

A Severe Asthma Disease Signature from Gene Expression Profiling of Peripheral Blood from U-BIOPRED Cohorts

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At a Glance Commentary

Scientific Knowledge on the Subject

Asthma is a heterogeneous disease that only responds partially to currently available therapies.

Understanding heterogeneity in severe asthma at the molecular level and identifying biomarkers characterizing subgroups is essential to develop new, targeted therapies, and to select patients most likely to respond to these.

What this Study Adds to the Field

This study has detected marked differences in gene expression in blood cells between asthmatics and non-asthmatic individuals and produced a severe asthma disease signature composed of nearly 1700 genes. Based on gene expression, the population could be divided into two clusters: a cluster enriched for severe asthmatics (87%), which included users of oral corticosteroid and individuals with blood neutrophilia, and a second cluster enriched for mixed severity asthmatic and non-asthmatic individuals. This study shows the value of blood transcriptomics for the identification of asthma stratification biomarkers and for the unbiased identification of molecular pathways of interest. Follow-up studies will be needed to take further the findings presented here.

This article has an online data supplement, which is accessible from this issue's table of content online at www.atsjournals.org

Abstract

Rationale: Stratification of asthma at the molecular level, especially using accessible biospecimens, could greatly enable patient selection for targeted therapy.

Objectives: To determine the value of blood to identify transcriptional differences between clinically defined asthmatic and non-asthmatic groups, identify potential patient subgroups based on gene expression, and explore biological pathways associated with identified differences.

Methods: Transcriptomics profiles were generated by microarray analysis of blood from 610 asthmatic and control participants in U-BIOPRED. Differentially expressed genes (DEGs) were identified by ANOVA, including covariates for RNA quality, gender, and clinical site, and Ingenuity Pathway Analysis was applied. Patient subgroups based on DEGs were created by hierarchical clustering and topological data analysis.

Measurements and Main Results: 1693 genes were differentially expressed between severe asthmatics and non-asthmatics. The differences to non-asthmatics in non-smoking severe and mild/moderate asthmatics were significantly related ($r=0.76$), with a larger effect size in the severe asthmatics. The majority, but not all, differences were explained by differences in circulating immune cell populations. Pathway analysis showed an increase in chemotaxis, migration, and myeloid cell trafficking in severe asthmatics, decreased B lymphocyte development and hematopoietic progenitor cells and lymphoid organ hypoplasia. Cluster

analysis of DEGs created subgroups among the severe asthmatics that differed in molecular responses to oral corticosteroids.

Conclusions: Blood gene expression differences between clinically defined subgroups of asthmatics and non-asthmatic individuals as well as subgroups of severe asthma defined by transcript profiles show the value of blood in stratifying asthma patients and identifying molecular pathways for further study.

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Introduction

Asthma is a complex disease that presents in various clinical forms and severity (1). While clinical severity is routinely used as an asthma classifier, it is not stable (2) and does not take into account the multiple underlying pathobiological processes. A substantial group of severe patients do not respond to existing therapies and have the greatest unmet needs (1, 3, 4). With the exception of patients treated with the anti-IgE antibody, Omalizumab, the majority are treated with the same drugs despite heterogeneous underlying pathobiological mechanisms (5). Patient stratification efforts have used mainly clinical and pathophysiological parameters to understand underlying mechanisms (5). Recognizing the limitations of this approach to asthma, significant efforts are being made to stratify asthmatics using methods that bypass traditional clinical biases (6, 7).

Subgroups of asthma patients have been identified using either mechanistic, hypothesis-driven approaches (e.g. (8)) or unbiased statistical analyses of clinical and pathophysiological characteristics (9, 10). Additionally, molecular and genetic markers have been considered with the goal of understanding the pathobiological mechanisms underlying each subgroup (6). A subgroup of mild/moderate asthmatics expresses high levels of some Th2-associated genes in airway epithelial brushings and is characterized by eosinophilic inflammation, atopy, and a good clinical response to inhaled corticosteroids (ICS) (6). Although generally accepted biomarker(s) for the identification of T2 asthma do not exist yet, a biomarker set, composed of blood eosinophil counts, fractional exhaled nitric oxide (FeNO) and serum periostin levels, is emerging as a predictor of corticosteroid response (11). In contrast, patients who lack some of the T2

features, the non-T2 asthmatics, tend to be less responsive to ICS (6). Understanding their disease, therefore, is important to develop effective treatments (12, 13).

The heterogeneity of severe asthma involves more than T2 gene expression (14, 15). The U-BIOPRED (Unbiased BIOMarkers in Prediction of REspiratory Disease outcomes) study of severe asthma (16), obtained 'omics data from bronchial biopsies, bronchial and nasal brushings, sputum, blood, and urine (17). We report here the focused analysis of gene expression in blood.

Blood is an important medium through which inflammatory and immune cells, as well as systemic treatment, reach the lungs. Analysis of this compartment can provide insight into pathobiological pathways associated with disease severity or other clinically relevant features.

There were two main objectives. First, we sought to identify the major differences in blood transcript profiles and molecular pathways between non-asthmatic study participants and asthmatics stratified as severe and mild/moderate (3) and whether this was affected by treatment with oral corticosteroids (OCS). Our second aim was to use an unbiased approach to cluster patients on the basis of gene expression, independent of clinical parameters, hypothesizing that this would point to processes that transcend the standard clinical strata and management with current therapies.

Some of the results of these studies have been previously reported in the form of an abstract (18).

Material and Methods

Study population

U-BIOPRED is a multi-center prospective cohort study, involving 16 clinical centers in 11 European countries. The adult part of the U-BIOPRED study consists of four cohorts (16): i) severe asthmatics/non-smoking (nsm) (n=311), ii) severe asthmatics/smoking (sm) (n=110), iii) mild/moderate asthmatics/nsm (n=88), and iv) non-asthmatics/nsm (n=101) (see Supplemental Methods for more detail).

Ethics Statement

The study was conducted in accordance with the principles expressed in the Declaration of Helsinki. It was approved by the Institutional Review Boards of all the participating institutions and adhered to the standards set by the International Conference on Harmonization and Good Clinical Practice. All participants provided written informed consent. The study is registered under NCT01982162 on *clinicaltrials.gov*.

Samples

Blood samples were collected from 606 study participants (309 non-smoking severe asthmatics, 110 smoking severe asthmatics, 87 non-smoking mild/moderate asthmatics and 100 non-smoking non-asthmatic individuals).

Microarray Analysis

RNA was isolated using the PAXgene Blood RNA kit (Qiagen, Valencia, CA) with on-column DNase treatment (Qiagen). RNA integrity was assessed using a Bioanalyzer 2100 (Agilent Technologies, Santa Clara, CA). Samples with RIN \geq 6 were processed for microarray as described

(19) and hybridized onto Affymetrix HT HG-U133PM+ arrays (Affymetrix, Santa Clara, CA) using a GeneTitan® according to Affymetrix technical protocols. The microarray data are deposited in GEO under GSE69683.

Data Analysis Sets

After RNA and microarray quality control and exclusion of samples due to discrepancies with demographic data, the 498 samples available for analysis were randomized into training and validation sets (Supp Table 1).

Statistical Analysis

Data were normalized and log₂ transformed prior to statistical analyses. Differentially expressed genes (DEGs) and gene signatures were identified using ANOVA including covariates for RIN, clinical site, and gender. When age was examined as a covariate in the main model, there were no significant gene expression changes associated with age. Initial comparisons were made in a training set and results were tested in a separate validation set (Supp Table 1). Both sets were then combined for further analysis, including clustering. Volcano plots show an area containing most null results (99.99%), referred to as the **patch of disbelief** (PoD). Findings outside the PoD with a local false discovery rate (lfDR) of ≤0.05 were considered significant (20, 21). Correlations were found with differential cell counts as well as OCS use and these variables were included as covariates in some analyses as described in the supplement.

To discover asthma sub-groups without a priori hypotheses, unbiased Hierarchical Clustering was performed on standardized data using Euclidean distance and Ward linkage (see

Supplement). Ingenuity Pathway Analysis (IPA; QIAGEN, Redwood City, CA) was used for functional analysis of DEG sets and predictors of upstream regulators.

Gene Correlation Network Analysis

Gene expression correlation matrices were created using subsets of genes as described in the text. Gene modules were identified using scaled correlation matrices (22).

Topological Data Analysis

The transcriptomics data was clustered by topological data analysis (TDA) (23–27). TDA provides geometric representation of the relationships between patient data and variables in high dimensional datasets. TDA structures were generated using Ayasdi Cure with a norm correlation metric and two Neighborhood lenses (resolution 38, gain 3.4 ×, equalized).

For further details of data acquisition and analysis please see online supplement.

Results

Study Population

Demographic and clinical characteristics for the participants included in the gene expression analysis are shown in Table 1. Females were more highly represented in the severe asthma/non-smoking cohort and the median age in the mild/moderate asthma and non-asthmatic cohorts was lower. Approximately 40% of severe asthmatics reported using OCS. FeNO, a marker of inflammation in the lung, IgE, white blood cell counts (WBC), blood eosinophils, and neutrophils were elevated in all the asthma cohorts compared to the non-

asthmatic cohort. The increase in WBC was highest in severe asthmatics using OCS and in severe asthmatic smokers regardless of OCS use (Supp Fig 1).

Severe Asthma Disease Signature (SADS)

Compared to non-asthmatic participants, both the non-smoking and smoking severe asthmatics had markedly different gene expression profiles (Fig 1A,B). Both severe asthmatic cohorts had a larger number of DEGs and larger fold-changes for some of these genes. Some of the DEGs were selective for particular immune cell subtypes and major differences in expression were observed in genes associated with eosinophils and neutrophils (higher in asthma) and B cells (lower in asthma) (Supp Table 2). There was good agreement between gene expression differences (severe asthma vs. non-asthmatic) discovered in the training when compared to the validation set ($r=0.83$; Supp Fig 2).

By comparison, mild/moderate asthmatics showed fewer differences to non-asthmatic participants (Fig 1C). Most disease/non-asthmatic gene expression ratios in the severe and mild/moderate asthmatics trended in the same direction, even in cases where the differences were not statistically significant. While the differences relative to non-asthmatic participants were larger in the severe asthmatics than in mild/moderate asthmatics, there was a good correlation between the groups ($r=0.76$; Supp Fig 3).

A severe asthma disease signature was developed using data from the combined data set. The collection of probe sets outside the PoD from the severe asthmatics vs. non-asthmatics comparison was designated the Severe Asthma Disease Signature (SADS); it contained 2695

probe sets, corresponding to 1693 genes. The top DEGs in severe asthmatics ranked by significance are shown in Table 2 and the full list in Supp Table 3).

Gene expression differences between the severe asthmatics and non-asthmatic individuals could be due either to differences in cell populations or different activation states of the cells. To control for cell count effects, the statistical analysis was repeated with total white blood cell counts, percent monocytes, lymphocytes, neutrophils, and eosinophils as covariates in the analysis. This reduced the number of probe sets with differential expression from 2695 to 268 (Supp Fig 4; Supp Table 4).

Forty percent of the severe asthma patients were on OCS maintenance treatment, which can have an effect on transcriptional regulation. The steroid-inducible gene, FKBP5, was easily detected in the blood of the U-BIOPRED participants (Supp Fig 5) but levels were elevated only in a subset of asthmatics on OCS, while ICS did not appear to have an effect on blood FKBP5 transcript levels (Supp Fig 5).

When only severe asthmatics not using OCS were compared to non-asthmatic controls, the signature was reduced to 877 probe sets (Suppl Table 5), of which 774 were shared with the SADS. Thus, about 30% of the SADS was not due to OCS use. A direct comparison of severe asthmatics using and not using OCS showed distinct differences between the groups (Supp Fig 6). There were 1442 differentially expressed probe sets corresponding to 893 genes. B cell-associated genes had lower expression among OCS users and a small number of eosinophil-associated genes had higher expression in this group.

Hierarchical Clustering of the SADS

Hierarchical clustering using the full dataset and the probe sets in the SADS showed two major patient clusters (Fig 2A). One of the patient clusters contained >87% severe asthmatics (severe asthma-enriched cluster (SA-EC)), whereas the other contained approximately 56% severe asthmatics (mixed cluster (MC)) (Table 3). About 90% and 86% of the non-asthmatics and mild/moderate asthmatics, respectively, were assigned to the MC.

To test the robustness of this clustering, we generated severe asthmatic vs. non-asthmatic signatures separately in the training and the validation sets. For both data sets, their respective signatures generated two main clusters, one corresponding to the MC and the other to the SA-EC. As in the full data set, >87% of participants in the SA-EC were from the severe asthma cohort. The MC contained about 88% and 84% non-asthmatics and mild/moderate asthmatics, respectively.

The robustness of the clustering into SA-EC and MC was tested further by using the signature gene list generated from the training set to cluster the validation set and vice versa. There was a significant overlap between this and the original classification (Fisher exact test $p=3e-10$). The signature gene list from the validation set was then used to cluster the training set, again with significant overlap ($p=2e-5$).

Topological Data Analysis of the SADS

TDA clustering was first performed on the training and validation gene expression sets and then on the full data set, thereby creating three TDA networks. TDA reproduced the two clusters identified by hierarchical clustering, with good separation of the SA-EC and MC clusters. (Fig.

2B). In all three networks, the participants identified as members of the SA-EC (presented as red nodes in Fig 2B) localized to the top part of the structure, while the MC participants (presented as the blue nodes in Fig 2B) localized to the bottom part. There was little mixing of the SA-EC and MC clusters and edges throughout the structures, supporting the classification by hierarchical clustering.

Differences between Asthma Clusters

The proportion of OCS users was larger in the SA-EC: 60/101 (two participants had no information on OCS usage) severe asthmatics in the SA-EC used OCS [59%; 95% CI (50%-69%)] versus 39/131 in the MC [30%; 95% CI (22%-38%)]. There were also differences in blood cell counts between the clusters with SA-EC having higher total white cell and neutrophils, but lower lymphocyte counts (Supp Fig 7).

When overlaid onto the TDA structure, participants with high neutrophil counts, defined as >60% of neutrophils in blood, were similarly distributed to patients from SA-EC (Figure 2B – panel B). In the MC, lymphocyte counts were elevated in the OCS users compared to non-users, while in the SA-EC, neutrophil counts were elevated in OCS users and eosinophil counts trended lower (ANOVA $p=0.07$). No other clinical or pathophysiological variables were clearly associated with the MC and SA-EC.

Pathway Analysis

Notable pathways upregulated in peripheral blood of severe asthmatics compared to non-asthmatic participants were chemotaxis, mobilization, migration, and infiltration of myeloid cells (Table 4). Gene sets similar to those affecting myeloid cells were involved in functions

associated with decreased viral and bacterial infections. In severe asthmatics' peripheral blood, there also was a decrease in pathways related to the abundance of B-lymphocytes and hematopoietic progenitor cells, B-cell development, and hypoplasia of lymphoid organs.

Table 5 shows the five top upstream activators (positive activation scores) and inhibitors (negative activation scores). The upstream regulators include cytokines, enzymes, transcription factors, as well as fluticasone. As OCS use was a clinical variables and there were apparent differences in the effect of OCS use in the SA-EC and the MC, we looked for effects of OCS use on gene expression by cluster. In the MC, there were no gene expression differences between OCS users and non-users, whereas extensive differences were present in the SA-EC. Pathway analysis of the DEGs between OCS users and non-users in the SA-EC showed that these genes are known corticosteroids targets. The top three predicted upstream regulators were dexamethasone, fluticasone, and prednisolone (data not shown).

Discussion

This is the first comprehensive study of whole genome expression in circulating cells in asthma, a complex respiratory disease in which the contribution of circulating inflammatory cells is poorly understood. It is also the first study to explore the value of transcriptomic analysis of blood cells for asthma stratification. It shows that gene expression does not follow standard clinical classification that is routinely used in clinical practice and for drug development. Pre-specified statistical analyses were first applied to data from cohorts of asthmatics defined by the U-BIOPRED consensus group (3) and from non-asthmatic participants. Marked differences between non-asthmatic individuals and severe asthmatics and fewer differences between

mild/moderate asthmatics and non-asthmatics suggest a continuum of pathobiology from mild/moderate to severe disease. We then applied unbiased clustering, the principal objective of U-BIOPRED, which stratified the study participants into two main clusters: a SA-EC, that consisted mostly of severe asthmatics, and a MC, consisting of about 56% severe asthmatics. More than 85% of the enrolled non-asthmatics and mild/moderate asthmatics were in the MC.

In the pairwise comparisons between the clinically defined non-asthmatic and severe asthmatic cohorts, several DEGs expressed in specific immune cells stood out. Genes associated with B-lymphocytes, including *TCL1A*, *EBF1*, *TSPAN13*, *IGK@*, *BLNK*, and *FAM129C* and genes associated with T-cells (*IL6ST*, *LRRN3*, and *MAN1C1*) [(28, 29) and unpublished Amgen data] had lower expression in severe asthmatics. Other down-regulated genes in severe asthma (*AKAP2*, *STRBP*, *TCF4*, *BCL11A*, *RAB30*, and *CCDC50*) have been reported as most highly expressed in B-lymphocytes but are also present in other cell types [(28, 29) and unpublished Amgen data]. Genes mainly associated with granulocytes with some contributions from T-cells (e.g. *DEF4A*, *OFLM4*, *CEACAM8*, *LTF*, *CCL23*, or *BPI*) [(28, 29) and unpublished Amgen data] had higher expression in severe asthmatics. Recently, signatures of eosinophilic and granulocytic inflammatory signals in whole blood were found to be associated with lower asthma control (30). Of the six TREM-1/LPS signaling genes, *CCL23*, *OLIG1* and *OLIG2* were contained in the SADS.

The number of DEGs was reduced by about 90% when blood cell counts were included as covariates. The DEGs that persisted may indicate altered cell function, although we cannot exclude that additional cell types, for which we did not have frequency data, contributed to the

SADS. After adjusting for cell counts, genes associated with B-lymphocytes and IPA functions such as lymphoid organ hypoplasia and decrease in B-lymphocyte development remained significant. While these differences were clearly detectable in the severe asthmatics, they were reduced or absent in the mild/moderate asthmatics. This observation is consistent with the notion that effects on B-lymphocytes are due either to severity of disease itself or OCS treatment in the severe asthmatics. Indeed, our analysis of severe OCS users and non-users showed a considerable number of DEGs. About 10 percent of the DEGs with lower expression in OCS users were B cell-selective. However, in this comparison, we cannot rule out contributions from disease, as OCS users by definition have more severe disease than OCS non-users. Furthermore, the number of probe sets in a signature derived from a comparison of severe asthmatics not using OCS with non-asthmatics was considerably smaller than the SADS. As in the SADS, B and T cell-selective genes had lower expression in the asthmatics and eosinophil-selective genes had higher expression. In addition to the absence of OCS effects, better asthma control and, therefore, less severe disease and the smaller sample size likely contributed to this observation.

Consistent with the observed gene expression differences, the top upstream inhibitors included *PAX5*, *TCF3*, and *MYC*, all of which are transcriptional regulators with roles in B- and T-cell development, early B-cell differentiation, or lymphoid carcinogenesis (31, 32). The top upstream activators included genes involved in activation of granulocyte production, differentiation, and function (upstream regulators *CSF3*, *NOS2*, and *CEBPE*) (33–35). The identification of the topical (inhaled) corticosteroid, fluticasone, as an upstream activator confirmed the presence of steroid effects on gene expression. *TGM2* is a cross-linking enzyme

with a role in cell adhesion, wound healing, proliferation, and cellular motility (36). Its expression is increased in inflammatory and allergic conditions and there is evidence for a role of *TGM2* in allergic asthma (37, 38). It is also the implicated auto-antigen in celiac disease (39).

An important consideration for the observations made in this study is whether they reflect clinical severity of asthma or treatment. Severity is defined by symptoms, lung physiology, and the various types and doses of medications used for symptom control (5). Of these three elements, treatment with OCS potentially has the greatest impact on gene expression of circulating cells. OCS is, therefore, the most important confounder because of greater systemic bioavailability than ICS, which have a predominantly local anti-inflammatory effect (40). Furthermore, the inflammatory milieu within the lungs may influence gene expression in blood cells, partly because many of them re-circulate and partly because of systemic mediator signals from the lungs. Corticosteroids inhibit neutrophil apoptosis and contribute to neutrophil activation (41–43) and are likely to account, at least partly, for the observed blood neutrophilia. Corticosteroids also reduce eosinophil longevity (44). Furthermore, glucocorticoids induce cell death in lymphoid cells and are included in chemotherapy regimens for lymphoid malignancies (45). However, the doses used in asthma therapy may not be sufficient to kill lymphoid cells and no reduction in lymphoid cell count was observed. Therefore, corticosteroid effects on lymphocyte function are probably more relevant.

Corticosteroids act through specific receptors, including the nuclear receptor subfamily 3 (*NR3C*), which function as ligand-dependent transcriptional regulators (46). In the absence of robust published data exploring the effects of OCS on blood cell gene expression in a human

population *in vivo*, *FKBP5* expression was used to gauge the effects of asthma therapy. *FKBP5* is an NRC3 chaperone, is highly expressed in blood of both non-asthmatics and asthmatics, and is itself corticosteroid-inducible (47). With the exception of one asthmatic, all the OCS users with elevated *FKBP5* levels were in the SA-EC. The segregation of patients with elevated *FKBP5* levels into the SA-EC, especially the non-smokers, suggests that disease severity is associated with high *FKBP5* expression. Whether this is due to underlying disease mechanisms or treatment with OCS is unclear. Whether the high variability within each patient group reflects individual differences in the ability to respond to corticosteroids, possibly due to *NR3C* or *FKBP5* genetic variation (48), the presence of oxidative/nitrosative stress (*NOS2* above), or the lack of adherence to asthma treatment, requires further analysis.

This study creates a solid basis for further assessment of the clinical value of the observed DEGs. The two classes of patients distinguished by blood transcript profiling did not align in a simple way with clinical characteristics, so the clinical applicability has yet to be defined. Gene sets identifying the two clusters can be developed based on the data from this study and can be tested prospectively in observational and intervention studies. Observational studies would serve to validate the findings of this study while intervention studies could provide insight into appropriate courses of treatment for the two classes of patients.

Blood eosinophilia is now widely used as a stratification biomarker of so-called T2 type asthma (49–52). As the reporting of eosinophil counts can vary between laboratories in multi-center studies, the expression of several eosinophil-selective genes (*ALOX15*, *ADORA3*, or *CCL23*), found in this study to correlate with eosinophil counts, could be used for a more consistent

measure of eosinophil numbers. However, blood transcript analysis cannot be used to stratify patients of other genes associated with T2 asthma: *POSTN*, *CLCA1* and *SERPINB2*. These T2 genes were shown to be elevated in lung epithelial cells and in steroid-naïve asthmatics (53) and to be responsive to IL-13 and corticosteroids (53, 54), but only *SERPINB2* transcripts were detectable in blood in the current study, likely derived from myeloid cells. Furthermore, this transcript was not elevated in asthmatics and there was no indication of down-regulation in patients taking maintenance OCS. Thus, these genes appear to play a role in T2 high or low classification only in lung samples but not in blood.

One limitation of this study is that a number of clinical outcomes used in U-BIOPRED relied on self-reporting by the participants, which is subject to greater inaccuracy than measurements of physiologic or pathobiological biomarkers. For proper interpretation of blood transcript profiling data, it is important to have reliable information on OCS use. Non-adherence to treatment in severe asthma is estimated to be 30-70% (55). In U-BIOPRED, participants were required to have been under follow-up by a respiratory physician for at least six months, while their asthma control was optimized and medication adherence assessed using the Medication Adherence Report Scale (MARS) (16). The average MARS score among non-smoking severe asthmatics was 22.44, suggesting good adherence to treatment. However, self-reported adherence tends to overestimate actual adherence to treatment (56). Furthermore, some severe asthmatics show relative corticosteroid insensitivity (57), which was not assessed in this study. The SA-EC cluster of asthmatics included patients not taking OCS but they still had expression profiles that were more similar to severe asthmatics taking OCS in the SA-EC than the severe asthmatics in the MC cluster.

In summary, this study has provided convincing evidence of differential gene expression in blood in patients with asthma. Our study shows, for the first time, major differences in the activity of circulating cells that do not follow currently applied clinical classification based on severity of asthma. The findings presented here are hypothesis-generating and clinical studies will be needed to determine the utility of stratifying markers derived from this study. Follow-up biological studies may lead to new insights into asthma disease mechanisms and open new avenues for therapeutic intervention.

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Figure Legends

Figure 1. Comparison of Non-smoking Mild/moderate Asthmatics, and Non-smoking and Smoking Severe Asthmatics with Non-smoking Non-asthmatic Volunteers. A. Severe asthmatics, nsm, B. Severe asthmatics, sm and C. Mild/moderate asthmatics. A positive fold-change indicates higher expression in asthmatics compared to non-asthmatic individuals and negative fold-change lower expression. Differentially expressed genes that were not assigned a cell type are ubiquitously expressed in immune cells. Light blue shaded area: Patch of Disbelief (non-significant differences).

Figure 2. A. Two-dimensional Clustering of the Severe Asthma Disease Signature. The heat map was generated using all the samples in the study and the genes that were differentially expressed between non-asthmatic individuals and severe asthmatics. Turquoise: class enriched in severe asthmatics; red: mixed class containing 90% of the non-asthmatic participants and 86% of the mild/moderate asthmatics. Blue squares: non-smoking severe asthmatics; turquoise squares: smoking severe asthmatics; brown squares: mild/moderate asthmatics; red squares: non-asthmatic individuals. B. Topological Data Analysis. *Left:* The distribution of classes derived from hierarchical clustering of the SADS in a network created by TDA using data from (top) the training set ($n = 328$), (middle) the validation set ($n = 170$), and (bottom) the whole data set ($n = 498$). Red and blue nodes represent participants identified by hierarchical clustering as being within the severe asthma-enriched cluster and the mixed cluster, respectively. *Right:* The distribution of study participants with high neutrophil cell counts in TDA structures: red nodes represent those with blood neutrophil cell count $>60\%$, and blue nodes represent those with

blood neutrophil cell count <60%. [Metric: Norm Correlation. Lenses: Neighborhood Lens 1 (Res. 38, Gain 3.4), Neighborhood Lens 2 (Res. 38, Gain 3.4)].

Table 1 Demographic Characteristics

Characteristic	Severe Asthma/Non- smoking (n=246)	Severe Asthma/Smoking (n=88)	Mild/moderate Asthma/Non- smoking (n=77)	Non- asthmatic/Non- smoking (n=87)
Gender				
Male (n/%)	85/34.6	45/51.1	40/51.9	53/60.9
Female (n/%)	161/65.4	43/48.9	37/48.1	34/39.1
Age (years)*	53 (43;62)	55(48;61)	39 (27;55)	37 (27;49)
White Caucasian (%)	87.4	95.5	93.5	92.0
OCS dose normalized to prednisolone (mg)*#	10 (5.8;16.3)	10 (7.5;18.8)	NA	NA
Atopy (positive/negative/unavailable)	180/47/19	54/27/7	68/8/1	32/44/11
FEV1 % predicted*	67 (50;84)	65 (53;75)	92 (77;102)	103 (94;110)
FeNO ppb*	26 (15.5;48.9)	25 (11.5;48)	25.5 (18.4;45.4)	19 (13.8;26.8)
IgE IU/ml*	112 (44;317)	140 (70;378)	102 (53;244)	27 (9;68)
Blood eosinophils $10^3/\mu\text{L}^*$	0.20 (0.10;0.40)	0.23 (0.12;0.40)	0.20 (0.10;0.30)	0.10 (0.10;0.20)
Blood neutrophils $10^3/\mu\text{L}^*$	4.7 (3.5;6.1)	4.8 (3.8;6.6)	3.3 (2.7;4.5)	3.0 (2.4;3.9)
Blood lymphocytes $10^3/\mu\text{L}^*$	1.9 (1.5;2.4)	2.1 (1.6;2.6)	1.7 (1.5;2.1)	1.7 (1.4;2.2)
Total white blood cells $10^3/\mu\text{L}^*$	7.8 (6.2;9.4)	7.9 (6.7;9.8)	5.8 (5.1;7.2)	5.3 (4.7;6.4)

*median (interquartile range)

40% and 37.5% of patients used OCS in the severe asthma/non-smoking and the severe asthma/smoking cohorts, respectively

Table 2 Genes with Most Significant Differential Expression between Severe Asthmatics and Non-asthmatic Individuals

Higher Expression in Severe Asthmatics				Lower Expression in Severe Asthmatics			
Gene symbol	Fold Change	P-value	IFDR	Gene symbol	Fold Change	P-value	IFDR
DEFA4	2.58	7.13E-10	0.00	TCL1A	-1.71	9.51E-07	0.00
OLFM4	2.43	2.27E-07	0.00	EBF1	-1.69	4.56E-09	0.00
CEACAM8	2.40	2.17E-09	0.00	TSPAN13	-1.69	1.91E-12	0.00
LTF	2.20	5.79E-09	0.00	IGK@	-1.68	1.31E-09	0.00
MMP8	2.18	9.98E-09	0.00	LRRN3	-1.66	4.83E-07	0.00
BPI	2.03	3.57E-09	0.00	CUX2	-1.49	2.63E-09	0.00
LCN2	2.03	5.45E-09	0.00	AFF3	-1.47	8.43E-08	0.00
CRISP3	1.98	8.07E-09	0.00	BLNK	-1.46	2.89E-09	0.00
RNASE3	1.98	2.65E-08	0.00	AKAP2	-1.44	1.96E-08	0.00
CEACAM6	1.97	8.44E-09	0.00	STRBP	-1.43	1.83E-09	0.00
CCL23	1.86	3.52E-06	0.00	IL6ST	-1.42	2.30E-09	0.00
HP	1.75	2.52E-09	0.00	MAN1C1	-1.40	1.59E-08	0.00
DEFA1	1.72	3.04E-10	0.00	FAM129C	-1.39	3.69E-08	0.00
MS4A3	1.69	1.09E-06	0.00	TCF4	-1.39	5.04E-11	0.00
CTSG	1.68	5.90E-07	0.00	TTN	-1.38	5.81E-09	0.00
CD24	1.62	5.34E-08	0.00	CCR6	-1.37	3.00E-09	0.00
ANXA3	1.60	2.33E-08	0.00	RAB11FIP3	-1.37	1.20E-09	0.00
SLPI	1.60	2.16E-09	0.00	BCL11A	-1.36	2.99E-09	0.00
CAMP	1.58	6.95E-09	0.00	GPM6B	-1.36	8.25E-10	0.00
RNASE2	1.56	1.57E-07	0.00	RAB30	-1.35	7.20E-09	0.00
TCN1	1.52	7.10E-08	0.00	PDE7A	-1.34	1.41E-10	0.00
F5	1.47	1.21E-10	0.00	SLFNL1	-1.31	6.97E-09	0.00
CEBPE	1.46	6.86E-09	0.00	CCDC50	-1.29	3.15E-09	0.00
GAPT	1.36	4.56E-10	0.00	ENAM	-1.26	3.80E-09	0.00
PNPLA1	1.35	1.40E-08	0.00	LUC7L	-1.25	9.86E-10	0.00
STXBP5	1.31	1.04E-08	0.00	NSUN6	-1.25	2.79E-09	0.00
ACSL1	1.30	6.85E-09	0.00	TGIF2	-1.25	7.67E-10	0.00
ALAS1	1.21	1.46E-09	0.00	ZBTB20	-1.25	1.17E-10	0.00
AMPD3	1.19	8.84E-10	0.00	CBFA2T2	-1.22	1.30E-09	0.00
MYD88	1.18	1.70E-10	0.00	KIAA0355	-1.20	3.76E-10	0.00

Table 3 Representation of the Four Cohorts in the Two Transcript Classes

Cohort	Cluster Classification n (%)		
	Mixed (MC)	Severe Asthma	Enriched (SA-EC)
Non-asthmatic, nsm	78 (22.8)	9 (5.8)	
Mild/moderate asthma, nsm	66 (19.3)	11 (7.1)	
Severe asthma, nsm	143 (41.8)	103 (66.0)	
Severe asthma, sm	55 (16.1)	33 (21.2)	
Total	342 (100)	156 (100)	

Table 4 Ingenuity Pathway Functional Analysis

Summary of Functions	Total Genes
Increased chemotaxis, recruitment and infiltration of myeloid cells such as neutrophils; increased angiogenesis; arthritis	448
Increase in protein metabolism and decrease in cancer	347
Decreased quantity and differentiation of lymphocytes and mononuclear leukocytes	293
Decreased viral infection	282
Increased apoptosis and decreased cell survival	219
Increased migration of mononuclear leukocytes and killing of bacteria; decrease in infections including fungal infections	211
Hypoplasia of lymphoid organs and decreased quantity of hematopoietic progenitor cells; increase in quantity of double negative T-cells	93
Decreased development of pre-B, pro-B and B lymphocytes	72
Increased aggregation and coagulation of blood cells	54

Table 5 Ingenuity Pathway Analysis Top Upstream Regulators and Inhibitors

Upstream Regulator	Molecule Type	p-value of Overlap	Activation z-score
CSF3	Cytokine	9.18E-07	4.47
TGM2	Enzyme	4.09E-08	4.08
NOS2	Enzyme	1.00E+00	3.52
Fluticasone	Chemical drug	1.19E-05	3.38
CEBPE	Transcription regulator	4.58E-04	3.11
PAX5	Transcription regulator	2.94E-06	-2.76
TCF3	Transcription regulator	1.41E-01	-2.80
Immunoglobulin	Complex	1.10E-05	-3.29
MKL2	Transcription regulator	1.73E-03	-3.32
MYC	Transcription regulator	1.15E-04	-4.83

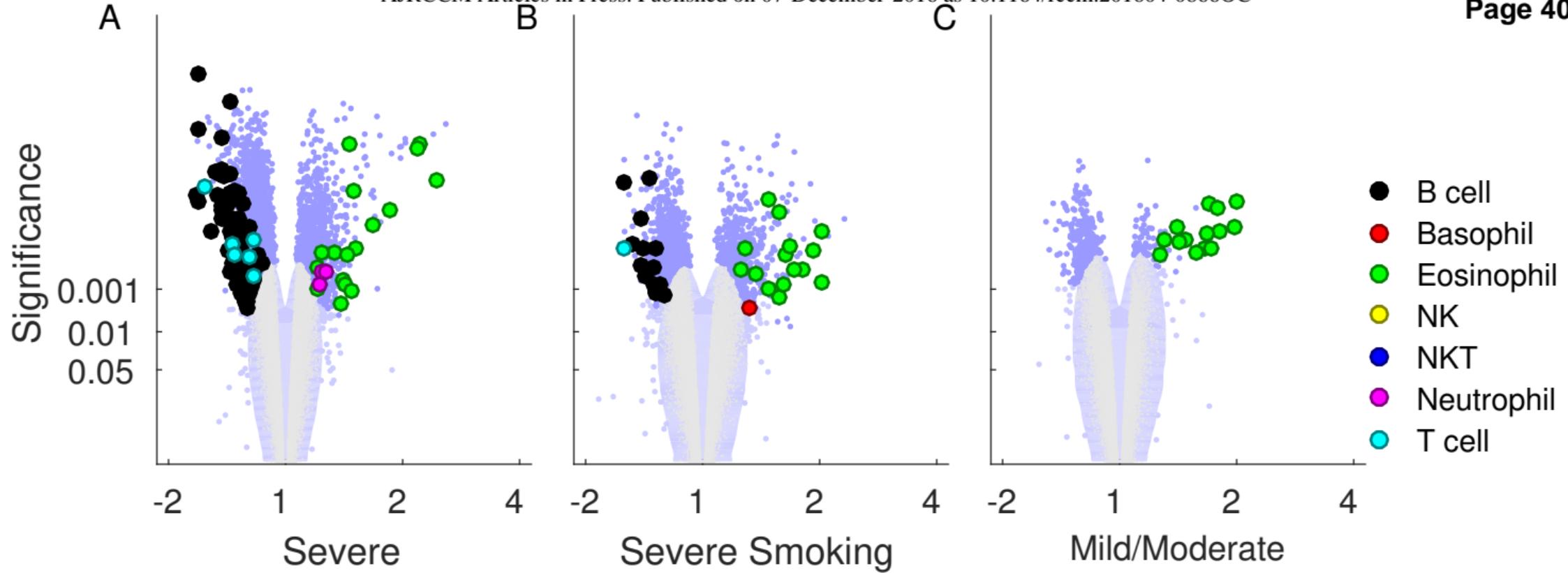
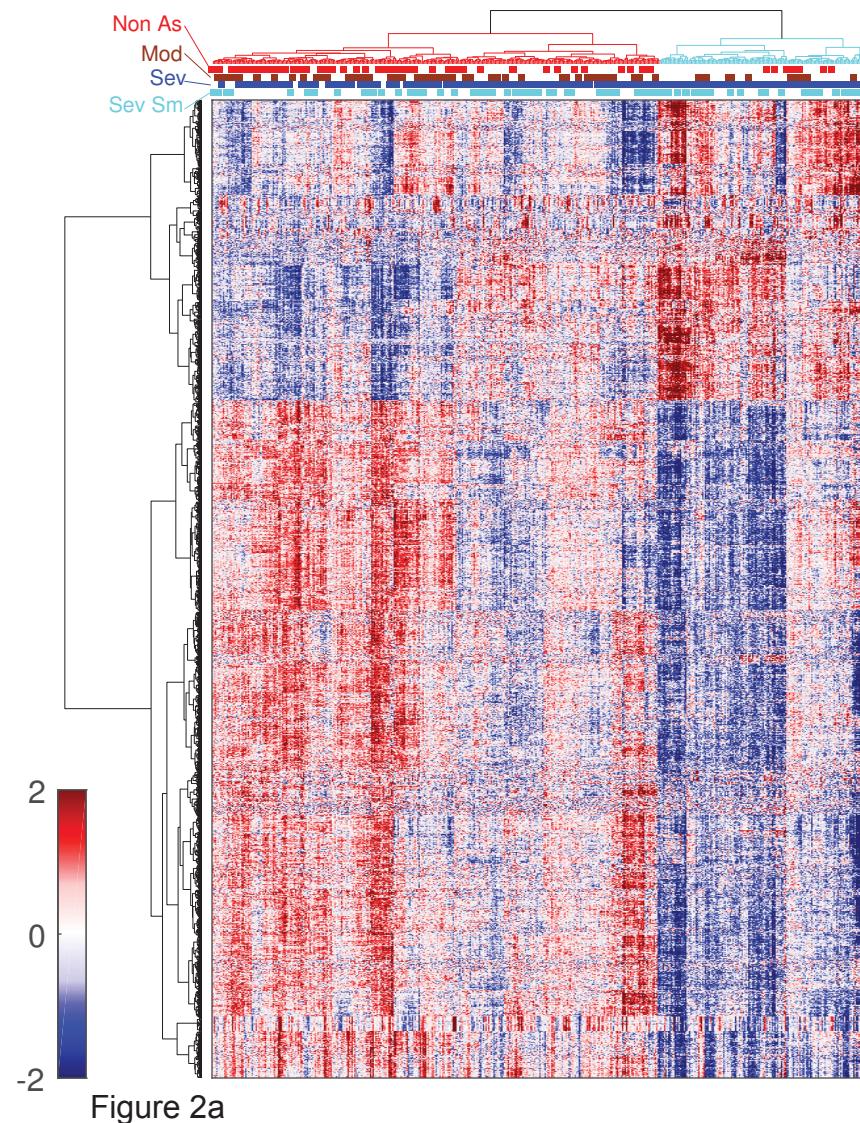


Figure 1

Fold Difference Relative to Non-Asthmatics
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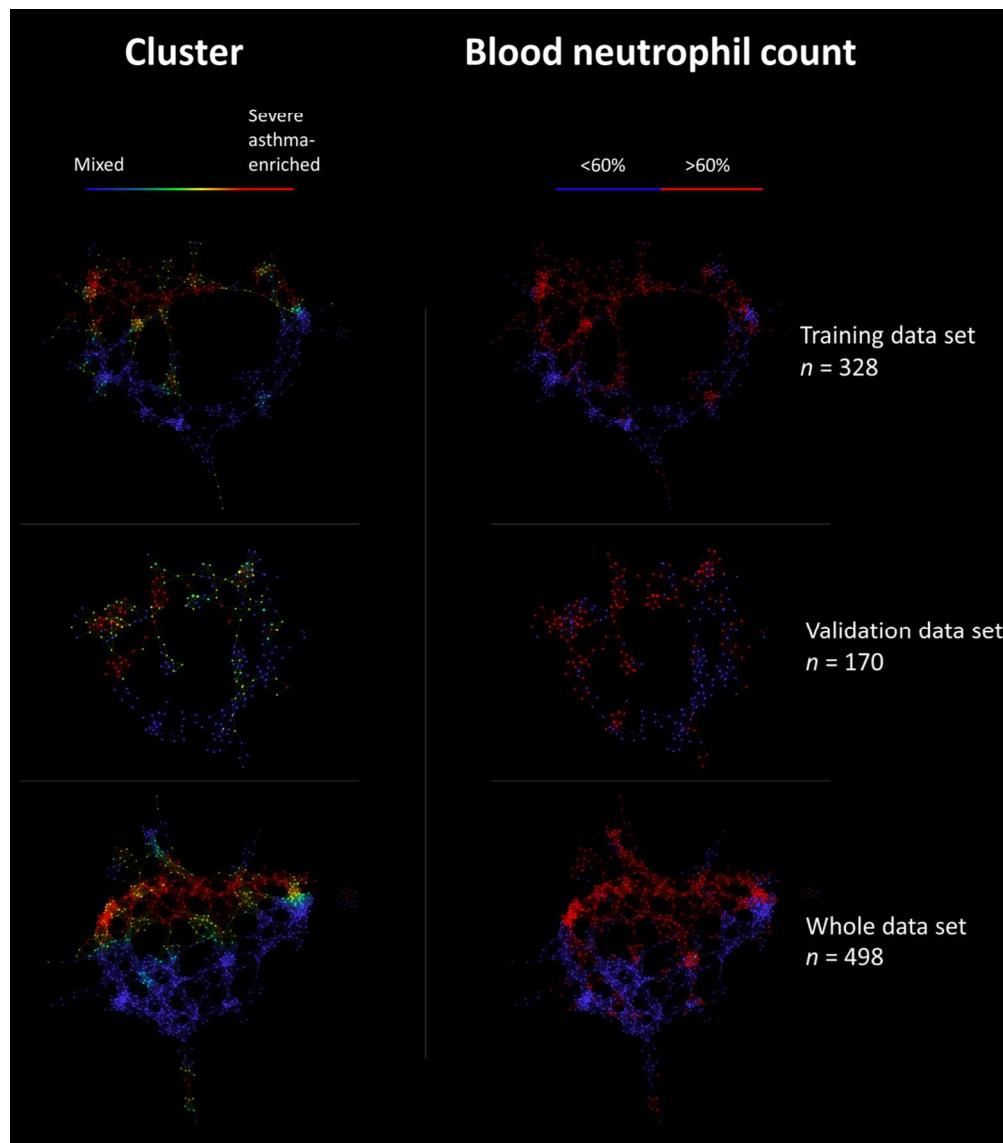


Figure 2b

242x275mm (150 x 150 DPI)

Online Data Supplement**A Severe Asthma Disease Signature from Gene Expression Profiling of Peripheral Blood from U-BIOPRED Cohorts**

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Supplementary Methods

Categorization of the Study Population

The participants were categorized into four groups:

- Severe non-smoking asthma: Participants in this group were non-smokers with a less than five pack-year smoking history, with asthma and uncontrolled symptoms defined according to GINA guidelines and/or frequent exacerbations (more than two per year) despite high-dose inhaled corticosteroids (ICS) ($ICS \geq 1000\mu\text{g}$ fluticasone propionate/day or equivalent dose).
- Smokers and ex-smokers with severe asthma: This group was defined as for the severe asthma group except that they were either current smokers or ex-smokers with a pack history of at least five years.
- Mild/moderate non-smoking asthmatics: These non-smoking participants had controlled or partially controlled asthma symptoms, as defined by the Global Initiative for Asthma (GINA), whilst receiving a dose of less than $500\mu\text{g}$ fluticasone propionate/day or equivalent.
- Healthy non-smoking controls (HC): These participants had no history of asthma or wheeze, had no other chronic respiratory disease, had never smoked and their pre-bronchodilator FEV_1 was $\geq 80\%$ predicted.

Atopy

Atopy was diagnosed either by skin tests or RAST analysis of six common aero-allergens as described in more detail in the Supplement to Shaw et al. (1).

Skin prick testing was performed to common allergens using single headed lancet and positive (10mg/ml histamine) and negative (saline) controls. A positive skin prick test was defined as a wheal $\geq 3\text{mm}$ to common aeroallergens (*Dermatophagoides pteronyssinus*, *Dermatophagoides farinae*, cat, dog, grass pollen mixture, tree pollen mixture and aspergillus plus the following were they were relevant to the site: cockroach and *Olea europaea* and *Parietaria*) in the presence of positive ($\geq 3\text{mm}$) and negative (0mm) controls.

Total IgE and specific IgE tests to the six common aeroallergens were measured. Allergic sensitization was defined as at least one test with a specific IgE $\geq 0.34\text{IU}$. These measurements were made in the laboratory of the individual site.

Statistical Analysis

Differentially expressed genes (DEGs) and gene signatures were identified using an ANOVA model including covariates for RIN, site and gender. Permutation testing was used to estimate a null distribution and an iso-density line encircled the area containing most null results (99.99%). The area is referred to as the **patch of disbelief** (PoD). A local false discovery rate (LFDR) of <0.05 was estimated using methods similar to those previously described (2, 3). DEGs are those results outside the PoD with an LFDR < 0.05 .

In some analyses, white blood cell counts (WBC) were used as covariates to capture the total abundance of cells. Percentages of eosinophils, basophils, neutrophils, monocytes, and lymphocytes were used to model the proportion of that cell type in the blood. Zero values were

imputed at $\frac{1}{2}$ the observed minimum of non-zero values. Data were log2 transformed to improve normality

Hierarchical Clustering was performed on data standardized to have a mean of zero and standard deviation of one. A Euclidean distance metric and Ward linkage were used. For validation purposes, clustering was done on various datasets (e.g. training and validation) in combination with various gene lists (e.g. severe asthma signature developed from the training set). Cutting the top branch formed two clusters. A cross-tabulation of number of participants by cohort and cluster were evaluated for enrichment using a chi-squared test. Characteristics that were tested included lung function (including FEV₁, methacholine challenge, airflow limitation, forced oscillation technique, plethysmography, spirometry), exacerbation frequency, blood chemistry, lung biopsy and sputum differential cell count, medication use (inhaled corticosteroid and medications other than asthma medication), ACQ, AQLQ, ESS, HADS, and MARS questionnaires, demographics, family history, medical history, and allergies.

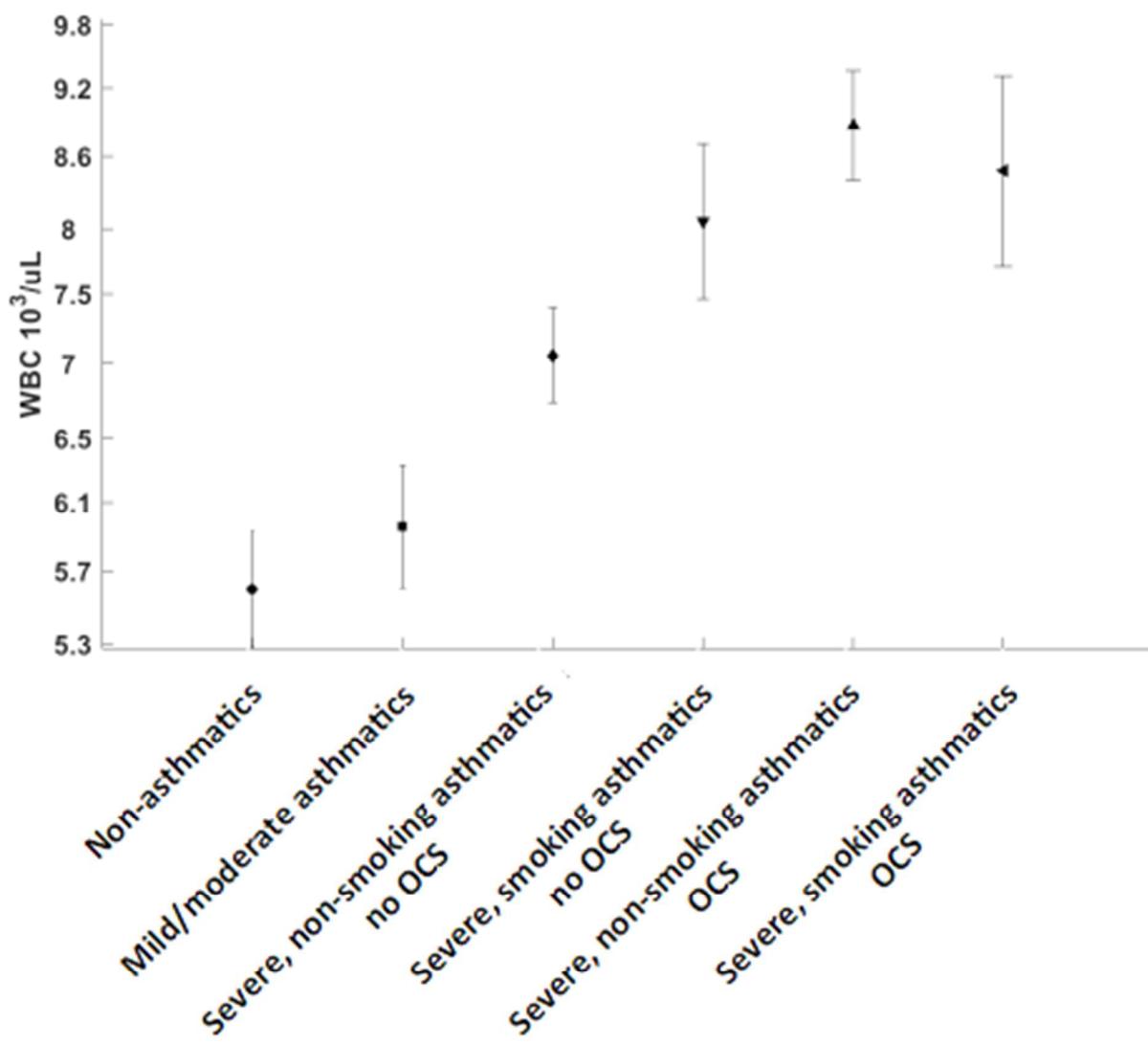
Functional analysis of DEG sets and predictors of upstream regulators were identified using Ingenuity Pathway Analysis (IPA; QIAGEN, Redwood City, CA). The pathway analysis examines how many known targets of each disease, function, or regulator are present in the submitted data set and also compares the direction of change. A p-value for the overlap of dataset and known pathways and an activation score for the likely activation state that takes into account the direction of differences were generated.

Gene Correlation Network Analysis

Gene expression correlation matrices were created using subsets of genes as described in the text. The absolute value of the correlation matrices was scaled (each element raised to some power) to make them approximately scale free. Generalized topological overlay (GTOM) (4) was applied to the scaled correlation matrices. Graphs were created by adding all edges with a GTOM value greater than a variable threshold and monitoring the number of connected components formed at each threshold. A bounded search algorithm was used to identify a threshold that maximized number of connected components. Each connected component was one gene module.

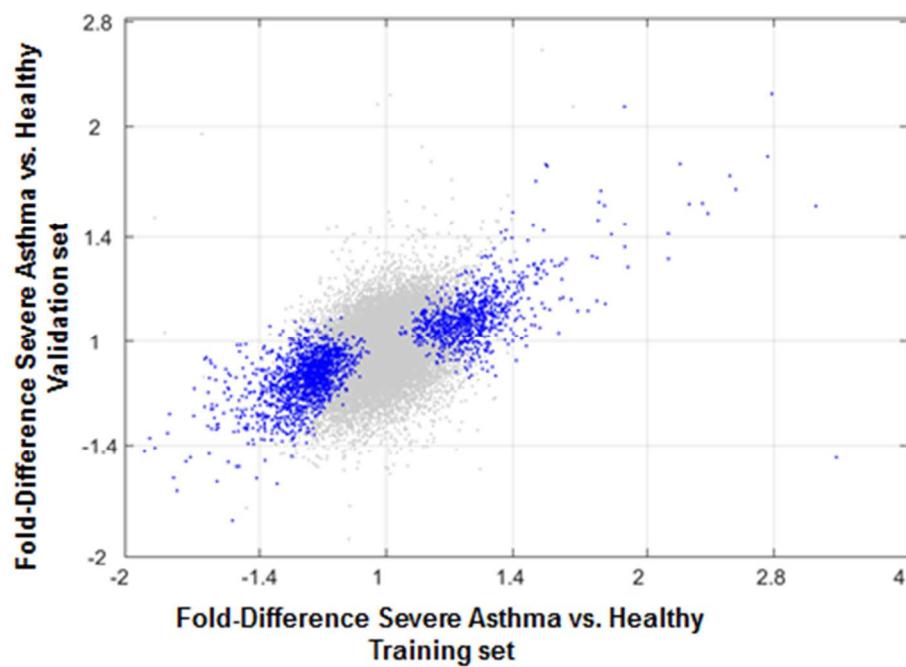
References:

1. Shaw DE, Sousa AR, Fowler SJ, Fleming LJ, Roberts G, Corfield J, Pandis I, Bansal AT, Bel EH, Auffray C, Compton CH, Bisgaard H, Bucchioni E, Caruso M, Chanez P, Dahlén B, Dahlen S-E, Dyson K, Frey U, Geiser T, Gerhardsson de Verdier M, Gibeon D, Guo Y-K, Hashimoto S, Hedlin G, Jeyasingham E, Hekking P-PW, Higenbottam T, Horváth I, et al. Clinical and inflammatory characteristics of the European U-BIOPRED adult severe asthma cohort. *Eur Respir J* 2015;46:1308–21.
2. Efron B, Tibshirani R, Storey JD, Tusher V. Empirical Bayes Analysis of a Microarray Experiment. *J Am Stat Assoc* 2001;96:1151–1160.
3. Ploner A, Calza S, Gusnanto A, Pawitan Y. Multidimensional local false discovery rate for microarray studies. *Bioinformatics* 2006;22:556–565.
4. Yip AM, Horvath S. Gene network interconnectedness and the generalized topological overlap measure. *BMC Bioinformatics* 2007;8:22.

Supplementary Figures**Supplementary Figure 1**

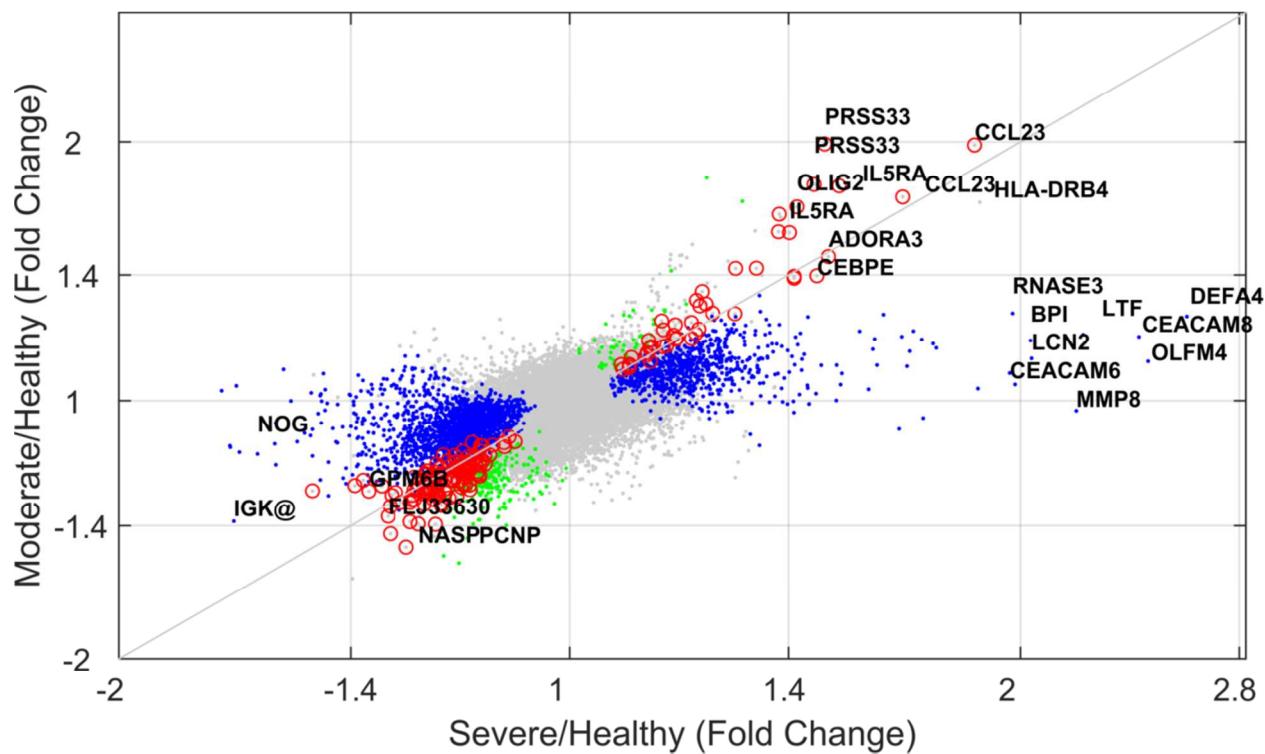
Mean white blood cell counts plotted for the non-asthmatics, mild/moderate asthmatics, and severe asthmatics. The latter group was divided by OCS use and smoking. Mean and 95% confidence intervals are shown for each group.

Supplementary Figure 2



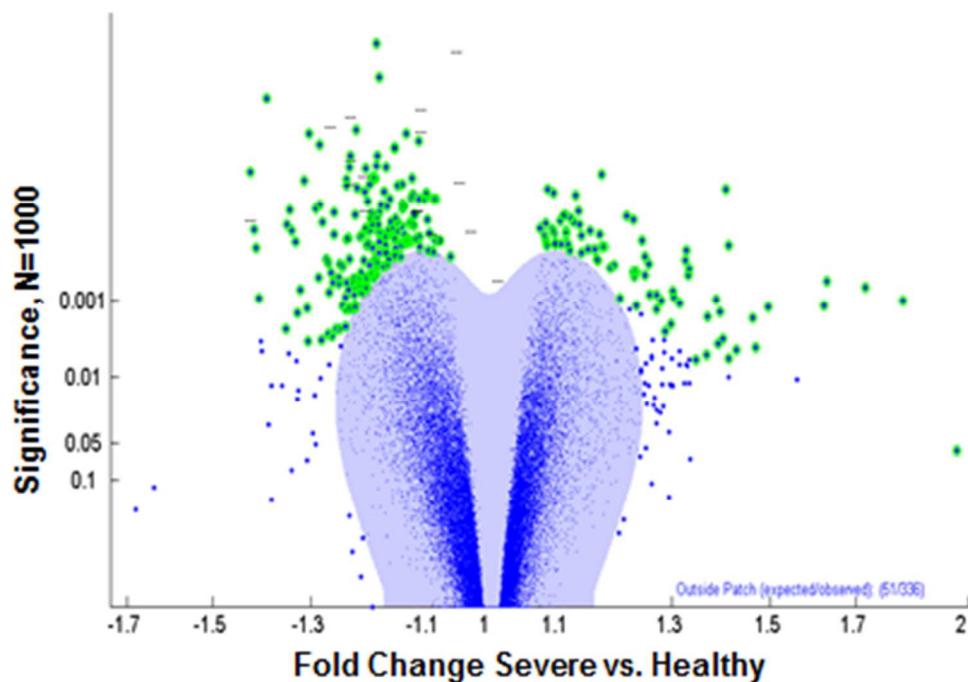
Comparison of gene expression differences between non-asthmatic and severe asthmatics were assessed separately in the training and the validation sets. The fold-change values for the two comparisons were then plotted against each other. Differences between the two data sets generally trended in the same direction, even though the magnitude of the effect may differ. Blue dots indicate reporters that were significantly different in the training set.

Supplementary Figure 3



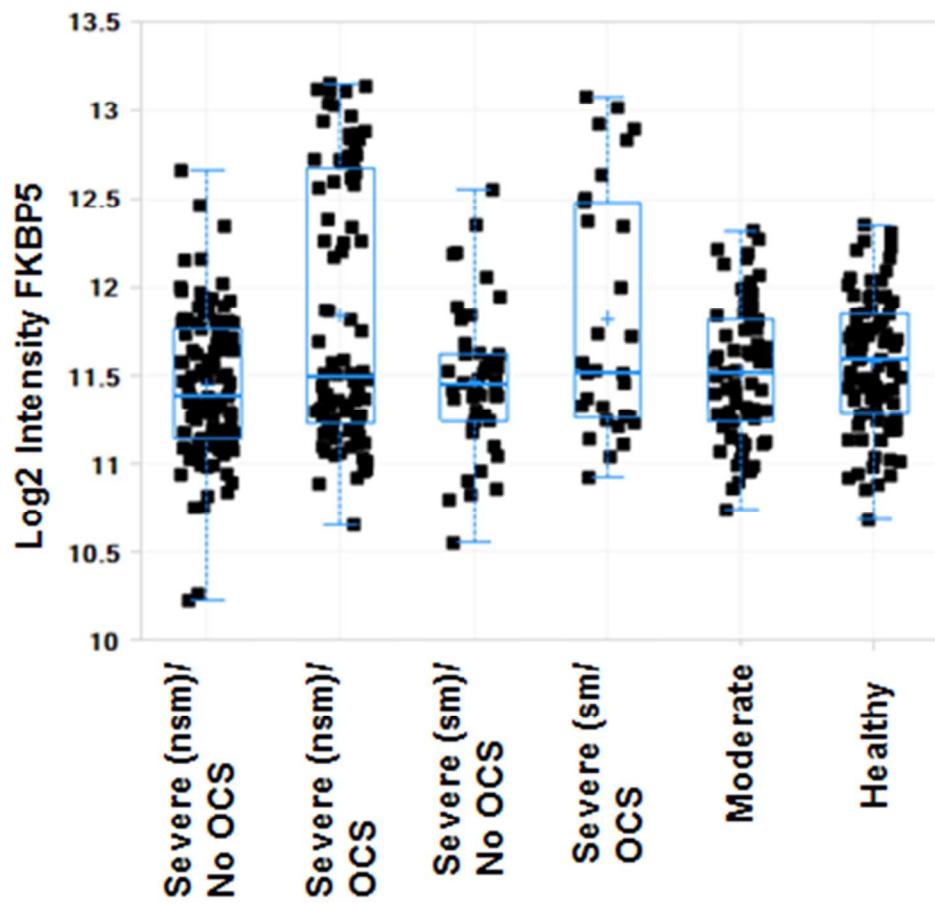
Comparison of gene expression differences between mild/moderate asthmatics or severe asthmatics and non-asthmatic individuals. The fold-change values for the two comparisons were plotted against each other. Perfect agreement between the two comparisons would put all the data points on the 45° diagonal. The moderate and severe asthmatics shared differences to non-asthmatic individuals. The magnitude of the difference and the number of differentially expressed genes was larger in the severe asthmatic vs. non-asthmatic comparison. Blue, green and red indicate changes found in severe only, mild/moderate only or both cohorts compared to non-asthmatic volunteers.

Supplementary Figure 4



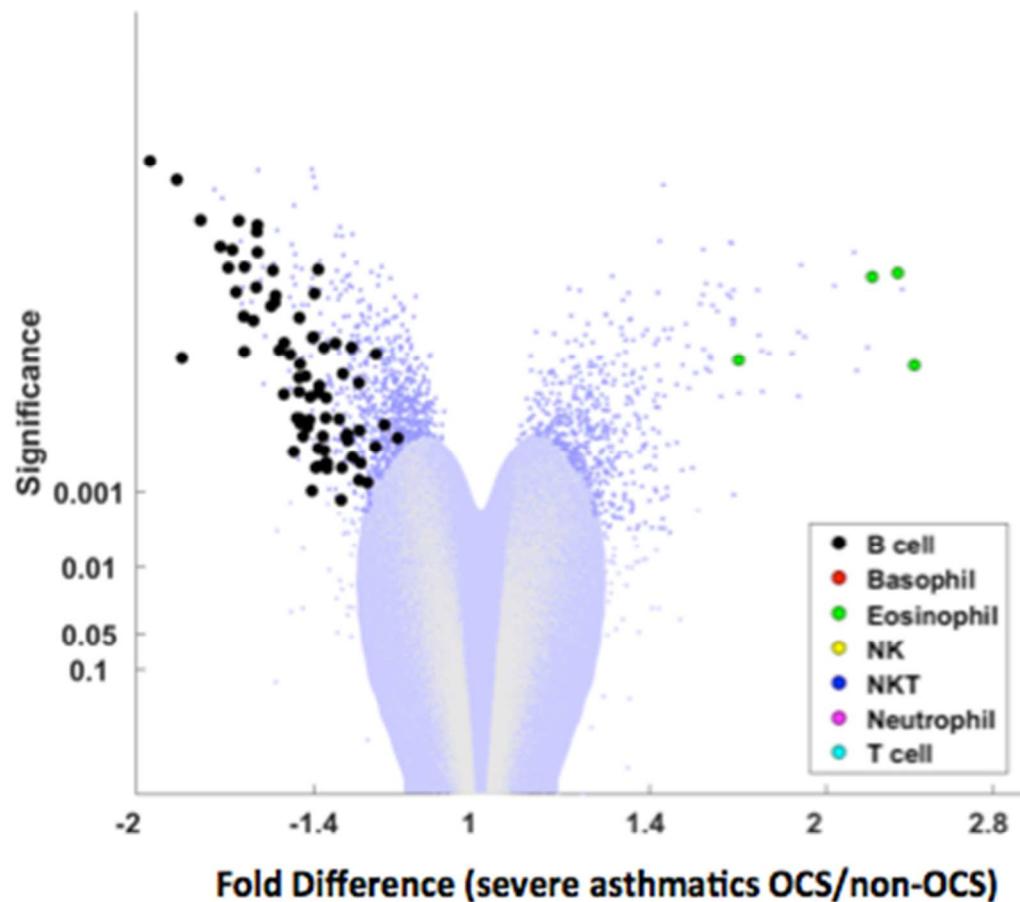
Comparison of non-smoking severe asthmatics with non-smoking non-asthmatic individuals. In this analysis, whole blood cell, basophil, eosinophil, neutrophil, lymphocyte, and monocyte counts were included as covariates. A positive fold-change indicates higher expression in asthmatics compared to non-asthmatic individuals and negative fold-change lower expression. Light blue shaded area: Patch of Disbelief (non-significant differences). Green data points represent reporters outside the Patch of Disbelief with a local false discovery rate of less than 5%.

Supplementary Figure 5



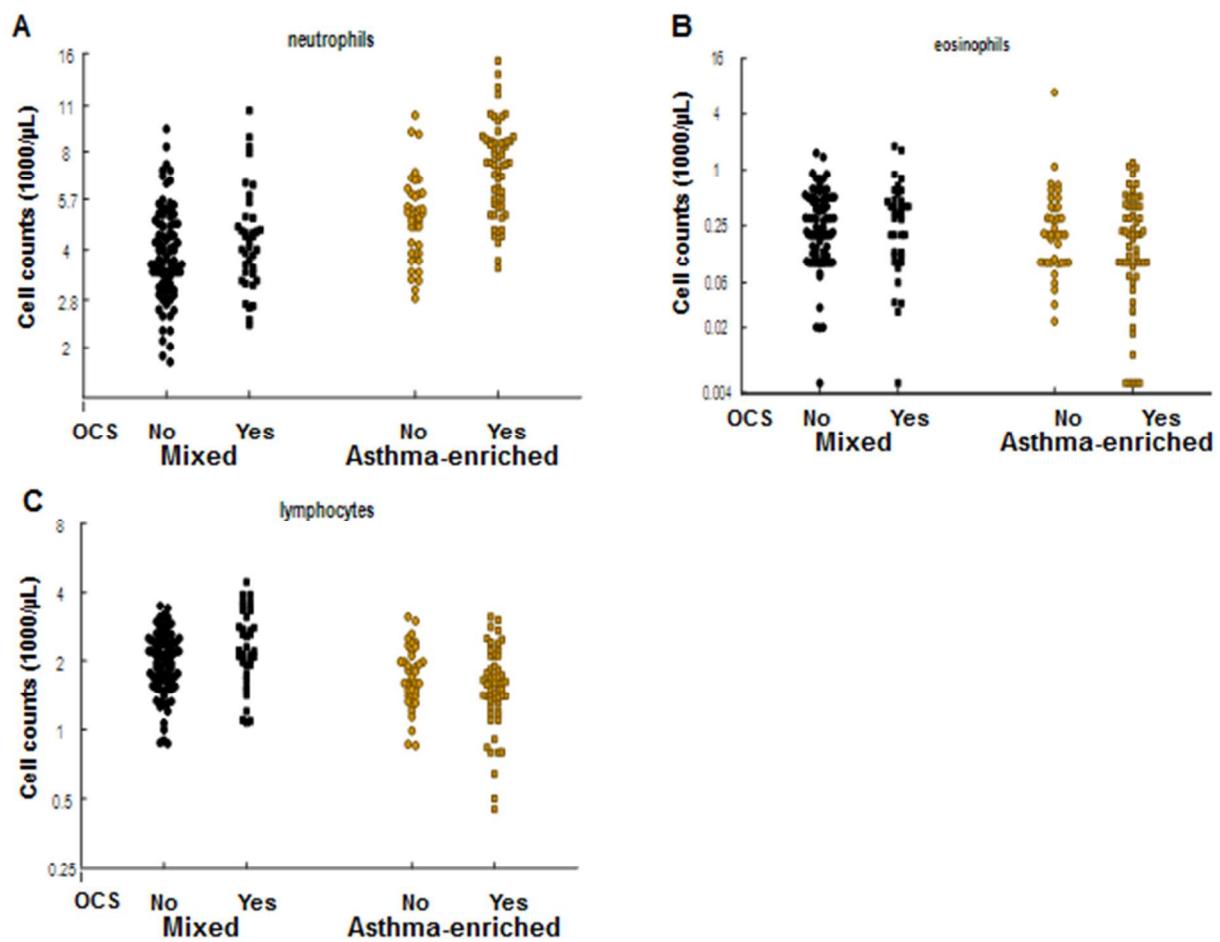
FKBP5 transcript levels by cohort and oral corticosteroid (OCS) use. The FKBP5 transcript levels were taken from microarrays. Elevated FKBP5 levels were detected only in cohorts reporting OCS use, but not all the patients taking OCS had elevated FKBP5 levels.

Supplementary Figure 6



Comparison of non-smoking severe asthmatics on maintenance OCS treatment and non-smoking severe asthmatics not on maintenance OCS. A positive fold-change indicates higher expression in OCS users when compared to non-users; negative fold-change indicates lower expression. Light blue shaded area: Patch of Disbelief (non-significant differences). Data points outside the Patch of Disbelief have a local false discovery rate ≤ 0.05 . Data points representing genes that are selective for a particular immune cell subtype are highlighted in different colors – for interpretation of color, see insert.

Supplementary Figure 7



The cell counts for neutrophils (A), eosinophils (B), and lymphocytes (C) for the non-smoking severe asthmatics are shown by cluster as defined by transcriptional profiles and by oral corticosteroid use.

Supplemental Table 1 - Sample Sets

Description	Baseline Training Set	Baseline Validation Set	Total Baseline
Severe asthmatics/non-smoking	165	81	246
Severe asthmatics/smoking	57	31	88
Mild-moderate asthmatics/non-smoking	50	27	77
Non-asthmatic/non-smoking	56	31	87
Total	328	170	498

Supplemental Table 2 - Cell-specific Genes

symbol	probe_name	product	CellSpecific	foldChange	pval	IFDR	group
TCF4	212382_PM_at	transcription factor 4	B cell	-1.37	0.00	0.00	severe asthma, smoking
TSPAN13	217979_PM_at	tetraspanin 13	B cell	-1.59	0.00	0.00	severe asthma, smoking
PAX5	221969_PM_at	paired box 5	B cell	-1.44	0.00	0.00	severe asthma, smoking
EBF1	232204_PM_at	early B-cell factor 1	B cell	-1.31	0.00	0.00	severe asthma, smoking
	244394_PM_at	---	B cell	-1.43	0.00	0.00	severe asthma, smoking
IGHM	209374_PM_s_at	immunoglobulin heavy constant mu	B cell	-1.44	0.00	0.01	severe asthma, smoking
BLNK	207655_PM_s_at	B-cell linker	B cell	-1.33	0.00	0.01	severe asthma, smoking
IGK@	237625_PM_s_at	immunoglobulin kappa locus	B cell	-1.52	0.00	0.01	severe asthma, smoking
EBF1	227646_PM_at	early B-cell factor 1	B cell	-1.4	0.00	0.01	severe asthma, smoking
MS4A1	231418_PM_at	Membrane-spanning 4-domains, subfamily	B cell	-1.34	0.00	0.01	severe asthma, smoking
	242104_PM_at	---	B cell	-1.29	0.00	0.01	severe asthma, smoking
AFF3	227198_PM_at	AF4	B cell	-1.33	0.00	0.03	severe asthma, smoking
EBF1	229487_PM_at	early B-cell factor 1	B cell	-1.26	0.00	0.03	severe asthma, smoking
PLEKHG1	226122_PM_at	pleckstrin homology domain containing, far	B cell	-1.32	0.00	0.03	severe asthma, smoking
HRH4	221170_PM_at	histamine receptor H4	Basophil	1.32	0.00	0.05	severe asthma, smoking
LTF	202018_PM_s_at	lactotransferrin	Eosinophil	1.92	0.00	0.00	severe asthma, smoking
ADORA3	206171_PM_at	adenosine A3 receptor	Eosinophil	1.57	0.00	0.00	severe asthma, smoking
OLFM4	212768_PM_s_at	olfactomedin 4	Eosinophil	2.04	0.00	0.00	severe asthma, smoking
CEBPE	214523_PM_at	CCAAT	Eosinophil	1.47	0.00	0.00	severe asthma, smoking
MMP8	231688_PM_at	matrix metallopeptidase 8 (neutrophil colla	Eosinophil	2.03	0.00	0.00	severe asthma, smoking
PRSS33	1552348_PM_at	protease, serine, 33	Eosinophil	1.71	0.00	0.00	severe asthma, smoking
CCL23	210549_PM_s_at	chemokine (C-C motif) ligand 23	Eosinophil	1.81	0.00	0.00	severe asthma, smoking
ACPP	204393_PM_s_at	acid phosphatase, prostate	Eosinophil	1.29	0.00	0.00	severe asthma, smoking
IL5RA	211517_PM_s_at	interleukin 5 receptor, alpha	Eosinophil	1.64	0.00	0.00	severe asthma, smoking
OLIG2	213825_PM_at	oligodendrocyte lineage transcription factor	Eosinophil	1.67	0.00	0.00	severe asthma, smoking
SMPD3	219695_PM_at	sphingomyelin phosphodiesterase 3, neutra	Eosinophil	1.37	0.00	0.01	severe asthma, smoking
SPNS3	235900_PM_at	spinster homolog 3 (Drosophila)	Eosinophil	1.26	0.00	0.01	severe asthma, smoking
ALOX15	207328_PM_at	arachidonate 15-lipoxygenase	Eosinophil	1.58	0.00	0.01	severe asthma, smoking
CCL23	210548_PM_at	chemokine (C-C motif) ligand 23	Eosinophil	1.61	0.00	0.01	severe asthma, smoking
IL5RA	210744_PM_s_at	interleukin 5 receptor, alpha	Eosinophil	1.48	0.00	0.03	severe asthma, smoking
NOG	231798_PM_at	noggin	T cell	-1.59	0.00	0.01	severe asthma, smoking
BLNK	207655_PM_s_at	B-cell linker	B cell	-1.46	0.00	0.00	severe asthma

IGHM	209374_PM_s_at	immunoglobulin heavy constant mu	B cell	-1.49	0.00	0.00	severe asthma
TCL1A	209995_PM_s_at	T-cell leukemia	B cell	-1.67	0.00	0.00	severe asthma
TCF4	212382_PM_at	transcription factor 4	B cell	-1.39	0.00	0.00	severe asthma
IGHM	212827_PM_at	immunoglobulin heavy constant mu	B cell	-1.46	0.00	0.00	severe asthma
TSPAN13	217979_PM_at	tetraspanin 13	B cell	-1.69	0.00	0.00	severe asthma
PAX5	221969_PM_at	paired box 5	B cell	-1.39	0.00	0.00	severe asthma
TCL1A	39318_PM_at	T-cell leukemia	B cell	-1.71	0.00	0.00	severe asthma
AFF3	227198_PM_at	AF4	B cell	-1.47	0.00	0.00	severe asthma
EBF1	227646_PM_at	early B-cell factor 1	B cell	-1.52	0.00	0.00	severe asthma
MS4A1	231418_PM_at	Membrane-spanning 4-domains, subfamily	B cell	-1.45	0.00	0.00	severe asthma
FCRL1	235982_PM_at	Fc receptor-like 1	B cell	-1.46	0.00	0.00	severe asthma
IGK@	237625_PM_s_at	immunoglobulin kappa locus	B cell	-1.68	0.00	0.00	severe asthma
	242104_PM_at	---	B cell	-1.38	0.00	0.00	severe asthma
FCRL1	243968_PM_x_at	Fc receptor-like 1	B cell	-1.47	0.00	0.00	severe asthma
	244394_PM_at	---	B cell	-1.47	0.00	0.00	severe asthma
CD79A	1555779_PM_a_at	CD79a molecule, immunoglobulin-associate	B cell	-1.4	0.00	0.00	severe asthma
CCDC50	228693_PM_at	coiled-coil domain containing 50	B cell	-1.35	0.00	0.00	severe asthma
EBF1	232204_PM_at	early B-cell factor 1	B cell	-1.32	0.00	0.00	severe asthma
EBF1	229487_PM_at	early B-cell factor 1	B cell	-1.34	0.00	0.00	severe asthma
MS4A1	217418_PM_x_at	membrane-spanning 4-domains, subfamily	B cell	-1.38	0.00	0.00	severe asthma
MS4A1	210356_PM_x_at	membrane-spanning 4-domains, subfamily	B cell	-1.37	0.00	0.00	severe asthma
OSBPL10	219073_PM_s_at	oxysterol binding protein-like 10	B cell	-1.39	0.00	0.00	severe asthma
	230648_PM_at	uncharacterized LOC283663	B cell	-1.36	0.00	0.00	severe asthma
CD79A	205049_PM_s_at	CD79a molecule, immunoglobulin-associate	B cell	-1.36	0.00	0.00	severe asthma
COBLL1	203642_PM_s_at	COBL-like 1	B cell	-1.32	0.00	0.00	severe asthma
	230245_PM_s_at	uncharacterized LOC283663	B cell	-1.39	0.00	0.00	severe asthma
PLEKHG1	226122_PM_at	pleckstrin homology domain containing, far	B cell	-1.37	0.00	0.00	severe asthma
SPIB	205861_PM_at	Spi-B transcription factor (Spi-1	B cell	-1.28	0.00	0.00	severe asthma
IGHD	230877_PM_at	immunoglobulin heavy constant delta	B cell	-1.55	0.00	0.00	severe asthma
CKAP2	217148_PM_x_at	Cytoskeleton associated protein 2	B cell	-1.38	0.00	0.00	severe asthma
IGHD	215621_PM_s_at	immunoglobulin heavy constant delta	B cell	-1.4	0.00	0.00	severe asthma
LARGE	215543_PM_s_at	like-glycosyltransferase	B cell	-1.36	0.00	0.00	severe asthma
BLK	206255_PM_at	B lymphoid tyrosine kinase	B cell	-1.24	0.00	0.00	severe asthma
BANK1	1558662_PM_s_at	B-cell scaffold protein with ankyrin repeats	B cell	-1.29	0.00	0.00	severe asthma

IGHA1	214916_PM_x_at	immunoglobulin heavy constant alpha 1	B cell	-1.33	0.00	0.00	severe asthma
FCRLA	235400_PM_at	Fc receptor-like A	B cell	-1.3	0.00	0.00	severe asthma
FCRLA	235372_PM_at	Fc receptor-like A	B cell	-1.32	0.00	0.00	severe asthma
CKAP2	216984_PM_x_at	Cytoskeleton associated protein 2	B cell	-1.33	0.00	0.00	severe asthma
CD22	204581_PM_at	CD22 molecule	B cell	-1.3	0.00	0.00	severe asthma
	243467_PM_at	---	B cell	-1.18	0.00	0.00	severe asthma
KLHL14	228377_PM_at	kelch-like 14 (Drosophila)	B cell	-1.31	0.00	0.00	severe asthma
IGHV5-78	210450_PM_at	immunoglobulin heavy variable 5-78 (pseuc	B cell	-1.18	0.00	0.00	severe asthma
SNX22	235460_PM_at	sorting nexin 22	B cell	-1.15	0.00	0.01	severe asthma
CKAP2	217235_PM_x_at	Cytoskeleton associated protein 2	B cell	-1.34	0.00	0.01	severe asthma
MS4A1	228599_PM_at	membrane-spanning 4-domains, subfamily	B cell	-1.38	0.00	0.01	severe asthma
FCRL2	221239_PM_s_at	Fc receptor-like 2	B cell	-1.21	0.00	0.01	severe asthma
MS4A1	228592_PM_at	membrane-spanning 4-domains, subfamily	B cell	-1.29	0.00	0.01	severe asthma
IGHG1	213674_PM_x_at	Immunoglobulin heavy constant gamma 1 (	B cell	-1.38	0.00	0.01	severe asthma
SNX22	230509_PM_at	sorting nexin 22	B cell	-1.24	0.00	0.01	severe asthma
BANK1	222915_PM_s_at	B-cell scaffold protein with ankyrin repeats	B cell	-1.21	0.00	0.01	severe asthma
BTLA	236226_PM_at	B and T lymphocyte associated	B cell	-1.21	0.00	0.01	severe asthma
IGK@	214768_PM_x_at	immunoglobulin kappa locus	B cell	-1.31	0.00	0.01	severe asthma
	217251_PM_x_at	---	B cell	-1.24	0.00	0.01	severe asthma
	239244_PM_at	uncharacterized LOC100507616	B cell	-1.27	0.00	0.02	severe asthma
IGHG1	228518_PM_at	immunoglobulin heavy constant gamma 1 (	B cell	-1.23	0.00	0.02	severe asthma
FAM129C	1553369_PM_at	family with sequence similarity 129, membe	B cell	-1.23	0.00	0.02	severe asthma
IGK@	216576_PM_x_at	immunoglobulin kappa locus	B cell	-1.3	0.00	0.02	severe asthma
	211645_PM_x_at	---	B cell	-1.29	0.00	0.02	severe asthma
IGK@	211644_PM_x_at	immunoglobulin kappa locus	B cell	-1.29	0.00	0.02	severe asthma
CKAP2	216566_PM_at	Cytoskeleton associated protein 2	B cell	-1.33	0.00	0.02	severe asthma
FCRL5	224404_PM_s_at	Fc receptor-like 5	B cell	-1.29	0.00	0.03	severe asthma
CNTNAP2	219301_PM_s_at	contactin associated protein-like 2	B cell	-1.25	0.00	0.03	severe asthma
IGKC	216207_PM_x_at	immunoglobulin kappa constant	B cell	-1.27	0.00	0.03	severe asthma
IGKC	215217_PM_at	Immunoglobulin kappa constant	B cell	-1.27	0.00	0.03	severe asthma
IGLV1-44	234707_PM_x_at	immunoglobulin lambda variable 1-44	B cell	-1.26	0.00	0.04	severe asthma
	217480_PM_x_at	ig kappa chain V-I region Walker-like	B cell	-1.25	0.00	0.04	severe asthma
	217378_PM_x_at	ig kappa chain V-I region Walker-like	B cell	-1.25	0.00	0.05	severe asthma
LTF	202018_PM_s_at	lactotransferrin	Eosinophil	2.2	0.00	0.00	severe asthma

ADORA3	206171_PM_at	adenosine A3 receptor	Eosinophil	1.49	0.00	0.00	severe asthma
CCL23	210548_PM_at	chemokine (C-C motif) ligand 23	Eosinophil	1.67	0.00	0.00	severe asthma
CCL23	210549_PM_s_at	chemokine (C-C motif) ligand 23	Eosinophil	1.86	0.00	0.00	severe asthma
OLFM4	212768_PM_s_at	olfactomedin 4	Eosinophil	2.43	0.00	0.00	severe asthma
CEBPE	214523_PM_at	CCAAT	Eosinophil	1.46	0.00	0.00	severe asthma
MMP8	231688_PM_at	matrix metallopeptidase 8 (neutrophil colla	Eosinophil	2.18	0.00	0.00	severe asthma
SMPD3	219695_PM_at	sphingomyelin phosphodiesterase 3, neutra	Eosinophil	1.33	0.00	0.00	severe asthma
PIK3R6	1558770_PM_a_at	phosphoinositide-3-kinase, regulatory subu	Eosinophil	1.23	0.00	0.00	severe asthma
ADORA3	223660_PM_at	adenosine A3 receptor	Eosinophil	1.44	0.00	0.00	severe asthma
IL5RA	211517_PM_s_at	interleukin 5 receptor, alpha	Eosinophil	1.51	0.00	0.00	severe asthma
ACPP	204393_PM_s_at	acid phosphatase, prostate	Eosinophil	1.21	0.00	0.01	severe asthma
OLIG2	213825_PM_at	oligodendrocyte lineage transcription factor	Eosinophil	1.42	0.00	0.01	severe asthma
IL5RA	210744_PM_s_at	interleukin 5 receptor, alpha	Eosinophil	1.4	0.00	0.01	severe asthma
PRSS33	1552348_PM_at	protease, serine, 33	Eosinophil	1.48	0.00	0.02	severe asthma
GPR97	220404_PM_at	G protein-coupled receptor 97	Eosinophil	1.21	0.00	0.03	severe asthma
SIGLEC8	208253_PM_at	sialic acid binding Ig-like lectin 8	Eosinophil	1.38	0.00	0.04	severe asthma
SLC22A1	207201_PM_s_at	solute carrier family 22 (organic cation tran	Neutrophil	1.23	0.00	0.01	severe asthma
KCNJ15	238428_PM_at	potassium inwardly-rectifying channel, subf	Neutrophil	1.26	0.00	0.01	severe asthma
ALPL	215783_PM_s_at	alkaline phosphatase, liver	Neutrophil	1.22	0.00	0.02	severe asthma
NOG	231798_PM_at	noggin	T cell	-1.62	0.00	0.00	severe asthma
LEF1-AS1	243362_PM_s_at	LEF1 antisense RNA 1 (non-protein coding)	T cell	-1.37	0.00	0.00	severe asthma
GAL3ST4	219815_PM_at	galactose-3-O-sulfotransferase 4	T cell	-1.21	0.00	0.00	severe asthma
LEF1-AS1	243363_PM_at	LEF1 antisense RNA 1 (non-protein coding)	T cell	-1.36	0.00	0.00	severe asthma
YME1L1	234849_PM_at	YME1-like 1 (<i>S. cerevisiae</i>)	T cell	-1.23	0.00	0.00	severe asthma
DPP4	203717_PM_at	dipeptidyl-peptidase 4	T cell	-1.2	0.00	0.01	severe asthma
ALOX15	207328_PM_at	arachidonate 15-lipoxygenase	Eosinophil	1.82	0.00	0.00	moderate asthma
IDO1	210029_PM_at	indoleamine 2,3-dioxygenase 1	Eosinophil	1.71	0.00	0.00	moderate asthma
CCL23	210549_PM_s_at	chemokine (C-C motif) ligand 23	Eosinophil	1.98	0.00	0.00	moderate asthma
IL5RA	211517_PM_s_at	interleukin 5 receptor, alpha	Eosinophil	1.78	0.00	0.00	moderate asthma
OLIG2	213825_PM_at	oligodendrocyte lineage transcription factor	Eosinophil	1.68	0.00	0.00	moderate asthma
PRSS33	1552348_PM_at	protease, serine, 33	Eosinophil	1.99	0.00	0.00	moderate asthma
CCL23	210548_PM_at	chemokine (C-C motif) ligand 23	Eosinophil	1.73	0.00	0.00	moderate asthma
SIGLEC8	208253_PM_at	sialic acid binding Ig-like lectin 8	Eosinophil	1.65	0.00	0.00	moderate asthma
CEBPE	214523_PM_at	CCAAT	Eosinophil	1.40	0.00	0.01	moderate asthma

IL5RA	210744_PM_s_at	interleukin 5 receptor, alpha	Eosinophil	1.57	0.00	0.01	moderate asthma
ADORA3	206171_PM_at	adenosine A3 receptor	Eosinophil	1.47	0.00	0.01	moderate asthma
PIK3R6	1558770_PM_a_at	phosphoinositide-3-kinase, regulatory subunit	Eosinophil	1.30	0.00	0.01	moderate asthma
SMPD3	219695_PM_at	sphingomyelin phosphodiesterase 3, neutral	Eosinophil	1.43	0.00	0.02	moderate asthma
SPNS3	235900_PM_at	spinster homolog 3 (Drosophila)	Eosinophil	1.27	0.00	0.03	moderate asthma

Supplemental Table 3 - Severe Asthma Disease Signature

symbol	probe_name	product	foldChange	pval	IFDR
TCL1A	39318_PM_at	T-cell leukemia	-1.71	0.00	0.00
TSPAN13	217979_PM_at	tetraspanin 13	-1.69	0.00	0.00
EBF1	233261_PM_at	Early B-cell factor 1	-1.69	0.00	0.00
IGK@	237625_PM_s_at	immunoglobulin kappa locus	-1.68	0.00	0.00
TCL1A	209995_PM_s_at	T-cell leukemia	-1.67	0.00	0.00
LRRN3	209841_PM_s_at	leucine rich repeat neuronal 3	-1.66	0.00	0.00
NOG	231798_PM_at	noggin	-1.62	0.00	0.00
---	243780_PM_at	---	-1.59	0.00	0.00
---	236307_PM_at	---	-1.57	0.00	0.00
---	244696_PM_at	---	-1.57	0.00	0.00
LRRN3	209840_PM_s_at	leucine rich repeat neuronal 3	-1.57	0.00	0.00
IGHD	230877_PM_at	immunoglobulin heavy constant delta	-1.55	0.00	0.00
---	232286_PM_at	---	-1.54	0.00	0.00
EBF1	227646_PM_at	early B-cell factor 1	-1.52	0.00	0.00
---	244172_PM_at	---	-1.5	0.00	0.00
CUX2	213920_PM_at	cut-like homeobox 2	-1.49	0.00	0.00
---	244876_PM_at	---	-1.49	0.00	0.00
---	1557580_PM_at	---	-1.49	0.00	0.00
IGHM	209374_PM_s_at	immunoglobulin heavy constant mu	-1.49	0.00	0.00
---	233401_PM_at	---	-1.48	0.00	0.00
AFF3	227198_PM_at	AF4	-1.47	0.00	0.00
---	244394_PM_at	---	-1.47	0.00	0.00
---	1557581_PM_x_at	---	-1.47	0.00	0.00
FCRL1	243968_PM_x_at	Fc receptor-like 1	-1.47	0.00	0.00
BLNK	207655_PM_s_at	B-cell linker	-1.46	0.00	0.00
---	241577_PM_at	---	-1.46	0.00	0.00
---	1566880_PM_at	---	-1.46	0.00	0.00
FCRL1	235982_PM_at	Fc receptor-like 1	-1.46	0.00	0.00
IGHM	212827_PM_at	immunoglobulin heavy constant mu	-1.46	0.00	0.00
---	224348_PM_s_at	---	-1.45	0.00	0.00
MS4A1	231418_PM_at	Membrane-spanning 4-domains, subfamily	-1.45	0.00	0.00

---	240861_PM_at	---	-1.45	0.00	0.00
AKAP2	202760_PM_s_at	A kinase (PRKA) anchor protein 2	-1.44	0.00	0.00
STRBP	233252_PM_s_at	spermatid perinuclear RNA binding protein	-1.43	0.00	0.00
---	1556451_PM_at	---	-1.43	0.00	0.00
IFI44L	204439_PM_at	interferon-induced protein 44-like	-1.43	0.00	0.03
IL6ST	234474_PM_x_at	interleukin 6 signal transducer (gp130, oncc)	-1.42	0.00	0.00
---	236796_PM_at	---	-1.42	0.00	0.00
---	241339_PM_at	---	-1.41	0.00	0.00
COL4A3	222073_PM_at	collagen, type IV, alpha 3 (Goodpasture ant	-1.41	0.00	0.00
MAN1C1	214180_PM_at	mannosidase, alpha, class 1C, member 1	-1.4	0.00	0.00
LOC100506195	1563039_PM_at	uncharacterized LOC100506195	-1.4	0.00	0.00
ABCB4	1570505_PM_at	ATP-binding cassette, sub-family B (MDR	-1.4	0.00	0.00
CD79A	1555779_PM_a_at	CD79a molecule, immunoglobulin-associate	-1.4	0.00	0.00
IGHD	215621_PM_s_at	immunoglobulin heavy constant delta	-1.4	0.00	0.01
TCF4	212382_PM_at	transcription factor 4	-1.39	0.00	0.00
FAM129C	230983_PM_at	family with sequence similarity 129, membe	-1.39	0.00	0.00
---	240593_PM_x_at	---	-1.39	0.00	0.00
CR2	205544_PM_s_at	complement component (3d	-1.39	0.00	0.00
PAX5	221969_PM_at	paired box 5	-1.39	0.00	0.00
HLA-DOB	205671_PM_s_at	major histocompatibility complex, class II, D	-1.39	0.00	0.00
---	1560971_PM_a_at	---	-1.39	0.00	0.00
OSBPL10	219073_PM_s_at	oxysterol binding protein-like 10	-1.39	0.00	0.00
LOC283663	230245_PM_s_at	uncharacterized LOC283663	-1.39	0.00	0.00
COL5A3	218975_PM_at	collagen, type V, alpha 3	-1.39	0.00	0.01
---	237334_PM_at	---	-1.38	0.00	0.00
TTN	241791_PM_at	titin	-1.38	0.00	0.00
---	1554963_PM_at	---	-1.38	0.00	0.00
POU2AF1	205267_PM_at	POU class 2 associating factor 1	-1.38	0.00	0.00
---	242104_PM_at	---	-1.38	0.00	0.00
MS4A1	217418_PM_x_at	membrane-spanning 4-domains, subfamily	-1.38	0.00	0.00
EPPK1	232165_PM_at	epiplakin 1	-1.38	0.00	0.00
CKAP2	217148_PM_x_at	Cytoskeleton associated protein 2	-1.38	0.00	0.00
---	228297_PM_at	---	-1.38	0.00	0.00

MS4A1	228599_PM_at	membrane-spanning 4-domains, subfamily .	-1.38	0.00	0.01
IGHG1	213674_PM_x_at	Immunoglobulin heavy constant gamma 1 (	-1.38	0.00	0.01
CCR6	206983_PM_at	chemokine (C-C motif) receptor 6	-1.37	0.00	0.00
RAB11FIP3	228613_PM_at	RAB11 family interacting protein 3 (class II)	-1.37	0.00	0.00
AGMAT	221648_PM_s_at	agmatine ureohydrolase (agmatinase)	-1.37	0.00	0.00
---	1558409_PM_at	---	-1.37	0.00	0.00
MS4A1	210356_PM_x_at	membrane-spanning 4-domains, subfamily .	-1.37	0.00	0.00
PLEKHG1	226122_PM_at	pleckstrin homology domain containing, far	-1.37	0.00	0.00
CD22	217422_PM_s_at	CD22 molecule	-1.37	0.00	0.00
FCRLA	235401_PM_s_at	Fc receptor-like A	-1.37	0.00	0.00
LEF1-AS1	243362_PM_s_at	LEF1 antisense RNA 1 (non-protein coding)	-1.37	0.00	0.00
GATM	203178_PM_at	glycine amidinotransferase (L-arginine:glyci	-1.37	0.00	0.00
GPM6B	209167_PM_at	glycoprotein M6B	-1.36	0.00	0.00
---	242052_PM_at	---	-1.36	0.00	0.00
BCL11A	1559078_PM_at	B-cell CLL	-1.36	0.00	0.00
TNFRSF21	218856_PM_at	tumor necrosis factor receptor superfamily,	-1.36	0.00	0.00
IL6ST	234967_PM_at	interleukin 6 signal transducer (gp130, oncc	-1.36	0.00	0.00
CD79A	205049_PM_s_at	CD79a molecule, immunoglobulin-associate	-1.36	0.00	0.00
LOC283663	230648_PM_at	uncharacterized LOC283663	-1.36	0.00	0.00
---	243107_PM_at	---	-1.36	0.00	0.00
LARGE	215543_PM_s_at	like-glycosyltransferase	-1.36	0.00	0.00
---	234838_PM_at	---	-1.36	0.00	0.00
LOC389834	244631_PM_at	ankyrin repeat domain 57 pseudogene	-1.36	0.00	0.00
IGLC1	217138_PM_x_at	Immunoglobulin lambda constant 1 (Mcg m	-1.36	0.00	0.00
LEF1-AS1	243363_PM_at	LEF1 antisense RNA 1 (non-protein coding)	-1.36	0.00	0.01
COL5A3	52255_PM_s_at	collagen, type V, alpha 3	-1.36	0.00	0.02
SLC15A2	240159_PM_at	solute carrier family 15 (H ⁺	-1.36	0.00	0.02
BCL11A	222891_PM_s_at	B-cell CLL	-1.35	0.00	0.00
RAB30	228003_PM_at	RAB30, member RAS oncogene family	-1.35	0.00	0.00
---	1554964_PM_x_at	---	-1.35	0.00	0.00
---	237916_PM_at	---	-1.35	0.00	0.00
POU6F1	229809_PM_at	POU class 6 homeobox 1	-1.35	0.00	0.00
PMEPA1	222450_PM_at	prostate transmembrane protein, androger	-1.35	0.00	0.00

CCDC50	228693_PM_at	coiled-coil domain containing 50	-1.35	0.00	0.00
STAP1	1554343_PM_a_at	signal transducing adaptor family member 1	-1.35	0.00	0.00
MZB1	223565_PM_at	marginal zone B and B1 cell-specific protein	-1.35	0.00	0.00
---	238309_PM_x_at	---	-1.35	0.00	0.02
---	232796_PM_at	---	-1.34	0.00	0.00
PDE7A	1552343_PM_s_at	phosphodiesterase 7A	-1.34	0.00	0.00
---	239449_PM_at	---	-1.34	0.00	0.00
BACH2	227173_PM_s_at	BTB and CNC homology 1, basic leucine zipper	-1.34	0.00	0.00
EBF1	229487_PM_at	early B-cell factor 1	-1.34	0.00	0.00
---	1561035_PM_at	---	-1.34	0.00	0.00
EPPK1	232164_PM_s_at	epiplakin 1	-1.34	0.00	0.00
CKAP2	216708_PM_x_at	Cytoskeleton associated protein 2	-1.34	0.00	0.00
CKAP2	217235_PM_x_at	Cytoskeleton associated protein 2	-1.34	0.00	0.01
LAMP3	205569_PM_at	lysosomal-associated membrane protein 3	-1.34	0.00	0.02
TCF4	212386_PM_at	transcription factor 4	-1.33	0.00	0.00
TCF4	212387_PM_at	transcription factor 4	-1.33	0.00	0.00
IL28RA	244261_PM_at	interleukin 28 receptor, alpha (interferon, λ)	-1.33	0.00	0.00
---	1560259_PM_at	---	-1.33	0.00	0.00
SPIB	232739_PM_at	Spi-B transcription factor (Spi-1)	-1.33	0.00	0.00
LEF1	210948_PM_s_at	lymphoid enhancer-binding factor 1	-1.33	0.00	0.00
---	1563217_PM_at	---	-1.33	0.00	0.00
IGHA1	214916_PM_x_at	immunoglobulin heavy constant alpha 1	-1.33	0.00	0.00
CKAP2	216984_PM_x_at	Cytoskeleton associated protein 2	-1.33	0.00	0.00
SLC16A10	219915_PM_s_at	solute carrier family 16, member 10 (aroma	-1.33	0.00	0.01
PRKXP1	235987_PM_at	protein kinase, X-linked, pseudogene 1	-1.33	0.00	0.01
CKAP2	216566_PM_at	Cytoskeleton associated protein 2	-1.33	0.00	0.02
NRCAM	204105_PM_s_at	neuronal cell adhesion molecule	-1.32	0.00	0.00
---	239411_PM_at	---	-1.32	0.00	0.00
EBF1	232204_PM_at	early B-cell factor 1	-1.32	0.00	0.00
---	236315_PM_at	---	-1.32	0.00	0.00
---	242839_PM_at	---	-1.32	0.00	0.00
FLJ33630	228686_PM_at	uncharacterized LOC644873	-1.32	0.00	0.00
---	244610_PM_x_at	---	-1.32	0.00	0.00

ZFP112	236328_PM_at	zinc finger protein 112 homolog (mouse)	-1.32	0.00	0.00
HLA-DOA	226878_PM_at	major histocompatibility complex, class II, D	-1.32	0.00	0.00
STRBP	229513_PM_at	spermatid perinuclear RNA binding protein	-1.32	0.00	0.00
PPM1K	244011_PM_at	protein phosphatase, Mg ²⁺	-1.32	0.00	0.00
---	239673_PM_at	---	-1.32	0.00	0.00
COBLL1	203642_PM_s_at	COBL-like 1	-1.32	0.00	0.00
FCRLA	235372_PM_at	Fc receptor-like A	-1.32	0.00	0.00
---	241625_PM_at	---	-1.32	0.00	0.00
PCDH9	219737_PM_s_at	protocadherin 9	-1.32	0.00	0.00
---	241320_PM_at	---	-1.31	0.00	0.00
SLFNL1	1553315_PM_at	schlafen-like 1	-1.31	0.00	0.00
---	1556964_PM_s_at	---	-1.31	0.00	0.00
LOC100507539	244308_PM_at	uncharacterized LOC100507539	-1.31	0.00	0.00
---	244878_PM_at	---	-1.31	0.00	0.00
---	1558410_PM_s_at	---	-1.31	0.00	0.00
FAM171A1	212771_PM_at	family with sequence similarity 171, member 1	-1.31	0.00	0.00
AAK1	205434_PM_s_at	AP2 associated kinase 1	-1.31	0.00	0.00
CAND2	213547_PM_at	cullin-associated and neddylation-dissociating protein 2	-1.31	0.00	0.00
MTUS1	239576_PM_at	microtubule associated tumor suppressor 1	-1.31	0.00	0.00
---	232834_PM_at	---	-1.31	0.00	0.00
---	1560861_PM_at	---	-1.31	0.00	0.00
---	233302_PM_at	---	-1.31	0.00	0.00
---	242664_PM_at	---	-1.31	0.00	0.00
---	237189_PM_at	---	-1.31	0.00	0.00
KLHL14	228377_PM_at	kelch-like 14 (Drosophila)	-1.31	0.00	0.01
PPAT	209433_PM_s_at	phosphoribosyl pyrophosphate amidotransferase	-1.31	0.00	0.01
IGK@	215176_PM_x_at	immunoglobulin kappa locus	-1.31	0.00	0.01
IGK@	214768_PM_x_at	immunoglobulin kappa locus	-1.31	0.00	0.02
IGHA1	216510_PM_x_at	immunoglobulin heavy constant alpha 1	-1.31	0.00	0.02
BCL11A	210347_PM_s_at	B-cell CLL	-1.3	0.00	0.00
TCF4	222146_PM_s_at	transcription factor 4	-1.3	0.00	0.00
---	235756_PM_at	---	-1.3	0.00	0.00
---	243450_PM_at	---	-1.3	0.00	0.00

---	241893_PM_at	---	-1.3	0.00	0.00
---	233995_PM_at	---	-1.3	0.00	0.00
---	242886_PM_at	---	-1.3	0.00	0.00
---	241732_PM_at	---	-1.3	0.00	0.00
LINC00494	236854_PM_at	long intergenic non-protein coding RNA 494	-1.3	0.00	0.00
ZCCHC18	230224_PM_at	zinc finger, CCHC domain containing 18	-1.3	0.00	0.00
---	234822_PM_at	---	-1.3	0.00	0.00
DPF3	238532_PM_at	D4, zinc and double PHD fingers, family 3	-1.3	0.00	0.00
FCRLA	235400_PM_at	Fc receptor-like A	-1.3	0.00	0.00
---	215284_PM_at	---	-1.3	0.00	0.00
CD72	215925_PM_s_at	CD72 molecule	-1.3	0.00	0.00
CD22	204581_PM_at	CD22 molecule	-1.3	0.00	0.00
---	239867_PM_at	---	-1.3	0.00	0.01
---	235172_PM_at	---	-1.3	0.00	0.01
IGK@	216576_PM_x_at	immunoglobulin kappa locus	-1.3	0.00	0.03
---	1556932_PM_at	---	-1.3	0.00	0.03
CCDC50	225331_PM_at	coiled-coil domain containing 50	-1.29	0.00	0.00
---	1556963_PM_at	---	-1.29	0.00	0.00
---	243736_PM_at	---	-1.29	0.00	0.00
BCL11A	219498_PM_s_at	B-cell CLL	-1.29	0.00	0.00
FAM226B	242292_PM_at	family with sequence similarity 226, member 1	-1.29	0.00	0.00
PTPRK	233609_PM_at	Protein tyrosine phosphatase, receptor type K	-1.29	0.00	0.00
AUTS2	212599_PM_at	autism susceptibility candidate 2	-1.29	0.00	0.00
---	1561195_PM_at	---	-1.29	0.00	0.00
---	244414_PM_at	---	-1.29	0.00	0.00
CD79B	205297_PM_s_at	CD79b molecule, immunoglobulin-associated	-1.29	0.00	0.00
BANK1	1558662_PM_s_at	B-cell scaffold protein with ankyrin repeats	-1.29	0.00	0.00
---	233425_PM_at	---	-1.29	0.00	0.00
---	243798_PM_at	---	-1.29	0.00	0.00
---	1562453_PM_at	---	-1.29	0.00	0.00
---	232614_PM_at	---	-1.29	0.00	0.00
MZB1	221286_PM_s_at	marginal zone B and B1 cell-specific protein	-1.29	0.00	0.00
CLDN23	228707_PM_at	claudin 23	-1.29	0.00	0.00

---	233862_PM_at	---	-1.29	0.00	0.00
STAP1	220059_PM_at	signal transducing adaptor family member 1	-1.29	0.00	0.00
ZNF662	228538_PM_at	zinc finger protein 662	-1.29	0.00	0.00
---	243810_PM_at	---	-1.29	0.00	0.00
---	224533_PM_s_at	---	-1.29	0.00	0.01
---	233034_PM_at	---	-1.29	0.00	0.01
MS4A1	228592_PM_at	membrane-spanning 4-domains, subfamily A, member 1	-1.29	0.00	0.01
---	1569312_PM_at	---	-1.29	0.00	0.01
VPREB3	220068_PM_at	pre-B lymphocyte 3	-1.29	0.00	0.01
IGHA1	215118_PM_s_at	Immunoglobulin heavy constant alpha 1	-1.29	0.00	0.02
---	236220_PM_at	---	-1.29	0.00	0.03
---	211645_PM_x_at	---	-1.29	0.00	0.03
IGK@	211644_PM_x_at	immunoglobulin kappa locus	-1.29	0.00	0.04
FCRL5	224404_PM_s_at	Fc receptor-like 5	-1.29	0.00	0.04
IGLC1	216853_PM_x_at	Immunoglobulin lambda constant 1 (Mcg m)	-1.29	0.00	0.04
MUM1	221290_PM_s_at	melanoma associated antigen (mutated) 1	-1.28	0.00	0.00
TCF4	203753_PM_at	transcription factor 4	-1.28	0.00	0.00
TMEM97	212282_PM_at	transmembrane protein 97	-1.28	0.00	0.00
TARSL2	227611_PM_at	threonyl-tRNA synthetase-like 2	-1.28	0.00	0.00
---	240605_PM_at	---	-1.28	0.00	0.00
---	215164_PM_at	---	-1.28	0.00	0.00
---	235912_PM_at	---	-1.28	0.00	0.00
SIK1	208078_PM_s_at	salt-inducible kinase 1	-1.28	0.00	0.00
METAP1D	227805_PM_at	methionyl aminopeptidase type 1D (mitochondrial)	-1.28	0.00	0.00
ZDHHC21	229923_PM_at	zinc finger, DHHC-type containing 21	-1.28	0.00	0.00
---	231450_PM_at	---	-1.28	0.00	0.00
LARS	223888_PM_s_at	leucyl-tRNA synthetase	-1.28	0.00	0.00
LRPPRC	1557360_PM_at	leucine-rich pentatricopeptide repeat containing protein 1	-1.28	0.00	0.00
CHD1L	238070_PM_at	chromodomain helicase DNA binding protein 1	-1.28	0.00	0.00
PSMG4	242055_PM_at	Proteasome (prosome, macropain) assembly chaperone	-1.28	0.00	0.00
---	243855_PM_at	---	-1.28	0.00	0.00
---	243005_PM_at	---	-1.28	0.00	0.00
---	236610_PM_at	---	-1.28	0.00	0.00

LILRA4	210313_PM_at	leukocyte immunoglobulin-like receptor, su	-1.28	0.00	0.00
SPIB	205861_PM_at	Spi-B transcription factor (Spi-1	-1.28	0.00	0.00
LOC100131541	1558569_PM_at	Uncharacterized LOC100131541	-1.28	0.00	0.00
SCML1	222747_PM_s_at	sex comb on midleg-like 1 (<i>Drosophila</i>)	-1.28	0.00	0.00
SERPINB9	242814_PM_at	serpin peptidase inhibitor, clade B (ovalbum	-1.28	0.00	0.00
TRAF3IP2	202987_PM_at	TRAF3 interacting protein 2	-1.28	0.00	0.00
PLEKHA1	219024_PM_at	pleckstrin homology domain containing, far	-1.28	0.00	0.00
RASGRP3	205801_PM_s_at	RAS guanyl releasing protein 3 (calcium and	-1.28	0.00	0.00
---	241505_PM_at	---	-1.28	0.00	0.00
LINC00342	213703_PM_at	long intergenic non-protein coding RNA 342	-1.28	0.00	0.00
UBE3D	1569262_PM_x_at	ubiquitin protein ligase E3D	-1.28	0.00	0.00
---	242741_PM_x_at	---	-1.28	0.00	0.00
---	236462_PM_at	---	-1.28	0.00	0.00
LOC285972	1560762_PM_at	uncharacterized LOC285972	-1.28	0.00	0.00
LOC100233156	227715_PM_at	tektin 4 pseudogene	-1.28	0.00	0.00
SAMD4A	212845_PM_at	sterile alpha motif domain containing 4A	-1.28	0.00	0.00
LIX1	230865_PM_at	Lix1 homolog (chicken)	-1.28	0.00	0.01
---	1554636_PM_at	---	-1.28	0.00	0.01
---	234186_PM_at	---	-1.28	0.00	0.01
---	244181_PM_at	---	-1.28	0.00	0.04
CAMTA1	213268_PM_at	calmodulin binding transcription activator 1	-1.28	0.00	0.04
IGJ	212592_PM_at	immunoglobulin J polypeptide, linker protein	-1.28	0.00	0.05
CARD11	1562368_PM_at	caspase recruitment domain family, member 11	-1.27	0.00	0.00
U2SURP	236696_PM_at	U2 snRNP-associated SURP domain containi	-1.27	0.00	0.00
---	240622_PM_at	---	-1.27	0.00	0.00
NAF1	244828_PM_x_at	nuclear assembly factor 1 homolog (<i>S. cerev</i>	-1.27	0.00	0.00
AQP3	39249_PM_at	aquaporin 3 (Gill blood group)	-1.27	0.00	0.00
IL6ST	204863_PM_s_at	interleukin 6 signal transducer (gp130, onco	-1.27	0.00	0.00
---	237067_PM_at	---	-1.27	0.00	0.00
TCF4	213891_PM_s_at	transcription factor 4	-1.27	0.00	0.00
---	244625_PM_at	---	-1.27	0.00	0.00
MBNL2	232138_PM_at	Muscleblind-like splicing regulator 2	-1.27	0.00	0.00
---	236279_PM_at	---	-1.27	0.00	0.00

METTL6	232102_PM_at	Methyltransferase like 6	-1.27	0.00	0.00
AQP3	203747_PM_at	aquaporin 3 (Gill blood group)	-1.27	0.00	0.00
TSPAN3	200972_PM_at	tetraspanin 3	-1.27	0.00	0.00
---	232778_PM_at	---	-1.27	0.00	0.00
---	237953_PM_at	---	-1.27	0.00	0.00
PMEPA1	222449_PM_at	prostate transmembrane protein, androger	-1.27	0.00	0.00
EPT1	1570371_PM_a_at	ethanolaminephosphotransferase 1 (CDP-e1	-1.27	0.00	0.00
---	1560999_PM_a_at	---	-1.27	0.00	0.00
NUP62	236505_PM_at	Nucleoporin 62kDa	-1.27	0.00	0.00
ACAT1	1559239_PM_s_at	acetyl-CoA acetyltransferase 1	-1.27	0.00	0.00
---	1566446_PM_at	---	-1.27	0.00	0.00
---	243512_PM_x_at	---	-1.27	0.00	0.00
---	243791_PM_at	---	-1.27	0.00	0.00
BACH2	221234_PM_s_at	BTB and CNC homology 1, basic leucine zipper	-1.27	0.00	0.00
---	244605_PM_at	---	-1.27	0.00	0.00
---	241417_PM_at	---	-1.27	0.00	0.00
---	239292_PM_at	---	-1.27	0.00	0.00
TTC9	213172_PM_at	tetratricopeptide repeat domain 9	-1.27	0.00	0.00
SPON1	213994_PM_s_at	spondin 1, extracellular matrix protein	-1.27	0.00	0.00
AXIN2	222696_PM_at	axin 2	-1.27	0.00	0.00
CD22	38521_PM_at	CD22 molecule	-1.27	0.00	0.00
TSPYL5	213122_PM_at	TSPY-like 5	-1.27	0.00	0.00
---	238157_PM_at	---	-1.27	0.00	0.00
SNX29	232485_PM_at	sorting nexin 29	-1.27	0.00	0.00
PTPRK	203038_PM_at	protein tyrosine phosphatase, receptor type	-1.27	0.00	0.01
IGLJ3	211798_PM_x_at	immunoglobulin lambda joining 3	-1.27	0.00	0.01
RCAN3	219864_PM_s_at	RCAN family member 3	-1.27	0.00	0.01
USP10	209136_PM_s_at	ubiquitin specific peptidase 10	-1.27	0.00	0.01
OR2A20P	222290_PM_at	olfactory receptor, family 2, subfamily A, mem	-1.27	0.00	0.01
IGLV1-44	217258_PM_x_at	immunoglobulin lambda variable 1-44	-1.27	0.00	0.02
LOC100507616	239244_PM_at	uncharacterized LOC100507616	-1.27	0.00	0.02
FCRL5	224406_PM_s_at	Fc receptor-like 5	-1.27	0.00	0.03
IGLJ3	216852_PM_x_at	Immunoglobulin lambda joining 3	-1.27	0.00	0.03

IGKC	216207_PM_x_at	immunoglobulin kappa constant	-1.27	0.00	0.04
---	216401_PM_x_at	---	-1.27	0.00	0.04
---	217036_PM_at	---	-1.27	0.00	0.04
IGKC	215217_PM_at	Immunoglobulin kappa constant	-1.27	0.00	0.05
ENAM	223893_PM_at	enamelin	-1.26	0.00	0.00
---	242920_PM_at	---	-1.26	0.00	0.00
---	243286_PM_at	---	-1.26	0.00	0.00
---	232134_PM_at	---	-1.26	0.00	0.00
ETS1	1555355_PM_a_at	v-ets erythroblastosis virus E26 oncogene h	-1.26	0.00	0.00
NAA25	236816_PM_at	N(alpha)-acetyltransferase 25, NatB auxiliar	-1.26	0.00	0.00
ZNF275	225383_PM_at	zinc finger protein 275	-1.26	0.00	0.00
AKT3	222880_PM_at	v-akt murine thymoma viral oncogene hom	-1.26	0.00	0.00
LMLN	238037_PM_at	leishmanolysin-like (metallopeptidase M8 f	-1.26	0.00	0.00
BCL7A	203796_PM_s_at	B-cell CLL	-1.26	0.00	0.00
FAM213A	228155_PM_at	family with sequence similarity 213, membe	-1.26	0.00	0.00
---	240238_PM_at	---	-1.26	0.00	0.00
---	222266_PM_at	---	-1.26	0.00	0.00
HAUS5	213054_PM_at	HAUS augmin-like complex, subunit 5	-1.26	0.00	0.00
ABLIM1	210461_PM_s_at	actin binding LIM protein 1	-1.26	0.00	0.00
---	241007_PM_at	---	-1.26	0.00	0.00
---	244845_PM_at	---	-1.26	0.00	0.00
C14orf64	1559097_PM_at	chromosome 14 open reading frame 64	-1.26	0.00	0.00
MAP2K5	216765_PM_at	Mitogen-activated protein kinase kinase 5	-1.26	0.00	0.00
ZCCHC2	219062_PM_s_at	zinc finger, CCHC domain containing 2	-1.26	0.00	0.00
---	236343_PM_at	---	-1.26	0.00	0.00
SCAF4	243759_PM_at	SR-related CTD-associated factor 4	-1.26	0.00	0.00
CD27	206150_PM_at	CD27 molecule	-1.26	0.00	0.00
IKZF1	1565818_PM_s_at	IKAROS family zinc finger 1 (Ikafos)	-1.26	0.00	0.00
SNRPN	1560741_PM_at	small nuclear ribonucleoprotein polypeptid	-1.26	0.00	0.00
HTATSF1	202602_PM_s_at	HIV-1 Tat specific factor 1	-1.26	0.00	0.00
APBA2	209871_PM_s_at	amyloid beta (A4) precursor protein-binding	-1.26	0.00	0.00
---	239784_PM_at	---	-1.26	0.00	0.00
DUSP5	209457_PM_at	dual specificity phosphatase 5	-1.26	0.00	0.00

MLLT3	1569652_PM_at	myeloid	-1.26	0.00	0.00
LOXL1-AS1	232752_PM_at	LOXL1 antisense RNA 1 (non-protein coding	-1.26	0.00	0.00
SLC16A10	222939_PM_s_at	solute carrier family 16, member 10 (aroma	-1.26	0.00	0.00
TMEM67	1569377_PM_at	transmembrane protein 67	-1.26	0.00	0.00
DIP2C	212504_PM_at	DIP2 disco-interacting protein 2 homolog C	-1.26	0.00	0.00
---	217394_PM_at	---	-1.26	0.00	0.00
LOC100653018	203413_PM_at	uncharacterized LOC100653018	-1.26	0.00	0.01
NASP	242918_PM_at	Nuclear autoantigenic sperm protein (histo)	-1.26	0.00	0.01
TNIP1	243423_PM_at	TNFAIP3 interacting protein 1	-1.26	0.00	0.01
---	1561004_PM_at	---	-1.26	0.00	0.02
IGHA1	216557_PM_x_at	immunoglobulin heavy constant alpha 1	-1.26	0.00	0.03
IGLV1-44	234707_PM_x_at	immunoglobulin lambda variable 1-44	-1.26	0.00	0.05
ZBTB20	205383_PM_s_at	zinc finger and BTB domain containing 20	-1.25	0.00	0.00
TGIF2	218724_PM_s_at	TGFB-induced factor homeobox 2	-1.25	0.00	0.00
NSUN6	230200_PM_at	NOP2	-1.25	0.00	0.00
---	239003_PM_at	---	-1.25	0.00	0.00
LUC7L	1557066_PM_at	LUC7-like (S. cerevisiae)	-1.25	0.00	0.00
---	1567044_PM_s_at	---	-1.25	0.00	0.00
ZNF785	1554770_PM_x_at	zinc finger protein 785	-1.25	0.00	0.00
ATF7IP2	219870_PM_at	activating transcription factor 7 interacting	-1.25	0.00	0.00
---	233246_PM_at	---	-1.25	0.00	0.00
PRKRA	237107_PM_at	protein kinase, interferon-inducible double	-1.25	0.00	0.00
---	243030_PM_at	---	-1.25	0.00	0.00
SHMT2	214095_PM_at	serine hydroxymethyltransferase 2 (mitoch	-1.25	0.00	0.00
ATAD5	220223_PM_at	ATPase family, AAA domain containing 5	-1.25	0.00	0.00
---	241106_PM_at	---	-1.25	0.00	0.00
---	222098_PM_s_at	---	-1.25	0.00	0.00
ABLM1	200965_PM_s_at	actin binding LIM protein 1	-1.25	0.00	0.00
BCL7A	203795_PM_s_at	B-cell CLL	-1.25	0.00	0.00
---	242031_PM_at	---	-1.25	0.00	0.00
TMEM97	212281_PM_s_at	transmembrane protein 97	-1.25	0.00	0.00
PTPLAD1	234000_PM_s_at	protein tyrosine phosphatase-like A domain	-1.25	0.00	0.00
---	238032_PM_at	---	-1.25	0.00	0.00

BCL11A	219497_PM_s_at	B-cell CLL	-1.25	0.00	0.00
MAN1C1	218918_PM_at	mannosidase, alpha, class 1C, member 1	-1.25	0.00	0.00
---	215204_PM_at	---	-1.25	0.00	0.00
PRICKLE1	226065_PM_at	prickle homolog 1 (<i>Drosophila</i>)	-1.25	0.00	0.00
---	233099_PM_at	---	-1.25	0.00	0.00
---	237429_PM_at	---	-1.25	0.00	0.00
---	229465_PM_s_at	---	-1.25	0.00	0.00
---	239862_PM_at	---	-1.25	0.00	0.00
---	1565614_PM_at	---	-1.25	0.00	0.00
HOXB-AS3	244512_PM_at	HOXB cluster antisense RNA 3 (non-protein	-1.25	0.00	0.00
8-Sep	209000_PM_s_at	septin 8	-1.25	0.00	0.00
BCAS4	231584_PM_s_at	Breast carcinoma amplified sequence 4	-1.25	0.00	0.00
---	240216_PM_at	---	-1.25	0.00	0.00
---	239966_PM_at	---	-1.25	0.00	0.00
STRBP	233251_PM_at	Spermatid perinuclear RNA binding protein	-1.25	0.00	0.00
KIAA0664L3	238910_PM_at	KIAA0664-like 3	-1.25	0.00	0.00
NAPEPLD	233539_PM_at	N-acyl phosphatidylethanolamine phosphol	-1.25	0.00	0.00
---	236727_PM_at	---	-1.25	0.00	0.00
KMO	205307_PM_s_at	kynurenone 3-monoxygenase (kynurenone	-1.25	0.00	0.00
---	227533_PM_at	---	-1.25	0.00	0.00
ARMC8	236966_PM_at	armadillo repeat containing 8	-1.25	0.00	0.00
---	242947_PM_at	---	-1.25	0.00	0.00
---	231107_PM_at	---	-1.25	0.00	0.00
SRRM2	1554671_PM_a_at	serine	-1.25	0.00	0.00
---	233921_PM_s_at	---	-1.25	0.00	0.00
---	240789_PM_at	---	-1.25	0.00	0.00
CD40	222292_PM_at	CD40 molecule, TNF receptor superfamily α	-1.25	0.00	0.00
P2RX5	210448_PM_s_at	purinergic receptor P2X, ligand-gated ion ch	-1.25	0.00	0.00
LOC100129858	1556736_PM_at	uncharacterized LOC100129858	-1.25	0.00	0.00
CAMTA1	1555370_PM_a_at	calmodulin binding transcription activator 1	-1.25	0.00	0.00
---	238311_PM_at	---	-1.25	0.00	0.00
PDE9A	205593_PM_s_at	phosphodiesterase 9A	-1.25	0.00	0.01
---	243006_PM_at	---	-1.25	0.00	0.01

SWAP70	210369_PM_at	SWAP switching B-cell complex 70kDa subunit	-1.25	0.00	0.01
LOC389834	241624_PM_at	ankyrin repeat domain 57 pseudogene	-1.25	0.00	0.01
IGH@	211868_PM_x_at	immunoglobulin heavy locus	-1.25	0.00	0.01
NT5E	203939_PM_at	5'-nucleotidase, ecto (CD73)	-1.25	0.00	0.01
IGK@	211908_PM_x_at	Immunoglobulin kappa locus	-1.25	0.00	0.01
TPD52	201691_PM_s_at	tumor protein D52	-1.25	0.00	0.01
CAMK4	241871_PM_at	calcium	-1.25	0.00	0.01
TRABD2A	227867_PM_at	TraB domain containing 2A	-1.25	0.00	0.01
CDKN1C	213183_PM_s_at	Cyclin-dependent kinase inhibitor 1C (p57, I	-1.25	0.00	0.01
LOC100233156	229748_PM_x_at	tektin 4 pseudogene	-1.25	0.00	0.01
CNTNAP2	219301_PM_s_at	contactin associated protein-like 2	-1.25	0.00	0.03
---	1565913_PM_at	---	-1.25	0.00	0.03
LOC100287723	217480_PM_x_at	ig kappa chain V-I region Walker-like	-1.25	0.00	0.05
---	240438_PM_at	---	-1.24	0.00	0.00
ZNF141	235580_PM_at	zinc finger protein 141	-1.24	0.00	0.00
PEX3	203969_PM_at	peroxisomal biogenesis factor 3	-1.24	0.00	0.00
---	244145_PM_at	---	-1.24	0.00	0.00
---	236699_PM_at	---	-1.24	0.00	0.00
TRIB2	202478_PM_at	tribbles homolog 2 (Drosophila)	-1.24	0.00	0.00
URB1	212996_PM_s_at	URB1 ribosome biogenesis 1 homolog (S. ce	-1.24	0.00	0.00
---	237432_PM_at	---	-1.24	0.00	0.00
---	234095_PM_at	---	-1.24	0.00	0.00
DHX30	230871_PM_at	DEAH (Asp-Glu-Ala-His) box polypeptide 30	-1.24	0.00	0.00
---	244204_PM_at	---	-1.24	0.00	0.00
APBA2	209870_PM_s_at	amyloid beta (A4) precursor protein-binding	-1.24	0.00	0.00
DTWD1	236649_PM_at	DTW domain containing 1	-1.24	0.00	0.00
---	242298_PM_x_at	---	-1.24	0.00	0.00
---	238653_PM_at	---	-1.24	0.00	0.00
---	1556345_PM_s_at	---	-1.24	0.00	0.00
LCN10	238071_PM_at	lipocalin 10	-1.24	0.00	0.00
CBX5	226085_PM_at	chromobox homolog 5	-1.24	0.00	0.00
---	243817_PM_at	---	-1.24	0.00	0.00
---	236143_PM_at	---	-1.24	0.00	0.00

---	233690_PM_at	---	-1.24	0.00	0.00
---	1559598_PM_at	---	-1.24	0.00	0.00
DPP4	203716_PM_s_at	dipeptidyl-peptidase 4	-1.24	0.00	0.00
SNRPA1	242146_PM_at	Small nuclear ribonucleoprotein polypeptid	-1.24	0.00	0.00
FAM3C	236316_PM_at	family with sequence similarity 3, member C	-1.24	0.00	0.00
SEMA6A	223449_PM_at	sema domain, transmembrane domain (TM)	-1.24	0.00	0.00
---	244535_PM_at	---	-1.24	0.00	0.00
---	230702_PM_at	---	-1.24	0.00	0.00
LOC100190986	235167_PM_at	uncharacterized LOC100190986	-1.24	0.00	0.00
BLK	206255_PM_at	B lymphoid tyrosine kinase	-1.24	0.00	0.00
AMIGO1	226718_PM_at	adhesion molecule with Ig-like domain 1	-1.24	0.00	0.00
---	240690_PM_at	---	-1.24	0.00	0.00
---	236617_PM_at	---	-1.24	0.00	0.00
C12orf42	1561378_PM_at	chromosome 12 open reading frame 42	-1.24	0.00	0.00
---	243546_PM_at	---	-1.24	0.00	0.00
GPR180	1566256_PM_s_at	G protein-coupled receptor 180	-1.24	0.00	0.00
---	240503_PM_at	---	-1.24	0.00	0.00
TCL6	239964_PM_at	T-cell leukemia	-1.24	0.00	0.00
ZNF496	238145_PM_at	Zinc finger protein 496	-1.24	0.00	0.00
---	215802_PM_at	---	-1.24	0.00	0.00
---	235743_PM_at	---	-1.24	0.00	0.01
HNRNPD	227744_PM_s_at	Heterogeneous nuclear ribonucleoprotein D	-1.24	0.00	0.01
ZNF709	242028_PM_at	zinc finger protein 709	-1.24	0.00	0.01
C11orf80	238593_PM_at	chromosome 11 open reading frame 80	-1.24	0.00	0.01
COBLL1	229598_PM_at	COBL-like 1	-1.24	0.00	0.01
SNX22	230509_PM_at	sorting nexin 22	-1.24	0.00	0.01
---	217536_PM_x_at	---	-1.24	0.00	0.01
ELOVL4	219532_PM_at	ELOVL fatty acid elongase 4	-1.24	0.00	0.01
---	217251_PM_x_at	---	-1.24	0.00	0.02
KIAA0125	206478_PM_at	KIAA0125	-1.24	0.00	0.02
GCOM1	228568_PM_at	GRINL1A complex locus 1	-1.24	0.00	0.02
---	239448_PM_at	---	-1.24	0.00	0.04
IGH@	217281_PM_x_at	immunoglobulin heavy locus	-1.24	0.00	0.05

ZNF202	204327_PM_s_at	zinc finger protein 202	-1.23	0.00	0.00
---	222306_PM_at	---	-1.23	0.00	0.00
LUC7L	1557067_PM_s_at	LUC7-like (<i>S. cerevisiae</i>)	-1.23	0.00	0.00
---	236139_PM_at	---	-1.23	0.00	0.00
---	239397_PM_at	---	-1.23	0.00	0.00
---	215526_PM_at	---	-1.23	0.00	0.00
MPRIP	214694_PM_at	myosin phosphatase Rho interacting protein	-1.23	0.00	0.00
---	1560680_PM_at	---	-1.23	0.00	0.00
MORC4	219038_PM_at	MORC family CW-type zinc finger 4	-1.23	0.00	0.00
GART	244822_PM_at	phosphoribosylglycinamide formyltransferase	-1.23	0.00	0.00
TGFBR1	236561_PM_at	transforming growth factor, beta receptor 1	-1.23	0.00	0.00
---	1567045_PM_at	---	-1.23	0.00	0.00
TNPO1	1556116_PM_s_at	Transportin 1	-1.23	0.00	0.00
MMP19	204574_PM_s_at	matrix metallopeptidase 19	-1.23	0.00	0.00
TRIB2	202479_PM_s_at	tribbles homolog 2 (<i>Drosophila</i>)	-1.23	0.00	0.00
C14orf64	1564211_PM_at	chromosome 14 open reading frame 64	-1.23	0.00	0.00
GPR18	210279_PM_at	G protein-coupled receptor 18	-1.23	0.00	0.00
---	236210_PM_at	---	-1.23	0.00	0.00
---	238106_PM_at	---	-1.23	0.00	0.00
---	1554771_PM_at	---	-1.23	0.00	0.00
TACR1	210637_PM_at	tachykinin receptor 1	-1.23	0.00	0.00
LOC100653004	242490_PM_at	uncharacterized LOC100653004	-1.23	0.00	0.00
ARL10	228843_PM_at	ADP-ribosylation factor-like 10	-1.23	0.00	0.00
---	1562529_PM_s_at	---	-1.23	0.00	0.00
HBS1L	209315_PM_at	HBS1-like (<i>S. cerevisiae</i>)	-1.23	0.00	0.00
TAF4B	235020_PM_at	TAF4b RNA polymerase II, TATA box binding protein	-1.23	0.00	0.00
---	220728_PM_at	---	-1.23	0.00	0.00
CAMSAP1	244682_PM_at	calmodulin regulated spectrin-associated protein	-1.23	0.00	0.00
---	1565886_PM_at	---	-1.23	0.00	0.00
LOC100291323	1564639_PM_at	uncharacterized LOC100291323	-1.23	0.00	0.00
---	242752_PM_at	---	-1.23	0.00	0.00
---	1564776_PM_at	---	-1.23	0.00	0.00
SERPINF1	202283_PM_at	serpin peptidase inhibitor, clade F (alpha-2)	-1.23	0.00	0.00

---	244633_PM_at	---	-1.23	0.00	0.00
---	234848_PM_at	---	-1.23	0.00	0.00
---	1555157_PM_at	---	-1.23	0.00	0.00
---	242409_PM_at	---	-1.23	0.00	0.00
---	240971_PM_x_at	---	-1.23	0.00	0.00
---	241298_PM_x_at	---	-1.23	0.00	0.00
RGCC	239827_PM_at	Regulator of cell cycle	-1.23	0.00	0.00
YME1L1	234849_PM_at	YME1-like 1 (<i>S. cerevisiae</i>)	-1.23	0.00	0.01
---	1566607_PM_at	---	-1.23	0.00	0.01
PGAP1	220576_PM_at	post-GPI attachment to proteins 1	-1.23	0.00	0.01
---	244226_PM_s_at	---	-1.23	0.00	0.01
---	236149_PM_at	---	-1.23	0.00	0.01
CCDC91	1570571_PM_at	Coiled-coil domain containing 91	-1.23	0.00	0.01
---	235268_PM_at	---	-1.23	0.00	0.01
KMO	211138_PM_s_at	kynurenine 3-monooxygenase (kynurenine	-1.23	0.00	0.01
---	239588_PM_s_at	---	-1.23	0.00	0.01
SLFN5	1557078_PM_at	schlafen family member 5	-1.23	0.00	0.01
---	241092_PM_at	---	-1.23	0.00	0.01
---	216173_PM_at	---	-1.23	0.00	0.01
SLC16A7	207057_PM_at	solute carrier family 16, member 7 (monocar-	-1.23	0.00	0.01
MYEF2	229464_PM_at	myelin expression factor 2	-1.23	0.00	0.01
PCNP	237577_PM_at	PEST proteolytic signal containing nuclear p	-1.23	0.00	0.01
KMO	205306_PM_x_at	kynurenine 3-monooxygenase (kynurenine	-1.23	0.00	0.02
IGHG1	228518_PM_at	immunoglobulin heavy constant gamma 1 (	-1.23	0.00	0.02
FAM129C	1553369_PM_at	family with sequence similarity 129, membe	-1.23	0.00	0.03
---	239278_PM_at	---	-1.23	0.00	0.03
IGLC1	209138_PM_x_at	Immunoglobulin lambda constant 1 (Mcg m	-1.23	0.00	0.03
WDR4	235551_PM_at	WD repeat domain 4	-1.23	0.00	0.03
---	242836_PM_at	---	-1.23	0.00	0.03
IGLJ3	211881_PM_x_at	immunoglobulin lambda joining 3	-1.23	0.00	0.03
---	1563364_PM_at	---	-1.23	0.00	0.03
---	216495_PM_x_at	---	-1.23	0.00	0.05
LOC100505549	238055_PM_at	uncharacterized LOC100505549	-1.22	0.00	0.00

CBFA2T2	238549_PM_at	core-binding factor, runt domain, alpha sub	-1.22	0.00	0.00
---	226773_PM_at	---	-1.22	0.00	0.00
---	236484_PM_at	---	-1.22	0.00	0.00
---	242089_PM_at	---	-1.22	0.00	0.00
---	236330_PM_at	---	-1.22	0.00	0.00
HSPH1	208744_PM_x_at	heat shock 105kDa	-1.22	0.00	0.00
---	1556126_PM_s_at	---	-1.22	0.00	0.00
CLN8	219341_PM_at	ceroid-lipofuscinosis, neuronal 8 (epilepsy, |	-1.22	0.00	0.00
ZNF827	226764_PM_at	zinc finger protein 827	-1.22	0.00	0.00
SPTAN1	214925_PM_s_at	spectrin, alpha, non-erythrocytic 1	-1.22	0.00	0.00
---	1569597_PM_at	---	-1.22	0.00	0.00
FAIM3	221602_PM_s_at	Fas apoptotic inhibitory molecule 3	-1.22	0.00	0.00
---	218544_PM_s_at	---	-1.22	0.00	0.00
GSPT1	240452_PM_at	G1 to S phase transition 1	-1.22	0.00	0.00
ATXN2L	207798_PM_s_at	ataxin 2-like	-1.22	0.00	0.00
AQP3	39248_PM_at	aquaporin 3 (Gill blood group)	-1.22	0.00	0.00
EIF3B	236274_PM_at	eukaryotic translation initiation factor 3, sul	-1.22	0.00	0.00
SEL1L3	212314_PM_at	sel-1 suppressor of lin-12-like 3 (C. elegans)	-1.22	0.00	0.00
GOLGA8A	208797_PM_s_at	golgin A8 family, member A	-1.22	0.00	0.00
LOC100128108	243957_PM_at	uncharacterized LOC100128108	-1.22	0.00	0.00
---	241750_PM_x_at	---	-1.22	0.00	0.00
LOC100507053	1559240_PM_at	uncharacterized LOC100507053	-1.22	0.00	0.00
---	239348_PM_at	---	-1.22	0.00	0.00
LOC100133130	223766_PM_at	PRO1102	-1.22	0.00	0.00
RNF157-AS1	230776_PM_at	RNF157 antisense RNA 1 (non-protein codir	-1.22	0.00	0.00
IL21R	219971_PM_at	interleukin 21 receptor	-1.22	0.00	0.00
FAIM3	221601_PM_s_at	Fas apoptotic inhibitory molecule 3	-1.22	0.00	0.00
---	238098_PM_at	---	-1.22	0.00	0.00
C16orf46	230281_PM_at	chromosome 16 open reading frame 46	-1.22	0.00	0.00
SEC62	1552789_PM_at	SEC62 homolog (S. cerevisiae)	-1.22	0.00	0.00
CXCR7	212977_PM_at	chemokine (C-X-C motif) receptor 7	-1.22	0.00	0.00
CAMK2D	224994_PM_at	calcium	-1.22	0.00	0.00
OPN3	224392_PM_s_at	opsin 3	-1.22	0.00	0.00

---	242709_PM_s_at	---	-1.22	0.00	0.00
---	234548_PM_at	---	-1.22	0.00	0.00
CYP3A5	214235_PM_at	cytochrome P450, family 3, subfamily A, polypeptide 5	-1.22	0.00	0.00
RHOH	236293_PM_at	ras homolog family member H	-1.22	0.00	0.00
LOC100506639	1557384_PM_at	uncharacterized LOC100506639	-1.22	0.00	0.00
PIGL	232262_PM_at	phosphatidylinositol glycan anchor biosynthase-like 2	-1.22	0.00	0.00
---	239842_PM_x_at	---	-1.22	0.00	0.00
SUN1	206487_PM_at	Sad1 and UNC84 domain containing 1	-1.22	0.00	0.00
---	1569601_PM_at	---	-1.22	0.00	0.00
ZMAT4	219877_PM_at	zinc finger, matrin-type 4	-1.22	0.00	0.00
AKAP13	229783_PM_at	A kinase (PRKA) anchor protein 13	-1.22	0.00	0.00
---	236395_PM_at	---	-1.22	0.00	0.00
RALGAPA1	234923_PM_at	Ral GTPase activating protein, alpha subunit	-1.22	0.00	0.00
ZNF83	236429_PM_at	zinc finger protein 83	-1.22	0.00	0.00
HELLS	227350_PM_at	helicase, lymphoid-specific	-1.22	0.00	0.00
RBM6	1556672_PM_a_at	RNA binding motif protein 6	-1.22	0.00	0.00
---	233614_PM_at	---	-1.22	0.00	0.00
---	1557555_PM_at	---	-1.22	0.00	0.01
FOSB	202768_PM_at	FBJ murine osteosarcoma viral oncogene homolog 2	-1.22	0.00	0.01
---	217697_PM_at	---	-1.22	0.00	0.01
---	244239_PM_at	---	-1.22	0.00	0.01
---	244053_PM_at	---	-1.22	0.00	0.01
---	243089_PM_at	---	-1.22	0.00	0.01
---	243416_PM_at	---	-1.22	0.00	0.01
---	242225_PM_at	---	-1.22	0.00	0.01
RAB30	228390_PM_at	RAB30, member RAS oncogene family	-1.22	0.00	0.01
---	244665_PM_at	---	-1.22	0.00	0.01
SHISA4	226674_PM_at	shisa homolog 4 (Xenopus laevis)	-1.22	0.00	0.01
---	244331_PM_at	---	-1.22	0.00	0.01
NAV1	242986_PM_at	Neuron navigator 1	-1.22	0.00	0.01
EPHX2	209368_PM_at	epoxide hydrolase 2, cytoplasmic	-1.22	0.00	0.01
---	216211_PM_at	---	-1.22	0.00	0.01
---	1559188_PM_x_at	---	-1.22	0.00	0.01

YTHDC1	214814_PM_at	YTH domain containing 1	-1.22	0.00	0.01
GART	230766_PM_at	phosphoribosylglycinamide formyltransfera	-1.22	0.00	0.01
HIST1H2AB	214469_PM_at	histone cluster 1, H2ab	-1.22	0.00	0.01
GOSR2	243880_PM_at	golgi SNAP receptor complex member 2	-1.22	0.00	0.01
FMNL3	238823_PM_at	formin-like 3	-1.22	0.00	0.01
---	232835_PM_at	---	-1.22	0.00	0.02
CYAT1	215121_PM_x_at	immunoglobulin lambda light chain-like	-1.22	0.00	0.02
---	241391_PM_at	---	-1.22	0.00	0.02
---	240442_PM_at	---	-1.22	0.00	0.02
CD28	206545_PM_at	CD28 molecule	-1.22	0.00	0.03
IL23A	234865_PM_at	Interleukin 23, alpha subunit p19	-1.22	0.00	0.03
---	1556375_PM_at	---	-1.21	0.00	0.00
GAR1	219110_PM_at	GAR1 ribonucleoprotein homolog (yeast)	-1.21	0.00	0.00
PCSK7	232521_PM_at	proprotein convertase subtilisin	-1.21	0.00	0.00
PSMG4	228217_PM_s_at	proteasome (prosome, macropain) assembl	-1.21	0.00	0.00
ZNF785	1554769_PM_at	zinc finger protein 785	-1.21	0.00	0.00
ADC	228000_PM_at	arginine decarboxylase	-1.21	0.00	0.00
WDR61	215156_PM_at	WD repeat domain 61	-1.21	0.00	0.00
QSOX2	227146_PM_at	quiescin Q6 sulfhydryl oxidase 2	-1.21	0.00	0.00
---	239238_PM_at	---	-1.21	0.00	0.00
LOC100507495	236520_PM_at	Uncharacterized LOC100507495	-1.21	0.00	0.00
---	233243_PM_at	---	-1.21	0.00	0.00
ELP2	235623_PM_at	elongation protein 2 homolog (<i>S. cerevisiae</i>)	-1.21	0.00	0.00
DGCR8	219811_PM_at	DiGeorge syndrome critical region gene 8	-1.21	0.00	0.00
---	1561640_PM_at	---	-1.21	0.00	0.00
---	241472_PM_at	---	-1.21	0.00	0.00
COX18	227442_PM_at	COX18 cytochrome c oxidase assembly hor	-1.21	0.00	0.00
SNHG12	223773_PM_s_at	small nucleolar RNA host gene 12 (non-prot	-1.21	0.00	0.00
SDAD1	218607_PM_s_at	SDA1 domain containing 1	-1.21	0.00	0.00
---	241930_PM_x_at	---	-1.21	0.00	0.00
RGS12	242079_PM_at	regulator of G-protein signaling 12	-1.21	0.00	0.00
RIMKLB	226164_PM_x_at	ribosomal modification protein rimK-like fai	-1.21	0.00	0.00
MTERFD2	1557965_PM_at	MTERF domain containing 2	-1.21	0.00	0.00

NOP14	214661_PM_s_at	NOP14 nucleolar protein homolog (yeast)	-1.21	0.00	0.00
ANAPC5	239651_PM_at	anaphase promoting complex subunit 5	-1.21	0.00	0.00
---	1557300_PM_s_at	---	-1.21	0.00	0.00
NGDN	216263_PM_s_at	neuroguidin, EIF4E binding protein	-1.21	0.00	0.00
---	222284_PM_at	---	-1.21	0.00	0.00
CEP41	225484_PM_at	centrosomal protein 41kDa	-1.21	0.00	0.00
---	233648_PM_at	---	-1.21	0.00	0.00
---	239070_PM_at	---	-1.21	0.00	0.00
HNRNPA1	222040_PM_at	heterogeneous nuclear ribonucleoprotein A	-1.21	0.00	0.00
EVL	227232_PM_at	Enah	-1.21	0.00	0.00
FAM208B	244165_PM_at	family with sequence similarity 208, member 1	-1.21	0.00	0.00
---	241489_PM_at	---	-1.21	0.00	0.00
HNRNPA1	214280_PM_x_at	heterogeneous nuclear ribonucleoprotein A	-1.21	0.00	0.00
---	242108_PM_at	---	-1.21	0.00	0.00
CUL4A	232466_PM_at	Cullin 4A	-1.21	0.00	0.00
C5orf63	244761_PM_at	chromosome 5 open reading frame 63	-1.21	0.00	0.00
SPATS2	222593_PM_s_at	spermatogenesis associated, serine-rich 2	-1.21	0.00	0.00
MAP3K9	213927_PM_at	mitogen-activated protein kinase kinase kinase 9	-1.21	0.00	0.00
---	237388_PM_at	---	-1.21	0.00	0.00
TCF12	215611_PM_at	transcription factor 12	-1.21	0.00	0.00
SEMA4C	46665_PM_at	sema domain, immunoglobulin domain (Ig), transmembrane 4C	-1.21	0.00	0.00
LY9	231124_PM_x_at	lymphocyte antigen 9	-1.21	0.00	0.00
FAM69A	1556498_PM_at	Family with sequence similarity 69, member 1	-1.21	0.00	0.00
---	241435_PM_at	---	-1.21	0.00	0.00
---	243280_PM_at	---	-1.21	0.00	0.00
ZMYM6	1552969_PM_a_at	zinc finger, MYM-type 6	-1.21	0.00	0.00
WDR60	229008_PM_at	WD repeat domain 60	-1.21	0.00	0.00
---	235788_PM_at	---	-1.21	0.00	0.00
---	237216_PM_at	---	-1.21	0.00	0.00
ARHGEF26	233903_PM_s_at	Rho guanine nucleotide exchange factor (GDP-GTP exchange factor) 26	-1.21	0.00	0.00
---	233444_PM_at	---	-1.21	0.00	0.00
LOC100506930	243924_PM_at	uncharacterized LOC100506930	-1.21	0.00	0.00
AKT3	242876_PM_at	V-akt murine thymoma viral oncogene homolog 3	-1.21	0.00	0.00

RRN3P1	216908_PM_x_at	RNA polymerase I transcription factor homolog	-1.21	0.00	0.00
CD83	204440_PM_at	CD83 molecule	-1.21	0.00	0.00
GAL3ST4	219815_PM_at	galactose-3-O-sulfotransferase 4	-1.21	0.00	0.00
PIK3C2B	204484_PM_at	phosphoinositide-3-kinase, class 2, beta pol	-1.21	0.00	0.00
CYP2B6	206754_PM_s_at	cytochrome P450, family 2, subfamily B, pol	-1.21	0.00	0.00
---	234785_PM_at	---	-1.21	0.00	0.00
---	232978_PM_at	---	-1.21	0.00	0.00
CAND1	239771_PM_at	cullin-associated and neddylation-dissociate	-1.21	0.00	0.00
KLHL3	221221_PM_s_at	kelch-like 3 (Drosophila)	-1.21	0.00	0.00
---	233706_PM_at	---	-1.21	0.00	0.00
---	239868_PM_at	---	-1.21	0.00	0.00
---	238536_PM_at	---	-1.21	0.00	0.00
NBPF10	242191_PM_at	neuroblastoma breakpoint family, member	-1.21	0.00	0.00
RORA	235567_PM_at	RAR-related orphan receptor A	-1.21	0.00	0.01
---	241079_PM_at	---	-1.21	0.00	0.01
---	235813_PM_at	---	-1.21	0.00	0.01
---	1570329_PM_at	---	-1.21	0.00	0.01
---	1569499_PM_at	---	-1.21	0.00	0.01
---	1559425_PM_at	---	-1.21	0.00	0.01
LOC283174	229734_PM_at	uncharacterized LOC283174	-1.21	0.00	0.01
CXCR5	206126_PM_at	chemokine (C-X-C motif) receptor 5	-1.21	0.00	0.01
---	243473_PM_at	---	-1.21	0.00	0.01
KLHDC4	234738_PM_s_at	kelch domain containing 4	-1.21	0.00	0.01
CELSR3	205165_PM_at	cadherin, EGF LAG seven-pass G-type recep	-1.21	0.00	0.01
ABCB4	207819_PM_s_at	ATP-binding cassette, sub-family B (MDR	-1.21	0.00	0.01
---	238155_PM_at	---	-1.21	0.00	0.01
FCRL2	221239_PM_s_at	Fc receptor-like 2	-1.21	0.00	0.01
---	233497_PM_at	---	-1.21	0.00	0.01
IGK@	214669_PM_x_at	immunoglobulin kappa locus	-1.21	0.00	0.01
TBC1D4	203386_PM_at	TBC1 domain family, member 4	-1.21	0.00	0.01
DPP4	211478_PM_s_at	dipeptidyl-peptidase 4	-1.21	0.00	0.01
---	244379_PM_at	---	-1.21	0.00	0.01
---	229327_PM_s_at	---	-1.21	0.00	0.01

BANK1	222915_PM_s_at	B-cell scaffold protein with ankyrin repeats	-1.21	0.00	0.02
HELB	1552787_PM_at	helicase (DNA) B	-1.21	0.00	0.02
BTLA	236226_PM_at	B and T lymphocyte associated	-1.21	0.00	0.02
MIR600	223522_PM_at	microRNA 600	-1.21	0.00	0.02
TCF4	212385_PM_at	transcription factor 4	-1.21	0.00	0.02
---	239227_PM_at	---	-1.21	0.00	0.02
SDC2	212158_PM_at	syndecan 2	-1.21	0.00	0.02
---	1563706_PM_at	---	-1.21	0.00	0.02
---	1557437_PM_a_at	---	-1.21	0.00	0.02
IGLV1-44	215379_PM_x_at	immunoglobulin lambda variable 1-44	-1.21	0.00	0.02
---	232882_PM_at	---	-1.21	0.00	0.03
EPHA1-AS1	1562249_PM_at	EPHA1 antisense RNA 1 (non-protein coding)	-1.21	0.00	0.03
KIAA0355	203288_PM_at	KIAA0355	-1.2	0.00	0.00
RBM17	224781_PM_s_at	RNA binding motif protein 17	-1.2	0.00	0.00
ZNF37A	228711_PM_at	zinc finger protein 37A	-1.2	0.00	0.00
CSTF3	229665_PM_at	cleavage stimulation factor, 3' pre-RNA, sub	-1.2	0.00	0.00
U2SURP	236431_PM_at	U2 snRNP-associated SURP domain containi	-1.2	0.00	0.00
KTN1	200914_PM_x_at	kinectin 1 (kinesin receptor)	-1.2	0.00	0.00
ZBTB4	225629_PM_s_at	zinc finger and BTB domain containing 4	-1.2	0.00	0.00
---	242194_PM_at	---	-1.2	0.00	0.00
DCAF8	243318_PM_at	DDB1 and CUL4 associated factor 8	-1.2	0.00	0.00
FKBP4	200895_PM_s_at	FK506 binding protein 4, 59kDa	-1.2	0.00	0.00
---	240595_PM_at	---	-1.2	0.00	0.00
SFXN4	230637_PM_at	sideroflexin 4	-1.2	0.00	0.00
---	242448_PM_at	---	-1.2	0.00	0.00
MTERFD2	1557966_PM_x_at	MTERF domain containing 2	-1.2	0.00	0.00
PTCD2	219658_PM_at	pentatricopeptide repeat domain 2	-1.2	0.00	0.00
SLC20A1	230494_PM_at	solute carrier family 20 (phosphate transpo	-1.2	0.00	0.00
---	236379_PM_at	---	-1.2	0.00	0.00
MSI2	225240_PM_s_at	musashi homolog 2 (Drosophila)	-1.2	0.00	0.00
SERBP1	209669_PM_s_at	SERPINE1 mRNA binding protein 1	-1.2	0.00	0.00
RBM19	206019_PM_at	RNA binding motif protein 19	-1.2	0.00	0.00
---	217647_PM_at	---	-1.2	0.00	0.00

AGAP4	1565620_PM_at	ArfGAP with GTPase domain, ankyrin repeat and CR36	-1.2	0.00	0.00
NOP14-AS1	214123_PM_s_at	NOP14 antisense RNA 1 (non-protein coding)	-1.2	0.00	0.00
USP36	227093_PM_at	Ubiquitin specific peptidase 36	-1.2	0.00	0.00
SLC38A10	1563226_PM_at	solute carrier family 38, member 10	-1.2	0.00	0.00
TNRC6A	243834_PM_at	trinucleotide repeat containing 6A	-1.2	0.00	0.00
TMEM198B	227106_PM_at	transmembrane protein 198B, pseudogene	-1.2	0.00	0.00
---	230651_PM_at	---	-1.2	0.00	0.00
ZNF330	209814_PM_at	zinc finger protein 330	-1.2	0.00	0.00
---	238709_PM_at	---	-1.2	0.00	0.00
P2RY10	1553856_PM_s_at	purinergic receptor P2Y, G-protein coupled, 10	-1.2	0.00	0.00
BCL11B	222895_PM_s_at	B-cell CLL lymphoma-associated gene 11	-1.2	0.00	0.00
CAND1	243910_PM_x_at	cullin-associated and neddylation-dissociating protein 1	-1.2	0.00	0.00
---	238271_PM_x_at	---	-1.2	0.00	0.00
---	1563109_PM_at	---	-1.2	0.00	0.00
RORA	241760_PM_x_at	RAR-related orphan receptor A	-1.2	0.00	0.00
TRPM7	1565887_PM_at	Transient receptor potential cation channel, subfamily M, member 7	-1.2	0.00	0.00
---	1568866_PM_at	---	-1.2	0.00	0.00
PTPLAD1	222404_PM_x_at	protein tyrosine phosphatase-like A domain containing 1	-1.2	0.00	0.00
---	241297_PM_at	---	-1.2	0.00	0.00
---	238000_PM_at	---	-1.2	0.00	0.00
---	240621_PM_at	---	-1.2	0.00	0.00
---	242110_PM_at	---	-1.2	0.00	0.00
TRAF5	204352_PM_at	TNF receptor-associated factor 5	-1.2	0.00	0.00
TAF15	234168_PM_at	TAF15 RNA polymerase II, TATA box binding protein-associated factor 15	-1.2	0.00	0.00
SLC16A7	210807_PM_s_at	solute carrier family 16, member 7 (monocarboxylate transporter 7)	-1.2	0.00	0.00
---	1559101_PM_at	---	-1.2	0.00	0.00
MMD	244523_PM_at	monocyte to macrophage differentiation-associated protein	-1.2	0.00	0.00
DKC1	216212_PM_s_at	dyskeratosis congenita 1, dyskerin	-1.2	0.00	0.00
---	241932_PM_at	---	-1.2	0.00	0.00
---	231222_PM_at	---	-1.2	0.00	0.00
PPM1K	235061_PM_at	protein phosphatase, Mg2+	-1.2	0.00	0.00
---	242501_PM_at	---	-1.2	0.00	0.00
MCF2L	212935_PM_at	MCF-2 cell line derived transforming sequer	-1.2	0.00	0.00

NUCB2	229838_PM_at	nucleobindin 2	-1.2	0.00	0.00
---	240050_PM_s_at	---	-1.2	0.00	0.00
---	1563473_PM_at	---	-1.2	0.00	0.00
PTPRS	226571_PM_s_at	protein tyrosine phosphatase, receptor type S	-1.2	0.00	0.00
---	240174_PM_at	---	-1.2	0.00	0.00
ERAP2	219759_PM_at	endoplasmic reticulum aminopeptidase 2	-1.2	0.00	0.00
PML	235508_PM_at	promyelocytic leukemia	-1.2	0.00	0.00
ADAM28	208268_PM_at	ADAM metallopeptidase domain 28	-1.2	0.00	0.00
THEM4	243492_PM_at	thioesterase superfamily member 4	-1.2	0.00	0.00
---	236346_PM_at	---	-1.2	0.00	0.01
EIF3B	242550_PM_at	eukaryotic translation initiation factor 3, subunit 10	-1.2	0.00	0.01
LMO7	242722_PM_at	LIM domain 7	-1.2	0.00	0.01
NLRP7	237461_PM_at	NLR family, pyrin domain containing 7	-1.2	0.00	0.01
P2RY10	214615_PM_at	purinergic receptor P2Y, G-protein coupled, 10	-1.2	0.00	0.01
SEL1L3	212311_PM_at	sel-1 suppressor of lin-12-like 3 (<i>C. elegans</i>)	-1.2	0.00	0.01
ZNF418	243439_PM_at	zinc finger protein 418	-1.2	0.00	0.01
SNX19	1554986_PM_a_at	sorting nexin 19	-1.2	0.00	0.01
---	223951_PM_at	---	-1.2	0.00	0.01
---	237194_PM_at	---	-1.2	0.00	0.01
IGK@	224795_PM_x_at	immunoglobulin kappa locus	-1.2	0.00	0.01
CCDC50	236831_PM_at	coiled-coil domain containing 50	-1.2	0.00	0.01
---	1556769_PM_a_at	---	-1.2	0.00	0.01
MPPED2	205413_PM_at	metallophosphoesterase domain containing 2	-1.2	0.00	0.01
ZFP82	1555793_PM_a_at	zinc finger protein 82 homolog (mouse)	-1.2	0.00	0.01
---	236427_PM_at	---	-1.2	0.00	0.01
LOC100506965	226587_PM_at	uncharacterized LOC100506965	-1.2	0.00	0.01
---	217482_PM_at	---	-1.2	0.00	0.01
TASP1	219443_PM_at	taspase, threonine aspartase, 1	-1.2	0.00	0.01
DPP4	203717_PM_at	dipeptidyl-peptidase 4	-1.2	0.00	0.01
---	243257_PM_at	---	-1.2	0.00	0.01
TEX10	218104_PM_at	testis expressed 10	-1.19	0.00	0.00
LUC7L	223546_PM_x_at	LUC7-like (<i>S. cerevisiae</i>)	-1.19	0.00	0.00
ZNF747	238606_PM_at	zinc finger protein 747	-1.19	0.00	0.00

DENR	238982_PM_at	density-regulated protein	-1.19	0.00	0.00
ZDHHC14	219247_PM_s_at	zinc finger, DHHC-type containing 14	-1.19	0.00	0.00
TSR2	213079_PM_at	TSR2, 20S rRNA accumulation, homolog (S. cerevisiae)	-1.19	0.00	0.00
PCBP2	229467_PM_at	poly(rC) binding protein 2	-1.19	0.00	0.00
---	1556818_PM_at	---	-1.19	0.00	0.00
FOXK1	226715_PM_at	forkhead box K1	-1.19	0.00	0.00
---	238651_PM_at	---	-1.19	0.00	0.00
PCCB	1557502_PM_at	Propionyl CoA carboxylase, beta polypeptid	-1.19	0.00	0.00
UGP2	232180_PM_at	UDP-glucose pyrophosphorylase 2	-1.19	0.00	0.00
NOL9	218754_PM_at	nucleolar protein 9	-1.19	0.00	0.00
SPG7	230885_PM_at	spastic paraplegia 7 (pure and complicated)	-1.19	0.00	0.00
UNG	202330_PM_s_at	uracil-DNA glycosylase	-1.19	0.00	0.00
---	243675_PM_at	---	-1.19	0.00	0.00
ZFAND6	239757_PM_at	Zinc finger, AN1-type domain 6	-1.19	0.00	0.00
CCDC88C	231288_PM_at	coiled-coil domain containing 88C	-1.19	0.00	0.00
SLC9B2	229491_PM_at	solute carrier family 9, subfamily B (NHA2, cation)	-1.19	0.00	0.00
SHQ1	63009_PM_at	SHQ1 homolog (S. cerevisiae)	-1.19	0.00	0.00
---	239943_PM_x_at	---	-1.19	0.00	0.00
HNRNPDL	209330_PM_s_at	heterogeneous nuclear ribonucleoprotein D	-1.19	0.00	0.00
---	242337_PM_at	---	-1.19	0.00	0.00
CEP104	243696_PM_at	centrosomal protein 104kDa	-1.19	0.00	0.00
WHSC1	209053_PM_s_at	Wolf-Hirschhorn syndrome candidate 1	-1.19	0.00	0.00
---	244711_PM_at	---	-1.19	0.00	0.00
6-Sep	213666_PM_at	septin 6	-1.19	0.00	0.00
HERC2	217902_PM_s_at	HECT and RLD domain containing E3 ubiquitin	-1.19	0.00	0.00
CDC14A	210743_PM_s_at	CDC14 cell division cycle 14 homolog A (S. cerevisiae)	-1.19	0.00	0.00
---	236237_PM_at	---	-1.19	0.00	0.00
TNFRSF25	211841_PM_s_at	tumor necrosis factor receptor superfamily, member 25	-1.19	0.00	0.00
USP40	225089_PM_at	ubiquitin specific peptidase 40	-1.19	0.00	0.00
TSPY26P	236369_PM_at	testis specific protein, Y-linked 26, pseudogene	-1.19	0.00	0.00
TMEM63A	215583_PM_at	Transmembrane protein 63A	-1.19	0.00	0.00
MCM3AP-AS1	232740_PM_at	MCM3AP antisense RNA 1 (non-protein coding)	-1.19	0.00	0.00
C21orf2	203996_PM_s_at	chromosome 21 open reading frame 2	-1.19	0.00	0.00

C21orf2	203995_PM_at	chromosome 21 open reading frame 2	-1.19	0.00	0.00
---	237383_PM_at	---	-1.19	0.00	0.00
BCCIP	218264_PM_at	BRCA2 and CDKN1A interacting protein	-1.19	0.00	0.00
---	238040_PM_at	---	-1.19	0.00	0.00
---	239110_PM_s_at	---	-1.19	0.00	0.00
CXCR7	232746_PM_at	Chemokine (C-X-C motif) receptor 7	-1.19	0.00	0.00
ZNF862	226808_PM_at	zinc finger protein 862	-1.19	0.00	0.00
---	231329_PM_at	---	-1.19	0.00	0.00
---	1559437_PM_at	---	-1.19	0.00	0.00
---	1564733_PM_at	---	-1.19	0.00	0.00
---	215376_PM_at	---	-1.19	0.00	0.00
ITPKB	235213_PM_at	Inositol-trisphosphate 3-kinase B	-1.19	0.00	0.00
CHD6	1555463_PM_a_at	chromodomain helicase DNA binding protein	-1.19	0.00	0.00
MAP4K4	1558732_PM_at	mitogen-activated protein kinase kinase kinase	-1.19	0.00	0.00
---	1568867_PM_x_at	---	-1.19	0.00	0.00
BCOR	223915_PM_at	BCL6 corepressor	-1.19	0.00	0.00
COPG2IT1	213486_PM_at	COPG2 imprinted transcript 1 (non-protein)	-1.19	0.00	0.00
---	1560082_PM_at	---	-1.19	0.00	0.00
WDR4	241937_PM_s_at	WD repeat domain 4	-1.19	0.00	0.00
LOC100131564	227074_PM_at	uncharacterized LOC100131564	-1.19	0.00	0.00
ZNHIT6	233005_PM_at	zinc finger, HIT-type containing 6	-1.19	0.00	0.00
ECHDC2	235305_PM_s_at	enoyl CoA hydratase domain containing 2	-1.19	0.00	0.00
GEMIN8	219252_PM_s_at	gem (nuclear organelle) associated protein	-1.19	0.00	0.00
KIAA0754	215268_PM_at	KIAA0754	-1.19	0.00	0.00
BCCIP	227322_PM_s_at	BRCA2 and CDKN1A interacting protein	-1.19	0.00	0.00
---	244408_PM_at	---	-1.19	0.00	0.00
---	220612_PM_at	---	-1.19	0.00	0.00
---	239167_PM_at	---	-1.19	0.00	0.00
---	237001_PM_at	---	-1.19	0.00	0.00
---	239646_PM_at	---	-1.19	0.00	0.00
C1orf186	222281_PM_s_at	chromosome 1 open reading frame 186	-1.19	0.00	0.00
---	239978_PM_at	---	-1.19	0.00	0.00
---	244341_PM_at	---	-1.19	0.00	0.00

SLC1A4	244377_PM_at	Solute carrier family 1 (glutamate	-1.19	0.00	0.00
---	1563553_PM_at	---	-1.19	0.00	0.00
ZCCHC7	230332_PM_at	Zinc finger, CCHC domain containing 7	-1.19	0.00	0.00
---	238938_PM_at	---	-1.19	0.00	0.00
MAGEE1	1556047_PM_s_at	melanoma antigen family E, 1	-1.19	0.00	0.00
DOCK10	215151_PM_at	dedicator of cytokinesis 10	-1.19	0.00	0.00
IRS1	238933_PM_at	insulin receptor substrate 1	-1.19	0.00	0.00
HSF2	209657_PM_s_at	heat shock transcription factor 2	-1.19	0.00	0.00
---	229858_PM_at	---	-1.19	0.00	0.00
SRRM2	208610_PM_s_at	serine	-1.19	0.00	0.00
---	243003_PM_at	---	-1.19	0.00	0.00
RAB14	200928_PM_s_at	RAB14, member RAS oncogene family	-1.19	0.00	0.00
ZNF512B	55872_PM_at	zinc finger protein 512B	-1.19	0.00	0.00
---	237803_PM_x_at	---	-1.19	0.00	0.00
---	244473_PM_at	---	-1.19	0.00	0.00
---	238558_PM_at	---	-1.19	0.00	0.01
NPR2	204310_PM_s_at	natriuretic peptide receptor B	-1.19	0.00	0.01
LOC100506776	239237_PM_at	uncharacterized LOC100506776	-1.19	0.00	0.01
INTS2	224308_PM_s_at	integrator complex subunit 2	-1.19	0.00	0.01
TRAF3IP1	238494_PM_at	TNF receptor-associated factor 3 interacting	-1.19	0.00	0.01
LARP1B	226750_PM_at	La ribonucleoprotein domain family, memb	-1.19	0.00	0.01
---	230233_PM_at	---	-1.19	0.00	0.01
---	242270_PM_at	---	-1.19	0.00	0.01
KIAA1919	242851_PM_at	KIAA1919	-1.19	0.00	0.01
NMNAT3	228090_PM_at	nicotinamide nucleotide adenylyltransferas	-1.19	0.00	0.01
---	239995_PM_at	---	-1.19	0.00	0.01
ZNF831	1558827_PM_a_at	zinc finger protein 831	-1.19	0.00	0.01
PNOC	205901_PM_at	prepronociceptin	-1.19	0.00	0.01
---	232333_PM_at	---	-1.19	0.00	0.01
---	1564798_PM_at	---	-1.19	0.00	0.01
LOC100506029	228661_PM_s_at	uncharacterized LOC100506029	-1.19	0.00	0.01
---	241823_PM_at	---	-1.19	0.00	0.01
---	215577_PM_at	---	-1.19	0.00	0.01

QSER1	229982_PM_at	glutamine and serine rich 1	-1.19	0.00	0.01
---	233713_PM_at	---	-1.19	0.00	0.01
AKAP2	202759_PM_s_at	A kinase (PRKA) anchor protein 2	-1.19	0.00	0.01
---	217322_PM_x_at	---	-1.19	0.00	0.01
---	232795_PM_at	---	-1.19	0.00	0.01
LAMC1	200771_PM_at	laminin, gamma 1 (formerly LAMB2)	-1.19	0.00	0.01
MYEF2	222771_PM_s_at	myelin expression factor 2	-1.19	0.00	0.01
CYB561	209164_PM_s_at	cytochrome b-561	-1.19	0.00	0.01
NMT2	215743_PM_at	N-myristoyltransferase 2	-1.19	0.00	0.02
RBM4	213718_PM_at	RNA binding motif protein 4	-1.18	0.00	0.00
DIS3L2	238602_PM_at	DIS3 mitotic control homolog (<i>S. cerevisiae</i>)	-1.18	0.00	0.00
DNAJC16	212908_PM_at	DnaJ (Hsp40) homolog, subfamily C, member 16	-1.18	0.00	0.00
TEX10	1558702_PM_at	testis expressed 10	-1.18	0.00	0.00
SYNPO	202796_PM_at	synaptopodin	-1.18	0.00	0.00
---	242725_PM_at	---	-1.18	0.00	0.00
---	239469_PM_at	---	-1.18	0.00	0.00
CSTF3	229666_PM_s_at	cleavage stimulation factor, 3' pre-RNA, subunit 3	-1.18	0.00	0.00
GPM6B	209169_PM_at	glycoprotein M6B	-1.18	0.00	0.00
SHQ1	219083_PM_at	SHQ1 homolog (<i>S. cerevisiae</i>)	-1.18	0.00	0.00
NEK1	213328_PM_at	NIMA (never in mitosis gene a)-related kinase 1	-1.18	0.00	0.00
---	235434_PM_at	---	-1.18	0.00	0.00
---	236607_PM_at	---	-1.18	0.00	0.00
METTL17	223528_PM_s_at	methyltransferase like 17	-1.18	0.00	0.00
ZSCAN2	231188_PM_at	zinc finger and SCAN domain containing 2	-1.18	0.00	0.00
YME1L1	224343_PM_x_at	YME1-like 1 (<i>S. cerevisiae</i>)	-1.18	0.00	0.00
---	239679_PM_at	---	-1.18	0.00	0.00
EXOSC7	213648_PM_at	exosome component 7	-1.18	0.00	0.00
CSPP1	220072_PM_at	centrosome and spindle pole associated protein 1	-1.18	0.00	0.00
IL12RB2	206999_PM_at	interleukin 12 receptor, beta 2	-1.18	0.00	0.00
ZNF248	213269_PM_at	zinc finger protein 248	-1.18	0.00	0.00
KDSR	202419_PM_at	3-ketodihydrophosphoglycerate reductase	-1.18	0.00	0.00
NHLRC3	236953_PM_s_at	NHL repeat containing 3	-1.18	0.00	0.00
ZNF830	226315_PM_at	zinc finger protein 830	-1.18	0.00	0.00

COBLL1	215393_PM_s_at	COPB-like 1	-1.18	0.00	0.00
---	234507_PM_at	---	-1.18	0.00	0.00
LOC100506469	222280_PM_at	uncharacterized LOC100506469	-1.18	0.00	0.00
---	235601_PM_at	---	-1.18	0.00	0.00
ZNHIT6	218932_PM_at	zinc finger, HIT-type containing 6	-1.18	0.00	0.00
SLC7A6	203580_PM_s_at	solute carrier family 7 (amino acid transport)	-1.18	0.00	0.00
---	1557539_PM_at	---	-1.18	0.00	0.00
---	239091_PM_at	---	-1.18	0.00	0.00
LOC100506694	235322_PM_at	uncharacterized LOC100506694	-1.18	0.00	0.00
WHAMMP2	222367_PM_at	WAS protein homolog associated with actin	-1.18	0.00	0.00
RPS15A	235309_PM_at	ribosomal protein S15a	-1.18	0.00	0.00
LOC100422781	1561304_PM_a_at	uncharacterized LOC100422781	-1.18	0.00	0.00
---	243303_PM_at	---	-1.18	0.00	0.00
PTPN2	241623_PM_at	Protein tyrosine phosphatase, non-receptor	-1.18	0.00	0.00
TMEM194A	212621_PM_at	transmembrane protein 194A	-1.18	0.00	0.00
ENGASE	65635_PM_at	endo-beta-N-acetylglucosaminidase	-1.18	0.00	0.00
HHAT	219687_PM_at	hedgehog acyltransferase	-1.18	0.00	0.00
GTPBP4	218239_PM_s_at	GTP binding protein 4	-1.18	0.00	0.00
MPHOSPH9	1558369_PM_at	M-phase phosphoprotein 9	-1.18	0.00	0.00
---	232583_PM_at	---	-1.18	0.00	0.00
TSPYL2	218012_PM_at	TSPY-like 2	-1.18	0.00	0.00
DNAJC30	239018_PM_at	DnaJ (Hsp40) homolog, subfamily C, member 30	-1.18	0.00	0.00
NAP1L4	1556567_PM_at	nucleosome assembly protein 1-like 4	-1.18	0.00	0.00
PIK3IP1	221757_PM_at	phosphoinositide-3-kinase interacting protein 1	-1.18	0.00	0.00
CHD6	225026_PM_at	chromodomain helicase DNA binding protein 6	-1.18	0.00	0.00
---	1557263_PM_s_at	---	-1.18	0.00	0.00
SNHG12	228990_PM_at	small nucleolar RNA host gene 12 (non-protein coding)	-1.18	0.00	0.00
USP36	220370_PM_s_at	ubiquitin specific peptidase 36	-1.18	0.00	0.00
RGP1	203169_PM_at	RGP1 retrograde golgi transport homolog (Sarcolemma)	-1.18	0.00	0.00
FBXO21	212229_PM_s_at	F-box protein 21	-1.18	0.00	0.00
LOC283174	232123_PM_at	uncharacterized LOC283174	-1.18	0.00	0.00
C2CD2	212875_PM_s_at	C2 calcium-dependent domain containing 2	-1.18	0.00	0.00
HAUS5	36888_PM_at	HAUS augmin-like complex, subunit 5	-1.18	0.00	0.00

WRN	205667_PM_at	Werner syndrome, RecQ helicase-like	-1.18	0.00	0.00
MRPS25	226848_PM_at	mitochondrial ribosomal protein S25	-1.18	0.00	0.00
---	233678_PM_at	---	-1.18	0.00	0.00
RAPH1	231075_PM_x_at	Ras association (RalGDS)	-1.18	0.00	0.00
MIR1204	222087_PM_at	microRNA 1204	-1.18	0.00	0.00
---	215140_PM_at	---	-1.18	0.00	0.00
---	1570166_PM_a_at	---	-1.18	0.00	0.00
DDHD2	212690_PM_at	DDHD domain containing 2	-1.18	0.00	0.00
FMNL3	232249_PM_at	formin-like 3	-1.18	0.00	0.00
LRRC69	238214_PM_at	leucine rich repeat containing 69	-1.18	0.00	0.00
---	243154_PM_at	---	-1.18	0.00	0.00
ENGASE	220349_PM_s_at	endo-beta-N-acetylglucosaminidase	-1.18	0.00	0.00
---	242068_PM_at	---	-1.18	0.00	0.00
---	231259_PM_s_at	---	-1.18	0.00	0.00
BICD1	214806_PM_at	bicaudal D homolog 1 (Drosophila)	-1.18	0.00	0.00
TXLNG	219969_PM_at	taxilin gamma	-1.18	0.00	0.00
---	241845_PM_at	---	-1.18	0.00	0.00
BCAS4	228787_PM_s_at	breast carcinoma amplified sequence 4	-1.18	0.00	0.00
---	1558922_PM_at	---	-1.18	0.00	0.00
---	232779_PM_at	---	-1.18	0.00	0.00
RNASEH2B	215040_PM_at	Ribonuclease H2, subunit B	-1.18	0.00	0.00
---	242983_PM_at	---	-1.18	0.00	0.00
---	232236_PM_at	---	-1.18	0.00	0.00
SLC38A10	1563228_PM_x_at	solute carrier family 38, member 10	-1.18	0.00	0.00
GGA2	213772_PM_s_at	golgi-associated, gamma adaptin ear contai	-1.18	0.00	0.00
---	244606_PM_at	---	-1.18	0.00	0.00
SRR	222844_PM_s_at	serine racemase	-1.18	0.00	0.00
---	240007_PM_at	---	-1.18	0.00	0.00
RAD51C	209849_PM_s_at	RAD51 homolog C (<i>S. cerevisiae</i>)	-1.18	0.00	0.00
---	237441_PM_at	---	-1.18	0.00	0.00
TCERG1	229706_PM_at	transcription elongation regulator 1	-1.18	0.00	0.00
AURKAPS1	216057_PM_at	aurora kinase A pseudogene 1	-1.18	0.00	0.00
NXT1	218708_PM_at	NTF2-like export factor 1	-1.18	0.00	0.00

WDR67	214061_PM_at	WD repeat domain 67	-1.18	0.00	0.00
---	231316_PM_at	---	-1.18	0.00	0.00
---	1562412_PM_at	---	-1.18	0.00	0.00
---	230415_PM_at	---	-1.18	0.00	0.00
NME9	1562619_PM_at	NME	-1.18	0.00	0.00
---	243467_PM_at	---	-1.18	0.00	0.00
LOC96610	233132_PM_at	BMS1 homolog, ribosome assembly protein	-1.18	0.00	0.00
OXNAD1	227686_PM_at	oxidoreductase NAD-binding domain contai	-1.18	0.00	0.00
---	232447_PM_at	---	-1.18	0.00	0.00
TMEM14A	218477_PM_at	transmembrane protein 14A	-1.18	0.00	0.01
---	243626_PM_at	---	-1.18	0.00	0.01
RUNX1-IT1	220918_PM_at	RUNX1 intronic transcript 1 (non-protein co	-1.18	0.00	0.01
PGM5-AS1	231024_PM_at	PGM5 antisense RNA 1 (non-protein coding	-1.18	0.00	0.01
RAPH1	225189_PM_s_at	Ras association (RalGDS	-1.18	0.00	0.01
---	242890_PM_at	---	-1.18	0.00	0.01
SEL1L3	235353_PM_at	sel-1 suppressor of lin-12-like 3 (<i>C. elegans</i>)	-1.18	0.00	0.01
SOX6	235526_PM_at	SRY (sex determining region Y)-box 6	-1.18	0.00	0.01
CRTC3	232879_PM_at	CREB regulated transcription coactivator 3	-1.18	0.00	0.01
---	231351_PM_at	---	-1.18	0.00	0.01
HSP90AB1	214359_PM_s_at	heat shock protein 90kDa alpha (cytosolic),	-1.18	0.00	0.01
IGHV5-78	210450_PM_at	immunoglobulin heavy variable 5-78 (pseuc	-1.18	0.00	0.01
---	235920_PM_at	---	-1.18	0.00	0.01
---	216278_PM_at	---	-1.18	0.00	0.01
MTMR2	203212_PM_s_at	myotubularin related protein 2	-1.18	0.00	0.01
---	1558801_PM_at	---	-1.18	0.00	0.01
RLTPR	227216_PM_at	RGD motif, leucine rich repeats, tropomodu	-1.18	0.00	0.01
KIAA0368	236368_PM_at	KIAA0368	-1.18	0.00	0.01
AAK1	214956_PM_at	AP2 associated kinase 1	-1.18	0.00	0.01
TCF7	205254_PM_x_at	transcription factor 7 (T-cell specific, HMG-I	-1.18	0.00	0.01
---	216000_PM_at	---	-1.18	0.00	0.01
PPAPDC1B	223569_PM_at	phosphatidic acid phosphatase type 2 doma	-1.18	0.00	0.01
RHPN2	227196_PM_at	rhophilin, Rho GTPase binding protein 2	-1.18	0.00	0.01
---	229293_PM_at	---	-1.18	0.00	0.01

NAPEPLD	242635_PM_s_at	N-acyl phosphatidylethanolamine phosphol	-1.18	0.00	0.01
HSP90AB1	1557910_PM_at	heat shock protein 90kDa alpha (cytosolic),	-1.18	0.00	0.01
---	1566709_PM_at	---	-1.18	0.00	0.01
KANSL1	243589_PM_at	KAT8 regulatory NSL complex subunit 1	-1.18	0.00	0.01
PPAPDC1B	223568_PM_s_at	phosphatidic acid phosphatase type 2 domain	-1.18	0.00	0.01
---	232369_PM_at	---	-1.18	0.00	0.01
FLJ10038	205511_PM_at	uncharacterized protein FLJ10038	-1.18	0.00	0.01
FAM102A	212400_PM_at	family with sequence similarity 102, member A	-1.18	0.00	0.01
---	228818_PM_at	---	-1.18	0.00	0.01
SLC35F2	218826_PM_at	solute carrier family 35, member F2	-1.18	0.00	0.01
---	235925_PM_at	---	-1.18	0.00	0.01
C1QTNF3	1561263_PM_at	C1q and tumor necrosis factor related protein 3	-1.18	0.00	0.01
---	241936_PM_x_at	---	-1.18	0.00	0.01
PEX5	203244_PM_at	peroxisomal biogenesis factor 5	-1.18	0.00	0.01
---	234645_PM_at	---	-1.18	0.00	0.01
---	241561_PM_at	---	-1.18	0.00	0.01
CD1C	205987_PM_at	CD1c molecule	-1.18	0.00	0.01
LRCH3	240926_PM_at	leucine-rich repeats and calponin homology	-1.18	0.00	0.01
---	240601_PM_at	---	-1.18	0.00	0.01
ACSS1	234801_PM_s_at	acyl-CoA synthetase short-chain family member 1	-1.18	0.00	0.01
SLC35E2	215169_PM_at	solute carrier family 35, member E2	-1.18	0.00	0.01
NASP	201969_PM_at	nuclear autoantigenic sperm protein (histone)	-1.17	0.00	0.00
TGIF2	216262_PM_s_at	TGFB-induced factor homeobox 2	-1.17	0.00	0.00
LUC7L	220143_PM_x_at	LUC7-like (<i>S. cerevisiae</i>)	-1.17	0.00	0.00
ZBTB44	220243_PM_at	zinc finger and BTB domain containing 44	-1.17	0.00	0.00
FAM165B	228239_PM_at	family with sequence similarity 165, member B	-1.17	0.00	0.00
PAPD7	202466_PM_at	PAP associated domain containing 7	-1.17	0.00	0.00
---	234164_PM_at	---	-1.17	0.00	0.00
---	244826_PM_at	---	-1.17	0.00	0.00
---	242431_PM_at	---	-1.17	0.00	0.00
RBFA	219419_PM_at	ribosome binding factor A (putative)	-1.17	0.00	0.00
---	243249_PM_at	---	-1.17	0.00	0.00
SUPV3L1	212894_PM_at	suppressor of var1, 3-like 1 (<i>S. cerevisiae</i>)	-1.17	0.00	0.00

---	228156_PM_at	---	-1.17	0.00	0.00
TRIT1	218617_PM_at	tRNA isopentenyltransferase 1	-1.17	0.00	0.00
USP34	233595_PM_at	ubiquitin specific peptidase 34	-1.17	0.00	0.00
TNRC6A	234734_PM_s_at	trinucleotide repeat containing 6A	-1.17	0.00	0.00
RAD52	205647_PM_at	RAD52 homolog (S. cerevisiae)	-1.17	0.00	0.00
---	240121_PM_x_at	---	-1.17	0.00	0.00
NAPEPLD	238722_PM_x_at	N-acyl phosphatidylethanolamine phosphol	-1.17	0.00	0.00
RIMKLB	229344_PM_x_at	ribosomal modification protein rimK-like fai	-1.17	0.00	0.00
METTL17	223988_PM_x_at	methyltransferase like 17	-1.17	0.00	0.00
SFSWAP	202773_PM_s_at	splicing factor, suppressor of white-apricot	-1.17	0.00	0.00
SHMT2	214096_PM_s_at	serine hydroxymethyltransferase 2 (mitoch	-1.17	0.00	0.00
---	236883_PM_at	---	-1.17	0.00	0.00
PIK3C2A	241905_PM_at	Phosphoinositide-3-kinase, class 2, alpha pc	-1.17	0.00	0.00
WDR3	218882_PM_s_at	WD repeat domain 3	-1.17	0.00	0.00
---	1553547_PM_at	---	-1.17	0.00	0.00
C3orf37	201677_PM_at	Chromosome 3 open reading frame 37	-1.17	0.00	0.00
CNOT7	233019_PM_at	CCR4-NOT transcription complex, subunit 7	-1.17	0.00	0.00
TPT1-AS1	228913_PM_at	TPT1 antisense RNA 1 (non-protein coding)	-1.17	0.00	0.00
MUM1	229033_PM_s_at	melanoma associated antigen (mutated) 1	-1.17	0.00	0.00
MUM1	223348_PM_x_at	melanoma associated antigen (mutated) 1	-1.17	0.00	0.00
PPARD	37152_PM_at	peroxisome proliferator-activated receptor	-1.17	0.00	0.00
SLC38A9	243709_PM_at	solute carrier family 38, member 9	-1.17	0.00	0.00
REV3L	238736_PM_at	REV3-like, catalytic subunit of DNA polymer	-1.17	0.00	0.00
TSPAN3	200973_PM_s_at	tetraspanin 3	-1.17	0.00	0.00
ITPR1	211323_PM_s_at	inositol 1,4,5-trisphosphate receptor, type :	-1.17	0.00	0.00
---	242343_PM_x_at	---	-1.17	0.00	0.00
PELP1	215354_PM_s_at	proline, glutamate and leucine rich protein	-1.17	0.00	0.00
MTERFD3	225341_PM_at	MTERF domain containing 3	-1.17	0.00	0.00
---	242650_PM_at	---	-1.17	0.00	0.00
C4orf29	219980_PM_at	chromosome 4 open reading frame 29	-1.17	0.00	0.00
RBMS5	230742_PM_at	RNA binding motif protein 5	-1.17	0.00	0.00
---	243869_PM_at	---	-1.17	0.00	0.00
---	243691_PM_at	---	-1.17	0.00	0.00

KIAA0494	1559023_PM_a_at	KIAA0494	-1.17	0.00	0.00
---	233161_PM_at	---	-1.17	0.00	0.00
---	1570552_PM_at	---	-1.17	0.00	0.00
---	232125_PM_at	---	-1.17	0.00	0.00
---	241885_PM_at	---	-1.17	0.00	0.00
KIAA0664L3	219442_PM_at	KIAA0664-like 3	-1.17	0.00	0.00
CXXC5	222996_PM_s_at	CXXC finger protein 5	-1.17	0.00	0.00
TMEM99	226565_PM_at	transmembrane protein 99	-1.17	0.00	0.00
SNX9	223028_PM_s_at	sorting nexin 9	-1.17	0.00	0.00
STMN1	200783_PM_s_at	stathmin 1	-1.17	0.00	0.00
PPRC1	203737_PM_s_at	peroxisome proliferator-activated receptor	-1.17	0.00	0.00
SSB	201138_PM_s_at	Sjogren syndrome antigen B (autoantigen L)	-1.17	0.00	0.00
---	215406_PM_at	---	-1.17	0.00	0.00
FAM60A	223038_PM_s_at	family with sequence similarity 60, member	-1.17	0.00	0.00
AGPAT4	219693_PM_at	1-acylglycerol-3-phosphate O-acyltransferase	-1.17	0.00	0.00
SYNJ2BP	219156_PM_at	synaptojanin 2 binding protein	-1.17	0.00	0.00
CD6	211893_PM_x_at	CD6 molecule	-1.17	0.00	0.00
---	236751_PM_at	---	-1.17	0.00	0.00
SPOCK2	202523_PM_s_at	sparc	-1.17	0.00	0.00
---	243300_PM_at	---	-1.17	0.00	0.00
---	239540_PM_at	---	-1.17	0.00	0.00
LEF1	221558_PM_s_at	lymphoid enhancer-binding factor 1	-1.17	0.00	0.00
PDE6B	238153_PM_at	phosphodiesterase 6B, cGMP-specific, rod,	-1.17	0.00	0.00
CYP2U1	226393_PM_at	cytochrome P450, family 2, subfamily U, po	-1.17	0.00	0.00
MCM9	213561_PM_at	minichromosome maintenance complex com	-1.17	0.00	0.00
ATXN3	205415_PM_s_at	ataxin 3	-1.17	0.00	0.00
ANKRD36	214723_PM_x_at	ankyrin repeat domain 36	-1.17	0.00	0.00
KLHL10	1552425_PM_a_at	kelch-like 10 (Drosophila)	-1.17	0.00	0.00
---	1564424_PM_at	---	-1.17	0.00	0.00
SBDS	1554089_PM_s_at	Shwachman-Bodian-Diamond syndrome	-1.17	0.00	0.00
C9orf91	221865_PM_at	chromosome 9 open reading frame 91	-1.17	0.00	0.00
ITM2C	221004_PM_s_at	integral membrane protein 2C	-1.17	0.00	0.00
GPATCH4	224632_PM_at	G patch domain containing 4	-1.17	0.00	0.00

CATSPER2	217588_PM_at	cation channel, sperm associated 2	-1.17	0.00	0.00
---	238172_PM_at	---	-1.17	0.00	0.00
---	233925_PM_at	---	-1.17	0.00	0.00
TRIO	231403_PM_at	triple functional domain (PTPRF interacting)	-1.17	0.00	0.00
MCF2L	35147_PM_at	MCF.2 cell line derived transforming sequer	-1.17	0.00	0.00
SETBP1	205933_PM_at	SET binding protein 1	-1.17	0.00	0.00
---	235705_PM_at	---	-1.17	0.00	0.00
---	1565601_PM_at	---	-1.17	0.00	0.00
C9orf85	235866_PM_at	chromosome 9 open reading frame 85	-1.17	0.00	0.00
AAGAB	243284_PM_at	alpha- and gamma-adaptin binding protein	-1.17	0.00	0.00
---	243310_PM_at	---	-1.17	0.00	0.00
BIN1	210201_PM_x_at	bridging integrator 1	-1.17	0.00	0.00
---	233271_PM_at	---	-1.17	0.00	0.00
HEG1	213069_PM_at	HEG homolog 1 (zebrafish)	-1.17	0.00	0.00
QRSL1	218949_PM_s_at	glutaminyl-tRNA synthase (glutamine-hydrc	-1.17	0.00	0.00
SLC12A3	215274_PM_at	solute carrier family 12 (sodium	-1.17	0.00	0.00
TOX4	232097_PM_at	TOX high mobility group box family membe	-1.17	0.00	0.00
ITPR1	240052_PM_at	inositol 1,4,5-trisphosphate receptor, type :	-1.17	0.00	0.00
NME7	219553_PM_at	NME	-1.17	0.00	0.00
---	230713_PM_at	---	-1.17	0.00	0.01
TRMT10B	240166_PM_x_at	tRNA methyltransferase 10 homolog B (S. ce	-1.17	0.00	0.01
---	238744_PM_at	---	-1.17	0.00	0.01
HIP1R	38340_PM_at	huntingtin interacting protein 1 related	-1.17	0.00	0.01
---	240169_PM_at	---	-1.17	0.00	0.01
CHIC1	228345_PM_at	cysteine-rich hydrophobic domain 1	-1.17	0.00	0.01
EP400NL	229892_PM_at	EP400 N-terminal like	-1.17	0.00	0.01
SNX29	1558745_PM_at	sorting nexin 29	-1.17	0.00	0.01
LOC100131043	244029_PM_at	uncharacterized LOC100131043	-1.17	0.00	0.01
RASGRF2	1556128_PM_a_at	Ras protein-specific guanine nucleotide-rele	-1.17	0.00	0.01
---	1558686_PM_at	---	-1.17	0.00	0.01
NBAS	242049_PM_s_at	neuroblastoma amplified sequence	-1.17	0.00	0.01
PTCD3	228590_PM_at	pentatricopeptide repeat domain 3	-1.17	0.00	0.01
PLCG1	202789_PM_at	phospholipase C, gamma 1	-1.17	0.00	0.01

ZNF519	1564190_PM_x_at	zinc finger protein 519	-1.17	0.00	0.01
---	231165_PM_at	---	-1.17	0.00	0.01
AFAP1L2	226829_PM_at	actin filament associated protein 1-like 2	-1.17	0.00	0.01
---	240743_PM_at	---	-1.17	0.00	0.01
6-Sep	212413_PM_at	septin 6	-1.17	0.00	0.01
---	241917_PM_at	---	-1.17	0.00	0.01
---	222368_PM_at	---	-1.17	0.00	0.01
CCAR1	224736_PM_at	cell division cycle and apoptosis regulator 1	-1.16	0.00	0.00
BOLA2	231500_PM_s_at	BolA homolog 2 (<i>E. coli</i>)	-1.16	0.00	0.00
VAV2	226063_PM_at	vav 2 guanine nucleotide exchange factor	-1.16	0.00	0.00
LUC7L3	208835_PM_s_at	LUC7-like 3 (<i>S. cerevisiae</i>)	-1.16	0.00	0.00
EXOSC9	205061_PM_s_at	exosome component 9	-1.16	0.00	0.00
IRF8	204057_PM_at	interferon regulatory factor 8	-1.16	0.00	0.00
ZNF224	232427_PM_at	Zinc finger protein 224	-1.16	0.00	0.00
HNRPDL	1554678_PM_s_at	heterogeneous nuclear ribonucleoprotein D	-1.16	0.00	0.00
---	217464_PM_at	---	-1.16	0.00	0.00
---	216668_PM_at	---	-1.16	0.00	0.00
SRSF7	213649_PM_at	serine	-1.16	0.00	0.00
ALDH18A1	217791_PM_s_at	aldehyde dehydrogenase 18 family, member 1	-1.16	0.00	0.00
TCF3	210776_PM_x_at	transcription factor 3 (E2A immunoglobulin)	-1.16	0.00	0.00
PATZ1	209431_PM_s_at	POZ (BTB) and AT hook containing zinc finger	-1.16	0.00	0.00
HPS4	54037_PM_at	Hermansky-Pudlak syndrome 4	-1.16	0.00	0.00
BZW2	217809_PM_at	basic leucine zipper and W2 domains 2	-1.16	0.00	0.00
---	240241_PM_at	---	-1.16	0.00	0.00
SYNRG	222715_PM_s_at	synergin, gamma	-1.16	0.00	0.00
ZBTB39	205256_PM_at	zinc finger and BTB domain containing 39	-1.16	0.00	0.00
GNAS	228173_PM_at	GNAS complex locus	-1.16	0.00	0.00
DOCK10	219279_PM_at	dedicator of cytokinesis 10	-1.16	0.00	0.00
---	234283_PM_at	---	-1.16	0.00	0.00
---	1556434_PM_at	---	-1.16	0.00	0.00
SIM2	206558_PM_at	single-minded homolog 2 (<i>Drosophila</i>)	-1.16	0.00	0.00
---	230461_PM_s_at	---	-1.16	0.00	0.00
---	1556322_PM_a_at	---	-1.16	0.00	0.00

PRKCI	209678_PM_s_at	protein kinase C, iota	-1.16	0.00	0.00
KCTD6	238077_PM_at	potassium channel tetramerisation domain	-1.16	0.00	0.00
---	1557522_PM_x_at	---	-1.16	0.00	0.00
---	238277_PM_at	---	-1.16	0.00	0.00
CHMP7	212313_PM_at	charged multivesicular body protein 7	-1.16	0.00	0.00
---	1557521_PM_a_at	---	-1.16	0.00	0.00
METTL17	218366_PM_x_at	methyltransferase like 17	-1.16	0.00	0.00
WBSCR22	207628_PM_s_at	Williams Beuren syndrome chromosome re	-1.16	0.00	0.00
---	236066_PM_at	---	-1.16	0.00	0.00
MAGEE1	229286_PM_at	melanoma antigen family E, 1	-1.16	0.00	0.00
---	224417_PM_at	---	-1.16	0.00	0.00
SLC25A17	214210_PM_at	solute carrier family 25 (mitochondrial carri	-1.16	0.00	0.00
BTN3A3	38241_PM_at	butyrophilin, subfamily 3, member A3	-1.16	0.00	0.00
---	243329_PM_at	---	-1.16	0.00	0.00
---	215974_PM_at	---	-1.16	0.00	0.00
---	236685_PM_at	---	-1.16	0.00	0.00
CTPS2	222819_PM_at	CTP synthase 2	-1.16	0.00	0.00
---	233114_PM_at	---	-1.16	0.00	0.00
RBM17	225751_PM_at	RNA binding motif protein 17	-1.16	0.00	0.00
CHEK2	210416_PM_s_at	checkpoint kinase 2	-1.16	0.00	0.00
OSGEPL1	230032_PM_at	O-sialoglycoprotein endopeptidase-like 1	-1.16	0.00	0.00
ST3GAL5	203217_PM_s_at	ST3 beta-galactoside alpha-2,3-sialyltransfe	-1.16	0.00	0.00
DNASE1L3	1561336_PM_at	deoxyribonuclease I-like 3	-1.16	0.00	0.00
---	237180_PM_at	---	-1.16	0.00	0.00
ZNF789	1569194_PM_at	zinc finger protein 789	-1.16	0.00	0.00
AP4S1	210278_PM_s_at	adaptor-related protein complex 4, sigma 1	-1.16	0.00	0.00
SPG7	230884_PM_s_at	spastic paraplegia 7 (pure and complicated	-1.16	0.00	0.00
SLC2A4RG	1555500_PM_s_at	SLC2A4 regulator	-1.16	0.00	0.00
KAT6B	1562236_PM_at	K(lysine) acetyltransferase 6B	-1.16	0.00	0.00
ZNF346	236267_PM_at	zinc finger protein 346	-1.16	0.00	0.00
---	243524_PM_at	---	-1.16	0.00	0.00
---	236776_PM_at	---	-1.16	0.00	0.00
GKAP1	229312_PM_s_at	G kinase anchoring protein 1	-1.16	0.00	0.00

---	240393_PM_at	---	-1.16	0.00	0.00
SFXN2	227560_PM_at	sideroflexin 2	-1.16	0.00	0.00
ETS1	214447_PM_at	v-ets erythroblastosis virus E26 oncogene h	-1.16	0.00	0.00
LINC00094	203245_PM_s_at	long intergenic non-protein coding RNA 94	-1.16	0.00	0.00
SIDT1	219734_PM_at	SID1 transmembrane family, member 1	-1.16	0.00	0.00
IREB2	242261_PM_at	iron-responsive element binding protein 2	-1.16	0.00	0.00
TAF15	202840_PM_at	TAF15 RNA polymerase II, TATA box binding	-1.16	0.00	0.00
USP24	230004_PM_at	ubiquitin specific peptidase 24	-1.16	0.00	0.00
TTC9C	1569189_PM_at	tetratricopeptide repeat domain 9C	-1.16	0.00	0.00
GPR157	227970_PM_at	G protein-coupled receptor 157	-1.16	0.00	0.00
---	241965_PM_at	---	-1.16	0.00	0.00
CCDC90B	1568834_PM_s_at	coiled-coil domain containing 90B	-1.16	0.00	0.00
---	1558739_PM_at	---	-1.16	0.00	0.00
BCL2L13	1560977_PM_a_at	BCL2-like 13 (apoptosis facilitator)	-1.16	0.00	0.00
---	238666_PM_at	---	-1.16	0.00	0.00
---	229896_PM_at	---	-1.16	0.00	0.00
CHCHD10	224932_PM_at	coiled-coil-helix-coiled-coil-helix domain co	-1.16	0.00	0.00
DLG1	230229_PM_at	Discs, large homolog 1 (Drosophila)	-1.16	0.00	0.00
GLMN	207153_PM_s_at	glomulin, FKBP associated protein	-1.16	0.00	0.00
HMGN3	209377_PM_s_at	high mobility group nucleosomal binding dc	-1.16	0.00	0.00
PSPC1	222611_PM_s_at	paraspeckle component 1	-1.16	0.00	0.00
MLL	220546_PM_at	myeloid	-1.16	0.00	0.00
SP140L	214791_PM_at	SP140 nuclear body protein-like	-1.16	0.00	0.00
ARMCX5-GPRASP2	228027_PM_at	ARMCX5-GPRASP2 readthrough	-1.16	0.00	0.00
RNF8	203160_PM_s_at	ring finger protein 8, E3 ubiquitin protein li	-1.16	0.00	0.00
MPHOSPH6	203740_PM_at	M-phase phosphoprotein 6	-1.16	0.00	0.00
NUCKS1	223661_PM_at	Nuclear casein kinase and cyclin-dependent	-1.16	0.00	0.00
MDH1	235374_PM_at	Malate dehydrogenase 1, NAD (soluble)	-1.16	0.00	0.00
---	240769_PM_at	---	-1.16	0.00	0.00
BIN1	202931_PM_x_at	bridging integrator 1	-1.16	0.00	0.00
---	240481_PM_at	---	-1.16	0.00	0.00
XPO1	235927_PM_at	exportin 1 (CRM1 homolog, yeast)	-1.16	0.00	0.00
NDUFB4	228940_PM_at	NADH dehydrogenase (ubiquinone) 1 beta s	-1.16	0.00	0.00

DKFZP434C153	216085_PM_at	DKFZP434C153 protein	-1.16	0.00	0.00
---	240321_PM_at	---	-1.16	0.00	0.00
---	232511_PM_at	---	-1.16	0.00	0.00
RALGAPA1	215162_PM_at	Ral GTPase activating protein, alpha subunit	-1.16	0.00	0.00
---	236969_PM_at	---	-1.16	0.00	0.00
LOC642852	1559957_PM_a_at	uncharacterized LOC642852	-1.16	0.00	0.00
TTN	1557994_PM_at	titin	-1.16	0.00	0.00
ZNF326	241720_PM_at	zinc finger protein 326	-1.16	0.00	0.00
ZAP70	1555613_PM_a_at	zeta-chain (TCR) associated protein kinase 7	-1.16	0.00	0.00
UTP20	209725_PM_at	UTP20, small subunit (SSU) processome con-	-1.16	0.00	0.00
CEP68	239442_PM_at	centrosomal protein 68kDa	-1.16	0.00	0.00
LOC92249	216838_PM_at	uncharacterized LOC92249	-1.16	0.00	0.01
PIEZ01	1566111_PM_at	piezo-type mechanosensitive ion channel co	-1.16	0.00	0.01
ACAD10	237481_PM_at	acyl-CoA dehydrogenase family, member 10	-1.16	0.00	0.01
DMRTC1	1553998_PM_at	DMRT-like family C1	-1.16	0.00	0.01
CYP2E1	209975_PM_at	cytochrome P450, family 2, subfamily E, pol	-1.16	0.00	0.01
RIF1	241820_PM_at	RAP1 interacting factor homolog (yeast)	-1.16	0.00	0.01
COG2	243608_PM_at	component of oligomeric golgi complex 2	-1.16	0.00	0.01
CLNS1A	242492_PM_at	chloride channel, nucleotide-sensitive, 1A	-1.16	0.00	0.01
---	242223_PM_at	---	-1.16	0.00	0.01
ZDHHC2	1563502_PM_at	Zinc finger, DHHC-type containing 2	-1.16	0.00	0.01
NUP107	218768_PM_at	nucleoporin 107kDa	-1.16	0.00	0.01
---	243305_PM_at	---	-1.16	0.00	0.01
---	243262_PM_at	---	-1.16	0.00	0.01
TRNAU1AP	228997_PM_at	tRNA selenocysteine 1 associated protein 1	-1.16	0.00	0.01
---	235662_PM_at	---	-1.16	0.00	0.01
CNOT4	210866_PM_s_at	CCR4-NOT transcription complex, subunit 4	-1.16	0.00	0.01
GTF3A	238880_PM_at	general transcription factor IIIA	-1.16	0.00	0.01
BIN1	214439_PM_x_at	bridging integrator 1	-1.16	0.00	0.01
AGPAT3	223182_PM_s_at	1-acylglycerol-3-phosphate O-acyltransfera	-1.16	0.00	0.01
STRBP	223246_PM_s_at	spermatid perinuclear RNA binding protein	-1.16	0.00	0.01
ZNF275	225382_PM_at	zinc finger protein 275	-1.16	0.00	0.01
HCG18	225584_PM_at	HLA complex group 18 (non-protein coding)	-1.16	0.00	0.01

ZNF280B	229360_PM_at	zinc finger protein 280B	-1.16	0.00	0.01
---	238944_PM_at	---	-1.16	0.00	0.01
---	221038_PM_at	---	-1.16	0.00	0.01
---	232974_PM_at	---	-1.16	0.00	0.01
---	237317_PM_at	---	-1.16	0.00	0.01
ATP6V1H	1557586_PM_s_at	ATPase, H ⁺ transporting, lysosomal 50	-1.16	0.00	0.01
POU2F2	228343_PM_at	POU class 2 homeobox 2	-1.16	0.00	0.01
LOC338758	238893_PM_at	uncharacterized LOC338758	-1.16	0.00	0.01
---	215635_PM_at	---	-1.16	0.00	0.01
PNISR	212177_PM_at	PNN-interacting serine	-1.15	0.00	0.00
---	1559054_PM_a_at	---	-1.15	0.00	0.00
TMEM101	225004_PM_at	transmembrane protein 101	-1.15	0.00	0.00
RFX5	202963_PM_at	regulatory factor X, 5 (influences HLA class I	-1.15	0.00	0.00
PNPO	218511_PM_s_at	pyridoxamine 5'-phosphate oxidase	-1.15	0.00	0.00
C16orf52	230296_PM_at	chromosome 16 open reading frame 52	-1.15	0.00	0.00
KLHL28	235727_PM_at	kelch-like 28 (Drosophila)	-1.15	0.00	0.00
SMARCE1	211989_PM_at	SWI	-1.15	0.00	0.00
RCN1	201063_PM_at	reticulocalbin 1, EF-hand calcium binding do	-1.15	0.00	0.00
FUS	217370_PM_x_at	fused in sarcoma	-1.15	0.00	0.00
---	213158_PM_at	---	-1.15	0.00	0.00
---	243631_PM_at	---	-1.15	0.00	0.00
NPIPL3	215920_PM_s_at	nuclear pore complex interacting protein-lil	-1.15	0.00	0.00
---	229483_PM_at	---	-1.15	0.00	0.00
NKTR	215338_PM_s_at	natural killer-tumor recognition sequence	-1.15	0.00	0.00
PSMG4	233443_PM_at	proteasome (prosome, macropain) assembl	-1.15	0.00	0.00
SLC25A26	225862_PM_at	solute carrier family 25 (S-adenosylmethion	-1.15	0.00	0.00
---	227082_PM_at	---	-1.15	0.00	0.00
AKR7A2	214259_PM_s_at	aldo-keto reductase family 7, member A2 (ε	-1.15	0.00	0.00
---	244778_PM_x_at	---	-1.15	0.00	0.00
TMEM161B	238783_PM_at	transmembrane protein 161B	-1.15	0.00	0.00
---	213156_PM_at	---	-1.15	0.00	0.00
LBH	221011_PM_s_at	limb bud and heart development homolog (	-1.15	0.00	0.00
BICD1	1556051_PM_a_at	bicaudal D homolog 1 (Drosophila)	-1.15	0.00	0.00

AGK	222132_PM_s_at	acylglycerol kinase	-1.15	0.00	0.00
ATP9B	214934_PM_at	ATPase, class II, type 9B	-1.15	0.00	0.00
---	243091_PM_at	---	-1.15	0.00	0.00
---	243745_PM_at	---	-1.15	0.00	0.00
RGS10	204316_PM_at	regulator of G-protein signaling 10	-1.15	0.00	0.00
---	1558740_PM_s_at	---	-1.15	0.00	0.00
PDIA4	208658_PM_at	protein disulfide isomerase family A, memb	-1.15	0.00	0.00
LINC00338	221621_PM_at	long intergenic non-protein coding RNA 338	-1.15	0.00	0.00
PLK1S1	233241_PM_at	polo-like kinase 1 substrate 1	-1.15	0.00	0.00
GPC2	239422_PM_at	glypican 2	-1.15	0.00	0.00
---	236784_PM_s_at	---	-1.15	0.00	0.00
---	239549_PM_at	---	-1.15	0.00	0.00
---	228611_PM_s_at	---	-1.15	0.00	0.00
PDE12	1554915_PM_a_at	phosphodiesterase 12	-1.15	0.00	0.00
MKLN1	1560145_PM_at	Muskelin 1, intracellular mediator containin	-1.15	0.00	0.00
---	236054_PM_at	---	-1.15	0.00	0.00
RABL2A	219151_PM_s_at	RAB, member of RAS oncogene family-like 2	-1.15	0.00	0.00
SCLY	221575_PM_at	selenocysteine lyase	-1.15	0.00	0.00
MIS18A	229671_PM_s_at	MIS18 kinetochore protein homolog A (S. po	-1.15	0.00	0.00
---	242972_PM_at	---	-1.15	0.00	0.00
POLR3E	218016_PM_s_at	polymerase (RNA) III (DNA directed) polype	-1.15	0.00	0.00
---	244002_PM_at	---	-1.15	0.00	0.00
RABGAP1	204028_PM_s_at	RAB GTPase activating protein 1	-1.15	0.00	0.00
RRN3	230328_PM_at	RRN3 RNA polymerase I transcription factor	-1.15	0.00	0.00
MDC1	203062_PM_s_at	mediator of DNA-damage checkpoint 1	-1.15	0.00	0.00
---	243217_PM_at	---	-1.15	0.00	0.00
---	1562673_PM_at	---	-1.15	0.00	0.00
DAAM1	244062_PM_at	dishevelled associated activator of morpho	-1.15	0.00	0.00
DFFB	206752_PM_s_at	DNA fragmentation factor, 40kDa, beta poly	-1.15	0.00	0.00
VPS13C	235023_PM_at	Vacuolar protein sorting 13 homolog C (S. c	-1.15	0.00	0.00
LUZP1	221832_PM_s_at	leucine zipper protein 1	-1.15	0.00	0.00
ANKRD40	227064_PM_at	ankyrin repeat domain 40	-1.15	0.00	0.00
ARHGEF7	229642_PM_at	Rho guanine nucleotide exchange factor (GI	-1.15	0.00	0.00

METTL2A	225253_PM_s_at	methyltransferase like 2A	-1.15	0.00	0.00
MPHOSPH10	212885_PM_at	M-phase phosphoprotein 10 (U3 small nucleolar RNA binding protein)	-1.15	0.00	0.00
FNBP1	230086_PM_at	formin binding protein 1	-1.15	0.00	0.00
HUWE1	214673_PM_s_at	HECT, UBA and WWE domain containing 1, E3 ubiquitin-protein ligase	-1.15	0.00	0.00
TP73-AS1	213340_PM_s_at	TP73 antisense RNA 1 (non-protein coding)	-1.15	0.00	0.00
PMS2L2	214757_PM_at	postmeiotic segregation increased 2-like 2	-1.15	0.00	0.00
---	1570318_PM_at	---	-1.15	0.00	0.00
PCNT	233387_PM_s_at	pericentrin	-1.15	0.00	0.00
TMEM201	228671_PM_at	transmembrane protein 201	-1.15	0.00	0.00
---	240139_PM_at	---	-1.15	0.00	0.00
SIK2	213221_PM_s_at	salt-inducible kinase 2	-1.15	0.00	0.00
SNX5	229981_PM_at	sorting nexin 5	-1.15	0.00	0.00
FNIP1	1555247_PM_a_at	folliculin interacting protein 1	-1.15	0.00	0.00
RUVBL1	201614_PM_s_at	RuvB-like 1 (E. coli)	-1.15	0.00	0.00
---	1556479_PM_at	---	-1.15	0.00	0.00
KIF5C	203129_PM_s_at	kinesin family member 5C	-1.15	0.00	0.00
ANKH	223092_PM_at	ankylosis, progressive homolog (mouse)	-1.15	0.00	0.00
XPO7	240168_PM_at	exportin 7	-1.15	0.00	0.00
BBS2	223227_PM_at	Bardet-Biedl syndrome 2	-1.15	0.00	0.00
---	241089_PM_at	---	-1.15	0.00	0.00
PTPN2	241622_PM_at	Protein tyrosine phosphatase, non-receptor type 2	-1.15	0.00	0.00
NDNL2	226008_PM_at	necdin-like 2	-1.15	0.00	0.00
---	213484_PM_at	---	-1.15	0.00	0.00
KRR1	232441_PM_at	KRR1, small subunit (SSU) processome complex	-1.15	0.00	0.00
EPM2A	205231_PM_s_at	epilepsy, progressive myoclonus type 2A, Lissencephaly 1	-1.15	0.00	0.00
FABP3	214285_PM_at	fatty acid binding protein 3, muscle and heart type	-1.15	0.00	0.00
NAPEPLD	242229_PM_at	N-acyl phosphatidylethanolamine phospholipase A2	-1.15	0.00	0.00
RPS28	208903_PM_at	ribosomal protein S28	-1.15	0.00	0.00
CLYBL	238440_PM_at	citrate lyase beta like	-1.15	0.00	0.00
MDM4	205655_PM_at	Mdm4 p53 binding protein homolog (mouse)	-1.15	0.00	0.00
PTCD3	228512_PM_at	pentatricopeptide repeat domain 3	-1.15	0.00	0.00
---	215630_PM_at	---	-1.15	0.00	0.00
---	222352_PM_at	---	-1.15	0.00	0.00

---	234649_PM_at	---	-1.15	0.00	0.00
---	244298_PM_at	---	-1.15	0.00	0.00
---	235493_PM_at	---	-1.15	0.00	0.00
RPS16	226130_PM_at	ribosomal protein S16	-1.15	0.00	0.00
LOC100653024	208820_PM_at	uncharacterized LOC100653024	-1.15	0.00	0.00
ZMYND8	230533_PM_at	zinc finger, MYND-type containing 8	-1.15	0.00	0.00
---	239160_PM_at	---	-1.15	0.00	0.00
---	242696_PM_at	---	-1.15	0.00	0.00
ABI2	216113_PM_at	Abl-interactor 2	-1.15	0.00	0.00
PRDM15	231931_PM_at	PR domain containing 15	-1.15	0.00	0.00
YLPM1	1557065_PM_at	YLP motif containing 1	-1.15	0.00	0.00
---	238303_PM_at	---	-1.15	0.00	0.00
6-Sep	1555526_PM_a_at	septin 6	-1.15	0.00	0.00
C1orf109	218712_PM_at	chromosome 1 open reading frame 109	-1.15	0.00	0.00
---	236586_PM_at	---	-1.15	0.00	0.00
PPIH	204228_PM_at	peptidylprolyl isomerase H (cyclophilin H)	-1.15	0.00	0.00
CD6	1566448_PM_at	CD6 molecule	-1.15	0.00	0.00
SPTBN1	200672_PM_x_at	spectrin, beta, non-erythrocytic 1	-1.15	0.00	0.00
PDCD5	227751_PM_at	programmed cell death 5	-1.15	0.00	0.01
SMURF2	227489_PM_at	SMAD specific E3 ubiquitin protein ligase 2	-1.15	0.00	0.01
RTN4IP1	1555679_PM_a_at	reticulon 4 interacting protein 1	-1.15	0.00	0.01
---	1557196_PM_a_at	---	-1.15	0.00	0.01
NUB1	1557071_PM_s_at	negative regulator of ubiquitin-like proteins	-1.15	0.00	0.01
---	232700_PM_at	---	-1.15	0.00	0.01
COQ10A	225747_PM_at	coenzyme Q10 homolog A (<i>S. cerevisiae</i>)	-1.15	0.00	0.01
---	1569703_PM_a_at	---	-1.15	0.00	0.01
---	231605_PM_at	---	-1.15	0.00	0.01
CREM	207630_PM_s_at	cAMP responsive element modulator	-1.15	0.00	0.01
---	228811_PM_at	---	-1.15	0.00	0.01
---	240307_PM_at	---	-1.15	0.00	0.01
HNRNPC	235500_PM_at	heterogeneous nuclear ribonucleoprotein C	-1.15	0.00	0.01
PDCD2	243773_PM_at	programmed cell death 2	-1.15	0.00	0.01
SPICE1	234995_PM_at	spindle and centriole associated protein 1	-1.15	0.00	0.01

---	241849_PM_at	---	-1.15	0.00	0.01
---	236585_PM_at	---	-1.15	0.00	0.01
TBC1D22B	233430_PM_at	TBC1 domain family, member 22B	-1.15	0.00	0.01
GLTSCR2	234339_PM_s_at	glioma tumor suppressor candidate region 2	-1.15	0.00	0.01
SIKE1	221705_PM_s_at	suppressor of IKBKE 1	-1.15	0.00	0.01
HEATR7A	232498_PM_at	HEAT repeat containing 7A	-1.15	0.00	0.01
TAF11	1558135_PM_at	TAF11 RNA polymerase II, TATA box binding protein-like	-1.15	0.00	0.01
MGC21881	228040_PM_at	uncharacterized locus MGC21881	-1.15	0.00	0.01
SPCS2	243570_PM_at	signal peptidase complex subunit 2 homolog	-1.15	0.00	0.01
---	236474_PM_at	---	-1.15	0.00	0.01
---	240061_PM_at	---	-1.15	0.00	0.01
SNX22	235460_PM_at	sorting nexin 22	-1.15	0.00	0.01
LOC100289019	1560089_PM_at	uncharacterized LOC100289019	-1.15	0.00	0.01
TAMM41	231958_PM_at	TAMM41, mitochondrial translocator assembly	-1.15	0.00	0.01
CDC14A	210742_PM_at	CDC14 cell division cycle 14 homolog A (S. cerevisiae)	-1.15	0.00	0.01
QRICH1	229806_PM_at	Glutamine-rich 1	-1.14	0.00	0.00
FBRSL1	225703_PM_at	fibrosin-like 1	-1.14	0.00	0.00
CCNL2	221427_PM_s_at	cyclin L2	-1.14	0.00	0.00
CBFA2T2	207625_PM_s_at	core-binding factor, runt domain, alpha subunit	-1.14	0.00	0.00
SLC25A14	204587_PM_at	solute carrier family 25 (mitochondrial carrier)	-1.14	0.00	0.00
MRPL49	201717_PM_at	mitochondrial ribosomal protein L49	-1.14	0.00	0.00
RBM4B	209497_PM_s_at	RNA binding motif protein 4B	-1.14	0.00	0.00
RPP14	204245_PM_s_at	ribonuclease P	-1.14	0.00	0.00
ZNF493	240155_PM_x_at	zinc finger protein 493	-1.14	0.00	0.00
LOC285033	235584_PM_at	uncharacterized LOC285033	-1.14	0.00	0.00
SUGP2	64371_PM_at	SURP and G patch domain containing 2	-1.14	0.00	0.00
AKT2	226156_PM_at	v-akt murine thymoma viral oncogene homolog 2	-1.14	0.00	0.00
ARID4B	212591_PM_at	AT rich interactive domain 4B (RBP1-like)	-1.14	0.00	0.00
SP140L	223934_PM_at	SP140 nuclear body protein-like	-1.14	0.00	0.00
SPAG8	206816_PM_s_at	sperm associated antigen 8	-1.14	0.00	0.00
KLHL26	219354_PM_at	kelch-like 26 (Drosophila)	-1.14	0.00	0.00
AMN	1563792_PM_at	amnionless homolog (mouse)	-1.14	0.00	0.00
PRKD3	222565_PM_s_at	protein kinase D3	-1.14	0.00	0.00

WDR27	235576_PM_at	WD repeat domain 27	-1.14	0.00	0.00
TNPO2	221506_PM_s_at	transportin 2	-1.14	0.00	0.00
RAB30	206530_PM_at	RAB30, member RAS oncogene family	-1.14	0.00	0.00
MTCH2	222403_PM_at	mitochondrial carrier 2	-1.14	0.00	0.00
SEH1L	221931_PM_s_at	SEH1-like (S. cerevisiae)	-1.14	0.00	0.00
SOCS7	228662_PM_at	suppressor of cytokine signaling 7	-1.14	0.00	0.00
RBM25	1557081_PM_at	RNA binding motif protein 25	-1.14	0.00	0.00
FLT1	232809_PM_s_at	Fms-related tyrosine kinase 1 (vascular endothelial growth factor receptor 1)	-1.14	0.00	0.00
---	232937_PM_at	---	-1.14	0.00	0.00
SAE1	1555618_PM_s_at	SUMO1 activating enzyme subunit 1	-1.14	0.00	0.00
FNBP4	212232_PM_at	formin binding protein 4	-1.14	0.00	0.00
MESDC2	224675_PM_at	mesoderm development candidate 2	-1.14	0.00	0.00
TMEM41A	235037_PM_at	transmembrane protein 41A	-1.14	0.00	0.00
UBA5	222578_PM_s_at	ubiquitin-like modifier activating enzyme 5	-1.14	0.00	0.00
UXS1	225583_PM_at	UDP-glucuronate decarboxylase 1	-1.14	0.00	0.00
---	233235_PM_x_at	---	-1.14	0.00	0.00
RUSC1-AS1	1552862_PM_at	RUSC1 antisense RNA 1 (non-protein coding)	-1.14	0.00	0.00
---	241775_PM_at	---	-1.14	0.00	0.00
RBM25	212027_PM_at	RNA binding motif protein 25	-1.14	0.00	0.00
TCF3	213730_PM_x_at	transcription factor 3 (E2A immunoglobulin)	-1.14	0.00	0.00
---	233274_PM_at	---	-1.14	0.00	0.00
HNRNPA2B1	205292_PM_s_at	heterogeneous nuclear ribonucleoprotein A	-1.14	0.00	0.00
---	238908_PM_at	---	-1.14	0.00	0.00
SMARCC2	1561973_PM_at	SWI	-1.14	0.00	0.00
---	239476_PM_at	---	-1.14	0.00	0.00
NAP1L1	204528_PM_s_at	nucleosome assembly protein 1-like 1	-1.14	0.00	0.00
HPS4	218402_PM_s_at	Hermansky-Pudlak syndrome 4	-1.14	0.00	0.00
UBAP1L	232557_PM_at	ubiquitin associated protein 1-like	-1.14	0.00	0.00
TULP3	221964_PM_at	tubby like protein 3	-1.14	0.00	0.00
LOC254128	235132_PM_at	uncharacterized LOC254128	-1.14	0.00	0.00
ZNF606	229707_PM_at	zinc finger protein 606	-1.14	0.00	0.00
TADA2A	210537_PM_s_at	transcriptional adaptor 2A	-1.14	0.00	0.00
OSGEP	209450_PM_at	O-sialoglycoprotein endopeptidase	-1.14	0.00	0.00

MRPS5	237560_PM_at	mitochondrial ribosomal protein S5	-1.14	0.00	0.00
---	240698_PM_s_at	---	-1.14	0.00	0.00
PRKCH	206099_PM_at	protein kinase C, eta	-1.14	0.00	0.00
---	234153_PM_at	---	-1.14	0.00	0.00
GDF11	226234_PM_at	growth differentiation factor 11	-1.14	0.00	0.00
TIMM21	223181_PM_at	translocase of inner mitochondrial membra	-1.14	0.00	0.00
TCF3	213811_PM_x_at	transcription factor 3 (E2A immunoglobulin	-1.14	0.00	0.00
CG030	215105_PM_at	uncharacterized CG030	-1.14	0.00	0.00
PRKX	204060_PM_s_at	protein kinase, X-linked	-1.14	0.00	0.00
ASF1A	203428_PM_s_at	ASF1 anti-silencing function 1 homolog A (S	-1.14	0.00	0.00
---	243112_PM_at	---	-1.14	0.00	0.00
TNFRSF10A	241371_PM_at	tumor necrosis factor receptor superfamily,	-1.14	0.00	0.00
PWP1	201606_PM_s_at	PWP1 homolog (<i>S. cerevisiae</i>)	-1.14	0.00	0.00
UCHL5	220083_PM_x_at	ubiquitin carboxyl-terminal hydrolase L5	-1.14	0.00	0.00
ZNF783	221876_PM_at	zinc finger family member 783	-1.14	0.00	0.00
RUFY3	227802_PM_at	RUN and FYVE domain containing 3	-1.14	0.00	0.00
NEURL	204889_PM_s_at	neuralized homolog (<i>Drosophila</i>)	-1.14	0.00	0.00
---	214050_PM_at	---	-1.14	0.00	0.00
BTBD18	215349_PM_at	BTB (POZ) domain containing 18	-1.14	0.00	0.00
UHFR1BP1	1568789_PM_at	UHFR1 binding protein 1	-1.14	0.00	0.00
FKBP4	200894_PM_s_at	FK506 binding protein 4, 59kDa	-1.14	0.00	0.00
BOLA2	241644_PM_at	bola homolog 2 (<i>E. coli</i>)	-1.14	0.00	0.00
LOC100506282	220572_PM_at	uncharacterized LOC100506282	-1.14	0.00	0.00
SCAF4	222311_PM_s_at	SR-related CTD-associated factor 4	-1.14	0.00	0.00
CNP	208912_PM_s_at	2',3'-cyclic nucleotide 3' phosphodiesterase	-1.14	0.00	0.00
GINS3	45633_PM_at	GINS complex subunit 3 (Psf3 homolog)	-1.14	0.00	0.00
---	242241_PM_x_at	---	-1.14	0.00	0.00
SMARCA4	215714_PM_s_at	SWI	-1.14	0.00	0.00
EIF5B	201024_PM_x_at	eukaryotic translation initiation factor 5B	-1.14	0.00	0.00
RPL13	214976_PM_at	ribosomal protein L13	-1.14	0.00	0.00
NEIL2	226585_PM_at	nei endonuclease VIII-like 2 (<i>E. coli</i>)	-1.14	0.00	0.00
UBE3A	214980_PM_at	Ubiquitin protein ligase E3A	-1.14	0.00	0.00
LOC100506453	222031_PM_at	uncharacterized LOC100506453	-1.14	0.00	0.00

ZC3H14	213064_PM_at	zinc finger CCCH-type containing 14	-1.14	0.00	0.00
PCYOX1L	218953_PM_s_at	prenylcysteine oxidase 1 like	-1.14	0.00	0.00
MTA3	223311_PM_s_at	metastasis associated 1 family, member 3	-1.14	0.00	0.00
RP9	227852_PM_at	retinitis pigmentosa 9 (autosomal dominant)	-1.14	0.00	0.00
URB2	205284_PM_at	URB2 ribosome biogenesis 2 homolog (S. cerevisiae)	-1.14	0.00	0.00
---	236755_PM_at	---	-1.14	0.00	0.00
DUSP8	206374_PM_at	dual specificity phosphatase 8	-1.14	0.00	0.00
AGAP9	242393_PM_x_at	ArfGAP with GTPase domain, ankyrin repeat and CR300 domain 9	-1.14	0.00	0.00
ID3	207826_PM_s_at	inhibitor of DNA binding 3, dominant negative transcription factor	-1.14	0.00	0.00
ZNF445	229766_PM_at	zinc finger protein 445	-1.14	0.00	0.00
---	1559119_PM_at	---	-1.14	0.00	0.00
POMT1	218476_PM_at	protein-O-mannosyltransferase 1	-1.14	0.00	0.00
---	239165_PM_at	---	-1.14	0.00	0.01
PIGU	225903_PM_at	phosphatidylinositol glycan anchor biosynthetic enzyme 1	-1.14	0.00	0.01
SCAF4	222310_PM_at	SR-related CTD-associated factor 4	-1.14	0.00	0.01
---	242606_PM_at	---	-1.14	0.00	0.01
WDR74	221712_PM_s_at	WD repeat domain 74	-1.14	0.00	0.01
GPNAT1	225853_PM_at	glucosamine-phosphate N-acetyltransferase	-1.14	0.00	0.01
---	241634_PM_at	---	-1.14	0.00	0.01
SETDB2	238684_PM_at	SET domain, bifurcated 2	-1.14	0.00	0.01
FBXO41	44040_PM_at	F-box protein 41	-1.14	0.00	0.01
GAS5	227517_PM_s_at	growth arrest-specific 5 (non-protein coding)	-1.14	0.00	0.01
---	216440_PM_at	---	-1.14	0.00	0.01
UBE2I	208760_PM_at	ubiquitin-conjugating enzyme E2I	-1.14	0.00	0.01
METTL2A	221079_PM_s_at	methyltransferase like 2A	-1.14	0.00	0.01
---	226624_PM_at	---	-1.14	0.00	0.01
DNAJC27	223505_PM_s_at	DnaJ (Hsp40) homolog, subfamily C, member 27	-1.14	0.00	0.01
NUP210	220035_PM_at	nucleoporin 210kDa	-1.14	0.00	0.01
ADCY3	209321_PM_s_at	adenylate cyclase 3	-1.14	0.00	0.01
NAP1L1	208752_PM_x_at	nucleosome assembly protein 1-like 1	-1.14	0.00	0.01
---	237772_PM_at	---	-1.14	0.00	0.01
NIPAL3	214579_PM_at	NIPA-like domain containing 3	-1.14	0.00	0.01
DNAL1	223959_PM_at	dynein, axonemal, light chain 1	-1.14	0.00	0.01

---	234056_PM_at	---	-1.14	0.00	0.01
QDPR	209123_PM_at	quinoid dihydropteridine reductase	-1.14	0.00	0.01
RPAIN	1556088_PM_at	RPA interacting protein	-1.14	0.00	0.01
TERF1	203448_PM_s_at	telomeric repeat binding factor (NIMA-interacting)	-1.13	0.00	0.00
RBMX2	204097_PM_s_at	RNA binding motif protein, X-linked 2	-1.13	0.00	0.00
ARHGEF7	202548_PM_s_at	Rho guanine nucleotide exchange factor (GTPase)	-1.13	0.00	0.00
BANF1	210125_PM_s_at	barrier to autointegration factor 1	-1.13	0.00	0.00
LOC100271836	208118_PM_x_at	smg-1 homolog, phosphatidylinositol 3-kinase	-1.13	0.00	0.00
MYCBP2	201960_PM_s_at	MYC binding protein 2, E3 ubiquitin protein ligase	-1.13	0.00	0.00
ZNF498	228138_PM_at	zinc finger protein 498	-1.13	0.00	0.00
CCT5	208696_PM_at	chaperonin containing TCP1, subunit 5 (epsilon)	-1.13	0.00	0.00
ATP2A2	209186_PM_at	ATPase, Ca++ transporting, cardiac muscle, ryanodine receptor type 2	-1.13	0.00	0.00
PTBP1	226491_PM_x_at	Polypyrimidine tract binding protein 1	-1.13	0.00	0.00
BICD1	204741_PM_at	bicaudal D homolog 1 (Drosophila)	-1.13	0.00	0.00
UTP6	218715_PM_at	UTP6, small subunit (SSU) processome component	-1.13	0.00	0.00
SDK2	234073_PM_at	Sidekick cell adhesion molecule 2	-1.13	0.00	0.00
CPSF4	206688_PM_s_at	cleavage and polyadenylation specific factor 4	-1.13	0.00	0.00
AQP11	229526_PM_at	aquaporin 11	-1.13	0.00	0.00
CTNNB1	223679_PM_at	catenin (cadherin-associated protein), beta 1	-1.13	0.00	0.00
MON1B	227116_PM_at	MON1 homolog B (yeast)	-1.13	0.00	0.00
RBM26	222626_PM_at	RNA binding motif protein 26	-1.13	0.00	0.00
EP400	212375_PM_at	E1A binding protein p400	-1.13	0.00	0.00
ANGEL1	36865_PM_at	angel homolog 1 (Drosophila)	-1.13	0.00	0.00
MRPS5	224877_PM_s_at	mitochondrial ribosomal protein S5	-1.13	0.00	0.00
MPRIP	212197_PM_x_at	myosin phosphatase Rho interacting protein	-1.13	0.00	0.00
ERCC1	228131_PM_at	excision repair cross-complementing rodent LTR virus 1	-1.13	0.00	0.00
CBFA2T2	209144_PM_s_at	core-binding factor, runt domain, alpha subunit	-1.13	0.00	0.00
WDR6	217734_PM_s_at	WD repeat domain 6	-1.13	0.00	0.00
NKTR	202379_PM_s_at	natural killer-tumor recognition sequence	-1.13	0.00	0.00
---	235531_PM_at	---	-1.13	0.00	0.00
CSTF2	204459_PM_at	cleavage stimulation factor, 3' pre-RNA, subunit 2	-1.13	0.00	0.00
PPP1R2	236754_PM_at	protein phosphatase 1, regulatory (inhibitor) subunit 2A	-1.13	0.00	0.00
SETD6	1554555_PM_a_at	SET domain containing 6	-1.13	0.00	0.00

KLHL24	221986_PM_s_at	kelch-like 24 (Drosophila)	-1.13	0.00	0.00
---	240478_PM_at	---	-1.13	0.00	0.00
GABPB2	228466_PM_at	GA binding protein transcription factor, bet	-1.13	0.00	0.00
---	234573_PM_at	---	-1.13	0.00	0.00
---	238714_PM_at	---	-1.13	0.00	0.00
ILKAP	221548_PM_s_at	integrin-linked kinase-associated serine	-1.13	0.00	0.00
---	238652_PM_at	---	-1.13	0.00	0.00
---	239969_PM_at	---	-1.13	0.00	0.00
---	242968_PM_at	---	-1.13	0.00	0.00
---	232788_PM_at	---	-1.13	0.00	0.00
SRSF4	242837_PM_at	Serine	-1.13	0.00	0.00
APOBEC3G	215579_PM_at	apolipoprotein B mRNA editing enzyme, cat	-1.13	0.00	0.00
---	243414_PM_at	---	-1.13	0.00	0.00
---	228615_PM_at	---	-1.13	0.00	0.00
AP1G2	214341_PM_at	adaptor-related protein complex 1, gamma	-1.13	0.00	0.00
MLL	226981_PM_at	myeloid	-1.13	0.00	0.00
AARSD1	222064_PM_s_at	alanyl-tRNA synthetase domain containing :	-1.13	0.00	0.00
HLA-DRB1	209312_PM_x_at	major histocompatibility complex, class II, D	-1.13	0.00	0.00
DIS3L2	227597_PM_at	DIS3 mitotic control homolog (S. cerevisiae)	-1.13	0.00	0.00
ATXN7	204516_PM_at	ataxin 7	-1.13	0.00	0.00
---	241373_PM_at	---	-1.13	0.00	0.00
DDX52	213637_PM_at	DEAD (Asp-Glu-Ala-Asp) box polypeptide 52	-1.13	0.00	0.00
---	222282_PM_at	---	-1.13	0.00	0.00
GPM6B	209170_PM_s_at	glycoprotein M6B	-1.13	0.00	0.00
GRSF1	221917_PM_s_at	G-rich RNA sequence binding factor 1	-1.13	0.00	0.00
PPP1R13B	216347_PM_s_at	protein phosphatase 1, regulatory subunit 1	-1.13	0.00	0.00
COPS7B	225696_PM_at	COP9 constitutive photomorphogenic homolog	-1.13	0.00	0.00
CCNJ	219470_PM_x_at	cyclin J	-1.13	0.00	0.00
RPRML	1554655_PM_a_at	reproto-like	-1.13	0.00	0.00
FBXO21	214891_PM_at	F-box protein 21	-1.13	0.00	0.00
KIAA0947	209654_PM_at	KIAA0947	-1.13	0.00	0.00
SLC7A6OS	232057_PM_at	solute carrier family 7, member 6 opposite : dishevelled associated activator of morpho	-1.13	0.00	0.00
DAAM1	232552_PM_at	dishevelled associated activator of morpho	-1.13	0.00	0.00

---	239619_PM_at	---	-1.13	0.00	0.01
ZADH2	243417_PM_at	zinc binding alcohol dehydrogenase domain	-1.13	0.00	0.01
FARP1	201910_PM_at	FERM, RhoGEF (ARHGEF) and pleckstrin domain	-1.13	0.00	0.01
RASA3	225562_PM_at	RAS p21 protein activator 3	-1.13	0.00	0.01
ZCCHC3	225072_PM_at	zinc finger, CCHC domain containing 3	-1.13	0.00	0.01
THOC1	204064_PM_at	THO complex 1	-1.13	0.00	0.01
SLC7A6	203579_PM_s_at	solute carrier family 7 (amino acid transport)	-1.13	0.00	0.01
---	240899_PM_at	---	-1.13	0.00	0.01
PLA2G12A	242323_PM_at	phospholipase A2, group XIIA	-1.13	0.00	0.01
ADO	212502_PM_at	2-aminoethanethiol (cysteamine) dioxygenase	-1.13	0.00	0.01
RWDD2B	218377_PM_s_at	RWD domain containing 2B	-1.13	0.00	0.01
---	1560209_PM_at	---	-1.13	0.00	0.01
MDN1	212693_PM_at	MDN1, midasin homolog (yeast)	-1.13	0.00	0.01
HERC2P7	232900_PM_at	hect domain and RLD 2 pseudogene 7	-1.13	0.00	0.01
YLPM1	212787_PM_at	YLP motif containing 1	-1.13	0.00	0.01
HSP90B1	216449_PM_x_at	heat shock protein 90kDa beta (Grp94), member 1	-1.13	0.00	0.01
LPHN1	219145_PM_at	latrophilin 1	-1.13	0.00	0.01
HLA-DRB1	215193_PM_x_at	major histocompatibility complex, class II, D	-1.13	0.00	0.01
HUWE1	208599_PM_at	HECT, UBA and WWE domain containing 1, member 1	-1.13	0.00	0.01
TRAPPC10	215269_PM_at	trafficking protein particle complex 10	-1.13	0.00	0.01
PDSS1	236298_PM_at	Prenyl (decaprenyl) diphosphate synthase, 1	-1.13	0.00	0.01
LYRM7	240344_PM_x_at	Lyrm7 homolog (mouse)	-1.13	0.00	0.01
SMAD3	218284_PM_at	SMAD family member 3	-1.13	0.00	0.01
CBX5	209715_PM_at	chromobox homolog 5	-1.13	0.00	0.01
LOC157562	213776_PM_at	uncharacterized LOC157562	-1.13	0.00	0.01
TAF2	1554721_PM_a_at	TAF2 RNA polymerase II, TATA box binding protein	-1.13	0.00	0.01
DERL2	226719_PM_at	derlin 2	-1.12	0.00	0.00
TBP	203135_PM_at	TATA box binding protein	-1.12	0.00	0.00
ZNF562	219163_PM_at	zinc finger protein 562	-1.12	0.00	0.00
SFPQ	214016_PM_s_at	splicing factor proline	-1.12	0.00	0.00
ZNF212	203985_PM_at	zinc finger protein 212	-1.12	0.00	0.00
ATG16L1	232612_PM_s_at	autophagy related 16-like 1 (S. cerevisiae)	-1.12	0.00	0.00
SMU1	222618_PM_at	smu-1 suppressor of mec-8 and unc-52 homolog	-1.12	0.00	0.00

DVL2	57532_PM_at	dishevelled, dsh homolog 2 (Drosophila)	-1.12	0.00	0.00
RAB3GAP1	213531_PM_s_at	RAB3 GTPase activating protein subunit 1 (c	-1.12	0.00	0.00
---	235862_PM_at	---	-1.12	0.00	0.00
DDX27	221780_PM_s_at	DEAD (Asp-Glu-Ala-Asp) box polypeptide 27	-1.12	0.00	0.00
RNF115	212742_PM_at	ring finger protein 115	-1.12	0.00	0.00
SBF1	213383_PM_at	SET binding factor 1	-1.12	0.00	0.00
KDM2B	226215_PM_s_at	lysine (K)-specific demethylase 2B	-1.12	0.00	0.00
HSPG2	201655_PM_s_at	heparan sulfate proteoglycan 2	-1.12	0.00	0.00
GALNT11	219013_PM_at	UDP-N-acetyl-alpha-D-galactosamine:polyp	-1.12	0.00	0.00
HN1L	212115_PM_at	hematological and neurological expressed 1	-1.12	0.00	0.00
DOLPP1	221817_PM_at	dolichyl pyrophosphate phosphatase 1	-1.12	0.00	0.00
HNRPDL	209067_PM_s_at	heterogeneous nuclear ribonucleoprotein D	-1.12	0.00	0.00
RPL18A	200869_PM_at	ribosomal protein L18a	-1.12	0.00	0.00
PPP6R2	202792_PM_s_at	protein phosphatase 6, regulatory subunit 2	-1.12	0.00	0.00
RNMT	202683_PM_s_at	RNA (guanine-7-) methyltransferase	-1.12	0.00	0.00
ZNF747	228856_PM_at	zinc finger protein 747	-1.12	0.00	0.00
YPEL1	228788_PM_at	yippee-like 1 (Drosophila)	-1.12	0.00	0.00
NUCKS1	217802_PM_s_at	nuclear casein kinase and cyclin-dependent	-1.12	0.00	0.00
MRPS27	212145_PM_at	mitochondrial ribosomal protein S27	-1.12	0.00	0.00
DNAJC16	212911_PM_at	DnaJ (Hsp40) homolog, subfamily C, member	-1.12	0.00	0.00
MTMR9	204837_PM_at	myotubularin related protein 9	-1.12	0.00	0.00
PPP2R1B	202883_PM_s_at	protein phosphatase 2, regulatory subunit 4	-1.12	0.00	0.00
LETM1	222006_PM_at	leucine zipper-EF-hand containing transm	-1.12	0.00	0.00
AMMECR1	226421_PM_at	Alport syndrome, mental retardation, midfa	-1.12	0.00	0.00
GOSR1	204630_PM_s_at	golgi SNAP receptor complex member 1	-1.12	0.00	0.00
MPRIP	214771_PM_x_at	myosin phosphatase Rho interacting protein	-1.12	0.00	0.00
NHP2L1	201076_PM_at	NHP2 non-histone chromosome protein 2-li	-1.12	0.00	0.00
POLR3A	231763_PM_at	polymerase (RNA) III (DNA directed) polype	-1.12	0.00	0.00
LSM4	212924_PM_s_at	LSM4 homolog, U6 small nuclear RNA assoc	-1.12	0.00	0.00
KCMF1	242887_PM_at	potassium channel modulatory factor 1	-1.12	0.00	0.00
---	241448_PM_at	---	-1.12	0.00	0.00
PCBP1-AS1	235482_PM_at	PCBP1 antisense RNA 1 (non-protein coding	-1.12	0.00	0.00
CDC23	202892_PM_at	cell division cycle 23 homolog (<i>S. cerevisiae</i>)	-1.12	0.00	0.00

GTPBP8	221046_PM_s_at	GTP-binding protein 8 (putative)	-1.12	0.00	0.00
LUC7L	223295_PM_s_at	LUC7-like (<i>S. cerevisiae</i>)	-1.12	0.00	0.00
RCL1	222666_PM_s_at	RNA terminal phosphate cyclase-like 1	-1.12	0.00	0.00
TXNDC15	220495_PM_s_at	thioredoxin domain containing 15	-1.12	0.00	0.00
FBXW7	218751_PM_s_at	F-box and WD repeat domain containing 7,	-1.12	0.00	0.00
---	237914_PM_s_at	---	-1.12	0.00	0.00
GCFC1-AS1	239407_PM_at	GCFC1 antisense RNA 1 (non-protein coding)	-1.12	0.00	0.00
SNRNP27	212438_PM_at	small nuclear ribonucleoprotein 27kDa (U4)	-1.12	0.00	0.00
TAF15	227891_PM_s_at	TAF15 RNA polymerase II, TATA box binding	-1.12	0.00	0.00
ELP3	227075_PM_at	elongation protein 3 homolog (<i>S. cerevisiae</i>)	-1.12	0.00	0.01
LIN7C	223350_PM_x_at	lin-7 homolog C (<i>C. elegans</i>)	-1.12	0.00	0.01
ZNF789	235231_PM_at	zinc finger protein 789	-1.12	0.00	0.01
---	241301_PM_at	---	-1.12	0.00	0.01
---	243498_PM_at	---	-1.12	0.00	0.01
PTPMT1	225901_PM_at	protein tyrosine phosphatase, mitochondrial	-1.12	0.00	0.01
ZBTB4	227047_PM_x_at	zinc finger and BTB domain containing 4	-1.12	0.00	0.01
SLC16A1	209900_PM_s_at	solute carrier family 16, member 1 (monocarboxylate transporter 1)	-1.12	0.00	0.01
ACSS1	224882_PM_at	acyl-CoA synthetase short-chain family member 1	-1.12	0.00	0.01
HIP1R	209559_PM_at	huntingtin interacting protein 1 related	-1.12	0.00	0.01
TNFRSF10A	231775_PM_at	tumor necrosis factor receptor superfamily, member 10A	-1.12	0.00	0.01
---	244648_PM_at	---	-1.12	0.00	0.01
LOC100507602	1557507_PM_at	uncharacterized LOC100507602	-1.12	0.00	0.01
MTA1	211783_PM_s_at	metastasis associated 1	-1.12	0.00	0.01
EXOSC7	212627_PM_s_at	exosome component 7	-1.12	0.00	0.01
CCL20	205476_PM_at	chemokine (C-C motif) ligand 20	-1.12	0.00	0.01
DIEXF	204699_PM_s_at	digestive organ expansion factor homolog (DSEF)	-1.12	0.00	0.01
UBE2G2	209042_PM_s_at	ubiquitin-conjugating enzyme E2G 2	-1.12	0.00	0.01
RBM4	235511_PM_at	RNA binding motif protein 4	-1.12	0.00	0.01
LRCH3	1559490_PM_at	leucine-rich repeats and calponin homology domain containing 3	-1.12	0.00	0.01
---	220969_PM_s_at	---	-1.12	0.00	0.01
TGFBRAP1	221235_PM_s_at	transforming growth factor, beta receptor α 1	-1.12	0.00	0.01
HNRNPH3	210588_PM_x_at	heterogeneous nuclear ribonucleoprotein H	-1.12	0.00	0.01
NONO	208698_PM_s_at	non-POU domain containing, octamer-binding protein 3	-1.11	0.00	0.00

SRSF5	212266_PM_s_at	serine	-1.11	0.00	0.00
GTF2H1	202451_PM_at	general transcription factor IIH, polypeptide	-1.11	0.00	0.00
GLS	203159_PM_at	glutaminase	-1.11	0.00	0.00
SLC30A7	226217_PM_at	solute carrier family 30 (zinc transporter), n	-1.11	0.00	0.00
KIAA0907	202220_PM_at	KIAA0907	-1.11	0.00	0.00
COX18	230909_PM_at	COX18 cytochrome c oxidase assembly hor	-1.11	0.00	0.00
HNRNPA2B1	225932_PM_s_at	heterogeneous nuclear ribonucleoprotein A	-1.11	0.00	0.00
---	228638_PM_at	---	-1.11	0.00	0.00
NCOA5	225145_PM_at	nuclear receptor coactivator 5	-1.11	0.00	0.00
FANCE	220255_PM_at	Fanconi anemia, complementation group E	-1.11	0.00	0.00
FBXW11	209455_PM_at	F-box and WD repeat domain containing 11	-1.11	0.00	0.00
THEM6	218500_PM_at	thioesterase superfamily member 6	-1.11	0.00	0.00
USP33	214843_PM_s_at	ubiquitin specific peptidase 33	-1.11	0.00	0.00
---	240217_PM_s_at	---	-1.11	0.00	0.00
HNRNPL	221860_PM_at	heterogeneous nuclear ribonucleoprotein L	-1.11	0.00	0.00
CHRAC1	231764_PM_at	chromatin accessibility complex 1	-1.11	0.00	0.00
UBE2Z	222395_PM_s_at	ubiquitin-conjugating enzyme E2Z	-1.11	0.00	0.00
SDHAP1	226693_PM_at	Succinate dehydrogenase complex, subunit	-1.11	0.00	0.00
HNRNPR	208766_PM_s_at	heterogeneous nuclear ribonucleoprotein R	-1.11	0.00	0.00
SLC25A12	203340_PM_s_at	solute carrier family 25 (aspartate	-1.11	0.00	0.00
---	240128_PM_at	---	-1.11	0.00	0.00
FNBP1	230389_PM_at	formin binding protein 1	-1.11	0.00	0.00
RRP9	204133_PM_at	ribosomal RNA processing 9, small subunit (	-1.11	0.00	0.01
NSUN2	223076_PM_s_at	NOP2	-1.11	0.00	0.01
FBRSL1	225704_PM_at	fibrosin-like 1	-1.11	0.00	0.01
PSMD11	208776_PM_at	proteasome (prosome, macropain) 26S sub	-1.11	0.00	0.01
KCTD10	226518_PM_at	potassium channel tetramerisation domain	-1.11	0.00	0.01
---	217554_PM_at	---	-1.11	0.00	0.01
ZBTB20	235308_PM_at	zinc finger and BTB domain containing 20	-1.11	0.00	0.01
NFATC1	208196_PM_x_at	nuclear factor of activated T-cells, cytoplasr	-1.11	0.00	0.01
RREB1	242297_PM_at	ras responsive element binding protein 1	-1.11	0.00	0.01
AKIRIN1	222458_PM_s_at	akirin 1	-1.11	0.00	0.01
CSNK2A1	212073_PM_at	casein kinase 2, alpha 1 polypeptide	-1.11	0.00	0.01

COPB2	226256_PM_at	coatomer protein complex, subunit beta 2 (	-1.11	0.00	0.01
EPM2AIP1	236314_PM_at	EPM2A (laforin) interacting protein 1	-1.11	0.00	0.01
THAP6	230169_PM_at	THAP domain containing 6	-1.11	0.00	0.01
GIMAP6	219777_PM_at	GTPase, IMAP family member 6	-1.11	0.00	0.01
---	238038_PM_at	---	-1.11	0.00	0.01
IL12RB1	1552584_PM_at	interleukin 12 receptor, beta 1	-1.11	0.00	0.01
AKR1B1	201272_PM_at	aldo-keto reductase family 1, member B1 (α	-1.11	0.00	0.01
HNRNPD	221481_PM_x_at	heterogeneous nuclear ribonucleoprotein D	-1.1	0.00	0.00
FAM192A	224248_PM_x_at	family with sequence similarity 192, member A	-1.1	0.00	0.00
MTMR1	216095_PM_x_at	myotubularin related protein 1	-1.1	0.00	0.00
SBNO1	230407_PM_at	strawberry notch homolog 1 (Drosophila)	-1.1	0.00	0.00
TARDBP	200020_PM_at	TAR DNA binding protein	-1.1	0.00	0.00
LEPROTL1	202595_PM_s_at	leptin receptor overlapping transcript-like 1	-1.1	0.00	0.00
APH1A	218389_PM_s_at	anterior pharynx defective 1 homolog A (C.	-1.1	0.00	0.00
WIPI2	202031_PM_s_at	WD repeat domain, phosphoinositide intera	-1.1	0.00	0.00
MTMR1	213511_PM_s_at	myotubularin related protein 1	-1.1	0.00	0.00
ZBTB43	231393_PM_x_at	Zinc finger and BTB domain containing 43	-1.1	0.00	0.00
HEATR5B	233642_PM_s_at	HEAT repeat containing 5B	-1.1	0.00	0.00
RPL22	214042_PM_s_at	ribosomal protein L22	-1.1	0.00	0.00
RARRES1	206391_PM_at	retinoic acid receptor responder (tazaroten	-1.1	0.00	0.00
PTBP1	211270_PM_x_at	polypyrimidine tract binding protein 1	-1.1	0.00	0.00
LSM2	209449_PM_at	LSM2 homolog, U6 small nuclear RNA assoc	-1.1	0.00	0.00
TM2D2	224413_PM_s_at	TM2 domain containing 2	-1.1	0.00	0.00
CRYZL1	219767_PM_s_at	crystallin, zeta (quinone reductase)-like 1	-1.1	0.00	0.00
SLC35A2	209326_PM_at	solute carrier family 35 (UDP-galactose tran	-1.1	0.00	0.00
NAB2	212803_PM_at	NGFI-A binding protein 2 (EGR1 binding pro	-1.1	0.00	0.00
PABPC1L	233104_PM_at	poly(A) binding protein, cytoplasmic 1-like	-1.1	0.00	0.00
SON	226465_PM_s_at	SON DNA binding protein	-1.1	0.00	0.00
RPL28	200003_PM_s_at	ribosomal protein L28	-1.1	0.00	0.00
INO80	229356_PM_x_at	INO80 homolog (S. cerevisiae)	-1.1	0.00	0.00
---	222316_PM_at	---	-1.1	0.00	0.01
ARMC8	1555281_PM_x_at	armadillo repeat containing 8	-1.1	0.00	0.01
ABCC1	202805_PM_s_at	ATP-binding cassette, sub-family C (CFTR	-1.1	0.00	0.01

SLC25A25	225212_PM_at	solute carrier family 25 (mitochondrial carri	-1.1	0.00	0.01
PDE6D	216883_PM_x_at	phosphodiesterase 6D, cGMP-specific, rod,	-1.1	0.00	0.01
SRSF2	214882_PM_s_at	serine	-1.1	0.00	0.01
SMPD1	217171_PM_at	sphingomyelin phosphodiesterase 1, acid ly	-1.1	0.00	0.01
ATXN2	202622_PM_s_at	ataxin 2	-1.1	0.00	0.01
SEC63	229969_PM_at	SEC63 homolog (S. cerevisiae)	-1.1	0.00	0.01
RARG	204189_PM_at	retinoic acid receptor, gamma	-1.1	0.00	0.01
EPHA2	203499_PM_at	EPH receptor A2	-1.1	0.00	0.01
---	227052_PM_at	---	-1.1	0.00	0.01
NUDCD3	201270_PM_x_at	NudC domain containing 3	-1.1	0.00	0.01
PDE8A	212521_PM_s_at	phosphodiesterase 8A	-1.1	0.00	0.01
PRPF38A	223230_PM_at	PRP38 pre-mRNA processing factor 38 (yeas	-1.1	0.00	0.01
LARP7	241385_PM_at	La ribonucleoprotein domain family, memb	-1.1	0.00	0.01
WDR77	201421_PM_s_at	WD repeat domain 77	-1.1	0.00	0.01
C20orf11	218448_PM_at	chromosome 20 open reading frame 11	-1.1	0.00	0.01
RABL2A	220500_PM_s_at	RAB, member of RAS oncogene family-like 2	-1.1	0.00	0.01
THOC2	222122_PM_s_at	THO complex 2	-1.1	0.00	0.01
BLCAP	201032_PM_at	bladder cancer associated protein	-1.09	0.00	0.00
STK35	225649_PM_s_at	serine	-1.09	0.00	0.00
SLC35E1	227518_PM_at	solute carrier family 35, member E1	-1.09	0.00	0.00
---	242233_PM_at	---	-1.09	0.00	0.00
ELK1	203617_PM_x_at	ELK1, member of ETS oncogene family	-1.09	0.00	0.00
LSM14A	212132_PM_at	LSM14A, SCD6 homolog A (S. cerevisiae)	-1.09	0.00	0.00
FGD2	1553906_PM_s_at	FYVE, RhoGEF and PH domain containing 2	-1.09	0.00	0.00
---	1554597_PM_at	---	-1.09	0.00	0.00
TMF1	214948_PM_s_at	TATA element modulatory factor 1	-1.09	0.00	0.00
ECD	203013_PM_at	ecdysoneless homolog (Drosophila)	-1.09	0.00	0.00
QRICH1	209174_PM_s_at	glutamine-rich 1	-1.09	0.00	0.00
DAZAP1	226620_PM_x_at	DAZ associated protein 1	-1.09	0.00	0.00
SRSF2	200754_PM_x_at	serine	-1.09	0.00	0.00
ANKRD11	238538_PM_at	ankyrin repeat domain 11	-1.09	0.00	0.00
GTF2H3	1554599_PM_x_at	general transcription factor IIH, polypeptide	-1.09	0.00	0.00
AAGAB	202851_PM_at	alpha- and gamma-adaptin binding protein	-1.09	0.00	0.01

FOXP1	224838_PM_at	forkhead box P1	-1.09	0.00	0.01
SUGP2	214092_PM_x_at	SURP and G patch domain containing 2	-1.09	0.00	0.01
POLR2D	203664_PM_s_at	polymerase (RNA) II (DNA directed) polypep	-1.09	0.00	0.01
UBE3B	212403_PM_at	ubiquitin protein ligase E3B	-1.09	0.00	0.01
MAP3K13	206249_PM_at	mitogen-activated protein kinase kinase kin	-1.09	0.00	0.01
---	214949_PM_at	---	-1.09	0.00	0.01
TMEM97	214283_PM_at	transmembrane protein 97	-1.09	0.00	0.01
TCF20	212931_PM_at	transcription factor 20 (AR1)	-1.09	0.00	0.01
RBM48	221595_PM_at	RNA binding motif protein 48	-1.09	0.00	0.01
UTP23	227402_PM_s_at	UTP23, small subunit (SSU) processome con	-1.09	0.00	0.01
FUS	200959_PM_at	fused in sarcoma	-1.09	0.00	0.01
IFT20	210312_PM_s_at	intraflagellar transport 20 homolog (Chlamy	-1.09	0.00	0.01
USP7	201498_PM_at	ubiquitin specific peptidase 7 (herpes virus-	-1.09	0.00	0.01
TSPYL1	221493_PM_at	TSPY-like 1	-1.09	0.00	0.01
HMGN1	200943_PM_at	high mobility group nucleosome binding do	-1.09	0.00	0.01
SRSF1	211784_PM_s_at	serine	-1.08	0.00	0.00
R3HDM2	203831_PM_at	R3H domain containing 2	-1.08	0.00	0.00
BBIP1	228993_PM_s_at	BBSome interacting protein 1	-1.08	0.00	0.00
ATP6V1G2-DDX39B	200041_PM_s_at	ATP6V1G2-DDX39B readthrough (non-prote	-1.08	0.00	0.00
FAM192A	223406_PM_x_at	family with sequence similarity 192, membe	-1.08	0.00	0.00
NONO	210470_PM_x_at	non-POU domain containing, octamer-bindin	-1.08	0.00	0.00
RPLP2	200909_PM_s_at	ribosomal protein, large, P2	-1.08	0.00	0.00
MAPK1IP1L	212643_PM_at	mitogen-activated protein kinase 1 interact	-1.08	0.00	0.00
LRRC47	212904_PM_at	leucine rich repeat containing 47	-1.08	0.00	0.01
PTDSS1	201433_PM_s_at	phosphatidylserine synthase 1	-1.08	0.00	0.01
CCNK	225824_PM_at	cyclin K	-1.08	0.00	0.01
LGALS8	208935_PM_s_at	lectin, galactoside-binding, soluble, 8	-1.08	0.00	0.01
NUB1	222512_PM_at	negative regulator of ubiquitin-like proteins	-1.08	0.00	0.01
FAM108B1	227551_PM_at	family with sequence similarity 108, membe	-1.08	0.00	0.01
NEK9	212299_PM_at	NIMA (never in mitosis gene a)- related kinase	-1.08	0.00	0.01
SECISBP2	218265_PM_at	SECIS binding protein 2	-1.08	0.00	0.01
MIR1304	222728_PM_s_at	microRNA 1304	-1.08	0.00	0.01
CALM1	200623_PM_s_at	calmodulin 1 (phosphorylase kinase, delta)	-1.08	0.00	0.01

NDFIP1	222422_PM_s_at	Nedd4 family interacting protein 1	-1.08	0.00	0.01
EPC1	234969_PM_s_at	enhancer of polycomb homolog 1 (Drosoph)	-1.08	0.00	0.01
METTL3	209265_PM_s_at	methyltransferase like 3	-1.08	0.00	0.01
SNW1	201575_PM_at	SNW domain containing 1	-1.08	0.00	0.01
CNOT2	222182_PM_s_at	CCR4-NOT transcription complex, subunit 2	-1.08	0.00	0.01
NONO	200057_PM_s_at	non-POU domain containing, octamer-bindin	-1.07	0.00	0.00
CELF1	221743_PM_at	CUGBP, Elav-like family member 1	-1.07	0.00	0.00
YTHDF1	221741_PM_s_at	YTH domain family, member 1	-1.07	0.00	0.00
FDFT1	208647_PM_at	farnesyl-diphosphate farnesyltransferase 1	-1.07	0.00	0.01
ALKBH5	234302_PM_s_at	alkB, alkylation repair homolog 5 (E. coli)	-1.07	0.00	0.01
SUDS3	224974_PM_at	suppressor of defective silencing 3 homolog	-1.07	0.00	0.01
OSBP	201800_PM_s_at	oxysterol binding protein	-1.07	0.00	0.01
LOC100505877	239880_PM_at	uncharacterized LOC100505877	-1.07	0.00	0.02
SRRM1	201225_PM_s_at	serine	-1.07	0.00	0.02
GLE1	225371_PM_at	GLE1 RNA export mediator homolog (yeast)	-1.06	0.00	0.01
PITPNB	202522_PM_at	phosphatidylinositol transfer protein, beta	-1.06	0.00	0.02
KCMF1	217938_PM_s_at	potassium channel modulatory factor 1	1.07	0.00	0.01
---	1566881_PM_at	---	1.07	0.00	0.01
SELL	204563_PM_at	selectin L	1.07	0.00	0.01
DDAH1	243711_PM_at	dimethylarginine dimethylaminohydrolase :	1.07	0.00	0.01
LOC219731	1569722_PM_s_at	uncharacterized LOC219731	1.07	0.00	0.01
PRR13	217794_PM_at	proline rich 13	1.07	0.00	0.01
---	233671_PM_at	---	1.07	0.00	0.01
CASP8	213373_PM_s_at	caspase 8, apoptosis-related cysteine peptid	1.07	0.00	0.01
ATP6V1E1	208678_PM_at	ATPase, H ⁺ transporting, lysosomal 31kDa,	1.07	0.00	0.01
ATP6V0E1	200096_PM_s_at	ATPase, H ⁺ transporting, lysosomal 9kDa, V	1.08	0.00	0.00
LOC440944	1557357_PM_at	uncharacterized LOC440944	1.08	0.00	0.00
---	234202_PM_at	---	1.08	0.00	0.00
CCDC67	1554072_PM_s_at	coiled-coil domain containing 67	1.08	0.00	0.00
SETD8	228443_PM_s_at	SET domain containing (lysine methyltransf	1.08	0.00	0.01
MRGPRX1	1553401_PM_at	MAS-related GPR, member X1	1.08	0.00	0.01
MBD4	209580_PM_s_at	methyl-CpG binding domain protein 4	1.08	0.00	0.01
BRK1	224023_PM_s_at	BRICK1, SCAR	1.08	0.00	0.01

PSG1	210196_PM_s_at	pregnancy specific beta-1-glycoprotein 1	1.08	0.00	0.01
---	1559313_PM_at	---	1.08	0.00	0.01
MOG	214650_PM_x_at	myelin oligodendrocyte glycoprotein	1.08	0.00	0.01
SETD8	225118_PM_at	SET domain containing (lysine methyltransferase 8)	1.08	0.00	0.01
ZNF701	220242_PM_x_at	zinc finger protein 701	1.08	0.00	0.01
ZPLD1	1561969_PM_at	zona pellucida-like domain containing 1	1.08	0.00	0.01
TRIP4	203732_PM_at	thyroid hormone receptor interactor 4	1.08	0.00	0.01
GNG5	207157_PM_s_at	guanine nucleotide binding protein (G protein), gamma 5	1.08	0.00	0.01
PDPN	226658_PM_at	podoplanin	1.08	0.00	0.01
LOC100652765	201171_PM_at	uncharacterized LOC100652765	1.09	0.00	0.00
MORF4L1	221381_PM_s_at	mortality factor 4 like 1	1.09	0.00	0.00
MBD4	214047_PM_s_at	methyl-CpG binding domain protein 4	1.09	0.00	0.00
ITM2B	217732_PM_s_at	integral membrane protein 2B	1.09	0.00	0.00
WAC	217742_PM_s_at	WW domain containing adaptor with coiled-coil domains and a tryptophan-rich region	1.09	0.00	0.00
ARPC3	208736_PM_at	actin related protein 2	1.09	0.00	0.00
CLIC1	208659_PM_at	chloride intracellular channel 1	1.09	0.00	0.00
H2AFZ	213911_PM_s_at	H2A histone family, member Z	1.09	0.00	0.00
BIN2	219191_PM_s_at	bridging integrator 2	1.09	0.00	0.00
TSG101	201758_PM_at	tumor susceptibility gene 101	1.09	0.00	0.00
FTH1P5	211628_PM_x_at	ferritin, heavy polypeptide 1 pseudogene 5	1.09	0.00	0.00
VAMP3	201336_PM_at	vesicle-associated membrane protein 3 (cellular)	1.09	0.00	0.01
PHKB	202739_PM_s_at	phosphorylase kinase, beta	1.09	0.00	0.01
AP1G1	203350_PM_at	adaptor-related protein complex 1, gamma	1.09	0.00	0.01
---	1570645_PM_at	---	1.09	0.00	0.01
R3HCC1L	228374_PM_at	R3H domain and coiled-coil containing 1-like	1.09	0.00	0.01
LINC00340	1562469_PM_at	long intergenic non-protein coding RNA 340	1.1	0.00	0.00
TMEM59	200620_PM_at	transmembrane protein 59	1.1	0.00	0.00
PPP2CA	208652_PM_at	protein phosphatase 2, catalytic subunit, alpha	1.1	0.00	0.00
RAB11A	200863_PM_s_at	RAB11A, member RAS oncogene family	1.1	0.00	0.00
SLC12A6	226741_PM_at	solute carrier family 12 (potassium)	1.1	0.00	0.00
ITM2B	217731_PM_s_at	integral membrane protein 2B	1.1	0.00	0.00
---	222202_PM_at	---	1.1	0.00	0.00
LCP2	205269_PM_at	lymphocyte cytosolic protein 2 (SH2 domain)	1.1	0.00	0.00

SAT1	203455_PM_s_at	spermidine	1.1	0.00	0.00
AMICA1	228094_PM_at	adhesion molecule, interacts with CXADR α	1.1	0.00	0.00
TINF2	220052_PM_s_at	TERF1 (TRF1)-interacting nuclear factor 2	1.1	0.00	0.00
SETX	201964_PM_at	senataxin	1.1	0.00	0.00
LOC100507699	202395_PM_at	vesicle-fusing ATPase-like	1.1	0.00	0.00
LINC00616	1561098_PM_at	long intergenic non-protein coding RNA 616	1.1	0.00	0.00
OTP	223835_PM_x_at	orthopedia homeobox	1.1	0.00	0.00
CCNDBP1	223084_PM_s_at	cyclin D-type binding-protein 1	1.1	0.00	0.00
PLEK	203471_PM_s_at	pleckstrin	1.1	0.00	0.00
TUBA1A	209118_PM_s_at	tubulin, alpha 1a	1.1	0.00	0.01
PHF20	209422_PM_at	PHD finger protein 20	1.1	0.00	0.01
CFHR3	1570228_PM_at	complement factor H-related 3	1.1	0.00	0.01
RANBP17	244198_PM_at	RAN binding protein 17	1.1	0.00	0.01
COG5	227089_PM_at	component of oligomeric golgi complex 5	1.1	0.00	0.01
CFTR	234702_PM_x_at	cystic fibrosis transmembrane conductance	1.1	0.00	0.01
FAM123C	1553350_PM_at	family with sequence similarity 123C	1.1	0.00	0.01
NRD1	208709_PM_s_at	nardilysin (N-arginine dibasic convertase)	1.1	0.00	0.01
PPCS	218341_PM_at	phosphopantethenoylcysteine synthetase	1.1	0.00	0.01
NCF2	209949_PM_at	neutrophil cytosolic factor 2	1.1	0.00	0.01
SUV420H1	218242_PM_s_at	suppressor of variegation 4-20 homolog 1 (I	1.1	0.00	0.01
UGT2B15	207392_PM_x_at	UDP glucuronosyltransferase 2 family, polype	1.1	0.00	0.01
LOC646214	236283_PM_x_at	p21 protein (Cdc42)	1.1	0.00	0.01
GLUD2	210447_PM_at	glutamate dehydrogenase 2	1.1	0.00	0.01
RBM33	226732_PM_at	RNA binding motif protein 33	1.1	0.00	0.01
LOC100507463	1555852_PM_at	uncharacterized LOC100507463	1.1	0.00	0.01
SERPINB1	213572_PM_s_at	serpin peptidase inhibitor, clade B (ovalbum	1.1	0.00	0.01
---	243412_PM_at	---	1.1	0.00	0.01
SETD2	215038_PM_s_at	SET domain containing 2	1.1	0.00	0.01
ADPRH	207863_PM_at	ADP-ribosylarginine hydrolase	1.1	0.00	0.01
MORF4L1	224561_PM_s_at	mortality factor 4 like 1	1.11	0.00	0.00
MAOB	1561009_PM_at	Monoamine oxidase B	1.11	0.00	0.00
PTTG1IP	200677_PM_at	pituitary tumor-transforming 1 interacting p	1.11	0.00	0.00
PLEKHB2	224121_PM_x_at	pleckstrin homology domain containing, far	1.11	0.00	0.00

LRRFIP1	201862_PM_s_at	leucine rich repeat (in FLII) interacting protein	1.11	0.00	0.00
H2AFZ	200853_PM_at	H2A histone family, member Z	1.11	0.00	0.00
IDS	212221_PM_x_at	iduronate 2-sulfatase	1.11	0.00	0.00
CPNE3	202119_PM_s_at	copine III	1.11	0.00	0.00
---	1569812_PM_at	---	1.11	0.00	0.00
PRKG1	228396_PM_at	protein kinase, cGMP-dependent, type I	1.11	0.00	0.00
TMUB2	218419_PM_s_at	transmembrane and ubiquitin-like domain containing protein 2	1.11	0.00	0.00
---	1569772_PM_x_at	---	1.11	0.00	0.00
SH3BGRL	201312_PM_s_at	SH3 domain binding glutamic acid-rich protein	1.11	0.00	0.00
---	1570181_PM_a_at	---	1.11	0.00	0.01
ATP6	242131_PM_at	ATP synthase F0 subunit 6	1.11	0.00	0.01
CLRN3	229777_PM_at	clarin 3	1.11	0.00	0.01
---	238016_PM_s_at	---	1.11	0.00	0.01
ZFP36	201531_PM_at	zinc finger protein 36, C3H type, homolog (rat)	1.11	0.00	0.01
ELMO2	55692_PM_at	engulfment and cell motility 2	1.11	0.00	0.01
RFC2	1053_PM_at	replication factor C (activator 1) 2, 40kDa	1.11	0.00	0.01
GNAQ	202615_PM_at	guanine nucleotide binding protein (G protein), alpha q/q2	1.11	0.00	0.01
SERINC3	221471_PM_at	serine incorporator 3	1.11	0.00	0.01
DHRS7B	220690_PM_s_at	dehydrogenase	1.11	0.00	0.01
PPM1M	226074_PM_at	protein phosphatase, Mg2+	1.11	0.00	0.01
GOLGA7	1554167_PM_a_at	golgin A7	1.11	0.00	0.01
---	237359_PM_at	---	1.11	0.00	0.01
BZW1	200776_PM_s_at	basic leucine zipper and W2 domains 1	1.11	0.00	0.01
NCOA1	209106_PM_at	nuclear receptor coactivator 1	1.11	0.00	0.01
YWHAH	201020_PM_at	tyrosine 3-monooxygenase	1.11	0.00	0.01
MIR21	220990_PM_s_at	microRNA 21	1.11	0.00	0.01
LINC00324	230012_PM_at	long intergenic non-protein coding RNA 324	1.11	0.00	0.01
SRGN	201859_PM_at	serglycin	1.12	0.00	0.00
TINF2	223776_PM_x_at	TERF1 (TRF1)-interacting nuclear factor 2	1.12	0.00	0.00
SERPINB1	228726_PM_at	serpin peptidase inhibitor, clade B (ovalbumin)	1.12	0.00	0.00
RPS6KA3	203843_PM_at	ribosomal protein S6 kinase, 90kDa, polypeptide 1	1.12	0.00	0.00
AP1M2	65517_PM_at	adaptor-related protein complex 1, mu 2 subunit	1.12	0.00	0.00
GIT2	225558_PM_at	G protein-coupled receptor kinase interacting protein 2	1.12	0.00	0.00

PTBP3	224617_PM_at	polypyrimidine tract binding protein 3	1.12	0.00	0.00
KPNA2	201088_PM_at	karyopherin alpha 2 (RAG cohort 1, importin	1.12	0.00	0.00
RAB27A	222294_PM_s_at	RAB27A, member RAS oncogene family	1.12	0.00	0.00
PSEN1	226577_PM_at	presenilin 1	1.12	0.00	0.00
POLR2C	214263_PM_x_at	polymerase (RNA) II (DNA directed) polypept	1.12	0.00	0.00
DIAPH3	232596_PM_at	diaphanous homolog 3 (Drosophila)	1.12	0.00	0.00
PLXNA2	227032_PM_at	plexin A2	1.12	0.00	0.00
CDCA3	223307_PM_at	cell division cycle associated 3	1.12	0.00	0.00
REEP5	208872_PM_s_at	receptor accessory protein 5	1.12	0.00	0.00
---	234371_PM_at	---	1.12	0.00	0.01
RNF135	223591_PM_at	ring finger protein 135	1.12	0.00	0.01
CDKN2D	210240_PM_s_at	cyclin-dependent kinase inhibitor 2D (p19, i	1.12	0.00	0.01
LOC100505487	225197_PM_at	uncharacterized LOC100505487	1.12	0.00	0.01
GSTO1	201470_PM_at	glutathione S-transferase omega 1	1.12	0.00	0.01
MSRB3	238583_PM_at	methionine sulfoxide reductase B3	1.12	0.00	0.01
FAM5B	214822_PM_at	family with sequence similarity 5, member I	1.12	0.00	0.01
LOC100287223	227396_PM_at	uncharacterized LOC100287223	1.12	0.00	0.01
C20orf43	217737_PM_x_at	chromosome 20 open reading frame 43	1.12	0.00	0.01
SFN	33323_PM_r_at	stratifin	1.12	0.00	0.01
NF1	204323_PM_x_at	neurofibromin 1	1.12	0.00	0.01
ITGAM	205786_PM_s_at	integrin, alpha M (complement component	1.12	0.00	0.01
CTAGE5	215930_PM_s_at	CTAGE family, member 5	1.12	0.00	0.01
CKLF	223451_PM_s_at	chemokine-like factor	1.12	0.00	0.01
SCN1A	210383_PM_at	sodium channel, voltage-gated, type I, alpha	1.12	0.00	0.01
SDHD	202026_PM_at	succinate dehydrogenase complex, subunit	1.12	0.00	0.01
GADD45B	209304_PM_x_at	growth arrest and DNA-damage-inducible, k	1.12	0.00	0.01
ERG	211626_PM_x_at	v-ets erythroblastosis virus E26 oncogene h	1.12	0.00	0.01
---	242950_PM_x_at	---	1.12	0.00	0.01
CACNA1D	210108_PM_at	calcium channel, voltage-dependent, L type	1.12	0.00	0.01
MAN2A2	202032_PM_s_at	mannosidase, alpha, class 2A, member 2	1.12	0.00	0.01
USP8	229501_PM_s_at	ubiquitin specific peptidase 8	1.13	0.00	0.00
MYL12A	201319_PM_at	myosin, light chain 12A, regulatory, non-sar	1.13	0.00	0.00
OSBPL8	212582_PM_at	oxysterol binding protein-like 8	1.13	0.00	0.00

ZNF552	219741_PM_x_at	zinc finger protein 552	1.13	0.00	0.00
FGR	208438_PM_s_at	Gardner-Rasheed feline sarcoma viral (v-fgr	1.13	0.00	0.00
MYL6	212082_PM_s_at	myosin, light chain 6, alkali, smooth muscle	1.13	0.00	0.00
SCPEP1	218217_PM_at	serine carboxypeptidase 1	1.13	0.00	0.00
SH3GLB1	209090_PM_s_at	SH3-domain GRB2-like endophilin B1	1.13	0.00	0.00
CTBP2	210554_PM_s_at	C-terminal binding protein 2	1.13	0.00	0.00
MKLN1	225526_PM_at	muskelin 1, intracellular mediator containin	1.13	0.00	0.00
---	226391_PM_at	---	1.13	0.00	0.00
CYTH4	211521_PM_s_at	cytohesin 4	1.13	0.00	0.00
LRMP	204674_PM_at	lymphoid-restricted membrane protein	1.13	0.00	0.00
PGM1	201968_PM_s_at	phosphoglucomutase 1	1.13	0.00	0.00
HEXIM1	202815_PM_s_at	hexamethylene bis-acetamide inducible 1	1.13	0.00	0.00
KBTBD11	204301_PM_at	kelch repeat and BTB (POZ) domain contain	1.13	0.00	0.00
NOL3	59625_PM_at	nucleolar protein 3 (apoptosis repressor wit	1.13	0.00	0.00
TOR4A	233589_PM_x_at	torsin family 4, member A	1.13	0.00	0.00
FERMT3	223303_PM_at	fermitin family member 3	1.13	0.00	0.00
PELO	218472_PM_s_at	pelota homolog (Drosophila)	1.13	0.00	0.00
MAP3K5	203837_PM_at	mitogen-activated protein kinase kinase kin	1.13	0.00	0.00
SLC39A14	1555433_PM_at	solute carrier family 39 (zinc transporter), n	1.13	0.00	0.01
IL17RA	229295_PM_at	interleukin 17 receptor A	1.13	0.00	0.01
RAB27A	235766_PM_x_at	RAB27A, member RAS oncogene family	1.13	0.00	0.01
CHMP3	222436_PM_s_at	charged multivesicular body protein 3	1.13	0.00	0.01
MAPK1	1552263_PM_at	mitogen-activated protein kinase 1	1.13	0.00	0.01
AIF1	213095_PM_x_at	allograft inflammatory factor 1	1.13	0.00	0.01
---	1560034_PM_a_at	---	1.13	0.00	0.01
DNAJC5	224613_PM_s_at	DnaJ (Hsp40) homolog, subfamily C, membe	1.13	0.00	0.01
BRCC3	221196_PM_x_at	BRCA1	1.13	0.00	0.01
PRELID1	223032_PM_x_at	PRELI domain containing 1	1.13	0.00	0.01
ITPR2	202661_PM_at	inositol 1,4,5-trisphosphate receptor, type 2	1.13	0.00	0.01
SLCO3A1	219229_PM_at	solute carrier organic anion transporter fam	1.13	0.00	0.01
MYL12B	221474_PM_at	myosin, light chain 12B, regulatory	1.14	0.00	0.00
EVI2B	211742_PM_s_at	ecotropic viral integration site 2B	1.14	0.00	0.00
PICALM	212506_PM_at	phosphatidylinositol binding clathrin assem	1.14	0.00	0.00

TINF2	224809_PM_x_at	TERF1 (TRF1)-interacting nuclear factor 2	1.14	0.00	0.00
CAMK2G	212757_PM_s_at	calcium	1.14	0.00	0.00
CDC42EP3	225685_PM_at	CDC42 effector protein (Rho GTPase binding)	1.14	0.00	0.00
MCMBP	222464_PM_s_at	minichromosome maintenance complex binding	1.14	0.00	0.00
TNFAIP8L2	223583_PM_at	tumor necrosis factor, alpha-induced protein	1.14	0.00	0.00
BID	227143_PM_s_at	BH3 interacting domain death agonist	1.14	0.00	0.00
STAG1	202294_PM_at	stromal antigen 1	1.14	0.00	0.00
LRRFIP1	227391_PM_x_at	leucine rich repeat (in FLII) interacting protein	1.14	0.00	0.00
LRMP	35974_PM_at	lymphoid-restricted membrane protein	1.14	0.00	0.00
GJA9-MYCBP	203359_PM_s_at	GJA9-MYCBP readthrough	1.14	0.00	0.00
INPP5A	203006_PM_at	inositol polyphosphate-5-phosphatase, 40kDa	1.14	0.00	0.00
RGS19	204336_PM_s_at	regulator of G-protein signaling 19	1.14	0.00	0.00
---	229934_PM_at	---	1.14	0.00	0.00
CNIH4	228306_PM_at	cornichon homolog 4 (Drosophila)	1.14	0.00	0.00
PIK3R5	227553_PM_at	Phosphoinositide-3-kinase, regulatory subunit	1.14	0.00	0.00
LAMP2	200821_PM_at	lysosomal-associated membrane protein 2	1.14	0.00	0.00
FNIP1	228768_PM_at	folliculin interacting protein 1	1.14	0.00	0.00
---	232607_PM_at	---	1.14	0.00	0.00
ANXA11	228727_PM_at	annexin A11	1.14	0.00	0.00
PIK3R5	227645_PM_at	phosphoinositide-3-kinase, regulatory subunit	1.14	0.00	0.00
ERG	213541_PM_s_at	v-ets erythroblastosis virus E26 oncogene homolog	1.14	0.00	0.00
SERPINB1	212268_PM_at	serpin peptidase inhibitor, clade B (ovalbumin)	1.14	0.00	0.00
FAM129A	217967_PM_s_at	family with sequence similarity 129, member A	1.14	0.00	0.00
CFLAR	235427_PM_at	CASP8 and FADD-like apoptosis regulator	1.14	0.00	0.00
SSH3	51192_PM_at	slingshot homolog 3 (Drosophila)	1.14	0.00	0.00
ACAA1	214274_PM_s_at	acetyl-CoA acyltransferase 1	1.14	0.00	0.00
BRI3	223376_PM_s_at	brain protein I3	1.14	0.00	0.00
ZNF33A	231864_PM_at	zinc finger protein 33A	1.14	0.00	0.00
STRN	236980_PM_at	striatin, calmodulin binding protein	1.14	0.00	0.01
C14orf101	225675_PM_at	chromosome 14 open reading frame 101	1.14	0.00	0.01
---	235843_PM_at	---	1.14	0.00	0.01
CEBPA	204039_PM_at	CCAAT	1.14	0.00	0.01
CHMP1B	218178_PM_s_at	charged multivesicular body protein 1B	1.14	0.00	0.01

MAPK14	202530_PM_at	mitogen-activated protein kinase 14	1.14	0.00	0.01
CKLF	221058_PM_s_at	chemokine-like factor	1.14	0.00	0.01
COA1	239490_PM_at	cytochrome C oxidase assembly factor 1 ho	1.14	0.00	0.01
PBLD	219543_PM_at	phenazine biosynthesis-like protein domain	1.14	0.00	0.01
TLR1	210176_PM_at	toll-like receptor 1	1.14	0.00	0.01
DCP2	244777_PM_at	DCP2 decapping enzyme homolog (<i>S. cerevi</i>	1.14	0.00	0.01
DEF8	219646_PM_at	differentially expressed in FDCP 8 homolog	1.14	0.00	0.01
FLOT2	201350_PM_at	flotillin 2	1.14	0.00	0.01
ACPP	237030_PM_at	acid phosphatase, prostate	1.14	0.00	0.01
TPMT	203671_PM_at	thiopurine S-methyltransferase	1.14	0.00	0.01
ASAP1	224791_PM_at	ArfGAP with SH3 domain, ankyrin repeat an	1.15	0.00	0.00
ATXN1	203232_PM_s_at	ataxin 1	1.15	0.00	0.00
CTSS	202901_PM_x_at	cathepsin S	1.15	0.00	0.00
CENPBD1	223728_PM_at	CENPB DNA-binding domains containing 1	1.15	0.00	0.00
RGS14	38290_PM_at	regulator of G-protein signaling 14	1.15	0.00	0.00
HBXIP	202300_PM_at	hepatitis B virus x interacting protein	1.15	0.00	0.00
FAM65B	209829_PM_at	family with sequence similarity 65, member	1.15	0.00	0.00
PROK2	232629_PM_at	prokineticin 2	1.15	0.00	0.00
GYG1	211275_PM_s_at	glycogenin 1	1.15	0.00	0.00
LOC100129034	225214_PM_at	uncharacterized LOC100129034	1.15	0.00	0.00
GDE1	226214_PM_at	glycerophosphodiester phosphodiesterase :	1.15	0.00	0.00
CSF2RA	211286_PM_x_at	colony stimulating factor 2 receptor, alpha,	1.15	0.00	0.00
NFE2L2	201146_PM_at	nuclear factor (erythroid-derived 2)-like 2	1.15	0.00	0.00
CACNG8	231355_PM_at	calcium channel, voltage-dependent, gamm	1.15	0.00	0.00
STOM	201062_PM_at	stomatin	1.15	0.00	0.00
ARL8B	222442_PM_s_at	ADP-ribosylation factor-like 8B	1.15	0.00	0.00
ZNF586	219711_PM_at	zinc finger protein 586	1.15	0.00	0.00
FAM32A	201863_PM_at	family with sequence similarity 32, member	1.15	0.00	0.00
---	216012_PM_at	---	1.15	0.00	0.00
GALNT7	222587_PM_s_at	UDP-N-acetyl-alpha-D-galactosamine:polyp	1.15	0.00	0.00
UBXN2B	212934_PM_at	UBX domain protein 2B	1.15	0.00	0.00
---	240064_PM_at	---	1.15	0.00	0.00
PGM2	223738_PM_s_at	phosphoglucomutase 2	1.15	0.00	0.01

GBA	210589_PM_s_at	glucosidase, beta, acid	1.15	0.00	0.01
C10orf128	1561890_PM_at	chromosome 10 open reading frame 128	1.15	0.00	0.01
---	1557099_PM_at	---	1.15	0.00	0.01
EEF1A1	1557120_PM_at	Eukaryotic translation elongation factor 1 alpha 1	1.15	0.00	0.01
SMARCD3	204099_PM_at	SWI	1.15	0.00	0.01
CCNYL1	227280_PM_s_at	cyclin Y-like 1	1.15	0.00	0.01
CMTM4	224998_PM_at	CKLF-like MARVEL transmembrane domain containing 4	1.15	0.00	0.01
PAC SIN2	201651_PM_s_at	protein kinase C and casein kinase substrate in neuron	1.15	0.00	0.01
UBE2J1	217824_PM_at	ubiquitin-conjugating enzyme E2, J1	1.15	0.00	0.01
STOM	201061_PM_s_at	stomatin	1.15	0.00	0.01
STX3	209238_PM_at	syntaxin 3	1.15	0.00	0.01
ATP5J2	202961_PM_s_at	ATP synthase, H ⁺ transporting, mitochondrial	1.15	0.00	0.01
MGST1	224918_PM_x_at	microsomal glutathione S-transferase 1	1.15	0.00	0.01
CYBB	233538_PM_s_at	Cytochrome b-245, beta polypeptide	1.15	0.00	0.01
SOS2	217644_PM_s_at	son of sevenless homolog 2 (Drosophila)	1.15	0.00	0.01
XPR1	226615_PM_at	xenotropic and polytropic retrovirus receptor	1.15	0.00	0.01
SH2D3C	226673_PM_at	SH2 domain containing 3C	1.15	0.00	0.01
MCU	225320_PM_at	mitochondrial calcium uniporter	1.16	0.00	0.00
DAPP1	219290_PM_x_at	dual adaptor of phosphotyrosine and 3-phosphoinositide	1.16	0.00	0.00
LAT2	221581_PM_s_at	linker for activation of T cells family, member 2	1.16	0.00	0.00
---	1564121_PM_at	---	1.16	0.00	0.00
GJA9-MYCBP	203360_PM_s_at	GJA9-MYCBP readthrough	1.16	0.00	0.00
SLC2A3	202499_PM_s_at	solute carrier family 2 (facilitated glucose transporters) 3	1.16	0.00	0.00
LINC00525	1553708_PM_at	long intergenic non-protein coding RNA 525	1.16	0.00	0.00
SSH3	219241_PM_x_at	slingshot homolog 3 (Drosophila)	1.16	0.00	0.00
DNTTIP1	224825_PM_at	deoxynucleotidyltransferase, terminal, intervening sequence-specific	1.16	0.00	0.00
ACVR1B	213198_PM_at	activin A receptor, type IB	1.16	0.00	0.00
ZEB2	235593_PM_at	zinc finger E-box binding homeobox 2	1.16	0.00	0.00
PLBD1	218454_PM_at	phospholipase B domain containing 1	1.16	0.00	0.01
PPP1R3D	204554_PM_at	protein phosphatase 1, regulatory subunit 3D	1.16	0.00	0.01
MTX1	210386_PM_s_at	metaxin 1	1.16	0.00	0.01
LAMP2	203042_PM_at	lysosomal-associated membrane protein 2	1.16	0.00	0.01
WIPI1	213836_PM_s_at	WD repeat domain, phosphoinositide interacting protein 1	1.16	0.00	0.01

ELF2	203822_PM_s_at	E74-like factor 2 (ets domain transcription f	1.16	0.00	0.01
FOXO3	224891_PM_at	forkhead box O3	1.16	0.00	0.01
---	1554723_PM_x_at	---	1.16	0.00	0.01
NDUFA1	202298_PM_at	NADH dehydrogenase (ubiquinone) 1 alpha	1.16	0.00	0.01
---	237451_PM_x_at	---	1.16	0.00	0.01
SF3B14	223416_PM_at	splicing factor 3B, 14 kDa subunit	1.16	0.00	0.01
TMEM189	201003_PM_x_at	transmembrane protein 189	1.16	0.00	0.01
NEDD9	202149_PM_at	neural precursor cell expressed, developme	1.16	0.00	0.01
LILRA2	207857_PM_at	leukocyte immunoglobulin-like receptor, su	1.16	0.00	0.01
SUCNR1	223939_PM_at	succinate receptor 1	1.16	0.00	0.01
PCOLCE2	219295_PM_s_at	procollagen C-endopeptidase enhancer 2	1.16	0.00	0.01
TXN	216609_PM_at	thioredoxin	1.16	0.00	0.02
APBB1IP	230925_PM_at	amyloid beta (A4) precursor protein-bindin	1.16	0.00	0.02
LRRC25	1559502_PM_s_at	leucine rich repeat containing 25	1.16	0.00	0.02
ENTPD1	207691_PM_x_at	ectonucleoside triphosphate diphosphohyd	1.16	0.00	0.02
CHMP3	217837_PM_s_at	charged multivesicular body protein 3	1.17	0.00	0.00
HBXIP	202299_PM_s_at	hepatitis B virus x interacting protein	1.17	0.00	0.00
RAB32	204214_PM_s_at	RAB32, member RAS oncogene family	1.17	0.00	0.00
LEPROT	202377_PM_at	leptin receptor overlapping transcript	1.17	0.00	0.00
PPP2R5A	202187_PM_s_at	protein phosphatase 2, regulatory subunit E	1.17	0.00	0.00
GLIPR1	226136_PM_at	GLI pathogenesis-related 1	1.17	0.00	0.00
---	217352_PM_at	---	1.17	0.00	0.00
STEAP4	225987_PM_at	STEAP family member 4	1.17	0.00	0.00
---	229602_PM_at	---	1.17	0.00	0.00
AZIN1	201772_PM_at	antizyme inhibitor 1	1.17	0.00	0.00
LOC100509484	209122_PM_at	uncharacterized LOC100509484	1.17	0.00	0.00
AGFG1	218092_PM_s_at	ArfGAP with FG repeats 1	1.17	0.00	0.00
SSH3	219919_PM_s_at	slingshot homolog 3 (Drosophila)	1.17	0.00	0.00
C1RL	218983_PM_at	complement component 1, r subcomponen	1.17	0.00	0.00
PCTP	218676_PM_s_at	phosphatidylcholine transfer protein	1.17	0.00	0.00
BRCC3	229436_PM_x_at	BRCA1	1.17	0.00	0.00
SNTB2	226685_PM_at	syntrophin, beta 2 (dystrophin-associated p	1.17	0.00	0.00
TNFSF14	233935_PM_at	Tumor necrosis factor (ligand) superfamily,	1.17	0.00	0.00

GLIPR2	225604_PM_s_at	GLI pathogenesis-related 2	1.17	0.00	0.00
UBL5	218011_PM_at	ubiquitin-like 5	1.17	0.00	0.00
XPO6	214784_PM_x_at	exportin 6	1.17	0.00	0.00
ASAP1	221039_PM_s_at	ArfGAP with SH3 domain, ankyrin repeat an	1.17	0.00	0.00
PPT1	200975_PM_at	palmitoyl-protein thioesterase 1	1.17	0.00	0.00
SRPK1	202200_PM_s_at	SRSF protein kinase 1	1.17	0.00	0.00
KIAA2018	227433_PM_at	KIAA2018	1.17	0.00	0.00
CPQ	203501_PM_at	carboxypeptidase Q	1.17	0.00	0.00
MKNK1	209467_PM_s_at	MAP kinase interacting serine	1.17	0.00	0.00
CUL4B	202213_PM_s_at	cullin 4B	1.17	0.00	0.00
PPP3CA	202429_PM_s_at	protein phosphatase 3, catalytic subunit, alj	1.17	0.00	0.00
PLD1	226636_PM_at	phospholipase D1, phosphatidylcholine-spe	1.17	0.00	0.00
PLIN4	228409_PM_at	perilipin 4	1.17	0.00	0.00
VTI1B	225926_PM_at	vesicle transport through interaction with t-	1.17	0.00	0.00
MGST1	231736_PM_x_at	microsomal glutathione S-transferase 1	1.17	0.00	0.01
CYB5R4	219079_PM_at	cytochrome b5 reductase 4	1.17	0.00	0.01
LAMP2	203041_PM_s_at	lysosomal-associated membrane protein 2	1.17	0.00	0.01
SKAP2	225639_PM_at	src kinase associated phosphoprotein 2	1.17	0.00	0.01
FRAT1	219889_PM_at	frequently rearranged in advanced T-cell lyr	1.17	0.00	0.01
VEPH1	229759_PM_s_at	ventricular zone expressed PH domain hom	1.17	0.00	0.01
DCBLD2	224911_PM_s_at	discoidin, CUB and LCCL domain containing	1.17	0.00	0.01
HK2	202934_PM_at	hexokinase 2	1.17	0.00	0.01
---	243115_PM_at	---	1.17	0.00	0.01
IFNAR1	204191_PM_at	interferon (alpha, beta and omega) recepto	1.17	0.00	0.01
FRY	214319_PM_at	furry homolog (Drosophila)	1.17	0.00	0.01
CSF2RA	207085_PM_x_at	colony stimulating factor 2 receptor, alpha,	1.17	0.00	0.01
PDK3	221957_PM_at	pyruvate dehydrogenase kinase, isozyme 3	1.17	0.00	0.01
C11orf82	228281_PM_at	chromosome 11 open reading frame 82	1.17	0.00	0.01
OSCAR	1554503_PM_a_at	osteoclast associated, immunoglobulin-like	1.17	0.00	0.01
TBC1D1	1568713_PM_a_at	TBC1 (tre-2	1.17	0.00	0.01
ENTPD1	209474_PM_s_at	ectonucleoside triphosphate diphosphohyd	1.17	0.00	0.01
B3GNT2	219326_PM_s_at	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucc	1.17	0.00	0.01
MYD88	209124_PM_at	myeloid differentiation primary response ge	1.18	0.00	0.00

GNAQ	224861_PM_at	guanine nucleotide binding protein (G protein), alpha Q subunit	1.18	0.00	0.00
LOC100507507	241353_PM_s_at	uncharacterized LOC100507507	1.18	0.00	0.00
LRRC57	229232_PM_at	leucine rich repeat containing 57	1.18	0.00	0.00
IFNAR1	225661_PM_at	interferon (alpha, beta and omega) receptor 1	1.18	0.00	0.00
AQP9	205568_PM_at	aquaporin 9	1.18	0.00	0.00
FAM47E	203986_PM_at	family with sequence similarity 47, member E	1.18	0.00	0.00
FADD	202535_PM_at	Fas (TNFRSF6)-associated via death domain	1.18	0.00	0.00
KCNE3	227647_PM_at	potassium voltage-gated channel, Isk-related 3	1.18	0.00	0.00
TANK	207616_PM_s_at	TRAF family member-associated NFKB activator	1.18	0.00	0.00
SUSD1	226264_PM_at	sushi domain containing 1	1.18	0.00	0.00
BID	204493_PM_at	BH3 interacting domain death agonist	1.18	0.00	0.00
DENND3	212975_PM_at	DENN	1.18	0.00	0.00
AGTPBP1	204500_PM_s_at	ATP	1.18	0.00	0.00
CCDC30	230897_PM_at	coiled-coil domain containing 30	1.18	0.00	0.00
CHD9	212616_PM_at	chromodomain helicase DNA binding protein 9	1.18	0.00	0.00
SNTB1	226438_PM_at	syntrophin, beta 1 (dystrophin-associated protein)	1.18	0.00	0.00
CDC42EP3	209287_PM_s_at	CDC42 effector protein (Rho GTPase binding)	1.18	0.00	0.00
FGD4	230559_PM_x_at	FYVE, RhoGEF and PH domain containing 4	1.18	0.00	0.01
ANKRD12	216550_PM_x_at	ankyrin repeat domain 12	1.18	0.00	0.01
STRN	236388_PM_at	striatin, calmodulin binding protein	1.18	0.00	0.01
TRIQK	225603_PM_s_at	triple QxxK	1.18	0.00	0.01
TXN	208864_PM_s_at	thioredoxin	1.18	0.00	0.01
RRP12	216913_PM_s_at	ribosomal RNA processing 12 homolog (S. cerevisiae)	1.18	0.00	0.01
CCPG1	221511_PM_x_at	cell cycle progression 1	1.18	0.00	0.01
APC	203527_PM_s_at	adenomatous polyposis coli	1.18	0.00	0.01
---	244492_PM_at	---	1.18	0.00	0.01
MBOAT2	213288_PM_at	membrane bound O-acyltransferase domain 2	1.18	0.00	0.01
ADAMTS2	226311_PM_at	ADAM metallopeptidase with thrombospondin type 1 motif 2	1.18	0.00	0.01
G6PD	202275_PM_at	glucose-6-phosphate dehydrogenase	1.18	0.00	0.01
---	226542_PM_at	---	1.18	0.00	0.01
MOSPD2	64883_PM_at	motile sperm domain containing 2	1.18	0.00	0.01
EIF2AK1	217735_PM_s_at	eukaryotic translation initiation factor 2-alpha kinase 1	1.18	0.00	0.01
CD36	206488_PM_s_at	CD36 molecule (thrombospondin receptor)	1.18	0.00	0.02

ATP6V1C1	202872_PM_at	ATPase, H+ transporting, lysosomal 42kDa, 'protein kinase C and casein kinase substrate' subunit eta	1.18	0.00	0.02
PACSIN2	1554691_PM_a_at	sorbitol dehydrogenase	1.18	0.00	0.02
SORD	201563_PM_at	adenosine monophosphate deaminase 3	1.19	0.00	0.00
AMPD3	207992_PM_s_at	neutral sphingomyelinase (N-SMase) activator	1.19	0.00	0.00
NSMAF	203269_PM_at	solute carrier organic anion transporter family 2 member 1	1.19	0.00	0.00
SLCO3A1	227367_PM_at	---	1.19	0.00	0.00
---	242366_PM_at	uncharacterized LOC100509498	1.19	0.00	0.00
LOC100509498	227290_PM_at	---	1.19	0.00	0.00
---	229359_PM_at	S100 calcium binding protein A9	1.19	0.00	0.00
S100A9	203535_PM_at	piwi-like 4 (Drosophila)	1.19	0.00	0.00
PIWIL4	230480_PM_at	neutrophil cytosolic factor 4, 40kDa	1.19	0.00	0.00
NCF4	207677_PM_s_at	SRY (sex determining region Y)-box 6	1.19	0.00	0.00
SOX6	227498_PM_at	myocyte enhancer factor 2A	1.19	0.00	0.00
MEF2A	212535_PM_at	transmembrane protein 167A	1.19	0.00	0.00
TMEM167A	224702_PM_at	complement component (3b)	1.19	0.00	0.00
CR1	244313_PM_at	family with sequence similarity 45, member 1	1.19	0.00	0.00
FAM45A	225351_PM_at	Arachidonate 5-lipoxygenase	1.19	0.00	0.00
ALOX5	213952_PM_s_at	anthrax toxin receptor 2	1.19	0.00	0.00
ANTXR2	228573_PM_at	chromosome 16 open reading frame 72	1.19	0.00	0.01
C16orf72	1568954_PM_s_at	TRAF family member-associated NFKB activator	1.19	0.00	0.01
TANK	209451_PM_at	ras homolog family member T1	1.19	0.00	0.01
RHOT1	218323_PM_at	---	1.19	0.00	0.01
---	244418_PM_at	KIAA0146	1.19	0.00	0.01
KIAA0146	213003_PM_s_at	chromosome 9 open reading frame 66	1.19	0.00	0.01
C9orf66	1552755_PM_at	coiled-coil domain containing 71-like	1.19	0.00	0.02
CCDC71L	229521_PM_at	diacylglycerol O-acyltransferase 2	1.19	0.00	0.02
DGAT2	226064_PM_s_at	chromosome 14 open reading frame 2	1.19	0.00	0.02
C14orf2	202279_PM_at	cytochrome P450, family 4, subfamily F, polypeptide 1	1.19	0.00	0.02
CYP4F3	206515_PM_at	multimerin 1	1.19	0.00	0.02
MMRN1	205612_PM_at	transient receptor potential cation channel, member 6	1.19	0.00	0.02
TRPM6	221102_PM_s_at	lymphotoxin beta receptor (TNFR superfamily, member 6)	1.19	0.00	0.02
LTBR	203005_PM_at	---	1.19	0.00	0.02
---	235759_PM_at	Copyright © 2016 by the American Thoracic Society	1.19	0.00	0.02

SORT1	224818_PM_at	sortilin 1	1.19	0.00	0.02
SAP30	204900_PM_x_at	Sin3A-associated protein, 30kDa	1.19	0.00	0.02
F11R	224097_PM_s_at	F11 receptor	1.19	0.00	0.02
---	239560_PM_at	---	1.19	0.00	0.02
NT5C2	209155_PM_s_at	5'-nucleotidase, cytosolic II	1.2	0.00	0.00
MAPK1	212271_PM_at	mitogen-activated protein kinase 1	1.2	0.00	0.00
LYST	203518_PM_at	lysosomal trafficking regulator	1.2	0.00	0.00
ALOX5	204446_PM_s_at	arachidonate 5-lipoxygenase	1.2	0.00	0.00
CFLAR	237367_PM_x_at	CASP8 and FADD-like apoptosis regulator	1.2	0.00	0.00
TMEM33	225492_PM_at	transmembrane protein 33	1.2	0.00	0.00
---	229968_PM_at	---	1.2	0.00	0.00
TLR8	229560_PM_at	toll-like receptor 8	1.2	0.00	0.00
KREMEN1	224534_PM_at	kringle containing transmembrane protein :	1.2	0.00	0.00
C7orf25	53202_PM_at	chromosome 7 open reading frame 25	1.2	0.00	0.00
RAB27A	209514_PM_s_at	RAB27A, member RAS oncogene family	1.2	0.00	0.00
NCF4	205147_PM_x_at	neutrophil cytosolic factor 4, 40kDa	1.2	0.00	0.00
GYG1	201554_PM_x_at	glycogenin 1	1.2	0.00	0.00
CSF2RA	210340_PM_s_at	colony stimulating factor 2 receptor, alpha,	1.2	0.00	0.00
TRIQK	225600_PM_at	triple QxxK	1.2	0.00	0.00
TLR6	207446_PM_at	toll-like receptor 6	1.2	0.00	0.00
KIAA0141	227056_PM_at	KIAA0141	1.2	0.00	0.00
FAM217B	225313_PM_at	family with sequence similarity 217, membe	1.2	0.00	0.00
MAN2A2	219999_PM_at	mannosidase, alpha, class 2A, member 2	1.2	0.00	0.00
CDC14B	221556_PM_at	CDC14 cell division cycle 14 homolog B (S. c	1.2	0.00	0.01
CCPG1	222156_PM_x_at	cell cycle progression 1	1.2	0.00	0.01
CTBS	218923_PM_at	chitobiase, di-N-acetyl-	1.2	0.00	0.01
IFNGR1	211676_PM_s_at	interferon gamma receptor 1	1.2	0.00	0.01
CR1	208488_PM_s_at	complement component (3b	1.2	0.00	0.01
CYYR1	228665_PM_at	cysteine	1.2	0.00	0.01
---	238455_PM_at	---	1.2	0.00	0.01
UBL3	201535_PM_at	ubiquitin-like 3	1.2	0.00	0.01
KLHL8	242648_PM_at	kelch-like 8 (Drosophila)	1.2	0.00	0.01
---	230176_PM_at	---	1.2	0.00	0.01

JAK2	205842_PM_s_at	Janus kinase 2	1.2	0.00	0.01
CHURC1	233268_PM_s_at	churchill domain containing 1	1.2	0.00	0.01
CENPW	226936_PM_at	centromere protein W	1.2	0.00	0.01
---	1560257_PM_at	---	1.2	0.00	0.02
LIMK2	210582_PM_s_at	LIM domain kinase 2	1.2	0.00	0.02
FAS	204781_PM_s_at	Fas (TNF receptor superfamily, member 6)	1.2	0.00	0.02
ST8SIA4	230261_PM_at	ST8 alpha-N-acetyl-neuraminate alpha-2,8-s	1.2	0.00	0.02
F13A1	203305_PM_at	coagulation factor XIII, A1 polypeptide	1.2	0.00	0.02
SRPK1	202199_PM_s_at	SRSF protein kinase 1	1.2	0.00	0.02
DNAJC3-AS1	240574_PM_at	DNAJC3 antisense RNA 1 (non-protein codir	1.2	0.00	0.02
ROPN1L	233312_PM_at	rhophilin associated tail protein 1-like	1.2	0.00	0.02
APOBEC3A	210873_PM_x_at	apolipoprotein B mRNA editing enzyme, cat	1.2	0.00	0.03
ALAS1	205633_PM_s_at	aminolevulinate, delta-, synthase 1	1.21	0.00	0.00
PLXNC1	213241_PM_at	plexin C1	1.21	0.00	0.00
ENTPD1	209473_PM_at	ectonucleoside triphosphate diphosphohyd	1.21	0.00	0.00
BHLHE40	201170_PM_s_at	basic helix-loop-helix family, member e40	1.21	0.00	0.00
ADAM8	205180_PM_s_at	ADAM metallopeptidase domain 8	1.21	0.00	0.00
HEBP2	203430_PM_at	heme binding protein 2	1.21	0.00	0.00
EGLN1	221497_PM_x_at	egl nine homolog 1 (<i>C. elegans</i>)	1.21	0.00	0.00
UBE2J1	217825_PM_s_at	ubiquitin-conjugating enzyme E2, J1	1.21	0.00	0.00
---	1569568_PM_at	---	1.21	0.00	0.00
PXK	225796_PM_at	PX domain containing serine	1.21	0.00	0.00
CREBRF	238476_PM_at	CREB3 regulatory factor	1.21	0.00	0.00
TP53I3	210609_PM_s_at	tumor protein p53 inducible protein 3	1.21	0.00	0.00
CAT	211922_PM_s_at	catalase	1.21	0.00	0.00
CARD16	1552703_PM_s_at	caspase recruitment domain family, membe	1.21	0.00	0.00
CNIH4	223993_PM_s_at	cornichon homolog 4 (<i>Drosophila</i>)	1.21	0.00	0.00
FNDC3B	225032_PM_at	fibronectin type III domain containing 3B	1.21	0.00	0.00
QPCT	205174_PM_s_at	glutaminyl-peptide cyclotransferase	1.21	0.00	0.00
---	235898_PM_at	---	1.21	0.00	0.00
CPD	201943_PM_s_at	carboxypeptidase D	1.21	0.00	0.01
SLC12A6	223596_PM_at	solute carrier family 12 (potassium	1.21	0.00	0.01
---	1569052_PM_at	---	1.21	0.00	0.01

JAG1	231183_PM_s_at	Jagged 1	1.21	0.00	0.01
ZNF578	1562245_PM_a_at	Zinc finger protein 578	1.21	0.00	0.01
LOC100128737	228753_PM_at	uncharacterized LOC100128737	1.21	0.00	0.01
MTMR6	214429_PM_at	myotubularin related protein 6	1.21	0.00	0.01
HDGFRP3	209526_PM_s_at	hepatoma-derived growth factor, related protein 3	1.21	0.00	0.01
APC	203525_PM_s_at	adenomatous polyposis coli	1.21	0.00	0.01
DYSF	218660_PM_at	dysferlin, limb girdle muscular dystrophy 2E	1.21	0.00	0.01
CR1	206244_PM_at	complement component (3b)	1.21	0.00	0.01
ACPP	204393_PM_s_at	acid phosphatase, prostate	1.21	0.00	0.01
---	242094_PM_at	---	1.21	0.00	0.01
GLRX	209276_PM_s_at	glutaredoxin (thioltransferase)	1.21	0.00	0.01
TMEM88	229452_PM_at	transmembrane protein 88	1.21	0.00	0.02
FBXL13	1553798_PM_a_at	F-box and leucine-rich repeat protein 13	1.21	0.00	0.02
RAB27B	228708_PM_at	RAB27B, member RAS oncogene family	1.21	0.00	0.02
LPCAT2	227889_PM_at	lysophosphatidylcholine acyltransferase 2	1.21	0.00	0.02
KCNE1	236407_PM_at	potassium voltage-gated channel, Isk-related	1.21	0.00	0.02
---	1569952_PM_x_at	---	1.21	0.00	0.02
DACH1	205471_PM_s_at	dachshund homolog 1 (Drosophila)	1.21	0.00	0.03
ARG1	231663_PM_s_at	Arginase, liver	1.21	0.00	0.03
CKLF	219161_PM_s_at	chemokine-like factor	1.22	0.00	0.00
CAT	201432_PM_at	catalase	1.22	0.00	0.00
S100A8	202917_PM_s_at	S100 calcium binding protein A8	1.22	0.00	0.00
KCTD21	229873_PM_at	potassium channel tetramerisation domain	1.22	0.00	0.00
PGM2	225367_PM_at	phosphoglucomutase 2	1.22	0.00	0.00
CTBP2	201218_PM_at	C-terminal binding protein 2	1.22	0.00	0.00
DPH3	225200_PM_at	DPH3, KTI11 homolog (<i>S. cerevisiae</i>)	1.22	0.00	0.00
SH3GLB1	210101_PM_x_at	SH3-domain GRB2-like endophilin B1	1.22	0.00	0.00
DRAM1	218627_PM_at	DNA-damage regulated autophagy modulator	1.22	0.00	0.00
CEP350	213165_PM_at	centrosomal protein 350kDa	1.22	0.00	0.00
RAB27A	210951_PM_x_at	RAB27A, member RAS oncogene family	1.22	0.00	0.00
ARHGAP26	226576_PM_at	Rho GTPase activating protein 26	1.22	0.00	0.00
ANKRD12	216563_PM_at	ankyrin repeat domain 12	1.22	0.00	0.00
---	227857_PM_at	---	1.22	0.00	0.00

ASAP1	224790_PM_at	ArfGAP with SH3 domain, ankyrin repeat an	1.22	0.00	0.00
CREB5	229228_PM_at	cAMP responsive element binding protein 5	1.22	0.00	0.00
DPH3	225195_PM_at	DPH3, KTI11 homolog (S. cerevisiae)	1.22	0.00	0.00
---	229373_PM_at	---	1.22	0.00	0.00
RRAGD	221523_PM_s_at	Ras-related GTP binding D	1.22	0.00	0.00
PLIN5	241368_PM_at	perilipin 5	1.22	0.00	0.00
---	242818_PM_x_at	---	1.22	0.00	0.01
CYSTM1	224707_PM_at	cysteine-rich transmembrane module conta	1.22	0.00	0.01
HSDL2	209512_PM_at	hydroxysteroid dehydrogenase like 2	1.22	0.00	0.01
CYBRD1	222453_PM_at	cytochrome b reductase 1	1.22	0.00	0.01
HRASLS5	231050_PM_at	HRAS-like suppressor family, member 5	1.22	0.00	0.01
ASRGL1	222764_PM_at	asparaginase like 1	1.22	0.00	0.01
ST3GAL6	210942_PM_s_at	ST3 beta-galactoside alpha-2,3-sialyltransfe	1.22	0.00	0.02
FLG-AS1	1570423_PM_at	FLG antisense RNA 1 (non-protein coding)	1.22	0.00	0.02
LRG1	228648_PM_at	leucine-rich alpha-2-glycoprotein 1	1.22	0.00	0.02
ATP8B4	220416_PM_at	ATPase, class I, type 8B, member 4	1.22	0.00	0.02
HIST1H2BC	214455_PM_at	histone cluster 1, H2bc	1.22	0.00	0.03
ALPL	215783_PM_s_at	alkaline phosphatase, liver	1.22	0.00	0.03
NDFIP2	224802_PM_at	Nedd4 family interacting protein 2	1.22	0.00	0.03
STS	203767_PM_s_at	steroid sulfatase (microsomal), isozyme S	1.22	0.00	0.03
RAB32	228161_PM_at	RAB32, member RAS oncogene family	1.23	0.00	0.00
MYO5A	204527_PM_at	myosin VA (heavy chain 12, myoxin)	1.23	0.00	0.00
CARD6	224414_PM_s_at	caspase recruitment domain family, membe	1.23	0.00	0.00
SH3GLB1	209091_PM_s_at	SH3-domain GRB2-like endophilin B1	1.23	0.00	0.00
RHOQ	212120_PM_at	ras homolog family member Q	1.23	0.00	0.00
---	240673_PM_at	---	1.23	0.00	0.00
IL18	206295_PM_at	interleukin 18 (interferon-gamma-inducing	1.23	0.00	0.00
DCBLD2	230175_PM_s_at	Discoidin, CUB and LCCL domain containing	1.23	0.00	0.00
MGC70870	242136_PM_x_at	C-terminal binding protein 2 pseudogene	1.23	0.00	0.00
LILRB2	210146_PM_x_at	leukocyte immunoglobulin-like receptor, su	1.23	0.00	0.00
TP53I11	203421_PM_at	tumor protein p53 inducible protein 11	1.23	0.00	0.00
HES1	203394_PM_s_at	hairy and enhancer of split 1, (Drosophila)	1.23	0.00	0.00
MGST1	1565162_PM_s_at	microsomal glutathione S-transferase 1	1.23	0.00	0.00

PIK3R6	1558770_PM_a_at	phosphoinositide-3-kinase, regulatory subunit	1.23	0.00	0.01
MRVI1	226047_PM_at	murine retrovirus integration site 1 homolog	1.23	0.00	0.01
---	237904_PM_at	---	1.23	0.00	0.01
CSTA	204971_PM_at	cystatin A (stefin A)	1.23	0.00	0.01
PALLD	200897_PM_s_at	palladin, cytoskeletal associated protein	1.23	0.00	0.01
CNIH4	218728_PM_s_at	cornichon homolog 4 (<i>Drosophila</i>)	1.23	0.00	0.01
---	239108_PM_at	---	1.23	0.00	0.01
SLC22A1	207201_PM_s_at	solute carrier family 22 (organic cation transporter)	1.23	0.00	0.01
ST6GALNAC3	235334_PM_at	ST6 (alpha-N-acetyl-neuraminy-2,3-beta-galactosidase)	1.23	0.00	0.02
NRG1	206237_PM_s_at	neuregulin 1	1.23	0.00	0.02
EXOC8	227577_PM_at	exocyst complex component 8	1.23	0.00	0.03
CHST15	244874_PM_at	carbohydrate (N-acetylgalactosamine 4-sulfatase)	1.23	0.00	0.03
GUSBP2	206565_PM_x_at	glucuronidase, beta pseudogene 2	1.23	0.00	0.03
C18orf32	224957_PM_at	chromosome 18 open reading frame 32	1.23	0.00	0.03
LGALS12	223828_PM_s_at	lectin, galactoside-binding, soluble, 12	1.23	0.00	0.03
LOC100653002	231950_PM_at	zinc finger protein 658-like	1.23	0.00	0.05
---	239294_PM_at	---	1.24	0.00	0.00
UBE2J1	222435_PM_s_at	ubiquitin-conjugating enzyme E2, J1	1.24	0.00	0.00
HK3	205936_PM_s_at	hexokinase 3 (white cell)	1.24	0.00	0.00
MEGF9	212830_PM_at	multiple EGF-like-domains 9	1.24	0.00	0.00
---	240020_PM_at	---	1.24	0.00	0.00
MIR4500HG	1569348_PM_at	MIR4500 host gene (non-protein coding)	1.24	0.00	0.00
PIP5K1B	205632_PM_s_at	phosphatidylinositol-4-phosphate 5-kinase,	1.24	0.00	0.00
PDZD8	225829_PM_at	PDZ domain containing 8	1.24	0.00	0.00
RNF141	226106_PM_at	ring finger protein 141	1.24	0.00	0.00
HIPK3	210148_PM_at	homeodomain interacting protein kinase 3	1.24	0.00	0.00
LOC100509635	226865_PM_at	uncharacterized LOC100509635	1.24	0.00	0.00
ROPN1L	223609_PM_at	rhophilin associated tail protein 1-like	1.24	0.00	0.00
MFSD9	213393_PM_at	major facilitator superfamily domain containing 9	1.24	0.00	0.00
ACSL4	202422_PM_s_at	acyl-CoA synthetase long-chain family member 4	1.24	0.00	0.00
AZU1	214575_PM_s_at	azurocidin 1	1.24	0.00	0.00
EMR2	207610_PM_s_at	egf-like module containing, mucin-like, domain 2	1.24	0.00	0.01
FAM198B	223204_PM_at	family with sequence similarity 198, member B	1.24	0.00	0.01

KRCC1	233329_PM_s_at	lysine-rich coiled-coil 1	1.24	0.00	0.01
B3GNT5	225612_PM_s_at	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminide beta-1,3-N-acetylglucosaminyltransferase	1.24	0.00	0.01
BCL6	215990_PM_s_at	B-cell CLL lymphoma-associated protein	1.24	0.00	0.01
CA4	206209_PM_s_at	carbonic anhydrase IV	1.24	0.00	0.02
DEFB106A	1552411_PM_at	defensin, beta 106A	1.24	0.00	0.02
CYP4F2	206514_PM_s_at	cytochrome P450, family 4, subfamily F, polypeptide 2	1.24	0.00	0.02
ABCA1	203505_PM_at	ATP-binding cassette, sub-family A (ABC1), member 1	1.24	0.00	0.02
GRB10	215248_PM_at	growth factor receptor-bound protein 10	1.24	0.00	0.02
IRAK3	213817_PM_at	interleukin-1 receptor-associated kinase 3	1.24	0.00	0.02
CD9	201005_PM_at	CD9 molecule	1.24	0.00	0.02
ITGA9	227297_PM_at	integrin, alpha 9	1.24	0.00	0.02
IQGAP3	229538_PM_s_at	IQ motif containing GTPase activating protein 3	1.24	0.00	0.03
CYBRD1	217889_PM_s_at	cytochrome b reductase 1	1.24	0.00	0.03
COL9A2	213622_PM_at	collagen, type IX, alpha 2	1.24	0.00	0.03
RAB33B	221014_PM_s_at	RAB33B, member RAS oncogene family	1.24	0.00	0.04
HECW2	232080_PM_at	HECT, C2 and WW domain containing E3 ubiquitin protein ligase	1.24	0.00	0.04
SORT1	212807_PM_s_at	sortilin 1	1.25	0.00	0.00
TLR2	204924_PM_at	toll-like receptor 2	1.25	0.00	0.00
---	239117_PM_at	---	1.25	0.00	0.00
C3AR1	209906_PM_at	complement component 3a receptor 1	1.25	0.00	0.00
ARSB	232197_PM_x_at	arylsulfatase B	1.25	0.00	0.00
RNF175	236465_PM_at	ring finger protein 175	1.25	0.00	0.00
UBE2J1	217823_PM_s_at	ubiquitin-conjugating enzyme E2, J1	1.25	0.00	0.00
NUDT16P1	232251_PM_at	nudix (nucleoside diphosphate linked moiety) adenylyltransferase 16	1.25	0.00	0.00
DEFT1P	1553518_PM_at	defensin, theta 1 pseudogene	1.25	0.00	0.00
SLC22A4	205896_PM_at	solute carrier family 22 (organic cation) member 4	1.25	0.00	0.00
WDFY3	212598_PM_at	WD repeat and FYVE domain containing 3	1.25	0.00	0.00
ACSL1	207275_PM_s_at	acyl-CoA synthetase long-chain family member 1	1.25	0.00	0.00
WDFY3	212602_PM_at	WD repeat and FYVE domain containing 3	1.25	0.00	0.00
LPCAT2	222833_PM_at	lysophosphatidylcholine acyltransferase 2	1.25	0.00	0.01
LOC100505702	229635_PM_at	uncharacterized LOC100505702	1.25	0.00	0.01
---	1570301_PM_at	---	1.25	0.00	0.01
ACPP	231711_PM_at	Acid phosphatase, prostate	1.25	0.00	0.01

BEND2	1553842_PM_at	BEN domain containing 2	1.25	0.00	0.01
ZNF608	229817_PM_at	zinc finger protein 608	1.25	0.00	0.01
FAM124B	220637_PM_at	family with sequence similarity 124B	1.25	0.00	0.01
1-Mar	218865_PM_at	mitochondrial amidoxime reducing compon	1.25	0.00	0.01
PI3	203691_PM_at	peptidase inhibitor 3, skin-derived	1.25	0.00	0.02
CHST13	239647_PM_at	carbohydrate (chondroitin 4) sulfotransfера	1.25	0.00	0.02
CD163	216233_PM_at	CD163 molecule	1.25	0.00	0.02
SLC5A9	232378_PM_at	solute carrier family 5 (sodium	1.25	0.00	0.02
SPP1	1568574_PM_x_at	Secreted phosphoprotein 1	1.25	0.00	0.03
HNMT	204112_PM_s_at	histamine N-methyltransferase	1.25	0.00	0.03
PFKFB2	226733_PM_at	6-phosphofructo-2-kinase	1.25	0.00	0.03
RPS27L	222487_PM_s_at	ribosomal protein S27-like	1.25	0.00	0.04
PYGL	202990_PM_at	phosphorylase, glycogen, liver	1.26	0.00	0.00
TSNAX	238973_PM_s_at	translin-associated factor X	1.26	0.00	0.00
RAB13	202252_PM_at	RAB13, member RAS oncogene family	1.26	0.00	0.00
---	237563_PM_s_at	---	1.26	0.00	0.00
---	235286_PM_at	---	1.26	0.00	0.00
WDFY3	212606_PM_at	WD repeat and FYVE domain containing 3	1.26	0.00	0.00
JAG1	209099_PM_x_at	jagged 1	1.26	0.00	0.00
PLBD1	222639_PM_s_at	phospholipase B domain containing 1	1.26	0.00	0.00
FAM120A	1555947_PM_at	family with sequence similarity 120A	1.26	0.00	0.00
SNORD89	235536_PM_at	small nucleolar RNA, C	1.26	0.00	0.00
NDUFB3	203371_PM_s_at	NADH dehydrogenase (ubiquinone) 1 beta s	1.26	0.00	0.00
ITPR2	202660_PM_at	inositol 1,4,5-trisphosphate receptor, type 2	1.26	0.00	0.00
---	207596_PM_at	---	1.26	0.00	0.00
TRPM6	224412_PM_s_at	transient receptor potential cation channel,	1.26	0.00	0.00
LIN7A	206440_PM_at	lin-7 homolog A (<i>C. elegans</i>)	1.26	0.00	0.00
OSBPL1A	208158_PM_s_at	oxysterol binding protein-like 1A	1.26	0.00	0.00
SLC29A1	201801_PM_s_at	solute carrier family 29 (nucleoside transpo	1.26	0.00	0.00
SLC24A3	219090_PM_at	solute carrier family 24 (sodium	1.26	0.00	0.00
APOBR	220023_PM_at	apolipoprotein B receptor	1.26	0.00	0.00
SLCO4C1	222071_PM_s_at	solute carrier organic anion transporter fam	1.26	0.00	0.00
IRAK3	220034_PM_at	interleukin-1 receptor-associated kinase 3	1.26	0.00	0.00

RGS12	1555032_PM_at	regulator of G-protein signaling 12	1.26	0.00	0.00
FSTL1	208782_PM_at	follistatin-like 1	1.26	0.00	0.00
ENTPD1	228585_PM_at	ectonucleoside triphosphate diphosphohyd	1.26	0.00	0.01
SSFA2	229744_PM_at	sperm specific antigen 2	1.26	0.00	0.01
THBS1	235086_PM_at	thrombospondin 1	1.26	0.00	0.01
KCNJ15	238428_PM_at	potassium inwardly-rectifying channel, subf	1.26	0.00	0.01
ASPH	225008_PM_at	aspartate beta-hydroxylase	1.26	0.00	0.03
S100A8	214370_PM_at	S100 calcium binding protein A8	1.27	0.00	0.00
RRAGD	221524_PM_s_at	Ras-related GTP binding D	1.27	0.00	0.00
CR1	217552_PM_x_at	complement component (3b	1.27	0.00	0.00
CYP4F12	206539_PM_s_at	cytochrome P450, family 4, subfamily F, pol	1.27	0.00	0.00
NFIL3	203574_PM_at	nuclear factor, interleukin 3 regulated	1.27	0.00	0.00
TLR5	210166_PM_at	toll-like receptor 5	1.27	0.00	0.00
CD163	215049_PM_x_at	CD163 molecule	1.27	0.00	0.00
LTB4R	236172_PM_at	leukotriene B4 receptor	1.27	0.00	0.00
JAG1	216268_PM_s_at	jagged 1	1.27	0.00	0.00
IKBIP	227295_PM_at	IKBKB interacting protein	1.27	0.00	0.00
CD163	203645_PM_s_at	CD163 molecule	1.27	0.00	0.00
GPR84	223767_PM_at	G protein-coupled receptor 84	1.27	0.00	0.00
SLC37A3	223304_PM_at	solute carrier family 37 (glycerol-3-phospha	1.27	0.00	0.00
SULT1B1	207601_PM_at	sulfotransferase family, cytosolic, 1B, memk	1.27	0.00	0.01
---	239825_PM_at	---	1.27	0.00	0.01
ABCA1	203504_PM_s_at	ATP-binding cassette, sub-family A (ABC1), i	1.27	0.00	0.01
PI3	41469_PM_at	peptidase inhibitor 3, skin-derived	1.27	0.00	0.01
ZNF321P	1558887_PM_at	zinc finger protein 321, pseudogene	1.27	0.00	0.01
ITGB3	204628_PM_s_at	integrin, beta 3 (platelet glycoprotein IIIa, a	1.27	0.00	0.02
RPS27L	218007_PM_s_at	ribosomal protein S27-like	1.27	0.00	0.03
FCHO2	228220_PM_at	FCH domain only 2	1.27	0.00	0.03
LPAR1	204036_PM_at	lysophosphatidic acid receptor 1	1.27	0.00	0.04
CALD1	212077_PM_at	caldesmon 1	1.27	0.00	0.04
DOCK4	205003_PM_at	dedicator of cytokinesis 4	1.27	0.00	0.05
ACOT11	216103_PM_at	acyl-CoA thioesterase 11	1.28	0.00	0.00
---	237071_PM_at	---	1.28	0.00	0.00

CCPG1	221156_PM_x_at	cell cycle progression 1	1.28	0.00	0.00
LIN7A	240027_PM_at	lin-7 homolog A (<i>C. elegans</i>)	1.28	0.00	0.00
F5	204713_PM_s_at	coagulation factor V (proaccelerin, labile fac	1.28	0.00	0.00
SAMSN1	1555638_PM_a_at	SAM domain, SH3 domain and nuclear local	1.28	0.00	0.00
PADI4	220001_PM_at	peptidyl arginine deiminase, type IV	1.28	0.00	0.01
IGHA1	1558438_PM_a_at	Immunoglobulin heavy constant alpha 1	1.28	0.00	0.01
PGLYRP1	207384_PM_at	peptidoglycan recognition protein 1	1.28	0.00	0.01
---	230416_PM_at	---	1.28	0.00	0.01
YOD1	227309_PM_at	YOD1 OTU deubiquinating enzyme 1 homol	1.28	0.00	0.02
CCDC126	228087_PM_at	coiled-coil domain containing 126	1.28	0.00	0.02
MYL9	201058_PM_s_at	myosin, light chain 9, regulatory	1.28	0.00	0.02
FCGR1A	216950_PM_s_at	Fc fragment of IgG, high affinity Ia, receptor	1.28	0.00	0.02
IPMK	238739_PM_at	inositol polyphosphate multikinase	1.28	0.00	0.03
TRIQK	225599_PM_s_at	triple QxxK	1.28	0.00	0.04
IPO11	238488_PM_at	importin 11	1.28	0.00	0.04
HIST1H3E	236278_PM_at	Histone cluster 1, H3e	1.28	0.00	0.04
HCAR3	205220_PM_at	hydroxycarboxylic acid receptor 3	1.29	0.00	0.00
LOC100507015	227356_PM_at	uncharacterized LOC100507015	1.29	0.00	0.00
ST3GAL6	213355_PM_at	ST3 beta-galactoside alpha-2,3-sialyltransfe	1.29	0.00	0.00
C10orf128	228372_PM_at	chromosome 10 open reading frame 128	1.29	0.00	0.00
---	236297_PM_at	---	1.29	0.00	0.00
PLOD2	202620_PM_s_at	procollagen-lysine, 2-oxoglutarate 5-dioxyg	1.29	0.00	0.00
CYP4F2	210452_PM_x_at	cytochrome P450, family 4, subfamily F, pol	1.29	0.00	0.00
---	236898_PM_at	---	1.29	0.00	0.01
FCGR1B	214511_PM_x_at	Fc fragment of IgG, high affinity Ib, receptor	1.29	0.00	0.01
FCGR1A	216951_PM_at	Fc fragment of IgG, high affinity Ia, receptor	1.29	0.00	0.02
SLC29A1	201802_PM_at	solute carrier family 29 (nucleoside transpo	1.29	0.00	0.03
---	231672_PM_at	---	1.29	0.00	0.03
ACSL1	201963_PM_at	acyl-CoA synthetase long-chain family mem	1.3	0.00	0.00
---	230778_PM_at	---	1.3	0.00	0.00
JAK2	205841_PM_at	Janus kinase 2	1.3	0.00	0.00
---	1567101_PM_at	---	1.3	0.00	0.00
FAM200B	227270_PM_at	family with sequence similarity 200, member	1.3	0.00	0.00

ASPH	224996_PM_at	aspartate beta-hydroxylase	1.3	0.00	0.02
STXBP5	226794_PM_at	syntaxin binding protein 5 (tomasyn)	1.31	0.00	0.00
MCTP2	229021_PM_at	multiple C2 domains, transmembrane 2	1.31	0.00	0.00
MYCT1	231947_PM_at	myc target 1	1.31	0.00	0.00
---	243824_PM_at	---	1.31	0.00	0.00
SGMS1	212989_PM_at	sphingomyelin synthase 1	1.31	0.00	0.00
GPR34	223620_PM_at	G protein-coupled receptor 34	1.31	0.00	0.00
CLEC5A	219890_PM_at	C-type lectin domain family 5, member A	1.31	0.00	0.01
BMX	206464_PM_at	BMX non-receptor tyrosine kinase	1.31	0.00	0.01
CD24	208651_PM_x_at	CD24 molecule	1.31	0.00	0.01
MCTP2	220603_PM_s_at	multiple C2 domains, transmembrane 2	1.32	0.00	0.00
RETN	220570_PM_at	resistin	1.32	0.00	0.00
SAMSN1	220330_PM_s_at	SAM domain, SH3 domain and nuclear local	1.32	0.00	0.00
CD24	209771_PM_x_at	CD24 molecule	1.32	0.00	0.01
IL1R2	205403_PM_at	interleukin 1 receptor, type II	1.32	0.00	0.01
PRUNE2	212805_PM_at	prune homolog 2 (Drosophila)	1.32	0.00	0.02
COMM8	218351_PM_at	COMM domain containing 8	1.32	0.00	0.02
BPGM	203502_PM_at	2,3-bisphosphoglycerate mutase	1.32	0.00	0.04
HTATSF1P2	1558882_PM_at	HIV-1 Tat specific factor 1 pseudogene 2	1.32	0.00	0.04
SLC24A3	57588_PM_at	solute carrier family 24 (sodium	1.33	0.00	0.00
CARD16	1552701_PM_a_at	caspase recruitment domain family, membe	1.33	0.00	0.00
SYNE1	232027_PM_at	spectrin repeat containing, nuclear envelop	1.33	0.00	0.00
CD24	216379_PM_x_at	CD24 molecule	1.33	0.00	0.00
SMPD3	219695_PM_at	sphingomyelin phosphodiesterase 3, neutra	1.33	0.00	0.01
ECHDC3	219298_PM_at	enoyl CoA hydratase domain containing 3	1.33	0.00	0.02
PROS1	207808_PM_s_at	protein S (alpha)	1.33	0.00	0.02
KIF1B	225878_PM_at	kinesin family member 1B	1.34	0.00	0.00
LIN7A	227929_PM_at	lin-7 homolog A (C. elegans)	1.34	0.00	0.00
MSRB3	225782_PM_at	methionine sulfoxide reductase B3	1.34	0.00	0.00
EPAS1	200878_PM_at	endothelial PAS domain protein 1	1.34	0.00	0.00
DSC2	204751_PM_x_at	desmocollin 2	1.34	0.00	0.00
KREMEN1	227250_PM_at	kringle containing transmembrane protein :	1.34	0.00	0.01
OLIG1	228170_PM_at	oligodendrocyte transcription factor 1	1.34	0.00	0.01

ORM1	214465_PM_at	orosomucoid 1	1.34	0.00	0.01
LY96	206584_PM_at	lymphocyte antigen 96	1.34	0.00	0.01
BCL2A1	205681_PM_at	BCL2-related protein A1	1.34	0.00	0.02
ANKRD22	238439_PM_at	ankyrin repeat domain 22	1.34	0.00	0.02
TPST1	204140_PM_at	tyrosylprotein sulfotransferase 1	1.34	0.00	0.03
PNPLA1	1553364_PM_at	patatin-like phospholipase domain containing 1	1.35	0.00	0.00
TRPM6	240389_PM_at	Transient receptor potential cation channel	1.35	0.00	0.00
---	1567100_PM_at	---	1.35	0.00	0.00
MPO	203948_PM_s_at	myeloperoxidase	1.35	0.00	0.00
---	243252_PM_at	---	1.35	0.00	0.01
GAPT	1552386_PM_at	GRB2-binding adaptor protein, transmembrane	1.36	0.00	0.00
DAPK2	215184_PM_at	death-associated protein kinase 2	1.36	0.00	0.00
NFE4	1560527_PM_at	transcription factor NF-E4	1.36	0.00	0.00
CYP1B1-AS1	1553829_PM_at	CYP1B1 antisense RNA 1 (non-protein coding)	1.36	0.00	0.00
SLC8A1	1556583_PM_a_at	solute carrier family 8 (sodium)	1.36	0.00	0.00
---	217329_PM_x_at	---	1.36	0.00	0.01
CYP1B1	202437_PM_s_at	cytochrome P450, family 1, subfamily B, polypeptide 1	1.37	0.00	0.00
DSC2	226817_PM_at	desmocollin 2	1.37	0.00	0.01
MMP9	203936_PM_s_at	matrix metallopeptidase 9 (gelatinase B, 92 kDa)	1.37	0.00	0.01
THBS1	201110_PM_s_at	thrombospondin 1	1.37	0.00	0.01
MOCS1	1555127_PM_at	molybdenum cofactor synthesis 1	1.37	0.00	0.02
ITGA2B	206493_PM_at	integrin, alpha 2b (platelet glycoprotein IIb)	1.38	0.00	0.00
PFKFB2	209992_PM_at	6-phosphofructo-2-kinase	1.38	0.00	0.00
---	240131_PM_at	---	1.38	0.00	0.00
SIGLEC8	208253_PM_at	sialic acid binding Ig-like lectin 8	1.38	0.00	0.04
CD24	209772_PM_s_at	CD24 molecule	1.39	0.00	0.00
ELANE	206871_PM_at	elastase, neutrophil expressed	1.39	0.00	0.00
OLAH	219975_PM_x_at	oleoyl-ACP hydrolase	1.39	0.00	0.00
EVI2A	204774_PM_at	ecotropic viral integration site 2A	1.39	0.00	0.01
C19orf59	235568_PM_at	chromosome 19 open reading frame 59	1.4	0.00	0.00
S100A12	205863_PM_at	S100 calcium binding protein A12	1.4	0.00	0.00
OLR1	210004_PM_at	oxidized low density lipoprotein (lectin-like)	1.4	0.00	0.00
IL5RA	210744_PM_s_at	interleukin 5 receptor, alpha	1.4	0.00	0.01

F5	204714_PM_s_at	coagulation factor V (proaccelerin, labile fac	1.41	0.00	0.00
PPBP	214146_PM_s_at	pro-platelet basic protein (chemokine (C-X-)	1.41	0.00	0.00
VSTM1	235818_PM_at	V-set and transmembrane domain containin	1.41	0.00	0.00
CLC	206207_PM_at	Charcot-Leyden crystal protein	1.41	0.00	0.00
ABCA13	1553604_PM_at	ATP-binding cassette, sub-family A (ABC1), i	1.41	0.00	0.00
OLAH	233126_PM_s_at	oleoyl-ACP hydrolase	1.41	0.00	0.01
LINC00537	232034_PM_at	Long intergenic non-protein coding RNA 537	1.42	0.00	0.00
CD24	266_PM_s_at	CD24 molecule	1.42	0.00	0.00
COX7B	202110_PM_at	cytochrome c oxidase subunit VIIb	1.42	0.00	0.01
OLIG2	213825_PM_at	oligodendrocyte lineage transcription factor	1.42	0.00	0.01
DACH1	228915_PM_at	dachshund homolog 1 (Drosophila)	1.43	0.00	0.00
INSC	237056_PM_at	inscuteable homolog (Drosophila)	1.43	0.00	0.00
---	230354_PM_at	---	1.43	0.00	0.00
SLC26A8	237340_PM_at	solute carrier family 26, member 8	1.43	0.00	0.00
MPO	203949_PM_at	myeloperoxidase	1.44	0.00	0.00
CLEC4D	1552772_PM_at	C-type lectin domain family 4, member D	1.44	0.00	0.00
ADORA3	223660_PM_at	adenosine A3 receptor	1.44	0.00	0.00
ARG1	231662_PM_at	Arginase, liver	1.45	0.00	0.00
CEBPE	214523_PM_at	CCAAT	1.46	0.00	0.00
OLAH	222945_PM_x_at	oleoyl-ACP hydrolase	1.46	0.00	0.00
PRSS33	1552349_PM_a_at	protease, serine, 33	1.46	0.00	0.02
F5	231029_PM_at	coagulation factor V (proaccelerin, labile fac	1.47	0.00	0.00
PRSS33	1552348_PM_at	protease, serine, 33	1.48	0.00	0.02
ADORA3	206171_PM_at	adenosine A3 receptor	1.49	0.00	0.00
ABCA13	1553605_PM_a_at	ATP-binding cassette, sub-family A (ABC1), i	1.51	0.00	0.00
IL5RA	211517_PM_s_at	interleukin 5 receptor, alpha	1.51	0.00	0.00
CLEC4D	1552773_PM_at	C-type lectin domain family 4, member D	1.51	0.00	0.00
TCN1	205513_PM_at	transcobalamin I (vitamin B12 binding prote	1.52	0.00	0.00
MS4A3	1554892_PM_a_at	membrane-spanning 4-domains, subfamily	1.52	0.00	0.00
RNASE2	206111_PM_at	ribonuclease, RNase A family, 2 (liver, eosin	1.56	0.00	0.00
CAMP	210244_PM_at	cathelicidin antimicrobial peptide	1.58	0.00	0.00
HP	208470_PM_s_at	haptoglobin	1.59	0.00	0.00
SLPI	203021_PM_at	secretory leukocyte peptidase inhibitor	1.6	0.00	0.00

ANXA3	209369_PM_at	annexin A3	1.6	0.00	0.00
CD24	208650_PM_s_at	CD24 molecule	1.62	0.00	0.00
MMP8	207329_PM_at	matrix metallopeptidase 8 (neutrophil colla	1.66	0.00	0.00
ORM1	205040_PM_at	orosomucoid 1	1.67	0.00	0.00
CCL23	210548_PM_at	chemokine (C-C motif) ligand 23	1.67	0.00	0.00
CTSG	205653_PM_at	cathepsin G	1.68	0.00	0.00
MS4A3	210254_PM_at	membrane-spanning 4-domains, subfamily .	1.69	0.00	0.00
ORM1	205041_PM_s_at	orosomucoid 1	1.7	0.00	0.00
DEFA1	205033_PM_s_at	defensin, alpha 1	1.72	0.00	0.00
RNF182	230720_PM_at	ring finger protein 182	1.72	0.00	0.02
HP	206697_PM_s_at	haptoglobin	1.75	0.00	0.00
ARG1	206177_PM_s_at	arginase, liver	1.76	0.00	0.00
CCL23	210549_PM_s_at	chemokine (C-C motif) ligand 23	1.86	0.00	0.00
CEACAM6	203757_PM_s_at	carcinoembryonic antigen-related cell adhe	1.87	0.00	0.00
CEACAM6	211657_PM_at	carcinoembryonic antigen-related cell adhe	1.97	0.00	0.00
RNASE3	206851_PM_at	ribonuclease, RNase A family, 3	1.98	0.00	0.00
CRISP3	207802_PM_at	cysteine-rich secretory protein 3	1.98	0.00	0.00
BPI	205557_PM_at	bactericidal	2.03	0.00	0.00
LCN2	212531_PM_at	lipocalin 2	2.03	0.00	0.00
MMP8	231688_PM_at	matrix metallopeptidase 8 (neutrophil colla	2.18	0.00	0.00
LTF	202018_PM_s_at	lactotransferrin	2.2	0.00	0.00
CEACAM8	206676_PM_at	carcinoembryonic antigen-related cell adhe	2.4	0.00	0.00
OLFM4	212768_PM_s_at	olfactomedin 4	2.43	0.00	0.00
DEFA4	207269_PM_at	defensin, alpha 4, corticostatin	2.58	0.00	0.00

Supplemental Table 4 - SADS Adjusted for Cell Count

symbol	probe_name	product	foldChange	pval	IFDR
TSPAN13	217979_PM_at	tetraspanin 13	-1.42	0.00	0.00
IGK@	237625_PM_s_at	immunoglobulin kappa locus	-1.41	0.00	0.00
---	233401_PM_at	---	-1.41	0.00	0.01
LRRN3	209841_PM_s_at	leucine rich repeat neuronal 3	-1.4	0.00	0.02
CLDN23	228707_PM_at	claudin 23	-1.39	0.00	0.00
---	241625_PM_at	---	-1.35	0.00	0.00
LIPA	236156_PM_at	lipase A, lysosomal acid, cholesterol esterase	-1.35	0.00	0.04
CUX2	213920_PM_at	cut-like homeobox 2	-1.34	0.00	0.00
EREG	205767_PM_at	epiregulin	-1.34	0.00	0.00
---	239867_PM_at	---	-1.33	0.00	0.01
EBF1	233261_PM_at	Early B-cell factor 1	-1.33	0.00	0.03
LOC389834	244631_PM_at	ankyrin repeat domain 57 pseudogene	-1.32	0.00	0.02
YTHDC1	214814_PM_at	YTH domain containing 1	-1.31	0.00	0.00
PRKXP1	235987_PM_at	protein kinase, X-linked, pseudogene 1	-1.31	0.00	0.02
LAMP3	205569_PM_at	lysosomal-associated membrane protein 3	-1.31	0.00	0.05
GPM6B	209167_PM_at	glycoprotein M6B	-1.3	0.00	0.00
LOC100506195	1563039_PM_at	uncharacterized LOC100506195	-1.29	0.00	0.00
---	1561035_PM_at	---	-1.29	0.00	0.01
TCF4	212382_PM_at	transcription factor 4	-1.28	0.00	0.00
NRCAM	204105_PM_s_at	neuronal cell adhesion molecule	-1.28	0.00	0.00
IL6ST	234474_PM_x_at	interleukin 6 signal transducer (gp130, oncostatin M rece	-1.28	0.00	0.00
---	244181_PM_at	---	-1.28	0.00	0.04
LOC389834	241624_PM_at	ankyrin repeat domain 57 pseudogene	-1.27	0.00	0.01
---	233425_PM_at	---	-1.27	0.00	0.01
ZNF521	226676_PM_at	zinc finger protein 521	-1.27	0.00	0.02
EBF1	227646_PM_at	early B-cell factor 1	-1.27	0.00	0.04
MAP2K5	216765_PM_at	Mitogen-activated protein kinase kinase 5	-1.26	0.00	0.00
ESCO1	235216_PM_at	establishment of cohesion 1 homolog 1 (<i>S. cerevisiae</i>)	-1.26	0.00	0.00
SAMD4A	212845_PM_at	sterile alpha motif domain containing 4A	-1.26	0.00	0.01
LACTB	1552485_PM_at	lactamase, beta	-1.26	0.00	0.01
CCNL1	241495_PM_at	cyclin L1	-1.26	0.00	0.04

SDC2	212158_PM_at	syndecan 2	-1.25	0.00	0.01
IL6ST	234967_PM_at	interleukin 6 signal transducer (gp130, oncostatin M receptor)	-1.25	0.00	0.01
TUBE1	230891_PM_at	Tubulin, epsilon 1	-1.25	0.00	0.01
WSB1	201295_PM_s_at	WD repeat and SOCS box containing 1	-1.25	0.00	0.04
---	224348_PM_s_at	---	-1.25	0.00	0.04
---	230014_PM_at	---	-1.24	0.00	0.01
HOXA3	235521_PM_at	homeobox A3	-1.24	0.00	0.02
---	220729_PM_at	---	-1.24	0.00	0.02
---	215831_PM_at	---	-1.24	0.00	0.03
---	242664_PM_at	---	-1.24	0.00	0.04
---	235756_PM_at	---	-1.23	0.00	0.00
DTWD1	236649_PM_at	DTW domain containing 1	-1.23	0.00	0.00
MBNL2	232138_PM_at	Muscleblind-like splicing regulator 2	-1.23	0.00	0.00
RAB14	200928_PM_s_at	RAB14, member RAS oncogene family	-1.23	0.00	0.00
CREM	209967_PM_s_at	cAMP responsive element modulator	-1.23	0.00	0.01
MPPED2	205413_PM_at	metallophosphoesterase domain containing 2	-1.23	0.00	0.01
PTPRK	233609_PM_at	Protein tyrosine phosphatase, receptor type, K	-1.23	0.00	0.01
SCLT1	1569190_PM_at	sodium channel and clathrin linker 1	-1.23	0.00	0.02
---	238311_PM_at	---	-1.23	0.00	0.02
---	1557581_PM_x_at	---	-1.23	0.00	0.03
---	1557580_PM_at	---	-1.23	0.00	0.03
---	1567044_PM_s_at	---	-1.22	0.00	0.00
U2SURP	236696_PM_at	U2 snRNP-associated SURP domain containing	-1.22	0.00	0.00
OPN3	224392_PM_s_at	opsin 3	-1.22	0.00	0.00
EPT1	1570371_PM_a_at	ethanolaminephosphotransferase 1 (CDP-ethanolamine-)	-1.22	0.00	0.01
---	216072_PM_at	---	-1.22	0.00	0.02
SMAD4	1565702_PM_at	SMAD family member 4	-1.22	0.00	0.02
---	242713_PM_at	---	-1.22	0.00	0.02
---	244331_PM_at	---	-1.22	0.00	0.02
---	240789_PM_at	---	-1.22	0.00	0.03
---	1559188_PM_x_at	---	-1.22	0.00	0.03
---	241413_PM_at	---	-1.21	0.00	0.01
TCF4	212386_PM_at	transcription factor 4	-1.21	0.00	0.01

PPP2R3A	209632_PM_at	protein phosphatase 2, regulatory subunit B'', alpha	-1.21	0.00	0.01
PTPRC	1569830_PM_at	protein tyrosine phosphatase, receptor type, C	-1.21	0.00	0.02
RALGPS2	242458_PM_at	Ral GEF with PH domain and SH3 binding motif 2	-1.21	0.00	0.02
---	243069_PM_at	---	-1.21	0.00	0.02
MS4A7	224358_PM_s_at	membrane-spanning 4-domains, subfamily A, member 7	-1.21	0.00	0.02
---	1556963_PM_at	---	-1.2	0.00	0.00
---	235716_PM_at	---	-1.2	0.00	0.00
BICD1	214806_PM_at	bicaudal D homolog 1 (<i>Drosophila</i>)	-1.2	0.00	0.00
---	236244_PM_at	---	-1.2	0.00	0.01
---	215164_PM_at	---	-1.2	0.00	0.01
---	239167_PM_at	---	-1.2	0.00	0.01
LGALS8	210732_PM_s_at	lectin, galactoside-binding, soluble, 8	-1.2	0.00	0.01
PID1	219093_PM_at	phosphotyrosine interaction domain containing 1	-1.2	0.00	0.01
STYX	242408_PM_at	serine	-1.2	0.00	0.02
---	215204_PM_at	---	-1.2	0.00	0.02
---	242018_PM_at	---	-1.2	0.00	0.02
RAB30	228003_PM_at	RAB30, member RAS oncogene family	-1.2	0.00	0.02
CCP110	1569353_PM_at	centriolar coiled coil protein 110kDa	-1.2	0.00	0.02
---	233995_PM_at	---	-1.2	0.00	0.02
SMCHD1	241620_PM_at	structural maintenance of chromosomes flexible hinge domain	-1.2	0.00	0.02
SMURF2	227489_PM_at	SMAD specific E3 ubiquitin protein ligase 2	-1.19	0.00	0.00
---	237821_PM_at	---	-1.19	0.00	0.00
---	239003_PM_at	---	-1.19	0.00	0.00
---	241320_PM_at	---	-1.19	0.00	0.00
COCH	1554241_PM_at	coagulation factor C homolog, cochlin (<i>Limulus polyphemus</i>)	-1.19	0.00	0.00
---	1567045_PM_at	---	-1.19	0.00	0.00
CNOT4	210866_PM_s_at	CCR4-NOT transcription complex, subunit 4	-1.19	0.00	0.01
PCBP1-AS1	240017_PM_at	PCBP1 antisense RNA 1 (non-protein coding)	-1.19	0.00	0.01
BCL11A	222891_PM_s_at	B-cell CLL	-1.19	0.00	0.01
TAF15	234168_PM_at	TAF15 RNA polymerase II, TATA box binding protein (TBP)	-1.19	0.00	0.01
C16orf46	230281_PM_at	chromosome 16 open reading frame 46	-1.19	0.00	0.01
RHPN2	227196_PM_at	rhophilin, Rho GTPase binding protein 2	-1.19	0.00	0.02
SCARB2	201646_PM_at	scavenger receptor class B, member 2	-1.19	0.00	0.02

---	243908_PM_at	---	-1.19	0.00	0.02
KCTD6	238077_PM_at	potassium channel tetramerisation domain containing 6	-1.18	0.00	0.00
KCMF1	242887_PM_at	potassium channel modulatory factor 1	-1.18	0.00	0.00
---	236168_PM_at	---	-1.18	0.00	0.00
---	236755_PM_at	---	-1.18	0.00	0.00
COX18	227442_PM_at	COX18 cytochrome c oxidase assembly homolog (<i>S. cerevisiae</i>)	-1.18	0.00	0.00
PTPN2	241623_PM_at	Protein tyrosine phosphatase, non-receptor type 2	-1.18	0.00	0.00
SPCS2	243570_PM_at	signal peptidase complex subunit 2 homolog (<i>S. cerevisiae</i>)	-1.18	0.00	0.01
ENAM	223893_PM_at	enamelin	-1.18	0.00	0.01
CLN8	219341_PM_at	ceroid-lipofuscinosis, neuronal 8 (epilepsy, progressive w	-1.18	0.00	0.01
SCLT1	1569495_PM_at	sodium channel and clathrin linker 1	-1.18	0.00	0.01
BCLAF1	201083_PM_s_at	BCL2-associated transcription factor 1	-1.18	0.00	0.01
---	244625_PM_at	---	-1.18	0.00	0.01
---	233007_PM_at	---	-1.18	0.00	0.01
---	244341_PM_at	---	-1.18	0.00	0.02
---	1556314_PM_a_at	---	-1.18	0.00	0.02
NHLRC3	236953_PM_s_at	NHL repeat containing 3	-1.17	0.00	0.00
ZNF785	1554770_PM_x_at	zinc finger protein 785	-1.17	0.00	0.00
---	216440_PM_at	---	-1.17	0.00	0.00
GART	244822_PM_at	phosphoribosylglycinamide formyltransferase, phosphori	-1.17	0.00	0.01
AGPAT4	219693_PM_at	1-acylglycerol-3-phosphate O-acyltransferase 4 (lysophos	-1.17	0.00	0.01
---	1557196_PM_a_at	---	-1.17	0.00	0.01
CCDC50	225331_PM_at	coiled-coil domain containing 50	-1.17	0.00	0.01
RIPK2	209544_PM_at	receptor-interacting serine-threonine kinase 2	-1.17	0.00	0.01
PRKRA	237107_PM_at	protein kinase, interferon-inducible double stranded RNA/	-1.17	0.00	0.01
SIKE1	221705_PM_s_at	suppressor of IKBKE 1	-1.17	0.00	0.01
---	242108_PM_at	---	-1.17	0.00	0.02
MSI2	225240_PM_s_at	musashi homolog 2 (<i>Drosophila</i>)	-1.16	0.00	0.00
RNPC3	226999_PM_at	RNA-binding region (RNP1, RRM) containing 3	-1.16	0.00	0.00
---	215974_PM_at	---	-1.16	0.00	0.01
---	232405_PM_at	---	-1.16	0.00	0.01
---	233246_PM_at	---	-1.16	0.00	0.02
ZMYM2	210282_PM_at	zinc finger, MYM-type 2	-1.16	0.00	0.02

DIS3L2	238602_PM_at	DIS3 mitotic control homolog (<i>S. cerevisiae</i>)-like 2	-1.15	0.00	0.00
ENTPD7	235204_PM_at	ectonucleoside triphosphate diphosphohydrolase 7	-1.15	0.00	0.00
---	243745_PM_at	---	-1.15	0.00	0.00
PCBP2	229467_PM_at	poly(rC) binding protein 2	-1.15	0.00	0.01
UCHL5	220083_PM_x_at	ubiquitin carboxyl-terminal hydrolase L5	-1.15	0.00	0.01
---	242312_PM_x_at	---	-1.15	0.00	0.01
---	1561640_PM_at	---	-1.15	0.00	0.01
C4orf29	219980_PM_at	chromosome 4 open reading frame 29	-1.15	0.00	0.01
TNFSF13B	223502_PM_s_at	tumor necrosis factor (ligand) superfamily, member 13b	-1.15	0.00	0.01
ADC	228000_PM_at	arginine decarboxylase	-1.15	0.00	0.01
LOC100505658	1557865_PM_at	uncharacterized LOC100505658	-1.15	0.00	0.02
IREB2	242261_PM_at	iron-responsive element binding protein 2	-1.15	0.00	0.02
MED28	224416_PM_s_at	mediator complex subunit 28	-1.14	0.00	0.00
---	242431_PM_at	---	-1.14	0.00	0.01
---	240438_PM_at	---	-1.14	0.00	0.01
ZNF37A	228711_PM_at	zinc finger protein 37A	-1.14	0.00	0.01
---	1556375_PM_at	---	-1.14	0.00	0.01
CREM	214508_PM_x_at	cAMP responsive element modulator	-1.14	0.00	0.01
NR3C1	232431_PM_at	nuclear receptor subfamily 3, group C, member 1 (glucoc	-1.14	0.00	0.02
---	228638_PM_at	---	-1.13	0.00	0.00
ZNF224	232427_PM_at	Zinc finger protein 224	-1.13	0.00	0.01
---	242948_PM_x_at	---	-1.13	0.00	0.01
---	229483_PM_at	---	-1.13	0.00	0.01
LATS2	223380_PM_s_at	LATS, large tumor suppressor, homolog 2 (<i>Drosophila</i>)	-1.13	0.00	0.01
NAPEPLD	238722_PM_x_at	N-acyl phosphatidylethanolamine phospholipase D	-1.13	0.00	0.01
BTF3L4	235819_PM_at	Basic transcription factor 3-like 4	-1.13	0.00	0.01
TDG	203743_PM_s_at	thymine-DNA glycosylase	-1.13	0.00	0.01
---	228156_PM_at	---	-1.13	0.00	0.01
ZNF785	1554769_PM_at	zinc finger protein 785	-1.13	0.00	0.02
---	240121_PM_x_at	---	-1.13	0.00	0.02
CDC42SE2	1552613_PM_s_at	CDC42 small effector 2	-1.12	0.00	0.00
SLC25A14	204587_PM_at	solute carrier family 25 (mitochondrial carrier, brain), me	-1.12	0.00	0.01
ZNF747	238606_PM_at	zinc finger protein 747	-1.12	0.00	0.01

---	227052_PM_at	---	-1.12	0.00	0.01
AKIRIN1	222458_PM_s_at	akirin 1	-1.12	0.00	0.01
---	239277_PM_at	---	-1.12	0.00	0.01
VAV2	226063_PM_at	vav 2 guanine nucleotide exchange factor	-1.12	0.00	0.01
MS4A6A	219666_PM_at	membrane-spanning 4-domains, subfamily A, member 6/	-1.12	0.00	0.02
FAM131A	221904_PM_at	family with sequence similarity 131, member A	-1.12	0.00	0.02
TERF1	203448_PM_s_at	telomeric repeat binding factor (NIMA-interacting) 1	-1.11	0.00	0.00
PNISR	212177_PM_at	PNN-interacting serine	-1.11	0.00	0.01
---	244854_PM_at	---	-1.11	0.00	0.02
C1orf63	209006_PM_s_at	chromosome 1 open reading frame 63	-1.11	0.00	0.02
GTF2H1	202451_PM_at	general transcription factor IIH, polypeptide 1, 62kDa	-1.1	0.00	0.01
ARF4	201096_PM_s_at	ADP-ribosylation factor 4	-1.1	0.00	0.01
ZBTB43	231393_PM_x_at	Zinc finger and BTB domain containing 43	-1.1	0.00	0.01
MB	204179_PM_at	myoglobin	-1.1	0.00	0.01
BOLA2	231500_PM_s_at	BolA homolog 2 (E. coli)	-1.1	0.00	0.02
MTMR1	216095_PM_x_at	myotubularin related protein 1	-1.09	0.00	0.01
KIAA0907	202220_PM_at	KIAA0907	-1.09	0.00	0.02
EIF2C2	225569_PM_at	Eukaryotic translation initiation factor 2C, 2	-1.09	0.00	0.02
SLC35A2	209326_PM_at	solute carrier family 35 (UDP-galactose transporter), mer	-1.09	0.00	0.03
DERL2	226719_PM_at	derlin 2	-1.08	0.00	0.01
SLC35E1	227518_PM_at	solute carrier family 35, member E1	-1.08	0.00	0.02
FGD2	1553906_PM_s_at	FYVE, RhoGEF and PH domain containing 2	-1.08	0.00	0.02
BBIP1	228993_PM_s_at	BBSome interacting protein 1	-1.06	0.00	0.04
MBD4	214047_PM_s_at	methyl-CpG binding domain protein 4	1.07	0.00	0.02
LINC00340	1562469_PM_at	long intergenic non-protein coding RNA 340	1.08	0.00	0.01
BIRC6	224635_PM_s_at	baculoviral IAP repeat containing 6	1.08	0.00	0.01
PSMD7	201705_PM_at	proteasome (prosome, macropain) 26S subunit, non-ATP	1.08	0.00	0.02
MASP1	232224_PM_at	mannan-binding lectin serine peptidase 1 (C4	1.08	0.00	0.02
NAP1L4	201414_PM_s_at	nucleosome assembly protein 1-like 4	1.08	0.00	0.02
PTPRA	213795_PM_s_at	protein tyrosine phosphatase, receptor type, A	1.09	0.00	0.01
PLEKHB2	224121_PM_x_at	pleckstrin homology domain containing, family B (evectir	1.09	0.00	0.02
USP8	229501_PM_s_at	ubiquitin specific peptidase 8	1.1	0.00	0.01
TTC1	201434_PM_at	tetratricopeptide repeat domain 1	1.1	0.00	0.02

KPNA6	226976_PM_at	karyopherin alpha 6 (importin alpha 7)	1.1	0.00	0.02
MYL12A	201319_PM_at	myosin, light chain 12A, regulatory, non-sarcomeric	1.1	0.00	0.02
CYFIP2	220999_PM_s_at	cytoplasmic FMR1 interacting protein 2	1.11	0.00	0.01
SLC46A3	214719_PM_at	solute carrier family 46, member 3	1.11	0.00	0.01
EIF1	217672_PM_x_at	eukaryotic translation initiation factor 1	1.11	0.00	0.01
GIT2	225558_PM_at	G protein-coupled receptor kinase interacting ArfGAP 2	1.11	0.00	0.01
SLC35E1	229410_PM_at	solute carrier family 35, member E1	1.11	0.00	0.02
TCHP	223455_PM_at	trichoplein, keratin filament binding	1.11	0.00	0.02
DCAF5	224696_PM_s_at	DDB1 and CUL4 associated factor 5	1.12	0.00	0.01
ELMO2	221528_PM_s_at	engulfment and cell motility 2	1.12	0.00	0.02
---	1569587_PM_at	---	1.12	0.00	0.02
STXBP1	202260_PM_s_at	syntaxin binding protein 1	1.13	0.00	0.01
---	241617_PM_x_at	---	1.13	0.00	0.01
ELMO2	55692_PM_at	engulfment and cell motility 2	1.13	0.00	0.01
ALAS1	205633_PM_s_at	aminolevulinate, delta-, synthase 1	1.14	0.00	0.01
VCL	200931_PM_s_at	vinculin	1.14	0.00	0.01
AP2B1	200612_PM_s_at	adaptor-related protein complex 2, beta 1 subunit	1.14	0.00	0.02
ZNF575	1557119_PM_a_at	zinc finger protein 575	1.15	0.00	0.01
EEF1A1	1557120_PM_at	Eukaryotic translation elongation factor 1 alpha 1	1.15	0.00	0.02
BHLHE40	201170_PM_s_at	basic helix-loop-helix family, member e40	1.16	0.00	0.02
LOC100509498	227290_PM_at	uncharacterized LOC100509498	1.17	0.00	0.00
SOX6	227498_PM_at	SRY (sex determining region Y)-box 6	1.17	0.00	0.01
TMEM189	201003_PM_x_at	transmembrane protein 189	1.17	0.00	0.02
SH2D3C	226673_PM_at	SH2 domain containing 3C	1.17	0.00	0.02
ENDOD1	212573_PM_at	endonuclease domain containing 1	1.17	0.00	0.02
SYT11	209197_PM_at	synaptotagmin XI	1.18	0.00	0.02
CDC14B	221556_PM_at	CDC14 cell division cycle 14 homolog B (S. cerevisiae)	1.19	0.00	0.03
EHD3	218935_PM_at	EH-domain containing 3	1.2	0.00	0.02
F5	231029_PM_at	coagulation factor V (proaccelerin, labile factor)	1.21	0.00	0.05
MGLL	225102_PM_at	monoglyceride lipase	1.22	0.00	0.01
EIF2AK1	217735_PM_s_at	eukaryotic translation initiation factor 2-alpha kinase 1	1.23	0.00	0.01
ARHGEF12	201334_PM_s_at	Rho guanine nucleotide exchange factor (GEF) 12	1.23	0.00	0.03
LINC00537	232034_PM_at	Long intergenic non-protein coding RNA 537	1.23	0.00	0.03

ALOX12	207206_PM_s_at	arachidonate 12-lipoxygenase	1.23	0.00	0.03
---	230354_PM_at	---	1.23	0.00	0.05
---	242094_PM_at	---	1.24	0.00	0.01
---	217125_PM_at	---	1.25	0.00	0.02
BEND2	1553842_PM_at	BEN domain containing 2	1.25	0.00	0.03
---	230778_PM_at	---	1.26	0.00	0.02
ACTA2	200974_PM_at	actin, alpha 2, smooth muscle, aorta	1.26	0.00	0.04
RIOK3	202131_PM_s_at	RIO kinase 3 (yeast)	1.27	0.00	0.03
ZNF321P	1558887_PM_at	zinc finger protein 321, pseudogene	1.27	0.00	0.04
PBX1	212151_PM_at	pre-B-cell leukemia homeobox 1	1.28	0.00	0.03
ARHGEF12	201333_PM_s_at	Rho guanine nucleotide exchange factor (GEF) 12	1.29	0.00	0.05
SLPI	203021_PM_at	secretory leukocyte peptidase inhibitor	1.3	0.00	0.02
CLU	208792_PM_s_at	clusterin	1.3	0.00	0.03
HBD	206834_PM_at	hemoglobin, delta	1.3	0.00	0.04
ITGB3	204627_PM_s_at	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	1.31	0.00	0.03
PPBP	214146_PM_s_at	pro-platelet basic protein (chemokine (C-X-C motif) ligand 4)	1.33	0.00	0.01
ITGB3	204628_PM_s_at	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	1.33	0.00	0.01
ITGB5	214021_PM_x_at	Integrin, beta 5	1.33	0.00	0.01
CLU	208791_PM_at	clusterin	1.33	0.00	0.01
CEACAM6	203757_PM_s_at	carcinoembryonic antigen-related cell adhesion molecule 6	1.35	0.01	0.05
FAM46C	226811_PM_at	family with sequence similarity 46, member C	1.37	0.00	0.02
ORM1	205040_PM_at	orosomucoid 1	1.37	0.01	0.04
BPGM	203502_PM_at	2,3-bisphosphoglycerate mutase	1.39	0.00	0.02
FECH	203116_PM_s_at	ferrochelatase	1.39	0.00	0.02
ORM1	205041_PM_s_at	orosomucoid 1	1.39	0.00	0.03
CEACAM6	211657_PM_at	carcinoembryonic antigen-related cell adhesion molecule 6	1.4	0.00	0.03
ITGA2B	206493_PM_at	integrin, alpha 2b (platelet glycoprotein IIb of IIb)	1.41	0.00	0.00
DEFA1	205033_PM_s_at	defensin, alpha 1	1.41	0.00	0.00
RNASE3	206851_PM_at	ribonuclease, RNase A family, 3	1.41	0.01	0.05
CA1	205950_PM_s_at	carbonic anhydrase I	1.43	0.00	0.04
BPI	205557_PM_at	bactericidal	1.46	0.00	0.02
MMP8	231688_PM_at	matrix metallopeptidase 8 (neutrophil collagenase)	1.47	0.00	0.04
LCN2	212531_PM_at	lipocalin 2	1.5	0.00	0.01

CEACAM8	206676_PM_at	carcinoembryonic antigen-related cell adhesion molecule	1.62	0.00	0.01
LTF	202018_PM_s_at	lactotransferrin	1.63	0.00	0.01
DEFA4	207269_PM_at	defensin, alpha 4, corticostatin	1.72	0.00	0.01
RNF182	230720_PM_at	ring finger protein 182	1.82	0.00	0.00
HLA-DRB4	209728_PM_at	major histocompatibility complex, class II, DR beta 4	1.97	0.06	0.03

Supplemental Table 5 - DEGs from 'Severe Asthma (no OCS) vs. Non-asthma' Comparison

symbol	probe_name	product	foldChange	pval	IFDR
LRRN3	209841_PM_s_at	leucine rich repeat neuronal 3	-1.61	0.00	0.00
LRRN3	209840_PM_s_at	leucine rich repeat neuronal 3	-1.54	0.00	0.02
NOG	231798_PM_at	noggin	-1.47	0.00	0.01
	233401_PM_at		-1.47	0.00	0.01
IGK@	237625_PM_s_at	immunoglobulin kappa locus	-1.47	0.00	0.00
IL6ST	234474_PM_x_at	interleukin 6 signal transducer (gp:	-1.45	0.00	0.00
	224348_PM_s_at		-1.43	0.00	0.00
EPPK1	232165_PM_at	epiplakin 1	-1.43	0.00	0.00
CUX2	213920_PM_at	cut-like homeobox 2	-1.42	0.00	0.00
	236307_PM_at		-1.42	0.00	0.00
EBF1	233261_PM_at	Early B-cell factor 1	-1.42	0.00	0.00
	244181_PM_at		-1.40	0.00	0.01
TSPAN13	217979_PM_at	tetraspanin 13	-1.40	0.00	0.00
EPPK1	232164_PM_s_at	epiplakin 1	-1.38	0.00	0.00
IL6ST	234967_PM_at	interleukin 6 signal transducer (gp:	-1.37	0.00	0.00
LEF1-AS1	243362_PM_s_at	LEF1 antisense RNA 1 (non-protein	-1.36	0.00	0.01
SLC16A10	219915_PM_s_at	solute carrier family 16, member 1	-1.36	0.00	0.01
COL4A3	222073_PM_at	collagen, type IV, alpha 3 (Goodpa:	-1.36	0.00	0.01
	228297_PM_at		-1.35	0.00	0.01
	1565913_PM_at		-1.35	0.00	0.01
	1557581_PM_x_at		-1.34	0.00	0.00
	1561035_PM_at		-1.34	0.00	0.00
	1557580_PM_at		-1.34	0.00	0.00
	243780_PM_at		-1.34	0.00	0.00
LEF1-AS1	243363_PM_at	LEF1 antisense RNA 1 (non-protein	-1.34	0.00	0.01
GPM6B	209167_PM_at	glycoprotein M6B	-1.34	0.00	0.00
PRKXP1	235987_PM_at	protein kinase, X-linked, pseudoge	-1.34	0.00	0.02
	233034_PM_at		-1.33	0.00	0.00
CACHD1	225627_PM_s_at	cache domain containing 1	-1.33	0.00	0.02
	228858_PM_at		-1.33	0.00	0.00
NRCAM	204105_PM_s_at	neuronal cell adhesion molecule	-1.32	0.00	0.00
	242664_PM_at		-1.32	0.00	0.01
	228854_PM_at		-1.32	0.00	0.00
	243107_PM_at		-1.31	0.00	0.00
	237334_PM_at		-1.31	0.00	0.00
LEF1	210948_PM_s_at	lymphoid enhancer-binding factor	-1.31	0.00	0.00
	244696_PM_at		-1.31	0.00	0.01
RAB11FIP3	228613_PM_at	RAB11 family interacting protein 3	-1.31	0.00	0.00
	239867_PM_at		-1.31	0.00	0.01
MAN1C1	214180_PM_at	mannosidase, alpha, class 1C, mem	-1.30	0.00	0.00
	231450_PM_at		-1.30	0.00	0.00
LOC100506195	1563039_PM_at	uncharacterized LOC100506195	-1.30	0.00	0.00
KDM4B	235789_PM_at	lysine (K)-specific demethylase 4B	-1.30	0.00	0.04
	244876_PM_at		-1.30	0.00	0.01
	1554963_PM_at		-1.30	0.00	0.00
	1556932_PM_at		-1.30	0.00	0.05
TNFRSF21	218856_PM_at	tumor necrosis factor receptor sup	-1.30	0.00	0.00
CLDN23	228707_PM_at	claudin 23	-1.30	0.00	0.01

	1556451_PM_at		-1.29	0.00	0.00
TTN	241791_PM_at	titin	-1.29	0.00	0.00
EBF1	227646_PM_at	early B-cell factor 1	-1.29	0.00	0.02
	240593_PM_x_at		-1.29	0.00	0.00
	1568366_PM_at		-1.29	0.00	0.01
ZNF496	238145_PM_at	Zinc finger protein 496	-1.29	0.00	0.00
FLJ33630	228686_PM_at	uncharacterized LOC644873	-1.29	0.00	0.00
ZNF662	228538_PM_at	zinc finger protein 662	-1.29	0.00	0.01
MTUS1	239576_PM_at	microtubule associated tumor sup|	-1.29	0.00	0.00
	241625_PM_at		-1.28	0.00	0.03
IL6ST	204863_PM_s_at	interleukin 6 signal transducer (gp:	-1.28	0.00	0.00
	244633_PM_at		-1.28	0.00	0.00
	1556963_PM_at		-1.28	0.00	0.00
	237916_PM_at		-1.28	0.00	0.00
	1566880_PM_at		-1.28	0.00	0.01
EPT1	1570371_PM_a_at	ethanolaminephosphotransferase	-1.28	0.00	0.00
	239411_PM_at		-1.28	0.00	0.00
	232796_PM_at		-1.27	0.00	0.00
AKAP2	202760_PM_s_at	A kinase (PRKA) anchor protein 2	-1.27	0.00	0.01
	244172_PM_at		-1.27	0.00	0.00
	241339_PM_at		-1.27	0.00	0.03
PDE7A	1552343_PM_s_at	phosphodiesterase 7A	-1.27	0.00	0.00
	236796_PM_at		-1.27	0.00	0.00
	215204_PM_at		-1.27	0.00	0.00
NASP	242918_PM_at	Nuclear autoantigenic sperm prote	-1.27	0.00	0.02
GCOM1	228568_PM_at	GRINL1A complex locus 1	-1.27	0.00	0.03
	1554964_PM_x_at		-1.27	0.00	0.00
PTPRK	233609_PM_at	Protein tyrosine phosphatase, rece	-1.27	0.00	0.00
PCNP	237577_PM_at	PEST proteolytic signal containing i	-1.27	0.00	0.01
PPM1K	244011_PM_at	protein phosphatase, Mg2+	-1.27	0.00	0.01
	237189_PM_at		-1.27	0.00	0.03
	244414_PM_at		-1.27	0.00	0.00
	241577_PM_at		-1.27	0.00	0.01
	215284_PM_at		-1.27	0.00	0.01
	242052_PM_at		-1.26	0.00	0.00
TCF4	212382_PM_at	transcription factor 4	-1.26	0.00	0.00
	233425_PM_at		-1.26	0.00	0.01
	235756_PM_at		-1.26	0.00	0.00
	238311_PM_at		-1.26	0.00	0.01
	1556964_PM_s_at		-1.26	0.00	0.00
IKZF1	1565818_PM_s_at	IKAROS family zinc finger 1 (Ikafos)	-1.26	0.00	0.00
	236462_PM_at		-1.26	0.00	0.01
	1565915_PM_at		-1.26	0.00	0.04
	233995_PM_at		-1.26	0.00	0.00
	234044_PM_at		-1.26	0.00	0.03
LOC100190986	235167_PM_at	uncharacterized LOC100190986	-1.26	0.00	0.00
	244394_PM_at		-1.26	0.00	0.05
	1560971_PM_a_at		-1.25	0.00	0.05
	232834_PM_at		-1.25	0.00	0.01
	238157_PM_at		-1.25	0.00	0.02

TUBE1	1558409_PM_at 230891_PM_at 244331_PM_at	Tubulin, epsilon 1	-1.25 -1.25 -1.25	0.00 0.00 0.00	0.01 0.01 0.01
LMLN	238037_PM_at	leishmanolysin-like (metallopeptid	-1.25	0.00	0.00
AGMAT	221648_PM_s_at 237953_PM_at 238892_PM_at 232795_PM_at	agmatine ureohydrolase (agmatinε	-1.25 -1.25 -1.25 -1.25	0.00 0.00 0.00 0.00	0.00 0.00 0.01 0.00
UBE3D	1569262_PM_x_at 243005_PM_at	ubiquitin protein ligase E3D	-1.25 -1.25	0.00 0.00	0.01 0.00
ABCB4	1570505_PM_at 241320_PM_at 244379_PM_at 236315_PM_at 220854_PM_at	ATP-binding cassette, sub-family B	-1.25 -1.25 -1.25 -1.25 -1.25	0.00 0.00 0.00 0.00 0.00	0.03 0.00 0.01 0.01 0.01
ZFP112	236328_PM_at	zinc finger protein 112 homolog (n	-1.25	0.00	0.01
SLFNL1	1553315_PM_at	schlafgen-like 1	-1.25	0.00	0.00
NUP62	236505_PM_at 232614_PM_at	Nucleoporin 62kDa	-1.25 -1.25	0.00 0.00	0.00 0.03
YTHDC1	214814_PM_at	YTH domain containing 1	-1.24	0.00	0.01
CAMTA1	1555370_PM_a_at	calmodulin binding transcription a	-1.24	0.00	0.02
AAK1	205434_PM_s_at 241893_PM_at 239788_PM_at	AP2 associated kinase 1	-1.24 -1.24 -1.24	0.00 0.00 0.00	0.00 0.00 0.01
CLN8	219341_PM_at	ceroid-lipofuscinosis, neuronal 8 (ε	-1.24	0.00	0.00
MS4A1	231418_PM_at	Membrane-spanning 4-domains, si	-1.24	0.00	0.02
SERPINB9	242814_PM_at 234822_PM_at	serpin peptidase inhibitor, clade B	-1.24 -1.24	0.00 0.00	0.01 0.02
APBA2	209870_PM_s_at 243450_PM_at	amyloid beta (A4) precursor protei	-1.24 -1.24	0.00 0.00	0.00 0.00
POU6F1	229809_PM_at 239003_PM_at	POU class 6 homeobox 1	-1.24 -1.24	0.00 0.00	0.01 0.00
AKT3	222880_PM_at 1560259_PM_at	v-akt murine thymoma viral oncog	-1.24 -1.24	0.00 0.00	0.00 0.01
U2SURP	236696_PM_at	U2 snRNP-associated SURP domair	-1.24	0.00	0.00
PAX5	221969_PM_at	paired box 5	-1.24	0.00	0.02
METTL6	232102_PM_at 1559188_PM_x_at 1563217_PM_at 236617_PM_at 237432_PM_at	Methyltransferase like 6	-1.24 -1.24 -1.24 -1.24 -1.24	0.00 0.00 0.00 0.00 0.00	0.00 0.01 0.02 0.01 0.00
SRGAP2	1556202_PM_at 216211_PM_at	SLIT-ROBO Rho GTPase activating p	-1.24 -1.24	0.00 0.00	0.04 0.01
ATAD5	220223_PM_at	ATPase family, AAA domain contai	-1.24	0.00	0.00
ACAT1	1559239_PM_s_at 217536_PM_x_at 1561004_PM_at	acetyl-CoA acetyltransferase 1	-1.24 -1.24 -1.24	0.00 0.00 0.00	0.01 0.05 0.04
STRBP	233252_PM_s_at	spermatid perinuclear RNA binding	-1.24	0.00	0.01
SRRM2	1554671_PM_a_at 241505_PM_at	serine	-1.23 -1.23	0.00 0.00	0.02 0.03

	1558410_PM_s_at		-1.23	0.00	0.00
	241007_PM_at		-1.23	0.00	0.00
	240789_PM_at		-1.23	0.00	0.01
	1556314_PM_a_at		-1.23	0.00	0.00
LOC389834	241624_PM_at	ankyrin repeat domain 57 pseudo ξ	-1.23	0.00	0.04
RCAN3	219864_PM_s_at	RCAN family member 3	-1.23	0.00	0.05
	240971_PM_x_at		-1.23	0.00	0.01
LILRA4	210313_PM_at	leukocyte immunoglobulin-like rec	-1.23	0.00	0.01
	222266_PM_at		-1.23	0.00	0.00
ZCCHC2	219062_PM_s_at	zinc finger, CCHC domain containir	-1.23	0.00	0.01
	1567044_PM_s_at		-1.23	0.00	0.00
CAND2	213547_PM_at	cullin-associated and neddylation-i	-1.23	0.00	0.02
	242886_PM_at		-1.23	0.00	0.01
	230014_PM_at		-1.23	0.00	0.03
	216072_PM_at		-1.23	0.00	0.01
BLNK	207655_PM_s_at	B-cell linker	-1.23	0.00	0.01
RALGAPA1	234923_PM_at	Ral GTPase activating protein, alph	-1.23	0.00	0.01
LARS	223888_PM_s_at	leucyl-tRNA synthetase	-1.23	0.00	0.00
MAP2K5	216765_PM_at	Mitogen-activated protein kinase k	-1.23	0.00	0.01
ZNF275	225383_PM_at	zinc finger protein 275	-1.23	0.00	0.00
	239227_PM_at		-1.23	0.00	0.03
CEP41	225484_PM_at	centrosomal protein 41kDa	-1.23	0.00	0.00
DHX30	230871_PM_at	DEAH (Asp-Glu-Ala-His) box polype	-1.23	0.00	0.00
CCR6	206983_PM_at	chemokine (C-C motif) receptor 6	-1.23	0.00	0.00
	237429_PM_at		-1.23	0.00	0.01
	1567045_PM_at		-1.22	0.00	0.00
SCML1	222747_PM_s_at	sex comb on midleg-like 1 (Drosop	-1.22	0.00	0.01
NAF1	244828_PM_x_at	nuclear assembly factor 1 homolog	-1.22	0.00	0.00
KIAA0368	236368_PM_at	KIAA0368	-1.22	0.00	0.00
BCL11A	1559078_PM_at	B-cell CLL	-1.22	0.00	0.00
	239842_PM_x_at		-1.22	0.00	0.01
LOC100507539	244308_PM_at	uncharacterized LOC100507539	-1.22	0.00	0.00
	243546_PM_at		-1.22	0.00	0.02
APBA2	209871_PM_s_at	amyloid beta (A4) precursor protei	-1.22	0.00	0.02
MUM1	221290_PM_s_at	melanoma associated antigen (mu	-1.22	0.00	0.00
SMCHD1	241620_PM_at	structural maintenance of chromo	-1.22	0.00	0.01
MBNL2	232138_PM_at	Muscleblind-like splicing regulator	-1.22	0.00	0.00
	1560861_PM_at		-1.22	0.00	0.03
LOC100131541	1558569_PM_at	Uncharacterized LOC100131541	-1.22	0.00	0.01
	222098_PM_s_at		-1.22	0.00	0.00
C16orf46	230281_PM_at	chromosome 16 open reading fran	-1.22	0.00	0.00
BACH2	227173_PM_s_at	BTB and CNC homology 1, basic leu	-1.22	0.00	0.00
TMEM67	1569377_PM_at	transmembrane protein 67	-1.22	0.00	0.03
	236279_PM_at		-1.22	0.00	0.00
SLFN5	1557078_PM_at	schlafin family member 5	-1.22	0.00	0.04
FAM171A1	212771_PM_at	family with sequence similarity 17:	-1.22	0.00	0.00
SLC16A10	222939_PM_s_at	solute carrier family 16, member 1	-1.22	0.00	0.02
	239397_PM_at		-1.22	0.00	0.00
	244423_PM_at		-1.22	0.00	0.03
RAB30	228003_PM_at	RAB30, member RAS oncogene fam	-1.22	0.00	0.00

ZNF785	1554770_PM_x_at	zinc finger protein 785	-1.22	0.00	0.00
FAM226B	242292_PM_at	family with sequence similarity 226	-1.22	0.00	0.01
	243473_PM_at		-1.22	0.00	0.02
	233246_PM_at		-1.22	0.00	0.00
	244665_PM_at		-1.22	0.00	0.02
CCDC50	228693_PM_at	coiled-coil domain containing 50	-1.22	0.00	0.02
	238536_PM_at		-1.22	0.00	0.01
	240622_PM_at		-1.22	0.00	0.00
AUTS2	212599_PM_at	autism susceptibility candidate 2	-1.22	0.00	0.02
	239167_PM_at		-1.22	0.00	0.00
LOC100291323	1564639_PM_at	uncharacterized LOC100291323	-1.22	0.00	0.00
	1556352_PM_at		-1.22	0.00	0.02
AQP3	39249_PM_at	aquaporin 3 (Gill blood group)	-1.22	0.00	0.00
PSMG4	242055_PM_at	Proteasome (prosome, macropain)	-1.22	0.00	0.01
	235912_PM_at		-1.22	0.00	0.00
	240216_PM_at		-1.21	0.00	0.01
PLEKHA1	219024_PM_at	pleckstrin homology domain conta	-1.21	0.00	0.01
FAM213A	228155_PM_at	family with sequence similarity 213	-1.21	0.00	0.00
	242270_PM_at		-1.21	0.00	0.01
	230702_PM_at		-1.21	0.00	0.01
SPIB	232739_PM_at	Spi-B transcription factor (Spi-1)	-1.21	0.00	0.02
TMEM97	212282_PM_at	transmembrane protein 97	-1.21	0.00	0.00
C14orf64	1559097_PM_at	chromosome 14 open reading fran	-1.21	0.00	0.00
NMNAT3	228090_PM_at	nicotinamide nucleotide adenylyltri	-1.21	0.00	0.01
	242104_PM_at		-1.21	0.00	0.02
	242920_PM_at		-1.21	0.00	0.00
ZBTB20	205383_PM_s_at	zinc finger and BTB domain contain	-1.21	0.00	0.00
	1565614_PM_at		-1.21	0.00	0.01
AXIN2	222696_PM_at	axin 2	-1.21	0.00	0.01
ZCCHC2	224503_PM_s_at	zinc finger, CCHC domain containir	-1.21	0.00	0.02
	1556769_PM_a_at		-1.21	0.00	0.02
	233690_PM_at		-1.21	0.00	0.01
	243030_PM_at		-1.21	0.00	0.00
	229465_PM_s_at		-1.21	0.00	0.01
ZMYM6	1552969_PM_a_at	zinc finger, MYM-type 6	-1.21	0.00	0.01
	1569597_PM_at		-1.21	0.00	0.00
SHMT2	214095_PM_at	serine hydroxymethyltransferase 2	-1.21	0.00	0.00
GAL3ST4	219815_PM_at	galactose-3-O-sulfotransferase 4	-1.21	0.00	0.01
BICD1	214806_PM_at	bicaudal D homolog 1 (Drosophila)	-1.21	0.00	0.00
	244878_PM_at		-1.21	0.00	0.01
	231107_PM_at		-1.21	0.00	0.03
	232778_PM_at		-1.21	0.00	0.01
TNPO1	1556116_PM_s_at	Transportin 1	-1.21	0.00	0.00
	239646_PM_at		-1.21	0.00	0.00
TAF15	234168_PM_at	TAF15 RNA polymerase II, TATA bo	-1.21	0.00	0.00
AQP3	203747_PM_at	aquaporin 3 (Gill blood group)	-1.21	0.00	0.00
ENAM	223893_PM_at	enamelin	-1.21	0.00	0.00
NSUN6	230200_PM_at	NOP2	-1.21	0.00	0.00
	240605_PM_at		-1.21	0.00	0.00
SOX7	228698_PM_at	SRY (sex determining region Y)-bo	-1.21	0.00	0.02

CBX5	226085_PM_at	chromobox homolog 5	-1.21	0.00	0.00
CHD1L	238070_PM_at	chromodomain helicase DNA bindi	-1.21	0.00	0.00
NAA25	236816_PM_at	N(alpha)-acetyltransferase 25, Nat	-1.21	0.00	0.00
	1564776_PM_at		-1.21	0.00	0.01
	238610_PM_s_at		-1.21	0.00	0.01
	244625_PM_at		-1.20	0.00	0.00
	1569601_PM_at		-1.20	0.00	0.01
AURKAPS1	216057_PM_at	aurora kinase A pseudogene 1	-1.20	0.00	0.00
LMO7	242722_PM_at	LIM domain 7	-1.20	0.00	0.01
CYP2B6	206754_PM_s_at	cytochrome P450, family 2, subfan	-1.20	0.00	0.02
MAP2K6	205699_PM_at	mitogen-activated protein kinase k	-1.20	0.00	0.01
AKAP13	229783_PM_at	A kinase (PRKA) anchor protein 13	-1.20	0.00	0.01
	243736_PM_at		-1.20	0.00	0.00
METAP1D	227805_PM_at	methionyl aminopeptidase type 1C	-1.20	0.00	0.00
MPRIP	214694_PM_at	myosin phosphatase Rho interactir	-1.20	0.00	0.00
	240595_PM_at		-1.20	0.00	0.00
RIMKLB	226164_PM_x_at	ribosomal modification protein rim	-1.20	0.00	0.00
LRPPRC	1557360_PM_at	leucine-rich pentatricopeptide rep	-1.20	0.00	0.00
CD27	206150_PM_at	CD27 molecule	-1.20	0.00	0.01
	1561195_PM_at		-1.20	0.00	0.01
	215164_PM_at		-1.20	0.00	0.01
CARD11	1562368_PM_at	caspase recruitment domain family	-1.20	0.00	0.00
ZNF141	235580_PM_at	zinc finger protein 141	-1.20	0.00	0.00
LOC100507053	1559240_PM_at	uncharacterized LOC100507053	-1.20	0.00	0.01
	236379_PM_at		-1.20	0.00	0.00
	241106_PM_at		-1.20	0.00	0.00
SNX19	1554986_PM_a_at	sorting nexin 19	-1.20	0.00	0.02
ZNF587	1557248_PM_at	Zinc finger protein 587	-1.20	0.00	0.01
	1556375_PM_at		-1.20	0.00	0.00
	240438_PM_at		-1.20	0.00	0.00
RHPN2	227196_PM_at	rhophilin, Rho GTPase binding prot	-1.20	0.00	0.01
	236143_PM_at		-1.20	0.00	0.01
TMEM63A	215583_PM_at	Transmembrane protein 63A	-1.20	0.00	0.00
IL28RA	244261_PM_at	interleukin 28 receptor, alpha (inte	-1.20	0.00	0.01
	244845_PM_at		-1.20	0.00	0.02
	218544_PM_s_at		-1.20	0.00	0.00
RIPK4	221215_PM_s_at	receptor-interacting serine-threon	-1.20	0.00	0.02
SLC38A10	1563226_PM_at	solute carrier family 38, member 1	-1.20	0.00	0.00
SRRM2	208610_PM_s_at	serine	-1.20	0.00	0.01
FLJ10038	205511_PM_at	uncharacterized protein FLJ10038	-1.20	0.00	0.01
ETS1	1555355_PM_a_at	v-ets erythroblastosis virus E26 on	-1.20	0.00	0.00
	242947_PM_at		-1.20	0.00	0.02
URB1	212996_PM_s_at	URB1 ribosome biogenesis 1 homc	-1.20	0.00	0.00
BCL11A	222891_PM_s_at	B-cell CLL	-1.20	0.00	0.00
C14orf64	1564211_PM_at	chromosome 14 open reading fran	-1.20	0.00	0.00
	239449_PM_at		-1.20	0.00	0.01
MAN1C1	218918_PM_at	mannosidase, alpha, class 1C, men	-1.20	0.00	0.00
	231351_PM_at		-1.20	0.00	0.01
TCF4	212386_PM_at	transcription factor 4	-1.20	0.00	0.01
TGIF2	218724_PM_s_at	TGFB-induced factor homeobox 2	-1.20	0.00	0.00

	243593_PM_s_at		-1.20	0.00	0.02
CAMSAP1	244682_PM_at	calmodulin regulated spectrin-assc	-1.19	0.00	0.01
	242709_PM_s_at		-1.19	0.00	0.01
	237998_PM_at		-1.19	0.00	0.01
SPATS2	222593_PM_s_at	spermatogenesis associated, serine	-1.19	0.00	0.00
	244341_PM_at		-1.19	0.00	0.01
	243817_PM_at		-1.19	0.00	0.02
TARSL2	227611_PM_at	threonyl-tRNA synthetase-like 2	-1.19	0.00	0.00
	240655_PM_at		-1.19	0.00	0.00
	231222_PM_at		-1.19	0.00	0.01
TSPAN3	200972_PM_at	tetraspanin 3	-1.19	0.00	0.01
TAF4B	235020_PM_at	TAF4b RNA polymerase II, TATA bc	-1.19	0.00	0.01
	242031_PM_at		-1.19	0.00	0.01
PTPLAD1	234000_PM_s_at	protein tyrosine phosphatase-like ,	-1.19	0.00	0.01
BCL7A	203796_PM_s_at	B-cell CLL	-1.19	0.00	0.00
COPG2IT1	213486_PM_at	COPG2 imprinted transcript 1 (non	-1.19	0.00	0.00
TGFBRI1	236561_PM_at	transforming growth factor, beta r	-1.19	0.00	0.00
PCBP2	229467_PM_at	poly(rC) binding protein 2	-1.19	0.00	0.00
ATXN3	205415_PM_s_at	ataxin 3	-1.19	0.00	0.00
SLC11A2	237106_PM_at	Solute carrier family 11 (proton-co	-1.19	0.00	0.01
THRAP3	242163_PM_at	thyroid hormone receptor associat	-1.19	0.00	0.01
	239238_PM_at		-1.19	0.00	0.00
CXCR7	212977_PM_at	chemokine (C-X-C motif) receptor	-1.19	0.00	0.01
ZNF785	1554769_PM_at	zinc finger protein 785	-1.19	0.00	0.00
	229858_PM_at		-1.19	0.00	0.02
	1562412_PM_at		-1.19	0.00	0.01
OPN3	224392_PM_s_at	opsin 3	-1.19	0.00	0.01
SLC38A10	1563228_PM_x_at	solute carrier family 38, member 1	-1.19	0.00	0.01
TXLNG	219969_PM_at	taxilin gamma	-1.19	0.00	0.00
	1561640_PM_at		-1.19	0.00	0.00
DTWD1	236649_PM_at	DTW domain containing 1	-1.19	0.00	0.00
SLC16A7	210807_PM_s_at	solute carrier family 16, member 7	-1.19	0.00	0.01
	243286_PM_at		-1.19	0.00	0.00
	237001_PM_at		-1.19	0.00	0.01
	233376_PM_at		-1.18	0.00	0.01
	1558686_PM_at		-1.18	0.00	0.01
DPP4	203716_PM_s_at	dipeptidyl-peptidase 4	-1.18	0.00	0.01
PHF20	1569906_PM_s_at	PHD finger protein 20	-1.18	0.00	0.00
	1560680_PM_at		-1.18	0.00	0.00
	241413_PM_at		-1.18	0.00	0.01
	240007_PM_at		-1.18	0.00	0.01
TCF4	212387_PM_at	transcription factor 4	-1.18	0.00	0.00
PEX3	203969_PM_at	peroxisomal biogenesis factor 3	-1.18	0.00	0.00
ZFAND6	239757_PM_at	Zinc finger, AN1-type domain 6	-1.18	0.00	0.00
	233243_PM_at		-1.18	0.00	0.00
ZDHHC21	229923_PM_at	zinc finger, DHHC-type containing :	-1.18	0.00	0.01
	243675_PM_at		-1.18	0.00	0.00
	234649_PM_at		-1.18	0.00	0.00
	236237_PM_at		-1.18	0.00	0.00
ZNF202	204327_PM_s_at	zinc finger protein 202	-1.18	0.00	0.00

ADC	228000_PM_at	arginine decarboxylase	-1.18	0.00	0.00
GKAP1	229312_PM_s_at	G kinase anchoring protein 1	-1.18	0.00	0.00
RBM5	230742_PM_at	RNA binding motif protein 5	-1.18	0.00	0.00
	242298_PM_x_at		-1.18	0.00	0.01
	238271_PM_x_at		-1.18	0.00	0.01
PRKRA	237107_PM_at	protein kinase, interferon-inducible	-1.18	0.00	0.00
PIK3IP1	221757_PM_at	phosphoinositide-3-kinase interact	-1.18	0.00	0.00
BCL11A	210347_PM_s_at	B-cell CLL	-1.18	0.00	0.00
	237067_PM_at		-1.18	0.00	0.01
ABLIM1	210461_PM_s_at	actin binding LIM protein 1	-1.18	0.00	0.01
GART	244822_PM_at	phosphoribosylglycinamide formyl	-1.18	0.00	0.01
	244145_PM_at		-1.18	0.00	0.01
ZMYM2	210282_PM_at	zinc finger, MYM-type 2	-1.18	0.00	0.01
	236066_PM_at		-1.18	0.00	0.00
	238040_PM_at		-1.18	0.00	0.01
SPG7	230885_PM_at	spastic paraplegia 7 (pure and com)	-1.18	0.00	0.00
	239110_PM_s_at		-1.18	0.00	0.01
TOX4	232097_PM_at	TOX high mobility group box family	-1.18	0.00	0.01
MORC4	219038_PM_at	MORC family CW-type zinc finger 4	-1.18	0.00	0.00
	236210_PM_at		-1.17	0.00	0.01
TMEM97	212281_PM_s_at	transmembrane protein 97	-1.17	0.00	0.01
DIS3L2	238602_PM_at	DIS3 mitotic control homolog (S. cerevisiae)	-1.17	0.00	0.00
	244204_PM_at		-1.17	0.00	0.01
IREB2	242261_PM_at	iron-responsive element binding protein 2	-1.17	0.00	0.00
PSPC1	222611_PM_s_at	paraspeckle component 1	-1.17	0.00	0.00
MAP4K4	1558732_PM_at	mitogen-activated protein kinase kinase 4	-1.17	0.00	0.01
NXPE3	243011_PM_at	neurexophilin and PC-esterase domain	-1.17	0.00	0.00
ZNF37A	228711_PM_at	zinc finger protein 37A	-1.17	0.00	0.00
	243262_PM_at		-1.17	0.00	0.00
UGP2	232180_PM_at	UDP-glucose pyrophosphorylase 2	-1.17	0.00	0.00
	1563109_PM_at		-1.17	0.00	0.01
	239943_PM_x_at		-1.17	0.00	0.01
SFXN4	230637_PM_at	sideroflexin 4	-1.17	0.00	0.00
CWF19L2	237040_PM_at	CWF19-like 2, cell cycle control (S. cerevisiae)	-1.17	0.00	0.01
MSI2	225240_PM_s_at	musashi homolog 2 (Drosophila)	-1.17	0.00	0.00
	217647_PM_at		-1.17	0.00	0.00
	236139_PM_at		-1.17	0.00	0.00
KIAA0355	203288_PM_at	KIAA0355	-1.17	0.00	0.00
FSCN1	210933_PM_s_at	fascin homolog 1, actin-bundling protein	-1.17	0.00	0.00
KIAA0494	1559023_PM_a_at	KIAA0494	-1.17	0.00	0.01
	242089_PM_at		-1.17	0.00	0.01
XBP1	242021_PM_at	X-box binding protein 1	-1.17	0.00	0.00
	215974_PM_at		-1.17	0.00	0.00
LUC7L	1557066_PM_at	LUC7-like (S. cerevisiae)	-1.17	0.00	0.00
ZNF330	209814_PM_at	zinc finger protein 330	-1.17	0.00	0.01
USP34	233595_PM_at	ubiquitin specific peptidase 34	-1.17	0.00	0.00
	243249_PM_at		-1.17	0.00	0.00
COX18	227442_PM_at	COX18 cytochrome c oxidase assembly protein	-1.17	0.00	0.00
MIR1204	222087_PM_at	microRNA 1204	-1.17	0.00	0.01
CNOT4	210866_PM_s_at	CNOT4-NOT transcription complex, subunit 4	-1.17	0.00	0.01

COCH	1554241_PM_at	coagulation factor C homolog, coel	-1.17	0.00	0.01
	1556818_PM_at		-1.17	0.00	0.00
EVL	227232_PM_at	Enah	-1.17	0.00	0.01
PTCD2	219658_PM_at	pentatricopeptide repeat domain 2	-1.16	0.00	0.00
TRIB2	202479_PM_s_at	tribbles homolog 2 (Drosophila)	-1.16	0.00	0.01
ACAD10	237481_PM_at	acyl-CoA dehydrogenase family, m	-1.16	0.00	0.01
PCSK7	232521_PM_at	proprotein convertase subtilisin	-1.16	0.00	0.00
OXNAD1	227686_PM_at	oxidoreductase NAD-binding domain	-1.16	0.00	0.01
ABLM1	200965_PM_s_at	actin binding LIM protein 1	-1.16	0.00	0.00
RIMKLB	229344_PM_x_at	ribosomal modification protein rim	-1.16	0.00	0.00
DCAF8	243318_PM_at	DDB1 and CUL4 associated factor 8	-1.16	0.00	0.00
TCF4	222146_PM_s_at	transcription factor 4	-1.16	0.00	0.01
SFSWAP	202773_PM_s_at	splicing factor, suppressor of white	-1.16	0.00	0.00
	243329_PM_at		-1.16	0.00	0.00
	242431_PM_at		-1.16	0.00	0.00
	239160_PM_at		-1.16	0.00	0.01
KTN1	200914_PM_x_at	kinectin 1 (kinesin receptor)	-1.16	0.00	0.00
	234153_PM_at		-1.16	0.00	0.00
AGAP4	1565620_PM_at	ArfGAP with GTPase domain, ankyrin	-1.16	0.00	0.01
HEATR1	232414_PM_at	HEAT repeat containing 1	-1.16	0.00	0.00
PSMG4	228217_PM_s_at	proteasome (prosome, macropain)	-1.16	0.00	0.00
YME1L1	224343_PM_x_at	YME1-like 1 (<i>S. cerevisiae</i>)	-1.16	0.00	0.00
AGPAT4	219693_PM_at	1-acylglycerol-3-phosphate O-acyltransferase	-1.16	0.00	0.01
ZMYND8	230533_PM_at	zinc finger, MYND-type containing	-1.16	0.00	0.01
	232700_PM_at		-1.16	0.00	0.01
GPR157	227970_PM_at	G protein-coupled receptor 157	-1.16	0.00	0.01
	222306_PM_at		-1.16	0.00	0.00
TRIB2	202478_PM_at	tribbles homolog 2 (Drosophila)	-1.16	0.00	0.01
	228156_PM_at		-1.16	0.00	0.00
FBXO21	212229_PM_s_at	F-box protein 21	-1.16	0.00	0.00
	242194_PM_at		-1.16	0.00	0.00
NOP14	214661_PM_s_at	NOP14 nucleolar protein homolog	-1.16	0.00	0.01
NGDN	216263_PM_s_at	neuroguidin, EIF4E binding protein	-1.16	0.00	0.01
	1562673_PM_at		-1.16	0.00	0.00
SIKE1	221705_PM_s_at	suppressor of IKBKE 1	-1.16	0.00	0.01
CCDC50	225331_PM_at	coiled-coil domain containing 50	-1.16	0.00	0.01
HSPH1	208744_PM_x_at	heat shock 105kDa	-1.16	0.00	0.00
	238645_PM_at		-1.16	0.00	0.01
C4orf29	219980_PM_at	chromosome 4 open reading frame 29	-1.16	0.00	0.00
ZNF747	238606_PM_at	zinc finger protein 747	-1.16	0.00	0.00
SERBP1	209669_PM_s_at	SERPINE1 mRNA binding protein 1	-1.16	0.00	0.01
NAPEPLD	238722_PM_x_at	N-acyl phosphatidylethanolamine phospholipase D	-1.16	0.00	0.00
U2SURP	236431_PM_at	U2 snRNP-associated SURP domain-containing protein	-1.16	0.00	0.01
DENR	238982_PM_at	density-regulated protein	-1.16	0.00	0.00
	236168_PM_at		-1.16	0.00	0.00
ELP2	235623_PM_at	elongation protein 2 homolog (<i>S. cerevisiae</i>)	-1.15	0.00	0.01
CIRH1A	228179_PM_at	cirrhosis, autosomal recessive 1A (cirrhosis, autosomal recessive 1A)	-1.15	0.00	0.00
LOC100505549	238055_PM_at	uncharacterized LOC100505549	-1.15	0.00	0.00
TMEM111	215250_PM_at	Transmembrane protein 111	-1.15	0.00	0.01
COBLL1	215393_PM_s_at	COBL-like 1	-1.15	0.00	0.01

SNHG12	223773_PM_s_at	small nucleolar RNA host gene 12 (	-1.15	0.00	0.00
ATF7IP2	219870_PM_at	activating transcription factor 7 int	-1.15	0.00	0.01
	243217_PM_at		-1.15	0.00	0.01
ZNF224	232427_PM_at	Zinc finger protein 224	-1.15	0.00	0.00
	1556479_PM_at		-1.15	0.00	0.01
LOC100507495	236520_PM_at	Uncharacterized LOC100507495	-1.15	0.00	0.01
	240121_PM_x_at		-1.15	0.00	0.00
NOP14-AS1	214123_PM_s_at	NOP14 antisense RNA 1 (non-prote	-1.15	0.00	0.01
	236586_PM_at		-1.15	0.00	0.01
ZNF830	226315_PM_at	zinc finger protein 830	-1.15	0.00	0.01
NASP	201969_PM_at	nuclear autoantigenic sperm prote	-1.15	0.00	0.00
LOC100132707	1558527_PM_at	uncharacterized LOC100132707	-1.15	0.00	0.00
FAM60A	223038_PM_s_at	family with sequence similarity 60,	-1.15	0.00	0.01
AQP3	39248_PM_at	aquaporin 3 (Gill blood group)	-1.15	0.00	0.01
ZDHHC14	219247_PM_s_at	zinc finger, DHHC-type containing :	-1.15	0.00	0.00
PCCB	1557502_PM_at	Propionyl CoA carboxylase, beta pol	-1.15	0.00	0.00
	236699_PM_at		-1.15	0.00	0.01
	243091_PM_at		-1.15	0.00	0.00
LUC7L	1557067_PM_s_at	LUC7-like (S. cerevisiae)	-1.15	0.00	0.01
ZBTB44	220243_PM_at	zinc finger and BTB domain contain	-1.15	0.00	0.00
	1556434_PM_at		-1.15	0.00	0.00
NEK1	213328_PM_at	NIMA (never in mitosis gene a)-relat	-1.15	0.00	0.00
KCTD6	238077_PM_at	potassium channel tetramerisation	-1.15	0.00	0.00
PNISR	212177_PM_at	PNN-interacting serine	-1.15	0.00	0.00
CSPP1	220072_PM_at	centrosome and spindle pole associa	-1.15	0.00	0.01
	216440_PM_at		-1.15	0.00	0.01
PMS2L2	214757_PM_at	postmeiotic segregation increased	-1.15	0.00	0.01
FOXK1	226715_PM_at	forkhead box K1	-1.15	0.00	0.00
RNPC3	226999_PM_at	RNA-binding region (RNP1, RRM) c	-1.15	0.00	0.01
KLHL28	235727_PM_at	kelch-like 28 (Drosophila)	-1.15	0.00	0.00
SYNPO	202796_PM_at	synaptopodin	-1.15	0.00	0.00
	234164_PM_at		-1.15	0.00	0.00
	1559054_PM_a_at		-1.15	0.00	0.00
	226773_PM_at		-1.15	0.00	0.00
CSTF3	229666_PM_s_at	cleavage stimulation factor, 3' pre-	-1.15	0.00	0.00
BOLA2	231500_PM_s_at	BolA homolog 2 (E. coli)	-1.15	0.00	0.00
SPAG8	206816_PM_s_at	sperm associated antigen 8	-1.14	0.00	0.00
PDSS1	236298_PM_at	Prenyl (decaprenyl) diphosphate sy	-1.14	0.00	0.01
NPIPL3	215920_PM_s_at	nuclear pore complex interacting p	-1.14	0.00	0.00
CBFA2T2	238549_PM_at	core-binding factor, runt domain, a	-1.14	0.00	0.01
KCMF1	242887_PM_at	potassium channel modulatory fac	-1.14	0.00	0.00
RBM17	224781_PM_s_at	RNA binding motif protein 17	-1.14	0.00	0.01
BOLA2	241644_PM_at	bolA homolog 2 (E. coli)	-1.14	0.00	0.01
	1553547_PM_at		-1.14	0.00	0.01
GAR1	219110_PM_at	GAR1 ribonucleoprotein homolog i	-1.14	0.00	0.00
CTNNB1	223679_PM_at	catenin (cadherin-associated prote	-1.14	0.00	0.00
	1556322_PM_a_at		-1.14	0.00	0.01
RBM4	213718_PM_at	RNA binding motif protein 4	-1.14	0.00	0.00
RBM19	206019_PM_at	RNA binding motif protein 19	-1.14	0.00	0.01
	244826_PM_at		-1.14	0.00	0.00

RAD52	205647_PM_at	RAD52 homolog (S. cerevisiae)	-1.14	0.00	0.01
RGS10	204316_PM_at	regulator of G-protein signaling 10	-1.14	0.00	0.00
DNAJC16	212908_PM_at	DnaJ (Hsp40) homolog, subfamily C	-1.14	0.00	0.00
VAV2	226063_PM_at	vav 2 guanine nucleotide exchange	-1.14	0.00	0.00
	236607_PM_at		-1.14	0.00	0.01
KDELR2	200700_PM_s_at	KDEL (Lys-Asp-Glu-Leu) endoplasmic	-1.14	0.00	0.00
UCHL5	220083_PM_x_at	ubiquitin carboxyl-terminal hydrolase	-1.14	0.00	0.01
TSR2	213079_PM_at	TSR2, 20S rRNA accumulation, hon	-1.14	0.00	0.01
CNOT7	233019_PM_at	CCR4-NOT transcription complex, s	-1.14	0.00	0.01
LUC7L	223546_PM_x_at	LUC7-like (S. cerevisiae)	-1.14	0.00	0.00
	242725_PM_at		-1.14	0.00	0.01
AMN	1563792_PM_at	amnionless homolog (mouse)	-1.14	0.00	0.00
RPP14	204245_PM_s_at	ribonuclease P	-1.14	0.00	0.00
TERF1	203448_PM_s_at	telomeric repeat binding factor (NIH3T3)	-1.13	0.00	0.00
LOC285033	235584_PM_at	uncharacterized LOC285033	-1.13	0.00	0.00
TNRC6A	234734_PM_s_at	trinucleotide repeat containing 6A	-1.13	0.00	0.00
FUS	217370_PM_x_at	fused in sarcoma	-1.13	0.00	0.01
	233235_PM_x_at		-1.13	0.00	0.01
MRPS5	224877_PM_s_at	mitochondrial ribosomal protein S5	-1.13	0.00	0.00
	217464_PM_at		-1.13	0.00	0.01
RBM25	212027_PM_at	RNA binding motif protein 25	-1.13	0.00	0.01
RCL1	222666_PM_s_at	RNA terminal phosphate cyclase-lil	-1.13	0.00	0.00
	240241_PM_at		-1.13	0.00	0.01
CCNL2	221427_PM_s_at	cyclin L2	-1.13	0.00	0.00
TNRC6B	229036_PM_at	trinucleotide repeat containing 6B	-1.13	0.00	0.01
ZBTB4	225629_PM_s_at	zinc finger and BTB domain containing	-1.13	0.00	0.00
LUC7L3	208835_PM_s_at	LUC7-like 3 (S. cerevisiae)	-1.13	0.00	0.00
GNAS	228173_PM_at	GNAS complex locus	-1.13	0.00	0.01
KLHL26	219354_PM_at	kelch-like 26 (Drosophila)	-1.13	0.00	0.00
SIM2	206558_PM_at	single-minded homolog 2 (Drosophila)	-1.13	0.00	0.01
LOC100653042	2214107_PM_x_at	uncharacterized LOC100653042	-1.13	0.00	0.00
BICD1	204741_PM_at	bicaudal D homolog 1 (Drosophila)	-1.13	0.00	0.00
SP140L	223934_PM_at	SP140 nuclear body protein-like	-1.13	0.00	0.00
CCAR1	224736_PM_at	cell division cycle and apoptosis regulator	-1.13	0.00	0.00
AKIRIN1	222458_PM_s_at	akirin 1	-1.13	0.00	0.00
KDSR	202419_PM_at	3-ketodihydrosphingosine reductase	-1.13	0.00	0.01
LEPROTL1	202595_PM_s_at	leptin receptor overlapping transcript	-1.13	0.00	0.00
UNKL	221064_PM_s_at	unkempt homolog (Drosophila)-like	-1.13	0.00	0.01
RBM25	1557081_PM_at	RNA binding motif protein 25	-1.13	0.00	0.01
SLC25A14	204587_PM_at	solute carrier family 25 (mitochondrial)	-1.13	0.00	0.00
ZNF493	240155_PM_x_at	zinc finger protein 493	-1.12	0.00	0.01
	240128_PM_at		-1.12	0.00	0.01
SDC2	212157_PM_at	syndecan 2	-1.12	0.00	0.01
UBE3B	212403_PM_at	ubiquitin protein ligase E3B	-1.12	0.00	0.00
PATZ1	209431_PM_s_at	POZ (BTB) and AT hook containing	-1.12	0.00	0.01
SUGP2	64371_PM_at	SURP and G patch domain containing	-1.12	0.00	0.01
PTBP1	226491_PM_x_at	Polypyrimidine tract binding protein 1	-1.12	0.00	0.00
TMEM101	225004_PM_at	transmembrane protein 101	-1.12	0.00	0.00
	230461_PM_s_at		-1.12	0.00	0.01
TRIT1	218617_PM_at	tRNA isopentenyltransferase 1	-1.12	0.00	0.01

AQP11	229526_PM_at	aquaporin 11	-1.12	0.00	0.00
HSPG2	201655_PM_s_at	heparan sulfate proteoglycan 2	-1.12	0.00	0.00
POLR3A	231763_PM_at	polymerase (RNA) III (DNA directed)	-1.12	0.00	0.01
RBMX2	204097_PM_s_at	RNA binding motif protein, X-linked	-1.12	0.00	0.00
RCN1	201063_PM_at	reticulocalbin 1, EF-hand calcium b	-1.12	0.00	0.01
LOC440434	215090_PM_x_at	aminopeptidase puromycin sensitiv	-1.12	0.00	0.01
ZNF498	228138_PM_at	zinc finger protein 498	-1.12	0.00	0.00
TCF3	210776_PM_x_at	transcription factor 3 (E2A immunoc	-1.11	0.00	0.01
RARG	204189_PM_at	retinoic acid receptor, gamma	-1.11	0.00	0.01
FAM165B	228239_PM_at	family with sequence similarity 16!	-1.11	0.00	0.01
EXOSC9	205061_PM_s_at	exosome component 9	-1.11	0.00	0.01
TGIF2	216262_PM_s_at	TGFB-induced factor homeobox 2	-1.11	0.00	0.00
SFRP5	207468_PM_s_at	secreted frizzled-related protein 5	-1.11	0.00	0.01
LUC7L	220143_PM_x_at	LUC7-like (S. cerevisiae)	-1.11	0.00	0.01
ANKRD11	238538_PM_at	ankyrin repeat domain 11	-1.11	0.00	0.00
TEX10	218104_PM_at	testis expressed 10	-1.11	0.00	0.01
ZBTB43	231393_PM_x_at	Zinc finger and BTB domain containi	-1.11	0.00	0.00
ZNF562	219163_PM_at	zinc finger protein 562	-1.11	0.00	0.00
CHD2	1554015_PM_a_at	chromodomain helicase DNA bindi	-1.11	0.00	0.01
RNF115	212742_PM_at	ring finger protein 115	-1.11	0.00	0.01
LOC100271836	208118_PM_x_at	smg-1 homolog, phosphatidylinosi	-1.11	0.00	0.00
CBFA2T2	207625_PM_s_at	core-binding factor, runt domain, a	-1.11	0.00	0.00
PRPF31	214380_PM_at	PRP31 pre-mRNA processing factor	-1.11	0.00	0.01
CCT5	208696_PM_at	chaperonin containing TCP1, subunit	-1.11	0.00	0.01
SDK2	234073_PM_at	Sidekick cell adhesion molecule 2	-1.11	0.00	0.01
RARRES1	206391_PM_at	retinoic acid receptor responder (t	-1.11	0.00	0.00
TCF20	212931_PM_at	transcription factor 20 (AR1)	-1.11	0.00	0.00
WIPI2	202031_PM_s_at	WD repeat domain, phosphoinosit	-1.11	0.00	0.00
	228638_PM_at		-1.11	0.00	0.01
FAM122A	226443_PM_at	family with sequence similarity 12:	-1.11	0.00	0.01
LIMS2	220765_PM_s_at	LIM and senescent cell antigen-like	-1.11	0.00	0.01
QRICH1	229806_PM_at	Glutamine-rich 1	-1.11	0.00	0.00
RAB3GAP1	213531_PM_s_at	RAB3 GTPase activating protein su	-1.11	0.00	0.01
MAP3K13	206249_PM_at	mitogen-activated protein kinase k	-1.11	0.00	0.00
BANF1	210125_PM_s_at	barrier to autointegration factor 1	-1.11	0.00	0.01
MRPL49	201717_PM_at	mitochondrial ribosomal protein L	-1.11	0.00	0.01
AIPL1	235731_PM_at	aryl hydrocarbon receptor interact	-1.10	0.00	0.01
C12orf76	226583_PM_at	chromosome 12 open reading fram	-1.10	0.00	0.01
ARHGEF7	202548_PM_s_at	Rho guanine nucleotide exchange :	-1.10	0.00	0.00
STK35	225649_PM_s_at	serine	-1.10	0.00	0.00
TBP	203135_PM_at	TATA box binding protein	-1.10	0.00	0.01
SMU1	222618_PM_at	smu-1 suppressor of mec-8 and un	-1.10	0.00	0.01
SLC35A2	209326_PM_at	solute carrier family 35 (UDP-galac	-1.10	0.00	0.01
GSX1	1555676_PM_s_at	GS homeobox 1	-1.10	0.00	0.01
NDFIP1	222422_PM_s_at	Nedd4 family interacting protein 1	-1.10	0.00	0.01
SFPQ	214016_PM_s_at	splicing factor proline	-1.10	0.00	0.01
CNTN1	211203_PM_s_at	contactin 1	-1.10	0.00	0.01
MB	204179_PM_at	myoglobin	-1.10	0.00	0.01
FAM192A	224248_PM_x_at	family with sequence similarity 19:	-1.10	0.00	0.00
GTF2H1	202451_PM_at	general transcription factor IIH, po	-1.10	0.00	0.01

APH1A	218389_PM_s_at	anterior pharynx defective 1 homolog	-1.09	0.00	0.01
MTMR1	216095_PM_x_at	myotubularin related protein 1	-1.09	0.00	0.00
DERL2	226719_PM_at	derlin 2	-1.09	0.00	0.00
ZNF212	203985_PM_at	zinc finger protein 212	-1.09	0.00	0.01
MTMR1	213511_PM_s_at	myotubularin related protein 1	-1.09	0.00	0.01
SLC35E1	227518_PM_at	solute carrier family 35, member E	-1.09	0.00	0.01
SRSF5	212266_PM_s_at	serine	-1.09	0.00	0.01
FGD2	1553906_PM_s_at	FYVE, RhoGEF and PH domain containing	-1.09	0.00	0.01
RPL22	214042_PM_s_at	ribosomal protein L22	-1.08	0.00	0.00
NR2E3	208385_PM_at	nuclear receptor subfamily 2, group A	-1.08	0.00	0.02
NONO	208698_PM_s_at	non-POU domain containing, octameric	-1.08	0.00	0.01
FAM192A	223406_PM_x_at	family with sequence similarity 192	-1.08	0.00	0.01
OR8G2	1567056_PM_at	olfactory receptor, family 8, subfamily 2	-1.08	0.00	0.02
R3HDM2	203831_PM_at	R3H domain containing 2	-1.07	0.00	0.01
HNRNPD	221481_PM_x_at	heterogeneous nuclear ribonucleoprotein D	-1.07	0.00	0.01
SRSF1	211784_PM_s_at	serine	-1.07	0.00	0.01
PSMB4	202243_PM_s_at	proteasome (prosome, macropain)	-1.06	0.00	0.01
PSMB4	228204_PM_at	Proteasome (prosome, macropain)	-1.05	0.00	0.02
	214182_PM_at		-1.04	0.00	0.03
ACTB	200801_PM_x_at	actin, beta	1.03	0.00	0.05
ACTB	213867_PM_x_at	actin, beta	1.03	0.00	0.02
HBB	211696_PM_x_at	hemoglobin, beta	1.03	0.00	0.05
MYL12A	201318_PM_s_at	myosin, light chain 12A, regulatory	1.04	0.00	0.04
ACTB	AFFX-HSAC07/X0035	actin, beta	1.04	0.00	0.01
TMEFF2	224321_PM_at	transmembrane protein with EGF-like domains	1.06	0.00	0.02
ATP6VOE1	201172_PM_x_at	ATPase, H ⁺ transporting, lysosomal	1.06	0.00	0.01
CAP1	200625_PM_s_at	CAP, adenylate cyclase-associated protein 1	1.06	0.00	0.01
YWHAZ	200639_PM_s_at	tyrosine 3-monooxygenase	1.07	0.00	0.00
LOC100652765	201171_PM_at	uncharacterized LOC100652765	1.07	0.00	0.01
LYZ	213975_PM_s_at	lysozyme	1.08	0.00	0.00
CCL14	210390_PM_s_at	chemokine (C-C motif) ligand 14	1.08	0.00	0.01
	1566342_PM_at		1.08	0.00	0.00
BTG4	1554362_PM_at	B-cell translocation gene 4	1.08	0.00	0.01
BRK1	224023_PM_s_at	BRICK1, SCAR	1.08	0.00	0.02
FTH1P5	211628_PM_x_at	ferritin, heavy polypeptide 1 pseudogene	1.08	0.00	0.02
CDC42SE1	218157_PM_x_at	CDC42 small effector 1	1.08	0.00	0.00
	AFFX-BioDn-3_at		1.08	0.00	0.01
B2M	201891_PM_s_at	beta-2-microglobulin	1.08	0.00	0.00
LINC00340	1562469_PM_at	long intergenic non-protein coding RNA	1.08	0.00	0.01
BIRC6	224635_PM_s_at	baculoviral IAP repeat containing 6	1.08	0.00	0.02
PSMD7	201705_PM_at	proteasome (prosome, macropain)	1.08	0.00	0.01
TMEM59	200620_PM_at	transmembrane protein 59	1.09	0.00	0.00
MORF4L1	221381_PM_s_at	mortality factor 4 like 1	1.09	0.00	0.00
LOC440944	1557357_PM_at	uncharacterized LOC440944	1.09	0.00	0.00
SPG11	203513_PM_at	spastic paraparesis 11 (autosomal recessive)	1.09	0.00	0.01
	AFFX-r2-Ec-bioD-3_at		1.09	0.00	0.01
RAB11A	200863_PM_s_at	RAB11A, member RAS oncogene family	1.09	0.00	0.01
H2AFZ	213911_PM_s_at	H2A histone family, member Z	1.09	0.00	0.01
MBD4	214047_PM_s_at	methyl-CpG binding domain protein 4	1.09	0.00	0.00
PPP2CA	208652_PM_at	protein phosphatase 2, catalytic subunit	1.09	0.00	0.01

NBPF10	212854_PM_x_at	neuroblastoma breakpoint family, serglycin	1.09	0.00	0.02
SRGN	201859_PM_at	iduronate 2-sulfatase	1.10	0.00	0.01
IDS	212221_PM_x_at		1.10	0.00	0.02
	216420_PM_at		1.10	0.00	0.01
SETX	201964_PM_at	senataxin	1.10	0.00	0.02
EVI2B	211742_PM_s_at	ecotropic viral integration site 2B	1.10	0.00	0.01
	1569812_PM_at		1.10	0.00	0.01
MAOB	1561009_PM_at	Monoamine oxidase B	1.10	0.00	0.00
AK2	212174_PM_at	adenylate kinase 2	1.10	0.00	0.02
PLEKHB2	224121_PM_x_at	pleckstrin homology domain conta	1.10	0.00	0.01
MCU	225320_PM_at	mitochondrial calcium uniporter	1.10	0.00	0.02
	AFFX-r2-Ec-bioD-5_at		1.10	0.00	0.00
CFTR	234702_PM_x_at	cystic fibrosis transmembrane con	1.11	0.00	0.01
LOC100507699	202395_PM_at	vesicle-fusing ATPase-like	1.11	0.00	0.01
H2AFZ	200853_PM_at	H2A histone family, member Z	1.11	0.00	0.01
RPS6KA3	203843_PM_at	ribosomal protein S6 kinase, 90kDa	1.11	0.00	0.01
MORF4L1	224561_PM_s_at	mortality factor 4 like 1	1.11	0.00	0.00
PPCS	218341_PM_at	phosphopantethenoylcysteine syn	1.11	0.00	0.01
OSBPL8	212582_PM_at	oxysterol binding protein-like 8	1.11	0.00	0.01
	1569772_PM_x_at		1.11	0.00	0.01
TINF2	224809_PM_x_at	TERF1 (TRF1)-interacting nuclear f:	1.11	0.00	0.01
ATP6	242131_PM_at	ATP synthase F0 subunit 6	1.12	0.00	0.02
PICALM	212506_PM_at	phosphatidylinositol binding clathr	1.12	0.00	0.01
ASAP1	224791_PM_at	ArfGAP with SH3 domain, ankyrin i	1.12	0.00	0.01
	234371_PM_at		1.12	0.00	0.01
FGR	208438_PM_s_at	Gardner-Rasheed feline sarcoma v	1.12	0.00	0.01
MYL12B	221474_PM_at	myosin, light chain 12B, regulatory	1.12	0.00	0.00
LOC400590	1560992_PM_at	uncharacterized LOC400590	1.12	0.00	0.00
CHMP3	217837_PM_s_at	charged multivesicular body protei	1.12	0.00	0.00
USP8	229501_PM_s_at	ubiquitin specific peptidase 8	1.12	0.00	0.00
MYL12A	201319_PM_at	myosin, light chain 12A, regulatory	1.12	0.00	0.00
BID	227143_PM_s_at	BH3 interacting domain death ago	1.13	0.00	0.01
UBQLN1	222990_PM_at	ubiquilin 1	1.13	0.00	0.02
LOC100128909	236008_PM_at	uncharacterized LOC100128909	1.13	0.00	0.01
SFN	33323_PM_r_at	stratin	1.13	0.00	0.01
	241617_PM_x_at		1.13	0.00	0.01
SCP2	211733_PM_x_at	sterol carrier protein 2	1.14	0.00	0.01
CENPBD1	223728_PM_at	CENPB DNA-binding domains conta	1.14	0.00	0.01
STAG1	202294_PM_at	stromal antigen 1	1.14	0.00	0.01
PRELID1	223032_PM_x_at	PRELI domain containing 1	1.14	0.00	0.02
MAPK1	212271_PM_at	mitogen-activated protein kinase 1	1.14	0.00	0.01
LOC100507507	241353_PM_s_at	uncharacterized LOC100507507	1.14	0.00	0.01
CFLAR	237367_PM_x_at	CASP8 and FADD-like apoptosis re	1.14	0.00	0.01
GNAQ	224861_PM_at	guanine nucleotide binding protei	1.14	0.00	0.01
NT5C2	209155_PM_s_at	5'-nucleotidase, cytosolic II	1.15	0.00	0.00
PPP2R5A	202187_PM_s_at	protein phosphatase 2, regulatory	1.15	0.00	0.01
	1564121_PM_at		1.15	0.00	0.01
SNTB2	226685_PM_at	syntrophin, beta 2 (dystrophin-ass	1.15	0.00	0.02
DAPP1	219290_PM_x_at	dual adaptor of phosphotyrosine a	1.15	0.00	0.00
HBXIP	202299_PM_s_at	hepatitis B virus x interacting prote	1.15	0.00	0.00

TNFSF14	233935_PM_at	Tumor necrosis factor (ligand) superfamily, member 14	1.15	0.00	0.02
	1555845_PM_at		1.16	0.00	0.02
NSMAF	203269_PM_at	neutral sphingomyelinase (N-SMas)	1.16	0.00	0.00
LYST	203518_PM_at	lysosomal trafficking regulator	1.16	0.00	0.02
LINC00525	1553708_PM_at	long intergenic non-protein coding RNA, H19	1.16	0.00	0.01
	242366_PM_at		1.16	0.00	0.00
PLXNC1	213241_PM_at	plexin C1	1.16	0.00	0.02
RAB32	228161_PM_at	RAB32, member RAS oncogene family	1.16	0.00	0.01
	229602_PM_at		1.16	0.00	0.01
ALOX5	204446_PM_s_at	arachidonate 5-lipoxygenase	1.16	0.00	0.01
	216580_PM_at		1.16	0.00	0.01
MYD88	209124_PM_at	myeloid differentiation primary response 88	1.16	0.00	0.00
IFNAR1	204191_PM_at	interferon (alpha, beta and omega)	1.16	0.00	0.02
CKLF	219161_PM_s_at	chemokine-like factor	1.16	0.00	0.01
CTSS	202901_PM_x_at	cathepsin S	1.16	0.00	0.00
ADAM8	205180_PM_s_at	ADAM metallopeptidase domain 8	1.16	0.00	0.02
HEBP2	203430_PM_at	heme binding protein 2	1.16	0.00	0.01
ATP5J2	202961_PM_s_at	ATP synthase, H ⁺ transporting, mitochondrial	1.17	0.00	0.01
	217352_PM_at		1.17	0.00	0.00
MYO5A	204527_PM_at	myosin VA (heavy chain 12, myoxin)	1.17	0.00	0.02
SSH3	219919_PM_s_at	slingshot homolog 3 (Drosophila)	1.17	0.00	0.01
TMEM189	201003_PM_x_at	transmembrane protein 189	1.17	0.00	0.02
TPMT	203671_PM_at	thiopurine S-methyltransferase	1.17	0.00	0.01
CACNG8	231355_PM_at	calcium channel, voltage-dependent, T-type	1.17	0.00	0.00
S100A8	202917_PM_s_at	S100 calcium binding protein A8	1.17	0.00	0.01
PGM2	225367_PM_at	phosphoglucomutase 2	1.17	0.00	0.02
ALAS1	205633_PM_s_at	aminolevulinate, delta-, synthase 1	1.17	0.00	0.00
TMEM33	225492_PM_at	transmembrane protein 33	1.17	0.00	0.02
	229359_PM_at		1.17	0.00	0.01
AMPD3	207992_PM_s_at	adenosine monophosphate deaminase 3	1.17	0.00	0.00
ARHGAP26	226576_PM_at	Rho GTPase activating protein 26	1.17	0.00	0.02
SLC25A20	203658_PM_at	solute carrier family 25 (carnitine)	1.17	0.00	0.01
SUSD1	226264_PM_at	sushi domain containing 1	1.17	0.00	0.01
DEFT1P	1553518_PM_at	defensin, theta 1 pseudogene	1.18	0.00	0.03
EEF1A1	1557120_PM_at	Eukaryotic translation elongation factor 1A1	1.18	0.00	0.00
C9orf85	238912_PM_x_at	chromosome 9 open reading frame 85	1.18	0.00	0.01
KCTD21	229873_PM_at	potassium channel tetramerisation domain-containing protein 21	1.18	0.00	0.01
KREMEN1	224534_PM_at	kringle containing transmembrane protein 1	1.18	0.00	0.01
CCNYL1	227280_PM_s_at	cyclin Y-like 1	1.18	0.00	0.01
PYGL	202990_PM_at	phosphorylase, glycogen, liver	1.18	0.00	0.02
SOX6	227498_PM_at	SRY (sex determining region Y)-box 6	1.18	0.00	0.00
CNIH4	223993_PM_s_at	cornichon homolog 4 (Drosophila)	1.18	0.00	0.03
LOC100509484	209122_PM_at	uncharacterized LOC100509484	1.19	0.00	0.00
NFIL3	203574_PM_at	nuclear factor, interleukin 3 regulatory subunit	1.19	0.00	0.02
	217340_PM_at		1.19	0.00	0.03
KIAA0141	227056_PM_at	KIAA0141	1.19	0.00	0.01
CAT	211922_PM_s_at	catalase	1.19	0.00	0.03
UBE2J1	217825_PM_s_at	ubiquitin-conjugating enzyme E2, J	1.19	0.00	0.01
TSNAX	238973_PM_s_at	translin-associated factor X	1.19	0.00	0.02
EID1	211698_PM_at	EP300 interacting inhibitor of differentiation 1	1.19	0.00	0.02

DPH3	225200_PM_at	DPH3, KTI11 homolog (S. cerevisiae)	1.19	0.00	0.00
SYT11	209197_PM_at	synaptotagmin XI	1.19	0.00	0.01
FAM217B	225313_PM_at	family with sequence similarity 217	1.20	0.00	0.01
RHOQ	212120_PM_at	ras homolog family member Q	1.20	0.00	0.01
	235286_PM_at		1.20	0.00	0.02
	237563_PM_s_at		1.20	0.00	0.02
UBE2J1	222435_PM_s_at	ubiquitin-conjugating enzyme E2, J	1.20	0.00	0.01
CEP350	213165_PM_at	centrosomal protein 350kDa	1.20	0.00	0.01
	239117_PM_at		1.20	0.00	0.01
	1569568_PM_at		1.20	0.00	0.00
HSD3B7	222817_PM_at	hydroxy-delta-5-steroid dehydrogenase	1.20	0.00	0.04
CAT	201432_PM_at	catalase	1.20	0.00	0.00
UBL3	201535_PM_at	ubiquitin-like 3	1.20	0.00	0.04
KCTD15	222668_PM_at	potassium channel tetramerisation domain containing 15	1.21	0.00	0.01
	237071_PM_at		1.21	0.00	0.02
RNF141	226106_PM_at	ring finger protein 141	1.21	0.00	0.04
CCPG1	221156_PM_x_at	cell cycle progression 1	1.21	0.00	0.03
LOC158402	1559067_PM_a_at	Uncharacterized LOC158402	1.21	0.00	0.02
	240020_PM_at		1.21	0.00	0.01
	230176_PM_at		1.21	0.00	0.03
S100A8	214370_PM_at	S100 calcium binding protein A8	1.21	0.00	0.00
CD36	206488_PM_s_at	CD36 molecule (thrombospondin related type 1 domain containing 6)	1.21	0.00	0.01
UBE2J1	217823_PM_s_at	ubiquitin-conjugating enzyme E2, J	1.21	0.00	0.03
LOC100507015	227356_PM_at	uncharacterized LOC100507015	1.22	0.00	0.02
	236297_PM_at		1.22	0.00	0.04
STXBP5	226794_PM_at	syntaxin binding protein 5 (tomasyn)	1.22	0.00	0.01
BHLHE40	201170_PM_s_at	basic helix-loop-helix family, member 40	1.22	0.00	0.00
MPO	203948_PM_s_at	myeloperoxidase	1.22	0.00	0.04
LIN7A	227929_PM_at	lin-7 homolog A (C. elegans)	1.22	0.00	0.04
	240673_PM_at		1.22	0.00	0.00
CR1	217552_PM_x_at	complement component (3b)	1.22	0.00	0.01
CHD9	212616_PM_at	chromodomain helicase DNA binding protein 9	1.22	0.00	0.00
ZNF321P	1558888_PM_x_at	zinc finger protein 321, pseudogen	1.22	0.00	0.03
CMC1	228283_PM_at	COX assembly mitochondrial protein CMC1	1.23	0.00	0.04
	239294_PM_at		1.23	0.00	0.00
FAM198B	223204_PM_at	family with sequence similarity 198	1.23	0.00	0.04
PPID	228469_PM_at	Peptidylprolyl isomerase D	1.23	0.00	0.00
ACSL1	201963_PM_at	acyl-CoA synthetase long-chain family member 1	1.23	0.00	0.00
LOC100509498	227290_PM_at	uncharacterized LOC100509498	1.24	0.00	0.00
RGS12	1555032_PM_at	regulator of G-protein signaling 12	1.24	0.00	0.03
CD24	216379_PM_x_at	CD24 molecule	1.24	0.00	0.05
	243824_PM_at		1.24	0.00	0.03
SNORD89	235536_PM_at	small nucleolar RNA, C	1.24	0.00	0.01
KCNJ15	238428_PM_at	potassium inwardly-rectifying channel subfamily J member 15	1.24	0.00	0.04
ACOT11	216103_PM_at	acyl-CoA thioesterase 11	1.24	0.00	0.01
PTGDR2	206361_PM_at	prostaglandin D2 receptor 2	1.25	0.00	0.04
HRASLS5	231050_PM_at	HRAS-like suppressor family, member 5	1.25	0.00	0.01
MCTP2	220603_PM_s_at	multiple C2 domains, transmembrane protein 2	1.25	0.00	0.00
HCAR3	205220_PM_at	hydroxycarboxylic acid receptor 3	1.25	0.00	0.01
ITPR2	202660_PM_at	inositol 1,4,5-trisphosphate receptor type 2	1.25	0.00	0.01

NDFIP2	224802_PM_at	Nedd4 family interacting protein 2	1.25	0.00	0.02
TCN1	205513_PM_at	transcobalamin I (vitamin B12 binc	1.25	0.00	0.05
DAPK2	215184_PM_at	death-associated protein kinase 2	1.25	0.00	0.02
HNMT	204112_PM_s_at	histamine N-methyltransferase	1.25	0.00	0.05
TRPM6	240389_PM_at	Transient receptor potential cation	1.25	0.00	0.01
FAM120A	1555947_PM_at	family with sequence similarity 12(	1.25	0.00	0.00
MSRB3	225782_PM_at	methionine sulfoxide reductase B3	1.26	0.00	0.02
KIF1B	225878_PM_at	kinesin family member 1B	1.26	0.00	0.01
CD24	209772_PM_s_at	CD24 molecule	1.26	0.00	0.02
RPS27L	218007_PM_s_at	ribosomal protein S27-like	1.26	0.00	0.05
PIK3R6	1558770_PM_a_at	phosphoinositide-3-kinase, regulat	1.26	0.00	0.01
IGHA1	1558438_PM_a_at	Immunoglobulin heavy constant al	1.27	0.00	0.03
LGALS12	223828_PM_s_at	lectin, galactoside-binding, soluble	1.27	0.00	0.01
MPO	203949_PM_at	myeloperoxidase	1.27	0.00	0.02
GPR34	223620_PM_at	G protein-coupled receptor 34	1.28	0.00	0.03
PNPLA1	1553364_PM_at	patatin-like phospholipase domain	1.28	0.00	0.00
SLC29A1	201801_PM_s_at	solute carrier family 29 (nucleoside	1.28	0.00	0.00
	1567100_PM_at		1.28	0.00	0.02
SGMS1	212989_PM_at	sphingomyelin synthase 1	1.28	0.00	0.02
CD36	228766_PM_at	CD36 molecule (thrombospondin r	1.28	0.00	0.00
ARSB	232197_PM_x_at	arylsulfatase B	1.28	0.00	0.00
CYP1B1-AS1	1553829_PM_at	CYP1B1 antisense RNA 1 (non-prot	1.28	0.00	0.01
CARD16	1552701_PM_a_at	caspase recruitment domain famil	1.28	0.00	0.01
	227051_PM_at		1.28	0.00	0.05
S100A12	205863_PM_at	S100 calcium binding protein A12	1.28	0.00	0.02
C19orf59	235568_PM_at	chromosome 19 open reading fran	1.28	0.00	0.01
CYP4F12	206539_PM_s_at	cytochrome P450, family 4, subfan	1.29	0.00	0.00
ITGA2B	206493_PM_at	integrin, alpha 2b (platelet glycop	1.29	0.00	0.03
PALLD	200897_PM_s_at	palladin, cytoskeletal associated pr	1.29	0.00	0.00
SLC24A3	57588_PM_at	solute carrier family 24 (sodium	1.30	0.00	0.00
FAM124B	220637_PM_at	family with sequence similarity 12(	1.30	0.00	0.01
ASRGL1	222764_PM_at	asparaginase like 1	1.30	0.00	0.00
CAMP	210244_PM_at	cathelicidin antimicrobial peptide	1.30	0.00	0.02
MMP8	207329_PM_at	matrix metallopeptidase 8 (neutro	1.31	0.00	0.03
F5	204714_PM_s_at	coagulation factor V (proaccelerin,	1.31	0.00	0.00
MYCT1	231947_PM_at	myc target 1	1.31	0.00	0.01
GAPT	1552386_PM_at	GRB2-binding adaptor protein, tra	1.31	0.00	0.00
SLC26A8	237340_PM_at	solute carrier family 26, member 8	1.31	0.00	0.03
	243252_PM_at		1.31	0.00	0.04
ZNF321P	1558887_PM_at	zinc finger protein 321, pseudogen	1.32	0.00	0.01
LPAR1	204036_PM_at	lysophosphatidic acid receptor 1	1.32	0.00	0.03
CD24	266_PM_s_at	CD24 molecule	1.32	0.00	0.01
DACH1	228915_PM_at	dachshund homolog 1 (<i>Drosophila</i>	1.33	0.00	0.02
F5	231029_PM_at	coagulation factor V (proaccelerin,	1.34	0.00	0.00
CTSG	205653_PM_at	cathepsin G	1.34	0.00	0.05
PPBP	214146_PM_s_at	pro-platelet basic protein (chemok	1.34	0.00	0.01
SLC29A1	201802_PM_at	solute carrier family 29 (nucleoside	1.35	0.00	0.01
OLIG1	228170_PM_at	oligodendrocyte transcription factor	1.35	0.00	0.02
LINC00537	232034_PM_at	Long intergenic non-protein coding	1.35	0.00	0.00
CYP1B1	202437_PM_s_at	cytochrome P450, family 1, subfan	1.37	0.00	0.01

COX7B	202110_PM_at	cytochrome c oxidase subunit VIIb	1.37	0.00	0.05
IDO1	210029_PM_at	indoleamine 2,3-dioxygenase 1	1.37	0.00	0.03
SMPD3	219695_PM_at	sphingomyelin phosphodiesterase	1.38	0.00	0.00
VSTM1	235818_PM_at	V-set and transmembrane domain	1.38	0.00	0.00
HP	208470_PM_s_at	haptoglobin	1.38	0.00	0.00
ARG1	206177_PM_s_at	arginase, liver	1.39	0.00	0.05
CEBPE	214523_PM_at	CCAAT	1.39	0.00	0.00
SLPI	203021_PM_at	secretory leukocyte peptidase inhib	1.40	0.00	0.00
ANXA3	209369_PM_at	annexin A3	1.41	0.00	0.00
ADORA3	206171_PM_at	adenosine A3 receptor	1.42	0.00	0.00
CLC	206207_PM_at	Charcot-Leyden crystal protein	1.44	0.00	0.00
CEACAM6	203757_PM_s_at	carcinoembryonic antigen-related	1.45	0.00	0.01
IL5RA	210744_PM_s_at	interleukin 5 receptor, alpha	1.46	0.00	0.01
CD24	208650_PM_s_at	CD24 molecule	1.46	0.00	0.00
OLIG2	213825_PM_at	oligodendrocyte lineage transcript	1.47	0.00	0.01
DEFA1	205033_PM_s_at	defensin, alpha 1	1.47	0.00	0.00
	240131_PM_at		1.47	0.00	0.00
HP	206697_PM_s_at	haptoglobin	1.48	0.00	0.00
ORM1	205040_PM_at	orosomucoid 1	1.48	0.00	0.03
ORM1	205041_PM_s_at	orosomucoid 1	1.51	0.00	0.02
CEACAM6	211657_PM_at	carcinoembryonic antigen-related	1.51	0.00	0.00
RNASE2	206111_PM_at	ribonuclease, RNase A family, 2 (liv	1.52	0.00	0.00
SIGLEC8	208253_PM_at	sialic acid binding Ig-like lectin 8	1.52	0.00	0.00
CRISP3	207802_PM_at	cysteine-rich secretory protein 3	1.52	0.00	0.00
LCN2	212531_PM_at	lipocalin 2	1.53	0.00	0.01
PRSS33	1552349_PM_a_at	protease, serine, 33	1.53	0.00	0.00
BPI	205557_PM_at	bactericidal	1.57	0.00	0.01
IL5RA	211517_PM_s_at	interleukin 5 receptor, alpha	1.57	0.00	0.00
MMP8	231688_PM_at	matrix metallopeptidase 8 (neutro	1.58	0.00	0.01
TMEM176A	218345_PM_at	transmembrane protein 176A	1.59	0.00	0.03
LTF	202018_PM_s_at	lactotransferrin	1.61	0.00	0.02
PRSS33	1552348_PM_at	protease, serine, 33	1.63	0.00	0.00
OLFM4	212768_PM_s_at	olfactomedin 4	1.71	0.00	0.02
CEACAM8	206676_PM_at	carcinoembryonic antigen-related	1.73	0.00	0.00
RNASE3	206851_PM_at	ribonuclease, RNase A family, 3	1.75	0.00	0.00
CCL23	210548_PM_at	chemokine (C-C motif) ligand 23	1.75	0.00	0.00
RNF182	230720_PM_at	ring finger protein 182	1.81	0.00	0.01
DEFA4	207269_PM_at	defensin, alpha 4, corticostatin	1.90	0.00	0.00
CCL23	210549_PM_s_at	chemokine (C-C motif) ligand 23	2.00	0.00	0.00

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