# Supplementary Material for:

## Epigenetic Loss of RNA Methyltransferase NSUN5 in Glioma Targets Ribosomes to Drive a Stress Adaptive Translational Program

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## SUPPLEMENTARY METHODS

### Cell lines

Human glioma cell lines DBTRG-05MG, MO59J, A172 and LN229 were purchased from the American Type Culture Collection; CAS-1 was obtained from The Biological Bank of the IRCCS Azienda Ospedaliera Universitaria San Martino – IST Istituto Nazionale per la Ricerca sul Cancro; and KS-1 was purchased from the Japanese Collection of Research Bioresources Cell Bank. Cell lines were all cultivated in Dulbecco's Modified Eagle's Medium (DMEM) supplemented with 10% v/v fetal bovine serum (FBS) (Innovative, Novi, MI), and 1% v/v penicillin/streptomycin (Gibco). Human grade III glioma cell lines SW1088 and BT142 mut/- were purchased from the American Type Culture Collection and MOG-G-CCM was purchased from Sigma-Aldrich. These cell lines were cultivated regarding to suppliers recommendations. All cell lines were authenticated by short tandem repeat profiling (LGS Standards SLU) and tested for the absence of mycoplasma.

### DNA methylation analyses

DNA methylation status of the 5'-end promoter-associated CpG island of the NSUN5 gene was determined by bisulfite genomic sequencing and DNA methylation microarrays. DNA was extracted from cell lines and brain white matter pellets by the addition of 4.5 mL of lysis buffer (10 mM Tris, 5 mM EDTA, 100 mM NaCl, pH 8), and re-suspended with 500 µL of SDS 10% and 50 µg of proteinase K at 10 mg/mL. Samples were incubated overnight at 37°C. After addition of 2.5 mL of NaCl 5M and vortex, samples were centrifuged at 4000 RPM during 15 minutes. Upper phases were collected and 5.6 mL of isopropanol were added to precipitate DNA. The DNA was recovered and washed by ethanol 70%. After re-suspension in water, all DNA samples were quantified by NanoDrop. For the 9 cell lines and the brain white matter, we performed bisulfite conversion of 500 ng of genomic DNA using an EZ DNA Methylation Gold kit (ZymoResearch, Orange, CA, USA). For bisulfite genomic sequencing primer sequences please refer to the Key Resources Table. Primers (from Sigma-Aldrich) were designed by MethPrimer (Peking Union Medical College Hospital (PUMCH), Chinese Academy of Medical Sciences). After PCR, the amplicon product (purified using a Macherey-Nagel purification kit) was ligated into pGEM®-T Easy vector (Promega) overnight at 16°C. *E. coli* was transformed with the ligated vectors on ice during 30 minutes, followed by thermal shock at 42°C one minute and 2 minutes on ice. After 45 minutes at 37°C with vortex, bacteria culture was centrifuged 4 minutes at 4000 RPM and the pellet was plated in 10 cm LB plus ampicillin petri dishes (supplemented with X-Gal and IPTG) and incubated overnight at 37ºC. Positive white colonies were grown in 1.5 mL of LB medium with ampicillin incubated overnight at 37°C. A minimum of eight single clones were extracted using the Nucleospin® 96 Plasmid kit (Macherey-Nagel) and the products were submitted to sequencing PCR using BigDye Terminator V3.1 cycle sequencing kit (Applied Biosystems) and sequenced in a Hitachi 3730 DNA sequencer (Applied Biosystems). Results were analyzed using BioEdit software and methylated cytosines were mapped using BSMap software. NSUN5 CpG methylation status in pediatric gliomas was determined by pyrosequencing using

primer sequences shown in the Key Resources Table**.** Bisulfite converted DNA (200 ng) was used for hybridization on the HumanMethylation450 or Infinium MethylationEPIC BeadChip (Illumina). Raw fluorescence intensity values were normalized with Illumina Genome Studio software (V2011.1) using 'control normalization' with background correction. Normalized intensities were then used to calculate DNA methylation levels (beta values).

## Expression Analyses

For real time quantitative reverse transcription PCR experiments, total RNA extraction was performed on three independent cellular pellets from each cell line, or one sample of brain white matter, using the SimplyRNA kit (Promega) on a Maxwell RSC device (Promega). The extracted RNA was stored at -80°C. Three µg of DNase treated RNA were converted to cDNA using the ThermoScript RT-PCR system (ThermoFisher) with oligo(dT) primers. Quantitative PCR was performed using SYBR® Green PCR Master Mix (ThermoFisher) on a QuantStudio5 (AppliedBiosystems) with QuantStudio™ Design&Analysis Software v1.3.1. Primers for qPCR are listed in the Key Resources Table. Reactivation treatments with the demethylating agent 5-aza-2′-deoxycytidine (AZA; Sigma) were performed at 0.5 µM for 72 h, beginning with confluence at 60% approximately. RNA extraction and RT-PCR were carried out as described before. For immunoblotting assays, we extracted cell pellets and brain white matter samples with 300 µL of RIPA buffer (50 mM Tris pH 7.5, 150 mM NaCl, 1 mM EDTA and EGTA, 1% NP40, 0.5% of sodium deoxycholate, 0.1% of SDS) containing protease and phosphatase inhibitors cocktail cOmplete™ (Roche) for 30 min on ice, followed by centrifugation at maximum speed for 20 min at 4ºC. Protein levels were quantified using Pierce™ BCA protein assay kit (Thermo Scientific) following manufacturer's recommendations. 80 µg of total cellular proteins were loaded per lane of SDS-polyacrylamide gels. Proteins were transferred to nitrocellulose membranes, then membranes were blocked in 5% non-fat dry milk in Tris-buffered saline supplemented with Tween20 (TBS-T, Biorad) and incubated with primary antibodies diluted in milk for 60 min at RT or overnight at 4ºC. Membranes were incubated with horseradish peroxidase-conjugated secondary antibodies for 1 hour before developing with enhanced chemiluminescence (ECL, Biorad). Antibodies used in this study are described in the Key Resources Table.

## NSUN5 transfection

The cDNA sequence of NSUN5 containing a FLAG-Tag in the amino-terminal end was cloned into the pLVX-IRES-ZsGreen1 expression plasmid (Clontech Laboratories) between the EcoRI and XbaI restriction sites. Lentiviruses containing this construct were produced by cotransfecting HEK-293T cells with the recombinant pLVX-IRES-ZsGreen1, psPAX2 (Addgene) and pMD2.G (Addgene), using jetPRIME® Transfection Reagent (Polyplus Transfection) and following the supplier instructions. The transfection cocktail was removed after 6h and replaced by fresh medium. After 72h, viral containing supernatant was collected, 0.45 µM-filtered and stored at 4 ºC before infection. The recombinant product was randomly inserted by lentiviral transduction into the genome of A172 and LN229 glioma cell lines. After 5 passages, the green fluorescent cells were sorted by FACS and cultured in DMEM medium supplemented with 10% FBS. For primers sequences please refer to the Key Resources Table.

## NSUN5 mutated transfection

The cDNA of NSUN5 from the DBTRG-05MG cell line was used to incorporate 4 specific point mutations at the 3 SAM-binding sites and the active site. The point mutations were D258L, R263L, D305L and C359V, and for every substituted amino acid the most frequent nucleotide codon was chosen. We used PCR fusion method with 3 different pairs of primers, the first ones including mutations at positions 258 and 263 (for sequences please refer to the Key Resources Table). The mutated NSUN5 was cloned into the pLVX-IRES-ZsGreen1 with EcoRI and SpeI, tagged with FLAG. Another mutated construct was cloned into pLVX-IRES-ZsGreen1 changing GFP by TOMATO. The corresponding tdTomato NSUN5 wild type was done and was tagged with HA.

## NSUN5 depletion

Four different gene-specific short hairpin RNA molecules (shRNAs) for NSUN5 mRNA were designed and transduced into NSUN5 expressing glioma cell lines (for sequences please refer to the Key Resources Table). shRNA against the MSS2 yeast mRNA (not present in mammals) was used as scramble (control). All shRNA molecules were ligated into pLVX-shRNA2-ZsGreen plasmid (Clontech). 10ug of each encoding plasmid was mixed with 7.5µg of ps-PAX2 and 2.5µg of PMD2.G plasmid (Addgene), using jetPRIME® Transfection Reagent (Polyplus Transfection). Upon 10 min of RT incubation, the transfection mix was added dropwise on a 10 cm culture plate containing HEK293-TLV lentiviral packaging cells at 80% confluence. After 72h, medium with high-titer lentiviral particles was 0.45µm filtered. NSUN5 expressing glioma cell lines were cultured in virus containing medium for 24 h. After 5 passages, the green fluorescent cells were sorted by FACS and cultured in DMEM medium supplemented with 10% FBS.

## Brain tumor xenografts

*IVIS images*: All mouse experiments were approved and performed in accordance with the guidelines of the Institutional Animal Care Committee of the Vall d'Hebron Research Institute. 1 x $10^6$ cells were stereotactically inoculated into the corpus striatum of the right brain hemispher of 9-week-old athymic mice Nude-Foxn1nu mice (Charles River Laboratories). In order to estimate the size of tumors the luciferase activity of inoculated tumor cells was quantified in a Xenogen-CCD camera from IVIS. All mouse experiments were approved by and performed according to the guidelines of the Institutional Animal Care Committee of the Vall d'Hebron Research Institute in agreement with the European Union and national directives. 3x$10^5$ A172 and LN229 (EV or NSUN5) cells were stereotactically inoculated into the corpus striatum of the right brain hemisphere (1mm anterior and 1.8mm lateral to the lambda; 2.5 mm intraparenchymal) of 8-week-old Balb/c nude mice (Janvier Labs). We inoculated 7 animals per group. Tumor progression was monitored by bioluminescence measurements using the Xenogen IVIS® Spectrum. Mice were euthanized at day 17 after inoculation.
*Xenografts growth:* All mouse experiments were approved and performed in accordance with the guidelines of the Institutional Animal Care Committee of the Bellvitge Biomedical Research Institute. For tumor growth into the brain, 3 x$10^5$

or 1,5 x$10^6$ cells, respectively for LN229 (EV or NSUN5) and DBTRG-05MG (Scramble or ShNSUN5) were inoculated into the corpus striatum of 9 (Scramble and ShNSUN5) or 10 (EV and NSUN5) mice for each cell line individually.

**Subcutaneous tumor xenografts**

Five-week-old male athymic nu/nu mice (Charles River, Wilmington, MA, USA), housed under specific pathogen-free conditions, were used in this study. In order to assess tumor growth, 2x$10^6$ LN229-EV, LN229-NSUN5 or 4x$10^6$ DBTRG-05MG-Scramble, DBTRG-05MG-ShNSUN5 glioma cells were subcutaneously injected in the flank of 8 animals for LN229 and 8 others for DBTRG-05MG. Each mouse had in one flank a cell line and in the opposite flank the respective construct. Tumors were measured in two dimensions using calipers, and volume was calculated using the formula: V ($mm^3$) = (L × W2)/2. Mice were sacrificed 28 days after injection, and tumors were then excised and weighed.

**NSUN5 Immunoprecipitation and RT-qPCR.**

Immunoprecipitations were carried out from total LN229 extracts (transfected with empty vector or NSUN5) overnight with 10 µl of Anti-Flag M2 Magnetic Beads (Sigma) in RIP buffer (150mM KCl, 25mM Tris pH7.4, 5mM EDTA, 0.5mM DTT, 0.5% NP40, protease inhibitors). Beads were then washed three times with RIP buffer, and 10% of beads were boiled in Laemmli buffer 1x and loaded on a protein gel to check immunoprecipitation efficiency. The pulled-down RNA from the remaining 90% of beads was extracted by adding 1 mL of TRIzol® Reagent (ThermoFisher). After phenol extraction and isopropanol precipitation, a DNase treatment step was performed, and the final pellet was resuspended in water. Equal amounts of each sample were then retrotranscribed and analyzed by quantitative PCR (Applied Biosystems 7900HT Fast Real Time PCR System). The equivalent amount of input RNA was processed in parallel to estimate pull-down efficiency.

**RNA methylation analyses**

Total RNA or cytoplasmic and nuclear RNA were extracted by SimplyRNA kit (Promega) on a Maxwell RSC device (Promega) or using PARIS™ kit (Ambion® PARIS™ system), respectively.

*Amplicon-specific detection of cytosine modifications:* Bisulfite conversion of cellular RNA was performed with the Methylamp RNA Bisulfite Conversion Kit (EpiGentek) following the manufacturer's instructions. Ten µL of the eluted bsRNA were converted into cDNA using the ThermoScript RT-PCR system (ThermoFisher) with random hexamer primers prior to PCR amplification. PCR primers for the sequences of interest are available in the Key Resources Table. The amplicon PCR band was purified, ligated into pGEM®-T Easy vector (Promega), transformed into *E. coli* and individual clones sequenced as described in **DNA methylation analyses**. Clones with uncompleted conversion (cytosines other than C3782 unconverted into thymines) were discarded.

*Transcriptome-wide bisulfite RNA sequencing (bsRNA-seq):* Three independent biological replicate samples of cellular RNA from NSUN5-transfected LN229 glioma cells and empty vector-transfected cells were prepared. RNA was isolated using the Maxwell RNA purification Kit, then DNase treated using Turbo DNase

(Ambion) and phenol/chloroform extracted using phase-lock tubes and ethanol precipitated. RNA quality was evaluated on Bioanalyzer Nano Chips (Agilent). 10ug of each RNA sample was spiked with 10ng each of two Luciferace *in vitro* transcripts to assess bisulfite conversion efficiency across the replicates. rRNA content of the samples was reduced using the Ribo-Zero rRNA Removal Kit (Illumina) prior to bisulfite conversion as previously described (Squires et al., 2012). Samples were ethanol-precipitated, re-suspended in water and the efficiency of rRNA depletion checked using the Bioanalyzer. Bisulfite conversion was carried out as described previously (Sibbritt et al., 2016) and the fragmentation of the RNA analyzed using the Bioanalyzer. Samples were supplemented with an equal volume of “Elute, Prime, Fragment High Mix” (Illumina) and incubated at 70°C for 3 minutes. Libraries were then prepared according to Illumina TruSeq Stranded Total RNA protocol and sequenced on an Illumina Hiseq2500 instrument in 2x100bp paired end mode using the Illumina HiSeq Rapid SBS kit v2. The fastq sequence files were quality checked and preprocessed with FastQC and BBDUK software (https://sourceforge.net /projects/bbmap) in order to remove the adapter sequences and low quality reads. The preprocessed reads were mapped with Hisat2-2.0.4 software (https://ccb.jhu.edu /software/hisat2/index.shtml) against the human converted transcriptome corresponding to Hg19 build. Only uniquely mapped reads were considered for the general analysis. For a specific rRNA analysis we mapped the reads against a sequence subset including RefSeq rRNA sequences corresponding to 28S, 18S, 5S and 5.8S. We used the BS-RNA software (http://bs-rna.big.ac.cn/) in order to obtain the m5C methylation value for each sample from the mapped reads. We obtained the methylation data for all cytosines per sample in both strands from which we selected only cytosines with data for all the samples. Furthermore, we filtered the data without reads present in half the samples. Finally, we normalize the read counts and obtained the cytosines differentially methylated between empty vector and NSUN5 transfected conditions by using the R package limma (Parker et al., 2017). We selected the cytosines with a multiple correction adjusted pvalue < 0.05, a logFC > 0 and a methylation difference over 0.33.

**Reverse Phase-High Pressure Liquid Chromatography (RP-HPLC) and mung bean nuclease protection assay**

Extraction of total RNA from the glioma cell lines was performed using phenol/chloroform to obtain 1mg. RP-HPLC analysis as well as the mung bean nuclease protection assay were performed as described previously (Yang et al., 2016). Synthetic deoxyoligonucleotides complementary to the specific sequence of C3765-3812 of human 28S rRNA were used for protection by hybridization to the rRNA. After digestion by mung bean nuclease (MBN Kit: M0250S, NEB) and 0.05 mg/ml RNase A (Sigma-Aldrich) purification of protected fragments from 8 M urea-PAGE (13%) was carried out by passive elution with 0.3 M NaAc by rotation at 4 °C overnight. Precipitation of eluted rRNA fragments was done using 100% EtOH. Isolated fragments were digested with nuclease P1 and bacterial alkaline phosphatase (Sigma Aldrich) and subsequently the nucleosides were analyzed by RP-HPLC on a Supelcosil LC-18-S HPLC column (25 cm × 4.6 cm × 5 µm) equipped with a precolumn (4.6 cm × 20 mm) at 30 °C on an Agilent 1200 HPLC system.

**Molecular dynamics simulations**

The Human 80S ribosome was taken from the high-resolution (2.9 Å) cryoEM structure with PDB id 6EK0 (Natchiar et al., 2017). Since the modelling of the complete 80S ribosome with all the modified bases reported (Natchiar et al., 2017) is not accessible with the current state-of-the-art methods available in the field (Šponer et al., 2018, Dans et al., 2018), we focused on a region of the ribosome 30 Å around 5mC3782, which comprise part of the 28S subunit (model labelled r30A5mC). The region contained 263 RNA residues, 21 amino acids belonging to the α-helix of the 60S ribosomal protein L41, and 13 Mg2+ ions. Several RNA chains of the 28S subunit were cut by our selection, consequently the Cartesian coordinates of all atoms in the mentioned region were fixed in the space as found experimentally by means of a harmonic potential of 5 KcalÅ2. The RNA residues 3750-3793 and 3807-3816 from the 28S subunit, the residues 15 to 24 from protein L41, and 8 Mg2+ (labelled 4405, 5186, 5188, 5215, 5252, 5299, 5632, 5639 in 6EK0) were completely free to move during the Molecular Dynamics (MD) simulation. The r30A5mC model also contained 10 different types of modified bases. PSU, 5MC, and 7MG were treated with the available parameters (Aduri et al., 2007), while OMC was converted to C, B8H to 5MU, A2M to M2A, OMG to G, B8W to G, UR3 to 3MU, and MA6 to 6MA. The model was then minimized in vacuo, neutralized (with 164 Na+ ions), solvated (with explicit waters and 0.4 M of added Na+Cl-), and minimized in solution with positional restraints on the solute using our well established multi-step protocol (Pérez et al., 2007, Dans et al., 2016). To produce the final models, the minimized structures were thermalized to 298ºC at NVT, and then simulated during 60 ns by means of Molecular Dynamics simulations at NPT (P = 1 atm). The first 10 ns of the simulations were considered as an equilibration step and were discarded for further analysis. The system labelled r30AC was built from r30A5mC by replacing 5mC3782 by C3782 (i.e. removing the methyl group).

To treat the L41 protein we used the ff12SB force field (Hornak et al., 2006), which is compatible with the modified RNA bases developed by Santa Lucia and co-workers (Aduri et al., 2007). The RNA was represented using parmbsc0 (Pérez et al., 2008) with OL3 correction (Zgarbova et al., 2011), and the entire system was surrounded by a truncated octahedral box of ~20,000 TIP3P water molecules (Jorgensen et al., 1983), applying Dang's parameters on ions (Smith et al., 1994). Ions were initially placed randomly, at a minimum distance of 5 Å from the solute and 3.5 Å from one another. All systems were simulated using the Berendsen algorithm (Berendsen et al., 1984) to control the temperature and the pressure, with a coupling constant of 5 ps. Center-of-mass motion was removed every 10 ps to limit build-up of the translational kinetic energy of the solute. SHAKE (Ryckaert et al., 1977) was used to keep all bonds involving hydrogen at their equilibrium values, which allowed us to use a 2 fs step for the integration of Newton equations of motion. Long-range electrostatic interactions were accounted for by using the Particle Mesh Ewald method (Darden et al., 1993) with standard defaults, and a real-space cut-off of 10 Å. All simulations were carried out using the PMEMD CUDA code module (Salomon-Ferrer et al., 2013) of AMBER 18 (Case et al., 2018), and analysed with CPPTRAJ (Roe et al., 2013), VMD 1.9.3 (Humphrey et al., 1996), and PYMOL 2.2.3 (Schrodinger et al., 2018).

**Global determination of protein synthesis**

Overall protein synthesis in the different experimental conditions was assessed by the incorporation of O-propargyl-puromycin (OP-Puro) into nascent proteins (Blanco et al., 2006) using the Click-iT® OPP Reagent (Thermo Fisher) and [3H] leucine incorporation (Kirchman et al., 1985). Cells were labeled for nascent protein synthesis using the Click-iT® OPP Reagent (Thermo Fisher, catalogue no.C10458) according to manufacturer's instructions. Briefly, following a hydrogen peroxide treatment, cells were incubated with 18 µM OPP Reagent in cell medium for 1 h. Cells were then fixed with 3.7% paraformaldehyde in PBS for 15 min, and permeabilized in PBS supplemented with 1% fetal bovine serum (Invitrogen) and 0.1% saponin (Sigma-Aldrich) for 5 min at room temperature. To conjugate OP-puro to a fluorochrome, an azide-alkyne cycloaddition was performed using the Click-iT® Plus OPP Protein Synthesis Kit (Thermo Fisher Scientific) with Alexa Fluor-647. After the 30 min reaction, cells were washed twice in PBS, and further stained for DAPI. Slides were mounted for imaging in glycerol supplemented with Mowiol 4-88 (Calbiochem catalogue no. 475904). Fluorescence images were acquired using a confocal microscope (Leica TCS SP5) at 1,024 × 1,024 dpi resolution. All the images were further processed with Fiji (ImageJ) software. To quantify protein synthesis rates, the fluorescence intensity of the OP-Puro signal was thresholded (mean OP-Puro = Integrated density/area) and divided by the total number of cells per image. The mean of OP-Puro incorporation was averaged from several images (n=10) per condition. For 3H-leucine incorporation, cells at 60-70% confluence were incubated with 10 mCi/mL 3H-leucine (Perkin Elmer, catalog no. NET116600) for 30 min. Cells were washed with phosphate-buffered saline (PBS), and lysed in RIPA buffer (50 mM Tris-HCl pH 8, 150 mM NaCl, 1% Triton X-100, 0.5% sodium deoxycholate, 0.1% SDS, 1 mM dithiothreitol (DTT)). The lysates were cleared by centrifugation and incubated with cold 10% trichloroacetic acid (TCA) for 10 min. TCA-insoluble proteins were then washed twice with 5% TCA, solubilised with 0.1 M NaOH, and analyzed using a liquid scintillation counter (Tri-Carb 2100TR, Perkin Elmer). Results were normalized to protein concentration quantified using Pierce™ BCA protein assay kit (Thermo Scientific).
To induce oxidative stress, 100µM $H_2O_2$ was added to the cell culture medium 16h before OP-Puro procedure. Nutrient deprivation medium consisted in DMEM medium with low Glucose, and no L-glutamine, Phenol Red and HEPES (ThermoFisher catalogue no. 11054020), supplemented with 10% dialyzed FBS, 1X GlutaMAX (ThermoFisher catalogue no.35050061) and 1mM Sodium Pyruvate (ThermoFisher catalogue no.11360070). Cells were washed three times with PBS prior to the addition of the nutrient deprivation medium and were cultured for 16h before OP-Puro procedure.

**Assessment of Translational Efficiency, RNA-sequencing (RNA-seq) and Ribosomal profiling (Ribo-seq).**

Translational efficiency for each RNA was determined by normalizing the ribosome profiling deep sequencing data (Ribo-seq) to transcript length and total transcript abundance according to deep sequencing RNA transcriptome (RNA-seq) data, as previously described (Wolfe et al., 2014). For RNA-seq, 2-3 replicates of RNA of each cell line A172 EV, A172 NSUN5-transfected, LN229 EV, LN229 NSUN5-transfected with and without stress stimulus, and DBTRG-05MG Scramble, shNSUN5 depleted without stress stimulus were sent to CNAG-CRG (Barcelona). RNA quality was controlled by QUBIT RNA BR Assay kit (Thermo Fisher). For both RNA-Seq and Ribo-Seq, libraries were prepared with

TruSeq stranded mRNA kit (Illumina) and sequenced in paired-end mode with a read length of 2x100bp on a HiSeq2000 (Illumina) following the manufacturer's protocol. An average of 70 to 93 million pairs of 100-bp paired-end read per sample was generated. After adapter trimming and quality score calculation, an average of 64 to 87 million reads were left on each sample. Reads showed a minimum quality of Q30 in at least 95% of base calls. Ribo-seq was performed following a modified version of the original protocol (Ingolia et al., 2012). A minimum of five replicates was performed for each sample (empty vector versus NSUN5 cells; Scramble versus shNSUN5 cells). Briefly, cells were grown until confluence, and then washed twice with PBS. An in-dish lysis was performed [20 mM Tris-Cl (pH 7.4), 150 mM NaCl, 5 mM MgCl2, 1 mM DTT, 100 µg/ml cycloheximide, 1% Triton X-100, 25 U/ml of Turbo DNase I (Thermo Fisher Scientific)]. Lysates were further triturated by passing them ten times through a 26-G needle and centrifuged at 20,000 g. for 10 min to remove nuclei and debris. Supernatant was digested with RNaseI (100 U/µl, Thermo Fisher Scientific) for 45 min at room temperature. Digestion was blocked with SUPERase*In (Invitrogen) and lysates were layered on a 1M sucrose cushion and separated by ultracentrifugation at 80 000 rpm in a TLA110 rotor for 204 min at 4ºC. Pellets were resuspended in Qiazol, and RNA was purified using the miRNeasy kit (Qiagen) according to manufacturer's instructions. Size selection of footprints with a length of 26–34 nucleotides was performed on 15% TBE-urea gels (Invitrogen). Footprints were 3′-dephosphorylated with a T4 polynucleotide kinase (New England Biolabs). 3′-adenylated and 5′-phosphorylated adapters suitable for Illumina RNA sequencing were ligated to the RNA fragments. RNA was reverse transcribed at 50°C for 1 h (SuperScript III cDNA synthesis kit, Invitrogen), followed by rDNA depletion by subtractive hybridization using oligonucleotides (as stated in the original protocol). Complementary DNAs were PCR amplified using a different primer index per sample. The libraries were sent to Macrogen (Seoul, Rep. of Korea).

For alignment and quantification of RNA-seq and Ribo-seq, read quality and adapter sequence presence was checked with FastQC (version 0.11.4) software (http://www.bioinformatics.babraham.ac.uk/projects/fastqc). Sequencing adapters were removed from the 5' and 3' ends of the reads using BBDUK (http://jgi.doe.gov/data-and-tools/bbtools/bb-tools-user-guide/bbduk-guide/).
RNA-Seq reads were aligned to the human reference transcriptome (GRCh37 build) using HISAT2 v.2.0.5 (Pertea et al. 2016). The alignments were then assembled with Stringtie v.1.3.3b (Pertea et al., 2015). The average of mapped reads per sample was 98%. RNA (RNA-seq) and ribosome-protected RNA (Ribo-seq) count tables were calculated from the StringTie output, with PrepDe.py. Differential gene expression at transcript level was analyzed using the R programming language (version 3.4) and DESeq2 package (version 1.16.1, Love et al., 2014). In the case of RNA seq data, DESeq2 default options were used. For Ribo-seq analyses, default options were turned off and an independent filtering was applied by using the Riborex R package as well as a minimum count transcript variance greater than 0 or 1, depending on the dataset quality. The cut-off for considering a transcript significantly up-expressed or down-expressed in the RNA-Seq samples was padj < 0.01 and an absolute log2-FoldChange>= 2. The latter values were calculated by collapsing data into gene symbols. For Ribo-seq data the cut off was pvalue <= 0.01 and a log2-FoldChange>= 0.5. Translational changes in genes were defined as differentially expressed, based on the ribosome profiling data. To analyze Ribo-seq ratios with expression and

identify differential translation the R package RiboDiff was used. This package compares the relative differences in the ratio of RIBO-seq mRNA fractions to total mRNA expression levels, translation efficiency was calculated (TE) (absolute fold change in TE > 0.5; pvalue<0.01). The final TE gene candidates were selected from the intersection of transcripts without RNA abundance differences, transcripts with significant less ribosome occupancy in LN229 NSUN5 cells and proteins significantly down regulated in NSUN5 transfected cells by SILAC experiments. For DBTRG-05MG cells, the final TE gene candidates were selected from the intersection of transcripts without RNA abundance differences and transcripts with significant less ribosome occupancy in DBTRG-05MG Scramble cells.

**Gene functional enrichment analysis and sequence motifs recognition**

Gene sets were used to perform a gene set overrepresentation analysis over the GO biological processes and KEGG pathways included in the public GSEA signature database collections and the DAVID web service (https://david.ncifcrf.gov/). The top gene clusters resulting from the hypergeometric test with a FDR adjusted p-value < 0.05 were finally considered. 5'UTR DNA sequences from selected genes were used to perform a motif recognition analysis. RegRNA 2.0 (http://regrna2.mbc.nctu.edu.tw/) and FIMO software from MEME suite 4.12.0 (http://meme-suite.org/index.html) were used to perform CERT, TOP, PRTE and uORF motif scanning. IRESPred web service (http://196.1.114.46:1800/IRESPred/home.html) and Infernal software (http://eddylab.org/infernal/) were used to identify IRES motifs. G4-quadruplexes were identified by using QGRS Mapper software (http://bioinformatics. ramapo.edu/QGRS/index.php).

**Stable isotope labeling by amino acids in cell culture (SILAC)**

SILAC was performed as previously described (Lopez-Serra et al., 2014). Samples were searched against a SwissProt database containing entries corresponding to Human (version of April 2016) a list of common contaminants and all the corresponding decoy entries. Resulting data files were filtered for FDR <1%. In more detail, SILAC labeling was performed by using SILAC-Lys8- Arg10-Kit media (Silantes). LN229 EV and LN229 NSUN5 transfected cells were grown during 10 days in heavy medium (Lys 8- Arg 10) or light medium (Lys 0 – Arg 0), respectively. After labeling, protein extraction was carried out by using RIPA buffer. Protein levels were quantified by Lowry and mixed in 1:1 ratio. Samples were further processed by the FASP method followed by alkylation with iodoacetamide and o/n digestion by Lys-c and trypsin over day at 37°C in 50 mM ammonium bicarbonate. Peptide mixes were analyzed using an OrbitrapFusion Lumos mass spectrometer (Thermo Scientific, San Jose, CA, USA) coupled to an EasyLC (Thermo Scientific (Proxeon), Odense, Denmark). All data were acquired with Xcalibur software v3.0.63. Proteome Discoverer software suite (v2.0, Thermo Fisher Scientific) and the Mascot search engine (v2.5, Matrix Science (1)) were used for peptide identification and quantification. Samples were searched against a SwissProt database containing entries corresponding to Human (version of April 2016) a list of common contaminants and all the corresponding decoy entries. Resulting data files were filtered for FDR <1%. Only peptide intensities corresponding to master protein category were used. The

ratios from average peptide intensities were calculated and normalized for each protein. Finally, the ratio differences between EV and NSUN5-transfected groups were calculated by applying a Student's t-test. Significant up and down-regulated proteins (p-value < 0.05) were selected.

## Deoxynyboquinone and isobutyl-Deoxynyboquinone drug assay

IC50 studies in the glioma cell lines upon drug exposure were performed using the sulforhodamineB (SRB) assay. Briefly, 48h after exposure to nine increasing concentrations of deoxynyboquinone (2nM to 15µM) or isobutyl-Deoxynyboquinone (0.7nM to 5µM), culture medium was removed and 100µL of 10% trichloroacetic acid was added to the wells in order to fix cells for one hour at 4ºC. Cells were then washed twice with distilled water and stained with 100µL of 0.4% SRB in 1% acetic acid during 30 minutes, light-protected, and washed twice with 1% acetic acid. SRB was then solubilized in Tris base (10mM; pH 10.0) and 540 nm-optical densities were determined using a microplate reader (Perkin Elmer Viktor 3). Data were analyzed with GraphPad Prism 5 software (GraphPad Software, La Jolla California USA).
For in vivo treatment with isobutyl-Deoxynyboquinone (IB-DNQ), 12 mice were inoculated with $2x10^6$ A172 or DBTRG-05MG cells into the brain, and we randomly chose 7 of each group to be treated. Five doses were orally given each two days consisting of 12mg/g of the drug dissolved in 2-hydroxypropyl-beta-cyclodextrin (HP□CD). Mock groups of 5 mice received in the same conditions the HP□CD without drug.

## Electronic microscopy

For transmission electron microscopy, LN229 cells at 80% of confluence were fixed in 2.5% glutaraldehyde in 0.1 M phosphate buffer, post fixed in 1.5% osmium tetroxide, and processed using the tEPON 812 embedding Kit (Tousimis®). The ultrathin sections, stained with uranyl acetate and lead citrate, were assessed at 80 kv with a JEM-1011 (JEOL) transmission electron microscope. Ribosomes were count in 10 random regions of 8 different pictures by three different researchers in blind samples and normalized by the area.

## Autoradiographic Analysis of rRNA Synthesis

To label newly synthesized RNA, cells were incubated for 2 hrs with 1.2 µCi/ml of [$^3$H]-uridine (Perkin Elmer) before RNA extraction with TRIzol reagent (Invitrogen). 2µg of total RNA were resolved on a formaldehyde-containing 1.2% agarose gel and transferred to Hybond N+ membrane (GE Healthcare). After ultraviolet crosslinking, the membranes were sprayed with EN3HANCE (Perkin Elmer) and exposed to Kodak BioMax MS film (Kodak) at -80ºC for 1 week.

## Patients

DNA methylation data in in the discovery set of glioma cases was collected from the The Cancer Genome Atlas (TCGA) Data Portal (https://tcga-data.nci.nih.gov/tcga/). For the initial glioma validation cohort, 115 formalin-fixed paraffin-embedded (FFPE) tumor tissues from glioma patients were retrospectively collected in four different centers (Hospital Universitari de Bellvitge, Hospital Germans Trias i Pujol, Hospital Clínic de Barcelona and

University Hospital Basel) from 1989 to 2018 and were histologically reviewed. Most of patients had received treatment based in temozolamide combined or not with radiotherapy, and molecular analyses of IDH1 mutational status and MGMT methylation were available. Co-deletion 1p19q status was only available in 23 of the 115 cases. Patients gave their informed consent to participate in the research, which had received ethical approval from the review board of each institution. The expanded glioma validation cohort included 303 additional glioma patients from which NSUN5 methylation, IDH1 mutation, co-deletion of 1p19q, MGMT methylation and Progression Free Survival are available (Bady et al. 2018; Kickingereder et al., 2018). These cases had signed written informed consent and were histologically reviewed as described in the respective publications (Bady et al. 2018; Kickingereder et al., 2018). In TCGA cohort, presence of G-CIMP phenotype was also available. We determined the sample G-CIMP status as previously described (Noushmehr et al., 2010). Briefly we analyzed the epigenetic signature of 1 hypomethylated locus, DOCK5, and 7 hypermethylated loci (ANKRD43, FAS-1, FAS-2, HFE, LGALS3, MAL, and RHO-F). We considered a sample as G-CIMP positive if at least 6 genes displayed a combination of DOCK5 DNA hypomethylation and/or hypermethylation of the remaining genes.

## Statistical analysis

The associations between variables were assessed by $\chi 2$ tests, Fisher's exact test, Welch's t-test, Mann-Whitney test, Wilcoxon paired test or Spearman correlation whenever indicated. Kaplan–Meier plots and log-rank test were used to estimate Progression-Free Survival (PFS) and Overall Survival (OS). Univariate Cox regression analysis was performed in which hazard ratio with a 95% of confidence interval was evaluated. Statistical analysis was performed by using SPSS for Windows (Armonk, NY) and GraphPad Prism 5 (La Jolla, CA) for Windows. P values less than .05 were considered statistically significant. All statistical tests were two-sided. Methylation and expression values for GBM and LGG TCGA primary tumor samples were obtained from the NCI's Genomic Data Commons (GDC) (https://gdc.cancer.gov/). The values corresponding to glioma cell lines were obtained from COSMIC cell line database (http://cancer.sanger.ac.uk/cell_lines). Correlations were obtained by calculating Spearman's rank correlation test and the associated rho coefficient.

## Data availability

All the obtained deep sequencing data have been deposited at the SRA (https://www.ncbi.nlm.nih.gov/sra) with the following links:

RNA-Seq: BioProject: PRJNA395552
https://dataview.ncbi.nlm.nih.gov/object/PRJNA395552?reviewer=60ndb08i1g6na5nkoaaiad9a6o

bsRNA-Seq: BioProject: PRJNA395575
https://www.ncbi.nlm.nih.gov/bioproject/395575

Ribo-Seq: BioProject: PRJNA395570
https://www.ncbi.nlm.nih.gov/bioproject/395570

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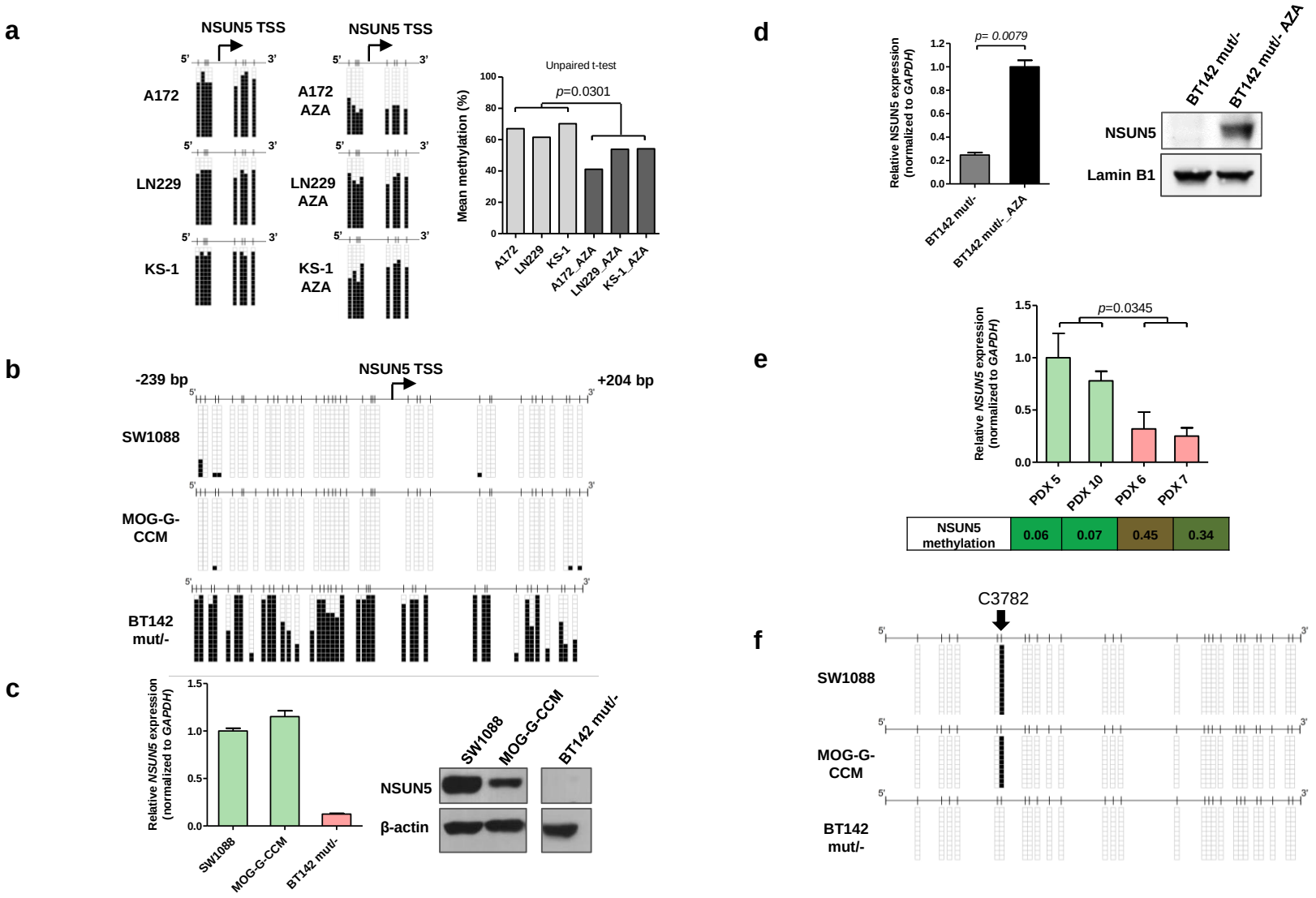


**Figure S1. Related to Figure 1.** (**a**) Bisulfite genomic sequencing of NSUN5 promoter in the three methylated glioblastoma cell lines in basal condition and after treatment with the demethylating drug 5-aza-2'-deoxycytidine (AZA). CpG dinucleotides around the transcription start site (TSS) are represented as short vertical lines. Single clones are shown for each sample. Presence of an unmethylated or methylated cytosine is indicated by a white or black square, respectively. Graphic represents methylation percentages of all CpGs analyzed in the island. (**b**) Bisulfite genomic sequencing of NSUN5 promoter CpG Island in three grade III glioma cell lines. (**c**) NSUN5 expression in the analyzed grade III glioma cell lines determined by real-time PCR (*left panel*) (data shown represent mean ± s.d. of biological triplicates) and western blot (*right panel*). (**d**) Expression of the NSUN5 RNA transcript and protein was restored in the BT142 mut/- cell line by treatment with AZA, analyzed by real-time PCR (*left panel*) and western blot (*right panel*). (**e**) Association between NSUN5 promoter CpG island hypermethylation determined by pyrosequencing and diminished expression of the NSUN5 transcript determined by qRT-PCR in patient-derived xenografts (PDXs) from primary gliomas. Average CpG methylation value of the NSUN5 pyrosequencing PCR product is shown in each case. Green corresponds to unmethylated samples; red/pink corresponds to methylated samples. (**f**) RNA bisulfite sequencing of the 28S rRNA in the three grade III glioma cell lines. Cytosines are represented as short vertical lines and the C3782 site is displayed by a long black arrow. Presence of an unmethylated or methylated cytosine is indicated by a white or black square, respectively.

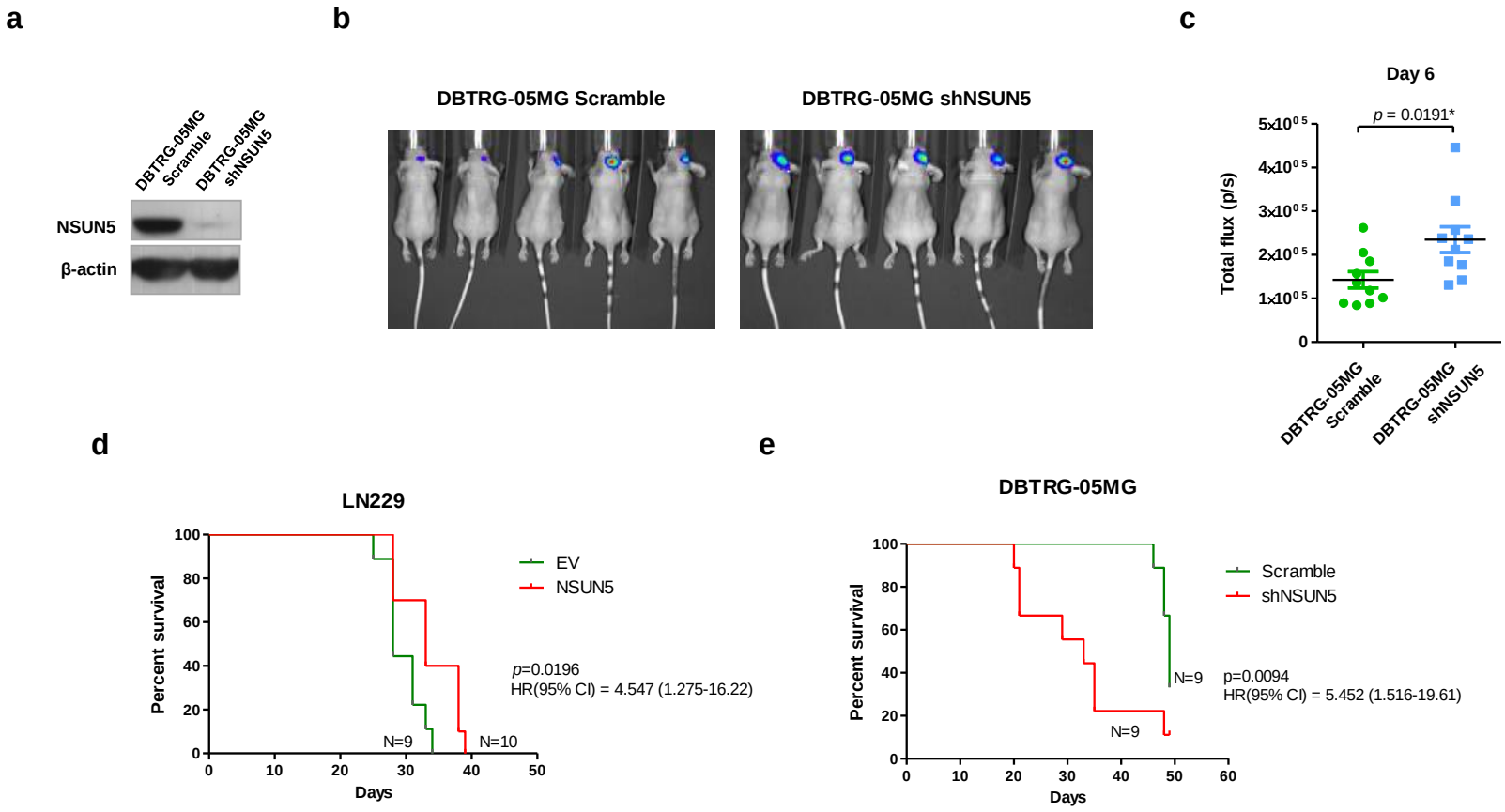


**Figure S2**. **Related to Figure 2.** (**a**) Western blot to show efficient depletion of NSUN5 protein expression upon stable transfection in DBTRG-05MG glioma cells**.** (**b**) An equal number of the indicated DBTRG-05MG Scramble and shNSUN5 cells populations were stereotactically inoculated into the brain of athymic mice. The size of the tumors was estimated at 6 days post-inoculation (DPI) by the quantification of luciferase activity in the tumor cells. Representative images of the luciferase signal at 6 DPI. (**c**) Scatter plots showing the individual size of the indicated DBTRG-05MG tumors at 6 DPI. (**d**) Kaplan-Meier analysis of Survival in a set of mice models with intracraneal implanted tumors derived from the NSUN5 methylated cell line LN229, empty vector transfected (EV) and NSUN5-transfected (NSUN5) or the NSUN5 unmethylated cell line DBTRG-05MG, scramble and NSUN5-shRNA depleted (**e**). Significance of the log-rank test is shown. Results of the univariate Cox regression analysis are represented by the Hazards Ratio (HR) and 95% Confidence Interval (CI).

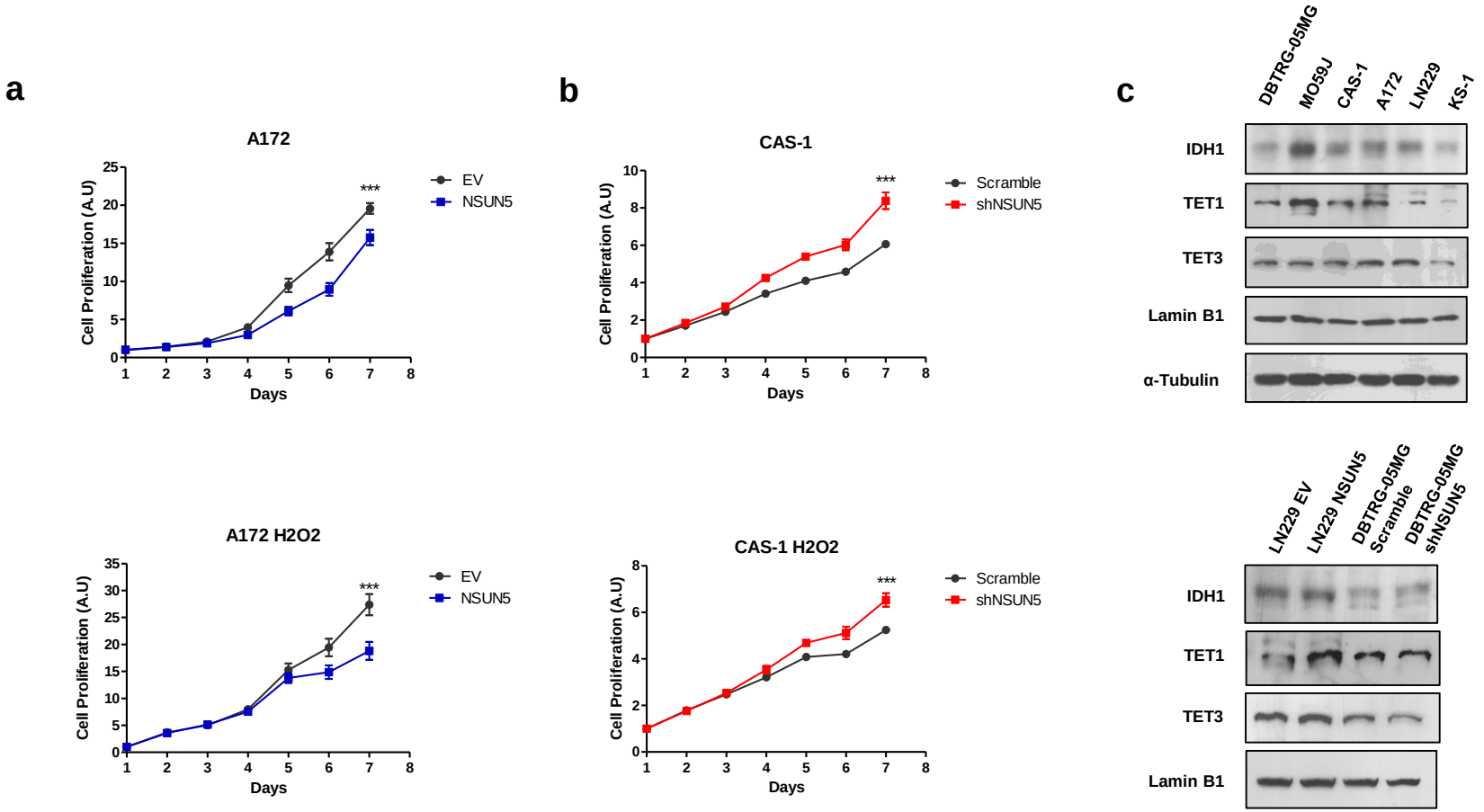


**Figure S3**. **Related to Figure 2.** (**a**) NSUN5 transfection reduces cell viability in the NSUN5 hypermethylated cell line A172, both in the presence (upper panel) or absence (lower panel) of H2O2 induced stress. (**b**) shRNA-mediated depletion of NSUN5 in the unmethylated glioblastoma cell line CAS-1 increases cell viability, both in the presence (upper panel) or absence (lower panel) of H2O2 induced stress. Values were analyzed from triplicates and expressed as the mean ± SD. Mann–Whitney U test, ***, P < 0.0001. (**c**) Expression levels of IDH1, TET1 and TET3 in NSUN5 unmethylated (DBTRG-05MG, MO59J and CAS-1) and methylated (A172, LN229 and KS-1) glioma cell lines (upper panel). Expression levels of IDH1, TET1 and TET3 upon NSUN5 transfection-mediated restoration in LN229 cells or NSUN5 shRNA-mediated depletion in DBTRG-05MG cells (lower panel).

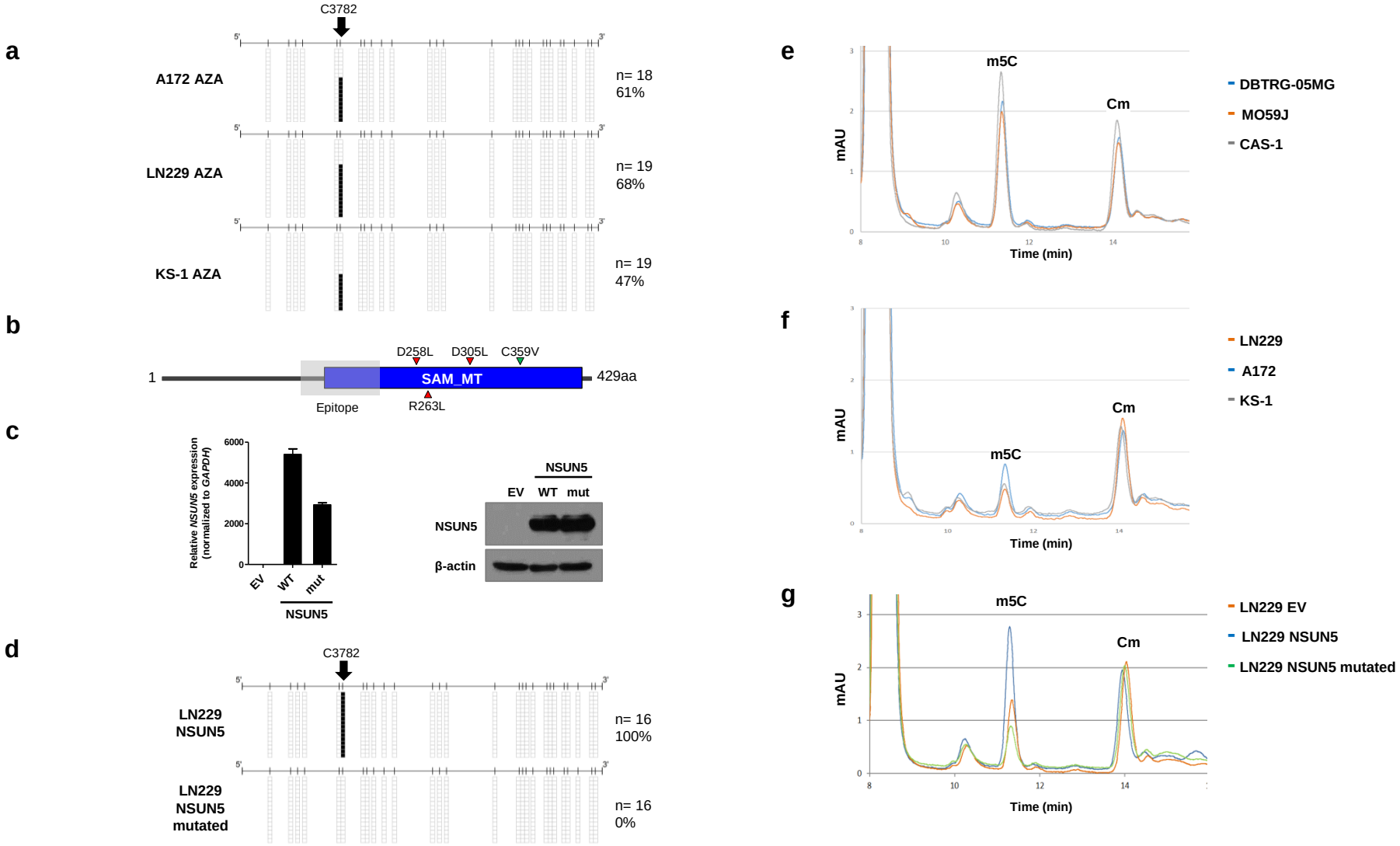


**Figure S4. Related to Figure 3.** (**a**) RNA bisulfite sequencing of the 28S rRNA in A172, LN229 and KS-1 glioma cells lines after treatment with the demethylating drug AZA. Cytosines are represented as short vertical lines and the C3782 site is displayed by a black arrow. Presence of an unmethylated or methylated cytosine is indicated by a white or black square, respectively. The three glioma cell lines recovered C3782 28S rRNA methylation upon restoration of NSUN5 activity by its promoter demethylation mediated by AZA treatment.(**b**) Schematic representation of the generated mutated NSUN5 protein. Each triangule points out the aminoacid substituted, with red triangules representing SAM-binding sites, and in green, the active site, with the residue directly involved in catalysis. The major functional domain is shown. (SAM_MT: SAM-dependent MTase RsmB/NOP-type domain). (**c**) NSUN5 expression determined by real-time quantitative PCR and western blot, after its tranfection into LN229 glioma cell lines. (**d**) RNA bisulfite sequencing of the 28S rRNA in NSUN5 epigenetically deficient cells transfected with wild-type NSUN5 (LN229-NSUN5-WT) or the engineered mutated NSUN5 protein (LN229-NSUN5-mutated). (**e**) and (**f**) Mung bean nuclease protection assay to determine the methylation status of C3782 at 28S rRNA in the glioma cells lines unmethylated and methylated for the NSUN5 promoter, respectively. In (**g**), recovery of C3782 28S rRNA methylation upon NSUN5 transfection in the epigenetically silenced LN229 cells.

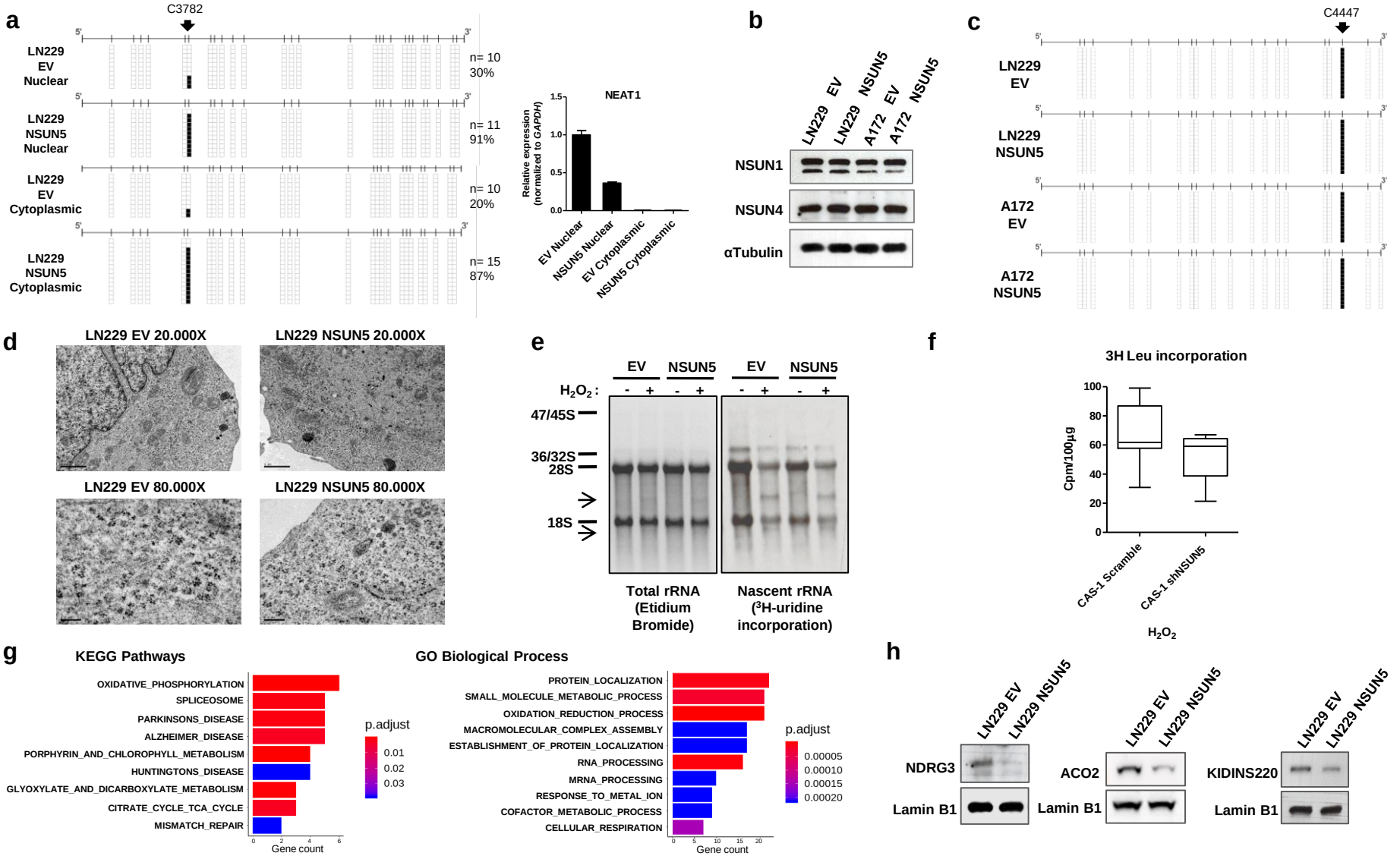


**Figure S5. Related to Figure 3 and Figure 5.** (**a**) RNA bisulfite sequencing of 28S rRNA in the nuclear or cytoplasmic compartments of empty vector (EV) and NSUN5-transfected LN229 glioma cells (*left panel*). Cytosines are represented as short vertical lines and the C3782 site is represented as a long black arrow. Nuclear long non-coding RNA NEAT1 expression analyzed by real-time qPCR, to validate the nuclear-cytosol fractions isolation (*right panel*) (**b**) Western blot to show how the restoration of NSUN5 protein expression upon stable transfection in A172 and LN299 glioma cells does not change the protein levels of the other two ribosomal RNA methyltransferases, NSUN1 and NSUN4. (**c**) RNA bisulfite sequencing at 28S rRNA related NSUN1 methyltransferase position of empty vector (EV) and NSUN5-transfected LN229 and A172 glioma cells. (**d**) NSUN5 restoration in LN229 cells with hypermethylation-associated silencing of NSUN5 does not induce major effects in ribosome distribution, rRNA maturation or total rRNA levels, observed by transmission electron microscopy. (**e**) Northern hybridizations of total RNA extracted from empty vector (EV) or NSUN5 transfected LN229 cells treated with hydrogen peroxide (H2O2) at 100 µM. Total rRNA was visualized by Ethdium bromide (*left*) and Nascent rRNA was visualized by 3H-uridine incorporation (*right*). The position of mature rRNA species is shown on the left of the pictures, and arrows specify major degradation products. (**f**) 3H-Leucine incorporation in CAS-1 cell line transfected with scramble or shNSUN5. (**g**) Gene set enrichment analysis (GSEA) of the proteins with different expression in the SILAC approach upon NSUN5 restoration in LN229 cells (hypergeometric test with a FDR adjusted p-value < 0.05). (**h**) Western blot of proteins down-regulated upon NSUN5 transfection according to SILAC results.

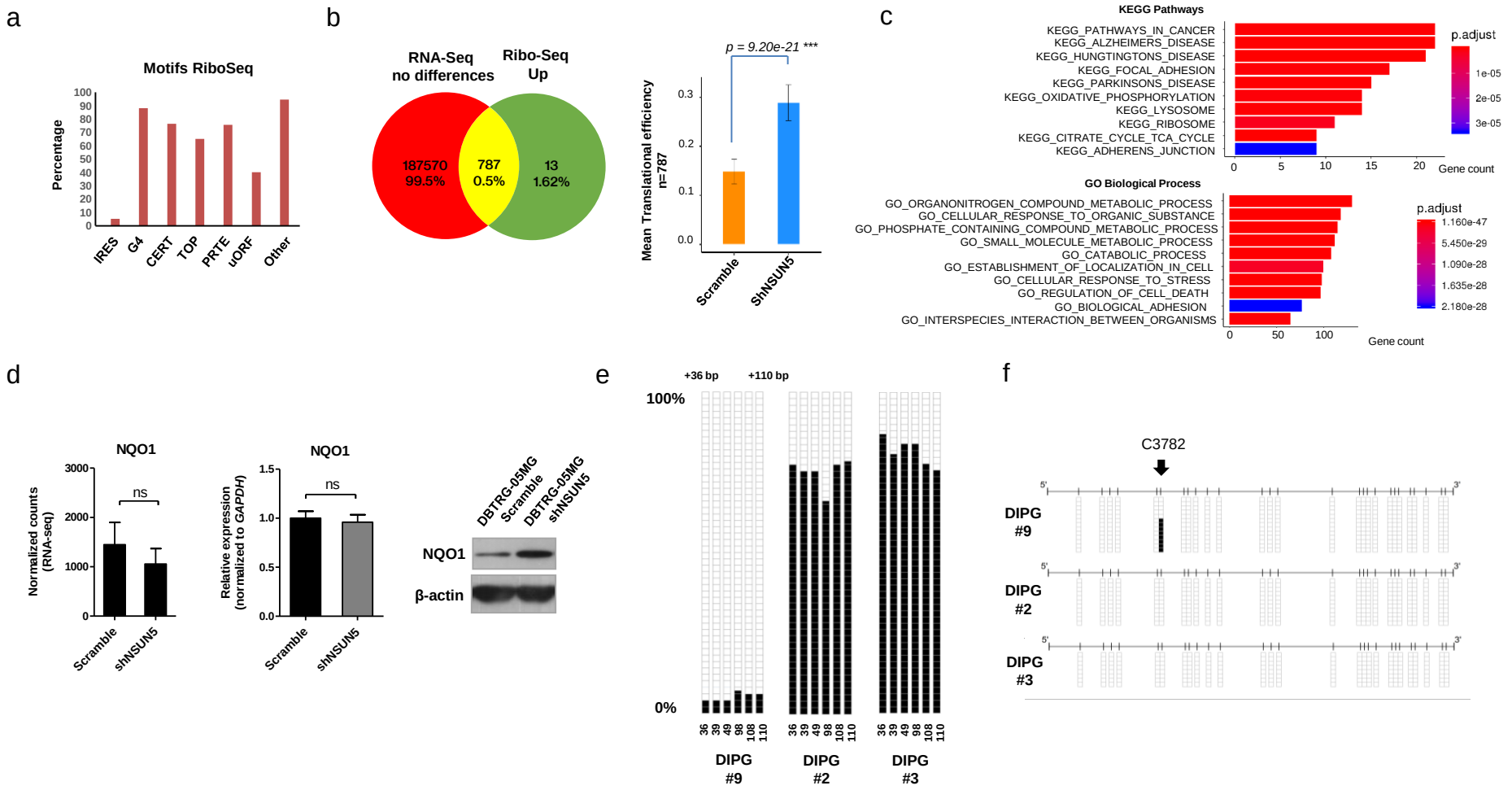


**Figure S6. Related to Figure 5.** (**a**) Distribution of known regulators motifs in the RNAs undergoing translational enhancement in NSUN5 deficient cells. (**b**) Translational efficiency upon NSUN5 shRNA mediated depletion in DBTRG-05MG cells. Comparing RNA-seq and ribosome-protected RNA (Ribo-seq) deep sequencing profiles, we showed that 787 RNAs did not change in the RNAseq of DBTRG-05MG cells upon NSUN5-depletion, but were upregulated in the Ribo-seq, indicating enhanced translational efficiency. (**c**) Gene set enrichment analysis (GSEA) of the RNAs with increased translational efficiency in NSUN5 deficient cells (hypergeometric test with a FDR adjusted p-value < 0.05). (**d**) Validation of NSUN5 translational regulation of the identified stress-related target NQO1. Its expression at the RNA level determined by RNA-seq counts (*left*) and real-time quantitative PCR (*middle*) do not change upon NSUN5 depletion, but NQO1 is increased at the protein level (*right*) upon NSUN5 depletion. (**e**) NSUN5 promoter methylation in Diffuse Intrinsic Pontine Glioma (DIPG). Methylation levels of six CpGs of the NSUN5 promoter CpG island (+36 bp to +110 bp from the transcription start site) determined by pyrosequencing in three DIPG cases (#9, #2 and #3). Black and white squares represent methylated or unmethylated status, respectively. (**f**) RNA bisulfite sequencing of 28S RNA in the studied primary DIPG patients. NSUN5 hypermethylation (#2 and #3 cases) is associated with an unmethylated C3782 site of 28S RNA, whereas the #9 NSUN5 unmethylated patient shows methylation of the C3782 position of ribosomal RNA.

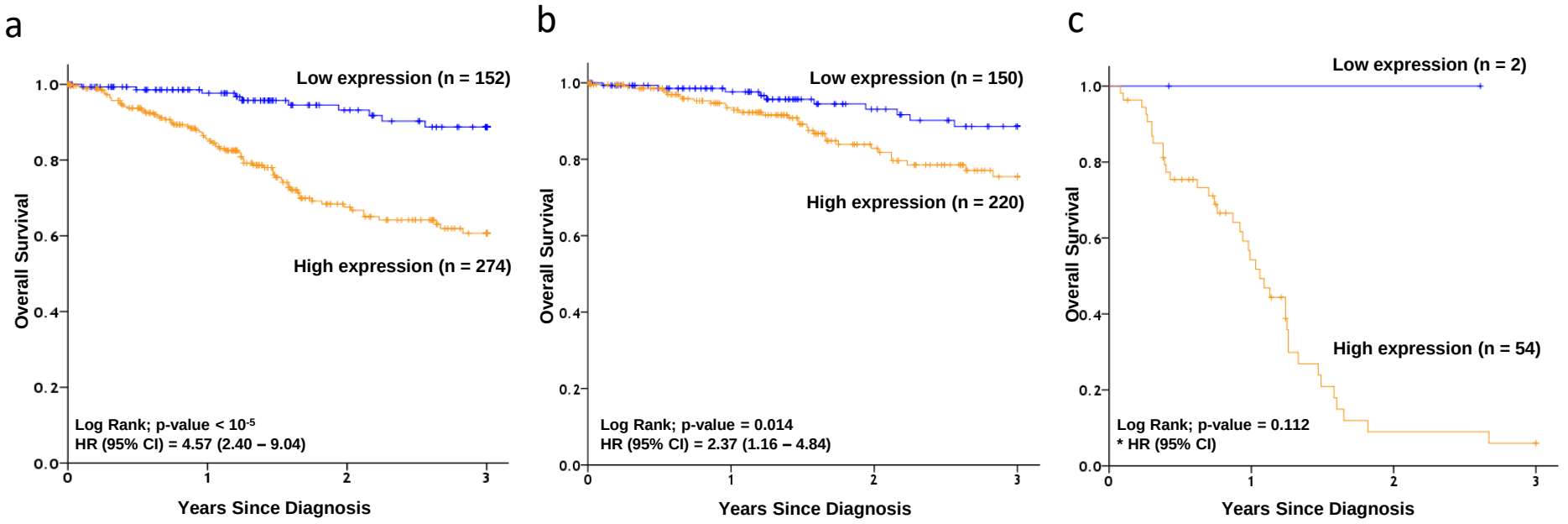


**Figure S7. Related to Figure 7.** Overall Survival of glioma TCGA datasets with available information for RNA expression of NSUN5, considering (**a**) all grades gliomas (N = 426), (**b**) low-grade gliomas (N = 370) and (**c**) glioblastomas (N = 56). P-value (p) is calculated using Log-rank function. Univariate Cox Regression analysis is represented by Hazard Ratio (HR) with a 95% of confidence interval (95%CI). P under 0.05 is considered as statistically significant. *HR (95% CI) = Hazard Ratio cannot be calculated since lack of events (dead) in low expression group.

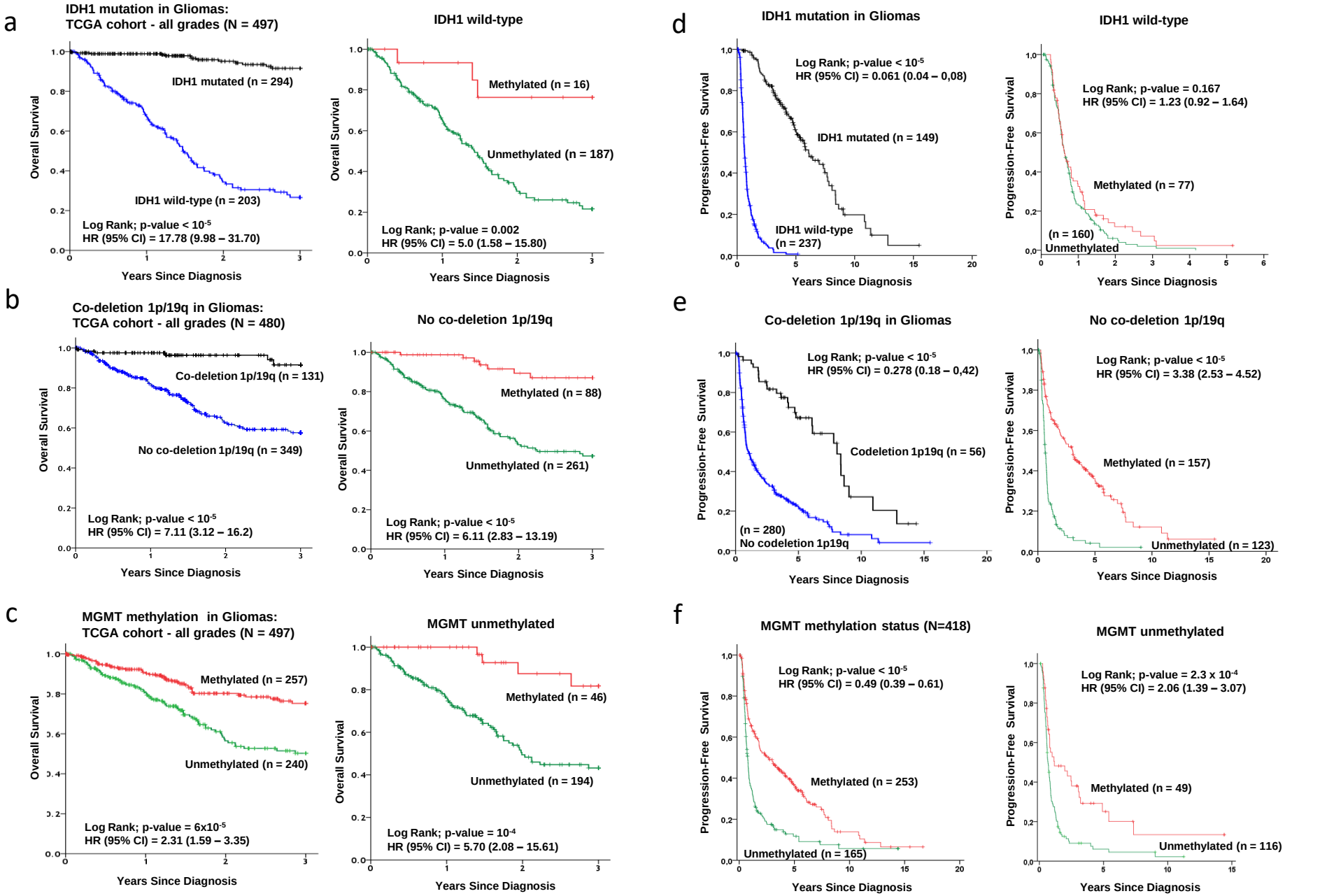


**Figure S8. Related to Figure 7.** (**a**) Kaplan-Meier analysis of Overall Survival (OS) across all glioma grades according to IDH1 mutational, co-deletion 1p/19q (**b**) and MGMT methylation (**c**) status. (**d**) Kaplan-Meier analysis of Progression-Free Survival (PFS) across all glioma grades according to IDH1 mutational, co-deletion 1p/19q (**e**) and MGMT methylation (**f**) status. Significance of the log-rank test is shown. Results of the univariate Cox regression analysis are represented by the Hazards Ratio (HR) and 95% Confidence Interval (CI). P under 0.05 is considered as statistically significant.

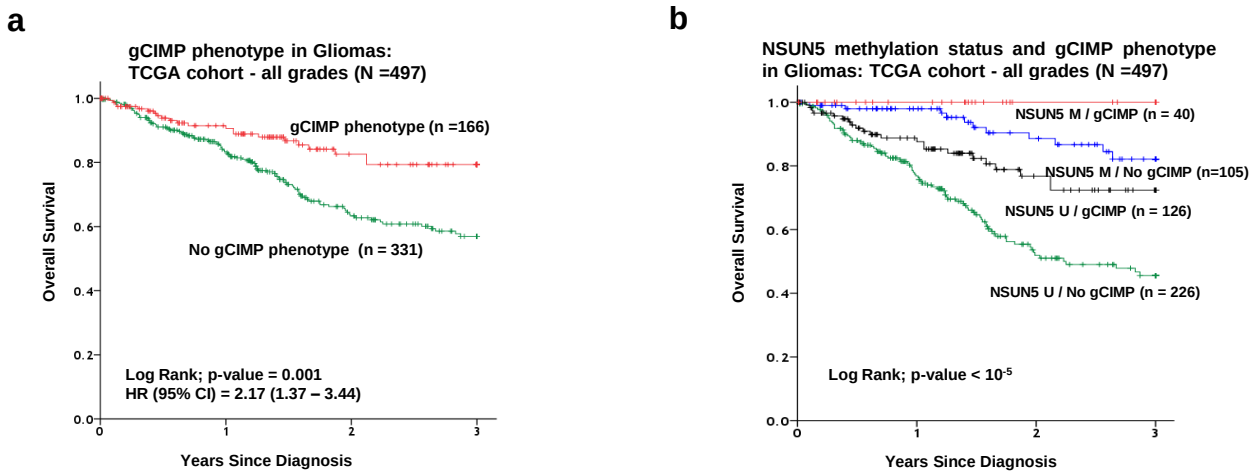


**Figure S9. Related to Figure 7.** (**a**) Kaplan-Meier analysis in glioma TCGA dataset of Overall Survival across all glioma grades according to gCIMP phenotype, and combination of gCIMP with NSUN5 methylation status (**b**). P-value (P) is calculated using Log-rank function. Univariate Cox Regression analysis is represented by hazard ratio (HR) with a 95% of confidence interval (95%CI). P under 0.05 is considered as statistically significant.

**Table S1. Ribo-seq and RNA-seq fold-change and p-values for RNAs with higher translational efficiency in LN229 NSUN5 deficient cells. Related to Figure 5. In the absence (A) or presence (B) of $H_2O_2$ stress.**

**A.** Ribo-seq and RNA-seq fold-change and p-values for RNAs with higher translational efficiency in LN229 NSUN5 deficient cells in absence of $H_2O_2$ stress

| | | Ribo-Seq | | | | | | RNA-Seq | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EnsemblID | Gene Name | Base Mean | log2Fold Change | Lfc SE | stat | pvalue | padj | Base Mean | log2Fold Change | Lfc SE | stat | pvalue | padj |
| ENST00000318602 | A2M | 137.34 | -2.87 | 0.36 | -7.98 | 1.41E-15 | 7.97E-13 | 2757.02 | -0.76 | 0.43 | -1.76 | 0.078 | 0.648 |
| ENST00000462568 | A2M | 11.71 | -6.68 | 1.82 | -3.67 | 2.40E-04 | 7.14E-03 | 39.90 | -1.09 | 0.65 | -1.68 | 0.093 | 0.704 |
| ENST00000495709 | A2M | 4.82 | -3.49 | 1.06 | -3.30 | 9.58E-04 | 2.29E-02 | 19.80 | 0.24 | 1.01 | 0.24 | 0.809 | 1.000 |
| ENST00000569825 | AARS | 32.52 | -8.16 | 1.15 | -7.09 | 1.30E-12 | 1.19E-10 | 311.73 | 0.14 | 0.31 | 0.45 | 0.654 | 1.000 |
| ENST00000374736 | ABCA1 | 11.84 | -1.31 | 0.50 | -2.64 | 8.34E-03 | 1.21E-01 | 3483.16 | 0.18 | 0.13 | 1.31 | 0.190 | 0.884 |
| ENST00000454898 | ABCD3 | 17.30 | -22.08 | 3.03 | -7.29 | 3.02E-13 | 4.06E-11 | 79.13 | 0.63 | 1.71 | 0.37 | 0.710 | 1.000 |
| ENST00000484213 | ABCD3 | 19.14 | -22.22 | 3.03 | -7.34 | 2.15E-13 | 3.07E-11 | 3060.63 | -0.06 | 0.24 | -0.24 | 0.806 | 1.000 |
| ENST00000512653 | ABL2 | 9.25 | -21.24 | 3.03 | -7.01 | 2.36E-12 | 1.88E-10 | 36.87 | 0.21 | 0.68 | 0.31 | 0.757 | 1.000 |
| ENST00000431957 | AC000110.1.1 | 50.19 | -1.03 | 0.39 | -2.65 | 8.01E-03 | 1.18E-01 | 1.69 | -0.19 | 4.40 | -0.04 | 0.966 | NA |
| ENST00000458451 | AC004014.4.1 | 32.43 | -1.22 | 0.31 | -3.91 | 9.30E-05 | 3.11E-03 | 1.20 | -0.40 | 4.46 | -0.09 | 0.928 | NA |
| ENST00000427861 | AC004074.3.1 | 54.25 | -0.94 | 0.23 | -4.08 | 4.56E-05 | 1.64E-03 | 70.15 | -0.20 | 0.60 | -0.34 | 0.733 | 1.000 |
| ENST00000438989 | AC007041.2.1 | 54.02 | -0.77 | 0.27 | -2.89 | 3.90E-03 | 7.01E-02 | 48.52 | -0.22 | 0.52 | -0.43 | 0.670 | 1.000 |
| ENST00000503102 | AC008427.2.1 | 19.87 | -1.48 | 0.38 | -3.94 | 8.26E-05 | 2.80E-03 | 3.73 | -0.45 | 1.63 | -0.28 | 0.780 | NA |
| ENST00000456481 | AC009245.3.1 | 344.39 | -1.86 | 0.48 | -3.86 | 1.12E-04 | 3.64E-03 | 601.72 | 0.02 | 0.19 | 0.10 | 0.921 | 1.000 |
| ENST00000448535 | AC009963.5.1 | 7.38 | -2.85 | 1.08 | -2.64 | 8.20E-03 | 1.20E-01 | 1.13 | -0.19 | 4.59 | -0.04 | 0.967 | NA |
| ENST00000441321 | AC016691.2.1 | 14.32 | -1.85 | 0.46 | -4.05 | 5.11E-05 | 1.82E-03 | 10.40 | -0.75 | 1.29 | -0.58 | 0.561 | 1.000 |
| ENST00000399515 | AC019178.1.1 | 219.35 | -0.62 | 0.19 | -3.21 | 1.33E-03 | 2.99E-02 | 395.40 | 0.12 | 0.26 | 0.45 | 0.653 | 1.000 |
| ENST00000554351 | AC027323.1 | 14.59 | -1.66 | 0.47 | -3.55 | 3.84E-04 | 1.07E-02 | 1229.88 | 0.59 | 0.56 | 1.06 | 0.289 | 0.966 |
| ENST00000453625 | AC074182.1.1 | 105.24 | -0.87 | 0.32 | -2.67 | 7.48E-03 | 1.13E-01 | 32.74 | -0.07 | 0.54 | -0.13 | 0.894 | 1.000 |
| ENST00000431445 | AC087650.1.1 | 5.20 | -1.84 | 0.66 | -2.78 | 5.37E-03 | 8.90E-02 | 1.37 | -0.01 | 2.65 | 0.00 | 0.997 | NA |
| ENST00000419844 | AC091492.2.1 | 27.17 | -1.48 | 0.44 | -3.40 | 6.68E-04 | 1.71E-02 | 4.41 | -0.27 | 1.44 | -0.19 | 0.850 | 1.000 |
| ENST00000431248 | AC093106.5.1 | 23.60 | -1.58 | 0.50 | -3.17 | 1.51E-03 | 3.32E-02 | 7.93 | -1.19 | 1.01 | -1.17 | 0.243 | 0.936 |
| ENST00000445713 | AC093106.7.1 | 17.40 | -1.27 | 0.49 | -2.59 | 9.57E-03 | 1.33E-01 | 294.30 | -0.23 | 0.20 | -1.15 | 0.251 | 0.943 |
| ENST00000516420 | AC098691.1 | 4.61 | -2.16 | 0.77 | -2.79 | 5.34E-03 | 8.87E-02 | 54041.23 | -0.35 | 0.11 | -3.14 | 0.002 | 0.056 |
| ENST00000427559 | AC104651.2.1 | 13.88 | -1.41 | 0.41 | -3.43 | 6.09E-04 | 1.58E-02 | 0.79 | 3.03 | 4.85 | 0.62 | 0.532 | NA |
| ENST00000457257 | AC174470.1 | 9.86 | -4.36 | 1.42 | -3.07 | 2.16E-03 | 4.43E-02 | 1371.51 | -0.21 | 0.22 | -0.92 | 0.357 | 0.997 |
| ENST00000326793 | ACAP2 | 72.44 | -0.93 | 0.36 | -2.62 | 8.68E-03 | 1.25E-01 | 8363.49 | -0.02 | 0.17 | -0.14 | 0.888 | 1.000 |
| ENST00000478010 | ACO2 | 3.64 | -5.00 | 1.70 | -2.94 | 3.31E-03 | 6.22E-02 | 104.29 | 0.35 | 0.55 | 0.64 | 0.521 | 1.000 |
| ENST00000449612 | ACOT9 | 5.82 | -5.69 | 1.13 | -5.03 | 4.80E-07 | 2.21E-05 | 38.56 | -0.79 | 1.20 | -0.65 | 0.513 | 1.000 |
| ENST00000293217 | ACOX1 | 21.34 | -22.37 | 3.03 | -7.39 | 1.49E-13 | 2.28E-11 | 3659.20 | -0.96 | 0.63 | -1.52 | 0.129 | 0.790 |
| ENST00000525230 | ACP2 | 8.44 | -6.21 | 1.76 | -3.52 | 4.25E-04 | 1.16E-02 | 121.19 | 1.82 | 0.66 | 2.78 | 0.005 | 0.134 |
| ENST00000357430 | ACSL3 | 197.47 | -3.17 | 1.03 | -3.08 | 2.07E-03 | 4.28E-02 | 29400.69 | -0.07 | 0.11 | -0.62 | 0.532 | 1.000 |
| ENST00000425660 | ACTB | 268.10 | -25.81 | 3.03 | -8.53 | 1.48E-17 | 1.72E-14 | 24273.07 | -1.78 | 0.96 | -1.85 | 0.064 | 0.593 |
| ENST00000443297 | ACTR3 | 38.78 | -3.77 | 1.36 | -2.77 | 5.61E-03 | 9.17E-02 | 82.54 | -0.20 | 0.71 | -0.28 | 0.778 | 1.000 |
| ENST00000470269 | ADAM10 | 23.47 | -7.69 | 1.08 | -7.15 | 8.59E-13 | 8.66E-11 | 251.76 | 0.00 | 0.28 | -0.01 | 0.994 | 1.000 |
| ENST00000310823 | ADAM17 | 158.76 | -0.78 | 0.28 | -2.75 | 5.88E-03 | 9.52E-02 | 8755.08 | 0.14 | 0.14 | 0.95 | 0.344 | 0.991 |
| ENST00000238561 | ADCK1 | 3.45 | -3.16 | 1.06 | -2.99 | 2.80E-03 | 5.44E-02 | 354.53 | -1.94 | 0.99 | -1.97 | 0.049 | 0.521 |
| ENST00000366779 | ADCK3 | 27.81 | -1.53 | 0.57 | -2.68 | 7.47E-03 | 1.13E-01 | 4163.39 | 0.14 | 0.27 | 0.51 | 0.612 | 1.000 |
| ENST00000260600 | ADCY3 | 41.85 | -1.12 | 0.39 | -2.87 | 4.15E-03 | 7.34E-02 | 3951.26 | 0.71 | 0.48 | 1.48 | 0.139 | 0.809 |
| ENST00000488837 | ADD3 | 22.63 | -1.23 | 0.40 | -3.08 | 2.05E-03 | 4.25E-02 | 169.66 | -0.30 | 0.66 | -0.45 | 0.651 | 1.000 |
| ENST00000495562 | ADIPOR1 | 7.82 | -6.10 | 1.81 | -3.36 | 7.69E-04 | 1.92E-02 | 3304.36 | 3.65 | 1.47 | 2.48 | 0.013 | 0.241 |
| ENST00000372734 | ADK | 166.33 | -1.11 | 0.32 | -3.42 | 6.33E-04 | 1.64E-02 | 1956.87 | 0.48 | 0.62 | 0.77 | 0.439 | 1.000 |
| ENST00000342312 | ADSL | 96.29 | -4.66 | 1.30 | -3.58 | 3.46E-04 | 9.75E-03 | 5795.02 | -0.23 | 0.14 | -1.60 | 0.110 | 0.751 |
| ENST00000468215 | ADSS | 9.53 | -21.27 | 3.03 | -7.02 | 2.16E-12 | 1.75E-10 | 205.65 | 0.56 | 0.42 | 1.33 | 0.185 | 0.879 |
| ENST00000484865 | AGPAT3 | 4.61 | -2.64 | 0.97 | -2.74 | 6.23E-03 | 9.92E-02 | 107.91 | -0.24 | 0.33 | -0.74 | 0.460 | 1.000 |
| ENST00000264409 | AGPAT9 | 139.91 | -5.23 | 1.41 | -3.70 | 2.11E-04 | 6.40E-03 | 3451.37 | 0.09 | 0.24 | 0.38 | 0.707 | 1.000 |
| ENST00000357081 | AGTPBP1 | 15.46 | -1.42 | 0.48 | -2.95 | 3.15E-03 | 5.97E-02 | 1051.04 | -0.48 | 0.18 | -2.62 | 0.009 | 0.190 |
| ENST00000217426 | AHCY | 351.74 | -11.59 | 1.01 | -11.52 | 1.05E-30 | 8.84E-27 | 13466.08 | 0.11 | 0.35 | 0.32 | 0.749 | 1.000 |
| ENST00000481423 | AHCYL1 | 90.61 | -1.46 | 0.49 | -2.98 | 2.84E-03 | 5.49E-02 | 35.76 | 1.38 | 0.53 | 2.61 | 0.009 | 0.194 |
| ENST00000555473 | AHSA1 | 32.31 | -8.15 | 2.29 | -3.55 | 3.81E-04 | 1.06E-02 | 162.11 | 0.00 | 0.82 | 0.00 | 0.997 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000394701 | AIMP1 | 183.86 | -0.70 | 0.21 | -3.28 | 1.04E-03 | 2.46E-02 | 2450.14 | 0.12 | 0.20 | 0.57 | 0.568 | 1.000 |
| ENST00000550143 | AK1 | 8.82 | -21.17 | 3.03 | -6.99 | 2.76E-12 | 2.08E-10 | 22.14 | -0.16 | 0.90 | -0.18 | 0.859 | 1.000 |
| ENST00000025301 | AKAP11 | 130.40 | -0.84 | 0.28 | -3.02 | 2.54E-03 | 5.05E-02 | 13090.47 | -0.07 | 0.17 | -0.42 | 0.672 | 1.000 |
| ENST00000475985 | AKR1A1 | 3.96 | -5.12 | 1.69 | -3.02 | 2.52E-03 | 5.03E-02 | 54.11 | -0.39 | 0.39 | -1.00 | 0.315 | 0.980 |
| ENST00000366539 | AKT3 | 129.03 | -0.87 | 0.19 | -4.46 | 8.06E-06 | 3.29E-04 | 30568.00 | 0.03 | 0.13 | 0.22 | 0.822 | 1.000 |
| ENST00000456007 | AL133244.1.1 | 3.86 | -2.04 | 0.79 | -2.60 | 9.33E-03 | 1.31E-01 | 1.01 | 1.64 | 4.60 | 0.36 | 0.721 | NA |
| ENST00000558098 | AL589988.1 | 9.51 | -21.27 | 3.03 | -7.02 | 2.17E-12 | 1.76E-10 | 14.59 | -0.12 | 0.76 | -0.16 | 0.872 | 1.000 |
| ENST00000310271 | ALAS1 | 10.88 | -21.46 | 3.03 | -7.08 | 1.40E-12 | 1.26E-10 | 531.82 | -0.23 | 0.25 | -0.90 | 0.366 | 1.000 |
| ENST00000346623 | ALDH1A3 | 281.48 | -25.87 | 3.03 | -8.55 | 1.24E-17 | 1.58E-14 | 24700.53 | 2.06 | 1.74 | 1.18 | 0.237 | 0.931 |
| ENST00000561338 | ALDH1A3 | 17.42 | -22.09 | 3.03 | -7.30 | 2.94E-13 | 3.97E-11 | 92.55 | -0.84 | 0.90 | -0.94 | 0.350 | 0.994 |
| ENST00000538148 | ALDH9A1 | 34.01 | -8.22 | 3.03 | -2.72 | 6.60E-03 | 1.03E-01 | 159.12 | -1.31 | 0.90 | -1.46 | 0.144 | 0.817 |
| ENST00000564595 | ALDOA | 21.07 | -21.05 | 3.03 | -6.95 | 3.57E-12 | 2.54E-10 | 1186.32 | -0.14 | 0.28 | -0.49 | 0.624 | 1.000 |
| ENST00000371108 | ALG6 | 58.44 | -1.58 | 0.50 | -3.13 | 1.73E-03 | 3.71E-02 | 7821.02 | 0.04 | 0.13 | 0.30 | 0.764 | 1.000 |
| ENST00000540305 | ALKBH2 | 3.24 | -4.84 | 1.15 | -4.20 | 2.67E-05 | 1.02E-03 | 514.32 | -0.11 | 0.26 | -0.41 | 0.683 | 1.000 |
| ENST00000428149 | ALKBH8 | 12.86 | -2.44 | 0.72 | -3.40 | 6.77E-04 | 1.73E-02 | 531.36 | 0.35 | 0.41 | 0.84 | 0.401 | 1.000 |
| ENST00000512673 | ALYREF | 18.98 | -7.38 | 1.65 | -4.48 | 7.50E-06 | 3.07E-04 | 182.85 | 0.85 | 0.57 | 1.49 | 0.136 | 0.804 |
| ENST00000382085 | AMACR | 30.07 | -8.05 | 2.71 | -2.97 | 2.99E-03 | 5.72E-02 | 631.62 | -0.63 | 0.73 | -0.87 | 0.387 | 1.000 |
| ENST00000281471 | AMN1 | 7.69 | -2.71 | 0.87 | -3.13 | 1.77E-03 | 3.77E-02 | 695.24 | 0.41 | 0.27 | 1.49 | 0.137 | 0.805 |
| ENST00000354910 | ANAPC13 | 30.50 | -22.85 | 3.03 | -7.55 | 4.41E-14 | 9.69E-12 | 537.35 | -0.98 | 0.72 | -1.36 | 0.173 | 0.861 |
| ENST00000265140 | ANKRD32 | 28.17 | -1.22 | 0.33 | -3.68 | 2.30E-04 | 6.90E-03 | 3214.92 | -0.03 | 0.28 | -0.12 | 0.907 | 1.000 |
| ENST00000448801 | ANKRD44 | 13.73 | -6.92 | 1.20 | -5.76 | 8.63E-09 | 4.42E-07 | 311.08 | -0.18 | 0.28 | -0.62 | 0.533 | 1.000 |
| ENST00000493808 | ANKRD44 | 2.30 | -4.35 | 1.15 | -3.79 | 1.50E-04 | 4.73E-03 | 54.69 | 0.49 | 0.59 | 0.82 | 0.412 | 1.000 |
| ENST00000414522 | ANO10 | 9.26 | -6.34 | 1.08 | -5.89 | 3.85E-09 | 2.00E-07 | 28.58 | 0.94 | 1.17 | 0.80 | 0.421 | 1.000 |
| ENST00000425752 | ANO6 | 18.64 | -7.35 | 2.20 | -3.35 | 8.08E-04 | 1.99E-02 | 43.30 | 0.96 | 2.75 | 0.35 | 0.728 | 1.000 |
| ENST00000409628 | ANP32A | 38.70 | -23.16 | 3.03 | -7.65 | 1.97E-14 | 5.52E-12 | 4918.05 | -0.19 | 0.13 | -1.43 | 0.152 | 0.830 |
| ENST00000495420 | ANP32A | 11.21 | -6.62 | 2.11 | -3.14 | 1.71E-03 | 3.67E-02 | 146.88 | 0.00 | 0.27 | -0.02 | 0.986 | 1.000 |
| ENST00000561430 | ANP32A | 13.90 | -6.93 | 1.82 | -3.80 | 1.42E-04 | 4.47E-03 | 59.72 | -0.23 | 0.53 | -0.44 | 0.663 | 1.000 |
| ENST00000486769 | ANP32B | 8.60 | -2.43 | 0.67 | -3.61 | 3.01E-04 | 8.72E-03 | 98.84 | 0.04 | 0.37 | 0.12 | 0.906 | 1.000 |
| ENST00000369119 | ANP32E | 31.39 | -22.69 | 3.03 | -7.49 | 6.64E-14 | 1.31E-11 | 856.27 | -0.81 | 0.37 | -2.19 | 0.029 | 0.391 |
| ENST00000559350 | ANXA2 | 28.95 | -7.90 | 2.87 | -2.75 | 5.90E-03 | 9.54E-02 | 552.97 | 1.87 | 1.00 | 1.88 | 0.060 | 0.575 |
| ENST00000560165 | ANXA2 | 4.84 | -5.41 | 1.98 | -2.73 | 6.39E-03 | 1.01E-01 | 409.55 | 0.12 | 0.43 | 0.28 | 0.778 | 1.000 |
| ENST00000501272 | ANXA5 | 59.87 | -23.77 | 3.03 | -7.85 | 4.09E-15 | 1.71E-12 | 3755.86 | 0.25 | 0.20 | 1.24 | 0.214 | 0.910 |
| ENST00000517486 | ANXA6 | 13.82 | -6.92 | 1.15 | -6.00 | 1.93E-09 | 1.02E-07 | 22.31 | -0.97 | 0.81 | -1.19 | 0.235 | 0.929 |
| ENST00000372921 | ANXA7 | 10.31 | -21.35 | 3.03 | -7.05 | 1.79E-12 | 1.51E-10 | 5053.42 | -0.09 | 0.25 | -0.34 | 0.735 | 1.000 |
| ENST00000535178 | ANXA7 | 36.44 | -23.08 | 3.03 | -7.63 | 2.42E-14 | 6.28E-12 | 302.33 | -0.22 | 0.37 | -0.58 | 0.563 | 1.000 |
| ENST00000565412 | AP1G1 | 4.77 | -5.39 | 1.72 | -3.13 | 1.77E-03 | 3.76E-02 | 17.50 | 0.43 | 0.66 | 0.65 | 0.513 | 1.000 |
| ENST00000292807 | AP2M1 | 14.32 | -6.98 | 2.60 | -2.68 | 7.34E-03 | 1.11E-01 | 15141.34 | 0.04 | 0.21 | 0.20 | 0.844 | 1.000 |
| ENST00000439647 | AP2M1 | 20.57 | -7.50 | 1.99 | -3.77 | 1.65E-04 | 5.13E-03 | 2090.18 | 0.49 | 0.15 | 3.35 | 0.001 | 0.031 |
| ENST00000461733 | AP2M1 | 20.95 | -7.52 | 1.92 | -3.92 | 8.91E-05 | 3.00E-03 | 377.03 | -0.36 | 0.23 | -1.58 | 0.115 | 0.762 |
| ENST00000468048 | AP2M1 | 5.88 | -5.69 | 1.72 | -3.32 | 9.10E-04 | 2.20E-02 | 92.99 | -0.32 | 0.35 | -0.91 | 0.361 | 0.999 |
| ENST00000343267 | APOD | 210.46 | -1.32 | 0.32 | -4.15 | 3.34E-05 | 1.24E-03 | 6820.88 | 0.23 | 0.31 | 0.73 | 0.468 | 1.000 |
| ENST00000348990 | APP | 150.35 | -25.02 | 3.03 | -8.27 | 1.36E-16 | 1.16E-13 | 9743.12 | 0.33 | 0.27 | 1.23 | 0.217 | 0.913 |
| ENST00000354192 | APP | 168.29 | -8.65 | 2.98 | -2.91 | 3.64E-03 | 6.68E-02 | 9160.53 | 0.30 | 0.14 | 2.24 | 0.025 | 0.365 |
| ENST00000439274 | APP | 94.80 | -8.76 | 3.03 | -2.89 | 3.79E-03 | 6.88E-02 | 735.88 | 0.01 | 0.27 | 0.03 | 0.976 | 1.000 |
| ENST00000288266 | APPL1 | 87.71 | -1.28 | 0.33 | -3.87 | 1.09E-04 | 3.55E-03 | 7558.82 | -0.07 | 0.16 | -0.42 | 0.677 | 1.000 |
| ENST00000264028 | ARCN1 | 26.85 | -22.68 | 3.03 | -7.49 | 6.77E-14 | 1.33E-11 | 17149.43 | 0.21 | 0.17 | 1.27 | 0.204 | 0.899 |
| ENST00000000233 | ARF5 | 48.66 | -23.47 | 3.03 | -7.76 | 8.83E-15 | 2.89E-12 | 3565.22 | 0.14 | 0.35 | 0.41 | 0.681 | 1.000 |
| ENST00000532478 | ARFGAP2 | 10.76 | -2.69 | 0.93 | -2.89 | 3.89E-03 | 7.00E-02 | 9.19 | -0.67 | 1.40 | -0.48 | 0.631 | 1.000 |
| ENST00000400198 | ARGLU1 | 71.05 | -1.03 | 0.38 | -2.71 | 6.69E-03 | 1.04E-01 | 2557.21 | -0.08 | 0.15 | -0.53 | 0.595 | 1.000 |
| ENST00000529960 | ARHGAP1 | 15.58 | -7.10 | 2.66 | -2.67 | 7.64E-03 | 1.14E-01 | 12.06 | -0.40 | 0.78 | -0.52 | 0.602 | 1.000 |
| ENST00000303665 | ARHGAP17 | 7.38 | -20.93 | 3.03 | -6.91 | 4.91E-12 | 3.20E-10 | 1732.30 | -1.72 | 0.21 | -7.99 | 0.000 | 0.000 |
| ENST00000539826 | ARHGAP5 | 5.63 | -4.40 | 1.63 | -2.70 | 6.91E-03 | 1.06E-01 | 305.41 | 0.87 | 0.96 | 0.91 | 0.361 | 0.999 |
| ENST00000350026 | ARID1B | 7.15 | -20.87 | 3.03 | -6.89 | 5.59E-12 | 3.55E-10 | 12.85 | -3.26 | 2.06 | -1.58 | 0.113 | 0.757 |
| ENST00000334344 | ARID2 | 91.14 | -0.81 | 0.28 | -2.84 | 4.49E-03 | 7.78E-02 | 7610.28 | 0.16 | 0.26 | 0.62 | 0.536 | 1.000 |
| ENST00000452385 | ARIH2 | 6.84 | -20.28 | 3.03 | -6.69 | 2.19E-11 | 1.21E-09 | 1598.04 | 0.01 | 0.20 | 0.04 | 0.968 | 1.000 |
| ENST00000492077 | ARIH2 | 14.95 | -7.04 | 2.66 | -2.64 | 8.25E-03 | 1.20E-01 | 106.73 | -0.19 | 0.42 | -0.44 | 0.658 | 1.000 |
| ENST00000549283 | ARL1 | 7.47 | -20.95 | 3.03 | -6.91 | 4.70E-12 | 3.08E-10 | 8.80 | 0.05 | 1.35 | 0.04 | 0.972 | 1.000 |
| ENST00000529254 | ARL2 | 80.02 | -3.82 | 1.46 | -2.61 | 9.10E-03 | 1.29E-01 | 73.03 | -0.60 | 0.78 | -0.76 | 0.444 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000455875 | ARL6IP6 | 7.48 | -3.11 | 1.14 | -2.73 | 6.29E-03 | 1.00E-01 | 48.16 | 0.18 | 0.78 | 0.23 | 0.818 | 1.000 |
| ENST00000441711 | ARMC10 | 1.74 | -3.91 | 1.22 | -3.20 | 1.39E-03 | 3.10E-02 | 664.67 | 0.58 | 0.39 | 1.50 | 0.132 | 0.797 |
| ENST00000470146 | ARPC2 | 50.38 | -7.64 | 1.59 | -4.80 | 1.57E-06 | 6.92E-05 | 5951.30 | 0.27 | 0.74 | 0.36 | 0.721 | 1.000 |
| ENST00000294742 | ARPC5 | 14.56 | -1.42 | 0.38 | -3.70 | 2.19E-04 | 6.60E-03 | 1345.85 | 0.93 | 1.36 | 0.68 | 0.497 | 1.000 |
| ENST00000539528 | ASB8 | 11.76 | -6.69 | 1.89 | -3.54 | 3.99E-04 | 1.10E-02 | 271.06 | 0.52 | 0.65 | 0.79 | 0.428 | 1.000 |
| ENST00000317168 | ASCC1 | 5.78 | -20.60 | 3.03 | -6.80 | 1.06E-11 | 6.11E-10 | 103.19 | -1.41 | 1.03 | -1.37 | 0.170 | 0.857 |
| ENST00000369162 | ASCC3 | 140.04 | -0.67 | 0.23 | -2.95 | 3.22E-03 | 6.05E-02 | 4899.85 | 0.08 | 0.15 | 0.50 | 0.619 | 1.000 |
| ENST00000229595 | ASF1A | 84.23 | -0.68 | 0.22 | -3.10 | 1.93E-03 | 4.04E-02 | 1479.34 | -0.03 | 0.17 | -0.21 | 0.836 | 1.000 |
| ENST00000260952 | ASNSD1 | 26.10 | -1.29 | 0.45 | -2.85 | 4.37E-03 | 7.64E-02 | 2199.80 | -0.11 | 0.20 | -0.56 | 0.578 | 1.000 |
| ENST00000521499 | ASPH | 18.28 | -3.61 | 1.31 | -2.76 | 5.79E-03 | 9.40E-02 | 18.41 | 0.37 | 0.95 | 0.39 | 0.695 | 1.000 |
| ENST00000261191 | ASUN | 72.59 | -0.74 | 0.27 | -2.69 | 7.05E-03 | 1.08E-01 | 1827.19 | 1.22 | 0.75 | 1.62 | 0.105 | 0.736 |
| ENST00000328142 | ATAD1 | 45.31 | -3.61 | 0.93 | -3.87 | 1.10E-04 | 3.58E-03 | 5790.84 | 0.34 | 0.25 | 1.38 | 0.167 | 0.851 |
| ENST00000521903 | ATAD2 | 4.28 | -3.42 | 1.22 | -2.81 | 4.91E-03 | 8.31E-02 | 684.58 | 0.51 | 0.91 | 0.56 | 0.575 | 1.000 |
| ENST00000396680 | ATF4 | 10.65 | -21.43 | 3.03 | -7.07 | 1.50E-12 | 1.33E-10 | 2878.80 | -0.42 | 0.44 | -0.95 | 0.343 | 0.991 |
| ENST00000540793 | ATF7IP | 11.72 | -21.55 | 3.03 | -7.12 | 1.12E-12 | 1.05E-10 | 1418.21 | 1.64 | 1.03 | 1.59 | 0.111 | 0.754 |
| ENST00000379594 | ATG12 | 5.00 | -4.84 | 1.87 | -2.59 | 9.72E-03 | 1.35E-01 | 67.13 | -0.43 | 0.45 | -0.96 | 0.335 | 0.988 |
| ENST00000496423 | ATG3 | 17.52 | -7.27 | 1.50 | -4.85 | 1.25E-06 | 5.55E-05 | 47.04 | -0.17 | 0.46 | -0.38 | 0.707 | 1.000 |
| ENST00000372246 | ATG4A | 4.01 | -3.44 | 1.19 | -2.88 | 3.97E-03 | 7.11E-02 | 199.12 | 1.24 | 0.89 | 1.40 | 0.163 | 0.845 |
| ENST00000405546 | ATG4B | 9.35 | -4.47 | 1.68 | -2.66 | 7.77E-03 | 1.16E-01 | 285.09 | -0.03 | 0.26 | -0.11 | 0.911 | 1.000 |
| ENST00000354449 | ATG7 | 55.53 | -0.90 | 0.33 | -2.73 | 6.32E-03 | 1.00E-01 | 2732.18 | 0.02 | 0.21 | 0.12 | 0.908 | 1.000 |
| ENST00000446622 | ATIC | 23.85 | -3.35 | 0.85 | -3.96 | 7.48E-05 | 2.57E-03 | 388.71 | 0.11 | 0.26 | 0.43 | 0.668 | 1.000 |
| ENST00000402054 | ATL2 | 32.24 | -5.84 | 1.86 | -3.13 | 1.72E-03 | 3.68E-02 | 48.49 | -0.39 | 0.56 | -0.70 | 0.484 | 1.000 |
| ENST00000452699 | ATP13A2 | 15.21 | -1.02 | 0.37 | -2.77 | 5.54E-03 | 9.10E-02 | 263.02 | 1.55 | 0.38 | 4.11 | 0.000 | 0.002 |
| ENST00000484727 | ATP1B3 | 6.64 | -20.76 | 3.03 | -6.85 | 7.37E-12 | 4.51E-10 | 373.83 | -2.84 | 1.27 | -2.24 | 0.025 | 0.365 |
| ENST00000539276 | ATP2A2 | 152.33 | -25.04 | 3.03 | -8.27 | 1.31E-16 | 1.14E-13 | 19945.57 | 0.26 | 0.17 | 1.55 | 0.120 | 0.775 |
| ENST00000282050 | ATP5A1 | 36.23 | -23.08 | 3.03 | -7.63 | 2.43E-14 | 6.28E-12 | 10449.92 | 6.66 | 1.98 | 3.37 | 0.001 | 0.029 |
| ENST00000471790 | ATP5A1 | 12.16 | -2.84 | 0.89 | -3.18 | 1.48E-03 | 3.26E-02 | 34.44 | 0.77 | 0.54 | 1.43 | 0.154 | 0.834 |
| ENST00000484856 | ATP5A1 | 69.47 | -23.97 | 3.03 | -7.92 | 2.38E-15 | 1.11E-12 | 163.45 | -3.02 | 1.68 | -1.80 | 0.071 | 0.623 |
| ENST00000547808 | ATP5B | 18.81 | -22.19 | 3.03 | -7.33 | 2.30E-13 | 3.22E-11 | 637.51 | 4.59 | 1.25 | 3.66 | 0.000 | 0.012 |
| ENST00000441945 | ATP5C1P1 | 51.26 | -1.85 | 0.40 | -4.57 | 4.95E-06 | 2.07E-04 | 4.17 | -1.14 | 2.27 | -0.51 | 0.613 | 1.000 |
| ENST00000395633 | ATP5D | 49.85 | -8.77 | 1.03 | -8.54 | 1.37E-17 | 1.65E-14 | 1917.09 | -0.13 | 0.23 | -0.55 | 0.585 | 1.000 |
| ENST00000243997 | ATP5E | 269.93 | -1.10 | 0.30 | -3.73 | 1.94E-04 | 5.94E-03 | 30476.69 | -0.05 | 0.11 | -0.45 | 0.654 | 1.000 |
| ENST00000468818 | ATP5F1 | 101.35 | -7.36 | 2.72 | -2.71 | 6.79E-03 | 1.05E-01 | 6283.03 | 0.55 | 0.21 | 2.62 | 0.009 | 0.189 |
| ENST00000483994 | ATP5F1 | 108.81 | -24.58 | 3.03 | -8.12 | 4.58E-16 | 3.26E-13 | 39.24 | 0.36 | 0.54 | 0.66 | 0.509 | 1.000 |
| ENST00000355938 | ATP5G1 | 6.05 | -2.83 | 1.08 | -2.62 | 8.78E-03 | 1.26E-01 | 3372.38 | -0.05 | 0.14 | -0.38 | 0.704 | 1.000 |
| ENST00000515116 | ATP5I | 109.66 | -1.93 | 0.61 | -3.16 | 1.59E-03 | 3.46E-02 | 40.99 | 0.03 | 0.45 | 0.07 | 0.941 | 1.000 |
| ENST00000527186 | ATP5L | 30.36 | -2.15 | 0.81 | -2.67 | 7.60E-03 | 1.14E-01 | 257.97 | 0.29 | 0.23 | 1.24 | 0.216 | 0.912 |
| ENST00000544975 | ATP6AP2 | 63.56 | -23.67 | 3.03 | -7.82 | 5.27E-15 | 1.97E-12 | 606.75 | 0.17 | 0.41 | 0.42 | 0.672 | 1.000 |
| ENST00000330398 | ATP6V0C | 25.37 | -2.29 | 0.83 | -2.77 | 5.57E-03 | 9.12E-02 | 3284.48 | 0.79 | 0.69 | 1.16 | 0.247 | 0.939 |
| ENST00000566322 | ATP6V0D1 | 13.98 | -21.79 | 3.03 | -7.20 | 6.21E-13 | 6.95E-11 | 13.20 | -2.32 | 1.14 | -2.03 | 0.042 | 0.482 |
| ENST00000273398 | ATP6V1A | 196.94 | -0.67 | 0.22 | -3.02 | 2.52E-03 | 5.02E-02 | 4517.01 | -0.51 | 0.54 | -0.95 | 0.344 | 0.991 |
| ENST00000557244 | ATP6V1D | 5.21 | -5.52 | 1.30 | -4.25 | 2.17E-05 | 8.44E-04 | 7.73 | 0.73 | 1.09 | 0.67 | 0.502 | 1.000 |
| ENST00000460085 | ATP6V1E1 | 92.97 | -9.67 | 1.10 | -8.75 | 2.06E-18 | 3.29E-15 | 4.31 | -3.00 | 2.15 | -1.39 | 0.163 | 0.846 |
| ENST00000374050 | ATP6V1G1 | 162.29 | -1.08 | 0.22 | -4.94 | 7.85E-07 | 3.55E-05 | 5942.45 | 0.25 | 0.14 | 1.85 | 0.065 | 0.596 |
| ENST00000350721 | ATR | 61.79 | -0.94 | 0.35 | -2.69 | 7.22E-03 | 1.10E-01 | 5195.43 | 0.26 | 0.19 | 1.42 | 0.156 | 0.839 |
| ENST00000446916 | ATRN | 29.56 | -4.22 | 1.48 | -2.86 | 4.23E-03 | 7.46E-02 | 19082.79 | -0.26 | 0.25 | -1.03 | 0.301 | 0.973 |
| ENST00000359092 | AXL | 9.47 | -21.27 | 3.03 | -7.02 | 2.20E-12 | 1.77E-10 | 6827.72 | -0.05 | 0.15 | -0.34 | 0.737 | 1.000 |
| ENST00000465740 | B4GALT3 | 3.75 | -2.88 | 1.07 | -2.69 | 7.11E-03 | 1.09E-01 | 350.44 | -0.08 | 0.29 | -0.27 | 0.790 | 1.000 |
| ENST00000464126 | BAG6 | 15.95 | -7.13 | 2.62 | -2.72 | 6.45E-03 | 1.01E-01 | 24.25 | 0.17 | 0.70 | 0.24 | 0.811 | 1.000 |
| ENST00000428708 | BAIAP2 | 15.52 | -21.94 | 3.03 | -7.24 | 4.34E-13 | 5.32E-11 | 2479.30 | -0.13 | 1.24 | -0.11 | 0.915 | 1.000 |
| ENST00000355163 | BANP | 3.32 | -3.61 | 1.17 | -3.07 | 2.11E-03 | 4.35E-02 | 153.00 | 0.51 | 2.46 | 0.21 | 0.834 | 1.000 |
| ENST00000391871 | BAX | 7.84 | -21.01 | 3.03 | -6.94 | 4.05E-12 | 2.77E-10 | 66.84 | -0.18 | 0.42 | -0.43 | 0.666 | 1.000 |
| ENST00000566210 | BBS2 | 1.94 | -4.08 | 1.44 | -2.84 | 4.47E-03 | 7.74E-02 | 22.70 | 1.88 | 0.83 | 2.25 | 0.024 | 0.358 |
| ENST00000506636 | BBS7 | 13.65 | -6.91 | 2.59 | -2.66 | 7.77E-03 | 1.16E-01 | 1796.54 | 0.19 | 0.16 | 1.22 | 0.223 | 0.917 |
| ENST00000491150 | BCAP29 | 43.01 | -3.47 | 0.77 | -4.49 | 7.27E-06 | 2.99E-04 | 512.47 | -0.01 | 0.28 | -0.03 | 0.976 | 1.000 |
| ENST00000368759 | BCCIP | 24.28 | -3.51 | 1.29 | -2.71 | 6.63E-03 | 1.03E-01 | 1213.21 | -0.02 | 0.27 | -0.08 | 0.935 | 1.000 |
| ENST00000317582 | BCL2L13 | 7.27 | -3.03 | 1.06 | -2.87 | 4.14E-03 | 7.33E-02 | 716.05 | 0.39 | 0.20 | 2.01 | 0.045 | 0.495 |
| ENST00000543382 | BECN1 | 65.79 | -1.12 | 0.29 | -3.93 | 8.39E-05 | 2.84E-03 | 5378.48 | 0.03 | 0.13 | 0.20 | 0.843 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000563971 | BFAR | 13.88 | -6.93 | 2.62 | -2.64 | 8.21E-03 | 1.20E-01 | 33.09 | -0.04 | 0.81 | -0.05 | 0.959 | 1.000 |
| ENST00000331595 | BGN | 32.55 | -1.97 | 0.34 | -5.75 | 8.72E-09 | 4.46E-07 | 7800.59 | -0.87 | 0.17 | -5.23 | 0.000 | 0.000 |
| ENST00000355112 | BLM | 109.72 | -0.60 | 0.21 | -2.82 | 4.73E-03 | 8.08E-02 | 1278.41 | -0.50 | 0.58 | -0.85 | 0.394 | 1.000 |
| ENST00000367807 | BLZF1 | 12.19 | -21.61 | 3.03 | -7.14 | 9.65E-13 | 9.35E-11 | 381.97 | 0.00 | 0.29 | 0.00 | 0.998 | 1.000 |
| ENST00000414869 | BPNT1 | 16.91 | -7.22 | 1.87 | -3.86 | 1.14E-04 | 3.70E-03 | 375.82 | -0.91 | 0.67 | -1.36 | 0.172 | 0.860 |
| ENST00000544455 | BRCA2 | 38.51 | -0.96 | 0.25 | -3.83 | 1.29E-04 | 4.12E-03 | 6.96 | -1.11 | 1.14 | -0.98 | 0.329 | 0.985 |
| ENST00000369462 | BRCC3 | 3.94 | -5.11 | 1.82 | -2.80 | 5.04E-03 | 8.49E-02 | 286.55 | -0.79 | 0.28 | -2.86 | 0.004 | 0.114 |
| ENST00000463620 | BRD8 | 16.75 | -7.20 | 2.64 | -2.73 | 6.39E-03 | 1.01E-01 | 458.18 | 0.40 | 0.30 | 1.32 | 0.187 | 0.880 |
| ENST00000259008 | BRIP1 | 43.87 | -1.02 | 0.34 | -2.97 | 2.95E-03 | 5.67E-02 | 4871.28 | -0.45 | 0.15 | -3.07 | 0.002 | 0.067 |
| ENST00000340934 | BROX | 157.54 | -0.76 | 0.19 | -3.89 | 1.00E-04 | 3.31E-03 | 5611.84 | 0.22 | 0.17 | 1.31 | 0.189 | 0.883 |
| ENST00000367846 | BRP44 | 42.38 | -0.62 | 0.24 | -2.59 | 9.52E-03 | 1.32E-01 | 1429.74 | 0.24 | 0.35 | 0.70 | 0.483 | 1.000 |
| ENST00000353555 | BSG | 1151.34 | -13.30 | 1.06 | -12.60 | 2.02E-36 | 4.25E-32 | 55676.35 | 0.25 | 0.15 | 1.65 | 0.098 | 0.719 |
| ENST00000252593 | BST2 | 10.89 | -6.57 | 1.06 | -6.18 | 6.45E-10 | 3.40E-08 | 2761.31 | -1.28 | 0.13 | -10.19 | 0.000 | 0.000 |
| ENST00000514360 | BTF3 | 642.50 | -1.06 | 0.27 | -3.90 | 9.57E-05 | 3.18E-03 | 9952.02 | 0.26 | 0.52 | 0.51 | 0.608 | 1.000 |
| ENST00000230340 | BYSL | 56.84 | -1.38 | 0.46 | -3.02 | 2.55E-03 | 5.08E-02 | 699.72 | -0.07 | 0.19 | -0.37 | 0.708 | 1.000 |
| ENST00000359893 | BZW1 | 48.15 | -5.60 | 1.45 | -3.86 | 1.13E-04 | 3.65E-03 | 88.88 | -0.22 | 0.57 | -0.39 | 0.697 | 1.000 |
| ENST00000410110 | BZW1 | 65.50 | -23.75 | 3.03 | -7.85 | 4.21E-15 | 1.73E-12 | 1758.09 | -0.18 | 0.24 | -0.75 | 0.452 | 1.000 |
| ENST00000447069 | BZW1 | 57.78 | -8.99 | 2.79 | -3.22 | 1.30E-03 | 2.94E-02 | 101.36 | -0.24 | 0.35 | -0.67 | 0.502 | 1.000 |
| ENST00000452206 | BZW1 | 55.80 | -23.09 | 3.03 | -7.63 | 2.36E-14 | 6.24E-12 | 617.69 | -0.30 | 0.53 | -0.56 | 0.575 | 1.000 |
| ENST00000463310 | BZW1 | 57.90 | -23.71 | 3.03 | -7.83 | 4.70E-15 | 1.84E-12 | 89.48 | -0.46 | 0.31 | -1.46 | 0.143 | 0.816 |
| ENST00000415365 | BZW2 | 4.72 | -5.36 | 1.33 | -4.03 | 5.63E-05 | 1.98E-03 | 1003.22 | -0.75 | 0.74 | -1.01 | 0.311 | 0.979 |
| ENST00000419769 | C10orf137 | 17.81 | -7.29 | 2.17 | -3.36 | 7.91E-04 | 1.96E-02 | 306.46 | -0.28 | 1.02 | -0.27 | 0.784 | 1.000 |
| ENST00000540434 | C11orf10 | 18.25 | -3.63 | 0.73 | -4.95 | 7.51E-07 | 3.40E-05 | 147.97 | -0.17 | 0.42 | -0.42 | 0.677 | 1.000 |
| ENST00000525684 | C11orf58 | 8.98 | -21.19 | 3.03 | -7.00 | 2.62E-12 | 2.03E-10 | 122.28 | -0.02 | 0.58 | -0.04 | 0.971 | 1.000 |
| ENST00000529405 | C11orf73 | 9.44 | -6.37 | 1.77 | -3.60 | 3.21E-04 | 9.18E-03 | 162.77 | 0.04 | 0.29 | 0.14 | 0.893 | 1.000 |
| ENST00000542080 | C12orf4 | 4.92 | -4.19 | 1.61 | -2.61 | 9.14E-03 | 1.29E-01 | 4.37 | -5.64 | 2.52 | -2.24 | 0.025 | 0.365 |
| ENST00000552951 | C12orf45 | 42.69 | -0.90 | 0.30 | -2.97 | 2.97E-03 | 5.69E-02 | 929.52 | 0.31 | 0.16 | 1.93 | 0.054 | 0.548 |
| ENST00000550487 | C12orf62 | 27.40 | -2.60 | 0.96 | -2.71 | 6.68E-03 | 1.04E-01 | 2884.23 | 0.13 | 0.18 | 0.76 | 0.450 | 1.000 |
| ENST00000553888 | C14orf133 | 20.11 | -2.74 | 0.92 | -2.99 | 2.79E-03 | 5.42E-02 | 386.30 | 0.75 | 0.29 | 2.57 | 0.010 | 0.208 |
| ENST00000483571 | C14orf135 | 2.80 | -4.62 | 1.75 | -2.64 | 8.19E-03 | 1.20E-01 | 342.98 | 0.58 | 0.62 | 0.95 | 0.344 | 0.991 |
| ENST00000247194 | C14orf149 | 34.64 | -1.38 | 0.47 | -2.93 | 3.36E-03 | 6.28E-02 | 914.61 | -0.03 | 0.29 | -0.12 | 0.907 | 1.000 |
| ENST00000556760 | C14orf166 | 10.42 | -21.40 | 3.03 | -7.07 | 1.60E-12 | 1.40E-10 | 3679.16 | -0.08 | 0.42 | -0.19 | 0.848 | 1.000 |
| ENST00000416151 | C15orf23 | 55.31 | -4.80 | 1.46 | -3.28 | 1.02E-03 | 2.42E-02 | 721.89 | 0.00 | 0.42 | 0.01 | 0.996 | 1.000 |
| ENST00000560321 | C15orf23 | 13.40 | -21.74 | 3.03 | -7.18 | 7.06E-13 | 7.46E-11 | 120.22 | 0.34 | 0.41 | 0.85 | 0.398 | 1.000 |
| ENST00000416810 | C15orf57 | 5.73 | -20.59 | 3.03 | -6.79 | 1.10E-11 | 6.29E-10 | 525.96 | -0.38 | 0.64 | -0.59 | 0.554 | 1.000 |
| ENST00000497142 | C15orf63 | 12.25 | -21.61 | 3.03 | -7.14 | 9.57E-13 | 9.32E-11 | 81.33 | 0.27 | 0.32 | 0.83 | 0.404 | 1.000 |
| ENST00000327237 | C16orf58 | 29.25 | -2.62 | 0.77 | -3.42 | 6.32E-04 | 1.63E-02 | 1822.30 | -0.45 | 0.31 | -1.47 | 0.143 | 0.816 |
| ENST00000565844 | C16orf88 | 19.47 | -7.42 | 1.93 | -3.84 | 1.25E-04 | 4.02E-03 | 560.51 | -0.06 | 1.37 | -0.04 | 0.966 | 1.000 |
| ENST00000442039 | C16orf91 | 12.37 | -6.76 | 1.75 | -3.87 | 1.09E-04 | 3.55E-03 | 1018.73 | -1.49 | 0.16 | -9.20 | 0.000 | 0.000 |
| ENST00000354429 | C17orf81 | 7.47 | -20.95 | 3.03 | -6.91 | 4.70E-12 | 3.08E-10 | 221.10 | 0.10 | 0.53 | 0.20 | 0.845 | 1.000 |
| ENST00000269194 | C18orf21 | 8.08 | -6.15 | 1.84 | -3.35 | 8.03E-04 | 1.98E-02 | 107.71 | -0.06 | 0.36 | -0.16 | 0.869 | 1.000 |
| ENST00000461488 | C19orf42 | 4.12 | -5.17 | 1.24 | -4.19 | 2.84E-05 | 1.08E-03 | 25.91 | 0.08 | 0.66 | 0.13 | 0.900 | 1.000 |
| ENST00000535581 | C19orf55 | 2.39 | -4.37 | 1.28 | -3.43 | 6.12E-04 | 1.59E-02 | 1465.68 | -0.15 | 0.16 | -0.97 | 0.334 | 0.987 |
| ENST00000287859 | C1orf27 | 47.18 | -2.89 | 0.88 | -3.27 | 1.06E-03 | 2.49E-02 | 3554.41 | 0.60 | 0.38 | 1.59 | 0.113 | 0.757 |
| ENST00000372525 | C1orf50 | 2.67 | -4.55 | 1.65 | -2.76 | 5.83E-03 | 9.46E-02 | 616.50 | 0.13 | 0.17 | 0.76 | 0.448 | 1.000 |
| ENST00000372970 | C20orf111 | 13.73 | -19.64 | 3.03 | -6.49 | 8.74E-11 | 4.73E-09 | 109.87 | 0.32 | 0.31 | 1.02 | 0.309 | 0.979 |
| ENST00000379283 | C20orf30 | 25.62 | -2.20 | 0.44 | -5.01 | 5.43E-07 | 2.49E-05 | 658.94 | 0.12 | 0.23 | 0.50 | 0.617 | 1.000 |
| ENST00000377704 | C20orf72 | 13.88 | -6.93 | 2.67 | -2.59 | 9.56E-03 | 1.33E-01 | 192.75 | 0.19 | 0.50 | 0.39 | 0.699 | 1.000 |
| ENST00000491220 | C2orf28 | 30.66 | -1.01 | 0.34 | -3.01 | 2.60E-03 | 5.14E-02 | 8.42 | -0.41 | 0.97 | -0.42 | 0.672 | 1.000 |
| ENST00000295148 | C2orf44 | 46.76 | -0.65 | 0.24 | -2.65 | 8.07E-03 | 1.19E-01 | 2268.36 | -0.01 | 0.16 | -0.09 | 0.927 | 1.000 |
| ENST00000392290 | C2orf47 | 12.56 | -21.65 | 3.03 | -7.15 | 8.72E-13 | 8.78E-11 | 1036.96 | 0.27 | 0.63 | 0.43 | 0.670 | 1.000 |
| ENST00000342649 | C3orf23 | 1.91 | -4.07 | 1.25 | -3.25 | 1.14E-03 | 2.64E-02 | 221.15 | -0.15 | 0.64 | -0.24 | 0.812 | 1.000 |
| ENST00000537319 | C5orf28 | 2.06 | -4.16 | 1.49 | -2.79 | 5.30E-03 | 8.82E-02 | 159.33 | -1.29 | 0.69 | -1.87 | 0.061 | 0.580 |
| ENST00000510890 | C5orf30 | 7.31 | -3.36 | 1.14 | -2.95 | 3.18E-03 | 6.00E-02 | 2096.47 | -1.07 | 1.66 | -0.64 | 0.522 | 1.000 |
| ENST00000509253 | C6orf108 | 4.45 | -5.29 | 1.64 | -3.23 | 1.22E-03 | 2.79E-02 | 16.39 | -1.19 | 2.88 | -0.41 | 0.680 | 1.000 |
| ENST00000309930 | C7orf10 | 4.16 | -3.38 | 1.28 | -2.64 | 8.23E-03 | 1.20E-01 | 336.92 | -0.32 | 0.45 | -0.70 | 0.481 | 1.000 |
| ENST00000344417 | C7orf26 | 26.86 | -1.24 | 0.46 | -2.71 | 6.77E-03 | 1.05E-01 | 3481.52 | -0.15 | 0.25 | -0.58 | 0.560 | 1.000 |
| ENST00000297145 | C7orf60 | 20.46 | -1.43 | 0.50 | -2.87 | 4.05E-03 | 7.20E-02 | 2202.45 | 0.05 | 0.15 | 0.36 | 0.720 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000276704 | C8orf76 | 17.64 | -1.69 | 0.40 | -4.22 | 2.39E-05 | 9.24E-04 | 804.24 | 0.25 | 0.16 | 1.57 | 0.117 | 0.767 |
| ENST00000376834 | C9orf41 | 12.20 | -2.04 | 0.65 | -3.14 | 1.67E-03 | 3.60E-02 | 2396.09 | 0.14 | 0.15 | 0.94 | 0.345 | 0.991 |
| ENST00000223864 | C9orf46 | 17.31 | -5.59 | 1.50 | -3.73 | 1.90E-04 | 5.84E-03 | 1320.00 | 0.05 | 0.14 | 0.34 | 0.731 | 1.000 |
| ENST00000492991 | C9orf78 | 8.83 | -21.17 | 3.03 | -6.99 | 2.75E-12 | 2.08E-10 | 24.99 | -0.06 | 0.67 | -0.09 | 0.930 | 1.000 |
| ENST00000488630 | C9orf89 | 13.48 | -5.16 | 1.59 | -3.24 | 1.18E-03 | 2.72E-02 | 612.24 | 0.04 | 0.30 | 0.13 | 0.893 | 1.000 |
| ENST00000448105 | CALCOCO2 | 21.52 | -6.98 | 1.82 | -3.83 | 1.29E-04 | 4.11E-03 | 138.45 | 0.56 | 0.28 | 2.01 | 0.044 | 0.494 |
| ENST00000422748 | CALD1 | 10.31 | -21.35 | 3.03 | -7.05 | 1.79E-12 | 1.51E-10 | 26.30 | -1.02 | 0.63 | -1.62 | 0.106 | 0.740 |
| ENST00000430085 | CALD1 | 64.62 | -9.15 | 1.97 | -4.64 | 3.54E-06 | 1.51E-04 | 92.64 | -0.36 | 0.39 | -0.93 | 0.351 | 0.994 |
| ENST00000482470 | CALD1 | 23.92 | -7.72 | 2.74 | -2.82 | 4.81E-03 | 8.18E-02 | 523.91 | 0.09 | 0.18 | 0.49 | 0.621 | 1.000 |
| ENST00000260743 | CALHM2 | 2.85 | -4.64 | 1.78 | -2.60 | 9.29E-03 | 1.31E-01 | 1780.53 | 0.11 | 0.20 | 0.53 | 0.595 | 1.000 |
| ENST00000456319 | CALM2 | 380.21 | -3.38 | 0.98 | -3.44 | 5.80E-04 | 1.52E-02 | 369.03 | -0.30 | 0.63 | -0.47 | 0.641 | 1.000 |
| ENST00000535011 | CALU | 56.83 | -23.69 | 3.03 | -7.83 | 4.98E-15 | 1.90E-12 | 1750.79 | -0.42 | 0.21 | -2.04 | 0.041 | 0.475 |
| ENST00000296402 | CAMK2D | 48.92 | -8.75 | 1.17 | -7.45 | 9.04E-14 | 1.64E-11 | 541.33 | -0.06 | 0.27 | -0.21 | 0.836 | 1.000 |
| ENST00000394524 | CAMK2D | 7.47 | -20.95 | 3.03 | -6.91 | 4.70E-12 | 3.08E-10 | 2084.90 | -0.52 | 0.39 | -1.32 | 0.188 | 0.882 |
| ENST00000503126 | CANX | 192.33 | -1.65 | 0.59 | -2.77 | 5.62E-03 | 9.18E-02 | 69.94 | 0.23 | 0.72 | 0.32 | 0.752 | 1.000 |
| ENST00000479759 | CAP1 | 151.81 | -3.10 | 1.12 | -2.78 | 5.51E-03 | 9.05E-02 | 254.26 | 0.26 | 0.39 | 0.67 | 0.504 | 1.000 |
| ENST00000366869 | CAPN2 | 33.92 | -21.35 | 3.03 | -7.05 | 1.77E-12 | 1.51E-10 | 381.94 | 1.72 | 0.92 | 1.87 | 0.062 | 0.581 |
| ENST00000327064 | CARM1 | 32.74 | -1.90 | 0.73 | -2.60 | 9.43E-03 | 1.32E-01 | 5127.35 | 0.06 | 0.21 | 0.26 | 0.794 | 1.000 |
| ENST00000529772 | CARS | 12.00 | -21.59 | 3.03 | -7.13 | 1.02E-12 | 9.73E-11 | 1652.28 | -0.50 | 0.56 | -0.89 | 0.372 | 1.000 |
| ENST00000524843 | CASP4 | 5.26 | -5.53 | 1.77 | -3.13 | 1.74E-03 | 3.71E-02 | 53.02 | -0.23 | 0.67 | -0.34 | 0.736 | 1.000 |
| ENST00000412916 | CBFB | 73.27 | -9.33 | 1.00 | -9.34 | 9.28E-21 | 1.95E-17 | 8467.26 | 0.06 | 0.16 | 0.38 | 0.706 | 1.000 |
| ENST00000493361 | CBLL1 | 13.16 | -3.55 | 1.27 | -2.78 | 5.38E-03 | 8.91E-02 | 71.41 | 0.06 | 0.51 | 0.11 | 0.909 | 1.000 |
| ENST00000314367 | CBWD1 | 2.10 | -4.19 | 1.17 | -3.59 | 3.34E-04 | 9.46E-03 | 193.15 | 0.74 | 0.39 | 1.90 | 0.058 | 0.565 |
| ENST00000462165 | CBX3 | 25.73 | -7.82 | 3.01 | -2.60 | 9.33E-03 | 1.31E-01 | 1225.01 | 0.01 | 0.27 | 0.03 | 0.977 | 1.000 |
| ENST00000402326 | CBX3P9 | 332.83 | -0.91 | 0.22 | -4.13 | 3.70E-05 | 1.36E-03 | 30.12 | 0.07 | 0.50 | 0.14 | 0.890 | 1.000 |
| ENST00000492537 | CBY1 | 3.91 | -5.10 | 1.74 | -2.92 | 3.46E-03 | 6.41E-02 | 107.35 | -0.06 | 0.32 | -0.20 | 0.842 | 1.000 |
| ENST00000480627 | CCAR1 | 12.70 | -4.82 | 1.77 | -2.73 | 6.41E-03 | 1.01E-01 | 431.81 | -0.10 | 0.26 | -0.38 | 0.701 | 1.000 |
| ENST00000543225 | CCAR1 | 27.93 | -22.73 | 3.03 | -7.51 | 5.94E-14 | 1.21E-11 | 3367.86 | 0.20 | 0.14 | 1.46 | 0.144 | 0.817 |
| ENST00000446900 | CCBL2 | 14.05 | -21.80 | 3.03 | -7.20 | 6.06E-13 | 6.91E-11 | 41.47 | 1.47 | 0.63 | 2.34 | 0.019 | 0.310 |
| ENST00000339012 | CCDC104 | 16.52 | -5.37 | 1.05 | -5.12 | 3.02E-07 | 1.41E-05 | 160.17 | 0.69 | 0.90 | 0.77 | 0.444 | 1.000 |
| ENST00000249064 | CCDC117 | 30.62 | -1.91 | 0.48 | -4.02 | 5.78E-05 | 2.03E-03 | 3972.14 | -0.25 | 0.18 | -1.42 | 0.156 | 0.839 |
| ENST00000295124 | CCDC138 | 22.69 | -3.50 | 0.57 | -6.14 | 8.01E-10 | 4.21E-08 | 1271.47 | -0.23 | 0.32 | -0.73 | 0.467 | 1.000 |
| ENST00000487498 | CCDC14 | 2.92 | -4.05 | 1.46 | -2.77 | 5.55E-03 | 9.10E-02 | 67.71 | -0.26 | 0.62 | -0.42 | 0.673 | 1.000 |
| ENST00000504487 | CCDC149 | 6.27 | -2.59 | 0.76 | -3.41 | 6.42E-04 | 1.65E-02 | 1788.07 | -0.32 | 0.18 | -1.77 | 0.077 | 0.646 |
| ENST00000328697 | CCDC34 | 8.06 | -6.15 | 1.73 | -3.54 | 3.94E-04 | 1.09E-02 | 775.59 | -0.33 | 0.19 | -1.75 | 0.080 | 0.656 |
| ENST00000291458 | CCDC58 | 17.27 | -7.25 | 1.34 | -5.39 | 7.01E-08 | 3.45E-06 | 246.74 | -0.26 | 0.44 | -0.60 | 0.551 | 1.000 |
| ENST00000263102 | CCDC6 | 133.92 | -0.87 | 0.29 | -2.98 | 2.87E-03 | 5.55E-02 | 6881.20 | -0.17 | 0.13 | -1.33 | 0.185 | 0.879 |
| ENST00000206423 | CCDC80 | 24.45 | -1.29 | 0.40 | -3.21 | 1.33E-03 | 2.99E-02 | 1849.77 | -0.06 | 0.19 | -0.29 | 0.772 | 1.000 |
| ENST00000530106 | CCDC82 | 24.48 | -1.04 | 0.37 | -2.80 | 5.06E-03 | 8.52E-02 | 461.43 | 0.32 | 0.25 | 1.28 | 0.199 | 0.894 |
| ENST00000545580 | CCDC86 | 33.80 | -22.98 | 3.03 | -7.59 | 3.12E-14 | 7.67E-12 | 21.51 | -1.71 | 0.80 | -2.14 | 0.032 | 0.416 |
| ENST00000507232 | CCDC99 | 14.71 | -21.86 | 3.03 | -7.22 | 5.24E-13 | 6.20E-11 | 522.05 | 0.95 | 0.98 | 0.97 | 0.332 | 0.987 |
| ENST00000396268 | CCHCR1 | 7.97 | -6.12 | 1.16 | -5.29 | 1.25E-07 | 6.08E-06 | 32.68 | 0.89 | 1.48 | 0.60 | 0.548 | 1.000 |
| ENST00000559622 | CCNB2 | 6.31 | -20.72 | 3.03 | -6.84 | 8.10E-12 | 4.88E-10 | 21.79 | -1.25 | 1.38 | -0.91 | 0.362 | 0.999 |
| ENST00000536559 | CCND1 | 4.84 | -5.41 | 1.85 | -2.93 | 3.41E-03 | 6.35E-02 | 103.19 | 0.01 | 0.49 | 0.03 | 0.979 | 1.000 |
| ENST00000262643 | CCNE1 | 6.50 | -4.62 | 1.75 | -2.64 | 8.31E-03 | 1.21E-01 | 1639.19 | 0.05 | 0.21 | 0.22 | 0.823 | 1.000 |
| ENST00000256897 | CCNH | 30.88 | -8.08 | 2.23 | -3.63 | 2.87E-04 | 8.37E-03 | 684.21 | 0.01 | 0.23 | 0.05 | 0.957 | 1.000 |
| ENST00000504115 | CCNH | 29.15 | -8.00 | 2.71 | -2.95 | 3.20E-03 | 6.03E-02 | 36.10 | 0.25 | 0.49 | 0.50 | 0.615 | 1.000 |
| ENST00000505230 | CCNH | 5.78 | -5.67 | 1.73 | -3.27 | 1.07E-03 | 2.52E-02 | 214.95 | -0.17 | 0.33 | -0.52 | 0.603 | 1.000 |
| ENST00000511207 | CCNH | 13.60 | -6.90 | 2.62 | -2.63 | 8.43E-03 | 1.22E-01 | 7.15 | -1.22 | 1.09 | -1.11 | 0.265 | 0.953 |
| ENST00000310958 | CCPG1 | 7.84 | -2.25 | 0.74 | -3.03 | 2.45E-03 | 4.91E-02 | 3608.61 | 0.29 | 0.30 | 0.98 | 0.325 | 0.985 |
| ENST00000550010 | CCT2 | 15.82 | -21.93 | 3.03 | -7.24 | 4.43E-13 | 5.40E-11 | 6554.80 | -0.04 | 0.17 | -0.23 | 0.819 | 1.000 |
| ENST00000553169 | CCT2 | 107.69 | -9.89 | 0.97 | -10.20 | 1.93E-24 | 6.73E-21 | 1733.34 | -0.08 | 0.16 | -0.53 | 0.599 | 1.000 |
| ENST00000368259 | CCT3 | 274.45 | -25.84 | 3.03 | -8.54 | 1.37E-17 | 1.65E-14 | 1803.00 | 0.58 | 1.32 | 0.44 | 0.660 | 1.000 |
| ENST00000538252 | CCT4 | 86.46 | -2.49 | 0.87 | -2.85 | 4.41E-03 | 7.68E-02 | 9322.84 | -0.04 | 0.19 | -0.23 | 0.822 | 1.000 |
| ENST00000503026 | CCT5 | 235.68 | -25.64 | 3.03 | -8.47 | 2.44E-17 | 2.62E-14 | 221.92 | 0.04 | 0.55 | 0.07 | 0.947 | 1.000 |
| ENST00000515676 | CCT5 | 407.23 | -26.37 | 3.03 | -8.71 | 2.91E-18 | 4.21E-15 | 16309.90 | -0.20 | 0.78 | -0.26 | 0.798 | 1.000 |
| ENST00000482776 | CCT6A | 37.84 | -7.22 | 1.76 | -4.10 | 4.15E-05 | 1.50E-03 | 880.25 | -0.09 | 0.32 | -0.29 | 0.774 | 1.000 |
| ENST00000258091 | CCT7 | 403.78 | -26.36 | 3.03 | -8.71 | 3.06E-18 | 4.28E-15 | 3637.06 | 3.26 | 0.97 | 3.36 | 0.001 | 0.030 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000398422 | CCT7 | 33.25 | -22.85 | 3.03 | -7.55 | 4.41E-14 | 9.69E-12 | 303.05 | -1.21 | 1.43 | -0.84 | 0.399 | 1.000 |
| ENST00000464397 | CCT7 | 3.46 | -4.93 | 1.37 | -3.59 | 3.25E-04 | 9.27E-03 | 34.99 | -0.75 | 0.80 | -0.93 | 0.351 | 0.994 |
| ENST00000469844 | CCT7 | 50.32 | -23.52 | 3.03 | -7.77 | 7.70E-15 | 2.60E-12 | 1253.13 | -1.15 | 1.27 | -0.91 | 0.365 | 0.999 |
| ENST00000480489 | CCT7 | 12.29 | -6.76 | 2.58 | -2.62 | 8.89E-03 | 1.27E-01 | 8.54 | -0.04 | 1.49 | -0.03 | 0.978 | 1.000 |
| ENST00000537131 | CCT7 | 48.52 | -22.54 | 3.03 | -7.45 | 9.46E-14 | 1.64E-11 | 12480.86 | 0.11 | 0.62 | 0.17 | 0.861 | 1.000 |
| ENST00000287097 | CD109 | 292.53 | -25.93 | 3.03 | -8.57 | 1.06E-17 | 1.39E-14 | 38883.15 | 0.23 | 0.69 | 0.34 | 0.736 | 1.000 |
| ENST00000530320 | CD151 | 27.60 | -22.71 | 3.03 | -7.50 | 6.24E-14 | 1.25E-11 | 2866.33 | 0.18 | 0.19 | 0.93 | 0.353 | 0.995 |
| ENST00000085219 | CD22 | 4.93 | -2.51 | 0.91 | -2.76 | 5.83E-03 | 9.46E-02 | 1677.50 | 2.07 | 1.08 | 1.91 | 0.056 | 0.557 |
| ENST00000359314 | CD2AP | 102.23 | -0.78 | 0.27 | -2.83 | 4.62E-03 | 7.93E-02 | 4055.68 | -0.09 | 0.16 | -0.56 | 0.573 | 1.000 |
| ENST00000279452 | CD44 | 132.26 | -24.80 | 3.03 | -8.19 | 2.54E-16 | 1.97E-13 | 196.75 | 0.13 | 0.25 | 0.53 | 0.595 | 1.000 |
| ENST00000442151 | CD44 | 22.37 | -22.42 | 3.03 | -7.41 | 1.29E-13 | 2.05E-11 | 3098.64 | -0.08 | 0.39 | -0.22 | 0.829 | 1.000 |
| ENST00000527326 | CD44 | 65.37 | -2.68 | 0.88 | -3.03 | 2.45E-03 | 4.90E-02 | 1554.33 | 0.12 | 0.35 | 0.34 | 0.731 | 1.000 |
| ENST00000527926 | CD59 | 205.30 | -3.29 | 1.05 | -3.12 | 1.78E-03 | 3.78E-02 | 858.41 | 0.62 | 0.51 | 1.20 | 0.231 | 0.927 |
| ENST00000533403 | CD59 | 28.14 | -7.95 | 1.00 | -7.93 | 2.16E-15 | 1.05E-12 | 134.02 | 0.10 | 0.36 | 0.28 | 0.777 | 1.000 |
| ENST00000549117 | CD63 | 51.72 | -2.84 | 1.07 | -2.66 | 7.88E-03 | 1.17E-01 | 3141.13 | 0.77 | 0.43 | 1.80 | 0.071 | 0.623 |
| ENST00000550050 | CD63 | 104.70 | -24.36 | 3.03 | -8.05 | 8.36E-16 | 5.17E-13 | 1495.51 | -1.94 | 4.56 | -0.43 | 0.671 | 1.000 |
| ENST00000523208 | CD74 | 31.53 | -8.11 | 2.00 | -4.06 | 5.00E-05 | 1.78E-03 | 580.42 | 0.40 | 0.46 | 0.88 | 0.379 | 1.000 |
| ENST00000523813 | CD74 | 32.23 | -4.01 | 1.36 | -2.96 | 3.09E-03 | 5.87E-02 | 166.26 | 0.86 | 0.32 | 2.72 | 0.007 | 0.153 |
| ENST00000524315 | CD74 | 12.18 | -21.61 | 3.03 | -7.13 | 9.70E-13 | 9.37E-11 | 604.33 | 0.48 | 0.27 | 1.78 | 0.076 | 0.640 |
| ENST00000540891 | CD9 | 24.50 | -7.75 | 2.70 | -2.87 | 4.07E-03 | 7.22E-02 | 30.21 | 0.41 | 0.52 | 0.78 | 0.438 | 1.000 |
| ENST00000438817 | CD96 | 10.77 | -21.44 | 3.03 | -7.08 | 1.46E-12 | 1.30E-10 | 312.61 | -1.06 | 0.41 | -2.56 | 0.010 | 0.211 |
| ENST00000360383 | CDC16 | 51.32 | -1.66 | 0.56 | -2.96 | 3.10E-03 | 5.89E-02 | 33.70 | 4.88 | 1.92 | 2.54 | 0.011 | 0.218 |
| ENST00000439880 | CDC25B | 69.80 | -23.98 | 3.03 | -7.92 | 2.33E-15 | 1.10E-12 | 16714.59 | -0.32 | 0.13 | -2.50 | 0.013 | 0.237 |
| ENST00000495915 | CDC25B | 2.91 | -4.67 | 1.26 | -3.72 | 2.00E-04 | 6.10E-03 | 65.60 | -0.46 | 0.60 | -0.77 | 0.442 | 1.000 |
| ENST00000527547 | CDC27 | 11.28 | -21.51 | 3.03 | -7.10 | 1.24E-12 | 1.15E-10 | 7735.46 | 0.18 | 0.29 | 0.62 | 0.533 | 1.000 |
| ENST00000421089 | CDC42 | 19.46 | -22.25 | 3.03 | -7.35 | 1.98E-13 | 2.90E-11 | 349.26 | 0.92 | 1.61 | 0.57 | 0.567 | 1.000 |
| ENST00000470278 | CDC42SE1 | 20.45 | -22.31 | 3.03 | -7.37 | 1.72E-13 | 2.58E-11 | 127.64 | 0.30 | 0.38 | 0.78 | 0.434 | 1.000 |
| ENST00000371477 | CDC5L | 336.21 | -0.74 | 0.23 | -3.20 | 1.37E-03 | 3.08E-02 | 7368.87 | -0.11 | 0.15 | -0.75 | 0.455 | 1.000 |
| ENST00000430031 | CDC7 | 5.99 | -20.65 | 3.03 | -6.81 | 9.58E-12 | 5.60E-10 | 88.69 | 0.06 | 0.42 | 0.15 | 0.881 | 1.000 |
| ENST00000523454 | CDCA2 | 4.10 | -5.16 | 1.25 | -4.13 | 3.71E-05 | 1.36E-03 | 62.01 | 1.17 | 1.61 | 0.73 | 0.468 | 1.000 |
| ENST00000479032 | CDCA5 | 25.96 | -5.35 | 1.46 | -3.66 | 2.54E-04 | 7.52E-03 | 90.50 | -0.13 | 0.32 | -0.41 | 0.678 | 1.000 |
| ENST00000431540 | CDH13 | 10.96 | -5.39 | 1.19 | -4.52 | 6.13E-06 | 2.55E-04 | 157.16 | -0.72 | 0.56 | -1.29 | 0.197 | 0.893 |
| ENST00000539548 | CDH13 | 15.78 | -21.94 | 3.03 | -7.25 | 4.27E-13 | 5.27E-11 | 829.89 | 1.04 | 3.51 | 0.30 | 0.768 | 1.000 |
| ENST00000565636 | CDH13 | 3.12 | -3.51 | 1.17 | -3.00 | 2.74E-03 | 5.35E-02 | 90.26 | -0.06 | 0.87 | -0.06 | 0.948 | 1.000 |
| ENST00000413878 | CDH2 | 9.56 | -2.90 | 0.97 | -2.99 | 2.79E-03 | 5.42E-02 | 223.94 | 0.29 | 0.23 | 1.30 | 0.194 | 0.890 |
| ENST00000563415 | CDIPT | 1.95 | -3.47 | 1.22 | -2.85 | 4.37E-03 | 7.64E-02 | 101.41 | -0.20 | 0.30 | -0.67 | 0.504 | 1.000 |
| ENST00000276052 | CDK16 | 5.77 | -5.66 | 1.83 | -3.09 | 2.02E-03 | 4.21E-02 | 467.43 | -0.70 | 0.82 | -0.86 | 0.391 | 1.000 |
| ENST00000522234 | CDK16 | 5.93 | -20.64 | 3.03 | -6.81 | 9.82E-12 | 5.71E-10 | 115.70 | 0.33 | 0.55 | 0.60 | 0.549 | 1.000 |
| ENST00000261211 | CDK17 | 57.39 | -0.86 | 0.32 | -2.72 | 6.50E-03 | 1.02E-01 | 2079.30 | -0.02 | 0.27 | -0.08 | 0.935 | 1.000 |
| ENST00000312990 | CDK4 | 47.45 | -8.70 | 1.10 | -7.93 | 2.12E-15 | 1.05E-12 | 2956.97 | -0.13 | 0.17 | -0.75 | 0.455 | 1.000 |
| ENST00000552388 | CDK4 | 6.73 | -20.80 | 3.03 | -6.86 | 6.68E-12 | 4.14E-10 | 2518.31 | -0.06 | 0.87 | -0.07 | 0.943 | 1.000 |
| ENST00000373264 | CDK9 | 9.02 | -6.31 | 2.07 | -3.05 | 2.29E-03 | 4.65E-02 | 292.95 | -0.29 | 0.29 | -0.99 | 0.322 | 0.984 |
| ENST00000491521 | CDK9 | 7.43 | -6.03 | 1.77 | -3.40 | 6.74E-04 | 1.72E-02 | 84.23 | -0.09 | 0.59 | -0.15 | 0.882 | 1.000 |
| ENST00000503932 | CDV3 | 8.20 | -6.17 | 2.14 | -2.88 | 3.92E-03 | 7.03E-02 | 55.39 | 2.15 | 0.90 | 2.37 | 0.018 | 0.294 |
| ENST00000535982 | CELF1 | 3.42 | -4.90 | 1.08 | -4.52 | 6.18E-06 | 2.57E-04 | 35.33 | -0.33 | 0.55 | -0.61 | 0.544 | 1.000 |
| ENST00000510742 | CENPH | 18.43 | -7.34 | 2.64 | -2.78 | 5.45E-03 | 8.99E-02 | 55.65 | -1.00 | 0.84 | -1.20 | 0.229 | 0.925 |
| ENST00000510768 | CENPK | 7.60 | -6.06 | 1.94 | -3.13 | 1.77E-03 | 3.76E-02 | 51.60 | -0.68 | 0.43 | -1.58 | 0.115 | 0.761 |
| ENST00000562943 | CENPN | 4.74 | -4.76 | 1.61 | -2.96 | 3.10E-03 | 5.89E-02 | 33.84 | -1.22 | 0.65 | -1.86 | 0.063 | 0.588 |
| ENST00000306467 | CEP120 | 30.82 | -1.75 | 0.63 | -2.77 | 5.59E-03 | 9.15E-02 | 821.01 | 0.00 | 0.29 | 0.00 | 0.997 | 1.000 |
| ENST00000445435 | CEP55 | 3.15 | -2.47 | 0.92 | -2.69 | 7.05E-03 | 1.08E-01 | 22.58 | 0.28 | 1.68 | 0.17 | 0.867 | 1.000 |
| ENST00000536374 | CEP78 | 22.64 | -7.64 | 1.88 | -4.06 | 4.85E-05 | 1.74E-03 | 709.66 | -0.09 | 0.23 | -0.39 | 0.696 | 1.000 |
| ENST00000422678 | CFL2 | 8.47 | -2.52 | 0.85 | -2.97 | 2.99E-03 | 5.72E-02 | 1797.29 | 0.84 | 1.11 | 0.76 | 0.449 | 1.000 |
| ENST00000341222 | CFLAR | 8.90 | -4.01 | 1.25 | -3.22 | 1.28E-03 | 2.90E-02 | 221.51 | -0.61 | 1.13 | -0.54 | 0.590 | 1.000 |
| ENST00000314103 | CHAF1B | 37.33 | -1.11 | 0.31 | -3.55 | 3.82E-04 | 1.06E-02 | 1132.74 | -0.19 | 0.15 | -1.25 | 0.211 | 0.907 |
| ENST00000512392 | CHD1 | 11.52 | -6.66 | 2.58 | -2.58 | 9.90E-03 | 1.36E-01 | 20.29 | -0.73 | 0.90 | -0.81 | 0.417 | 1.000 |
| ENST00000430771 | CHD4 | 2.96 | -4.06 | 1.55 | -2.63 | 8.63E-03 | 1.24E-01 | 58.76 | 0.31 | 0.41 | 0.76 | 0.450 | 1.000 |
| ENST00000429789 | CHID1 | 5.78 | -20.60 | 3.03 | -6.80 | 1.06E-11 | 6.11E-10 | 784.63 | -0.06 | 0.41 | -0.15 | 0.881 | 1.000 |
| ENST00000531859 | CHID1 | 15.82 | -7.12 | 1.91 | -3.72 | 1.99E-04 | 6.07E-03 | 23.04 | 0.41 | 0.70 | 0.58 | 0.561 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000256509 | CHL1 | 31.05 | -3.57 | 0.93 | -3.82 | 1.33E-04 | 4.23E-03 | 1464.96 | 0.08 | 0.19 | 0.42 | 0.678 | 1.000 |
| ENST00000263780 | CHMP2B | 117.93 | -1.26 | 0.44 | -2.85 | 4.33E-03 | 7.58E-02 | 3998.32 | 0.09 | 0.13 | 0.68 | 0.495 | 1.000 |
| ENST00000295497 | CHN1 | 81.86 | -7.75 | 1.30 | -5.96 | 2.45E-09 | 1.28E-07 | 6850.25 | 1.77 | 0.28 | 6.42 | 0.000 | 0.000 |
| ENST00000529726 | CHORDC1 | 7.43 | -2.92 | 1.11 | -2.64 | 8.32E-03 | 1.21E-01 | 481.01 | -0.23 | 0.37 | -0.61 | 0.539 | 1.000 |
| ENST00000368476 | CHRNB2 | 1.24 | -3.42 | 1.31 | -2.62 | 8.80E-03 | 1.26E-01 | 415.43 | -0.38 | 0.22 | -1.74 | 0.082 | 0.661 |
| ENST00000565786 | CIAPIN1 | 17.39 | -7.26 | 2.64 | -2.75 | 6.01E-03 | 9.67E-02 | 88.58 | 0.15 | 0.48 | 0.32 | 0.749 | 1.000 |
| ENST00000342016 | CIR1 | 11.41 | -1.39 | 0.47 | -2.93 | 3.37E-03 | 6.28E-02 | 1659.50 | -0.23 | 1.22 | -0.19 | 0.852 | 1.000 |
| ENST00000564408 | CIRH1A | 3.90 | -5.10 | 1.81 | -2.81 | 4.97E-03 | 8.40E-02 | 218.37 | 0.13 | 0.33 | 0.38 | 0.705 | 1.000 |
| ENST00000273986 | CISD2 | 16.82 | -1.06 | 0.38 | -2.77 | 5.55E-03 | 9.10E-02 | 2546.63 | -0.05 | 0.13 | -0.36 | 0.720 | 1.000 |
| ENST00000533413 | CKAP5 | 28.39 | -21.94 | 3.03 | -7.25 | 4.22E-13 | 5.24E-11 | 376.08 | -0.86 | 1.27 | -0.68 | 0.500 | 1.000 |
| ENST00000553878 | CKB | 7.35 | -3.86 | 1.07 | -3.59 | 3.25E-04 | 9.27E-03 | 175.78 | 1.46 | 1.42 | 1.03 | 0.305 | 0.977 |
| ENST00000525064 | CLNS1A | 15.52 | -21.94 | 3.03 | -7.24 | 4.34E-13 | 5.32E-11 | 1212.93 | 0.26 | 0.15 | 1.80 | 0.072 | 0.627 |
| ENST00000527299 | CLNS1A | 39.33 | -3.33 | 0.52 | -6.44 | 1.17E-10 | 6.32E-09 | 146.98 | 0.10 | 0.28 | 0.37 | 0.710 | 1.000 |
| ENST00000517467 | CLSPN | 5.42 | -4.34 | 1.32 | -3.30 | 9.70E-04 | 2.32E-02 | 10.81 | -0.28 | 0.98 | -0.29 | 0.773 | 1.000 |
| ENST00000477264 | CLSTN1 | 147.04 | -10.33 | 2.11 | -4.90 | 9.51E-07 | 4.28E-05 | 247.49 | 0.16 | 0.51 | 0.32 | 0.751 | 1.000 |
| ENST00000393043 | CLTC | 282.68 | -8.30 | 2.94 | -2.83 | 4.71E-03 | 8.06E-02 | 4257.81 | 0.40 | 0.19 | 2.10 | 0.036 | 0.444 |
| ENST00000472129 | CLTC | 48.29 | -8.73 | 2.79 | -3.12 | 1.79E-03 | 3.79E-02 | 140.86 | -0.47 | 0.64 | -0.73 | 0.466 | 1.000 |
| ENST00000538498 | CMAS | 7.35 | -20.93 | 3.03 | -6.91 | 4.96E-12 | 3.22E-10 | 51.18 | -0.57 | 0.96 | -0.60 | 0.551 | 1.000 |
| ENST00000451728 | CNBP | 311.64 | -1.44 | 0.31 | -4.66 | 3.16E-06 | 1.36E-04 | 1978.82 | -0.04 | 0.21 | -0.20 | 0.844 | 1.000 |
| ENST00000324301 | CNDP2 | 15.24 | -7.06 | 2.65 | -2.66 | 7.77E-03 | 1.16E-01 | 376.35 | -0.40 | 0.19 | -2.07 | 0.039 | 0.458 |
| ENST00000562075 | CNN2 | 8.51 | -21.12 | 3.03 | -6.97 | 3.10E-12 | 2.28E-10 | 194.53 | -0.36 | 0.23 | -1.57 | 0.117 | 0.766 |
| ENST00000328834 | CNOT10 | 41.37 | -1.61 | 0.33 | -4.85 | 1.25E-06 | 5.56E-05 | 1024.53 | -0.71 | 0.36 | -1.98 | 0.048 | 0.516 |
| ENST00000550194 | CNOT2 | 3.65 | -5.00 | 1.94 | -2.58 | 9.80E-03 | 1.35E-01 | 14.34 | -0.22 | 0.77 | -0.29 | 0.775 | 1.000 |
| ENST00000504123 | CNOT6L | 1.40 | -3.64 | 1.28 | -2.84 | 4.55E-03 | 7.85E-02 | 178.93 | -0.87 | 4.56 | -0.19 | 0.849 | 1.000 |
| ENST00000403027 | CNOT8 | 41.24 | -3.61 | 1.35 | -2.67 | 7.49E-03 | 1.13E-01 | 1261.90 | -3.98 | 1.21 | -3.29 | 0.001 | 0.037 |
| ENST00000546937 | CNPY2 | 118.54 | -10.02 | 1.04 | -9.68 | 3.56E-22 | 8.30E-19 | 1570.18 | 1.00 | 1.07 | 0.93 | 0.351 | 0.994 |
| ENST00000551475 | CNPY2 | 46.95 | -8.69 | 2.78 | -3.13 | 1.76E-03 | 3.76E-02 | 265.25 | -0.57 | 0.27 | -2.11 | 0.035 | 0.436 |
| ENST00000366669 | COG2 | 25.86 | -7.83 | 1.81 | -4.31 | 1.61E-05 | 6.36E-04 | 335.08 | 0.08 | 1.01 | 0.08 | 0.938 | 1.000 |
| ENST00000567754 | COG4 | 6.48 | -4.60 | 1.39 | -3.30 | 9.73E-04 | 2.32E-02 | 26.07 | -0.17 | 0.55 | -0.32 | 0.751 | 1.000 |
| ENST00000347053 | COG5 | 36.40 | -23.09 | 3.03 | -7.63 | 2.38E-14 | 6.24E-12 | 4694.23 | 0.14 | 0.18 | 0.81 | 0.420 | 1.000 |
| ENST00000562081 | COG8 | 8.17 | -6.17 | 2.22 | -2.78 | 5.45E-03 | 8.99E-02 | 1102.05 | -1.97 | 0.92 | -2.14 | 0.032 | 0.415 |
| ENST00000512756 | COL11A1 | 13.60 | -21.75 | 3.03 | -7.18 | 6.76E-13 | 7.31E-11 | 16013.60 | 0.96 | 0.84 | 1.14 | 0.255 | 0.947 |
| ENST00000322507 | COL12A1 | 291.91 | -0.99 | 0.28 | -3.59 | 3.37E-04 | 9.54E-03 | 20696.23 | -1.03 | 0.73 | -1.41 | 0.158 | 0.840 |
| ENST00000375001 | COL15A1 | 13.98 | -4.83 | 0.91 | -5.30 | 1.15E-07 | 5.60E-06 | 14409.85 | -0.22 | 0.13 | -1.67 | 0.096 | 0.714 |
| ENST00000261415 | COL4A3BP | 119.27 | -23.77 | 3.03 | -7.85 | 4.00E-15 | 1.70E-12 | 1500.15 | 0.28 | 0.15 | 1.84 | 0.066 | 0.603 |
| ENST00000357250 | COL9A1 | 4.87 | -3.06 | 1.11 | -2.74 | 6.14E-03 | 9.82E-02 | 7830.80 | -0.45 | 0.56 | -0.79 | 0.429 | 1.000 |
| ENST00000368069 | COPA | 180.95 | -6.10 | 1.46 | -4.19 | 2.77E-05 | 1.05E-03 | 27156.08 | 0.15 | 0.40 | 0.38 | 0.704 | 1.000 |
| ENST00000349893 | COPE | 126.46 | -10.12 | 1.99 | -5.08 | 3.74E-07 | 1.74E-05 | 91.61 | 0.16 | 0.47 | 0.33 | 0.738 | 1.000 |
| ENST00000538245 | COPE | 12.28 | -21.62 | 3.03 | -7.14 | 9.40E-13 | 9.17E-11 | 9531.57 | 0.00 | 0.18 | -0.02 | 0.987 | 1.000 |
| ENST00000445977 | COPG2 | 47.13 | -1.18 | 0.24 | -4.82 | 1.47E-06 | 6.49E-05 | 30.71 | -0.03 | 0.74 | -0.04 | 0.970 | 1.000 |
| ENST00000542928 | COPS2 | 27.04 | -4.41 | 1.61 | -2.73 | 6.35E-03 | 1.01E-01 | 108.60 | -0.08 | 0.41 | -0.19 | 0.848 | 1.000 |
| ENST00000558545 | COPS2 | 36.73 | -8.33 | 2.25 | -3.71 | 2.06E-04 | 6.25E-03 | 23.53 | 0.07 | 0.84 | 0.08 | 0.938 | 1.000 |
| ENST00000558843 | COPS2 | 25.84 | -7.83 | 2.68 | -2.92 | 3.50E-03 | 6.48E-02 | 19.95 | -0.34 | 0.61 | -0.56 | 0.575 | 1.000 |
| ENST00000511653 | COPS4 | 6.82 | -5.30 | 1.10 | -4.82 | 1.41E-06 | 6.26E-05 | 849.41 | 0.11 | 0.26 | 0.42 | 0.675 | 1.000 |
| ENST00000409629 | COPS8 | 4.68 | -5.35 | 1.39 | -3.84 | 1.25E-04 | 4.01E-03 | 150.53 | 0.45 | 0.49 | 0.91 | 0.362 | 0.999 |
| ENST00000341356 | CORO1B | 34.86 | -23.03 | 3.03 | -7.61 | 2.79E-14 | 7.06E-12 | 306.64 | -0.45 | 0.83 | -0.54 | 0.590 | 1.000 |
| ENST00000562929 | COX4I1 | 5.41 | -20.49 | 3.03 | -6.76 | 1.38E-11 | 7.68E-10 | 159.85 | -0.28 | 0.31 | -0.89 | 0.372 | 1.000 |
| ENST00000566405 | COX4I1 | 17.15 | -5.57 | 1.92 | -2.91 | 3.66E-03 | 6.69E-02 | 3239.45 | -0.29 | 0.17 | -1.75 | 0.081 | 0.659 |
| ENST00000297564 | COX6C | 42.18 | -0.87 | 0.32 | -2.72 | 6.55E-03 | 1.02E-01 | 2163.51 | 0.38 | 0.17 | 2.28 | 0.023 | 0.344 |
| ENST00000520468 | COX6C | 119.91 | -10.04 | 1.10 | -9.12 | 7.58E-20 | 1.51E-16 | 1093.97 | 0.25 | 1.32 | 0.19 | 0.849 | 1.000 |
| ENST00000524245 | COX6C | 49.44 | -1.78 | 0.61 | -2.90 | 3.75E-03 | 6.82E-02 | 460.77 | 0.06 | 0.30 | 0.20 | 0.845 | 1.000 |
| ENST00000460985 | COX7A2 | 6.34 | -5.80 | 1.74 | -3.33 | 8.53E-04 | 2.09E-02 | 117.37 | -0.17 | 0.39 | -0.45 | 0.653 | 1.000 |
| ENST00000234301 | COX7A2L | 28.71 | -7.98 | 0.96 | -8.31 | 9.36E-17 | 8.35E-14 | 3790.20 | 0.44 | 0.41 | 1.07 | 0.283 | 0.962 |
| ENST00000247655 | COX7C | 66.15 | -8.02 | 1.01 | -7.96 | 1.72E-15 | 9.13E-13 | 6928.39 | 0.11 | 0.19 | 0.56 | 0.578 | 1.000 |
| ENST00000402744 | CPE | 179.99 | -1.36 | 0.43 | -3.13 | 1.72E-03 | 3.68E-02 | 9470.46 | -0.14 | 0.13 | -1.09 | 0.277 | 0.960 |
| ENST00000352393 | CPNE1 | 31.10 | -6.92 | 2.39 | -2.89 | 3.84E-03 | 6.95E-02 | 65.11 | 1.41 | 1.02 | 1.38 | 0.169 | 0.854 |
| ENST00000198765 | CPNE3 | 33.37 | -2.94 | 1.06 | -2.78 | 5.46E-03 | 8.99E-02 | 11.29 | -0.67 | 1.75 | -0.39 | 0.700 | 1.000 |
| ENST00000489629 | CPSF3 | 19.11 | -7.39 | 1.12 | -6.58 | 4.70E-11 | 2.56E-09 | 491.33 | 1.19 | 0.62 | 1.93 | 0.054 | 0.546 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000539743 | CPT1A | 9.89 | -21.32 | 3.03 | -7.04 | 1.92E-12 | 1.60E-10 | 28.05 | 0.49 | 0.77 | 0.63 | 0.529 | 1.000 |
| ENST00000498700 | CRBN | 4.95 | -5.44 | 2.03 | -2.68 | 7.42E-03 | 1.12E-01 | 423.89 | 0.15 | 0.22 | 0.70 | 0.484 | 1.000 |
| ENST00000344351 | CREM | 3.50 | -4.94 | 1.74 | -2.84 | 4.46E-03 | 7.74E-02 | 56.13 | 1.02 | 0.61 | 1.66 | 0.097 | 0.715 |
| ENST00000329146 | CRIP2 | 6.79 | -5.30 | 1.45 | -3.66 | 2.56E-04 | 7.56E-03 | 1044.88 | 0.35 | 0.24 | 1.46 | 0.143 | 0.817 |
| ENST00000550577 | CRIP2 | 10.70 | -2.76 | 0.90 | -3.06 | 2.19E-03 | 4.48E-02 | 29.52 | 2.29 | 2.13 | 1.08 | 0.282 | 0.962 |
| ENST00000182096 | CRYBG3 | 9.26 | -1.46 | 0.55 | -2.67 | 7.56E-03 | 1.14E-01 | 3634.43 | 0.00 | 0.19 | 0.01 | 0.992 | 1.000 |
| ENST00000492102 | CRYZ | 4.81 | -4.79 | 1.66 | -2.89 | 3.86E-03 | 6.97E-02 | 214.39 | 0.14 | 0.42 | 0.33 | 0.744 | 1.000 |
| ENST00000469700 | CSE1L | 29.58 | -4.18 | 0.95 | -4.39 | 1.11E-05 | 4.46E-04 | 1389.47 | -0.22 | 0.14 | -1.54 | 0.123 | 0.780 |
| ENST00000344188 | CSF1 | 8.85 | -21.17 | 3.03 | -6.99 | 2.75E-12 | 2.08E-10 | 41.06 | -0.97 | 2.36 | -0.41 | 0.682 | 1.000 |
| ENST00000567135 | CSK | 19.25 | -22.22 | 3.03 | -7.34 | 2.14E-13 | 3.07E-11 | 856.50 | -0.05 | 0.67 | -0.08 | 0.940 | 1.000 |
| ENST00000269361 | CSNK1D | 11.20 | -21.49 | 3.03 | -7.10 | 1.27E-12 | 1.18E-10 | 1247.11 | -0.14 | 0.15 | -0.96 | 0.338 | 0.989 |
| ENST00000405675 | CSNK1E | 6.89 | -3.84 | 1.48 | -2.59 | 9.52E-03 | 1.32E-01 | 2277.06 | 0.33 | 0.17 | 1.97 | 0.048 | 0.518 |
| ENST00000562367 | CSNK2A2 | 9.19 | -2.70 | 0.97 | -2.80 | 5.15E-03 | 8.65E-02 | 52.60 | 0.00 | 0.62 | 0.00 | 0.999 | 1.000 |
| ENST00000546966 | CSRP2 | 44.65 | -23.37 | 3.03 | -7.72 | 1.15E-14 | 3.61E-12 | 215.28 | 0.31 | 0.24 | 1.29 | 0.197 | 0.893 |
| ENST00000398411 | CST3 | 41.30 | -8.50 | 0.97 | -8.72 | 2.67E-18 | 4.00E-15 | 1139.43 | -0.22 | 0.15 | -1.49 | 0.137 | 0.805 |
| ENST00000490539 | CSTF1 | 10.35 | -5.31 | 1.97 | -2.70 | 6.90E-03 | 1.06E-01 | 814.59 | 0.79 | 1.27 | 0.63 | 0.532 | 1.000 |
| ENST00000478778 | CTB-118N6.1.1 | 48.27 | -1.63 | 0.46 | -3.56 | 3.77E-04 | 1.05E-02 | 7.36 | 0.04 | 1.21 | 0.03 | 0.975 | 1.000 |
| ENST00000477670 | CTD-2284O10.1.1 | 200.81 | -1.38 | 0.53 | -2.60 | 9.26E-03 | 1.30E-01 | 30.72 | -0.80 | 0.73 | -1.10 | 0.272 | 0.958 |
| ENST00000515712 | CTD-2309M13.1.1 | 201.75 | -1.81 | 0.64 | -2.83 | 4.65E-03 | 7.96E-02 | 8.90 | 0.43 | 1.02 | 0.42 | 0.676 | 1.000 |
| ENST00000534518 | CTD-2589O24.1.1 | 123.23 | -0.95 | 0.31 | -3.02 | 2.56E-03 | 5.08E-02 | 21.05 | -0.02 | 0.66 | -0.03 | 0.977 | 1.000 |
| ENST00000260327 | CTDSPL2 | 54.36 | -2.18 | 0.34 | -6.43 | 1.29E-10 | 6.94E-09 | 4662.24 | -0.18 | 0.24 | -0.77 | 0.444 | 1.000 |
| ENST00000396185 | CTNNB1 | 511.85 | -2.82 | 0.82 | -3.42 | 6.30E-04 | 1.63E-02 | 1058.22 | -0.32 | 0.60 | -0.54 | 0.587 | 1.000 |
| ENST00000361383 | CTNNBL1 | 88.69 | -9.61 | 2.83 | -3.40 | 6.79E-04 | 1.73E-02 | 8013.28 | 0.12 | 0.15 | 0.79 | 0.430 | 1.000 |
| ENST00000372616 | CTPS | 13.85 | -21.78 | 3.03 | -7.19 | 6.35E-13 | 7.03E-11 | 106.21 | -0.94 | 1.57 | -0.60 | 0.548 | 1.000 |
| ENST00000372621 | CTPS | 342.60 | -1.13 | 0.36 | -3.11 | 1.84E-03 | 3.89E-02 | 12688.23 | -0.06 | 0.13 | -0.48 | 0.632 | 1.000 |
| ENST00000372459 | CTSA | 8.38 | -5.60 | 1.78 | -3.15 | 1.61E-03 | 3.48E-02 | 1638.08 | 0.32 | 0.70 | 0.46 | 0.647 | 1.000 |
| ENST00000367196 | CTSD | 8.89 | -21.18 | 3.03 | -6.99 | 2.73E-12 | 2.07E-10 | 201.94 | 0.46 | 0.39 | 1.17 | 0.242 | 0.935 |
| ENST00000310325 | CTSF | 99.77 | -1.73 | 0.64 | -2.68 | 7.38E-03 | 1.12E-01 | 15972.78 | 0.09 | 0.21 | 0.41 | 0.679 | 1.000 |
| ENST00000374748 | CUL2 | 81.10 | -1.18 | 0.36 | -3.25 | 1.17E-03 | 2.69E-02 | 1840.37 | -0.81 | 0.30 | -2.68 | 0.007 | 0.167 |
| ENST00000374754 | CUL2 | 17.21 | -7.24 | 1.64 | -4.42 | 9.82E-06 | 3.98E-04 | 434.16 | 3.48 | 2.47 | 1.41 | 0.158 | 0.840 |
| ENST00000264414 | CUL3 | 202.65 | -0.61 | 0.17 | -3.49 | 4.89E-04 | 1.31E-02 | 1995.33 | 0.01 | 0.43 | 0.02 | 0.985 | 1.000 |
| ENST00000375441 | CUL4A | 14.02 | -20.67 | 3.03 | -6.83 | 8.79E-12 | 5.21E-10 | 1586.70 | -0.77 | 0.17 | -4.52 | 0.000 | 0.000 |
| ENST00000393094 | CUL5 | 22.76 | -1.03 | 0.29 | -3.52 | 4.30E-04 | 1.18E-02 | 1772.44 | 0.02 | 0.17 | 0.13 | 0.893 | 1.000 |
| ENST00000524608 | CYB5R2 | 45.23 | -3.65 | 1.05 | -3.47 | 5.21E-04 | 1.39E-02 | 1214.92 | 0.11 | 0.14 | 0.73 | 0.464 | 1.000 |
| ENST00000533444 | CYC1 | 23.90 | -3.39 | 1.04 | -3.25 | 1.14E-03 | 2.64E-02 | 331.15 | 0.13 | 0.55 | 0.23 | 0.818 | 1.000 |
| ENST00000558826 | CYFIP1 | 22.29 | -7.61 | 1.90 | -4.00 | 6.38E-05 | 2.22E-03 | 56.71 | -1.35 | 1.00 | -1.34 | 0.179 | 0.870 |
| ENST00000561020 | CYFIP1 | 18.66 | -6.77 | 1.83 | -3.69 | 2.23E-04 | 6.71E-03 | 2563.28 | 2.15 | 0.83 | 2.60 | 0.009 | 0.198 |
| ENST00000356079 | CYP20A1 | 13.69 | -6.32 | 1.62 | -3.91 | 9.13E-05 | 3.06E-03 | 241.44 | 0.21 | 0.51 | 0.42 | 0.674 | 1.000 |
| ENST00000360431 | CYR61 | 68.77 | -23.95 | 3.03 | -7.91 | 2.48E-15 | 1.14E-12 | 19121.51 | 0.19 | 0.21 | 0.91 | 0.363 | 0.999 |
| ENST00000479935 | DAG1 | 23.79 | -22.51 | 3.03 | -7.44 | 1.03E-13 | 1.75E-11 | 119.78 | 0.22 | 0.48 | 0.46 | 0.644 | 1.000 |
| ENST00000471523 | DAP3 | 5.68 | -5.64 | 1.74 | -3.24 | 1.22E-03 | 2.78E-02 | 811.63 | 0.24 | 0.21 | 1.15 | 0.252 | 0.943 |
| ENST00000535183 | DAP3 | 21.80 | -6.42 | 2.04 | -3.15 | 1.64E-03 | 3.55E-02 | 405.49 | -0.53 | 0.37 | -1.43 | 0.153 | 0.832 |
| ENST00000264161 | DARS | 481.56 | -0.70 | 0.27 | -2.61 | 9.16E-03 | 1.29E-01 | 3381.60 | 1.13 | 0.88 | 1.29 | 0.199 | 0.894 |
| ENST00000361951 | DARS2 | 135.07 | -0.69 | 0.23 | -3.03 | 2.48E-03 | 4.97E-02 | 1437.18 | -0.01 | 0.16 | -0.09 | 0.930 | 1.000 |
| ENST00000311521 | DBI | 30.55 | -8.03 | 3.03 | -2.65 | 7.97E-03 | 1.18E-01 | 55.95 | 0.45 | 0.57 | 0.79 | 0.428 | 1.000 |
| ENST00000409094 | DBI | 50.85 | -7.65 | 1.41 | -5.42 | 6.11E-08 | 3.01E-06 | 1390.36 | 0.10 | 0.16 | 0.65 | 0.513 | 1.000 |
| ENST00000460901 | DBI | 41.96 | -6.31 | 2.00 | -3.16 | 1.56E-03 | 3.40E-02 | 525.05 | -0.14 | 0.39 | -0.35 | 0.727 | 1.000 |
| ENST00000492375 | DBI | 10.48 | -2.94 | 0.93 | -3.17 | 1.51E-03 | 3.32E-02 | 1138.83 | 0.00 | 0.47 | 0.00 | 1.000 | 1.000 |
| ENST00000535757 | DBI | 24.65 | -2.61 | 1.01 | -2.60 | 9.44E-03 | 1.32E-01 | 96.97 | -0.74 | 0.55 | -1.36 | 0.175 | 0.864 |
| ENST00000370132 | DBT | 61.45 | -1.70 | 0.47 | -3.63 | 2.85E-04 | 8.30E-03 | 2485.40 | 0.10 | 0.13 | 0.77 | 0.439 | 1.000 |
| ENST00000389063 | DCP2 | 38.76 | -1.58 | 0.44 | -3.55 | 3.80E-04 | 1.06E-02 | 3874.16 | 1.29 | 0.76 | 1.68 | 0.092 | 0.701 |
| ENST00000491465 | DCTN1 | 18.70 | -7.36 | 1.86 | -3.95 | 7.91E-05 | 2.69E-03 | 237.29 | -0.73 | 0.92 | -0.79 | 0.427 | 1.000 |
| ENST00000537120 | DDB1 | 22.77 | -21.85 | 3.03 | -7.22 | 5.36E-13 | 6.28E-11 | 76.46 | 0.00 | 0.55 | -0.01 | 0.993 | 1.000 |
| ENST00000415136 | DDOST | 23.97 | -22.52 | 3.03 | -7.44 | 1.01E-13 | 1.72E-11 | 3561.85 | 0.70 | 0.92 | 0.76 | 0.448 | 1.000 |
| ENST00000233084 | DDX1 | 458.01 | -11.97 | 2.11 | -5.67 | 1.40E-08 | 7.09E-07 | 16750.11 | -0.02 | 0.12 | -0.20 | 0.838 | 1.000 |
| ENST00000471144 | DDX27 | 9.20 | -4.56 | 1.47 | -3.11 | 1.85E-03 | 3.91E-02 | 1115.92 | 1.51 | 0.27 | 5.53 | 0.000 | 0.000 |
| ENST00000396172 | DDX39B | 7.85 | -21.01 | 3.03 | -6.94 | 4.04E-12 | 2.76E-10 | 4.09 | 2.12 | 1.42 | 1.49 | 0.136 | 0.803 |
| ENST00000431908 | DDX39B | 64.80 | -23.66 | 3.03 | -7.82 | 5.44E-15 | 1.98E-12 | 1733.48 | -0.16 | 0.29 | -0.56 | 0.575 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000453105 | DDX39B | 67.93 | -6.08 | 1.35 | -4.51 | 6.40E-06 | 2.66E-04 | 5339.07 | -0.15 | 0.14 | -1.07 | 0.286 | 0.963 |
| ENST00000441189 | DDX3X | 46.00 | -8.66 | 2.83 | -3.06 | 2.23E-03 | 4.54E-02 | 185.12 | -0.15 | 0.33 | -0.45 | 0.650 | 1.000 |
| ENST00000389924 | DDX42 | 206.83 | -0.55 | 0.17 | -3.19 | 1.44E-03 | 3.20E-02 | 578.05 | 0.19 | 0.24 | 0.81 | 0.421 | 1.000 |
| ENST00000373585 | DDX50 | 74.25 | -1.42 | 0.40 | -3.53 | 4.19E-04 | 1.15E-02 | 5959.42 | -0.28 | 0.22 | -1.29 | 0.197 | 0.893 |
| ENST00000460470 | DDX50 | 5.89 | -20.62 | 3.03 | -6.81 | 1.01E-11 | 5.86E-10 | 510.03 | 0.68 | 0.88 | 0.78 | 0.437 | 1.000 |
| ENST00000460080 | DDX52 | 14.90 | -5.84 | 1.82 | -3.21 | 1.31E-03 | 2.95E-02 | 197.82 | 0.77 | 0.64 | 1.19 | 0.233 | 0.928 |
| ENST00000244776 | DEK | 19.48 | -22.21 | 3.03 | -7.34 | 2.21E-13 | 3.13E-11 | 70.40 | 0.16 | 0.44 | 0.37 | 0.709 | 1.000 |
| ENST00000512145 | DEK | 11.29 | -6.63 | 1.91 | -3.46 | 5.34E-04 | 1.42E-02 | 49.36 | -1.20 | 0.46 | -2.62 | 0.009 | 0.187 |
| ENST00000280557 | DENR | 43.17 | -1.18 | 0.39 | -3.04 | 2.40E-03 | 4.84E-02 | 6118.33 | -0.03 | 0.13 | -0.21 | 0.831 | 1.000 |
| ENST00000527316 | DHCR7 | 11.55 | -21.54 | 3.03 | -7.11 | 1.15E-12 | 1.08E-10 | 84.52 | -0.05 | 0.54 | -0.09 | 0.925 | 1.000 |
| ENST00000533800 | DHCR7 | 31.12 | -22.85 | 3.03 | -7.55 | 4.37E-14 | 9.69E-12 | 38.54 | -0.42 | 0.55 | -0.75 | 0.454 | 1.000 |
| ENST00000536410 | DHRS7 | 18.56 | -22.17 | 3.03 | -7.32 | 2.43E-13 | 3.40E-11 | 878.62 | 0.54 | 1.13 | 0.48 | 0.630 | 1.000 |
| ENST00000252011 | DHX35 | 50.72 | -1.57 | 0.43 | -3.68 | 2.36E-04 | 7.04E-03 | 739.73 | -0.72 | 0.35 | -2.04 | 0.042 | 0.479 |
| ENST00000477549 | DHX36 | 12.66 | -1.92 | 0.65 | -2.94 | 3.33E-03 | 6.24E-02 | 138.34 | 0.56 | 0.69 | 0.81 | 0.416 | 1.000 |
| ENST00000481941 | DHX36 | 7.52 | -2.23 | 0.67 | -3.32 | 9.03E-04 | 2.19E-02 | 2479.53 | 0.19 | 0.21 | 0.88 | 0.376 | 1.000 |
| ENST00000496811 | DHX36 | 208.52 | -1.09 | 0.38 | -2.89 | 3.85E-03 | 6.95E-02 | 5431.37 | -0.07 | 0.17 | -0.44 | 0.658 | 1.000 |
| ENST00000540306 | DHX8 | 14.65 | -21.85 | 3.03 | -7.22 | 5.35E-13 | 6.28E-11 | 268.00 | -0.03 | 0.32 | -0.10 | 0.921 | 1.000 |
| ENST00000485081 | DHX9 | 14.95 | -21.88 | 3.03 | -7.23 | 4.92E-13 | 5.90E-11 | 1257.68 | 1.17 | 0.18 | 6.58 | 0.000 | 0.000 |
| ENST00000509182 | DIMT1 | 14.76 | -21.87 | 3.03 | -7.22 | 5.14E-13 | 6.09E-11 | 85.74 | -0.09 | 0.58 | -0.16 | 0.875 | 1.000 |
| ENST00000319194 | DIS3L | 29.88 | -1.11 | 0.33 | -3.38 | 7.31E-04 | 1.84E-02 | 310.68 | 0.25 | 1.44 | 0.18 | 0.859 | 1.000 |
| ENST00000484317 | DKC1 | 18.17 | -7.32 | 1.80 | -4.07 | 4.80E-05 | 1.72E-03 | 864.64 | -0.08 | 0.20 | -0.43 | 0.668 | 1.000 |
| ENST00000525493 | DKK3 | 28.00 | -22.74 | 3.03 | -7.51 | 5.88E-14 | 1.21E-11 | 101.95 | 0.22 | 0.67 | 0.32 | 0.748 | 1.000 |
| ENST00000494493 | DLG3 | 3.15 | -4.79 | 1.81 | -2.64 | 8.26E-03 | 1.21E-01 | 4.70 | -1.07 | 2.71 | -0.40 | 0.692 | 1.000 |
| ENST00000475894 | DLGAP4 | 8.44 | -21.11 | 3.03 | -6.97 | 3.18E-12 | 2.32E-10 | 5408.81 | 0.14 | 0.18 | 0.75 | 0.454 | 1.000 |
| ENST00000554007 | DLGAP5 | 5.02 | -5.47 | 1.10 | -4.96 | 7.09E-07 | 3.21E-05 | 49.42 | -0.07 | 0.80 | -0.08 | 0.935 | 1.000 |
| ENST00000372289 | DMAP1 | 33.96 | -1.74 | 0.65 | -2.66 | 7.86E-03 | 1.17E-01 | 166.41 | -0.12 | 0.42 | -0.28 | 0.781 | 1.000 |
| ENST00000412350 | DMRT2 | 2.70 | -4.56 | 1.77 | -2.58 | 9.90E-03 | 1.36E-01 | 189.86 | 0.19 | 0.39 | 0.48 | 0.633 | 1.000 |
| ENST00000507552 | DMXL1 | 3.05 | -4.76 | 1.17 | -4.07 | 4.74E-05 | 1.70E-03 | 207.99 | 0.39 | 0.76 | 0.51 | 0.610 | 1.000 |
| ENST00000298292 | DNAAF2 | 65.05 | -2.24 | 0.55 | -4.09 | 4.22E-05 | 1.53E-03 | 1767.72 | 0.08 | 0.18 | 0.46 | 0.648 | 1.000 |
| ENST00000544625 | DNAJA1 | 17.53 | -21.69 | 3.03 | -7.17 | 7.76E-13 | 8.00E-11 | 629.89 | -0.41 | 0.36 | -1.14 | 0.253 | 0.945 |
| ENST00000264065 | DNAJC10 | 257.87 | -1.03 | 0.39 | -2.63 | 8.57E-03 | 1.24E-01 | 16744.03 | -0.01 | 0.12 | -0.06 | 0.950 | 1.000 |
| ENST00000294401 | DNAJC11 | 8.85 | -21.17 | 3.03 | -6.99 | 2.75E-12 | 2.08E-10 | 403.51 | -1.58 | 0.80 | -1.97 | 0.049 | 0.521 |
| ENST00000485073 | DNAJC11 | 24.85 | -7.77 | 1.04 | -7.46 | 8.89E-14 | 1.62E-11 | 138.07 | -0.53 | 0.43 | -1.22 | 0.221 | 0.917 |
| ENST00000260818 | DNAJC13 | 93.72 | -1.05 | 0.32 | -3.32 | 9.16E-04 | 2.21E-02 | 3854.99 | 0.14 | 0.18 | 0.75 | 0.454 | 1.000 |
| ENST00000475090 | DNAJC2 | 5.11 | -3.30 | 1.21 | -2.72 | 6.44E-03 | 1.01E-01 | 44.27 | 0.39 | 0.48 | 0.81 | 0.419 | 1.000 |
| ENST00000483637 | DNAJC2 | 7.52 | -4.29 | 1.05 | -4.09 | 4.36E-05 | 1.57E-03 | 90.63 | 0.03 | 0.55 | 0.05 | 0.960 | 1.000 |
| ENST00000512136 | DNAJC21 | 5.21 | -5.52 | 1.98 | -2.79 | 5.32E-03 | 8.83E-02 | 1243.81 | 0.04 | 0.16 | 0.21 | 0.831 | 1.000 |
| ENST00000457167 | DNAJC7 | 335.80 | -0.65 | 0.16 | -4.01 | 6.16E-05 | 2.15E-03 | 4719.65 | 0.04 | 0.42 | 0.09 | 0.929 | 1.000 |
| ENST00000553031 | DNM1L | 19.76 | -7.44 | 1.86 | -4.00 | 6.46E-05 | 2.24E-03 | 202.72 | -0.15 | 0.26 | -0.56 | 0.574 | 1.000 |
| ENST00000540357 | DNMT1 | 83.58 | -3.98 | 0.99 | -4.01 | 6.01E-05 | 2.10E-03 | 11853.54 | -0.49 | 0.22 | -2.23 | 0.026 | 0.370 |
| ENST00000462779 | DNPEP | 4.89 | -5.42 | 1.76 | -3.07 | 2.12E-03 | 4.36E-02 | 12.50 | -0.31 | 1.22 | -0.26 | 0.797 | 1.000 |
| ENST00000409592 | DOCK10 | 38.74 | -1.99 | 0.64 | -3.12 | 1.83E-03 | 3.87E-02 | 900.84 | 1.28 | 3.48 | 0.37 | 0.712 | 1.000 |
| ENST00000251157 | DOCK7 | 91.40 | -1.96 | 0.63 | -3.11 | 1.87E-03 | 3.94E-02 | 5055.61 | -0.02 | 0.46 | -0.04 | 0.967 | 1.000 |
| ENST00000467758 | DOCK7 | 7.11 | -5.96 | 2.10 | -2.84 | 4.58E-03 | 7.89E-02 | 48.71 | 0.39 | 0.56 | 0.70 | 0.485 | 1.000 |
| ENST00000372546 | DOLPP1 | 7.90 | -3.32 | 1.03 | -3.21 | 1.33E-03 | 3.00E-02 | 1562.96 | 0.84 | 0.26 | 3.25 | 0.001 | 0.041 |
| ENST00000370148 | DPCD | 7.61 | -20.94 | 3.03 | -6.91 | 4.81E-12 | 3.14E-10 | 298.44 | 0.68 | 1.06 | 0.65 | 0.518 | 1.000 |
| ENST00000495421 | DPH2 | 14.65 | -7.01 | 2.15 | -3.26 | 1.11E-03 | 2.59E-02 | 665.53 | 0.38 | 0.62 | 0.62 | 0.534 | 1.000 |
| ENST00000371584 | DPM1 | 15.27 | -19.92 | 3.03 | -6.58 | 4.72E-11 | 2.56E-09 | 3.53 | -0.22 | 1.60 | -0.14 | 0.888 | NA |
| ENST00000449701 | DPM1 | 13.37 | -6.87 | 2.11 | -3.26 | 1.13E-03 | 2.63E-02 | 116.94 | 0.09 | 0.43 | 0.22 | 0.828 | 1.000 |
| ENST00000530165 | DPP3 | 8.75 | -21.14 | 3.03 | -6.98 | 2.95E-12 | 2.21E-10 | 799.02 | 0.42 | 0.83 | 0.50 | 0.614 | 1.000 |
| ENST00000531863 | DPP3 | 15.44 | -21.93 | 3.03 | -7.24 | 4.42E-13 | 5.40E-11 | 2487.99 | -0.53 | 0.84 | -0.64 | 0.524 | 1.000 |
| ENST00000339244 | DPP8 | 3.83 | -5.07 | 1.72 | -2.96 | 3.12E-03 | 5.91E-02 | 21.49 | 7.81 | 4.79 | 1.63 | 0.103 | 0.731 |
| ENST00000342179 | DPY19L3 | 43.17 | -1.22 | 0.43 | -2.82 | 4.84E-03 | 8.22E-02 | 431.04 | -0.15 | 0.48 | -0.32 | 0.753 | 1.000 |
| ENST00000370192 | DPYD | 524.48 | -0.94 | 0.24 | -3.91 | 9.09E-05 | 3.05E-03 | 10839.56 | 0.00 | 0.12 | 0.03 | 0.978 | 1.000 |
| ENST00000523027 | DPYSL2 | 28.56 | -5.78 | 2.14 | -2.70 | 6.86E-03 | 1.06E-01 | 36.23 | -1.56 | 0.68 | -2.29 | 0.022 | 0.335 |
| ENST00000525501 | DRAP1 | 6.24 | -20.70 | 3.03 | -6.83 | 8.46E-12 | 5.06E-10 | 905.14 | -0.61 | 0.28 | -2.16 | 0.031 | 0.406 |
| ENST00000540275 | DSE | 13.07 | -21.70 | 3.03 | -7.17 | 7.74E-13 | 7.99E-11 | 75.78 | 0.35 | 0.88 | 0.39 | 0.694 | 1.000 |
| ENST00000246069 | DSTN | 3362.05 | -1.09 | 0.13 | -8.33 | 7.85E-17 | 7.32E-14 | 64943.48 | 0.45 | 0.12 | 3.89 | 0.000 | 0.005 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000449141 | DSTN | 4.36 | -5.26 | 1.82 | -2.88 | 3.95E-03 | 7.07E-02 | 579.28 | 0.34 | 0.26 | 1.33 | 0.184 | 0.878 |
| ENST00000338950 | DTNBP1 | 16.57 | -6.59 | 1.79 | -3.69 | 2.22E-04 | 6.68E-03 | 228.66 | 0.00 | 0.24 | 0.00 | 0.999 | 1.000 |
| ENST00000344537 | DTNBP1 | 26.77 | -7.88 | 2.72 | -2.90 | 3.72E-03 | 6.77E-02 | 216.56 | -1.29 | 1.53 | -0.84 | 0.399 | 1.000 |
| ENST00000296161 | DTX3L | 39.44 | -1.02 | 0.31 | -3.30 | 9.79E-04 | 2.34E-02 | 4403.06 | -0.05 | 0.12 | -0.40 | 0.689 | 1.000 |
| ENST00000400770 | DTYMK | 8.60 | -21.14 | 3.03 | -6.98 | 3.01E-12 | 2.24E-10 | 305.71 | -0.24 | 0.38 | -0.62 | 0.536 | 1.000 |
| ENST00000331200 | DUT | 19.64 | -7.43 | 2.09 | -3.55 | 3.78E-04 | 1.05E-02 | 2025.97 | -1.29 | 1.00 | -1.30 | 0.195 | 0.892 |
| ENST00000559852 | DUT | 34.89 | -1.40 | 0.45 | -3.09 | 1.99E-03 | 4.14E-02 | 176.54 | -0.02 | 0.36 | -0.05 | 0.958 | 1.000 |
| ENST00000273130 | DYNC1LI1 | 28.60 | -7.97 | 2.77 | -2.88 | 3.94E-03 | 7.06E-02 | 957.47 | 0.67 | 0.70 | 0.96 | 0.338 | 0.990 |
| ENST00000472985 | DYNC1LI1 | 14.21 | -6.96 | 2.62 | -2.65 | 7.95E-03 | 1.18E-01 | 46.85 | -0.29 | 0.94 | -0.30 | 0.761 | 1.000 |
| ENST00000527884 | E2F8 | 69.51 | -0.95 | 0.28 | -3.38 | 7.26E-04 | 1.83E-02 | 295.67 | -0.11 | 0.38 | -0.28 | 0.782 | 1.000 |
| ENST00000236051 | EBNA1BP2 | 550.87 | -12.24 | 2.12 | -5.76 | 8.38E-09 | 4.30E-07 | 1926.15 | -0.09 | 0.25 | -0.38 | 0.707 | 1.000 |
| ENST00000474240 | ECHDC1 | 12.39 | -3.83 | 1.41 | -2.72 | 6.49E-03 | 1.02E-01 | 9.40 | -0.10 | 0.97 | -0.10 | 0.918 | 1.000 |
| ENST00000464057 | ECI2 | 11.48 | -6.66 | 1.88 | -3.53 | 4.10E-04 | 1.13E-02 | 332.67 | 0.55 | 0.33 | 1.65 | 0.098 | 0.719 |
| ENST00000380138 | EDIL3 | 53.84 | -8.89 | 2.86 | -3.10 | 1.92E-03 | 4.03E-02 | 32238.12 | 0.15 | 0.18 | 0.88 | 0.379 | 1.000 |
| ENST00000322349 | EEA1 | 156.56 | -1.03 | 0.35 | -2.94 | 3.33E-03 | 6.23E-02 | 7479.15 | -0.08 | 0.20 | -0.41 | 0.683 | 1.000 |
| ENST00000358190 | EEF1A1 | 36.41 | -22.02 | 2.82 | -7.82 | 5.47E-15 | 1.98E-12 | 829.96 | -0.70 | 0.51 | -1.36 | 0.174 | 0.863 |
| ENST00000455150 | EEF1B2 | 64.67 | -9.15 | 1.39 | -6.59 | 4.35E-11 | 2.37E-09 | 3971.21 | -0.46 | 0.27 | -1.73 | 0.084 | 0.671 |
| ENST00000447718 | EEF1B2P3 | 298.48 | -1.01 | 0.33 | -3.10 | 1.95E-03 | 4.08E-02 | 110.34 | -0.54 | 0.29 | -1.84 | 0.066 | 0.599 |
| ENST00000529516 | EEF1D | 36.05 | -22.48 | 3.03 | -7.43 | 1.11E-13 | 1.86E-11 | 16.82 | 0.58 | 0.68 | 0.85 | 0.396 | 1.000 |
| ENST00000534377 | EEF1D | 25.16 | -22.59 | 3.03 | -7.46 | 8.54E-14 | 1.59E-11 | 58.82 | 0.09 | 0.38 | 0.23 | 0.814 | 1.000 |
| ENST00000379715 | EEF1E1 | 23.29 | -1.50 | 0.47 | -3.17 | 1.55E-03 | 3.38E-02 | 1652.72 | 0.10 | 0.18 | 0.53 | 0.596 | 1.000 |
| ENST00000329251 | EEF1G | 28.80 | -4.88 | 1.86 | -2.62 | 8.84E-03 | 1.26E-01 | 19781.46 | -0.12 | 0.18 | -0.68 | 0.499 | 1.000 |
| ENST00000371088 | EFCAB7 | 6.92 | -5.33 | 1.63 | -3.26 | 1.11E-03 | 2.59E-02 | 2196.26 | 0.02 | 0.14 | 0.17 | 0.865 | 1.000 |
| ENST00000422786 | EIF2AK1 | 12.14 | -5.54 | 1.65 | -3.35 | 7.98E-04 | 1.97E-02 | 82.03 | 0.50 | 0.38 | 1.33 | 0.185 | 0.878 |
| ENST00000405334 | EIF2AK2 | 29.55 | -7.06 | 2.72 | -2.60 | 9.41E-03 | 1.32E-01 | 67.72 | 9.46 | 4.58 | 2.07 | 0.039 | 0.460 |
| ENST00000461070 | EIF2S2P4 | 259.87 | -1.42 | 0.41 | -3.45 | 5.53E-04 | 1.46E-02 | 267.42 | 0.16 | 0.21 | 0.78 | 0.437 | 1.000 |
| ENST00000253039 | EIF2S3 | 358.46 | -2.26 | 0.38 | -5.97 | 2.36E-09 | 1.23E-07 | 29453.81 | -0.03 | 0.12 | -0.24 | 0.807 | 1.000 |
| ENST00000423068 | EIF2S3 | 93.81 | -9.69 | 0.97 | -9.99 | 1.70E-23 | 5.10E-20 | 71.39 | -0.78 | 0.49 | -1.62 | 0.106 | 0.740 |
| ENST00000360876 | EIF3B | 65.36 | -23.89 | 3.03 | -7.89 | 2.96E-15 | 1.31E-12 | 3465.04 | 0.60 | 0.54 | 1.10 | 0.271 | 0.957 |
| ENST00000380876 | EIF3CL | 503.96 | -6.85 | 1.45 | -4.73 | 2.20E-06 | 9.56E-05 | 8707.55 | -0.14 | 0.33 | -0.43 | 0.667 | 1.000 |
| ENST00000432675 | EIF3D | 14.10 | -6.95 | 2.13 | -3.27 | 1.09E-03 | 2.56E-02 | 74.76 | -0.91 | 0.38 | -2.38 | 0.017 | 0.292 |
| ENST00000457241 | EIF3D | 18.97 | -20.75 | 3.03 | -6.85 | 7.27E-12 | 4.47E-10 | 64.73 | 0.50 | 0.64 | 0.77 | 0.441 | 1.000 |
| ENST00000519627 | EIF3E | 16.55 | -22.02 | 3.03 | -7.27 | 3.49E-13 | 4.52E-11 | 110.02 | -0.49 | 0.37 | -1.33 | 0.183 | 0.877 |
| ENST00000558227 | EIF3J | 10.61 | -1.83 | 0.71 | -2.59 | 9.50E-03 | 1.32E-01 | 18.39 | -0.55 | 0.68 | -0.81 | 0.416 | 1.000 |
| ENST00000426808 | EIF4A2 | 15.88 | -7.12 | 2.61 | -2.73 | 6.31E-03 | 1.00E-01 | 180.13 | -0.61 | 0.43 | -1.42 | 0.157 | 0.839 |
| ENST00000475653 | EIF4A2 | 5.45 | -4.35 | 1.57 | -2.76 | 5.70E-03 | 9.27E-02 | 263.25 | -0.59 | 0.21 | -2.86 | 0.004 | 0.113 |
| ENST00000424196 | EIF4G1 | 50.29 | -22.53 | 3.03 | -7.44 | 9.87E-14 | 1.69E-11 | 1468.38 | 0.31 | 0.55 | 0.56 | 0.575 | 1.000 |
| ENST00000525681 | EIF4G2 | 7.76 | -21.00 | 3.03 | -6.93 | 4.18E-12 | 2.83E-10 | 10.57 | 1.44 | 0.87 | 1.65 | 0.099 | 0.720 |
| ENST00000525972 | EIF4G2 | 8.08 | -21.05 | 3.03 | -6.95 | 3.66E-12 | 2.58E-10 | 11.37 | -1.00 | 0.93 | -1.07 | 0.286 | 0.964 |
| ENST00000531180 | EIF4G2 | 28.78 | -22.77 | 3.03 | -7.52 | 5.46E-14 | 1.14E-11 | 32.05 | -0.71 | 0.69 | -1.04 | 0.301 | 0.973 |
| ENST00000392715 | EIF5 | 5.11 | -5.48 | 1.80 | -3.04 | 2.34E-03 | 4.73E-02 | 9.45 | 0.39 | 1.68 | 0.23 | 0.819 | 1.000 |
| ENST00000394235 | ELF2 | 57.57 | -0.71 | 0.23 | -3.04 | 2.33E-03 | 4.71E-02 | 44.32 | -1.69 | 1.20 | -1.41 | 0.160 | 0.843 |
| ENST00000497412 | ELMO2 | 3.76 | -2.80 | 1.06 | -2.65 | 8.15E-03 | 1.20E-01 | 75.67 | 0.13 | 0.46 | 0.29 | 0.773 | 1.000 |
| ENST00000252445 | ELOF1 | 118.64 | -0.76 | 0.22 | -3.40 | 6.65E-04 | 1.70E-02 | 5558.99 | -0.02 | 0.16 | -0.12 | 0.902 | 1.000 |
| ENST00000304434 | ELOVL5 | 129.44 | -8.06 | 0.78 | -10.37 | 3.47E-25 | 1.46E-21 | 135.43 | -0.43 | 0.85 | -0.50 | 0.615 | 1.000 |
| ENST00000535488 | ELP2 | 14.17 | -6.37 | 2.22 | -2.87 | 4.07E-03 | 7.22E-02 | 19.19 | -0.35 | 0.68 | -0.52 | 0.602 | 1.000 |
| ENST00000536373 | ELP2 | 5.54 | -20.54 | 3.03 | -6.78 | 1.22E-11 | 6.84E-10 | 68.98 | -0.13 | 0.55 | -0.23 | 0.818 | 1.000 |
| ENST00000544274 | ELP2 | 10.55 | -1.90 | 0.65 | -2.94 | 3.26E-03 | 6.12E-02 | 49.55 | 0.15 | 0.45 | 0.34 | 0.735 | 1.000 |
| ENST00000518112 | ELP3 | 7.08 | -20.83 | 3.03 | -6.88 | 6.19E-12 | 3.86E-10 | 79.44 | 0.27 | 3.87 | 0.07 | 0.945 | 1.000 |
| ENST00000492448 | EMD | 10.29 | -3.49 | 1.22 | -2.87 | 4.11E-03 | 7.28E-02 | 61.24 | 0.14 | 0.38 | 0.37 | 0.712 | 1.000 |
| ENST00000497899 | ENAH | 4.37 | -4.66 | 1.11 | -4.18 | 2.92E-05 | 1.10E-03 | 212.65 | -0.05 | 0.59 | -0.08 | 0.933 | 1.000 |
| ENST00000373203 | ENG | 17.69 | -7.28 | 1.28 | -5.69 | 1.25E-08 | 6.34E-07 | 4202.82 | 0.16 | 0.19 | 0.80 | 0.424 | 1.000 |
| ENST00000509635 | ENOPH1 | 46.71 | -3.30 | 1.05 | -3.15 | 1.65E-03 | 3.57E-02 | 465.23 | 0.57 | 0.71 | 0.80 | 0.423 | 1.000 |
| ENST00000261488 | ENOX1 | 7.31 | -3.39 | 0.92 | -3.70 | 2.19E-04 | 6.59E-03 | 1594.91 | -0.33 | 0.37 | -0.91 | 0.365 | 0.999 |
| ENST00000522167 | ENPP2 | 35.63 | -2.37 | 0.55 | -4.31 | 1.63E-05 | 6.44E-04 | 4638.66 | -0.19 | 0.17 | -1.09 | 0.274 | 0.959 |
| ENST00000412989 | ENSAP3 | 8.45 | -1.94 | 0.60 | -3.25 | 1.15E-03 | 2.66E-02 | 1.43 | -0.78 | 4.46 | -0.17 | 0.861 | NA |
| ENST00000491099 | EPC2 | 9.10 | -2.44 | 0.65 | -3.73 | 1.90E-04 | 5.85E-03 | 22.64 | -0.02 | 1.30 | -0.02 | 0.987 | 1.000 |
| ENST00000506744 | ERBB2IP | 13.20 | -6.86 | 2.65 | -2.59 | 9.71E-03 | 1.34E-01 | 18.89 | -0.45 | 0.63 | -0.71 | 0.476 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000551242 | ERBB3 | 50.32 | -22.54 | 3.03 | -7.45 | 9.46E-14 | 1.64E-11 | 294.08 | -0.16 | 0.20 | -0.81 | 0.419 | 1.000 |
| ENST00000490062 | ERCC3 | 9.28 | -21.24 | 3.03 | -7.01 | 2.34E-12 | 1.87E-10 | 202.83 | 0.23 | 0.24 | 0.95 | 0.341 | 0.990 |
| ENST00000407654 | ERLIN1 | 25.85 | -3.94 | 1.36 | -2.90 | 3.76E-03 | 6.84E-02 | 203.33 | -0.38 | 0.23 | -1.64 | 0.100 | 0.722 |
| ENST00000521644 | ERLIN2 | 10.84 | -21.45 | 3.03 | -7.08 | 1.43E-12 | 1.28E-10 | 42.15 | -0.20 | 0.43 | -0.46 | 0.646 | 1.000 |
| ENST00000554251 | ERO1L | 5.41 | -20.49 | 3.03 | -6.76 | 1.38E-11 | 7.68E-10 | 224.28 | 0.55 | 0.32 | 1.71 | 0.087 | 0.683 |
| ENST00000556769 | ERO1L | 5.93 | -20.64 | 3.03 | -6.81 | 9.82E-12 | 5.71E-10 | 24.47 | -0.25 | 0.70 | -0.35 | 0.725 | 1.000 |
| ENST00000546477 | ERP29 | 21.35 | -7.55 | 2.69 | -2.81 | 4.93E-03 | 8.34E-02 | 2970.59 | -0.23 | 0.28 | -0.83 | 0.404 | 1.000 |
| ENST00000523910 | ESCO2 | 12.37 | -6.76 | 2.62 | -2.58 | 9.89E-03 | 1.36E-01 | 3.81 | -1.19 | 1.52 | -0.79 | 0.432 | 1.000 |
| ENST00000412582 | ESD | 34.46 | -8.24 | 2.73 | -3.02 | 2.53E-03 | 5.04E-02 | 601.47 | -0.13 | 0.39 | -0.32 | 0.748 | 1.000 |
| ENST00000495654 | ESD | 26.64 | -7.87 | 2.89 | -2.72 | 6.50E-03 | 1.02E-01 | 761.63 | -0.35 | 0.28 | -1.25 | 0.210 | 0.905 |
| ENST00000541590 | ESYT1 | 49.90 | -3.81 | 1.47 | -2.59 | 9.50E-03 | 1.32E-01 | 332.06 | -0.06 | 0.21 | -0.27 | 0.791 | 1.000 |
| ENST00000559973 | ETFA | 3.53 | -4.95 | 1.36 | -3.63 | 2.82E-04 | 8.26E-03 | 77.59 | 0.01 | 0.77 | 0.02 | 0.986 | 1.000 |
| ENST00000266517 | ETNK1 | 8.90 | -21.18 | 3.03 | -6.99 | 2.68E-12 | 2.06E-10 | 2418.77 | 0.54 | 0.13 | 4.13 | 0.000 | 0.002 |
| ENST00000531611 | ETS1 | 7.15 | -20.88 | 3.03 | -6.89 | 5.47E-12 | 3.50E-10 | 165.19 | 0.29 | 2.43 | 0.12 | 0.905 | 1.000 |
| ENST00000455726 | EWSR1 | 10.50 | -21.40 | 3.03 | -7.07 | 1.58E-12 | 1.39E-10 | 425.70 | 0.55 | 0.37 | 1.48 | 0.139 | 0.810 |
| ENST00000366547 | EXO1 | 20.35 | -22.30 | 3.03 | -7.37 | 1.75E-13 | 2.62E-11 | 450.36 | 0.03 | 0.35 | 0.08 | 0.935 | 1.000 |
| ENST00000315013 | EXOC3 | 20.46 | -20.96 | 3.03 | -6.92 | 4.46E-12 | 2.98E-10 | 1445.98 | 0.93 | 0.64 | 1.45 | 0.148 | 0.823 |
| ENST00000260762 | EXOC6 | 15.82 | -21.96 | 3.03 | -7.25 | 4.08E-13 | 5.11E-11 | 1647.12 | -0.28 | 0.33 | -0.86 | 0.389 | 1.000 |
| ENST00000243498 | EXOSC9 | 10.27 | -21.38 | 3.03 | -7.06 | 1.70E-12 | 1.45E-10 | 8.82 | 0.76 | 1.08 | 0.71 | 0.481 | 1.000 |
| ENST00000508212 | EXOSC9 | 7.07 | -20.87 | 3.03 | -6.89 | 5.69E-12 | 3.60E-10 | 76.46 | -0.21 | 0.37 | -0.56 | 0.575 | 1.000 |
| ENST00000469631 | EZH2 | 2.74 | -3.25 | 1.13 | -2.88 | 3.98E-03 | 7.13E-02 | 118.52 | -0.06 | 0.36 | -0.18 | 0.861 | 1.000 |
| ENST00000368444 | FABP7 | 103.54 | -2.50 | 0.88 | -2.84 | 4.51E-03 | 7.80E-02 | 22292.96 | 0.21 | 0.12 | 1.79 | 0.074 | 0.632 |
| ENST00000370035 | FAM102B | 4.95 | -2.41 | 0.91 | -2.64 | 8.19E-03 | 1.20E-01 | 2440.47 | 0.17 | 0.17 | 1.00 | 0.317 | 0.981 |
| ENST00000515037 | FAM114A1 | 8.96 | -21.19 | 3.03 | -7.00 | 2.62E-12 | 2.03E-10 | 371.16 | 0.46 | 1.31 | 0.35 | 0.726 | 1.000 |
| ENST00000487732 | FAM118A | 4.92 | -3.06 | 1.10 | -2.79 | 5.33E-03 | 8.86E-02 | 48.28 | -0.92 | 0.83 | -1.11 | 0.269 | 0.955 |
| ENST00000409185 | FAM168B | 22.09 | -2.26 | 0.48 | -4.68 | 2.83E-06 | 1.22E-04 | 37876.53 | -0.01 | 0.11 | -0.08 | 0.936 | 1.000 |
| ENST00000238961 | FAM178A | 66.55 | -1.30 | 0.31 | -4.20 | 2.63E-05 | 1.01E-03 | 7369.21 | -0.05 | 0.12 | -0.42 | 0.678 | 1.000 |
| ENST00000566077 | FAM192A | 26.95 | -7.30 | 2.60 | -2.81 | 4.98E-03 | 8.41E-02 | 1.76 | -2.55 | 4.32 | -0.59 | 0.555 | NA |
| ENST00000567439 | FAM192A | 16.51 | -22.02 | 3.03 | -7.27 | 3.54E-13 | 4.57E-11 | 834.25 | 2.57 | 0.91 | 2.84 | 0.004 | 0.118 |
| ENST00000490716 | FAM48A | 24.86 | -0.93 | 0.32 | -2.89 | 3.86E-03 | 6.97E-02 | 250.07 | -3.30 | 2.16 | -1.53 | 0.125 | 0.784 |
| ENST00000520887 | FAM49B | 27.48 | -3.31 | 0.86 | -3.84 | 1.25E-04 | 4.00E-03 | 87.92 | 0.21 | 0.34 | 0.60 | 0.551 | 1.000 |
| ENST00000523288 | FAM49B | 80.58 | -1.52 | 0.42 | -3.60 | 3.16E-04 | 9.07E-03 | 717.43 | -0.37 | 0.34 | -1.08 | 0.280 | 0.961 |
| ENST00000380290 | FAM96A | 17.02 | -7.22 | 2.65 | -2.72 | 6.48E-03 | 1.02E-01 | 2851.28 | 0.13 | 0.14 | 0.90 | 0.368 | 1.000 |
| ENST00000561607 | FAN1 | 9.12 | -6.32 | 1.61 | -3.91 | 9.06E-05 | 3.04E-03 | 189.80 | 0.29 | 0.42 | 0.70 | 0.486 | 1.000 |
| ENST00000480909 | FANCD2 | 9.04 | -6.31 | 1.72 | -3.68 | 2.38E-04 | 7.08E-03 | 38.59 | -0.26 | 0.99 | -0.26 | 0.792 | 1.000 |
| ENST00000561894 | FANCI | 31.43 | -22.89 | 3.03 | -7.56 | 3.99E-14 | 9.06E-12 | 2311.30 | -1.49 | 0.57 | -2.62 | 0.009 | 0.187 |
| ENST00000281828 | FARSB | 564.91 | -0.90 | 0.22 | -4.14 | 3.41E-05 | 1.26E-03 | 7513.30 | -0.01 | 0.13 | -0.06 | 0.956 | 1.000 |
| ENST00000355740 | FAS | 7.84 | -3.67 | 1.36 | -2.71 | 6.79E-03 | 1.05E-01 | 926.81 | -0.42 | 0.58 | -0.73 | 0.468 | 1.000 |
| ENST00000434523 | FBXO11 | 7.35 | -20.93 | 3.03 | -6.91 | 4.96E-12 | 3.22E-10 | 48.92 | -9.13 | 4.67 | -1.96 | 0.050 | 0.528 |
| ENST00000493962 | FBXO11 | 11.47 | -21.53 | 3.03 | -7.11 | 1.18E-12 | 1.10E-10 | 2664.00 | -0.23 | 0.15 | -1.47 | 0.140 | 0.811 |
| ENST00000427718 | FBXO21 | 80.12 | -1.36 | 0.35 | -3.92 | 8.86E-05 | 2.99E-03 | 3441.32 | -0.15 | 0.22 | -0.66 | 0.512 | 1.000 |
| ENST00000523990 | FBXO28 | 48.68 | -8.74 | 2.76 | -3.16 | 1.56E-03 | 3.40E-02 | 92.72 | 0.75 | 0.74 | 1.01 | 0.311 | 0.979 |
| ENST00000509134 | FBXO4 | 22.78 | -5.53 | 1.79 | -3.09 | 2.02E-03 | 4.20E-02 | 292.77 | 0.05 | 0.39 | 0.13 | 0.899 | 1.000 |
| ENST00000397426 | FBXO7 | 35.55 | -8.29 | 3.03 | -2.74 | 6.19E-03 | 9.87E-02 | 19271.91 | 0.18 | 0.59 | 0.31 | 0.756 | 1.000 |
| ENST00000420700 | FBXO7 | 17.17 | -7.24 | 2.64 | -2.74 | 6.15E-03 | 9.82E-02 | 1738.36 | -3.79 | 1.49 | -2.55 | 0.011 | 0.217 |
| ENST00000443614 | FDFT1 | 27.62 | -22.72 | 3.03 | -7.50 | 6.17E-14 | 1.25E-11 | 1204.99 | 0.32 | 0.26 | 1.21 | 0.227 | 0.923 |
| ENST00000274457 | FEM1C | 57.43 | -0.71 | 0.26 | -2.75 | 5.91E-03 | 9.54E-02 | 4492.35 | -0.03 | 0.14 | -0.22 | 0.825 | 1.000 |
| ENST00000327214 | FGFR1OP2 | 6.12 | -20.68 | 3.03 | -6.82 | 8.95E-12 | 5.28E-10 | 572.60 | 0.10 | 0.29 | 0.33 | 0.739 | 1.000 |
| ENST00000546072 | FGFR1OP2 | 7.00 | -5.94 | 1.87 | -3.18 | 1.49E-03 | 3.28E-02 | 574.76 | 0.24 | 0.23 | 1.04 | 0.301 | 0.973 |
| ENST00000395556 | FIGNL1 | 6.89 | -20.84 | 3.03 | -6.88 | 6.07E-12 | 3.81E-10 | 58.96 | -0.58 | 0.40 | -1.45 | 0.147 | 0.822 |
| ENST00000433017 | FIGNL1 | 8.59 | -5.04 | 1.89 | -2.67 | 7.68E-03 | 1.15E-01 | 810.65 | -0.17 | 0.22 | -0.78 | 0.433 | 1.000 |
| ENST00000223136 | FIS1 | 148.29 | -1.36 | 0.50 | -2.74 | 6.13E-03 | 9.80E-02 | 4487.92 | -0.21 | 0.20 | -1.05 | 0.293 | 0.968 |
| ENST00000269598 | FKBP10 | 62.60 | -8.24 | 3.03 | -2.72 | 6.49E-03 | 1.02E-01 | 388.46 | 0.25 | 0.19 | 1.30 | 0.193 | 0.889 |
| ENST00000489591 | FKBP10 | 44.69 | -22.51 | 3.03 | -7.44 | 1.04E-13 | 1.75E-11 | 3109.57 | 0.44 | 0.14 | 3.20 | 0.001 | 0.047 |
| ENST00000396062 | FKBP3 | 31.64 | -22.90 | 3.03 | -7.57 | 3.87E-14 | 8.97E-12 | 3129.32 | 0.02 | 1.01 | 0.02 | 0.981 | 1.000 |
| ENST00000368431 | FLAD1 | 4.44 | -3.45 | 1.03 | -3.36 | 7.91E-04 | 1.96E-02 | 744.26 | 0.16 | 0.30 | 0.52 | 0.602 | 1.000 |
| ENST00000360319 | FLNA | 262.53 | -25.78 | 3.03 | -8.52 | 1.61E-17 | 1.82E-14 | 61191.69 | -0.77 | 1.36 | -0.56 | 0.573 | 1.000 |
| ENST00000466319 | FLNA | 132.13 | -0.84 | 0.25 | -3.34 | 8.36E-04 | 2.05E-02 | 74.60 | -0.30 | 0.58 | -0.52 | 0.605 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000474358 | FLNA | 28.88 | -7.99 | 1.53 | -5.23 | 1.72E-07 | 8.25E-06 | 483.88 | 0.13 | 0.35 | 0.38 | 0.703 | 1.000 |
| ENST00000293590 | FMNL3 | 21.45 | -21.08 | 3.03 | -6.96 | 3.30E-12 | 2.38E-10 | 84.21 | -0.32 | 0.52 | -0.61 | 0.545 | 1.000 |
| ENST00000356005 | FN1 | 31.65 | -22.89 | 3.03 | -7.56 | 3.93E-14 | 9.01E-12 | 229532.66 | -0.18 | 0.17 | -1.07 | 0.285 | 0.963 |
| ENST00000370256 | FNBP1L | 5.22 | -5.52 | 1.33 | -4.15 | 3.37E-05 | 1.25E-03 | 3077.86 | -0.06 | 0.15 | -0.42 | 0.671 | 1.000 |
| ENST00000344768 | FRMD6 | 42.10 | -8.53 | 1.10 | -7.75 | 9.25E-15 | 3.01E-12 | 439.52 | -0.11 | 0.28 | -0.38 | 0.702 | 1.000 |
| ENST00000405801 | FSCN1 | 42.80 | -23.31 | 3.03 | -7.70 | 1.34E-14 | 4.09E-12 | 20.62 | -0.41 | 0.84 | -0.49 | 0.624 | 1.000 |
| ENST00000256759 | FST | 66.47 | -2.92 | 0.49 | -5.94 | 2.80E-09 | 1.46E-07 | 16713.93 | -0.07 | 0.11 | -0.65 | 0.517 | 1.000 |
| ENST00000396947 | FST | 12.40 | -4.93 | 1.48 | -3.32 | 9.04E-04 | 2.19E-02 | 522.24 | -0.04 | 0.24 | -0.19 | 0.853 | 1.000 |
| ENST00000424703 | FSTL1 | 21.82 | -22.40 | 3.03 | -7.40 | 1.39E-13 | 2.16E-11 | 230.34 | 3.11 | 1.28 | 2.43 | 0.015 | 0.266 |
| ENST00000319725 | FUBP3 | 96.03 | -1.25 | 0.46 | -2.71 | 6.64E-03 | 1.03E-01 | 10482.09 | -0.20 | 0.16 | -1.24 | 0.216 | 0.912 |
| ENST00000358307 | FUT8 | 4.08 | -5.16 | 1.97 | -2.61 | 8.94E-03 | 1.27E-01 | 34.11 | -0.82 | 1.36 | -0.60 | 0.548 | 1.000 |
| ENST00000461044 | FXR1 | 10.75 | -2.98 | 0.69 | -4.31 | 1.67E-05 | 6.55E-04 | 36.79 | 0.54 | 0.81 | 0.67 | 0.505 | 1.000 |
| ENST00000473375 | FXR1 | 8.86 | -2.17 | 0.82 | -2.65 | 7.95E-03 | 1.18E-01 | 34.88 | -0.94 | 0.60 | -1.57 | 0.117 | 0.766 |
| ENST00000435734 | FXYD3 | 7.18 | -4.80 | 1.72 | -2.78 | 5.38E-03 | 8.90E-02 | 524.77 | -1.01 | 0.21 | -4.79 | 0.000 | 0.000 |
| ENST00000270310 | FXYD7 | 17.95 | -2.52 | 0.89 | -2.82 | 4.78E-03 | 8.14E-02 | 1637.64 | 0.79 | 0.21 | 3.77 | 0.000 | 0.008 |
| ENST00000393564 | G6PD | 205.87 | -10.82 | 2.04 | -5.30 | 1.17E-07 | 5.66E-06 | 108.91 | -0.09 | 0.42 | -0.22 | 0.824 | 1.000 |
| ENST00000534779 | GANAB | 211.24 | -8.46 | 2.96 | -2.86 | 4.27E-03 | 7.49E-02 | 1315.27 | -0.24 | 0.28 | -0.87 | 0.385 | 1.000 |
| ENST00000396859 | GAPDH | 131.91 | -24.84 | 3.03 | -8.21 | 2.25E-16 | 1.78E-13 | 895.92 | -0.06 | 0.35 | -0.17 | 0.864 | 1.000 |
| ENST00000447061 | GAPDHP25 | 12.03 | -1.95 | 0.64 | -3.06 | 2.18E-03 | 4.47E-02 | 7.16 | -0.60 | 0.99 | -0.60 | 0.548 | 1.000 |
| ENST00000505218 | GAPDHP40 | 654.10 | -1.23 | 0.28 | -4.42 | 9.84E-06 | 3.98E-04 | 6.23 | 1.09 | 1.52 | 0.72 | 0.473 | 1.000 |
| ENST00000396115 | GAS7 | 193.05 | -1.73 | 0.61 | -2.85 | 4.43E-03 | 7.70E-02 | 132037.02 | 0.06 | 0.13 | 0.49 | 0.622 | 1.000 |
| ENST00000429563 | GATAD2A | 8.83 | -3.67 | 1.20 | -3.05 | 2.33E-03 | 4.71E-02 | 66.26 | -0.05 | 0.38 | -0.13 | 0.894 | 1.000 |
| ENST00000481729 | GCC2 | 2.49 | -4.46 | 1.72 | -2.60 | 9.40E-03 | 1.32E-01 | 60.66 | 0.31 | 0.43 | 0.73 | 0.465 | 1.000 |
| ENST00000220822 | GDAP1 | 40.54 | -2.35 | 0.64 | -3.65 | 2.66E-04 | 7.84E-03 | 2247.62 | -0.18 | 0.18 | -0.98 | 0.329 | 0.985 |
| ENST00000465640 | GDI1 | 84.83 | -0.90 | 0.33 | -2.78 | 5.44E-03 | 8.98E-02 | 161.49 | 0.48 | 0.46 | 1.06 | 0.291 | 0.966 |
| ENST00000380181 | GDI2 | 75.58 | -24.09 | 3.03 | -7.96 | 1.75E-15 | 9.17E-13 | 3915.31 | 0.69 | 0.27 | 2.51 | 0.012 | 0.233 |
| ENST00000456041 | GDI2 | 8.19 | -19.03 | 3.03 | -6.28 | 3.34E-10 | 1.77E-08 | 822.07 | 1.02 | 0.73 | 1.39 | 0.165 | 0.848 |
| ENST00000284116 | GDPD1 | 6.10 | -2.65 | 0.94 | -2.83 | 4.65E-03 | 7.96E-02 | 1632.77 | 0.00 | 0.13 | -0.01 | 0.991 | 1.000 |
| ENST00000250379 | GEMIN2 | 4.94 | -5.44 | 1.75 | -3.11 | 1.84E-03 | 3.89E-02 | 190.65 | 0.54 | 0.48 | 1.14 | 0.254 | 0.946 |
| ENST00000525153 | GEMIN2 | 9.13 | -6.33 | 1.10 | -5.75 | 9.10E-09 | 4.65E-07 | 106.75 | 1.17 | 0.94 | 1.25 | 0.210 | 0.906 |
| ENST00000285873 | GEMIN5 | 123.28 | -0.92 | 0.28 | -3.31 | 9.39E-04 | 2.26E-02 | 5253.85 | 0.01 | 0.12 | 0.06 | 0.950 | 1.000 |
| ENST00000264263 | GFM1 | 67.47 | -3.86 | 1.25 | -3.09 | 2.02E-03 | 4.20E-02 | 6609.28 | 0.11 | 0.12 | 0.96 | 0.335 | 0.988 |
| ENST00000483256 | GGNBP2 | 27.42 | -7.91 | 2.72 | -2.91 | 3.66E-03 | 6.70E-02 | 2114.58 | 0.42 | 0.20 | 2.06 | 0.039 | 0.464 |
| ENST00000409196 | GIGYF2 | 16.71 | -22.04 | 3.03 | -7.28 | 3.38E-13 | 4.42E-11 | 551.11 | 0.84 | 0.90 | 0.93 | 0.350 | 0.994 |
| ENST00000328514 | GINS3 | 18.03 | -7.31 | 1.06 | -6.92 | 4.39E-12 | 2.95E-10 | 645.50 | -0.23 | 0.21 | -1.14 | 0.253 | 0.946 |
| ENST00000553118 | GIT2 | 8.81 | -6.27 | 1.88 | -3.34 | 8.36E-04 | 2.05E-02 | 69.48 | 0.39 | 0.45 | 0.87 | 0.382 | 1.000 |
| ENST00000373365 | GLO1 | 170.19 | -0.79 | 0.29 | -2.74 | 6.09E-03 | 9.76E-02 | 18263.87 | 0.00 | 0.11 | -0.04 | 0.967 | 1.000 |
| ENST00000264428 | GLRB | 6.72 | -2.46 | 0.73 | -3.37 | 7.50E-04 | 1.88E-02 | 1278.77 | 0.01 | 0.33 | 0.02 | 0.984 | 1.000 |
| ENST00000338435 | GLS | 27.02 | -7.89 | 3.00 | -2.63 | 8.49E-03 | 1.23E-01 | 9407.32 | -0.05 | 0.14 | -0.35 | 0.725 | 1.000 |
| ENST00000461965 | GLS | 8.12 | -6.16 | 1.70 | -3.63 | 2.81E-04 | 8.23E-03 | 28.66 | -0.70 | 0.74 | -0.95 | 0.343 | 0.991 |
| ENST00000495444 | GLS | 8.04 | -6.14 | 1.71 | -3.60 | 3.24E-04 | 9.24E-03 | 74.43 | 0.11 | 0.44 | 0.24 | 0.809 | 1.000 |
| ENST00000490206 | GNAI1 | 4.24 | -5.22 | 1.74 | -3.00 | 2.68E-03 | 5.25E-02 | 14.46 | 0.25 | 0.95 | 0.26 | 0.792 | 1.000 |
| ENST00000424361 | GNB2 | 6.17 | -20.69 | 3.03 | -6.83 | 8.70E-12 | 5.19E-10 | 221.65 | -1.03 | 0.41 | -2.54 | 0.011 | 0.219 |
| ENST00000503494 | GNB2L1 | 18.03 | -22.13 | 3.03 | -7.31 | 2.67E-13 | 3.65E-11 | 19.21 | 0.10 | 0.75 | 0.14 | 0.889 | 1.000 |
| ENST00000504325 | GNB2L1 | 16.41 | -22.01 | 3.03 | -7.27 | 3.64E-13 | 4.66E-11 | 334.44 | -0.73 | 0.91 | -0.79 | 0.428 | 1.000 |
| ENST00000508682 | GNB2L1 | 10.76 | -21.42 | 3.03 | -7.07 | 1.53E-12 | 1.35E-10 | 1138.93 | -0.10 | 0.42 | -0.24 | 0.809 | 1.000 |
| ENST00000511900 | GNB2L1 | 62.81 | -22.97 | 3.03 | -7.59 | 3.25E-14 | 7.79E-12 | 142.01 | 0.21 | 1.08 | 0.20 | 0.844 | 1.000 |
| ENST00000515417 | GNB2L1 | 9.70 | -21.30 | 3.03 | -7.03 | 2.05E-12 | 1.67E-10 | 46286.36 | -0.97 | 1.22 | -0.80 | 0.425 | 1.000 |
| ENST00000466899 | GNB4 | 7.93 | -21.03 | 3.03 | -6.94 | 3.90E-12 | 2.68E-10 | 53.26 | -0.26 | 0.59 | -0.44 | 0.662 | 1.000 |
| ENST00000358784 | GNB5 | 8.73 | -21.12 | 3.03 | -6.97 | 3.16E-12 | 2.31E-10 | 481.46 | -0.10 | 0.23 | -0.43 | 0.669 | 1.000 |
| ENST00000370982 | GNG12 | 121.58 | -1.39 | 0.27 | -5.24 | 1.61E-07 | 7.70E-06 | 41955.00 | 0.11 | 0.16 | 0.73 | 0.467 | 1.000 |
| ENST00000433809 | GNL1 | 16.97 | -4.44 | 1.59 | -2.80 | 5.14E-03 | 8.63E-02 | 595.97 | 0.26 | 0.35 | 0.75 | 0.454 | 1.000 |
| ENST00000373062 | GNL2 | 259.57 | -0.94 | 0.29 | -3.21 | 1.31E-03 | 2.95E-02 | 15340.44 | -0.01 | 0.12 | -0.12 | 0.906 | 1.000 |
| ENST00000451249 | GOSR1 | 33.78 | -2.79 | 0.52 | -5.31 | 1.08E-07 | 5.24E-06 | 1125.40 | -0.02 | 0.22 | -0.07 | 0.943 | 1.000 |
| ENST00000355105 | GPBP1L1 | 22.85 | -1.07 | 0.41 | -2.60 | 9.43E-03 | 1.32E-01 | 5654.18 | 0.18 | 0.24 | 0.74 | 0.457 | 1.000 |
| ENST00000407583 | GPN1 | 35.98 | -8.30 | 3.03 | -2.74 | 6.09E-03 | 9.75E-02 | 46.99 | 2.86 | 2.16 | 1.32 | 0.186 | 0.880 |
| ENST00000228827 | GPN3 | 43.24 | -8.57 | 1.95 | -4.39 | 1.14E-05 | 4.60E-04 | 1439.82 | 0.30 | 0.31 | 0.96 | 0.338 | 0.989 |
| ENST00000372406 | GPR107 | 49.24 | -0.83 | 0.24 | -3.41 | 6.50E-04 | 1.67E-02 | 64.38 | 0.82 | 1.27 | 0.64 | 0.521 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000361314 | GPX7 | 4.04 | -2.52 | 0.94 | -2.67 | 7.61E-03 | 1.14E-01 | 2877.31 | -0.05 | 0.19 | -0.25 | 0.805 | 1.000 |
| ENST00000316804 | GRB2 | 30.93 | -3.05 | 1.08 | -2.81 | 4.91E-03 | 8.31E-02 | 3768.14 | 2.74 | 0.96 | 2.87 | 0.004 | 0.111 |
| ENST00000460882 | GRHPR | 50.76 | -2.62 | 0.87 | -3.00 | 2.66E-03 | 5.23E-02 | 1048.40 | 0.17 | 0.26 | 0.66 | 0.509 | 1.000 |
| ENST00000513661 | GRPEL2 | 22.82 | -22.46 | 3.03 | -7.42 | 1.19E-13 | 1.95E-11 | 63.91 | 0.54 | 0.45 | 1.20 | 0.228 | 0.924 |
| ENST00000439371 | GRSF1 | 28.03 | -22.68 | 3.03 | -7.49 | 6.84E-14 | 1.33E-11 | 3329.33 | -0.06 | 4.56 | -0.01 | 0.990 | 1.000 |
| ENST00000341272 | GSN | 46.52 | -23.42 | 3.03 | -7.74 | 1.02E-14 | 3.28E-12 | 2622.00 | 0.38 | 0.29 | 1.31 | 0.190 | 0.884 |
| ENST00000373806 | GSN | 39.96 | -5.44 | 1.35 | -4.04 | 5.35E-05 | 1.89E-03 | 83.81 | 0.51 | 0.41 | 1.25 | 0.213 | 0.909 |
| ENST00000373807 | GSN | 31.17 | -22.77 | 3.03 | -7.52 | 5.38E-14 | 1.13E-11 | 12029.20 | -0.05 | 0.13 | -0.41 | 0.679 | 1.000 |
| ENST00000432226 | GSN | 6.89 | -20.84 | 3.03 | -6.88 | 6.07E-12 | 3.81E-10 | 12.97 | -4.06 | 2.18 | -1.86 | 0.062 | 0.584 |
| ENST00000485767 | GSN | 6.50 | -5.83 | 1.90 | -3.07 | 2.11E-03 | 4.36E-02 | 398.85 | 0.12 | 0.28 | 0.42 | 0.677 | 1.000 |
| ENST00000326729 | GSTM4 | 11.76 | -6.69 | 2.58 | -2.59 | 9.51E-03 | 1.32E-01 | 1761.76 | -0.08 | 0.23 | -0.36 | 0.715 | 1.000 |
| ENST00000432659 | GSTO1 | 21.61 | -22.38 | 3.03 | -7.39 | 1.44E-13 | 2.22E-11 | 631.08 | 0.09 | 0.17 | 0.49 | 0.625 | 1.000 |
| ENST00000484743 | GTF2A2 | 5.83 | -20.61 | 3.03 | -6.80 | 1.04E-11 | 5.99E-10 | 24.25 | 0.38 | 0.79 | 0.47 | 0.636 | 1.000 |
| ENST00000330280 | GTF2H2 | 14.00 | -3.60 | 1.20 | -3.00 | 2.69E-03 | 5.27E-02 | 562.91 | 0.00 | 0.27 | -0.02 | 0.988 | 1.000 |
| ENST00000521942 | GTF2H2 | 7.76 | -6.09 | 1.36 | -4.48 | 7.35E-06 | 3.02E-04 | 492.58 | 0.09 | 0.27 | 0.34 | 0.735 | 1.000 |
| ENST00000324896 | GTF2I | 67.32 | -1.84 | 0.32 | -5.68 | 1.34E-08 | 6.79E-07 | 1325.31 | -0.20 | 0.22 | -0.92 | 0.355 | 0.996 |
| ENST00000470115 | GTF3C2 | 7.23 | -20.88 | 3.03 | -6.89 | 5.56E-12 | 3.54E-10 | 118.05 | -0.07 | 0.35 | -0.19 | 0.848 | 1.000 |
| ENST00000372146 | GTF3C4 | 128.79 | -0.86 | 0.28 | -3.13 | 1.78E-03 | 3.78E-02 | 10460.96 | 0.05 | 0.11 | 0.42 | 0.677 | 1.000 |
| ENST00000372097 | GTF3C5 | 46.79 | -1.95 | 0.52 | -3.73 | 1.92E-04 | 5.89E-03 | 1540.66 | 0.05 | 0.14 | 0.34 | 0.730 | 1.000 |
| ENST00000512507 | H2AFY | 132.27 | -2.15 | 0.65 | -3.29 | 1.01E-03 | 2.40E-02 | 10862.13 | 0.10 | 0.12 | 0.80 | 0.422 | 1.000 |
| ENST00000511319 | H2AFZ | 83.21 | -24.22 | 3.03 | -8.00 | 1.23E-15 | 7.19E-13 | 2743.42 | -0.78 | 0.50 | -1.56 | 0.119 | 0.772 |
| ENST00000466976 | HABP4 | 3.26 | -4.85 | 1.63 | -2.98 | 2.89E-03 | 5.57E-02 | 114.35 | 0.00 | 0.31 | 0.00 | 0.996 | 1.000 |
| ENST00000309522 | HADH | 44.41 | -23.23 | 3.03 | -7.68 | 1.65E-14 | 4.77E-12 | 2489.97 | -0.06 | 0.29 | -0.22 | 0.826 | 1.000 |
| ENST00000507260 | HADH | 5.79 | -3.17 | 1.21 | -2.63 | 8.54E-03 | 1.23E-01 | 863.20 | -0.06 | 0.20 | -0.33 | 0.741 | 1.000 |
| ENST00000405867 | HADHB | 8.55 | -21.12 | 3.03 | -6.97 | 3.11E-12 | 2.29E-10 | 2634.89 | 0.05 | 0.32 | 0.16 | 0.873 | 1.000 |
| ENST00000545822 | HADHB | 13.01 | -21.69 | 3.03 | -7.16 | 7.84E-13 | 8.05E-11 | 2507.90 | 0.23 | 0.75 | 0.31 | 0.755 | 1.000 |
| ENST00000415192 | HARS | 53.70 | -8.88 | 1.99 | -4.46 | 8.31E-06 | 3.38E-04 | 94.49 | -0.51 | 0.59 | -0.86 | 0.388 | 1.000 |
| ENST00000570178 | HAUS2 | 11.83 | -21.57 | 3.03 | -7.12 | 1.06E-12 | 1.01E-10 | 13.10 | -0.11 | 3.93 | -0.03 | 0.977 | 1.000 |
| ENST00000380502 | HAUS6 | 103.60 | -0.51 | 0.16 | -3.16 | 1.60E-03 | 3.48E-02 | 8536.30 | 0.03 | 0.14 | 0.22 | 0.825 | 1.000 |
| ENST00000476391 | HDAC1 | 24.19 | -6.55 | 2.38 | -2.75 | 5.99E-03 | 9.65E-02 | 2113.74 | 0.04 | 0.70 | 0.05 | 0.960 | 1.000 |
| ENST00000520746 | HDAC2 | 13.55 | -6.90 | 1.85 | -3.73 | 1.90E-04 | 5.84E-03 | 116.56 | -0.59 | 0.96 | -0.62 | 0.537 | 1.000 |
| ENST00000486618 | HDAC3 | 9.56 | -4.29 | 1.17 | -3.68 | 2.35E-04 | 7.02E-03 | 135.92 | 0.73 | 0.45 | 1.62 | 0.106 | 0.740 |
| ENST00000491581 | HDAC3 | 5.58 | -5.61 | 2.05 | -2.73 | 6.31E-03 | 1.00E-01 | 61.93 | 0.23 | 0.37 | 0.63 | 0.532 | 1.000 |
| ENST00000456922 | HDAC4 | 2.55 | -4.49 | 1.41 | -3.18 | 1.47E-03 | 3.25E-02 | 81.73 | 0.17 | 0.56 | 0.31 | 0.760 | 1.000 |
| ENST00000405943 | HDGFP1 | 17.52 | -2.17 | 0.65 | -3.33 | 8.61E-04 | 2.10E-02 | 16.08 | 0.84 | 0.97 | 0.86 | 0.388 | 1.000 |
| ENST00000555843 | HECTD1 | 5.22 | -5.52 | 1.83 | -3.01 | 2.60E-03 | 5.14E-02 | 5499.13 | 0.04 | 0.14 | 0.33 | 0.742 | 1.000 |
| ENST00000247815 | HELB | 12.56 | -6.79 | 1.82 | -3.72 | 1.96E-04 | 6.01E-03 | 127.24 | -1.24 | 0.97 | -1.28 | 0.200 | 0.895 |
| ENST00000466552 | HELLS | 4.83 | -4.19 | 1.26 | -3.33 | 8.54E-04 | 2.09E-02 | 331.72 | 0.10 | 1.07 | 0.09 | 0.928 | 1.000 |
| ENST00000427635 | HERC4 | 49.70 | -1.26 | 0.23 | -5.38 | 7.47E-08 | 3.66E-06 | 1249.44 | 1.36 | 0.49 | 2.79 | 0.005 | 0.131 |
| ENST00000380265 | HERC6 | 2.71 | -2.72 | 1.00 | -2.73 | 6.42E-03 | 1.01E-01 | 146.30 | -0.43 | 2.85 | -0.15 | 0.880 | 1.000 |
| ENST00000344114 | HERPUD1 | 2.74 | -4.59 | 1.70 | -2.70 | 6.96E-03 | 1.07E-01 | 48.11 | -0.72 | 0.59 | -1.23 | 0.219 | 0.914 |
| ENST00000439977 | HERPUD1 | 3.64 | -5.00 | 1.12 | -4.48 | 7.40E-06 | 3.04E-04 | 151.97 | -0.64 | 0.58 | -1.10 | 0.273 | 0.958 |
| ENST00000504459 | HEXB | 25.58 | -5.42 | 1.86 | -2.90 | 3.68E-03 | 6.71E-02 | 491.17 | 0.17 | 0.27 | 0.64 | 0.525 | 1.000 |
| ENST00000513079 | HEXB | 16.87 | -7.21 | 2.67 | -2.70 | 6.98E-03 | 1.07E-01 | 1311.85 | -0.04 | 0.27 | -0.13 | 0.893 | 1.000 |
| ENST00000354724 | HEY1 | 8.40 | -6.21 | 1.27 | -4.88 | 1.08E-06 | 4.84E-05 | 193.44 | 0.55 | 0.75 | 0.74 | 0.462 | 1.000 |
| ENST00000359678 | HIBCH | 38.75 | -8.41 | 2.76 | -3.05 | 2.31E-03 | 4.68E-02 | 723.09 | -0.33 | 0.51 | -0.65 | 0.518 | 1.000 |
| ENST00000418900 | HIGD1A | 9.60 | -21.28 | 3.03 | -7.03 | 2.11E-12 | 1.71E-10 | 431.37 | 0.29 | 2.13 | 0.14 | 0.892 | 1.000 |
| ENST00000377791 | HIST1H2AC | 445.16 | -2.31 | 0.25 | -9.08 | 1.11E-19 | 2.11E-16 | 81.17 | 1.11 | 1.92 | 0.58 | 0.564 | 1.000 |
| ENST00000359985 | HIST1H2BF | 325.63 | -0.82 | 0.27 | -3.04 | 2.35E-03 | 4.73E-02 | 26.37 | 1.71 | 0.78 | 2.20 | 0.028 | 0.388 |
| ENST00000356350 | HIST1H2BH | 183.53 | -1.26 | 0.26 | -4.91 | 9.03E-07 | 4.06E-05 | 42.71 | -0.05 | 0.50 | -0.09 | 0.927 | 1.000 |
| ENST00000339812 | HIST1H2BJ | 495.10 | -1.04 | 0.27 | -3.86 | 1.11E-04 | 3.62E-03 | 41.50 | 0.20 | 0.59 | 0.35 | 0.730 | 1.000 |
| ENST00000377831 | HIST1H3D | 40.31 | -1.51 | 0.32 | -4.75 | 2.04E-06 | 8.91E-05 | 6.52 | -2.55 | 1.22 | -2.08 | 0.037 | 0.450 |
| ENST00000354348 | HIST1H4I | 295.72 | -0.82 | 0.24 | -3.43 | 5.94E-04 | 1.55E-02 | 178.29 | 0.99 | 0.32 | 3.10 | 0.002 | 0.061 |
| ENST00000355981 | HIST1H4L | 109.68 | -1.11 | 0.33 | -3.32 | 9.00E-04 | 2.18E-02 | 3.46 | -5.31 | 2.75 | -1.93 | 0.054 | NA |
| ENST00000369155 | HIST2H2BE | 317.67 | -1.39 | 0.23 | -5.92 | 3.14E-09 | 1.63E-07 | 5975.88 | 1.35 | 0.21 | 6.41 | 0.000 | 0.000 |
| ENST00000392939 | HIST2H4A | 346.34 | -2.66 | 0.84 | -3.18 | 1.48E-03 | 3.26E-02 | 819.46 | 0.10 | 0.16 | 0.64 | 0.524 | 1.000 |
| ENST00000412585 | HLA-B | 71.97 | -2.78 | 0.82 | -3.41 | 6.51E-04 | 1.67E-02 | 3391.99 | -0.10 | 0.12 | -0.79 | 0.430 | 1.000 |
| ENST00000422592 | HLA-DPB1 | 41.82 | -5.92 | 1.45 | -4.10 | 4.16E-05 | 1.51E-03 | 6241.82 | 0.07 | 0.26 | 0.25 | 0.800 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000310053 | HLTF | 148.38 | -1.20 | 0.18 | -6.78 | 1.20E-11 | 6.80E-10 | 120.67 | 0.14 | 0.41 | 0.33 | 0.738 | 1.000 |
| ENST00000340852 | HM13 | 20.42 | -7.49 | 2.73 | -2.74 | 6.16E-03 | 9.83E-02 | 147.53 | -0.54 | 0.31 | -1.74 | 0.082 | 0.662 |
| ENST00000494153 | HM13 | 17.68 | -7.28 | 1.89 | -3.85 | 1.17E-04 | 3.79E-03 | 16.13 | -0.40 | 0.70 | -0.57 | 0.566 | 1.000 |
| ENST00000416526 | HMG20B | 7.91 | -21.03 | 3.03 | -6.94 | 3.91E-12 | 2.68E-10 | 57.20 | -0.02 | 1.92 | -0.01 | 0.991 | 1.000 |
| ENST00000405805 | HMGB1 | 96.47 | -1.91 | 0.74 | -2.60 | 9.40E-03 | 1.32E-01 | 8941.19 | 0.89 | 0.26 | 3.42 | 0.001 | 0.026 |
| ENST00000513148 | HMGCL | 4.87 | -4.22 | 1.29 | -3.28 | 1.05E-03 | 2.47E-02 | 337.02 | 0.11 | 0.73 | 0.15 | 0.880 | 1.000 |
| ENST00000358715 | HMMR | 42.86 | -8.56 | 2.80 | -3.05 | 2.28E-03 | 4.64E-02 | 1887.80 | -1.04 | 0.65 | -1.60 | 0.110 | 0.750 |
| ENST00000562569 | HN1L | 31.00 | -22.87 | 3.03 | -7.56 | 4.14E-14 | 9.34E-12 | 19.20 | -0.74 | 2.70 | -0.27 | 0.784 | 1.000 |
| ENST00000556897 | HNRNPC | 27.08 | -22.13 | 3.03 | -7.31 | 2.65E-13 | 3.64E-11 | 8065.28 | 0.12 | 0.22 | 0.55 | 0.580 | 1.000 |
| ENST00000515432 | HNRNPD | 18.11 | -22.14 | 3.03 | -7.31 | 2.62E-13 | 3.60E-11 | 115.44 | 0.18 | 0.36 | 0.52 | 0.606 | 1.000 |
| ENST00000481819 | HNRNPH3 | 12.68 | -21.66 | 3.03 | -7.15 | 8.42E-13 | 8.51E-11 | 1693.63 | 0.25 | 0.34 | 0.73 | 0.463 | 1.000 |
| ENST00000376281 | HNRNPK | 70.84 | -24.00 | 3.03 | -7.93 | 2.22E-15 | 1.07E-12 | 7.37 | -1.19 | 1.32 | -0.90 | 0.369 | 1.000 |
| ENST00000470941 | HNRNPR | 44.09 | -8.60 | 1.91 | -4.51 | 6.53E-06 | 2.70E-04 | 103.02 | -0.43 | 0.38 | -1.13 | 0.259 | 0.950 |
| ENST00000283179 | HNRNPU | 58.72 | -5.59 | 2.01 | -2.78 | 5.50E-03 | 9.04E-02 | 45003.75 | -0.27 | 0.25 | -1.10 | 0.269 | 0.955 |
| ENST00000349655 | HNRPDL | 99.73 | -24.46 | 3.03 | -8.08 | 6.30E-16 | 4.07E-13 | 1074.53 | -0.36 | 0.36 | -0.98 | 0.326 | 0.985 |
| ENST00000378915 | HNRPLL | 23.16 | -7.67 | 2.72 | -2.82 | 4.84E-03 | 8.22E-02 | 79.80 | -1.62 | 2.25 | -0.72 | 0.470 | 1.000 |
| ENST00000424732 | HP1BP3 | 58.84 | -1.00 | 0.35 | -2.84 | 4.51E-03 | 7.80E-02 | 1838.44 | -0.14 | 0.22 | -0.62 | 0.532 | 1.000 |
| ENST00000513628 | HSD17B4 | 25.80 | -22.62 | 3.03 | -7.47 | 7.79E-14 | 1.47E-11 | 4490.43 | 0.81 | 3.80 | 0.21 | 0.830 | 1.000 |
| ENST00000549334 | HSP90B1 | 24.08 | -22.53 | 3.03 | -7.44 | 9.89E-14 | 1.69E-11 | 44.52 | -0.31 | 0.42 | -0.73 | 0.466 | 1.000 |
| ENST00000532167 | HSPA8 | 13.47 | -21.74 | 3.03 | -7.18 | 7.06E-13 | 7.46E-11 | 781.42 | -0.60 | 0.28 | -2.15 | 0.032 | 0.412 |
| ENST00000425843 | HSPA8P1 | 1450.14 | -1.09 | 0.27 | -4.06 | 4.81E-05 | 1.72E-03 | 63.46 | -0.65 | 0.44 | -1.47 | 0.141 | 0.813 |
| ENST00000504902 | HSPA9 | 75.19 | -3.08 | 0.82 | -3.75 | 1.74E-04 | 5.38E-03 | 3665.87 | -0.42 | 0.26 | -1.62 | 0.105 | 0.739 |
| ENST00000524109 | HSPA9 | 9.54 | -21.28 | 3.03 | -7.02 | 2.15E-12 | 1.74E-10 | 1428.55 | -0.22 | 0.27 | -0.81 | 0.417 | 1.000 |
| ENST00000418022 | HSPD1 | 7.22 | -2.77 | 1.06 | -2.63 | 8.59E-03 | 1.24E-01 | 50.57 | -0.21 | 0.68 | -0.30 | 0.762 | 1.000 |
| ENST00000537078 | HSPD1P1 | 21.13 | -1.80 | 0.60 | -3.00 | 2.74E-03 | 5.34E-02 | 14.74 | -2.09 | 1.46 | -1.43 | 0.152 | 0.829 |
| ENST00000218364 | HTATSF1 | 40.92 | -8.49 | 3.02 | -2.81 | 5.00E-03 | 8.43E-02 | 636.28 | 1.12 | 1.12 | 1.00 | 0.317 | 0.981 |
| ENST00000496603 | IAH1 | 6.00 | -5.72 | 1.90 | -3.00 | 2.69E-03 | 5.26E-02 | 24.83 | 0.47 | 0.57 | 0.81 | 0.418 | 1.000 |
| ENST00000473915 | IARS | 6.75 | -5.89 | 1.24 | -4.76 | 1.98E-06 | 8.65E-05 | 48.48 | -0.34 | 0.48 | -0.72 | 0.471 | 1.000 |
| ENST00000265986 | IDE | 191.13 | -0.78 | 0.22 | -3.58 | 3.42E-04 | 9.66E-03 | 6438.21 | -0.01 | 0.16 | -0.09 | 0.931 | 1.000 |
| ENST00000484575 | IDH1 | 20.00 | -7.46 | 2.64 | -2.82 | 4.73E-03 | 8.07E-02 | 344.16 | -1.01 | 0.65 | -1.55 | 0.121 | 0.776 |
| ENST00000558535 | IDH3A | 12.77 | -6.81 | 2.04 | -3.34 | 8.42E-04 | 2.06E-02 | 2827.71 | 0.00 | 0.13 | 0.01 | 0.995 | 1.000 |
| ENST00000479376 | IDH3B | 9.36 | -2.38 | 0.68 | -3.49 | 4.85E-04 | 1.31E-02 | 144.84 | 0.42 | 0.37 | 1.13 | 0.259 | 0.950 |
| ENST00000370092 | IDH3G | 10.95 | -4.87 | 1.25 | -3.90 | 9.49E-05 | 3.16E-03 | 272.07 | -0.47 | 0.30 | -1.56 | 0.118 | 0.769 |
| ENST00000295809 | IFI16 | 29.29 | -7.42 | 2.42 | -3.07 | 2.12E-03 | 4.36E-02 | 3659.38 | 0.04 | 0.18 | 0.25 | 0.803 | 1.000 |
| ENST00000448393 | IFI16 | 67.93 | -9.22 | 2.81 | -3.28 | 1.04E-03 | 2.47E-02 | 9097.69 | -0.11 | 0.13 | -0.81 | 0.417 | 1.000 |
| ENST00000562225 | IFI16 | 26.63 | -7.87 | 1.99 | -3.95 | 7.74E-05 | 2.64E-03 | 59.90 | -0.17 | 0.40 | -0.42 | 0.673 | 1.000 |
| ENST00000438486 | IFI44 | 6.51 | -20.73 | 3.03 | -6.84 | 7.93E-12 | 4.80E-10 | 27.64 | -0.10 | 0.83 | -0.12 | 0.903 | 1.000 |
| ENST00000263642 | IFIH1 | 4.52 | -3.05 | 1.09 | -2.79 | 5.29E-03 | 8.80E-02 | 2237.80 | 0.17 | 0.13 | 1.33 | 0.182 | 0.875 |
| ENST00000408968 | IFITM1 | 27.81 | -1.71 | 0.52 | -3.28 | 1.03E-03 | 2.44E-02 | 380.29 | -3.08 | 1.05 | -2.94 | 0.003 | 0.094 |
| ENST00000399815 | IFITM2 | 12.49 | -1.86 | 0.70 | -2.66 | 7.84E-03 | 1.17E-01 | 115.80 | -0.39 | 0.48 | -0.81 | 0.418 | 1.000 |
| ENST00000346192 | IGF2BP2 | 10.85 | -2.63 | 0.81 | -3.25 | 1.14E-03 | 2.64E-02 | 1014.96 | 0.01 | 0.29 | 0.04 | 0.969 | 1.000 |
| ENST00000496495 | IGF2BP2 | 6.12 | -3.19 | 0.97 | -3.29 | 9.96E-04 | 2.37E-02 | 167.63 | 0.14 | 0.25 | 0.57 | 0.566 | 1.000 |
| ENST00000417621 | IGFBP3 | 5.73 | -5.66 | 1.73 | -3.26 | 1.11E-03 | 2.59E-02 | 127.34 | -1.17 | 0.62 | -1.90 | 0.058 | 0.565 |
| ENST00000374647 | IKBKAP | 128.60 | -0.67 | 0.24 | -2.80 | 5.11E-03 | 8.59E-02 | 9161.92 | 0.09 | 0.13 | 0.66 | 0.508 | 1.000 |
| ENST00000422485 | IL1RAP | 9.37 | -21.23 | 3.03 | -7.01 | 2.41E-12 | 1.90E-10 | 211.90 | -0.10 | 1.57 | -0.06 | 0.950 | 1.000 |
| ENST00000250241 | ILF3 | 17.28 | -7.24 | 1.48 | -4.88 | 1.06E-06 | 4.74E-05 | 9573.43 | -0.35 | 0.17 | -2.08 | 0.038 | 0.454 |
| ENST00000520065 | IMPA1 | 5.38 | -5.56 | 1.70 | -3.26 | 1.10E-03 | 2.56E-02 | 72.98 | 0.04 | 0.42 | 0.09 | 0.930 | 1.000 |
| ENST00000326739 | IMPDH2 | 403.03 | -1.48 | 0.44 | -3.34 | 8.34E-04 | 2.05E-02 | 12761.91 | -0.16 | 0.15 | -1.05 | 0.292 | 0.967 |
| ENST00000442157 | IMPDH2 | 18.18 | -22.15 | 3.03 | -7.32 | 2.57E-13 | 3.56E-11 | 79.02 | 0.74 | 0.35 | 2.13 | 0.034 | 0.426 |
| ENST00000462980 | IMPDH2 | 2.93 | -4.68 | 1.09 | -4.30 | 1.68E-05 | 6.61E-04 | 947.27 | -0.35 | 0.23 | -1.49 | 0.136 | 0.803 |
| ENST00000339121 | ING3 | 13.43 | -3.69 | 1.13 | -3.27 | 1.09E-03 | 2.56E-02 | 302.60 | -0.21 | 0.28 | -0.73 | 0.462 | 1.000 |
| ENST00000283410 | INO80C | 5.78 | -20.60 | 3.03 | -6.80 | 1.06E-11 | 6.11E-10 | 42.49 | -5.74 | 3.50 | -1.64 | 0.101 | 0.725 |
| ENST00000368670 | INTS3 | 6.79 | -20.82 | 3.03 | -6.87 | 6.37E-12 | 3.96E-10 | 196.19 | -0.30 | 1.36 | -0.22 | 0.825 | 1.000 |
| ENST00000366994 | INTS7 | 21.62 | -21.58 | 3.03 | -7.13 | 1.02E-12 | 9.73E-11 | 1227.55 | 0.75 | 0.41 | 1.84 | 0.066 | 0.600 |
| ENST00000403772 | IPO5 | 14.45 | -21.84 | 3.03 | -7.21 | 5.53E-13 | 6.41E-11 | 30.49 | 0.23 | 0.79 | 0.30 | 0.766 | 1.000 |
| ENST00000490680 | IPO5 | 193.63 | -25.36 | 3.03 | -8.38 | 5.32E-17 | 5.07E-14 | 1355.88 | 0.05 | 0.61 | 0.08 | 0.937 | 1.000 |
| ENST00000491555 | IPO5 | 89.48 | -9.62 | 2.89 | -3.33 | 8.65E-04 | 2.11E-02 | 7275.36 | -0.13 | 0.16 | -0.78 | 0.433 | 1.000 |
| ENST00000542464 | IPO8 | 8.02 | -21.04 | 3.03 | -6.95 | 3.74E-12 | 2.61E-10 | 14.08 | -0.54 | 0.83 | -0.64 | 0.519 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000544829 | IPO8 | 23.00 | -22.44 | 3.03 | -7.41 | 1.23E-13 | 1.97E-11 | 104.48 | -0.21 | 0.66 | -0.32 | 0.752 | 1.000 |
| ENST00000310864 | IQCB1 | 7.18 | -3.13 | 0.82 | -3.84 | 1.24E-04 | 3.98E-03 | 2162.56 | -0.06 | 0.21 | -0.28 | 0.777 | 1.000 |
| ENST00000561461 | IQGAP1 | 21.51 | -1.33 | 0.50 | -2.67 | 7.49E-03 | 1.13E-01 | 152.46 | -0.36 | 0.40 | -0.91 | 0.363 | 0.999 |
| ENST00000369940 | IRAK1BP1 | 2.80 | -3.30 | 1.21 | -2.72 | 6.52E-03 | 1.02E-01 | 623.17 | -0.05 | 0.22 | -0.22 | 0.825 | 1.000 |
| ENST00000258886 | IREB2 | 98.59 | -1.40 | 0.42 | -3.32 | 9.05E-04 | 2.19E-02 | 12745.02 | 0.03 | 0.13 | 0.20 | 0.842 | 1.000 |
| ENST00000538850 | IST1 | 54.79 | -8.91 | 1.92 | -4.65 | 3.29E-06 | 1.41E-04 | 32.86 | -8.56 | 4.76 | -1.80 | 0.072 | 0.626 |
| ENST00000544001 | ITFG1 | 14.46 | -21.84 | 3.03 | -7.21 | 5.52E-13 | 6.41E-11 | 1003.44 | -0.12 | 0.39 | -0.31 | 0.754 | 1.000 |
| ENST00000228799 | ITFG2 | 3.80 | -2.42 | 0.91 | -2.67 | 7.62E-03 | 1.14E-01 | 967.19 | 0.01 | 0.22 | 0.05 | 0.956 | 1.000 |
| ENST00000296585 | ITGA2 | 85.22 | -0.91 | 0.34 | -2.65 | 8.02E-03 | 1.18E-01 | 9613.48 | -0.24 | 0.53 | -0.45 | 0.652 | 1.000 |
| ENST00000264107 | ITGA6 | 29.90 | -22.81 | 3.03 | -7.53 | 4.89E-14 | 1.06E-11 | 2093.76 | -0.84 | 1.36 | -0.61 | 0.540 | 1.000 |
| ENST00000409080 | ITGA6 | 8.57 | -21.12 | 3.03 | -6.97 | 3.16E-12 | 2.31E-10 | 3098.59 | -1.70 | 0.31 | -5.51 | 0.000 | 0.000 |
| ENST00000430709 | ITGAV | 19.00 | -7.38 | 1.19 | -6.21 | 5.41E-10 | 2.86E-08 | 167.14 | 0.05 | 0.27 | 0.18 | 0.855 | 1.000 |
| ENST00000474571 | ITGAV | 13.26 | -6.87 | 1.20 | -5.73 | 1.01E-08 | 5.16E-07 | 14.51 | 0.14 | 0.75 | 0.19 | 0.848 | 1.000 |
| ENST00000496477 | ITGAV | 12.22 | -6.75 | 1.26 | -5.37 | 7.74E-08 | 3.79E-06 | 36.77 | 0.00 | 0.63 | 0.01 | 0.995 | 1.000 |
| ENST00000360635 | ITGB1BP1 | 5.46 | -4.38 | 1.28 | -3.42 | 6.17E-04 | 1.60E-02 | 830.63 | -0.46 | 0.31 | -1.50 | 0.133 | 0.799 |
| ENST00000460394 | ITGB3BP | 17.16 | -2.63 | 1.01 | -2.61 | 9.08E-03 | 1.29E-01 | 166.62 | -0.04 | 0.28 | -0.16 | 0.875 | 1.000 |
| ENST00000218436 | ITIH6 | 46.04 | -2.02 | 0.46 | -4.41 | 1.01E-05 | 4.10E-04 | 20057.93 | -0.27 | 0.12 | -2.31 | 0.021 | 0.328 |
| ENST00000492029 | ITM2C | 8.94 | -21.19 | 3.03 | -6.99 | 2.66E-12 | 2.05E-10 | 70.96 | 0.48 | 0.38 | 1.28 | 0.199 | 0.894 |
| ENST00000553695 | ITPK1 | 8.12 | -21.05 | 3.03 | -6.95 | 3.67E-12 | 2.58E-10 | 14.33 | 0.20 | 0.79 | 0.25 | 0.800 | 1.000 |
| ENST00000429204 | ITPKB | 59.44 | -1.02 | 0.31 | -3.26 | 1.13E-03 | 2.63E-02 | 309.25 | 0.08 | 1.40 | 0.06 | 0.954 | 1.000 |
| ENST00000406921 | ITSN2 | 9.87 | -21.32 | 3.03 | -7.04 | 1.92E-12 | 1.60E-10 | 50.48 | 2.29 | 1.53 | 1.50 | 0.134 | 0.801 |
| ENST00000487418 | IVD | 5.27 | -20.45 | 3.03 | -6.75 | 1.50E-11 | 8.36E-10 | 1112.68 | -0.82 | 0.40 | -2.07 | 0.038 | 0.456 |
| ENST00000494880 | IVNS1ABP | 26.50 | -7.86 | 2.74 | -2.87 | 4.06E-03 | 7.21E-02 | 949.44 | -0.15 | 0.25 | -0.58 | 0.564 | 1.000 |
| ENST00000387429 | J01415.15 | 17.84 | -2.81 | 0.62 | -4.52 | 6.29E-06 | 2.61E-04 | 9378.99 | 0.47 | 0.15 | 3.23 | 0.001 | 0.044 |
| ENST00000387449 | J01415.18 | 387.92 | -0.94 | 0.24 | -3.87 | 1.07E-04 | 3.50E-03 | 16085.72 | 0.30 | 0.15 | 2.03 | 0.042 | 0.480 |
| ENST00000387456 | J01415.19 | 37.98 | -2.60 | 0.51 | -5.12 | 3.10E-07 | 1.45E-05 | 20242.63 | 0.31 | 0.17 | 1.86 | 0.063 | 0.586 |
| ENST00000387460 | J01415.21 | 21.95 | -1.68 | 0.38 | -4.47 | 7.80E-06 | 3.19E-04 | 4408.77 | 0.30 | 0.17 | 1.76 | 0.079 | 0.654 |
| ENST00000361851 | J01415.24 | 61.85 | -1.52 | 0.43 | -3.55 | 3.79E-04 | 1.06E-02 | 123212.11 | 0.14 | 0.12 | 1.15 | 0.251 | 0.942 |
| ENST00000387342 | J01415.3 | 103.78 | -3.17 | 0.50 | -6.39 | 1.62E-10 | 8.71E-09 | 2660.54 | 0.20 | 0.18 | 1.11 | 0.265 | 0.953 |
| ENST00000441717 | JAM3 | 16.82 | -22.04 | 3.03 | -7.28 | 3.32E-13 | 4.35E-11 | 194.45 | -0.24 | 0.48 | -0.49 | 0.627 | 1.000 |
| ENST00000565258 | JMJD8 | 3.30 | -4.85 | 1.80 | -2.70 | 7.03E-03 | 1.08E-01 | 32.02 | 0.14 | 0.66 | 0.21 | 0.835 | 1.000 |
| ENST00000482442 | JOSD1 | 5.57 | -5.60 | 1.11 | -5.06 | 4.15E-07 | 1.92E-05 | 65.28 | 0.16 | 0.62 | 0.26 | 0.797 | 1.000 |
| ENST00000570215 | KARS | 6.01 | -3.95 | 1.49 | -2.65 | 7.95E-03 | 1.18E-01 | 104.62 | -0.50 | 0.42 | -1.18 | 0.236 | 0.930 |
| ENST00000377046 | KAT5 | 7.30 | -20.91 | 3.03 | -6.90 | 5.12E-12 | 3.32E-10 | 129.18 | -0.19 | 0.51 | -0.37 | 0.713 | 1.000 |
| ENST00000510829 | KCTD7 | 3.02 | -4.72 | 1.63 | -2.90 | 3.77E-03 | 6.85E-02 | 286.26 | -0.05 | 0.53 | -0.10 | 0.919 | 1.000 |
| ENST00000400181 | KDM1A | 100.12 | -0.95 | 0.31 | -3.03 | 2.44E-03 | 4.90E-02 | 230.30 | 1.61 | 1.01 | 1.60 | 0.109 | 0.749 |
| ENST00000406396 | KDSR | 28.12 | -1.40 | 0.43 | -3.29 | 9.92E-04 | 2.36E-02 | 9418.94 | 0.06 | 0.13 | 0.49 | 0.625 | 1.000 |
| ENST00000518728 | KHDRBS3 | 9.73 | -21.30 | 3.03 | -7.03 | 2.02E-12 | 1.65E-10 | 1.54 | 0.33 | 4.29 | 0.08 | 0.939 | NA |
| ENST00000397885 | KIAA0020 | 212.25 | -0.68 | 0.17 | -4.03 | 5.52E-05 | 1.95E-03 | 8569.42 | 0.03 | 0.16 | 0.16 | 0.873 | 1.000 |
| ENST00000558043 | KIAA0101 | 14.64 | -1.83 | 0.69 | -2.65 | 7.99E-03 | 1.18E-01 | 242.25 | 0.72 | 0.45 | 1.60 | 0.110 | 0.750 |
| ENST00000194118 | KIAA0141 | 4.65 | -5.35 | 1.06 | -5.03 | 4.81E-07 | 2.21E-05 | 912.49 | -0.22 | 0.35 | -0.64 | 0.524 | 1.000 |
| ENST00000259335 | KIAA0368 | 263.08 | -0.56 | 0.19 | -2.97 | 2.94E-03 | 5.66E-02 | 877.94 | -1.29 | 1.30 | -1.00 | 0.318 | 0.982 |
| ENST00000465499 | KIAA0368 | 17.80 | -22.12 | 3.03 | -7.31 | 2.75E-13 | 3.74E-11 | 623.01 | -0.25 | 0.68 | -0.37 | 0.709 | 1.000 |
| ENST00000557565 | KIAA0391 | 132.15 | -1.32 | 0.41 | -3.22 | 1.30E-03 | 2.94E-02 | 1525.69 | -0.27 | 0.28 | -0.98 | 0.329 | 0.985 |
| ENST00000546967 | KIAA0430 | 3.95 | -3.89 | 1.05 | -3.72 | 1.98E-04 | 6.06E-03 | 8.77 | -1.48 | 0.99 | -1.50 | 0.135 | 0.801 |
| ENST00000548534 | KIAA1033 | 3.94 | -3.25 | 1.12 | -2.91 | 3.58E-03 | 6.60E-02 | 190.69 | 0.24 | 0.27 | 0.89 | 0.372 | 1.000 |
| ENST00000295746 | KIAA1524 | 227.97 | -0.74 | 0.20 | -3.67 | 2.42E-04 | 7.18E-03 | 2077.81 | -0.07 | 0.27 | -0.27 | 0.787 | 1.000 |
| ENST00000378814 | KIF13A | 48.09 | -6.05 | 0.79 | -7.68 | 1.63E-14 | 4.76E-12 | 5206.55 | 0.09 | 0.23 | 0.39 | 0.698 | 1.000 |
| ENST00000407071 | KIF26B | 4.91 | -5.43 | 1.75 | -3.10 | 1.94E-03 | 4.05E-02 | 1066.88 | -0.37 | 0.18 | -2.04 | 0.042 | 0.479 |
| ENST00000401507 | KIF2A | 35.07 | -23.04 | 3.03 | -7.61 | 2.73E-14 | 6.95E-12 | 2508.44 | -0.74 | 1.29 | -0.58 | 0.565 | 1.000 |
| ENST00000455186 | KIF2C | 28.32 | -7.96 | 2.72 | -2.93 | 3.41E-03 | 6.35E-02 | 70.94 | -0.16 | 2.45 | -0.06 | 0.949 | 1.000 |
| ENST00000302418 | KIF5B | 594.86 | -0.73 | 0.16 | -4.62 | 3.87E-06 | 1.64E-04 | 26634.74 | -0.01 | 0.14 | -0.09 | 0.931 | 1.000 |
| ENST00000543003 | KIN | 16.32 | -2.91 | 1.06 | -2.75 | 5.91E-03 | 9.54E-02 | 353.18 | -0.03 | 0.32 | -0.09 | 0.925 | 1.000 |
| ENST00000392647 | KLHL23 | 29.20 | -1.08 | 0.30 | -3.54 | 3.97E-04 | 1.10E-02 | 2553.60 | 0.76 | 0.80 | 0.95 | 0.343 | 0.991 |
| ENST00000545252 | KLHL8 | 8.02 | -21.04 | 3.03 | -6.95 | 3.74E-12 | 2.61E-10 | 7.45 | -6.41 | 2.19 | -2.93 | 0.003 | 0.096 |
| ENST00000333479 | KNTC1 | 54.93 | -1.33 | 0.46 | -2.90 | 3.77E-03 | 6.85E-02 | 12161.65 | -0.35 | 0.12 | -3.00 | 0.003 | 0.081 |
| ENST00000330459 | KPNA2 | 202.90 | -25.20 | 3.03 | -8.33 | 8.25E-17 | 7.52E-14 | 26104.19 | -0.07 | 0.11 | -0.62 | 0.537 | 1.000 |
| ENST00000446515 | KPNA6 | 12.32 | -21.62 | 3.03 | -7.14 | 9.31E-13 | 9.16E-11 | 23.86 | -0.10 | 1.15 | -0.09 | 0.932 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000537679 | KPNB1 | 482.23 | -26.61 | 3.03 | -8.79 | 1.44E-18 | 2.51E-15 | 58.53 | -9.39 | 4.61 | -2.04 | 0.042 | 0.479 |
| ENST00000551070 | KRR1 | 14.48 | -6.99 | 1.80 | -3.89 | 1.02E-04 | 3.34E-03 | 118.04 | -0.90 | 0.85 | -1.06 | 0.288 | 0.965 |
| ENST00000276590 | LACTB2 | 33.44 | -1.52 | 0.55 | -2.77 | 5.55E-03 | 9.10E-02 | 672.82 | 0.04 | 0.24 | 0.15 | 0.882 | 1.000 |
| ENST00000389463 | LAMA4 | 48.13 | -22.56 | 3.03 | -7.45 | 9.17E-14 | 1.64E-11 | 17732.81 | 0.12 | 0.12 | 1.05 | 0.294 | 0.969 |
| ENST00000521693 | LAMA4 | 17.31 | -22.08 | 3.03 | -7.29 | 3.05E-13 | 4.09E-11 | 135.99 | 0.26 | 0.33 | 0.79 | 0.430 | 1.000 |
| ENST00000521732 | LAMA4 | 4.19 | -3.44 | 1.04 | -3.32 | 8.90E-04 | 2.16E-02 | 26.25 | 0.40 | 0.95 | 0.42 | 0.674 | 1.000 |
| ENST00000515100 | LAMTOR3 | 7.44 | -5.43 | 1.52 | -3.58 | 3.38E-04 | 9.57E-03 | 194.19 | -0.07 | 0.31 | -0.24 | 0.812 | 1.000 |
| ENST00000412863 | LANCL1 | 13.71 | -6.91 | 2.68 | -2.58 | 9.99E-03 | 1.37E-01 | 31.75 | -0.86 | 0.81 | -1.06 | 0.288 | 0.965 |
| ENST00000326639 | LARP1B | 8.18 | -2.65 | 0.68 | -3.87 | 1.07E-04 | 3.50E-03 | 166.13 | -0.64 | 0.87 | -0.74 | 0.461 | 1.000 |
| ENST00000539715 | LARS | 93.82 | -9.69 | 2.87 | -3.37 | 7.38E-04 | 1.85E-02 | 1099.41 | 1.09 | 1.39 | 0.79 | 0.431 | 1.000 |
| ENST00000379509 | LCLAT1 | 13.86 | -21.77 | 3.03 | -7.19 | 6.58E-13 | 7.15E-11 | 1599.96 | -0.16 | 0.47 | -0.33 | 0.739 | 1.000 |
| ENST00000396222 | LDHA | 83.57 | -9.52 | 1.16 | -8.24 | 1.78E-16 | 1.46E-13 | 3605.04 | -1.31 | 0.23 | -5.74 | 0.000 | 0.000 |
| ENST00000537296 | LDHA | 55.79 | -1.30 | 0.49 | -2.63 | 8.55E-03 | 1.23E-01 | 675.57 | -1.51 | 0.37 | -4.10 | 0.000 | 0.002 |
| ENST00000350669 | LDHB | 152.23 | -10.38 | 2.02 | -5.15 | 2.58E-07 | 1.21E-05 | 16201.49 | 1.23 | 1.11 | 1.11 | 0.269 | 0.955 |
| ENST00000470280 | LDHB | 2.64 | -4.53 | 1.70 | -2.67 | 7.49E-03 | 1.13E-01 | 77.08 | -0.20 | 0.33 | -0.60 | 0.545 | 1.000 |
| ENST00000505328 | LEF1 | 2.07 | -4.19 | 1.32 | -3.17 | 1.50E-03 | 3.30E-02 | 10.58 | -0.35 | 0.85 | -0.42 | 0.677 | 1.000 |
| ENST00000308330 | LEMD3 | 61.11 | -0.72 | 0.24 | -3.06 | 2.18E-03 | 4.46E-02 | 5515.52 | -0.01 | 0.12 | -0.08 | 0.935 | 1.000 |
| ENST00000296388 | LEPRE1 | 11.41 | -21.52 | 3.03 | -7.10 | 1.21E-12 | 1.13E-10 | 4044.24 | 0.48 | 0.29 | 1.64 | 0.102 | 0.727 |
| ENST00000557725 | LGMN | 4.27 | -5.23 | 1.75 | -2.98 | 2.84E-03 | 5.49E-02 | 31.57 | -0.22 | 0.53 | -0.41 | 0.681 | 1.000 |
| ENST00000340417 | LIN54 | 23.32 | -1.78 | 0.53 | -3.36 | 7.89E-04 | 1.96E-02 | 132.14 | 0.57 | 0.61 | 0.95 | 0.342 | 0.990 |
| ENST00000336233 | LIPA | 135.43 | -2.39 | 0.87 | -2.75 | 5.88E-03 | 9.53E-02 | 2959.75 | 0.32 | 0.49 | 0.65 | 0.519 | 1.000 |
| ENST00000261366 | LMNB1 | 44.96 | -23.38 | 3.03 | -7.72 | 1.13E-14 | 3.56E-12 | 602.51 | -2.99 | 0.95 | -3.14 | 0.002 | 0.056 |
| ENST00000409549 | LOXL3 | 202.60 | -4.01 | 0.99 | -4.03 | 5.64E-05 | 1.98E-03 | 11946.10 | 0.35 | 0.24 | 1.47 | 0.143 | 0.815 |
| ENST00000470907 | LOXL3 | 57.73 | -7.12 | 2.53 | -2.82 | 4.82E-03 | 8.20E-02 | 1784.27 | 0.74 | 0.28 | 2.68 | 0.007 | 0.168 |
| ENST00000283415 | LPCAT1 | 17.23 | -7.24 | 2.62 | -2.76 | 5.73E-03 | 9.31E-02 | 9670.06 | -0.89 | 0.84 | -1.07 | 0.286 | 0.963 |
| ENST00000261596 | LPIN2 | 13.01 | -1.61 | 0.51 | -3.19 | 1.44E-03 | 3.20E-02 | 4509.46 | -0.10 | 0.12 | -0.87 | 0.384 | 1.000 |
| ENST00000311322 | LPL | 85.22 | -0.74 | 0.26 | -2.82 | 4.83E-03 | 8.21E-02 | 3043.47 | -0.64 | 0.40 | -1.59 | 0.112 | 0.756 |
| ENST00000389798 | LRCH1 | 19.01 | -2.21 | 0.45 | -4.88 | 1.07E-06 | 4.80E-05 | 291.34 | 0.16 | 2.56 | 0.06 | 0.952 | 1.000 |
| ENST00000460646 | LRRFIP2 | 3.29 | -4.87 | 1.44 | -3.38 | 7.29E-04 | 1.84E-02 | 1107.20 | -0.11 | 0.19 | -0.60 | 0.549 | 1.000 |
| ENST00000433627 | LSM14A | 82.02 | -0.92 | 0.30 | -3.08 | 2.08E-03 | 4.29E-02 | 276.18 | 3.43 | 1.43 | 2.40 | 0.016 | 0.279 |
| ENST00000470086 | LSM2 | 2.29 | -3.68 | 1.27 | -2.89 | 3.89E-03 | 7.01E-02 | 172.78 | 0.32 | 0.56 | 0.57 | 0.568 | 1.000 |
| ENST00000409987 | LSM5 | 5.31 | -5.54 | 1.85 | -2.99 | 2.78E-03 | 5.40E-02 | 21.71 | -0.91 | 0.72 | -1.27 | 0.203 | 0.898 |
| ENST00000468732 | LUC7L | 3.33 | -4.87 | 1.76 | -2.77 | 5.62E-03 | 9.17E-02 | 91.76 | 0.02 | 0.48 | 0.04 | 0.965 | 1.000 |
| ENST00000498518 | LUC7L2 | 28.51 | -22.73 | 3.03 | -7.51 | 5.90E-14 | 1.21E-11 | 351.62 | -0.23 | 0.49 | -0.48 | 0.631 | 1.000 |
| ENST00000522528 | LY6E | 24.28 | -7.15 | 1.72 | -4.16 | 3.24E-05 | 1.21E-03 | 16.61 | -0.17 | 0.65 | -0.27 | 0.790 | 1.000 |
| ENST00000343470 | LYAR | 70.70 | -1.43 | 0.43 | -3.32 | 8.89E-04 | 2.16E-02 | 2964.76 | -0.17 | 0.17 | -1.02 | 0.306 | 0.978 |
| ENST00000374502 | LYPLA2 | 15.05 | -4.53 | 1.43 | -3.16 | 1.56E-03 | 3.39E-02 | 1810.99 | 0.24 | 0.22 | 1.06 | 0.289 | 0.966 |
| ENST00000463964 | LYPLAL1 | 6.16 | -20.68 | 3.03 | -6.83 | 8.79E-12 | 5.21E-10 | 49.56 | 0.33 | 0.48 | 0.70 | 0.485 | 1.000 |
| ENST00000400903 | LZIC | 23.62 | -7.70 | 2.11 | -3.64 | 2.72E-04 | 8.00E-03 | 30.08 | 0.11 | 0.58 | 0.20 | 0.845 | 1.000 |
| ENST00000488540 | LZIC | 16.57 | -7.18 | 2.76 | -2.60 | 9.28E-03 | 1.31E-01 | 52.10 | 0.00 | 0.72 | 0.00 | 0.997 | 1.000 |
| ENST00000440576 | LZTFL1 | 16.14 | -7.15 | 1.81 | -3.95 | 7.82E-05 | 2.66E-03 | 100.72 | 0.91 | 0.72 | 1.25 | 0.211 | 0.907 |
| ENST00000543834 | M6PR | 23.07 | -2.47 | 0.86 | -2.86 | 4.19E-03 | 7.41E-02 | 150.01 | 0.48 | 0.50 | 0.96 | 0.335 | 0.988 |
| ENST00000538595 | MACROD1 | 6.39 | -20.73 | 3.03 | -6.84 | 7.83E-12 | 4.75E-10 | 375.91 | 0.12 | 0.33 | 0.36 | 0.716 | 1.000 |
| ENST00000296509 | MAD2L1 | 335.44 | -1.08 | 0.27 | -4.04 | 5.44E-05 | 1.92E-03 | 4065.74 | -0.23 | 0.14 | -1.70 | 0.089 | 0.690 |
| ENST00000322428 | MAF1 | 15.12 | -7.05 | 2.67 | -2.64 | 8.22E-03 | 1.20E-01 | 3015.01 | -0.13 | 0.41 | -0.33 | 0.740 | 1.000 |
| ENST00000396224 | MAGED2 | 13.20 | -21.72 | 3.03 | -7.17 | 7.45E-13 | 7.81E-11 | 246.16 | -0.07 | 1.65 | -0.04 | 0.967 | 1.000 |
| ENST00000518389 | MAK16 | 19.63 | -22.25 | 3.03 | -7.35 | 1.98E-13 | 2.90E-11 | 74.05 | -0.48 | 0.50 | -0.96 | 0.336 | 0.989 |
| ENST00000261483 | MAN2A1 | 78.09 | -1.09 | 0.30 | -3.69 | 2.27E-04 | 6.80E-03 | 4221.88 | 0.10 | 0.13 | 0.82 | 0.412 | 1.000 |
| ENST00000397150 | MANBAL | 7.05 | -1.56 | 0.59 | -2.63 | 8.64E-03 | 1.24E-01 | 198.26 | 0.19 | 0.28 | 0.70 | 0.482 | 1.000 |
| ENST00000447185 | MAP2 | 37.34 | -23.12 | 3.03 | -7.64 | 2.22E-14 | 6.05E-12 | 2755.69 | -0.68 | 0.41 | -1.66 | 0.097 | 0.717 |
| ENST00000425818 | MAP2K1 | 7.76 | -21.00 | 3.03 | -6.93 | 4.18E-12 | 2.83E-10 | 59.28 | -1.09 | 1.11 | -0.98 | 0.326 | 0.985 |
| ENST00000415385 | MAP2K4 | 63.35 | -0.59 | 0.22 | -2.69 | 7.14E-03 | 1.09E-01 | 1.13 | -3.68 | 4.11 | -0.90 | 0.370 | NA |
| ENST00000392142 | MAP3K4 | 46.13 | -0.93 | 0.28 | -3.25 | 1.14E-03 | 2.65E-02 | 281.88 | 0.27 | 0.37 | 0.73 | 0.467 | 1.000 |
| ENST00000369327 | MAP3K7 | 16.33 | -7.16 | 2.66 | -2.69 | 7.08E-03 | 1.08E-01 | 2757.48 | 0.03 | 0.13 | 0.25 | 0.806 | 1.000 |
| ENST00000369332 | MAP3K7 | 46.06 | -3.39 | 1.07 | -3.17 | 1.53E-03 | 3.36E-02 | 578.50 | 2.13 | 0.92 | 2.30 | 0.021 | 0.330 |
| ENST00000479630 | MAP3K7 | 19.57 | -5.87 | 1.87 | -3.14 | 1.68E-03 | 3.63E-02 | 786.42 | 0.92 | 0.67 | 1.36 | 0.173 | 0.862 |
| ENST00000360240 | MAP4 | 25.94 | -22.28 | 3.03 | -7.36 | 1.84E-13 | 2.74E-11 | 1461.55 | 1.15 | 0.96 | 1.19 | 0.233 | 0.928 |
| ENST00000498066 | MAP4K4 | 37.12 | -1.22 | 0.38 | -3.24 | 1.18E-03 | 2.72E-02 | 582.65 | 0.18 | 0.35 | 0.52 | 0.604 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000496250 | MAPK14 | 23.34 | -7.68 | 2.66 | -2.88 | 3.92E-03 | 7.04E-02 | 74.67 | 0.41 | 1.19 | 0.34 | 0.732 | 1.000 |
| ENST00000420397 | MARCH7 | 10.54 | -6.53 | 1.75 | -3.74 | 1.83E-04 | 5.66E-03 | 26.08 | -2.61 | 1.96 | -1.33 | 0.184 | 0.877 |
| ENST00000262027 | MARS | 42.28 | -7.14 | 2.77 | -2.58 | 9.95E-03 | 1.37E-01 | 3406.45 | -0.05 | 0.59 | -0.09 | 0.929 | 1.000 |
| ENST00000547665 | MARS | 3.63 | -3.72 | 1.31 | -2.84 | 4.52E-03 | 7.80E-02 | 302.12 | -0.21 | 0.26 | -0.83 | 0.405 | 1.000 |
| ENST00000318473 | MBIP | 11.52 | -6.66 | 1.91 | -3.49 | 4.78E-04 | 1.29E-02 | 134.87 | 0.05 | 0.42 | 0.11 | 0.914 | 1.000 |
| ENST00000553298 | MBIP | 7.63 | -20.97 | 3.03 | -6.92 | 4.47E-12 | 2.98E-10 | 35.22 | -0.10 | 0.88 | -0.11 | 0.912 | 1.000 |
| ENST00000370839 | MBNL3 | 1.55 | -3.75 | 1.30 | -2.89 | 3.83E-03 | 6.94E-02 | 10.12 | -1.34 | 2.23 | -0.60 | 0.550 | 1.000 |
| ENST00000394311 | MBNL3 | 4.44 | -5.29 | 1.36 | -3.90 | 9.45E-05 | 3.15E-03 | 3220.39 | -4.67 | 1.88 | -2.49 | 0.013 | 0.240 |
| ENST00000340941 | MCCC2 | 54.22 | -1.87 | 0.65 | -2.88 | 4.03E-03 | 7.19E-02 | 5062.90 | -0.97 | 1.60 | -0.61 | 0.544 | 1.000 |
| ENST00000361282 | MCM10 | 123.88 | -10.09 | 1.01 | -9.95 | 2.59E-23 | 6.80E-20 | 1753.89 | -1.28 | 0.27 | -4.73 | 0.000 | 0.000 |
| ENST00000419835 | MCM3 | 90.86 | -2.50 | 0.86 | -2.92 | 3.50E-03 | 6.48E-02 | 5734.00 | 0.24 | 0.19 | 1.28 | 0.200 | 0.895 |
| ENST00000519138 | MCM4 | 216.27 | -10.89 | 1.06 | -10.26 | 1.03E-24 | 3.93E-21 | 110.63 | -0.41 | 0.35 | -1.17 | 0.240 | 0.934 |
| ENST00000519170 | MCM4 | 54.66 | -8.91 | 2.80 | -3.19 | 1.44E-03 | 3.20E-02 | 48.26 | -0.46 | 0.51 | -0.90 | 0.369 | 1.000 |
| ENST00000264156 | MCM6 | 1042.96 | -0.78 | 0.25 | -3.09 | 2.01E-03 | 4.20E-02 | 21407.56 | -0.14 | 0.13 | -1.10 | 0.271 | 0.957 |
| ENST00000343023 | MCM7 | 14.00 | -21.79 | 3.03 | -7.20 | 6.13E-13 | 6.95E-11 | 737.26 | -0.40 | 0.35 | -1.14 | 0.253 | 0.945 |
| ENST00000360003 | MCMBP | 283.42 | -0.68 | 0.21 | -3.21 | 1.31E-03 | 2.96E-02 | 9016.12 | -0.17 | 0.18 | -0.96 | 0.339 | 0.990 |
| ENST00000548334 | MCRS1 | 7.61 | -20.94 | 3.03 | -6.91 | 4.81E-12 | 3.14E-10 | 126.32 | 0.05 | 0.48 | 0.10 | 0.921 | 1.000 |
| ENST00000371315 | MCTS1 | 20.26 | -3.49 | 1.33 | -2.63 | 8.52E-03 | 1.23E-01 | 651.80 | 1.69 | 0.95 | 1.78 | 0.075 | 0.638 |
| ENST00000371317 | MCTS1 | 63.00 | -1.31 | 0.41 | -3.21 | 1.32E-03 | 2.98E-02 | 3525.42 | -0.11 | 0.39 | -0.28 | 0.783 | 1.000 |
| ENST00000490105 | MDH2 | 20.83 | -4.99 | 0.95 | -5.27 | 1.37E-07 | 6.62E-06 | 107.12 | 0.09 | 0.34 | 0.26 | 0.793 | 1.000 |
| ENST00000367182 | MDM4 | 13.74 | -1.28 | 0.39 | -3.32 | 9.13E-04 | 2.20E-02 | 15748.96 | -0.11 | 0.18 | -0.59 | 0.558 | 1.000 |
| ENST00000462012 | MDM4 | 2.19 | -4.25 | 1.13 | -3.77 | 1.65E-04 | 5.13E-03 | 262.96 | -0.06 | 0.22 | -0.26 | 0.795 | 1.000 |
| ENST00000369393 | MDN1 | 176.54 | -0.63 | 0.18 | -3.44 | 5.90E-04 | 1.54E-02 | 33026.81 | -0.05 | 0.12 | -0.38 | 0.706 | 1.000 |
| ENST00000373073 | MEAF6 | 5.61 | -20.56 | 3.03 | -6.78 | 1.18E-11 | 6.66E-10 | 23.38 | -0.77 | 0.66 | -1.16 | 0.245 | 0.937 |
| ENST00000464511 | MECR | 2.89 | -4.65 | 1.17 | -3.97 | 7.07E-05 | 2.44E-03 | 77.80 | -0.27 | 0.53 | -0.50 | 0.618 | 1.000 |
| ENST00000255764 | MED10 | 81.46 | -0.80 | 0.21 | -3.89 | 1.02E-04 | 3.34E-03 | 2026.09 | -0.08 | 0.16 | -0.54 | 0.589 | 1.000 |
| ENST00000479574 | MED18 | 8.18 | -21.07 | 3.03 | -6.96 | 3.51E-12 | 2.51E-10 | 82.80 | 0.75 | 0.35 | 2.14 | 0.032 | 0.417 |
| ENST00000534677 | MED19 | 3.26 | -4.84 | 1.43 | -3.37 | 7.49E-04 | 1.87E-02 | 33.63 | -0.55 | 0.49 | -1.12 | 0.261 | 0.951 |
| ENST00000378594 | MED4 | 13.57 | -6.90 | 2.10 | -3.29 | 1.02E-03 | 2.41E-02 | 2103.80 | -0.12 | 0.43 | -0.27 | 0.786 | 1.000 |
| ENST00000417167 | MED4 | 16.62 | -4.27 | 1.61 | -2.65 | 8.08E-03 | 1.19E-01 | 84.52 | -0.21 | 0.37 | -0.56 | 0.577 | 1.000 |
| ENST00000411432 | METTL21A | 2.42 | -3.09 | 1.19 | -2.60 | 9.36E-03 | 1.31E-01 | 94.25 | 0.58 | 0.38 | 1.54 | 0.124 | 0.782 |
| ENST00000392640 | METTL5 | 7.46 | -20.91 | 3.03 | -6.90 | 5.16E-12 | 3.34E-10 | 338.00 | 0.39 | 0.35 | 1.11 | 0.266 | 0.953 |
| ENST00000383789 | METTL6 | 7.05 | -20.84 | 3.03 | -6.88 | 6.11E-12 | 3.82E-10 | 469.08 | -0.48 | 0.53 | -0.92 | 0.358 | 0.998 |
| ENST00000490857 | MFF | 13.46 | -6.88 | 1.86 | -3.70 | 2.13E-04 | 6.42E-03 | 1142.44 | -0.32 | 0.15 | -2.12 | 0.034 | 0.429 |
| ENST00000566497 | MFGE8 | 17.88 | -22.11 | 3.03 | -7.30 | 2.81E-13 | 3.81E-11 | 6215.91 | 0.47 | 0.28 | 1.67 | 0.095 | 0.711 |
| ENST00000539261 | MGP | 36.33 | -1.63 | 0.40 | -4.06 | 4.87E-05 | 1.74E-03 | 2570.97 | -0.58 | 0.26 | -2.18 | 0.029 | 0.394 |
| ENST00000344507 | MIA3 | 11.62 | -6.67 | 2.02 | -3.30 | 9.62E-04 | 2.30E-02 | 1212.49 | 0.74 | 0.41 | 1.81 | 0.071 | 0.621 |
| ENST00000467029 | MINOS1 | 18.10 | -2.33 | 0.70 | -3.33 | 8.57E-04 | 2.09E-02 | 84.18 | 0.02 | 0.51 | 0.04 | 0.968 | 1.000 |
| ENST00000368653 | MKI67 | 33.86 | -22.39 | 3.03 | -7.40 | 1.40E-13 | 2.18E-11 | 439.54 | -0.59 | 0.67 | -0.89 | 0.375 | 1.000 |
| ENST00000537609 | MKI67 | 7.28 | -20.89 | 3.03 | -6.89 | 5.42E-12 | 3.49E-10 | 17019.98 | -0.06 | 0.30 | -0.20 | 0.845 | 1.000 |
| ENST00000447132 | MKI67IP | 14.05 | -21.80 | 3.03 | -7.20 | 6.06E-13 | 6.91E-11 | 921.31 | -0.55 | 0.19 | -2.89 | 0.004 | 0.106 |
| ENST00000399054 | MKKS | 122.84 | -0.64 | 0.20 | -3.17 | 1.53E-03 | 3.35E-02 | 8.40 | 0.17 | 0.95 | 0.17 | 0.862 | 1.000 |
| ENST00000341243 | MKL2 | 8.40 | -3.45 | 1.10 | -3.13 | 1.73E-03 | 3.71E-02 | 784.78 | -0.05 | 0.25 | -0.18 | 0.856 | 1.000 |
| ENST00000486716 | MKNK1 | 7.85 | -3.76 | 1.03 | -3.65 | 2.67E-04 | 7.86E-03 | 9.23 | -0.16 | 1.01 | -0.16 | 0.873 | 1.000 |
| ENST00000411987 | MKRN2 | 32.49 | -3.44 | 0.77 | -4.49 | 7.22E-06 | 2.97E-04 | 38.99 | 0.32 | 1.12 | 0.28 | 0.776 | 1.000 |
| ENST00000508095 | MLF1IP | 13.16 | -6.85 | 1.03 | -6.65 | 2.93E-11 | 1.60E-09 | 42.38 | 0.23 | 0.72 | 0.32 | 0.753 | 1.000 |
| ENST00000305963 | MMGT1 | 39.13 | -1.06 | 0.29 | -3.62 | 2.89E-04 | 8.41E-03 | 2848.30 | 0.12 | 0.32 | 0.37 | 0.710 | 1.000 |
| ENST00000520568 | MMP16 | 8.12 | -6.16 | 2.06 | -2.99 | 2.78E-03 | 5.40E-02 | 71.67 | -0.47 | 0.37 | -1.28 | 0.201 | 0.897 |
| ENST00000543485 | MMP2 | 88.53 | -7.26 | 2.00 | -3.64 | 2.76E-04 | 8.08E-03 | 84317.61 | 0.25 | 0.25 | 0.99 | 0.320 | 0.983 |
| ENST00000275053 | MMS22L | 54.51 | -0.92 | 0.32 | -2.91 | 3.57E-03 | 6.58E-02 | 1842.26 | -0.15 | 0.20 | -0.75 | 0.452 | 1.000 |
| ENST00000409916 | MOB4 | 6.28 | -20.71 | 3.03 | -6.83 | 8.22E-12 | 4.94E-10 | 29.14 | -0.26 | 0.56 | -0.46 | 0.645 | 1.000 |
| ENST00000380492 | MOSPD2 | 33.71 | -1.14 | 0.44 | -2.59 | 9.51E-03 | 1.32E-01 | 2646.27 | 0.17 | 0.14 | 1.17 | 0.243 | 0.936 |
| ENST00000319217 | MPDZ | 78.50 | -1.05 | 0.40 | -2.61 | 8.98E-03 | 1.28E-01 | 87.07 | 0.34 | 0.45 | 0.75 | 0.453 | 1.000 |
| ENST00000498451 | MPHOSPH10 | 32.08 | -8.14 | 1.92 | -4.23 | 2.30E-05 | 8.89E-04 | 1213.96 | 0.04 | 0.16 | 0.23 | 0.817 | 1.000 |
| ENST00000541076 | MPHOSPH9 | 37.70 | -1.00 | 0.33 | -2.98 | 2.89E-03 | 5.58E-02 | 3852.21 | 0.21 | 0.15 | 1.45 | 0.147 | 0.822 |
| ENST00000567570 | MPI | 9.56 | -5.22 | 1.93 | -2.70 | 6.95E-03 | 1.07E-01 | 38.25 | -0.05 | 0.55 | -0.10 | 0.921 | 1.000 |
| ENST00000491955 | MPP1 | 5.55 | -1.94 | 0.72 | -2.71 | 6.81E-03 | 1.05E-01 | 625.89 | -0.37 | 0.94 | -0.39 | 0.695 | 1.000 |
| ENST00000414263 | MPRIP | 5.22 | -20.44 | 3.03 | -6.74 | 1.53E-11 | 8.53E-10 | 1362.22 | -0.21 | 0.23 | -0.91 | 0.363 | 0.999 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000233545 | MPV17 | 19.59 | -2.55 | 0.50 | -5.14 | 2.75E-07 | 1.29E-05 | 110.67 | 0.65 | 0.75 | 0.86 | 0.389 | 1.000 |
| ENST00000380044 | MPV17 | 15.15 | -6.47 | 1.28 | -5.05 | 4.31E-07 | 1.99E-05 | 845.89 | 0.53 | 1.01 | 0.52 | 0.601 | 1.000 |
| ENST00000430991 | MPV17 | 4.78 | -3.55 | 1.31 | -2.70 | 6.84E-03 | 1.06E-01 | 23.28 | -0.95 | 0.60 | -1.57 | 0.117 | 0.766 |
| ENST00000491222 | MPZ | 6.88 | -20.79 | 3.03 | -6.86 | 6.81E-12 | 4.20E-10 | 749.48 | 0.18 | 0.53 | 0.34 | 0.730 | 1.000 |
| ENST00000315567 | MRPL1 | 48.58 | -0.79 | 0.26 | -3.07 | 2.11E-03 | 4.36E-02 | 1194.14 | 0.13 | 0.38 | 0.34 | 0.736 | 1.000 |
| ENST00000332396 | MRPL12 | 88.74 | -9.61 | 2.90 | -3.31 | 9.22E-04 | 2.22E-02 | 12172.18 | -0.18 | 0.16 | -1.13 | 0.258 | 0.949 |
| ENST00000545862 | MRPL12 | 16.59 | -7.19 | 2.73 | -2.63 | 8.42E-03 | 1.22E-01 | 989.21 | 0.97 | 1.29 | 0.75 | 0.451 | 1.000 |
| ENST00000522717 | MRPL13 | 16.93 | -7.22 | 2.67 | -2.70 | 6.91E-03 | 1.06E-01 | 2.32 | 1.76 | 2.09 | 0.84 | 0.400 | NA |
| ENST00000529958 | MRPL17 | 24.77 | -1.39 | 0.48 | -2.92 | 3.53E-03 | 6.53E-02 | 458.74 | 0.12 | 0.32 | 0.37 | 0.712 | 1.000 |
| ENST00000362034 | MRPL21 | 140.20 | -1.66 | 0.40 | -4.14 | 3.54E-05 | 1.31E-03 | 2478.23 | -0.10 | 0.36 | -0.29 | 0.775 | 1.000 |
| ENST00000361531 | MRPL24 | 149.42 | -0.94 | 0.29 | -3.22 | 1.28E-03 | 2.91E-02 | 3632.25 | 0.15 | 0.14 | 1.09 | 0.275 | 0.959 |
| ENST00000505059 | MRPL36 | 59.62 | -9.03 | 2.87 | -3.15 | 1.64E-03 | 3.55E-02 | 2746.95 | 0.36 | 0.30 | 1.19 | 0.236 | 0.929 |
| ENST00000352957 | MRPL39 | 9.76 | -21.31 | 3.03 | -7.03 | 2.00E-12 | 1.64E-10 | 1127.08 | -0.33 | 0.25 | -1.34 | 0.181 | 0.873 |
| ENST00000558660 | MRPL46.1 | 49.87 | -1.58 | 0.49 | -3.24 | 1.18E-03 | 2.72E-02 | 322.35 | 0.05 | 0.25 | 0.21 | 0.838 | 1.000 |
| ENST00000553965 | MRPL52 | 51.94 | -1.90 | 0.44 | -4.27 | 1.97E-05 | 7.70E-04 | 253.44 | 0.22 | 0.21 | 1.08 | 0.281 | 0.962 |
| ENST00000053468 | MRPS10 | 68.35 | -1.17 | 0.29 | -3.98 | 6.79E-05 | 2.35E-03 | 3877.58 | 0.04 | 0.18 | 0.24 | 0.807 | 1.000 |
| ENST00000259873 | MRPS18B | 21.61 | -7.57 | 2.66 | -2.84 | 4.49E-03 | 7.78E-02 | 4600.69 | 0.33 | 0.18 | 1.82 | 0.069 | 0.612 |
| ENST00000492644 | MRPS22 | 6.80 | -5.30 | 1.58 | -3.36 | 7.75E-04 | 1.93E-02 | 127.12 | 0.23 | 0.38 | 0.62 | 0.537 | 1.000 |
| ENST00000261413 | MRPS27 | 84.44 | -2.80 | 1.00 | -2.80 | 5.19E-03 | 8.70E-02 | 2501.20 | -0.09 | 0.24 | -0.36 | 0.720 | 1.000 |
| ENST00000323563 | MRPS31 | 24.17 | -1.31 | 0.49 | -2.66 | 7.87E-03 | 1.17E-01 | 1918.44 | -0.03 | 0.20 | -0.15 | 0.884 | 1.000 |
| ENST00000081029 | MRPS35 | 113.94 | -1.08 | 0.22 | -4.98 | 6.46E-07 | 2.95E-05 | 1920.09 | 0.11 | 0.15 | 0.78 | 0.437 | 1.000 |
| ENST00000538315 | MRPS35 | 7.00 | -20.83 | 3.03 | -6.87 | 6.22E-12 | 3.88E-10 | 91.15 | 1.11 | 1.27 | 0.87 | 0.382 | 1.000 |
| ENST00000489572 | MRRF | 5.41 | -20.49 | 3.03 | -6.76 | 1.38E-11 | 7.68E-10 | 1191.27 | 0.27 | 0.20 | 1.36 | 0.175 | 0.864 |
| ENST00000406134 | MSH2 | 320.18 | -0.58 | 0.14 | -4.05 | 5.07E-05 | 1.80E-03 | 150.35 | -0.98 | 0.67 | -1.47 | 0.142 | 0.815 |
| ENST00000437063 | MTAPP2 | 31.01 | -0.70 | 0.27 | -2.61 | 9.06E-03 | 1.29E-01 | 19.68 | 0.11 | 0.86 | 0.12 | 0.901 | 1.000 |
| ENST00000305949 | MTBP | 35.59 | -0.99 | 0.30 | -3.31 | 9.41E-04 | 2.26E-02 | 2226.13 | -0.13 | 0.18 | -0.73 | 0.465 | 1.000 |
| ENST00000523373 | MTBP | 4.14 | -5.19 | 1.79 | -2.89 | 3.81E-03 | 6.90E-02 | 3.58 | 2.56 | 2.08 | 1.23 | 0.219 | NA |
| ENST00000542981 | MTCH2 | 19.68 | -7.43 | 2.70 | -2.75 | 5.90E-03 | 9.54E-02 | 97.63 | -0.10 | 0.46 | -0.21 | 0.832 | 1.000 |
| ENST00000361739 | MT-CO2 | 1373.16 | -0.61 | 0.19 | -3.27 | 1.08E-03 | 2.53E-02 | 1082086.96 | 0.06 | 0.14 | 0.42 | 0.675 | 1.000 |
| ENST00000362079 | MT-CO3 | 1560.29 | -0.57 | 0.15 | -3.77 | 1.65E-04 | 5.13E-03 | 747419.66 | 0.14 | 0.11 | 1.25 | 0.213 | 0.909 |
| ENST00000555709 | MTHFD1 | 876.24 | -0.78 | 0.19 | -4.12 | 3.86E-05 | 1.41E-03 | 5191.69 | -0.53 | 0.40 | -1.33 | 0.183 | 0.877 |
| ENST00000462026 | MTHFD2 | 10.71 | -21.43 | 3.03 | -7.08 | 1.48E-12 | 1.32E-10 | 44.12 | -0.26 | 0.87 | -0.30 | 0.764 | 1.000 |
| ENST00000370396 | MTM1 | 28.07 | -1.73 | 0.37 | -4.63 | 3.59E-06 | 1.53E-04 | 684.78 | -0.12 | 0.27 | -0.43 | 0.667 | 1.000 |
| ENST00000457540 | MTND2P28 | 13.10 | -2.48 | 0.69 | -3.62 | 2.93E-04 | 8.51E-03 | 58137.85 | 0.20 | 0.12 | 1.69 | 0.091 | 0.697 |
| ENST00000358107 | MTPAP | 50.48 | -1.70 | 0.46 | -3.66 | 2.53E-04 | 7.49E-03 | 633.77 | -0.31 | 0.18 | -1.73 | 0.083 | 0.666 |
| ENST00000308110 | MUS81 | 19.35 | -2.32 | 0.88 | -2.63 | 8.59E-03 | 1.24E-01 | 2648.17 | 0.00 | 0.21 | -0.02 | 0.986 | 1.000 |
| ENST00000450313 | MUTYH | 3.83 | -3.34 | 1.20 | -2.79 | 5.25E-03 | 8.77E-02 | 9.35 | -0.64 | 1.02 | -0.63 | 0.530 | 1.000 |
| ENST00000237500 | MYL12B | 150.59 | -4.77 | 1.82 | -2.62 | 8.91E-03 | 1.27E-01 | 12859.91 | 0.10 | 0.15 | 0.67 | 0.500 | 1.000 |
| ENST00000293422 | MYL6 | 7.15 | -20.88 | 3.03 | -6.89 | 5.47E-12 | 3.50E-10 | 90.48 | 0.16 | 0.36 | 0.44 | 0.659 | 1.000 |
| ENST00000536128 | MYL6 | 26.61 | -1.79 | 0.69 | -2.58 | 9.83E-03 | 1.36E-01 | 35.85 | 0.39 | 0.55 | 0.71 | 0.479 | 1.000 |
| ENST00000552297 | MYL6 | 8.16 | -4.98 | 1.55 | -3.21 | 1.32E-03 | 2.97E-02 | 22.66 | -0.37 | 1.07 | -0.34 | 0.731 | 1.000 |
| ENST00000356716 | MYNN | 26.76 | -1.31 | 0.46 | -2.83 | 4.59E-03 | 7.90E-02 | 1412.28 | 0.10 | 0.14 | 0.75 | 0.456 | 1.000 |
| ENST00000428345 | MYO6 | 92.43 | -0.72 | 0.20 | -3.56 | 3.71E-04 | 1.04E-02 | 482.48 | 2.01 | 1.89 | 1.06 | 0.289 | 0.966 |
| ENST00000359263 | MYOF | 53.74 | -3.52 | 1.16 | -3.04 | 2.33E-03 | 4.71E-02 | 2531.46 | 0.97 | 0.62 | 1.56 | 0.119 | 0.773 |
| ENST00000472487 | MYSM1 | 16.63 | -1.55 | 0.46 | -3.39 | 7.10E-04 | 1.80E-02 | 702.67 | 0.19 | 0.26 | 0.74 | 0.461 | 1.000 |
| ENST00000493821 | MYSM1 | 28.27 | -0.99 | 0.34 | -2.94 | 3.24E-03 | 6.09E-02 | 15657.32 | 0.05 | 0.14 | 0.34 | 0.731 | 1.000 |
| ENST00000262384 | N4BP1 | 26.92 | -0.84 | 0.32 | -2.62 | 8.74E-03 | 1.25E-01 | 5071.19 | 0.00 | 0.13 | -0.02 | 0.981 | 1.000 |
| ENST00000511480 | N4BP2 | 27.63 | -1.19 | 0.31 | -3.81 | 1.37E-04 | 4.34E-03 | 1350.84 | -0.17 | 0.71 | -0.24 | 0.808 | 1.000 |
| ENST00000267068 | N4BP2L2 | 10.01 | -4.24 | 1.60 | -2.65 | 7.96E-03 | 1.18E-01 | 934.39 | -1.28 | 0.78 | -1.65 | 0.099 | 0.720 |
| ENST00000512755 | N4BP2L2 | 22.17 | -1.26 | 0.48 | -2.61 | 8.98E-03 | 1.28E-01 | 2027.68 | 0.08 | 0.30 | 0.28 | 0.782 | 1.000 |
| ENST00000480277 | NAA15 | 14.17 | -21.81 | 3.03 | -7.20 | 5.87E-13 | 6.73E-11 | 450.28 | 0.24 | 1.89 | 0.13 | 0.898 | 1.000 |
| ENST00000361671 | NAA35 | 40.08 | -2.00 | 0.65 | -3.08 | 2.05E-03 | 4.25E-02 | 3333.57 | 0.13 | 0.13 | 1.06 | 0.290 | 0.966 |
| ENST00000547914 | NACA | 405.36 | -0.84 | 0.19 | -4.54 | 5.54E-06 | 2.32E-04 | 2117.77 | -1.15 | 0.57 | -2.02 | 0.043 | 0.487 |
| ENST00000552055 | NACA | 227.19 | -1.34 | 0.48 | -2.77 | 5.65E-03 | 9.21E-02 | 1140.78 | -0.74 | 0.40 | -1.87 | 0.062 | 0.583 |
| ENST00000359087 | NAE1 | 19.62 | -7.43 | 2.88 | -2.58 | 9.85E-03 | 1.36E-01 | 27.27 | -0.53 | 1.25 | -0.43 | 0.671 | 1.000 |
| ENST00000463871 | NAMPT | 2.84 | -4.64 | 1.68 | -2.77 | 5.67E-03 | 9.24E-02 | 120.13 | -0.26 | 0.34 | -0.76 | 0.449 | 1.000 |
| ENST00000431879 | NAP1L1 | 12.91 | -5.63 | 1.66 | -3.40 | 6.75E-04 | 1.72E-02 | 6.80 | 0.53 | 1.33 | 0.40 | 0.689 | 1.000 |
| ENST00000552056 | NAP1L1 | 50.08 | -23.52 | 3.03 | -7.77 | 7.75E-15 | 2.60E-12 | 2153.79 | -0.49 | 0.36 | -1.36 | 0.175 | 0.864 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000529361 | NAP1L4 | 13.14 | -21.71 | 3.03 | -7.17 | 7.54E-13 | 7.87E-11 | 21.20 | 1.11 | 1.12 | 0.99 | 0.322 | 0.983 |
| ENST00000390006 | NARF | 13.32 | -6.87 | 1.80 | -3.81 | 1.40E-04 | 4.42E-03 | 3451.45 | 0.75 | 1.79 | 0.42 | 0.677 | 1.000 |
| ENST00000437901 | NASP | 16.37 | -22.01 | 3.03 | -7.27 | 3.61E-13 | 4.63E-11 | 593.99 | -0.05 | 0.58 | -0.08 | 0.934 | 1.000 |
| ENST00000481782 | NASP | 38.96 | -3.35 | 0.86 | -3.89 | 9.82E-05 | 3.26E-03 | 7236.36 | 0.08 | 0.26 | 0.30 | 0.768 | 1.000 |
| ENST00000530073 | NASP | 48.76 | -4.00 | 0.99 | -4.04 | 5.26E-05 | 1.87E-03 | 4296.89 | -0.09 | 0.18 | -0.49 | 0.627 | 1.000 |
| ENST00000396252 | NBN | 159.97 | -1.04 | 0.27 | -3.89 | 1.00E-04 | 3.31E-03 | 41.84 | 2.10 | 1.32 | 1.59 | 0.112 | 0.757 |
| ENST00000542492 | NCAPD2 | 29.16 | -8.00 | 2.76 | -2.90 | 3.78E-03 | 6.85E-02 | 778.60 | 0.95 | 0.64 | 1.49 | 0.137 | 0.805 |
| ENST00000525432 | NCAPD3 | 4.93 | -5.44 | 1.71 | -3.18 | 1.48E-03 | 3.26E-02 | 76.50 | 0.34 | 0.39 | 0.86 | 0.391 | 1.000 |
| ENST00000477409 | NCAPH | 44.08 | -23.35 | 3.03 | -7.71 | 1.22E-14 | 3.80E-12 | 232.50 | -0.22 | 0.54 | -0.41 | 0.681 | 1.000 |
| ENST00000417652 | NCL | 8.96 | -21.19 | 3.03 | -7.00 | 2.62E-12 | 2.03E-10 | 47.54 | 0.14 | 0.56 | 0.24 | 0.807 | 1.000 |
| ENST00000374087 | NCOA4 | 21.99 | -22.32 | 3.03 | -7.37 | 1.67E-13 | 2.53E-11 | 489.76 | 0.05 | 0.26 | 0.17 | 0.862 | 1.000 |
| ENST00000290231 | NCOA5 | 150.87 | -0.71 | 0.22 | -3.16 | 1.55E-03 | 3.39E-02 | 4798.38 | -0.12 | 0.12 | -0.97 | 0.334 | 0.987 |
| ENST00000555026 | NDRG2 | 2.64 | -4.54 | 1.74 | -2.61 | 8.93E-03 | 1.27E-01 | 2.97 | -0.22 | 2.43 | -0.09 | 0.929 | NA |
| ENST00000339600 | NDUFA4 | 245.00 | -8.62 | 1.27 | -6.81 | 9.73E-12 | 5.68E-10 | 19726.06 | 0.09 | 0.13 | 0.68 | 0.497 | 1.000 |
| ENST00000482299 | NDUFA4 | 71.01 | -6.57 | 1.18 | -5.55 | 2.81E-08 | 1.40E-06 | 2921.49 | -0.09 | 0.23 | -0.40 | 0.687 | 1.000 |
| ENST00000567761 | NDUFAB1 | 29.93 | -22.81 | 3.03 | -7.54 | 4.81E-14 | 1.05E-11 | 84.90 | -0.16 | 0.45 | -0.36 | 0.716 | 1.000 |
| ENST00000569148 | NDUFB10 | 5.73 | -20.59 | 3.03 | -6.79 | 1.10E-11 | 6.29E-10 | 157.77 | -0.54 | 0.73 | -0.73 | 0.464 | 1.000 |
| ENST00000259037 | NDUFB5 | 27.00 | -7.89 | 1.86 | -4.25 | 2.12E-05 | 8.23E-04 | 2055.79 | 0.11 | 0.14 | 0.77 | 0.444 | 1.000 |
| ENST00000522532 | NDUFB9 | 9.20 | -21.23 | 3.03 | -7.01 | 2.41E-12 | 1.90E-10 | 287.06 | -0.05 | 0.88 | -0.06 | 0.955 | 1.000 |
| ENST00000423725 | NDUFS1 | 72.54 | -2.71 | 0.91 | -2.99 | 2.83E-03 | 5.47E-02 | 219.45 | -0.09 | 0.81 | -0.11 | 0.910 | 1.000 |
| ENST00000372967 | NDUFS5 | 353.32 | -1.36 | 0.38 | -3.53 | 4.08E-04 | 1.12E-02 | 6732.09 | 0.07 | 0.14 | 0.50 | 0.616 | 1.000 |
| ENST00000529867 | NDUFV1 | 10.03 | -21.34 | 3.03 | -7.05 | 1.84E-12 | 1.54E-10 | 17.25 | 0.14 | 0.70 | 0.21 | 0.836 | 1.000 |
| ENST00000529927 | NDUFV1 | 10.76 | -21.42 | 3.03 | -7.07 | 1.53E-12 | 1.35E-10 | 104.19 | -0.02 | 0.47 | -0.05 | 0.960 | 1.000 |
| ENST00000266742 | NEDD1 | 31.47 | -3.10 | 0.59 | -5.22 | 1.83E-07 | 8.73E-06 | 305.22 | -0.66 | 0.54 | -1.23 | 0.219 | 0.915 |
| ENST00000530579 | NEDD8-MDP1 | 79.81 | -9.45 | 2.84 | -3.33 | 8.83E-04 | 2.15E-02 | 26.53 | 1.38 | 2.51 | 0.55 | 0.583 | 1.000 |
| ENST00000366998 | NEK2 | 36.37 | -23.09 | 3.03 | -7.63 | 2.37E-14 | 6.24E-12 | 2287.83 | 0.09 | 0.35 | 0.26 | 0.795 | 1.000 |
| ENST00000367385 | NEK7 | 25.68 | -1.83 | 0.36 | -5.05 | 4.43E-07 | 2.04E-05 | 5671.46 | 0.14 | 0.16 | 0.90 | 0.366 | 1.000 |
| ENST00000238616 | NEK9 | 25.47 | -0.99 | 0.37 | -2.65 | 7.99E-03 | 1.18E-01 | 1570.74 | -0.26 | 0.33 | -0.78 | 0.438 | 1.000 |
| ENST00000479589 | NENF | 40.82 | -8.49 | 1.94 | -4.38 | 1.21E-05 | 4.85E-04 | 694.63 | -0.27 | 0.25 | -1.09 | 0.275 | 0.959 |
| ENST00000361676 | NF2 | 8.94 | -21.19 | 3.03 | -6.99 | 2.66E-12 | 2.05E-10 | 40.50 | -0.38 | 2.34 | -0.16 | 0.872 | 1.000 |
| ENST00000396009 | NFATC2 | 16.20 | -3.75 | 1.09 | -3.44 | 5.76E-04 | 1.51E-02 | 41250.10 | -0.05 | 0.18 | -0.26 | 0.798 | 1.000 |
| ENST00000504044 | NFKB1 | 7.52 | -6.04 | 1.78 | -3.39 | 6.93E-04 | 1.76E-02 | 51.89 | -0.46 | 0.44 | -1.04 | 0.300 | 0.972 |
| ENST00000462320 | NFU1 | 39.10 | -8.43 | 0.98 | -8.60 | 7.87E-18 | 1.06E-14 | 200.82 | -0.08 | 1.04 | -0.08 | 0.940 | 1.000 |
| ENST00000555128 | NGDN | 11.55 | -6.67 | 2.36 | -2.82 | 4.74E-03 | 8.08E-02 | 47.90 | -1.14 | 1.17 | -0.97 | 0.332 | 0.987 |
| ENST00000556022 | NGDN | 16.65 | -7.20 | 1.06 | -6.82 | 9.39E-12 | 5.51E-10 | 699.60 | -0.17 | 0.22 | -0.75 | 0.453 | 1.000 |
| ENST00000280700 | NGLY1 | 6.92 | -4.09 | 1.04 | -3.93 | 8.50E-05 | 2.87E-03 | 52.50 | -0.55 | 0.93 | -0.59 | 0.554 | 1.000 |
| ENST00000402458 | NHP2L1 | 21.74 | -7.58 | 1.81 | -4.18 | 2.96E-05 | 1.11E-03 | 71.13 | 0.44 | 0.47 | 0.93 | 0.351 | 0.994 |
| ENST00000366595 | NID1 | 32.18 | -22.92 | 3.03 | -7.57 | 3.65E-14 | 8.62E-12 | 7431.56 | -0.11 | 0.43 | -0.25 | 0.805 | 1.000 |
| ENST00000409588 | NIF3L1 | 8.14 | -21.06 | 3.03 | -6.95 | 3.57E-12 | 2.54E-10 | 22.57 | 0.27 | 0.68 | 0.40 | 0.692 | 1.000 |
| ENST00000368009 | NIT1 | 11.05 | -21.47 | 3.03 | -7.09 | 1.35E-12 | 1.23E-10 | 673.97 | -0.01 | 0.24 | -0.06 | 0.954 | 1.000 |
| ENST00000472258 | NKTR | 2.61 | -4.52 | 1.08 | -4.19 | 2.81E-05 | 1.06E-03 | 20.71 | 0.89 | 0.81 | 1.11 | 0.268 | 0.955 |
| ENST00000514264 | NME2 | 29.55 | -4.05 | 1.38 | -2.93 | 3.40E-03 | 6.34E-02 | 333.90 | 1.62 | 0.99 | 1.64 | 0.101 | 0.727 |
| ENST00000344920 | NNT | 14.41 | -21.82 | 3.03 | -7.21 | 5.73E-13 | 6.60E-11 | 9630.22 | 0.37 | 0.47 | 0.79 | 0.427 | 1.000 |
| ENST00000564620 | NOB1 | 15.03 | -6.45 | 1.89 | -3.41 | 6.57E-04 | 1.69E-02 | 498.68 | 1.16 | 0.60 | 1.95 | 0.051 | 0.533 |
| ENST00000543788 | NOC3L | 7.76 | -21.00 | 3.03 | -6.93 | 4.18E-12 | 2.83E-10 | 34.78 | -0.63 | 0.86 | -0.73 | 0.467 | 1.000 |
| ENST00000345985 | NOL10 | 140.66 | -0.93 | 0.25 | -3.70 | 2.16E-04 | 6.52E-03 | 2333.19 | 1.20 | 0.20 | 5.91 | 0.000 | 0.000 |
| ENST00000253247 | NOL11 | 302.25 | -1.38 | 0.15 | -9.44 | 3.74E-21 | 8.26E-18 | 8453.88 | -0.02 | 0.14 | -0.13 | 0.897 | 1.000 |
| ENST00000535137 | NOL11 | 5.67 | -20.57 | 3.03 | -6.79 | 1.14E-11 | 6.50E-10 | 121.66 | -0.69 | 3.92 | -0.17 | 0.861 | 1.000 |
| ENST00000451315 | NOL7 | 100.98 | -1.09 | 0.37 | -2.96 | 3.10E-03 | 5.89E-02 | 3317.08 | -0.06 | 0.15 | -0.39 | 0.693 | 1.000 |
| ENST00000569526 | NOMO2 | 60.27 | -1.92 | 0.53 | -3.60 | 3.17E-04 | 9.08E-03 | 54.15 | 0.67 | 0.42 | 1.61 | 0.108 | 0.744 |
| ENST00000373841 | NONO | 21.25 | -21.56 | 3.03 | -7.12 | 1.07E-12 | 1.02E-10 | 4434.95 | -0.43 | 0.21 | -2.07 | 0.038 | 0.457 |
| ENST00000382421 | NOP2 | 47.06 | -6.96 | 1.95 | -3.57 | 3.56E-04 | 1.00E-02 | 1268.42 | 0.33 | 0.18 | 1.87 | 0.062 | 0.582 |
| ENST00000542919 | NOP2 | 19.06 | -7.39 | 2.70 | -2.74 | 6.24E-03 | 9.93E-02 | 254.83 | 0.28 | 0.31 | 0.90 | 0.369 | 1.000 |
| ENST00000381169 | NOP56 | 94.93 | -9.70 | 2.04 | -4.77 | 1.88E-06 | 8.27E-05 | 45.47 | 0.83 | 1.23 | 0.67 | 0.500 | 1.000 |
| ENST00000264279 | NOP58 | 281.39 | -0.71 | 0.14 | -5.19 | 2.11E-07 | 1.00E-05 | 12099.82 | -0.06 | 0.17 | -0.37 | 0.713 | 1.000 |
| ENST00000362074 | NOTCH2NL | 6.11 | -20.68 | 3.03 | -6.82 | 8.95E-12 | 5.28E-10 | 219.05 | 0.05 | 0.28 | 0.20 | 0.845 | 1.000 |
| ENST00000335681 | NPAS2 | 9.03 | -4.04 | 1.46 | -2.76 | 5.82E-03 | 9.45E-02 | 8963.94 | 0.07 | 0.20 | 0.34 | 0.735 | 1.000 |
| ENST00000544660 | NPEPPS | 18.17 | -22.14 | 3.03 | -7.31 | 2.59E-13 | 3.58E-11 | 140.14 | 0.08 | 0.38 | 0.20 | 0.838 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000351986 | NPM1 | 544.64 | -1.18 | 0.41 | -2.86 | 4.20E-03 | 7.42E-02 | 17225.33 | 0.04 | 0.13 | 0.29 | 0.769 | 1.000 |
| ENST00000463178 | NPRL3 | 2.55 | -4.49 | 1.65 | -2.72 | 6.50E-03 | 1.02E-01 | 469.10 | -0.10 | 0.27 | -0.37 | 0.709 | 1.000 |
| ENST00000379046 | NQO1 | 67.48 | -9.21 | 1.94 | -4.76 | 1.97E-06 | 8.61E-05 | 290.96 | 1.13 | 0.63 | 1.80 | 0.072 | 0.624 |
| ENST00000544883 | NR2C2AP | 7.17 | -5.98 | 1.73 | -3.46 | 5.48E-04 | 1.45E-02 | 322.65 | -0.26 | 0.26 | -0.99 | 0.324 | 0.984 |
| ENST00000369535 | NRAS | 209.69 | -0.72 | 0.19 | -3.87 | 1.09E-04 | 3.57E-03 | 12265.15 | 0.06 | 0.14 | 0.40 | 0.686 | 1.000 |
| ENST00000371665 | NRD1 | 8.38 | -21.10 | 3.03 | -6.97 | 3.27E-12 | 2.37E-10 | 579.57 | 1.66 | 1.18 | 1.40 | 0.160 | 0.843 |
| ENST00000355117 | NRP2 | 9.47 | -21.27 | 3.03 | -7.02 | 2.20E-12 | 1.77E-10 | 95.01 | -0.18 | 0.50 | -0.36 | 0.720 | 1.000 |
| ENST00000216879 | NSFL1C | 32.84 | -7.00 | 1.78 | -3.93 | 8.63E-05 | 2.91E-03 | 127.15 | -0.26 | 0.52 | -0.49 | 0.625 | 1.000 |
| ENST00000361439 | NSMCE1 | 12.41 | -21.63 | 3.03 | -7.14 | 9.10E-13 | 9.07E-11 | 1051.35 | 0.03 | 0.38 | 0.08 | 0.935 | 1.000 |
| ENST00000522563 | NSMCE2 | 21.38 | -7.55 | 1.56 | -4.84 | 1.29E-06 | 5.73E-05 | 521.85 | 0.70 | 0.51 | 1.36 | 0.174 | 0.863 |
| ENST00000552185 | NT5C2 | 5.26 | -5.53 | 1.99 | -2.77 | 5.55E-03 | 9.10E-02 | 71.82 | 0.21 | 0.43 | 0.48 | 0.632 | 1.000 |
| ENST00000456458 | NT5C3 | 15.51 | -2.14 | 0.74 | -2.89 | 3.87E-03 | 6.99E-02 | 667.85 | -0.48 | 0.27 | -1.77 | 0.076 | 0.642 |
| ENST00000319550 | NT5DC1 | 70.89 | -0.78 | 0.28 | -2.81 | 4.92E-03 | 8.32E-02 | 1634.92 | 0.14 | 0.26 | 0.56 | 0.573 | 1.000 |
| ENST00000369651 | NT5E | 101.47 | -4.68 | 1.79 | -2.61 | 8.99E-03 | 1.28E-01 | 362.00 | 0.14 | 0.27 | 0.52 | 0.605 | 1.000 |
| ENST00000483358 | NUB1 | 7.68 | -20.99 | 3.03 | -6.93 | 4.30E-12 | 2.89E-10 | 19.26 | 3.14 | 1.24 | 2.53 | 0.011 | 0.223 |
| ENST00000493588 | NUB1 | 6.69 | -20.76 | 3.03 | -6.85 | 7.41E-12 | 4.52E-10 | 14.90 | -0.60 | 0.70 | -0.86 | 0.392 | 1.000 |
| ENST00000458064 | NUCB2 | 50.75 | -23.54 | 3.03 | -7.78 | 7.42E-15 | 2.55E-12 | 2584.06 | 0.08 | 0.12 | 0.63 | 0.529 | 1.000 |
| ENST00000531242 | NUCB2 | 32.36 | -3.37 | 0.93 | -3.63 | 2.83E-04 | 8.26E-03 | 33.93 | -0.15 | 0.58 | -0.25 | 0.799 | 1.000 |
| ENST00000239690 | NUDCD1 | 106.54 | -0.61 | 0.20 | -3.13 | 1.73E-03 | 3.69E-02 | 4241.08 | -0.21 | 0.34 | -0.61 | 0.539 | 1.000 |
| ENST00000378927 | NUDT5 | 28.61 | -7.97 | 2.47 | -3.22 | 1.26E-03 | 2.87E-02 | 609.38 | 0.39 | 0.36 | 1.07 | 0.283 | 0.962 |
| ENST00000540453 | NUP107 | 3.73 | -5.04 | 1.64 | -3.08 | 2.05E-03 | 4.25E-02 | 43.61 | -0.61 | 0.85 | -0.72 | 0.473 | 1.000 |
| ENST00000403890 | NUP43 | 14.24 | -6.97 | 2.02 | -3.44 | 5.78E-04 | 1.51E-02 | 56.31 | 0.42 | 0.95 | 0.44 | 0.661 | 1.000 |
| ENST00000508465 | NUP54 | 5.22 | -5.52 | 1.82 | -3.03 | 2.41E-03 | 4.84E-02 | 24.88 | -0.06 | 0.81 | -0.07 | 0.942 | 1.000 |
| ENST00000560898 | NUSAP1 | 3.04 | -4.73 | 1.76 | -2.69 | 7.22E-03 | 1.10E-01 | 45.18 | 0.23 | 0.58 | 0.41 | 0.684 | 1.000 |
| ENST00000294172 | NXF1 | 9.87 | -21.32 | 3.03 | -7.04 | 1.93E-12 | 1.60E-10 | 8.75 | -0.36 | 1.70 | -0.21 | 0.831 | 1.000 |
| ENST00000439713 | NXF1 | 8.37 | -21.10 | 3.03 | -6.97 | 3.28E-12 | 2.37E-10 | 14.16 | -0.17 | 0.80 | -0.21 | 0.832 | 1.000 |
| ENST00000486557 | ODF2L | 3.62 | -3.77 | 1.11 | -3.41 | 6.55E-04 | 1.68E-02 | 11.05 | -0.16 | 0.83 | -0.19 | 0.849 | 1.000 |
| ENST00000443864 | OGDH | 29.83 | -4.41 | 1.69 | -2.61 | 9.12E-03 | 1.29E-01 | 498.64 | 0.28 | 0.44 | 0.64 | 0.524 | 1.000 |
| ENST00000444676 | OGDH | 8.70 | -20.19 | 3.03 | -6.67 | 2.63E-11 | 1.44E-09 | 6650.44 | -0.86 | 2.33 | -0.37 | 0.712 | 1.000 |
| ENST00000373701 | OGT | 9.98 | -21.34 | 3.03 | -7.05 | 1.84E-12 | 1.54E-10 | 10759.84 | 0.24 | 0.22 | 1.07 | 0.284 | 0.962 |
| ENST00000220514 | OIP5 | 6.42 | -2.00 | 0.77 | -2.59 | 9.55E-03 | 1.33E-01 | 964.11 | -0.20 | 0.15 | -1.34 | 0.181 | 0.873 |
| ENST00000234296 | ORC2 | 24.18 | -1.43 | 0.44 | -3.20 | 1.35E-03 | 3.04E-02 | 5200.22 | 0.12 | 0.12 | 0.98 | 0.328 | 0.985 |
| ENST00000440042 | ORC4 | 6.13 | -5.75 | 1.66 | -3.46 | 5.49E-04 | 1.45E-02 | 7.17 | 0.09 | 2.04 | 0.04 | 0.966 | 1.000 |
| ENST00000219097 | ORC6 | 6.73 | -20.80 | 3.03 | -6.86 | 6.68E-12 | 4.14E-10 | 3.38 | -0.09 | 1.38 | -0.07 | 0.947 | NA |
| ENST00000315970 | OS9 | 108.81 | -2.04 | 0.69 | -2.96 | 3.09E-03 | 5.88E-02 | 3584.59 | 0.43 | 0.26 | 1.66 | 0.097 | 0.715 |
| ENST00000389142 | OS9 | 10.18 | -21.34 | 3.03 | -7.05 | 1.83E-12 | 1.54E-10 | 141.12 | 0.29 | 0.87 | 0.34 | 0.737 | 1.000 |
| ENST00000552285 | OS9 | 16.69 | -21.04 | 3.03 | -6.95 | 3.70E-12 | 2.60E-10 | 11201.13 | -0.15 | 0.57 | -0.27 | 0.788 | 1.000 |
| ENST00000513831 | OSMR | 12.43 | -6.77 | 2.05 | -3.30 | 9.57E-04 | 2.29E-02 | 323.95 | 0.19 | 0.26 | 0.74 | 0.458 | 1.000 |
| ENST00000346234 | OSTF1 | 29.05 | -8.00 | 1.19 | -6.70 | 2.10E-11 | 1.16E-09 | 1375.77 | 0.18 | 0.13 | 1.34 | 0.180 | 0.871 |
| ENST00000543004 | OTUB1 | 24.50 | -22.55 | 3.03 | -7.45 | 9.43E-14 | 1.64E-11 | 177.53 | -0.07 | 0.52 | -0.13 | 0.898 | 1.000 |
| ENST00000375120 | OTUD3 | 3.32 | -4.24 | 1.57 | -2.70 | 7.00E-03 | 1.07E-01 | 5108.61 | -0.23 | 0.16 | -1.43 | 0.152 | 0.828 |
| ENST00000440381 | P4HA1 | 51.28 | -8.81 | 2.81 | -3.14 | 1.72E-03 | 3.68E-02 | 1576.16 | 0.43 | 0.16 | 2.72 | 0.007 | 0.153 |
| ENST00000550166 | PA2G4 | 43.02 | -2.11 | 0.61 | -3.45 | 5.62E-04 | 1.48E-02 | 174.12 | 0.36 | 0.25 | 1.45 | 0.148 | 0.823 |
| ENST00000310571 | PAAF1 | 6.19 | -20.69 | 3.03 | -6.83 | 8.65E-12 | 5.16E-10 | 412.90 | 0.08 | 0.27 | 0.30 | 0.764 | 1.000 |
| ENST00000520868 | PABPC1 | 7.05 | -5.95 | 1.69 | -3.52 | 4.33E-04 | 1.18E-02 | 1836.83 | -0.04 | 0.60 | -0.07 | 0.943 | 1.000 |
| ENST00000522387 | PABPC1 | 47.79 | -8.71 | 2.97 | -2.93 | 3.34E-03 | 6.25E-02 | 28456.97 | -0.26 | 0.28 | -0.90 | 0.369 | 1.000 |
| ENST00000523555 | PABPC1 | 22.92 | -22.46 | 3.03 | -7.42 | 1.17E-13 | 1.91E-11 | 2426.11 | 0.93 | 1.34 | 0.70 | 0.487 | 1.000 |
| ENST00000419197 | PAFAH1B2 | 72.87 | -24.03 | 3.03 | -7.94 | 2.01E-15 | 1.03E-12 | 341.66 | -0.10 | 0.24 | -0.42 | 0.673 | 1.000 |
| ENST00000338972 | PAIP1 | 22.90 | -7.65 | 2.83 | -2.70 | 6.91E-03 | 1.06E-01 | 141.12 | -1.52 | 0.30 | -5.09 | 0.000 | 0.000 |
| ENST00000436644 | PAIP1 | 7.80 | -21.01 | 3.03 | -6.93 | 4.10E-12 | 2.79E-10 | 111.48 | 1.52 | 0.80 | 1.91 | 0.056 | 0.556 |
| ENST00000510409 | PAIP2 | 5.86 | -20.61 | 3.03 | -6.80 | 1.03E-11 | 5.98E-10 | 2884.01 | 0.56 | 0.24 | 2.33 | 0.020 | 0.314 |
| ENST00000379568 | PAK1IP1 | 127.43 | -0.61 | 0.18 | -3.39 | 6.93E-04 | 1.76E-02 | 3846.22 | 0.03 | 0.13 | 0.19 | 0.846 | 1.000 |
| ENST00000379799 | PAM | 132.07 | -3.65 | 0.76 | -4.84 | 1.33E-06 | 5.90E-05 | 3649.70 | 0.21 | 0.15 | 1.46 | 0.143 | 0.816 |
| ENST00000504691 | PAM | 7.07 | -20.87 | 3.03 | -6.89 | 5.69E-12 | 3.60E-10 | 1167.90 | -0.05 | 0.18 | -0.30 | 0.762 | 1.000 |
| ENST00000238714 | PAPOLG | 22.97 | -1.78 | 0.60 | -2.97 | 2.97E-03 | 5.69E-02 | 353.33 | 1.47 | 0.66 | 2.23 | 0.026 | 0.371 |
| ENST00000497113 | PARK7 | 13.77 | -21.77 | 3.03 | -7.19 | 6.45E-13 | 7.12E-11 | 2456.42 | 0.00 | 0.21 | 0.00 | 0.997 | 1.000 |
| ENST00000490921 | PARP1 | 71.49 | -2.98 | 1.07 | -2.79 | 5.22E-03 | 8.72E-02 | 175.16 | -0.06 | 0.27 | -0.21 | 0.830 | 1.000 |
| ENST00000397192 | PAXIP1 | 6.88 | -5.92 | 1.05 | -5.63 | 1.81E-08 | 9.08E-07 | 186.69 | 0.15 | 0.82 | 0.19 | 0.851 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000521226 | PBK | 6.45 | -20.71 | 3.03 | -6.83 | 8.29E-12 | 4.98E-10 | 81.79 | 0.00 | 0.34 | -0.01 | 0.993 | 1.000 |
| ENST00000524266 | PBK | 29.83 | -22.82 | 3.03 | -7.54 | 4.72E-14 | 1.03E-11 | 38.73 | 0.20 | 0.47 | 0.43 | 0.669 | 1.000 |
| ENST00000462207 | PBRM1 | 15.06 | -7.05 | 1.87 | -3.76 | 1.71E-04 | 5.29E-03 | 85.85 | -0.32 | 0.45 | -0.71 | 0.476 | 1.000 |
| ENST00000549863 | PCBP2 | 8.76 | -4.49 | 1.53 | -2.94 | 3.29E-03 | 6.18E-02 | 1654.04 | 0.05 | 0.29 | 0.17 | 0.866 | 1.000 |
| ENST00000294192 | PCBP4 | 7.61 | -20.94 | 3.03 | -6.91 | 4.81E-12 | 3.14E-10 | 29.94 | -0.06 | 0.61 | -0.09 | 0.925 | 1.000 |
| ENST00000355852 | PCBP4 | 6.21 | -5.77 | 1.95 | -2.95 | 3.16E-03 | 5.97E-02 | 50.50 | -1.26 | 0.90 | -1.40 | 0.162 | 0.845 |
| ENST00000468777 | PCCB | 5.78 | -20.60 | 3.03 | -6.80 | 1.06E-11 | 6.11E-10 | 46.22 | 0.61 | 1.28 | 0.48 | 0.633 | 1.000 |
| ENST00000336126 | PCGF5 | 24.48 | -4.03 | 1.28 | -3.15 | 1.61E-03 | 3.50E-02 | 4780.17 | 0.14 | 0.19 | 0.74 | 0.459 | 1.000 |
| ENST00000498274 | PCNP | 8.42 | -2.11 | 0.74 | -2.87 | 4.15E-03 | 7.34E-02 | 1203.26 | 0.31 | 0.26 | 1.19 | 0.235 | 0.929 |
| ENST00000223061 | PCOLCE | 250.31 | -0.75 | 0.27 | -2.79 | 5.25E-03 | 8.76E-02 | 26155.27 | -0.43 | 0.18 | -2.33 | 0.020 | 0.316 |
| ENST00000472348 | PCOLCE | 22.99 | -3.76 | 1.21 | -3.09 | 1.98E-03 | 4.14E-02 | 15723.42 | -0.31 | 0.17 | -1.85 | 0.064 | 0.593 |
| ENST00000268896 | PCTP | 45.36 | -1.29 | 0.48 | -2.67 | 7.62E-03 | 1.14E-01 | 3891.74 | 0.04 | 0.45 | 0.09 | 0.931 | 1.000 |
| ENST00000430755 | PCYT1A | 3.45 | -3.67 | 1.14 | -3.21 | 1.34E-03 | 3.00E-02 | 80.36 | 0.26 | 0.50 | 0.52 | 0.601 | 1.000 |
| ENST00000473645 | PDCD10 | 78.42 | -8.85 | 2.11 | -4.19 | 2.75E-05 | 1.05E-03 | 79.68 | 0.07 | 0.35 | 0.20 | 0.840 | 1.000 |
| ENST00000280154 | PDCD4 | 85.14 | -24.16 | 3.03 | -7.98 | 1.45E-15 | 8.09E-13 | 2741.74 | 0.00 | 0.98 | 0.00 | 0.999 | 1.000 |
| ENST00000481353 | PDCD4 | 25.92 | -3.64 | 1.23 | -2.96 | 3.10E-03 | 5.89E-02 | 1076.00 | -0.02 | 0.60 | -0.03 | 0.978 | 1.000 |
| ENST00000511482 | PDCD6 | 12.54 | -5.59 | 1.30 | -4.30 | 1.74E-05 | 6.82E-04 | 1495.83 | 0.05 | 0.18 | 0.27 | 0.784 | 1.000 |
| ENST00000487821 | PDCD6IP | 7.27 | -3.18 | 1.18 | -2.70 | 6.98E-03 | 1.07E-01 | 341.64 | 0.22 | 0.27 | 0.84 | 0.400 | 1.000 |
| ENST00000396182 | PDE1C | 33.81 | -22.99 | 3.03 | -7.60 | 3.06E-14 | 7.60E-12 | 348.52 | -0.10 | 0.37 | -0.26 | 0.796 | 1.000 |
| ENST00000369351 | PDE4DIP | 8.90 | -21.18 | 3.03 | -6.99 | 2.69E-12 | 2.06E-10 | 454.63 | -3.08 | 1.76 | -1.74 | 0.081 | 0.661 |
| ENST00000402802 | PDGFA | 6.52 | -2.74 | 1.00 | -2.74 | 6.15E-03 | 9.83E-02 | 3547.22 | 0.09 | 0.13 | 0.68 | 0.497 | 1.000 |
| ENST00000479146 | PDHA1 | 7.17 | -3.31 | 1.05 | -3.15 | 1.62E-03 | 3.50E-02 | 324.00 | 0.34 | 0.31 | 1.08 | 0.280 | 0.961 |
| ENST00000430469 | PDHX | 5.54 | -20.54 | 3.03 | -6.78 | 1.22E-11 | 6.84E-10 | 49.68 | 1.12 | 1.05 | 1.07 | 0.285 | 0.963 |
| ENST00000446523 | PDIA3 | 56.11 | -1.36 | 0.44 | -3.10 | 1.92E-03 | 4.02E-02 | 1222.21 | -0.58 | 0.85 | -0.69 | 0.492 | 1.000 |
| ENST00000379018 | PDLIM4 | 27.66 | -7.92 | 2.74 | -2.89 | 3.85E-03 | 6.95E-02 | 9192.22 | 0.04 | 0.23 | 0.19 | 0.853 | 1.000 |
| ENST00000297598 | PDP1 | 34.64 | -8.25 | 2.76 | -2.99 | 2.82E-03 | 5.47E-02 | 1928.32 | -0.72 | 1.01 | -0.71 | 0.476 | 1.000 |
| ENST00000517764 | PDP1 | 35.85 | -8.30 | 2.72 | -3.05 | 2.30E-03 | 4.67E-02 | 2213.83 | -0.26 | 0.16 | -1.60 | 0.109 | 0.748 |
| ENST00000376215 | PDSS1 | 23.30 | -5.08 | 1.22 | -4.17 | 3.08E-05 | 1.15E-03 | 808.68 | 0.15 | 0.21 | 0.73 | 0.463 | 1.000 |
| ENST00000468392 | PDXK | 7.99 | -21.03 | 3.03 | -6.94 | 3.88E-12 | 2.67E-10 | 114.20 | -0.15 | 0.37 | -0.39 | 0.693 | 1.000 |
| ENST00000478502 | PEF1 | 14.02 | -21.79 | 3.03 | -7.20 | 6.16E-13 | 6.95E-11 | 71.57 | -0.48 | 0.56 | -0.85 | 0.396 | 1.000 |
| ENST00000482108 | PEG10 | 123.71 | -6.51 | 1.54 | -4.22 | 2.44E-05 | 9.39E-04 | 22373.10 | -0.05 | 0.15 | -0.31 | 0.754 | 1.000 |
| ENST00000335214 | PES1 | 62.08 | -22.92 | 3.03 | -7.57 | 3.68E-14 | 8.62E-12 | 4924.41 | -0.14 | 0.15 | -0.93 | 0.352 | 0.994 |
| ENST00000354694 | PES1 | 39.69 | -23.21 | 3.03 | -7.67 | 1.76E-14 | 5.06E-12 | 2064.31 | 0.17 | 0.22 | 0.77 | 0.440 | 1.000 |
| ENST00000514611 | PFDN1 | 3.67 | -5.01 | 1.72 | -2.91 | 3.59E-03 | 6.61E-02 | 55.74 | 0.13 | 0.41 | 0.31 | 0.754 | 1.000 |
| ENST00000549759 | PFDN5 | 33.48 | -22.21 | 3.03 | -7.34 | 2.16E-13 | 3.08E-11 | 109.35 | 0.21 | 0.45 | 0.46 | 0.645 | 1.000 |
| ENST00000550513 | PFDN5 | 9.08 | -3.76 | 1.30 | -2.89 | 3.89E-03 | 7.00E-02 | 184.23 | -0.08 | 0.31 | -0.28 | 0.782 | 1.000 |
| ENST00000546964 | PFKM | 27.95 | -22.58 | 3.03 | -7.46 | 8.63E-14 | 1.60E-11 | 2324.26 | -0.17 | 1.60 | -0.11 | 0.914 | 1.000 |
| ENST00000381125 | PFKP | 105.37 | -24.54 | 3.03 | -8.11 | 5.17E-16 | 3.56E-13 | 10091.65 | -0.16 | 0.15 | -1.02 | 0.307 | 0.978 |
| ENST00000421751 | PFKP | 11.72 | -21.55 | 3.03 | -7.12 | 1.12E-12 | 1.05E-10 | 151.44 | -0.26 | 0.29 | -0.89 | 0.375 | 1.000 |
| ENST00000423691 | PFN2 | 68.35 | -2.51 | 0.55 | -4.58 | 4.76E-06 | 2.00E-04 | 107.35 | -0.22 | 0.37 | -0.59 | 0.553 | 1.000 |
| ENST00000409475 | PGAP1 | 3.00 | -4.73 | 1.40 | -3.38 | 7.26E-04 | 1.83E-02 | 256.62 | 0.56 | 0.24 | 2.39 | 0.017 | 0.287 |
| ENST00000371084 | PGM1 | 208.42 | -10.84 | 0.98 | -11.11 | 1.08E-28 | 6.49E-25 | 6038.74 | 0.05 | 0.16 | 0.29 | 0.769 | 1.000 |
| ENST00000507554 | PGM3 | 38.06 | -8.38 | 2.19 | -3.84 | 1.25E-04 | 4.01E-03 | 10.26 | -0.37 | 0.84 | -0.44 | 0.662 | 1.000 |
| ENST00000493669 | PHACTR4 | 35.25 | -3.58 | 1.21 | -2.97 | 3.00E-03 | 5.73E-02 | 613.32 | -0.77 | 0.60 | -1.29 | 0.196 | 0.892 |
| ENST00000399433 | PHB2 | 20.87 | -21.45 | 3.03 | -7.09 | 1.38E-12 | 1.25E-10 | 39.60 | 0.01 | 0.59 | 0.02 | 0.988 | 1.000 |
| ENST00000546217 | PHB2 | 8.82 | -5.68 | 1.64 | -3.45 | 5.50E-04 | 1.46E-02 | 136.12 | -0.07 | 0.34 | -0.21 | 0.831 | 1.000 |
| ENST00000312189 | PHF19 | 22.97 | -7.65 | 0.98 | -7.80 | 5.99E-15 | 2.11E-12 | 1452.91 | 0.51 | 0.20 | 2.61 | 0.009 | 0.194 |
| ENST00000339089 | PHF20 | 5.61 | -20.56 | 3.03 | -6.78 | 1.18E-11 | 6.66E-10 | 382.45 | 0.59 | 1.03 | 0.57 | 0.570 | 1.000 |
| ENST00000509876 | PHF3 | 12.34 | -21.63 | 3.03 | -7.14 | 9.26E-13 | 9.16E-11 | 6883.84 | -0.91 | 1.90 | -0.48 | 0.631 | 1.000 |
| ENST00000416404 | PHF6 | 23.52 | -22.45 | 3.03 | -7.42 | 1.21E-13 | 1.95E-11 | 879.77 | 0.21 | 0.41 | 0.51 | 0.607 | 1.000 |
| ENST00000369409 | PHGDH | 25.85 | -22.63 | 3.03 | -7.48 | 7.71E-14 | 1.46E-11 | 3341.63 | 0.18 | 0.72 | 0.24 | 0.807 | 1.000 |
| ENST00000537497 | PHGDH | 5.83 | -5.67 | 1.85 | -3.06 | 2.20E-03 | 4.49E-02 | 115.79 | 1.39 | 1.10 | 1.27 | 0.205 | 0.900 |
| ENST00000379942 | PHKA2 | 8.74 | -3.09 | 0.74 | -4.18 | 2.89E-05 | 1.09E-03 | 3140.58 | 0.00 | 0.18 | 0.01 | 0.995 | 1.000 |
| ENST00000326291 | PIBF1 | 44.45 | -0.88 | 0.29 | -3.01 | 2.63E-03 | 5.19E-02 | 3380.92 | 0.05 | 0.14 | 0.35 | 0.724 | 1.000 |
| ENST00000530692 | PICALM | 4.98 | -4.83 | 1.53 | -3.15 | 1.64E-03 | 3.55E-02 | 186.35 | 0.18 | 0.74 | 0.25 | 0.805 | 1.000 |
| ENST00000533350 | PICALM | 3.31 | -4.86 | 1.74 | -2.79 | 5.31E-03 | 8.83E-02 | 22.53 | 0.14 | 0.83 | 0.17 | 0.865 | 1.000 |
| ENST00000306465 | PIGF | 6.58 | -3.68 | 0.97 | -3.80 | 1.43E-04 | 4.50E-03 | 205.67 | -0.19 | 0.38 | -0.49 | 0.624 | 1.000 |
| ENST00000341555 | PIGT | 14.81 | -21.87 | 3.03 | -7.22 | 5.10E-13 | 6.06E-11 | 17332.75 | -0.10 | 0.18 | -0.52 | 0.600 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000486866 | PIP5K1A | 6.82 | -3.25 | 1.09 | -2.99 | 2.82E-03 | 5.47E-02 | 92.42 | -0.46 | 0.43 | -1.07 | 0.283 | 0.962 |
| ENST00000436663 | PITPNB | 5.15 | -5.50 | 2.02 | -2.73 | 6.43E-03 | 1.01E-01 | 24.28 | -1.04 | 0.65 | -1.61 | 0.107 | 0.741 |
| ENST00000361557 | PJA2 | 72.16 | -24.02 | 3.03 | -7.94 | 2.08E-15 | 1.05E-12 | 4728.87 | 0.16 | 0.86 | 0.18 | 0.855 | 1.000 |
| ENST00000237596 | PKD2 | 50.49 | -1.37 | 0.50 | -2.73 | 6.39E-03 | 1.01E-01 | 9994.69 | 0.03 | 0.11 | 0.23 | 0.821 | 1.000 |
| ENST00000418336 | PKNOX1 | 20.05 | -7.46 | 1.82 | -4.10 | 4.13E-05 | 1.50E-03 | 3.00 | 0.53 | 1.92 | 0.28 | 0.783 | NA |
| ENST00000303908 | PLEKHB2 | 14.25 | -21.82 | 3.03 | -7.21 | 5.74E-13 | 6.60E-11 | 0.91 | -3.39 | 4.85 | -0.70 | 0.485 | NA |
| ENST00000427836 | PLEKHM3 | 7.56 | -6.06 | 1.01 | -5.99 | 2.07E-09 | 1.09E-07 | 1249.54 | -0.01 | 0.17 | -0.05 | 0.962 | 1.000 |
| ENST00000503914 | PLK4 | 3.10 | -4.75 | 1.14 | -4.15 | 3.26E-05 | 1.21E-03 | 18.78 | -1.24 | 0.76 | -1.64 | 0.100 | 0.722 |
| ENST00000376369 | PLOD1 | 13.29 | -21.72 | 3.03 | -7.17 | 7.27E-13 | 7.66E-11 | 17847.68 | 0.23 | 0.17 | 1.38 | 0.167 | 0.851 |
| ENST00000469350 | PLOD2 | 8.52 | -21.12 | 3.03 | -6.97 | 3.10E-12 | 2.28E-10 | 178.52 | -7.60 | 2.09 | -3.63 | 0.000 | 0.013 |
| ENST00000421736 | PLOD3 | 8.36 | -21.10 | 3.03 | -6.96 | 3.29E-12 | 2.38E-10 | 188.75 | 0.12 | 0.42 | 0.28 | 0.778 | 1.000 |
| ENST00000465975 | PLP1 | 42.47 | -8.54 | 1.12 | -7.59 | 3.08E-14 | 7.60E-12 | 1439.91 | 0.24 | 1.54 | 0.15 | 0.879 | 1.000 |
| ENST00000457734 | PLS1 | 6.12 | -20.68 | 3.03 | -6.82 | 8.95E-12 | 5.28E-10 | 507.36 | -1.55 | 1.03 | -1.50 | 0.133 | 0.799 |
| ENST00000462666 | PLSCR1 | 5.80 | -4.47 | 1.13 | -3.96 | 7.57E-05 | 2.59E-03 | 35.69 | 0.00 | 0.58 | 0.00 | 0.997 | 1.000 |
| ENST00000275072 | PM20D2 | 44.27 | -1.61 | 0.49 | -3.31 | 9.33E-04 | 2.24E-02 | 3462.73 | -0.29 | 0.15 | -1.91 | 0.056 | 0.556 |
| ENST00000268261 | PMM2 | 8.96 | -6.29 | 1.51 | -4.18 | 2.97E-05 | 1.11E-03 | 155.10 | 0.27 | 0.51 | 0.52 | 0.602 | 1.000 |
| ENST00000395936 | PMP22 | 6.06 | -3.59 | 1.39 | -2.59 | 9.65E-03 | 1.34E-01 | 628.84 | 1.99 | 1.05 | 1.89 | 0.059 | 0.568 |
| ENST00000444457 | PMPCB | 49.06 | -8.17 | 2.12 | -3.85 | 1.20E-04 | 3.89E-03 | 888.54 | -0.59 | 0.20 | -2.93 | 0.003 | 0.096 |
| ENST00000498530 | PMPCB | 88.77 | -9.61 | 2.86 | -3.36 | 7.83E-04 | 1.95E-02 | 1658.93 | -0.04 | 0.38 | -0.09 | 0.925 | 1.000 |
| ENST00000361505 | PNP | 16.12 | -7.14 | 1.10 | -6.47 | 9.57E-11 | 5.17E-09 | 142.58 | 0.20 | 0.30 | 0.66 | 0.511 | 1.000 |
| ENST00000534893 | PNPO | 10.03 | -21.34 | 3.03 | -7.05 | 1.84E-12 | 1.54E-10 | 48.45 | 0.13 | 0.52 | 0.24 | 0.810 | 1.000 |
| ENST00000486717 | POFUT1 | 26.94 | -22.24 | 3.03 | -7.35 | 2.03E-13 | 2.93E-11 | 106.27 | -0.11 | 0.32 | -0.35 | 0.730 | 1.000 |
| ENST00000471540 | POFUT2 | 3.63 | -4.99 | 1.21 | -4.14 | 3.49E-05 | 1.29E-03 | 1014.34 | -1.50 | 1.23 | -1.22 | 0.222 | 0.917 |
| ENST00000527618 | POLA2 | 40.66 | -2.40 | 0.71 | -3.39 | 7.03E-04 | 1.79E-02 | 284.29 | 0.08 | 0.34 | 0.24 | 0.811 | 1.000 |
| ENST00000539111 | POLG2 | 22.92 | -0.99 | 0.32 | -3.11 | 1.89E-03 | 3.98E-02 | 3951.99 | 0.00 | 0.15 | 0.00 | 0.996 | 1.000 |
| ENST00000562953 | POLR2C | 10.38 | -6.51 | 1.83 | -3.55 | 3.82E-04 | 1.06E-02 | 101.03 | -0.53 | 1.17 | -0.46 | 0.648 | 1.000 |
| ENST00000567982 | POLR2C | 5.41 | -5.56 | 1.59 | -3.51 | 4.54E-04 | 1.23E-02 | 159.30 | 0.04 | 0.39 | 0.11 | 0.913 | 1.000 |
| ENST00000306433 | POLR3D | 13.92 | -21.79 | 3.03 | -7.20 | 6.24E-13 | 6.95E-11 | 167.59 | -0.16 | 0.49 | -0.33 | 0.742 | 1.000 |
| ENST00000409832 | POTEG | 48.59 | -2.00 | 0.67 | -2.99 | 2.76E-03 | 5.38E-02 | 31.63 | 0.01 | 0.52 | 0.02 | 0.986 | 1.000 |
| ENST00000499847 | PPA2 | 8.64 | -21.14 | 3.03 | -6.98 | 2.96E-12 | 2.21E-10 | 188.55 | -0.25 | 0.29 | -0.86 | 0.387 | 1.000 |
| ENST00000256678 | PPHLN1 | 18.57 | -3.45 | 1.17 | -2.94 | 3.25E-03 | 6.10E-02 | 308.99 | 0.17 | 0.49 | 0.36 | 0.721 | 1.000 |
| ENST00000551723 | PPHLN1 | 3.83 | -5.07 | 1.76 | -2.88 | 3.93E-03 | 7.05E-02 | 19.93 | -0.15 | 1.17 | -0.13 | 0.899 | 1.000 |
| ENST00000372835 | PPIE | 7.31 | -6.00 | 1.91 | -3.14 | 1.70E-03 | 3.65E-02 | 228.67 | -0.16 | 0.31 | -0.50 | 0.614 | 1.000 |
| ENST00000448165 | PPIF | 16.25 | -4.43 | 1.43 | -3.10 | 1.90E-03 | 4.00E-02 | 683.10 | -0.04 | 0.24 | -0.19 | 0.852 | 1.000 |
| ENST00000433207 | PPIG | 5.37 | -5.56 | 1.88 | -2.96 | 3.13E-03 | 5.92E-02 | 87.84 | -0.67 | 0.52 | -1.28 | 0.200 | 0.895 |
| ENST00000321521 | PPIP5K2 | 18.07 | -6.73 | 1.58 | -4.25 | 2.10E-05 | 8.16E-04 | 1273.80 | -0.34 | 0.15 | -2.29 | 0.022 | 0.339 |
| ENST00000358506 | PPP1CB | 78.22 | -24.13 | 3.03 | -7.97 | 1.55E-15 | 8.55E-13 | 8460.89 | 0.35 | 0.74 | 0.48 | 0.634 | 1.000 |
| ENST00000551191 | PPP1R12A | 6.17 | -5.76 | 1.85 | -3.12 | 1.82E-03 | 3.86E-02 | 9.80 | 0.06 | 0.89 | 0.07 | 0.943 | 1.000 |
| ENST00000202556 | PPP1R13B | 12.33 | -1.14 | 0.40 | -2.83 | 4.60E-03 | 7.91E-02 | 362.21 | -1.74 | 1.12 | -1.55 | 0.121 | 0.777 |
| ENST00000557217 | PPP2R3C | 60.54 | -2.42 | 0.39 | -6.19 | 6.03E-10 | 3.18E-08 | 1216.18 | 0.54 | 0.34 | 1.58 | 0.113 | 0.757 |
| ENST00000455292 | PPP2R4 | 12.50 | -6.78 | 1.80 | -3.77 | 1.62E-04 | 5.07E-03 | 218.80 | 0.44 | 0.42 | 1.05 | 0.292 | 0.967 |
| ENST00000394853 | PPP3CA | 6.51 | -20.72 | 3.03 | -6.84 | 7.98E-12 | 4.81E-10 | 2316.30 | 0.18 | 1.16 | 0.15 | 0.880 | 1.000 |
| ENST00000527193 | PPP5C | 16.56 | -7.18 | 2.65 | -2.71 | 6.77E-03 | 1.05E-01 | 31.90 | 1.94 | 0.64 | 3.02 | 0.003 | 0.077 |
| ENST00000529172 | PPP6R3 | 12.31 | -21.62 | 3.03 | -7.14 | 9.37E-13 | 9.16E-11 | 14.48 | -0.20 | 0.80 | -0.25 | 0.805 | 1.000 |
| ENST00000531432 | PPP6R3 | 17.40 | -1.54 | 0.38 | -4.06 | 4.92E-05 | 1.76E-03 | 171.53 | -0.18 | 0.25 | -0.74 | 0.457 | 1.000 |
| ENST00000265462 | PRDX5 | 813.95 | -0.55 | 0.18 | -3.04 | 2.35E-03 | 4.73E-02 | 25577.18 | 0.00 | 0.18 | 0.00 | 1.000 | 1.000 |
| ENST00000425263 | PREPL | 22.94 | -22.44 | 3.03 | -7.41 | 1.25E-13 | 2.00E-11 | 90.62 | -3.18 | 3.73 | -0.85 | 0.394 | 1.000 |
| ENST00000316299 | PRKAG1 | 25.11 | -6.61 | 2.43 | -2.72 | 6.51E-03 | 1.02E-01 | 11.93 | 6.96 | 1.89 | 3.68 | 0.000 | 0.011 |
| ENST00000395170 | PRKAG1 | 31.38 | -8.11 | 1.65 | -4.92 | 8.53E-07 | 3.85E-05 | 3.58 | 2.54 | 1.93 | 1.31 | 0.190 | NA |
| ENST00000392710 | PRKAR1A | 122.44 | -3.65 | 1.28 | -2.86 | 4.24E-03 | 7.46E-02 | 32697.23 | -0.04 | 0.12 | -0.35 | 0.724 | 1.000 |
| ENST00000330452 | PRKCD | 25.92 | -22.55 | 3.03 | -7.45 | 9.43E-14 | 1.64E-11 | 17395.66 | -0.19 | 0.39 | -0.50 | 0.618 | 1.000 |
| ENST00000303927 | PRKCDBP | 55.00 | -2.64 | 0.89 | -2.97 | 3.00E-03 | 5.73E-02 | 3401.25 | -0.41 | 0.17 | -2.38 | 0.017 | 0.291 |
| ENST00000331968 | PRKD1 | 58.76 | -0.98 | 0.30 | -3.32 | 9.09E-04 | 2.19E-02 | 3810.16 | 0.08 | 0.26 | 0.29 | 0.768 | 1.000 |
| ENST00000331079 | PRMT3 | 50.22 | -0.76 | 0.25 | -3.08 | 2.08E-03 | 4.30E-02 | 3104.73 | -0.13 | 0.31 | -0.43 | 0.669 | 1.000 |
| ENST00000541371 | PRPF19 | 14.85 | -7.03 | 2.15 | -3.26 | 1.11E-03 | 2.59E-02 | 110.99 | -0.11 | 0.36 | -0.31 | 0.757 | 1.000 |
| ENST00000372435 | PRPS1 | 90.86 | -1.26 | 0.41 | -3.08 | 2.10E-03 | 4.34E-02 | 6101.78 | -0.24 | 0.18 | -1.31 | 0.192 | 0.887 |
| ENST00000472686 | PRPSAP1 | 5.55 | -5.60 | 1.76 | -3.18 | 1.48E-03 | 3.26E-02 | 164.89 | 0.36 | 0.27 | 1.33 | 0.185 | 0.879 |
| ENST00000488339 | PRPSAP1 | 12.48 | -4.58 | 1.48 | -3.09 | 1.98E-03 | 4.14E-02 | 19.88 | 1.13 | 1.05 | 1.08 | 0.282 | 0.962 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000481741 | PRR3 | 37.81 | -8.38 | 1.98 | -4.24 | 2.24E-05 | 8.69E-04 | 89.80 | 0.39 | 0.33 | 1.18 | 0.239 | 0.934 |
| ENST00000467601 | PRRC2C | 7.68 | -20.99 | 3.03 | -6.93 | 4.30E-12 | 2.89E-10 | 31.14 | -0.45 | 0.53 | -0.86 | 0.388 | 1.000 |
| ENST00000397519 | PSIP1 | 6.12 | -20.68 | 3.03 | -6.82 | 8.95E-12 | 5.28E-10 | 5186.70 | -0.20 | 0.30 | -0.65 | 0.513 | 1.000 |
| ENST00000445517 | PSMA2 | 34.98 | -8.26 | 1.08 | -7.62 | 2.51E-14 | 6.45E-12 | 674.83 | -0.11 | 0.34 | -0.33 | 0.740 | 1.000 |
| ENST00000559146 | PSMA4 | 15.06 | -21.89 | 3.03 | -7.23 | 4.80E-13 | 5.77E-11 | 208.95 | 0.34 | 0.39 | 0.87 | 0.386 | 1.000 |
| ENST00000370861 | PSMA7 | 98.06 | -9.66 | 3.03 | -3.19 | 1.41E-03 | 3.14E-02 | 1048.06 | 1.10 | 0.80 | 1.37 | 0.171 | 0.858 |
| ENST00000555895 | PSMB5 | 13.04 | -21.70 | 3.03 | -7.17 | 7.71E-13 | 7.99E-11 | 4.08 | 5.41 | 4.80 | 1.13 | 0.259 | 0.950 |
| ENST00000292644 | PSMC2 | 246.04 | -11.08 | 2.99 | -3.70 | 2.12E-04 | 6.41E-03 | 2629.43 | 3.95 | 1.19 | 3.31 | 0.001 | 0.034 |
| ENST00000544811 | PSMC2 | 33.44 | -22.98 | 3.03 | -7.59 | 3.18E-14 | 7.75E-12 | 466.02 | -0.45 | 0.49 | -0.92 | 0.359 | 0.999 |
| ENST00000524447 | PSMC3 | 14.45 | -21.84 | 3.03 | -7.21 | 5.51E-13 | 6.41E-11 | 266.20 | -0.05 | 0.39 | -0.13 | 0.899 | 1.000 |
| ENST00000409643 | PSMD1 | 27.39 | -22.56 | 3.03 | -7.45 | 9.23E-14 | 1.64E-11 | 3796.16 | -0.25 | 0.16 | -1.54 | 0.125 | 0.783 |
| ENST00000382671 | PSMD13 | 9.20 | -21.23 | 3.03 | -7.01 | 2.41E-12 | 1.90E-10 | 20.91 | 0.32 | 3.92 | 0.08 | 0.935 | 1.000 |
| ENST00000532097 | PSMD13 | 233.42 | -0.97 | 0.32 | -2.98 | 2.87E-03 | 5.53E-02 | 3589.90 | 0.09 | 0.16 | 0.54 | 0.587 | 1.000 |
| ENST00000417952 | PSMD2 | 19.54 | -7.42 | 1.03 | -7.23 | 4.74E-13 | 5.71E-11 | 17.01 | 1.13 | 1.02 | 1.11 | 0.267 | 0.954 |
| ENST00000435761 | PSMD2 | 20.51 | -22.31 | 3.03 | -7.37 | 1.72E-13 | 2.58E-11 | 252.59 | 0.05 | 0.58 | 0.09 | 0.928 | 1.000 |
| ENST00000445776 | PSMD4 | 13.56 | -21.74 | 3.03 | -7.18 | 6.93E-13 | 7.38E-11 | 57.25 | -0.18 | 0.63 | -0.28 | 0.782 | 1.000 |
| ENST00000476949 | PSMD5 | 3.35 | -4.88 | 1.70 | -2.88 | 4.01E-03 | 7.16E-02 | 17.00 | 1.55 | 2.12 | 0.73 | 0.464 | 1.000 |
| ENST00000543699 | PSMD9 | 9.09 | -21.21 | 3.03 | -7.00 | 2.51E-12 | 1.97E-10 | 97.74 | -0.58 | 0.62 | -0.93 | 0.352 | 0.994 |
| ENST00000544254 | PSMD9 | 10.39 | -6.51 | 1.16 | -5.62 | 1.90E-08 | 9.51E-07 | 204.74 | -0.62 | 0.47 | -1.32 | 0.188 | 0.881 |
| ENST00000559056 | PSME2 | 20.57 | -7.50 | 2.68 | -2.80 | 5.11E-03 | 8.59E-02 | 104.98 | 0.52 | 0.41 | 1.27 | 0.203 | 0.898 |
| ENST00000478731 | PSME4 | 9.17 | -1.74 | 0.66 | -2.63 | 8.60E-03 | 1.24E-01 | 27.12 | 0.48 | 0.64 | 0.76 | 0.450 | 1.000 |
| ENST00000438768 | PSMF1 | 29.99 | -3.88 | 1.49 | -2.61 | 9.15E-03 | 1.29E-01 | 342.09 | -1.95 | 0.94 | -2.09 | 0.037 | 0.449 |
| ENST00000236228 | PTBP2 | 20.21 | -1.90 | 0.51 | -3.70 | 2.13E-04 | 6.44E-03 | 494.09 | -0.49 | 0.33 | -1.50 | 0.134 | 0.801 |
| ENST00000483925 | PTCD3 | 8.11 | -20.64 | 3.03 | -6.81 | 9.64E-12 | 5.63E-10 | 22.80 | 0.41 | 0.57 | 0.72 | 0.471 | 1.000 |
| ENST00000338961 | PTGES2 | 44.48 | -1.04 | 0.36 | -2.85 | 4.42E-03 | 7.69E-02 | 517.00 | -0.12 | 0.17 | -0.71 | 0.477 | 1.000 |
| ENST00000407693 | PTGR1 | 15.08 | -7.05 | 2.60 | -2.71 | 6.77E-03 | 1.05E-01 | 96.55 | 0.79 | 2.33 | 0.34 | 0.735 | 1.000 |
| ENST00000393083 | PTN | 29.77 | -8.03 | 1.59 | -5.04 | 4.54E-07 | 2.09E-05 | 4088.75 | -0.16 | 0.22 | -0.73 | 0.463 | 1.000 |
| ENST00000372413 | PTPRF | 9.91 | -6.44 | 1.85 | -3.47 | 5.14E-04 | 1.37E-02 | 1176.80 | 1.58 | 1.74 | 0.91 | 0.364 | 0.999 |
| ENST00000527197 | PUF60 | 30.77 | -4.56 | 1.52 | -3.01 | 2.63E-03 | 5.19E-02 | 6396.34 | 0.07 | 0.50 | 0.14 | 0.885 | 1.000 |
| ENST00000356362 | PUS7 | 57.45 | -1.20 | 0.41 | -2.93 | 3.34E-03 | 6.24E-02 | 2520.70 | -0.03 | 0.14 | -0.21 | 0.834 | 1.000 |
| ENST00000478208 | PUS7 | 1.89 | -4.05 | 1.27 | -3.20 | 1.38E-03 | 3.09E-02 | 29.65 | 0.29 | 0.56 | 0.51 | 0.609 | 1.000 |
| ENST00000319792 | PVRL3 | 9.93 | -21.33 | 3.03 | -7.04 | 1.90E-12 | 1.59E-10 | 44.20 | 0.16 | 0.66 | 0.25 | 0.803 | 1.000 |
| ENST00000541166 | PWP1 | 21.67 | -5.46 | 1.90 | -2.87 | 4.07E-03 | 7.22E-02 | 3648.82 | 0.00 | 0.13 | -0.03 | 0.977 | 1.000 |
| ENST00000486126 | PWP2 | 4.19 | -5.20 | 1.66 | -3.14 | 1.69E-03 | 3.63E-02 | 19.04 | 0.09 | 0.68 | 0.14 | 0.891 | 1.000 |
| ENST00000425171 | PXDN | 12.55 | -6.79 | 1.05 | -6.49 | 8.70E-11 | 4.72E-09 | 322.80 | 0.60 | 0.23 | 2.58 | 0.010 | 0.206 |
| ENST00000530336 | PYGL | 26.57 | -4.40 | 1.29 | -3.40 | 6.69E-04 | 1.71E-02 | 1557.79 | 0.06 | 0.41 | 0.14 | 0.891 | 1.000 |
| ENST00000531889 | PYGL | 54.80 | -23.65 | 3.03 | -7.81 | 5.60E-15 | 2.01E-12 | 1537.07 | 0.43 | 0.26 | 1.64 | 0.100 | 0.722 |
| ENST00000532107 | PYGL | 20.74 | -6.36 | 2.33 | -2.72 | 6.43E-03 | 1.01E-01 | 106.58 | 0.03 | 0.43 | 0.07 | 0.945 | 1.000 |
| ENST00000553872 | PYGL | 10.04 | -6.47 | 1.38 | -4.69 | 2.79E-06 | 1.21E-04 | 771.72 | 0.14 | 0.24 | 0.60 | 0.551 | 1.000 |
| ENST00000567671 | RAB11A | 44.07 | -7.43 | 1.75 | -4.26 | 2.08E-05 | 8.12E-04 | 37.92 | -1.06 | 0.71 | -1.48 | 0.138 | 0.806 |
| ENST00000462680 | RAB13 | 26.15 | -1.82 | 0.65 | -2.78 | 5.47E-03 | 9.00E-02 | 703.47 | 0.41 | 0.42 | 0.97 | 0.332 | 0.987 |
| ENST00000484297 | RAB13 | 18.32 | -1.42 | 0.39 | -3.64 | 2.76E-04 | 8.08E-03 | 172.04 | -0.04 | 0.31 | -0.13 | 0.901 | 1.000 |
| ENST00000261263 | RAB21 | 127.93 | -1.37 | 0.38 | -3.62 | 2.93E-04 | 8.52E-03 | 4550.23 | -0.07 | 0.15 | -0.45 | 0.654 | 1.000 |
| ENST00000396696 | RAB2A | 3.67 | -4.37 | 1.08 | -4.03 | 5.58E-05 | 1.97E-03 | 14.62 | -1.17 | 1.11 | -1.05 | 0.293 | 0.967 |
| ENST00000415040 | RAB34 | 10.18 | -6.48 | 1.75 | -3.71 | 2.08E-04 | 6.30E-03 | 603.08 | 0.34 | 0.48 | 0.69 | 0.489 | 1.000 |
| ENST00000366690 | RAB4A | 10.17 | -3.86 | 1.05 | -3.68 | 2.36E-04 | 7.04E-03 | 3590.10 | 0.00 | 0.13 | -0.02 | 0.983 | 1.000 |
| ENST00000481981 | RAB4A | 3.69 | -5.01 | 1.52 | -3.29 | 1.02E-03 | 2.41E-02 | 3.64 | -1.42 | 1.52 | -0.93 | 0.351 | NA |
| ENST00000346213 | RAB5C | 40.73 | -7.31 | 2.42 | -3.02 | 2.53E-03 | 5.05E-02 | 4418.57 | 0.08 | 0.34 | 0.23 | 0.816 | 1.000 |
| ENST00000336083 | RAB6A | 13.36 | -2.08 | 0.76 | -2.75 | 5.91E-03 | 9.54E-02 | 5842.89 | -0.39 | 0.44 | -0.90 | 0.367 | 1.000 |
| ENST00000410061 | RAB6C | 40.49 | -0.93 | 0.33 | -2.83 | 4.72E-03 | 8.07E-02 | 128.01 | -0.73 | 0.29 | -2.54 | 0.011 | 0.220 |
| ENST00000493186 | RAB7A | 377.81 | -1.82 | 0.51 | -3.60 | 3.23E-04 | 9.24E-03 | 48.23 | 0.24 | 0.51 | 0.46 | 0.645 | 1.000 |
| ENST00000559006 | RAB8B | 5.85 | -5.68 | 1.78 | -3.18 | 1.45E-03 | 3.21E-02 | 14.36 | -0.23 | 0.91 | -0.25 | 0.800 | 1.000 |
| ENST00000485090 | RABGAP1 | 6.67 | -4.11 | 1.03 | -3.97 | 7.10E-05 | 2.44E-03 | 2.70 | -1.45 | 1.70 | -0.85 | 0.394 | NA |
| ENST00000465063 | RABL2B | 6.41 | -1.86 | 0.72 | -2.60 | 9.21E-03 | 1.30E-01 | 409.10 | -0.01 | 0.29 | -0.03 | 0.973 | 1.000 |
| ENST00000495499 | RAC1 | 108.10 | -2.28 | 0.36 | -6.33 | 2.48E-10 | 1.33E-08 | 302.40 | -0.08 | 0.20 | -0.41 | 0.682 | 1.000 |
| ENST00000546786 | RACGAP1 | 4.25 | -2.98 | 0.86 | -3.47 | 5.13E-04 | 1.37E-02 | 37.56 | -0.60 | 0.46 | -1.29 | 0.196 | 0.892 |
| ENST00000550149 | RACGAP1 | 36.00 | -3.78 | 1.08 | -3.48 | 4.92E-04 | 1.32E-02 | 29.98 | -0.04 | 0.76 | -0.05 | 0.957 | 1.000 |
| ENST00000520992 | RAD21 | 44.64 | -5.56 | 1.71 | -3.25 | 1.15E-03 | 2.65E-02 | 37.71 | 0.12 | 0.52 | 0.23 | 0.820 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000536346 | RAD51AP1 | 13.88 | -4.03 | 1.30 | -3.10 | 1.96E-03 | 4.09E-02 | 60.35 | -0.09 | 0.75 | -0.12 | 0.907 | 1.000 |
| ENST00000487270 | RAD51B | 1.83 | -3.33 | 1.15 | -2.90 | 3.72E-03 | 6.77E-02 | 179.91 | 0.72 | 0.71 | 1.01 | 0.314 | 0.980 |
| ENST00000371975 | RAD54L | 45.07 | -0.93 | 0.33 | -2.77 | 5.68E-03 | 9.26E-02 | 3673.52 | 0.22 | 0.47 | 0.47 | 0.641 | 1.000 |
| ENST00000005257 | RALA | 337.23 | -1.17 | 0.41 | -2.85 | 4.35E-03 | 7.62E-02 | 5861.06 | 0.13 | 0.13 | 1.05 | 0.293 | 0.967 |
| ENST00000392367 | RAN | 7.52 | -20.96 | 3.03 | -6.92 | 4.60E-12 | 3.05E-10 | 260.41 | 0.24 | 0.47 | 0.51 | 0.610 | 1.000 |
| ENST00000541630 | RAN | 137.42 | -24.88 | 3.03 | -8.22 | 2.03E-16 | 1.64E-13 | 46.70 | -0.19 | 2.41 | -0.08 | 0.935 | 1.000 |
| ENST00000331821 | RANBP1 | 91.56 | -2.22 | 0.74 | -3.00 | 2.72E-03 | 5.32E-02 | 3667.62 | -0.03 | 0.14 | -0.21 | 0.838 | 1.000 |
| ENST00000423859 | RANBP1 | 6.16 | -20.68 | 3.03 | -6.83 | 8.79E-12 | 5.21E-10 | 60.20 | -1.43 | 1.16 | -1.23 | 0.220 | 0.916 |
| ENST00000259569 | RANBP6 | 66.79 | -0.68 | 0.21 | -3.25 | 1.14E-03 | 2.65E-02 | 5828.08 | 0.00 | 0.12 | 0.03 | 0.973 | 1.000 |
| ENST00000413361 | RANP4 | 9.62 | -3.35 | 0.65 | -5.12 | 2.99E-07 | 1.40E-05 | 28.64 | -1.02 | 0.77 | -1.33 | 0.183 | 0.876 |
| ENST00000250559 | RAP1B | 5.67 | -4.41 | 1.07 | -4.14 | 3.46E-05 | 1.28E-03 | 958.16 | 0.39 | 0.45 | 0.87 | 0.387 | 1.000 |
| ENST00000544639 | RAP1B | 10.10 | -5.87 | 1.07 | -5.49 | 3.98E-08 | 1.97E-06 | 51.17 | -0.24 | 0.58 | -0.41 | 0.683 | 1.000 |
| ENST00000380158 | RAP1GDS1 | 8.44 | -21.11 | 3.03 | -6.97 | 3.18E-12 | 2.32E-10 | 20.15 | -1.02 | 1.36 | -0.75 | 0.455 | 1.000 |
| ENST00000505026 | RAPGEF2 | 4.52 | -2.97 | 0.93 | -3.20 | 1.38E-03 | 3.09E-02 | 78.12 | -0.58 | 0.36 | -1.61 | 0.107 | 0.742 |
| ENST00000518757 | RARS | 13.23 | -6.27 | 1.46 | -4.30 | 1.74E-05 | 6.82E-04 | 385.79 | 0.14 | 0.30 | 0.47 | 0.640 | 1.000 |
| ENST00000521939 | RARS | 26.87 | -22.65 | 3.03 | -7.48 | 7.32E-14 | 1.41E-11 | 39.90 | -0.16 | 0.56 | -0.28 | 0.780 | 1.000 |
| ENST00000369536 | RARS2 | 7.54 | -20.96 | 3.03 | -6.92 | 4.56E-12 | 3.03E-10 | 4741.31 | 0.02 | 0.17 | 0.09 | 0.930 | 1.000 |
| ENST00000334062 | RASA3 | 72.25 | -0.96 | 0.34 | -2.84 | 4.50E-03 | 7.79E-02 | 14690.10 | 0.03 | 0.15 | 0.23 | 0.821 | 1.000 |
| ENST00000405154 | RASSF8 | 23.81 | -6.53 | 1.95 | -3.35 | 8.00E-04 | 1.98E-02 | 2788.14 | 3.71 | 1.63 | 2.28 | 0.023 | 0.343 |
| ENST00000267163 | RB1 | 254.22 | -0.81 | 0.22 | -3.68 | 2.33E-04 | 6.96E-03 | 9444.87 | 0.02 | 0.17 | 0.10 | 0.920 | 1.000 |
| ENST00000458695 | RBBP4 | 6.77 | -20.78 | 3.03 | -6.86 | 6.93E-12 | 4.26E-10 | 10654.68 | -0.08 | 0.14 | -0.54 | 0.592 | 1.000 |
| ENST00000367164 | RBBP5 | 17.70 | -7.28 | 2.66 | -2.73 | 6.26E-03 | 9.96E-02 | 2273.36 | -0.07 | 0.27 | -0.27 | 0.787 | 1.000 |
| ENST00000373664 | RBL1 | 118.28 | -0.72 | 0.17 | -4.19 | 2.76E-05 | 1.05E-03 | 4020.04 | -0.29 | 0.23 | -1.28 | 0.201 | 0.896 |
| ENST00000496012 | RBM10 | 6.39 | -20.73 | 3.03 | -6.84 | 7.83E-12 | 4.75E-10 | 38.09 | 0.15 | 0.56 | 0.27 | 0.791 | 1.000 |
| ENST00000514361 | RBM14-RBM4 | 17.80 | -7.29 | 1.91 | -3.82 | 1.33E-04 | 4.25E-03 | 9.95 | -0.18 | 0.88 | -0.21 | 0.838 | 1.000 |
| ENST00000554256 | RBM23 | 7.49 | -20.95 | 3.03 | -6.92 | 4.67E-12 | 3.08E-10 | 5.43 | 0.05 | 1.63 | 0.03 | 0.975 | 1.000 |
| ENST00000449987 | RBM26 | 20.72 | -2.56 | 0.85 | -3.00 | 2.69E-03 | 5.26E-02 | 4082.23 | 0.05 | 0.15 | 0.31 | 0.756 | 1.000 |
| ENST00000403542 | RBM39 | 64.22 | -3.48 | 0.89 | -3.89 | 1.01E-04 | 3.33E-03 | 767.84 | -0.51 | 0.58 | -0.87 | 0.383 | 1.000 |
| ENST00000310092 | RBM4 | 20.66 | -4.35 | 1.63 | -2.67 | 7.66E-03 | 1.15E-01 | 326.56 | 0.28 | 0.21 | 1.33 | 0.183 | 0.877 |
| ENST00000408993 | RBM4 | 22.73 | -7.64 | 1.88 | -4.06 | 4.84E-05 | 1.73E-03 | 966.81 | 0.31 | 0.22 | 1.39 | 0.164 | 0.847 |
| ENST00000360475 | RBM42 | 12.32 | -21.62 | 3.03 | -7.14 | 9.31E-13 | 9.16E-11 | 1189.95 | -0.42 | 0.21 | -1.97 | 0.049 | 0.520 |
| ENST00000412742 | RCAN3 | 15.96 | -7.13 | 2.61 | -2.73 | 6.31E-03 | 1.00E-01 | 9.00 | 2.46 | 2.01 | 1.22 | 0.221 | 0.917 |
| ENST00000533898 | RCN1 | 40.52 | -8.47 | 2.12 | -3.99 | 6.48E-05 | 2.25E-03 | 2844.14 | 0.10 | 0.26 | 0.39 | 0.696 | 1.000 |
| ENST00000529774 | RDX | 16.55 | -7.18 | 1.12 | -6.39 | 1.71E-10 | 9.19E-09 | 13.18 | 0.27 | 1.05 | 0.26 | 0.795 | 1.000 |
| ENST00000444129 | RECQL | 251.35 | -0.78 | 0.20 | -3.89 | 1.02E-04 | 3.34E-03 | 5903.88 | 0.04 | 0.12 | 0.35 | 0.724 | 1.000 |
| ENST00000513339 | REEP5 | 8.26 | -21.07 | 3.03 | -6.96 | 3.49E-12 | 2.50E-10 | 64.70 | 0.88 | 0.60 | 1.48 | 0.138 | 0.807 |
| ENST00000201979 | REM1 | 13.39 | -1.24 | 0.47 | -2.65 | 8.05E-03 | 1.19E-01 | 6171.35 | -0.21 | 0.18 | -1.17 | 0.242 | 0.936 |
| ENST00000422377 | REV3L | 26.61 | -1.13 | 0.35 | -3.28 | 1.05E-03 | 2.47E-02 | 139.36 | -3.13 | 1.32 | -2.37 | 0.018 | 0.296 |
| ENST00000434425 | RFC3 | 15.67 | -7.10 | 2.69 | -2.64 | 8.38E-03 | 1.22E-01 | 390.95 | 0.79 | 0.56 | 1.40 | 0.160 | 0.843 |
| ENST00000454402 | RFC5 | 50.43 | -8.79 | 2.09 | -4.21 | 2.51E-05 | 9.65E-04 | 1884.26 | 0.13 | 0.22 | 0.59 | 0.558 | 1.000 |
| ENST00000464302 | RGS2 | 12.43 | -6.77 | 1.82 | -3.72 | 2.01E-04 | 6.11E-03 | 57.58 | 0.25 | 0.87 | 0.29 | 0.771 | 1.000 |
| ENST00000367906 | RGS4 | 18.26 | -5.75 | 2.09 | -2.75 | 6.01E-03 | 9.67E-02 | 254.24 | -0.20 | 0.31 | -0.63 | 0.526 | 1.000 |
| ENST00000527809 | RGS4 | 14.41 | -21.82 | 3.03 | -7.21 | 5.73E-13 | 6.60E-11 | 16.55 | -7.57 | 4.79 | -1.58 | 0.114 | 0.760 |
| ENST00000392837 | RIC8B | 28.48 | -1.53 | 0.54 | -2.81 | 4.91E-03 | 8.32E-02 | 1306.94 | -0.49 | 0.39 | -1.27 | 0.204 | 0.899 |
| ENST00000535839 | RLF | 31.74 | -8.12 | 2.70 | -3.01 | 2.64E-03 | 5.20E-02 | 830.66 | -0.58 | 0.83 | -0.70 | 0.484 | 1.000 |
| ENST00000283632 | RMND5A | 35.32 | -1.23 | 0.44 | -2.79 | 5.26E-03 | 8.78E-02 | 4292.24 | 1.00 | 0.67 | 1.50 | 0.133 | 0.799 |
| ENST00000336617 | RNASEH2B | 24.82 | -2.11 | 0.72 | -2.95 | 3.18E-03 | 6.00E-02 | 356.22 | 0.15 | 0.21 | 0.71 | 0.476 | 1.000 |
| ENST00000528220 | RNASEH2C | 76.05 | -4.09 | 1.50 | -2.72 | 6.54E-03 | 1.02E-01 | 606.42 | 0.00 | 0.34 | 0.01 | 0.993 | 1.000 |
| ENST00000263895 | RND3 | 10.62 | -21.42 | 3.03 | -7.07 | 1.53E-12 | 1.35E-10 | 6067.44 | -0.09 | 0.24 | -0.39 | 0.694 | 1.000 |
| ENST00000526549 | RNF121 | 6.47 | -20.75 | 3.03 | -6.85 | 7.54E-12 | 4.60E-10 | 93.85 | 0.08 | 0.33 | 0.25 | 0.803 | 1.000 |
| ENST00000493238 | RNF13 | 13.95 | -6.94 | 1.84 | -3.77 | 1.61E-04 | 5.04E-03 | 47.49 | 0.31 | 0.48 | 0.66 | 0.510 | 1.000 |
| ENST00000261593 | RNF138 | 29.68 | -1.17 | 0.31 | -3.71 | 2.04E-04 | 6.19E-03 | 4381.29 | 0.00 | 0.18 | 0.02 | 0.983 | 1.000 |
| ENST00000367510 | RNF2 | 90.54 | -1.32 | 0.48 | -2.74 | 6.16E-03 | 9.83E-02 | 3412.81 | -0.03 | 0.15 | -0.21 | 0.834 | 1.000 |
| ENST00000389120 | RNF20 | 331.62 | -0.55 | 0.21 | -2.64 | 8.41E-03 | 1.22E-01 | 9657.51 | 0.14 | 0.12 | 1.13 | 0.260 | 0.950 |
| ENST00000282003 | RNF219 | 70.52 | -1.53 | 0.32 | -4.78 | 1.76E-06 | 7.73E-05 | 2865.63 | 0.02 | 0.13 | 0.19 | 0.853 | 1.000 |
| ENST00000563909 | RNF40 | 8.92 | -21.19 | 3.03 | -6.99 | 2.65E-12 | 2.05E-10 | 67.84 | 0.09 | 0.43 | 0.22 | 0.824 | 1.000 |
| ENST00000492849 | RNPEP | 7.40 | -20.94 | 3.03 | -6.91 | 4.82E-12 | 3.15E-10 | 44.08 | 0.05 | 0.58 | 0.08 | 0.936 | 1.000 |
| ENST00000570051 | RNPS1 | 18.71 | -7.36 | 2.80 | -2.63 | 8.49E-03 | 1.23E-01 | 174.36 | -0.32 | 0.26 | -1.27 | 0.205 | 0.900 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000362512 | RNU12 | 65.29 | -1.49 | 0.30 | -4.97 | 6.83E-07 | 3.10E-05 | 5.05 | -0.32 | 1.41 | -0.23 | 0.819 | 1.000 |
| ENST00000399089 | ROCK2 | 28.70 | -21.46 | 3.03 | -7.09 | 1.35E-12 | 1.23E-10 | 177.02 | 0.58 | 0.66 | 0.87 | 0.385 | 1.000 |
| ENST00000567078 | RP11-1035H13.3.1 | 28.82 | -22.78 | 3.03 | -7.52 | 5.32E-14 | 1.13E-11 | 312.22 | -0.17 | 0.54 | -0.31 | 0.759 | 1.000 |
| ENST00000436697 | RP11-139H15.1.1 | 5.98 | -5.10 | 1.24 | -4.12 | 3.75E-05 | 1.38E-03 | 576.86 | 0.22 | 0.21 | 1.09 | 0.278 | 0.961 |
| ENST00000413059 | RP11-1A15.2.1 | 91.18 | -0.77 | 0.27 | -2.89 | 3.80E-03 | 6.88E-02 | 10.09 | -1.00 | 0.89 | -1.12 | 0.262 | 0.952 |
| ENST00000552100 | RP11-202G11.1.1 | 63.81 | -0.89 | 0.31 | -2.83 | 4.60E-03 | 7.91E-02 | 1.39 | 0.40 | 4.48 | 0.09 | 0.929 | NA |
| ENST00000569473 | RP11-217B1.2.1 | 47.10 | -2.69 | 0.91 | -2.97 | 2.95E-03 | 5.67E-02 | 32.41 | 0.79 | 0.69 | 1.14 | 0.255 | 0.947 |
| ENST00000496294 | RP11-234A1.1.1 | 977.69 | -1.09 | 0.30 | -3.63 | 2.84E-04 | 8.27E-03 | 562.84 | -0.01 | 0.19 | -0.06 | 0.950 | 1.000 |
| ENST00000558778 | RP11-323I15.2.1 | 84.76 | -1.33 | 0.30 | -4.49 | 7.12E-06 | 2.94E-04 | 12.95 | -0.43 | 0.93 | -0.46 | 0.645 | 1.000 |
| ENST00000510543 | RP11-323K3.1.1 | 11.90 | -1.29 | 0.47 | -2.75 | 6.05E-03 | 9.70E-02 | 3.14 | 1.36 | 2.42 | 0.56 | 0.573 | NA |
| ENST00000445455 | RP11-325E14.2.1 | 11.04 | -1.26 | 0.42 | -2.97 | 2.97E-03 | 5.69E-02 | 2.44 | -0.85 | 2.33 | -0.36 | 0.716 | NA |
| ENST00000438469 | RP11-325P15.2.1 | 32.82 | -0.98 | 0.29 | -3.38 | 7.13E-04 | 1.80E-02 | 43.29 | 0.22 | 0.43 | 0.51 | 0.610 | 1.000 |
| ENST00000562949 | RP11-343C2.8.1 | 7.78 | -3.24 | 1.18 | -2.74 | 6.20E-03 | 9.88E-02 | 36.49 | -0.13 | 0.83 | -0.15 | 0.878 | 1.000 |
| ENST00000521717 | RP11-359B20.1.1 | 3.99 | -2.54 | 0.93 | -2.74 | 6.14E-03 | 9.82E-02 | 8.41 | -1.61 | 1.17 | -1.38 | 0.169 | 0.854 |
| ENST00000309865 | RP11-368J21.1.1 | 110.61 | -0.82 | 0.20 | -4.05 | 5.15E-05 | 1.83E-03 | 792.30 | -0.34 | 0.16 | -2.20 | 0.028 | 0.388 |
| ENST00000441206 | RP11-36D19.5.1 | 85.57 | -1.26 | 0.24 | -5.27 | 1.37E-07 | 6.62E-06 | 17.86 | 0.80 | 0.81 | 0.98 | 0.325 | 0.985 |
| ENST00000446071 | RP11-373A9.1.1 | 60.14 | -1.33 | 0.33 | -4.10 | 4.22E-05 | 1.53E-03 | 21.10 | 0.10 | 0.61 | 0.16 | 0.875 | 1.000 |
| ENST00000299633 | RP11-382A20.3.1 | 14.09 | -2.12 | 0.73 | -2.91 | 3.67E-03 | 6.71E-02 | 7680.38 | -0.02 | 0.12 | -0.21 | 0.831 | 1.000 |
| ENST00000487533 | RP11-385J23.1.1 | 12.81 | -1.37 | 0.42 | -3.28 | 1.04E-03 | 2.46E-02 | 11.91 | -0.13 | 0.98 | -0.13 | 0.895 | 1.000 |
| ENST00000452964 | RP11-3J10.7.1 | 21.96 | -1.14 | 0.35 | -3.23 | 1.25E-03 | 2.86E-02 | 41.75 | 0.67 | 0.46 | 1.45 | 0.148 | 0.823 |
| ENST00000567372 | RP11-421N8.1.1 | 78.22 | -0.97 | 0.33 | -2.94 | 3.31E-03 | 6.21E-02 | 43.11 | 0.26 | 0.48 | 0.53 | 0.598 | 1.000 |
| ENST00000486001 | RP11-4K3__A.5.1 | 72.30 | -1.97 | 0.50 | -3.92 | 9.00E-05 | 3.03E-03 | 182.39 | -0.12 | 0.26 | -0.44 | 0.657 | 1.000 |
| ENST00000489251 | RP11-507E23.1.1 | 105.74 | -1.32 | 0.50 | -2.61 | 8.96E-03 | 1.28E-01 | 8.46 | -0.06 | 1.55 | -0.04 | 0.968 | 1.000 |
| ENST00000466718 | RP11-510I6.2.1 | 148.71 | -0.65 | 0.24 | -2.66 | 7.79E-03 | 1.16E-01 | 7.49 | -1.88 | 1.51 | -1.24 | 0.214 | 0.910 |
| ENST00000548656 | RP11-536C10.12.1 | 9.03 | -1.27 | 0.44 | -2.86 | 4.21E-03 | 7.42E-02 | 4.90 | 0.48 | 1.15 | 0.42 | 0.677 | 1.000 |
| ENST00000546580 | RP11-620J15.3.1 | 3.91 | -3.86 | 1.41 | -2.75 | 6.02E-03 | 9.67E-02 | 1270.82 | -0.19 | 0.19 | -1.00 | 0.316 | 0.980 |
| ENST00000443998 | RP11-632C17__A.1.1 | 61.89 | -1.44 | 0.49 | -2.92 | 3.54E-03 | 6.53E-02 | 2880.80 | -0.12 | 0.18 | -0.70 | 0.486 | 1.000 |
| ENST00000407054 | RP11-63K6.4.1 | 33.43 | -0.91 | 0.31 | -2.88 | 4.01E-03 | 7.15E-02 | 0.64 | 2.76 | 4.86 | 0.57 | 0.571 | NA |
| ENST00000502784 | RP11-65F13.1.1 | 69.53 | -1.41 | 0.27 | -5.19 | 2.08E-07 | 9.86E-06 | 79.42 | -0.19 | 0.42 | -0.44 | 0.659 | 1.000 |
| ENST00000426243 | RP11-753C18.7.1 | 52.20 | -2.12 | 0.55 | -3.86 | 1.13E-04 | 3.65E-03 | 8.22 | 0.11 | 1.04 | 0.11 | 0.916 | 1.000 |
| ENST00000569028 | RP11-80F22.9.1 | 2.81 | -4.63 | 1.77 | -2.61 | 8.94E-03 | 1.27E-01 | 204.20 | 0.32 | 1.11 | 0.29 | 0.772 | 1.000 |
| ENST00000405720 | RP1-292B18.1.1 | 86.39 | -0.99 | 0.30 | -3.33 | 8.68E-04 | 2.11E-02 | 80.76 | -0.68 | 0.53 | -1.27 | 0.204 | 0.899 |
| ENST00000396021 | RP13-178D16.2.1 | 1942.31 | -0.68 | 0.16 | -4.31 | 1.61E-05 | 6.37E-04 | 49.55 | 0.26 | 0.56 | 0.46 | 0.643 | 1.000 |
| ENST00000408001 | RP3-375P9.2.1 | 16.47 | -1.51 | 0.58 | -2.63 | 8.61E-03 | 1.24E-01 | 15.80 | 0.03 | 0.68 | 0.05 | 0.961 | 1.000 |
| ENST00000400299 | RP3-412A9.11.1 | 13.76 | -6.92 | 2.61 | -2.65 | 7.98E-03 | 1.18E-01 | 1387.72 | 0.11 | 0.39 | 0.28 | 0.780 | 1.000 |
| ENST00000546846 | RP3-432I18.1.1 | 7.80 | -2.39 | 0.75 | -3.18 | 1.47E-03 | 3.25E-02 | 1.53 | 1.23 | 4.27 | 0.29 | 0.774 | NA |
| ENST00000565336 | RP4-561L24.3.1 | 291.23 | -2.62 | 0.97 | -2.72 | 6.57E-03 | 1.03E-01 | 81.29 | -0.13 | 0.60 | -0.21 | 0.831 | 1.000 |
| ENST00000469566 | RP4-604K5.1.1 | 20.75 | -22.33 | 3.03 | -7.38 | 1.63E-13 | 2.48E-11 | 60.69 | -0.53 | 0.79 | -0.67 | 0.503 | 1.000 |
| ENST00000434910 | RP4-775C13.1.1 | 126.19 | -1.11 | 0.18 | -6.15 | 7.58E-10 | 3.99E-08 | 87.23 | -0.32 | 0.40 | -0.80 | 0.424 | 1.000 |
| ENST00000414855 | RP5-1166A24.1.1 | 12.87 | -1.12 | 0.43 | -2.64 | 8.29E-03 | 1.21E-01 | 7.58 | -0.61 | 1.02 | -0.60 | 0.546 | 1.000 |
| ENST00000422958 | RP5-827C21.1.1 | 19.66 | -2.01 | 0.57 | -3.54 | 4.07E-04 | 1.12E-02 | 9.43 | -0.80 | 1.00 | -0.80 | 0.422 | 1.000 |
| ENST00000396682 | RPA3 | 19.63 | -22.25 | 3.03 | -7.35 | 1.98E-13 | 2.90E-11 | 13.39 | 7.12 | 4.79 | 1.49 | 0.137 | 0.806 |
| ENST00000406109 | RPA3 | 33.35 | -22.97 | 3.03 | -7.59 | 3.25E-14 | 7.79E-12 | 19.24 | -0.65 | 0.64 | -1.02 | 0.308 | 0.979 |
| ENST00000547706 | RPAP3 | 6.78 | -2.86 | 0.73 | -3.90 | 9.70E-05 | 3.22E-03 | 159.05 | -0.48 | 0.46 | -1.05 | 0.296 | 0.970 |
| ENST00000490335 | RPL10A | 6.01 | -20.65 | 3.03 | -6.82 | 9.42E-12 | 5.52E-10 | 601.00 | -0.16 | 0.24 | -0.68 | 0.498 | 1.000 |
| ENST00000472730 | RPL10AP6 | 44.09 | -0.79 | 0.30 | -2.64 | 8.32E-03 | 1.21E-01 | 101.37 | -0.05 | 0.30 | -0.18 | 0.859 | 1.000 |
| ENST00000391857 | RPL13A | 18.41 | -20.52 | 3.03 | -6.78 | 1.22E-11 | 6.88E-10 | 106268.30 | -0.28 | 0.26 | -1.07 | 0.283 | 0.962 |
| ENST00000467825 | RPL13A | 14.74 | -7.02 | 1.78 | -3.94 | 8.22E-05 | 2.79E-03 | 13071.77 | 0.11 | 0.35 | 0.30 | 0.761 | 1.000 |
| ENST00000461368 | RPL14 | 131.68 | -1.09 | 0.42 | -2.58 | 9.89E-03 | 1.36E-01 | 99.55 | 0.07 | 0.32 | 0.21 | 0.833 | 1.000 |
| ENST00000418495 | RPL17 | 81.19 | -0.71 | 0.27 | -2.62 | 8.75E-03 | 1.25E-01 | 35889.99 | -0.19 | 0.13 | -1.42 | 0.157 | 0.839 |
| ENST00000546623 | RPL18 | 5.61 | -20.56 | 3.03 | -6.78 | 1.18E-11 | 6.66E-10 | 149.85 | 0.35 | 0.58 | 0.59 | 0.552 | 1.000 |
| ENST00000295830 | RPL22L1 | 68.14 | -4.46 | 1.48 | -3.02 | 2.53E-03 | 5.04E-02 | 3355.44 | -0.75 | 0.16 | -4.74 | 0.000 | 0.000 |
| ENST00000463836 | RPL22L1 | 40.84 | -23.24 | 3.03 | -7.68 | 1.61E-14 | 4.73E-12 | 2348.92 | -0.61 | 0.16 | -3.76 | 0.000 | 0.008 |
| ENST00000245857 | RPL23 | 442.06 | -11.35 | 1.67 | -6.77 | 1.25E-11 | 7.00E-10 | 898.83 | 0.28 | 3.89 | 0.07 | 0.942 | 1.000 |
| ENST00000419125 | RPL26P30 | 10.87 | -3.60 | 1.31 | -2.75 | 5.89E-03 | 9.54E-02 | 80.10 | -0.66 | 1.40 | -0.47 | 0.638 | 1.000 |
| ENST00000216146 | RPL3 | 104.43 | -5.36 | 1.00 | -5.36 | 8.27E-08 | 4.04E-06 | 123634.89 | -0.26 | 0.33 | -0.80 | 0.426 | 1.000 |
| ENST00000517489 | RPL30 | 7.15 | -20.87 | 3.03 | -6.89 | 5.59E-12 | 3.55E-10 | 273.48 | 0.15 | 0.28 | 0.52 | 0.604 | 1.000 |
| ENST00000518850 | RPL30 | 8.02 | -21.04 | 3.03 | -6.95 | 3.74E-12 | 2.61E-10 | 2923.33 | 1.83 | 0.77 | 2.38 | 0.017 | 0.289 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000441435 | RPL31 | 12.69 | -21.54 | 3.03 | -7.11 | 1.15E-12 | 1.08E-10 | 394.73 | 0.23 | 0.34 | 0.67 | 0.506 | 1.000 |
| ENST00000434963 | RPL32 | 6.56 | -20.74 | 3.03 | -6.84 | 7.66E-12 | 4.67E-10 | 57.63 | -0.06 | 0.58 | -0.11 | 0.915 | 1.000 |
| ENST00000394667 | RPL34 | 65.40 | -9.17 | 2.80 | -3.28 | 1.05E-03 | 2.47E-02 | 368.63 | 0.41 | 0.41 | 1.00 | 0.318 | 0.982 |
| ENST00000429437 | RPL35A | 10.10 | -21.35 | 3.03 | -7.05 | 1.79E-12 | 1.52E-10 | 7549.43 | -0.12 | 0.30 | -0.41 | 0.682 | 1.000 |
| ENST00000439255 | RPL35A | 4.07 | -5.17 | 1.78 | -2.91 | 3.64E-03 | 6.68E-02 | 3034.01 | 0.00 | 0.14 | -0.01 | 0.994 | 1.000 |
| ENST00000420712 | RPL37A | 22.78 | -4.70 | 1.67 | -2.82 | 4.82E-03 | 8.19E-02 | 108.30 | 0.26 | 0.34 | 0.77 | 0.440 | 1.000 |
| ENST00000448289 | RPL39P6 | 17.01 | -2.22 | 0.62 | -3.55 | 3.86E-04 | 1.07E-02 | 1.36 | 0.95 | 2.60 | 0.37 | 0.715 | NA |
| ENST00000315741 | RPL5 | 62.22 | -23.82 | 3.03 | -7.87 | 3.54E-15 | 1.53E-12 | 811.92 | -0.80 | 0.27 | -2.93 | 0.003 | 0.096 |
| ENST00000546368 | RPL6 | 15.71 | -1.87 | 0.60 | -3.14 | 1.67E-03 | 3.60E-02 | 2736.09 | -0.19 | 0.22 | -0.87 | 0.385 | 1.000 |
| ENST00000550238 | RPL6 | 14.40 | -1.47 | 0.48 | -3.09 | 2.02E-03 | 4.20E-02 | 522.47 | 0.13 | 0.40 | 0.33 | 0.738 | 1.000 |
| ENST00000315731 | RPL7A | 290.96 | -4.38 | 1.46 | -3.00 | 2.72E-03 | 5.31E-02 | 979.92 | -0.39 | 0.22 | -1.76 | 0.078 | 0.650 |
| ENST00000462348 | RPL7L1 | 17.66 | -4.12 | 1.05 | -3.92 | 9.01E-05 | 3.03E-03 | 174.92 | 0.50 | 0.34 | 1.48 | 0.140 | 0.810 |
| ENST00000527914 | RPL8 | 8.82 | -19.13 | 3.03 | -6.32 | 2.69E-10 | 1.44E-08 | 1617.41 | -0.42 | 0.19 | -2.28 | 0.023 | 0.344 |
| ENST00000528957 | RPL8 | 570.93 | -2.57 | 0.96 | -2.67 | 7.56E-03 | 1.14E-01 | 1844.38 | -0.81 | 0.73 | -1.11 | 0.269 | 0.955 |
| ENST00000529920 | RPL8 | 7.85 | -21.02 | 3.03 | -6.94 | 4.00E-12 | 2.74E-10 | 1831.12 | -0.02 | 0.22 | -0.11 | 0.916 | 1.000 |
| ENST00000550296 | RPLP0 | 26.32 | -22.07 | 3.03 | -7.29 | 3.12E-13 | 4.15E-11 | 29.15 | 0.46 | 0.61 | 0.75 | 0.451 | 1.000 |
| ENST00000373632 | RPN2 | 35.72 | -3.00 | 0.99 | -3.02 | 2.49E-03 | 4.98E-02 | 681.29 | 0.82 | 0.91 | 0.90 | 0.369 | 1.000 |
| ENST00000445193 | RPP14 | 8.81 | -2.60 | 0.72 | -3.62 | 2.98E-04 | 8.62E-03 | 175.63 | -1.02 | 0.25 | -4.15 | 0.000 | 0.002 |
| ENST00000474973 | RPS18 | 8.29 | -21.09 | 3.03 | -6.96 | 3.38E-12 | 2.43E-10 | 1066.15 | -0.08 | 0.21 | -0.40 | 0.691 | 1.000 |
| ENST00000479802 | RPS18 | 539.18 | -1.52 | 0.40 | -3.81 | 1.36E-04 | 4.33E-03 | 794.07 | -0.38 | 0.32 | -1.19 | 0.235 | 0.929 |
| ENST00000526586 | RPS2 | 7.48 | -6.04 | 1.39 | -4.35 | 1.34E-05 | 5.30E-04 | 2387.01 | -0.29 | 0.17 | -1.70 | 0.089 | 0.691 |
| ENST00000504293 | RPS23 | 249.10 | -2.37 | 0.61 | -3.89 | 9.87E-05 | 3.27E-03 | 6733.98 | -0.22 | 0.86 | -0.25 | 0.803 | 1.000 |
| ENST00000440692 | RPS24 | 48.44 | -8.73 | 1.49 | -5.88 | 4.21E-09 | 2.18E-07 | 564.10 | -0.88 | 2.54 | -0.34 | 0.730 | 1.000 |
| ENST00000532567 | RPS25 | 122.03 | -2.31 | 0.78 | -2.97 | 3.00E-03 | 5.73E-02 | 2993.69 | -0.50 | 0.32 | -1.57 | 0.118 | 0.767 |
| ENST00000477151 | RPS27 | 1.70 | -3.89 | 1.38 | -2.83 | 4.71E-03 | 8.06E-02 | 432.98 | -0.30 | 0.22 | -1.32 | 0.187 | 0.880 |
| ENST00000557367 | RPS29 | 29.22 | -1.50 | 0.57 | -2.64 | 8.19E-03 | 1.20E-01 | 298.71 | -0.48 | 0.31 | -1.57 | 0.117 | 0.766 |
| ENST00000528439 | RPS3 | 224.49 | -1.53 | 0.55 | -2.79 | 5.27E-03 | 8.79E-02 | 985.32 | -0.53 | 0.32 | -1.69 | 0.092 | 0.700 |
| ENST00000534440 | RPS3 | 39.79 | -8.45 | 1.88 | -4.50 | 6.95E-06 | 2.87E-04 | 15674.40 | 0.36 | 0.29 | 1.23 | 0.217 | 0.913 |
| ENST00000398541 | RPS4L.1 | 71.27 | -2.24 | 0.55 | -4.08 | 4.50E-05 | 1.62E-03 | 22.92 | -0.45 | 0.57 | -0.79 | 0.427 | 1.000 |
| ENST00000315377 | RPS6 | 121.64 | -24.73 | 3.03 | -8.17 | 3.04E-16 | 2.32E-13 | 68154.04 | -0.46 | 0.26 | -1.77 | 0.076 | 0.643 |
| ENST00000379565 | RPS6KA3 | 79.22 | -1.25 | 0.40 | -3.11 | 1.86E-03 | 3.92E-02 | 11260.09 | -0.14 | 0.20 | -0.72 | 0.472 | 1.000 |
| ENST00000304921 | RPS7 | 16.66 | -22.02 | 3.03 | -7.27 | 3.49E-13 | 4.52E-11 | 71895.56 | -0.20 | 0.15 | -1.32 | 0.186 | 0.880 |
| ENST00000396651 | RPS8 | 38.88 | -8.42 | 2.27 | -3.70 | 2.15E-04 | 6.49E-03 | 77806.61 | -0.20 | 0.20 | -1.01 | 0.313 | 0.980 |
| ENST00000474582 | RPS8 | 29.94 | -1.72 | 0.47 | -3.69 | 2.27E-04 | 6.80E-03 | 1965.07 | -1.09 | 0.54 | -2.01 | 0.045 | 0.496 |
| ENST00000391752 | RPS9 | 69.10 | -23.67 | 3.03 | -7.82 | 5.20E-15 | 1.97E-12 | 466.02 | -0.29 | 0.19 | -1.51 | 0.131 | 0.795 |
| ENST00000246043 | RRBP1 | 84.22 | -24.23 | 3.03 | -8.01 | 1.19E-15 | 7.03E-13 | 38852.53 | -0.01 | 0.20 | -0.07 | 0.944 | 1.000 |
| ENST00000300738 | RRM1 | 85.57 | -8.97 | 2.46 | -3.65 | 2.58E-04 | 7.60E-03 | 7225.34 | -0.19 | 0.37 | -0.51 | 0.612 | 1.000 |
| ENST00000485717 | RRM2 | 41.19 | -4.26 | 1.28 | -3.34 | 8.52E-04 | 2.09E-02 | 22.23 | -0.76 | 0.62 | -1.21 | 0.225 | 0.920 |
| ENST00000526324 | RSF1 | 5.67 | -20.57 | 3.03 | -6.79 | 1.14E-11 | 6.50E-10 | 229.14 | 0.64 | 0.46 | 1.38 | 0.168 | 0.853 |
| ENST00000394420 | RSPRY1 | 15.98 | -7.13 | 2.69 | -2.65 | 8.06E-03 | 1.19E-01 | 460.57 | -0.66 | 0.46 | -1.44 | 0.151 | 0.827 |
| ENST00000370128 | RTCD1 | 62.83 | -0.76 | 0.29 | -2.60 | 9.38E-03 | 1.31E-01 | 2909.48 | -0.27 | 0.24 | -1.09 | 0.274 | 0.959 |
| ENST00000255674 | RTTN | 22.85 | -1.30 | 0.45 | -2.87 | 4.06E-03 | 7.21E-02 | 6980.19 | -0.26 | 0.12 | -2.26 | 0.024 | 0.353 |
| ENST00000464873 | RUVBL1 | 45.55 | -6.92 | 1.20 | -5.76 | 8.34E-09 | 4.29E-07 | 559.13 | 0.16 | 0.19 | 0.85 | 0.397 | 1.000 |
| ENST00000221413 | RUVBL2 | 110.52 | -9.92 | 2.87 | -3.45 | 5.56E-04 | 1.47E-02 | 4601.23 | -0.07 | 0.15 | -0.47 | 0.639 | 1.000 |
| ENST00000368809 | S100A10 | 156.02 | -9.45 | 2.25 | -4.19 | 2.74E-05 | 1.05E-03 | 964.16 | 4.27 | 1.73 | 2.47 | 0.014 | 0.248 |
| ENST00000368704 | S100A16 | 8.84 | -5.67 | 1.98 | -2.87 | 4.16E-03 | 7.35E-02 | 141.48 | -0.73 | 0.39 | -1.88 | 0.060 | 0.572 |
| ENST00000354332 | S100A4 | 15.19 | -2.82 | 0.93 | -3.05 | 2.28E-03 | 4.63E-02 | 20.22 | -0.95 | 0.63 | -1.52 | 0.129 | 0.790 |
| ENST00000382298 | SACS | 181.30 | -0.66 | 0.23 | -2.92 | 3.50E-03 | 6.48E-02 | 1251.09 | -0.13 | 0.75 | -0.17 | 0.865 | 1.000 |
| ENST00000382533 | SAP18 | 158.21 | -0.95 | 0.36 | -2.64 | 8.41E-03 | 1.22E-01 | 5141.93 | 0.02 | 0.13 | 0.16 | 0.872 | 1.000 |
| ENST00000450573 | SAP18 | 20.10 | -1.86 | 0.47 | -3.98 | 7.01E-05 | 2.42E-03 | 13.90 | -0.28 | 0.97 | -0.29 | 0.771 | 1.000 |
| ENST00000467636 | SAP18 | 10.96 | -6.59 | 1.02 | -6.44 | 1.18E-10 | 6.37E-09 | 5.33 | -0.90 | 1.20 | -0.75 | 0.452 | 1.000 |
| ENST00000471009 | SAP18 | 16.94 | -2.57 | 0.50 | -5.13 | 2.83E-07 | 1.33E-05 | 253.64 | -0.20 | 0.31 | -0.64 | 0.525 | 1.000 |
| ENST00000296504 | SAP30 | 31.03 | -2.06 | 0.76 | -2.71 | 6.77E-03 | 1.05E-01 | 1869.23 | 0.27 | 0.26 | 1.04 | 0.299 | 0.972 |
| ENST00000373241 | SAR1A | 50.38 | -8.79 | 2.76 | -3.18 | 1.47E-03 | 3.25E-02 | 546.40 | 0.31 | 0.45 | 0.69 | 0.493 | 1.000 |
| ENST00000402673 | SAR1B | 87.12 | -1.85 | 0.69 | -2.69 | 7.11E-03 | 1.09E-01 | 4650.77 | 0.05 | 0.13 | 0.36 | 0.717 | 1.000 |
| ENST00000369923 | SARS | 8.36 | -6.20 | 1.51 | -4.12 | 3.85E-05 | 1.41E-03 | 440.05 | -0.04 | 0.51 | -0.09 | 0.930 | 1.000 |
| ENST00000547397 | SART3 | 27.84 | -7.93 | 1.95 | -4.06 | 4.91E-05 | 1.75E-03 | 337.45 | 0.34 | 0.28 | 1.22 | 0.223 | 0.917 |
| ENST00000462159 | SASS6 | 31.30 | -2.06 | 0.76 | -2.71 | 6.70E-03 | 1.04E-01 | 1320.27 | 0.02 | 0.29 | 0.07 | 0.948 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000269298 | SAT2 | 4.86 | -3.24 | 0.96 | -3.36 | 7.78E-04 | 1.93E-02 | 1892.48 | 0.64 | 0.38 | 1.71 | 0.088 | 0.686 |
| ENST00000246868 | SBDS | 324.00 | -0.95 | 0.20 | -4.69 | 2.71E-06 | 1.17E-04 | 3750.38 | 0.10 | 0.13 | 0.81 | 0.416 | 1.000 |
| ENST00000490953 | SBDS | 2.50 | -4.46 | 1.69 | -2.64 | 8.19E-03 | 1.20E-01 | 28.92 | 0.53 | 0.93 | 0.57 | 0.566 | 1.000 |
| ENST00000423610 | SC22CB-1E7.1.1 | 63.69 | -1.55 | 0.53 | -2.90 | 3.72E-03 | 6.77E-02 | 701.76 | -0.22 | 0.19 | -1.20 | 0.231 | 0.926 |
| ENST00000538629 | SCAMP1 | 66.10 | -1.02 | 0.27 | -3.76 | 1.70E-04 | 5.28E-03 | 1087.45 | 0.32 | 0.18 | 1.82 | 0.069 | 0.614 |
| ENST00000261693 | SCARB1 | 58.74 | -4.98 | 1.56 | -3.19 | 1.42E-03 | 3.16E-02 | 770.79 | -0.20 | 0.41 | -0.48 | 0.632 | 1.000 |
| ENST00000546215 | SCARB1 | 15.37 | -21.77 | 3.03 | -7.19 | 6.56E-13 | 7.15E-11 | 1399.67 | 0.07 | 0.16 | 0.42 | 0.675 | 1.000 |
| ENST00000370355 | SCD | 445.07 | -2.03 | 0.77 | -2.64 | 8.24E-03 | 1.20E-01 | 60909.09 | -0.05 | 0.12 | -0.44 | 0.660 | 1.000 |
| ENST00000487197 | SCLY | 2.20 | -3.59 | 1.15 | -3.12 | 1.81E-03 | 3.83E-02 | 39.11 | -1.09 | 0.47 | -2.33 | 0.020 | 0.318 |
| ENST00000402904 | SCMH1 | 19.58 | -2.12 | 0.41 | -5.13 | 2.90E-07 | 1.36E-05 | 485.01 | -0.71 | 0.50 | -1.43 | 0.152 | 0.830 |
| ENST00000255390 | SCO1 | 63.46 | -0.87 | 0.28 | -3.14 | 1.70E-03 | 3.65E-02 | 3999.24 | 0.18 | 0.21 | 0.83 | 0.408 | 1.000 |
| ENST00000502535 | SCOC | 8.20 | -21.06 | 3.03 | -6.95 | 3.62E-12 | 2.56E-10 | 148.40 | 1.54 | 0.89 | 1.73 | 0.083 | 0.669 |
| ENST00000409497 | SCRN1 | 58.08 | -8.99 | 2.37 | -3.79 | 1.51E-04 | 4.74E-03 | 29.06 | 0.09 | 0.80 | 0.11 | 0.912 | 1.000 |
| ENST00000416113 | SCRN1 | 29.24 | -22.78 | 3.03 | -7.52 | 5.32E-14 | 1.13E-11 | 67.10 | 0.44 | 0.77 | 0.57 | 0.566 | 1.000 |
| ENST00000395710 | SDAD1 | 107.05 | -0.85 | 0.29 | -2.93 | 3.41E-03 | 6.35E-02 | 141.84 | -0.16 | 0.46 | -0.35 | 0.725 | 1.000 |
| ENST00000504824 | SDHA | 6.69 | -20.76 | 3.03 | -6.85 | 7.41E-12 | 4.52E-10 | 309.17 | -0.64 | 0.44 | -1.46 | 0.145 | 0.819 |
| ENST00000558217 | SEC11A | 83.14 | -9.51 | 2.82 | -3.37 | 7.44E-04 | 1.86E-02 | 477.75 | -0.16 | 0.33 | -0.47 | 0.636 | 1.000 |
| ENST00000350697 | SEC13 | 73.86 | -9.34 | 1.97 | -4.73 | 2.23E-06 | 9.69E-05 | 1884.73 | -0.35 | 0.40 | -0.89 | 0.373 | 1.000 |
| ENST00000397101 | SEC13 | 14.76 | -7.02 | 2.20 | -3.19 | 1.42E-03 | 3.15E-02 | 243.99 | 0.24 | 0.28 | 0.86 | 0.389 | 1.000 |
| ENST00000262544 | SEC23B | 115.93 | -9.99 | 2.91 | -3.43 | 5.93E-04 | 1.54E-02 | 3412.55 | 0.22 | 0.17 | 1.27 | 0.204 | 0.899 |
| ENST00000369075 | SEC23IP | 129.54 | -0.64 | 0.25 | -2.58 | 9.94E-03 | 1.37E-01 | 8031.13 | 0.12 | 0.13 | 0.89 | 0.372 | 1.000 |
| ENST00000339365 | SEC24C | 51.32 | -4.30 | 0.72 | -5.95 | 2.73E-09 | 1.42E-07 | 1839.05 | -0.14 | 0.18 | -0.76 | 0.447 | 1.000 |
| ENST00000540668 | SEC24C | 9.05 | -20.22 | 3.03 | -6.68 | 2.45E-11 | 1.35E-09 | 71.61 | -0.14 | 0.34 | -0.42 | 0.672 | 1.000 |
| ENST00000379735 | SEC24D | 91.86 | -0.66 | 0.21 | -3.19 | 1.40E-03 | 3.12E-02 | 3437.81 | -0.22 | 0.26 | -0.82 | 0.413 | 1.000 |
| ENST00000503226 | SEC31A | 11.76 | -4.98 | 1.31 | -3.81 | 1.40E-04 | 4.43E-03 | 34.82 | 0.38 | 0.56 | 0.68 | 0.495 | 1.000 |
| ENST00000554744 | SEL1L | 6.44 | -5.82 | 1.72 | -3.39 | 6.87E-04 | 1.75E-02 | 23.69 | -0.54 | 0.57 | -0.95 | 0.344 | 0.991 |
| ENST00000557372 | SEL1L | 42.90 | -1.92 | 0.51 | -3.74 | 1.86E-04 | 5.74E-03 | 26.84 | -0.14 | 0.65 | -0.21 | 0.832 | 1.000 |
| ENST00000526049 | SELS.1 | 85.44 | -9.55 | 2.87 | -3.33 | 8.62E-04 | 2.10E-02 | 1370.20 | 0.36 | 0.28 | 1.29 | 0.197 | 0.893 |
| ENST00000448372 | SENP1 | 8.12 | -6.16 | 1.93 | -3.20 | 1.40E-03 | 3.12E-02 | 626.56 | 0.15 | 0.52 | 0.28 | 0.777 | 1.000 |
| ENST00000478753 | SEPHS2 | 25.60 | -1.53 | 0.57 | -2.68 | 7.47E-03 | 1.13E-01 | 1877.19 | 1.77 | 2.39 | 0.74 | 0.457 | 1.000 |
| ENST00000502584 | SEPT11 | 67.74 | -3.55 | 1.05 | -3.38 | 7.14E-04 | 1.81E-02 | 3790.87 | -0.04 | 0.16 | -0.26 | 0.798 | 1.000 |
| ENST00000510515 | SEPT11 | 16.24 | -21.99 | 3.03 | -7.26 | 3.78E-13 | 4.77E-11 | 53.77 | -0.17 | 0.69 | -0.25 | 0.803 | 1.000 |
| ENST00000360051 | SEPT2 | 37.89 | -23.15 | 3.03 | -7.65 | 2.06E-14 | 5.71E-12 | 535.54 | 0.06 | 1.45 | 0.04 | 0.965 | 1.000 |
| ENST00000428282 | SEPT2 | 6.51 | -20.72 | 3.03 | -6.84 | 7.98E-12 | 4.81E-10 | 18.82 | -0.32 | 0.69 | -0.46 | 0.648 | 1.000 |
| ENST00000361871 | SEPX1 | 17.84 | -2.51 | 0.94 | -2.67 | 7.67E-03 | 1.15E-01 | 1338.60 | -0.09 | 0.19 | -0.46 | 0.645 | 1.000 |
| ENST00000367102 | SERAC1 | 1.53 | -3.76 | 1.24 | -3.05 | 2.32E-03 | 4.70E-02 | 38.29 | 3.68 | 1.85 | 1.99 | 0.047 | 0.507 |
| ENST00000462814 | SERBP1 | 191.42 | -0.73 | 0.26 | -2.81 | 4.99E-03 | 8.43E-02 | 247.79 | -0.60 | 0.21 | -2.84 | 0.005 | 0.118 |
| ENST00000445816 | SERF2 | 7.91 | -21.03 | 3.03 | -6.94 | 3.91E-12 | 2.68E-10 | 11976.12 | 0.22 | 0.14 | 1.53 | 0.126 | 0.785 |
| ENST00000339697 | SERINC1 | 51.87 | -22.55 | 3.03 | -7.45 | 9.23E-14 | 1.64E-11 | 10686.05 | 0.23 | 0.13 | 1.80 | 0.072 | 0.625 |
| ENST00000479209 | SERP1 | 30.06 | -5.18 | 1.52 | -3.40 | 6.78E-04 | 1.73E-02 | 4155.62 | -0.78 | 0.53 | -1.47 | 0.142 | 0.815 |
| ENST00000467132 | SERPINA3 | 19.37 | -3.17 | 1.08 | -2.93 | 3.44E-03 | 6.38E-02 | 31143.46 | -0.05 | 0.15 | -0.34 | 0.730 | 1.000 |
| ENST00000422298 | SF1 | 13.66 | -21.76 | 3.03 | -7.19 | 6.64E-13 | 7.20E-11 | 55.22 | -0.28 | 0.68 | -0.41 | 0.684 | 1.000 |
| ENST00000489544 | SF1 | 246.98 | -0.75 | 0.28 | -2.68 | 7.41E-03 | 1.12E-01 | 678.29 | -0.37 | 0.23 | -1.63 | 0.102 | 0.730 |
| ENST00000215793 | SF3A1 | 78.52 | -8.85 | 2.30 | -3.85 | 1.20E-04 | 3.87E-03 | 2587.29 | -0.02 | 0.30 | -0.07 | 0.942 | 1.000 |
| ENST00000462258 | SF3A3 | 21.33 | -21.57 | 3.03 | -7.13 | 1.04E-12 | 9.89E-11 | 25.15 | -0.22 | 1.12 | -0.20 | 0.841 | 1.000 |
| ENST00000414963 | SF3B1 | 8.16 | -21.04 | 3.03 | -6.95 | 3.78E-12 | 2.63E-10 | 29.93 | -0.16 | 0.60 | -0.27 | 0.790 | 1.000 |
| ENST00000568291 | SF3B3 | 10.62 | -2.51 | 0.67 | -3.74 | 1.83E-04 | 5.66E-03 | 101.40 | -0.75 | 0.30 | -2.52 | 0.012 | 0.225 |
| ENST00000321442 | SFXN1 | 80.85 | -2.18 | 0.71 | -3.07 | 2.13E-03 | 4.39E-02 | 10801.34 | 0.02 | 0.11 | 0.19 | 0.852 | 1.000 |
| ENST00000502865 | SFXN1 | 13.92 | -21.79 | 3.03 | -7.20 | 6.24E-13 | 6.95E-11 | 44.40 | -0.18 | 0.65 | -0.28 | 0.781 | 1.000 |
| ENST00000224807 | SFXN3 | 7.68 | -20.99 | 3.03 | -6.93 | 4.30E-12 | 2.89E-10 | 10164.33 | 0.15 | 0.19 | 0.80 | 0.422 | 1.000 |
| ENST00000521435 | SGK3 | 6.50 | -3.74 | 1.05 | -3.57 | 3.50E-04 | 9.86E-03 | 54.74 | -0.45 | 0.52 | -0.87 | 0.386 | 1.000 |
| ENST00000557348 | SHMT2 | 38.53 | -8.40 | 2.80 | -3.00 | 2.67E-03 | 5.24E-02 | 9083.32 | -0.04 | 0.14 | -0.31 | 0.755 | 1.000 |
| ENST00000212015 | SIRT1 | 72.30 | -0.86 | 0.23 | -3.66 | 2.55E-04 | 7.53E-03 | 920.13 | -0.13 | 0.21 | -0.60 | 0.550 | 1.000 |
| ENST00000536038 | SIRT7 | 11.64 | -2.78 | 0.87 | -3.21 | 1.32E-03 | 2.98E-02 | 223.22 | 0.85 | 0.81 | 1.05 | 0.292 | 0.967 |
| ENST00000398452 | SKA1 | 56.25 | -1.84 | 0.68 | -2.70 | 6.84E-03 | 1.06E-01 | 281.80 | -0.12 | 0.46 | -0.26 | 0.791 | 1.000 |
| ENST00000494518 | SKA1 | 35.62 | -2.72 | 0.83 | -3.27 | 1.07E-03 | 2.52E-02 | 64.22 | 0.14 | 0.52 | 0.26 | 0.793 | 1.000 |
| ENST00000426052 | SKIL | 10.89 | -21.45 | 3.03 | -7.08 | 1.41E-12 | 1.26E-10 | 59.25 | -0.15 | 0.44 | -0.34 | 0.735 | 1.000 |
| ENST00000504997 | SKIV2L2 | 26.25 | -7.85 | 2.06 | -3.81 | 1.37E-04 | 4.34E-03 | 49.20 | -1.28 | 0.82 | -1.57 | 0.116 | 0.765 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000505565 | SKIV2L2 | 13.12 | -21.71 | 3.03 | -7.17 | 7.58E-13 | 7.89E-11 | 28.52 | 0.29 | 0.63 | 0.47 | 0.640 | 1.000 |
| ENST00000550061 | SLC11A2 | 5.85 | -3.90 | 0.99 | -3.96 | 7.50E-05 | 2.57E-03 | 80.56 | 0.18 | 0.74 | 0.24 | 0.809 | 1.000 |
| ENST00000547379 | SLC16A7 | 12.47 | -6.78 | 1.74 | -3.89 | 1.02E-04 | 3.34E-03 | 442.98 | -0.78 | 0.53 | -1.48 | 0.138 | 0.807 |
| ENST00000262352 | SLC1A1 | 41.95 | -1.13 | 0.43 | -2.63 | 8.47E-03 | 1.22E-01 | 4338.91 | 0.09 | 0.21 | 0.42 | 0.678 | 1.000 |
| ENST00000542575 | SLC1A5 | 40.87 | -8.49 | 2.78 | -3.06 | 2.23E-03 | 4.54E-02 | 361.86 | -4.23 | 1.50 | -2.81 | 0.005 | 0.125 |
| ENST00000521645 | SLC25A32 | 33.86 | -7.63 | 2.18 | -3.50 | 4.72E-04 | 1.27E-02 | 1381.36 | 0.14 | 0.14 | 0.98 | 0.329 | 0.985 |
| ENST00000341119 | SLC25A40 | 23.49 | -4.01 | 1.34 | -2.98 | 2.86E-03 | 5.53E-02 | 4305.15 | -0.09 | 0.12 | -0.73 | 0.467 | 1.000 |
| ENST00000483810 | SLC25A40 | 2.26 | -4.30 | 1.35 | -3.20 | 1.40E-03 | 3.12E-02 | 30.28 | -0.66 | 0.55 | -1.19 | 0.235 | 0.929 |
| ENST00000371731 | SLC29A1 | 8.65 | -21.14 | 3.03 | -6.98 | 2.95E-12 | 2.21E-10 | 1063.89 | -0.70 | 0.37 | -1.89 | 0.059 | 0.568 |
| ENST00000359271 | SLC2A10 | 6.01 | -1.51 | 0.57 | -2.65 | 7.99E-03 | 1.18E-01 | 2101.40 | -0.37 | 0.21 | -1.78 | 0.074 | 0.636 |
| ENST00000357650 | SLC30A7 | 19.01 | -21.78 | 3.03 | -7.20 | 6.24E-13 | 6.95E-11 | 212.90 | 0.11 | 0.25 | 0.44 | 0.658 | 1.000 |
| ENST00000374212 | SLC31A1 | 66.99 | -0.80 | 0.26 | -3.14 | 1.69E-03 | 3.64E-02 | 5277.09 | -0.02 | 0.12 | -0.16 | 0.874 | 1.000 |
| ENST00000529113 | SLC43A3 | 8.52 | -21.12 | 3.03 | -6.97 | 3.10E-12 | 2.28E-10 | 38.89 | -0.28 | 0.53 | -0.53 | 0.593 | 1.000 |
| ENST00000419036 | SLC4A7 | 23.21 | -7.67 | 2.68 | -2.86 | 4.27E-03 | 7.50E-02 | 14941.55 | -0.12 | 0.59 | -0.20 | 0.838 | 1.000 |
| ENST00000428179 | SLC4A7 | 18.84 | -5.25 | 1.62 | -3.25 | 1.16E-03 | 2.68E-02 | 31.14 | -0.57 | 0.76 | -0.74 | 0.458 | 1.000 |
| ENST00000238688 | SLIRP | 15.79 | -21.96 | 3.03 | -7.25 | 4.11E-13 | 5.13E-11 | 309.69 | 0.65 | 0.47 | 1.39 | 0.163 | 0.846 |
| ENST00000432750 | SLTM | 13.69 | -21.77 | 3.03 | -7.19 | 6.56E-13 | 7.15E-11 | 33.15 | 0.00 | 0.72 | 0.01 | 0.995 | 1.000 |
| ENST00000497088 | SLTM | 5.83 | -5.68 | 1.75 | -3.25 | 1.16E-03 | 2.68E-02 | 54.13 | 0.78 | 0.59 | 1.31 | 0.189 | 0.883 |
| ENST00000545279 | SMAD5 | 64.43 | -0.62 | 0.23 | -2.66 | 7.77E-03 | 1.16E-01 | 1337.57 | 1.80 | 0.25 | 7.32 | 0.000 | 0.000 |
| ENST00000371123 | SMARCA1 | 187.17 | -10.68 | 2.94 | -3.64 | 2.73E-04 | 8.03E-03 | 4990.29 | -0.15 | 1.13 | -0.14 | 0.892 | 1.000 |
| ENST00000349721 | SMARCA2 | 13.08 | -21.58 | 3.03 | -7.13 | 1.04E-12 | 9.89E-11 | 2359.01 | -0.01 | 0.15 | -0.09 | 0.927 | 1.000 |
| ENST00000359052 | SMARCAD1 | 101.20 | -1.24 | 0.45 | -2.76 | 5.78E-03 | 9.40E-02 | 1739.22 | 0.55 | 0.65 | 0.84 | 0.398 | 1.000 |
| ENST00000407422 | SMARCB1 | 29.34 | -1.93 | 0.57 | -3.37 | 7.62E-04 | 1.90E-02 | 5552.79 | -0.55 | 0.49 | -1.13 | 0.260 | 0.950 |
| ENST00000491967 | SMARCB1 | 12.19 | -21.61 | 3.03 | -7.14 | 9.65E-13 | 9.35E-11 | 219.90 | 0.00 | 0.46 | 0.00 | 0.998 | 1.000 |
| ENST00000483847 | SMARCC1 | 18.20 | -7.32 | 2.68 | -2.73 | 6.37E-03 | 1.01E-01 | 41.81 | -0.18 | 0.43 | -0.42 | 0.673 | 1.000 |
| ENST00000347471 | SMARCC2 | 23.44 | -22.48 | 3.03 | -7.42 | 1.13E-13 | 1.88E-11 | 302.12 | -1.40 | 0.56 | -2.51 | 0.012 | 0.229 |
| ENST00000412207 | SMARCE1P5 | 20.93 | -2.00 | 0.39 | -5.07 | 3.95E-07 | 1.83E-05 | 2.90 | -1.76 | 2.37 | -0.74 | 0.457 | NA |
| ENST00000374793 | SMC2 | 59.59 | -22.51 | 3.03 | -7.44 | 1.02E-13 | 1.74E-11 | 635.35 | -0.04 | 0.50 | -0.08 | 0.940 | 1.000 |
| ENST00000465563 | SMC4 | 20.22 | -7.47 | 1.00 | -7.46 | 8.89E-14 | 1.62E-11 | 25.20 | -0.35 | 1.01 | -0.34 | 0.731 | 1.000 |
| ENST00000472282 | SMC4 | 2.67 | -4.54 | 1.74 | -2.62 | 8.85E-03 | 1.26E-01 | 56.57 | 0.00 | 0.59 | 0.00 | 0.998 | 1.000 |
| ENST00000497203 | SMC4 | 14.06 | -2.73 | 0.56 | -4.88 | 1.05E-06 | 4.70E-05 | 107.22 | -0.16 | 0.47 | -0.34 | 0.737 | 1.000 |
| ENST00000361138 | SMC5 | 53.03 | -1.43 | 0.40 | -3.61 | 3.12E-04 | 8.97E-03 | 11901.38 | -0.02 | 0.15 | -0.12 | 0.907 | 1.000 |
| ENST00000351948 | SMC6 | 6.02 | -5.73 | 1.13 | -5.05 | 4.41E-07 | 2.04E-05 | 1132.03 | 0.18 | 0.69 | 0.26 | 0.794 | 1.000 |
| ENST00000448223 | SMC6 | 206.41 | -1.00 | 0.38 | -2.68 | 7.40E-03 | 1.12E-01 | 2120.00 | -0.11 | 0.35 | -0.33 | 0.745 | 1.000 |
| ENST00000320876 | SMCHD1 | 114.56 | -1.07 | 0.29 | -3.71 | 2.10E-04 | 6.35E-03 | 12297.54 | -0.14 | 0.14 | -0.99 | 0.320 | 0.983 |
| ENST00000433117 | SMCR7L | 18.65 | -7.35 | 2.70 | -2.73 | 6.39E-03 | 1.01E-01 | 283.96 | 0.15 | 0.84 | 0.17 | 0.862 | 1.000 |
| ENST00000345102 | SMEK2 | 17.06 | -7.23 | 2.09 | -3.46 | 5.48E-04 | 1.45E-02 | 5383.92 | 0.05 | 0.14 | 0.35 | 0.729 | 1.000 |
| ENST00000543872 | SMG8 | 8.41 | -21.09 | 3.03 | -6.96 | 3.38E-12 | 2.43E-10 | 5086.57 | -0.03 | 0.12 | -0.22 | 0.823 | 1.000 |
| ENST00000563830 | SNAP23 | 48.55 | -23.48 | 3.03 | -7.76 | 8.69E-15 | 2.87E-12 | 31.25 | -0.03 | 0.53 | -0.05 | 0.957 | 1.000 |
| ENST00000490458 | SNAP29 | 12.17 | -21.17 | 3.03 | -6.99 | 2.72E-12 | 2.07E-10 | 66.53 | -1.77 | 0.93 | -1.89 | 0.059 | 0.569 |
| ENST00000465900 | SND1 | 28.72 | -3.13 | 1.18 | -2.65 | 7.96E-03 | 1.18E-01 | 142.68 | 0.13 | 0.78 | 0.17 | 0.864 | 1.000 |
| ENST00000486037 | SND1 | 5.38 | -5.56 | 2.05 | -2.72 | 6.54E-03 | 1.02E-01 | 48.20 | 0.41 | 0.41 | 1.01 | 0.315 | 0.980 |
| ENST00000492840 | SND1 | 4.41 | -3.46 | 1.24 | -2.78 | 5.42E-03 | 8.96E-02 | 15.52 | -0.04 | 0.74 | -0.06 | 0.955 | 1.000 |
| ENST00000521399 | SNHG6 | 7.99 | -1.84 | 0.70 | -2.63 | 8.42E-03 | 1.22E-01 | 1462.76 | -0.37 | 0.23 | -1.60 | 0.111 | 0.752 |
| ENST00000384550 | SNORD20 | 54.77 | -1.66 | 0.50 | -3.35 | 7.98E-04 | 1.97E-02 | 114.59 | -0.43 | 0.38 | -1.12 | 0.261 | 0.952 |
| ENST00000384048 | SNORD37 | 7.04 | -2.25 | 0.58 | -3.86 | 1.15E-04 | 3.72E-03 | 21.60 | 0.13 | 0.66 | 0.20 | 0.839 | 1.000 |
| ENST00000390833 | SNORD67 | 21.85 | -2.73 | 0.85 | -3.20 | 1.38E-03 | 3.09E-02 | 13.83 | -0.94 | 0.73 | -1.30 | 0.195 | 0.891 |
| ENST00000386747 | SNORD83A | 21.36 | -1.72 | 0.56 | -3.06 | 2.19E-03 | 4.48E-02 | 270.35 | -0.03 | 0.22 | -0.14 | 0.889 | 1.000 |
| ENST00000263694 | SNRNP40 | 42.36 | -23.30 | 3.03 | -7.70 | 1.40E-14 | 4.22E-12 | 497.56 | -0.20 | 0.27 | -0.75 | 0.455 | 1.000 |
| ENST00000254193 | SNRPA1 | 24.02 | -4.14 | 1.00 | -4.12 | 3.71E-05 | 1.36E-03 | 1268.15 | 0.52 | 0.45 | 1.15 | 0.250 | 0.941 |
| ENST00000339610 | SNRPB | 52.84 | -7.70 | 1.86 | -4.13 | 3.59E-05 | 1.32E-03 | 5525.13 | -0.45 | 0.23 | -1.95 | 0.051 | 0.532 |
| ENST00000391932 | SNRPD2 | 18.71 | -4.63 | 1.06 | -4.38 | 1.18E-05 | 4.73E-04 | 331.93 | -0.25 | 0.20 | -1.25 | 0.212 | 0.908 |
| ENST00000468770 | SNRPD3 | 21.81 | -3.41 | 0.95 | -3.60 | 3.21E-04 | 9.17E-03 | 31.39 | -0.67 | 0.73 | -0.92 | 0.359 | 0.999 |
| ENST00000266735 | SNRPF | 338.07 | -0.84 | 0.19 | -4.38 | 1.17E-05 | 4.69E-04 | 4116.61 | -0.19 | 0.19 | -0.99 | 0.321 | 0.983 |
| ENST00000456025 | SNRPGP9 | 246.21 | -2.43 | 0.32 | -7.63 | 2.29E-14 | 6.15E-12 | 2.36 | 0.48 | 1.65 | 0.29 | 0.772 | NA |
| ENST00000567437 | SNUPN | 4.03 | -3.38 | 1.27 | -2.66 | 7.75E-03 | 1.16E-01 | 15.41 | 0.42 | 0.78 | 0.54 | 0.590 | 1.000 |
| ENST00000554324 | SNW1 | 12.78 | -6.81 | 2.30 | -2.97 | 3.02E-03 | 5.75E-02 | 41.09 | 0.47 | 0.74 | 0.64 | 0.524 | 1.000 |
| ENST00000554775 | SNW1 | 9.67 | -21.29 | 3.03 | -7.03 | 2.06E-12 | 1.68E-10 | 1465.08 | -1.00 | 3.64 | -0.28 | 0.783 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000559844 | SNX1 | 253.98 | -11.12 | 3.01 | -3.70 | 2.19E-04 | 6.60E-03 | 547.56 | -0.24 | 0.27 | -0.91 | 0.365 | 0.999 |
| ENST00000428135 | SNX13 | 18.89 | -4.85 | 1.38 | -3.50 | 4.63E-04 | 1.25E-02 | 2994.64 | 0.55 | 0.67 | 0.81 | 0.416 | 1.000 |
| ENST00000314673 | SNX14 | 13.86 | -21.77 | 3.03 | -7.19 | 6.58E-13 | 7.15E-11 | 932.33 | 0.01 | 0.52 | 0.01 | 0.991 | 1.000 |
| ENST00000511365 | SNX2 | 16.28 | -1.50 | 0.42 | -3.55 | 3.92E-04 | 1.09E-02 | 65.53 | -0.41 | 0.36 | -1.14 | 0.255 | 0.947 |
| ENST00000368838 | SNX27 | 9.26 | -21.24 | 3.03 | -7.01 | 2.37E-12 | 1.88E-10 | 52.64 | -0.29 | 0.47 | -0.60 | 0.548 | 1.000 |
| ENST00000426155 | SNX3 | 12.49 | -6.78 | 2.62 | -2.59 | 9.57E-03 | 1.33E-01 | 1096.03 | -0.44 | 0.49 | -0.90 | 0.367 | 1.000 |
| ENST00000536067 | SNX4 | 24.45 | -22.55 | 3.03 | -7.45 | 9.40E-14 | 1.64E-11 | 78.85 | -0.36 | 0.33 | -1.10 | 0.272 | 0.957 |
| ENST00000377759 | SNX5 | 42.30 | -23.29 | 3.03 | -7.69 | 1.42E-14 | 4.23E-12 | 75.98 | -0.20 | 0.66 | -0.30 | 0.761 | 1.000 |
| ENST00000381692 | SON | 7.96 | -21.04 | 3.03 | -6.94 | 3.82E-12 | 2.65E-10 | 4590.33 | 0.37 | 0.17 | 2.26 | 0.024 | 0.354 |
| ENST00000426016 | SOS1 | 45.44 | -1.11 | 0.30 | -3.66 | 2.48E-04 | 7.35E-03 | 262.32 | 5.07 | 1.88 | 2.70 | 0.007 | 0.159 |
| ENST00000528252 | SOX6 | 15.92 | -5.94 | 1.32 | -4.52 | 6.26E-06 | 2.60E-04 | 50.88 | 0.11 | 2.30 | 0.05 | 0.961 | 1.000 |
| ENST00000327443 | SP1 | 10.95 | -21.46 | 3.03 | -7.09 | 1.38E-12 | 1.25E-10 | 375.60 | 0.25 | 0.37 | 0.67 | 0.501 | 1.000 |
| ENST00000415673 | SP140L | 5.55 | -20.54 | 3.03 | -6.78 | 1.22E-11 | 6.84E-10 | 850.89 | 0.22 | 0.35 | 0.63 | 0.531 | 1.000 |
| ENST00000506500 | SPAG9 | 6.21 | -5.77 | 1.70 | -3.39 | 7.05E-04 | 1.79E-02 | 393.78 | 0.16 | 0.19 | 0.87 | 0.384 | 1.000 |
| ENST00000510283 | SPAG9 | 75.44 | -7.71 | 1.57 | -4.93 | 8.43E-07 | 3.81E-05 | 4354.25 | 0.58 | 0.48 | 1.21 | 0.227 | 0.923 |
| ENST00000358677 | SPATS2L | 26.14 | -22.15 | 3.03 | -7.32 | 2.53E-13 | 3.51E-11 | 262.41 | 3.24 | 2.45 | 1.32 | 0.186 | 0.880 |
| ENST00000530257 | SPCS2 | 52.64 | -8.85 | 2.00 | -4.42 | 9.80E-06 | 3.97E-04 | 105.46 | 0.27 | 0.60 | 0.45 | 0.656 | 1.000 |
| ENST00000437398 | SPECC1L | 237.24 | -0.66 | 0.25 | -2.60 | 9.30E-03 | 1.31E-01 | 384.48 | -0.15 | 0.20 | -0.72 | 0.472 | 1.000 |
| ENST00000216484 | SPTLC2 | 158.52 | -1.94 | 0.57 | -3.40 | 6.70E-04 | 1.71E-02 | 6617.59 | 0.05 | 0.12 | 0.43 | 0.668 | 1.000 |
| ENST00000557566 | SPTLC2 | 29.41 | -0.99 | 0.28 | -3.59 | 3.28E-04 | 9.34E-03 | 11.79 | -0.61 | 1.13 | -0.54 | 0.587 | 1.000 |
| ENST00000536336 | SPTY2D1 | 10.42 | -21.39 | 3.03 | -7.06 | 1.63E-12 | 1.41E-10 | 114.67 | -1.38 | 0.87 | -1.57 | 0.116 | 0.764 |
| ENST00000360718 | SQSTM1 | 7.15 | -20.88 | 3.03 | -6.89 | 5.47E-12 | 3.50E-10 | 2245.73 | -2.39 | 1.08 | -2.20 | 0.028 | 0.386 |
| ENST00000445403 | SRC | 4.25 | -4.60 | 1.41 | -3.27 | 1.09E-03 | 2.54E-02 | 9.43 | 6.62 | 2.07 | 3.20 | 0.001 | 0.047 |
| ENST00000265729 | SRI | 22.46 | -7.04 | 1.05 | -6.69 | 2.21E-11 | 1.22E-09 | 7532.86 | -0.01 | 0.17 | -0.06 | 0.956 | 1.000 |
| ENST00000486860 | SRI | 31.51 | -8.11 | 1.02 | -7.96 | 1.70E-15 | 9.13E-13 | 479.28 | 0.17 | 0.21 | 0.79 | 0.431 | 1.000 |
| ENST00000542536 | SRP68 | 14.02 | -20.67 | 3.03 | -6.83 | 8.79E-12 | 5.21E-10 | 1154.86 | -0.01 | 0.41 | -0.01 | 0.989 | 1.000 |
| ENST00000342756 | SRP72 | 204.84 | -0.79 | 0.19 | -4.11 | 3.99E-05 | 1.46E-03 | 12959.72 | 0.04 | 0.12 | 0.35 | 0.724 | 1.000 |
| ENST00000477925 | SRPK2 | 5.39 | -4.93 | 1.25 | -3.95 | 7.69E-05 | 2.63E-03 | 414.69 | -0.30 | 0.95 | -0.32 | 0.750 | 1.000 |
| ENST00000490543 | SRRM1 | 6.23 | -20.70 | 3.03 | -6.83 | 8.46E-12 | 5.06E-10 | 191.54 | -0.41 | 0.49 | -0.83 | 0.405 | 1.000 |
| ENST00000426911 | SRRM1P3 | 15.84 | -1.13 | 0.38 | -2.97 | 2.97E-03 | 5.69E-02 | 63.28 | -0.17 | 0.40 | -0.43 | 0.666 | 1.000 |
| ENST00000405432 | SRSF11 | 15.22 | -21.91 | 3.03 | -7.23 | 4.66E-13 | 5.63E-11 | 29.09 | -0.13 | 0.56 | -0.23 | 0.816 | 1.000 |
| ENST00000339436 | SRSF3 | 70.36 | -7.65 | 2.21 | -3.47 | 5.29E-04 | 1.41E-02 | 2536.63 | -0.16 | 0.18 | -0.91 | 0.365 | 0.999 |
| ENST00000546138 | SRSF4 | 9.13 | -21.21 | 3.03 | -7.00 | 2.51E-12 | 1.97E-10 | 197.54 | 0.31 | 0.73 | 0.42 | 0.675 | 1.000 |
| ENST00000244020 | SRSF6 | 135.82 | -10.22 | 2.91 | -3.51 | 4.54E-04 | 1.23E-02 | 39288.02 | -0.34 | 0.13 | -2.69 | 0.007 | 0.164 |
| ENST00000409276 | SRSF7 | 41.53 | -8.51 | 1.01 | -8.45 | 2.83E-17 | 2.90E-14 | 184.36 | 0.36 | 0.35 | 1.01 | 0.310 | 0.979 |
| ENST00000446327 | SRSF7 | 44.97 | -22.78 | 3.03 | -7.53 | 5.17E-14 | 1.11E-11 | 1103.29 | -0.02 | 0.20 | -0.11 | 0.909 | 1.000 |
| ENST00000548792 | SRSF9 | 25.82 | -1.59 | 0.46 | -3.43 | 5.99E-04 | 1.56E-02 | 6628.26 | 0.16 | 0.12 | 1.39 | 0.166 | 0.848 |
| ENST00000260956 | SSB | 110.26 | -24.60 | 3.03 | -8.13 | 4.38E-16 | 3.17E-13 | 4259.88 | -0.47 | 0.40 | -1.16 | 0.246 | 0.938 |
| ENST00000461708 | SSB | 13.43 | -6.88 | 2.61 | -2.63 | 8.49E-03 | 1.23E-01 | 887.63 | 0.79 | 0.91 | 0.87 | 0.385 | 1.000 |
| ENST00000473783 | SSBP1 | 21.51 | -2.25 | 0.85 | -2.64 | 8.19E-03 | 1.20E-01 | 36.56 | 0.06 | 0.85 | 0.06 | 0.949 | 1.000 |
| ENST00000474597 | SSR1 | 68.12 | -23.39 | 3.03 | -7.73 | 1.09E-14 | 3.48E-12 | 48.22 | -0.01 | 0.92 | -0.01 | 0.992 | 1.000 |
| ENST00000480176 | SSR2 | 7.28 | -20.89 | 3.03 | -6.89 | 5.42E-12 | 3.49E-10 | 259.52 | -0.46 | 0.23 | -2.00 | 0.046 | 0.502 |
| ENST00000486204 | SSR4 | 9.14 | -21.22 | 3.03 | -7.01 | 2.47E-12 | 1.94E-10 | 131.76 | -0.27 | 0.34 | -0.78 | 0.436 | 1.000 |
| ENST00000522430 | ST13P6 | 29.43 | -0.96 | 0.31 | -3.08 | 2.04E-03 | 4.24E-02 | 12.02 | 0.55 | 1.05 | 0.52 | 0.600 | 1.000 |
| ENST00000470519 | ST7L | 6.85 | -5.31 | 1.92 | -2.77 | 5.59E-03 | 9.15E-02 | 21.88 | 0.66 | 0.70 | 0.94 | 0.346 | 0.992 |
| ENST00000236698 | STAG1 | 9.26 | -21.24 | 3.03 | -7.01 | 2.37E-12 | 1.88E-10 | 2290.23 | 0.82 | 0.45 | 1.84 | 0.066 | 0.600 |
| ENST00000371145 | STAG2 | 33.43 | -22.20 | 3.03 | -7.33 | 2.23E-13 | 3.15E-11 | 649.50 | 0.56 | 0.74 | 0.76 | 0.448 | 1.000 |
| ENST00000456374 | STAG3L1 | 3.51 | -4.95 | 1.68 | -2.95 | 3.23E-03 | 6.07E-02 | 1283.15 | -0.12 | 0.15 | -0.81 | 0.416 | 1.000 |
| ENST00000463854 | STAM2 | 8.59 | -6.23 | 2.03 | -3.08 | 2.09E-03 | 4.31E-02 | 39.94 | -0.55 | 0.47 | -1.17 | 0.243 | 0.936 |
| ENST00000409465 | STAT1 | 117.65 | -9.43 | 2.41 | -3.91 | 9.22E-05 | 3.08E-03 | 809.96 | 0.22 | 0.40 | 0.55 | 0.585 | 1.000 |
| ENST00000404369 | STEAP1B | 1.45 | -3.65 | 1.21 | -3.03 | 2.46E-03 | 4.94E-02 | 24.04 | -3.04 | 2.02 | -1.51 | 0.132 | 0.796 |
| ENST00000360380 | STIL | 65.46 | -1.03 | 0.34 | -3.06 | 2.21E-03 | 4.51E-02 | 377.14 | 1.27 | 0.81 | 1.56 | 0.119 | 0.770 |
| ENST00000357865 | STMN1 | 69.85 | -23.98 | 3.03 | -7.92 | 2.33E-15 | 1.10E-12 | 11871.48 | -0.12 | 0.13 | -0.93 | 0.352 | 0.994 |
| ENST00000399728 | STMN1 | 112.45 | -8.80 | 2.54 | -3.47 | 5.28E-04 | 1.41E-02 | 5434.38 | -0.12 | 0.14 | -0.83 | 0.409 | 1.000 |
| ENST00000446334 | STMN1 | 69.81 | -8.32 | 3.03 | -2.75 | 5.99E-03 | 9.65E-02 | 231.53 | -0.15 | 0.26 | -0.58 | 0.561 | 1.000 |
| ENST00000538352 | STRAP | 17.30 | -7.25 | 2.74 | -2.64 | 8.25E-03 | 1.20E-01 | 4.26 | 2.09 | 1.54 | 1.35 | 0.176 | 0.866 |
| ENST00000486660 | STX4 | 4.35 | -2.22 | 0.86 | -2.58 | 9.95E-03 | 1.37E-01 | 42.63 | -0.12 | 0.52 | -0.23 | 0.818 | 1.000 |
| ENST00000481942 | STXBP1 | 10.35 | -21.39 | 3.03 | -7.06 | 1.66E-12 | 1.42E-10 | 24.05 | -1.08 | 0.59 | -1.84 | 0.066 | 0.602 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000370008 | STXBP3 | 117.35 | -1.14 | 0.43 | -2.66 | 7.89E-03 | 1.17E-01 | 3895.62 | 0.09 | 0.14 | 0.64 | 0.525 | 1.000 |
| ENST00000511175 | SUB1 | 104.89 | -9.85 | 1.96 | -5.03 | 5.02E-07 | 2.30E-05 | 111.00 | -0.81 | 0.75 | -1.08 | 0.279 | 0.961 |
| ENST00000393868 | SUCLG1 | 102.58 | -0.58 | 0.23 | -2.58 | 9.87E-03 | 1.36E-01 | 6434.29 | 0.01 | 0.17 | 0.04 | 0.965 | 1.000 |
| ENST00000371460 | SUPT3H | 5.08 | -4.27 | 1.09 | -3.93 | 8.60E-05 | 2.90E-03 | 46.65 | -0.08 | 0.45 | -0.17 | 0.866 | 1.000 |
| ENST00000225504 | SUPT4H1 | 202.11 | -1.08 | 0.20 | -5.32 | 1.07E-07 | 5.19E-06 | 9494.93 | 0.04 | 0.11 | 0.32 | 0.753 | 1.000 |
| ENST00000402194 | SUPT5H | 13.07 | -21.70 | 3.03 | -7.17 | 7.74E-13 | 7.99E-11 | 408.40 | 1.61 | 0.29 | 5.63 | 0.000 | 0.000 |
| ENST00000432763 | SUPT5H | 23.22 | -22.48 | 3.03 | -7.43 | 1.12E-13 | 1.87E-11 | 17944.30 | 0.03 | 0.19 | 0.15 | 0.884 | 1.000 |
| ENST00000354361 | SYF2 | 6.90 | -20.84 | 3.03 | -6.88 | 6.10E-12 | 3.82E-10 | 132.72 | 0.45 | 0.39 | 1.15 | 0.249 | 0.939 |
| ENST00000355238 | SYNCRIP | 192.33 | -10.72 | 1.57 | -6.82 | 8.99E-12 | 5.29E-10 | 25391.47 | -0.06 | 0.15 | -0.43 | 0.665 | 1.000 |
| ENST00000318801 | SYNGR1 | 20.59 | -3.03 | 0.81 | -3.73 | 1.95E-04 | 5.98E-03 | 1504.47 | -0.27 | 0.32 | -0.85 | 0.394 | 1.000 |
| ENST00000464029 | SYPL1 | 18.37 | -6.75 | 2.31 | -2.92 | 3.52E-03 | 6.50E-02 | 73.51 | -0.26 | 0.69 | -0.38 | 0.702 | 1.000 |
| ENST00000484651 | TACC3 | 26.90 | -6.10 | 1.95 | -3.13 | 1.78E-03 | 3.78E-02 | 3524.03 | -0.08 | 0.17 | -0.46 | 0.648 | 1.000 |
| ENST00000467021 | TADA1 | 7.36 | -6.02 | 1.74 | -3.46 | 5.47E-04 | 1.45E-02 | 1279.67 | 0.31 | 0.25 | 1.23 | 0.219 | 0.914 |
| ENST00000338366 | TAF13 | 95.59 | -0.82 | 0.24 | -3.46 | 5.35E-04 | 1.42E-02 | 2312.12 | 0.29 | 0.16 | 1.86 | 0.063 | 0.586 |
| ENST00000352967 | TAF1A | 5.61 | -20.56 | 3.03 | -6.78 | 1.18E-11 | 6.66E-10 | 12.01 | 1.88 | 0.84 | 2.23 | 0.026 | 0.369 |
| ENST00000369839 | TAF5 | 13.70 | -1.38 | 0.53 | -2.62 | 8.83E-03 | 1.26E-01 | 953.88 | -0.18 | 0.15 | -1.23 | 0.220 | 0.915 |
| ENST00000380818 | TAF9 | 39.91 | -8.45 | 1.23 | -6.89 | 5.42E-12 | 3.49E-10 | 776.77 | -0.03 | 0.26 | -0.14 | 0.893 | 1.000 |
| ENST00000532870 | TAGLN | 12.90 | -6.23 | 2.08 | -3.00 | 2.68E-03 | 5.25E-02 | 305.02 | 1.94 | 0.79 | 2.46 | 0.014 | 0.251 |
| ENST00000368096 | TAGLN2 | 228.99 | -25.60 | 3.03 | -8.46 | 2.71E-17 | 2.84E-14 | 26974.07 | -1.00 | 1.30 | -0.77 | 0.443 | 1.000 |
| ENST00000530119 | TALDO1 | 5.82 | -5.67 | 1.88 | -3.02 | 2.52E-03 | 5.02E-02 | 713.70 | 0.09 | 0.26 | 0.34 | 0.731 | 1.000 |
| ENST00000532685 | TALDO1 | 6.11 | -4.50 | 1.42 | -3.17 | 1.55E-03 | 3.38E-02 | 151.57 | 2.48 | 1.15 | 2.15 | 0.032 | 0.414 |
| ENST00000273037 | TAMM41 | 10.14 | -5.89 | 1.57 | -3.75 | 1.80E-04 | 5.56E-03 | 79.65 | 0.85 | 1.37 | 0.62 | 0.536 | 1.000 |
| ENST00000508361 | TARS | 36.78 | -3.81 | 1.27 | -3.00 | 2.68E-03 | 5.25E-02 | 595.07 | -0.61 | 0.41 | -1.49 | 0.137 | 0.806 |
| ENST00000541634 | TARS | 46.63 | -22.59 | 3.03 | -7.46 | 8.52E-14 | 1.59E-11 | 11.48 | 0.68 | 1.41 | 0.48 | 0.629 | 1.000 |
| ENST00000369054 | TARS2 | 15.78 | -21.94 | 3.03 | -7.25 | 4.27E-13 | 5.27E-11 | 76.20 | -1.24 | 1.64 | -0.75 | 0.451 | 1.000 |
| ENST00000225525 | TAX1BP3 | 9.86 | -21.32 | 3.03 | -7.04 | 1.94E-12 | 1.60E-10 | 4347.79 | 0.08 | 0.14 | 0.58 | 0.561 | 1.000 |
| ENST00000319106 | TBC1D15 | 49.88 | -23.52 | 3.03 | -7.77 | 7.80E-15 | 2.60E-12 | 31.47 | -0.65 | 0.50 | -1.30 | 0.194 | 0.891 |
| ENST00000546450 | TBC1D15 | 2.92 | -4.68 | 1.68 | -2.78 | 5.40E-03 | 8.93E-02 | 2282.52 | 0.06 | 0.13 | 0.50 | 0.616 | 1.000 |
| ENST00000486274 | TBC1D23 | 18.94 | -2.27 | 0.64 | -3.55 | 3.88E-04 | 1.08E-02 | 288.98 | 2.02 | 0.92 | 2.19 | 0.029 | 0.390 |
| ENST00000253692 | TBC1D5 | 69.70 | -1.31 | 0.41 | -3.16 | 1.56E-03 | 3.40E-02 | 9318.06 | 0.33 | 0.25 | 1.35 | 0.178 | 0.868 |
| ENST00000306388 | TBCA | 31.82 | -2.48 | 0.91 | -2.73 | 6.40E-03 | 1.01E-01 | 537.33 | 0.15 | 0.19 | 0.76 | 0.446 | 1.000 |
| ENST00000522370 | TBCA | 57.54 | -23.71 | 3.03 | -7.83 | 4.69E-15 | 1.84E-12 | 65.12 | 0.99 | 0.66 | 1.49 | 0.135 | 0.803 |
| ENST00000436520 | TBCAP1 | 101.07 | -1.27 | 0.31 | -4.11 | 3.91E-05 | 1.43E-03 | 228.49 | 0.05 | 0.29 | 0.16 | 0.875 | 1.000 |
| ENST00000331710 | TBK1 | 47.40 | -1.49 | 0.54 | -2.73 | 6.32E-03 | 1.00E-01 | 5631.42 | 0.09 | 0.12 | 0.76 | 0.449 | 1.000 |
| ENST00000430069 | TBL1XR1 | 167.12 | -1.15 | 0.42 | -2.73 | 6.25E-03 | 9.95E-02 | 4186.76 | -0.10 | 0.21 | -0.49 | 0.621 | 1.000 |
| ENST00000237264 | TBPL1 | 4.88 | -3.21 | 0.92 | -3.49 | 4.81E-04 | 1.30E-02 | 1130.88 | 0.37 | 0.16 | 2.36 | 0.018 | 0.302 |
| ENST00000521604 | TCEA1 | 31.93 | -8.13 | 1.97 | -4.12 | 3.74E-05 | 1.37E-03 | 4482.45 | -0.19 | 0.75 | -0.25 | 0.800 | 1.000 |
| ENST00000478245 | TCTN3 | 26.16 | -7.84 | 1.57 | -4.99 | 6.01E-07 | 2.75E-05 | 35.13 | 0.09 | 0.79 | 0.12 | 0.906 | 1.000 |
| ENST00000402696 | TF | 183.76 | -1.61 | 0.51 | -3.16 | 1.60E-03 | 3.48E-02 | 45659.52 | -0.10 | 0.24 | -0.44 | 0.662 | 1.000 |
| ENST00000467842 | TF | 30.73 | -5.71 | 1.31 | -4.37 | 1.24E-05 | 4.95E-04 | 3227.84 | 0.29 | 0.20 | 1.45 | 0.147 | 0.822 |
| ENST00000482271 | TF | 6.88 | -20.79 | 3.03 | -6.86 | 6.81E-12 | 4.20E-10 | 8409.39 | -0.14 | 0.12 | -1.12 | 0.263 | 0.952 |
| ENST00000373895 | TFAM | 44.13 | -3.68 | 1.13 | -3.27 | 1.09E-03 | 2.55E-02 | 98.29 | -0.31 | 0.37 | -0.84 | 0.400 | 1.000 |
| ENST00000544618 | TFB2M | 28.38 | -7.96 | 1.84 | -4.33 | 1.51E-05 | 5.99E-04 | 102.30 | 0.47 | 0.37 | 1.29 | 0.198 | 0.893 |
| ENST00000495310 | TFDP2 | 3.12 | -4.78 | 1.62 | -2.95 | 3.17E-03 | 5.98E-02 | 58.10 | -0.36 | 0.40 | -0.90 | 0.368 | 1.000 |
| ENST00000481389 | TFPI | 14.77 | -7.02 | 0.99 | -7.07 | 1.50E-12 | 1.33E-10 | 11.71 | -3.16 | 1.02 | -3.09 | 0.002 | 0.063 |
| ENST00000392396 | TFRC | 177.00 | -8.25 | 2.01 | -4.10 | 4.07E-05 | 1.48E-03 | 14482.73 | -0.85 | 0.66 | -1.29 | 0.198 | 0.893 |
| ENST00000535031 | TFRC | 69.76 | -23.73 | 3.03 | -7.84 | 4.44E-15 | 1.79E-12 | 48.19 | -0.97 | 2.33 | -0.42 | 0.676 | 1.000 |
| ENST00000536701 | TGM2 | 21.14 | -5.16 | 1.85 | -2.80 | 5.18E-03 | 8.69E-02 | 86.84 | -1.28 | 0.61 | -2.11 | 0.035 | 0.437 |
| ENST00000398263 | TGOLN2 | 27.73 | -22.72 | 3.03 | -7.50 | 6.16E-14 | 1.25E-11 | 14371.29 | 0.36 | 1.23 | 0.29 | 0.770 | 1.000 |
| ENST00000245838 | THOC2 | 105.91 | -0.72 | 0.23 | -3.12 | 1.80E-03 | 3.81E-02 | 5996.48 | -0.08 | 0.13 | -0.64 | 0.519 | 1.000 |
| ENST00000469141 | THRAP3 | 37.08 | -23.11 | 3.03 | -7.64 | 2.25E-14 | 6.08E-12 | 312.78 | 0.85 | 0.66 | 1.29 | 0.197 | 0.893 |
| ENST00000369087 | TIAL1 | 5.36 | -5.56 | 1.68 | -3.32 | 9.05E-04 | 2.19E-02 | 1636.45 | 0.02 | 0.32 | 0.08 | 0.940 | 1.000 |
| ENST00000472645 | TIMM17B | 4.58 | -4.71 | 1.77 | -2.66 | 7.88E-03 | 1.17E-01 | 61.28 | -0.46 | 1.66 | -0.28 | 0.783 | 1.000 |
| ENST00000264244 | TIMMDC1 | 50.84 | -22.55 | 3.03 | -7.45 | 9.36E-14 | 1.64E-11 | 426.27 | -0.60 | 1.58 | -0.38 | 0.702 | 1.000 |
| ENST00000456754 | TIMP1 | 14.82 | -3.71 | 1.05 | -3.53 | 4.19E-04 | 1.15E-02 | 14977.84 | 0.11 | 0.11 | 0.95 | 0.341 | 0.990 |
| ENST00000536189 | TIMP2 | 5.61 | -20.56 | 3.03 | -6.78 | 1.18E-11 | 6.66E-10 | 52.72 | 0.05 | 0.44 | 0.11 | 0.913 | 1.000 |
| ENST00000356107 | TJP1 | 13.14 | -21.71 | 3.03 | -7.17 | 7.53E-13 | 7.87E-11 | 1704.49 | 0.39 | 0.37 | 1.06 | 0.290 | 0.966 |
| ENST00000400007 | TJP1 | 29.30 | -8.01 | 2.74 | -2.93 | 3.43E-03 | 6.38E-02 | 6961.24 | -0.13 | 0.16 | -0.83 | 0.408 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000561307 | TJP1 | 12.30 | -6.76 | 2.59 | -2.60 | 9.19E-03 | 1.30E-01 | 14.87 | 0.08 | 0.70 | 0.11 | 0.914 | 1.000 |
| ENST00000535702 | TJP2 | 13.58 | -21.75 | 3.03 | -7.18 | 6.79E-13 | 7.32E-11 | 2720.66 | -0.17 | 0.32 | -0.53 | 0.593 | 1.000 |
| ENST00000423525 | TKT | 59.67 | -22.89 | 3.03 | -7.56 | 3.93E-14 | 9.01E-12 | 14820.32 | -1.50 | 0.69 | -2.19 | 0.029 | 0.392 |
| ENST00000450814 | TKT | 67.76 | -9.22 | 2.87 | -3.22 | 1.30E-03 | 2.95E-02 | 2276.18 | 0.17 | 1.07 | 0.16 | 0.874 | 1.000 |
| ENST00000376499 | TLE1 | 23.42 | -1.12 | 0.37 | -2.98 | 2.86E-03 | 5.52E-02 | 2921.44 | -0.04 | 0.16 | -0.23 | 0.819 | 1.000 |
| ENST00000443638 | TM9SF3 | 7.96 | -21.04 | 3.03 | -6.94 | 3.82E-12 | 2.65E-10 | 8.99 | -1.98 | 1.70 | -1.17 | 0.243 | 0.936 |
| ENST00000547798 | TMBIM6 | 20.36 | -5.47 | 1.65 | -3.31 | 9.43E-04 | 2.26E-02 | 56197.78 | 0.11 | 0.13 | 0.83 | 0.408 | 1.000 |
| ENST00000464650 | TMCO1 | 199.81 | -10.78 | 2.09 | -5.17 | 2.36E-07 | 1.11E-05 | 2370.69 | -3.42 | 1.46 | -2.35 | 0.019 | 0.306 |
| ENST00000555036 | TMED10 | 9.03 | -21.20 | 3.03 | -7.00 | 2.56E-12 | 2.00E-10 | 267.96 | 0.13 | 0.38 | 0.34 | 0.736 | 1.000 |
| ENST00000557670 | TMED10 | 102.06 | -24.49 | 3.03 | -8.09 | 5.89E-16 | 3.92E-13 | 91.13 | 0.34 | 0.31 | 1.10 | 0.270 | 0.955 |
| ENST00000370280 | TMED5 | 17.63 | -1.81 | 0.65 | -2.78 | 5.46E-03 | 8.99E-02 | 106.94 | -0.03 | 0.30 | -0.10 | 0.922 | 1.000 |
| ENST00000503010 | TMED7 | 26.02 | -22.63 | 3.03 | -7.48 | 7.69E-14 | 1.46E-11 | 49.34 | -1.14 | 0.47 | -2.42 | 0.015 | 0.270 |
| ENST00000282382 | TMED7-TICAM2 | 23.00 | -22.42 | 3.03 | -7.41 | 1.30E-13 | 2.05E-11 | 78.18 | 5.77 | 2.28 | 2.53 | 0.012 | 0.225 |
| ENST00000333314 | TMED7-TICAM2 | 16.87 | -22.04 | 3.03 | -7.28 | 3.32E-13 | 4.35E-11 | 1144.46 | -0.24 | 0.22 | -1.06 | 0.288 | 0.965 |
| ENST00000216468 | TMED8 | 36.92 | -0.69 | 0.26 | -2.60 | 9.25E-03 | 1.30E-01 | 11410.60 | -0.07 | 0.11 | -0.58 | 0.559 | 1.000 |
| ENST00000396668 | TMEM106B | 10.40 | -21.39 | 3.03 | -7.06 | 1.63E-12 | 1.41E-10 | 375.39 | -0.07 | 0.41 | -0.16 | 0.871 | 1.000 |
| ENST00000420833 | TMEM106B | 10.30 | -5.31 | 1.84 | -2.88 | 3.98E-03 | 7.12E-02 | 223.08 | -0.40 | 0.87 | -0.46 | 0.648 | 1.000 |
| ENST00000245046 | TMEM111 | 217.77 | -0.63 | 0.21 | -3.04 | 2.37E-03 | 4.77E-02 | 5484.50 | 0.14 | 0.12 | 1.24 | 0.216 | 0.912 |
| ENST00000340353 | TMEM135 | 16.46 | -3.47 | 1.20 | -2.89 | 3.79E-03 | 6.87E-02 | 2588.66 | 0.09 | 0.15 | 0.58 | 0.563 | 1.000 |
| ENST00000381787 | TMEM138 | 8.59 | -6.24 | 1.82 | -3.43 | 5.98E-04 | 1.56E-02 | 1123.30 | 0.17 | 0.21 | 0.81 | 0.415 | 1.000 |
| ENST00000511118 | TMEM167A | 7.60 | -2.95 | 0.96 | -3.06 | 2.23E-03 | 4.54E-02 | 16.11 | -0.03 | 0.69 | -0.05 | 0.962 | 1.000 |
| ENST00000338272 | TMEM167B | 26.13 | -1.08 | 0.35 | -3.05 | 2.29E-03 | 4.65E-02 | 5729.26 | 0.17 | 0.11 | 1.46 | 0.143 | 0.816 |
| ENST00000306480 | TMEM192 | 24.94 | -1.41 | 0.41 | -3.41 | 6.51E-04 | 1.67E-02 | 4379.54 | -0.02 | 0.13 | -0.15 | 0.883 | 1.000 |
| ENST00000377066 | TMEM2 | 11.30 | -3.67 | 1.09 | -3.38 | 7.33E-04 | 1.84E-02 | 3560.40 | 0.90 | 0.30 | 2.96 | 0.003 | 0.087 |
| ENST00000533723 | TMEM41B | 8.25 | -6.18 | 1.11 | -5.56 | 2.71E-08 | 1.35E-06 | 24.25 | -1.85 | 1.01 | -1.82 | 0.068 | 0.609 |
| ENST00000537333 | TMEM48 | 12.50 | -20.52 | 3.03 | -6.77 | 1.25E-11 | 6.98E-10 | 402.50 | 1.90 | 1.13 | 1.68 | 0.093 | 0.705 |
| ENST00000480937 | TMEM50A | 14.78 | -7.02 | 1.96 | -3.58 | 3.38E-04 | 9.57E-03 | 120.63 | 0.45 | 0.31 | 1.46 | 0.144 | 0.817 |
| ENST00000371341 | TMEM59 | 103.01 | -2.32 | 0.66 | -3.52 | 4.37E-04 | 1.19E-02 | 1554.46 | 0.42 | 0.35 | 1.21 | 0.226 | 0.922 |
| ENST00000257663 | TMEM60 | 24.53 | -1.26 | 0.33 | -3.82 | 1.33E-04 | 4.25E-03 | 1421.14 | -0.02 | 0.16 | -0.13 | 0.896 | 1.000 |
| ENST00000518174 | TMEM66 | 9.05 | -20.22 | 3.03 | -6.68 | 2.45E-11 | 1.35E-09 | 1129.51 | 0.33 | 0.22 | 1.52 | 0.128 | 0.789 |
| ENST00000523127 | TMEM66 | 10.65 | -21.43 | 3.03 | -7.07 | 1.50E-12 | 1.33E-10 | 96.72 | -0.68 | 0.60 | -1.13 | 0.256 | 0.948 |
| ENST00000545648 | TMEM66 | 21.81 | -6.40 | 2.39 | -2.67 | 7.49E-03 | 1.13E-01 | 327.57 | -0.12 | 0.26 | -0.45 | 0.655 | 1.000 |
| ENST00000452614 | TMEM87B | 13.27 | -6.87 | 2.59 | -2.65 | 8.03E-03 | 1.18E-01 | 41.02 | -0.39 | 0.48 | -0.82 | 0.415 | 1.000 |
| ENST00000367330 | TMEM9 | 11.40 | -3.19 | 1.22 | -2.62 | 8.74E-03 | 1.25E-01 | 644.44 | 0.89 | 0.68 | 1.31 | 0.190 | 0.884 |
| ENST00000394642 | TMEM98 | 20.09 | -7.46 | 1.89 | -3.95 | 7.94E-05 | 2.70E-03 | 521.34 | 0.23 | 0.34 | 0.68 | 0.499 | 1.000 |
| ENST00000548223 | TMPO | 15.90 | -5.06 | 1.76 | -2.88 | 3.99E-03 | 7.13E-02 | 48.61 | -0.02 | 0.53 | -0.04 | 0.968 | 1.000 |
| ENST00000233143 | TMSB10 | 3352.94 | -1.18 | 0.20 | -5.75 | 9.01E-09 | 4.60E-07 | 44877.28 | 0.04 | 0.17 | 0.25 | 0.803 | 1.000 |
| ENST00000533602 | TMX2 | 7.14 | -4.76 | 1.84 | -2.59 | 9.55E-03 | 1.33E-01 | 10.11 | -0.04 | 0.82 | -0.05 | 0.957 | 1.000 |
| ENST00000299608 | TMX3 | 313.29 | -0.66 | 0.25 | -2.69 | 7.18E-03 | 1.10E-01 | 14637.24 | 0.17 | 0.17 | 0.95 | 0.342 | 0.990 |
| ENST00000341037 | TNC | 303.00 | -4.76 | 1.33 | -3.57 | 3.61E-04 | 1.01E-02 | 45007.45 | 0.64 | 0.12 | 5.27 | 0.000 | 0.000 |
| ENST00000537320 | TNC | 54.70 | -23.64 | 3.03 | -7.81 | 5.65E-15 | 2.01E-12 | 15685.21 | 0.41 | 0.14 | 2.85 | 0.004 | 0.116 |
| ENST00000274456 | TNFAIP8 | 8.31 | -19.05 | 3.03 | -6.29 | 3.18E-10 | 1.69E-08 | 177.48 | -0.13 | 0.35 | -0.37 | 0.714 | 1.000 |
| ENST00000539372 | TNFRSF1A | 6.09 | -20.67 | 3.03 | -6.82 | 9.08E-12 | 5.34E-10 | 51.81 | 0.57 | 0.80 | 0.71 | 0.475 | 1.000 |
| ENST00000517989 | TNKS | 6.88 | -5.92 | 1.71 | -3.45 | 5.51E-04 | 1.46E-02 | 12.08 | -0.88 | 0.77 | -1.13 | 0.257 | 0.949 |
| ENST00000371627 | TNKS2 | 66.07 | -1.14 | 0.36 | -3.16 | 1.55E-03 | 3.39E-02 | 11391.83 | 0.05 | 0.15 | 0.32 | 0.751 | 1.000 |
| ENST00000508762 | TNPO1 | 16.22 | -7.15 | 1.99 | -3.59 | 3.30E-04 | 9.37E-03 | 20.78 | -0.99 | 0.73 | -1.36 | 0.173 | 0.860 |
| ENST00000509030 | TNPO1 | 106.53 | -9.87 | 1.98 | -4.99 | 5.98E-07 | 2.74E-05 | 94.16 | 0.70 | 0.52 | 1.35 | 0.178 | 0.867 |
| ENST00000366607 | TOMM20 | 551.02 | -0.97 | 0.18 | -5.23 | 1.69E-07 | 8.08E-06 | 53548.86 | -0.11 | 0.11 | -1.01 | 0.312 | 0.980 |
| ENST00000321301 | TOMM5 | 42.16 | -23.29 | 3.03 | -7.69 | 1.42E-14 | 4.23E-12 | 3356.85 | 0.01 | 0.14 | 0.06 | 0.949 | 1.000 |
| ENST00000544379 | TOMM5 | 16.27 | -21.79 | 3.03 | -7.20 | 6.18E-13 | 6.95E-11 | 26.23 | -0.23 | 1.11 | -0.21 | 0.837 | 1.000 |
| ENST00000284320 | TOMM70A | 187.02 | -0.60 | 0.22 | -2.77 | 5.63E-03 | 9.19E-02 | 9147.59 | -0.11 | 0.12 | -0.88 | 0.381 | 1.000 |
| ENST00000357601 | TOP2A | 42.38 | -0.93 | 0.35 | -2.69 | 7.25E-03 | 1.10E-01 | 48.94 | -1.15 | 0.79 | -1.45 | 0.146 | 0.821 |
| ENST00000379858 | TOPORS | 7.23 | -20.88 | 3.03 | -6.89 | 5.56E-12 | 3.54E-10 | 354.46 | -0.80 | 0.57 | -1.40 | 0.162 | 0.845 |
| ENST00000504937 | TP53 | 6.79 | -20.82 | 3.03 | -6.87 | 6.37E-12 | 3.96E-10 | 14.39 | 0.87 | 1.55 | 0.56 | 0.576 | 1.000 |
| ENST00000391878 | TP53BP2 | 112.92 | -0.63 | 0.20 | -3.07 | 2.14E-03 | 4.41E-02 | 5322.61 | -0.64 | 0.94 | -0.68 | 0.497 | 1.000 |
| ENST00000378292 | TPM2 | 31.23 | -1.48 | 0.47 | -3.13 | 1.75E-03 | 3.74E-02 | 4263.34 | 0.62 | 0.13 | 4.59 | 0.000 | 0.000 |
| ENST00000368533 | TPM3 | 55.54 | -23.66 | 3.03 | -7.82 | 5.35E-15 | 1.98E-12 | 4045.07 | 1.23 | 0.23 | 5.28 | 0.000 | 0.000 |
| ENST00000505010 | TPM3 | 19.52 | -22.25 | 3.03 | -7.35 | 2.01E-13 | 2.92E-11 | 16.08 | 0.14 | 0.76 | 0.19 | 0.853 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000309983 | TPMT | 40.25 | -1.22 | 0.31 | -3.96 | 7.55E-05 | 2.59E-03 | 5617.13 | 0.18 | 0.17 | 1.05 | 0.293 | 0.967 |
| ENST00000299427 | TPP1 | 11.05 | -21.47 | 3.03 | -7.09 | 1.34E-12 | 1.22E-10 | 84.44 | 0.98 | 1.64 | 0.60 | 0.551 | 1.000 |
| ENST00000376065 | TPP2 | 11.76 | -21.56 | 3.03 | -7.12 | 1.09E-12 | 1.03E-10 | 1595.85 | 0.01 | 0.31 | 0.04 | 0.971 | 1.000 |
| ENST00000367478 | TPR | 976.28 | -0.57 | 0.22 | -2.58 | 9.74E-03 | 1.35E-01 | 46756.99 | -0.10 | 0.14 | -0.71 | 0.476 | 1.000 |
| ENST00000379055 | TPT1 | 151.61 | -1.54 | 0.33 | -4.67 | 3.04E-06 | 1.31E-04 | 1400.52 | 1.23 | 0.92 | 1.33 | 0.183 | 0.876 |
| ENST00000300403 | TPX2 | 28.01 | -22.73 | 3.03 | -7.51 | 5.90E-14 | 1.21E-11 | 28135.97 | -0.23 | 0.12 | -2.02 | 0.044 | 0.490 |
| ENST00000297071 | TRA2A | 156.51 | -0.85 | 0.23 | -3.76 | 1.69E-04 | 5.23E-03 | 1904.22 | -0.03 | 0.16 | -0.20 | 0.844 | 1.000 |
| ENST00000414862 | TRA2B | 14.63 | -7.01 | 2.68 | -2.61 | 9.06E-03 | 1.29E-01 | 129.87 | -0.21 | 0.40 | -0.53 | 0.595 | 1.000 |
| ENST00000521425 | TRAM1 | 192.41 | -0.58 | 0.22 | -2.59 | 9.61E-03 | 1.33E-01 | 4608.18 | 0.19 | 0.30 | 0.65 | 0.513 | 1.000 |
| ENST00000434101 | TRAPPC4 | 5.54 | -20.54 | 3.03 | -6.78 | 1.22E-11 | 6.84E-10 | 29.07 | -0.29 | 0.84 | -0.34 | 0.732 | 1.000 |
| ENST00000528230 | TRAPPC4 | 111.28 | -24.61 | 3.03 | -8.13 | 4.24E-16 | 3.12E-13 | 114.30 | 0.93 | 0.86 | 1.08 | 0.281 | 0.961 |
| ENST00000354631 | TRDMT1 | 13.03 | -1.27 | 0.48 | -2.65 | 8.09E-03 | 1.19E-01 | 1297.93 | -0.40 | 0.53 | -0.76 | 0.445 | 1.000 |
| ENST00000343526 | TRIM24 | 69.29 | -1.23 | 0.41 | -3.00 | 2.66E-03 | 5.23E-02 | 1466.94 | 0.10 | 0.49 | 0.20 | 0.841 | 1.000 |
| ENST00000377194 | TRIM27 | 15.89 | -2.45 | 0.72 | -3.39 | 6.89E-04 | 1.75E-02 | 371.99 | 1.44 | 0.72 | 2.01 | 0.045 | 0.497 |
| ENST00000358465 | TRIM33 | 66.66 | -1.21 | 0.21 | -5.84 | 5.09E-09 | 2.63E-07 | 7154.76 | -0.18 | 0.14 | -1.29 | 0.196 | 0.892 |
| ENST00000267622 | TRIP11 | 137.52 | -0.80 | 0.30 | -2.65 | 8.00E-03 | 1.18E-01 | 5771.59 | 0.33 | 0.25 | 1.32 | 0.186 | 0.880 |
| ENST00000389045 | TRIP12 | 21.03 | -0.98 | 0.35 | -2.84 | 4.46E-03 | 7.74E-02 | 15977.47 | 0.09 | 0.20 | 0.44 | 0.658 | 1.000 |
| ENST00000261884 | TRIP4 | 73.60 | -0.65 | 0.23 | -2.79 | 5.20E-03 | 8.72E-02 | 1673.32 | -0.08 | 0.14 | -0.59 | 0.558 | 1.000 |
| ENST00000203001 | TRMT6 | 74.55 | -9.35 | 2.82 | -3.31 | 9.26E-04 | 2.23E-02 | 430.32 | -0.03 | 0.38 | -0.07 | 0.942 | 1.000 |
| ENST00000251607 | TRNT1 | 79.52 | -0.86 | 0.33 | -2.58 | 9.82E-03 | 1.36E-01 | 27.57 | 0.60 | 0.84 | 0.72 | 0.472 | 1.000 |
| ENST00000367441 | TROVE2 | 47.45 | -8.70 | 1.28 | -6.80 | 1.04E-11 | 5.99E-10 | 340.35 | 0.04 | 0.21 | 0.19 | 0.846 | 1.000 |
| ENST00000539834 | TRPC4AP | 26.46 | -7.86 | 2.86 | -2.75 | 6.02E-03 | 9.67E-02 | 336.33 | -0.03 | 0.30 | -0.10 | 0.917 | 1.000 |
| ENST00000361136 | TSC22D2 | 26.02 | -7.84 | 1.82 | -4.31 | 1.66E-05 | 6.54E-04 | 1874.38 | 0.22 | 0.27 | 0.82 | 0.411 | 1.000 |
| ENST00000543727 | TSFM | 5.58 | -5.62 | 1.74 | -3.22 | 1.26E-03 | 2.88E-02 | 204.05 | -0.19 | 0.43 | -0.44 | 0.662 | 1.000 |
| ENST00000476913 | TSNAX | 18.68 | -2.27 | 0.78 | -2.91 | 3.66E-03 | 6.69E-02 | 184.26 | 0.19 | 0.35 | 0.56 | 0.573 | 1.000 |
| ENST00000423920 | TSPAN3 | 12.84 | -21.68 | 3.03 | -7.16 | 8.11E-13 | 8.26E-11 | 54.41 | -3.40 | 1.96 | -1.73 | 0.083 | 0.667 |
| ENST00000243344 | TTC21B | 20.46 | -1.45 | 0.47 | -3.06 | 2.21E-03 | 4.51E-02 | 5053.31 | -0.02 | 0.17 | -0.12 | 0.906 | 1.000 |
| ENST00000397906 | TTC28 | 45.00 | -0.94 | 0.25 | -3.72 | 2.01E-04 | 6.13E-03 | 7605.64 | -0.19 | 0.12 | -1.63 | 0.103 | 0.731 |
| ENST00000317571 | TTC39C | 46.74 | -0.87 | 0.31 | -2.78 | 5.39E-03 | 8.92E-02 | 3380.75 | -0.25 | 0.34 | -0.72 | 0.474 | 1.000 |
| ENST00000301071 | TUBA1A | 592.55 | -4.93 | 1.83 | -2.69 | 7.09E-03 | 1.08E-01 | 1435.94 | 0.33 | 0.25 | 1.34 | 0.181 | 0.873 |
| ENST00000548363 | TUBA1A | 174.21 | -4.57 | 0.66 | -6.95 | 3.60E-12 | 2.56E-10 | 56.80 | -0.57 | 0.53 | -1.07 | 0.286 | 0.963 |
| ENST00000336023 | TUBA1B | 4316.56 | -2.17 | 0.58 | -3.74 | 1.87E-04 | 5.78E-03 | 1055.07 | -1.06 | 0.44 | -2.44 | 0.015 | 0.260 |
| ENST00000333628 | TUBB2A | 104.88 | -1.21 | 0.29 | -4.14 | 3.53E-05 | 1.30E-03 | 5625.72 | 0.19 | 0.18 | 1.05 | 0.294 | 0.969 |
| ENST00000510836 | TUSC3 | 44.19 | -23.33 | 3.03 | -7.71 | 1.27E-14 | 3.90E-12 | 74.46 | -0.04 | 0.62 | -0.06 | 0.951 | 1.000 |
| ENST00000547459 | TWF1 | 10.49 | -21.40 | 3.03 | -7.07 | 1.59E-12 | 1.39E-10 | 3848.39 | -1.47 | 0.88 | -1.67 | 0.095 | 0.712 |
| ENST00000374517 | TXN | 691.61 | -1.56 | 0.37 | -4.18 | 2.91E-05 | 1.10E-03 | 12208.84 | -0.08 | 0.17 | -0.45 | 0.651 | 1.000 |
| ENST00000379757 | TXNDC5 | 194.42 | -3.01 | 1.07 | -2.83 | 4.66E-03 | 7.98E-02 | 9576.94 | 0.45 | 0.70 | 0.64 | 0.520 | 1.000 |
| ENST00000425134 | TXNIP | 13.15 | -5.67 | 1.16 | -4.89 | 1.01E-06 | 4.53E-05 | 57.57 | 0.22 | 0.69 | 0.31 | 0.754 | 1.000 |
| ENST00000526580 | TXNRD1 | 20.06 | -7.46 | 1.10 | -6.79 | 1.10E-11 | 6.30E-10 | 170.53 | 0.38 | 0.37 | 1.03 | 0.305 | 0.977 |
| ENST00000540716 | TXNRD1 | 14.42 | -6.98 | 2.63 | -2.65 | 7.95E-03 | 1.18E-01 | 52.05 | 0.12 | 0.66 | 0.19 | 0.852 | 1.000 |
| ENST00000410344 | U2 | 63.85 | -1.48 | 0.45 | -3.29 | 1.01E-03 | 2.39E-02 | 3.66 | -0.41 | 1.57 | -0.26 | 0.793 | NA |
| ENST00000398137 | U2AF1 | 25.52 | -6.65 | 1.62 | -4.11 | 4.02E-05 | 1.46E-03 | 124.22 | 0.37 | 0.32 | 1.16 | 0.246 | 0.937 |
| ENST00000464750 | U2AF1 | 29.79 | -8.03 | 1.92 | -4.19 | 2.78E-05 | 1.05E-03 | 51.34 | -0.67 | 1.82 | -0.37 | 0.713 | 1.000 |
| ENST00000322244 | UBA6 | 103.25 | -0.85 | 0.31 | -2.75 | 6.00E-03 | 9.66E-02 | 7852.21 | -0.06 | 0.16 | -0.41 | 0.685 | 1.000 |
| ENST00000271877 | UBAP2L | 21.68 | -4.92 | 1.73 | -2.84 | 4.50E-03 | 7.79E-02 | 11945.38 | 0.66 | 0.61 | 1.08 | 0.279 | 0.961 |
| ENST00000395837 | UBB | 51.28 | -3.74 | 1.21 | -3.10 | 1.94E-03 | 4.05E-02 | 806.45 | -0.27 | 0.33 | -0.83 | 0.406 | 1.000 |
| ENST00000506787 | UBE2B | 10.36 | -2.70 | 0.90 | -2.99 | 2.80E-03 | 5.44E-02 | 47.10 | 0.87 | 0.56 | 1.56 | 0.119 | 0.771 |
| ENST00000445950 | UBE2K | 6.23 | -20.70 | 3.03 | -6.83 | 8.46E-12 | 5.06E-10 | 1926.99 | 0.20 | 0.22 | 0.90 | 0.366 | 1.000 |
| ENST00000487227 | UBE2T | 8.58 | -21.14 | 3.03 | -6.98 | 3.00E-12 | 2.24E-10 | 2164.82 | -0.68 | 0.63 | -1.08 | 0.280 | 0.961 |
| ENST00000371674 | UBE2V1 | 37.30 | -23.13 | 3.03 | -7.64 | 2.17E-14 | 5.96E-12 | 3026.33 | -0.17 | 1.11 | -0.15 | 0.878 | 1.000 |
| ENST00000483534 | UBE2V1 | 12.31 | -21.62 | 3.03 | -7.14 | 9.37E-13 | 9.16E-11 | 70.45 | 0.07 | 0.44 | 0.16 | 0.875 | 1.000 |
| ENST00000490555 | UBE2V1 | 75.38 | -24.05 | 3.03 | -7.95 | 1.94E-15 | 1.00E-12 | 246.05 | -0.10 | 0.26 | -0.39 | 0.699 | 1.000 |
| ENST00000565634 | UBFD1 | 8.16 | -21.04 | 3.03 | -6.95 | 3.78E-12 | 2.63E-10 | 101.86 | 0.68 | 0.36 | 1.88 | 0.060 | 0.573 |
| ENST00000565494 | UBL7 | 8.55 | -21.11 | 3.03 | -6.97 | 3.16E-12 | 2.31E-10 | 122.76 | 0.42 | 0.31 | 1.36 | 0.175 | 0.864 |
| ENST00000553674 | UBR7 | 56.74 | -8.96 | 1.11 | -8.09 | 6.05E-16 | 3.97E-13 | 87.78 | 1.77 | 1.23 | 1.44 | 0.151 | 0.828 |
| ENST00000272638 | UBXN4 | 153.10 | -0.84 | 0.25 | -3.42 | 6.26E-04 | 1.62E-02 | 14301.76 | -0.30 | 0.27 | -1.13 | 0.259 | 0.950 |
| ENST00000519246 | UBXN8 | 11.76 | -3.31 | 0.69 | -4.81 | 1.52E-06 | 6.71E-05 | 739.68 | 0.11 | 0.16 | 0.72 | 0.474 | 1.000 |
| ENST00000505232 | UCHL1 | 29.53 | -22.79 | 3.03 | -7.53 | 5.15E-14 | 1.11E-11 | 84.45 | -0.19 | 0.64 | -0.30 | 0.765 | 1.000 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000508768 | UCHL1 | 43.71 | -23.34 | 3.03 | -7.71 | 1.25E-14 | 3.84E-12 | 2053.37 | -0.19 | 0.14 | -1.38 | 0.168 | 0.854 |
| ENST00000510566 | UCHL1 | 7.15 | -2.13 | 0.72 | -2.98 | 2.92E-03 | 5.63E-02 | 211.98 | -0.48 | 0.22 | -2.17 | 0.030 | 0.403 |
| ENST00000420791 | UCHL5 | 33.32 | -6.51 | 1.74 | -3.73 | 1.88E-04 | 5.80E-03 | 207.94 | 0.18 | 0.64 | 0.27 | 0.784 | 1.000 |
| ENST00000367879 | UCK2 | 224.95 | -1.13 | 0.27 | -4.25 | 2.18E-05 | 8.45E-04 | 5367.39 | -0.20 | 0.17 | -1.22 | 0.221 | 0.917 |
| ENST00000372212 | UCK2 | 6.39 | -20.73 | 3.03 | -6.84 | 7.83E-12 | 4.75E-10 | 56.23 | -0.79 | 0.40 | -1.97 | 0.048 | 0.517 |
| ENST00000368003 | UFC1 | 77.81 | -1.57 | 0.49 | -3.19 | 1.40E-03 | 3.13E-02 | 9158.42 | 0.07 | 0.12 | 0.58 | 0.560 | 1.000 |
| ENST00000421968 | UFD1L | 16.32 | -22.00 | 3.03 | -7.27 | 3.67E-13 | 4.69E-11 | 15.60 | -0.26 | 0.87 | -0.30 | 0.762 | 1.000 |
| ENST00000369278 | UFL1 | 74.90 | -1.34 | 0.37 | -3.65 | 2.64E-04 | 7.78E-03 | 4403.84 | 0.01 | 0.14 | 0.10 | 0.917 | 1.000 |
| ENST00000239878 | UFM1 | 15.40 | -7.08 | 1.79 | -3.96 | 7.46E-05 | 2.56E-03 | 881.55 | -0.39 | 0.15 | -2.64 | 0.008 | 0.182 |
| ENST00000262952 | UHRF1 | 40.99 | -21.62 | 3.03 | -7.14 | 9.18E-13 | 9.12E-11 | 5917.83 | -0.01 | 0.32 | -0.03 | 0.973 | 1.000 |
| ENST00000455180 | UHRF1 | 7.99 | -21.03 | 3.03 | -6.94 | 3.88E-12 | 2.67E-10 | 843.16 | -2.41 | 1.13 | -2.14 | 0.033 | 0.420 |
| ENST00000279907 | UHRF1BP1L | 39.68 | -1.02 | 0.34 | -3.02 | 2.50E-03 | 5.01E-02 | 2694.74 | -1.07 | 1.50 | -0.71 | 0.477 | 1.000 |
| ENST00000242576 | UNG | 12.61 | -6.79 | 2.60 | -2.61 | 9.12E-03 | 1.29E-01 | 750.82 | -0.06 | 0.81 | -0.07 | 0.940 | 1.000 |
| ENST00000356352 | UPF2 | 75.62 | -0.80 | 0.22 | -3.57 | 3.51E-04 | 9.87E-03 | 962.26 | -3.04 | 2.37 | -1.28 | 0.200 | 0.895 |
| ENST00000417464 | UPP1 | 7.76 | -20.99 | 3.03 | -6.93 | 4.21E-12 | 2.85E-10 | 31.89 | -0.49 | 0.52 | -0.95 | 0.344 | 0.991 |
| ENST00000429491 | UPP1 | 8.67 | -21.15 | 3.03 | -6.98 | 2.92E-12 | 2.20E-10 | 1849.79 | 0.20 | 0.20 | 1.02 | 0.309 | 0.979 |
| ENST00000304863 | UQCRFS1 | 252.20 | -0.74 | 0.25 | -2.93 | 3.42E-03 | 6.36E-02 | 5908.79 | -0.01 | 0.13 | -0.09 | 0.928 | 1.000 |
| ENST00000496429 | UQCRQ | 28.44 | -7.96 | 2.73 | -2.92 | 3.53E-03 | 6.52E-02 | 289.80 | 0.23 | 0.26 | 0.88 | 0.380 | 1.000 |
| ENST00000369815 | USMG5 | 36.37 | -7.74 | 2.39 | -3.24 | 1.19E-03 | 2.74E-02 | 680.19 | 0.31 | 0.20 | 1.55 | 0.122 | 0.777 |
| ENST00000218348 | USP11 | 54.93 | -8.91 | 2.58 | -3.46 | 5.44E-04 | 1.44E-02 | 888.88 | -0.03 | 0.67 | -0.04 | 0.969 | 1.000 |
| ENST00000261601 | USP14 | 327.11 | -1.76 | 0.44 | -3.97 | 7.28E-05 | 2.50E-03 | 3516.18 | 0.47 | 0.41 | 1.14 | 0.253 | 0.945 |
| ENST00000547317 | USP15 | 12.17 | -21.17 | 3.03 | -6.99 | 2.72E-12 | 2.07E-10 | 41.11 | -0.23 | 0.45 | -0.51 | 0.610 | 1.000 |
| ENST00000434032 | USP19 | 12.48 | -21.64 | 3.03 | -7.15 | 8.94E-13 | 8.95E-11 | 5361.58 | 0.79 | 0.33 | 2.38 | 0.017 | 0.290 |
| ENST00000261497 | USP22 | 33.44 | -8.20 | 2.74 | -2.99 | 2.76E-03 | 5.38E-02 | 632.22 | -1.28 | 0.27 | -4.77 | 0.000 | 0.000 |
| ENST00000559192 | USP3 | 53.78 | -2.35 | 0.54 | -4.36 | 1.30E-05 | 5.18E-04 | 2044.74 | 0.25 | 0.30 | 0.83 | 0.408 | 1.000 |
| ENST00000527733 | USP47 | 6.77 | -20.78 | 3.03 | -6.86 | 6.93E-12 | 4.26E-10 | 262.07 | 0.41 | 0.98 | 0.42 | 0.677 | 1.000 |
| ENST00000567329 | USP7 | 2.83 | -4.63 | 1.37 | -3.37 | 7.52E-04 | 1.88E-02 | 39.67 | -0.83 | 0.56 | -1.48 | 0.138 | 0.807 |
| ENST00000307179 | USP8 | 8.99 | -21.19 | 3.03 | -7.00 | 2.62E-12 | 2.03E-10 | 252.23 | -0.11 | 0.24 | -0.48 | 0.633 | 1.000 |
| ENST00000378308 | USP9X | 6.51 | -5.84 | 1.02 | -5.70 | 1.18E-08 | 6.01E-07 | 14753.68 | 0.05 | 0.14 | 0.33 | 0.744 | 1.000 |
| ENST00000296792 | UTP15 | 47.92 | -2.02 | 0.38 | -5.27 | 1.39E-07 | 6.70E-06 | 1289.87 | 0.56 | 0.56 | 1.00 | 0.315 | 0.980 |
| ENST00000508506 | UTP18 | 26.31 | -22.65 | 3.03 | -7.48 | 7.35E-14 | 1.41E-11 | 4216.22 | -0.07 | 0.12 | -0.59 | 0.552 | 1.000 |
| ENST00000261637 | UTP20 | 217.29 | -1.01 | 0.17 | -5.83 | 5.66E-09 | 2.92E-07 | 10208.78 | -0.07 | 0.14 | -0.50 | 0.618 | 1.000 |
| ENST00000484661 | UTP6 | 32.03 | -22.91 | 3.03 | -7.57 | 3.75E-14 | 8.75E-12 | 213.01 | -0.37 | 0.28 | -1.35 | 0.176 | 0.865 |
| ENST00000409501 | UXS1 | 31.74 | -5.14 | 1.85 | -2.78 | 5.36E-03 | 8.88E-02 | 3433.02 | 0.15 | 0.20 | 0.74 | 0.457 | 1.000 |
| ENST00000262640 | VAMP7 | 7.67 | -20.95 | 3.03 | -6.92 | 4.64E-12 | 3.07E-10 | 1897.70 | 1.44 | 0.68 | 2.13 | 0.033 | 0.424 |
| ENST00000265619 | VAPB | 36.08 | -3.34 | 1.26 | -2.65 | 8.10E-03 | 1.19E-01 | 288.86 | 0.26 | 0.37 | 0.71 | 0.479 | 1.000 |
| ENST00000474643 | VARS | 18.72 | -7.36 | 1.83 | -4.03 | 5.52E-05 | 1.95E-03 | 87.73 | 0.11 | 0.66 | 0.17 | 0.866 | 1.000 |
| ENST00000286428 | VBP1 | 258.23 | -1.95 | 0.57 | -3.45 | 5.53E-04 | 1.46E-02 | 3121.84 | -0.07 | 0.13 | -0.51 | 0.608 | 1.000 |
| ENST00000459836 | VBP1 | 3.63 | -4.35 | 1.48 | -2.95 | 3.19E-03 | 6.00E-02 | 329.13 | 0.40 | 0.38 | 1.05 | 0.293 | 0.968 |
| ENST00000439229 | VDAC1P1 | 468.30 | -0.74 | 0.19 | -3.84 | 1.23E-04 | 3.97E-03 | 125.35 | -0.23 | 0.35 | -0.65 | 0.515 | 1.000 |
| ENST00000258963 | VEZF1 | 71.68 | -1.28 | 0.47 | -2.71 | 6.73E-03 | 1.04E-01 | 18434.75 | 0.06 | 0.11 | 0.51 | 0.609 | 1.000 |
| ENST00000469543 | VIM | 4353.04 | -3.84 | 0.92 | -4.16 | 3.15E-05 | 1.18E-03 | 28482.58 | -0.38 | 0.51 | -0.73 | 0.466 | 1.000 |
| ENST00000487938 | VIM | 446.08 | -26.51 | 3.03 | -8.76 | 1.97E-18 | 3.29E-15 | 16904.68 | 3.43 | 1.43 | 2.41 | 0.016 | 0.277 |
| ENST00000489794 | VPS26A | 26.16 | -21.56 | 3.03 | -7.12 | 1.07E-12 | 1.02E-10 | 14.20 | -0.34 | 0.82 | -0.41 | 0.680 | 1.000 |
| ENST00000546041 | VPS26A | 65.41 | -9.17 | 1.57 | -5.85 | 4.80E-09 | 2.48E-07 | 78.15 | -0.57 | 0.34 | -1.64 | 0.100 | 0.723 |
| ENST00000531032 | VPS28 | 6.73 | -20.80 | 3.03 | -6.86 | 6.68E-12 | 4.14E-10 | 19.35 | -0.26 | 0.62 | -0.43 | 0.669 | 1.000 |
| ENST00000533806 | VPS28 | 11.34 | -6.64 | 1.81 | -3.67 | 2.45E-04 | 7.28E-03 | 259.21 | 0.07 | 0.39 | 0.17 | 0.867 | 1.000 |
| ENST00000419023 | VPS45 | 7.63 | -20.97 | 3.03 | -6.92 | 4.47E-12 | 2.98E-10 | 225.75 | -0.40 | 0.55 | -0.72 | 0.474 | 1.000 |
| ENST00000555351 | VRK1 | 7.99 | -21.04 | 3.03 | -6.94 | 3.80E-12 | 2.64E-10 | 264.91 | -0.96 | 0.72 | -1.34 | 0.180 | 0.872 |
| ENST00000427932 | VTA1 | 25.39 | -22.60 | 3.03 | -7.47 | 8.21E-14 | 1.54E-11 | 3117.10 | 0.43 | 0.30 | 1.45 | 0.147 | 0.822 |
| ENST00000480474 | WAC | 3.19 | -4.81 | 1.66 | -2.90 | 3.73E-03 | 6.80E-02 | 139.05 | 0.35 | 0.41 | 0.84 | 0.400 | 1.000 |
| ENST00000392882 | WARS | 42.83 | -7.40 | 2.17 | -3.41 | 6.54E-04 | 1.68E-02 | 707.34 | 0.66 | 0.40 | 1.66 | 0.096 | 0.714 |
| ENST00000261167 | WBP11 | 121.97 | -0.64 | 0.20 | -3.25 | 1.15E-03 | 2.66E-02 | 13173.74 | -0.10 | 0.11 | -0.88 | 0.376 | 1.000 |
| ENST00000372661 | WBP5 | 65.39 | -2.87 | 0.55 | -5.21 | 1.84E-07 | 8.77E-06 | 4057.37 | 0.09 | 0.14 | 0.69 | 0.491 | 1.000 |
| ENST00000421744 | WBSCR22 | 6.51 | -20.72 | 3.03 | -6.84 | 7.98E-12 | 4.81E-10 | 72.04 | -1.77 | 1.02 | -1.73 | 0.083 | 0.668 |
| ENST00000487006 | WBSCR22 | 16.51 | -21.66 | 3.03 | -7.15 | 8.37E-13 | 8.49E-11 | 626.30 | -1.14 | 0.74 | -1.53 | 0.126 | 0.785 |
| ENST00000502702 | WDR1 | 32.24 | -22.92 | 3.03 | -7.57 | 3.67E-14 | 8.62E-12 | 231.93 | -0.06 | 0.56 | -0.10 | 0.920 | 1.000 |
| ENST00000508079 | WDR1 | 112.71 | -5.95 | 2.17 | -2.74 | 6.10E-03 | 9.77E-02 | 48.70 | -0.01 | 0.54 | -0.01 | 0.991 | 1.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000261015 | WDR12 | 225.39 | -0.78 | 0.26 | -3.04 | 2.33E-03 | 4.71E-02 | 8748.48 | -0.06 | 0.12 | -0.47 | 0.635 | 1.000 |
| ENST00000471680 | WDR3 | 5.93 | -20.63 | 3.03 | -6.81 | 9.84E-12 | 5.72E-10 | 605.79 | 0.18 | 0.43 | 0.43 | 0.671 | 1.000 |
| ENST00000505303 | WDR36 | 57.10 | -8.97 | 2.81 | -3.19 | 1.41E-03 | 3.14E-02 | 65.89 | 0.17 | 0.50 | 0.33 | 0.743 | 1.000 |
| ENST00000506474 | WDR41 | 3.99 | -5.13 | 1.85 | -2.78 | 5.44E-03 | 8.97E-02 | 11.01 | -0.82 | 1.12 | -0.73 | 0.462 | 1.000 |
| ENST00000371822 | WDR44 | 17.53 | -7.27 | 2.67 | -2.72 | 6.45E-03 | 1.01E-01 | 93.37 | -2.73 | 0.95 | -2.88 | 0.004 | 0.106 |
| ENST00000392325 | WDR45L | 82.40 | -1.40 | 0.31 | -4.46 | 8.29E-06 | 3.38E-04 | 16502.75 | -0.10 | 0.12 | -0.86 | 0.389 | 1.000 |
| ENST00000563381 | WDR59 | 3.09 | -4.77 | 1.08 | -4.42 | 9.76E-06 | 3.96E-04 | 4.36 | -1.18 | 1.90 | -0.62 | 0.537 | 1.000 |
| ENST00000471162 | WDR6 | 60.07 | -22.97 | 3.03 | -7.59 | 3.21E-14 | 7.78E-12 | 101.39 | 0.13 | 0.31 | 0.41 | 0.684 | 1.000 |
| ENST00000436347 | WDR75 | 18.33 | -22.16 | 3.03 | -7.32 | 2.50E-13 | 3.48E-11 | 87.71 | -0.91 | 0.43 | -2.09 | 0.037 | 0.448 |
| ENST00000472286 | WDR75 | 16.26 | -7.16 | 1.81 | -3.96 | 7.50E-05 | 2.57E-03 | 571.92 | -0.35 | 0.32 | -1.09 | 0.276 | 0.959 |
| ENST00000411751 | WDR77 | 8.35 | -21.08 | 3.03 | -6.96 | 3.43E-12 | 2.46E-10 | 270.62 | 4.88 | 1.70 | 2.86 | 0.004 | 0.112 |
| ENST00000449340 | WDR77 | 61.48 | -9.08 | 2.82 | -3.22 | 1.29E-03 | 2.93E-02 | 63.65 | 0.49 | 0.83 | 0.60 | 0.551 | 1.000 |
| ENST00000549091 | WDR90 | 3.56 | -3.12 | 1.14 | -2.73 | 6.36E-03 | 1.01E-01 | 539.38 | -5.54 | 1.74 | -3.18 | 0.001 | 0.051 |
| ENST00000474411 | WDR91 | 3.44 | -4.91 | 1.10 | -4.48 | 7.61E-06 | 3.11E-04 | 39.09 | 0.02 | 0.62 | 0.04 | 0.971 | 1.000 |
| ENST00000523984 | WDYHV1 | 4.93 | -5.44 | 1.75 | -3.11 | 1.88E-03 | 3.95E-02 | 156.67 | 0.13 | 0.27 | 0.46 | 0.644 | 1.000 |
| ENST00000508803 | WHSC1 | 46.75 | -8.68 | 2.75 | -3.15 | 1.61E-03 | 3.49E-02 | 238.75 | -0.94 | 0.31 | -3.00 | 0.003 | 0.079 |
| ENST00000380764 | WRNIP1 | 9.24 | -21.23 | 3.03 | -7.01 | 2.40E-12 | 1.90E-10 | 5769.16 | 0.07 | 0.13 | 0.54 | 0.591 | 1.000 |
| ENST00000540129 | WSB2 | 6.08 | -5.13 | 1.42 | -3.61 | 3.06E-04 | 8.83E-03 | 156.75 | 0.13 | 0.28 | 0.47 | 0.642 | 1.000 |
| ENST00000484256 | XBP1 | 20.09 | -1.01 | 0.35 | -2.85 | 4.31E-03 | 7.56E-02 | 4308.68 | -0.42 | 0.24 | -1.76 | 0.078 | 0.648 |
| ENST00000369658 | XPNPEP1 | 22.14 | -7.60 | 1.82 | -4.18 | 2.88E-05 | 1.09E-03 | 1443.89 | 0.05 | 0.19 | 0.26 | 0.793 | 1.000 |
| ENST00000443240 | XPO1 | 6.18 | -5.76 | 2.02 | -2.85 | 4.36E-03 | 7.63E-02 | 172.71 | -1.76 | 1.18 | -1.48 | 0.138 | 0.806 |
| ENST00000400602 | XPO4 | 40.14 | -0.96 | 0.36 | -2.63 | 8.53E-03 | 1.23E-01 | 158.89 | 0.21 | 0.41 | 0.50 | 0.619 | 1.000 |
| ENST00000332707 | XPOT | 196.08 | -0.89 | 0.34 | -2.63 | 8.52E-03 | 1.23E-01 | 28065.37 | -0.06 | 0.11 | -0.56 | 0.572 | 1.000 |
| ENST00000392132 | XRCC5 | 501.39 | -26.67 | 3.03 | -8.81 | 1.24E-18 | 2.25E-15 | 45007.31 | 0.22 | 0.18 | 1.24 | 0.214 | 0.910 |
| ENST00000460284 | XRCC5 | 27.27 | -7.90 | 2.85 | -2.77 | 5.56E-03 | 9.11E-02 | 7828.55 | -0.95 | 0.45 | -2.13 | 0.033 | 0.425 |
| ENST00000360079 | XRCC6 | 412.04 | -11.82 | 2.14 | -5.54 | 3.08E-08 | 1.53E-06 | 28348.08 | 0.01 | 0.25 | 0.02 | 0.983 | 1.000 |
| ENST00000405506 | XRCC6 | 59.36 | -23.75 | 3.03 | -7.85 | 4.24E-15 | 1.73E-12 | 1274.34 | 0.03 | 0.44 | 0.08 | 0.939 | 1.000 |
| ENST00000428575 | XRCC6 | 56.75 | -23.69 | 3.03 | -7.83 | 4.93E-15 | 1.90E-12 | 2417.95 | 0.11 | 0.27 | 0.42 | 0.673 | 1.000 |
| ENST00000464116 | XRCC6 | 4.84 | -5.41 | 1.69 | -3.21 | 1.33E-03 | 2.99E-02 | 14.87 | -0.56 | 1.15 | -0.48 | 0.631 | 1.000 |
| ENST00000300145 | XRCC6BP1 | 5.07 | -5.47 | 1.04 | -5.26 | 1.47E-07 | 7.05E-06 | 806.58 | 0.17 | 0.64 | 0.27 | 0.787 | 1.000 |
| ENST00000377191 | XRN2 | 715.07 | -0.52 | 0.18 | -2.95 | 3.13E-03 | 5.93E-02 | 13752.69 | -0.35 | 0.12 | -2.87 | 0.004 | 0.110 |
| ENST00000207870 | XYLB | 4.00 | -5.13 | 1.80 | -2.86 | 4.23E-03 | 7.46E-02 | 1060.23 | 0.24 | 0.49 | 0.48 | 0.629 | 1.000 |
| ENST00000469100 | YARS | 26.67 | -7.87 | 2.48 | -3.18 | 1.48E-03 | 3.26E-02 | 938.83 | -0.09 | 0.20 | -0.44 | 0.660 | 1.000 |
| ENST00000470377 | YARS | 6.76 | -3.11 | 1.04 | -3.00 | 2.67E-03 | 5.24E-02 | 270.05 | -0.29 | 0.26 | -1.10 | 0.271 | 0.956 |
| ENST00000478828 | YARS | 24.87 | -22.57 | 3.03 | -7.46 | 8.84E-14 | 1.62E-11 | 848.30 | 0.11 | 0.25 | 0.42 | 0.672 | 1.000 |
| ENST00000487404 | YARS | 14.78 | -4.21 | 1.55 | -2.72 | 6.57E-03 | 1.03E-01 | 2342.88 | -0.22 | 0.23 | -0.93 | 0.353 | 0.995 |
| ENST00000332220 | YBX1 | 14.91 | -21.88 | 3.03 | -7.23 | 4.96E-13 | 5.93E-11 | 980.52 | -0.62 | 0.24 | -2.51 | 0.012 | 0.230 |
| ENST00000305135 | YEATS2 | 16.53 | -7.18 | 1.13 | -6.33 | 2.38E-10 | 1.28E-08 | 7681.48 | -0.03 | 0.14 | -0.21 | 0.830 | 1.000 |
| ENST00000416380 | YIPF3 | 31.34 | -8.11 | 0.96 | -8.41 | 4.25E-17 | 4.15E-14 | 25.34 | -0.12 | 0.60 | -0.21 | 0.836 | 1.000 |
| ENST00000437765 | YIPF4 | 7.50 | -6.04 | 1.71 | -3.53 | 4.22E-04 | 1.16E-02 | 20.50 | 2.00 | 2.00 | 1.00 | 0.319 | 0.983 |
| ENST00000376016 | YME1L1 | 97.48 | -24.43 | 3.03 | -8.07 | 6.90E-16 | 4.38E-13 | 10194.82 | -0.28 | 0.22 | -1.29 | 0.198 | 0.894 |
| ENST00000355665 | YTHDC1 | 4.44 | -5.28 | 1.71 | -3.09 | 2.00E-03 | 4.18E-02 | 1440.30 | 0.56 | 0.66 | 0.86 | 0.392 | 1.000 |
| ENST00000477896 | YWHAB | 105.84 | -2.51 | 0.61 | -4.09 | 4.29E-05 | 1.55E-03 | 215.60 | -0.35 | 0.27 | -1.28 | 0.200 | 0.895 |
| ENST00000486241 | YWHAE | 30.56 | -4.76 | 1.58 | -3.02 | 2.56E-03 | 5.09E-02 | 38.40 | -0.04 | 0.51 | -0.08 | 0.935 | 1.000 |
| ENST00000373659 | ZBTB6 | 46.81 | -0.85 | 0.26 | -3.28 | 1.03E-03 | 2.43E-02 | 2888.82 | 0.00 | 0.16 | -0.03 | 0.976 | 1.000 |
| ENST00000473294 | ZBTB8OS | 29.14 | -3.86 | 1.28 | -3.02 | 2.57E-03 | 5.09E-02 | 162.64 | 0.38 | 0.25 | 1.49 | 0.137 | 0.806 |
| ENST00000483138 | ZBTB8OS | 7.12 | -20.85 | 3.03 | -6.88 | 5.97E-12 | 3.76E-10 | 104.52 | 0.89 | 0.49 | 1.83 | 0.068 | 0.608 |
| ENST00000555799 | ZC3H14 | 6.90 | -5.92 | 1.84 | -3.22 | 1.30E-03 | 2.94E-02 | 59.61 | -2.69 | 1.64 | -1.64 | 0.102 | 0.727 |
| ENST00000337859 | ZC3H15 | 288.60 | -0.78 | 0.20 | -3.95 | 7.70E-05 | 2.63E-03 | 5659.62 | 0.11 | 0.18 | 0.65 | 0.514 | 1.000 |
| ENST00000498757 | ZC3H15 | 13.13 | -6.85 | 2.60 | -2.63 | 8.53E-03 | 1.23E-01 | 687.19 | 0.15 | 0.26 | 0.57 | 0.566 | 1.000 |
| ENST00000409573 | ZC3H8 | 5.77 | -5.66 | 1.72 | -3.29 | 1.00E-03 | 2.38E-02 | 1066.84 | 0.02 | 0.41 | 0.04 | 0.970 | 1.000 |
| ENST00000460845 | ZC3HAV1 | 15.46 | -7.09 | 2.60 | -2.73 | 6.34E-03 | 1.00E-01 | 121.19 | 1.28 | 0.38 | 3.34 | 0.001 | 0.032 |
| ENST00000531722 | ZCCHC11 | 8.68 | -6.25 | 1.11 | -5.65 | 1.64E-08 | 8.26E-07 | 828.86 | 0.05 | 0.27 | 0.17 | 0.861 | 1.000 |
| ENST00000269499 | ZCCHC2 | 31.12 | -0.70 | 0.27 | -2.61 | 9.18E-03 | 1.30E-01 | 5146.56 | -0.12 | 0.12 | -1.04 | 0.297 | 0.970 |
| ENST00000542645 | ZDHHC20 | 6.64 | -20.76 | 3.03 | -6.85 | 7.37E-12 | 4.51E-10 | 187.96 | 0.15 | 0.42 | 0.36 | 0.715 | 1.000 |
| ENST00000558170 | ZEB2 | 13.52 | -21.75 | 3.03 | -7.18 | 6.84E-13 | 7.33E-11 | 7005.04 | 0.15 | 0.18 | 0.81 | 0.415 | 1.000 |
| ENST00000521895 | ZFAND1 | 8.02 | -6.14 | 2.11 | -2.91 | 3.59E-03 | 6.61E-02 | 82.40 | 0.10 | 0.95 | 0.10 | 0.917 | 1.000 |
| ENST00000261749 | ZFAND6 | 11.50 | -6.66 | 1.90 | -3.50 | 4.72E-04 | 1.27E-02 | 308.68 | 1.27 | 0.22 | 5.76 | 0.000 | 0.000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000558688 | ZFAND6 | 6.79 | -5.30 | 2.03 | -2.62 | 8.82E-03 | 1.26E-01 | 67.37 | 0.71 | 0.63 | 1.12 | 0.263 | 0.952 |
| ENST00000561017 | ZFAND6 | 11.83 | -6.70 | 2.60 | -2.58 | 9.90E-03 | 1.36E-01 | 86.24 | 0.46 | 0.61 | 0.75 | 0.451 | 1.000 |
| ENST00000507465 | ZFR | 8.53 | -21.13 | 3.03 | -6.97 | 3.08E-12 | 2.28E-10 | 473.76 | -0.31 | 0.28 | -1.12 | 0.261 | 0.952 |
| ENST00000357540 | ZFYVE27 | 6.63 | -5.86 | 1.69 | -3.47 | 5.25E-04 | 1.40E-02 | 77.61 | -0.56 | 3.86 | -0.14 | 0.885 | 1.000 |
| ENST00000493328 | ZMYM6 | 18.92 | -1.64 | 0.55 | -2.98 | 2.92E-03 | 5.63E-02 | 633.97 | -0.09 | 0.23 | -0.39 | 0.697 | 1.000 |
| ENST00000320451 | ZNF121 | 45.77 | -4.14 | 1.33 | -3.12 | 1.82E-03 | 3.86E-02 | 2373.46 | -0.51 | 0.15 | -3.46 | 0.001 | 0.023 |
| ENST00000360647 | ZNF148 | 89.81 | -0.65 | 0.24 | -2.72 | 6.47E-03 | 1.02E-01 | 3825.66 | 0.01 | 0.23 | 0.03 | 0.976 | 1.000 |
| ENST00000523638 | ZNF260 | 8.88 | -1.40 | 0.53 | -2.62 | 8.72E-03 | 1.25E-01 | 4490.86 | 0.10 | 0.13 | 0.75 | 0.451 | 1.000 |
| ENST00000334197 | ZNF347 | 2.81 | -3.31 | 1.17 | -2.84 | 4.52E-03 | 7.82E-02 | 1997.65 | 0.23 | 0.20 | 1.15 | 0.250 | 0.941 |
| ENST00000397148 | ZNF43 | 6.13 | -1.68 | 0.64 | -2.64 | 8.41E-03 | 1.22E-01 | 390.53 | 0.19 | 0.64 | 0.29 | 0.771 | 1.000 |
| ENST00000425708 | ZNF445 | 19.53 | -1.03 | 0.32 | -3.19 | 1.44E-03 | 3.20E-02 | 3991.11 | -0.86 | 0.85 | -1.01 | 0.313 | 0.980 |
| ENST00000294753 | ZNF496 | 4.11 | -5.17 | 1.83 | -2.83 | 4.61E-03 | 7.92E-02 | 12365.44 | -0.21 | 0.16 | -1.28 | 0.201 | 0.896 |
| ENST00000482709 | ZNF644 | 4.74 | -5.38 | 1.23 | -4.38 | 1.21E-05 | 4.84E-04 | 23.69 | 0.01 | 0.66 | 0.01 | 0.989 | 1.000 |
| ENST00000366503 | ZNF670 | 18.59 | -1.16 | 0.34 | -3.41 | 6.48E-04 | 1.67E-02 | 1496.61 | 0.12 | 0.15 | 0.80 | 0.422 | 1.000 |
| ENST00000418100 | ZNF724P | 21.70 | -1.41 | 0.34 | -4.18 | 2.96E-05 | 1.11E-03 | 895.77 | -0.32 | 0.18 | -1.78 | 0.075 | 0.637 |
| ENST00000552593 | ZNF740 | 5.77 | -5.67 | 1.12 | -5.08 | 3.70E-07 | 1.72E-05 | 736.98 | -0.03 | 0.17 | -0.17 | 0.867 | 1.000 |
| ENST00000356321 | ZNF770 | 66.06 | -0.92 | 0.34 | -2.71 | 6.66E-03 | 1.04E-01 | 8709.84 | 0.03 | 0.14 | 0.20 | 0.841 | 1.000 |
| ENST00000508784 | ZNF827 | 30.04 | -0.97 | 0.30 | -3.22 | 1.27E-03 | 2.89E-02 | 12928.16 | -0.16 | 0.19 | -0.84 | 0.402 | 1.000 |
| ENST00000446801 | ZWILCH | 14.15 | -21.79 | 3.03 | -7.20 | 6.13E-13 | 6.95E-11 | 1496.57 | -1.21 | 0.84 | -1.44 | 0.150 | 0.825 |
| ENST00000535141 | ZWILCH | 21.39 | -7.55 | 2.65 | -2.85 | 4.37E-03 | 7.64E-02 | 589.16 | 0.57 | 2.62 | 0.22 | 0.829 | 1.000 |
| ENST00000569489 | ZWILCH | 24.12 | -0.89 | 0.31 | -2.85 | 4.41E-03 | 7.68E-02 | 18.42 | 0.13 | 1.27 | 0.10 | 0.920 | 1.000 |
| ENST00000336332 | ZXDC | 12.45 | -6.77 | 2.61 | -2.60 | 9.42E-03 | 1.32E-01 | 1461.72 | -0.19 | 0.68 | -0.28 | 0.779 | 1.000 |
| ENST00000449423 | ZYX | 8.75 | -20.25 | 3.03 | -6.68 | 2.34E-11 | 1.29E-09 | 3380.21 | -1.76 | 0.88 | -2.00 | 0.046 | 0.501 |

**B.** Ribo-seq and RNA-seq fold-change and p-values for RNAs with higher translational efficiency in LN229 NSUN5 deficient cells in the presence of $H_2O_2$ stress

| | | Ribo-Seq | | | | | | RNA-Seq | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EnsemblID** | **GeneName** | **Base Mean** | **log2Fold Change** | **Lfc SE** | **stat** | **pvalue** | **padj** | **Base Mean** | **log2Fold Change** | **Lfc SE** | **stat** | **pvalue** | **padj** |
| ENST00000516388 | AC091047.1 | 72.59 | -3.50 | 1.13 | -3.10 | 1.94E-03 | 3.89E-01 | 76.64 | -0.33 | 0.25 | -1.29 | 0.20 | 1.00 |
| ENST00000480301 | ACTB | 22.88 | -3.57 | 1.27 | -2.81 | 4.93E-03 | 8.07E-01 | 6.35 | -0.35 | 0.77 | -0.46 | 0.65 | 1.00 |
| ENST00000481423 | AHCYL1 | 7.15 | -21.32 | 3.03 | -7.03 | 2.02E-12 | 1.07E-09 | 24.45 | -0.58 | 0.44 | -1.33 | 0.18 | 0.99 |
| ENST00000529701 | APLP2 | 29.16 | -8.46 | 1.73 | -4.88 | 1.09E-06 | 2.91E-04 | 12.10 | -2.22 | 1.49 | -1.49 | 0.14 | 0.93 |
| ENST00000368233 | APOA1BP | 2.50 | -4.87 | 1.65 | -2.95 | 3.13E-03 | 5.73E-01 | 4035.29 | 0.30 | 0.18 | 1.69 | 0.09 | 0.85 |
| ENST00000522919 | ASPH | 7.45 | -21.37 | 3.03 | -7.05 | 1.79E-12 | 1.05E-09 | 220.04 | 0.61 | 0.42 | 1.48 | 0.14 | 0.94 |
| ENST00000339159 | ATP1A1 | 65.20 | -24.33 | 3.03 | -8.04 | 9.15E-16 | 5.52E-12 | 8828.89 | -0.78 | 0.47 | -1.68 | 0.09 | 0.85 |
| ENST00000537345 | ATP1A1 | 49.76 | -23.85 | 3.03 | -7.88 | 3.29E-15 | 1.21E-11 | 73750.46 | -0.11 | 0.36 | -0.31 | 0.75 | 1.00 |
| ENST00000367815 | ATP1B1 | 6.12 | -21.09 | 3.03 | -6.95 | 3.56E-12 | 1.50E-09 | 7530.34 | 0.20 | 1.07 | 0.18 | 0.85 | 1.00 |
| ENST00000460085 | ATP6V1E1 | 12.57 | -22.10 | 3.03 | -7.29 | 3.01E-13 | 2.56E-10 | 6.06 | 3.47 | 1.02 | 3.42 | 0.00 | 0.04 |
| ENST00000404251 | BAZ1B | 12.68 | -22.11 | 3.03 | -7.30 | 2.93E-13 | 2.56E-10 | 274.78 | 0.97 | 0.42 | 2.32 | 0.02 | 0.44 |
| ENST00000301633 | BIRC5 | 11.20 | -3.55 | 1.14 | -3.13 | 1.78E-03 | 3.65E-01 | 839.94 | -0.22 | 0.19 | -1.14 | 0.25 | 1.00 |
| ENST00000353555 | BSG | 80.03 | -24.60 | 3.03 | -8.13 | 4.32E-16 | 3.12E-12 | 43682.70 | 0.10 | 0.19 | 0.55 | 0.58 | 1.00 |
| ENST00000379286 | C20orf30 | 19.79 | -6.73 | 2.15 | -3.14 | 1.71E-03 | 3.54E-01 | 252.70 | -11.45 | 3.46 | -3.31 | 0.00 | 0.06 |
| ENST00000472428 | C7orf49 | 16.45 | -22.34 | 3.03 | -7.38 | 1.63E-13 | 1.60E-10 | 7.08 | -0.64 | 0.80 | -0.80 | 0.42 | 1.00 |
| ENST00000463087 | CABYR | 2.56 | -3.72 | 1.33 | -2.79 | 5.33E-03 | 8.63E-01 | 171.74 | 1.41 | 0.42 | 3.39 | 0.00 | 0.05 |
| ENST00000367681 | CACYBP | 30.64 | -8.53 | 2.47 | -3.45 | 5.55E-04 | 1.29E-01 | 109.84 | 0.01 | 0.51 | 0.02 | 0.98 | 1.00 |
| ENST00000506298 | CANX | 500.35 | -26.91 | 3.03 | -8.89 | 5.99E-19 | 7.22E-15 | 16.11 | -0.02 | 0.59 | -0.03 | 0.98 | 1.00 |
| ENST00000461993 | CAP1 | 94.02 | -10.14 | 1.85 | -5.50 | 3.83E-08 | 1.04E-05 | 68.45 | -0.35 | 0.30 | -1.16 | 0.24 | 1.00 |
| ENST00000222125 | CAPS | 5.96 | -21.09 | 3.03 | -6.95 | 3.57E-12 | 1.50E-09 | 1443.89 | 0.59 | 0.88 | 0.67 | 0.50 | 1.00 |
| ENST00000209875 | CBX5 | 14.08 | -1.93 | 0.67 | -2.87 | 4.14E-03 | 7.06E-01 | 45541.74 | -0.01 | 0.10 | -0.08 | 0.93 | 1.00 |
| ENST00000472524 | CCDC88B | 2.44 | -4.86 | 1.76 | -2.77 | 5.65E-03 | 9.00E-01 | 517.41 | -0.03 | 0.14 | -0.19 | 0.85 | 1.00 |
| ENST00000493482 | CETN2 | 9.73 | -6.28 | 2.11 | -2.98 | 2.87E-03 | 5.43E-01 | 37.81 | -0.09 | 0.34 | -0.27 | 0.79 | 1.00 |
| ENST00000308162 | CFL1 | 258.07 | -2.30 | 0.80 | -2.87 | 4.17E-03 | 7.08E-01 | 38961.45 | 0.00 | 0.17 | 0.03 | 0.98 | 1.00 |
| ENST00000535571 | CLDN12 | 4.44 | -5.73 | 1.76 | -3.26 | 1.10E-03 | 2.39E-01 | 0.85 | -0.65 | 1.99 | -0.33 | 0.74 | NA |
| ENST00000541297 | CLPTM1 | 6.34 | -21.17 | 3.03 | -6.98 | 2.91E-12 | 1.35E-09 | 766.66 | 0.73 | 1.54 | 0.47 | 0.64 | 1.00 |
| ENST00000273308 | CNPY2 | 7.45 | -4.06 | 1.46 | -2.78 | 5.46E-03 | 8.78E-01 | 488.05 | -0.23 | 0.29 | -0.80 | 0.42 | 1.00 |
| ENST00000273342 | COL8A1 | 15.82 | -22.40 | 3.03 | -7.40 | 1.40E-13 | 1.45E-10 | 13203.28 | 0.59 | 1.47 | 0.40 | 0.69 | 1.00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000449653 | COMT | 5.99 | -6.18 | 2.20 | -2.81 | 4.93E-03 | 8.07E-01 | 2341.49 | 0.69 | 0.42 | 1.65 | 0.10 | 0.87 |
| ENST00000462432 | CPSF3L | 2.52 | -4.94 | 1.74 | -2.85 | 4.42E-03 | 7.47E-01 | 91.47 | 0.12 | 0.30 | 0.38 | 0.70 | 1.00 |
| ENST00000468255 | CSNK2B | 24.12 | -8.18 | 3.03 | -2.70 | 6.89E-03 | 1.00E+00 | 4408.57 | 0.14 | 0.17 | 0.84 | 0.40 | 1.00 |
| ENST00000548783 | CSRP2 | 7.53 | -5.91 | 2.00 | -2.96 | 3.11E-03 | 5.73E-01 | 4318.75 | 0.22 | 0.31 | 0.72 | 0.47 | 1.00 |
| ENST00000568342 | CYB5B | 14.83 | -2.24 | 0.67 | -3.36 | 7.80E-04 | 1.77E-01 | 10.85 | -0.37 | 0.57 | -0.66 | 0.51 | 1.00 |
| ENST00000466152 | DPM1 | 18.79 | -22.64 | 3.03 | -7.48 | 7.71E-14 | 1.14E-10 | 1420.43 | -0.53 | 1.09 | -0.49 | 0.63 | 1.00 |
| ENST00000495333 | EEF1A1 | 20.39 | -7.97 | 3.03 | -2.63 | 8.47E-03 | 1.00E+00 | 2360.14 | -0.26 | 0.24 | -1.06 | 0.29 | 1.00 |
| ENST00000256383 | EIF2S1 | 6.56 | -5.13 | 1.85 | -2.77 | 5.64E-03 | 9.00E-01 | 15787.39 | -0.02 | 0.12 | -0.14 | 0.89 | 1.00 |
| ENST00000522352 | EIF3E | 16.91 | -22.49 | 3.03 | -7.43 | 1.11E-13 | 1.38E-10 | 160.41 | -0.13 | 0.29 | -0.47 | 0.64 | 1.00 |
| ENST00000293831 | EIF4A1 | 50.22 | -7.58 | 2.48 | -3.06 | 2.23E-03 | 4.37E-01 | 139472.90 | -0.05 | 0.16 | -0.28 | 0.78 | 1.00 |
| ENST00000424196 | EIF4G1 | 25.62 | -7.11 | 2.23 | -3.19 | 1.44E-03 | 3.02E-01 | 359.17 | 0.70 | 0.92 | 0.76 | 0.45 | 1.00 |
| ENST00000525681 | EIF4G2 | 17.62 | -22.44 | 3.03 | -7.41 | 1.25E-13 | 1.45E-10 | 35.25 | 3.51 | 1.01 | 3.49 | 0.00 | 0.04 |
| ENST00000467800 | ELMO2 | 4.45 | -3.27 | 1.10 | -2.98 | 2.91E-03 | 5.45E-01 | 1016.21 | -1.51 | 0.98 | -1.54 | 0.12 | 0.91 |
| ENST00000539440 | EMG1 | 15.36 | -7.53 | 2.62 | -2.88 | 4.03E-03 | 6.95E-01 | 433.45 | -0.64 | 0.50 | -1.29 | 0.20 | 1.00 |
| ENST00000546220 | EMG1 | 4.52 | -5.77 | 1.60 | -3.60 | 3.15E-04 | 7.50E-02 | 224.34 | -0.48 | 1.50 | -0.32 | 0.75 | 1.00 |
| ENST00000281821 | EPHA4 | 15.49 | -1.16 | 0.45 | -2.60 | 9.38E-03 | 1.00E+00 | 859.32 | -0.05 | 1.06 | -0.05 | 0.96 | 1.00 |
| ENST00000431842 | FAM208A | 4.05 | -5.59 | 1.67 | -3.35 | 8.18E-04 | 1.84E-01 | 8538.92 | -0.27 | 0.15 | -1.89 | 0.06 | 0.74 |
| ENST00000459993 | FAM208A | 2.33 | -4.82 | 1.63 | -2.95 | 3.21E-03 | 5.83E-01 | 1481.13 | -0.10 | 0.14 | -0.76 | 0.45 | 1.00 |
| ENST00000505125 | FIP1L1 | 27.56 | -3.20 | 0.86 | -3.72 | 1.95E-04 | 4.87E-02 | 170.39 | -1.46 | 1.00 | -1.46 | 0.14 | 0.94 |
| ENST00000487376 | FLOT1 | 6.44 | -21.18 | 3.03 | -6.99 | 2.82E-12 | 1.33E-09 | 2121.85 | 0.10 | 1.01 | 0.10 | 0.92 | 1.00 |
| ENST00000541882 | FLRT3 | 6.12 | -21.09 | 3.03 | -6.95 | 3.56E-12 | 1.50E-09 | 5861.97 | -0.13 | 0.22 | -0.60 | 0.55 | 1.00 |
| ENST00000356005 | FN1 | 38.84 | -23.62 | 3.03 | -7.80 | 6.05E-15 | 1.82E-11 | 243480.92 | -0.02 | 0.16 | -0.16 | 0.88 | 1.00 |
| ENST00000443816 | FN1 | 34.24 | -23.23 | 3.03 | -7.67 | 1.68E-14 | 3.79E-11 | 2380.49 | 0.29 | 0.30 | 0.97 | 0.33 | 1.00 |
| ENST00000568685 | FUS | 10.20 | -21.81 | 3.03 | -7.20 | 6.10E-13 | 4.32E-10 | 509.92 | 0.22 | 0.29 | 0.76 | 0.45 | 1.00 |
| ENST00000254108 | FUS | 20.50 | -6.34 | 2.32 | -2.73 | 6.28E-03 | 9.68E-01 | 2544.32 | 0.11 | 0.71 | 0.15 | 0.88 | 1.00 |
| ENST00000396861 | GAPDH | 26.68 | -8.33 | 2.70 | -3.08 | 2.05E-03 | 4.08E-01 | 20161.15 | -0.37 | 0.10 | -3.90 | 0.00 | 0.01 |
| ENST00000380181 | GDI2 | 18.14 | -22.59 | 3.03 | -7.46 | 8.69E-14 | 1.16E-10 | 4054.20 | -0.07 | 0.64 | -0.10 | 0.92 | 1.00 |
| ENST00000492383 | GNAI2 | 10.63 | -7.00 | 2.30 | -3.05 | 2.30E-03 | 4.50E-01 | 570.12 | -0.09 | 0.29 | -0.31 | 0.76 | 1.00 |
| ENST00000482112 | GNAS | 6.44 | -21.18 | 3.03 | -6.99 | 2.82E-12 | 1.33E-09 | 345.96 | -0.13 | 0.97 | -0.14 | 0.89 | 1.00 |
| ENST00000515417 | GNB2L1 | 10.36 | -21.83 | 3.03 | -7.21 | 5.77E-13 | 4.26E-10 | 10512.00 | 1.09 | 1.12 | 0.97 | 0.33 | 1.00 |
| ENST00000476321 | GSTM3 | 6.97 | -21.30 | 3.03 | -7.03 | 2.12E-12 | 1.08E-09 | 22.39 | -0.12 | 0.64 | -0.18 | 0.86 | 1.00 |
| ENST00000281543 | GUF1 | 1.72 | -4.41 | 1.70 | -2.59 | 9.72E-03 | 1.00E+00 | 589.93 | -0.03 | 0.25 | -0.11 | 0.91 | 1.00 |
| ENST00000425835 | HDAC2 | 6.95 | -6.39 | 2.25 | -2.84 | 4.56E-03 | 7.63E-01 | 25.91 | -0.08 | 0.81 | -0.10 | 0.92 | 1.00 |
| ENST00000374982 | HLA-DRA | 24.65 | -22.85 | 3.03 | -7.55 | 4.40E-14 | 7.66E-11 | 26057.55 | -0.01 | 0.21 | -0.03 | 0.97 | 1.00 |
| ENST00000255320 | HMGB1P5 | 5.36 | -6.01 | 2.24 | -2.69 | 7.21E-03 | 1.00E+00 | 12352.63 | -0.10 | 0.13 | -0.80 | 0.43 | 1.00 |
| ENST00000446922 | HMGB2 | 10.06 | -21.79 | 3.03 | -7.19 | 6.43E-13 | 4.47E-10 | 1820.92 | -0.54 | 1.21 | -0.45 | 0.66 | 1.00 |
| ENST00000376256 | HNRNPK | 8.51 | -21.57 | 3.03 | -7.12 | 1.11E-12 | 7.19E-10 | 1999.52 | -0.07 | 0.32 | -0.24 | 0.81 | 1.00 |
| ENST00000299767 | HSP90B1 | 146.75 | -10.79 | 2.60 | -4.15 | 3.34E-05 | 8.51E-03 | 85791.58 | 0.02 | 0.24 | 0.10 | 0.92 | 1.00 |
| ENST00000479376 | IDH3B | 5.12 | -5.95 | 1.64 | -3.64 | 2.77E-04 | 6.67E-02 | 3.45 | 1.29 | 0.93 | 1.39 | 0.16 | 0.97 |
| ENST00000340979 | IFI16 | 7.59 | -6.51 | 2.40 | -2.71 | 6.65E-03 | 1.00E+00 | 691.42 | -0.27 | 0.26 | -1.03 | 0.30 | 1.00 |
| ENST00000368131 | IFI16 | 7.43 | -6.48 | 2.37 | -2.73 | 6.29E-03 | 9.68E-01 | 1664.29 | -0.18 | 0.20 | -0.88 | 0.38 | 1.00 |
| ENST00000559676 | IREB2 | 2.15 | -4.68 | 1.73 | -2.71 | 6.69E-03 | 1.00E+00 | 107.46 | 0.10 | 0.56 | 0.17 | 0.86 | 1.00 |
| ENST00000394636 | IRX5 | 3.05 | -3.93 | 1.26 | -3.11 | 1.86E-03 | 3.78E-01 | 104.45 | 0.59 | 1.00 | 0.58 | 0.56 | 1.00 |
| ENST00000381340 | ITPR2 | 46.59 | -1.11 | 0.32 | -3.50 | 4.60E-04 | 1.07E-01 | 14928.61 | -1.67 | 0.15 | -11.08 | 0.00 | 0.00 |
| ENST00000261247 | JKAMP | 6.18 | -21.11 | 3.03 | -6.96 | 3.37E-12 | 1.47E-09 | 379.83 | -0.13 | 0.38 | -0.34 | 0.73 | 1.00 |
| ENST00000554271 | JKAMP | 13.19 | -4.34 | 1.00 | -4.34 | 1.41E-05 | 3.62E-03 | 361.28 | 0.11 | 0.21 | 0.56 | 0.58 | 1.00 |
| ENST00000330459 | KPNA2 | 30.47 | -23.29 | 3.03 | -7.69 | 1.44E-14 | 3.48E-11 | 84177.91 | 0.02 | 0.24 | 0.08 | 0.93 | 1.00 |
| ENST00000371335 | LAMP2 | 13.04 | -7.29 | 2.38 | -3.07 | 2.17E-03 | 4.28E-01 | 23361.33 | 0.16 | 0.17 | 0.93 | 0.35 | 1.00 |
| ENST00000556263 | LGALS3 | 2.55 | -4.26 | 1.26 | -3.39 | 7.05E-04 | 1.61E-01 | 14.95 | 0.33 | 0.84 | 0.39 | 0.70 | 1.00 |
| ENST00000347559 | LMNA | 20.47 | -22.75 | 3.03 | -7.51 | 5.78E-14 | 9.09E-11 | 5294.09 | 0.00 | 1.21 | 0.00 | 1.00 | 1.00 |
| ENST00000480956 | LSM5 | 3.50 | -5.42 | 1.82 | -2.97 | 2.95E-03 | 5.50E-01 | 795.87 | 0.09 | 0.21 | 0.42 | 0.68 | 1.00 |
| ENST00000523944 | MCM4 | 7.24 | -21.35 | 3.03 | -7.04 | 1.88E-12 | 1.06E-09 | 956.70 | -0.01 | 0.49 | -0.01 | 0.99 | 1.00 |
| ENST00000495083 | MDH1 | 11.40 | -1.30 | 0.49 | -2.66 | 7.81E-03 | 1.00E+00 | 296.30 | 0.79 | 0.22 | 3.61 | 0.00 | 0.03 |
| ENST00000546753 | METAP2 | 5.11 | -20.86 | 3.03 | -6.88 | 6.12E-12 | 2.19E-09 | 289.72 | -0.37 | 0.66 | -0.57 | 0.57 | 1.00 |
| ENST00000564864 | MMP2 | 14.04 | -22.22 | 3.03 | -7.33 | 2.23E-13 | 2.12E-10 | 149.18 | -0.16 | 0.41 | -0.40 | 0.69 | 1.00 |
| ENST00000535726 | NDUFA9 | 6.27 | -6.24 | 2.26 | -2.76 | 5.79E-03 | 9.11E-01 | 147.05 | 0.52 | 0.32 | 1.61 | 0.11 | 0.89 |
| ENST00000476279 | NDUFB2 | 7.06 | -21.31 | 3.03 | -7.03 | 2.07E-12 | 1.08E-09 | 87.97 | 1.42 | 1.69 | 0.84 | 0.40 | 1.00 |
| ENST00000468210 | NDUFB5 | 6.60 | -21.21 | 3.03 | -7.00 | 2.62E-12 | 1.26E-09 | 84.68 | -1.14 | 0.80 | -1.41 | 0.16 | 0.96 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000525440 | NME7 | 4.10 | -5.63 | 1.58 | -3.56 | 3.70E-04 | 8.74E-02 | 690.26 | -0.60 | 1.69 | -0.35 | | 0.72 | 1.00 |
| ENST00000517671 | NPM1 | 27.52 | -23.15 | 3.03 | -7.65 | 2.06E-14 | 4.14E-11 | 16381.64 | -9.42 | 3.73 | -2.53 | NA | NA | |
| ENST00000379046 | NQO1 | 12.60 | -22.10 | 3.03 | -7.30 | 2.98E-13 | 2.56E-10 | 433.32 | 0.82 | 1.03 | 0.79 | | 0.43 | 1.00 |
| ENST00000569118 | NQO1 | 64.01 | -1.79 | 0.69 | -2.58 | 9.85E-03 | 1.00E+00 | 421.01 | -0.14 | 0.48 | -0.30 | | 0.76 | 1.00 |
| ENST00000569236 | NSMCE1 | 5.67 | -6.10 | 2.36 | -2.58 | 9.86E-03 | 1.00E+00 | 138.19 | -1.01 | 1.06 | -0.95 | | 0.34 | 1.00 |
| ENST00000563405 | NUP93 | 7.89 | -3.97 | 1.45 | -2.74 | 6.18E-03 | 9.60E-01 | 383.67 | 0.39 | 0.35 | 1.13 | | 0.26 | 1.00 |
| ENST00000551035 | OS9 | 5.11 | -20.86 | 3.03 | -6.88 | 6.12E-12 | 2.19E-09 | 66.16 | 0.06 | 0.35 | 0.17 | | 0.86 | 1.00 |
| ENST00000354694 | PES1 | 18.40 | -4.83 | 1.46 | -3.31 | 9.22E-04 | 2.02E-01 | 3900.34 | -0.17 | 0.39 | -0.43 | | 0.67 | 1.00 |
| ENST00000355899 | PLS3 | 16.24 | -22.44 | 3.03 | -7.41 | 1.28E-13 | 1.45E-10 | 11229.32 | -0.38 | 0.94 | -0.40 | | 0.69 | 1.00 |
| ENST00000450367 | PPP1R7 | 5.43 | -20.96 | 3.03 | -6.91 | 4.81E-12 | 1.88E-09 | 46.77 | -0.08 | 0.40 | -0.21 | | 0.83 | 1.00 |
| ENST00000412601 | PRKCSH | 15.66 | -6.39 | 2.26 | -2.83 | 4.63E-03 | 7.72E-01 | 3937.77 | -2.25 | 0.85 | -2.64 | | 0.01 | 0.26 |
| ENST00000376033 | PRRC2A | 6.66 | -21.23 | 3.03 | -7.00 | 2.50E-12 | 1.22E-09 | 2542.42 | -0.39 | 0.76 | -0.51 | | 0.61 | 1.00 |
| ENST00000554812 | PSMA3 | 9.48 | -6.83 | 2.34 | -2.92 | 3.52E-03 | 6.23E-01 | 3134.88 | -0.09 | 0.29 | -0.30 | | 0.76 | 1.00 |
| ENST00000474100 | PSMB4 | 21.94 | -8.05 | 3.03 | -2.66 | 7.88E-03 | 1.00E+00 | 2536.67 | -0.40 | 0.42 | -0.95 | | 0.34 | 1.00 |
| ENST00000395330 | PSMB9 | 2.68 | -5.00 | 1.36 | -3.68 | 2.34E-04 | 5.76E-02 | 6.68 | 0.52 | 2.96 | 0.18 | | 0.86 | 1.00 |
| ENST00000295901 | PSMD6 | 8.31 | -21.54 | 3.03 | -7.11 | 1.20E-12 | 7.59E-10 | 7225.36 | 0.18 | 0.44 | 0.40 | | 0.69 | 1.00 |
| ENST00000544823 | QKI | 5.48 | -20.93 | 3.03 | -6.90 | 5.16E-12 | 1.96E-09 | 6.15 | -0.44 | 1.09 | -0.40 | | 0.69 | 1.00 |
| ENST00000358546 | RAB21 | 5.22 | -20.89 | 3.03 | -6.89 | 5.66E-12 | 2.09E-09 | 26.76 | 0.39 | 1.04 | 0.38 | | 0.71 | 1.00 |
| ENST00000482525 | RAB7A | 5.06 | -20.85 | 3.03 | -6.87 | 6.33E-12 | 2.22E-09 | 11063.39 | -0.17 | 0.23 | -0.75 | | 0.45 | 1.00 |
| ENST00000392369 | RAN | 45.82 | -23.85 | 3.03 | -7.88 | 3.34E-15 | 1.21E-11 | 507.14 | 0.40 | 0.34 | 1.19 | | 0.24 | 1.00 |
| ENST00000550265 | RARG | 2.74 | -5.06 | 1.74 | -2.90 | 3.67E-03 | 6.45E-01 | 2.77 | 4.91 | 3.92 | 1.25 | | 0.21 | 1.00 |
| ENST00000488353 | RER1 | 2.49 | -4.24 | 1.20 | -3.53 | 4.12E-04 | 9.67E-02 | 7382.61 | 0.06 | 0.09 | 0.63 | | 0.53 | 1.00 |
| ENST00000458349 | RPL28 | 12.83 | -22.12 | 3.03 | -7.30 | 2.81E-13 | 2.56E-10 | 2943.85 | 0.12 | 0.33 | 0.36 | | 0.72 | 1.00 |
| ENST00000527273 | RPS3 | 5.65 | -6.10 | 2.01 | -3.04 | 2.37E-03 | 4.61E-01 | 1768.64 | -0.22 | 0.18 | -1.22 | | 0.22 | 1.00 |
| ENST00000337526 | RTN4 | 30.49 | -5.06 | 1.67 | -3.04 | 2.40E-03 | 4.62E-01 | 542.80 | -1.97 | 2.71 | -0.73 | NA | NA | |
| ENST00000496817 | S100A6 | 183.15 | -9.97 | 3.03 | -3.29 | 9.91E-04 | 2.16E-01 | 45061.65 | 0.02 | 0.14 | 0.18 | | 0.86 | 1.00 |
| ENST00000369923 | SARS | 49.26 | -9.21 | 2.06 | -4.48 | 7.57E-06 | 1.96E-03 | 357.10 | -0.06 | 0.44 | -0.13 | | 0.89 | 1.00 |
| ENST00000514362 | SEC31A | 16.56 | -22.47 | 3.03 | -7.42 | 1.18E-13 | 1.43E-10 | 64.13 | -0.57 | 0.50 | -1.13 | | 0.26 | 1.00 |
| ENST00000223641 | SEC61B | 7.26 | -6.45 | 2.31 | -2.79 | 5.35E-03 | 8.63E-01 | 8918.72 | -0.06 | 0.12 | -0.52 | | 0.60 | 1.00 |
| ENST00000360051 | SEPT2 | 17.30 | -22.53 | 3.03 | -7.44 | 1.02E-13 | 1.31E-10 | 517.66 | -0.02 | 2.12 | -0.01 | | 0.99 | 1.00 |
| ENST00000358171 | SERPINH1 | 46.26 | -23.86 | 3.03 | -7.88 | 3.24E-15 | 1.21E-11 | 166.16 | 0.46 | 0.65 | 0.71 | | 0.48 | 1.00 |
| ENST00000522552 | SKP1 | 6.74 | -21.24 | 3.03 | -7.00 | 2.47E-12 | 1.22E-09 | 98.14 | 0.24 | 0.33 | 0.74 | | 0.46 | 1.00 |
| ENST00000552981 | SLC25A3 | 19.01 | -7.84 | 2.42 | -3.24 | 1.20E-03 | 2.58E-01 | 1132.46 | -0.56 | 0.44 | -1.27 | | 0.20 | 1.00 |
| ENST00000551374 | SLC38A2 | 15.79 | -6.40 | 1.91 | -3.35 | 8.20E-04 | 1.84E-01 | 22614.25 | -0.19 | 0.15 | -1.28 | | 0.20 | 1.00 |
| ENST00000483847 | SMARCC1 | 5.54 | -20.96 | 3.03 | -6.91 | 4.84E-12 | 1.88E-09 | 20.05 | 0.12 | 0.60 | 0.20 | | 0.84 | 1.00 |
| ENST00000360804 | SPP1 | 19.89 | -7.90 | 3.03 | -2.61 | 9.06E-03 | 1.00E+00 | 959.24 | 0.16 | 0.10 | 1.65 | | 0.10 | 0.87 |
| ENST00000488179 | SSR2 | 33.51 | -8.70 | 3.03 | -2.88 | 4.04E-03 | 6.95E-01 | 6123.01 | 0.02 | 0.44 | 0.05 | | 0.96 | 1.00 |
| ENST00000480567 | SSR2 | 24.29 | -4.77 | 1.69 | -2.83 | 4.68E-03 | 7.76E-01 | 5442.19 | -0.84 | 0.91 | -0.92 | | 0.36 | 1.00 |
| ENST00000541731 | STRAP | 11.66 | -21.99 | 3.03 | -7.26 | 3.88E-13 | 3.17E-10 | 839.12 | 0.16 | 0.33 | 0.48 | | 0.63 | 1.00 |
| ENST00000367874 | TADA1 | 19.15 | -3.96 | 1.36 | -2.92 | 3.56E-03 | 6.27E-01 | 3422.89 | 0.06 | 0.10 | 0.57 | | 0.57 | 1.00 |
| ENST00000377636 | TBC1D4 | 3.26 | -5.32 | 1.66 | -3.20 | 1.39E-03 | 2.93E-01 | 0.32 | -1.84 | 4.04 | -0.45 | | 0.65 | NA |
| ENST00000400011 | TJP1 | 6.18 | -21.11 | 3.03 | -6.96 | 3.37E-12 | 1.47E-09 | 5.91 | -3.48 | 3.83 | -0.91 | | 0.36 | 1.00 |
| ENST00000552370 | TMBIM6 | 5.28 | -6.00 | 2.20 | -2.73 | 6.40E-03 | 9.81E-01 | 66.21 | 0.47 | 0.50 | 0.95 | | 0.34 | 1.00 |
| ENST00000464650 | TMCO1 | 15.09 | -6.92 | 2.20 | -3.14 | 1.67E-03 | 3.47E-01 | 8879.77 | -0.08 | 1.54 | -0.05 | | 0.96 | 1.00 |
| ENST00000423613 | TNC | 21.67 | -8.07 | 3.03 | -2.67 | 7.67E-03 | 1.00E+00 | 1589.13 | 0.35 | 0.28 | 1.26 | | 0.21 | 1.00 |
| ENST00000405021 | TOMM7 | 8.67 | -6.11 | 2.01 | -3.04 | 2.40E-03 | 4.62E-01 | 213.82 | 0.25 | 0.47 | 0.52 | | 0.60 | 1.00 |
| ENST00000300403 | TPX2 | 18.37 | -22.61 | 3.03 | -7.47 | 8.31E-14 | 1.16E-10 | 79634.58 | 0.06 | 0.21 | 0.30 | | 0.76 | 1.00 |
| ENST00000494255 | TRA2A | 3.58 | -4.79 | 1.84 | -2.60 | 9.32E-03 | 1.00E+00 | 6.47 | 0.03 | 0.69 | 0.05 | | 0.96 | 1.00 |
| ENST00000541364 | TUBA1C | 98.99 | -24.90 | 3.03 | -8.23 | 1.94E-16 | 1.75E-12 | 882.06 | -0.15 | 0.26 | -0.57 | | 0.57 | 1.00 |
| ENST00000552448 | TUBA1C | 35.97 | -23.52 | 3.03 | -7.77 | 7.98E-15 | 2.22E-11 | 87.92 | -0.43 | 0.69 | -0.62 | | 0.54 | 1.00 |
| ENST00000425134 | TXNIP | 9.38 | -6.82 | 2.29 | -2.98 | 2.90E-03 | 5.45E-01 | 175.11 | -0.59 | 0.47 | -1.26 | | 0.21 | 1.00 |
| ENST00000246548 | UBA2 | 10.17 | -21.10 | 3.03 | -6.96 | 3.34E-12 | 1.47E-09 | 15746.70 | 0.01 | 0.57 | 0.02 | | 0.99 | 1.00 |
| ENST00000339647 | UBC | 21.80 | -2.92 | 1.08 | -2.69 | 7.08E-03 | 1.00E+00 | 1133.45 | -1.75 | 1.25 | -1.40 | | 0.16 | 0.97 |
| ENST00000462569 | UBE2G2 | 5.83 | -5.54 | 1.98 | -2.80 | 5.03E-03 | 8.20E-01 | 7.15 | 0.01 | 0.93 | 0.02 | | 0.99 | 1.00 |
| ENST00000523920 | UQCRB | 11.93 | -6.58 | 2.07 | -3.18 | 1.47E-03 | 3.07E-01 | 40.77 | -0.70 | 0.50 | -1.41 | | 0.16 | 0.96 |
| ENST00000369825 | USMG5 | 19.74 | -4.62 | 1.39 | -3.32 | 9.06E-04 | 2.00E-01 | 616.85 | -0.05 | 1.86 | -0.03 | | 0.98 | 1.00 |
| ENST00000518563 | VDAC3 | 9.00 | -21.64 | 3.03 | -7.14 | 9.22E-13 | 6.06E-10 | 111.25 | -0.22 | 0.51 | -0.43 | | 0.67 | 1.00 |
| ENST00000467957 | YBX1 | 35.14 | -23.48 | 3.03 | -7.76 | 8.77E-15 | 2.27E-11 | 807.84 | -0.91 | 0.57 | -1.58 | | 0.11 | 0.90 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000299927 | ZNF592 | 69.60 | -4.88 | 1.20 | -4.08 | 4.58E-05 | 1.16E-02 | 298.40 | 0.50 | 0.40 | 1.26 | 0.21 | 1.00 |

**Table S2. Proteins with different expression in the SILAC approach upon NSUN5 restoration in LN229 cells. Related to Figure 5.**

**A. Upregulated upon restoration of NSUN5 (p-value ≤ 0.05)**

| Accession | Description |
|---|---|
| Q96P11 | Probable 28S rRNA (cytosine-C(5))-methyltransferase OS=Homo sapiens GN=NSUN5 PE=1 SV=2 |
| O14949 | Cytochrome b-c1 complex subunit 8 OS=Homo sapiens GN=UQCRQ PE=1 SV=4 |
| Q15785 | Mitochondrial import receptor subunit TOM34 OS=Homo sapiens GN=TOMM34 PE=1 SV=2 |
| Q9BV57 | 1,2-dihydroxy-3-keto-5-methylthiopentene dioxygenase OS=Homo sapiens GN=ADI1 PE=1 SV=1 |
| P07942 | Laminin subunit beta-1 OS=Homo sapiens GN=LAMB1 PE=1 SV=2 |
| Q7Z5H4 | Vomeronasal type-1 receptor 5 OS=Homo sapiens GN=VN1R5 PE=2 SV=2 |
| Q15165 | Serum paraoxonase/arylesterase 2 OS=Homo sapiens GN=PON2 PE=1 SV=3 |
| Q9Y5K8 | V-type proton ATPase subunit D OS=Homo sapiens GN=ATP6V1D PE=1 SV=1 |
| P26358 | DNA (cytosine-5)-methyltransferase 1 OS=Homo sapiens GN=DNMT1 PE=1 SV=2 |
| P21399 | Cytoplasmic aconitate hydratase OS=Homo sapiens GN=ACO1 PE=1 SV=3 |
| Q6BCY4 | NADH-cytochrome b5 reductase 2 OS=Homo sapiens GN=CYB5R2 PE=1 SV=1 |
| Q8TBC4 | NEDD8-activating enzyme E1 catalytic subunit OS=Homo sapiens GN=UBA3 PE=1 SV=2 |
| O00625 | Pirin OS=Homo sapiens GN=PIR PE=1 SV=1 |
| P35249 | Replication factor C subunit 4 OS=Homo sapiens GN=RFC4 PE=1 SV=2 |
| Q9UHX1 | Poly(U)-binding-splicing factor PUF60 OS=Homo sapiens GN=PUF60 PE=1 SV=1 |
| P19404 | NADH dehydrogenase [ubiquinone] flavoprotein 2, mitochondrial OS=Homo sapiens GN=NDUFV2 PE=1 SV=2 |
| Q53GS9 | U4/U6.U5 tri-snRNP-associated protein 2 OS=Homo sapiens GN=USP39 PE=1 SV=2 |
| Q96DG6 | Carboxymethylenebutenolidase homolog OS=Homo sapiens GN=CMBL PE=1 SV=1 |
| P48147 | Prolyl endopeptidase OS=Homo sapiens GN=PREP PE=1 SV=2 |
| P13473 | Lysosome-associated membrane glycoprotein 2 OS=Homo sapiens GN=LAMP2 PE=1 SV=2 |
| O95562 | Vesicle transport protein SFT2B OS=Homo sapiens GN=SFT2D2 PE=1 SV=1 |
| Q16543 | Hsp90 co-chaperone Cdc37 OS=Homo sapiens GN=CDC37 PE=1 SV=1 |
| Q13144 | Translation initiation factor eIF-2B subunit epsilon OS=Homo sapiens GN=EIF2B5 PE=1 SV=3 |
| O75369 | Filamin-B OS=Homo sapiens GN=FLNB PE=1 SV=2 |
| Q8TC12 | Retinol dehydrogenase 11 OS=Homo sapiens GN=RDH11 PE=1 SV=2 |
| P82979 | SAP domain-containing ribonucleoprotein OS=Homo sapiens GN=SARNP PE=1 SV=3 |
| P19022 | Cadherin-2 OS=Homo sapiens GN=CDH2 PE=1 SV=4 |
| Q9H8Y8 | Golgi reassembly-stacking protein 2 OS=Homo sapiens GN=GORASP2 PE=1 SV=3 |
| P53007 | Tricarboxylate transport protein, mitochondrial OS=Homo sapiens GN=SLC25A1 PE=1 SV=2 |
| P16152 | Carbonyl reductase [NADPH] 1 OS=Homo sapiens GN=CBR1 PE=1 SV=3 |
| Q92544 | Transmembrane 9 superfamily member 4 OS=Homo sapiens GN=TM9SF4 PE=1 SV=2 |
| O60664 | Perilipin-3 OS=Homo sapiens GN=PLIN3 PE=1 SV=3 |
| P43246 | DNA mismatch repair protein Msh2 OS=Homo sapiens GN=MSH2 PE=1 SV=1 |
| O43493 | Trans-Golgi network integral membrane protein 2 OS=Homo sapiens GN=TGOLN2 PE=1 SV=2 |
| P09936 | Ubiquitin carboxyl-terminal hydrolase isozyme L1 OS=Homo sapiens GN=UCHL1 PE=1 SV=2 |
| O00469 | Procollagen-lysine,2-oxoglutarate 5-dioxygenase 2 OS=Homo sapiens GN=PLOD2 PE=1 |

| | |
|---|---|
| | SV=2 |
| Q86Y56 | Dynein assembly factor 5, axonemal OS=Homo sapiens GN=DNAAF5 PE=1 SV=4 |
| Q32P28 | Prolyl 3-hydroxylase 1 OS=Homo sapiens GN=P3H1 PE=1 SV=2 |
| O43676 | NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 3 OS=Homo sapiens GN=NDUFB3 PE=1 SV=3 |
| P54709 | Sodium/potassium-transporting ATPase subunit beta-3 OS=Homo sapiens GN=ATP1B3 PE=1 SV=1 |
| P61163 | Alpha-centractin OS=Homo sapiens GN=ACTR1A PE=1 SV=1 |
| P04264 | Keratin, type II cytoskeletal 1 OS=Homo sapiens GN=KRT1 PE=1 SV=6 |
| Q9Y3E5 | Peptidyl-tRNA hydrolase 2, mitochondrial OS=Homo sapiens GN=PTRH2 PE=1 SV=1 |
| Q9UH62 | Armadillo repeat-containing X-linked protein 3 OS=Homo sapiens GN=ARMCX3 PE=1 SV=1 |
| O43719 | HIV Tat-specific factor 1 OS=Homo sapiens GN=HTATSF1 PE=1 SV=1 |
| Q9UNH7 | Sorting nexin-6 OS=Homo sapiens GN=SNX6 PE=1 SV=1 |
| P42330 | Aldo-keto reductase family 1 member C3 OS=Homo sapiens GN=AKR1C3 PE=1 SV=4 |
| Q9Y520 | Protein PRRC2C OS=Homo sapiens GN=PRRC2C PE=1 SV=4 |
| O75152 | Zinc finger CCCH domain-containing protein 11A OS=Homo sapiens GN=ZC3H11A PE=1 SV=3 |
| Q92925 | SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 2 OS=Homo sapiens GN=SMARCD2 PE=1 SV=3 |
| Q99614 | Tetratricopeptide repeat protein 1 OS=Homo sapiens GN=TTC1 PE=1 SV=1 |
| Q92597 | Protein NDRG1 OS=Homo sapiens GN=NDRG1 PE=1 SV=1 |
| Q96FZ7 | Charged multivesicular body protein 6 OS=Homo sapiens GN=CHMP6 PE=1 SV=3 |
| O95169 | NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 8, mitochondrial OS=Homo sapiens GN=NDUFB8 PE=1 SV=1 |
| P53701 | Cytochrome c-type heme lyase OS=Homo sapiens GN=HCCS PE=1 SV=1 |
| O95817 | BAG family molecular chaperone regulator 3 OS=Homo sapiens GN=BAG3 PE=1 SV=3 |
| Q9UI12 | V-type proton ATPase subunit H OS=Homo sapiens GN=ATP6V1H PE=1 SV=1 |
| Q13895 | Bystin OS=Homo sapiens GN=BYSL PE=1 SV=3 |
| O60613 | 15 kDa selenoprotein OS=Homo sapiens GN=SEP15 PE=1 SV=3 |
| Q99943 | 1-acyl-sn-glycerol-3-phosphate acyltransferase alpha OS=Homo sapiens GN=AGPAT1 PE=1 SV=2 |
| Q9GZT8 | NIF3-like protein 1 OS=Homo sapiens GN=NIF3L1 PE=1 SV=2 |
| Q08209 | Serine/threonine-protein phosphatase 2B catalytic subunit alpha isoform OS=Homo sapiens GN=PPP3CA PE=1 SV=1 |
| P13995 | Bifunctional methylenetetrahydrofolate dehydrogenase/cyclohydrolase, mitochondrial OS=Homo sapiens GN=MTHFD2 PE=1 SV=2 |
| P11908 | Ribose-phosphate pyrophosphokinase 2 OS=Homo sapiens GN=PRPS2 PE=1 SV=2 |
| Q3YEC7 | Rab-like protein 6 OS=Homo sapiens GN=RABL6 PE=1 SV=2 |
| P30043 | Flavin reductase (NADPH) OS=Homo sapiens GN=BLVRB PE=1 SV=3 |
| Q9Y6W5 | Wiskott-Aldrich syndrome protein family member 2 OS=Homo sapiens GN=WASF2 PE=1 SV=3 |
| Q7Z417 | Nuclear fragile X mental retardation-interacting protein 2 OS=Homo sapiens GN=NUFIP2 PE=1 SV=1 |
| Q9NW13 | RNA-binding protein 28 OS=Homo sapiens GN=RBM28 PE=1 SV=3 |
| Q9H098 | Protein FAM107B OS=Homo sapiens GN=FAM107B PE=1 SV=1 |
| Q96IZ0 | PRKC apoptosis WT1 regulator protein OS=Homo sapiens GN=PAWR PE=1 SV=1 |
| Q12999 | Tetraspanin-31 OS=Homo sapiens GN=TSPAN31 PE=2 SV=1 |

| | |
|---|---|
| O15269 | Serine palmitoyltransferase 1 OS=Homo sapiens GN=SPTLC1 PE=1 SV=1 |
| P43355 | Melanoma-associated antigen 1 OS=Homo sapiens GN=MAGEA1 PE=1 SV=1 |
| P78362 | SRSF protein kinase 2 OS=Homo sapiens GN=SRPK2 PE=1 SV=3 |
| O15160 | DNA-directed RNA polymerases I and III subunit RPAC1 OS=Homo sapiens GN=POLR1C PE=1 SV=1 |
| Q96DI7 | U5 small nuclear ribonucleoprotein 40 kDa protein OS=Homo sapiens GN=SNRNP40 PE=1 SV=1 |
| Q9Y4I1 | Unconventional myosin-Va OS=Homo sapiens GN=MYO5A PE=1 SV=2 |
| Q9BVM2 | Protein DPCD OS=Homo sapiens GN=DPCD PE=1 SV=2 |
| O00186 | Syntaxin-binding protein 3 OS=Homo sapiens GN=STXBP3 PE=1 SV=2 |
| Q9Y605 | MORF4 family-associated protein 1 OS=Homo sapiens GN=MRFAP1 PE=1 SV=1 |
| Q9BVJ6 | U3 small nucleolar RNA-associated protein 14 homolog A OS=Homo sapiens GN=UTP14A PE=1 SV=1 |
| Q8N3F8 | MICAL-like protein 1 OS=Homo sapiens GN=MICALL1 PE=1 SV=2 |
| P56182 | Ribosomal RNA processing protein 1 homolog A OS=Homo sapiens GN=RRP1 PE=1 SV=1 |
| P23258 | Tubulin gamma-1 chain OS=Homo sapiens GN=TUBG1 PE=1 SV=2 |
| P07311 | Acylphosphatase-1 OS=Homo sapiens GN=ACYP1 PE=1 SV=2 |
| Q8TF72 | Protein Shroom3 OS=Homo sapiens GN=SHROOM3 PE=1 SV=2 |
| Q8N122 | Regulatory-associated protein of mTOR OS=Homo sapiens GN=RPTOR PE=1 SV=1 |
| P13716 | Delta-aminolevulinic acid dehydratase OS=Homo sapiens GN=ALAD PE=1 SV=1 |
| Q9H9G7 | Protein argonaute-3 OS=Homo sapiens GN=AGO3 PE=1 SV=2 |
| Q00653 | Nuclear factor NF-kappa-B p100 subunit OS=Homo sapiens GN=NFKB2 PE=1 SV=4 |
| P08559 | Pyruvate dehydrogenase E1 component subunit alpha, somatic form, mitochondrial OS=Homo sapiens GN=PDHA1 PE=1 SV=3 |
| Q9H910 | Hematological and neurological expressed 1-like protein OS=Homo sapiens GN=HN1L PE=1 SV=1 |
| Q9BUN8 | Derlin-1 OS=Homo sapiens GN=DERL1 PE=1 SV=1 |

**B. Downregulated upon restoration of NSUN5 (p-value $\leq$ 0.05)**

| Accession | Description |
|---|---|
| P36551 | Oxygen-dependent coproporphyrinogen-III oxidase, mitochondrial OS=Homo sapiens GN=CPOX PE=1 SV=3 |
| Q9UHV9 | Prefoldin subunit 2 OS=Homo sapiens GN=PFDN2 PE=1 SV=1 |
| Q96TA2 | ATP-dependent zinc metalloprotease YME1L1 OS=Homo sapiens GN=YME1L1 PE=1 SV=2 |
| O75044 | SLIT-ROBO Rho GTPase-activating protein 2 OS=Homo sapiens GN=SRGAP2 PE=1 SV=2 |
| P20962 | Parathymosin OS=Homo sapiens GN=PTMS PE=1 SV=2 |
| P20933 | N(4)-(beta-N-acetylglucosaminyl)-L-asparaginase OS=Homo sapiens GN=AGA PE=1 SV=2 |
| P53992 | Protein transport protein Sec24C OS=Homo sapiens GN=SEC24C PE=1 SV=3 |
| Q99798 | Aconitate hydratase, mitochondrial OS=Homo sapiens GN=ACO2 PE=1 SV=2 |
| Q9UJU6 | Drebrin-like protein OS=Homo sapiens GN=DBNL PE=1 SV=1 |
| Q9NXR7 | BRCA1-A complex subunit BRE OS=Homo sapiens GN=BRE PE=1 SV=2 |
| Q9Y376 | Calcium-binding protein 39 OS=Homo sapiens GN=CAB39 PE=1 SV=1 |
| Q8WYA6 | Beta-catenin-like protein 1 OS=Homo sapiens GN=CTNNBL1 PE=1 SV=1 |

| | |
|---|---|
| Q5T1J5 | Putative coiled-coil-helix-coiled-coil-helix domain-containing protein CHCHD2P9, mitochondrial OS=Homo sapiens GN=CHCHD2P9 PE=5 SV=1 |
| Q9Y5B9 | FACT complex subunit SPT16 OS=Homo sapiens GN=SUPT16H PE=1 SV=1 |
| Q96C90 | Protein phosphatase 1 regulatory subunit 14B OS=Homo sapiens GN=PPP1R14B PE=1 SV=3 |
| P49006 | MARCKS-related protein OS=Homo sapiens GN=MARCKSL1 PE=1 SV=2 |
| P20036 | HLA class II histocompatibility antigen, DP alpha 1 chain OS=Homo sapiens GN=HLA-DPA1 PE=1 SV=1 |
| Q00577 | Transcriptional activator protein Pur-alpha OS=Homo sapiens GN=PURA PE=1 SV=2 |
| Q13011 | Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial OS=Homo sapiens GN=ECH1 PE=1 SV=2 |
| Q9Y6C9 | Mitochondrial carrier homolog 2 OS=Homo sapiens GN=MTCH2 PE=1 SV=1 |
| P24534 | Elongation factor 1-beta OS=Homo sapiens GN=EEF1B2 PE=1 SV=3 |
| P15559 | NAD(P)H dehydrogenase [quinone] 1 OS=Homo sapiens GN=NQO1 PE=1 SV=1 |
| Q8N766 | ER membrane protein complex subunit 1 OS=Homo sapiens GN=EMC1 PE=1 SV=1 |
| P26641 | Elongation factor 1-gamma OS=Homo sapiens GN=EEF1G PE=1 SV=3 |
| Q9Y266 | Nuclear migration protein nudC OS=Homo sapiens GN=NUDC PE=1 SV=1 |
| Q14847 | LIM and SH3 domain protein 1 OS=Homo sapiens GN=LASP1 PE=1 SV=2 |
| P21589 | 5'-nucleotidase OS=Homo sapiens GN=NT5E PE=1 SV=1 |
| O14979 | Heterogeneous nuclear ribonucleoprotein D-like OS=Homo sapiens GN=HNRNPDL PE=1 SV=3 |
| A6NHL2 | Tubulin alpha chain-like 3 OS=Homo sapiens GN=TUBAL3 PE=1 SV=2 |
| Q13243 | Serine/arginine-rich splicing factor 5 OS=Homo sapiens GN=SRSF5 PE=1 SV=1 |
| Q9UGV2 | Protein NDRG3 OS=Homo sapiens GN=NDRG3 PE=1 SV=2 |
| Q99447 | Ethanolamine-phosphate cytidylyltransferase OS=Homo sapiens GN=PCYT2 PE=1 SV=1 |
| Q6P587 | Acylpyruvase FAHD1, mitochondrial OS=Homo sapiens GN=FAHD1 PE=1 SV=2 |
| Q9ULH0 | Kinase D-interacting substrate of 220 kDa OS=Homo sapiens GN=KIDINS220 PE=1 SV=3 |

**Table S3. List of transcripts from RNA-seq data with differential levels in empty vector vs NSUN5 transfected LN229 and A172 cells. Related to Figure 5.**

A. Upregulated upon NSUN5 transfection in LN229 cells with oxidative stress

| Ensembl ID | bMean | lfc | lfcSE | stat | pvalue | padj | Gene |
|---|---|---|---|---|---|---|---|
| ENST00000428206 | 88349.23 | 7.90 | 0.24 | 33.53 | 1.7E-246 | 1.1E-241 | NSUN5 |
| ENST00000471461 | 13102.11 | 11.36 | 0.40 | 28.65 | 1.6E-180 | 5.2E-176 | NSUN5 |
| ENST00000478977 | 21886.25 | 12.48 | 0.81 | 15.47 | 5.6E-54 | 2.9E-50 | NSUN5 |
| ENST00000393651 | 967.76 | 4.06 | 0.27 | 15.29 | 8.83E-53 | 4.4E-49 | SRPK2 |
| ENST00000564558 | 576.62 | 3.33 | 0.23 | 14.33 | 1.35E-46 | 5.16E-43 | ZFP90 |
| ENST00000356448 | 473.51 | 7.65 | 0.55 | 13.95 | 3.33E-44 | 1.23E-40 | ARHGEF26 |
| ENST00000265631 | 3197.50 | 5.66 | 0.41 | 13.83 | 1.61E-43 | 5.79E-40 | SLC25A13 |
| ENST00000367765 | 689.13 | 3.73 | 0.27 | 13.58 | 4.97E-42 | 1.74E-38 | KIFAP3 |
| ENST00000335757 | 730.02 | 7.69 | 0.57 | 13.51 | 1.46E-41 | 4.84E-38 | SLC44A2 |
| ENST00000282223 | 1399.43 | 4.27 | 0.34 | 12.49 | 8.07E-36 | 2.23E-32 | SPOCK1 |
| ENST00000432648 | 2729.74 | 3.80 | 0.36 | 10.65 | 1.67E-26 | 2.4E-23 | AKIRIN1 |
| ENST00000493099 | 266.49 | 8.64 | 0.89 | 9.74 | 2.04E-22 | 2.38E-19 | C22orf13 |
| ENST00000561623 | 4755.79 | 2.02 | 0.21 | 9.72 | 2.44E-22 | 2.8E-19 | GTF3C1 |
| ENST00000445140 | 3393.56 | 2.09 | 0.23 | 9.28 | 1.74E-20 | 1.71E-17 | FXR1 |
| ENST00000537534 | 224.12 | 11.25 | 1.22 | 9.23 | 2.76E-20 | 2.67E-17 | UBXN1 |
| ENST00000230901 | 1685.79 | 3.46 | 0.39 | 8.95 | 3.46E-19 | 3.05E-16 | BRD8 |
| ENST00000489353 | 560.01 | 2.71 | 0.30 | 8.91 | 4.94E-19 | 4.3E-16 | EIF3I |
| ENST00000537126 | 609.39 | 3.28 | 0.37 | 8.87 | 7.55E-19 | 6.53E-16 | MLF2 |
| ENST00000477925 | 817.44 | 2.37 | 0.27 | 8.68 | 4.08E-18 | 3.27E-15 | SRPK2 |
| ENST00000268989 | 56.04 | 5.56 | 0.65 | 8.58 | 9.33E-18 | 7.29E-15 | SGSM2 |
| ENST00000361016 | 837.79 | 2.11 | 0.25 | 8.53 | 1.43E-17 | 1.1E-14 | PCDHB16 |
| ENST00000540530 | 293.56 | 11.64 | 1.40 | 8.33 | 8.01E-17 | 5.71E-14 | NDUFS7 |
| ENST00000485775 | 422.76 | 6.39 | 0.77 | 8.24 | 1.68E-16 | 1.14E-13 | FAM40A |
| ENST00000252594 | 14561.25 | 12.40 | 1.52 | 8.16 | 3.31E-16 | 2.18E-13 | NSUN5 |
| ENST00000422437 | 388.66 | 2.58 | 0.32 | 7.98 | 1.5E-15 | 9.19E-13 | XXbac-BPG300A18.12.1 |
| ENST00000567957 | 206.41 | 4.01 | 0.51 | 7.89 | 2.97E-15 | 1.75E-12 | ITFG1 |
| ENST00000549773 | 34.50 | 4.64 | 0.60 | 7.72 | 1.14E-14 | 6.59E-12 | METTL1 |
| ENST00000313432 | 3969.40 | 28.48 | 3.81 | 7.48 | 7.18E-14 | 3.68E-11 | ATP2A2 |
| ENST00000532920 | 388.39 | 2.30 | 0.34 | 6.85 | 7.47E-12 | 2.97E-09 | CYB5R2 |
| ENST00000367010 | 73.10 | 7.20 | 1.07 | 6.74 | 1.56E-11 | 5.99E-09 | HHAT |
| ENST00000220592 | 269.97 | 2.22 | 0.33 | 6.73 | 1.74E-11 | 6.65E-09 | EIF2C2 |
| ENST00000268616 | 1904.71 | 5.65 | 0.88 | 6.45 | 1.15E-10 | 3.99E-08 | ZCCHC14 |
| ENST00000540900 | 950.70 | 4.24 | 0.68 | 6.24 | 4.25E-10 | 1.36E-07 | NSRP1 |
| ENST00000413769 | 38.97 | 2.37 | 0.38 | 6.24 | 4.48E-10 | 1.43E-07 | RBMXL1 |
| ENST00000282050 | 16090.14 | 13.03 | 2.11 | 6.18 | 6.58E-10 | 2.06E-07 | ATP5A1 |
| ENST00000483517 | 707.68 | 3.89 | 0.67 | 5.81 | 6.16E-09 | 1.71E-06 | EIF3I |
| ENST00000258530 | 1482.04 | 11.53 | 2.04 | 5.65 | 1.59E-08 | 4.11E-06 | APPL2 |
| ENST00000552285 | 2178.54 | 6.50 | 1.15 | 5.65 | 1.64E-08 | 4.21E-06 | OS9 |
| ENST00000457199 | 826.85 | 2.15 | 0.38 | 5.60 | 2.18E-08 | 5.51E-06 | CHORDC1 |
| ENST00000435975 | 1603.19 | 11.24 | 2.02 | 5.57 | 2.61E-08 | 6.5E-06 | NCAPH |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENST00000471273 | 747.51 | 2.54 | 0.46 | 5.57 | 2.61E-08 | 6.5E-06 | TBC1D23 |
| ENST00000338427 | 37.69 | 2.66 | 0.49 | 5.48 | 4.35E-08 | 1.05E-05 | NUDCD3 |
| ENST00000503111 | 30.98 | 8.39 | 1.58 | 5.33 | 1E-07 | 2.28E-05 | PIGG |
| ENST00000541543 | 20.15 | 7.77 | 1.47 | 5.30 | 1.18E-07 | 2.66E-05 | CEP41 |
| ENST00000552296 | 826.71 | 2.26 | 0.43 | 5.20 | 1.95E-07 | 4.23E-05 | PCBP2 |
| ENST00000426282 | 149.97 | 3.23 | 0.62 | 5.19 | 2.11E-07 | 4.57E-05 | CTA-217C2.1.1 |
| ENST00000230459 | 1474.67 | 4.14 | 0.81 | 5.09 | 3.57E-07 | 7.39E-05 | COX7A2 |
| ENST00000270649 | 415.42 | 9.69 | 1.95 | 4.96 | 6.98E-07 | 0.000134 | ZNF614 |
| ENST00000539480 | 23.15 | 7.97 | 1.61 | 4.94 | 7.75E-07 | 0.000148 | NDUFS7 |
| ENST00000531018 | 54.17 | 3.13 | 0.64 | 4.89 | 1E-06 | 0.000186 | SYVN1 |
| ENST00000371984 | 416.07 | 6.58 | 1.36 | 4.85 | 1.22E-06 | 0.00022 | POMGNT1 |
| ENST00000273963 | 242.04 | 3.81 | 0.80 | 4.78 | 1.76E-06 | 0.000309 | KLHL8 |
| ENST00000567873 | 234.87 | 8.87 | 1.89 | 4.70 | 2.64E-06 | 0.000447 | STARD13 |
| ENST00000361298 | 1895.38 | 5.16 | 1.11 | 4.67 | 3.04E-06 | 0.000507 | NGFRAP1 |
| ENST00000407215 | 204.69 | 4.91 | 1.05 | 4.66 | 3.2E-06 | 0.00053 | SCRN2 |
| ENST00000429452 | 317.96 | 6.03 | 1.30 | 4.64 | 3.41E-06 | 0.00056 | XXbac-B461K10.4.1 |
| ENST00000416160 | 605.62 | 8.37 | 1.81 | 4.62 | 3.79E-06 | 0.000618 | ITSN2 |
| ENST00000507846 | 172.92 | 7.70 | 1.67 | 4.62 | 3.87E-06 | 0.000628 | PCDH18 |
| ENST00000265806 | 175.73 | 2.70 | 0.59 | 4.58 | 4.61E-06 | 0.000734 | R3HCC1 |
| ENST00000509938 | 20.02 | 4.25 | 0.93 | 4.56 | 5.2E-06 | 0.00082 | RP11-148B6.1.1 |
| ENST00000527886 | 375.29 | 8.52 | 1.90 | 4.48 | 7.29E-06 | 0.001111 | TOLLIP |
| ENST00000504986 | 673.59 | 5.75 | 1.28 | 4.48 | 7.58E-06 | 0.001147 | TMEM33 |
| ENST00000394186 | 2736.45 | 6.24 | 1.40 | 4.45 | 8.45E-06 | 0.001259 | ATP5J2 |
| ENST00000308979 | 52.55 | 6.26 | 1.41 | 4.45 | 8.58E-06 | 0.001274 | TLR1 |
| ENST00000483526 | 5.89 | 6.00 | 1.36 | 4.41 | 1.05E-05 | 0.001523 | KIAA0895 |
| ENST00000369755 | 1449.77 | 5.21 | 1.18 | 4.40 | 1.08E-05 | 0.001553 | SLK |
| ENST00000411414 | 6.71 | 6.19 | 1.42 | 4.37 | 1.25E-05 | 0.001782 | FAM160B1 |
| ENST00000551434 | 45.98 | 3.34 | 0.77 | 4.35 | 1.37E-05 | 0.001934 | CNOT2 |
| ENST00000493335 | 831.47 | 4.35 | 1.00 | 4.33 | 1.48E-05 | 0.002064 | SMTN |
| ENST00000469936 | 25.32 | 2.11 | 0.49 | 4.32 | 1.55E-05 | 0.002153 | KHK |
| ENST00000521509 | 718.20 | 2.34 | 0.55 | 4.28 | 1.85E-05 | 0.002517 | COPS5 |
| ENST00000422947 | 27.25 | 2.59 | 0.61 | 4.27 | 1.97E-05 | 0.002662 | GCDH |
| ENST00000394906 | 83.83 | 3.83 | 0.90 | 4.26 | 2.02E-05 | 0.002708 | FLOT2 |
| ENST00000443967 | 34.21 | 5.09 | 1.21 | 4.22 | 2.48E-05 | 0.003262 | C5orf25 |
| ENST00000404826 | 605.45 | 5.15 | 1.23 | 4.20 | 2.69E-05 | 0.003478 | SDK1 |
| ENST00000366862 | 2724.76 | 2.13 | 0.51 | 4.19 | 2.77E-05 | 0.003566 | FBXO28 |
| ENST00000513192 | 82.55 | 7.36 | 1.76 | 4.19 | 2.8E-05 | 0.003597 | PIGG |
| ENST00000409212 | 569.09 | 9.78 | 2.34 | 4.18 | 2.9E-05 | 0.003695 | SH3BP4 |
| ENST00000504491 | 8.48 | 6.52 | 1.56 | 4.17 | 3.03E-05 | 0.003819 | INTU |
| ENST00000374257 | 1873.79 | 4.24 | 1.02 | 4.14 | 3.43E-05 | 0.00423 | PTBP3 |
| ENST00000345136 | 87.60 | 3.07 | 0.74 | 4.13 | 3.67E-05 | 0.004501 | PLEC |
| ENST00000335247 | 194.28 | 4.28 | 1.04 | 4.13 | 3.7E-05 | 0.004527 | CYP27C1 |
| ENST00000481616 | 26.28 | 2.47 | 0.60 | 4.12 | 3.85E-05 | 0.004697 | PDS5B |
| ENST00000524776 | 54.41 | 5.78 | 1.41 | 4.11 | 3.94E-05 | 0.004793 | DPH2 |
| ENST00000367808 | 2525.51 | 3.76 | 0.92 | 4.09 | 4.25E-05 | 0.005123 | BLZF1 |
| ENST00000257986 | 382.62 | 6.46 | 1.58 | 4.09 | 4.33E-05 | 0.005214 | EPB41L2 |

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|---|---|---|---|---|---|---|---|
| ENST00000450411 | 68.05 | 7.08 | 1.73 | 4.08 | 4.52E-05 | 0.005409 | ILKAP |
| ENST00000219345 | 302.90 | 3.37 | 0.83 | 4.07 | 4.64E-05 | 0.005524 | PLA2G15 |
| ENST00000398148 | 8462.94 | 2.15 | 0.53 | 4.07 | 4.63E-05 | 0.005524 | KHSRP |
| ENST00000375867 | 11.97 | 4.52 | 1.11 | 4.05 | 5.1E-05 | 0.005987 | RP11-1E11.1.1 |
| ENST00000376687 | 879.27 | 5.23 | 1.30 | 4.03 | 5.59E-05 | 0.006451 | SUV39H1 |
| ENST00000536530 | 356.76 | 5.15 | 1.28 | 4.03 | 5.59E-05 | 0.006451 | ARMCX5 |
| ENST00000391940 | 20.50 | 3.22 | 0.80 | 4.01 | 6.12E-05 | 0.006991 | ERCC2 |
| ENST00000381685 | 1488.79 | 3.45 | 0.86 | 3.99 | 6.56E-05 | 0.007395 | NOL10 |
| ENST00000294740 | 7.69 | 3.85 | 0.97 | 3.96 | 7.35E-05 | 0.008127 | ZNF281 |
| ENST00000162749 | 1615.92 | 3.62 | 0.91 | 3.96 | 7.59E-05 | 0.008348 | TNFRSF1A |
| ENST00000512062 | 958.05 | 4.71 | 1.19 | 3.95 | 7.97E-05 | 0.008679 | CYB5B |
| ENST00000540700 | 1478.49 | 5.33 | 1.35 | 3.94 | 8.16E-05 | 0.00883 | UBC |
| ENST00000467601 | 46.56 | 6.11 | 1.55 | 3.94 | 8.29E-05 | 0.008957 | PRRC2C |

B. Downregulated upon NSUN5 transfection in LN229 cells with oxidative stress

| **Ensembl ID** | **bMean** | **lfc** | **lfcSE** | **stat** | **pvalue** | **padj** | **Gene** |
|---|---|---|---|---|---|---|---|
| ENST00000416240 | 3194.02 | -4.79 | 0.18 | -26.94 | 7.25E-160 | 1.88E-155 | SLC25A13 |
| ENST00000538366 | 3804.42 | -9.75 | 0.37 | -26.27 | 4.11E-152 | 8.88E-148 | KIFAP3 |
| ENST00000541377 | 19979.83 | -4.93 | 0.22 | -22.45 | 1.27E-111 | 2.06E-107 | CLASP1 |
| ENST00000255977 | 3767.92 | -12.49 | 0.83 | -14.98 | 9.44E-51 | 4.22E-47 | MKRN1 |
| ENST00000414542 | 2028.46 | -14.46 | 1.20 | -12.04 | 2.24E-33 | 5.08E-30 | BLCAP |
| ENST00000373963 | 754.25 | -3.22 | 0.29 | -11.12 | 9.60E-29 | 1.64E-25 | DNPEP |
| ENST00000467807 | 409.92 | -8.70 | 0.79 | -11.03 | 2.79E-28 | 4.58E-25 | ZNF542 |
| ENST00000404574 | 1231.64 | -4.98 | 0.46 | -10.82 | 2.67E-27 | 4.13E-24 | SMTN |
| ENST00000334298 | 207.63 | -2.15 | 0.20 | -10.79 | 3.87E-27 | 5.83E-24 | LINC00221 |
| ENST00000552650 | 127.82 | -3.26 | 0.31 | -10.67 | 1.46E-26 | 2.15E-23 | TARBP2 |
| ENST00000540793 | 1620.10 | -2.51 | 0.24 | -10.55 | 4.97E-26 | 6.86E-23 | ATF7IP |
| ENST00000543413 | 355.08 | -2.81 | 0.28 | -10.06 | 8.67E-24 | 1.10E-20 | SUCLA2 |
| ENST00000340535 | 1106.99 | -5.35 | 0.55 | -9.76 | 1.70E-22 | 2.01E-19 | MIA3 |
| ENST00000279024 | 106.36 | -6.75 | 0.69 | -9.71 | 2.74E-22 | 3.11E-19 | KIAA1755 |
| ENST00000546260 | 1524.12 | -8.94 | 0.92 | -9.67 | 4.22E-22 | 4.75E-19 | SOD2 |
| ENST00000440023 | 1301.75 | -4.47 | 0.47 | -9.61 | 7.13E-22 | 7.83E-19 | NSDHL |
| ENST00000430799 | 296.24 | -11.68 | 1.25 | -9.36 | 8.08E-21 | 8.32E-18 | ARID1A |
| ENST00000504329 | 240.24 | -11.38 | 1.22 | -9.29 | 1.53E-20 | 1.51E-17 | TMEM110-MUSTN1 |
| ENST00000435120 | 349.33 | -4.43 | 0.48 | -9.18 | 4.23E-20 | 4.06E-17 | MLF2 |
| ENST00000484727 | 1146.28 | -3.12 | 0.35 | -8.82 | 1.20E-18 | 1.01E-15 | ATP1B3 |
| ENST00000367212 | 186.94 | -9.16 | 1.08 | -8.50 | 1.95E-17 | 1.50E-14 | ZC3H11A |
| ENST00000537679 | 88.24 | -9.93 | 1.24 | -8.04 | 8.69E-16 | 5.47E-13 | KPNB1 |
| ENST00000483815 | 5782.34 | -2.05 | 0.26 | -8.00 | 1.29E-15 | 8.00E-13 | C20orf24 |
| ENST00000249760 | 3842.22 | -4.62 | 0.59 | -7.83 | 4.76E-15 | 2.77E-12 | IVD |
| ENST00000525200 | 73.24 | -9.67 | 1.24 | -7.78 | 7.18E-15 | 4.16E-12 | NADSYN1 |
| ENST00000452723 | 518.44 | -4.53 | 0.59 | -7.63 | 2.43E-14 | 1.34E-11 | CDK5RAP1 |
| ENST00000336111 | 2264.35 | -28.34 | 3.75 | -7.55 | 4.33E-14 | 2.32E-11 | OGFOD1 |
| ENST00000568104 | 486.89 | -12.40 | 1.64 | -7.54 | 4.75E-14 | 2.51E-11 | BBS2 |
| ENST00000336216 | 2502.47 | -4.26 | 0.58 | -7.29 | 3.13E-13 | 1.49E-10 | HMG20A |

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|---|---|---|---|---|---|---|---|
| ENST00000420743 | 620.66 | -26.56 | 3.77 | -7.05 | 1.78E-12 | 7.63E-10 | HNRNPC |
| ENST00000541801 | 36.76 | -8.67 | 1.25 | -6.95 | 3.62E-12 | 1.49E-09 | ZNF211 |
| ENST00000346315 | 55.03 | -9.25 | 1.34 | -6.89 | 5.70E-12 | 2.30E-09 | BRCA1 |
| ENST00000454876 | 652.65 | -11.86 | 1.76 | -6.74 | 1.55E-11 | 5.97E-09 | SLC6A6 |
| ENST00000463639 | 139.86 | -10.60 | 1.59 | -6.66 | 2.72E-11 | 1.00E-08 | BRD2 |
| ENST00000456556 | 213.65 | -10.25 | 1.57 | -6.53 | 6.47E-11 | 2.32E-08 | ANKRD36C |
| ENST00000542654 | 233.36 | -2.47 | 0.38 | -6.43 | 1.24E-10 | 4.29E-08 | SLC25A13 |
| ENST00000345097 | 504.81 | -10.01 | 1.56 | -6.41 | 1.43E-10 | 4.88E-08 | FOXN3 |
| ENST00000404233 | 3307.82 | -12.72 | 2.04 | -6.23 | 4.65E-10 | 1.48E-07 | HYOU1 |
| ENST00000414273 | 35990.69 | -11.99 | 1.94 | -6.19 | 6.12E-10 | 1.93E-07 | RP5-857K21.6.1 |
| ENST00000380051 | 61.61 | -4.59 | 0.75 | -6.15 | 7.91E-10 | 2.44E-07 | RPP40 |
| ENST00000462965 | 336.51 | -2.64 | 0.44 | -6.00 | 1.97E-09 | 5.82E-07 | ARPC5 |
| ENST00000352861 | 609.89 | -7.26 | 1.25 | -5.80 | 6.45E-09 | 1.78E-06 | SEC61G |
| ENST00000511217 | 160.16 | -2.87 | 0.50 | -5.79 | 6.99E-09 | 1.92E-06 | SH3RF2 |
| ENST00000374586 | 2532.16 | -10.33 | 1.80 | -5.76 | 8.57E-09 | 2.33E-06 | C9orf5 |
| ENST00000412207 | 54.60 | -3.35 | 0.58 | -5.74 | 9.74E-09 | 2.62E-06 | SMARCE1P5 |
| ENST00000543466 | 3983.02 | -8.87 | 1.57 | -5.65 | 1.65E-08 | 4.23E-06 | G3BP1 |
| ENST00000313005 | 2661.09 | -9.82 | 1.76 | -5.57 | 2.48E-08 | 6.20E-06 | BACE1 |
| ENST00000369795 | 954.74 | -6.72 | 1.22 | -5.52 | 3.47E-08 | 8.57E-06 | FAM40A |
| ENST00000373302 | 173.99 | -5.78 | 1.06 | -5.45 | 5.08E-08 | 1.21E-05 | STXBP1 |
| ENST00000553674 | 166.63 | -7.40 | 1.37 | -5.39 | 7.17E-08 | 1.68E-05 | UBR7 |
| ENST00000407142 | 1650.89 | -8.98 | 1.68 | -5.36 | 8.22E-08 | 1.90E-05 | PPM1F |
| ENST00000537043 | 268.44 | -6.76 | 1.28 | -5.28 | 1.32E-07 | 2.95E-05 | VCL |
| ENST00000533064 | 629.10 | -10.32 | 1.96 | -5.26 | 1.47E-07 | 3.26E-05 | TRIM3 |
| ENST00000415149 | 1515.96 | -3.48 | 0.67 | -5.22 | 1.75E-07 | 3.85E-05 | BBX |
| ENST00000554908 | 4209.08 | -2.43 | 0.47 | -5.16 | 2.52E-07 | 5.37E-05 | GMFB |
| ENST00000252455 | 6243.86 | -6.96 | 1.38 | -5.03 | 4.89E-07 | 9.90E-05 | PRKCSH |
| ENST00000403834 | 119.50 | -3.31 | 0.66 | -5.03 | 4.91E-07 | 9.92E-05 | MED23 |
| ENST00000480674 | 18.52 | -2.72 | 0.54 | -4.99 | 5.94E-07 | 0.000117 | PRUNE2 |
| ENST00000332396 | 5130.31 | -5.48 | 1.10 | -4.99 | 6.19E-07 | 0.000121 | MRPL12 |
| ENST00000355739 | 958.44 | -2.60 | 0.53 | -4.91 | 8.97E-07 | 0.000168 | ERCC5 |
| ENST00000544001 | 1561.52 | -3.78 | 0.77 | -4.90 | 9.62E-07 | 0.000179 | ITFG1 |
| ENST00000307602 | 319.20 | -8.61 | 1.76 | -4.89 | 1.02E-06 | 0.000189 | HOOK3 |
| ENST00000545045 | 26.45 | -5.73 | 1.17 | -4.88 | 1.08E-06 | 0.000198 | ENO2 |
| ENST00000367178 | 1896.37 | -5.32 | 1.10 | -4.84 | 1.30E-06 | 0.000234 | SCAF8 |
| ENST00000438478 | 269.37 | -9.10 | 1.89 | -4.83 | 1.39E-06 | 0.000248 | RP11-3P17.3.1 |
| ENST00000297565 | 43.15 | -2.61 | 0.56 | -4.64 | 3.40E-06 | 0.000559 | OSR2 |
| ENST00000375217 | 18088.92 | -2.23 | 0.48 | -4.61 | 4.09E-06 | 0.000656 | UBR4 |
| ENST00000280551 | 1075.70 | -2.72 | 0.59 | -4.58 | 4.60E-06 | 0.000734 | SEC24D |
| ENST00000423517 | 197.08 | -8.65 | 1.95 | -4.44 | 9.17E-06 | 0.001352 | PCLO |
| ENST00000428216 | 3939.55 | -3.07 | 0.70 | -4.39 | 1.14E-05 | 0.001632 | MAVS |
| ENST00000568816 | 4206.65 | -5.62 | 1.29 | -4.37 | 1.23E-05 | 0.001756 | PLDN |
| ENST00000359834 | 77.22 | -9.74 | 2.25 | -4.33 | 1.47E-05 | 0.002055 | YES1 |
| ENST00000465189 | 11.69 | -7.02 | 1.63 | -4.31 | 1.62E-05 | 0.002244 | NSMCE4A |
| ENST00000359742 | 41.75 | -4.48 | 1.04 | -4.30 | 1.70E-05 | 0.00234 | GRIP1 |
| ENST00000357681 | 367.11 | -7.96 | 1.86 | -4.28 | 1.86E-05 | 0.002526 | ATP2B4 |

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|---|---|---|---|---|---|---|---|
| ENST00000409906 | 999.19 | -4.83 | 1.13 | -4.27 | 1.97E-05 | 0.002662 | TCEB2 |
| ENST00000526666 | 14.93 | -3.38 | 0.80 | -4.22 | 2.44E-05 | 0.003216 | PDE4B |
| ENST00000437245 | 9.57 | -4.21 | 1.00 | -4.22 | 2.48E-05 | 0.003266 | CEP350 |
| ENST00000393524 | 238.96 | -3.80 | 0.90 | -4.21 | 2.58E-05 | 0.003367 | PHLPP2 |
| ENST00000396822 | 937.92 | -5.43 | 1.29 | -4.20 | 2.69E-05 | 0.003478 | SNAI2 |
| ENST00000531480 | 131.67 | -7.33 | 1.75 | -4.19 | 2.80E-05 | 0.003597 | CPSF1 |
| ENST00000399408 | 79.14 | -7.32 | 1.75 | -4.19 | 2.81E-05 | 0.003603 | ABCC1 |
| ENST00000312431 | 1539.12 | -5.94 | 1.42 | -4.18 | 2.91E-05 | 0.003702 | DST |
| ENST00000298048 | 1042.40 | -2.27 | 0.55 | -4.15 | 3.40E-05 | 0.00421 | MELK |
| ENST00000481918 | 81.64 | -3.02 | 0.73 | -4.14 | 3.47E-05 | 0.004271 | ANGEL2 |
| ENST00000317538 | 101.84 | -7.27 | 1.77 | -4.11 | 3.89E-05 | 0.004738 | ZMYM6 |
| ENST00000428708 | 122.44 | -3.44 | 0.84 | -4.10 | 4.10E-05 | 0.004972 | BAIAP2 |
| ENST00000533799 | 5.04 | -5.80 | 1.42 | -4.08 | 4.42E-05 | 0.005306 | DPP3 |
| ENST00000494576 | 734.83 | -12.03 | 2.96 | -4.07 | 4.74E-05 | 0.005623 | UBAC2 |
| ENST00000530095 | 18.35 | -3.20 | 0.79 | -4.06 | 5.00E-05 | 0.005893 | THUMPD2 |
| ENST00000553208 | 11.61 | -2.61 | 0.64 | -4.05 | 5.12E-05 | 0.00601 | OS9 |
| ENST00000535458 | 116.26 | -2.03 | 0.50 | -4.04 | 5.40E-05 | 0.006282 | KPNB1 |
| ENST00000324379 | 876.65 | -2.99 | 0.75 | -4.01 | 6.04E-05 | 0.006917 | PPIE |
| ENST00000356577 | 38.95 | -2.03 | 0.51 | -4.01 | 6.18E-05 | 0.007043 | SON |
| ENST00000465505 | 39.24 | -2.04 | 0.51 | -4.00 | 6.35E-05 | 0.007197 | SNX4 |
| ENST00000539768 | 242.97 | -5.87 | 1.47 | -3.98 | 6.81E-05 | 0.007635 | SLC38A9 |
| ENST00000475896 | 28.73 | -5.42 | 1.36 | -3.98 | 6.84E-05 | 0.007652 | ABI3BP |
| ENST00000409855 | 4.72 | -5.71 | 1.43 | -3.98 | 6.92E-05 | 0.007731 | SCN7A |
| ENST00000503611 | 72.89 | -6.79 | 1.71 | -3.98 | 6.95E-05 | 0.007747 | RP11-597D13.9.1 |
| ENST00000530705 | 15503.76 | -6.38 | 1.60 | -3.98 | 6.96E-05 | 0.007752 | TPT1 |
| ENST00000490910 | 4.82 | -5.74 | 1.44 | -3.98 | 6.99E-05 | 0.007779 | CRNKL1 |
| ENST00000379091 | 80.49 | -2.45 | 0.62 | -3.95 | 7.66E-05 | 0.00841 | ZBTB10 |
| ENST00000395923 | 27.90 | -8.27 | 2.10 | -3.94 | 8.17E-05 | 0.008835 | NCALD |

C. Upregulated upon NSUN5 transfection in A172 cells without oxidative stress

| Ensembl ID | bMean | lfc | lfcSE | stat | pvalue | padj | Gene |
|---|---|---|---|---|---|---|---|
| ENST00000428206 | 141911.11 | 8.20 | 0.11 | 73.05 | 0 | 0 | NSUN5 |
| ENST00000471461 | 26813.33 | 8.93 | 0.14 | 61.62 | 0 | 0 | NSUN5 |
| ENST00000478977 | 34355.82 | 12.02 | 0.31 | 38.62 | 0 | 0 | NSUN5 |
| ENST00000479532 | 1167.94 | 4.83 | 0.17 | 28.74 | 1.1E-181 | 1.1E-177 | SF3B1 |
| ENST00000554228 | 1116.26 | 5.17 | 0.19 | 27.79 | 6.3E-170 | 5.4E-166 | KLC1 |
| ENST00000461347 | 30170.93 | 2.30 | 0.08 | 27.13 | 4E-162 | 3.2E-158 | NCL |
| ENST00000510146 | 1458.58 | 3.80 | 0.19 | 19.69 | 2.72E-86 | 9.01E-83 | MLF1IP |
| ENST00000557450 | 796.54 | 4.63 | 0.24 | 19.57 | 2.67E-85 | 8.21E-82 | KLC1 |
| ENST00000497424 | 822.09 | 4.59 | 0.24 | 19.12 | 1.66E-81 | 4.86E-78 | PANK2 |
| ENST00000454685 | 315.90 | 4.43 | 0.23 | 18.92 | 7.66E-80 | 2.2E-76 | MICALL1 |
| ENST00000370323 | 891.39 | 2.10 | 0.12 | 17.11 | 1.17E-65 | 2.55E-62 | MAGEA10 |
| ENST00000373394 | 1329.84 | 3.43 | 0.25 | 13.59 | 4.45E-42 | 5.58E-39 | ABCB7 |
| ENST00000326232 | 287.29 | 5.61 | 0.41 | 13.54 | 9.4E-42 | 1.17E-38 | SLC37A3 |
| ENST00000378203 | 670.82 | 2.29 | 0.17 | 13.17 | 1.31E-39 | 1.5E-36 | RPP38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENST00000343115 | 4222.40 | 7.24 | 0.56 | 12.98 | 1.62E-38 | 1.76E-35 | RDX |
| ENST00000417037 | 1725.61 | 9.77 | 0.75 | 12.95 | 2.36E-38 | 2.54E-35 | MYD88 |
| ENST00000561457 | 232.59 | 7.00 | 0.55 | 12.76 | 2.76E-37 | 2.83E-34 | C9orf69 |
| ENST00000409988 | 3316.98 | 3.76 | 0.33 | 11.52 | 1.04E-30 | 7.7E-28 | SPATS2L |
| ENST00000367996 | 1723.91 | 2.52 | 0.22 | 11.32 | 1.02E-29 | 7.24E-27 | ADAMTS4 |
| ENST00000461992 | 153.49 | 5.53 | 0.51 | 10.79 | 4.03E-27 | 2.53E-24 | C9orf86 |
| ENST00000554280 | 298.20 | 3.87 | 0.39 | 9.99 | 1.62E-23 | 7.79E-21 | KLC1 |
| ENST00000556925 | 385.59 | 11.92 | 1.20 | 9.96 | 2.21E-23 | 1.05E-20 | NEMF |
| ENST00000395824 | 270.60 | 11.41 | 1.22 | 9.34 | 9.41E-21 | 3.8E-18 | ZNF287 |
| ENST00000398803 | 2820.43 | 2.11 | 0.23 | 9.16 | 4.99E-20 | 1.91E-17 | HSDL2 |
| ENST00000296591 | 4188.57 | 2.08 | 0.23 | 9.00 | 2.32E-19 | 8.45E-17 | EDIL3 |
| ENST00000271348 | 1492.87 | 2.44 | 0.27 | 8.98 | 2.59E-19 | 9.41E-17 | GJA5 |
| ENST00000418388 | 136.91 | 7.98 | 0.90 | 8.87 | 7.63E-19 | 2.62E-16 | C9orf69 |
| ENST00000373297 | 1434.44 | 13.82 | 1.63 | 8.49 | 2.13E-17 | 6.55E-15 | ZMYM4 |
| ENST00000319432 | 488.39 | 12.26 | 1.46 | 8.39 | 4.94E-17 | 1.46E-14 | CCDC93 |
| ENST00000473251 | 195.74 | 10.95 | 1.31 | 8.37 | 5.54E-17 | 1.62E-14 | RAD54L |
| ENST00000313833 | 401.93 | 4.72 | 0.57 | 8.24 | 1.78E-16 | 4.98E-14 | FBXO34 |
| ENST00000339526 | 3224.95 | 2.11 | 0.26 | 8.18 | 2.94E-16 | 8.08E-14 | GLUL |
| ENST00000482609 | 229.25 | 3.76 | 0.46 | 8.16 | 3.35E-16 | 9.15E-14 | RP11-129B22.1.1 |
| ENST00000497024 | 90.40 | 3.74 | 0.46 | 8.15 | 3.78E-16 | 1.02E-13 | ELMO1 |
| ENST00000243326 | 243.84 | 4.86 | 0.60 | 8.09 | 5.97E-16 | 1.58E-13 | RIF1 |
| ENST00000313400 | 43.90 | 3.33 | 0.42 | 8.01 | 1.15E-15 | 2.92E-13 | ASTN2 |
| ENST00000484302 | 798.14 | 3.45 | 0.44 | 7.93 | 2.25E-15 | 5.58E-13 | HOXB6 |
| ENST00000542151 | 2439.59 | 3.51 | 0.47 | 7.40 | 1.33E-13 | 2.68E-11 | KDM1A |
| ENST00000268349 | 184.14 | 5.58 | 0.76 | 7.33 | 2.3E-13 | 4.49E-11 | FTO |
| ENST00000535624 | 65.66 | 3.90 | 0.53 | 7.31 | 2.7E-13 | 5.23E-11 | MGST1 |
| ENST00000521195 | 1788.30 | 26.48 | 3.74 | 7.09 | 1.34E-12 | 2.35E-10 | FZD6 |
| ENST00000355292 | 80.63 | 5.62 | 0.81 | 6.94 | 3.87E-12 | 6.49E-10 | NR3C2 |
| ENST00000293851 | 546.96 | 2.07 | 0.30 | 6.88 | 6.04E-12 | 9.86E-10 | PRSS33 |
| ENST00000372638 | 1057.39 | 2.02 | 0.30 | 6.82 | 8.98E-12 | 1.42E-09 | CITED4 |
| ENST00000541029 | 250.13 | 3.07 | 0.45 | 6.76 | 1.39E-11 | 2.16E-09 | ATN1 |
| ENST00000394224 | 590.38 | 25.72 | 3.81 | 6.75 | 1.44E-11 | 2.24E-09 | SIPA1 |
| ENST00000470670 | 2449.81 | 3.46 | 0.52 | 6.68 | 2.34E-11 | 3.54E-09 | ARF1 |
| ENST00000437079 | 143.91 | 5.02 | 0.75 | 6.67 | 2.52E-11 | 3.78E-09 | VPS8 |
| ENST00000437844 | 100.97 | 9.99 | 1.51 | 6.60 | 4.21E-11 | 6.08E-09 | ZEB1 |
| ENST00000392504 | 78.06 | 6.16 | 0.95 | 6.50 | 7.87E-11 | 1.09E-08 | DCBLD1 |
| ENST00000379858 | 175.55 | 10.79 | 1.66 | 6.49 | 8.59E-11 | 1.18E-08 | TOPORS |
| ENST00000563462 | 29.21 | 5.73 | 0.89 | 6.40 | 1.51E-10 | 2E-08 | KATNB1 |
| ENST00000372155 | 145.39 | 4.12 | 0.64 | 6.39 | 1.66E-10 | 2.17E-08 | DDX31 |
| ENST00000295119 | 194.15 | 2.38 | 0.37 | 6.37 | 1.94E-10 | 2.51E-08 | NUP35 |
| ENST00000334895 | 221.97 | 2.67 | 0.43 | 6.27 | 3.63E-10 | 4.49E-08 | TPM1 |
| ENST00000490982 | 27.73 | 8.13 | 1.31 | 6.20 | 5.53E-10 | 6.62E-08 | TRPM2 |
| ENST00000360505 | 92.86 | 9.87 | 1.59 | 6.19 | 5.99E-10 | 7.13E-08 | GSTCD |
| ENST00000472094 | 65.70 | 9.37 | 1.53 | 6.14 | 8.19E-10 | 9.49E-08 | NRG4 |
| ENST00000314607 | 1168.17 | 2.95 | 0.48 | 6.14 | 8.36E-10 | 9.64E-08 | ZMYM4 |
| ENST00000339647 | 1391.00 | 3.03 | 0.50 | 6.11 | 9.71E-10 | 1.11E-07 | UBC |

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|---|---|---|---|---|---|---|---|
| ENST00000448361 | 20.04 | 7.66 | 1.29 | 5.96 | 2.55E-09 | 2.72E-07 | COMMD3 |
| ENST00000506054 | 86.95 | 2.58 | 0.44 | 5.88 | 4.09E-09 | 4.21E-07 | ARHGAP10 |
| ENST00000520266 | 15.85 | 7.32 | 1.25 | 5.87 | 4.3E-09 | 4.41E-07 | MOK |
| ENST00000388918 | 57.69 | 3.57 | 0.61 | 5.81 | 6.08E-09 | 6.09E-07 | TYRP1 |
| ENST00000291577 | 114.00 | 5.10 | 0.88 | 5.78 | 7.41E-09 | 7.22E-07 | C21orf33 |
| ENST00000520687 | 129930.43 | 2.24 | 0.39 | 5.77 | 7.98E-09 | 7.72E-07 | SPARC |
| ENST00000222339 | 25.98 | 8.03 | 1.43 | 5.60 | 2.12E-08 | 1.9E-06 | ZNF574 |
| ENST00000366516 | 140.51 | 4.03 | 0.73 | 5.54 | 3.05E-08 | 2.67E-06 | SMYD3 |
| ENST00000420282 | 13.42 | 7.08 | 1.29 | 5.51 | 3.64E-08 | 3.14E-06 | PPP1CB |
| ENST00000421904 | 20.85 | 7.71 | 1.42 | 5.44 | 5.4E-08 | 4.49E-06 | DNAJC27-AS1 |
| ENST00000371160 | 397.69 | 4.66 | 0.88 | 5.30 | 1.16E-07 | 9.04E-06 | STAG2 |
| ENST00000562695 | 76.37 | 4.12 | 0.78 | 5.30 | 1.16E-07 | 9.04E-06 | C16orf52 |
| ENST00000389087 | 3090.57 | 8.40 | 1.59 | 5.30 | 1.17E-07 | 9.08E-06 | FBN1 |
| ENST00000475394 | 45.27 | 2.72 | 0.52 | 5.27 | 1.36E-07 | 1.03E-05 | DLG1 |
| ENST00000407142 | 1413.66 | 8.36 | 1.59 | 5.25 | 1.54E-07 | 1.16E-05 | PPM1F |
| ENST00000361922 | 277.50 | 2.08 | 0.40 | 5.23 | 1.68E-07 | 1.24E-05 | MAG |
| ENST00000537536 | 9.80 | 6.63 | 1.28 | 5.19 | 2.13E-07 | 1.55E-05 | TBC1D25 |
| ENST00000523938 | 10.10 | 6.67 | 1.30 | 5.12 | 3.12E-07 | 2.19E-05 | YWHAZ |
| ENST00000546382 | 17.66 | 3.14 | 0.62 | 5.03 | 4.89E-07 | 3.3E-05 | CTD-2314B22.3.1 |
| ENST00000256062 | 840.42 | 12.09 | 2.40 | 5.03 | 4.99E-07 | 3.36E-05 | TMTC1 |
| ENST00000372950 | 585.56 | 5.58 | 1.11 | 5.02 | 5.27E-07 | 3.52E-05 | DNAJC9 |
| ENST00000449062 | 38.43 | 4.68 | 0.94 | 4.98 | 6.22E-07 | 4.09E-05 | C20orf43 |
| ENST00000372572 | 549.60 | 5.42 | 1.09 | 4.98 | 6.46E-07 | 4.23E-05 | FOXJ3 |
| ENST00000411996 | 1573.35 | 4.38 | 0.88 | 4.97 | 6.77E-07 | 4.41E-05 | DNM1L |
| ENST00000359867 | 271.68 | 8.97 | 1.82 | 4.93 | 8.08E-07 | 5.16E-05 | CSNK1E |
| ENST00000457956 | 29.96 | 2.37 | 0.49 | 4.87 | 1.11E-06 | 6.88E-05 | BTG3 |
| ENST00000398484 | 3524.69 | 11.09 | 2.29 | 4.85 | 1.21E-06 | 7.4E-05 | FGFRL1 |
| ENST00000498586 | 14.41 | 4.68 | 0.97 | 4.85 | 1.25E-06 | 7.65E-05 | NCOA4 |
| ENST00000366837 | 180.99 | 9.87 | 2.04 | 4.84 | 1.32E-06 | 7.99E-05 | EPHX1 |
| ENST00000453626 | 335.06 | 2.42 | 0.50 | 4.84 | 1.33E-06 | 8.02E-05 | DONSON |
| ENST00000454092 | 35.31 | 2.11 | 0.44 | 4.77 | 1.84E-06 | 0.000107 | MIR4461 |
| ENST00000559017 | 10.32 | 6.70 | 1.41 | 4.75 | 2.05E-06 | 0.000119 | DCAF11 |
| ENST00000334705 | 656.25 | 2.40 | 0.51 | 4.70 | 2.58E-06 | 0.000145 | FAM91A1 |
| ENST00000488497 | 1275.37 | 2.14 | 0.46 | 4.66 | 3.17E-06 | 0.000173 | U2SURP |
| ENST00000517593 | 285.23 | 7.04 | 1.52 | 4.63 | 3.68E-06 | 0.000197 | TTC35 |
| ENST00000445856 | 29.78 | 3.44 | 0.75 | 4.60 | 4.29E-06 | 0.000224 | EPHX1 |
| ENST00000395411 | 995.91 | 5.83 | 1.27 | 4.58 | 4.64E-06 | 0.000241 | CSNK1G3 |
| ENST00000223321 | 812.71 | 3.46 | 0.76 | 4.58 | 4.72E-06 | 0.000244 | PSMA2 |
| ENST00000505013 | 6.65 | 6.06 | 1.33 | 4.56 | 5.15E-06 | 0.000263 | ACPL2 |
| ENST00000490885 | 338.96 | 7.42 | 1.63 | 4.54 | 5.62E-06 | 0.000284 | PTGS2 |
| ENST00000356259 | 28.69 | 4.45 | 0.98 | 4.52 | 6.24E-06 | 0.00031 | GIT2 |
| ENST00000372165 | 222.59 | 2.12 | 0.47 | 4.52 | 6.3E-06 | 0.000313 | RSPH9 |
| ENST00000456040 | 136.60 | 7.24 | 1.62 | 4.48 | 7.61E-06 | 0.000368 | R3HDM1 |
| ENST00000553932 | 36.71 | 7.56 | 1.70 | 4.46 | 8.16E-06 | 0.00039 | RP11-566K8.2.1 |
| ENST00000376834 | 963.09 | 5.08 | 1.14 | 4.45 | 8.63E-06 | 0.000409 | C9orf41 |
| ENST00000355790 | 215.76 | 6.90 | 1.55 | 4.45 | 8.71E-06 | 0.000412 | LRRC20 |

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|---|---|---|---|---|---|---|---|
| ENST00000486300 | 21.13 | 3.77 | 0.85 | 4.44 | 9.09E-06 | 0.000428 | AFAP1L2 |
| ENST00000255380 | 79.13 | 8.67 | 1.96 | 4.42 | 9.7E-06 | 0.000451 | CHRM3 |
| ENST00000394419 | 2188.98 | 3.27 | 0.74 | 4.38 | 1.16E-05 | 0.00053 | ACTN1 |
| ENST00000354914 | 1334.61 | 2.28 | 0.52 | 4.38 | 1.21E-05 | 0.000548 | SCARA5 |
| ENST00000432399 | 131.69 | 10.37 | 2.38 | 4.37 | 1.26E-05 | 0.000566 | MAST4 |
| ENST00000508096 | 11.39 | 2.79 | 0.64 | 4.34 | 1.4E-05 | 0.00062 | RP11-298J20.4.1 |
| ENST00000505615 | 489.14 | 4.40 | 1.01 | 4.34 | 1.46E-05 | 0.000642 | VCAN |
| ENST00000461287 | 8.71 | 6.46 | 1.49 | 4.33 | 1.51E-05 | 0.000664 | LY6G6E |
| ENST00000470093 | 401.76 | 5.57 | 1.31 | 4.26 | 2.01E-05 | 0.000854 | FBXW4 |
| ENST00000526397 | 10.20 | 4.16 | 0.99 | 4.23 | 2.39E-05 | 0.000994 | SERPINH1 |
| ENST00000294737 | 57.78 | 9.19 | 2.17 | 4.22 | 2.4E-05 | 0.000998 | DENND1B |
| ENST00000473565 | 27.49 | 5.22 | 1.24 | 4.20 | 2.62E-05 | 0.001078 | CLK1 |
| ENST00000276816 | 15.29 | 2.61 | 0.62 | 4.19 | 2.73E-05 | 0.001116 | ZNF16 |
| ENST00000540218 | 387.12 | 2.95 | 0.71 | 4.16 | 3.14E-05 | 0.001256 | TYRO3 |
| ENST00000262953 | 224.95 | 2.89 | 0.70 | 4.14 | 3.46E-05 | 0.001364 | TLE2 |
| ENST00000478047 | 228.53 | 4.36 | 1.05 | 4.14 | 3.46E-05 | 0.001364 | CWF19L1 |
| ENST00000543430 | 15.98 | 7.33 | 1.78 | 4.13 | 3.68E-05 | 0.001437 | P2RX4 |
| ENST00000396594 | 1815.14 | 4.64 | 1.13 | 4.13 | 3.71E-05 | 0.001445 | GNE |
| ENST00000464060 | 23.90 | 6.02 | 1.46 | 4.12 | 3.74E-05 | 0.001456 | MAGI1 |
| ENST00000463227 | 15.01 | 3.05 | 0.74 | 4.11 | 4.03E-05 | 0.001552 | DEDD |
| ENST00000320394 | 27.62 | 8.12 | 1.99 | 4.08 | 4.46E-05 | 0.00169 | IQCK |
| ENST00000381352 | 580.64 | 2.01 | 0.49 | 4.08 | 4.5E-05 | 0.001699 | RASSF8 |
| ENST00000523313 | 18.68 | 3.23 | 0.79 | 4.06 | 4.84E-05 | 0.001809 | RP11-697M17.1.1 |
| ENST00000430935 | 10.79 | 3.81 | 0.95 | 4.03 | 5.68E-05 | 0.002065 | TTC26 |
| ENST00000343267 | 2252.07 | 2.35 | 0.59 | 4.01 | 6.15E-05 | 0.002207 | APOD |
| ENST00000307659 | 2140.13 | 8.46 | 2.12 | 4.00 | 6.41E-05 | 0.002284 | KIAA0232 |
| ENST00000230658 | 82.40 | 2.25 | 0.56 | 4.00 | 6.44E-05 | 0.002292 | ISL1 |
| ENST00000356058 | 63.39 | 6.12 | 1.54 | 3.98 | 6.86E-05 | 0.002417 | ABCB8 |
| ENST00000404910 | 417.27 | 2.95 | 0.74 | 3.97 | 7.3E-05 | 0.002537 | RAMP1 |
| ENST00000462190 | 495.98 | 4.84 | 1.22 | 3.96 | 7.39E-05 | 0.002563 | SPATS2L |
| ENST00000553674 | 392.74 | 2.56 | 0.65 | 3.96 | 7.6E-05 | 0.002625 | UBR7 |
| ENST00000518721 | 4710.40 | 2.01 | 0.51 | 3.95 | 7.81E-05 | 0.002687 | ASAP1 |
| ENST00000409331 | 8.10 | 3.81 | 0.97 | 3.93 | 8.37E-05 | 0.002849 | ELMOD3 |
| ENST00000272433 | 1805.60 | 3.73 | 0.95 | 3.93 | 8.5E-05 | 0.002883 | SFXN5 |
| ENST00000517097 | 4.82 | 5.60 | 1.43 | 3.91 | 9.42E-05 | 0.00314 | SCARNA3 |
| ENST00000485565 | 7.56 | 6.25 | 1.61 | 3.89 | 0.000101 | 0.00333 | SPIN1 |
| ENST00000540331 | 269.16 | 6.35 | 1.64 | 3.88 | 0.000105 | 0.003451 | ZNF701 |
| ENST00000397090 | 15.90 | 2.97 | 0.77 | 3.87 | 0.00011 | 0.00359 | FGFR1 |
| ENST00000347630 | 1782.33 | 5.14 | 1.33 | 3.86 | 0.000114 | 0.003679 | SPOP |
| ENST00000329143 | 114.62 | 2.16 | 0.56 | 3.85 | 0.000117 | 0.003775 | C11orf82 |
| ENST00000400202 | 132.35 | 6.32 | 1.64 | 3.85 | 0.000117 | 0.003777 | NRIP1 |
| ENST00000396210 | 62.70 | 2.23 | 0.58 | 3.84 | 0.000123 | 0.003923 | MGST1 |
| ENST00000509345 | 10.42 | 3.40 | 0.89 | 3.83 | 0.000128 | 0.004069 | MAGEA5 |
| ENST00000361828 | 1315.33 | 2.79 | 0.73 | 3.82 | 0.000133 | 0.004194 | OPA1 |
| ENST00000404574 | 1131.00 | 4.39 | 1.16 | 3.80 | 0.000145 | 0.00453 | SMTN |
| ENST00000492211 | 59.71 | 5.75 | 1.52 | 3.78 | 0.000159 | 0.00489 | ARHGAP19 |

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|---|---|---|---|---|---|---|---|
| ENST00000356839 | 2644.07 | 2.68 | 0.71 | 3.77 | 0.000164 | 0.004998 | ACADVL |
| ENST00000556393 | 13.16 | 7.05 | 1.88 | 3.76 | 0.000172 | 0.005201 | L2HGDH |
| ENST00000302851 | 1024.04 | 3.76 | 1.00 | 3.74 | 0.000181 | 0.005444 | ZNF561 |
| ENST00000295598 | 70840.68 | 2.82 | 0.75 | 3.74 | 0.000182 | 0.005468 | ATP1A1 |
| ENST00000524558 | 7303.11 | 2.63 | 0.70 | 3.73 | 0.000191 | 0.005685 | SERPINH1 |
| ENST00000441447 | 29.02 | 2.91 | 0.78 | 3.73 | 0.000192 | 0.005718 | ZMYM4 |
| ENST00000488909 | 33.90 | 2.71 | 0.73 | 3.73 | 0.000194 | 0.005763 | ODF2 |
| ENST00000453304 | 1431.87 | 13.82 | 3.72 | 3.72 | 0.0002 | 0.005899 | UNC5C |
| ENST00000421660 | 64.88 | 2.74 | 0.74 | 3.72 | 0.000201 | 0.00591 | YEATS2 |
| ENST00000441210 | 78.57 | 3.16 | 0.85 | 3.72 | 0.000202 | 0.005945 | TINAGL1 |
| ENST00000337959 | 206.08 | 3.65 | 0.98 | 3.72 | 0.000203 | 0.005949 | PACSIN2 |
| ENST00000409963 | 1287.60 | 13.66 | 3.70 | 3.70 | 0.000219 | 0.006313 | MRPL38 |
| ENST00000349999 | 10.29 | 4.79 | 1.31 | 3.66 | 0.000253 | 0.007109 | HFE |
| ENST00000263713 | 458.61 | 3.56 | 0.97 | 3.65 | 0.000259 | 0.007243 | EPB41L5 |
| ENST00000370314 | 60.13 | 8.28 | 2.27 | 3.65 | 0.00026 | 0.007259 | GABRA3 |
| ENST00000370256 | 307.79 | 4.64 | 1.27 | 3.64 | 0.000272 | 0.007523 | FNBP1L |
| ENST00000512871 | 28.02 | 2.85 | 0.78 | 3.63 | 0.000285 | 0.007833 | PRRC1 |
| ENST00000425762 | 1066.05 | 3.69 | 1.02 | 3.63 | 0.000287 | 0.007876 | PSMB5 |
| ENST00000467131 | 10.19 | 2.83 | 0.78 | 3.62 | 0.000299 | 0.008148 | LEPREL1 |
| ENST00000261892 | 31.82 | 4.83 | 1.34 | 3.61 | 0.000305 | 0.008256 | SLC24A1 |
| ENST00000420764 | 26.32 | 3.23 | 0.90 | 3.61 | 0.000312 | 0.008424 | SLC26A6 |
| ENST00000557666 | 93.48 | 4.50 | 1.25 | 3.60 | 0.000321 | 0.008617 | BAG5 |
| ENST00000523303 | 14.87 | 3.95 | 1.10 | 3.60 | 0.000322 | 0.00863 | INTS9 |
| ENST00000491976 | 51.40 | 2.94 | 0.82 | 3.58 | 0.000344 | 0.009111 | SERINC2 |
| ENST00000509156 | 578.44 | 9.05 | 2.53 | 3.58 | 0.000346 | 0.009154 | ZNF131 |
| ENST00000535305 | 818.45 | 13.01 | 3.64 | 3.57 | 0.000354 | 0.009303 | TMEM87A |
| ENST00000546155 | 38.57 | 2.45 | 0.69 | 3.57 | 0.000356 | 0.009343 | LTBP4 |
| ENST00000495414 | 30.67 | 3.47 | 0.97 | 3.57 | 0.000357 | 0.009354 | C3orf58 |
| ENST00000335144 | 812.79 | 13.00 | 3.65 | 3.57 | 0.000364 | 0.009489 | SPIN4 |
| ENST00000548968 | 15.12 | 2.45 | 0.69 | 3.56 | 0.000372 | 0.009649 | LRIG3 |

D. Downregulated upon NSUN5 transfection in A172 cells without oxidative stress

| **Ensembl ID** | **bMean** | **lfc** | **lfcSE** | **stat** | **pvalue** | **padj** | **Gene** |
|---|---|---|---|---|---|---|---|
| ENST00000336066 | 1752.90 | -5.81 | 0.20 | -28.77 | 4.6E-182 | 4.5E-178 | PANK2 |
| ENST00000409601 | 2123.81 | -5.38 | 0.22 | -24.48 | 2.2E-132 | 1.2E-128 | MTHFD2 |
| ENST00000453712 | 905.21 | -4.54 | 0.23 | -19.62 | 9.59E-86 | 3.02E-82 | RAP1GDS1 |
| ENST00000316562 | 719.38 | -3.19 | 0.18 | -18.04 | 9.87E-73 | 2.55E-69 | PANK2 |
| ENST00000345133 | 552.44 | -5.05 | 0.29 | -17.44 | 3.84E-68 | 9.02E-65 | TGIF1 |
| ENST00000256103 | 4299.79 | -2.73 | 0.16 | -17.25 | 1.19E-66 | 2.65E-63 | PMP2 |
| ENST00000544910 | 915.71 | -9.40 | 0.56 | -16.77 | 3.82E-63 | 7.96E-60 | CCDC132 |
| ENST00000263849 | 1801.19 | -2.10 | 0.13 | -16.41 | 1.61E-60 | 3.19E-57 | FAM164A |
| ENST00000193403 | 14100.18 | -2.34 | 0.15 | -15.60 | 6.78E-55 | 1.2E-51 | ACTN1 |
| ENST00000521873 | 184.84 | -4.71 | 0.33 | -14.19 | 1.06E-45 | 1.47E-42 | FAM164A |
| ENST00000312431 | 2341.74 | -7.16 | 0.51 | -13.91 | 5.43E-44 | 7.01E-41 | DST |
| ENST00000321521 | 322.91 | -5.27 | 0.41 | -12.91 | 3.94E-38 | 4.18E-35 | PPIP5K2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENST00000374955 | 315.12 | -2.50 | 0.20 | -12.80 | 1.63E-37 | 1.7E-34 | PAGE5 |
| ENST00000512621 | 923.75 | -2.55 | 0.20 | -12.71 | 4.93E-37 | 4.86E-34 | ADH5 |
| ENST00000322635 | 448.50 | -9.54 | 0.77 | -12.44 | 1.5E-35 | 1.37E-32 | CAMK2G |
| ENST00000368124 | 2198.63 | -2.18 | 0.18 | -12.27 | 1.29E-34 | 1.11E-31 | CADM3 |
| ENST00000493099 | 319.60 | -8.72 | 0.73 | -11.93 | 8.73E-33 | 7.28E-30 | C22orf13 |
| ENST00000257749 | 126.03 | -5.77 | 0.49 | -11.83 | 2.72E-32 | 2.16E-29 | BACH2 |
| ENST00000560241 | 86.15 | -3.81 | 0.33 | -11.61 | 3.61E-31 | 2.76E-28 | IL16 |
| ENST00000264867 | 494.93 | -4.40 | 0.38 | -11.53 | 9.17E-31 | 6.89E-28 | PPARGC1A |
| ENST00000298049 | 149.41 | -3.61 | 0.32 | -11.17 | 5.65E-29 | 3.82E-26 | EEF1A2 |
| ENST00000463787 | 939.21 | -2.43 | 0.22 | -10.88 | 1.38E-27 | 8.93E-25 | MAGED2 |
| ENST00000264071 | 551.31 | -2.16 | 0.21 | -10.41 | 2.19E-25 | 1.25E-22 | TUBB4A |
| ENST00000423381 | 444.14 | -12.38 | 1.21 | -10.27 | 1E-24 | 5.39E-22 | CAMK2G |
| ENST00000480329 | 144.34 | -5.35 | 0.53 | -10.01 | 1.44E-23 | 7E-21 | SLC35C2 |
| ENST00000536483 | 732.53 | -3.98 | 0.40 | -10.00 | 1.53E-23 | 7.4E-21 | PRKDC |
| ENST00000402643 | 78.57 | -2.89 | 0.29 | -9.89 | 4.42E-23 | 2.07E-20 | GAPDHP72 |
| ENST00000360760 | 287.76 | -3.11 | 0.31 | -9.89 | 4.72E-23 | 2.2E-20 | SPATS2L |
| ENST00000303115 | 2302.95 | -2.11 | 0.22 | -9.46 | 2.96E-21 | 1.24E-18 | IL7R |
| ENST00000409707 | 245.53 | -11.53 | 1.26 | -9.15 | 5.47E-20 | 2.07E-17 | STAMBP |
| ENST00000313234 | 1144.80 | -2.82 | 0.32 | -8.94 | 3.93E-19 | 1.4E-16 | KRT80 |
| ENST00000333046 | 138.34 | -8.25 | 0.94 | -8.81 | 1.25E-18 | 4.21E-16 | TPRN |
| ENST00000431180 | 245.82 | -9.67 | 1.11 | -8.75 | 2.16E-18 | 7.11E-16 | SETD2 |
| ENST00000477128 | 1108.31 | -4.85 | 0.56 | -8.71 | 3.16E-18 | 1.03E-15 | UTP6 |
| ENST00000384756 | 61.36 | -6.33 | 0.73 | -8.62 | 6.96E-18 | 2.22E-15 | SNORD22 |
| ENST00000362031 | 248.41 | -3.67 | 0.43 | -8.59 | 9.03E-18 | 2.85E-15 | SNX6 |
| ENST00000484404 | 197.09 | -3.26 | 0.40 | -8.23 | 1.88E-16 | 5.25E-14 | ITGA4 |
| ENST00000285105 | 225.25 | -4.79 | 0.60 | -8.04 | 9.34E-16 | 2.4E-13 | AIM1 |
| ENST00000227503 | 622.14 | -3.59 | 0.45 | -8.02 | 1.05E-15 | 2.69E-13 | SF1 |
| ENST00000521331 | 433.73 | -2.34 | 0.29 | -8.00 | 1.24E-15 | 3.15E-13 | PRKDC |
| ENST00000545801 | 165.42 | -9.99 | 1.26 | -7.96 | 1.78E-15 | 4.45E-13 | ANAPC5 |
| ENST00000445888 | 2151.71 | -3.48 | 0.45 | -7.67 | 1.71E-14 | 3.84E-12 | TP53 |
| ENST00000545294 | 274.20 | -3.35 | 0.44 | -7.65 | 1.98E-14 | 4.39E-12 | UHMK1 |
| ENST00000450465 | 1887.15 | -28.20 | 3.72 | -7.58 | 3.4E-14 | 7.34E-12 | TNRC6A |
| ENST00000337437 | 1857.97 | -27.53 | 3.73 | -7.37 | 1.67E-13 | 3.34E-11 | GGA1 |
| ENST00000377902 | 3505.10 | -3.05 | 0.42 | -7.33 | 2.3E-13 | 4.5E-11 | GNE |
| ENST00000535318 | 112.26 | -7.53 | 1.04 | -7.23 | 4.91E-13 | 9.22E-11 | CPNE2 |
| ENST00000409140 | 320.90 | -2.19 | 0.30 | -7.22 | 5.13E-13 | 9.59E-11 | SPATS2L |
| ENST00000392692 | 3182.18 | -4.23 | 0.59 | -7.17 | 7.63E-13 | 1.4E-10 | ECT2 |
| ENST00000480769 | 1628.71 | -6.49 | 0.92 | -7.09 | 1.31E-12 | 2.32E-10 | IVNS1ABP |
| ENST00000466787 | 545.05 | -2.32 | 0.33 | -7.04 | 1.85E-12 | 3.22E-10 | WRB |
| ENST00000369750 | 2761.12 | -2.89 | 0.41 | -7.03 | 2.07E-12 | 3.57E-10 | TPBG |
| ENST00000567690 | 37.90 | -3.98 | 0.57 | -7.01 | 2.36E-12 | 4.06E-10 | CCNDBP1 |
| ENST00000370196 | 335.24 | -3.85 | 0.55 | -6.97 | 3.13E-12 | 5.3E-10 | TLX1 |
| ENST00000399464 | 569.49 | -9.88 | 1.43 | -6.92 | 4.55E-12 | 7.59E-10 | NEURL4 |
| ENST00000434178 | 825.71 | -7.19 | 1.04 | -6.91 | 4.74E-12 | 7.84E-10 | MGLL |
| ENST00000369817 | 8627.43 | -3.15 | 0.47 | -6.74 | 1.58E-11 | 2.43E-09 | RPL10 |
| ENST00000357006 | 143.57 | -5.61 | 0.84 | -6.69 | 2.25E-11 | 3.41E-09 | ZFP161 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENST00000430479 | 353.57 | -7.02 | 1.05 | -6.68 | 2.39E-11 | 3.59E-09 | ETV1 |
| ENST00000302628 | 70.43 | -2.32 | 0.35 | -6.68 | 2.41E-11 | 3.63E-09 | CALB2 |
| ENST00000535581 | 33.33 | -8.64 | 1.30 | -6.64 | 3.04E-11 | 4.48E-09 | C19orf55 |
| ENST00000455785 | 424.74 | -2.34 | 0.36 | -6.59 | 4.33E-11 | 6.23E-09 | STMN1 |
| ENST00000252455 | 5326.20 | -6.36 | 0.97 | -6.58 | 4.73E-11 | 6.78E-09 | PRKCSH |
| ENST00000218004 | 215.85 | -11.34 | 1.74 | -6.50 | 7.94E-11 | 1.1E-08 | NXT2 |
| ENST00000258530 | 281.38 | -8.54 | 1.32 | -6.47 | 9.81E-11 | 1.33E-08 | APPL2 |
| ENST00000358677 | 253.56 | -2.54 | 0.40 | -6.37 | 1.86E-10 | 2.42E-08 | SPATS2L |
| ENST00000403258 | 20.35 | -7.93 | 1.25 | -6.35 | 2.22E-10 | 2.85E-08 | ACTBP8 |
| ENST00000357154 | 29.91 | -6.03 | 0.95 | -6.31 | 2.77E-10 | 3.49E-08 | SPOCK3 |
| ENST00000269468 | 129.00 | -2.01 | 0.32 | -6.28 | 3.29E-10 | 4.11E-08 | MBD1 |
| ENST00000439578 | 2536.12 | -4.06 | 0.67 | -6.08 | 1.23E-09 | 1.38E-07 | SAR1B |
| ENST00000526926 | 610.29 | -4.33 | 0.72 | -6.01 | 1.85E-09 | 2.01E-07 | ZNF623 |
| ENST00000305762 | 26.41 | -7.34 | 1.23 | -5.97 | 2.36E-09 | 2.54E-07 | CAMK2G |
| ENST00000369135 | 5596.30 | -14.17 | 2.39 | -5.94 | 2.86E-09 | 3.03E-07 | OTUD7B |
| ENST00000569028 | 607.63 | -3.70 | 0.63 | -5.85 | 4.93E-09 | 4.99E-07 | RP11-80F22.9.1 |
| ENST00000339950 | 12552.90 | -2.82 | 0.49 | -5.80 | 6.54E-09 | 6.47E-07 | USP1 |
| ENST00000413081 | 201.37 | -8.79 | 1.52 | -5.77 | 7.95E-09 | 7.69E-07 | TNRC18 |
| ENST00000378921 | 1486.62 | -11.68 | 2.04 | -5.73 | 9.84E-09 | 9.34E-07 | ZC3H13 |
| ENST00000400337 | 748.59 | -5.11 | 0.91 | -5.65 | 1.63E-08 | 1.5E-06 | COL18A1 |
| ENST00000379597 | 254.01 | -2.23 | 0.40 | -5.61 | 2.04E-08 | 1.84E-06 | GCNT2 |
| ENST00000282169 | 554.48 | -3.08 | 0.55 | -5.57 | 2.6E-08 | 2.31E-06 | UHMK1 |
| ENST00000485978 | 140.15 | -3.25 | 0.59 | -5.52 | 3.33E-08 | 2.88E-06 | SLC2A6 |
| ENST00000520401 | 14.73 | -3.69 | 0.67 | -5.52 | 3.34E-08 | 2.89E-06 | CTC-554D6.1.1 |
| ENST00000412716 | 156.80 | -3.03 | 0.55 | -5.51 | 3.6E-08 | 3.1E-06 | DAZAP2 |
| ENST00000440926 | 152.43 | -4.94 | 0.90 | -5.48 | 4.17E-08 | 3.54E-06 | SLC18A1 |
| ENST00000396526 | 852.13 | -5.57 | 1.03 | -5.42 | 6.11E-08 | 5.03E-06 | SNX6 |
| ENST00000500728 | 4999.64 | -3.63 | 0.67 | -5.40 | 6.54E-08 | 5.36E-06 | LRPAP1 |
| ENST00000399119 | 21.64 | -8.02 | 1.49 | -5.39 | 6.97E-08 | 5.67E-06 | DTNA |
| ENST00000541394 | 18.41 | -7.79 | 1.45 | -5.39 | 7.11E-08 | 5.78E-06 | C12orf48 |
| ENST00000379335 | 516.46 | -3.02 | 0.56 | -5.37 | 7.98E-08 | 6.42E-06 | PHACTR1 |
| ENST00000331456 | 508.62 | -9.72 | 1.81 | -5.36 | 8.29E-08 | 6.64E-06 | TRAIP |
| ENST00000534989 | 1639.90 | -9.31 | 1.74 | -5.36 | 8.56E-08 | 6.83E-06 | COG2 |
| ENST00000409185 | 3290.43 | -2.38 | 0.45 | -5.30 | 1.14E-07 | 8.9E-06 | FAM168B |
| ENST00000556752 | 2200.94 | -5.86 | 1.11 | -5.26 | 1.43E-07 | 1.08E-05 | GNG2 |
| ENST00000395325 | 2493.31 | -3.65 | 0.70 | -5.26 | 1.48E-07 | 1.11E-05 | DNAJC6 |
| ENST00000441843 | 1008.59 | -2.30 | 0.44 | -5.23 | 1.69E-07 | 1.25E-05 | LACC1 |
| ENST00000522751 | 612.54 | -3.31 | 0.64 | -5.14 | 2.68E-07 | 1.9E-05 | ENDOV |
| ENST00000307885 | 2528.07 | -3.10 | 0.60 | -5.13 | 2.82E-07 | 2E-05 | ADCY6 |
| ENST00000282541 | 1655.85 | -4.13 | 0.81 | -5.13 | 2.92E-07 | 2.07E-05 | GPD1L |
| ENST00000399054 | 1618.65 | -8.63 | 1.69 | -5.11 | 3.21E-07 | 2.25E-05 | MKKS |
| ENST00000536429 | 10.04 | -6.91 | 1.36 | -5.09 | 3.66E-07 | 2.54E-05 | PRKDC |
| ENST00000357122 | 1666.33 | -3.81 | 0.76 | -5.03 | 4.96E-07 | 3.34E-05 | SPAG9 |
| ENST00000393567 | 21.61 | -2.80 | 0.56 | -5.02 | 5.11E-07 | 3.43E-05 | HYDIN |
| ENST00000394144 | 3133.33 | -2.22 | 0.44 | -5.00 | 5.67E-07 | 3.77E-05 | TBC1D23 |
| ENST00000007414 | 849.81 | -5.63 | 1.13 | -5.00 | 5.69E-07 | 3.78E-05 | OSBPL7 |

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|---|---|---|---|---|---|---|---|
| ENST00000474050 | 231.24 | -7.99 | 1.60 | -4.99 | 6.03E-07 | 3.98E-05 | GLIPR2 |
| ENST00000345807 | 768.76 | -2.41 | 0.48 | -4.97 | 6.66E-07 | 4.35E-05 | CLTB |
| ENST00000455537 | 379.38 | -7.83 | 1.58 | -4.96 | 7.04E-07 | 4.57E-05 | KIF5A |
| ENST00000323833 | 910.56 | -3.22 | 0.65 | -4.92 | 8.85E-07 | 5.62E-05 | TSFM |
| ENST00000478866 | 1085.38 | -7.55 | 1.54 | -4.92 | 8.87E-07 | 5.63E-05 | NDUFS2 |
| ENST00000463732 | 120.66 | -2.79 | 0.57 | -4.90 | 9.35E-07 | 5.88E-05 | HDAC7 |
| ENST00000357710 | 2296.02 | -3.84 | 0.79 | -4.89 | 1.03E-06 | 6.44E-05 | PSEN1 |
| ENST00000503162 | 989.54 | -6.60 | 1.36 | -4.85 | 1.27E-06 | 7.72E-05 | MAEA |
| ENST00000368209 | 22562.19 | -4.59 | 0.95 | -4.84 | 1.29E-06 | 7.87E-05 | HDGF |
| ENST00000349228 | 132.99 | -2.16 | 0.45 | -4.82 | 1.44E-06 | 8.6E-05 | TNFSF13 |
| ENST00000439657 | 294.25 | -7.33 | 1.52 | -4.81 | 1.52E-06 | 9.04E-05 | LENG8 |
| ENST00000497571 | 204.94 | -8.82 | 1.84 | -4.79 | 1.65E-06 | 9.69E-05 | KLF6 |
| ENST00000368068 | 456.71 | -7.74 | 1.63 | -4.74 | 2.13E-06 | 0.000123 | MED23 |
| ENST00000359707 | 3619.98 | -5.79 | 1.22 | -4.74 | 2.18E-06 | 0.000125 | G3BP2 |
| ENST00000497692 | 40.15 | -2.34 | 0.49 | -4.73 | 2.23E-06 | 0.000127 | CCNY |
| ENST00000360538 | 3589.47 | -4.39 | 0.93 | -4.73 | 2.25E-06 | 0.000129 | TOPORS |
| ENST00000556769 | 17.13 | -3.54 | 0.76 | -4.68 | 2.82E-06 | 0.000156 | ERO1L |
| ENST00000397872 | 70.52 | -2.34 | 0.50 | -4.68 | 2.87E-06 | 0.000159 | THOC5 |
| ENST00000504937 | 146.49 | -5.51 | 1.18 | -4.68 | 2.88E-06 | 0.000159 | TP53 |
| ENST00000510624 | 267.66 | -2.43 | 0.52 | -4.65 | 3.33E-06 | 0.00018 | LEF1 |
| ENST00000569334 | 33.06 | -2.25 | 0.49 | -4.63 | 3.59E-06 | 0.000193 | VENTXP1 |
| ENST00000553532 | 682.26 | -4.59 | 0.99 | -4.63 | 3.72E-06 | 0.000198 | TIMELESS |
| ENST00000531480 | 141.58 | -8.28 | 1.80 | -4.60 | 4.2E-06 | 0.00022 | CPSF1 |
| ENST00000540964 | 30.66 | -4.28 | 0.94 | -4.57 | 4.86E-06 | 0.00025 | TLR5 |
| ENST00000326804 | 599.12 | -4.51 | 0.99 | -4.55 | 5.32E-06 | 0.000271 | ZNF274 |
| ENST00000348222 | 142.85 | -3.87 | 0.86 | -4.52 | 6.31E-06 | 0.000313 | DGUOK |
| ENST00000449290 | 6.46 | -6.28 | 1.39 | -4.51 | 6.33E-06 | 0.000314 | SPRYD5 |
| ENST00000342056 | 24.43 | -8.20 | 1.82 | -4.51 | 6.62E-06 | 0.000326 | KCNQ5 |
| ENST00000484734 | 1630.21 | -2.15 | 0.48 | -4.48 | 7.38E-06 | 0.00036 | THBS1 |
| ENST00000357480 | 7134.19 | -5.85 | 1.30 | -4.48 | 7.4E-06 | 0.00036 | NFE2L1 |
| ENST00000396822 | 808.03 | -5.89 | 1.32 | -4.47 | 7.76E-06 | 0.000374 | SNAI2 |
| ENST00000321566 | 255.07 | -9.14 | 2.04 | -4.47 | 7.86E-06 | 0.000378 | AC011139.1.1 |
| ENST00000368518 | 310.79 | -6.82 | 1.53 | -4.46 | 8.04E-06 | 0.000385 | C1orf43 |
| ENST00000532461 | 2329.22 | -2.69 | 0.60 | -4.45 | 8.44E-06 | 0.000401 | RDX |
| ENST00000423280 | 594.46 | -5.75 | 1.29 | -4.44 | 8.86E-06 | 0.000418 | PPP1R7 |
| ENST00000531727 | 139.47 | -3.42 | 0.77 | -4.42 | 1.01E-05 | 0.000465 | CPSF1 |
| ENST00000538582 | 759.16 | -6.77 | 1.53 | -4.42 | 1.01E-05 | 0.000466 | PYROXD1 |
| ENST00000473686 | 25.54 | -4.53 | 1.03 | -4.39 | 1.11E-05 | 0.000508 | EFCAB2 |
| ENST00000381227 | 5473.38 | -2.48 | 0.56 | -4.39 | 1.14E-05 | 0.000522 | POLR2B |
| ENST00000524037 | 25.59 | -3.47 | 0.80 | -4.36 | 1.29E-05 | 0.000576 | C8orf83 |
| ENST00000559889 | 32.22 | -3.63 | 0.84 | -4.34 | 1.4E-05 | 0.00062 | IDH3A |
| ENST00000299341 | 85.51 | -3.63 | 0.84 | -4.33 | 1.51E-05 | 0.000663 | STXBP4 |
| ENST00000537034 | 13643.32 | -4.74 | 1.10 | -4.32 | 1.54E-05 | 0.000672 | CTNNA1 |
| ENST00000288022 | 19.01 | -4.93 | 1.14 | -4.32 | 1.56E-05 | 0.000681 | PDF |
| ENST00000374098 | 229.81 | -4.69 | 1.10 | -4.28 | 1.84E-05 | 0.000792 | TIMM23B |
| ENST00000362003 | 2001.91 | -4.80 | 1.12 | -4.27 | 1.95E-05 | 0.000832 | PCGF3 |

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|---|---|---|---|---|---|---|---|
| ENST00000547587 | 3230.27 | -5.92 | 1.39 | -4.26 | 2.08E-05 | 0.000881 | PFKM |
| ENST00000559020 | 413.15 | -2.84 | 0.67 | -4.24 | 2.27E-05 | 0.00095 | CERS2 |
| ENST00000476438 | 111.11 | -3.40 | 0.81 | -4.21 | 2.54E-05 | 0.001051 | PIGQ |
| ENST00000371941 | 5339.76 | -2.68 | 0.64 | -4.20 | 2.62E-05 | 0.001076 | PREX1 |
| ENST00000316985 | 394.91 | -3.10 | 0.74 | -4.18 | 2.97E-05 | 0.001199 | WHSC1L1 |
| ENST00000505472 | 2079.10 | -3.87 | 0.93 | -4.17 | 3.01E-05 | 0.001211 | SEC31A |
| ENST00000264658 | 626.53 | -2.79 | 0.67 | -4.16 | 3.15E-05 | 0.001259 | FBXL20 |
| ENST00000246015 | 125.51 | -7.11 | 1.72 | -4.14 | 3.53E-05 | 0.001392 | PSMF1 |
| ENST00000380050 | 2155.84 | -2.85 | 0.69 | -4.13 | 3.62E-05 | 0.001417 | CDK14 |
| ENST00000342697 | 434.71 | -3.87 | 0.94 | -4.13 | 3.65E-05 | 0.001426 | TP53INP1 |
| ENST00000432763 | 3937.90 | -5.72 | 1.39 | -4.11 | 3.88E-05 | 0.001504 | SUPT5H |
| ENST00000394945 | 7250.00 | -4.04 | 0.98 | -4.11 | 3.94E-05 | 0.00152 | SPOCK1 |
| ENST00000527243 | 214.03 | -5.34 | 1.30 | -4.09 | 4.24E-05 | 0.001615 | CTSB |
| ENST00000468227 | 2421.51 | -3.43 | 0.85 | -4.05 | 5.03E-05 | 0.001867 | UBA5 |
| ENST00000431828 | 137.69 | -5.48 | 1.35 | -4.05 | 5.18E-05 | 0.001915 | KANSL3 |
| ENST00000461167 | 10.18 | -2.70 | 0.67 | -4.03 | 5.54E-05 | 0.002023 | FAM129A |
| ENST00000252891 | 73.76 | -6.60 | 1.64 | -4.02 | 5.79E-05 | 0.002102 | NUMBL |
| ENST00000438886 | 133.75 | -2.66 | 0.66 | -4.01 | 6.14E-05 | 0.002204 | APEX1 |
| ENST00000548214 | 75.71 | -2.38 | 0.60 | -4.00 | 6.2E-05 | 0.00222 | DYNLL1 |
| ENST00000432072 | 149.69 | -2.45 | 0.61 | -4.00 | 6.22E-05 | 0.002225 | FN1 |
| ENST00000349157 | 1139.33 | -5.45 | 1.37 | -3.98 | 6.77E-05 | 0.00239 | PUF60 |
| ENST00000562945 | 14.32 | -4.94 | 1.24 | -3.98 | 6.79E-05 | 0.002395 | RP11-488I20.9.1 |
| ENST00000366997 | 8001.52 | -4.65 | 1.17 | -3.97 | 7.07E-05 | 0.002475 | LPGAT1 |
| ENST00000369809 | 137.13 | -2.53 | 0.64 | -3.97 | 7.08E-05 | 0.002475 | DNASE1L1 |
| ENST00000397231 | 40.17 | -3.97 | 1.00 | -3.97 | 7.17E-05 | 0.002496 | MYH9 |
| ENST00000058691 | 471.43 | -7.00 | 1.77 | -3.96 | 7.55E-05 | 0.002609 | HEBP2 |
| ENST00000298004 | 24.99 | -3.80 | 0.96 | -3.95 | 7.88E-05 | 0.002706 | PIGO |
| ENST00000412964 | 243.02 | -4.21 | 1.07 | -3.95 | 7.91E-05 | 0.002715 | CCDC138 |
| ENST00000393256 | 136.57 | -2.55 | 0.65 | -3.94 | 8.3E-05 | 0.002829 | BCL2L11 |
| ENST00000238738 | 289.27 | -5.42 | 1.38 | -3.93 | 8.52E-05 | 0.002888 | RHOQ |
| ENST00000567593 | 1150.17 | -2.81 | 0.72 | -3.91 | 9.26E-05 | 0.003099 | C16orf61 |
| ENST00000418533 | 32.65 | -2.02 | 0.52 | -3.90 | 9.6E-05 | 0.003195 | LTBP1 |
| ENST00000531413 | 6199.98 | -5.26 | 1.35 | -3.88 | 0.000102 | 0.003371 | CFL1 |
| ENST00000310924 | 225.64 | -2.23 | 0.58 | -3.88 | 0.000105 | 0.003451 | TBC1D16 |
| ENST00000395644 | 1679.60 | -3.88 | 1.00 | -3.88 | 0.000106 | 0.003487 | C15orf44 |
| ENST00000372739 | 7769.76 | -3.09 | 0.80 | -3.87 | 0.000109 | 0.003559 | SPTAN1 |
| ENST00000219473 | 1132.71 | -4.49 | 1.16 | -3.86 | 0.000114 | 0.003679 | USP10 |
| ENST00000503241 | 100.59 | -2.42 | 0.63 | -3.85 | 0.000117 | 0.003769 | ENSA |
| ENST00000338920 | 5049.48 | -4.91 | 1.28 | -3.84 | 0.000125 | 0.003981 | PRRC2C |
| ENST00000396401 | 3157.70 | -5.03 | 1.31 | -3.83 | 0.000128 | 0.004059 | TCEA1 |
| ENST00000559775 | 1789.81 | -2.12 | 0.55 | -3.82 | 0.000131 | 0.00414 | ZFAND6 |
| ENST00000375018 | 341.29 | -4.84 | 1.27 | -3.81 | 0.000141 | 0.004411 | ANKS6 |
| ENST00000372841 | 137.35 | -4.26 | 1.13 | -3.77 | 0.00016 | 0.004905 | FUT11 |
| ENST00000428926 | 415.85 | -3.45 | 0.92 | -3.76 | 0.000168 | 0.005109 | C14orf159 |
| ENST00000412601 | 3653.76 | -2.51 | 0.67 | -3.76 | 0.00017 | 0.005158 | PRKCSH |
| ENST00000463545 | 4.67 | -5.81 | 1.55 | -3.75 | 0.000174 | 0.005275 | DDX50P2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENST00000433404 | 1121.10 | -2.85 | 0.76 | -3.75 | 0.000179 | 0.005381 | SAFB |
| ENST00000368843 | 985.89 | -3.93 | 1.05 | -3.74 | 0.000182 | 0.005474 | SNX27 |
| ENST00000514940 | 30.50 | -6.05 | 1.62 | -3.73 | 0.000189 | 0.005646 | ADD1 |
| ENST00000353234 | 275.98 | -4.35 | 1.17 | -3.73 | 0.000191 | 0.005675 | ANKS6 |
| ENST00000289619 | 6.57 | -3.76 | 1.01 | -3.73 | 0.000195 | 0.005779 | PAGE5 |
| ENST00000505587 | 292.80 | -2.45 | 0.66 | -3.72 | 0.0002 | 0.005896 | CCNH |
| ENST00000316341 | 2832.45 | -8.30 | 2.24 | -3.71 | 0.000206 | 0.006022 | SLC12A4 |
| ENST00000309428 | 1445.68 | -4.14 | 1.11 | -3.71 | 0.000207 | 0.006044 | FAM134C |
| ENST00000433670 | 11.71 | -2.31 | 0.62 | -3.71 | 0.000208 | 0.006078 | PXDN |
| ENST00000447027 | 219.66 | -10.40 | 2.81 | -3.71 | 0.000208 | 0.006086 | MUC5B |
| ENST00000423692 | 38.29 | -4.77 | 1.29 | -3.71 | 0.000209 | 0.006107 | SRRT |
| ENST00000449277 | 3190.57 | -3.88 | 1.05 | -3.71 | 0.00021 | 0.006119 | MEF2A |
| ENST00000394688 | 195.18 | -4.05 | 1.09 | -3.70 | 0.000212 | 0.006168 | BRD7 |
| ENST00000258840 | 76.18 | -6.14 | 1.66 | -3.70 | 0.000217 | 0.00626 | RALGAPA1 |
| ENST00000376526 | 1174.52 | -2.40 | 0.65 | -3.69 | 0.000221 | 0.006346 | LENG8 |
| ENST00000482141 | 230.33 | -4.03 | 1.09 | -3.69 | 0.000222 | 0.006367 | NRM |
| ENST00000397165 | 97.86 | -2.37 | 0.64 | -3.69 | 0.000223 | 0.006416 | ZNF682 |
| ENST00000340957 | 18.51 | -7.80 | 2.11 | -3.69 | 0.000227 | 0.006508 | FAM131A |
| ENST00000328631 | 29.28 | -4.74 | 1.29 | -3.68 | 0.000234 | 0.00667 | IP6K2 |
| ENST00000439576 | 117.38 | -4.92 | 1.34 | -3.68 | 0.000236 | 0.006704 | ACAN |
| ENST00000525681 | 41.36 | -4.00 | 1.09 | -3.67 | 0.000239 | 0.006795 | EIF4G2 |
| ENST00000340647 | 19.35 | -3.55 | 0.98 | -3.64 | 0.000278 | 0.007676 | BRCC3 |
| ENST00000557481 | 5.24 | -5.98 | 1.65 | -3.63 | 0.000283 | 0.007785 | CTD-3049M7.1.1 |
| ENST00000391781 | 216.90 | -3.58 | 0.99 | -3.63 | 0.000287 | 0.007882 | ZNF320 |
| ENST00000404104 | 25.81 | -5.81 | 1.60 | -3.63 | 0.000287 | 0.007886 | SETD7 |
| ENST00000317538 | 62.50 | -6.68 | 1.85 | -3.61 | 0.000305 | 0.00827 | ZMYM6 |
| ENST00000307641 | 723.75 | -4.45 | 1.24 | -3.60 | 0.000315 | 0.008495 | NKIRAS2 |
| ENST00000470683 | 17.41 | -2.53 | 0.70 | -3.60 | 0.000319 | 0.008569 | ST7L |
| ENST00000525843 | 1374.48 | -3.55 | 0.99 | -3.59 | 0.000325 | 0.008698 | PUM1 |
| ENST00000504373 | 1418.01 | -3.38 | 0.94 | -3.59 | 0.000329 | 0.008771 | CD164 |
| ENST00000441222 | 2021.32 | -2.66 | 0.75 | -3.56 | 0.000367 | 0.009548 | USP46 |
| ENST00000466764 | 2544.19 | -2.43 | 0.68 | -3.56 | 0.000369 | 0.009589 | RBM3 |
| ENST00000376520 | 241.11 | -5.77 | 1.62 | -3.55 | 0.000378 | 0.009778 | TLE4 |
| ENST00000381237 | 3371.11 | -4.09 | 1.15 | -3.55 | 0.000386 | 0.009938 | SLC39A14 |

**bMean:** mean of sequencing depth normalized counts.

**lfc:** log 2 fold change.

**lfcSE:** lfc Standard Error

**stat:** Wald-statistics value.

**padj:** FDR adjusted pvalue.

**Table S4. Ribo-seq and RNA-seq fold-change and p-values for RNAs with higher translational efficiency in NSUN5 shRNA depleted DBTRG-05MG cells. Related to Figure S6.**

| | | Ribo-Seq | | | | | | RNA-Seq | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EnsemblID | Gene Name | Base Mean | log2Fold Change | lfc SE | stat | pvalue | padj | Base Mean | log2Fold Change | lfc SE | stat | pvalue | padj |
| ENST00000444053 | AAMP | 4.86 | 4.64 | 1.75 | 2.66 | 7.78E-03 | 5.78E-01 | 2343.96 | -0.26 | 0.32 | -0.81 | 4.16E-01 | 1.00E+00 |
| ENST00000489767 | AAMP | 9.41 | 20.87 | 3.03 | 6.89 | 5.72E-12 | 1.35E-09 | 1392.81 | -0.52 | 0.27 | -1.92 | 5.44E-02 | 7.29E-01 |
| ENST00000265662 | ABCA2 | 7.21 | 3.27 | 0.95 | 3.46 | 5.35E-04 | 6.89E-02 | 0.00 | NA | NA | NA | NA | NA |
| ENST00000301732 | ABCA3 | 9.32 | 2.40 | 0.90 | 2.67 | 7.54E-03 | 5.64E-01 | 3265.27 | 0.45 | 1.06 | 0.42 | 6.75E-01 | 1.00E+00 |
| ENST00000427699 | ABCC3 | 4.27 | 5.66 | 2.31 | 2.45 | 1.43E-02 | 8.32E-01 | 89.29 | -0.66 | 1.38 | -0.48 | 6.35E-01 | 1.00E+00 |
| ENST00000395008 | ABHD14B | 5.92 | 6.11 | 1.85 | 3.30 | 9.64E-04 | 1.15E-01 | 1626.45 | 0.45 | 0.80 | 0.56 | 5.77E-01 | 1.00E+00 |
| ENST00000473912 | ABHD14B | 2.40 | 3.54 | 1.26 | 2.81 | 4.92E-03 | 4.16E-01 | 29.76 | 0.49 | 0.61 | 0.80 | 4.22E-01 | 1.00E+00 |
| ENST00000444970 | ABL1 | 11.91 | 1.21 | 0.55 | 2.22 | 2.67E-02 | 9.96E-01 | 153.48 | -0.79 | 1.58 | -0.50 | 6.16E-01 | 1.00E+00 |
| ENST00000369267 | ABLIM1 | 9.32 | 2.49 | 0.93 | 2.67 | 7.52E-03 | 5.64E-01 | 4.42 | 1.90 | 2.78 | 0.69 | 4.93E-01 | 1.00E+00 |
| ENST00000560397 | AC012652.1.1 | 5.22 | 5.94 | 3.03 | 1.96 | 5.01E-02 | 9.96E-01 | 18.20 | -2.23 | 1.18 | -1.90 | 5.80E-02 | 7.47E-01 |
| ENST00000560411 | AC012652.1.1 | 4.59 | 5.76 | 3.03 | 1.90 | 5.76E-02 | 9.96E-01 | 10.23 | -0.24 | 1.80 | -0.13 | 8.93E-01 | 1.00E+00 |
| ENST00000532792 | ACAT1 | 6.17 | 4.51 | 1.79 | 2.52 | 1.16E-02 | 7.47E-01 | 21.26 | 0.54 | 0.77 | 0.70 | 4.84E-01 | 1.00E+00 |
| ENST00000478010 | ACO2 | 4.84 | 4.62 | 2.42 | 1.91 | 5.57E-02 | 9.96E-01 | 135.67 | -0.03 | 0.61 | -0.05 | 9.63E-01 | 1.00E+00 |
| ENST00000487599 | ACTR1A | 5.38 | 5.98 | 3.03 | 1.97 | 4.88E-02 | 9.96E-01 | 10064.75 | -0.65 | 2.02 | -0.32 | 7.46E-01 | 1.00E+00 |
| ENST00000494549 | ACTR1A | 5.54 | 5.41 | 2.74 | 1.97 | 4.84E-02 | 9.96E-01 | 16.28 | -1.32 | 1.25 | -1.05 | 2.94E-01 | 1.00E+00 |
| ENST00000241416 | ACVR2A | 10.87 | 1.37 | 0.49 | 2.78 | 5.45E-03 | 4.48E-01 | 1030.02 | 0.79 | 0.33 | 2.37 | 1.76E-02 | 4.25E-01 |
| ENST00000464097 | ADA | 2.83 | 2.77 | 1.37 | 2.02 | 4.31E-02 | 9.96E-01 | 409.35 | -1.00 | 0.69 | -1.44 | 1.49E-01 | 9.65E-01 |
| ENST00000396140 | ADAM10 | 5.76 | 6.08 | 3.03 | 2.01 | 4.49E-02 | 9.96E-01 | 233.93 | -2.27 | 3.43 | -0.66 | 5.08E-01 | 1.00E+00 |
| ENST00000498707 | ADAMTS9 | 33.66 | 1.51 | 0.69 | 2.18 | 2.94E-02 | 9.96E-01 | 2233.41 | 1.64 | 1.91 | 0.86 | 3.89E-01 | 1.00E+00 |
| ENST00000294016 | ADCY9 | 6.11 | 1.33 | 0.70 | 1.90 | 5.80E-02 | 9.96E-01 | 1546.65 | 0.19 | 0.40 | 0.48 | 6.31E-01 | 1.00E+00 |
| ENST00000569534 | ADPGK | 5.77 | 6.08 | 3.03 | 2.01 | 4.49E-02 | 9.96E-01 | 0.47 | 0.50 | 2.16 | 0.23 | 8.17E-01 | NA |
| ENST00000360995 | AEBP2 | 3.42 | 2.58 | 1.24 | 2.07 | 3.80E-02 | 9.96E-01 | 219.11 | 1.15 | 1.48 | 0.78 | 4.38E-01 | 1.00E+00 |
| ENST00000264409 | AGPAT9 | 18.93 | 7.80 | 1.72 | 4.52 | 6.15E-06 | 1.02E-03 | 1161.55 | 0.36 | 1.12 | 0.33 | 7.45E-01 | 1.00E+00 |
| ENST00000217426 | AHCY | 20.18 | 21.93 | 3.03 | 7.24 | 4.40E-13 | 2.39E-10 | 6925.53 | 0.60 | 0.70 | 0.85 | 3.94E-01 | 1.00E+00 |
| ENST00000373176 | AK1 | 56.51 | 0.64 | 0.28 | 2.26 | 2.36E-02 | 9.96E-01 | 5460.61 | 0.16 | 0.38 | 0.42 | 6.75E-01 | 1.00E+00 |
| ENST00000374525 | AKAP2 | 7.84 | 6.52 | 3.03 | 2.15 | 3.14E-02 | 9.96E-01 | 3493.96 | 2.98 | 1.25 | 2.38 | 1.73E-02 | 4.21E-01 |
| ENST00000426422 | AKR1B1 | 3.07 | 5.17 | 2.43 | 2.13 | 3.33E-02 | 9.96E-01 | 94.51 | -0.02 | 0.42 | -0.06 | 9.53E-01 | 1.00E+00 |
| ENST00000441729 | ALAS1 | 10.14 | 20.97 | 3.03 | 6.92 | 4.43E-12 | 1.08E-09 | 348.28 | 0.14 | 0.69 | 0.21 | 8.37E-01 | 1.00E+00 |
| ENST00000470756 | ALCAM | 30.12 | 0.73 | 0.34 | 2.12 | 3.36E-02 | 9.96E-01 | 171.41 | 1.76 | 0.98 | 1.79 | 7.27E-02 | 8.12E-01 |
| ENST00000297785 | ALDH1A1 | 45.40 | 2.45 | 0.46 | 5.31 | 1.12E-07 | 1.99E-05 | 3532.52 | 1.47 | 0.21 | 6.97 | 3.25E-12 | 3.46E-09 |
| ENST00000395240 | ALDOA | 117.20 | 1.63 | 0.53 | 3.10 | 1.92E-03 | 2.04E-01 | 973.64 | -0.41 | 0.39 | -1.06 | 2.90E-01 | 1.00E+00 |
| ENST00000566846 | ALDOA | 9.69 | 6.83 | 2.38 | 2.88 | 4.01E-03 | 3.60E-01 | 46.03 | -0.78 | 0.53 | -1.48 | 1.38E-01 | 9.52E-01 |
| ENST00000566897 | ALDOA | 18.87 | 6.31 | 2.94 | 2.14 | 3.20E-02 | 9.96E-01 | 706.85 | 0.16 | 0.65 | 0.25 | 8.04E-01 | 1.00E+00 |
| ENST00000461415 | ALG3 | 1.50 | 3.52 | 1.51 | 2.33 | 1.96E-02 | 9.96E-01 | 35.86 | 0.42 | 0.64 | 0.66 | 5.09E-01 | 1.00E+00 |
| ENST00000331204 | ALYREF | 54.66 | 2.45 | 1.01 | 2.42 | 1.55E-02 | 8.78E-01 | 58.09 | -0.34 | 0.60 | -0.56 | 5.78E-01 | 1.00E+00 |
| ENST00000369864 | AMIGO1 | 4.52 | 1.71 | 0.72 | 2.38 | 1.71E-02 | 9.23E-01 | 1234.41 | 0.55 | 0.37 | 1.49 | 1.37E-01 | 9.50E-01 |
| ENST00000447274 | ANKRD13D | 1.77 | 4.39 | 2.27 | 1.94 | 5.28E-02 | 9.96E-01 | 766.27 | 0.05 | 0.24 | 0.22 | 8.29E-01 | 1.00E+00 |
| ENST00000550693 | ANKS1B | 4.97 | 3.44 | 1.73 | 1.99 | 4.64E-02 | 9.96E-01 | 0.59 | 0.77 | 4.06 | 0.19 | 8.50E-01 | NA |
| ENST00000447173 | ANP32B | 12.33 | 21.25 | 3.03 | 7.01 | 2.32E-12 | 6.86E-10 | 137.39 | -0.24 | 0.69 | -0.35 | 7.26E-01 | 1.00E+00 |
| ENST00000376911 | ANXA1 | 307.17 | 3.89 | 1.78 | 2.18 | 2.93E-02 | 9.96E-01 | 9789.82 | 0.12 | 0.39 | 0.31 | 7.55E-01 | 1.00E+00 |
| ENST00000515017 | ANXA5 | 11.76 | 5.93 | 2.92 | 2.03 | 4.25E-02 | 9.96E-01 | 23241.27 | -0.42 | 0.26 | -1.63 | 1.02E-01 | 8.97E-01 |
| ENST00000522664 | ANXA6 | 7.95 | 20.62 | 3.03 | 6.80 | 1.01E-11 | 2.17E-09 | 213.91 | -0.04 | 0.39 | -0.10 | 9.21E-01 | 1.00E+00 |
| ENST00000415298 | AP1S3 | 22.41 | 1.73 | 0.71 | 2.44 | 1.46E-02 | 8.43E-01 | 133.53 | -1.86 | 1.40 | -1.33 | 1.85E-01 | 9.92E-01 |
| ENST00000527917 | AP2A2 | 6.25 | 1.65 | 0.72 | 2.28 | 2.28E-02 | 9.96E-01 | 2.51 | -0.01 | 1.07 | -0.01 | 9.94E-01 | NA |
| ENST00000292807 | AP2M1 | 10.81 | 6.99 | 3.03 | 2.31 | 2.11E-02 | 9.96E-01 | 29821.26 | -0.26 | 0.38 | -0.70 | 4.86E-01 | 1.00E+00 |
| ENST00000461733 | AP2M1 | 12.41 | 21.11 | 3.03 | 6.97 | 3.16E-12 | 8.70E-10 | 1418.56 | 0.10 | 0.55 | 0.18 | 8.54E-01 | 1.00E+00 |
| ENST00000530493 | APLP2 | 4.68 | 4.00 | 1.34 | 3.00 | 2.73E-03 | 2.69E-01 | 853.71 | 0.10 | 0.32 | 0.31 | 7.55E-01 | 1.00E+00 |
| ENST00000319136 | APOL1 | 16.79 | 2.36 | 0.66 | 3.59 | 3.30E-04 | 4.44E-02 | 25.92 | 1.19 | 1.65 | 0.72 | 4.71E-01 | 1.00E+00 |
| ENST00000456209 | APP | 9.36 | 6.78 | 3.03 | 2.24 | 2.52E-02 | 9.96E-01 | 59.45 | -0.16 | 0.58 | -0.28 | 7.81E-01 | 1.00E+00 |
| ENST00000495878 | ARAP1 | 5.04 | 5.89 | 2.33 | 2.53 | 1.13E-02 | 7.31E-01 | 6.94 | 1.58 | 1.00 | 1.58 | 1.14E-01 | 9.21E-01 |
| ENST00000356641 | ARHGEF12 | 4.95 | 5.87 | 3.03 | 1.93 | 5.30E-02 | 9.96E-01 | 4843.76 | 2.00 | 2.16 | 0.93 | 3.54E-01 | 1.00E+00 |
| ENST00000539576 | ARL6IP4 | 2.47 | 4.85 | 2.50 | 1.94 | 5.24E-02 | 9.96E-01 | 227.26 | -0.55 | 0.55 | -1.00 | 3.19E-01 | 1.00E+00 |
| ENST00000476566 | ARPC3 | 5.44 | 3.92 | 1.81 | 2.17 | 3.02E-02 | 9.96E-01 | 33.07 | -0.37 | 0.65 | -0.57 | 5.68E-01 | 1.00E+00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000294742 | ARPC5 | 5.51 | 5.41 | 2.81 | 1.92 | 5.44E-02 | 9.96E-01 | 875.28 | -0.46 | 0.54 | -0.86 | 3.87E-01 | 1.00E+00 |
| ENST00000336689 | ASAP3 | 8.42 | 2.55 | 0.91 | 2.79 | 5.34E-03 | 4.40E-01 | 1511.69 | 1.04 | 2.29 | 0.45 | 6.51E-01 | 1.00E+00 |
| ENST00000475693 | ATG4B | 2.99 | 4.51 | 2.09 | 2.16 | 3.05E-02 | 9.96E-01 | 1598.11 | -0.65 | 0.71 | -0.91 | 3.63E-01 | 1.00E+00 |
| ENST00000236959 | ATIC | 5.30 | 5.96 | 3.03 | 1.97 | 4.92E-02 | 9.96E-01 | 1901.96 | 1.17 | 0.57 | 2.04 | 4.12E-02 | 6.50E-01 |
| ENST00000339159 | ATP1A1 | 87.83 | 23.93 | 3.03 | 7.91 | 2.64E-15 | 9.40E-12 | 359.64 | -0.83 | 0.94 | -0.89 | 3.75E-01 | 1.00E+00 |
| ENST00000488733 | ATP1A1 | 18.54 | 1.17 | 0.62 | 1.88 | 5.98E-02 | 9.96E-01 | 512.51 | -0.80 | 0.82 | -0.97 | 3.31E-01 | 1.00E+00 |
| ENST00000537345 | ATP1A1 | 97.35 | 24.12 | 3.03 | 7.97 | 1.58E-15 | 7.61E-12 | 13011.30 | 0.41 | 0.80 | 0.51 | 6.10E-01 | 1.00E+00 |
| ENST00000514654 | ATP2C1 | 18.17 | 7.74 | 3.03 | 2.56 | 1.06E-02 | 7.01E-01 | 1775.30 | 0.45 | 0.83 | 0.54 | 5.87E-01 | 1.00E+00 |
| ENST00000412323 | ATP5A1P2 | 51.35 | 0.79 | 0.35 | 2.29 | 2.20E-02 | 9.96E-01 | 3.92 | 0.62 | 1.07 | 0.58 | 5.63E-01 | 1.00E+00 |
| ENST00000553007 | ATP5B | 6.10 | 20.13 | 3.03 | 6.64 | 3.16E-11 | 6.06E-09 | 199.13 | 0.09 | 0.56 | 0.15 | 8.79E-01 | 1.00E+00 |
| ENST00000464154 | ATP5F1 | 35.77 | 22.72 | 3.03 | 7.51 | 6.09E-14 | 6.43E-11 | 32.97 | 0.91 | 0.52 | 1.74 | 8.23E-02 | 8.46E-01 |
| ENST00000566322 | ATP6V0D1 | 4.87 | 5.84 | 3.03 | 1.93 | 5.41E-02 | 9.96E-01 | 12.17 | 0.31 | 1.13 | 0.27 | 7.87E-01 | 1.00E+00 |
| ENST00000558401 | B2M | 50.76 | 2.44 | 1.11 | 2.19 | 2.86E-02 | 9.96E-01 | 13994.50 | -0.03 | 0.32 | -0.08 | 9.35E-01 | 1.00E+00 |
| ENST00000379731 | B4GALT1 | 115.77 | 0.55 | 0.25 | 2.16 | 3.09E-02 | 9.96E-01 | 17264.54 | 0.17 | 0.32 | 0.52 | 6.06E-01 | 1.00E+00 |
| ENST00000467604 | B4GALT4 | 6.37 | 1.82 | 0.91 | 2.01 | 4.46E-02 | 9.96E-01 | 782.12 | -1.11 | 0.68 | -1.64 | 1.01E-01 | 8.94E-01 |
| ENST00000328735 | BACE2 | 5.64 | 6.05 | 3.03 | 2.00 | 4.59E-02 | 9.96E-01 | 455.47 | 0.01 | 0.63 | 0.02 | 9.87E-01 | 1.00E+00 |
| ENST00000466844 | BAZ1B | 7.05 | 2.40 | 0.97 | 2.48 | 1.31E-02 | 7.89E-01 | 42.12 | -1.37 | 0.50 | -2.75 | 5.91E-03 | 2.26E-01 |
| ENST00000458587 | BCAP31 | 22.61 | 5.31 | 1.48 | 3.59 | 3.36E-04 | 4.50E-02 | 18776.05 | -1.08 | 0.99 | -1.09 | 2.75E-01 | 1.00E+00 |
| ENST00000482958 | BCHE | 2.63 | 2.38 | 1.14 | 2.09 | 3.64E-02 | 9.96E-01 | 16.09 | -1.78 | 2.08 | -0.85 | 3.94E-01 | 1.00E+00 |
| ENST00000398117 | BCL2 | 2.01 | 2.73 | 1.14 | 2.39 | 1.66E-02 | 9.09E-01 | 252.56 | 0.88 | 0.30 | 2.92 | 3.52E-03 | 1.64E-01 |
| ENST00000422920 | BCL2L1 | 10.99 | 7.01 | 2.73 | 2.57 | 1.03E-02 | 6.89E-01 | 196.89 | 1.01 | 0.63 | 1.61 | 1.08E-01 | 9.10E-01 |
| ENST00000520626 | BMP1 | 1.98 | 4.54 | 2.39 | 1.90 | 5.73E-02 | 9.96E-01 | 23.32 | -0.16 | 2.05 | -0.08 | 9.37E-01 | 1.00E+00 |
| ENST00000254900 | BRD8 | 20.90 | 0.97 | 0.45 | 2.17 | 2.97E-02 | 9.96E-01 | 50.11 | -1.03 | 1.09 | -0.94 | 3.45E-01 | 1.00E+00 |
| ENST00000367846 | BRP44 | 4.43 | 5.72 | 1.69 | 3.39 | 6.91E-04 | 8.52E-02 | 2772.69 | 0.13 | 0.37 | 0.35 | 7.24E-01 | 1.00E+00 |
| ENST00000533084 | BSDC1 | 2.88 | 5.07 | 2.44 | 2.08 | 3.77E-02 | 9.96E-01 | 8.22 | 0.18 | 0.86 | 0.21 | 8.32E-01 | 1.00E+00 |
| ENST00000456893 | BUD31 | 6.30 | 6.21 | 3.03 | 2.05 | 4.07E-02 | 9.96E-01 | 29.86 | 0.18 | 0.68 | 0.27 | 7.90E-01 | 1.00E+00 |
| ENST00000314641 | BVES | 87.68 | 0.67 | 0.24 | 2.83 | 4.68E-03 | 4.04E-01 | 16478.31 | 0.66 | 0.36 | 1.84 | 6.59E-02 | 7.87E-01 |
| ENST00000450637 | BZW1 | 5.53 | 6.02 | 3.03 | 1.98 | 4.73E-02 | 9.96E-01 | 55.59 | -0.53 | 2.35 | -0.23 | 8.21E-01 | 1.00E+00 |
| ENST00000525256 | C11orf58 | 3.90 | 3.74 | 1.39 | 2.70 | 7.00E-03 | 5.38E-01 | 276.48 | -0.05 | 0.71 | -0.08 | 9.39E-01 | 1.00E+00 |
| ENST00000549177 | C12orf10 | 1.83 | 3.79 | 1.97 | 1.92 | 5.43E-02 | 9.96E-01 | 309.86 | -0.77 | 0.60 | -1.29 | 1.96E-01 | 1.00E+00 |
| ENST00000443656 | C17orf70 | 8.94 | 1.03 | 0.53 | 1.94 | 5.18E-02 | 9.96E-01 | 48.88 | -0.91 | 0.74 | -1.22 | 2.23E-01 | 1.00E+00 |
| ENST00000366687 | C1orf96 | 2.42 | 4.84 | 2.28 | 2.12 | 3.39E-02 | 9.96E-01 | 1290.11 | 0.02 | 0.33 | 0.06 | 9.54E-01 | 1.00E+00 |
| ENST00000379286 | C20orf30 | 5.51 | 5.42 | 2.78 | 1.95 | 5.14E-02 | 9.96E-01 | 319.13 | -0.34 | 2.54 | -0.13 | 8.94E-01 | 1.00E+00 |
| ENST00000480786 | C21orf33 | 5.45 | 6.01 | 2.31 | 2.60 | 9.41E-03 | 6.48E-01 | 274.69 | -0.68 | 0.44 | -1.56 | 1.18E-01 | 9.29E-01 |
| ENST00000495007 | C21orf33 | 5.78 | 6.09 | 2.32 | 2.62 | 8.73E-03 | 6.23E-01 | 379.33 | -0.06 | 0.28 | -0.21 | 8.33E-01 | 1.00E+00 |
| ENST00000507191 | C5orf15 | 7.19 | 20.49 | 3.03 | 6.76 | 1.39E-11 | 2.80E-09 | 29.88 | 0.27 | 0.78 | 0.35 | 7.30E-01 | 1.00E+00 |
| ENST00000520464 | C5orf41 | 7.66 | 2.48 | 1.14 | 2.19 | 2.89E-02 | 9.96E-01 | 18.71 | -1.17 | 1.22 | -0.96 | 3.36E-01 | 1.00E+00 |
| ENST00000275227 | C6orf192 | 1.67 | 4.30 | 2.28 | 1.88 | 5.96E-02 | 9.96E-01 | 1322.37 | 0.18 | 0.32 | 0.54 | 5.88E-01 | 1.00E+00 |
| ENST00000438444 | C7orf44 | 5.62 | 2.12 | 0.99 | 2.15 | 3.19E-02 | 9.96E-01 | 676.50 | -0.54 | 0.75 | -0.72 | 4.74E-01 | 1.00E+00 |
| ENST00000481410 | C7orf49 | 1.83 | 3.11 | 1.45 | 2.14 | 3.21E-02 | 9.96E-01 | 173.93 | -0.02 | 0.80 | -0.02 | 9.81E-01 | 1.00E+00 |
| ENST00000348904 | C7orf57 | 3.23 | 5.25 | 1.65 | 3.19 | 1.43E-03 | 1.61E-01 | 238.02 | 1.82 | 0.55 | 3.32 | 9.08E-04 | 6.74E-02 |
| ENST00000297613 | C9orf23 | 18.34 | 0.87 | 0.45 | 1.95 | 5.16E-02 | 9.96E-01 | 810.08 | 0.24 | 0.29 | 0.83 | 4.09E-01 | 1.00E+00 |
| ENST00000333916 | C9orf82 | 8.41 | 1.90 | 0.71 | 2.65 | 7.96E-03 | 5.87E-01 | 290.87 | 0.47 | 0.73 | 0.65 | 5.16E-01 | 1.00E+00 |
| ENST00000488630 | C9orf89 | 7.71 | 6.50 | 2.41 | 2.70 | 7.01E-03 | 5.38E-01 | 521.97 | 0.46 | 0.25 | 1.84 | 6.63E-02 | 7.89E-01 |
| ENST00000542447 | CADM1 | 6.81 | 6.32 | 2.47 | 2.56 | 1.04E-02 | 6.94E-01 | 44.86 | 0.11 | 0.43 | 0.26 | 7.97E-01 | 1.00E+00 |
| ENST00000265431 | CALB1 | 11.58 | 5.39 | 0.98 | 5.51 | 3.66E-08 | 6.60E-06 | 966.18 | 1.91 | 0.72 | 2.63 | 8.46E-03 | 2.81E-01 |
| ENST00000497376 | CALB1 | 12.81 | 3.47 | 1.09 | 3.17 | 1.51E-03 | 1.67E-01 | 5.88 | 2.34 | 0.90 | 2.60 | 9.19E-03 | 2.96E-01 |
| ENST00000342760 | CALCOCO1 | 4.48 | 5.72 | 2.48 | 2.31 | 2.10E-02 | 9.96E-01 | 8.27 | 0.43 | 0.89 | 0.48 | 6.31E-01 | 1.00E+00 |
| ENST00000393118 | CALD1 | 5.19 | 20.04 | 3.03 | 6.61 | 3.89E-11 | 7.35E-09 | 169.49 | 0.10 | 0.93 | 0.11 | 9.13E-01 | 1.00E+00 |
| ENST00000394524 | CAMK2D | 5.38 | 5.98 | 3.03 | 1.97 | 4.87E-02 | 9.96E-01 | 1817.48 | 0.65 | 0.37 | 1.78 | 7.47E-02 | 8.20E-01 |
| ENST00000297156 | CAMLG | 22.04 | 1.51 | 0.71 | 2.13 | 3.30E-02 | 9.96E-01 | 2370.37 | 0.04 | 0.21 | 0.17 | 8.67E-01 | 1.00E+00 |
| ENST00000372792 | CAP1 | 26.08 | 22.29 | 3.03 | 7.36 | 1.82E-13 | 1.32E-10 | 7493.28 | -0.25 | 0.60 | -0.42 | 6.77E-01 | 1.00E+00 |
| ENST00000372794 | CAP1 | 26.11 | 22.29 | 3.03 | 7.36 | 1.82E-13 | 1.32E-10 | 11699.93 | -0.40 | 0.26 | -1.57 | 1.17E-01 | 9.27E-01 |
| ENST00000372798 | CAP1 | 9.36 | 20.86 | 3.03 | 6.89 | 5.76E-12 | 1.35E-09 | 36.17 | 0.55 | 0.76 | 0.73 | 4.67E-01 | 1.00E+00 |
| ENST00000372805 | CAP1 | 52.84 | 23.27 | 3.03 | 7.69 | 1.49E-14 | 2.62E-11 | 146.00 | -0.02 | 0.66 | -0.03 | 9.72E-01 | 1.00E+00 |
| ENST00000527323 | CAPN1 | 51.47 | 9.24 | 1.88 | 4.92 | 8.75E-07 | 1.52E-04 | 5909.66 | -2.02 | 1.61 | -1.25 | 2.10E-01 | 1.00E+00 |
| ENST00000463997 | CAPN2 | 21.81 | 1.44 | 0.74 | 1.93 | 5.33E-02 | 9.96E-01 | 1093.99 | -0.14 | 0.39 | -0.35 | 7.28E-01 | 1.00E+00 |
| ENST00000496161 | CAPZA2 | 17.21 | 3.78 | 1.06 | 3.56 | 3.64E-04 | 4.83E-02 | 9.25 | -0.83 | 1.02 | -0.81 | 4.19E-01 | 1.00E+00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000361962 | CASK | 2.55 | 4.91 | 2.28 | 2.15 | 3.14E-02 | 9.96E-01 | 18.24 | -0.28 | 2.07 | -0.13 | 8.93E-01 | 1.00E+00 |
| ENST00000338252 | CAST | 26.72 | 21.44 | 3.03 | 7.08 | 1.43E-12 | 5.02E-10 | 60.54 | 0.23 | 1.72 | 0.13 | 8.94E-01 | 1.00E+00 |
| ENST00000348386 | CAST | 12.72 | 21.29 | 3.03 | 7.03 | 2.11E-12 | 6.34E-10 | 113.33 | 0.63 | 0.73 | 0.87 | 3.85E-01 | 1.00E+00 |
| ENST00000515063 | CAST | 27.97 | 22.38 | 3.03 | 7.39 | 1.43E-13 | 1.13E-10 | 249.03 | 0.97 | 0.68 | 1.43 | 1.52E-01 | 9.68E-01 |
| ENST00000337620 | CBX3 | 6.40 | 5.03 | 2.54 | 1.98 | 4.79E-02 | 9.96E-01 | 1004.75 | -0.93 | 0.27 | -3.40 | 6.72E-04 | 5.44E-02 |
| ENST00000225831 | CCL2 | 96.18 | 0.67 | 0.26 | 2.57 | 1.01E-02 | 6.80E-01 | 8129.80 | 0.48 | 0.36 | 1.34 | 1.79E-01 | 9.90E-01 |
| ENST00000507798 | CCNB1 | 6.95 | 6.35 | 3.03 | 2.09 | 3.62E-02 | 9.96E-01 | 268.27 | -0.78 | 0.60 | -1.29 | 1.98E-01 | 1.00E+00 |
| ENST00000398160 | CCNB1IP1 | 4.77 | 5.81 | 3.03 | 1.91 | 5.57E-02 | 9.96E-01 | 20.03 | 3.43 | 2.11 | 1.63 | 1.04E-01 | 9.02E-01 |
| ENST00000227507 | CCND1 | 178.51 | 0.62 | 0.26 | 2.34 | 1.91E-02 | 9.80E-01 | 5941.65 | 0.13 | 0.70 | 0.19 | 8.49E-01 | 1.00E+00 |
| ENST00000564630 | CCNDBP1 | 4.40 | 3.82 | 1.93 | 1.98 | 4.80E-02 | 9.96E-01 | 242.76 | 0.09 | 0.97 | 0.10 | 9.24E-01 | 1.00E+00 |
| ENST00000566833 | CCNDBP1 | 5.38 | 5.99 | 3.03 | 1.97 | 4.84E-02 | 9.96E-01 | 29.66 | -0.10 | 1.02 | -0.10 | 9.20E-01 | 1.00E+00 |
| ENST00000512163 | CCNG1 | 7.31 | 20.52 | 3.03 | 6.77 | 1.29E-11 | 2.66E-09 | 40.41 | 4.15 | 1.51 | 2.74 | 6.07E-03 | 2.30E-01 |
| ENST00000532045 | CD151 | 7.84 | 5.93 | 2.74 | 2.16 | 3.07E-02 | 9.96E-01 | 1726.95 | -0.26 | 0.44 | -0.59 | 5.56E-01 | 1.00E+00 |
| ENST00000434472 | CD44 | 123.34 | 2.98 | 1.05 | 2.83 | 4.68E-03 | 4.04E-01 | 661.23 | 0.42 | 0.38 | 1.10 | 2.71E-01 | 1.00E+00 |
| ENST00000531141 | CD44 | 6.43 | 2.14 | 1.12 | 1.91 | 5.68E-02 | 9.96E-01 | 91.61 | 0.48 | 0.49 | 0.98 | 3.29E-01 | 1.00E+00 |
| ENST00000527926 | CD59 | 8.17 | 6.58 | 3.03 | 2.17 | 2.98E-02 | 9.96E-01 | 464.62 | -0.38 | 0.28 | -1.32 | 1.87E-01 | 9.94E-01 |
| ENST00000468153 | CD81 | 31.27 | 5.21 | 1.24 | 4.20 | 2.63E-05 | 4.17E-03 | 14397.03 | -0.21 | 0.43 | -0.48 | 6.28E-01 | 1.00E+00 |
| ENST00000382518 | CD9 | 5.25 | 5.95 | 3.03 | 1.96 | 5.00E-02 | 9.96E-01 | 0.81 | -0.80 | 3.92 | -0.20 | 8.38E-01 | NA |
| ENST00000375310 | CDC16 | 5.86 | 20.21 | 3.03 | 6.67 | 2.63E-11 | 5.09E-09 | 1451.55 | -0.12 | 1.50 | -0.08 | 9.39E-01 | 1.00E+00 |
| ENST00000380665 | CDCA2 | 5.13 | 20.03 | 3.03 | 6.60 | 4.03E-11 | 7.57E-09 | 2065.24 | -0.22 | 0.38 | -0.58 | 5.65E-01 | 1.00E+00 |
| ENST00000480353 | CDK9 | 4.53 | 5.74 | 3.03 | 1.89 | 5.86E-02 | 9.96E-01 | 324.15 | 0.57 | 0.36 | 1.61 | 1.06E-01 | 9.07E-01 |
| ENST00000405375 | CDKN1A | 23.09 | 7.50 | 1.92 | 3.91 | 9.06E-05 | 1.34E-02 | 8491.21 | 0.84 | 0.29 | 2.92 | 3.45E-03 | 1.62E-01 |
| ENST00000478800 | CDKN1A | 18.02 | 7.73 | 3.03 | 2.55 | 1.07E-02 | 7.06E-01 | 19.68 | -0.41 | 0.93 | -0.44 | 6.58E-01 | 1.00E+00 |
| ENST00000337090 | CEP63 | 5.36 | 1.64 | 0.86 | 1.89 | 5.85E-02 | 9.96E-01 | 1030.20 | -0.04 | 0.29 | -0.13 | 8.94E-01 | 1.00E+00 |
| ENST00000309534 | CGGBP1 | 4.91 | 4.63 | 2.29 | 2.02 | 4.35E-02 | 9.96E-01 | 1524.73 | -1.20 | 1.13 | -1.06 | 2.89E-01 | 1.00E+00 |
| ENST00000523865 | CHCHD10 | 24.82 | 0.81 | 0.42 | 1.90 | 5.68E-02 | 9.96E-01 | 970.61 | -0.08 | 0.83 | -0.10 | 9.24E-01 | 1.00E+00 |
| ENST00000524737 | CHEK1 | 9.08 | 6.74 | 3.03 | 2.22 | 2.61E-02 | 9.96E-01 | 875.13 | 0.17 | 0.20 | 0.85 | 3.94E-01 | 1.00E+00 |
| ENST00000549260 | CHST11 | 8.04 | 6.56 | 3.03 | 2.16 | 3.04E-02 | 9.96E-01 | 1670.30 | 0.80 | 0.94 | 0.85 | 3.93E-01 | 1.00E+00 |
| ENST00000567518 | CIAPIN1 | 4.91 | 3.30 | 1.75 | 1.89 | 5.93E-02 | 9.96E-01 | 1528.38 | -0.15 | 1.07 | -0.14 | 8.88E-01 | 1.00E+00 |
| ENST00000273986 | CISD2 | 1.61 | 4.26 | 2.26 | 1.88 | 5.98E-02 | 9.96E-01 | 2939.06 | -0.36 | 0.23 | -1.61 | 1.07E-01 | 9.07E-01 |
| ENST00000553878 | CKB | 17.12 | 3.21 | 1.24 | 2.58 | 9.77E-03 | 6.68E-01 | 89.60 | 2.25 | 1.33 | 1.69 | 9.12E-02 | 8.70E-01 |
| ENST00000555366 | CKB | 9.08 | 1.91 | 0.98 | 1.95 | 5.09E-02 | 9.96E-01 | 227.51 | 0.12 | 0.56 | 0.22 | 8.29E-01 | 1.00E+00 |
| ENST00000513761 | CLCN3 | 38.69 | 0.70 | 0.36 | 1.97 | 4.85E-02 | 9.96E-01 | 4263.93 | 0.02 | 0.37 | 0.06 | 9.51E-01 | 1.00E+00 |
| ENST00000506927 | CLDND1 | 3.58 | 5.40 | 2.23 | 2.42 | 1.54E-02 | 8.73E-01 | 105.92 | -0.39 | 0.48 | -0.81 | 4.16E-01 | 1.00E+00 |
| ENST00000375780 | CLIC1 | 32.76 | 22.58 | 3.03 | 7.46 | 8.65E-14 | 8.07E-11 | 20.24 | 5.03 | 3.79 | 1.33 | NA | NA |
| ENST00000298912 | CLMN | 1.00 | 3.56 | 1.72 | 2.07 | 3.88E-02 | 9.96E-01 | 219.74 | 1.45 | 0.53 | 2.76 | 5.86E-03 | 2.26E-01 |
| ENST00000477264 | CLSTN1 | 25.23 | 21.46 | 3.03 | 7.09 | 1.35E-12 | 5.02E-10 | 588.05 | 0.01 | 0.26 | 0.05 | 9.58E-01 | 1.00E+00 |
| ENST00000310418 | CLTB | 5.55 | 4.83 | 2.21 | 2.18 | 2.92E-02 | 9.96E-01 | 1692.56 | -0.03 | 0.57 | -0.04 | 9.65E-01 | 1.00E+00 |
| ENST00000256722 | CMPK2 | 2.11 | 4.64 | 1.60 | 2.91 | 3.62E-03 | 3.34E-01 | 360.57 | 1.17 | 0.83 | 1.40 | 1.61E-01 | 9.75E-01 |
| ENST00000568865 | CNN2 | 7.64 | 6.49 | 2.48 | 2.62 | 8.84E-03 | 6.26E-01 | 1683.56 | -0.09 | 0.38 | -0.24 | 8.10E-01 | 1.00E+00 |
| ENST00000549890 | CNR1 | 36.62 | 0.91 | 0.37 | 2.45 | 1.42E-02 | 8.31E-01 | 77.73 | 0.84 | 0.43 | 1.94 | 5.20E-02 | 7.19E-01 |
| ENST00000264638 | CNTNAP1 | 10.88 | 1.54 | 0.54 | 2.84 | 4.49E-03 | 3.93E-01 | 353.00 | 0.28 | 0.82 | 0.34 | 7.36E-01 | 1.00E+00 |
| ENST00000469061 | CNTNAP3 | 5.50 | 1.59 | 0.73 | 2.19 | 2.89E-02 | 9.96E-01 | 1.56 | 1.44 | 1.48 | 0.97 | 3.32E-01 | NA |
| ENST00000479351 | CNTNAP3B | 6.22 | 6.19 | 3.03 | 2.04 | 4.10E-02 | 9.96E-01 | 125.49 | -0.95 | 1.62 | -0.59 | 5.57E-01 | 1.00E+00 |
| ENST00000393603 | COG5 | 11.30 | 7.05 | 2.46 | 2.86 | 4.18E-03 | 3.71E-01 | 1435.67 | -0.19 | 0.68 | -0.28 | 7.78E-01 | 1.00E+00 |
| ENST00000356340 | COL13A1 | 1.89 | 3.85 | 1.99 | 1.93 | 5.30E-02 | 9.96E-01 | 2.56 | -1.66 | 1.89 | -0.88 | 3.81E-01 | NA |
| ENST00000477429 | COL4A5 | 2.49 | 4.87 | 2.28 | 2.13 | 3.29E-02 | 9.96E-01 | 15.60 | -0.80 | 1.13 | -0.71 | 4.78E-01 | 1.00E+00 |
| ENST00000486023 | COL6A1 | 4.43 | 5.10 | 2.61 | 1.95 | 5.11E-02 | 9.96E-01 | 46.53 | 0.32 | 0.45 | 0.70 | 4.81E-01 | 1.00E+00 |
| ENST00000498614 | COL6A1 | 61.29 | 23.47 | 3.03 | 7.76 | 8.83E-15 | 2.03E-11 | 26669.84 | 0.31 | 0.31 | 0.99 | 3.21E-01 | 1.00E+00 |
| ENST00000273342 | COL8A1 | 12.23 | 21.22 | 3.03 | 7.00 | 2.48E-12 | 7.15E-10 | 78.31 | 1.04 | 0.95 | 1.10 | 2.71E-01 | 1.00E+00 |
| ENST00000349893 | COPE | 6.00 | 6.14 | 3.03 | 2.02 | 4.30E-02 | 9.96E-01 | 239.94 | -0.61 | 0.55 | -1.10 | 2.73E-01 | 1.00E+00 |
| ENST00000538245 | COPE | 22.35 | 22.07 | 3.03 | 7.29 | 3.11E-13 | 1.90E-10 | 16200.80 | -0.51 | 0.47 | -1.09 | 2.74E-01 | 1.00E+00 |
| ENST00000299259 | COPS2 | 20.84 | 1.91 | 0.85 | 2.26 | 2.40E-02 | 9.96E-01 | 1289.74 | -1.81 | 0.82 | -2.22 | 2.64E-02 | 5.25E-01 |
| ENST00000426712 | COPS6 | 9.80 | 6.85 | 3.03 | 2.26 | 2.38E-02 | 9.96E-01 | 614.90 | -0.48 | 0.47 | -1.02 | 3.08E-01 | 1.00E+00 |
| ENST00000549387 | CORO1C | 38.06 | 1.53 | 0.64 | 2.40 | 1.65E-02 | 9.05E-01 | 194.73 | 0.28 | 0.65 | 0.43 | 6.68E-01 | 1.00E+00 |
| ENST00000567270 | COX5A | 7.50 | 6.46 | 3.03 | 2.13 | 3.31E-02 | 9.96E-01 | 1235.83 | -0.17 | 0.59 | -0.28 | 7.77E-01 | 1.00E+00 |
| ENST00000247655 | COX7C | 5.60 | 4.85 | 1.88 | 2.58 | 9.98E-03 | 6.78E-01 | 11004.29 | -0.28 | 0.42 | -0.67 | 5.03E-01 | 1.00E+00 |
| ENST00000512055 | CPNE4 | 17.68 | 1.04 | 0.44 | 2.35 | 1.86E-02 | 9.66E-01 | 602.85 | 0.58 | 1.56 | 0.37 | 7.12E-01 | 1.00E+00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000349769 | CPSF1 | 33.82 | 0.68 | 0.36 | 1.91 | 5.58E-02 | 9.96E-01 | 2566.80 | -0.39 | 0.90 | -0.44 | 6.60E-01 | 1.00E+00 |
| ENST00000265394 | CPVL | 5.01 | 5.89 | 3.03 | 1.94 | 5.23E-02 | 9.96E-01 | 400.02 | 3.78 | 1.56 | 2.43 | 1.53E-02 | 3.94E-01 |
| ENST00000409850 | CPVL | 9.63 | 3.32 | 1.19 | 2.79 | 5.30E-03 | 4.39E-01 | 31.67 | -22.46 | 3.91 | -5.75 | NA | NA |
| ENST00000318080 | CRAT | 67.80 | 0.77 | 0.36 | 2.15 | 3.14E-02 | 9.96E-01 | 3196.75 | 1.34 | 0.74 | 1.82 | 6.94E-02 | 8.00E-01 |
| ENST00000262367 | CREBBP | 16.11 | 0.94 | 0.47 | 2.00 | 4.50E-02 | 9.96E-01 | 661.28 | 0.75 | 2.07 | 0.36 | NA | NA |
| ENST00000280527 | CRIM1 | 260.96 | 0.74 | 0.20 | 3.79 | 1.50E-04 | 2.14E-02 | 8634.68 | 0.47 | 0.54 | 0.86 | 3.89E-01 | 1.00E+00 |
| ENST00000546891 | CS | 8.37 | 6.63 | 2.53 | 2.62 | 8.72E-03 | 6.23E-01 | 32.54 | 0.82 | 0.51 | 1.61 | 1.08E-01 | 9.10E-01 |
| ENST00000530886 | CSDE1 | 5.70 | 6.07 | 2.33 | 2.61 | 9.07E-03 | 6.32E-01 | 2070.71 | 0.23 | 1.92 | 0.12 | 9.05E-01 | 1.00E+00 |
| ENST00000329608 | CSF1 | 56.85 | 0.89 | 0.30 | 2.97 | 2.97E-03 | 2.85E-01 | 6656.00 | 0.76 | 0.24 | 3.13 | 1.74E-03 | 1.05E-01 |
| ENST00000303052 | CSNK1G1 | 12.76 | 1.91 | 0.85 | 2.24 | 2.53E-02 | 9.96E-01 | 3629.51 | 0.37 | 1.42 | 0.26 | 7.92E-01 | 1.00E+00 |
| ENST00000398411 | CST3 | 15.94 | 21.60 | 3.03 | 7.13 | 9.83E-13 | 3.93E-10 | 1087.10 | 0.04 | 0.40 | 0.09 | 9.29E-01 | 1.00E+00 |
| ENST00000431742 | CSTF3 | 2.70 | 4.39 | 1.77 | 2.48 | 1.32E-02 | 7.90E-01 | 413.76 | -0.27 | 0.54 | -0.50 | 6.18E-01 | 1.00E+00 |
| ENST00000563172 | CTD-2354A18.1.1 | 0.95 | 3.48 | 1.75 | 1.99 | 4.68E-02 | 9.96E-01 | 669.71 | 1.45 | 0.44 | 3.31 | 9.46E-04 | 6.96E-02 |
| ENST00000302763 | CTNNA1 | 54.51 | 23.31 | 3.03 | 7.70 | 1.33E-14 | 2.62E-11 | 2207.03 | -0.47 | 0.69 | -0.68 | 4.98E-01 | 1.00E+00 |
| ENST00000374595 | CTNNAL1 | 37.06 | 1.45 | 0.58 | 2.50 | 1.24E-02 | 7.71E-01 | 3582.68 | -0.33 | 0.76 | -0.44 | 6.61E-01 | 1.00E+00 |
| ENST00000450969 | CTNNB1 | 8.73 | 6.68 | 3.03 | 2.20 | 2.75E-02 | 9.96E-01 | 57.14 | 0.43 | 0.91 | 0.47 | 6.37E-01 | 1.00E+00 |
| ENST00000453024 | CTNNB1 | 18.14 | 5.79 | 2.99 | 1.94 | 5.30E-02 | 9.96E-01 | 6152.35 | -0.30 | 2.16 | -0.14 | 8.89E-01 | 1.00E+00 |
| ENST00000524630 | CTNND1 | 18.67 | 21.82 | 3.03 | 7.21 | 5.75E-13 | 2.88E-10 | 111.22 | 1.04 | 2.02 | 0.52 | 6.05E-01 | 1.00E+00 |
| ENST00000415599 | CTSB | 64.00 | 23.54 | 3.03 | 7.78 | 7.44E-15 | 1.82E-11 | 8.20 | 0.15 | 0.93 | 0.16 | 8.73E-01 | 1.00E+00 |
| ENST00000340342 | CTSL1 | 14.45 | 21.46 | 3.03 | 7.09 | 1.39E-12 | 5.02E-10 | 887.60 | -0.01 | 0.50 | -0.02 | 9.83E-01 | 1.00E+00 |
| ENST00000375894 | CTSL1 | 11.73 | 21.17 | 3.03 | 6.99 | 2.76E-12 | 7.78E-10 | 90.88 | -0.59 | 0.49 | -1.20 | 2.30E-01 | 1.00E+00 |
| ENST00000375441 | CUL4A | 8.69 | 20.76 | 3.03 | 6.85 | 7.36E-12 | 1.66E-09 | 230.97 | 0.57 | 1.16 | 0.49 | 6.27E-01 | 1.00E+00 |
| ENST00000440279 | CUTA | 8.43 | 6.04 | 2.15 | 2.81 | 4.97E-03 | 4.16E-01 | 142.43 | -0.29 | 0.49 | -0.59 | 5.55E-01 | 1.00E+00 |
| ENST00000462802 | CUTA | 7.80 | 6.52 | 2.40 | 2.71 | 6.67E-03 | 5.27E-01 | 55.40 | -1.26 | 1.00 | -1.26 | 2.09E-01 | 1.00E+00 |
| ENST00000565912 | CX3CL1 | 9.52 | 1.58 | 0.50 | 3.18 | 1.47E-03 | 1.64E-01 | 132.00 | 0.30 | 1.08 | 0.28 | 7.82E-01 | 1.00E+00 |
| ENST00000568342 | CYB5B | 41.21 | 2.26 | 0.74 | 3.07 | 2.14E-03 | 2.24E-01 | 129.72 | 0.54 | 1.09 | 0.49 | 6.23E-01 | 1.00E+00 |
| ENST00000497655 | CYB5R1 | 2.36 | 2.34 | 1.18 | 1.99 | 4.65E-02 | 9.96E-01 | 1105.78 | 0.06 | 0.60 | 0.10 | 9.18E-01 | 1.00E+00 |
| ENST00000479935 | DAG1 | 5.07 | 5.90 | 2.35 | 2.51 | 1.21E-02 | 7.61E-01 | 7.30 | 0.70 | 0.96 | 0.73 | 4.64E-01 | 1.00E+00 |
| ENST00000491481 | DARS | 7.23 | 6.41 | 3.03 | 2.11 | 3.46E-02 | 9.96E-01 | 27.99 | -0.05 | 0.73 | -0.07 | 9.43E-01 | 1.00E+00 |
| ENST00000460901 | DBI | 7.83 | 6.52 | 2.42 | 2.69 | 7.16E-03 | 5.46E-01 | 187.16 | 0.68 | 0.95 | 0.72 | 4.73E-01 | 1.00E+00 |
| ENST00000475783 | DBI | 7.73 | 2.18 | 0.95 | 2.29 | 2.21E-02 | 9.96E-01 | 258.61 | -0.92 | 0.59 | -1.55 | 1.21E-01 | 9.33E-01 |
| ENST00000309007 | DBN1 | 13.04 | 6.84 | 3.03 | 2.26 | 2.39E-02 | 9.96E-01 | 5473.92 | -1.05 | 1.03 | -1.02 | 3.06E-01 | 1.00E+00 |
| ENST00000491465 | DCTN1 | 4.57 | 5.75 | 3.03 | 1.90 | 5.80E-02 | 9.96E-01 | 617.17 | -0.43 | 0.50 | -0.84 | 3.98E-01 | 1.00E+00 |
| ENST00000550086 | DCTN2 | 4.45 | 5.71 | 3.03 | 1.88 | 5.98E-02 | 9.96E-01 | 4.46 | 0.40 | 0.98 | 0.40 | 6.86E-01 | 1.00E+00 |
| ENST00000450997 | DDB1 | 8.33 | 20.70 | 3.03 | 6.83 | 8.46E-12 | 1.89E-09 | 10620.61 | -0.08 | 0.31 | -0.26 | 7.93E-01 | 1.00E+00 |
| ENST00000535174 | DDB1 | 7.19 | 20.50 | 3.03 | 6.76 | 1.36E-11 | 2.78E-09 | 22.96 | 0.39 | 0.66 | 0.59 | 5.58E-01 | 1.00E+00 |
| ENST00000528148 | DDHD2 | 4.27 | 1.50 | 0.76 | 1.98 | 4.79E-02 | 9.96E-01 | 1.63 | 1.21 | 1.61 | 0.75 | 4.52E-01 | NA |
| ENST00000415136 | DDOST | 18.56 | 21.81 | 3.03 | 7.20 | 5.86E-13 | 2.90E-10 | 923.43 | 0.49 | 0.43 | 1.15 | 2.51E-01 | 1.00E+00 |
| ENST00000486473 | DDOST | 6.47 | 6.26 | 2.39 | 2.61 | 8.97E-03 | 6.30E-01 | 36.39 | -0.13 | 0.49 | -0.27 | 7.89E-01 | 1.00E+00 |
| ENST00000403230 | DDX17 | 10.08 | 20.96 | 3.03 | 6.92 | 4.53E-12 | 1.10E-09 | 709.72 | 0.73 | 0.77 | 0.95 | 3.43E-01 | 1.00E+00 |
| ENST00000444597 | DDX17 | 5.69 | 6.07 | 3.03 | 2.00 | 4.55E-02 | 9.96E-01 | 33994.21 | -0.04 | 1.35 | -0.03 | 9.78E-01 | 1.00E+00 |
| ENST00000376177 | DDX39B | 13.50 | 21.37 | 3.03 | 7.05 | 1.73E-12 | 5.63E-10 | 130.37 | -1.26 | 0.64 | -1.96 | 5.00E-02 | 7.05E-01 |
| ENST00000481456 | DDX39B | 32.11 | 3.07 | 1.36 | 2.26 | 2.39E-02 | 9.96E-01 | 7070.34 | 0.37 | 0.32 | 1.17 | 2.43E-01 | 1.00E+00 |
| ENST00000545038 | DDX47 | 6.95 | 6.35 | 3.03 | 2.09 | 3.63E-02 | 9.96E-01 | 2941.43 | -0.25 | 0.61 | -0.41 | 6.79E-01 | 1.00E+00 |
| ENST00000220764 | DECR1 | 14.97 | 19.60 | 3.03 | 6.47 | 9.68E-11 | 1.81E-08 | 3193.09 | 0.47 | 0.47 | 1.01 | 3.14E-01 | 1.00E+00 |
| ENST00000373624 | DENND1A | 15.32 | 0.92 | 0.46 | 2.01 | 4.47E-02 | 9.96E-01 | 1819.81 | 0.12 | 0.38 | 0.30 | 7.61E-01 | 1.00E+00 |
| ENST00000532372 | DKK3 | 203.30 | 1.03 | 0.50 | 2.05 | 4.09E-02 | 9.96E-01 | 23.94 | -0.28 | 0.66 | -0.43 | 6.65E-01 | 1.00E+00 |
| ENST00000537636 | DLAT | 4.69 | 3.71 | 1.70 | 2.19 | 2.89E-02 | 9.96E-01 | 104.64 | 2.61 | 1.66 | 1.57 | 1.16E-01 | 9.27E-01 |
| ENST00000205402 | DLD | 199.11 | 0.51 | 0.21 | 2.38 | 1.74E-02 | 9.33E-01 | 1726.08 | -3.04 | 1.25 | -2.43 | NA | NA |
| ENST00000339266 | DLGAP4 | 10.36 | 21.00 | 3.03 | 6.93 | 4.17E-12 | 1.04E-09 | 0.48 | 1.73 | 4.06 | 0.43 | 6.70E-01 | NA |
| ENST00000555089 | DLST | 5.86 | 20.21 | 3.03 | 6.67 | 2.63E-11 | 5.09E-09 | 1219.12 | 1.36 | 2.25 | 0.61 | NA | NA |
| ENST00000357606 | DNAJC14 | 4.40 | 5.69 | 2.40 | 2.37 | 1.80E-02 | 9.49E-01 | 17.82 | -5.16 | 1.62 | -3.18 | 1.46E-03 | 9.33E-02 |
| ENST00000276440 | DOCK5 | 150.29 | 0.63 | 0.20 | 3.12 | 1.80E-03 | 1.94E-01 | 10129.36 | 0.81 | 1.46 | 0.55 | 5.82E-01 | 1.00E+00 |
| ENST00000483783 | DPP7 | 3.24 | 3.49 | 1.54 | 2.27 | 2.34E-02 | 9.96E-01 | 5448.29 | 0.17 | 0.58 | 0.29 | 7.71E-01 | 1.00E+00 |
| ENST00000400454 | DSCAM | 2.55 | 2.23 | 0.96 | 2.33 | 2.00E-02 | 9.96E-01 | 459.72 | 1.18 | 0.51 | 2.29 | 2.22E-02 | 4.82E-01 |
| ENST00000296161 | DTX3L | 81.28 | 0.72 | 0.29 | 2.47 | 1.34E-02 | 7.98E-01 | 4987.10 | 0.95 | 0.43 | 2.19 | 2.88E-02 | 5.52E-01 |
| ENST00000240101 | DUSP4 | 5.59 | 6.03 | 3.03 | 1.99 | 4.66E-02 | 9.96E-01 | 196.25 | 0.46 | 0.59 | 0.78 | 4.33E-01 | 1.00E+00 |
| ENST00000308385 | DUSP6 | 5.89 | 6.11 | 3.03 | 2.02 | 4.38E-02 | 9.96E-01 | 657.19 | 0.09 | 0.30 | 0.31 | 7.54E-01 | 1.00E+00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000547291 | DUSP6 | 7.79 | 6.51 | 2.51 | 2.60 | 9.37E-03 | 6.46E-01 | 505.75 | 0.23 | 0.53 | 0.44 | 6.57E-01 | 1.00E+00 |
| ENST00000563447 | ECI1 | 5.64 | 6.05 | 3.03 | 2.00 | 4.60E-02 | 9.96E-01 | 456.12 | 0.07 | 0.32 | 0.22 | 8.24E-01 | 1.00E+00 |
| ENST00000217182 | EEF1A2 | 25.38 | 0.90 | 0.39 | 2.29 | 2.19E-02 | 9.96E-01 | 1725.73 | 0.62 | 0.54 | 1.15 | 2.51E-01 | 1.00E+00 |
| ENST00000527741 | EEF1D | 9.20 | 6.76 | 3.03 | 2.23 | 2.58E-02 | 9.96E-01 | 1182.80 | -0.60 | 0.35 | -1.70 | 8.84E-02 | 8.63E-01 |
| ENST00000462917 | EIF1 | 152.13 | 2.47 | 0.79 | 3.12 | 1.81E-03 | 1.94E-01 | 1512.35 | -0.17 | 0.28 | -0.61 | 5.42E-01 | 1.00E+00 |
| ENST00000293831 | EIF4A1 | 158.06 | 3.37 | 1.75 | 1.93 | 5.42E-02 | 9.96E-01 | 71481.25 | -0.46 | 0.35 | -1.32 | 1.86E-01 | 9.94E-01 |
| ENST00000496382 | EIF4A2 | 9.37 | 6.79 | 3.03 | 2.24 | 2.51E-02 | 9.96E-01 | 9.32 | 0.48 | 0.93 | 0.52 | 6.04E-01 | 1.00E+00 |
| ENST00000424196 | EIF4G1 | 68.38 | 9.65 | 2.59 | 3.73 | 1.91E-04 | 2.68E-02 | 663.92 | -0.62 | 0.94 | -0.66 | 5.12E-01 | 1.00E+00 |
| ENST00000526148 | EIF4G2 | 6.43 | 6.24 | 3.03 | 2.06 | 3.95E-02 | 9.96E-01 | 10.39 | -0.35 | 1.11 | -0.32 | 7.51E-01 | 1.00E+00 |
| ENST00000440766 | EIF6 | 4.97 | 5.87 | 3.03 | 1.94 | 5.29E-02 | 9.96E-01 | 148.07 | -0.32 | 0.75 | -0.42 | 6.72E-01 | 1.00E+00 |
| ENST00000541407 | ELOVL5 | 14.88 | 21.51 | 3.03 | 7.10 | 1.24E-12 | 4.70E-10 | 254.16 | 0.83 | 1.06 | 0.78 | 4.33E-01 | 1.00E+00 |
| ENST00000541477 | ENO2 | 15.34 | 21.55 | 3.03 | 7.11 | 1.12E-12 | 4.39E-10 | 1310.52 | 0.94 | 0.93 | 1.01 | 3.11E-01 | 1.00E+00 |
| ENST00000380935 | ERBB2IP | 9.22 | 6.76 | 2.36 | 2.87 | 4.15E-03 | 3.69E-01 | 561.26 | 0.42 | 0.64 | 0.65 | 5.15E-01 | 1.00E+00 |
| ENST00000543086 | ERC1 | 14.62 | 7.42 | 2.47 | 3.00 | 2.68E-03 | 2.67E-01 | 123.70 | 2.66 | 2.29 | 1.16 | 2.44E-01 | 1.00E+00 |
| ENST00000013807 | ERCC1 | 5.60 | 6.04 | 2.32 | 2.61 | 9.06E-03 | 6.32E-01 | 2150.16 | -0.27 | 0.38 | -0.72 | 4.73E-01 | 1.00E+00 |
| ENST00000460485 | ERCC3 | 1.16 | 3.77 | 1.88 | 2.01 | 4.46E-02 | 9.96E-01 | 90.48 | -0.02 | 0.70 | -0.02 | 9.81E-01 | 1.00E+00 |
| ENST00000546477 | ERP29 | 13.22 | 21.34 | 3.03 | 7.05 | 1.85E-12 | 5.87E-10 | 3663.24 | -0.26 | 0.57 | -0.46 | 6.46E-01 | 1.00E+00 |
| ENST00000319349 | ETV4 | 2.98 | 4.52 | 1.91 | 2.36 | 1.80E-02 | 9.50E-01 | 105.97 | -0.65 | 0.82 | -0.80 | 4.24E-01 | 1.00E+00 |
| ENST00000544779 | EXOSC10 | 42.59 | 1.16 | 0.45 | 2.56 | 1.04E-02 | 6.91E-01 | 2282.08 | -0.48 | 0.89 | -0.53 | 5.93E-01 | 1.00E+00 |
| ENST00000490537 | EXOSC8 | 4.59 | 5.76 | 3.03 | 1.90 | 5.76E-02 | 9.96E-01 | 1350.67 | -0.21 | 0.31 | -0.68 | 5.00E-01 | 1.00E+00 |
| ENST00000528159 | EXT2 | 5.47 | 6.01 | 3.03 | 1.98 | 4.75E-02 | 9.96E-01 | 29.85 | 0.34 | 0.47 | 0.73 | 4.67E-01 | 1.00E+00 |
| ENST00000220562 | EXTL3 | 23.89 | 0.68 | 0.33 | 2.04 | 4.09E-02 | 9.96E-01 | 7150.92 | 0.03 | 1.24 | 0.02 | 9.80E-01 | 1.00E+00 |
| ENST00000517312 | FADS2 | 5.97 | 6.14 | 3.03 | 2.02 | 4.30E-02 | 9.96E-01 | 4.54 | -1.04 | 2.51 | -0.41 | 6.79E-01 | 1.00E+00 |
| ENST00000494293 | FAM54B | 1.66 | 2.98 | 1.37 | 2.17 | 2.98E-02 | 9.96E-01 | 378.16 | 0.44 | 0.31 | 1.44 | 1.50E-01 | 9.66E-01 |
| ENST00000304916 | FAM84B | 4.36 | 2.54 | 0.84 | 3.02 | 2.56E-03 | 2.59E-01 | 3766.72 | 1.07 | 0.45 | 2.36 | 1.84E-02 | 4.37E-01 |
| ENST00000279259 | FAU | 6.40 | 20.33 | 3.03 | 6.71 | 1.99E-11 | 3.91E-09 | 1508.50 | -0.85 | 0.69 | -1.24 | 2.16E-01 | 1.00E+00 |
| ENST00000389087 | FBN1 | 479.27 | 0.56 | 0.18 | 3.20 | 1.37E-03 | 1.56E-01 | 2357.09 | -0.73 | 1.20 | -0.60 | 5.46E-01 | 1.00E+00 |
| ENST00000376770 | FBXO44 | 1.74 | 4.34 | 1.78 | 2.44 | 1.45E-02 | 8.38E-01 | 166.17 | 1.00 | 0.48 | 2.08 | 3.78E-02 | 6.28E-01 |
| ENST00000380339 | FBXW9 | 1.90 | 4.47 | 1.76 | 2.55 | 1.08E-02 | 7.06E-01 | 460.32 | -1.46 | 1.24 | -1.18 | 2.39E-01 | 1.00E+00 |
| ENST00000477057 | FDPS | 7.29 | 6.42 | 3.03 | 2.12 | 3.41E-02 | 9.96E-01 | 1237.10 | -0.56 | 0.32 | -1.77 | 7.59E-02 | 8.23E-01 |
| ENST00000278919 | FEZ1 | 10.46 | 1.48 | 0.75 | 1.99 | 4.68E-02 | 9.96E-01 | 1398.66 | 0.65 | 0.44 | 1.47 | 1.41E-01 | 9.56E-01 |
| ENST00000310729 | FGFR1 | 6.47 | 2.18 | 0.66 | 3.29 | 1.01E-03 | 1.19E-01 | 13.01 | 2.82 | 1.80 | 1.57 | 1.17E-01 | 9.28E-01 |
| ENST00000464180 | FKBP10 | 3.05 | 3.43 | 1.66 | 2.07 | 3.84E-02 | 9.96E-01 | 437.86 | -0.25 | 0.31 | -0.81 | 4.20E-01 | 1.00E+00 |
| ENST00000466319 | FLNA | 49.07 | 1.90 | 0.98 | 1.93 | 5.31E-02 | 9.96E-01 | 170.76 | -0.36 | 0.51 | -0.70 | 4.83E-01 | 1.00E+00 |
| ENST00000496542 | FN1 | 7.72 | 2.33 | 0.85 | 2.74 | 6.17E-03 | 4.96E-01 | 20.97 | -0.08 | 0.97 | -0.08 | 9.36E-01 | 1.00E+00 |
| ENST00000498719 | FN1 | 6.72 | 5.71 | 2.03 | 2.81 | 4.94E-03 | 4.16E-01 | 450.26 | 0.33 | 1.34 | 0.24 | NA | NA |
| ENST00000300784 | FN3K | 56.37 | 1.34 | 0.30 | 4.47 | 7.99E-06 | 1.30E-03 | 1124.82 | 0.16 | 0.60 | 0.27 | 7.87E-01 | 1.00E+00 |
| ENST00000380874 | FOXC1 | 21.98 | 0.88 | 0.44 | 2.01 | 4.40E-02 | 9.96E-01 | 1092.63 | 0.69 | 1.02 | 0.68 | 4.96E-01 | 1.00E+00 |
| ENST00000317568 | FRMD8 | 23.41 | 1.29 | 0.41 | 3.15 | 1.62E-03 | 1.79E-01 | 2132.84 | 0.16 | 0.47 | 0.35 | 7.26E-01 | 1.00E+00 |
| ENST00000405801 | FSCN1 | 4.64 | 5.76 | 3.03 | 1.90 | 5.75E-02 | 9.96E-01 | 27.49 | 0.87 | 0.57 | 1.54 | 1.23E-01 | 9.37E-01 |
| ENST00000256759 | FST | 15.04 | 1.06 | 0.50 | 2.11 | 3.47E-02 | 9.96E-01 | 693.40 | 1.04 | 0.96 | 1.09 | 2.75E-01 | 1.00E+00 |
| ENST00000445140 | FXR1 | 10.32 | 6.33 | 2.36 | 2.68 | 7.39E-03 | 5.57E-01 | 2228.43 | -1.01 | 0.83 | -1.21 | 2.25E-01 | 1.00E+00 |
| ENST00000522367 | G3BP1 | 7.84 | 6.52 | 3.03 | 2.15 | 3.14E-02 | 9.96E-01 | 1.16 | 0.52 | 1.60 | 0.32 | 7.47E-01 | NA |
| ENST00000393780 | GAP43 | 7.53 | 6.46 | 3.03 | 2.13 | 3.30E-02 | 9.96E-01 | 668.09 | 0.48 | 0.91 | 0.53 | 5.98E-01 | 1.00E+00 |
| ENST00000229239 | GAPDH | 228.10 | 11.10 | 3.03 | 3.67 | 2.46E-04 | 3.37E-02 | 72265.17 | -0.55 | 0.31 | -1.74 | 8.11E-02 | 8.42E-01 |
| ENST00000396859 | GAPDH | 16.06 | 21.61 | 3.03 | 7.14 | 9.62E-13 | 3.88E-10 | 1507.86 | -0.28 | 0.31 | -0.90 | 3.70E-01 | 1.00E+00 |
| ENST00000466588 | GAPDH | 19.68 | 5.76 | 2.98 | 1.93 | 5.34E-02 | 9.96E-01 | 50.66 | 0.47 | 0.65 | 0.73 | 4.68E-01 | 1.00E+00 |
| ENST00000450766 | GAS6 | 28.84 | 8.41 | 2.47 | 3.41 | 6.57E-04 | 8.14E-02 | 8661.20 | 1.49 | 1.04 | 1.43 | 1.52E-01 | 9.68E-01 |
| ENST00000480426 | GAS6 | 4.75 | 5.81 | 2.72 | 2.14 | 3.28E-02 | 9.96E-01 | 10155.78 | 1.23 | 1.00 | 1.23 | 2.19E-01 | 1.00E+00 |
| ENST00000470952 | GGT7 | 6.58 | 2.79 | 1.20 | 2.32 | 2.05E-02 | 9.96E-01 | 53.00 | -0.56 | 0.65 | -0.87 | 3.82E-01 | 1.00E+00 |
| ENST00000223293 | GIMAP2 | 1.67 | 3.64 | 1.44 | 2.53 | 1.15E-02 | 7.40E-01 | 306.46 | 1.00 | 0.39 | 2.61 | 9.14E-03 | 2.94E-01 |
| ENST00000321612 | GLDC | 23.56 | 0.80 | 0.37 | 2.15 | 3.15E-02 | 9.96E-01 | 3182.01 | 0.62 | 0.62 | 1.00 | 3.16E-01 | 1.00E+00 |
| ENST00000530075 | GMDS | 2.09 | 2.26 | 1.19 | 1.90 | 5.69E-02 | 9.96E-01 | 18.14 | 0.05 | 0.97 | 0.05 | 9.57E-01 | 1.00E+00 |
| ENST00000078429 | GNA11 | 30.92 | 1.03 | 0.50 | 2.05 | 4.01E-02 | 9.96E-01 | 3047.01 | -0.10 | 0.49 | -0.20 | 8.45E-01 | 1.00E+00 |
| ENST00000490122 | GNAI2 | 12.58 | 7.21 | 2.51 | 2.88 | 4.02E-03 | 3.60E-01 | 8547.97 | -0.32 | 1.36 | -0.23 | 8.17E-01 | 1.00E+00 |
| ENST00000503494 | GNB2L1 | 43.19 | 22.99 | 3.03 | 7.59 | 3.10E-14 | 4.26E-11 | 79.14 | 1.97 | 1.27 | 1.55 | 1.20E-01 | 9.32E-01 |
| ENST00000506312 | GNB2L1 | 6.48 | 6.25 | 3.03 | 2.06 | 3.91E-02 | 9.96E-01 | 298.76 | -0.51 | 0.32 | -1.58 | 1.14E-01 | 9.22E-01 |
| ENST00000515417 | GNB2L1 | 12.41 | 21.11 | 3.03 | 6.97 | 3.16E-12 | 8.70E-10 | 9282.55 | 2.53 | 0.97 | 2.61 | 9.05E-03 | 2.92E-01 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000556752 | GNG2 | 2.32 | 4.78 | 2.26 | 2.11 | 3.46E-02 | 9.96E-01 | 1261.41 | 4.61 | 1.54 | 2.99 | 2.82E-03 | 1.42E-01 |
| ENST00000357743 | GOLGA7 | 2.78 | 5.04 | 2.24 | 2.25 | 2.44E-02 | 9.96E-01 | 963.81 | 1.18 | 0.57 | 2.09 | 3.66E-02 | 6.18E-01 |
| ENST00000543866 | GOT1 | 32.40 | 5.00 | 1.49 | 3.35 | 8.21E-04 | 1.00E-01 | 35.54 | 0.80 | 0.52 | 1.54 | 1.24E-01 | 9.37E-01 |
| ENST00000532758 | GPAA1 | 7.47 | 20.54 | 3.03 | 6.78 | 1.22E-11 | 2.52E-09 | 85.57 | -0.33 | 1.04 | -0.32 | 7.49E-01 | 1.00E+00 |
| ENST00000377047 | GPC6 | 91.90 | 0.68 | 0.36 | 1.89 | 5.89E-02 | 9.96E-01 | 2650.35 | 0.06 | 0.61 | 0.10 | 9.22E-01 | 1.00E+00 |
| ENST00000478722 | GPHN | 4.92 | 1.87 | 0.71 | 2.65 | 8.13E-03 | 5.96E-01 | 223.45 | 1.97 | 0.65 | 3.02 | 2.50E-03 | 1.30E-01 |
| ENST00000515877 | GPN1 | 7.79 | 20.61 | 3.03 | 6.80 | 1.05E-11 | 2.24E-09 | 70.76 | 4.09 | 1.39 | 2.94 | 3.30E-03 | 1.58E-01 |
| ENST00000533662 | GPR172A | 6.50 | 4.33 | 1.62 | 2.68 | 7.33E-03 | 5.54E-01 | 121.90 | -1.09 | 0.63 | -1.73 | 8.34E-02 | 8.49E-01 |
| ENST00000394705 | GPR75 | 1.35 | 2.60 | 1.28 | 2.04 | 4.18E-02 | 9.96E-01 | 239.39 | 0.47 | 0.79 | 0.60 | 5.46E-01 | 1.00E+00 |
| ENST00000407526 | GRB10 | 13.77 | 21.40 | 3.03 | 7.06 | 1.62E-12 | 5.37E-10 | 52.10 | 0.15 | 0.82 | 0.18 | 8.57E-01 | 1.00E+00 |
| ENST00000460882 | GRHPR | 15.25 | 7.49 | 3.03 | 2.47 | 1.34E-02 | 7.98E-01 | 1577.81 | -0.17 | 0.34 | -0.50 | 6.14E-01 | 1.00E+00 |
| ENST00000327946 | GRID1 | 6.93 | 2.14 | 0.74 | 2.88 | 3.99E-03 | 3.60E-01 | 1011.54 | 1.86 | 0.39 | 4.75 | 2.08E-06 | 5.37E-04 |
| ENST00000529301 | GRINA | 8.12 | 20.66 | 3.03 | 6.82 | 9.28E-12 | 2.03E-09 | 4.63 | 0.94 | 1.17 | 0.80 | 4.22E-01 | 1.00E+00 |
| ENST00000443571 | GSTK1 | 4.53 | 5.74 | 3.03 | 1.89 | 5.86E-02 | 9.96E-01 | 270.94 | 0.83 | 0.58 | 1.42 | 1.54E-01 | 9.70E-01 |
| ENST00000216044 | GTPBP1 | 36.51 | 1.23 | 0.52 | 2.38 | 1.75E-02 | 9.33E-01 | 1246.56 | -0.12 | 0.41 | -0.30 | 7.66E-01 | 1.00E+00 |
| ENST00000526355 | GUCY1A2 | 3.20 | 1.81 | 0.87 | 2.07 | 3.85E-02 | 9.96E-01 | 190.69 | 2.77 | 0.84 | 3.29 | 9.86E-04 | 7.11E-02 |
| ENST00000375249 | HABP4 | 2.79 | 5.06 | 1.76 | 2.87 | 4.15E-03 | 3.69E-01 | 3865.38 | -0.21 | 0.36 | -0.59 | 5.57E-01 | 1.00E+00 |
| ENST00000317799 | HADHB | 41.30 | 22.93 | 3.03 | 7.57 | 3.63E-14 | 4.55E-11 | 801.45 | 0.32 | 1.37 | 0.23 | 8.17E-01 | 1.00E+00 |
| ENST00000537713 | HADHB | 19.56 | 21.89 | 3.03 | 7.23 | 4.88E-13 | 2.58E-10 | 233.11 | 0.90 | 1.76 | 0.51 | 6.10E-01 | 1.00E+00 |
| ENST00000282058 | HAUS1 | 2.50 | 4.87 | 2.33 | 2.09 | 3.69E-02 | 9.96E-01 | 2021.23 | -0.08 | 0.37 | -0.22 | 8.28E-01 | 1.00E+00 |
| ENST00000229330 | HCFC2 | 1.96 | 3.28 | 1.48 | 2.21 | 2.68E-02 | 9.96E-01 | 1112.19 | 0.29 | 0.79 | 0.37 | 7.14E-01 | 1.00E+00 |
| ENST00000482974 | HEMK1 | 1.36 | 3.99 | 1.84 | 2.17 | 3.03E-02 | 9.96E-01 | 247.49 | -0.36 | 0.30 | -1.19 | 2.34E-01 | 1.00E+00 |
| ENST00000568777 | HEXA | 5.71 | 5.46 | 2.33 | 2.35 | 1.90E-02 | 9.78E-01 | 1039.09 | -0.04 | 0.55 | -0.08 | 9.38E-01 | 1.00E+00 |
| ENST00000392939 | HIST2H4A | 32.75 | 3.23 | 1.18 | 2.74 | 6.14E-03 | 4.95E-01 | 326.23 | 0.45 | 0.26 | 1.73 | 8.38E-02 | 8.50E-01 |
| ENST00000298649 | HK1 | 34.36 | 22.67 | 3.03 | 7.49 | 6.92E-14 | 7.13E-11 | 3690.17 | -1.24 | 3.73 | -0.33 | NA | NA |
| ENST00000359426 | HK1 | 42.74 | 22.97 | 3.03 | 7.59 | 3.24E-14 | 4.26E-11 | 22231.12 | 0.36 | 0.71 | 0.51 | 6.13E-01 | 1.00E+00 |
| ENST00000436817 | HK1 | 8.39 | 19.43 | 3.03 | 6.41 | 1.44E-10 | 2.69E-08 | 4.01 | -1.71 | 2.88 | -0.60 | 5.51E-01 | 1.00E+00 |
| ENST00000494253 | HK1 | 5.88 | 6.11 | 3.03 | 2.02 | 4.38E-02 | 9.96E-01 | 315.55 | -1.69 | 1.19 | -1.42 | 1.57E-01 | 9.72E-01 |
| ENST00000495183 | HLA-A | 6.07 | 6.16 | 3.03 | 2.03 | 4.23E-02 | 9.96E-01 | 15791.03 | -0.30 | 0.65 | -0.46 | 6.47E-01 | 1.00E+00 |
| ENST00000484194 | HLA-E | 16.25 | 7.58 | 3.03 | 2.50 | 1.23E-02 | 7.70E-01 | 167.46 | -0.21 | 0.38 | -0.57 | 5.69E-01 | 1.00E+00 |
| ENST00000483417 | HMG20B | 9.71 | 6.84 | 1.32 | 5.17 | 2.37E-07 | 4.17E-05 | 18.35 | 0.11 | 0.85 | 0.13 | 8.93E-01 | 1.00E+00 |
| ENST00000495810 | HNRNPA2B1 | 29.23 | 1.79 | 0.93 | 1.92 | 5.45E-02 | 9.96E-01 | 351.62 | -0.41 | 0.23 | -1.81 | 7.10E-02 | 8.06E-01 |
| ENST00000352301 | HNRNPD | 4.24 | 5.65 | 2.25 | 2.51 | 1.20E-02 | 7.61E-01 | 4543.59 | 0.54 | 0.47 | 1.15 | 2.48E-01 | 1.00E+00 |
| ENST00000376256 | HNRNPK | 8.81 | 20.77 | 3.03 | 6.86 | 7.11E-12 | 1.63E-09 | 1828.96 | 0.13 | 0.48 | 0.28 | 7.80E-01 | 1.00E+00 |
| ENST00000374612 | HNRNPR | 7.77 | 2.84 | 1.08 | 2.63 | 8.46E-03 | 6.09E-01 | 286.57 | -0.25 | 0.84 | -0.30 | 7.68E-01 | 1.00E+00 |
| ENST00000283179 | HNRNPU | 5.19 | 20.04 | 3.03 | 6.61 | 3.89E-11 | 7.35E-09 | 23108.88 | -0.48 | 0.34 | -1.42 | 1.54E-01 | 9.70E-01 |
| ENST00000476241 | HNRNPU | 10.90 | 7.00 | 3.03 | 2.31 | 2.08E-02 | 9.96E-01 | 397.12 | 0.28 | 0.89 | 0.32 | 7.51E-01 | 1.00E+00 |
| ENST00000484302 | HOXB6 | 56.73 | 0.67 | 0.31 | 2.19 | 2.86E-02 | 9.96E-01 | 1548.59 | -0.88 | 1.32 | -0.67 | 5.04E-01 | 1.00E+00 |
| ENST00000371554 | HSP90AB1 | 69.60 | 23.59 | 3.03 | 7.79 | 6.46E-15 | 1.80E-11 | 208.83 | 0.52 | 0.42 | 1.25 | 2.10E-01 | 1.00E+00 |
| ENST00000550595 | HSP90B1 | 9.24 | 20.84 | 3.03 | 6.88 | 6.05E-12 | 1.40E-09 | 1314.10 | -1.05 | 0.86 | -1.22 | 2.21E-01 | 1.00E+00 |
| ENST00000296464 | HSPA4L | 17.20 | 1.14 | 0.57 | 1.98 | 4.72E-02 | 9.96E-01 | 1970.38 | 0.56 | 0.50 | 1.12 | 2.64E-01 | 1.00E+00 |
| ENST00000532091 | HSPA8 | 3.51 | 3.08 | 1.51 | 2.04 | 4.10E-02 | 9.96E-01 | 300.09 | -0.76 | 0.47 | -1.61 | 1.06E-01 | 9.07E-01 |
| ENST00000248553 | HSPB1 | 87.08 | 0.90 | 0.40 | 2.25 | 2.47E-02 | 9.96E-01 | 16850.89 | 0.19 | 0.48 | 0.39 | 6.94E-01 | 1.00E+00 |
| ENST00000448722 | HSPB1P2 | 3.02 | 1.64 | 0.83 | 1.98 | 4.82E-02 | 9.96E-01 | 9.30 | -0.05 | 0.84 | -0.06 | 9.55E-01 | 1.00E+00 |
| ENST00000503199 | HSPD1P1 | 4.77 | 5.81 | 3.03 | 1.91 | 5.57E-02 | 9.96E-01 | 14.60 | 0.01 | 0.80 | 0.01 | 9.92E-01 | 1.00E+00 |
| ENST00000489468 | IAH1 | 1.87 | 3.78 | 1.66 | 2.28 | 2.25E-02 | 9.96E-01 | 99.12 | 0.44 | 0.36 | 1.22 | 2.23E-01 | 1.00E+00 |
| ENST00000562225 | IFI16 | 6.27 | 6.20 | 3.03 | 2.05 | 4.09E-02 | 9.96E-01 | 62.29 | -0.08 | 0.53 | -0.14 | 8.85E-01 | 1.00E+00 |
| ENST00000415816 | IFI35 | 2.51 | 4.90 | 2.34 | 2.09 | 3.62E-02 | 9.96E-01 | 831.10 | -0.93 | 0.71 | -1.31 | 1.90E-01 | 9.97E-01 |
| ENST00000371936 | IL13RA2 | 10.40 | 6.93 | 2.37 | 2.93 | 3.38E-03 | 3.16E-01 | 4.95 | -1.36 | 3.78 | -0.36 | 7.20E-01 | 1.00E+00 |
| ENST00000318511 | ILF3 | 7.78 | 20.58 | 3.03 | 6.79 | 1.11E-11 | 2.35E-09 | 104.84 | -0.11 | 2.40 | -0.05 | NA | NA |
| ENST00000545283 | IMMT | 7.22 | 6.40 | 3.03 | 2.11 | 3.47E-02 | 9.96E-01 | 44.49 | -0.22 | 0.43 | -0.52 | 6.02E-01 | 1.00E+00 |
| ENST00000338791 | IMPDH1 | 2.66 | 3.73 | 1.57 | 2.37 | 1.76E-02 | 9.38E-01 | 7.14 | -0.65 | 1.08 | -0.60 | 5.49E-01 | 1.00E+00 |
| ENST00000242208 | INHBA | 2.12 | 3.36 | 1.54 | 2.18 | 2.89E-02 | 9.96E-01 | 437.36 | 1.62 | 0.47 | 3.44 | 5.74E-04 | 4.88E-02 |
| ENST00000506437 | ITGA3 | 7.38 | 4.53 | 2.06 | 2.19 | 2.82E-02 | 9.96E-01 | 15100.47 | -0.03 | 0.57 | -0.06 | 9.55E-01 | 1.00E+00 |
| ENST00000512553 | ITGA3 | 11.04 | 4.28 | 2.04 | 2.10 | 3.55E-02 | 9.96E-01 | 23.44 | -0.10 | 0.72 | -0.14 | 8.89E-01 | 1.00E+00 |
| ENST00000425522 | ITGA4 | 8.60 | 6.62 | 3.03 | 2.19 | 2.88E-02 | 9.96E-01 | 0.77 | 1.27 | 3.92 | 0.32 | 7.47E-01 | NA |
| ENST00000464001 | ITGB1 | 14.75 | 1.37 | 0.73 | 1.89 | 5.92E-02 | 9.96E-01 | 21.14 | -1.21 | 1.04 | -1.16 | 2.45E-01 | 1.00E+00 |
| ENST00000376180 | ITGBL1 | 214.22 | 1.30 | 0.41 | 3.14 | 1.72E-03 | 1.86E-01 | 1646.46 | 0.86 | 1.44 | 0.59 | 5.53E-01 | 1.00E+00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000382303 | KANK1 | 5.13 | 5.92 | 3.03 | 1.95 | 5.11E-02 | 9.96E-01 | 314.11 | 1.59 | 1.01 | 1.58 | 1.13E-01 | 9.20E-01 |
| ENST00000534681 | KAT5 | 13.55 | 7.32 | 1.68 | 4.35 | 1.36E-05 | 2.20E-03 | 14.49 | 1.09 | 1.72 | 0.63 | 5.26E-01 | 1.00E+00 |
| ENST00000262888 | KCNN4 | 17.21 | 3.24 | 1.03 | 3.15 | 1.63E-03 | 1.79E-01 | 3852.75 | 0.51 | 0.33 | 1.56 | 1.20E-01 | 9.32E-01 |
| ENST00000322444 | KCTD2 | 14.51 | 2.48 | 1.03 | 2.41 | 1.57E-02 | 8.85E-01 | 3846.34 | -0.11 | 0.38 | -0.30 | 7.61E-01 | 1.00E+00 |
| ENST00000314256 | KIAA0195 | 3.54 | 5.39 | 2.31 | 2.34 | 1.95E-02 | 9.94E-01 | 1622.36 | 0.61 | 1.81 | 0.34 | 7.37E-01 | 1.00E+00 |
| ENST00000530275 | KIAA0754 | 87.07 | 0.50 | 0.25 | 2.05 | 4.06E-02 | 9.96E-01 | 176.48 | 0.66 | 0.92 | 0.71 | 4.78E-01 | 1.00E+00 |
| ENST00000377086 | KIF1B | 78.11 | 0.68 | 0.30 | 2.25 | 2.42E-02 | 9.96E-01 | 27.29 | 0.61 | 2.31 | 0.26 | 7.93E-01 | 1.00E+00 |
| ENST00000508792 | KIF20A | 9.78 | 20.90 | 3.03 | 6.90 | 5.28E-12 | 1.26E-09 | 3174.23 | 0.15 | 2.93 | 0.05 | 9.60E-01 | 1.00E+00 |
| ENST00000252999 | LAMA5 | 129.52 | 1.68 | 0.35 | 4.76 | 1.96E-06 | 3.33E-04 | 8779.62 | 0.65 | 0.66 | 0.99 | 3.21E-01 | 1.00E+00 |
| ENST00000514104 | LARS | 3.17 | 4.60 | 2.09 | 2.20 | 2.76E-02 | 9.96E-01 | 9.45 | 0.04 | 0.99 | 0.04 | 9.71E-01 | 1.00E+00 |
| ENST00000545707 | LDLR | 4.51 | 3.44 | 0.98 | 3.53 | 4.14E-04 | 5.46E-02 | 54.33 | 0.73 | 1.61 | 0.46 | 6.49E-01 | 1.00E+00 |
| ENST00000369308 | LIX1L | 10.25 | 1.59 | 0.79 | 2.02 | 4.31E-02 | 9.96E-01 | 3380.83 | -0.07 | 0.27 | -0.25 | 8.00E-01 | 1.00E+00 |
| ENST00000347559 | LMNA | 22.41 | 22.07 | 3.03 | 7.29 | 3.09E-13 | 1.90E-10 | 2252.33 | 2.43 | 1.27 | 1.92 | 5.54E-02 | 7.35E-01 |
| ENST00000361308 | LMNA | 44.73 | 22.98 | 3.03 | 7.59 | 3.18E-14 | 4.26E-11 | 11176.83 | 0.36 | 0.54 | 0.67 | 5.00E-01 | 1.00E+00 |
| ENST00000395354 | LMNB1 | 20.85 | 7.94 | 3.03 | 2.62 | 8.75E-03 | 6.23E-01 | 2104.53 | -0.03 | 0.61 | -0.05 | 9.59E-01 | 1.00E+00 |
| ENST00000377499 | LMO7 | 5.23 | 5.94 | 3.03 | 1.96 | 5.01E-02 | 9.96E-01 | 370.12 | -0.75 | 1.19 | -0.63 | 5.29E-01 | 1.00E+00 |
| ENST00000374431 | LPAR1 | 4.38 | 3.62 | 1.62 | 2.23 | 2.56E-02 | 9.96E-01 | 143.05 | 0.33 | 0.84 | 0.39 | 6.96E-01 | 1.00E+00 |
| ENST00000543006 | LPP | 13.84 | 7.35 | 3.03 | 2.43 | 1.53E-02 | 8.66E-01 | 3582.25 | 1.01 | 1.15 | 0.88 | 3.80E-01 | 1.00E+00 |
| ENST00000249377 | LRRC17 | 19.17 | 3.42 | 1.42 | 2.41 | 1.60E-02 | 8.93E-01 | 787.53 | -0.94 | 0.91 | -1.03 | 3.04E-01 | 1.00E+00 |
| ENST00000444156 | LSM14B | 17.75 | 1.19 | 0.50 | 2.40 | 1.64E-02 | 9.03E-01 | 2094.99 | 0.20 | 1.69 | 0.12 | 9.05E-01 | 1.00E+00 |
| ENST00000464357 | LSS | 10.20 | 20.98 | 3.03 | 6.93 | 4.33E-12 | 1.07E-09 | 176.22 | 4.50 | 1.35 | 3.33 | NA | NA |
| ENST00000533227 | LUZP2 | 2.73 | 2.79 | 1.43 | 1.94 | 5.21E-02 | 9.96E-01 | 135.21 | 1.87 | 0.54 | 3.44 | 5.79E-04 | 4.91E-02 |
| ENST00000415817 | LZTR1 | 3.63 | 4.17 | 1.51 | 2.76 | 5.74E-03 | 4.68E-01 | 749.66 | -0.39 | 0.66 | -0.59 | 5.58E-01 | 1.00E+00 |
| ENST00000379919 | MAB21L1 | 65.70 | 0.74 | 0.26 | 2.84 | 4.50E-03 | 3.93E-01 | 2521.94 | 0.24 | 0.40 | 0.59 | 5.52E-01 | 1.00E+00 |
| ENST00000545844 | MACF1 | 4.77 | 5.81 | 3.03 | 1.91 | 5.57E-02 | 9.96E-01 | 0.00 | NA | NA | NA | NA | NA |
| ENST00000375060 | MAGED2 | 20.65 | 7.92 | 3.03 | 2.62 | 8.89E-03 | 6.27E-01 | 659.65 | -0.47 | 0.61 | -0.76 | 4.44E-01 | 1.00E+00 |
| ENST00000463787 | MAGED2 | 16.11 | 7.56 | 3.03 | 2.50 | 1.25E-02 | 7.73E-01 | 55.68 | -0.15 | 0.61 | -0.24 | 8.09E-01 | 1.00E+00 |
| ENST00000416960 | MAGED4 | 4.09 | 3.89 | 1.57 | 2.48 | 1.31E-02 | 7.89E-01 | 39.15 | -0.47 | 1.31 | -0.36 | 7.20E-01 | 1.00E+00 |
| ENST00000348428 | MALT1 | 63.81 | 1.71 | 0.32 | 5.34 | 9.25E-08 | 1.65E-05 | 2512.90 | 3.31 | 2.35 | 1.41 | NA | NA |
| ENST00000545096 | MAN1B1 | 3.33 | 5.30 | 2.28 | 2.33 | 1.99E-02 | 9.96E-01 | 23.87 | 0.61 | 0.90 | 0.68 | 4.97E-01 | 1.00E+00 |
| ENST00000514430 | MANBA | 16.43 | 2.44 | 1.05 | 2.33 | 2.00E-02 | 9.96E-01 | 1841.17 | -0.02 | 0.54 | -0.04 | 9.72E-01 | 1.00E+00 |
| ENST00000373505 | MAPKAP1 | 22.22 | 1.08 | 0.44 | 2.45 | 1.43E-02 | 8.32E-01 | 61.56 | 1.39 | 1.81 | 0.77 | 4.41E-01 | 1.00E+00 |
| ENST00000446044 | MAPKAPK3 | 2.08 | 4.61 | 2.27 | 2.03 | 4.24E-02 | 9.96E-01 | 14.10 | 0.20 | 1.22 | 0.17 | 8.67E-01 | 1.00E+00 |
| ENST00000361297 | MAST2 | 4.76 | 1.79 | 0.90 | 2.00 | 4.55E-02 | 9.96E-01 | 756.41 | -0.12 | 1.76 | -0.07 | 9.45E-01 | 1.00E+00 |
| ENST00000509990 | MATR3 | 11.35 | 7.06 | 3.03 | 2.33 | 1.97E-02 | 9.96E-01 | 152.75 | 1.14 | 1.60 | 0.71 | 4.78E-01 | 1.00E+00 |
| ENST00000449249 | MBOAT7 | 2.49 | 4.88 | 2.28 | 2.14 | 3.23E-02 | 9.96E-01 | 267.56 | 0.86 | 0.84 | 1.02 | 3.06E-01 | 1.00E+00 |
| ENST00000528533 | MCAM | 21.07 | 2.26 | 1.08 | 2.10 | 3.57E-02 | 9.96E-01 | 66.02 | 0.49 | 0.59 | 0.82 | 4.10E-01 | 1.00E+00 |
| ENST00000377716 | MCART1 | 1.72 | 2.34 | 1.19 | 1.96 | 4.98E-02 | 9.96E-01 | 123.23 | -0.19 | 0.60 | -0.32 | 7.47E-01 | 1.00E+00 |
| ENST00000424167 | MDH2 | 37.20 | 2.46 | 1.10 | 2.24 | 2.50E-02 | 9.96E-01 | 361.95 | -0.24 | 0.45 | -0.54 | 5.88E-01 | 1.00E+00 |
| ENST00000492663 | MDH2 | 12.31 | 1.74 | 0.78 | 2.24 | 2.49E-02 | 9.96E-01 | 61.41 | 0.04 | 0.49 | 0.07 | 9.41E-01 | 1.00E+00 |
| ENST00000529626 | MED17 | 10.55 | 0.94 | 0.50 | 1.89 | 5.91E-02 | 9.96E-01 | 89.19 | 0.41 | 0.64 | 0.64 | 5.22E-01 | 1.00E+00 |
| ENST00000378586 | MED4 | 4.72 | 5.79 | 2.40 | 2.41 | 1.60E-02 | 8.93E-01 | 534.82 | 0.24 | 0.43 | 0.55 | 5.80E-01 | 1.00E+00 |
| ENST00000337652 | MEN1 | 17.62 | 1.10 | 0.46 | 2.41 | 1.58E-02 | 8.85E-01 | 0.14 | 1.58 | 4.07 | 0.39 | 6.98E-01 | NA |
| ENST00000378576 | MEST | 1.97 | 4.54 | 2.29 | 1.99 | 4.69E-02 | 9.96E-01 | 51.44 | 2.18 | 0.77 | 2.85 | 4.39E-03 | 1.88E-01 |
| ENST00000341249 | METTL23 | 2.28 | 4.76 | 2.33 | 2.04 | 4.11E-02 | 9.96E-01 | 878.97 | 0.04 | 0.28 | 0.15 | 8.81E-01 | 1.00E+00 |
| ENST00000482661 | MFN1 | 5.15 | 5.91 | 1.74 | 3.41 | 6.56E-04 | 8.14E-02 | 60.75 | 0.19 | 1.01 | 0.19 | 8.50E-01 | 1.00E+00 |
| ENST00000329548 | MFSD5 | 8.85 | 6.70 | 3.03 | 2.21 | 2.70E-02 | 9.96E-01 | 5170.94 | -0.66 | 0.30 | -2.16 | 3.05E-02 | 5.70E-01 |
| ENST00000506797 | MGST2 | 8.41 | 6.63 | 3.03 | 2.19 | 2.87E-02 | 9.96E-01 | 1595.59 | -0.57 | 0.46 | -1.24 | 2.15E-01 | 1.00E+00 |
| ENST00000449934 | MICA | 6.41 | 6.24 | 3.03 | 2.06 | 3.96E-02 | 9.96E-01 | 4403.86 | 0.39 | 0.40 | 0.99 | 3.23E-01 | 1.00E+00 |
| ENST00000390708 | MIR708 | 3.27 | 1.96 | 0.86 | 2.28 | 2.25E-02 | 9.96E-01 | 0.59 | 0.94 | 2.06 | 0.46 | 6.46E-01 | NA |
| ENST00000303319 | MMADHC | 8.12 | 20.67 | 3.03 | 6.82 | 9.18E-12 | 2.02E-09 | 709.73 | 0.02 | 0.31 | 0.05 | 9.59E-01 | 1.00E+00 |
| ENST00000422154 | MORF4L2 | 4.65 | 2.85 | 1.44 | 1.97 | 4.83E-02 | 9.96E-01 | 80.72 | -1.79 | 1.72 | -1.04 | 2.99E-01 | 1.00E+00 |
| ENST00000313485 | MPRIP | 15.83 | 1.48 | 0.49 | 3.00 | 2.69E-03 | 2.67E-01 | 390.07 | 1.59 | 1.27 | 1.25 | NA | NA |
| ENST00000468957 | MRPL2 | 2.22 | 4.72 | 2.33 | 2.03 | 4.25E-02 | 9.96E-01 | 59.09 | -0.22 | 0.56 | -0.40 | 6.88E-01 | 1.00E+00 |
| ENST00000482352 | MRPL20 | 14.63 | 2.28 | 0.75 | 3.03 | 2.42E-03 | 2.46E-01 | 294.84 | 0.25 | 0.42 | 0.60 | 5.46E-01 | 1.00E+00 |
| ENST00000514928 | MRPL27 | 2.00 | 2.58 | 1.22 | 2.12 | 3.44E-02 | 9.96E-01 | 203.35 | -0.29 | 0.33 | -0.88 | 3.80E-01 | 1.00E+00 |
| ENST00000355151 | MRPL52 | 2.29 | 4.75 | 1.89 | 2.51 | 1.20E-02 | 7.61E-01 | 888.33 | -1.01 | 0.42 | -2.41 | 1.62E-02 | 4.06E-01 |
| ENST00000477091 | MRPS6 | 37.29 | 3.82 | 1.71 | 2.24 | 2.50E-02 | 9.96E-01 | 3423.97 | -0.27 | 0.36 | -0.74 | 4.58E-01 | 1.00E+00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000544857 | MSH6 | 7.00 | 6.36 | 3.03 | 2.10 | 3.58E-02 | 9.96E-01 | 111.02 | 0.05 | 0.77 | 0.06 | 9.49E-01 | 1.00E+00 |
| ENST00000525649 | MTCH2 | 7.27 | 20.50 | 3.03 | 6.76 | 1.34E-11 | 2.75E-09 | 1222.43 | -0.20 | 0.76 | -0.26 | 7.94E-01 | 1.00E+00 |
| ENST00000530428 | MTCH2 | 18.90 | 20.35 | 3.03 | 6.72 | 1.81E-11 | 3.61E-09 | 448.07 | 0.13 | 0.47 | 0.28 | 7.81E-01 | 1.00E+00 |
| ENST00000542981 | MTCH2 | 6.24 | 6.20 | 3.03 | 2.04 | 4.09E-02 | 9.96E-01 | 71.53 | 0.27 | 0.62 | 0.43 | 6.64E-01 | 1.00E+00 |
| ENST00000398600 | MX1 | 25.60 | 1.15 | 0.37 | 3.15 | 1.61E-03 | 1.78E-01 | 86.18 | 1.34 | 1.57 | 0.85 | 3.95E-01 | 1.00E+00 |
| ENST00000381556 | MYBBP1A | 7.53 | 20.55 | 3.03 | 6.78 | 1.20E-11 | 2.50E-09 | 206.05 | -2.52 | 0.99 | -2.55 | 1.06E-02 | 3.22E-01 |
| ENST00000486218 | MYH9 | 77.90 | 1.42 | 0.70 | 2.04 | 4.14E-02 | 9.96E-01 | 123.21 | -0.28 | 0.44 | -0.63 | 5.26E-01 | 1.00E+00 |
| ENST00000550184 | MYL6 | 23.12 | 2.15 | 0.88 | 2.45 | 1.42E-02 | 8.31E-01 | 11303.67 | -0.09 | 0.24 | -0.39 | 6.98E-01 | 1.00E+00 |
| ENST00000553066 | MYL6B | 2.47 | 4.25 | 1.93 | 2.20 | 2.80E-02 | 9.96E-01 | 980.02 | -1.38 | 0.90 | -1.54 | 1.24E-01 | 9.38E-01 |
| ENST00000318217 | MYO1D | 2.41 | 1.85 | 0.91 | 2.03 | 4.21E-02 | 9.96E-01 | 83.07 | 2.75 | 1.10 | 2.49 | 1.26E-02 | 3.55E-01 |
| ENST00000285039 | MYO5B | 43.08 | 0.90 | 0.37 | 2.44 | 1.48E-02 | 8.48E-01 | 3063.14 | 1.00 | 1.93 | 0.52 | 6.04E-01 | 1.00E+00 |
| ENST00000359263 | MYOF | 101.97 | 5.47 | 1.43 | 3.82 | 1.36E-04 | 1.96E-02 | 31409.69 | -1.59 | 0.84 | -1.89 | 5.87E-02 | 7.51E-01 |
| ENST00000381804 | N4BP2 | 9.86 | 6.86 | 2.36 | 2.90 | 3.73E-03 | 3.41E-01 | 22.74 | 3.44 | 1.81 | 1.90 | 5.71E-02 | 7.42E-01 |
| ENST00000334982 | NAA20 | 7.10 | 20.48 | 3.03 | 6.76 | 1.42E-11 | 2.85E-09 | 5579.07 | -0.39 | 0.33 | -1.18 | 2.39E-01 | 1.00E+00 |
| ENST00000424702 | NAA38 | 21.40 | 1.82 | 0.85 | 2.14 | 3.24E-02 | 9.96E-01 | 1362.52 | -0.27 | 0.37 | -0.73 | 4.67E-01 | 1.00E+00 |
| ENST00000567743 | NAE1 | 3.16 | 4.61 | 1.65 | 2.80 | 5.12E-03 | 4.27E-01 | 90.71 | 0.37 | 0.48 | 0.78 | 4.38E-01 | 1.00E+00 |
| ENST00000483643 | NAP1L4 | 3.59 | 4.17 | 1.92 | 2.16 | 3.04E-02 | 9.96E-01 | 35.58 | 0.88 | 0.45 | 1.94 | 5.25E-02 | 7.21E-01 |
| ENST00000526115 | NAP1L4 | 6.14 | 6.17 | 3.03 | 2.03 | 4.19E-02 | 9.96E-01 | 5262.78 | -0.24 | 1.10 | -0.22 | 8.29E-01 | 1.00E+00 |
| ENST00000396085 | NAV2 | 25.53 | 1.13 | 0.39 | 2.90 | 3.74E-03 | 3.41E-01 | 870.48 | -0.76 | 1.65 | -0.46 | 6.44E-01 | 1.00E+00 |
| ENST00000397957 | NCAM1 | 6.16 | 6.16 | 1.10 | 5.59 | 2.21E-08 | 4.04E-06 | 14.33 | -3.22 | 0.95 | -3.38 | 7.29E-04 | 5.75E-02 |
| ENST00000374082 | NCOA4 | 15.72 | 1.67 | 0.84 | 1.99 | 4.67E-02 | 9.96E-01 | 293.37 | -0.55 | 1.49 | -0.37 | NA | NA |
| ENST00000373773 | NDRG3 | 7.93 | 6.60 | 3.03 | 2.18 | 2.95E-02 | 9.96E-01 | 794.08 | -1.94 | 1.31 | -1.48 | NA | NA |
| ENST00000538372 | NDUFA12 | 11.14 | 2.15 | 0.96 | 2.24 | 2.48E-02 | 9.96E-01 | 14.49 | -2.45 | 1.71 | -1.43 | 1.52E-01 | 9.68E-01 |
| ENST00000550187 | NDUFA12 | 3.08 | 5.18 | 2.32 | 2.23 | 2.55E-02 | 9.96E-01 | 53.93 | -2.30 | 1.24 | -1.85 | 6.42E-02 | 7.80E-01 |
| ENST00000471292 | NDUFA3 | 6.99 | 1.64 | 0.81 | 2.03 | 4.23E-02 | 9.96E-01 | 171.41 | 0.15 | 0.46 | 0.32 | 7.47E-01 | 1.00E+00 |
| ENST00000339600 | NDUFA4 | 31.98 | 4.19 | 1.36 | 3.08 | 2.10E-03 | 2.21E-01 | 24359.10 | -0.29 | 0.42 | -0.69 | 4.92E-01 | 1.00E+00 |
| ENST00000482299 | NDUFA4 | 11.41 | 4.31 | 1.46 | 2.96 | 3.10E-03 | 2.95E-01 | 2887.57 | -0.55 | 0.51 | -1.08 | 2.82E-01 | 1.00E+00 |
| ENST00000247866 | NDUFB2 | 12.98 | 21.31 | 3.03 | 7.04 | 1.97E-12 | 6.02E-10 | 4222.08 | -1.80 | 1.02 | -1.76 | 7.77E-02 | 8.30E-01 |
| ENST00000526169 | NDUFV1 | 4.77 | 5.81 | 3.03 | 1.91 | 5.57E-02 | 9.96E-01 | 1738.46 | 0.42 | 0.43 | 0.97 | 3.33E-01 | 1.00E+00 |
| ENST00000527355 | NDUFV1 | 7.66 | 6.50 | 3.03 | 2.14 | 3.21E-02 | 9.96E-01 | 65.88 | 0.05 | 0.62 | 0.08 | 9.33E-01 | 1.00E+00 |
| ENST00000318388 | NDUFV2 | 7.91 | 6.54 | 3.03 | 2.16 | 3.11E-02 | 9.96E-01 | 8828.09 | -0.30 | 0.45 | -0.67 | 5.02E-01 | 1.00E+00 |
| ENST00000375631 | NEU1 | 5.73 | 6.07 | 3.03 | 2.00 | 4.54E-02 | 9.96E-01 | 813.42 | -0.36 | 0.45 | -0.81 | 4.15E-01 | 1.00E+00 |
| ENST00000426654 | NFAT5 | 22.77 | 0.70 | 0.34 | 2.06 | 3.96E-02 | 9.96E-01 | 78.97 | -2.08 | 1.09 | -1.92 | 5.52E-02 | 7.34E-01 |
| ENST00000473371 | NHLRC3 | 4.31 | 2.62 | 1.05 | 2.49 | 1.27E-02 | 7.79E-01 | 45.07 | 0.64 | 0.72 | 0.89 | 3.73E-01 | 1.00E+00 |
| ENST00000324330 | NIN | 4.59 | 5.76 | 3.03 | 1.90 | 5.76E-02 | 9.96E-01 | 56.51 | 0.48 | 3.73 | 0.13 | NA | NA |
| ENST00000567271 | NME3 | 3.50 | 1.86 | 0.93 | 2.00 | 4.53E-02 | 9.96E-01 | 2.55 | 1.27 | 1.32 | 0.96 | 3.37E-01 | NA |
| ENST00000490044 | NONO | 13.63 | 7.02 | 3.03 | 2.32 | 2.04E-02 | 9.96E-01 | 1006.20 | -0.35 | 0.74 | -0.48 | 6.34E-01 | 1.00E+00 |
| ENST00000471702 | NPHP3 | 21.78 | 1.93 | 0.95 | 2.04 | 4.13E-02 | 9.96E-01 | 154.27 | -1.25 | 2.49 | -0.50 | 6.17E-01 | 1.00E+00 |
| ENST00000351986 | NPM1 | 11.87 | 7.12 | 3.03 | 2.35 | 1.87E-02 | 9.68E-01 | 14464.08 | -0.48 | 0.27 | -1.76 | 7.79E-02 | 8.31E-01 |
| ENST00000439109 | NQO1 | 4.50 | 5.72 | 3.03 | 1.89 | 5.94E-02 | 9.96E-01 | 1190.56 | -1.08 | 0.69 | -1.56 | 1.20E-01 | 9.32E-01 |
| ENST00000374822 | NRP1 | 40.63 | 8.92 | 3.00 | 2.97 | 2.96E-03 | 2.85E-01 | 809.93 | 0.14 | 0.82 | 0.17 | 8.69E-01 | 1.00E+00 |
| ENST00000355117 | NRP2 | 14.34 | 6.81 | 1.72 | 3.95 | 7.77E-05 | 1.16E-02 | 86.58 | -0.14 | 0.59 | -0.24 | 8.14E-01 | 1.00E+00 |
| ENST00000357118 | NRP2 | 99.61 | 2.64 | 0.94 | 2.82 | 4.86E-03 | 4.14E-01 | 14053.36 | -0.57 | 0.65 | -0.87 | 3.83E-01 | 1.00E+00 |
| ENST00000357785 | NRP2 | 125.73 | 4.23 | 1.23 | 3.43 | 5.98E-04 | 7.55E-02 | 1332.66 | -0.23 | 0.51 | -0.44 | 6.57E-01 | 1.00E+00 |
| ENST00000479431 | NTM | 9.12 | 6.74 | 3.03 | 2.22 | 2.61E-02 | 9.96E-01 | 2.45 | -1.67 | 1.32 | -1.26 | 2.08E-01 | NA |
| ENST00000376214 | NTRK2 | 10.04 | 20.96 | 3.03 | 6.92 | 4.59E-12 | 1.10E-09 | 64.95 | -0.87 | 1.79 | -0.48 | 6.29E-01 | 1.00E+00 |
| ENST00000395882 | NTRK2 | 11.17 | 5.87 | 2.42 | 2.42 | 1.54E-02 | 8.73E-01 | 81.69 | 1.41 | 1.98 | 0.71 | NA | NA |
| ENST00000394480 | NTRK3 | 7.37 | 2.35 | 0.75 | 3.15 | 1.65E-03 | 1.80E-01 | 156.74 | 1.97 | 0.62 | 3.18 | 1.47E-03 | 9.37E-02 |
| ENST00000536544 | NUMA1 | 8.15 | 20.67 | 3.03 | 6.82 | 9.04E-12 | 2.00E-09 | 7971.90 | 1.37 | 0.84 | 1.63 | 1.03E-01 | 8.99E-01 |
| ENST00000496921 | NUP214 | 1.12 | 3.72 | 1.74 | 2.13 | 3.28E-02 | 9.96E-01 | 217.93 | 0.14 | 0.31 | 0.46 | 6.46E-01 | 1.00E+00 |
| ENST00000414849 | NUSAP1 | 11.16 | 2.19 | 0.99 | 2.21 | 2.70E-02 | 9.96E-01 | 120.80 | -0.03 | 0.45 | -0.07 | 9.46E-01 | 1.00E+00 |
| ENST00000514576 | OCIAD2 | 17.04 | 3.01 | 1.32 | 2.28 | 2.24E-02 | 9.96E-01 | 7993.00 | -0.21 | 0.27 | -0.77 | 4.42E-01 | 1.00E+00 |
| ENST00000449767 | OGDH | 2.80 | 5.03 | 2.39 | 2.10 | 3.53E-02 | 9.96E-01 | 287.03 | 0.68 | 0.86 | 0.79 | 4.29E-01 | 1.00E+00 |
| ENST00000374103 | OGDHL | 72.12 | 2.81 | 1.00 | 2.82 | 4.86E-03 | 4.14E-01 | 1364.27 | 1.43 | 0.50 | 2.87 | 4.09E-03 | 1.80E-01 |
| ENST00000370469 | OGFR | 2.59 | 4.93 | 2.26 | 2.18 | 2.95E-02 | 9.96E-01 | 0.00 | NA | NA | NA | NA | NA |
| ENST00000378764 | OPTN | 6.07 | 6.16 | 2.27 | 2.71 | 6.71E-03 | 5.27E-01 | 42.67 | -2.38 | 3.74 | -0.64 | NA | NA |
| ENST00000257966 | OS9 | 19.03 | 7.80 | 3.03 | 2.58 | 9.96E-03 | 6.78E-01 | 893.45 | -0.69 | 0.83 | -0.84 | 4.03E-01 | 1.00E+00 |
| ENST00000546916 | OS9 | 14.64 | 2.43 | 0.95 | 2.55 | 1.09E-02 | 7.11E-01 | 3733.86 | -0.73 | 0.53 | -1.37 | 1.71E-01 | 9.83E-01 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000543004 | OTUB1 | 9.54 | 6.81 | 3.03 | 2.25 | 2.47E-02 | 9.96E-01 | 137.67 | 0.45 | 1.09 | 0.41 | 6.78E-01 | 1.00E+00 |
| ENST00000440381 | P4HA1 | 4.77 | 5.82 | 3.03 | 1.92 | 5.52E-02 | 9.96E-01 | 690.26 | -1.25 | 1.68 | -0.74 | 4.57E-01 | 1.00E+00 |
| ENST00000467086 | P4HB | 33.41 | 22.62 | 3.03 | 7.47 | 7.86E-14 | 7.68E-11 | 108.78 | 0.37 | 0.77 | 0.49 | 6.26E-01 | 1.00E+00 |
| ENST00000473021 | P4HB | 15.08 | 4.96 | 1.53 | 3.25 | 1.16E-03 | 1.34E-01 | 6541.36 | 0.71 | 1.29 | 0.56 | 5.78E-01 | 1.00E+00 |
| ENST00000484115 | P4HTM | 8.20 | 1.37 | 0.65 | 2.11 | 3.48E-02 | 9.96E-01 | 1505.28 | 0.14 | 0.37 | 0.38 | 7.03E-01 | 1.00E+00 |
| ENST00000517921 | PABPC1 | 11.98 | 5.79 | 3.02 | 1.91 | 5.57E-02 | 9.96E-01 | 45.21 | 0.32 | 0.51 | 0.63 | 5.28E-01 | 1.00E+00 |
| ENST00000522387 | PABPC1 | 7.91 | 20.63 | 3.03 | 6.81 | 9.97E-12 | 2.16E-09 | 12160.94 | -0.48 | 0.44 | -1.09 | 2.75E-01 | 1.00E+00 |
| ENST00000527224 | PACS1 | 6.73 | 6.27 | 3.03 | 2.07 | 3.87E-02 | 9.96E-01 | 398.39 | 0.14 | 0.74 | 0.19 | 8.48E-01 | 1.00E+00 |
| ENST00000551359 | PAN2 | 10.36 | 2.98 | 1.20 | 2.49 | 1.29E-02 | 7.85E-01 | 61.07 | 0.30 | 2.21 | 0.14 | 8.91E-01 | 1.00E+00 |
| ENST00000544292 | PARD3 | 3.76 | 3.33 | 1.75 | 1.90 | 5.68E-02 | 9.96E-01 | 70.12 | -0.33 | 0.77 | -0.43 | 6.66E-01 | 1.00E+00 |
| ENST00000338639 | PARK7 | 17.45 | 21.73 | 3.03 | 7.17 | 7.25E-13 | 3.33E-10 | 4987.89 | -0.64 | 0.45 | -1.41 | 1.60E-01 | 9.74E-01 |
| ENST00000437198 | PARN | 6.79 | 6.32 | 1.61 | 3.92 | 8.90E-05 | 1.32E-02 | 3183.66 | -0.08 | 0.31 | -0.27 | 7.84E-01 | 1.00E+00 |
| ENST00000417220 | PARP3 | 1.92 | 4.51 | 2.31 | 1.95 | 5.11E-02 | 9.96E-01 | 1161.51 | -0.86 | 1.94 | -0.44 | 6.56E-01 | 1.00E+00 |
| ENST00000489652 | PARP9 | 7.52 | 6.47 | 3.03 | 2.13 | 3.28E-02 | 9.96E-01 | 162.40 | 0.35 | 0.43 | 0.81 | 4.15E-01 | 1.00E+00 |
| ENST00000468777 | PCCB | 6.58 | 20.37 | 3.03 | 6.72 | 1.82E-11 | 3.61E-09 | 52.72 | 0.55 | 2.54 | 0.22 | 8.30E-01 | 1.00E+00 |
| ENST00000264360 | PCDH10 | 17.92 | 0.97 | 0.39 | 2.47 | 1.34E-02 | 7.98E-01 | 1803.79 | 0.65 | 0.46 | 1.43 | 1.52E-01 | 9.68E-01 |
| ENST00000484979 | PCDH17 | 29.43 | 0.89 | 0.36 | 2.48 | 1.30E-02 | 7.89E-01 | 167.14 | -0.48 | 0.75 | -0.64 | 5.22E-01 | 1.00E+00 |
| ENST00000361762 | PCDH7 | 9.10 | 1.09 | 0.50 | 2.19 | 2.89E-02 | 9.96E-01 | 528.20 | 1.24 | 0.59 | 2.09 | 3.62E-02 | 6.14E-01 |
| ENST00000239446 | PCDHB10 | 6.34 | 1.28 | 0.67 | 1.92 | 5.47E-02 | 9.96E-01 | 881.89 | 0.77 | 0.36 | 2.15 | 3.16E-02 | 5.80E-01 |
| ENST00000194155 | PCDHB2 | 13.19 | 0.85 | 0.44 | 1.92 | 5.50E-02 | 9.96E-01 | 1000.35 | 0.58 | 0.32 | 1.82 | 6.90E-02 | 7.97E-01 |
| ENST00000522605 | PCDHGB2 | 22.49 | 0.65 | 0.34 | 1.92 | 5.48E-02 | 9.96E-01 | 884.28 | 0.89 | 0.45 | 1.98 | 4.75E-02 | 6.89E-01 |
| ENST00000337344 | PCID2 | 5.56 | 6.03 | 3.03 | 1.99 | 4.67E-02 | 9.96E-01 | 505.07 | 6.64 | 1.95 | 3.40 | NA | NA |
| ENST00000379160 | PCNA | 192.68 | 11.15 | 2.01 | 5.54 | 3.05E-08 | 5.53E-06 | 2333.28 | -1.51 | 0.70 | -2.14 | 3.25E-02 | 5.85E-01 |
| ENST00000218230 | PCSK1N | 4.11 | 5.61 | 1.18 | 4.75 | 2.00E-06 | 3.38E-04 | 768.04 | 1.90 | 0.54 | 3.52 | 4.31E-04 | 3.97E-02 |
| ENST00000497056 | PDCD10 | 9.68 | 6.83 | 3.03 | 2.25 | 2.42E-02 | 9.96E-01 | 307.24 | -0.06 | 0.46 | -0.13 | 8.99E-01 | 1.00E+00 |
| ENST00000462577 | PDCD4 | 7.75 | 20.58 | 3.03 | 6.79 | 1.13E-11 | 2.37E-09 | 8.72 | 0.66 | 1.01 | 0.65 | 5.18E-01 | 1.00E+00 |
| ENST00000359062 | PDE3A | 12.58 | 1.71 | 0.49 | 3.51 | 4.55E-04 | 5.89E-02 | 1062.66 | 1.51 | 0.54 | 2.78 | 5.52E-03 | 2.17E-01 |
| ENST00000288050 | PDPR | 4.09 | 2.12 | 1.11 | 1.91 | 5.57E-02 | 9.96E-01 | 1676.43 | -0.94 | 2.34 | -0.40 | 6.87E-01 | 1.00E+00 |
| ENST00000438447 | PDZD2 | 5.40 | 1.43 | 0.70 | 2.05 | 4.02E-02 | 9.96E-01 | 53.04 | -8.41 | 3.18 | -2.64 | NA | NA |
| ENST00000550964 | PFDN5 | 4.25 | 2.98 | 1.25 | 2.39 | 1.70E-02 | 9.21E-01 | 1.16 | 0.52 | 1.60 | 0.32 | 7.47E-01 | NA |
| ENST00000421751 | PFKP | 5.86 | 20.21 | 3.03 | 6.67 | 2.63E-11 | 5.09E-09 | 189.50 | 0.90 | 0.56 | 1.61 | 1.08E-01 | 9.10E-01 |
| ENST00000497148 | PFN2 | 7.54 | 6.47 | 3.03 | 2.13 | 3.28E-02 | 9.96E-01 | 4.93 | 0.24 | 0.87 | 0.28 | 7.80E-01 | 1.00E+00 |
| ENST00000359246 | PHF2 | 10.56 | 0.92 | 0.49 | 1.89 | 5.84E-02 | 9.96E-01 | 3746.03 | -0.74 | 0.90 | -0.82 | 4.12E-01 | 1.00E+00 |
| ENST00000299167 | PHKB | 4.88 | 1.37 | 0.72 | 1.90 | 5.70E-02 | 9.96E-01 | 413.10 | -0.92 | 1.70 | -0.54 | 5.86E-01 | 1.00E+00 |
| ENST00000568171 | PHKB | 2.10 | 4.62 | 2.33 | 1.98 | 4.73E-02 | 9.96E-01 | 127.99 | 0.80 | 0.68 | 1.17 | 2.43E-01 | 1.00E+00 |
| ENST00000400316 | PHLPP1 | 16.91 | 2.09 | 0.74 | 2.83 | 4.67E-03 | 4.04E-01 | 43.24 | 0.17 | 0.84 | 0.20 | 8.40E-01 | 1.00E+00 |
| ENST00000393045 | PIAS3 | 6.57 | 1.77 | 0.89 | 1.99 | 4.70E-02 | 9.96E-01 | 196.21 | 1.10 | 1.69 | 0.65 | 5.14E-01 | 1.00E+00 |
| ENST00000333590 | PIGA | 3.19 | 2.85 | 1.37 | 2.08 | 3.78E-02 | 9.96E-01 | 460.77 | -0.27 | 0.92 | -0.29 | 7.68E-01 | 1.00E+00 |
| ENST00000452740 | PIGU | 5.87 | 4.49 | 2.09 | 2.15 | 3.17E-02 | 9.96E-01 | 249.82 | -1.63 | 1.40 | -1.17 | 2.44E-01 | 1.00E+00 |
| ENST00000482866 | PION | 2.11 | 4.60 | 1.44 | 3.20 | 1.38E-03 | 1.56E-01 | 1344.94 | -0.13 | 0.59 | -0.22 | 8.25E-01 | 1.00E+00 |
| ENST00000460723 | PISD | 2.30 | 4.76 | 2.51 | 1.90 | 5.77E-02 | 9.96E-01 | 12.07 | 0.80 | 0.69 | 1.16 | 2.48E-01 | 1.00E+00 |
| ENST00000539476 | PITPNA | 6.91 | 6.34 | 3.03 | 2.09 | 3.65E-02 | 9.96E-01 | 82.65 | 2.45 | 1.73 | 1.42 | NA | NA |
| ENST00000566809 | PKM2 | 8.88 | 6.76 | 3.03 | 2.23 | 2.57E-02 | 9.96E-01 | 102.20 | 0.23 | 0.62 | 0.37 | 7.14E-01 | 1.00E+00 |
| ENST00000568743 | PKM2 | 201.51 | 3.25 | 0.98 | 3.32 | 8.88E-04 | 1.07E-01 | 15022.59 | -0.91 | 1.39 | -0.66 | 5.12E-01 | 1.00E+00 |
| ENST00000569857 | PKM2 | 510.64 | 4.85 | 1.79 | 2.71 | 6.69E-03 | 5.27E-01 | 6226.97 | -0.50 | 0.55 | -0.91 | 3.64E-01 | 1.00E+00 |
| ENST00000283243 | PLA2R1 | 3.46 | 4.10 | 1.23 | 3.33 | 8.59E-04 | 1.04E-01 | 1589.84 | 0.48 | 0.98 | 0.49 | 6.26E-01 | 1.00E+00 |
| ENST00000270189 | PLAT | 11.60 | 7.09 | 3.03 | 2.34 | 1.92E-02 | 9.86E-01 | 245.17 | -1.36 | 1.53 | -0.88 | 3.76E-01 | 1.00E+00 |
| ENST00000540511 | PLCD3 | 9.23 | 2.33 | 0.69 | 3.35 | 7.98E-04 | 9.78E-02 | 6685.69 | 0.32 | 0.27 | 1.18 | 2.38E-01 | 1.00E+00 |
| ENST00000465571 | PLCG1 | 1.52 | 4.20 | 1.75 | 2.40 | 1.65E-02 | 9.04E-01 | 1.16 | 0.52 | 1.60 | 0.32 | 7.47E-01 | NA |
| ENST00000538982 | PLEKHB2 | 8.69 | 20.76 | 3.03 | 6.85 | 7.36E-12 | 1.66E-09 | 60.65 | -1.09 | 2.23 | -0.49 | 6.25E-01 | 1.00E+00 |
| ENST00000358517 | PLEKHG1 | 5.86 | 6.10 | 3.03 | 2.01 | 4.42E-02 | 9.96E-01 | 6077.05 | 0.06 | 0.75 | 0.08 | 9.34E-01 | 1.00E+00 |
| ENST00000543070 | PLS3 | 58.40 | 21.99 | 3.03 | 7.27 | 3.73E-13 | 2.21E-10 | 118.56 | 0.01 | 1.15 | 0.01 | 9.92E-01 | 1.00E+00 |
| ENST00000449103 | PLXNB2 | 131.75 | 0.57 | 0.29 | 1.95 | 5.08E-02 | 9.96E-01 | 4625.66 | 1.19 | 0.59 | 2.02 | 4.39E-02 | 6.67E-01 |
| ENST00000563500 | PML | 1.87 | 3.82 | 1.28 | 2.99 | 2.81E-03 | 2.75E-01 | 323.81 | -0.03 | 0.35 | -0.09 | 9.32E-01 | 1.00E+00 |
| ENST00000456433 | PMPCB | 5.11 | 5.91 | 3.03 | 1.95 | 5.12E-02 | 9.96E-01 | 88.48 | -0.11 | 0.47 | -0.24 | 8.11E-01 | 1.00E+00 |
| ENST00000498530 | PMPCB | 15.72 | 21.58 | 3.03 | 7.13 | 1.03E-12 | 4.07E-10 | 257.91 | -0.47 | 0.90 | -0.52 | 6.04E-01 | 1.00E+00 |
| ENST00000525250 | PNPLA2 | 2.17 | 4.07 | 1.91 | 2.13 | 3.29E-02 | 9.96E-01 | 466.65 | -0.01 | 0.44 | -0.02 | 9.86E-01 | 1.00E+00 |
| ENST00000461589 | POLR3F | 2.05 | 2.79 | 1.25 | 2.23 | 2.56E-02 | 9.96E-01 | 23.37 | 0.24 | 0.92 | 0.26 | 7.93E-01 | 1.00E+00 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000460403 | POMP | 17.31 | 7.67 | 3.03 | 2.53 | 1.13E-02 | 7.34E-01 | 282.11 | -0.34 | 0.74 | -0.46 | 6.47E-01 | 1.00E+00 |
| ENST00000264867 | PPARGC1A | 29.92 | 0.98 | 0.46 | 2.12 | 3.40E-02 | 9.96E-01 | 4041.46 | 0.68 | 0.29 | 2.34 | 1.92E-02 | 4.46E-01 |
| ENST00000395580 | PPHLN1 | 6.47 | 6.25 | 2.45 | 2.55 | 1.08E-02 | 7.06E-01 | 1017.11 | -0.37 | 1.92 | -0.19 | NA | NA |
| ENST00000561048 | PPIB | 22.80 | 2.68 | 1.02 | 2.63 | 8.46E-03 | 6.09E-01 | 441.63 | -0.02 | 0.43 | -0.05 | 9.64E-01 | 1.00E+00 |
| ENST00000532279 | PPP1CA | 3.14 | 5.21 | 1.89 | 2.76 | 5.83E-03 | 4.73E-01 | 163.28 | -1.42 | 1.27 | -1.12 | 2.65E-01 | 1.00E+00 |
| ENST00000422370 | PPP1R37 | 2.57 | 4.90 | 1.97 | 2.49 | 1.27E-02 | 7.79E-01 | 309.00 | -0.18 | 0.40 | -0.45 | 6.54E-01 | 1.00E+00 |
| ENST00000423280 | PPP1R7 | 4.10 | 4.37 | 2.30 | 1.90 | 5.73E-02 | 9.96E-01 | 424.21 | -0.47 | 1.97 | -0.24 | NA | NA |
| ENST00000394413 | PPP2R2B | 13.77 | 1.10 | 0.51 | 2.17 | 2.98E-02 | 9.96E-01 | 488.40 | 0.98 | 1.04 | 0.94 | 3.46E-01 | 1.00E+00 |
| ENST00000563732 | PPP4C | 4.99 | 5.87 | 3.03 | 1.94 | 5.29E-02 | 9.96E-01 | 71.86 | -0.05 | 0.99 | -0.05 | 9.62E-01 | 1.00E+00 |
| ENST00000373547 | PPP6C | 11.47 | 3.63 | 1.65 | 2.20 | 2.78E-02 | 9.96E-01 | 3551.42 | 0.10 | 0.47 | 0.21 | 8.34E-01 | 1.00E+00 |
| ENST00000262746 | PRDX1 | 52.70 | 6.99 | 1.91 | 3.65 | 2.63E-04 | 3.58E-02 | 45.23 | -2.40 | 0.94 | -2.54 | 1.12E-02 | 3.30E-01 |
| ENST00000372079 | PRDX1 | 4.47 | 5.72 | 3.03 | 1.89 | 5.93E-02 | 9.96E-01 | 34.90 | 0.50 | 0.69 | 0.73 | 4.65E-01 | 1.00E+00 |
| ENST00000334482 | PRDX2 | 6.97 | 5.76 | 2.05 | 2.81 | 4.94E-03 | 4.16E-01 | 322.47 | -0.49 | 0.50 | -0.98 | 3.29E-01 | 1.00E+00 |
| ENST00000550448 | PRKAG1 | 5.10 | 5.90 | 3.03 | 1.95 | 5.16E-02 | 9.96E-01 | 63.60 | 0.40 | 0.49 | 0.82 | 4.14E-01 | 1.00E+00 |
| ENST00000392711 | PRKAR1A | 16.36 | 21.64 | 3.03 | 7.14 | 9.04E-13 | 3.80E-10 | 324.72 | -0.76 | 1.62 | -0.47 | 6.39E-01 | 1.00E+00 |
| ENST00000265563 | PRKAR2A | 16.17 | 2.07 | 0.82 | 2.51 | 1.21E-02 | 7.61E-01 | 3211.51 | -0.29 | 0.31 | -0.92 | 3.55E-01 | 1.00E+00 |
| ENST00000466404 | PRPF31 | 2.70 | 3.73 | 1.63 | 2.29 | 2.18E-02 | 9.96E-01 | 175.72 | 1.88 | 0.76 | 2.47 | 1.37E-02 | 3.70E-01 |
| ENST00000376033 | PRRC2A | 7.23 | 6.41 | 3.03 | 2.11 | 3.46E-02 | 9.96E-01 | 5701.01 | 2.76 | 0.99 | 2.78 | 5.46E-03 | 2.16E-01 |
| ENST00000428286 | PRUNE2 | 2.69 | 3.76 | 1.25 | 3.01 | 2.65E-03 | 2.65E-01 | 36.05 | 2.46 | 1.69 | 1.46 | 1.45E-01 | 9.61E-01 |
| ENST00000394934 | PSAP | 111.24 | 6.90 | 2.92 | 2.36 | 1.82E-02 | 9.55E-01 | 90746.35 | -0.15 | 0.32 | -0.46 | 6.48E-01 | 1.00E+00 |
| ENST00000531156 | PSMA1 | 5.69 | 6.06 | 3.03 | 2.00 | 4.58E-02 | 9.96E-01 | 57.00 | -0.35 | 0.50 | -0.71 | 4.78E-01 | 1.00E+00 |
| ENST00000554812 | PSMA3 | 6.12 | 6.17 | 3.03 | 2.03 | 4.19E-02 | 9.96E-01 | 1170.48 | 0.32 | 0.60 | 0.53 | 5.97E-01 | 1.00E+00 |
| ENST00000531653 | PSMC3 | 7.39 | 5.24 | 2.75 | 1.90 | 5.71E-02 | 9.96E-01 | 78.32 | -0.19 | 0.33 | -0.57 | 5.67E-01 | 1.00E+00 |
| ENST00000526783 | PSMD13 | 8.38 | 20.71 | 3.03 | 6.83 | 8.29E-12 | 1.86E-09 | 688.97 | -0.75 | 0.48 | -1.55 | 1.21E-01 | 9.33E-01 |
| ENST00000476461 | PSMD2 | 6.05 | 2.32 | 1.04 | 2.22 | 2.61E-02 | 9.96E-01 | 312.15 | -0.20 | 0.70 | -0.28 | 7.79E-01 | 1.00E+00 |
| ENST00000561059 | PSME1 | 8.62 | 4.41 | 2.31 | 1.91 | 5.65E-02 | 9.96E-01 | 329.53 | 0.16 | 0.37 | 0.43 | 6.66E-01 | 1.00E+00 |
| ENST00000409746 | PSTPIP2 | 4.57 | 1.39 | 0.64 | 2.17 | 3.04E-02 | 9.96E-01 | 701.40 | 1.78 | 0.31 | 5.68 | 1.35E-08 | 6.80E-06 |
| ENST00000377200 | PTAR1 | 9.48 | 2.30 | 1.00 | 2.31 | 2.10E-02 | 9.96E-01 | 6338.96 | 0.46 | 0.63 | 0.73 | 4.67E-01 | 1.00E+00 |
| ENST00000236228 | PTBP2 | 5.15 | 3.01 | 1.20 | 2.50 | 1.25E-02 | 7.73E-01 | 106.61 | -1.37 | 1.49 | -0.92 | 3.57E-01 | 1.00E+00 |
| ENST00000393083 | PTN | 8.55 | 5.73 | 3.03 | 1.89 | 5.87E-02 | 9.96E-01 | 4219.44 | -0.19 | 0.27 | -0.70 | 4.85E-01 | 1.00E+00 |
| ENST00000371621 | PTPN1 | 93.11 | 0.81 | 0.23 | 3.58 | 3.40E-04 | 4.54E-02 | 3954.80 | 1.36 | 1.04 | 1.30 | 1.93E-01 | 9.99E-01 |
| ENST00000568108 | PTPN9 | 3.11 | 5.20 | 2.29 | 2.27 | 2.32E-02 | 9.96E-01 | 11.94 | 0.57 | 0.82 | 0.69 | 4.87E-01 | 1.00E+00 |
| ENST00000355005 | PTPRS | 3.73 | 5.46 | 2.23 | 2.45 | 1.44E-02 | 8.34E-01 | 6.80 | 0.09 | 0.77 | 0.12 | 9.05E-01 | 1.00E+00 |
| ENST00000511609 | QDPR | 2.35 | 2.23 | 1.10 | 2.02 | 4.37E-02 | 9.96E-01 | 7.01 | 0.62 | 0.96 | 0.65 | 5.17E-01 | 1.00E+00 |
| ENST00000498392 | QRICH1 | 2.47 | 3.60 | 1.87 | 1.92 | 5.43E-02 | 9.96E-01 | 86.96 | -0.25 | 0.72 | -0.34 | 7.33E-01 | 1.00E+00 |
| ENST00000415040 | RAB34 | 4.64 | 5.78 | 3.03 | 1.90 | 5.70E-02 | 9.96E-01 | 1606.86 | -0.64 | 0.58 | -1.12 | 2.64E-01 | 1.00E+00 |
| ENST00000485090 | RABGAP1 | 8.59 | 6.66 | 3.03 | 2.20 | 2.80E-02 | 9.96E-01 | 3.60 | 1.01 | 1.20 | 0.84 | 4.00E-01 | 1.00E+00 |
| ENST00000552310 | RACGAP1 | 1.57 | 4.23 | 2.24 | 1.89 | 5.93E-02 | 9.96E-01 | 9.18 | 0.35 | 1.76 | 0.20 | 8.40E-01 | 1.00E+00 |
| ENST00000435265 | RANBP1 | 7.52 | 4.81 | 2.01 | 2.39 | 1.66E-02 | 9.09E-01 | 700.83 | -0.84 | 0.41 | -2.04 | 4.11E-02 | 6.50E-01 |
| ENST00000503028 | RBM14-RBM4 | 4.93 | 5.86 | 3.03 | 1.93 | 5.33E-02 | 9.96E-01 | 265.47 | 0.77 | 0.52 | 1.49 | 1.37E-01 | 9.50E-01 |
| ENST00000533898 | RCN1 | 7.61 | 6.48 | 2.40 | 2.70 | 6.90E-03 | 5.34E-01 | 954.24 | -1.03 | 0.55 | -1.87 | 6.09E-02 | 7.65E-01 |
| ENST00000428130 | RDH11 | 6.77 | 5.72 | 2.76 | 2.07 | 3.86E-02 | 9.96E-01 | 6.24 | -1.25 | 1.02 | -1.23 | 2.20E-01 | 1.00E+00 |
| ENST00000553578 | RDH11 | 23.91 | 8.13 | 2.71 | 3.00 | 2.66E-03 | 2.66E-01 | 1439.60 | 1.08 | 0.95 | 1.13 | 2.58E-01 | 1.00E+00 |
| ENST00000554731 | RDH11 | 23.56 | 8.11 | 3.03 | 2.68 | 7.36E-03 | 5.56E-01 | 15.07 | -0.10 | 0.65 | -0.16 | 8.75E-01 | 1.00E+00 |
| ENST00000557331 | RDH11 | 9.63 | 6.82 | 3.03 | 2.25 | 2.43E-02 | 9.96E-01 | 11.73 | -0.21 | 1.08 | -0.20 | 8.44E-01 | 1.00E+00 |
| ENST00000540492 | REXO2 | 7.56 | 1.40 | 0.65 | 2.17 | 3.03E-02 | 9.96E-01 | 406.65 | 0.16 | 0.31 | 0.54 | 5.92E-01 | 1.00E+00 |
| ENST00000304685 | RGL1 | 15.66 | 1.64 | 0.78 | 2.09 | 3.64E-02 | 9.96E-01 | 173.97 | 1.85 | 1.36 | 1.36 | 1.74E-01 | 9.85E-01 |
| ENST00000473074 | RHOC | 10.12 | 6.89 | 3.03 | 2.28 | 2.29E-02 | 9.96E-01 | 1629.06 | -0.95 | 0.70 | -1.37 | 1.72E-01 | 9.84E-01 |
| ENST00000544458 | RHPN2 | 2.43 | 4.84 | 2.29 | 2.11 | 3.44E-02 | 9.96E-01 | 219.24 | 0.32 | 1.97 | 0.16 | 8.71E-01 | 1.00E+00 |
| ENST00000368323 | RIT1 | 2.31 | 4.76 | 2.40 | 1.98 | 4.75E-02 | 9.96E-01 | 2791.63 | 0.19 | 0.24 | 0.82 | 4.11E-01 | 1.00E+00 |
| ENST00000552176 | RNASEK | 12.05 | 1.59 | 0.76 | 2.10 | 3.59E-02 | 9.96E-01 | 580.87 | -0.52 | 0.45 | -1.14 | 2.53E-01 | 1.00E+00 |
| ENST00000389100 | RNF180 | 0.90 | 3.42 | 1.73 | 1.98 | 4.78E-02 | 9.96E-01 | 65.26 | 2.53 | 1.02 | 2.49 | 1.26E-02 | 3.55E-01 |
| ENST00000311413 | RNF26 | 32.23 | 1.12 | 0.54 | 2.08 | 3.76E-02 | 9.96E-01 | 6884.85 | -0.45 | 0.31 | -1.47 | 1.42E-01 | 9.56E-01 |
| ENST00000354420 | RNH1 | 8.89 | 4.35 | 1.55 | 2.81 | 4.89E-03 | 4.15E-01 | 74.32 | 0.97 | 1.22 | 0.80 | 4.24E-01 | 1.00E+00 |
| ENST00000524780 | RNH1 | 15.50 | 2.74 | 1.36 | 2.01 | 4.42E-02 | 9.96E-01 | 27.52 | 0.10 | 1.25 | 0.08 | 9.36E-01 | 1.00E+00 |
| ENST00000563030 | ROGDI | 2.85 | 4.44 | 2.01 | 2.21 | 2.72E-02 | 9.96E-01 | 1546.74 | -0.30 | 0.35 | -0.85 | 3.95E-01 | 1.00E+00 |
| ENST00000520819 | RP11-11N9.4.1 | 10.91 | 1.62 | 0.69 | 2.36 | 1.84E-02 | 9.62E-01 | 2.94 | 0.20 | 1.52 | 0.13 | 8.97E-01 | 1.00E+00 |
| ENST00000463721 | RP11-155D18.11.1 | 5.71 | 6.08 | 2.27 | 2.68 | 7.42E-03 | 5.58E-01 | 101.71 | -0.06 | 0.77 | -0.07 | 9.42E-01 | 1.00E+00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000555399 | RP11-566K11.2.1 | 12.68 | 21.28 | 3.03 | 7.02 | 2.15E-12 | 6.41E-10 | 90.10 | -0.80 | 1.50 | -0.54 | 5.91E-01 | 1.00E+00 |
| ENST00000547717 | RP11-793H13.8.1 | 5.04 | 4.70 | 2.07 | 2.27 | 2.30E-02 | 9.96E-01 | 4221.59 | -0.32 | 0.36 | -0.89 | 3.74E-01 | 1.00E+00 |
| ENST00000322203 | RPL10A | 8.84 | 6.70 | 2.56 | 2.61 | 9.01E-03 | 6.31E-01 | 5169.34 | -0.85 | 0.49 | -1.72 | 8.60E-02 | 8.56E-01 |
| ENST00000482370 | RPL11 | 6.07 | 6.16 | 3.03 | 2.03 | 4.23E-02 | 9.96E-01 | 5622.45 | -0.78 | 0.66 | -1.18 | 2.39E-01 | 1.00E+00 |
| ENST00000344063 | RPL28 | 33.64 | 22.64 | 3.03 | 7.48 | 7.49E-14 | 7.51E-11 | 15004.86 | -0.76 | 0.64 | -1.19 | 2.36E-01 | 1.00E+00 |
| ENST00000560881 | RPL28 | 7.61 | 6.48 | 3.03 | 2.14 | 3.25E-02 | 9.96E-01 | 7995.96 | -0.35 | 0.34 | -1.03 | 3.03E-01 | 1.00E+00 |
| ENST00000471290 | RPL3 | 5.10 | 3.37 | 1.45 | 2.32 | 2.05E-02 | 9.96E-01 | 359.25 | -0.80 | 0.51 | -1.58 | 1.15E-01 | 9.23E-01 |
| ENST00000474640 | RPL35A | 15.03 | 1.92 | 0.86 | 2.23 | 2.58E-02 | 9.96E-01 | 386.84 | -0.66 | 0.56 | -1.18 | 2.37E-01 | 1.00E+00 |
| ENST00000311111 | RPL38 | 14.42 | 4.61 | 1.93 | 2.39 | 1.68E-02 | 9.16E-01 | 14962.48 | -0.72 | 0.52 | -1.39 | 1.64E-01 | 9.77E-01 |
| ENST00000552461 | RPLP0 | 5.99 | 2.55 | 1.00 | 2.55 | 1.08E-02 | 7.06E-01 | 893.47 | -0.42 | 0.37 | -1.11 | 2.65E-01 | 1.00E+00 |
| ENST00000524867 | RPLP2 | 19.00 | 2.38 | 0.95 | 2.50 | 1.23E-02 | 7.70E-01 | 168.62 | -0.54 | 0.48 | -1.12 | 2.62E-01 | 1.00E+00 |
| ENST00000343986 | RPS21 | 14.97 | 21.51 | 3.03 | 7.10 | 1.22E-12 | 4.67E-10 | 33362.38 | -0.32 | 0.49 | -0.65 | 5.14E-01 | 1.00E+00 |
| ENST00000470475 | RPS8 | 6.60 | 6.28 | 3.03 | 2.07 | 3.83E-02 | 9.96E-01 | 1525.90 | -0.45 | 0.45 | -0.99 | 3.24E-01 | 1.00E+00 |
| ENST00000369415 | RRAGD | 3.27 | 5.27 | 1.69 | 3.11 | 1.86E-03 | 1.99E-01 | 4203.28 | 0.38 | 0.57 | 0.67 | 5.00E-01 | 1.00E+00 |
| ENST00000474701 | RRM2 | 31.26 | 20.54 | 3.03 | 6.79 | 1.16E-11 | 2.43E-09 | 609.16 | -0.55 | 0.82 | -0.67 | 5.02E-01 | 1.00E+00 |
| ENST00000267484 | RTN1 | 10.24 | 1.96 | 0.66 | 2.97 | 3.02E-03 | 2.89E-01 | 887.50 | 1.71 | 0.62 | 2.75 | 6.01E-03 | 2.29E-01 |
| ENST00000357732 | RTN4 | 11.73 | 7.11 | 3.03 | 2.35 | 1.90E-02 | 9.78E-01 | 1413.75 | 0.72 | 0.49 | 1.47 | 1.43E-01 | 9.57E-01 |
| ENST00000394609 | RTN4 | 15.81 | 7.54 | 3.03 | 2.49 | 1.28E-02 | 7.83E-01 | 19861.46 | 1.78 | 1.31 | 1.36 | NA | NA |
| ENST00000417360 | RUVBL1 | 5.43 | 20.11 | 3.03 | 6.63 | 3.37E-11 | 6.43E-09 | 3262.55 | -0.61 | 1.90 | -0.32 | 7.47E-01 | 1.00E+00 |
| ENST00000552207 | SARNP | 12.25 | 7.17 | 3.03 | 2.37 | 1.80E-02 | 9.49E-01 | 211.44 | -0.20 | 0.27 | -0.75 | 4.54E-01 | 1.00E+00 |
| ENST00000477544 | SARS | 10.07 | 6.89 | 3.03 | 2.27 | 2.31E-02 | 9.96E-01 | 63.75 | -0.80 | 1.29 | -0.62 | 5.39E-01 | 1.00E+00 |
| ENST00000490953 | SBDS | 2.93 | 4.47 | 1.69 | 2.65 | 8.12E-03 | 5.96E-01 | 60.82 | 0.08 | 0.95 | 0.08 | 9.33E-01 | 1.00E+00 |
| ENST00000268099 | SCAMP2 | 5.40 | 5.99 | 3.03 | 1.98 | 4.82E-02 | 9.96E-01 | 848.03 | -0.84 | 0.86 | -0.97 | 3.31E-01 | 1.00E+00 |
| ENST00000405555 | SCARF2 | 3.33 | 2.09 | 0.91 | 2.30 | 2.13E-02 | 9.96E-01 | 264.41 | 7.11 | 2.28 | 3.11 | NA | NA |
| ENST00000459255 | SCARNA10 | 2632.84 | 0.53 | 0.23 | 2.29 | 2.22E-02 | 9.96E-01 | 2.12 | 1.76 | 1.94 | 0.91 | 3.63E-01 | NA |
| ENST00000458748 | SCARNA2 | 1052.05 | 1.03 | 0.50 | 2.05 | 4.02E-02 | 9.96E-01 | 7.89 | 1.64 | 1.56 | 1.05 | 2.91E-01 | 1.00E+00 |
| ENST00000319540 | SCD5 | 130.17 | 1.02 | 0.22 | 4.71 | 2.44E-06 | 4.10E-04 | 11692.83 | 0.74 | 0.32 | 2.27 | 2.30E-02 | 4.91E-01 |
| ENST00000356994 | SCRIB | 12.56 | 0.93 | 0.48 | 1.93 | 5.34E-02 | 9.96E-01 | 833.73 | -0.14 | 0.44 | -0.33 | 7.41E-01 | 1.00E+00 |
| ENST00000409497 | SCRN1 | 13.22 | 21.34 | 3.03 | 7.05 | 1.85E-12 | 5.87E-10 | 65.90 | 2.50 | 1.30 | 1.93 | 5.41E-02 | 7.27E-01 |
| ENST00000520168 | SDCBP | 9.43 | 20.87 | 3.03 | 6.89 | 5.71E-12 | 1.35E-09 | 90.70 | 0.02 | 1.45 | 0.01 | 9.88E-01 | 1.00E+00 |
| ENST00000375549 | SDHD | 3.73 | 5.44 | 1.86 | 2.93 | 3.36E-03 | 3.15E-01 | 7332.72 | 0.15 | 0.39 | 0.40 | 6.90E-01 | 1.00E+00 |
| ENST00000528048 | SDHD | 5.88 | 6.11 | 3.03 | 2.02 | 4.37E-02 | 9.96E-01 | 160.27 | -0.96 | 0.85 | -1.13 | 2.58E-01 | 1.00E+00 |
| ENST00000404826 | SDK1 | 24.35 | 1.12 | 0.35 | 3.18 | 1.49E-03 | 1.67E-01 | 1909.86 | 0.37 | 0.80 | 0.47 | 6.41E-01 | 1.00E+00 |
| ENST00000392476 | SEC14L1 | 4.87 | 5.84 | 3.03 | 1.93 | 5.41E-02 | 9.96E-01 | 568.68 | 0.55 | 1.81 | 0.30 | 7.61E-01 | 1.00E+00 |
| ENST00000395310 | SEC31A | 8.48 | 6.64 | 3.03 | 2.19 | 2.84E-02 | 9.96E-01 | 260.41 | 1.00 | 0.70 | 1.43 | 1.53E-01 | 9.70E-01 |
| ENST00000397613 | SEPT9 | 11.67 | 21.17 | 3.03 | 6.99 | 2.80E-12 | 7.82E-10 | 154.14 | -0.43 | 2.04 | -0.21 | 8.34E-01 | 1.00E+00 |
| ENST00000380739 | SERPINB1 | 22.12 | 0.78 | 0.41 | 1.92 | 5.42E-02 | 9.96E-01 | 1535.96 | 0.05 | 0.28 | 0.17 | 8.64E-01 | 1.00E+00 |
| ENST00000409840 | SERPINE2 | 20.27 | 21.94 | 3.03 | 7.24 | 4.33E-13 | 2.39E-10 | 0.00 | NA | NA | NA | NA | NA |
| ENST00000478966 | SERPINE2 | 25.32 | 22.14 | 3.03 | 7.31 | 2.62E-13 | 1.76E-10 | 74.90 | 0.74 | 0.49 | 1.49 | 1.37E-01 | 9.50E-01 |
| ENST00000525876 | SERPINH1 | 55.44 | 0.51 | 0.27 | 1.91 | 5.59E-02 | 9.96E-01 | 168.57 | -2.35 | 1.27 | -1.85 | NA | NA |
| ENST00000533595 | SF3B2 | 4.69 | 5.77 | 2.02 | 2.86 | 4.21E-03 | 3.73E-01 | 76.51 | 0.25 | 0.49 | 0.52 | 6.03E-01 | 1.00E+00 |
| ENST00000507823 | SFXN1 | 12.88 | 7.24 | 2.43 | 2.98 | 2.86E-03 | 2.79E-01 | 290.65 | 0.01 | 1.13 | 0.00 | 9.96E-01 | 1.00E+00 |
| ENST00000265735 | SGCE | 9.03 | 6.73 | 3.03 | 2.22 | 2.63E-02 | 9.96E-01 | 370.03 | -0.17 | 1.61 | -0.11 | 9.15E-01 | 1.00E+00 |
| ENST00000326317 | SGSH | 25.49 | 1.67 | 0.68 | 2.47 | 1.36E-02 | 8.03E-01 | 14.17 | 1.32 | 0.96 | 1.38 | 1.67E-01 | 9.80E-01 |
| ENST00000361989 | SHF | 43.88 | 1.36 | 0.43 | 3.13 | 1.72E-03 | 1.86E-01 | 8.82 | 0.59 | 1.06 | 0.56 | 5.76E-01 | 1.00E+00 |
| ENST00000379262 | SIRT5 | 4.48 | 3.03 | 1.30 | 2.33 | 1.97E-02 | 9.96E-01 | 756.22 | -0.15 | 0.33 | -0.47 | 6.39E-01 | 1.00E+00 |
| ENST00000442759 | SLAIN1 | 11.43 | 7.07 | 2.38 | 2.97 | 2.94E-03 | 2.85E-01 | 776.35 | 0.36 | 1.23 | 0.30 | 7.68E-01 | 1.00E+00 |
| ENST00000395348 | SLC16A9 | 9.74 | 1.28 | 0.50 | 2.55 | 1.08E-02 | 7.06E-01 | 2113.62 | 1.00 | 0.36 | 2.82 | 4.74E-03 | 1.98E-01 |
| ENST00000312221 | SLC22A18 | 10.14 | 6.89 | 3.03 | 2.28 | 2.29E-02 | 9.96E-01 | 615.00 | 0.44 | 1.08 | 0.40 | 6.86E-01 | 1.00E+00 |
| ENST00000463571 | SLC22A18 | 4.59 | 5.76 | 3.03 | 1.90 | 5.76E-02 | 9.96E-01 | 187.32 | -0.60 | 0.59 | -1.01 | 3.12E-01 | 1.00E+00 |
| ENST00000319017 | SLC25A20 | 3.70 | 5.45 | 1.66 | 3.28 | 1.06E-03 | 1.24E-01 | 155.86 | 0.40 | 0.90 | 0.45 | 6.53E-01 | 1.00E+00 |
| ENST00000536651 | SLC25A26 | 4.85 | 5.84 | 3.03 | 1.92 | 5.44E-02 | 9.96E-01 | 274.82 | 0.46 | 0.55 | 0.83 | 4.05E-01 | 1.00E+00 |
| ENST00000546766 | SLC25A3 | 62.94 | 5.52 | 2.30 | 2.40 | 1.63E-02 | 9.02E-01 | 24495.06 | -0.17 | 0.32 | -0.52 | 6.07E-01 | 1.00E+00 |
| ENST00000514629 | SLC25A36 | 1.03 | 3.57 | 1.85 | 1.93 | 5.41E-02 | 9.96E-01 | 345.46 | 0.22 | 0.64 | 0.35 | 7.29E-01 | 1.00E+00 |
| ENST00000469537 | SLC25A44 | 3.62 | 3.35 | 1.78 | 1.88 | 5.99E-02 | 9.96E-01 | 728.46 | -0.64 | 1.07 | -0.60 | 5.48E-01 | 1.00E+00 |
| ENST00000472176 | SLC29A1 | 2.13 | 4.66 | 2.33 | 2.00 | 4.50E-02 | 9.96E-01 | 207.48 | 0.10 | 0.32 | 0.31 | 7.60E-01 | 1.00E+00 |
| ENST00000529510 | SLC37A4 | 3.58 | 2.55 | 1.22 | 2.09 | 3.68E-02 | 9.96E-01 | 16.11 | -0.77 | 0.93 | -0.83 | 4.08E-01 | 1.00E+00 |
| ENST00000549258 | SLC38A2 | 42.81 | 8.97 | 2.59 | 3.47 | 5.21E-04 | 6.72E-02 | 3961.66 | -0.07 | 2.04 | -0.04 | 9.71E-01 | 1.00E+00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000354884 | SLC39A13 | 0.95 | 3.52 | 1.85 | 1.90 | 5.76E-02 | 9.96E-01 | 15.22 | -0.28 | 2.87 | -0.10 | 9.23E-01 | 1.00E+00 |
| ENST00000338663 | SLC3A2 | 34.35 | 3.38 | 1.56 | 2.17 | 3.02E-02 | 9.96E-01 | 1131.30 | -0.07 | 0.39 | -0.18 | 8.55E-01 | 1.00E+00 |
| ENST00000539458 | SLC3A2 | 5.01 | 5.29 | 2.17 | 2.44 | 1.47E-02 | 8.48E-01 | 111.12 | 0.11 | 0.51 | 0.21 | 8.34E-01 | 1.00E+00 |
| ENST00000541649 | SLC3A2 | 5.14 | 3.75 | 1.02 | 3.69 | 2.25E-04 | 3.11E-02 | 426.30 | 1.95 | 0.49 | 3.96 | 7.57E-05 | 1.07E-02 |
| ENST00000310317 | SLC4A2 | 4.62 | 5.77 | 3.03 | 1.90 | 5.74E-02 | 9.96E-01 | 4734.61 | -0.84 | 1.36 | -0.62 | 5.34E-01 | 1.00E+00 |
| ENST00000453097 | SLC4A8 | 5.33 | 4.79 | 1.39 | 3.45 | 5.51E-04 | 7.04E-02 | 234.96 | -0.32 | 0.92 | -0.35 | 7.30E-01 | 1.00E+00 |
| ENST00000454876 | SLC6A6 | 60.07 | 1.85 | 0.44 | 4.20 | 2.71E-05 | 4.25E-03 | 180.11 | -24.83 | 3.91 | -6.35 | NA | NA |
| ENST00000504154 | SLIT2 | 6.43 | 2.28 | 0.65 | 3.51 | 4.53E-04 | 5.89E-02 | 323.33 | 2.00 | 1.31 | 1.53 | 1.27E-01 | 9.39E-01 |
| ENST00000400286 | SLITRK6 | 8.48 | 2.24 | 0.71 | 3.15 | 1.65E-03 | 1.80E-01 | 929.90 | 1.83 | 0.41 | 4.51 | 6.54E-06 | 1.45E-03 |
| ENST00000448276 | SMARCD2 | 6.87 | 4.29 | 1.71 | 2.51 | 1.21E-02 | 7.61E-01 | 8159.49 | -0.43 | 0.45 | -0.97 | 3.33E-01 | 1.00E+00 |
| ENST00000544865 | SMG6 | 45.47 | 0.80 | 0.33 | 2.45 | 1.43E-02 | 8.32E-01 | 5978.04 | -0.07 | 0.49 | -0.14 | 8.90E-01 | 1.00E+00 |
| ENST00000532367 | SMPD1 | 7.58 | 1.29 | 0.66 | 1.95 | 5.17E-02 | 9.96E-01 | 21.67 | 0.44 | 0.69 | 0.64 | 5.23E-01 | 1.00E+00 |
| ENST00000394986 | SNCA | 6.70 | 1.78 | 0.93 | 1.92 | 5.50E-02 | 9.96E-01 | 271.06 | 0.25 | 0.56 | 0.44 | 6.58E-01 | 1.00E+00 |
| ENST00000447221 | SNHG7 | 10.51 | 1.92 | 0.79 | 2.43 | 1.52E-02 | 8.66E-01 | 399.57 | 0.25 | 0.31 | 0.82 | 4.15E-01 | 1.00E+00 |
| ENST00000364432 | SNORA65 | 31.52 | 0.87 | 0.33 | 2.68 | 7.29E-03 | 5.53E-01 | 45.02 | -0.51 | 0.52 | -0.97 | 3.34E-01 | 1.00E+00 |
| ENST00000390930 | SNORD17 | 162.38 | 0.95 | 0.44 | 2.14 | 3.24E-02 | 9.96E-01 | 6.41 | 2.01 | 1.64 | 1.22 | 2.22E-01 | 1.00E+00 |
| ENST00000363091 | SNORD1B | 40.20 | 0.96 | 0.42 | 2.28 | 2.23E-02 | 9.96E-01 | 5.71 | 0.82 | 0.78 | 1.06 | 2.91E-01 | 1.00E+00 |
| ENST00000383926 | SNORD29 | 27.06 | 1.15 | 0.53 | 2.18 | 2.94E-02 | 9.96E-01 | 86.65 | -0.42 | 1.14 | -0.37 | 7.13E-01 | 1.00E+00 |
| ENST00000390833 | SNORD67 | 2640.14 | 0.63 | 0.28 | 2.23 | 2.61E-02 | 9.96E-01 | 7.71 | 0.07 | 0.73 | 0.10 | 9.20E-01 | 1.00E+00 |
| ENST00000363146 | SNORD76 | 40.58 | 0.86 | 0.40 | 2.18 | 2.89E-02 | 9.96E-01 | 83.80 | -0.07 | 1.23 | -0.06 | 9.52E-01 | 1.00E+00 |
| ENST00000484372 | SNRNP200 | 5.11 | 5.91 | 3.03 | 1.95 | 5.14E-02 | 9.96E-01 | 48.05 | -0.15 | 0.45 | -0.33 | 7.42E-01 | 1.00E+00 |
| ENST00000560829 | SNX1 | 12.10 | 7.15 | 3.03 | 2.36 | 1.82E-02 | 9.56E-01 | 4712.38 | -0.28 | 0.51 | -0.54 | 5.89E-01 | 1.00E+00 |
| ENST00000561026 | SNX1 | 2.39 | 4.83 | 2.22 | 2.18 | 2.96E-02 | 9.96E-01 | 37.48 | 0.71 | 2.11 | 0.33 | 7.38E-01 | 1.00E+00 |
| ENST00000344780 | SNX21 | 7.01 | 2.01 | 1.04 | 1.93 | 5.32E-02 | 9.96E-01 | 343.41 | 0.27 | 0.81 | 0.33 | 7.39E-01 | 1.00E+00 |
| ENST00000270142 | SOD1 | 15.38 | 4.49 | 1.94 | 2.32 | 2.05E-02 | 9.96E-01 | 25509.64 | -1.31 | 0.42 | -3.08 | 2.06E-03 | 1.16E-01 |
| ENST00000421541 | SON | 5.04 | 5.89 | 3.03 | 1.94 | 5.24E-02 | 9.96E-01 | 61.39 | 1.08 | 0.82 | 1.31 | 1.89E-01 | 9.96E-01 |
| ENST00000431808 | SORBS2 | 24.98 | 1.17 | 0.36 | 3.23 | 1.25E-03 | 1.44E-01 | 16.81 | 4.75 | 1.56 | 3.04 | 2.35E-03 | 1.25E-01 |
| ENST00000260197 | SORL1 | 65.24 | 1.46 | 0.58 | 2.51 | 1.19E-02 | 7.61E-01 | 5059.44 | 0.74 | 0.47 | 1.58 | 1.15E-01 | 9.24E-01 |
| ENST00000342665 | SOX12 | 23.39 | 0.95 | 0.35 | 2.74 | 6.22E-03 | 4.99E-01 | 5360.17 | 0.55 | 0.99 | 0.55 | 5.79E-01 | 1.00E+00 |
| ENST00000510283 | SPAG9 | 6.41 | 5.65 | 2.78 | 2.03 | 4.26E-02 | 9.96E-01 | 508.97 | -0.51 | 0.70 | -0.73 | 4.63E-01 | 1.00E+00 |
| ENST00000511312 | SPAG9 | 5.43 | 6.00 | 3.03 | 1.98 | 4.79E-02 | 9.96E-01 | 11.66 | 1.21 | 0.95 | 1.26 | 2.06E-01 | 1.00E+00 |
| ENST00000521327 | SPARC | 9.99 | 6.88 | 2.34 | 2.94 | 3.29E-03 | 3.11E-01 | 61.54 | 1.21 | 0.79 | 1.53 | 1.25E-01 | 9.38E-01 |
| ENST00000344120 | SPRY4 | 10.33 | 0.86 | 0.44 | 1.94 | 5.20E-02 | 9.96E-01 | 4775.56 | 0.86 | 2.16 | 0.40 | 6.92E-01 | 1.00E+00 |
| ENST00000523259 | SRA1 | 5.15 | 5.31 | 1.75 | 3.03 | 2.42E-03 | 2.46E-01 | 1899.18 | -0.54 | 0.60 | -0.90 | 3.69E-01 | 1.00E+00 |
| ENST00000519259 | SREK1 | 5.60 | 3.06 | 1.17 | 2.62 | 8.77E-03 | 6.24E-01 | 2186.82 | 0.11 | 0.87 | 0.12 | 9.03E-01 | 1.00E+00 |
| ENST00000344595 | SRR | 12.59 | 1.33 | 0.62 | 2.16 | 3.09E-02 | 9.96E-01 | 2653.26 | 0.30 | 0.84 | 0.36 | 7.18E-01 | 1.00E+00 |
| ENST00000370950 | SRSF11 | 5.41 | 5.99 | 3.03 | 1.98 | 4.81E-02 | 9.96E-01 | 1744.78 | -0.70 | 0.38 | -1.82 | 6.91E-02 | 7.98E-01 |
| ENST00000454579 | SSFA2 | 9.05 | 20.81 | 3.03 | 6.87 | 6.53E-12 | 1.50E-09 | 356.24 | 1.17 | 1.73 | 0.68 | 4.97E-01 | 1.00E+00 |
| ENST00000491720 | SSFA2 | 7.67 | 5.90 | 2.77 | 2.13 | 3.29E-02 | 9.96E-01 | 3606.95 | 1.46 | 1.47 | 1.00 | 3.20E-01 | 1.00E+00 |
| ENST00000319914 | ST3GAL1 | 7.47 | 1.83 | 0.56 | 3.28 | 1.05E-03 | 1.24E-01 | 5.23 | -0.38 | 1.90 | -0.20 | 8.44E-01 | 1.00E+00 |
| ENST00000268164 | ST8SIA2 | 3.43 | 2.54 | 1.10 | 2.30 | 2.15E-02 | 9.96E-01 | 533.79 | 1.75 | 0.63 | 2.79 | 5.24E-03 | 2.10E-01 |
| ENST00000404395 | STAT3 | 13.91 | 21.41 | 3.03 | 7.07 | 1.57E-12 | 5.24E-10 | 308.27 | 0.70 | 0.69 | 1.00 | 3.17E-01 | 1.00E+00 |
| ENST00000286713 | STOM | 342.63 | 1.27 | 0.44 | 2.91 | 3.61E-03 | 3.34E-01 | 7527.01 | 0.88 | 0.22 | 4.01 | 6.01E-05 | 9.00E-03 |
| ENST00000531491 | STT3A | 17.32 | 21.71 | 3.03 | 7.17 | 7.47E-13 | 3.40E-10 | 824.92 | 0.51 | 0.45 | 1.12 | 2.63E-01 | 1.00E+00 |
| ENST00000367479 | STXBP5 | 2.69 | 3.17 | 1.65 | 1.92 | 5.47E-02 | 9.96E-01 | 534.06 | 0.42 | 0.57 | 0.74 | 4.60E-01 | 1.00E+00 |
| ENST00000433632 | SULF2 | 11.31 | 7.06 | 2.38 | 2.97 | 3.01E-03 | 2.89E-01 | 235.01 | 0.80 | 0.40 | 2.01 | 4.47E-02 | 6.72E-01 |
| ENST00000467815 | SULF2 | 13.94 | 7.36 | 3.03 | 2.43 | 1.51E-02 | 8.65E-01 | 5888.71 | -0.61 | 0.53 | -1.16 | 2.45E-01 | 1.00E+00 |
| ENST00000272902 | SUMF1 | 20.40 | 0.79 | 0.39 | 2.02 | 4.36E-02 | 9.96E-01 | 2867.93 | -0.11 | 0.28 | -0.40 | 6.91E-01 | 1.00E+00 |
| ENST00000275607 | SUMF2 | 14.18 | 7.38 | 2.51 | 2.94 | 3.23E-03 | 3.07E-01 | 115.06 | 0.03 | 0.44 | 0.08 | 9.40E-01 | 1.00E+00 |
| ENST00000320188 | SWI5 | 13.26 | 2.69 | 1.21 | 2.22 | 2.63E-02 | 9.96E-01 | 133.54 | -1.06 | 1.08 | -0.98 | 3.30E-01 | 1.00E+00 |
| ENST00000328933 | SYNGR1 | 4.57 | 3.62 | 1.11 | 3.25 | 1.16E-03 | 1.34E-01 | 472.80 | 1.28 | 0.66 | 1.92 | 5.49E-02 | 7.31E-01 |
| ENST00000485989 | TACC3 | 6.10 | 20.13 | 3.03 | 6.64 | 3.16E-11 | 6.06E-09 | 16.42 | 0.81 | 0.70 | 1.16 | 2.47E-01 | 1.00E+00 |
| ENST00000478033 | TAGLN2 | 21.54 | 7.98 | 3.03 | 2.64 | 8.36E-03 | 6.07E-01 | 425.97 | -1.50 | 1.13 | -1.33 | NA | NA |
| ENST00000393917 | TAGLN3 | 3.03 | 5.15 | 2.32 | 2.22 | 2.64E-02 | 9.96E-01 | 179.62 | 2.11 | 1.53 | 1.38 | 1.67E-01 | 9.80E-01 |
| ENST00000349155 | TBX3 | 13.34 | 1.98 | 0.50 | 3.96 | 7.38E-05 | 1.11E-02 | 2411.30 | 1.94 | 0.38 | 5.13 | 2.89E-07 | 9.97E-05 |
| ENST00000548503 | TBX3 | 2.68 | 4.99 | 1.70 | 2.94 | 3.32E-03 | 3.13E-01 | 1.16 | 0.52 | 1.60 | 0.32 | 7.47E-01 | NA |
| ENST00000360000 | TCEAL8 | 5.53 | 6.02 | 3.03 | 1.98 | 4.73E-02 | 9.96E-01 | 2870.42 | -0.39 | 0.22 | -1.75 | 7.99E-02 | 8.38E-01 |
| ENST00000415259 | TEX264 | 5.06 | 5.90 | 3.03 | 1.94 | 5.19E-02 | 9.96E-01 | 1187.01 | -0.45 | 0.52 | -0.88 | 3.81E-01 | 1.00E+00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000544508 | TFAP2C | 5.20 | 5.94 | 3.03 | 1.96 | 5.04E-02 | 9.96E-01 | 57.89 | 0.49 | 0.66 | 0.75 | 4.56E-01 | 1.00E+00 |
| ENST00000366930 | TGFB2 | 4.53 | 5.74 | 3.03 | 1.89 | 5.85E-02 | 9.96E-01 | 5682.24 | 0.00 | 0.54 | 0.00 | 1.00E+00 | 1.00E+00 |
| ENST00000506699 | TGFBI | 951.47 | 3.70 | 1.59 | 2.33 | 2.00E-02 | 9.96E-01 | 33103.03 | -0.23 | 0.42 | -0.55 | 5.81E-01 | 1.00E+00 |
| ENST00000527590 | THY1 | 4.79 | 5.82 | 3.03 | 1.92 | 5.51E-02 | 9.96E-01 | 63.03 | 1.05 | 1.04 | 1.01 | 3.13E-01 | 1.00E+00 |
| ENST00000374097 | TIMM23B | 3.94 | 5.53 | 2.33 | 2.37 | 1.77E-02 | 9.38E-01 | 231.29 | -1.43 | 0.74 | -1.94 | 5.26E-02 | 7.22E-01 |
| ENST00000266085 | TIMP3 | 132.33 | 0.55 | 0.23 | 2.41 | 1.58E-02 | 8.85E-01 | 19862.01 | 0.13 | 0.30 | 0.44 | 6.59E-01 | 1.00E+00 |
| ENST00000450814 | TKT | 27.14 | 6.15 | 2.56 | 2.40 | 1.63E-02 | 9.01E-01 | 1845.75 | -0.37 | 0.52 | -0.71 | 4.77E-01 | 1.00E+00 |
| ENST00000376520 | TLE4 | 13.49 | 3.15 | 1.62 | 1.94 | 5.22E-02 | 9.96E-01 | 2.11 | -0.16 | 2.25 | -0.07 | 9.45E-01 | NA |
| ENST00000540444 | TLN1 | 10.78 | 21.05 | 3.03 | 6.95 | 3.67E-12 | 9.39E-10 | 4262.35 | 1.18 | 2.04 | 0.58 | NA | NA |
| ENST00000322019 | TM6SF1 | 3.77 | 5.48 | 1.60 | 3.42 | 6.22E-04 | 7.80E-02 | 293.32 | 1.34 | 0.71 | 1.89 | 5.91E-02 | 7.54E-01 |
| ENST00000527851 | TM7SF2 | 1.88 | 3.82 | 1.94 | 1.97 | 4.86E-02 | 9.96E-01 | 58.59 | 0.54 | 0.80 | 0.68 | 4.94E-01 | 1.00E+00 |
| ENST00000546914 | TMBIM6 | 12.36 | 21.24 | 3.03 | 7.01 | 2.33E-12 | 6.86E-10 | 4.70 | 0.84 | 3.77 | 0.22 | 8.24E-01 | 1.00E+00 |
| ENST00000547798 | TMBIM6 | 34.70 | 3.62 | 1.36 | 2.66 | 7.92E-03 | 5.87E-01 | 55558.49 | -0.37 | 0.30 | -1.24 | 2.15E-01 | 1.00E+00 |
| ENST00000549130 | TMBIM6 | 9.50 | 6.81 | 3.03 | 2.25 | 2.47E-02 | 9.96E-01 | 632.94 | -0.79 | 1.41 | -0.56 | 5.74E-01 | 1.00E+00 |
| ENST00000552635 | TMBIM6 | 9.21 | 3.34 | 1.71 | 1.95 | 5.13E-02 | 9.96E-01 | 294.81 | -0.74 | 0.59 | -1.25 | 2.12E-01 | 1.00E+00 |
| ENST00000507723 | TMED9 | 13.53 | 21.37 | 3.03 | 7.06 | 1.70E-12 | 5.60E-10 | 114.96 | -0.31 | 0.71 | -0.44 | 6.58E-01 | 1.00E+00 |
| ENST00000540112 | TMEM132A | 4.90 | 4.65 | 2.36 | 1.97 | 4.89E-02 | 9.96E-01 | 1148.40 | 0.07 | 0.62 | 0.12 | 9.08E-01 | 1.00E+00 |
| ENST00000569445 | TMEM219 | 2.31 | 3.00 | 1.43 | 2.10 | 3.56E-02 | 9.96E-01 | 35.66 | -0.42 | 0.43 | -0.97 | 3.31E-01 | 1.00E+00 |
| ENST00000420455 | TMEM50B | 20.91 | 2.06 | 1.05 | 1.97 | 4.90E-02 | 9.96E-01 | 862.80 | 0.09 | 1.77 | 0.05 | 9.60E-01 | 1.00E+00 |
| ENST00000558205 | TMEM85 | 3.68 | 3.37 | 1.57 | 2.15 | 3.18E-02 | 9.96E-01 | 1013.83 | -0.09 | 0.70 | -0.13 | 9.00E-01 | 1.00E+00 |
| ENST00000380636 | TMSB4X | 103.86 | 2.61 | 0.99 | 2.63 | 8.52E-03 | 6.13E-01 | 128331.13 | -0.18 | 0.39 | -0.47 | 6.39E-01 | 1.00E+00 |
| ENST00000341037 | TNC | 16.06 | 21.61 | 3.03 | 7.14 | 9.60E-13 | 3.88E-10 | 7906.82 | 1.44 | 0.37 | 3.89 | 9.93E-05 | 1.31E-02 |
| ENST00000350763 | TNC | 503.77 | 1.31 | 0.27 | 4.79 | 1.69E-06 | 2.89E-04 | 919.95 | 1.30 | 0.57 | 2.27 | 2.32E-02 | 4.92E-01 |
| ENST00000327473 | TNFAIP8L1 | 1.99 | 4.53 | 1.68 | 2.69 | 7.13E-03 | 5.46E-01 | 2900.90 | -0.47 | 0.40 | -1.17 | 2.41E-01 | 1.00E+00 |
| ENST00000539372 | TNFRSF1A | 5.13 | 5.92 | 3.03 | 1.95 | 5.11E-02 | 9.96E-01 | 10.15 | 0.20 | 0.82 | 0.24 | 8.10E-01 | 1.00E+00 |
| ENST00000296861 | TNFRSF21 | 8.70 | 1.20 | 0.61 | 1.97 | 4.93E-02 | 9.96E-01 | 707.31 | 1.06 | 1.32 | 0.81 | 4.19E-01 | 1.00E+00 |
| ENST00000535933 | TOM1L2 | 5.07 | 5.90 | 3.03 | 1.95 | 5.16E-02 | 9.96E-01 | 133.57 | 1.09 | 0.67 | 1.62 | 1.05E-01 | 9.05E-01 |
| ENST00000492561 | TOMM22 | 4.66 | 5.78 | 3.03 | 1.90 | 5.69E-02 | 9.96E-01 | 187.30 | 0.03 | 0.53 | 0.05 | 9.57E-01 | 1.00E+00 |
| ENST00000413037 | TP53I3 | 4.07 | 5.59 | 2.24 | 2.49 | 1.27E-02 | 7.81E-01 | 146.38 | 0.18 | 0.93 | 0.20 | 8.42E-01 | 1.00E+00 |
| ENST00000369750 | TPBG | 21.88 | 0.94 | 0.34 | 2.74 | 6.07E-03 | 4.91E-01 | 902.29 | -2.00 | 0.93 | -2.14 | 3.24E-02 | 5.85E-01 |
| ENST00000558072 | TPM1 | 9.93 | 2.75 | 1.05 | 2.62 | 8.86E-03 | 6.26E-01 | 2.31 | 0.57 | 1.24 | 0.46 | 6.46E-01 | NA |
| ENST00000378292 | TPM2 | 32.28 | 22.58 | 3.03 | 7.46 | 8.67E-14 | 8.07E-11 | 13650.49 | -0.42 | 0.54 | -0.77 | 4.41E-01 | 1.00E+00 |
| ENST00000428886 | TPP1 | 31.87 | 5.63 | 2.13 | 2.64 | 8.41E-03 | 6.09E-01 | 179.26 | -0.51 | 0.85 | -0.60 | 5.46E-01 | 1.00E+00 |
| ENST00000300403 | TPX2 | 14.71 | 20.95 | 3.03 | 6.92 | 4.59E-12 | 1.10E-09 | 20291.63 | -0.42 | 0.31 | -1.36 | 1.73E-01 | 9.85E-01 |
| ENST00000155926 | TRIB2 | 56.24 | 0.65 | 0.24 | 2.71 | 6.73E-03 | 5.27E-01 | 7460.04 | 0.99 | 0.90 | 1.10 | 2.72E-01 | 1.00E+00 |
| ENST00000354852 | TRIM6-TRIM34 | 2.12 | 4.63 | 2.35 | 1.97 | 4.88E-02 | 9.96E-01 | 0.99 | 0.37 | 3.88 | 0.10 | 9.24E-01 | NA |
| ENST00000403663 | TRIOBP | 8.64 | 20.68 | 3.03 | 6.82 | 8.85E-12 | 1.97E-09 | 489.74 | 0.26 | 0.96 | 0.27 | 7.87E-01 | 1.00E+00 |
| ENST00000476941 | TRPC1 | 8.75 | 6.69 | 2.38 | 2.81 | 4.96E-03 | 4.16E-01 | 176.94 | 0.36 | 0.88 | 0.41 | 6.84E-01 | 1.00E+00 |
| ENST00000396388 | TSEN34 | 4.68 | 5.78 | 2.29 | 2.53 | 1.15E-02 | 7.43E-01 | 2982.91 | 0.03 | 0.75 | 0.04 | 9.64E-01 | 1.00E+00 |
| ENST00000522793 | TTC1 | 6.33 | 6.22 | 3.03 | 2.05 | 4.02E-02 | 9.96E-01 | 507.13 | -0.21 | 0.41 | -0.52 | 6.00E-01 | 1.00E+00 |
| ENST00000498660 | TUBA4A | 4.89 | 5.85 | 3.03 | 1.93 | 5.37E-02 | 9.96E-01 | 19.12 | -0.61 | 0.61 | -1.00 | 3.18E-01 | 1.00E+00 |
| ENST00000374515 | TXN | 6.07 | 6.16 | 3.03 | 2.03 | 4.22E-02 | 9.96E-01 | 34.81 | 0.49 | 1.33 | 0.37 | 7.14E-01 | 1.00E+00 |
| ENST00000217515 | TXNL1 | 75.06 | 0.58 | 0.24 | 2.40 | 1.63E-02 | 9.01E-01 | 4387.44 | 0.26 | 0.48 | 0.54 | 5.89E-01 | 1.00E+00 |
| ENST00000427956 | TXNRD1 | 7.18 | 20.49 | 3.03 | 6.76 | 1.38E-11 | 2.80E-09 | 837.14 | -0.22 | 2.03 | -0.11 | NA | NA |
| ENST00000246548 | UBA2 | 7.56 | 6.48 | 3.03 | 2.14 | 3.26E-02 | 9.96E-01 | 9017.02 | -0.07 | 0.35 | -0.20 | 8.45E-01 | 1.00E+00 |
| ENST00000441890 | UBAP2L | 7.85 | 20.62 | 3.03 | 6.80 | 1.02E-11 | 2.18E-09 | 3.67 | 0.40 | 1.22 | 0.33 | 7.42E-01 | 1.00E+00 |
| ENST00000339647 | UBC | 14.66 | 2.59 | 0.99 | 2.61 | 9.04E-03 | 6.32E-01 | 147.86 | -0.20 | 0.74 | -0.26 | 7.91E-01 | 1.00E+00 |
| ENST00000220959 | UBR5 | 5.97 | 6.14 | 3.03 | 2.02 | 4.30E-02 | 9.96E-01 | 360.00 | 1.97 | 1.70 | 1.16 | 2.48E-01 | 1.00E+00 |
| ENST00000360834 | UFD1L | 4.57 | 5.75 | 3.03 | 1.90 | 5.79E-02 | 9.96E-01 | 1069.96 | -1.15 | 0.66 | -1.74 | 8.10E-02 | 8.41E-01 |
| ENST00000367351 | ULBP2 | 18.41 | 0.73 | 0.39 | 1.90 | 5.76E-02 | 9.96E-01 | 1235.24 | -0.24 | 0.36 | -0.66 | 5.08E-01 | 1.00E+00 |
| ENST00000401406 | UQCR10 | 2.95 | 2.13 | 0.98 | 2.17 | 2.97E-02 | 9.96E-01 | 1239.04 | -0.23 | 0.41 | -0.57 | 5.71E-01 | 1.00E+00 |
| ENST00000415995 | UQCRC1 | 13.09 | 21.33 | 3.03 | 7.04 | 1.92E-12 | 5.99E-10 | 2963.68 | -0.59 | 1.32 | -0.45 | NA | NA |
| ENST00000268379 | UQCRC2 | 206.14 | 0.61 | 0.29 | 2.14 | 3.26E-02 | 9.96E-01 | 7945.08 | -0.08 | 0.34 | -0.23 | 8.18E-01 | 1.00E+00 |
| ENST00000337003 | USMG5 | 22.06 | 4.51 | 2.19 | 2.07 | 3.89E-02 | 9.96E-01 | 107.51 | -0.11 | 0.69 | -0.16 | 8.71E-01 | 1.00E+00 |
| ENST00000450251 | USP53 | 22.04 | 1.39 | 0.73 | 1.90 | 5.74E-02 | 9.96E-01 | 1209.40 | 1.61 | 1.87 | 0.86 | 3.88E-01 | 1.00E+00 |
| ENST00000498143 | USP54 | 1.39 | 3.32 | 1.34 | 2.47 | 1.34E-02 | 7.97E-01 | 68.33 | -0.27 | 1.45 | -0.19 | 8.51E-01 | 1.00E+00 |
| ENST00000463829 | USP9X | 1.85 | 3.06 | 1.37 | 2.23 | 2.60E-02 | 9.96E-01 | 2.84 | 0.34 | 1.56 | 0.22 | 8.29E-01 | 1.00E+00 |
| ENST00000302536 | VAT1L | 25.04 | 1.28 | 0.58 | 2.23 | 2.60E-02 | 9.96E-01 | 3748.96 | 0.99 | 0.34 | 2.88 | 3.93E-03 | 1.76E-01 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENST00000371851 | VAV2 | 60.23 | 0.86 | 0.25 | 3.45 | 5.69E-04 | 7.25E-02 | 1460.08 | 0.48 | 0.53 | 0.92 | 3.60E-01 | 1.00E+00 |
| ENST00000342785 | VCAN | 47.90 | 5.94 | 1.83 | 3.25 | 1.14E-03 | 1.32E-01 | 848.16 | 0.71 | 2.05 | 0.34 | 7.30E-01 | 1.00E+00 |
| ENST00000537043 | VCL | 43.22 | 22.99 | 3.03 | 7.59 | 3.08E-14 | 4.26E-11 | 14.18 | -0.19 | 0.66 | -0.28 | 7.77E-01 | 1.00E+00 |
| ENST00000530983 | VPS28 | 1.36 | 4.04 | 2.05 | 1.97 | 4.89E-02 | 9.96E-01 | 77.44 | 0.99 | 0.90 | 1.10 | 2.70E-01 | 1.00E+00 |
| ENST00000333371 | VPS33B | 4.82 | 3.76 | 1.59 | 2.37 | 1.79E-02 | 9.46E-01 | 200.48 | 0.24 | 0.45 | 0.53 | 5.93E-01 | 1.00E+00 |
| ENST00000566354 | VPS4A | 8.41 | 1.65 | 0.77 | 2.14 | 3.22E-02 | 9.96E-01 | 1.16 | 0.52 | 1.60 | 0.32 | 7.47E-01 | NA |
| ENST00000238497 | VPS4B | 28.67 | 1.71 | 0.81 | 2.10 | 3.57E-02 | 9.96E-01 | 2356.97 | 0.50 | 0.45 | 1.10 | 2.69E-01 | 1.00E+00 |
| ENST00000354911 | WAC | 4.49 | 5.72 | 3.03 | 1.89 | 5.93E-02 | 9.96E-01 | 75.10 | 0.42 | 0.55 | 0.76 | 4.46E-01 | 1.00E+00 |
| ENST00000554950 | WARS | 15.45 | 7.51 | 3.03 | 2.48 | 1.32E-02 | 7.90E-01 | 87.41 | 1.26 | 2.04 | 0.62 | 5.37E-01 | 1.00E+00 |
| ENST00000558311 | WDR61 | 14.27 | 21.45 | 3.03 | 7.08 | 1.43E-12 | 5.02E-10 | 1858.47 | -0.52 | 0.34 | -1.52 | 1.29E-01 | 9.42E-01 |
| ENST00000317025 | WHSC1L1 | 9.04 | 2.61 | 0.84 | 3.12 | 1.80E-03 | 1.94E-01 | 264.88 | 0.50 | 1.72 | 0.29 | 7.72E-01 | 1.00E+00 |
| ENST00000322238 | XPNPEP1 | 5.13 | 5.92 | 3.03 | 1.95 | 5.11E-02 | 9.96E-01 | 1393.15 | -0.68 | 1.69 | -0.40 | NA | NA |
| ENST00000498684 | XPNPEP3 | 6.92 | 6.34 | 3.03 | 2.09 | 3.65E-02 | 9.96E-01 | 3.32 | 2.96 | 1.53 | 1.94 | 5.29E-02 | 7.22E-01 |
| ENST00000460284 | XRCC5 | 27.45 | 20.63 | 3.03 | 6.81 | 9.53E-12 | 2.07E-09 | 2763.27 | 0.25 | 0.63 | 0.39 | 6.99E-01 | 1.00E+00 |
| ENST00000478828 | YARS | 16.42 | 21.64 | 3.03 | 7.15 | 8.89E-13 | 3.80E-10 | 331.15 | -0.17 | 0.40 | -0.43 | 6.70E-01 | 1.00E+00 |
| ENST00000376899 | YIF1A | 5.71 | 6.07 | 3.03 | 2.00 | 4.52E-02 | 9.96E-01 | 706.67 | -0.04 | 0.30 | -0.13 | 9.00E-01 | 1.00E+00 |
| ENST00000372839 | YWHAB | 43.82 | 3.71 | 1.42 | 2.61 | 9.13E-03 | 6.32E-01 | 15215.33 | 0.03 | 0.80 | 0.04 | 9.66E-01 | 1.00E+00 |
| ENST00000479421 | YWHAB | 17.19 | 21.71 | 3.03 | 7.17 | 7.60E-13 | 3.42E-10 | 72.13 | 0.03 | 0.81 | 0.04 | 9.72E-01 | 1.00E+00 |
| ENST00000381844 | YWHAQ | 93.79 | 4.10 | 0.88 | 4.66 | 3.12E-06 | 5.21E-04 | 754.21 | -0.23 | 0.57 | -0.40 | 6.91E-01 | 1.00E+00 |
| ENST00000554579 | YY1 | 5.76 | 2.25 | 1.11 | 2.03 | 4.28E-02 | 9.96E-01 | 56.72 | -2.14 | 0.91 | -2.35 | 1.86E-02 | 4.39E-01 |
| ENST00000322342 | ZADH2 | 12.85 | 0.99 | 0.42 | 2.37 | 1.78E-02 | 9.41E-01 | 3222.92 | 0.39 | 0.26 | 1.50 | 1.33E-01 | 9.47E-01 |
| ENST00000471652 | ZC3HAV1 | 9.26 | 20.35 | 3.03 | 6.72 | 1.86E-11 | 3.68E-09 | 349.90 | -0.80 | 0.78 | -1.02 | 3.08E-01 | 1.00E+00 |
| ENST00000525490 | ZDHHC13 | 5.71 | 3.13 | 1.38 | 2.27 | 2.31E-02 | 9.96E-01 | 1458.79 | -0.19 | 0.91 | -0.21 | 8.32E-01 | 1.00E+00 |
| ENST00000301318 | ZFP28 | 2.55 | 2.69 | 1.21 | 2.23 | 2.59E-02 | 9.96E-01 | 817.17 | 0.89 | 0.38 | 2.37 | 1.79E-02 | 4.31E-01 |
| ENST00000505204 | ZFR | 1.99 | 3.27 | 1.66 | 1.97 | 4.91E-02 | 9.96E-01 | 12.42 | 0.02 | 0.96 | 0.02 | 9.81E-01 | 1.00E+00 |
| ENST00000309060 | ZHX3 | 25.81 | 1.35 | 0.61 | 2.20 | 2.77E-02 | 9.96E-01 | 483.13 | 8.20 | 3.75 | 2.19 | NA | NA |
| ENST00000373988 | ZMYM3 | 3.40 | 3.25 | 1.68 | 1.93 | 5.33E-02 | 9.96E-01 | 5.84 | -0.75 | 3.77 | -0.20 | 8.43E-01 | 1.00E+00 |
| ENST00000464860 | ZNF136 | 3.25 | 1.78 | 0.83 | 2.16 | 3.11E-02 | 9.96E-01 | 205.90 | 0.45 | 0.66 | 0.68 | 4.98E-01 | 1.00E+00 |
| ENST00000532305 | ZNF143 | 3.49 | 2.87 | 1.44 | 1.99 | 4.65E-02 | 9.96E-01 | 154.11 | -0.57 | 1.37 | -0.42 | 6.77E-01 | 1.00E+00 |
| ENST00000448715 | ZNF181 | 1.39 | 3.32 | 1.63 | 2.03 | 4.19E-02 | 9.96E-01 | 574.47 | -0.08 | 0.81 | -0.10 | 9.24E-01 | 1.00E+00 |
| ENST00000427606 | ZNF252 | 2.85 | 5.07 | 2.29 | 2.22 | 2.66E-02 | 9.96E-01 | 217.36 | 0.04 | 0.39 | 0.11 | 9.16E-01 | 1.00E+00 |
| ENST00000509196 | ZNF302 | 9.62 | 1.21 | 0.61 | 1.98 | 4.83E-02 | 9.96E-01 | 469.90 | 0.18 | 0.68 | 0.27 | 7.90E-01 | 1.00E+00 |
| ENST00000262990 | ZNF330 | 14.40 | 0.77 | 0.41 | 1.88 | 5.98E-02 | 9.96E-01 | 1491.20 | 0.15 | 0.46 | 0.31 | 7.54E-01 | 1.00E+00 |
| ENST00000391709 | ZNF470 | 2.03 | 2.26 | 1.15 | 1.96 | 4.99E-02 | 9.96E-01 | 529.33 | 0.46 | 0.48 | 0.97 | 3.34E-01 | 1.00E+00 |
| ENST00000357666 | ZNF816 | 2.89 | 2.18 | 0.97 | 2.24 | 2.48E-02 | 9.96E-01 | 51.21 | 0.99 | 1.01 | 0.97 | 3.30E-01 | 1.00E+00 |
| ENST00000396105 | ZNFX1 | 64.39 | 0.99 | 0.30 | 3.25 | 1.16E-03 | 1.34E-01 | 4522.14 | 0.24 | 0.47 | 0.51 | 6.08E-01 | 1.00E+00 |
| ENST00000485387 | ZNHIT1 | 29.00 | 0.95 | 0.46 | 2.06 | 3.96E-02 | 9.96E-01 | 2536.63 | -0.31 | 0.40 | -0.77 | 4.42E-01 | 1.00E+00 |
| ENST00000449423 | ZYX | 12.97 | 21.32 | 3.03 | 7.04 | 1.96E-12 | 6.02E-10 | 3012.89 | -0.59 | 0.78 | -0.75 | 4.54E-01 | 1.00E+00 |

**Table S5. Association between prognostic factors and NSUN5 methylation status in the TCGA dataset and validation cohorts of glioma patients. Related to Figure 7.**

| CHARACTERISTICS | | Glioma TCGA dataset | | | | Glioma initial validation cohort | | | | Glioma expanded validation cohort | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | NSUN5 methylation (N = 497) | | | | NSUN5 methylation (N = 115) | | | | NSUN5 methylation (N = 418) | | | |
| | N (%) | Unmethylated N (%) | Methylated N (%) | P* | N (%) | Unmethylated N (%) | Methylated N (%) | P* | N (%) | Unmethylated N (%) | Methylated N (%) | P* |
| **Age (years)** | | | | | | | | | | | | |
| <50 | 282 (56%) | 192 (68%) | 90 (32%) | 0.090 | 47 (41%) | 30 (64%) | 17 (36%) | 0.052 | 142 (34%) | 30 (21%) | 112 (79%) | $<10^{-5}$*** |
| >50 | 213 (43%) | 160 (75%) | 53 (25%) | | 68 (59%) | 55 (81%) | 13 (19%) | | 105 (25%) | 55 (52%) | 50 (48%) | |
| Unknown | 2 (1%) | 0 (0%) | 2 (100%) | | 0 (0%) | 0 (0%) | 0 (0%) | | 171 (41%) | 113 (66%) | 58 (34%) | |
| **Gender** | | | | | | | | | | | | |
| Male | 267 (54%) | 187 (70%) | 80 (30%) | 0.074 | 68 (59%) | 51 (75%) | 17 (25%) | 0.830 | 186 (44%) | 51 (27%) | 135 (73%) | $<10^{-5}$*** |
| Female | 228 (45%) | 165 (73%) | 63 (27%) | | 47 (41%) | 34 (72%) | 13 (28%) | | 61 (15%) | 34 (56%) | 27 (44%) | |
| Unknown | 2 (1%) | 0 (0%) | 2 (100%) | | 0 (0%) | 0 (0%) | 0 (0%) | | 171 (41%) | 113 (66%) | 58 (34%) | |
| **Grade of glioma** | | | | | | | | | | | | |
| Low-grade glioma | 374 (75%) | 237 (63%) | 137 (37%) | $<10^{-5}$*** | 41 (36%) | 25 (61%) | 16 (39%) | 0.026* | 183 (44%) | 74 (40%) | 109 (60%) | 0.014* |
| Glioblastoma | 123 (25%) | 115 (93%) | 8 (7%) | | 74 (64%) | 60 (81%) | 14 (19%) | | 235 (56%) | 124 (53%) | 111 (47%) | |
| **Treatment** | | | | | | | | | | | | |
| Radiotherapy | 221 (44%) | 140 (63%) | 81 (37%) | $<10^{-5}$*** | 8 (7%) | 4 (50%) | 4 (50%) | 0.187 | 77 (18%) | 4 (5%) | 73 (95%) | $<10^{-5}$*** |
| Temozolamide | 9 (2.5%) | 9 (100%) | 0 (0%) | | 49 (43%) | 39 (70%) | 10 (30%) | | 112 (27%) | 39 (35%) | 73 (65%) | |
| Radiotherapy + Temozolamide | 82 (16%) | 74 (90%) | 8 (10%) | | 33 (29%) | 24 (73%) | 9 (27%) | | 33 (8%) | 24 (73%) | 9 (27%) | |
| Others | 9 (2.5%) | 9 (100%) | 0 (0%) | | 11 (9%) | 6 (54%) | 5 (46%) | | 11 (3%) | 6 (54%) | 5 (46%) | |
| No treatment | 169 (34%) | 113 (67%) | 56 (33%) | | 6 (5%) | 6 (100%) | 0 (0%) | | 6 (1%) | 6 (100%) | 0 (0%) | |
| Unknown | 7 (1%) | 7 (100%) | 0 (0%) | | 8 (7%) | 6 (75%) | 2 (25%) | | 179 (43%) | 119 (66%) | 60 (34%) | |
| **IDH1 mutational status** | | | | | | | | | | | | |
| Wild-type | 203 (41%) | 187 (92%) | 16 (8%) | $<10^{-5}$*** | 54 (47%) | 47 (87%) | 7 (13%) | $10^{-4}$*** | 237 (57%) | 160 (67%) | 77 (33%) | $<10^{-5}$*** |
| Mutated | 294 (50%) | 165 (56%) | 129 (44%) | | 29 (25%) | 13 (45%) | 16 (55%) | | 149 (36%) | 13 (9%) | 136 (91%) | |
| Unknown | 0 (0%) | 0 (0%) | 0 (0%) | | 32 (28%) | 25 (78%) | 7 (22%) | | 32 (7%) | 25 (78%) | 7 (22%) | |
| **Co-deletion 1p/19q** | | | | | | | | | | | | |
| No co-deletion | 349 (65%) | 261 (75%) | 88 (25%) | 0.002** | 17 (15%) | 10 (59%) | 7 (41%) | 0.999 | 280 (67%) | 123 (44%) | 157 (56%) | $<10^{-5}$*** |
| Co-deletion 1p/19q | 131 (26%) | 77 (59%) | 54 (41%) | | 16 (14%) | 9 (56%) | 7 (44%) | | 56 (13%) | 9 (16%) | 47 (84%) | |
| Unknown | 17 (4%) | 14 (82%) | 3 (18%) | | 82 (71%) | 66 (80%) | 16 (20%) | | 82 (71%) | 66 (80%) | 16 (20%) | |
| **MGMT methylation status** | | | | | | | | | | | | |
| Unmethylated | 240 (48%) | 194 (81%) | 46 (19%) | $<10^{-5}$*** | 25 (22%) | 19 (76%) | 6 (24%) | 0.432 | 165 (39%) | 116 (70%) | 49 (30%) | $<10^{-5}$*** |
| Methylated | 257 (52%) | 158 (61%) | 99 (39%) | | 56 (49%) | 45 (80%) | 11 (37%) | | 253 (61%) | 82 (32%) | 171 (68%) | |
| Unknown | 0 (0%) | 0 (0%) | 0 (0%) | | 34 (29%) | 21 (62%) | 13 (38%) | | | | | |
| **gCIMP phenotype** | | | | | | | | | | | | |
| No gCIMP | 331 (67%) | 226 (68%) | 105 (32%) | 0.094 | - | - | - | - | - | - | - | - |
| gCIMP | 166 (33%) | 126 (76%) | 40 (24%) | | - | - | - | | - | - | - | |

*P-value represents Fisher's exact test or Chi-square function whenever required: statistical significance under 0.05*, 0.01** and 0.001***

**Table S6. Association between different prognostic co-variables in glioma TCGA dataset and validation cohort. Related to Figure 7.**

| | Glioma TCGA dataset | | | | | | Glioma VALIDATION cohort | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | IDH1 mutation | | | MGMT methylation | | | IDH1 mutation | | | MGMT methylation | | |
| **IDH1 mutation** | Wild-type N (%) | Mutated N (%) | P* | Unmethylated N (%) | Methylated N (%) | P* | Wild-type N (%) | Mutated N (%) | P* | Unmethylated N (%) | Methylated N (%) | P* |
| Wild-type | - | - | - | 129 (54%) | 74 (29%) | $< 10^{-5}$ | - | - | - | 130 (87%) | 107 (45%) | $< 10^{-5}$ |
| Mutated | - | - | | 111 (46%) | 183 (71%) | | - | - | | 19 (13%) | 130 (55%) | |
| **Co-deletion 1p/19q** | | | | | | | | | | | | |
| No co-deletion | 172 (91%) | 177 (61%) | $< 10^{-5}$ | 206 (90%) | 143 (57%) | $< 10^{-5}$ | 187 (99%) | 93 (65%) | $< 10^{-5}$ | 119 (95%) | 161 (76%) | $< 10^{-5}$ |
| Co-deletion 1p/19q | 16 (9%) | 115 (39%) | | 23 (10%) | 108 (43%) | | 2 (1%) | 51 (35%) | | 6 (5%) | 50 (24%) | |

*P-value represents Fisher's exact test: statistical significance under 0.05

## Key Resources Table

| REAGENT or RESOURCE | SOURCE | IDENTIFIER |
|---|---|---|
| **Antibodies** | | |
| Rabbit polyclonal anti-NSUN1 (NOP2) | ThermoFisher | Cat# PA5-34712 |
| Rabbit polyclonal anti-NSUN4 | ThermoFisher | Cat# PA5-31695 |
| Rabbit polyclonal anti-NSUN5 | Abcam | Cat# ab121633 |
| Mouse monoclonal anti-NQO1 | Cell signaling | Cat# 3187 |
| Rabbit polyclonal anti-IDH1 | Cell signaling | Cat# 3997 |
| Rabbit polyclonal anti-TET1 | Novus Biologicals | Cat# NBP2-19290 |
| Rabbit polyclonal anti-TET3 | Abcam | Cat# ab139311 |
| Rabbit polyclonal anti-KIDINS220 | Novus Biologicals | Cat# NBP1-31216 |
| Rabbit polyclonal anti-NDRG3 | Cell signaling | Cat# 5846 |
| Mouse monoclonal anti-ACO2 | ThermoFisher | Cat# MA1-029 |
| Monoclonal anti-β-Actin | Sigma | Cat# A3854 |
| Rabbit polyclonal anti-Lamin B1 | Abcam | Cat# ab16048 |
| Mouse monoclonal anti-αTubulin | Abcam | Cat# ab40742 |
| **Cell lines** | | |
| DBTRG-05MG | American Type Culture Collection | Cat# CRL-2020™ |
| M059J | American Type Culture Collection | Cat# CRL-2366™ |
| CAS-1 | The Biological Bank of the IRCCS | Cat# ICLC HTL97009 |
| A172 | American Type Culture Collection | Cat# CRL-1620™ |
| LN229 | American Type Culture Collection | Cat# CRL-2611™ |
| KS-1 | Japanese Collection of Research Bioresources Cell Bank | Cat# IFO50436 |
| SW1088 | American Type Culture Collection | Cat# HTB-12™ |
| BT142 mut/- | American Type Culture Collection | Cat# ACS-1018™ |
| MOG-G-CCM | Sigma | Cat# 86022702-1VL |
| **Oligonucleotides** | | |
| **Q-PCR** | | |
| NSUN5 Fd | CAAGGTTTCTCCTATCAGGGTC | |
| NSUN5 Rv | AGGCAAAGATCTTCCCTTGGT | |
| NQO1 Fd | AAAGGACCCTTCCGGAGTAA | |
| NQO1 Rv | CCATCCTTCCAGGATTTGAA | |
| GAPDH Fd | TGCACCACCAACTGCTTAGC | |
| GAPDH Rv | GGCATGGACTGTGGTCATGAG | |
| **Cloning** | | |
| NSUN5 Cloning Fd | AAAAAAAAGAATTCGCCGCCACCATGGGGCTGTATGCTGCAGCTGCAGGCG TGTTGGCCGGCGTGGAGAGCCGCCAGGGCTCTATCAAGGGGT | |
| NSUN5 Cloning Rv | AAAAAAAATCTAGATCACTTATCGTCGTCATCCTTGTAATCGCCGGAGCCCCTTG GCACCTCGACCCGTTCAATTACAGCAACGAAGAAGCCACTGCTGAGTGTGGTCTC | |
| NSUN5 mut Cloning Fd | AAAAAAAAGAATTCGCCGCCACCATGGGGCTGTATGCTGCAGCTGCAGGCGTGT TGGCCGGCGTGGAGAGCC | |
| NSUN5 mut Cloning Rv | AAAAAAAACTAGTTCAGGCGTAGTCGGGCACGTCGTAGGGGTAGCCGCTGCCGCC CGGAGCCTCTGCTATGTGCAAGGCGGTGTGCAAGCACCGGCTGCGGCTCTTTGCT | |
| NSUN5 mut PCR fusion A Fd | ATGGGGCTGTATGCTGCAGCTG | |
| NSUN5 mut PCR fusion A Rv | CATGGATGCCAGCAGCTTGGCATCCAGCAGAAAGGCAAAGATCTTCCCTTGGTTCT TCAGAAGAGCAGCCAAGTGACTGGTCTTATTGCC | |

| | |
|---|---|
| NSUN5 mut PCR fusion B Fd | GATCTTTGCCTTTCTGCTGGATGCCAAGCTGCTGGCATCCATGGCCACGCTGCTGG CCCGGGCTGGCGTCTCTTGCTGTGAACTGGCTGAG |
| NSUN5 mut PCR fusion B Rv | TGCAGGAAGGCAGCAGCAGGATGTAGTGGACCTCATGGTAGCGTGG |
| NSUN5 mut PCR fusion C Fd | CATCCTGCTGCTGCCTTCCTGCAGTGGCTCGGGTATGCCGAGC |
| NSUN5 mut PCR fusion C Rv | GGCAGAGGGACACCGTGGAGTAGACGAGCCGCTGCAGGGAAGGG |
| NSUN5 mut PCR fusion D Fd | GTCTACTCCACGGTGTCCCTCTGCCAGGAGGAGAATGAAGACGTGGTGC |
| NSUN5 mut PCR fusion D Rv | ttttttttACTAGTTCACTTgTCGTCGTCgTCCTTGTAgTCgCCgctgCCGCCCGGAGCCTCTG CTATGTGCAAGGCGGTGTGCAAGCACCGGCTGCGGCTCTTTGCTGT |
| **DNA bisulfite sequencing PCR** | |
| NSUN5 BSP Fd | TAAAAATTTAAGAATTAGAGAAGAAGTGG |
| NSUN5 BSP Rv | AAAACAAACTAAATAAAAACTCCCC |
| GAPDH BSP Fd | TTTTTAAAGTTTTTTTGTTTTATTTAAG |
| GAPDH BSP Rv | CCCAAAATCTTAAAACCTAAACTAC |
| OOEP BSP Fd | TGGAGATTTAATAGGAGGTTAAATGAATA |
| OOEP BSP Rv | AATAAAACACCAAAAAATCTCTCAATT |
| **RNA bisulfite sequencing PCR** | |
| NSUN5 C3782 28S rRNA Fd | GTGATTTTTGTTTAGTGTTTTGAATGTTAA |
| NSUN5 C3782 28S rRNA Rv | AAAACCTCCCACTTATTCTACACCTCTC |
| NSUN1 C4447 28S rRNA Fd | TAGTGTTAGGTGGGGAGTTTGATTG |
| NSUN1 C4447 28S rRNA Rv | AAATTCTACTTCACAATAATAAAAAAAACC |
| **ShRNA** | |
| NSUN5 ShRNA 1 Fd | gatccGCTCCGATGATGTAGTTGATTTCAAGAGAA TCAACTACATCATCGGAGTTTTTTACGCGTg |
| NSUN5 ShRNA 1 Rv | aattcACGCGTAAAAAACTCCGATGATGTAGTTGAT TCTCTTGAAATCAACTACATCATCGGAGCg |
| NSUN5 ShRNA 2 Fd | gatccGCCATGAGGTCCACTACATCTTCAAGAGAG ATGTAGTGGACCTCATGGTTTTTTACGCGTg |
| NSUN5 ShRNA 2 Rv | aattcACGCGTAAAAAACCATGAGGTCCACTACATC TCTCTTGAAGATGTAGTGGACCTCATGGCg |
| NSUN5 ShRNA 3 Fd | gatccGCCGATGATGTAGTTGATTATTCAAGAGATA ATCAACTACATCATCGGTTTTTTACGCGTg |
| NSUN5 ShRNA 3 Rv | aattcACGCGTAAAAAACCGATGATGTAGTTGATTA TCTCTTGAATAATCAACTACATCATCGGCg |
| NSUN5 ShRNA 4 Fd | gatccGTGCTAGTGTATGAGTTGTTTCAAGAGAACA ACTCATACACTAGCACTTTTTTACGCGTg |
| NSUN5 ShRNA 4 Rv | attcACGCGTAAAAAAGTGCTAGTGTATGAGTTGTT CTCTTGAAACAACTCATACACTAGCACg |
| **Pyrosequencing** | |
| NSUN5 PCR Pyroseq Fd | Biot-ATGGGGTTGTATGTTGTAGTTG |
| NSUN5 PCR Pyroseq Rv | CCCACCCCRAATTCCTCACT |
| NSUN5 SeqS1 Pyroseq Rv | TCCCCACCCCTACTA |
| NSUN5 SeqS2 Pyroseq Rv | CCCTTAATAAAACCC |
| **Deposited Data** | |
| RNA-Seq: BioProject: PRJNA395552 | https://dataview.ncbi.nlm.nih.gov/object/PRJNA395552?reviewer=60ndb08i1g6na5nkoaaiad9a6o |
| bsRNA-Seq: BioProject: PRJNA395575 | https://www.ncbi.nlm.nih.gov/bioproject/395575 |
| Ribo-Seq: BioProject: PRJNA395570 | https://www.ncbi.nlm.nih.gov/bioproject/395570 |