	1.65	5.28E-11	1.49E-08
<i>CNFN</i>	1.62	2.92E-10	6.75E-08
<i>SPRR1B</i>	1.62	2.68E-10	6.39E-08
<i>ITGAM</i>	1.61	8.13E-08	1.11E-05
<i>SPRR2D</i>	1.60	4.68E-09	8.59E-07
<i>KRT4</i>	1.59	4.64E-13	2.03E-10
<i>KRT6A</i>	1.59	1.95E-10	4.73E-08
<i>EMP1</i>	1.59	3.16E-11	9.96E-09
<i>C5AR1</i>	1.57	5.56E-11	1.54E-08
<i>CALML5</i>	1.57	7.23E-09	1.3E-06
<i>KLK12</i>	1.57	6.22E-05	0.004322
<i>S1PR4</i>	1.56	1.09E-05	0.000952
<i>CCR1</i>	1.56	3.35E-08	4.98E-06
<i>FOSB</i>	1.56	2.3E-08	3.59E-06
<i>DGAT2</i>	1.56	1.4E-08	2.35E-06
<i>IL1RN</i>	1.54	2.51E-11	8.06E-09
<i>BIRC5</i>	1.54	3.68E-05	0.002778
<i>FCN1</i>	1.53	0.000371	0.018471
<i>RPTN</i>	1.51	1.54E-09	3.2E-07
<i>IFITM2</i>	1.51	1.41E-10	3.58E-08
<i>CXCR4</i>	1.50	5.92E-09	1.07E-06
<i>FOSL1</i>	1.50	1.93E-05	0.001578
<i>EGR1</i>	1.49	1.49E-08	2.47E-06
<i>HSPB8</i>	1.49	2.15E-09	4.3E-07
<i>PILRA</i>	1.48	7.83E-07	9.29E-05
<i>EVI2B</i>	1.48	1.65E-08	2.7E-06
<i>ITGAX</i>	1.48	3.55E-10	7.99E-08
<i>S100A9</i>	1.47	4.84E-10	1.06E-07
<i>RNASE7</i>	1.47	0.000152	0.009032
<i>HCAR2</i>	1.46	1.77E-09	3.57E-07
<i>RHCG</i>	1.46	2.5E-05	0.001983
<i>CYTH4</i>	1.45	2.3E-09	4.54E-07

<i>NCCRP1</i>	1.45	3.54E-09	6.56E-07
<i>TNFRSF1E</i>	1.44	3.21E-09	6.03E-07
<i>NFAM1</i>	1.44	4.02E-07	5.07E-05
<i>HLX</i>	1.44	0.000999	0.040719
<i>NCF4</i>	1.44	3.43E-08	5.01E-06
<i>LOC72973</i>	1.43	2.69E-08	4.07E-06
<i>HCK</i>	1.42	1.06E-08	1.82E-06
<i>UCA1</i>	1.41	7.11E-08	9.74E-06
<i>LRRC25</i>	1.41	8.44E-06	0.000765
<i>AATK</i>	1.41	8.77E-05	0.005832
<i>UBE2C</i>	1.41	0.000376	0.018644
<i>MYO1F</i>	1.40	2.56E-09	4.99E-07
<i>CYTIP</i>	1.40	8.41E-07	9.89E-05
<i>SPI1</i>	1.40	1.11E-08	1.88E-06
<i>EVI2A</i>	1.40	3.27E-05	0.002492
<i>LILRB2</i>	1.39	9.51E-07	0.000109
<i>NR4A3</i>	1.37	1.09E-05	0.000952
<i>SAMSN1</i>	1.37	1.91E-06	0.000202
<i>SH2B2</i>	1.36	0.000217	0.012198
<i>PADI2</i>	1.36	1.72E-06	0.000183
<i>RRM2</i>	1.35	0.000223	0.012408
<i>SLURP1</i>	1.34	6.87E-05	0.004711
<i>CHI3L1</i>	1.33	0.000105	0.006783
<i>LCP2</i>	1.32	5.69E-08	7.94E-06
<i>WAS</i>	1.32	6.48E-07	7.92E-05
<i>CST6</i>	1.31	0.000155	0.009102
<i>SIGLEC10</i>	1.31	3.27E-05	0.002492
<i>CSRNP1</i>	1.30	4.2E-08	5.96E-06
<i>SLC7A5</i>	1.30	2.99E-06	0.000302
<i>CAMK2N1</i>	1.29	0.001154	0.045604
<i>CAPN14</i>	1.29	1.15E-05	0.000993
<i>CD300A</i>	1.28	2.31E-05	0.001849
<i>SPRR2E</i>	1.28	1.55E-06	0.000166
<i>LAT2</i>	1.28	1.63E-05	0.001363
<i>DOK3</i>	1.27	2.24E-06	0.000233
<i>ANO8</i>	1.26	2.33E-08	3.61E-06
<i>CDSN</i>	1.25	0.001297	0.049746
<i>ZFP36</i>	1.25	3.89E-08	5.62E-06
<i>GMFG</i>	1.25	1.17E-05	0.001012
<i>RASSF2</i>	1.25	7.38E-07	8.89E-05
<i>VSIG10L</i>	1.24	9.26E-05	0.006107
<i>PRSS3</i>	1.24	6.84E-05	0.004709
<i>SCEL</i>	1.24	9.73E-08	1.31E-05
<i>C1ORF38</i>	1.23	2.88E-06	0.000293
<i>DPEP2</i>	1.23	0.000222	0.012392
<i>CYP1B1</i>	1.23	2.85E-07	3.65E-05
<i>ADAMTSL4</i>	1.23	4.6E-05	0.003339
<i>JUNB</i>	1.23	1.54E-07	2.04E-05
<i>S100A7</i>	1.22	0.000123	0.007705
<i>ESPL1</i>	1.22	0.000489	0.022863

<i>SLC19A1</i>	1.22	0.00032	0.016453
<i>TMPRSS11</i>	1.21	7.08E-06	0.000657
<i>SERPINB1</i>	1.21	1.96E-06	0.000204
<i>SPRR2A</i>	1.21	6.48E-07	7.92E-05
<i>MXD1</i>	1.20	1.58E-07	2.08E-05
<i>ALOX5AP</i>	1.20	5.1E-06	0.000484
<i>SEMA6B</i>	1.20	0.000354	0.018025
<i>CTSL2</i>	1.19	0.000114	0.007216
<i>S100A2</i>	1.19	1.14E-06	0.000126
<i>APBB1IP</i>	1.18	2.14E-05	0.001722
<i>PTPRC</i>	1.18	5.38E-07	6.73E-05
<i>CD53</i>	1.18	1.02E-06	0.000113
<i>FLJ45445</i>	1.18	7.41E-06	0.000683
<i>FYB</i>	1.18	3.33E-06	0.000328
<i>TLR4</i>	1.18	1.07E-05	0.000947
<i>SKAP2</i>	1.17	0.000358	0.018146
<i>SELL</i>	1.16	6.69E-06	0.000624
<i>DUSP1</i>	1.15	7.05E-07	8.55E-05
<i>PIK3R5</i>	1.15	1.42E-05	0.001205
<i>PTPRE</i>	1.15	4.05E-06	0.000389
<i>PFKFB3</i>	1.15	7.84E-07	9.29E-05
<i>ADM</i>	1.14	1.07E-05	0.000947
<i>ABLIM3</i>	1.13	0.00037	0.018471
<i>LMNB1</i>	1.13	1.93E-05	0.001578
<i>LCP1</i>	1.12	8.72E-07	0.000102
<i>HSPA6</i>	1.12	0.000118	0.007416
<i>ADORA2A</i>	1.11	0.000979	0.040282
<i>LST1</i>	1.11	6.54E-05	0.00452
<i>PECAM1</i>	1.11	0.000191	0.010974
<i>C8ORF73</i>	1.10	1.42E-06	0.000154
<i>NAMPT</i>	1.10	8.92E-07	0.000103
<i>ADAM8</i>	1.09	1.42E-06	0.000154
<i>LRRK2</i>	1.09	1.98E-05	0.001608
<i>LYPD3</i>	1.09	1.57E-05	0.00132
<i>BIN2</i>	1.08	2.88E-05	0.002245
<i>FAM101B</i>	1.07	0.000661	0.028897
<i>CSTA</i>	1.07	1.39E-06	0.000152
<i>FMNL1</i>	1.07	2.86E-06	0.000293
<i>RAC2</i>	1.06	9.7E-06	0.000868
<i>ASPRV1</i>	1.05	0.000442	0.021236
<i>KRT14</i>	1.05	0.000412	0.020021
<i>TYROBP</i>	1.03	1.93E-05	0.001578
<i>NFKBIA</i>	1.03	3.58E-06	0.000351
<i>ARHGAP21</i>	1.02	0.000148	0.00891
<i>KLK13</i>	1.01	0.00052	0.023933
<i>CD93</i>	1.01	0.000832	0.035559
<i>CLIC3</i>	1.01	0.000151	0.008988
<i>P2RY13</i>	1.00	0.001269	0.048908
<i>PADI1</i>	1.00	4.01E-06	0.000388
<i>CXCL2</i>	1.00	0.000442	0.021236

<i>A2ML1</i>	0.99	7.02E-05	0.004788
<i>MXRA8</i>	0.99	8.03E-06	0.000736
<i>C9ORF169</i>	0.99	3.15E-05	0.002448
<i>KDM6B</i>	0.98	6.52E-06	0.000611
<i>SOD2</i>	0.98	1.69E-05	0.001399
<i>ITGA5</i>	0.98	0.000304	0.015858
<i>ITGB2</i>	0.97	2.72E-05	0.002137
<i>KIAA1949</i>	0.97	4.11E-05	0.003087
<i>ALOX5</i>	0.97	9.92E-05	0.006516
<i>AMICA1</i>	0.97	4.18E-05	0.003123
<i>SIRPA</i>	0.97	4.58E-05	0.003339
<i>SLC25A37</i>	0.96	3.24E-05	0.002491
<i>ARHGAP9</i>	0.95	0.000124	0.007705
<i>ICAM3</i>	0.95	5.94E-05	0.004158
<i>PLXNC1</i>	0.95	0.000158	0.00925
<i>WIPF1</i>	0.94	0.000111	0.007072
<i>HOPX</i>	0.94	0.000256	0.013902
<i>UPP1</i>	0.94	0.000165	0.009607
<i>APOBR</i>	0.94	0.000113	0.007156
<i>FCGR3A</i>	0.94	0.00049	0.022863
<i>JAK3</i>	0.93	0.000367	0.018429
<i>NOTCH1</i>	0.93	4.92E-05	0.003539
<i>SLCO4A1</i>	0.92	0.000371	0.018471
<i>PREX1</i>	0.91	5.41E-05	0.003859
<i>SLC17A9</i>	0.91	0.001147	0.045549
<i>BTG2</i>	0.90	0.000101	0.00654
<i>GCA</i>	0.90	0.000199	0.011302
<i>IL6R</i>	0.89	0.000154	0.009102
<i>SLA</i>	0.89	0.000554	0.025291
<i>TRIB1</i>	0.89	0.000101	0.00654
<i>ATG16L2</i>	0.89	9.09E-05	0.006017
<i>SPINK5</i>	0.88	0.00015	0.008988
<i>ITPRIP</i>	0.88	0.000294	0.015529
<i>OBFC2A</i>	0.87	0.000313	0.016152
<i>IFRD1</i>	0.87	0.000147	0.00891
<i>IER3</i>	0.86	5.6E-05	0.003956
<i>UPK3B</i>	0.86	0.000267	0.014387
<i>CD14</i>	0.86	0.000201	0.011381
<i>SULT2B1</i>	0.85	0.000577	0.026118
<i>ASAP1</i>	0.84	0.000894	0.037696
<i>ZDHC18</i>	0.84	0.00015	0.008988
<i>ICAM1</i>	0.84	0.000565	0.025736
<i>UNC13D</i>	0.83	0.000912	0.038134
<i>FERMT3</i>	0.83	0.000626	0.027711
<i>SERPINA1</i>	0.83	0.000249	0.01359
<i>NCF2</i>	0.83	0.000312	0.016152
<i>TNNI2</i>	0.82	0.000468	0.022264
<i>BCAT1</i>	0.82	0.000282	0.014947
<i>PPIF</i>	0.81	0.000124	0.007705
<i>PDLIM2</i>	0.80	0.00052	0.023933

VWF	0.79	0.000903	0.037867
CHSY1	0.79	0.000928	0.038717
LAPTM5	0.79	0.000302	0.015858
AMPD2	0.78	0.00041	0.019997
NBEAL2	0.77	0.000187	0.010733
DENND3	0.77	0.000695	0.030164
TLE3	0.76	0.000892	0.037695
BCL3	0.75	0.000673	0.029302
PLXNB3	0.75	0.001179	0.046474
CLEC7A	0.74	0.001248	0.048455
SH3D21	0.73	0.001141	0.045419
TRIP10	0.73	0.000616	0.027685
COTL1	0.72	0.000947	0.039282
RNF207	0.72	0.001187	0.046666
FOSL2	0.71	0.000976	0.04026
IER2	0.71	0.000995	0.040719
MBD6	0.71	0.000451	0.021615
NR4A2	0.71	0.001053	0.042679
ANKRD9	0.70	0.001255	0.048476
TCIRG1	0.70	0.000519	0.023933
ZYX	0.69	0.001254	0.048476
ALDH1A3	0.68	0.001151	0.045604
S100A14	0.66	0.000938	0.039026
LAMC2	-0.72	0.000623	0.027685
FMO3	-0.72	0.000719	0.031048
MUC15	-0.73	0.001202	0.047119
APOD	-0.73	0.001118	0.044643
C11ORF88	-0.76	0.001109	0.044481
C12ORF75	-0.76	0.001076	0.043482
ENPP5	-0.77	0.001219	0.047572
PROM1	-0.77	0.000405	0.01983
ROPN1L	-0.77	0.000718	0.031048
CAPS	-0.77	0.000645	0.028399
SVEP1	-0.78	0.001238	0.048177
C5ORF49	-0.78	0.000781	0.033445
FOXJ1	-0.79	0.000486	0.022853
SPARCL1	-0.79	0.000364	0.018349
FAM183A	-0.79	0.000869	0.03681
TTC26	-0.79	0.001213	0.047462
CCDC113	-0.80	0.000621	0.027685
C9ORF24	-0.80	0.000521	0.023933
IL5RA	-0.80	0.001091	0.043974
C1ORF192	-0.81	0.00057	0.025899
VWA3B	-0.81	0.000841	0.035809
TEKT1	-0.81	0.000628	0.027711
TPPP3	-0.83	0.000278	0.014911
ECT2L	-0.83	0.000778	0.033415
SPA17	-0.83	0.00049	0.022863
C10ORF10	-0.83	0.000624	0.027685
APOBEC4	-0.83	0.000898	0.037762

<i>PACRG</i>	-0.83	0.000656	0.028795
<i>CAPSL</i>	-0.84	0.000391	0.019238
<i>NWD1</i>	-0.84	0.000483	0.022802
<i>CTGF</i>	-0.84	0.00021	0.011801
<i>GBP6</i>	-0.84	0.000304	0.015858
<i>UBXN10</i>	-0.84	0.000336	0.017156
<i>C20ORF85</i>	-0.84	0.000297	0.015655
<i>SPATA17</i>	-0.84	0.000981	0.040282
<i>C1ORF88</i>	-0.85	0.000245	0.013461
<i>LRRIQ1</i>	-0.85	0.000474	0.0225
<i>CCDC81</i>	-0.86	0.000457	0.021824
<i>CC2D2A</i>	-0.86	0.000246	0.013492
<i>AKAP6</i>	-0.86	0.000599	0.027039
<i>TTC29</i>	-0.86	0.000536	0.024539
<i>WDR78</i>	-0.86	0.000281	0.014947
<i>C14ORF50</i>	-0.86	0.000856	0.036386
<i>AKAP14</i>	-0.86	0.000381	0.018807
<i>TEX9</i>	-0.87	0.001	0.040719
<i>ZNF474</i>	-0.87	0.000622	0.027685
<i>SNTN</i>	-0.87	0.000174	0.010056
<i>NELL2</i>	-0.87	0.000483	0.022802
<i>CCDC103</i>	-0.87	0.000745	0.032104
<i>ANKUB1</i>	-0.88	0.000414	0.020066
<i>ARMC3</i>	-0.88	0.000241	0.013324
<i>FN1</i>	-0.88	0.001119	0.044643
<i>C1ORF87</i>	-0.88	0.000662	0.028897
<i>SPAG6</i>	-0.88	0.000128	0.007915
<i>EFNB3</i>	-0.88	0.000619	0.027685
<i>ARMC4</i>	-0.89	0.000245	0.013461
<i>C1ORF194</i>	-0.89	0.000194	0.011069
<i>SCGB3A1</i>	-0.89	3.19E-05	0.002469
<i>WDR69</i>	-0.89	0.000273	0.014684
<i>NEK10</i>	-0.90	0.000323	0.016541
<i>CX3CL1</i>	-0.90	4.58E-05	0.003339
<i>NME5</i>	-0.90	0.000168	0.009753
<i>RSPH4A</i>	-0.90	0.000116	0.00731
<i>CASC1</i>	-0.91	0.000201	0.011381
<i>RP1</i>	-0.91	0.00129	0.049591
<i>ENKUR</i>	-0.92	0.000142	0.008686
<i>LOC10028</i>	-0.92	0.000281	0.014947
<i>MORN5</i>	-0.93	0.000152	0.009032
<i>MAOB</i>	-0.93	0.000266	0.014387
<i>C1ORF173</i>	-0.94	8E-05	0.005366
<i>AK7</i>	-0.94	7.31E-05	0.004969
<i>SLC7A2</i>	-0.94	0.000107	0.006878
<i>C6ORF97</i>	-0.94	4.5E-05	0.003316
<i>YSK4</i>	-0.95	7.84E-05	0.00528
<i>MLF1</i>	-0.96	4.64E-05	0.003359
<i>PROS1</i>	-0.96	0.00014	0.008599
<i>HHLA2</i>	-0.97	8.26E-05	0.005519

<i>PPIL6</i>	-0.98	6.03E-05	0.004205
<i>SEC14L3</i>	-1.01	4.37E-05	0.003232
<i>FILIP1</i>	-1.02	0.000363	0.018349
<i>HSD17B13</i>	-1.02	2.63E-05	0.002076
<i>IGFBP5</i>	-1.02	2.12E-05	0.001717
<i>CYP24A1</i>	-1.03	0.000101	0.00654
<i>C13ORF30</i>	-1.03	1.36E-05	0.001168
<i>TP63</i>	-1.04	0.00032	0.016453
<i>CES1</i>	-1.04	3.65E-06	0.000356
<i>FAM81B</i>	-1.08	6.45E-06	0.000609
<i>GSTA2</i>	-1.14	2.86E-06	0.000293
<i>DMBT1</i>	-1.16	9.8E-06	0.000872
<i>MMP10</i>	-1.51	4.71E-12	1.73E-09

Pre-Exposure 1 vs. Post-exposure 4 within M+

Genes	Log ₂ FC	pvalsGLM	padjGLM
<i>KRT24</i>	3.57	0	0
<i>CCR3</i>	3.00	6.64E-06	0.000203
<i>HK3</i>	2.93	1.04E-11	1.73E-09
<i>FCGR3B</i>	2.89	0	0
<i>PROK2</i>	2.89	0	0
<i>LILRA2</i>	2.86	3.53E-12	6.33E-10
<i>FCAR</i>	2.86	9.21E-15	2.85E-12
<i>OSM</i>	2.85	0	0
<i>SLC5A5</i>	2.82	0	0
<i>NLRP6</i>	2.79	6.47E-10	6.75E-08
<i>FFAR2</i>	2.72	0	0
<i>KRT13</i>	2.72	0	0
<i>PKMYT1</i>	2.66	1.88E-06	6.83E-05
<i>CXCR1</i>	2.66	0	0
<i>FPR2</i>	2.66	0	0
<i>TNFRSF10C</i>	2.62	0	0
<i>EGR3</i>	2.59	0	0
<i>CD300LB</i>	2.56	1.69E-05	0.000435
<i>CAPN14</i>	2.54	0	0
<i>TREML2</i>	2.53	6.02E-13	1.17E-10
<i>IVL</i>	2.52	8.36E-14	2.11E-11
<i>LOC731424</i>	2.51	6.09E-07	2.59E-05
<i>LILRB3</i>	2.50	0	0
<i>CEACAM3</i>	2.48	2.48E-10	3.1E-08
<i>FPR1</i>	2.47	0	0
<i>CMTM2</i>	2.46	2.37E-08	1.6E-06
<i>AQP9</i>	2.46	0	0
<i>GPR97</i>	2.46	0	0
<i>CPA4</i>	2.45	0	0
<i>KLK7</i>	2.44	3.33E-16	1.42E-13
<i>LILRA1</i>	2.42	6.89E-06	0.000208
<i>CSF2RB</i>	2.42	0	0
<i>SIGLEC14</i>	2.42	1.32E-06	5E-05
<i>THBD</i>	2.42	3.44E-15	1.21E-12
<i>CLEC4E</i>	2.42	7.62E-09	6.28E-07
<i>TREM1</i>	2.39	0	0
<i>CRCT1</i>	2.38	4.09E-12	7.24E-10
<i>G0S2</i>	2.38	0	0
<i>IL1R2</i>	2.38	7.65E-13	1.47E-10
<i>LPL</i>	2.38	0.000131	0.002393
<i>EMR3</i>	2.36	8.21E-10	8.41E-08
<i>CXCR2</i>	2.35	0	0
<i>KLK6</i>	2.34	3.08E-14	8.81E-12
<i>CCL24</i>	2.32	3.52E-05	0.000813
<i>MIR223</i>	2.32	0.000128	0.002351
<i>PADI4</i>	2.31	2.77E-05	0.000664
<i>HRH2</i>	2.31	1.75E-06	6.39E-05
<i>MNDA</i>	2.27	0	0

<i>MIR21</i>	2.27	0.00343	0.033455
<i>CSF3R</i>	2.27	0	0
<i>LILRA5</i>	2.26	1.56E-11	2.45E-09
<i>SIGLEC5</i>	2.25	1.04E-07	5.62E-06
<i>CR1</i>	2.25	8.99E-12	1.51E-09
<i>LILRA6</i>	2.25	8.64E-10	8.79E-08
<i>IQGAP3</i>	2.24	2.25E-05	0.000557
<i>FOSL1</i>	2.22	1.22E-10	1.6E-08
<i>SIRPB2</i>	2.22	3.93E-06	0.000127
<i>MKI67</i>	2.20	3.63E-10	4.33E-08
<i>CASS4</i>	2.20	1.2E-10	1.59E-08
<i>IL1RL1</i>	2.20	3.61E-05	0.000827
<i>SPRR3</i>	2.19	0	0
<i>FCN1</i>	2.19	1.34E-06	5.07E-05
<i>NLRP12</i>	2.18	3.33E-05	0.000776
<i>ITGAM</i>	2.18	2.42E-13	5.3E-11
<i>KRT6A</i>	2.18	0	0
<i>TNFAIP6</i>	2.17	2.12E-07	1.04E-05
<i>MEFV</i>	2.17	1.46E-12	2.73E-10
<i>LOC100302650</i>	2.16	8.8E-11	1.2E-08
<i>C19ORF59</i>	2.15	5.81E-08	3.42E-06
<i>FGR</i>	2.12	2.89E-15	1.06E-12
<i>MME</i>	2.12	4.71E-10	5.3E-08
<i>SRGN</i>	2.12	0	0
<i>APOBEC3A</i>	2.12	1.71E-13	3.91E-11
<i>RASGRP4</i>	2.12	7.27E-11	1.01E-08
<i>KRT16</i>	2.11	3.66E-15	1.23E-12
<i>P2RX1</i>	2.10	5.11E-05	0.001104
<i>CLC</i>	2.10	0.002431	0.025526
<i>EMR1</i>	2.09	1.28E-06	4.9E-05
<i>CDA</i>	2.09	2.05E-05	0.000516
<i>RRM2</i>	2.09	2.47E-08	1.66E-06
<i>SIRPB1</i>	2.09	2.4E-11	3.63E-09
<i>IL1B</i>	2.08	9.04E-14	2.23E-11
<i>RGS2</i>	2.08	0	0
<i>GPR65</i>	2.08	3.13E-12	5.67E-10
<i>GLT1D1</i>	2.08	4.78E-09	4.14E-07
<i>NCF1C</i>	2.07	3.94E-08	2.45E-06
<i>CHI3L1</i>	2.07	5.9E-10	6.37E-08
<i>RPTN</i>	2.07	1.11E-16	5.15E-14
<i>NCF1</i>	2.06	5.32E-13	1.08E-10
<i>NFAM1</i>	2.06	1.63E-13	3.79E-11
<i>CA4</i>	2.06	0.00403	0.037925
<i>PDE4B</i>	2.05	3.36E-14	9.3E-12
<i>CREB5</i>	2.04	3.31E-10	3.98E-08
<i>KLK9</i>	2.03	6.04E-05	0.001263
<i>EMP1</i>	2.03	0	0
<i>LILRB2</i>	2.02	5.74E-13	1.13E-10
<i>ADAMTS1</i>	2.02	6.84E-05	0.00139
<i>BCL2A1</i>	2.02	3.35E-14	9.3E-12

<i>SERPINB13</i>	2.02	3.55E-15	1.22E-12
<i>CCR1</i>	2.02	4.64E-13	9.5E-11
<i>NFE2</i>	2.01	2.33E-08	1.59E-06
<i>TLR8</i>	2.00	1.16E-08	8.56E-07
<i>PTGS2</i>	2.00	0	0
<i>IL36RN</i>	1.99	3.16E-05	0.000741
<i>FOSB</i>	1.98	4.44E-15	1.43E-12
<i>EDN2</i>	1.98	0.000393	0.005882
<i>PHACTR1</i>	1.98	2.95E-08	1.93E-06
<i>EMR2</i>	1.97	5.76E-14	1.49E-11
<i>NR4A3</i>	1.97	1.99E-10	2.52E-08
<i>FAM25A</i>	1.97	2.79E-05	0.000668
<i>SOCS3</i>	1.97	2.22E-16	1E-13
<i>SPRR1B</i>	1.97	3.33E-16	1.42E-13
<i>SPRR1A</i>	1.96	1.78E-15	7E-13
<i>IL8</i>	1.95	0	0
<i>KIAA0226L</i>	1.95	1.57E-09	1.51E-07
<i>S100A12</i>	1.95	6.6E-07	2.76E-05
<i>SBSN</i>	1.94	4.51E-09	3.93E-07
<i>FCGR2A</i>	1.94	4.88E-15	1.54E-12
<i>ECM1</i>	1.93	3.33E-15	1.19E-12
<i>NCF1B</i>	1.93	3.37E-05	0.000783
<i>PHOSPHO1</i>	1.93	6.61E-09	5.54E-07
<i>LOC100507127</i>	1.92	1.62E-05	0.000418
<i>PLAUR</i>	1.92	9.99E-16	4.04E-13
<i>MYBL2</i>	1.91	2.69E-06	9.19E-05
<i>CLEC5A</i>	1.90	0.000742	0.009992
<i>MMP25</i>	1.90	1.37E-14	4.14E-12
<i>TNFRSF1B</i>	1.89	3.77E-15	1.24E-12
<i>SLC2A3</i>	1.88	4.81E-14	1.28E-11
<i>HCAR3</i>	1.88	1.93E-13	4.28E-11
<i>EVI2B</i>	1.87	1.41E-13	3.33E-11
<i>CEACAM4</i>	1.87	0.001496	0.017524
<i>EDN1</i>	1.86	0.000263	0.004224
<i>SLC11A1</i>	1.86	1.66E-12	3.07E-10
<i>DYSF</i>	1.86	3.96E-11	5.73E-09
<i>KRT78</i>	1.86	3.07E-12	5.62E-10
<i>ADAMTSL4</i>	1.86	4.14E-10	4.77E-08
<i>PLEK</i>	1.85	2.29E-14	6.8E-12
<i>KLK8</i>	1.84	0.000626	0.008689
<i>TAGAP</i>	1.84	3.96E-13	8.22E-11
<i>EGR2</i>	1.84	6.46E-07	2.72E-05
<i>CASP5</i>	1.82	0.001673	0.019132
<i>SIGLEC10</i>	1.82	3.37E-09	3.06E-07
<i>ANO8</i>	1.82	1.11E-16	5.15E-14
<i>CXCR4</i>	1.82	9.35E-14	2.27E-11
<i>VSIG10L</i>	1.81	9.5E-09	7.31E-07
<i>SEMA6B</i>	1.81	3.09E-08	1.99E-06
<i>BIRC5</i>	1.81	2.35E-06	8.23E-05
<i>SPRR2F</i>	1.80	8E-07	3.24E-05

<i>KRT4</i>	1.80	0	0
<i>RNF222</i>	1.80	0.000153	0.002687
<i>RHCG</i>	1.80	5.35E-07	2.32E-05
<i>SLC7A5</i>	1.80	2.51E-11	3.74E-09
<i>SPRR2E</i>	1.79	8.23E-12	1.39E-09
<i>S100A8</i>	1.79	1.89E-15	7.26E-13
<i>ITGAX</i>	1.79	2.22E-15	8.33E-13
<i>HSPA6</i>	1.78	5.25E-10	5.79E-08
<i>CCL26</i>	1.78	0.003381	0.033146
<i>MMP19</i>	1.77	0.002848	0.028998
<i>BTBD19</i>	1.76	0.000136	0.002462
<i>CDC6</i>	1.76	0.000184	0.00311
<i>MAL</i>	1.76	1.12E-11	1.84E-09
<i>CRNN</i>	1.75	3.1E-08	1.99E-06
<i>IDI2-AS1</i>	1.75	0.003603	0.03476
<i>PIF1</i>	1.74	0.005157	0.045796
<i>AATK</i>	1.74	9.66E-07	3.79E-05
<i>CD93</i>	1.74	4.3E-09	3.77E-07
<i>C7ORF53</i>	1.74	0.000177	0.003019
<i>NR4A1</i>	1.73	2.93E-14	8.56E-12
<i>NCCRP1</i>	1.73	3.9E-14	1.06E-11
<i>C10RF170</i>	1.73	7.32E-07	2.98E-05
<i>FCGR1B</i>	1.73	0.000301	0.004737
<i>AURKB</i>	1.73	0.000653	0.008991
<i>ADRA2B</i>	1.72	0.000153	0.002692
<i>EGR1</i>	1.71	3.08E-13	6.56E-11
<i>CST6</i>	1.71	6.68E-07	2.78E-05
<i>HLX</i>	1.70	8.9E-05	0.001738
<i>S100A7</i>	1.70	2.76E-08	1.81E-06
<i>CXCL5</i>	1.70	2.05E-05	0.000516
<i>TYRP1</i>	1.69	0.000704	0.009542
<i>SCEL</i>	1.69	1.2E-13	2.86E-11
<i>OBFC2A</i>	1.69	3.34E-13	7.03E-11
<i>TRPV3</i>	1.69	4.71E-05	0.001032
<i>TMPRSS11B</i>	1.69	2.8E-06	9.54E-05
<i>IL1RL2</i>	1.69	2.74E-05	0.00066
<i>PILRA</i>	1.69	9.04E-09	7.09E-07
<i>CD300A</i>	1.68	1.46E-08	1.05E-06
<i>LAT2</i>	1.67	8.4E-09	6.72E-07
<i>FOS</i>	1.66	5.39E-13	1.08E-10
<i>OLR1</i>	1.66	0.000207	0.003427
<i>TRPM6</i>	1.66	3E-07	1.39E-05
<i>HCK</i>	1.65	7.66E-12	1.31E-09
<i>CAMK2N1</i>	1.65	2.9E-05	0.000689
<i>GAPT</i>	1.65	0.000137	0.002476
<i>PRSS27</i>	1.64	3.26E-10	3.95E-08
<i>IL1RN</i>	1.64	1.85E-13	4.17E-11
<i>SIGLEC9</i>	1.64	0.000577	0.008159
<i>SH2B2</i>	1.63	3.13E-06	0.000105
<i>IL36G</i>	1.63	0.000465	0.006809

<i>ARC</i>	1.63	0.004656	0.042398
<i>RASSF2</i>	1.63	1.65E-11	2.57E-09
<i>ACHE</i>	1.62	0.004763	0.043195
<i>LRRC25</i>	1.62	1.68E-07	8.54E-06
<i>SAMSN1</i>	1.62	7.12E-09	5.94E-07
<i>CST1</i>	1.61	2.29E-07	1.11E-05
<i>HSPB8</i>	1.61	1.31E-11	2.12E-09
<i>FAM157A</i>	1.61	0.000142	0.002547
<i>NTNG2</i>	1.61	0.001583	0.018271
<i>PADI2</i>	1.61	8.06E-09	6.55E-07
<i>CTSL2</i>	1.60	7.02E-08	4.02E-06
<i>PADI1</i>	1.60	5.78E-14	1.49E-11
<i>E2F2</i>	1.60	8.65E-05	0.001702
<i>LOC646329</i>	1.59	0.004301	0.039877
<i>SPRR2A</i>	1.59	4.35E-12	7.62E-10
<i>IL18RAP</i>	1.59	4.85E-07	2.14E-05
<i>S100A2</i>	1.59	1.16E-12	2.2E-10
<i>ZFP36</i>	1.59	8.43E-14	2.11E-11
<i>DOK3</i>	1.58	1.3E-09	1.27E-07
<i>DQX1</i>	1.58	1.44E-05	0.000381
<i>UCA1</i>	1.57	7.84E-11	1.07E-08
<i>CEP55</i>	1.57	0.001276	0.015469
<i>SPRR2D</i>	1.57	1.09E-09	1.09E-07
<i>ASPM</i>	1.57	0.005372	0.047229
<i>ARID3A</i>	1.56	0.000345	0.005305
<i>PDE4C</i>	1.56	0.000111	0.002107
<i>TLR4</i>	1.56	7.44E-10	7.66E-08
<i>IGSF6</i>	1.56	2.3E-07	1.11E-05
<i>MYO1F</i>	1.56	6.96E-12	1.21E-09
<i>KRT14</i>	1.56	3.57E-08	2.24E-06
<i>ABLIM3</i>	1.55	1.27E-06	4.89E-05
<i>UBE2C</i>	1.54	8.52E-05	0.00168
<i>IRF4</i>	1.54	0.001174	0.014554
<i>SULT1E1</i>	1.54	2.33E-06	8.18E-05
<i>EVI2A</i>	1.53	1.88E-06	6.82E-05
<i>PLEKHN1</i>	1.53	3E-08	1.95E-06
<i>CYTIP</i>	1.53	2.02E-08	1.39E-06
<i>PTPRC</i>	1.53	1.37E-11	2.2E-09
<i>PIK3R5</i>	1.53	1.75E-09	1.66E-07
<i>HBEGF</i>	1.53	2.49E-06	8.61E-05
<i>C5AR1</i>	1.52	2.45E-11	3.68E-09
<i>GPR77</i>	1.52	0.000366	0.005568
<i>ESPL1</i>	1.52	1.33E-05	0.000358
<i>DGAT2</i>	1.51	5.14E-09	4.43E-07
<i>LOC729737</i>	1.51	1.06E-09	1.07E-07
<i>LOC100133161</i>	1.50	8.49E-07	3.4E-05
<i>PLA2G2F</i>	1.50	4.09E-05	0.000921
<i>CYTH4</i>	1.50	1.44E-10	1.87E-08
<i>P2RY13</i>	1.48	1.48E-06	5.57E-05
<i>FGFBP1</i>	1.48	9.91E-09	7.54E-07

<i>SH2D1B</i>	1.48	2.06E-06	7.35E-05
<i>ANGPTL4</i>	1.47	9.03E-05	0.001761
<i>CCNA2</i>	1.47	0.000523	0.007514
<i>CA2</i>	1.47	1.83E-05	0.000467
<i>CCL3</i>	1.47	0.000194	0.003248
<i>EREG</i>	1.47	1.97E-06	7.1E-05
<i>NLRC4</i>	1.46	0.003121	0.03117
<i>LCP2</i>	1.46	3E-10	3.7E-08
<i>FYB</i>	1.46	1.12E-09	1.12E-07
<i>SPI1</i>	1.46	3.79E-10	4.49E-08
<i>CALML5</i>	1.46	7.72E-09	6.34E-07
<i>PRSS3</i>	1.45	1.84E-06	6.71E-05
<i>ALOX5AP</i>	1.45	9.28E-09	7.2E-07
<i>GPR183</i>	1.45	6.92E-05	0.001402
<i>TROAP</i>	1.45	0.000935	0.012126
<i>SLA</i>	1.44	1.38E-08	9.95E-07
<i>LCP1</i>	1.44	4.76E-11	6.7E-09
<i>ST3GAL2</i>	1.44	1.55E-06	5.75E-05
<i>CD53</i>	1.44	5.16E-10	5.73E-08
<i>P2RY14</i>	1.44	0.003301	0.032587
<i>PLXNC1</i>	1.44	5.5E-09	4.69E-07
<i>TMPRSS11A</i>	1.44	1.16E-06	4.48E-05
<i>FLJ45445</i>	1.43	7.3E-09	6.05E-07
<i>MRVI1</i>	1.43	0.000224	0.003671
<i>NCF4</i>	1.43	8.8E-09	6.95E-07
<i>CNFN</i>	1.43	9.83E-09	7.52E-07
<i>KLK5</i>	1.43	0.00394	0.037255
<i>CD69</i>	1.43	5.75E-06	0.000178
<i>CALB1</i>	1.43	1.09E-05	0.000301
<i>MXRA8</i>	1.42	1.05E-10	1.41E-08
<i>FAM40B</i>	1.42	0.000312	0.004867
<i>TNFSF14</i>	1.42	8.16E-05	0.001625
<i>MIR149</i>	1.41	0.002834	0.028909
<i>S1PR4</i>	1.41	2.11E-05	0.000526
<i>TNFRSF6B</i>	1.40	0.003036	0.030484
<i>LST1</i>	1.40	2.89E-07	1.35E-05
<i>ADORA2A</i>	1.40	2.12E-05	0.000528
<i>ADAM8</i>	1.40	1.19E-10	1.59E-08
<i>KCP</i>	1.40	0.0003	0.004721
<i>LYPD3</i>	1.40	5.83E-10	6.33E-08
<i>SPRR2C</i>	1.39	0.001441	0.01701
<i>APBB1IP</i>	1.39	2.53E-07	1.2E-05
<i>CSTA</i>	1.39	4.24E-11	6.01E-09
<i>PECAM1</i>	1.39	1.55E-06	5.75E-05
<i>WAS</i>	1.39	4.94E-08	2.95E-06
<i>S100A9</i>	1.39	1.77E-10	2.25E-08
<i>A2ML1</i>	1.38	3.19E-08	2.04E-06
<i>IFITM2</i>	1.38	4.33E-10	4.9E-08
<i>C8ORF73</i>	1.38	3.99E-10	4.66E-08
<i>FAM101B</i>	1.38	5.91E-06	0.000183

<i>LRRK2</i>	1.37	1.15E-08	8.56E-07
<i>SELL</i>	1.37	1.58E-08	1.13E-06
<i>RASGRP2</i>	1.37	8.84E-05	0.001731
<i>SIRPA</i>	1.37	1.6E-09	1.53E-07
<i>FMNL1</i>	1.37	6.3E-10	6.66E-08
<i>ZEB1</i>	1.37	0.002858	0.029087
<i>RELT</i>	1.37	5.07E-07	2.23E-05
<i>CDRT1</i>	1.37	7.78E-08	4.38E-06
<i>BIN2</i>	1.37	1.83E-08	1.27E-06
<i>CYP2E1</i>	1.36	1.25E-05	0.00034
<i>LOC284454</i>	1.36	3.49E-08	2.2E-06
<i>KDM6B</i>	1.36	1.33E-10	1.74E-08
<i>ASPG</i>	1.36	6.68E-06	0.000204
<i>JAK3</i>	1.36	5.88E-08	3.45E-06
<i>DPEP2</i>	1.35	4.72E-05	0.001032
<i>ITGA5</i>	1.35	2.39E-07	1.14E-05
<i>MXD1</i>	1.34	4.19E-10	4.79E-08
<i>SPINK5</i>	1.34	1.7E-08	1.2E-06
<i>ADM</i>	1.34	1.7E-08	1.2E-06
<i>NEAT1</i>	1.33	1.71E-11	2.64E-09
<i>HAL</i>	1.33	0.001223	0.015007
<i>C10RF38</i>	1.33	1.59E-07	8.14E-06
<i>WIPF1</i>	1.32	2E-08	1.38E-06
<i>BEST1</i>	1.32	0.0005	0.007255
<i>NHSL2</i>	1.32	0.004341	0.040184
<i>CXCL2</i>	1.31	1.09E-06	4.27E-05
<i>UNC13D</i>	1.31	4.42E-08	2.7E-06
<i>HRH1</i>	1.31	0.000793	0.010534
<i>C15ORF63</i>	1.31	0.003847	0.036555
<i>MLKL</i>	1.31	6.21E-07	2.64E-05
<i>AQP6</i>	1.30	0.001471	0.01732
<i>ZEB2</i>	1.30	2.58E-06	8.88E-05
<i>LMNB1</i>	1.29	2.33E-07	1.12E-05
<i>AIM1L</i>	1.29	5.97E-08	3.48E-06
<i>PXDN</i>	1.29	0.003051	0.030596
<i>CD83</i>	1.29	8.44E-06	0.000248
<i>GMFG</i>	1.29	1.99E-06	7.17E-05
<i>SLC19A1</i>	1.28	6.9E-05	0.001399
<i>PACSIN1</i>	1.28	0.002002	0.022024
<i>CCK</i>	1.28	0.000567	0.00804
<i>DSC2</i>	1.28	1.1E-05	0.000304
<i>LOC100131094</i>	1.28	0.001507	0.017579
<i>TUBB3</i>	1.27	0.00307	0.030725
<i>JUNB</i>	1.27	3.22E-09	2.93E-07
<i>PLEKHG2</i>	1.27	1.26E-06	4.87E-05
<i>CSRNP1</i>	1.26	1.33E-08	9.69E-07
<i>BCAT1</i>	1.26	1.07E-08	8.09E-07
<i>KLK13</i>	1.26	9.66E-06	0.000276
<i>CST7</i>	1.26	0.000131	0.00239
<i>CRABP2</i>	1.25	6.44E-06	0.000198

KY	1.25	0.004053	0.038097
RAC2	1.24	6.17E-08	3.58E-06
TRIB1	1.24	1.74E-08	1.22E-06
ATG16L2	1.24	1.35E-08	9.83E-07
GRIP2	1.24	0.002743	0.02815
APOBR	1.24	8.15E-08	4.55E-06
KRT17	1.24	1.5E-08	1.08E-06
DUSP1	1.23	8.03E-09	6.55E-07
PTPRE	1.23	3E-07	1.39E-05
OSCAR	1.23	0.001832	0.02053
CD37	1.23	7.72E-06	0.000231
CISH	1.23	6.59E-05	0.001349
KIAA1949	1.23	8.89E-08	4.92E-06
UPP1	1.23	3.09E-07	1.42E-05
NUSAP1	1.22	0.001196	0.014752
ECEL1P2	1.22	0.000164	0.002862
C9ORF169	1.22	1E-07	5.46E-06
NFKBID	1.22	2.11E-05	0.000526
SPINK7	1.22	0.001051	0.013296
TUBB6	1.22	8.8E-06	0.000257
PRKCB	1.22	5.2E-05	0.00112
RNF207	1.22	1.94E-08	1.35E-06
LY6D	1.21	9.39E-09	7.25E-07
TMPRSS11E	1.21	1.59E-06	5.87E-05
PADI3	1.21	0.001755	0.019828
TMEM88	1.21	0.001074	0.013534
SH2D3C	1.20	0.000143	0.002559
GNG2	1.20	6.09E-05	0.00127
SLURP1	1.20	0.000168	0.002914
ARHGAP9	1.20	3.73E-07	1.68E-05
PDLIM7	1.20	1.44E-07	7.42E-06
LTB	1.19	1.35E-05	0.00036
SOCS1	1.19	0.005744	0.04992
SKAP2	1.19	0.000103	0.001969
MPP1	1.19	1.53E-05	0.0004
NLRP3	1.19	0.000387	0.005814
NOTCH1	1.19	9.34E-08	5.11E-06
LOC90834	1.18	0.003735	0.035742
KIAA1199	1.18	0.003209	0.031956
SLCO4A1	1.18	1.43E-06	5.36E-05
DOCK5	1.18	1.2E-07	6.35E-06
APOBEC3B	1.18	0.00243	0.025526
RTEL1	1.18	0.00036	0.00549
RNASE7	1.17	0.001766	0.019931
PSTPIP1	1.17	0.000142	0.002547
LOC100505839	1.17	0.00426	0.03966
ZBP1	1.17	0.003723	0.035671
MSLN	1.17	6.69E-06	0.000204
LOC100128881	1.17	7.92E-05	0.001578
CYBB	1.16	2.66E-06	9.09E-05

<i>TNNI2</i>	1.16	5.33E-07	2.31E-05
<i>NAMPT</i>	1.16	2.38E-08	1.61E-06
<i>DUSP2</i>	1.16	1.14E-05	0.000314
<i>SLC25A37</i>	1.16	1.85E-07	9.3E-06
<i>VNN1</i>	1.16	9.2E-06	0.000266
<i>SERPINB4</i>	1.15	2.58E-07	1.22E-05
<i>ZNF467</i>	1.15	1.17E-07	6.23E-06
<i>TACC3</i>	1.15	2.16E-06	7.62E-05
<i>PPP1R3B</i>	1.15	3.32E-06	0.00011
<i>ALPPL2</i>	1.15	0.003514	0.034123
<i>FOXE1</i>	1.15	0.002822	0.028814
<i>CXCL6</i>	1.14	6.24E-07	2.64E-05
<i>DSG3</i>	1.14	0.000508	0.007342
<i>CDH24</i>	1.14	0.000345	0.005305
<i>PLXDC2</i>	1.14	0.001039	0.013203
<i>LIF</i>	1.14	5.35E-05	0.001144
<i>CSGALNACT1</i>	1.14	0.000457	0.006695
<i>SOD2</i>	1.14	1.13E-07	6.05E-06
<i>COX6B2</i>	1.14	0.000279	0.004445
<i>MAFF</i>	1.14	6.57E-07	2.75E-05
<i>PFKFB3</i>	1.13	3.31E-07	1.51E-05
<i>BTG2</i>	1.13	3.64E-07	1.65E-05
<i>PAG1</i>	1.13	4.15E-05	0.000932
<i>AMICA1</i>	1.13	6.63E-07	2.76E-05
<i>GPR153</i>	1.13	3.16E-07	1.45E-05
<i>GPCPD1</i>	1.13	6.12E-08	3.56E-06
<i>PRAM1</i>	1.13	0.001506	0.017579
<i>FCGR1A</i>	1.13	0.000265	0.004249
<i>PRRT2</i>	1.12	7.15E-06	0.000216
<i>SNX10</i>	1.12	0.00038	0.005741
<i>LOC100288123</i>	1.12	0.002697	0.027753
<i>MIR200B</i>	1.12	0.004939	0.044182
<i>CLIC3</i>	1.12	1.17E-05	0.00032
<i>FCGR3A</i>	1.12	1.24E-05	0.000338
<i>LGALS7</i>	1.12	0.000818	0.010804
<i>NRIP3</i>	1.12	0.000941	0.0122
<i>DOCK11</i>	1.11	0.000236	0.003824
<i>CCL4</i>	1.11	0.003561	0.034479
<i>DUSP5</i>	1.11	6.9E-07	2.85E-05
<i>ZYX</i>	1.11	6.56E-08	3.79E-06
<i>TNFSF13B</i>	1.11	0.000144	0.002565
<i>SMTN</i>	1.11	8.77E-05	0.00172
<i>SPNS2</i>	1.11	1.04E-07	5.62E-06
<i>HCN3</i>	1.10	0.000396	0.00591
<i>NLGN2</i>	1.10	0.000106	0.002027
<i>TYROBP</i>	1.10	2.05E-06	7.35E-05
<i>MBD6</i>	1.10	4.33E-08	2.65E-06
<i>NBEAL2</i>	1.10	4.65E-08	2.81E-06
<i>GPSM1</i>	1.09	0.000374	0.005683
<i>PKP1</i>	1.09	1.05E-05	0.000294

<i>FLNC</i>	1.09	4.81E-07	2.13E-05
<i>GPRC5A</i>	1.09	1.27E-07	6.66E-06
<i>ASAP1</i>	1.09	8.56E-06	0.000251
<i>PREX1</i>	1.09	5.17E-07	2.27E-05
<i>EHBP1L1</i>	1.09	5.8E-08	3.42E-06
<i>LOC100505746</i>	1.09	0.000459	0.006723
<i>TK1</i>	1.09	0.00012	0.002225
<i>RGS1</i>	1.09	0.000972	0.012553
<i>ITGB2</i>	1.08	8.92E-07	3.53E-05
<i>MYO7A</i>	1.08	0.000188	0.003171
<i>FLNA</i>	1.08	5.4E-07	2.33E-05
<i>SNX20</i>	1.08	0.001153	0.014345
<i>FGL2</i>	1.08	6.43E-06	0.000198
<i>CD109</i>	1.08	0.000624	0.008676
<i>GGT1</i>	1.08	0.001491	0.017504
<i>PHLDA1</i>	1.08	1.39E-06	5.25E-05
<i>C10RF183</i>	1.08	0.000258	0.004148
<i>SERPINB9</i>	1.08	1.97E-05	0.000497
<i>MIR200A</i>	1.08	0.004492	0.041239
<i>DGKA</i>	1.07	2.07E-07	1.02E-05
<i>NOS3</i>	1.07	0.000484	0.00705
<i>TMCC3</i>	1.07	6.34E-05	0.001311
<i>TRIP10</i>	1.07	1.9E-07	9.52E-06
<i>GCNT3</i>	1.07	3.22E-06	0.000107
<i>KRT6B</i>	1.07	5.05E-05	0.001095
<i>NFKB2</i>	1.06	3.33E-07	1.52E-05
<i>CCL22</i>	1.06	0.005751	0.049943
<i>CBFA2T3</i>	1.06	0.003268	0.032361
<i>FAM20C</i>	1.06	0.000945	0.012246
<i>CLCA4</i>	1.06	2.71E-05	0.000657
<i>DNAH17</i>	1.06	0.001149	0.014307
<i>SLCO3A1</i>	1.06	5.32E-05	0.001142
<i>FCER1G</i>	1.05	3.93E-05	0.000891
<i>SSH2</i>	1.05	2.51E-06	8.65E-05
<i>ZDHHC18</i>	1.05	7.11E-07	2.92E-05
<i>GABRE</i>	1.05	2.47E-06	8.55E-05
<i>TMPRSS11D</i>	1.05	2.84E-06	9.66E-05
<i>ANO1</i>	1.04	1.96E-05	0.000496
<i>DKK1</i>	1.04	0.000139	0.002494
<i>SCARF1</i>	1.04	1.68E-05	0.000432
<i>TRPV6</i>	1.04	0.000376	0.005704
<i>ALOX5</i>	1.04	9.37E-06	0.00027
<i>FAM126A</i>	1.04	0.000375	0.005693
<i>FOXO1</i>	1.03	0.000505	0.007321
<i>TBXAS1</i>	1.03	0.000255	0.004117
<i>LOC729966</i>	1.03	0.004727	0.042922
<i>ARHGAP25</i>	1.03	8.43E-05	0.001668
<i>ZNF117</i>	1.03	0.000126	0.002317
<i>TNFAIP3</i>	1.03	6.72E-07	2.79E-05
<i>HR</i>	1.02	5.04E-05	0.001094

<i>PLCB3</i>	1.02	1.61E-06	5.93E-05
<i>BMP1</i>	1.02	9.3E-06	0.000269
<i>MUC2</i>	1.02	1.58E-06	5.85E-05
<i>TMEM71</i>	1.02	3.92E-05	0.000891
<i>PLIN4</i>	1.02	5.98E-05	0.001256
<i>VWF</i>	1.02	1.31E-05	0.000353
<i>SHROOM1</i>	1.02	6.08E-05	0.001268
<i>IER2</i>	1.02	5.89E-07	2.52E-05
<i>ARHGAP30</i>	1.02	1.38E-06	5.21E-05
<i>TINAGL1</i>	1.01	9.7E-05	0.001872
<i>CYP4F3</i>	1.01	1.32E-05	0.000354
<i>PLAC2</i>	1.01	0.002104	0.022922
<i>AGAP11</i>	1.01	0.001514	0.017639
<i>CHSY1</i>	1.01	1.05E-05	0.000294
<i>NDRG1</i>	1.01	8.77E-07	3.49E-05
<i>SAP25</i>	1.01	0.000194	0.003244
<i>KLK10</i>	1.00	6.89E-06	0.000208
<i>ABTB2</i>	1.00	0.000381	0.005763
<i>CATSPERB</i>	1.00	0.000508	0.007342
<i>LOC100133331</i>	1.00	6.59E-05	0.001349
<i>JARID2</i>	1.00	4.36E-06	0.000139
<i>CACNB1</i>	1.00	1.77E-06	6.46E-05
<i>CFP</i>	1.00	0.000524	0.007514
<i>CLEC4A</i>	1.00	0.003695	0.035525
<i>IER3</i>	1.00	1.54E-06	5.75E-05
<i>NR4A2</i>	1.00	3.67E-06	0.00012
<i>METRNL</i>	0.99	4.47E-06	0.000142
<i>FERMT3</i>	0.99	2.73E-05	0.000659
<i>TLR6</i>	0.99	0.001343	0.016117
<i>DENND5A</i>	0.99	8.72E-06	0.000255
<i>FHL3</i>	0.99	0.002189	0.02366
<i>CSF1</i>	0.99	0.001699	0.019365
<i>RCN3</i>	0.99	0.001731	0.019599
<i>SERPINA1</i>	0.98	8.28E-06	0.000245
<i>ARHGAP15</i>	0.98	0.005378	0.047256
<i>PIM1</i>	0.98	4.79E-06	0.000152
<i>TLE3</i>	0.98	9.44E-06	0.000271
<i>MIR429</i>	0.98	0.00103	0.01311
<i>SH3D21</i>	0.97	1.57E-05	0.000407
<i>PMEL</i>	0.97	0.001085	0.01366
<i>NFIL3</i>	0.97	5.66E-05	0.001197
<i>TCIRG1</i>	0.97	8.02E-07	3.24E-05
<i>AMPD2</i>	0.97	5.63E-06	0.000175
<i>LAPTM5</i>	0.97	3.78E-06	0.000122
<i>NCF2</i>	0.97	1.11E-05	0.000307
<i>SEMA7A</i>	0.97	0.001724	0.01957
<i>IFRD1</i>	0.97	9.13E-06	0.000264
<i>KLF2</i>	0.97	7.19E-06	0.000217
<i>GADD45B</i>	0.97	1.04E-05	0.000293
<i>MIRLET7BHG</i>	0.97	0.00138	0.016457

<i>GLS</i>	0.97	2.78E-05	0.000667
<i>B3GNT8</i>	0.97	0.004507	0.041331
<i>ICAM3</i>	0.97	2.56E-05	0.000623
<i>HAS3</i>	0.97	0.000781	0.010414
<i>MALL</i>	0.96	4.86E-06	0.000154
<i>CELF2</i>	0.96	9.88E-05	0.0019
<i>ITPRIP</i>	0.96	3.56E-05	0.000818
<i>RASAL1</i>	0.96	3.56E-05	0.000818
<i>FOSL2</i>	0.96	3.86E-06	0.000125
<i>ALDH1A3</i>	0.96	4.04E-06	0.00013
<i>TIMP2</i>	0.96	7.99E-06	0.000238
<i>HOPX</i>	0.96	0.000143	0.002559
<i>CXCL3</i>	0.95	0.000901	0.011753
<i>MAST3</i>	0.95	2.34E-05	0.000578
<i>PHLDA2</i>	0.95	7.35E-05	0.001479
<i>SGK494</i>	0.95	0.004412	0.040746
<i>MDFI</i>	0.95	4.12E-05	0.000928
<i>GDPD3</i>	0.95	2.27E-05	0.000561
<i>IL6R</i>	0.95	6.03E-05	0.001263
<i>CYP3A5</i>	0.95	8.48E-05	0.001676
<i>CCNL1</i>	0.95	4.12E-06	0.000132
<i>PP14571</i>	0.94	4.42E-05	0.00098
<i>WDFY4</i>	0.94	0.001324	0.01591
<i>TIMP3</i>	0.94	4.88E-05	0.001063
<i>ASF1B</i>	0.94	0.005007	0.04467
<i>EHD1</i>	0.94	4.84E-06	0.000153
<i>CARD8</i>	0.94	0.000105	0.001996
<i>MOBKL2A</i>	0.94	2.87E-05	0.000682
<i>SULT2B1</i>	0.94	0.000112	0.002114
<i>CD274</i>	0.94	0.000291	0.004592
<i>COL1A1</i>	0.94	1.62E-05	0.000418
<i>SFN</i>	0.94	3.73E-06	0.000122
<i>GMIP</i>	0.93	1.45E-05	0.000381
<i>PPM1F</i>	0.93	3.36E-05	0.000782
<i>ARHGAP10</i>	0.93	0.004113	0.038473
<i>ZNF438</i>	0.93	0.002961	0.029956
<i>DEFB4A</i>	0.93	0.000143	0.002558
<i>PRDM1</i>	0.93	9.8E-05	0.001889
<i>SPTBN5</i>	0.93	0.001016	0.012979
<i>DOT1L</i>	0.93	1.43E-05	0.00038
<i>CD44</i>	0.92	3.33E-06	0.00011
<i>UPK3B</i>	0.92	5.53E-05	0.001171
<i>FAM83A</i>	0.92	7.65E-05	0.001534
<i>CCRL2</i>	0.92	0.001637	0.018779
<i>EPS8L1</i>	0.92	2.99E-06	0.000101
<i>RGL4</i>	0.92	0.000519	0.007462
<i>FLJ45340</i>	0.92	5.42E-06	0.00017
<i>DOCK2</i>	0.92	0.000313	0.004892
<i>CCDC88B</i>	0.92	7.2E-06	0.000217
<i>BCL3</i>	0.91	1.26E-05	0.000341

<i>PLK3</i>	0.91	2.88E-05	0.000684
<i>CLEC7A</i>	0.91	2.17E-05	0.000538
<i>PFKFB4</i>	0.91	0.003783	0.036123
<i>LOC100506123</i>	0.91	0.000404	0.006008
<i>SNCG</i>	0.91	0.0004	0.005973
<i>CYP2D7P1</i>	0.91	0.00563	0.049033
<i>QPCT</i>	0.91	0.001134	0.014156
<i>LYNX1</i>	0.90	8.64E-06	0.000253
<i>PLXNB3</i>	0.90	6.63E-05	0.001354
<i>GRHL3</i>	0.90	0.000209	0.003442
<i>GABBR1</i>	0.90	0.000892	0.011656
<i>ASPRV1</i>	0.90	0.002315	0.024573
<i>PTAFR</i>	0.90	1.61E-05	0.000418
<i>IGFBP3</i>	0.90	8.53E-06	0.00025
<i>PARVG</i>	0.90	0.000602	0.008446
<i>TMEM79</i>	0.90	6.41E-05	0.001324
<i>AVIL</i>	0.89	0.005225	0.046272
<i>TNFRSF18</i>	0.89	0.000151	0.002663
<i>ATP2A1</i>	0.89	0.002975	0.030041
<i>PI4KAP1</i>	0.89	0.001194	0.014734
<i>SLC12A6</i>	0.89	1.46E-05	0.000384
<i>UPK1B</i>	0.89	9.55E-06	0.000273
<i>HCAR2</i>	0.89	0.000161	0.002809
<i>LOC146880</i>	0.88	1.07E-05	0.0003
<i>PLAU</i>	0.88	9.92E-05	0.001904
<i>ADAM19</i>	0.88	0.002837	0.028922
<i>ICAM1</i>	0.88	0.0001	0.001922
<i>PRSS22</i>	0.88	1.14E-05	0.000312
<i>GCA</i>	0.88	0.000121	0.002242
<i>LYST</i>	0.88	9.47E-05	0.001837
<i>MC1R</i>	0.88	0.000134	0.002443
<i>COTL1</i>	0.88	2.97E-05	0.000703
<i>RAP1GAP2</i>	0.87	0.001678	0.019168
<i>PLEKHM1P</i>	0.87	5.06E-05	0.001095
<i>RNF149</i>	0.87	3.17E-05	0.000744
<i>EME2</i>	0.87	0.002177	0.023617
<i>TMEM184A</i>	0.87	1.28E-05	0.000347
<i>DENND3</i>	0.87	6.45E-05	0.001328
<i>CD14</i>	0.86	0.000123	0.002264
<i>E2F1</i>	0.86	0.003948	0.03731
<i>LPCAT1</i>	0.86	0.000165	0.002874
<i>AIF1</i>	0.86	0.000683	0.009306
<i>CXCL1</i>	0.86	1.68E-05	0.000432
<i>SMCHD1</i>	0.86	3.58E-05	0.000822
<i>MALAT1</i>	0.86	1.06E-05	0.000296
<i>PAQR6</i>	0.86	0.001141	0.014223
<i>LOC731275</i>	0.86	0.004421	0.040785
<i>MAFK</i>	0.86	4.54E-05	0.000997
<i>DHX34</i>	0.86	0.000117	0.002186
<i>NFKBIZ</i>	0.86	2.38E-05	0.000585

<i>MMP9</i>	0.86	0.003033	0.030467
<i>JOSD1</i>	0.86	4.18E-05	0.000935
<i>SLC17A9</i>	0.86	0.001958	0.02166
<i>PDLIM2</i>	0.86	0.000116	0.002164
<i>PIK3AP1</i>	0.86	0.000234	0.003796
<i>ARAP3</i>	0.85	0.000183	0.003103
<i>ZWINT</i>	0.85	0.002522	0.026328
<i>ZNF267</i>	0.85	0.000481	0.007013
<i>FAM46B</i>	0.85	0.002974	0.030041
<i>FGD3</i>	0.85	0.000283	0.004477
<i>VEGFA</i>	0.85	3.82E-05	0.00087
<i>SIK1</i>	0.85	7.73E-05	0.001548
<i>TGFB1</i>	0.85	0.000201	0.003359
<i>CMYA5</i>	0.85	0.000658	0.009031
<i>SMOX</i>	0.85	0.00139	0.016519
<i>PRICKLE4</i>	0.84	0.000391	0.005861
<i>RHOG</i>	0.84	9.52E-05	0.001841
<i>IL4R</i>	0.84	5.22E-05	0.001122
<i>C17ORF91</i>	0.84	4.9E-05	0.001065
<i>PPIF</i>	0.84	4.18E-05	0.000935
<i>DDX12</i>	0.84	0.003026	0.030423
<i>LPAR2</i>	0.84	0.000176	0.003007
<i>CD300LF</i>	0.84	0.000979	0.012622
<i>FER1L4</i>	0.84	3.28E-05	0.000766
<i>TLR2</i>	0.84	0.00023	0.003753
<i>SECTM1</i>	0.84	4.89E-05	0.001065
<i>PTK6</i>	0.84	6.59E-05	0.001349
<i>CLCF1</i>	0.83	0.002561	0.026648
<i>CORO1A</i>	0.83	7.39E-05	0.001484
<i>CEACAM1</i>	0.83	0.000179	0.003062
<i>MIDN</i>	0.83	3.15E-05	0.000741
<i>SBNO2</i>	0.83	3.26E-05	0.000764
<i>S100A14</i>	0.83	2.4E-05	0.000589
<i>NFKBIA</i>	0.83	9.06E-05	0.001766
<i>GLIPR1</i>	0.83	0.002648	0.027407
<i>FAM49A</i>	0.82	0.004359	0.040298
<i>CNN2</i>	0.82	3.69E-05	0.000843
<i>CBLC</i>	0.82	0.000297	0.004676
<i>SLC34A3</i>	0.82	0.003498	0.033995
<i>LOC645638</i>	0.82	4.48E-05	0.000991
<i>SLC6A14</i>	0.82	3.43E-05	0.000792
<i>RHBDF1</i>	0.82	9.62E-05	0.001858
<i>KRT80</i>	0.82	0.000104	0.001984
<i>AMN</i>	0.82	0.000322	0.005003
<i>KIF21B</i>	0.82	0.000723	0.009755
<i>GOLGA8A</i>	0.82	0.000101	0.00193
<i>GSDMC</i>	0.81	0.002291	0.024403
<i>C8ORF4</i>	0.81	0.000894	0.011671
<i>C16ORF7</i>	0.81	7.91E-05	0.001578
<i>SYNJ1</i>	0.81	0.001505	0.017579

ALS2CL	0.81	5.18E-05	0.001116
LIMD2	0.81	0.000653	0.008996
AGER	0.81	0.002933	0.029736
MYADM	0.81	0.000119	0.002207
SLC37A2	0.81	0.000402	0.005982
IL10RA	0.81	0.001819	0.020438
MAP3K6	0.80	0.000135	0.002443
ETS2	0.80	6.25E-05	0.001295
CAPN8	0.80	0.000137	0.002484
MPRIIP	0.80	6.67E-05	0.00136
ARRB2	0.80	7.75E-05	0.001551
WSB1	0.80	8.72E-05	0.001713
ATHL1	0.79	0.000187	0.003147
ARL5B	0.79	0.002268	0.024277
PPFIA3	0.79	0.001252	0.015251
PIK3CD	0.79	0.00027	0.004319
HIF1A	0.79	0.000114	0.002136
MYO9B	0.79	8.29E-05	0.001646
SIPA1	0.79	0.000323	0.005007
COL18A1	0.79	0.002299	0.024465
TIAM1	0.79	0.002265	0.024276
PTPRH	0.79	0.00021	0.003464
CHST11	0.79	0.002215	0.023864
IRF7	0.78	0.000343	0.005279
SH3BP2	0.78	0.00018	0.003066
PPCDC	0.78	0.001984	0.021869
THBS1	0.78	0.004105	0.038422
HIP1	0.78	0.002461	0.02579
CARD14	0.78	0.00054	0.007716
LOC440434	0.77	0.001377	0.016453
RNF39	0.77	0.000693	0.00942
S100A16	0.77	8.6E-05	0.001694
KCNN4	0.77	0.003833	0.036509
IL2RG	0.77	0.000672	0.009179
TNFAIP2	0.77	0.000112	0.002114
C15ORF52	0.77	0.001268	0.015405
ID1	0.77	0.000408	0.006047
STAT5B	0.77	0.000331	0.005122
HDAC7	0.77	0.000109	0.002078
ZNF276	0.77	0.000277	0.004421
RGS19	0.77	0.001568	0.018112
HIST1H2AC	0.76	0.005629	0.049033
SH3TC1	0.76	0.001162	0.014443
MUC4	0.76	8.29E-05	0.001646
PROM2	0.76	0.000184	0.00311
KIAA0895L	0.76	0.00058	0.008184
SGK1	0.76	0.000111	0.002107
VASN	0.76	0.002354	0.024921
LENG8	0.76	0.000111	0.002102
LPPR2	0.76	0.000568	0.008047

<i>PIM3</i>	0.76	0.000147	0.002615
<i>CSAD</i>	0.76	0.000903	0.011769
<i>PILRB</i>	0.75	0.000202	0.003364
<i>INF2</i>	0.75	0.00019	0.003188
<i>SLC9A3</i>	0.75	0.000332	0.005122
<i>SORL1</i>	0.75	0.00015	0.002658
<i>ZNF692</i>	0.75	0.000622	0.008655
<i>RHBDF2</i>	0.75	0.000492	0.007148
<i>SHKBP1</i>	0.75	0.000246	0.003982
<i>LAMA4</i>	0.75	0.004823	0.043538
<i>CHST15</i>	0.75	0.000699	0.009478
<i>FUT3</i>	0.75	0.000151	0.002667
<i>VASP</i>	0.75	0.000256	0.004126
<i>HK2</i>	0.75	0.000183	0.003102
<i>LSP1</i>	0.74	0.000329	0.005096
<i>CBL</i>	0.74	0.001177	0.014578
<i>C10ORF54</i>	0.74	0.000208	0.003436
<i>ST3GAL1</i>	0.74	0.000631	0.008754
<i>HOMER3</i>	0.74	0.000775	0.010361
<i>VAMP5</i>	0.74	0.000717	0.00969
<i>RARA</i>	0.74	0.000524	0.007514
<i>MCL1</i>	0.74	0.000163	0.002837
<i>ACSL1</i>	0.74	0.000383	0.005778
<i>QKI</i>	0.74	0.000644	0.008914
<i>NTS</i>	0.74	0.000474	0.006923
<i>ZMYND15</i>	0.74	0.00104	0.013204
<i>DDX60L</i>	0.74	0.000863	0.01134
<i>DDIT3</i>	0.73	0.001827	0.020494
<i>ATP6V0A1</i>	0.73	0.00065	0.008974
<i>MAP3K8</i>	0.73	0.000527	0.00755
<i>ANTXR2</i>	0.73	0.001422	0.016832
<i>MIR5047</i>	0.73	0.00058	0.008184
<i>PDXDC2P</i>	0.73	0.00028	0.004451
<i>ELL</i>	0.73	0.000918	0.011936
<i>RASSF3</i>	0.73	0.001206	0.014821
<i>ACAP3</i>	0.73	0.000259	0.004161
<i>GRB7</i>	0.73	0.000719	0.009716
<i>IGSF9</i>	0.73	0.000991	0.012761
<i>RASSF5</i>	0.73	0.000517	0.007438
<i>FBXL19</i>	0.73	0.000656	0.009027
<i>PRSS36</i>	0.73	0.004967	0.044334
<i>HPSE</i>	0.73	0.001233	0.01508
<i>OVOL1</i>	0.73	0.005523	0.048287
<i>EHD3</i>	0.73	0.003516	0.034123
<i>KLF6</i>	0.73	0.000369	0.005608
<i>NKTR</i>	0.73	0.000401	0.005981
<i>PGAM2</i>	0.73	0.002887	0.029317
<i>NPDC1</i>	0.73	0.000683	0.009306
<i>TMEM86B</i>	0.72	0.002394	0.025226
<i>KCNK6</i>	0.72	0.00138	0.016457

<i>MXRA5</i>	0.72	0.003998	0.037711
<i>C1ORF159</i>	0.72	0.001108	0.01388
<i>VMP1</i>	0.72	0.000337	0.005196
<i>PLXNA3</i>	0.72	0.000614	0.008574
<i>LAD1</i>	0.72	0.000663	0.009074
<i>SEMA3B</i>	0.71	0.002028	0.022234
<i>DUSP6</i>	0.71	0.0013	0.015684
<i>TRIM25</i>	0.71	0.00043	0.006349
<i>POLE</i>	0.71	0.001042	0.013216
<i>MIR3064</i>	0.71	0.004294	0.039837
<i>VNN2</i>	0.71	0.001638	0.018779
<i>PLCD3</i>	0.71	0.001204	0.014821
<i>MBOAT7</i>	0.71	0.000548	0.007804
<i>NLRP1</i>	0.71	0.001494	0.017518
<i>EVPL</i>	0.71	0.000401	0.005974
<i>SPHK1</i>	0.71	0.001528	0.017741
<i>MAN2A2</i>	0.71	0.000517	0.007438
<i>LATS2</i>	0.71	0.004501	0.041299
<i>FAM38A</i>	0.71	0.000622	0.008655
<i>RAPGEF3</i>	0.71	0.001383	0.016461
<i>HMGA1</i>	0.71	0.000385	0.005793
<i>AQP5</i>	0.70	0.000394	0.005891
<i>FAM49B</i>	0.70	0.000806	0.010669
<i>SYT8</i>	0.70	0.00047	0.006871
<i>CDC25B</i>	0.70	0.003381	0.033146
<i>FAM176B</i>	0.70	0.001855	0.020733
<i>LPCAT2</i>	0.70	0.003701	0.035528
<i>DUSP8</i>	0.70	0.004478	0.041182
<i>KLF4</i>	0.70	0.000503	0.00729
<i>SLC4A11</i>	0.70	0.000386	0.0058
<i>USP15</i>	0.70	0.000754	0.010119
<i>RNF24</i>	0.70	0.004083	0.03824
<i>IL1RAP</i>	0.70	0.002511	0.026225
<i>JMJD1C</i>	0.70	0.001138	0.014189
<i>KIAA0907</i>	0.70	0.001044	0.013229
<i>XPO6</i>	0.69	0.000618	0.008626
<i>AGPAT9</i>	0.69	0.003053	0.030596
<i>APBB3</i>	0.69	0.001677	0.019168
<i>TPCN1</i>	0.69	0.000499	0.007253
<i>IFITM10</i>	0.69	0.000907	0.011801
<i>GPSM3</i>	0.69	0.001717	0.019523
<i>GPC1</i>	0.69	0.000602	0.008446
<i>OPLAH</i>	0.69	0.003008	0.03028
<i>LBR</i>	0.69	0.002002	0.022024
<i>REEP4</i>	0.69	0.001225	0.015019
<i>ARHGAP27</i>	0.69	0.00066	0.009037
<i>CAPN3</i>	0.69	0.003602	0.03476
<i>RAB8B</i>	0.69	0.003852	0.036581
<i>PRODH</i>	0.69	0.000622	0.008655
<i>TUFT1</i>	0.69	0.001703	0.019392

<i>TP53INP2</i>	0.69	0.000613	0.008574
<i>ADCY7</i>	0.69	0.003776	0.036074
<i>PNPLA7</i>	0.68	0.001375	0.016444
<i>KRT23</i>	0.68	0.000608	0.008515
<i>CYP1B1</i>	0.68	0.003535	0.034287
<i>DENND4B</i>	0.68	0.001013	0.012958
<i>HMHA1</i>	0.68	0.001207	0.014821
<i>CYR61</i>	0.68	0.001849	0.020686
<i>JMJD6</i>	0.68	0.004898	0.044047
<i>NOXA1</i>	0.68	0.001186	0.014653
<i>ABTB1</i>	0.68	0.001727	0.019586
<i>RUNX2</i>	0.68	0.002777	0.028441
<i>C15ORF39</i>	0.68	0.000998	0.01283
<i>DDX11</i>	0.68	0.00207	0.022566
<i>WASH1</i>	0.68	0.005572	0.048664
<i>VDR</i>	0.68	0.003262	0.032321
<i>PTPRJ</i>	0.68	0.001052	0.013296
<i>PLEKHH2</i>	0.68	0.003238	0.032163
<i>MICAL1</i>	0.68	0.000871	0.011424
<i>OXSR1</i>	0.68	0.001561	0.018054
<i>IVNS1ABP</i>	0.67	0.000657	0.009031
<i>SASH3</i>	0.67	0.003931	0.037236
<i>TNFRSF1A</i>	0.67	0.000753	0.010108
<i>RDH13</i>	0.67	0.003122	0.03117
<i>PTPN12</i>	0.67	0.002021	0.022173
<i>BACH1</i>	0.67	0.002228	0.023952
<i>MNT</i>	0.67	0.002375	0.025092
<i>ATP13A4</i>	0.67	0.003069	0.030725
<i>FXD5</i>	0.67	0.003637	0.035044
<i>VIM</i>	0.67	0.001279	0.015485
<i>CLSTN3</i>	0.67	0.002139	0.023241
<i>HSPB1</i>	0.67	0.000616	0.008606
<i>HSH2D</i>	0.67	0.00178	0.020052
<i>CYP4F12</i>	0.67	0.001197	0.014752
<i>TET2</i>	0.66	0.001051	0.013296
<i>MYD88</i>	0.66	0.00093	0.01207
<i>PLCG2</i>	0.66	0.005291	0.046798
<i>STK10</i>	0.66	0.001656	0.018955
<i>LITAF</i>	0.66	0.000799	0.010607
<i>CDC42SE1</i>	0.66	0.000806	0.010669
<i>CPM</i>	0.66	0.005173	0.045914
<i>XDH</i>	0.66	0.00219	0.02366
<i>TSPAN4</i>	0.66	0.004466	0.041116
<i>LOC338799</i>	0.66	0.003983	0.037617
<i>KRT15</i>	0.66	0.001526	0.017739
<i>BNIP2</i>	0.66	0.002199	0.023738
<i>ARID5A</i>	0.66	0.004194	0.039143
<i>FAM193B</i>	0.66	0.00112	0.014011
<i>HPCAL1</i>	0.66	0.00561	0.048928
<i>FCHSD1</i>	0.66	0.002119	0.023047

LAMA5	0.66	0.000873	0.011435
PLEKHO2	0.66	0.002386	0.025173
FHOD1	0.66	0.002229	0.023952
LOC100499177	0.65	0.003189	0.031798
FGFR3	0.65	0.002502	0.026168
PPP1R12C	0.65	0.001116	0.013975
OAS1	0.65	0.001123	0.014033
MLL4	0.65	0.001303	0.015703
ARL4C	0.65	0.005745	0.04992
F3	0.65	0.00088	0.011516
MSL1	0.65	0.001488	0.017492
ATAD3B	0.65	0.001999	0.022019
RNF213	0.65	0.000952	0.012324
PLCH2	0.65	0.001774	0.019999
RIT1	0.64	0.002668	0.027576
ABCA1	0.64	0.003427	0.033449
ARHGEF16	0.64	0.001374	0.016444
LOC100289015	0.64	0.00354	0.034317
TIMP1	0.64	0.001723	0.01957
RECQL5	0.64	0.001781	0.020052
MKNK1	0.64	0.003278	0.032433
LPCAT4	0.64	0.001296	0.015637
HIST1H2BK	0.64	0.00483	0.043556
YOD1	0.64	0.004546	0.041539
ANO9	0.64	0.002501	0.026168
CDK11A	0.64	0.004005	0.037735
HMOX1	0.63	0.003714	0.035626
CAMTA2	0.63	0.001935	0.021419
SEMA4D	0.63	0.002438	0.025591
C11ORF9	0.63	0.002634	0.027299
IRS2	0.63	0.003454	0.033655
DOCK8	0.63	0.003485	0.033904
OSBPL7	0.63	0.00237	0.025059
GOLGA8B	0.63	0.002156	0.023407
TEP1	0.63	0.002417	0.025421
SH3BGRL3	0.63	0.001883	0.020978
BHLHE40	0.62	0.001739	0.019659
LDHA	0.62	0.001502	0.017568
FBXO32	0.62	0.003603	0.03476
C12ORF35	0.62	0.002305	0.024486
CELSR2	0.62	0.004713	0.042818
MBOAT2	0.62	0.002579	0.026812
LRCH4	0.62	0.001706	0.019417
SLC16A3	0.62	0.001491	0.017504
CRIPAK	0.62	0.004544	0.041539
RAB24	0.62	0.003587	0.034686
TM4SF1	0.62	0.002363	0.024995
CEBPB	0.62	0.002782	0.028453
ATXN2L	0.62	0.001898	0.021108
C19ORF22	0.62	0.001964	0.021693

DGKD	0.62	0.00419	0.039126
KIAA1539	0.62	0.004537	0.041527
FNBP4	0.62	0.002702	0.027782
ARHGEF2	0.62	0.0033	0.032587
RAPGEFL1	0.62	0.002276	0.024341
MDM4	0.61	0.005184	0.045982
LRRC8A	0.61	0.002381	0.025136
PRSS8	0.61	0.002225	0.023945
SRRM2	0.61	0.001502	0.017568
ZC3H12A	0.61	0.003989	0.037648
TPM4	0.61	0.001731	0.019599
GK	0.61	0.003012	0.030301
ATP13A5	0.61	0.004481	0.041187
ZNF83	0.61	0.00461	0.042008
ZFP36L1	0.61	0.002326	0.024653
TLN1	0.61	0.002301	0.024471
CERK	0.60	0.005358	0.047133
AHSA2	0.60	0.003393	0.033202
CHD1	0.60	0.00534	0.047024
ARHGEF1	0.60	0.002627	0.027251
PLEKHH1	0.59	0.003659	0.035229
MICALL2	0.59	0.003103	0.031039
C17ORF28	0.59	0.003211	0.031956
GNA13	0.59	0.004678	0.04256
C10RF63	0.59	0.004837	0.043594
NDEL1	0.59	0.004776	0.043219
SLC24A6	0.59	0.004825	0.043538
EDEM1	0.59	0.004943	0.044189
KIFC3	0.59	0.005388	0.04729
ULK1	0.59	0.003754	0.03589
ALPL	0.59	0.003284	0.032476
MYO18A	0.59	0.003935	0.037255
ATG2A	0.58	0.004399	0.040644
PPP1R13L	0.58	0.005301	0.046832
NDOR1	0.58	0.004262	0.03966
MSN	0.58	0.004908	0.044096
TAF1C	0.58	0.003861	0.036645
LETM1	0.58	0.004311	0.039952
CYP2B7P1	0.58	0.004075	0.03821
HN1	0.58	0.004933	0.044179
PRIC285	0.57	0.004521	0.04141
EPHA2	0.57	0.004247	0.039591
MLL2	0.57	0.004422	0.040785
CCDC64B	0.57	0.003842	0.036555
PPP1R9B	0.57	0.005324	0.046968
MYH9	0.57	0.003253	0.032252
SEMA3F	0.57	0.004936	0.044182
STAT2	0.56	0.004451	0.041029
CHD2	0.56	0.00482	0.043538
BCL6	0.56	0.004347	0.040212

<i>CLTB</i>	0.56	0.004893	0.04402
<i>TMC6</i>	0.56	0.005441	0.047703
<i>CD55</i>	0.56	0.004078	0.038218
<i>TRPM4</i>	0.55	0.005275	0.046684
<i>CXCL16</i>	0.55	0.005465	0.047857
<i>TYK2</i>	0.55	0.005384	0.047278
<i>EPS8L2</i>	0.55	0.005218	0.046264
<i>ANPEP</i>	0.54	0.005474	0.047909
<i>DYNLL1</i>	-0.55	0.005303	0.046832
<i>ITGA3</i>	-0.55	0.005416	0.047505
<i>YWHAE</i>	-0.56	0.004002	0.03773
<i>MSMB</i>	-0.56	0.005674	0.049384
<i>DNAJA4</i>	-0.56	0.005129	0.045625
<i>LRP11</i>	-0.56	0.004546	0.041539
<i>AKAP9</i>	-0.56	0.004679	0.04256
<i>STEAP3</i>	-0.57	0.004687	0.04261
<i>PALLD</i>	-0.57	0.004591	0.041855
<i>LRBA</i>	-0.58	0.004957	0.044273
<i>C2ORF28</i>	-0.58	0.00491	0.044096
<i>CCDC69</i>	-0.58	0.003222	0.032039
<i>AZIN1</i>	-0.59	0.003354	0.032981
<i>MAPRE3</i>	-0.59	0.004515	0.041373
<i>SCPEP1</i>	-0.59	0.003111	0.031092
<i>EPCAM</i>	-0.59	0.003939	0.037255
<i>CES2</i>	-0.59	0.003252	0.032252
<i>C8ORF40</i>	-0.59	0.005296	0.046821
<i>CYB5D1</i>	-0.59	0.004287	0.0398
<i>AHSA1</i>	-0.59	0.003373	0.033124
<i>WDR34</i>	-0.59	0.002822	0.028814
<i>SYTL3</i>	-0.59	0.004945	0.044189
<i>DALRD3</i>	-0.60	0.004329	0.040089
<i>ZNF664</i>	-0.60	0.002768	0.028389
<i>MAPK15</i>	-0.60	0.003677	0.035382
<i>CLDN23</i>	-0.60	0.004019	0.037848
<i>TCTA</i>	-0.60	0.003734	0.035742
<i>SCGB1A1</i>	-0.60	0.002036	0.022271
<i>SSB</i>	-0.60	0.003194	0.031823
<i>VWA3A</i>	-0.60	0.0048	0.043385
<i>CDS1</i>	-0.60	0.002946	0.029825
<i>LRWD1</i>	-0.60	0.003326	0.032791
<i>DDAH1</i>	-0.60	0.004484	0.041187
<i>RAB36</i>	-0.60	0.005147	0.045743
<i>CCDC114</i>	-0.61	0.004264	0.03966
<i>MRPL40</i>	-0.61	0.004564	0.041662
<i>PEBP1</i>	-0.61	0.001801	0.020261
<i>CYBASC3</i>	-0.61	0.002727	0.028013
<i>SIX4</i>	-0.61	0.005566	0.048638
<i>TOMM34</i>	-0.61	0.002984	0.030078
<i>EFEMP1</i>	-0.61	0.002628	0.027251
<i>STRBP</i>	-0.61	0.002964	0.029966

<i>MCAT</i>	-0.61	0.005612	0.048928
<i>ZNF440</i>	-0.61	0.004033	0.037928
<i>NGRN</i>	-0.62	0.002016	0.022131
<i>ANK3</i>	-0.62	0.002541	0.026493
<i>LRIG3</i>	-0.62	0.003334	0.032842
<i>ST6GALNAC2</i>	-0.62	0.003454	0.033655
<i>IQCK</i>	-0.62	0.00332	0.032749
<i>CREBL2</i>	-0.62	0.003698	0.035525
<i>RFX2</i>	-0.62	0.003252	0.032252
<i>KIAA1908</i>	-0.62	0.005095	0.045346
<i>NUDC</i>	-0.62	0.001718	0.019523
<i>CCDC28A</i>	-0.63	0.003405	0.033271
<i>PARVA</i>	-0.63	0.002188	0.02366
<i>TMEM14B</i>	-0.63	0.002556	0.026627
<i>NBEA</i>	-0.63	0.002822	0.028814
<i>C3</i>	-0.63	0.002244	0.024068
<i>FAM174A</i>	-0.63	0.00229	0.024403
<i>BRP44</i>	-0.63	0.001901	0.02112
<i>C16ORF80</i>	-0.63	0.00339	0.033202
<i>BTBD3</i>	-0.64	0.00269	0.027733
<i>TTC18</i>	-0.64	0.004242	0.039563
<i>DYNC2LI1</i>	-0.64	0.003346	0.032928
<i>CALM2</i>	-0.64	0.001134	0.014156
<i>SLC25A4</i>	-0.64	0.00228	0.024351
<i>SEPP1</i>	-0.64	0.005325	0.046968
<i>EPHX1</i>	-0.64	0.000992	0.012761
<i>MKS1</i>	-0.64	0.002885	0.029317
<i>LOC400891</i>	-0.64	0.003053	0.030596
<i>C9ORF5</i>	-0.64	0.002057	0.022436
<i>DNAAF2</i>	-0.64	0.004762	0.043195
<i>TMEM98</i>	-0.65	0.002041	0.022301
<i>CCDC40</i>	-0.65	0.002396	0.025231
<i>MGC2752</i>	-0.65	0.002187	0.02366
<i>GFM2</i>	-0.65	0.001875	0.020935
<i>UBXN11</i>	-0.65	0.001402	0.016623
<i>LRIG1</i>	-0.65	0.001319	0.015864
<i>HMGN3</i>	-0.65	0.001244	0.015197
<i>KIF21A</i>	-0.65	0.00123	0.015062
<i>C7ORF63</i>	-0.65	0.003716	0.035626
<i>TCTN3</i>	-0.65	0.002054	0.022417
<i>KIF2A</i>	-0.65	0.001977	0.021824
<i>CD59</i>	-0.65	0.001002	0.012855
<i>AGBL2</i>	-0.65	0.003909	0.037054
<i>TRIM37</i>	-0.65	0.003696	0.035525
<i>CYP4B1</i>	-0.65	0.001274	0.015469
<i>IQCE</i>	-0.65	0.001509	0.017597
<i>TPPP</i>	-0.66	0.002538	0.026474
<i>ODF3B</i>	-0.66	0.001089	0.013705
<i>FDXR</i>	-0.66	0.001869	0.020876
<i>C10ORF57</i>	-0.66	0.002611	0.027127

<i>IFT27</i>	-0.66	0.00198	0.021836
<i>PRR7</i>	-0.66	0.003545	0.034348
<i>GBAS</i>	-0.66	0.001532	0.017762
<i>WRAP53</i>	-0.66	0.0022	0.023738
<i>SLC41A3</i>	-0.66	0.001878	0.02095
<i>IK</i>	-0.66	0.000788	0.010485
<i>C3ORF39</i>	-0.66	0.002839	0.028923
<i>CDC20B</i>	-0.66	0.005679	0.049402
<i>C11ORF92</i>	-0.66	0.001468	0.017291
<i>TMEM68</i>	-0.67	0.00458	0.041778
<i>SMYD3</i>	-0.67	0.004271	0.03967
<i>DYNLT1</i>	-0.67	0.000764	0.010225
<i>DTX3</i>	-0.67	0.003737	0.035742
<i>RABL2B</i>	-0.67	0.001262	0.015357
<i>RBP1</i>	-0.67	0.001535	0.017774
<i>SAMHD1</i>	-0.67	0.000973	0.012555
<i>FARS2</i>	-0.67	0.004922	0.044131
<i>C14ORF135</i>	-0.67	0.002912	0.029537
<i>CNTRL</i>	-0.68	0.002639	0.027331
<i>DMD</i>	-0.68	0.002899	0.029428
<i>PDE8B</i>	-0.68	0.003833	0.036509
<i>KIAA1737</i>	-0.68	0.000965	0.012479
<i>WDR19</i>	-0.68	0.001545	0.017885
<i>UFC1</i>	-0.68	0.000659	0.009036
<i>C6ORF108</i>	-0.68	0.001293	0.015625
<i>TTC16</i>	-0.69	0.003791	0.036174
<i>ANKRD54</i>	-0.69	0.000872	0.011427
<i>KBTBD4</i>	-0.69	0.003819	0.036414
<i>KIF3B</i>	-0.69	0.000763	0.010225
<i>CD24</i>	-0.69	0.000582	0.008203
<i>FRMPD2</i>	-0.69	0.003288	0.032498
<i>ZDHHC1</i>	-0.69	0.001181	0.014616
<i>GCLC</i>	-0.69	0.000432	0.006378
<i>CALML4</i>	-0.69	0.000867	0.011392
<i>APOO</i>	-0.69	0.001632	0.018733
<i>MDM1</i>	-0.69	0.002238	0.024031
<i>TEKT4</i>	-0.70	0.003487	0.033904
<i>HSPBP1</i>	-0.70	0.00064	0.008871
<i>RABL2A</i>	-0.70	0.001349	0.016157
<i>C9ORF68</i>	-0.70	0.00412	0.03852
<i>CYP2A13</i>	-0.70	0.000716	0.009686
<i>BCL7A</i>	-0.70	0.002241	0.024042
<i>TTC27</i>	-0.70	0.004461	0.041095
<i>NEK1</i>	-0.70	0.002984	0.030078
<i>LXN</i>	-0.70	0.001913	0.021237
<i>YEATS4</i>	-0.70	0.005599	0.048872
<i>GRIN3B</i>	-0.70	0.001766	0.019931
<i>AGPAT5</i>	-0.70	0.003847	0.036555
<i>PCM1</i>	-0.70	0.000551	0.007847
<i>IFT140</i>	-0.70	0.000818	0.010804

<i>KCTD1</i>	-0.70	0.001091	0.013712
<i>FTO</i>	-0.70	0.001102	0.013826
<i>NEURL3</i>	-0.70	0.001734	0.01962
<i>TTC8</i>	-0.70	0.002183	0.023648
<i>LRRC71</i>	-0.70	0.001603	0.018462
<i>C11ORF49</i>	-0.70	0.001016	0.012979
<i>FBLN5</i>	-0.70	0.002942	0.029807
<i>IGSF10</i>	-0.71	0.003228	0.032086
<i>IFT172</i>	-0.71	0.000705	0.009552
<i>CCDC104</i>	-0.71	0.000817	0.010804
<i>CSPP1</i>	-0.71	0.001098	0.013794
<i>C6ORF27</i>	-0.71	0.001067	0.013457
<i>GPC4</i>	-0.71	0.003398	0.033231
<i>CHCHD6</i>	-0.71	0.002035	0.022271
<i>SESN1</i>	-0.71	0.001275	0.015469
<i>SLC41A1</i>	-0.71	0.001251	0.015249
<i>TRIM32</i>	-0.71	0.00267	0.027576
<i>FLJ90757</i>	-0.71	0.00104	0.013204
<i>UGDH</i>	-0.71	0.000566	0.008031
<i>FUZ</i>	-0.71	0.001495	0.017522
<i>KIFAP3</i>	-0.72	0.001306	0.015732
<i>ARHGAP44</i>	-0.72	0.002473	0.025905
<i>NAT14</i>	-0.72	0.001528	0.017741
<i>TUBA1A</i>	-0.72	0.000364	0.005556
<i>TSPAN6</i>	-0.72	0.00029	0.004587
<i>ADSSL1</i>	-0.72	0.001439	0.017003
<i>BPIFB2</i>	-0.72	0.004056	0.038104
<i>KLHL6</i>	-0.72	0.000769	0.010289
<i>TEKT2</i>	-0.72	0.000741	0.009982
<i>TMEM14A</i>	-0.72	0.001381	0.016457
<i>KIF3A</i>	-0.72	0.001613	0.018555
<i>C3ORF15</i>	-0.72	0.001232	0.01508
<i>DNAH12</i>	-0.73	0.000987	0.01272
<i>DNAJB4</i>	-0.73	0.004776	0.043219
<i>BBS4</i>	-0.73	0.00103	0.01311
<i>SPATA7</i>	-0.73	0.005331	0.046998
<i>GALM</i>	-0.73	0.001172	0.014554
<i>PKIB</i>	-0.73	0.001387	0.0165
<i>MUCL1</i>	-0.73	0.002983	0.030078
<i>CD164L2</i>	-0.73	0.000842	0.011085
<i>MIPOL1</i>	-0.73	0.003393	0.033202
<i>TSGA10</i>	-0.73	0.001173	0.014554
<i>SRCIN1</i>	-0.73	0.002663	0.027548
<i>IFT43</i>	-0.73	0.000821	0.010828
<i>LRRC6</i>	-0.73	0.002037	0.022271
<i>VSTM2L</i>	-0.73	0.001198	0.014752
<i>BCAS3</i>	-0.74	0.000691	0.009401
<i>C4ORF47</i>	-0.74	0.005456	0.047804
<i>C12ORF74</i>	-0.74	0.004473	0.041163
<i>WRB</i>	-0.74	0.000686	0.009338

<i>TUB</i>	-0.74	0.001603	0.018462
<i>PRRT3</i>	-0.74	0.000573	0.008111
<i>ACAT1</i>	-0.74	0.001022	0.013049
<i>CCDC80</i>	-0.74	0.000204	0.003388
<i>TPRXL</i>	-0.74	0.001888	0.021019
<i>TNNC1</i>	-0.74	0.004783	0.043253
<i>FAM179B</i>	-0.74	0.000788	0.010485
<i>LOC730101</i>	-0.74	0.00145	0.017105
<i>FBXW9</i>	-0.74	0.000404	0.006004
<i>C1ORF110</i>	-0.75	0.000438	0.00645
<i>FAM164A</i>	-0.75	0.001454	0.017144
<i>GPR125</i>	-0.75	0.000854	0.01124
<i>C18ORF10</i>	-0.75	0.000281	0.004465
<i>CLU</i>	-0.75	0.000166	0.002878
<i>DMRT2</i>	-0.75	0.00162	0.018624
<i>PACRGL</i>	-0.75	0.00153	0.017742
<i>FAIM</i>	-0.75	0.001919	0.021282
<i>SSPN</i>	-0.75	0.004164	0.038907
<i>HIBADH</i>	-0.75	0.000446	0.006561
<i>PCSK1N</i>	-0.75	0.004915	0.044096
<i>KIAA1377</i>	-0.75	0.001103	0.013826
<i>CCDC17</i>	-0.76	0.000255	0.004117
<i>ZSCAN18</i>	-0.76	0.000414	0.006121
<i>ULK4</i>	-0.76	0.002446	0.025658
<i>TMEM150C</i>	-0.76	0.001245	0.015201
<i>SPAG17</i>	-0.76	0.000803	0.010648
<i>DNAL4</i>	-0.76	0.000394	0.005891
<i>SPATA6</i>	-0.76	0.0006	0.008439
<i>C16ORF46</i>	-0.76	0.003905	0.037035
<i>CLMN</i>	-0.76	0.000227	0.003709
<i>DIXDC1</i>	-0.76	0.001473	0.017326
<i>FAM149A</i>	-0.76	0.001177	0.014578
<i>TSGA14</i>	-0.77	0.002728	0.028013
<i>PSENEN</i>	-0.77	0.000146	0.002604
<i>IFT52</i>	-0.77	0.000389	0.005836
<i>EFHC1</i>	-0.77	0.000208	0.003436
<i>CCDC108</i>	-0.77	0.000351	0.005366
<i>STX2</i>	-0.77	0.001964	0.021693
<i>LRGUK</i>	-0.77	0.00278	0.028453
<i>HAGHL</i>	-0.78	0.000321	0.004986
<i>MYB</i>	-0.78	0.00054	0.007716
<i>CLCN4</i>	-0.78	0.004267	0.03966
<i>MAPK8IP1</i>	-0.78	0.000211	0.003465
<i>IFT88</i>	-0.78	0.000581	0.008194
<i>C1ORF201</i>	-0.78	0.000647	0.008951
<i>TP73</i>	-0.78	0.000347	0.005324
<i>WDR49</i>	-0.78	0.001835	0.020541
<i>TMEM37</i>	-0.78	0.00072	0.009719
<i>CSMD1</i>	-0.78	0.004849	0.043677
<i>C21ORF59</i>	-0.78	0.000128	0.002351

<i>TNFRSF19</i>	-0.78	0.000314	0.004892
<i>CAPS2</i>	-0.78	0.002672	0.027583
<i>CAP2</i>	-0.79	0.002349	0.024885
<i>WDR93</i>	-0.79	0.002557	0.026627
<i>ECI2</i>	-0.79	0.004548	0.041539
<i>PPOX</i>	-0.79	0.000166	0.002887
<i>BTC</i>	-0.79	0.00508	0.045238
<i>ARHGAP18</i>	-0.79	0.000146	0.002604
<i>CCDC146</i>	-0.79	0.000169	0.002925
<i>FOLR1</i>	-0.79	0.002506	0.026197
<i>TRAF3IP1</i>	-0.79	0.000156	0.002737
<i>C18ORF1</i>	-0.79	0.00065	0.008974
<i>HEPACAM2</i>	-0.79	0.002695	0.027749
<i>PRSS12</i>	-0.79	0.000177	0.003019
<i>ALMS1</i>	-0.79	0.000675	0.009208
<i>TTC12</i>	-0.79	0.000194	0.003244
<i>SDK1</i>	-0.79	0.000332	0.005122
<i>INHBB</i>	-0.79	0.001	0.01283
<i>FAM104B</i>	-0.79	0.001285	0.015544
<i>RAMP1</i>	-0.79	0.001186	0.014653
<i>DPY30</i>	-0.80	0.000166	0.002878
<i>BPIFA1</i>	-0.80	0.000139	0.002503
<i>LOC344595</i>	-0.80	0.001828	0.020497
<i>NQO1</i>	-0.80	4.68E-05	0.001027
<i>ACYP2</i>	-0.80	0.002775	0.02844
<i>ZNF627</i>	-0.80	0.001312	0.015791
<i>USP2</i>	-0.80	0.000328	0.005089
<i>PTPLAD2</i>	-0.80	0.001003	0.012856
<i>CCDC135</i>	-0.80	0.000447	0.006571
<i>ABHD12B</i>	-0.80	0.00056	0.007974
<i>TRIP13</i>	-0.80	0.001379	0.016457
<i>MB</i>	-0.80	0.000303	0.00475
<i>FANK1</i>	-0.80	0.000188	0.003165
<i>DGCR6</i>	-0.80	0.00011	0.002095
<i>MIPEP</i>	-0.81	0.000148	0.002622
<i>PTPRT</i>	-0.81	0.001882	0.020977
<i>FAM179A</i>	-0.81	0.000279	0.004445
<i>PAIP2B</i>	-0.81	0.001404	0.016639
<i>IFT74</i>	-0.81	0.000382	0.005765
<i>SPINLW1</i>	-0.81	0.000828	0.010919
<i>MPDZ</i>	-0.81	0.001653	0.018931
<i>SLC2A12</i>	-0.81	0.000605	0.00849
<i>FAM161B</i>	-0.81	0.002879	0.029281
<i>PCDH7</i>	-0.81	0.000306	0.004802
<i>C2ORF55</i>	-0.82	0.000113	0.002122
<i>ALS2CR12</i>	-0.82	0.003417	0.033368
<i>C19ORF51</i>	-0.82	0.000141	0.00253
<i>HEY1</i>	-0.82	0.000231	0.003768
<i>LY6H</i>	-0.82	0.001922	0.021303
<i>EDA</i>	-0.82	0.001346	0.016153

<i>CCDC13</i>	-0.82	0.000632	0.008768
<i>DCDC2B</i>	-0.82	0.000171	0.00294
<i>SNCAIP</i>	-0.82	0.002179	0.023619
<i>DNAH11</i>	-0.82	0.000278	0.004434
<i>DNAAF1</i>	-0.82	0.000127	0.002334
<i>ANKRD45</i>	-0.82	0.000352	0.00538
<i>CNGA4</i>	-0.82	0.001679	0.019168
<i>TMCC2</i>	-0.82	0.000476	0.006951
<i>DZIP3</i>	-0.82	0.000138	0.002494
<i>FAM107A</i>	-0.82	0.000117	0.002177
<i>SLC13A3</i>	-0.83	0.000379	0.005741
<i>C3ORF25</i>	-0.83	0.000259	0.004163
<i>AGR3</i>	-0.83	0.00028	0.004451
<i>STK32C</i>	-0.83	0.004865	0.043797
<i>SGCB</i>	-0.83	0.001295	0.015637
<i>GPR98</i>	-0.83	0.00075	0.010083
<i>IFT81</i>	-0.83	0.000207	0.003427
<i>KIF24</i>	-0.83	0.000542	0.007735
<i>TSNAXIP1</i>	-0.83	0.000155	0.002724
<i>RUVBL2</i>	-0.83	3.27E-05	0.000764
<i>PFN2</i>	-0.83	3.41E-05	0.000789
<i>FAM164C</i>	-0.83	0.002123	0.023083
<i>C22ORF15</i>	-0.83	0.000779	0.010396
<i>EFCAB2</i>	-0.84	0.000213	0.003496
<i>TMEM107</i>	-0.84	0.000351	0.005369
<i>WDR96</i>	-0.84	0.000181	0.003085
<i>MORN1</i>	-0.84	0.000255	0.004115
<i>APCDD1</i>	-0.84	0.000512	0.007379
<i>TCTN2</i>	-0.84	8.34E-05	0.001651
<i>RIBC2</i>	-0.84	0.000665	0.009089
<i>GLB1L</i>	-0.84	9.12E-05	0.001773
<i>SYNE1</i>	-0.84	0.000115	0.002149
<i>CLDN3</i>	-0.85	6.45E-05	0.001328
<i>MAP1B</i>	-0.85	0.001697	0.019359
<i>C11ORF1</i>	-0.85	0.0014	0.016622
<i>TXNDC6</i>	-0.85	0.000544	0.007762
<i>ZNF396</i>	-0.85	0.002206	0.023782
<i>PLA1A</i>	-0.85	0.005519	0.048274
<i>LARP6</i>	-0.85	0.001416	0.01677
<i>CCDC30</i>	-0.85	0.00239	0.025199
<i>TMPRSS3</i>	-0.85	0.000118	0.002199
<i>TMEM213</i>	-0.85	0.000206	0.00342
<i>SPEF2</i>	-0.85	0.000148	0.002615
<i>SLC27A2</i>	-0.86	3.74E-05	0.000854
<i>GMPR</i>	-0.86	0.000249	0.004029
<i>SCGB2A1</i>	-0.86	0.00017	0.00293
<i>SAMD15</i>	-0.86	0.001524	0.017734
<i>LRRC43</i>	-0.86	0.000349	0.005339
<i>CXCL9</i>	-0.86	0.0019	0.02112
<i>MDH1B</i>	-0.86	0.000223	0.003666

CCDC34	-0.86	0.001392	0.016536
KLHDC9	-0.86	0.000284	0.004502
AP2B1	-0.86	2.5E-05	0.000611
TTLL1	-0.86	0.000782	0.010425
SELP	-0.86	0.004072	0.038202
CCDC39	-0.86	0.00017	0.00293
MAP9	-0.87	0.000175	0.003007
GLB1L2	-0.87	5.51E-05	0.00117
DNAH2	-0.87	6.82E-05	0.001387
CCDC153	-0.87	0.000138	0.002494
CCDC121	-0.87	0.005036	0.044897
LOC100506990	-0.87	0.000117	0.002186
CCDC74B	-0.87	0.000115	0.002149
ANKRD37	-0.87	0.000564	0.008015
FHAD1	-0.87	5.73E-05	0.00121
CLCNKB	-0.87	0.004915	0.044096
ATXN7L1	-0.87	0.000151	0.002663
HHAT	-0.87	0.000306	0.004802
C9ORF103	-0.87	0.001026	0.013076
PHGDH	-0.87	0.000246	0.003982
GAS2L2	-0.87	5.36E-05	0.001145
ANKRD42	-0.88	0.000115	0.002149
ADPRHL1	-0.88	0.000517	0.007438
CBY1	-0.88	5.37E-05	0.001146
B9D2	-0.88	9.12E-05	0.001773
LOC730091	-0.88	0.003847	0.036555
SPAG16	-0.88	4.3E-05	0.000959
DMRT3	-0.88	0.003462	0.033708
CCDC148	-0.88	0.004267	0.03966
LOC100505881	-0.89	0.001348	0.016157
GPR162	-0.89	5.35E-05	0.001144
DNAH10	-0.89	6.03E-05	0.001263
SLC22A4	-0.89	2.6E-05	0.00063
WDR35	-0.89	7.29E-05	0.001468
DNAH6	-0.89	5.45E-05	0.00116
FLJ23152	-0.89	0.000869	0.011408
CDHR3	-0.89	3.69E-05	0.000843
LRRC61	-0.89	3.4E-05	0.000789
LEKR1	-0.89	0.002676	0.027607
CLDN16	-0.89	0.001825	0.020494
KIAA1211	-0.90	0.000319	0.004971
FGGY	-0.90	0.000572	0.008094
SLC4A8	-0.90	0.000191	0.003199
DSCAML1	-0.90	0.001024	0.013057
SQLE	-0.90	4.54E-05	0.000997
CCDC74A	-0.90	3.1E-05	0.000731
BBS9	-0.90	0.000185	0.003123
WDR63	-0.90	0.000175	0.003004
FAM47E	-0.90	0.000652	0.008991
C1ORF129	-0.90	0.003636	0.035044

<i>RFX3</i>	-0.90	0.000147	0.00261
<i>C10ORF67</i>	-0.90	0.002269	0.024277
<i>ZNF214</i>	-0.90	0.002411	0.02537
<i>DCDC2</i>	-0.90	0.005337	0.047024
<i>DRD2</i>	-0.90	0.001007	0.012894
<i>KIF9</i>	-0.90	4.54E-05	0.000997
<i>SNX29</i>	-0.90	3.97E-05	0.000898
<i>C8ORF37</i>	-0.90	0.002993	0.030149
<i>CACNG6</i>	-0.91	0.000155	0.002714
<i>ARL3</i>	-0.91	1.36E-05	0.000361
<i>CCDC138</i>	-0.91	0.000608	0.008518
<i>WDR31</i>	-0.91	0.00092	0.011952
<i>C17ORF72</i>	-0.91	2.43E-05	0.000595
<i>STK33</i>	-0.91	6.16E-05	0.001282
<i>TCTN1</i>	-0.91	3.66E-05	0.000839
<i>C15ORF26</i>	-0.91	0.000282	0.004471
<i>OXTR</i>	-0.91	0.000225	0.003683
<i>ADH7</i>	-0.91	3.74E-06	0.000122
<i>C2ORF40</i>	-0.91	0.000119	0.002207
<i>UNC119B</i>	-0.91	1.08E-05	0.0003
<i>TMEM67</i>	-0.91	3.02E-05	0.000714
<i>KNDC1</i>	-0.91	4.5E-05	0.000992
<i>LOC100131176</i>	-0.91	0.000126	0.002326
<i>DYRK3</i>	-0.91	0.003367	0.033089
<i>C11ORF74</i>	-0.91	0.000233	0.003788
<i>LRRC36</i>	-0.92	0.0009	0.011741
<i>DTHD1</i>	-0.92	4.19E-05	0.000935
<i>NEK5</i>	-0.92	0.000347	0.005326
<i>DNAH3</i>	-0.92	2.73E-05	0.000659
<i>TSPAN11</i>	-0.92	0.00228	0.024351
<i>CCDC147</i>	-0.92	0.000132	0.002417
<i>C14ORF142</i>	-0.92	4.82E-05	0.001053
<i>FSD1L</i>	-0.92	0.000409	0.006066
<i>LOC257396</i>	-0.92	0.003564	0.034483
<i>LOC100506668</i>	-0.92	5.99E-05	0.001256
<i>GLIS3</i>	-0.92	6.61E-05	0.001352
<i>CCDC78</i>	-0.92	1.14E-05	0.000314
<i>C20ORF96</i>	-0.93	2.53E-05	0.000618
<i>KCNE1</i>	-0.93	4.15E-05	0.000933
<i>PLTP</i>	-0.93	6.31E-06	0.000194
<i>ABHD14A</i>	-0.93	0.001061	0.013397
<i>DUSP19</i>	-0.93	0.002013	0.022114
<i>BBS12</i>	-0.93	0.000449	0.006595
<i>RUVBL1</i>	-0.93	1.04E-05	0.000294
<i>C17ORF97</i>	-0.93	4.35E-05	0.000965
<i>ACSBG1</i>	-0.93	0.000407	0.006034
<i>PRDX5</i>	-0.93	2.14E-06	7.58E-05
<i>LCA5</i>	-0.93	8.34E-05	0.001651
<i>PSPH</i>	-0.94	0.000445	0.006545
<i>CHP2</i>	-0.94	5.34E-05	0.001144

<i>RAB3B</i>	-0.94	0.000169	0.002921
<i>PDE7B</i>	-0.94	0.003155	0.031478
<i>NUCB2</i>	-0.94	5.54E-06	0.000173
<i>MMP10</i>	-0.94	1.11E-05	0.000307
<i>CCDC89</i>	-0.94	0.000174	0.002993
<i>SVEP1</i>	-0.94	4.5E-05	0.000993
<i>PDE6B</i>	-0.94	0.000134	0.002438
<i>METTL7A</i>	-0.94	4.55E-06	0.000145
<i>CH25H</i>	-0.94	0.005355	0.047133
<i>TUSC3</i>	-0.94	9.91E-06	0.000282
<i>CYP2U1</i>	-0.94	0.000481	0.007014
<i>C11ORF63</i>	-0.95	0.000159	0.002777
<i>RABL5</i>	-0.95	9.8E-06	0.000279
<i>GRM7</i>	-0.95	0.004774	0.043219
<i>PROC</i>	-0.95	0.001207	0.014821
<i>DYDC1</i>	-0.95	0.002036	0.022271
<i>PZP</i>	-0.95	6.45E-05	0.001328
<i>C1ORF168</i>	-0.95	0.001928	0.021355
<i>C6ORF103</i>	-0.95	5.6E-05	0.001184
<i>HYDIN</i>	-0.95	1.84E-05	0.00047
<i>DNAL1</i>	-0.95	1.11E-05	0.000307
<i>THSD4</i>	-0.95	0.000385	0.005793
<i>ABCD2</i>	-0.95	0.002695	0.027749
<i>CYP24A1</i>	-0.95	0.000158	0.002772
<i>CTXN1</i>	-0.95	1.45E-05	0.000381
<i>ARL6</i>	-0.96	0.001277	0.015469
<i>LAMC2</i>	-0.96	2.63E-06	9.03E-05
<i>RND2</i>	-0.96	0.000226	0.0037
<i>C20ORF26</i>	-0.96	0.000127	0.002334
<i>TUBB2C</i>	-0.96	1.54E-06	5.75E-05
<i>DPCD</i>	-0.96	1.08E-05	0.000301
<i>APBB1</i>	-0.96	1.53E-05	0.0004
<i>C14ORF37</i>	-0.96	0.001431	0.016918
<i>C7ORF57</i>	-0.97	2.8E-05	0.00067
<i>DNAI2</i>	-0.97	1.06E-05	0.000297
<i>RBKS</i>	-0.97	0.000132	0.002417
<i>LOC646903</i>	-0.97	0.000793	0.010534
<i>FHOD3</i>	-0.97	0.003375	0.033124
<i>MACROD2</i>	-0.97	0.000291	0.004592
<i>CDC14A</i>	-0.97	2.45E-05	0.000601
<i>C2ORF77</i>	-0.97	6.56E-05	0.001348
<i>ARMC2</i>	-0.97	2.84E-05	0.000678
<i>WFDC6</i>	-0.97	5.98E-05	0.001256
<i>NPHP1</i>	-0.97	1.35E-05	0.000361
<i>EPDR1</i>	-0.97	0.000136	0.002459
<i>C1ORF114</i>	-0.97	0.000119	0.002207
<i>LRRC46</i>	-0.97	6.7E-06	0.000204
<i>C10ORF95</i>	-0.97	1.17E-05	0.000319
<i>PTPRN2</i>	-0.98	5.28E-06	0.000166
<i>LRRC49</i>	-0.98	7.25E-05	0.001464

<i>OSBPL6</i>	-0.98	4.33E-05	0.000963
<i>C8ORF47</i>	-0.98	1.38E-05	0.000367
<i>COL28A1</i>	-0.98	0.000183	0.003102
<i>LOC729013</i>	-0.98	1.39E-05	0.000368
<i>CCDC96</i>	-0.98	9.73E-06	0.000277
<i>DYNC2H1</i>	-0.98	1.16E-05	0.000317
<i>RBM24</i>	-0.98	0.00021	0.003464
<i>GBP6</i>	-0.98	1.35E-05	0.000361
<i>GIPC2</i>	-0.98	0.002009	0.022081
<i>MS4A8B</i>	-0.98	1.44E-05	0.000381
<i>GRM5</i>	-0.98	0.004068	0.03819
<i>MAP1A</i>	-0.98	9.55E-06	0.000273
<i>TMEM190</i>	-0.99	5.1E-06	0.000161
<i>RGS22</i>	-0.99	8.89E-05	0.001738
<i>LCA5L</i>	-0.99	0.000182	0.003091
<i>C11ORF16</i>	-0.99	7.36E-06	0.000221
<i>LRP2BP</i>	-0.99	9.83E-05	0.001892
<i>C2ORF62</i>	-0.99	1.3E-05	0.00035
<i>C2ORF81</i>	-0.99	8.34E-06	0.000246
<i>COL21A1</i>	-0.99	6.11E-05	0.001272
<i>SMYD2</i>	-0.99	3.97E-06	0.000128
<i>TMEM212</i>	-0.99	0.000138	0.002493
<i>LPAR3</i>	-0.99	0.000339	0.005226
<i>GSTA3</i>	-0.99	0.00023	0.00375
<i>WDR66</i>	-0.99	3.68E-06	0.00012
<i>CDKL1</i>	-0.99	0.000182	0.003091
<i>LOC390940</i>	-0.99	0.000376	0.005704
<i>CCDC42B</i>	-1.00	3.22E-06	0.000107
<i>HLF</i>	-1.00	8.23E-06	0.000244
<i>IFLTD1</i>	-1.00	0.000748	0.010066
<i>C1ORF141</i>	-1.00	0.005148	0.045743
<i>EFCAB10</i>	-1.00	0.000319	0.004971
<i>FAM154B</i>	-1.00	3.64E-06	0.000119
<i>CCDC60</i>	-1.00	2.02E-05	0.000511
<i>RNF150</i>	-1.00	0.00163	0.018723
<i>MUC15</i>	-1.00	3.91E-06	0.000126
<i>LRRC67</i>	-1.00	0.000778	0.010393
<i>TSPAN19</i>	-1.00	2.74E-05	0.00066
<i>CWH43</i>	-1.01	5.52E-05	0.00117
<i>MARCH10</i>	-1.01	0.000152	0.002682
<i>PAMR1</i>	-1.02	0.002224	0.023945
<i>TCTE1</i>	-1.02	1.88E-05	0.000478
<i>GJB7</i>	-1.02	0.003592	0.034714
<i>ZBBX</i>	-1.02	7.61E-06	0.000228
<i>ATP6V0A4</i>	-1.02	2.43E-06	8.44E-05
<i>ADH6</i>	-1.02	0.000203	0.003377
<i>AQP4</i>	-1.02	0.001594	0.018376
<i>TXLNB</i>	-1.02	0.000293	0.004616
<i>C9ORF9</i>	-1.02	1.57E-05	0.000407
<i>C5ORF4</i>	-1.02	1.87E-05	0.000477

<i>LZTFL1</i>	-1.02	2.12E-06	7.54E-05
<i>IQCA1</i>	-1.02	2.07E-05	0.000518
<i>UCKL1-AS1</i>	-1.02	8.83E-06	0.000257
<i>TAGLN3</i>	-1.03	0.001524	0.017734
<i>PLCH1</i>	-1.03	9.99E-06	0.000283
<i>C3ORF67</i>	-1.03	3.21E-05	0.000752
<i>SPATA18</i>	-1.03	1.51E-06	5.66E-05
<i>LRRC18</i>	-1.03	7.08E-05	0.001433
<i>EFCAB6</i>	-1.03	1.96E-05	0.000496
<i>PNLDC1</i>	-1.03	0.004768	0.043215
<i>IQUB</i>	-1.04	4.16E-05	0.000933
<i>FMO3</i>	-1.04	2.8E-07	1.31E-05
<i>NCRNA00271</i>	-1.04	0.005224	0.046272
<i>CES1P1</i>	-1.04	0.004931	0.044179
<i>CLUAP1</i>	-1.04	2.22E-06	7.8E-05
<i>APOD</i>	-1.04	8.26E-07	3.31E-05
<i>SHANK2</i>	-1.04	1.51E-05	0.000395
<i>PIH1D2</i>	-1.04	2.15E-05	0.000535
<i>ABCB11</i>	-1.04	2.18E-05	0.000541
<i>TEX9</i>	-1.04	3.99E-05	0.0009
<i>DNAJB13</i>	-1.04	6.27E-06	0.000193
<i>C13ORF26</i>	-1.04	3.94E-05	0.000893
<i>CXCR7</i>	-1.04	0.000436	0.006426
<i>ENPP3</i>	-1.05	6.25E-05	0.001295
<i>PCYT1B</i>	-1.05	9.52E-05	0.001841
<i>TTC25</i>	-1.05	2.64E-06	9.03E-05
<i>USP51</i>	-1.05	0.000202	0.00336
<i>FAM175A</i>	-1.05	0.000181	0.003082
<i>PALMD</i>	-1.05	1.47E-05	0.000386
<i>SLC47A2</i>	-1.05	0.00211	0.022974
<i>LRRC48</i>	-1.05	8.02E-07	3.24E-05
<i>RSPH1</i>	-1.06	8.16E-07	3.28E-05
<i>RIBC1</i>	-1.06	2.87E-06	9.73E-05
<i>DNAH5</i>	-1.06	1.13E-06	4.38E-05
<i>BTG4</i>	-1.06	0.001562	0.018057
<i>PRR18</i>	-1.06	5.4E-05	0.00115
<i>XK</i>	-1.06	0.001059	0.013379
<i>WDR16</i>	-1.06	3.06E-06	0.000103
<i>LRTOMT</i>	-1.06	2.03E-06	7.28E-05
<i>DNAH7</i>	-1.06	2.22E-06	7.8E-05
<i>RP1</i>	-1.06	9.18E-05	0.001782
<i>C2ORF50</i>	-1.06	0.000999	0.01283
<i>ARHGEF26-AS</i>	-1.06	0.002322	0.02463
<i>CRISPLD1</i>	-1.06	0.000134	0.002443
<i>C6ORF154</i>	-1.07	6.75E-06	0.000205
<i>GNA14</i>	-1.07	3.2E-06	0.000107
<i>BNIP3</i>	-1.07	2.07E-05	0.000519
<i>LOC284276</i>	-1.07	0.001251	0.015249
<i>CEP112</i>	-1.07	0.000195	0.003257
<i>CLDN8</i>	-1.07	0.000169	0.002918

<i>PLEKHB1</i>	-1.07	3.12E-06	0.000105
<i>CETN2</i>	-1.07	3.79E-07	1.7E-05
<i>FN1</i>	-1.07	7.09E-05	0.001434
<i>CTGF</i>	-1.07	3.99E-07	1.79E-05
<i>IQCD</i>	-1.07	1.9E-06	6.88E-05
<i>LRRC34</i>	-1.07	9.07E-06	0.000263
<i>EFCAB1</i>	-1.07	6.22E-07	2.64E-05
<i>PRUNE2</i>	-1.07	1.7E-05	0.000436
<i>SPARCL1</i>	-1.07	4.99E-07	2.19E-05
<i>FBXO36</i>	-1.07	3.14E-06	0.000105
<i>HS3ST6</i>	-1.07	0.000122	0.002258
<i>TTC5</i>	-1.08	2.64E-05	0.000641
<i>GSTA1</i>	-1.08	7.67E-08	4.33E-06
<i>RRAD</i>	-1.08	2.15E-07	1.04E-05
<i>CMBL</i>	-1.08	1.03E-05	0.000292
<i>REM1</i>	-1.08	0.000506	0.007324
<i>MNS1</i>	-1.08	2.14E-06	7.58E-05
<i>CD38</i>	-1.08	3E-05	0.000709
<i>C2ORF65</i>	-1.08	0.000275	0.004394
<i>CCDC19</i>	-1.08	4.38E-07	1.96E-05
<i>KCNRG</i>	-1.08	1.31E-05	0.000353
<i>CHST9</i>	-1.09	1.92E-07	9.53E-06
<i>SPATA4</i>	-1.09	0.000256	0.004124
<i>C14ORF45</i>	-1.09	7.2E-07	2.95E-05
<i>DIAPH2</i>	-1.09	9.39E-06	0.00027
<i>CCDC113</i>	-1.09	6.91E-07	2.85E-05
<i>ENO4</i>	-1.09	3.75E-05	0.000854
<i>SRD5A2</i>	-1.09	1.73E-05	0.000441
<i>C9ORF171</i>	-1.09	5.4E-06	0.00017
<i>M1</i>	-1.09	0.002302	0.024472
<i>AK8</i>	-1.09	2.99E-06	0.000101
<i>TTC26</i>	-1.09	3.5E-06	0.000115
<i>CTNNAL1</i>	-1.09	5.44E-07	2.34E-05
<i>ERBB4</i>	-1.09	5.68E-06	0.000176
<i>IFT57</i>	-1.09	1.67E-07	8.5E-06
<i>RIIAD1</i>	-1.10	0.000223	0.00366
<i>ENPP5</i>	-1.10	9.71E-07	3.8E-05
<i>LOC100506844</i>	-1.10	3.07E-05	0.000725
<i>TMEM151B</i>	-1.10	4.32E-05	0.000962
<i>TUBA4B</i>	-1.10	3.69E-07	1.67E-05
<i>EML1</i>	-1.10	3.32E-06	0.00011
<i>C2ORF73</i>	-1.10	0.000195	0.003262
<i>C11ORF70</i>	-1.10	2.16E-06	7.62E-05
<i>DNER</i>	-1.10	3.5E-06	0.000115
<i>ZMYND12</i>	-1.10	6.25E-05	0.001295
<i>KIF19</i>	-1.10	3.74E-07	1.68E-05
<i>EFNB3</i>	-1.10	7.97E-06	0.000237
<i>IFT46</i>	-1.11	2.38E-07	1.14E-05
<i>CASC2</i>	-1.11	5.78E-05	0.001218
<i>ANKFN1</i>	-1.11	0.000308	0.004826

<i>C14ORF132</i>	-1.11	0.000102	0.001959
<i>NCRNA00094</i>	-1.11	6.34E-07	2.67E-05
<i>TCTEX1D2</i>	-1.11	2.4E-06	8.35E-05
<i>TCTEX1D4</i>	-1.11	5.3E-07	2.31E-05
<i>DNALI1</i>	-1.11	1.69E-07	8.56E-06
<i>LOC201651</i>	-1.11	0.000658	0.009031
<i>DMBT1</i>	-1.11	0.000112	0.002114
<i>CRIP1</i>	-1.11	4.53E-08	2.74E-06
<i>LRRIQ1</i>	-1.11	8.88E-07	3.52E-05
<i>DYDC2</i>	-1.11	2.11E-06	7.53E-05
<i>TMEM231</i>	-1.12	1.26E-07	6.66E-06
<i>RAB6B</i>	-1.12	5.06E-05	0.001095
<i>PCDH19</i>	-1.12	2.54E-05	0.000618
<i>NCALD</i>	-1.12	1.32E-06	5E-05
<i>WDR65</i>	-1.12	8.32E-06	0.000246
<i>PKIG</i>	-1.12	2.28E-07	1.11E-05
<i>LDLRAD1</i>	-1.12	7.3E-07	2.98E-05
<i>NME7</i>	-1.13	3.16E-06	0.000105
<i>NEK11</i>	-1.13	5.28E-07	2.31E-05
<i>PROM1</i>	-1.13	4.08E-08	2.52E-06
<i>B9D1</i>	-1.13	2.5E-07	1.19E-05
<i>FAM166B</i>	-1.13	2.1E-07	1.03E-05
<i>C4ORF22</i>	-1.13	2.24E-05	0.000555
<i>TNFAIP8L1</i>	-1.13	1.39E-07	7.24E-06
<i>EFHC2</i>	-1.13	4.54E-07	2.02E-05
<i>FAM134B</i>	-1.14	1.65E-05	0.000426
<i>STOX1</i>	-1.14	9.42E-07	3.7E-05
<i>OSCP1</i>	-1.14	1.24E-07	6.56E-06
<i>IQCH</i>	-1.14	1.01E-05	0.000287
<i>LOC100507240</i>	-1.14	0.003343	0.032911
<i>NEK10</i>	-1.14	1.27E-06	4.87E-05
<i>COL1A2</i>	-1.14	0.002291	0.024403
<i>TIMP4</i>	-1.14	2.06E-05	0.000518
<i>CXORF22</i>	-1.14	5.67E-06	0.000176
<i>C21ORF128</i>	-1.14	8.73E-05	0.001713
<i>MYCT1</i>	-1.14	0.000309	0.004832
<i>DNAH9</i>	-1.15	2.85E-07	1.33E-05
<i>C1ORF158</i>	-1.15	2.43E-06	8.45E-05
<i>MAP6</i>	-1.15	2.64E-07	1.24E-05
<i>IQCG</i>	-1.15	9.11E-08	5.02E-06
<i>ECT2L</i>	-1.15	6.86E-07	2.84E-05
<i>PCDP1</i>	-1.15	3.4E-07	1.55E-05
<i>RSPH9</i>	-1.15	2.77E-07	1.3E-05
<i>MORN3</i>	-1.15	5.47E-06	0.000171
<i>WDR54</i>	-1.15	7.9E-08	4.43E-06
<i>CCDC11</i>	-1.16	1.73E-06	6.34E-05
<i>SLC16A12</i>	-1.16	0.002284	0.024378
<i>FAM92B</i>	-1.16	6.81E-08	3.92E-06
<i>TDRD1</i>	-1.16	0.001812	0.020375
<i>CX3CL1</i>	-1.17	7.66E-08	4.33E-06

<i>CERKL</i>	-1.17	4.17E-06	0.000133
<i>NWD1</i>	-1.17	1.66E-07	8.49E-06
<i>KIF6</i>	-1.17	2.77E-05	0.000664
<i>SPEF1</i>	-1.17	1.02E-07	5.5E-06
<i>VWA3B</i>	-1.17	1.93E-07	9.54E-06
<i>CXORF41</i>	-1.17	8.13E-06	0.000241
<i>MORN2</i>	-1.17	5.82E-08	3.42E-06
<i>C6ORF165</i>	-1.18	1.91E-07	9.53E-06
<i>UBXN10</i>	-1.18	7.48E-08	4.25E-06
<i>LRRC23</i>	-1.18	2.54E-08	1.69E-06
<i>PRPH</i>	-1.18	1.3E-05	0.00035
<i>ENKUR</i>	-1.18	2.47E-07	1.18E-05
<i>C1ORF87</i>	-1.18	1.11E-06	4.32E-05
<i>RTN4RL1</i>	-1.18	0.000591	0.008315
<i>FILIP1</i>	-1.18	1.52E-05	0.000397
<i>CCDC164</i>	-1.18	4.88E-08	2.94E-06
<i>SPATA17</i>	-1.18	8.59E-07	3.43E-05
<i>DCLK1</i>	-1.19	0.005047	0.044972
<i>C1ORF173</i>	-1.19	9.53E-08	5.2E-06
<i>GPR156</i>	-1.19	0.002626	0.027251
<i>DYNLRB2</i>	-1.19	1.18E-06	4.54E-05
<i>DYX1C1</i>	-1.19	7.87E-05	0.001573
<i>C16ORF71</i>	-1.20	1.82E-07	9.21E-06
<i>LOC643037</i>	-1.20	9.2E-07	3.62E-05
<i>CCDC65</i>	-1.20	7.18E-08	4.1E-06
<i>IGFBP2</i>	-1.20	5.97E-09	5.06E-07
<i>CCDC33</i>	-1.20	1.58E-07	8.14E-06
<i>CC2D2A</i>	-1.21	4.31E-08	2.65E-06
<i>C16ORF89</i>	-1.21	0.000511	0.00737
<i>ZMYND10</i>	-1.21	8.72E-09	6.94E-07
<i>EFHB</i>	-1.21	9.22E-08	5.06E-06
<i>IL5RA</i>	-1.21	1.89E-07	9.49E-06
<i>C9ORF116</i>	-1.21	1.24E-08	9.11E-07
<i>FABP6</i>	-1.22	9.09E-07	3.59E-05
<i>NELL2</i>	-1.22	1.4E-07	7.27E-06
<i>MKX</i>	-1.22	0.001267	0.015405
<i>WDR38</i>	-1.22	1.69E-08	1.2E-06
<i>C6ORF118</i>	-1.23	1.37E-07	7.2E-06
<i>FBXO15</i>	-1.23	1.62E-06	5.95E-05
<i>WDR78</i>	-1.23	3.48E-08	2.2E-06
<i>ZNF853</i>	-1.23	1.29E-06	4.93E-05
<i>C12ORF75</i>	-1.23	3.23E-08	2.06E-06
<i>ZNF474</i>	-1.23	2.03E-07	1E-05
<i>APOBEC4</i>	-1.24	1.41E-07	7.3E-06
<i>C14ORF50</i>	-1.24	4.66E-07	2.07E-05
<i>IGFBP5</i>	-1.24	3.9E-08	2.44E-06
<i>SLC7A2</i>	-1.24	4.92E-08	2.95E-06
<i>ARMC3</i>	-1.24	2.64E-08	1.76E-06
<i>C9ORF135</i>	-1.25	2.12E-08	1.45E-06
<i>TPPP3</i>	-1.25	2.68E-09	2.47E-07

TEKT1	-1.25	1.23E-08	9.06E-07
ARMC4	-1.25	3.28E-08	2.08E-06
TTC29	-1.25	8.26E-08	4.6E-06
CCDC81	-1.25	5.42E-08	3.23E-06
CASC1	-1.25	3.01E-08	1.95E-06
C11ORF88	-1.26	9.12E-09	7.12E-07
C6ORF225	-1.26	2.03E-08	1.39E-06
LPPR3	-1.26	5.68E-07	2.44E-05
C1ORF192	-1.26	8.82E-09	6.95E-07
C10ORF107	-1.26	2.67E-08	1.77E-06
C1ORF189	-1.26	7.35E-06	0.000221
AKAP6	-1.27	1.11E-07	5.94E-06
AK7	-1.28	8.25E-09	6.67E-07
ROPN1L	-1.28	2.18E-09	2.06E-07
RSPH4A	-1.29	3.72E-09	3.3E-07
SLC23A1	-1.29	5.93E-07	2.53E-05
C1ORF88	-1.29	1.43E-09	1.38E-07
C6ORF97	-1.30	2.47E-09	2.29E-07
C13ORF30	-1.30	3.43E-09	3.09E-07
YSK4	-1.30	6.44E-09	5.43E-07
LOC100499227	-1.30	0.000108	0.002062
CAPSL	-1.30	3.03E-09	2.78E-07
LRRC10B	-1.31	1.28E-09	1.27E-07
STOML3	-1.31	3.71E-09	3.3E-07
LOC100287718	-1.31	4.01E-08	2.49E-06
PACRG	-1.32	1.13E-08	8.52E-07
ANKUB1	-1.32	1.08E-08	8.14E-07
CHRNA9	-1.32	4.44E-05	0.000983
SPA17	-1.32	2.4E-09	2.25E-07
C1ORF194	-1.32	2.44E-09	2.28E-07
NME5	-1.32	5.41E-09	4.64E-07
SPAG6	-1.33	6.15E-10	6.6E-08
FOXJ1	-1.33	4.15E-10	4.77E-08
CCDC103	-1.33	4.44E-08	2.7E-06
MT3	-1.33	6.8E-05	0.001386
COL3A1	-1.34	0.000426	0.006295
IGFBP7	-1.34	6.25E-10	6.65E-08
C5ORF49	-1.34	3.89E-10	4.58E-08
MLF1	-1.35	1.29E-09	1.27E-07
PPIL6	-1.36	3.83E-09	3.37E-07
TMCO5A	-1.37	0.000698	0.009478
NHLRC4	-1.37	3.53E-09	3.16E-07
AKAP14	-1.38	1.43E-09	1.38E-07
HSD17B13	-1.38	6.64E-10	6.88E-08
UCN3	-1.39	2.07E-07	1.02E-05
TMEM232	-1.39	8.35E-08	4.64E-06
KLHDC8A	-1.39	8.31E-09	6.69E-07
SNTN	-1.40	7.59E-11	1.05E-08
FAM183A	-1.40	2.56E-10	3.18E-08
CAPS	-1.41	1.53E-11	2.44E-09

<i>C20ORF85</i>	-1.42	3.73E-11	5.44E-09
<i>RTDR1</i>	-1.42	2.76E-08	1.81E-06
<i>MAOB</i>	-1.42	1.16E-08	8.56E-07
<i>WDR69</i>	-1.42	6.34E-10	6.66E-08
<i>SCGB3A1</i>	-1.42	4.04E-11	5.8E-09
<i>HHLA2</i>	-1.43	5.58E-10	6.11E-08
<i>C9ORF24</i>	-1.44	1.98E-11	3.04E-09
<i>TMEM146</i>	-1.45	8.15E-07	3.28E-05
<i>MORN5</i>	-1.45	3.15E-10	3.85E-08
<i>CCNA1</i>	-1.46	7.27E-05	0.001465
<i>PROS1</i>	-1.51	1.67E-10	2.14E-08
<i>PTGFR</i>	-1.51	4.96E-10	5.55E-08
<i>SEC14L3</i>	-1.52	2.97E-11	4.38E-09
<i>FAM81B</i>	-1.63	2.66E-13	5.74E-11
<i>CES1</i>	-1.75	1.11E-16	5.15E-14
<i>GSTA2</i>	-1.80	8.88E-16	3.68E-13
<i>NR2E1</i>	-1.93	2.35E-05	0.000578

ACCEPTED MANUSCRIPT				
Gene	GWAS traits/disease	Author	Journal	Pubmed ID
<i>IL1RL1</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>IL18R1</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>IL18RAP</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>MHC</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>OR10A3</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>NLRP10</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>GLB1</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>CCDC80</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>CARD11</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>ZNF365</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>CYP24A1</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>PFDN4</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>FLG</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>C11ORF30</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>TMEM232</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>SLC25A46</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>TNFRSF6B</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>ZGPAT</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>OVOL1</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>ACTL9</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>KIF3A</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>IL13</i>	Atopic Dermatitis	Hirota et al., 2012	Nat Genet. 2012 Nov;44(11):1222-6	23042114
<i>TLR1</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>TLR6</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>TLR10</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>HLA-C</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>MICA</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>PTGER4</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>PLCL1</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>LPP</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>NFATC2</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>ADAD1</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>FOXA1</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>TTC6</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>HLA-DQB1</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>IL33</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>IL18R1</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>SMAD3</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>GSDMA</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>IL2RB</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>RORA</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>GSDMB</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>IL13</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>SLC22A5</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>DENND1B</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>PDE4D</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>ORMDL3</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>IL6R</i>	Asthma	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>FLG</i>	Atopic Dermatitis	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>OVOL1</i>	Atopic Dermatitis	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>ACTL9</i>	Atopic Dermatitis	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>WDR36</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>CAMK4</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>C11ORF30</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>LRRC32</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>IL1RL2</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>IL1RL1</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>HLA-DQA1</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>HLA-DQB1</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>PLCL1</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>LPP</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>RANBP6</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>NFATC2</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569
<i>GSDMB</i>	Allergy	Hinds et al., 2013	Nature Genetics VOLUME 45 NUMBER 8 AUGUST 2013	23817569

<i>DLG1</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>SYCP2L</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>FAM20C</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>FERD3L</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>NKAIN3</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>TUSC1</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>OSTF1</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>ABCA1</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>AKR1E2</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>SVIP</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>CHRD12</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>DYRK4</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>ST8SIA2</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>RBFOX1</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>FTO</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>PMP22</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>LAMA3</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>ZNF776</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>RBX1</i>	Allergy	Bunyavanich et al., 2014	BMC Medical Genomics 2014, 7:48	25085501
<i>EFHC1</i>	Atopic march	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>TMT2C</i>	Atopic march	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>SLC6A15</i>	Atopic march	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>FLG</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>IL4</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>KIF3A</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>AP5B1</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>OVOL1</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>C11ORF30</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>LRRC32</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>IKZF3</i>	Asthma	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8804	26542096
<i>CRNN</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8805	26542096
<i>LCE5A</i>	Eczema	Marenholz et al., 2015	NATURE COMMUNICATIONS 6:8806	26542096
<i>CRCT1</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>LCE3E</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>FLG</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>OVOL1</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>RAD50</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>IL13</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>IL18R1</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>IL18RAP</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>C11ORF30</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>LRRC32</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>RTKL1</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>TNFRSF6B</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>ADAMTS10</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>ACTL9</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>CLEC16A</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>IL6R</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>KIAA1109</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>IL2</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>HLA-DRB1</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>HLA-DQA1</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>ZNF365</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>MICB</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>OR10A3</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>NLRP10</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>CCDC80</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>CD200R1L</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>PRRS1</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>PPP2R3C</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>ETS1</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>C1ORF51</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>MRPS21</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>MIR5708</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879
<i>ZBTB10</i>	Atopic Dermatitis	EAGLE and AAGC, 2015	Nature Genetics VOLUME 47 NUMBER 12 DECEMBER 2015	26482879

<i>GPSM3</i>	Atopic Dermatitis	Schaarschmidt et., 2015	J Allergy Clin Immunol. 2015 Sep;136(3):802-6	25865352
<i>CARD11</i>	Atopic Dermatitis	Schaarschmidt et., 2015	J Allergy Clin Immunol. 2015 Sep;136(3):802-6	25865352
<i>ZNF365</i>	Atopic Dermatitis	Schaarschmidt et., 2015	J Allergy Clin Immunol. 2015 Sep;136(3):802-6	25865352
<i>OR10A3</i>	Atopic Dermatitis	Schaarschmidt et., 2015	J Allergy Clin Immunol. 2015 Sep;136(3):802-6	25865352
<i>NLRP10</i>	Atopic Dermatitis	Schaarschmidt et., 2015	J Allergy Clin Immunol. 2015 Sep;136(3):802-6	25865352
<i>CYP24A1</i>	Atopic Dermatitis	Schaarschmidt et., 2015	J Allergy Clin Immunol. 2015 Sep;136(3):802-6	25865352
<i>PFDN4</i>	Atopic Dermatitis	Schaarschmidt et., 2015	J Allergy Clin Immunol. 2015 Sep;136(3):802-6	25865352
<i>TNFRSF6B</i>	Atopic Dermatitis	Schaarschmidt et., 2015	J Allergy Clin Immunol. 2015 Sep;136(3):802-6	25865352

Gene	Allergic Traits	Allergy	Asthma	Atopic Dermatitis	Atopic March	Eczema	Allergy-related
<i>ABCA1</i>							
<i>ACTL1</i>							
<i>ACTL9</i>							
<i>ADAD1</i>							
<i>ADAM33</i>							
<i>ADAMTS10</i>							
<i>ADRB2</i>							
<i>AKR1E2</i>							
<i>AP5B1</i>							
<i>BAT1</i>							
<i>BCL6</i>							
<i>BSND</i>							
<i>C11ORF30</i>							
<i>C1ORF51</i>							
<i>C6ORF48</i>							
<i>CAMK4</i>							
<i>CAPSL</i>							
<i>CARD11</i>							
<i>CCDC80</i>							
<i>CCL5</i>							
<i>CD14</i>							
<i>CD200R1L</i>							
<i>CD207</i>							
<i>CD5</i>							
<i>CD6</i>							
<i>CDHR3</i>							
<i>CDK2</i>							
<i>CEBPA</i>							
<i>CHRD12</i>							
<i>CLEC16A</i>							
<i>CMA1</i>							

GWAS associated
GWAS association not found

COL6A5							
CRCT1							
CREBL1							
CRNN							
CYP24A1							
DENND1B							
DEX1							
DLG1							
DMRTA1							
DPP10							
DUSP1							
DYRK4							
EDC							
EFHC1							
ETS1							
FAM20C							
FCER1A							
FCER1B							
FERD3L							
FLG							
FLJ44477							
FOXA1							
FTO							
GAB1							
GATA2							
GATA3							
GLB1							
GPSM3							
GSDMA							
GSDMB							
HDC							
HLA-A							
HLA-B							

HLA-C							
HLA-DP							
HLA-DQA1							
HLA-DQA2							
HLA-DQB1							
HLA-DRA							
HLA-DRB1							
HLA-DRB4							
HLA-DRQ							
HLA-G							
HRH4							
HRNR							
ID2							
IFNG							
IKZF2							
IKZF3							
IKZF4							
IL10							
IL13							
IL15RA							
IL18R1							
IL18RAP							
IL1RL1							
IL1RL2							
IL2							
IL21							
IL21R							
IL22							
IL2RA							
IL2RB							
IL33							
IL4							
IL4R							

IL4RA							
IL5							
IL6R							
IL7R							
INPP4A							
INPP5D							
KIAA1109							
KIF3A							
KRT8P16							
LAMA3							
LCE3A							
LCE3E							
LCE5A							
LINC00299							
LINC00486							
LPP							
LRP1							
LRRC2							
LRRC32							
LSM3P4							
MICA							
MICB							
MIR5708							
MRPS21							
MYC							
NFATC2							
NKAIN3							
NLRP10							
NOD1							
NPSR1							
OR10A3							
ORMDL3							
OSTF1							

OVOL1							
PCDH1							
PDE4D							
PEX14							
PFDN4							
PGS1							
PHF11							
PLAUR							
PLCL1							
PMP22							
PPP2R3C							
PRDM16							
PRR5							
PRR5L							
PTGER4							
PTK2							
PUS10							
PVT1							
PYH1N1							
RAD50							
RANBP6							
RBFOX1							
RBX1							
RFT1							
RNF111							
RORA							
RTEL1							
S100A7							
SFMBT1							
SH2B3							
SLC22A4							
SLC22A5							
SLC25A46							

SLC25A6							
SLC30A8							
SLC6A15							
SLC9A4							
SMAD3							
SOCS3							
SPINK5							
ST8SIA2							
STAT3							
STAT6							
SUOX							
SVIP							
SYCP2L							
TCEB1P3							
TCHH							
TLR1							
TLR10							
TLR6							
TLR7							
TLR9							
TMEM232							
TMTC2							
TNFA							
TNFRSF6B							
TNXB							
TPD52							
TRAF3							
TSLP							
TTC6							
TUSC1							
USP38							
VAX2							
WDR36							

XIRP2							
ZBTB10							
ZGPAT							
ZNF365							
ZNF652							
ZNF776							
ZPBP2							

Genes	Sets *						Longitudinal comparison in M+ participants						Longitudinal comparison in M- participants†						Cross-sectional comparison M+ vs M-*					
							Earlier		Later		Overall		Earlier		Later		Overall		Pre-Exposure 1		Post-Exposure 1		Post-Exposure 4	
	1	2	3	4	5	6	log ₂ FC	FDR	log ₂ FC	FDR	log ₂ FC	FDR	log ₂ FC	FDR	log ₂ FC	FDR	log ₂ FC	FDR	log ₂ FC	FDR	log ₂ FC	FDR	log ₂ FC	FDR
ABCA1					x		0.07	1.000	0.62	0.179	0.64	0.033	0.21	1.000	0.82	0.019	1.03	0.000	-0.01	1.000	0.02	1.000	-0.62	0.176
BCL6					x		0.20	1.000	0.36	0.621	0.56	0.040	0.03	1.000	0.58	0.090	0.60	0.051	-0.07	1.000	0.26	1.000	-0.21	1.000
BPIFA1	x						-0.29	1.000	-0.46	0.386	-0.80	0.003	-0.03	1.000	-0.56	0.135	-0.58	0.063	1.24	0.000	0.95	0.000	1.40	0.000
BSND					x		-0.77	1.000	-0.06	0.994	-0.89	0.346	-1.07	1.000	-0.84	0.656	-1.90	0.014	-1.10	1.000	-0.78	0.968	0.22	1.000
CAPSL					x		-0.53	1.000	-0.84	0.019	-1.30	0.000	-0.36	1.000	-1.14	0.000	-1.54	0.000	-0.09	1.000	-0.11	1.000	-0.11	1.000
CCDC80					x		-0.30	1.000	-0.43	0.443	-0.74	0.003	0.04	1.000	-0.97	0.001	-0.93	0.001	-0.22	1.000	-0.45	0.351	-0.15	1.000
CCL22				x			1.04	1.000	0.04	0.995	1.06	0.050	0.15	1.000	0.38	0.883	0.42	0.685	0.37	1.000	1.86	0.000	1.78	0.000
CCL24				x			0.90	1.000	1.12	0.512	2.32	0.001	0.45	1.000	0.99	0.587	1.22	0.252	1.41	1.000	2.61	0.000	2.46	0.000
CCL3				x			0.63	1.000	0.88	0.362	1.47	0.003	0.32	1.000	1.21	0.059	1.39	0.009	0.62	1.000	1.36	0.004	1.37	0.008
CCL5					x		0.26	1.000	-0.37	0.717	-0.10	0.876	-0.28	1.000	-0.06	0.990	-0.34	0.490	-0.08	1.000	0.99	0.000	0.28	1.000
CCR3				x			1.13	1.000	1.75	0.125	3.00	0.000	0.49	1.000	1.57	0.226	1.80	0.055	0.64	1.000	2.68	0.000	2.20	0.004
CD14					x		0.12	1.000	0.86	0.011	0.86	0.002	-0.35	1.000	1.00	0.002	0.62	0.077	-0.14	1.000	1.57	0.000	0.13	1.000
CD177	x						0.50	1.000	-0.18	0.979	0.36	0.404	0.08	1.000	0.10	0.976	0.18	0.800	0.96	0.017	1.53	0.000	0.78	0.049
CD200R1L					x		-0.07	1.000	-0.50	0.875	-0.64	0.322	-0.79	1.000	-0.59	0.648	-1.57	0.002	-1.46	0.008	-0.10	1.000	-0.75	0.547
CD207					x		0.37	1.000	-0.82	0.210	-0.42	0.517	-0.56	1.000	-0.13	0.982	-0.67	0.279	0.08	1.000	1.03	0.031	0.61	0.874
CD300LB				x			1.43	1.000	1.45	0.185	2.56	0.000	-0.06	1.000	1.48	0.147	1.11	0.220	0.37	1.000	2.04	0.001	1.60	0.038
CD69				x			0.79	1.000	0.72	0.344	1.43	0.000	0.08	1.000	0.84	0.193	0.81	0.140	0.66	1.000	2.85	0.000	1.22	0.007
CDHR3					x		-0.46	1.000	-0.50	0.440	-0.89	0.001	-0.44	1.000	-0.93	0.003	-1.42	0.000	-0.27	1.000	-0.09	1.000	0.11	1.000
CHI3L1				x			0.92	0.866	1.33	0.007	2.07	0.000	0.16	1.000	1.18	0.008	1.12	0.004	-0.22	1.000	2.00	0.000	1.47	0.000
CISH					x		0.80	1.000	0.41	0.876	1.23	0.001	-0.14	1.000	0.79	0.203	0.57	0.349	0.03	1.000	1.93	0.000	0.41	1.000
CLC				x			1.68	1.000	0.54	0.979	2.10	0.026	0.59	1.000	0.24	0.988	0.83	0.681	2.00	0.898	5.06	0.000	3.92	0.000
CLDN17				x			-0.53	1.000	1.51	0.244	0.83	0.478	0.67	1.000	1.23	0.346	2.30	0.002	0.45	1.000	-2.15	0.000	-1.43	0.037
CNFN				x			-0.06	1.000	1.62	0.000	1.43	0.000	-0.09	1.000	1.47	0.000	1.48	0.000	-0.33	1.000	-1.10	0.000	-1.22	0.000
COL1A1					x		0.50	1.000	0.44	0.469	0.94	0.000	0.38	1.000	0.03	0.994	0.40	0.363	0.78	0.150	0.86	0.003	1.17	0.000
COL1A2	x			x			-0.66	1.000	-0.57	0.813	-1.14	0.024	0.92	1.000	-1.66	0.005	-0.76	0.382	1.72	0.000	1.04	0.017	3.00	0.000
COL3A1		x			x		-0.24	1.000	-1.01	0.179	-1.34	0.006	1.08	1.000	-2.13	0.000	-1.13	0.104	1.50	0.002	0.93	0.047	2.94	0.000
COL6A2	x						0.19	1.000	-0.31	0.977	-0.14	0.907	0.68	1.000	-0.65	0.623	0.06	0.973	1.64	0.002	1.15	0.016	3.46	0.000
CRCT1				x		x	-0.09	1.000	2.43	0.000	2.38	0.000	0.19	1.000	2.14	0.000	2.39	0.000	-0.49	1.000	-2.30	0.000	-1.52	0.000
CRNN				x		x	-0.34	1.000	1.98	0.000	1.75	0.000	-0.01	1.000	2.32	0.000	2.57	0.000	-0.36	1.000	-2.49	0.000	-2.21	0.000
CSF1					x		0.63	1.000	0.42	0.847	0.99	0.019	-0.26	1.000	0.48	0.653	0.17	0.878	-0.21	1.000	1.12	0.009	1.21	0.013
CST1	x			x			0.28	1.000	0.91	0.139	1.61	0.000	-0.21	1.000	0.85	0.172	0.76	0.145	3.76	0.000	4.61	0.000	3.95	0.000
CYBB					x		0.73	0.866	0.54	0.438	1.16	0.000	-0.05	1.000	0.76	0.052	0.64	0.110	0.31	1.000	1.80	0.000	1.15	0.001
CYP1A1			x				-0.32	1.000	0.27	0.973	0.10	0.934	0.09	1.000	0.35	0.848	0.90	0.120	-31.36	0.000	-16.93	0.000	-6.04	0.000
CYP1B1			x				-0.59	1.000	1.23	0.000	0.68	0.034	-0.14	1.000	0.59	0.183	0.58	0.183	-2.99	0.000	-2.95	0.000	-1.30	0.000

CYP24A1					x	0.05	1.000	-1.03	0.007	-0.95	0.003	0.01	1.000	-1.03	0.004	-1.01	0.003	0.15	1.000	0.00	1.000	0.65	0.201
DPEP2					x	0.26	1.000	1.23	0.012	1.35	0.001	-0.19	1.000	0.83	0.203	0.57	0.356	0.12	1.000	1.41	0.000	1.18	0.014
DQX1					x	0.70	1.000	0.85	0.290	1.58	0.000	0.11	1.000	0.55	0.685	0.68	0.343	0.72	1.000	1.11	0.045	1.46	0.006
DUSP1					x	0.28	1.000	1.15	0.000	1.23	0.000	0.14	1.000	0.55	0.159	0.70	0.018	-0.25	1.000	0.97	0.000	0.67	0.059
DUSP6					x	0.53	1.000	0.20	0.964	0.71	0.016	0.18	1.000	0.20	0.912	0.35	0.488	0.00	1.000	0.89	0.003	0.25	1.000
ECM1					x	-0.03	1.000	1.94	0.000	1.93	0.000	0.16	1.000	1.85	0.000	2.23	0.000	0.10	1.000	-1.42	0.000	-1.81	0.000
EFHC1					x	-0.38	1.000	-0.41	0.614	-0.77	0.003	-0.16	1.000	-0.95	0.001	-1.11	0.000	-0.09	1.000	-0.18	1.000	0.11	1.000
EGR1					x	0.68	0.926	1.49	0.000	1.71	0.000	0.13	1.000	0.98	0.006	1.13	0.000	-0.58	1.000	1.76	0.000	1.02	0.000
EGR2					x	0.94	1.000	1.00	0.156	1.84	0.000	-0.33	1.000	1.84	0.001	1.46	0.004	0.78	1.000	2.98	0.000	1.15	0.037
EV12A					x	0.19	1.000	1.40	0.002	1.53	0.000	-0.57	1.000	1.39	0.003	0.74	0.157	0.09	1.000	2.45	0.000	1.13	0.014
FAM20C					x	0.83	1.000	0.28	0.964	1.06	0.012	0.21	1.000	0.24	0.945	0.45	0.542	-0.06	1.000	0.78	0.225	0.97	0.136
FAM25A					x	-0.27	1.000	2.33	0.000	1.97	0.001	0.46	1.000	1.89	0.007	2.47	0.000	-0.48	1.000	-2.17	0.000	-1.67	0.000
FCGR1A					x	0.39	1.000	0.64	0.508	1.13	0.004	-0.24	1.000	0.70	0.333	0.38	0.607	-0.09	1.000	2.84	0.000	1.17	0.007
FCGR3A					x	0.33	1.000	0.94	0.023	1.12	0.000	-0.69	1.000	1.12	0.002	0.34	0.545	0.04	1.000	2.98	0.000	1.11	0.000
FCGR3B					x	0.43	1.000	2.76	0.000	2.89	0.000	-0.70	1.000	2.77	0.000	2.06	0.000	0.27	1.000	4.54	0.000	1.09	0.000
FLG					x	0.03	1.000	0.71	0.607	0.73	0.317	0.44	1.000	1.80	0.016	2.36	0.000	-0.19	1.000	-2.90	0.000	-4.12	0.000
FOS					x	0.67	1.000	1.67	0.000	1.66	0.000	-0.09	1.000	1.04	0.003	0.98	0.001	-0.45	1.000	2.29	0.000	1.05	0.000
FTO					x	-0.30	1.000	-0.40	0.640	-0.70	0.014	-0.38	1.000	-0.63	0.114	-1.01	0.001	-0.08	1.000	0.01	1.000	0.01	1.000
GAPT					x	0.73	1.000	0.97	0.379	1.65	0.002	-0.84	1.000	1.02	0.319	-0.02	0.992	0.01	1.000	2.33	0.000	1.55	0.020
GATA2					x	0.81	1.000	0.03	0.997	0.89	0.519	0.24	1.000	0.70	0.892	0.85	0.654	0.65	1.000	2.39	0.012	0.92	1.000
GPR183					x	0.67	1.000	0.64	0.647	1.45	0.001	-0.12	1.000	1.03	0.102	0.81	0.171	0.91	1.000	2.00	0.000	1.14	0.049
GPSM3					x	0.18	1.000	0.58	0.216	0.69	0.020	-0.32	1.000	0.77	0.025	0.42	0.311	-0.01	1.000	1.27	0.000	0.40	0.933
HBA2					x	-1.26	1.000	1.82	0.227	0.66	0.610	-0.02	1.000	0.35	0.969	0.18	0.941	3.18	0.000	4.31	0.000	7.13	0.000
HBB					x	-2.10	0.098	3.47	0.000	0.96	0.199	-0.91	1.000	1.08	0.477	-0.27	0.884	3.59	0.000	6.71	0.000	7.95	0.000
HLA-DOA					x	0.02	1.000	-0.34	0.822	-0.32	0.519	-0.28	1.000	-0.60	0.228	-0.89	0.014	0.07	1.000	0.65	0.145	0.96	0.011
HLA-DQA1					x	0.00	1.000	-0.37	0.802	-0.37	0.406	-0.31	1.000	-0.45	0.454	-0.77	0.031	-0.94	0.027	-0.25	1.000	0.15	1.000
HLA-DQA2					x	-0.13	1.000	-0.37	0.838	-0.52	0.202	-0.16	1.000	-0.32	0.792	-0.52	0.290	0.65	1.000	1.54	0.000	1.10	0.003
HLA-DRA					x	-0.01	1.000	-0.37	0.583	-0.36	0.287	-0.21	1.000	-0.47	0.236	-0.68	0.017	0.26	1.000	0.67	0.019	0.79	0.009
HLA-DRB1					x	-0.06	1.000	-0.32	0.741	-0.37	0.287	-0.25	1.000	-0.46	0.273	-0.71	0.012	0.04	1.000	0.35	0.819	0.55	0.235
IL18RAP					x	0.74	1.000	0.86	0.168	1.59	0.000	-0.18	1.000	1.35	0.002	1.06	0.010	-0.27	1.000	0.92	0.026	0.35	1.000
IL1RL1					x	0.36	1.000	1.76	0.044	2.20	0.001	0.94	1.000	0.60	0.852	1.72	0.049	-0.94	1.000	-0.59	1.000	-1.18	0.265
IL1RL2					x	0.56	1.000	1.16	0.096	1.69	0.001	0.22	1.000	0.96	0.299	1.24	0.042	0.09	1.000	-0.01	1.000	-0.52	1.000
IL2RB					x	0.30	1.000	-0.50	0.614	-0.17	0.814	-0.22	1.000	-0.37	0.737	-0.60	0.220	-0.12	1.000	0.97	0.010	0.36	1.000
IL33					x	0.05	1.000	-0.59	0.161	-0.58	0.055	-0.35	1.000	-0.30	0.710	-0.66	0.036	0.08	1.000	0.52	0.226	-0.10	1.000
IL4R					x	0.42	1.000	0.45	0.453	0.84	0.001	-0.06	1.000	0.64	0.073	0.56	0.096	-0.05	1.000	1.03	0.000	0.22	1.000
IL6R					x	0.10	1.000	0.89	0.009	0.95	0.001	-0.53	1.000	0.79	0.033	0.21	0.747	-0.25	1.000	1.42	0.000	0.43	0.879
IL7R					x	0.56	1.000	-0.30	0.981	0.25	0.833	0.06	1.000	-0.12	0.991	-0.13	0.940	0.54	1.000	1.63	0.005	1.06	0.451
INPP5D					x	0.31	1.000	0.19	0.964	0.48	0.177	-0.21	1.000	0.42	0.468	0.21	0.747	0.11	1.000	0.91	0.003	0.40	1.000
KIF3A					x	-0.15	1.000	-0.60	0.235	-0.72	0.019	-0.14	1.000	-0.81	0.026	-0.95	0.003	-0.12	1.000	-0.05	1.000	0.00	1.000

LCE3D				x			0.07	1.000	1.25	0.374	1.43	0.077	1.27	1.000	1.37	0.288	2.71	0.000	-0.54	1.000	-2.13	0.000	-2.13	0.000
LCE3E					x		-0.24	1.000	1.01	0.882	0.85	0.615	1.25	1.000	0.52	0.962	1.89	0.183	-0.21	1.000	-2.04	0.047	-1.63	0.262
LPL				x			1.54	1.000	0.65	0.925	2.38	0.002	0.13	1.000	0.75	0.765	0.78	0.571	-0.04	1.000	1.00	0.562	1.95	0.018
MMP9					x		0.49	1.000	0.46	0.779	0.86	0.030	0.06	1.000	0.56	0.408	0.45	0.421	0.76	0.470	1.72	0.000	0.59	0.387
NFAM1				x			0.68	1.000	1.44	0.000	2.06	0.000	-0.51	1.000	1.68	0.000	1.00	0.007	-0.36	1.000	3.30	0.000	1.06	0.002
NLRC4					x		0.32	1.000	1.20	0.294	1.46	0.031	-0.05	1.000	1.00	0.443	0.89	0.359	0.54	1.000	2.86	0.000	1.07	0.471
OVOL1				x			-0.08	1.000	0.79	0.099	0.73	0.048	-0.08	1.000	0.70	0.135	0.64	0.139	0.00	1.000	0.02	1.000	-0.45	0.919
P2RY14				x	x		0.44	1.000	1.21	0.316	1.44	0.033	-0.58	1.000	1.33	0.304	0.67	0.612	0.81	1.000	4.66	0.000	2.70	0.000
PHOSPHO1				x			0.33	1.000	1.83	0.000	1.93	0.000	-0.37	1.000	1.79	0.000	1.38	0.000	-0.09	1.000	2.50	0.000	1.02	0.017
PLAUR					x		0.38	1.000	1.82	0.000	1.92	0.000	-0.08	1.000	1.32	0.000	1.20	0.000	-0.13	1.000	1.82	0.000	0.39	0.888
PMP22				x			0.41	1.000	0.09	0.992	0.50	0.560	0.32	1.000	0.37	0.908	0.62	0.500	0.82	1.000	1.40	0.016	1.11	0.240
PNMA2		x					-0.40	1.000	-0.44	0.979	-0.89	0.363	-0.34	1.000	0.49	0.895	0.28	0.876	3.70	0.000	4.36	0.000	1.96	0.001
RHCG				x			0.17	1.000	1.46	0.002	1.80	0.000	0.27	1.000	1.55	0.001	1.92	0.000	-0.64	1.000	-1.52	0.000	-1.46	0.000
RNASE7				x			-0.43	1.000	1.47	0.009	1.17	0.020	0.34	1.000	1.16	0.094	1.77	0.000	0.33	1.000	-1.17	0.005	-1.15	0.011
RNF222				x			0.18	1.000	1.66	0.016	1.80	0.003	0.65	1.000	1.48	0.062	2.34	0.000	-0.12	1.000	-1.81	0.000	-1.37	0.010
RPTN				x			0.51	1.000	1.51	0.000	2.07	0.000	0.48	1.000	1.62	0.000	2.24	0.000	0.63	0.676	-1.46	0.000	-1.67	0.000
RTEL1				x			0.39	1.000	0.75	0.345	1.18	0.005	0.06	1.000	0.87	0.171	0.91	0.079	0.27	1.000	0.53	0.927	0.26	1.000
S100A7					x		0.35	1.000	1.22	0.008	1.70	0.000	0.41	1.000	1.12	0.032	1.34	0.000	0.01	1.000	0.12	1.000	-0.13	1.000
SCGB1A1				x			-0.66	0.842	0.06	0.992	-0.60	0.022	-0.71	1.000	0.24	0.815	-0.46	0.226	-0.99	0.001	-0.73	0.007	-0.78	0.010
SIGLEC10					x		0.60	1.000	1.31	0.002	1.82	0.000	-0.61	1.000	1.48	0.001	0.73	0.151	-0.31	1.000	2.48	0.000	1.15	0.005
SLC22A4				x			-0.32	1.000	-0.57	0.178	-0.89	0.001	-0.41	1.000	-0.73	0.033	-1.12	0.000	-0.09	1.000	0.03	1.000	-0.05	1.000
SOCS3					x		0.44	1.000	1.67	0.000	1.97	0.000	0.16	1.000	1.07	0.002	1.19	0.000	-0.60	0.768	2.08	0.000	0.39	0.879
SPINK5				x			0.45	1.000	0.88	0.009	1.34	0.000	0.00	1.000	1.12	0.001	1.14	0.000	-0.24	1.000	-0.40	0.705	-1.08	0.000
SPINK7				x			-0.72	1.000	2.11	0.000	1.22	0.013	0.47	1.000	1.65	0.001	2.48	0.000	-0.22	1.000	-2.58	0.000	-1.92	0.000
SPRR1A				x	x		0.27	1.000	1.68	0.000	1.96	0.000	0.33	1.000	1.31	0.000	1.67	0.000	-0.88	0.016	-1.01	0.000	-1.47	0.000
STAT5B					x		0.30	1.000	0.53	0.290	0.77	0.005	-0.13	1.000	0.52	0.222	0.38	0.373	-0.12	1.000	1.05	0.000	0.33	1.000
TAGAP				x			0.42	1.000	1.66	0.000	1.84	0.000	-0.27	1.000	1.28	0.000	0.93	0.003	0.16	1.000	3.22	0.000	1.05	0.000
TLR1					x		0.22	1.000	0.20	0.962	0.40	0.332	-0.18	1.000	0.30	0.747	0.10	0.904	-0.24	1.000	0.89	0.004	0.09	1.000
TLR6				x	x		0.32	1.000	0.73	0.326	0.99	0.016	-0.39	1.000	0.64	0.314	0.23	0.791	-0.62	1.000	1.26	0.001	0.43	1.000
TMEM232					x		-0.58	1.000	-0.83	0.078	-1.39	0.000	-0.42	1.000	-1.15	0.002	-1.56	0.000	0.06	1.000	0.00	1.000	0.15	1.000
TMPRSS11B				x			-0.33	1.000	2.04	0.000	1.69	0.000	0.38	1.000	1.86	0.000	2.60	0.000	0.37	1.000	-2.52	0.000	-1.18	0.002
TNFRSF6B					x		1.10	1.000	0.37	0.979	1.40	0.030	0.69	1.000	0.10	0.991	0.82	0.405	0.02	1.000	0.50	1.000	0.18	1.000
TRPV3				x			0.40	1.000	1.22	0.061	1.69	0.001	0.72	1.000	1.11	0.159	1.94	0.000	-0.37	1.000	-1.11	0.043	-1.69	0.000

FC, Fold change; FDR, False discovery rate

* The description of these 6 sets are in online methods

[†] The reference groups of the longitudinal comparisons for Earlier, Later and Overall analysis are pre-exposure 1, post-exposure 1 and pre-exposure 1 respectively

[‡] The reference groups of the cross-sectional comparisons are M- participants at each time-point.

Immunophenotype Gated Data Summary

Gating hierarchy and population derivations move from left to right, top to bottom

			Cross-sectional Comparison: Differences Between M+ vs. M- participants at pre- exposure 1		Longitudinal Comparison: Differences Between Post- vs. Pre-exposure 1			
CD45+	CD14-CD33-	Immunophenotype #	Mean Difference	StDev	M-		M+	
					Mean	StDev	Mean	StDev
CD3+	CD4+	1	1.91	5.97	-1.45	7.71	0.83	3.84
		2	1.79	6.67	-6.85	0.35	-0.17	5.26
		3	-0.16	8.25	-1.55	1.48	-2.20	6.44
		4	-4.59	20.87	3.15	8.70	-13.80	19.32
		5	4.59	20.87	-3.15	8.70	13.80	19.32
		6	-0.19	19.09	3.65	21.71	-4.23	7.22
		7	0.19	19.09	-3.65	21.71	4.23	7.22
		8	2.58	7.58	-0.45	3.32	-4.40	2.31
		9	-0.16	0.34	-0.09	0.48	-0.33	0.31
		10	-0.13	0.83	0.25	1.56	-0.26	0.73
		11	-2.30	7.93	0.30	5.37	4.93	2.90
		12	-0.42	2.41	0.13	2.86	-0.24	0.64
		13	-3.01	4.51	-0.13	3.51	-1.80	1.65
		14	-14.25	12.19	0.60	14.00	-4.77	3.75
		15	17.72	11.76	-0.60	20.36	6.80	2.03
		16	1.39	6.58	-0.05	1.06	-5.00	1.30
		17	0.21	1.78	-0.58	2.55	0.59	1.20
		18	-1.47	8.19	0.50	7.51	5.39	7.56
		19	-0.20	11.80	0.20	11.17	-1.00	8.70
		20	-2.76	5.18	0.10	4.92	-2.62	2.23
		21	-0.59	1.71	-0.05	1.17	0.62	1.11
		22	-0.67	8.19	-0.03	8.90	5.37	7.69
		23	4.00	13.45	0.00	14.99	-3.37	8.32
		24	-2.97	4.51	0.48	3.49	-1.54	1.94
		25	-0.44	2.46	-0.48	2.88	-0.48	0.71
		26	15.28	11.62	-9.55	3.46	-1.40	5.96
		27	-11.83	11.88	9.55	2.90	3.47	4.13
		28	12.85	19.31	-8.55	9.83	7.38	13.57
		29	-3.04	7.98	-5.35	7.00	5.20	10.05
		30	-0.70	0.65	-0.02	0.09	0.02	0.90
		31	-1.37	1.51	0.03	0.12	0.96	2.25
		32	7.28	18.68	-9.30	5.37	7.57	17.21
		33	0.12	0.65	0.54	0.34	0.34	0.39
		34	9.17	14.83	-1.55	22.98	-7.40	10.57
		35	-9.18	14.83	1.55	22.98	7.40	10.57
		36	3.09	3.70	-2.00	3.11	-1.90	2.96
		37	0.36	0.30	0.14	0.57	0.00	0.34
		38	-0.45	1.53	0.49	2.37	0.13	2.27
		39	-3.02	4.11	1.40	6.08	1.73	3.17
		40	0.95	2.19	0.08	3.82	-0.90	1.15
		41	-3.86	7.30	-1.35	6.22	-2.79	2.82
		42	-10.90	10.90	3.20	2.26	7.13	8.56
		43	13.78	9.27	-1.90	7.78	-3.47	9.27
		44	3.00	2.65	-0.71	0.92	-2.01	2.25
		45	0.40	1.24	-0.51	2.49	0.42	0.66
		46	0.93	7.48	0.38	8.99	5.39	7.24
		47	-4.31	9.20	0.85	12.37	-3.77	7.70
		48	-3.35	7.51	-0.69	6.69	-4.38	4.58
		49	0.56	2.13	-0.28	3.10	0.59	1.35
		50	0.78	6.53	0.15	8.37	5.18	6.47
		51	2.01	13.68	0.85	18.17	-1.43	6.29
		52	-3.21	7.73	0.03	7.67	-2.80	2.74
		53	0.30	2.02	-1.30	2.38	-0.89	1.34
		54	5.67	7.17	-2.30	1.41	1.15	0.82
		55	-2.77	12.09	3.60	11.46	2.53	4.38

20 T Cell Cytokine Phenotypes
included in Supplementary
Figure 12B: PCA Analysis

1	CD3+	IFN+
2	CD3+	IL2+
3	CD3+	IL4+
4	CD3+	IL17+
5	CD3+	TNF+
6	CD3+ CD4+	IFN+
7	CD3+ CD4+	IL2+
8	CD3+ CD4+	IL4+
9	CD3+ CD4+	IL17+
10	CD3+ CD4+	TNF+
11	CD3+ CD8+	IFN+
12	CD3+ CD8+	IL2+
13	CD3+ CD8+	IL4+
14	CD3+ CD8+	IL17+
15	CD3+ CD8+	TNF+
16	CD3+ gdTCR+	IFN+
17	CD3+ gdTCR+	IL2+
18	CD3+ gdTCR+	IL4+
19	CD3+ gdTCR+	IL17+
20	CD3+ gdTCR+	TNF+

CD8+	56	2.10	7.07	1.20	1.70	1.37	8.19
45RA +	57	-3.61	13.72	3.75	11.81	-7.40	9.71
45RA -	58	3.61	13.72	-3.75	11.81	7.40	9.71
CCR7 +	59	2.29	9.46	-0.06	20.14	1.26	1.82
CCR7 -	60	-2.29	9.47	0.05	20.15	-1.27	1.81
a4b7- 103+	61	-2.75	9.38	-2.60	3.39	-6.10	0.89
a4b7+ 103+	62	-0.97	3.33	-0.29	2.93	-2.91	3.91
a4b7+ 103-	63	-0.23	1.46	0.03	2.10	-0.93	1.47
a4b7- 103-	64	3.95	9.02	2.90	8.34	9.97	4.69
CCR4- CLA+	65	-0.42	2.74	0.24	3.99	-0.59	1.11
CCR4+ CLA+	66	-2.49	5.02	-0.02	2.31	0.08	0.73
CCR4+ CLA-	67	-1.41	5.42	1.33	9.52	-0.46	3.37
CCR4- CLA-	68	4.34	10.63	-1.55	15.77	0.97	2.30
GPR15- a4b7+	69	-3.24	7.20	-2.15	4.45	-8.60	1.21
GPR15+ a4b7+	70	0.33	1.59	-0.26	2.85	0.52	0.44
GPR15+ a4b7-	71	-0.46	3.85	0.11	4.88	2.95	3.03
GPR15- a4b7-	72	3.35	9.98	2.20	12.16	5.20	4.04
GPR15- CLA+	73	-2.42	6.16	0.26	5.34	-1.27	1.75
GPR15+ CLA+	74	-0.45	1.31	-0.02	0.78	0.62	0.96
GPR15+ CLA-	75	0.33	4.33	-0.13	6.95	2.85	2.58
GPR15- CLA-	76	2.56	10.20	-0.15	13.08	-2.17	3.09
CXCR3- CLA+	77	-2.75	4.92	0.66	1.97	-0.10	0.80
CXCR3+ CLA+	78	-0.16	2.90	-0.43	4.32	-0.44	0.92
CXCR3+ CLA-	79	13.77	13.77	-7.30	1.27	-0.70	5.05
CXCR3- CLA-	80	-10.83	12.56	7.05	5.02	1.20	4.25
IFN+	81	20.66	24.90	-9.25	6.86	18.27	34.24
IL2+	82	1.87	9.15	-5.60	3.11	6.73	8.51
IL4+	83	-0.40	0.68	-0.01	0.26	0.13	0.44
IL17+	84	-0.23	0.31	0.04	0.03	0.19	0.21
TNF+	85	19.73	25.12	-8.30	0.71	17.47	32.45
gd TCR+	86	1.12	2.76	0.74	0.16	-0.38	1.94
45RA +	87	9.33	36.50	-3.30	3.39	-10.57	10.07
45RA -	88	-9.33	36.50	3.30	3.39	10.57	10.07
CCR7 +	89	1.12	10.71	2.89	18.26	-1.02	5.18
CCR7 -	90	-1.13	10.71	-2.90	18.24	1.03	5.20
a4b7- 103+	91	2.98	17.29	1.20	14.28	-10.77	3.02
a4b7+ 103+	92	-0.06	0.69	-0.75	0.07	-0.21	0.59
a4b7+ 103-	93	0.61	1.77	1.38	2.44	0.04	0.56
a4b7- 103-	94	-3.52	16.79	-1.80	16.83	10.93	1.97
CCR4- CLA+	95	-1.55	4.50	-0.68	2.58	-0.74	1.54
CCR4+ CLA+	96	0.05	1.39	0.47	1.27	-0.31	0.39
CCR4+ CLA-	97	1.12	9.59	0.69	14.30	-2.89	1.35
CCR4- CLA-	98	0.32	13.78	-0.45	18.17	3.93	3.20
GPR15- a4b7+	99	2.73	15.04	0.85	12.37	-9.30	4.03
GPR15+ a4b7+	100	0.31	3.06	-1.54	5.45	0.59	1.40
GPR15+ a4b7-	101	0.80	7.59	1.45	7.10	4.56	5.94
GPR15- a4b7-	102	-3.80	15.68	-0.70	25.03	4.17	4.74
GPR15- CLA+	103	-1.24	4.48	0.25	3.52	-1.31	1.99
GPR15+ CLA+	104	-0.27	1.03	-0.03	0.73	0.38	0.49
GPR15+ CLA-	105	1.40	8.79	-0.03	11.88	4.77	6.63
GPR15- CLA-	106	0.12	12.87	-0.20	16.12	-3.87	5.92
CXCR3- CLA+	107	-0.15	0.94	0.31	0.82	-0.44	0.75
CXCR3+ CLA+	108	-1.35	4.87	-0.52	3.04	-0.61	1.16
CXCR3+ CLA-	109	1.28	16.45	-1.70	1.84	-0.60	8.94
CXCR3- CLA-	110	0.21	16.93	1.95	5.59	1.63	8.80
IFN+	111	0.65	12.07	-3.90	13.72	6.30	12.49
IL2+	112	-8.28	7.11	-2.30	1.56	0.50	3.76
IL4+	113	0.54	0.84	-0.11	0.02	-0.18	0.08
IL17+	114	-0.10	0.10	-0.08	0.04	-0.06	0.07
TNF+	115	2.18	8.01	-1.65	7.57	3.83	8.13
CD3+ IFN+	116	11.69	18.52	-7.45	11.81	10.43	19.76

	CD3+ IL2+	117	-1.66	7.12	-5.15	5.59	4.33	6.79
	CD3+ IL4+	118	-0.50	0.53	-0.03	0.02	-0.03	0.66
	CD3+ IL17+	119	-1.02	0.99	-0.01	0.07	0.59	1.36
	CD3+ TNF+	120	8.63	17.66	-8.00	1.41	9.37	19.37
CD20+		121	0.20	4.26	3.44	2.50	2.50	1.48
Monocytes CD14+ CD33+		122	-1.72	5.59	1.35	6.94	-1.35	2.88
CCR7 +		123	0.01	5.62	-1.56	10.84	1.21	2.86
CCR7 -		124	-0.02	5.61	1.55	10.82	-1.20	2.91
CD11b +		125	-2.35	4.19	-1.90	4.38	-2.40	3.76
CD66 +		126	-1.01	9.95	3.97	17.91	3.87	4.03
CD66 -		127	1.01	9.94	-3.95	17.89	-3.87	4.03
CD11b -		128	2.35	4.19	1.90	4.38	2.41	3.75
CD14 hi		129	-3.57	6.99	3.75	1.20	-1.80	1.41
CD16 +		130	5.64	6.37	-1.79	12.64	-1.59	3.57
CD16 -		131	-5.63	6.35	1.75	12.66	1.60	3.58
CD14 low		132	3.58	6.99	-3.75	1.20	1.82	1.38
CD16 +		133	2.19	5.78	1.45	6.62	-1.08	2.81
CD16 -		134	-2.18	5.77	-1.45	6.58	1.10	2.77
HLADR+		135	2.53	15.63	-7.60	10.18	-8.27	15.28
HLARDR -		136	-2.53	15.63	7.63	10.15	8.25	15.27
CD27- CD43+		137	-2.93	8.23	-1.70	1.13	-7.43	5.01
CD27+ CD43+		138	-0.06	4.48	-0.68	7.90	-0.75	1.93
CD27+ CD43-		139	0.10	0.76	-0.20	1.44	0.39	0.32
CD27- CD43-		140	2.90	8.45	2.60	8.34	7.77	7.21
TNF+		141	7.56	12.88	-2.15	25.95	3.17	3.93

Red: differences >10%

Cross-sectional Comparison at pre-exp. 1: Differences Between M+ vs. M- participants

0	Number of Phenotypes with Difference Less than -20%
4	Number of Phenotypes with Difference Between -10 and -20%
129	Number of Phenotypes with Difference -10% < x < 10%
7	Number of Phenotypes with Difference Between 10-20%
1	Number of Phenotypes with Difference Greater than 20%

List of Phenotypes with Magnitude Difference Greater than 10%

1-2*	CD4 CD45RA- CCR4+/-	p= 0.1266	t=2.099 df=3
3-4	CD4 CD25hi CD127- Treg CCR4+/-	p= 0.3162	t=1.200 df=3
5-6	CD4 CD45RA- CXCR3+/-	p= 0.1813	t=1.734 df=3
7-8	CD8 CD45RA- CXCR3+/-	p= 0.3527	t=1.097 df=3
9-10	CD4 CD45RA- CXCR3+/CCR4+ Ratio	p= 0.1357	t=2.028 df=3
11-12	CD4 CD45RA- IFN+/-IL4+ Ratio	p= 0.2084	t=1.598 df=3

*Those markers that the other side of the +/- gate has exactly the same statistical significance are only listed once

Unpaired t-test

Longitudinal Comparison:
Post- vs. Pre-exposure 1

M-	M+
0	0
0	3
141	132
0	6
0	0

Cytokine/Memory T cell Phenotypes Affected

		Interaction	2-way Repeated Measures ANOVA		
			Allergic Status	Time	Subjects (Matching)
1-2	CD4+ CD45RA-	P = 0.3437	P = 0.7263	P = 0.5318	P = 0.2359
3	CD8+ IFN+	P = 0.3640	P = 0.1398	P = 0.7496	P = 0.6365
4	CD8+ TNF+	P = 0.3649	P = 0.1961	P = 0.7299	P = 0.5097
5-6	gdTCR+ CD45RA-	P = 0.4159	P = 0.7135	P = 0.1702	P = 0.0075
7-8	gdTCR+ a4b7- CD103+	P = 0.2252	P = 0.7808	P = 0.3105	P = 0.0836
9	CD3+ IFN+	P = 0.3448	P = 0.3029	P = 0.8639	P = 0.3966
CD4	IL4+	P = 0.9650	P = 0.1667	P = 0.9987	P = 0.4197
CD8	IL4+	P = 0.7214	P = 0.4996	P = 0.7593	P = 0.0536
gdTC	IL4+	P = 0.2987	P = 0.3905	P = 0.0180 *	P = 0.0003
CD4	IL17A	P = 0.6153	P = 0.1805	P = 0.5961	P = 0.5392
CD8	IL17A	P = 0.3991	P = 0.3823	P = 0.2463	P = 0.0610
gdTC	IL17A	P = 0.7307	P = 0.2304	P = 0.0734	P = 0.0841
CD4	IFN+	P = 0.2554	P = 0.3299	P = 0.9247	P = 0.1509
CD8	IFN+	P = 0.3640	P = 0.1398	P = 0.7496	P = 0.6365
gdTC	IFN+	P = 0.4506	P = 0.9096	P = 0.8517	P = 0.5713
CD4	TNF+	P = 0.2893	P = 0.5208	P = 0.9034	P = 0.2518

CD8
gdTC

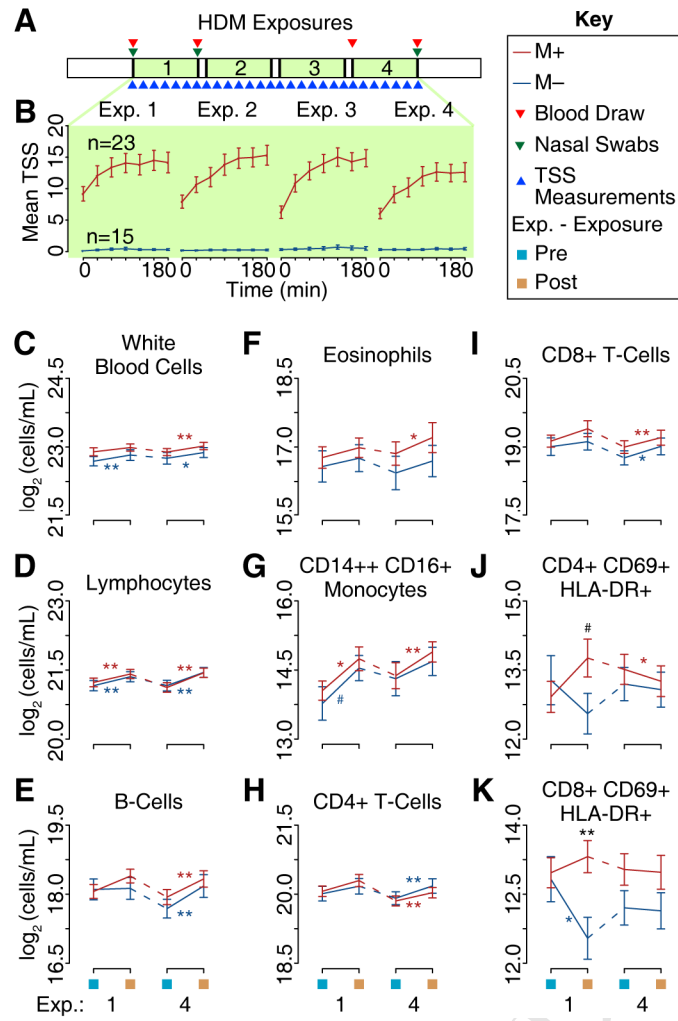
TNF+
TNF+

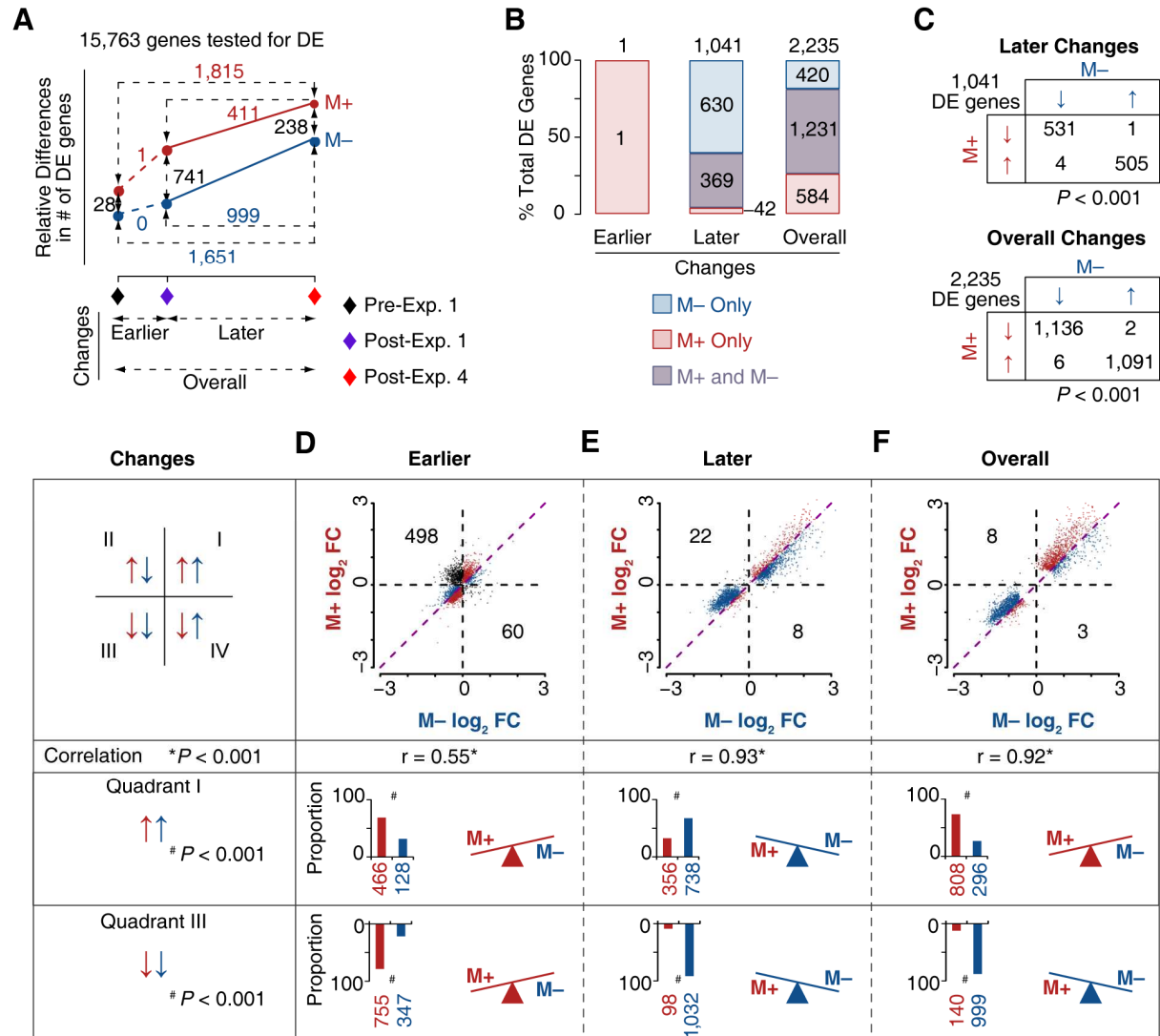
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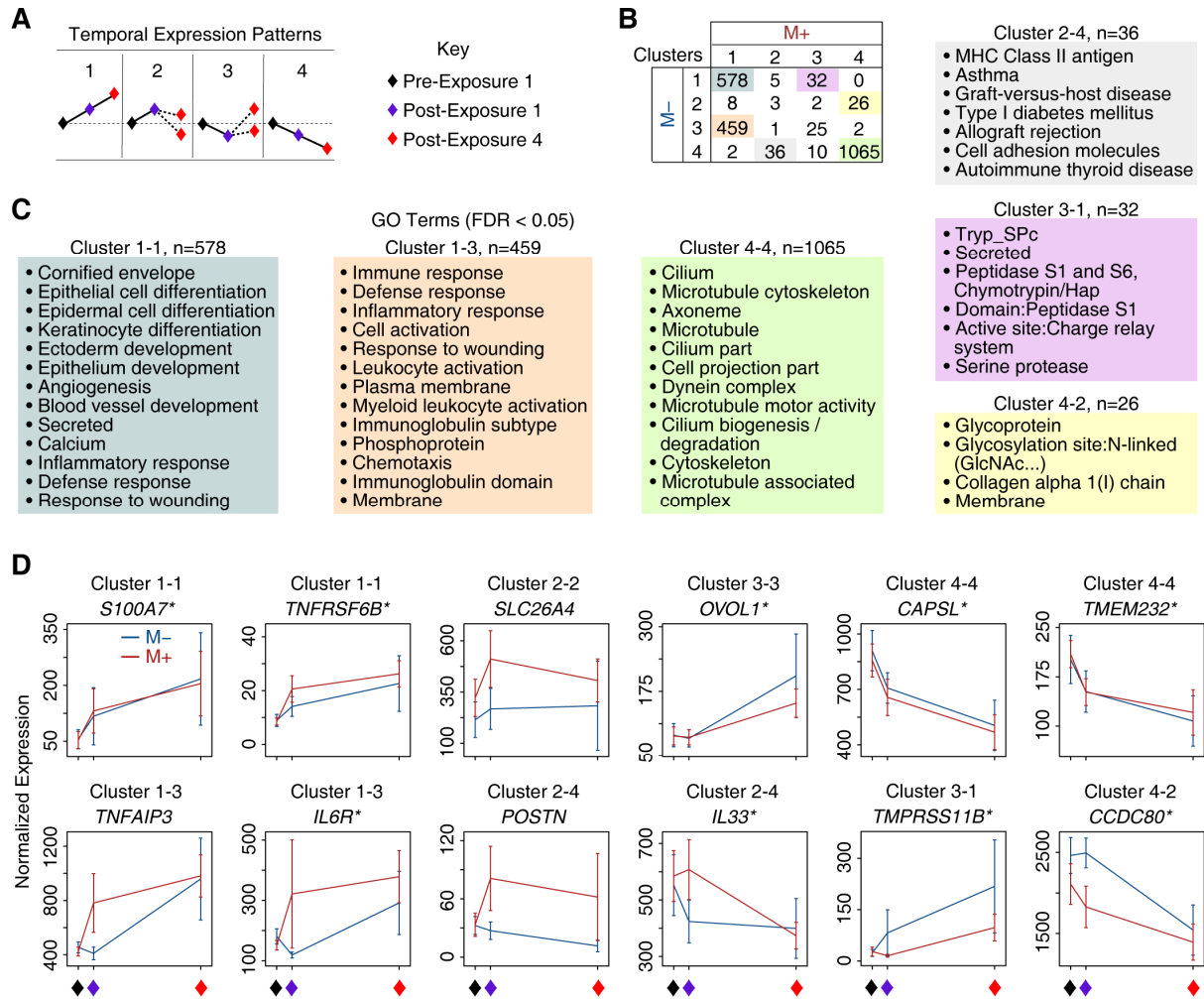
P = 0.1961
P = 0.6320

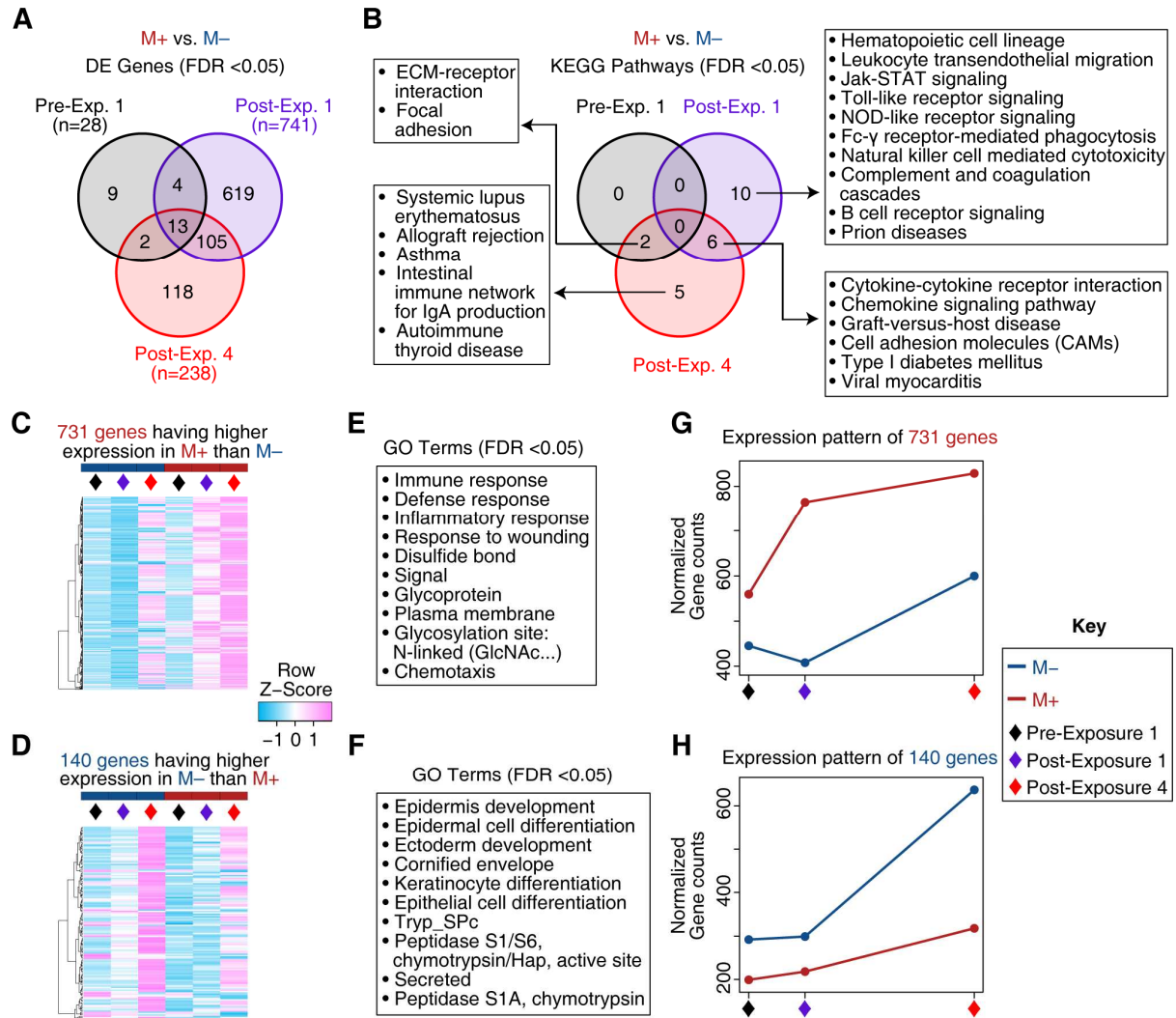
P = 0.7299
P = 0.7831

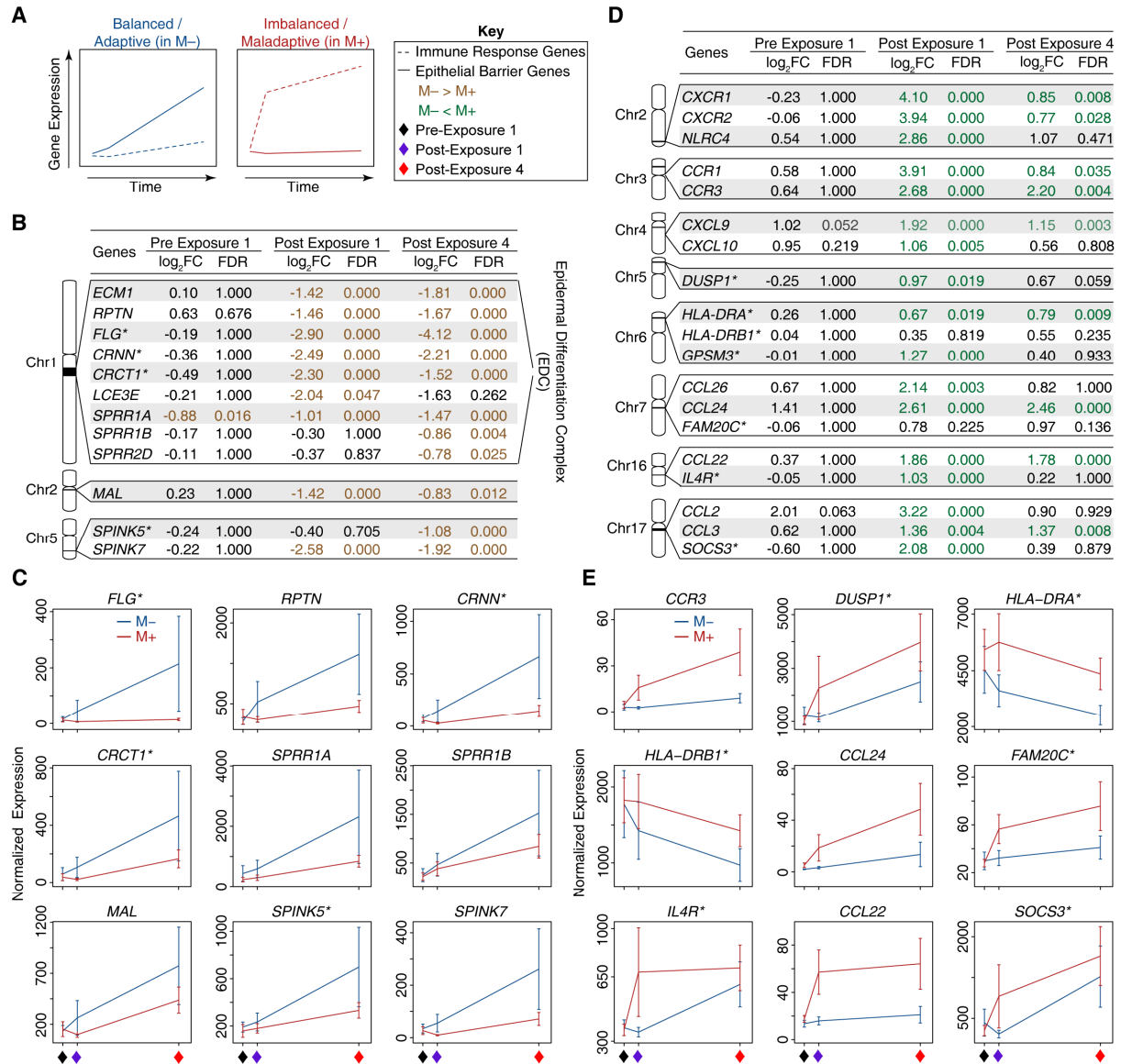
P = 0.5097
P = 0.4235











File E1. Abbreviations of gene names

Gene Symbol	Gene Name
ABCA1	ATP-Binding Cassette, sub-family A (ABC1), member 1
BCL6	B-cell CLL/Lymphoma 6
BPIFA1	BPI Fold Containing Family A, Member 1
BSND	Barttin CLCNK-Type Chloride Channel Accessory Beta Subunit
CAPSL	Calcyphosine-Like
CCDC80	Coiled-Coil Domain Containing 80
CCL17	Chemokine (C-C motif) Ligand 17 (TARC, Thymus and Activation-Regulated Chemokine)
CCL22	Chemokine (C-C Motif) Ligand 22 (MDC, macrophage-derived chemokine)
CCL24	Chemokine (C-C Motif) Ligand 24 (Eotaxin-2)
CCL3	Chemokine (C-C Motif) Ligand 3 (MIP-1 α , Macrophage Inflammatory Protein 1-Alpha)
CCL5	Chemokine (C-C motif) Ligand 5 (RANTES)
CCR3	Chemokine (C-C Motif) Receptor 3
CD14	CD14 molecule, Myeloid Cell-specific Leucine-rich Glycoprotein
CD177	CD177 molecule
CD200R1L	CD200 Receptor 1-Like
CD207	CD207 molecule, Langerin
CD300LB	CD300 molecule-like family member B
CD4	T-cell surface glycoprotein CD4
CD69	Early T-Cell Activation Antigen
CD8	T-cell surface glycoprotein CD8
CDH1	E-Cadherin
CDHR3	Cadherin-Related Family Member 3
CHI3L1	Chitinase 3-Like 1 (cartilage glycoprotein-39)
CISH	Cytokine-Inducible SH2-Containing Protein
CLC	Charcot-Leyden Crystal protein
CLDN17	Claudin 17
CNFN	Cornifelin
COL1A1	Collagen, type I, Alpha 1
COL1A2	Collagen, type I, Alpha 2
COL3A1	Collagen, Type III, Alpha 1
COL3A2	Collagen, Type III, Alpha 2
COL6A2	Collagen, Type VI, Alpha 2
CRCT1	Cysteine-Rich C-Terminal 1

CRNN	Cornulin
CSF1	Colony-Stimulating Factor 1 (Macrophage)
CST1	Cystatin SN
CYBB	Cytochrome B-245, Beta Polypeptide
CYP1A1	Cytochrome P450, Family 1, Subfamily A, Polypeptide 1
CYP1B1	Cytochrome P450, family 1, subfamily B, polypeptide 1
CYP24A1	Cytochrome P450, Family 24, Subfamily A, Polypeptide 1
DPEP2	Dipeptidase 2
DQX1	DEAQ Box RNA-Dependent ATPase 1
DUSP1	Dual-Specificity Phosphatase 1
DUSP6	Dual-Specificity Phosphatase 6
EBI2	Epstein-Barr Virus Induced Gene 2
ECM1	Extracellular Matrix Protein 1
EFHC1	EF-Hand domain (C-terminal) Containing 1
EGR1	Early Growth Response 1
EGR2	Early Growth Response 2
EVI2A	Ecotropic Viral Integration site 2A
FAM20C	Family With Sequence Similarity 20, Member C
FAM25A	Family with sequence similarity 25, member A
FCGR1A	Fc Fragment of IgG, High Affinity Ia, Receptor (CD64)
FCGR3A	Fc Fragment of IgG, Low Affinity IIIa, Receptor (CD16a)
FCGR3B	Fc fragment of IgG, low affinity IIIb, receptor (CD16B)
FLG	Filaggrin
FOS	v-fos FBJ murine osteosarcoma viral oncogene homolog
FTO	Fat Mass and Obesity Associated
GAPT	GRB2-Binding Adaptor Protein, Transmembrane
GATA2	GATA binding protein 2
GPR183	G Protein-Coupled Receptor 183
GPSM3	G-Protein Signaling Modulator 3
HBA2	Hemoglobin, Alpha 2
HBB	Hemoglobin, Beta
HLA-DOA	Major Histocompatibility Complex, Class II, DO Alpha
HLA-DQA1	Major Histocompatibility Complex, Class II, DQ Alpha 1
HLA-DQA2	Major Histocompatibility Complex, Class II, DQ Alpha 2
HLA-DRA	Major Histocompatibility Complex, Class II, DR Alpha
HLA-DRB1	Major Histocompatibility Complex, Class II, DR Beta 1
IL13	Interleukin 13
IL18RAP	Interleukin 18 Receptor Accessory Protein
IL1RL1	Interleukin 1 Receptor-Like 1

IL1RL2	Interleukin 1 Receptor-Like 2
IL2RB	Interleukin 2 Receptor, Beta
IL33	Interleukin 33
IL4	Interleukin 4
IL4R	Interleukin 4 Receptor
IL5	Interleukin 5 (Colony-Stimulating Factor, Eosinophil)
IL6R	Interleukin 6 Receptor
IL7R	Interleukin 7 Receptor
INPP5D	Inositol Polyphosphate-5-Phosphatase, 145kDa
KIF3A	Kinesin Family Member 3A
LCE3D	Late Cornified Envelope 3D
LCE3E	Late Cornified Envelope 3E
LPL	Lipoprotein Lipase
MHC	Major histocompatibility complex
MMP9	Matrix Metalloproteinase 9 (Gelatinase B, 92kDa Gelatinase)
NFAM1	NFAT activating protein with ITAM motif 1
NLRC4	NLR Family, CARD Domain Containing 4
NR4A1	Nuclear Receptor Subfamily 4, Group A, Member 1
ORMDL3	ORMDL Sphingolipid Biosynthesis Regulator 3
OVOL1	OVO-Like Zinc Finger 1
P2RY14	Purinergic receptor P2Y, G-protein coupled, 14
PHOSPHO1	Phosphatase, Orphan 1
PLAUR	Plasminogen Activator, Urokinase Receptor
PMP22	Peripheral Myelin Protein 22
PNMA2	Paraneoplastic antigen MA2
POSTN	Periostin, osteoblast specific factor
RHCG	Rh Family, C Glycoprotein
RNASE7	Ribonuclease, RNase A Family, 7
RNF222	Ring Finger Protein 222
RPTN	Repetin
RTKL1	Regulator Of Telomere Elongation Helicase 1
S100A7	S100 calcium binding protein A7
SCGB1A1	Secretoglobulin, Family 1A, Member 1 (Uteroglobulin)
SIGLEC10	Sialic Acid binding Ig-like Lectin 10
SLC22A4	Solute Carrier Family 22 (organic cation/ergothioneine transporter), member 4
SMAD3	SMAD Family Member 3
SNTN	Sentatin, cilia apical structure protein
SOCS3	Suppressor of Cytokine Signaling 3

<i>SPINK5</i>	Serine Peptidase Inhibitor, Kazal type 5
<i>SPINK7</i>	Serine Peptidase Inhibitor, Kazal Type 7 (Putative)
<i>SPRR1A</i>	Small Proline-Rich Protein 1A
<i>STAT5B</i>	Signal Transducer and Activator of Transcription 5B
<i>TAGAP</i>	T-cell activation RhoGTPase activating protein
<i>TLR1</i>	Toll-Like Receptor 1
<i>TLR4</i>	Toll-Like Receptor 4
<i>TLR6</i>	Toll-Like Receptor 6
<i>TMEM232</i>	Transmembrane Protein 232
<i>TMPRSS11B</i>	Transmembrane Protease, Serine 11B
<i>TNFRSF6B</i>	Tumor Necrosis Factor Receptor Superfamily, Member 6B
<i>TRPV3</i>	Transient Receptor Potential cation channel, subfamily V, member 3
<i>Tryp_SPC</i>	trypsin-like serine proteases