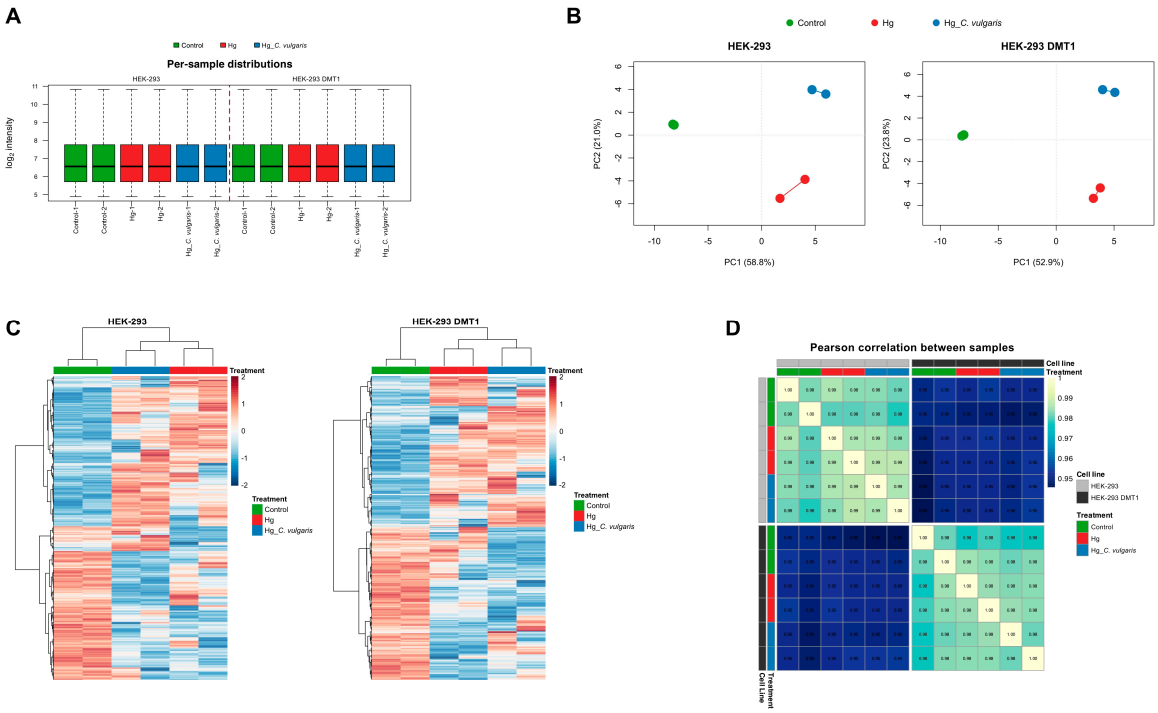



**Supplementary Figure S1.** Global quality assessment of the normalized microarray data. (A) Boxplot of per-sample intensity distributions across HEK-293 and HEK-293 DMT1 cells. Visualization of treatment signature in treatment-associated genes (nominal $p < 0.05$) across HEK-293 and HEK-293 DMT1 cells, using (B) principal component analysis (PCA) and (C) hierarchical clustering analysis. (D) Sample-to-sample Pearson correlation across HEK-293 and HEK-293 DMT1 cells.

**Supplementary Table S1.** Deregulated genes in $Hg^{2+}$-exposed HEK-293 cells

| Symbol | Entrez Gene Name | Affymetrix Gene Code | Expr False Discovery Rate (q-value) | Expr Log Ratio |
|---|---|---|---|---|
| EGR1 | early growth response 1 | TC0500008785.hg.1 | 0 | -1.378 |
| MUC12 | mucin 12, cell surface associated | TC0700008576.hg.1 | 0 | -1.194 |
| ATG16L1 | autophagy related 16 like 1 | TSUnmapped00000048.hg.1 | 0.000017 | -1.009 |
| SLU7 | spliceosome associated SLU7 | TC0500012663.hg.1 | 0.000088 | -0.944 |
| CLPTM1L | CLPTM1 like | TC0500009856.hg.1 | 0.000244 | -0.905 |
| COMMD9 | COMM domain containing 9 | TC1100010546.hg.1 | 0.00104 | -0.852 |
| KIAA0753 | KIAA0753 | TC1700009590.hg.1 | 0.00133 | -0.837 |
| MACF1 | microtubule actin crosslinking factor 1 | TC0100007898.hg.1 | 0.00249 | -0.808 |
| GARS1 | glycyl-tRNA synthetase 1 | TC0700007098.hg.1 | 0.00266 | -0.804 |
| TMEM14B | transmembrane protein 14B | TC0600014069.hg.1 | 0.00347 | -0.792 |
| PTDSS1 | phosphatidylserine synthase 1 | TC0800008295.hg.1 | 0.00424 | -0.777 |
| RET | ret proto-oncogene | TC1000007403.hg.1 | 0.00436 | -0.775 |
| POP1 | POP1 ribonuclease P/MRP subunit | TC0800008330.hg.1 | 0.0056 | -0.758 |
| PGRMC2 | progesterone receptor membrane component 2 | TC0400011823.hg.1 | 0.0064 | -0.751 |
| PLA2G4D | phospholipase A2 group IVD | TC1500009179.hg.1 | 0.00714 | -0.745 |
| HDGFL2 | HDGF like 2 | TC1900006700.hg.1 | 0.00822 | -0.736 |
| NEDD1 | NEDD1 gamma-tubulin ring complex targeting factor | TC1200008544.hg.1 | 0.00966 | -0.727 |
| FADD | Fas associated via death domain | TC1100008262.hg.1 | 0.00966 | -0.726 |
| LRP6 | LDL receptor related protein 6 | TSUnmapped00000166.hg.1 | 0.00966 | -0.726 |
| NIT2 | nitrilase family member 2 | TC0300008144.hg.1 | 0.0103 | -0.723 |
| ARID1B | AT-rich interaction domain 1B | TC0600009961.hg.1 | 0.0109 | -0.718 |
| CBL | Cbl proto-oncogene | TC1100009245.hg.1 | 0.0129 | -0.708 |
| FKBP1A-SDCBP2 | FKBP1A-SDCBP2 readthrough (NMD candidate) | TC2000009966.hg.1 | 0.0132 | -0.707 |
| ROCK1 | Rho associated coiled-coil containing protein kinase 1 | TC1800008219.hg.1 | 0.0171 | -0.693 |
| RBM15B | RNA binding motif protein 15B | TC0300007438.hg.1 | 0.0171 | -0.693 |
| TMEM38B | transmembrane protein 38B | TC0900008318.hg.1 | 0.0172 | -0.692 |
| KIF14 | kinesin family member 14 | TC0100016891.hg.1 | 0.0202 | -0.682 |
| SPTB | spectrin beta, erythrocytic | TC1400009417.hg.1 | 0.0227 | -0.677 |
| AGRP | agouti related neuropeptide | TC1600010636.hg.1 | 0.0254 | -0.665 |

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|---|---|---|---|---|
| LCOR | ligand dependent nuclear receptor corepressor | TC1000008558.hg.1 | 0.0271 | -0.66 |
| ARID4A | AT-rich interaction domain 4A | TC1400007307.hg.1 | 0.0276 | -0.657 |
| HIVEP2 | HIVEP zinc finger 2 | TC0600013409.hg.1 | 0.0276 | -0.656 |
| ELOA3BP (includes others) | elongin A3 family member B, pseudogene | TC1800008609.hg.1 | 0.0281 | -0.655 |
| DUSP7 | dual specificity phosphatase 7 | TC0300011152.hg.1 | 0.0362 | -0.642 |
| NSD2 | nuclear receptor binding SET domain protein 2 | TC0400006546.hg.1 | 0.0363 | -0.642 |
| RPRD1A | regulation of nuclear pre-mRNA domain containing 1A | TC1800008472.hg.1 | 0.0367 | -0.641 |
| BIRC6 | baculoviral IAP repeat containing 6 | TC0200007184.hg.1 | 0.037 | -0.64 |
| MARF1 | meiosis regulator and mRNA stability factor 1 | TC1600009530.hg.1 | 0.0388 | -0.636 |
| SURF4 | surfeit 4 | TSUnmapped00000076.hg.1 | 0.0388 | -0.636 |
| MDH1 | malate dehydrogenase 1 | TC0200007775.hg.1 | 0.0417 | -0.632 |
| DIS3L | DIS3 like exosome 3'-5' exoribonuclease | TC1500007612.hg.1 | 0.0438 | -0.628 |
| CCDC88A | coiled-coil and HOOK domain protein 88A | TC0200012643.hg.1 | 0.0438 | -0.628 |
| EID2 | EP300 interacting inhibitor of differentiation 2 | TC1900010665.hg.1 | 0.0448 | -0.626 |
| OMA1 | OMA1 zinc metallopeptidase | TC0100018446.hg.1 | 0.0463 | -0.625 |
| FAHD1 | fumarylacetoacetate hydrolase domain containing 1 | TC1600006569.hg.1 | 0.0465 | -0.624 |
| GRAMD2A | GRAM domain containing 2A | TC1500009951.hg.1 | 0.0476 | -0.622 |
| EPIST | esophagus epithelial intergenic associated transcript | TC0500012094.hg.1 | 0.0488 | -0.62 |
| COQ8A | coenzyme Q8A | TC0100011812.hg.1 | 0.049 | -0.619 |
| DYNLL1 | dynein light chain LC8-type 1 | TC1200009131.hg.1 | 0.049 | -0.618 |
| UBN2 | ubinuclein 2 | TC0700009333.hg.1 | 0.049 | -0.618 |
| H2BC5 | H2B clustered histone 5 | TC0600007274.hg.1 | 0.049 | -0.617 |
| NPPC | natriuretic peptide C | TC0200016047.hg.1 | 0.049 | -0.617 |
| TM6SF1 | transmembrane 6 superfamily member 1 | TC1500008114.hg.1 | 0.0586 | -0.606 |
| C2CD3 | C2 domain containing 3 centriole elongation regulator | TC1100011606.hg.1 | 0.0587 | -0.605 |
| TBC1D12 | TBC1 domain family member 12 | TC1000008502.hg.1 | 0.0595 | -0.604 |
| HDAC10 | histone deacetylase 10 | TC2200009360.hg.1 | 0.0632 | -0.599 |
| GMPS | guanine monophosphate synthase | TC0300009271.hg.1 | 0.0634 | -0.598 |
| CSNK1G2 | casein kinase 1 gamma 2 | TC1900006565.hg.1 | 0.0661 | -0.596 |
| ABHD12 | abhydrolase domain containing 12, lysophospholipase | TC2000008741.hg.1 | 0.0683 | -0.594 |
| CRYBG3 | crystallin beta-gamma domain containing 3 | TC0300008088.hg.1 | 0.0711 | -0.591 |

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|---|---|---|---|---|
| NSUN2 | NOP2/Sun RNA methyltransferase 2 | TC0500009996.hg.1 | 0.0722 | -0.59 |
| LIMK1 | LIM domain kinase 1 | TC0700007997.hg.1 | 0.0722 | -0.59 |
| SLMAP | sarcolemma associated protein | TC0300013841.hg.1 | 0.0781 | -0.584 |
| LGALS9B | galectin 9B | TC1700010050.hg.1 | 0.0787 | -0.584 |
| ATP5F1EP2 | ATP synthase F1 subunit epsilon pseudogene 2 | TC1300006699.hg.1 | 0.0787 | -0.583 |
| NOTUM | notum, palmitoleoyl-protein carboxylesterase | TC1700012084.hg.1 | 0.0795 | -0.583 |
| CCDC137 | coiled-coil domain containing 137 | TC1700009186.hg.1 | 0.083 | -0.579 |
| PRRC2A | proline rich coiled-coil 2A | TC0600007599.hg.1 | 0.0855 | -0.577 |
| EIF4G2 | eukaryotic translation initiation factor 4 gamma 2 | TC1100010092.hg.1 | 0.0872 | -0.575 |
| WDR7 | WD repeat domain 7 | TC1800007385.hg.1 | 0.0872 | -0.575 |
| AKAP17A | A-kinase anchoring protein 17A | TC0X00006460.hg.1 | 0.0917 | -0.57 |
| SLC16A1 | solute carrier family 16 member 1 | TSUnmapped00000763.hg.1 | 0.0925 | -0.569 |
| FOXC2 | forkhead box C2 | TC1600008738.hg.1 | 0.0925 | -0.568 |
| EOMES | eomesodermin | TC0300010566.hg.1 | 0.0945 | -0.567 |
| OARD1 | O-acyl-ADP-ribose deacylase 1 | TC0600014292.hg.1 | 0.0937 | -0.567 |
| RAX2 | retina and anterior neural fold homeobox 2 | TC1900009308.hg.1 | 0.0945 | -0.566 |
| RSAD2 | radical S-adenosyl methionine domain containing 2 | TC0200016402.hg.1 | 0.0966 | -0.565 |
| GLDC | glycine decarboxylase | TC0900009489.hg.1 | 0.0973 | -0.564 |
| FAM25EP | family with sequence similarity 25 member E | TC1000010507.hg.1 | 0.0973 | -0.564 |
| PLXNA2 | plexin A2 | TC0100017145.hg.1 | 0.0991 | -0.56 |
| NCKAP1 | NCK associated protein 1 | TC0200016757.hg.1 | 0.0991 | -0.56 |
| MFSD2A | MFSD2 lysolipid transporter A, lysophospholipid | TC0100007936.hg.1 | 0.0991 | -0.56 |
| NCAN | neurocan | TC1900007426.hg.1 | 0.0999 | -0.559 |
| DNAH14 | dynein axonemal heavy chain 14 | TC0100011755.hg.1 | 0.0995 | 0.559 |
| ZNF627 | zinc finger protein 627 | TC1900011666.hg.1 | 0.0991 | 0.56 |
| MESD | mesoderm development LRP chaperone | TC1500010907.hg.1 | 0.0985 | 0.563 |
| COL19A1 | collagen type XIX alpha 1 chain | TC0600008462.hg.1 | 0.0973 | 0.564 |
| PPFIBP1 | PPFIB scaffold protein 1 | TC1200007153.hg.1 | 0.0947 | 0.566 |
| STC2 | stanniocalcin 2 | TC0500012870.hg.1 | 0.0925 | 0.568 |
| HYAL1 | hyaluronidase 1 | TC0300011103.hg.1 | 0.0925 | 0.568 |
| SATB1 | SATB homeobox 1 | TC0300013949.hg.1 | 0.0925 | 0.569 |
| MRNIP | MRN complex interacting protein | TC0500013425.hg.1 | 0.0925 | 0.569 |
| HERPUD1 | homocysteine inducible ER protein with ubiquitin like domain 1 | TC1600007982.hg.1 | 0.0924 | 0.57 |
| UTP23 | UTP23 small subunit processome component | TC0800008626.hg.1 | 0.0891 | 0.572 |
| CWC15 | CWC15 spliceosome associated protein | TC1100012012.hg.1 | 0.0891 | 0.572 |
| KIF18B | kinesin family member 18B | TC1700010851.hg.1 | 0.0891 | 0.572 |

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|---|---|---|---|---|
| RPL7A | ribosomal protein L7a | TSUnmapped00000053.hg.1 | 0.0875 | 0.574 |
| HOXA3 | homeobox A3 | TC0700013529.hg.1 | 0.088 | 0.574 |
| ZNF670 | zinc finger protein 670 | TC0100018081.hg.1 | 0.0872 | 0.575 |
| PIF1 | PIF1 5'-to-3' DNA helicase | TC1500009760.hg.1 | 0.0872 | 0.575 |
| TRMT1L | tRNA methyltransferase 1L | TC0100016685.hg.1 | 0.0872 | 0.575 |
| CELA2A | chymotrypsin like elastase 2A | TC0100018177.hg.1 | 0.0872 | 0.576 |
| UBLCP1 | ubiquitin like domain containing CTD phosphatase 1 | TC0500009250.hg.1 | 0.0872 | 0.576 |
| THAP5 | THAP domain containing 5 | TC0700013606.hg.1 | 0.0819 | 0.58 |
| SIGIRR | single Ig and TIR domain containing | TC1100009666.hg.1 | 0.0819 | 0.58 |
| ZNF726 | zinc finger protein 726 | TC1900007619.hg.1 | 0.0818 | 0.581 |
| RPF1 | ribosome production factor 1 homolog | TC0100008884.hg.1 | 0.0795 | 0.582 |
| ZNF780B | zinc finger protein 780B | TSUnmapped00000100.hg.1 | 0.0795 | 0.583 |
| CHMP2A | charged multivesicular body protein 2A | TC1900011635.hg.1 | 0.0787 | 0.584 |
| INSIG2 | insulin induced gene 2 | TC0200009049.hg.1 | 0.0781 | 0.585 |
| PHF20L1 | PHD finger protein 20 like 1 | TC0800008940.hg.1 | 0.0742 | 0.588 |
| ELOVL4 | ELOVL fatty acid elongase 4 | TC0600012379.hg.1 | 0.0726 | 0.589 |
| DDX31 | DEAD-box helicase 31 | TC0900011811.hg.1 | 0.0719 | 0.59 |
| TMEM208 | transmembrane protein 208 | TC1600008153.hg.1 | 0.0717 | 0.591 |
| ZNF875 | zinc finger protein 875 | TC1900011722.hg.1 | 0.0694 | 0.593 |
| NRSN2-AS1 | NRSN2 antisense RNA 1 | TC2000008123.hg.1 | 0.067 | 0.595 |
| ZNF492/ZNF98 | zinc finger protein 492 | TC1900007570.hg.1 | 0.0641 | 0.597 |
| CENPK | centromere protein K | TC0500010928.hg.1 | 0.0634 | 0.598 |
| LIG4 | DNA ligase 4 | TC1300009740.hg.1 | 0.0627 | 0.6 |
| COPRS | coordinator of PRMT5 and differentiation stimulator | TC1700010327.hg.1 | 0.0615 | 0.601 |
| ZNF578 | zinc finger protein 578 | TC1900008702.hg.1 | 0.061 | 0.601 |
| ZNF321P | zinc finger protein 321, pseudogene | TC1900012030.hg.1 | 0.0609 | 0.602 |
| CLIP1 | CAP-Gly domain containing linker protein 1 | TC1200012234.hg.1 | 0.0587 | 0.604 |
| MTHFSD | methenyltetrahydrofolate synthetase domain containing | TC1600011147.hg.1 | 0.0587 | 0.605 |
| S100A1 | S100 calcium binding protein A1 | TC0100010043.hg.1 | 0.0587 | 0.605 |
| FAM76B | family with sequence similarity 76 member B | TC1100012029.hg.1 | 0.0587 | 0.605 |
| PNMA5 | PNMA family member 5 | TC0X00011144.hg.1 | 0.0587 | 0.606 |
| AASDH | aminoadipate-semialdehyde dehydrogenase | TC0400010768.hg.1 | 0.0586 | 0.606 |
| PROP1 | PROP paired-like homeobox 1 | TC0500013002.hg.1 | 0.0569 | 0.608 |
| MED21 | mediator complex subunit 21 | TC1200012612.hg.1 | 0.056 | 0.609 |
| GNA15 | G protein subunit alpha 15 | TC1900006620.hg.1 | 0.0554 | 0.61 |

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|---|---|---|---|---|
| NR6A1 | nuclear receptor subfamily 6 group A member 1 | TC0900011501.hg.1 | 0.0533 | 0.612 |
| ENPP5 | ectonucleotide pyrophosphatase/phosphodiesterase family member 5 | TC0600011943.hg.1 | 0.0523 | 0.613 |
| MSGN1 | mesogenin 1 | TC0200006835.hg.1 | 0.0508 | 0.615 |
| CACNA2D3 | calcium voltage-gated channel auxiliary subunit alpha2delta 3 | TC0300007529.hg.1 | 0.049 | 0.617 |
| ZNF586 | zinc finger protein 586 | TC1900011822.hg.1 | 0.049 | 0.619 |
| XRCC5 | X-ray repair cross complementing 5 | TC0200010729.hg.1 | 0.0488 | 0.619 |
| HMMR | hyaluronan mediated motility receptor | TC0500009320.hg.1 | 0.0488 | 0.62 |
| ACTR6 | actin related protein 6 | TC1200008591.hg.1 | 0.0468 | 0.623 |
| CATSPERE | catsper channel auxiliary subunit epsilon | TC0100012221.hg.1 | 0.0463 | 0.624 |
| ZNF217 | zinc finger protein 217 | TC2000009504.hg.1 | 0.0438 | 0.628 |
| NAGLU | N-acetyl-alpha-glucosaminidase | TC1700012259.hg.1 | 0.0431 | 0.63 |
| TAF15 | TATA-box binding protein associated factor 15 | TC1700007606.hg.1 | 0.0422 | 0.632 |
| STXBP3 | syntaxin binding protein 3 | TC0100009331.hg.1 | 0.0388 | 0.636 |
| H2BC21 | H2B clustered histone 21 | TC0100018483.hg.1 | 0.0388 | 0.637 |
| DLX5 | distal-less homeobox 5 | TC0700011865.hg.1 | 0.0379 | 0.638 |
| SAG | S-antigen visual arrestin | TSUnmapped00000152.hg.1 | 0.0374 | 0.639 |
| U2AF1L4 | U2 small nuclear RNA auxiliary factor 1 like 4 | TC1900011930.hg.1 | 0.0341 | 0.645 |
| OR4D2 | olfactory receptor family 4 subfamily D member 2 | TC1700008423.hg.1 | 0.0317 | 0.649 |
| NCR3LG1 | natural killer cell cytotoxicity receptor 3 ligand 1 | TC1100006966.hg.1 | 0.0316 | 0.649 |
| KNL1 | kinetochore scaffold 1 | TC1500006963.hg.1 | 0.0287 | 0.654 |
| TBC1D8B | TBC1 domain family member 8B | TC0X00008055.hg.1 | 0.0276 | 0.657 |
| SMC5 | structural maintenance of chromosomes 5 | TC0900007520.hg.1 | 0.0276 | 0.658 |
| CBX5 | chromobox 5 | TC1200010833.hg.1 | 0.0271 | 0.659 |
| HES6 | hes family bHLH transcription factor 6 | TC0200016222.hg.1 | 0.0271 | 0.66 |
| PRKAR1A | protein kinase cAMP-dependent type I regulatory subunit alpha | TC1700012296.hg.1 | 0.0263 | 0.662 |
| SLC2A14 | solute carrier family 2 member 14 | TC1200009796.hg.1 | 0.0255 | 0.664 |
| KLHL11 | kelch like family member 11 | TC1700010692.hg.1 | 0.0252 | 0.665 |
| MZT1 | mitotic spindle organizing protein 1 | TC1300009229.hg.1 | 0.0252 | 0.666 |
| RRP36 | ribosomal RNA processing 36 | TC0600014129.hg.1 | 0.0252 | 0.666 |
| TMEM234 | transmembrane protein 234 | TC0100013602.hg.1 | 0.0252 | 0.667 |
| H3C1 | H3 clustered histone 1 | TC0600007262.hg.1 | 0.0238 | 0.67 |
| PRMT6 | protein arginine methyltransferase 6 | TC0100009305.hg.1 | 0.0238 | 0.67 |
| SEMA3C | semaphorin 3C | TC0700011626.hg.1 | 0.024 | 0.67 |
| UBE3A | ubiquitin protein ligase E3A | TC1500008751.hg.1 | 0.0233 | 0.672 |
| DGLUCY | D-glutamate cyclase | TC1400007975.hg.1 | 0.0233 | 0.672 |

| | | | | |
|---|---|---|---|---|
| NTAQ1 | N-terminal glutamine amidase 1 | TC0800012351.hg.1 | 0.0232 | 0.673 |
| LETMD1 | LETM1 domain containing 1 | TC1200007630.hg.1 | 0.0227 | 0.674 |
| OSBPL9 | oxysterol binding protein like 9 | TC0100008289.hg.1 | 0.0227 | 0.675 |
| COL2A1 | collagen type II alpha 1 chain | TC1200010562.hg.1 | 0.0227 | 0.676 |
| GOLGA8K (includes others) | golgin A8 family member K | TC1500006699.hg.1 | 0.0197 | 0.684 |
| SENP5 | SUMO specific peptidase 5 | TC0300010038.hg.1 | 0.0187 | 0.686 |
| ZNF585A | zinc finger protein 585A | TC1900011933.hg.1 | 0.0188 | 0.686 |
| KIF27 | kinesin family member 27 | TC0900010582.hg.1 | 0.0185 | 0.687 |
| ZNF226 | zinc finger protein 226 | TC1900011755.hg.1 | 0.0183 | 0.688 |
| FASTKD3 | FAST kinase domains 3 | TC0500010019.hg.1 | 0.0174 | 0.691 |
| MMACHC | metabolism of cobalamin associated C | TC0100008124.hg.1 | 0.0174 | 0.691 |
| APOBEC3F | apolipoprotein B mRNA editing enzyme catalytic subunit 3F | TC2200009273.hg.1 | 0.0159 | 0.697 |
| LIAS | lipoic acid synthetase | TC0400007285.hg.1 | 0.0159 | 0.698 |
| PHC3 | polyhomeotic homolog 3 | TC0300013090.hg.1 | 0.0123 | 0.711 |
| GNG4 | G protein subunit gamma 4 | TC0100017834.hg.1 | 0.0103 | 0.722 |
| RTL8A | retrotransposon Gag like 8A | TC0X00011399.hg.1 | 0.0084 | 0.734 |
| ABCB4 | ATP binding cassette subfamily B member 4 | TC0700011705.hg.1 | 0.00768 | 0.74 |
| ZNF567 | zinc finger protein 567 | TC1900007950.hg.1 | 0.00714 | 0.744 |
| RAD52 | RAD52 DNA repair protein | TC1200009566.hg.1 | 0.00714 | 0.744 |
| SEC23B | SEC23 homolog B, COPII component | TC2000006833.hg.1 | 0.00539 | 0.763 |
| ZFAT | zinc finger and AT-hook domain containing | TC0800011907.hg.1 | 0.00514 | 0.766 |
| VPS26A | VPS26 retromer complex component A | TC1000007888.hg.1 | 0.00514 | 0.767 |
| NPAS1 | neuronal PAS domain protein 1 | TC1900008404.hg.1 | 0.00411 | 0.782 |
| LIN9 | lin-9 DREAM MuvB core complex component | TC0100017523.hg.1 | 0.00376 | 0.788 |
| PLSCR1 | phospholipid scramblase 1 | TC0300012728.hg.1 | 0.00303 | 0.798 |
| USP45 | ubiquitin specific peptidase 45 | TC0600012656.hg.1 | 0.00248 | 0.809 |
| KLF9 | KLF transcription factor 9 | TC0900010366.hg.1 | 0.00179 | 0.822 |
| SLX4 | SLX4 structure-specific endonuclease subunit | TC1600009199.hg.1 | 0.00141 | 0.833 |
| PEAK1 | pseudopodium enriched atypical kinase 1 | TC1500010109.hg.1 | 0.00133 | 0.838 |
| CTTNBP2NL | CTTNBP2 N-terminal like | TC0100009441.hg.1 | 0.00133 | 0.839 |
| EBF3 | EBF transcription factor 3 | TC1000012270.hg.1 | 0.00127 | 0.843 |
| ADH5 | alcohol dehydrogenase 5 (class III), chi polypeptide | TC0400011402.hg.1 | 0.000552 | 0.875 |
| H2BC26 | H2B clustered histone 26 | TC0100011871.hg.1 | 0.000204 | 0.913 |
| SHANK3 | SH3 and multiple ankyrin repeat domains 3 | TC2200007825.hg.1 | 0.000164 | 0.922 |
| MT-ND2 | NADH dehydrogenase subunit 2 | TC0M00006434.hg.1 | 0.000058 | 0.959 |

| | | | | |
|---|---|---|---|---|
| VRK1 | VRK serine/threonine kinase 1 | TC1400010649.hg.1 | 0.000056 | 0.963 |
| SLC5A10 | solute carrier family 5 member 10 | TC1700007145.hg.1 | 0.00002 | 1 |
| NR2C2 | nuclear receptor subfamily 2 group C member 2 | TC0300006696.hg.1 | 0.000017 | 1.01 |
| CLPTM1 | CLPTM1 regulator of GABA type A receptor forward trafficking | TC1900008297.hg.1 | 0.000004 | 1.055 |
| RPL36A | ribosomal protein L36a | TC0X00011308.hg.1 | 0 | 1.283 |

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**Supplementary Table S2.** Deregulated genes in *C. vulgaris* co-treated $Hg^{2+}$-exposed HEK-293 cells

| Symbol | Entrez Gene Name | Affymetrix Gene Code | Expr False Discovery Rate (q-value) | Expr Log Ratio |
|---|---|---|---|---|
| H2AC25 | H2A clustered histone 25 | TC0100017617.hg.1 | 0 | -1.331 |
| RTL8A | retrotransposon Gag like 8A | TC0X00011399.hg.1 | 0 | -1.243 |
| ZNF429 | zinc finger protein 429 | TC1900011692.hg.1 | 0.000022 | -0.943 |
| GLOD4 | glyoxalase domain containing 4 | TC1700012322.hg.1 | 0.000041 | -0.924 |
| ARHGEF19 | Rho guanine nucleotide exchange factor 19 | TC0100013034.hg.1 | 0.000165 | -0.878 |
| H2BC11 | H2B clustered histone 11 | TC0600011184.hg.1 | 0.000847 | -0.807 |
| MT-ND2 | NADH dehydrogenase subunit 2 | TC0M00006434.hg.1 | 0.00179 | -0.773 |
| UQCC2 | ubiquinol-cytochrome c reductase complex assembly factor 2 | TC0600011560.hg.1 | 0.00366 | -0.736 |
| MIEN1 | migration and invasion enhancer 1 | TC1700010584.hg.1 | 0.00444 | -0.727 |
| UQCRQ | ubiquinol-cytochrome c reductase complex III subunit VII | TC0500008653.hg.1 | 0.00554 | -0.716 |
| ETV7 | ETS variant transcription factor 7 | TC0600011658.hg.1 | 0.00554 | -0.716 |
| GNG4 | G protein subunit gamma 4 | TC0100017834.hg.1 | 0.00562 | -0.714 |
| CAV1 | caveolin 1 | TC0700008873.hg.1 | 0.00919 | -0.695 |
| SKI | SKI proto-oncogene | TC0100006565.hg.1 | 0.0109 | -0.687 |
| CDH16 | cadherin 16 | TC1600010602.hg.1 | 0.0112 | -0.683 |
| ZNF567 | zinc finger protein 567 | TC1900007950.hg.1 | 0.0112 | -0.683 |
| SENP6 | SUMO specific peptidase 6 | TC0600008562.hg.1 | 0.0166 | -0.665 |
| CLASRP | CLK4 associating serine/arginine rich protein | TC1900008303.hg.1 | 0.0175 | -0.66 |
| PHF8 | PHD finger protein 8 | TC0X00009773.hg.1 | 0.0175 | -0.659 |
| EDA | ectodysplasin A | TC0X00007523.hg.1 | 0.0175 | -0.659 |

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|---|---|---|---|---|
| GPAM | glycerol-3-phosphate acyltransferase, mitochondrial | TC1000011839.hg.1 | 0.0185 | -0.656 |
| DRG2 | developmentally regulated GTP binding protein 2 | TC1700007099.hg.1 | 0.0188 | -0.655 |
| CHMP2A | charged multivesicular body protein 2A | TC1900011635.hg.1 | 0.0197 | -0.652 |
| POMP | proteasome maturation protein | TC1300006729.hg.1 | 0.0223 | -0.644 |
| H4C4 | H4 clustered histone 4 | TC0600011134.hg.1 | 0.0238 | -0.64 |
| IFFO1 | intermediate filament family orphan 1 | TC1200009740.hg.1 | 0.025 | -0.636 |
| RPL9P7 | ribosomal protein L9 pseudogene 7 | TC0X00009255.hg.1 | 0.0252 | -0.635 |
| TNFRSF10C | TNF receptor superfamily member 10c | TC0800007007.hg.1 | 0.0285 | -0.628 |
| CNEP1R1 | CTD nuclear envelope phosphatase 1 regulatory subunit 1 | TC1600007803.hg.1 | 0.0285 | -0.627 |
| VPS26A | VPS26 retromer complex component A | TC1000007888.hg.1 | 0.0285 | -0.627 |
| RPL9 | ribosomal protein L9 | TC1500010237.hg.1 | 0.0309 | -0.621 |
| LIAS | lipoic acid synthetase | TC0400007285.hg.1 | 0.0319 | -0.619 |
| HYOU1 | hypoxia up-regulated 1 | TSUnmapped00000440.hg.1 | 0.0329 | -0.616 |
| IHH | Indian hedgehog signaling molecule | TC0200015759.hg.1 | 0.0386 | -0.609 |
| MED21 | mediator complex subunit 21 | TC1200012612.hg.1 | 0.0386 | -0.608 |
| ZNF322 | zinc finger protein 322 | TC0600011162.hg.1 | 0.0394 | -0.607 |
| NTAN1 | N-terminal asparagine amidase | TC1600009512.hg.1 | 0.0412 | -0.605 |
| TXNDC17 | thioredoxin domain containing 17 | TC1700006702.hg.1 | 0.0418 | -0.603 |
| DUSP5 | dual specificity phosphatase 5 | TC1000008891.hg.1 | 0.0418 | -0.603 |
| BRPF3 | bromodomain and PHD finger containing 3 | TC0600007832.hg.1 | 0.0429 | -0.601 |

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|---|---|---|---|---|
| MMACHC | metabolism of cobalamin associated C | TC0100008124.hg.1 | 0.0427 | -0.601 |
| HAP1 | huntingtin associated protein 1 | TC1700010684.hg.1 | 0.0434 | -0.6 |
| ZNF92 | zinc finger protein 92 | TC0700007807.hg.1 | 0.0446 | -0.598 |
| EXOC2 | exocyst complex component 2 | TC0600010375.hg.1 | 0.0446 | -0.597 |
| SLC4A4 | solute carrier family 4 member 4 | TC0400007799.hg.1 | 0.0446 | -0.597 |
| SYNE1 | spectrin repeat containing nuclear envelope protein 1 | TC0600013588.hg.1 | 0.0489 | -0.592 |
| CHRNA4 | cholinergic receptor nicotinic alpha 4 subunit | TC2000010033.hg.1 | 0.0489 | -0.592 |
| UBXN2B | UBX domain protein 2B | TC0800007735.hg.1 | 0.0502 | -0.59 |
| IL17C | interleukin 17C | TC1600008832.hg.1 | 0.0501 | -0.59 |
| SAMM50 | SAMM50 sorting and assembly machinery component | TC2200009282.hg.1 | 0.0598 | -0.58 |
| SETDB2 | SET domain bifurcated histone lysine methyltransferase 2 | TC1300007164.hg.1 | 0.0664 | -0.574 |
| ABCB4 | ATP binding cassette subfamily B member 4 | TC0700011705.hg.1 | 0.0665 | -0.574 |
| CTTNBP2NL | CTTNBP2 N-terminal like | TC0100009441.hg.1 | 0.0678 | -0.572 |
| MAGEA12 | MAGE family member A12 | TC0X00008752.hg.1 | 0.0678 | -0.571 |
| DNAH14 | dynein axonemal heavy chain 14 | TC0100011755.hg.1 | 0.0713 | -0.568 |
| LANCL1 | LanC like glutathione S-transferase 1 | TC0200015608.hg.1 | 0.0731 | -0.567 |
| NR2C2 | nuclear receptor subfamily 2 group C member 2 | TC0300006696.hg.1 | 0.0735 | -0.566 |
| KNL1 | kinetochore scaffold 1 | TC1500006963.hg.1 | 0.0742 | -0.565 |
| RPS4Y1 | ribosomal protein S4 Y-linked 1 | TC0Y00007322.hg.1 | 0.077 | -0.563 |
| TMEM87A | transmembrane protein 87A | TC1500009185.hg.1 | 0.077 | -0.563 |
| TLNRD1 | talin rod domain containing 1 | TC1500008052.hg.1 | 0.0877 | -0.554 |

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|---|---|---|---|---|
| ASTE1 | asteroid structure-specific endonuclease 1 | TC0300012435.hg.1 | 0.0937 | -0.55 |
| CAV2 | caveolin 2 | TC0700008870.hg.1 | 0.0945 | 0.549 |
| SYAP1 | synapse associated protein 1 | TC0X00006697.hg.1 | 0.0937 | 0.55 |
| ZBTB46 | zinc finger and BTB domain containing 46 | TC2000009833.hg.1 | 0.0908 | 0.552 |
| ZNF208 | zinc finger protein 208 | TC1900010164.hg.1 | 0.081 | 0.558 |
| SLC16A1 | solute carrier family 16 member 1 | TSUnmapped00000763.hg.1 | 0.0814 | 0.558 |
| ZYX | zyxin | TC0700009493.hg.1 | 0.0786 | 0.56 |
| LPP | LIM domain containing preferred translocation partner in lipoma | TC0300009815.hg.1 | 0.0786 | 0.56 |
| HLA-DRB5 | major histocompatibility complex, class II, DR beta 5 | TC0600011491.hg.1 | 0.0786 | 0.561 |
| DUSP16 | dual specificity phosphatase 16 | TSUnmapped00000144.hg.1 | 0.0786 | 0.561 |
| TRIP11 | thyroid hormone receptor interactor 11 | TC1400010778.hg.1 | 0.0785 | 0.561 |
| CACFD1 | calcium channel flower domain containing 1 | TSUnmapped00000519.hg.1 | 0.0742 | 0.565 |
| DYNC2LI1 | dynein cytoplasmic 2 light intermediate chain 1 | TC0200007401.hg.1 | 0.0735 | 0.566 |
| AHSA2P | activator of HSP90 ATPase homolog 2, pseudogene | TC0200007717.hg.1 | 0.0709 | 0.568 |
| CYP11B1 | cytochrome P450 family 11 subfamily B member 1 | TC0800012092.hg.1 | 0.0664 | 0.575 |
| POGZ | pogo transposable element derived with ZNF domain | TC0100015791.hg.1 | 0.0629 | 0.577 |
| TMEM132A | transmembrane protein 132A | TC1100007786.hg.1 | 0.057 | 0.582 |
| ST6GALNAC3 | ST6 N-acetylgalactosaminide alpha-2,6-sialyltransferase 3 | TC0100008779.hg.1 | 0.0563 | 0.583 |

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|---|---|---|---|---|
| NSD2 | nuclear receptor binding SET domain protein 2 | TC0400006546.hg.1 | 0.0549 | 0.585 |
| NDUFA10 | NADH:ubiquinone oxidoreductase subunit A10 | TSUnmapped00000163.hg.1 | 0.0522 | 0.587 |
| MORN3 | MORN repeat containing 3 | TC1200012210.hg.1 | 0.0501 | 0.59 |
| LMO1 | LIM domain only 1 | TC1100010026.hg.1 | 0.0489 | 0.592 |
| C1QTNF3-AMACR | C1QTNF3-AMACR readthrough (NMD candidate) | TC0500013296.hg.1 | 0.0486 | 0.593 |
| H3C13 | H3 clustered histone 13 | TC0100015698.hg.1 | 0.0463 | 0.595 |
| POLR3D | RNA polymerase III subunit D | TC0800006978.hg.1 | 0.0442 | 0.599 |
| CPE | carboxypeptidase E | TC0400009223.hg.1 | 0.0434 | 0.6 |
| GAS2L1 | growth arrest specific 2 like 1 | TC2200007014.hg.1 | 0.0418 | 0.603 |
| CFAP61 | cilia and flagella associated protein 61 | TC2000006868.hg.1 | 0.0404 | 0.606 |
| KAT2A | lysine acetyltransferase 2A | TC1700012415.hg.1 | 0.0361 | 0.612 |
| FKBP1A-SDCBP2 | FKBP1A-SDCBP2 readthrough (NMD candidate) | TC2000009966.hg.1 | 0.0328 | 0.617 |
| FHIP1A | FHF complex subunit HOOK interacting protein 1A | TC0400009001.hg.1 | 0.0319 | 0.618 |
| TMEM106B | transmembrane protein 106B | TC0700006727.hg.1 | 0.0308 | 0.621 |
| STOX2 | storkhead box 2 | TC0400012868.hg.1 | 0.0309 | 0.621 |
| DMXL1 | Dmx like 1 | TC0500008431.hg.1 | 0.0308 | 0.622 |
| SNCG | synuclein gamma | TC1000008320.hg.1 | 0.0298 | 0.623 |
| LRRC34 | leucine rich repeat containing 34 | TC0300013083.hg.1 | 0.0297 | 0.624 |
| ARRB1 | arrestin beta 1 | TC1100011643.hg.1 | 0.0297 | 0.624 |
| IRX2 | iroquois homeobox 2 | TC0500009909.hg.1 | 0.0297 | 0.624 |
| FGFR1OP2 | FGFR1 oncogene partner 2 | TC1200007137.hg.1 | 0.0285 | 0.627 |
| MLXIP | MLX interacting protein | TSUnmapped00000502.hg.1 | 0.0257 | 0.634 |
| ABR | ABR activator of RhoGEF and GTPase | TC1700012324.hg.1 | 0.0249 | 0.636 |
| LILRA5 | leukocyte immunoglobulin like receptor A5 | TC1900012040.hg.1 | 0.0249 | 0.637 |

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|---|---|---|---|---|
| PPME1 | protein phosphatase methylesterase 1 | TC1100008409.hg.1 | 0.0249 | 0.637 |
| TBCEL | tubulin folding cofactor E like | TC1100009301.hg.1 | 0.0244 | 0.639 |
| DEGS2 | delta 4-desaturase, sphingolipid 2 | TC1400010182.hg.1 | 0.0238 | 0.64 |
| PPP1R26 | protein phosphatase 1 regulatory subunit 26 | TC0900009163.hg.1 | 0.0238 | 0.64 |
| RAB31 | RAB31, member RAS oncogene family | TC1800006650.hg.1 | 0.0223 | 0.644 |
| SLC38A6 | solute carrier family 38 member 6 | TC1400010616.hg.1 | 0.0209 | 0.648 |
| UBN2 | ubinuclein 2 | TC0700009333.hg.1 | 0.02 | 0.65 |
| GAD2 | glutamate decarboxylase 2 | TC1000007068.hg.1 | 0.0197 | 0.652 |
| FADD | Fas associated via death domain | TC1100008262.hg.1 | 0.0197 | 0.652 |
| PTGIR | prostaglandin I2 receptor | TC1900010994.hg.1 | 0.0197 | 0.653 |
| GTPBP1 | GTP binding protein 1 | TC2200009267.hg.1 | 0.0175 | 0.66 |
| PLEKHG4B | pleckstrin homology and RhoGEF domain containing G4B | TC0500006435.hg.1 | 0.0175 | 0.66 |
| TAGAP | T cell activation RhoGTPase activating protein | TC0600013743.hg.1 | 0.017 | 0.663 |
| TAS2R31 | taste 2 receptor member 31 | TC1200012761.hg.1 | 0.0166 | 0.664 |
| ZNF641 | zinc finger protein 641 | TC1200010577.hg.1 | 0.0163 | 0.666 |
| ANKRD18A | ankyrin repeat domain 18A | TC0900010056.hg.1 | 0.0159 | 0.668 |
| STX16-NPEPL1 | STX16-NPEPL1 readthrough (NMD candidate) | TC2000009947.hg.1 | 0.0115 | 0.681 |
| TMEM38B | transmembrane protein 38B | TC0900008318.hg.1 | 0.0112 | 0.683 |
| TTC24 | tetratricopeptide repeat domain 24 | TC0100010184.hg.1 | 0.011 | 0.686 |
| ZNF268 | zinc finger protein 268 | TC1200012737.hg.1 | 0.0109 | 0.688 |
| RAD54L | RAD54 like | TC0100008150.hg.1 | 0.00579 | 0.713 |
| POLR2A | RNA polymerase II subunit A | TC1700006751.hg.1 | 0.005 | 0.721 |
| PLA2G4F | phospholipase A2 group IVF | TC1500009181.hg.1 | 0.00444 | 0.727 |

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|---|---|---|---|---|
| L3HYPDH | trans-L-3-hydroxyproline dehydratase | TC1400010757.hg.1 | 0.00406 | 0.732 |
| TBC1D3 (includes others) | TBC1 domain family member 3 | TC1700012241.hg.1 | 0.00366 | 0.737 |
| MUC12 | mucin 12, cell surface associated | TC0700008576.hg.1 | 0.00366 | 0.738 |
| KATNIP | katanin interacting protein | TC1600007317.hg.1 | 0.00304 | 0.746 |
| ZNF780B | zinc finger protein 780B | TSUnmapped00000206.hg.1 | 0.0029 | 0.748 |
| NIT2 | nitrilase family member 2 | TC0300008144.hg.1 | 0.0029 | 0.749 |
| SMIM11 | small integral membrane protein 11 | TC2100008499.hg.1 | 0.0028 | 0.751 |
| KPNA3 | karyopherin subunit alpha 3 | TC1300008927.hg.1 | 0.00257 | 0.755 |
| ATG16L1 | autophagy related 16 like 1 | TSUnmapped00000048.hg.1 | 0.00252 | 0.756 |
| ADGRL3 | adhesion G protein-coupled receptor L3 | TC0400012797.hg.1 | 0.00233 | 0.76 |
| FAHD1 | fumarylacetoacetate hydrolase domain containing 1 | TC1600006569.hg.1 | 0.002 | 0.766 |
| BRI3BP | BRI3 binding protein | TC1200009300.hg.1 | 0.00179 | 0.772 |
| SLMAP | sarcolemma associated protein | TC0300013841.hg.1 | 0.00129 | 0.786 |
| FAM25EP | family with sequence similarity 25 member E | TC1000010507.hg.1 | 0.00114 | 0.793 |
| NUBPL | NUBP iron-sulfur cluster assembly factor, mitochondrial | TC1400010592.hg.1 | 0.00105 | 0.798 |
| ZDHHC3 | zDHHC palmitoyltransferase 3 | TSUnmapped00000569.hg.1 | 0.00103 | 0.8 |
| LRP6 | LDL receptor related protein 6 | TSUnmapped00000166.hg.1 | 0.000847 | 0.807 |
| OSMR | oncostatin M receptor | TC0500007201.hg.1 | 0.000779 | 0.816 |
| OARD1 | O-acyl-ADP-ribose deacylase 1 | TC0600014292.hg.1 | 0.000662 | 0.822 |
| TBC1D12 | TBC1 domain family member 12 | TC1000008502.hg.1 | 0.000662 | 0.823 |
| TMEM175 | transmembrane protein 175 | TC0400006487.hg.1 | 0.000649 | 0.826 |
| KIAA0753 | KIAA0753 | TC1700009590.hg.1 | 0.000473 | 0.838 |

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|---|---|---|---|---|
| WNK1 | WNK lysine deficient protein kinase 1 | TC1200006454.hg.1 | 0.000224 | 0.865 |
| SLU7 | spliceosome associated SLU7 | TC0500012663.hg.1 | 0.000091 | 0.898 |
| HDAC10 | histone deacetylase 10 | TC2200009360.hg.1 | 0.000006 | 0.99 |
| PBRM1 | polybromo 1 | TC0300011175.hg.1 | 0 | 1.154 |
| HNRNPH2 | heterogeneous nuclear ribonucleoprotein H2 | TC0X00011309.hg.1 | 0 | 1.303 |

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**Supplementary Table S3.** Deregulated genes in $Hg^{2+}$-exposed HEK-293 DMT1 cells

| Symbol | Entrez Gene Name | Affymetrix Gene Code | Expr False Discovery Rate (q-value) | Expr Log Ratio |
|---|---|---|---|---|
| CCAR1 | cell division cycle and apoptosis regulator 1 | TC1000007866.hg.1 | 0 | -1.59 |
| RPL41 | ribosomal protein L41 | TC2200008578.hg.1 | 0.000016 | -1.052 |
| PCDHB7 | protocadherin beta 7 | TC0500008880.hg.1 | 0.000034 | -1.018 |
| SENP6 | SUMO specific peptidase 6 | TC0600008562.hg.1 | 0.000041 | -1.005 |
| SCAF8 | SR-related CTD associated factor 8 | TC0600014193.hg.1 | 0.000059 | -0.991 |
| ZNF205 | zinc finger protein 205 | TC1600006664.hg.1 | 0.000067 | -0.985 |
| ANTKMT | adenine nucleotide translocase lysine methyltransferase | TC1600006493.hg.1 | 0.000124 | -0.957 |
| ICAM1 | intercellular adhesion molecule 1 | TC1900006977.hg.1 | 0.000457 | -0.904 |
| UQCRB | ubiquinol-cytochrome c reductase binding protein | TC0800011171.hg.1 | 0.000564 | -0.896 |
| GPR21 | G protein-coupled receptor 21 | TC0900008684.hg.1 | 0.000901 | -0.874 |
| LY6E | lymphocyte antigen 6 family member E | TC0800012372.hg.1 | 0.000985 | -0.869 |
| IFNL1 | interferon lambda 1 | TC1900008051.hg.1 | 0.00115 | -0.861 |
| WDR83OS | WD repeat domain 83 opposite strand | TC1900011890.hg.1 | 0.00166 | -0.843 |
| SCN8A | sodium voltage-gated channel alpha subunit 8 | TC1200010711.hg.1 | 0.0018 | -0.838 |
| MUC12 | mucin 12, cell surface associated | TC0700008576.hg.1 | 0.0018 | -0.838 |
| LYAR | Ly1 antibody reactive | TC0400009856.hg.1 | 0.002 | -0.834 |
| TNFRSF10C | TNF receptor superfamily member 10c | TC0800007007.hg.1 | 0.00219 | -0.829 |
| RBM4B | RNA binding motif protein 4B | TC1100011299.hg.1 | 0.00314 | -0.81 |
| LLPH | LLP homolog, long-term synaptic facilitation factor | TC1200012818.hg.1 | 0.00367 | -0.804 |
| BMERB1 | bMERB domain containing 1 | TC1600011358.hg.1 | 0.00367 | -0.803 |
| RPL36A | ribosomal protein L36a | TC0X00011308.hg.1 | 0.00429 | -0.795 |
| PUDP | pseudouridine 5'-phosphatase | TC0X00009007.hg.1 | 0.00736 | -0.768 |
| TFR2 | transferrin receptor 2 | TC0700012010.hg.1 | 0.00736 | -0.767 |
| PSMD13 | proteasome 26S subunit, non-ATPase 13 | TC1100006441.hg.1 | 0.00739 | -0.767 |
| NKX6-1 | NK6 homeobox 1 | TC0400011217.hg.1 | 0.00783 | -0.761 |

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|---|---|---|---|---|
| CNGA3 | cyclic nucleotide gated channel subunit alpha 3 | TC0200008566.hg.1 | 0.00794 | -0.76 |
| CLIC3 | chloride intracellular channel 3 | TC0900012024.hg.1 | 0.0095 | -0.752 |
| CLEC2D | C-type lectin domain family 2 member D | TC1200006771.hg.1 | 0.0108 | -0.746 |
| RASSF10 | Ras association domain family member 10 | TC1100006896.hg.1 | 0.0118 | -0.741 |
| SLC16A1 | solute carrier family 16 member 1 | TSUnmapped00000178.hg.1 | 0.0122 | -0.739 |
| SLC22A7 | solute carrier family 22 member 7 | TC0600008078.hg.1 | 0.0124 | -0.737 |
| GPC3 | glypican 3 | TC0X00010851.hg.1 | 0.0124 | -0.736 |
| BBLN | bublin coiled coil protein | TC0900008849.hg.1 | 0.0125 | -0.735 |
| SLC25A41 | solute carrier family 25 member 41 | TC1900009430.hg.1 | 0.0144 | -0.726 |
| PCDHB9 | protocadherin beta 9 | TC0500013245.hg.1 | 0.0149 | -0.724 |
| MVB12B | multivesicular body subunit 12B | TC0900008776.hg.1 | 0.0161 | -0.72 |
| RPL9 | ribosomal protein L9 | TC1500010237.hg.1 | 0.0166 | -0.718 |
| PGAM1 | phosphoglycerate mutase 1 | TC1200011543.hg.1 | 0.017 | -0.716 |
| PRM2 | protamine 2 | TC1600009399.hg.1 | 0.0187 | -0.71 |
| SULT1A1 | sulfotransferase family 1A member 1 | TC1600009870.hg.1 | 0.0188 | -0.709 |
| CLASRP | CLK4 associating serine/arginine rich protein | TC1900008303.hg.1 | 0.0196 | -0.706 |
| MORF4L1 | mortality factor 4 like 1 | TC1500007986.hg.1 | 0.0202 | -0.702 |
| SPTB | spectrin beta, erythrocytic | TC1400009417.hg.1 | 0.0217 | -0.699 |
| NBPF20 | NBPF member 20 | TC0100015580.hg.1 | 0.0224 | -0.697 |
| SMG1 | SMG1 nonsense mediated mRNA decay associated PI3K related kinase | TC1600009620.hg.1 | 0.0241 | -0.692 |
| GGT2P | gamma-glutamyltransferase 2, pseudogene | TC2200008078.hg.1 | 0.0264 | -0.686 |
| RTP2 | receptor transporter protein 2 | TC0300013470.hg.1 | 0.0294 | -0.68 |
| TRMT61B | tRNA methyltransferase 61B | TC0200012129.hg.1 | 0.0294 | -0.679 |
| POLR1C | RNA polymerase I and III subunit C | TC0600008095.hg.1 | 0.0295 | -0.678 |
| PIWIL1 | piwi like RNA-mediated gene silencing 1 | TC1200009399.hg.1 | 0.03 | -0.677 |
| PSMC1 | proteasome 26S subunit, ATPase 1 | TC0300007739.hg.1 | 0.0332 | -0.671 |

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|---|---|---|---|---|
| HSPE1 | heat shock protein family E (Hsp10) member 1 | TC0200016584.hg.1 | 0.034 | -0.67 |
| MYADML2 | myeloid associated differentiation marker like 2 | TC1700012485.hg.1 | 0.0342 | -0.669 |
| H4C9 | H4 clustered histone 9 | TC0600014084.hg.1 | 0.0344 | -0.668 |
| CLDN18 | claudin 18 | TC0300008933.hg.1 | 0.0366 | -0.664 |
| PYCARD | PYD and CARD domain containing | TC1600010011.hg.1 | 0.0417 | -0.657 |
| H2AC25 | H2A clustered histone 25 | TC0100017617.hg.1 | 0.0417 | -0.657 |
| HYOU1 | hypoxia up-regulated 1 | TSUnmapped00000517.hg.1 | 0.0425 | -0.656 |
| OMA1 | OMA1 zinc metallopeptidase | TC0100018446.hg.1 | 0.0427 | -0.655 |
| SLC5A10 | solute carrier family 5 member 10 | TC1700007145.hg.1 | 0.0437 | -0.653 |
| MELTF | melanotransferrin | TC0300013733.hg.1 | 0.044 | -0.653 |
| ZNF880 | zinc finger protein 880 | TC1900008696.hg.1 | 0.0456 | -0.65 |
| PLSCR2 | phospholipid scramblase 2 | TC0300014061.hg.1 | 0.0489 | -0.646 |
| EIF4G2 | eukaryotic translation initiation factor 4 gamma 2 | TC1100010092.hg.1 | 0.049 | -0.646 |
| NPM3 | nucleophosmin/nucleoplasmin 3 | TC1000011658.hg.1 | 0.0502 | -0.644 |
| USP40 | ubiquitin specific peptidase 40 | TC0200016093.hg.1 | 0.0502 | -0.644 |
| RAD54L | RAD54 like | TC0100008150.hg.1 | 0.0502 | -0.643 |
| CYP4F2 | cytochrome P450 family 4 subfamily F member 2 | TC1900009893.hg.1 | 0.0502 | -0.643 |
| CXCL1 | C-X-C motif chemokine ligand 1 | TC0400007840.hg.1 | 0.0505 | -0.642 |
| LSM5 | LSM5 homolog, U6 small nuclear RNA and mRNA degradation associated | TC0700010678.hg.1 | 0.0502 | -0.642 |
| GLOD4 | glyoxalase domain containing 4 | TC1700012322.hg.1 | 0.054 | -0.637 |
| RPL41P2 | ribosomal protein L41 pseudogene 2 | TC1500006663.hg.1 | 0.054 | -0.637 |
| MTHFD2L | methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2 like | TC0400007848.hg.1 | 0.0544 | -0.635 |
| TPSG1 | tryptase gamma 1 | TC1600009021.hg.1 | 0.0544 | -0.635 |
| ZBED5 | zinc finger BED-type containing 5 | TC1100013144.hg.1 | 0.0602 | -0.629 |
| RPS6KA6 | ribosomal protein S6 kinase A6 | TC0X00010196.hg.1 | 0.0609 | -0.628 |

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|---|---|---|---|---|
| UBE2A | ubiquitin conjugating enzyme E2 A | TC0X00008253.hg.1 | 0.0633 | -0.625 |
| TDG | thymine DNA glycosylase | TC1200008669.hg.1 | 0.0633 | -0.625 |
| FGF8 | fibroblast growth factor 8 | TC1000011657.hg.1 | 0.0633 | -0.625 |
| DNAJC9 | DnaJ heat shock protein family (Hsp40) member C9 | TC1000012564.hg.1 | 0.0646 | -0.623 |
| SAMM50 | SAMM50 sorting and assembly machinery component | TC2200009282.hg.1 | 0.0648 | -0.622 |
| NCR3 | natural cytotoxicity triggering receptor 3 | TC0600011439.hg.1 | 0.0675 | -0.617 |
| PI4KB | phosphatidylinositol 4-kinase beta | TC0100015781.hg.1 | 0.0706 | -0.614 |
| DNAH14 | dynein axonemal heavy chain 14 | TC0100011755.hg.1 | 0.0706 | -0.614 |
| CRYBG1 | crystallin beta-gamma domain containing 1 | TC0600008981.hg.1 | 0.0726 | -0.612 |
| ZNF777 | zinc finger protein 777 | TC0700012995.hg.1 | 0.0726 | -0.611 |
| VWF | von Willebrand factor | TC1200009705.hg.1 | 0.0789 | -0.606 |
| EEF1E1-BLOC1S5 | EEF1E1-BLOC1S5 readthrough (NMD candidate) | TC0600014237.hg.1 | 0.0804 | -0.605 |
| PITHD1 | PITH domain containing 1 | TC0100007333.hg.1 | 0.0804 | -0.605 |
| NUP88 | nucleoporin 88 | TC1700012340.hg.1 | 0.0804 | -0.604 |
| LINC00473 | long intergenic non-protein coding RNA 473 | TC0600014369.hg.1 | 0.0804 | -0.604 |
| GAD2 | glutamate decarboxylase 2 | TC1000007068.hg.1 | 0.0824 | -0.602 |
| ASTL | astacin like metalloendopeptidase | TC0200013510.hg.1 | 0.0855 | -0.6 |
| TPSD1 | tryptase delta 1 | TC1600006530.hg.1 | 0.0953 | -0.593 |
| HMHB1 | histocompatibility minor HB-1 | TC0500008975.hg.1 | 0.0953 | -0.593 |
| SLC35A2 | solute carrier family 35 member A2 | TC0X00009636.hg.1 | 0.0991 | 0.59 |
| ZNF358 | zinc finger protein 358 | TC1900011652.hg.1 | 0.0964 | 0.592 |
| KATNIP | katanin interacting protein | TC1600007317.hg.1 | 0.0953 | 0.593 |
| PIAS1 | protein inhibitor of activated STAT 1 | TC1500007659.hg.1 | 0.0944 | 0.594 |
| CIMIP5 | ciliary microtubule inner protein 5 | TC0200006714.hg.1 | 0.0915 | 0.596 |
| MLLT1 | MLLT1 super elongation complex subunit | TC1900009417.hg.1 | 0.0903 | 0.597 |
| ESS2 | ess-2 spliceosome associated protein | TC2200007973.hg.1 | 0.0894 | 0.597 |

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|---|---|---|---|---|
| SARDH | sarcosine dehydrogenase | TC0900011860.hg.1 | 0.0855 | 0.6 |
| FOXJ1 | forkhead box J1 | TC1700011786.hg.1 | 0.0804 | 0.604 |
| JPH4 | junctophilin 4 | TC1400010719.hg.1 | 0.0804 | 0.604 |
| CSKMT | citrate synthase lysine methyltransferase | TC1100007865.hg.1 | 0.0742 | 0.61 |
| INO80D | INO80 complex subunit D | TC0200015506.hg.1 | 0.0726 | 0.612 |
| DTNA | dystrobrevin alpha | TC1800007059.hg.1 | 0.07 | 0.615 |
| FAHD1 | fumarylacetoacetate hydrolase domain containing 1 | TC1600006569.hg.1 | 0.07 | 0.615 |
| CACNB4 | calcium voltage-gated channel auxiliary subunit beta 4 | TC0200014620.hg.1 | 0.0686 | 0.616 |
| LYSET | lysosomal enzyme trafficking factor | TC1400010640.hg.1 | 0.0691 | 0.616 |
| POGZ | pogo transposable element derived with ZNF domain | TC0100015791.hg.1 | 0.0664 | 0.618 |
| DEPDC1 | DEP domain containing 1 | TC0100014543.hg.1 | 0.0664 | 0.619 |
| PPP1R27 | protein phosphatase 1 regulatory subunit 27 | TC1700012072.hg.1 | 0.0664 | 0.619 |
| RABL3 | RAB, member of RAS oncogene family like 3 | TC0300012157.hg.1 | 0.0664 | 0.619 |
| IQSEC2 | IQ motif and Sec7 domain ArfGEF 2 | TC0X00009755.hg.1 | 0.0663 | 0.62 |
| ZNF354C | zinc finger protein 354C | TC0500009678.hg.1 | 0.0664 | 0.62 |
| IGFBP5 | insulin like growth factor binding protein 5 | TC0200015678.hg.1 | 0.0663 | 0.621 |
| EEF2KMT | eukaryotic elongation factor 2 lysine methyltransferase | TC1600009260.hg.1 | 0.0648 | 0.622 |
| AK2 | adenylate kinase 2 | TC0100013641.hg.1 | 0.0586 | 0.63 |
| SCGB1D1 | secretoglobin family 1D member 1 | TC1100007837.hg.1 | 0.0583 | 0.631 |
| NR2F2 | nuclear receptor subfamily 2 group F member 2 | TC1500008442.hg.1 | 0.0571 | 0.632 |
| GPAM | glycerol-3-phosphate acyltransferase, mitochondrial | TC1000011839.hg.1 | 0.056 | 0.634 |
| TUBB4A | tubulin beta 4A class IVa | TC1900009433.hg.1 | 0.0542 | 0.636 |
| AAK1 | AP2 associated kinase 1 | TC0200012961.hg.1 | 0.054 | 0.637 |
| SEZ6L | seizure related 6 homolog like | TC2200006945.hg.1 | 0.0537 | 0.638 |
| SLC26A2 | solute carrier family 26 member 2 | TC0500009076.hg.1 | 0.0525 | 0.639 |
| TBCD | tubulin folding cofactor D | TC1700009284.hg.1 | 0.0525 | 0.639 |
| PGPEP1 | pyroglutamyl-peptidase I | TC1900007382.hg.1 | 0.0502 | 0.642 |

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|---|---|---|---|---|
| MAF | MAF bZIP transcription factor | TC1600010951.hg.1 | 0.0471 | 0.649 |
| TP53BP2 | tumor protein p53 binding protein 2 | TC0100017451.hg.1 | 0.0447 | 0.652 |
| ARHGAP1 | Rho GTPase activating protein 1 | TC1100010712.hg.1 | 0.0433 | 0.654 |
| TBC1D20 | TBC1 domain family member 20 | TC2000008130.hg.1 | 0.0425 | 0.656 |
| CABYR | calcium binding tyrosine phosphorylation regulated | TC1800006905.hg.1 | 0.0379 | 0.662 |
| DNAJC14 | DnaJ heat shock protein family (Hsp40) member C14 | TC1200012800.hg.1 | 0.0379 | 0.663 |
| ZNF445 | zinc finger protein 445 | TC0300010889.hg.1 | 0.0359 | 0.666 |
| TNFRSF14-AS1 | TNFRSF14 antisense RNA 1 | TC0100012539.hg.1 | 0.0354 | 0.667 |
| DNAJA4 | DnaJ heat shock protein family (Hsp40) member A4 | TC1500007967.hg.1 | 0.0342 | 0.669 |
| UBXN1 | UBX domain protein 1 | TC1100011094.hg.1 | 0.0318 | 0.674 |
| POLR1A | RNA polymerase I subunit A | TC0200016702.hg.1 | 0.0304 | 0.676 |
| MOB3A | MOB kinase activator 3A | TC1900009204.hg.1 | 0.0287 | 0.681 |
| SETDB2 | SET domain bifurcated histone lysine methyltransferase 2 | TC1300007164.hg.1 | 0.0287 | 0.681 |
| DNAL4 | dynein axonemal light chain 4 | TC2200009355.hg.1 | 0.0284 | 0.682 |
| HOXA3 | homeobox A3 | TC0700013529.hg.1 | 0.0278 | 0.684 |
| RAB40B | RAB40B, member RAS oncogene family | TC1700012143.hg.1 | 0.0271 | 0.685 |
| PBRM1 | polybromo 1 | TC0300011175.hg.1 | 0.0255 | 0.688 |
| NRSN2 | neurensin 2 | TC2000006442.hg.1 | 0.0242 | 0.691 |
| ZNF875 | zinc finger protein 875 | TC1900011721.hg.1 | 0.022 | 0.698 |
| CD164 | CD164 molecule | TC0600012814.hg.1 | 0.0201 | 0.704 |
| VPS26C | VPS26 endosomal protein sorting factor C | TC2100008098.hg.1 | 0.0197 | 0.706 |
| CDC42EP1 | CDC42 effector protein 1 | TC2200007303.hg.1 | 0.0196 | 0.706 |
| HAPSTR2 | HUWE1 associated protein modifying stress responses 2 | TC0X00008586.hg.1 | 0.0187 | 0.71 |
| ZFP64 | ZFP64 zinc finger protein | TC2000009469.hg.1 | 0.0187 | 0.71 |
| CX3CR1 | C-X3-C motif chemokine receptor 1 | TC0300010775.hg.1 | 0.0186 | 0.712 |
| AAGAB | alpha and gamma adaptin binding protein | TC1500009846.hg.1 | 0.0166 | 0.718 |

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|---|---|---|---|---|
| OSBPL9 | oxysterol binding protein like 9 | TC0100008289.hg.1 | 0.0134 | 0.729 |
| P2RY8 | P2Y receptor family member 8 | TC0X00008911.hg.1 | 0.0129 | 0.732 |
| DMBX1 | diencephalon/mesencephalon homeobox 1 | TC0100008163.hg.1 | 0.0129 | 0.732 |
| RFX5 | regulatory factor X5 | TC0100015783.hg.1 | 0.0124 | 0.737 |
| GLMP | glycosylated lysosomal membrane protein | TC0100018510.hg.1 | 0.0109 | 0.745 |
| ZNF182 | zinc finger protein 182 | TC0X00011363.hg.1 | 0.01 | 0.749 |
| C11orf24 | chromosome 11 open reading frame 24 | TC1100011375.hg.1 | 0.00881 | 0.756 |
| FAM107B | family with sequence similarity 107 member B | TC1000009863.hg.1 | 0.0077 | 0.763 |
| TMT1A | thiol methyltransferase 1A | TC1200007626.hg.1 | 0.00743 | 0.765 |
| AKT1S1 | AKT1 substrate 1 | TC1900012006.hg.1 | 0.00743 | 0.766 |
| GATA6 | GATA binding protein 6 | TC1800006852.hg.1 | 0.00736 | 0.768 |
| GLOD5 | glyoxalase domain containing 5 | TC0X00007203.hg.1 | 0.00736 | 0.769 |
| PITX1 | paired like homeodomain 1 | TC0500012093.hg.1 | 0.00683 | 0.773 |
| LIAS | lipoic acid synthetase | TC0400007285.hg.1 | 0.00683 | 0.773 |
| COX4I2 | cytochrome c oxidase subunit 4I2 | TC2000007085.hg.1 | 0.00522 | 0.785 |
| NUCB1 | nucleobindin 1 | TC1900008498.hg.1 | 0.00519 | 0.786 |
| TMPPE | transmembrane protein with metallophosphoesterase domain | TC0300010664.hg.1 | 0.00441 | 0.794 |
| TRO | trophinin | TC0X00007368.hg.1 | 0.00314 | 0.81 |
| WBP2 | WW domain binding protein 2 | TC1700011773.hg.1 | 0.00314 | 0.811 |
| DDIAS | DNA damage induced apoptosis suppressor | TC1100013075.hg.1 | 0.00314 | 0.812 |
| OTOS | otospiralin | TC0200016309.hg.1 | 0.00222 | 0.827 |
| WDR24 | WD repeat domain 24 | TC1600008972.hg.1 | 0.00166 | 0.843 |
| ZFP36L1 | ZFP36 ring finger protein like 1 | TC1400009524.hg.1 | 0.00138 | 0.852 |
| RHBDD2 | rhomboid domain containing 2 | TC0700008072.hg.1 | 0.00132 | 0.854 |
| LCOR | ligand dependent nuclear receptor corepressor | TC1000008556.hg.1 | 0.00132 | 0.854 |
| SCD5 | stearoyl-CoA desaturase 5 | TC0400011180.hg.1 | 0.00102 | 0.867 |
| NKAP | NFKB activating protein | TC0X00011389.hg.1 | 0.000829 | 0.878 |
| NMNAT2 | nicotinamide nucleotide adenylyltransferase 2 | TC0100016649.hg.1 | 0.000801 | 0.881 |

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|---|---|---|---|---|
| PRKAR1A | protein kinase cAMP-dependent type I regulatory subunit alpha | TC1700012296.hg.1 | 0.000423 | 0.908 |
| MADCAM1 | mucosal vascular addressin cell adhesion molecule 1 | TC1900006462.hg.1 | 0.000137 | 0.95 |
| PHC3 | polyhomeotic homolog 3 | TC0300013090.hg.1 | 0.000126 | 0.954 |
| ZNF268 | zinc finger protein 268 | TC1200012737.hg.1 | 0.000039 | 1.009 |
| SRRM2 | serine/arginine repetitive matrix 2 | TC1600006633.hg.1 | 0.000029 | 1.026 |
| LANCL1 | LanC like glutathione S-transferase 1 | TC0200015608.hg.1 | 0.000024 | 1.035 |
| ESCO2 | establishment of sister chromatid cohesion N-acetyltransferase 2 | TC0800007119.hg.1 | 0.000016 | 1.05 |
| GPATCH8 | G-patch domain containing 8 | TC1700010831.hg.1 | 0.000012 | 1.068 |
| ZNF780B | zinc finger protein 780B | TSUnmapped00000206.hg.1 | 0.000008 | 1.086 |
| VCF2 | VCP nuclear cofactor family member 2 | TC0X00009799.hg.1 | 0 | 1.444 |

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**Supplementary Table S4.** Deregulated genes in *C.vulgaris* co-treated $Hg^{2+}$-exposed HEK-293 DMT1 cells

| Symbol | Entrez Gene Name | Affymetrix Gene Code | Expr False Discovery Rate (q-value) | Expr Log Ratio |
|---|---|---|---|---|
| HNRNPCL1 | heterogeneous nuclear ribonucleoprotein C like 1 | TSUnmapped00000528.hg.1 | 0.000118 | -0.99 |
| VCF2 | VCP nuclear cofactor family member 2 | TC0X00009799.hg.1 | 0.000527 | -0.926 |
| MRPL28 | mitochondrial ribosomal protein L28 | TC1600008942.hg.1 | 0.000779 | -0.909 |
| TMCC1 | transmembrane and coiled-coil domain family 1 | TC0300012403.hg.1 | 0.0012 | -0.889 |
| CWC15 | CWC15 spliceosome associated protein | TC1100012012.hg.1 | 0.00173 | -0.873 |
| EHBP1 | EH domain binding protein 1 | TC0200007759.hg.1 | 0.00208 | -0.865 |
| H2BC7 | H2B clustered histone 7 | TC0600007282.hg.1 | 0.00511 | -0.827 |
| PNMA5 | PNMA family member 5 | TC0X00011144.hg.1 | 0.0053 | -0.824 |
| H2BC13 | H2B clustered histone 13 | TC0600011224.hg.1 | 0.00572 | -0.82 |
| AMER1 | APC membrane recruitment protein 1 | TC0X00009877.hg.1 | 0.0105 | -0.788 |
| GRINA | glutamate ionotropic receptor NMDA type subunit associated protein 1 | TC0800009231.hg.1 | 0.0108 | -0.786 |
| MARS2 | methionyl-tRNA synthetase 2, mitochondrial | TC0200010374.hg.1 | 0.0131 | -0.777 |
| SPATA31A6 (includes others) | SPATA31 subfamily A member 6 | TC0900007288.hg.1 | 0.0292 | -0.731 |
| TNRC6C | trinucleotide repeat containing adaptor 6C | TC1700009032.hg.1 | 0.0292 | -0.73 |
| ZNF573 | zinc finger protein 573 | TC1900010580.hg.1 | 0.0292 | -0.73 |
| ARHGEF26 | Rho guanine nucleotide exchange factor 26 | TC0300009247.hg.1 | 0.0313 | -0.727 |
| TADA3 | transcriptional adaptor 3 | TC0300010209.hg.1 | 0.0383 | -0.714 |
| H2AC17 | H2A clustered histone 17 | TC0600011235.hg.1 | 0.04 | -0.711 |

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|---|---|---|---|---|
| NXF1 | nuclear RNA export factor 1 | TC1100011101.hg.1 | 0.0516 | -0.692 |
| ADORA2B | adenosine A2b receptor | TC1700006999.hg.1 | 0.0554 | -0.687 |
| NPPC | natriuretic peptide C | TC0200016047.hg.1 | 0.0576 | -0.682 |
| C2orf42 | chromosome 2 open reading frame 42 | TC0200016683.hg.1 | 0.0622 | -0.676 |
| FAM241B | family with sequence similarity 241 member B | TC1000007905.hg.1 | 0.0622 | -0.675 |
| TTC9C | tetratricopeptide repeat domain 9C | TC1100013026.hg.1 | 0.0622 | -0.675 |
| CDH16 | cadherin 16 | TC1600010602.hg.1 | 0.0622 | -0.675 |
| SERTAD4 | SERTA domain containing 4 | TSUnmapped00000211.hg.1 | 0.0626 | -0.673 |
| AGBL5 | AGBL carboxypeptidase 5 | TC0200007050.hg.1 | 0.086 | -0.654 |
| PCBD1 | pterin-4 alpha-carbinolamine dehydratase 1 | TC1000010930.hg.1 | 0.0946 | -0.649 |
| RAF1 | Raf-1 proto-oncogene, serine/threonine kinase | TC0300010299.hg.1 | 0.0998 | -0.644 |
| CDC42EP1 | CDC42 effector protein 1 | TC2200007303.hg.1 | 0.0998 | -0.643 |
| RPL36A | ribosomal protein L36a | TC0X00011308.hg.1 | 0.0998 | 0.643 |
| NAGA | alpha-N-acetylgalactosaminidase | TC2200008856.hg.1 | 0.0974 | 0.646 |
| CNKSR1 | connector enhancer of kinase suppressor of Ras 1 | TC0100007444.hg.1 | 0.0974 | 0.646 |
| SRCIN1 | SRC kinase signaling inhibitor 1 | TC1700010529.hg.1 | 0.0971 | 0.647 |
| ZC3H11C | zinc finger CCCH-type containing 11C | TC0600008418.hg.1 | 0.0971 | 0.647 |
| SENP6 | SUMO specific peptidase 6 | TC0600008562.hg.1 | 0.086 | 0.654 |
| PLSCR2 | phospholipid scramblase 2 | TC0300014061.hg.1 | 0.0694 | 0.666 |
| PEAK1 | pseudopodium enriched atypical kinase 1 | TC1500010109.hg.1 | 0.0694 | 0.666 |
| LLPH | LLP homolog, long-term synaptic facilitation factor | TC1200012818.hg.1 | 0.0694 | 0.667 |
| ELOA3BP (includes others) | elongin A3 family member B, pseudogene | TC1800008607.hg.1 | 0.0641 | 0.672 |

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|---|---|---|---|---|
| ZMAT2 | zinc finger matrin-type 2 | TC0500013238.hg.1 | 0.0626 | 0.673 |
| ZNF574 | zinc finger protein 574 | TC1900008172.hg.1 | 0.0622 | 0.675 |
| YOD1 | YOD1 deubiquitinase | TC0100017118.hg.1 | 0.0622 | 0.675 |
| CANT1 | calcium activated nucleotidase 1 | TC1700011923.hg.1 | 0.0622 | 0.677 |
| PNPLA7 | patatin like domain 7, lysophospholipase | TC0900012068.hg.1 | 0.0555 | 0.686 |
| PLLP | plasmolipin | TC1600011545.hg.1 | 0.0555 | 0.686 |
| CLDN18 | claudin 18 | TC0300008933.hg.1 | 0.0516 | 0.691 |
| MIA2 | MIA SH3 domain ER export factor 2 | TC1400010605.hg.1 | 0.0516 | 0.691 |
| RPL41 | ribosomal protein L41 | TC2200008578.hg.1 | 0.0471 | 0.699 |
| MYH7 | myosin heavy chain 7 | TC1400008718.hg.1 | 0.0438 | 0.703 |
| SCN8A | sodium voltage-gated channel alpha subunit 8 | TC1200010711.hg.1 | 0.0429 | 0.705 |
| ABHD16B | abhydrolase domain containing 16B | TC2000008094.hg.1 | 0.0429 | 0.705 |
| HMHB1 | histocompatibility minor HB-1 | TC0500008975.hg.1 | 0.0429 | 0.706 |
| CCAR1 | cell division cycle and apoptosis regulator 1 | TC1000007866.hg.1 | 0.04 | 0.71 |
| CD79B | CD79b molecule | TC1700011430.hg.1 | 0.0376 | 0.716 |
| CLIC3 | chloride intracellular channel 3 | TC0900012024.hg.1 | 0.0372 | 0.717 |
| TIMP1 | TIMP metallopeptidase inhibitor 1 | TC0X00007149.hg.1 | 0.0362 | 0.719 |
| TRMT61B | tRNA methyltransferase 61B | TC0200012129.hg.1 | 0.0292 | 0.73 |
| KLK4 | kallikrein related peptidase 4 | TC1900011226.hg.1 | 0.0292 | 0.731 |
| SLC49A3 | solute carrier family 49 member 3 | TC0400009695.hg.1 | 0.0284 | 0.736 |
| APOBEC3A | apolipoprotein B mRNA editing enzyme catalytic subunit 3A | TC2200009269.hg.1 | 0.0257 | 0.745 |
| IMPA1 | inositol monophosphatase 1 | TC0800010944.hg.1 | 0.0142 | 0.772 |
| GNAT1 | G protein subunit alpha transducin 1 | TC0300007408.hg.1 | 0.0131 | 0.776 |
| VRK1 | VRK serine/threonine kinase 1 | TC1400010649.hg.1 | 0.00923 | 0.797 |
| WDR83OS | WD repeat domain 83 opposite strand | TC1900011890.hg.1 | 0.00844 | 0.802 |
| GPR21 | G protein-coupled receptor 21 | TC0900008684.hg.1 | 0.0012 | 0.888 |

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|---|---|---|---|---|
| RAX2 | retina and anterior neural fold homeobox 2 | TC1900009308.hg.1 | 0.0012 | 0.891 |
| PCDHB7 | protocadherin beta 7 | TC0500008880.hg.1 | 0.000278 | 0.95 |
| EXOC2 | exocyst complex component 2 | TC0600010375.hg.1 | 0.0002 | 0.967 |
| UQCRB | ubiquinol-cytochrome c reductase binding protein | TC0800011171.hg.1 | 0.000123 | 0.986 |
| BMERB1 | bMERB domain containing 1 | TC1600011358.hg.1 | 0.000118 | 0.99 |
| ZNF443 | zinc finger protein 443 | TC1900011884.hg.1 | 0.000118 | 0.992 |
| CRYGN | crystallin gamma N | TC0700013075.hg.1 | 0.000118 | 0.998 |
| SLC16A1 | solute carrier family 16 member 1 | TSUnmapped00000763.hg.1 | 0.000054 | 1.028 |
| SMG1 | SMG1 nonsense mediated mRNA decay associated PI3K related kinase | TC1600009620.hg.1 | 0.000011 | 1.082 |
| TTYH1 | tweety family member 1 | TC1900008856.hg.1 | 0.000002 | 1.137 |
| RBM24 | RNA binding motif protein 24 | TC0600007084.hg.1 | 0.000001 | 1.162 |
| GGT2P | gamma-glutamyltransferase 2, pseudogene | TC2200008078.hg.1 | 0 | 1.2 |
| TNFRSF10C | TNF receptor superfamily member 10c | TC0800007007.hg.1 | 0 | 1.42 |

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