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Supplementary Methods

Consensus Clustering:

Consensus clustering was used to identify the number of clusters (k) in the data and to select the most reliable clusters. This process involves several runs (n) of a clustering algorithm such as kmeans, PAM, HCL on the transcriptomic data. A pairwise consensus value is computed, defined as the proportion of clustering runs in which two samples clustered together, where 1 is assigned if two samples clustered together along all n runs and 0 if they did not cluster together. Samples are clustered in the same k cluster if they show high consensus values along n iterations. Three metrics were used to compare the performance of the above clustering algorithms: delta-K, consensus matrix, and the membership robustness matrix. Delta-k plots the consensus distributions for each k, called the cumulative distribution function (CDF). When this distribution reaches the maximum it indicates the maximum stability, and suggested k as a number of clusters in the dataset. Consensus matrix shows the consensus values between samples. These values should be 1 for samples clustered together and shown as a clear cluster. The membership robustness matrix shows the proportion of n runs that the samples were assigned into k cluster. We used clusterCons R package version 1.0 for the consensus clustering approach. R code as follows:

```
library(clusterCons)

#RNA_SEQ_DATA has genes in row and samples in columns
cmr_TI <- cluscomp(data.frame(t(RNA_seq_data)),
                  algorithms=list('kmeans','pam','hclust'),
                  merge=1,clmin=2,clmax=10, reps=1000)

cmr=cmr_TI
ac <- aucs(cmr)
#plot out the auc curves
#aucplot(ac)
#now lets calculate the deltak
```

```
dk <- deltax(ac)
#plot out the results to find optimal class number
dkplot1(dk)
```

Transcriptomic Profiling:

In NEPTUNE, the research core obtained at the time of a clinically-indicated biopsy was placed in RNA preservative (RNAlater). Genome wide transcriptome analysis was performed on manually micro-dissected kidney biopsy tissue that separated the tubulointerstitial compartment from the glomerular compartment. For RNA-sequencing (RNA-seq) profiles, mRNA samples

were prepared using the Illumina TruSeq mRNA Sample Prep v2 kit. Multiplex amplification was used to prepare cDNA with a paired-end read length of 100 bases using an Illumina HiSeq2000. RNAseq was performed by the University of Michigan Advanced Genomics Core (<https://brcf.medicine.umich.edu/cores/advanced-genomics/>). Quality of the sequencing data was assessed using the FastQC tool (<http://www.bioinformatics.babraham.ac.uk/projects/fastqc/>).

Read counts were extracted from the fastq files using HTSeq (version 0.11). RNA-seq profiles from different batches were voom-transformed and batch corrected using ComBat^{s1}.

For ERCB biopsy samples, total RNA was isolated, reverse transcribed, linearly amplified and hybridized on the Affymetrix microarray platforms^{s2-s6}. Microarrays were preprocessed and normalized with RMA^{s7} following the workflow described by Lockstone et al.^{s8} Human microarrays were annotated using custom chip definition files from the University of Michigan (Brainarray), custom chip definition file version 19^{s9, s10}. Normalized gene expression data was batch corrected using ComBat^{s11}. Transcriptional profiles of biopsies from patients with MCD and FSGS in the ERCB have been deposited to GEO and are part of

accession numbers GSE104954 (tubulointerstitium) and GSE104948 (glomeruli).

For H3 Africa biopsy samples, a 5 mm cortical segment of a kidney biopsy core (beyond that necessary for clinical diagnosis) was placed into an RNA preservative (RNAlater).

Manual microdissection was used to separate the tissue into glomeruli and tubulointerstitial compartments and were processed for RNA expression profiles as in the NEPTUNE study.

Urine Biomarker Profiling – Luminex Profiling

All urine analyte levels were measured in duplicate and normalized to urine creatinine concentration. Extensive quality control thresholds were required for inclusion in the analysis.

Briefly, based on manual review of all analyte distributions, data with technical errors (e.g., low bead count, high inter-well variability) were discarded. Data were flagged if they were extrapolated (outside of the standard curve) or out of range (above or below the 4-5 dilution logistic standard curve). A coefficient of variation was calculated for each analyte aggregated by sample. Analytes were excluded if >50% of measures were extrapolated or out of range or there was a high coefficient of variation.

Single nuclear RNA-seq data processing

Analyses were performed on the output data files from CellRanger using the Seurat R package (version 4.1.1 ; <https://cran.r-project.org/web/packages/Seurat/index.html>), the SoupX R package^{s12}, and the DoubletFinder R package^{s13}. To limit low quality nuclei and/or multiplets, we set minimum and maximum cutoffs for gene counts

pernuclei to 500 and 5000 genes, respectively and limited the analysis to nuclei with a mitochondrial gene content less than 10%. Nuclei were merged into a Seurat object using integrate function for downstream analyses. Data submitted to GEO. R code used as follows:

```
#These packages are necessary to run the base Seurat pipeline
library(dplyr)
library(Seurat)
library(SeuratObject)
library(patchwork)
library(umap)
#As these were all run in cellranger v6, there is no need to adjust the base SoupX code.
If anyone reprocesses this in cellranger v7 or higher, please check the SoupX github
page, as there is a change to the package code that is needed to make SoupX work.
library(SoupX)
#These packages are needed to run DoubletFinder; some of these need to be installed via
github
library(fields)
library(Matrix)
library(KernSmooth)
library(ROCR)
library(parallel)
library(DoubletFinder)
#TNF High
#1134-EO-2 sample
sc=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-240/1134-EO/NovaA-
240/Sample_1134-EO-2/outs")
sc=autoEstCont(sc)
out=adjustCounts(sc)
Patient11342 <- CreateSeuratObject(out)
Patient11342$TNF <- "TNFHigh"
Patient11342$ID <- "Patient11342"
Patient11342$NS <- "FSGS"
Patient11342[["percent.mt"]] <- PercentageFeatureSet(Patient11342, pattern="^MT-")
Patient11342 <- subset(Patient11342, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11342 <- NormalizeData(Patient11342,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11342 <- FindVariableFeatures(Patient11342, selection.method="vst",nfeatures=
2000)
Patient11342 <- ScaleData(Patient11342)
Patient11342 <- RunPCA(Patient11342, features = VariableFeatures(object =
Patient11342))
```

```

Patient11342 <- FindNeighbors(Patient11342, dims = 1:30)
Patient11342 <- FindClusters(Patient11342, resolution = 0.6)
Patient11342 <- RunUMAP(Patient11342, dims = 1:30)
#The above is needed to run the data to a point where DoubletFinder can take over. the
remaining steps for this sample identify doublets and then I remove them with the subset
command below. I also clean up the resulting matrix with the last two lines in this
sample. To save on space, I won't repeat this particular comment, but just kinda use this
template down below.
sweep.res.list_Patient11342 <- paramSweep_v3(Patient11342, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11342 <- summarizeSweep(sweep.res.list_Patient11342, GT =
FALSE)
bcmvn_Patient11342 <- find.pK(sweep.stats_Patient11342)
pK_Patient11342 <- bcmvn_Patient11342 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11342 <- as.numeric(as.character(pK_Patient11342[[1]]))
annotations_Patient11342 <- Patient11342@meta.data$seurat_clusters
homotypic.prop_Patient11342 <- modelHomotypic(annotations_Patient11342)
nExp_poi_Patient11342 <- round(0.075*nrow(Patient11342@meta.data))
nExp_poi_adj_Patient11342 <- round(nExp_poi_Patient11342*(1-
homotypic.prop_Patient11342))
Patient11342 <- doubletFinder_v3(Patient11342, PCs = 1:10, pN = 0.25, pK =
pK_Patient11342, nExp = nExp_poi_adj_Patient11342, reuse.pANN = FALSE, sct =
FALSE)
#I ran table(Patient11342@meta.data$DF.classifications_0.25_0.005_684) to determine
the number of possible doublets that were identified.
Patient11342 <- subset(x=Patient11342, subset = DF.classifications_0.25_0.005_684 ==
"Singlet")
Patient11342$DF.classifications_0.25_0.005_684 <- NULL
Patient11342$pANN_0.25_0.005_684 <- NULL
#Rinse and repeat for the remaining samples.
#1144-EO-3 sample
sc1=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-246/1144-EO/NovaA-
246/Sample_1144-EO-3/outs")
sc1=autoEstCont(sc1)
out1=adjustCounts(sc1)
Patient11443 <- CreateSeuratObject(out1)
Patient11443$TNF <- "TNFHigh"
Patient11443$ID <- "Patient11443"
Patient11443$NS <- "FSGS"
Patient11443[["percent.mt"]] <- PercentageFeatureSet(Patient11443, pattern="^MT-")
Patient11443 <- subset(Patient11443, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11443<- NormalizeData(Patient11443,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11443 <- FindVariableFeatures(Patient11443, selection.method="vst",nfeatures=
2000)

```

```

Patient11443 <- ScaleData(Patient11443)
Patient11443 <- RunPCA(Patient11443, features = VariableFeatures(object =
Patient11443))
Patient11443 <- FindNeighbors(Patient11443, dims = 1:30)
Patient11443 <- FindClusters(Patient11443, resolution = 0.6)
Patient11443 <- RunUMAP(Patient11443, dims = 1:30)
sweep.res.list_Patient11443 <- paramSweep_v3(Patient11443, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11443 <- summarizeSweep(sweep.res.list_Patient11443, GT =
FALSE)
bcmvn_Patient11443 <- find.pK(sweep.stats_Patient11443)
pK_Patient11443 <- bcmvn_Patient11443 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11443 <- as.numeric(as.character(pK_Patient11443[[1]]))
annotations_Patient11443 <- Patient11443@meta.data$seurat_clusters
homotypic.prop_Patient11443 <- modelHomotypic(annotations_Patient11443)
nExp_poi_Patient11443 <- round(0.075*nrow(Patient11443@meta.data))
nExp_poi_adj_Patient11443 <- round(nExp_poi_Patient11443*(1-
homotypic.prop_Patient11443))
Patient11443 <- doubletFinder_v3(Patient11443, PCs = 1:10, pN = 0.25, pK =
pK_Patient11443, nExp = nExp_poi_adj_Patient11443, reuse.pANN = FALSE, sct =
FALSE)
Patient11443 <- subset(x=Patient11443, subset = DF.classifications_0.25_0.06_106 ==
"Singlet")
Patient11443$DF.classifications_0.25_0.06_106 <- NULL
Patient11443$pANN_0.25_0.06_106 <- NULL
#1134-EO-4 sample
sc2=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-240/1134-EO/NovaA-
240/Sample_1134-EO-4/outs")
sc2=autoEstCont(sc2,forceAccept=TRUE)
out2=adjustCounts(sc2)
Patient11344 <- CreateSeuratObject(out2)
Patient11344$TNF <- "TNFHigh"
Patient11344$ID <- "Patient11344"
Patient11344$NS <- "FSGS"
Patient11344[["percent.mt"]] <- PercentageFeatureSet(Patient11344, pattern="^MT-")
Patient11344 <- subset(Patient11344, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11344 <- NormalizeData(Patient11344,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11344 <- FindVariableFeatures(Patient11344, selection.method="vst",nfeatures=
2000)
Patient11344 <- ScaleData(Patient11344)
Patient11344 <- RunPCA(Patient11344, features = VariableFeatures(object =
Patient11344))
Patient11344 <- FindNeighbors(Patient11344, dims = 1:30)
Patient11344 <- FindClusters(Patient11344, resolution = 0.6)

```

```

Patient11344 <- RunUMAP(Patient11344, dims = 1:30)
sweep.res.list_Patient11344 <- paramSweep_v3(Patient11344, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11344 <- summarizeSweep(sweep.res.list_Patient11344, GT =
FALSE)
bcmvn_Patient11344 <- find.pK(sweep.stats_Patient11344)
pK_Patient11344 <- bcmvn_Patient11344 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11344 <- as.numeric(as.character(pK_Patient11344[[1]]))
annotations_Patient11344 <- Patient11344@meta.data$seurat_clusters
homotypic.prop_Patient11344 <- modelHomotypic(annotations_Patient11344)
nExp_poi_Patient11344 <- round(0.075*nrow(Patient11344@meta.data))
nExp_poi_adj_Patient11344 <- round(nExp_poi_Patient11344*(1-
homotypic.prop_Patient11344))
Patient11344 <- doubletFinder_v3(Patient11344, PCs = 1:10, pN = 0.25, pK =
pK_Patient11344, nExp = nExp_poi_adj_Patient11344, reuse.pANN = FALSE, sct =
FALSE)
#Need to change the column name, as minus sign is messing up subsetting function
colnames(Patient11344@meta.data) <-
c("orig.ident", "nCount_RNA", "nFeature_RNA", "TNF", "ID", "NS", "percent.mt", "RNA_s
nn_res.0.6", "seurat_clusters", "pANN_0.25_5eNeg04_1395", "DF.classifications_0.25_5e
Neg04_1395")
Patient11344 <- subset(x=Patient11344, subset =
DF.classifications_0.25_5eNeg04_1395 == "Singlet")
Patient11344$DF.classifications_0.25_5eNeg04_1395 <- NULL
Patient11344$pANN_0.25_5eNeg04_1395 <- NULL
#1137-EO-1 sample
sc3=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-246/1137-EO/NovaA-
246/Sample_1137-EO-1/outs")
sc3=autoEstCont(sc3)
out3=adjustCounts(sc3)
Patient11371 <- CreateSeuratObject(out3)
Patient11371$TNF <- "TNFHigh"
Patient11371$ID <- "Patient11371"
Patient11371$NS <- "MCD"
Patient11371[["percent.mt"]] <- PercentageFeatureSet(Patient11371, pattern="^MT-")
Patient11371 <- subset(Patient11371, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11371 <- NormalizeData(Patient11371,
normalization.method="LogNormalize", scale.factor = 10000)
Patient11371 <- FindVariableFeatures(Patient11371, selection.method="vst", nfeatures=
2000)
Patient11371 <- ScaleData(Patient11371)
Patient11371 <- RunPCA(Patient11371, features = VariableFeatures(object =
Patient11371))
Patient11371 <- FindNeighbors(Patient11371, dims = 1:30)
Patient11371 <- FindClusters(Patient11371, resolution = 0.6)

```

```

Patient11371 <- RunUMAP(Patient11371, dims = 1:30)
sweep.res.list_Patient11371 <- paramSweep_v3(Patient11371, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11371 <- summarizeSweep(sweep.res.list_Patient11371, GT =
FALSE)
bcmvn_Patient11371 <- find.pK(sweep.stats_Patient11371)
pK_Patient11371 <- bcmvn_Patient11371 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11371 <- as.numeric(as.character(pK_Patient11371[[1]]))
annotations_Patient11371 <- Patient11371@meta.data$seurat_clusters
homotypic.prop_Patient11371 <- modelHomotypic(annotations_Patient11371)
nExp_poi_Patient11371 <- round(0.075*nrow(Patient11371@meta.data))
nExp_poi_adj_Patient11371 <- round(nExp_poi_Patient11371*(1-
homotypic.prop_Patient11371))
Patient11371 <- doubletFinder_v3(Patient11371, PCs = 1:10, pN = 0.25, pK =
pK_Patient11371, nExp = nExp_poi_adj_Patient11371, reuse.pANN = FALSE, sct =
FALSE)
Patient11371 <- subset(x=Patient11371, subset = DF.classifications_0.25_0.3_322 ==
"Singlet")
Patient11371$DF.classifications_0.25_0.3_322 <- NULL
Patient11371$pANN_0.25_0.3_322 <- NULL
#1138-EO-2 sample
sc4=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-246/1138-EO/NovaA-
246/Sample_1138-EO-2/outs")
sc4=autoEstCont(sc4)
out4=adjustCounts(sc4)
Patient11382 <- CreateSeuratObject(out4)
Patient11382$TNF <- "TNFHigh"
Patient11382$ID <- "Patient11382"
Patient11382$NS <- "FSGS"
Patient11382[["percent.mt"]] <- PercentageFeatureSet(Patient11382, pattern="^MT-")
Patient11382 <- subset(Patient11382, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11382 <- NormalizeData(Patient11382,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11382 <- FindVariableFeatures(Patient11382, selection.method="vst",nfeatures=
2000)
Patient11382 <- ScaleData(Patient11382)
Patient11382 <- RunPCA(Patient11382, features = VariableFeatures(object =
Patient11382))
Patient11382 <- FindNeighbors(Patient11382, dims = 1:30)
Patient11382 <- FindClusters(Patient11382, resolution = 0.6)
Patient11382 <- RunUMAP(Patient11382, dims = 1:30)
sweep.res.list_Patient11382 <- paramSweep_v3(Patient11382, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11382 <- summarizeSweep(sweep.res.list_Patient11382, GT =
FALSE)
bcmvn_Patient11382 <- find.pK(sweep.stats_Patient11382)

```

```

pK_Patient11382 <- bcmvn_Patient11382 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11382 <- as.numeric(as.character(pK_Patient11382[[1]]))
annotations_Patient11382 <- Patient11382@meta.data$seurat_clusters
homotypic.prop_Patient11382 <- modelHomotypic(annotations_Patient11382)
nExp_poi_Patient11382 <- round(0.075*nrow(Patient11382@meta.data))
nExp_poi_adj_Patient11382 <- round(nExp_poi_Patient11382*(1-
homotypic.prop_Patient11382))
Patient11382 <- doubletFinder_v3(Patient11382, PCs = 1:10, pN = 0.25, pK =
pK_Patient11382, nExp = nExp_poi_adj_Patient11382, reuse.pANN = FALSE, sct =
FALSE)
Patient11382 <- subset(x=Patient11382, subset = DF.classifications_0.25_0.06_74 ==
"Singlet")
Patient11382$DF.classifications_0.25_0.06_74 <- NULL
Patient11382$pANN_0.25_0.06_74 <- NULL
#TNF_Low
#1144-EO-2 sample
sc5=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-246/1144-EO/NovaA-
246/Sample_1144-EO-2/outs")
sc5=autoEstCont(sc5,tfidfMin=0.8,forceAccept=TRUE)
out5=adjustCounts(sc5)
Patient11442 <- CreateSeuratObject(out5)
Patient11442$TNF <- "TNFLow"
Patient11442$ID <- "Patient11442"
Patient11442$NS <- "FSGS"
Patient11442[["percent.mt"]] <- PercentageFeatureSet(Patient11442, pattern="^MT-")
Patient11442 <- subset(Patient11442, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11442<- NormalizeData(Patient11442,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11442 <- FindVariableFeatures(Patient11442, selection.method="vst",nfeatures=
2000)
Patient11442 <- ScaleData(Patient11442)
Patient11442 <- RunPCA(Patient11442, features = VariableFeatures(object =
Patient11442))
Patient11442 <- FindNeighbors(Patient11442, dims = 1:30)
Patient11442 <- FindClusters(Patient11442, resolution = 0.6)
Patient11442 <- RunUMAP(Patient11442, dims = 1:30)
sweep.res.list_Patient11442 <- paramSweep_v3(Patient11442, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11442 <- summarizeSweep(sweep.res.list_Patient11442, GT =
FALSE)
bcmvn_Patient11442 <- find.pK(sweep.stats_Patient11442)
pK_Patient11442 <- bcmvn_Patient11442 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11442 <- as.numeric(as.character(pK_Patient11442[[1]]))
annotations_Patient11442 <- Patient11442@meta.data$seurat_clusters

```

```

homotypic.prop_Patient11442 <- modelHomotypic(annotations_Patient11442)
nExp_poi_Patient11442 <- round(0.075*nrow(Patient11442@meta.data))
nExp_poi_adj_Patient11442 <- round(nExp_poi_Patient11442*(1-
homotypic.prop_Patient11442))
Patient11442 <- doubletFinder_v3(Patient11442, PCs = 1:10, pN = 0.25, pK =
pK_Patient11442, nExp = nExp_poi_adj_Patient11442, reuse.pANN = FALSE, sct =
FALSE)
Patient11442 <- subset(x=Patient11442, subset = DF.classifications_0.25_0.03_71 ==
"Singlet")
Patient11442$DF.classifications_0.25_0.03_71 <- NULL
Patient11442$pANN_0.25_0.03_71 <- NULL
#1138-EO-1 sample
sc6=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-246/1138-EO/NovaA-
246/Sample_1138-EO-1/outs")
sc6=autoEstCont(sc6)
out6=adjustCounts(sc6)
Patient11381 <- CreateSeuratObject(out6)
Patient11381$TNF <- "TNFLow"
Patient11381$ID <- "Patient11381"
Patient11381$NS <- "FSGS"
Patient11381[["percent.mt"]] <- PercentageFeatureSet(Patient11381, pattern="^MT-")
Patient11381 <- subset(Patient11381, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11381 <- NormalizeData(Patient11381,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11381 <- FindVariableFeatures(Patient11381, selection.method="vst",nfeatures=
2000)
Patient11381 <- ScaleData(Patient11381)
Patient11381 <- RunPCA(Patient11381, features = VariableFeatures(object =
Patient11381))
Patient11381 <- FindNeighbors(Patient11381, dims = 1:30)
Patient11381 <- FindClusters(Patient11381, resolution = 0.6)
Patient11381 <- RunUMAP(Patient11381, dims = 1:30)
sweep.res.list_Patient11381 <- paramSweep_v3(Patient11381, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11381 <- summarizeSweep(sweep.res.list_Patient11381, GT =
FALSE)
bcmvn_Patient11381 <- find.pK(sweep.stats_Patient11381)
pK_Patient11381 <- bcmvn_Patient11381 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11381 <- as.numeric(as.character(pK_Patient11381[[1]]))
annotations_Patient11381 <- Patient11381@meta.data$seurat_clusters
homotypic.prop_Patient11381 <- modelHomotypic(annotations_Patient11381)
nExp_poi_Patient11381 <- round(0.075*nrow(Patient11381@meta.data))
nExp_poi_adj_Patient11381 <- round(nExp_poi_Patient11381*(1-
homotypic.prop_Patient11381))
Patient11381 <- doubletFinder_v3(Patient11381, PCs = 1:10, pN = 0.25, pK =

```

```

pK_Patient11381, nExp = nExp_poi_adj_Patient11381, reuse.pANN = FALSE, sct =
FALSE)
Patient11381 <- subset(x=Patient11381, subset = DF.classifications_0.25_0.19_63 ==
"Singlet")
Patient11381$DF.classifications_0.25_0.19_63 <- NULL
Patient11381$pANN_0.25_0.19_63 <- NULL
#1134-EO-1 sample
sc7=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-240/1134-EO/NovaA-
240/Sample_1134-EO-1/outs")
sc7=autoEstCont(sc7,forceAccept=TRUE)
out7=adjustCounts(sc7)
Patient11341 <- CreateSeuratObject(out7)
Patient11341$TNF <- "TNFLow"
Patient11341$ID <- "Patient11341"
Patient11341$NS <- "MCD"
Patient11341[["percent.mt"]] <- PercentageFeatureSet(Patient11341, pattern="^MT-")
Patient11341 <- subset(Patient11341, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11341 <- NormalizeData(Patient11341,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11341 <- FindVariableFeatures(Patient11341, selection.method="vst",nfeatures=
2000)
Patient11341 <- ScaleData(Patient11341)
Patient11341 <- RunPCA(Patient11341, features = VariableFeatures(object =
Patient11341))
Patient11341 <- FindNeighbors(Patient11341, dims = 1:30)
Patient11341 <- FindClusters(Patient11341, resolution = 0.6)
Patient11341 <- RunUMAP(Patient11341, dims = 1:30)
sweep.res.list_Patient11341 <- paramSweep_v3(Patient11341, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11341 <- summarizeSweep(sweep.res.list_Patient11341, GT =
FALSE)
bcmvn_Patient11341 <- find.pK(sweep.stats_Patient11341)
pK_Patient11341 <- bcmvn_Patient11341 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11341 <- as.numeric(as.character(pK_Patient11341[[1]]))
annotations_Patient11341 <- Patient11341@meta.data$seurat_clusters
homotypic.prop_Patient11341 <- modelHomotypic(annotations_Patient11341)
nExp_poi_Patient11341 <- round(0.075*nrow(Patient11341@meta.data))
nExp_poi_adj_Patient11341 <- round(nExp_poi_Patient11341*(1-
homotypic.prop_Patient11341))
Patient11341 <- doubletFinder_v3(Patient11341, PCs = 1:10, pN = 0.25, pK =
pK_Patient11341, nExp = nExp_poi_adj_Patient11341, reuse.pANN = FALSE, sct =
FALSE)
Patient11341 <- subset(x=Patient11341, subset = DF.classifications_0.25_0.23_1828 ==
"Singlet")
Patient11341$DF.classifications_0.25_0.23_1828 <- NULL

```



```

Patient11341$pANN_0.25_0.23_1828 <- NULL
#1134-EO-3 sample
sc8=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-240/1134-EO/NovaA-
240/Sample_1134-EO-3/outs")
sc8=autoEstCont(sc8)
out8=adjustCounts(sc8)
Patient11343 <- CreateSeuratObject(out8)
Patient11343$TNF <- "TNFLow"
Patient11343$ID <- "Patient11343"
Patient11343$NS <- "FSGS"
Patient11343[["percent.mt"]] <- PercentageFeatureSet(Patient11343, pattern="^MT-")
Patient11343 <- subset(Patient11343, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11343<- NormalizeData(Patient11343,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11343 <- FindVariableFeatures(Patient11343, selection.method="vst",nfeatures=
2000)
Patient11343 <- ScaleData(Patient11343)
Patient11343 <- RunPCA(Patient11343, features = VariableFeatures(object =
Patient11343))
Patient11343 <- FindNeighbors(Patient11343, dims = 1:30)
Patient11343 <- FindClusters(Patient11343, resolution = 0.6)
Patient11343 <- RunUMAP(Patient11343, dims = 1:30)
sweep.res.list_Patient11343 <- paramSweep_v3(Patient11343, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11343 <- summarizeSweep(sweep.res.list_Patient11343, GT =
FALSE)
bcmvn_Patient11343 <- find.pK(sweep.stats_Patient11343)
pK_Patient11343 <- bcmvn_Patient11343 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11343 <- as.numeric(as.character(pK_Patient11343[[1]]))
annotations_Patient11343 <- Patient11343@meta.data$seurat_clusters
homotypic.prop_Patient11343 <- modelHomotypic(annotations_Patient11343)
nExp_poi_Patient11343 <- round(0.075*nrow(Patient11343@meta.data))
nExp_poi_adj_Patient11343 <- round(nExp_poi_Patient11343*(1-
homotypic.prop_Patient11343))
Patient11343 <- doubletFinder_v3(Patient11343, PCs = 1:10, pN = 0.25, pK =
pK_Patient11343, nExp = nExp_poi_adj_Patient11343, reuse.pANN = FALSE, sct =
FALSE)
Patient11343 <- subset(x=Patient11343, subset = DF.classifications_0.25_0.14_171 ==
"Singlet")
Patient11343$DF.classifications_0.25_0.14_171 <- NULL
Patient11343$pANN_0.25_0.14_171 <- NULL
#1137-EO-2 sample
sc9=load10X("/nfs/turbo/umms-kretzler-covid19/NovaA-246/1137-EO/NovaA-
246/Sample_1137-EO-2/outs")
sc9=autoEstCont(sc9,forceAccept=TRUE)

```

```

out9=adjustCounts(sc9)
Patient11372 <- CreateSeuratObject(out9)
Patient11372$TNF <- "TNFLow"
Patient11372$ID <- "Patient11372"
Patient11372$NS <- "FSGS"
Patient11372[["percent.mt"]] <- PercentageFeatureSet(Patient11372, pattern="^MT-")
Patient11372 <- subset(Patient11372, subset = nFeature_RNA > 500 & nFeature_RNA
<5000 & percent.mt <10)
Patient11372 <- NormalizeData(Patient11372,
normalization.method="LogNormalize",scale.factor = 10000)
Patient11372 <- FindVariableFeatures(Patient11372, selection.method="vst",nfeatures=
2000)
Patient11372 <- ScaleData(Patient11372)
Patient11372 <- RunPCA(Patient11372, features = VariableFeatures(object =
Patient11372))
Patient11372 <- FindNeighbors(Patient11372, dims = 1:30)
Patient11372 <- FindClusters(Patient11372, resolution = 0.6)
Patient11372 <- RunUMAP(Patient11372, dims = 1:30)
sweep.res.list_Patient11372 <- paramSweep_v3(Patient11372, PCs = 1:10, sct=FALSE)
sweep.stats_Patient11372 <- summarizeSweep(sweep.res.list_Patient11372, GT =
FALSE)
bcmvn_Patient11372 <- find.pK(sweep.stats_Patient11372)
pK_Patient11372 <- bcmvn_Patient11372 %>% filter(BCmetric == max(BCmetric))
%>% select(pK)
pK_Patient11372 <- as.numeric(as.character(pK_Patient11372[[1]]))
annotations_Patient11372 <- Patient11372@meta.data$seurat_clusters
homotypic.prop_Patient11372 <- modelHomotypic(annotations_Patient11372)
nExp_poi_Patient11372 <- round(0.075*nrow(Patient11372@meta.data))
nExp_poi_adj_Patient11372 <- round(nExp_poi_Patient11372*(1-
homotypic.prop_Patient11372))
Patient11372 <- doubletFinder_v3(Patient11372, PCs = 1:10, pN = 0.25, pK =
pK_Patient11372, nExp = nExp_poi_adj_Patient11372, reuse.pANN = FALSE, sct =
FALSE)
Patient11372 <- subset(x=Patient11372, subset = DF.classifications_0.25_0.06_1065 ==
"Singlet")
Patient11372$DF.classifications_0.25_0.06_1065 <- NULL
Patient11372$pANN_0.25_0.06_1065 <- NULL
#Merge the data to setup for the RPCA integration
AllTNF <- merge(Patient11341,
y=c(Patient11342,Patient11343,Patient11344,Patient11371,Patient11372,Patient11381,P
atient11382,Patient11442,Patient11443),add.cell.ids=c("11341","11342","11343","1134
4","11371","11372","11381","11382","11442","11443"),project="TNFIntegrate")
AllTNF.list <- SplitObject(AllTNF, split.by="TNF")
AllTNF.list <- lapply(X=AllTNF.list, FUN=function(x) {
x <- NormalizeData(x)
x <- FindVariableFeatures(x, selection.method="vst",nfeatures=2000)

```

```

})
features <- SelectIntegrationFeatures(object.list=AllTNF.list)
AllTNF.list <- lapply(X = AllTNF.list, FUN=function(x) {
  x <- ScaleData(x, features=features, verbose = FALSE)
  x <- RunPCA(x, features=features, verbose=FALSE)
})
#RPCA Integration
TNFanchors <- FindIntegrationAnchors(object.list=AllTNF.list,
reference=c(1,2),anchor.features=features, reduction="rpca")
TNFcombined <- IntegrateData(anchorset=TNFanchors,dims=1:30)
DefaultAssay(TNFcombined) <- "integrated"
#Default Seurat pipeline
TNFcombined <- ScaleData(TNFcombined)
TNFcombined <- RunPCA(TNFcombined,
features=VariableFeatures(object=TNFcombined))
TNFcombined <- FindNeighbors(TNFcombined, dims=1:30)
TNFcombined <- FindClusters(TNFcombined, resolution=0.6)
TNFcombined <- RunUMAP(TNFcombined, dims=1:30)
saveRDS(TNFcombined, "/data/pjlmac/TNF_Redo_SoupX_DoubletFinder_RPCA.rds")
#Generate cluster markers and match back to reference
WholeNephron.markers <- FindAllMarkers(TNFcombined, min.pct=0.25,
only.pos=TRUE, logfc.threshold = 0.25)
WholeNephron.markers %>% group_by(cluster) %>% top_n(n = 2, wt = avg_logFC)
ConstantMarkers <- read.csv("/home/pjlmac/ReferenceMarkers1.csv")
ConstantNephron <- left_join(WholeNephron.markers,ConstantMarkers)
write.csv(ConstantNephron, "/data/pjlmac/TNF_Redo_Cleaned_ClusterAnalysis_.csv")
#One additional DoubletFinder markup oddly appeared in the data; purged with this line
below.
TNFcombined$DF.classifications_0.25_0.005_684 <- NULL
#Premiere and KPMP Markers nomenclature used per cluster
#Very detailed cluster labels
new.cluster.ids <- c("PT-S1-S2","dPT-S1-1","TAL","dPT-S2-S3-1","dPT-S2-S3-
2","FIB","dPT-S1-S2-1","PC/IC","dPT-S2-S3-3","PT-S2-S3","dPT-S1-2","dPT-S1-S2-
2","cyclingPT","adaptivePT","PT-S1-1","Immune","DTL","PT-S1-2","EC-
GC","ATL","DCT","POD")
names(new.cluster.ids) <- levels(TNFcombined)
TNFcombined <- RenameIdents(TNFcombined,new.cluster.ids)
TNFcombined$Compartment_Level <- Idents(TNFcombined)
#A bit less detailed cluster labels
new.cluster.ids <- c("PT-1","degenPT-1","TAL","degenPT-2","degenPT-
3","FIB","degenPT-4","PC/IC","degenPT-5","PT-2","degenPT-6","degenPT-
7","cyclingPT","adaptivePT","PT-3","Immune","DTL","PT-4","EC-
GC","ATL","DCT","POD")
names(new.cluster.ids) <- levels(TNFcombined)
TNFcombined <- RenameIdents(TNFcombined,new.cluster.ids)
TNFcombined$celltype <- Idents(TNFcombined)

```

```
#Cluster labels used in the manuscript
new.cluster.ids <- c("PT",
"PT","TAL","PT","PT","FIB","PT","PC/IC","PT","PT","PT","PT","PT","PT","PT","Im
mune","DTL","PT","EC","ATL","DCT","POD")
names(new.cluster.ids) <- levels(TNFcombined)
TNFcombined <- RenameIdents(TNFcombined,new.cluster.ids)
TNFcombined$PublicationLabels <- Idents(TNFcombined)
saveRDS(TNFcombined,
"/data/pjlmac/TNF_RPCA_NoDoublets_LabelsWKPMP_v4.rds")
```

Organoid qRT-PCR:

RNA quantity and quality was assessed by Nanodrop (ThermoFisher) via 260/280 ranging 1.91-2.04. One μg of total RNA was then reverse-transcribed into cDNA using SuperScriptFirst-Strand kit (Invitrogen, Cat# 11904-018) per manufacturer's protocol. Quantitative real-time PCR was performed on a QuantStudio™ 7 Flex Real-Time PCR System (ThermoFisher) with sample analysis performed in triplicate using TaqMan Fast Universal PCR Master Mix (2X) (Applied Biosystems, Cat# 4352042) with the following Taq-Man Assay Reagents (Thermo Fisher): CCL2 (Hs00234140_m1), TIMP1 (Hs01092512_g1), and GAPDH (Hs03929097_g1).

The $\Delta\Delta\text{C}_q$ method was applied to calculate the relative quantity (RQ, or fold change) of target genes after normalization to GAPDH. Graphs were plotted using GraphPad Prism software.

Organoid RNAseq quality assessment:

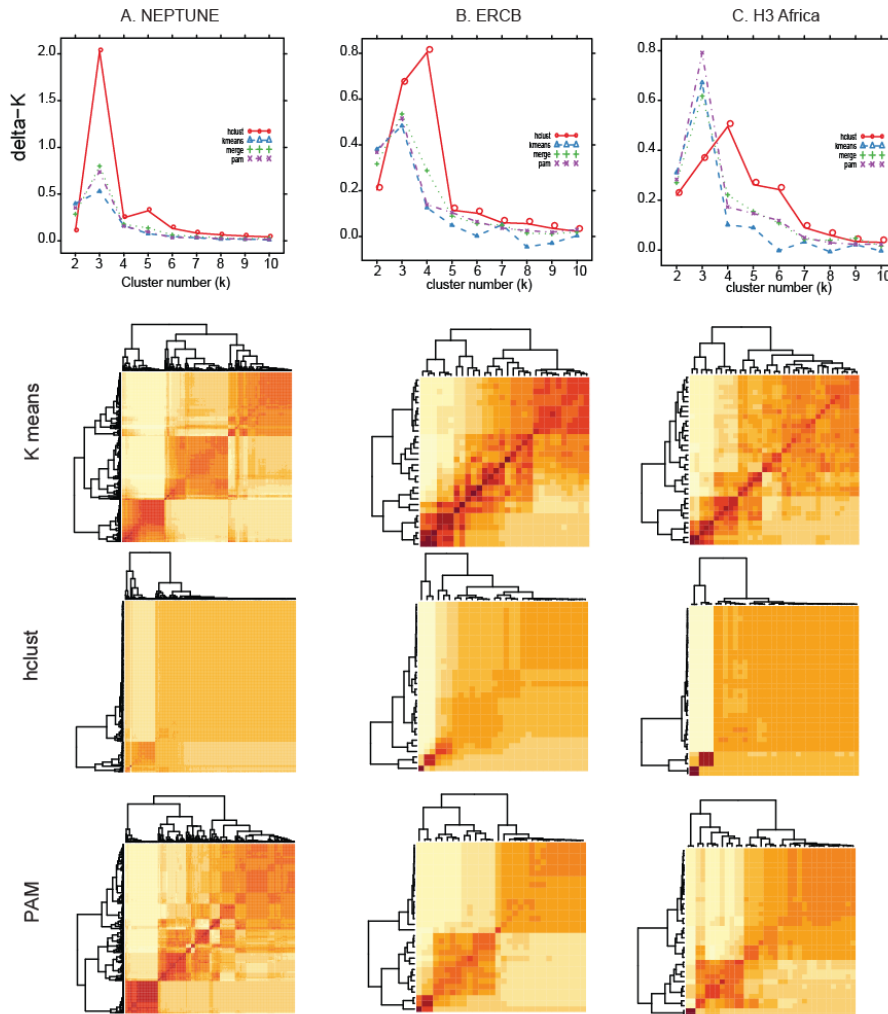
Individual reads were inspected for quality measures such as adapter content, GC content, and per-base sequence quality with FastQC (<http://www.bioinformatics.babraham.ac.uk/projects/fastqc/>). Reads were examined for contamination of foreign as well as disproportional amounts of off-target RNA using

FastqScreen^{s11}, randomly sampling reads from each subject and mapping them to 16 different organisms and artifacts. Mapping to the human reference genome GRCh38 was performed with STAR 2.5.2b^{s14}. The mapped reads were inspected for distribution across exons, introns, UTR and intergenic regions using picardtools (<https://broadinstitute.github.io/picard/>). Annotation and quantification of mapping results on the gene level was performed with HTseq^{s15}. Counts were transformed with voom^{s16} for quality evaluation on the dataset level. Principal Component analysis and hierarchical clustering were used to identify any outlier samples. All samples passed quality control criteria. A TNF activation score for all samples was generated as explained earlier from TNF signature gene profiles.

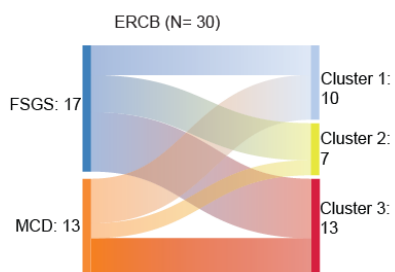
Supplementary References

- s1. Johnson WE, Li C, Rabinovic A: Adjusting batch effects in microarray expression data using empirical Bayes methods. *Biostatistics*, 8: 118-127, 2007 10.1093/biostatistics/kxj037
- s2. Lai JY, Luo J, O'Connor C, Jing X, Nair V, Ju W, et al.: MicroRNA-21 in Glomerular Injury. *J Am Soc Nephrol*, 26: 805-816, 2015 10.1681/asn.2013121274
- s3. Schmid H, Boucherot A, Yasuda Y, Henger A, Brunner B, Eichinger F, et al.: Modular Activation of Nuclear Factor- κ B Transcriptional Programs in Human Diabetic Nephropathy. *Diabetes*, 55: 2993-3003, 2006 10.2337/db06-0477
- s4. Cohen CD, Frach K, Schlondorff D, Kretzler M: Quantitative gene expression analysis in renal biopsies: a novel protocol for a high-throughput multicenter application. *Kidney Int*, 61: 133-140, 2002 10.1046/j.1523-1755.2002.00113.x
- s5. Grayson PC, Eddy S, Taroni JN, Lightfoot YL, Mariani L, Parikh H, et al.: Metabolic pathways and immunometabolism in rare kidney diseases. *Ann Rheum Dis*, 77: 1226-1233, 2018 10.1136/annrheumdis-2017-212935
- s6. Martini S, Nair V, Keller BJ, Eichinger F, Hawkins JJ, Randolph A, et al.: Integrative biology identifies shared transcriptional networks in CKD. *J Am Soc Nephrol*, 25: 2559-2572, 2014 10.1681/ASN.2013080906
- s7. Irizarry RA, Hobbs B, Collin F, Beazer-Barclay YD, Antonellis KJ, Scherf U, et al.: Exploration, normalization, and summaries of high density oligonucleotide array probe level data. *Biostatistics*, 4: 249-264, 2003 10.1093/biostatistics/4.2.249
- s8. Lockstone HE: Exon array data analysis using Affymetrix power tools and R statistical software. *Brief Bioinform*, 12: 634-644, 2011 10.1093/bib/bbq086
- s9. Dai M, Wang P, Boyd AD, Kostov G, Athey B, Jones EG, et al.: Evolving gene/transcript definitions significantly alter the interpretation of GeneChip data. *Nucleic Acids Res*, 33: e175, 2005 10.1093/nar/gni179
- s10. Sandberg R, Larsson O: Improved precision and accuracy for microarrays using updated probe set definitions. *BMC Bioinformatics*, 8: 48, 2007 10.1186/1471-2105-8-48
- s11. Wingett SW, Andrews S: FastQ Screen: A tool for multi-genome mapping and quality control. *F1000Research*, 7: 1338, 2018 10.12688/f1000research.15931.2
- s12. Young MD, Behjati S. SoupX removes ambient RNA contamination from droplet-based single-cell RNA sequencing data. *GigaScience* 2020; **9**.
- s13. McGinnis CS, Murrow LM, Gartner ZJ. DoubletFinder: Doublet Detection in Single-Cell RNA Sequencing Data Using Artificial Nearest Neighbors. *Cell Systems* 2019; **8**: 329-337.e324.
- s14. Dobin A, Davis CA, Schlesinger F, Drenkow J, Zaleski C, Jha S, et al.: STAR: ultrafast universal RNA-seq aligner. *Bioinformatics*, 29: 15-21, 2013 10.1093/bioinformatics/bts635
- s15. Anders S, Pyl PT, Huber W: HTSeq-a Python framework to work with high-throughput sequencing data. *Bioinformatics*, 31: 166-169, 2015 10.1093/bioinformatics/btu638
- s16. Law CW, Chen Y, Shi W, Smyth GK: voom: Precision weights unlock linear model analysis tools for RNA-seq read counts. *Genome Biol*, 15: R29, 2014 10.1186/gb-2014-15-2-r29

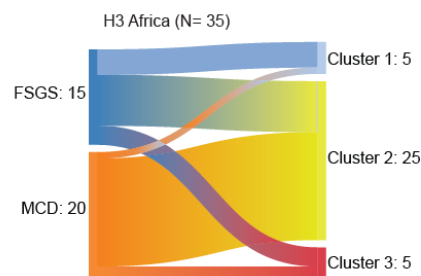
Supplementary Figure S1. Cluster dendrogram and assignment of minimal change disease (MCD) and focal segmental glomerulosclerosis (FSGS) participants based on kidney biopsy tubulointerstitial gene expression data in North American Nephrotic Syndrome Study Network (NEPTUNE), European Renal cDNA Bank (ERCB), and Human Heredity and Health in Africa Kidney Disease Research Network cohort (H3 Africa). Optimal cluster determination and similarity matrices using different clustering algorithms from transcriptomic profiles of MCD and FSGS participants based on kidney biopsy tubulointerstitial gene expression data in NEPTUNE (A), ERCB (B), and H3 Africa (C). Sankey diagrams from the ERCB (D) and H3 Africa (E) cohorts comparing diagnosis with cluster assignment.



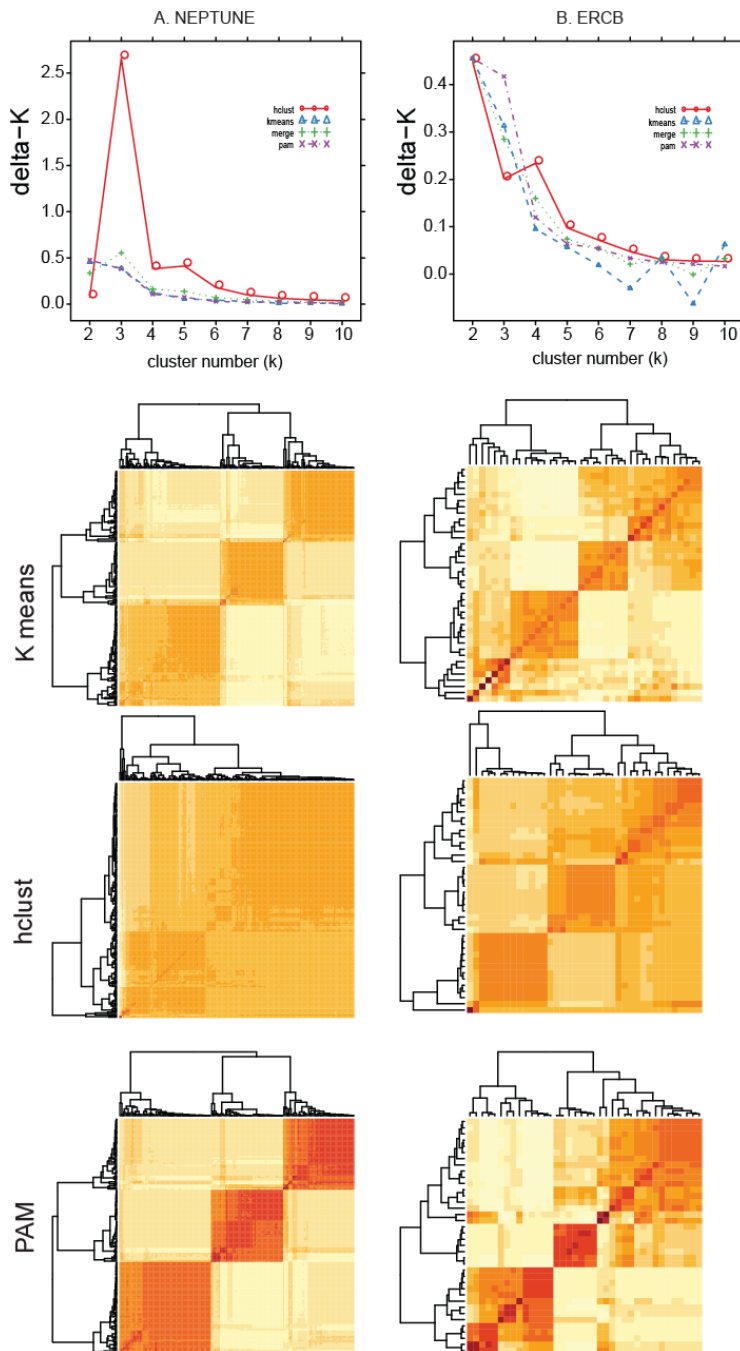
D.



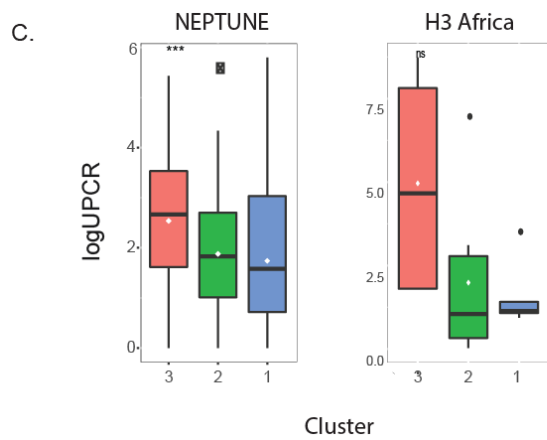
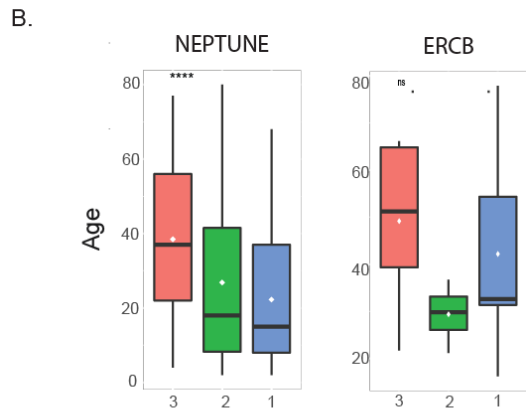
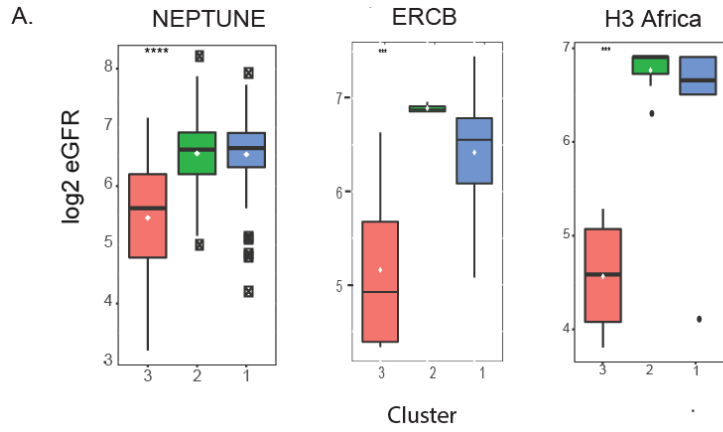
E.



Supplementary Figure S2. Comparison of cluster assignment and clinical measures in NEPTUNE and ERCB using glomerular compartment expression data. Optimal cluster determination and similarity matrices using different clustering algorithms from transcriptomic profiles of MCD and FSGS participants based on kidney biopsy glomerular gene expression data in NEPTUNE (A), and ERCB (B).

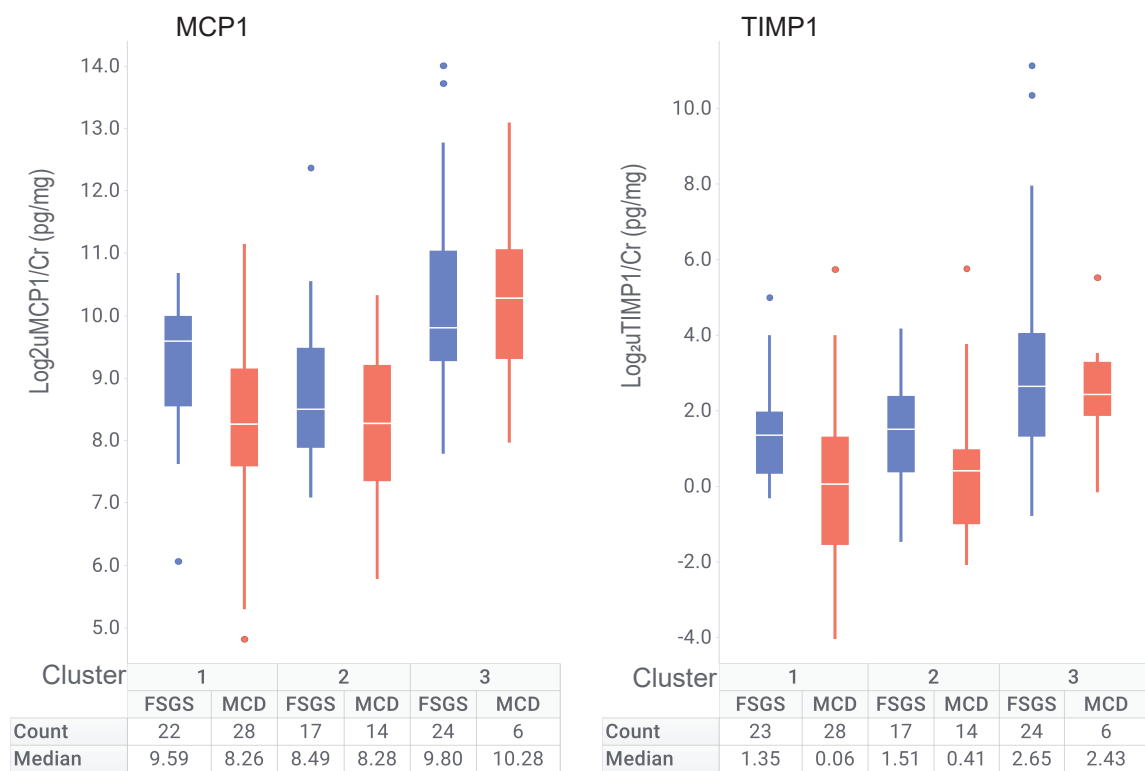


Supplementary Figure S3. Comparison of clinical factors and cluster assignment across cohorts.
Clinical information analyzed by cluster for eGFR (A), Age (B), and UPCR (C) across the cohorts.



Supplementary Figure S4. Urine marker levels by diagnosis and cluster. Urine markers for chemokine (C-C motif) ligand 2 (CCL2) / monocyte chemoattractant protein-1 (MCP-1) (left panel) and tissue inhibitor of metalloproteinases 1 (TIMP-1) (right panel) were assayed in duplicate and normalized to urine creatinine as described in the methods. Data are presented as log₂ transformed urine marker levels by disease and TNF cluster. Significance of log₂ transformed values was determined by Welch's t-test comparing samples in cluster T3 to those in clusters T1 and T2 as indicated in the accompanying table.

ELISA levels by cluster and diagnosis



Comparisons	Log ₂ uMCP/Cr (pg/mg)	Log ₂ uTIMP1/Cr (ng/mg)
Cluster 3 vs. Cluster 1 and 2	p<0.0005	p<0.0001
Cluster 3 vs. Cluster 1 and 2 (MCD only)	p<0.05	p<0.05
Cluster 3 vs. Cluster 1 and 2 (FSGS only)	p<0.005	p<0.005
Cluster 3 FSGS vs Cluster 3 MCD	p=0.47	p=0.25

Supplementary Table S1a. List of differentially expressed genes in Cluster 3 versus Clusters 1 and 2. List of differentially expressed genes (absolute FC>1.5, q<0.05) in Cluster 3 versus Clusters 1 and 2, in each cohort, used for enrichment analyses.

Cohort	Ensembl or EntrezGene identifier	Symbol	Fold change	q-value
NEPTUNE	ENSG00000167748	KLK1	-7.36	1.18E-23
NEPTUNE	ENSG00000162391	FAM151A	-4.36	8.64E-24
NEPTUNE	ENSG00000134042	MRO	-4.19	1.08E-33
NEPTUNE	ENSG00000226733	LOC100505985	-4.01	2.59E-25
NEPTUNE	ENSG00000198569	SLC34A3	-3.97	5.66E-30
NEPTUNE	ENSG00000164199	ADGRV1	-3.83	5.38E-21
NEPTUNE	ENSG00000139988	RDH12	-3.81	1.59E-19
NEPTUNE	ENSG00000100884	CPNE6	-3.71	2.59E-11
NEPTUNE	ENSG00000213901	SLC23A3	-3.62	1.39E-27
NEPTUNE	ENSG00000146809	ASB15	-3.50	1.13E-26
NEPTUNE	ENSG00000131482	G6PC1	-3.50	6.40E-17
NEPTUNE	ENSG00000158865	SLC5A11	-3.47	1.31E-24
NEPTUNE	ENSG00000178363	CALML3	-3.44	4.52E-21
NEPTUNE	ENSG00000244067	GSTA2	-3.42	7.96E-19
NEPTUNE	ENSG00000160868	CYP3A4	-3.40	1.38E-30
NEPTUNE	ENSG00000174358	SLC6A19	-3.34	3.16E-19
NEPTUNE	ENSG00000215277	RNF212B	-3.28	2.05E-18
NEPTUNE	ENSG00000122194	PLG	-3.27	1.26E-19
NEPTUNE	ENSG00000163586	FABP1	-3.26	1.20E-22
NEPTUNE	ENSG00000100889	PCK2	-3.26	5.83E-34
NEPTUNE	ENSG00000134864	GGACT	-3.23	2.57E-29
NEPTUNE	ENSG00000138798	EGF	-3.18	4.72E-18
NEPTUNE	ENSG00000079557	AFM	-3.17	1.77E-21
NEPTUNE	ENSG00000100253	MIOX	-3.15	8.46E-23
NEPTUNE	ENSG00000186335	SLC36A2	-3.07	2.63E-22
NEPTUNE	ENSG00000099994	SUSD2	-3.04	2.80E-23
NEPTUNE	ENSG00000103154	NECAB2	-3.01	6.67E-24
NEPTUNE	ENSG00000136943	CTSV	-3.01	6.39E-25
NEPTUNE	ENSG0000015413	DPEP1	-3.00	3.34E-21
NEPTUNE	ENSG00000137868	STRA6	-2.99	1.57E-17
NEPTUNE	ENSG00000243955	GSTA1	-2.99	2.45E-19
NEPTUNE	ENSG00000104808	DHDH	-2.97	4.81E-23
NEPTUNE	ENSG00000143257	NR1I3	-2.97	1.38E-20
NEPTUNE	ENSG00000172482	AGXT	-2.93	1.69E-11
NEPTUNE	ENSG00000164089	ETNPPL	-2.92	4.52E-19
NEPTUNE	ENSG00000122121	XPNPEP2	-2.91	2.19E-17
NEPTUNE	ENSG00000110887	DAO	-2.90	1.62E-24
NEPTUNE	ENSG00000158104	HPD	-2.89	3.23E-23
NEPTUNE	ENSG00000149452	SLC22A8	-2.87	9.99E-15
NEPTUNE	ENSG00000211452	DIO1	-2.86	2.03E-22
NEPTUNE	ENSG00000251637	LINC02754	-2.86	7.61E-26
NEPTUNE	ENSG00000091583	APOH	-2.85	3.96E-18
NEPTUNE	ENSG00000100344	PNPLA3	-2.83	1.73E-25
NEPTUNE	ENSG00000261795	RP11_90P131	-2.82	3.58E-18
NEPTUNE	ENSG00000138678	GPAT3	-2.81	6.52E-30
NEPTUNE	ENSG00000172940	SLC22A13	-2.81	2.34E-23

NEPTUNE	ENSG00000132855	ANGPTL3	-2.81	4.80E-22
NEPTUNE	ENSG00000229005	HNF4A-AS1	-2.81	8.92E-31
NEPTUNE	ENSG00000110245	APOC3	-2.80	4.87E-15
NEPTUNE	ENSG00000160862	AZGP1	-2.80	8.32E-26
NEPTUNE	ENSG00000187621	TCL6	-2.78	2.36E-31
NEPTUNE	ENSG00000134612	FOLH1B	-2.77	1.39E-23
NEPTUNE	ENSG00000204444	APOM	-2.76	1.90E-25
NEPTUNE	ENSG00000116882	HAO2	-2.76	1.02E-20
NEPTUNE	ENSG00000062096	ARSF	-2.75	3.40E-18
NEPTUNE	ENSG00000164325	TMEM174	-2.75	3.64E-25
NEPTUNE	ENSG00000129214	SHBG	-2.75	3.47E-25
NEPTUNE	ENSG00000164303	ENPP6	-2.74	1.25E-24
NEPTUNE	ENSG00000250799	PRODH2	-2.74	4.07E-18
NEPTUNE	ENSG00000171759	PAH	-2.73	1.62E-18
NEPTUNE	ENSG00000186466	AQP7P1	-2.73	1.08E-23
NEPTUNE	ENSG00000100024	UPB1	-2.72	2.76E-27
NEPTUNE	ENSG00000204653	ASPDH	-2.68	5.54E-28
NEPTUNE	ENSG00000117601	SERPINC1	-2.64	2.18E-22
NEPTUNE	ENSG00000145692	BHMT	-2.64	2.74E-22
NEPTUNE	ENSG00000143627	PKLR	-2.64	2.58E-19
NEPTUNE	ENSG00000227877	MRLN	-2.64	4.95E-20
NEPTUNE	ENSG00000196549	MME	-2.61	1.77E-26
NEPTUNE	ENSG00000117009	KMO	-2.60	5.12E-28
NEPTUNE	ENSG00000138823	MTTP	-2.57	5.96E-28
NEPTUNE	ENSG00000130707	ASS1	-2.54	1.35E-32
NEPTUNE	ENSG00000182327	GLTPD2	-2.54	1.24E-15
NEPTUNE	ENSG00000183535	COL18A1-AS1	-2.53	1.29E-24
NEPTUNE	ENSG00000173826	KCNH6	-2.53	2.31E-14
NEPTUNE	ENSG00000156398	SFXN2	-2.51	1.54E-32
NEPTUNE	ENSG00000172478	MAB21L4	-2.50	4.56E-08
NEPTUNE	ENSG00000099834	CDHR5	-2.50	3.92E-18
NEPTUNE	ENSG00000160870	CYP3A7	-2.49	5.55E-22
NEPTUNE	ENSG00000197901	SLC22A6	-2.49	1.39E-16
NEPTUNE	ENSG00000186529	CYP4F3	-2.49	1.75E-23
NEPTUNE	ENSG00000140263	SORD	-2.48	3.47E-31
NEPTUNE	ENSG00000148795	CYP17A1	-2.48	1.29E-09
NEPTUNE	ENSG00000171234	UGT2B7	-2.48	7.33E-22
NEPTUNE	ENSG00000166840	GLYATL1	-2.47	5.00E-20
NEPTUNE	ENSG00000126231	PROZ	-2.47	1.33E-16
NEPTUNE	ENSG00000100053	CRYBB3	-2.46	1.10E-19
NEPTUNE	ENSG00000234996	ACTG1P25	-2.45	9.68E-35
NEPTUNE	ENSG00000205279	CTXN3	-2.43	1.22E-12
NEPTUNE	ENSG00000167701	GPT	-2.42	1.52E-14
NEPTUNE	ENSG00000164893	SLC7A13	-2.41	5.20E-04
NEPTUNE	ENSG00000253196	RP11_706C167	-2.41	2.71E-23
NEPTUNE	ENSG00000163631	ALB	-2.41	5.83E-05
NEPTUNE	ENSG00000131183	SLC34A1	-2.41	3.77E-12
NEPTUNE	ENSG00000119711	ALDH6A1	-2.41	2.73E-32
NEPTUNE	ENSG00000158296	SLC13A3	-2.41	6.25E-13
NEPTUNE	ENSG00000139540	SLC39A5	-2.41	1.76E-19
NEPTUNE	ENSG00000118094	TREH	-2.40	9.05E-18
NEPTUNE	ENSG00000082293	COL19A1	-2.39	5.83E-24
NEPTUNE	ENSG00000187048	CYP4A11	-2.38	9.28E-13

NEPTUNE	ENSG00000172955	ADH6	-2.38	1.81E-20
NEPTUNE	ENSG00000258472	AC005726.1	-2.37	2.30E-14
NEPTUNE	ENSG00000160282	FTCD	-2.37	9.82E-13
NEPTUNE	ENSG00000145832	SLC25A48	-2.36	1.57E-19
NEPTUNE	ENSG00000179761	PIPOX	-2.35	2.02E-18
NEPTUNE	ENSG00000123453	SARDH	-2.35	3.21E-22
NEPTUNE	ENSG00000137474	MYO7A	-2.34	4.03E-21
NEPTUNE	ENSG00000172828	CES3	-2.33	2.37E-22
NEPTUNE	ENSG00000256162	SMLR1	-2.33	1.61E-21
NEPTUNE	ENSG00000162881	OXER1	-2.33	9.49E-22
NEPTUNE	ENSG00000214796	RP11_480I125	-2.32	4.08E-28
NEPTUNE	ENSG00000116771	AGMAT	-2.32	3.96E-18
NEPTUNE	ENSG00000183784	DOCK8-AS1	-2.31	2.04E-17
NEPTUNE	ENSG00000223985	LINC01874	-2.31	8.27E-13
NEPTUNE	ENSG00000007001	UPP2	-2.31	1.08E-09
NEPTUNE	ENSG00000171766	GATM	-2.31	1.26E-18
NEPTUNE	ENSG00000101425	BPI	-2.30	2.71E-08
NEPTUNE	ENSG00000162365	CYP4A22	-2.29	1.14E-08
NEPTUNE	ENSG00000173599	PC	-2.28	3.69E-19
NEPTUNE	ENSG00000178803	ADORA2A-AS1	-2.28	6.98E-23
NEPTUNE	ENSG00000162877	PM20D1	-2.28	3.58E-07
NEPTUNE	ENSG00000165449	SLC16A9	-2.27	6.27E-14
NEPTUNE	ENSG00000138030	KHK	-2.27	2.50E-28
NEPTUNE	ENSG00000113492	AGXT2	-2.26	1.96E-16
NEPTUNE	ENSG00000170482	SLC23A1	-2.26	1.57E-21
NEPTUNE	ENSG00000142484	TM4SF5	-2.24	1.01E-25
NEPTUNE	ENSG00000186868	MAPT	-2.24	2.41E-22
NEPTUNE	ENSG00000070915	SLC12A3	-2.24	3.62E-09
NEPTUNE	ENSG00000255021	RP11_536I62	-2.24	1.06E-07
NEPTUNE	ENSG00000021488	SLC7A9	-2.24	1.46E-17
NEPTUNE	ENSG00000112494	UNC93A	-2.23	5.41E-09
NEPTUNE	ENSG00000165140	FBP1	-2.23	9.07E-30
NEPTUNE	ENSG00000092068	SLC7A8	-2.23	4.42E-16
NEPTUNE	ENSG00000132837	DMGDH	-2.23	3.33E-27
NEPTUNE	ENSG00000161896	IP6K3	-2.22	6.15E-16
NEPTUNE	ENSG00000214814	FER1L6	-2.22	4.03E-18
NEPTUNE	ENSG00000197408	CYP2B6	-2.21	4.55E-13
NEPTUNE	ENSG00000189233	NUGGC	-2.21	1.76E-20
NEPTUNE	ENSG00000180316	PNPLA1	-2.21	5.09E-20
NEPTUNE	ENSG00000154025	SLC5A10	-2.19	1.19E-16
NEPTUNE	ENSG00000144908	ALDH1L1	-2.19	3.96E-18
NEPTUNE	ENSG00000148942	SLC5A12	-2.19	1.84E-12
NEPTUNE	ENSG00000007216	SLC13A2	-2.19	7.64E-16
NEPTUNE	ENSG00000113905	HRG	-2.19	1.59E-19
NEPTUNE	ENSG00000162551	ALPL	-2.18	1.37E-24
NEPTUNE	ENSG00000204872	NAT8B	-2.18	1.14E-16
NEPTUNE	ENSG00000149527	PLCH2	-2.18	1.56E-09
NEPTUNE	ENSG00000257335	MGAM	-2.18	9.33E-17
NEPTUNE	ENSG00000282408	LOC105377924	-2.17	4.05E-19
NEPTUNE	ENSG00000148584	A1CF	-2.17	2.38E-19
NEPTUNE	ENSG00000142583	SLC2A5	-2.17	1.57E-16
NEPTUNE	ENSG00000109072	VTN	-2.17	3.88E-12
NEPTUNE	ENSG00000164756	SLC30A8	-2.16	3.58E-07

NEPTUNE	ENSG00000234155	LINC02535	-2.16	3.81E-09
NEPTUNE	ENSG00000137204	SLC22A7	-2.16	3.27E-11
NEPTUNE	ENSG00000113494	PRLR	-2.16	1.39E-22
NEPTUNE	ENSG00000258616	LINC02303	-2.15	5.17E-08
NEPTUNE	ENSG00000181291	TMEM132E	-2.15	2.85E-13
NEPTUNE	ENSG00000149476	TKFC	-2.15	3.78E-21
NEPTUNE	ENSG00000182271	TMIGD1	-2.15	9.88E-32
NEPTUNE	ENSG00000010379	SLC6A13	-2.14	1.67E-26
NEPTUNE	ENSG00000168306	ACOX2	-2.14	2.85E-23
NEPTUNE	ENSG00000002726	AOC1	-2.13	7.94E-13
NEPTUNE	ENSG00000009765	IYD	-2.13	1.25E-20
NEPTUNE	ENSG00000224417	LOC105378138	-2.13	1.60E-15
NEPTUNE	ENSG00000183044	ABAT	-2.12	3.31E-20
NEPTUNE	ENSG00000104327	CALB1	-2.12	2.77E-08
NEPTUNE	ENSG00000181035	SLC25A42	-2.12	2.45E-20
NEPTUNE	ENSG00000143630	HCN3	-2.11	7.22E-27
NEPTUNE	ENSG00000228038	VN1R51P	-2.11	1.77E-17
NEPTUNE	ENSG00000257894	RP1_78O141	-2.11	1.56E-16
NEPTUNE	ENSG00000101445	PPP1R16B	-2.10	3.55E-15
NEPTUNE	ENSG00000093217	XYLB	-2.10	3.45E-22
NEPTUNE	ENSG00000245750	DRAIC	-2.09	7.67E-16
NEPTUNE	ENSG00000124253	PCK1	-2.09	1.02E-08
NEPTUNE	ENSG00000125255	SLC10A2	-2.08	8.25E-13
NEPTUNE	ENSG00000166816	LDHD	-2.08	3.50E-23
NEPTUNE	ENSG00000163145	C1QTNF7	-2.08	1.83E-16
NEPTUNE	ENSG00000185100	ADSS1	-2.07	6.98E-21
NEPTUNE	ENSG00000081051	AFP	-2.07	1.42E-14
NEPTUNE	ENSG00000002746	HECW1	-2.07	4.87E-18
NEPTUNE	ENSG00000169738	DCXR	-2.07	2.92E-26
NEPTUNE	ENSG00000187017	ESPN	-2.07	5.13E-25
NEPTUNE	ENSG00000151240	DIP2C	-2.07	9.22E-31
NEPTUNE	ENSG00000250244	CTB_49A34	-2.07	1.12E-18
NEPTUNE	ENSG00000224950	RP5_1086K131	-2.07	9.94E-22
NEPTUNE	ENSG00000215231	LINC01020	-2.06	1.70E-15
NEPTUNE	ENSG00000164120	HPGD	-2.06	3.35E-23
NEPTUNE	ENSG00000253574	LOC105375781	-2.06	7.49E-26
NEPTUNE	ENSG00000140284	SLC27A2	-2.06	1.53E-14
NEPTUNE	ENSG00000266588	RP1_56K135	-2.06	1.52E-22
NEPTUNE	ENSG00000148218	ALAD	-2.06	1.51E-27
NEPTUNE	ENSG00000074276	CDHR2	-2.05	3.42E-13
NEPTUNE	ENSG00000100433	KCNK10	-2.04	1.87E-13
NEPTUNE	ENSG00000178828	RNF186	-2.04	2.76E-14
NEPTUNE	ENSG00000162433	AK4	-2.03	2.44E-22
NEPTUNE	ENSG00000008513	ST3GAL1	-2.03	8.07E-23
NEPTUNE	ENSG00000172497	ACOT12	-2.03	6.18E-16
NEPTUNE	ENSG00000132541	RIDA	-2.02	4.08E-28
NEPTUNE	ENSG00000118004	COLEC11	-2.02	9.81E-21
NEPTUNE	ENSG00000172367	PDZD3	-2.01	1.68E-18
NEPTUNE	ENSG00000172594	SMPDL3A	-2.01	3.52E-26
NEPTUNE	ENSG00000145217	SLC26A1	-2.01	6.05E-18
NEPTUNE	ENSG00000166869	CHP2	-2.00	8.85E-08
NEPTUNE	ENSG00000088926	F11	-2.00	1.14E-16
NEPTUNE	ENSG00000198130	HIBCH	-2.00	2.46E-25

NEPTUNE	ENSG00000173610	UGT2A1	-2.00	1.51E-03
NEPTUNE	ENSG00000162882	HAAO	-2.00	9.78E-28
NEPTUNE	ENSG00000167741	GGT6	-2.00	4.44E-23
NEPTUNE	ENSG00000166391	MOGAT2	-1.99	3.98E-11
NEPTUNE	ENSG00000159640	ACE	-1.99	1.82E-10
NEPTUNE	ENSG00000130377	ACSBG2	-1.98	1.06E-18
NEPTUNE	ENSG00000161653	NAGS	-1.98	4.74E-22
NEPTUNE	ENSG00000145362	ANK2	-1.98	4.75E-10
NEPTUNE	ENSG00000172425	TTC36	-1.98	1.82E-23
NEPTUNE	ENSG00000091137	SLC26A4	-1.98	2.67E-05
NEPTUNE	ENSG00000137274	BPHL	-1.97	2.64E-31
NEPTUNE	ENSG00000023839	ABCC2	-1.97	3.69E-15
NEPTUNE	ENSG00000167711	SERPINF2	-1.97	1.12E-13
NEPTUNE	ENSG00000249378	LINC01060	-1.97	8.80E-19
NEPTUNE	ENSG00000130203	APOE	-1.96	1.09E-07
NEPTUNE	ENSG00000124214	STAU1	-1.96	6.96E-27
NEPTUNE	ENSG00000196177	ACADSB	-1.96	1.94E-21
NEPTUNE	ENSG00000170099	SERPINA6	-1.96	5.29E-18
NEPTUNE	ENSG00000240045	STRIT1	-1.95	7.36E-09
NEPTUNE	ENSG00000178772	CPN2	-1.95	3.68E-07
NEPTUNE	ENSG00000023171	GRAMD1B	-1.95	1.60E-17
NEPTUNE	ENSG00000113790	EHHADH	-1.95	9.87E-23
NEPTUNE	ENSG00000237674	GSTA7P	-1.95	3.46E-24
NEPTUNE	ENSG00000091262	ABCC6	-1.95	6.21E-18
NEPTUNE	ENSG00000164406	LEAP2	-1.95	1.06E-10
NEPTUNE	ENSG00000102886	GDPD3	-1.94	1.40E-14
NEPTUNE	ENSG00000179914	ITLN1	-1.94	2.34E-04
NEPTUNE	ENSG00000101444	AHCY	-1.94	9.94E-27
NEPTUNE	ENSG00000117600	PLPPR4	-1.94	4.48E-15
NEPTUNE	ENSG00000184022	OR2T10	-1.94	6.27E-05
NEPTUNE	ENSG00000183715	OPCML	-1.94	1.34E-10
NEPTUNE	ENSG00000167780	SOAT2	-1.94	4.12E-09
NEPTUNE	ENSG00000115255	REEP6	-1.93	3.99E-19
NEPTUNE	ENSG00000140519	RHCG	-1.93	3.60E-08
NEPTUNE	ENSG00000119121	TRPM6	-1.93	2.10E-11
NEPTUNE	ENSG00000144395	CCDC150	-1.93	3.92E-20
NEPTUNE	ENSG00000231210	COMETT	-1.93	1.24E-19
NEPTUNE	ENSG00000255274	SMIM35	-1.93	2.96E-11
NEPTUNE	ENSG00000186198	SLC51B	-1.92	3.22E-19
NEPTUNE	ENSG00000131781	FMO5	-1.92	8.92E-12
NEPTUNE	ENSG00000137860	SLC28A2	-1.92	8.40E-08
NEPTUNE	ENSG00000113739	STC2	-1.92	1.58E-18
NEPTUNE	ENSG00000143891	GALM	-1.92	1.37E-29
NEPTUNE	ENSG00000148057	IDNK	-1.92	1.84E-26
NEPTUNE	ENSG00000137561	TTPA	-1.91	8.44E-17
NEPTUNE	ENSG00000140199	SLC12A6	-1.91	1.59E-22
NEPTUNE	ENSG00000277196	LOC102724788/PRODH	-1.91	2.73E-08
NEPTUNE	ENSG00000198010	DLGAP2	-1.90	2.07E-14
NEPTUNE	ENSG00000203995	ZYG11A	-1.90	4.82E-20
NEPTUNE	ENSG00000241119	UGT1A9 (includes others)	-1.90	1.06E-06
NEPTUNE	ENSG00000198814	GK	-1.90	2.62E-13
NEPTUNE	ENSG00000211445	GPX3	-1.90	9.28E-14
NEPTUNE	ENSG00000010932	FMO1	-1.90	3.72E-10

NEPTUNE	ENSG00000216560	LINC00955	-1.89	3.52E-08
NEPTUNE	ENSG00000155465	SLC7A7	-1.89	4.94E-15
NEPTUNE	ENSG00000162461	SLC25A34	-1.89	1.62E-09
NEPTUNE	ENSG00000148357	HMCN2	-1.88	5.39E-14
NEPTUNE	ENSG00000204099	NEU4	-1.88	1.53E-03
NEPTUNE	ENSG00000172782	FADS6	-1.88	5.49E-09
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NEPTUNE	ENSG00000167363	FN3K	-1.86	1.53E-13
NEPTUNE	ENSG00000163328	GPR155	-1.85	1.25E-23
NEPTUNE	ENSG00000157335	CLEC18A/CLEC18C	-1.85	2.48E-07
NEPTUNE	ENSG00000163581	SLC2A2	-1.84	3.78E-09
NEPTUNE	ENSG00000143416	SELENBP1	-1.84	1.14E-25
NEPTUNE	ENSG00000180769	WDFY3-AS2	-1.84	1.95E-25
NEPTUNE	ENSG00000240935	PLGLA	-1.84	2.20E-12
NEPTUNE	ENSG00000076258	FMO4	-1.84	7.94E-14
NEPTUNE	ENSG00000251377	LOC105377490	-1.84	2.66E-19
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NEPTUNE	ENSG00000213373	LINC00671	-1.83	4.73E-17
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NEPTUNE	ENSG00000225697	SLC26A6	-1.82	2.38E-15
NEPTUNE	ENSG00000187097	ENTPD5	-1.82	1.04E-17
NEPTUNE	ENSG00000184672	RALYL	-1.82	3.81E-16
NEPTUNE	ENSG00000138413	IDH1	-1.82	6.28E-23
NEPTUNE	ENSG00000152782	PANK1	-1.82	2.40E-18
NEPTUNE	ENSG00000164749	HNF4G	-1.82	6.94E-12
NEPTUNE	ENSG00000167994	RAB3IL1	-1.81	3.76E-16
NEPTUNE	ENSG00000181997	AQP7P2	-1.81	5.23E-10
NEPTUNE	ENSG00000101447	FAM83D	-1.81	4.56E-10
NEPTUNE	ENSG00000133116	KL	-1.81	7.97E-11
NEPTUNE	ENSG00000262995	LOC105371119	-1.81	2.71E-13
NEPTUNE	ENSG00000254717	GLYATL1P2	-1.81	4.87E-04
NEPTUNE	ENSG00000223716	RP11_113O243	-1.81	3.43E-20
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NEPTUNE	ENSG00000178462	TUBAL3	-1.80	6.28E-16
NEPTUNE	ENSG00000108479	GALK1	-1.80	6.01E-24
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NEPTUNE	ENSG00000075673	ATP12A	-1.80	2.08E-05
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NEPTUNE	ENSG00000236136	ADORA2BP1	-1.80	1.30E-12
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NEPTUNE	ENSG00000133401	PDZD2	-1.79	1.64E-17
NEPTUNE	ENSG00000113389	NPR3	-1.79	6.04E-14
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NEPTUNE	ENSG00000103316	CRYM	-1.79	6.13E-16

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NEPTUNE	ENSG00000163959	SLC51A	-1.78	3.44E-18
NEPTUNE	ENSG00000198398	TMEM207	-1.78	6.89E-08
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NEPTUNE	ENSG00000213963	LOC100130691	-1.77	1.17E-06
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NEPTUNE	ENSG00000108018	SORCS1	-1.77	4.15E-04
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NEPTUNE	ENSG00000175538	KCNE3	-1.76	1.17E-19
NEPTUNE	ENSG00000178821	TMEM52	-1.76	1.52E-15
NEPTUNE	ENSG00000248211	TRPC7-AS1	-1.76	6.08E-18
NEPTUNE	ENSG00000150656	CNDP1	-1.76	1.39E-14
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NEPTUNE	ENSG00000113318	MSH3	-1.75	2.96E-25
NEPTUNE	ENSG00000170180	GYPA	-1.75	5.66E-18
NEPTUNE	ENSG00000260201	LOC105371120	-1.75	5.78E-13
NEPTUNE	ENSG00000083067	TRPM3	-1.75	2.55E-15
NEPTUNE	ENSG00000228376	GAS2L1P2	-1.74	3.21E-15
NEPTUNE	ENSG00000145147	SLIT2	-1.74	5.60E-13
NEPTUNE	ENSG00000135476	ESPL1	-1.74	6.19E-09
NEPTUNE	ENSG00000105784	RUNDC3B	-1.74	4.88E-18
NEPTUNE	ENSG00000127831	VIL1	-1.74	4.48E-09
NEPTUNE	ENSG00000165973	NELL1	-1.74	6.94E-10
NEPTUNE	ENSG00000237153	RP11_132E112	-1.74	4.93E-08
NEPTUNE	ENSG00000099194	SCD	-1.74	1.36E-08
NEPTUNE	ENSG00000264569	DCXR-DT	-1.74	4.68E-20
NEPTUNE	ENSG00000166402	TUB	-1.74	6.03E-14
NEPTUNE	ENSG00000255319	ENPP7P8	-1.74	4.96E-16
NEPTUNE	ENSG00000165899	OTOGL	-1.73	1.16E-03
NEPTUNE	ENSG00000157680	DGKI	-1.73	3.33E-07
NEPTUNE	ENSG00000143845	ETNK2	-1.73	3.85E-13
NEPTUNE	ENSG00000145088	EAF2	-1.73	7.21E-18
NEPTUNE	ENSG00000100362	PVALB	-1.73	4.91E-07
NEPTUNE	ENSG00000259347	RP11_798K32	-1.73	1.74E-16
NEPTUNE	ENSG00000117791	MTARC2	-1.73	1.10E-12
NEPTUNE	ENSG00000281655	RP11-817J15.3	-1.73	2.66E-03
NEPTUNE	ENSG00000102575	ACP5	-1.73	6.93E-13
NEPTUNE	ENSG00000278967	RP5_849H193	-1.72	2.47E-15
NEPTUNE	ENSG00000072682	P4HA2	-1.72	2.09E-16
NEPTUNE	ENSG00000176809	LRRC37A3 (includes others)	-1.72	7.32E-16
NEPTUNE	ENSG00000094631	HDAC6	-1.72	2.65E-14
NEPTUNE	ENSG00000176641	RNF152	-1.72	1.85E-11
NEPTUNE	ENSG00000146166	LGSN	-1.72	1.63E-06
NEPTUNE	ENSG00000012171	SEMA3B	-1.72	8.62E-11
NEPTUNE	ENSG00000159423	ALDH4A1	-1.71	2.18E-12
NEPTUNE	ENSG00000264589	MAPT-AS1	-1.71	5.30E-12
NEPTUNE	ENSG00000278058	RP11_70D242	-1.71	1.32E-16
NEPTUNE	ENSG00000167074	TEF	-1.71	5.23E-07
NEPTUNE	ENSG00000145949	MYLK4	-1.71	2.50E-11
NEPTUNE	ENSG00000122729	ACO1	-1.70	3.37E-13
NEPTUNE	ENSG00000224093	BCAR3-AS1	-1.70	5.98E-18
NEPTUNE	ENSG00000263535	AK4P1	-1.70	4.11E-04

NEPTUNE	ENSG00000180902	D2HGDH	-1.70	3.50E-13
NEPTUNE	ENSG00000227244	LINC00845	-1.70	3.32E-20
NEPTUNE	ENSG00000258084	RP11_754N211	-1.69	1.68E-19
NEPTUNE	ENSG00000137106	GRHPR	-1.69	3.16E-20
NEPTUNE	ENSG00000161270	NPHS1	-1.69	3.97E-04
NEPTUNE	ENSG00000261804	LOC102723373	-1.69	1.57E-16
NEPTUNE	ENSG00000225376	TMEM246-AS1	-1.69	1.19E-10
NEPTUNE	ENSG00000165633	VSTM4	-1.69	6.94E-13
NEPTUNE	ENSG00000140675	SLC5A2	-1.69	2.74E-05
NEPTUNE	ENSG00000234647	LOC101929420	-1.68	1.03E-15
NEPTUNE	ENSG00000197114	ZGPAT	-1.68	3.71E-22
NEPTUNE	ENSG00000163050	COQ8A	-1.68	2.55E-14
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NEPTUNE	ENSG00000171132	PRKCE	-1.67	1.32E-15
NEPTUNE	ENSG00000072210	ALDH3A2	-1.67	1.20E-20
NEPTUNE	ENSG00000229639	LINC01758	-1.67	2.12E-15
NEPTUNE	ENSG00000135838	NPL	-1.67	1.37E-09
NEPTUNE	ENSG00000241224	C3orf85	-1.66	1.45E-09
NEPTUNE	ENSG00000142661	MYOM3	-1.66	1.32E-05
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NEPTUNE	ENSG00000271824	SMIM32	-1.66	2.50E-08
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NEPTUNE	ENSG00000204613	TRIM10	-1.66	6.00E-13
NEPTUNE	ENSG00000164309	CMYA5	-1.66	2.63E-09
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NEPTUNE	ENSG00000158874	APOA2	-1.66	1.20E-05
NEPTUNE	ENSG00000016391	CHDH	-1.65	1.13E-11
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NEPTUNE	ENSG00000254126	CD8B2	-1.65	1.53E-05
NEPTUNE	ENSG00000113073	SLC4A9	-1.65	9.35E-07
NEPTUNE	ENSG00000254416	LINC02732	-1.65	9.15E-09
NEPTUNE	ENSG00000101405	OXT	-1.64	3.71E-08
NEPTUNE	ENSG00000253300	RP11_108E141	-1.64	2.46E-08
NEPTUNE	ENSG00000166415	WDR72	-1.64	9.05E-16
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NEPTUNE	ENSG00000133315	MACROD1	-1.64	6.07E-11
NEPTUNE	ENSG00000213612	FAM220CP	-1.64	3.23E-14
NEPTUNE	ENSG00000105516	DBP	-1.64	3.45E-05
NEPTUNE	ENSG00000253888	LOC105379340	-1.64	6.45E-10
NEPTUNE	ENSG00000173848	NET1	-1.64	2.78E-14
NEPTUNE	ENSG00000114120	SLC25A36	-1.63	5.71E-20
NEPTUNE	ENSG00000236581	STARD13-AS	-1.63	7.58E-17
NEPTUNE	ENSG00000181192	DHTKD1	-1.63	3.60E-15
NEPTUNE	ENSG00000176225	RTTN	-1.63	6.14E-16

NEPTUNE	ENSG00000069424	KCNAB2	-1.63	8.58E-10
NEPTUNE	ENSG00000130234	ACE2	-1.63	5.45E-06
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NEPTUNE	ENSG00000227543	SPAG5-AS1	-1.62	1.41E-13
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NEPTUNE	ENSG00000128165	ADM2	-1.62	1.92E-08
NEPTUNE	ENSG00000075651	PLD1	-1.62	8.74E-13
NEPTUNE	ENSG00000124491	F13A1	-1.62	1.10E-04
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NEPTUNE	ENSG00000125144	MT1G	-1.61	5.09E-03
NEPTUNE	ENSG00000008311	AASS	-1.61	1.13E-08
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NEPTUNE	ENSG00000264404	LINC02675	-1.61	2.79E-08
NEPTUNE	ENSG00000225457	RP11_736E31	-1.61	2.16E-11
NEPTUNE	ENSG00000204978	ERICH4	-1.61	3.30E-08
NEPTUNE	ENSG00000162148	PPP1R32	-1.61	3.16E-20
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NEPTUNE	ENSG00000112782	CLIC5	-1.60	2.36E-03
NEPTUNE	ENSG00000133020	MYH8	-1.60	4.88E-02
NEPTUNE	ENSG00000160202	CRYAA/LOC102724652	-1.59	2.12E-03
NEPTUNE	ENSG00000156968	MPV17L	-1.59	2.55E-11
NEPTUNE	ENSG00000101230	ISM1	-1.59	1.49E-11
NEPTUNE	ENSG00000136267	DGKB	-1.59	2.02E-08
NEPTUNE	ENSG00000108515	ENO3	-1.58	1.04E-12
NEPTUNE	ENSG00000157303	SUSD3	-1.58	4.83E-11
NEPTUNE	ENSG00000204511	MCCD1	-1.58	1.76E-05
NEPTUNE	ENSG00000107186	MPDZ	-1.58	3.47E-11
NEPTUNE	ENSG00000173531	MST1	-1.58	4.57E-07
NEPTUNE	ENSG00000165694	FRMD7	-1.58	1.44E-06
NEPTUNE	ENSG00000118137	APOA1	-1.57	1.35E-06
NEPTUNE	ENSG00000197658	SLC22A24	-1.57	4.05E-04
NEPTUNE	ENSG00000109576	AADAT	-1.57	2.20E-10
NEPTUNE	ENSG00000259319	JDP2-AS1	-1.57	1.65E-12
NEPTUNE	ENSG00000169504	CLIC4	-1.57	1.95E-09
NEPTUNE	ENSG00000257845	LINC02294	-1.57	9.05E-07
NEPTUNE	ENSG00000120913	PDLIM2	-1.57	2.44E-14
NEPTUNE	ENSG00000222019	URAHP	-1.57	1.34E-17
NEPTUNE	ENSG00000183077	AFMID	-1.57	2.95E-09
NEPTUNE	ENSG00000178146	RP1_232L22__B1	-1.56	2.58E-09
NEPTUNE	ENSG00000141485	SLC13A5	-1.56	2.63E-02
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NEPTUNE	ENSG00000154096	THY1	-1.56	1.28E-06
NEPTUNE	ENSG00000058091	CDK14	-1.56	3.63E-14
NEPTUNE	ENSG00000186815	TPCN1	-1.56	2.01E-11
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NEPTUNE	ENSG00000248747	RP11_586L231	-1.55	2.45E-08
NEPTUNE	ENSG00000162817	C1orf115	-1.55	4.16E-09
NEPTUNE	ENSG00000277737	FP3253171	-1.55	7.63E-05
NEPTUNE	ENSG00000156535	CD109	-1.55	9.44E-09
NEPTUNE	ENSG00000069018	TRPC7	-1.55	2.68E-04
NEPTUNE	ENSG00000176894	PXMP2	-1.55	6.91E-11
NEPTUNE	ENSG00000165868	HSPA12A	-1.54	6.15E-11
NEPTUNE	ENSG00000250378	LOC107986453	-1.54	4.38E-11
NEPTUNE	ENSG00000187546	AGMO	-1.54	1.97E-10
NEPTUNE	ENSG00000158109	TPRG1L	-1.54	2.08E-13
NEPTUNE	ENSG00000233198	RNF224	-1.54	5.53E-13
NEPTUNE	ENSG00000082397	EPB41L3	-1.54	1.64E-08
NEPTUNE	ENSG00000250358	LINC02200	-1.54	1.55E-12
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NEPTUNE	ENSG00000255182	CTD_2517M2214	-1.54	1.25E-07
NEPTUNE	ENSG00000164283	ESM1	-1.53	2.03E-07
NEPTUNE	ENSG00000140839	CLEC18B	-1.53	1.29E-08
NEPTUNE	ENSG00000260963	LOC105371264	-1.53	1.60E-09
NEPTUNE	ENSG00000166123	GPT2	-1.53	2.54E-07
NEPTUNE	ENSG00000134207	SYT6	-1.53	1.66E-08
NEPTUNE	ENSG00000166126	AMN	-1.53	5.37E-03
NEPTUNE	ENSG00000262445	CTD_2545H12	-1.53	1.24E-13
NEPTUNE	ENSG00000253598	SLC10A5	-1.53	6.05E-15
NEPTUNE	ENSG00000214102	WEE2	-1.53	5.06E-17
NEPTUNE	ENSG00000246022	ALDH1L1-AS2	-1.53	5.76E-11
NEPTUNE	ENSG00000069702	TGFBR3	-1.53	1.82E-10
NEPTUNE	ENSG00000214888	XXYAC_YM21GA27	-1.53	8.04E-07
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NEPTUNE	ENSG00000235947	EGOT	-1.53	8.32E-12
NEPTUNE	ENSG00000188816	HMX2	-1.52	1.91E-05
NEPTUNE	ENSG00000072657	TRHDE	-1.52	3.17E-10
NEPTUNE	ENSG00000241233	KRTAP5-8	-1.52	3.48E-08
NEPTUNE	ENSG00000234452	SLC16A12-AS1	-1.52	2.90E-11
NEPTUNE	ENSG00000036672	USP2	-1.52	3.76E-06
NEPTUNE	ENSG00000238099	LINC01625	-1.52	9.82E-13
NEPTUNE	ENSG00000271952	LINC01954	-1.52	6.42E-12
NEPTUNE	ENSG00000198829	SUCNR1	-1.52	4.94E-06
NEPTUNE	ENSG00000147804	SLC39A4	-1.52	1.10E-11
NEPTUNE	ENSG00000182901	RGS7	-1.51	6.48E-07
NEPTUNE	ENSG00000101311	FERMT1	-1.51	7.91E-06
NEPTUNE	ENSG00000246695	RASSF8-AS1	-1.51	1.52E-11
NEPTUNE	ENSG00000128242	GAL3ST1	-1.51	4.73E-08
NEPTUNE	ENSG00000125675	GRIA3	-1.51	9.81E-08
NEPTUNE	ENSG00000125520	SLC2A4RG	-1.51	4.52E-11
NEPTUNE	ENSG00000242612	DECR2	-1.51	2.23E-10
NEPTUNE	ENSG00000042832	TG	-1.51	1.82E-07
NEPTUNE	ENSG00000184227	ACOT1	-1.51	2.67E-06
NEPTUNE	ENSG00000235200	LINC01702	-1.50	8.53E-07
NEPTUNE	ENSG00000166426	CRABP1	-1.50	1.43E-07
NEPTUNE	ENSG00000260457	RP11_723G81	-1.50	3.28E-04
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NEPTUNE	ENSG00000060656	PTPRU	1.50	9.60E-06
NEPTUNE	ENSG00000276180	H4C9	1.50	9.46E-11
NEPTUNE	ENSG00000165757	JCAD	1.50	2.96E-09
NEPTUNE	ENSG00000171408	PDE7B	1.50	1.60E-08
NEPTUNE	ENSG00000144834	TAGLN3	1.50	9.07E-05
NEPTUNE	ENSG00000169105	CHST14	1.50	4.31E-13
NEPTUNE	ENSG00000123473	STIL	1.50	2.76E-08
NEPTUNE	ENSG00000196814	MVB12B	1.50	2.13E-11
NEPTUNE	ENSG00000101596	SMCHD1	1.50	6.93E-12
NEPTUNE	ENSG00000154102	C16orf74	1.51	1.00E-13
NEPTUNE	ENSG00000151023	ENKUR	1.51	1.63E-15
NEPTUNE	ENSG00000033100	CHPF2	1.51	2.10E-09
NEPTUNE	ENSG00000134138	MEIS2	1.51	1.66E-08
NEPTUNE	ENSG00000181274	FRAT2	1.51	1.37E-03
NEPTUNE	ENSG00000143514	TP53BP2	1.51	1.07E-10
NEPTUNE	ENSG00000064932	SBNO2	1.51	3.73E-13
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NEPTUNE	ENSG00000135736	CCDC102A	1.55	4.61E-07
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NEPTUNE	ENSG00000136237	RAPGEF5	1.57	1.58E-10
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NEPTUNE	ENSG00000179314	WSCD1	1.57	2.81E-10
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NEPTUNE	ENSG00000152952	PLOD2	1.57	1.29E-14
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NEPTUNE	ENSG00000150556	LYPD6B	1.58	9.62E-08
NEPTUNE	ENSG00000180730	SHISA2	1.58	1.23E-08
NEPTUNE	ENSG00000033170	FUT8	1.58	2.47E-15
NEPTUNE	ENSG00000163785	RYK	1.58	1.33E-06
NEPTUNE	ENSG00000123384	LRP1	1.58	1.56E-10
NEPTUNE	ENSG00000162595	DIRAS3	1.58	6.86E-09
NEPTUNE	ENSG00000240356	RPL23AP7	1.58	1.83E-16
NEPTUNE	ENSG00000162591	MEGF6	1.58	6.56E-09
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NEPTUNE	ENSG00000151694	ADAM17	1.58	4.03E-09
NEPTUNE	ENSG00000142632	ARHGEF19	1.58	6.24E-12
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NEPTUNE	ENSG00000165617	DACT1	1.59	1.06E-09
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NEPTUNE	ENSG00000167641	PPP1R14A	1.59	2.39E-10
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NEPTUNE	ENSG00000162618	ADGRL4	1.60	2.41E-11
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NEPTUNE	ENSG00000186806	VSIG10L	1.60	7.86E-19
NEPTUNE	ENSG00000182013	PNMA8A	1.60	6.54E-13
NEPTUNE	ENSG00000164307	ERAP1	1.60	4.05E-16
NEPTUNE	ENSG00000172071	EIF2AK3	1.60	8.52E-11
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NEPTUNE	ENSG00000162063	CCNF	1.60	4.56E-12
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NEPTUNE	ENSG00000029993	HMGB3	1.60	9.29E-16
NEPTUNE	ENSG00000148110	MFSD14B	1.61	4.78E-06
NEPTUNE	ENSG00000089356	FXD3	1.61	3.10E-06
NEPTUNE	ENSG00000142798	HSPG2	1.61	1.67E-10
NEPTUNE	ENSG00000104450	SPAG1	1.61	2.44E-14
NEPTUNE	ENSG00000088832	FKBP1A	1.61	4.49E-22
NEPTUNE	ENSG00000155761	SPAG17	1.61	1.22E-12
NEPTUNE	ENSG00000214381	LINC00488	1.61	3.68E-15
NEPTUNE	ENSG00000120889	TNFRSF10B	1.61	1.79E-13
NEPTUNE	ENSG00000249396	LINC02212	1.61	4.55E-17
NEPTUNE	ENSG00000115457	IGFBP2	1.61	1.60E-02
NEPTUNE	ENSG00000160588	MPZL3	1.61	5.66E-16
NEPTUNE	ENSG00000106991	ENG	1.61	2.19E-10
NEPTUNE	ENSG00000113441	LNPEP	1.61	4.11E-15
NEPTUNE	ENSG00000117472	TSPAN1	1.61	2.73E-16
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NEPTUNE	ENSG00000015475	BID	1.61	8.28E-22
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NEPTUNE	ENSG00000272674	PCDHB16	1.65	1.69E-14
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NEPTUNE	ENSG00000137821	LRRC49	1.65	3.02E-21
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NEPTUNE	ENSG00000251562	MALAT1	1.65	4.23E-03
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NEPTUNE	ENSG00000164305	CASP3	1.66	8.59E-23
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NEPTUNE	ENSG00000188112	C6orf132	1.69	1.91E-16
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NEPTUNE	ENSG00000198826	ARHGAP11A	1.69	1.62E-12
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NEPTUNE	ENSG00000204592	HLA-E	1.69	2.62E-19
NEPTUNE	ENSG00000186314	PRELID2	1.69	3.36E-23
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NEPTUNE	ENSG00000119640	ACYP1	1.69	1.14E-25
NEPTUNE	ENSG00000129353	SLC44A2	1.69	1.87E-15
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NEPTUNE	ENSG00000146670	CDCA5	1.70	5.11E-12
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NEPTUNE	ENSG00000090006	LTBP4	1.70	2.60E-08
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NEPTUNE	ENSG00000165424	ZCCHC24	1.71	1.42E-12
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NEPTUNE	ENSG00000138722	MMRN1	1.71	1.89E-09
NEPTUNE	ENSG00000120278	PLEKHG1	1.71	3.67E-15
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NEPTUNE	ENSG00000174944	P2RY14	1.71	7.70E-17
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NEPTUNE	ENSG00000140525	FANCI	1.73	4.46E-12
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NEPTUNE	ENSG00000163378	EOGT	1.73	5.56E-18
NEPTUNE	ENSG00000146938	NLGN4X	1.73	8.29E-16
NEPTUNE	ENSG00000188290	HES4	1.73	3.88E-14
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NEPTUNE	ENSG00000092853	CLSPN	1.73	2.87E-18
NEPTUNE	ENSG00000142185	TRPM2	1.73	8.38E-22
NEPTUNE	ENSG00000090971	NAT14	1.73	2.66E-19
NEPTUNE	ENSG00000091972	CD200	1.73	1.94E-20
NEPTUNE	ENSG00000128918	ALDH1A2	1.73	3.96E-14
NEPTUNE	ENSG00000145936	KCNMB1	1.73	2.59E-17
NEPTUNE	ENSG00000177054	ZDHHC13	1.73	1.03E-22
NEPTUNE	ENSG00000103222	ABCC1	1.73	1.82E-17
NEPTUNE	ENSG00000179542	SLITRK4	1.73	8.92E-12
NEPTUNE	ENSG00000166743	ACSM1	1.73	3.58E-10
NEPTUNE	ENSG00000189129	PLAC9	1.73	1.02E-11
NEPTUNE	ENSG00000164078	MST1R	1.73	2.91E-18
NEPTUNE	ENSG00000116793	PHTF1	1.74	3.33E-24
NEPTUNE	ENSG00000135749	PCNX2	1.74	2.96E-20
NEPTUNE	ENSG00000213983	AP1G2	1.74	1.64E-19
NEPTUNE	ENSG00000173852	DPY19L1	1.74	4.31E-12
NEPTUNE	ENSG00000113721	PDGFRB	1.74	6.31E-11
NEPTUNE	ENSG00000167081	PBX3	1.74	4.14E-20
NEPTUNE	ENSG00000204516	MICB	1.74	9.53E-21
NEPTUNE	ENSG00000213462	ERV3-1	1.74	6.50E-14
NEPTUNE	ENSG00000172830	SSH3	1.74	2.64E-20
NEPTUNE	ENSG00000107731	UNC5B	1.74	2.06E-11
NEPTUNE	ENSG00000185686	PRAME	1.74	3.79E-10
NEPTUNE	ENSG00000108846	ABCC3	1.74	4.05E-06
NEPTUNE	ENSG00000164109	MAD2L1	1.74	1.24E-17
NEPTUNE	ENSG00000147883	CDKN2B	1.74	5.69E-24
NEPTUNE	ENSG00000110811	P3H3	1.74	5.09E-18
NEPTUNE	ENSG00000073849	ST6GAL1	1.74	1.17E-06
NEPTUNE	ENSG00000078237	TIGAR	1.74	1.27E-22
NEPTUNE	ENSG00000119630	PGF	1.75	1.02E-17
NEPTUNE	ENSG00000169213	RAB3B	1.75	5.99E-10
NEPTUNE	ENSG00000151690	MFSD6	1.75	3.98E-11
NEPTUNE	ENSG00000144843	ADPRH	1.75	8.93E-19
NEPTUNE	ENSG00000106868	SUSD1	1.75	1.56E-17
NEPTUNE	ENSG00000174348	PODN	1.75	1.29E-12
NEPTUNE	ENSG00000152611	CAPSL	1.75	6.52E-20
NEPTUNE	ENSG00000124067	SLC12A4	1.75	7.37E-17
NEPTUNE	ENSG00000228262	LINC01320	1.75	3.46E-10
NEPTUNE	ENSG00000077152	UBE2T	1.75	4.21E-19
NEPTUNE	ENSG00000125384	PTGER2	1.75	4.27E-14
NEPTUNE	ENSG00000114251	WNT5A	1.75	1.06E-12

NEPTUNE	ENSG00000139146	SINHCAF	1.75	3.51E-28
NEPTUNE	ENSG00000251003	ZFPM2-AS1	1.75	1.23E-21
NEPTUNE	ENSG00000115594	IL1R1	1.75	2.45E-15
NEPTUNE	ENSG00000001626	CFTR	1.75	4.53E-11
NEPTUNE	ENSG00000064300	NGFR	1.75	2.43E-18
NEPTUNE	ENSG00000171310	CHST11	1.75	1.28E-13
NEPTUNE	ENSG00000140937	CDH11	1.75	1.10E-13
NEPTUNE	ENSG00000157445	CACNA2D3	1.75	5.53E-13
NEPTUNE	ENSG00000168917	SLC35G2	1.75	3.03E-19
NEPTUNE	ENSG00000033327	GAB2	1.75	4.65E-23
NEPTUNE	ENSG00000164054	SHISA5	1.75	4.01E-32
NEPTUNE	ENSG00000112699	GMDS	1.75	1.34E-23
NEPTUNE	ENSG00000177181	RIMKLA	1.75	8.43E-16
NEPTUNE	ENSG00000165125	TRPV6	1.75	1.59E-13
NEPTUNE	ENSG00000143333	RGS16	1.75	1.13E-15
NEPTUNE	ENSG00000139880	CDH24	1.75	3.63E-17
NEPTUNE	ENSG00000127955	GNAI1	1.76	4.80E-15
NEPTUNE	ENSG00000165816	VWA2	1.76	4.46E-24
NEPTUNE	ENSG00000154548	SRSF12	1.76	2.73E-23
NEPTUNE	ENSG00000089041	P2RX7	1.76	8.53E-17
NEPTUNE	ENSG00000135919	SERPINE2	1.76	5.65E-11
NEPTUNE	ENSG00000009790	TRAF3IP3	1.76	8.10E-10
NEPTUNE	ENSG00000137804	NUSAP1	1.76	3.32E-11
NEPTUNE	ENSG00000180801	ARSJ	1.76	2.25E-20
NEPTUNE	ENSG00000123360	PDE1B	1.76	8.17E-18
NEPTUNE	ENSG00000109674	NEIL3	1.76	6.41E-15
NEPTUNE	ENSG00000154065	ANKRD29	1.76	4.48E-12
NEPTUNE	ENSG00000263528	IKBKE	1.76	1.56E-17
NEPTUNE	ENSG00000234184	LINC01781	1.76	2.46E-09
NEPTUNE	ENSG00000166130	IKBIP	1.76	2.32E-29
NEPTUNE	ENSG00000196511	TPK1	1.76	2.00E-23
NEPTUNE	ENSG00000141574	SECTM1	1.76	2.15E-10
NEPTUNE	ENSG00000119865	CNRIP1	1.76	5.09E-18
NEPTUNE	ENSG00000106683	LIMK1	1.76	1.80E-19
NEPTUNE	ENSG00000117984	CTSD	1.76	2.28E-21
NEPTUNE	ENSG00000135914	HTR2B	1.76	1.16E-19
NEPTUNE	ENSG00000213694	S1PR3	1.77	4.69E-11
NEPTUNE	ENSG00000087495	PHACTR3	1.77	2.72E-15
NEPTUNE	ENSG00000109272	PF4V1	1.77	5.18E-22
NEPTUNE	ENSG00000095587	TLL2	1.77	7.77E-23
NEPTUNE	ENSG00000143147	GPR161	1.77	2.36E-22
NEPTUNE	ENSG00000089472	HEPH	1.77	3.68E-12
NEPTUNE	ENSG00000100100	PIK3IP1	1.77	3.90E-15
NEPTUNE	ENSG00000160447	PKN3	1.77	2.50E-21
NEPTUNE	ENSG00000184497	TMEM255B	1.77	1.03E-19
NEPTUNE	ENSG00000143878	RHOB	1.77	9.81E-20
NEPTUNE	ENSG00000181381	DDX60L	1.77	2.31E-17
NEPTUNE	ENSG00000145850	TIMD4	1.77	9.62E-12
NEPTUNE	ENSG00000148841	ITPRIP	1.77	7.34E-14
NEPTUNE	ENSG00000137507	LRRC32	1.77	2.20E-16
NEPTUNE	ENSG00000137478	FCHSD2	1.77	1.50E-20
NEPTUNE	ENSG00000155629	PIK3AP1	1.77	2.21E-11
NEPTUNE	ENSG00000152076	CCDC74B	1.77	1.53E-20

NEPTUNE	ENSG00000019144	PHLDB1	1.78	4.90E-21
NEPTUNE	ENSG000000141756	FKBP10	1.78	1.30E-19
NEPTUNE	ENSG000000187741	FANCA	1.78	1.44E-20
NEPTUNE	ENSG000000129682	FGF13	1.78	1.09E-23
NEPTUNE	ENSG000000105609	LILRB5	1.78	3.72E-18
NEPTUNE	ENSG000000091651	ORC6	1.78	2.83E-20
NEPTUNE	ENSG000000162929	SANBR	1.78	8.93E-22
NEPTUNE	ENSG000000076003	MCM6	1.78	7.98E-20
NEPTUNE	ENSG000000078018	MAP2	1.78	7.96E-14
NEPTUNE	ENSG000000144369	FAM171B	1.78	6.01E-21
NEPTUNE	ENSG000000140848	CPNE2	1.78	7.47E-09
NEPTUNE	ENSG000000118898	PPL	1.78	7.85E-12
NEPTUNE	ENSG000000132321	IQCA1	1.78	1.21E-18
NEPTUNE	ENSG000000138835	RGS3	1.78	4.51E-15
NEPTUNE	ENSG000000143248	RGS5	1.78	5.02E-09
NEPTUNE	ENSG000000135218	CD36	1.78	1.67E-08
NEPTUNE	ENSG000000197646	PDCD1LG2	1.78	2.37E-20
NEPTUNE	ENSG000000116574	RHOA	1.78	4.59E-19
NEPTUNE	ENSG000000181467	RAP2B	1.78	1.50E-23
NEPTUNE	ENSG000000182162	P2RY8	1.78	3.20E-12
NEPTUNE	ENSG000000128394	APOBEC3F	1.78	9.36E-22
NEPTUNE	ENSG000000168268	NT5DC2	1.78	3.74E-13
NEPTUNE	ENSG000000112183	RBM24	1.79	7.44E-23
NEPTUNE	ENSG000000156515	HK1	1.79	3.12E-14
NEPTUNE	ENSG000000103710	RASL12	1.79	1.14E-19
NEPTUNE	ENSG000000129534	MIS18BP1	1.79	3.38E-21
NEPTUNE	ENSG000000110697	PITPNM1	1.79	2.39E-11
NEPTUNE	ENSG000000170004	CHD3	1.79	9.03E-21
NEPTUNE	ENSG000000104722	NEFM	1.79	1.06E-19
NEPTUNE	ENSG000000138031	ADCY3	1.79	3.47E-19
NEPTUNE	ENSG000000004660	CAMKK1	1.79	7.22E-27
NEPTUNE	ENSG000000104140	RHOV	1.79	3.89E-21
NEPTUNE	ENSG000000173821	RNF213	1.79	8.38E-21
NEPTUNE	ENSG000000125810	CD93	1.79	1.53E-17
NEPTUNE	ENSG000000188643	S100A16	1.79	3.06E-33
NEPTUNE	ENSG000000164128	NPY1R	1.79	9.56E-14
NEPTUNE	ENSG000000129219	PLD2	1.79	1.95E-22
NEPTUNE	ENSG000000204580	DDR1	1.79	2.47E-18
NEPTUNE	ENSG000000130055	GDPD2	1.79	4.11E-14
NEPTUNE	ENSG000000081189	MEF2C	1.79	8.81E-14
NEPTUNE	ENSG000000169085	VXN	1.79	7.40E-15
NEPTUNE	ENSG000000156970	BUB1B	1.79	2.73E-15
NEPTUNE	ENSG000000175471	MCTP1	1.79	1.28E-15
NEPTUNE	ENSG000000057657	PRDM1	1.79	8.31E-20
NEPTUNE	ENSG000000127334	DYRK2	1.79	9.84E-18
NEPTUNE	ENSG00000013619	MAMLD1	1.79	3.38E-21
NEPTUNE	ENSG000000105131	EPHX3	1.80	2.02E-17
NEPTUNE	ENSG000000162576	MXRA8	1.80	2.73E-13
NEPTUNE	ENSG000000266338	NBPF10 (includes others)	1.80	1.69E-17
NEPTUNE	ENSG000000114923	SLC4A3	1.80	4.48E-19
NEPTUNE	ENSG00000019991	HGF	1.80	2.87E-12
NEPTUNE	ENSG000000130309	COLGALT1	1.80	6.05E-14
NEPTUNE	ENSG000000114554	PLXNA1	1.80	1.25E-21

NEPTUNE	ENSG00000183010	PYCR1	1.80	9.01E-21
NEPTUNE	ENSG00000162073	PAQR4	1.80	2.27E-18
NEPTUNE	ENSG00000142733	MAP3K6	1.80	4.35E-10
NEPTUNE	ENSG00000116991	SIPA1L2	1.80	4.11E-16
NEPTUNE	ENSG00000150782	IL18	1.80	3.54E-18
NEPTUNE	ENSG00000065717	TLE2	1.80	6.36E-12
NEPTUNE	ENSG00000162711	NLRP3	1.80	4.93E-22
NEPTUNE	ENSG00000166025	AMOTL1	1.80	3.48E-21
NEPTUNE	ENSG00000027075	PRKCH	1.80	3.82E-17
NEPTUNE	ENSG00000198846	TOX	1.80	2.71E-13
NEPTUNE	ENSG00000115163	CENPA	1.80	1.35E-16
NEPTUNE	ENSG00000172175	MALT1	1.80	3.53E-18
NEPTUNE	ENSG00000164649	CDCA7L	1.80	4.86E-20
NEPTUNE	ENSG00000259275	RP11_522B153	1.80	1.17E-26
NEPTUNE	ENSG00000066697	MSANTD3	1.80	4.24E-27
NEPTUNE	ENSG00000121858	TNFSF10	1.80	4.20E-11
NEPTUNE	ENSG00000104341	LAPTM4B	1.80	1.39E-23
NEPTUNE	ENSG00000163082	SGPP2	1.80	3.27E-12
NEPTUNE	ENSG00000006453	BAIAP2L1	1.80	6.13E-23
NEPTUNE	ENSG00000142945	KIF2C	1.80	3.27E-16
NEPTUNE	ENSG00000088882	CPXM1	1.81	1.96E-06
NEPTUNE	ENSG00000099256	PRTFDC1	1.81	8.88E-23
NEPTUNE	ENSG00000105612	DNASE2	1.81	2.47E-21
NEPTUNE	ENSG00000100906	NFKBIA	1.81	1.00E-22
NEPTUNE	ENSG00000164116	GUCY1A1	1.81	6.61E-24
NEPTUNE	ENSG00000163075	CFAP221	1.81	1.09E-26
NEPTUNE	ENSG00000198055	GRK6	1.81	2.11E-07
NEPTUNE	ENSG00000095015	MAP3K1	1.81	1.77E-17
NEPTUNE	ENSG00000124508	BTN2A2	1.81	1.89E-25
NEPTUNE	ENSG00000182179	UBA7	1.81	9.93E-20
NEPTUNE	ENSG00000213853	EMP2	1.81	9.47E-17
NEPTUNE	ENSG00000150687	PRSS23	1.81	6.33E-21
NEPTUNE	ENSG00000204525	HLA-C	1.81	7.15E-21
NEPTUNE	ENSG00000163803	PLB1	1.81	1.60E-24
NEPTUNE	ENSG00000156711	MAPK13	1.81	8.09E-23
NEPTUNE	ENSG00000071054	MAP4K4	1.81	8.88E-15
NEPTUNE	ENSG00000110002	VWA5A	1.81	8.01E-20
NEPTUNE	ENSG00000065675	PRKCQ	1.81	6.51E-11
NEPTUNE	ENSG00000076716	GPC4	1.81	3.81E-15
NEPTUNE	ENSG00000156510	HKDC1	1.81	9.99E-09
NEPTUNE	ENSG00000112562	SMOC2	1.81	1.69E-10
NEPTUNE	ENSG00000007237	GAS7	1.81	2.13E-17
NEPTUNE	ENSG00000077782	FGFR1	1.81	1.63E-16
NEPTUNE	ENSG00000134285	FKBP11	1.81	3.60E-22
NEPTUNE	ENSG00000116260	QSOX1	1.82	3.29E-21
NEPTUNE	ENSG00000237172	B3GNT9	1.82	5.09E-16
NEPTUNE	ENSG00000205078	SYCE1L	1.82	7.28E-24
NEPTUNE	ENSG00000162614	NEXN	1.82	3.16E-18
NEPTUNE	ENSG00000233834	MACC1-DT	1.82	8.26E-16
NEPTUNE	ENSG00000103569	AQP9	1.82	2.55E-22
NEPTUNE	ENSG00000241644	INMT	1.82	9.15E-11
NEPTUNE	ENSG00000091592	NLRP1	1.82	1.92E-15
NEPTUNE	ENSG00000138496	PARP9	1.82	1.85E-19

NEPTUNE	ENSG00000160180	TFF3	1.82	7.28E-14
NEPTUNE	ENSG00000145050	MANF	1.82	1.18E-22
NEPTUNE	ENSG00000072786	STK10	1.82	4.39E-19
NEPTUNE	ENSG00000162849	KIF26B	1.82	1.89E-18
NEPTUNE	ENSG00000140280	LYSMD2	1.82	8.65E-15
NEPTUNE	ENSG00000160013	PTGIR	1.83	2.52E-21
NEPTUNE	ENSG00000144218	AFF3	1.83	1.36E-19
NEPTUNE	ENSG00000197879	MYO1C	1.83	1.62E-17
NEPTUNE	ENSG00000167797	CDK2AP2	1.83	5.15E-24
NEPTUNE	ENSG00000177409	SAMD9L	1.83	1.05E-18
NEPTUNE	ENSG00000188883	KLRG2	1.83	1.24E-11
NEPTUNE	ENSG00000134853	PDGFRA	1.83	7.22E-12
NEPTUNE	ENSG00000103145	HCFC1R1	1.83	4.37E-28
NEPTUNE	ENSG00000157557	ETS2	1.83	1.72E-23
NEPTUNE	ENSG00000103742	IGDCC4	1.83	3.89E-26
NEPTUNE	ENSG00000172031	EPHX4	1.83	2.98E-20
NEPTUNE	ENSG00000127920	GNG11	1.83	1.15E-19
NEPTUNE	ENSG00000049323	LTBP1	1.83	2.99E-10
NEPTUNE	ENSG00000156802	ATAD2	1.83	2.31E-19
NEPTUNE	ENSG00000113749	HRH2	1.83	2.87E-23
NEPTUNE	ENSG00000179144	GIMAP7	1.83	7.39E-19
NEPTUNE	ENSG00000149418	ST14	1.83	1.30E-10
NEPTUNE	ENSG00000079462	PAFAH1B3	1.83	3.43E-31
NEPTUNE	ENSG00000115325	DOK1	1.83	1.30E-26
NEPTUNE	ENSG00000156218	ADAMTSL3	1.83	1.94E-12
NEPTUNE	ENSG00000079819	EPB41L2	1.83	3.17E-21
NEPTUNE	ENSG00000184349	EFNA5	1.84	2.31E-16
NEPTUNE	ENSG00000162783	IER5	1.84	1.06E-12
NEPTUNE	ENSG00000138587	MNS1	1.84	1.79E-19
NEPTUNE	ENSG00000140367	UBE2Q2	1.84	6.81E-24
NEPTUNE	ENSG00000171488	LRRC8C	1.84	1.49E-21
NEPTUNE	ENSG00000142910	TINAGL1	1.84	6.42E-12
NEPTUNE	ENSG00000256229	ZNF486	1.84	1.44E-12
NEPTUNE	ENSG00000198796	ALPK2	1.84	2.21E-08
NEPTUNE	ENSG00000243701	DUBR	1.84	1.22E-25
NEPTUNE	ENSG00000090889	KIF4A	1.84	2.65E-17
NEPTUNE	ENSG00000231925	TAPBP	1.84	5.81E-19
NEPTUNE	ENSG00000134321	RSAD2	1.84	1.42E-08
NEPTUNE	ENSG00000213977	TAX1BP3	1.84	6.46E-30
NEPTUNE	ENSG00000121152	NCAPH	1.84	1.52E-22
NEPTUNE	ENSG00000106952	TNFSF8	1.84	2.37E-21
NEPTUNE	ENSG00000117318	ID3	1.84	4.73E-17
NEPTUNE	ENSG00000133083	DCLK1	1.84	2.95E-22
NEPTUNE	ENSG00000109089	CDR2L	1.84	5.43E-23
NEPTUNE	ENSG00000067445	TRO	1.84	2.93E-18
NEPTUNE	ENSG00000134901	POGLUT2	1.84	4.90E-24
NEPTUNE	ENSG00000159259	CHAF1B	1.84	2.50E-23
NEPTUNE	ENSG00000132932	ATP8A2	1.84	3.51E-22
NEPTUNE	ENSG00000181104	F2R	1.84	2.54E-13
NEPTUNE	ENSG00000132530	XAF1	1.85	3.80E-15
NEPTUNE	ENSG00000102554	KLF5	1.85	5.77E-11
NEPTUNE	ENSG00000067225	PKM	1.85	2.03E-21
NEPTUNE	ENSG00000116711	PLA2G4A	1.85	6.63E-15

NEPTUNE	ENSG00000227036	LINC00511	1.85	5.97E-22
NEPTUNE	ENSG00000106665	CLIP2	1.85	9.06E-17
NEPTUNE	ENSG00000197457	STMN3	1.85	2.16E-21
NEPTUNE	ENSG00000146192	FGD2	1.85	1.58E-22
NEPTUNE	ENSG00000213424	KRT222	1.85	1.50E-25
NEPTUNE	ENSG00000095370	SH2D3C	1.85	8.02E-18
NEPTUNE	ENSG00000109854	HTATIP2	1.85	1.96E-21
NEPTUNE	ENSG00000131037	EPS8L1	1.85	7.59E-14
NEPTUNE	ENSG00000146267	FAXC	1.85	6.08E-22
NEPTUNE	ENSG00000121005	CRISPLD1	1.85	2.85E-17
NEPTUNE	ENSG00000143515	ATP8B2	1.85	1.14E-18
NEPTUNE	ENSG00000134954	ETS1	1.85	1.43E-22
NEPTUNE	ENSG00000183036	PCP4	1.85	2.11E-06
NEPTUNE	ENSG00000170458	CD14	1.85	3.24E-19
NEPTUNE	ENSG00000112343	TRIM38	1.85	1.08E-28
NEPTUNE	ENSG00000164056	SPRY1	1.85	1.27E-23
NEPTUNE	ENSG00000163689	CFAP20DC	1.85	2.97E-27
NEPTUNE	ENSG00000119403	PHF19	1.85	2.44E-24
NEPTUNE	ENSG00000105499	PLA2G4C	1.85	9.87E-11
NEPTUNE	ENSG00000117632	STMN1	1.85	1.99E-32
NEPTUNE	ENSG00000181830	SLC35C1	1.85	1.41E-27
NEPTUNE	ENSG00000164318	EGFLAM	1.85	2.26E-15
NEPTUNE	ENSG00000129675	ARHGEF6	1.85	1.21E-15
NEPTUNE	ENSG00000024526	DEPDC1	1.86	1.01E-15
NEPTUNE	ENSG00000127528	KLF2	1.86	1.62E-09
NEPTUNE	ENSG00000109846	CRYAB	1.86	1.03E-08
NEPTUNE	ENSG00000168234	TTC39C	1.86	1.99E-25
NEPTUNE	ENSG00000240184	PCDHGC3	1.86	1.58E-14
NEPTUNE	ENSG00000017483	SLC38A5	1.86	1.31E-23
NEPTUNE	ENSG00000132470	ITGB4	1.86	2.05E-17
NEPTUNE	ENSG00000068001	HYAL2	1.86	4.70E-34
NEPTUNE	ENSG00000100106	TRIOBP	1.86	6.71E-16
NEPTUNE	ENSG00000145365	TIFA	1.86	4.44E-26
NEPTUNE	ENSG00000213719	CLIC1	1.86	9.46E-38
NEPTUNE	ENSG00000170989	S1PR1	1.86	3.33E-19
NEPTUNE	ENSG00000108798	ABI3	1.86	1.75E-15
NEPTUNE	ENSG00000105514	RAB3D	1.86	3.21E-23
NEPTUNE	ENSG00000155849	ELMO1	1.86	2.63E-17
NEPTUNE	ENSG00000119280	C1orf198	1.86	3.15E-22
NEPTUNE	ENSG00000111834	RSPH4A	1.86	1.11E-25
NEPTUNE	ENSG00000137033	IL33	1.87	1.30E-10
NEPTUNE	ENSG00000261801	LOXL1-AS1	1.87	1.46E-20
NEPTUNE	ENSG00000247596	TWF2	1.87	1.34E-33
NEPTUNE	ENSG00000150093	ITGB1	1.87	1.07E-20
NEPTUNE	ENSG00000196405	EVL	1.87	4.91E-21
NEPTUNE	ENSG00000102057	KCND1	1.87	7.64E-28
NEPTUNE	ENSG00000122824	NUDT10	1.87	7.82E-19
NEPTUNE	ENSG00000135622	SEMA4F	1.87	9.84E-22
NEPTUNE	ENSG00000051180	RAD51	1.87	9.72E-21
NEPTUNE	ENSG00000127507	ADGRE2	1.88	2.10E-30
NEPTUNE	ENSG00000171617	ENC1	1.88	3.29E-22
NEPTUNE	ENSG00000260244	RP11_588K222	1.88	1.51E-17
NEPTUNE	ENSG00000129654	FOXJ1	1.88	3.81E-14

NEPTUNE	ENSG00000168016	TRANK1	1.88	3.17E-18
NEPTUNE	ENSG00000136026	CKAP4	1.88	6.53E-16
NEPTUNE	ENSG00000176435	CLEC14A	1.88	2.78E-18
NEPTUNE	ENSG00000158270	COLEC12	1.88	9.06E-15
NEPTUNE	ENSG00000261371	PECAM1	1.88	7.62E-16
NEPTUNE	ENSG00000213186	TRIM59	1.88	8.77E-24
NEPTUNE	ENSG00000101187	SLCO4A1	1.88	2.31E-06
NEPTUNE	ENSG00000134504	KCTD1	1.88	1.24E-25
NEPTUNE	ENSG00000141429	GALNT1	1.88	6.72E-12
NEPTUNE	ENSG00000133574	GIMAP4	1.88	5.18E-21
NEPTUNE	ENSG00000184009	ACTG1	1.88	2.70E-28
NEPTUNE	ENSG00000065989	PDE4A	1.88	1.36E-19
NEPTUNE	ENSG00000177096	PHETA2	1.88	3.52E-26
NEPTUNE	ENSG00000010610	CD4	1.88	6.69E-13
NEPTUNE	ENSG00000167861	HID1	1.88	1.34E-19
NEPTUNE	ENSG00000213923	CSNK1E	1.88	1.24E-18
NEPTUNE	ENSG00000143507	DUSP10	1.88	2.55E-23
NEPTUNE	ENSG00000104549	SQLE	1.88	2.36E-22
NEPTUNE	ENSG00000123219	CENPK	1.88	2.08E-22
NEPTUNE	ENSG00000153814	JAZF1	1.88	3.76E-22
NEPTUNE	ENSG00000168743	NPNT	1.88	4.55E-12
NEPTUNE	ENSG00000107562	CXCL12	1.88	4.89E-12
NEPTUNE	ENSG00000151468	CCDC3	1.89	5.00E-11
NEPTUNE	ENSG00000182132	KCNIP1	1.89	3.70E-11
NEPTUNE	ENSG00000196628	TCF4	1.89	1.20E-18
NEPTUNE	ENSG00000116584	ARHGEF2	1.89	1.39E-26
NEPTUNE	ENSG00000146285	SCML4	1.89	1.32E-20
NEPTUNE	ENSG00000087116	ADAMTS2	1.89	6.82E-24
NEPTUNE	ENSG00000105355	PLIN3	1.89	5.09E-26
NEPTUNE	ENSG00000152669	CCNO	1.89	1.82E-16
NEPTUNE	ENSG00000165929	TC2N	1.89	1.26E-15
NEPTUNE	ENSG00000160991	ORAI2	1.89	8.00E-23
NEPTUNE	ENSG00000138448	ITGAV	1.89	5.51E-23
NEPTUNE	ENSG00000164111	ANXA5	1.89	9.16E-40
NEPTUNE	ENSG00000128656	CHN1	1.89	8.15E-22
NEPTUNE	ENSG00000177675	CD163L1	1.89	1.86E-19
NEPTUNE	ENSG00000109805	NCAPG	1.89	5.71E-14
NEPTUNE	ENSG00000124126	PREX1	1.89	3.03E-14
NEPTUNE	ENSG00000110841	PPFIBP1	1.89	1.41E-21
NEPTUNE	ENSG00000164088	PPM1M	1.89	1.38E-17
NEPTUNE	ENSG00000137310	TCF19	1.90	1.54E-17
NEPTUNE	ENSG00000101096	NFATC2	1.90	7.89E-20
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NEPTUNE	ENSG00000138134	STAMBPL1	1.90	1.07E-24
NEPTUNE	ENSG00000167972	ABCA3	1.90	3.92E-19
NEPTUNE	ENSG00000168476	REEP4	1.90	2.24E-26
NEPTUNE	ENSG00000130511	SSBP4	1.90	2.58E-14
NEPTUNE	ENSG00000151835	SACS	1.90	5.33E-21
NEPTUNE	ENSG00000166963	MAP1A	1.90	1.86E-20
NEPTUNE	ENSG00000149557	FEZ1	1.90	1.93E-23
NEPTUNE	ENSG00000124143	ARHGAP40	1.90	2.14E-19
NEPTUNE	ENSG00000105520	PLPPR2	1.90	2.59E-25
NEPTUNE	ENSG00000183615	FAM167B	1.90	3.36E-21

NEPTUNE	ENSG00000128284	APOL3	1.90	2.74E-26
NEPTUNE	ENSG00000138376	BARD1	1.90	2.66E-21
NEPTUNE	ENSG00000172932	ANKRD13D	1.90	2.95E-27
NEPTUNE	ENSG00000059378	PARP12	1.90	6.81E-09
NEPTUNE	ENSG00000107518	ATRNL1	1.91	1.62E-21
NEPTUNE	ENSG00000174600	CMKLR1	1.91	2.71E-16
NEPTUNE	ENSG00000170542	SERPINB9	1.91	7.83E-21
NEPTUNE	ENSG00000152402	GUCY1A2	1.91	1.25E-11
NEPTUNE	ENSG00000094804	CDC6	1.91	9.63E-14
NEPTUNE	ENSG00000171320	ESCO2	1.91	1.94E-16
NEPTUNE	ENSG00000103966	EHD4	1.91	1.95E-26
NEPTUNE	ENSG00000143320	CRABP2	1.91	2.52E-12
NEPTUNE	ENSG00000198074	AKR1B10	1.91	3.95E-04
NEPTUNE	ENSG00000101955	SRPX	1.91	2.91E-18
NEPTUNE	ENSG00000178726	THBD	1.91	2.47E-16
NEPTUNE	ENSG00000244694	PTCHD4	1.91	4.78E-18
NEPTUNE	ENSG00000125245	GPR18	1.91	2.77E-18
NEPTUNE	ENSG00000166523	CLEC4E	1.91	3.49E-27
NEPTUNE	ENSG00000112096	SOD2	1.91	1.06E-16
NEPTUNE	ENSG00000116157	GPX7	1.91	2.08E-25
NEPTUNE	ENSG00000058668	ATP2B4	1.91	6.91E-25
NEPTUNE	ENSG00000111913	RIPOR2	1.91	1.78E-15
NEPTUNE	ENSG00000101000	PROCR	1.91	5.08E-26
NEPTUNE	ENSG00000122877	EGR2	1.91	1.32E-22
NEPTUNE	ENSG00000118156	ZNF541	1.91	5.58E-10
NEPTUNE	ENSG00000174640	SLCO2A1	1.92	1.48E-12
NEPTUNE	ENSG00000185033	SEMA4B	1.92	1.95E-17
NEPTUNE	ENSG00000139926	FRMD6	1.92	5.17E-16
NEPTUNE	ENSG00000100364	KIAA0930	1.92	1.84E-25
NEPTUNE	ENSG00000148154	UGCG	1.92	2.16E-20
NEPTUNE	ENSG00000178695	KCTD12	1.92	3.03E-17
NEPTUNE	ENSG00000117226	GBP3	1.92	4.38E-11
NEPTUNE	ENSG00000127951	FGL2	1.92	1.51E-17
NEPTUNE	ENSG00000183775	KCTD16	1.92	6.08E-14
NEPTUNE	ENSG00000139083	ETV6	1.92	2.92E-31
NEPTUNE	ENSG00000124429	POF1B	1.92	6.35E-15
NEPTUNE	ENSG00000082074	FYB1	1.92	2.83E-18
NEPTUNE	ENSG00000106462	EZH2	1.92	9.34E-22
NEPTUNE	ENSG00000064666	CNN2	1.92	6.39E-25
NEPTUNE	ENSG00000087085	ACHE	1.92	2.77E-25
NEPTUNE	ENSG00000144642	RBMS3	1.92	6.93E-20
NEPTUNE	ENSG00000196526	AFAP1	1.93	7.72E-25
NEPTUNE	ENSG00000109736	MFSD10	1.93	8.39E-33
NEPTUNE	ENSG00000163453	IGFBP7	1.93	1.13E-22
NEPTUNE	ENSG00000100300	TSPO	1.93	8.10E-31
NEPTUNE	ENSG00000108700	CCL8	1.93	6.69E-18
NEPTUNE	ENSG00000067955	CBFB	1.93	9.02E-24
NEPTUNE	ENSG00000112936	C7	1.93	3.89E-09
NEPTUNE	ENSG00000181374	CCL13	1.93	3.87E-24
NEPTUNE	ENSG00000213445	SIPA1	1.93	1.95E-18
NEPTUNE	ENSG00000173083	HPSE	1.93	4.68E-21
NEPTUNE	ENSG00000163040	CCDC74A	1.93	3.25E-28
NEPTUNE	ENSG00000119969	HELLS	1.93	1.24E-24

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NEPTUNE	ENSG00000105339	DENND3	1.93	1.83E-24
NEPTUNE	ENSG00000159247	TUBBP5	1.93	5.32E-12
NEPTUNE	ENSG00000204472	AIF1	1.93	1.13E-10
NEPTUNE	ENSG00000112812	PRSS16	1.93	1.83E-16
NEPTUNE	ENSG00000166803	PCLAF	1.93	4.75E-18
NEPTUNE	ENSG00000105851	PIK3CG	1.93	3.71E-22
NEPTUNE	ENSG00000230438	SERPINB9P1	1.93	1.79E-20
NEPTUNE	ENSG00000197093	GAL3ST4	1.93	5.03E-23
NEPTUNE	ENSG00000176658	MYO1D	1.93	1.34E-16
NEPTUNE	ENSG00000157111	TMEM171	1.93	8.57E-22
NEPTUNE	ENSG00000181804	SLC9A9	1.94	2.44E-18
NEPTUNE	ENSG00000147408	CSGALNACT1	1.94	3.10E-17
NEPTUNE	ENSG00000133466	C1QTNF6	1.94	6.84E-25
NEPTUNE	ENSG00000130164	LDLR	1.94	3.84E-12
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NEPTUNE	ENSG00000143217	NECTIN4	1.94	5.76E-18
NEPTUNE	ENSG00000114450	GNB4	1.94	1.72E-21
NEPTUNE	ENSG00000197905	TEAD4	1.94	1.42E-21
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NEPTUNE	ENSG00000123609	NMI	1.94	9.22E-38
NEPTUNE	ENSG00000105327	BBC3	1.94	2.49E-31
NEPTUNE	ENSG00000056558	TRAF1	1.94	1.71E-16
NEPTUNE	ENSG00000136193	SCRN1	1.94	1.66E-16
NEPTUNE	ENSG00000276600	RAB7B	1.94	1.90E-26
NEPTUNE	ENSG00000176907	TCIM	1.94	6.91E-22
NEPTUNE	ENSG00000151746	BICD1	1.94	7.20E-24
NEPTUNE	ENSG00000138166	DUSP5	1.95	3.24E-21
NEPTUNE	ENSG00000184574	LPAR5	1.95	4.20E-19
NEPTUNE	ENSG00000175928	LRRN1	1.95	3.16E-20
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NEPTUNE	ENSG00000106483	SFRP4	1.95	8.15E-08
NEPTUNE	ENSG00000175505	CLCF1	1.95	2.20E-31
NEPTUNE	ENSG00000134602	STK26	1.95	3.00E-20
NEPTUNE	ENSG00000163576	EFHB	1.95	3.05E-16
NEPTUNE	ENSG00000082512	TRAF5	1.95	4.16E-24
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NEPTUNE	ENSG00000159388	BTG2	1.95	1.88E-22
NEPTUNE	ENSG00000166448	TMEM130	1.95	2.86E-11
NEPTUNE	ENSG00000131203	IDO1	1.96	1.53E-18
NEPTUNE	ENSG00000116132	PRRX1	1.96	5.24E-18
NEPTUNE	ENSG00000142149	HUNK	1.96	8.31E-18
NEPTUNE	ENSG00000155962	CLIC2	1.96	7.50E-24
NEPTUNE	ENSG00000167123	CERCAM	1.96	1.33E-20
NEPTUNE	ENSG00000177697	CD151	1.96	1.17E-27
NEPTUNE	ENSG00000063660	GPC1	1.96	2.94E-19
NEPTUNE	ENSG00000152253	SPC25	1.96	5.59E-18
NEPTUNE	ENSG00000099998	GGT5	1.96	2.34E-15
NEPTUNE	ENSG00000100450	GZMH	1.96	1.40E-20
NEPTUNE	ENSG00000112742	TTK	1.96	2.67E-16
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NEPTUNE	ENSG00000152056	AP1S3	1.96	2.28E-26

NEPTUNE	ENSG00000152527	PLEKHH2	1.96	1.44E-17
NEPTUNE	ENSG00000150961	SEC24D	1.96	6.18E-21
NEPTUNE	ENSG00000104432	IL7	1.96	2.22E-26
NEPTUNE	ENSG00000165309	ARMC3	1.96	1.68E-20
NEPTUNE	ENSG00000135905	DOCK10	1.96	1.06E-22
NEPTUNE	ENSG00000158710	TAGLN2	1.96	3.37E-38
NEPTUNE	ENSG00000105655	ISYNA1	1.96	2.34E-24
NEPTUNE	ENSG00000237988	OR211P	1.96	6.81E-15
NEPTUNE	ENSG00000093072	ADA2	1.96	5.55E-11
NEPTUNE	ENSG00000235162	C12orf75	1.97	1.64E-30
NEPTUNE	ENSG00000183160	TMEM119	1.97	2.80E-16
NEPTUNE	ENSG00000143554	SLC27A3	1.97	8.52E-23
NEPTUNE	ENSG00000152804	HHEX	1.97	6.03E-27
NEPTUNE	ENSG00000152661	GJA1	1.97	1.42E-17
NEPTUNE	ENSG00000140464	PML	1.97	1.86E-27
NEPTUNE	ENSG00000168502	MTCL1	1.97	1.33E-24
NEPTUNE	ENSG00000197496	SLC2A10	1.97	1.13E-19
NEPTUNE	ENSG00000164125	GASK1B	1.97	4.61E-17
NEPTUNE	ENSG00000139641	ESYT1	1.97	1.21E-22
NEPTUNE	ENSG00000099250	NRP1	1.97	2.92E-20
NEPTUNE	ENSG00000143369	ECM1	1.97	7.05E-15
NEPTUNE	ENSG00000105854	PON2	1.97	5.25E-31
NEPTUNE	ENSG00000182481	KPNA2	1.97	3.02E-24
NEPTUNE	ENSG00000229891	LINC01315	1.97	3.43E-24
NEPTUNE	ENSG00000197965	MPZL1	1.97	1.04E-27
NEPTUNE	ENSG00000237541	HLA-DQA2	1.97	8.24E-06
NEPTUNE	ENSG00000168243	GNG4	1.98	3.44E-10
NEPTUNE	ENSG00000163840	DTX3L	1.98	2.75E-23
NEPTUNE	ENSG00000151883	PARP8	1.98	7.55E-32
NEPTUNE	ENSG00000170421	KRT8	1.98	8.30E-24
NEPTUNE	ENSG00000167693	NXN	1.98	2.95E-16
NEPTUNE	ENSG00000179583	CIITA	1.98	1.09E-24
NEPTUNE	ENSG00000170775	GPR37	1.98	7.53E-25
NEPTUNE	ENSG00000069431	ABCC9	1.98	2.05E-18
NEPTUNE	ENSG00000081059	TCF7	1.98	4.34E-19
NEPTUNE	ENSG00000182287	AP1S2	1.98	5.89E-29
NEPTUNE	ENSG00000149485	FADS1	1.98	2.59E-25
NEPTUNE	ENSG00000163817	SLC6A20	1.98	3.27E-05
NEPTUNE	ENSG00000136869	TLR4	1.98	4.21E-18
NEPTUNE	ENSG00000127564	PKMYT1	1.98	1.57E-23
NEPTUNE	ENSG00000124920	MYRF	1.98	8.88E-30
NEPTUNE	ENSG00000156136	DCK	1.98	4.78E-33
NEPTUNE	ENSG00000114115	RBP1	1.98	9.53E-26
NEPTUNE	ENSG00000196352	CD55	1.98	1.84E-29
NEPTUNE	ENSG00000166444	DENND2B	1.98	3.39E-28
NEPTUNE	ENSG00000034053	APBA2	1.98	1.32E-24
NEPTUNE	ENSG00000183831	ANKRD45	1.98	7.31E-29
NEPTUNE	ENSG00000173457	PPP1R14B	1.98	5.40E-09
NEPTUNE	ENSG00000133321	PLAAT4	1.98	5.81E-19
NEPTUNE	ENSG00000181458	TMEM45A	1.98	1.55E-22
NEPTUNE	ENSG00000057019	DCBLD2	1.98	2.94E-26
NEPTUNE	ENSG00000154380	ENAH	1.98	8.22E-28
NEPTUNE	ENSG00000049130	KITLG	1.99	2.74E-22

NEPTUNE	ENSG00000182667	NTM	1.99	3.86E-23
NEPTUNE	ENSG00000151725	CENPU	1.99	4.78E-17
NEPTUNE	ENSG00000090659	CD209	1.99	8.89E-19
NEPTUNE	ENSG00000144214	LYG1	1.99	4.09E-07
NEPTUNE	ENSG00000203706	SERTAD4-AS1	1.99	2.44E-22
NEPTUNE	ENSG00000103855	CD276	1.99	4.24E-29
NEPTUNE	ENSG00000129195	PIMREG	1.99	4.36E-20
NEPTUNE	ENSG00000160188	RSPH1	1.99	3.99E-18
NEPTUNE	ENSG00000196260	SFTA2	1.99	2.20E-24
NEPTUNE	ENSG00000179431	FJX1	1.99	8.31E-15
NEPTUNE	ENSG00000237649	KIFC1	1.99	4.40E-15
NEPTUNE	ENSG00000143476	DTL	1.99	1.83E-14
NEPTUNE	ENSG00000130176	CNN1	1.99	6.45E-10
NEPTUNE	ENSG00000155850	SLC26A2	1.99	9.53E-19
NEPTUNE	ENSG00000078596	ITM2A	1.99	3.61E-18
NEPTUNE	ENSG00000108244	KRT23	1.99	1.06E-20
NEPTUNE	ENSG00000166979	EVA1C	1.99	6.42E-26
NEPTUNE	ENSG00000161714	PLCD3	1.99	9.01E-21
NEPTUNE	ENSG00000134871	COL4A2	1.99	2.59E-13
NEPTUNE	ENSG00000102445	RUBCNL	2.00	7.85E-22
NEPTUNE	ENSG00000132639	SNAP25	2.00	1.48E-18
NEPTUNE	ENSG00000088827	SIGLEC1	2.00	1.81E-18
NEPTUNE	ENSG00000060138	YBX3	2.00	4.23E-11
NEPTUNE	ENSG00000243649	CFB	2.00	6.21E-23
NEPTUNE	ENSG00000277639	LOC105371267	2.00	2.87E-15
NEPTUNE	ENSG00000179862	CITED4	2.00	6.30E-05
NEPTUNE	ENSG00000135205	CCDC146	2.00	3.09E-14
NEPTUNE	ENSG00000205929	C21orf62	2.00	1.73E-18
NEPTUNE	ENSG00000117650	NEK2	2.00	8.45E-12
NEPTUNE	ENSG00000108960	MMD	2.00	2.67E-29
NEPTUNE	ENSG00000111371	SLC38A1	2.00	3.00E-20
NEPTUNE	ENSG00000236699	ARHGEF38	2.01	5.96E-25
NEPTUNE	ENSG00000154856	APCDD1	2.01	9.91E-17
NEPTUNE	ENSG00000106560	GIMAP2	2.01	3.26E-25
NEPTUNE	ENSG00000169122	FAM110B	2.01	2.53E-27
NEPTUNE	ENSG00000198648	STK39	2.01	1.03E-19
NEPTUNE	ENSG00000106333	PCOLCE	2.01	8.84E-25
NEPTUNE	ENSG00000198832	SELENOM	2.01	1.79E-20
NEPTUNE	ENSG00000144815	NXPE3	2.01	3.21E-24
NEPTUNE	ENSG00000180914	OXTR	2.01	2.54E-19
NEPTUNE	ENSG00000198467	TPM2	2.01	6.68E-14
NEPTUNE	ENSG00000110446	SLC15A3	2.01	1.64E-22
NEPTUNE	ENSG00000183690	EFHC2	2.01	2.08E-23
NEPTUNE	ENSG00000180448	ARHGAP45	2.01	9.78E-23
NEPTUNE	ENSG00000106546	AHR	2.01	6.01E-21
NEPTUNE	ENSG00000111252	SH2B3	2.01	1.01E-20
NEPTUNE	ENSG00000164877	MICALL2	2.01	5.51E-29
NEPTUNE	ENSG00000124942	AHNAK	2.01	2.64E-15
NEPTUNE	ENSG00000165046	LETM2	2.01	1.44E-25
NEPTUNE	ENSG00000134369	NAV1	2.01	1.17E-22
NEPTUNE	ENSG00000163606	CD200R1	2.01	3.46E-24
NEPTUNE	ENSG00000176454	LPCAT4	2.02	4.44E-35
NEPTUNE	ENSG00000165996	HACD1	2.02	7.20E-21

NEPTUNE	ENSG00000135925	WNT10A	2.02	1.99E-18
NEPTUNE	ENSG00000170382	LRRN2	2.02	1.37E-13
NEPTUNE	ENSG00000123342	MMP19	2.02	6.94E-29
NEPTUNE	ENSG00000070669	ASNS	2.02	4.19E-27
NEPTUNE	ENSG00000154645	CHODL	2.02	2.13E-16
NEPTUNE	ENSG00000131188	PRR7	2.02	8.07E-29
NEPTUNE	ENSG00000138795	LEF1	2.02	4.04E-17
NEPTUNE	ENSG00000100336	APOL4	2.02	1.22E-09
NEPTUNE	ENSG00000133800	LYVE1	2.02	3.67E-16
NEPTUNE	ENSG00000163923	RPL39L	2.02	4.77E-34
NEPTUNE	ENSG00000101224	CDC25B	2.02	1.74E-23
NEPTUNE	ENSG00000148426	PROSER2	2.02	6.14E-15
NEPTUNE	ENSG00000141510	TP53	2.02	7.45E-39
NEPTUNE	ENSG00000137691	CFAP300	2.02	2.49E-26
NEPTUNE	ENSG00000064763	FAR2	2.03	4.16E-28
NEPTUNE	ENSG00000160111	CPAMD8	2.03	6.26E-11
NEPTUNE	ENSG00000178562	CD28	2.03	9.92E-23
NEPTUNE	ENSG00000007384	RHBDF1	2.03	1.97E-21
NEPTUNE	ENSG00000169896	ITGAM	2.03	2.21E-27
NEPTUNE	ENSG00000221955	SLC12A8	2.03	4.13E-20
NEPTUNE	ENSG00000160791	CCR5	2.03	6.32E-30
NEPTUNE	ENSG00000120129	DUSP1	2.03	5.42E-08
NEPTUNE	ENSG00000100379	KCTD17	2.03	2.15E-26
NEPTUNE	ENSG00000179750	APOBEC3B	2.03	1.47E-15
NEPTUNE	ENSG00000162687	KCNT2	2.03	1.87E-28
NEPTUNE	ENSG00000168675	LDLRAD4	2.03	1.73E-22
NEPTUNE	ENSG00000119946	CNNM1	2.03	4.47E-14
NEPTUNE	ENSG00000092969	TGFB2	2.03	1.73E-22
NEPTUNE	ENSG00000235568	NFAM1	2.03	8.92E-27
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NEPTUNE	ENSG00000122861	PLAU	2.04	1.09E-09
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NEPTUNE	ENSG00000250303	LINC02762	2.04	2.08E-27
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NEPTUNE	ENSG00000127412	TRPV5	2.05	1.15E-15
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NEPTUNE	ENSG00000143537	ADAM15	2.09	5.92E-29
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NEPTUNE	ENSG00000114346	ECT2	2.09	8.74E-25
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NEPTUNE	ENSG00000157368	IL34	2.10	1.70E-26
NEPTUNE	ENSG00000120820	GLT8D2	2.10	6.33E-23
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NEPTUNE	ENSG00000151632	AKR1C1/AKR1C2	2.10	2.12E-10
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NEPTUNE	ENSG00000257017	HP	2.10	1.91E-14
NEPTUNE	ENSG00000187688	TRPV2	2.10	1.34E-27
NEPTUNE	ENSG00000153395	LPCAT1	2.10	2.91E-17
NEPTUNE	ENSG00000061273	HDAC7	2.10	7.46E-32
NEPTUNE	ENSG00000183484	GPR132	2.10	4.56E-30
NEPTUNE	ENSG00000164687	FABP5	2.10	2.17E-21
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NEPTUNE	ENSG00000151882	CCL28	2.10	4.34E-20
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NEPTUNE	ENSG00000111907	TPD52L1	2.11	1.17E-31
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NEPTUNE	ENSG00000007174	DNAH9	2.11	1.34E-29
NEPTUNE	ENSG00000205413	SAMD9	2.11	8.86E-22
NEPTUNE	ENSG00000142686	C1orf216	2.11	7.84E-26
NEPTUNE	ENSG00000188761	BCL2L15	2.12	1.34E-33
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NEPTUNE	ENSG00000026103	FAS	2.12	1.29E-20
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NEPTUNE	ENSG00000154277	UCHL1	2.12	8.66E-16
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NEPTUNE	ENSG00000128422	KRT17	2.13	3.18E-17
NEPTUNE	ENSG00000112303	VNN2	2.13	2.57E-23
NEPTUNE	ENSG00000172716	SLFN11	2.13	9.87E-23
NEPTUNE	ENSG00000164038	SLC9B2	2.13	9.69E-29
NEPTUNE	ENSG00000258586	LINC02274	2.13	8.03E-10
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NEPTUNE	ENSG00000139514	SLC7A1	2.14	2.97E-23
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NEPTUNE	ENSG00000140682	TGFB111	2.15	4.30E-36
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NEPTUNE	ENSG00000135048	CEMIP2	2.15	2.00E-19
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NEPTUNE	ENSG00000186469	GNG2	2.15	2.59E-27
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NEPTUNE	ENSG00000115232	ITGA4	2.15	6.51E-24
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NEPTUNE	ENSG00000171621	SPSB1	2.16	7.72E-12
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NEPTUNE	ENSG00000097046	CDC7	2.16	4.32E-25
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NEPTUNE	ENSG00000154917	RAB6B	2.17	4.88E-31
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NEPTUNE	ENSG00000188157	AGRN	2.18	7.15E-25
NEPTUNE	ENSG00000160326	SLC2A6	2.18	1.74E-25
NEPTUNE	ENSG00000196776	CD47	2.18	8.19E-36
NEPTUNE	ENSG00000023902	PLEKHO1	2.18	1.84E-25
NEPTUNE	ENSG00000137809	ITGA11	2.18	7.23E-19
NEPTUNE	ENSG00000136689	IL1RN	2.19	1.43E-24
NEPTUNE	ENSG00000102854	MSLN	2.19	2.00E-13
NEPTUNE	ENSG00000132329	RAMP1	2.19	8.70E-17
NEPTUNE	ENSG00000166922	SCG5	2.19	3.63E-25
NEPTUNE	ENSG00000182752	PAPPA	2.19	1.03E-18
NEPTUNE	ENSG00000118503	TNFAIP3	2.19	1.40E-24
NEPTUNE	ENSG00000205220	PSMB10	2.19	3.72E-39
NEPTUNE	ENSG00000154764	WNT7A	2.19	4.35E-30
NEPTUNE	ENSG00000101134	DOK5	2.19	1.92E-26
NEPTUNE	ENSG00000129538	RNASE1	2.19	3.35E-23
NEPTUNE	ENSG00000232629	HLA-DQB2	2.19	9.91E-16
NEPTUNE	ENSG00000142173	COL6A2	2.19	1.48E-17
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NEPTUNE	ENSG00000112655	PTK7	2.19	2.06E-21

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NEPTUNE	ENSG00000168404	MLKL	2.20	3.68E-31
NEPTUNE	ENSG00000092929	UNC13D	2.20	1.64E-33
NEPTUNE	ENSG00000038945	MSR1	2.20	2.52E-23
NEPTUNE	ENSG00000167535	CACNB3	2.20	1.07E-31
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NEPTUNE	ENSG00000119900	OGFRL1	2.20	2.56E-21
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NEPTUNE	ENSG00000180537	RNF182	2.21	9.35E-26
NEPTUNE	ENSG00000004776	HSPB6	2.21	2.88E-24
NEPTUNE	ENSG00000123416	TUBA1B	2.21	2.74E-35
NEPTUNE	ENSG00000158473	CD1D	2.21	7.95E-35
NEPTUNE	ENSG00000259134	LINC00924	2.21	9.39E-16
NEPTUNE	ENSG00000069974	RAB27A	2.21	3.52E-33
NEPTUNE	ENSG00000168824	NSG1	2.21	4.21E-06
NEPTUNE	ENSG00000100162	CENPM	2.21	1.23E-22
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NEPTUNE	ENSG00000189057	FAM111B	2.21	3.98E-16
NEPTUNE	ENSG00000160190	SLC37A1	2.22	7.23E-38
NEPTUNE	ENSG00000179820	MYADM	2.22	4.52E-28
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NEPTUNE	ENSG00000183853	KIRREL1	2.22	6.78E-22
NEPTUNE	ENSG00000136542	GALNT5	2.22	8.34E-28
NEPTUNE	ENSG00000105246	EBI3	2.22	9.30E-29
NEPTUNE	ENSG00000137699	TRIM29	2.22	8.69E-17
NEPTUNE	ENSG00000136425	CIB2	2.22	1.21E-21
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NEPTUNE	ENSG00000154553	PDLIM3	2.23	2.28E-18
NEPTUNE	ENSG00000079689	SCGN	2.23	5.53E-22
NEPTUNE	ENSG00000163154	TNFAIP8L2	2.23	1.11E-30
NEPTUNE	ENSG00000198771	RCSD1	2.23	2.30E-26
NEPTUNE	ENSG00000177469	CAVIN1	2.23	2.44E-22
NEPTUNE	ENSG00000185989	RASA3	2.23	9.74E-26
NEPTUNE	ENSG00000173535	TNFRSF10C	2.23	2.44E-28
NEPTUNE	ENSG00000101850	GPR143	2.24	9.35E-27
NEPTUNE	ENSG00000011426	ANLN	2.24	1.09E-15
NEPTUNE	ENSG00000186867	QRFPR	2.24	3.13E-29
NEPTUNE	ENSG00000113263	ITK	2.24	6.94E-29
NEPTUNE	ENSG00000085514	PILRA	2.24	8.11E-27
NEPTUNE	ENSG00000131042	LILRB2	2.24	3.90E-32
NEPTUNE	ENSG00000085831	TTC39A	2.24	1.36E-21
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NEPTUNE	ENSG00000137404	NRM	2.25	2.12E-35
NEPTUNE	ENSG00000102034	ELF4	2.25	5.09E-31
NEPTUNE	ENSG00000131153	GIN52	2.25	2.81E-23
NEPTUNE	ENSG00000112769	LAMA4	2.25	2.76E-22
NEPTUNE	ENSG00000140853	NLRC5	2.25	3.59E-26
NEPTUNE	ENSG00000126709	IFI6	2.25	7.51E-08
NEPTUNE	ENSG00000154639	CXADR	2.25	5.95E-29
NEPTUNE	ENSG00000079215	SLC1A3	2.25	1.73E-22
NEPTUNE	ENSG00000163762	TM4SF18	2.25	3.96E-22
NEPTUNE	ENSG00000179241	LDLRAD3	2.26	1.30E-26

NEPTUNE	ENSG00000134242	PTPN22	2.26	1.09E-29
NEPTUNE	ENSG00000048740	CELF2	2.26	6.59E-28
NEPTUNE	ENSG00000075618	FSCN1	2.26	7.04E-31
NEPTUNE	ENSG00000166750	SLFN5	2.26	8.59E-23
NEPTUNE	ENSG00000166289	PLEKHF1	2.27	1.11E-30
NEPTUNE	ENSG00000260314	MRC1	2.27	9.06E-24
NEPTUNE	ENSG00000243449	C4orf48	2.27	1.95E-22
NEPTUNE	ENSG00000162998	FRZB	2.27	6.23E-18
NEPTUNE	ENSG00000095303	PTGS1	2.27	1.55E-11
NEPTUNE	ENSG00000163909	HEYL	2.27	3.06E-22
NEPTUNE	ENSG00000140545	MFGE8	2.27	4.68E-23
NEPTUNE	ENSG00000158747	MICOS10-NBL1/NBL1	2.27	1.54E-29
NEPTUNE	ENSG00000141682	PMAIP1	2.28	5.68E-34
NEPTUNE	ENSG00000162739	SLAMF6	2.28	1.93E-27
NEPTUNE	ENSG00000203760	CENPW	2.28	2.59E-33
NEPTUNE	ENSG00000111344	RASAL1	2.28	2.77E-19
NEPTUNE	ENSG00000090104	RGS1	2.28	8.76E-25
NEPTUNE	ENSG00000101236	RNF24	2.28	3.01E-27
NEPTUNE	ENSG00000111057	KRT18	2.28	2.72E-35
NEPTUNE	ENSG00000149573	MPZL2	2.29	1.03E-34
NEPTUNE	ENSG00000172243	CLEC7A	2.29	3.06E-33
NEPTUNE	ENSG00000185499	MUC1	2.29	3.40E-19
NEPTUNE	ENSG00000100448	CTSG	2.29	1.53E-21
NEPTUNE	ENSG00000138172	CALHM2	2.29	2.79E-32
NEPTUNE	ENSG00000181885	CLDN7	2.29	1.19E-36
NEPTUNE	ENSG00000169252	ADRB2	2.29	7.03E-33
NEPTUNE	ENSG00000133216	EPHB2	2.29	1.92E-24
NEPTUNE	ENSG00000117724	CENPF	2.29	2.87E-18
NEPTUNE	ENSG00000158186	MRAS	2.29	8.31E-39
NEPTUNE	ENSG00000162692	VCAM1	2.29	7.51E-11
NEPTUNE	ENSG00000165507	DEPP1	2.29	6.42E-28
NEPTUNE	ENSG00000171551	ECEL1	2.30	4.69E-13
NEPTUNE	ENSG00000163219	ARHGAP25	2.30	6.89E-28
NEPTUNE	ENSG00000184489	PTP4A3	2.30	2.50E-34
NEPTUNE	ENSG00000111817	DSE	2.30	2.56E-29
NEPTUNE	ENSG00000109099	PMP22	2.30	1.18E-32
NEPTUNE	ENSG00000110852	CLEC2B	2.30	1.13E-27
NEPTUNE	ENSG00000137462	TLR2	2.30	2.06E-32
NEPTUNE	ENSG00000142552	RCN3	2.31	1.26E-29
NEPTUNE	ENSG00000197471	SPN	2.31	1.63E-29
NEPTUNE	ENSG00000134470	IL15RA	2.31	9.34E-34
NEPTUNE	ENSG00000170545	SMAGP	2.31	1.31E-34
NEPTUNE	ENSG00000138180	CEP55	2.31	3.47E-22
NEPTUNE	ENSG00000124249	KCNK15	2.31	3.98E-34
NEPTUNE	ENSG00000155254	MARVELD1	2.31	3.58E-20
NEPTUNE	ENSG00000154080	CHST9	2.31	1.22E-22
NEPTUNE	ENSG00000166147	FBN1	2.31	1.15E-20
NEPTUNE	ENSG00000054392	HHAT	2.31	2.20E-23
NEPTUNE	ENSG00000104814	MAP4K1	2.31	2.82E-33
NEPTUNE	ENSG00000084731	KIF3C	2.32	2.35E-39
NEPTUNE	ENSG00000121966	CXCR4	2.32	3.82E-21
NEPTUNE	ENSG00000204381	LAYN	2.32	8.28E-28
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NEPTUNE	ENSG00000175793	SFN	2.32	6.46E-34
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NEPTUNE	ENSG00000186470	BTN3A2	2.33	4.09E-32
NEPTUNE	ENSG00000137965	IFI44	2.33	2.09E-19
NEPTUNE	ENSG00000172116	CD8B	2.33	8.64E-28
NEPTUNE	ENSG00000113361	CDH6	2.33	3.24E-18
NEPTUNE	ENSG00000100644	HIF1A	2.33	6.78E-32
NEPTUNE	ENSG00000277586	NEFL	2.33	4.25E-11
NEPTUNE	ENSG00000156265	MAP3K7CL	2.33	6.43E-25
NEPTUNE	ENSG00000154760	SLFN13	2.34	7.83E-20
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NEPTUNE	ENSG00000185507	IRF7	2.34	2.03E-24
NEPTUNE	ENSG00000181631	P2RY13	2.34	2.76E-28
NEPTUNE	ENSG00000105643	ARRDC2	2.34	1.29E-23
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NEPTUNE	ENSG00000213190	MLLT11	2.35	1.50E-36
NEPTUNE	ENSG00000169903	TM4SF4	2.35	1.12E-23
NEPTUNE	ENSG00000005844	ITGAL	2.35	2.16E-26
NEPTUNE	ENSG00000134802	SLC43A3	2.35	1.00E-35
NEPTUNE	ENSG00000126787	DLGAP5	2.35	2.79E-22
NEPTUNE	ENSG00000068366	ACSL4	2.35	1.44E-25
NEPTUNE	ENSG00000115339	GALNT3	2.35	5.49E-31
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NEPTUNE	ENSG00000059804	SLC2A3	2.36	2.27E-26
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NEPTUNE	ENSG00000112984	KIF20A	2.36	6.66E-16
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NEPTUNE	ENSG00000165304	MELK	2.37	1.00E-19
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NEPTUNE	ENSG00000198821	CD247	2.37	4.46E-28
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NEPTUNE	ENSG00000180644	PRF1	2.37	2.64E-24
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NEPTUNE	ENSG00000163106	HPGDS	2.38	4.27E-31
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NEPTUNE	ENSG00000107438	PDLIM1	2.40	9.06E-36
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NEPTUNE	ENSG00000143546	S100A8	2.40	1.18E-13
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NEPTUNE	ENSG00000166278	C2	2.41	5.56E-13
NEPTUNE	ENSG00000187498	COL4A1	2.41	2.96E-26
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NEPTUNE	ENSG00000158517	NCF1	2.41	1.21E-29
NEPTUNE	ENSG00000129048	ACKR4	2.41	8.59E-31
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NEPTUNE	ENSG00000148908	RGS10	2.41	7.04E-31
NEPTUNE	ENSG00000188783	PRELP	2.41	5.31E-17
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NEPTUNE	ENSG00000126458	RRAS	2.42	1.19E-33
NEPTUNE	ENSG00000196664	TLR7	2.42	1.29E-30
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NEPTUNE	ENSG00000104332	SFRP1	2.42	6.00E-20
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NEPTUNE	ENSG00000175489	LRRC25	2.43	1.16E-32
NEPTUNE	ENSG00000117399	CDC20	2.43	2.06E-16
NEPTUNE	ENSG00000198121	LPAR1	2.43	2.61E-28
NEPTUNE	ENSG00000158714	SLAMF8	2.44	1.43E-27
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NEPTUNE	ENSG00000077238	IL4R	2.44	4.99E-31
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NEPTUNE	ENSG00000146038	DCDC2	2.44	1.66E-34
NEPTUNE	ENSG00000048052	HDAC9	2.45	3.06E-29
NEPTUNE	ENSG00000184254	ALDH1A3	2.45	1.21E-28
NEPTUNE	ENSG00000075426	FOSL2	2.45	3.09E-31
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NEPTUNE	ENSG00000204264	PSMB8	2.45	9.16E-40
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NEPTUNE	ENSG00000167895	TMC8	2.45	4.73E-33
NEPTUNE	ENSG00000159212	CLIC6	2.45	2.19E-29
NEPTUNE	ENSG00000010671	BTK	2.45	1.50E-32
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NEPTUNE	ENSG00000140297	GCNT3	2.45	4.74E-14
NEPTUNE	ENSG00000099337	KCNK6	2.45	2.41E-39
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NEPTUNE	ENSG00000087245	MMP2	2.45	4.13E-23

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NEPTUNE	ENSG00000007312	CD79B	2.46	2.73E-25
NEPTUNE	ENSG00000198286	CARD11	2.46	2.90E-42
NEPTUNE	ENSG00000275385	CCL18	2.46	7.25E-11
NEPTUNE	ENSG00000129680	MAP7D3	2.46	5.15E-39
NEPTUNE	ENSG00000135114	OASL	2.46	6.92E-21
NEPTUNE	ENSG00000197872	CYRIA	2.46	1.35E-31
NEPTUNE	ENSG00000130755	GMFG	2.47	2.21E-29
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NEPTUNE	ENSG00000006128	TAC1	2.47	2.59E-13
NEPTUNE	ENSG00000100365	NCF4	2.48	1.08E-32
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NEPTUNE	ENSG00000013810	TACC3	2.49	3.10E-33
NEPTUNE	ENSG00000168961	LGALS9	2.49	1.89E-37
NEPTUNE	ENSG00000168394	TAP1	2.49	7.27E-28
NEPTUNE	ENSG00000175567	UCP2	2.49	3.97E-21
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NEPTUNE	ENSG00000113532	ST8SIA4	2.50	7.73E-33
NEPTUNE	ENSG00000024422	EHD2	2.50	4.91E-23
NEPTUNE	ENSG00000147113	DIPK2B	2.50	2.44E-26
NEPTUNE	ENSG00000173918	C1QTNF1	2.50	3.51E-35
NEPTUNE	ENSG00000167695	TLCD3A	2.50	5.40E-35
NEPTUNE	ENSG00000197747	S100A10	2.51	2.35E-38
NEPTUNE	ENSG00000198075	SULT1C4	2.51	4.95E-28
NEPTUNE	ENSG00000174175	SELP	2.51	1.79E-21
NEPTUNE	ENSG00000133063	CHIT1	2.51	2.71E-08
NEPTUNE	ENSG00000137309	HMGA1	2.52	1.39E-31
NEPTUNE	ENSG00000166710	B2M	2.52	1.19E-36
NEPTUNE	ENSG00000119535	CSF3R	2.52	7.97E-24
NEPTUNE	ENSG00000168078	PBK	2.52	8.66E-15
NEPTUNE	ENSG00000133816	MICAL2	2.52	9.56E-27
NEPTUNE	ENSG00000115415	STAT1	2.52	1.50E-25
NEPTUNE	ENSG00000159216	RUNX1	2.52	5.76E-36
NEPTUNE	ENSG00000013588	GPRC5A	2.53	5.03E-21
NEPTUNE	ENSG00000163485	ADORA1	2.53	3.07E-18
NEPTUNE	ENSG00000182022	CHST15	2.53	1.03E-27
NEPTUNE	ENSG00000148344	PTGES	2.53	7.88E-24
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NEPTUNE	ENSG00000123329	ARHGAP9	2.53	1.11E-40

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NEPTUNE	ENSG00000188313	PLSCR1	2.53	6.13E-39
NEPTUNE	ENSG00000154237	LRRK1	2.53	9.57E-34
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NEPTUNE	ENSG00000129038	LOXL1	2.56	4.50E-28
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NEPTUNE	ENSG00000135269	TES	2.56	9.70E-40
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NEPTUNE	ENSG00000171557	FGG	2.56	9.26E-12
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NEPTUNE	ENSG00000136514	RTP4	2.56	2.38E-33
NEPTUNE	ENSG00000177606	JUN	2.57	3.07E-24
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NEPTUNE	ENSG00000131401	NAPSB	2.57	6.47E-12
NEPTUNE	ENSG00000196839	ADA	2.57	1.69E-40
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NEPTUNE	ENSG00000174939	ASPHD1	2.58	1.19E-36
NEPTUNE	ENSG00000102359	SRPX2	2.58	4.42E-35
NEPTUNE	ENSG00000148773	MKI67	2.58	4.83E-21
NEPTUNE	ENSG00000084636	COL16A1	2.58	3.29E-33
NEPTUNE	ENSG00000170571	EMB	2.59	4.32E-27
NEPTUNE	ENSG00000184584	STING1	2.59	8.04E-39
NEPTUNE	ENSG00000122176	FMOD	2.59	5.74E-24
NEPTUNE	ENSG00000247774	PCED1B-AS1	2.59	1.79E-31
NEPTUNE	ENSG00000125657	TNFSF9	2.59	2.70E-37
NEPTUNE	ENSG00000110448	CD5	2.60	9.41E-35
NEPTUNE	ENSG00000132205	EMILIN2	2.60	8.27E-33
NEPTUNE	ENSG00000110799	VWF	2.61	4.58E-20
NEPTUNE	ENSG00000172543	CTSW	2.61	1.67E-26
NEPTUNE	ENSG00000163359	COL6A3	2.62	4.92E-23
NEPTUNE	ENSG00000137265	IRF4	2.62	1.45E-35
NEPTUNE	ENSG00000165215	CLDN3	2.62	2.66E-28
NEPTUNE	ENSG00000168421	RHOH	2.62	4.43E-31
NEPTUNE	ENSG00000240694	PNMA2	2.62	1.06E-19
NEPTUNE	ENSG00000165949	IFI27	2.62	8.67E-18
NEPTUNE	ENSG00000134531	EMP1	2.62	2.12E-28
NEPTUNE	ENSG00000171051	FPR1	2.62	4.52E-29
NEPTUNE	ENSG00000029153	ARNTL2	2.63	1.41E-40
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NEPTUNE	ENSG00000151651	ADAM8	2.63	2.58E-30
NEPTUNE	ENSG00000116741	RGS2	2.63	1.04E-31
NEPTUNE	ENSG00000171223	JUNB	2.63	5.29E-28
NEPTUNE	ENSG00000251292	ERVH-1	2.63	2.08E-29
NEPTUNE	ENSG00000172215	CXCR6	2.63	1.92E-27
NEPTUNE	ENSG00000174307	PHLDA3	2.63	1.88E-26

NEPTUNE	ENSG00000104856	RELB	2.64	1.07E-29
NEPTUNE	ENSG00000151892	GFRA1	2.64	1.11E-23
NEPTUNE	ENSG00000164691	TAGAP	2.64	6.61E-32
NEPTUNE	ENSG00000050344	NFE2L3	2.64	9.58E-31
NEPTUNE	ENSG00000204257	HLA-DMA	2.64	1.38E-36
NEPTUNE	ENSG00000232533	AC0936735	2.65	1.50E-40
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NEPTUNE	ENSG00000007908	SELE	2.65	6.06E-23
NEPTUNE	ENSG00000101265	RASSF2	2.65	4.71E-28
NEPTUNE	ENSG00000164308	ERAP2	2.66	1.21E-07
NEPTUNE	ENSG00000162981	LRATD1	2.66	8.96E-29
NEPTUNE	ENSG00000159110	IFNAR2	2.67	9.58E-42
NEPTUNE	ENSG00000173467	AGR3	2.67	7.07E-36
NEPTUNE	ENSG00000136732	GYPC	2.67	3.41E-38
NEPTUNE	ENSG00000171848	RRM2	2.67	1.78E-14
NEPTUNE	ENSG00000162512	SDC3	2.68	8.92E-31
NEPTUNE	ENSG00000023892	DEF6	2.68	7.99E-36
NEPTUNE	ENSG00000128342	LIF	2.68	2.39E-34
NEPTUNE	ENSG00000138964	PARVG	2.68	2.88E-37
NEPTUNE	ENSG00000168329	CX3CR1	2.68	3.99E-27
NEPTUNE	ENSG00000125347	IRF1	2.68	3.54E-43
NEPTUNE	ENSG00000169604	ANTXR1	2.68	1.46E-30
NEPTUNE	ENSG00000204642	HLA-F	2.68	5.49E-32
NEPTUNE	ENSG00000077942	FBLN1	2.68	4.12E-17
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NEPTUNE	ENSG00000170312	CDK1	2.69	3.45E-23
NEPTUNE	ENSG00000183722	LHFPL6	2.69	1.03E-34
NEPTUNE	ENSG00000137959	IFI44L	2.69	5.08E-14
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NEPTUNE	ENSG00000105374	NKG7	2.69	1.90E-27
NEPTUNE	ENSG00000184292	TACSTD2	2.69	1.37E-23
NEPTUNE	ENSG00000142347	MYO1F	2.70	3.77E-32
NEPTUNE	ENSG00000000971	CFH	2.70	1.70E-23
NEPTUNE	ENSG00000106537	TSPAN13	2.70	2.19E-37
NEPTUNE	ENSG00000062038	CDH3	2.71	3.45E-21
NEPTUNE	ENSG00000161638	ITGA5	2.71	1.85E-28
NEPTUNE	ENSG00000078081	LAMP3	2.71	1.41E-29
NEPTUNE	ENSG00000234745	HLA-B	2.71	1.44E-29
NEPTUNE	ENSG00000102837	OLFM4	2.72	1.31E-09
NEPTUNE	ENSG00000137496	IL18BP	2.72	6.72E-37
NEPTUNE	ENSG00000129009	ISLR	2.72	9.90E-26
NEPTUNE	ENSG00000132334	PTPRE	2.72	5.81E-43
NEPTUNE	ENSG00000013725	CD6	2.73	7.20E-38
NEPTUNE	ENSG00000167772	ANGPTL4	2.73	1.07E-09
NEPTUNE	ENSG00000142627	EPHA2	2.73	5.74E-34
NEPTUNE	ENSG00000167077	MEI1	2.73	8.04E-33
NEPTUNE	ENSG00000149131	SERPING1	2.73	1.63E-32
NEPTUNE	ENSG00000104894	CD37	2.73	3.37E-34
NEPTUNE	ENSG00000135842	NIBAN1	2.73	1.78E-31
NEPTUNE	ENSG00000157456	CCNB2	2.73	8.59E-23
NEPTUNE	ENSG00000123146	ADGRE5	2.74	5.95E-31
NEPTUNE	ENSG00000140416	TPM1	2.74	5.31E-44

NEPTUNE	ENSG00000162745	OLFML2B	2.74	8.89E-30
NEPTUNE	ENSG00000171700	RGS19	2.74	7.18E-46
NEPTUNE	ENSG00000168487	BMP1	2.74	8.57E-31
NEPTUNE	ENSG00000129667	RHBDF2	2.75	7.21E-37
NEPTUNE	ENSG00000107281	NPDC1	2.75	2.18E-40
NEPTUNE	ENSG00000050165	DKK3	2.75	6.01E-30
NEPTUNE	ENSG00000204136	GGTA1	2.75	5.13E-30
NEPTUNE	ENSG00000244414	CFHR1	2.75	3.22E-14
NEPTUNE	ENSG00000185774	KCNIP4	2.75	3.68E-26
NEPTUNE	ENSG00000138061	CYP1B1	2.75	2.92E-27
NEPTUNE	ENSG00000122641	INHBA	2.75	3.09E-38
NEPTUNE	ENSG00000008517	IL32	2.75	9.94E-16
NEPTUNE	ENSG00000183742	MACC1	2.76	2.95E-29
NEPTUNE	ENSG00000196781	TLE1	2.76	1.32E-29
NEPTUNE	ENSG00000166501	PRKCB	2.76	4.23E-29
NEPTUNE	ENSG00000162896	PIGR	2.76	1.43E-16
NEPTUNE	ENSG00000197766	CFD	2.76	2.68E-21
NEPTUNE	ENSG00000175832	ETV4	2.77	9.01E-28
NEPTUNE	ENSG00000182492	BGN	2.77	2.58E-27
NEPTUNE	ENSG00000103490	PYCARD	2.77	7.83E-42
NEPTUNE	ENSG00000110934	BIN2	2.77	7.03E-33
NEPTUNE	ENSG00000196639	HRH1	2.77	4.56E-35
NEPTUNE	ENSG00000105011	ASF1B	2.77	3.38E-21
NEPTUNE	ENSG00000163430	FSTL1	2.77	6.61E-31
NEPTUNE	ENSG00000101670	LIPG	2.78	9.51E-25
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NEPTUNE	ENSG00000104998	IL27RA	2.79	4.90E-35
NEPTUNE	ENSG00000147251	DOCK11	2.79	3.63E-32
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NEPTUNE	ENSG00000053747	LAMA3	2.80	5.11E-32
NEPTUNE	ENSG00000187474	FPR3	2.80	6.93E-33
NEPTUNE	ENSG00000117122	MFAP2	2.80	1.56E-33
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NEPTUNE	ENSG00000141524	TMC6	2.81	1.11E-34
NEPTUNE	ENSG00000187608	ISG15	2.81	6.52E-16
NEPTUNE	ENSG00000137078	SIT1	2.81	7.68E-32
NEPTUNE	ENSG00000163814	CDCP1	2.81	1.16E-32
NEPTUNE	ENSG00000110848	CD69	2.82	2.79E-33
NEPTUNE	ENSG00000233901	LINC01503	2.82	6.79E-29
NEPTUNE	ENSG00000175857	GAPT	2.82	7.54E-31
NEPTUNE	ENSG00000153283	CD96	2.82	5.81E-29
NEPTUNE	ENSG00000100385	IL2RB	2.83	6.54E-30
NEPTUNE	ENSG00000000938	FGR	2.83	3.88E-33
NEPTUNE	ENSG00000235531	MSC-AS1	2.83	1.89E-33
NEPTUNE	ENSG00000128245	YWHAH	2.83	5.96E-28
NEPTUNE	ENSG00000170006	TMEM154	2.84	8.45E-37
NEPTUNE	ENSG00000132718	SYT11	2.84	1.69E-32

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NEPTUNE	ENSG00000184371	CSF1	2.85	1.40E-36
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NEPTUNE	ENSG00000196684	HSH2D	2.86	7.11E-39
NEPTUNE	ENSG00000186818	LILRB4	2.86	3.18E-33
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NEPTUNE	ENSG00000133110	POSTN	2.88	8.75E-17
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NEPTUNE	ENSG00000170190	SLC16A5	2.88	1.82E-30
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NEPTUNE	ENSG00000128283	CDC42EP1	2.90	2.01E-41
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NEPTUNE	ENSG00000196924	FLNA	2.91	1.50E-30
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NEPTUNE	ENSG00000066294	CD84	2.91	5.77E-28
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NEPTUNE	ENSG00000185811	IKZF1	2.91	3.35E-33
NEPTUNE	ENSG00000100097	LGALS1	2.92	1.78E-29
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NEPTUNE	ENSG00000089639	GMIP	2.93	6.37E-43
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NEPTUNE	ENSG00000146592	CREB5	2.93	3.09E-23
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NEPTUNE	ENSG00000077984	CST7	2.94	1.65E-32
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NEPTUNE	ENSG00000175463	TBC1D10C	2.95	1.40E-33
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NEPTUNE	ENSG00000065357	DGKA	2.96	8.06E-39
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NEPTUNE	ENSG00000222041	CYTOR	2.97	3.29E-39
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NEPTUNE	ENSG00000173846	PLK3	2.99	7.68E-36
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NEPTUNE	ENSG00000240382	IGKV1-17	3.03	1.30E-21
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NEPTUNE	ENSG00000120708	TGFBI	3.04	7.08E-32
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NEPTUNE	ENSG00000132514	CLEC10A	3.08	3.25E-34
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NEPTUNE	ENSG00000112799	LY86	3.16	1.82E-34
NEPTUNE	ENSG00000094755	GABRP	3.16	2.64E-20
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NEPTUNE	ENSG00000095970	TREM2	3.21	5.26E-29
NEPTUNE	ENSG00000266094	RASSF5	3.21	3.42E-36
NEPTUNE	ENSG00000075884	ARHGAP15	3.22	1.57E-33
NEPTUNE	ENSG00000142089	IFITM3	3.22	1.57E-35
NEPTUNE	ENSG00000006118	TMEM132A	3.22	1.96E-33
NEPTUNE	ENSG00000198223	CSF2RA	3.23	9.88E-42
NEPTUNE	ENSG00000134516	DOCK2	3.23	1.81E-34
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NEPTUNE	ENSG00000169508	GPR183	3.23	4.67E-31
NEPTUNE	ENSG00000000005	TNMD	3.23	8.69E-20
NEPTUNE	ENSG00000124766	SOX4	3.24	4.12E-32
NEPTUNE	ENSG00000168542	COL3A1	3.26	4.17E-21
NEPTUNE	ENSG00000204287	HLA-DRA	3.26	2.54E-38
NEPTUNE	ENSG00000149781	FERMT3	3.26	7.12E-37
NEPTUNE	ENSG00000122862	SRGN	3.27	5.35E-37
NEPTUNE	ENSG00000175130	MARCKSL1	3.27	6.11E-43
NEPTUNE	ENSG00000145287	PLAC8	3.28	1.25E-37
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NEPTUNE	ENSG00000239713	APOBEC3G	3.29	6.11E-39
NEPTUNE	ENSG00000138772	ANXA3	3.29	5.81E-43
NEPTUNE	ENSG00000184454	NCMAP	3.29	2.04E-29
NEPTUNE	ENSG00000159840	ZYX	3.29	4.39E-39
NEPTUNE	ENSG00000197629	MPEG1	3.29	8.03E-30
NEPTUNE	ENSG00000132965	ALOX5AP	3.29	2.88E-40
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NEPTUNE	ENSG00000072694	FCGR2B	3.29	3.35E-33
NEPTUNE	ENSG00000125872	LRRN4	3.30	6.26E-35
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NEPTUNE	ENSG00000240065	PSMB9	3.31	1.12E-38
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NEPTUNE	ENSG00000101198	NKAIN4	3.33	4.04E-15
NEPTUNE	ENSG00000243290	IGKV1-12	3.33	1.06E-22
NEPTUNE	ENSG00000175315	CST6	3.33	1.38E-35
NEPTUNE	ENSG00000164764	SBSPON	3.33	2.33E-34
NEPTUNE	ENSG00000185201	IFITM2	3.33	3.54E-43
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NEPTUNE	ENSG00000162894	FCMR	3.34	4.14E-38
NEPTUNE	ENSG00000165168	CYBB	3.35	4.67E-33
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NEPTUNE	ENSG00000204252	HLA-DOA	3.36	1.37E-29
NEPTUNE	ENSG00000196923	PDLIM7	3.37	5.36E-49
NEPTUNE	ENSG00000198502	HLA-DRB5	3.38	9.37E-11
NEPTUNE	ENSG00000072110	ACTN1	3.38	1.61E-41
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NEPTUNE	ENSG00000114013	CD86	3.38	7.83E-42
NEPTUNE	ENSG00000158488	CD1E	3.39	3.78E-35
NEPTUNE	ENSG00000124762	CDKN1A	3.39	1.09E-23
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NEPTUNE	ENSG00000136999	CCN3	3.40	5.06E-27
NEPTUNE	ENSG00000251546	IGKV1D-39	3.41	1.08E-25
NEPTUNE	ENSG00000166482	MFAP4	3.42	3.13E-23
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NEPTUNE	ENSG00000178860	MSC	3.42	7.94E-33
NEPTUNE	ENSG00000139278	GLIPR1	3.43	2.50E-45
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NEPTUNE	ENSG00000105369	CD79A	3.58	6.31E-31
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NEPTUNE	ENSG00000185885	IFITM1	3.59	9.69E-33
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NEPTUNE	ENSG00000168386	FILIP1L	3.61	3.88E-42
NEPTUNE	ENSG00000123338	NCKAP1L	3.62	5.16E-36
NEPTUNE	ENSG00000211649	IGLV7-46	3.63	4.40E-25
NEPTUNE	ENSG00000034510	TMSB10/TMSB4X	3.63	1.26E-40
NEPTUNE	ENSG00000244509	APOBEC3C	3.64	1.25E-46
NEPTUNE	ENSG00000145623	OSMR	3.64	7.53E-39
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NEPTUNE	ENSG00000165887	ANKRD2	3.71	3.52E-25
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NEPTUNE	ENSG00000167613	LAIR1	3.72	2.22E-33
NEPTUNE	ENSG00000110079	MS4A4A	3.73	1.83E-32
NEPTUNE	ENSG00000158481	CD1C	3.73	3.41E-39
NEPTUNE	ENSG00000172965	MIR4435-2HG	3.74	1.18E-38
NEPTUNE	ENSG00000064886	CHI3L2	3.75	2.31E-33
NEPTUNE	ENSG00000211962	IGHV1-46	3.76	1.86E-27
NEPTUNE	ENSG00000211964	IGHV3-48	3.78	1.81E-24
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NEPTUNE	ENSG00000122694	GLIPR2	3.78	4.47E-44
NEPTUNE	ENSG00000162458	FBLIM1	3.79	5.15E-45
NEPTUNE	ENSG00000203747	FCGR3A/FCGR3B	3.79	1.32E-34
NEPTUNE	ENSG00000224650	IGHV3-74	3.81	9.26E-29
NEPTUNE	ENSG00000169245	CXCL10	3.81	1.28E-23
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NEPTUNE	ENSG00000005059	MCUB	3.85	4.72E-48
NEPTUNE	ENSG00000143954	REG3G	3.86	7.22E-26
NEPTUNE	ENSG00000022267	FHL1	3.86	1.44E-33
NEPTUNE	ENSG00000137752	CASP1	3.87	3.81E-45
NEPTUNE	ENSG00000223865	HLA-DPB1	3.88	1.99E-39
NEPTUNE	ENSG00000108551	RASD1	3.88	5.63E-19
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NEPTUNE	ENSG00000136490	LIMD2	3.90	4.99E-48
NEPTUNE	ENSG00000110876	SELPLG	3.90	1.98E-41
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NEPTUNE	ENSG00000011422	PLAUR	3.93	1.64E-44
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NEPTUNE	ENSG00000140968	IRF8	3.94	9.77E-34
NEPTUNE	ENSG00000159189	C1QC	3.94	1.66E-34
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NEPTUNE	ENSG00000211937	IGHV2-5	4.01	1.28E-22
NEPTUNE	ENSG00000244575	IGKV1-27	4.01	6.42E-28
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H3 Africa	ENSG00000266865	LOC107984974	1.84	1.03E-02
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H3 Africa	ENSG00000083535	PIBF1	1.84	8.11E-04
H3 Africa	ENSG00000073861	TBX21	1.84	1.51E-03
H3 Africa	ENSG00000152818	UTRN	1.84	7.67E-04
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H3 Africa	ENSG00000183458	PKD1P3	1.84	4.02E-02
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H3 Africa	ENSG00000203706	SERTAD4-AS1	1.84	3.71E-02
H3 Africa	ENSG00000156515	HK1	1.84	2.10E-03
H3 Africa	ENSG00000225792	SNX10-AS1	1.84	4.34E-03
H3 Africa	ENSG00000130332	LSM7	1.84	4.86E-03
H3 Africa	ENSG00000273542	H4C12	1.85	4.87E-02
H3 Africa	ENSG00000156970	BUB1B	1.85	4.94E-03
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H3 Africa	ENSG00000184194	GPR173	1.85	1.31E-02
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H3 Africa	ENSG00000108700	CCL8	1.85	5.55E-04
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H3 Africa	ENSG00000004777	ARHGAP33	2.00	1.16E-02
H3 Africa	ENSG00000262246	CORO7/CORO7-PAM16	2.00	2.89E-04
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H3 Africa	ENSG00000235531	MSC-AS1	2.50	2.90E-03
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H3 Africa	ENSG00000189129	PLAC9	2.51	3.37E-03
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H3 Africa	ENSG00000172687	ZNF738	2.52	2.78E-05
H3 Africa	ENSG00000198113	TOR4A	2.52	4.52E-03
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H3 Africa	ENSG00000102359	SRPX2	2.52	1.90E-03
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H3 Africa	ENSG00000120254	MTHFD1L	2.53	7.82E-05
H3 Africa	ENSG00000179841	AKAP5	2.53	2.50E-04
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H3 Africa	ENSG00000126759	CFP	2.53	1.47E-04
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H3 Africa	ENSG00000139679	LPAR6	2.54	6.50E-04
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H3 Africa	ENSG00000129009	ISLR	2.54	7.26E-03
H3 Africa	ENSG00000169679	BUB1	2.54	6.76E-03
H3 Africa	ENSG00000132965	ALOX5AP	2.54	7.78E-05
H3 Africa	ENSG00000131459	GFPT2	2.54	3.51E-04
H3 Africa	ENSG00000064547	LPAR2	2.54	1.33E-04
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H3 Africa	ENSG00000068831	RASGRP2	2.59	3.07E-03
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H3 Africa	ENSG00000087116	ADAMTS2	2.60	1.35E-03
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H3 Africa	ENSG00000276566	IGKV1D-13	2.60	4.71E-05
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H3 Africa	ENSG00000140379	BCL2A1	2.63	2.05E-06
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H3 Africa	ENSG00000110079	MS4A4A	2.65	8.38E-05
H3 Africa	ENSG00000197142	ACSL5	2.66	7.37E-05
H3 Africa	ENSG00000103196	CRISPLD2	2.66	1.19E-03
H3 Africa	ENSG00000196684	HSH2D	2.66	2.81E-06
H3 Africa	ENSG00000212443	SNORA53	2.66	2.15E-02
H3 Africa	ENSG00000280411	IGHV1-69D	2.66	6.69E-05
H3 Africa	ENSG00000049130	KITLG	2.66	1.03E-05
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H3 Africa	ENSG00000183598	H3C13	2.68	2.30E-04
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H3 Africa	ENSG00000059377	TBXAS1	2.72	6.99E-06
H3 Africa	ENSG00000137265	IRF4	2.72	6.14E-04
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H3 Africa	ENSG00000186867	QRFPR	2.73	7.36E-05
H3 Africa	ENSG00000136542	GALNT5	2.73	3.38E-03
H3 Africa	ENSG00000198121	LPAR1	2.73	9.02E-04
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H3 Africa	ENSG00000172215	CXCR6	2.75	4.91E-06
H3 Africa	ENSG00000197153	H3C12	2.75	9.08E-07
H3 Africa	ENSG00000266338	NBPF10 (includes others)	2.75	4.03E-05
H3 Africa	ENSG00000249437	NAIP	2.76	1.66E-04
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H3 Africa	ENSG00000181631	P2RY13	2.77	1.12E-06
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H3 Africa	ENSG00000147443	DOK2	2.77	1.55E-06
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H3 Africa	ENSG00000270550	IGHV3-30	2.79	1.20E-02
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H3 Africa	ENSG00000115415	STAT1	2.79	1.94E-05
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H3 Africa	ENSG00000122188	LAX1	2.80	1.95E-07
H3 Africa	ENSG00000196781	TLE1	2.80	4.71E-05
H3 Africa	ENSG00000183778	B3GALT5	2.80	6.53E-04
H3 Africa	ENSG00000165887	ANKRD2	2.80	2.35E-02
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H3 Africa	ENSG00000168461	RAB31	2.80	3.56E-06
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H3 Africa	ENSG00000179869	ABCA13	2.83	1.75E-04
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H3 Africa	ENSG00000125398	SOX9	2.83	6.65E-03
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H3 Africa	ENSG00000205413	SAMD9	2.86	1.49E-07
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H3 Africa	ENSG00000101057	MYBL2	2.88	6.15E-05
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H3 Africa	ENSG00000065911	MTHFD2	2.89	1.32E-05
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H3 Africa	ENSG00000266094	RASSF5	2.94	1.28E-04
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H3 Africa	ENSG00000126882	FAM78A	2.95	7.92E-08
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H3 Africa	ENSG00000124203	ZNF831	2.96	2.36E-06
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H3 Africa	ENSG00000205885	C1RL-AS1	2.98	2.74E-05
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H3 Africa	ENSG00000090376	IRAK3	2.99	1.44E-05
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H3 Africa	ENSG00000178752	ERFE	3.00	3.30E-03
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H3 Africa	ENSG00000136425	CIB2	3.01	1.88E-03
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H3 Africa	ENSG00000137331	IER3	3.02	4.49E-04
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H3 Africa	ENSG00000140853	NLRC5	3.02	1.23E-05
H3 Africa	ENSG00000019991	HGF	3.02	5.40E-03
H3 Africa	ENSG00000141934	PLPP2	3.03	1.78E-04
H3 Africa	ENSG00000240694	PNMA2	3.03	4.94E-03
H3 Africa	ENSG00000134247	PTGFRN	3.04	3.50E-03
H3 Africa	ENSG00000177675	CD163L1	3.04	2.98E-05
H3 Africa	ENSG00000197903	H2BC12	3.04	6.84E-06
H3 Africa	ENSG00000275713	H2BC9	3.04	5.01E-04
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H3 Africa	ENSG00000247774	PCED1B-AS1	3.14	8.77E-09
H3 Africa	ENSG00000196747	H2AC13	3.15	1.47E-05
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H3 Africa	ENSG00000176463	SLCO3A1	3.17	5.37E-06
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H3 Africa	ENSG00000162745	OLFML2B	3.21	3.88E-05
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H3 Africa	ENSG00000158481	CD1C	4.05	3.30E-07
H3 Africa	ENSG00000154237	LRRK1	4.05	5.12E-07
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H3 Africa	ENSG00000252835	SCARNA21	4.06	7.61E-04
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H3 Africa	ENSG00000172673	THEMIS	4.08	8.66E-09
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H3 Africa	ENSG00000196754	S100A2	4.12	4.67E-05
H3 Africa	ENSG00000101336	HCK	4.14	1.98E-07
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H3 Africa	ENSG00000159674	SPON2	4.17	1.56E-03
H3 Africa	ENSG00000187474	FPR3	4.18	3.04E-08
H3 Africa	ENSG00000227507	LTB	4.21	1.98E-08
H3 Africa	ENSG00000211751	TRBC1	4.21	5.00E-09
H3 Africa	ENSG00000029153	ARNTL2	4.22	8.28E-06
H3 Africa	ENSG00000025708	TYMP	4.22	4.24E-06
H3 Africa	ENSG00000148773	MKI67	4.22	3.06E-02
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H3 Africa	ENSG00000180448	ARHGAP45	4.24	2.13E-07
H3 Africa	ENSG00000136286	MYO1G	4.24	7.97E-06
H3 Africa	ENSG00000166428	PLD4	4.24	2.15E-08
H3 Africa	ENSG00000175463	TBC1D10C	4.24	2.51E-08
H3 Africa	ENSG00000200087	SNORA73B	4.25	6.34E-04
H3 Africa	ENSG00000034510	TMSB10/TMSB4X	4.25	1.48E-05
H3 Africa	ENSG00000172724	CCL19	4.27	2.65E-06
H3 Africa	ENSG00000168918	INPP5D	4.28	2.26E-08
H3 Africa	ENSG00000145623	OSMR	4.29	1.04E-04
H3 Africa	ENSG00000110324	IL10RA	4.29	6.88E-07
H3 Africa	ENSG00000006327	TNFRSF12A	4.29	9.75E-04
H3 Africa	ENSG00000162706	CADM3	4.30	5.81E-04
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H3 Africa	ENSG00000242574	HLA-DMB	4.32	2.65E-07
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H3 Africa	ENSG00000173369	C1QB	4.35	3.91E-06
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H3 Africa	ENSG00000104894	CD37	4.40	3.31E-08
H3 Africa	ENSG00000121281	ADCY7	4.42	6.55E-08
H3 Africa	ENSG00000026751	SLAMF7	4.43	1.12E-06
H3 Africa	ENSG00000145416	MARCHF1	4.43	3.29E-07
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H3 Africa	ENSG00000134115	CNTN6	4.45	6.68E-06
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H3 Africa	ENSG00000066294	CD84	4.47	1.02E-08
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H3 Africa	ENSG00000132205	EMILIN2	4.52	1.54E-07
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H3 Africa	ENSG00000170571	EMB	5.16	4.33E-09
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H3 Africa	ENSG00000244437	IGKV3-15	5.21	1.83E-05
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H3 Africa	ENSG00000198223	CSF2RA	5.29	2.87E-09
H3 Africa	ENSG00000223865	HLA-DPB1	5.33	2.54E-08
H3 Africa	ENSG00000144802	NFKBIZ	5.35	1.41E-06
H3 Africa	ENSG00000007062	PROM1	5.35	1.43E-04
H3 Africa	ENSG00000134516	DOCK2	5.36	1.80E-08
H3 Africa	ENSG00000123338	NCKAP1L	5.39	2.87E-09
H3 Africa	ENSG00000185774	KCNIP4	5.40	5.50E-08
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H3 Africa	ENSG00000160593	JAML	5.65	2.75E-08
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H3 Africa	ENSG00000162511	LAPTM5	5.71	5.66E-09
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H3 Africa	ENSG00000237541	HLA-DQA2	5.76	1.44E-04
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H3 Africa	ENSG00000168685	IL7R	5.82	4.20E-07
H3 Africa	ENSG00000110077	MS4A6A	5.88	3.67E-07
H3 Africa	ENSG00000241755	IGKV1-9	5.90	2.63E-07
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H3 Africa	ENSG00000047457	CP	5.99	2.03E-05
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H3 Africa	ENSG00000102879	CORO1A	6.33	2.51E-08
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H3 Africa	ENSG00000184357	H1-5	6.83	2.07E-08
H3 Africa	ENSG00000133110	POSTN	6.87	2.96E-04
H3 Africa	ENSG00000081237	PTPRC	6.90	1.24E-08
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H3 Africa	ENSG00000137673	MMP7	7.32	2.61E-03
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H3 Africa	ENSG00000157890	MEGF11	11.24	1.02E-04
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H3 Africa	ENSG00000166741	NNMT	22.88	6.16E-08
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ERCB	5340	PLG	-4.10	1.05E-04
ERCB	213	ALB	-3.84	1.01E-02
ERCB	2538	G6PC	-3.72	1.71E-04
ERCB	2938	GSTA1	-3.66	8.40E-05
ERCB	26	AOC1	-3.36	4.18E-05
ERCB	51733	UPB1	-3.29	1.09E-05
ERCB	84619	ZGPAT	-3.15	3.30E-05
ERCB	27329	ANGPTL3	-3.11	6.31E-05
ERCB	3242	HPD	-3.10	1.08E-03
ERCB	173	AFM	-3.06	1.12E-04
ERCB	189	AGXT	-2.98	2.86E-03
ERCB	866	SERPINA6	-2.86	9.39E-06
ERCB	350	APOH	-2.85	1.25E-03
ERCB	8564	KMO	-2.82	5.47E-05

ERCB	1950	EGF	-2.77	2.21E-03
ERCB	1551	CYP3A7	-2.75	2.55E-05
ERCB	3816	KLK1	-2.74	4.20E-02
ERCB	1610	DAO	-2.72	2.42E-05
ERCB	1515	CTSV	-2.70	3.74E-05
ERCB	5106	PCK2	-2.70	2.74E-05
ERCB	1586	CYP17A1	-2.69	8.40E-03
ERCB	345	APOC3	-2.67	1.68E-04
ERCB	8529	CYP4F2	-2.63	6.58E-03
ERCB	810	CALML3	-2.60	3.30E-03
ERCB	825	CAPN3	-2.56	5.48E-03
ERCB	7512	XPNPEP2	-2.52	4.12E-04
ERCB	2168	FABP1	-2.51	2.35E-04
ERCB	1733	DIO1	-2.48	8.53E-04
ERCB	51181	DCXR	-2.47	1.65E-04
ERCB	5816	PVALB	-2.47	1.98E-03
ERCB	1800	DPEP1	-2.44	4.27E-03
ERCB	11181	TREH	-2.41	2.27E-03
ERCB	563	AZGP1	-2.40	1.38E-03
ERCB	3248	HPGD	-2.40	1.37E-04
ERCB	51179	HAO2	-2.38	7.28E-04
ERCB	4547	MTTP	-2.36	2.43E-05
ERCB	51268	PIPOX	-2.35	3.53E-05
ERCB	8309	ACOX2	-2.30	3.33E-05
ERCB	2690	GHR	-2.26	8.46E-05
ERCB	51471	NAT8B	-2.25	2.74E-05
ERCB	138046	RALYL	-2.18	3.13E-04
ERCB	1428	CRYM	-2.17	5.87E-05
ERCB	8972	MGAM	-2.14	1.57E-03
ERCB	6569	SLC34A1	-2.14	1.12E-04
ERCB	9970	NR1I3	-2.13	4.60E-03
ERCB	3795	KHK	-2.13	1.09E-05
ERCB	26007	TKFC	-2.13	1.12E-04
ERCB	6555	SLC10A2	-2.12	4.98E-03
ERCB	54886	LPPR1	-2.12	4.04E-04
ERCB	79153	GDPD3	-2.12	5.08E-03
ERCB	8991	SELENBP1	-2.12	5.53E-05
ERCB	4311	MME	-2.12	1.98E-04
ERCB	10974	ADIRF	-2.10	7.47E-04
ERCB	11136	SLC7A9	-2.09	1.57E-03
ERCB	140462	ASB9	-2.09	4.18E-05
ERCB	10840	ALDH1L1	-2.08	9.73E-05
ERCB	6518	SLC2A5	-2.08	4.58E-04
ERCB	1644	DDC	-2.08	5.78E-04
ERCB	58510	PRODH2	-2.07	3.84E-04
ERCB	78989	COLEC11	-2.06	1.05E-04
ERCB	29974	A1CF	-2.05	9.92E-05
ERCB	2819	GPD1	-2.05	5.00E-05
ERCB	2203	FBP1	-2.04	3.13E-04
ERCB	9356	SLC22A6	-2.04	6.39E-04
ERCB	670	BPHL	-2.04	2.55E-05
ERCB	348	APOE	-2.03	4.05E-04
ERCB	9727	RAB11FIP3	-2.03	7.56E-05

ERCB	4329	ALDH6A1	-2.02	5.32E-04
ERCB	10615	SPAG5	-2.02	2.42E-05
ERCB	36	ACADSB	-2.01	5.79E-05
ERCB	55937	APOM	-2.01	5.97E-03
ERCB	10249	GLYAT	-2.01	2.60E-04
ERCB	50486	G0S2	-1.99	6.72E-03
ERCB	64849	SLC13A3	-1.99	1.19E-03
ERCB	416	ARSF	-1.99	2.84E-04
ERCB	51257	MARCH2	-1.98	4.91E-05
ERCB	3273	HRG	-1.97	5.66E-03
ERCB	6583	SLC22A4	-1.97	2.57E-04
ERCB	9429	ABCG2	-1.94	6.53E-04
ERCB	1594	CYP27B1	-1.94	1.87E-02
ERCB	5184	PEPD	-1.93	1.10E-05
ERCB	229	ALDOB	-1.93	3.33E-05
ERCB	3434	IFIT1	-1.93	2.87E-03
ERCB	4835	NQO2	-1.93	1.81E-04
ERCB	10841	FTCD	-1.93	4.03E-03
ERCB	57406	ABHD6	-1.92	4.05E-05
ERCB	1803	DPP4	-1.91	2.47E-04
ERCB	1807	DPYS	-1.91	4.85E-04
ERCB	130	ADH6	-1.91	2.55E-04
ERCB	54923	LIME1	-1.91	3.04E-05
ERCB	55856	ACOT13	-1.90	3.10E-05
ERCB	4482	MSRA	-1.89	1.71E-04
ERCB	1579	CYP4A11	-1.89	8.80E-04
ERCB	8029	CUBN	-1.89	4.80E-04
ERCB	155066	ATP6V0E2	-1.89	1.42E-05
ERCB	22977	AKR7A3	-1.89	6.25E-04
ERCB	1370	CPN2	-1.88	6.39E-04
ERCB	53841	CDHR5	-1.88	9.89E-05
ERCB	55840	EAF2	-1.88	3.30E-05
ERCB	8974	P4HA2	-1.87	2.30E-04
ERCB	462	SERPINC1	-1.86	9.59E-04
ERCB	6470	SHMT1	-1.85	1.77E-04
ERCB	9390	SLC22A13	-1.85	4.78E-04
ERCB	80896	NPL	-1.84	5.03E-03
ERCB	10864	SLC22A7	-1.84	4.40E-03
ERCB	8858	PROZ	-1.84	2.39E-02
ERCB	1468	SLC25A10	-1.83	5.37E-05
ERCB	159963	SLC5A12	-1.83	2.32E-03
ERCB	2053	EPHX2	-1.83	6.18E-04
ERCB	54988	ACSM5	-1.83	1.44E-04
ERCB	26051	PPP1R16B	-1.82	2.17E-03
ERCB	30	ACAA1	-1.82	5.47E-05
ERCB	5745	PTH1R	-1.82	1.22E-04
ERCB	79783	SUGCT	-1.82	1.12E-04
ERCB	8824	CES2	-1.81	2.42E-05
ERCB	6296	ACSM3	-1.81	2.65E-03
ERCB	80339	PNPLA3	-1.81	2.70E-03
ERCB	54981	NMRK1	-1.81	5.00E-05
ERCB	9990	SLC12A6	-1.80	4.33E-04
ERCB	2184	FAH	-1.80	2.89E-04

ERCB	5313	PKLR	-1.79	1.39E-04
ERCB	80036	TRPM3	-1.79	6.04E-04
ERCB	9353	SLIT2	-1.79	1.28E-03
ERCB	10924	SMPDL3A	-1.79	9.60E-04
ERCB	22982	DIP2C	-1.79	6.31E-05
ERCB	1491	CTH	-1.79	1.17E-04
ERCB	635	BHMT	-1.79	3.69E-03
ERCB	23743	BHMT2	-1.78	1.39E-04
ERCB	6456	SH3GL2	-1.78	4.87E-03
ERCB	6514	SLC2A2	-1.78	9.76E-03
ERCB	10714	POLD3	-1.78	1.41E-04
ERCB	249	ALPL	-1.77	1.44E-04
ERCB	9365	KL	-1.77	5.04E-04
ERCB	3827	KNG1	-1.76	4.78E-02
ERCB	28992	MACROD1	-1.76	4.33E-04
ERCB	5860	QDPR	-1.76	8.93E-05
ERCB	4860	PNP	-1.75	3.85E-04
ERCB	957	ENTPD5	-1.75	4.30E-04
ERCB	1244	ABCC2	-1.75	3.85E-04
ERCB	2329	FMO4	-1.74	2.07E-02
ERCB	5827	PXMP2	-1.74	4.85E-04
ERCB	6540	SLC6A13	-1.74	6.25E-04
ERCB	793	CALB1	-1.74	3.41E-02
ERCB	80221	ACSF2	-1.74	6.38E-04
ERCB	443	ASPA	-1.74	2.07E-03
ERCB	445	ASS1	-1.74	6.44E-03
ERCB	54550	NECAB2	-1.73	8.80E-04
ERCB	5641	LGMN	-1.72	2.08E-02
ERCB	8671	SLC4A4	-1.72	7.21E-03
ERCB	26275	HIBCH	-1.71	2.30E-03
ERCB	1662	DDX10	-1.71	2.19E-03
ERCB	83660	TLN2	-1.71	2.63E-03
ERCB	7107	GPR137B	-1.70	2.56E-04
ERCB	4128	MAOA	-1.70	1.25E-03
ERCB	368	ABCC6	-1.69	3.45E-04
ERCB	6482	ST3GAL1	-1.69	1.74E-03
ERCB	79919	C2orf54	-1.69	3.10E-02
ERCB	2710	GK	-1.69	8.90E-05
ERCB	9032	TM4SF5	-1.69	1.12E-04
ERCB	275	AMT	-1.68	4.05E-05
ERCB	3417	IDH1	-1.67	1.53E-04
ERCB	9514	GAL3ST1	-1.67	1.40E-03
ERCB	2542	SLC37A4	-1.67	2.65E-04
ERCB	2160	F11	-1.67	1.02E-03
ERCB	5264	PHYH	-1.67	1.08E-03
ERCB	2348	FOLR1	-1.66	1.56E-03
ERCB	2584	GALK1	-1.66	1.71E-04
ERCB	3373	HYAL1	-1.66	9.75E-05
ERCB	10858	CYP46A1	-1.66	1.38E-03
ERCB	23037	PDZD2	-1.66	2.67E-02
ERCB	224	ALDH3A2	-1.66	4.26E-04
ERCB	2643	GCH1	-1.65	1.34E-03
ERCB	57476	GRAMD1B	-1.65	5.44E-03

ERCB	4137	MAPT	-1.65	6.42E-04
ERCB	10276	NET1	-1.65	5.33E-04
ERCB	10243	GPHN	-1.65	5.09E-04
ERCB	79746	ECHDC3	-1.65	5.47E-05
ERCB	9058	SLC13A2	-1.65	7.65E-04
ERCB	18	ABAT	-1.65	1.11E-02
ERCB	5646	PRSS3	-1.65	6.97E-03
ERCB	55256	ADI1	-1.64	4.22E-03
ERCB	9700	ESPL1	-1.63	3.05E-02
ERCB	64081	PBLD	-1.63	2.99E-04
ERCB	79861	TUBAL3	-1.63	2.10E-03
ERCB	59307	SIGIRR	-1.63	5.15E-04
ERCB	210	ALAD	-1.62	6.39E-04
ERCB	8228	PNPLA4	-1.62	1.21E-03
ERCB	10693	CCT6B	-1.62	6.11E-04
ERCB	4883	NPR3	-1.61	3.04E-03
ERCB	8659	ALDH4A1	-1.61	3.13E-03
ERCB	54494	C11orf71	-1.61	4.58E-04
ERCB	5973	RENBP	-1.60	4.80E-04
ERCB	6780	STAU1	-1.60	8.51E-04
ERCB	9056	SLC7A7	-1.60	3.21E-02
ERCB	3033	HADH	-1.60	4.58E-04
ERCB	5164	PDK2	-1.59	8.93E-05
ERCB	2639	GCDH	-1.59	8.04E-03
ERCB	54762	GRAMD1C	-1.59	3.25E-03
ERCB	1184	CLCN5	-1.59	6.98E-03
ERCB	1657	DMXL1	-1.59	1.05E-02
ERCB	3291	HSD11B2	-1.59	4.82E-02
ERCB	7429	VIL1	-1.59	3.95E-02
ERCB	1962	EHHADH	-1.58	1.07E-03
ERCB	10367	MICU1	-1.58	7.01E-04
ERCB	50	ACO2	-1.58	6.31E-05
ERCB	25895	METTTL21B	-1.58	6.68E-04
ERCB	81932	HDHD3	-1.58	1.78E-04
ERCB	64577	ALDH8A1	-1.57	2.08E-03
ERCB	8802	SUCLG1	-1.57	3.20E-04
ERCB	4094	MAF	-1.57	1.63E-03
ERCB	5053	PAH	-1.57	2.90E-03
ERCB	154661	RUNDC3B	-1.57	1.26E-03
ERCB	5833	PCYT2	-1.57	8.50E-05
ERCB	378708	APITD1	-1.56	6.97E-04
ERCB	2746	GLUD1	-1.56	2.78E-03
ERCB	4745	NELL1	-1.56	4.60E-02
ERCB	57733	GBA3	-1.56	4.03E-03
ERCB	50507	NOX4	-1.56	2.24E-02
ERCB	8416	ANXA9	-1.56	3.51E-03
ERCB	2525	FUT3	-1.56	1.53E-02
ERCB	2528	FUT6	-1.56	1.65E-04
ERCB	58488	PCTP	-1.56	1.45E-03
ERCB	3029	HAGH	-1.55	4.33E-04
ERCB	384	ARG2	-1.55	4.45E-02
ERCB	6097	RORC	-1.55	2.41E-02
ERCB	1573	CYP2J2	-1.55	1.56E-03

ERCB	55224	ETNK2	-1.55	1.94E-02
ERCB	23136	EPB41L3	-1.55	5.08E-04
ERCB	2644	GCHFR	-1.55	4.45E-04
ERCB	55005	RMND1	-1.55	2.29E-03
ERCB	818	CAMK2G	-1.55	2.57E-05
ERCB	2110	ETFDH	-1.55	6.54E-04
ERCB	9380	GRHPR	-1.55	3.85E-04
ERCB	79763	ISOC2	-1.55	1.77E-04
ERCB	48	ACO1	-1.54	6.35E-04
ERCB	79154	DHRS11	-1.54	4.85E-04
ERCB	23341	DNAJC16	-1.54	4.31E-04
ERCB	8528	DDO	-1.54	9.31E-05
ERCB	2254	FGF9	-1.54	1.38E-02
ERCB	29953	TRHDE	-1.54	2.25E-02
ERCB	7070	THY1	-1.54	3.53E-02
ERCB	501	ALDH7A1	-1.53	1.72E-04
ERCB	10110	SGK2	-1.53	1.23E-02
ERCB	51449	PCYOX1	-1.53	1.72E-03
ERCB	5590	PRKCZ	-1.53	7.09E-04
ERCB	4234	METTL1	-1.53	1.91E-04
ERCB	94081	SFXN1	-1.53	2.76E-03
ERCB	55867	SLC22A11	-1.53	3.40E-02
ERCB	6390	SDHB	-1.53	4.51E-04
ERCB	8836	GGH	-1.53	3.14E-02
ERCB	526	ATP6V1B2	-1.52	9.57E-04
ERCB	51171	HSD17B14	-1.52	1.05E-03
ERCB	25864	ABHD14A	-1.52	3.05E-02
ERCB	9027	NAT8	-1.51	1.18E-02
ERCB	26999	CYFIP2	-1.51	8.45E-04
ERCB	10428	CFDP1	-1.51	3.51E-03
ERCB	2731	GLDC	-1.51	6.41E-03
ERCB	4437	MSH3	-1.51	6.91E-04
ERCB	11332	ACOT7	-1.51	2.11E-02
ERCB	2940	GSTA3	-1.51	2.15E-03
ERCB	55244	SLC47A1	-1.51	6.87E-03
ERCB	11082	ESM1	-1.50	1.28E-02
ERCB	5274	SERPINI1	-1.50	2.48E-02
ERCB	64220	STRA6	-1.50	6.97E-04
ERCB	683	BST1	-1.50	9.85E-03
ERCB	6821	SUOX	-1.50	4.85E-04
ERCB	3399	ID3	1.50	1.11E-02
ERCB	8635	RNASET2	1.50	2.35E-03
ERCB	1026	CDKN1A	1.51	1.58E-02
ERCB	3576	CXCL8	1.51	6.81E-03
ERCB	1836	SLC26A2	1.51	1.38E-03
ERCB	1627	DBN1	1.51	9.89E-05
ERCB	11000	SLC27A3	1.51	1.57E-03
ERCB	23670	TMEM2	1.51	3.29E-02
ERCB	100133941	CD24	1.52	1.76E-02
ERCB	8714	ABCC3	1.52	3.34E-02
ERCB	4267	CD99	1.52	8.08E-03
ERCB	1436	CSF1R	1.52	4.34E-02
ERCB	5332	PLCB4	1.52	3.32E-02

ERCB	1364	CLDN4	1.52	3.25E-03
ERCB	8743	TNFSF10	1.52	1.30E-02
ERCB	55353	LAPTM4B	1.52	7.35E-04
ERCB	858	CAV2	1.53	2.69E-02
ERCB	11010	GLIPR1	1.53	3.42E-02
ERCB	56892	C8orf4	1.53	8.32E-03
ERCB	977	CD151	1.53	1.56E-02
ERCB	1307	COL16A1	1.53	1.05E-02
ERCB	81539	SLC38A1	1.53	4.68E-03
ERCB	706	TSPO	1.53	5.15E-04
ERCB	79668	PARP8	1.54	6.85E-04
ERCB	29760	BLNK	1.54	4.83E-02
ERCB	6181	RPLP2	1.54	1.26E-03
ERCB	51809	GALNT7	1.55	2.85E-02
ERCB	2752	GLUL	1.55	9.28E-04
ERCB	4582	MUC1	1.55	1.62E-02
ERCB	11138	TBC1D8	1.55	3.84E-04
ERCB	9289	ADGRG1	1.55	2.67E-03
ERCB	10312	TCIRG1	1.55	4.96E-03
ERCB	10079	ATP9A	1.55	2.95E-02
ERCB	116372	LYPD1	1.55	2.36E-04
ERCB	7357	UGCG	1.55	2.25E-02
ERCB	8323	FZD6	1.55	2.08E-03
ERCB	6422	SFRP1	1.56	5.90E-03
ERCB	3606	IL18	1.56	1.27E-03
ERCB	196	AHR	1.56	4.43E-03
ERCB	55179	FAIM	1.56	1.29E-02
ERCB	837	CASP4	1.56	3.87E-03
ERCB	9957	HS3ST1	1.56	1.58E-04
ERCB	961	CD47	1.56	1.40E-04
ERCB	1848	DUSP6	1.57	5.97E-03
ERCB	10892	MALT1	1.57	4.30E-04
ERCB	64359	NXN	1.57	1.68E-04
ERCB	2995	GYPC	1.57	2.30E-03
ERCB	5216	PFN1	1.57	5.51E-03
ERCB	8496	PPFIBP1	1.57	6.91E-04
ERCB	54504	CPVL	1.57	4.11E-02
ERCB	7097	TLR2	1.57	1.36E-03
ERCB	231	AKR1B1	1.58	2.96E-02
ERCB	1001	CDH3	1.58	1.44E-03
ERCB	3459	IFNGR1	1.58	9.28E-04
ERCB	6387	CXCL12	1.58	4.34E-02
ERCB	1906	EDN1	1.58	5.92E-04
ERCB	3690	ITGB3	1.58	2.95E-04
ERCB	2591	GALNT3	1.59	5.51E-03
ERCB	5315	PKM	1.59	3.06E-03
ERCB	3397	ID1	1.59	5.51E-03
ERCB	10769	PLK2	1.59	1.72E-02
ERCB	55329	MNS1	1.60	4.78E-02
ERCB	57228	SMAGP	1.60	9.60E-04
ERCB	6035	RNASE1	1.60	2.23E-02
ERCB	10627	MYL12A	1.60	6.18E-04
ERCB	60489	APOBEC3G	1.60	2.19E-02

ERCB	5321	PLA2G4A	1.60	2.89E-02
ERCB	1633	DCK	1.61	7.21E-03
ERCB	1192	CLIC1	1.61	2.84E-04
ERCB	3106	HLA-B	1.62	1.05E-02
ERCB	51278	IER5	1.63	8.86E-03
ERCB	9976	CLEC2B	1.63	2.81E-02
ERCB	304	ANXA2P2	1.64	8.51E-04
ERCB	308	ANXA5	1.64	6.51E-04
ERCB	1522	CTSZ	1.64	2.54E-03
ERCB	1513	CTSK	1.64	2.44E-03
ERCB	2239	GPC4	1.65	7.01E-04
ERCB	7351	UCP2	1.66	3.84E-02
ERCB	9450	LY86	1.66	1.91E-02
ERCB	8682	PEA15	1.66	1.12E-04
ERCB	10409	BASP1	1.67	4.55E-02
ERCB	79679	VTCN1	1.67	1.81E-02
ERCB	5873	RAB27A	1.67	1.12E-04
ERCB	2919	CXCL1	1.68	1.10E-02
ERCB	6237	RRAS	1.68	7.54E-04
ERCB	10875	FGL2	1.68	3.71E-02
ERCB	11259	FILIP1L	1.68	7.78E-04
ERCB	9332	CD163	1.68	5.93E-03
ERCB	3134	HLA-F	1.69	6.21E-03
ERCB	79888	LPCAT1	1.69	2.76E-03
ERCB	2950	GSTP1	1.69	2.17E-03
ERCB	5376	PMP22	1.69	2.86E-03
ERCB	55013	CCDC109B	1.70	3.19E-03
ERCB	7991	TUSC3	1.70	3.43E-03
ERCB	10092	ARPC5	1.70	8.93E-05
ERCB	1397	CRIP2	1.70	1.76E-03
ERCB	9076	CLDN1	1.71	2.07E-03
ERCB	165	AEBP1	1.71	3.86E-02
ERCB	730	C7	1.71	9.77E-03
ERCB	1277	COL1A1	1.71	1.37E-03
ERCB	2	A2M	1.72	7.48E-03
ERCB	4070	TACSTD2	1.72	1.95E-03
ERCB	4082	MARCKS	1.73	1.21E-03
ERCB	3123	HLA-DRB1	1.74	4.22E-02
ERCB	6999	TDO2	1.75	2.69E-02
ERCB	203068	TUBB	1.75	9.75E-05
ERCB	23344	ESYT1	1.75	3.30E-05
ERCB	9388	LIPG	1.75	3.84E-04
ERCB	4688	NCF2	1.75	3.55E-03
ERCB	1316	KLF6	1.76	2.29E-02
ERCB	8829	NRP1	1.76	2.16E-04
ERCB	9805	SCRN1	1.76	1.42E-04
ERCB	240	ALOX5	1.77	1.19E-03
ERCB	3109	HLA-DMB	1.77	1.29E-02
ERCB	11031	RAB31	1.77	4.43E-03
ERCB	8531	YBX3	1.77	3.22E-04
ERCB	3880	KRT19	1.77	2.65E-02
ERCB	6284	S100A13	1.78	1.68E-03
ERCB	220	ALDH1A3	1.78	2.57E-04

ERCB	4886	NPY1R	1.78	4.06E-02
ERCB	1675	CFD	1.79	1.95E-04
ERCB	2273	FHL1	1.79	6.45E-03
ERCB	9535	GMFG	1.79	1.10E-02
ERCB	1536	CYBB	1.80	1.38E-02
ERCB	81618	ITM2C	1.80	6.21E-04
ERCB	8519	IFITM1	1.80	1.98E-02
ERCB	330	BIRC3	1.80	2.39E-02
ERCB	5359	PLSCR1	1.80	3.61E-04
ERCB	85236	HIST1H2BK	1.81	4.91E-04
ERCB	10797	MTHFD2	1.81	6.92E-03
ERCB	9124	PDLIM1	1.81	3.84E-04
ERCB	51330	TNFRSF12A	1.81	2.08E-03
ERCB	10376	TUBA1B	1.81	3.25E-03
ERCB	23231	SEL1L3	1.81	5.67E-03
ERCB	3936	LCP1	1.82	1.28E-02
ERCB	1999	ELF3	1.82	3.20E-04
ERCB	960	CD44	1.82	6.39E-04
ERCB	5696	PSMB8	1.82	3.74E-03
ERCB	51155	HN1	1.83	4.33E-04
ERCB	914	CD2	1.84	1.89E-02
ERCB	51338	MS4A4A	1.84	1.78E-04
ERCB	3075	CFH	1.84	1.16E-02
ERCB	29940	DSE	1.84	4.80E-04
ERCB	5880	RAC2	1.84	2.33E-02
ERCB	7940	LST1	1.85	6.60E-03
ERCB	4050	LTB	1.85	2.58E-02
ERCB	834	CASP1	1.86	8.45E-03
ERCB	972	CD74	1.87	8.12E-03
ERCB	2697	GJA1	1.87	2.90E-02
ERCB	5788	PTPRC	1.87	1.05E-02
ERCB	3091	HIF1A	1.87	2.55E-05
ERCB	2014	EMP3	1.88	2.86E-03
ERCB	54997	TESC	1.88	2.89E-04
ERCB	6280	S100A9	1.89	8.31E-03
ERCB	1545	CYP1B1	1.90	4.12E-03
ERCB	9180	OSMR	1.90	2.55E-05
ERCB	83716	CRISPLD2	1.90	4.24E-04
ERCB	26136	TES	1.90	8.93E-05
ERCB	5698	PSMB9	1.91	3.99E-03
ERCB	6648	SOD2	1.91	3.51E-03
ERCB	3108	HLA-DMA	1.92	1.54E-02
ERCB	55843	ARHGAP15	1.93	7.94E-03
ERCB	25816	TNFAIP8	1.93	8.53E-04
ERCB	1365	CLDN3	1.93	1.20E-04
ERCB	5209	PFKFB3	1.93	3.42E-02
ERCB	6659	SOX4	1.93	1.74E-04
ERCB	65108	MARCKSL1	1.93	7.83E-05
ERCB	2213	FCGR2B	1.94	1.50E-02
ERCB	100505650	LOC100505650	1.94	2.55E-02
ERCB	2012	EMP1	1.95	7.09E-04
ERCB	7533	YWHAH	1.95	1.38E-04
ERCB	6678	SPARC	1.95	6.39E-04

ERCB	27075	TSPAN13	1.96	4.31E-04
ERCB	6281	S100A10	1.97	3.45E-04
ERCB	4016	LOXL1	1.97	1.42E-02
ERCB	3685	ITGAV	1.97	1.84E-04
ERCB	2532	ACKR1	1.98	3.74E-03
ERCB	5997	RGS2	1.98	4.77E-04
ERCB	10551	AGR2	1.98	3.57E-02
ERCB	10457	GPNMB	1.99	1.60E-03
ERCB	3428	IFI16	2.00	6.85E-04
ERCB	2207	FCER1G	2.00	5.30E-03
ERCB	2634	GBP2	2.01	5.56E-04
ERCB	3001	GZMA	2.01	2.88E-02
ERCB	3491	CYR61	2.05	1.05E-02
ERCB	10346	TRIM22	2.06	2.54E-03
ERCB	1359	CPA3	2.07	1.93E-02
ERCB	23531	MMD	2.07	4.21E-04
ERCB	390	RND3	2.08	1.42E-04
ERCB	6001	RGS10	2.09	1.72E-03
ERCB	1439	CSF2RB	2.10	5.97E-03
ERCB	7852	CXCR4	2.10	2.56E-03
ERCB	51316	PLAC8	2.11	4.27E-02
ERCB	713	C1QB	2.12	1.76E-02
ERCB	8870	IER3	2.13	1.34E-03
ERCB	1525	CXADR	2.14	4.91E-04
ERCB	3956	LGALS1	2.14	5.51E-03
ERCB	5699	PSMB10	2.14	1.44E-04
ERCB	3689	ITGB2	2.15	6.82E-03
ERCB	29108	PYCARD	2.16	6.78E-04
ERCB	64231	MS4A6A	2.16	6.25E-04
ERCB	1284	COL4A2	2.16	4.50E-04
ERCB	84617	TUBB6	2.17	1.22E-04
ERCB	397	ARHGDIB	2.17	1.57E-03
ERCB	306	ANXA3	2.18	3.81E-04
ERCB	7837	PXDN	2.18	1.10E-04
ERCB	7168	TPM1	2.19	1.42E-05
ERCB	7412	VCAM1	2.20	6.27E-03
ERCB	3575	IL7R	2.20	7.46E-03
ERCB	6277	S100A6	2.20	9.31E-05
ERCB	11326	VSIG4	2.21	2.47E-04
ERCB	10581	IFITM2	2.22	1.71E-04
ERCB	2274	FHL2	2.22	5.56E-04
ERCB	963	CD53	2.23	6.82E-03
ERCB	3113	HLA-DPA1	2.23	1.82E-02
ERCB	712	C1QA	2.23	4.97E-03
ERCB	1634	DCN	2.24	1.85E-03
ERCB	51816	CECR1	2.25	1.83E-03
ERCB	1051	CEBPB	2.25	1.80E-04
ERCB	10095	ARPC1B	2.26	1.65E-04
ERCB	51192	CKLF	2.26	8.06E-04
ERCB	1004	CDH6	2.28	6.85E-05
ERCB	1520	CTSS	2.28	7.90E-04
ERCB	7162	TPBG	2.28	2.33E-05
ERCB	3820	KLRB1	2.30	8.18E-03

ERCB	4256	MGP	2.30	2.30E-03
ERCB	3122	HLA-DRA	2.31	2.65E-03
ERCB	26509	MYOF	2.32	2.42E-05
ERCB	5355	PLP2	2.32	3.41E-05
ERCB	25797	QPCT	2.34	2.65E-03
ERCB	10186	LHFP	2.36	6.39E-04
ERCB	6662	SOX9	2.36	1.81E-04
ERCB	6863	TAC1	2.38	2.51E-02
ERCB	1306	COL15A1	2.38	2.42E-05
ERCB	5552	SRGN	2.39	1.21E-03
ERCB	2205	FCER1A	2.39	2.08E-02
ERCB	6273	S100A2	2.40	5.30E-03
ERCB	6039	RNASE6	2.40	2.02E-03
ERCB	3489	IGFBP6	2.41	1.23E-04
ERCB	1282	COL4A1	2.41	5.47E-05
ERCB	3059	HCLS1	2.41	1.17E-03
ERCB	715	C1R	2.42	1.64E-03
ERCB	10123	ARL4C	2.42	5.15E-04
ERCB	4360	MRC1	2.42	4.05E-04
ERCB	629	CFB	2.43	3.95E-03
ERCB	3394	IRF8	2.43	7.49E-04
ERCB	6282	S100A11	2.43	5.09E-05
ERCB	87	ACTN1	2.44	2.82E-04
ERCB	710	SERPING1	2.46	6.65E-05
ERCB	4609	MYC	2.47	2.13E-05
ERCB	3119	HLA-DQB1	2.48	1.14E-02
ERCB	23643	LY96	2.48	5.66E-03
ERCB	241	ALOX5AP	2.50	1.42E-04
ERCB	7305	TYROBP	2.50	2.27E-03
ERCB	6275	S100A4	2.51	4.85E-04
ERCB	7045	TGFBI	2.52	9.90E-04
ERCB	11167	FSTL1	2.52	2.42E-05
ERCB	1475	CSTA	2.53	5.90E-03
ERCB	26002	MOXD1	2.54	7.03E-04
ERCB	7980	TFPI2	2.55	4.80E-04
ERCB	2123	EVI2A	2.58	1.85E-03
ERCB	6347	CCL2	2.59	3.43E-04
ERCB	9168	TMSB10	2.61	6.32E-05
ERCB	10417	SPON2	2.67	5.15E-04
ERCB	3115	HLA-DPB1	2.70	1.08E-03
ERCB	9510	ADAMTS1	2.74	2.55E-05
ERCB	716	C1S	2.80	1.71E-04
ERCB	5918	RARRES1	2.80	1.17E-03
ERCB	3934	LCN2	2.89	1.71E-04
ERCB	7846	TUBA1A	2.89	8.46E-05
ERCB	7431	VIM	2.93	8.68E-05
ERCB	7058	THBS2	2.94	3.61E-04
ERCB	3371	TNC	2.95	1.72E-04
ERCB	301	ANXA1	2.95	1.12E-04
ERCB	302	ANXA2	2.99	4.05E-05
ERCB	84525	HOPX	3.00	6.54E-04
ERCB	64102	TNMD	3.01	5.23E-04
ERCB	4060	LUM	3.02	4.80E-04

ERCB	1293	COL6A3	3.12	2.40E-03
ERCB	1043	CD52	3.12	1.78E-03
ERCB	962	CD48	3.28	1.38E-03
ERCB	10631	POSTN	3.33	1.55E-03
ERCB	1278	COL1A2	3.34	1.65E-04
ERCB	7805	LAPTM5	3.36	1.38E-04
ERCB	9590	AKAP12	3.42	2.74E-05
ERCB	91353	IGLL3P	3.45	3.97E-02
ERCB	6590	SLPI	3.63	3.44E-05
ERCB	5967	REG1A	3.71	5.68E-03
ERCB	718	C3	3.75	2.22E-03
ERCB	91316	GUSBP11	3.76	6.72E-03
ERCB	6279	S100A8	3.98	2.17E-03
ERCB	1462	VCAN	4.06	1.22E-04
ERCB	10562	OLFM4	4.12	5.64E-03
ERCB	3694	ITGB6	4.27	1.09E-05
ERCB	10406	WFDC2	4.31	8.65E-05
ERCB	7076	TIMP1	4.40	6.85E-05
ERCB	12	SERPINA3	4.40	9.77E-05
ERCB	3512	JCHAIN	4.45	2.07E-03
ERCB	1281	COL3A1	4.54	1.65E-04
ERCB	4316	MMP7	5.58	1.42E-04
ERCB	8842	PROM1	5.58	5.00E-05
ERCB	4069	LYZ	5.91	1.84E-04
ERCB	6372	CXCL6	6.16	2.11E-03
ERCB	3514	IGKC	6.26	6.39E-04
ERCB	4837	NNMT	8.04	9.39E-06
ERCB	4057	LTF	10.97	1.12E-04

Supplementary Table S1b. Predicted Upstream Regulators based on DEG profiles of patients in cluster 3 relative to clusters 1 and 2. Biological upstream regulators from the differential expression profile in each cohort were extracted from Ingenuity Pathways Analysis and ranked according to enrichment p-value for each upstream regulator in a given cohort. Upstream regulators were aggregated and the average rank and activation score was calculated. The top 15 regulators by average rank are shown.

Upstream Regulator	Molecule Type	Average Rank	Average Activation Z-score
TNF	cytokine	1.3	11.03
IFNG	cytokine	2.0	9.58
TGFB1	growth factor	4.3	7.33
IL6	cytokine	4.7	6.49
IL1B	cytokine	6.7	8.84
STAT3	transcription regulator	11.7	5.55
SMARCA4	transcription regulator	12.7	6.75
KRAS	enzyme	14.7	-1.50
Immunoglobulin	complex	15.0	-0.80
IL4	cytokine	15.3	3.68
OSM	cytokine	16.0	7.07
NFkB (complex)	complex	17.7	8.42
STAT1	transcription regulator	18.0	6.71
ERBB2	kinase	21.0	4.26
TP53	transcription regulator	22.0	3.92

Supplementary Table S2. Genes and gene products activated by TNF used to generate the TNF activation score.

Gene	PMID	Gene	PMID	Gene	PMID	Gene	PMID	Gene	PMID	Gene	PMID	Gene	PMID
CCL17	12354417	CHUK	11796489	EMCN	11594763	ICAM1	15963988	ITGB2	12454401	OLR1	11985903	SYTL1	12137562
CCL19	10679062	COX2	10501211	ENG	17389265	ICOSLG	10744980	JUN	17500068	OPTN	10807909	TAP1	1385520
CCL2	9825772	CPNE1	14674885	EPCAM	10867614	IER3	11244505	JUNB	10903323	ORM1	9726030	TFRC	9135559
CCL20	11133838	CR1	2961377	ESAM	15505101	IGFBP1	10070049	KIT	10206577	OSM	12097485	TGFB1	15574511
CCL22	11923841	CRH	12676571	ETS1	11229456	IGFBP3	11971816	KITLG	15579452	PAPP4	16269458	THBS1	11157717
CCL27	11821900	CRHR2	17412781	F3	11058594	IGFBP6	12054123	LAMP3	15963988	PECAMI	7686548	TMP1	15663564
CCL3	12115625	CRP	9726030	FABP2	11329616	IKKBK	11796489	LEP	12032749	PLA2G4A	10930295	TIMP2	15663564
CCL4	9570566	CSF1	3494061	FABP4	12927809	IL10	12414777	LIF	8895217	PLAT	12692009	TLR2	11160251
CCL5	9277410	CSF2	12562880	FANCG	11181053	IL11	10467228	MADCAM1	15483224	PLAU	8601416	TLR4	11160251
CCND1	12444159	CSF3	1700731	FAS	8168998	IL12B	10513808	MAP2K6	9029150	PLAUR	8601416	TNF	16365392
CCR1	9787141	CTSG	11722574	FASLG	10358159	IL13RA2	14652008	MAP3K14	11368442	PLD1	11485559	TNFAIP3	12388275
CCR3	11884459	CX3CL1	11525637	FCER2	7643018	IL15RA	12165497	MAP4K4	16461467	POSTN	15378733	TNFRSF11B	11685652
CCR4	9787141	CXADR	12571626	FGF2	10629075	IL1A	7686496	MEFV	10807793	PRTN3	11415941	TNFRSF1A	11923841
CCR5	9787141	CXCL1	12744776	FGF7	7936642	IL1B	7994029	MIFEP	1372592	PTGES	11029586	TNFRSF1B	12067756
CCR7	15963988	CXCL10	11884459	FOS	3259871	IL1R1	8120407	MMP1	12060661	PTGS2	12576525	TNFRSF21	11753679
CCRL2	15188357	CXCL11	12627325	GADD45B	12388275	IL1RN	8331299	MMP10	8349617	PTHLH	10854575	TNFRSF8	12414777
CD14	1373513	CXCL2	10502561	GDF15	9886240	IL2	12414777	MMP12	17525194	PTPRF	10905491	TNFSF10	12218071
CD1A	11238627	CXCL3	9277410	GFAP	10674496	IL21R	11986233	MMP13	12878172	PTX3	9521058	TNFSF11	15479886
CD4	1921451	CXCL5	9277410	GJA1	12827213	IL2RA	12414777	MMP14	9212749	RB1	15611081	TNFSF15	11911831
CD40	11488834	CXCL6	12744776	GNAI3	12214898	IL3RA	1825289	MMP17	12962706	RELA	9756499	TNIP2	15378733
CD55	10477692	CXCL8	9209275	GPNMB	19320736	IL6	10467228	MMP2	25358651	RPS6KA5	9873047	TP53	10213465
CD58	1354203	CXCL9	12627325	GRIA1	12460558	IL6R	11923841	MMP3	10967046	S100A11	16339570	TRAF1	11978013
CD70	9067541	CXCR4	11160334	GSS	15378733	IL7	10961889	MMP7	9461124	SAA1	1714101	TRAF2	12067756
CD80	9824486	CYCS	12149248	HBEGF	12138120	IL7R	10779425	MMP9	25358651	SELE	8695814	TRAF3	12067756
CD83	15963988	CYLD	18245814	HCK	12237848	INHBA	1417851	MUC1	10867614	SELL	12517920	TRAF4	12067756
CD86	12230943	CYP19A1	12452446	HGF	9397161	IRF1	12713595	MUC5AC	12690113	SELP	10484438	TRAF5	12067756
CDK3	15378733	DDR1	11606478	HIF1A	12808024	ITGA1	12606473	MYC	10200535	SERPINA3	9461605	TRAF6	12067756
CDK4	15611081	DEFB4A	11702237	HLA-A	1354203	ITGA4	12759453	MYLK	15681825	SERPINB2	8824249	TRPC1	12855710
CDKN1A	12795334	DUSP10	24707477	HLA-B	3455781	ITGA5	8006453	NAMPT	11241162	SERPINE1	11402043	TXN	10555039
CEBPA	10211885	E2F1	15611081	HLA-C	1354203	ITGA6	8006453	NFKB1	9756499	SLC11A2	16224057	TYMP	14573775
CFB	7512988	EDN1	10764953	HMOX1	10330231	ITGAL	10198263	NFKB2	9529131	SLC3A2	2318252	VCAM1	10484438
CFH	1690734	EFNA1	11278471	HP	9097927	ITGAM	12747235	NFKBIA	12580918	SLC7A2	11742806	WNT5A	12165812
CFLAR	12861043	EGFR	10077640	HPSE	16384929	ITGAX	1921451	NLRP3	14662828	SMAD7	10652273	XIAP	16219905
CHRM2	15671275	EGR1	1370482	HSP90B1	15378733	ITGB1	9565575	NOS2	10601128	SOD2	9114748	ZFP36	10763822

Supplementary Table S3. Clinical characteristics of North American Nephrotic Syndrome Study Network (NEPTUNE) participants with biopsies used for single-nucleus RNA-seq.

	TNF High (N = 5)	TNF Low (N = 5)
Age mean (sd)	44.6 (22.6)	20.8 (17.4)
Sex (male:female)	2:3	3:2
eGFR mean (sd)	44.26 (22.47)	115.53 (44.01)
UPCR median (IQR)	5.05 (3.62, 5.8)	0.96 (0.86, 1.03)
FSGS	4	4
Cluster 3	5	0
TNF Score mean (sd)	0.13 (0.02)	0.081 (0.01)