



## Early View

Original article

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**Acute wheeze-specific gene module shows correlation with vitamin D and asthma medication**

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**CONFLICT OF INTERESTS**

K.K. and J.K. have a patent "GlobinLock - blocking oligonucleotides" pending. The other authors declare no conflict of interests.

## Abstract

**Background:** Airway obstruction and wheezing in preschool children with recurrent viral infections are a major clinical problem, and recognized as a risk factor for the development of chronic asthma. We aimed at analyzing whether gene expression profiling provides evidence for pathways that delineate distinct groups of children with wheeze, and in combination with clinical information could contribute to diagnosis and prognosis of disease development. **Methods:** We analyzed leukocyte transcriptomes from preschool children (6 months - 3 y) at acute wheeze (n=107), and at a revisit 2-3 months later, comparing them to age-matched healthy controls (n=66). RNA-sequencing applying GlobinLock was used. The cases were clinically followed until age 7 years. Differential expression tests, weighted correlation network analysis (WGCNA) and logistic regression were applied and correlations to 76 clinical traits evaluated. **Findings:** Significant enrichment of genes involved in the innate immune responses were observed in children with wheeze. We identified a unique acute wheeze-specific gene-module, that was associated with Vitamin D levels ( $p<0.005$ ) in infancy, and asthma medication and FEV1%/FVC several years later, at age 7 ( $p<0.005$ ). A model that predicts LTRA-medication at 7 years of age with high accuracy was developed (AUC=0.815, 95%CI:0.668-0.962). **Interpretation:** Gene expression profiles in blood from preschool wheezers predict asthma symptoms at school-age, and therefore serve as biomarkers. The acute wheeze-specific gene module suggests that molecular phenotyping in combination with clinical information already at an early episode of wheeze may help to distinguish children that will outgrow their wheeze from those that will develop chronic asthma.

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**Keywords:** preschool children, wheeze, asthma, gene expression, differential expression tests, weighted gene co-expression network analysis (WGCNA), acute wheeze specific gene module, vitamin D, leukotriene receptor antagonist

**Abbreviations:**

C-ACT asthma control test

DEG differentially expressed genes

GEWAC Gene Expression in Wheezing and Asthmatic Children

IFN Interferon

LPS Lipopolysaccharides

PBMC peripheral blood mononuclear cell

TNF Tumor necrosis factor

WGNA Weighted Gene Co-expression Network Analysis

RV rhinovirus

ACW acute phase wheeze patient

REV revisit of the wheeze patient

CTRL healthy control children

VitD 25-OH Vitamin D

VDR Vitamin D receptor

LTRA Leukotriene receptor antagonist

## **Introduction**

Recurrent viral wheeze in preschool children is a major clinical problem that requires high healthcare and economical resources. In the majority of infants, wheeze is a transient condition, but wheeze caused by early rhinovirus (RV) infections has been associated with a significantly increased risk of asthma later in childhood[1]. In a recent study, risk of asthma development was associated with the number of respiratory episodes in the first years of life, but not with specific viruses or bacteria[2]. Thus, whether infection causes asthma or serves as a marker for genetically predisposed individuals is yet unknown. Factors that determine the persistence or remittance of preschool wheeze remain unclear but exposure to tobacco smoke is a confirmed risk factor[3], and e.g., sensitization and viral infections in early life are possible risk factors[4]. Early identification of preschool children at risk of developing chronic asthma would make it possible to provide more specific therapeutic interventions, which might even interfere with the disease trajectory, and help to improve the prognosis.

Today, no simple tools or biomarkers are available to predict the long-term outcome of preschool children with wheeze. Interferons were originally identified through their ability to contribute to the viral resistance of cells, but their role is much broader, with involvement in both the innate and adaptive immune response[5, 6]. Three types of IFNs are described, type I (e.g. IFN- $\alpha$ , - $\beta$ ), type II (IFN- $\gamma$ ), and type III (IFN- $\lambda$ ), which all use distinctive, but related, multimeric receptors[7]. During a respiratory viral infection, an increase of IFN-I and -III occurs, followed by induction of cytokines and accumulation of immune cells[8, 9]. Significant alteration of serum IFN-levels has been found in relation to asthma exacerbation upon RV-infection[10].

Key molecular findings have been made for asthma with global gene expression studies in leukocytes, bronchial biopsies and epithelial cells[11]. However, longitudinal studies including gene expression profiles in preschool children with wheeze are rare. In an attempt to identify gene expression profiles that could be used for prognosis of asthma development and increase the understanding of the pathophysiology, we have analyzed gene expression profiles in acute wheeze in relation to clinical characteristics in a longitudinal cohort of preschool children with wheeze.

## **Materials and methods**

A full description is provided in this article's Online Repository.

### **Ethics**

The study protocol was approved by the Regional Ethics Committee of Karolinska Institutet, Stockholm (Dnr 2008/378-31/4 and 2014/399-31/3). Written informed consent was obtained from parents and/or legal guardians of all children.

### **Study design and subject enrollment**

The children in this study are part of a longitudinal study on preschool children  $\geq 6$  months- 3 years old with wheezing, enrolled between 2008 and 2012, recruited consecutively when visiting the Paediatric Emergency Department at Astrid Lindgren Children's Hospital, Stockholm, Sweden because of acute wheezing (ACW)[12, 13]. Diagnosis of acute wheeze was based on a clinical diagnosis made by the treating physician at the Pediatric Emergency Department. The enrolment criteria were confirmed by the study doctor. Of children with acute wheeze, 80% were hospitalised for at least 24h[12]. The children came to a revisit 2-3 months later (REV, median 12 weeks), and thereafter annually to the same paediatrician and allergologist (study doctor KSH) until school-age. The children are well characterized with clinical examinations, standardized questionnaires, and biological sampling at all visits. Families documented e.g. medication, contact with healthcare, days of absence due to illness during the year preceding each visit. Lung function tests at age 7 yrs were performed, as well as asthma control test (C-ACT). Included in this study are the acute visit (transcriptomics and clinical information), the first revisit after 2-4 months (transcriptomics and clinical information), and the annual visit at 7 years of age (clinical information). For inclusion and exclusion criteria see Table1. During the same recruitment-period, age-matched healthy control children (CTRL) were recruited (Table1). For detailed information of the study design see Fig1, and clinical parameters see TableE1. In total, 334 samples were included (Fig2B). For eighty children transcriptome profiles were available from both acute wheeze (ACW) and from the revisit (REV).

### **Definitions of clinical parameters**

For further details, see TableE1. Acute wheeze was based on a clinical diagnosis made by the treating physician at the Pediatric Emergency Department[12]. At the 7 years visit, the children were examined by the study doctor. Asthma at 7 years of age (7Y\_ASTHMA\_GA2LEN) was defined as a positive answer to either the question; Have you had an attack of asthma in the last 12 months?" OR the question "Are you currently taking or have you during the last 12 months taken any medication for asthma, including short-acting b<sub>2</sub>-antagonists, inhaled corticosteroids, and montelukast?",

modified from[14]. In addition, allergic asthma (7Y\_ASTHMA\_ALLERGIC) was defined as asthma with allergic sensitization and clinical symptoms of allergy until the age of 7 years.

(7Y\_FEV1%\_FVC\_RATIO) refers to the ratio between FEV1%/FVC at the 7 years visit. (7Y\_LTRA) refers to leukotriene receptor antagonist medication during the year preceding the 7 years visit.

(7Y\_ASTHMA\_CONTROL\_TEST) Self-reported asthma control test at the 7 years visit was assessed using the C-ACT[15].

### **Sampling and RNA extraction**

Blood samples were collected both at the acute visit and the revisit for the wheezing children, and at recruitment for the healthy controls. The legal guardian filled out a standardized questionnaire as detailed previously[12, 13]. Total RNA was extracted from buffy coat, and a RIN-value >8 was used as RNA quality cut-off for inclusion.

### **RNA sequencing and statistical analyses**

A transcriptome sequencing (RNA-seq) method that targets the 5'-ends of RNA transcripts, known as STRT[16], was applied[17]. In brief, 80 ng of total RNA from each individual was used for the library preparation. To suppress uninformative globin gene transcripts originating from red blood cells, RNA samples were treated by GlobinLock oligonucleotides[17]. The samples were subdivided into eight 48-plex libraries. Each library was sequenced on three Illumina HiSeq2000 flow-cell lanes using Illumina TruSeq v3 chemistry. The raw sequences were processed, aligned and summarized using the STRTprep pipeline v3[16]. Library bias was corrected by an approximation-based approach[18], and spike-in based normalization was applied. The level of significance of variation between samples was evaluated by comparison with the technical variation of spike-in RNAs[16]. Outlier samples were excluded (FigE1). Significant differential expression between the sample groups was tested using SAMstrt[19]. In the DEG analyses, false discovery rates were estimated by permutation, as described in Li *et al.*[20]. Hierarchical clustering was performed using the Spearman's correlation distance and Ward's clustering methods. Gene set enrichment analysis was performed using EnrichR[21]. Weighted correlation network analysis (WGCNA) was applied according to the developers' recommendations[22].

## Results

When analyzing the transcriptome of peripheral blood leukocytes, the ACW-samples differed the most from the others. A unique acute wheeze-specific gene-module, associated with Vitamin D levels in infancy, and asthma medication and FEV1%/FVC ratio several years later, at age 7 yrs, was identified. This gene module was shown to be a predictor of LTRA-medication at 7 years with high accuracy. Another gene-module showed association to allergic asthma at 7 years.

### Transcriptome profiling

In total, 334 preschool children were included in the current study. 67 samples were excluded for technical reasons, failing QC (Fig2A, FigE1). 267 samples were included in the statistical analyses (Fig2A, Table2). Unsupervised clustering of the samples according to the expression profile suggested clear differences between acute wheeze (ACW) and controls (CTRL), while cases at revisit (REV) were more similar to controls (Figs2B, 2C). Significantly differentially expressed genes (DEGs) were identified between the groups (Fig2A, TableE2), and co-regulated genes in each group were classified into modules using Weighted Correlation Network Analysis implemented in R (WGCNA) as described below (Fig2A, TableE3).

### Differentially expressed genes in preschool children with wheeze in acute phase and at revisit

In order to characterize the expression profile of acute wheeze, we compared the expression of the acute wheeze (ACW) samples to the revisit (REV) and the control (CTRL) samples. The majority (96%, n=391/407) of the genes upregulated in ACW when compared to CTRL was also upregulated when compared to REV samples in the 80 sample pairs available from both visits. This was expected, given the similarity between the expression profiles of the REV and CTRL samples (Fig2B, 2C). Gene ontology analyses of the 391 consistently upregulated genes revealed biological functions with plausible relevance to wheeze, such as neutrophil activation, cytokines and interferon signaling pathways, as well as inflammatory response and negative regulation of viral replication (Fig3A). The increased levels of neutrophils in the group of children with acute wheeze are in agreement with enrichment of genes involved in neutrophilic activity (Fig2C and Fig3A). Gene enrichment analyses showed highly overlapping genes in the categories IFN-signaling pathways and negative regulation of viral replication, supporting the importance of viral infections in preschool wheeze. The majority (90%, n=371/412) of the downregulated genes were consistent between the comparisons, and gene ontology analyses revealed mainly biological functions related to a defense against viral infection (Fig3B).

The 170 upregulated genes specific for the paired samples between ACW and REV showed neutrophilic involvement, and mast cell activation and degranulation, as well as cytokine and IFN-I-mediated signaling pathway (data not shown). This likely reflects phenotype-relevant biological processes similar to the genes consistently upregulated in both comparisons, supporting the importance of interferons/cytokines in the wheezing preschool child.

### **WGCNA reveals an acute wheeze-specific co-regulated gene module**

In the group-wise comparisons of DEGs we assumed homogenous characteristics within the groups. This is the most commonly used approach, but it tends to ignore genes that vary between individuals within a group. The dendrogram in Fig2C illustrates the individual variation within each group. The ACW-samples differed the most from the others, and the majority of the ACW-samples clustered together, but several of them were included in the cluster dominated by CTRL samples. Based on that, we hypothesized that the transcriptomic profiles were heterogeneous even within each group, and that this variation might be relevant to their clinical characteristics. WGCNA was used to find modules of highly correlated genes within each sample group[22]. From 3,079 significantly variable protein coding genes, three overlapping modules from co-regulated gene networks were defined in the ACW, REV and CTRL sample groups (Fig2A, FigsE2-E4 and TableE3). We denote these gene networks by colors (blue, brown, turquoise, yellow and grey). In addition, one unique module consisting of 145 genes was defined for acute wheeze (ACW-yellow). We focused on that ACW-specific module (yellow) and used WGCNA[22] to identify clinical traits that correlated with this gene module.

### **Gene set enrichment analysis suggests variation in interferon responses in the acute-phase wheezing children**

To reveal the roles of the 145 genes in the ACW-specific yellow gene module, we applied gene set enrichment analysis. Genes for IFN-I/-II signaling pathways and responses, cytokine-mediated signaling pathways, and antiviral response were the most enriched (Fig4A). Most prominent was the enrichment of genes in the IFN-signaling pathways and response. We found both genes crucial for signal transduction (e.g., *STAT1* and *STAT2*) as well as down-stream ISRE regulated antiviral genes (e.g., *OAS1*, *OAS2*, *OASL*, *MX1*), and GAS regulated pro-inflammatory genes (e.g., *IRF1*) to be enriched. Also *USP18*, which mediates suppression of IFN-I signaling via STAT2[23], is a member of this module. Genes within the IFN-III signaling pathway were not significantly enriched, most likely due to the limited available information for this newest group of interferons. The expression variation of IFNs (not of IFN-response genes) was not significant and therefore the IFNs were not included in WGCNA (out of the 3079 genes in Fig2A). Our results indicate that the ACW-specific module represented a variation of IFN-response for antiviral activity and inflammation in children with acute wheeze, but

that IFN-expression in peripheral leukocytes was independent of the IFN-response in peripheral leukocytes.

To identify molecules that interfere with the genes in the ACW-specific module, we again applied gene set enrichment analysis, but utilizing a database focused on drug targets (Fig4B). We found that 52% (76/145) of the ACW-specific module genes were upregulated by *in-vitro* IFN- $\beta$  stimulation of human PBMCs (GEO:GSE26104, Fig4B). IFN-I/-II targets were also significantly enriched, but the combined enrichment scores were relatively low. IFN-III targets could not be evaluated as these were not available in the gene sets of the enrichment analysis. These results supported the contribution of IFN-I/-II in variation of acute wheeze, but did not exclude the contribution of IFN-III. Also, an enrichment of genes downstream of LPS stimulation was found. In contrast, 31% (46/145) of the ACW-specific module genes were downregulated by etanercept, a known TNF inhibitor, or *in-vitro* nitric oxide-stimulation of cells (GEO:GSE13887, Fig4B).

### **Gene module-trait association analysis suggests that higher interferon response at the acute-phase wheezing is a predictor of poor respiratory prognosis**

We used WGCNA[22] to identify clinical traits that correlated with the gene modules. 76 clinical traits (Table E1) and blood cell counts were compared with representative expression patterns of each gene module (Figs4C, E5-E6). The ACW-specific module showed positive correlations with the FEV1%/FVC ratio at the visit at 7 years of age (**7Y\_FEV1%\_FCV\_RATIO** in Fig4C; p<0.05) and the leukotriene receptor antagonist (LTRA, montelukast) medication in the year preceding the revisit at 7 years (**7Y\_LTRA** in Fig4C; p<0.005). More than half of the ACW-yellow module genes (55% (80/145)) were significantly correlated with LTRA medication (adjusted p<0.05; TableE4), with *TRIM22* as the most significant gene (Fig4D, p=2.49×10<sup>-4</sup>). *TRIM22* expression differed between children with or without LTRA treatment, with higher expression in those that received treatment. *TRIM22* is induced by IFN-I/-II/-III, and represses virus replication[24]. Among the 25 ACW-specific module genes involved in the IFN-I-signaling pathway (Fig4A; GO:0060337), 19 genes (76%) including *TRIM22* were correlated with LTRA treatment. Similarly, 10/17 genes (59%) of the IFN-II-mediated signaling pathway in this ACW-specific module were also correlated with LTRA treatment at 7 years. The differential expression of *TRIM22* seems to be independent of allergies in our material (FigE7A).

Based on the WGCNA analyses, we used logistic regression to develop a prediction model, and the ACW-specific gene module was shown to be a predictor of LTRA-medication at 7 years with high accuracy (Table3, AUC<sub>ACW-yellow</sub>=0.785, 95%CI:0.652-0.917, Fig4E-F). Among the correlated traits in WGCNA, the body weight at acute visit was suggested as the primary confounder (Table3, AUC<sub>ACW-yellow+weight</sub>=0.815, 95%CI:0.668-0.962, Fig4G), and was therefore added to the prediction model, although no significant improvement of the prediction model was seen (P=0.77, Fig4F). This effect by

the body weight could not be explained by the age or sex of the child (Table3, BG\_GENDER and ACW\_AGE in FigsE5-6). The significant association between the ACW-specific yellow module and clinical traits suggested that children with higher IFN-response at acute wheeze often had more LTRA-responding, respiratory symptoms at the age of 7 years.

The ACW-specific module showed a negative correlation with the number of visits to the emergency room between acute- and revisit ( $p<0.05$ , Fig4C), and 25-OH Vitamin D (VitD) levels in the cases (**REV\_VITAMIND** in Fig4C;  $p<0.005$ ). VitD levels were not a confounder of the prediction model for LTRA-treatment at 7 yrs (Table3). 51 of the 145 ACW-specific module genes (35%) were significantly correlated with VitD levels (adjusted  $p<0.05$ ; TableE5), with *CREM* as the most significant gene (Fig4H,  $p=4.12\times10^{-4}$ ). Of these 51 genes, 38 genes (75%; including *STAT1*, *TRIM22* and *CREM*) were also correlated with LTRA at the age of 7 years, suggesting association between VitD level and the prognosis. In the ACW-specific gene module, 10 of the 25 genes in the IFN-I-signaling pathway (40%), and 8 of the 17 genes in the IFN- $\gamma$ -mediated signaling pathway (47%), were correlated with the VitD levels at revisit.

#### **Gene module-trait association analysis suggests that downregulation of the turquoise module at the revisit indicates an increased risk for allergic asthma and less asthma control at the age of 7 years**

The REV turquoise gene module showed association to asthma-related traits (Fig5A). The module was associated to asthma (**7Y\_ASTHMA\_GA2LEN**), allergic asthma (**7Y\_ASTHMA\_ALLERGIC**) and asthma control (**7Y\_ASTHMA\_CONTROL\_TEST**), all at 7 years of age. By logistic regression analysis, this module was a predictor of prognostic asthma risk (**7Y\_ASTHMA\_GA2LEN**; Table3, Fig5B-C, AUC=0.730 95%CI:0.573-0.888). Among the REV-turquoise genes, downregulation of *DYNC1I2* at the revisit was the most significant in asthma at 7yrs (Fig5D), and *PRMT9* for allergic asthma at 7yrs (Fig5E-F). In this module there were genes for targeting of proteins to the endoplasmic reticulum, nonsense-mediated mRNA degradation and viral transcription and processes enriched (Fig5G). The REV turquoise module consists of 1257 genes (FigE4). Less than 10 % of the module genes (118/1257) were found in the enrichment analysis of the module, and the annotation was therefore limited. Because of a correlation to lymphocyte counts at the revisit (Fig5A,5H, E7B), the reason for the co-expression of the module genes likely represent changes of the lymphocyte population in the peripheral blood leukocytes rather than changes of a specific molecular pathway. Therefore, our data indicates that downregulation of the module genes by lower lymphocyte count at the revisit suggest higher risk for allergic asthma, and progress to chronic asthma.

## Discussion

The most prominent findings of the significant differences in gene expression between wheezing children and healthy controls, showed upregulation of genes involved in interferon response, as well as neutrophil activity. Furthermore, we identified an acute wheeze-specific gene module consisting of 145 genes, which was associated to VitD levels in infancy, as well as with FEV1%/FVC and asthma medication several years later. This module was a predictor of asthma medication at 7 years with high accuracy, and therefore genes in this module are strong candidates as prognostic markers. The major role of the genes in this module was related to the innate immune response combined with reduction of viral replication through interferon signaling. Another co-regulated gene module correlated to development of allergic asthma.

Interferons are secreted as part of the innate immune response by lymphocytes and infected non-immune cells, e.g. epithelial cells, as defense against pathogens. Viral infections trigger as many as 85% of acute asthma attacks in children, with Rhinovirus (RV) as the most common agent[25]. During a respiratory viral infection, an increase of interferons (IFN)-I and -III will occur, followed by induction of e.g. cytokines and accumulation of immune cells, but the specific response differs depending on age and the viral trigger [9, 26, 27]. Rhinovirus-associated acute wheeze correlates with higher serum IFN-II levels than Respiratory syncytial (RS)-virus associated acute wheeze[27]. Similarly, an *in-vitro* approach revealed that IFN- $\alpha$ -/ $\beta$ -/ $\lambda$  are produced by RV-infection in bronchial epithelial cells and PBMCs[28]. These studies suggest an increased serum IFN-level in children with an acute viral infection with wheeze. Furthermore, a recent observation showed that the general impairment of IFN –I/-III production in asthmatics previously seen both *in-vivo*[10] and *in-vitro*[29-31], can be overcome at an acute rhinovirus-infection[10]. Our study consistently revealed an enrichment of genes known to be upregulated by IFN-stimulation in the ACW-specific module. Genes crucial for signal transduction, as well as down-stream ISRE-regulated antiviral genes, and GAS-regulated pro-inflammatory genes were enriched, clearly showing an increased IFN response in acute wheeze. Importantly, this gene module identified in infancy was significantly correlated with LTRA medication at 7 years. In common Swedish practice LTRA is used as add-on medication to inhaled corticosteroids. Based on this, our data suggested that children with higher serum IFN level at acute wheeze are those with the worst prognosis as they tend to need continuous LTRA medication several years later.

Decreased IFN-levels in asthmatic samples [10, 29-31] and low IFN- $\gamma$  production in the first year of life have been suggested as predictors of childhood wheeze[32]. LTRA blocks leukotriens and increases IFN- $\gamma$  production in T-lymphocytes[33]. LTRA medication will support the native IFN-production to prevent infection as an asthma trigger, or asthma exacerbations. We hypothesize that the children in our cohort in general, but especially those with LTRA treatment at 7 years, were those

with a generally impaired IFN-production already at an early age. Therefore, those children were more severely affected by common respiratory viruses, such as rhinovirus, resulting in acute wheeze severe enough to result in a visit to the emergency room at the hospital at an early age. The reason for this suggested impairment is, however, unknown. For the majority of infants with wheeze it is a transient condition, and viral-induced wheezing will remit by school age[34]. At least part of the explanation might be that IFN- $\gamma$  production increases with age[35]. Wheeze caused by early rhinovirus-infections has been associated with a significantly increased risk of asthma later in childhood[1], and it was recently suggested[26] that identification of the viral trigger should be included in the diagnosis of bronchiolitis, to improve treatment. In our cohort, rhinovirus was detected in 74% at acute wheeze, dominated by species rhinovirus-C, and children with species-specific IgG<sub>1</sub> antibody increase against rhinovirus-A or against rhinovirus-A and -C until the revisit had longer time with respiratory symptoms[13]. As IFN- $\gamma$  reduces IgG<sub>1</sub> production[36, 37], RV-A could result in lower IFN- $\gamma$  induction than the other RV subtypes. Importantly, the time with reported respiratory symptoms seemed to relate more to the antibody response than the RV-species at the acute visit[13], indicating a more general deficiency of the early innate immune response.

Vitamin D is required for IFN-mediated defense against pathogens, its deficiency is a risk factor for childhood asthma, and Vitamin D supplementation during pregnancy seems to reduce risk of asthma/recurrent wheeze in the offspring[38-41]. In this cohort, we have previously shown that low Vitamin D (25(OH)D <30 ng/ml) is associated with an increased risk of acute wheeze[12]. Thus, either reduced IFN-production capacity or Vitamin D deficiency, or both, could lead to viral-induced exacerbation through deficient IFN-response. Our data imply that Vitamin D-deficient children tend to be on LTRA medication at age 7 years for prevention/alleviation of respiratory symptoms. Our study not only supports the impact of VitaminD levels for wheeze, but also shows a connection to gene expression, with *CREM* as the most negatively correlated gene. *CREM* is a repressor of the Vitamin D receptor (VDR) expression[42], and a negative regulator of the TH2 response[43]. Interestingly, the expression of the Vitamin D receptor may be a limiting factor in the Vitamin D-response. A general deficiency of the innate immune response in children with RV-induced respiratory symptoms would also provide room for other viruses and even bacteria to colonize and affect the host. In our cohort, children with Vitamin D insufficiency were not colonized with virus or bacteria to any higher degree than vitamin D-sufficient children[12].

Another interesting finding was that downregulation of the REV turquoise module genes at the revisit indicates an increased risk for allergic asthma, and less asthma control several years later, at the age of 7 years. The risk of adverse health effects in the offspring by maternal tobacco smoking during pregnancy is well documented[44], with for example increased risk of childhood wheeze and

asthma[45], but its effect on development of allergic sensitization in the child is unclear. In our material, a correlation was seen between the module genes and smoking of the mother during pregnancy and allergic sensitization during infancy. In a previous study, more than 80% of Swedish school children with problematic severe asthma or persistent asthma were atopic [46]. Allergic asthma is often chronic and requires anti-inflammatory treatment, which would be represented by the correlation of the gene module with asthma control at 7 years in our material. Based on our data, the REV turquoise module genes could be evaluated as biomarkers for development of allergic asthma. This gene module may serve as a complement to clinical follow-ups to identify the preschool wheezing children that will gain the most from more frequent clinical examinations as well as more active anti-inflammatory treatment. Unlike the prediction value of the ACW-specific gene module which is limited to sampling during acute wheeze, the turquoise module could be evaluated at any timepoint without requirements of ongoing respiratory symptoms.

Our study had some limitations and the findings have to be further validated in independent longitudinal cohorts. Many genes show cell-type specific expression patterns, and therefore it is preferable to study gene expression in disease-relevant tissue whenever possible. However, disease-relevant tissue can be very hard or impossible to access, especially when investigating diseases in preschool children. As acute wheezing primarily affects the airways, the most relevant samples would be, e.g. bronchial epithelial cells or bronchial biopsies, which is not realistic in studies of preschool children. Blood is more accessible as it demands less invasive sampling and reflects relevant changes in the regulation of the inflammatory mechanisms. Despite the heterogeneity in the samples, our analyses approach of the transcriptome in peripheral blood identified an acute wheeze-specific gene module, that associated with later clinical characteristics of the wheezing children. Gene enrichment analyses showing plausible pathways, supported our approach of studying expression profiling for respiratory diseases in peripheral blood. To increase the molecular understanding of the pathophysiology and identification of therapeutic targets, further mechanistic studies will be necessary.

In conclusion, our data strongly support the role of skewed IFN-response in children with wheeze. Despite the heterogeneity in the acute wheeze samples, the gene expression changes in the acute-wheeze specific module correlated with lung-function measurements at 7 years of age and LTRA treatment in the year preceding the age 7 years' revisit. This ACW-specific gene module was a predictor of asthma medication with high accuracy, and therefore we hypothesize that these 145 genes are candidate diagnostic, or even prognostic, markers for a more long-term prognosis of preschool children with wheeze. The gene expression profiles in this acute wheeze group may reflect the cause of the wheezing, and could in that case, serve as candidate markers for more short-time

outcome. Moreover, the same analysis approach might well identify relations between other variable gene modules and clinical characteristics. This gives hope to the long-term aim of development of trustworthy prognostic models based on blood biomarkers.

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## AUTHOR CONTRIBUTIONS

SK designed, developed and performed statistical and bioinformatic analyses. KSH and GH, clinical characterization. KK developed lab procedures and generated the data by RNA-seq. EE contributed to the bioinformatic analysis. JK conceived the study together with CS and supervised transcriptome analyses. CS conceived the study and coordinated the analyses and the project. SK, KSH, KK, EE, GH, JK and CS contributed to the interpretation of the data. SK and CS wrote the manuscript, and all authors read, edited and approved the manuscript.

## REFERENCES

1. Jackson, D.J., et al., *Wheezing rhinovirus illnesses in early life predict asthma development in high-risk children*. Am J Respir Crit Care Med, 2008. **178**(7): p. 667-72.
2. Bonnelykke, K., et al., *Association between respiratory infections in early life and later asthma is independent of virus type*. J Allergy Clin Immunol, 2015. **136**(1): p. 81-86 e4.
3. Silvestri, M., et al., *Smoke exposure, wheezing, and asthma development: a systematic review and meta-analysis in unselected birth cohorts*. Pediatr Pulmonol, 2015. **50**(4): p. 353-62.
4. Rubner, F.J., et al., *Early life rhinovirus wheezing, allergic sensitization, and asthma risk at adolescence*. J Allergy Clin Immunol, 2017. **139**(2): p. 501-507.
5. Ivashkiv, L.B. and L.T. Donlin, *Regulation of type I interferon responses*. Nat Rev Immunol, 2014. **14**(1): p. 36-49.
6. Moro, K., et al., *Interferon and IL-27 antagonize the function of group 2 innate lymphoid cells and type 2 innate immune responses*. Nat Immunol, 2016. **17**(1): p. 76-86.
7. de Weerd, N.A. and T. Nguyen, *The interferons and their receptors--distribution and regulation*. Immunol Cell Biol, 2012. **90**(5): p. 483-91.
8. Jartti, T. and J.E. Gern, *Role of viral infections in the development and exacerbation of asthma in children*. J Allergy Clin Immunol, 2017. **140**(4): p. 895-906.

9. Restori, K.H., et al., *Neonatal Immunity, Respiratory Virus Infections, and the Development of Asthma*. Front Immunol, 2018. **9**: p. 1249.
10. Bergauer, A., et al., *IFN-alpha/IFN-lambda responses to respiratory viruses in paediatric asthma*. Eur Respir J, 2017. **49**(2).
11. Gelfand, E.W. and M. Schedel, *Molecular Endotypes Contribute to the Heterogeneity of Asthma*. Immunol Allergy Clin North Am, 2018. **38**(4): p. 655-665.
12. Stenberg Hammar, K., et al., *Subnormal levels of vitamin D are associated with acute wheeze in young children*. Acta Paediatr, 2014. **103**(8): p. 856-61.
13. Stenberg-Hammar, K., et al., *Rhinovirus-specific antibody responses in preschool children with acute wheeze reflect severity of respiratory symptoms*. Allergy, 2016. **71**(12): p. 1728-1735.
14. Sundbom, F., et al., *Asthma symptoms and nasal congestion as independent risk factors for insomnia in a general population: results from the GA(2)LEN survey*. Allergy, 2013. **68**(2): p. 213-9.
15. Liu, A.H., et al., *Development and cross-sectional validation of the Childhood Asthma Control Test*. J Allergy Clin Immunol, 2007. **119**(4): p. 817-25.
16. Krjutskov, K., et al., *Single-cell transcriptome analysis of endometrial tissue*. Hum Reprod, 2016. **31**(4): p. 844-53.
17. Krjutskov, K., et al., *Globin mRNA reduction for whole-blood transcriptome sequencing*. Sci Rep, 2016. **6**: p. 31584.
18. Katayama, S., et al., *Guide for library design and bias correction for large-scale transcriptome studies using highly multiplexed RNAseq methods*. BMC Bioinformatics, 2019. **20**(1): p. 418.
19. Katayama, S., et al., *SAMstrt: statistical test for differential expression in single-cell transcriptome with spike-in normalization*. Bioinformatics, 2013. **29**(22): p. 2943-5.
20. Li, J. and R. Tibshirani, *Finding consistent patterns: a nonparametric approach for identifying differential expression in RNA-Seq data*. Stat Methods Med Res, 2013. **22**(5): p. 519-36.
21. Kuleshov, M.V., et al., *Enrichr: a comprehensive gene set enrichment analysis web server 2016 update*. Nucleic Acids Res, 2016. **44**(W1): p. W90-7.
22. Langfelder, P. and S. Horvath, *WGCNA: an R package for weighted correlation network analysis*. BMC Bioinformatics, 2008. **9**: p. 559.
23. Arimoto, K.I., et al., *STAT2 is an essential adaptor in USP18-mediated suppression of type I interferon signaling*. Nat Struct Mol Biol, 2017. **24**(3): p. 279-289.
24. Lian, Q. and B. Sun, *Interferons command Trim22 to fight against viruses*. Cell Mol Immunol, 2017. **14**(9): p. 794-796.
25. Gern, J.E., *The ABCs of rhinoviruses, wheezing, and asthma*. J Virol, 2010. **84**(15): p. 7418-26.
26. Jartti, T., et al., *Bronchiolitis needs a revisit: distinguishing between virus entities and their treatments*. Allergy, 2018.
27. Jartti, T., et al., *Systemic T-helper and T-regulatory cell type cytokine responses in rhinovirus vs. respiratory syncytial virus induced early wheezing: an observational study*. Respir Res, 2009. **10**: p. 85.
28. Khaitov, M.R., et al., *Respiratory virus induction of alpha-, beta- and lambda-interferons in bronchial epithelial cells and peripheral blood mononuclear cells*. Allergy, 2009. **64**(3): p. 375-86.
29. Wark, P.A., et al., *Asthmatic bronchial epithelial cells have a deficient innate immune response to infection with rhinovirus*. J Exp Med, 2005. **201**(6): p. 937-47.
30. Contoli, M., et al., *Role of deficient type III interferon-lambda production in asthma exacerbations*. Nat Med, 2006. **12**(9): p. 1023-6.
31. Zhu, J., et al., *Bronchial mucosal IFN-alpha/beta and pattern recognition receptor expression in patients with experimental rhinovirus-induced asthma exacerbations*. J Allergy Clin Immunol, 2018.
32. Stern, D.A., et al., *Low IFN-gamma production in the first year of life as a predictor of wheeze during childhood*. J Allergy Clin Immunol, 2007. **120**(4): p. 835-41.
33. Spinozzi, F., et al., *Biological effects of montelukast, a cysteinyl-leukotriene receptor-antagonist, on T lymphocytes*. Clin Exp Allergy, 2004. **34**(12): p. 1876-82.

34. Martinez, F.D., et al., *Asthma and wheezing in the first six years of life*. The Group Health Medical Associates. N Engl J Med, 1995. **332**(3): p. 133-8.
35. Gasparoni, A., et al., *Age-related changes in intracellular TH1/TH2 cytokine production, immunoproliferative T lymphocyte response and natural killer cell activity in newborns, children and adults*. Biol Neonate, 2003. **84**(4): p. 297-303.
36. Snapper, C.M. and W.E. Paul, *Interferon-gamma and B cell stimulatory factor-1 reciprocally regulate Ig isotype production*. Science, 1987. **236**(4804): p. 944-7.
37. Berton, M.T., J.W. Uhr, and E.S. Vitetta, *Synthesis of germ-line gamma 1 immunoglobulin heavy-chain transcripts in resting B cells: induction by interleukin 4 and inhibition by interferon gamma*. Proc Natl Acad Sci U S A, 1989. **86**(8): p. 2829-33.
38. Fabri, M., et al., *Vitamin D is required for IFN-gamma-mediated antimicrobial activity of human macrophages*. Sci Transl Med, 2011. **3**(104): p. 104ra102.
39. Litonjua, A.A., *Vitamin D and childhood asthma: causation and contribution to disease activity*. Curr Opin Allergy Clin Immunol, 2019.
40. Arikoglu, T., et al., *The association of vitamin D, cathelicidin, and vitamin D binding protein with acute asthma attacks in children*. Allergy Asthma Proc, 2015. **36**(4): p. 51-8.
41. Feng, H., et al., *In utero exposure to 25-hydroxyvitamin D and risk of childhood asthma, wheeze, and respiratory tract infections: A meta-analysis of birth cohort studies*. J Allergy Clin Immunol, 2017. **139**(5): p. 1508-1517.
42. Huening, M., et al., *Evidence for a regulatory role of inducible cAMP early repressor in protein kinase a-mediated enhancement of vitamin D receptor expression and modulation of hormone action*. Mol Endocrinol, 2002. **16**(9): p. 2052-64.
43. Verjans, E., et al., *The cAMP response element modulator (CREM) regulates TH2 mediated inflammation*. Oncotarget, 2015. **6**(36): p. 38538-51.
44. Disease, N.C.f.C., in *The Health Consequences of Smoking-50 Years of Progress: A Report of the Surgeon General*. 2014: Atlanta (GA).
45. McEvoy, C.T. and E.R. Spindel, *Pulmonary Effects of Maternal Smoking on the Fetus and Child: Effects on Lung Development, Respiratory Morbidities, and Life Long Lung Health*. Paediatr Respir Rev, 2017. **21**: p. 27-33.
46. Konradsen, J.R., et al., *Problematic severe asthma: a proposed approach to identifying children who are severely resistant to therapy*. Pediatr Allergy Immunol, 2011. **22**(1 Pt 1): p. 9-18.

**TABLE 1.** Inclusion and exclusion criteria for the children.

	Inclusion criteria	Exclusion criteria
Children with wheeze/asthma	<ul style="list-style-type: none"><li>• Age 6-48 months</li><li>• Presenting at the emergency with acute symptoms of wheeze</li></ul>	<ul style="list-style-type: none"><li>• Prematurity (birth before 36 gestational w.)</li><li>• Any chronic disease</li><li>• Any simultaneous complications such as sepsis, bacterial pneumonia, diabetes at the time point of inclusion</li></ul>
Healthy children	<ul style="list-style-type: none"><li>• Age 6-48 months</li><li>• Otherwise healthy</li></ul>	<ul style="list-style-type: none"><li>• Prematurity (birth before 36 gestational w.)</li><li>• A history of bronchial obstruction/asthma<sup>1</sup></li><li>• Known sensitization to airborne allergens</li><li>• Any chronic disease</li></ul>

<sup>1</sup> This criterion is aimed at excluding wheezing children at enrollment.

**TABLE 2.** Basic characteristics of the children

Table 2

Abbreviation	Wheeze		Wheeze		Healthy controls	
	Acute visit		Revisit		n=66	
	n=107 <sup>a</sup>	n=94				
Male, n (%)	68 (64)		48 (51)		52 (82)	
Age, median (min-max)	17 mo (7-42 mo)		19 mo (9-45 mo)		17 mo (6-44 mo)	
Birth weight (kg), median (IQR)	3.4 (3.0-3.7) <sup>a</sup>		3.4 (3.1-3.8)		3.5 (3.2-3.8)	
Ethnicity mother Caucasian , n (%)	79 (86) <sup>a</sup>		78 (83)		53 (84)	
Ethnicity father Caucasian , n (%)	79 (86) <sup>a</sup>		80 (85)		53 (84)	
Heredity: Mother and/or father with						
Asthma, n (%)	33 (35) <sup>a</sup>		38 (40)		10 (16)	
Eczema, n (%)	21 (23) <sup>a</sup>		22 (23)		8 (13)	
Pollen allergy, n (%)	52 (56) <sup>a</sup>		55 (58)		18 (29)	
Mo smoking during pregnancy, n(%)	9 (10) <sup>a</sup>		8 (8)		3 (5)	
Current smoking, n (%)	17 (18) <sup>a</sup>		19 (20)		12 (20)	
Dog and/or cat at home, n (%)	20 (22) <sup>a</sup>		20 (21)		13 (21)	
Eczema, n (%)	18 (20) <sup>a</sup>		22 (23)		3 (5)	
Sensitized, <sup>b</sup> n (%)	23 <sup>b</sup> (26) <sup>b</sup>		27 <sup>b</sup> (29) <sup>b</sup>		10 <sup>b</sup> (20) <sup>b</sup>	
>6 colds/year, n (%)	62 (67) <sup>a</sup>		61 (64)		14 (22)	
Total WBC, ( $10^9 \times L^{-1}$ ) median (IQR)	11.4 (8.4-14.1) <sup>c</sup>		9.1(7.2-11.2) <sup>d</sup>		8.8 (7.0-10.4)	
Neutrophils ( $10^9 \times L^{-1}$ ), median (IQR)	7.3 (4.1-10.4) <sup>c</sup>		3.3 (2.2-4.2) <sup>d</sup>		2.7 (1.9-3.7)	
Eosinophils <sup>g</sup> ( $10^9 \times L^{-1}$ ), median (IQR)	0.0 (0.0-0.1)		0.3 (0.2-0.6)		0.2 (0.2-0.3)	
Oral steroids at inclusion, n (%)	86 (80)				0	
25-OH-Vitamin D			84 (67-99) <sup>e</sup>		83.5 (70.5-100.5) <sup>f</sup>	

<sup>a</sup> 15 children have missing data since they did not come to the follow-up visit after the acute visit, <sup>b</sup> specific IgE >0,35 kU/L in fx5 and/or phadiatop, n=87 children analyzed in group ACW, n=92 children in group REV and n=49 children in group CTRL <sup>c</sup>6 blood count missing

<sup>d</sup>1 blood count missing <sup>e</sup> 30 vitamin D level missing <sup>f</sup> 12 vitamin D level missing, <sup>g</sup> eosinophil measurements missing for ACW n=6, REV n=3 and CTRL n=4, IQR interquartile range, WBC White blood cells, mo = months, w = weeks, y = years

**TABLE 3.** Logistic regression models for prediction of prognostic traits.

Variable	Coefficient	Standard Error	Z-value	Pr(> z )	Odds Ratio	95% Confidence Interval
<i>Model for 7Y_LTRA prediction by ACW-yellow eigengene</i>						
Intercept	-11.577	3.906				
ACW-yellow	9.675	3.668	2.638	0.008	$1.592 \times 10^4$	$2.004 \times 10^1 - 5.005 \times 10^7$
<i>Model for 7Y_LTRA prediction by ACW-yellow eigengene and ACW_WEIGHT<sup>a</sup></i>						
Intercept	-9.725	4.251				
ACW-yellow	13.565	4.456	3.044	0.002	$7.783 \times 10^5$	$2.888 \times 10^2 - 1.639 \times 10^{10}$
ACW_WEIGHT	-0.532	0.227	-2.339	0.019	$5.877 \times 10^{-1}$	$3.550 \times 10^{-1} - 8.797 \times 10^{-1}$
<i>Model for 7Y_LTRA prediction by ACW-yellow eigengene, BG_GENDER and ACW_AGE<sup>a</sup></i>						
Intercept	$-1.412 \times 10^1$	$4.278 \times 10^1$				
ACW-yellow	$9.523 \times 10^0$	$3.718 \times 10^0$	2.561	0.010		
BG_GENDER	$1.172 \times 10^{-1}$	$6.974 \times 10^{-1}$	0.246	0.806		
ACW_AGE	$6.517 \times 10^{-5}$	$1.058 \times 10^{-3}$	0.062	0.951		
<i>Model for 7Y_LTRA prediction by ACW-yellow eigengene, ACW_WEIGHT and REV_VITAMIND<sup>a</sup></i>						
Intercept	-10.528	6.002				
ACW-yellow	13.988	5.592	2.501	0.012		
ACW_WEIGHT	-0.465	0.236	-1.975	0.048		
REV_VITAMIND	-0.004	0.021	-0.182	0.856		
<i>Model for 7Y_ASTHMA_GA2LEN prediction by REV-turquoise eigengene</i>						
Intercept	9.688	3.518	2.754			
REV-turquoise	-8.323	3.355	-2.481	0.013	$2.429 \times 10^{-4}$	$1.852 \times 10^{-7} - 1.162 \times 10^{-1}$

In all models, subjects, which have missing values, were excluded before the model fitting.

<sup>a</sup> There was no multiple collinearity between the explanatory variables.

## FIGURE LEGENDS

**FIGURE 1.** Overview of the study design. Children were recruited consecutively when visiting the Paediatric Emergency Department because of acute wheezing (ACW). Diagnosis of acute wheeze was based on a clinical diagnosis made by the treating physician at the Pediatric Emergency Department. The enrolment criteria were confirmed by the study doctor [12]. The children came back for a revisit 2-3 months later (REV, median 12 weeks). At the 7 years visit, the children were examined by the study doctor. Age-matched healthy control children were recruited during the same time period (CTRL). The children are well characterized with clinical examinations, standardized questionnaires, and biological sampling at all visits. Guardians and children responded to questions in structured interviews concerning medication, contact with healthcare, days of absence due to illness during the year preceding each visit, and also reported symptoms of allergy and eczema. Asthma at 7 years of age was defined as a positive answer to either the question; Have you had an attack of asthma in the last 12 months? OR the question "Are you currently taking or have you during the last 12 months taken any medication for asthma, including short-acting  $\beta_2$ -agonists, inhaled corticosteroids, and montelukast?", modified from[14]. Allergic asthma at the age of 7 years of age was based on atopy in blood samples at the first revisit and clinical history of allergy until the age of 7 years. Lung function tests including reversibility test at age 7 yrs were performed, as well as asthma control test (C-ACT). In the final analyses, the following numbers of individuals were included, wheezing children at acute visit n=107, wheezing children at revisit n=94, at 7 years n=93 age-matched healthy controls n=66, and follow-up at 7 years n=42 children. See also the supplementary materials and methods and in TableE1. "

**FIGURE 2.** Overview of the transcriptome analysis. **A**, Number of samples available (n=334), and included in the study after sequencing QC (n=267), and differentially expressed genes (DEGs) between the groups (upper panel) and genes categorized into modules by their expression profiles using WGCNA (lower panel), according to the analysis steps. **B**, Similarity of the expression profiles for the different sample groups by principal component analysis. Sample group is annotated. **C**, Similarity of the expression profile for the different groups by hierarchical clustering. Sample group (a), cell counts of neutrophils (b) and lymphocytes (c) ( $10^6$  cells/ $\mu$ l) are annotated. Both B and C illustrate the 267 samples on the leukocyte transcriptome profile of the 1,476 protein coding genes, which showed significant variation after normalization significantly fluctuated. ACW = acute wheeze, REV = revisit, CTRL = healthy controls, PC1 = principal component 1, PC2 = principal component 2.

**FIGURE 3.** Characterization of the acute wheezing children by comparison to healthy controls and the same children at revisit after 2-3 months. **A and B**, Characterization by comparison of DEGs, which were consistently upregulated in acute wheeze (**A**) and consistently downregulated in acute wheeze

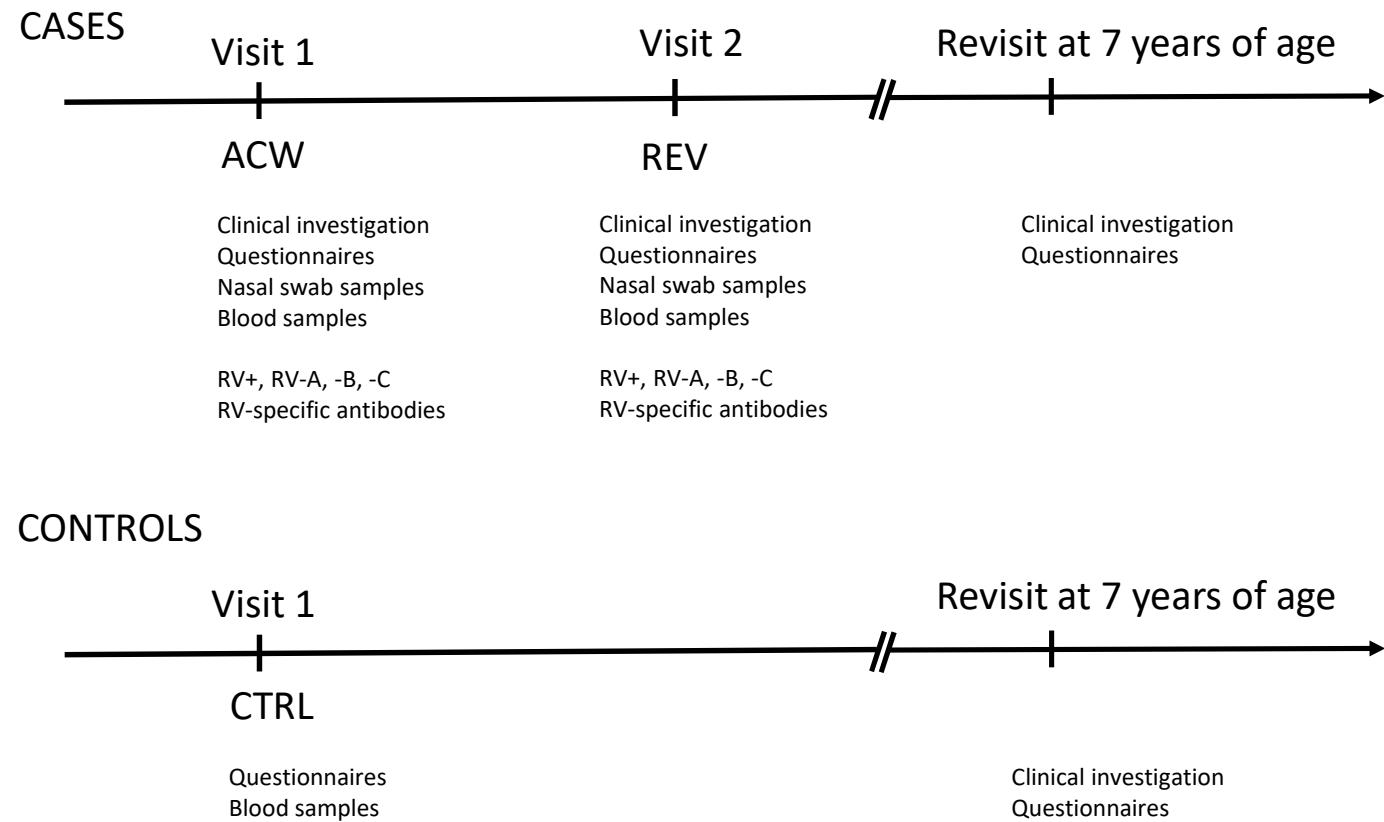
**(B)**, when compared to healthy controls and their own revisit. Euler diagrams illustrate overlap of the DEGs. Enrichment of the consistently regulated genes in Gene Ontology Biological Process was tested by EnrichR, and the 10 most enriched terms based on the combined score were shown here with the significance (x-axis) and the overlap rate; the denominator is member genes of the category, and the numerator is the consistent DEGs overlapping with the member genes of the category. ACW = acute wheeze, REV = revisit, CTRL = controls

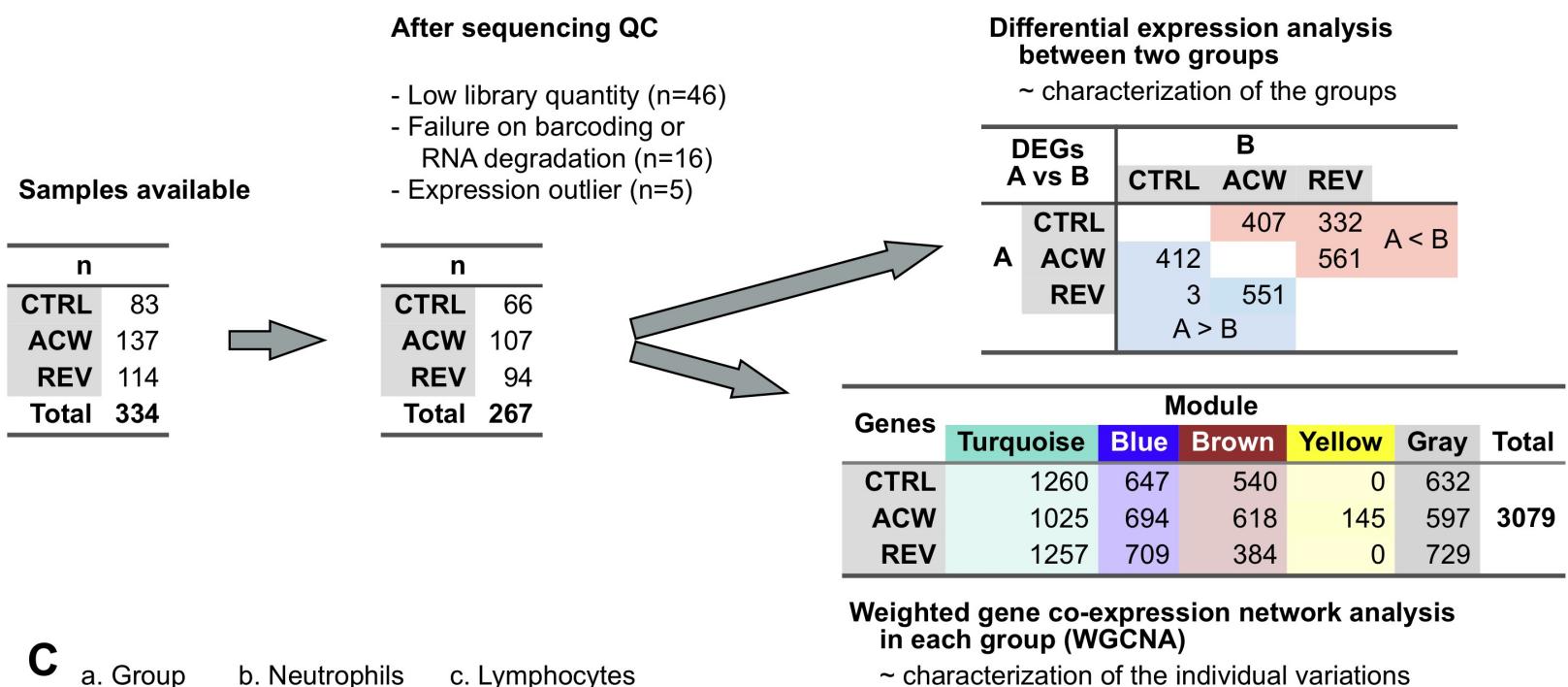
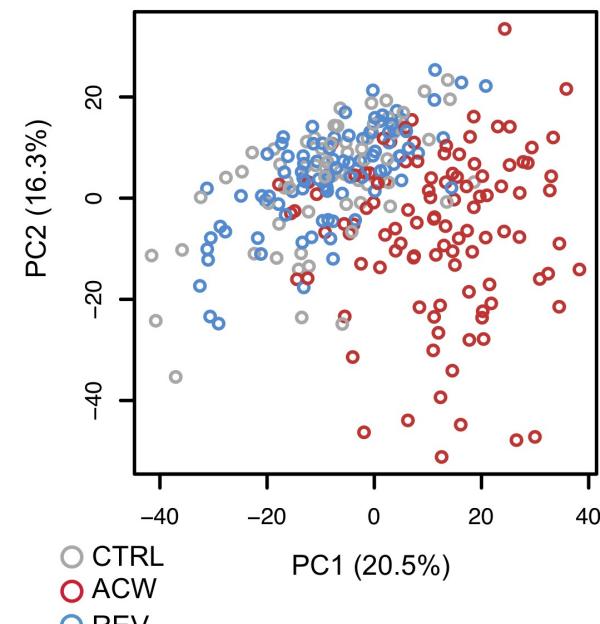
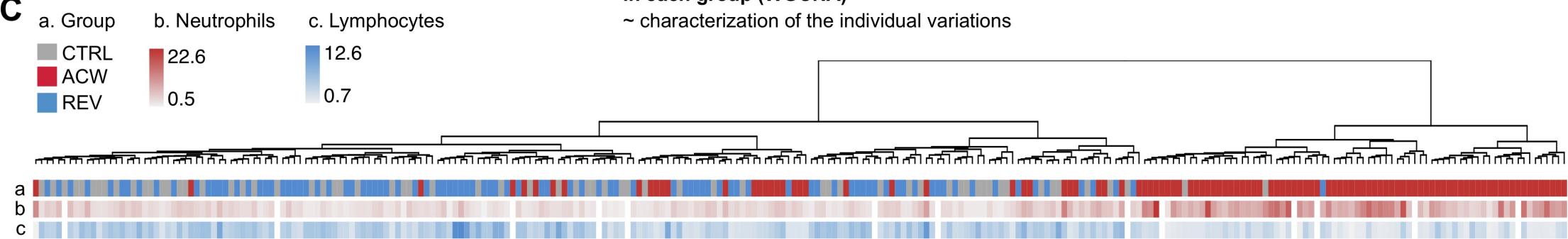
**FIGURE 4.** Characterization of a co-regulated gene module “ACW-yellow” specifically identified in acute wheezing children (ACW). **A and B**, Characterization of ACW yellow module by enrichment of the module genes in Gene Ontology Biological Process (**A**), and Drug Perturbation from GEO using human blood samples (**B**). Enrichments were tested by EnrichR, and the 10 most enriched terms on the combined score were shown here with the significance (x-axis) and the overlap rate; the denominator is member genes of the term, and the numerator is the AC yellow genes overlapping with the member genes. **C**, Significant associations between clinical traits and the ACW yellow module. Each panel illustrates an association between the binary (top) and the quantitative (bottom) traits and the ACW yellow modules. Each column is a clinical trait. Each cell is colored by  $-\log_{10}(p) \times \text{sgn}(r)$ , where  $p$  is p-value of the corresponding correlation, and  $r$  is the correlation coefficient; thus red is positive correlation and blue is negative. !, !! and !!! in each cell are  $p < 0.05$ ,  $0.005$  and  $0.0005$ , respectively. Legend of the trait IDs is in TableE1, and the complete results are found in Figs E5 and E6. **D**, Differential gene expression (y-axis) of TRIM22, a member of the acute wheeze-specific module, in the cases with (Yes) or without (No) a leukotriene receptor antagonist medication (Montelukast) the year preceding the visit at 7 years of age (x-axis). Significance level (P-value at the top of each panel) was tested by Kruskal-Wallis rank sum test. **E**, Relation between ACW-yellow eigengene and 7Y\_LTRA. The probability at 7yrs based on the expression profile at acute visit was modeled by logistic regression (Table3). Line is a trace of the probability (y-axis) according to ACW-yellow eigengene (x-axis). Point is a predicted probability (y-axis) of an ACW child based on the ACW-yellow eigengene (x-axis) with the prognosis (circle, 7Y\_LTRA == yes; cross, == no). **F**, Receiver-operating characteristic (ROC) curves and corresponding areas under the curves (AUC) statistics of the 7Y\_LTRA risk prediction models. Dotted line is about the model using ACW-yellow eigengene only, and gray line is about ACW-yellow eigengene and ACW\_WEIGHT. P-value was estimated by DeLong’s test for two ROC curves. **G**, Relation between ACW-yellow eigengene, ACW\_WEIGHT and conditional probabilities of 7Y\_LTRA. The probability at the 7yrs based on the expression profile and the body weight at the acute visit was modeled by multiple logistic regression (Table3). Line is a trace of the probability (y-axis) according to ACW-yellow eigengene (x-axis) in each body weight, either the first quartile (dark gray), median (the second quartile; gray), or the third quartile (light gray). Point is a predicted probability (y-axis) of an ACW child based on the ACW-yellow eigengene (x-axis) and the body weight (colored) with the

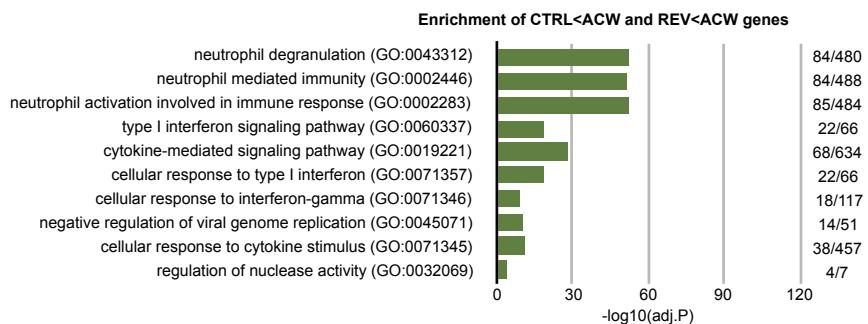
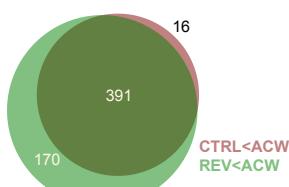
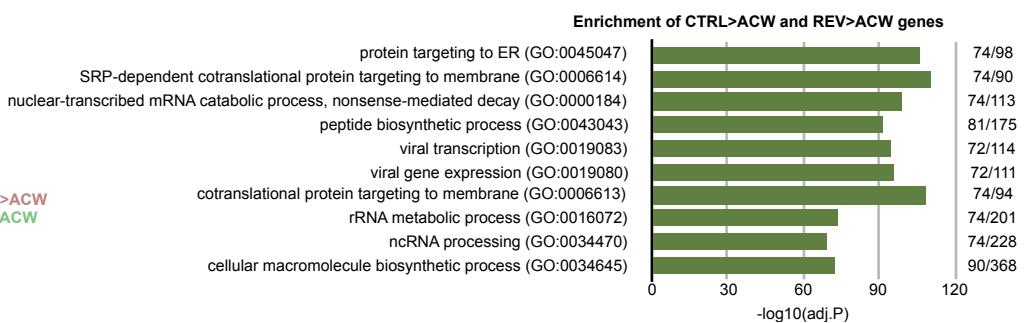
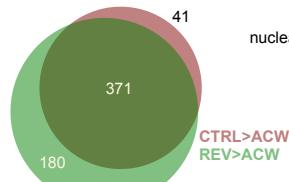
prognosis (circle, 7Y\_LTRA == yes; cross, == no). **H**, Negative correlation with CREM gene expression (y-axis) and 25-OH-vitamin D concentration of the cases at the first revisit (x-axis; RE\_VITAMIND). Biweight midcorrelation coefficient ( $r$ ) and the significance ( $P$ ) are labeled.

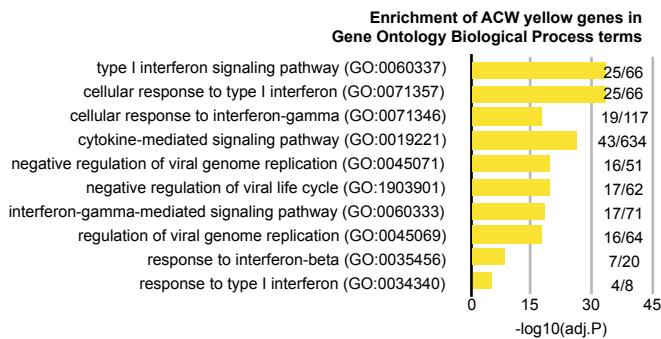
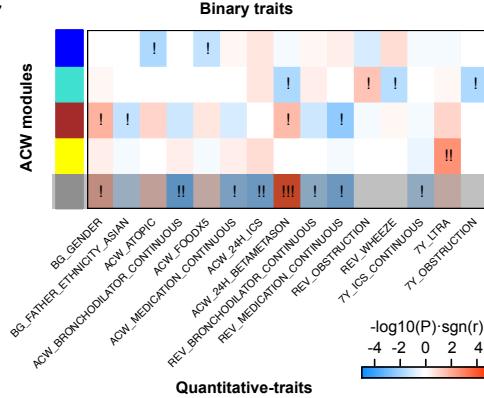
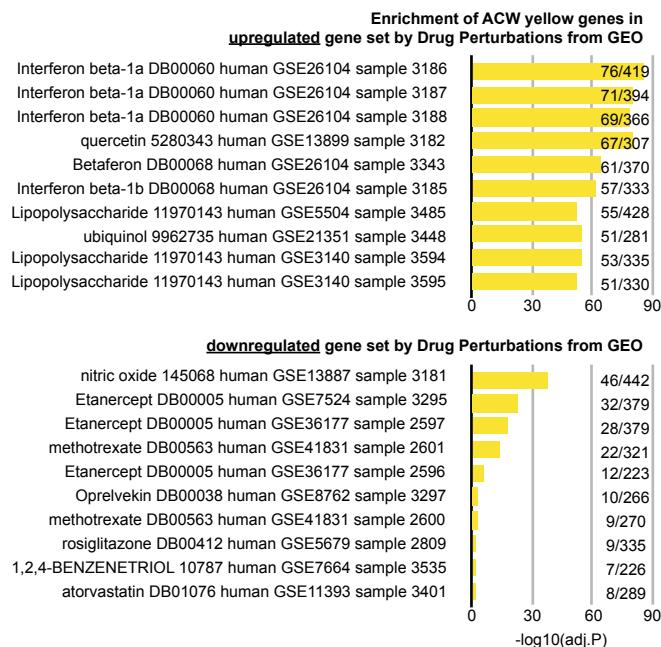
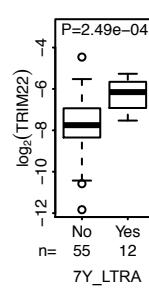
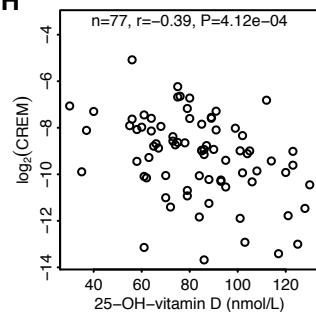
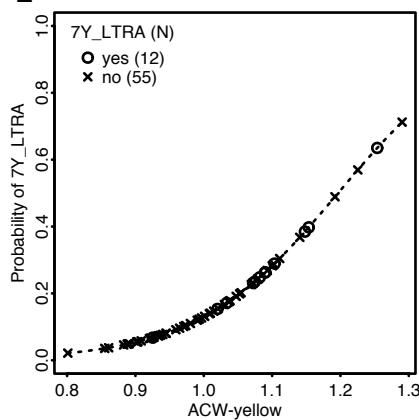
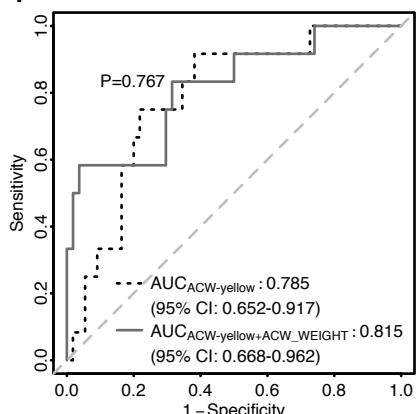
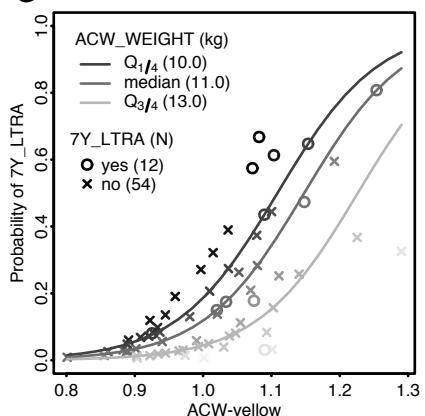
**FIGURE 5.** Characterization of a co-regulated gene module “REV-turquoise” identified in the wheezing children at the revisit. **A**, Significant associations between clinical traits and the REV turquoise module. Each panel illustrates an association between the binary (top) and the quantitative (bottom) traits and the REV turquoise module. Each column is a clinical trait. Each cell is colored by  $-\log_{10}(p) \times \text{sgn}(r)$ , where  $p$  is p-value of the corresponding correlation, and  $r$  is the correlation coefficient; thus red is positive correlation and blue is negative. !, !! and !!! in each cell are  $p < 0.05$ ,  $0.005$  and  $0.0005$ , respectively. Legend of the trait ID is in Table E1, and the complete results are found in Figs E5 and E6. **B**, Relation between REV-turquoise eigengene, probabilities of 7Y\_ASTHMA\_GA2LEN. The probability at the 7yrs using a trait at the revisit is based on the multiple logistic regression model (Table 3). Line is a trace of the probability (y-axis) according to ACW-yellow eigengene (x-axis). Point is a predicted probability of a REV child with the prognosis (circle, 7Y\_ASTHMA\_GA2LEN == yes; cross, == no). **C**, Receiver-operating characteristic curve and corresponding area under the curve statistics for the 7Y\_ASTHMA\_GA2LEN risk score of REV children. **D**, Differential gene expression of DYNC1I2 (y-axis), a member of the REV turquoise module, in the cases with (Yes) or without (No) asthma diagnosis at 7 years of age (x-axis). Significance level (P-value at the top) was tested by Kruskal-Wallis rank sum test. **E**, Differential gene expression of PRMT9 (y-axis), a member of the REV turquoise module, in the cases with (Yes) or without (No) allergic asthma at 7 years of age (x-axis). Significance level (P-value at the top) was tested by Kruskal-Wallis rank sum test. **F**, Differential gene expression of PRMT9 (y-axis) in the cases with asthma sub-types at 7 years of age (x-axis). **G**, Characterization of REV turquoise module by enrichment of the module genes in Gene Ontology Biological Process. Enrichments were tested by EnrichR, and the 10 most enriched terms on the combined score were shown here with the significance (x-axis) and the overlap rate; the denominator is member genes of the term, and the numerator is the REV turquoise genes overlapping with the member genes. SRP = signal recognition particle. **H**, Positive correlation between lymphocyte counts (x-axis) and expression of T- and B-cell markers (y-axis; CD3D and CD79B, respectively) in the REV turquoise module at the revisit. Biweight midcorrelation coefficient ( $r$ ) and the significance ( $P$ ) are labeled.

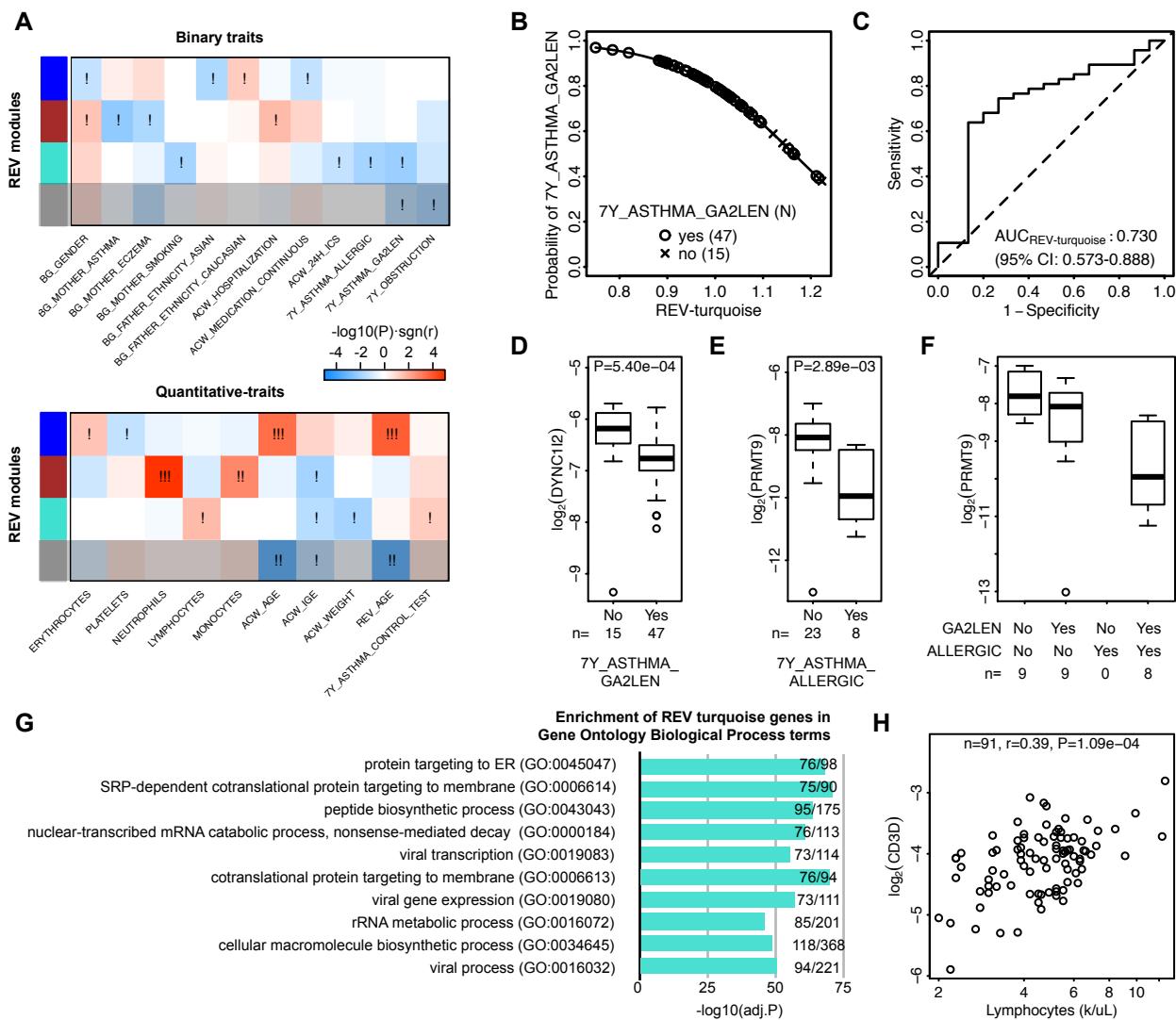
## Figure 1



**A****B****C**

**A****B**

**A****C****B****D****H****E****F****G**



***Acute wheeze-specific gene module shows correlation with vitamin D and asthma medication***

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## **Supplementary methods**

### **Material and methods**

#### **Study design and subject enrollment**

Children in this study are part of a longitudinal study on preschool children with wheezing enrolled between 2008 and 2012, recruited consecutively when visiting the Paediatric Emergency Department at Astrid Lindgren Children's Hospital, Stockholm, Sweden as a result of acute wheezing. Diagnosis of acute wheeze was based on a clinical diagnosis made by the treating physician at the Pediatric Emergency Department. The enrolment criteria were confirmed by the study doctor. Of children with acute wheeze, 80% were hospitalised for at least 24h [1]. The children came back for a revisit 2-3 months later (median 12 weeks), and thereafter annually to the same paediatrician and allergologist (study doctor KSH) until school-age. This study is still ongoing with follow-ups. The children are well characterized with clinical examinations, standardized questionnaires, and biological sampling at all visits. Guardians and children responded to questions in structured interviews concerning medication, contact with healthcare, days of absence due to illness until first follow up 2-4 mo later [1] and also during the year preceding each visit. They also reported symptoms of allergy and eczema at each visit. Lung function tests at age 7 yrs were performed. For inclusion and exclusion criteria see Table1. Included in this study are the acute visit (transcriptomics and clinical information), the first revisit after 2-4 months (transcriptomics and clinical information), and the annual visit at 7 years of age (clinical information). Age-matched healthy control children were recruited at the Surgical Day-care Ward, Astrid Lindgren Children's Hospital. For the study design see Figure 1, and for inclusion and exclusion criteria see Table 1. In total, 334 samples were included in the transcriptome study (Acute wheeze (ACW) n=138, revisit (REV) n=114, healthy controls (CTRL) n=83). Details of some of the definitions of clinical parameters are found below, and further explanations are found in Table E1.

#### **Definitions of clinical parameters**

For inclusion and exclusion criteria see Table1, and for clinical parameters see TableE1. Diagnosis of acute wheeze was based on a clinical diagnosis made by the treating physician at the Pediatric Emergency Department, whereof 80% were hospitalised for at least 24h. At the follow up at 7 years of age, all children were examined by the study doctor (KSH) and assessed for the diagnosis of asthma. Asthma at 7 years of age (7Y\_ASTHMA\_GA2LEN) was defined as a positive answer to either the question; Have you had an attack of asthma in the last 12 months? OR the question "Are you currently taking or have you during the last 12 months taken any medication for asthma, including short-acting b<sub>2</sub>-agonists, inhaled corticosteroids, and montelukast?", modified from[2]. In

addition, allergic asthma (7Y\_ASTHMA\_ALLERGIC) was defined as asthma with allergic sensitization and clinical symptoms of allergy until the age of 7 years. (7Y\_FEV1%\_FVC\_RATIO) the ratio between FEV1%/FVC at the 7 years visit. FEV1% = Percent of the expected forced expiratory volume during 1s, FVC = Forced vital capacity. (7Y\_LTRA) Leukotriene receptor antagonist medication the year preceding the 7 years visit. (7Y\_ASTHMA\_CONTROL\_TEST) Self-reported asthma control test at the 7 years visit was assessed using the ACT[3].

### **Sampling**

For the wheezing children blood samples and nasopharyngeal swab samples were obtained at the acute visit as well as at the follow-up visit 2-3 months later (median 12 weeks). For the age-matched healthy control children blood was drawn at the same time as an intravenous line was inserted prior to surgery and anaesthesia. The legal guardian filled out a standardized questionnaire (cases and controls), as detailed previously [1, 4].

### **Laboratory analysis**

Blood samples were analyzed for total blood cell counts at the Karolinska University Hospital Laboratory at all visits. Presence of RV was detected by PCR in the nasopharyngeal samples, as described elsewhere [4]. The levels of bound antigen-specific antibodies against recombinant VP1 proteins from RV2, 16, 89 (RV-A), RV14 (RV-B) and RV-YP (RV -C), were previously analysed in plasma samples at the acute visit and the follow-up visit 2-3 months later (median 12 weeks) as described elsewhere [1, 4]. Vitamin D; The levels of 25-hydroxyvitamin D (25(OH)D) was assessed using direct, competitive chemiluminescence analysis (CLIA; DiaSorin Inc, Stillwater, MN, USA), as described elsewhere [1].

### **RNA extraction**

Total RNA was extracted from white blood cells (buffy coat) using RiboPure-Blood extraction kit (Thermo Fisher Scientific, Waltham, MA, USA) according to the manufacturer's instructions. For RNA extraction, white blood cells were freshly isolated from the blood, immediately put into *RNAlater* (Thermo Fisher Scientific) and stored at -20° and -80°C until RNA extraction. RNA quality and quantity were assessed using NanoDrop 8000 (Thermo Fisher Scientific), Qubit Fluorometric Quantitation (Thermo Fisher Scientific) and Agilent 2100 Bioanalyzer (Agilent, Santa Clara, CA, USA). RIN-value >8 was used as cut-off for inclusion.

### **RNA sequencing including GlobinLock and statistical analyses**

80 ng of total RNA from each individual was added to the library preparation. In total, 334 samples were included (Acute wheeze ACW n=138, healthy controls CTRL n=83, revisit REV n=114) and

subdivided into eight 48-plex libraries. Peripheral blood leukocyte RNA samples were first treated by GlobinLock® oligonucleotides [5] to exclude highly abundant globin mRNA molecules from the cDNA synthesis, followed by RNA sequencing library preparation according to the Single-cell Tagged Reverse Transcription (STRT) method [6, 7]. In detail, human globin mRNA alpha 1 and 2 (*HBA*, hereafter α) and beta (*HBB*, β) were first denatured and subsequently locked by specific oligonucleotides to mask the binding site of the anchored oligo-dT primer. As a result of this, the GlobinLock treatment significantly reduces the amount of sequences from *HBA* and *HBB*, making direct whole blood full transcriptome analysis possible from 80 ng input material.

Peripheral blood leukocyte RNA samples were diluted with RNase-DNase-free water to a concentration of 40 ng/μl, and 2 μl was added to 4 μl of GlobinLock buffer. The RNA samples (n =368) were placed randomly in eight 48-plex GlobinLock-STRT reaction plates, and each well was tagged for sequencing with an individual barcode. After mixing GlobinLock and RNA on ice, the RNA was denatured for 30 s at 95°C and incubated for 10 min at 60°C for GlobinLock masking and continued for 60 min at 42°C. Just after the 60°C incubation, the block was cooled to 42°C, and 5 μl of reverse transcriptase (RT) mixture was added to initiate cDNA synthesis. The RT mixture contained 1 M betaine (Sigma), 50 mM Tris (pH 8.0, Sigma), 5 mM DTT (Sigma), 7.5 mM MgCl<sub>2</sub> (Sigma), RiboLock (0.7 U/μl, Thermo), 400 nM T30VN and RevertAid Premium reverse transcriptase (7 U/μl, Thermo). The concentrations were calculated for final RT in a volume of 10 μl, including the GlobinLock® buffer. Two microliters of ERCC Mix 1 (Ambion), a 1:500 spike-in dilution with nuclease-free water, were used per whole 48-plex library. After a 60 min RT reaction at 42°C and a 5 min inactivation of RT at 85°C, the contents of all 48 reaction wells (480 μl) were pooled into a low-binding 2.0-ml tube. One hundred microliters of Dynabeads MyOne C1 Streptavidin (Thermo) beads were washed twice and used to capture the cDNA molecules (and free primers) according to instructions. After three rounds of EB buffer (10 mM Tris, pH 8.0) and one round of water washing, the DNA-enriched beads were suspended in 75 μl of water and incubated at 75°C for 3 min to release biotin from the streptavidin beads. The supernatant was used as a template for further full cDNA amplification as described previously [7]. The purified cDNA pool was first amplified using 15 cycles of PCR followed by 15 additional cycles to introduce the complete sets of adapters for Illumina sequencing. The libraries were size-selected (200–400 bp) using the sequential AMPure XP (Beckman Coulter) bead selection protocol described previously [7].

All libraries were quality-controlled by TapeStation HS assay (Agilent) and quantified by KAPA Library Quantification Kit (Kapa Biosystems) in a concentration of 1–10 nM. The amplified libraries were alkaline denatured and diluted to 10 pM library prior to Illumina cluster generation. Single 59 bp

reads were sequenced on an Illumina HiSeq2000 instrument using a v3 single read kit. In total, each 48-plex library was sequenced on three HiSeq2000 flow-cell lanes.

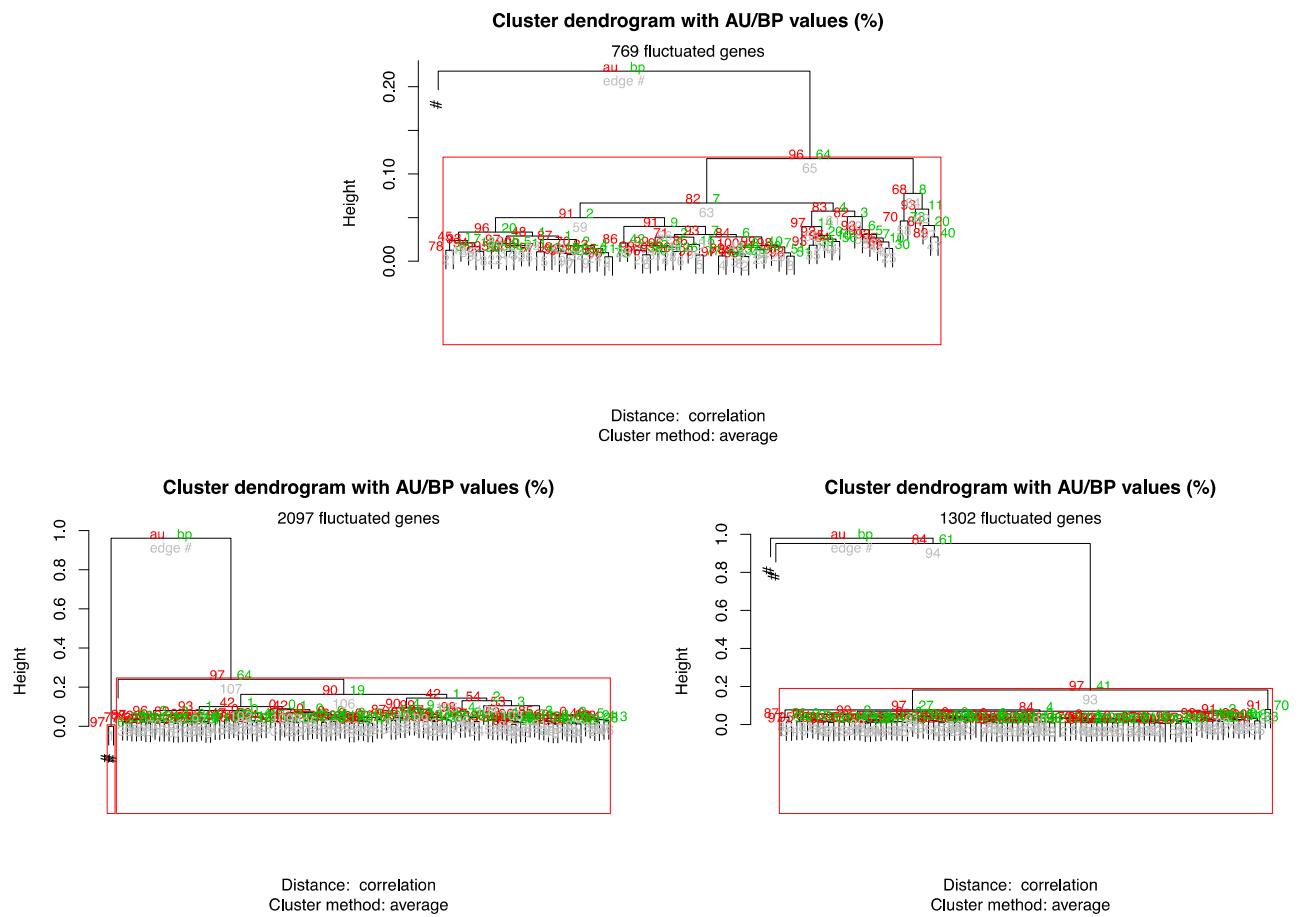
The raw sequences were processed, aligned and summarized using the STRTprep pipeline version 3 (branch 3vdev, commit 8cb9974; <https://github.com/shka/STRTprep/wiki>; [7]). Raw read redundancy was corrected through the use of unique molecular identifiers (UMI [8]). The corrected reads were demultiplexed according to the barcode sequence. The demultiplexed reads were aligned to UCSC hg19 human reference genome, human ribosomal DNA unit [GenBank:U13369] and spike-in sequences by Bowtie v. 1.1.0 [9] and Tophat v.2.0.12 [10] with NCBI RefSeq genes as a transcriptome reference; the aligned reads uniquely within 5'-UTR or the proximal upstream of protein coding genes were counted by genes and by samples; 5'-end capture rates in protein coding genes were also calculated. Library bias in the counts was corrected by an approximation-based approach [11]. After the library bias correction, spike-in based normalization was applied [12]. To select variable genes, significance of variation of gene expression was evaluated by comparison with technical variation in the spike-in RNAs, as described in Supplementary text S1 of [7]. Outlier samples in each of the CTRL, ACW and REV groups were examined by pvclust [13] on the normalized expression levels of variable genes (adjusted P < 0.05) in each group, and excluded. Expression of genes, which contribute to similar function, tends to correlate [14]. Moreover, because of non-random topology in the regulatory network [15], mutants of different genes that are involved in the same cellular processes have been shown to display similar expression profiles [16]. Therefore, grouping of co-regulated genes followed by association with phenotypes is another approach on functional genomics, which is supposed to work well for identification of diagnostic/prognostic marker genes as well. WGCNA [17] is one of the packages to perform such correlation analysis, and the "gene module" is a set of co-regulated genes with consideration of the topology. Weighted correlation network analysis (WGCNA) [17] was applied according to the developers' recommendations; in detail, (i) genes which were weakly variable in at least either ACW, RVE or CTRL (adjusted variation p-value < 0.25) were selected, (ii) approximation of scale-free topology, signed network construction and module detection used biweight mid-correlation [18] with maxPOutliers=0.05 on the logged normalized levels of variable genes (adjusted P < 0.25) in either CTRL, ACW or REV, (iii) relating modules to binary traits used hybrid robust-Pearson correlation [18], and to quantitative traits used biweight mid-correlation with maxPOutliers=0.05. To investigate similarity of the modules between the three groups, consensus modules, which are set of genes correlating in all the three groups, were defined with the same parameters, then related to the group-specific modules. Significance of differential expression between the sample groups was evaluated by SAMstrt [12] and STRTprep [7]. In detail, the differentially expressed genes between two groups were those with the variation p-value < 0.05 (to

guarantee the significant fold-change; adjusted by BH correction) and the differential expression q-value < 0.05 (to guarantee the significant difference between the groups; estimated by permutation, as described in Li et al [19]); the variation index is gene-to-spike-in ratio on the squared coefficient of variance; same amount of spike-in RNA was added to all samples, to model the technical variation, and the variation p-value was estimated by the technical variation, as described in [7]. Hierarchical clustering was performed using Spearman's correlation distance and Ward's clustering method. Gene set enrichment analysis was performed by EnrichR [20]. Multiple logistic regression analysis was performed using glm function in R.

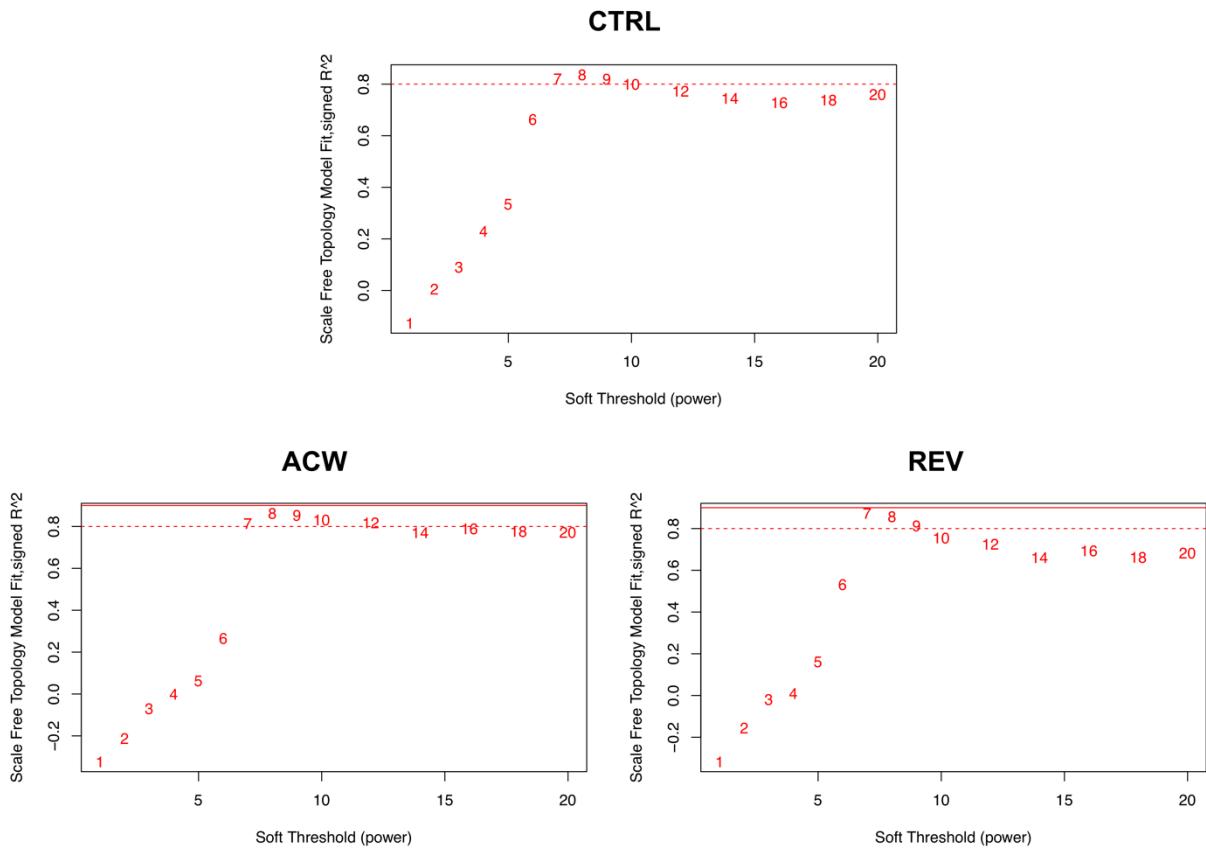
## References

1. Stenberg Hammar, K., et al., *Subnormal levels of vitamin D are associated with acute wheeze in young children*. Acta Paediatr, 2014. **103**(8): p. 856-61.
2. Sundbom, F., et al., *Asthma symptoms and nasal congestion as independent risk factors for insomnia in a general population: results from the GA(2)LEN survey*. Allergy, 2013. **68**(2): p. 213-9.
3. Liu, A.H., et al., *Development and cross-sectional validation of the Childhood Asthma Control Test*. J Allergy Clin Immunol, 2007. **119**(4): p. 817-25.
4. Stenberg-Hammar, K., et al., *Rhinovirus-specific antibody responses in preschool children with acute wheeze reflect severity of respiratory symptoms*. Allergy, 2016. **71**(12): p. 1728-1735.
5. Krjutskov, K., et al., *Globin mRNA reduction for whole-blood transcriptome sequencing*. Sci Rep, 2016. **6**: p. 31584.
6. Islam, S., et al., *Highly multiplexed and strand-specific single-cell RNA 5' end sequencing*. Nat Protoc, 2012. **7**(5): p. 813-28.
7. Krjutskov, K., et al., *Single-cell transcriptome analysis of endometrial tissue*. Hum Reprod, 2016. **31**(4): p. 844-53.
8. Kivioja, T., et al., *Counting absolute numbers of molecules using unique molecular identifiers*. Nat Methods, 2011. **9**(1): p. 72-4.
9. Langmead, B., et al., *Ultrafast and memory-efficient alignment of short DNA sequences to the human genome*. Genome Biol, 2009. **10**(3): p. R25.
10. Kim, D., et al., *TopHat2: accurate alignment of transcriptomes in the presence of insertions, deletions and gene fusions*. Genome Biol, 2013. **14**(4): p. R36.
11. Katayama, S., et al., *Guide for library design and bias correction for large-scale transcriptome studies using highly multiplexed RNAseq methods*. BMC Bioinformatics, 2019. **20**(1): p. 418.
12. Katayama, S., et al., *SAMstrt: statistical test for differential expression in single-cell transcriptome with spike-in normalization*. Bioinformatics, 2013. **29**(22): p. 2943-5.
13. Suzuki, R. and H. Shimodaira, *Pvclust: an R package for assessing the uncertainty in hierarchical clustering*. Bioinformatics, 2006. **22**(12): p. 1540-2.
14. Eisen, M.B., et al., *Cluster analysis and display of genome-wide expression patterns*. Proc Natl Acad Sci U S A, 1998. **95**(25): p. 14863-8.
15. Featherstone, D.E. and K. Broadie, *Wrestling with pleiotropy: genomic and topological analysis of the yeast gene expression network*. Bioessays, 2002. **24**(3): p. 267-74.
16. Hughes, T.R., et al., *Functional discovery via a compendium of expression profiles*. Cell, 2000. **102**(1): p. 109-26.
17. Langfelder, P. and S. Horvath, *WGCNA: an R package for weighted correlation network analysis*. BMC Bioinformatics, 2008. **9**: p. 559.
18. Langfelder, P. and S. Horvath, *Fast R Functions for Robust Correlations and Hierarchical Clustering*. 2012, 2012. **46**(11): p. 17.
19. Li, J. and R. Tibshirani, *Finding consistent patterns: a nonparametric approach for identifying differential expression in RNA-Seq data*. Stat Methods Med Res, 2013. **22**(5): p. 519-36.
20. Kuleshov, M.V., et al., *Enrichr: a comprehensive gene set enrichment analysis web server 2016 update*. Nucleic Acids Res, 2016. **44**(W1): p. W90-7.

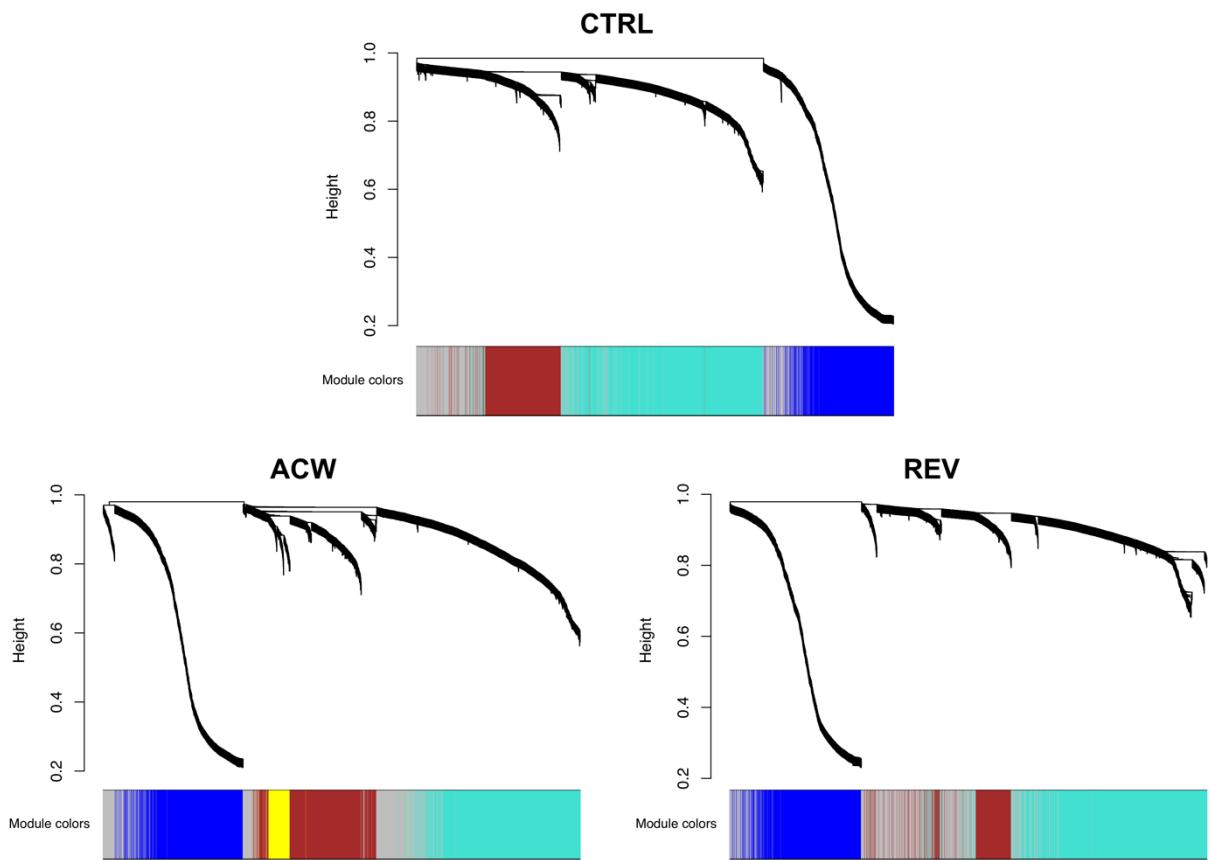
## Supplementary figures



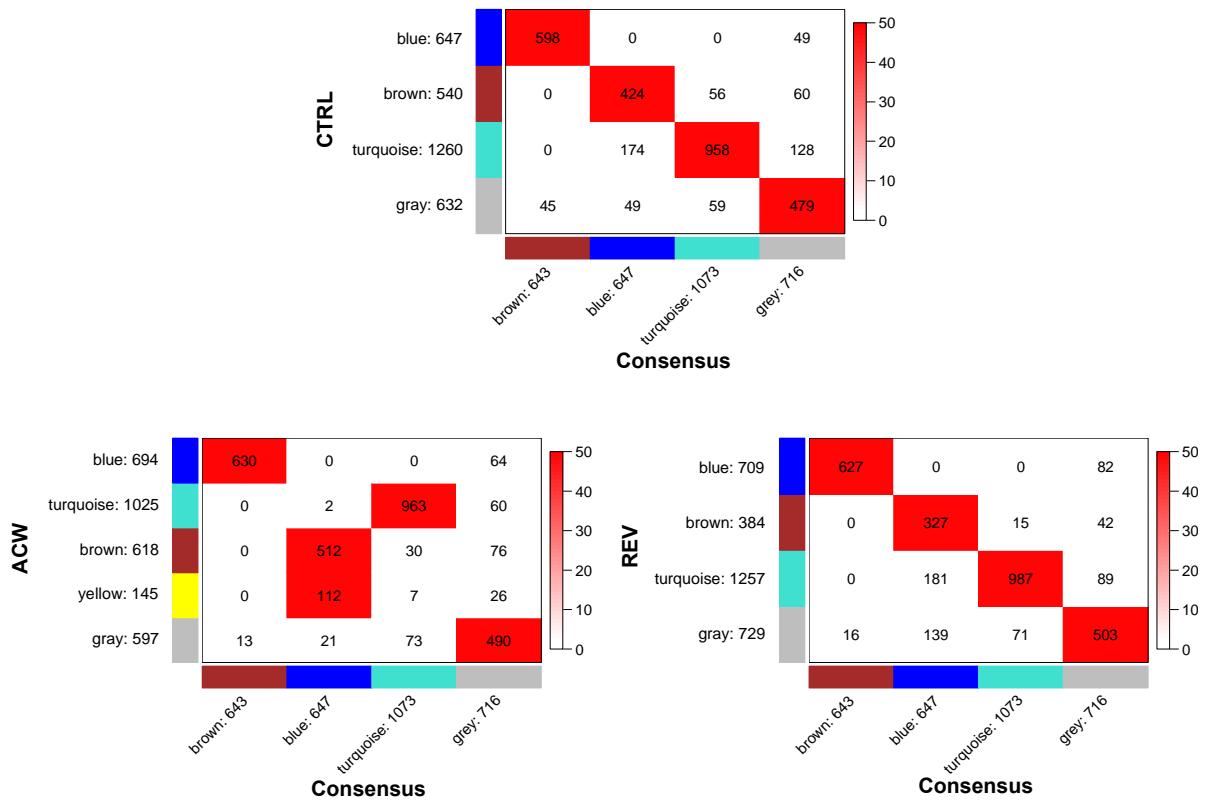
**FIG E1.** Outlier check. Each dendrogram elucidates outlier samples on the leukocyte transcriptome profile of the variable protein coding genes (adjusted variation p-value  $< 0.05$ ) in the healthy controls (top), the cases at the acute visit (bottom left) and the cases at the follow-up visit (bottom right). Red value in each branch is approximately unbiased p-value (AU), and green is bootstrap probability. Clusters with AU  $\geq 95\%$  are highlighted by red rectangles, which are strongly supported as certain cluster by normalized expression levels of variable genes in each group; whereas the samples “#” are outliers.



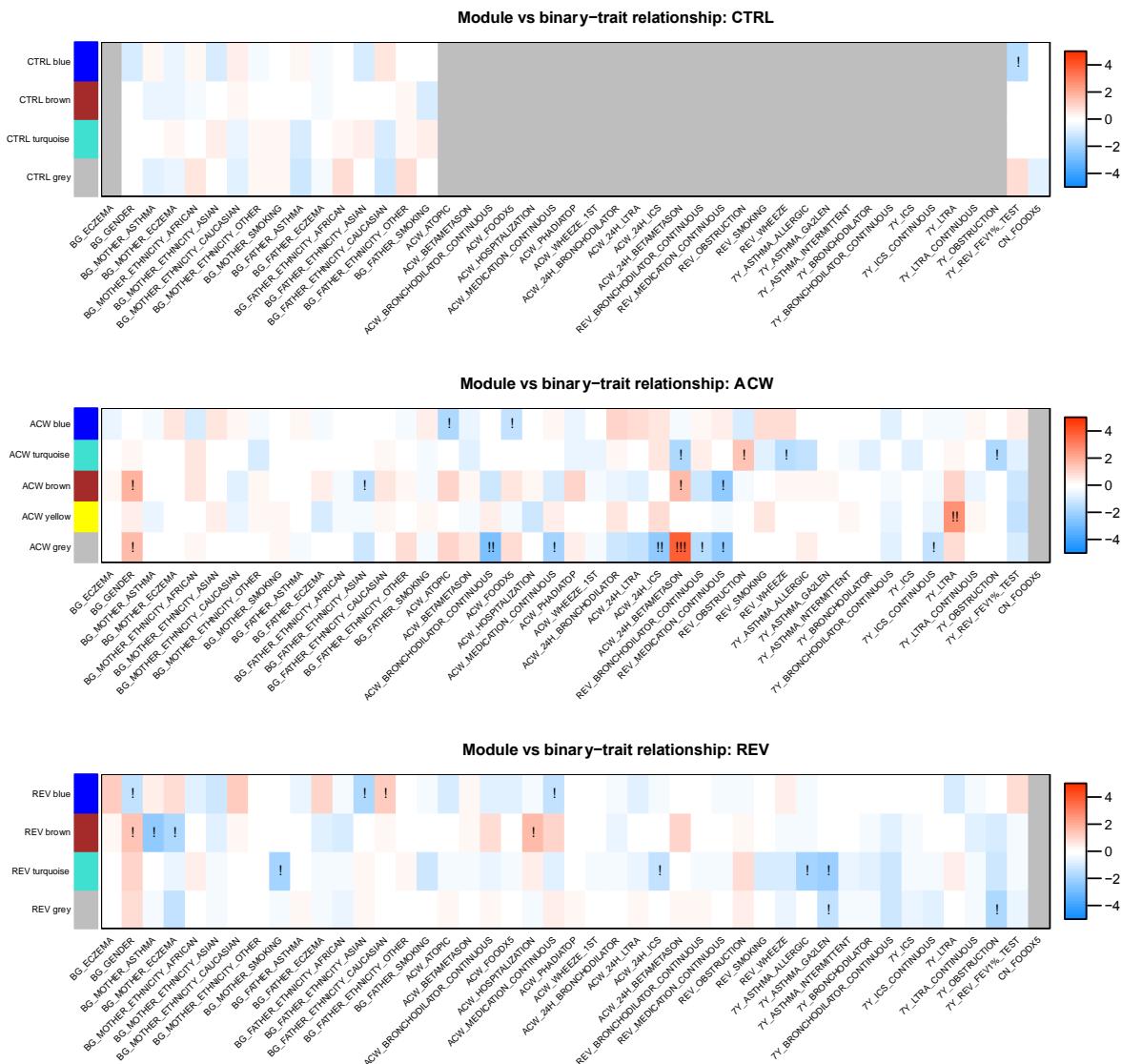
**FIG E2.** Analysis of network topology for various soft-thresholding powers. Panels illustrate the scale-free fit index (y-axis) as a function of the soft-thresholding power (x-axis) on the healthy controls (top), the cases at the acute visit (bottom left) and the cases at the follow-up visit (bottom right). Red horizontal lines are guides of the index at 0.8 (dashed) and 0.9 (solid). At the power=7, the index curve flattened out upon reaching the higher value in all groups; it is a recommended soft-thresholding value by the authors of WGCNA. ACW = acute wheeze, REV= cases at revisit after 2-3 months, CTRL = healthy controls



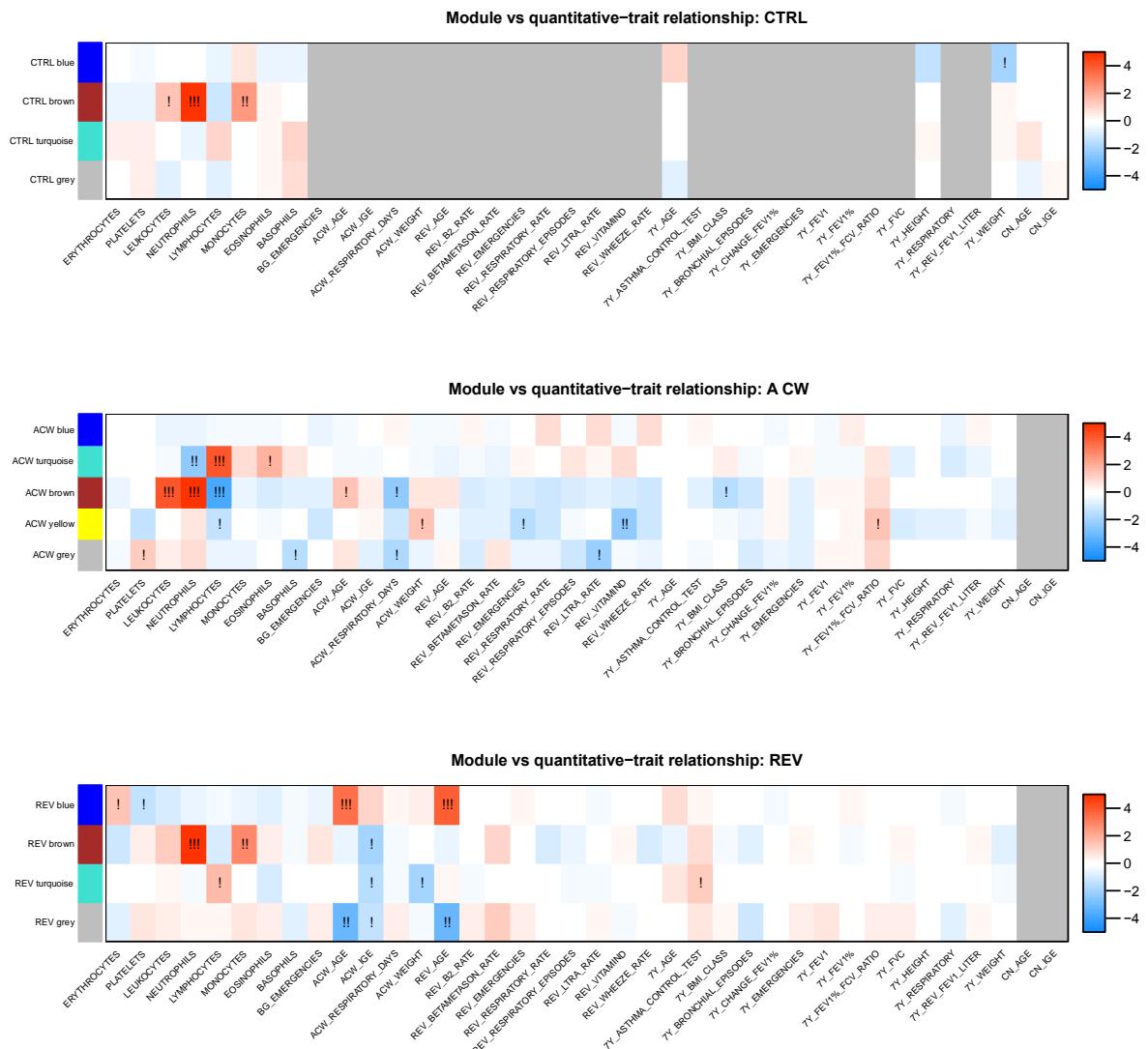
**FIG E3.** Hierarchical clustering of logged normalized levels of the variable coding genes and the module assignment. Each dendrogram illustrates similarity on the leukocyte transcriptome profile of the variable protein coding genes (adjusted variation p-value < 0.25) in the healthy controls (top), the cases at the acute visit (bottom left) and the cases at the follow-up visit (bottom right), and the module assignment (bottom of each panel). Gray module color is a reserved one for genes that are not part of any module. Module detection in a block-wise manner by WGCNA does not define identical grouping with the hierarchical clustering, because of its use of the topological overlap measure. ACW = acute wheeze, REV= cases at revisit after 2-3 months, CTRL = healthy controls



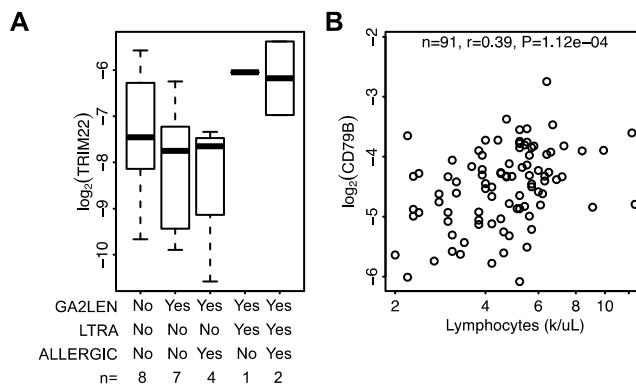
**FIG E4.** Gene correspondence between group-specific modules and the consensus modules. Each matrix represents the correspondence between the consensus modules and group-specific modules defined by the healthy controls (top), the cases at the acute visit (bottom left) and the cases at the follow-up visit (bottom right). Each row corresponds to a group-specific module labeled by color (but gray is a reserved color for genes that are not part of any module) and numbers of the member genes, and each column corresponds to one consensus module. Numbers in each cell is number of genes in the intersection of the corresponding modules. Color of each cell is  $-\log(p)$ , where  $p$  is by the Fisher's exact test for the overlap of the two modules. ACW = acute wheeze, REV= cases at revisit after 2-3 months, CTRL = healthy controls



**FIG E5.** Associations between the binary traits and the group-specific modules. Each panel illustrates an association between the traits and the modules of the controls (top), the cases at the acute visit (middle) and the cases at the follow-up visit (bottom). Each row is a module labeled by a color (gray is a reserved color for genes that are not part of any module), and each column is a trait. Each cell is colored by  $-\log_{10}(p) \times \text{sign}(r)$ , where  $p$  is p-value of the corresponding correlation, and  $r$  is the correlation coefficient. !, !! and !!! in each cell are  $p < 0.05$ ,  $0.005$  and  $0.0005$ , respectively. Legend of the trait IDs is Table E1. ACW = acute wheeze, REV= cases at revisit after 2-3 months, CTRL = healthy controls



**FIG E6.** Associations between the quantitative traits and the group-specific modules. Each panel illustrates an association between the traits and the modules of the controls (top), the cases at the acute visit (middle) and the cases at the follow-up visit (bottom). Each row is a module labeled by a color (gray is a reserved color for genes that are not part of any module), and each column is a trait. Each cell is colored by  $-\log_{10}(p) \times \text{sign}(r)$ , where  $p$  is  $p$ -value of the corresponding correlation, and  $r$  is the correlation coefficient. !, !! and !!! in each cell are  $p < 0.05$ ,  $0.005$  and  $0.0005$ , respectively. Legend of the trait IDs is Table E1. ACW = acute wheeze, REV= cases at revisit after 2-3 months, CTRL = healthy controls



**FIG E7.** Differential gene expression of ACW yellow module genes and the association with clinical traits.

**A,** Differential gene expression of TRIM22 (y-axis) at the acute visit in the cases with the asthma-related traits at 7yrs (x-axis). GA2LEN = (7Y\_ASTHMA\_GA2LEN) Asthma at 7 years of age (7Y\_ASTHMA\_GA2LEN) was defined as a positive answer to either the question; Have you had an attack of asthma in the last 12 months? OR the question “Are you currently taking or have you during the last 12 months taken any medication for asthma, including short-acting  $\beta$ 2-agonists, inhaled corticosteroids, and montelukast?”, modified from[2].LTRA = leukotriene receptor antagonist medication the year preceding the 7 year visit (7Y\_LTRA), and ALLERGIC = (7Y\_ASTHMA\_ALLERGIC) Allergic asthma was defined as asthma as above with allergic sensitization and clinical symptoms of allergy.

**B,** Positive correlation between lymphocyte counts (x-axis) and expression of B-cell marker gene (y-axis; CD79B) in the REV turquoise module at the revisit. Biweight midcorrelation coefficient ( $r$ ) and the significance ( $P$ ) are labeled.

## Supplementary table legends

**TABLE E1.** Legends of the clinical traits. Binary traits have either 0 or 1.

**TABLE E2.** Differentially expressed genes between the groups. Sheet label represents the pair of compared groups, the cases (ACW= acute phase, REV = revisit), the healthy controls (CTRL=controls). These tests were unpaired, except for the comparison between REV vs ACW which were paired. DE.score is a statistic value of the differential expression test between the two groups; in a comparison A vs B, positive DE.score is up-regulation in the group B. DE.qvalue is the false discovery rate on the differential expression test. FL.pvalue is a corrected significance on degree of the variation of all samples in the compared groups. FL.score is the statistic value of the variation test.

**TABLE E3.** Modules and the member genes. Group CTRLACWREV is the consensus module of CTRL, ACW and REV.

**TABLE E4.** Correlation between the LTRA medication in the last year before the revisit at seven years of age and expression of ACW yellow genes. Correlation coefficient (bicor) and the significance (p.adj) were calculated by hybrid biweight mid-correlation with Benjamini and Hochberg correction.

**TABLE E5.** Correlation between the vitamin D concentration at the first revisit and expression of ACW yellow genes. Correlation coefficient (bicor) and the significance (p.adj) were calculated by biweight mid-correlation with Benjamini and Hochberg correction.

Category	Trait ID	For	For	Type	Unit
<b>BG :: Background information</b>					
	BG_ECZEMA	case		binary	no=0/yes=1
	BG_EMERGENCIES	case		quantitative	times
	BG_GENDER	case	control	binary	female=0/male=1
<b>BG_MOTHER :: Background information about mother of the subject</b>					
	BG_MOTHER_ASTHMA	case	control	binary	no=0/yes=1
	BG_MOTHER_ECZEMA	case	control	binary	no=0/yes=1
	BG_MOTHER_ETHNICITY_AFRICAN	case	control	binary	no=0/yes=1
	BG_MOTHER_ETHNICITY_ASIAN	case	control	binary	no=0/yes=1
	BG_MOTHER_ETHNICITY_CAUCASIAN	case	control	binary	no=0/yes=1
	BG_MOTHER_ETHNICITY_OTHER	case	control	binary	no=0/yes=1
	BG_MOTHER_SMOKING	case	control	binary	no=0/yes=1
<b>BG_FATHER :: Background information about father of the subject</b>					
	BG_FATHER_ASTHMA	case	control	binary	no=0/yes=1
	BG_FATHER_ECZEMA	case	control	binary	no=0/yes=1
	BG_FATHER_ETHNICITY_AFRICAN	case	control	binary	no=0/yes=1
	BG_FATHER_ETHNICITY_ASIAN	case	control	binary	no=0/yes=1
	BG_FATHER_ETHNICITY_CAUCASIAN	case	control	binary	no=0/yes=1
	BG_FATHER_ETHNICITY_OTHER	case	control	binary	no=0/yes=1
	BG_FATHER_SMOKING	case	control	binary	no=0/yes=1
<b>ACW :: Information of cases at the acute visit</b>					
	ACW AGE	case		quantitative	days
	ACW_ATOPIC	case		binary	no=0/yes=1
	ACW_BETAMETASON	case		binary	no=0/yes=1
	ACW_BRONHODILATOR_CONTINUOUS	case		binary	no=0/yes=1
	ACW_FOODX5	case		binary	no=0/yes=1
	ACW_HOSPITALIZATION	case		binary	no=0/yes=1
	ACW_IGE	case		quantitative	kU/L
	ACW_MEDICATION_CONTINUOUS	case		binary	no=0/yes=1
	ACW_PHADIATOP	case		binary	no=0/yes=1
	ACW_RESPIRATORY_DAYS	case		quantitative	days
	ACW_WHEEZE_1ST	case		binary	no=0/yes=1
	ACW_WEIGHT	case		quantitative	kg
<b>ACW_24H :: Medication the last 24 h</b>					

ACW_24H_BRONCHODILATOR	case	binary	no=0/yes=1
ACW_24H_LTRA	case	binary	no=0/yes=1
ACW_24H_ICS	case	binary	no=0/yes=1
ACW_24H_BETAMETASON	case	binary	no=0/yes=1

#### REV :: Information of cases at the follow-up visit

REV AGE	case	quantitative	days
REV_B2 RATE	case	quantitative	%
REV_BETAMETASON RATE	case	quantitative	%
REV_BRONCHODILATOR_CONTINUOUS	case	binary	no=0/yes=1
REV_EMERGENCIES	case	quantitative	times
REV_MEDICATION_CONTINUOUS	case	binary	no=0/yes=1
REV_OBSTRUCTION	case	binary	no=0/yes=1
REV_RESPIRATORY_RATE	case	quantitative	%
REV_RESPIRATORY_EPISODES	case	quantitative	times
REV_LTRA_RATE	case	quantitative	%
REV_SMOKING	case	binary	no=0/yes=1
REV_VITAMIND	case	quantitative	nmol/L
REV_WHEEZE	case	binary	no=0/yes=1
REV_WHEEZE_RATE	case	quantitative	%

#### 7Y :: Information at the 7 year visit

7Y AGE	case	control	quantitative	days
7Y_ASTHMA_CONTROL_TEST	case		quantitative	
7Y_BMI_CLASS	case		quantitative	below25=1/between
7Y_BRONCHIAL_EPISODES	case		quantitative	times
7Y_BRONCHODILATOR	case	binary	no=0/yes=1	
7Y_BRONCHODILATOR_CONTINUOUS	case	binary	no=0/yes=1	
7Y_EMERGENCIES	case		quantitative	times
7Y_REV_FEV1%_CLASS	case	control	binary	no=0/yes=1
7Y_HEIGHT	case	control	quantitative	cm
7Y_ICS	case		binary	no=0/yes=1
7Y_ICS_CONTINUOUS	case		binary	no=0/yes=1
7Y_LTRA	case		binary	no=0/yes=1
7Y_LTRA_CONTINUOUS	case		binary	no=0/yes=1
7Y_OBSTRUCTION	case		binary	no=0/yes=1

7Y_RESPIRATORY	case	binary	no=0/yes=1
7Y_WEIGHT	case	control	quantitative kg

7y_ASTHMA_GA2LEN	case	binary	no=0/allergic=1
7Y_ASTHMA_ALLERGIC	case	quantitative	
7Y_FEV1	case	quantitative	
7Y_FEV1%	case	quantitative	
7Y_FVC	case	quantitative	
7Y_FEV1%_FCV_RATIO	case	quantitative	
7Y_REV_FEV1	case	quantitative	
7Y_CHANGE_FEV1%	case	quantitative	
7Y_REV_FEV1_LITER	case	quantitative	

#### CTRL :: Information of controls

CTRL_AGE	control	quantitative	days
CTRL_FOODX5	control	binary	no=0/yes=1
CTRL_IGE	control	quantitative	kU/L
CTRL_PHADIATOP	control	binary	no=0/yes=1

## Description

Current eczema at inclusion into the GEWAC study

Number of emergency visits due to respiratory symptoms last year before inclusion into the

GEWAC study

Sex of the child

Drs diagnosed asthma mother

Drs diagnosed eczema mother

Ethnicity of the mother is African

Ethnicity of the mother is Asian

Ethnicity of the mother is Caucasian

Ethnicity of the mother is neither African, Asian nor Caucasian

Mother smoking during pregnancy

Drs diagnosed asthma father

Drs diagnosed eczema father

Ethnicity of the father is African

Ethnicity of the father is Asian

Ethnicity of the father is Caucasian

Ethnicity of the father is neither African, Asian nor Caucasian

Father smoking during pregnancy

Age at acute visit

Sensitized (FoodX5  $\geq$  0.35 kUA/L or Phadiatop  $\geq$  0.35 kUA/L) at the first follow-up visit

Oral betametason at acute visit

Continious bronchodilator bef acute visit

FoodX5  $\geq$  0.35 kUA/L

Hospitalization at acute visit

IgE level at acute visit

Continous medication inhaled corticosteroids, bronchodilators and/or leukotriene receptor

antagonists (montelukast)

Phadiatop  $\geq$  0.35 kUA/L

How many days has the child had respiratory symptoms?

Previous respiratory symptoms ~ first time wheezers or not

Weight at acute visit

Bronchodilator inhaled the last 24 h  
Leukotriene receptor antagonists medication (montelukast) the last 24 h  
Inhaled corticosteroids the last 24 h  
Received oral betametason the last 24 h before sampling

Age at the revisit  
Percent of days with inhaled bronchodilator (B2-agonist) between acute visit and revisit  
Percent of days with oral betametason between acute visit and revisit  
Continuous inhaled bronchodilator between acute visit and revisit  
Number of acute visits to the emergency room between acute visit and revisit  
Continuous medication inhated corticosteroids, bronchodilators and/or leukotriene receptor antagonists (montelukast) between acute visit and revisit  
Bronchial obstruction at the revisit  
Respiratory symptoms between acute visit and revisit, percent of days  
Respiratory symptoms between acute visit and revisit, number of episodes  
Percent of days with leukotriene receptor antagonists (montelukast) between acute visit and revisit  
Current smoking at home at the revisit  
25-OH-vitamin D level at the revisit  
Wheeze at the revisit  
Wheeze percent of days until revisit

Age at the 7 year visit  
Asthma control test at the 7 year visit  
Body mass index at the 7 year visit  
Number of episodes with bronchial obstruction the year preceding the 7 year visit  
Inhaled bronchodilator the year preceding the 7 year visit  
Continuous medication with inhaled bronchodilator the year preceding the 7 year visit  
Number of visits to the emergency room the year preceding the 7 year visit  
Reversible FEV1% > 12% at the 7 year visit  
Height at the 7 year visit  
Inhaled corticosteroids medication the year preceding the 7 year visit  
Continuous inhaled corticosteroids medication the year preceding the 7 year visit  
Leukotriene receptor antagonists medication the year preceding the 7 year visit  
Continuous leukotriene receptor antagonists medication (montelukast) the year preceding the 7 year visit  
Bronchial obstruction at the 7 year visit

Ongoing respiratory symptoms at the 7 year visit

Weight at the 7 year visit

Asthma at 7 years of age was defined as a positive answer to either the question; ‘Have you had an attack of asthma in the last 12 months?’ OR the question “Are you currently taking any medicine, including inhalers, aerosols or tablets, for asthma?”. With the inclusion of inhaled corticosteroids or montelukast the last 12 months.

defined as 7Y\_ASTHMA\_GA2LENA with allergic sensitization and clinical symptoms of allergy

Forced expiratory volume during one second at the 7 year visit

Percent of expected (normal) value of the FEV1 at the 7 year visit

Forced vital capacity, volume at the 7 year visit

the ratio between FEV1% and FVC at the 7 year visit

not commented in katarinas email

The difference between FEV1% before and after reversiblity test in % at the 7 year visit

The difference between FEV1 before and after reversiblity test in ml at the 7 year visit

Age at the inclusion

FoodX5  $\geq$  0.35 kUA/L

IgE level at the inclusion

Phadiatop  $\geq$  0.35 kUA/L

Gene	DE.score	DE.pvalue	DE.qvalue	FL.pvalue	FL.score
ANXA3	2954.45	0.00124	0	1.3E-20	18.0011
NAIP	2923.15	0.00124	0	6.2E-15	13.6587
FCER1G	2922.8	0.00124	0	4E-231	171.93
AIM2	2874.9	0.00124	0	2.2E-09	9.31171
S100A8	2846.45	0.00124	0	0.000000C	215.678
S100A11	2825.6	0.00124	0	6E-234	173.998
CYSTM1	2778.8	0.00124	0	4E-127	96.5277
SAT1	2731.6	0.00124	0	4E-112	85.5004
SERPINB1	2697.4	0.00124	0	7.5E-27	22.7087
LY96	2694.85	0.00124	0	6.7E-22	18.9877
IFITM3	2669.85	0.00124	0	0	591.29
UPP1	2667.85	0.00124	0	7.1E-18	15.9219
SH3GLB1	2643.45	0.00124	0	1.4E-07	7.85611
PLSCR1	2628.05	0.00124	0	6.6E-21	18.2327
MSRB1	2620.9	0.00124	0	2.6E-38	31.2552
S100A9	2595.6	0.00124	0	0.000000C	197.846
BCL2A1	2593.75	0.00124	0	3.4E-62	48.8851
S100A12	2580.8	0.00124	0	0	259.875
CLEC4D	2569.05	0.00124	0	1.5E-09	9.43411
IFITM1	2567.05	0.00124	0	0.000000C	213.37
LILRA5	2557.4	0.00124	0	6E-20	17.5019
MYL12A	2536.6	0.00124	0	1.1E-15	14.2495
CST7	2478	0.00124	0	0.000000C	204.646
GNG5	2472.95	0.00124	0	9.4E-25	21.1344
CARD16	2465.95	0.00124	0	3.7E-56	44.442
AGTRAP	2457	0.00124	0	7.4E-08	8.09022
C4orf3	2438.3	0.00124	0	2.5E-27	23.0641
SRGN	2425	0.00124	0	4E-126	95.7653
FPR1	2420.3	0.00124	0	4.5E-79	61.2906
ADM	2415.75	0.00124	0	4.7E-09	9.04901
TSPO	2398.3	0.00124	0	7E-120	91.2101
AQP9	2396.85	0.00124	0	7.8E-10	9.67072
ARG1	2393.8	0.00124	0	1.1E-16	15.0078
SLPI	2393.55	0.00124	0	2.5E-56	44.5752
PLBD1	2377.6	0.00124	0	8.3E-09	8.85229
NAMPT	2374.15	0.00124	0	2.6E-05	5.98695
ALPL	2360.65	0.00124	0	3.3E-41	33.3997
RHOG	2353.35	0.00124	0	7.8E-42	33.8578
FCGR2A	2349.25	0.00124	0	6.1E-25	21.276
HP	2340.85	0.00124	0	1.9E-15	14.059
SERPINA1	2325.9	0.00124	0	1.4E-60	47.6936
CD177	2319.9	0.00124	0	4.1E-14	13.0251
CD63	2307.75	0.00124	0	1.5E-29	24.7338
DYSF	2306.85	0.00124	0	2.7E-09	9.23785
CLEC4E	2302.85	0.00124	0	5.3E-24	20.5688
CD59	2302.2	0.00124	0	1.2E-07	7.91132
HIST1H2A\	2301.9	0.00124	0	7.3E-05	5.60474
UBE2D1	2296.2	0.00124	0	2.3E-09	9.28921
FCGR1A	2295.8	0.00124	0	8.5E-11	10.4337
HRH2	2266.35	0.00124	0	1.6E-71	55.7295
TRIM22	2262.4	0.00124	0	1.3E-09	9.5046

DYNLT1	2257.1	0.00124	0	2.4E-28	23.8261
FCGR1B	2255.45	0.00124	0	1.6E-08	8.6257
S100A6	2251.3	0.00124	0	4.9E-91	70.088
SQRDL	2247	0.00124	0	0.0001	5.46671
GLRX	2239.8	0.00124	0	2.7E-10	10.0387
RGS19	2231	0.00124	0	6.3E-05	5.66108
HCK	2226.4	0.00124	0	8.9E-50	39.7295
IFIT1	2207.45	0.00124	0	3E-102	78.3505
TXN	2200.45	0.00124	0	3.3E-19	16.9324
TYROBP	2191.95	0.00124	0	5E-103	78.8601
IFITM2	2191.7	0.00124	0	5.3E-49	39.1563
CD53	2186.55	0.00124	0	4.8E-09	9.03741
IL1RN	2183.65	0.00124	0	2.2E-55	43.8707
PRR13	2173.15	0.00124	0	1.1E-19	17.3036
HIST1H2B	2172.7	0.00124	0	8.8E-17	15.0852
CD55	2169.7	0.00124	0	1.6E-13	12.5645
CASP1	2169.6	0.00124	0	8.3E-05	5.55927
CLIC1	2168.85	0.00124	0	9.6E-25	21.1251
MX2	2167.05	0.00124	0	4.5E-27	22.8732
TLR2	2162.4	0.00124	0	0.01408	3.55272
SELL	2140.1	0.00124	0	4.7E-19	16.8199
SLC31A2	2132.35	0.00124	0	8.3E-07	7.23298
IFI6	2125.3	0.00124	0	0.0000000C	180.322
GNG10	2123.15	0.00124	0	0.00011	5.45896
CASP4	2112.85	0.00124	0	2.7E-13	12.3899
C1QB	2112.15	0.00124	0	5.1E-17	15.2678
PGLYRP1	2103.55	0.00124	0	4.5E-17	15.3128
IL1R2	2102	0.00124	0	7.8E-38	30.9004
PLP2	2088.35	0.00124	0	8.7E-08	8.03447
TCN2	2087.2	0.00124	0	0.00133	4.49987
CLEC2B	2085.3	0.00124	0	5.4E-09	9.00326
HIST1H2B	2075.15	0.00124	0	8.1E-06	6.41702
C19orf38	2056.1	0.00124	0	4.9E-06	6.60125
RTN3	2052.45	0.00124	0	1.6E-15	14.1208
GCA	2047.9	0.00124	0	1.3E-31	26.2873
CARD17	2043.6	0.00124	0	9.5E-06	6.35837
FOLR3	2042.95	0.00124	0	1E-183	137.523
ACSL1	2030.75	0.00124	0	4E-124	94.3321
TNFSF13B	2023.75	0.00124	0	6E-23	19.7755
IRF7	2023.55	0.00124	0	5.4E-20	17.5418
CD164	2019.95	0.00124	0	0.00427	4.04231
TNFAIP6	2010.8	0.00124	0	1.1E-16	14.9958
PYGL	2009.4	0.00124	0	0.00813	3.77984
CHMP5	2006.05	0.00124	0	7.2E-05	5.60966
TIMP1	1990.55	0.00124	0	5.8E-30	25.0395
EPSTI1	1974.05	0.00124	0	6.8E-18	15.9372
DDX60L	1971.05	0.00124	0	0.00112	4.56717
PROK2	1970.6	0.00124	0	2.5E-08	8.46375
NFE2	1970	0.00124	0	1E-57	45.5882
ITM2B	1966.2	0.00124	0	3.8E-30	25.1785
ATP6VOE1	1965.9	0.00124	0	7.6E-10	9.68476
ROPN1L	1963.15	0.00124	0	5.7E-07	7.37172

FTH1	1962.75	0.00124	0	3.2E-72	56.248
IFIT3	1952.6	0.00124	0	8.8E-64	50.0458
GYG1	1950.55	0.00124	0	0.005	3.97961
HN1	1947.15	0.00124	0	0.00244	4.26498
MNDA	1945	0.00124	0	7.5E-18	15.9018
GLIPR2	1944.9	0.00124	0	1.4E-12	11.8336
RETN	1943.95	0.00124	0	1.8E-45	36.5458
MS4A6A	1937.45	0.00124	0	1.6E-07	7.82093
GRN	1937	0.00124	0	3.5E-05	5.8768
EIF1B	1931.7	0.00124	0	8.2E-05	5.56501
PGD	1929.9	0.00124	0	0.00343	4.1295
OASL	1929.55	0.00124	0	3.7E-10	9.93316
H3F3B	1906.7	0.00124	0	2E-164	123.635
AKIRIN2	1896.55	0.00124	0	0.03858	3.11813
ANXA1	1896.15	0.00124	0	4E-13	12.2586
SLC11A1	1895.85	0.00124	0	2.5E-13	12.4257
NOP10	1894.6	0.00124	0	7.2E-10	9.6996
LTB4R	1887.85	0.00124	0	0.009	3.73827
TMEM55A	1871.15	0.00124	0	0.01504	3.52262
CXCR1	1862.5	0.00124	0	1.4E-09	9.46261
FPR2	1860.9	0.00124	0	0.00492	3.98608
LRG1	1852.85	0.00124	0	1.3E-24	21.0316
PDLIM7	1841.4	0.00124	0	0.01416	3.55004
CDC42EP3	1838.55	0.00124	0	0.00033	5.03328
PYCARD	1835.8	0.00124	0	1.2E-17	15.7421
CXCR2	1835.05	0.00124	0	1.3E-68	53.5944
SPI1	1834	0.00124	0	3.4E-38	31.1644
GMFG	1832.05	0.00124	0	1.5E-14	13.3746
IFI44	1830.55	0.00124	0	0.01144	3.6382
S100P	1826.5	0.00124	0	5E-141	106.653
QPCT	1822.8	0.00124	0	1.6E-09	9.42559
TMBIM6	1817.9	0.00124	0	0.00024	5.16233
RSAD2	1812.05	0.00124	0	6.8E-49	39.0744
FTL	1803.3	0.00124	0	1.3E-20	18.0177
C1QC	1794.15	0.00124	0	1E-09	9.56805
CEACAM4	1791.3	0.00124	0	9.8E-12	11.1721
TSEN34	1790.95	0.00124	0	5.9E-07	7.35526
RNF149	1789.35	0.00124	0	3.2E-06	6.74764
TNFSF10	1781	0.00124	0	7.2E-14	12.8375
C10orf54	1774.65	0.00124	0	1.5E-13	12.5868
KLF6	1774.25	0.00124	0	0.00234	4.2811
MYL6	1773.95	0.00124	0	1E-15	14.2605
P2RY13	1773.2	0.00124	0	0.00329	4.14653
MCL1	1768.15	0.00124	0	0.00067	4.76571
HSPA1A	1764.9	0.00124	0	0.00093	4.638
TYMP	1762.2	0.00124	0	9.8E-09	8.79095
ANKRD22	1756.3	0.00124	0	8.1E-13	12.0168
OAS1	1753.2	0.00124	0	1.5E-45	36.6183
CSTA	1752.85	0.00124	0	1.1E-20	18.0609
IGSF6	1747.25	0.00124	0	1.4E-06	7.06064
TUBA1A	1745	0.00124	0	2.5E-53	42.3498
EVI2B	1742.85	0.00124	0	0.00012	5.41165

MTHFS	1737.25	0.00124	0	2.7E-11	10.8324
HAUS4	1732	0.00124	0	0.02674	3.27602
SIRPB1	1730.45	0.00124	0	0.0108	3.6616
BLOC1S1	1725.9	0.00124	0	9.8E-06	6.34519
ADGRG3	1724.95	0.00124	0	4.6E-06	6.62166
VIM	1721.15	0.00124	0	3.3E-16	14.6454
IFI30	1718.7	0.00124	0	3E-75	58.4804
C1QA	1714.2	0.00124	0	9.1E-05	5.52194
UBE2D3	1712.15	0.00124	0	5.9E-07	7.35899
ALOX5AP	1707.4	0.00124	0	9E-125	94.7863
PLIN3	1704.7	0.00124	0	0.01487	3.52844
NCF4	1703.2	0.00124	0	8.2E-41	33.1052
CPPED1	1697.75	0.00124	0	5.2E-16	14.489
NQO2	1695.85	0.00124	0	1.7E-12	11.7659
IFIT2	1694.3	0.00124	0	2.7E-22	19.2858
UBE2J1	1689.55	0.00124	0	0.03637	3.1447
GABARAPI	1688.8	0.00124	0	0.00187	4.36674
NMI	1687.15	0.00124	0	0.01691	3.47257
UBE2F	1682.6	0.00124	0	0.04092	3.09235
DOK3	1674.9	0.00124	0	0.00434	4.03539
CDA	1674.55	0.00124	0	1.3E-27	23.2846
MX1	1671.75	0.00124	0	4.5E-11	10.6536
KCNJ15	1667.1	0.00124	0	0.00017	5.28112
SOD2	1666.9	0.00124	0	3E-136	103.166
SDCBP	1659.75	0.00124	0	0.03367	3.17826
H3F3A	1655.4	0.00124	0	4E-103	78.926
TALDO1	1655.2	0.00124	0	1.2E-25	21.8001
AIF1	1653.85	0.00124	0	9E-38	30.8528
CFLAR	1653.75	0.00124	0	0.00544	3.94551
TSC22D3	1652.55	0.00124	0	7.3E-21	18.2003
RNASE1	1643.15	0.00124	0	0.00802	3.78616
MMP9	1642.5	0.00124	0	1.6E-73	57.2076
THEMIS2	1620.25	0.00124	0	4.6E-05	5.77598
APMAP	1607.3	0.00124	0	0.0009	4.65048
CA4	1604.4	0.00124	0	0.00034	5.01955
GP9	1592.35	0.00124	0	7.6E-09	8.88197
ERGIC1	1591.85	0.00124	0	0.02418	3.31745
IFI35	1591.15	0.00124	0	5E-19	16.7932
TNFRSF10	1585.8	0.00124	0	1E-103	79.2938
LRRC25	1579.25	0.00124	0	0.04497	3.04813
TREML1	1570	0.00124	0	2.1E-06	6.89894
VAPA	1567.45	0.00124	0	0.00368	4.10135
ISG15	1560.3	0.00124	0	0	508.42
B2M	1552.7	0.00124	0	2E-49	39.472
TMEM14C	1551.1	0.00124	0	2.6E-07	7.65198
FLOT1	1547.7	0.00124	0	0.00024	5.15803
LITAF	1540.45	0.00124	0	2E-20	17.8733
CAPG	1536.95	0.00124	0	0.03585	3.15154
SHISA5	1536.3	0.00124	0	8E-31	25.684
IL1B	1535.2	0.00124	0	9E-15	13.533
DGAT2	1533.7	0.00124	0	0.02341	3.33146
IFI44L	1523.9	0.00124	0	0.00057	4.82585

ARPC5	1522.6	0.00124	0	0.00043	4.93185
CDC42SE1	1514	0.00124	0	0.01656	3.48131
VNN2	1506.05	0.00124	0	0.00024	5.1596
FBXO6	1503.7	0.00124	0	2.4E-09	9.27379
CEACAM1	1502.6	0.00124	0	4.5E-13	12.2183
TREM1	1501.1	0.00124	0	5.1E-17	15.2702
HIST1H2B1	1497.9	0.00124	0	3.6E-07	7.52544
C1orf162	1496.15	0.00124	0	8.9E-12	11.2052
TMEM40	1489.65	0.00124	0	9.3E-05	5.5159
STX11	1485.4	0.00124	0	9.1E-05	5.52338
MYL9	1478.7	0.00124	0	7.9E-19	16.6463
XAF1	1471.65	0.00124	0	0.03707	3.13627
SHKBP1	1452.6	0.00124	0	0.00937	3.72129
SRA1	1452.4	0.00124	0	0.04157	3.08489
SAMSN1	1451.95	0.00124	0	0.00018	5.25832
MPP1	1449.45	0.00124	0	0.0004	4.95927
ATP6V0D1	1434.6	0.00124	0	0.00265	4.23183
C2orf88	1433.75	0.00124	0	2.9E-08	8.42007
ODF3B	1430.65	0.00124	0	0.00315	4.16324
CREB5	1420.75	0.00124	0	1.1E-30	25.5815
LAMP2	1418.15	0.00124	0	0.00206	4.32985
GABARAP	1416.05	0.00124	0	8.7E-27	22.6602
VASP	1413.15	0.00124	0	7.3E-07	7.28172
ATG3	1403.45	0.00124	0	0.00948	3.71609
SLA	1401.95	0.00124	0	0.01943	3.41269
LRPAP1	1400.35	0.00124	0	0.0004	4.95869
ATP6V0B	1399.05	0.00124	0	9.2E-14	12.7558
TOR1B	1398.55	0.00124	0	0.01864	3.43035
RBCK1	1397.45	0.00124	0	1.4E-10	10.2544
NFKBIA	1391.3	0.00124	0	9E-18	15.8398
RBP7	1370.35	0.00124	0	0.00361	4.10902
HBD	1365.3	0.00124	0	9.3E-55	43.4045
FCGR3B	1359.5	0.00124	0	3E-05	5.93515
PPBP	1345.45	0.00124	0	1.6E-52	41.7475
CEACAM3	1342.95	0.00124	0	1.7E-10	10.1898
CLU	1337.65	0.00124	0	0.00123	4.53227
MXD1	1336.8	0.00124	0	0.0277	3.26135
RNF213	1330.4	0.00124	0	0.00157	4.43536
CTSA	1329.4	0.00124	0	0.03545	3.15665
PSMB3	1314.85	0.00124	0	1.5E-07	7.82907
LAT2	1313.1	0.00124	0	0.01656	3.48159
CCNDBP1	1311.7	0.00124	0	0.00276	4.21678
FLOT2	1311.4	0.00124	0	2.7E-06	6.8135
CSF3R	1309.9	0.00124	0	2.5E-96	73.9722
EXOSC4	1309.7	0.00124	0	0.00532	3.95485
GRB2	1309.3	0.00124	0	3.3E-05	5.9057
NADK	1301.8	0.00124	0	9.4E-05	5.50794
CAMP	1301.65	0.00124	0	1.4E-16	14.917
HSD17B11	1301.65	0.00124	0	0.00975	3.70394
LRP10	1297.5	0.00124	0	0.00593	3.91108
ALOX5	1294.55	0.00124	0	6.5E-11	10.5248
IER2	1268.6	0.00125	0	0.00023	5.18107

LILRA2	1266.9	0.00125	0	5.1E-17	15.2662
SECTM1	1259.6	0.00125	0	1.8E-59	46.891
PSENEN	1256.3	0.00125	0	0.00028	5.0931
MBOAT7	1252.2	0.00125	0	0.00091	4.64945
BAZ1A	1248.8	0.00125	0	0.0026	4.23933
GAPDH	1247.55	0.00125	0	2E-35	29.1087
GBA	1239.5	0.00126	0	0.01157	3.63265
HIST1H2B.	1228.95	0.00127	0	0.04293	3.06946
NARF	1228.45	0.00127	0	0.00236	4.27834
SERPING1	1222.75	0.00127	0	5E-132	100.064
NAPA	1212.7	0.0013	0	8.3E-06	6.40547
DDAH2	1203.95	0.00131	0	7.2E-11	10.4937
ARRB2	1191.85	0.00135	0	9.5E-06	6.35778
LGALS9	1191.15	0.00135	0	5.6E-13	12.1426
NCF2	1189.2	0.00136	0	1.3E-17	15.7216
FOS	1179.95	0.00138	0	8.9E-24	20.397
FKBP1A	1174.15	0.00141	0	4.5E-09	9.0626
UBE2L6	1163.8	0.00145	0	1.1E-58	46.2953
HMGB2	1159.95	0.00146	0	0.00381	4.08706
SF3B6	1159.85	0.00146	0	0.00673	3.85774
RTP4	1157.95	0.00146	0	8.6E-52	41.2151
STXBP2	1157.35	0.00146	0	0.00187	4.36683
CD82	1152.4	0.00149	0	0.00405	4.0626
SELPLG	1151.9	0.00149	0	4.5E-58	45.8523
MTRNR2L	1148.65	0.00151	0	7.5E-95	72.8873
DDIT3	1148.5	0.00151	0	0.0499	3.00354
RGS2	1147.65	0.00152	0	5.1E-33	27.3282
PF4	1142.8	0.00156	0.00053	3.7E-08	8.32715
DHRS9	1139.1	0.00159	0.00053	0.02251	3.34961
MSRB2	1138.9	0.0016	0.00053	0.03108	3.21226
C7orf73	1138.15	0.0016	0.00053	2E-06	6.92546
PLAUR	1127.7	0.00167	0.00053	9.7E-05	5.49551
TMEM123	1124.2	0.0017	0.00053	0.00203	4.33719
SMAP2	1123.35	0.00171	0.00053	0.00012	5.43085
KIAA0040	1120.85	0.00174	0.00053	1.1E-09	9.5421
LCN2	1119.45	0.00174	0.00053	5.6E-31	25.8041
IFI27	1116.75	0.00176	0.00053	0	1078.99
ALAS2	1113.05	0.00179	0.00053	9.2E-87	66.93
CD14	1110.6	0.00182	0.00053	4E-06	6.66961
SMIM5	1108.1	0.00184	0.00053	0.00564	3.9315
MMP25	1103.15	0.00189	0.00053	2.5E-11	10.8475
KRT23	1095.4	0.00198	0.00053	0.00529	3.95753
MBOAT2	1095	0.00199	0.00053	0.03399	3.1742
RAB7A	1090.25	0.00205	0.00053	3.5E-18	16.1527
LY6E	1089.5	0.00206	0.00053	1.3E-77	60.2103
GBP2	1088.45	0.00207	0.00053	0.03295	3.18763
TUBA4A	1087.8	0.00208	0.00053	1E-09	9.57033
MPZL1	1083.8	0.00214	0.00053	0.00666	3.86259
BUD31	1080	0.0022	0.00101	2.3E-05	6.03444
B3GNT8	1076.5	0.00224	0.00101	0.00243	4.26707
OAZ2	1074.45	0.00226	0.00101	3E-06	6.76909
GIMAP4	1071.95	0.00229	0.00101	6.2E-12	11.3285

IL4R	1067.95	0.00236	0.00101	0.02371	3.32625
LAPTM5	1065.6	0.0024	0.00101	2.1E-13	12.4801
HAL	1062.95	0.00243	0.00101	0.00602	3.90477
H2AFJ	1055.45	0.00255	0.00101	6.6E-05	5.64478
GBP1	1055.4	0.00255	0.00101	2E-05	6.08828
JUNB	1050.9	0.00262	0.00101	1.8E-77	60.1119
PHF11	1046.65	0.0027	0.00101	0.04156	3.08561
RHOA	1041.95	0.00279	0.00145	0.00048	4.89362
OAS3	1036.25	0.00289	0.00145	0.00021	5.20247
SCO2	1035.75	0.0029	0.00145	1.6E-05	6.16488
TXNIP	1030.75	0.00302	0.00145	7.5E-07	7.27179
PSMB9	1028.15	0.00308	0.00145	2.8E-37	30.4886
FYB	1025.9	0.00315	0.00145	1.6E-28	23.9731
CSK	1022.7	0.00324	0.00145	0.01244	3.60297
ARF3	1020.3	0.00331	0.00188	0.02266	3.34674
SPARC	1012.05	0.00359	0.00188	0.01734	3.46091
RASGRP4	1010.05	0.00364	0.00188	2.5E-08	8.47503
TRAPP5	1009.95	0.00364	0.00188	0.00119	4.54553
CHMP2A	1009.75	0.00364	0.00188	2.8E-07	7.62464
LILRA3	1009.05	0.00365	0.00188	1.8E-12	11.7494
RAB24	1007.3	0.0037	0.00188	5.4E-08	8.20149
MT2A	1001.7	0.00386	0.00228	0	569.711
ISG20	999.6	0.00393	0.00228	9.7E-89	68.387
PSMB8	991.25	0.0042	0.00228	6.5E-06	6.49705
AMICA1	989.3	0.00424	0.00228	0.01407	3.55371
NFAM1	988.6	0.00427	0.00269	0.00017	5.29669
ATP6VOC	987	0.00432	0.00269	8.3E-25	21.174
PTAFR	973.1	0.00487	0.00309	0.00024	5.16161
ETV7	963.25	0.00527	0.00346	7.9E-07	7.24769
BST2	962.4	0.00529	0.00346	0.00066	4.77385
C5AR1	958.1	0.00551	0.00346	5E-49	39.1753
GPSM3	957	0.00556	0.00346	1.4E-12	11.8347
BTNL8	945.95	0.00614	0.00422	0.04372	3.06069
AHSP	931.9	0.00697	0.00493	2.8E-37	30.4866
BLVRB	930.75	0.00703	0.00493	1.5E-45	36.6104
HIST1H4H	923.95	0.0075	0.00527	0.00894	3.74134
TCIRG1	905.4	0.00882	0.00654	0.00588	3.9146
ZFP36	900.25	0.00924	0.00704	0.000000C	180.38
H2AFZ	899.4	0.00931	0.00704	2.3E-05	6.03922
FAM65B	896.2	0.00957	0.0074	0.01848	3.43402
TMEM59	895.3	0.00965	0.0074	0.0061	3.89883
FGR	888.35	0.01022	0.0077	8.1E-16	14.3401
LDHA	872.7	0.01166	0.00929	0.03719	3.13436
SNCA	872.5	0.01168	0.00929	8.7E-20	17.3818
UBC	857.85	0.01332	0.01096	7.7E-22	18.9418
ICAM3	856.85	0.01346	0.01096	2.9E-06	6.78923
GRINA	847.95	0.01447	0.0122	3.1E-05	5.93153
RAB3D	845.05	0.01485	0.01248	0.02008	3.39885
GNG11	838.1	0.01586	0.01341	8.5E-08	8.04082
PLAC8	833	0.01652	0.0143	8.7E-13	11.9931
OSM	830.15	0.0169	0.01458	1.7E-13	12.5436
NRGN	824.55	0.01781	0.01551	0.00125	4.52676

CREM	819.35	0.01858	0.01665	1.8E-05	6.11921
BCL6	818.7	0.01869	0.01665	8.8E-07	7.21013
TAGLN2	816.4	0.01901	0.01721	4E-152	114.738
MYL12B	815.8	0.01907	0.01721	3.5E-05	5.88542
MYO1F	811.6	0.01974	0.01794	0.00183	4.37758
CCR1	802.45	0.02127	0.01963	3.1E-06	6.76143
HBM	800.2	0.02166	0.01972	1E-107	82.2301
IQGAP1	795.55	0.02251	0.02082	0.00061	4.80244
PADI4	794.95	0.02262	0.02082	0.00461	4.01072
LAMTOR1	786.35	0.02445	0.02275	6.8E-05	5.63139
ILK	778.65	0.02593	0.02416	0.02062	3.38691
ACTB	777.35	0.02624	0.02444	8.6E-69	53.7365
HCLS1	774.75	0.02679	0.02521	0.02339	3.33278
FCGRT	772.55	0.02721	0.02574	0.01649	3.48359
TRIM27	772.4	0.02723	0.02574	0.00293	4.19311
USP18	770.35	0.02772	0.02598	0.01919	3.41826
BIN2	764.25	0.0291	0.02763	0.00011	5.45245
TREX1	760.9	0.0298	0.02826	6.7E-07	7.31143
WIPF1	757.65	0.03055	0.02949	0.00025	5.13926
BATF	757.15	0.03067	0.02949	0.01288	3.58872
GPX1	755.25	0.03116	0.03004	2.8E-30	25.2808
TMC4	752.2	0.03189	0.03047	1.6E-73	57.2078
EIF1	752	0.0319	0.03047	3.5E-21	18.436
P2RX1	750.7	0.03223	0.0308	0.00389	4.07908
NINJ1	750.55	0.03226	0.0308	1.4E-10	10.2572
STAT2	750.1	0.03232	0.03112	0.00035	5.01351
CYTH4	745.15	0.03361	0.03302	0.00091	4.64668
LGALS1	743.3	0.03413	0.0332	6.5E-51	40.5682
BLVRA	743.2	0.03414	0.0332	3.8E-05	5.85018
HSH2D	740.95	0.0347	0.0337	0.00047	4.90177
CYBA	740.55	0.03481	0.03381	5.9E-50	39.8631
PPP1R15A	739.85	0.035	0.03403	0.01514	3.51967
DRAP1	739.75	0.03501	0.03403	7.2E-15	13.6093
RAC2	738.7	0.03526	0.03424	2E-22	19.376
TMEM12C	732.9	0.03698	0.03592	0.01551	3.50859
GSTO1	727.8	0.03846	0.03773	0.02062	3.38697
SP110	724.6	0.03926	0.0384	3.4E-06	6.72493
PF4V1	721.55	0.04014	0.03941	3.6E-08	8.34213
PNRC1	719.2	0.04082	0.04013	2.6E-05	5.98627
GLIPR1	707.65	0.04453	0.04402	0.01811	3.4431
RABAC1	703.6	0.04596	0.04582	9.4E-10	9.60772
NECAB1	702.65	0.04628	0.04628	0.02918	3.2399
RNF10	699.25	0.04747	0.04728	0.00584	3.91792
ZYX	699.25	0.04747	0.04728	0.00026	5.12841
PRKCSH	-550.9	0.1266	0.04882	0.01504	3.5224
TMUB1	-551.2	0.12639	0.04882	9.7E-11	10.3861
RCSD1	-551.85	0.12588	0.04848	4.1E-06	6.66464
HMGB1	-551.9	0.12587	0.04848	0.04326	3.0661
AP2S1	-560.6	0.11915	0.04499	0.02921	3.23917
TBC1D13	-561.1	0.11888	0.04475	0.00183	4.37709
ACTG1	-567	0.11454	0.04302	1.5E-48	38.8113
LAIR1	-568.6	0.11344	0.04221	0.00069	4.75138

SCAF1	-578.7	0.10648	0.03919	0.04488	3.0492
BLCAP	-583.8	0.10267	0.03749	0.00738	3.81923
SMPD1	-583.95	0.10267	0.03749	5.4E-15	13.7047
TAPBP	-585.2	0.10182	0.03732	6.7E-05	5.6374
RASSF5	-587.15	0.1006	0.03686	0.01706	3.46897
C12orf10	-605.5	0.08957	0.03236	0.00113	4.56529
TRAP1	-607.55	0.08858	0.03183	0.04157	3.08497
CLTA	-608.2	0.08824	0.03161	0.0467	3.03204
MRPL27	-608.7	0.08793	0.03161	0.03727	3.13328
RNASEH2C	-609.8	0.08744	0.03113	0.00179	4.38622
VSTM1	-609.95	0.08742	0.03113	0.00066	4.77153
VAMP8	-610.25	0.0873	0.03113	9E-05	5.52875
ZFP36L2	-611.4	0.08668	0.03069	0.00024	5.15118
SEC61B	-614.75	0.08493	0.03018	0.0122	3.6106
ALG12	-617.5	0.08321	0.02954	0.01515	3.5189
ELP5	-623.55	0.08007	0.02801	3.8E-08	8.3175
DNAJB1	-624.8	0.07941	0.02778	1E-26	22.6083
BAG1	-625.4	0.07912	0.02766	7.8E-05	5.58077
PET100	-626.3	0.07863	0.02727	0.00223	4.30036
EIF4G2	-628.15	0.0777	0.02686	0.00096	4.62642
ZNHIT1	-633.1	0.07504	0.02603	0.00123	4.53051
NFATC3	-636.65	0.07323	0.02514	0.00295	4.18975
CECR1	-636.85	0.07317	0.02514	1.1E-07	7.94408
ERP29	-637.4	0.07288	0.02502	0.00405	4.06285
NDUFV2	-639.4	0.07179	0.02447	0.02072	3.38474
PSMB10	-640.75	0.0711	0.02422	1.3E-08	8.70153
RELA	-651	0.06652	0.02207	0.00014	5.37139
CCL23	-651.35	0.06634	0.02207	0.00014	5.37102
EIF1AY	-651.85	0.06611	0.02195	7.8E-11	10.4648
TMSB4X	-656.3	0.06431	0.02146	3.3E-20	17.7002
SRRM1	-660.85	0.06238	0.02084	0.0062	3.89208
SCAND1	-665.1	0.06052	0.02032	0.03494	3.16259
EMC6	-667.75	0.05935	0.01978	0.03047	3.22025
P4HB	-670.3	0.05828	0.01952	0.00399	4.06956
IGFLR1	-673.45	0.0571	0.01898	0.00289	4.1988
POU2AF1	-709	0.04414	0.01376	0.00033	5.03888
PEA15	-709.15	0.04412	0.01376	0.01681	3.47534
RBM8A	-717.85	0.04124	0.01281	0.0172	3.46521
SUMO2	-718.05	0.04121	0.01281	0.00655	3.86924
FABP5	-719.25	0.04082	0.0125	0.00687	3.84854
PHACTR4	-725.7	0.03901	0.0116	0.01593	3.49787
SYVN1	-728.8	0.03816	0.01131	0.02406	3.3197
NDUFB4	-732.4	0.0371	0.01098	9.6E-08	7.9997
WDR83OS	-732.85	0.03698	0.01098	0.00029	5.08101
GTF3C5	-749.2	0.03255	0.00936	0.01132	3.64257
SFPQ	-761.1	0.0298	0.00838	3.3E-05	5.89816
FUS	-768.1	0.02819	0.00772	9.5E-06	6.35991
ITGAL	-769.45	0.02791	0.00772	0.01948	3.41104
SRP14	-772.55	0.02721	0.00741	5.2E-11	10.6022
ROMO1	-776.65	0.02639	0.00741	0.00147	4.4619
SEC61G	-780.8	0.02546	0.00706	0.01031	3.68172
SLC35A4	-786.5	0.02443	0.00674	1.5E-05	6.19543

IGLL5	-789.8	0.0237	0.00637	0.03123	3.20976
IL2RG	-796.8	0.02226	0.00603	7.2E-06	6.45825
CFD	-800.45	0.02163	0.00565	3.2E-20	17.7072
RPS26	-804.35	0.02092	0.00565	0.0000000	221.166
NOB1	-811.8	0.01971	0.00497	0.00044	4.9261
C4orf48	-813.7	0.01943	0.00497	0.01204	3.61618
NR1D1	-817.45	0.01888	0.00497	0.00133	4.50126
CALM1	-825.45	0.01768	0.00462	4.8E-05	5.76384
PI3	-841.5	0.01539	0.00388	7.1E-55	43.4927
PSMB5	-849.4	0.0143	0.00351	0.01058	3.6705
CS	-849.95	0.01425	0.00351	6.9E-05	5.62897
USMG5	-851.85	0.014	0.00351	9.2E-09	8.81822
UQCR10	-854.9	0.01365	0.00351	7.5E-08	8.08709
SF1	-856.2	0.01352	0.00313	1.6E-11	11.005
FAM96B	-872.4	0.01168	0.00274	0.00211	4.32153
RPS27L	-895.15	0.00966	0.00234	0.00018	5.2734
SEPT6	-904.15	0.00892	0.00192	0.00969	3.70768
ABRACL	-912.75	0.00828	0.00192	0.00377	4.09203
NDUFA4	-913.3	0.00826	0.00192	0.00084	4.67912
DCPS	-917.6	0.00793	0.00151	0.02807	3.25556
HSP90AA1	-919.9	0.00778	0.00151	0.00133	4.50147
UQCRRQ	-920.1	0.00777	0.00151	6.8E-06	6.48317
QRICH1	-924.8	0.00745	0.00151	0.0435	3.06366
MAGED1	-927.3	0.00727	0.00151	1.7E-06	6.98904
NOLC1	-934.85	0.00678	0.00151	2.2E-05	6.05499
LGALS2	-934.95	0.00678	0.00151	2.3E-14	13.2155
VPS28	-945.2	0.00618	0.00106	0.00737	3.82043
UQCR11	-951.15	0.00583	0.00106	1.7E-07	7.78498
ITM2C	-955.35	0.00563	0.00106	0.03739	3.13169
BRK1	-958.85	0.00546	0.00106	0.0206	3.38792
TAPBPL	-980.8	0.00459	0.00059	1.4E-28	24.0172
DYNLL1	-984.15	0.00444	0.00059	0.00923	3.72792
RNF26	-996.3	0.00403	0.00059	8.2E-08	8.05293
PSMB1	-1000.6	0.00389	0.00059	0.04043	3.09767
EZR	-1010.1	0.00364	0.00059	0.00051	4.86944
POLR2F	-1029.9	0.00305	0.00059	0.03871	3.11625
DBI	-1034.15	0.00293	0.00059	0.01398	3.55661
MT1F	-1037.5	0.00286	0.00059	0.04779	3.02174
ATP6V1F	-1040.7	0.00281	0.00059	0.0002	5.22497
COX5A	-1042.15	0.00279	0.00059	0.00522	3.9626
MRPL41	-1043.2	0.00276	0.00059	7.9E-05	5.57763
NDUFA2	-1045.25	0.00272	0.00059	1.4E-05	6.21572
TMEM109	-1066.45	0.00238	0	1.5E-10	10.2466
TMA7	-1069.9	0.00233	0	0.00224	4.29874
CDC37	-1074.65	0.00226	0	0.01478	3.53117
PFN1	-1083.05	0.00215	0	5.1E-19	16.786
UBA52	-1091.75	0.00202	0	1E-42	34.5128
ABI3	-1095.45	0.00198	0	3.3E-05	5.89924
TMEM258	-1095.5	0.00198	0	5E-06	6.59246
TMSB10	-1095.85	0.00198	0	6.1E-53	42.0689
CHI3L1	-1104.45	0.00187	0	9.4E-11	10.4004
GSTP1	-1109.5	0.00183	0	3.5E-13	12.3009

CD48	-1110.95	0.00182	0	0.01499	3.52487
QARS	-1111.3	0.00181	0	0.01477	3.53181
GATA3	-1114	0.00178	0	3.6E-05	5.86746
ZNF593	-1120.9	0.00174	0	0.0452	3.04547
PPDPF	-1125.6	0.00169	0	1.7E-05	6.14909
PRDX2	-1150.95	0.0015	0	9.6E-05	5.50273
PSMA7	-1151.5	0.00149	0	0.01204	3.61592
LIMD2	-1155.5	0.00147	0	3.6E-06	6.70667
UQCRH	-1157.9	0.00146	0	3.6E-08	8.3378
LBH	-1158.4	0.00146	0	2.1E-15	14.0193
NDUFS7	-1159.85	0.00146	0	5.6E-06	6.54833
NUCD3	-1159.85	0.00146	0	0.04723	3.02728
HLA-DQA1	-1166.7	0.00144	0	7.5E-07	7.26769
ANAPC11	-1175	0.00141	0	3.2E-07	7.57085
MT1X	-1179.9	0.00138	0	0.00047	4.90252
DCXR	-1188.15	0.00136	0	0.04367	3.06177
IL2RB	-1211.4	0.0013	0	0.01934	3.41479
NDUFB9	-1218.5	0.00128	0	0.00022	5.1851
MRPL14	-1226.45	0.00127	0	0.02274	3.34465
PSMG4	-1227.6	0.00127	0	0.03956	3.10706
SEPT9	-1231.95	0.00127	0	2.6E-13	12.4105
HMGN2	-1233.1	0.00127	0	2.3E-09	9.30178
PTBP1	-1244.75	0.00125	0	0.00939	3.72034
CXCR3	-1250.3	0.00125	0	0.02236	3.35246
NDUFS5	-1257.5	0.00125	0	0.00121	4.53893
RPL36AL	-1258.5	0.00125	0	1.9E-11	10.9482
AAK1	-1264.3	0.00125	0	0.00595	3.90941
EVL	-1272.15	0.00125	0	7E-16	14.3897
PARK7	-1276.25	0.00125	0	0.00676	3.85496
CCL5	-1284.95	0.00125	0	1.2E-44	35.9485
CHCHD2	-1289	0.00125	0	2.6E-13	12.4086
ATP5G3	-1289.2	0.00125	0	0.00053	4.85601
LTB	-1311.8	0.00124	0	0.01015	3.68795
CD5	-1315.6	0.00124	0	0.0097	3.70701
LY9	-1318.7	0.00124	0	0.0451	3.04664
SNRPD3	-1324.25	0.00124	0	0.01031	3.68143
PPIB	-1325.4	0.00124	0	0.0067	3.85978
S100B	-1337.35	0.00124	0	8.2E-12	11.2303
SPIB	-1345.3	0.00124	0	0.00304	4.17698
SPN	-1347.55	0.00124	0	7.3E-13	12.0535
PHPT1	-1351.85	0.00124	0	0.00705	3.83859
HLA-DMB	-1359.7	0.00124	0	0.0473	3.02643
MRPL52	-1360.75	0.00124	0	1.7E-07	7.78619
NDUFA13	-1364.8	0.00124	0	1.7E-10	10.1885
SH2D2A	-1366.55	0.00124	0	0.04179	3.0825
TCL1A	-1369.05	0.00124	0	1E-16	15.0303
HSP90AB1	-1369.2	0.00124	0	0.02298	3.34025
CSNK2B	-1369.65	0.00124	0	0.02074	3.38409
NDUFB10	-1373.8	0.00124	0	0.00146	4.4644
SHMT2	-1387.6	0.00124	0	0.00104	4.59621
CDK2AP2	-1393.2	0.00124	0	0.00873	3.75102
ATP5F1	-1400.25	0.00124	0	0.0108	3.66093

VDAC2	-1402.8	0.00124	0	0.00337	4.1358
TESPA1	-1421.2	0.00124	0	0.03637	3.14503
NMT1	-1429.15	0.00124	0	0.00301	4.18142
PIK3IP1	-1441.05	0.00124	0	4.2E-17	15.3359
SCGB3A1	-1444.8	0.00124	0	0.00804	3.78459
EMC4	-1445.25	0.00124	0	0.03578	3.15265
EMP3	-1464.55	0.00124	0	0.00088	4.66241
UBE2D2	-1465.4	0.00124	0	0.04183	3.08182
MRPL40	-1468.05	0.00124	0	0.03999	3.1026
NDUFA12	-1477.7	0.00124	0	0.00032	5.04925
NDUFB7	-1483.35	0.00124	0	5.4E-07	7.38618
HAX1	-1489.1	0.00124	0	0.03712	3.13541
PTGDS	-1494.6	0.00124	0	0.00235	4.27987
CCR7	-1501.3	0.00124	0	3.3E-11	10.7605
ATP5I	-1510.8	0.00124	0	2.7E-07	7.63182
CD248	-1515.85	0.00124	0	0.01161	3.63121
ATP5L	-1519.15	0.00124	0	0.01894	3.42353
SMDT1	-1524.05	0.00124	0	0.00692	3.84587
APOBEC3C	-1528.65	0.00124	0	5.3E-05	5.72547
SMIM10L1	-1533.2	0.00124	0	2.8E-16	14.6957
HMGA1	-1538.65	0.00124	0	2.9E-08	8.41116
MRPL23	-1540	0.00124	0	0.00022	5.19421
C8orf59	-1542.75	0.00124	0	0.04372	3.06027
CRIP1	-1551.3	0.00124	0	5.1E-31	25.8391
TCF25	-1569.5	0.00124	0	6.7E-07	7.30891
PNKD	-1574.35	0.00124	0	0.04129	3.08845
ATP5G1	-1574.65	0.00124	0	0.00019	5.24998
UQCRB	-1574.7	0.00124	0	6.3E-05	5.66565
NDUFA3	-1585.6	0.00124	0	4.1E-07	7.48747
NDUFB8	-1592.4	0.00124	0	2.2E-05	6.0551
HLA-DRB1	-1595.7	0.00124	0	5E-34	28.0798
ZAP70	-1608.3	0.00124	0	0.02939	3.23652
PABPC1	-1609.85	0.00124	0	0.0184	3.43628
CD79A	-1611.8	0.00124	0	2.5E-19	17.0273
TIMM10	-1612.75	0.00124	0	3.6E-05	5.86527
VAMP2	-1617.15	0.00124	0	0.01797	3.44636
EIF3G	-1620	0.00124	0	7.4E-07	7.27607
PCED1B	-1623.8	0.00124	0	0.01324	3.57787
NSA2	-1626.25	0.00124	0	0.02341	3.33213
RPS4Y1	-1626.8	0.00124	0	1E-107	82.3364
SSR4	-1627.45	0.00124	0	9.5E-09	8.80357
C11orf31	-1627.75	0.00124	0	3.1E-06	6.75907
TBCA	-1630.45	0.00124	0	2.4E-05	6.01856
BANF1	-1631.2	0.00124	0	0.00378	4.09062
CWF19L2	-1632.7	0.00124	0	0.0076	3.80804
EEF2	-1653.2	0.00124	0	7.5E-05	5.59531
GADD45G	-1654.05	0.00124	0	0.02175	3.36503
LEF1	-1654.25	0.00124	0	0.02777	3.26
HLA-DMA	-1656.55	0.00124	0	0.00069	4.75377
C9orf16	-1660.7	0.00124	0	2.3E-06	6.86464
LYPD2	-1668.4	0.00124	0	0.00673	3.85811
POLR2L	-1671.1	0.00124	0	2.1E-08	8.53196

LPXN	-1673.2	0.00124	0	0.01047	3.67532
SNRPC	-1675.05	0.00124	0	0.00097	4.62175
MRPL34	-1678.45	0.00124	0	0.00067	4.76423
HINT2	-1682.55	0.00124	0	3.1E-07	7.58149
RARRES3	-1687.8	0.00124	0	1.9E-19	17.1146
SLC25A5	-1692.6	0.00124	0	0.0057	3.92714
NDUFA11	-1701.85	0.00124	0	1.2E-18	16.4962
NME2	-1710.85	0.00124	0	1E-13	12.7226
VPREB3	-1712.25	0.00124	0	3.3E-26	22.2236
POLR3K	-1712.6	0.00124	0	0.03858	3.11849
MYEOV2	-1733.45	0.00124	0	0.01408	3.55235
HIGD2A	-1735.2	0.00124	0	1.6E-07	7.82635
TCF7	-1748.1	0.00124	0	9E-215	160.144
LAIR2	-1749.05	0.00124	0	0.00086	4.67195
NDUFB2	-1752.7	0.00124	0	0.00053	4.85523
RHOF	-1761.55	0.00124	0	0.00074	4.72668
MRPL57	-1762.2	0.00124	0	1.2E-07	7.92066
C19orf70	-1770.95	0.00124	0	1.4E-05	6.22548
CIB1	-1772.45	0.00124	0	0.04247	3.07457
NHP2L1	-1772.9	0.00124	0	3.6E-05	5.87242
CXCL8	-1780.2	0.00124	0	1.9E-12	11.724
STMN1	-1786.6	0.00124	0	0.0011	4.57354
NDUFS3	-1804.85	0.00124	0	0.00134	4.49872
FCMR	-1808.6	0.00124	0	2.1E-18	16.3183
HSPA8	-1822.1	0.00124	0	1.1E-07	7.948
EDF1	-1834.6	0.00124	0	1.7E-11	10.9847
LIME1	-1849.5	0.00124	0	0.01526	3.51587
DDX18	-1854.85	0.00124	0	0.00174	4.39812
GIMAP7	-1861.2	0.00124	0	0.0009	4.65023
MRPS21	-1866.15	0.00124	0	6E-08	8.16459
EIF5B	-1866.55	0.00124	0	1.4E-19	17.2283
SOD1	-1878.85	0.00124	0	0.0003	5.07021
HCST	-1878.9	0.00124	0	9.5E-16	14.2877
RPS9	-1878.95	0.00124	0	3.9E-30	25.1692
GZMB	-1882.05	0.00124	0	3.3E-27	22.976
SOX4	-1882.75	0.00124	0	2.4E-10	10.0802
SEPW1	-1892.25	0.00124	0	3.7E-09	9.13039
GIMAP5	-1892.8	0.00124	0	0.00033	5.03711
NDUFB11	-1892.9	0.00124	0	9.3E-06	6.36643
UCP2	-1906.55	0.00124	0	6.5E-12	11.3088
CD79B	-1908.05	0.00124	0	1.9E-16	14.8305
CD8A	-1912.85	0.00124	0	0.00022	5.19338
FXYD5	-1921.55	0.00124	0	1E-16	15.0295
PARP8	-1932.45	0.00124	0	0.00033	5.0381
C19orf53	-1932.6	0.00124	0	3.4E-13	12.3089
ARL6IP4	-1933.1	0.00124	0	0.02017	3.39674
HLA-DQB1	-1936.1	0.00124	0	9E-05	5.5292
GZMH	-1940.9	0.00124	0	1.4E-13	12.6099
POLR2I	-1951.65	0.00124	0	1.6E-05	6.16701
MRPS24	-1953.7	0.00124	0	3E-06	6.77612
COX6C	-1956.85	0.00124	0	3E-16	14.6699
ZNF706	-1961.5	0.00124	0	0.00185	4.3716

GZMA	-1961.95	0.00124	0	7.9E-07	7.25012
FXYD2	-1964.25	0.00124	0	0.04535	3.04389
BTF3	-1966	0.00124	0	3.1E-21	18.4808
MIF	-1975	0.00124	0	1.4E-21	18.7421
PPIA	-1980	0.00124	0	7.2E-10	9.70257
LSM7	-1981.25	0.00124	0	2.8E-19	16.9898
TIMM13	-1996.9	0.00124	0	2.5E-06	6.84897
CD74	-2007.05	0.00124	0	9E-99	75.7578
SSR2	-2014.45	0.00124	0	9.5E-05	5.50482
RPL21	-2022.2	0.00124	0	2.8E-45	36.4116
TECR	-2022.6	0.00124	0	3.3E-07	7.56314
HMGN1	-2023.3	0.00124	0	0.00028	5.09675
UXT	-2025.2	0.00124	0	0.03139	3.20742
CD52	-2027.55	0.00124	0	3.7E-92	70.9107
CLIC3	-2074.25	0.00124	0	0.00143	4.4745
RPL28	-2075.55	0.00124	0	1.9E-58	46.1361
PTPRCAP	-2088.15	0.00124	0	1.6E-09	9.42338
TPT1	-2097	0.00124	0	1.5E-32	26.9726
NDUFS8	-2097.3	0.00124	0	0.00054	4.85195
ATP5O	-2097.35	0.00124	0	2.6E-13	12.4013
HLA-DPA1	-2106.45	0.00124	0	4.9E-18	16.0455
ID3	-2109.1	0.00124	0	0.00056	4.83483
HLA-DRA	-2116.2	0.00124	0	6.8E-31	25.7396
SLC25A3	-2116.35	0.00124	0	1.6E-07	7.81087
LAT	-2118.9	0.00124	0	4.2E-09	9.08864
RPS12	-2120.6	0.00124	0	2.9E-42	34.1809
PTMA	-2134.15	0.00124	0	3E-37	30.4681
ABHD14B	-2137	0.00124	0	0.00971	3.70617
NHP2	-2142.9	0.00124	0	1.4E-06	7.04326
RPS19	-2143.3	0.00124	0	2.5E-98	75.4409
TMEM256	-2144.95	0.00124	0	1.5E-08	8.65626
PFDN5	-2145.35	0.00124	0	2.5E-14	13.1975
TOMM6	-2160.3	0.00124	0	0.0003	5.07551
TSTD1	-2170.3	0.00124	0	0.00012	5.42937
COX7C	-2171.6	0.00124	0	8.7E-23	19.6533
FAU	-2175.95	0.00124	0	2.2E-40	32.7928
PEBP1	-2177.95	0.00124	0	0.0004	4.96514
CUTA	-2181.5	0.00124	0	8.5E-10	9.64431
RPL9	-2185.35	0.00124	0	6E-05	5.67996
TMEM261	-2189.65	0.00124	0	0.03629	3.14617
DNPH1	-2191.85	0.00124	0	0.0004	4.96651
CLC	-2191.95	0.00124	0	1E-198	148.405
C6orf48	-2208.25	0.00124	0	2.9E-15	13.9137
FGFBP2	-2214.25	0.00124	0	0.00461	4.0114
RPS2	-2237	0.00124	0	3.7E-56	44.4395
TRAF3IP3	-2259.5	0.00124	0	0.00307	4.17313
EIF3H	-2275.7	0.00124	0	3.7E-06	6.69656
HLA-DPB1	-2279.95	0.00124	0	1.8E-21	18.6628
CD27	-2311	0.00124	0	2.3E-12	11.6642
TRAPP6A	-2333.9	0.00124	0	0.03706	3.13673
NPM1	-2340.65	0.00124	0	0.02755	3.26378
RPS7	-2341.45	0.00124	0	3.6E-64	50.3417

RPS20	-2341.85	0.00124	0	4.5E-65	51.0111
MAL	-2347.3	0.00124	0	9E-05	5.53012
HINT1	-2349.7	0.00124	0	1.6E-26	22.4516
ALKBH7	-2357.25	0.00124	0	2.3E-06	6.87658
COMM6	-2358.95	0.00124	0	0.0001	5.48345
RPL38	-2359.95	0.00124	0	2.9E-21	18.5048
RPS15	-2364.85	0.00124	0	2.5E-64	50.4604
RPL26	-2384.65	0.00124	0	2.4E-69	54.1501
CD3E	-2386.2	0.00124	0	9E-11	10.4131
OCIAD2	-2387.25	0.00124	0	8.2E-11	10.4468
RPSA	-2393.5	0.00124	0	5E-19	16.7971
IL32	-2394.15	0.00124	0	9.2E-56	44.1468
RPL14	-2403.7	0.00124	0	7E-53	42.0208
RPL41	-2406.45	0.00124	0	2.5E-52	41.6158
RPL24	-2407.1	0.00124	0	2E-33	27.6341
RPS28	-2410.05	0.00124	0	4.2E-30	25.1478
RPL36	-2410.6	0.00124	0	4.6E-93	71.5832
NKG7	-2411.95	0.00124	0	2.7E-58	46.0121
RPL23	-2421.05	0.00124	0	3.9E-14	13.0422
RPS11	-2430.25	0.00124	0	1.1E-39	32.272
EIF3K	-2433.9	0.00124	0	1.5E-19	17.1952
FLT3LG	-2437.8	0.00124	0	0.00635	3.88273
RPL15	-2443.4	0.00124	0	8.1E-64	50.0776
CD7	-2456.65	0.00124	0	7.7E-07	7.25766
RPS25	-2456.7	0.00124	0	1E-38	31.5497
NACA	-2476.05	0.00124	0	2.4E-34	28.3107
RPL30	-2479.15	0.00124	0	2.7E-84	65.1217
RPL35A	-2489.7	0.00124	0	1.3E-59	46.9926
RPL4	-2496.45	0.00124	0	1.3E-21	18.7828
COX4I1	-2498.5	0.00124	0	1.3E-43	35.17
RPL31	-2502.9	0.00124	0	1.4E-56	44.7555
RPL39	-2505.15	0.00124	0	2.6E-89	68.8164
RPL23A	-2517.25	0.00124	0	4.6E-82	63.4791
GNB2L1	-2518.5	0.00124	0	2.1E-51	40.9226
RPL34	-2519.15	0.00124	0	1.1E-90	69.8354
CTSW	-2519.3	0.00124	0	7.8E-12	11.2479
RPL8	-2530.15	0.00124	0	5.4E-64	50.209
RPL37	-2534.85	0.00124	0	6.9E-60	47.1918
RPL13A	-2538.95	0.00124	0	7E-118	89.768
APRT	-2539.45	0.00124	0	6.3E-12	11.323
RPLP1	-2539.65	0.00124	0	6.4E-89	68.5211
RPL18A	-2541.9	0.00124	0	9E-84	64.7304
RPS13	-2545.75	0.00124	0	5.8E-63	49.443
RPL35	-2546.1	0.00124	0	2E-82	63.7486
RPLP0	-2547.3	0.00124	0	7.8E-64	50.0899
RPS8	-2556.4	0.00124	0	1.8E-76	59.3759
RPL37A	-2556.9	0.00124	0	2.6E-89	68.8071
EEF1D	-2561.95	0.00124	0	8.2E-18	15.8714
TOMM7	-2566.5	0.00124	0	4.1E-52	41.4536
RPS15A	-2568.1	0.00124	0	4.6E-75	58.3442
RPS16	-2571.25	0.00124	0	2.5E-72	56.3366
RPL27A	-2573.65	0.00124	0	1.8E-78	60.8572

RPL32	-2574.95	0.00124	0	2E-102	78.3869
RPS4X	-2578.45	0.00124	0	4.1E-66	51.7689
GNLY	-2579.1	0.00124	0	9E-121	91.8572
CD3D	-2583.15	0.00124	0	3E-19	16.967
EIF3F	-2583.3	0.00124	0	2.8E-16	14.6916
RPS27	-2591.65	0.00124	0	3E-113	86.3261
RPS18	-2607.5	0.00124	0	8E-111	84.5684
RPL22	-2607.95	0.00124	0	5.9E-31	25.7839
RPS24	-2607.95	0.00124	0	5.8E-45	36.1752
SNRPD2	-2608.5	0.00124	0	8.4E-24	20.4184
RPL12	-2610.6	0.00124	0	4.8E-64	50.2482
RPL29	-2610.75	0.00124	0	1.1E-84	65.4034
RPL7A	-2614.1	0.00124	0	1.2E-72	56.5594
EEF1B2	-2618.3	0.00124	0	3.7E-74	57.6769
RPL18	-2621.3	0.00124	0	1.4E-90	69.7508
RPS3	-2623.1	0.00124	0	1.8E-67	52.7656
RPL13	-2630.35	0.00124	0	1E-131	99.7321
LDHB	-2635.4	0.00124	0	4.7E-10	9.85194
RPL19	-2636.45	0.00124	0	2E-105	80.5817
RPS23	-2664.65	0.00124	0	2E-114	87.2073
RPS29	-2668.9	0.00124	0	2.5E-94	72.5016
RPL7	-2675.35	0.00124	0	2.2E-97	74.7422
CD6	-2675.6	0.00124	0	0.02209	3.35753
RPS3A	-2678.45	0.00124	0	5E-115	87.6762
EEF1G	-2679.95	0.00124	0	1.4E-43	35.1555
RPS21	-2690.5	0.00124	0	2E-114	87.1759
RPL6	-2693.65	0.00124	0	2E-78	60.8113
RPL11	-2709.35	0.00124	0	1.5E-77	60.165
RPS27A	-2710.5	0.00124	0	1.6E-98	75.5838
RPL3	-2713.55	0.00124	0	5.7E-35	28.7804
RPLP2	-2715.05	0.00124	0	4.5E-78	60.5521
RPL10	-2721.9	0.00124	0	1.1E-88	68.3366
EEF1A1	-2722.35	0.00124	0	1.2E-38	31.4964
RPS6	-2723.4	0.00124	0	1.6E-68	53.5399
C12orf57	-2731.35	0.00124	0	2.9E-84	65.0872
KLRB1	-2750.05	0.00124	0	2.9E-13	12.361
RPS5	-2776.8	0.00124	0	6.3E-85	65.5846
RPS14	-2778.75	0.00124	0	6.3E-87	67.0517
RPL5	-2786.35	0.00124	0	5.5E-71	55.3427
RPL10A	-2819.35	0.00124	0	6.9E-73	56.7445

Gene	DE.score	DE.pvalue	DE.qvalue	FL.pvalue	FL.score
FCER1G	2730.2	0.00106	0	0	160.171
ANXA3	2728	0.00106	0	1.6E-39	17.6823
SERPINB1	2727.9	0.00106	0	1.2E-57	24.5137
CYSTM1	2720.15	0.00106	0	2E-225	86.2355
S100A11	2711.15	0.00106	0	0	147.344
S100A8	2697.4	0.00106	0	0	199.849
NAIP	2677.5	0.00106	0	1.1E-30	14.2994
SAT1	2629.8	0.00106	0	4E-234	89.3809
LILRA5	2622.55	0.00106	0	2E-29	13.8137
FCGR2A	2620.4	0.00106	0	5.5E-49	21.263
FPR1	2610.15	0.00106	0	4E-140	54.9833
UPP1	2597.25	0.00106	0	7E-31	14.3764
S100A12	2531	0.00106	0	0	220.447
BCL2A1	2529.05	0.00106	0	3E-132	52.0832
S100A9	2525.8	0.00106	0	0	196.141
LY96	2518.55	0.00106	0	4.6E-46	20.1581
MSRB1	2511.1	0.00106	0	1.1E-73	30.4876
ARG1	2502.6	0.00106	0	4.4E-34	15.603
SH3GLB1	2492.9	0.00106	0	1.5E-14	7.93056
RHOG	2472.3	0.00106	0	3.6E-72	29.9208
SERPINA1	2464.8	0.00106	0	1.1E-89	36.4201
CST7	2463.25	0.00106	0	0	196.07
CLEC4D	2450.8	0.00106	0	2.4E-18	9.46839
GNG5	2448.4	0.00106	0	3.7E-50	21.703
SRGN	2447	0.00106	0	2E-236	90.2116
HRH2	2421.65	0.00106	0	3E-125	49.5434
PLBD1	2396.8	0.00106	0	1.9E-17	9.10769
C19orf38	2392.7	0.00106	0	2.4E-11	6.61044
TSPO	2392.35	0.00106	0	3E-182	70.4385
DYSF	2377.7	0.00106	0	4.3E-20	10.1611
PLSCR1	2377.45	0.00106	0	1.6E-40	18.0649
ALPL	2373.7	0.00106	0	4.4E-85	34.7196
TNFSF13B	2346.2	0.00106	0	1.4E-48	21.1061
AQP9	2319.8	0.00106	0	1E-20	10.4057
AGTRAP	2312.9	0.00106	0	4.7E-14	7.72914
CLEC4E	2275.9	0.00106	0	7.9E-43	18.9344
AIM2	2274.6	0.00106	0	1.9E-17	9.11344
GCA	2273.1	0.00106	0	8.8E-48	20.8095
SQRDL	2270.85	0.00106	0	4E-09	5.66607
HP	2269.4	0.00106	0	3.4E-26	12.5613
NAMPT	2266.55	0.00106	0	1.6E-09	5.83566
SLC31A2	2261.2	0.00106	0	8.8E-12	6.79071
C10orf54	2259.2	0.00106	0	8.7E-21	10.4389
IFITM1	2259.1	0.00106	0	0	208.71
IL1R2	2254.9	0.00106	0	1.7E-72	30.0407
CD53	2252.8	0.00106	0	1E-15	8.40764
CD55	2249.6	0.00106	0	2.2E-26	12.6387
C4orf3	2232.7	0.00106	0	4.8E-49	21.2865
IFITM2	2204.35	0.00106	0	6.4E-83	33.9177
TYROBP	2201.95	0.00106	0	3E-185	71.5215
MYL12A	2198.2	0.00106	0	3.3E-28	13.342

IFITM3	2194.15	0.00106	0	0	570.767
CARD16	2191.2	0.00106	0	2E-108	43.3153
HIST1H2A	2169.5	0.00106	0	6.1E-09	5.58269
SELL	2165.25	0.00106	0	1.4E-35	16.1829
SLC11A1	2164.8	0.00106	0	7.4E-29	13.594
PGD	2160.65	0.00106	0	1.6E-05	4.04786
S100A6	2159.5	0.00106	0	5E-158	61.5891
TSC22D3	2140.35	0.00106	0	3.7E-52	22.4578
CD59	2125.1	0.00106	0	3.2E-16	8.61406
RTN3	2114.5	0.00106	0	5.3E-25	12.0965
HSPA1A	2111.4	0.00106	0	1.3E-07	5.00452
RGS19	2094.45	0.00106	0	3.5E-08	5.25139
ADM	2093.95	0.00106	0	5.5E-16	8.51733
CXCR1	2093.4	0.00106	0	7.4E-20	10.0675
PRR13	2076.85	0.00106	0	1.4E-34	15.7905
ATP6V0E1	2065.75	0.00106	0	8.2E-15	8.03705
HIST1H2B	2064.8	0.00106	0	6.4E-34	15.5429
CASP4	2057.6	0.00106	0	2.5E-26	12.612
FTH1	2056	0.00106	0	5E-122	48.3432
PYGL	2052.7	0.00106	0	0.0001	3.66907
MNDA	2051.4	0.00106	0	1.8E-35	16.1362
UBE2D1	2049.45	0.00106	0	8.3E-17	8.8508
IL1RN	2038.8	0.00106	0	5E-119	47.2531
EVI2B	2031	0.00106	0	3.4E-08	5.26042
PGLYRP1	2029.7	0.00106	0	1.4E-24	11.9251
ACSL1	2023.8	0.00106	0	0.000000C	103.163
MAP1LC3I	2022.3	0.00106	0	0.01922	2.48088
HN1	2012.2	0.00106	0	7.3E-06	4.21186
EIF1B	2005.95	0.00106	0	3.5E-09	5.68856
SLPI	2005.45	0.00106	0	1E-70	29.3865
TRIM22	2005.05	0.00106	0	7.3E-21	10.4696
ITM2B	2001.75	0.00106	0	2.3E-50	21.7841
DYNLT1	1999.4	0.00106	0	9.7E-57	24.1769
QPCT	1985.15	0.00106	0	5.8E-14	7.69258
TXN	1984.55	0.00106	0	8.1E-30	13.9649
MX2	1977.8	0.00106	0	5.6E-54	23.1438
SDCBP	1972.6	0.00106	0	0.00024	3.48393
IFIT1	1956.4	0.00106	0	3E-215	82.5137
SPI1	1953.7	0.00106	0	2.3E-76	31.4854
FPR2	1952	0.00106	0	0.00028	3.45228
LITAF	1951.05	0.00106	0	1.9E-28	13.4411
HCK	1949.8	0.00106	0	4E-103	41.4032
STX11	1949.05	0.00106	0	3.2E-12	6.97116
CEACAM4	1947.05	0.00106	0	2E-23	11.476
CD63	1942.35	0.00106	0	4.1E-35	15.9989
VIM	1940.65	0.00106	0	1.1E-31	14.6868
GNG10	1938.4	0.00106	0	8.8E-08	5.07713
IFI6	1937.7	0.00106	0	0	192.149
STOM	1936.45	0.00106	0	0.0297	2.36869
TYMP	1934.85	0.00106	0	6.6E-18	9.29152
TALDO1	1932.95	0.00106	0	6.7E-45	19.7192
CD177	1931.9	0.00106	0	2.7E-12	7.0066

MS4A6A	1931.3	0.00106	0	1.3E-15	8.35801
CNIH4	1927.6	0.00106	0	0.01408	2.55795
CA4	1925.35	0.00106	0	2.3E-08	5.33288
ROPN1L	1924.45	0.00106	0	6.3E-11	6.43097
PLP2	1924.2	0.00106	0	3.8E-14	7.76766
TUBA1A	1919	0.00106	0	6E-122	48.3247
H3F3B	1917.55	0.00106	0	0	144.635
CDA	1917.1	0.00106	0	4.7E-49	21.2912
CLIC1	1916.15	0.00106	0	1.5E-47	20.7191
RNF149	1914.5	0.00106	0	3E-10	6.14233
TSEN34	1913.7	0.00106	0	8.3E-12	6.80079
MMP9	1912.4	0.00106	0	1E-171	66.5587
GLRX	1910.3	0.00106	0	4.5E-20	10.1535
CDC42EP3	1907.7	0.00106	0	1.1E-07	5.03005
GYG1	1906.65	0.00106	0	6.8E-05	3.75399
SAMSN1	1904.95	0.00106	0	4E-07	4.783
LRG1	1904.1	0.00106	0	4.8E-50	21.6602
APMAP	1898.8	0.00106	0	6.8E-05	3.75267
CHMP5	1898.8	0.00106	0	2.5E-10	6.17794
BAZ1A	1896.7	0.00106	0	1.1E-06	4.58154
UBE2D3	1894.75	0.00106	0	3.3E-14	7.79378
PYCARD	1894.15	0.00106	0	5.1E-28	13.2682
NFE2	1891.35	0.00106	0	2.1E-89	36.315
TLR2	1888.95	0.00106	0	0.00012	3.63342
FOLR3	1885.1	0.00106	0	0	132.444
CXCR2	1878.5	0.00106	0	4E-126	49.867
GLIPR2	1876.85	0.00106	0	1E-19	10.0089
PDLIM7	1871.75	0.00106	0	0.0006	3.28682
TNFRSF10	1865.3	0.00106	0	6E-153	59.7258
TMEM55A	1858.15	0.00106	0	0.00016	3.56925
FCGR1B	1857.25	0.00106	0	1.5E-16	8.74486
GMFG	1845.3	0.00106	0	9.4E-24	11.6051
MKNK1	1836.55	0.00106	0	0.02412	2.4212
CASP1	1832.1	0.00106	0	3.3E-08	5.26104
MPP1	1821.15	0.00106	0	6.8E-11	6.41918
FCGR1A	1814.55	0.00106	0	1.5E-21	10.742
H3F3A	1813.95	0.00106	0	5E-154	60.1008
DOK3	1811.8	0.00106	0	3.1E-06	4.3839
TIMP1	1808.25	0.00106	0	4.3E-47	20.5487
CSTA	1802.75	0.00106	0	4E-35	16.002
C20orf24	1801.65	0.00106	0	0.04436	2.26336
DGAT2	1796.75	0.00106	0	0.00176	3.04754
RETN	1795.05	0.00106	0	3.8E-94	38.0677
ADGRG3	1792.9	0.00106	0	4.3E-13	7.33379
PROK2	1791.9	0.00106	0	5.6E-12	6.87284
BLOC1S1	1784	0.00106	0	1.4E-08	5.42281
RNF24	1783.8	0.00106	0	0.03601	2.31845
FLOT1	1782.95	0.00106	0	7.2E-08	5.11406
AIF1	1779.75	0.00106	0	8.9E-75	30.8942
IL18R1	1777.8	0.00106	0	0.04501	2.25916
P2RY13	1777.45	0.00106	0	4.4E-06	4.3149
KLF6	1771.15	0.00106	0	2.1E-05	3.99469

HSD17B11	1770.65	0.00106	0	0.00015	3.58287
TCN2	1767.8	0.00106	0	3.3E-06	4.37125
C1orf162	1762.8	0.00106	0	1.1E-26	12.7562
MTHFS	1759.9	0.00106	0	4.4E-17	8.96374
SIRPB1	1757.5	0.00106	0	2.5E-05	3.96299
TMEM14C	1753.05	0.00106	0	6.1E-17	8.90435
ALOX5AP	1752.25	0.00106	0	2E-213	81.8607
CDC42SE1	1746.25	0.00106	0	0.00683	2.73271
CLEC2B	1740.2	0.00106	0	1.3E-15	8.36196
LILRA2	1736.5	0.00106	0	3.2E-25	12.1821
NOP10	1735.05	0.00106	0	3E-13	7.39956
OASL	1735	0.00106	0	9.5E-22	10.8185
HAUS4	1734.15	0.00106	0	0.00173	3.05115
FTL	1734.05	0.00106	0	1.7E-44	19.5684
SLA	1731.5	0.00106	0	6.9E-05	3.74854
C1QB	1729.4	0.00106	0	1.2E-22	11.1659
RSAD2	1723.6	0.00106	0	1E-109	43.8088
DDX60L	1720	0.00106	0	3.4E-07	4.81558
IRF7	1718.05	0.00106	0	6.3E-40	17.8335
TREM1	1718.05	0.00106	0	9.7E-32	14.7049
CD164	1715.55	0.00106	0	1.4E-05	4.08505
MX1	1711.55	0.00106	0	5.5E-22	10.9111
BNIP3L	1711.5	0.00106	0	0.00551	2.78391
NMI	1707.7	0.00106	0	0.0001	3.66001
IFI44	1702.35	0.00106	0	5.2E-05	3.81033
ANXA1	1701.4	0.00106	0	7.4E-24	11.6463
RFX2	1700.85	0.00106	0	0.00832	2.68623
FAM129A	1692.95	0.00106	0	0.00156	3.07489
TNFAIP6	1692.7	0.00106	0	1.2E-35	16.1964
NQO2	1688.1	0.00106	0	2.4E-11	6.60631
CEACAM1	1682.9	0.00106	0	5.5E-30	14.031
IGSF6	1676.75	0.00106	0	5.1E-11	6.46904
OLAH	1670.45	0.00106	0	0.00108	3.15668
ARPC5	1666.2	0.00106	0	1.9E-06	4.47788
ARL11	1662.7	0.00106	0	0.00745	2.71194
SMAP2	1662.4	0.00106	0	5.9E-10	6.01885
IFIT3	1653.7	0.00106	0	1E-135	53.3647
GABARAPI	1645.7	0.00106	0	6E-06	4.25192
S100P	1642.65	0.00106	0	2E-213	81.8468
VPS9D1	1642.1	0.00106	0	0.0381	2.30361
OSCAR	1639.3	0.00106	0	0.04474	2.26102
MOB1A	1627.15	0.00106	0	0.03174	2.35241
CFLAR	1616.25	0.00106	0	8.5E-06	4.18077
IFIT2	1614.35	0.00106	0	4.5E-51	22.0509
ERGIC1	1614.25	0.00106	0	0.00027	3.45639
MYL6	1613.3	0.00106	0	2.9E-20	10.2286
APH1B	1612.05	0.00106	0	0.02159	2.45076
HBD	1607.2	0.00106	0	7E-121	47.9249
EPSTI1	1605.85	0.00106	0	7.3E-36	16.2847
NRBF2	1604	0.00106	0	0.01613	2.52435
GABARAP	1602.6	0.00106	0	5.1E-43	19.0067
ATP6V0B	1602.55	0.00106	0	2.3E-21	10.67

CCNDBP1	1601.85	0.00106	0	0.0001	3.66573
HPGD	1600.5	0.00106	0	0.00078	3.22814
TMEM91	1600	0.00106	0	0.0146	2.54893
PLIN3	1599.1	0.00106	0	0.00014	3.60603
FCGR3B	1598.55	0.00106	0	3.7E-11	6.53124
CARD17	1589.75	0.00106	0	1.3E-11	6.71665
MCL1	1589.5	0.00106	0	8.1E-07	4.64666
NCF4	1579.7	0.00106	0	5.9E-66	27.6176
CTSB	1573.55	0.00106	0	0.00032	3.42396
LAT2	1569.05	0.00106	0	2.3E-05	3.97934
SHISA5	1565.95	0.00106	0	5.1E-60	25.4038
BST1	1565.35	0.00106	0	0.04332	2.26976
ATP6VOC	1564.35	0.00106	0	7E-68	28.3322
BLVRB	1561.35	0.00106	0	7.2E-96	38.7055
DUSP1	1556.2	0.00106	0	0.01122	2.61288
RAB27A	1553.5	0.00106	0	0.00506	2.80369
TNFSF10	1553.2	0.00106	0	6.8E-30	13.9957
ASAH1	1539.8	0.00106	0	0.03995	2.29116
ANKRD22	1538.4	0.00106	0	2.1E-28	13.4207
VNN2	1538.3	0.00106	0	7.3E-05	3.73729
OAS1	1536.55	0.00106	0	3.1E-93	37.7311
LTB4R	1534.8	0.00106	0	1.2E-05	4.11638
XAF1	1533.85	0.00106	0	0.00058	3.29482
GPSM3	1527.45	0.00106	0	5.4E-21	10.5222
LAMP2	1524.8	0.00106	0	5E-06	4.29016
THEMIS2	1518	0.00106	0	1.2E-09	5.88404
RBP7	1505.15	0.00106	0	1.1E-05	4.13635
ATP6V0D1	1500.55	0.00106	0	0.00017	3.56111
UBE2F	1499.95	0.00106	0	7.9E-05	3.72001
CSF3R	1499.85	0.00106	0	9E-202	77.5835
SOD2	1487.65	0.00106	0	9E-227	86.6985
IFI30	1486.9	0.00106	0	2E-132	52.1459
ODF3B	1485	0.00106	0	1.3E-06	4.55706
TUBA4A	1483.4	0.00106	0	3.7E-16	8.58533
LAPTM5	1483.25	0.00106	0	6.9E-20	10.0803
NAPA	1481.1	0.00106	0	1.5E-11	6.6966
FBXO6	1474.35	0.00106	0	8.3E-20	10.0462
LRRC70	1462.15	0.00106	0	0.02947	2.37108
GRN	1460.55	0.00106	0	2.3E-10	6.19312
CPPED1	1455.3	0.00106	0	2.9E-25	12.2001
CLEC4A	1453.85	0.00106	0	0.00716	2.72122
ZBP1	1453.65	0.00106	0	0.01031	2.63426
KCNJ15	1449.85	0.00106	0	8.9E-09	5.51404
IL1B	1442.05	0.00106	0	6.4E-30	14.0044
TMBIM6	1440.8	0.00106	0	2.6E-06	4.41834
CREB5	1438.35	0.00106	0	1.3E-59	25.2463
SHKBP1	1424.9	0.00106	0	0.00187	3.03278
STAT3	1423.35	0.00106	0	0.01899	2.48407
FLOT2	1417.85	0.00106	0	1.3E-10	6.29705
MKRN1	1417.45	0.00106	0	0.04999	2.2314
LILRA3	1411.95	0.00106	0	8.7E-19	9.64338
SF3B6	1408.35	0.00106	0	9.1E-05	3.69165

ALPK1	1407.55	0.00106	0	0.02247	2.44082
CHMP2A	1406.7	0.00106	0	8.9E-12	6.78799
RHOA	1405.45	0.00106	0	1.6E-05	4.05848
LRP10	1399.7	0.00106	0	1.4E-06	4.53678
B9D2	1398	0.00106	0	0.04487	2.26015
LRPAP1	1394.8	0.00106	0	1.8E-05	4.02437
C1QA	1394.5	0.00106	0	2.3E-07	4.89519
CTSA	1390.15	0.00106	0	0.00049	3.33276
ARRB2	1390	0.00106	0	1.7E-10	6.25189
TREML1	1388.35	0.00106	0	6.1E-10	6.01279
ASPH	1386.85	0.00106	0	0.00258	2.96089
AHSP	1384.85	0.00106	0	1.6E-79	32.6569
MXD1	1383.7	0.00106	0	0.00875	2.67421
UBE2J1	1381.15	0.00106	0	0.00073	3.24402
RBCK1	1375.75	0.00106	0	1.2E-21	10.7851
GK	1375.05	0.00106	0	0.04609	2.2527
TOR1B	1372.2	0.00106	0	0.00015	3.58094
MMP25	1370.95	0.00106	0	1.2E-22	11.1795
KIAA0040	1369.5	0.00106	0	4.4E-16	8.55435
NADK	1366.1	0.00106	0	5E-09	5.62228
EIF1	1364.15	0.00106	0	4.4E-43	19.0326
SELPLG	1360.5	0.00106	0	9E-120	47.5126
PTAFR	1360.25	0.00106	0	1.5E-07	4.97329
ISG15	1358.7	0.00106	0	0	500.632
BTNL8	1357.4	0.00106	0	0.00057	3.29854
SEC62	1356.15	0.00106	0	1.4E-07	4.99345
RGS2	1346.85	0.00106	0	8.6E-57	24.1974
IFI35	1339.55	0.00106	0	7.9E-38	17.0367
RNASE1	1339.3	0.00106	0	2.8E-05	3.93956
NFKBIA	1331.75	0.00106	0	1.2E-37	16.9628
IFI44L	1329.5	0.00106	0	1E-05	4.14834
HBM	1324.65	0.00106	0	0.0000000C	91.3932
RNF213	1319.7	0.00106	0	3.7E-07	4.80169
HIST1H2BI	1318.95	0.00106	0	1.7E-10	6.25321
TMEM12C	1316.8	0.00106	0	0.00608	2.76027
LRRC25	1315.25	0.00106	0	0.00355	2.88651
FCGRT	1313.25	0.00106	0	0.00132	3.1129
HIST2H2BI	1311.3	0.00106	0	0.00554	2.7822
ATG3	1310.9	0.00106	0	0.00019	3.53975
GLUL	1310.3	0.00106	0	0.00321	2.90929
ALDH2	1308.8	0.00106	0	0.01041	2.63184
B2M	1305.4	0.00106	0	1.1E-75	31.2328
GBP2	1300.45	0.00106	0	0.00012	3.63763
OAZ1	1299.15	0.00106	0	1.1E-86	35.3131
ALAS2	1296.6	0.00106	0	4E-182	70.38
CAPG	1295.2	0.00106	0	0.00145	3.09208
FAS	1294.4	0.00106	0	0.02359	2.42744
IL4R	1293.3	0.00106	0	4.2E-05	3.8562
STXBP2	1292.5	0.00106	0	1.4E-05	4.07855
TMEM40	1283.8	0.00106	0	3.4E-07	4.8179
TXNIP	1266.9	0.00106	0	0.00112	3.1493
VASP	1264.95	0.00106	0	6.7E-16	8.48242

VAPA	1251.35	0.00106	0	0.00039	3.38138
DDIT3	1250.95	0.00106	0	0.00558	2.78067
KRT23	1250.8	0.00106	0	1.8E-05	4.02713
SNCA	1250.2	0.00106	0	4.6E-46	20.1596
ABTB1	1246.55	0.00106	0	0.00075	3.23953
FKBP1A	1243.55	0.00106	0	7.9E-13	7.22445
IRF9	1239.9	0.00106	0	0.00291	2.93203
WIPF1	1236.45	0.00106	0	1.1E-07	5.03674
HAL	1234	0.00106	0	0.00512	2.8008
EIF2AK2	1231.1	0.00106	0	0.04049	2.2876
MPZL1	1229.35	0.00106	0	5.8E-06	4.25711
OAZ2	1222	0.00106	0	4E-10	6.08924
LYRM1	1219.9	0.00106	0	0.01474	2.54656
HSBP1	1219.6	0.00106	0	0.02233	2.44243
PSMB3	1214.95	0.00106	0	1.4E-10	6.27982
TMEM123	1214.05	0.00106	0	3.4E-07	4.81421
ICAM3	1207.9	0.00106	0	5.5E-10	6.03128
FAM63A	1205.6	0.00106	0	0.03459	2.32944
CEACAM3	1194.65	0.00106	0	2E-16	8.69257
MBOAT7	1193.75	0.00106	0	0.0003	3.43987
LGALS9	1189.25	0.00106	0	3E-11	6.56759
FGR	1186	0.00106	0	5.8E-24	11.6878
IMPDH1	1181.3	0.00106	0	0.00146	3.09006
CLU	1180.4	0.00106	0	1.7E-05	4.0418
SRA1	1180.1	0.00106	0	0.00479	2.81763
ALOX5	1179.3	0.00106	0	2.1E-24	11.861
HCLS1	1178	0.00106	0	0.00253	2.965
C7orf73	1176.7	0.00106	0	5.8E-15	8.09856
PLAUR	1166.25	0.00106	0	1.9E-06	4.47689
C1QC	1159.7	0.00106	0	4.7E-14	7.72712
CTSS	1156.35	0.00106	0	1.2E-16	8.78052
LCP1	1152.8	0.00106	0	0.03478	2.32786
NARF	1148.8	0.00106	0	0.00014	3.60492
RNF10	1145.65	0.00106	0	6.2E-06	4.24625
PSENEN	1144.45	0.00106	0	2.2E-05	3.98827
C2orf88	1140.85	0.00106	0	3.3E-16	8.60622
TMUB2	1139.6	0.00106	0	0.01216	2.5939
GRB2	1137.75	0.00106	0	1.1E-05	4.13701
HIST1H2BI	1137.6	0.00106	0	2.6E-09	5.74654
MS4A4A	1137.45	0.00106	0	0.01528	2.5378
NINJ2	1132.6	0.00106	0	0.00062	3.28085
SLC6A6	1122.65	0.00106	0	0.00241	2.97635
CD300A	1117.15	0.00106	0	0.01099	2.61848
GAPDH	1115.85	0.00106	0	5.4E-61	25.7697
VSIG4	1112.95	0.00106	0	0.02105	2.45739
SULT1A1	1112.45	0.00106	0	0.04753	2.24452
DDAH2	1110.6	0.00106	0	2.1E-20	10.2901
CALM2	1108.3	0.00106	0	0.02339	2.43016
ARF3	1108.2	0.00106	0	0.00114	3.14501
PTPRE	1105.8	0.00106	0	0.02664	2.39635
USP18	1105.05	0.00106	0	0.00013	3.61592
ADIPOR1	1102.1	0.00106	0	7.1E-78	32.049

DCAF12	1101.25	0.00106	0	1.4E-19	9.96204
CA1	1098.05	0.00107	0	0.00549	2.78493
UBC	1096.15	0.00107	0	1.7E-32	14.996
PPBP	1093.35	0.00107	0	5.4E-87	35.4297
PF4	1088.85	0.00107	0	1.1E-12	7.15979
PELI1	1087.15	0.00107	0	0.00747	2.71128
HMGB2	1086.5	0.00107	0	3.1E-05	3.91482
H2AFJ	1077.25	0.00107	0	3.1E-11	6.56389
NUMB	1075.5	0.00107	0	0.00059	3.29276
CD14	1063.05	0.0011	0	3.1E-11	6.56284
RAB24	1058.8	0.00111	0	4.6E-15	8.14222
C1RL	1056.9	0.00111	0	0.02623	2.40049
MTRNR2L	1052.5	0.00112	0	1E-149	58.4741
RABAC1	1050.1	0.00112	0	2E-17	9.09885
FAM45A	1047.9	0.00113	0	0.01495	2.54294
FOS	1041.2	0.00115	0	7E-33	15.1455
FAM65B	1040.8	0.00115	0	5.7E-05	3.79033
MSRB2	1026.75	0.00121	0	0.00694	2.72887
UBE2L6	1025.85	0.00121	0	8E-119	47.1757
RNASE6	1025.3	0.00121	0	4.7E-09	5.6329
BUD31	1022.15	0.00123	0	2E-10	6.21668
OAS3	1017.65	0.00125	0	5.1E-09	5.6159
PHF11	1014.8	0.00126	0	0.00179	3.04378
FYB	1014.1	0.00127	0	1.4E-40	18.0829
RAB3D	1014.1	0.00127	0	0.00082	3.21849
BIN2	1014.05	0.00127	0	3.2E-09	5.7035
LY6E	1011.25	0.00128	0	5E-140	54.9643
MYL9	1001.45	0.00133	0.00051	3.9E-37	16.7717
CAMP	994.45	0.00137	0.00051	1.4E-25	12.3247
RAB7A	993.15	0.00138	0.00051	2.5E-15	8.25112
NCF2	986.15	0.00142	0.00051	1.8E-25	12.2836
SPARC	984.25	0.00143	0.00051	6.6E-05	3.76077
HBQ1	982.65	0.00144	0.00051	1.2E-27	13.1318
PPP1R15A	982.2	0.00145	0.00051	0.0002	3.5266
GP9	977.75	0.00148	0.00051	3.6E-12	6.95271
GPX1	976.3	0.00148	0.00051	7.8E-53	22.7141
CCND3	975.5	0.00149	0.00051	1.6E-05	4.04753
LGALS3	974.9	0.0015	0.00051	1E-109	43.8076
CYBA	974.8	0.0015	0.00051	2.4E-73	30.3571
NRGN	974.45	0.0015	0.00051	2.1E-06	4.4651
AMICA1	972.05	0.00152	0.00051	0.00679	2.73453
GSN	968.55	0.00155	0.00051	0.03137	2.35525
SERF2	966.15	0.00158	0.00051	1.4E-24	11.9361
NFAM1	958.8	0.00166	0.00051	8.6E-11	6.37507
C5AR1	958.15	0.00166	0.00051	3.2E-97	39.2077
B3GNT8	954.75	0.00169	0.00051	5.7E-06	4.26225
INAFM1	953.15	0.00172	0.00051	0.02133	2.45379
SERPING1	951.4	0.00174	0.00051	3E-167	64.9543
JUNB	950.8	0.00174	0.00051	4E-147	57.5539
TKT	950.25	0.00174	0.00051	0.00635	2.75002
ISG20	947.25	0.00178	0.00097	8E-193	74.3183
CREM	946.65	0.00178	0.00097	1.6E-10	6.25701

CNN2	946.25	0.00179	0.00097	7.7E-88	35.7423
ZDHHC12	946.25	0.00179	0.00097	0.0007	3.25331
ALDOA	946.1	0.00179	0.00097	8.3E-11	6.38202
APOL6	932.65	0.002	0.00097	0.00325	2.90606
CSNK1D	928.05	0.00208	0.00097	0.00076	3.2362
UNC13D	926.55	0.00211	0.00097	0.01065	2.62601
ILK	925.15	0.00213	0.00097	0.00378	2.87171
PADI4	925.15	0.00213	0.00097	1.6E-05	4.04731
CYTH4	921.6	0.00219	0.00097	6E-07	4.70757
GNG11	916.05	0.0023	0.0014	2.2E-09	5.78005
PSMB9	915.9	0.0023	0.0014	1.9E-76	31.5188
DAPP1	914.85	0.00232	0.0014	0.01692	2.51276
SIRPB2	914.8	0.00232	0.0014	5.7E-05	3.79012
FKBP8	910.9	0.00241	0.0014	2.2E-09	5.77812
LAMTOR1	910.1	0.00243	0.0014	8.5E-06	4.18186
SECTM1	906.95	0.0025	0.0014	6E-62	26.1253
STAT1	906.5	0.00251	0.0014	0.01534	2.53661
TREX1	903.95	0.00256	0.0014	2.7E-14	7.82524
RASGRP4	903.85	0.00256	0.0014	5E-16	8.53386
SMIM1	902.4	0.00259	0.0014	2E-158	61.7276
LILRB2	895.85	0.00276	0.00182	2.1E-41	18.3908
PHF21A	895.25	0.00277	0.00182	2.6E-16	8.64933
EXOSC4	890.05	0.0029	0.00182	0.00017	3.55822
TGOLN2	889.2	0.00293	0.00182	8.8E-06	4.17397
SCO2	888.5	0.00296	0.00182	7.4E-06	4.21073
TNFSF13	886.85	0.00301	0.00182	0.00187	3.03361
PRDX6	882.05	0.00316	0.00182	3E-112	44.7686
LCN2	875.45	0.00339	0.00224	7.3E-90	36.4897
FES	872.75	0.00347	0.00224	0.00073	3.2452
PSMB8	871.35	0.00352	0.00224	2.8E-12	6.99633
SP110	870.25	0.00356	0.00224	8.8E-10	5.94512
ZYX	865.55	0.00374	0.00263	3.5E-08	5.24884
MYL12B	863.65	0.00381	0.00263	8.8E-08	5.07689
TAGLN2	862.85	0.00385	0.00263	0.0000000C	114.936
SLC25A37	862.45	0.00386	0.00263	2E-197	75.9828
TANGO2	857.15	0.00408	0.00263	0.0341	2.33333
SMIM5	854.5	0.00419	0.003	2.8E-06	4.40333
GNS	850.15	0.00441	0.003	0.0042	2.8472
DHRS9	848.8	0.00446	0.003	0.00021	3.51824
BSG	846.45	0.00455	0.003	6E-09	5.58595
RAC2	845.95	0.00457	0.003	7.4E-34	15.5168
RTP4	845.9	0.00457	0.003	7.2E-98	39.4501
ITGAM	844.4	0.00463	0.0034	0.00048	3.33485
GADD45B	844.05	0.00466	0.0034	0.00627	2.75312
ZFP36	841.9	0.00476	0.0034	0	159.166
SH2D3C	841.8	0.00476	0.0034	0.02403	2.42219
UBB	840.6	0.00483	0.0034	0.0000000C	104.992
RNASET2	839.8	0.00487	0.0034	2.9E-20	10.2329
HERC5	838.95	0.0049	0.0034	0.03866	2.29962
SELENBP1	837.9	0.00496	0.0034	2E-14	7.87678
MT2A	837.85	0.00496	0.0034	0	435.953
WAS	833.25	0.0052	0.00374	4.4E-75	31.0092

FECH	828.65	0.00545	0.00374	0.01564	2.53206
MTRNR2L	824.8	0.00566	0.0041	0.00014	3.60662
GRINA	822.8	0.00578	0.0041	5.2E-10	6.04093
P2RX1	821.4	0.00586	0.00444	0.0015	3.08422
CDC42EP2	819.75	0.00597	0.00444	0.00047	3.34377
ARHGDIB	816.3	0.00618	0.00444	3.1E-39	17.5685
IST1	815.3	0.00623	0.00479	5.7E-11	6.45063
TMEM59	814.95	0.00624	0.00479	0.00489	2.81206
ACTB	812.4	0.00641	0.00479	7E-143	56.0186
BCL6	808.55	0.00667	0.00513	8.4E-14	7.62645
HIST1H2B.	808.3	0.00669	0.00513	0.01259	2.58526
HSH2D	805.15	0.00692	0.00513	1.2E-07	5.01327
ARF1	803.55	0.00704	0.00513	0.00019	3.53441
GALNT2	800.7	0.00731	0.00548	1.9E-05	4.01831
PXN	797.5	0.00752	0.00582	9.7E-13	7.18873
HBB	794.35	0.00778	0.00582	0.0000000C	94.4453
MYL4	788.35	0.00824	0.00616	1.1E-16	8.80801
CD82	787.55	0.00832	0.00616	0.00423	2.84557
FGD3	786.8	0.00839	0.00651	2.1E-41	18.3907
TRIM27	786.05	0.00845	0.00651	5.9E-10	6.01819
TREML2	783.35	0.00869	0.00684	4E-05	3.86558
TRAPPC5	782.85	0.00872	0.00684	3.4E-06	4.3622
FBXO9	782.2	0.00879	0.00684	0.03288	2.34315
GIMAP4	772.45	0.00979	0.00783	2.4E-22	11.0512
GBA	771.75	0.00984	0.00783	0.00016	3.56766
PCGF5	770.25	0.00996	0.00783	1.5E-08	5.41498
FBXO7	762.9	0.01073	0.00881	2.2E-24	11.8532
SLC25A39	761.45	0.01091	0.00881	2.1E-96	38.8996
CTSD	759.25	0.01113	0.00914	1.3E-24	11.9475
RGS3	756.75	0.01139	0.00942	0.01011	2.63916
LDHA	755.3	0.01156	0.00942	0.00231	2.98641
MTRNR2L	745.3	0.01277	0.0107	2.9E-15	8.2222
TNFRSF1A	740.75	0.01339	0.01131	9.5E-22	10.8179
OSM	737.9	0.01376	0.01162	3.9E-19	9.78061
SH3BGRL3	734.35	0.01433	0.01191	8.8E-43	18.916
IQGAP1	728.45	0.01523	0.01282	4.4E-07	4.76579
PHOSPHO	725.4	0.01571	0.01339	0.00184	3.0379
HLA-C	725.35	0.01571	0.01339	0.0000000C	115.048
FUNDC2	725.15	0.01574	0.01339	7.1E-10	5.98295
ETV7	720.15	0.0165	0.01394	8.4E-14	7.62604
PRELID1	711.8	0.01785	0.01553	0.01908	2.48282
PILRA	708.15	0.01849	0.0159	0.0009	3.19755
GBP1	707.45	0.01862	0.0159	3E-10	6.13973
NINJ1	704.65	0.01915	0.01653	2.8E-16	8.63804
ZNF438	701.75	0.01968	0.01707	0.0196	2.4755
PKM	700.2	0.01999	0.01734	6.2E-06	4.24612
AZU1	698.55	0.02029	0.01762	1.8E-08	5.3776
PRKD2	698.5	0.02029	0.01762	0.00285	2.93647
DDIT4	686.45	0.02272	0.02004	2.1E-07	4.90804
EVI2A	685.65	0.02291	0.02031	0.02181	2.44813
BPI	685.1	0.02302	0.02031	0.0225	2.44038
ACKR1	684.7	0.02311	0.02031	0.02892	2.37588

IRF1	683.5	0.02338	0.02056	5.8E-06	4.2597
RNF130	682.25	0.02364	0.02083	0.02997	2.36645
DAZAP2	681.55	0.0238	0.02083	0.00716	2.72154
TMEM92	678.1	0.02461	0.0217	0.04458	2.262
DNAJA1	666.3	0.02764	0.02461	0.01959	2.47591
NPC2	665.6	0.02782	0.02485	3.9E-22	10.9709
RNF114	665.3	0.02788	0.02485	0.00098	3.17757
TRIB1	664.8	0.02799	0.02485	0.01994	2.47116
WDR45	663.9	0.02821	0.0251	0.00494	2.80962
CD274	663.5	0.02832	0.0251	0.00778	2.70156
CXCR4	663.2	0.02839	0.0251	9.8E-09	5.49498
ACP1	660.7	0.02906	0.02596	0.01947	2.47742
TOM1	655.9	0.03035	0.02699	0.02583	2.40465
LSP1	652.8	0.03126	0.02778	4E-177	68.5607
REEP5	650.9	0.03171	0.02858	0.0092	2.6622
GUK1	647.2	0.0328	0.02958	2.5E-28	13.3872
STAT2	642.8	0.03402	0.03082	3.3E-07	4.82349
GLIPR1	641.3	0.03452	0.03128	0.01045	2.63067
PRTN3	631.25	0.038	0.03474	0.00098	3.17881
IMPA2	629.65	0.03853	0.03525	0.02053	2.46357
PRAM1	627.8	0.0392	0.03549	1.2E-08	5.45344
HBG2	622.25	0.0412	0.03764	7.6E-51	21.9635
CEBPB	620.3	0.04193	0.03825	0.02489	2.41378
DEFA4	619.4	0.04223	0.03846	3.4E-08	5.25462
BATF	617.65	0.04287	0.03905	0.00039	3.3811
OAS2	617.55	0.0429	0.03905	0.00983	2.64634
CCR1	616.55	0.04326	0.03972	4.6E-13	7.32231
GSTO1	616.15	0.04342	0.03984	0.00111	3.15078
PSAP	614.5	0.04393	0.04012	0.00029	3.44847
KIF27	611	0.04526	0.04181	0.04785	2.2428
IFI27	610.4	0.04552	0.0419	0	969.03
LTBR	610.4	0.04552	0.0419	0.00301	2.92434
PPP1R18	609.8	0.04577	0.04233	0.00016	3.56983
PRDX5	606.7	0.04701	0.04319	9.7E-06	4.15488
CCNI	606.2	0.04717	0.04331	0.01325	2.57253
TMC4	604.45	0.04795	0.04425	2.9E-62	26.2408
GTF2B	604.05	0.04811	0.04425	0.04692	2.24814
PDZK1IP1	603.6	0.04829	0.04447	8.9E-96	38.6705
FCN1	600.45	0.04959	0.0456	3.5E-10	6.11686
C9orf78	597.5	0.05082	0.04716	1.6E-10	6.26397
RNF145	595.45	0.05171	0.04818	8.9E-12	6.78722
PSMF1	590.2	0.05401	0.04987	4.2E-12	6.92444
RANBP3	-506.65	0.10462	0.0499	0.02854	2.37929
IFI27L2	-514.05	0.09863	0.04674	0.00942	2.65656
DNAJC15	-517.05	0.09642	0.04563	1.4E-10	6.27921
CS	-518.8	0.09522	0.04493	1.9E-06	4.48351
CD48	-520.05	0.09443	0.04473	0.00227	2.98992
PLEKHG2	-520.65	0.09404	0.04437	0.00291	2.93147
NRROS	-532.8	0.08557	0.03996	0.00231	2.98548
TMSB4X	-535	0.0843	0.03932	1.7E-36	16.5278
HMGB1	-535.7	0.08385	0.03899	0.00153	3.08017
FAAP20	-541.3	0.08058	0.03754	4.9E-06	4.29307

TMEM109	-550.7	0.07477	0.03451	5.1E-15	8.122
KRTCAP3	-558.6	0.07029	0.03205	0.04191	2.27859
MRPL53	-563.05	0.06801	0.03109	0.00073	3.2438
HLA-DQA2	-563.3	0.06787	0.03109	5.8E-15	8.09863
C11orf98	-566.8	0.06588	0.03011	1.4E-12	7.12762
CLTA	-566.95	0.06581	0.03011	6.4E-05	3.76751
SON	-571.05	0.06368	0.0291	0.0367	2.31356
ZNHIT1	-573.85	0.06231	0.02834	3.4E-08	5.25454
NDUFV2	-574.3	0.06205	0.02834	0.00048	3.33856
NDUFAF3	-580.6	0.0588	0.02678	4.9E-07	4.74394
IL10RA	-595.55	0.0517	0.023	1.2E-05	4.11472
DCPS	-597.6	0.05079	0.02278	0.00207	3.01101
ZNF653	-598.1	0.0506	0.0225	2.2E-17	9.08228
RBM8A	-599.15	0.05014	0.02236	0.00134	3.10998
HLA-DRB5	-599.2	0.05014	0.02236	1.9E-34	15.748
GSTM2	-602.75	0.04865	0.02168	0.00989	2.6446
C12orf10	-604	0.04811	0.02141	4.8E-06	4.2985
TMUB1	-608.15	0.04639	0.02062	3.1E-25	12.1856
PTGDS	-611	0.04526	0.02009	0.00252	2.96581
PSME2	-612.7	0.04459	0.01978	8.6E-57	24.1983
PDCD6	-615.65	0.04356	0.01932	0.00016	3.57658
RBX1	-619.25	0.04225	0.01851	0.0017	3.05632
TXN2	-619.55	0.0422	0.01851	0.0367	2.31342
MEN1	-619.8	0.04214	0.01851	0.04733	2.24582
UQCR11	-624.8	0.04024	0.01766	5.7E-15	8.1027
TARBP2	-625.7	0.03992	0.01736	0.03677	2.31279
SUB1	-628.25	0.03904	0.01683	2.3E-07	4.89201
TMEM179	-635.2	0.03655	0.01598	0.04826	2.2406
FAM195B	-637.15	0.0359	0.01568	0.00863	2.67758
LAIR1	-637.15	0.0359	0.01568	6.5E-09	5.57107
MYDGF	-640.1	0.03487	0.01509	0.00044	3.35476
FABP5	-641.05	0.0346	0.01479	2.3E-08	5.33252
ERP29	-644.4	0.03361	0.01454	7.1E-06	4.21825
SH2D2A	-652.6	0.03131	0.01344	0.01959	2.47582
ATP5B	-653.05	0.0312	0.01344	0.02014	2.46847
ELP5	-653.85	0.03097	0.01313	2.4E-11	6.60629
HSP90AA1	-656.3	0.03024	0.01251	2.8E-07	4.8562
ACTG1	-658.4	0.02969	0.01222	4.2E-72	29.896
PRKCSH	-663.35	0.02836	0.01193	5.4E-05	3.80059
NOB1	-664.5	0.02805	0.01193	0.01922	2.48091
ZFP36L2	-666.3	0.02764	0.01165	1.1E-05	4.13653
VSTM1	-666.65	0.02758	0.01165	1.9E-08	5.36803
ZCRB1	-666.65	0.02758	0.01165	0.04233	2.27609
WDR83OS	-670.4	0.02664	0.01135	3.2E-07	4.83151
SCAND1	-671.5	0.02633	0.01102	0.00191	3.02852
BRK1	-672.5	0.02607	0.01102	0.00176	3.04819
IDO1	-672.5	0.02607	0.01102	4E-08	5.22501
CD24	-682.9	0.0235	0.00976	0.00276	2.94377
SEPT6	-683.2	0.02344	0.00976	9.3E-06	4.16331
DYRK1B	-686.7	0.02269	0.00946	0.00791	2.69777
BAG3	-687.85	0.02248	0.00946	0.00964	2.65118
CCL23	-694.55	0.02106	0.00883	2E-09	5.79705

SF1	-698.5	0.02029	0.0085	7.4E-38	17.0476
LBH	-702.9	0.01949	0.00789	1E-36	16.6159
XAB2	-703.75	0.01931	0.00789	0.00876	2.67395
SHMT2	-704.15	0.01925	0.00789	1.2E-06	4.572
VAMP8	-712.85	0.01768	0.0072	1.3E-08	5.44101
MGST3	-713.9	0.01751	0.0072	0.00123	3.12818
HLA-DRB1	-716.8	0.01703	0.00686	1E-73	30.4972
EIF4EBP1	-717.7	0.01687	0.00686	0.03237	2.34712
RPS4Y1	-717.7	0.01687	0.00686	1E-198	76.474
NMT1	-718.35	0.01679	0.00655	9.3E-05	3.6871
S1PR1	-727.1	0.01545	0.0062	4.2E-05	3.85446
SRP14	-732	0.01468	0.00586	3.1E-17	9.0214
PRDX1	-732.25	0.01464	0.00586	4.7E-05	3.83153
MPG	-738.15	0.01374	0.00551	0.00737	2.71456
PRDX2	-738.6	0.01368	0.00551	3.3E-08	5.26363
KDELR1	-739.5	0.01355	0.00551	0.03983	2.29204
PSMB7	-740.75	0.01339	0.00516	0.03395	2.33466
EIF5A	-742.65	0.01313	0.00516	0.00289	2.93372
PSMB2	-743.35	0.01303	0.00516	0.00245	2.97261
KIAA0141	-748.8	0.01232	0.00484	0.0002	3.52391
CSNK2B	-748.85	0.01232	0.00484	6.8E-05	3.75218
TAPBPL	-752.65	0.01181	0.00449	2.6E-77	31.843
RNF26	-758.75	0.01118	0.00449	9.2E-09	5.50567
PI3	-762.9	0.01073	0.00415	1.7E-73	30.4191
CD38	-763.2	0.01071	0.00415	0.00985	2.64561
RRP7A	-763.4	0.01069	0.00415	0.0387	2.29921
NUCDC3	-763.75	0.01066	0.00415	0.01939	2.4786
NCL	-771.75	0.00984	0.00381	0.02093	2.45884
SDF2L1	-771.95	0.00983	0.00381	0.002	3.01812
MRPL21	-772.4	0.00979	0.00381	0.00405	2.85592
SUMO2	-773.8	0.00965	0.00381	3.9E-05	3.86994
HSPA9	-776.75	0.00934	0.00343	0.00039	3.38094
H1FX	-785.8	0.00846	0.00307	0.02756	2.3882
QARS	-790.7	0.00805	0.00307	0.00876	2.67363
PSMC2	-800.15	0.00735	0.00267	0.02827	2.38186
ITM2C	-801.3	0.00724	0.00267	0.02255	2.43972
IL2RB	-802.9	0.00709	0.00267	0.00424	2.84513
FKBP2	-811.45	0.00646	0.00227	0.00509	2.80251
PSMA2	-814.55	0.00625	0.00227	0.03634	2.31597
TMA7	-819.5	0.00598	0.00227	5.9E-05	3.78435
MT1E	-822.55	0.00579	0.00187	2.6E-08	5.30582
COMM1	-824.6	0.00567	0.00187	0.02825	2.3822
GNGT2	-835.05	0.0051	0.00187	0.00019	3.53714
CALM1	-838.1	0.00495	0.00187	1.3E-11	6.72093
AAK1	-839.45	0.00488	0.00187	7.6E-05	3.7282
PIM2	-842	0.00476	0.00145	0.01159	2.60542
HLA-DQA1	-846.75	0.00454	0.00145	8.6E-14	7.62056
SLIRP	-847.25	0.00452	0.00145	0.00359	2.88322
PSMB5	-853.65	0.00423	0.00145	0.00015	3.58203
CDC20	-860.05	0.00394	0.00145	0.00906	2.66568
MAGED1	-861.35	0.0039	0.00121	0.00014	3.59389
PET100	-866.4	0.00371	0.00102	4.6E-06	4.3074

SF3A2	-869.95	0.00358	0.00102	0.00053	3.31458
NOLC1	-872	0.00349	0.00102	5.4E-05	3.80065
PFN1	-873.55	0.00345	0.00102	9.1E-46	20.046
PTTG1	-879.2	0.00325	0.00102	8.6E-12	6.79508
ATP5H	-881.9	0.00316	0.00102	0.00822	2.68914
CHCHD5	-882.15	0.00316	0.00102	0.00273	2.94668
CDC37	-883.45	0.00311	0.00102	2E-05	4.00841
PSMA5	-892.95	0.00284	0.00057	0.01112	2.61555
ACO2	-906.25	0.00252	0.00057	0.00555	2.78165
C17orf49	-922.9	0.00216	0.00057	0.00862	2.67808
ATRAID	-923.2	0.00216	0.00057	0.00512	2.80102
NME3	-925.15	0.00213	0.00057	0.00024	3.48311
AUP1	-933.55	0.00198	0.00057	0.01271	2.5822
DYNLL1	-935.9	0.00195	0.00057	1.6E-06	4.51452
PTBP1	-940.25	0.00188	0.00057	2.8E-05	3.93417
LIMD2	-948.25	0.00176	0.00057	1.5E-11	6.6927
VDAC2	-948.4	0.00176	0.00057	6.6E-05	3.75893
FTSJ1	-949.1	0.00176	0.00057	0.04527	2.25762
PSMB6	-955.4	0.00169	0	0.00025	3.47361
MRPS16	-956.2	0.00169	0	0.01089	2.62073
CYCS	-957.1	0.00168	0	0.04733	2.24565
COX5A	-962.55	0.00162	0	5.8E-07	4.71444
USMG5	-964.05	0.00159	0	1.7E-15	8.31589
NDUFA4	-975.35	0.00149	0	7.5E-07	4.66339
NDUFB10	-978.25	0.00148	0	1.2E-06	4.57082
LGALS2	-980.7	0.00145	0	3E-27	12.9722
C12orf75	-980.8	0.00145	0	0.00021	3.50839
GTF3C5	-981.55	0.00145	0	2.9E-07	4.85009
SPON2	-981.65	0.00145	0	0.00902	2.66686
ROMO1	-984	0.00143	0	1.3E-08	5.43989
ABI3	-986	0.00142	0	7.5E-10	5.97291
MT1X	-986.5	0.00142	0	6.2E-07	4.70059
PRKAR1B	-987.75	0.00141	0	0.01739	2.50597
MRPL27	-989.1	0.0014	0	4.8E-05	3.82453
VAMP2	-992.05	0.00138	0	0.0031	2.91655
ATP5F1	-994.25	0.00137	0	0.00031	3.42952
LTB	-995.1	0.00137	0	5.7E-06	4.26297
SEC11C	-995.25	0.00137	0	0.00302	2.92267
SPIB	-995.45	0.00137	0	2.4E-06	4.43109
PLSCR3	-996	0.00137	0	0.00981	2.64687
CHI3L1	-996.25	0.00137	0	7.2E-16	8.46922
CHCHD2	-997.1	0.00136	0	4.4E-32	14.8377
MT1F	-1006.1	0.0013	0	0.00066	3.26534
RNASEH2C	-1007	0.0013	0	8.9E-08	5.0728
CDC25B	-1010.55	0.00128	0	0.01271	2.58239
UQCRB	-1013.75	0.00127	0	1.5E-07	4.97925
RPP21	-1016.1	0.00126	0	0.00142	3.09728
PSMB4	-1017.2	0.00126	0	0.00397	2.86083
CD79A	-1028.65	0.0012	0	5.2E-36	16.3414
CD320	-1028.85	0.0012	0	0.01031	2.63445
UBE2D2	-1029.95	0.00119	0	0.01408	2.5577
RPS19BP1	-1032.05	0.00119	0	0.0024	2.97723

C4orf48	-1032.35	0.00119	0	0.00091	3.19497
KLRD1	-1033.05	0.00119	0	0.0112	2.61372
CCL5	-1036.35	0.00117	0	2E-160	62.4492
PPIB	-1036.75	0.00117	0	2E-08	5.35516
EIF4A1	-1037.5	0.00117	0	0.00642	2.74701
FAM96B	-1038.6	0.00117	0	9.6E-07	4.61351
TRMT112	-1041.55	0.00115	0	0.00214	3.00287
UBXN1	-1045.5	0.00114	0	0.00636	2.74939
EIF6	-1050.25	0.00112	0	0.02045	2.46459
OSTC	-1050.35	0.00112	0	0.03936	2.29512
TCL1A	-1050.8	0.00112	0	2.1E-29	13.8047
PSMA7	-1056.45	0.00111	0	9.6E-06	4.15545
EVL	-1058.05	0.00111	0	1.8E-18	9.51299
UQCC2	-1061.55	0.00111	0	0.00617	2.75692
COA3	-1065.7	0.0011	0	0.00067	3.26443
COA4	-1071.55	0.00108	0	0.03008	2.36543
PSMB1	-1077	0.00107	0	0.00129	3.11899
NDUFA2	-1079.3	0.00107	0	3.5E-13	7.3713
EEF2	-1080.6	0.00107	0	6.3E-07	4.6969
ATP6V1F	-1081.25	0.00107	0	3.9E-09	5.66912
SEC61B	-1082.5	0.00107	0	2.6E-09	5.74524
CIRBP	-1083.7	0.00107	0	0.02118	2.45587
CCR7	-1090.2	0.00107	0	9.7E-21	10.4202
PRF1	-1090.3	0.00107	0	9.8E-05	3.67515
MS4A1	-1091.1	0.00107	0	0.00181	3.04134
SNRPB	-1094.85	0.00107	0	0.00057	3.30006
NDUFB4	-1102.35	0.00106	0	8.9E-15	8.02313
COX14	-1104.4	0.00106	0	0.00092	3.19285
APOBEC3C	-1107.8	0.00106	0	3.2E-11	6.55744
AFF3	-1115.05	0.00106	0	0.00043	3.35895
HLA-DMB	-1115.55	0.00106	0	0.00072	3.24878
SLC29A1	-1118.6	0.00106	0	8.1E-05	3.71492
HLA-DQB1	-1122.9	0.00106	0	6.1E-09	5.58263
SPN	-1128.2	0.00106	0	3.5E-16	8.59892
LAIR2	-1132.95	0.00106	0	1.8E-08	5.38441
BTF3	-1136.25	0.00106	0	1.1E-29	13.9131
GSTP1	-1137.1	0.00106	0	3.1E-25	12.1901
PABPC1	-1137.3	0.00106	0	2.8E-06	4.40551
EIF3G	-1142	0.00106	0	3.3E-14	7.79068
SMIM10L1	-1142.6	0.00106	0	1.3E-25	12.3368
NDUFA7	-1144.1	0.00106	0	0.00496	2.80871
HSP90AB1	-1144.35	0.00106	0	9.6E-06	4.15615
RPL22L1	-1145.4	0.00106	0	0.01165	2.60411
HSD17B1C	-1147.2	0.00106	0	0.00519	2.79755
HMGN2	-1150.45	0.00106	0	6.4E-21	10.4928
SEPT9	-1151.95	0.00106	0	2.2E-24	11.8547
ZNF593	-1154.8	0.00106	0	2.7E-05	3.94912
NDUFS7	-1158.35	0.00106	0	1.2E-12	7.15553
C9orf142	-1160.85	0.00106	0	0.02124	2.45503
ATPIF1	-1161.95	0.00106	0	0.00187	3.03344
ANXA6	-1163.55	0.00106	0	0.04398	2.26588
HMGA1	-1165.7	0.00106	0	1.3E-13	7.54554

POLR2G	-1166.1	0.00106	0	0.00643	2.74663
SMDT1	-1166.85	0.00106	0	8.7E-06	4.17629
ZNF302	-1174.05	0.00106	0	0.00564	2.77802
NME2	-1174.35	0.00106	0	1.9E-28	13.4374
PIK3IP1	-1181.95	0.00106	0	5.2E-21	10.5294
SEC61G	-1182.05	0.00106	0	1E-08	5.48356
CCL4	-1182.65	0.00106	0	0.02934	2.37227
GTF3A	-1183.3	0.00106	0	0.02792	2.38504
SF3B5	-1184.65	0.00106	0	0.00276	2.94456
SOX4	-1190.5	0.00106	0	2.8E-12	6.99971
SRSF3	-1192.7	0.00106	0	0.01411	2.55721
KLRG1	-1193.25	0.00106	0	0.0136	2.56613
ABRACL	-1194.65	0.00106	0	9.2E-07	4.6213
RPL36AL	-1199.3	0.00106	0	2.4E-19	9.8663
NDUFS6	-1202.2	0.00106	0	0.00403	2.85774
SNRPG	-1203.75	0.00106	0	0.00029	3.44177
TMEM258	-1205.4	0.00106	0	4.1E-14	7.75167
MRPS18B	-1208.15	0.00106	0	0.01422	2.55518
DDX39A	-1209.25	0.00106	0	0.00078	3.22846
MEA1	-1210	0.00106	0	0.01269	2.58291
HLA-DMA	-1210.75	0.00106	0	1.6E-06	4.5157
ESYT1	-1211.5	0.00106	0	0.01262	2.58456
TCF25	-1213.65	0.00106	0	8.5E-11	6.37762
NSMCE1	-1213.95	0.00106	0	0.00606	2.76152
UQCR10	-1214.2	0.00106	0	1.6E-16	8.73902
EMC4	-1216.6	0.00106	0	0.00034	3.40799
C15orf61	-1220.1	0.00106	0	0.03319	2.34036
PHB	-1221.95	0.00106	0	0.01491	2.54367
MPLKIP	-1223.25	0.00106	0	0.00064	3.27513
MAP4K1	-1224.55	0.00106	0	0.02738	2.38992
S100B	-1225.5	0.00106	0	2.1E-12	7.05115
MDH2	-1226.15	0.00106	0	0.0208	2.46046
CD5	-1231.65	0.00106	0	1.3E-08	5.44518
RPS27L	-1233.7	0.00106	0	1.6E-10	6.26061
DUT	-1235.6	0.00106	0	0.02527	2.41018
PIN1	-1236.4	0.00106	0	0.03463	2.32904
USE1	-1238.1	0.00106	0	0.00876	2.67388
UCP2	-1240.55	0.00106	0	2.6E-27	12.9994
ANAPC11	-1241.85	0.00106	0	2.6E-15	8.23969
UBASH3A	-1242.25	0.00106	0	0.03604	2.31807
CXCR3	-1251.75	0.00106	0	0.00156	3.07607
IGLL5	-1252.65	0.00106	0	1.6E-05	4.05279
RPL21	-1256.95	0.00106	0	4.9E-77	31.7381
UQCRRQ	-1259.15	0.00106	0	5.3E-15	8.11581
NAA10	-1261.45	0.00106	0	0.00757	2.70805
ANP32B	-1268.7	0.00106	0	0.00244	2.97359
MRPS26	-1275.3	0.00106	0	0.018	2.49715
DPM3	-1276.85	0.00106	0	0.00165	3.06255
ALOX15	-1277.25	0.00106	0	0.02008	2.46943
C9orf16	-1283.9	0.00106	0	1E-09	5.91852
IL27RA	-1286.65	0.00106	0	0.02385	2.42465
TIMM10	-1290.45	0.00106	0	6.4E-10	6.00269

TMSB10	-1292.1	0.00106	0	8.1E-86	34.9916
MRPL52	-1292.55	0.00106	0	9.5E-19	9.62663
HIGD2A	-1292.75	0.00106	0	3.2E-12	6.97576
MRPS14	-1294.75	0.00106	0	0.01865	2.48865
RPS26	-1296.3	0.00106	0	0	150.763
NDUFS5	-1297.55	0.00106	0	1.1E-10	6.33519
GATA3	-1304.15	0.00106	0	2.3E-09	5.7646
LPXN	-1304.95	0.00106	0	0.00524	2.7951
UQCC3	-1308.25	0.00106	0	0.01829	2.49331
PARK7	-1308.9	0.00106	0	2E-05	4.00268
UXT	-1311.55	0.00106	0	0.00047	3.33952
POLR2F	-1311.7	0.00106	0	3.3E-07	4.82496
HMGN3	-1318.1	0.00106	0	0.02613	2.40159
UQCRH	-1319.25	0.00106	0	2.5E-15	8.24784
NDUFB7	-1320	0.00106	0	1.7E-16	8.72523
GZMB	-1333.9	0.00106	0	5.5E-74	30.6006
SURF2	-1340.8	0.00106	0	0.04501	2.25931
FXYD5	-1344.35	0.00106	0	2.1E-28	13.4193
AIP	-1347	0.00106	0	0.01577	2.52974
TESPA1	-1347.1	0.00106	0	0.00419	2.84838
TPT1	-1350.7	0.00106	0	8.6E-58	24.5724
ATP5G3	-1351.35	0.00106	0	2.2E-10	6.19821
DBI	-1351.9	0.00106	0	5E-06	4.28821
MRPL54	-1357.25	0.00106	0	0.00092	3.19296
NXT1	-1357.3	0.00106	0	0.00334	2.90035
MRPL37	-1358.75	0.00106	0	0.04704	2.24741
ZAP70	-1361.4	0.00106	0	0.0067	2.73749
PCED1B	-1368.3	0.00106	0	0.00299	2.92589
EMP3	-1373.9	0.00106	0	3.1E-07	4.83504
HSPA8	-1374.15	0.00106	0	1.9E-44	19.5502
ATP5L	-1377.75	0.00106	0	0.00016	3.56441
SNRPE	-1380.2	0.00106	0	0.00132	3.11332
TBCA	-1381.45	0.00106	0	1.5E-10	6.26796
NSA2	-1387.45	0.00106	0	0.00231	2.98545
DGKA	-1390	0.00106	0	0.01224	2.59179
CCDC101	-1392	0.00106	0	0.03524	2.32422
CWF19L2	-1401.8	0.00106	0	0.0001	3.66714
SSR4	-1408.95	0.00106	0	7.5E-21	10.4631
CD247	-1417.15	0.00106	0	0.01051	2.62938
FGFBP2	-1422.45	0.00106	0	1.2E-19	9.98614
MRPL41	-1423.1	0.00106	0	6.1E-12	6.85707
LSM2	-1423.25	0.00106	0	0.00418	2.84891
RAN	-1424.3	0.00106	0	8.1E-05	3.7157
RPS9	-1425.3	0.00106	0	4.8E-51	22.0376
CLIC3	-1428.05	0.00106	0	4.1E-07	4.78157
MRPL23	-1428.5	0.00106	0	1.5E-13	7.5214
CDK2AP2	-1430.05	0.00106	0	7E-07	4.67693
NDUFA13	-1440.8	0.00106	0	2.3E-22	11.0592
NDUFB2	-1442.5	0.00106	0	4.2E-08	5.21797
LEF1	-1443.85	0.00106	0	0.02963	2.36958
PFDN5	-1444.75	0.00106	0	4.1E-26	12.5317
SH2D1A	-1445.25	0.00106	0	0.01133	2.61065

NDUFB9	-1450.1	0.00106	0	2.6E-09	5.74607
ARL6IP4	-1452.95	0.00106	0	0.00029	3.44755
PSMG4	-1453.4	0.00106	0	0.00173	3.05172
NDUFA11	-1453.75	0.00106	0	1.8E-43	19.1754
PHPT1	-1455.2	0.00106	0	3.4E-07	4.81494
NDUFB11	-1459.3	0.00106	0	1.5E-14	7.93257
SNRPA	-1461.5	0.00106	0	0.02561	2.40676
PHB2	-1462.3	0.00106	0	0.02356	2.42791
ABHD14B	-1467.15	0.00106	0	8.3E-05	3.71156
HAX1	-1467.25	0.00106	0	0.00019	3.53421
EIF5B	-1468.4	0.00106	0	2.3E-44	19.515
CD74	-1471.7	0.00106	0	5E-140	54.9608
SSR2	-1473.4	0.00106	0	1.4E-07	4.99078
FCMR	-1478.5	0.00106	0	1.5E-28	13.4794
SNRPD3	-1483.8	0.00106	0	5.3E-05	3.80569
DDX18	-1496.25	0.00106	0	9.6E-06	4.15554
LCK	-1498.45	0.00106	0	0.00029	3.4444
C11orf31	-1499.4	0.00106	0	9.8E-12	6.77017
CD79B	-1504.7	0.00106	0	5E-32	14.8145
HINT2	-1512.05	0.00106	0	9.6E-16	8.41881
SNRPC	-1514.65	0.00106	0	2E-10	6.22043
HCST	-1516.85	0.00106	0	3.4E-33	15.2664
RANGRF	-1519.6	0.00106	0	0.00106	3.16155
RARRES3	-1520.6	0.00106	0	1.1E-43	19.2561
PPIH	-1522.3	0.00106	0	0.01214	2.59437
C14orf16ε	-1523.8	0.00106	0	0.01248	2.58723
MRPL14	-1525.3	0.00106	0	3E-08	5.28285
LYPD2	-1529.2	0.00106	0	0.01104	2.61719
MRPL40	-1530.75	0.00106	0	7.6E-05	3.72845
RHOF	-1534.1	0.00106	0	0.00011	3.64939
TUBB	-1534.45	0.00106	0	0.00158	3.07293
PNKD	-1535	0.00106	0	0.00079	3.22646
CD3G	-1536.85	0.00106	0	0.00929	2.65983
TOMM20	-1544.75	0.00106	0	0.01039	2.63231
C8orf59	-1551.3	0.00106	0	0.00021	3.50936
MRPS12	-1552.85	0.00106	0	0.02847	2.37994
GZMH	-1559.25	0.00106	0	3.9E-53	22.8262
CD8A	-1562.5	0.00106	0	5.4E-13	7.29368
MYEOV2	-1565.6	0.00106	0	2.1E-05	3.9971
BUB3	-1566.9	0.00106	0	0.04275	2.27349
TECR	-1579.1	0.00106	0	1.1E-12	7.16271
GADD45G	-1579.55	0.00106	0	0.00011	3.65341
RPS12	-1579.6	0.00106	0	7.4E-61	25.7165
MRPL11	-1583.35	0.00106	0	0.00776	2.70238
TCF7	-1586.25	0.00106	0	4E-151	59.0238
GIMAP5	-1588.25	0.00106	0	3.6E-07	4.80518
MRPL43	-1589.15	0.00106	0	8.3E-05	3.70928
SLC25A5	-1595.35	0.00106	0	1.7E-06	4.4969
RPL28	-1599.1	0.00106	0	6.8E-97	39.0861
NDUFB8	-1600.35	0.00106	0	1.8E-13	7.49323
ZNF749	-1601.05	0.00106	0	0.00089	3.20134
VPREB3	-1602.1	0.00106	0	2.3E-55	23.6618

STMN1	-1604.35	0.00106	0	9.4E-12	6.77761
SLC25A3	-1610.55	0.00106	0	1.4E-11	6.7042
SIVA1	-1619.45	0.00106	0	0.00174	3.05074
CRIP1	-1633.45	0.00106	0	4.7E-63	26.537
NDUFA3	-1636.65	0.00106	0	7.8E-17	8.86244
C6orf48	-1643.15	0.00106	0	1.3E-22	11.1606
CHI3L2	-1644.55	0.00106	0	0.02335	2.43072
NDUFS3	-1644.55	0.00106	0	1.7E-07	4.95402
NDUFA12	-1645	0.00106	0	8.9E-09	5.51341
ATP5I	-1650	0.00106	0	2.2E-15	8.27582
CCR3	-1655.85	0.00106	0	0.02657	2.3971
HLA-DPA1	-1659.65	0.00106	0	1.7E-26	12.6781
MRPS24	-1661.45	0.00106	0	6E-15	8.09216
SPOCK2	-1667.35	0.00106	0	0.03592	2.31918
GIMAP7	-1669.1	0.00106	0	3.6E-06	4.35182
RPS2	-1670.65	0.00106	0	2.8E-86	35.161
C1QBP	-1676.15	0.00106	0	0.02837	2.38091
EDF1	-1679.1	0.00106	0	8.6E-23	11.229
MRPL34	-1682.9	0.00106	0	6.2E-08	5.1444
TSTD1	-1689.1	0.00106	0	6.4E-07	4.69179
ATP5G1	-1692.2	0.00106	0	8.8E-11	6.37016
BANF1	-1693	0.00106	0	4.3E-08	5.21297
HLA-DRA	-1695.2	0.00106	0	1.3E-52	22.6332
NHP2L1	-1695.4	0.00106	0	2.4E-13	7.43791
TIMM13	-1706.9	0.00106	0	3E-13	7.3985
NDUFS8	-1708.5	0.00106	0	4.8E-09	5.62816
SNRNP25	-1719.4	0.00106	0	0.00034	3.41232
MRPL57	-1721.6	0.00106	0	3E-20	10.2248
RPL9	-1722.7	0.00106	0	4.6E-07	4.75965
CCDC167	-1723.75	0.00106	0	1.6E-05	4.05586
GZMA	-1725.75	0.00106	0	1.4E-38	17.3283
CIB1	-1730.1	0.00106	0	6.5E-05	3.76166
CD8B	-1732.5	0.00106	0	0.00388	2.86621
TMEM256	-1736.35	0.00106	0	2.8E-13	7.40875
ZNF706	-1737.3	0.00106	0	7.7E-09	5.54047
ALKBH7	-1738.05	0.00106	0	1.7E-10	6.24956
SIRPG	-1740.65	0.00106	0	0.0176	2.50302
LIME1	-1744.65	0.00106	0	7.7E-05	3.72664
C19orf70	-1745.05	0.00106	0	2.9E-10	6.15008
RPS15	-1748.2	0.00106	0	1E-105	42.2981
UFC1	-1753.9	0.00106	0	0.01696	2.51197
TRAPPCC6A	-1758.9	0.00106	0	0.00482	2.81605
C19orf53	-1763.7	0.00106	0	8.6E-26	12.405
LAT	-1764.65	0.00106	0	2.5E-16	8.65606
KLRK1	-1765	0.00106	0	0.03525	2.32399
MIF	-1768.75	0.00106	0	5E-52	22.4074
RPS11	-1774.55	0.00106	0	6.3E-78	32.0706
PTPRCAP	-1785.65	0.00106	0	1.8E-20	10.3139
POLR2L	-1791.7	0.00106	0	4.6E-20	10.15
HNRNPA1	-1799.6	0.00106	0	0.03415	2.33284
RPS19	-1805.3	0.00106	0	5E-169	65.5956
COX6C	-1807.5	0.00106	0	1.6E-32	15.0094

MRPS21	-1809.3	0.00106	0	1.2E-17	9.19406
FAU	-1815	0.00106	0	9.1E-65	27.1748
POLR2I	-1815.4	0.00106	0	7.6E-10	5.9707
CTSW	-1821.6	0.00106	0	4.2E-25	12.1358
ITM2A	-1825.1	0.00106	0	0.04293	2.27234
PPIA	-1825.5	0.00106	0	2.2E-23	11.4641
NHP2	-1832.05	0.00106	0	3.7E-19	9.79031
POLR3K	-1835.35	0.00106	0	0.00484	2.81453
RPS28	-1837.55	0.00106	0	3.7E-56	23.9599
PTMA	-1841.2	0.00106	0	1.1E-47	20.7782
RPL30	-1846.25	0.00106	0	7E-129	50.8734
LSM7	-1847.85	0.00106	0	1E-41	18.5157
NCR3	-1858.5	0.00106	0	0.01529	2.5375
MAL	-1860.65	0.00106	0	2.8E-05	3.94142
RPS7	-1861.95	0.00106	0	3E-97	39.219
RPS20	-1866.05	0.00106	0	6E-105	42.0504
DCXR	-1867.4	0.00106	0	0.00066	3.26532
NPM1	-1873.25	0.00106	0	0.0149	2.54389
CUTA	-1884.7	0.00106	0	9.4E-19	9.62891
FLT3LG	-1890.9	0.00106	0	0.00171	3.05465
HMGN1	-1898	0.00106	0	3.1E-06	4.3849
PARP8	-1899.85	0.00106	0	2.2E-05	3.98359
SEPW1	-1907.85	0.00106	0	1.3E-16	8.77568
NKG7	-1910.5	0.00106	0	1E-188	72.7795
HLA-DPB1	-1914.25	0.00106	0	6E-37	16.701
SOD1	-1916	0.00106	0	1.4E-06	4.54013
RPSA	-1917.75	0.00106	0	1.6E-32	15.0047
CXCL8	-1925.85	0.00106	0	3.9E-20	10.1793
EIF3H	-1930.55	0.00106	0	2.4E-08	5.32446
PEBP1	-1933.7	0.00106	0	1.3E-07	5.0092
TMEM261	-1936.2	0.00106	0	0.00076	3.23445
ID3	-1938.1	0.00106	0	1.5E-06	4.52976
DNPH1	-1940.1	0.00106	0	5.7E-08	5.15793
EEF1D	-1946.6	0.00106	0	1.3E-24	11.9474
CD52	-1947.75	0.00106	0	3E-157	61.285
RPL15	-1954.05	0.00106	0	3.9E-97	39.1756
NACA	-1959.05	0.00106	0	2E-52	22.5596
EIF3K	-1964.8	0.00106	0	3.4E-32	14.8834
RPL36	-1965.95	0.00106	0	4E-153	59.7945
TOMM6	-1975.25	0.00106	0	1.1E-06	4.59508
ATP5O	-1976.2	0.00106	0	4.7E-25	12.1156
RPL14	-1979.3	0.00106	0	1.7E-81	33.3941
COX7C	-1979.65	0.00106	0	4.5E-36	16.3674
DNAJC19	-1982.45	0.00106	0	0.00561	2.77913
SELM	-1995.85	0.00106	0	0.03566	2.32101
TRAF3IP3	-1998.3	0.00106	0	7.5E-05	3.73333
CD3E	-2000.85	0.00106	0	9.1E-14	7.6109
RPL41	-2002.05	0.00106	0	4.2E-81	33.2436
CD6	-2002.75	0.00106	0	3.1E-05	3.91587
RPL26	-2003.3	0.00106	0	9E-108	43.0968
APRT	-2005	0.00106	0	1.2E-22	11.1711
RPL23A	-2006.55	0.00106	0	1E-131	51.8928

RPL18A	-2007.8	0.00106	0	2E-130	51.4737
GZMK	-2015.35	0.00106	0	8.8E-06	4.17534
RPL35	-2015.7	0.00106	0	2E-152	59.537
RPL3	-2021.7	0.00106	0	5.3E-53	22.7782
FXYD2	-2027.1	0.00106	0	0.00515	2.7993
RPL4	-2032.85	0.00106	0	1.4E-47	20.7369
RPL38	-2035.75	0.00106	0	1.6E-34	15.7712
GNLY	-2036.7	0.00106	0	0	126.108
EEF1G	-2037.6	0.00106	0	7.1E-61	25.7248
RPL23	-2038.5	0.00106	0	4.1E-23	11.3569
EIF3F	-2043.4	0.00106	0	2.5E-24	11.8292
HINT1	-2044.6	0.00106	0	5E-52	22.4077
RPL34	-2046.1	0.00106	0	2E-148	58.0124
RPS16	-2049.35	0.00106	0	6E-109	43.5387
CD7	-2067.35	0.00106	0	9.1E-18	9.23689
RPL39	-2071.2	0.00106	0	1E-127	50.4325
RPL13A	-2072.75	0.00106	0	1E-174	67.6915
RPL37	-2072.85	0.00106	0	1E-98	39.7609
RPL24	-2073.05	0.00106	0	2.9E-55	23.624
GNB2L1	-2075.75	0.00106	0	2.8E-75	31.0813
RPL13	-2078.9	0.00106	0	2E-186	71.9623
RPS15A	-2081.25	0.00106	0	9E-117	46.4164
RPS4X	-2090.65	0.00106	0	5E-133	52.4083
COMM6	-2097.15	0.00106	0	1.7E-08	5.3944
RPL27A	-2097.15	0.00106	0	6E-124	49.0424
RPL35A	-2107.6	0.00106	0	3.2E-94	38.0967
RPLP0	-2108	0.00106	0	3E-109	43.6697
COX4I1	-2114.2	0.00106	0	6.5E-75	30.9445
RPL8	-2116.95	0.00106	0	8.3E-95	38.3137
RPL37A	-2124.5	0.00106	0	5E-149	58.2713
KLRB1	-2140.35	0.00106	0	1.9E-22	11.0919
RPL12	-2140.75	0.00106	0	3E-104	41.8097
RPS27	-2149.55	0.00106	0	2E-174	67.6152
RPL29	-2151.15	0.00106	0	1E-128	50.8103
RPL31	-2153.7	0.00106	0	1.4E-86	35.2798
RPS3	-2156.8	0.00106	0	7E-99	39.8248
RPLP1	-2156.9	0.00106	0	3E-134	52.8436
RPS8	-2159.9	0.00106	0	9E-126	49.7206
RPS25	-2170.15	0.00106	0	7.9E-60	25.3318
CD27	-2171.45	0.00106	0	1.3E-16	8.77834
RPL7A	-2176.65	0.00106	0	2E-113	45.1742
RPS3A	-2191.95	0.00106	0	3E-163	63.5032
RPL32	-2194.55	0.00106	0	4E-146	57.2202
TOMM7	-2196.15	0.00106	0	1.1E-81	33.4609
RPS18	-2201.25	0.00106	0	2E-175	67.9942
RPS24	-2212.35	0.00106	0	3.3E-72	29.9352
RPS13	-2222.05	0.00106	0	6.9E-98	39.4584
CLC	-2229.15	0.00106	0	0	177.874
RPL18	-2235.7	0.00106	0	2E-140	55.1004
RPL7	-2235.85	0.00106	0	1E-137	54.1019
RPL10	-2239.7	0.00106	0	5E-139	54.5837
EEF1B2	-2242.1	0.00106	0	3E-105	42.159

RPS5	-2251.35	0.00106	0	1E-141	55.5701
SNRPD2	-2253.2	0.00106	0	7.5E-42	18.5645
IL32	-2270.05	0.00106	0	4E-152	59.3953
EEF1A1	-2271.9	0.00106	0	5.7E-58	24.6383
LDHB	-2273.5	0.00106	0	1.3E-16	8.77479
RPS6	-2275.6	0.00106	0	3E-103	41.4285
RPS23	-2282.4	0.00106	0	3E-169	65.682
RPL22	-2295.1	0.00106	0	1.4E-50	21.8641
RPS29	-2300.5	0.00106	0	9E-145	56.7129
RPL11	-2303.05	0.00106	0	7E-117	46.4572
RPLP2	-2305.7	0.00106	0	3E-119	47.308
RPL19	-2306.2	0.00106	0	2E-154	60.2707
OCIAD2	-2311.4	0.00106	0	3.2E-18	9.4198
RPL10A	-2319.5	0.00106	0	5E-110	43.9279
RPS21	-2329	0.00106	0	2E-173	67.187
RPL6	-2335.8	0.00106	0	3E-112	44.7464
RPS27A	-2364.85	0.00106	0	7E-152	59.3167
RPS14	-2375.35	0.00106	0	2E-133	52.5772
RPL5	-2395	0.00106	0	9.4E-97	39.0331
CD3D	-2425.7	0.00106	0	2.4E-40	17.9945
C12orf57	-2450.15	0.00106	0	2E-114	45.5505

TYPE	MODULE	GENE
CN	turquoise	<i>AAK1</i>
CN	blue	<i>ABCC4</i>
CN	turquoise	<i>ABI3</i>
CN	turquoise	<i>ABRACL</i>
CN	blue	<i>ACO1</i>
CN	brown	<i>ACSL1</i>
CN	turquoise	<i>ACTB</i>
CN	turquoise	<i>ACTG1</i>
CN	grey	<i>ACTN4</i>
CN	turquoise	<i>ADGRE2</i>
CN	turquoise	<i>ADGRE5</i>
CN	brown	<i>ADGRG3</i>
CN	grey	<i>ADIPO1</i>
CN	brown	<i>ADM</i>
CN	brown	<i>AGTRAP</i>
CN	blue	<i>AHSP</i>
CN	brown	<i>AIF1</i>
CN	grey	<i>ALAS2</i>
CN	brown	<i>ALDOA</i>
CN	grey	<i>ALG11</i>
CN	turquoise	<i>ALKBH7</i>
CN	brown	<i>ALOX5AP</i>
CN	brown	<i>ALPL</i>
CN	grey	<i>AMDHD2</i>
CN	blue	<i>AMIGO1</i>
CN	blue	<i>AMIGO3</i>
CN	blue	<i>AMPH</i>
CN	turquoise	<i>ANAPC11</i>
CN	turquoise	<i>ANPEP</i>
CN	brown	<i>ANXA1</i>
CN	turquoise	<i>ANXA11</i>
CN	brown	<i>ANXA3</i>
CN	blue	<i>AP1S1</i>
CN	grey	<i>AP2A1</i>
CN	grey	<i>APH1A</i>
CN	grey	<i>APLP2</i>
CN	brown	<i>APMAP</i>
CN	turquoise	<i>APOBEC3C</i>
CN	blue	<i>APOC1</i>
CN	turquoise	<i>APRT</i>
CN	brown	<i>AQP9</i>
CN	turquoise	<i>ARAF</i>
CN	turquoise	<i>ARAP1</i>
CN	turquoise	<i>ARF3</i>
CN	grey	<i>ARHGAP1</i>
CN	blue	<i>ARHGAP33</i>
CN	turquoise	<i>ARHGAP9</i>
CN	turquoise	<i>ARHGDIA</i>

CN	turquoise	<i>ARHGDI</i> B
CN	brown	<i>ARID3B</i>
CN	brown	<i>ARRB2</i>
CN	blue	<i>ASB16</i>
CN	blue	<i>ATG2A</i>
CN	blue	<i>ATN1</i>
CN	turquoise	<i>ATP5E</i>
CN	turquoise	<i>ATP5G1</i>
CN	turquoise	<i>ATP5G3</i>
CN	turquoise	<i>ATP5I</i>
CN	turquoise	<i>ATP5L</i>
CN	turquoise	<i>ATP5O</i>
CN	brown	<i>ATP6V0B</i>
CN	grey	<i>ATP6V0C</i>
CN	brown	<i>ATP6V0E1</i>
CN	turquoise	<i>ATP6V1F</i>
CN	turquoise	<i>ATP6V1G1</i>
CN	blue	<i>ATRIP</i>
CN	grey	<i>ATXN2L</i>
CN	brown	<i>AZU1</i>
CN	brown	<i>B2M</i>
CN	brown	<i>B3GNT8</i>
CN	blue	<i>BAG1</i>
CN	brown	<i>BAZ1A</i>
CN	brown	<i>BCL2A1</i>
CN	turquoise	<i>BCL2L1</i>
CN	brown	<i>BCL6</i>
CN	blue	<i>BCL9</i>
CN	turquoise	<i>BHLHE40</i>
CN	brown	<i>BID</i>
CN	brown	<i>BIN2</i>
CN	grey	<i>BLCAP</i>
CN	brown	<i>BLOC1S1</i>
CN	blue	<i>BLVRB</i>
CN	blue	<i>BLZF1</i>
CN	blue	<i>BOD1</i>
CN	turquoise	<i>BRD2</i>
CN	turquoise	<i>BRK1</i>
CN	brown	<i>BSG</i>
CN	turquoise	<i>BTF3</i>
CN	turquoise	<i>BTG1</i>
CN	brown	<i>BUD31</i>
CN	blue	<i>BYSL</i>
CN	blue	<i>BZRAP1</i>
CN	brown	<i>C10orf54</i>
CN	turquoise	<i>C11orf31</i>
CN	turquoise	<i>C11orf98</i>
CN	turquoise	<i>C12orf10</i>
CN	turquoise	<i>C12orf57</i>

CN turquoise C14orf2  
CN turquoise C15orf39  
CN turquoise C16orf54  
CN blue C17orf98  
CN grey C19orf33  
CN brown C19orf38  
CN turquoise C19orf53  
CN turquoise C19orf66  
CN turquoise C19orf70  
CN grey C1QB  
CN blue C1QTNF1  
CN blue C1orf116  
CN turquoise C1orf162  
CN blue C1orf64  
CN blue C2CD5  
CN grey C2orf88  
CN brown C4orf3  
CN turquoise C4orf48  
CN turquoise C5AR1  
CN turquoise C6orf25  
CN turquoise C6orf48  
CN grey C7orf73  
CN turquoise C9orf16  
CN grey C9orf78  
CN turquoise CALHM2  
CN turquoise CALM1  
CN brown CAMP  
CN turquoise CAMTA2  
CN turquoise CAP1  
CN turquoise CAPN1  
CN brown CARD16  
CN brown CASP4  
CN blue CATSPERG  
CN blue CBY3  
CN grey CCAR2  
CN blue CCDC120  
CN blue CCDC151  
CN blue CCDC183  
CN turquoise CCDC97  
CN grey CCL23  
CN grey CCL5  
CN turquoise CCR3  
CN turquoise CCR7  
CN grey CCT6B  
CN brown CD14  
CN turquoise CD248  
CN turquoise CD27  
CN turquoise CD37  
CN turquoise CD3D

CN	turquoise	<i>CD3E</i>
CN	brown	<i>CD44</i>
CN	turquoise	<i>CD48</i>
CN	turquoise	<i>CD5</i>
CN	turquoise	<i>CD52</i>
CN	brown	<i>CD53</i>
CN	brown	<i>CD55</i>
CN	brown	<i>CD63</i>
CN	turquoise	<i>CD68</i>
CN	turquoise	<i>CD7</i>
CN	turquoise	<i>CD74</i>
CN	turquoise	<i>CD79A</i>
CN	turquoise	<i>CD79B</i>
CN	turquoise	<i>CD8A</i>
CN	brown	<i>CDA</i>
CN	blue	<i>CDC25C</i>
CN	turquoise	<i>CDC37</i>
CN	turquoise	<i>CDK2AP2</i>
CN	brown	<i>CEACAM1</i>
CN	brown	<i>CEACAM3</i>
CN	grey	<i>CELF1</i>
CN	blue	<i>CEP192</i>
CN	brown	<i>CFD</i>
CN	turquoise	<i>CFL1</i>
CN	turquoise	<i>CHCHD2</i>
CN	brown	<i>CHI3L1</i>
CN	brown	<i>CHMP2A</i>
CN	turquoise	<i>CITED2</i>
CN	blue	<i>CKAP2</i>
CN	turquoise	<i>CLC</i>
CN	blue	<i>CLCN7</i>
CN	brown	<i>CLEC2B</i>
CN	brown	<i>CLEC4E</i>
CN	brown	<i>CLIC1</i>
CN	turquoise	<i>CLIC3</i>
CN	grey	<i>CLPTM1</i>
CN	turquoise	<i>CNBP</i>
CN	brown	<i>CNN2</i>
CN	turquoise	<i>CNOT1</i>
CN	grey	<i>CNOT3</i>
CN	grey	<i>COG1</i>
CN	turquoise	<i>COMMD6</i>
CN	blue	<i>COPRS</i>
CN	turquoise	<i>CORO1A</i>
CN	turquoise	<i>COX4I1</i>
CN	turquoise	<i>COX5B</i>
CN	turquoise	<i>COX6A1</i>
CN	turquoise	<i>COX6B1</i>
CN	turquoise	<i>COX6C</i>

CN turquoise COX7B  
CN turquoise COX7C  
CN turquoise COX8A  
CN brown CPPED1  
CN turquoise CPSF3L  
CN turquoise CPSF7  
CN grey CREB5  
CN turquoise CRIP1  
CN turquoise CRTC2  
CN turquoise CS  
CN brown CSF2RB  
CN turquoise CSF3R  
CN grey CSK  
CN turquoise CSNK2B  
CN brown CST3  
CN brown CST7  
CN brown CSTA  
CN brown CSTB  
CN turquoise CTDNEP1  
CN turquoise CTDSP1  
CN turquoise CTSD  
CN brown CTSS  
CN turquoise CTSW  
CN turquoise CUTA  
CN turquoise CWF19L2  
CN grey CXCL8  
CN brown CXCR1  
CN brown CXCR2  
CN turquoise CXCR3  
CN turquoise CXCR4  
CN grey CXCR5  
CN turquoise CYB5R3  
CN brown CYBA  
CN blue CYP4F3  
CN brown CYSTM1  
CN grey CYTH1  
CN turquoise CYTH4  
CN brown DAZAP2  
CN blue DBF4B  
CN turquoise DBI  
CN blue DCAF12  
CN turquoise DCPS  
CN turquoise DDAH2  
CN turquoise DDX18  
CN blue DHX32  
CN blue DKKL1  
CN turquoise DNAJB1  
CN blue DNAJB5  
CN blue DNAJC14

CN turquoise *DNAJC15*  
CN blue *DNLZ*  
CN grey *DPM2*  
CN turquoise *DPP7*  
CN grey *DQX1*  
CN brown *DRAP1*  
CN turquoise *DTX2*  
CN turquoise *DYNLL1*  
CN turquoise *DYNLRB1*  
CN brown *DYNLT1*  
CN brown *DYSF*  
CN blue *EDAR*  
CN turquoise *EDF1*  
CN turquoise *EEF1A1*  
CN turquoise *EEF1B2*  
CN turquoise *EEF1D*  
CN turquoise *EEF1G*  
CN turquoise *EEF2*  
CN turquoise *EFCAB14*  
CN brown *EIF1*  
CN turquoise *EIF1AY*  
CN grey *EIF1B*  
CN turquoise *EIF3F*  
CN turquoise *EIF3G*  
CN turquoise *EIF3H*  
CN turquoise *EIF3K*  
CN turquoise *EIF4G2*  
CN turquoise *EIF5B*  
CN turquoise *ELP5*  
CN turquoise *EMP3*  
CN grey *ENSA*  
CN grey *EPC1*  
CN blue *EPHB1*  
CN brown *EPSTI1*  
CN turquoise *ERP29*  
CN blue *ESRRA*  
CN turquoise *EVL*  
CN turquoise *EWSR1*  
CN blue *EXO5*  
CN grey *EXOSC10*  
CN turquoise *EZR*  
CN turquoise *FABP5*  
CN blue *FAM161B*  
CN grey *FAM210B*  
CN blue *FAM220A*  
CN turquoise *FAM222B*  
CN blue *FAM43A*  
CN turquoise *FAM96B*  
CN blue *FASN*

CN	turquoise	<i>FAU</i>
CN	grey	<i>FBXO7</i>
CN	brown	<i>FCER1G</i>
CN	brown	<i>FCGR1B</i>
CN	brown	<i>FCGR2A</i>
CN	brown	<i>FCGRT</i>
CN	turquoise	<i>FCMR</i>
CN	brown	<i>FCN1</i>
CN	turquoise	<i>FERMT3</i>
CN	turquoise	<i>FGFBP2</i>
CN	brown	<i>FGL2</i>
CN	turquoise	<i>FGR</i>
CN	brown	<i>FKBP1A</i>
CN	blue	<i>FKBP8</i>
CN	brown	<i>FLOT2</i>
CN	brown	<i>FOLR3</i>
CN	turquoise	<i>FOS</i>
CN	brown	<i>FPR1</i>
CN	blue	<i>FSTL4</i>
CN	brown	<i>FTH1</i>
CN	brown	<i>FTL</i>
CN	blue	<i>FUND2</i>
CN	turquoise	<i>FUS</i>
CN	turquoise	<i>FXYD5</i>
CN	turquoise	<i>FYB</i>
CN	brown	<i>G0S2</i>
CN	turquoise	<i>GAA</i>
CN	brown	<i>GABARAP</i>
CN	blue	<i>GAGE10</i>
CN	blue	<i>GAL3ST4</i>
CN	brown	<i>GAPDH</i>
CN	turquoise	<i>GATA3</i>
CN	brown	<i>GBA</i>
CN	brown	<i>GBP5</i>
CN	brown	<i>GCA</i>
CN	turquoise	<i>GDI1</i>
CN	blue	<i>GFM2</i>
CN	turquoise	<i>GIMAP4</i>
CN	turquoise	<i>GIMAP5</i>
CN	turquoise	<i>GIMAP7</i>
CN	brown	<i>GLIPR1</i>
CN	brown	<i>GLIPR2</i>
CN	brown	<i>GLRX</i>
CN	turquoise	<i>GM2A</i>
CN	brown	<i>GMFG</i>
CN	blue	<i>GNA12</i>
CN	turquoise	<i>GNAI2</i>
CN	blue	<i>GNAZ</i>
CN	turquoise	<i>GNB2L1</i>

CN turquoise *GNG11*  
CN brown *GNG2*  
CN brown *GNG5*  
CN turquoise *GNLY*  
CN grey *GNS*  
CN grey *GP9*  
CN blue *GPR137B*  
CN brown *GPSM3*  
CN grey *GPX1*  
CN turquoise *GRINA*  
CN brown *GRN*  
CN turquoise *GSDMD*  
CN turquoise *GSTK1*  
CN turquoise *GSTP1*  
CN blue *GUK1*  
CN grey *GYPC*  
CN turquoise *GZMA*  
CN turquoise *GZMB*  
CN grey *GZMH*  
CN brown *H2AFJ*  
CN brown *H2AFZ*  
CN brown *H3F3A*  
CN brown *H3F3B*  
CN blue *HAS3*  
CN grey *HBA1*  
CN grey *HBA2*  
CN grey *HBB*  
CN blue *HBD*  
CN blue *HBG2*  
CN blue *HBM*  
CN blue *HBQ1*  
CN blue *HBZ*  
CN brown *HCK*  
CN turquoise *HCST*  
CN turquoise *HERPUD1*  
CN turquoise *HIGD2A*  
CN turquoise *HINT1*  
CN turquoise *HINT2*  
CN blue *HIPK2*  
CN turquoise *HIST1H2AE*  
CN brown *HIST1H2BC*  
CN turquoise *HIST1H2BH*  
CN turquoise *HIST1H2BJ*  
CN brown *HIST1H2BK*  
CN blue *HIST1H3D*  
CN turquoise *HIST1H3H*  
CN grey *HIST1H4H*  
CN turquoise *HLA-A*  
CN grey *HLA-B*

CN	grey	<i>HLA-C</i>
CN	turquoise	<i>HLA-DPA1</i>
CN	turquoise	<i>HLA-DPB1</i>
CN	turquoise	<i>HLA-DQA1</i>
CN	grey	<i>HLA-DQA2</i>
CN	turquoise	<i>HLA-DQB1</i>
CN	turquoise	<i>HLA-DRA</i>
CN	turquoise	<i>HLA-DRB1</i>
CN	grey	<i>HLA-DRB5</i>
CN	turquoise	<i>HLA-E</i>
CN	blue	<i>HLCS</i>
CN	turquoise	<i>HM13</i>
CN	turquoise	<i>HMGA1</i>
CN	turquoise	<i>HMGB1</i>
CN	turquoise	<i>HMGN1</i>
CN	turquoise	<i>HMGN2</i>
CN	brown	<i>HMOX1</i>
CN	turquoise	<i>HNRNPK</i>
CN	blue	<i>HOXC4</i>
CN	brown	<i>HP</i>
CN	brown	<i>HRH2</i>
CN	grey	<i>HSP90AB1</i>
CN	turquoise	<i>HSPA8</i>
CN	grey	<i>HSPA9</i>
CN	turquoise	<i>HSPB1</i>
CN	blue	<i>HSPB9</i>
CN	grey	<i>HTRA2</i>
CN	brown	<i>ICAM3</i>
CN	turquoise	<i>ID3</i>
CN	brown	<i>IER2</i>
CN	grey	<i>IFI27</i>
CN	brown	<i>IFI30</i>
CN	brown	<i>IFI35</i>
CN	brown	<i>IFI6</i>
CN	brown	<i>IFIT1</i>
CN	brown	<i>IFIT2</i>
CN	brown	<i>IFIT3</i>
CN	brown	<i>IFITM1</i>
CN	brown	<i>IFITM2</i>
CN	brown	<i>IFITM3</i>
CN	turquoise	<i>IGFLR1</i>
CN	turquoise	<i>IGLL5</i>
CN	brown	<i>IGSF6</i>
CN	turquoise	<i>IL16</i>
CN	brown	<i>IL1B</i>
CN	brown	<i>IL1R2</i>
CN	brown	<i>IL1RN</i>
CN	blue	<i>IL24</i>
CN	brown	<i>IL2RB</i>

CN turquoise *IL2RG*  
CN turquoise *IL32*  
CN grey *IMPA2*  
CN brown *IMPDH1*  
CN grey *IRAK3*  
CN blue *IRF2BPL*  
CN grey *IRF4*  
CN grey *IRF7*  
CN brown *ISG15*  
CN turquoise *ISG20*  
CN turquoise *IST1*  
CN grey *ITGAL*  
CN brown *ITGB2*  
CN brown *ITM2B*  
CN turquoise *ITM2C*  
CN grey *IWS1*  
CN grey *JAK3*  
CN turquoise *JCHAIN*  
CN turquoise *JUNB*  
CN blue *KCNK17*  
CN turquoise *KIAA0040*  
CN turquoise *KIAA1191*  
CN turquoise *KLF2*  
CN blue *KLHL14*  
CN blue *KLHL26*  
CN turquoise *KLRB1*  
CN turquoise *KXD1*  
CN turquoise *LAIR1*  
CN grey *LAIR2*  
CN brown *LAMP2*  
CN turquoise *LAMTOR1*  
CN brown *LAMTOR4*  
CN brown *LAPTM5*  
CN turquoise *LAT*  
CN turquoise *LBH*  
CN grey *LBHD1*  
CN grey *LCN2*  
CN turquoise *LCP2*  
CN turquoise *LDHB*  
CN turquoise *LEF1*  
CN turquoise *LENG8*  
CN brown *LGALS1*  
CN turquoise *LGALS2*  
CN grey *LGALS3*  
CN turquoise *LGALS9*  
CN turquoise *LILRA1*  
CN brown *LILRA2*  
CN brown *LILRA3*  
CN brown *LILRA5*

CN turquoise *LILRB1*  
CN turquoise *LILRB2*  
CN turquoise *LIMD2*  
CN grey *LIMS1*  
CN brown *LITAF*  
CN turquoise *LPAR5*  
CN turquoise *LPXN*  
CN brown *LRG1*  
CN turquoise *LRP10*  
CN turquoise *LSM7*  
CN turquoise *LSP1*  
CN brown *LST1*  
CN turquoise *LTB*  
CN turquoise *LY6E*  
CN turquoise *LY86*  
CN turquoise *LY9*  
CN brown *LY96*  
CN grey *LYPD2*  
CN brown *LYZ*  
CN turquoise *MAGED1*  
CN turquoise *MAL*  
CN turquoise *MAP3K7CL*  
CN turquoise *MAP4K1*  
CN grey *MAPKAPK3*  
CN blue *MAPKAPK5*  
CN blue *MARVELD2*  
CN turquoise *MBD6*  
CN brown *MBOAT7*  
CN blue *MECOM*  
CN turquoise *MIEN1*  
CN turquoise *MIF*  
CN turquoise *MKL1*  
CN turquoise *MMP25*  
CN brown *MMP9*  
CN brown *MNDA*  
CN grey *MNT*  
CN turquoise *MRPL21*  
CN turquoise *MRPL41*  
CN turquoise *MRPL52*  
CN turquoise *MRPL57*  
CN turquoise *MRPS21*  
CN turquoise *MRPS24*  
CN blue *MRVI1*  
CN brown *MS4A6A*  
CN turquoise *MSN*  
CN brown *MSRB1*  
CN grey *MT1E*  
CN turquoise *MT1X*  
CN brown *MT2A*

CN brown *MTHFS*  
CN turquoise *MTRNR2L1*  
CN turquoise *MTRNR2L2*  
CN turquoise *MTRNR2L8*  
CN turquoise *MTRNR2L9*  
CN grey *MX1*  
CN brown *MX2*  
CN turquoise *MYADM*  
CN turquoise *MYL12A*  
CN brown *MYL12B*  
CN blue *MYL4*  
CN brown *MYL6*  
CN grey *MYL9*  
CN brown *MYO1F*  
CN grey *MZB1*  
CN turquoise *NACA*  
CN brown *NADK*  
CN brown *NAIP*  
CN brown *NARF*  
CN blue *NBL1*  
CN brown *NCF2*  
CN brown *NCF4*  
CN turquoise *NDUFA11*  
CN turquoise *NDUFA12*  
CN turquoise *NDUFA13*  
CN turquoise *NDUFA2*  
CN turquoise *NDUFA3*  
CN turquoise *NDUFA4*  
CN turquoise *NDUFAF3*  
CN turquoise *NDUFB11*  
CN turquoise *NDUFB2*  
CN turquoise *NDUFB4*  
CN turquoise *NDUFB7*  
CN turquoise *NDUFB8*  
CN turquoise *NDUFB9*  
CN turquoise *NDUFS3*  
CN turquoise *NDUFS5*  
CN turquoise *NDUFS7*  
CN turquoise *NDUFV2*  
CN turquoise *NFAM1*  
CN grey *NFATC3*  
CN brown *NFE2*  
CN turquoise *NHP2*  
CN turquoise *NHP2L1*  
CN brown *NINJ1*  
CN grey *NIPAL2*  
CN turquoise *NIPSNAP1*  
CN grey *NKG7*  
CN turquoise *NKRAS2*

CN turquoise *NLRP1*  
CN turquoise *NME2*  
CN turquoise *NME3*  
CN turquoise *NMT1*  
CN turquoise *NOB1*  
CN turquoise *NOLC1*  
CN brown *NOP10*  
CN turquoise *NOSIP*  
CN brown *NPC2*  
CN brown *NQO2*  
CN turquoise *NR1D1*  
CN blue *NR3C2*  
CN turquoise *NSA2*  
CN turquoise *NUDCD3*  
CN turquoise *NUMB*  
CN grey *NUP210*  
CN turquoise *NUP85*  
CN brown *OAS1*  
CN brown *OASL*  
CN grey *OAZ1*  
CN brown *OAZ2*  
CN turquoise *OCIAD2*  
CN blue *OLIG1*  
CN grey *OPTN*  
CN turquoise *ORMDL3*  
CN grey *OSBP2*  
CN brown *OSM*  
CN turquoise *OST4*  
CN grey *P4HB*  
CN turquoise *PABPC1*  
CN turquoise *PARK7*  
CN turquoise *PARP8*  
CN turquoise *PCED1B*  
CN blue *PCYT2*  
CN blue *PDE5A*  
CN brown *PDLIM7*  
CN grey *PDZK1IP1*  
CN turquoise *PEA15*  
CN turquoise *PEBP1*  
CN turquoise *PEF1*  
CN turquoise *PET100*  
CN turquoise *PF4*  
CN grey *PF4V1*  
CN turquoise *PFDN5*  
CN turquoise *PFN1*  
CN brown *PGLYRP1*  
CN turquoise *PHACTR4*  
CN blue *PHC1*  
CN turquoise *PHF21A*

CN	blue	<i>PHLDB2</i>
CN	brown	<i>PI3</i>
CN	brown	<i>PIK3CD</i>
CN	blue	<i>PIK3CG</i>
CN	turquoise	<i>PIK3IP1</i>
CN	brown	<i>PILRA</i>
CN	turquoise	<i>PKM</i>
CN	brown	<i>PLBD1</i>
CN	brown	<i>PLCB2</i>
CN	turquoise	<i>PLD3</i>
CN	grey	<i>PLEKHG2</i>
CN	blue	<i>PLEKHG5</i>
CN	brown	<i>PLP2</i>
CN	blue	<i>PLS1</i>
CN	brown	<i>PLSCR1</i>
CN	turquoise	<i>PLSCR3</i>
CN	turquoise	<i>PML</i>
CN	turquoise	<i>POLR2I</i>
CN	turquoise	<i>POLR2L</i>
CN	turquoise	<i>POU2AF1</i>
CN	turquoise	<i>POU2F2</i>
CN	grey	<i>PPBP</i>
CN	turquoise	<i>PPDPF</i>
CN	turquoise	<i>PPIA</i>
CN	turquoise	<i>PPIB</i>
CN	turquoise	<i>PPP1R18</i>
CN	blue	<i>PPP2R5A</i>
CN	turquoise	<i>PRAF2</i>
CN	grey	<i>PRAM1</i>
CN	blue	<i>PRDM4</i>
CN	grey	<i>PRDX6</i>
CN	turquoise	<i>PRKCSH</i>
CN	blue	<i>PRMT3</i>
CN	brown	<i>PROK2</i>
CN	grey	<i>PRPF8</i>
CN	brown	<i>PRR13</i>
CN	turquoise	<i>PRR14</i>
CN	blue	<i>PRRT3</i>
CN	brown	<i>PRSS23</i>
CN	brown	<i>PSAP</i>
CN	brown	<i>PSENEN</i>
CN	brown	<i>PSMB10</i>
CN	brown	<i>PSMB3</i>
CN	turquoise	<i>PSMB5</i>
CN	brown	<i>PSMB8</i>
CN	brown	<i>PSMB9</i>
CN	brown	<i>PSME1</i>
CN	brown	<i>PSME2</i>
CN	grey	<i>PSMF1</i>

CN	brown	<i>PTAFR</i>
CN	turquoise	<i>PTBP1</i>
CN	turquoise	<i>PTGDS</i>
CN	turquoise	<i>PTGS1</i>
CN	turquoise	<i>PTMA</i>
CN	turquoise	<i>PTPRC</i>
CN	turquoise	<i>PTPRCAP</i>
CN	turquoise	<i>PTTG1</i>
CN	turquoise	<i>PXN</i>
CN	brown	<i>PYCARD</i>
CN	blue	<i>PYGO2</i>
CN	turquoise	<i>QARS</i>
CN	brown	<i>QPCT</i>
CN	turquoise	<i>QRICH1</i>
CN	brown	<i>RAB24</i>
CN	turquoise	<i>RAB5C</i>
CN	turquoise	<i>RAB7A</i>
CN	turquoise	<i>RABAC1</i>
CN	brown	<i>RAC2</i>
CN	brown	<i>RALY</i>
CN	grey	<i>RAP1GAP</i>
CN	grey	<i>RARA</i>
CN	turquoise	<i>RARRES3</i>
CN	brown	<i>RASGRP4</i>
CN	brown	<i>RAVER1</i>
CN	turquoise	<i>RBM8A</i>
CN	brown	<i>RBP7</i>
CN	turquoise	<i>RCSD1</i>
CN	turquoise	<i>RELA</i>
CN	blue	<i>REPS1</i>
CN	brown	<i>RETN</i>
CN	turquoise	<i>RGS10</i>
CN	brown	<i>RGS2</i>
CN	brown	<i>RHOA</i>
CN	grey	<i>RHOB</i>
CN	turquoise	<i>RHOF</i>
CN	brown	<i>RHOG</i>
CN	turquoise	<i>RNASE6</i>
CN	brown	<i>RNASET2</i>
CN	blue	<i>RNA_SPIKE_ERCC-00040</i>
CN	blue	<i>RNA_SPIKE_ERCC-00067</i>
CN	grey	<i>RNF145</i>
CN	turquoise	<i>RNF181</i>
CN	turquoise	<i>RNF26</i>
CN	turquoise	<i>ROMO1</i>
CN	brown	<i>ROPN1L</i>
CN	turquoise	<i>RPL10</i>
CN	turquoise	<i>RPL10A</i>
CN	turquoise	<i>RPL11</i>

CN turquoise *RPL12*  
CN turquoise *RPL13*  
CN turquoise *RPL13A*  
CN turquoise *RPL14*  
CN turquoise *RPL15*  
CN turquoise *RPL18*  
CN turquoise *RPL18A*  
CN turquoise *RPL19*  
CN turquoise *RPL21*  
CN turquoise *RPL22*  
CN turquoise *RPL23*  
CN turquoise *RPL23A*  
CN turquoise *RPL24*  
CN turquoise *RPL26*  
CN turquoise *RPL27A*  
CN turquoise *RPL28*  
CN turquoise *RPL29*  
CN turquoise *RPL3*  
CN turquoise *RPL30*  
CN turquoise *RPL31*  
CN turquoise *RPL32*  
CN turquoise *RPL34*  
CN turquoise *RPL35*  
CN turquoise *RPL35A*  
CN turquoise *RPL36*  
CN turquoise *RPL36AL*  
CN turquoise *RPL37*  
CN turquoise *RPL37A*  
CN turquoise *RPL38*  
CN turquoise *RPL39*  
CN turquoise *RPL4*  
CN turquoise *RPL41*  
CN turquoise *RPL5*  
CN turquoise *RPL6*  
CN turquoise *RPL7*  
CN turquoise *RPL7A*  
CN turquoise *RPL8*  
CN turquoise *RPL9*  
CN turquoise *RPLP0*  
CN turquoise *RPLP1*  
CN turquoise *RPLP2*  
CN turquoise *RPS11*  
CN turquoise *RPS12*  
CN turquoise *RPS13*  
CN turquoise *RPS14*  
CN turquoise *RPS15*  
CN turquoise *RPS15A*  
CN turquoise *RPS16*  
CN turquoise *RPS18*

CN turquoise *RPS19*  
CN turquoise *RPS2*  
CN turquoise *RPS20*  
CN turquoise *RPS21*  
CN turquoise *RPS23*  
CN turquoise *RPS24*  
CN turquoise *RPS25*  
CN grey *RPS26*  
CN turquoise *RPS27*  
CN turquoise *RPS27A*  
CN turquoise *RPS27L*  
CN turquoise *RPS28*  
CN turquoise *RPS29*  
CN turquoise *RPS3*  
CN turquoise *RPS3A*  
CN turquoise *RPS4X*  
CN turquoise *RPS4Y1*  
CN turquoise *RPS5*  
CN turquoise *RPS6*  
CN turquoise *RPS7*  
CN turquoise *RPS8*  
CN turquoise *RPS9*  
CN turquoise *RPSA*  
CN brown *RSAD2*  
CN turquoise *RSBN1L*  
CN blue *RSPH6A*  
CN brown *RTN3*  
CN turquoise *RTP4*  
CN grey *RUNX3*  
CN grey *RXRB*  
CN turquoise *S100A10*  
CN brown *S100A11*  
CN brown *S100A12*  
CN brown *S100A4*  
CN brown *S100A6*  
CN brown *S100A8*  
CN brown *S100A9*  
CN turquoise *S100B*  
CN brown *S100P*  
CN turquoise *S1PR1*  
CN turquoise *SAP25*  
CN turquoise *SASH3*  
CN brown *SAT1*  
CN blue *SAV1*  
CN turquoise *SCAMP2*  
CN turquoise *SCGB3A1*  
CN brown *SCO2*  
CN turquoise *SEC61B*  
CN turquoise *SEC61G*

CN	grey	<i>SEC62</i>
CN	brown	<i>SECTM1</i>
CN	blue	<i>SELENBP1</i>
CN	brown	<i>SELL</i>
CN	turquoise	<i>SELPLG</i>
CN	grey	<i>SEMA4A</i>
CN	blue	<i>SENP3</i>
CN	turquoise	<i>SEPT6</i>
CN	turquoise	<i>SEPT9</i>
CN	turquoise	<i>SEPW1</i>
CN	grey	<i>SERF2</i>
CN	turquoise	<i>SERP1</i>
CN	brown	<i>SERPINA1</i>
CN	brown	<i>SERPINB1</i>
CN	brown	<i>SERPING1</i>
CN	turquoise	<i>SF1</i>
CN	brown	<i>SF3A1</i>
CN	turquoise	<i>SF3A2</i>
CN	grey	<i>SF3B2</i>
CN	brown	<i>SF3B6</i>
CN	turquoise	<i>SFPQ</i>
CN	turquoise	<i>SH2D2A</i>
CN	brown	<i>SH3BGRL3</i>
CN	brown	<i>SHISA5</i>
CN	turquoise	<i>SHMT2</i>
CN	turquoise	<i>SIRPB2</i>
CN	brown	<i>SLC11A1</i>
CN	blue	<i>SLC25A15</i>
CN	turquoise	<i>SLC25A3</i>
CN	blue	<i>SLC25A37</i>
CN	blue	<i>SLC25A39</i>
CN	turquoise	<i>SLC29A1</i>
CN	turquoise	<i>SLC35A4</i>
CN	blue	<i>SLC38A7</i>
CN	turquoise	<i>SLC44A2</i>
CN	blue	<i>SLC8A1</i>
CN	brown	<i>SLPI</i>
CN	brown	<i>SMAP2</i>
CN	blue	<i>SMARCC1</i>
CN	turquoise	<i>SMDT1</i>
CN	grey	<i>SMIM1</i>
CN	turquoise	<i>SMIM10L1</i>
CN	grey	<i>SMPD1</i>
CN	turquoise	<i>SNAI3</i>
CN	blue	<i>SNCA</i>
CN	turquoise	<i>SNRPB</i>
CN	turquoise	<i>SNRPD2</i>
CN	turquoise	<i>SNRPD3</i>
CN	turquoise	<i>SOD1</i>

CN	brown	<i>SOD2</i>
CN	turquoise	<i>SOX4</i>
CN	turquoise	<i>SP110</i>
CN	grey	<i>SPDYE1</i>
CN	brown	<i>SPI1</i>
CN	turquoise	<i>SPIB</i>
CN	turquoise	<i>SPN</i>
CN	blue	<i>SPOCK3</i>
CN	brown	<i>SRGN</i>
CN	turquoise	<i>SRP14</i>
CN	turquoise	<i>SRRM1</i>
CN	turquoise	<i>SSR2</i>
CN	turquoise	<i>SSR4</i>
CN	grey	<i>ST6GAL1</i>
CN	grey	<i>ST6GALNAC6</i>
CN	blue	<i>STARD9</i>
CN	grey	<i>STAT2</i>
CN	turquoise	<i>STMN1</i>
CN	blue	<i>STRN3</i>
CN	turquoise	<i>SUB1</i>
CN	turquoise	<i>SUMO2</i>
CN	grey	<i>SUSD6</i>
CN	blue	<i>SYNGR4</i>
CN	grey	<i>SYVN1</i>
CN	turquoise	<i>SZRD1</i>
CN	turquoise	<i>TAGAP</i>
CN	turquoise	<i>TAGLN2</i>
CN	brown	<i>TALDO1</i>
CN	turquoise	<i>TAPBP</i>
CN	grey	<i>TAPBPL</i>
CN	grey	<i>TARBP2</i>
CN	grey	<i>TBC1D13</i>
CN	turquoise	<i>TBCA</i>
CN	grey	<i>TBL3</i>
CN	brown	<i>TCEB2</i>
CN	turquoise	<i>TCERG1</i>
CN	turquoise	<i>TCF25</i>
CN	turquoise	<i>TCF7</i>
CN	turquoise	<i>TCIRG1</i>
CN	turquoise	<i>TCL1A</i>
CN	turquoise	<i>TECR</i>
CN	turquoise	<i>TESPA1</i>
CN	grey	<i>TFE3</i>
CN	turquoise	<i>TGFB1</i>
CN	blue	<i>TGFBR2</i>
CN	brown	<i>THEMIS2</i>
CN	turquoise	<i>TICAM1</i>
CN	blue	<i>TIGD4</i>
CN	turquoise	<i>TIMM10</i>

CN turquoise *TIMM13*  
CN brown *TIMP1*  
CN blue *TIPARP*  
CN turquoise *TMA7*  
CN brown *TMC4*  
CN turquoise *TMEM109*  
CN brown *TMEM120A*  
CN brown *TMEM140*  
CN turquoise *TMEM176A*  
CN grey *TMEM176B*  
CN blue *TMEM198*  
CN turquoise *TMEM219*  
CN turquoise *TMEM256*  
CN turquoise *TMEM258*  
CN blue *TMEM8A*  
CN turquoise *TMSB10*  
CN turquoise *TMSB4X*  
CN turquoise *TMUB1*  
CN brown *TNFAIP6*  
CN brown *TNFRSF10C*  
CN blue *TNFRSF13C*  
CN brown *TNFRSF1A*  
CN turquoise *TNFRSF1B*  
CN brown *TNFSF13*  
CN brown *TNFSF13B*  
CN brown *TNIP1*  
CN turquoise *TOB1*  
CN turquoise *TOMM6*  
CN turquoise *TOMM7*  
CN brown *TPI1*  
CN turquoise *TPT1*  
CN turquoise *TRAF3IP3*  
CN turquoise *TRAP1*  
CN turquoise *TRAPP5*  
CN brown *TREM1*  
CN turquoise *TREX1*  
CN turquoise *TRIM27*  
CN blue *TRMT44*  
CN brown *TSC22D3*  
CN turquoise *TSC22D4*  
CN brown *TSEN34*  
CN blue *TSHZ1*  
CN brown *TSPO*  
CN turquoise *TSTD1*  
CN brown *TUBA1A*  
CN turquoise *TUBA1B*  
CN grey *TUBB2A*  
CN brown *TXN*  
CN brown *TYMP*

CN	brown	<i>TYROBP</i>
CN	turquoise	<i>U2AF2</i>
CN	grey	<i>UBA52</i>
CN	grey	<i>UBALD1</i>
CN	turquoise	<i>UBASH3A</i>
CN	grey	<i>UBB</i>
CN	turquoise	<i>UBC</i>
CN	grey	<i>UBE2C</i>
CN	brown	<i>UBE2D1</i>
CN	turquoise	<i>UBE2D2</i>
CN	brown	<i>UBE2D3</i>
CN	brown	<i>UBE2L6</i>
CN	turquoise	<i>UBL5</i>
CN	turquoise	<i>UCP2</i>
CN	turquoise	<i>UQCR10</i>
CN	turquoise	<i>UQCR11</i>
CN	turquoise	<i>UQCRB</i>
CN	turquoise	<i>UQCRH</i>
CN	turquoise	<i>UQCRRQ</i>
CN	turquoise	<i>USMG5</i>
CN	turquoise	<i>VAMP2</i>
CN	turquoise	<i>VAMP5</i>
CN	turquoise	<i>VAMP8</i>
CN	brown	<i>VASP</i>
CN	turquoise	<i>VDAC2</i>
CN	grey	<i>VDR</i>
CN	brown	<i>VIM</i>
CN	turquoise	<i>VPREB3</i>
CN	brown	<i>VPS28</i>
CN	turquoise	<i>VPS37B</i>
CN	brown	<i>VSTM1</i>
CN	brown	<i>WARS</i>
CN	turquoise	<i>WAS</i>
CN	turquoise	<i>WASF2</i>
CN	grey	<i>WBP1L</i>
CN	turquoise	<i>WBP2</i>
CN	turquoise	<i>WDR83OS</i>
CN	brown	<i>WIPF1</i>
CN	turquoise	<i>WWP2</i>
CN	brown	<i>YWHAB</i>
CN	turquoise	<i>ZAP70</i>
CN	blue	<i>ZBTB10</i>
CN	blue	<i>ZBTB16</i>
CN	blue	<i>ZCCHC3</i>
CN	turquoise	<i>ZFP36</i>
CN	turquoise	<i>ZFP36L1</i>
CN	grey	<i>ZFP36L2</i>
CN	turquoise	<i>ZFR</i>
CN	blue	<i>ZIK1</i>

CN turquoise ZNF260  
CN blue ZNF304  
CN turquoise ZNF384  
CN turquoise ZNF385A  
CN turquoise ZNF414  
CN blue ZNF497  
CN turquoise ZNF592  
CN blue ZNF614  
CN blue ZNF619  
CN blue ZNF629  
CN blue ZNF639  
CN blue ZNF646  
CN turquoise ZNF706  
CN turquoise ZNF830  
CN blue ZNF835  
CN blue ZNF843  
CN turquoise ZNHIT1  
CN turquoise ZYX  
CN blue AAC5  
CN grey ABCB4  
CN grey ABCB6  
CN blue ABCD3  
CN blue ABCE1  
CN turquoise ABHD14B  
CN brown ABTB1  
CN grey ACADVL  
CN turquoise ACAP1  
CN grey ACKR1  
CN blue ACLY  
CN turquoise ACO2  
CN turquoise ACOT13  
CN turquoise ACOT8  
CN grey ACP1  
CN turquoise ACSL5  
CN turquoise ACTN1  
CN turquoise ACTR1A  
CN grey ACTR3  
CN blue ADAM15  
CN brown ADAM8  
CN blue ADAP1  
CN grey ADAR  
CN brown ADGRE3  
CN grey ADK  
CN grey ADM5  
CN grey ADORA2A  
CN grey AFF1  
CN grey AFF3  
CN blue AFF4  
CN blue AGAP3

CN	blue	<i>AGRP</i>
CN	grey	<i>AGTPBP1</i>
CN	brown	<i>AIM2</i>
CN	turquoise	<i>AIMP2</i>
CN	turquoise	<i>AIP</i>
CN	blue	<i>AK1</i>
CN	turquoise	<i>AK2</i>
CN	brown	<i>AKIRIN2</i>
CN	turquoise	<i>AKR1A1</i>
CN	turquoise	<i>AKR1B1</i>
CN	turquoise	<i>AKT1S1</i>
CN	brown	<i>ALDH2</i>
CN	grey	<i>ALDH6A1</i>
CN	turquoise	<i>ALG12</i>
CN	blue	<i>ALKBH5</i>
CN	grey	<i>ALOX15</i>
CN	brown	<i>ALOX5</i>
CN	brown	<i>ALPK1</i>
CN	brown	<i>AMICA1</i>
CN	turquoise	<i>ANAPC15</i>
CN	turquoise	<i>ANAPC16</i>
CN	grey	<i>ANK1</i>
CN	blue	<i>ANKMY2</i>
CN	grey	<i>ANKRD22</i>
CN	blue	<i>ANKRD23</i>
CN	blue	<i>ANKRD60</i>
CN	grey	<i>ANKZF1</i>
CN	grey	<i>ANO6</i>
CN	blue	<i>ANO9</i>
CN	turquoise	<i>ANP32B</i>
CN	turquoise	<i>ANXA2</i>
CN	turquoise	<i>ANXA2R</i>
CN	brown	<i>ANXA5</i>
CN	turquoise	<i>ANXA6</i>
CN	turquoise	<i>AOAH</i>
CN	grey	<i>AP2A2</i>
CN	grey	<i>AP2M1</i>
CN	brown	<i>AP2S1</i>
CN	blue	<i>AP4E1</i>
CN	grey	<i>AP5Z1</i>
CN	brown	<i>APBB1IP</i>
CN	turquoise	<i>APEX1</i>
CN	brown	<i>APH1B</i>
CN	turquoise	<i>APOA1BP</i>
CN	blue	<i>APOBEC3B</i>
CN	grey	<i>APOBEC3H</i>
CN	grey	<i>APOL1</i>
CN	brown	<i>APOL6</i>
CN	blue	<i>AREL1</i>

CN	brown	<i>ARF1</i>
CN	turquoise	<i>ARF4</i>
CN	brown	<i>ARF5</i>
CN	grey	<i>ARFGAP2</i>
CN	brown	<i>ARG1</i>
CN	turquoise	<i>ARGLU1</i>
CN	blue	<i>ARHGAP19</i>
CN	turquoise	<i>ARHGEF1</i>
CN	turquoise	<i>ARHGEF2</i>
CN	blue	<i>ARHGEF28</i>
CN	turquoise	<i>ARHGEF3</i>
CN	blue	<i>ARID1A</i>
CN	brown	<i>ARID5A</i>
CN	brown	<i>ARL11</i>
CN	turquoise	<i>ARL2</i>
CN	turquoise	<i>ARL6IP4</i>
CN	brown	<i>ARPC3</i>
CN	brown	<i>ARPC5</i>
CN	blue	<i>ARPP21</i>
CN	turquoise	<i>ARSA</i>
CN	brown	<i>ASAHI</i>
CN	turquoise	<i>ASB8</i>
CN	grey	<i>ASCC2</i>
CN	brown	<i>ASGR2</i>
CN	grey	<i>ASNA1</i>
CN	grey	<i>ASPH</i>
CN	blue	<i>ASZ1</i>
CN	blue	<i>ATAD3C</i>
CN	blue	<i>ATF3</i>
CN	turquoise	<i>ATF5</i>
CN	turquoise	<i>ATF6B</i>
CN	grey	<i>ATF7IP2</i>
CN	blue	<i>ATG14</i>
CN	turquoise	<i>ATG16L2</i>
CN	blue	<i>ATG2B</i>
CN	brown	<i>ATG3</i>
CN	grey	<i>ATG9A</i>
CN	turquoise	<i>ATOX1</i>
CN	grey	<i>ATP2A3</i>
CN	turquoise	<i>ATP5A1</i>
CN	turquoise	<i>ATP5B</i>
CN	turquoise	<i>ATP5C1</i>
CN	turquoise	<i>ATP5F1</i>
CN	turquoise	<i>ATP5H</i>
CN	turquoise	<i>ATP5J</i>
CN	turquoise	<i>ATP6AP1</i>
CN	brown	<i>ATP6V0D1</i>
CN	blue	<i>ATP8B2</i>
CN	blue	<i>ATP8B3</i>

CN turquoise *ATPIF1*  
CN blue *ATR*  
CN turquoise *ATRAID*  
CN grey *ATXN7L3B*  
CN turquoise *AUP1*  
CN turquoise *AURKAIP1*  
CN blue *B3GNT7*  
CN grey *B4GALT7*  
CN brown *B9D2*  
CN blue *BAG3*  
CN turquoise *BANF1*  
CN grey *BASP1*  
CN turquoise *BATF*  
CN blue *BATF2*  
CN grey *BBX*  
CN turquoise *BCKDHA*  
CN blue *BCL3*  
CN blue *BEST3*  
CN grey *BET1L*  
CN turquoise *BEX2*  
CN turquoise *BIRC3*  
CN grey *BLMH*  
CN turquoise *BLOC1S2*  
CN brown *BLVRA*  
CN blue *BMPER*  
CN blue *BMS1*  
CN grey *BNIP3L*  
CN blue *BNIPL*  
CN grey *BPI*  
CN grey *BRD8*  
CN brown *BST1*  
CN grey *BST2*  
CN turquoise *BTG2*  
CN turquoise *BTLA*  
CN grey *BTN2A2*  
CN turquoise *BTN3A2*  
CN turquoise *BTN3A3*  
CN brown *BTNL8*  
CN turquoise *BUB3*  
CN blue *C10orf10*  
CN turquoise *C10orf32*  
CN blue *C10orf82*  
CN grey *C11orf21*  
CN turquoise *C11orf24*  
CN grey *C11orf54*  
CN grey *C11orf71*  
CN turquoise *C12orf75*  
CN blue *C12orf77*  
CN turquoise *C14orf119*

CN turquoise C14orf166  
CN blue C14orf28  
CN blue C14orf80  
CN blue C15orf48  
CN turquoise C15orf61  
CN turquoise C16orf13  
CN turquoise C17orf49  
CN brown C17orf62  
CN turquoise C17orf89  
CN grey C19orf35  
CN turquoise C19orf60  
CN grey C1QA  
CN turquoise C1QBP  
CN grey C1QC  
CN brown C1RL  
CN blue C1orf159  
CN turquoise C1orf43  
CN brown C20orf24  
CN turquoise C20orf27  
CN blue C21orf62  
CN blue C2CD3  
CN grey C2orf69  
CN brown C3AR1  
CN grey C4orf46  
CN turquoise C6orf1  
CN turquoise C6orf226  
CN turquoise C8orf59  
CN turquoise C9orf114  
CN turquoise C9orf142  
CN grey C9orf85  
CN brown C9orf89  
CN grey CA1  
CN blue CA13  
CN grey CA2  
CN brown CA4  
CN blue CABIN1  
CN blue CACTIN  
CN turquoise CACYBP  
CN brown CALM2  
CN turquoise CALM3  
CN brown CALML4  
CN turquoise CALR  
CN grey CAMKK2  
CN brown CANT1  
CN turquoise CAPG  
CN brown CAPZB  
CN blue CARD11  
CN brown CARD17  
CN turquoise CARD8

CN	grey	CASC3
CN	brown	CASP1
CN	blue	CASP5
CN	brown	CASP8
CN	brown	CASS4
CN	brown	CAT
CN	turquoise	CBLL1
CN	turquoise	CBR1
CN	turquoise	CCDC101
CN	turquoise	CCDC109B
CN	blue	CCDC112
CN	blue	CCDC154
CN	turquoise	CCDC167
CN	grey	CCDC176
CN	grey	CCDC25
CN	blue	CCDC3
CN	turquoise	CCDC53
CN	blue	CCDC6
CN	blue	CCDC71L
CN	blue	CCDC83
CN	grey	CCL2
CN	grey	CCL28
CN	grey	CCL3
CN	turquoise	CCL4
CN	blue	CCNA1
CN	grey	CCNB1
CN	turquoise	CCND3
CN	brown	CCNDBP1
CN	blue	CCNG2
CN	grey	CCNI
CN	turquoise	CCNK
CN	turquoise	CCNL1
CN	brown	CCR1
CN	turquoise	CCT4
CN	brown	CD164
CN	blue	CD177
CN	grey	CD19
CN	turquoise	CD24
CN	grey	CD247
CN	blue	CD274
CN	brown	CD300A
CN	turquoise	CD320
CN	turquoise	CD33
CN	grey	CD38
CN	grey	CD3G
CN	brown	CD59
CN	turquoise	CD6
CN	grey	CD69
CN	brown	CD82

CN	grey	<i>CD83</i>
CN	turquoise	<i>CD8B</i>
CN	turquoise	<i>CDC123</i>
CN	grey	<i>CDC20</i>
CN	blue	<i>CDC20B</i>
CN	turquoise	<i>CDC25B</i>
CN	brown	<i>CDC42</i>
CN	brown	<i>CDC42EP2</i>
CN	brown	<i>CDC42EP3</i>
CN	brown	<i>CDC42SE1</i>
CN	blue	<i>CDCA5</i>
CN	blue	<i>CDH7</i>
CN	blue	<i>CDK1</i>
CN	blue	<i>CDK12</i>
CN	blue	<i>CDK3</i>
CN	turquoise	<i>CDKN1A</i>
CN	brown	<i>CDKN1C</i>
CN	turquoise	<i>CEACAM21</i>
CN	brown	<i>CEACAM4</i>
CN	brown	<i>CEACAM7</i>
CN	grey	<i>CEBPB</i>
CN	brown	<i>CEBDP</i>
CN	grey	<i>CEBPG</i>
CN	turquoise	<i>CECR1</i>
CN	blue	<i>CEP295</i>
CN	grey	<i>CES1</i>
CN	blue	<i>CFAP126</i>
CN	brown	<i>CFLAR</i>
CN	brown	<i>CFP</i>
CN	turquoise	<i>CHCHD1</i>
CN	turquoise	<i>CHCHD5</i>
CN	turquoise	<i>CHERP</i>
CN	turquoise	<i>CHI3L2</i>
CN	brown	<i>CHIC2</i>
CN	brown	<i>CHMP3</i>
CN	grey	<i>CHMP4A</i>
CN	brown	<i>CHMP5</i>
CN	turquoise	<i>CHP1</i>
CN	grey	<i>CHPF2</i>
CN	blue	<i>CHRM3</i>
CN	brown	<i>CHST15</i>
CN	blue	<i>CHURC1-FNTB</i>
CN	turquoise	<i>CIB1</i>
CN	grey	<i>CIITA</i>
CN	grey	<i>CIR1</i>
CN	turquoise	<i>CIRBP</i>
CN	turquoise	<i>CISD3</i>
CN	turquoise	<i>CISH</i>
CN	blue	<i>CKAP5</i>

CN	blue	<i>CLCN1</i>
CN	turquoise	<i>CLEC10A</i>
CN	brown	<i>CLEC12A</i>
CN	blue	<i>CLEC17A</i>
CN	turquoise	<i>CLEC1B</i>
CN	brown	<i>CLEC4A</i>
CN	brown	<i>CLEC4D</i>
CN	blue	<i>CLEC5A</i>
CN	brown	<i>CLEC7A</i>
CN	blue	<i>CLEC9A</i>
CN	blue	<i>CLIP3</i>
CN	grey	<i>CLN6</i>
CN	turquoise	<i>CLTA</i>
CN	grey	<i>CLU</i>
CN	grey	<i>CLUAP1</i>
CN	blue	<i>CMBL</i>
CN	turquoise	<i>CMTM5</i>
CN	brown	<i>CMTM6</i>
CN	brown	<i>CNIH4</i>
CN	blue	<i>CNKSR1</i>
CN	turquoise	<i>CNPPD1</i>
CN	turquoise	<i>CNPY2</i>
CN	brown	<i>CNPY3</i>
CN	blue	<i>CNTNAP3</i>
CN	turquoise	<i>COA3</i>
CN	turquoise	<i>COA4</i>
CN	turquoise	<i>COA6</i>
CN	blue	<i>COCH</i>
CN	grey	<i>COG3</i>
CN	turquoise	<i>COMMD1</i>
CN	turquoise	<i>COMMD4</i>
CN	grey	<i>COMTD1</i>
CN	brown	<i>COPE</i>
CN	turquoise	<i>COPS5</i>
CN	turquoise	<i>COPZ1</i>
CN	turquoise	<i>COQ4</i>
CN	turquoise	<i>COX14</i>
CN	turquoise	<i>COX16</i>
CN	turquoise	<i>COX17</i>
CN	turquoise	<i>COX5A</i>
CN	blue	<i>COX7A1</i>
CN	turquoise	<i>COX7A2L</i>
CN	blue	<i>CPT1B</i>
CN	grey	<i>CPVL</i>
CN	grey	<i>CREBRF</i>
CN	turquoise	<i>CREM</i>
CN	blue	<i>CRISP2</i>
CN	grey	<i>CRISPLD2</i>
CN	grey	<i>CRKL</i>

CN	grey	<i>CRTC3</i>
CN	blue	<i>CSDC2</i>
CN	blue	<i>CSE1L</i>
CN	turquoise	<i>CSF1R</i>
CN	turquoise	<i>CSNK1A1</i>
CN	brown	<i>CSNK1D</i>
CN	turquoise	<i>CSRP1</i>
CN	grey	<i>CTC1</i>
CN	brown	<i>CTSA</i>
CN	brown	<i>CTSB</i>
CN	brown	<i>CTSC</i>
CN	turquoise	<i>CTSH</i>
CN	turquoise	<i>CUEDC2</i>
CN	grey	<i>CUL4A</i>
CN	turquoise	<i>CWC25</i>
CN	grey	<i>CXCL1</i>
CN	grey	<i>CXCL10</i>
CN	brown	<i>CXCL16</i>
CN	blue	<i>CXCL17</i>
CN	brown	<i>CYBB</i>
CN	turquoise	<i>CYCS</i>
CN	blue	<i>CYP11A1</i>
CN	blue	<i>CYP2R1</i>
CN	blue	<i>CYP4F22</i>
CN	turquoise	<i>CYTIP</i>
CN	turquoise	<i>DAPP1</i>
CN	turquoise	<i>DARS</i>
CN	turquoise	<i>DAXX</i>
CN	grey	<i>DCLRE1B</i>
CN	grey	<i>DCP2</i>
CN	grey	<i>DCTN1</i>
CN	turquoise	<i>DCTN2</i>
CN	turquoise	<i>DCTN3</i>
CN	turquoise	<i>DCTPP1</i>
CN	turquoise	<i>DCXR</i>
CN	turquoise	<i>DDA1</i>
CN	turquoise	<i>DDIT3</i>
CN	brown	<i>DDIT4</i>
CN	grey	<i>DDX11</i>
CN	grey	<i>DDX17</i>
CN	turquoise	<i>DDX39A</i>
CN	turquoise	<i>DDX39B</i>
CN	turquoise	<i>DDX5</i>
CN	turquoise	<i>DDX50</i>
CN	turquoise	<i>DDX56</i>
CN	grey	<i>DDX58</i>
CN	blue	<i>DDX60</i>
CN	brown	<i>DDX60L</i>
CN	turquoise	<i>DEDD2</i>

CN turquoise *DEF6*  
CN turquoise *DEF8*  
CN grey *DEFA4*  
CN turquoise *DENND1C*  
CN blue *DEPDC4*  
CN turquoise *DESI1*  
CN blue *DFFB*  
CN blue *DFNB31*  
CN brown *DGAT2*  
CN blue *DGAT2L6*  
CN grey *DGCR2*  
CN turquoise *DGCR6L*  
CN turquoise *DGKA*  
CN turquoise *DGUOK*  
CN blue *DHRS11*  
CN brown *DHRS7*  
CN grey *DHRS9*  
CN grey *DHX8*  
CN blue *DISC1*  
CN grey *DLST*  
CN blue *DMD*  
CN blue *DMRT1*  
CN grey *DMTN*  
CN blue *DNAAF2*  
CN brown *DNAJA1*  
CN grey *DNAJB11*  
CN turquoise *DNAJC1*  
CN turquoise *DNAJC19*  
CN turquoise *DNAJC4*  
CN grey *DNASE1L1*  
CN turquoise *DNASE2*  
CN blue *DNM2*  
CN turquoise *DNPH1*  
CN brown *DNTTIP1*  
CN grey *DOK2*  
CN brown *DOK3*  
CN turquoise *DOLPP1*  
CN turquoise *DPEP2*  
CN turquoise *DPF2*  
CN turquoise *DPH3*  
CN turquoise *DPM3*  
CN turquoise *DPY30*  
CN turquoise *DR1*  
CN turquoise *DRAM2*  
CN turquoise *DROSHA*  
CN grey *DUS2*  
CN brown *DUSP1*  
CN turquoise *DUSP23*  
CN brown *DUSP3*

CN	grey	<i>DUSP6</i>
CN	turquoise	<i>DUT</i>
CN	turquoise	<i>DYNC1I2</i>
CN	turquoise	<i>EBP</i>
CN	turquoise	<i>ECH1</i>
CN	blue	<i>EDEM1</i>
CN	turquoise	<i>EEF1E1</i>
CN	grey	<i>EFCAB11</i>
CN	blue	<i>EFCAB5</i>
CN	turquoise	<i>EGLN2</i>
CN	blue	<i>EGR1</i>
CN	grey	<i>EHMT1</i>
CN	grey	<i>EIF2AK1</i>
CN	grey	<i>EIF2AK2</i>
CN	grey	<i>EIF2B5</i>
CN	grey	<i>EIF2D</i>
CN	turquoise	<i>EIF2S2</i>
CN	blue	<i>EIF3A</i>
CN	turquoise	<i>EIF3D</i>
CN	turquoise	<i>EIF3I</i>
CN	turquoise	<i>EIF3L</i>
CN	turquoise	<i>EIF4A1</i>
CN	turquoise	<i>EIF4E</i>
CN	turquoise	<i>EIF4E2</i>
CN	turquoise	<i>EIF4EBP1</i>
CN	grey	<i>EIF4EBP2</i>
CN	turquoise	<i>EIF4EBP3</i>
CN	turquoise	<i>EIF5</i>
CN	turquoise	<i>EIF5A</i>
CN	turquoise	<i>EIF6</i>
CN	grey	<i>ELAC2</i>
CN	grey	<i>ELANE</i>
CN	turquoise	<i>ELK3</i>
CN	grey	<i>ELL2</i>
CN	grey	<i>ELMO3</i>
CN	turquoise	<i>ELOVL1</i>
CN	turquoise	<i>ELOVL5</i>
CN	turquoise	<i>ELP6</i>
CN	grey	<i>EMB</i>
CN	brown	<i>EMC3</i>
CN	turquoise	<i>EMC4</i>
CN	turquoise	<i>EMC6</i>
CN	turquoise	<i>EMG1</i>
CN	blue	<i>EMID1</i>
CN	grey	<i>EML4</i>
CN	turquoise	<i>ENO1</i>
CN	turquoise	<i>ENY2</i>
CN	blue	<i>EOMES</i>
CN	blue	<i>EPB42</i>

CN      turquoise *EPHX2*  
CN      turquoise *ERCC1*  
CN      blue     *ERCC8*  
CN      brown    *ERGIC1*  
CN      turquoise *ERGIC3*  
CN      turquoise *ERICH1*  
CN      blue     *ERN1*  
CN      turquoise *ERP44*  
CN      turquoise *ERV3-1*  
CN      turquoise *ETFB*  
CN      turquoise *ETHE1*  
CN      brown    *ETV7*  
CN      brown    *EVI2A*  
CN      brown    *EVI2B*  
CN      turquoise *EXOC7*  
CN      turquoise *EXOSC1*  
CN      brown    *EXOSC4*  
CN      turquoise *F11R*  
CN      turquoise *F13A1*  
CN      grey     *F2R*  
CN      turquoise *FAAP20*  
CN      grey     *FAM102A*  
CN      blue     *FAM104A*  
CN      grey     *FAM122B*  
CN      brown    *FAM129A*  
CN      grey     *FAM177A1*  
CN      grey     *FAM189B*  
CN      grey     *FAM195A*  
CN      turquoise *FAM195B*  
CN      brown    *FAM200B*  
CN      blue     *FAM20A*  
CN      grey     *FAM212B*  
CN      blue     *FAM229A*  
CN      grey     *FAM26F*  
CN      brown    *FAM32A*  
CN      blue     *FAM3B*  
CN      brown    *FAM45A*  
CN      grey     *FAM46A*  
CN      grey     *FAM46C*  
CN      grey     *FAM53C*  
CN      brown    *FAM63A*  
CN      turquoise *FAM65A*  
CN      turquoise *FAM65B*  
CN      blue     *FAM8A1*  
CN      blue     *FAM90A1*  
CN      blue     *FAR1*  
CN      brown    *FAS*  
CN      blue     *FBXL6*  
CN      blue     *FBXO18*

CN	blue	<i>FBXO24</i>
CN	grey	<i>FBXO44</i>
CN	brown	<i>FBXO6</i>
CN	grey	<i>FBXO9</i>
CN	blue	<i>FBXW2</i>
CN	turquoise	<i>FBXW5</i>
CN	grey	<i>FCAR</i>
CN	brown	<i>FCGR1A</i>
CN	brown	<i>FCGR3B</i>
CN	turquoise	<i>FDFT1</i>
CN	grey	<i>FDX1</i>
CN	grey	<i>FECH</i>
CN	turquoise	<i>FES</i>
CN	blue	<i>FFAR3</i>
CN	grey	<i>FGD3</i>
CN	grey	<i>FGFR1OP2</i>
CN	blue	<i>FIS1</i>
CN	turquoise	<i>FKBP11</i>
CN	grey	<i>FKBP15</i>
CN	turquoise	<i>FKBP2</i>
CN	grey	<i>FKBP5</i>
CN	grey	<i>FLCN</i>
CN	turquoise	<i>FLI1</i>
CN	turquoise	<i>FLII</i>
CN	blue	<i>FLNB</i>
CN	brown	<i>FLOT1</i>
CN	turquoise	<i>FLT3LG</i>
CN	grey	<i>FLVCR2</i>
CN	turquoise	<i>FOPNL</i>
CN	grey	<i>FOXO1</i>
CN	turquoise	<i>FPGS</i>
CN	brown	<i>FPR2</i>
CN	grey	<i>FRA10AC1</i>
CN	blue	<i>FRYL</i>
CN	blue	<i>FSCN1</i>
CN	turquoise	<i>FTSJ1</i>
CN	blue	<i>FUT7</i>
CN	blue	<i>FXR2</i>
CN	turquoise	<i>FXYD2</i>
CN	grey	<i>GAB3</i>
CN	brown	<i>GABARAPL2</i>
CN	blue	<i>GABBR1</i>
CN	grey	<i>GADD45B</i>
CN	turquoise	<i>GADD45GIP1</i>
CN	turquoise	<i>GALM</i>
CN	grey	<i>GALNS</i>
CN	grey	<i>GALNT2</i>
CN	grey	<i>GBGT1</i>
CN	brown	<i>GBP1</i>

CN	brown	<i>GBP2</i>
CN	brown	<i>GBP4</i>
CN	turquoise	<i>GCHFR</i>
CN	brown	<i>GDE1</i>
CN	blue	<i>GDPD3</i>
CN	grey	<i>GEMIN7</i>
CN	turquoise	<i>GFI1B</i>
CN	turquoise	<i>GIMAP2</i>
CN	grey	<i>GIMAP6</i>
CN	brown	<i>GK</i>
CN	blue	<i>GLB1L</i>
CN	brown	<i>GLUL</i>
CN	grey	<i>GMIP</i>
CN	turquoise	<i>GMPR2</i>
CN	blue	<i>GNE</i>
CN	brown	<i>GNG10</i>
CN	turquoise	<i>GNGT2</i>
CN	turquoise	<i>GNPTG</i>
CN	turquoise	<i>GOLGA7</i>
CN	turquoise	<i>GOSR2</i>
CN	turquoise	<i>GP1BB</i>
CN	turquoise	<i>GPBAR1</i>
CN	brown	<i>GPR132</i>
CN	grey	<i>GPR146</i>
CN	blue	<i>GPR84</i>
CN	turquoise	<i>GPS1</i>
CN	turquoise	<i>GPS2</i>
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CN	grey	<i>GRAP2</i>
CN	brown	<i>GRB2</i>
CN	blue	<i>GRHL2</i>
CN	turquoise	<i>GRHPR</i>
CN	blue	<i>GRM4</i>
CN	turquoise	<i>GRPEL1</i>
CN	blue	<i>GSG1L</i>
CN	brown	<i>GSN</i>
CN	grey	<i>GSTM1</i>
CN	turquoise	<i>GSTM2</i>
CN	turquoise	<i>GSTM4</i>
CN	blue	<i>GSTM5</i>
CN	turquoise	<i>GSTO1</i>
CN	turquoise	<i>GTF2B</i>
CN	turquoise	<i>GTF3A</i>
CN	turquoise	<i>GTF3C5</i>
CN	turquoise	<i>GTF3C6</i>
CN	grey	<i>GYG1</i>
CN	grey	<i>GYPA</i>
CN	blue	<i>GYPE</i>
CN	turquoise	<i>GZMK</i>

CN	brown	<i>H1F0</i>
CN	turquoise	<i>H1FX</i>
CN	brown	<i>HACD4</i>
CN	grey	<i>HAGH</i>
CN	grey	<i>HAL</i>
CN	grey	<i>HAT1</i>
CN	turquoise	<i>HAUS4</i>
CN	turquoise	<i>HAX1</i>
CN	brown	<i>HBP1</i>
CN	brown	<i>HCAR2</i>
CN	brown	<i>HCAR3</i>
CN	grey	<i>HCFC1</i>
CN	turquoise	<i>HCFC1R1</i>
CN	brown	<i>HCLS1</i>
CN	blue	<i>HDAC6</i>
CN	grey	<i>HDAC7</i>
CN	blue	<i>HEATR1</i>
CN	blue	<i>HELZ</i>
CN	grey	<i>HEMGN</i>
CN	blue	<i>HERC5</i>
CN	blue	<i>HILPDA</i>
CN	brown	<i>HIST1H1C</i>
CN	blue	<i>HIST1H1E</i>
CN	brown	<i>HIST1H2AC</i>
CN	grey	<i>HIST1H2AM</i>
CN	brown	<i>HIST1H2BD</i>
CN	grey	<i>HIST1H2BG</i>
CN	grey	<i>HIST1H2BO</i>
CN	grey	<i>HIST1H3B</i>
CN	turquoise	<i>HIST2H2AC</i>
CN	turquoise	<i>HIST2H2BE</i>
CN	grey	<i>HIST2H2BF</i>
CN	blue	<i>HJURP</i>
CN	brown	<i>HK3</i>
CN	turquoise	<i>HLA-DMA</i>
CN	turquoise	<i>HLA-DMB</i>
CN	turquoise	<i>HLA-F</i>
CN	grey	<i>HLX</i>
CN	turquoise	<i>HMGB2</i>
CN	turquoise	<i>HMGN3</i>
CN	turquoise	<i>HMOX2</i>
CN	brown	<i>HN1</i>
CN	turquoise	<i>HNRNPA1</i>
CN	blue	<i>HNRNPU</i>
CN	blue	<i>HOMER3</i>
CN	brown	<i>HOPX</i>
CN	grey	<i>HPGD</i>
CN	blue	<i>HPN</i>
CN	grey	<i>HRASLS2</i>

CN	grey	<i>HS1BP3</i>
CN	brown	<i>HSBP1</i>
CN	turquoise	<i>HSD17B10</i>
CN	brown	<i>HSD17B11</i>
CN	turquoise	<i>HSD17B8</i>
CN	brown	<i>HSH2D</i>
CN	turquoise	<i>HSP90AA1</i>
CN	brown	<i>HSPA1A</i>
CN	blue	<i>HSPB8</i>
CN	turquoise	<i>HVCN1</i>
CN	blue	<i>HYAL1</i>
CN	blue	<i>HYAL2</i>
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CN	turquoise	<i>ICAM2</i>
CN	blue	<i>ICOS</i>
CN	blue	<i>ID1</i>
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CN	grey	<i>IDH1</i>
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CN	turquoise	<i>IER3IP1</i>
CN	blue	<i>IER5L</i>
CN	brown	<i>IFI16</i>
CN	turquoise	<i>IFI27L2</i>
CN	brown	<i>IFI44</i>
CN	grey	<i>IFI44L</i>
CN	blue	<i>IFIH1</i>
CN	brown	<i>IFNAR2</i>
CN	brown	<i>IFNGR2</i>
CN	brown	<i>IFRD1</i>
CN	turquoise	<i>IGBP1</i>
CN	grey	<i>IGFBP7</i>
CN	turquoise	<i>IK</i>
CN	brown	<i>IKBIP</i>
CN	grey	<i>IKZF1</i>
CN	grey	<i>IL10RA</i>
CN	turquoise	<i>IL10RB</i>
CN	turquoise	<i>IL17RA</i>
CN	grey	<i>IL18</i>
CN	turquoise	<i>IL18BP</i>
CN	blue	<i>IL18R1</i>
CN	blue	<i>IL4I1</i>
CN	turquoise	<i>IL4R</i>
CN	brown	<i>ILK</i>
CN	blue	<i>ILVBL</i>
CN	turquoise	<i>IMP3</i>

CN	brown	<i>INAFM1</i>
CN	grey	<i>INPP5B</i>
CN	grey	<i>INPP5D</i>
CN	grey	<i>INSIG1</i>
CN	grey	<i>IPO4</i>
CN	grey	<i>IQGAP1</i>
CN	brown	<i>IRF1</i>
CN	brown	<i>IRF2</i>
CN	turquoise	<i>IRF5</i>
CN	brown	<i>IRF9</i>
CN	grey	<i>ISCA1</i>
CN	grey	<i>ITGA2B</i>
CN	brown	<i>ITGAM</i>
CN	turquoise	<i>ITGB3BP</i>
CN	turquoise	<i>ITGB7</i>
CN	turquoise	<i>ITM2A</i>
CN	grey	<i>JAZF1</i>
CN	turquoise	<i>JOSD2</i>
CN	turquoise	<i>JTB</i>
CN	blue	<i>JUN</i>
CN	turquoise	<i>KARS</i>
CN	blue	<i>KAT2A</i>
CN	blue	<i>KBTBD6</i>
CN	grey	<i>KBTBD7</i>
CN	blue	<i>KCNE1</i>
CN	brown	<i>KCNE3</i>
CN	brown	<i>KCNJ15</i>
CN	blue	<i>KCNJ6</i>
CN	blue	<i>KCNJ8</i>
CN	blue	<i>KCNK7</i>
CN	blue	<i>KCNMA1</i>
CN	turquoise	<i>KDELR1</i>
CN	blue	<i>KDM1A</i>
CN	grey	<i>KDM5C</i>
CN	blue	<i>KDM5D</i>
CN	blue	<i>KDM6B</i>
CN	blue	<i>KHDRBS1</i>
CN	grey	<i>KIAA0101</i>
CN	turquoise	<i>KIAA0141</i>
CN	grey	<i>KIAA0226L</i>
CN	blue	<i>KIAA0319</i>
CN	blue	<i>KIF15</i>
CN	brown	<i>KIF27</i>
CN	blue	<i>KIFC1</i>
CN	grey	<i>KIR2DL1</i>
CN	blue	<i>KIR2DL4</i>
CN	brown	<i>KLF6</i>
CN	grey	<i>KLF7</i>
CN	turquoise	<i>KLHL18</i>

CN	blue	<i>KLK7</i>
CN	turquoise	<i>KLRD1</i>
CN	turquoise	<i>KLRG1</i>
CN	turquoise	<i>KLRK1</i>
CN	grey	<i>KMT2C</i>
CN	turquoise	<i>KMT2E</i>
CN	brown	<i>KRT23</i>
CN	grey	<i>KRTCAP3</i>
CN	blue	<i>L2HGDH</i>
CN	grey	<i>LACE1</i>
CN	turquoise	<i>LAGE3</i>
CN	grey	<i>LAMP3</i>
CN	turquoise	<i>LAMTOR2</i>
CN	turquoise	<i>LASP1</i>
CN	brown	<i>LAT2</i>
CN	grey	<i>LCK</i>
CN	turquoise	<i>LCP1</i>
CN	turquoise	<i>LDHA</i>
CN	blue	<i>LDLR</i>
CN	blue	<i>LETM1</i>
CN	turquoise	<i>LGALS3BP</i>
CN	grey	<i>LGALS9C</i>
CN	blue	<i>LGR6</i>
CN	turquoise	<i>LHPP</i>
CN	grey	<i>LILRB4</i>
CN	turquoise	<i>LIME1</i>
CN	brown	<i>LIMK2</i>
CN	grey	<i>LINC01272</i>
CN	brown	<i>LMAN2</i>
CN	brown	<i>LPCAT2</i>
CN	grey	<i>LPCAT3</i>
CN	blue	<i>LPP</i>
CN	turquoise	<i>LPPR2</i>
CN	brown	<i>LRPAP1</i>
CN	blue	<i>LRRC2</i>
CN	brown	<i>LRRC25</i>
CN	grey	<i>LRRC70</i>
CN	brown	<i>LRRFIP1</i>
CN	grey	<i>LRRFIP2</i>
CN	blue	<i>LRRN1</i>
CN	turquoise	<i>LSM10</i>
CN	turquoise	<i>LSM2</i>
CN	turquoise	<i>LSM6</i>
CN	blue	<i>LSR</i>
CN	grey	<i>LTB4R</i>
CN	grey	<i>LTBR</i>
CN	grey	<i>LTF</i>
CN	turquoise	<i>LXN</i>
CN	grey	<i>LY6G6F</i>

CN	grey	<i>LYL1</i>
CN	brown	<i>LYPLAL1</i>
CN	brown	<i>LYRM1</i>
CN	grey	<i>LYSMD2</i>
CN	blue	<i>MACROD1</i>
CN	turquoise	<i>MAD1L1</i>
CN	turquoise	<i>MAD2L2</i>
CN	grey	<i>MAF1</i>
CN	turquoise	<i>MAFB</i>
CN	blue	<i>MAGEB17</i>
CN	turquoise	<i>MANBA</i>
CN	brown	<i>MAP1LC3B</i>
CN	grey	<i>MAP2K3</i>
CN	brown	<i>MAP3K11</i>
CN	blue	<i>MAP3K12</i>
CN	grey	<i>MAP3K8</i>
CN	turquoise	<i>MAP4K2</i>
CN	turquoise	<i>MAP7D1</i>
CN	grey	<i>MAPK14</i>
CN	turquoise	<i>MAPK1IP1L</i>
CN	blue	<i>MAPK3</i>
CN	grey	<i>MAPRE2</i>
CN	grey	<i>MARCH8</i>
CN	blue	<i>MARCH9</i>
CN	blue	<i>MARCKS</i>
CN	blue	<i>MARCO</i>
CN	grey	<i>MATK</i>
CN	turquoise	<i>MAX</i>
CN	brown	<i>MBOAT2</i>
CN	turquoise	<i>MBP</i>
CN	grey	<i>MCAT</i>
CN	grey	<i>MCCC2</i>
CN	grey	<i>MCEMP1</i>
CN	brown	<i>MCL1</i>
CN	turquoise	<i>MCTS1</i>
CN	turquoise	<i>MDH1</i>
CN	turquoise	<i>MDH2</i>
CN	grey	<i>MDK</i>
CN	turquoise	<i>MEA1</i>
CN	turquoise	<i>MED11</i>
CN	turquoise	<i>MED15</i>
CN	grey	<i>MED16</i>
CN	grey	<i>MED25</i>
CN	turquoise	<i>MED28</i>
CN	blue	<i>MEF2A</i>
CN	turquoise	<i>MEF2C</i>
CN	blue	<i>MEFV</i>
CN	grey	<i>MEN1</i>
CN	grey	<i>MEOX1</i>

CN turquoise *METTL12*  
CN blue *METTL14*  
CN turquoise *METTL7A*  
CN brown *METTL9*  
CN turquoise *MFF*  
CN turquoise *MFNG*  
CN grey *MFSD2B*  
CN blue *MGEA5*  
CN grey *MGLL*  
CN turquoise *MGST3*  
CN grey *MICAL1*  
CN grey *MICU2*  
CN turquoise *MID1IP1*  
CN turquoise *MIF4GD*  
CN brown *MKNK1*  
CN grey *MKRN1*  
CN turquoise *MLF2*  
CN turquoise *MLST8*  
CN brown *MLX*  
CN turquoise *MMD*  
CN brown *MOB1A*  
CN turquoise *MOB3A*  
CN blue *MOK*  
CN turquoise *MOSPD3*  
CN grey *MOV10*  
CN grey *MPEG1*  
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CN turquoise *MPLKIP*  
CN grey *MPP1*  
CN turquoise *MPV17*  
CN blue *MPZ*  
CN brown *MPZL1*  
CN turquoise *MRFAP1*  
CN blue *MRGPRX3*  
CN blue *MROH6*  
CN turquoise *MRPL11*  
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CN turquoise *MRPL43*  
CN brown *MRPL44*  
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CN turquoise *MRPS18B*  
CN turquoise *MRPS18C*  
CN turquoise *MRPS2*  
CN grey *MRPS25*  
CN grey *MRPS26*  
CN turquoise *MRPS34*  
CN turquoise *MS4A1*  
CN brown *MS4A4A*  
CN turquoise *MS4A7*  
CN blue *MSL2*  
CN blue *MSLN*  
CN brown *MSRB2*  
CN blue *MSTO1*  
CN turquoise *MT1F*  
CN grey *MT1G*  
CN blue *MTCH1*  
CN turquoise *MTMR14*  
CN blue *MTRR*  
CN turquoise *MVP*  
CN brown *MXD1*  
CN turquoise *MYD88*  
CN turquoise *MYDGF*  
CN turquoise *MYEOV2*  
CN grey *MYL6B*  
CN turquoise *MZT2B*  
CN turquoise *NAA10*  
CN turquoise *NAA38*  
CN turquoise *NAA60*  
CN grey *NABP1*  
CN brown *NAMPT*  
CN brown *NAPA*  
CN blue *NARS2*  
CN blue *NAT6*  
CN turquoise *NCL*  
CN grey *NCOA7*  
CN turquoise *NCR3*  
CN grey *NCSTN*  
CN grey *NDNL2*  
CN grey *NDRG3*

CN turquoise *NDUFA1*  
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CN turquoise *NDUFB6*  
CN turquoise *NDUFC1*  
CN turquoise *NDUFS2*  
CN turquoise *NDUFS6*  
CN turquoise *NDUFS8*  
CN grey *NDUFV3*  
CN blue *NECAB1*  
CN brown *NEDD9*  
CN blue *NEK3*  
CN turquoise *NELFE*  
CN turquoise *NFATC1*  
CN brown *NFKBIA*  
CN brown *NFKBIZ*  
CN blue *NFRKB*  
CN turquoise *NGFRAP1*  
CN turquoise *NIFK*  
CN grey *NINJ2*  
CN blue *NLRP3*  
CN grey *NMB*  
CN brown *NMI*  
CN turquoise *NMRAL1*  
CN turquoise *NOL11*  
CN turquoise *NOL12*  
CN turquoise *NOL7*  
CN turquoise *NONO*  
CN brown *NPL*  
CN turquoise *NPM1*  
CN grey *NR4A1*  
CN brown *NRBF2*  
CN turquoise *NRDE2*  
CN turquoise *NRGN*  
CN blue *NRN1*  
CN turquoise *NRROS*  
CN turquoise *NSMCE1*  
CN grey *NSUN3*  
CN brown *NT5C3A*  
CN blue *NTM*  
CN grey *NUCB1*  
CN turquoise *NUDC*  
CN turquoise *NUDT1*  
CN grey *NUDT16*  
CN turquoise *NUDT2*  
CN brown *NUDT3*

CN	grey	<i>NUDT4</i>
CN	turquoise	<i>NUDT5</i>
CN	turquoise	<i>NUTF2</i>
CN	grey	<i>NXT1</i>
CN	grey	<i>OAS2</i>
CN	blue	<i>OAS3</i>
CN	brown	<i>ODF3B</i>
CN	grey	<i>OGDH</i>
CN	blue	<i>OLAH</i>
CN	blue	<i>OLFM4</i>
CN	turquoise	<i>ORAI3</i>
CN	brown	<i>ORM2</i>
CN	grey	<i>ORMDL2</i>
CN	brown	<i>OSBPL2</i>
CN	brown	<i>OSCAR</i>
CN	grey	<i>OSGEP</i>
CN	turquoise	<i>OSTC</i>
CN	brown	<i>OSTF1</i>
CN	turquoise	<i>OTUB1</i>
CN	turquoise	<i>OXLD1</i>
CN	turquoise	<i>P2RX1</i>
CN	grey	<i>P2RY11</i>
CN	brown	<i>P2RY13</i>
CN	grey	<i>P2RY14</i>
CN	turquoise	<i>PA2G4</i>
CN	blue	<i>PACRG</i>
CN	brown	<i>PADI4</i>
CN	turquoise	<i>PAFAH1B3</i>
CN	blue	<i>PANK4</i>
CN	grey	<i>PARP1</i>
CN	turquoise	<i>PARP10</i>
CN	turquoise	<i>PARVB</i>
CN	grey	<i>PAX5</i>
CN	turquoise	<i>PCBD1</i>
CN	turquoise	<i>PCBP2</i>
CN	grey	<i>PCGF5</i>
CN	grey	<i>PCIF1</i>
CN	turquoise	<i>PCNA</i>
CN	blue	<i>PCYOX1</i>
CN	turquoise	<i>PDCD2</i>
CN	turquoise	<i>PDCD5</i>
CN	turquoise	<i>PDCD6</i>
CN	blue	<i>PDE1B</i>
CN	blue	<i>PDE2A</i>
CN	brown	<i>PDE4B</i>
CN	grey	<i>PDIA3</i>
CN	grey	<i>PDIA6</i>
CN	blue	<i>PDK1</i>
CN	turquoise	<i>PDLIM1</i>

CN	blue	<i>PDPK1</i>
CN	blue	<i>PEAR1</i>
CN	brown	<i>PELI1</i>
CN	brown	<i>PELO</i>
CN	grey	<i>PEPD</i>
CN	grey	<i>PERP</i>
CN	turquoise	<i>PFDN1</i>
CN	turquoise	<i>PFDN2</i>
CN	turquoise	<i>PGAM1</i>
CN	blue	<i>PGBD4</i>
CN	brown	<i>PGD</i>
CN	brown	<i>PGK1</i>
CN	turquoise	<i>PGLS</i>
CN	grey	<i>PGRMC1</i>
CN	turquoise	<i>PHB</i>
CN	turquoise	<i>PHB2</i>
CN	grey	<i>PHF11</i>
CN	turquoise	<i>PHF20</i>
CN	blue	<i>PHF7</i>
CN	grey	<i>PHLDA2</i>
CN	grey	<i>PHOSPHO1</i>
CN	turquoise	<i>PHPT1</i>
CN	grey	<i>PID1</i>
CN	blue	<i>PIDD1</i>
CN	grey	<i>PIGO</i>
CN	turquoise	<i>PIK3R5</i>
CN	turquoise	<i>PIM2</i>
CN	turquoise	<i>PIN1</i>
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CN	grey	<i>PITHD1</i>
CN	blue	<i>PITPNM1</i>
CN	grey	<i>PLA2G12A</i>
CN	turquoise	<i>PLAC8</i>
CN	blue	<i>PLAG1</i>
CN	blue	<i>PLAGL2</i>
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CN	brown	<i>PLEK</i>
CN	brown	<i>PLIN3</i>
CN	brown	<i>PLOD1</i>
CN	grey	<i>PLVAP</i>
CN	turquoise	<i>PNKD</i>
CN	grey	<i>PNPLA2</i>
CN	grey	<i>PNRC1</i>
CN	grey	<i>POFUT2</i>
CN	turquoise	<i>POLB</i>
CN	blue	<i>POLD1</i>
CN	turquoise	<i>POLD4</i>
CN	turquoise	<i>POLDIP2</i>
CN	grey	<i>POLDIP3</i>

CN turquoise *POLR1D*  
CN turquoise *POLR2E*  
CN turquoise *POLR2F*  
CN turquoise *POLR2G*  
CN turquoise *POLR2J*  
CN blue *POLR3A*  
CN turquoise *POLR3GL*  
CN turquoise *POLR3K*  
CN grey *POM121*  
CN turquoise *POMP*  
CN turquoise *POP4*  
CN turquoise *POP7*  
CN grey *POR*  
CN blue *POU6F1*  
CN turquoise *PPA1*  
CN blue *PPAPDC3*  
CN brown *PPCDC*  
CN turquoise *PPCS*  
CN turquoise *PPIH*  
CN grey *PPIL2*  
CN grey *PPIL3*  
CN turquoise *PPP1CA*  
CN turquoise *PPP1R10*  
CN grey *PPP1R14A*  
CN brown *PPP1R15A*  
CN blue *PPP1R1B*  
CN turquoise *PPP1R2*  
CN blue *PPP1R3D*  
CN blue *PPP6R2*  
CN blue *PPP6R3*  
CN turquoise *PQBP1*  
CN turquoise *PRCC*  
CN blue *PRDM16*  
CN grey *PRDM2*  
CN blue *PRDM8*  
CN turquoise *PRDX1*  
CN grey *PRDX2*  
CN turquoise *PRDX3*  
CN grey *PRDX5*  
CN grey *PREB*  
CN brown *PRELID1*  
CN blue *PREPL*  
CN turquoise *PRF1*  
CN turquoise *PRKAR1A*  
CN grey *PRKAR1B*  
CN blue *PRKCI*  
CN turquoise *PRKD2*  
CN turquoise *PRMT2*  
CN turquoise *PRMT9*

CN	grey	<i>PRPF4B</i>
CN	turquoise	<i>PRR11</i>
CN	grey	<i>PRRC2A</i>
CN	blue	<i>PRRT2</i>
CN	blue	<i>PRSS54</i>
CN	grey	<i>PRTN3</i>
CN	turquoise	<i>PSMA2</i>
CN	turquoise	<i>PSMA3</i>
CN	turquoise	<i>PSMA4</i>
CN	turquoise	<i>PSMA6</i>
CN	turquoise	<i>PSMA7</i>
CN	turquoise	<i>PSMB1</i>
CN	turquoise	<i>PSMB2</i>
CN	turquoise	<i>PSMB4</i>
CN	turquoise	<i>PSMB6</i>
CN	turquoise	<i>PSMB7</i>
CN	turquoise	<i>PSMC1</i>
CN	turquoise	<i>PSMC2</i>
CN	turquoise	<i>PSMC5</i>
CN	turquoise	<i>PSMD3</i>
CN	turquoise	<i>PSMD4</i>
CN	turquoise	<i>PSMD6</i>
CN	turquoise	<i>PSMD9</i>
CN	turquoise	<i>PSMG4</i>
CN	turquoise	<i>PSPC1</i>
CN	brown	<i>PSTPIP1</i>
CN	grey	<i>PSTPIP2</i>
CN	turquoise	<i>PTK2B</i>
CN	turquoise	<i>PTPMT1</i>
CN	blue	<i>PTPN12</i>
CN	turquoise	<i>PTPN6</i>
CN	brown	<i>PTPRE</i>
CN	turquoise	<i>PTRH2</i>
CN	grey	<i>PUM1</i>
CN	blue	<i>PUS7L</i>
CN	blue	<i>PVRL2</i>
CN	turquoise	<i>PYCR2</i>
CN	grey	<i>PYGB</i>
CN	brown	<i>PYGL</i>
CN	brown	<i>R3HDM4</i>
CN	turquoise	<i>RAB11A</i>
CN	grey	<i>RAB11B</i>
CN	turquoise	<i>RAB1B</i>
CN	brown	<i>RAB27A</i>
CN	grey	<i>RAB28</i>
CN	brown	<i>RAB2A</i>
CN	turquoise	<i>RAB37</i>
CN	grey	<i>RAB39B</i>
CN	brown	<i>RAB3D</i>

CN	blue	<i>RAB3GAP2</i>
CN	turquoise	<i>RAB8A</i>
CN	turquoise	<i>RABGAP1L</i>
CN	brown	<i>RABIF</i>
CN	turquoise	<i>RAD23A</i>
CN	turquoise	<i>RAD51C</i>
CN	grey	<i>RALA</i>
CN	turquoise	<i>RAN</i>
CN	turquoise	<i>RANBP3</i>
CN	turquoise	<i>RANGRF</i>
CN	grey	<i>RASA3</i>
CN	turquoise	<i>RASAL3</i>
CN	grey	<i>RASSF5</i>
CN	brown	<i>RBCK1</i>
CN	turquoise	<i>RBFA</i>
CN	grey	<i>RBL1</i>
CN	grey	<i>RBL2</i>
CN	grey	<i>RBM23</i>
CN	turquoise	<i>RBM3</i>
CN	turquoise	<i>RBM4</i>
CN	turquoise	<i>RBMS1</i>
CN	turquoise	<i>RBX1</i>
CN	blue	<i>RDM1</i>
CN	brown	<i>REEP5</i>
CN	blue	<i>REEP6</i>
CN	grey	<i>RELL1</i>
CN	brown	<i>RFX2</i>
CN	blue	<i>RGCC</i>
CN	turquoise	<i>RGL2</i>
CN	blue	<i>RGP1</i>
CN	turquoise	<i>RGS14</i>
CN	brown	<i>RGS19</i>
CN	grey	<i>RGS3</i>
CN	blue	<i>RGS9</i>
CN	turquoise	<i>RHBDD2</i>
CN	grey	<i>RHBDF2</i>
CN	blue	<i>RHBG</i>
CN	blue	<i>RHD</i>
CN	turquoise	<i>RHOC</i>
CN	blue	<i>RIF1</i>
CN	blue	<i>RILPL1</i>
CN	grey	<i>RIPK2</i>
CN	grey	<i>RIT1</i>
CN	blue	<i>RNASE1</i>
CN	grey	<i>RNASE2</i>
CN	turquoise	<i>RNASEH2A</i>
CN	turquoise	<i>RNASEH2C</i>
CN	brown	<i>RNASEK</i>
CN	grey	<i>RNA_SPIKE_ERCC-00034</i>

CN	grey	<i>RNA_SPIKE_ERCC-00039</i>
CN	grey	<i>RNA_SPIKE_ERCC-00054</i>
CN	grey	<i>RNA_SPIKE_ERCC-00154</i>
CN	grey	<i>RNF10</i>
CN	brown	<i>RNF114</i>
CN	brown	<i>RNF130</i>
CN	grey	<i>RNF138</i>
CN	grey	<i>RNF144B</i>
CN	brown	<i>RNF149</i>
CN	grey	<i>RNF167</i>
CN	grey	<i>RNF212</i>
CN	turquoise	<i>RNF213</i>
CN	brown	<i>RNF24</i>
CN	blue	<i>RNF31</i>
CN	grey	<i>RNF38</i>
CN	turquoise	<i>RNF4</i>
CN	grey	<i>RNF44</i>
CN	turquoise	<i>RNF7</i>
CN	turquoise	<i>RNH1</i>
CN	turquoise	<i>RNPS1</i>
CN	turquoise	<i>RPA3</i>
CN	grey	<i>RPIA</i>
CN	turquoise	<i>RPL22L1</i>
CN	turquoise	<i>RPL26L1</i>
CN	turquoise	<i>RPL27</i>
CN	turquoise	<i>RPP21</i>
CN	turquoise	<i>RPP25L</i>
CN	turquoise	<i>RPS19BP1</i>
CN	grey	<i>RPS6KA1</i>
CN	blue	<i>RPS6KL1</i>
CN	grey	<i>RRP7A</i>
CN	grey	<i>RSPH9</i>
CN	turquoise	<i>RSRP1</i>
CN	grey	<i>RTCA</i>
CN	turquoise	<i>RUSC1</i>
CN	blue	<i>RUSC2</i>
CN	turquoise	<i>RUVBL2</i>
CN	turquoise	<i>RWDD1</i>
CN	turquoise	<i>S100A13</i>
CN	grey	<i>S1PR4</i>
CN	blue	<i>SAMD10</i>
CN	turquoise	<i>SAMHD1</i>
CN	brown	<i>SAMSN1</i>
CN	turquoise	<i>SAP18</i>
CN	turquoise	<i>SARAF</i>
CN	turquoise	<i>SAT2</i>
CN	grey	<i>SBNO2</i>
CN	grey	<i>SCAF1</i>
CN	turquoise	<i>SCAF4</i>

CN	blue	SCAF8
CN	turquoise	SCAND1
CN	grey	SCAP
CN	blue	SCD
CN	turquoise	SCIMP
CN	grey	SCML4
CN	turquoise	SCNM1
CN	grey	SCYL1
CN	brown	SDCBP
CN	grey	SDF2L1
CN	turquoise	SDHAF2
CN	turquoise	SDHAF3
CN	blue	SDR42E1
CN	turquoise	SEC11A
CN	turquoise	SEC11C
CN	turquoise	SEC13
CN	grey	SEC16A
CN	grey	SEC24D
CN	brown	SELK
CN	turquoise	SELM
CN	brown	SELT
CN	blue	SEPT4
CN	blue	SERPINB2
CN	grey	SERPINB9
CN	blue	SETD2
CN	blue	SETD8
CN	turquoise	SF3B4
CN	turquoise	SF3B5
CN	brown	SFT2D1
CN	grey	SGTA
CN	turquoise	SH2D1A
CN	grey	SH2D3C
CN	turquoise	SH3BGRL
CN	turquoise	SH3BP2
CN	brown	SH3GLB1
CN	blue	SH3TC1
CN	turquoise	SHFM1
CN	turquoise	SHKBP1
CN	blue	SIAE
CN	grey	SIGLEC10
CN	blue	SIGLEC5
CN	grey	SIPA1
CN	turquoise	SIPA1L3
CN	brown	SIRPB1
CN	turquoise	SIRPG
CN	blue	SIRT1
CN	turquoise	SIT1
CN	turquoise	SIVA1
CN	turquoise	SKP1

CN	brown	<i>SLA</i>
CN	brown	<i>SLBP</i>
CN	grey	<i>SLC19A1</i>
CN	grey	<i>SLC22A18AS</i>
CN	turquoise	<i>SLC25A5</i>
CN	blue	<i>SLC26A6</i>
CN	turquoise	<i>SLC29A3</i>
CN	grey	<i>SLC2A1</i>
CN	brown	<i>SLC2A3</i>
CN	brown	<i>SLC31A2</i>
CN	turquoise	<i>SLC35C1</i>
CN	turquoise	<i>SLC35C2</i>
CN	turquoise	<i>SLC38A2</i>
CN	turquoise	<i>SLC39A4</i>
CN	brown	<i>SLC43A3</i>
CN	grey	<i>SLC46A3</i>
CN	grey	<i>SLC4A1</i>
CN	brown	<i>SLC6A6</i>
CN	blue	<i>SLC8A2</i>
CN	blue	<i>SLC8B1</i>
CN	blue	<i>SLC9A1</i>
CN	blue	<i>SLCO5A1</i>
CN	turquoise	<i>SLIRP</i>
CN	grey	<i>SLX4IP</i>
CN	blue	<i>SMAD1</i>
CN	blue	<i>SMARCA4</i>
CN	grey	<i>SMARCC2</i>
CN	grey	<i>SMARCD3</i>
CN	blue	<i>SMC5</i>
CN	turquoise	<i>SMCO4</i>
CN	grey	<i>SMEK2</i>
CN	blue	<i>SMG7</i>
CN	grey	<i>SMG9</i>
CN	blue	<i>SMIM10</i>
CN	turquoise	<i>SMIM19</i>
CN	grey	<i>SMIM24</i>
CN	grey	<i>SMIM3</i>
CN	grey	<i>SMIM5</i>
CN	turquoise	<i>SMIM7</i>
CN	brown	<i>SNAP23</i>
CN	turquoise	<i>SNAP29</i>
CN	turquoise	<i>SNRNP25</i>
CN	grey	<i>SNRNP27</i>
CN	turquoise	<i>SNRPA</i>
CN	turquoise	<i>SNRPC</i>
CN	turquoise	<i>SNRPD1</i>
CN	turquoise	<i>SNRPE</i>
CN	turquoise	<i>SNRPF</i>
CN	turquoise	<i>SNRPG</i>

CN	brown	SNX20
CN	grey	SNX22
CN	grey	SNX3
CN	turquoise	SON
CN	grey	SORL1
CN	turquoise	SP100
CN	turquoise	SP140
CN	grey	SP2
CN	grey	SP3
CN	turquoise	SPAG7
CN	turquoise	SPARC
CN	blue	SPATA6
CN	grey	SPATS2L
CN	blue	SPDL1
CN	blue	SPINK4
CN	turquoise	SPOCK2
CN	turquoise	SPON2
CN	turquoise	SPRY1
CN	brown	SQRDL
CN	brown	SRA1
CN	turquoise	SREK1IP1
CN	blue	SRF
CN	brown	SRI
CN	turquoise	SRSF3
CN	turquoise	SRSF7
CN	turquoise	SSB
CN	turquoise	SSBP1
CN	turquoise	SSNA1
CN	turquoise	SSR3
CN	turquoise	SSU72
CN	turquoise	ST13
CN	blue	ST14
CN	blue	ST20
CN	grey	ST3GAL1
CN	grey	ST6GALNAC3
CN	grey	ST6GALNAC4
CN	grey	STARD7
CN	grey	STAT1
CN	brown	STAT3
CN	brown	STEAP4
CN	grey	STK10
CN	grey	STK17A
CN	grey	STK17B
CN	turquoise	STK25
CN	blue	STK36
CN	grey	STMN3
CN	grey	STOM
CN	brown	STX11
CN	turquoise	STX3

CN	turquoise	<i>STX8</i>
CN	grey	<i>STXBP2</i>
CN	turquoise	<i>SUGP1</i>
CN	grey	<i>SULF2</i>
CN	brown	<i>SULT1A1</i>
CN	grey	<i>SUMF1</i>
CN	turquoise	<i>SUMO1</i>
CN	grey	<i>SUN1</i>
CN	turquoise	<i>SUPT4H1</i>
CN	grey	<i>SURF1</i>
CN	turquoise	<i>SURF2</i>
CN	turquoise	<i>SURF4</i>
CN	turquoise	<i>SUSD3</i>
CN	blue	<i>SUZ12</i>
CN	grey	<i>SVBP</i>
CN	grey	<i>SYCE3</i>
CN	turquoise	<i>SYF2</i>
CN	brown	<i>SYK</i>
CN	turquoise	<i>SYNGR2</i>
CN	blue	<i>SYNPO2L</i>
CN	grey	<i>SYNRG</i>
CN	turquoise	<i>SYPL1</i>
CN	turquoise	<i>SYS1</i>
CN	blue	<i>SYT1</i>
CN	blue	<i>SYT5</i>
CN	grey	<i>TACC1</i>
CN	grey	<i>TAL1</i>
CN	grey	<i>TANGO2</i>
CN	blue	<i>TARP</i>
CN	grey	<i>TARSL2</i>
CN	brown	<i>TBC1D1</i>
CN	grey	<i>TBC1D10C</i>
CN	grey	<i>TBC1D22B</i>
CN	turquoise	<i>TBCB</i>
CN	blue	<i>TBCK</i>
CN	brown	<i>TBXAS1</i>
CN	turquoise	<i>TCEAL8</i>
CN	grey	<i>TCN2</i>
CN	blue	<i>TESC</i>
CN	blue	<i>TEX261</i>
CN	turquoise	<i>TEX264</i>
CN	blue	<i>TGDS</i>
CN	blue	<i>TGFBR3</i>
CN	brown	<i>TGOLN2</i>
CN	grey	<i>THEM5</i>
CN	blue	<i>THRSP</i>
CN	turquoise	<i>THYN1</i>
CN	grey	<i>TIFA</i>
CN	brown	<i>TIMM17B</i>

CN	turquoise	<i>TIMM9</i>
CN	turquoise	<i>TINF2</i>
CN	grey	<i>TJAP1</i>
CN	blue	<i>TJP3</i>
CN	brown	<i>TKT</i>
CN	brown	<i>TLR2</i>
CN	brown	<i>TLR4</i>
CN	blue	<i>TLR7</i>
CN	turquoise	<i>TLR9</i>
CN	grey	<i>TM2D3</i>
CN	grey	<i>TM9SF1</i>
CN	grey	<i>TMA16</i>
CN	grey	<i>TMBIM1</i>
CN	turquoise	<i>TMBIM4</i>
CN	brown	<i>TMBIM6</i>
CN	turquoise	<i>TMED4</i>
CN	turquoise	<i>TMEM106B</i>
CN	brown	<i>TMEM11</i>
CN	turquoise	<i>TMEM123</i>
CN	turquoise	<i>TMEM126B</i>
CN	turquoise	<i>TMEM134</i>
CN	turquoise	<i>TMEM141</i>
CN	turquoise	<i>TMEM147</i>
CN	turquoise	<i>TMEM14C</i>
CN	blue	<i>TMEM150B</i>
CN	turquoise	<i>TMEM160</i>
CN	blue	<i>TMEM161B</i>
CN	brown	<i>TMEM167A</i>
CN	turquoise	<i>TMEM179B</i>
CN	blue	<i>TMEM185B</i>
CN	grey	<i>TMEM199</i>
CN	blue	<i>TMEM203</i>
CN	turquoise	<i>TMEM205</i>
CN	turquoise	<i>TMEM208</i>
CN	blue	<i>TMEM222</i>
CN	turquoise	<i>TMEM223</i>
CN	turquoise	<i>TMEM261</i>
CN	grey	<i>TMEM30A</i>
CN	grey	<i>TMEM40</i>
CN	turquoise	<i>TMEM43</i>
CN	brown	<i>TMEM50A</i>
CN	brown	<i>TMEM55A</i>
CN	brown	<i>TMEM59</i>
CN	turquoise	<i>TMEM60</i>
CN	turquoise	<i>TMEM70</i>
CN	brown	<i>TMEM71</i>
CN	blue	<i>TMEM80</i>
CN	brown	<i>TMEM91</i>
CN	grey	<i>TMEM92</i>

CN	grey	<i>TMEM95</i>
CN	grey	<i>TMLHE</i>
CN	blue	<i>TMOD1</i>
CN	blue	<i>TMOD2</i>
CN	grey	<i>TMPO</i>
CN	brown	<i>TMUB2</i>
CN	turquoise	<i>TNFRSF14</i>
CN	turquoise	<i>TNFRSF17</i>
CN	brown	<i>TNFSF10</i>
CN	blue	<i>TNK2</i>
CN	brown	<i>TNNI2</i>
CN	grey	<i>TNRC6C</i>
CN	grey	<i>TNS1</i>
CN	grey	<i>TOLLIP</i>
CN	grey	<i>TOM1</i>
CN	turquoise	<i>TOMM20</i>
CN	turquoise	<i>TOMM5</i>
CN	blue	<i>TOMM70A</i>
CN	turquoise	<i>TOR1A</i>
CN	brown	<i>TOR1B</i>
CN	grey	<i>TOX</i>
CN	brown	<i>TP53I3</i>
CN	blue	<i>TPH2</i>
CN	grey	<i>TPM1</i>
CN	grey	<i>TPM2</i>
CN	turquoise	<i>TPM3</i>
CN	brown	<i>TPM4</i>
CN	turquoise	<i>TPP1</i>
CN	turquoise	<i>TPRKB</i>
CN	turquoise	<i>TRAFD1</i>
CN	turquoise	<i>TRAPPC1</i>
CN	turquoise	<i>TRAPPC2L</i>
CN	turquoise	<i>TRAPPC4</i>
CN	turquoise	<i>TRAPPC6A</i>
CN	grey	<i>TREML1</i>
CN	grey	<i>TREML2</i>
CN	blue	<i>TRIB1</i>
CN	grey	<i>TRIB2</i>
CN	blue	<i>TRIM16</i>
CN	brown	<i>TRIM22</i>
CN	turquoise	<i>TRIM38</i>
CN	grey	<i>TRIM58</i>
CN	turquoise	<i>TRMT112</i>
CN	blue	<i>TRMT61A</i>
CN	blue	<i>TRPM1</i>
CN	blue	<i>TRPS1</i>
CN	blue	<i>TRPV3</i>
CN	blue	<i>TSACC</i>
CN	blue	<i>TSC22D2</i>

CN	blue	<i>TSNAXIP1</i>
CN	turquoise	<i>TSPAN2</i>
CN	blue	<i>TSPAN7</i>
CN	blue	<i>TSPYL4</i>
CN	brown	<i>TST</i>
CN	blue	<i>TSTA3</i>
CN	blue	<i>TTC12</i>
CN	blue	<i>TTC37</i>
CN	turquoise	<i>TUBA1C</i>
CN	brown	<i>TUBA4A</i>
CN	turquoise	<i>TUBA8</i>
CN	turquoise	<i>TUBB</i>
CN	grey	<i>TUBB1</i>
CN	brown	<i>TUBB4B</i>
CN	turquoise	<i>TUFM</i>
CN	blue	<i>TULP3</i>
CN	blue	<i>TVP23A</i>
CN	turquoise	<i>TWF2</i>
CN	turquoise	<i>TXN2</i>
CN	turquoise	<i>TXNDC12</i>
CN	blue	<i>TXNDC15</i>
CN	turquoise	<i>TXNDC17</i>
CN	turquoise	<i>TXNIP</i>
CN	grey	<i>TYK2</i>
CN	brown	<i>UBAP1</i>
CN	blue	<i>UBAP2</i>
CN	brown	<i>UBE2F</i>
CN	brown	<i>UBE2J1</i>
CN	turquoise	<i>UBE2L3</i>
CN	blue	<i>UBN1</i>
CN	grey	<i>UBQLN2</i>
CN	turquoise	<i>UBXN1</i>
CN	brown	<i>UBXN2B</i>
CN	grey	<i>UBXN6</i>
CN	turquoise	<i>UFC1</i>
CN	brown	<i>UFD1L</i>
CN	blue	<i>UHMK1</i>
CN	brown	<i>UNC119</i>
CN	blue	<i>UNC13B</i>
CN	grey	<i>UNC13D</i>
CN	grey	<i>UNC93B1</i>
CN	turquoise	<i>UPF2</i>
CN	turquoise	<i>UPK3A</i>
CN	brown	<i>UPP1</i>
CN	turquoise	<i>UQCC2</i>
CN	turquoise	<i>UQCC3</i>
CN	turquoise	<i>UQCRC1</i>
CN	turquoise	<i>UQCRCFS1</i>
CN	turquoise	<i>URM1</i>

CN	grey	<i>UROD</i>
CN	brown	<i>USB1</i>
CN	turquoise	<i>USE1</i>
CN	grey	<i>USF1</i>
CN	grey	<i>USP18</i>
CN	grey	<i>USP21</i>
CN	turquoise	<i>UXT</i>
CN	brown	<i>VAMP3</i>
CN	brown	<i>VAPA</i>
CN	brown	<i>VCAN</i>
CN	turquoise	<i>VDAC3</i>
CN	grey	<i>VEGFB</i>
CN	blue	<i>VEPH1</i>
CN	grey	<i>VEZF1</i>
CN	turquoise	<i>VKORC1</i>
CN	brown	<i>VMP1</i>
CN	blue	<i>VNN1</i>
CN	brown	<i>VNN2</i>
CN	brown	<i>VNN3</i>
CN	turquoise	<i>VPS29</i>
CN	grey	<i>VPS9D1</i>
CN	blue	<i>VSIG4</i>
CN	blue	<i>VWA7</i>
CN	turquoise	<i>WBP1</i>
CN	blue	<i>WDPCP</i>
CN	grey	<i>WDR11</i>
CN	grey	<i>WDR45</i>
CN	blue	<i>WDR59</i>
CN	grey	<i>WDR6</i>
CN	blue	<i>WDR81</i>
CN	turquoise	<i>WRAP73</i>
CN	brown	<i>WSB1</i>
CN	grey	<i>WWOX</i>
CN	turquoise	<i>XAB2</i>
CN	grey	<i>XAF1</i>
CN	turquoise	<i>XCL2</i>
CN	grey	<i>XPNPEP1</i>
CN	turquoise	<i>XRCC1</i>
CN	turquoise	<i>XRCC6</i>
CN	grey	<i>YBX1</i>
CN	turquoise	<i>YIF1A</i>
CN	grey	<i>YIPF1</i>
CN	grey	<i>YIPF3</i>
CN	turquoise	<i>YKT6</i>
CN	grey	<i>YPEL3</i>
CN	brown	<i>YPEL5</i>
CN	turquoise	<i>YWHAQ</i>
CN	turquoise	<i>YWHAZ</i>
CN	blue	<i>ZAK</i>

CN	brown	ZBP1
CN	grey	ZBTB2
CN	blue	ZBTB5
CN	turquoise	ZBTB8OS
CN	grey	ZC3H10
CN	grey	ZC3HAV1
CN	blue	ZCCHC2
CN	grey	ZCCHC6
CN	blue	ZCCHC8
CN	turquoise	ZCRB1
CN	brown	ZDHHC12
CN	grey	ZDHHC16
CN	blue	ZDHHC5
CN	blue	ZDHHC7
CN	grey	ZEB2
CN	grey	ZER1
CN	turquoise	ZFAND2A
CN	turquoise	ZMYM6NB
CN	turquoise	ZNF107
CN	blue	ZNF17
CN	blue	ZNF181
CN	blue	ZNF266
CN	turquoise	ZNF302
CN	blue	ZNF331
CN	blue	ZNF35
CN	blue	ZNF382
CN	brown	ZNF438
CN	blue	ZNF442
CN	blue	ZNF483
CN	blue	ZNF496
CN	grey	ZNF517
CN	blue	ZNF556
CN	blue	ZNF574
CN	grey	ZNF575
CN	turquoise	ZNF593
CN	blue	ZNF621
CN	grey	ZNF653
CN	blue	ZNF678
CN	blue	ZNF683
CN	grey	ZNF684
CN	blue	ZNF740
CN	grey	ZNF749
CN	turquoise	ZNF76
CN	blue	ZNF782
CN	blue	ZNF829
CN	blue	ZNF841
CN	blue	ZNF860
CN	grey	ZNFX1
CN	grey	ZSCAN26

CN	grey	ZSCAN9
CN	grey	ABLIM1
CN	blue	ACTA1
CN	blue	AHDC1
CN	grey	AKAP8
CN	blue	ALDH1L1
CN	blue	ALDH7A1
CN	blue	ANGPTL6
CN	turquoise	AP1M1
CN	grey	APBB3
CN	grey	ARG2
CN	turquoise	ARHGAP17
CN	blue	ARMC5
CN	blue	ASB9
CN	blue	ATG4A
CN	blue	ATP2C1
CN	blue	B3GNT3
CN	blue	BCLAF1
CN	blue	BDP1
CN	blue	BMF
CN	blue	BMP3
CN	blue	BRWD1
CN	brown	C10orf128
CN	blue	C11orf84
CN	blue	C12orf4
CN	blue	C19orf52
CN	blue	C6orf141
CN	blue	C8orf82
CN	brown	CARHSP1
CN	grey	CBX1
CN	turquoise	CCM2
CN	turquoise	CCND2
CN	blue	CCSAP
CN	grey	CD244
CN	turquoise	CD9
CN	blue	CDC27
CN	blue	CDC7
CN	blue	CDH13
CN	blue	CEACAM8
CN	blue	CENPC
CN	grey	CENPM
CN	blue	CENPQ
CN	blue	CLDN9
CN	grey	CMPK1
CN	blue	CNOT11
CN	grey	COG8
CN	blue	CORO2A
CN	blue	CSNK1G1
CN	blue	CWC22

CN	turquoise	<i>CYFIP2</i>
CN	blue	<i>DACT3</i>
CN	blue	<i>DCAF15</i>
CN	turquoise	<i>DDX19B</i>
CN	grey	<i>DDX54</i>
CN	blue	<i>DENND5B</i>
CN	blue	<i>DEXI</i>
CN	grey	<i>DHTKD1</i>
CN	blue	<i>DHX57</i>
CN	blue	<i>DPPA4</i>
CN	grey	<i>DPYSL2</i>
CN	blue	<i>DYNLRB2</i>
CN	grey	<i>DYRK1B</i>
CN	blue	<i>ECHDC3</i>
CN	blue	<i>EEF2K</i>
CN	blue	<i>EPN2</i>
CN	blue	<i>EPT1</i>
CN	turquoise	<i>ESYT1</i>
CN	grey	<i>EXTL3</i>
CN	blue	<i>FAM13A</i>
CN	blue	<i>FAM83A</i>
CN	blue	<i>FN3K</i>
CN	turquoise	<i>FNBP4</i>
CN	grey	<i>FOXJ3</i>
CN	blue	<i>FRMD5</i>
CN	grey	<i>FTSJ3</i>
CN	blue	<i>GABRA2</i>
CN	blue	<i>GLS</i>
CN	turquoise	<i>GORASP2</i>
CN	blue	<i>GPR34</i>
CN	grey	<i>GPX3</i>
CN	blue	<i>GRK6</i>
CN	blue	<i>GTF2E1</i>
CN	blue	<i>HDHD2</i>
CN	grey	<i>HDLBP</i>
CN	blue	<i>HELLS</i>
CN	grey	<i>HIP1</i>
CN	grey	<i>HIP1R</i>
CN	grey	<i>HIST1H2BL</i>
CN	blue	<i>HIVEP1</i>
CN	blue	<i>HMGB3</i>
CN	blue	<i>HSPA2</i>
CN	blue	<i>ICK</i>
CN	blue	<i>IFT74</i>
CN	grey	<i>IL12RB1</i>
CN	turquoise	<i>IL27RA</i>
CN	turquoise	<i>ILF3</i>
CN	blue	<i>INSL3</i>
CN	grey	<i>IRF8</i>

CN	grey	<i>ITGA5</i>
CN	blue	<i>JOSD1</i>
CN	blue	<i>KIAA0895L</i>
CN	blue	<i>KLHL5</i>
CN	grey	<i>LIG1</i>
CN	blue	<i>LINC00649</i>
CN	grey	<i>LMF2</i>
CN	grey	<i>LOC102724279</i>
CN	blue	<i>LRP5L</i>
CN	blue	<i>LRRC47</i>
CN	grey	<i>LRSAM1</i>
CN	grey	<i>LSG1</i>
CN	blue	<i>LY6G5B</i>
CN	grey	<i>MAN2B2</i>
CN	blue	<i>MAP2K4</i>
CN	blue	<i>MAP4K5</i>
CN	blue	<i>MEF2BNB-MEF2B</i>
CN	blue	<i>MLEC</i>
CN	grey	<i>MTF1</i>
CN	turquoise	<i>MYC</i>
CN	blue	<i>N4BP2</i>
CN	turquoise	<i>NAGA</i>
CN	grey	<i>NCKAP1L</i>
CN	blue	<i>NCR3LG1</i>
CN	grey	<i>NDRG2</i>
CN	blue	<i>NFXL1</i>
CN	blue	<i>NOMO3</i>
CN	grey	<i>NRAS</i>
CN	blue	<i>NUF2</i>
CN	blue	<i>NVL</i>
CN	blue	<i>OAZ3</i>
CN	blue	<i>PACS1</i>
CN	blue	<i>PDE4A</i>
CN	grey	<i>PHF12</i>
CN	blue	<i>PIWIL3</i>
CN	brown	<i>PKN1</i>
CN	turquoise	<i>PLA2G16</i>
CN	blue	<i>POGLUT1</i>
CN	blue	<i>POLD3</i>
CN	blue	<i>PPP1R12B</i>
CN	grey	<i>PPP5C</i>
CN	blue	<i>PPP6R1</i>
CN	turquoise	<i>PRPF6</i>
CN	grey	<i>PRPSAP1</i>
CN	grey	<i>PRRC1</i>
CN	turquoise	<i>PSMA1</i>
CN	grey	<i>PSMA5</i>
CN	blue	<i>PTPRK</i>
CN	blue	<i>RAB19</i>

CN	blue	<i>RALGPS2</i>
CN	blue	<i>RCCD1</i>
CN	blue	<i>RCN3</i>
CN	grey	<i>RDH13</i>
CN	grey	<i>RDH14</i>
CN	blue	<i>RGS13</i>
CN	blue	<i>RIBC2</i>
CN	blue	<i>RNA_SPIKE_ERCC-00053</i>
CN	grey	<i>RNF139</i>
CN	turquoise	<i>RNF166</i>
CN	blue	<i>RNF182</i>
CN	blue	<i>RNF19A</i>
CN	grey	<i>RPP40</i>
CN	grey	<i>SCPEP1</i>
CN	grey	<i>SEC24C</i>
CN	turquoise	<i>SEC61A1</i>
CN	blue	<i>SERPINE1</i>
CN	turquoise	<i>SH3BP1</i>
CN	blue	<i>SHBG</i>
CN	blue	<i>SLC16A1</i>
CN	blue	<i>SLC2A9</i>
CN	blue	<i>SLFN12</i>
CN	blue	<i>SMPD4</i>
CN	grey	<i>SNX24</i>
CN	blue	<i>SOX8</i>
CN	blue	<i>SPAG8</i>
CN	grey	<i>SPATA20</i>
CN	blue	<i>SPATA32</i>
CN	blue	<i>SPATA4</i>
CN	blue	<i>SPEF1</i>
CN	blue	<i>SPG11</i>
CN	blue	<i>SPP1</i>
CN	turquoise	<i>SRSF2</i>
CN	blue	<i>STARD4</i>
CN	blue	<i>STAT5A</i>
CN	blue	<i>SWAP70</i>
CN	blue	<i>SYDE1</i>
CN	grey	<i>TAF1C</i>
CN	blue	<i>TAF5</i>
CN	turquoise	<i>TBRG4</i>
CN	blue	<i>TCHP</i>
CN	blue	<i>TCTEX1D4</i>
CN	grey	<i>TDRD3</i>
CN	blue	<i>TDRKH</i>
CN	blue	<i>TET2</i>
CN	blue	<i>TEX2</i>
CN	blue	<i>TFF3</i>
CN	grey	<i>THEMIS</i>
CN	grey	<i>TMC8</i>

CN	blue	<i>TMCC2</i>
CN	blue	<i>TMEM117</i>
CN	turquoise	<i>TMEM156</i>
CN	grey	<i>TMEM180</i>
CN	grey	<i>TMEM41B</i>
CN	blue	<i>TMEM97</i>
CN	grey	<i>TNPO2</i>
CN	blue	<i>TRAPPC8</i>
CN	grey	<i>TRIB3</i>
CN	blue	<i>TRIM37</i>
CN	blue	<i>TRIM7</i>
CN	grey	<i>TSEN54</i>
CN	blue	<i>TSHZ2</i>
CN	turquoise	<i>TSPAN14</i>
CN	blue	<i>TTLL6</i>
CN	blue	<i>TYW5</i>
CN	turquoise	<i>UBE2D4</i>
CN	turquoise	<i>UBE2T</i>
CN	blue	<i>UBFD1</i>
CN	blue	<i>UCHL1</i>
CN	grey	<i>UHRF1BP1L</i>
CN	blue	<i>UPK3BL</i>
CN	blue	<i>USO1</i>
CN	blue	<i>USP33</i>
CN	turquoise	<i>VAT1</i>
CN	blue	<i>WBP2NL</i>
CN	grey	<i>WDSUB1</i>
CN	grey	<i>YBX3</i>
CN	grey	<i>ZFAND5</i>
CN	grey	<i>ZHX2</i>
CN	blue	<i>ZNF202</i>
CN	blue	<i>ZNF25</i>
CN	blue	<i>ZNF326</i>
CN	blue	<i>ZNF354B</i>
CN	blue	<i>ZNF395</i>
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CN	brown	<i>ZNF655</i>
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CN	blue	<i>ZNF689</i>
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CN	blue	<i>ZSCAN25</i>
AC	turquoise	<i>AAK1</i>
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AC	turquoise	<i>ABRACL</i>
AC	blue	<i>ACO1</i>
AC	brown	<i>ACSL1</i>
AC	brown	<i>ACTB</i>

AC turquoise *ACTG1*  
AC brown *ACTN4*  
AC brown *ADGRE2*  
AC brown *ADGRE5*  
AC brown *ADGRG3*  
AC grey *ADIPOR1*  
AC brown *ADM*  
AC brown *AGTRAP*  
AC grey *AHSP*  
AC brown *AIF1*  
AC grey *ALAS2*  
AC brown *ALDOA*  
AC grey *ALG11*  
AC turquoise *ALKBH7*  
AC brown *ALOX5AP*  
AC brown *ALPL*  
AC grey *AMDHD2*  
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AC blue *AMIGO3*  
AC blue *AMPH*  
AC turquoise *ANAPC11*  
AC grey *ANPEP*  
AC brown *ANXA1*  
AC brown *ANXA11*  
AC brown *ANXA3*  
AC blue *AP1S1*  
AC grey *AP2A1*  
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AC blue *APOC1*  
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AC turquoise *ARHGDIA*  
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AC brown *ARRB2*  
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AC turquoise *ATP6V1F*  
AC yellow *ATP6V1G1*  
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AC grey *ATXN2L*  
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AC grey *BHLHE40*  
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AC brown *BIN2*  
AC grey *BLCAP*  
AC brown *BLOC1S1*  
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AC brown *BRD2*  
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AC turquoise *BTF3*  
AC brown *BTG1*  
AC yellow *BUD31*  
AC blue *BYSL*  
AC blue *BZRAP1*  
AC brown *C10orf54*  
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AC brown *C15orf39*  
AC brown *C16orf54*  
AC blue *C17orf98*  
AC grey *C19orf33*  
AC brown *C19orf38*  
AC turquoise *C19orf53*  
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AC turquoise C19orf70  
AC grey C1QB  
AC blue C1QTNF1  
AC blue C1orf116  
AC brown C1orf162  
AC blue C1orf64  
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AC grey C2orf88  
AC brown C4orf3  
AC turquoise C4orf48  
AC brown C5AR1  
AC grey C6orf25  
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AC grey C7orf73  
AC turquoise C9orf16  
AC grey C9orf78  
AC grey CALHM2  
AC turquoise CALM1  
AC brown CAMP  
AC brown CAMTA2  
AC brown CAP1  
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AC yellow CARD16  
AC brown CASP4  
AC blue CATSPERG  
AC blue CBY3  
AC grey CCAR2  
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AC turquoise CCR7  
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AC turquoise CD14  
AC grey CD248  
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AC brown CD37  
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AC brown CD53  
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AC blue *CDC25C*  
AC turquoise *CDC37*  
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AC brown *CEACAM1*  
AC brown *CEACAM3*  
AC grey *CELF1*  
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AC grey *CFD*  
AC brown *CFL1*  
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AC brown *CHI3L1*  
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AC brown *CITED2*  
AC blue *CKAP2*  
AC grey *CLC*  
AC blue *CLCN7*  
AC yellow *CLEC2B*  
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AC grey *CNOT1*  
AC grey *CNOT3*  
AC grey *COG1*  
AC turquoise *COMMD6*  
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AC brown *CORO1A*  
AC turquoise *COX4I1*  
AC turquoise *COX5B*  
AC turquoise *COX6A1*  
AC turquoise *COX6B1*  
AC turquoise *COX6C*  
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AC turquoise *COX8A*  
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AC turquoise *CPSF3L*  
AC brown *CPSF7*  
AC brown *CREB5*  
AC turquoise *CRIP1*

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AC brown *CSF2RB*  
AC brown *CSF3R*  
AC grey *CSK*  
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AC turquoise *CST3*  
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AC turquoise *CSTB*  
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AC brown *CTDSP1*  
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AC yellow *CTSS*  
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AC brown *CYTH4*  
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AC grey *DPM2*  
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AC grey *DQX1*  
AC yellow *DRAP1*  
AC brown *DTX2*  
AC turquoise *DYNLL1*

AC turquoise *DYNLRB1*  
AC yellow *DYNLT1*  
AC brown *DYSF*  
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AC turquoise *EEF1A1*  
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AC turquoise *EEF1D*  
AC turquoise *EEF1G*  
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AC turquoise *EIF3G*  
AC turquoise *EIF3H*  
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AC turquoise *EIF5B*  
AC turquoise *ELP5*  
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AC grey *EPC1*  
AC blue *EPHB1*  
AC yellow *EPSTI1*  
AC turquoise *ERP29*  
AC blue *ESRRA*  
AC turquoise *EVL*  
AC turquoise *EWSR1*  
AC blue *EXO5*  
AC grey *EXOSC10*  
AC turquoise *EZR*  
AC turquoise *FABP5*  
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AC grey *FAM210B*  
AC blue *FAM220A*  
AC grey *FAM222B*  
AC blue *FAM43A*  
AC turquoise *FAM96B*  
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AC turquoise *FAU*  
AC grey *FBXO7*  
AC brown *FCER1G*  
AC yellow *FCGR1B*  
AC brown *FCGR2A*  
AC brown *FCGRT*  
AC turquoise *FCMR*  
AC turquoise *FCN1*

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AC turquoise *FGFBP2*  
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AC brown *FGR*  
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AC grey *FKBP8*  
AC brown *FLOT2*  
AC brown *FOLR3*  
AC brown *FOS*  
AC brown *FPR1*  
AC blue *FSTL4*  
AC brown *FTH1*  
AC brown *FTL*  
AC grey *FUND2*  
AC turquoise *FUS*  
AC turquoise *FXYD5*  
AC brown *FYB*  
AC grey *G0S2*  
AC brown *GAA*  
AC brown *GABARAP*  
AC blue *GAGE10*  
AC blue *GAL3ST4*  
AC brown *GAPDH*  
AC turquoise *GATA3*  
AC grey *GBA*  
AC yellow *GBP5*  
AC brown *GCA*  
AC brown *GD1*  
AC blue *GFM2*  
AC yellow *GIMAP4*  
AC turquoise *GIMAP5*  
AC turquoise *GIMAP7*  
AC brown *GLIPR1*  
AC brown *GLIPR2*  
AC yellow *GLRX*  
AC turquoise *GM2A*  
AC brown *GMFG*  
AC blue *GNA12*  
AC grey *GNAI2*  
AC blue *GNAZ*  
AC turquoise *GNB2L1*  
AC turquoise *GNG11*  
AC brown *GNG2*  
AC brown *GNG5*  
AC turquoise *GNLY*  
AC brown *GNS*  
AC grey *GP9*  
AC blue *GPR137B*  
AC brown *GPSM3*

AC	grey	<i>GPX1</i>
AC	brown	<i>GRINA</i>
AC	yellow	<i>GRN</i>
AC	grey	<i>GSDMD</i>
AC	yellow	<i>GSTK1</i>
AC	turquoise	<i>GSTP1</i>
AC	grey	<i>GUK1</i>
AC	grey	<i>GYPC</i>
AC	turquoise	<i>GZMA</i>
AC	turquoise	<i>GZMB</i>
AC	turquoise	<i>GZMH</i>
AC	turquoise	<i>H2AFJ</i>
AC	brown	<i>H2AFZ</i>
AC	brown	<i>H3F3A</i>
AC	brown	<i>H3F3B</i>
AC	blue	<i>HAS3</i>
AC	grey	<i>HBA1</i>
AC	grey	<i>HBA2</i>
AC	grey	<i>HBB</i>
AC	grey	<i>HBD</i>
AC	grey	<i>HBG2</i>
AC	grey	<i>HBM</i>
AC	grey	<i>HBQ1</i>
AC	grey	<i>HBZ</i>
AC	brown	<i>HCK</i>
AC	turquoise	<i>HCST</i>
AC	turquoise	<i>HERPUD1</i>
AC	turquoise	<i>HIGD2A</i>
AC	turquoise	<i>HINT1</i>
AC	turquoise	<i>HINT2</i>
AC	blue	<i>HIPK2</i>
AC	turquoise	<i>HIST1H2AE</i>
AC	yellow	<i>HIST1H2BC</i>
AC	turquoise	<i>HIST1H2BH</i>
AC	turquoise	<i>HIST1H2BJ</i>
AC	brown	<i>HIST1H2BK</i>
AC	blue	<i>HIST1H3D</i>
AC	turquoise	<i>HIST1H3H</i>
AC	grey	<i>HIST1H4H</i>
AC	turquoise	<i>HLA-A</i>
AC	grey	<i>HLA-B</i>
AC	grey	<i>HLA-C</i>
AC	turquoise	<i>HLA-DPA1</i>
AC	turquoise	<i>HLA-DPB1</i>
AC	turquoise	<i>HLA-DQA1</i>
AC	grey	<i>HLA-DQA2</i>
AC	turquoise	<i>HLA-DQB1</i>
AC	turquoise	<i>HLA-DRA</i>
AC	turquoise	<i>HLA-DRB1</i>

AC	grey	<i>HLA-DRB5</i>
AC	brown	<i>HLA-E</i>
AC	blue	<i>HLCS</i>
AC	turquoise	<i>HM13</i>
AC	turquoise	<i>HMGA1</i>
AC	turquoise	<i>HMGB1</i>
AC	turquoise	<i>HMGN1</i>
AC	turquoise	<i>HMGN2</i>
AC	grey	<i>HMOX1</i>
AC	turquoise	<i>HNRNPK</i>
AC	blue	<i>HOXC4</i>
AC	brown	<i>HP</i>
AC	brown	<i>HRH2</i>
AC	turquoise	<i>HSP90AB1</i>
AC	turquoise	<i>HSPA8</i>
AC	turquoise	<i>HSPA9</i>
AC	turquoise	<i>HSPB1</i>
AC	blue	<i>HSPB9</i>
AC	turquoise	<i>HTRA2</i>
AC	brown	<i>ICAM3</i>
AC	turquoise	<i>ID3</i>
AC	grey	<i>IER2</i>
AC	grey	<i>IFI27</i>
AC	yellow	<i>IFI30</i>
AC	yellow	<i>IFI35</i>
AC	yellow	<i>IFI6</i>
AC	yellow	<i>IFIT1</i>
AC	yellow	<i>IFIT2</i>
AC	yellow	<i>IFIT3</i>
AC	yellow	<i>IFITM1</i>
AC	yellow	<i>IFITM2</i>
AC	yellow	<i>IFITM3</i>
AC	turquoise	<i>IGFLR1</i>
AC	turquoise	<i>IGLL5</i>
AC	brown	<i>IGSF6</i>
AC	brown	<i>IL16</i>
AC	brown	<i>IL1B</i>
AC	brown	<i>IL1R2</i>
AC	yellow	<i>IL1RN</i>
AC	blue	<i>IL24</i>
AC	grey	<i>IL2RB</i>
AC	turquoise	<i>IL2RG</i>
AC	turquoise	<i>IL32</i>
AC	grey	<i>IMPA2</i>
AC	brown	<i>IMPDH1</i>
AC	brown	<i>IRAK3</i>
AC	blue	<i>IRF2BPL</i>
AC	grey	<i>IRF4</i>
AC	yellow	<i>IRF7</i>

AC	yellow	<i>ISG15</i>
AC	yellow	<i>ISG20</i>
AC	grey	<i>IST1</i>
AC	turquoise	<i>ITGAL</i>
AC	brown	<i>ITGB2</i>
AC	brown	<i>ITM2B</i>
AC	grey	<i>ITM2C</i>
AC	grey	<i>IWS1</i>
AC	grey	<i>JAK3</i>
AC	turquoise	<i>JCHAIN</i>
AC	brown	<i>JUNB</i>
AC	blue	<i>KCNK17</i>
AC	brown	<i>KIAA0040</i>
AC	grey	<i>KIAA1191</i>
AC	grey	<i>KLF2</i>
AC	blue	<i>KLHL14</i>
AC	blue	<i>KLHL26</i>
AC	turquoise	<i>KLRB1</i>
AC	brown	<i>KXD1</i>
AC	turquoise	<i>LAIR1</i>
AC	turquoise	<i>LAIR2</i>
AC	brown	<i>LAMP2</i>
AC	brown	<i>LAMTOR1</i>
AC	brown	<i>LAMTOR4</i>
AC	brown	<i>LAPTM5</i>
AC	turquoise	<i>LAT</i>
AC	grey	<i>LBH</i>
AC	grey	<i>LBHD1</i>
AC	grey	<i>LCN2</i>
AC	brown	<i>LCP2</i>
AC	turquoise	<i>LDHB</i>
AC	turquoise	<i>LEF1</i>
AC	grey	<i>LENG8</i>
AC	turquoise	<i>LGALS1</i>
AC	turquoise	<i>LGALS2</i>
AC	grey	<i>LGALS3</i>
AC	yellow	<i>LGALS9</i>
AC	turquoise	<i>LILRA1</i>
AC	brown	<i>LILRA2</i>
AC	brown	<i>LILRA3</i>
AC	brown	<i>LILRA5</i>
AC	turquoise	<i>LILRB1</i>
AC	brown	<i>LILRB2</i>
AC	turquoise	<i>LIMD2</i>
AC	turquoise	<i>LIMS1</i>
AC	brown	<i>LITAF</i>
AC	grey	<i>LPAR5</i>
AC	turquoise	<i>LPXN</i>
AC	brown	<i>LRG1</i>

AC brown *LRP10*  
AC turquoise *LSM7*  
AC brown *LSP1*  
AC brown *LST1*  
AC turquoise *LTB*  
AC yellow *LY6E*  
AC turquoise *LY86*  
AC grey *LY9*  
AC brown *LY96*  
AC grey *LYPD2*  
AC turquoise *LYZ*  
AC grey *MAGED1*  
AC turquoise *MAL*  
AC brown *MAP3K7CL*  
AC turquoise *MAP4K1*  
AC turquoise *MAPKAPK3*  
AC blue *MAPKAPK5*  
AC blue *MARVELD2*  
AC grey *MBD6*  
AC brown *MBOAT7*  
AC blue *MECOM*  
AC turquoise *MIEN1*  
AC turquoise *MIF*  
AC brown *MKL1*  
AC brown *MMP25*  
AC brown *MMP9*  
AC brown *MNDA*  
AC blue *MNT*  
AC turquoise *MRPL21*  
AC turquoise *MRPL41*  
AC turquoise *MRPL52*  
AC turquoise *MRPL57*  
AC turquoise *MRPS21*  
AC turquoise *MRPS24*  
AC blue *MRVI1*  
AC yellow *MS4A6A*  
AC turquoise *MSN*  
AC brown *MSRB1*  
AC turquoise *MT1E*  
AC turquoise *MT1X*  
AC yellow *MT2A*  
AC brown *MTHFS*  
AC brown *MTRNR2L1*  
AC brown *MTRNR2L2*  
AC brown *MTRNR2L8*  
AC brown *MTRNR2L9*  
AC yellow *MX1*  
AC yellow *MX2*  
AC brown *MYADM*

AC	yellow	<i>MYL12A</i>
AC	brown	<i>MYL12B</i>
AC	grey	<i>MYL4</i>
AC	brown	<i>MYL6</i>
AC	grey	<i>MYL9</i>
AC	brown	<i>MYO1F</i>
AC	turquoise	<i>MZB1</i>
AC	turquoise	<i>NACA</i>
AC	brown	<i>NADK</i>
AC	brown	<i>NAIP</i>
AC	brown	<i>NARF</i>
AC	blue	<i>NBL1</i>
AC	brown	<i>NCF2</i>
AC	brown	<i>NCF4</i>
AC	turquoise	<i>NDUFA11</i>
AC	turquoise	<i>NDUFA12</i>
AC	turquoise	<i>NDUFA13</i>
AC	turquoise	<i>NDUFA2</i>
AC	turquoise	<i>NDUFA3</i>
AC	turquoise	<i>NDUFA4</i>
AC	turquoise	<i>NDUFAF3</i>
AC	turquoise	<i>NDUFB11</i>
AC	turquoise	<i>NDUFB2</i>
AC	turquoise	<i>NDUFB4</i>
AC	turquoise	<i>NDUFB7</i>
AC	turquoise	<i>NDUFB8</i>
AC	turquoise	<i>NDUFB9</i>
AC	turquoise	<i>NDUFS3</i>
AC	turquoise	<i>NDUFS5</i>
AC	turquoise	<i>NDUFS7</i>
AC	turquoise	<i>NDUFV2</i>
AC	brown	<i>NFAM1</i>
AC	blue	<i>NFATC3</i>
AC	brown	<i>NFE2</i>
AC	turquoise	<i>NHP2</i>
AC	turquoise	<i>NHP2L1</i>
AC	brown	<i>NINJ1</i>
AC	blue	<i>NIPAL2</i>
AC	grey	<i>NIPSNAP1</i>
AC	turquoise	<i>NKG7</i>
AC	turquoise	<i>NKIRAS2</i>
AC	brown	<i>NLRP1</i>
AC	turquoise	<i>NME2</i>
AC	turquoise	<i>NME3</i>
AC	turquoise	<i>NMT1</i>
AC	turquoise	<i>NOB1</i>
AC	turquoise	<i>NOLC1</i>
AC	brown	<i>NOP10</i>
AC	turquoise	<i>NOSIP</i>

AC yellow *NPC2*  
AC brown *NQO2*  
AC grey *NR1D1*  
AC blue *NR3C2*  
AC turquoise *NSA2*  
AC turquoise *NUDCD3*  
AC brown *NUMB*  
AC grey *NUP210*  
AC turquoise *NUP85*  
AC yellow *OAS1*  
AC yellow *OASL*  
AC grey *OAZ1*  
AC brown *OAZ2*  
AC turquoise *OCIAD2*  
AC blue *OLIG1*  
AC grey *OPTN*  
AC grey *ORMDL3*  
AC grey *OSBP2*  
AC brown *OSM*  
AC turquoise *OST4*  
AC turquoise *P4HB*  
AC turquoise *PABPC1*  
AC turquoise *PARK7*  
AC turquoise *PARP8*  
AC turquoise *PCED1B*  
AC blue *PCYT2*  
AC blue *PDE5A*  
AC brown *PDLIM7*  
AC grey *PDZK1IP1*  
AC grey *PEA15*  
AC turquoise *PEBP1*  
AC turquoise *PEF1*  
AC turquoise *PET100*  
AC grey *PF4*  
AC grey *PF4V1*  
AC turquoise *PFDN5*  
AC turquoise *PFN1*  
AC brown *PGLYRP1*  
AC grey *PHACTR4*  
AC blue *PHC1*  
AC brown *PHF21A*  
AC blue *PHLDB2*  
AC grey *PI3*  
AC brown *PIK3CD*  
AC blue *PIK3CG*  
AC turquoise *PIK3IP1*  
AC brown *PILRA*  
AC turquoise *PKM*  
AC brown *PLBD1*

AC turquoise *PLCB2*  
AC turquoise *PLD3*  
AC blue *PLEKHG2*  
AC blue *PLEKHG5*  
AC brown *PLP2*  
AC blue *PLS1*  
AC yellow *PLSCR1*  
AC turquoise *PLSCR3*  
AC yellow *PML*  
AC turquoise *POLR2I*  
AC turquoise *POLR2L*  
AC turquoise *POU2AF1*  
AC grey *POU2F2*  
AC grey *PPBP*  
AC turquoise *PPDPF*  
AC turquoise *PPIA*  
AC turquoise *PPIB*  
AC brown *PPP1R18*  
AC blue *PPP2R5A*  
AC turquoise *PRAF2*  
AC brown *PRAM1*  
AC blue *PRDM4*  
AC grey *PRDX6*  
AC grey *PRKCSH*  
AC blue *PRMT3*  
AC brown *PROK2*  
AC blue *PRPF8*  
AC brown *PRR13*  
AC brown *PRR14*  
AC blue *PRRT3*  
AC grey *PRSS23*  
AC turquoise *PSAP*  
AC brown *PSENEN*  
AC yellow *PSMB10*  
AC brown *PSMB3*  
AC turquoise *PSMB5*  
AC yellow *PSMB8*  
AC yellow *PSMB9*  
AC yellow *PSME1*  
AC yellow *PSME2*  
AC grey *PSMF1*  
AC brown *PTAFR*  
AC turquoise *PTBP1*  
AC turquoise *PTGDS*  
AC grey *PTGS1*  
AC turquoise *PTMA*  
AC brown *PTPRC*  
AC turquoise *PTPRCAP*  
AC turquoise *PTTG1*

AC	brown	<i>PXN</i>
AC	brown	<i>PYCARD</i>
AC	blue	<i>PYGO2</i>
AC	turquoise	<i>QARS</i>
AC	brown	<i>QPCT</i>
AC	grey	<i>QRICH1</i>
AC	yellow	<i>RAB24</i>
AC	brown	<i>RAB5C</i>
AC	brown	<i>RAB7A</i>
AC	brown	<i>RABAC1</i>
AC	brown	<i>RAC2</i>
AC	grey	<i>RALY</i>
AC	grey	<i>RAP1GAP</i>
AC	grey	<i>RARA</i>
AC	turquoise	<i>RARRES3</i>
AC	brown	<i>RASGRP4</i>
AC	brown	<i>RAVER1</i>
AC	turquoise	<i>RBM8A</i>
AC	brown	<i>RBP7</i>
AC	turquoise	<i>RCSD1</i>
AC	brown	<i>RELA</i>
AC	blue	<i>REPS1</i>
AC	grey	<i>RETN</i>
AC	grey	<i>RGS10</i>
AC	brown	<i>RGS2</i>
AC	brown	<i>RHOA</i>
AC	grey	<i>RHOB</i>
AC	turquoise	<i>RHOF</i>
AC	brown	<i>RHOG</i>
AC	grey	<i>RNASE6</i>
AC	brown	<i>RNASET2</i>
AC	blue	<i>RNA_SPIKE_ERCC-00040</i>
AC	blue	<i>RNA_SPIKE_ERCC-00067</i>
AC	grey	<i>RNF145</i>
AC	turquoise	<i>RNF181</i>
AC	turquoise	<i>RNF26</i>
AC	turquoise	<i>ROMO1</i>
AC	brown	<i>ROPN1L</i>
AC	turquoise	<i>RPL10</i>
AC	turquoise	<i>RPL10A</i>
AC	turquoise	<i>RPL11</i>
AC	turquoise	<i>RPL12</i>
AC	turquoise	<i>RPL13</i>
AC	turquoise	<i>RPL13A</i>
AC	turquoise	<i>RPL14</i>
AC	turquoise	<i>RPL15</i>
AC	turquoise	<i>RPL18</i>
AC	turquoise	<i>RPL18A</i>
AC	turquoise	<i>RPL19</i>

AC turquoise *RPL21*  
AC turquoise *RPL22*  
AC turquoise *RPL23*  
AC turquoise *RPL23A*  
AC turquoise *RPL24*  
AC turquoise *RPL26*  
AC turquoise *RPL27A*  
AC turquoise *RPL28*  
AC turquoise *RPL29*  
AC turquoise *RPL3*  
AC turquoise *RPL30*  
AC turquoise *RPL31*  
AC turquoise *RPL32*  
AC turquoise *RPL34*  
AC turquoise *RPL35*  
AC turquoise *RPL35A*  
AC turquoise *RPL36*  
AC turquoise *RPL36AL*  
AC turquoise *RPL37*  
AC turquoise *RPL37A*  
AC turquoise *RPL38*  
AC turquoise *RPL39*  
AC turquoise *RPL4*  
AC turquoise *RPL41*  
AC turquoise *RPL5*  
AC turquoise *RPL6*  
AC turquoise *RPL7*  
AC turquoise *RPL7A*  
AC turquoise *RPL8*  
AC turquoise *RPL9*  
AC turquoise *RPLP0*  
AC turquoise *RPLP1*  
AC turquoise *RPLP2*  
AC turquoise *RPS11*  
AC turquoise *RPS12*  
AC turquoise *RPS13*  
AC turquoise *RPS14*  
AC turquoise *RPS15*  
AC turquoise *RPS15A*  
AC turquoise *RPS16*  
AC turquoise *RPS18*  
AC turquoise *RPS19*  
AC turquoise *RPS2*  
AC turquoise *RPS20*  
AC turquoise *RPS21*  
AC turquoise *RPS23*  
AC turquoise *RPS24*  
AC turquoise *RPS25*  
AC turquoise *RPS26*

AC turquoise *RPS27*  
AC turquoise *RPS27A*  
AC turquoise *RPS27L*  
AC turquoise *RPS28*  
AC turquoise *RPS29*  
AC turquoise *RPS3*  
AC turquoise *RPS3A*  
AC turquoise *RPS4X*  
AC turquoise *RPS4Y1*  
AC turquoise *RPS5*  
AC turquoise *RPS6*  
AC turquoise *RPS7*  
AC turquoise *RPS8*  
AC turquoise *RPS9*  
AC turquoise *RPSA*  
AC yellow *RSAD2*  
AC brown *RSBN1L*  
AC blue *RSPH6A*  
AC brown *RTN3*  
AC yellow *RTP4*  
AC blue *RUNX3*  
AC blue *RXRB*  
AC turquoise *S100A10*  
AC brown *S100A11*  
AC brown *S100A12*  
AC turquoise *S100A4*  
AC brown *S100A6*  
AC brown *S100A8*  
AC brown *S100A9*  
AC turquoise *S100B*  
AC brown *S100P*  
AC turquoise *S1PR1*  
AC brown *SAP25*  
AC brown *SASH3*  
AC yellow *SAT1*  
AC blue *SAV1*  
AC turquoise *SCAMP2*  
AC blue *SCGB3A1*  
AC yellow *SCO2*  
AC turquoise *SEC61B*  
AC turquoise *SEC61G*  
AC brown *SEC62*  
AC brown *SECTM1*  
AC grey *SELENBP1*  
AC brown *SELL*  
AC brown *SELPLG*  
AC grey *SEMA4A*  
AC blue *SENP3*  
AC turquoise *SEPT6*

AC	grey	<i>SEPT9</i>
AC	turquoise	<i>SEPW1</i>
AC	grey	<i>SERF2</i>
AC	turquoise	<i>SERP1</i>
AC	brown	<i>SERPINA1</i>
AC	brown	<i>SERPINB1</i>
AC	yellow	<i>SERPING1</i>
AC	grey	<i>SF1</i>
AC	grey	<i>SF3A1</i>
AC	grey	<i>SF3A2</i>
AC	grey	<i>SF3B2</i>
AC	brown	<i>SF3B6</i>
AC	turquoise	<i>SFPQ</i>
AC	grey	<i>SH2D2A</i>
AC	brown	<i>SH3BGRL3</i>
AC	yellow	<i>SHISA5</i>
AC	turquoise	<i>SHMT2</i>
AC	brown	<i>SIRPB2</i>
AC	brown	<i>SLC11A1</i>
AC	blue	<i>SLC25A15</i>
AC	turquoise	<i>SLC25A3</i>
AC	grey	<i>SLC25A37</i>
AC	grey	<i>SLC25A39</i>
AC	blue	<i>SLC29A1</i>
AC	turquoise	<i>SLC35A4</i>
AC	blue	<i>SLC38A7</i>
AC	brown	<i>SLC44A2</i>
AC	blue	<i>SLC8A1</i>
AC	brown	<i>SLPI</i>
AC	brown	<i>SMAP2</i>
AC	blue	<i>SMARCC1</i>
AC	turquoise	<i>SMDT1</i>
AC	grey	<i>SMIM1</i>
AC	turquoise	<i>SMIM10L1</i>
AC	blue	<i>SMPD1</i>
AC	turquoise	<i>SNAI3</i>
AC	grey	<i>SNCA</i>
AC	turquoise	<i>SNRPB</i>
AC	turquoise	<i>SNRPD2</i>
AC	turquoise	<i>SNRPD3</i>
AC	turquoise	<i>SOD1</i>
AC	brown	<i>SOD2</i>
AC	turquoise	<i>SOX4</i>
AC	yellow	<i>SP110</i>
AC	grey	<i>SPDYE1</i>
AC	brown	<i>SPI1</i>
AC	turquoise	<i>SPIB</i>
AC	turquoise	<i>SPN</i>
AC	blue	<i>SPOCK3</i>

AC brown SRGN  
AC turquoise SRP14  
AC grey SRRM1  
AC turquoise SSR2  
AC turquoise SSR4  
AC grey ST6GAL1  
AC grey ST6GALNAC6  
AC blue STARD9  
AC yellow STAT2  
AC turquoise STMN1  
AC blue STRN3  
AC turquoise SUB1  
AC turquoise SUMO2  
AC grey SUSD6  
AC blue SYNGR4  
AC grey SYVN1  
AC turquoise SZRD1  
AC grey TAGAP  
AC brown TAGLN2  
AC brown TALDO1  
AC grey TAPBP  
AC turquoise TAPBPL  
AC grey TARBP2  
AC grey TBC1D13  
AC turquoise TBCA  
AC grey TBL3  
AC grey TCEB2  
AC blue TCERG1  
AC turquoise TCF25  
AC turquoise TCF7  
AC brown TCIRG1  
AC turquoise TCL1A  
AC turquoise TECR  
AC turquoise TESPA1  
AC grey TFE3  
AC brown TGFB1  
AC blue TGFBR2  
AC brown THEMIS2  
AC turquoise TICAM1  
AC blue TIGD4  
AC turquoise TIMM10  
AC turquoise TIMM13  
AC brown TIMP1  
AC blue TIPARP  
AC turquoise TMA7  
AC brown TMC4  
AC turquoise TMEM109  
AC brown TMEM120A  
AC yellow TMEM140

AC turquoise *TMEM176A*  
AC turquoise *TMEM176B*  
AC blue *TMEM198*  
AC turquoise *TMEM219*  
AC turquoise *TMEM256*  
AC turquoise *TMEM258*  
AC blue *TMEM8A*  
AC turquoise *TMSB10*  
AC turquoise *TMSB4X*  
AC turquoise *TMUB1*  
AC yellow *TNFAIP6*  
AC brown *TNFRSF10C*  
AC blue *TNFRSF13C*  
AC brown *TNFRSF1A*  
AC brown *TNFRSF1B*  
AC turquoise *TNFSF13*  
AC brown *TNFSF13B*  
AC grey *TNIP1*  
AC grey *TOB1*  
AC turquoise *TOMM6*  
AC turquoise *TOMM7*  
AC turquoise *TPI1*  
AC turquoise *TPT1*  
AC turquoise *TRAF3IP3*  
AC grey *TRAP1*  
AC turquoise *TRAPP5*  
AC brown *TREM1*  
AC yellow *TREX1*  
AC brown *TRIM27*  
AC blue *TRMT44*  
AC brown *TSC22D3*  
AC brown *TSC22D4*  
AC brown *TSEN34*  
AC blue *TSHZ1*  
AC brown *TSPO*  
AC turquoise *TSTD1*  
AC brown *TUBA1A*  
AC turquoise *TUBA1B*  
AC grey *TUBB2A*  
AC brown *TXN*  
AC yellow *TYMP*  
AC brown *TYROBP*  
AC turquoise *U2AF2*  
AC grey *UBA52*  
AC grey *UBALD1*  
AC grey *UBASH3A*  
AC grey *UBB*  
AC brown *UBC*  
AC turquoise *UBE2C*

AC	brown	<i>UBE2D1</i>
AC	turquoise	<i>UBE2D2</i>
AC	brown	<i>UBE2D3</i>
AC	yellow	<i>UBE2L6</i>
AC	brown	<i>UBL5</i>
AC	turquoise	<i>UCP2</i>
AC	turquoise	<i>UQCR10</i>
AC	turquoise	<i>UQCR11</i>
AC	turquoise	<i>UQCRB</i>
AC	turquoise	<i>UQCRH</i>
AC	turquoise	<i>UQCRRQ</i>
AC	turquoise	<i>USMG5</i>
AC	turquoise	<i>VAMP2</i>
AC	yellow	<i>VAMP5</i>
AC	turquoise	<i>VAMP8</i>
AC	brown	<i>VASP</i>
AC	turquoise	<i>VDAC2</i>
AC	grey	<i>VDR</i>
AC	brown	<i>VIM</i>
AC	turquoise	<i>VPREB3</i>
AC	turquoise	<i>VPS28</i>
AC	brown	<i>VPS37B</i>
AC	grey	<i>VSTM1</i>
AC	yellow	<i>WARS</i>
AC	brown	<i>WAS</i>
AC	brown	<i>WASF2</i>
AC	blue	<i>WBP1L</i>
AC	brown	<i>WBP2</i>
AC	turquoise	<i>WDR83OS</i>
AC	brown	<i>WIPF1</i>
AC	brown	<i>WWP2</i>
AC	turquoise	<i>YWHAB</i>
AC	turquoise	<i>ZAP70</i>
AC	blue	<i>ZBTB10</i>
AC	blue	<i>ZBTB16</i>
AC	blue	<i>ZCCHC3</i>
AC	brown	<i>ZFP36</i>
AC	brown	<i>ZFP36L1</i>
AC	grey	<i>ZFP36L2</i>
AC	grey	<i>ZFR</i>
AC	blue	<i>ZIK1</i>
AC	grey	<i>ZNF260</i>
AC	blue	<i>ZNF304</i>
AC	grey	<i>ZNF384</i>
AC	grey	<i>ZNF385A</i>
AC	grey	<i>ZNF414</i>
AC	blue	<i>ZNF497</i>
AC	brown	<i>ZNF592</i>
AC	blue	<i>ZNF614</i>

AC	blue	ZNF619
AC	blue	ZNF629
AC	blue	ZNF639
AC	blue	ZNF646
AC	turquoise	ZNF706
AC	turquoise	ZNF830
AC	blue	ZNF835
AC	blue	ZNF843
AC	turquoise	ZNHIT1
AC	brown	ZYX
AC	blue	AACS
AC	blue	ABCB4
AC	blue	ABCB6
AC	blue	ABCD3
AC	blue	ABCE1
AC	turquoise	ABHD14B
AC	brown	ABTB1
AC	turquoise	ACADVL
AC	brown	ACAP1
AC	grey	ACKR1
AC	blue	ACLY
AC	turquoise	ACO2
AC	turquoise	ACOT13
AC	turquoise	ACOT8
AC	grey	ACP1
AC	grey	ACSL5
AC	brown	ACTN1
AC	turquoise	ACTR1A
AC	brown	ACTR3
AC	blue	ADAM15
AC	brown	ADAM8
AC	grey	ADAP1
AC	grey	ADAR
AC	brown	ADGRE3
AC	turquoise	ADK
AC	grey	ADM5
AC	grey	ADORA2A
AC	grey	AFF1
AC	turquoise	AFF3
AC	blue	AFF4
AC	blue	AGAP3
AC	blue	AGRP
AC	brown	AGTPBP1
AC	yellow	AIM2
AC	turquoise	AIMP2
AC	turquoise	AIP
AC	grey	AK1
AC	turquoise	AK2
AC	brown	AKIRIN2

AC turquoise *AKR1A1*  
AC turquoise *AKR1B1*  
AC grey *AKT1S1*  
AC brown *ALDH2*  
AC blue *ALDH6A1*  
AC grey *ALG12*  
AC blue *ALKBH5*  
AC blue *ALOX15*  
AC brown *ALOX5*  
AC brown *ALPK1*  
AC brown *AMICA1*  
AC turquoise *ANAPC15*  
AC turquoise *ANAPC16*  
AC grey *ANK1*  
AC blue *ANKMY2*  
AC yellow *ANKRD22*  
AC blue *ANKRD23*  
AC blue *ANKRD60*  
AC grey *ANKZF1*  
AC grey *ANO6*  
AC blue *ANO9*  
AC turquoise *ANP32B*  
AC turquoise *ANXA2*  
AC turquoise *ANXA2R*  
AC turquoise *ANXA5*  
AC turquoise *ANXA6*  
AC turquoise *AOAH*  
AC grey *AP2A2*  
AC turquoise *AP2M1*  
AC turquoise *AP2S1*  
AC blue *AP4E1*  
AC grey *AP5Z1*  
AC brown *APBB1IP*  
AC turquoise *APEX1*  
AC brown *APH1B*  
AC turquoise *APOA1BP*  
AC blue *APOBEC3B*  
AC grey *APOBEC3H*  
AC yellow *APOL1*  
AC yellow *APOL6*  
AC blue *AREL1*  
AC brown *ARF1*  
AC turquoise *ARF4*  
AC brown *ARF5*  
AC grey *ARFGAP2*  
AC brown *ARG1*  
AC turquoise *ARGLU1*  
AC blue *ARHGAP19*  
AC brown *ARHGEF1*

AC	brown	<i>ARHGEF2</i>
AC	blue	<i>ARHGEF28</i>
AC	turquoise	<i>ARHGEF3</i>
AC	grey	<i>ARID1A</i>
AC	brown	<i>ARID5A</i>
AC	brown	<i>ARL11</i>
AC	turquoise	<i>ARL2</i>
AC	turquoise	<i>ARL6IP4</i>
AC	brown	<i>ARPC3</i>
AC	brown	<i>ARPC5</i>
AC	blue	<i>ARPP21</i>
AC	brown	<i>ARSA</i>
AC	brown	<i>ASAHI</i>
AC	brown	<i>ASB8</i>
AC	grey	<i>ASCC2</i>
AC	turquoise	<i>ASGR2</i>
AC	turquoise	<i>ASNA1</i>
AC	brown	<i>ASPH</i>
AC	blue	<i>ASZ1</i>
AC	blue	<i>ATAD3C</i>
AC	blue	<i>ATF3</i>
AC	turquoise	<i>ATF5</i>
AC	turquoise	<i>ATF6B</i>
AC	grey	<i>ATF7IP2</i>
AC	blue	<i>ATG14</i>
AC	brown	<i>ATG16L2</i>
AC	blue	<i>ATG2B</i>
AC	yellow	<i>ATG3</i>
AC	grey	<i>ATG9A</i>
AC	turquoise	<i>ATOX1</i>
AC	blue	<i>ATP2A3</i>
AC	turquoise	<i>ATP5A1</i>
AC	turquoise	<i>ATP5B</i>
AC	turquoise	<i>ATP5C1</i>
AC	turquoise	<i>ATP5F1</i>
AC	turquoise	<i>ATP5H</i>
AC	turquoise	<i>ATP5J</i>
AC	grey	<i>ATP6AP1</i>
AC	brown	<i>ATP6V0D1</i>
AC	blue	<i>ATP8B2</i>
AC	blue	<i>ATP8B3</i>
AC	turquoise	<i>ATPIF1</i>
AC	blue	<i>ATR</i>
AC	turquoise	<i>ATRAID</i>
AC	grey	<i>ATXN7L3B</i>
AC	turquoise	<i>AUP1</i>
AC	turquoise	<i>AURKAIP1</i>
AC	blue	<i>B3GNT7</i>
AC	grey	<i>B4GALT7</i>

AC brown *B9D2*  
AC blue *BAG3*  
AC turquoise *BANF1*  
AC brown *BASP1*  
AC turquoise *BATF*  
AC blue *BATF2*  
AC grey *BBX*  
AC turquoise *BCKDHA*  
AC blue *BCL3*  
AC blue *BEST3*  
AC turquoise *BET1L*  
AC turquoise *BEX2*  
AC turquoise *BIRC3*  
AC grey *BLMH*  
AC turquoise *BLOC1S2*  
AC turquoise *BLVRA*  
AC blue *BMPER*  
AC blue *BMS1*  
AC grey *BNIP3L*  
AC blue *BNIPL*  
AC grey *BPI*  
AC grey *BRD8*  
AC brown *BST1*  
AC turquoise *BST2*  
AC brown *BTG2*  
AC grey *BTLA*  
AC blue *BTN2A2*  
AC turquoise *BTN3A2*  
AC grey *BTN3A3*  
AC brown *BTNL8*  
AC turquoise *BUB3*  
AC blue *C10orf10*  
AC turquoise *C10orf32*  
AC blue *C10orf82*  
AC turquoise *C11orf21*  
AC turquoise *C11orf24*  
AC grey *C11orf54*  
AC turquoise *C11orf71*  
AC turquoise *C12orf75*  
AC blue *C12orf77*  
AC turquoise *C14orf119*  
AC turquoise *C14orf166*  
AC blue *C14orf28*  
AC blue *C14orf80*  
AC blue *C15orf48*  
AC turquoise *C15orf61*  
AC turquoise *C16orf13*  
AC turquoise *C17orf49*  
AC brown *C17orf62*

AC turquoise C17orf89  
AC brown C19orf35  
AC turquoise C19orf60  
AC turquoise C1QA  
AC turquoise C1QBP  
AC turquoise C1QC  
AC brown C1RL  
AC blue C1orf159  
AC turquoise C1orf43  
AC brown C20orf24  
AC turquoise C20orf27  
AC blue C21orf62  
AC blue C2CD3  
AC grey C2orf69  
AC yellow C3AR1  
AC grey C4orf46  
AC turquoise C6orf1  
AC turquoise C6orf226  
AC turquoise C8orf59  
AC turquoise C9orf114  
AC turquoise C9orf142  
AC grey C9orf85  
AC turquoise C9orf89  
AC grey CA1  
AC blue CA13  
AC grey CA2  
AC brown CA4  
AC blue CABIN1  
AC blue CACTIN  
AC turquoise CACYBP  
AC brown CALM2  
AC grey CALM3  
AC turquoise CALML4  
AC turquoise CALR  
AC grey CAMKK2  
AC brown CANT1  
AC turquoise CAPG  
AC brown CAPZB  
AC blue CARD11  
AC yellow CARD17  
AC grey CARD8  
AC grey CASC3  
AC yellow CASP1  
AC yellow CASP5  
AC brown CASP8  
AC brown CASS4  
AC grey CAT  
AC grey CBLL1  
AC turquoise CBR1

AC turquoise *CCDC101*  
AC turquoise *CCDC109B*  
AC blue *CCDC112*  
AC blue *CCDC154*  
AC turquoise *CCDC167*  
AC grey *CCDC176*  
AC grey *CCDC25*  
AC blue *CCDC3*  
AC turquoise *CCDC53*  
AC blue *CCDC6*  
AC blue *CCDC71L*  
AC blue *CCDC83*  
AC blue *CCL2*  
AC blue *CCL28*  
AC grey *CCL3*  
AC turquoise *CCL4*  
AC blue *CCNA1*  
AC grey *CCNB1*  
AC brown *CCND3*  
AC brown *CCNDBP1*  
AC blue *CCNG2*  
AC brown *CCNI*  
AC brown *CCNK*  
AC yellow *CCNL1*  
AC brown *CCR1*  
AC turquoise *CCT4*  
AC yellow *CD164*  
AC brown *CD177*  
AC turquoise *CD19*  
AC grey *CD24*  
AC turquoise *CD247*  
AC grey *CD274*  
AC brown *CD300A*  
AC turquoise *CD320*  
AC turquoise *CD33*  
AC turquoise *CD38*  
AC turquoise *CD3G*  
AC yellow *CD59*  
AC turquoise *CD6*  
AC grey *CD69*  
AC brown *CD82*  
AC grey *CD83*  
AC turquoise *CD8B*  
AC brown *CDC123*  
AC grey *CDC20*  
AC blue *CDC20B*  
AC grey *CDC25B*  
AC brown *CDC42*  
AC brown *CDC42EP2*

AC	brown	<i>CDC42EP3</i>
AC	brown	<i>CDC42SE1</i>
AC	blue	<i>CDCA5</i>
AC	blue	<i>CDH7</i>
AC	blue	<i>CDK1</i>
AC	blue	<i>CDK12</i>
AC	blue	<i>CDK3</i>
AC	turquoise	<i>CDKN1A</i>
AC	grey	<i>CDKN1C</i>
AC	turquoise	<i>CEACAM21</i>
AC	brown	<i>CEACAM4</i>
AC	brown	<i>CEACAM7</i>
AC	grey	<i>CEBPB</i>
AC	brown	<i>CEBDP</i>
AC	turquoise	<i>CEBPG</i>
AC	turquoise	<i>CECR1</i>
AC	blue	<i>CEP295</i>
AC	grey	<i>CES1</i>
AC	blue	<i>CFAP126</i>
AC	brown	<i>CFLAR</i>
AC	brown	<i>CFP</i>
AC	turquoise	<i>CHCHD1</i>
AC	turquoise	<i>CHCHD5</i>
AC	brown	<i>CHERP</i>
AC	turquoise	<i>CHI3L2</i>
AC	brown	<i>CHIC2</i>
AC	brown	<i>CHMP3</i>
AC	blue	<i>CHMP4A</i>
AC	yellow	<i>CHMP5</i>
AC	grey	<i>CHP1</i>
AC	blue	<i>CHPF2</i>
AC	grey	<i>CHRM3</i>
AC	brown	<i>CHST15</i>
AC	blue	<i>CHURC1-FNTB</i>
AC	turquoise	<i>CIB1</i>
AC	grey	<i>CIITA</i>
AC	yellow	<i>CIR1</i>
AC	turquoise	<i>CIRBP</i>
AC	turquoise	<i>CISD3</i>
AC	turquoise	<i>CISH</i>
AC	blue	<i>CKAP5</i>
AC	blue	<i>CLCN1</i>
AC	grey	<i>CLEC10A</i>
AC	grey	<i>CLEC12A</i>
AC	blue	<i>CLEC17A</i>
AC	grey	<i>CLEC1B</i>
AC	turquoise	<i>CLEC4A</i>
AC	brown	<i>CLEC4D</i>
AC	grey	<i>CLEC5A</i>

AC yellow CLEC7A  
AC blue CLEC9A  
AC blue CLIP3  
AC blue CLN6  
AC turquoise CLTA  
AC turquoise CLU  
AC blue CLUAP1  
AC blue CMBL  
AC grey CMTM5  
AC brown CMTM6  
AC brown CNIH4  
AC blue CNKSR1  
AC grey CNPPD1  
AC turquoise CNPY2  
AC turquoise CNPY3  
AC blue CNTNAP3  
AC turquoise COA3  
AC turquoise COA4  
AC turquoise COA6  
AC blue COCH  
AC turquoise COG3  
AC turquoise COMMD1  
AC turquoise COMMD4  
AC turquoise COMTD1  
AC turquoise COPE  
AC turquoise COPS5  
AC turquoise COPZ1  
AC turquoise COQ4  
AC turquoise COX14  
AC turquoise COX16  
AC turquoise COX17  
AC turquoise COX5A  
AC blue COX7A1  
AC turquoise COX7A2L  
AC blue CPT1B  
AC turquoise CPVL  
AC grey CREBRF  
AC yellow CREM  
AC blue CRISP2  
AC brown CRISPLD2  
AC grey CRKL  
AC grey CRTIC3  
AC blue CSDC2  
AC blue CSE1L  
AC grey CSF1R  
AC grey CSNK1A1  
AC brown CSNK1D  
AC turquoise CSRP1  
AC blue CTC1

AC turquoise *CTSA*  
AC brown *CTSB*  
AC turquoise *CTSC*  
AC turquoise *CTSH*  
AC turquoise *CUEDC2*  
AC grey *CUL4A*  
AC brown *CWC25*  
AC brown *CXCL1*  
AC blue *CXCL10*  
AC brown *CXCL16*  
AC blue *CXCL17*  
AC turquoise *CYBB*  
AC turquoise *CYCS*  
AC blue *CYP11A1*  
AC blue *CYP2R1*  
AC blue *CYP4F22*  
AC brown *CYTIP*  
AC brown *DAPP1*  
AC turquoise *DARS*  
AC grey *DAXX*  
AC grey *DCLRE1B*  
AC brown *DCP2*  
AC grey *DCTN1*  
AC turquoise *DCTN2*  
AC turquoise *DCTN3*  
AC turquoise *DCTPP1*  
AC turquoise *DCXR*  
AC turquoise *DDA1*  
AC brown *DDIT3*  
AC grey *DDIT4*  
AC blue *DDX11*  
AC grey *DDX17*  
AC turquoise *DDX39A*  
AC turquoise *DDX39B*  
AC turquoise *DDX5*  
AC turquoise *DDX50*  
AC grey *DDX56*  
AC yellow *DDX58*  
AC blue *DDX60*  
AC yellow *DDX60L*  
AC brown *DEDD2*  
AC turquoise *DEF6*  
AC turquoise *DEF8*  
AC grey *DEFA4*  
AC turquoise *DENND1C*  
AC blue *DEPDC4*  
AC turquoise *DESI1*  
AC blue *DFFB*  
AC blue *DFNB31*

AC	brown	<i>DGAT2</i>
AC	blue	<i>DGAT2L6</i>
AC	brown	<i>DGCR2</i>
AC	turquoise	<i>DGCR6L</i>
AC	turquoise	<i>DGKA</i>
AC	turquoise	<i>DGUOK</i>
AC	blue	<i>DHRS11</i>
AC	brown	<i>DHRS7</i>
AC	brown	<i>DHRS9</i>
AC	blue	<i>DHX8</i>
AC	blue	<i>DISC1</i>
AC	grey	<i>DLST</i>
AC	blue	<i>DMD</i>
AC	blue	<i>DMRT1</i>
AC	grey	<i>DMTN</i>
AC	blue	<i>DNAAF2</i>
AC	yellow	<i>DNAJA1</i>
AC	turquoise	<i>DNAJB11</i>
AC	grey	<i>DNAJC1</i>
AC	turquoise	<i>DNAJC19</i>
AC	turquoise	<i>DNAJC4</i>
AC	grey	<i>DNASE1L1</i>
AC	grey	<i>DNASE2</i>
AC	blue	<i>DNM2</i>
AC	turquoise	<i>DNPH1</i>
AC	brown	<i>DNTTIP1</i>
AC	turquoise	<i>DOK2</i>
AC	brown	<i>DOK3</i>
AC	grey	<i>DOLPP1</i>
AC	turquoise	<i>DPEP2</i>
AC	brown	<i>DPF2</i>
AC	brown	<i>DPH3</i>
AC	turquoise	<i>DPM3</i>
AC	turquoise	<i>DPY30</i>
AC	brown	<i>DR1</i>
AC	turquoise	<i>DRAM2</i>
AC	grey	<i>DROSHA</i>
AC	grey	<i>DUS2</i>
AC	brown	<i>DUSP1</i>
AC	turquoise	<i>DUSP23</i>
AC	turquoise	<i>DUSP3</i>
AC	grey	<i>DUSP6</i>
AC	turquoise	<i>DUT</i>
AC	turquoise	<i>DYNC1I2</i>
AC	turquoise	<i>EBP</i>
AC	turquoise	<i>ECH1</i>
AC	blue	<i>EDEM1</i>
AC	turquoise	<i>EEF1E1</i>
AC	blue	<i>EFCAB11</i>

AC	blue	<i>EFCAB5</i>
AC	brown	<i>EGLN2</i>
AC	blue	<i>EGR1</i>
AC	grey	<i>EHMT1</i>
AC	grey	<i>EIF2AK1</i>
AC	yellow	<i>EIF2AK2</i>
AC	grey	<i>EIF2B5</i>
AC	grey	<i>EIF2D</i>
AC	turquoise	<i>EIF2S2</i>
AC	blue	<i>EIF3A</i>
AC	turquoise	<i>EIF3D</i>
AC	turquoise	<i>EIF3I</i>
AC	turquoise	<i>EIF3L</i>
AC	turquoise	<i>EIF4A1</i>
AC	turquoise	<i>EIF4E</i>
AC	turquoise	<i>EIF4E2</i>
AC	turquoise	<i>EIF4EBP1</i>
AC	brown	<i>EIF4EBP2</i>
AC	turquoise	<i>EIF4EBP3</i>
AC	turquoise	<i>EIF5</i>
AC	turquoise	<i>EIF5A</i>
AC	turquoise	<i>EIF6</i>
AC	grey	<i>ELAC2</i>
AC	grey	<i>ELANE</i>
AC	grey	<i>ELK3</i>
AC	blue	<i>ELL2</i>
AC	blue	<i>ELMO3</i>
AC	turquoise	<i>ELOVL1</i>
AC	brown	<i>ELOVL5</i>
AC	turquoise	<i>ELP6</i>
AC	brown	<i>EMB</i>
AC	turquoise	<i>EMC3</i>
AC	turquoise	<i>EMC4</i>
AC	turquoise	<i>EMC6</i>
AC	turquoise	<i>EMG1</i>
AC	blue	<i>EMID1</i>
AC	grey	<i>EML4</i>
AC	turquoise	<i>ENO1</i>
AC	turquoise	<i>ENY2</i>
AC	blue	<i>EOMES</i>
AC	grey	<i>EPB42</i>
AC	turquoise	<i>EPHX2</i>
AC	turquoise	<i>ERCC1</i>
AC	blue	<i>ERCC8</i>
AC	brown	<i>ERGIC1</i>
AC	turquoise	<i>ERGIC3</i>
AC	turquoise	<i>ERICH1</i>
AC	blue	<i>ERN1</i>
AC	grey	<i>ERP44</i>

AC	brown	<i>ERV3-1</i>
AC	turquoise	<i>ETFB</i>
AC	turquoise	<i>ETHE1</i>
AC	yellow	<i>ETV7</i>
AC	brown	<i>EVI2A</i>
AC	brown	<i>EVI2B</i>
AC	turquoise	<i>EXOC7</i>
AC	turquoise	<i>EXOSC1</i>
AC	brown	<i>EXOSC4</i>
AC	brown	<i>F11R</i>
AC	grey	<i>F13A1</i>
AC	grey	<i>F2R</i>
AC	turquoise	<i>FAAP20</i>
AC	grey	<i>FAM102A</i>
AC	grey	<i>FAM104A</i>
AC	grey	<i>FAM122B</i>
AC	brown	<i>FAM129A</i>
AC	grey	<i>FAM177A1</i>
AC	blue	<i>FAM189B</i>
AC	turquoise	<i>FAM195A</i>
AC	turquoise	<i>FAM195B</i>
AC	brown	<i>FAM200B</i>
AC	blue	<i>FAM20A</i>
AC	brown	<i>FAM212B</i>
AC	blue	<i>FAM229A</i>
AC	grey	<i>FAM26F</i>
AC	turquoise	<i>FAM32A</i>
AC	grey	<i>FAM3B</i>
AC	brown	<i>FAM45A</i>
AC	grey	<i>FAM46A</i>
AC	grey	<i>FAM46C</i>
AC	brown	<i>FAM53C</i>
AC	brown	<i>FAM63A</i>
AC	turquoise	<i>FAM65A</i>
AC	brown	<i>FAM65B</i>
AC	brown	<i>FAM8A1</i>
AC	brown	<i>FAM90A1</i>
AC	blue	<i>FAR1</i>
AC	yellow	<i>FAS</i>
AC	blue	<i>FBXL6</i>
AC	blue	<i>FBXO18</i>
AC	blue	<i>FBXO24</i>
AC	grey	<i>FBXO44</i>
AC	yellow	<i>FBXO6</i>
AC	grey	<i>FBXO9</i>
AC	blue	<i>FBXW2</i>
AC	grey	<i>FBXW5</i>
AC	brown	<i>FCAR</i>
AC	yellow	<i>FCGR1A</i>

AC	brown	<i>FCGR3B</i>
AC	grey	<i>FDFT1</i>
AC	grey	<i>FDX1</i>
AC	grey	<i>FECH</i>
AC	brown	<i>FES</i>
AC	grey	<i>FFAR3</i>
AC	grey	<i>FGD3</i>
AC	grey	<i>FGFR1OP2</i>
AC	grey	<i>FIS1</i>
AC	turquoise	<i>FKBP11</i>
AC	turquoise	<i>FKBP15</i>
AC	turquoise	<i>FKBP2</i>
AC	brown	<i>FKBP5</i>
AC	grey	<i>FLCN</i>
AC	grey	<i>FLI1</i>
AC	turquoise	<i>FLII</i>
AC	blue	<i>FLNB</i>
AC	brown	<i>FLOT1</i>
AC	turquoise	<i>FLT3LG</i>
AC	brown	<i>FLVCR2</i>
AC	grey	<i>FOPNL</i>
AC	blue	<i>FOXO1</i>
AC	grey	<i>FPGS</i>
AC	brown	<i>FPR2</i>
AC	blue	<i>FRA10AC1</i>
AC	blue	<i>FRYL</i>
AC	blue	<i>FSCN1</i>
AC	turquoise	<i>FTSJ1</i>
AC	blue	<i>FUT7</i>
AC	blue	<i>FXR2</i>
AC	turquoise	<i>FXYD2</i>
AC	grey	<i>GAB3</i>
AC	brown	<i>GABARAPL2</i>
AC	blue	<i>GABBR1</i>
AC	brown	<i>GADD45B</i>
AC	turquoise	<i>GADD45GIP1</i>
AC	yellow	<i>GALM</i>
AC	grey	<i>GALNS</i>
AC	grey	<i>GALNT2</i>
AC	grey	<i>GBGT1</i>
AC	yellow	<i>GBP1</i>
AC	yellow	<i>GBP2</i>
AC	grey	<i>GBP4</i>
AC	turquoise	<i>GCHFR</i>
AC	brown	<i>GDE1</i>
AC	blue	<i>GDPD3</i>
AC	turquoise	<i>GEMIN7</i>
AC	grey	<i>GFI1B</i>
AC	yellow	<i>GIMAP2</i>

AC	grey	<i>GIMAP6</i>
AC	brown	<i>GK</i>
AC	blue	<i>GLB1L</i>
AC	brown	<i>GLUL</i>
AC	brown	<i>GMIP</i>
AC	brown	<i>GMPR2</i>
AC	blue	<i>GNE</i>
AC	brown	<i>GNG10</i>
AC	turquoise	<i>GNGT2</i>
AC	turquoise	<i>GNPTG</i>
AC	brown	<i>GOLGA7</i>
AC	turquoise	<i>GOSR2</i>
AC	turquoise	<i>GP1BB</i>
AC	turquoise	<i>GPBAR1</i>
AC	grey	<i>GPR132</i>
AC	grey	<i>GPR146</i>
AC	brown	<i>GPR84</i>
AC	turquoise	<i>GPS1</i>
AC	turquoise	<i>GPS2</i>
AC	turquoise	<i>GPX7</i>
AC	turquoise	<i>GRAP2</i>
AC	brown	<i>GRB2</i>
AC	blue	<i>GRHL2</i>
AC	turquoise	<i>GRHPR</i>
AC	blue	<i>GRM4</i>
AC	turquoise	<i>GRPEL1</i>
AC	blue	<i>GSG1L</i>
AC	brown	<i>GSN</i>
AC	grey	<i>GSTM1</i>
AC	turquoise	<i>GSTM2</i>
AC	turquoise	<i>GSTM4</i>
AC	blue	<i>GSTM5</i>
AC	turquoise	<i>GSTO1</i>
AC	brown	<i>GTF2B</i>
AC	turquoise	<i>GTF3A</i>
AC	grey	<i>GTF3C5</i>
AC	turquoise	<i>GTF3C6</i>
AC	brown	<i>GYG1</i>
AC	grey	<i>GYPA</i>
AC	blue	<i>GYPE</i>
AC	turquoise	<i>GZMK</i>
AC	grey	<i>H1F0</i>
AC	turquoise	<i>H1FX</i>
AC	brown	<i>HACD4</i>
AC	grey	<i>HAGH</i>
AC	brown	<i>HAL</i>
AC	grey	<i>HAT1</i>
AC	brown	<i>HAUS4</i>
AC	turquoise	<i>HAX1</i>

AC brown *HBP1*  
AC grey *HCAR2*  
AC brown *HCAR3*  
AC blue *HCFC1*  
AC turquoise *HCFC1R1*  
AC brown *HCLS1*  
AC blue *HDAC6*  
AC grey *HDAC7*  
AC blue *HEATR1*  
AC blue *HELZ*  
AC grey *HEMGN*  
AC yellow *HERC5*  
AC blue *HILPDA*  
AC turquoise *HIST1H1C*  
AC blue *HIST1H1E*  
AC brown *HIST1H2AC*  
AC turquoise *HIST1H2AM*  
AC yellow *HIST1H2BD*  
AC grey *HIST1H2BG*  
AC grey *HIST1H2BO*  
AC grey *HIST1H3B*  
AC grey *HIST2H2AC*  
AC brown *HIST2H2BE*  
AC grey *HIST2H2BF*  
AC blue *HJURP*  
AC brown *HK3*  
AC turquoise *HLA-DMA*  
AC turquoise *HLA-DMB*  
AC turquoise *HLA-F*  
AC brown *HLX*  
AC brown *HMGB2*  
AC turquoise *HMGN3*  
AC turquoise *HMOX2*  
AC brown *HN1*  
AC turquoise *HNRNPA1*  
AC blue *HNRNPU*  
AC blue *HOMER3*  
AC grey *HOPX*  
AC brown *HPGD*  
AC blue *HPN*  
AC grey *HRASLS2*  
AC brown *HS1BP3*  
AC brown *HSBP1*  
AC turquoise *HSD17B10*  
AC brown *HSD17B11*  
AC turquoise *HSD17B8*  
AC yellow *HSH2D*  
AC turquoise *HSP90AA1*  
AC brown *HSPA1A*

AC	blue	<i>HSPB8</i>
AC	turquoise	<i>HVCN1</i>
AC	blue	<i>HYAL1</i>
AC	blue	<i>HYAL2</i>
AC	grey	<i>ICAM1</i>
AC	turquoise	<i>ICAM2</i>
AC	blue	<i>ICOS</i>
AC	blue	<i>ID1</i>
AC	turquoise	<i>ID2</i>
AC	grey	<i>IDH1</i>
AC	turquoise	<i>IDH2</i>
AC	turquoise	<i>IDH3G</i>
AC	turquoise	<i>IDNK</i>
AC	grey	<i>IDO1</i>
AC	brown	<i>IDS</i>
AC	turquoise	<i>IER3IP1</i>
AC	blue	<i>IER5L</i>
AC	yellow	<i>IFI16</i>
AC	turquoise	<i>IFI27L2</i>
AC	yellow	<i>IFI44</i>
AC	yellow	<i>IFI44L</i>
AC	blue	<i>IFIH1</i>
AC	turquoise	<i>IFNAR2</i>
AC	brown	<i>IFNGR2</i>
AC	brown	<i>IFRD1</i>
AC	turquoise	<i>IGBP1</i>
AC	blue	<i>IGFBP7</i>
AC	turquoise	<i>IK</i>
AC	brown	<i>IKBIP</i>
AC	grey	<i>IKZF1</i>
AC	grey	<i>IL10RA</i>
AC	brown	<i>IL10RB</i>
AC	brown	<i>IL17RA</i>
AC	grey	<i>IL18</i>
AC	grey	<i>IL18BP</i>
AC	brown	<i>IL18R1</i>
AC	blue	<i>IL4I1</i>
AC	brown	<i>IL4R</i>
AC	turquoise	<i>ILK</i>
AC	blue	<i>ILVBL</i>
AC	turquoise	<i>IMP3</i>
AC	yellow	<i>INAFM1</i>
AC	blue	<i>INPP5B</i>
AC	brown	<i>INPP5D</i>
AC	turquoise	<i>INSIG1</i>
AC	blue	<i>IPO4</i>
AC	grey	<i>IQGAP1</i>
AC	yellow	<i>IRF1</i>
AC	brown	<i>IRF2</i>

AC	grey	<i>IRF5</i>
AC	brown	<i>IRF9</i>
AC	grey	<i>ISCA1</i>
AC	grey	<i>ITGA2B</i>
AC	brown	<i>ITGAM</i>
AC	grey	<i>ITGB3BP</i>
AC	turquoise	<i>ITGB7</i>
AC	turquoise	<i>ITM2A</i>
AC	grey	<i>JAZF1</i>
AC	turquoise	<i>JOSD2</i>
AC	turquoise	<i>JTB</i>
AC	blue	<i>JUN</i>
AC	turquoise	<i>KARS</i>
AC	blue	<i>KAT2A</i>
AC	blue	<i>KBTBD6</i>
AC	brown	<i>KBTBD7</i>
AC	brown	<i>KCNE1</i>
AC	grey	<i>KCNE3</i>
AC	brown	<i>KCNJ15</i>
AC	blue	<i>KCNJ6</i>
AC	blue	<i>KCNJ8</i>
AC	blue	<i>KCNK7</i>
AC	blue	<i>KCNMA1</i>
AC	turquoise	<i>KDELR1</i>
AC	blue	<i>KDM1A</i>
AC	blue	<i>KDM5C</i>
AC	blue	<i>KDM5D</i>
AC	blue	<i>KDM6B</i>
AC	blue	<i>KHDRBS1</i>
AC	turquoise	<i>KIAA0101</i>
AC	turquoise	<i>KIAA0141</i>
AC	grey	<i>KIAA0226L</i>
AC	blue	<i>KIAA0319</i>
AC	blue	<i>KIF15</i>
AC	brown	<i>KIF27</i>
AC	blue	<i>KIFC1</i>
AC	blue	<i>KIR2DL1</i>
AC	grey	<i>KIR2DL4</i>
AC	brown	<i>KLF6</i>
AC	brown	<i>KLF7</i>
AC	turquoise	<i>KLHL18</i>
AC	blue	<i>KLK7</i>
AC	grey	<i>KLRD1</i>
AC	grey	<i>KLRG1</i>
AC	turquoise	<i>KLRK1</i>
AC	grey	<i>KMT2C</i>
AC	turquoise	<i>KMT2E</i>
AC	brown	<i>KRT23</i>
AC	grey	<i>KRTCAP3</i>

AC	blue	<i>L2HGDH</i>
AC	blue	<i>LACE1</i>
AC	turquoise	<i>LAGE3</i>
AC	blue	<i>LAMP3</i>
AC	turquoise	<i>LAMTOR2</i>
AC	brown	<i>LASP1</i>
AC	brown	<i>LAT2</i>
AC	turquoise	<i>LCK</i>
AC	brown	<i>LCP1</i>
AC	turquoise	<i>LDHA</i>
AC	blue	<i>LDLR</i>
AC	blue	<i>LETM1</i>
AC	yellow	<i>LGALS3BP</i>
AC	grey	<i>LGALS9C</i>
AC	blue	<i>LGR6</i>
AC	turquoise	<i>LHPP</i>
AC	turquoise	<i>LILRB4</i>
AC	turquoise	<i>LIME1</i>
AC	brown	<i>LIMK2</i>
AC	turquoise	<i>LINC01272</i>
AC	brown	<i>LMAN2</i>
AC	brown	<i>LPCAT2</i>
AC	brown	<i>LPCAT3</i>
AC	blue	<i>LPP</i>
AC	brown	<i>LPPR2</i>
AC	brown	<i>LRPAP1</i>
AC	blue	<i>LRRC2</i>
AC	brown	<i>LRRC25</i>
AC	brown	<i>LRRC70</i>
AC	brown	<i>LRRFIP1</i>
AC	brown	<i>LRRFIP2</i>
AC	blue	<i>LRRN1</i>
AC	turquoise	<i>LSM10</i>
AC	turquoise	<i>LSM2</i>
AC	turquoise	<i>LSM6</i>
AC	blue	<i>LSR</i>
AC	brown	<i>LTB4R</i>
AC	brown	<i>LTBR</i>
AC	grey	<i>LTF</i>
AC	grey	<i>LXN</i>
AC	grey	<i>LY6G6F</i>
AC	grey	<i>LYL1</i>
AC	turquoise	<i>LYPLAL1</i>
AC	brown	<i>LYRM1</i>
AC	grey	<i>LYSMD2</i>
AC	blue	<i>MACROD1</i>
AC	turquoise	<i>MAD1L1</i>
AC	turquoise	<i>MAD2L2</i>
AC	grey	<i>MAF1</i>

AC	grey	<i>MAFB</i>
AC	blue	<i>MAGEB17</i>
AC	turquoise	<i>MANBA</i>
AC	brown	<i>MAP1LC3B</i>
AC	grey	<i>MAP2K3</i>
AC	grey	<i>MAP3K11</i>
AC	blue	<i>MAP3K12</i>
AC	brown	<i>MAP3K8</i>
AC	grey	<i>MAP4K2</i>
AC	brown	<i>MAP7D1</i>
AC	grey	<i>MAPK14</i>
AC	turquoise	<i>MAPK1IP1L</i>
AC	grey	<i>MAPK3</i>
AC	turquoise	<i>MAPRE2</i>
AC	grey	<i>MARCH8</i>
AC	blue	<i>MARCH9</i>
AC	blue	<i>MARCKS</i>
AC	blue	<i>MARCO</i>
AC	blue	<i>MATK</i>
AC	brown	<i>MAX</i>
AC	brown	<i>MBOAT2</i>
AC	brown	<i>MBP</i>
AC	blue	<i>MCAT</i>
AC	grey	<i>MCCC2</i>
AC	brown	<i>MCEMP1</i>
AC	brown	<i>MCL1</i>
AC	turquoise	<i>MCTS1</i>
AC	turquoise	<i>MDH1</i>
AC	turquoise	<i>MDH2</i>
AC	grey	<i>MDK</i>
AC	turquoise	<i>MEA1</i>
AC	turquoise	<i>MED11</i>
AC	grey	<i>MED15</i>
AC	grey	<i>MED16</i>
AC	brown	<i>MED25</i>
AC	yellow	<i>MED28</i>
AC	grey	<i>MEF2A</i>
AC	grey	<i>MEF2C</i>
AC	grey	<i>MEFV</i>
AC	blue	<i>MEN1</i>
AC	blue	<i>MEOX1</i>
AC	turquoise	<i>METTL12</i>
AC	blue	<i>METTL14</i>
AC	grey	<i>METTL7A</i>
AC	brown	<i>METTL9</i>
AC	brown	<i>MFF</i>
AC	turquoise	<i>MFNG</i>
AC	grey	<i>MFSD2B</i>
AC	blue	<i>MGEA5</i>

AC turquoise *MGLL*  
AC turquoise *MGST3*  
AC grey *MICAL1*  
AC grey *MICU2*  
AC grey *MID1IP1*  
AC turquoise *MIF4GD*  
AC brown *MKNK1*  
AC grey *MKRN1*  
AC brown *MLF2*  
AC turquoise *MLST8*  
AC turquoise *MLX*  
AC turquoise *MMD*  
AC yellow *MOB1A*  
AC brown *MOB3A*  
AC blue *MOK*  
AC grey *MOSPD3*  
AC grey *MOV10*  
AC grey *MPEG1*  
AC turquoise *MPG*  
AC turquoise *MPLKIP*  
AC grey *MPP1*  
AC turquoise *MPV17*  
AC blue *MPZ*  
AC brown *MPZL1*  
AC turquoise *MRFAP1*  
AC blue *MRGPRX3*  
AC blue *MROH6*  
AC turquoise *MRPL11*  
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AC turquoise *MRPL14*  
AC turquoise *MRPL15*  
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AC turquoise *MRPS12*  
AC turquoise *MRPS14*

AC turquoise *MRPS15*  
AC turquoise *MRPS16*  
AC turquoise *MRPS18B*  
AC turquoise *MRPS18C*  
AC turquoise *MRPS2*  
AC turquoise *MRPS25*  
AC turquoise *MRPS26*  
AC turquoise *MRPS34*  
AC turquoise *MS4A1*  
AC grey *MS4A4A*  
AC turquoise *MS4A7*  
AC blue *MSL2*  
AC blue *MSLN*  
AC yellow *MSRB2*  
AC blue *MSTO1*  
AC turquoise *MT1F*  
AC blue *MT1G*  
AC blue *MTCH1*  
AC turquoise *MTMR14*  
AC blue *MTRR*  
AC grey *MVP*  
AC brown *MXD1*  
AC brown *MYD88*  
AC turquoise *MYDGF*  
AC turquoise *MYEOV2*  
AC turquoise *MYL6B*  
AC turquoise *MZT2B*  
AC turquoise *NAA10*  
AC turquoise *NAA38*  
AC turquoise *NAA60*  
AC brown *NABP1*  
AC brown *NAMPT*  
AC yellow *NAPA*  
AC blue *NARS2*  
AC blue *NAT6*  
AC turquoise *NCL*  
AC yellow *NCOA7*  
AC turquoise *NCR3*  
AC grey *NCSTN*  
AC blue *NDNL2*  
AC grey *NDRG3*  
AC turquoise *NDUFA1*  
AC turquoise *NDUFA7*  
AC turquoise *NDUFAB1*  
AC grey *NDUFAF1*  
AC turquoise *NDUFB10*  
AC brown *NDUFB3*  
AC brown *NDUFB6*  
AC turquoise *NDUFC1*

AC turquoise *NDUFS2*  
AC turquoise *NDUFS6*  
AC turquoise *NDUFS8*  
AC grey *NDUFV3*  
AC blue *NECAB1*  
AC brown *NEDD9*  
AC blue *NEK3*  
AC grey *NELFE*  
AC grey *NFATC1*  
AC brown *NFKB1A*  
AC brown *NFKB1Z*  
AC blue *NFRKB*  
AC turquoise *NGFRAP1*  
AC turquoise *NIFK*  
AC brown *NINJ2*  
AC blue *NLRP3*  
AC grey *NMB*  
AC yellow *NMI*  
AC turquoise *NMRAL1*  
AC grey *NOL11*  
AC turquoise *NOL12*  
AC turquoise *NOL7*  
AC turquoise *NONO*  
AC brown *NPL*  
AC turquoise *NPM1*  
AC blue *NR4A1*  
AC brown *NRBF2*  
AC brown *NRDE2*  
AC grey *NRGN*  
AC blue *NRN1*  
AC turquoise *NRROS*  
AC turquoise *NSMCE1*  
AC grey *NSUN3*  
AC yellow *NT5C3A*  
AC blue *NTM*  
AC brown *NUCB1*  
AC turquoise *NUDC*  
AC turquoise *NUDT1*  
AC grey *NUDT16*  
AC turquoise *NUDT2*  
AC grey *NUDT3*  
AC grey *NUDT4*  
AC brown *NUDT5*  
AC turquoise *NUTF2*  
AC turquoise *NXT1*  
AC yellow *OAS2*  
AC grey *OAS3*  
AC yellow *ODF3B*  
AC grey *OGDH*

AC brown *OLAH*  
AC blue *OLFM4*  
AC turquoise *ORAI3*  
AC brown *ORM2*  
AC turquoise *ORMDL2*  
AC grey *OSBPL2*  
AC brown *OSCAR*  
AC turquoise *OSGEP*  
AC turquoise *OSTC*  
AC brown *OSTF1*  
AC turquoise *OTUB1*  
AC turquoise *OXLD1*  
AC turquoise *P2RX1*  
AC grey *P2RY11*  
AC brown *P2RY13*  
AC grey *P2RY14*  
AC turquoise *PA2G4*  
AC blue *PACRG*  
AC brown *PADI4*  
AC turquoise *PAFAH1B3*  
AC blue *PANK4*  
AC grey *PARP1*  
AC yellow *PARP10*  
AC grey *PARVB*  
AC turquoise *PAX5*  
AC turquoise *PCBD1*  
AC turquoise *PCBP2*  
AC grey *PCGF5*  
AC grey *PCIF1*  
AC turquoise *PCNA*  
AC blue *PCYOX1*  
AC grey *PDCD2*  
AC turquoise *PDCD5*  
AC turquoise *PDCD6*  
AC blue *PDE1B*  
AC blue *PDE2A*  
AC turquoise *PDE4B*  
AC grey *PDIA3*  
AC grey *PDIA6*  
AC blue *PDK1*  
AC turquoise *PDLIM1*  
AC grey *PDPK1*  
AC blue *PEAR1*  
AC brown *PELI1*  
AC brown *PELO*  
AC grey *PEPD*  
AC blue *PERP*  
AC turquoise *PFDN1*  
AC turquoise *PFDN2*

AC turquoise *PGAM1*  
AC blue *PGBD4*  
AC brown *PGD*  
AC brown *PGK1*  
AC turquoise *PGLS*  
AC turquoise *PGRMC1*  
AC turquoise *PHB*  
AC turquoise *PHB2*  
AC yellow *PHF11*  
AC turquoise *PHF20*  
AC blue *PHF7*  
AC grey *PHLDA2*  
AC grey *PHOSPHO1*  
AC turquoise *PHPT1*  
AC grey *PID1*  
AC blue *PIDD1*  
AC blue *PIGO*  
AC grey *PIK3R5*  
AC turquoise *PIM2*  
AC turquoise *PIN1*  
AC blue *PISD*  
AC grey *PITHD1*  
AC blue *PITPNM1*  
AC grey *PLA2G12A*  
AC yellow *PLAC8*  
AC blue *PLAG1*  
AC blue *PLAGL2*  
AC yellow *PLAUR*  
AC brown *PLEK*  
AC brown *PLIN3*  
AC grey *PLOD1*  
AC grey *PLVAP*  
AC turquoise *PNKD*  
AC grey *PNPLA2*  
AC brown *PNRC1*  
AC blue *POFUT2*  
AC yellow *POLB*  
AC blue *POLD1*  
AC turquoise *POLD4*  
AC blue *POLDIP2*  
AC grey *POLDIP3*  
AC grey *POLR1D*  
AC turquoise *POLR2E*  
AC turquoise *POLR2F*  
AC turquoise *POLR2G*  
AC turquoise *POLR2J*  
AC blue *POLR3A*  
AC turquoise *POLR3GL*  
AC turquoise *POLR3K*

AC blue *POM121*  
AC yellow *POMP*  
AC turquoise *POP4*  
AC turquoise *POP7*  
AC brown *POR*  
AC blue *POU6F1*  
AC turquoise *PPA1*  
AC blue *PPAPDC3*  
AC yellow *PPCDC*  
AC turquoise *PPCS*  
AC turquoise *PPIH*  
AC grey *PPIL2*  
AC blue *PPIL3*  
AC turquoise *PPP1CA*  
AC brown *PPP1R10*  
AC turquoise *PPP1R14A*  
AC brown *PPP1R15A*  
AC blue *PPP1R1B*  
AC brown *PPP1R2*  
AC blue *PPP1R3D*  
AC blue *PPP6R2*  
AC blue *PPP6R3*  
AC turquoise *PQBP1*  
AC grey *PRCC*  
AC blue *PRDM16*  
AC brown *PRDM2*  
AC blue *PRDM8*  
AC turquoise *PRDX1*  
AC grey *PRDX2*  
AC turquoise *PRDX3*  
AC grey *PRDX5*  
AC turquoise *PREB*  
AC turquoise *PRELID1*  
AC blue *PREPL*  
AC turquoise *PRF1*  
AC turquoise *PRKAR1A*  
AC turquoise *PRKAR1B*  
AC blue *PRKCI*  
AC brown *PRKD2*  
AC turquoise *PRMT2*  
AC turquoise *PRMT9*  
AC grey *PRPF4B*  
AC grey *PRR11*  
AC blue *PRRC2A*  
AC blue *PRRT2*  
AC blue *PRSS54*  
AC grey *PRTN3*  
AC turquoise *PSMA2*  
AC turquoise *PSMA3*

AC yellow *PSMA4*  
AC turquoise *PSMA6*  
AC turquoise *PSMA7*  
AC turquoise *PSMB1*  
AC turquoise *PSMB2*  
AC turquoise *PSMB4*  
AC turquoise *PSMB6*  
AC turquoise *PSMB7*  
AC turquoise *PSMC1*  
AC turquoise *PSMC2*  
AC turquoise *PSMC5*  
AC turquoise *PSMD3*  
AC turquoise *PSMD4*  
AC turquoise *PSMD6*  
AC turquoise *PSMD9*  
AC turquoise *PSMG4*  
AC grey *PSPC1*  
AC brown *PSTPIP1*  
AC brown *PSTPIP2*  
AC brown *PTK2B*  
AC turquoise *PTPMT1*  
AC blue *PTPN12*  
AC brown *PTPN6*  
AC brown *PTPRE*  
AC turquoise *PTRH2*  
AC grey *PUM1*  
AC blue *PUS7L*  
AC grey *PVRL2*  
AC grey *PYCR2*  
AC grey *PYGB*  
AC brown *PYGL*  
AC brown *R3HDM4*  
AC turquoise *RAB11A*  
AC brown *RAB11B*  
AC brown *RAB1B*  
AC brown *RAB27A*  
AC blue *RAB28*  
AC brown *RAB2A*  
AC grey *RAB37*  
AC blue *RAB39B*  
AC brown *RAB3D*  
AC blue *RAB3GAP2*  
AC yellow *RAB8A*  
AC yellow *RABGAP1L*  
AC brown *RAB1F*  
AC grey *RAD23A*  
AC turquoise *RAD51C*  
AC turquoise *RALA*  
AC turquoise *RAN*

AC	grey	<i>RANBP3</i>
AC	turquoise	<i>RANGRF</i>
AC	blue	<i>RASA3</i>
AC	turquoise	<i>RASAL3</i>
AC	grey	<i>RASSF5</i>
AC	yellow	<i>RBCK1</i>
AC	grey	<i>RBFA</i>
AC	blue	<i>RBL1</i>
AC	grey	<i>RBL2</i>
AC	brown	<i>RBM23</i>
AC	turquoise	<i>RBM3</i>
AC	turquoise	<i>RBM4</i>
AC	grey	<i>RBMS1</i>
AC	turquoise	<i>RBX1</i>
AC	blue	<i>RDM1</i>
AC	turquoise	<i>REEP5</i>
AC	blue	<i>REEP6</i>
AC	grey	<i>RELL1</i>
AC	brown	<i>RFX2</i>
AC	blue	<i>RGCC</i>
AC	brown	<i>RGL2</i>
AC	blue	<i>RGP1</i>
AC	brown	<i>RGS14</i>
AC	brown	<i>RGS19</i>
AC	grey	<i>RGS3</i>
AC	blue	<i>RGS9</i>
AC	turquoise	<i>RHBDD2</i>
AC	grey	<i>RHBDF2</i>
AC	blue	<i>RHBG</i>
AC	blue	<i>RHD</i>
AC	turquoise	<i>RHOC</i>
AC	blue	<i>RIF1</i>
AC	blue	<i>RILPL1</i>
AC	grey	<i>RIPK2</i>
AC	brown	<i>RIT1</i>
AC	grey	<i>RNASE1</i>
AC	grey	<i>RNASE2</i>
AC	turquoise	<i>RNASEH2A</i>
AC	turquoise	<i>RNASEH2C</i>
AC	grey	<i>RNASEK</i>
AC	blue	<i>RNA_SPIKE_ERCC-00034</i>
AC	blue	<i>RNA_SPIKE_ERCC-00039</i>
AC	blue	<i>RNA_SPIKE_ERCC-00054</i>
AC	grey	<i>RNA_SPIKE_ERCC-00154</i>
AC	grey	<i>RNF10</i>
AC	yellow	<i>RNF114</i>
AC	brown	<i>RNF130</i>
AC	grey	<i>RNF138</i>
AC	brown	<i>RNF144B</i>

AC	brown	<i>RNF149</i>
AC	brown	<i>RNF167</i>
AC	blue	<i>RNF212</i>
AC	yellow	<i>RNF213</i>
AC	brown	<i>RNF24</i>
AC	blue	<i>RNF31</i>
AC	grey	<i>RNF38</i>
AC	grey	<i>RNF4</i>
AC	brown	<i>RNF44</i>
AC	turquoise	<i>RNF7</i>
AC	turquoise	<i>RNH1</i>
AC	turquoise	<i>RNPS1</i>
AC	turquoise	<i>RPA3</i>
AC	grey	<i>RPIA</i>
AC	turquoise	<i>RPL22L1</i>
AC	turquoise	<i>RPL26L1</i>
AC	turquoise	<i>RPL27</i>
AC	turquoise	<i>RPP21</i>
AC	turquoise	<i>RPP25L</i>
AC	turquoise	<i>RPS19BP1</i>
AC	grey	<i>RPS6KA1</i>
AC	blue	<i>RPS6KL1</i>
AC	turquoise	<i>RRP7A</i>
AC	yellow	<i>RSPH9</i>
AC	brown	<i>RSRP1</i>
AC	grey	<i>RTCA</i>
AC	turquoise	<i>RUSC1</i>
AC	blue	<i>RUSC2</i>
AC	turquoise	<i>RUVBL2</i>
AC	turquoise	<i>RWDD1</i>
AC	turquoise	<i>S100A13</i>
AC	brown	<i>S1PR4</i>
AC	blue	<i>SAMD10</i>
AC	yellow	<i>SAMHD1</i>
AC	brown	<i>SAMSN1</i>
AC	yellow	<i>SAP18</i>
AC	turquoise	<i>SARAF</i>
AC	turquoise	<i>SAT2</i>
AC	brown	<i>SBNO2</i>
AC	grey	<i>SCAF1</i>
AC	grey	<i>SCAF4</i>
AC	blue	<i>SCAF8</i>
AC	turquoise	<i>SCAND1</i>
AC	grey	<i>SCAP</i>
AC	blue	<i>SCD</i>
AC	turquoise	<i>SCIMP</i>
AC	turquoise	<i>SCML4</i>
AC	yellow	<i>SCNM1</i>
AC	grey	<i>SCYL1</i>

AC brown *SDCBP*  
AC turquoise *SDF2L1*  
AC turquoise *SDHAF2*  
AC brown *SDHAF3*  
AC blue *SDR42E1*  
AC turquoise *SEC11A*  
AC turquoise *SEC11C*  
AC turquoise *SEC13*  
AC blue *SEC16A*  
AC grey *SEC24D*  
AC grey *SELK*  
AC turquoise *SELM*  
AC brown *SELT*  
AC blue *SEPT4*  
AC blue *SERPINB2*  
AC grey *SERPINB9*  
AC blue *SETD2*  
AC blue *SETD8*  
AC brown *SF3B4*  
AC turquoise *SF3B5*  
AC brown *SFT2D1*  
AC grey *SGTA*  
AC turquoise *SH2D1A*  
AC brown *SH2D3C*  
AC turquoise *SH3BGRL*  
AC brown *SH3BP2*  
AC brown *SH3GLB1*  
AC blue *SH3TC1*  
AC turquoise *SHFM1*  
AC brown *SHKBP1*  
AC blue *SIAE*  
AC grey *SIGLEC10*  
AC grey *SIGLEC5*  
AC grey *SIPA1*  
AC turquoise *SIPA1L3*  
AC brown *SIRPB1*  
AC turquoise *SIRPG*  
AC blue *SIRT1*  
AC turquoise *SIT1*  
AC turquoise *SIVA1*  
AC turquoise *SKP1*  
AC brown *SLA*  
AC grey *SLBP*  
AC brown *SLC19A1*  
AC blue *SLC22A18AS*  
AC turquoise *SLC25A5*  
AC blue *SLC26A6*  
AC grey *SLC29A3*  
AC grey *SLC2A1*

AC	brown	<i>SLC2A3</i>
AC	brown	<i>SLC31A2</i>
AC	grey	<i>SLC35C1</i>
AC	turquoise	<i>SLC35C2</i>
AC	grey	<i>SLC38A2</i>
AC	turquoise	<i>SLC39A4</i>
AC	turquoise	<i>SLC43A3</i>
AC	grey	<i>SLC46A3</i>
AC	grey	<i>SLC4A1</i>
AC	brown	<i>SLC6A6</i>
AC	blue	<i>SLC8A2</i>
AC	blue	<i>SLC8B1</i>
AC	blue	<i>SLC9A1</i>
AC	blue	<i>SLCO5A1</i>
AC	turquoise	<i>SLIRP</i>
AC	blue	<i>SLX4IP</i>
AC	blue	<i>SMAD1</i>
AC	blue	<i>SMARCA4</i>
AC	grey	<i>SMARCC2</i>
AC	blue	<i>SMARCD3</i>
AC	blue	<i>SMC5</i>
AC	turquoise	<i>SMCO4</i>
AC	grey	<i>SMEK2</i>
AC	blue	<i>SMG7</i>
AC	grey	<i>SMG9</i>
AC	blue	<i>SMIM10</i>
AC	turquoise	<i>SMIM19</i>
AC	grey	<i>SMIM24</i>
AC	brown	<i>SMIM3</i>
AC	grey	<i>SMIM5</i>
AC	turquoise	<i>SMIM7</i>
AC	brown	<i>SNAP23</i>
AC	turquoise	<i>SNAP29</i>
AC	turquoise	<i>SNRNP25</i>
AC	grey	<i>SNRNP27</i>
AC	turquoise	<i>SNRPA</i>
AC	turquoise	<i>SNRPC</i>
AC	turquoise	<i>SNRPD1</i>
AC	turquoise	<i>SNRPE</i>
AC	turquoise	<i>SNRPF</i>
AC	turquoise	<i>SNRPG</i>
AC	yellow	<i>SNX20</i>
AC	grey	<i>SNX22</i>
AC	brown	<i>SNX3</i>
AC	turquoise	<i>SON</i>
AC	grey	<i>SORL1</i>
AC	yellow	<i>SP100</i>
AC	yellow	<i>SP140</i>
AC	grey	<i>SP2</i>

AC grey SP3  
AC turquoise SPAG7  
AC turquoise SPARC  
AC blue SPATA6  
AC grey SPATS2L  
AC blue SPDL1  
AC blue SPINK4  
AC turquoise SPOCK2  
AC grey SPON2  
AC turquoise SPRY1  
AC yellow SQRDL  
AC brown SRA1  
AC turquoise SREK1IP1  
AC blue SRF  
AC turquoise SRI  
AC turquoise SRSF3  
AC turquoise SRSF7  
AC turquoise SSB  
AC turquoise SSBP1  
AC turquoise SSNA1  
AC turquoise SSR3  
AC turquoise SSU72  
AC grey ST13  
AC blue ST14  
AC blue ST20  
AC grey ST3GAL1  
AC brown ST6GALNAC3  
AC grey ST6GALNAC4  
AC blue STARD7  
AC yellow STAT1  
AC brown STAT3  
AC brown STEAP4  
AC grey STK10  
AC grey STK17A  
AC brown STK17B  
AC grey STK25  
AC blue STK36  
AC grey STMN3  
AC brown STOM  
AC yellow STX11  
AC brown STX3  
AC turquoise STX8  
AC brown STXBP2  
AC grey SUGP1  
AC grey SULF2  
AC brown SULT1A1  
AC grey SUMF1  
AC turquoise SUMO1  
AC grey SUN1

AC turquoise *SUPT4H1*  
AC grey *SURF1*  
AC turquoise *SURF2*  
AC turquoise *SURF4*  
AC turquoise *SUSD3*  
AC blue *SUZ12*  
AC grey *SVBP*  
AC grey *SYCE3*  
AC brown *SYF2*  
AC brown *SYK*  
AC turquoise *SYNGR2*  
AC blue *SYNPO2L*  
AC blue *SYNRG*  
AC turquoise *SYPL1*  
AC turquoise *SYS1*  
AC blue *SYT1*  
AC blue *SYT5*  
AC blue *TACC1*  
AC grey *TAL1*  
AC grey *TANGO2*  
AC blue *TARP*  
AC blue *TARSL2*  
AC brown *TBC1D1*  
AC turquoise *TBC1D10C*  
AC grey *TBC1D22B*  
AC turquoise *TBCB*  
AC blue *TBCK*  
AC brown *TBXAS1*  
AC turquoise *TCEAL8*  
AC grey *TCN2*  
AC grey *TESC*  
AC blue *TEX261*  
AC turquoise *TEX264*  
AC blue *TGDS*  
AC blue *TGFBR3*  
AC brown *TGOLN2*  
AC grey *THEM5*  
AC blue *THRSP*  
AC turquoise *THYN1*  
AC yellow *TIFA*  
AC brown *TIMM17B*  
AC turquoise *TIMM9*  
AC grey *TINF2*  
AC grey *TJAP1*  
AC blue *TJP3*  
AC brown *TKT*  
AC brown *TLR2*  
AC brown *TLR4*  
AC blue *TLR7*

AC grey *TLR9*  
AC turquoise *TM2D3*  
AC grey *TM9SF1*  
AC turquoise *TMA16*  
AC brown *TMBIM1*  
AC brown *TMBIM4*  
AC brown *TMBIM6*  
AC turquoise *TMED4*  
AC blue *TMEM106B*  
AC turquoise *TMEM11*  
AC yellow *TMEM123*  
AC turquoise *TMEM126B*  
AC turquoise *TMEM134*  
AC turquoise *TMEM141*  
AC turquoise *TMEM147*  
AC turquoise *TMEM14C*  
AC grey *TMEM150B*  
AC turquoise *TMEM160*  
AC blue *TMEM161B*  
AC turquoise *TMEM167A*  
AC turquoise *TMEM179B*  
AC blue *TMEM185B*  
AC turquoise *TMEM199*  
AC blue *TMEM203*  
AC turquoise *TMEM205*  
AC turquoise *TMEM208*  
AC blue *TMEM222*  
AC turquoise *TMEM223*  
AC turquoise *TMEM261*  
AC brown *TMEM30A*  
AC turquoise *TMEM40*  
AC brown *TMEM43*  
AC brown *TMEM50A*  
AC brown *TMEM55A*  
AC brown *TMEM59*  
AC turquoise *TMEM60*  
AC grey *TMEM70*  
AC brown *TMEM71*  
AC blue *TMEM80*  
AC brown *TMEM91*  
AC grey *TMEM92*  
AC grey *TMEM95*  
AC brown *TMLHE*  
AC blue *TMOD1*  
AC grey *TMOD2*  
AC grey *TMPO*  
AC brown *TMUB2*  
AC turquoise *TNFRSF14*  
AC grey *TNFRSF17*

AC	yellow	<i>TNFSF10</i>
AC	grey	<i>TNK2</i>
AC	brown	<i>TNNI2</i>
AC	grey	<i>TNRC6C</i>
AC	blue	<i>TNS1</i>
AC	brown	<i>TOLLIP</i>
AC	brown	<i>TOM1</i>
AC	turquoise	<i>TOMM20</i>
AC	turquoise	<i>TOMM5</i>
AC	blue	<i>TOMM70A</i>
AC	yellow	<i>TOR1A</i>
AC	yellow	<i>TOR1B</i>
AC	blue	<i>TOX</i>
AC	brown	<i>TP53I3</i>
AC	blue	<i>TPH2</i>
AC	grey	<i>TPM1</i>
AC	grey	<i>TPM2</i>
AC	brown	<i>TPM3</i>
AC	turquoise	<i>TPM4</i>
AC	grey	<i>TPP1</i>
AC	turquoise	<i>TPRKB</i>
AC	yellow	<i>TRAFD1</i>
AC	brown	<i>TRAPP1</i>
AC	turquoise	<i>TRAPP2L</i>
AC	turquoise	<i>TRAPP4</i>
AC	turquoise	<i>TRAPP6A</i>
AC	grey	<i>TREML1</i>
AC	brown	<i>TREML2</i>
AC	grey	<i>TRIB1</i>
AC	grey	<i>TRIB2</i>
AC	blue	<i>TRIM16</i>
AC	yellow	<i>TRIM22</i>
AC	yellow	<i>TRIM38</i>
AC	grey	<i>TRIM58</i>
AC	turquoise	<i>TRMT112</i>
AC	blue	<i>TRMT61A</i>
AC	blue	<i>TRPM1</i>
AC	blue	<i>TRPS1</i>
AC	blue	<i>TRPV3</i>
AC	blue	<i>TSACC</i>
AC	blue	<i>TSC22D2</i>
AC	blue	<i>TSNAXIP1</i>
AC	brown	<i>TSPAN2</i>
AC	blue	<i>TSPAN7</i>
AC	blue	<i>TSPYL4</i>
AC	grey	<i>TST</i>
AC	grey	<i>TSTA3</i>
AC	blue	<i>TTC12</i>
AC	blue	<i>TTC37</i>

AC turquoise *TUBA1C*  
AC brown *TUBA4A*  
AC grey *TUBA8*  
AC turquoise *TUBB*  
AC grey *TUBB1*  
AC turquoise *TUBB4B*  
AC turquoise *TUFM*  
AC blue *TULP3*  
AC blue *TVP23A*  
AC turquoise *TWF2*  
AC turquoise *TXN2*  
AC turquoise *TXNDC12*  
AC blue *TXNDC15*  
AC turquoise *TXNDC17*  
AC brown *TXNIP*  
AC grey *TYK2*  
AC brown *UBAP1*  
AC blue *UBAP2*  
AC yellow *UBE2F*  
AC brown *UBE2J1*  
AC turquoise *UBE2L3*  
AC blue *UBN1*  
AC grey *UBQLN2*  
AC turquoise *UBXN1*  
AC brown *UBXN2B*  
AC grey *UBXN6*  
AC turquoise *UFC1*  
AC turquoise *UFD1L*  
AC blue *UHMK1*  
AC brown *UNC119*  
AC blue *UNC13B*  
AC brown *UNC13D*  
AC brown *UNC93B1*  
AC brown *UPF2*  
AC grey *UPK3A*  
AC brown *UPP1*  
AC turquoise *UQCC2*  
AC turquoise *UQCC3*  
AC turquoise *UQCRC1*  
AC turquoise *UQCRLS1*  
AC turquoise *URM1*  
AC turquoise *UROD*  
AC brown *USB1*  
AC turquoise *USE1*  
AC brown *USF1*  
AC yellow *USP18*  
AC grey *USP21*  
AC turquoise *UXT*  
AC brown *VAMP3*

AC	brown	VAPA
AC	grey	VCAN
AC	turquoise	VDAC3
AC	grey	VEGFB
AC	blue	VEPH1
AC	grey	VEZF1
AC	turquoise	VKORC1
AC	brown	VMP1
AC	blue	VNN1
AC	brown	VNN2
AC	brown	VNN3
AC	turquoise	VPS29
AC	brown	VPS9D1
AC	blue	VSIG4
AC	blue	VWA7
AC	grey	WBP1
AC	blue	WDPCP
AC	blue	WDR11
AC	grey	WDR45
AC	blue	WDR59
AC	grey	WDR6
AC	blue	WDR81
AC	grey	WRAP73
AC	brown	WSB1
AC	grey	WWOX
AC	turquoise	XAB2
AC	yellow	XAF1
AC	turquoise	XCL2
AC	grey	XPNPEP1
AC	brown	XRCC1
AC	turquoise	XRCC6
AC	grey	YBX1
AC	turquoise	YIF1A
AC	brown	YIPF1
AC	brown	YIPF3
AC	grey	YKT6
AC	brown	YPEL3
AC	brown	YPEL5
AC	turquoise	YWHAQ
AC	brown	YWHAZ
AC	blue	ZAK
AC	yellow	ZBP1
AC	grey	ZBTB2
AC	blue	ZBTB5
AC	turquoise	ZBTB8OS
AC	turquoise	ZC3H10
AC	yellow	ZC3HAV1
AC	blue	ZCCHC2
AC	brown	ZCCHC6

AC	blue	ZCCHC8
AC	turquoise	ZCRB1
AC	brown	ZDHHC12
AC	grey	ZDHHC16
AC	blue	ZDHHC5
AC	blue	ZDHHC7
AC	grey	ZEB2
AC	grey	ZER1
AC	grey	ZFAND2A
AC	turquoise	ZMYM6NB
AC	brown	ZNF107
AC	blue	ZNF17
AC	blue	ZNF181
AC	blue	ZNF266
AC	turquoise	ZNF302
AC	blue	ZNF331
AC	blue	ZNF35
AC	blue	ZNF382
AC	brown	ZNF438
AC	blue	ZNF442
AC	blue	ZNF483
AC	blue	ZNF496
AC	grey	ZNF517
AC	blue	ZNF556
AC	blue	ZNF574
AC	blue	ZNF575
AC	turquoise	ZNF593
AC	blue	ZNF621
AC	grey	ZNF653
AC	blue	ZNF678
AC	blue	ZNF683
AC	grey	ZNF684
AC	blue	ZNF740
AC	turquoise	ZNF749
AC	grey	ZNF76
AC	blue	ZNF782
AC	blue	ZNF829
AC	blue	ZNF841
AC	grey	ZNF860
AC	grey	ZNFX1
AC	blue	ZSCAN26
AC	blue	ZSCAN9
AC	grey	ABLIM1
AC	blue	ACTA1
AC	blue	AHDC1
AC	grey	AKAP8
AC	blue	ALDH1L1
AC	blue	ALDH7A1
AC	blue	ANGPTL6

AC	grey	<i>AP1M1</i>
AC	blue	<i>APBB3</i>
AC	grey	<i>ARG2</i>
AC	grey	<i>ARHGAP17</i>
AC	blue	<i>ARMC5</i>
AC	blue	<i>ASB9</i>
AC	blue	<i>ATG4A</i>
AC	blue	<i>ATP2C1</i>
AC	blue	<i>B3GNT3</i>
AC	blue	<i>BCLAF1</i>
AC	blue	<i>BDP1</i>
AC	blue	<i>BMF</i>
AC	blue	<i>BMP3</i>
AC	blue	<i>BRWD1</i>
AC	grey	<i>C10orf128</i>
AC	blue	<i>C11orf84</i>
AC	blue	<i>C12orf4</i>
AC	blue	<i>C19orf52</i>
AC	blue	<i>C6orf141</i>
AC	blue	<i>C8orf82</i>
AC	grey	<i>CARHSP1</i>
AC	blue	<i>CBX1</i>
AC	turquoise	<i>CCM2</i>
AC	turquoise	<i>CCND2</i>
AC	blue	<i>CCSAP</i>
AC	turquoise	<i>CD244</i>
AC	grey	<i>CD9</i>
AC	blue	<i>CDC27</i>
AC	blue	<i>CDC7</i>
AC	blue	<i>CDH13</i>
AC	grey	<i>CEACAM8</i>
AC	blue	<i>CENPC</i>
AC	turquoise	<i>CENPM</i>
AC	blue	<i>CENPQ</i>
AC	blue	<i>CLDN9</i>
AC	blue	<i>CMPK1</i>
AC	blue	<i>CNOT11</i>
AC	blue	<i>COG8</i>
AC	blue	<i>CORO2A</i>
AC	blue	<i>CSNK1G1</i>
AC	blue	<i>CWC22</i>
AC	grey	<i>CYFIP2</i>
AC	blue	<i>DACT3</i>
AC	blue	<i>DCAF15</i>
AC	turquoise	<i>DDX19B</i>
AC	grey	<i>DDX54</i>
AC	blue	<i>DENND5B</i>
AC	blue	<i>DEXI</i>
AC	grey	<i>DHTKD1</i>

AC	blue	<i>DHX57</i>
AC	blue	<i>DPPA4</i>
AC	grey	<i>DPYSL2</i>
AC	blue	<i>DYNLRB2</i>
AC	grey	<i>DYRK1B</i>
AC	blue	<i>ECHDC3</i>
AC	blue	<i>EEF2K</i>
AC	blue	<i>EPN2</i>
AC	blue	<i>EPT1</i>
AC	grey	<i>ESYT1</i>
AC	grey	<i>EXTL3</i>
AC	blue	<i>FAM13A</i>
AC	blue	<i>FAM83A</i>
AC	blue	<i>FN3K</i>
AC	grey	<i>FNBP4</i>
AC	blue	<i>FOXJ3</i>
AC	blue	<i>FRMD5</i>
AC	grey	<i>FTSJ3</i>
AC	blue	<i>GABRA2</i>
AC	blue	<i>GLS</i>
AC	turquoise	<i>GORASP2</i>
AC	blue	<i>GPR34</i>
AC	blue	<i>GPX3</i>
AC	blue	<i>GRK6</i>
AC	blue	<i>GTF2E1</i>
AC	blue	<i>HDHD2</i>
AC	grey	<i>HDLBP</i>
AC	blue	<i>HELLS</i>
AC	grey	<i>HIP1</i>
AC	grey	<i>HIP1R</i>
AC	blue	<i>HIST1H2BL</i>
AC	blue	<i>HIVEP1</i>
AC	grey	<i>HMGB3</i>
AC	blue	<i>HSPA2</i>
AC	blue	<i>ICK</i>
AC	blue	<i>IFT74</i>
AC	blue	<i>IL12RB1</i>
AC	turquoise	<i>IL27RA</i>
AC	grey	<i>ILF3</i>
AC	blue	<i>INSL3</i>
AC	grey	<i>IRF8</i>
AC	brown	<i>ITGA5</i>
AC	blue	<i>JOSD1</i>
AC	blue	<i>KIAA0895L</i>
AC	blue	<i>KLHL5</i>
AC	blue	<i>LIG1</i>
AC	blue	<i>LINC00649</i>
AC	grey	<i>LMF2</i>
AC	grey	<i>LOC102724279</i>

AC	blue	<i>LRP5L</i>
AC	blue	<i>LRRC47</i>
AC	grey	<i>LRSAM1</i>
AC	blue	<i>LSG1</i>
AC	blue	<i>LY6G5B</i>
AC	grey	<i>MAN2B2</i>
AC	blue	<i>MAP2K4</i>
AC	blue	<i>MAP4K5</i>
AC	brown	<i>MEF2BNB-MEF2B</i>
AC	blue	<i>MLEC</i>
AC	blue	<i>MTF1</i>
AC	turquoise	<i>MYC</i>
AC	blue	<i>N4BP2</i>
AC	grey	<i>NAGA</i>
AC	grey	<i>NCKAP1L</i>
AC	blue	<i>NCR3LG1</i>
AC	blue	<i>NDRG2</i>
AC	blue	<i>NFXL1</i>
AC	blue	<i>NOMO3</i>
AC	grey	<i>NRAS</i>
AC	blue	<i>NUF2</i>
AC	blue	<i>NVL</i>
AC	blue	<i>OAZ3</i>
AC	blue	<i>PACS1</i>
AC	blue	<i>PDE4A</i>
AC	grey	<i>PHF12</i>
AC	blue	<i>PIWIL3</i>
AC	grey	<i>PKN1</i>
AC	turquoise	<i>PLA2G16</i>
AC	blue	<i>POGLUT1</i>
AC	blue	<i>POLD3</i>
AC	blue	<i>PPP1R12B</i>
AC	grey	<i>PPP5C</i>
AC	blue	<i>PPP6R1</i>
AC	turquoise	<i>PRPF6</i>
AC	grey	<i>PRPSAP1</i>
AC	blue	<i>PRRC1</i>
AC	turquoise	<i>PSMA1</i>
AC	turquoise	<i>PSMA5</i>
AC	blue	<i>PTPRK</i>
AC	blue	<i>RAB19</i>
AC	blue	<i>RALGPS2</i>
AC	blue	<i>RCCD1</i>
AC	blue	<i>RCN3</i>
AC	blue	<i>RDH13</i>
AC	grey	<i>RDH14</i>
AC	blue	<i>RGS13</i>
AC	blue	<i>RIBC2</i>
AC	blue	<i>RNA_SPIKE_ERCC-00053</i>

AC	grey	<i>RNF139</i>
AC	grey	<i>RNF166</i>
AC	blue	<i>RNF182</i>
AC	blue	<i>RNF19A</i>
AC	grey	<i>RPP40</i>
AC	grey	<i>SCPEP1</i>
AC	grey	<i>SEC24C</i>
AC	turquoise	<i>SEC61A1</i>
AC	blue	<i>SERPINE1</i>
AC	grey	<i>SH3BP1</i>
AC	blue	<i>SHBG</i>
AC	blue	<i>SLC16A1</i>
AC	blue	<i>SLC2A9</i>
AC	blue	<i>SLFN12</i>
AC	blue	<i>SMPD4</i>
AC	grey	<i>SNX24</i>
AC	blue	<i>SOX8</i>
AC	blue	<i>SPAG8</i>
AC	grey	<i>SPATA20</i>
AC	blue	<i>SPATA32</i>
AC	blue	<i>SPATA4</i>
AC	blue	<i>SPEF1</i>
AC	blue	<i>SPG11</i>
AC	blue	<i>SPP1</i>
AC	turquoise	<i>SRSF2</i>
AC	blue	<i>STARD4</i>
AC	grey	<i>STAT5A</i>
AC	blue	<i>SWAP70</i>
AC	blue	<i>SYDE1</i>
AC	blue	<i>TAF1C</i>
AC	blue	<i>TAF5</i>
AC	turquoise	<i>TBRG4</i>
AC	blue	<i>TCHP</i>
AC	blue	<i>TCTEX1D4</i>
AC	blue	<i>TDRD3</i>
AC	blue	<i>TDRKH</i>
AC	grey	<i>TET2</i>
AC	blue	<i>TEX2</i>
AC	blue	<i>TFF3</i>
AC	blue	<i>THEMIS</i>
AC	grey	<i>TMC8</i>
AC	blue	<i>TMCC2</i>
AC	blue	<i>TMEM117</i>
AC	turquoise	<i>TMEM156</i>
AC	grey	<i>TMEM180</i>
AC	blue	<i>TMEM41B</i>
AC	blue	<i>TMEM97</i>
AC	blue	<i>TNPO2</i>
AC	blue	<i>TRAPPC8</i>

AC	blue	<i>TRIB3</i>
AC	blue	<i>TRIM37</i>
AC	blue	<i>TRIM7</i>
AC	blue	<i>TSEN54</i>
AC	blue	<i>TSHZ2</i>
AC	grey	<i>TSPAN14</i>
AC	blue	<i>TTLL6</i>
AC	blue	<i>TYW5</i>
AC	grey	<i>UBE2D4</i>
AC	turquoise	<i>UBE2T</i>
AC	blue	<i>UBFD1</i>
AC	blue	<i>UCHL1</i>
AC	blue	<i>UHRF1BP1L</i>
AC	blue	<i>UPK3BL</i>
AC	blue	<i>USO1</i>
AC	blue	<i>USP33</i>
AC	grey	<i>VAT1</i>
AC	blue	<i>WBP2NL</i>
AC	grey	<i>WDSUB1</i>
AC	grey	<i>YBX3</i>
AC	brown	<i>ZFAND5</i>
AC	grey	<i>ZHX2</i>
AC	blue	<i>ZNF202</i>
AC	blue	<i>ZNF25</i>
AC	blue	<i>ZNF326</i>
AC	blue	<i>ZNF354B</i>
AC	blue	<i>ZNF395</i>
AC	blue	<i>ZNF44</i>
AC	turquoise	<i>ZNF655</i>
AC	blue	<i>ZNF660</i>
AC	blue	<i>ZNF689</i>
AC	blue	<i>ZNF729</i>
AC	blue	<i>ZNF879</i>
AC	blue	<i>ZSCAN25</i>
RE	turquoise	<i>AAK1</i>
RE	blue	<i>ABCC4</i>
RE	turquoise	<i>ABI3</i>
RE	turquoise	<i>ABRACL</i>
RE	blue	<i>ACO1</i>
RE	brown	<i>ACSL1</i>
RE	brown	<i>ACTB</i>
RE	turquoise	<i>ACTG1</i>
RE	turquoise	<i>ACTN4</i>
RE	brown	<i>ADGRE2</i>
RE	grey	<i>ADGRE5</i>
RE	brown	<i>ADGRG3</i>
RE	brown	<i>ADIPOR1</i>
RE	brown	<i>ADM</i>
RE	brown	<i>AGTRAP</i>

RE	grey	AHSP
RE	brown	AIF1
RE	brown	ALAS2
RE	turquoise	ALDOA
RE	grey	ALG11
RE	turquoise	ALKBH7
RE	brown	ALOX5AP
RE	brown	ALPL
RE	grey	AMDHD2
RE	blue	AMIGO1
RE	blue	AMIGO3
RE	blue	AMPH
RE	turquoise	ANAPC11
RE	brown	ANPEP
RE	turquoise	ANXA1
RE	brown	ANXA11
RE	brown	ANXA3
RE	blue	AP1S1
RE	grey	AP2A1
RE	grey	APH1A
RE	grey	APLP2
RE	turquoise	APMAP
RE	turquoise	APOBEC3C
RE	blue	APOC1
RE	turquoise	APRT
RE	brown	AQP9
RE	turquoise	ARAF
RE	grey	ARAP1
RE	turquoise	ARF3
RE	brown	ARHGAP1
RE	blue	ARHGAP33
RE	turquoise	ARHGAP9
RE	turquoise	ARHGDIA
RE	turquoise	ARHGDIIB
RE	grey	ARID3B
RE	brown	ARRB2
RE	blue	ASB16
RE	blue	ATG2A
RE	blue	ATN1
RE	turquoise	ATP5E
RE	turquoise	ATP5G1
RE	turquoise	ATP5G3
RE	turquoise	ATP5I
RE	turquoise	ATP5L
RE	turquoise	ATP5O
RE	brown	ATP6V0B
RE	brown	ATP6V0C
RE	brown	ATP6V0E1
RE	turquoise	ATP6V1F

RE turquoise *ATP6V1G1*  
RE blue *ATRIP*  
RE grey *ATXN2L*  
RE grey *AZU1*  
RE brown *B2M*  
RE brown *B3GNT8*  
RE grey *BAG1*  
RE brown *BAZ1A*  
RE brown *BCL2A1*  
RE brown *BCL2L1*  
RE brown *BCL6*  
RE blue *BCL9*  
RE grey *BHLHE40*  
RE brown *BID*  
RE turquoise *BIN2*  
RE grey *BLCAP*  
RE brown *BLOC1S1*  
RE grey *BLVRB*  
RE blue *BLZF1*  
RE blue *BOD1*  
RE turquoise *BRD2*  
RE turquoise *BRK1*  
RE turquoise *BSG*  
RE turquoise *BTF3*  
RE turquoise *BTG1*  
RE turquoise *BUD31*  
RE blue *BYSL*  
RE blue *BZRAP1*  
RE brown *C10orf54*  
RE turquoise *C11orf31*  
RE turquoise *C11orf98*  
RE turquoise *C12orf10*  
RE turquoise *C12orf57*  
RE turquoise *C14orf2*  
RE brown *C15orf39*  
RE grey *C16orf54*  
RE blue *C17orf98*  
RE grey *C19orf33*  
RE brown *C19orf38*  
RE turquoise *C19orf53*  
RE turquoise *C19orf66*  
RE turquoise *C19orf70*  
RE turquoise *C1QB*  
RE blue *C1QTNF1*  
RE blue *C1orf116*  
RE turquoise *C1orf162*  
RE blue *C1orf64*  
RE blue *C2CD5*  
RE grey *C2orf88*

RE turquoise C4orf3  
RE turquoise C4orf48  
RE brown C5AR1  
RE brown C6orf25  
RE turquoise C6orf48  
RE brown C7orf73  
RE turquoise C9orf16  
RE grey C9orf78  
RE grey CALHM2  
RE turquoise CALM1  
RE brown CAMP  
RE grey CAMTA2  
RE turquoise CAP1  
RE turquoise CAPN1  
RE brown CARD16  
RE brown CASP4  
RE blue CATSPERG  
RE blue CBY3  
RE turquoise CCAR2  
RE blue CCDC120  
RE blue CCDC151  
RE grey CCDC183  
RE grey CCDC97  
RE grey CCL23  
RE turquoise CCL5  
RE grey CCR3  
RE turquoise CCR7  
RE blue CCT6B  
RE brown CD14  
RE grey CD248  
RE turquoise CD27  
RE turquoise CD37  
RE turquoise CD3D  
RE turquoise CD3E  
RE turquoise CD44  
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RE brown CD55  
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RE turquoise CD7  
RE turquoise CD74  
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RE turquoise CD79B  
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RE brown CDA  
RE blue CDC25C

RE turquoise *CDC37*  
RE turquoise *CDK2AP2*  
RE brown *CEACAM1*  
RE brown *CEACAM3*  
RE turquoise *CELF1*  
RE blue *CEP192*  
RE brown *CFD*  
RE turquoise *CFL1*  
RE turquoise *CHCHD2*  
RE grey *CHI3L1*  
RE brown *CHMP2A*  
RE brown *CITED2*  
RE blue *CKAP2*  
RE brown *CLC*  
RE blue *CLCN7*  
RE turquoise *CLEC2B*  
RE brown *CLEC4E*  
RE brown *CLIC1*  
RE turquoise *CLIC3*  
RE turquoise *CLPTM1*  
RE turquoise *CNBP*  
RE turquoise *CNN2*  
RE grey *CNOT1*  
RE grey *CNOT3*  
RE grey *COG1*  
RE turquoise *COMM6*  
RE blue *COPRS*  
RE turquoise *CORO1A*  
RE turquoise *COX4I1*  
RE turquoise *COX5B*  
RE turquoise *COX6A1*  
RE turquoise *COX6B1*  
RE turquoise *COX6C*  
RE turquoise *COX7B*  
RE turquoise *COX7C*  
RE turquoise *COX8A*  
RE brown *CPPED1*  
RE turquoise *CPSF3L*  
RE brown *CPSF7*  
RE brown *CREB5*  
RE turquoise *CRIP1*  
RE brown *CRTC2*  
RE turquoise *CS*  
RE grey *CSF2RB*  
RE brown *CSF3R*  
RE grey *CSK*  
RE turquoise *CSNK2B*  
RE turquoise *CST3*  
RE turquoise *CST7*

RE brown *CSTA*  
RE turquoise *CSTB*  
RE grey *CTDNEP1*  
RE grey *CTDSP1*  
RE turquoise *CTSD*  
RE brown *CTSS*  
RE turquoise *CTSW*  
RE turquoise *CUTA*  
RE turquoise *CWF19L2*  
RE grey *CXCL8*  
RE brown *CXCR1*  
RE brown *CXCR2*  
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RE turquoise *CXCR4*  
RE grey *CXCR5*  
RE grey *CYB5R3*  
RE turquoise *CYBA*  
RE blue *CYP4F3*  
RE brown *CYSTM1*  
RE grey *CYTH1*  
RE grey *CYTH4*  
RE brown *DAZAP2*  
RE blue *DBF4B*  
RE turquoise *DBI*  
RE brown *DCAF12*  
RE turquoise *DCPS*  
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RE turquoise *DNAJB1*  
RE blue *DNAJB5*  
RE blue *DNAJC14*  
RE turquoise *DNAJC15*  
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RE turquoise *DRAP1*  
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RE turquoise *DYNLRB1*  
RE brown *DYNLT1*  
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RE blue *EDAR*  
RE turquoise *EDF1*  
RE turquoise *EEF1A1*  
RE turquoise *EEF1B2*  
RE turquoise *EEF1D*

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RE turquoise *EIF1B*  
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RE turquoise *EIF3G*  
RE turquoise *EIF3H*  
RE turquoise *EIF3K*  
RE turquoise *EIF4G2*  
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RE brown *ELP5*  
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RE turquoise *EPC1*  
RE blue *EPHB1*  
RE grey *EPSTI1*  
RE turquoise *ERP29*  
RE blue *ESRRA*  
RE turquoise *EVL*  
RE turquoise *EWSR1*  
RE blue *EXO5*  
RE turquoise *EXOSC10*  
RE turquoise *EZR*  
RE turquoise *FABP5*  
RE blue *FAM161B*  
RE grey *FAM210B*  
RE blue *FAM220A*  
RE grey *FAM222B*  
RE blue *FAM43A*  
RE turquoise *FAM96B*  
RE blue *FASN*  
RE turquoise *FAU*  
RE grey *FBXO7*  
RE brown *FCER1G*  
RE brown *FCGR1B*  
RE brown *FCGR2A*  
RE brown *FCGRT*  
RE turquoise *FCMR*  
RE turquoise *FCN1*  
RE turquoise *FERMT3*  
RE turquoise *FGFBP2*  
RE brown *FGL2*  
RE brown *FGR*  
RE brown *FKBP1A*  
RE grey *FKBP8*  
RE brown *FLOT2*  
RE brown *FOLR3*

RE brown *FOS*  
RE brown *FPR1*  
RE blue *FSTL4*  
RE brown *FTH1*  
RE brown *FTL*  
RE grey *FUND2*  
RE turquoise *FUS*  
RE turquoise *FXYD5*  
RE brown *FYB*  
RE brown *G0S2*  
RE turquoise *GAA*  
RE brown *GABARAP*  
RE blue *GAGE10*  
RE blue *GAL3ST4*  
RE turquoise *GAPDH*  
RE turquoise *GATA3*  
RE grey *GBA*  
RE grey *GBP5*  
RE brown *GCA*  
RE grey *GDI1*  
RE blue *GFM2*  
RE turquoise *GIMAP4*  
RE turquoise *GIMAP5*  
RE turquoise *GIMAP7*  
RE turquoise *GLIPR1*  
RE brown *GLIPR2*  
RE brown *GLRX*  
RE grey *GM2A*  
RE brown *GMFG*  
RE blue *GNA12*  
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RE blue *GNAZ*  
RE turquoise *GNB2L1*  
RE turquoise *GNG11*  
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RE brown *GNG5*  
RE turquoise *GNLY*  
RE turquoise *GNS*  
RE grey *GP9*  
RE blue *GPR137B*  
RE brown *GPSM3*  
RE turquoise *GPX1*  
RE brown *GRINA*  
RE brown *GRN*  
RE turquoise *GSDMD*  
RE turquoise *GSTK1*  
RE turquoise *GSTP1*  
RE grey *GUK1*  
RE brown *GYPC*

RE turquoise *GZMA*  
RE turquoise *GZMB*  
RE turquoise *GZMH*  
RE turquoise *H2AFJ*  
RE turquoise *H2AFZ*  
RE brown *H3F3A*  
RE grey *H3F3B*  
RE blue *HAS3*  
RE brown *HBA1*  
RE brown *HBA2*  
RE grey *HBB*  
RE grey *HBD*  
RE grey *HBG2*  
RE grey *HBM*  
RE grey *HBQ1*  
RE grey *HBZ*  
RE brown *HCK*  
RE turquoise *HCST*  
RE turquoise *HERPUD1*  
RE turquoise *HIGD2A*  
RE turquoise *HINT1*  
RE turquoise *HINT2*  
RE blue *HIPK2*  
RE turquoise *HIST1H2AE*  
RE brown *HIST1H2BC*  
RE turquoise *HIST1H2BH*  
RE turquoise *HIST1H2BJ*  
RE turquoise *HIST1H2BK*  
RE blue *HIST1H3D*  
RE grey *HIST1H3H*  
RE grey *HIST1H4H*  
RE turquoise *HLA-A*  
RE grey *HLA-B*  
RE grey *HLA-C*  
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RE turquoise *HLA-DPB1*  
RE grey *HLA-DQA1*  
RE grey *HLA-DQA2*  
RE turquoise *HLA-DQB1*  
RE turquoise *HLA-DRA*  
RE grey *HLA-DRB1*  
RE grey *HLA-DRB5*  
RE turquoise *HLA-E*  
RE blue *HLCS*  
RE turquoise *HM13*  
RE turquoise *HMGA1*  
RE turquoise *HMGB1*  
RE turquoise *HMGN1*  
RE turquoise *HMGN2*

RE grey *HMOX1*  
RE turquoise *HNRNPK*  
RE blue *HOXC4*  
RE grey *HP*  
RE brown *HRH2*  
RE grey *HSP90AB1*  
RE turquoise *HSPA8*  
RE grey *HSPA9*  
RE turquoise *HSPB1*  
RE blue *HSPB9*  
RE turquoise *HTRA2*  
RE brown *ICAM3*  
RE grey *ID3*  
RE grey *IER2*  
RE turquoise *IFI27*  
RE brown *IFI30*  
RE turquoise *IFI35*  
RE turquoise *IFI6*  
RE grey *IFIT1*  
RE grey *IFIT2*  
RE grey *IFIT3*  
RE turquoise *IFITM1*  
RE turquoise *IFITM2*  
RE turquoise *IFITM3*  
RE turquoise *IGFLR1*  
RE turquoise *IGLL5*  
RE brown *IGSF6*  
RE turquoise *IL16*  
RE brown *IL1B*  
RE brown *IL1R2*  
RE brown *IL1RN*  
RE blue *IL24*  
RE grey *IL2RB*  
RE turquoise *IL2RG*  
RE turquoise *IL32*  
RE grey *IMPA2*  
RE brown *IMPDH1*  
RE blue *IRAK3*  
RE blue *IRF2BPL*  
RE grey *IRF4*  
RE grey *IRF7*  
RE grey *ISG15*  
RE turquoise *ISG20*  
RE turquoise *IST1*  
RE turquoise *ITGAL*  
RE grey *ITGB2*  
RE brown *ITM2B*  
RE grey *ITM2C*  
RE grey *IWS1*

RE grey *JAK3*  
RE turquoise *JCHAIN*  
RE brown *JUNB*  
RE blue *KCNK17*  
RE turquoise *KIAA0040*  
RE grey *KIAA1191*  
RE grey *KLF2*  
RE blue *KLHL14*  
RE blue *KLHL26*  
RE turquoise *KLRB1*  
RE turquoise *KXD1*  
RE turquoise *LAIR1*  
RE turquoise *LAIR2*  
RE brown *LAMP2*  
RE turquoise *LAMTOR1*  
RE brown *LAMTOR4*  
RE brown *LAPTM5*  
RE turquoise *LAT*  
RE turquoise *LBH*  
RE grey *LBHD1*  
RE grey *LCN2*  
RE brown *LCP2*  
RE turquoise *LDHB*  
RE turquoise *LEF1*  
RE turquoise *LENG8*  
RE turquoise *LGALS1*  
RE grey *LGALS2*  
RE brown *LGALS3*  
RE grey *LGALS9*  
RE turquoise *LILRA1*  
RE brown *LILRA2*  
RE brown *LILRA3*  
RE brown *LILRA5*  
RE grey *LILRB1*  
RE brown *LILRB2*  
RE turquoise *LIMD2*  
RE grey *LIMS1*  
RE brown *LITAF*  
RE grey *LPAR5*  
RE turquoise *LPXN*  
RE brown *LRG1*  
RE turquoise *LRP10*  
RE turquoise *LSM7*  
RE brown *LSP1*  
RE brown *LST1*  
RE turquoise *LTB*  
RE turquoise *LY6E*  
RE turquoise *LY86*  
RE turquoise *LY9*

RE brown LY96  
RE grey LYPD2  
RE turquoise LYZ  
RE turquoise MAGED1  
RE turquoise MAL  
RE grey MAP3K7CL  
RE grey MAP4K1  
RE grey MAPKAPK3  
RE blue MAPKAPK5  
RE blue MARVELD2  
RE grey MBD6  
RE brown MBOAT7  
RE blue MECOM  
RE turquoise MIEN1  
RE turquoise MIF  
RE brown MKL1  
RE brown MMP25  
RE brown MMP9  
RE brown MNDA  
RE blue MNT  
RE grey MRPL21  
RE turquoise MRPL41  
RE turquoise MRPL52  
RE turquoise MRPL57  
RE turquoise MRPS21  
RE turquoise MRPS24  
RE blue MRVI1  
RE brown MS4A6A  
RE turquoise MSN  
RE brown MSRB1  
RE turquoise MT1E  
RE turquoise MT1X  
RE turquoise MT2A  
RE brown MTHFS  
RE brown MTRNR2L1  
RE brown MTRNR2L2  
RE brown MTRNR2L8  
RE brown MTRNR2L9  
RE grey MX1  
RE brown MX2  
RE brown MYADM  
RE turquoise MYL12A  
RE turquoise MYL12B  
RE grey MYL4  
RE brown MYL6  
RE grey MYL9  
RE grey MYO1F  
RE turquoise MZB1  
RE turquoise NACA

RE brown *NADK*  
RE brown *NAIP*  
RE brown *NARF*  
RE blue *NBL1*  
RE brown *NCF2*  
RE brown *NCF4*  
RE turquoise *NDUFA11*  
RE turquoise *NDUFA12*  
RE turquoise *NDUFA13*  
RE turquoise *NDUFA2*  
RE turquoise *NDUFA3*  
RE turquoise *NDUFA4*  
RE turquoise *NDUFAF3*  
RE turquoise *NDUFB11*  
RE turquoise *NDUFB2*  
RE turquoise *NDUFB4*  
RE turquoise *NDUFB7*  
RE turquoise *NDUFB8*  
RE turquoise *NDUFB9*  
RE turquoise *NDUFS3*  
RE turquoise *NDUFS5*  
RE turquoise *NDUFS7*  
RE turquoise *NDUFV2*  
RE brown *NFAM1*  
RE grey *NFATC3*  
RE brown *NFE2*  
RE turquoise *NHP2*  
RE turquoise *NHP2L1*  
RE brown *NINJ1*  
RE grey *NIPAL2*  
RE grey *NIPSNAP1*  
RE turquoise *NKG7*  
RE brown *NKIRAS2*  
RE grey *NLRP1*  
RE turquoise *NME2*  
RE turquoise *NME3*  
RE turquoise *NMT1*  
RE turquoise *NOB1*  
RE turquoise *NOLC1*  
RE brown *NOP10*  
RE turquoise *NOSIP*  
RE brown *NPC2*  
RE brown *NQO2*  
RE grey *NR1D1*  
RE blue *NR3C2*  
RE turquoise *NSA2*  
RE turquoise *NUDCD3*  
RE brown *NUMB*  
RE grey *NUP210*

RE turquoise *NUP85*  
RE turquoise *OAS1*  
RE grey *OASL*  
RE brown *OAZ1*  
RE brown *OAZ2*  
RE turquoise *OCIAD2*  
RE blue *OLIG1*  
RE grey *OPTN*  
RE grey *ORMDL3*  
RE brown *OSBP2*  
RE brown *OSM*  
RE turquoise *CST4*  
RE turquoise *P4HB*  
RE turquoise *PABPC1*  
RE turquoise *PARK7*  
RE turquoise *PARP8*  
RE turquoise *PCED1B*  
RE blue *PCYT2*  
RE blue *PDE5A*  
RE brown *PDLIM7*  
RE grey *PDZK1IP1*  
RE grey *PEA15*  
RE turquoise *PEBP1*  
RE turquoise *PEF1*  
RE turquoise *PET100*  
RE turquoise *PF4*  
RE grey *PF4V1*  
RE turquoise *PFDN5*  
RE turquoise *PFN1*  
RE brown *PGLYRP1*  
RE grey *PHACTR4*  
RE blue *PHC1*  
RE brown *PHF21A*  
RE blue *PHLDB2*  
RE brown *PI3*  
RE grey *PIK3CD*  
RE blue *PIK3CG*  
RE turquoise *PIK3IP1*  
RE brown *PILRA*  
RE turquoise *PKM*  
RE brown *PLBD1*  
RE grey *PLCB2*  
RE grey *PLD3*  
RE blue *PLEKHG2*  
RE blue *PLEKHG5*  
RE brown *PLP2*  
RE blue *PLS1*  
RE grey *PLSCR1*  
RE turquoise *PLSCR3*

RE turquoise *PML*  
RE turquoise *POLR2I*  
RE turquoise *POLR2L*  
RE turquoise *POU2AF1*  
RE turquoise *POU2F2*  
RE grey *PPBP*  
RE turquoise *PPDPF*  
RE turquoise *PPIA*  
RE turquoise *PPIB*  
RE brown *PPP1R18*  
RE blue *PPP2R5A*  
RE turquoise *PRAF2*  
RE turquoise *PRAM1*  
RE blue *PRDM4*  
RE brown *PRDX6*  
RE grey *PRKCSH*  
RE blue *PRMT3*  
RE brown *PROK2*  
RE grey *PRPF8*  
RE brown *PRR13*  
RE turquoise *PRR14*  
RE blue *PRRT3*  
RE grey *PRSS23*  
RE grey *PSAP*  
RE brown *PSENEN*  
RE turquoise *PSMB10*  
RE turquoise *PSMB3*  
RE turquoise *PSMB5*  
RE turquoise *PSMB8*  
RE brown *PSMB9*  
RE turquoise *PSME1*  
RE turquoise *PSME2*  
RE grey *PSMF1*  
RE brown *PTAFR*  
RE turquoise *PTBP1*  
RE turquoise *PTGDS*  
RE grey *PTGS1*  
RE turquoise *PTMA*  
RE turquoise *PTPRC*  
RE turquoise *PTPRCAP*  
RE turquoise *PTTG1*  
RE brown *PXN*  
RE brown *PYCARD*  
RE grey *PYGO2*  
RE turquoise *QARS*  
RE brown *QPCT*  
RE grey *QRICH1*  
RE brown *RAB24*  
RE brown *RAB5C*

RE brown *RAB7A*  
RE turquoise *RABAC1*  
RE turquoise *RAC2*  
RE turquoise *RALY*  
RE grey *RAP1GAP*  
RE grey *RARA*  
RE turquoise *RARRES3*  
RE brown *RASGRP4*  
RE grey *RAVER1*  
RE turquoise *RBM8A*  
RE brown *RBP7*  
RE turquoise *RCSD1*  
RE turquoise *RELA*  
RE blue *REPS1*  
RE turquoise *RETN*  
RE turquoise *RGS10*  
RE brown *RGS2*  
RE brown *RHOA*  
RE grey *RHOB*  
RE turquoise *RHOF*  
RE brown *RHOG*  
RE turquoise *RNASE6*  
RE brown *RNASET2*  
RE blue *RNA\_SPIKE\_ERCC-00040*  
RE blue *RNA\_SPIKE\_ERCC-00067*  
RE grey *RNF145*  
RE turquoise *RNF181*  
RE grey *RNF26*  
RE turquoise *ROMO1*  
RE brown *ROPN1L*  
RE turquoise *RPL10*  
RE turquoise *RPL10A*  
RE turquoise *RPL11*  
RE turquoise *RPL12*  
RE turquoise *RPL13*  
RE turquoise *RPL13A*  
RE turquoise *RPL14*  
RE turquoise *RPL15*  
RE turquoise *RPL18*  
RE turquoise *RPL18A*  
RE turquoise *RPL19*  
RE turquoise *RPL21*  
RE turquoise *RPL22*  
RE turquoise *RPL23*  
RE turquoise *RPL23A*  
RE turquoise *RPL24*  
RE turquoise *RPL26*  
RE turquoise *RPL27A*  
RE turquoise *RPL28*

RE turquoise *RPL29*  
RE turquoise *RPL3*  
RE turquoise *RPL30*  
RE turquoise *RPL31*  
RE turquoise *RPL32*  
RE turquoise *RPL34*  
RE turquoise *RPL35*  
RE turquoise *RPL35A*  
RE turquoise *RPL36*  
RE turquoise *RPL36AL*  
RE turquoise *RPL37*  
RE turquoise *RPL37A*  
RE turquoise *RPL38*  
RE turquoise *RPL39*  
RE turquoise *RPL4*  
RE turquoise *RPL41*  
RE turquoise *RPL5*  
RE turquoise *RPL6*  
RE turquoise *RPL7*  
RE turquoise *RPL7A*  
RE turquoise *RPL8*  
RE turquoise *RPL9*  
RE turquoise *RPLP0*  
RE turquoise *RPLP1*  
RE turquoise *RPLP2*  
RE turquoise *RPS11*  
RE turquoise *RPS12*  
RE turquoise *RPS13*  
RE turquoise *RPS14*  
RE turquoise *RPS15*  
RE turquoise *RPS15A*  
RE turquoise *RPS16*  
RE turquoise *RPS18*  
RE turquoise *RPS19*  
RE turquoise *RPS2*  
RE turquoise *RPS20*  
RE turquoise *RPS21*  
RE turquoise *RPS23*  
RE turquoise *RPS24*  
RE turquoise *RPS25*  
RE grey *RPS26*  
RE turquoise *RPS27*  
RE turquoise *RPS27A*  
RE turquoise *RPS27L*  
RE turquoise *RPS28*  
RE turquoise *RPS29*  
RE turquoise *RPS3*  
RE turquoise *RPS3A*  
RE turquoise *RPS4X*

RE grey *RPS4Y1*  
RE turquoise *RPS5*  
RE turquoise *RPS6*  
RE turquoise *RPS7*  
RE turquoise *RPS8*  
RE turquoise *RPS9*  
RE turquoise *RPSA*  
RE grey *RSAD2*  
RE turquoise *RSBN1L*  
RE blue *RSPH6A*  
RE brown *RTN3*  
RE turquoise *RTP4*  
RE grey *RUNX3*  
RE blue *RXRB*  
RE turquoise *S100A10*  
RE brown *S100A11*  
RE brown *S100A12*  
RE brown *S100A4*  
RE brown *S100A6*  
RE brown *S100A8*  
RE brown *S100A9*  
RE turquoise *S100B*  
RE brown *S100P*  
RE turquoise *S1PR1*  
RE grey *SAP25*  
RE brown *SASH3*  
RE brown *SAT1*  
RE blue *SAV1*  
RE turquoise *SCAMP2*  
RE grey *SCGB3A1*  
RE turquoise *SCO2*  
RE turquoise *SEC61B*  
RE turquoise *SEC61G*  
RE turquoise *SEC62*  
RE brown *SECTM1*  
RE grey *SELENBP1*  
RE brown *SELL*  
RE brown *SELPLG*  
RE grey *SEMA4A*  
RE blue *SENP3*  
RE turquoise *SEPT6*  
RE grey *SEPT9*  
RE turquoise *SEPW1*  
RE brown *SERF2*  
RE turquoise *SERP1*  
RE brown *SERPINA1*  
RE brown *SERPINB1*  
RE brown *SERPING1*  
RE grey *SF1*

RE grey SF3A1  
RE turquoise SF3A2  
RE turquoise SF3B2  
RE turquoise SF3B6  
RE grey SFPQ  
RE turquoise SH2D2A  
RE turquoise SH3BGRl3  
RE turquoise SHISA5  
RE turquoise SHMT2  
RE brown SIRPB2  
RE brown SLC11A1  
RE blue SLC25A15  
RE turquoise SLC25A3  
RE grey SLC25A37  
RE grey SLC25A39  
RE grey SLC29A1  
RE turquoise SLC35A4  
RE blue SLC38A7  
RE grey SLC44A2  
RE blue SLC8A1  
RE brown SLPI  
RE grey SMAP2  
RE blue SMARCC1  
RE turquoise SMDT1  
RE grey SMIM1  
RE turquoise SMIM10L1  
RE grey SMPD1  
RE grey SNAI3  
RE brown SNCA  
RE turquoise SNRPB  
RE turquoise SNRPD2  
RE turquoise SNRPD3  
RE turquoise SOD1  
RE brown SOD2  
RE turquoise SOX4  
RE turquoise SP110  
RE grey SPDYE1  
RE brown SPI1  
RE turquoise SPIB  
RE turquoise SPN  
RE blue SPOCK3  
RE brown SRGN  
RE turquoise SRP14  
RE turquoise SRRM1  
RE turquoise SSR2  
RE turquoise SSR4  
RE grey ST6GAL1  
RE grey ST6GALNAC6  
RE blue STARD9

RE grey *STAT2*  
RE turquoise *STMN1*  
RE blue *STRN3*  
RE turquoise *SUB1*  
RE turquoise *SUMO2*  
RE blue *SUSD6*  
RE blue *SYNGR4*  
RE grey *SYVN1*  
RE turquoise *SZRD1*  
RE grey *TAGAP*  
RE brown *TAGLN2*  
RE brown *TALDO1*  
RE turquoise *TAPBP*  
RE grey *TAPBPL*  
RE turquoise *TARBP2*  
RE grey *TBC1D13*  
RE turquoise *TBCA*  
RE grey *TBL3*  
RE turquoise *TCEB2*  
RE grey *TCERG1*  
RE turquoise *TCF25*  
RE turquoise *TCF7*  
RE brown *TCIRG1*  
RE grey *TCL1A*  
RE turquoise *TECR*  
RE turquoise *TESPA1*  
RE grey *TFE3*  
RE brown *TGFB1*  
RE blue *TGFBR2*  
RE brown *THEMIS2*  
RE grey *TICAM1*  
RE blue *TIGD4*  
RE turquoise *TIMM10*  
RE turquoise *TIMM13*  
RE brown *TIMP1*  
RE blue *TIPARP*  
RE turquoise *TMA7*  
RE brown *TMC4*  
RE turquoise *TMEM109*  
RE brown *TMEM120A*  
RE brown *TMEM140*  
RE turquoise *TMEM176A*  
RE turquoise *TMEM176B*  
RE blue *TMEM198*  
RE turquoise *TMEM219*  
RE turquoise *TMEM256*  
RE turquoise *TMEM258*  
RE blue *TMEM8A*  
RE turquoise *TMSB10*

RE turquoise *TMSB4X*  
RE turquoise *TMUB1*  
RE grey *TNFAIP6*  
RE brown *TNFRSF10C*  
RE blue *TNFRSF13C*  
RE brown *TNFRSF1A*  
RE brown *TNFRSF1B*  
RE brown *TNFSF13*  
RE brown *TNFSF13B*  
RE grey *TNIP1*  
RE grey *TOB1*  
RE turquoise *TOMM6*  
RE turquoise *TOMM7*  
RE turquoise *TPI1*  
RE turquoise *TPT1*  
RE turquoise *TRAF3IP3*  
RE grey *TRAP1*  
RE brown *TRAPP/C5*  
RE brown *TREM1*  
RE turquoise *TREX1*  
RE grey *TRIM27*  
RE blue *TRMT44*  
RE turquoise *TSC22D3*  
RE brown *TSC22D4*  
RE brown *TSEN34*  
RE blue *TSHZ1*  
RE brown *TSPO*  
RE turquoise *TSTD1*  
RE brown *TUBA1A*  
RE turquoise *TUBA1B*  
RE grey *TUBB2A*  
RE brown *TXN*  
RE brown *TYMP*  
RE brown *TYROBP*  
RE grey *U2AF2*  
RE grey *UBA52*  
RE grey *UBALD1*  
RE turquoise *UBASH3A*  
RE brown *UBB*  
RE turquoise *UBC*  
RE turquoise *UBE2C*  
RE brown *UBE2D1*  
RE turquoise *UBE2D2*  
RE brown *UBE2D3*  
RE turquoise *UBE2L6*  
RE turquoise *UBL5*  
RE turquoise *UCP2*  
RE turquoise *UQCR10*  
RE turquoise *UQCR11*

RE turquoise *UQCRB*  
RE turquoise *UQCRH*  
RE turquoise *UQCRQ*  
RE turquoise *USMG5*  
RE turquoise *VAMP2*  
RE turquoise *VAMP5*  
RE turquoise *VAMP8*  
RE brown *VASP*  
RE turquoise *VDAC2*  
RE grey *VDR*  
RE brown *VIM*  
RE turquoise *VPREB3*  
RE turquoise *VPS28*  
RE grey *VPS37B*  
RE brown *VSTM1*  
RE grey *WARS*  
RE brown *WAS*  
RE brown *WASF2*  
RE grey *WBP1L*  
RE brown *WBP2*  
RE turquoise *WDR83OS*  
RE brown *WIPF1*  
RE grey *WWP2*  
RE turquoise *YWHAB*  
RE turquoise *ZAP70*  
RE blue *ZBTB10*  
RE blue *ZBTB16*  
RE blue *ZCCHC3*  
RE brown *ZFP36*  
RE brown *ZFP36L1*  
RE grey *ZFP36L2*  
RE grey *ZFR*  
RE blue *ZIK1*  
RE grey *ZNF260*  
RE blue *ZNF304*  
RE turquoise *ZNF384*  
RE grey *ZNF385A*  
RE turquoise *ZNF414*  
RE blue *ZNF497*  
RE grey *ZNF592*  
RE blue *ZNF614*  
RE blue *ZNF619*  
RE blue *ZNF629*  
RE blue *ZNF639*  
RE blue *ZNF646*  
RE turquoise *ZNF706*  
RE turquoise *ZNF830*  
RE blue *ZNF835*  
RE blue *ZNF843*

RE turquoise *ZNHIT1*  
RE turquoise *ZYX*  
RE blue *AACS*  
RE blue *ABCB4*  
RE blue *ABCB6*  
RE blue *ABCD3*  
RE blue *ABCE1*  
RE turquoise *ABHD14B*  
RE turquoise *ABTB1*  
RE grey *ACADVL*  
RE turquoise *ACAP1*  
RE grey *ACKR1*  
RE blue *ACLY*  
RE turquoise *ACO2*  
RE turquoise *ACOT13*  
RE turquoise *ACOT8*  
RE turquoise *ACP1*  
RE grey *ACSL5*  
RE grey *ACTN1*  
RE turquoise *ACTR1A*  
RE grey *ACTR3*  
RE blue *ADAM15*  
RE grey *ADAM8*  
RE grey *ADAP1*  
RE grey *ADAR*  
RE brown *ADGRE3*  
RE grey *ADK*  
RE grey *ADM5*  
RE grey *ADORA2A*  
RE grey *AFF1*  
RE turquoise *AFF3*  
RE blue *AFF4*  
RE blue *AGAP3*  
RE blue *AGRP*  
RE grey *AGTPBP1*  
RE grey *AIM2*  
RE turquoise *AIMP2*  
RE turquoise *AIP*  
RE grey *AK1*  
RE turquoise *AK2*  
RE turquoise *AKIRIN2*  
RE turquoise *AKR1A1*  
RE turquoise *AKR1B1*  
RE brown *AKT1S1*  
RE brown *ALDH2*  
RE grey *ALDH6A1*  
RE grey *ALG12*  
RE blue *ALKBH5*  
RE grey *ALOX15*

RE	grey	<i>ALOX5</i>
RE	grey	<i>ALPK1</i>
RE	brown	<i>AMICA1</i>
RE	turquoise	<i>ANAPC15</i>
RE	turquoise	<i>ANAPC16</i>
RE	grey	<i>ANK1</i>
RE	blue	<i>ANKMY2</i>
RE	grey	<i>ANKRD22</i>
RE	blue	<i>ANKRD23</i>
RE	blue	<i>ANKRD60</i>
RE	blue	<i>ANKZF1</i>
RE	grey	<i>ANO6</i>
RE	blue	<i>ANO9</i>
RE	turquoise	<i>ANP32B</i>
RE	turquoise	<i>ANXA2</i>
RE	turquoise	<i>ANXA2R</i>
RE	turquoise	<i>ANXA5</i>
RE	turquoise	<i>ANXA6</i>
RE	grey	<i>AOAH</i>
RE	grey	<i>AP2A2</i>
RE	turquoise	<i>AP2M1</i>
RE	turquoise	<i>AP2S1</i>
RE	blue	<i>AP4E1</i>
RE	grey	<i>AP5Z1</i>
RE	grey	<i>APBB1IP</i>
RE	turquoise	<i>APEX1</i>
RE	grey	<i>APH1B</i>
RE	grey	<i>APOA1BP</i>
RE	blue	<i>APOBEC3B</i>
RE	turquoise	<i>APOBEC3H</i>
RE	grey	<i>APOL1</i>
RE	turquoise	<i>APOL6</i>
RE	blue	<i>AREL1</i>
RE	turquoise	<i>ARF1</i>
RE	turquoise	<i>ARF4</i>
RE	brown	<i>ARF5</i>
RE	grey	<i>ARFGAP2</i>
RE	brown	<i>ARG1</i>
RE	turquoise	<i>ARGLU1</i>
RE	blue	<i>ARHGAP19</i>
RE	turquoise	<i>ARHGEF1</i>
RE	grey	<i>ARHGEF2</i>
RE	blue	<i>ARHGEF28</i>
RE	turquoise	<i>ARHGEF3</i>
RE	blue	<i>ARID1A</i>
RE	turquoise	<i>ARID5A</i>
RE	turquoise	<i>ARL11</i>
RE	turquoise	<i>ARL2</i>
RE	turquoise	<i>ARL6IP4</i>

RE brown *ARPC3*  
RE brown *ARPC5*  
RE blue *ARPP21*  
RE brown *ARSA*  
RE turquoise *ASAHI*  
RE turquoise *ASB8*  
RE grey *ASCC2*  
RE turquoise *ASGR2*  
RE turquoise *ASNA1*  
RE grey *ASPH*  
RE blue *ASZ1*  
RE blue *ATAD3C*  
RE blue *ATF3*  
RE turquoise *ATF5*  
RE turquoise *ATF6B*  
RE turquoise *ATF7IP2*  
RE blue *ATG14*  
RE grey *ATG16L2*  
RE blue *ATG2B*  
RE brown *ATG3*  
RE grey *ATG9A*  
RE turquoise *ATOX1*  
RE blue *ATP2A3*  
RE turquoise *ATP5A1*  
RE turquoise *ATP5B*  
RE turquoise *ATP5C1*  
RE turquoise *ATP5F1*  
RE turquoise *ATP5H*  
RE turquoise *ATP5J*  
RE turquoise *ATP6AP1*  
RE brown *ATP6V0D1*  
RE blue *ATP8B2*  
RE blue *ATP8B3*  
RE turquoise *ATPIF1*  
RE blue *ATR*  
RE turquoise *ATRAID*  
RE grey *ATXN7L3B*  
RE turquoise *AUP1*  
RE turquoise *AURKAIP1*  
RE blue *B3GNT7*  
RE grey *B4GALT7*  
RE turquoise *B9D2*  
RE blue *BAG3*  
RE turquoise *BANF1*  
RE grey *BASP1*  
RE turquoise *BATF*  
RE blue *BATF2*  
RE grey *BBX*  
RE turquoise *BCKDHA*

RE	blue	<i>BCL3</i>
RE	blue	<i>BEST3</i>
RE	grey	<i>BET1L</i>
RE	turquoise	<i>BEX2</i>
RE	turquoise	<i>BIRC3</i>
RE	grey	<i>BLMH</i>
RE	turquoise	<i>BLOC1S2</i>
RE	turquoise	<i>BLVRA</i>
RE	blue	<i>BMPER</i>
RE	blue	<i>BMS1</i>
RE	brown	<i>BNIP3L</i>
RE	blue	<i>BNIPL</i>
RE	grey	<i>BPI</i>
RE	grey	<i>BRD8</i>
RE	brown	<i>BST1</i>
RE	turquoise	<i>BST2</i>
RE	turquoise	<i>BTG2</i>
RE	turquoise	<i>BTLA</i>
RE	blue	<i>BTN2A2</i>
RE	turquoise	<i>BTN3A2</i>
RE	grey	<i>BTN3A3</i>
RE	brown	<i>BTNL8</i>
RE	turquoise	<i>BUB3</i>
RE	blue	<i>C10orf10</i>
RE	turquoise	<i>C10orf32</i>
RE	blue	<i>C10orf82</i>
RE	turquoise	<i>C11orf21</i>
RE	turquoise	<i>C11orf24</i>
RE	grey	<i>C11orf54</i>
RE	turquoise	<i>C11orf71</i>
RE	turquoise	<i>C12orf75</i>
RE	blue	<i>C12orf77</i>
RE	turquoise	<i>C14orf119</i>
RE	turquoise	<i>C14orf166</i>
RE	blue	<i>C14orf28</i>
RE	blue	<i>C14orf80</i>
RE	blue	<i>C15orf48</i>
RE	turquoise	<i>C15orf61</i>
RE	turquoise	<i>C16orf13</i>
RE	turquoise	<i>C17orf49</i>
RE	turquoise	<i>C17orf62</i>
RE	turquoise	<i>C17orf89</i>
RE	grey	<i>C19orf35</i>
RE	turquoise	<i>C19orf60</i>
RE	turquoise	<i>C1QA</i>
RE	turquoise	<i>C1QBP</i>
RE	grey	<i>C1QC</i>
RE	brown	<i>C1RL</i>
RE	blue	<i>C1orf159</i>

RE turquoise C1orf43  
RE brown C20orf24  
RE turquoise C20orf27  
RE blue C21orf62  
RE blue C2CD3  
RE blue C2orf69  
RE turquoise C3AR1  
RE grey C4orf46  
RE turquoise C6orf1  
RE turquoise C6orf226  
RE turquoise C8orf59  
RE turquoise C9orf114  
RE turquoise C9orf142  
RE turquoise C9orf85  
RE turquoise C9orf89  
RE brown CA1  
RE blue CA13  
RE brown CA2  
RE brown CA4  
RE blue CABIN1  
RE blue CACTIN  
RE turquoise CACYBP  
RE brown CALM2  
RE turquoise CALM3  
RE turquoise CALML4  
RE grey CALR  
RE blue CAMKK2  
RE grey CANT1  
RE turquoise CAPG  
RE turquoise CAPZB  
RE blue CARD11  
RE grey CARD17  
RE turquoise CARD8  
RE grey CASC3  
RE brown CASP1  
RE blue CASP5  
RE grey CASP8  
RE brown CASS4  
RE grey CAT  
RE grey CBLL1  
RE turquoise CBR1  
RE turquoise CCDC101  
RE turquoise CCDC109B  
RE blue CCDC112  
RE blue CCDC154  
RE turquoise CCDC167  
RE grey CCDC176  
RE grey CCDC25  
RE blue CCDC3

RE turquoise *CCDC53*  
RE blue *CCDC6*  
RE blue *CCDC71L*  
RE blue *CCDC83*  
RE blue *CCL2*  
RE grey *CCL28*  
RE grey *CCL3*  
RE grey *CCL4*  
RE blue *CCNA1*  
RE turquoise *CCNB1*  
RE turquoise *CCND3*  
RE brown *CCNDBP1*  
RE blue *CCNG2*  
RE grey *CCNI*  
RE turquoise *CCNK*  
RE turquoise *CCNL1*  
RE brown *CCR1*  
RE turquoise *CCT4*  
RE turquoise *CD164*  
RE blue *CD177*  
RE grey *CD19*  
RE turquoise *CD24*  
RE grey *CD247*  
RE grey *CD274*  
RE brown *CD300A*  
RE turquoise *CD320*  
RE grey *CD33*  
RE turquoise *CD38*  
RE turquoise *CD3G*  
RE turquoise *CD59*  
RE turquoise *CD6*  
RE turquoise *CD69*  
RE grey *CD82*  
RE grey *CD83*  
RE turquoise *CD8B*  
RE turquoise *CDC123*  
RE turquoise *CDC20*  
RE blue *CDC20B*  
RE grey *CDC25B*  
RE turquoise *CDC42*  
RE brown *CDC42EP2*  
RE turquoise *CDC42EP3*  
RE turquoise *CDC42SE1*  
RE blue *CDCA5*  
RE blue *CDH7*  
RE blue *CDK1*  
RE blue *CDK12*  
RE blue *CDK3*  
RE brown *CDKN1A*

RE grey *CDKN1C*  
RE turquoise *CEACAM21*  
RE brown *CEACAM4*  
RE grey *CEACAM7*  
RE grey *CEBPB*  
RE brown *CEBD*  
RE turquoise *CEBPG*  
RE turquoise *CECR1*  
RE blue *CEP295*  
RE blue *CES1*  
RE blue *CFAP126*  
RE turquoise *CFLAR*  
RE brown *CFP*  
RE turquoise *CHCHD1*  
RE turquoise *CHCHD5*  
RE grey *CHERP*  
RE turquoise *CHI3L2*  
RE brown *CHIC2*  
RE brown *CHMP3*  
RE blue *CHMP4A*  
RE turquoise *CHMP5*  
RE brown *CHP1*  
RE blue *CHPF2*  
RE grey *CHRM3*  
RE brown *CHST15*  
RE blue *CHURC1-FNTB*  
RE turquoise *CIB1*  
RE grey *CIITA*  
RE grey *CIR1*  
RE turquoise *CIRBP*  
RE turquoise *CISD3*  
RE grey *CISH*  
RE blue *CKAP5*  
RE blue *CLCN1*  
RE grey *CLEC10A*  
RE brown *CLEC12A*  
RE blue *CLEC17A*  
RE grey *CLEC1B*  
RE brown *CLEC4A*  
RE brown *CLEC4D*  
RE blue *CLEC5A*  
RE brown *CLEC7A*  
RE blue *CLEC9A*  
RE blue *CLIP3*  
RE grey *CLN6*  
RE turquoise *CLTA*  
RE turquoise *CLU*  
RE blue *CLUAP1*  
RE blue *CMBL*

RE turquoise *CMTM5*  
RE grey *CMTM6*  
RE turquoise *CNIH4*  
RE blue *CNKS1*  
RE grey *CNPPD1*  
RE turquoise *CNPY2*  
RE turquoise *CNPY3*  
RE blue *CNTNAP3*  
RE turquoise *COA3*  
RE turquoise *COA4*  
RE turquoise *COA6*  
RE blue *COCH*  
RE grey *COG3*  
RE turquoise *COMMD1*  
RE turquoise *COMMD4*  
RE turquoise *COMTD1*  
RE turquoise *COPE*  
RE turquoise *COPS5*  
RE turquoise *COPZ1*  
RE turquoise *COQ4*  
RE turquoise *COX14*  
RE turquoise *COX16*  
RE turquoise *COX17*  
RE turquoise *COX5A*  
RE blue *COX7A1*  
RE turquoise *COX7A2L*  
RE blue *CPT1B*  
RE grey *CPVL*  
RE blue *CREBRF*  
RE grey *CREM*  
RE blue *CRISP2*  
RE brown *CRISPLD2*  
RE grey *CRKL*  
RE grey *CRTC3*  
RE blue *CSDC2*  
RE blue *CSE1L*  
RE grey *CSF1R*  
RE turquoise *CSNK1A1*  
RE grey *CSNK1D*  
RE turquoise *CSRP1*  
RE grey *CTC1*  
RE brown *CTSA*  
RE grey *CTSB*  
RE turquoise *CTSC*  
RE turquoise *CTSH*  
RE turquoise *CUEDC2*  
RE grey *CUL4A*  
RE turquoise *CWC25*  
RE brown *CXCL1*

RE	grey	<i>CXCL10</i>
RE	brown	<i>CXCL16</i>
RE	blue	<i>CXCL17</i>
RE	grey	<i>CYBB</i>
RE	turquoise	<i>CYCS</i>
RE	blue	<i>CYP11A1</i>
RE	blue	<i>CYP2R1</i>
RE	blue	<i>CYP4F22</i>
RE	turquoise	<i>CYTIP</i>
RE	grey	<i>DAPP1</i>
RE	grey	<i>DARS</i>
RE	turquoise	<i>DAXX</i>
RE	grey	<i>DCLRE1B</i>
RE	grey	<i>DCP2</i>
RE	grey	<i>DCTN1</i>
RE	turquoise	<i>DCTN2</i>
RE	turquoise	<i>DCTN3</i>
RE	turquoise	<i>DCTPP1</i>
RE	turquoise	<i>DCXR</i>
RE	turquoise	<i>DDA1</i>
RE	grey	<i>DDIT3</i>
RE	grey	<i>DDIT4</i>
RE	blue	<i>DDX11</i>
RE	grey	<i>DDX17</i>
RE	turquoise	<i>DDX39A</i>
RE	turquoise	<i>DDX39B</i>
RE	turquoise	<i>DDX5</i>
RE	grey	<i>DDX50</i>
RE	turquoise	<i>DDX56</i>
RE	grey	<i>DDX58</i>
RE	blue	<i>DDX60</i>
RE	brown	<i>DDX60L</i>
RE	grey	<i>DEDD2</i>
RE	turquoise	<i>DEF6</i>
RE	turquoise	<i>DEF8</i>
RE	grey	<i>DEFA4</i>
RE	turquoise	<i>DENND1C</i>
RE	blue	<i>DEPDC4</i>
RE	turquoise	<i>DESI1</i>
RE	blue	<i>DFFB</i>
RE	blue	<i>DFNB31</i>
RE	brown	<i>DGAT2</i>
RE	blue	<i>DGAT2L6</i>
RE	grey	<i>DGCR2</i>
RE	turquoise	<i>DGCR6L</i>
RE	turquoise	<i>DGKA</i>
RE	turquoise	<i>DGUOK</i>
RE	blue	<i>DHRS11</i>
RE	brown	<i>DHRS7</i>

RE grey *DHRS9*  
RE blue *DHX8*  
RE blue *DISC1*  
RE turquoise *DLST*  
RE blue *DMD*  
RE blue *DMRT1*  
RE brown *DMTN*  
RE blue *DNAAF2*  
RE turquoise *DNAJA1*  
RE turquoise *DNAJB11*  
RE grey *DNAJC1*  
RE turquoise *DNAJC19*  
RE turquoise *DNAJC4*  
RE grey *DNASE1L1*  
RE grey *DNASE2*  
RE blue *DNM2*  
RE turquoise *DNPH1*  
RE brown *DNTTIP1*  
RE turquoise *DOK2*  
RE brown *DOK3*  
RE blue *DOLPP1*  
RE turquoise *DPEP2*  
RE turquoise *DPF2*  
RE brown *DPH3*  
RE turquoise *DPM3*  
RE turquoise *DPY30*  
RE grey *DR1*  
RE turquoise *DRAM2*  
RE grey *DROSHA*  
RE grey *DUS2*  
RE brown *DUSP1*  
RE turquoise *DUSP23*  
RE turquoise *DUSP3*  
RE brown *DUSP6*  
RE turquoise *DUT*  
RE turquoise *DYNC1I2*  
RE turquoise *EBP*  
RE turquoise *ECH1*  
RE blue *EDEM1*  
RE turquoise *EEF1E1*  
RE grey *EFCAB11*  
RE blue *EFCAB5*  
RE grey *EGLN2*  
RE blue *EGR1*  
RE grey *EHMT1*  
RE grey *EIF2AK1*  
RE blue *EIF2AK2*  
RE grey *EIF2B5*  
RE turquoise *EIF2D*

RE turquoise *EIF2S2*  
RE blue *EIF3A*  
RE turquoise *EIF3D*  
RE turquoise *EIF3I*  
RE turquoise *EIF3L*  
RE turquoise *EIF4A1*  
RE turquoise *EIF4E*  
RE turquoise *EIF4E2*  
RE turquoise *EIF4EBP1*  
RE brown *EIF4EBP2*  
RE turquoise *EIF4EBP3*  
RE turquoise *EIF5*  
RE turquoise *EIF5A*  
RE turquoise *EIF6*  
RE grey *ELAC2*  
RE blue *ELANE*  
RE grey *ELK3*  
RE grey *ELL2*  
RE grey *ELMO3*  
RE grey *ELOVL1*  
RE turquoise *ELOVL5*  
RE turquoise *ELP6*  
RE grey *EMB*  
RE turquoise *EMC3*  
RE turquoise *EMC4*  
RE turquoise *EMC6*  
RE turquoise *EMG1*  
RE blue *EMID1*  
RE grey *EML4*  
RE turquoise *ENO1*  
RE turquoise *ENY2*  
RE blue *EOMES*  
RE grey *EPB42*  
RE grey *EPHX2*  
RE turquoise *ERCC1*  
RE blue *ERCC8*  
RE grey *ERGIC1*  
RE turquoise *ERGIC3*  
RE turquoise *ERICH1*  
RE blue *ERN1*  
RE turquoise *ERP44*  
RE turquoise *ERV3-1*  
RE turquoise *ETFB*  
RE turquoise *ETHE1*  
RE grey *ETV7*  
RE turquoise *EVI2A*  
RE brown *EVI2B*  
RE turquoise *EXOC7*  
RE turquoise *EXOSC1*

RE turquoise *EXOSC4*  
RE brown *F11R*  
RE grey *F13A1*  
RE grey *F2R*  
RE turquoise *FAAP20*  
RE grey *FAM102A*  
RE grey *FAM104A*  
RE blue *FAM122B*  
RE brown *FAM129A*  
RE turquoise *FAM177A1*  
RE blue *FAM189B*  
RE grey *FAM195A*  
RE turquoise *FAM195B*  
RE turquoise *FAM200B*  
RE blue *FAM20A*  
RE grey *FAM212B*  
RE blue *FAM229A*  
RE grey *FAM26F*  
RE turquoise *FAM32A*  
RE blue *FAM3B*  
RE brown *FAM45A*  
RE grey *FAM46A*  
RE grey *FAM46C*  
RE grey *FAM53C*  
RE grey *FAM63A*  
RE turquoise *FAM65A*  
RE turquoise *FAM65B*  
RE grey *FAM8A1*  
RE blue *FAM90A1*  
RE blue *FAR1*  
RE brown *FAS*  
RE blue *FBXL6*  
RE blue *FBXO18*  
RE blue *FBXO24*  
RE grey *FBXO44*  
RE grey *FBXO6*  
RE grey *FBXO9*  
RE blue *FBXW2*  
RE turquoise *FBXW5*  
RE grey *FCAR*  
RE brown *FCGR1A*  
RE brown *FCGR3B*  
RE turquoise *FDFT1*  
RE grey *FDX1*  
RE grey *FECH*  
RE brown *FES*  
RE blue *FFAR3*  
RE grey *FGD3*  
RE grey *FGFR1OP2*

RE turquoise *FIS1*  
RE turquoise *FKBP11*  
RE grey *FKBP15*  
RE turquoise *FKBP2*  
RE blue *FKBP5*  
RE grey *FLCN*  
RE grey *FLI1*  
RE grey *FLII*  
RE blue *FLNB*  
RE brown *FLOT1*  
RE turquoise *FLT3LG*  
RE blue *FLVCR2*  
RE turquoise *FOPNL*  
RE grey *FOXO1*  
RE turquoise *FPGS*  
RE brown *FPR2*  
RE grey *FRA10AC1*  
RE blue *FRYL*  
RE blue *FSCN1*  
RE turquoise *FTSJ1*  
RE blue *FUT7*  
RE blue *FXR2*  
RE turquoise *FXYD2*  
RE grey *GAB3*  
RE turquoise *GABARAPL2*  
RE blue *GABBR1*  
RE brown *GADD45B*  
RE turquoise *GADD45GIP1*  
RE turquoise *GALM*  
RE grey *GALNS*  
RE grey *GALNT2*  
RE grey *GBGT1*  
RE grey *GBP1*  
RE brown *GBP2*  
RE grey *GBP4*  
RE turquoise *GCHFR*  
RE turquoise *GDE1*  
RE blue *GDPD3*  
RE turquoise *GEMIN7*  
RE grey *GFI1B*  
RE turquoise *GIMAP2*  
RE grey *GIMAP6*  
RE grey *GK*  
RE blue *GLB1L*  
RE brown *GLUL*  
RE turquoise *GMIP*  
RE turquoise *GMPR2*  
RE blue *GNE*  
RE brown *GNG10*

RE turquoise *GNGT2*  
RE turquoise *GNPTG*  
RE turquoise *GOLGA7*  
RE turquoise *GOSR2*  
RE grey *GP1BB*  
RE turquoise *GPBAR1*  
RE grey *GPR132*  
RE brown *GPR146*  
RE blue *GPR84*  
RE turquoise *GPS1*  
RE turquoise *GPS2*  
RE turquoise *GPX7*  
RE turquoise *GRAP2*  
RE grey *GRB2*  
RE blue *GRHL2*  
RE turquoise *GRHPR*  
RE blue *GRM4*  
RE turquoise *GRPEL1*  
RE blue *GSG1L*  
RE brown *GSN*  
RE blue *GSTM1*  
RE turquoise *GSTM2*  
RE grey *GSTM4*  
RE blue *GSTM5*  
RE turquoise *GSTO1*  
RE turquoise *GTF2B*  
RE turquoise *GTF3A*  
RE grey *GTF3C5*  
RE turquoise *GTF3C6*  
RE turquoise *GYG1*  
RE grey *GYPA*  
RE blue *GYPE*  
RE turquoise *GZMK*  
RE grey *H1F0*  
RE turquoise *H1FX*  
RE brown *HACD4*  
RE grey *HAGH*  
RE grey *HAL*  
RE grey *HAT1*  
RE turquoise *HAUS4*  
RE turquoise *HAX1*  
RE grey *HBP1*  
RE brown *HCAR2*  
RE brown *HCAR3*  
RE blue *HCFC1*  
RE turquoise *HCFC1R1*  
RE turquoise *HCLS1*  
RE blue *HDAC6*  
RE grey *HDAC7*

RE blue *HEATR1*  
RE blue *HELZ*  
RE grey *HEMGN*  
RE blue *HERC5*  
RE blue *HILPDA*  
RE turquoise *HIST1H1C*  
RE blue *HIST1H1E*  
RE brown *HIST1H2AC*  
RE grey *HIST1H2AM*  
RE turquoise *HIST1H2BD*  
RE turquoise *HIST1H2BG*  
RE grey *HIST1H2BO*  
RE turquoise *HIST1H3B*  
RE turquoise *HIST2H2AC*  
RE grey *HIST2H2BE*  
RE blue *HIST2H2BF*  
RE blue *HJURP*  
RE grey *HK3*  
RE turquoise *HLA-DMA*  
RE turquoise *HLA-DMB*  
RE turquoise *HLA-F*  
RE grey *HLX*  
RE turquoise *HMGB2*  
RE turquoise *HMGN3*  
RE turquoise *HMOX2*  
RE turquoise *HN1*  
RE turquoise *HNRNPA1*  
RE blue *HNRNPU*  
RE blue *HOMER3*  
RE grey *HOPX*  
RE blue *HPGD*  
RE blue *HPN*  
RE turquoise *HRASLS2*  
RE grey *HS1BP3*  
RE brown *HSBP1*  
RE turquoise *HSD17B10*  
RE brown *HSD17B11*  
RE turquoise *HSD17B8*  
RE turquoise *HSH2D*  
RE turquoise *HSP90AA1*  
RE brown *HSPA1A*  
RE blue *HSPB8*  
RE turquoise *HVCN1*  
RE blue *HYAL1*  
RE blue *HYAL2*  
RE grey *ICAM1*  
RE turquoise *ICAM2*  
RE blue *ICOS*  
RE blue *ID1*

RE turquoise *ID2*  
RE grey *IDH1*  
RE turquoise *IDH2*  
RE turquoise *IDH3G*  
RE turquoise *IDNK*  
RE grey *IDO1*  
RE grey *IDS*  
RE turquoise *IER3IP1*  
RE blue *IER5L*  
RE grey *IFI16*  
RE turquoise *IFI27L2*  
RE grey *IFI44*  
RE grey *IFI44L*  
RE blue *IFIH1*  
RE turquoise *IFNAR2*  
RE grey *IFNGR2*  
RE brown *IFRD1*  
RE turquoise *IGBP1*  
RE blue *IGFBP7*  
RE turquoise *IK*  
RE grey *IKBIP*  
RE grey *IKZF1*  
RE grey *IL10RA*  
RE turquoise *IL10RB*  
RE brown *IL17RA*  
RE blue *IL18*  
RE grey *IL18BP*  
RE blue *IL18R1*  
RE blue *IL4I1*  
RE grey *IL4R*  
RE turquoise *ILK*  
RE blue *ILVBL*  
RE turquoise *IMP3*  
RE grey *INAFM1*  
RE blue *INPP5B*  
RE turquoise *INPP5D*  
RE grey *INSIG1*  
RE grey *IPO4*  
RE grey *IQGAP1*  
RE grey *IRF1*  
RE grey *IRF2*  
RE brown *IRF5*  
RE turquoise *IRF9*  
RE grey *ISCA1*  
RE turquoise *ITGA2B*  
RE grey *ITGAM*  
RE grey *ITGB3BP*  
RE turquoise *ITGB7*  
RE turquoise *TM2A*

RE grey *JAZF1*  
RE turquoise *JOSD2*  
RE turquoise *JTB*  
RE blue *JUN*  
RE turquoise *KARS*  
RE blue *KAT2A*  
RE blue *KBTBD6*  
RE grey *KBTBD7*  
RE blue *KCNE1*  
RE grey *KCNE3*  
RE brown *KCNJ15*  
RE blue *KCNJ6*  
RE blue *KCNJ8*  
RE blue *KCNK7*  
RE blue *KCNMA1*  
RE turquoise *KDELR1*  
RE blue *KDM1A*  
RE grey *KDM5C*  
RE blue *KDM5D*  
RE blue *KDM6B*  
RE blue *KHDRBS1*  
RE turquoise *KIAA0101*  
RE grey *KIAA0141*  
RE grey *KIAA0226L*  
RE blue *KIAA0319*  
RE blue *KIF15*  
RE grey *KIF27*  
RE blue *KIFC1*  
RE blue *KIR2DL1*  
RE blue *KIR2DL4*  
RE grey *KLF6*  
RE blue *KLF7*  
RE grey *KLHL18*  
RE blue *KLK7*  
RE turquoise *KLRD1*  
RE grey *KLRG1*  
RE turquoise *KLRK1*  
RE grey *KMT2C*  
RE turquoise *KMT2E*  
RE brown *KRT23*  
RE grey *KRTCAP3*  
RE blue *L2HGDH*  
RE blue *LACE1*  
RE turquoise *LAGE3*  
RE blue *LAMP3*  
RE turquoise *LAMTOR2*  
RE grey *LASP1*  
RE grey *LAT2*  
RE turquoise *LCK*

RE grey *LCP1*  
RE turquoise *LDHA*  
RE blue *LDLR*  
RE blue *LETM1*  
RE turquoise *LGALS3BP*  
RE grey *LGALS9C*  
RE blue *LGR6*  
RE turquoise *LHPP*  
RE turquoise *LILRB4*  
RE turquoise *LIME1*  
RE brown *LIMK2*  
RE grey *LINC01272*  
RE turquoise *LMAN2*  
RE brown *LPCAT2*  
RE grey *LPCAT3*  
RE blue *LPP*  
RE brown *LPPR2*  
RE turquoise *LRPAP1*  
RE blue *LRRC2*  
RE brown *LRRC25*  
RE blue *LRRC70*  
RE brown *LRRFIP1*  
RE grey *LRRFIP2*  
RE blue *LRRN1*  
RE turquoise *LSM10*  
RE turquoise *LSM2*  
RE turquoise *LSM6*  
RE blue *LSR*  
RE grey *LTB4R*  
RE grey *LTBR*  
RE grey *LTF*  
RE turquoise *LXN*  
RE grey *LY6G6F*  
RE grey *LYL1*  
RE grey *LYPLAL1*  
RE turquoise *LYRM1*  
RE blue *LYSMD2*  
RE blue *MACROD1*  
RE turquoise *MAD1L1*  
RE turquoise *MAD2L2*  
RE grey *MAF1*  
RE grey *MAFB*  
RE blue *MAGEB17*  
RE grey *MANBA*  
RE turquoise *MAP1LC3B*  
RE grey *MAP2K3*  
RE grey *MAP3K11*  
RE blue *MAP3K12*  
RE grey *MAP3K8*

RE	grey	<i>MAP4K2</i>
RE	grey	<i>MAP7D1</i>
RE	blue	<i>MAPK14</i>
RE	turquoise	<i>MAPK1IP1L</i>
RE	blue	<i>MAPK3</i>
RE	grey	<i>MAPRE2</i>
RE	grey	<i>MARCH8</i>
RE	blue	<i>MARCH9</i>
RE	blue	<i>MARCKS</i>
RE	blue	<i>MARCO</i>
RE	grey	<i>MATK</i>
RE	grey	<i>MAX</i>
RE	grey	<i>MBOAT2</i>
RE	turquoise	<i>MBP</i>
RE	grey	<i>MCAT</i>
RE	turquoise	<i>MCCC2</i>
RE	grey	<i>MCEMP1</i>
RE	brown	<i>MCL1</i>
RE	turquoise	<i>MCTS1</i>
RE	turquoise	<i>MDH1</i>
RE	turquoise	<i>MDH2</i>
RE	grey	<i>MDK</i>
RE	turquoise	<i>MEA1</i>
RE	turquoise	<i>MED11</i>
RE	grey	<i>MED15</i>
RE	grey	<i>MED16</i>
RE	grey	<i>MED25</i>
RE	turquoise	<i>MED28</i>
RE	grey	<i>MEF2A</i>
RE	grey	<i>MEF2C</i>
RE	blue	<i>MEFV</i>
RE	grey	<i>MEN1</i>
RE	blue	<i>MEOX1</i>
RE	turquoise	<i>METTL12</i>
RE	blue	<i>METTL14</i>
RE	grey	<i>METTL7A</i>
RE	grey	<i>METTL9</i>
RE	turquoise	<i>MFF</i>
RE	turquoise	<i>MFNG</i>
RE	grey	<i>MFSD2B</i>
RE	blue	<i>MGEA5</i>
RE	turquoise	<i>MGLL</i>
RE	turquoise	<i>MGST3</i>
RE	grey	<i>MICAL1</i>
RE	turquoise	<i>MICU2</i>
RE	grey	<i>MID1IP1</i>
RE	turquoise	<i>MIF4GD</i>
RE	turquoise	<i>MKNK1</i>
RE	brown	<i>MKRN1</i>

RE turquoise *MLF2*  
RE turquoise *MLST8*  
RE turquoise *MLX*  
RE turquoise *MMD*  
RE turquoise *MOB1A*  
RE grey *MOB3A*  
RE blue *MOK*  
RE turquoise *MOSPD3*  
RE blue *MOV10*  
RE grey *MPEG1*  
RE turquoise *MPG*  
RE turquoise *MPLKIP*  
RE brown *MPP1*  
RE turquoise *MPV17*  
RE blue *MPZ*  
RE brown *MPZL1*  
RE turquoise *MRFAP1*  
RE blue *MRGPRX3*  
RE blue *MROH6*  
RE turquoise *MRPL11*  
RE turquoise *MRPL13*  
RE turquoise *MRPL14*  
RE turquoise *MRPL15*  
RE turquoise *MRPL20*  
RE turquoise *MRPL23*  
RE turquoise *MRPL27*  
RE turquoise *MRPL33*  
RE turquoise *MRPL34*  
RE turquoise *MRPL37*  
RE turquoise *MRPL40*  
RE turquoise *MRPL43*  
RE turquoise *MRPL44*  
RE turquoise *MRPL46*  
RE turquoise *MRPL49*  
RE turquoise *MRPL51*  
RE turquoise *MRPL53*  
RE turquoise *MRPL54*  
RE turquoise *MRPL55*  
RE turquoise *MRPS11*  
RE turquoise *MRPS12*  
RE turquoise *MRPS14*  
RE turquoise *MRPS15*  
RE turquoise *MRPS16*  
RE turquoise *MRPS18B*  
RE turquoise *MRPS18C*  
RE turquoise *MRPS2*  
RE turquoise *MRPS25*  
RE turquoise *MRPS26*  
RE turquoise *MRPS34*

RE turquoise *MS4A1*  
RE grey *MS4A4A*  
RE grey *MS4A7*  
RE blue *MSL2*  
RE blue *MSLN*  
RE grey *MSRB2*  
RE blue *MSTO1*  
RE turquoise *MT1F*  
RE grey *MT1G*  
RE blue *MTCH1*  
RE turquoise *MTMR14*  
RE blue *MTRR*  
RE grey *MVP*  
RE brown *MXD1*  
RE turquoise *MYD88*  
RE turquoise *MYDGF*  
RE turquoise *MYEOV2*  
RE turquoise *MYL6B*  
RE turquoise *MZT2B*  
RE turquoise *NAA10*  
RE turquoise *NAA38*  
RE turquoise *NAA60*  
RE grey *NABP1*  
RE brown *NAMPT*  
RE turquoise *NAPA*  
RE blue *NARS2*  
RE blue *NAT6*  
RE turquoise *NCL*  
RE grey *NCOA7*  
RE turquoise *NCR3*  
RE turquoise *NCSTN*  
RE blue *NDNL2*  
RE grey *NDRG3*  
RE turquoise *NDUFA1*  
RE turquoise *NDUFA7*  
RE turquoise *NDUFAB1*  
RE grey *NDUFAF1*  
RE turquoise *NDUFB10*  
RE turquoise *NDUFB3*  
RE turquoise *NDUFB6*  
RE turquoise *NDUFC1*  
RE turquoise *NDUFS2*  
RE turquoise *NDUFS6*  
RE turquoise *NDUFS8*  
RE turquoise *NDUVF3*  
RE blue *NECAB1*  
RE grey *NEDD9*  
RE blue *NEK3*  
RE turquoise *NELFE*

RE grey *NFATC1*  
RE grey *NFKBIA*  
RE grey *NFKBIZ*  
RE blue *NFRKB*  
RE turquoise *NGFRAP1*  
RE turquoise *NIFK*  
RE grey *NINJ2*  
RE blue *NLRP3*  
RE turquoise *NMB*  
RE turquoise *NMI*  
RE turquoise *NMRAL1*  
RE grey *NOL11*  
RE turquoise *NOL12*  
RE turquoise *NOL7*  
RE turquoise *NONO*  
RE brown *NPL*  
RE turquoise *NPM1*  
RE blue *NR4A1*  
RE brown *NRBF2*  
RE turquoise *NRDE2*  
RE turquoise *NRGN*  
RE blue *NRN1*  
RE grey *NRROS*  
RE turquoise *NSMCE1*  
RE grey *NSUN3*  
RE turquoise *NT5C3A*  
RE blue *NTM*  
RE grey *NUCB1*  
RE turquoise *NUDC*  
RE turquoise *NUDT1*  
RE grey *NUDT16*  
RE turquoise *NUDT2*  
RE grey *NUDT3*  
RE grey *NUDT4*  
RE turquoise *NUDT5*  
RE turquoise *NUTF2*  
RE grey *NXT1*  
RE grey *OAS2*  
RE blue *OAS3*  
RE brown *ODF3B*  
RE turquoise *OGDH*  
RE blue *OLAH*  
RE blue *OLFM4*  
RE turquoise *ORAI3*  
RE brown *ORM2*  
RE turquoise *ORMDL2*  
RE grey *OSBPL2*  
RE grey *OSCAR*  
RE grey *OSGEP*

RE turquoise OSTC  
RE turquoise OSTF1  
RE turquoise OTUB1  
RE turquoise OXLD1  
RE turquoise P2RX1  
RE grey P2RY11  
RE brown P2RY13  
RE grey P2RY14  
RE turquoise PA2G4  
RE blue PACRG  
RE brown PADI4  
RE turquoise PAFAH1B3  
RE blue PANK4  
RE grey PARP1  
RE grey PARP10  
RE grey PARVB  
RE turquoise PAX5  
RE turquoise PCBD1  
RE turquoise PCBP2  
RE brown PCGF5  
RE turquoise PCIF1  
RE turquoise PCNA  
RE blue PCYOX1  
RE grey PDCD2  
RE turquoise PDCD5  
RE turquoise PDCD6  
RE blue PDE1B  
RE blue PDE2A  
RE grey PDE4B  
RE grey PDIA3  
RE grey PDIA6  
RE blue PDK1  
RE turquoise PDLIM1  
RE blue PDPK1  
RE blue PEAR1  
RE brown PELI1  
RE brown PELO  
RE grey PEPD  
RE blue PERP  
RE turquoise PFDN1  
RE turquoise PFDN2  
RE turquoise PGAM1  
RE blue PGBD4  
RE brown PGD  
RE turquoise PGK1  
RE turquoise PGLS  
RE turquoise PGRMC1  
RE turquoise PHB  
RE turquoise PHB2

RE turquoise *PHF11*  
RE turquoise *PHF20*  
RE blue *PHF7*  
RE grey *PHLDA2*  
RE brown *PHOSPHO1*  
RE turquoise *PHPT1*  
RE grey *PID1*  
RE blue *PIDD1*  
RE grey *PIGO*  
RE grey *PIK3R5*  
RE turquoise *PIM2*  
RE turquoise *PIN1*  
RE blue *PISD*  
RE grey *PITHD1*  
RE blue *PITPNM1*  
RE turquoise *PLA2G12A*  
RE turquoise *PLAC8*  
RE blue *PLAG1*  
RE blue *PLAGL2*  
RE brown *PLAUR*  
RE grey *PLEK*  
RE grey *PLIN3*  
RE grey *PLOD1*  
RE grey *PLVAP*  
RE turquoise *PNKD*  
RE grey *PNPLA2*  
RE brown *PNRC1*  
RE blue *POFUT2*  
RE turquoise *POLB*  
RE blue *POLD1*  
RE turquoise *POLD4*  
RE grey *POLDIP2*  
RE grey *POLDIP3*  
RE grey *POLR1D*  
RE turquoise *POLR2E*  
RE turquoise *POLR2F*  
RE turquoise *POLR2G*  
RE turquoise *POLR2J*  
RE blue *POLR3A*  
RE turquoise *POLR3GL*  
RE turquoise *POLR3K*  
RE blue *POM121*  
RE turquoise *POMP*  
RE turquoise *POP4*  
RE turquoise *POP7*  
RE grey *POR*  
RE blue *POU6F1*  
RE turquoise *PPA1*  
RE blue *PPAPDC3*

RE brown *PPCDC*  
RE turquoise *PPCS*  
RE turquoise *PPIH*  
RE grey *PPIL2*  
RE grey *PPIL3*  
RE turquoise *PPP1CA*  
RE grey *PPP1R10*  
RE turquoise *PPP1R14A*  
RE grey *PPP1R15A*  
RE blue *PPP1R1B*  
RE turquoise *PPP1R2*  
RE blue *PPP1R3D*  
RE blue *PPP6R2*  
RE blue *PPP6R3*  
RE turquoise *PQBP1*  
RE grey *PRCC*  
RE blue *PRDM16*  
RE grey *PRDM2*  
RE blue *PRDM8*  
RE turquoise *PRDX1*  
RE turquoise *PRDX2*  
RE turquoise *PRDX3*  
RE brown *PRDX5*  
RE turquoise *PREB*  
RE brown *PRELID1*  
RE blue *PREPL*  
RE turquoise *PRF1*  
RE grey *PRKAR1A*  
RE grey *PRKAR1B*  
RE blue *PRKCI*  
RE grey *PRKD2*  
RE turquoise *PRMT2*  
RE turquoise *PRMT9*  
RE grey *PRPF4B*  
RE turquoise *PRR11*  
RE grey *PRRC2A*  
RE blue *PRRT2*  
RE blue *PRSS54*  
RE blue *PRTN3*  
RE turquoise *PSMA2*  
RE turquoise *PSMA3*  
RE turquoise *PSMA4*  
RE turquoise *PSMA6*  
RE turquoise *PSMA7*  
RE turquoise *PSMB1*  
RE turquoise *PSMB2*  
RE turquoise *PSMB4*  
RE turquoise *PSMB6*  
RE turquoise *PSMB7*

RE turquoise *PSMC1*  
RE turquoise *PSMC2*  
RE turquoise *PSMC5*  
RE grey *PSMD3*  
RE turquoise *PSMD4*  
RE turquoise *PSMD6*  
RE turquoise *PSMD9*  
RE turquoise *PSMG4*  
RE turquoise *PSPC1*  
RE turquoise *PSTPIP1*  
RE grey *PSTPIP2*  
RE grey *PTK2B*  
RE turquoise *PTPMT1*  
RE blue *PTPN12*  
RE turquoise *PTPN6*  
RE brown *PTPRE*  
RE turquoise *PTRH2*  
RE grey *PUM1*  
RE blue *PUS7L*  
RE blue *PVRL2*  
RE grey *PYCR2*  
RE blue *PYGB*  
RE brown *PYGL*  
RE brown *R3HDM4*  
RE turquoise *RAB11A*  
RE grey *RAB11B*  
RE brown *RAB1B*  
RE turquoise *RAB27A*  
RE blue *RAB28*  
RE turquoise *RAB2A*  
RE grey *RAB37*  
RE blue *RAB39B*  
RE grey *RAB3D*  
RE blue *RAB3GAP2*  
RE turquoise *RAB8A*  
RE turquoise *RABGAP1L*  
RE turquoise *RAB1F*  
RE turquoise *RAD23A*  
RE turquoise *RAD51C*  
RE turquoise *RALA*  
RE turquoise *RAN*  
RE grey *RANBP3*  
RE turquoise *RANGRF*  
RE grey *RASA3*  
RE turquoise *RASAL3*  
RE grey *RASSF5*  
RE turquoise *RBCK1*  
RE grey *RBFA*  
RE blue *RBL1*

RE	grey	<i>RBL2</i>
RE	grey	<i>RBM23</i>
RE	turquoise	<i>RBM3</i>
RE	turquoise	<i>RBM4</i>
RE	grey	<i>RBMS1</i>
RE	turquoise	<i>RBX1</i>
RE	grey	<i>RDM1</i>
RE	turquoise	<i>REEP5</i>
RE	blue	<i>REEP6</i>
RE	grey	<i>RELL1</i>
RE	grey	<i>RFX2</i>
RE	blue	<i>RGCC</i>
RE	turquoise	<i>RGL2</i>
RE	blue	<i>RGP1</i>
RE	grey	<i>RGS14</i>
RE	brown	<i>RGS19</i>
RE	grey	<i>RGS3</i>
RE	blue	<i>RGS9</i>
RE	turquoise	<i>RHBDD2</i>
RE	grey	<i>RHBDF2</i>
RE	blue	<i>RHBG</i>
RE	blue	<i>RHD</i>
RE	turquoise	<i>RHOC</i>
RE	blue	<i>RIF1</i>
RE	blue	<i>RILPL1</i>
RE	grey	<i>RIPK2</i>
RE	grey	<i>RIT1</i>
RE	blue	<i>RNASE1</i>
RE	brown	<i>RNASE2</i>
RE	turquoise	<i>RNASEH2A</i>
RE	turquoise	<i>RNASEH2C</i>
RE	grey	<i>RNASEK</i>
RE	grey	<i>RNA_SPIKE_ERCC-00034</i>
RE	blue	<i>RNA_SPIKE_ERCC-00039</i>
RE	blue	<i>RNA_SPIKE_ERCC-00054</i>
RE	grey	<i>RNA_SPIKE_ERCC-00154</i>
RE	brown	<i>RNF10</i>
RE	turquoise	<i>RNF114</i>
RE	brown	<i>RNF130</i>
RE	grey	<i>RNF138</i>
RE	grey	<i>RNF144B</i>
RE	brown	<i>RNF149</i>
RE	grey	<i>RNF167</i>
RE	blue	<i>RNF212</i>
RE	turquoise	<i>RNF213</i>
RE	brown	<i>RNF24</i>
RE	blue	<i>RNF31</i>
RE	grey	<i>RNF38</i>
RE	grey	<i>RNF4</i>

RE grey *RNF44*  
RE turquoise *RNF7*  
RE turquoise *RNH1*  
RE turquoise *RNPS1*  
RE turquoise *RPA3*  
RE grey *RPIA*  
RE turquoise *RPL22L1*  
RE turquoise *RPL26L1*  
RE turquoise *RPL27*  
RE turquoise *RPP21*  
RE turquoise *RPP25L*  
RE turquoise *RPS19BP1*  
RE grey *RPS6KA1*  
RE blue *RPS6KL1*  
RE turquoise *RRP7A*  
RE blue *RSPH9*  
RE turquoise *RSRP1*  
RE grey *RTCA*  
RE grey *RUSC1*  
RE blue *RUSC2*  
RE turquoise *RUVBL2*  
RE turquoise *RWDD1*  
RE grey *S100A13*  
RE grey *S1PR4*  
RE blue *SAMD10*  
RE grey *SAMHD1*  
RE grey *SAMSN1*  
RE turquoise *SAP18*  
RE turquoise *SARAF*  
RE turquoise *SAT2*  
RE grey *SBNO2*  
RE blue *SCAF1*  
RE grey *SCAF4*  
RE blue *SCAF8*  
RE turquoise *SCAND1*  
RE grey *SCAP*  
RE blue *SCD*  
RE turquoise *SCIMP*  
RE turquoise *SCML4*  
RE turquoise *SCNM1*  
RE grey *SCYL1*  
RE brown *SDCBP*  
RE turquoise *SDF2L1*  
RE turquoise *SDHAF2*  
RE turquoise *SDHAF3*  
RE blue *SDR42E1*  
RE turquoise *SEC11A*  
RE turquoise *SEC11C*  
RE turquoise *SEC13*

RE	blue	<i>SEC16A</i>
RE	grey	<i>SEC24D</i>
RE	grey	<i>SELK</i>
RE	turquoise	<i>SELM</i>
RE	turquoise	<i>SELT</i>
RE	blue	<i>SEPT4</i>
RE	blue	<i>SERPINB2</i>
RE	grey	<i>SERPINB9</i>
RE	blue	<i>SETD2</i>
RE	blue	<i>SETD8</i>
RE	turquoise	<i>SF3B4</i>
RE	turquoise	<i>SF3B5</i>
RE	turquoise	<i>SFT2D1</i>
RE	turquoise	<i>SGTA</i>
RE	turquoise	<i>SH2D1A</i>
RE	turquoise	<i>SH2D3C</i>
RE	turquoise	<i>SH3BGRL</i>
RE	grey	<i>SH3BP2</i>
RE	brown	<i>SH3GLB1</i>
RE	blue	<i>SH3TC1</i>
RE	turquoise	<i>SHFM1</i>
RE	brown	<i>SHKBP1</i>
RE	blue	<i>SIAE</i>
RE	grey	<i>SIGLEC10</i>
RE	blue	<i>SIGLEC5</i>
RE	grey	<i>SIPA1</i>
RE	turquoise	<i>SIPA1L3</i>
RE	brown	<i>SIRPB1</i>
RE	turquoise	<i>SIRPG</i>
RE	blue	<i>SIRT1</i>
RE	turquoise	<i>SIT1</i>
RE	turquoise	<i>SIVA1</i>
RE	turquoise	<i>SKP1</i>
RE	grey	<i>SLA</i>
RE	turquoise	<i>SLBP</i>
RE	grey	<i>SLC19A1</i>
RE	blue	<i>SLC22A18AS</i>
RE	turquoise	<i>SLC25A5</i>
RE	blue	<i>SLC26A6</i>
RE	grey	<i>SLC29A3</i>
RE	grey	<i>SLC2A1</i>
RE	grey	<i>SLC2A3</i>
RE	brown	<i>SLC31A2</i>
RE	grey	<i>SLC35C1</i>
RE	turquoise	<i>SLC35C2</i>
RE	turquoise	<i>SLC38A2</i>
RE	turquoise	<i>SLC39A4</i>
RE	turquoise	<i>SLC43A3</i>
RE	grey	<i>SLC46A3</i>

RE	grey	<i>SLC4A1</i>
RE	grey	<i>SLC6A6</i>
RE	blue	<i>SLC8A2</i>
RE	blue	<i>SLC8B1</i>
RE	blue	<i>SLC9A1</i>
RE	blue	<i>SLCO5A1</i>
RE	turquoise	<i>SLIRP</i>
RE	blue	<i>SLX4IP</i>
RE	blue	<i>SMAD1</i>
RE	blue	<i>SMARCA4</i>
RE	grey	<i>SMARCC2</i>
RE	blue	<i>SMARCD3</i>
RE	blue	<i>SMC5</i>
RE	turquoise	<i>SMCO4</i>
RE	turquoise	<i>SMEK2</i>
RE	blue	<i>SMG7</i>
RE	grey	<i>SMG9</i>
RE	blue	<i>SMIM10</i>
RE	turquoise	<i>SMIM19</i>
RE	grey	<i>SMIM24</i>
RE	grey	<i>SMIM3</i>
RE	turquoise	<i>SMIM5</i>
RE	turquoise	<i>SMIM7</i>
RE	turquoise	<i>SNAP23</i>
RE	turquoise	<i>SNAP29</i>
RE	turquoise	<i>SNRNP25</i>
RE	turquoise	<i>SNRNP27</i>
RE	turquoise	<i>SNRPA</i>
RE	turquoise	<i>SNRPC</i>
RE	turquoise	<i>SNRPD1</i>
RE	turquoise	<i>SNRPE</i>
RE	turquoise	<i>SNRPF</i>
RE	turquoise	<i>SNRPG</i>
RE	turquoise	<i>SNX20</i>
RE	grey	<i>SNX22</i>
RE	grey	<i>SNX3</i>
RE	turquoise	<i>SON</i>
RE	grey	<i>SORL1</i>
RE	grey	<i>SP100</i>
RE	turquoise	<i>SP140</i>
RE	grey	<i>SP2</i>
RE	grey	<i>SP3</i>
RE	turquoise	<i>SPAG7</i>
RE	turquoise	<i>SPARC</i>
RE	blue	<i>SPATA6</i>
RE	grey	<i>SPATS2L</i>
RE	blue	<i>SPDL1</i>
RE	blue	<i>SPINK4</i>
RE	turquoise	<i>SPOCK2</i>

RE turquoise SPON2  
RE grey SPRY1  
RE brown SQRDL  
RE turquoise SRA1  
RE turquoise SREK1IP1  
RE blue SRF  
RE turquoise SRI  
RE turquoise SRSF3  
RE turquoise SRSF7  
RE turquoise SSB  
RE turquoise SSBP1  
RE turquoise SSNA1  
RE turquoise SSR3  
RE turquoise SSU72  
RE grey ST13  
RE blue ST14  
RE blue ST20  
RE brown ST3GAL1  
RE grey ST6GALNAC3  
RE grey ST6GALNAC4  
RE blue STARD7  
RE turquoise STAT1  
RE turquoise STAT3  
RE brown STEAP4  
RE grey STK10  
RE grey STK17A  
RE grey STK17B  
RE grey STK25  
RE blue STK36  
RE grey STMN3  
RE grey STOM  
RE brown STX11  
RE brown STX3  
RE turquoise STX8  
RE turquoise STXBP2  
RE turquoise SUGP1  
RE blue SULF2  
RE turquoise SULT1A1  
RE brown SUMF1  
RE turquoise SUMO1  
RE turquoise SUN1  
RE grey SUPT4H1  
RE grey SURF1  
RE turquoise SURF2  
RE turquoise SURF4  
RE turquoise SUSD3  
RE blue SUZ12  
RE grey SVBP  
RE blue SYCE3

RE turquoise *SYF2*  
RE turquoise *SYK*  
RE turquoise *SYNGR2*  
RE blue *SYNPO2L*  
RE grey *SYNRG*  
RE turquoise *SYPL1*  
RE turquoise *SYS1*  
RE blue *SYT1*  
RE blue *SYT5*  
RE blue *TACC1*  
RE grey *TAL1*  
RE grey *TANGO2*  
RE blue *TARP*  
RE blue *TARSL2*  
RE grey *TBC1D1*  
RE turquoise *TBC1D10C*  
RE grey *TBC1D22B*  
RE turquoise *TBCB*  
RE blue *TBCK*  
RE brown *TBXAS1*  
RE turquoise *TCEAL8*  
RE grey *TCN2*  
RE grey *TESC*  
RE blue *TEX261*  
RE turquoise *TEX264*  
RE blue *TGDS*  
RE blue *TGFBR3*  
RE turquoise *TGOLN2*  
RE grey *THEM5*  
RE blue *THRSP*  
RE turquoise *THYN1*  
RE turquoise *TIFA*  
RE turquoise *TIMM17B*  
RE turquoise *TIMM9*  
RE turquoise *TINF2*  
RE grey *TJAP1*  
RE blue *TJP3*  
RE brown *TKT*  
RE grey *TLR2*  
RE grey *TLR4*  
RE blue *TLR7*  
RE grey *TLR9*  
RE turquoise *TM2D3*  
RE turquoise *TM9SF1*  
RE grey *TMA16*  
RE turquoise *TMBIM1*  
RE turquoise *TMBIM4*  
RE turquoise *TMBIM6*  
RE turquoise *TMED4*

RE grey *TMEM106B*  
RE turquoise *TMEM11*  
RE turquoise *TMEM123*  
RE turquoise *TMEM126B*  
RE turquoise *TMEM134*  
RE turquoise *TMEM141*  
RE turquoise *TMEM147*  
RE turquoise *TMEM14C*  
RE grey *TMEM150B*  
RE turquoise *TMEM160*  
RE blue *TMEM161B*  
RE turquoise *TMEM167A*  
RE turquoise *TMEM179B*  
RE blue *TMEM185B*  
RE grey *TMEM199*  
RE blue *TMEM203*  
RE turquoise *TMEM205*  
RE turquoise *TMEM208*  
RE blue *TMEM222*  
RE turquoise *TMEM223*  
RE turquoise *TMEM261*  
RE turquoise *TMEM30A*  
RE turquoise *TMEM40*  
RE grey *TMEM43*  
RE grey *TMEM50A*  
RE brown *TMEM55A*  
RE turquoise *TMEM59*  
RE grey *TMEM60*  
RE turquoise *TMEM70*  
RE brown *TMEM71*  
RE blue *TMEM80*  
RE brown *TMEM91*  
RE blue *TMEM92*  
RE grey *TMEM95*  
RE brown *TMLHE*  
RE blue *TMOD1*  
RE blue *TMOD2*  
RE grey *TMPO*  
RE brown *TMUB2*  
RE turquoise *TNFRSF14*  
RE turquoise *TNFRSF17*  
RE brown *TNFSF10*  
RE grey *TNK2*  
RE brown *TNNI2*  
RE grey *TNRC6C*  
RE grey *TNS1*  
RE turquoise *TOLLIP*  
RE grey *TOM1*  
RE turquoise *TOMM20*

RE turquoise *TOMM5*  
RE blue *TOMM70A*  
RE turquoise *TOR1A*  
RE grey *TOR1B*  
RE grey *TOX*  
RE turquoise *TP53I3*  
RE blue *TPH2*  
RE grey *TPM1*  
RE grey *TPM2*  
RE turquoise *TPM3*  
RE turquoise *TPM4*  
RE turquoise *TPP1*  
RE turquoise *TPRK*  
RE grey *TRAFD1*  
RE turquoise *TRAPPC1*  
RE turquoise *TRAPPC2L*  
RE turquoise *TRAPPC4*  
RE turquoise *TRAPPC6A*  
RE grey *TREML1*  
RE grey *TREML2*  
RE blue *TRIB1*  
RE grey *TRIB2*  
RE blue *TRIM16*  
RE grey *TRIM22*  
RE grey *TRIM38*  
RE grey *TRIM58*  
RE turquoise *TRMT112*  
RE blue *TRMT61A*  
RE blue *TRPM1*  
RE blue *TRPS1*  
RE blue *TRPV3*  
RE blue *TSACC*  
RE blue *TSC22D2*  
RE blue *TSNAXIP1*  
RE brown *TSPAN2*  
RE blue *TSPAN7*  
RE blue *TSPYL4*  
RE turquoise *TST*  
RE grey *TSTA3*  
RE blue *TTC12*  
RE blue *TTC37*  
RE turquoise *TUBA1C*  
RE turquoise *TUBA4A*  
RE grey *TUBA8*  
RE turquoise *TUBB*  
RE grey *TUBB1*  
RE turquoise *TUBB4B*  
RE turquoise *TUFM*  
RE blue *TULP3*

RE blue *TVP23A*  
RE turquoise *TWF2*  
RE turquoise *TXN2*  
RE grey *TXNDC12*  
RE blue *TXNDC15*  
RE turquoise *TXNDC17*  
RE grey *TXNIP*  
RE grey *TYK2*  
RE brown *UBAP1*  
RE blue *UBAP2*  
RE turquoise *UBE2F*  
RE grey *UBE2J1*  
RE turquoise *UBE2L3*  
RE blue *UBN1*  
RE grey *UBQLN2*  
RE turquoise *UBXN1*  
RE grey *UBXN2B*  
RE grey *UBXN6*  
RE turquoise *UFC1*  
RE turquoise *UFD1L*  
RE blue *UHMK1*  
RE turquoise *UNC119*  
RE blue *UNC13B*  
RE grey *UNC13D*  
RE grey *UNC93B1*  
RE turquoise *UPF2*  
RE grey *UPK3A*  
RE brown *UPP1*  
RE turquoise *UQCC2*  
RE turquoise *UQCC3*  
RE turquoise *UQCRC1*  
RE turquoise *UQCRCFS1*  
RE turquoise *URM1*  
RE turquoise *UROD*  
RE grey *USB1*  
RE turquoise *USE1*  
RE grey *USF1*  
RE turquoise *USP18*  
RE turquoise *USP21*  
RE turquoise *UXT*  
RE brown *VAMP3*  
RE turquoise *VAPA*  
RE blue *VCAN*  
RE turquoise *VDAC3*  
RE grey *VEGFB*  
RE blue *VEPH1*  
RE grey *VEZF1*  
RE turquoise *VKORC1*  
RE brown *VMP1*

RE	blue	VNN1
RE	turquoise	VNN2
RE	grey	VNN3
RE	turquoise	VPS29
RE	grey	VPS9D1
RE	blue	VSIG4
RE	blue	VWA7
RE	turquoise	WBP1
RE	blue	WDPCP
RE	blue	WDR11
RE	brown	WDR45
RE	blue	WDR59
RE	grey	WDR6
RE	blue	WDR81
RE	grey	WRAP73
RE	turquoise	WSB1
RE	grey	WWOX
RE	grey	XAB2
RE	turquoise	XAF1
RE	turquoise	XCL2
RE	grey	XPNPEP1
RE	grey	XRCC1
RE	turquoise	XRCC6
RE	grey	YBX1
RE	turquoise	YIF1A
RE	brown	YIPF1
RE	turquoise	YIPF3
RE	grey	YKT6
RE	brown	YPEL3
RE	turquoise	YPEL5
RE	turquoise	YWHAQ
RE	turquoise	YWHAZ
RE	blue	ZAK
RE	grey	ZBP1
RE	blue	ZBTB2
RE	blue	ZBTB5
RE	turquoise	ZBTB8OS
RE	grey	ZC3H10
RE	grey	ZC3HAV1
RE	blue	ZCCHC2
RE	blue	ZCCHC6
RE	blue	ZCCHC8
RE	turquoise	ZCRB1
RE	turquoise	ZDHHC12
RE	grey	ZDHHC16
RE	blue	ZDHHC5
RE	blue	ZDHHC7
RE	grey	ZEB2
RE	grey	ZER1

RE	grey	ZFAND2A
RE	turquoise	ZMYM6NB
RE	grey	ZNF107
RE	blue	ZNF17
RE	blue	ZNF181
RE	grey	ZNF266
RE	grey	ZNF302
RE	grey	ZNF331
RE	blue	ZNF35
RE	blue	ZNF382
RE	brown	ZNF438
RE	blue	ZNF442
RE	blue	ZNF483
RE	blue	ZNF496
RE	grey	ZNF517
RE	blue	ZNF556
RE	blue	ZNF574
RE	grey	ZNF575
RE	turquoise	ZNF593
RE	blue	ZNF621
RE	grey	ZNF653
RE	blue	ZNF678
RE	blue	ZNF683
RE	grey	ZNF684
RE	blue	ZNF740
RE	grey	ZNF749
RE	grey	ZNF76
RE	blue	ZNF782
RE	blue	ZNF829
RE	blue	ZNF841
RE	grey	ZNF860
RE	grey	ZNFX1
RE	blue	ZSCAN26
RE	blue	ZSCAN9
RE	turquoise	ABLIM1
RE	blue	ACTA1
RE	blue	AHDC1
RE	grey	AKAP8
RE	blue	ALDH1L1
RE	blue	ALDH7A1
RE	blue	ANGPTL6
RE	turquoise	AP1M1
RE	blue	APBB3
RE	blue	ARG2
RE	turquoise	ARHGAP17
RE	blue	ARMC5
RE	blue	ASB9
RE	blue	ATG4A
RE	blue	ATP2C1

RE	blue	<i>B3GNT3</i>
RE	blue	<i>BCLAF1</i>
RE	blue	<i>BDP1</i>
RE	grey	<i>BMF</i>
RE	blue	<i>BMP3</i>
RE	blue	<i>BRWD1</i>
RE	grey	<i>C10orf128</i>
RE	blue	<i>C11orf84</i>
RE	blue	<i>C12orf4</i>
RE	blue	<i>C19orf52</i>
RE	blue	<i>C6orf141</i>
RE	blue	<i>C8orf82</i>
RE	turquoise	<i>CARHSP1</i>
RE	blue	<i>CBX1</i>
RE	turquoise	<i>CCM2</i>
RE	grey	<i>CCND2</i>
RE	blue	<i>CCSAP</i>
RE	grey	<i>CD244</i>
RE	grey	<i>CD9</i>
RE	blue	<i>CDC27</i>
RE	blue	<i>CDC7</i>
RE	blue	<i>CDH13</i>
RE	blue	<i>CEACAM8</i>
RE	blue	<i>CENPC</i>
RE	turquoise	<i>CENPM</i>
RE	blue	<i>CENPQ</i>
RE	blue	<i>CLDN9</i>
RE	blue	<i>CMPK1</i>
RE	blue	<i>CNOT11</i>
RE	grey	<i>COG8</i>
RE	blue	<i>CORO2A</i>
RE	blue	<i>CSNK1G1</i>
RE	blue	<i>CWC22</i>
RE	turquoise	<i>CYFIP2</i>
RE	blue	<i>DACT3</i>
RE	blue	<i>DCAF15</i>
RE	turquoise	<i>DDX19B</i>
RE	grey	<i>DDX54</i>
RE	blue	<i>DENND5B</i>
RE	blue	<i>DEXI</i>
RE	blue	<i>DHTKD1</i>
RE	blue	<i>DHX57</i>
RE	blue	<i>DPPA4</i>
RE	blue	<i>DPYSL2</i>
RE	blue	<i>DYNLRB2</i>
RE	grey	<i>DYRK1B</i>
RE	blue	<i>ECHDC3</i>
RE	blue	<i>EEF2K</i>
RE	blue	<i>EPN2</i>

RE	blue	<i>EPT1</i>
RE	grey	<i>ESYT1</i>
RE	blue	<i>EXTL3</i>
RE	blue	<i>FAM13A</i>
RE	blue	<i>FAM83A</i>
RE	blue	<i>FN3K</i>
RE	blue	<i>FNBP4</i>
RE	grey	<i>FOXJ3</i>
RE	blue	<i>FRMD5</i>
RE	blue	<i>FTSJ3</i>
RE	blue	<i>GABRA2</i>
RE	blue	<i>GLS</i>
RE	turquoise	<i>GORASP2</i>
RE	blue	<i>GPR34</i>
RE	blue	<i>GPX3</i>
RE	blue	<i>GRK6</i>
RE	grey	<i>GTF2E1</i>
RE	blue	<i>HDHD2</i>
RE	grey	<i>HDLBP</i>
RE	blue	<i>HELLS</i>
RE	grey	<i>HIP1</i>
RE	grey	<i>HIP1R</i>
RE	blue	<i>HIST1H2BL</i>
RE	blue	<i>HIVEP1</i>
RE	grey	<i>HMGB3</i>
RE	blue	<i>HSPA2</i>
RE	blue	<i>ICK</i>
RE	blue	<i>IFT74</i>
RE	grey	<i>IL12RB1</i>
RE	grey	<i>IL27RA</i>
RE	grey	<i>ILF3</i>
RE	blue	<i>INSL3</i>
RE	grey	<i>IRF8</i>
RE	blue	<i>ITGA5</i>
RE	blue	<i>JOSD1</i>
RE	blue	<i>KIAA0895L</i>
RE	blue	<i>KLHL5</i>
RE	grey	<i>LIG1</i>
RE	blue	<i>LINC00649</i>
RE	grey	<i>LMF2</i>
RE	grey	<i>LOC102724279</i>
RE	blue	<i>LRP5L</i>
RE	blue	<i>LRRC47</i>
RE	grey	<i>LRSAM1</i>
RE	blue	<i>LSG1</i>
RE	blue	<i>LY6G5B</i>
RE	grey	<i>MAN2B2</i>
RE	blue	<i>MAP2K4</i>
RE	blue	<i>MAP4K5</i>

RE	blue	<i>MEF2BNB-MEF2B</i>
RE	blue	<i>MLEC</i>
RE	blue	<i>MTF1</i>
RE	grey	<i>MYC</i>
RE	blue	<i>N4BP2</i>
RE	turquoise	<i>NAGA</i>
RE	grey	<i>NCKAP1L</i>
RE	blue	<i>NCR3LG1</i>
RE	blue	<i>NDRG2</i>
RE	blue	<i>NFXL1</i>
RE	blue	<i>NOMO3</i>
RE	grey	<i>NRAS</i>
RE	blue	<i>NUF2</i>
RE	blue	<i>NVL</i>
RE	blue	<i>OAZ3</i>
RE	blue	<i>PACS1</i>
RE	blue	<i>PDE4A</i>
RE	blue	<i>PHF12</i>
RE	blue	<i>PIWIL3</i>
RE	grey	<i>PKN1</i>
RE	turquoise	<i>PLA2G16</i>
RE	blue	<i>POGLUT1</i>
RE	blue	<i>POLD3</i>
RE	blue	<i>PPP1R12B</i>
RE	turquoise	<i>PPP5C</i>
RE	blue	<i>PPP6R1</i>
RE	grey	<i>PRPF6</i>
RE	grey	<i>PRPSAP1</i>
RE	grey	<i>PRRC1</i>
RE	turquoise	<i>PSMA1</i>
RE	turquoise	<i>PSMA5</i>
RE	blue	<i>PTPRK</i>
RE	blue	<i>RAB19</i>
RE	blue	<i>RALGPS2</i>
RE	blue	<i>RCCD1</i>
RE	blue	<i>RCN3</i>
RE	blue	<i>RDH13</i>
RE	grey	<i>RDH14</i>
RE	blue	<i>RGS13</i>
RE	blue	<i>RIBC2</i>
RE	blue	<i>RNA_SPIKE_ERCC-00053</i>
RE	blue	<i>RNF139</i>
RE	grey	<i>RNF166</i>
RE	blue	<i>RNF182</i>
RE	blue	<i>RNF19A</i>
RE	grey	<i>RPP40</i>
RE	grey	<i>SCPEP1</i>
RE	grey	<i>SEC24C</i>
RE	turquoise	<i>SEC61A1</i>

RE	blue	<i>SERPINE1</i>
RE	grey	<i>SH3BP1</i>
RE	blue	<i>SHBG</i>
RE	blue	<i>SLC16A1</i>
RE	blue	<i>SLC2A9</i>
RE	blue	<i>SLFN12</i>
RE	blue	<i>SMPD4</i>
RE	grey	<i>SNX24</i>
RE	blue	<i>SOX8</i>
RE	blue	<i>SPAG8</i>
RE	grey	<i>SPATA20</i>
RE	blue	<i>SPATA32</i>
RE	blue	<i>SPATA4</i>
RE	blue	<i>SPEF1</i>
RE	blue	<i>SPG11</i>
RE	blue	<i>SPP1</i>
RE	turquoise	<i>SRSF2</i>
RE	blue	<i>STARD4</i>
RE	blue	<i>STAT5A</i>
RE	blue	<i>SWAP70</i>
RE	blue	<i>SYDE1</i>
RE	grey	<i>TAF1C</i>
RE	blue	<i>TAF5</i>
RE	turquoise	<i>TBRG4</i>
RE	blue	<i>TCHP</i>
RE	blue	<i>TCTEX1D4</i>
RE	blue	<i>TDRD3</i>
RE	blue	<i>TDRKH</i>
RE	blue	<i>TET2</i>
RE	blue	<i>TEX2</i>
RE	blue	<i>TFF3</i>
RE	blue	<i>THEMIS</i>
RE	grey	<i>TMC8</i>
RE	blue	<i>TMCC2</i>
RE	blue	<i>TMEM117</i>
RE	turquoise	<i>TMEM156</i>
RE	grey	<i>TMEM180</i>
RE	blue	<i>TMEM41B</i>
RE	blue	<i>TMEM97</i>
RE	blue	<i>TNPO2</i>
RE	blue	<i>TRAPP8</i>
RE	grey	<i>TRIB3</i>
RE	blue	<i>TRIM37</i>
RE	blue	<i>TRIM7</i>
RE	blue	<i>TSEN54</i>
RE	blue	<i>TSHZ2</i>
RE	grey	<i>TSPAN14</i>
RE	blue	<i>TTLL6</i>
RE	blue	<i>TYW5</i>

RE turquoise *UBE2D4*  
RE turquoise *UBE2T*  
RE blue *UBFD1*  
RE blue *UCHL1*  
RE blue *UHRF1BP1L*  
RE blue *UPK3BL*  
RE blue *USO1*  
RE grey *USP33*  
RE grey *VAT1*  
RE blue *WBP2NL*  
RE blue *WDSUB1*  
RE grey *YBX3*  
RE grey *ZFAND5*  
RE grey *ZHX2*  
RE blue *ZNF202*  
RE blue *ZNF25*  
RE blue *ZNF326*  
RE blue *ZNF354B*  
RE blue *ZNF395*  
RE blue *ZNF44*  
RE turquoise *ZNF655*  
RE blue *ZNF660*  
RE blue *ZNF689*  
RE blue *ZNF729*  
RE blue *ZNF879*  
RE blue *ZSCAN25*  
CNACRE turquoise *AAK1*  
CNACRE brown *ABCC4*  
CNACRE turquoise *ABI3*  
CNACRE turquoise *ABRACL*  
CNACRE brown *AC01*  
CNACRE blue *ACSL1*  
CNACRE blue *ACTB*  
CNACRE turquoise *ACTG1*  
CNACRE blue *ACTN4*  
CNACRE blue *ADGRE2*  
CNACRE blue *ADGRE5*  
CNACRE blue *ADGRG3*  
CNACRE grey *ADIPOR1*  
CNACRE blue *ADM*  
CNACRE blue *AGTRAP*  
CNACRE grey *AHSP*  
CNACRE blue *AIF1*  
CNACRE grey *ALAS2*  
CNACRE turquoise *ALDOA*  
CNACRE grey *ALG11*  
CNACRE turquoise *ALKBH7*  
CNACRE blue *ALOX5AP*  
CNACRE blue *ALPL*

CNACRE grey	<i>AMDHD2</i>
CNACRE brown	<i>AMIGO1</i>
CNACRE brown	<i>AMIGO3</i>
CNACRE brown	<i>AMPH</i>
CNACRE turquoise	<i>ANAPC11</i>
CNACRE blue	<i>ANPEP</i>
CNACRE blue	<i>ANXA1</i>
CNACRE blue	<i>ANXA11</i>
CNACRE blue	<i>ANXA3</i>
CNACRE brown	<i>AP1S1</i>
CNACRE grey	<i>AP2A1</i>
CNACRE grey	<i>APH1A</i>
CNACRE grey	<i>APLP2</i>
CNACRE blue	<i>APMAP</i>
CNACRE turquoise	<i>APOBEC3C</i>
CNACRE brown	<i>APOC1</i>
CNACRE turquoise	<i>APRT</i>
CNACRE blue	<i>AQP9</i>
CNACRE blue	<i>ARAF</i>
CNACRE blue	<i>ARAP1</i>
CNACRE turquoise	<i>ARF3</i>
CNACRE blue	<i>ARHGAP1</i>
CNACRE brown	<i>ARHGAP33</i>
CNACRE blue	<i>ARHGAP9</i>
CNACRE turquoise	<i>ARHGDIA</i>
CNACRE blue	<i>ARHGDIB</i>
CNACRE blue	<i>ARID3B</i>
CNACRE blue	<i>ARRB2</i>
CNACRE brown	<i>ASB16</i>
CNACRE brown	<i>ATG2A</i>
CNACRE brown	<i>ATN1</i>
CNACRE turquoise	<i>ATP5E</i>
CNACRE turquoise	<i>ATP5G1</i>
CNACRE turquoise	<i>ATP5G3</i>
CNACRE turquoise	<i>ATP5I</i>
CNACRE turquoise	<i>ATP5L</i>
CNACRE turquoise	<i>ATP5O</i>
CNACRE blue	<i>ATP6V0B</i>
CNACRE grey	<i>ATP6V0C</i>
CNACRE blue	<i>ATP6V0E1</i>
CNACRE turquoise	<i>ATP6V1F</i>
CNACRE blue	<i>ATP6V1G1</i>
CNACRE brown	<i>ATRIP</i>
CNACRE grey	<i>ATXN2L</i>
CNACRE grey	<i>AZU1</i>
CNACRE blue	<i>B2M</i>
CNACRE blue	<i>B3GNT8</i>
CNACRE grey	<i>BAG1</i>
CNACRE blue	<i>BAZ1A</i>

CNACRE blue	<i>BCL2A1</i>
CNACRE grey	<i>BCL2L1</i>
CNACRE blue	<i>BCL6</i>
CNACRE brown	<i>BCL9</i>
CNACRE grey	<i>BHLHE40</i>
CNACRE blue	<i>BID</i>
CNACRE blue	<i>BIN2</i>
CNACRE grey	<i>BLCAP</i>
CNACRE blue	<i>BLOC1S1</i>
CNACRE grey	<i>BLVRB</i>
CNACRE brown	<i>BLZF1</i>
CNACRE brown	<i>BOD1</i>
CNACRE blue	<i>BRD2</i>
CNACRE turquoise	<i>BRK1</i>
CNACRE blue	<i>BSG</i>
CNACRE turquoise	<i>BTF3</i>
CNACRE blue	<i>BTG1</i>
CNACRE blue	<i>BUD31</i>
CNACRE brown	<i>BYSL</i>
CNACRE brown	<i>BZRAP1</i>
CNACRE blue	<i>C10orf54</i>
CNACRE turquoise	<i>C11orf31</i>
CNACRE turquoise	<i>C11orf98</i>
CNACRE turquoise	<i>C12orf10</i>
CNACRE turquoise	<i>C12orf57</i>
CNACRE turquoise	<i>C14orf2</i>
CNACRE blue	<i>C15orf39</i>
CNACRE blue	<i>C16orf54</i>
CNACRE brown	<i>C17orf98</i>
CNACRE grey	<i>C19orf33</i>
CNACRE blue	<i>C19orf38</i>
CNACRE turquoise	<i>C19orf53</i>
CNACRE turquoise	<i>C19orf66</i>
CNACRE turquoise	<i>C19orf70</i>
CNACRE grey	<i>C1QB</i>
CNACRE brown	<i>C1QTNF1</i>
CNACRE brown	<i>C1orf116</i>
CNACRE turquoise	<i>C1orf162</i>
CNACRE brown	<i>C1orf64</i>
CNACRE brown	<i>C2CD5</i>
CNACRE grey	<i>C2orf88</i>
CNACRE blue	<i>C4orf3</i>
CNACRE turquoise	<i>C4orf48</i>
CNACRE blue	<i>C5AR1</i>
CNACRE turquoise	<i>C6orf25</i>
CNACRE turquoise	<i>C6orf48</i>
CNACRE grey	<i>C7orf73</i>
CNACRE turquoise	<i>C9orf16</i>
CNACRE grey	<i>C9orf78</i>

CNACRE grey CALHM2  
CNACRE turquoise CALM1  
CNACRE blue CAMP  
CNACRE blue CAMTA2  
CNACRE blue CAP1  
CNACRE blue CAPN1  
CNACRE blue CARD16  
CNACRE blue CASP4  
CNACRE brown CATSPERG  
CNACRE brown CBY3  
CNACRE grey CCAR2  
CNACRE brown CCDC120  
CNACRE brown CCDC151  
CNACRE brown CCDC183  
CNACRE blue CCDC97  
CNACRE grey CCL23  
CNACRE turquoise CCL5  
CNACRE grey CCR3  
CNACRE turquoise CCR7  
CNACRE brown CCT6B  
CNACRE turquoise CD14  
CNACRE grey CD248  
CNACRE turquoise CD27  
CNACRE blue CD37  
CNACRE turquoise CD3D  
CNACRE turquoise CD3E  
CNACRE blue CD44  
CNACRE turquoise CD48  
CNACRE turquoise CD5  
CNACRE turquoise CD52  
CNACRE blue CD53  
CNACRE blue CD55  
CNACRE blue CD63  
CNACRE turquoise CD68  
CNACRE turquoise CD7  
CNACRE turquoise CD74  
CNACRE turquoise CD79A  
CNACRE turquoise CD79B  
CNACRE turquoise CD8A  
CNACRE blue CDA  
CNACRE brown CDC25C  
CNACRE turquoise CDC37  
CNACRE turquoise CDK2AP2  
CNACRE blue CEACAM1  
CNACRE blue CEACAM3  
CNACRE turquoise CELF1  
CNACRE brown CEP192  
CNACRE grey CFD  
CNACRE turquoise CFL1

CNACRE turquoise CHCHD2  
CNACRE blue CHI3L1  
CNACRE blue CHMP2A  
CNACRE blue CITED2  
CNACRE brown CKAP2  
CNACRE grey CLC  
CNACRE brown CLCN7  
CNACRE blue CLEC2B  
CNACRE blue CLEC4E  
CNACRE blue CLIC1  
CNACRE turquoise CLIC3  
CNACRE grey CLPTM1  
CNACRE turquoise CNBP  
CNACRE blue CNN2  
CNACRE turquoise CNOT1  
CNACRE blue CNOT3  
CNACRE grey COG1  
CNACRE turquoise COMMD6  
CNACRE brown COPRS  
CNACRE turquoise CORO1A  
CNACRE turquoise COX4I1  
CNACRE turquoise COX5B  
CNACRE turquoise COX6A1  
CNACRE turquoise COX6B1  
CNACRE turquoise COX6C  
CNACRE turquoise COX7B  
CNACRE turquoise COX7C  
CNACRE turquoise COX8A  
CNACRE blue CPPED1  
CNACRE turquoise CPSF3L  
CNACRE blue CPSF7  
CNACRE blue CREB5  
CNACRE turquoise CRIP1  
CNACRE blue CRTC2  
CNACRE turquoise CS  
CNACRE blue CSF2RB  
CNACRE blue CSF3R  
CNACRE grey CSK  
CNACRE turquoise CSNK2B  
CNACRE turquoise CST3  
CNACRE blue CST7  
CNACRE blue CSTA  
CNACRE turquoise CSTB  
CNACRE grey CTDNEP1  
CNACRE blue CTDSP1  
CNACRE turquoise CTSD  
CNACRE blue CTSS  
CNACRE turquoise CTSW  
CNACRE turquoise CUTA

CNACRE turquoise *CWF19L2*  
CNACRE grey *CXCL8*  
CNACRE blue *CXCR1*  
CNACRE blue *CXCR2*  
CNACRE turquoise *CXCR3*  
CNACRE blue *CXCR4*  
CNACRE turquoise *CXCR5*  
CNACRE grey *CYB5R3*  
CNACRE blue *CYBA*  
CNACRE brown *CYP4F3*  
CNACRE blue *CYSTM1*  
CNACRE grey *CYTH1*  
CNACRE blue *CYTH4*  
CNACRE blue *DAZAP2*  
CNACRE brown *DBF4B*  
CNACRE turquoise *DBI*  
CNACRE grey *DCAF12*  
CNACRE turquoise *DCPS*  
CNACRE blue *DDAH2*  
CNACRE turquoise *DDX18*  
CNACRE brown *DHX32*  
CNACRE brown *DKKL1*  
CNACRE blue *DNAJB1*  
CNACRE brown *DNAJB5*  
CNACRE brown *DNAJC14*  
CNACRE turquoise *DNAJC15*  
CNACRE brown *DNLZ*  
CNACRE grey *DPM2*  
CNACRE turquoise *DPP7*  
CNACRE grey *DQX1*  
CNACRE blue *DRAP1*  
CNACRE blue *DTX2*  
CNACRE turquoise *DYNLL1*  
CNACRE turquoise *DYNLRB1*  
CNACRE blue *DYNLT1*  
CNACRE blue *DYSF*  
CNACRE brown *EDAR*  
CNACRE turquoise *EDF1*  
CNACRE turquoise *EEF1A1*  
CNACRE turquoise *EEF1B2*  
CNACRE turquoise *EEF1D*  
CNACRE turquoise *EEF1G*  
CNACRE turquoise *EEF2*  
CNACRE grey *EFCAB14*  
CNACRE grey *EIF1*  
CNACRE grey *EIF1AY*  
CNACRE blue *EIF1B*  
CNACRE turquoise *EIF3F*  
CNACRE turquoise *EIF3G*

CNACRE turquoise *EIF3H*  
CNACRE turquoise *EIF3K*  
CNACRE turquoise *EIF4G2*  
CNACRE turquoise *EIF5B*  
CNACRE grey *ELP5*  
CNACRE turquoise *EMP3*  
CNACRE grey *ENSA*  
CNACRE turquoise *EPC1*  
CNACRE brown *EPHB1*  
CNACRE blue *EPSTI1*  
CNACRE turquoise *ERP29*  
CNACRE brown *ESRRA*  
CNACRE turquoise *EVL*  
CNACRE turquoise *EWSR1*  
CNACRE brown *EXO5*  
CNACRE grey *EXOSC10*  
CNACRE turquoise *EZR*  
CNACRE turquoise *FABP5*  
CNACRE brown *FAM161B*  
CNACRE grey *FAM210B*  
CNACRE brown *FAM220A*  
CNACRE grey *FAM222B*  
CNACRE brown *FAM43A*  
CNACRE turquoise *FAM96B*  
CNACRE brown *FASN*  
CNACRE turquoise *FAU*  
CNACRE grey *FBXO7*  
CNACRE blue *FCER1G*  
CNACRE blue *FCGR1B*  
CNACRE blue *FCGR2A*  
CNACRE blue *FCGRT*  
CNACRE turquoise *FCMR*  
CNACRE turquoise *FCN1*  
CNACRE turquoise *FERMT3*  
CNACRE turquoise *FGFBP2*  
CNACRE blue *FGL2*  
CNACRE blue *FGR*  
CNACRE blue *FKBP1A*  
CNACRE grey *FKBP8*  
CNACRE blue *FLOT2*  
CNACRE blue *FOLR3*  
CNACRE blue *FOS*  
CNACRE blue *FPR1*  
CNACRE brown *FSTL4*  
CNACRE blue *FTH1*  
CNACRE blue *FTL*  
CNACRE grey *FUNDC2*  
CNACRE turquoise *FUS*  
CNACRE turquoise *FXYD5*

CNACRE blue	<i>FYB</i>
CNACRE blue	<i>G0S2</i>
CNACRE blue	<i>GAA</i>
CNACRE blue	<i>GABARAP</i>
CNACRE brown	<i>GAGE10</i>
CNACRE brown	<i>GAL3ST4</i>
CNACRE turquoise	<i>GAPDH</i>
CNACRE turquoise	<i>GATA3</i>
CNACRE grey	<i>GBA</i>
CNACRE blue	<i>GBP5</i>
CNACRE blue	<i>GCA</i>
CNACRE blue	<i>GDI1</i>
CNACRE brown	<i>GFM2</i>
CNACRE blue	<i>GIMAP4</i>
CNACRE turquoise	<i>GIMAP5</i>
CNACRE turquoise	<i>GIMAP7</i>
CNACRE blue	<i>GLIPR1</i>
CNACRE blue	<i>GLIPR2</i>
CNACRE blue	<i>GLRX</i>
CNACRE turquoise	<i>GM2A</i>
CNACRE blue	<i>GMFG</i>
CNACRE brown	<i>GNA12</i>
CNACRE turquoise	<i>GNAI2</i>
CNACRE brown	<i>GNAZ</i>
CNACRE turquoise	<i>GNB2L1</i>
CNACRE turquoise	<i>GNG11</i>
CNACRE blue	<i>GNG2</i>
CNACRE blue	<i>GNG5</i>
CNACRE turquoise	<i>GONLY</i>
CNACRE grey	<i>GNS</i>
CNACRE grey	<i>GP9</i>
CNACRE brown	<i>GPR137B</i>
CNACRE blue	<i>GPSM3</i>
CNACRE grey	<i>GPX1</i>
CNACRE blue	<i>GRINA</i>
CNACRE blue	<i>GRN</i>
CNACRE turquoise	<i>GSDMD</i>
CNACRE blue	<i>GSTK1</i>
CNACRE turquoise	<i>GSTP1</i>
CNACRE grey	<i>GUK1</i>
CNACRE grey	<i>GYPC</i>
CNACRE turquoise	<i>GZMA</i>
CNACRE turquoise	<i>GZMB</i>
CNACRE grey	<i>GZMH</i>
CNACRE turquoise	<i>H2AFJ</i>
CNACRE turquoise	<i>H2AFZ</i>
CNACRE blue	<i>H3F3A</i>
CNACRE blue	<i>H3F3B</i>
CNACRE brown	<i>HAS3</i>

CNACRE grey *HBA1*  
CNACRE grey *HBA2*  
CNACRE grey *HBB*  
CNACRE grey *HBD*  
CNACRE grey *HBG2*  
CNACRE grey *HBM*  
CNACRE grey *HBQ1*  
CNACRE grey *HBZ*  
CNACRE blue *HCK*  
CNACRE turquoise *HCST*  
CNACRE turquoise *HERPUD1*  
CNACRE turquoise *HIGD2A*  
CNACRE turquoise *HINT1*  
CNACRE turquoise *HINT2*  
CNACRE brown *HIPK2*  
CNACRE turquoise *HIST1H2AE*  
CNACRE blue *HIST1H2BC*  
CNACRE turquoise *HIST1H2BH*  
CNACRE turquoise *HIST1H2BJ*  
CNACRE turquoise *HIST1H2BK*  
CNACRE brown *HIST1H3D*  
CNACRE turquoise *HIST1H3H*  
CNACRE grey *HIST1H4H*  
CNACRE turquoise *HLA-A*  
CNACRE grey *HLA-B*  
CNACRE grey *HLA-C*  
CNACRE turquoise *HLA-DPA1*  
CNACRE turquoise *HLA-DPB1*  
CNACRE grey *HLA-DQA1*  
CNACRE grey *HLA-DQA2*  
CNACRE turquoise *HLA-DQB1*  
CNACRE turquoise *HLA-DRA*  
CNACRE turquoise *HLA-DRB1*  
CNACRE grey *HLA-DRB5*  
CNACRE blue *HLA-E*  
CNACRE brown *HLCS*  
CNACRE turquoise *HM13*  
CNACRE turquoise *HMGA1*  
CNACRE turquoise *HMGB1*  
CNACRE turquoise *HMGN1*  
CNACRE turquoise *HMGN2*  
CNACRE grey *HMOX1*  
CNACRE turquoise *HNRNPK*  
CNACRE brown *HOXC4*  
CNACRE blue *HP*  
CNACRE blue *HRH2*  
CNACRE grey *HSP90AB1*  
CNACRE turquoise *HSPA8*  
CNACRE turquoise *HSPA9*

CNACRE turquoise *HSPB1*  
CNACRE brown *HSPB9*  
CNACRE grey *HTRA2*  
CNACRE blue *ICAM3*  
CNACRE turquoise *ID3*  
CNACRE blue *IER2*  
CNACRE grey *IFI27*  
CNACRE blue *IFI30*  
CNACRE blue *IFI35*  
CNACRE blue *IFI6*  
CNACRE blue *IFIT1*  
CNACRE blue *IFIT2*  
CNACRE blue *IFIT3*  
CNACRE blue *IFITM1*  
CNACRE blue *IFITM2*  
CNACRE blue *IFITM3*  
CNACRE turquoise *IGFLR1*  
CNACRE turquoise *IGLL5*  
CNACRE blue *IGSF6*  
CNACRE blue *IL16*  
CNACRE blue *IL1B*  
CNACRE blue *IL1R2*  
CNACRE blue *IL1RN*  
CNACRE brown *IL24*  
CNACRE grey *IL2RB*  
CNACRE turquoise *IL2RG*  
CNACRE turquoise *IL32*  
CNACRE grey *IMPA2*  
CNACRE blue *IMPDH1*  
CNACRE grey *IRAK3*  
CNACRE brown *IRF2BPL*  
CNACRE grey *IRF4*  
CNACRE blue *IRF7*  
CNACRE blue *ISG15*  
CNACRE blue *ISG20*  
CNACRE grey *IST1*  
CNACRE turquoise *ITGAL*  
CNACRE blue *ITGB2*  
CNACRE blue *ITM2B*  
CNACRE grey *ITM2C*  
CNACRE grey *IWS1*  
CNACRE grey *JAK3*  
CNACRE turquoise *JCHAIN*  
CNACRE blue *JUNB*  
CNACRE brown *KCNK17*  
CNACRE blue *KIAA0040*  
CNACRE grey *KIAA1191*  
CNACRE grey *KLF2*  
CNACRE brown *KLHL14*

CNACRE brown *KLHL26*  
CNACRE turquoise *KLRB1*  
CNACRE blue *KXD1*  
CNACRE turquoise *LAIR1*  
CNACRE grey *LAIR2*  
CNACRE blue *LAMP2*  
CNACRE turquoise *LAMTOR1*  
CNACRE turquoise *LAMTOR4*  
CNACRE blue *LAPTM5*  
CNACRE turquoise *LAT*  
CNACRE turquoise *LBH*  
CNACRE grey *LBHD1*  
CNACRE blue *LCN2*  
CNACRE blue *LCP2*  
CNACRE turquoise *LDHB*  
CNACRE turquoise *LEF1*  
CNACRE grey *LENG8*  
CNACRE turquoise *LGALS1*  
CNACRE grey *LGALS2*  
CNACRE grey *LGALS3*  
CNACRE blue *LGALS9*  
CNACRE turquoise *LILRA1*  
CNACRE blue *LILRA2*  
CNACRE blue *LILRA3*  
CNACRE blue *LILRA5*  
CNACRE turquoise *LILRB1*  
CNACRE blue *LILRB2*  
CNACRE turquoise *LIMD2*  
CNACRE grey *LIMS1*  
CNACRE blue *LITAF*  
CNACRE grey *LPAR5*  
CNACRE turquoise *LPXN*  
CNACRE blue *LRG1*  
CNACRE blue *LRP10*  
CNACRE turquoise *LSM7*  
CNACRE blue *LSP1*  
CNACRE turquoise *LST1*  
CNACRE turquoise *LTB*  
CNACRE blue *LY6E*  
CNACRE turquoise *LY86*  
CNACRE turquoise *LY9*  
CNACRE blue *LY96*  
CNACRE grey *LYPD2*  
CNACRE turquoise *LYZ*  
CNACRE grey *MAGED1*  
CNACRE turquoise *MAL*  
CNACRE blue *MAP3K7CL*  
CNACRE turquoise *MAP4K1*  
CNACRE turquoise *MAPKAPK3*

CNACRE brown *MAPKAPK5*  
CNACRE brown *MARVELD2*  
CNACRE blue *MBD6*  
CNACRE blue *MBOAT7*  
CNACRE brown *MECOM*  
CNACRE turquoise *MIEN1*  
CNACRE turquoise *MIF*  
CNACRE blue *MKL1*  
CNACRE blue *MMP25*  
CNACRE blue *MMP9*  
CNACRE blue *MNDA*  
CNACRE grey *MNT*  
CNACRE turquoise *MRPL21*  
CNACRE turquoise *MRPL41*  
CNACRE turquoise *MRPL52*  
CNACRE turquoise *MRPL57*  
CNACRE turquoise *MRPS21*  
CNACRE turquoise *MRPS24*  
CNACRE brown *MRVI1*  
CNACRE blue *MS4A6A*  
CNACRE turquoise *MSN*  
CNACRE blue *MSRB1*  
CNACRE turquoise *MT1E*  
CNACRE turquoise *MT1X*  
CNACRE grey *MT2A*  
CNACRE blue *MTHFS*  
CNACRE blue *MTRNR2L1*  
CNACRE blue *MTRNR2L2*  
CNACRE blue *MTRNR2L8*  
CNACRE blue *MTRNR2L9*  
CNACRE blue *MX1*  
CNACRE blue *MX2*  
CNACRE blue *MYADM*  
CNACRE blue *MYL12A*  
CNACRE blue *MYL12B*  
CNACRE grey *MYL4*  
CNACRE blue *MYL6*  
CNACRE grey *MYL9*  
CNACRE blue *MYO1F*  
CNACRE turquoise *MZB1*  
CNACRE turquoise *NACA*  
CNACRE blue *NADK*  
CNACRE blue *NAIP*  
CNACRE blue *NARF*  
CNACRE brown *NBL1*  
CNACRE blue *NCF2*  
CNACRE blue *NCF4*  
CNACRE turquoise *NDUFA11*  
CNACRE turquoise *NDUFA12*

CNACRE turquoise *NDUFA13*  
CNACRE turquoise *NDUFA2*  
CNACRE turquoise *NDUFA3*  
CNACRE turquoise *NDUFA4*  
CNACRE turquoise *NDUFAF3*  
CNACRE turquoise *NDUFB11*  
CNACRE turquoise *NDUFB2*  
CNACRE turquoise *NDUFB4*  
CNACRE turquoise *NDUFB7*  
CNACRE turquoise *NDUFB8*  
CNACRE turquoise *NDUFB9*  
CNACRE turquoise *NDUFS3*  
CNACRE turquoise *NDUFS5*  
CNACRE turquoise *NDUFS7*  
CNACRE turquoise *NDUVF2*  
CNACRE blue *NFAM1*  
CNACRE grey *NFATC3*  
CNACRE blue *NFE2*  
CNACRE turquoise *NHP2*  
CNACRE turquoise *NHP2L1*  
CNACRE blue *NINJ1*  
CNACRE grey *NIPAL2*  
CNACRE turquoise *NIPSNAP1*  
CNACRE turquoise *NKG7*  
CNACRE turquoise *NKIRAS2*  
CNACRE blue *NLRP1*  
CNACRE turquoise *NME2*  
CNACRE turquoise *NME3*  
CNACRE turquoise *NMT1*  
CNACRE turquoise *NOB1*  
CNACRE turquoise *NOLC1*  
CNACRE blue *NOP10*  
CNACRE turquoise *NOSIP*  
CNACRE blue *NPC2*  
CNACRE blue *NQO2*  
CNACRE grey *NR1D1*  
CNACRE brown *NR3C2*  
CNACRE turquoise *NSA2*  
CNACRE turquoise *NUCD3*  
CNACRE blue *NUMB*  
CNACRE grey *NUP210*  
CNACRE turquoise *NUP85*  
CNACRE blue *OAS1*  
CNACRE blue *OASL*  
CNACRE grey *OAZ1*  
CNACRE blue *OAZ2*  
CNACRE turquoise *OCIAD2*  
CNACRE brown *OLIG1*  
CNACRE grey *OPTN*

CNACRE grey *ORMDL3*  
CNACRE grey *OSBP2*  
CNACRE blue *OSM*  
CNACRE turquoise *OST4*  
CNACRE grey *P4HB*  
CNACRE turquoise *PABPC1*  
CNACRE turquoise *PARK7*  
CNACRE turquoise *PARP8*  
CNACRE turquoise *PCED1B*  
CNACRE brown *PCYT2*  
CNACRE brown *PDE5A*  
CNACRE blue *PDLIM7*  
CNACRE grey *PDZK1IP1*  
CNACRE grey *PEA15*  
CNACRE turquoise *PEBP1*  
CNACRE turquoise *PEF1*  
CNACRE turquoise *PET100*  
CNACRE turquoise *PF4*  
CNACRE grey *PF4V1*  
CNACRE turquoise *PFDN5*  
CNACRE turquoise *PFN1*  
CNACRE blue *PGLYRP1*  
CNACRE grey *PHACTR4*  
CNACRE brown *PHC1*  
CNACRE blue *PHF21A*  
CNACRE brown *PHLDB2*  
CNACRE grey *PI3*  
CNACRE blue *PIK3CD*  
CNACRE brown *PIK3CG*  
CNACRE turquoise *PIK3IP1*  
CNACRE blue *PILRA*  
CNACRE turquoise *PKM*  
CNACRE blue *PLBD1*  
CNACRE turquoise *PLCB2*  
CNACRE turquoise *PLD3*  
CNACRE brown *PLEKHG2*  
CNACRE brown *PLEKHG5*  
CNACRE blue *PLP2*  
CNACRE brown *PLS1*  
CNACRE blue *PLSCR1*  
CNACRE turquoise *PLSCR3*  
CNACRE blue *PML*  
CNACRE turquoise *POLR2I*  
CNACRE turquoise *POLR2L*  
CNACRE turquoise *POU2AF1*  
CNACRE turquoise *POU2F2*  
CNACRE grey *PPBP*  
CNACRE turquoise *PPDPF*  
CNACRE turquoise *PPIA*

CNACRE turquoise *PPIB*  
CNACRE blue *PPP1R18*  
CNACRE brown *PPP2R5A*  
CNACRE turquoise *PRAF2*  
CNACRE blue *PRAM1*  
CNACRE brown *PRDM4*  
CNACRE grey *PRDX6*  
CNACRE turquoise *PRKCSH*  
CNACRE brown *PRMT3*  
CNACRE blue *PROK2*  
CNACRE grey *PRPF8*  
CNACRE blue *PRR13*  
CNACRE blue *PRR14*  
CNACRE brown *PRRT3*  
CNACRE grey *PRSS23*  
CNACRE turquoise *PSAP*  
CNACRE blue *PSENEN*  
CNACRE blue *PSMB10*  
CNACRE blue *PSMB3*  
CNACRE turquoise *PSMB5*  
CNACRE blue *PSMB8*  
CNACRE blue *PSMB9*  
CNACRE blue *PSME1*  
CNACRE grey *PSME2*  
CNACRE grey *PSMF1*  
CNACRE blue *PTAFR*  
CNACRE turquoise *PTBP1*  
CNACRE turquoise *PTGDS*  
CNACRE grey *PTGS1*  
CNACRE turquoise *PTMA*  
CNACRE blue *PTPRC*  
CNACRE turquoise *PTPRCAP*  
CNACRE turquoise *PTTG1*  
CNACRE blue *PXN*  
CNACRE blue *PYCARD*  
CNACRE brown *PYGO2*  
CNACRE turquoise *QARS*  
CNACRE blue *QPCT*  
CNACRE grey *QRICH1*  
CNACRE blue *RAB24*  
CNACRE blue *RAB5C*  
CNACRE blue *RAB7A*  
CNACRE blue *RABAC1*  
CNACRE blue *RAC2*  
CNACRE grey *RALY*  
CNACRE grey *RAP1GAP*  
CNACRE blue *RARA*  
CNACRE turquoise *RARRES3*  
CNACRE blue *RASGRP4*

CNACRE grey *RAVER1*  
CNACRE turquoise *RBM8A*  
CNACRE blue *RBP7*  
CNACRE turquoise *RCSD1*  
CNACRE blue *RELA*  
CNACRE brown *REPS1*  
CNACRE turquoise *RETN*  
CNACRE grey *RGS10*  
CNACRE blue *RGS2*  
CNACRE blue *RHOA*  
CNACRE grey *RHOB*  
CNACRE turquoise *RHOF*  
CNACRE blue *RHOG*  
CNACRE turquoise *RNASE6*  
CNACRE blue *RNASET2*  
CNACRE brown *RNA\_SPIKE\_ERCC-00040*  
CNACRE brown *RNA\_SPIKE\_ERCC-00067*  
CNACRE grey *RNF145*  
CNACRE turquoise *RNF181*  
CNACRE grey *RNF26*  
CNACRE turquoise *ROMO1*  
CNACRE blue *ROPN1L*  
CNACRE turquoise *RPL10*  
CNACRE turquoise *RPL10A*  
CNACRE turquoise *RPL11*  
CNACRE turquoise *RPL12*  
CNACRE turquoise *RPL13*  
CNACRE turquoise *RPL13A*  
CNACRE turquoise *RPL14*  
CNACRE turquoise *RPL15*  
CNACRE turquoise *RPL18*  
CNACRE turquoise *RPL18A*  
CNACRE turquoise *RPL19*  
CNACRE turquoise *RPL21*  
CNACRE turquoise *RPL22*  
CNACRE turquoise *RPL23*  
CNACRE turquoise *RPL23A*  
CNACRE turquoise *RPL24*  
CNACRE turquoise *RPL26*  
CNACRE turquoise *RPL27A*  
CNACRE turquoise *RPL28*  
CNACRE turquoise *RPL29*  
CNACRE turquoise *RPL3*  
CNACRE turquoise *RPL30*  
CNACRE turquoise *RPL31*  
CNACRE turquoise *RPL32*  
CNACRE turquoise *RPL34*  
CNACRE turquoise *RPL35*  
CNACRE turquoise *RPL35A*

CNACRE turquoise *RPL36*  
CNACRE turquoise *RPL36AL*  
CNACRE turquoise *RPL37*  
CNACRE turquoise *RPL37A*  
CNACRE turquoise *RPL38*  
CNACRE turquoise *RPL39*  
CNACRE turquoise *RPL4*  
CNACRE turquoise *RPL41*  
CNACRE turquoise *RPL5*  
CNACRE turquoise *RPL6*  
CNACRE turquoise *RPL7*  
CNACRE turquoise *RPL7A*  
CNACRE turquoise *RPL8*  
CNACRE turquoise *RPL9*  
CNACRE turquoise *RPLP0*  
CNACRE turquoise *RPLP1*  
CNACRE turquoise *RPLP2*  
CNACRE turquoise *RPS11*  
CNACRE turquoise *RPS12*  
CNACRE turquoise *RPS13*  
CNACRE turquoise *RPS14*  
CNACRE turquoise *RPS15*  
CNACRE turquoise *RPS15A*  
CNACRE turquoise *RPS16*  
CNACRE turquoise *RPS18*  
CNACRE turquoise *RPS19*  
CNACRE turquoise *RPS2*  
CNACRE turquoise *RPS20*  
CNACRE turquoise *RPS21*  
CNACRE turquoise *RPS23*  
CNACRE turquoise *RPS24*  
CNACRE turquoise *RPS25*  
CNACRE grey *RPS26*  
CNACRE turquoise *RPS27*  
CNACRE turquoise *RPS27A*  
CNACRE turquoise *RPS27L*  
CNACRE turquoise *RPS28*  
CNACRE turquoise *RPS29*  
CNACRE turquoise *RPS3*  
CNACRE turquoise *RPS3A*  
CNACRE turquoise *RPS4X*  
CNACRE grey *RPS4Y1*  
CNACRE turquoise *RPS5*  
CNACRE turquoise *RPS6*  
CNACRE turquoise *RPS7*  
CNACRE turquoise *RPS8*  
CNACRE turquoise *RPS9*  
CNACRE turquoise *RPSA*  
CNACRE grey *RSAD2*

CNACRE blue	<i>RSBN1L</i>
CNACRE brown	<i>RSPH6A</i>
CNACRE blue	<i>RTN3</i>
CNACRE blue	<i>RTP4</i>
CNACRE grey	<i>RUNX3</i>
CNACRE brown	<i>RXRB</i>
CNACRE turquoise	<i>S100A10</i>
CNACRE blue	<i>S100A11</i>
CNACRE blue	<i>S100A12</i>
CNACRE turquoise	<i>S100A4</i>
CNACRE blue	<i>S100A6</i>
CNACRE blue	<i>S100A8</i>
CNACRE blue	<i>S100A9</i>
CNACRE turquoise	<i>S100B</i>
CNACRE blue	<i>S100P</i>
CNACRE turquoise	<i>S1PR1</i>
CNACRE blue	<i>SAP25</i>
CNACRE blue	<i>SASH3</i>
CNACRE blue	<i>SAT1</i>
CNACRE brown	<i>SAV1</i>
CNACRE turquoise	<i>SCAMP2</i>
CNACRE grey	<i>SCGB3A1</i>
CNACRE blue	<i>SCO2</i>
CNACRE turquoise	<i>SEC61B</i>
CNACRE turquoise	<i>SEC61G</i>
CNACRE grey	<i>SEC62</i>
CNACRE blue	<i>SECTM1</i>
CNACRE grey	<i>SELENBP1</i>
CNACRE blue	<i>SELL</i>
CNACRE blue	<i>SELPLG</i>
CNACRE blue	<i>SEMA4A</i>
CNACRE brown	<i>SENP3</i>
CNACRE turquoise	<i>SEPT6</i>
CNACRE turquoise	<i>SEPT9</i>
CNACRE turquoise	<i>SEPW1</i>
CNACRE grey	<i>SERF2</i>
CNACRE turquoise	<i>SERP1</i>
CNACRE blue	<i>SERPINA1</i>
CNACRE blue	<i>SERPINB1</i>
CNACRE blue	<i>SERPING1</i>
CNACRE turquoise	<i>SF1</i>
CNACRE grey	<i>SF3A1</i>
CNACRE turquoise	<i>SF3A2</i>
CNACRE grey	<i>SF3B2</i>
CNACRE blue	<i>SF3B6</i>
CNACRE turquoise	<i>SFPQ</i>
CNACRE turquoise	<i>SH2D2A</i>
CNACRE turquoise	<i>SH3BGRL3</i>
CNACRE blue	<i>SHISA5</i>

CNACRE turquoise *SHMT2*  
CNACRE blue *SIRPB2*  
CNACRE blue *SLC11A1*  
CNACRE brown *SLC25A15*  
CNACRE turquoise *SLC25A3*  
CNACRE grey *SLC25A37*  
CNACRE grey *SLC25A39*  
CNACRE grey *SLC29A1*  
CNACRE turquoise *SLC35A4*  
CNACRE brown *SLC38A7*  
CNACRE blue *SLC44A2*  
CNACRE brown *SLC8A1*  
CNACRE blue *SLPI*  
CNACRE blue *SMAP2*  
CNACRE brown *SMARCC1*  
CNACRE turquoise *SMDT1*  
CNACRE grey *SMIM1*  
CNACRE turquoise *SMIM10L1*  
CNACRE grey *SMPD1*  
CNACRE grey *SNAI3*  
CNACRE grey *SNCA*  
CNACRE turquoise *SNRPB*  
CNACRE turquoise *SNRPD2*  
CNACRE turquoise *SNRPD3*  
CNACRE turquoise *SOD1*  
CNACRE blue *SOD2*  
CNACRE turquoise *SOX4*  
CNACRE blue *SP110*  
CNACRE grey *SPDYE1*  
CNACRE blue *SPI1*  
CNACRE turquoise *SPIB*  
CNACRE turquoise *SPN*  
CNACRE brown *SPOCK3*  
CNACRE blue *SRGN*  
CNACRE turquoise *SRP14*  
CNACRE turquoise *SRRM1*  
CNACRE turquoise *SSR2*  
CNACRE turquoise *SSR4*  
CNACRE grey *ST6GAL1*  
CNACRE grey *ST6GALNAC6*  
CNACRE brown *STARD9*  
CNACRE blue *STAT2*  
CNACRE turquoise *STMN1*  
CNACRE brown *STRN3*  
CNACRE turquoise *SUB1*  
CNACRE turquoise *SUMO2*  
CNACRE grey *SUSD6*  
CNACRE brown *SYNGR4*  
CNACRE grey *SYVN1*

CNACRE turquoise *SZRD1*  
CNACRE grey *TAGAP*  
CNACRE blue *TAGLN2*  
CNACRE blue *TALDO1*  
CNACRE turquoise *TAPBP*  
CNACRE grey *TAPBPL*  
CNACRE turquoise *TARBP2*  
CNACRE grey *TBC1D13*  
CNACRE turquoise *TBCA*  
CNACRE grey *TBL3*  
CNACRE grey *TCEB2*  
CNACRE grey *TCERG1*  
CNACRE turquoise *TCF25*  
CNACRE turquoise *TCF7*  
CNACRE blue *TCIRG1*  
CNACRE turquoise *TCL1A*  
CNACRE turquoise *TECR*  
CNACRE turquoise *TESPA1*  
CNACRE grey *TFE3*  
CNACRE blue *TGFB1*  
CNACRE brown *TGFBR2*  
CNACRE blue *THEMIS2*  
CNACRE turquoise *TICAM1*  
CNACRE brown *TIGD4*  
CNACRE turquoise *TIMM10*  
CNACRE turquoise *TIMM13*  
CNACRE turquoise *TIMP1*  
CNACRE brown *TIPARP*  
CNACRE turquoise *TMA7*  
CNACRE blue *TMC4*  
CNACRE turquoise *TMEM109*  
CNACRE blue *TMEM120A*  
CNACRE blue *TMEM140*  
CNACRE turquoise *TMEM176A*  
CNACRE turquoise *TMEM176B*  
CNACRE brown *TMEM198*  
CNACRE turquoise *TMEM219*  
CNACRE turquoise *TMEM256*  
CNACRE turquoise *TMEM258*  
CNACRE brown *TMEM8A*  
CNACRE turquoise *TMSB10*  
CNACRE turquoise *TMSB4X*  
CNACRE turquoise *TMUB1*  
CNACRE blue *TNFAIP6*  
CNACRE blue *TNFRSF10C*  
CNACRE brown *TNFRSF13C*  
CNACRE blue *TNFRSF1A*  
CNACRE blue *TNFRSF1B*  
CNACRE turquoise *TNFSF13*

CNACRE blue	<i>TNFSF13B</i>
CNACRE grey	<i>TNIP1</i>
CNACRE grey	<i>TOB1</i>
CNACRE turquoise	<i>TOMM6</i>
CNACRE turquoise	<i>TOMM7</i>
CNACRE turquoise	<i>TPI1</i>
CNACRE turquoise	<i>TPT1</i>
CNACRE turquoise	<i>TRAF3IP3</i>
CNACRE grey	<i>TRAP1</i>
CNACRE turquoise	<i>TRAPPC5</i>
CNACRE blue	<i>TREM1</i>
CNACRE blue	<i>TREX1</i>
CNACRE grey	<i>TRIM27</i>
CNACRE brown	<i>TRMT44</i>
CNACRE blue	<i>TSC22D3</i>
CNACRE blue	<i>TSC22D4</i>
CNACRE blue	<i>TSEN34</i>
CNACRE brown	<i>TSHZ1</i>
CNACRE blue	<i>TSPO</i>
CNACRE turquoise	<i>TSTD1</i>
CNACRE blue	<i>TUBA1A</i>
CNACRE turquoise	<i>TUBA1B</i>
CNACRE grey	<i>TUBB2A</i>
CNACRE blue	<i>TXN</i>
CNACRE blue	<i>TYMP</i>
CNACRE blue	<i>TYROBP</i>
CNACRE turquoise	<i>U2AF2</i>
CNACRE grey	<i>UBA52</i>
CNACRE grey	<i>UBALD1</i>
CNACRE grey	<i>UBASH3A</i>
CNACRE grey	<i>UBB</i>
CNACRE blue	<i>UBC</i>
CNACRE turquoise	<i>UBE2C</i>
CNACRE blue	<i>UBE2D1</i>
CNACRE turquoise	<i>UBE2D2</i>
CNACRE blue	<i>UBE2D3</i>
CNACRE blue	<i>UBE2L6</i>
CNACRE turquoise	<i>UBL5</i>
CNACRE turquoise	<i>UCP2</i>
CNACRE turquoise	<i>UQCR10</i>
CNACRE turquoise	<i>UQCR11</i>
CNACRE turquoise	<i>UQCRB</i>
CNACRE turquoise	<i>UQCRL</i>
CNACRE turquoise	<i>UQCRRQ</i>
CNACRE turquoise	<i>USMG5</i>
CNACRE turquoise	<i>VAMP2</i>
CNACRE turquoise	<i>VAMP5</i>
CNACRE turquoise	<i>VAMP8</i>
CNACRE blue	<i>VASP</i>

CNACRE turquoise *VDAC2*  
CNACRE grey *VDR*  
CNACRE blue *VIM*  
CNACRE turquoise *VPREB3*  
CNACRE turquoise *VPS28*  
CNACRE blue *VPS37B*  
CNACRE grey *VSTM1*  
CNACRE grey *WARS*  
CNACRE blue *WAS*  
CNACRE blue *WASF2*  
CNACRE brown *WBP1L*  
CNACRE blue *WBP2*  
CNACRE turquoise *WDR83OS*  
CNACRE blue *WIPF1*  
CNACRE blue *WWP2*  
CNACRE grey *YWHAB*  
CNACRE turquoise *ZAP70*  
CNACRE brown *ZBTB10*  
CNACRE brown *ZBTB16*  
CNACRE brown *ZCCHC3*  
CNACRE blue *ZFP36*  
CNACRE blue *ZFP36L1*  
CNACRE grey *ZFP36L2*  
CNACRE grey *ZFR*  
CNACRE brown *ZIK1*  
CNACRE grey *ZNF260*  
CNACRE brown *ZNF304*  
CNACRE turquoise *ZNF384*  
CNACRE turquoise *ZNF385A*  
CNACRE turquoise *ZNF414*  
CNACRE brown *ZNF497*  
CNACRE blue *ZNF592*  
CNACRE brown *ZNF614*  
CNACRE brown *ZNF619*  
CNACRE brown *ZNF629*  
CNACRE brown *ZNF639*  
CNACRE brown *ZNF646*  
CNACRE turquoise *ZNF706*  
CNACRE turquoise *ZNF830*  
CNACRE brown *ZNF835*  
CNACRE brown *ZNF843*  
CNACRE turquoise *ZNHIT1*  
CNACRE blue *ZYX*  
CNACRE brown *AACS*  
CNACRE grey *ABCB4*  
CNACRE brown *ABCB6*  
CNACRE brown *ABCD3*  
CNACRE brown *ABCE1*  
CNACRE turquoise *ABHD14B*

CNACRE blue ABTB1  
CNACRE grey ACADVL  
CNACRE blue ACAP1  
CNACRE grey ACKR1  
CNACRE brown ACLY  
CNACRE turquoise ACO2  
CNACRE turquoise ACOT13  
CNACRE turquoise ACOT8  
CNACRE grey ACP1  
CNACRE turquoise ACSL5  
CNACRE blue ACTN1  
CNACRE turquoise ACTR1A  
CNACRE grey ACTR3  
CNACRE brown ADAM15  
CNACRE blue ADAM8  
CNACRE brown ADAP1  
CNACRE grey ADAR  
CNACRE blue ADGRE3  
CNACRE grey ADK  
CNACRE grey ADM5  
CNACRE grey ADORA2A  
CNACRE grey AFF1  
CNACRE grey AFF3  
CNACRE brown AFF4  
CNACRE brown AGAP3  
CNACRE brown AGRP  
CNACRE grey AGTPBP1  
CNACRE blue AIM2  
CNACRE turquoise AIMP2  
CNACRE turquoise AIP  
CNACRE grey AK1  
CNACRE turquoise AK2  
CNACRE blue AKIRIN2  
CNACRE turquoise AKR1A1  
CNACRE turquoise AKR1B1  
CNACRE grey AKT1S1  
CNACRE blue ALDH2  
CNACRE grey ALDH6A1  
CNACRE turquoise ALG12  
CNACRE brown ALKBH5  
CNACRE grey ALOX15  
CNACRE blue ALOX5  
CNACRE blue ALPK1  
CNACRE blue AMICA1  
CNACRE turquoise ANAPC15  
CNACRE turquoise ANAPC16  
CNACRE grey ANK1  
CNACRE brown ANKMY2  
CNACRE blue ANKRD22

CNACRE brown ANKRD23  
CNACRE brown ANKRD60  
CNACRE grey ANKZF1  
CNACRE grey ANO6  
CNACRE brown ANO9  
CNACRE turquoise ANP32B  
CNACRE turquoise ANXA2  
CNACRE turquoise ANXA2R  
CNACRE turquoise ANXA5  
CNACRE turquoise ANXA6  
CNACRE turquoise AOAH  
CNACRE grey AP2A2  
CNACRE turquoise AP2M1  
CNACRE turquoise AP2S1  
CNACRE brown AP4E1  
CNACRE grey AP5Z1  
CNACRE blue APBB1IP  
CNACRE turquoise APEX1  
CNACRE blue APH1B  
CNACRE turquoise APOA1BP  
CNACRE brown APOBEC3B  
CNACRE grey APOBEC3H  
CNACRE grey APOL1  
CNACRE blue APOL6  
CNACRE brown AREL1  
CNACRE blue ARF1  
CNACRE turquoise ARF4  
CNACRE turquoise ARF5  
CNACRE grey ARFGAP2  
CNACRE blue ARG1  
CNACRE turquoise ARGLU1  
CNACRE brown ARHGAP19  
CNACRE blue ARHGEF1  
CNACRE blue ARHGEF2  
CNACRE brown ARHGEF28  
CNACRE turquoise ARHGEF3  
CNACRE grey ARID1A  
CNACRE blue ARID5A  
CNACRE blue ARL11  
CNACRE turquoise ARL2  
CNACRE turquoise ARL6IP4  
CNACRE blue ARPC3  
CNACRE blue ARPC5  
CNACRE brown ARPP21  
CNACRE blue ARSA  
CNACRE blue ASAHI  
CNACRE blue ASB8  
CNACRE grey ASCC2  
CNACRE turquoise ASGR2

CNACRE turquoise ASNA1  
CNACRE grey ASPH  
CNACRE brown ASZ1  
CNACRE brown ATAD3C  
CNACRE brown ATF3  
CNACRE turquoise ATF5  
CNACRE turquoise ATF6B  
CNACRE grey ATF7IP2  
CNACRE brown ATG14  
CNACRE blue ATG16L2  
CNACRE brown ATG2B  
CNACRE blue ATG3  
CNACRE grey ATG9A  
CNACRE turquoise ATOX1  
CNACRE brown ATP2A3  
CNACRE turquoise ATP5A1  
CNACRE turquoise ATP5B  
CNACRE turquoise ATP5C1  
CNACRE turquoise ATP5F1  
CNACRE turquoise ATP5H  
CNACRE turquoise ATP5J  
CNACRE turquoise ATP6AP1  
CNACRE blue ATP6V0D1  
CNACRE brown ATP8B2  
CNACRE brown ATP8B3  
CNACRE turquoise ATPIF1  
CNACRE brown ATR  
CNACRE turquoise ATRAID  
CNACRE grey ATXN7L3B  
CNACRE turquoise AUP1  
CNACRE turquoise AURKAIP1  
CNACRE brown B3GNT7  
CNACRE grey B4GALT7  
CNACRE blue B9D2  
CNACRE brown BAG3  
CNACRE turquoise BANF1  
CNACRE grey BASP1  
CNACRE turquoise BATF  
CNACRE brown BATF2  
CNACRE grey BBX  
CNACRE turquoise BCKDHA  
CNACRE brown BCL3  
CNACRE brown BEST3  
CNACRE grey BET1L  
CNACRE turquoise BEX2  
CNACRE turquoise BIRC3  
CNACRE grey BLMH  
CNACRE turquoise BLOC1S2  
CNACRE grey BLVRA

CNACRE brown *BMPER*  
CNACRE brown *BMS1*  
CNACRE grey *BNIP3L*  
CNACRE brown *BNIPL*  
CNACRE grey *BPI*  
CNACRE grey *BRD8*  
CNACRE blue *BST1*  
CNACRE grey *BST2*  
CNACRE blue *BTG2*  
CNACRE turquoise *BTLA*  
CNACRE brown *BTN2A2*  
CNACRE turquoise *BTN3A2*  
CNACRE grey *BTN3A3*  
CNACRE blue *BTNL8*  
CNACRE turquoise *BUB3*  
CNACRE brown *C10orf10*  
CNACRE turquoise *C10orf32*  
CNACRE brown *C10orf82*  
CNACRE turquoise *C11orf21*  
CNACRE turquoise *C11orf24*  
CNACRE grey *C11orf54*  
CNACRE turquoise *C11orf71*  
CNACRE turquoise *C12orf75*  
CNACRE brown *C12orf77*  
CNACRE turquoise *C14orf119*  
CNACRE turquoise *C14orf166*  
CNACRE brown *C14orf28*  
CNACRE brown *C14orf80*  
CNACRE brown *C15orf48*  
CNACRE turquoise *C15orf61*  
CNACRE turquoise *C16orf13*  
CNACRE turquoise *C17orf49*  
CNACRE blue *C17orf62*  
CNACRE turquoise *C17orf89*  
CNACRE grey *C19orf35*  
CNACRE turquoise *C19orf60*  
CNACRE turquoise *C1QA*  
CNACRE turquoise *C1QBP*  
CNACRE grey *C1QC*  
CNACRE blue *C1RL*  
CNACRE brown *C1orf159*  
CNACRE turquoise *C1orf43*  
CNACRE blue *C20orf24*  
CNACRE turquoise *C20orf27*  
CNACRE brown *C21orf62*  
CNACRE brown *C2CD3*  
CNACRE grey *C2orf69*  
CNACRE blue *C3AR1*  
CNACRE grey *C4orf46*

CNACRE turquoise *C6orf1*  
CNACRE turquoise *C6orf226*  
CNACRE turquoise *C8orf59*  
CNACRE turquoise *C9orf114*  
CNACRE turquoise *C9orf142*  
CNACRE grey *C9orf85*  
CNACRE turquoise *C9orf89*  
CNACRE grey *CA1*  
CNACRE brown *CA13*  
CNACRE grey *CA2*  
CNACRE blue *CA4*  
CNACRE brown *CABIN1*  
CNACRE brown *CACTIN*  
CNACRE turquoise *CACYBP*  
CNACRE blue *CALM2*  
CNACRE turquoise *CALM3*  
CNACRE turquoise *CALML4*  
CNACRE turquoise *CALR*  
CNACRE grey *CAMKK2*  
CNACRE blue *CANT1*  
CNACRE turquoise *CAPG*  
CNACRE blue *CAPZB*  
CNACRE brown *CARD11*  
CNACRE blue *CARD17*  
CNACRE blue *CARD8*  
CNACRE grey *CASC3*  
CNACRE blue *CASP1*  
CNACRE grey *CASP5*  
CNACRE grey *CASP8*  
CNACRE blue *CASS4*  
CNACRE grey *CAT*  
CNACRE blue *CBLL1*  
CNACRE turquoise *CBR1*  
CNACRE turquoise *CCDC101*  
CNACRE turquoise *CCDC109B*  
CNACRE brown *CCDC112*  
CNACRE brown *CCDC154*  
CNACRE turquoise *CCDC167*  
CNACRE grey *CCDC176*  
CNACRE grey *CCDC25*  
CNACRE brown *CCDC3*  
CNACRE turquoise *CCDC53*  
CNACRE brown *CCDC6*  
CNACRE brown *CCDC71L*  
CNACRE brown *CCDC83*  
CNACRE grey *CCL2*  
CNACRE grey *CCL28*  
CNACRE grey *CCL3*  
CNACRE turquoise *CCL4*

CNACRE brown	CCNA1
CNACRE grey	CCNB1
CNACRE blue	CCND3
CNACRE blue	CCNDBP1
CNACRE brown	CCNG2
CNACRE grey	CCNI
CNACRE blue	CCNK
CNACRE turquoise	CCNL1
CNACRE blue	CCR1
CNACRE turquoise	CCT4
CNACRE blue	CD164
CNACRE grey	CD177
CNACRE grey	CD19
CNACRE turquoise	CD24
CNACRE turquoise	CD247
CNACRE grey	CD274
CNACRE blue	CD300A
CNACRE turquoise	CD320
CNACRE grey	CD33
CNACRE grey	CD38
CNACRE grey	CD3G
CNACRE blue	CD59
CNACRE turquoise	CD6
CNACRE grey	CD69
CNACRE blue	CD82
CNACRE grey	CD83
CNACRE turquoise	CD8B
CNACRE blue	CDC123
CNACRE grey	CDC20
CNACRE brown	CDC20B
CNACRE grey	CDC25B
CNACRE blue	CDC42
CNACRE blue	CDC42EP2
CNACRE blue	CDC42EP3
CNACRE blue	CDC42SE1
CNACRE brown	CDCA5
CNACRE brown	CDH7
CNACRE brown	CDK1
CNACRE brown	CDK12
CNACRE brown	CDK3
CNACRE turquoise	CDKN1A
CNACRE grey	CDKN1C
CNACRE turquoise	CEACAM21
CNACRE blue	CEACAM4
CNACRE grey	CEACAM7
CNACRE grey	CEBPB
CNACRE blue	CEBD
CNACRE turquoise	CEBPG
CNACRE turquoise	CECR1

CNACRE brown	<i>CEP295</i>
CNACRE grey	<i>CES1</i>
CNACRE brown	<i>CFAP126</i>
CNACRE blue	<i>CFLAR</i>
CNACRE blue	<i>CFP</i>
CNACRE turquoise	<i>CHCHD1</i>
CNACRE turquoise	<i>CHCHD5</i>
CNACRE blue	<i>CHERP</i>
CNACRE turquoise	<i>CHI3L2</i>
CNACRE blue	<i>CHIC2</i>
CNACRE blue	<i>CHMP3</i>
CNACRE grey	<i>CHMP4A</i>
CNACRE blue	<i>CHMP5</i>
CNACRE blue	<i>CHP1</i>
CNACRE brown	<i>CHPF2</i>
CNACRE grey	<i>CHRM3</i>
CNACRE blue	<i>CHST15</i>
CNACRE brown	<i>CHURC1-FNTB</i>
CNACRE turquoise	<i>CIB1</i>
CNACRE grey	<i>CIITA</i>
CNACRE blue	<i>CIR1</i>
CNACRE turquoise	<i>CIRBP</i>
CNACRE turquoise	<i>CISD3</i>
CNACRE turquoise	<i>CISH</i>
CNACRE brown	<i>CKAP5</i>
CNACRE brown	<i>CLCN1</i>
CNACRE grey	<i>CLEC10A</i>
CNACRE grey	<i>CLEC12A</i>
CNACRE brown	<i>CLEC17A</i>
CNACRE turquoise	<i>CLEC1B</i>
CNACRE blue	<i>CLEC4A</i>
CNACRE blue	<i>CLEC4D</i>
CNACRE brown	<i>CLEC5A</i>
CNACRE blue	<i>CLEC7A</i>
CNACRE brown	<i>CLEC9A</i>
CNACRE brown	<i>CLIP3</i>
CNACRE grey	<i>CLN6</i>
CNACRE turquoise	<i>CLTA</i>
CNACRE turquoise	<i>CLU</i>
CNACRE brown	<i>CLUAP1</i>
CNACRE brown	<i>CMBL</i>
CNACRE turquoise	<i>CMTM5</i>
CNACRE blue	<i>CMTM6</i>
CNACRE blue	<i>CNIH4</i>
CNACRE brown	<i>CNKS1R1</i>
CNACRE grey	<i>CNPPD1</i>
CNACRE turquoise	<i>CNPY2</i>
CNACRE turquoise	<i>CNPY3</i>
CNACRE brown	<i>CNTNAP3</i>

CNACRE turquoise COA3  
CNACRE turquoise COA4  
CNACRE turquoise COA6  
CNACRE brown COCH  
CNACRE turquoise COG3  
CNACRE turquoise COMMD1  
CNACRE turquoise COMMD4  
CNACRE turquoise COMTD1  
CNACRE turquoise COPE  
CNACRE turquoise COPS5  
CNACRE turquoise COPZ1  
CNACRE turquoise COQ4  
CNACRE turquoise COX14  
CNACRE turquoise COX16  
CNACRE turquoise COX17  
CNACRE turquoise COX5A  
CNACRE brown COX7A1  
CNACRE turquoise COX7A2L  
CNACRE brown CPT1B  
CNACRE turquoise CPVL  
CNACRE grey CREBRF  
CNACRE blue CREM  
CNACRE brown CRISP2  
CNACRE blue CRISPLD2  
CNACRE grey CRKL  
CNACRE grey CRTIC3  
CNACRE brown CSDC2  
CNACRE brown CSE1L  
CNACRE grey CSF1R  
CNACRE grey CSNK1A1  
CNACRE blue CSNK1D  
CNACRE turquoise CSRP1  
CNACRE grey CTC1  
CNACRE turquoise CTSA  
CNACRE blue CTSB  
CNACRE turquoise CTSC  
CNACRE turquoise CTSH  
CNACRE turquoise CUEDC2  
CNACRE grey CUL4A  
CNACRE blue CWC25  
CNACRE blue CXCL1  
CNACRE grey CXCL10  
CNACRE blue CXCL16  
CNACRE brown CXCL17  
CNACRE grey CYBB  
CNACRE turquoise CYCS  
CNACRE brown CYP11A1  
CNACRE brown CYP2R1  
CNACRE brown CYP4F22

CNACRE blue CYTIP  
CNACRE grey DAPP1  
CNACRE turquoise DARS  
CNACRE turquoise DAXX  
CNACRE grey DCLRE1B  
CNACRE grey DCP2  
CNACRE grey DCTN1  
CNACRE turquoise DCTN2  
CNACRE turquoise DCTN3  
CNACRE turquoise DCTPP1  
CNACRE turquoise DCXR  
CNACRE turquoise DDA1  
CNACRE blue DDIT3  
CNACRE grey DDIT4  
CNACRE grey DDX11  
CNACRE grey DDX17  
CNACRE turquoise DDX39A  
CNACRE turquoise DDX39B  
CNACRE turquoise DDX5  
CNACRE turquoise DDX50  
CNACRE turquoise DDX56  
CNACRE grey DDX58  
CNACRE brown DDX60  
CNACRE blue DDX60L  
CNACRE grey DEDD2  
CNACRE turquoise DEF6  
CNACRE turquoise DEF8  
CNACRE grey DEFA4  
CNACRE turquoise DENND1C  
CNACRE brown DEPDC4  
CNACRE turquoise DESI1  
CNACRE brown DFFB  
CNACRE brown DFNB31  
CNACRE blue DGAT2  
CNACRE brown DGAT2L6  
CNACRE blue DGCR2  
CNACRE turquoise DGCR6L  
CNACRE turquoise DGKA  
CNACRE turquoise DGUOK  
CNACRE brown DHRS11  
CNACRE blue DHRS7  
CNACRE blue DHRS9  
CNACRE brown DHX8  
CNACRE brown DISC1  
CNACRE grey DLST  
CNACRE brown DMD  
CNACRE brown DMRT1  
CNACRE grey DMTN  
CNACRE brown DNAAF2

CNACRE blue *DNAJA1*  
CNACRE grey *DNAJB11*  
CNACRE grey *DNAJC1*  
CNACRE turquoise *DNAJC19*  
CNACRE turquoise *DNAJC4*  
CNACRE grey *DNASE1L1*  
CNACRE grey *DNASE2*  
CNACRE brown *DNM2*  
CNACRE turquoise *DNPH1*  
CNACRE blue *DNTTIP1*  
CNACRE turquoise *DOK2*  
CNACRE blue *DOK3*  
CNACRE grey *DOLPP1*  
CNACRE turquoise *DPEP2*  
CNACRE turquoise *DPF2*  
CNACRE blue *DPH3*  
CNACRE turquoise *DPM3*  
CNACRE turquoise *DPY30*  
CNACRE blue *DR1*  
CNACRE turquoise *DRAM2*  
CNACRE grey *DROSHA*  
CNACRE grey *DUS2*  
CNACRE blue *DUSP1*  
CNACRE turquoise *DUSP23*  
CNACRE grey *DUSP3*  
CNACRE grey *DUSP6*  
CNACRE turquoise *DUT*  
CNACRE turquoise *DYNC1I2*  
CNACRE turquoise *EBP*  
CNACRE turquoise *ECH1*  
CNACRE brown *EDEM1*  
CNACRE turquoise *EEF1E1*  
CNACRE brown *EFCAB11*  
CNACRE brown *EFCAB5*  
CNACRE blue *EGLN2*  
CNACRE brown *EGR1*  
CNACRE grey *EHMT1*  
CNACRE grey *EIF2AK1*  
CNACRE grey *EIF2AK2*  
CNACRE grey *EIF2B5*  
CNACRE grey *EIF2D*  
CNACRE turquoise *EIF2S2*  
CNACRE brown *EIF3A*  
CNACRE turquoise *EIF3D*  
CNACRE turquoise *EIF3I*  
CNACRE turquoise *EIF3L*  
CNACRE turquoise *EIF4A1*  
CNACRE turquoise *EIF4E*  
CNACRE turquoise *EIF4E2*

CNACRE turquoise *EIF4EBP1*  
CNACRE grey *EIF4EBP2*  
CNACRE turquoise *EIF4EBP3*  
CNACRE turquoise *EIF5*  
CNACRE turquoise *EIF5A*  
CNACRE turquoise *EIF6*  
CNACRE grey *ELAC2*  
CNACRE grey *ELANE*  
CNACRE grey *ELK3*  
CNACRE grey *ELL2*  
CNACRE grey *ELMO3*  
CNACRE turquoise *ELOVL1*  
CNACRE turquoise *ELOVL5*  
CNACRE turquoise *ELP6*  
CNACRE grey *EMB*  
CNACRE turquoise *EMC3*  
CNACRE turquoise *EMC4*  
CNACRE turquoise *EMC6*  
CNACRE turquoise *EMG1*  
CNACRE brown *EMID1*  
CNACRE grey *EML4*  
CNACRE turquoise *ENO1*  
CNACRE turquoise *ENY2*  
CNACRE brown *EOMES*  
CNACRE grey *EPB42*  
CNACRE turquoise *EPHX2*  
CNACRE turquoise *ERCC1*  
CNACRE brown *ERCC8*  
CNACRE grey *ERGIC1*  
CNACRE turquoise *ERGIC3*  
CNACRE turquoise *ERICH1*  
CNACRE brown *ERN1*  
CNACRE turquoise *ERP44*  
CNACRE turquoise *ERV3-1*  
CNACRE turquoise *ETFB*  
CNACRE turquoise *ETHE1*  
CNACRE grey *ETV7*  
CNACRE blue *EVI2A*  
CNACRE blue *EVI2B*  
CNACRE turquoise *EXOC7*  
CNACRE turquoise *EXOSC1*  
CNACRE blue *EXOSC4*  
CNACRE blue *F11R*  
CNACRE grey *F13A1*  
CNACRE grey *F2R*  
CNACRE turquoise *FAAP20*  
CNACRE grey *FAM102A*  
CNACRE grey *FAM104A*  
CNACRE grey *FAM122B*

CNACRE blue FAM129A  
CNACRE blue FAM177A1  
CNACRE brown FAM189B  
CNACRE grey FAM195A  
CNACRE turquoise FAM195B  
CNACRE blue FAM200B  
CNACRE brown FAM20A  
CNACRE grey FAM212B  
CNACRE brown FAM229A  
CNACRE brown FAM26F  
CNACRE turquoise FAM32A  
CNACRE grey FAM3B  
CNACRE blue FAM45A  
CNACRE grey FAM46A  
CNACRE grey FAM46C  
CNACRE blue FAM53C  
CNACRE blue FAM63A  
CNACRE turquoise FAM65A  
CNACRE blue FAM65B  
CNACRE grey FAM8A1  
CNACRE grey FAM90A1  
CNACRE brown FAR1  
CNACRE blue FAS  
CNACRE brown FBXL6  
CNACRE brown FBXO18  
CNACRE brown FBXO24  
CNACRE grey FBXO44  
CNACRE blue FBXO6  
CNACRE grey FBXO9  
CNACRE brown FBXW2  
CNACRE turquoise FBXW5  
CNACRE blue FCAR  
CNACRE blue FCGR1A  
CNACRE blue FCGR3B  
CNACRE turquoise FDFT1  
CNACRE grey FDX1  
CNACRE grey FECH  
CNACRE blue FES  
CNACRE grey FFAR3  
CNACRE blue FGD3  
CNACRE grey FGFR1OP2  
CNACRE grey FIS1  
CNACRE turquoise FKBP11  
CNACRE grey FKBP15  
CNACRE turquoise FKBP2  
CNACRE grey FKBP5  
CNACRE grey FLCN  
CNACRE turquoise FLI1  
CNACRE grey FLII

CNACRE brown *FLNB*  
CNACRE blue *FLOT1*  
CNACRE turquoise *FLT3LG*  
CNACRE grey *FLVCR2*  
CNACRE turquoise *FOPNL*  
CNACRE grey *FOXO1*  
CNACRE grey *FPGS*  
CNACRE blue *FPR2*  
CNACRE brown *FRA10AC1*  
CNACRE brown *FRYL*  
CNACRE brown *FSCN1*  
CNACRE turquoise *FTSJ1*  
CNACRE brown *FUT7*  
CNACRE brown *FXR2*  
CNACRE turquoise *FXYD2*  
CNACRE grey *GAB3*  
CNACRE blue *GABARAPL2*  
CNACRE brown *GABBR1*  
CNACRE blue *GADD45B*  
CNACRE turquoise *GADD45GIP1*  
CNACRE blue *GALM*  
CNACRE grey *GALNS*  
CNACRE grey *GALNT2*  
CNACRE grey *GBGT1*  
CNACRE blue *GBP1*  
CNACRE blue *GBP2*  
CNACRE grey *GBP4*  
CNACRE turquoise *GCHFR*  
CNACRE blue *GDE1*  
CNACRE brown *GDPD3*  
CNACRE turquoise *GEMIN7*  
CNACRE grey *GFI1B*  
CNACRE blue *GIMAP2*  
CNACRE grey *GIMAP6*  
CNACRE blue *GK*  
CNACRE brown *GLB1L*  
CNACRE blue *GLUL*  
CNACRE blue *GMIP*  
CNACRE blue *GMPR2*  
CNACRE brown *GNE*  
CNACRE blue *GNG10*  
CNACRE turquoise *GNGT2*  
CNACRE turquoise *GNPTG*  
CNACRE blue *GOLGA7*  
CNACRE turquoise *GOSR2*  
CNACRE grey *GP1BB*  
CNACRE turquoise *GPBAR1*  
CNACRE grey *GPR132*  
CNACRE grey *GPR146*

CNACRE grey *GPR84*  
CNACRE turquoise *GPS1*  
CNACRE turquoise *GPS2*  
CNACRE turquoise *GPX7*  
CNACRE turquoise *GRAP2*  
CNACRE blue *GRB2*  
CNACRE brown *GRHL2*  
CNACRE turquoise *GRHPR*  
CNACRE brown *GRM4*  
CNACRE turquoise *GRPEL1*  
CNACRE brown *GSG1L*  
CNACRE blue *GSN*  
CNACRE grey *GSTM1*  
CNACRE turquoise *GSTM2*  
CNACRE grey *GSTM4*  
CNACRE brown *GSTM5*  
CNACRE turquoise *GSTO1*  
CNACRE blue *GTF2B*  
CNACRE turquoise *GTF3A*  
CNACRE grey *GTF3C5*  
CNACRE turquoise *GTF3C6*  
CNACRE blue *GYG1*  
CNACRE grey *GYPA*  
CNACRE brown *GYPE*  
CNACRE turquoise *GZMK*  
CNACRE grey *H1F0*  
CNACRE turquoise *H1FX*  
CNACRE blue *HACD4*  
CNACRE grey *HAGH*  
CNACRE grey *HAL*  
CNACRE grey *HAT1*  
CNACRE blue *HAUS4*  
CNACRE turquoise *HAX1*  
CNACRE blue *HBP1*  
CNACRE blue *HCAR2*  
CNACRE blue *HCAR3*  
CNACRE brown *HCFC1*  
CNACRE turquoise *HCFC1R1*  
CNACRE blue *HCLS1*  
CNACRE brown *HDAC6*  
CNACRE turquoise *HDAC7*  
CNACRE brown *HEATR1*  
CNACRE brown *HELZ*  
CNACRE grey *HEMGN*  
CNACRE grey *HERC5*  
CNACRE brown *HILPDA*  
CNACRE grey *HIST1H1C*  
CNACRE brown *HIST1H1E*  
CNACRE blue *HIST1H2AC*

CNACRE grey *HIST1H2AM*  
CNACRE blue *HIST1H2BD*  
CNACRE grey *HIST1H2BG*  
CNACRE grey *HIST1H2BO*  
CNACRE grey *HIST1H3B*  
CNACRE turquoise *HIST2H2AC*  
CNACRE grey *HIST2H2BE*  
CNACRE grey *HIST2H2BF*  
CNACRE brown *HJURP*  
CNACRE blue *HK3*  
CNACRE turquoise *HLA-DMA*  
CNACRE turquoise *HLA-DMB*  
CNACRE turquoise *HLA-F*  
CNACRE grey *HLX*  
CNACRE blue *HMGB2*  
CNACRE turquoise *HMGN3*  
CNACRE turquoise *HMOX2*  
CNACRE blue *HN1*  
CNACRE turquoise *HNRNPA1*  
CNACRE brown *HNRNPU*  
CNACRE brown *HOMER3*  
CNACRE grey *HOPX*  
CNACRE grey *HPGD*  
CNACRE brown *HPN*  
CNACRE turquoise *HRASLS2*  
CNACRE grey *HS1BP3*  
CNACRE turquoise *HSBP1*  
CNACRE turquoise *HSD17B10*  
CNACRE blue *HSD17B11*  
CNACRE turquoise *HSD17B8*  
CNACRE blue *HSH2D*  
CNACRE turquoise *HSP90AA1*  
CNACRE blue *HSPA1A*  
CNACRE brown *HSPB8*  
CNACRE turquoise *HVCN1*  
CNACRE brown *HYAL1*  
CNACRE brown *HYAL2*  
CNACRE grey *ICAM1*  
CNACRE turquoise *ICAM2*  
CNACRE brown *ICOS*  
CNACRE brown *ID1*  
CNACRE turquoise *ID2*  
CNACRE grey *IDH1*  
CNACRE turquoise *IDH2*  
CNACRE turquoise *IDH3G*  
CNACRE turquoise *IDNK*  
CNACRE grey *IDO1*  
CNACRE blue *IDS*  
CNACRE turquoise *IER3IP1*

CNACRE brown *IER5L*  
CNACRE blue *IFI16*  
CNACRE turquoise *IFI27L2*  
CNACRE blue *IFI44*  
CNACRE grey *IFI44L*  
CNACRE brown *IFIH1*  
CNACRE turquoise *IFNAR2*  
CNACRE grey *IFNGR2*  
CNACRE blue *IFRD1*  
CNACRE turquoise *IGBP1*  
CNACRE grey *IGFBP7*  
CNACRE turquoise *IK*  
CNACRE grey *IKBIP*  
CNACRE grey *IKZF1*  
CNACRE grey *IL10RA*  
CNACRE blue *IL10RB*  
CNACRE blue *IL17RA*  
CNACRE grey *IL18*  
CNACRE grey *IL18BP*  
CNACRE grey *IL18R1*  
CNACRE brown *IL4I1*  
CNACRE blue *IL4R*  
CNACRE turquoise *ILK*  
CNACRE brown *ILVBL*  
CNACRE turquoise *IMP3*  
CNACRE blue *INAFM1*  
CNACRE grey *INPP5B*  
CNACRE grey *INPP5D*  
CNACRE grey *INSIG1*  
CNACRE grey *IPO4*  
CNACRE grey *IQGAP1*  
CNACRE blue *IRF1*  
CNACRE blue *IRF2*  
CNACRE grey *IRF5*  
CNACRE blue *IRF9*  
CNACRE grey *ISCA1*  
CNACRE grey *ITGA2B*  
CNACRE grey *ITGAM*  
CNACRE turquoise *ITGB3BP*  
CNACRE turquoise *ITGB7*  
CNACRE turquoise *TM2A*  
CNACRE grey *JAZF1*  
CNACRE turquoise *JOSD2*  
CNACRE turquoise *JTB*  
CNACRE brown *JUN*  
CNACRE turquoise *KARS*  
CNACRE brown *KAT2A*  
CNACRE brown *KBTBD6*  
CNACRE grey *KBTBD7*

CNACRE grey	<i>KCNE1</i>
CNACRE blue	<i>KCNE3</i>
CNACRE blue	<i>KCNJ15</i>
CNACRE brown	<i>KCNJ6</i>
CNACRE brown	<i>KCNJ8</i>
CNACRE brown	<i>KCNK7</i>
CNACRE brown	<i>KCNMA1</i>
CNACRE turquoise	<i>KDELR1</i>
CNACRE brown	<i>KDM1A</i>
CNACRE grey	<i>KDM5C</i>
CNACRE brown	<i>KDM5D</i>
CNACRE brown	<i>KDM6B</i>
CNACRE brown	<i>KHDRBS1</i>
CNACRE grey	<i>KIAA0101</i>
CNACRE turquoise	<i>KIAA0141</i>
CNACRE grey	<i>KIAA0226L</i>
CNACRE brown	<i>KIAA0319</i>
CNACRE brown	<i>KIF15</i>
CNACRE grey	<i>KIF27</i>
CNACRE brown	<i>KIFC1</i>
CNACRE grey	<i>KIR2DL1</i>
CNACRE brown	<i>KIR2DL4</i>
CNACRE blue	<i>KLF6</i>
CNACRE grey	<i>KLF7</i>
CNACRE turquoise	<i>KLHL18</i>
CNACRE brown	<i>KLK7</i>
CNACRE turquoise	<i>KLRD1</i>
CNACRE grey	<i>KLRG1</i>
CNACRE turquoise	<i>KLRK1</i>
CNACRE grey	<i>KMT2C</i>
CNACRE turquoise	<i>KMT2E</i>
CNACRE blue	<i>KRT23</i>
CNACRE grey	<i>KRTCAP3</i>
CNACRE brown	<i>L2HGDH</i>
CNACRE brown	<i>LACE1</i>
CNACRE turquoise	<i>LAGE3</i>
CNACRE brown	<i>LAMP3</i>
CNACRE turquoise	<i>LAMTOR2</i>
CNACRE blue	<i>LASP1</i>
CNACRE blue	<i>LAT2</i>
CNACRE turquoise	<i>LCK</i>
CNACRE blue	<i>LCP1</i>
CNACRE blue	<i>LDHA</i>
CNACRE brown	<i>LDLR</i>
CNACRE brown	<i>LETM1</i>
CNACRE turquoise	<i>LGALS3BP</i>
CNACRE grey	<i>LGALS9C</i>
CNACRE brown	<i>LGR6</i>
CNACRE turquoise	<i>LHPP</i>

CNACRE grey *LILRB4*  
CNACRE turquoise *LIME1*  
CNACRE blue *LIMK2*  
CNACRE grey *LINC01272*  
CNACRE turquoise *LMAN2*  
CNACRE blue *LPCAT2*  
CNACRE blue *LPCAT3*  
CNACRE brown *LPP*  
CNACRE blue *LPPR2*  
CNACRE blue *LRPAP1*  
CNACRE brown *LRRC2*  
CNACRE blue *LRRC25*  
CNACRE grey *LRRC70*  
CNACRE blue *LRRFIP1*  
CNACRE grey *LRRFIP2*  
CNACRE brown *LRRN1*  
CNACRE turquoise *LSM10*  
CNACRE turquoise *LSM2*  
CNACRE turquoise *LSM6*  
CNACRE brown *LSR*  
CNACRE blue *LTB4R*  
CNACRE blue *LTBR*  
CNACRE grey *LTF*  
CNACRE turquoise *LXN*  
CNACRE grey *LY6G6F*  
CNACRE grey *LYL1*  
CNACRE turquoise *LYPLAL1*  
CNACRE blue *LYRM1*  
CNACRE grey *LYSMD2*  
CNACRE brown *MACROD1*  
CNACRE turquoise *MAD1L1*  
CNACRE turquoise *MAD2L2*  
CNACRE grey *MAF1*  
CNACRE grey *MAFB*  
CNACRE brown *MAGEB17*  
CNACRE grey *MANBA*  
CNACRE blue *MAP1LC3B*  
CNACRE grey *MAP2K3*  
CNACRE grey *MAP3K11*  
CNACRE brown *MAP3K12*  
CNACRE grey *MAP3K8*  
CNACRE grey *MAP4K2*  
CNACRE grey *MAP7D1*  
CNACRE brown *MAPK14*  
CNACRE turquoise *MAPK1IP1L*  
CNACRE grey *MAPK3*  
CNACRE turquoise *MAPRE2*  
CNACRE grey *MARCH8*  
CNACRE brown *MARCH9*

CNACRE brown	<i>MARCKS</i>
CNACRE brown	<i>MARCO</i>
CNACRE grey	<i>MATK</i>
CNACRE blue	<i>MAX</i>
CNACRE grey	<i>MBOAT2</i>
CNACRE blue	<i>MBP</i>
CNACRE grey	<i>MCAT</i>
CNACRE grey	<i>MCCC2</i>
CNACRE grey	<i>MCEMP1</i>
CNACRE blue	<i>MCL1</i>
CNACRE turquoise	<i>MCTS1</i>
CNACRE turquoise	<i>MDH1</i>
CNACRE turquoise	<i>MDH2</i>
CNACRE grey	<i>MDK</i>
CNACRE turquoise	<i>MEA1</i>
CNACRE turquoise	<i>MED11</i>
CNACRE grey	<i>MED15</i>
CNACRE grey	<i>MED16</i>
CNACRE blue	<i>MED25</i>
CNACRE blue	<i>MED28</i>
CNACRE grey	<i>MEF2A</i>
CNACRE turquoise	<i>MEF2C</i>
CNACRE grey	<i>MEFV</i>
CNACRE grey	<i>MEN1</i>
CNACRE brown	<i>MEOX1</i>
CNACRE turquoise	<i>METTL12</i>
CNACRE brown	<i>METTL14</i>
CNACRE grey	<i>METTL7A</i>
CNACRE blue	<i>METTL9</i>
CNACRE turquoise	<i>MFF</i>
CNACRE turquoise	<i>MFNG</i>
CNACRE grey	<i>MFSD2B</i>
CNACRE brown	<i>MGEA5</i>
CNACRE grey	<i>MGLL</i>
CNACRE turquoise	<i>MGST3</i>
CNACRE grey	<i>MICAL1</i>
CNACRE grey	<i>MICU2</i>
CNACRE grey	<i>MID1IP1</i>
CNACRE turquoise	<i>MIF4GD</i>
CNACRE blue	<i>MKNK1</i>
CNACRE grey	<i>MKRN1</i>
CNACRE turquoise	<i>MLF2</i>
CNACRE turquoise	<i>MLST8</i>
CNACRE turquoise	<i>MLX</i>
CNACRE turquoise	<i>MMD</i>
CNACRE blue	<i>MOB1A</i>
CNACRE blue	<i>MOB3A</i>
CNACRE brown	<i>MOK</i>
CNACRE grey	<i>MOSPD3</i>

CNACRE grey *MOV10*  
CNACRE grey *MPEG1*  
CNACRE turquoise *MPG*  
CNACRE turquoise *MPLKIP*  
CNACRE grey *MPP1*  
CNACRE turquoise *MPV17*  
CNACRE brown *MPZ*  
CNACRE blue *MPZL1*  
CNACRE turquoise *MRFAP1*  
CNACRE brown *MRGPRX3*  
CNACRE brown *MROH6*  
CNACRE turquoise *MRPL11*  
CNACRE turquoise *MRPL13*  
CNACRE turquoise *MRPL14*  
CNACRE turquoise *MRPL15*  
CNACRE turquoise *MRPL20*  
CNACRE turquoise *MRPL23*  
CNACRE turquoise *MRPL27*  
CNACRE turquoise *MRPL33*  
CNACRE turquoise *MRPL34*  
CNACRE turquoise *MRPL37*  
CNACRE turquoise *MRPL40*  
CNACRE turquoise *MRPL43*  
CNACRE turquoise *MRPL44*  
CNACRE turquoise *MRPL46*  
CNACRE turquoise *MRPL49*  
CNACRE turquoise *MRPL51*  
CNACRE turquoise *MRPL53*  
CNACRE turquoise *MRPL54*  
CNACRE turquoise *MRPL55*  
CNACRE turquoise *MRPS11*  
CNACRE turquoise *MRPS12*  
CNACRE turquoise *MRPS14*  
CNACRE turquoise *MRPS15*  
CNACRE turquoise *MRPS16*  
CNACRE turquoise *MRPS18B*  
CNACRE turquoise *MRPS18C*  
CNACRE turquoise *MRPS2*  
CNACRE grey *MRPS25*  
CNACRE turquoise *MRPS26*  
CNACRE turquoise *MRPS34*  
CNACRE turquoise *MS4A1*  
CNACRE grey *MS4A4A*  
CNACRE grey *MS4A7*  
CNACRE brown *MSL2*  
CNACRE brown *MSLN*  
CNACRE blue *MSRB2*  
CNACRE brown *MSTO1*  
CNACRE turquoise *MT1F*

CNACRE grey *MT1G*  
CNACRE brown *MTCH1*  
CNACRE turquoise *MTMR14*  
CNACRE brown *MTRR*  
CNACRE blue *MVP*  
CNACRE blue *MXD1*  
CNACRE blue *MYD88*  
CNACRE turquoise *MYDGF*  
CNACRE turquoise *MYEOV2*  
CNACRE turquoise *MYL6B*  
CNACRE turquoise *MZT2B*  
CNACRE turquoise *NAA10*  
CNACRE turquoise *NAA38*  
CNACRE turquoise *NAA60*  
CNACRE blue *NABP1*  
CNACRE blue *NAMPT*  
CNACRE blue *NAPA*  
CNACRE brown *NARS2*  
CNACRE brown *NAT6*  
CNACRE turquoise *NCL*  
CNACRE grey *NCOA7*  
CNACRE turquoise *NCR3*  
CNACRE turquoise *NCSTN*  
CNACRE brown *NDNL2*  
CNACRE grey *NDRG3*  
CNACRE turquoise *NDUFA1*  
CNACRE turquoise *NDUFA7*  
CNACRE turquoise *NDUFAB1*  
CNACRE grey *NDUFAF1*  
CNACRE turquoise *NDUFB10*  
CNACRE blue *NDUFB3*  
CNACRE blue *NDUFB6*  
CNACRE turquoise *NDUFC1*  
CNACRE turquoise *NDUFS2*  
CNACRE turquoise *NDUFS6*  
CNACRE turquoise *NDUFS8*  
CNACRE grey *NDUVF3*  
CNACRE brown *NECAB1*  
CNACRE grey *NEDD9*  
CNACRE brown *NEK3*  
CNACRE turquoise *NELFE*  
CNACRE grey *NFATC1*  
CNACRE blue *NFKB1A*  
CNACRE grey *NFKB1Z*  
CNACRE brown *NFRKB*  
CNACRE turquoise *NGFRAP1*  
CNACRE turquoise *NIFK*  
CNACRE blue *NINJ2*  
CNACRE brown *NLRP3*

CNACRE grey NMB  
CNACRE blue NMI  
CNACRE turquoise NMRAL1  
CNACRE grey NOL11  
CNACRE turquoise NOL12  
CNACRE turquoise NOL7  
CNACRE turquoise NONO  
CNACRE blue NPL  
CNACRE turquoise NPM1  
CNACRE brown NR4A1  
CNACRE blue NRBF2  
CNACRE blue NRDE2  
CNACRE turquoise NRGN  
CNACRE brown NRN1  
CNACRE grey NRROS  
CNACRE turquoise NSMCE1  
CNACRE grey NSUN3  
CNACRE blue NT5C3A  
CNACRE brown NTM  
CNACRE grey NUCB1  
CNACRE turquoise NUDC  
CNACRE turquoise NUDT1  
CNACRE grey NUDT16  
CNACRE turquoise NUDT2  
CNACRE grey NUDT3  
CNACRE grey NUDT4  
CNACRE blue NUDT5  
CNACRE turquoise NUTF2  
CNACRE turquoise NXT1  
CNACRE grey OAS2  
CNACRE grey OAS3  
CNACRE blue ODF3B  
CNACRE turquoise OGDH  
CNACRE grey OLAH  
CNACRE brown OLFM4  
CNACRE turquoise ORAI3  
CNACRE blue ORM2  
CNACRE grey ORMDL2  
CNACRE grey OSBPL2  
CNACRE blue OSCAR  
CNACRE turquoise OSGEP  
CNACRE turquoise OSTC  
CNACRE blue OSTF1  
CNACRE turquoise OTUB1  
CNACRE turquoise OXLD1  
CNACRE turquoise P2RX1  
CNACRE grey P2RY11  
CNACRE blue P2RY13  
CNACRE grey P2RY14

CNACRE turquoise *PA2G4*  
CNACRE brown *PACRG*  
CNACRE blue *PADI4*  
CNACRE turquoise *PAFAH1B3*  
CNACRE brown *PANK4*  
CNACRE grey *PARP1*  
CNACRE blue *PARP10*  
CNACRE grey *PARVB*  
CNACRE turquoise *PAX5*  
CNACRE turquoise *PCBD1*  
CNACRE turquoise *PCBP2*  
CNACRE grey *PCGF5*  
CNACRE turquoise *PCIF1*  
CNACRE turquoise *PCNA*  
CNACRE brown *PCYOX1*  
CNACRE turquoise *PDCD2*  
CNACRE turquoise *PDCD5*  
CNACRE turquoise *PDCD6*  
CNACRE brown *PDE1B*  
CNACRE brown *PDE2A*  
CNACRE grey *PDE4B*  
CNACRE grey *PDIA3*  
CNACRE grey *PDIA6*  
CNACRE brown *PDK1*  
CNACRE turquoise *PDLIM1*  
CNACRE brown *PDPK1*  
CNACRE brown *PEAR1*  
CNACRE blue *PELI1*  
CNACRE blue *PELO*  
CNACRE grey *PEPD*  
CNACRE brown *PERP*  
CNACRE turquoise *PFDN1*  
CNACRE turquoise *PFDN2*  
CNACRE turquoise *PGAM1*  
CNACRE brown *PGBD4*  
CNACRE blue *PGD*  
CNACRE blue *PGK1*  
CNACRE turquoise *PGLS*  
CNACRE grey *PGRMC1*  
CNACRE turquoise *PHB*  
CNACRE turquoise *PHB2*  
CNACRE blue *PHF11*  
CNACRE turquoise *PHF20*  
CNACRE brown *PHF7*  
CNACRE grey *PHLDA2*  
CNACRE grey *PHOSPHO1*  
CNACRE turquoise *PHPT1*  
CNACRE grey *PID1*  
CNACRE brown *PIDD1*

CNACRE grey *PIGO*  
CNACRE grey *PIK3R5*  
CNACRE turquoise *PIM2*  
CNACRE turquoise *PIN1*  
CNACRE brown *PISD*  
CNACRE grey *PITHD1*  
CNACRE brown *PITPNM1*  
CNACRE grey *PLA2G12A*  
CNACRE turquoise *PLAC8*  
CNACRE brown *PLAG1*  
CNACRE brown *PLAGL2*  
CNACRE blue *PLAUR*  
CNACRE blue *PLEK*  
CNACRE blue *PLIN3*  
CNACRE blue *PLOD1*  
CNACRE grey *PLVAP*  
CNACRE turquoise *PNKD*  
CNACRE grey *PNPLA2*  
CNACRE grey *PNRC1*  
CNACRE grey *POFUT2*  
CNACRE blue *POLB*  
CNACRE brown *POLD1*  
CNACRE turquoise *POLD4*  
CNACRE grey *POLDIP2*  
CNACRE turquoise *POLDIP3*  
CNACRE grey *POLR1D*  
CNACRE turquoise *POLR2E*  
CNACRE turquoise *POLR2F*  
CNACRE turquoise *POLR2G*  
CNACRE turquoise *POLR2J*  
CNACRE brown *POLR3A*  
CNACRE turquoise *POLR3GL*  
CNACRE turquoise *POLR3K*  
CNACRE brown *POM121*  
CNACRE blue *POMP*  
CNACRE turquoise *POP4*  
CNACRE turquoise *POP7*  
CNACRE blue *POR*  
CNACRE brown *POU6F1*  
CNACRE turquoise *PPA1*  
CNACRE brown *PPAPDC3*  
CNACRE blue *PPCDC*  
CNACRE turquoise *PPCS*  
CNACRE turquoise *PPIH*  
CNACRE grey *PPIL2*  
CNACRE grey *PPIL3*  
CNACRE turquoise *PPP1CA*  
CNACRE blue *PPP1R10*  
CNACRE turquoise *PPP1R14A*

CNACRE blue *PPP1R15A*  
CNACRE brown *PPP1R1B*  
CNACRE grey *PPP1R2*  
CNACRE brown *PPP1R3D*  
CNACRE brown *PPP6R2*  
CNACRE brown *PPP6R3*  
CNACRE turquoise *PQBP1*  
CNACRE grey *PRCC*  
CNACRE brown *PRDM16*  
CNACRE grey *PRDM2*  
CNACRE brown *PRDM8*  
CNACRE turquoise *PRDX1*  
CNACRE grey *PRDX2*  
CNACRE turquoise *PRDX3*  
CNACRE grey *PRDX5*  
CNACRE turquoise *PREB*  
CNACRE turquoise *PRELID1*  
CNACRE brown *PREPL*  
CNACRE turquoise *PRF1*  
CNACRE grey *PRKAR1A*  
CNACRE grey *PRKAR1B*  
CNACRE brown *PRKCI*  
CNACRE blue *PRKD2*  
CNACRE turquoise *PRMT2*  
CNACRE turquoise *PRMT9*  
CNACRE grey *PRPF4B*  
CNACRE grey *PRR11*  
CNACRE grey *PRRC2A*  
CNACRE brown *PRRT2*  
CNACRE brown *PRSS54*  
CNACRE grey *PRTN3*  
CNACRE turquoise *PSMA2*  
CNACRE turquoise *PSMA3*  
CNACRE turquoise *PSMA4*  
CNACRE turquoise *PSMA6*  
CNACRE turquoise *PSMA7*  
CNACRE turquoise *PSMB1*  
CNACRE turquoise *PSMB2*  
CNACRE turquoise *PSMB4*  
CNACRE turquoise *PSMB6*  
CNACRE turquoise *PSMB7*  
CNACRE turquoise *PSMC1*  
CNACRE turquoise *PSMC2*  
CNACRE turquoise *PSMC5*  
CNACRE turquoise *PSMD3*  
CNACRE turquoise *PSMD4*  
CNACRE turquoise *PSMD6*  
CNACRE turquoise *PSMD9*  
CNACRE turquoise *PSMG4*

CNACRE grey	<i>PSPC1</i>
CNACRE blue	<i>PSTPIP1</i>
CNACRE grey	<i>PSTPIP2</i>
CNACRE grey	<i>PTK2B</i>
CNACRE turquoise	<i>PTPMT1</i>
CNACRE brown	<i>PTPN12</i>
CNACRE blue	<i>PTPN6</i>
CNACRE blue	<i>PTPRE</i>
CNACRE turquoise	<i>PTRH2</i>
CNACRE grey	<i>PUM1</i>
CNACRE brown	<i>PUS7L</i>
CNACRE brown	<i>PVRL2</i>
CNACRE grey	<i>PYCR2</i>
CNACRE grey	<i>PYGB</i>
CNACRE blue	<i>PYGL</i>
CNACRE blue	<i>R3HDM4</i>
CNACRE turquoise	<i>RAB11A</i>
CNACRE blue	<i>RAB11B</i>
CNACRE blue	<i>RAB1B</i>
CNACRE blue	<i>RAB27A</i>
CNACRE grey	<i>RAB28</i>
CNACRE blue	<i>RAB2A</i>
CNACRE grey	<i>RAB37</i>
CNACRE grey	<i>RAB39B</i>
CNACRE blue	<i>RAB3D</i>
CNACRE brown	<i>RAB3GAP2</i>
CNACRE turquoise	<i>RAB8A</i>
CNACRE blue	<i>RABGAP1L</i>
CNACRE turquoise	<i>RAB1F</i>
CNACRE turquoise	<i>RAD23A</i>
CNACRE turquoise	<i>RAD51C</i>
CNACRE turquoise	<i>RALA</i>
CNACRE turquoise	<i>RAN</i>
CNACRE grey	<i>RANBP3</i>
CNACRE turquoise	<i>RANGRF</i>
CNACRE grey	<i>RASA3</i>
CNACRE turquoise	<i>RASAL3</i>
CNACRE grey	<i>RASSF5</i>
CNACRE blue	<i>RBCK1</i>
CNACRE turquoise	<i>RBFA</i>
CNACRE brown	<i>RBL1</i>
CNACRE grey	<i>RBL2</i>
CNACRE blue	<i>RBM23</i>
CNACRE turquoise	<i>RBM3</i>
CNACRE turquoise	<i>RBM4</i>
CNACRE grey	<i>RBMS1</i>
CNACRE turquoise	<i>RBX1</i>
CNACRE brown	<i>RDM1</i>
CNACRE turquoise	<i>REEP5</i>

CNACRE brown	<i>REEP6</i>
CNACRE grey	<i>RELL1</i>
CNACRE blue	<i>RFX2</i>
CNACRE brown	<i>RGCC</i>
CNACRE blue	<i>RGL2</i>
CNACRE brown	<i>RGP1</i>
CNACRE blue	<i>RGS14</i>
CNACRE blue	<i>RGS19</i>
CNACRE blue	<i>RGS3</i>
CNACRE brown	<i>RGS9</i>
CNACRE turquoise	<i>RHBDD2</i>
CNACRE grey	<i>RHBDF2</i>
CNACRE brown	<i>RHBG</i>
CNACRE brown	<i>RHD</i>
CNACRE turquoise	<i>RHOC</i>
CNACRE brown	<i>RIF1</i>
CNACRE brown	<i>RILPL1</i>
CNACRE grey	<i>RIPK2</i>
CNACRE blue	<i>RIT1</i>
CNACRE grey	<i>RNASE1</i>
CNACRE grey	<i>RNASE2</i>
CNACRE turquoise	<i>RNASEH2A</i>
CNACRE turquoise	<i>RNASEH2C</i>
CNACRE blue	<i>RNASEK</i>
CNACRE brown	<i>RNA_SPIKE_ERCC-00034</i>
CNACRE grey	<i>RNA_SPIKE_ERCC-00039</i>
CNACRE grey	<i>RNA_SPIKE_ERCC-00054</i>
CNACRE grey	<i>RNA_SPIKE_ERCC-00154</i>
CNACRE grey	<i>RNF10</i>
CNACRE blue	<i>RNF114</i>
CNACRE blue	<i>RNF130</i>
CNACRE grey	<i>RNF138</i>
CNACRE grey	<i>RNF144B</i>
CNACRE blue	<i>RNF149</i>
CNACRE blue	<i>RNF167</i>
CNACRE brown	<i>RNF212</i>
CNACRE blue	<i>RNF213</i>
CNACRE blue	<i>RNF24</i>
CNACRE brown	<i>RNF31</i>
CNACRE grey	<i>RNF38</i>
CNACRE grey	<i>RNF4</i>
CNACRE blue	<i>RNF44</i>
CNACRE turquoise	<i>RNF7</i>
CNACRE turquoise	<i>RNH1</i>
CNACRE turquoise	<i>RNPS1</i>
CNACRE turquoise	<i>RPA3</i>
CNACRE grey	<i>RPIA</i>
CNACRE turquoise	<i>RPL22L1</i>
CNACRE turquoise	<i>RPL26L1</i>

CNACRE turquoise *RPL27*  
CNACRE turquoise *RPP21*  
CNACRE turquoise *RPP25L*  
CNACRE turquoise *RPS19BP1*  
CNACRE grey *RPS6KA1*  
CNACRE brown *RPS6KL1*  
CNACRE turquoise *RRP7A*  
CNACRE grey *RSPH9*  
CNACRE blue *RSRP1*  
CNACRE grey *RTCA*  
CNACRE grey *RUSC1*  
CNACRE brown *RUSC2*  
CNACRE turquoise *RUVBL2*  
CNACRE turquoise *RWDD1*  
CNACRE grey *S100A13*  
CNACRE blue *S1PR4*  
CNACRE brown *SAMD10*  
CNACRE grey *SAMHD1*  
CNACRE blue *SAMSN1*  
CNACRE turquoise *SAP18*  
CNACRE turquoise *SARAF*  
CNACRE turquoise *SAT2*  
CNACRE grey *SBNO2*  
CNACRE grey *SCAF1*  
CNACRE grey *SCAF4*  
CNACRE brown *SCAF8*  
CNACRE turquoise *SCAND1*  
CNACRE grey *SCAP*  
CNACRE brown *SCD*  
CNACRE turquoise *SCIMP*  
CNACRE turquoise *SCML4*  
CNACRE blue *SCNM1*  
CNACRE grey *SCYL1*  
CNACRE blue *SDCBP*  
CNACRE turquoise *SDF2L1*  
CNACRE turquoise *SDHAF2*  
CNACRE blue *SDHAF3*  
CNACRE brown *SDR42E1*  
CNACRE turquoise *SEC11A*  
CNACRE turquoise *SEC11C*  
CNACRE turquoise *SEC13*  
CNACRE brown *SEC16A*  
CNACRE grey *SEC24D*  
CNACRE grey *SELK*  
CNACRE turquoise *SELM*  
CNACRE turquoise *SELT*  
CNACRE brown *SEPT4*  
CNACRE brown *SERPINB2*  
CNACRE grey *SERPINB9*

CNACRE brown *SETD2*  
CNACRE brown *SETD8*  
CNACRE blue *SF3B4*  
CNACRE turquoise *SF3B5*  
CNACRE blue *SFT2D1*  
CNACRE grey *SGTA*  
CNACRE turquoise *SH2D1A*  
CNACRE grey *SH2D3C*  
CNACRE turquoise *SH3BGRL*  
CNACRE blue *SH3BP2*  
CNACRE blue *SH3GLB1*  
CNACRE brown *SH3TC1*  
CNACRE turquoise *SHFM1*  
CNACRE blue *SHKBP1*  
CNACRE brown *SIAE*  
CNACRE grey *SIGLEC10*  
CNACRE grey *SIGLEC5*  
CNACRE grey *SIPA1*  
CNACRE turquoise *SIPA1L3*  
CNACRE blue *SIRPB1*  
CNACRE turquoise *SIRPG*  
CNACRE brown *SIRT1*  
CNACRE turquoise *SIT1*  
CNACRE turquoise *SIVA1*  
CNACRE turquoise *SKP1*  
CNACRE blue *SLA*  
CNACRE turquoise *SLBP*  
CNACRE grey *SLC19A1*  
CNACRE grey *SLC22A18AS*  
CNACRE turquoise *SLC25A5*  
CNACRE brown *SLC26A6*  
CNACRE grey *SLC29A3*  
CNACRE grey *SLC2A1*  
CNACRE blue *SLC2A3*  
CNACRE blue *SLC31A2*  
CNACRE grey *SLC35C1*  
CNACRE turquoise *SLC35C2*  
CNACRE turquoise *SLC38A2*  
CNACRE turquoise *SLC39A4*  
CNACRE turquoise *SLC43A3*  
CNACRE grey *SLC46A3*  
CNACRE grey *SLC4A1*  
CNACRE grey *SLC6A6*  
CNACRE brown *SLC8A2*  
CNACRE brown *SLC8B1*  
CNACRE brown *SLC9A1*  
CNACRE brown *SLCO5A1*  
CNACRE turquoise *SLRP*  
CNACRE grey *SLX4IP*

CNACRE brown SMAD1  
CNACRE brown SMARCA4  
CNACRE grey SMARCC2  
CNACRE brown SMARCD3  
CNACRE brown SMC5  
CNACRE turquoise SMCO4  
CNACRE grey SMEK2  
CNACRE brown SMG7  
CNACRE grey SMG9  
CNACRE brown SMIM10  
CNACRE turquoise SMIM19  
CNACRE grey SMIM24  
CNACRE blue SMIM3  
CNACRE grey SMIM5  
CNACRE turquoise SMIM7  
CNACRE blue SNAP23  
CNACRE turquoise SNAP29  
CNACRE turquoise SNRNP25  
CNACRE turquoise SNRNP27  
CNACRE turquoise SNRPA  
CNACRE turquoise SNRPC  
CNACRE turquoise SNRPD1  
CNACRE turquoise SNRPE  
CNACRE turquoise SNRPF  
CNACRE turquoise SNRPG  
CNACRE blue SNX20  
CNACRE grey SNX22  
CNACRE grey SNX3  
CNACRE turquoise SON  
CNACRE grey SORL1  
CNACRE grey SP100  
CNACRE grey SP140  
CNACRE grey SP2  
CNACRE grey SP3  
CNACRE turquoise SPAG7  
CNACRE turquoise SPARC  
CNACRE brown SPATA6  
CNACRE grey SPATS2L  
CNACRE brown SPDL1  
CNACRE brown SPINK4  
CNACRE turquoise SPOCK2  
CNACRE turquoise SPON2  
CNACRE turquoise SPRY1  
CNACRE blue SQRDL  
CNACRE blue SRA1  
CNACRE turquoise SREK1/P1  
CNACRE brown SRF  
CNACRE turquoise SRI  
CNACRE turquoise SRSF3

CNACRE turquoise SRSF7  
CNACRE turquoise SSB  
CNACRE turquoise SSBP1  
CNACRE turquoise SSNA1  
CNACRE turquoise SSR3  
CNACRE turquoise SSU72  
CNACRE grey ST13  
CNACRE brown ST14  
CNACRE brown ST20  
CNACRE grey ST3GAL1  
CNACRE grey ST6GALNAC3  
CNACRE grey ST6GALNAC4  
CNACRE brown STARD7  
CNACRE grey STAT1  
CNACRE blue STAT3  
CNACRE blue STEAP4  
CNACRE grey STK10  
CNACRE grey STK17A  
CNACRE grey STK17B  
CNACRE grey STK25  
CNACRE brown STK36  
CNACRE grey STMN3  
CNACRE blue STOM  
CNACRE blue STX11  
CNACRE blue STX3  
CNACRE turquoise STX8  
CNACRE grey STXBP2  
CNACRE grey SUGP1  
CNACRE grey SULF2  
CNACRE blue SULT1A1  
CNACRE grey SUMF1  
CNACRE turquoise SUMO1  
CNACRE turquoise SUN1  
CNACRE turquoise SUPT4H1  
CNACRE grey SURF1  
CNACRE turquoise SURF2  
CNACRE turquoise SURF4  
CNACRE turquoise SUSD3  
CNACRE brown SUZ12  
CNACRE turquoise SVBP  
CNACRE grey SYCE3  
CNACRE blue SYF2  
CNACRE blue SYK  
CNACRE turquoise SYNGR2  
CNACRE brown SYNPO2L  
CNACRE grey SYNRG  
CNACRE turquoise SYPL1  
CNACRE turquoise SYS1  
CNACRE brown SYT1

CNACRE brown SYT5  
CNACRE brown TACC1  
CNACRE grey TAL1  
CNACRE grey TANGO2  
CNACRE brown TARP  
CNACRE brown TARSL2  
CNACRE blue TBC1D1  
CNACRE turquoise TBC1D10C  
CNACRE grey TBC1D22B  
CNACRE turquoise TBCB  
CNACRE brown TBCK  
CNACRE blue TBXAS1  
CNACRE turquoise TCEAL8  
CNACRE turquoise TCN2  
CNACRE grey TESC  
CNACRE brown TEX261  
CNACRE turquoise TEX264  
CNACRE brown TGDS  
CNACRE brown TGFBR3  
CNACRE blue TGOLN2  
CNACRE grey THEM5  
CNACRE brown THRSP  
CNACRE turquoise THYN1  
CNACRE grey TIFA  
CNACRE turquoise TIMM17B  
CNACRE turquoise TIMM9  
CNACRE grey TINF2  
CNACRE grey TJAP1  
CNACRE brown TJP3  
CNACRE blue TKT  
CNACRE blue TLR2  
CNACRE grey TLR4  
CNACRE brown TLR7  
CNACRE grey TLR9  
CNACRE grey TM2D3  
CNACRE turquoise TM9SF1  
CNACRE turquoise TMA16  
CNACRE blue TMBIM1  
CNACRE blue TMBIM4  
CNACRE blue TMBIM6  
CNACRE turquoise TMED4  
CNACRE grey TMEM106B  
CNACRE turquoise TMEM11  
CNACRE blue TMEM123  
CNACRE turquoise TMEM126B  
CNACRE turquoise TMEM134  
CNACRE turquoise TMEM141  
CNACRE turquoise TMEM147  
CNACRE turquoise TMEM14C

CNACRE grey *TMEM150B*  
CNACRE turquoise *TMEM160*  
CNACRE brown *TMEM161B*  
CNACRE grey *TMEM167A*  
CNACRE turquoise *TMEM179B*  
CNACRE brown *TMEM185B*  
CNACRE turquoise *TMEM199*  
CNACRE brown *TMEM203*  
CNACRE turquoise *TMEM205*  
CNACRE turquoise *TMEM208*  
CNACRE brown *TMEM222*  
CNACRE turquoise *TMEM223*  
CNACRE turquoise *TMEM261*  
CNACRE grey *TMEM30A*  
CNACRE turquoise *TMEM40*  
CNACRE blue *TMEM43*  
CNACRE turquoise *TMEM50A*  
CNACRE blue *TMEM55A*  
CNACRE blue *TMEM59*  
CNACRE turquoise *TMEM60*  
CNACRE turquoise *TMEM70*  
CNACRE blue *TMEM71*  
CNACRE brown *TMEM80*  
CNACRE blue *TMEM91*  
CNACRE grey *TMEM92*  
CNACRE grey *TMEM95*  
CNACRE blue *TMLHE*  
CNACRE brown *TMOD1*  
CNACRE brown *TMOD2*  
CNACRE grey *TMPO*  
CNACRE blue *TMUB2*  
CNACRE turquoise *TNFRSF14*  
CNACRE turquoise *TNFRSF17*  
CNACRE blue *TNFSF10*  
CNACRE brown *TNK2*  
CNACRE blue *TNNI2*  
CNACRE grey *TNRC6C*  
CNACRE brown *TNS1*  
CNACRE grey *TOLLIP*  
CNACRE blue *TOM1*  
CNACRE turquoise *TOMM20*  
CNACRE turquoise *TOMM5*  
CNACRE brown *TOMM70A*  
CNACRE blue *TOR1A*  
CNACRE grey *TOR1B*  
CNACRE grey *TOX*  
CNACRE blue *TP53I3*  
CNACRE brown *TPH2*  
CNACRE grey *TPM1*

CNACRE grey *TPM2*  
CNACRE turquoise *TPM3*  
CNACRE grey *TPM4*  
CNACRE turquoise *TPP1*  
CNACRE turquoise *TPRKB*  
CNACRE grey *TRAFD1*  
CNACRE turquoise *TRAPPC1*  
CNACRE turquoise *TRAPPC2L*  
CNACRE turquoise *TRAPPC4*  
CNACRE turquoise *TRAPPC6A*  
CNACRE grey *TREML1*  
CNACRE grey *TREML2*  
CNACRE brown *TRIB1*  
CNACRE grey *TRIB2*  
CNACRE brown *TRIM16*  
CNACRE blue *TRIM22*  
CNACRE grey *TRIM38*  
CNACRE grey *TRIM58*  
CNACRE turquoise *TRMT112*  
CNACRE brown *TRMT61A*  
CNACRE brown *TRPM1*  
CNACRE brown *TRPS1*  
CNACRE brown *TRPV3*  
CNACRE brown *TSACC*  
CNACRE brown *TSC22D2*  
CNACRE brown *TSNAXIP1*  
CNACRE blue *TSPAN2*  
CNACRE brown *TSPAN7*  
CNACRE brown *TSPYL4*  
CNACRE turquoise *TST*  
CNACRE grey *TSTA3*  
CNACRE brown *TTC12*  
CNACRE brown *TTC37*  
CNACRE turquoise *TUBA1C*  
CNACRE blue *TUBA4A*  
CNACRE grey *TUBA8*  
CNACRE turquoise *TUBB*  
CNACRE grey *TUBB1*  
CNACRE turquoise *TUBB4B*  
CNACRE turquoise *TUFM*  
CNACRE brown *TULP3*  
CNACRE brown *TVP23A*  
CNACRE turquoise *TWF2*  
CNACRE turquoise *TXN2*  
CNACRE grey *TXNDC12*  
CNACRE brown *TXNDC15*  
CNACRE turquoise *TXNDC17*  
CNACRE blue *TXNIP*  
CNACRE grey *TYK2*

CNACRE blue *UBAP1*  
CNACRE brown *UBAP2*  
CNACRE blue *UBE2F*  
CNACRE grey *UBE2J1*  
CNACRE turquoise *UBE2L3*  
CNACRE brown *UBN1*  
CNACRE grey *UBQLN2*  
CNACRE turquoise *UBXN1*  
CNACRE blue *UBXN2B*  
CNACRE grey *UBXN6*  
CNACRE turquoise *UFC1*  
CNACRE turquoise *UFD1L*  
CNACRE brown *UHMK1*  
CNACRE blue *UNC119*  
CNACRE brown *UNC13B*  
CNACRE turquoise *UNC13D*  
CNACRE blue *UNC93B1*  
CNACRE blue *UPF2*  
CNACRE grey *UPK3A*  
CNACRE blue *UPP1*  
CNACRE turquoise *UQCC2*  
CNACRE turquoise *UQCC3*  
CNACRE turquoise *UQCRC1*  
CNACRE turquoise *UQCRLS1*  
CNACRE turquoise *URM1*  
CNACRE turquoise *UROD*  
CNACRE blue *USB1*  
CNACRE turquoise *USE1*  
CNACRE grey *USF1*  
CNACRE grey *USP18*  
CNACRE grey *USP21*  
CNACRE turquoise *UXT*  
CNACRE blue *VAMP3*  
CNACRE blue *VAPA*  
CNACRE grey *VCAN*  
CNACRE turquoise *VDAC3*  
CNACRE grey *VEGFB*  
CNACRE brown *VEPH1*  
CNACRE grey *VEZF1*  
CNACRE turquoise *VKORC1*  
CNACRE blue *VMP1*  
CNACRE brown *VNN1*  
CNACRE blue *VNN2*  
CNACRE blue *VNN3*  
CNACRE turquoise *VPS29*  
CNACRE grey *VPS9D1*  
CNACRE brown *VSIG4*  
CNACRE brown *VWA7*  
CNACRE grey *WBP1*

CNACRE brown	<i>WDPCP</i>
CNACRE brown	<i>WDR11</i>
CNACRE grey	<i>WDR45</i>
CNACRE brown	<i>WDR59</i>
CNACRE grey	<i>WDR6</i>
CNACRE brown	<i>WDR81</i>
CNACRE grey	<i>WRAP73</i>
CNACRE blue	<i>WSB1</i>
CNACRE grey	<i>WWOX</i>
CNACRE turquoise	<i>XAB2</i>
CNACRE grey	<i>XAF1</i>
CNACRE turquoise	<i>XCL2</i>
CNACRE grey	<i>XPNPEP1</i>
CNACRE blue	<i>XRCC1</i>
CNACRE turquoise	<i>XRCC6</i>
CNACRE grey	<i>YBX1</i>
CNACRE turquoise	<i>YIF1A</i>
CNACRE blue	<i>YIPF1</i>
CNACRE blue	<i>YIPF3</i>
CNACRE turquoise	<i>YKT6</i>
CNACRE blue	<i>YPEL3</i>
CNACRE blue	<i>YPEL5</i>
CNACRE turquoise	<i>YWHAQ</i>
CNACRE blue	<i>YWHAZ</i>
CNACRE brown	<i>ZAK</i>
CNACRE grey	<i>ZBP1</i>
CNACRE grey	<i>ZBTB2</i>
CNACRE brown	<i>ZBTB5</i>
CNACRE turquoise	<i>ZBTB8OS</i>
CNACRE grey	<i>ZC3H10</i>
CNACRE grey	<i>ZC3HAV1</i>
CNACRE brown	<i>ZCCHC2</i>
CNACRE grey	<i>ZCCHC6</i>
CNACRE brown	<i>ZCCHC8</i>
CNACRE turquoise	<i>ZCRB1</i>
CNACRE turquoise	<i>ZDHHC12</i>
CNACRE grey	<i>ZDHHC16</i>
CNACRE brown	<i>ZDHHC5</i>
CNACRE brown	<i>ZDHHC7</i>
CNACRE grey	<i>ZEB2</i>
CNACRE grey	<i>ZER1</i>
CNACRE grey	<i>ZFAND2A</i>
CNACRE turquoise	<i>ZMYM6NB</i>
CNACRE grey	<i>ZNF107</i>
CNACRE brown	<i>ZNF17</i>
CNACRE brown	<i>ZNF181</i>
CNACRE brown	<i>ZNF266</i>
CNACRE turquoise	<i>ZNF302</i>
CNACRE brown	<i>ZNF331</i>

CNACRE brown	ZNF35
CNACRE brown	ZNF382
CNACRE blue	ZNF438
CNACRE brown	ZNF442
CNACRE brown	ZNF483
CNACRE brown	ZNF496
CNACRE grey	ZNF517
CNACRE brown	ZNF556
CNACRE brown	ZNF574
CNACRE grey	ZNF575
CNACRE turquoise	ZNF593
CNACRE brown	ZNF621
CNACRE grey	ZNF653
CNACRE brown	ZNF678
CNACRE brown	ZNF683
CNACRE grey	ZNF684
CNACRE brown	ZNF740
CNACRE turquoise	ZNF749
CNACRE grey	ZNF76
CNACRE brown	ZNF782
CNACRE brown	ZNF829
CNACRE brown	ZNF841
CNACRE grey	ZNF860
CNACRE grey	ZNFX1
CNACRE brown	ZSCAN26
CNACRE grey	ZSCAN9
CNACRE grey	ABLIM1
CNACRE brown	ACTA1
CNACRE brown	AHDC1
CNACRE grey	AKAP8
CNACRE brown	ALDH1L1
CNACRE brown	ALDH7A1
CNACRE brown	ANGPTL6
CNACRE grey	AP1M1
CNACRE brown	APBB3
CNACRE grey	ARG2
CNACRE turquoise	ARHGAP17
CNACRE brown	ARMC5
CNACRE brown	ASB9
CNACRE brown	ATG4A
CNACRE brown	ATP2C1
CNACRE brown	B3GNT3
CNACRE brown	BCLAF1
CNACRE brown	BDP1
CNACRE brown	BMF
CNACRE brown	BMP3
CNACRE brown	BRWD1
CNACRE grey	C10orf128
CNACRE brown	C11orf84

CNACRE brown	<i>C12orf4</i>
CNACRE brown	<i>C19orf52</i>
CNACRE brown	<i>C6orf141</i>
CNACRE brown	<i>C8orf82</i>
CNACRE grey	<i>CARHSP1</i>
CNACRE brown	<i>CBX1</i>
CNACRE turquoise	<i>CCM2</i>
CNACRE turquoise	<i>CCND2</i>
CNACRE brown	<i>CCSAP</i>
CNACRE grey	<i>CD244</i>
CNACRE grey	<i>CD9</i>
CNACRE brown	<i>CDC27</i>
CNACRE brown	<i>CDC7</i>
CNACRE brown	<i>CDH13</i>
CNACRE grey	<i>CEACAM8</i>
CNACRE brown	<i>CENPC</i>
CNACRE turquoise	<i>CENPM</i>
CNACRE brown	<i>CENPQ</i>
CNACRE brown	<i>CLDN9</i>
CNACRE grey	<i>CMPK1</i>
CNACRE brown	<i>CNOT11</i>
CNACRE grey	<i>COG8</i>
CNACRE brown	<i>CORO2A</i>
CNACRE brown	<i>CSNK1G1</i>
CNACRE brown	<i>CWC22</i>
CNACRE turquoise	<i>CYFIP2</i>
CNACRE brown	<i>DACT3</i>
CNACRE brown	<i>DCAF15</i>
CNACRE turquoise	<i>DDX19B</i>
CNACRE grey	<i>DDX54</i>
CNACRE brown	<i>DENND5B</i>
CNACRE brown	<i>DEXI</i>
CNACRE grey	<i>DHTKD1</i>
CNACRE brown	<i>DHX57</i>
CNACRE brown	<i>DPPA4</i>
CNACRE grey	<i>DPYSL2</i>
CNACRE brown	<i>DYNLRB2</i>
CNACRE grey	<i>DYRK1B</i>
CNACRE brown	<i>ECHDC3</i>
CNACRE brown	<i>EEF2K</i>
CNACRE brown	<i>EPN2</i>
CNACRE brown	<i>EPT1</i>
CNACRE grey	<i>ESYT1</i>
CNACRE grey	<i>EXTL3</i>
CNACRE brown	<i>FAM13A</i>
CNACRE brown	<i>FAM83A</i>
CNACRE brown	<i>FN3K</i>
CNACRE grey	<i>FNBP4</i>
CNACRE grey	<i>FOXJ3</i>

CNACRE brown	<i>FRMD5</i>
CNACRE grey	<i>FTSJ3</i>
CNACRE brown	<i>GABRA2</i>
CNACRE brown	<i>GLS</i>
CNACRE turquoise	<i>GORASP2</i>
CNACRE brown	<i>GPR34</i>
CNACRE brown	<i>GPX3</i>
CNACRE brown	<i>GRK6</i>
CNACRE brown	<i>GTF2E1</i>
CNACRE brown	<i>HDHD2</i>
CNACRE grey	<i>HDLBP</i>
CNACRE brown	<i>HELLS</i>
CNACRE grey	<i>HIP1</i>
CNACRE grey	<i>HIP1R</i>
CNACRE brown	<i>HIST1H2BL</i>
CNACRE brown	<i>HIVEP1</i>
CNACRE grey	<i>HMGB3</i>
CNACRE brown	<i>HSPA2</i>
CNACRE brown	<i>ICK</i>
CNACRE brown	<i>IFT74</i>
CNACRE grey	<i>IL12RB1</i>
CNACRE turquoise	<i>IL27RA</i>
CNACRE grey	<i>ILF3</i>
CNACRE brown	<i>INSL3</i>
CNACRE grey	<i>IRF8</i>
CNACRE grey	<i>ITGA5</i>
CNACRE brown	<i>JOSD1</i>
CNACRE brown	<i>KIAA0895L</i>
CNACRE brown	<i>KLHL5</i>
CNACRE grey	<i>LIG1</i>
CNACRE brown	<i>LINC00649</i>
CNACRE grey	<i>LMF2</i>
CNACRE grey	<i>LOC102724279</i>
CNACRE brown	<i>LRP5L</i>
CNACRE brown	<i>LRRC47</i>
CNACRE grey	<i>LRSAM1</i>
CNACRE grey	<i>LSG1</i>
CNACRE brown	<i>LY6G5B</i>
CNACRE grey	<i>MAN2B2</i>
CNACRE brown	<i>MAP2K4</i>
CNACRE brown	<i>MAP4K5</i>
CNACRE grey	<i>MEF2BNB-MEF2B</i>
CNACRE brown	<i>MLEC</i>
CNACRE brown	<i>MTF1</i>
CNACRE turquoise	<i>MYC</i>
CNACRE brown	<i>N4BP2</i>
CNACRE turquoise	<i>NAGA</i>
CNACRE grey	<i>NCKAP1L</i>
CNACRE brown	<i>NCR3LG1</i>

CNACRE brown	<i>NDRG2</i>
CNACRE brown	<i>NFXL1</i>
CNACRE brown	<i>NOMO3</i>
CNACRE grey	<i>NRAS</i>
CNACRE brown	<i>NUF2</i>
CNACRE brown	<i>NVL</i>
CNACRE brown	<i>OAZ3</i>
CNACRE brown	<i>PACS1</i>
CNACRE brown	<i>PDE4A</i>
CNACRE grey	<i>PHF12</i>
CNACRE brown	<i>PIWIL3</i>
CNACRE grey	<i>PKN1</i>
CNACRE turquoise	<i>PLA2G16</i>
CNACRE brown	<i>POGLUT1</i>
CNACRE brown	<i>POLD3</i>
CNACRE brown	<i>PPP1R12B</i>
CNACRE grey	<i>PPP5C</i>
CNACRE brown	<i>PPP6R1</i>
CNACRE grey	<i>PRPF6</i>
CNACRE grey	<i>PRPSAP1</i>
CNACRE grey	<i>PRRC1</i>
CNACRE turquoise	<i>PSMA1</i>
CNACRE grey	<i>PSMA5</i>
CNACRE brown	<i>PTPRK</i>
CNACRE brown	<i>RAB19</i>
CNACRE brown	<i>RALGPS2</i>
CNACRE brown	<i>RCCD1</i>
CNACRE brown	<i>RCN3</i>
CNACRE grey	<i>RDH13</i>
CNACRE grey	<i>RDH14</i>
CNACRE brown	<i>RGS13</i>
CNACRE brown	<i>RIBC2</i>
CNACRE brown	<i>RNA_SPIKE_ERCC-00053</i>
CNACRE grey	<i>RNF139</i>
CNACRE turquoise	<i>RNF166</i>
CNACRE brown	<i>RNF182</i>
CNACRE brown	<i>RNF19A</i>
CNACRE grey	<i>RPP40</i>
CNACRE grey	<i>SCPEP1</i>
CNACRE grey	<i>SEC24C</i>
CNACRE turquoise	<i>SEC61A1</i>
CNACRE brown	<i>SERPINE1</i>
CNACRE grey	<i>SH3BP1</i>
CNACRE brown	<i>SHBG</i>
CNACRE brown	<i>SLC16A1</i>
CNACRE brown	<i>SLC2A9</i>
CNACRE brown	<i>SLFN12</i>
CNACRE brown	<i>SMPD4</i>
CNACRE grey	<i>SNX24</i>

CNACRE brown	SOX8
CNACRE brown	SPAG8
CNACRE grey	SPATA20
CNACRE brown	SPATA32
CNACRE brown	SPATA4
CNACRE brown	SPEF1
CNACRE brown	SPG11
CNACRE brown	SPP1
CNACRE turquoise	SRSF2
CNACRE brown	STARD4
CNACRE brown	STAT5A
CNACRE brown	SWAP70
CNACRE brown	SYDE1
CNACRE brown	TAF1C
CNACRE brown	TAF5
CNACRE turquoise	TBRG4
CNACRE brown	TCHP
CNACRE brown	TCTEX1D4
CNACRE grey	TDRD3
CNACRE brown	TDRKH
CNACRE brown	TET2
CNACRE brown	TEX2
CNACRE brown	TFF3
CNACRE grey	THEMIS
CNACRE grey	TMC8
CNACRE brown	TMCC2
CNACRE brown	TMEM117
CNACRE turquoise	TMEM156
CNACRE grey	TMEM180
CNACRE grey	TMEM41B
CNACRE brown	TMEM97
CNACRE brown	TNPO2
CNACRE brown	TRAPP8
CNACRE grey	TRIB3
CNACRE brown	TRIM37
CNACRE brown	TRIM7
CNACRE grey	TSEN54
CNACRE brown	TSHZ2
CNACRE grey	TSPAN14
CNACRE brown	TTLL6
CNACRE brown	TYW5
CNACRE grey	UBE2D4
CNACRE turquoise	UBE2T
CNACRE brown	UBFD1
CNACRE brown	UCHL1
CNACRE brown	UHRF1BP1L
CNACRE brown	UPK3BL
CNACRE brown	USO1
CNACRE grey	USP33

CNACRE turquoise *VAT1*  
CNACRE brown *WBP2NL*  
CNACRE brown *WDSUB1*  
CNACRE grey *YBX3*  
CNACRE grey *ZFAND5*  
CNACRE grey *ZHX2*  
CNACRE brown *ZNF202*  
CNACRE brown *ZNF25*  
CNACRE brown *ZNF326*  
CNACRE brown *ZNF354B*  
CNACRE brown *ZNF395*  
CNACRE brown *ZNF44*  
CNACRE turquoise *ZNF655*  
CNACRE brown *ZNF660*  
CNACRE brown *ZNF689*  
CNACRE brown *ZNF729*  
CNACRE brown *ZNF879*  
CNACRE brown *ZSCAN25*

gene	bicor	p.adj
TRIM22	0.4350	0.0209
STX11	0.4248	0.0209
TYMP	0.4152	0.0209
SERPING1	0.4001	0.0209
NAPA	0.3986	0.0209
GALM	0.3901	0.0209
IFI35	0.3883	0.0209
SHISA5	0.3877	0.0209
PML	0.3849	0.0209
RNF213	0.3772	0.0219
LGALS9	0.3770	0.0219
OAS1	0.3604	0.0254
ODF3B	0.3568	0.0254
UBE2L6	0.3547	0.0254
RBCK1	0.3542	0.0254
EPSTI1	0.3538	0.0254
MX2	0.3530	0.0254
MX1	0.3529	0.0254
PLSCR1	0.3520	0.0254
IFIT1	0.3518	0.0254
LY6E	0.3475	0.0258
DYNLT1	0.3428	0.0258
DNAJA1	0.3424	0.0258
PHF11	0.3419	0.0258
APOL6	0.3416	0.0258
TRAFD1	0.3411	0.0258
TMEM123	0.3405	0.0258
IFIT2	0.3374	0.0271
DRAP1	0.3361	0.0271
STAT1	0.3320	0.0292
IFI6	0.3309	0.0292
TNFSF10	0.3295	0.0293
IFITM3	0.3270	0.0304
ISG20	0.3222	0.0319
FAS	0.3218	0.0319
IRF7	0.3213	0.0319
DDX60L	0.3202	0.0319
CARD17	0.3197	0.0319
IFIT3	0.3182	0.0323
IFITM1	0.3151	0.0325
IFI44	0.3145	0.0325
OAS2	0.3140	0.0325
GBP5	0.3129	0.0325
CD59	0.3129	0.0325
ETV7	0.3123	0.0325

TOR1B	0.3110	0.0329
IFI44L	0.3096	0.0331
CASP1	0.3083	0.0331
USP18	0.3081	0.0331
TREX1	0.3043	0.0338
SP100	0.3041	0.0338
OASL	0.3036	0.0338
ISG15	0.3029	0.0338
GIMAP2	0.3026	0.0338
RTP4	0.3020	0.0338
GBP1	0.3014	0.0338
GIMAP4	0.3011	0.0338
HERC5	0.2976	0.0361
PSMB10	0.2969	0.0361
PSMB8	0.2958	0.0362
SP110	0.2955	0.0362
RSAD2	0.2938	0.0364
MYL12A	0.2935	0.0364
GSTK1	0.2931	0.0364
ATP6V1G1	0.2924	0.0364
CHMP5	0.2905	0.0376
HSH2D	0.2883	0.0389
CLEC2B	0.2860	0.0404
CD164	0.2833	0.0419
ZC3HAV1	0.2832	0.0419
SAT1	0.2816	0.0428
MOB1A	0.2786	0.0452
NMI	0.2759	0.0471
MT2A	0.2751	0.0471
CREM	0.2749	0.0471
PSMB9	0.2737	0.0477
APOL1	0.2729	0.0480
PSME1	0.2720	0.0483
NCOA7	0.2713	0.0484
CARD16	0.2707	0.0484
AIM2	0.2671	0.0516
IL1RN	0.2666	0.0516
B2M	0.2660	0.0516
FCGR1B	0.2564	0.0626
FBXO6	0.2551	0.0634
NT5C3A	0.2501	0.0695
SCNM1	0.2487	0.0707
PSME2	0.2471	0.0722
SNX20	0.2445	0.0752
XAF1	0.2424	0.0776
RABGAP1L	0.2404	0.0787

DDX58	0.2403	0.0787
TRIM38	0.2397	0.0787
SAP18	0.2394	0.0787
SQRDL	0.2337	0.0869
IFI16	0.2332	0.0869
TOR1A	0.2316	0.0887
IFITM2	0.2237	0.1017
TMEM140	0.2214	0.1051
UBE2F	0.2190	0.1082
PSMA4	0.2187	0.1082
WARS	0.2168	0.1106
GLRX	0.2162	0.1106
POLB	0.2159	0.1106
FGL2	0.2143	0.1127
CASP5	0.2127	0.1148
TIFA	0.2101	0.1191
IFI30	0.2067	0.1252
RAB8A	0.2061	0.1255
LGALS3BP	0.2030	0.1310
SCO2	0.1997	0.1373
TNFAIP6	0.1977	0.1409
RAB24	0.1907	0.1554
CTSS	0.1907	0.1554
STAT2	0.1855	0.1675
HIST1H2BC	0.1847	0.1682
PARP10	0.1831	0.1711
GBP2	0.1823	0.1717
BUD31	0.1803	0.1759
IRF1	0.1716	0.1992
PLAC8	0.1681	0.2084
CCNL1	0.1652	0.2157
VAMP5	0.1641	0.2176
ANKRD22	0.1622	0.2217
NPC2	0.1608	0.2245
MED28	0.1585	0.2304
MS4A6A	0.1567	0.2346
FCGR1A	0.1497	0.2566
RNF114	0.1459	0.2685
ZBP1	0.1423	0.2795
EIF2AK2	0.1379	0.2941
CIR1	0.1333	0.3100
HIST1H2BD	0.1312	0.3160
POMP	0.1227	0.3490
ATG3	0.1092	0.4071
SAMHD1	0.1086	0.4071
CLEC7A	0.1042	0.4246

GRN	0.0990	0.4471
PLAUR	0.0867	0.5061
SP140	0.0815	0.5266
MSRB2	0.0810	0.5266
C3AR1	0.0808	0.5266
INAFM1	0.0726	0.5669
PPCDC	0.0653	0.6036
RSPH9	0.0643	0.6050

gene	bicor	p.adj
<i>CREM</i>	-0.3926	0.0347
<i>GIMAP2</i>	-0.3886	0.0347
<i>AIM2</i>	-0.3768	0.0353
<i>CD59</i>	-0.3583	0.0386
<i>EIF2AK2</i>	-0.3579	0.0386
<i>GLRX</i>	-0.3517	0.0386
<i>SERPING1</i>	-0.3448	0.0386
<i>ISG20</i>	-0.3432	0.0386
<i>DNAJA1</i>	-0.3328	0.0386
<i>CHMP5</i>	-0.3276	0.0386
<i>MT2A</i>	-0.3269	0.0386
<i>CARD17</i>	-0.3248	0.0386
<i>IFITM1</i>	-0.3223	0.0386
<i>DYNLT1</i>	-0.3201	0.0386
<i>MOB1A</i>	-0.3174	0.0386
<i>EPSTI1</i>	-0.3160	0.0386
<i>GIMAP4</i>	-0.3157	0.0386
<i>STAT1</i>	-0.3153	0.0386
<i>GALM</i>	-0.3135	0.0386
<i>WARS</i>	-0.3131	0.0386
<i>RBCK1</i>	-0.3130	0.0386
<i>CASP5</i>	-0.3073	0.0398
<i>SQRDL</i>	-0.3071	0.0398
<i>IFI35</i>	-0.3058	0.0398
<i>CLEC2B</i>	-0.3057	0.0398
<i>RNF114</i>	-0.3020	0.0398
<i>TRIM22</i>	-0.3010	0.0398
<i>NAPA</i>	-0.3001	0.0398
<i>ETV7</i>	-0.2997	0.0398
<i>FCGR1A</i>	-0.2987	0.0398
<i>GBP1</i>	-0.2973	0.0398
<i>UBE2L6</i>	-0.2956	0.0398
<i>MSRB2</i>	-0.2956	0.0398
<i>HERC5</i>	-0.2919	0.0404
<i>FBXO6</i>	-0.2906	0.0404
<i>GBP5</i>	-0.2903	0.0404
<i>SAMHD1</i>	-0.2891	0.0404
<i>CARD16</i>	-0.2885	0.0404
<i>DDX58</i>	-0.2884	0.0404
<i>B2M</i>	-0.2878	0.0404
<i>DRAP1</i>	-0.2843	0.0427
<i>LY6E</i>	-0.2836	0.0427
<i>PSMB9</i>	-0.2829	0.0427
<i>OAS2</i>	-0.2817	0.0431
<i>OASL</i>	-0.2796	0.0444

<i>TRAFD1</i>	-0.2788	0.0444
<i>SAT1</i>	-0.2768	0.0456
<i>IFITM3</i>	-0.2760	0.0456
<i>PSMB8</i>	-0.2730	0.0467
<i>SHISA5</i>	-0.2729	0.0467
<i>IFIT3</i>	-0.2727	0.0467
<i>MX2</i>	-0.2674	0.0516
<i>RTP4</i>	-0.2671	0.0516
<i>SP100</i>	-0.2660	0.0520
<i>ISG15</i>	-0.2651	0.0522
<i>NCOA7</i>	-0.2630	0.0540
<i>TNFAIP6</i>	-0.2610	0.0556
<i>IFI6</i>	-0.2598	0.0563
<i>SP140</i>	-0.2574	0.0586
<i>TNFSF10</i>	-0.2525	0.0644
<i>SAP18</i>	-0.2519	0.0644
<i>TYMP</i>	-0.2510	0.0648
<i>POMP</i>	-0.2502	0.0648
<i>RNF213</i>	-0.2491	0.0655
<i>NMI</i>	-0.2469	0.0678
<i>DDX60L</i>	-0.2460	0.0682
<i>IRF7</i>	-0.2446	0.0693
<i>ANKRD22</i>	-0.2436	0.0698
<i>OAS1</i>	-0.2422	0.0701
<i>MYL12A</i>	-0.2422	0.0701
<i>CASP1</i>	-0.2392	0.0727
<i>PARP10</i>	-0.2391	0.0727
<i>HIST1H2BC</i>	-0.2382	0.0727
<i>STX11</i>	-0.2370	0.0727
<i>SP110</i>	-0.2365	0.0727
<i>GBP2</i>	-0.2362	0.0727
<i>RSPH9</i>	-0.2358	0.0727
<i>ATG3</i>	-0.2357	0.0727
<i>IFIT2</i>	-0.2299	0.0809
<i>IFIT1</i>	-0.2296	0.0809
<i>RAB8A</i>	-0.2279	0.0822
<i>TMEM140</i>	-0.2277	0.0822
<i>ATP6V1G1</i>	-0.2236	0.0884
<i>FCGR1B</i>	-0.2227	0.0890
<i>PSME1</i>	-0.2208	0.0915
<i>IFI16</i>	-0.2177	0.0953
<i>MX1</i>	-0.2177	0.0953
<i>VAMP5</i>	-0.2146	0.0997
<i>XAF1</i>	-0.2144	0.0997
<i>PML</i>	-0.2133	0.1004
<i>IL1RN</i>	-0.2129	0.1004

<i>PSME2</i>	-0.2070	0.1118
<i>PLSCR1</i>	-0.2060	0.1127
<i>PLAUR</i>	-0.2000	0.1251
<i>CLEC7A</i>	-0.1993	0.1256
<i>PSMA4</i>	-0.1976	0.1284
<i>PLAC8</i>	-0.1962	0.1304
<i>ZBP1</i>	-0.1947	0.1327
<i>UBE2F</i>	-0.1903	0.1425
<i>NPC2</i>	-0.1863	0.1468
<i>RAB24</i>	-0.1863	0.1468
<i>APOL6</i>	-0.1862	0.1468
<i>SNX20</i>	-0.1861	0.1468
<i>FGL2</i>	-0.1860	0.1468
<i>CCNL1</i>	-0.1758	0.1742
<i>IFI44</i>	-0.1730	0.1811
<i>RSAD2</i>	-0.1646	0.2066
<i>GRN</i>	-0.1627	0.2114
<i>IFITM2</i>	-0.1611	0.2134
<i>POLB</i>	-0.1610	0.2134
<i>TRIM38</i>	-0.1594	0.2147
<i>GSTK1</i>	-0.1592	0.2147
<i>CIR1</i>	-0.1590	0.2147
<i>CTSS</i>	-0.1581	0.2156
<i>HSH2D</i>	-0.1532	0.2313
<i>IRF1</i>	-0.1521	0.2331
<i>C3AR1</i>	-0.1515	0.2331
<i>PSMB10</i>	-0.1511	0.2331
<i>BUD31</i>	-0.1488	0.2392
<i>TOR1A</i>	-0.1483	0.2392
<i>TOR1B</i>	-0.1387	0.2743
<i>TREX1</i>	-0.1368	0.2800
<i>TIFA</i>	-0.1354	0.2833
<i>FAS</i>	-0.1292	0.3074
<i>MED28</i>	-0.1260	0.3186
<i>TMEM123</i>	-0.1240	0.3251
<i>RABGAP1L</i>	-0.1185	0.3479
<i>LGALS9</i>	-0.1154	0.3600
<i>PPCDC</i>	-0.1141	0.3633
<i>LGALS3BP</i>	-0.1134	0.3637
<i>ZC3HAV1</i>	-0.1110	0.3724
<i>NT5C3A</i>	-0.1078	0.3854
<i>STAT2</i>	-0.1054	0.3943
<i>INAFM1</i>	-0.1043	0.3948
<i>USP18</i>	-0.1041	0.3948
<i>MS4A6A</i>	-0.0862	0.4863
<i>IFI30</i>	-0.0714	0.5684

<i>HIST1H2BD</i>	-0.0701	0.5720
<i>ODF3B</i>	-0.0656	0.5954
<i>SCNM1</i>	-0.0622	0.6119
<i>IFI44L</i>	-0.0577	0.6359
<i>CD164</i>	-0.0433	0.7233
<i>PHF11</i>	-0.0353	0.7715
<i>APOL1</i>	-0.0180	0.8828
<i>SCO2</i>	-0.0100	0.9309