

Additional File 3. Genes, affected by gains and losses in the grade II meningioma.

| Gene Symbol | Chromosome | Start | End | Length | Gene Name |
|--------------|------------|----------|----------|--------|---|
| PEX10 | chr1 | 2336240 | 2344010 | 7771 | peroxisomal biogenesis factor 10 |
| PLCH2 | chr1 | 2407753 | 2436969 | 29217 | phospholipase C, eta 2 |
| ACTR2 | chr1 | 2938045 | 2939467 | 1423 | actin-related protein T2 |
| FLJ42875 | chr1 | 2976180 | 2980350 | 4171 | |
| LINC00982 | chr1 | 2976180 | 2984289 | 8110 | long intergenic non-protein coding RNA 982 |
| FLJ42875 | chr1 | 2980635 | 2984289 | 3655 | |
| MIR4251 | chr1 | 3044538 | 3044599 | 62 | microRNA 4251 |
| PRDM16 | chr1 | 2985741 | 3355185 | 369445 | PR domain containing 16 |
| ARHGEF16 | chr1 | 3371146 | 3397677 | 26532 | Rho guanine nucleotide exchange factor (GEF) 16 |
| MEGF6 | chr1 | 3404505 | 3528059 | 123555 | multiple EGF-like-domains 6 |
| C1orf174 | chr1 | 3805696 | 3816857 | 11162 | chromosome 1 open reading frame 174 |
| LINC01134 | chr1 | 3816967 | 3832011 | 15045 | long intergenic non-protein coding RNA 1134 |
| LOC100133612 | chr1 | 3816967 | 3833879 | 16913 | long intergenic non-protein coding RNA 1134 |
| LINC01346 | chr1 | 4000671 | 4012643 | 11973 | long intergenic non-protein coding RNA 1346 |
| LOC728716 | chr1 | 4000671 | 4012643 | 11973 | long intergenic non-protein coding RNA 1346 |
| LOC284661 | chr1 | 4472110 | 4484744 | 12635 | uncharacterized LOC284661 |
| AJAP1 | chr1 | 4715104 | 4843851 | 128748 | adherens junctions associated protein 1 |
| BC037321 | chr1 | 4847557 | 4852183 | 4627 | |
| MIR4417 | chr1 | 5624130 | 5624203 | 74 | microRNA 4417 |
| AK125078 | chr1 | 5621768 | 5728315 | 106548 | |
| GPR153 | chr1 | 6307405 | 6321035 | 13631 | G protein-coupled receptor 153 |
| ACOT7 | chr1 | 6324331 | 6453826 | 129496 | acyl-CoA thioesterase 7 |
| HES2 | chr1 | 6472497 | 6484730 | 12234 | hes family bHLH transcription factor 2 |
| MIR4252 | chr1 | 6489893 | 6489956 | 64 | microRNA 4252 |
| ESPN | chr1 | 6484847 | 6521004 | 36158 | espin |
| TNFRSF25 | chr1 | 6521213 | 6526255 | 5043 | tumor necrosis factor receptor superfamily, member 25 |
| PLEKHG5 | chr1 | 6526151 | 6580121 | 53971 | pleckstrin homology domain containing, family G (with RhoGef domain) member 5 |
| NOL9 | chr1 | 6581406 | 6614658 | 33253 | nucleolar protein 9 |
| TAS1R1 | chr1 | 6615337 | 6639817 | 24481 | taste receptor, type 1, member 1 |
| ZBTB48 | chr1 | 6640050 | 6649340 | 9291 | zinc finger and BTB domain containing 48 |
| KLHL21 | chr1 | 6650778 | 6662929 | 12152 | kelch-like family member 21 |
| CAMTA1 | chr1 | 6845383 | 7829766 | 984384 | calmodulin binding transcription activator 1 |
| VAMP3 | chr1 | 7831328 | 7841492 | 10165 | vesicle-associated membrane protein 3 |
| PER3 | chr1 | 7844379 | 7905240 | 60862 | period circadian clock 3 |
| UTS2 | chr1 | 7903142 | 7973294 | 70153 | urotensin 2 |
| TNFRSF9 | chr1 | 7975930 | 8003225 | 27296 | tumor necrosis factor receptor superfamily, member 9 |
| TRNA_Pseudo | chr1 | 7990338 | 7990408 | 71 | |
| SLC2A7 | chr1 | 9063358 | 9086404 | 23047 | intestinal facilitative glucose transporter 7 |
| SLC2A5 | chr1 | 9097004 | 9148510 | 51507 | solute carrier family 2 (facilitated glucose/fructose transporter), member 5 |
| SLC25A33 | chr1 | 9599527 | 9642831 | 43305 | solute carrier family 25 (pyrimidine nucleotide carrier), member 33 |
| TMEM201 | chr1 | 9648931 | 9674935 | 26005 | transmembrane protein 201 |
| C1orf200 | chr1 | 9712667 | 9714644 | 1978 | chromosome 1 open reading frame 200 |
| PIK3CD | chr1 | 9711789 | 9789172 | 77384 | phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit delta |
| C1orf127 | chr1 | 11006529 | 11042094 | 35566 | chromosome 1 open reading frame 127 |
| TARDBP | chr1 | 11072678 | 11085549 | 12872 | TAR DNA binding protein |
| MASP2 | chr1 | 11086579 | 11107296 | 20718 | mannan-binding lectin serine peptidase 2 |
| SRM | chr1 | 11114648 | 11120091 | 5444 | spermidine synthase |
| EXOSC10 | chr1 | 11126675 | 11159938 | 33264 | exosome component 10 |
| MTOR-AS1 | chr1 | 11203954 | 11209595 | 5642 | MTOR antisense RNA 1 |
| MTOR | chr1 | 11166587 | 11322608 | 156022 | mechanistic target of rapamycin (serine/threonine kinase) |
| ANGPTL7 | chr1 | 11249345 | 11256038 | 6694 | angiopoietin-like 7 |
| UBIAD1 | chr1 | 11333254 | 11348491 | 15238 | UbiA prenyltransferase domain containing 1 |
| LOC101929181 | chr1 | 11669587 | 11673411 | 3825 | uncharacterized LOC101929181 |
| FBXO2 | chr1 | 11708417 | 11714888 | 6472 | F-box protein 2 |
| FBXO44 | chr1 | 11714431 | 11723384 | 8954 | F-box protein 44 |
| FBXO6 | chr1 | 11724149 | 11734409 | 10261 | F-box protein 6 |
| AADA44 | chr1 | 12704565 | 12727097 | 22533 | arylacetamide deacetylase-like 4 |
| AADA43 | chr1 | 12776117 | 12788726 | 12610 | arylacetamide deacetylase-like 3 |
| C1orf158 | chr1 | 12806133 | 12821102 | 14970 | chromosome 1 open reading frame 158 |
| PRAMEF12 | chr1 | 12834990 | 12838048 | 3059 | PRAME family member 12 |
| PRAMEF1 | chr1 | 12851545 | 12856777 | 5233 | PRAME family member 1 |
| PRAMEF11 | chr1 | 12884617 | 12891264 | 6648 | PRAME family member 11 |
| LOC649330 | chr1 | 12907229 | 12908235 | 1007 | heterogeneous nuclear ribonucleoprotein C-like |
| HNRNPCL1 | chr1 | 12907260 | 12908578 | 1319 | heterogeneous nuclear ribonucleoprotein C-like 1 |
| PRAMEF2 | chr1 | 12916940 | 12921764 | 4825 | PRAME family member 2 |
| PRAMEF4 | chr1 | 12939032 | 12946025 | 6994 | PRAME family member 4 |
| LOC101929983 | chr1 | 12998504 | 13002353 | 3850 | PRAME family member 9/15-like |
| PRAMEF9 | chr1 | 12998504 | 13002353 | 3850 | PRAME family member 9 |
| LOC391003 | chr1 | 13035498 | 13039011 | 3514 | PRAME family member-like |
| PRAMEF5 | chr1 | 12998301 | 13117751 | 119451 | PRAME family member 5 |
| LOC645354 | chr1 | 13161985 | 13167193 | 5209 | PRAME family member 1 pseudogene |
| LOC649324 | chr1 | 13161985 | 13167193 | 5209 | PRAME family member 1 pseudogene |
| HNRNPCL2 | chr1 | 13182959 | 13184326 | 1368 | heterogeneous nuclear ribonucleoprotein C-like 2 |
| LOC440563 | chr1 | 13182959 | 13184326 | 1368 | heterogeneous nuclear ribonucleoprotein C-like 2 |
| PRAMEF3 | chr1 | 13328195 | 13331692 | 3498 | |
| PRAMEF22 | chr1 | 13328832 | 13331671 | 2840 | PRAME family member 22 |
| PRAMEF6 | chr1 | 13359832 | 13368936 | 9105 | PRAME family member 6 |

| | | | | | |
|-------------|------|----------|----------|--------|--|
| PRAMEF5 | chr1 | 13359818 | 13369057 | 9240 | PRAME family member 5 |
| PRAMEF8 | chr1 | 13386646 | 13390748 | 4103 | PRAME family member 8 |
| PRAMEF10 | chr1 | 13409127 | 13414502 | 5376 | PRAME family member 10 |
| LOC645382 | chr1 | 13409134 | 13414502 | 5369 | PRAME family member 10-like |
| PRAMEF13 | chr1 | 13447413 | 13452656 | 5244 | PRAME family member 14 |
| PRAMEF14 | chr1 | 13447413 | 13452656 | 5244 | PRAME family member 14 |
| LOC400736 | chr1 | 13447413 | 13452656 | 5244 | PRAME family member-like |
| PRAMEF19 | chr1 | 13474052 | 13477569 | 3518 | PRAME family member 19 |
| PRAMEF16 | chr1 | 13495253 | 13498259 | 3007 | PRAME family member 16 |
| PRAMEF17 | chr1 | 13495257 | 13498257 | 3001 | PRAME family member 17 |
| PRAMEF20 | chr1 | 13516065 | 13526943 | 10879 | PRAME family member 20 |
| PRAMEF7 | chr1 | 13607699 | 13611533 | 3835 | PRAME family member 7 |
| PRAMEF10 | chr1 | 13629937 | 13635299 | 5363 | PRAME family member 10 |
| PRAMEF15 | chr1 | 13641972 | 13648987 | 7016 | PRAME family member 15 |
| PRAMEF19 | chr1 | 13694888 | 13698405 | 3518 | PRAME family member 19 |
| LRRC38 | chr1 | 13801444 | 13840242 | 38799 | leucine rich repeat containing 38 |
| PRDM2 | chr1 | 14026734 | 14151574 | 124841 | PR domain containing 2, with ZNF domain |
| AK124197 | chr1 | 14146461 | 14150513 | 4053 | |
| KAZN | chr1 | 14925212 | 15444544 | 519333 | kazrin, periactin interacting protein |
| TMEM51-AS1 | chr1 | 15438310 | 15478960 | 40651 | TMEM51 antisense RNA 1 |
| C1orf195 | chr1 | 15490691 | 15498120 | 7430 | chromosome 1 open reading frame 195 |
| TMEM51 | chr1 | 15479027 | 15546974 | 67948 | transmembrane protein 51 |
| FHAD1 | chr1 | 15573767 | 15726778 | 153012 | forkhead-associated (FHA) phosphopeptide binding domain 1 |
| AK055853 | chr1 | 15653175 | 15670372 | 17198 | |
| EFHD2 | chr1 | 15736390 | 15756839 | 20450 | EF-hand domain family, member D2 |
| CTRC | chr1 | 15764937 | 15773153 | 8217 | chymotrypsin C (caldecrin) |
| CELA2A | chr1 | 15783222 | 15798586 | 15365 | chymotrypsin-like elastase family, member 2A |
| CELA2B | chr1 | 15802595 | 15817895 | 15301 | chymotrypsin-like elastase family, member 2B |
| CASP9 | chr1 | 15817323 | 15851285 | 33963 | caspase 9, apoptosis-related cysteine peptidase |
| PLEKHM2 | chr1 | 16010826 | 16061264 | 50439 | pleckstrin homology domain containing, family M (with RUN domain) member 2 |
| SLC25A34 | chr1 | 16062808 | 16067884 | 5077 | solute carrier family 25, member 34 |
| TMEM82 | chr1 | 16068986 | 16074292 | 5307 | transmembrane protein 82 |
| FBLIM1 | chr1 | 16083153 | 16113084 | 29932 | filamin binding LIM protein 1 |
| UQCRHL | chr1 | 16133656 | 16134194 | 539 | ubiquinol-cytochrome c reductase hinge protein-like |
| FLJ37453 | chr1 | 16160709 | 16174642 | 13934 | uncharacterized LOC729614 |
| SPEN | chr1 | 16174358 | 16266950 | 92593 | spen family transcriptional repressor |
| ZBTB17 | chr1 | 16268363 | 16302627 | 34265 | zinc finger and BTB domain containing 17 |
| DQ576383 | chr1 | 16317618 | 16317647 | 30 | |
| C1orf64 | chr1 | 16330730 | 16333184 | 2455 | chromosome 1 open reading frame 64 |
| HSPB7 | chr1 | 16340522 | 16346089 | 5568 | heat shock 27kDa protein family, member 7 (cardiovascular) |
| CLCNKA | chr1 | 16345369 | 16360545 | 15177 | chloride channel, voltage-sensitive Ka |
| CLCNKB | chr1 | 16355620 | 16383821 | 28202 | chloride channel, voltage-sensitive Kb |
| FAM131C | chr1 | 16384263 | 16400127 | 15865 | family with sequence similarity 131, member C |
| EPHA2 | chr1 | 16450831 | 16482582 | 31752 | EPH receptor A2 |
| ARHGEF19 | chr1 | 16524598 | 16539104 | 14507 | Rho guanine nucleotide exchange factor (GEF) 19 |
| RSG1 | chr1 | 16558181 | 16563659 | 5479 | REM2 and RAB-like small GTPase 1 |
| FBXO42 | chr1 | 16576558 | 16678948 | 102391 | F-box protein 42 |
| SZRD1 | chr1 | 16693524 | 16724643 | 31120 | SUZ RNA binding domain containing 1 |
| AL832937 | chr1 | 16721826 | 16724639 | 2814 | |
| SPATA21 | chr1 | 16722175 | 16763919 | 41745 | spermatogenesis associated 21 |
| NECAP2 | chr1 | 16767166 | 16786584 | 19419 | NECAP endocytosis associated 2 |
| CROCCP3 | chr1 | 16793930 | 16819196 | 25267 | ciliary rootlet coiled-coil, rootletin pseudogene 3 |
| TRNA_Asn | chr1 | 16847079 | 16847153 | 75 | |
| BC036435 | chr1 | 16860349 | 16862144 | 1796 | |
| AX747988 | chr1 | 16862254 | 16864669 | 2416 | |
| TRNA_Gly | chr1 | 16872433 | 16872504 | 72 | |
| MIR3675 | chr1 | 16875408 | 16875482 | 75 | microRNA 3675 |
| NBPF1 | chr1 | 16888921 | 16940100 | 51180 | neuroblastoma breakpoint family, member 1 |
| BC015342 | chr1 | 16955701 | 16956958 | 1258 | |
| CROCCP2 | chr1 | 16944750 | 16971178 | 26429 | ciliary rootlet coiled-coil, rootletin pseudogene 2 |
| FLJ00313 | chr1 | 16956164 | 16971178 | 15015 | |
| MST1P2 | chr1 | 16972068 | 16976915 | 4848 | macrophage stimulating 1 (hepatocyte growth factor-like) pseudogene 2 |
| FAM231A | chr1 | 16999497 | 17000007 | 511 | family with sequence similarity 231, member A |
| TRNA_Val | chr1 | 17006500 | 17006573 | 74 | |
| ESPNP | chr1 | 17017712 | 17046652 | 28941 | espin pseudogene |
| TRNA_Pseudo | chr1 | 17052060 | 17052133 | 74 | |
| TRNA_Gly | chr1 | 17053779 | 17053850 | 72 | |
| MST1L | chr1 | 17081128 | 17090975 | 9848 | macrophage stimulating 1-like |
| CROCC | chr1 | 17066767 | 17299474 | 232708 | ciliary rootlet coiled-coil, rootletin |
| AK125737 | chr1 | 17197439 | 17200574 | 3136 | |
| TRNA_Asn | chr1 | 17201957 | 17202031 | 75 | |
| BC070363 | chr1 | 17215040 | 17216161 | 1122 | |
| DL489931 | chr1 | 17222645 | 17222720 | 76 | |
| MFAP2 | chr1 | 17300998 | 17308081 | 7084 | microfibrillar-associated protein 2 |
| ATP13A2 | chr1 | 17312452 | 17338467 | 26016 | ATPase type 13A2 |
| PADI1 | chr1 | 17531620 | 17572501 | 40882 | peptidyl arginine deiminase, type I |
| Mir_584 | chr1 | 17581660 | 17581778 | 119 | |
| PADI3 | chr1 | 17575592 | 17610727 | 35136 | peptidyl arginine deiminase, type III |
| PADI4 | chr1 | 17634689 | 17690495 | 55807 | peptidyl arginine deiminase, type IV |
| PADI6 | chr1 | 17698690 | 17728195 | 29506 | peptidylarginine deiminase type 6 |

| | | | | | |
|--------------|------|----------|----------|--------|--|
| ARHGEF10L | chr1 | 17846826 | 18024370 | 177545 | Rho guanine nucleotide exchange factor (GEF) 10-like |
| ARHGEF10L | chr1 | 17914910 | 17966476 | 51567 | Rho guanine nucleotide exchange factor (GEF) 10-like |
| ACTL8 | chr1 | 18081807 | 18153558 | 71752 | actin-like 8 |
| IGSF21 | chr1 | 18434239 | 18704977 | 270739 | immunoglobulin superfamily, member 21 |
| PAX7 | chr1 | 18957499 | 19075360 | 117862 | paired box 7 |
| TAS1R2 | chr1 | 19166092 | 19186155 | 20064 | taste receptor, type 1, member 2 |
| MIR4695 | chr1 | 19209695 | 19209769 | 75 | microRNA 4695 |
| ALDH4A1 | chr1 | 19197923 | 19229293 | 31371 | aldehyde dehydrogenase 4 family, member A1 |
| IFFO2 | chr1 | 19230773 | 19282826 | 52054 | intermediate filament family orphan 2 |
| RPS14P3 | chr1 | 19934300 | 19935138 | 839 | ribosomal protein S14 pseudogene 3 |
| MINOS1 | chr1 | 19923470 | 19956315 | 32846 | mitochondrial inner membrane organizing system 1 |
| MINOS1-NBL1 | chr1 | 19923470 | 19984949 | 61480 | MINOS1-NBL1 readthrough |
| NBL1 | chr1 | 19969722 | 19984949 | 15228 | neuroblastoma 1, DAN family BMP antagonist |
| HTR6 | chr1 | 19991779 | 20007459 | 15681 | 5-hydroxytryptamine (serotonin) receptor 6, G protein-coupled |
| TMCO4 | chr1 | 20008705 | 20126758 | 118054 | transmembrane and coiled-coil domains 4 |
| RNF186 | chr1 | 20140521 | 20141771 | 1251 | ring finger protein 186 |
| OTUD3 | chr1 | 20208887 | 20239437 | 30551 | OTU deubiquitinase 3 |
| PLA2G2E | chr1 | 20246799 | 20250110 | 3312 | phospholipase A2, group IIE |
| PLA2G2A | chr1 | 20301923 | 20306932 | 5010 | phospholipase A2, group IIA (platelets, synovial fluid) |
| PLA2G5 | chr1 | 20354671 | 20418394 | 63724 | phospholipase A2, group V |
| PLA2G2D | chr1 | 20439142 | 20446059 | 6918 | phospholipase A2, group IID |
| PLA2G2F | chr1 | 20465822 | 20476879 | 11058 | phospholipase A2, group IIF |
| PLA2G2C | chr1 | 20490483 | 20501687 | 11205 | phospholipase A2, group IIC |
| UBXN10-AS1 | chr1 | 20510735 | 20512979 | 2245 | UBXN10 antisense RNA 1 |
| UBXN10 | chr1 | 20512577 | 20519942 | 7366 | UBX domain protein 10 |
| VWA5B1 | chr1 | 20617411 | 20681387 | 63977 | von Willebrand factor A domain containing 5B1 |
| LINC01141 | chr1 | 20686293 | 20755287 | 68995 | long intergenic non-protein coding RNA 1141 |
| LOC339505 | chr1 | 20686293 | 20755287 | 68995 | long intergenic non-protein coding RNA 1141 |
| CAMK2N1 | chr1 | 20808883 | 20812728 | 3846 | calcium/calmodulin-dependent protein kinase II inhibitor 1 |
| MUL1 | chr1 | 20825940 | 20834674 | 8735 | mitochondrial E3 ubiquitin protein ligase 1 |
| CDA | chr1 | 20915443 | 20945400 | 29958 | cytidine deaminase |
| MIR6084 | chr1 | 20960171 | 20960281 | 111 | microRNA 6084 |
| PINK1 | chr1 | 20959947 | 20978004 | 18058 | PTEN induced putative kinase 1 |
| PINK1-AS | chr1 | 20969149 | 20978686 | 9538 | PINK1 antisense RNA |
| DDOST | chr1 | 20978259 | 20988037 | 9779 | dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit (non-catalytic) |
| KIF17 | chr1 | 20990506 | 21044510 | 54005 | kinesin family member 17 |
| SH2D5 | chr1 | 21046224 | 21059330 | 13107 | SH2 domain containing 5 |
| HP1BP3 | chr1 | 21069170 | 21113799 | 44630 | heterochromatin protein 1, binding protein 3 |
| EIF4G3 | chr1 | 21132784 | 21503381 | 370598 | eukaryotic translation initiation factor 4 gamma, 3 |
| AX747766 | chr1 | 21602542 | 21604868 | 2327 | |
| ECE1 | chr1 | 21543739 | 21672034 | 128296 | endothelin converting enzyme 1 |
| LOC100506801 | chr1 | 21619782 | 21626362 | 6581 | uncharacterized LOC100506801 |
| AK098438 | chr1 | 21749600 | 21754300 | 4701 | |
| BC127868 | chr1 | 21761832 | 21762609 | 778 | |
| NBPF3 | chr1 | 21766582 | 21811393 | 44812 | neuroblastoma breakpoint family, member 3 |
| ALPL | chr1 | 21835857 | 21904905 | 69049 | alkaline phosphatase, liver/bone/kidney |
| RAP1GAP | chr1 | 21922707 | 21995856 | 73150 | RAP1 GTPase activating protein |
| USP48 | chr1 | 22004791 | 22109688 | 104898 | ubiquitin specific peptidase 48 |
| LDLRAD2 | chr1 | 22138757 | 22151714 | 12958 | low density lipoprotein receptor class A domain containing 2 |
| HSPG2 | chr1 | 22148724 | 22263790 | 115067 | heparan sulfate proteoglycan 2 |
| CELA3A | chr1 | 22328148 | 22339035 | 10888 | chymotrypsin-like elastase family, member 3A |
| LOC101928043 | chr1 | 22350486 | 22352541 | 2056 | uncharacterized LOC101928043 |
| LINC00339 | chr1 | 22351683 | 22357717 | 6035 | long intergenic non-protein coding RNA 339 |
| CDC42 | chr1 | 22379119 | 22419436 | 40318 | cell division cycle 42 |
| WNT4 | chr1 | 22443797 | 22470385 | 26589 | wingless-type MMTV integration site family, member 4 |
| AX747207 | chr1 | 25227540 | 25230414 | 2875 | |
| MIR6731 | chr1 | 25245835 | 25245907 | 73 | microRNA 6731 |
| RUNX3 | chr1 | 25226001 | 25291612 | 65612 | runt-related transcription factor 3 |
| C1orf63 | chr1 | 25568739 | 25664656 | 95918 | arginine/serine-rich protein 1 |
| TMEM50A | chr1 | 25664788 | 25688852 | 24065 | transmembrane protein 50A |
| RHCE | chr1 | 25688739 | 25756683 | 67945 | Rhesus blood group C antigen |
| TMEM57 | chr1 | 25757348 | 25826698 | 69351 | transmembrane protein 57 |
| LDLRAP1 | chr1 | 25870075 | 25895377 | 25303 | low density lipoprotein receptor adaptor protein 1 |
| MAN1C1 | chr1 | 25943958 | 26112698 | 168741 | mannosidase, alpha, class 1C, member 1 |
| SEPN1 | chr1 | 26126666 | 26144713 | 18048 | selenoprotein N, 1 |
| LOC646471 | chr1 | 26146444 | 26150097 | 3654 | uncharacterized LOC646471 |
| MTFR1L | chr1 | 26146396 | 26159433 | 13038 | mitochondrial fission regulator 1-like |
| AUNIP | chr1 | 26158403 | 26185949 | 27547 | aurora kinase A and ninein interacting protein |
| PAQR7 | chr1 | 26187974 | 26197744 | 9771 | progesterin and adipoQ receptor family member VII |
| STMN1 | chr1 | 26210676 | 26233368 | 22693 | stathmin 1 |
| MIR3917 | chr1 | 26232852 | 26232945 | 94 | microRNA 3917 |
| BC042538 | chr1 | 30486798 | 30510456 | 23659 | |
| LOC101929406 | chr1 | 30486798 | 30510459 | 23662 | uncharacterized LOC101929406 |
| SDC3 | chr1 | 31342312 | 31381480 | 39169 | syndecan 3 |
| SNORD103A | chr1 | 31408535 | 31408623 | 89 | small nucleolar RNA, C/D box 103A |
| SNORD103B | chr1 | 31408535 | 31408623 | 89 | small nucleolar RNA, C/D box 103B |
| SNORD103A | chr1 | 31421964 | 31422052 | 89 | small nucleolar RNA, C/D box 103A |
| SNORD85 | chr1 | 31441009 | 31441084 | 76 | small nucleolar RNA, C/D box 85 |
| PUM1 | chr1 | 31404352 | 31538763 | 134412 | pumilio RNA-binding family member 1 |
| NKAIN1 | chr1 | 31652591 | 31712734 | 60144 | Na+/K+ transporting ATPase interacting 1 |

| | | | | | |
|-----------|------|----------|----------|--------|---|
| SNRNP40 | chr1 | 31732414 | 31769644 | 37231 | small nuclear ribonucleoprotein 40kDa (U5) |
| ZCCHC17 | chr1 | 31769828 | 31837800 | 67973 | zinc finger, CCHC domain containing 17 |
| FABP3 | chr1 | 31838099 | 31845923 | 7825 | fatty acid binding protein 3, muscle and heart (mammary-derived growth inhibitor) |
| SERINC2 | chr1 | 31882411 | 31907527 | 25117 | serine incorporator 2 |
| LINC01225 | chr1 | 31971838 | 31974167 | 2330 | long intergenic non-protein coding RNA 1225 |
| LOC149086 | chr1 | 31971838 | 31974167 | 2330 | long intergenic non-protein coding RNA 1225 |
| LINC01226 | chr1 | 31984035 | 31989846 | 5812 | long intergenic non-protein coding RNA 1226 |
| LOC284551 | chr1 | 31984035 | 31989846 | 5812 | long intergenic non-protein coding RNA 1226 |
| TINAGL1 | chr1 | 32042085 | 32053287 | 11203 | tubulointerstitial nephritis antigen-like 1 |
| HCRTR1 | chr1 | 32083300 | 32098119 | 14820 | hypocretin (orexin) receptor 1 |
| AX747565 | chr1 | 32095467 | 32098435 | 2969 | |
| PEF1 | chr1 | 32095462 | 32110838 | 15377 | penta-EF-hand domain containing 1 |
| COL16A1 | chr1 | 32117847 | 32169768 | 51922 | collagen, type XVI, alpha 1 |
| BAI2 | chr1 | 32192705 | 32229664 | 36960 | brain-specific angiogenesis inhibitor 2 |
| MIR4254 | chr1 | 32224260 | 32224336 | 77 | microRNA 4254 |
| BC069257 | chr1 | 32256024 | 32258424 | 2401 | |
| SPOCD1 | chr1 | 32256022 | 32281652 | 25631 | SPOC domain containing 1 |
| LCK | chr1 | 32716839 | 32751768 | 34930 | LCK proto-oncogene, Src family tyrosine kinase |
| HDAC1 | chr1 | 32757707 | 32799224 | 41518 | histone deacetylase 1 |
| MARCKSL1 | chr1 | 32799429 | 32801840 | 2412 | MARCKS-like 1 |
| FAM229A | chr1 | 32826870 | 32827844 | 975 | family with sequence similarity 229, member A |
| TSSK3 | chr1 | 32827861 | 32829924 | 2064 | testis-specific serine kinase 3 |
| BSDC1 | chr1 | 32830233 | 32860062 | 29830 | BSD domain containing 1 |
| ZBTB8A | chr1 | 32930657 | 32953459 | 22803 | zinc finger and BTB domain containing 8B |
| ZBTB8B | chr1 | 32930657 | 33071551 | 140895 | zinc finger and BTB domain containing 8A |
| ZBTB8OS | chr1 | 33065772 | 33116185 | 50414 | zinc finger and BTB domain containing 8 opposite strand |
| S100BPB | chr1 | 33283042 | 33324480 | 41439 | S100P binding protein |
| FNDC5 | chr1 | 33327868 | 33338093 | 10226 | fibronectin type III domain containing 5 |
| HPCA | chr1 | 33352097 | 33360247 | 8151 | hippocalcin |
| TMEM54 | chr1 | 33360195 | 33366953 | 6759 | transmembrane protein 54 |
| RNF19B | chr1 | 33402046 | 33430414 | 28369 | ring finger protein 19B |
| ZSCAN20 | chr1 | 33938231 | 33961995 | 23765 | zinc finger and SCAN domain containing 20 |
| CSMD2 | chr1 | 33979598 | 34631443 | 651846 | CUB and Sushi multiple domains 2 |
| HMGB4 | chr1 | 34326075 | 34330392 | 4318 | high mobility group box 4 |
| CSMD2-AS1 | chr1 | 34334556 | 34351059 | 16504 | CSMD2 antisense RNA 1 |
| LOC402779 | chr1 | 34334556 | 34351059 | 16504 | CSMD2 antisense RNA 1 |
| C1orf94 | chr1 | 34632483 | 34684731 | 52249 | chromosome 1 open reading frame 94 |
| GJB5 | chr1 | 35220647 | 35224113 | 3467 | gap junction protein, beta 5, 31.1kDa |
| GJB4 | chr1 | 35225341 | 35229325 | 3985 | gap junction protein, beta 4, 30.3kDa |
| Mir_548 | chr1 | 35244163 | 35244247 | 85 | |
| GJB3 | chr1 | 35246789 | 35251967 | 5179 | gap junction protein, beta 3, 31kDa |
| GJA4 | chr1 | 35258170 | 35261348 | 3179 | gap junction protein, alpha 4, 37kDa |
| SMIM12 | chr1 | 35315962 | 35325417 | 9456 | small integral membrane protein 12 |
| DLGAP3 | chr1 | 35331036 | 35370984 | 39949 | discs, large (Drosophila) homolog-associated protein 3 |
| LOC653160 | chr1 | 35441299 | 35450948 | 9650 | uncharacterized LOC653160 |
| ZMYM6NB | chr1 | 35447126 | 35450948 | 3823 | ZMYM6 neighbor |
| ZMYM6 | chr1 | 35449367 | 35497569 | 48203 | zinc finger, MYM-type 6 |
| ZMYM1 | chr1 | 35525386 | 35581459 | 56074 | zinc finger, MYM-type 1 |
| BX537811 | chr1 | 35641980 | 35646083 | 4104 | |
| AL831889 | chr1 | 35641980 | 35646083 | 4104 | |
| SFPQ | chr1 | 35649200 | 35658743 | 9544 | splicing factor proline/glutamine-rich |
| ZMYM4 | chr1 | 35734567 | 35887545 | 152979 | zinc finger, MYM-type 4 |
| AF119915 | chr1 | 35833677 | 35835012 | 1336 | |
| KIAA0319L | chr1 | 35899090 | 36023551 | 124462 | KIAA0319-like |
| NCDN | chr1 | 36023392 | 36032380 | 8989 | neurochondrin |
| TFAP2E | chr1 | 36038970 | 36060927 | 21958 | transcription factor AP-2 epsilon (activating enhancer binding protein 2 epsilon) |
| PSMB2 | chr1 | 36035412 | 36107445 | 72034 | proteasome (prosome, macropain) subunit, beta type, 2 |
| C1orf216 | chr1 | 36179476 | 36184790 | 5315 | chromosome 1 open reading frame 216 |
| CLSPN | chr1 | 36197712 | 36235551 | 37840 | claspin |
| AGO4 | chr1 | 36273827 | 36323490 | 49664 | argonaute RISC catalytic component 4 |
| AGO1 | chr1 | 36335408 | 36389899 | 54492 | argonaute RISC catalytic component 1 |
| AK025726 | chr1 | 36391432 | 36395210 | 3779 | |
| AGO3 | chr1 | 36396318 | 36522063 | 125746 | argonaute RISC catalytic component 3 |
| TEKT2 | chr1 | 36549675 | 36553876 | 4202 | tektin 2 (testicular) |
| CSF3R | chr1 | 36931643 | 36948915 | 17273 | colony stimulating factor 3 receptor (granulocyte) |
| GRIK3 | chr1 | 37261127 | 37499844 | 238718 | glutamate receptor, ionotropic, kainate 3 |
| MIR4255 | chr1 | 37627163 | 37627235 | 73 | microRNA 4255 |
| AX747480 | chr1 | 38147242 | 38149864 | 2623 | |
| C1orf109 | chr1 | 38147241 | 38156192 | 8952 | chromosome 1 open reading frame 109 |
| CDCA8 | chr1 | 38158072 | 38175391 | 17320 | cell division cycle associated 8 |
| EPHA10 | chr1 | 38179552 | 38230824 | 51273 | EPH receptor A10 |
| INPP5B | chr1 | 38326368 | 38412729 | 86362 | inositol polyphosphate-5-phosphatase, 75kDa |
| SF3A3 | chr1 | 38422651 | 38455761 | 33111 | splicing factor 3a, subunit 3, 60kDa |
| FHL3 | chr1 | 38462441 | 38471187 | 8747 | four and a half LIM domains 3 |
| UTP11L | chr1 | 38478383 | 38490497 | 12115 | UTP11-like, U3 small nucleolar ribonucleoprotein (yeast) |
| POU3F1 | chr1 | 38509522 | 38512450 | 2929 | POU class 3 homeobox 1 |
| MIR3659 | chr1 | 38554902 | 38555001 | 100 | microRNA 3659 |
| LINC01343 | chr1 | 38674705 | 38680439 | 5735 | long intergenic non-protein coding RNA 1343 |
| LOC339442 | chr1 | 38674705 | 38680439 | 5735 | long intergenic non-protein coding RNA 1343 |
| RRAGC | chr1 | 39303868 | 39340166 | 36299 | Ras-related GTP binding C |

| | | | | | |
|--------------|------|----------|----------|---------|--|
| MYCBP | chr1 | 39328161 | 39339050 | 10890 | MYC binding protein |
| GJA9-MYCBP | chr1 | 39328161 | 39347298 | 19138 | GJA9-MYCBP readthrough |
| GJA9 | chr1 | 39339738 | 39347298 | 7561 | gap junction protein, alpha 9, 59kDa |
| RHBDL2 | chr1 | 39351478 | 39407456 | 55979 | rhomboid, veinlet-like 2 (Drosophila) |
| MACF1 | chr1 | 39670422 | 39748740 | 78319 | microtubule-actin crosslinking factor 1 |
| MACF1 | chr1 | 39547088 | 39952810 | 405723 | microtubule-actin crosslinking factor 1 |
| KIAA0754 | chr1 | 39875175 | 39882154 | 6980 | KIAA0754 |
| BMP8A | chr1 | 39957317 | 39995541 | 38225 | bone morphogenetic protein 8a |
| PPIEL | chr1 | 39987951 | 40025370 | 37420 | peptidylprolyl isomerase E-like pseudogene |
| SNORA55 | chr1 | 40033045 | 40033182 | 138 | small nucleolar RNA, H/ACA box 55 |
| PABPC4 | chr1 | 40026484 | 40042521 | 16038 | poly(A) binding protein, cytoplasmic 4 (inducible form) |
| LOC101929516 | chr1 | 40030741 | 40038875 | 8135 | uncharacterized LOC101929516 |
| HEYL | chr1 | 40089102 | 40105348 | 16247 | hes-related family bHLH transcription factor with YRPW motif-like |
| NT5C1A | chr1 | 40124792 | 40137710 | 12919 | 5'-nucleotidase, cytosolic IA |
| HPCAL4 | chr1 | 40144319 | 40157382 | 13064 | hippocalcin like 4 |
| PPIE | chr1 | 40204516 | 40229586 | 25071 | peptidylprolyl isomerase E (cyclophilin E) |
| AB075489 | chr1 | 40222853 | 40225715 | 2863 | |
| OXCT2 | chr1 | 40235196 | 40237020 | 1825 | 3-oxoacid CoA transferase 2 |
| BMP8B | chr1 | 40223902 | 40254533 | 30632 | bone morphogenetic protein 8b |
| TRIT1 | chr1 | 40306705 | 40349177 | 42473 | tRNA isopentenyltransferase 1 |
| MYCL | chr1 | 40361095 | 40367687 | 6593 | v-myc avian myelocytomatosis viral oncogene lung carcinoma derived homolog |
| MYCL1 | chr1 | 40361095 | 40367687 | 6593 | |
| BC069694 | chr1 | 40420819 | 40422587 | 1769 | |
| MFSD2A | chr1 | 40420783 | 40435640 | 14858 | major facilitator superfamily domain containing 2A |
| CAP1 | chr1 | 40506254 | 40538321 | 32068 | CAP, adenylate cyclase-associated protein 1 (yeast) |
| PPT1 | chr1 | 40538381 | 40563142 | 24762 | palmitoyl-protein thioesterase 1 |
| RLF | chr1 | 40627040 | 40706593 | 79554 | rearranged L-myc fusion |
| TMCO2 | chr1 | 40713572 | 40717365 | 3794 | transmembrane and coiled-coil domains 2 |
| ZMPSTE24 | chr1 | 40723721 | 40759856 | 36136 | zinc metalloproteinase STE24 |
| COL9A2 | chr1 | 40766162 | 40783060 | 16899 | collagen, type IX, alpha 2 |
| ZFP69 | chr1 | 40943301 | 40962015 | 18715 | ZFP69 zinc finger protein |
| EXO5 | chr1 | 40974432 | 40982214 | 7783 | exonuclease 5 |
| ZNF684 | chr1 | 40997232 | 41013841 | 16610 | zinc finger protein 684 |
| RIMS3 | chr1 | 41086351 | 41131324 | 44974 | regulating synaptic membrane exocytosis 3 |
| EFCAB14-AS1 | chr1 | 47139707 | 47157769 | 18063 | EFCAB14 antisense RNA 1 |
| EFCAB14 | chr1 | 47124358 | 47184736 | 60379 | EF-hand calcium binding domain 14 |
| CYP4B1 | chr1 | 47264669 | 47285021 | 20353 | cytochrome P450, family 4, subfamily B, polypeptide 1 |
| CYP4Z2P | chr1 | 47308766 | 47366147 | 57382 | cytochrome P450, family 4, subfamily Z, polypeptide 2, pseudogene |
| CYP4A11 | chr1 | 47394845 | 47407156 | 12312 | cytochrome P450, family 4, subfamily A, polypeptide 11 |
| CYP4X1 | chr1 | 47427035 | 47516423 | 89389 | cytochrome P450, family 4, subfamily X, polypeptide 1 |
| CYP4Z1 | chr1 | 47533159 | 47583992 | 50834 | cytochrome P450, family 4, subfamily Z, polypeptide 1 |
| CYP4A22 | chr1 | 47603106 | 47614526 | 11421 | cytochrome P450, family 4, subfamily A, polypeptide 22 |
| LINC00853 | chr1 | 47644921 | 47646011 | 1091 | long intergenic non-protein coding RNA 853 |
| PDZK1IP1 | chr1 | 47649260 | 47655771 | 6512 | PDZK1 interacting protein 1 |
| TAL1 | chr1 | 47681961 | 47698007 | 16047 | T-cell acute lymphocytic leukemia 1 |
| JA375062 | chr1 | 47691628 | 47691655 | 28 | |
| STIL | chr1 | 47694867 | 47779819 | 84953 | SCL/TAL1 interrupting locus |
| CMPK1 | chr1 | 47799468 | 47844511 | 45044 | cytidine monophosphate (UMP-CMP) kinase 1, cytosolic |
| AX748181 | chr1 | 47859449 | 47861215 | 1767 | |
| TRABD2B | chr1 | 48226199 | 48462562 | 236364 | TraB domain containing 2B |
| SKINTL | chr1 | 48567386 | 48648100 | 80715 | Skint-like, pseudogene |
| SLC5A9 | chr1 | 48688356 | 48714316 | 25961 | solute carrier family 5 (sodium/sugar cotransporter), member 9 |
| SPATA6 | chr1 | 48761043 | 48937880 | 176838 | spermatogenesis associated 6 |
| BEND5 | chr1 | 49193539 | 49242547 | 49009 | BEN domain containing 5 |
| LOC101929721 | chr1 | 49723082 | 49734966 | 11885 | uncharacterized LOC101929721 |
| AGBL4 | chr1 | 48998526 | 50489626 | 1491101 | ATP/GTP binding protein-like 4 |
| AGBL4-IT1 | chr1 | 49839872 | 49937757 | 97886 | AGBL4 intronic transcript 1 (non-protein coding) |
| ELAVL4 | chr1 | 50513685 | 50669457 | 155773 | ELAV like neuron-specific RNA binding protein 4 |
| DMRTA2 | chr1 | 50883222 | 50889119 | 5898 | DMRT-like family A2 |
| FAF1 | chr1 | 50906934 | 51425936 | 519003 | Fas (TNFRSF6) associated factor 1 |
| CDKN2C | chr1 | 51434366 | 51440309 | 5944 | cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4) |
| C1orf185 | chr1 | 51567905 | 51613754 | 45850 | chromosome 1 open reading frame 185 |
| RNF11 | chr1 | 51701944 | 51739119 | 37176 | ring finger protein 11 |
| TTC39A | chr1 | 51752929 | 51810788 | 57860 | tetratricopeptide repeat domain 39A |
| TTC39A-AS1 | chr1 | 51795325 | 51796953 | 1629 | TTC39A antisense RNA 1 |
| EPS15 | chr1 | 51819934 | 51984995 | 165062 | epidermal growth factor receptor pathway substrate 15 |
| OSBPL9 | chr1 | 52042850 | 52254891 | 212042 | oxysterol-binding protein-like protein 9 |
| RAB3B | chr1 | 52373627 | 52456436 | 82810 | RAB3B, member RAS oncogene family |
| KTI12 | chr1 | 52497776 | 52499472 | 1697 | KTI12 homolog, chromatin associated (S. cerevisiae) |
| TXNDC12 | chr1 | 52485803 | 52521843 | 36041 | thioredoxin domain containing 12 (endoplasmic reticulum) |
| BTF3L4 | chr1 | 52521856 | 52556388 | 34533 | basic transcription factor 3-like 4 |
| ZFYVE9 | chr1 | 52607765 | 52812358 | 204594 | zinc finger, FYVE domain containing 9 |
| CC2D1B | chr1 | 52816264 | 52831877 | 15614 | coiled-coil and C2 domain containing 1B |
| ORC1 | chr1 | 52838500 | 52870143 | 31644 | origin recognition complex, subunit 1 |
| PRPF38A | chr1 | 52870218 | 52883992 | 13775 | pre-mRNA processing factor 38A |
| ZCCHC11 | chr1 | 52888947 | 53019130 | 130184 | zinc finger, CCHC domain containing 11 |
| GPX7 | chr1 | 53068042 | 53074723 | 6682 | glutathione peroxidase 7 |
| FAM159A | chr1 | 53099065 | 53135339 | 36275 | family with sequence similarity 159, member A |
| SELRC1 | chr1 | 53152013 | 53164038 | 12026 | |
| COA7 | chr1 | 53152013 | 53164038 | 12026 | cytochrome c oxidase assembly factor 7 (putative) |

| | | | | | |
|--------------|------|----------|----------|---------|--|
| ZYG11B | chr1 | 53192130 | 53293013 | 100884 | zyg-11 family member B, cell cycle regulator |
| ZYG11A | chr1 | 53308182 | 53360247 | 52066 | zyg-11 family member A, cell cycle regulator |
| ECHDC2 | chr1 | 53361581 | 53392851 | 31271 | enoyl CoA hydratase domain containing 2 |
| SCP2 | chr1 | 53392900 | 53517289 | 124390 | sterol carrier protein 2 |
| PODN | chr1 | 53527723 | 53551174 | 23452 | podocan |
| SLC1A7 | chr1 | 53552850 | 53608304 | 55455 | solute carrier family 1 (glutamate transporter), member 7 |
| AX748428 | chr1 | 53580247 | 53584281 | 4035 | |
| CPT2 | chr1 | 53662100 | 53679869 | 17770 | carnitine palmitoyltransferase 2 |
| C1orf123 | chr1 | 53679771 | 53686289 | 6519 | chromosome 1 open reading frame 123 |
| MAGOH | chr1 | 53692563 | 53704282 | 11720 | mago-nashi homolog, proliferation-associated (Drosophila) |
| LOC100507564 | chr1 | 53704281 | 53708455 | 4175 | uncharacterized LOC100507564 |
| LRP8 | chr1 | 53708040 | 53793821 | 85782 | low density lipoprotein receptor-related protein 8, apolipoprotein e receptor |
| AK097571 | chr1 | 53793904 | 53802889 | 8986 | |
| SLC25A3P1 | chr1 | 53904042 | 53905693 | 1652 | solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 3 pseudogene 1 |
| DMRTB1 | chr1 | 53925071 | 53933158 | 8088 | DMRT-like family B with proline-rich C-terminal, 1 |
| GLIS1 | chr1 | 53971905 | 54199877 | 227973 | GLIS family zinc finger 1 |
| NDC1 | chr1 | 54231133 | 54304225 | 73093 | NDC1 transmembrane nucleoporin |
| TMEM59 | chr1 | 54497348 | 54519111 | 21764 | transmembrane protein 59 |
| MIR4781 | chr1 | 54519751 | 54519827 | 77 | microRNA 4781 |
| TCEANC2 | chr1 | 54519273 | 54578192 | 58920 | transcription elongation factor A (SII) N-terminal and central domain containing 2 |
| CDCP2 | chr1 | 54604667 | 54618679 | 14013 | CUB domain containing protein 2 |
| ACOT11 | chr1 | 55007929 | 55100417 | 92489 | acyl-CoA thioesterase 11 |
| MROH7 | chr1 | 55107412 | 55175940 | 68529 | maestro heat-like repeat family member 7 |
| MROH7-TTC4 | chr1 | 55107412 | 55208328 | 100917 | MROH7-TTC4 readthrough (NMD candidate) |
| HEATR8-TTC4 | chr1 | 55107426 | 55208328 | 100903 | MROH7-TTC4 readthrough (NMD candidate) |
| TTC4 | chr1 | 55181494 | 55208328 | 26835 | tetratricopeptide repeat domain 4 |
| PARS2 | chr1 | 55222570 | 55230226 | 7657 | prolyl-tRNA synthetase 2, mitochondrial (putative) |
| TTC22 | chr1 | 55246751 | 55266941 | 20191 | tetratricopeptide repeat domain 22 |
| C1orf177 | chr1 | 55271735 | 55307937 | 36203 | chromosome 1 open reading frame 177 |
| TRNA_Lys | chr1 | 55423541 | 55423614 | 74 | |
| TMEM61 | chr1 | 55446464 | 55457966 | 11503 | transmembrane protein 61 |
| BSND | chr1 | 55464616 | 55474465 | 9850 | barttin CLCNK-type chloride channel accessory beta subunit |
| PCSK9 | chr1 | 55505148 | 55530526 | 25379 | proprotein convertase subtilisin/kexin type 9 |
| USP24 | chr1 | 55532031 | 55681039 | 149009 | ubiquitin specific peptidase 24 |
| LOC100507634 | chr1 | 55681080 | 55683128 | 2049 | uncharacterized LOC100507634 |
| MIR4422 | chr1 | 55691313 | 55691396 | 84 | microRNA 4422 |
| Y_RNA | chr1 | 55950543 | 55950645 | 103 | |
| AK127270 | chr1 | 56046709 | 56200675 | 153967 | |
| PPAP2B | chr1 | 56960418 | 57045257 | 84840 | phosphatidic acid phosphatase type 2B |
| PRKAA2 | chr1 | 57110989 | 57181008 | 70020 | protein kinase, AMP-activated, alpha 2 catalytic subunit |
| C1orf168 | chr1 | 57184476 | 57285369 | 100894 | chromosome 1 open reading frame 168 |
| BC048114 | chr1 | 57289353 | 57292593 | 3241 | |
| C8A | chr1 | 57320442 | 57383894 | 63453 | complement component 8, alpha polypeptide |
| C8B | chr1 | 57394882 | 57431813 | 36932 | complement component 8, beta polypeptide |
| DAB1 | chr1 | 57463578 | 59012446 | 1548869 | Dab, reelin signal transducer, homolog 1 (Drosophila) |
| BC047487 | chr1 | 58326214 | 58328786 | 2573 | |
| DAB1-AS1 | chr1 | 58326214 | 58328786 | 2573 | DAB1 antisense RNA 1 |
| BC033978 | chr1 | 58326265 | 58328786 | 2522 | |
| AX746780 | chr1 | 58933598 | 58934677 | 1080 | |
| OMA1 | chr1 | 58939503 | 59012446 | 72944 | OMA1 zinc metalloproteinase |
| TACSTD2 | chr1 | 59041094 | 59043166 | 2073 | tumor-associated calcium signal transducer 2 |
| MYSM1 | chr1 | 59120410 | 59165747 | 45338 | Myb-like, SWIRM and MPN domains 1 |
| JUN | chr1 | 59246462 | 59249785 | 3324 | jun proto-oncogene |
| LINC01135 | chr1 | 59250822 | 59365384 | 114563 | long intergenic non-protein coding RNA 1135 |
| LOC100131060 | chr1 | 59250822 | 59365384 | 114563 | long intergenic non-protein coding RNA 1135 |
| LINC01358 | chr1 | 59486147 | 59553919 | 67773 | long intergenic non-protein coding RNA 1358 |
| HSD52 | chr1 | 59597607 | 59612479 | 14873 | uncharacterized LOC729467 |
| FGGY | chr1 | 59762624 | 60228402 | 465779 | FGGY carbohydrate kinase domain containing |
| MIR4711 | chr1 | 60198898 | 60198968 | 71 | microRNA 4711 |
| LOC101926944 | chr1 | 60238466 | 60254501 | 16036 | uncharacterized LOC101926944 |
| BC042048 | chr1 | 60238466 | 60254501 | 16036 | |
| HOOB1 | chr1 | 60280462 | 60342050 | 61589 | hook microtubule-tethering protein 1 |
| CYP2J2 | chr1 | 60358979 | 60392423 | 33445 | cytochrome P450, family 2, subfamily J, polypeptide 2 |
| C1orf87 | chr1 | 60454823 | 60539442 | 84620 | chromosome 1 open reading frame 87 |
| LOC101926964 | chr1 | 61125302 | 61291256 | 165955 | uncharacterized LOC101926964 |
| AK097193 | chr1 | 61125302 | 61291256 | 165955 | |
| NFIA-AS2 | chr1 | 61405915 | 61436448 | 30534 | NFIA antisense RNA 2 |
| BC030753 | chr1 | 61405915 | 61436448 | 30534 | |
| NFIA-AS1 | chr1 | 61714616 | 61719190 | 4575 | NFIA antisense RNA 1 |
| NFIA | chr1 | 61542945 | 61928460 | 38516 | nuclear factor I/A |
| MGC34796 | chr1 | 62119913 | 62121800 | 1888 | sepiapterin reductase (7,8-dihydrobiopterin:NADP+ oxidoreductase) pseudogene |
| TM2D1 | chr1 | 62146718 | 62191095 | 44378 | TM2 domain containing 1 |
| INADL | chr1 | 62208148 | 62644347 | 436200 | InaD-like (Drosophila) |
| L1TD1 | chr1 | 62660473 | 62678001 | 17529 | LINE-1 type transposase domain containing 1 |
| KANK4 | chr1 | 62701836 | 62785083 | 83248 | KN motif and ankyrin repeat domains 4 |
| USP1 | chr1 | 62901974 | 62917475 | 15502 | ubiquitin specific peptidase 1 |
| DOCK7 | chr1 | 62920396 | 63154039 | 233644 | dedicator of cytokinesis 7 |
| ANGPTL3 | chr1 | 63063157 | 63071976 | 8820 | angiopoietin-like 3 |
| ATG4C | chr1 | 63249776 | 63330941 | 81166 | autophagy related 4C, cysteine peptidase |
| LINC00466 | chr1 | 63624753 | 63782901 | 158149 | long intergenic non-protein coding RNA 466 |

| | | | | | |
|--------------|------|----------|----------|--------|---|
| 7SK | chr1 | 63704613 | 63704845 | 233 | RNA, 7SK small nuclear |
| FOXD3-AS1 | chr1 | 63786554 | 63790112 | 3559 | FOXD3 antisense RNA 1 (head to head) |
| FOXD3 | chr1 | 63788729 | 63790797 | 2069 | forkhead box D3 |
| MIR6068 | chr1 | 63792595 | 63792655 | 61 | microRNA 6068 |
| U7 | chr1 | 63799429 | 63799491 | 63 | RNA, U7 small nuclear 86 pseudogene |
| ALG6 | chr1 | 63833260 | 63904233 | 70974 | ALG6, alpha-1,3-glucosyltransferase |
| ITGB3BP | chr1 | 63906440 | 63988944 | 82505 | integrin beta 3 binding protein (beta3-endonexin) |
| EFCAB7 | chr1 | 63989012 | 64038364 | 49353 | EF-hand calcium binding domain 7 |
| DLEU2L | chr1 | 64014650 | 64016307 | 1658 | deleted in lymphocytic leukemia 2-like |
| PGM1 | chr1 | 64058946 | 64125916 | 66971 | phosphoglucomutase 1 |
| Mir_544 | chr1 | 64262024 | 64262128 | 105 | |
| ROR1 | chr1 | 64239689 | 64647179 | 407491 | receptor tyrosine kinase-like orphan receptor 1 |
| BC040909 | chr1 | 64560124 | 64577888 | 17765 | |
| ROR1-AS1 | chr1 | 64560124 | 64579474 | 19351 | ROR1 antisense RNA 1 |
| AK096291 | chr1 | 64571005 | 64636980 | 65976 | |
| UBE2U | chr1 | 64669489 | 64710027 | 40539 | ubiquitin-conjugating enzyme E2U (putative) |
| MIR4794 | chr1 | 65045529 | 65045604 | 76 | microRNA 4794 |
| CACHD1 | chr1 | 64936475 | 65158741 | 222267 | cache domain containing 1 |
| AK026777 | chr1 | 65154981 | 65158736 | 3756 | |
| RAVER2 | chr1 | 65210777 | 65298914 | 88138 | ribonucleoprotein, PTB-binding 2 |
| AK128734 | chr1 | 65338382 | 65343856 | 5475 | |
| JAK1 | chr1 | 65298905 | 65432619 | 133715 | Janus kinase 1 |
| BC035370 | chr1 | 65445259 | 65468159 | 22901 | |
| LINC01359 | chr1 | 65445259 | 65468159 | 22901 | long intergenic non-protein coding RNA 1359 |
| MIR3671 | chr1 | 65523437 | 65523525 | 89 | microRNA 3671 |
| MIR101-1 | chr1 | 65524116 | 65524191 | 76 | microRNA 101-1 |
| AK4 | chr1 | 65613231 | 65697828 | 84598 | adenylate kinase 4 |
| AK123450 | chr1 | 65720144 | 65721848 | 1705 | |
| DNAJC6 | chr1 | 65720147 | 65881552 | 161406 | DnaJ (Hsp40) homolog, subfamily C, member 6 |
| LEPROT | chr1 | 65886130 | 65901690 | 15561 | leptin receptor overlapping transcript |
| LEPR | chr1 | 65886130 | 66103176 | 217047 | leptin receptor |
| LOC101927139 | chr1 | 66508182 | 66516401 | 8220 | uncharacterized LOC101927139 |
| PDE4B | chr1 | 66258192 | 66840262 | 582071 | phosphodiesterase 4B, cAMP-specific |
| U4 | chr1 | 66560143 | 66560229 | 87 | RNA, U4A small nuclear |
| MIR3117 | chr1 | 67094122 | 67094200 | 79 | microRNA 3117 |
| SGIP1 | chr1 | 66999824 | 67210768 | 210945 | SH3-domain GRB2-like (endophilin) interacting protein 1 |
| AK298300 | chr1 | 67132271 | 67142710 | 10440 | |
| TCTEX1D1 | chr1 | 67218139 | 67244730 | 26592 | Tctex1 domain containing 1 |
| INSL5 | chr1 | 67263423 | 67266942 | 3520 | insulin-like 5 |
| WDR78 | chr1 | 67278571 | 67390570 | 112000 | WD repeat domain 78 |
| MIER1 | chr1 | 67390577 | 67454302 | 63726 | mesoderm induction early response 1, transcriptional regulator |
| SLC35D1 | chr1 | 67465014 | 67520080 | 55067 | solute carrier family 35 (UDP-GlcA/UDP-GalNAc transporter), member D1 |
| C1orf141 | chr1 | 67557858 | 67600654 | 42797 | chromosome 1 open reading frame 141 |
| IL23R | chr1 | 67604589 | 67725650 | 121062 | interleukin 23 receptor |
| IL12RB2 | chr1 | 67773046 | 67862583 | 89538 | interleukin 12 receptor, beta 2 |
| SERBP1 | chr1 | 67873492 | 67896123 | 22632 | SERPINE1 mRNA binding protein 1 |
| GADD45A | chr1 | 68150859 | 68154021 | 3163 | growth arrest and DNA-damage-inducible, alpha |
| GNG12 | chr1 | 68167148 | 68299155 | 132008 | guanine nucleotide binding protein (G protein), gamma 12 |
| U7 | chr1 | 68238275 | 68238336 | 62 | RNA, U7 small nuclear 86 pseudogene |
| GNG12-AS1 | chr1 | 68297970 | 68668670 | 370701 | GNG12 antisense RNA 1 |
| DIRAS3 | chr1 | 68511644 | 68516460 | 4817 | DIRAS family, GTP-binding RAS-like 3 |
| WLS | chr1 | 68564141 | 68698284 | 134144 | wntless Wnt ligand secretion mediator |
| MIR1262 | chr1 | 68649200 | 68649293 | 94 | microRNA 1262 |
| JB175146 | chr1 | 68649301 | 68649321 | 21 | |
| RPE65 | chr1 | 68894506 | 68915642 | 21137 | retinal pigment epithelium-specific protein 65kDa |
| DEPDC1 | chr1 | 68939834 | 68962904 | 23071 | DEP domain containing 1 |
| DEPDC1-AS1 | chr1 | 68962358 | 69004310 | 41953 | DEPDC1 antisense RNA 1 |
| BC020917 | chr1 | 68962358 | 69004310 | 41953 | |
| LRRC7 | chr1 | 70032867 | 70589171 | 556305 | leucine rich repeat containing 7 |
| PIN1P1 | chr1 | 70385004 | 70386000 | 997 | peptidylprolyl cis/trans isomerase, NIMA-interacting 1 pseudogene 1 |
| LRRC40 | chr1 | 70610484 | 70671361 | 60878 | leucine rich repeat containing 40 |
| SRSF11 | chr1 | 70671364 | 70717701 | 46338 | serine/arginine-rich splicing factor 11 |
| ANKRD13C | chr1 | 70724684 | 70820417 | 95734 | ankyrin repeat domain 13C |
| HHLA3 | chr1 | 70820492 | 70833705 | 13214 | HERV-H LTR-associating 3 |
| CTH | chr1 | 70876900 | 70905534 | 28635 | cystathionine gamma-lyase |
| LOC101927244 | chr1 | 71172135 | 71252151 | 80017 | uncharacterized LOC101927244 |
| BC041441 | chr1 | 71172135 | 71252151 | 80017 | |
| PTGER3 | chr1 | 71318035 | 71513491 | 195457 | prostaglandin E receptor 3 (subtype EP3) |
| ZRANB2-AS2 | chr1 | 71547006 | 71703406 | 156401 | ZRANB2 antisense RNA 2 (head to head) |
| NEGR1 | chr1 | 71868624 | 72748405 | 879782 | neuronal growth regulator 1 |
| SLC44A5 | chr1 | 75667815 | 76143610 | 475796 | solute carrier family 44, member 5 |
| CR936677 | chr1 | 76103850 | 76188721 | 84872 | |
| ACADM | chr1 | 76190031 | 76229363 | 39333 | acyl-CoA dehydrogenase, C-4 to C-12 straight chain |
| SNORD45C | chr1 | 76252756 | 76252834 | 79 | small nucleolar RNA, C/D box 45C |
| SNORD45A | chr1 | 76253573 | 76253657 | 85 | small nucleolar RNA, C/D box 45A |
| SNORD45B | chr1 | 76255161 | 76255232 | 72 | small nucleolar RNA, C/D box 45B |
| RABGGTB | chr1 | 76251878 | 76260775 | 8898 | Rab geranylgeranyltransferase, beta subunit |
| MSH4 | chr1 | 76262555 | 76378923 | 116369 | mutS homolog 4 |
| MGC27382 | chr1 | 78695282 | 78835147 | 139866 | uncharacterized MGC27382 |
| PTGFR | chr1 | 78956727 | 79006386 | 49660 | prostaglandin F receptor (FP) |

| | | | | | |
|--------------|------|----------|----------|--------|--|
| IFI44L | chr1 | 79086087 | 79111830 | 25744 | interferon-induced protein 44-like |
| IFI44 | chr1 | 79115476 | 79129763 | 14288 | interferon-induced protein 44 |
| Mir_548 | chr1 | 79152744 | 79152828 | 85 | |
| ELTD1 | chr1 | 79355448 | 79472495 | 117048 | EGF, latrophilin and seven transmembrane domain containing 1 |
| LOC101927412 | chr1 | 81001439 | 81112473 | 111035 | uncharacterized LOC101927412 |
| LOC101927434 | chr1 | 81979564 | 82023387 | 43824 | uncharacterized LOC101927434 |
| LPHN2 | chr1 | 81771844 | 82458422 | 686579 | latrophilin 2 |
| Mir_544 | chr1 | 82312940 | 82313045 | 106 | |
| U80773 | chr1 | 83439565 | 83451891 | 12327 | |
| LINC01361 | chr1 | 83439565 | 83451891 | 12327 | long intergenic non-protein coding RNA 1361 |
| BC043544 | chr1 | 83911736 | 83920454 | 8719 | |
| LOC101927587 | chr1 | 84041470 | 84326679 | 285210 | uncharacterized LOC101927587 |
| BC036594 | chr1 | 84041470 | 84326679 | 285210 | |
| HH834010 | chr1 | 84259583 | 84259634 | 52 | |
| LOC101927560 | chr1 | 84267198 | 84326229 | 59032 | uncharacterized LOC101927560 |
| AK097722 | chr1 | 84267442 | 84326229 | 58788 | |
| MIR548AP | chr1 | 84259597 | 84379059 | 119463 | microRNA 548ap |
| TTL7 | chr1 | 84335056 | 84464833 | 129778 | tubulin tyrosine ligase-like family, member 7 |
| BC037304 | chr1 | 84543635 | 84546350 | 2716 | |
| PRKACB | chr1 | 84543657 | 84704181 | 160525 | protein kinase, cAMP-dependent, catalytic, beta |
| SNORA2 | chr1 | 84743003 | 84743140 | 138 | |
| SAMD13 | chr1 | 84764048 | 84816481 | 52434 | sterile alpha motif domain containing 13 |
| UOX | chr1 | 84830640 | 84863576 | 32937 | urate oxidase, pseudogene |
| DNASE2B | chr1 | 84864214 | 84880691 | 16478 | deoxyribonuclease II beta |
| RPF1 | chr1 | 84944919 | 84964033 | 19115 | ribosome production factor 1 homolog (S. cerevisiae) |
| GNG5 | chr1 | 84964005 | 84972262 | 8258 | guanine nucleotide binding protein (G protein), gamma 5 |
| SPATA1 | chr1 | 84972012 | 85018767 | 46756 | spermatogenesis associated 1 |
| CTBS | chr1 | 85018803 | 85040163 | 21361 | chitinase, di-N-acetyl- |
| LINC01461 | chr1 | 85063646 | 85086714 | 23069 | long intergenic non-protein coding RNA 1461 |
| C1orf180 | chr1 | 85093912 | 85100703 | 6792 | chromosome 1 open reading frame 180 |
| SSX2IP | chr1 | 85109389 | 85156440 | 47052 | synovial sarcoma, X breakpoint 2 interacting protein |
| LPAR3 | chr1 | 85279085 | 85358896 | 79812 | lysophosphatidic acid receptor 3 |
| MCOLN2 | chr1 | 85391265 | 85462796 | 71532 | muco lipin 2 |
| MCOLN3 | chr1 | 85490240 | 85495642 | 5403 | muco lipin 3 |
| MCOLN3 | chr1 | 85483764 | 85514223 | 30460 | muco lipin 3 |
| WDR63 | chr1 | 85527980 | 85598821 | 70842 | WD repeat domain 63 |
| MIR4423 | chr1 | 85599476 | 85599556 | 81 | microRNA 4423 |
| SYDE2 | chr1 | 85623355 | 85666728 | 43374 | synapse defective 1, Rho GTPase, homolog 2 (C. elegans) |
| C1orf52 | chr1 | 85715636 | 85725355 | 9720 | chromosome 1 open reading frame 52 |
| BCL10 | chr1 | 85731459 | 85742587 | 11129 | B-cell CLL/lymphoma 10 |
| LOC646626 | chr1 | 85742040 | 85865646 | 123607 | uncharacterized LOC646626 |
| DDAH1 | chr1 | 85784167 | 86044046 | 259880 | dimethylarginine dimethylaminohydrolase 1 |
| CYR61 | chr1 | 86046443 | 86049648 | 3206 | cysteine-rich, angiogenic inducer, 61 |
| AL832891 | chr1 | 86047526 | 86049388 | 1863 | |
| ZNHIT6 | chr1 | 86115105 | 86174116 | 59012 | zinc finger, HIT-type containing 6 |
| COL24A1 | chr1 | 86194915 | 86622446 | 427532 | collagen, type XXIV, alpha 1 |
| DR1 | chr1 | 93811477 | 93828148 | 16672 | down-regulator of transcription 1, TBP-binding (negative cofactor 2) |
| FNBP1L | chr1 | 93913687 | 94020218 | 106532 | formin binding protein 1-like |
| TRNA_Cys | chr1 | 93981833 | 93981906 | 74 | |
| LOC100129046 | chr1 | 94057524 | 94065587 | 8064 | uncharacterized LOC100129046 |
| BCAR3 | chr1 | 94027342 | 94312706 | 285365 | breast cancer anti-estrogen resistance 3 |
| MIG7 | chr1 | 94219111 | 94240930 | 21820 | mig-7 |
| MIR760 | chr1 | 94312387 | 94312467 | 81 | microRNA 760 |
| TRNA_Arg | chr1 | 94313128 | 94313213 | 86 | |
| AX746627 | chr1 | 94317792 | 94319887 | 2096 | |
| DNTTIP2 | chr1 | 94335013 | 94344762 | 9750 | deoxynucleotidyltransferase, terminal, interacting protein 2 |
| GCLM | chr1 | 94352589 | 94375012 | 22424 | glutamate-cysteine ligase, modifier subunit |
| ABCA4 | chr1 | 94458393 | 94586705 | 128313 | ATP-binding cassette, sub-family A (ABC1), member 4 |
| ARHGAP29 | chr1 | 94615402 | 94740624 | 125223 | Rho GTPase activating protein 29 |
| ABCD3 | chr1 | 94883932 | 94984219 | 100288 | ATP-binding cassette, sub-family D (ALD), member 3 |
| F3 | chr1 | 94994731 | 95007413 | 12683 | coagulation factor III (thromboplastin, tissue factor) |
| BC030750 | chr1 | 95123088 | 95285834 | 162747 | |
| LINC01057 | chr1 | 95123088 | 95285837 | 162750 | long intergenic non-protein coding RNA 1057 |
| SLC44A3 | chr1 | 95285897 | 95360803 | 74907 | solute carrier family 44, member 3 |
| CNN3 | chr1 | 95362504 | 95392779 | 30276 | calponin 3, acidic |
| LOC729970 | chr1 | 95393583 | 95428826 | 35244 | hCG2028352-like |
| ALG14 | chr1 | 95448278 | 95538507 | 90230 | ALG14, UDP-N-acetylglucosaminyltransferase subunit |
| Mir_448 | chr1 | 95550007 | 95550119 | 113 | |
| TMEM56 | chr1 | 95558072 | 95663161 | 105090 | transmembrane protein 56 |
| TMEM56-RWD | chr1 | 95583478 | 95710509 | 127032 | TMEM56-RWD3 readthrough |
| LOC101928118 | chr1 | 95628774 | 95699538 | 70765 | uncharacterized LOC101928118 |
| AK090700 | chr1 | 95628774 | 95699538 | 70765 | |
| RWDD3 | chr1 | 95699710 | 95712781 | 13072 | RWD domain containing 3 |
| FLJ31862 | chr1 | 95940292 | 95944912 | 4621 | uncharacterized LOC440594 |
| LOC100996635 | chr1 | 95975671 | 95981020 | 5350 | uncharacterized LOC100996635 |
| BC067883 | chr1 | 95975895 | 95981020 | 5126 | |
| LOC102723661 | chr1 | 96457623 | 96488436 | 30814 | uncharacterized LOC102723661 |
| LOC101928241 | chr1 | 96719624 | 96839681 | 120058 | uncharacterized LOC101928241 |
| PTBP2 | chr1 | 97187160 | 97280605 | 93446 | polypyrimidine tract binding protein 2 |
| PTBLP | chr1 | 97279223 | 97280347 | 1125 | polypyrimidine tract binding protein 2 |

| | | | | | |
|--------------|------|-----------|-----------|--------|--|
| DPYD-AS1 | chr1 | 97561478 | 97788511 | 227034 | DPYD antisense RNA 1 |
| DPYD | chr1 | 97543299 | 98386615 | 843317 | dihydropyrimidine dehydrogenase |
| DPYD-AS2 | chr1 | 98262476 | 98263607 | 1132 | DPYD antisense RNA 2 |
| MIR137HG | chr1 | 98453555 | 98515249 | 61695 | MIR137 host gene (non-protein coding) |
| MIR2682 | chr1 | 98510798 | 98510907 | 110 | microRNA 2682 |
| MIR137 | chr1 | 98511625 | 98511727 | 103 | microRNA 137 |
| LOC729987 | chr1 | 98676266 | 98738214 | 61949 | uncharacterized LOC729987 |
| SNX7 | chr1 | 99127235 | 99226056 | 98822 | sorting nexin 7 |
| LPPR5 | chr1 | 99355800 | 99470449 | 114650 | lipid phosphate phosphatase-related protein type 5 |
| LOC10012962C | chr1 | 99469831 | 99614408 | 144578 | uncharacterized LOC100129620 |
| LPPR4 | chr1 | 99729847 | 99775138 | 45292 | lipid phosphate phosphatase-related protein type 4 |
| LOC10192827C | chr1 | 99937975 | 99999571 | 61597 | uncharacterized LOC101928270 |
| PALMD | chr1 | 100111430 | 100160097 | 48668 | palmdelphin |
| MIR548AA1 | chr1 | 100154610 | 100178513 | 23904 | microRNA 548aa-1 |
| MIR548D1 | chr1 | 100154610 | 100178513 | 23904 | microRNA 548d-1 |
| FRRS1 | chr1 | 100174258 | 100231349 | 57092 | ferric-chelate reductase 1 |
| AGL | chr1 | 100315639 | 100389579 | 73941 | amylase, alpha-1, 6-glucosidase, 4-alpha-glucanotransferase |
| BC112312 | chr1 | 100434000 | 100435404 | 1405 | |
| SLC35A3 | chr1 | 100435344 | 100492534 | 57191 | solute carrier family 35 (UDP-N-acetylglucosamine (UDP-GlcNAc) transporter), member A3 |
| HIAT1 | chr1 | 100503788 | 100548929 | 45142 | hippocampus abundant transcript 1 |
| SASS6 | chr1 | 100549101 | 100598511 | 49411 | spindle assembly 6 homolog (C. elegans) |
| TRMT13 | chr1 | 100598705 | 100616054 | 17350 | tRNA methyltransferase 13 homolog (S. cerevisiae) |
| LRR39 | chr1 | 100614003 | 100643829 | 29827 | leucine rich repeat containing 39 |
| DBT | chr1 | 100652477 | 100715409 | 62933 | dihydroliipoamide branched chain transacylase E2 |
| RTCA-AS1 | chr1 | 100730297 | 100731730 | 1434 | RTCA antisense RNA 1 |
| RTCA | chr1 | 100731713 | 100758325 | 26613 | RNA 3'-terminal phosphate cyclase |
| MIR553 | chr1 | 100746796 | 100746864 | 69 | microRNA 553 |
| CDC14A | chr1 | 100810583 | 100985833 | 175251 | cell division cycle 14A |
| GPR88 | chr1 | 101003727 | 101007583 | 3857 | G protein-coupled receptor 88 |
| LINC01349 | chr1 | 101092605 | 101112560 | 19956 | long intergenic non-protein coding RNA 1349 |
| LOC100128787 | chr1 | 101092605 | 101112560 | 19956 | long intergenic non-protein coding RNA 1349 |
| VCAM1 | chr1 | 101185195 | 101204601 | 19407 | vascular cell adhesion molecule 1 |
| EXTL2 | chr1 | 101337927 | 101360735 | 22809 | exostosin-like glycosyltransferase 2 |
| SLC30A7 | chr1 | 101361631 | 101447311 | 85681 | solute carrier family 30 (zinc transporter), member 7 |
| DPH5 | chr1 | 101455179 | 101491644 | 36466 | diphthamide biosynthesis 5 |
| BX538249 | chr1 | 101491408 | 101552819 | 61412 | |
| LOC102606465 | chr1 | 101491401 | 101552935 | 61535 | uncharacterized LOC102606465 |
| BC045807 | chr1 | 101538215 | 101552819 | 14605 | |
| AK021551 | chr1 | 101548009 | 101552819 | 4811 | |
| LOC10192837C | chr1 | 101700428 | 101702084 | 1657 | uncharacterized LOC101928370 |
| S1PR1 | chr1 | 101702304 | 101707076 | 4773 | sphingosine-1-phosphate receptor 1 |
| RNU6-31P | chr1 | 101806424 | 101806451 | 28 | RNA, U6 small nuclear 31, pseudogene |
| DNAJA1P5 | chr1 | 102337566 | 102360299 | 22734 | DnaJ (Hsp40) homolog, subfamily A, member 1 pseudogene 5 |
| OLFM3 | chr1 | 102268122 | 102462790 | 194669 | olfactomedin 3 |
| COL11A1 | chr1 | 103342022 | 103574052 | 232031 | collagen, type XI, alpha 1 |
| LOC101928436 | chr1 | 103960700 | 104068105 | 107406 | uncharacterized LOC101928436 |
| RNPC3 | chr1 | 104068577 | 104097859 | 29283 | RNA-binding region (RNP1, RRM) containing 3 |
| ACTG1P4 | chr1 | 104112025 | 104114008 | 1984 | actin, gamma 1 pseudogene 4 |
| AMY2B | chr1 | 104078747 | 104153092 | 74346 | amylase, alpha 2B (pancreatic) |
| AMY2A | chr1 | 104159998 | 104168400 | 8403 | amylase, alpha 2A (pancreatic) |
| AMY1A | chr1 | 104198301 | 104207173 | 8873 | amylase, alpha 1A (salivary) |
| AMY1B | chr1 | 104230040 | 104238889 | 8850 | amylase, alpha 1B (salivary) |
| AMY1A | chr1 | 104230039 | 104239073 | 9035 | amylase, alpha 1A (salivary) |
| AMY2A | chr1 | 104257374 | 104262492 | 5119 | amylase, alpha 2A (pancreatic) |
| AMY1C | chr1 | 104292440 | 104301310 | 8871 | amylase, alpha 1C (salivary) |
| LOC100129138 | chr1 | 104615644 | 104619693 | 4050 | THAP domain containing, apoptosis associated protein 3 pseudogene |
| LOC101928476 | chr1 | 106132315 | 106161557 | 29243 | uncharacterized LOC101928476 |
| BC043293 | chr1 | 106144773 | 106161557 | 16785 | |
| PRMT6 | chr1 | 107599266 | 107601916 | 2651 | protein arginine methyltransferase 6 |
| NTNG1 | chr1 | 107682628 | 108024475 | 341848 | netrin G1 |
| VAV3 | chr1 | 108113781 | 108507545 | 393765 | vav 3 guanine nucleotide exchange factor |
| MIR7852 | chr1 | 108439844 | 108439926 | 83 | microRNA 7852 |
| VAV3-AS1 | chr1 | 108507064 | 108537229 | 30166 | VAV3 antisense RNA 1 |
| SLC25A24 | chr1 | 108677343 | 108742980 | 65638 | solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 24 |
| NBPF4 | chr1 | 108765962 | 108786703 | 20742 | neuroblastoma breakpoint family, member 4 |
| BC051808 | chr1 | 108803819 | 108816311 | 12493 | |
| NBPF4 | chr1 | 108918459 | 108953434 | 34976 | neuroblastoma breakpoint family, member 4 |
| NBPF6 | chr1 | 108992903 | 109013260 | 20358 | neuroblastoma breakpoint family, member 6 |
| FAM102B | chr1 | 109102970 | 109181949 | 78980 | family with sequence similarity 102, member B |
| HENMT1 | chr1 | 109190909 | 109204148 | 13240 | HEN1 methyltransferase homolog 1 (Arabidopsis) |
| PRPF38B | chr1 | 109234931 | 109244422 | 9492 | pre-mRNA processing factor 38B |
| FNDC7 | chr1 | 109255555 | 109285367 | 29813 | fibronectin type III domain containing 7 |
| STXBP3 | chr1 | 109289284 | 109352148 | 62865 | syntaxin binding protein 3 |
| SPATA42 | chr1 | 109399838 | 109401146 | 1309 | spermatogenesis associated 42 (non-protein coding) |
| AKNAD1 | chr1 | 109358519 | 109506121 | 147603 | AKNA domain containing 1 |
| GPSM2 | chr1 | 109419602 | 109476957 | 57356 | G-protein signaling modulator 2 |
| CLCC1 | chr1 | 109472129 | 109506121 | 33993 | chloride channel CLIC-like 1 |
| WDR47 | chr1 | 109512837 | 109584850 | 72014 | WD repeat domain 47 |
| TAF13 | chr1 | 109606997 | 109618624 | 11628 | TAF13 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 18kDa |
| MYBPHL | chr1 | 109834986 | 109849663 | 14678 | myosin binding protein H-like |

| | | | | | |
|--------------|------|-----------|-----------|--------|--|
| SORT1 | chr1 | 109852187 | 109940563 | 88377 | sortilin 1 |
| PSMA5 | chr1 | 109941652 | 109969108 | 27457 | proteasome (prosome, macropain) subunit, alpha type, 5 |
| FW340027 | chr1 | 109965120 | 109966952 | 1833 | |
| SYPL2 | chr1 | 110009099 | 110024764 | 15666 | synaptophysin-like 2 |
| ATXN7L2 | chr1 | 110026560 | 110035420 | 8861 | ataxin 7-like 2 |
| CYB561D1 | chr1 | 110036657 | 110043063 | 6407 | cytochrome b561 family, member D1 |
| AMIGO1 | chr1 | 110049445 | 110052336 | 2892 | adhesion molecule with Ig-like domain 1 |
| GPR61 | chr1 | 110082493 | 110088455 | 5963 | G protein-coupled receptor 61 |
| GNAI3 | chr1 | 110091185 | 110138454 | 47270 | guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 3 |
| MIR197 | chr1 | 110141514 | 110141589 | 76 | microRNA 197 |
| GNAT2 | chr1 | 110145888 | 110155705 | 9818 | guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 2 |
| AMPD2 | chr1 | 110162125 | 110174677 | 12553 | adenosine monophosphate deaminase 2 |
| GSTM4 | chr1 | 110198697 | 110208123 | 9427 | glutathione S-transferase mu 4 |
| GSTM2 | chr1 | 110198697 | 110226619 | 27923 | glutathione S-transferase mu 2 (muscle) |
| GSTM1 | chr1 | 110230417 | 110236367 | 5951 | glutathione S-transferase mu 1 |
| GSTM5 | chr1 | 110254863 | 110260890 | 6028 | glutathione S-transferase mu 5 |
| GSTM3 | chr1 | 110276553 | 110283660 | 7108 | glutathione S-transferase mu 3 (brain) |
| EPS8L3 | chr1 | 110292701 | 110306644 | 13944 | EPS8-like 3 |
| KCNC4 | chr1 | 110753335 | 110776674 | 23340 | potassium voltage-gated channel, Shaw-related subfamily, member 4 |
| SNORA25 | chr1 | 110815105 | 110815229 | 125 | small nucleolar RNA, H/ACA box 25 |
| LOC440600 | chr1 | 110828998 | 110881793 | 52796 | uncharacterized LOC440600 |
| RBM15 | chr1 | 110881944 | 110889303 | 7360 | RNA binding motif protein 15 |
| BC069739 | chr1 | 110887099 | 110888734 | 1636 | |
| SLC16A4 | chr1 | 110905472 | 110933704 | 28233 | solute carrier family 16, member 4 |
| LAMTOR5 | chr1 | 110943876 | 110950546 | 6671 | late endosomal/lysosomal adaptor, MAPK and MTOR activator 5 |
| LAMTOR5-AS1 | chr1 | 110950430 | 110958896 | 8467 | LAMTOR5 antisense RNA 1 |
| PROK1 | chr1 | 110993787 | 110999976 | 6190 | prokineticin 1 |
| CYMP | chr1 | 111016377 | 111033891 | 17515 | chymosin pseudogene |
| LOC440602 | chr1 | 111030301 | 111032880 | 2580 | uncharacterized LOC440602 |
| KCNA10 | chr1 | 111059838 | 111061797 | 1960 | potassium voltage-gated channel, shaker-related subfamily, member 10 |
| KCNA2 | chr1 | 111136201 | 111174096 | 37896 | potassium voltage-gated channel, shaker-related subfamily, member 2 |
| KCNA3 | chr1 | 111196185 | 111217655 | 21471 | potassium voltage-gated channel, shaker-related subfamily, member 3 |
| CD53 | chr1 | 111413820 | 111442558 | 28739 | CD53 molecule |
| LRIF1 | chr1 | 111489811 | 111506566 | 16756 | ligand dependent nuclear receptor interacting factor 1 |
| DRAM2 | chr1 | 111659953 | 111682838 | 22886 | DNA-damage regulated autophagy modulator 2 |
| CEPT1 | chr1 | 111682248 | 111727724 | 45477 | choline/ethanolamine phosphotransferase 1 |
| DENND2D | chr1 | 111728590 | 111747160 | 18571 | DENN/MADD domain containing 2D |
| CHI3L2 | chr1 | 111770280 | 111786062 | 15783 | chitinase 3-like 2 |
| CHIAP2 | chr1 | 111823145 | 111828730 | 5586 | chitinase, acidic pseudogene 2 |
| CHIA | chr1 | 111833473 | 111863188 | 29716 | chitinase, acidic |
| PIFO | chr1 | 111889181 | 111895639 | 6459 | primary cilia formation |
| PGCP1 | chr1 | 111927140 | 111932473 | 5334 | progastricin (pepsinogen C) pseudogene 1 |
| OVGP1 | chr1 | 111956936 | 111970399 | 13464 | oviductal glycoprotein 1, 120kDa |
| WDR77 | chr1 | 111982511 | 111991830 | 9320 | WD repeat domain 77 |
| ATP5F1 | chr1 | 111991461 | 112004525 | 13065 | ATP synthase, H+ transporting, mitochondrial Fo complex, subunit B1 |
| C1orf162 | chr1 | 112016490 | 112021134 | 4645 | chromosome 1 open reading frame 162 |
| ADORA3 | chr1 | 112025969 | 112106597 | 80629 | adenosine A3 receptor |
| LINC01160 | chr1 | 112141628 | 112150940 | 9313 | long intergenic non-protein coding RNA 1160 |
| LOC100129269 | chr1 | 112141628 | 112150940 | 9313 | long intergenic non-protein coding RNA 1160 |
| RAP1A | chr1 | 112085054 | 112259317 | 174264 | RAP1A, member of RAS oncogene family |
| AK023457 | chr1 | 112256829 | 112259310 | 2482 | |
| FAM212B | chr1 | 112264685 | 112298419 | 33735 | family with sequence similarity 212, member B |
| FAM212B-AS1 | chr1 | 112282462 | 112290420 | 7959 | FAM212B antisense RNA 1 |
| LOC100506343 | chr1 | 112282462 | 112290420 | 7959 | FAM212B antisense RNA 1 |
| BC041890 | chr1 | 112287934 | 112298131 | 10198 | |
| LOC101928718 | chr1 | 112287938 | 112298131 | 10194 | uncharacterized LOC101928718 |
| DDX20 | chr1 | 112298189 | 112310199 | 12011 | DEAD (Asp-Glu-Ala-Asp) box polypeptide 20 |
| KCND3-IT1 | chr1 | 112396383 | 112399527 | 3145 | KCND3 intronic transcript 1 (non-protein coding) |
| KCND3 | chr1 | 112318453 | 112531777 | 213325 | potassium voltage-gated channel, Shal-related subfamily, member 3 |
| LOC643355 | chr1 | 112533189 | 112541463 | 8275 | uncharacterized LOC643355 |
| SnoU13 | chr1 | 112913625 | 112913729 | 105 | |
| AX747733 | chr1 | 112938880 | 112941439 | 2560 | |
| CTTNBP2NL | chr1 | 112938799 | 113003786 | 64988 | CTTNBP2 N-terminal like |
| DKFZp547A02c | chr1 | 112999439 | 113006065 | 6627 | |
| MIR4256 | chr1 | 113004391 | 113004455 | 65 | microRNA 4256 |
| WNT2B | chr1 | 113009162 | 113063910 | 54749 | wingless-type MMTV integration site family, member 2B |
| ST7L | chr1 | 113066140 | 113162405 | 96266 | suppression of tumorigenicity 7 like |
| CAPZA1 | chr1 | 113162074 | 113214241 | 52168 | capping protein (actin filament) muscle Z-line, alpha 1 |
| MOV10 | chr1 | 113216933 | 113243368 | 26436 | Mov10 RISC complex RNA helicase |
| RHOC | chr1 | 113243748 | 113250025 | 6278 | ras homolog family member C |
| PPM1J | chr1 | 113252615 | 113257950 | 5336 | protein phosphatase, Mg2+/Mn2+ dependent, 1J |
| FAM19A3 | chr1 | 113263188 | 113269856 | 6669 | family with sequence similarity 19 (chemokine (C-C motif)-like), member A3 |
| LINC01356 | chr1 | 113362790 | 113393265 | 30476 | long intergenic non-protein coding RNA 1356 |
| AX748125 | chr1 | 113362795 | 113393265 | 30471 | |
| HP08777 | chr1 | 113392521 | 113420491 | 27971 | |
| AKR7A2P1 | chr1 | 113465971 | 113467295 | 1325 | aldo-keto reductase family 7, member A2 pseudogene 1 |
| SLC16A1 | chr1 | 113454469 | 113498975 | 44507 | solute carrier family 16 (monocarboxylate transporter), member 1 |
| BC023568 | chr1 | 113499036 | 113506690 | 7655 | |
| SLC16A1-AS1 | chr1 | 113499036 | 113506690 | 7655 | SLC16A1 antisense RNA 1 |
| BX648855 | chr1 | 113499070 | 113511603 | 12534 | |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| BC047723 | chr1 | 113499036 | 113542118 | 43083 | |
| BC037540 | chr1 | 113554308 | 113615724 | 61417 | |
| LOC100996251 | chr1 | 113554308 | 113615724 | 61417 | uncharacterized LOC100996251 |
| LRIG2 | chr1 | 113615830 | 113667342 | 51513 | leucine-rich repeats and immunoglobulin-like domains 2 |
| LOC643441 | chr1 | 113739403 | 113748875 | 9473 | uncharacterized LOC643441 |
| MAGI3 | chr1 | 113933474 | 114228545 | 295072 | membrane associated guanylate kinase, WW and PDZ domain containing 3 |
| PHTF1 | chr1 | 114239823 | 114302098 | 62276 | putative homeodomain transcription factor 1 |
| RSBN1 | chr1 | 114304453 | 114355070 | 50618 | round spermatid basic protein 1 |
| PTPN22 | chr1 | 114356432 | 114414375 | 57944 | protein tyrosine phosphatase, non-receptor type 22 (lymphoid) |
| AP4B1-AS1 | chr1 | 114355233 | 114443859 | 88627 | AP4B1 antisense RNA 1 |
| BCL2L15 | chr1 | 114419435 | 114430169 | 10735 | BCL2-like 15 |
| AP4B1 | chr1 | 114437370 | 114447741 | 10372 | adaptor-related protein complex 4, beta 1 subunit |
| DCLRE1B | chr1 | 114447914 | 114456708 | 8795 | DNA cross-link repair 1B |
| BC048113 | chr1 | 114466622 | 114471854 | 5233 | |
| BC036361 | chr1 | 114466622 | 114471880 | 5259 | |
| HIPK1-AS1 | chr1 | 114466622 | 114472147 | 5526 | HIPK1 antisense RNA 1 |
| HIPK1 | chr1 | 114471995 | 114520491 | 48497 | homeodomain interacting protein kinase 1 |
| OLFML3 | chr1 | 114522012 | 114524876 | 2865 | olfactomedin-like 3 |
| SYT6 | chr1 | 114631913 | 114696472 | 64560 | synaptotagmin VI |
| TRIM33 | chr1 | 114935398 | 115053781 | 118384 | tripartite motif containing 33 |
| BCAS2 | chr1 | 115110180 | 115124265 | 14086 | breast carcinoma amplified sequence 2 |
| DKFZp686N16 | chr1 | 115125468 | 115126223 | 756 | |
| DENND2C | chr1 | 115064016 | 115213044 | 149029 | DENN/MADD domain containing 2C |
| AMPD1 | chr1 | 115215719 | 115238239 | 22521 | adenosine monophosphate deaminase 1 |
| NRAS | chr1 | 115247084 | 115259515 | 12432 | neuroblastoma RAS viral (v-ras) oncogene homolog |
| CSDE1 | chr1 | 115259533 | 115300671 | 41139 | cold shock domain containing E1, RNA-binding |
| SIKE1 | chr1 | 115312104 | 115323308 | 11205 | suppressor of IKBKE 1 |
| SYCP1 | chr1 | 115397423 | 115537990 | 140568 | synaptonemal complex protein 1 |
| HIST2H2BC | chr1 | 149821758 | 149822340 | 583 | histone cluster 2, H2bc (pseudogene) |
| HIST2H2AA4 | chr1 | 149822627 | 149823161 | 535 | histone cluster 2, H2aa4 |
| HIST2H2BE | chr1 | 149856009 | 149858232 | 2224 | histone cluster 2, H2be |
| HIST2H2AC | chr1 | 149858524 | 149858961 | 438 | histone cluster 2, H2ac |
| HIST2H2AB | chr1 | 149859018 | 149859466 | 449 | histone cluster 2, H2ab |
| BOLA1 | chr1 | 149871154 | 149872348 | 1195 | bolA family member 1 |
| SV2A | chr1 | 149874871 | 149889434 | 14564 | synaptic vesicle glycoprotein 2A |
| SF3B4 | chr1 | 149895208 | 149900144 | 4937 | splicing factor 3b, subunit 4, 49kDa |
| MTMR11 | chr1 | 149900542 | 149908791 | 8250 | myotubularin related protein 11 |
| OTUD7B | chr1 | 149912228 | 149982686 | 70459 | OTU deubiquitinase 7B |
| TRNA_Ala | chr1 | 150017381 | 150017452 | 72 | |
| VPS45 | chr1 | 150039341 | 150117505 | 78165 | vacuolar protein sorting 45 homolog (S. cerevisiae) |
| PLEKHO1 | chr1 | 150121766 | 150131841 | 10076 | pleckstrin homology domain containing, family O member 1 |
| ANP32E | chr1 | 150190716 | 150208504 | 17789 | acidic (leucine-rich) nuclear phosphoprotein 32 family, member E |
| CA14 | chr1 | 150230217 | 150237480 | 7264 | carbonic anhydrase XIV |
| APH1A | chr1 | 150237798 | 150241609 | 3812 | APH1A gamma secretase subunit |
| C1orf54 | chr1 | 150244686 | 150253335 | 8650 | chromosome 1 open reading frame 54 |
| CIART | chr1 | 150254942 | 150259504 | 4563 | circadian associated repressor of transcription |
| C1orf51 | chr1 | 150254952 | 150259501 | 4550 | circadian associated repressor of transcription |
| MRPS21 | chr1 | 150266261 | 150281414 | 15154 | mitochondrial ribosomal protein S21 |
| PRPF3 | chr1 | 150293927 | 150325704 | 31778 | pre-mRNA processing factor 3 |
| RPRD2 | chr1 | 150336586 | 150449041 | 112456 | regulation of nuclear pre-mRNA domain containing 2 |
| MIR6878 | chr1 | 150464820 | 150464886 | 67 | microRNA 6878 |
| TARS2 | chr1 | 150459839 | 150480085 | 20247 | threonyl-tRNA synthetase 2, mitochondrial (putative) |
| ECM1 | chr1 | 150480486 | 150486265 | 5780 | extracellular matrix protein 1 |
| FALEC | chr1 | 150488232 | 150490508 | 2277 | focally amplified long non-coding RNA in epithelial cancer |
| LINC00568 | chr1 | 150488232 | 150490508 | 2277 | |
| MIR4257 | chr1 | 150524404 | 150524490 | 87 | microRNA 4257 |
| ADAMTSL4 | chr1 | 150521844 | 150533412 | 11569 | ADAMTSL4-like 4 |
| ADAMTSL4-AS | chr1 | 150533370 | 150547028 | 13659 | ADAMTSL4 antisense RNA 1 |
| MCL1 | chr1 | 150547026 | 150552214 | 5189 | myeloid cell leukemia 1 |
| ENSA | chr1 | 150594598 | 150602098 | 7501 | endosulfine alpha |
| GOLPH3L | chr1 | 150618700 | 150669672 | 50973 | golgi phosphoprotein 3-like |
| HORMAD1 | chr1 | 150670534 | 150693364 | 22831 | HORMA domain containing 1 |
| CTSS | chr1 | 150702671 | 150738433 | 35763 | cathepsin S |
| CTSK | chr1 | 150768683 | 150780917 | 12235 | cathepsin K |
| ARNT | chr1 | 150782180 | 150849244 | 67065 | aryl hydrocarbon receptor nuclear translocator |
| SETDB1 | chr1 | 150898814 | 150937220 | 38407 | SET domain, bifurcated 1 |
| CERS2 | chr1 | 150937648 | 150947479 | 9832 | ceramide synthase 2 |
| ANXA9 | chr1 | 150954498 | 150968114 | 13617 | annexin A9 |
| FAM63A | chr1 | 150969300 | 150980854 | 11555 | family with sequence similarity 63, member A |
| PRUNE | chr1 | 150980972 | 151008189 | 27218 | prune exopolyphosphatase |
| BNIPL | chr1 | 151009028 | 151020076 | 11049 | BCL2/adenovirus E1B 19kD interacting protein like |
| C1orf56 | chr1 | 151020186 | 151023871 | 3686 | chromosome 1 open reading frame 56 |
| CDC42SE1 | chr1 | 151023446 | 151032125 | 8680 | CDC42 small effector 1 |
| MLLT11 | chr1 | 151032150 | 151040973 | 8824 | myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 11 |
| GABPB2 | chr1 | 151043079 | 151091007 | 47929 | GA binding protein transcription factor, beta subunit 2 |
| SEMA6C | chr1 | 151104162 | 151119140 | 14979 | sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6C |
| TNFAIP8L2 | chr1 | 151129104 | 151132225 | 3122 | tumor necrosis factor, alpha-induced protein 8-like 2 |
| LYSMD1 | chr1 | 151132223 | 151138424 | 6202 | LysM, putative peptidoglycan-binding, domain containing 1 |
| TNFAIP8L2-SC | chr1 | 151129104 | 151142773 | 13670 | TNFAIP8L2-SCNM1 readthrough |
| SCNM1 | chr1 | 151138497 | 151142773 | 4277 | sodium channel modifier 1 |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| TMOD4 | chr1 | 151142462 | 151148547 | 6086 | tropomodulin 4 (muscle) |
| VPS72 | chr1 | 151148775 | 151162689 | 13915 | vacuolar protein sorting 72 homolog (S. cerevisiae) |
| PIP5K1A | chr1 | 151171020 | 151222007 | 50988 | phosphatidylinositol-4-phosphate 5-kinase, type I, alpha |
| PSMD4 | chr1 | 151227196 | 151239954 | 12759 | proteasome (prosome, macropain) 26S subunit, non-ATPase, 4 |
| BC021024 | chr1 | 151252499 | 151254405 | 1907 | |
| ZNF687 | chr1 | 151254093 | 151264381 | 10289 | zinc finger protein 687 |
| HV592965 | chr1 | 151265261 | 151265284 | 24 | |
| HV592900 | chr1 | 151265461 | 151265487 | 27 | |
| HV592953 | chr1 | 151266582 | 151266606 | 25 | |
| HV592909 | chr1 | 151271387 | 151271414 | 28 | |
| HV592934 | chr1 | 151271499 | 151271523 | 25 | |
| HV592964 | chr1 | 151274383 | 151274409 | 27 | |
| HV592982 | chr1 | 151278732 | 151278766 | 35 | |
| PI4KB | chr1 | 151264272 | 151300191 | 35920 | phosphatidylinositol 4-kinase, catalytic, beta |
| RFX5 | chr1 | 151313115 | 151319769 | 6655 | regulatory factor X, 5 (influences HLA class II expression) |
| SELENBP1 | chr1 | 151336777 | 151345210 | 8434 | selenium binding protein 1 |
| PSMB4 | chr1 | 151372040 | 151374412 | 2373 | proteasome (prosome, macropain) subunit, beta type, 4 |
| POGZ | chr1 | 151375199 | 151431941 | 56743 | pogo transposable element with ZNF domain |
| CGN | chr1 | 151483861 | 151511167 | 27307 | cingulin |
| MIR554 | chr1 | 151518271 | 151518367 | 97 | microRNA 554 |
| TUFT1 | chr1 | 151512780 | 151556059 | 43280 | tuftelin 1 |
| SNX27 | chr1 | 151584540 | 151671559 | 87020 | sorting nexin family member 27 |
| KIAA0488 | chr1 | 151668703 | 151671551 | 2849 | hypothetical protein LOC284484 |
| THEM4 | chr1 | 151843342 | 151882361 | 39020 | thioesterase superfamily member 4 |
| S100A10 | chr1 | 151955385 | 151966714 | 11330 | S100 calcium binding protein A10 |
| AC2 | chr1 | 151967006 | 152015250 | 48245 | adenylate cyclase 2 (brain) |
| NBPF18P | chr1 | 151990753 | 151994985 | 4233 | neuroblastoma breakpoint family, member 18 (pseudogene) |
| S100A11 | chr1 | 152004981 | 152009511 | 4531 | S100 calcium binding protein A11 |
| TCHHL1 | chr1 | 152056619 | 152061540 | 4922 | trichohyalin-like 1 |
| TCHH | chr1 | 152078792 | 152117706 | 38915 | trichohyalin |
| RPTN | chr1 | 152126070 | 152131704 | 5635 | repetin |
| INTS3 | chr1 | 153700548 | 153746555 | 46008 | integrator complex subunit 3 |
| SLC27A3 | chr1 | 153747767 | 153752633 | 4867 | solute carrier family 27 (fatty acid transporter), member 3 |
| GATAD2B | chr1 | 153777202 | 153895451 | 118250 | GATA zinc finger domain containing 2B |
| DENND4B | chr1 | 153901976 | 153919154 | 17179 | DENN/MADD domain containing 4B |
| CRTC2 | chr1 | 153920147 | 153931132 | 10986 | CREB regulated transcription coactivator 2 |
| MIR6737 | chr1 | 153934826 | 153934896 | 71 | microRNA 6737 |
| SLC39A1 | chr1 | 153931574 | 153940660 | 9087 | solute carrier family 39 (zinc transporter), member 1 |
| CREB3L4 | chr1 | 153940314 | 153946840 | 6527 | cAMP responsive element binding protein 3-like 4 |
| JTB | chr1 | 153946744 | 153950451 | 3708 | jumping translocation breakpoint |
| RAB13 | chr1 | 153954092 | 153958853 | 4762 | RAB13, member RAS oncogene family |
| RPS27 | chr1 | 153963238 | 153964631 | 1394 | ribosomal protein S27 |
| NUP210L | chr1 | 153965167 | 154127592 | 162426 | nucleoporin 210kDa-like |
| TPM3 | chr1 | 154127779 | 154164611 | 36833 | tropomyosin 3 |
| MIR190B | chr1 | 154166140 | 154166219 | 80 | microRNA 190b |
| C1orf189 | chr1 | 154171561 | 154178841 | 7281 | chromosome 1 open reading frame 189 |
| C1orf43 | chr1 | 154179176 | 154193273 | 14098 | chromosome 1 open reading frame 43 |
| UBAP2L | chr1 | 154192647 | 154243986 | 51340 | ubiquitin associated protein 2-like |
| SNORA58 | chr1 | 154232202 | 154232338 | 137 | small nucleolar RNA, H/ACA box 58 |
| HAX1 | chr1 | 154245038 | 154248355 | 3318 | HCLS1 associated protein X-1 |
| AQP10 | chr1 | 154293591 | 154297801 | 4211 | aquaporin 10 |
| ATP8B2 | chr1 | 154298035 | 154323780 | 25746 | ATPase, aminophospholipid transporter, class I, type 8B, member 2 |
| IL6R | chr1 | 154377668 | 154441926 | 64259 | interleukin 6 receptor |
| SHE | chr1 | 154451953 | 154474526 | 22574 | Src homology 2 domain containing E |
| TDRD10 | chr1 | 154474694 | 154520623 | 45930 | tudor domain containing 10 |
| UBE2Q1 | chr1 | 154521050 | 154531120 | 10071 | ubiquitin-conjugating enzyme E2Q family member 1 |
| UBE2Q1-AS1 | chr1 | 154526084 | 154527504 | 1421 | UBE2Q1 antisense RNA 1 |
| CHRNA2 | chr1 | 154540256 | 154552353 | 12098 | cholinergic receptor, nicotinic, beta 2 (neuronal) |
| ADAR | chr1 | 154554533 | 154600456 | 45924 | adenosine deaminase, RNA-specific |
| KCNN3 | chr1 | 154669941 | 154842754 | 172814 | potassium intermediate/small conductance calcium-activated channel, subfamily N, member 3 |
| SHC1 | chr1 | 154934773 | 154946959 | 12187 | SHC (Src homology 2 domain containing) transforming protein 1 |
| MIR4258 | chr1 | 154948168 | 154948259 | 92 | microRNA 4258 |
| CKS1B | chr1 | 154947117 | 154951725 | 4609 | CDC28 protein kinase regulatory subunit 1B |
| FLAD1 | chr1 | 154955769 | 154965587 | 9819 | flavin adenine dinucleotide synthetase 1 |
| LENEP | chr1 | 154966061 | 154966791 | 731 | lens epithelial protein |
| Mir_324 | chr1 | 154979449 | 154979509 | 61 | |
| ZBTB7B | chr1 | 154975105 | 154991001 | 15897 | zinc finger and BTB domain containing 7B |
| DCST2 | chr1 | 154991002 | 155006257 | 15256 | DC-STAMP domain containing 2 |
| DCST1 | chr1 | 155006281 | 155023406 | 17126 | DC-STAMP domain containing 1 |
| LOC100505666 | chr1 | 155017667 | 155036467 | 18801 | uncharacterized LOC100505666 |
| ADAM15 | chr1 | 155023421 | 155035252 | 11832 | ADAM metallopeptidase domain 15 |
| EFNA4 | chr1 | 155036212 | 155042029 | 5818 | ephrin-A4 |
| EFNA3 | chr1 | 155036212 | 155060014 | 23803 | ephrin-A3 |
| EFNA1 | chr1 | 155100348 | 155107386 | 7039 | ephrin-A1 |
| AK308965 | chr1 | 155105263 | 155106131 | 869 | |
| SLC50A1 | chr1 | 155107819 | 155111334 | 3516 | solute carrier family 50 (sugar efflux transporter), member 1 |
| DPM3 | chr1 | 155112366 | 155112996 | 631 | dolichyl-phosphate mannosyltransferase polypeptide 3 |
| KRTCAP2 | chr1 | 155141883 | 155145804 | 3922 | keratinocyte associated protein 2 |
| TRIM46 | chr1 | 155145420 | 155157447 | 12028 | tripartite motif containing 46 |
| AX746485 | chr1 | 155155666 | 155157427 | 1762 | |

| | | | | | |
|------------|------|-----------|-----------|--------|--|
| MUC1 | chr1 | 155158299 | 155162706 | 4408 | mucin 1, cell surface associated |
| FAM189B | chr1 | 155216995 | 155225274 | 8280 | family with sequence similarity 189, member B |
| SCAMP3 | chr1 | 155225769 | 155232176 | 6408 | secretory carrier membrane protein 3 |
| CLK2 | chr1 | 155232658 | 155247501 | 14844 | CDC-like kinase 2 |
| HCN3 | chr1 | 155247217 | 155259639 | 12423 | hyperpolarization activated cyclic nucleotide-gated potassium channel 3 |
| PKLR | chr1 | 155259083 | 155271225 | 12143 | pyruvate kinase, liver and RBC |
| FDPS | chr1 | 155278538 | 155290457 | 11920 | farnesyl diphosphate synthase |
| RUSC1-AS1 | chr1 | 155286653 | 155293938 | 7286 | RUSC1 antisense RNA 1 |
| RUSC1 | chr1 | 155290639 | 155300909 | 10271 | RUN and SH3 domain containing 1 |
| MIR555 | chr1 | 155316140 | 155316236 | 97 | microRNA 555 |
| POU5F1P4 | chr1 | 155402970 | 155404053 | 1084 | POU domain class 5, transcription factor 1 pseudogene 4 |
| ASH1L | chr1 | 155305051 | 155325585 | 227535 | ash1 (absent, small, or homeotic)-like (Drosophila) |
| ASH1L-AS1 | chr1 | 155531771 | 155533735 | 1965 | ASH1L antisense RNA 1 |
| BC017347 | chr1 | 155531863 | 155533735 | 1873 | |
| MSTO2P | chr1 | 155579978 | 155584616 | 4639 | misato family member 2, pseudogene |
| MSTO1 | chr1 | 155579960 | 155584758 | 4799 | misato 1, mitochondrial distribution and morphology regulator |
| BC041646 | chr1 | 155596545 | 155618335 | 21791 | |
| DAP3 | chr1 | 155658881 | 155708800 | 49920 | death associated protein 3 |
| YY1AP1 | chr1 | 155629232 | 155755165 | 125934 | YY1 associated protein 1 |
| MSTO2P | chr1 | 155715558 | 155720673 | 5116 | misato family member 2, pseudogene |
| GON4L | chr1 | 155719448 | 155829191 | 109744 | gon-4-like (C. elegans) |
| SYT11 | chr1 | 155829259 | 155854990 | 25732 | synaptotagmin XI |
| RIT1 | chr1 | 155867598 | 155881193 | 13596 | Ras-like without CAAX 1 |
| SNORA42 | chr1 | 155889699 | 155889833 | 135 | small nucleolar RNA, H/ACA box 80E |
| SNORA80E | chr1 | 155889699 | 155889833 | 135 | small nucleolar RNA, H/ACA box 80E |
| KIAA0907 | chr1 | 155882835 | 155904188 | 21354 | KIAA0907 |
| SCARNA4 | chr1 | 155895748 | 155895877 | 130 | small Cajal body-specific RNA 4 |
| RXFP4 | chr1 | 155911479 | 155912625 | 1147 | relaxin/insulin-like family peptide receptor 4 |
| MIR6738 | chr1 | 155921063 | 155921127 | 65 | microRNA 6738 |
| ARHGEF2 | chr1 | 155916629 | 155959864 | 43236 | Rho/Rac guanine nucleotide exchange factor (GEF) 2 |
| SSR2 | chr1 | 155978838 | 155990758 | 11921 | signal sequence receptor, beta (translocon-associated protein beta) |
| UBQLN4 | chr1 | 156005091 | 156023516 | 18426 | ubiquilin 4 |
| LAMTOR2 | chr1 | 156024516 | 156028301 | 3786 | late endosomal/lysosomal adaptor, MAPK and MTOR activator 2 |
| RAB25 | chr1 | 156030965 | 156040295 | 9331 | RAB25, member RAS oncogene family |
| MEX3A | chr1 | 156041803 | 156051789 | 9987 | mex-3 RNA binding family member A |
| MIR7851 | chr1 | 155996957 | 156132001 | 135045 | microRNA 7851 |
| LMNA | chr1 | 156052336 | 156109880 | 57545 | lamin A/C |
| SEMA4A | chr1 | 156119734 | 156147542 | 27809 | sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (s) |
| SLC25A44 | chr1 | 156163722 | 156182587 | 18866 | solute carrier family 25, member 44 |
| PMF1 | chr1 | 156182778 | 156209868 | 27091 | polyamine-modulated factor 1 |
| PMF1-BGLAP | chr1 | 156182778 | 156213123 | 30346 | PMF1-BGLAP readthrough |
| BGLAP | chr1 | 156211950 | 156213123 | 1174 | bone gamma-carboxyglutamate (gla) protein |
| PAQR6 | chr1 | 156213111 | 156217908 | 4798 | progesterin and adipoQ receptor family member VI |
| SMG5 | chr1 | 156219014 | 156252620 | 33607 | SMG5 nonsense mediated mRNA decay factor |
| TMEM79 | chr1 | 156252703 | 156262234 | 9532 | transmembrane protein 79 |
| AF086351 | chr1 | 156259881 | 156262810 | 2930 | |
| C1orf85 | chr1 | 156262477 | 156265480 | 3004 | chromosome 1 open reading frame 85 |
| VHLL | chr1 | 156268414 | 156269428 | 1015 | von Hippel-Lindau tumor suppressor-like |
| CCT3 | chr1 | 156278751 | 156308206 | 29456 | chaperonin containing TCP1, subunit 3 (gamma) |
| TSACC | chr1 | 156307104 | 156316785 | 9682 | TSSK6 activating co-chaperone |
| RHBG | chr1 | 156338979 | 156355013 | 16035 | Rh family, B glycoprotein (gene/pseudogene) |
| BC016978 | chr1 | 156374048 | 156377645 | 3598 | |
| C1orf61 | chr1 | 156374054 | 156400493 | 26440 | chromosome 1 open reading frame 61 |
| MIR9-1 | chr1 | 156390132 | 156390221 | 90 | microRNA 9-1 |
| MEF2D | chr1 | 156433512 | 156470634 | 37123 | myocyte enhancer factor 2D |
| IQGAP3 | chr1 | 156495196 | 156542396 | 47201 | IQ motif containing GTPase activating protein 3 |
| TTC24 | chr1 | 156549518 | 156556562 | 7045 | tetratricopeptide repeat domain 24 |
| APOA1BP | chr1 | 156561557 | 156566601 | 5045 | apolipoprotein A-I binding protein |
| GPATCH4 | chr1 | 156564099 | 156571279 | 7181 | G patch domain containing 4 |
| HAPLN2 | chr1 | 156589085 | 156595517 | 6433 | hyaluronan and proteoglycan link protein 2 |
| BC005081 | chr1 | 156611456 | 156613427 | 1972 | |
| BCAN | chr1 | 156611739 | 156629324 | 17586 | brevican |
| NES | chr1 | 156638554 | 156647189 | 8636 | nestin |
| CRABP2 | chr1 | 156669399 | 156675608 | 6210 | cellular retinoic acid binding protein 2 |
| ISG20L2 | chr1 | 156692412 | 156698211 | 5800 | interferon stimulated exonuclease gene 20kDa-like 2 |
| RRNAD1 | chr1 | 156698262 | 156706752 | 8491 | ribosomal RNA adenine dimethylase domain containing 1 |
| MRPL24 | chr1 | 156707093 | 156710923 | 3831 | mitochondrial ribosomal protein L24 |
| HDGF | chr1 | 156711898 | 156736717 | 24820 | hepatoma-derived growth factor |
| PRCC | chr1 | 156737273 | 156770609 | 33337 | papillary renal cell carcinoma (translocation-associated) |
| SH2D2A | chr1 | 156776034 | 156786640 | 10607 | SH2 domain containing 2A |
| NTRK1 | chr1 | 156785541 | 156851642 | 66102 | neurotrophic tyrosine kinase, receptor, type 1 |
| INSRR | chr1 | 156810664 | 156828712 | 18049 | insulin receptor-related receptor |
| PEAR1 | chr1 | 156863522 | 156886226 | 22705 | platelet endothelial aggregation receptor 1 |
| ARHGEF11 | chr1 | 156904631 | 157015162 | 110532 | Rho guanine nucleotide exchange factor (GEF) 11 |
| ETV3L | chr1 | 157061834 | 157069600 | 7767 | ets variant 3-like |
| CYCSP52 | chr1 | 157098153 | 157098463 | 311 | cytochrome c, somatic pseudogene 52 |
| ETV3 | chr1 | 157094458 | 157108383 | 13926 | ets variant 3 |
| FCRL4 | chr1 | 157543538 | 157567870 | 24333 | Fc receptor-like 4 |
| FCRL3 | chr1 | 157646270 | 157670775 | 24506 | Fc receptor-like 3 |
| FCRL1 | chr1 | 157764193 | 157789940 | 25748 | Fc receptor-like 1 |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| CD5L | chr1 | 157800703 | 157811634 | 10932 | CD5 molecule-like |
| AK057438 | chr1 | 157895763 | 157918861 | 23099 | |
| LOC646268 | chr1 | 158101833 | 158110430 | 8598 | hCG1654703 |
| CD1D | chr1 | 158149736 | 158156216 | 6481 | CD1d molecule |
| AK097921 | chr1 | 158169170 | 158173667 | 4498 | |
| CD1A | chr1 | 158223926 | 158228058 | 4133 | CD1a molecule |
| CD1C | chr1 | 158259562 | 158264564 | 5003 | CD1c molecule |
| CD1B | chr1 | 158297739 | 158301321 | 3583 | CD1b molecule |
| CD1E | chr1 | 158323253 | 158327343 | 4091 | CD1e molecule |
| OR10T2 | chr1 | 158368311 | 158369256 | 946 | olfactory receptor, family 10, subfamily T, member 2 |
| OR10K2 | chr1 | 158389717 | 158390656 | 940 | olfactory receptor, family 10, subfamily K, member 2 |
| OR10K1 | chr1 | 158435351 | 158436293 | 943 | olfactory receptor, family 10, subfamily K, member 1 |
| OR10R2 | chr1 | 158449667 | 158450675 | 1009 | olfactory receptor, family 10, subfamily R, member 2 |
| AK057554 | chr1 | 158444244 | 158464676 | 20433 | |
| OR6Y1 | chr1 | 158516917 | 158517895 | 979 | olfactory receptor, family 6, subfamily Y, member 1 |
| OR6P1 | chr1 | 158532440 | 158533394 | 955 | olfactory receptor, family 6, subfamily P, member 1 |
| OR10X1 | chr1 | 158548708 | 158549689 | 982 | olfactory receptor, family 10, subfamily X, member 1 |
| OR10Z1 | chr1 | 158576228 | 158577170 | 943 | olfactory receptor, family 10, subfamily Z, member 1 |
| SPTA1 | chr1 | 158580495 | 158656506 | 76012 | spectrin, alpha, erythrocytic 1 |
| OR6K2 | chr1 | 158669467 | 158670442 | 976 | olfactory receptor, family 6, subfamily K, member 2 |
| OR6K3 | chr1 | 158686957 | 158687905 | 949 | olfactory receptor, family 6, subfamily K, member 3 |
| OR6K6 | chr1 | 158724605 | 158725637 | 1033 | olfactory receptor, family 6, subfamily K, member 6 |
| MNDA | chr1 | 158801167 | 158819270 | 18104 | myeloid cell nuclear differentiation antigen |
| PYHIN1 | chr1 | 158901336 | 158946849 | 45514 | pyrin and HIN domain family, member 1 |
| IFI16 | chr1 | 158969757 | 159024945 | 55189 | interferon, gamma-inducible protein 16 |
| BC038194 | chr1 | 159315958 | 159438858 | 122901 | |
| OR10J1 | chr1 | 159409511 | 159410600 | 1090 | olfactory receptor, family 10, subfamily J, member 1 |
| OR10J5 | chr1 | 159504867 | 159505797 | 931 | olfactory receptor, family 10, subfamily J, member 5 |
| APCS | chr1 | 159557615 | 159558661 | 1047 | amyloid P component, serum |
| CRP | chr1 | 159682078 | 159684379 | 2302 | C-reactive protein, pentraxin-related |
| VSIG8 | chr1 | 159824105 | 159832447 | 8343 | V-set and immunoglobulin domain containing 8 |
| CCDC19 | chr1 | 159842153 | 159869906 | 27754 | cilia and flagella associated protein 45 |
| CFAP45 | chr1 | 159842153 | 159869906 | 27754 | cilia and flagella associated protein 45 |
| TAGLN2 | chr1 | 159887896 | 159895332 | 7437 | transgelin 2 |
| IGSF9 | chr1 | 159896828 | 159915386 | 18559 | immunoglobulin superfamily, member 9 |
| SLAMF9 | chr1 | 159921281 | 159924044 | 2764 | SLAM family member 9 |
| LINC01133 | chr1 | 159931013 | 159948876 | 17864 | long intergenic non-protein coding RNA 1133 |
| LOC100505633 | chr1 | 159931013 | 159948876 | 17864 | long intergenic non-protein coding RNA 1133 |
| PIGM | chr1 | 159997461 | 160001783 | 4323 | phosphatidylinositol glycan anchor biosynthesis, class M |
| KCNJ10 | chr1 | 160007256 | 160040051 | 32796 | potassium inwardly-rectifying channel, subfamily J, member 10 |
| KCNJ9 | chr1 | 160051359 | 160059212 | 7854 | potassium inwardly-rectifying channel, subfamily J, member 9 |
| IGSF8 | chr1 | 160061128 | 160068618 | 7491 | immunoglobulin superfamily, member 8 |
| ATP1A2 | chr1 | 160085519 | 160113374 | 27856 | ATPase, Na+/K+ transporting, alpha 2 polypeptide |
| ATP1A4 | chr1 | 160121351 | 160156767 | 35417 | ATPase, Na+/K+ transporting, alpha 4 polypeptide |
| CASQ1 | chr1 | 160160284 | 160171676 | 11393 | calsequestrin 1 (fast-twitch, skeletal muscle) |
| AK093299 | chr1 | 160171988 | 160178659 | 6672 | |
| LOC729867 | chr1 | 160171988 | 160178659 | 6672 | uncharacterized LOC729867 |
| PEA15 | chr1 | 160175108 | 160185166 | 10059 | phosphoprotein enriched in astrocytes 15 |
| DCAF8 | chr1 | 160185504 | 160254941 | 69438 | DDB1 and CUL4 associated factor 8 |
| PEX19 | chr1 | 160246598 | 160254941 | 8344 | peroxisomal biogenesis factor 19 |
| COPA | chr1 | 160258376 | 160313354 | 54979 | coatamer protein complex, subunit alpha |
| SUMO1P3 | chr1 | 160287054 | 160288260 | 1207 | SUMO1 pseudogene 3 (functional) |
| NCSTN | chr1 | 160313062 | 160328742 | 15681 | nicastrin |
| NHLH1 | chr1 | 160336860 | 160342638 | 5779 | nescient helix loop helix 1 |
| VANGL2 | chr1 | 160370230 | 160398468 | 28239 | VANGL planar cell polarity protein 2 |
| SLAMF6 | chr1 | 160454819 | 160493052 | 38234 | SLAM family member 6 |
| CD84 | chr1 | 160510883 | 160549306 | 38424 | CD84 molecule |
| SLAMF1 | chr1 | 160579608 | 160617101 | 37494 | signaling lymphocytic activation molecule family member 1 |
| SLAMF7 | chr1 | 160708846 | 160724608 | 15763 | SLAM family member 7 |
| LY9 | chr1 | 160765863 | 160798045 | 32183 | lymphocyte antigen 9 |
| CD244 | chr1 | 160799949 | 160832692 | 32744 | CD244 molecule, natural killer cell receptor 2B4 |
| ITLN1 | chr1 | 160846329 | 160854960 | 8632 | intelectin 1 (galactofuranose binding) |
| LOC101928372 | chr1 | 160902254 | 160919712 | 17459 | uncharacterized LOC101928372 |
| ITLN2 | chr1 | 160914815 | 160924589 | 9775 | intelectin 2 |
| F11R | chr1 | 160965000 | 161008774 | 43775 | F11 receptor |
| TSTD1 | chr1 | 161007421 | 161008774 | 1354 | thiosulfate sulfurtransferase (rhodanese)-like domain containing 1 |
| USF1 | chr1 | 161009040 | 161015769 | 6730 | upstream transcription factor 1 |
| ARHGAP30 | chr1 | 161016731 | 161039760 | 23030 | Rho GTPase activating protein 30 |
| KLHDC9 | chr1 | 161068150 | 161070138 | 1989 | kelch domain containing 9 |
| PFDN2 | chr1 | 161070345 | 161087866 | 17522 | prefoldin subunit 2 |
| NIT1 | chr1 | 161087861 | 161095235 | 7375 | nitrilase 1 |
| DEDD | chr1 | 161090768 | 161102478 | 11711 | death effector domain containing |
| UFC1 | chr1 | 161123533 | 161128646 | 5114 | ubiquitin-fold modifier conjugating enzyme 1 |
| USP21 | chr1 | 161129253 | 161135516 | 6264 | ubiquitin-specific protease |
| PPOX | chr1 | 161136180 | 161147801 | 11622 | protoporphyrinogen oxidase |
| B4GALT3 | chr1 | 161141099 | 161147758 | 6660 | UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 3 |
| ADAMTS4 | chr1 | 161159537 | 161168845 | 9309 | ADAM metalloproteinase with thrombospondin type 1 motif, 4 |
| NDUFS2 | chr1 | 161169104 | 161184184 | 15081 | NADH dehydrogenase (ubiquinone) Fe-S protein 2, 49kDa (NADH-coenzyme Q reductase) |
| FCER1G | chr1 | 161185086 | 161189038 | 3953 | Fc fragment of IgE, high affinity I, receptor for; gamma polypeptide |
| APOA2 | chr1 | 161192082 | 161193418 | 1337 | apolipoprotein A-II |

| | | | | | |
|--------------|------|-----------|-----------|--------|--|
| MIR5187 | chr1 | 161196975 | 161197051 | 77 | microRNA 5187 |
| NR1I3 | chr1 | 161199455 | 161208000 | 8546 | nuclear receptor subfamily 1, group I, member 3 |
| TOMM40L | chr1 | 161195728 | 161213089 | 17362 | translocase of outer mitochondrial membrane 40 homolog (yeast)-like |
| PCP4L1 | chr1 | 161228516 | 161255240 | 26725 | Purkinje cell protein 4 like 1 |
| MPZ | chr1 | 161274524 | 161279762 | 5239 | myelin protein zero |
| SDHC | chr1 | 161284165 | 161334535 | 50371 | succinate dehydrogenase complex, subunit C, integral membrane protein, 15kDa |
| C1orf192 | chr1 | 161334520 | 161337673 | 3154 | chromosome 1 open reading frame 192 |
| TRNA_Asp | chr1 | 161410614 | 161410686 | 73 | |
| TRNA_Leu | chr1 | 161411322 | 161411405 | 84 | |
| FCGR2A | chr1 | 161475204 | 161489360 | 14157 | Fc fragment of IgG, low affinity IIa, receptor (CD32) |
| HSPA6 | chr1 | 161494035 | 161496687 | 2653 | heat shock 70kDa protein 6 (HSP70B) |
| TRNA_Leu | chr1 | 161500131 | 161500214 | 84 | |
| TRNA_Asp | chr1 | 161501914 | 161501986 | 73 | |
| FCGR3A | chr1 | 161511550 | 161520413 | 8864 | Fc fragment of IgG, low affinity IIIa, receptor (CD16a) |
| FCGR2C | chr1 | 161551128 | 161571010 | 19883 | Fc fragment of IgG, low affinity IIc, receptor for (CD32) (gene/pseudogene) |
| HSPA7 | chr1 | 161575848 | 161578341 | 2494 | heat shock 70kDa protein 7 (HSP70B) |
| FCGR3B | chr1 | 161592987 | 161601753 | 8767 | Fc fragment of IgG, low affinity IIIB, receptor (CD16b) |
| FCGR2B | chr1 | 161632904 | 161648444 | 15541 | Fc fragment of IgG, low affinity IIb, receptor (CD32) |
| RPL31P11 | chr1 | 161653494 | 161655042 | 1549 | ribosomal protein L31 pseudogene 11 |
| FCRLA | chr1 | 161676761 | 161684142 | 7382 | Fc receptor-like A |
| FCRLB | chr1 | 161691333 | 161697933 | 6601 | Fc receptor-like B |
| DUSP12 | chr1 | 161719580 | 161726952 | 7373 | dual specificity phosphatase 12 |
| ATF6 | chr1 | 161736033 | 161933860 | 197828 | activating transcription factor 6 |
| MIR4654 | chr1 | 162126896 | 162126972 | 77 | microRNA 4654 |
| NOS1AP | chr1 | 162039580 | 162339813 | 300234 | nitric oxide synthase 1 (neuronal) adaptor protein |
| MIR556 | chr1 | 162312335 | 162312430 | 96 | microRNA 556 |
| C1orf226 | chr1 | 162348695 | 162356608 | 7914 | chromosome 1 open reading frame 226 |
| SH2D1B | chr1 | 162365055 | 162381928 | 16874 | SH2 domain containing 1B |
| UHMK1 | chr1 | 162466963 | 162499419 | 32457 | U2AF homology motif (UHM) kinase 1 |
| UAP1 | chr1 | 162531295 | 162569633 | 38339 | UDP-N-acetylglucosamine pyrophosphorylase 1 |
| DDR2 | chr1 | 162602227 | 162750247 | 148021 | discoidin domain receptor tyrosine kinase 2 |
| AF268386 | chr1 | 162751900 | 162756362 | 4463 | |
| HSD17B7 | chr1 | 162760495 | 162782608 | 22114 | hydroxysteroid (17-beta) dehydrogenase 7 |
| C1orf110 | chr1 | 162794247 | 162838605 | 44359 | chromosome 1 open reading frame 110 |
| RGS4 | chr1 | 163038395 | 163046592 | 8198 | regulator of G-protein signaling 4 |
| LOC101928404 | chr1 | 163131464 | 163182813 | 51350 | uncharacterized LOC101928404 |
| RGS5 | chr1 | 163112088 | 163291581 | 179494 | regulator of G-protein signaling 5 |
| NUF2 | chr1 | 163291722 | 163325553 | 33832 | NUF2, NDC80 kinetochore complex component |
| LOC100422212 | chr1 | 163390859 | 163392981 | 2123 | eukaryotic translation initiation factor 3, subunit J pseudogene |
| AX748175 | chr1 | 164595272 | 164651720 | 56449 | |
| PBX1 | chr1 | 164528596 | 164854300 | 325705 | pre-B-cell leukemia homeobox 1 |
| LOC100505795 | chr1 | 164738352 | 164743878 | 5527 | uncharacterized LOC100505795 |
| LMX1A | chr1 | 165171103 | 165325952 | 154850 | LIM homeobox transcription factor 1, alpha |
| RXRG | chr1 | 165370158 | 165414592 | 44435 | retinoid X receptor, gamma |
| LOC400794 | chr1 | 165446078 | 165551341 | 105264 | uncharacterized LOC400794 |
| LRRCS52 | chr1 | 165513477 | 165533185 | 19709 | leucine rich repeat containing 52 |
| MGST3 | chr1 | 165600109 | 165625372 | 25264 | microsomal glutathione S-transferase 3 |
| ALDH9A1 | chr1 | 165631448 | 165667900 | 36453 | aldehyde dehydrogenase 9 family, member A1 |
| LOC440700 | chr1 | 165667986 | 165679199 | 11214 | carbonic anhydrase XIV (CA14) pseudogene |
| BC071770 | chr1 | 165738165 | 165744685 | 6521 | |
| LOC100147773 | chr1 | 165738165 | 165744685 | 6521 | uncharacterized LOC100147773 |
| TMCO1 | chr1 | 165693527 | 165796992 | 103466 | transmembrane and coiled-coil domains 1 |
| FMO9P | chr1 | 166573152 | 166594473 | 21322 | flavin containing monooxygenase 9 pseudogene |
| POGK | chr1 | 166808723 | 166823709 | 14987 | pogo transposable element with KRAB domain |
| TADA1 | chr1 | 166825748 | 166845654 | 19907 | transcriptional adaptor 1 |
| ILDR2 | chr1 | 166882440 | 166944561 | 62122 | immunoglobulin-like domain containing receptor 2 |
| MAEL | chr1 | 166944818 | 166991449 | 46632 | maelstrom spermatogenic transposon silencer |
| GPA33 | chr1 | 167022081 | 167059868 | 37788 | glycoprotein A33 (transmembrane) |
| DUSP27 | chr1 | 167064086 | 167098402 | 34317 | dual specificity phosphatase 27 (putative) |
| RBSG4 | chr1 | 167144598 | 167165042 | 20445 | |
| LINC01363 | chr1 | 167144598 | 167165042 | 20445 | long intergenic non-protein coding RNA 1363 |
| POU2F1 | chr1 | 167190065 | 167396582 | 206518 | POU class 2 homeobox 1 |
| CREG1 | chr1 | 167510250 | 167523056 | 12807 | cellular repressor of E1A-stimulated genes 1 |
| RCSD1 | chr1 | 167599473 | 167675486 | 76014 | RCSD domain containing 1 |
| TRNA_Pro | chr1 | 167683961 | 167684033 | 73 | |
| TRNA_Pro | chr1 | 167684724 | 167684796 | 73 | |
| MPZL1 | chr1 | 167691186 | 167761156 | 69971 | myelin protein zero-like 1 |
| ADCY10 | chr1 | 167778624 | 167883464 | 104841 | adenylate cyclase 10 (soluble) |
| MPC2 | chr1 | 167885912 | 167906307 | 20396 | mitochondrial pyruvate carrier 2 |
| DCAF6 | chr1 | 167905796 | 168045083 | 139288 | DDB1 and CUL4 associated factor 6 |
| GPR161 | chr1 | 168048779 | 168106905 | 58127 | G protein-coupled receptor 161 |
| TIPRL | chr1 | 168148082 | 168171351 | 23270 | TOR signaling pathway regulator |
| SFT2D2 | chr1 | 168195254 | 168212088 | 16835 | SFT2 domain containing 2 |
| ANKRD36BP1 | chr1 | 168214818 | 168216668 | 1851 | ankyrin repeat domain 36B pseudogene 1 |
| DQ576756 | chr1 | 168218461 | 168220378 | 1918 | |
| TBX19 | chr1 | 168195254 | 168283664 | 88411 | T-box 19 |
| LOC101928565 | chr1 | 168433351 | 168464882 | 31532 | uncharacterized LOC101928565 |
| XCL2 | chr1 | 168510002 | 168513235 | 3234 | chemokine (C motif) ligand 2 |
| XCL1 | chr1 | 168545710 | 168551315 | 5606 | chemokine (C motif) ligand 1 |
| DPT | chr1 | 168664694 | 168698442 | 33749 | dermatopontin |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| LINC00626 | chr1 | 168756178 | 168762126 | 5949 | long intergenic non-protein coding RNA 626 |
| LINC00970 | chr1 | 168873142 | 169056243 | 183102 | long intergenic non-protein coding RNA 970 |
| ATP1B1 | chr1 | 169075946 | 169101960 | 26015 | ATPase, Na+/K+ transporting, beta 1 polypeptide |
| NME7 | chr1 | 169101767 | 169337201 | 235435 | NME/NM23 family member 7 |
| BLZF1 | chr1 | 169337193 | 169365780 | 28588 | basic leucine zipper nuclear factor 1 |
| CCDC181 | chr1 | 169364107 | 169429907 | 65801 | coiled-coil domain containing 181 |
| BC041451 | chr1 | 169411875 | 169429907 | 18033 | |
| SLC19A2 | chr1 | 169433148 | 169455208 | 22061 | solute carrier family 19 (thiamine transporter), member 2 |
| F5 | chr1 | 169481191 | 169555769 | 74579 | coagulation factor V (proaccelerin, labile factor) |
| SELP | chr1 | 169558087 | 169599377 | 41291 | selectin P (granule membrane protein 140kDa, antigen CD62) |
| SELL | chr1 | 169659805 | 169680843 | 21039 | selectin L |
| SELE | chr1 | 169691780 | 169703220 | 11441 | selectin E |
| C1orf112 | chr1 | 169631244 | 169822229 | 190986 | chromosome 1 open reading frame 112 |
| METTL18 | chr1 | 169761669 | 169764061 | 2393 | methyltransferase like 18 |
| SCYL3 | chr1 | 169822214 | 169863100 | 40887 | SCY1-like 3 (S. cerevisiae) |
| KIFAP3 | chr1 | 169890469 | 170043879 | 153411 | kinesin-associated protein 3 |
| MIR3119-1 | chr1 | 170120518 | 170120603 | 86 | microRNA 3119-1 |
| MIR3119-2 | chr1 | 170120518 | 170120603 | 86 | microRNA 3119-2 |
| METTL11B | chr1 | 170115187 | 170136923 | 21737 | methyltransferase like 11B |
| LINC01142 | chr1 | 170240545 | 170253349 | 12805 | long intergenic non-protein coding RNA 1142 |
| LOC284688 | chr1 | 170240545 | 170253349 | 12805 | long intergenic non-protein coding RNA 1142 |
| PRRX1 | chr1 | 170633312 | 170708541 | 75230 | paired related homeobox 1 |
| MROH9 | chr1 | 170904611 | 171033906 | 129296 | maestro heat-like repeat family member 9 |
| MIR1295A | chr1 | 171070868 | 171070947 | 80 | microRNA 1295a |
| MIR1295B | chr1 | 171070879 | 171070939 | 61 | microRNA 1295b |
| FMO3 | chr1 | 171060017 | 171086959 | 26943 | flavin containing monooxygenase 3 |
| FMO6P | chr1 | 171106878 | 171130702 | 23825 | flavin containing monooxygenase 6 pseudogene |
| FMO2 | chr1 | 171154346 | 171181822 | 27477 | flavin containing monooxygenase 2 (non-functional) |
| FMO1 | chr1 | 171217609 | 171255117 | 37509 | flavin containing monooxygenase 1 |
| FMO4 | chr1 | 171283485 | 171311223 | 27739 | flavin containing monooxygenase 4 |
| TOP1P1 | chr1 | 171308034 | 171310463 | 2430 | topoisomerase (DNA) I pseudogene 1 |
| PRRC2C | chr1 | 171454665 | 171562650 | 107986 | proline-rich coiled-coil 2C |
| MYOC | chr1 | 171604556 | 171621823 | 17268 | myocilin, trabecular meshwork inducible glucocorticoid response |
| VAMP4 | chr1 | 171669295 | 171711379 | 42085 | vesicle-associated membrane protein 4 |
| METTL13 | chr1 | 171750760 | 171766856 | 16097 | methyltransferase like 13 |
| AK094818 | chr1 | 171763732 | 171766852 | 3121 | |
| DNM3 | chr1 | 171810617 | 172387567 | 576951 | dynamins 3 |
| MIR3120 | chr1 | 172107947 | 172108028 | 82 | microRNA 3120 |
| MIR214 | chr1 | 172107937 | 172108047 | 111 | microRNA 214 |
| DNM3OS | chr1 | 172106018 | 172113975 | 7958 | DNM3 opposite strand/antisense RNA |
| MIR199A2 | chr1 | 172113674 | 172113784 | 111 | microRNA 199a-2 |
| PIGC | chr1 | 172362273 | 172413230 | 50958 | phosphatidylinositol glycan anchor biosynthesis, class C |
| C1orf105 | chr1 | 172389827 | 172437969 | 48143 | chromosome 1 open reading frame 105 |
| SUCO | chr1 | 172501488 | 172580975 | 79488 | SUN domain containing ossification factor |
| TNFSF18 | chr1 | 173010359 | 173020103 | 9745 | tumor necrosis factor (ligand) superfamily, member 18 |
| TNFSF4 | chr1 | 173152869 | 173176452 | 23584 | tumor necrosis factor (ligand) superfamily, member 4 |
| LOC100506023 | chr1 | 173204198 | 173446294 | 242097 | uncharacterized LOC100506023 |
| LOC101928673 | chr1 | 173386927 | 173430501 | 43575 | uncharacterized LOC101928673 |
| BC136808 | chr1 | 173387087 | 173430501 | 43415 | |
| PRDX6 | chr1 | 173446485 | 173457946 | 11462 | peroxiredoxin 6 |
| SLC9C2 | chr1 | 173469603 | 173572233 | 102631 | solute carrier family 9, member C2 (putative) |
| LOC730159 | chr1 | 173604660 | 173606272 | 1613 | uncharacterized LOC730159 |
| ANKRD45 | chr1 | 173577474 | 173639001 | 61528 | ankyrin repeat domain 45 |
| KLHL20 | chr1 | 173684079 | 173755840 | 71762 | kelch-like family member 20 |
| CENPL | chr1 | 173768687 | 173793777 | 25091 | centromere protein L |
| DARS2 | chr1 | 173793796 | 173827682 | 33887 | aspartyl-tRNA synthetase 2, mitochondrial |
| GAS5-AS1 | chr1 | 173832385 | 173833079 | 695 | GAS5 antisense RNA 1 |
| SNORD81 | chr1 | 173833312 | 173833355 | 44 | small nucleolar RNA, C/D box 81 |
| SNORD47 | chr1 | 173833506 | 173833583 | 78 | small nucleolar RNA, C/D box 47 |
| SNORD80 | chr1 | 173833970 | 173834041 | 72 | small nucleolar RNA, C/D box 80 |
| SNORD79 | chr1 | 173834487 | 173834568 | 82 | small nucleolar RNA, C/D box 79 |
| SNORD78 | chr1 | 173834770 | 173834824 | 55 | small nucleolar RNA, C/D box 78 |
| GAS5 | chr1 | 173833038 | 173837125 | 4088 | growth arrest-specific 5 (non-protein coding) |
| SNORD44 | chr1 | 173835105 | 173835166 | 62 | small nucleolar RNA, C/D box 44 |
| SNORD77 | chr1 | 173835448 | 173835509 | 62 | small nucleolar RNA, C/D box 77 |
| SNORD76 | chr1 | 173835772 | 173835853 | 82 | small nucleolar RNA, C/D box 76 |
| SNORD75 | chr1 | 173836016 | 173836076 | 61 | small nucleolar RNA, C/D box 75 |
| SNORD74 | chr1 | 173836811 | 173836883 | 73 | small nucleolar RNA, C/D box 74 |
| ZBTB37 | chr1 | 173837219 | 173855774 | 18556 | zinc finger and BTB domain containing 37 |
| DQ593451 | chr1 | 173867684 | 173867712 | 29 | |
| SERPINC1 | chr1 | 173872941 | 173886516 | 13576 | serpin peptidase inhibitor, clade C (antithrombin), member 1 |
| RC3H1 | chr1 | 173900221 | 173962210 | 61990 | ring finger and CCCH-type domains 1 |
| LOC102724601 | chr1 | 174090775 | 174128425 | 37651 | uncharacterized LOC102724601 |
| GPR52 | chr1 | 174417211 | 174418683 | 1473 | G protein-coupled receptor 52 |
| RABGAP1L | chr1 | 174128551 | 174964445 | 835895 | RAB GTPase activating protein 1-like |
| LOC101928696 | chr1 | 174904083 | 174923398 | 19316 | uncharacterized LOC101928696 |
| CACYBP | chr1 | 174968570 | 174981163 | 12594 | calyculin binding protein |
| MRPS14 | chr1 | 174982093 | 174992591 | 10499 | mitochondrial ribosomal protein S14 |
| TNN | chr1 | 175036993 | 175117202 | 80210 | tenascin N |
| TNR | chr1 | 175291934 | 175712752 | 420819 | tenascin R |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| AK093214 | chr1 | 175526123 | 175533005 | 6883 | |
| BC043291 | chr1 | 175526123 | 175537388 | 11266 | |
| LOC101928751 | chr1 | 175846478 | 175849600 | 3123 | uncharacterized LOC101928751 |
| SCARNA3 | chr1 | 175937532 | 175937676 | 145 | small Cajal body-specific RNA 3 |
| RFWD2 | chr1 | 175913961 | 176176380 | 262420 | ring finger and WD repeat domain 2, E3 ubiquitin protein ligase |
| PAPPA2 | chr1 | 176432306 | 176811970 | 379665 | pappalysin 2 |
| SEC16B | chr1 | 177897488 | 178007142 | 109655 | SEC16 homolog B (<i>S. cerevisiae</i>) |
| LOC730102 | chr1 | 177975274 | 178007142 | 31869 | quinone oxidoreductase-like protein 2 pseudogene |
| RASAL2-AS1 | chr1 | 178060642 | 178063128 | 2487 | RASAL2 antisense RNA 1 |
| RASAL2 | chr1 | 178062863 | 178448648 | 385786 | RAS protein activator like 2 |
| TEX35 | chr1 | 178482211 | 178517734 | 35524 | testis expressed 35 |
| C1orf220 | chr1 | 178511930 | 178518024 | 6095 | chromosome 1 open reading frame 220 |
| MIR4424 | chr1 | 178646883 | 178646969 | 87 | microRNA 4424 |
| RALGPS2 | chr1 | 178694281 | 178890977 | 196697 | Ral GEF with PH domain and SH3 binding motif 2 |
| ANGPTL1 | chr1 | 178818669 | 178840215 | 21547 | angiopoietin-like 1 |
| FAM20B | chr1 | 178995073 | 179045702 | 50630 | family with sequence similarity 20, member B |
| TOR3A | chr1 | 179051111 | 179065129 | 14019 | torsin family 3, member A |
| ABL2 | chr1 | 179068461 | 179198819 | 130359 | ABL proto-oncogene 2, non-receptor tyrosine kinase |
| DD413682 | chr1 | 179170962 | 179170982 | 21 | |
| SOAT1 | chr1 | 179262848 | 179327814 | 64967 | sterol O-acyltransferase 1 |
| AXDND1 | chr1 | 179334854 | 179523870 | 189017 | axonemal dynein light chain domain containing 1 |
| TDRD5 | chr1 | 179560747 | 179660407 | 99661 | tudor domain containing 5 |
| FAM163A | chr1 | 179696914 | 179785333 | 88420 | family with sequence similarity 163, member A |
| TOR1AIP2 | chr1 | 179809101 | 179846941 | 37841 | torsin A interacting protein 2 |
| TOR1AIP1 | chr1 | 179851176 | 179889212 | 38037 | torsin A interacting protein 1 |
| CEP350 | chr1 | 179923907 | 180084015 | 160109 | centrosomal protein 350kDa |
| QSOX1 | chr1 | 180123967 | 180167169 | 43203 | quiescin Q6 sulfhydryl oxidase 1 |
| AX747393 | chr1 | 180150089 | 180151749 | 1661 | |
| FLJ23867 | chr1 | 180167143 | 180169859 | 2717 | uncharacterized protein FLJ23867 |
| ACBD6 | chr1 | 180257351 | 180472022 | 214672 | acyl-CoA binding domain containing 6 |
| MIR3121 | chr1 | 180407448 | 180407525 | 78 | microRNA 3121 |
| BC036830 | chr1 | 180528109 | 180535654 | 7546 | |
| OVAAL | chr1 | 180528109 | 180535654 | 7546 | ovarian adenocarcinoma amplified long non-coding RNA |
| XPR1 | chr1 | 180601145 | 180859415 | 258271 | xenotropic and polytropic retrovirus receptor 1 |
| LOC101928973 | chr1 | 181143619 | 181151342 | 7724 | uncharacterized LOC101928973 |
| BC039493 | chr1 | 181143619 | 181151342 | 7724 | |
| GM140 | chr1 | 181205523 | 181207740 | 2218 | uncharacterized LOC100287948 |
| AF387615 | chr1 | 181382578 | 181382716 | 139 | |
| CACNA1E | chr1 | 181452685 | 181775921 | 323237 | calcium channel, voltage-dependent, R type, alpha 1E subunit |
| ZNF648 | chr1 | 182023704 | 182030847 | 7144 | zinc finger protein 648 |
| LINC01344 | chr1 | 182173079 | 182283196 | 110118 | long intergenic non-protein coding RNA 1344 |
| GLUL | chr1 | 182350838 | 182361341 | 10504 | glutamate-ammonia ligase |
| JA429801 | chr1 | 182360854 | 182360875 | 22 | |
| JA429802 | chr1 | 182360900 | 182360923 | 24 | |
| TEDDM1 | chr1 | 182367251 | 182369751 | 2501 | transmembrane epididymal protein 1 |
| LINC00272 | chr1 | 182376755 | 182383948 | 7194 | long intergenic non-protein coding RNA 272 |
| RGSL1 | chr1 | 182419255 | 182529732 | 110478 | regulator of G-protein signaling like 1 |
| RNASEL | chr1 | 182542768 | 182558394 | 15627 | ribonuclease L (2',5'-oligoadenylate synthetase-dependent) |
| RGS16 | chr1 | 182567757 | 182573548 | 5792 | regulator of G-protein signaling 16 |
| LOC284648 | chr1 | 182584274 | 182585764 | 1491 | uncharacterized LOC284648 |
| RGS8 | chr1 | 182615791 | 182642067 | 26277 | regulator of G-protein signaling 8 |
| NPL | chr1 | 182758583 | 182799519 | 40937 | N-acetylneuraminidase pyruvate lyase (dihydrodipicolinate synthase) |
| DHX9 | chr1 | 182808438 | 182857117 | 48680 | DEAH (Asp-Glu-Ala-His) box helicase 9 |
| SHCBP1L | chr1 | 182868999 | 182922553 | 53555 | SHC SH2-domain binding protein 1-like |
| LAMC1 | chr1 | 182992594 | 183114727 | 122134 | laminin, gamma 1 (formerly LAMB2) |
| LAMC2 | chr1 | 183155173 | 183214262 | 59090 | laminin, gamma 2 |
| NMNAT2 | chr1 | 183217371 | 183387634 | 170264 | nicotinamide nucleotide adenylyltransferase 2 |
| SMG7-AS1 | chr1 | 183430010 | 183441117 | 11108 | SMG7 antisense RNA 1 |
| SMG7 | chr1 | 183441505 | 183523328 | 81824 | SMG7 nonsense mediated mRNA decay factor |
| APOBEC4 | chr1 | 183615410 | 183622448 | 7039 | apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 4 (putative) |
| RGL1 | chr1 | 183605181 | 183897685 | 292505 | ral guanine nucleotide dissociation stimulator-like 1 |
| COLGALT2 | chr1 | 183898795 | 184006878 | 108084 | collagen beta(1-O)galactosyltransferase 2 |
| TSEN15 | chr1 | 184020784 | 184043344 | 22561 | TSEN15 tRNA splicing endonuclease subunit |
| C1orf21 | chr1 | 184356149 | 184598155 | 242007 | chromosome 1 open reading frame 21 |
| EDEM3 | chr1 | 184659624 | 184724041 | 64418 | ER degradation enhancer, mannosidase alpha-like 3 |
| FAM129A | chr1 | 184760158 | 184943718 | 183561 | family with sequence similarity 129, member A |
| RNF2 | chr1 | 185014550 | 185071740 | 57191 | ring finger protein 2 |
| TRMT1L | chr1 | 185087217 | 185126230 | 39014 | tRNA methyltransferase 1 homolog (<i>S. cerevisiae</i>)-like |
| SWT1 | chr1 | 185126191 | 185260913 | 134723 | SWT1 RNA endoribonuclease homolog (<i>S. cerevisiae</i>) |
| JA611272 | chr1 | 185220508 | 185220534 | 27 | |
| IVNS1ABP | chr1 | 185265521 | 185286461 | 20941 | influenza virus NS1A binding protein |
| GS1-279B7.1 | chr1 | 185292978 | 185304171 | 11194 | microtubule-associated protein 1 light chain 3 beta pseudogene |
| LOC100288079 | chr1 | 185292978 | 185304171 | 11194 | microtubule-associated protein 1 light chain 3 beta pseudogene |
| AF508906 | chr1 | 185527511 | 185597620 | 70110 | |
| LINC01350 | chr1 | 185527511 | 185597620 | 70110 | long intergenic non-protein coding RNA 1350 |
| AF508907 | chr1 | 185576315 | 185591914 | 15600 | |
| HMCN1 | chr1 | 185703682 | 186160085 | 456404 | hemocentin 1 |
| MIR548F1 | chr1 | 186029866 | 186446655 | 416790 | microRNA 548f-1 |
| RNU6-72P | chr1 | 186198963 | 186281028 | 82066 | RNA, U6 small nuclear 72, pseudogene |
| PRG4 | chr1 | 186265404 | 186283688 | 18285 | proteoglycan 4 |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| TPR | chr1 | 186280785 | 186344864 | 64080 | translocated promoter region, nuclear basket protein |
| C1orf27 | chr1 | 186344889 | 186390503 | 45615 | chromosome 1 open reading frame 27 |
| OCLM | chr1 | 186369703 | 186370587 | 885 | oculomedin |
| PDC | chr1 | 186412697 | 186430240 | 17544 | phosducin |
| LOC102724918 | chr1 | 186404292 | 186439423 | 35132 | uncharacterized LOC102724919 |
| PTGS2 | chr1 | 186640943 | 186649559 | 8617 | prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase) |
| PACERR | chr1 | 186649785 | 186650578 | 794 | PTGS2 antisense NFKB1 complex-mediated expression regulator RNA |
| PLA2G4A | chr1 | 186798031 | 186958113 | 160083 | phospholipase A2, group IVA (cytosolic, calcium-dependent) |
| C1orf99 | chr1 | 187610357 | 187612988 | 2632 | endogenous retrovirus group MER61, member 1 |
| FAM5C | chr1 | 190066796 | 190446759 | 379964 | |
| BRINP3 | chr1 | 190066796 | 190446759 | 379964 | bone morphogenetic protein/retinoic acid inducible neural-specific 3 |
| CR936711 | chr1 | 190447389 | 190450524 | 3136 | |
| LINC01351 | chr1 | 190447389 | 190450524 | 3136 | long intergenic non-protein coding RNA 1351 |
| LOC440704 | chr1 | 190594019 | 190770788 | 176770 | uncharacterized LOC440704 |
| RGS18 | chr1 | 192127591 | 192154945 | 27355 | regulator of G-protein signaling 18 |
| RGS21 | chr1 | 192286121 | 192336414 | 50294 | regulator of G-protein signaling 21 |
| RGS1 | chr1 | 192544856 | 192549159 | 4304 | regulator of G-protein signaling 1 |
| RGS13 | chr1 | 192605267 | 192629440 | 24174 | regulator of G-protein signaling 13 |
| RGS2 | chr1 | 192778168 | 192781407 | 3240 | regulator of G-protein signaling 2 |
| LINC01032 | chr1 | 192904873 | 192917387 | 12515 | long intergenic non-protein coding RNA 1032 |
| UCHL5 | chr1 | 192981495 | 193029237 | 47743 | ubiquitin carboxyl-terminal hydrolase L5 |
| SnoU109 | chr1 | 193026410 | 193026545 | 136 | |
| TROVE2 | chr1 | 193028551 | 193060906 | 32356 | TROVE domain family, member 2 |
| AK022030 | chr1 | 193057300 | 193060904 | 3605 | |
| GLRX2 | chr1 | 193065594 | 193075244 | 9651 | glutaredoxin 2 |
| MIR1278 | chr1 | 193105632 | 193105713 | 82 | microRNA 1278 |
| B3GALT2 | chr1 | 193147859 | 193155743 | 7885 | UDP-Gal:betaGlcNAc beta 1,3-galactosyltransferase, polypeptide 2 |
| CDC73 | chr1 | 193091087 | 193223942 | 132856 | cell division cycle 73 |
| LINC01031 | chr1 | 193273874 | 193335083 | 61210 | long intergenic non-protein coding RNA 1031 |
| KCNT2 | chr1 | 196194909 | 196577561 | 382653 | potassium channel, subfamily T, member 2 |
| MIR4735 | chr1 | 196551542 | 196551611 | 70 | microRNA 4735 |
| CFH | chr1 | 196621007 | 196716634 | 95628 | complement factor H |
| CFHR3 | chr1 | 196743929 | 196763203 | 19275 | complement factor H-related 3 |
| CFHR4 | chr1 | 196659181 | 196887843 | 228663 | complement factor H-related 4 |
| CFHR1 | chr1 | 196748291 | 196801319 | 53029 | complement factor H-related 1 |
| CFHR2 | chr1 | 196912933 | 196928356 | 15424 | complement factor H-related 2 |
| CFHR5 | chr1 | 196946666 | 196978803 | 32138 | complement factor H-related 5 |
| F13B | chr1 | 197008320 | 197036397 | 28078 | coagulation factor XIII, B polypeptide |
| ASPM | chr1 | 197053256 | 197115824 | 62569 | asp (abnormal spindle) homolog, microcephaly associated (Drosophila) |
| ZBTB41 | chr1 | 197122813 | 197169672 | 46860 | zinc finger and BTB domain containing 41 |
| CRB1 | chr1 | 197170591 | 197447585 | 276995 | crumbs family member 1, photoreceptor morphogenesis associated |
| DENND1B | chr1 | 197473878 | 197744623 | 270746 | DENN/MADD domain containing 1B |
| C1orf53 | chr1 | 197871681 | 197876497 | 4817 | chromosome 1 open reading frame 53 |
| LHX9 | chr1 | 197881634 | 197901715 | 20082 | LIM homeobox 9 |
| NEK7 | chr1 | 198126107 | 198291548 | 165442 | NIMA-related kinase 7 |
| ATP6V1G3 | chr1 | 198492351 | 198510075 | 17725 | ATPase, H+ transporting, lysosomal 13kDa, V1 subunit G3 |
| PTPRC | chr1 | 198608097 | 198726605 | 118509 | protein tyrosine phosphatase, receptor type, C |
| MIR181B1 | chr1 | 198828001 | 198828111 | 111 | microRNA 181b-1 |
| MIR181A1 | chr1 | 198828172 | 198828282 | 111 | microRNA 181a-1 |
| MIR181A1HG | chr1 | 198777131 | 198906558 | 129428 | MIR181A1 host gene (non-protein coding) |
| LINC01222 | chr1 | 198961717 | 198988093 | 26377 | long intergenic non-protein coding RNA 1222 |
| BC040869 | chr1 | 198975168 | 198990166 | 14999 | |
| NR5A2 | chr1 | 199996729 | 200146550 | 149822 | nuclear receptor subfamily 5, group A, member 2 |
| LINC00862 | chr1 | 200311671 | 200342920 | 31250 | long intergenic non-protein coding RNA 862 |
| ZNF281 | chr1 | 200374074 | 200379186 | 5113 | zinc finger protein 281 |
| EU250746 | chr1 | 200380927 | 200444641 | 63715 | |
| KIF14 | chr1 | 200520624 | 200589862 | 69239 | kinesin family member 14 |
| DDX59 | chr1 | 200610118 | 200639126 | 29009 | DEAD (Asp-Glu-Ala-Asp) box polypeptide 59 |
| LOC101929224 | chr1 | 200638634 | 200663378 | 24745 | uncharacterized LOC101929224 |
| CAMSAP2 | chr1 | 200708685 | 200829835 | 121151 | calmodulin regulated spectrin-associated protein family, member 2 |
| GPR25 | chr1 | 200842082 | 200843306 | 1225 | G protein-coupled receptor 25 |
| C1orf106 | chr1 | 200860626 | 200884864 | 24239 | chromosome 1 open reading frame 106 |
| C1orf81 | chr1 | 200898071 | 200935796 | 37726 | chromosome 1 open reading frame 81 |
| KIF21B | chr1 | 200938513 | 200992828 | 54316 | kinesin family member 21B |
| BC016656 | chr1 | 200993076 | 200997920 | 4845 | |
| CACNA1S | chr1 | 201008639 | 201081694 | 73056 | calcium channel, voltage-dependent, L type, alpha 1S subunit |
| LAD1 | chr1 | 201349965 | 201368669 | 18705 | ladinin 1 |
| TNNI1 | chr1 | 201372894 | 201398994 | 26101 | troponin I type 1 (skeletal, slow) |
| PHLDA3 | chr1 | 201434606 | 201438299 | 3694 | pleckstrin homology-like domain, family A, member 3 |
| MIR5191 | chr1 | 201688635 | 201688755 | 121 | microRNA 5191 |
| NAV1 | chr1 | 201617449 | 201796102 | 178654 | neuron navigator 1 |
| IPO9-AS1 | chr1 | 201657383 | 201798687 | 141305 | IPO9 antisense RNA 1 |
| RNU6-79P | chr1 | 201736888 | 201767778 | 30891 | RNA, U6 small nuclear 79, pseudogene |
| MIR1231 | chr1 | 201777738 | 201777830 | 93 | microRNA 1231 |
| IPO9 | chr1 | 201798287 | 201853422 | 55136 | importin 9 |
| MIR6739 | chr1 | 201832500 | 201832575 | 76 | microRNA 6739 |
| SHISA4 | chr1 | 201857796 | 201861715 | 3920 | shisa family member 4 |
| LMOD1 | chr1 | 201865583 | 201915716 | 50134 | leiomodulin 1 (smooth muscle) |
| TIMM17A | chr1 | 201924618 | 201939789 | 15172 | translocase of inner mitochondrial membrane 17 homolog A (yeast) |
| RNPEP | chr1 | 201951765 | 201975275 | 23511 | arginyl aminopeptidase (aminopeptidase B) |

| | | | | | |
|-----------|------|-----------|-----------|--------|---|
| MIR6740 | chr1 | 201972251 | 201972364 | 114 | microRNA 6740 |
| ELF3 | chr1 | 201977072 | 201986315 | 9244 | E74-like factor 3 (ets domain transcription factor, epithelial-specific) |
| GPR37L1 | chr1 | 202092028 | 202098634 | 6607 | G-protein coupled receptor 37 like 1 |
| ARL8A | chr1 | 202102531 | 202113871 | 11341 | ADP-ribosylation factor-like 8A |
| PTPN7 | chr1 | 202116140 | 202130716 | 14577 | protein tyrosine phosphatase, non-receptor type 7 |
| UBE2T | chr1 | 202300784 | 202311094 | 10311 | ubiquitin-conjugating enzyme E2T (putative) |
| PPP1R12B | chr1 | 202317829 | 202557697 | 239869 | protein phosphatase 1, regulatory subunit 12B |
| SYT2 | chr1 | 202559724 | 202679551 | 119828 | synaptotagmin II |
| KDM5B | chr1 | 202696531 | 202777549 | 81019 | lysine (K)-specific demethylase 5B |
| PCAT6 | chr1 | 202780073 | 202781041 | 969 | prostate cancer associated transcript 6 (non-protein coding) |
| KDM5B-AS1 | chr1 | 202780073 | 202781041 | 969 | prostate cancer associated transcript 6 (non-protein coding) |
| MGAT4EP | chr1 | 202789384 | 202796341 | 6958 | MGAT4 family, member E, pseudogene |
| LOC641515 | chr1 | 202789393 | 202796341 | 6949 | MGAT4 family, member E, pseudogene |
| BC040684 | chr1 | 202819223 | 202830736 | 11514 | |
| BC049825 | chr1 | 202827080 | 202830736 | 3657 | |
| LOC148709 | chr1 | 202830881 | 202844369 | 13489 | actin pseudogene |
| RABIF | chr1 | 202847409 | 202858385 | 10977 | RAB interacting factor |
| KLHL12 | chr1 | 202860229 | 202897727 | 37499 | kelch-like family member 12 |
| ADIPOR1 | chr1 | 202909952 | 202927700 | 17749 | adiponectin receptor 1 |
| PPFIA4 | chr1 | 203003611 | 203047864 | 44254 | protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 4 |
| MYOG | chr1 | 203052256 | 203055166 | 2911 | myogenin (myogenic factor 4) |
| ADORA1 | chr1 | 203096835 | 203136533 | 39699 | adenosine A1 receptor |
| MYBPH | chr1 | 203136938 | 203144942 | 8005 | myosin binding protein H |
| BC034684 | chr1 | 203148063 | 203148611 | 549 | |
| CHI3L1 | chr1 | 203148058 | 203155922 | 7865 | chitinase 3-like 1 (cartilage glycoprotein-39) |
| CHIT1 | chr1 | 203181958 | 203241937 | 59980 | chitinase 1 (chitotriosidase) |
| LINC01353 | chr1 | 203256279 | 203257924 | 1646 | long intergenic non-protein coding RNA 1353 |
| LINC01136 | chr1 | 203267885 | 203274453 | 6569 | long intergenic non-protein coding RNA 1136 |
| LOC730227 | chr1 | 203267885 | 203274453 | 6569 | long intergenic non-protein coding RNA 1136 |
| BTG2 | chr1 | 203274663 | 203278729 | 4067 | BTG family, member 2 |
| FMOD | chr1 | 203309748 | 203320557 | 10810 | fibromodulin |
| ATP2B4 | chr1 | 203595914 | 203713209 | 117296 | ATPase, Ca ⁺⁺ transporting, plasma membrane 4 |
| U42379 | chr1 | 203696679 | 203696730 | 52 | |
| SNORA77 | chr1 | 203698708 | 203698833 | 126 | small nucleolar RNA, H/ACA box 77 |
| LINC00260 | chr1 | 203699704 | 203700979 | 1276 | long intergenic non-protein coding RNA 260 |
| LAX1 | chr1 | 203734283 | 203745480 | 11198 | lymphocyte transmembrane adaptor 1 |
| ZBED6 | chr1 | 203766650 | 203769590 | 2941 | zinc finger, BED-type containing 6 |
| ZC3H11A | chr1 | 203764750 | 203823256 | 58507 | zinc finger CCCH-type containing 11A |
| SNRPE | chr1 | 203830726 | 203840280 | 9555 | small nuclear ribonucleoprotein polypeptide E |
| LINC00303 | chr1 | 204001574 | 204010392 | 8819 | long intergenic non-protein coding RNA 303 |
| SOX13 | chr1 | 204042245 | 204096871 | 54627 | SRY (sex determining region Y)-box 13 |
| ETNK2 | chr1 | 204100188 | 204121310 | 21123 | ethanolamine kinase 2 |
| PLEKHA6 | chr1 | 204218311 | 204226997 | 8687 | pleckstrin homology domain containing, family A member 6 |
| PLEKHA6 | chr1 | 204187978 | 204329057 | 141080 | pleckstrin homology domain containing, family A member 6 |
| PIK3C2B | chr1 | 204391757 | 204463852 | 72096 | phosphatidylinositol-4-phosphate 3-kinase, catalytic subunit type 2 beta |
| TRNA_Lys | chr1 | 204475654 | 204475727 | 74 | |
| MDM4 | chr1 | 204485506 | 204677661 | 192156 | MDM4, p53 regulator |
| AK097184 | chr1 | 204595902 | 204598840 | 2939 | |
| LRRN2 | chr1 | 204586302 | 204654597 | 68296 | leucine rich repeat neuronal 2 |
| NFASC | chr1 | 204797781 | 204991950 | 194170 | neurofascin |
| AX746920 | chr1 | 204989426 | 204991950 | 2525 | |
| RBBP5 | chr1 | 205055269 | 205091150 | 35882 | retinoblastoma binding protein 5 |
| DSTYK | chr1 | 205111630 | 205180727 | 69098 | dual serine/threonine and tyrosine protein kinase |
| TMCC2 | chr1 | 205197037 | 205242471 | 45435 | transmembrane and coiled-coil domain family 2 |
| NUAK2 | chr1 | 205271190 | 205290883 | 19694 | NUAK family, SNF1-like kinase, 2 |
| KLHDC8A | chr1 | 205305192 | 205326218 | 21027 | kelch domain containing 8A |
| LEMD1-AS1 | chr1 | 205342379 | 205356568 | 14190 | LEMD1 antisense RNA 1 |
| LEMD1 | chr1 | 205350505 | 205391214 | 40710 | LEM domain containing 1 |
| BLACAT1 | chr1 | 205404013 | 205425214 | 21202 | bladder cancer associated transcript 1 (non-protein coding) |
| MIR135B | chr1 | 205417429 | 205417526 | 98 | microRNA 135b |
| AK095633 | chr1 | 205425185 | 205438152 | 12968 | |
| CDK18 | chr1 | 205473683 | 205501921 | 28239 | cyclin-dependent kinase 18 |
| LOC284578 | chr1 | 205523400 | 205525763 | 2364 | uncharacterized LOC284578 |
| MFSD4 | chr1 | 205538111 | 205572046 | 33936 | major facilitator superfamily domain containing 4 |
| ELK4 | chr1 | 205566694 | 205649630 | 82937 | ELK4, ETS-domain protein (SRF accessory protein 1) |
| SLC45A3 | chr1 | 205592803 | 205649630 | 56828 | solute carrier family 45, member 3 |
| NUCKS1 | chr1 | 205681946 | 205719372 | 37427 | nuclear casein kinase and cyclin-dependent kinase substrate 1 |
| RAB7L1 | chr1 | 205737113 | 205744610 | 7498 | |
| RAB29 | chr1 | 205737113 | 205744610 | 7498 | RAB29, member RAS oncogene family |
| IL10 | chr1 | 206940947 | 206946034 | 5088 | interleukin 10 |
| IL19 | chr1 | 206972214 | 207016326 | 44113 | interleukin 19 |
| C1orf116 | chr1 | 207191865 | 207206101 | 14237 | chromosome 1 open reading frame 116 |
| YOD1 | chr1 | 207217193 | 207226325 | 9133 | YOD1 deubiquitinase |
| PFKFB2 | chr1 | 207207760 | 207254368 | 46609 | 6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 2 |
| C4BPB | chr1 | 207262211 | 207273337 | 11127 | complement component 4 binding protein, beta |
| AX229788 | chr1 | 207277510 | 207277617 | 108 | |
| C4BPA | chr1 | 207277606 | 207318317 | 40712 | complement component 4 binding protein, alpha |
| CD55 | chr1 | 207494816 | 207534311 | 39496 | CD55 molecule, decay accelerating factor for complement (Cromer blood group) |
| CR2 | chr1 | 207627644 | 207663240 | 35597 | complement component (3d/Epstein Barr virus) receptor 2 |
| CR1 | chr1 | 207669472 | 207815110 | 145639 | complement component (3b/4b) receptor 1 (Knops blood group) |

| | | | | | |
|--------------|------|-----------|-----------|--------|--|
| CR1L | chr1 | 207818457 | 207898053 | 79597 | complement component (3b/4b) receptor 1-like |
| CD46 | chr1 | 207925382 | 207968861 | 43480 | CD46 molecule, complement regulatory protein |
| MIR29C | chr1 | 207975196 | 207975868 | 673 | microRNA 29c |
| MIR29B2 | chr1 | 207975787 | 207975868 | 82 | microRNA 29b-2 |
| mir-29b-2 | chr1 | 207974866 | 207996048 | 21183 | |
| LOC148696 | chr1 | 207991723 | 207995941 | 4219 | uncharacterized LOC148696 |
| AK123177 | chr1 | 208039465 | 208042417 | 2953 | |
| CD34 | chr1 | 208059882 | 208084683 | 24802 | CD34 molecule |
| PLXNA2 | chr1 | 208195587 | 208417665 | 222079 | plexin A2 |
| MIR205HG | chr1 | 209602167 | 209605892 | 3726 | MIR205 host gene (non-protein coding) |
| MIR205 | chr1 | 209605477 | 209605587 | 111 | microRNA 205 |
| CAMK1G | chr1 | 209757044 | 209787284 | 30241 | calcium/calmodulin-dependent protein kinase IG |
| MIR4260 | chr1 | 209796788 | 209796855 | 68 | microRNA 4260 |
| LAMB3 | chr1 | 209788217 | 209825820 | 37604 | laminin, beta 3 |
| G0S2 | chr1 | 209848669 | 209849735 | 1067 | G0/G1 switch 2 |
| HSD11B1 | chr1 | 209859524 | 209908295 | 48772 | hydroxysteroid (11-beta) dehydrogenase 1 |
| DIEXF | chr1 | 210001311 | 210030910 | 29600 | digestive organ expansion factor homolog (zebrafish) |
| SYT14 | chr1 | 210111518 | 210337633 | 226116 | synaptotagmin XIV |
| SERTAD4-AS1 | chr1 | 210404803 | 210407466 | 2664 | SERTAD4 antisense RNA 1 |
| SERTAD4 | chr1 | 210406194 | 210416440 | 10247 | SERTA domain containing 4 |
| HHAT | chr1 | 210501595 | 210849638 | 348044 | hedgehog acyltransferase |
| KCNH1 | chr1 | 210851656 | 211307457 | 455802 | potassium voltage-gated channel, subfamily H (eag-related), member 1 |
| RCOR3 | chr1 | 211432707 | 211489725 | 57019 | REST corepressor 3 |
| TRAF5 | chr1 | 211499956 | 211548286 | 48331 | TNF receptor-associated factor 5 |
| LINC00467 | chr1 | 211556096 | 211605877 | 49782 | long intergenic non-protein coding RNA 467 |
| RD3 | chr1 | 211649863 | 211666259 | 16397 | retinal degeneration 3 |
| SLC30A1 | chr1 | 211748380 | 211752099 | 3720 | solute carrier family 30 (zinc transporter), member 1 |
| NEK2 | chr1 | 211831598 | 211848972 | 17375 | NIMA-related kinase 2 |
| LPGAT1 | chr1 | 211916798 | 212004114 | 87317 | lysophosphatidylglycerol acyltransferase 1 |
| INTS7 | chr1 | 212113740 | 212209002 | 95263 | integrator complex subunit 7 |
| DTL | chr1 | 212208894 | 212278348 | 69455 | denticleless E3 ubiquitin protein ligase homolog (Drosophila) |
| MIR3122 | chr1 | 212250954 | 212251027 | 74 | microRNA 3122 |
| BC010168 | chr1 | 212317864 | 212318301 | 438 | |
| LOC101929541 | chr1 | 212386343 | 212458363 | 72021 | uncharacterized LOC101929541 |
| PPP2R5A | chr1 | 212458878 | 212535205 | 76328 | protein phosphatase 2, regulatory subunit B', alpha |
| SNORA16B | chr1 | 212526159 | 212526292 | 134 | small nucleolar RNA, H/ACA box 16B |
| TMEM206 | chr1 | 212537815 | 212588267 | 50453 | transmembrane protein 206 |
| NENF | chr1 | 212606228 | 212619721 | 13494 | neudessin neurotrophic factor |
| LOC101929565 | chr1 | 212719035 | 212729408 | 10374 | uncharacterized LOC101929565 |
| ATF3 | chr1 | 212738675 | 212794119 | 55445 | activating transcription factor 3 |
| FAM71A | chr1 | 212797625 | 212800120 | 2496 | family with sequence similarity 71, member A |
| BATF3 | chr1 | 212859758 | 212873327 | 13570 | basic leucine zipper transcription factor, ATF-like 3 |
| NSL1 | chr1 | 212899494 | 212965139 | 65646 | NSL1, MIS12 kinetochore complex component |
| TATDN3 | chr1 | 212965169 | 212990167 | 24999 | TatD DNase domain containing 3 |
| SPATA45 | chr1 | 213003484 | 213020991 | 17508 | spermatogenesis associated 45 |
| C1orf227 | chr1 | 213003484 | 213020991 | 17508 | spermatogenesis associated 45 |
| FLVCR1-AS1 | chr1 | 213029945 | 213031480 | 1536 | FLVCR1 antisense RNA 1 (head to head) |
| FLVCR1 | chr1 | 213031596 | 213072705 | 41110 | feline leukemia virus subgroup C cellular receptor 1 |
| VASH2 | chr1 | 213123861 | 213164927 | 41067 | vasohibin 2 |
| ANGEL2 | chr1 | 213165523 | 213189217 | 23695 | angel homolog 2 (Drosophila) |
| RPS6KC1 | chr1 | 213224574 | 213446808 | 222235 | ribosomal protein S6 kinase, 52kDa, polypeptide 1 |
| AK092251 | chr1 | 213992977 | 214139607 | 146631 | |
| LINC00538 | chr1 | 214098091 | 214099996 | 1906 | long intergenic non-protein coding RNA 538 |
| PROX1 | chr1 | 214161277 | 214214847 | 53571 | prospero homeobox 1 |
| SMYD2 | chr1 | 214454564 | 214510477 | 55914 | SET and MYND domain containing 2 |
| PTPN14 | chr1 | 214522038 | 214725024 | 202987 | protein tyrosine phosphatase, non-receptor type 14 |
| BC171896 | chr1 | 214655881 | 214656819 | 939 | |
| CENPF | chr1 | 214776531 | 214837914 | 61384 | centromere protein F, 350/400kDa |
| KCNK2 | chr1 | 215178884 | 215410436 | 231553 | potassium channel, subfamily K, member 2 |
| KCTD3 | chr1 | 215740734 | 215795149 | 54416 | potassium channel tetramerization domain containing 3 |
| USH2A | chr1 | 215796235 | 216596738 | 800504 | Usher syndrome 2A (autosomal recessive, mild) |
| LOC102723833 | chr1 | 216245806 | 216260259 | 14454 | uncharacterized LOC102723833 |
| Mir_598 | chr1 | 216825011 | 216825068 | 58 | |
| ESRRG | chr1 | 216676587 | 217311097 | 634511 | estrogen-related receptor gamma |
| GPATCH2 | chr1 | 217600334 | 217804444 | 204111 | G patch domain containing 2 |
| SPATA17 | chr1 | 217804694 | 218040484 | 235791 | spermatogenesis associated 17 |
| SPATA17-AS1 | chr1 | 217954539 | 217958462 | 3924 | SPATA17 antisense RNA 1 |
| LOC101929631 | chr1 | 218216846 | 218232482 | 15637 | uncharacterized LOC101929631 |
| RRP15 | chr1 | 218458628 | 218511325 | 52698 | ribosomal RNA processing 15 homolog (S. cerevisiae) |
| LOC728463 | chr1 | 218517537 | 218519020 | 1484 | TGFB2 antisense RNA 1 (head to head) |
| TGFB2-AS1 | chr1 | 218517537 | 218519020 | 1484 | TGFB2 antisense RNA 1 (head to head) |
| TGFB2 | chr1 | 218518675 | 218617961 | 99287 | transforming growth factor, beta 2 |
| TGFB2-OT1 | chr1 | 218615967 | 218617337 | 1371 | TGFB2 overlapping transcript 1 |
| LYPLAL1-AS1 | chr1 | 219254316 | 219347130 | 92815 | LYPLAL1 antisense RNA 1 (head to head) |
| LOC643723 | chr1 | 219254316 | 219347130 | 92815 | LYPLAL1 antisense RNA 1 (head to head) |
| LYPLAL1 | chr1 | 219347172 | 219386207 | 39036 | lysophospholipase-like 1 |
| SLC30A10 | chr1 | 219858768 | 220131989 | 273222 | solute carrier family 30, member 10 |
| RNU5F-1 | chr1 | 220046618 | 220292777 | 246160 | RNA, U5F small nuclear 1 |
| EPRS | chr1 | 220141941 | 220220000 | 78060 | glutamyl-prolyl-tRNA synthetase |
| BPNT1 | chr1 | 220230823 | 220263195 | 32373 | 3'(2'), 5'-bisphosphate nucleotidase 1 |

| | | | | | |
|--------------|------|-----------|-----------|--------|--|
| MIR215 | chr1 | 220291194 | 220291304 | 111 | microRNA 215 |
| MIR194-1 | chr1 | 220291498 | 220291583 | 86 | microRNA 194-1 |
| DM119532 | chr1 | 220291547 | 220291569 | 23 | |
| IARS2 | chr1 | 220267454 | 220321383 | 53930 | isoleucyl-tRNA synthetase 2, mitochondrial |
| MIR664A | chr1 | 220373883 | 220373961 | 79 | microRNA 664a |
| SNORA36B | chr1 | 220373887 | 220374018 | 132 | small nucleolar RNA, H/ACA box 36B |
| RAB3GAP2 | chr1 | 220321609 | 220445843 | 124235 | RAB3 GTPase activating protein subunit 2 (non-catalytic) |
| AURKAPS1 | chr1 | 220439520 | 220441057 | 1538 | aurora kinase A pseudogene 1 |
| MARK1 | chr1 | 220701524 | 220837799 | 136276 | MAP/microtubule affinity-regulating kinase 1 |
| DUSP10 | chr1 | 221874761 | 221915518 | 40758 | dual specificity phosphatase 10 |
| LOC101929771 | chr1 | 222001007 | 222014008 | 13002 | uncharacterized LOC101929771 |
| TRNA_Thr | chr1 | 222638346 | 222638419 | 74 | |
| DQ587965 | chr1 | 222646009 | 222646043 | 35 | |
| DQ573170 | chr1 | 222646722 | 222646767 | 46 | |
| DQ576410 | chr1 | 222646839 | 222646870 | 32 | |
| DQ584993 | chr1 | 222647751 | 222647786 | 36 | |
| DQ584971 | chr1 | 222648391 | 222648423 | 33 | |
| DQ575983 | chr1 | 222648536 | 222648596 | 61 | |
| DQ597892 | chr1 | 222648680 | 222648717 | 38 | |
| DQ574659 | chr1 | 222649002 | 222649064 | 63 | |
| DQ584609 | chr1 | 222649161 | 222649251 | 91 | |
| DQ600234 | chr1 | 222650319 | 222650381 | 63 | |
| HHIPL2 | chr1 | 222695601 | 222721444 | 25844 | HHIP-like 2 |
| TAF1A | chr1 | 222731243 | 222763275 | 32033 | TATA box binding protein (TBP)-associated factor, RNA polymerase I, A, 48kDa |
| TAF1A-AS1 | chr1 | 222763261 | 222765975 | 2715 | TAF1A antisense RNA 1 |
| MIA3 | chr1 | 222791443 | 222841354 | 49912 | melanoma inhibitory activity family, member 3 |
| AIDA | chr1 | 222841354 | 222886526 | 45173 | axin interactor, dorsalization associated |
| BROX | chr1 | 222885894 | 222908538 | 22645 | BRO1 domain and CAAX motif containing |
| AK025140 | chr1 | 222906202 | 222908533 | 2332 | |
| FAM177B | chr1 | 222910557 | 222924002 | 13446 | family with sequence similarity 177, member B |
| AK094916 | chr1 | 222900275 | 222946483 | 46209 | |
| DISP1 | chr1 | 222988430 | 223179337 | 190908 | dispatched homolog 1 (Drosophila) |
| TLR5 | chr1 | 223282747 | 223316624 | 33878 | toll-like receptor 5 |
| SUSD4 | chr1 | 223394160 | 223537544 | 143385 | sushi domain containing 4 |
| C1orf65 | chr1 | 223566714 | 223568812 | 2099 | coiled-coil domain containing 185 |
| CCDC185 | chr1 | 223566714 | 223568812 | 2099 | coiled-coil domain containing 185 |
| CAPN8 | chr1 | 223714971 | 223853436 | 138466 | calpain 8 |
| CAPN2 | chr1 | 223889294 | 223963720 | 74427 | calpain 2, (mII) large subunit |
| TP53BP2 | chr1 | 223967594 | 224033674 | 66081 | tumor protein p53 binding protein 2 |
| HM358976 | chr1 | 224051997 | 224052306 | 310 | |
| AK124970 | chr1 | 224189608 | 224197818 | 8211 | |
| FBXO28 | chr1 | 224301788 | 224349749 | 47962 | F-box protein 28 |
| DEGS1 | chr1 | 224370909 | 224381142 | 10234 | delta(4)-desaturase, sphingolipid 1 |
| LOC101927143 | chr1 | 224396449 | 224400981 | 4533 | uncharacterized LOC101927143 |
| LOC101927164 | chr1 | 224407314 | 224415745 | 8432 | uncharacterized LOC101927164 |
| MIR320B2 | chr1 | 224444705 | 224444843 | 139 | microRNA 320b-2 |
| NVL | chr1 | 224415035 | 224517891 | 102857 | nuclear VCP-like |
| CNIH4 | chr1 | 224544512 | 224567153 | 22642 | cornichon family AMPA receptor auxiliary protein 4 |
| MIR4742 | chr1 | 224585928 | 224586013 | 86 | microRNA 4742 |
| DL490795 | chr1 | 224586541 | 224586601 | 61 | |
| WDR26 | chr1 | 224572844 | 224622001 | 49158 | WD repeat domain 26 |
| AB586698 | chr1 | 224605809 | 224606083 | 275 | |
| CNIH3 | chr1 | 224804178 | 224928249 | 124072 | cornichon family AMPA receptor auxiliary protein 3 |
| DNAH14 | chr1 | 225117355 | 225586996 | 469642 | dynein, axonemal, heavy chain 14 |
| LBR | chr1 | 225589203 | 225616557 | 27355 | lamin B receptor |
| ENAH | chr1 | 225674533 | 225840845 | 166313 | enabled homolog (Drosophila) |
| AK124056 | chr1 | 225888305 | 225939945 | 51641 | |
| SRP9 | chr1 | 225965514 | 225978168 | 12655 | signal recognition particle 9kDa |
| EPHX1 | chr1 | 225997775 | 226033262 | 35488 | epoxide hydrolase 1, microsomal (xenobiotic) |
| LEFTY1 | chr1 | 226073981 | 226112040 | 38060 | left-right determination factor 1 |
| PYCR2 | chr1 | 226107576 | 226112040 | 4465 | pyrroline-5-carboxylate reductase family, member 2 |
| MIR6741 | chr1 | 226109779 | 226109842 | 64 | microRNA 6741 |
| LEFTY2 | chr1 | 226124297 | 226129083 | 4787 | left-right determination factor 2 |
| SDE2 | chr1 | 226170402 | 226187066 | 16665 | SDE2 telomere maintenance homolog (S. pombe) |
| H3F3A | chr1 | 226250407 | 226259703 | 9297 | H3 histone, family 3A |
| H3F3AP4 | chr1 | 226250427 | 226259703 | 9277 | H3 histone, family 3A, pseudogene 4 |
| BC032899 | chr1 | 226271655 | 226277994 | 6340 | |
| ACBD3 | chr1 | 226332379 | 226374423 | 42045 | acyl-CoA binding domain containing 3 |
| BC033346 | chr1 | 226374532 | 226385086 | 10555 | |
| MIXL1 | chr1 | 226411318 | 226414756 | 3439 | Mix paired-like homeobox |
| LIN9 | chr1 | 226418849 | 226497449 | 78601 | lin-9 DREAM MuvB core complex component |
| PARP1 | chr1 | 226548391 | 226595801 | 47411 | poly (ADP-ribose) polymerase 1 |
| AK055856 | chr1 | 226723318 | 226730469 | 7152 | |
| C1orf95 | chr1 | 226736500 | 226796915 | 60416 | chromosome 1 open reading frame 95 |
| ITPKB | chr1 | 226819390 | 226926876 | 107487 | inositol-trisphosphate 3-kinase B |
| PSEN2 | chr1 | 227058272 | 227083804 | 25533 | presenilin 2 |
| CABC1 | chr1 | 227084588 | 227091365 | 6778 | chaperone, ABC1 activity of bc1 complex like (S. pombe) |
| ADCK3 | chr1 | 227084588 | 227175246 | 90659 | aarF domain containing kinase 3 |
| CDC42BPA | chr1 | 227177565 | 227505826 | 328262 | CDC42 binding protein kinase alpha (DMPK-like) |
| DTNB | chr2 | 25600066 | 25896516 | 296451 | dystrobrevin, beta |

| | | | | | |
|--------------|------|-----------|-----------|---------|--|
| Y_RNA | chr2 | 25919944 | 25920057 | 114 | |
| ASXL2 | chr2 | 25962252 | 26101312 | 139061 | additional sex combs like transcriptional regulator 2 |
| KIF3C | chr2 | 26149454 | 26205443 | 55990 | kinesin family member 3C |
| GAREML | chr2 | 26395959 | 26412532 | 16574 | GRB2 associated, regulator of MAPK1-like |
| HADHA | chr2 | 26413503 | 26467594 | 54092 | hydroxyacyl-CoA dehydrogenase/3-ketoacyl-CoA thiolase/enoyl-CoA hydratase (trifunctional protein), alpha |
| HADHB | chr2 | 26467615 | 26513333 | 45719 | hydroxyacyl-CoA dehydrogenase/3-ketoacyl-CoA thiolase/enoyl-CoA hydratase (trifunctional protein), beta |
| GPR113 | chr2 | 26531040 | 26569685 | 38646 | G protein-coupled receptor 113 |
| EMILIN1 | chr2 | 27301434 | 27309265 | 7832 | elastin microfibril interfacier 1 |
| KHK | chr2 | 27309610 | 27323619 | 14010 | ketohexokinase (fructokinase) |
| CGREF1 | chr2 | 27322220 | 27341995 | 19776 | cell growth regulator with EF hand domain 1 |
| AK074615 | chr2 | 27346722 | 27349815 | 3094 | |
| ABHD1 | chr2 | 27346656 | 27353680 | 7025 | abhydrolase domain containing 1 |
| PREB | chr2 | 27353624 | 27357542 | 3919 | prolactin regulatory element binding |
| PRR30 | chr2 | 27359714 | 27362332 | 2619 | proline rich 30 |
| C2orf53 | chr2 | 27359714 | 27362332 | 2619 | proline rich 30 |
| TCF23 | chr2 | 27371944 | 27375819 | 3876 | transcription factor 23 |
| SLC5A6 | chr2 | 27422454 | 27435175 | 12722 | solute carrier family 5 (sodium/multivitamin and iodide cotransporter), member 6 |
| LRP1B | chr2 | 140988995 | 142889270 | 1900276 | low density lipoprotein receptor-related protein 1B |
| NAALADL2 | chr3 | 174156362 | 174455536 | 299175 | N-acetylated alpha-linked acidic dipeptidase-like 2 |
| LGSN | chr6 | 63985855 | 64029882 | 44028 | lensin, lens protein with glutamine synthetase domain |
| PTP4A1 | chr6 | 64231650 | 64293493 | 61844 | protein tyrosine phosphatase type IVA, member 1 |
| PHF3 | chr6 | 64345706 | 64425418 | 79713 | PHD finger protein 3 |
| EYS | chr6 | 64429875 | 66417118 | 1987244 | eyes shut homolog (Drosophila) |
| LMBRD1 | chr6 | 70385640 | 70507049 | 121410 | LMBR1 domain containing 1 |
| COL19A1 | chr6 | 70576447 | 70922157 | 345711 | collagen, type XIX, alpha 1 |
| COL9A1 | chr6 | 70925742 | 71012786 | 87045 | collagen, type IX, alpha 1 |
| LOC101928353 | chr6 | 71103904 | 71109120 | 5217 | uncharacterized LOC101928353 |
| FAM135A | chr6 | 71123106 | 71270877 | 147772 | family with sequence similarity 135, member A |
| C6orf57 | chr6 | 71276624 | 71298606 | 21983 | chromosome 6 open reading frame 57 |
| SMAP1 | chr6 | 71377473 | 71571716 | 194244 | small ArfGAP 1 |
| B3GAT2 | chr6 | 71571068 | 71666788 | 95721 | beta-1,3-glucuronyltransferase 2 |
| U3 | chr6 | 71836595 | 71836808 | 214 | RNA, U3 small nucleolar |
| OGFRL1 | chr6 | 71998476 | 72011973 | 13498 | opioid growth factor receptor-like 1 |
| MIR30C2 | chr6 | 72086662 | 72086734 | 73 | microRNA 30c-2 |
| DM119538 | chr6 | 72113256 | 72113278 | 23 | |
| MIR30A | chr6 | 72113253 | 72113324 | 72 | microRNA 30a |
| DM119539 | chr6 | 72113297 | 72113319 | 23 | |
| LINC00472 | chr6 | 72117566 | 72130448 | 12883 | long intergenic non-protein coding RNA 472 |
| LOC10272400C | chr6 | 72130729 | 72168575 | 37847 | uncharacterized LOC102724000 |
| RIMS1 | chr6 | 72596405 | 73112845 | 516441 | regulating synaptic membrane exocytosis 1 |
| KCNQ5-IT1 | chr6 | 73340222 | 73388282 | 48061 | KCNQ5 intronic transcript 1 (non-protein coding) |
| KCNQ5 | chr6 | 73331570 | 73908573 | 577004 | potassium voltage-gated channel, KQT-like subfamily, member 5 |
| MIR4282 | chr6 | 73677409 | 73677476 | 68 | microRNA 4282 |
| KCNQ5-AS1 | chr6 | 73844525 | 73853237 | 8713 | KCNQ5 antisense RNA 1 |
| KHDC1L | chr6 | 73933267 | 73935175 | 1909 | KH homology domain containing 1-like |
| KHDC1 | chr6 | 73919470 | 74019938 | 100469 | KH homology domain containing 1 |
| BC031876 | chr6 | 73972949 | 73986225 | 13277 | |
| AL832252 | chr6 | 73977773 | 74001061 | 23289 | |
| C6orf147 | chr6 | 73983861 | 74020088 | 36228 | chromosome 6 open reading frame 147 |
| DPPA5 | chr6 | 74062784 | 74063999 | 1216 | developmental pluripotency associated 5 |
| KHDC3L | chr6 | 74072399 | 74073898 | 1500 | KH domain containing 3-like, subcortical maternal complex member |
| OOEP | chr6 | 74078279 | 74104816 | 26538 | oocyte expressed protein |
| DDX43 | chr6 | 74104284 | 74127289 | 23006 | DEAD (Asp-Glu-Ala-Asp) box polypeptide 43 |
| MB21D1 | chr6 | 74134855 | 74162043 | 27189 | Mab-21 domain containing 1 |
| MTO1 | chr6 | 74189658 | 74190528 | 871 | mitochondrial tRNA translation optimization 1 |
| MTO1 | chr6 | 74171453 | 74211179 | 39727 | mitochondrial tRNA translation optimization 1 |
| EEF1A1 | chr6 | 74225472 | 74230755 | 5284 | eukaryotic translation elongation factor 1 alpha 1 |
| DL491467 | chr6 | 74228125 | 74228181 | 57 | |
| DQ590492 | chr6 | 74228271 | 74228299 | 29 | |
| SLC17A5 | chr6 | 74303101 | 74363737 | 60637 | solute carrier family 17 (acidic sugar transporter), member 5 |
| AK124950 | chr6 | 74403625 | 74405743 | 2119 | |
| LOC101928489 | chr6 | 74403625 | 74405854 | 2230 | uncharacterized LOC101928489 |
| CD109 | chr6 | 74405807 | 74538041 | 132235 | CD109 molecule |
| LOC101928516 | chr6 | 74779166 | 75400443 | 621278 | uncharacterized LOC101928516 |
| AF086303 | chr6 | 74779166 | 75400443 | 621278 | |
| COL12A1 | chr6 | 75794041 | 75915623 | 121583 | collagen, type XII, alpha 1 |
| COX7A2 | chr6 | 75947390 | 75953644 | 6255 | cytochrome c oxidase subunit VIIa polypeptide 2 (liver) |
| TMEM30A | chr6 | 75962637 | 75994632 | 31996 | transmembrane protein 30A |
| LOC100506804 | chr6 | 75994729 | 76001580 | 6852 | uncharacterized LOC100506804 |
| FILIP1 | chr6 | 76004606 | 76203545 | 198940 | filamin A interacting protein 1 |
| LOC10192854C | chr6 | 76092901 | 76168615 | 75715 | uncharacterized LOC101928540 |
| SENPE6 | chr6 | 76311621 | 76427994 | 116374 | SUMO1/sentrin specific peptidase 6 |
| MYO6 | chr6 | 76458892 | 76629254 | 170363 | myosin VI |
| IMPG1 | chr6 | 76630830 | 76782395 | 151566 | interphotoreceptor matrix proteoglycan 1 |
| HTR1B | chr6 | 78171947 | 78173120 | 1174 | 5-hydroxytryptamine (serotonin) receptor 1B, G protein-coupled |
| MEI4 | chr6 | 78400372 | 78634476 | 234105 | meiosis-specific 4 homolog (S. cerevisiae) |
| IRAK1BP1 | chr6 | 79577260 | 79656157 | 78898 | interleukin-1 receptor-associated kinase 1 binding protein 1 |
| PHIP | chr6 | 79644135 | 79788011 | 143877 | pleckstrin homology domain interacting protein |
| HMGN3 | chr6 | 79910961 | 79944455 | 33495 | high mobility group nucleosomal binding domain 3 |
| HMGN3-AS1 | chr6 | 79943390 | 79946517 | 3128 | HMGN3 antisense RNA 1 |

| | | | | | |
|--------------|------|----------|----------|--------|---|
| LOC100288198 | chr6 | 79943390 | 79946517 | 3128 | HMG3 antisense RNA 1 |
| BC070061 | chr6 | 80017385 | 80023101 | 5717 | |
| LCA5 | chr6 | 80194707 | 80247147 | 52441 | Leber congenital amaurosis 5 |
| DQ582269 | chr6 | 80248450 | 80248479 | 30 | |
| SH3BGR2 | chr6 | 80340999 | 80413369 | 72371 | SH3 domain binding glutamate-rich protein like 2 |
| RNY4 | chr6 | 80451635 | 80451669 | 35 | RNA, Ro-associated Y4 |
| C6orf7 | chr6 | 80513303 | 80580137 | 66835 | chromosome 6 open reading frame 7 |
| ELOVL4 | chr6 | 80624528 | 80657315 | 32788 | ELOVL fatty acid elongase 4 |
| TTK | chr6 | 80714321 | 80752244 | 37924 | TTK protein kinase |
| BCKDHB | chr6 | 80816343 | 81055987 | 239645 | branched chain keto acid dehydrogenase E1, beta polypeptide |
| FAM46A | chr6 | 82455446 | 82462428 | 6983 | family with sequence similarity 46, member A |
| BC038576 | chr6 | 82523002 | 82523909 | 908 | |
| IBTK | chr6 | 82879703 | 82957471 | 77769 | inhibitor of Bruton agammaglobulinemia tyrosine kinase |
| TPBG | chr6 | 83072922 | 83077133 | 4212 | trophoblast glycoprotein |
| UBE3D | chr6 | 83602185 | 83775545 | 173361 | ubiquitin protein ligase E3D |
| DOPEY1 | chr6 | 83777384 | 83881065 | 103682 | dopey family member 1 |
| PGM3 | chr6 | 83874592 | 83903655 | 29064 | phosphoglucomutase 3 |
| RWDD2A | chr6 | 83903031 | 83906256 | 3226 | RWD domain containing 2A |
| ME1 | chr6 | 83920109 | 84140938 | 220830 | malic enzyme 1, NADP(+)-dependent, cytosolic |
| PRSS35 | chr6 | 84222193 | 84235421 | 13229 | protease, serine, 35 |
| SNAP91 | chr6 | 84262604 | 84419127 | 156524 | synaptosomal-associated protein, 91kDa |
| RIPPLY2 | chr6 | 84562984 | 84567234 | 4251 | rippy transcriptional repressor 2 |
| CYB5R4 | chr6 | 84569369 | 84670146 | 100778 | cytochrome b5 reductase 4 |
| MRAP2 | chr6 | 84743419 | 84800605 | 57187 | melanocortin 2 receptor accessory protein 2 |
| KIAA1009 | chr6 | 84833959 | 84937335 | 103377 | |
| CEP162 | chr6 | 84833959 | 84937353 | 103395 | centrosomal protein 162kDa |
| LOC102724201 | chr6 | 85399175 | 85419252 | 20078 | uncharacterized LOC102724201 |
| TBX18 | chr6 | 85397078 | 85473954 | 76877 | T-box 18 |
| AK024998 | chr6 | 86096936 | 86099904 | 2969 | |
| NT5E | chr6 | 86159301 | 86205509 | 46209 | 5'-nucleotidase, ecto (CD73) |
| SNX14 | chr6 | 86215214 | 86303850 | 88637 | sorting nexin 14 |
| SYNCRIP | chr6 | 86317501 | 86353043 | 35543 | synaptotagmin binding, cytoplasmic RNA interacting protein |
| SNORD50A | chr6 | 86387011 | 86387086 | 76 | small nucleolar RNA, C/D box 50A |
| SNORD50B | chr6 | 86387306 | 86387377 | 72 | small nucleolar RNA, C/D box 50B |
| SNHG5 | chr6 | 86386724 | 86388451 | 1728 | small nucleolar RNA host gene 5 (non-protein coding) |
| HTR1E | chr6 | 87647023 | 87726397 | 79375 | 5-hydroxytryptamine (serotonin) receptor 1E, G protein-coupled |
| CGA | chr6 | 87795215 | 87804865 | 9651 | glycoprotein hormones, alpha polypeptide |
| ZNF292 | chr6 | 87862550 | 87973406 | 110857 | zinc finger protein 292 |
| GJB7 | chr6 | 87992696 | 88038996 | 46301 | gap junction protein, beta 7, 25kDa |
| SMIM8 | chr6 | 88032305 | 88085428 | 53124 | small integral membrane protein 8 |
| C6orf163 | chr6 | 88054570 | 88075181 | 20612 | chromosome 6 open reading frame 163 |
| C6orf164 | chr6 | 88091719 | 88109459 | 17741 | chromosome 6 open reading frame 164 |
| C6orf165 | chr6 | 88117689 | 88205858 | 88170 | chromosome 6 open reading frame 165 |
| SLC35A1 | chr6 | 88146443 | 88222057 | 75615 | solute carrier family 35 (CMP-sialic acid transporter), member A1 |
| AK299432 | chr6 | 88218259 | 88218731 | 473 | |
| RARS2 | chr6 | 88224095 | 88299735 | 75641 | arginyl-tRNA synthetase 2, mitochondrial |
| ORC3 | chr6 | 88299784 | 88377172 | 77389 | origin recognition complex, subunit 3 |
| AKIRIN2 | chr6 | 88384577 | 88411985 | 27409 | akirin 2 |
| LOC101928911 | chr6 | 88494577 | 88621449 | 126873 | uncharacterized LOC101928911 |
| AY927641 | chr6 | 88494577 | 88621449 | 126873 | |
| SPACA1 | chr6 | 88757506 | 88776550 | 19045 | sperm acrosome associated 1 |
| CNR1 | chr6 | 88849584 | 88875767 | 26184 | cannabinoid receptor 1 (brain) |
| LOC101928936 | chr6 | 89235642 | 89249088 | 13447 | uncharacterized LOC101928936 |
| JQ733905 | chr6 | 89372191 | 89380624 | 8434 | |
| RNGTT | chr6 | 89319615 | 89673348 | 353734 | RNA guanylyltransferase and 5'-phosphatase |
| PNRC1 | chr6 | 89790428 | 89794879 | 4452 | proline-rich nuclear receptor coactivator 1 |
| SRSF12 | chr6 | 89805677 | 89827800 | 22124 | serine/arginine-rich splicing factor 12 |
| PM20D2 | chr6 | 89855768 | 89875288 | 19521 | peptidase M20 domain containing 2 |
| GABRR1 | chr6 | 89887222 | 89941007 | 53786 | gamma-aminobutyric acid (GABA) A receptor, rho 1 |
| GABRR2 | chr6 | 89966839 | 90025018 | 58180 | gamma-aminobutyric acid (GABA) A receptor, rho 2 |
| UBE2J1 | chr6 | 90036343 | 90062619 | 26277 | ubiquitin-conjugating enzyme E2, J1 |
| RRAGD | chr6 | 90074334 | 90121995 | 47662 | Ras-related GTP binding D |
| ANKRD6 | chr6 | 90142896 | 90343553 | 200658 | ankyrin repeat domain 6 |
| LYRM2 | chr6 | 90277862 | 90348474 | 70613 | LYR motif containing 2 |
| LOC101929057 | chr6 | 90348250 | 90399200 | 50951 | uncharacterized LOC101929057 |
| MDN1 | chr6 | 90352493 | 90529513 | 177021 | MDN1, midasin homolog (yeast) |
| CASP8AP2 | chr6 | 90539618 | 90584155 | 44538 | caspase 8 associated protein 2 |
| GJA10 | chr6 | 90604187 | 90605819 | 1633 | gap junction protein, alpha 10, 62kDa |
| BACH2 | chr6 | 90636246 | 91006627 | 370382 | BTB and CNC homology 1, basic leucine zipper transcription factor 2 |
| MIR4464 | chr6 | 91022460 | 91022552 | 93 | microRNA 4464 |
| Mir_562 | chr6 | 91177261 | 91177362 | 102 | |
| MAP3K7 | chr6 | 91223291 | 91297020 | 73730 | mitogen-activated protein kinase kinase kinase 7 |
| MIR4643 | chr6 | 92231377 | 92231455 | 79 | microRNA 4643 |
| BC037927 | chr6 | 92338753 | 92400146 | 61394 | |
| CASC6 | chr6 | 92338757 | 92400146 | 61390 | cancer susceptibility candidate 6 (non-protein coding) |
| EPHA7 | chr6 | 93949739 | 94129300 | 179562 | EPH receptor A7 |
| TSG1 | chr6 | 94416800 | 94486199 | 69400 | tumor suppressor TSG1 |
| MANEA-AS1 | chr6 | 96007971 | 96025327 | 17357 | MANEA antisense RNA 1 (head to head) |
| MANEA | chr6 | 96025372 | 96057328 | 31957 | mannosidase, endo-alpha |
| FUT9 | chr6 | 96463844 | 96663488 | 199645 | fucosyltransferase 9 (alpha (1,3) fucosyltransferase) |

| | | | | | |
|--------------|------|-----------|-----------|--------|--|
| UFL1 | chr6 | 96969701 | 97003151 | 33451 | UFM1-specific ligase 1 |
| FHL5 | chr6 | 97010423 | 97064512 | 54090 | four and a half LIM domains 5 |
| U4 | chr6 | 97097328 | 97097467 | 140 | RNA, U4A small nuclear |
| GPR63 | chr6 | 97241997 | 97285353 | 43357 | G protein-coupled receptor 63 |
| NDUFAF4 | chr6 | 97337186 | 97345767 | 8582 | NADH dehydrogenase (ubiquinone) complex I, assembly factor 4 |
| Metazoa_SRP | chr6 | 97362643 | 97362871 | 229 | |
| KLHL32 | chr6 | 97372495 | 97588630 | 216136 | kelch-like family member 32 |
| MMS22L | chr6 | 97590036 | 97731061 | 141026 | MMS22-like, DNA repair protein |
| MIR548H3 | chr6 | 97537842 | 97862283 | 324442 | microRNA 548h-3 |
| AK091365 | chr6 | 97753512 | 98156726 | 403215 | |
| LOC101927314 | chr6 | 97753461 | 98156793 | 403333 | uncharacterized LOC101927314 |
| MIR2113 | chr6 | 98472406 | 98472495 | 90 | microRNA 2113 |
| POU3F2 | chr6 | 99282579 | 99286666 | 4088 | POU class 3 homeobox 2 |
| FBXL4 | chr6 | 99321600 | 99395882 | 74283 | F-box and leucine-rich repeat protein 4 |
| FAXC | chr6 | 99720792 | 99797531 | 76740 | failed axon connections homolog (Drosophila) |
| COQ3 | chr6 | 99817347 | 99842082 | 24736 | coenzyme Q3 methyltransferase |
| BC033061 | chr6 | 99846536 | 99848504 | 1969 | |
| PNISR | chr6 | 99846536 | 99873207 | 26672 | PNN-interacting serine/arginine-rich protein |
| DQ599242 | chr6 | 99872797 | 99875596 | 2800 | |
| LOC101927365 | chr6 | 99872746 | 99879190 | 6445 | uncharacterized LOC101927365 |
| USP45 | chr6 | 99880183 | 99963308 | 83126 | ubiquitin specific peptidase 45 |
| TSTD3 | chr6 | 99968869 | 100033084 | 64216 | thiosulfate sulfurtransferase (rhodanese)-like domain containing 3 |
| CCNC | chr6 | 99990262 | 100016690 | 26429 | cyclin C |
| PRDM13 | chr6 | 100054649 | 100063454 | 8806 | PR domain containing 13 |
| MCHR2 | chr6 | 100367785 | 100442114 | 74330 | melanin-concentrating hormone receptor 2 |
| MCHR2-AS1 | chr6 | 100441913 | 100524295 | 82383 | MCHR2 antisense RNA 1 |
| LOC728012 | chr6 | 100441913 | 100524295 | 82383 | MCHR2 antisense RNA 1 |
| SIM1 | chr6 | 100836749 | 100912805 | 76057 | single-minded family bHLH transcription factor 1 |
| ASCC3 | chr6 | 100956070 | 101329248 | 373179 | activating signal cointegrator 1 complex subunit 3 |
| DQ585302 | chr6 | 101878708 | 101878736 | 29 | |
| GRIK2 | chr6 | 101841381 | 102517958 | 676578 | glutamate receptor, ionotropic, kainate 2 |
| HACE1 | chr6 | 105175967 | 105307794 | 131828 | HECT domain and ankyrin repeat containing E3 ubiquitin protein ligase 1 |
| LINC00577 | chr6 | 105384168 | 105388402 | 4235 | long intergenic non-protein coding RNA 577 |
| LIN28B | chr6 | 105404922 | 105531207 | 126286 | lin-28 homolog B (C. elegans) |
| BVES | chr6 | 105544698 | 105585049 | 40352 | blood vessel epicardial substance |
| BVES-AS1 | chr6 | 105585561 | 105617819 | 32259 | BVES antisense RNA 1 |
| POPDC3 | chr6 | 105605774 | 105627858 | 22085 | popeye domain containing 3 |
| PREP | chr6 | 105725441 | 105850999 | 125559 | prolyl endopeptidase |
| PRDM1 | chr6 | 106534194 | 106557814 | 23621 | PR domain containing 1, with ZNF domain |
| ATG5 | chr6 | 106632351 | 106773695 | 141345 | autophagy related 5 |
| AIM1 | chr6 | 106959729 | 107018334 | 58606 | absent in melanoma 1 |
| RTN4IP1 | chr6 | 107018902 | 107078366 | 59465 | reticulon 4 interacting protein 1 |
| QRSL1 | chr6 | 107077440 | 107116292 | 38853 | glutaminyl-tRNA synthase (glutamine-hydrolyzing)-like 1 |
| LOC100422737 | chr6 | 107165326 | 107235300 | 69975 | uncharacterized LOC100422737 |
| AK123416 | chr6 | 107218004 | 107222877 | 4874 | |
| C6orf203 | chr6 | 107349375 | 107372790 | 23416 | chromosome 6 open reading frame 203 |
| BEND3 | chr6 | 107386384 | 107435636 | 49253 | BEN domain containing 3 |
| PDSS2 | chr6 | 107473760 | 107780779 | 307020 | prenyl (decaprenyl) diphosphate synthase, subunit 2 |
| SOBP | chr6 | 107811316 | 107982513 | 171198 | sine oculis binding protein homolog (Drosophila) |
| SCML4 | chr6 | 108023360 | 108145521 | 122162 | sex comb on midleg-like 4 (Drosophila) |
| SEC63 | chr6 | 108188959 | 108279482 | 90524 | SEC63 homolog (S. cerevisiae) |
| AJ420489 | chr6 | 108362675 | 108365439 | 2765 | |
| OSTM1 | chr6 | 108362612 | 108395941 | 33330 | osteopetrosis associated transmembrane protein 1 |
| AF520419 | chr6 | 108444839 | 108479222 | 34384 | |
| NR2E1 | chr6 | 108487261 | 108510013 | 22753 | nuclear receptor subfamily 2, group E, member 1 |
| SNX3 | chr6 | 108532420 | 108582464 | 50045 | sorting nexin 3 |
| LACE1 | chr6 | 108616097 | 108844251 | 228155 | lactation elevated 1 |
| FOXO3 | chr6 | 108881025 | 109005971 | 124947 | forkhead box O3 |
| LINC00222 | chr6 | 109072856 | 109091145 | 18290 | long intergenic non-protein coding RNA 222 |
| ARMC2 | chr6 | 109169618 | 109295675 | 126058 | armadillo repeat containing 2 |
| ARMC2-AS1 | chr6 | 109229342 | 109245306 | 15965 | ARMC2 antisense RNA 1 |
| SEN1 | chr6 | 109307639 | 109415708 | 108070 | sestrin 1 |
| CEP57L1 | chr6 | 109416355 | 109485115 | 68761 | centrosomal protein 57kDa-like 1 |
| LOC100996634 | chr6 | 109557816 | 109591717 | 33902 | transmembrane protein FLJ37396 |
| CCDC162P | chr6 | 109615505 | 109629423 | 13919 | coiled-coil domain containing 162, pseudogene |
| C6orf185 | chr6 | 109659677 | 109676151 | 16475 | coiled-coil domain containing 162, pseudogene |
| CD164 | chr6 | 109687716 | 109703762 | 16047 | CD164 molecule, sialomucin |
| PPIL6 | chr6 | 109711417 | 109762374 | 50958 | peptidylprolyl isomerase (cyclophilin)-like 6 |
| SMPD2 | chr6 | 109761930 | 109765122 | 3193 | sphingomyelin phosphodiesterase 2, neutral membrane (neutral sphingomyelinase) |
| MICAL1 | chr6 | 109765265 | 109787171 | 21907 | microtubule associated monooxygenase, calponin and LIM domain containing 1 |
| ZBTB24 | chr6 | 109783718 | 109804440 | 20723 | zinc finger and BTB domain containing 24 |
| AK9 | chr6 | 109850073 | 109871740 | 21668 | adenylate kinase 9 |
| AK9 | chr6 | 109814058 | 110012415 | 198358 | adenylate kinase 9 |
| FIG4 | chr6 | 110012423 | 110146634 | 134212 | FIG4 phosphoinositide 5-phosphatase |
| GPR6 | chr6 | 110299458 | 110301924 | 2467 | G protein-coupled receptor 6 |
| WASF1 | chr6 | 110421021 | 110501207 | 80187 | WAS protein family, member 1 |
| CDC40 | chr6 | 110501623 | 110553422 | 51800 | cell division cycle 40 |
| METTL24 | chr6 | 110567148 | 110731939 | 164792 | methyltransferase like 24 |
| DDO | chr6 | 110713382 | 110736753 | 23372 | D-aspartate oxidase |
| SLC22A16 | chr6 | 110745891 | 110797844 | 51954 | solute carrier family 22 (organic cation/carnitine transporter), member 16 |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| CDK19 | chr6 | 110931180 | 111137088 | 205909 | cyclin-dependent kinase 19 |
| BC047513 | chr6 | 111133327 | 111136191 | 2865 | |
| AMD1 | chr6 | 111135823 | 111216915 | 81093 | adenosylmethionine decarboxylase 1 |
| GTF3C6 | chr6 | 111279762 | 111289091 | 9330 | general transcription factor IIIC, polypeptide 6, alpha 35kDa |
| RPF2 | chr6 | 111303219 | 111349466 | 46248 | ribosome production factor 2 homolog (S. cerevisiae) |
| GSTM2P1 | chr6 | 111367621 | 111368757 | 1137 | glutathione S-transferase mu 2 (muscle) pseudogene 1 |
| SLC16A10 | chr6 | 111408780 | 111544606 | 135827 | solute carrier family 16 (aromatic amino acid transporter), member 10 |
| KIAA1919 | chr6 | 111580481 | 111590261 | 9781 | KIAA1919 |
| REV3L | chr6 | 111620233 | 111804918 | 184686 | REV3-like, polymerase (DNA directed), zeta, catalytic subunit |
| AF216583 | chr6 | 111816121 | 111816969 | 849 | |
| TRAF3IP2-AS1 | chr6 | 111804674 | 111923497 | 118824 | TRAF3IP2 antisense RNA 1 |
| TRAF3IP2 | chr6 | 111876580 | 111927477 | 50898 | TRAF3 interacting protein 2 |
| FYN | chr6 | 111981534 | 112194655 | 213122 | FYN proto-oncogene, Src family tyrosine kinase |
| WISP3 | chr6 | 112375277 | 112390887 | 15611 | WNT1 inducible signaling pathway protein 3 |
| TUBE1 | chr6 | 112391859 | 112408751 | 16893 | tubulin, epsilon 1 |
| FAM229B | chr6 | 112408673 | 112423993 | 15321 | family with sequence similarity 229, member B |
| LAMA4 | chr6 | 112429133 | 112575917 | 146785 | laminin, alpha 4 |
| LOC10192764C | chr6 | 112557796 | 112627885 | 70090 | uncharacterized LOC101927640 |
| RFPL4B | chr6 | 112668531 | 112672498 | 3968 | ret finger protein-like 4B |
| LOC10192768E | chr6 | 113944736 | 113971277 | 26542 | uncharacterized LOC101927686 |
| MARCKS | chr6 | 114178526 | 114184652 | 6127 | myristoylated alanine-rich protein kinase C substrate |
| LINC01268 | chr6 | 114189178 | 114194512 | 5335 | long intergenic non-protein coding RNA 1268 |
| LOC285758 | chr6 | 114189178 | 114194512 | 5335 | long intergenic non-protein coding RNA 1268 |
| FLJ34503 | chr6 | 114225550 | 114242806 | 17257 | uncharacterized FLJ34503 |
| HDAC2 | chr6 | 114257319 | 114292359 | 35041 | histone deacetylase 2 |
| LOC10192776E | chr6 | 114290864 | 114661893 | 371030 | uncharacterized LOC101927768 |
| BC042098 | chr6 | 114290864 | 114661899 | 371036 | |
| Mir_320 | chr6 | 114499969 | 114500051 | 83 | |
| HS3ST5 | chr6 | 114376749 | 114663540 | 286792 | heparan sulfate (glucosamine) 3-O-sulfotransferase 5 |
| Mir_548 | chr6 | 114598550 | 114598634 | 85 | |
| Mir_584 | chr6 | 114743162 | 114743280 | 119 | |
| FRK | chr6 | 116262692 | 116381921 | 119230 | fyn-related Src family tyrosine kinase |
| TPI1P3 | chr6 | 116359893 | 116361107 | 1215 | triosephosphate isomerase 1 pseudogene 3 |
| COL10A1 | chr6 | 116440084 | 116447296 | 7213 | collagen, type X, alpha 1 |
| NT5DC1 | chr6 | 116421998 | 116566853 | 144856 | 5'-nucleotidase domain containing 1 |
| TSPYL4 | chr6 | 116571130 | 116575261 | 4132 | TSPY-like 4 |
| AK093256 | chr6 | 116575436 | 116577906 | 2471 | |
| TSPYL1 | chr6 | 116596021 | 116601280 | 5260 | TSPY-like 1 |
| DSE | chr6 | 116575335 | 116759442 | 184108 | dermatan sulfate epimerase |
| FAM26F | chr6 | 116782532 | 116784934 | 2403 | family with sequence similarity 26, member F |
| FAM26E | chr6 | 116832807 | 116839709 | 6903 | family with sequence similarity 26, member E |
| TRAPPC3L | chr6 | 116817650 | 116866773 | 49124 | trafficking protein particle complex 3-like |
| FAM26D | chr6 | 116850175 | 116880031 | 29857 | family with sequence similarity 26, member D |
| RWDD1 | chr6 | 116892529 | 116914764 | 22236 | RWD domain containing 1 |
| RSPH4A | chr6 | 116937641 | 116954148 | 16508 | radial spoke head 4 homolog A (Chlamydomonas) |
| ZUFSP | chr6 | 116956780 | 116989973 | 33194 | zinc finger with UFM1-specific peptidase domain |
| AX746765 | chr6 | 116999739 | 117001922 | 2184 | |
| KPNA5 | chr6 | 117002366 | 117063030 | 60665 | karyopherin alpha 5 (importin alpha 6) |
| FAM162B | chr6 | 117073359 | 117086886 | 13528 | family with sequence similarity 162, member B |
| GPRC6A | chr6 | 117113247 | 117150220 | 36974 | G protein-coupled receptor, class C, group 6, member A |
| RFX6 | chr6 | 117198375 | 117253326 | 54952 | regulatory factor X, 6 |
| VGLL2 | chr6 | 117586720 | 117594728 | 8009 | vestigial-like family member 2 |
| ROS1 | chr6 | 117609529 | 117747018 | 137490 | ROS proto-oncogene 1, receptor tyrosine kinase |
| GOPC | chr6 | 117639350 | 117923705 | 284356 | golgi-associated PDZ and coiled-coil motif containing |
| DCBLD1 | chr6 | 117803819 | 117891020 | 87202 | discoidin, CUB and LCCL domain containing 1 |
| AJ420595 | chr6 | 117896482 | 117897548 | 1067 | |
| LOC101927919 | chr6 | 117993975 | 117996447 | 2473 | uncharacterized LOC101927919 |
| NUS1 | chr6 | 117996616 | 118031886 | 35271 | nuclear undecaprenyl pyrophosphate synthase 1 homolog (S. cerevisiae) |
| SLC35F1 | chr6 | 118228688 | 118638839 | 410152 | solute carrier family 35, member F1 |
| BRD7P3 | chr6 | 118822535 | 118824996 | 2462 | bromodomain containing 7 pseudogene 3 |
| PLN | chr6 | 118869441 | 118881587 | 12147 | phospholamban |
| CEP85L | chr6 | 118781934 | 119031238 | 249305 | centrosomal protein 85kDa-like |
| LOC100287632 | chr6 | 119103870 | 119104581 | 712 | selenoprotein K pseudogene |
| MCM9 | chr6 | 119134611 | 119256327 | 121717 | minichromosome maintenance complex component 9 |
| ASF1A | chr6 | 119215240 | 119230335 | 15096 | anti-silencing function 1A histone chaperone |
| FAM184A | chr6 | 119280993 | 119470358 | 189366 | family with sequence similarity 184, member A |
| MIR548B | chr6 | 119390211 | 119390308 | 98 | microRNA 548b |
| MAN1A1 | chr6 | 119498365 | 119670931 | 172567 | mannosidase, alpha, class 1A, member 1 |
| LOC285762 | chr6 | 119773711 | 119812467 | 38757 | uncharacterized LOC285762 |
| C6orf170 | chr6 | 121400626 | 121655644 | 255019 | TBC1 domain family, member 32 |
| TBC1D32 | chr6 | 121400639 | 121655646 | 255008 | TBC1 domain family, member 32 |
| GJA1 | chr6 | 121756722 | 121770890 | 14169 | gap junction protein, alpha 1, 43kDa |
| HSF2 | chr6 | 122720695 | 122754264 | 33570 | heat shock transcription factor 2 |
| BC022047 | chr6 | 122757933 | 122760368 | 2436 | |
| SERINC1 | chr6 | 122764492 | 122792952 | 28461 | serine incorporator 1 |
| PKIB | chr6 | 122793061 | 123047518 | 254458 | protein kinase (cAMP-dependent, catalytic) inhibitor beta |
| FABP7 | chr6 | 123100645 | 123105218 | 4574 | fatty acid binding protein 7, brain |
| SMPDL3A | chr6 | 123109970 | 123130864 | 20895 | sphingomyelin phosphodiesterase, acid-like 3A |
| CLVS2 | chr6 | 123317115 | 123394064 | 76950 | clavesin 2 |
| TRDN | chr6 | 123537483 | 123958238 | 420756 | triadin |

| | | | | | |
|--------------|------|-----------|-----------|---------|--|
| LOC10192799C | chr6 | 123760748 | 123792901 | 32154 | uncharacterized LOC101927990 |
| AL832096 | chr6 | 123760748 | 123792901 | 32154 | |
| NKAIN2 | chr6 | 124124990 | 125146786 | 1021797 | Na+/K+ transporting ATPase interacting 2 |
| STL | chr6 | 125229391 | 125284173 | 54783 | |
| RNF217-AS1 | chr6 | 125229391 | 125284173 | 54783 | RNF217 antisense RNA 1 (head to head) |
| Metazoa_SRP | chr6 | 125286438 | 125286740 | 303 | |
| RNF217 | chr6 | 125283690 | 125407484 | 123795 | ring finger protein 217 |
| TPD52L1 | chr6 | 125474874 | 125584644 | 109771 | tumor protein D52-like 1 |
| HDDC2 | chr6 | 125596495 | 125623282 | 26788 | HD domain containing 2 |
| LOC643623 | chr6 | 125995498 | 126041364 | 45867 | uncharacterized LOC643623 |
| BC036196 | chr6 | 126039386 | 126070336 | 30951 | |
| HEY2 | chr6 | 126068779 | 126082415 | 13637 | hes-related family bHLH transcription factor with YRPW motif 2 |
| TRNA_Glu | chr6 | 126101392 | 126101464 | 73 | |
| NCOA7 | chr6 | 126102306 | 126253176 | 150871 | nuclear receptor coactivator 7 |
| HINT3 | chr6 | 126277860 | 126301389 | 23530 | histidine triad nucleotide binding protein 3 |
| TRMT11 | chr6 | 126307575 | 126360420 | 52846 | tRNA methyltransferase 11 homolog (S. cerevisiae) |
| MIR5695 | chr6 | 126433836 | 126443762 | 9927 | microRNA 5695 |
| CENPW | chr6 | 126660934 | 126804466 | 143533 | centromere protein W |
| Vimentin3 | chr6 | 126923379 | 126923444 | 66 | |
| AK127472 | chr6 | 126698800 | 127440994 | 742195 | |
| RSPO3 | chr6 | 127440047 | 127520626 | 80580 | R-spondin 3 |
| RNF146 | chr6 | 127587826 | 127609705 | 21880 | ring finger protein 146 |
| ECHDC1 | chr6 | 127609856 | 127664754 | 54899 | enoyl CoA hydratase domain containing 1 |
| KIAA0408 | chr6 | 127759550 | 127780535 | 20986 | KIAA0408 |
| SOGA3 | chr6 | 127759550 | 127840500 | 80951 | SOGA family member 3 |
| C6orf58 | chr6 | 12789318 | 127912963 | 14646 | chromosome 6 open reading frame 58 |
| THEMIS | chr6 | 128029338 | 128239776 | 210439 | thymocyte selection associated |
| LOC10192814C | chr6 | 128349009 | 128407435 | 58427 | uncharacterized LOC101928140 |
| PTPRK | chr6 | 128289923 | 128841870 | 551948 | protein tyrosine phosphatase, receptor type, K |
| LAMA2 | chr6 | 129204285 | 129837710 | 633426 | laminin, alpha 2 |
| BC035400 | chr6 | 129800757 | 129873731 | 72975 | |
| ARHGAP18 | chr6 | 129898239 | 130182692 | 284454 | Rho GTPase activating protein 18 |
| TMEM244 | chr6 | 130152388 | 130182416 | 30029 | transmembrane protein 244 |
| L3MBTL3 | chr6 | 130339727 | 130462594 | 122868 | l(3)mbt-like 3 (Drosophila) |
| SAMD3 | chr6 | 130465446 | 130686570 | 221125 | sterile alpha motif domain containing 3 |
| TMEM200A | chr6 | 130687425 | 130764210 | 76786 | transmembrane protein 200A |
| Mir_562 | chr6 | 131092913 | 131093012 | 100 | |
| SMLR1 | chr6 | 131148544 | 131158276 | 9733 | small leucine-rich protein 1 |
| EPB41L2 | chr6 | 131160487 | 131384462 | 223976 | erythrocyte membrane protein band 4.1-like 2 |
| AKAP7 | chr6 | 131456825 | 131604675 | 147851 | A kinase (PRKA) anchor protein 7 |
| ARG1 | chr6 | 131894343 | 131905472 | 11130 | arginase 1 |
| MED23 | chr6 | 131895105 | 131949379 | 54275 | mediator complex subunit 23 |
| ENPP3 | chr6 | 131949581 | 132068550 | 118970 | ectonucleotide pyrophosphatase/phosphodiesterase 3 |
| OR2A4 | chr6 | 132020783 | 132022541 | 1759 | olfactory receptor, family 2, subfamily A, member 4 |
| CTAGE9 | chr6 | 132029580 | 132032157 | 2578 | CTAGE family, member 9 |
| ENPP1 | chr6 | 132129155 | 132216295 | 87141 | ectonucleotide pyrophosphatase/phosphodiesterase 1 |
| DD182001 | chr6 | 132270468 | 132270491 | 24 | |
| CTGF | chr6 | 132269316 | 132272518 | 3203 | connective tissue growth factor |
| LINC01013 | chr6 | 132455117 | 132490514 | 35398 | long intergenic non-protein coding RNA 1013 |
| LOC100507254 | chr6 | 132455117 | 132490514 | 35398 | long intergenic non-protein coding RNA 1013 |
| MOXD1 | chr6 | 132617193 | 132722673 | 105481 | monooxygenase, DBH-like 1 |
| STX7 | chr6 | 132778662 | 132834337 | 55676 | syntaxin 7 |
| TAAR9 | chr6 | 132859426 | 132860475 | 1050 | trace amine associated receptor 9 (gene/pseudogene) |
| TAAR8 | chr6 | 132873831 | 132874860 | 1030 | trace amine associated receptor 8 |
| TAAR6 | chr6 | 132891460 | 132892498 | 1039 | trace amine associated receptor 6 |
| TAAR5 | chr6 | 132909730 | 132910877 | 1148 | trace amine associated receptor 5 |
| TAAR3 | chr6 | 132929363 | 132930441 | 1079 | trace amine associated receptor 3 (gene/pseudogene) |
| TAAR2 | chr6 | 132938288 | 132945414 | 7127 | trace amine associated receptor 2 |
| TAAR1 | chr6 | 132966122 | 132967142 | 1021 | trace amine associated receptor 1 |
| VNN1 | chr6 | 133001996 | 133035194 | 33199 | vanin 1 |
| VNN3 | chr6 | 133043925 | 133055904 | 11980 | vanin 3 |
| VNN2 | chr6 | 133065008 | 133084598 | 19591 | vanin 2 |
| SLC18B1 | chr6 | 133090506 | 133119747 | 29242 | solute carrier family 18, subfamily B, member 1 |
| SNORD101 | chr6 | 133136445 | 133136518 | 74 | small nucleolar RNA, C/D box 101 |
| RPS12 | chr6 | 133135707 | 133138703 | 2997 | ribosomal protein S12 |
| SNORD100 | chr6 | 133137940 | 133138016 | 77 | small nucleolar RNA, C/D box 100 |
| SNORA33 | chr6 | 133138357 | 133138490 | 134 | small nucleolar RNA, H/ACA box 33 |
| LINC00326 | chr6 | 133409218 | 133427717 | 18500 | long intergenic non-protein coding RNA 326 |
| EYA4 | chr6 | 133561735 | 133853258 | 291524 | EYA transcriptional coactivator and phosphatase 4 |
| AK093513 | chr6 | 133756215 | 133828795 | 72581 | |
| BC041459 | chr6 | 133823389 | 134210120 | 386732 | |
| TARID | chr6 | 133823389 | 134210144 | 386756 | TCF21 antisense RNA inducing promoter demethylation |
| LINC01312 | chr6 | 134142284 | 134175130 | 32847 | long intergenic non-protein coding RNA 1312 |
| MGC34034 | chr6 | 134142284 | 134175130 | 32847 | |
| TCF21 | chr6 | 134210258 | 134216675 | 6418 | transcription factor 21 |
| AX747860 | chr6 | 134216640 | 134219157 | 2518 | |
| TBPL1 | chr6 | 134273307 | 134308638 | 35332 | TBP-like 1 |
| SLC2A12 | chr6 | 134308718 | 134373789 | 65072 | solute carrier family 2 (facilitated glucose transporter), member 12 |
| HMGAI1P7 | chr6 | 134435110 | 134438818 | 3709 | high mobility group AT-hook 1 pseudogene 7 |
| SGK1 | chr6 | 134490383 | 134639196 | 148814 | serum/glucocorticoid regulated kinase 1 |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| AJ606330 | chr6 | 134749385 | 134797680 | 48296 | |
| BC040308 | chr6 | 134749385 | 134800051 | 50667 | |
| AJ606328 | chr6 | 134749385 | 134800051 | 50667 | |
| LOC101928231 | chr6 | 134750167 | 134800035 | 49869 | uncharacterized LOC101928231 |
| LINC01010 | chr6 | 134758853 | 134825158 | 66306 | long intergenic non-protein coding RNA 1010 |
| LOC154092 | chr6 | 134758853 | 134825158 | 66306 | long intergenic non-protein coding RNA 1010 |
| LOC101928304 | chr6 | 134846455 | 134861143 | 14689 | uncharacterized LOC101928304 |
| AJ606331 | chr6 | 134846455 | 134930796 | 84342 | |
| DQ591448 | chr6 | 134943815 | 134943843 | 29 | |
| ALDH8A1 | chr6 | 135238527 | 135271260 | 32734 | aldehyde dehydrogenase 8 family, member A1 |
| MIR3662 | chr6 | 135300475 | 135300570 | 96 | microRNA 3662 |
| HBS1L | chr6 | 135281516 | 135376036 | 94521 | HBS1-like translational GTPase |
| MYB | chr6 | 135502452 | 135540311 | 37860 | v-myb avian myeloblastosis viral oncogene homolog |
| AHI1 | chr6 | 135605109 | 135818903 | 213795 | Abelson helper integration site 1 |
| LINC00271 | chr6 | 135818938 | 136037193 | 218256 | long intergenic non-protein coding RNA 271 |
| PDE7B | chr6 | 136172833 | 136516709 | 343877 | phosphodiesterase 7B |
| AJ606316 | chr6 | 136175173 | 136546762 | 371590 | |
| BC038719 | chr6 | 136364989 | 136393965 | 28977 | |
| MTFR2 | chr6 | 136552167 | 136571449 | 19283 | mitochondrial fission regulator 2 |
| BCLAF1 | chr6 | 136578000 | 136610989 | 32990 | BCL2-associated transcription factor 1 |
| AB073649 | chr6 | 136692055 | 136694961 | 2907 | |
| MAP7 | chr6 | 136663418 | 136871957 | 208540 | microtubule-associated protein 7 |
| LOC101928461 | chr6 | 136950251 | 136969336 | 19086 | uncharacterized LOC101928461 |
| CRISPR_DR35 | chr6 | 136972992 | 136973028 | 37 | |
| MAP3K5 | chr6 | 136878186 | 137113656 | 235471 | mitogen-activated protein kinase kinase kinase 5 |
| PEX7 | chr6 | 137143701 | 137235072 | 91372 | peroxisomal biogenesis factor 7 |
| SLC35D3 | chr6 | 137243401 | 137246776 | 3376 | solute carrier family 35, member D3 |
| NHEG1 | chr6 | 137303295 | 137314368 | 11074 | neuroblastoma highly expressed 1 |
| IL20RA | chr6 | 137321107 | 137366317 | 45211 | interleukin 20 receptor, alpha |
| IL22RA2 | chr6 | 137464956 | 137494785 | 29830 | interleukin 22 receptor, alpha 2 |
| IFNGR1 | chr6 | 137518620 | 137540567 | 21948 | interferon gamma receptor 1 |
| OLIG3 | chr6 | 137813335 | 137815531 | 2197 | oligodendrocyte transcription factor 3 |
| LOC102723649 | chr6 | 137986782 | 137995691 | 8910 | uncharacterized LOC102723649 |
| LOC100507406 | chr6 | 138051306 | 138060174 | 8869 | uncharacterized LOC100507406 |
| LOC100130476 | chr6 | 138144806 | 138189370 | 44565 | uncharacterized LOC100130476 |
| TNFAIP3 | chr6 | 138188324 | 138204451 | 16128 | tumor necrosis factor, alpha-induced protein 3 |
| PERP | chr6 | 138409641 | 138428660 | 19020 | PERP, TP53 apoptosis effector |
| PBOV1 | chr6 | 138537126 | 138539627 | 2502 | prostate and breast cancer overexpressed 1 |
| KIAA1244 | chr6 | 138483052 | 138665800 | 182749 | KIAA1244 |
| HEBP2 | chr6 | 138725335 | 138734582 | 9248 | heme binding protein 2 |
| MIR3145 | chr6 | 138756349 | 138756431 | 83 | microRNA 3145 |
| NHSL1 | chr6 | 138743180 | 138893668 | 150489 | NHS-like 1 |
| FLJ46906 | chr6 | 139012804 | 139018425 | 5622 | uncharacterized LOC441172 |
| LOC100507462 | chr6 | 139046347 | 139094816 | 48470 | uncharacterized LOC100507462 |
| CCDC28A | chr6 | 139094656 | 139114456 | 19801 | coiled-coil domain containing 28A |
| ECT2L | chr6 | 139117247 | 139225207 | 107961 | epithelial cell transforming sequence 2 oncogene-like |
| REPS1 | chr6 | 139225151 | 139309398 | 84248 | RALBP1 associated Eps domain containing 1 |
| ABRACL | chr6 | 139349818 | 139364439 | 14622 | ABRA C-terminal like |
| HECA | chr6 | 139456248 | 139501946 | 45699 | headcase homolog (Drosophila) |
| TXLNB | chr6 | 139561198 | 139613208 | 52011 | taxilin beta |
| CITED2 | chr6 | 139693391 | 139695787 | 2397 | Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2 |
| LOC645434 | chr6 | 139790131 | 139795733 | 5603 | uncharacterized LOC645434 |
| LOC100132735 | chr6 | 140092209 | 140181608 | 89400 | uncharacterized LOC100132735 |
| LOC103352541 | chr6 | 140299486 | 140312398 | 12913 | uncharacterized LOC103352541 |
| LOC100507477 | chr6 | 140297455 | 140414858 | 117404 | uncharacterized LOC100507477 |
| BC038188 | chr6 | 140297466 | 140414858 | 117393 | |
| MIR3668 | chr6 | 140526388 | 140526463 | 76 | microRNA 3668 |
| MIR4465 | chr6 | 141004950 | 141005020 | 71 | microRNA 4465 |
| AK097143 | chr6 | 141902805 | 142351554 | 448750 | |
| JA611295 | chr6 | 142334791 | 142334865 | 75 | |
| JA611294 | chr6 | 142334796 | 142334860 | 65 | |
| NMBR | chr6 | 142396744 | 142409936 | 13193 | neuromedin B receptor |
| VTA1 | chr6 | 142468298 | 142542085 | 73788 | vesicle (multivesicular body) trafficking 1 |
| TRNA_Gly | chr6 | 142578775 | 142578846 | 72 | |
| GPR126 | chr6 | 142623055 | 142767403 | 144349 | G protein-coupled receptor 126 |
| LOC153910 | chr6 | 142847591 | 142959026 | 111436 | uncharacterized LOC153910 |
| HIVEP2 | chr6 | 143072603 | 143266338 | 193736 | human immunodeficiency virus type I enhancer binding protein 2 |
| LINC01277 | chr6 | 143287558 | 143358719 | 71162 | long intergenic non-protein coding RNA 1277 |
| LOC100507489 | chr6 | 143287558 | 143358719 | 71162 | long intergenic non-protein coding RNA 1277 |
| AIG1 | chr6 | 143380499 | 143661480 | 280982 | androgen-induced 1 |
| ADAT2 | chr6 | 143743968 | 143771841 | 27874 | adenosine deaminase, tRNA-specific 2 |
| PEX3 | chr6 | 143771917 | 143811751 | 39835 | peroxisomal biogenesis factor 3 |
| FUCA2 | chr6 | 143815948 | 143833020 | 17073 | fucosidase, alpha-L- 2, plasma |
| LOC285740 | chr6 | 143875251 | 143890476 | 15226 | uncharacterized LOC285740 |
| PHACTR2 | chr6 | 143929316 | 144152322 | 223007 | phosphatase and actin regulator 2 |
| LTV1 | chr6 | 144164507 | 144184943 | 20437 | LTV1 ribosome biogenesis factor |
| AX746989 | chr6 | 144175205 | 144177090 | 1886 | |
| ZC2HC1B | chr6 | 144178439 | 144259483 | 81045 | zinc finger, C2HC-type containing 1B |
| PLAGL1 | chr6 | 144261436 | 144385736 | 124301 | pleiomorphic adenoma gene-like 1 |
| HYMAI | chr6 | 144324033 | 144329867 | 5835 | hydantidiform mole associated and imprinted (non-protein coding) |

| | | | | | |
|--------------|------|-----------|-----------|--------|---|
| SF3B5 | chr6 | 144416017 | 144416754 | 738 | splicing factor 3b, subunit 5, 10kDa |
| STX11 | chr6 | 144471653 | 144513076 | 41424 | syntaxin 11 |
| UTRN | chr6 | 144607489 | 145174170 | 566682 | utrophin |
| EPM2A | chr6 | 145946439 | 146057122 | 110684 | epilepsy, progressive myoclonus type 2A, Lafora disease (laforin) |
| FLJ44955 | chr6 | 146110405 | 146113109 | 2705 | |
| FBXO30 | chr6 | 146119271 | 146135921 | 16651 | F-box protein 30 |
| LOC100507557 | chr6 | 146056004 | 146207721 | 151718 | uncharacterized LOC100507557 |
| SHPRH | chr6 | 146205944 | 146285233 | 79290 | SNF2 histone linker PHD RING helicase |
| GRM1 | chr6 | 146348781 | 146758734 | 409954 | glutamate receptor, metabotropic 1 |
| RAB32 | chr6 | 146864827 | 146876086 | 11260 | RAB32, member RAS oncogene family |
| FW339973 | chr6 | 146870894 | 146873504 | 2611 | |
| LOC101928661 | chr6 | 146915651 | 146920067 | 4417 | uncharacterized LOC101928661 |
| ADGB | chr6 | 146920135 | 147136597 | 216463 | androglobin |
| KATNBL1P6 | chr6 | 147122804 | 147124960 | 2157 | katanin p80 subunit B-like 1 pseudogene 6 |
| LOC729176 | chr6 | 147122804 | 147124960 | 2157 | katanin p80 subunit B-like 1 pseudogene 6 |
| STXBP5-AS1 | chr6 | 147162524 | 147525750 | 363227 | STXBP5 antisense RNA 1 |
| STXBP5 | chr6 | 147525493 | 147711612 | 186120 | syntaxin binding protein 5 (tomosyn) |
| BC043173 | chr6 | 147708803 | 147711603 | 2801 | |
| SAMD5 | chr6 | 147829827 | 147891157 | 61331 | sterile alpha motif domain containing 5 |
| BC047626 | chr6 | 148048811 | 148051503 | 2693 | |
| SASH1 | chr6 | 148663728 | 148873184 | 209457 | SAM and SH3 domain containing 1 |
| UST | chr6 | 149068270 | 149398126 | 329857 | uronyl-2-sulfotransferase |
| LOC100128176 | chr6 | 149275396 | 149285820 | 10425 | uncharacterized LOC100128176 |
| BC041998 | chr6 | 149539061 | 149544218 | 5158 | |
| TAB2 | chr6 | 149539059 | 149732749 | 193691 | TGF-beta activated kinase 1/MAP3K7 binding protein 2 |
| SUMO4 | chr6 | 149721494 | 149722182 | 689 | small ubiquitin-like modifier 4 |
| ZC3H12D | chr6 | 149768765 | 149806148 | 37384 | zinc finger CCH-type containing 12D |
| PPIL4 | chr6 | 149825630 | 149867238 | 41609 | peptidylprolyl isomerase (cyclophilin)-like 4 |
| GINM1 | chr6 | 149887527 | 149912067 | 24541 | glycoprotein integral membrane 1 |
| RPS18P9 | chr6 | 149914751 | 149915720 | 970 | ribosomal protein S18 pseudogene 9 |
| KATNA1 | chr6 | 149916010 | 149969940 | 53931 | katanin p60 (ATPase containing) subunit A 1 |
| LATS1 | chr6 | 149979288 | 150039392 | 60105 | large tumor suppressor kinase 1 |
| NUP43 | chr6 | 150045451 | 150067708 | 22258 | nucleoporin 43kDa |
| PCMT1 | chr6 | 150070830 | 150132557 | 61728 | protein-L-isoaspartate (D-aspartate) O-methyltransferase |
| LRP11 | chr6 | 150139893 | 150185480 | 45588 | low density lipoprotein receptor-related protein 11 |
| RAET1E | chr6 | 150204510 | 150217195 | 12686 | retinoic acid early transcript 1E |
| RAET1E-AS1 | chr6 | 150184633 | 150240644 | 56012 | RAET1E antisense RNA 1 |
| LOC100652739 | chr6 | 150184633 | 150240644 | 56012 | RAET1E antisense RNA 1 |
| RAET1G | chr6 | 150238013 | 150244214 | 6202 | retinoic acid early transcript 1G |
| BC040898 | chr6 | 150255662 | 150257455 | 1794 | |
| ULBP2 | chr6 | 150263135 | 150270368 | 7234 | UL16 binding protein 2 |
| ULBP1 | chr6 | 150285142 | 150294846 | 9705 | UL16 binding protein 1 |
| RAET1K | chr6 | 150319154 | 150326280 | 7127 | retinoic acid early transcript 1K pseudogene |
| RAET1L | chr6 | 150341265 | 150346668 | 5404 | retinoic acid early transcript 1L |
| ULBP3 | chr6 | 150383340 | 150390283 | 6944 | UL16 binding protein 3 |
| PPP1R14C | chr6 | 150464187 | 150571528 | 107342 | protein phosphatase 1, regulatory (inhibitor) subunit 14C |
| IYD | chr6 | 150690027 | 150725765 | 35739 | iodotyrosine deiodinase |
| PLEKHG1 | chr6 | 150920998 | 151164799 | 243802 | pleckstrin homology domain containing, family G (with RhoGef domain) member 1 |
| MTHFD1L | chr6 | 151186814 | 151423023 | 236210 | methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1-like |
| LOC102723831 | chr6 | 151517807 | 151549592 | 31786 | uncharacterized LOC102723831 |
| BC031960 | chr6 | 151517807 | 151549592 | 31786 | |
| AKAP12 | chr6 | 151561133 | 151679694 | 118562 | A kinase (PKA) anchor protein 12 |
| C6orf211 | chr6 | 151773392 | 151791234 | 17843 | chromosome 6 open reading frame 211 |
| CCDC170 | chr6 | 151815174 | 151942328 | 127155 | coiled-coil domain containing 170 |
| ESR1 | chr6 | 151977829 | 152424408 | 446580 | estrogen receptor 1 |
| SYNE1 | chr6 | 152656412 | 152702497 | 46086 | spectrin repeat containing, nuclear envelope 1 |
| SYNE1 | chr6 | 152442818 | 152958534 | 515717 | spectrin repeat containing, nuclear envelope 1 |
| SYNE1-AS1 | chr6 | 152701664 | 152702847 | 1184 | SYNE1 antisense RNA 1 |
| MYCT1 | chr6 | 153019029 | 153045715 | 26687 | myc target 1 |
| VIP | chr6 | 153071931 | 153080902 | 8972 | vasoactive intestinal peptide |
| FBXO5 | chr6 | 153291657 | 153304740 | 13084 | F-box protein 5 |
| MTRF1L | chr6 | 153308399 | 153323925 | 15527 | mitochondrial translational release factor 1-like |
| RGS17 | chr6 | 153332031 | 153452389 | 120359 | regulator of G-protein signaling 17 |
| OPRM1 | chr6 | 154331630 | 154568001 | 236372 | opioid receptor, mu 1 |
| IPCEF1 | chr6 | 154475617 | 154831753 | 356137 | interaction protein for cytohesin exchange factors 1 |
| CNKSR3 | chr6 | 154726432 | 154831753 | 105322 | CNKSR family member 3 |
| SCAF8 | chr6 | 155054511 | 155155378 | 100868 | SR-related CTD-associated factor 8 |
| AK124484 | chr6 | 155184661 | 155230000 | 45340 | |
| U8 | chr6 | 155226209 | 155226340 | 132 | small nucleolar RNA, C/D box 118 |
| TIAM2 | chr6 | 155153830 | 155578857 | 425028 | T-cell lymphoma invasion and metastasis 2 |
| AB075492 | chr6 | 155572433 | 155575064 | 2632 | |
| AK022993 | chr6 | 155574273 | 155577858 | 3586 | |
| CLDN20 | chr6 | 155585146 | 155597682 | 12537 | claudin 20 |
| TFB1M | chr6 | 155577263 | 155635617 | 58355 | transcription factor B1, mitochondrial |
| NOX3 | chr6 | 155716501 | 155777037 | 60537 | NADPH oxidase 3 |
| MIR4466 | chr6 | 157100811 | 157100865 | 55 | microRNA 4466 |
| ARID1B | chr6 | 157099063 | 157531913 | 432851 | AT rich interactive domain 1B (SWI1-like) |
| TMEM242 | chr6 | 157710053 | 157745291 | 35239 | transmembrane protein 242 |
| ZDHHC14 | chr6 | 157802556 | 158094977 | 292422 | zinc finger, DHHC-type containing 14 |
| SNX9 | chr6 | 158244202 | 158366109 | 121908 | sorting nexin 9 |

| | | | | | |
|--------------|------|-----------|-----------|---------|---|
| SYNJ2-IT1 | chr6 | 158422138 | 158423415 | 1278 | SYNJ2 intronic transcript 1 (non-protein coding) |
| AK026758 | chr6 | 158448398 | 158450058 | 1661 | |
| SYNJ2 | chr6 | 158402887 | 158520207 | 117321 | synaptojanin 2 |
| SERAC1 | chr6 | 158530535 | 158589312 | 58778 | serine active site containing 1 |
| GTF2H5 | chr6 | 158589378 | 158620376 | 30999 | general transcription factor IIH, polypeptide 5 |
| TULP4 | chr6 | 158733691 | 158932856 | 199166 | tubby like protein 4 |
| DQ581726 | chr6 | 158981118 | 158981146 | 29 | |
| TMEM181 | chr6 | 158957467 | 159056467 | 99001 | transmembrane protein 181 |
| MIR7161 | chr6 | 159030738 | 159030822 | 85 | microRNA 7161 |
| DQ586009 | chr6 | 159031785 | 159031813 | 29 | |
| DYNLT1 | chr6 | 159057506 | 159065818 | 8313 | dynein, light chain, Tctex-type 1 |
| SYTL3 | chr6 | 159071045 | 159185908 | 114864 | synaptotagmin-like 3 |
| EZR | chr6 | 159186772 | 159240456 | 53685 | ezrin |
| AX747826 | chr6 | 159219681 | 159221893 | 2213 | |
| EZR-AS1 | chr6 | 159239010 | 159243272 | 4263 | EZR antisense RNA 1 |
| OSTCP1 | chr6 | 159262157 | 159278664 | 16508 | oligosaccharyltransferase complex subunit pseudogene 1 |
| C6orf99 | chr6 | 159309618 | 159331385 | 21768 | chromosome 6 open reading frame 99 |
| RSPH3 | chr6 | 159398265 | 159421198 | 22934 | radial spoke 3 homolog (Chlamydomonas) |
| TAGAP | chr6 | 159455500 | 159466184 | 10685 | T-cell activation RhoGTPase activating protein |
| LOC101929122 | chr6 | 159586930 | 159591039 | 4110 | uncharacterized LOC101929122 |
| FNDC1 | chr6 | 159590428 | 159693140 | 102713 | fibronectin type III domain containing 1 |
| LOC102724053 | chr6 | 159804562 | 159817473 | 12912 | uncharacterized LOC102724053 |
| AK130765 | chr6 | 160007986 | 160010201 | 2216 | |
| BC016015 | chr6 | 160100148 | 160101403 | 1256 | |
| SOD2 | chr6 | 160100148 | 160114353 | 14206 | superoxide dismutase 2, mitochondrial |
| WTAP | chr6 | 160148029 | 160177352 | 29324 | Wilms tumor 1 associated protein |
| LOC100129518 | chr6 | 160181290 | 160183364 | 2075 | uncharacterized LOC100129518 |
| ACAT2 | chr6 | 160182988 | 160200087 | 17100 | acetyl-CoA acetyltransferase 2 |
| SNORA20 | chr6 | 160201281 | 160201413 | 133 | small nucleolar RNA, H/ACA box 20 |
| TCP1 | chr6 | 160199529 | 160210735 | 11207 | t-complex 1 |
| SNORA29 | chr6 | 160206625 | 160206765 | 141 | small nucleolar RNA, H/ACA box 29 |
| MRPL18 | chr6 | 160211021 | 160219461 | 8441 | mitochondrial ribosomal protein L18 |
| PNLDC1 | chr6 | 160221280 | 160241736 | 20457 | poly(A)-specific ribonuclease (PARN)-like domain containing 1 |
| MAS1 | chr6 | 160327973 | 160329107 | 1135 | MAS1 proto-oncogene, G protein-coupled receptor |
| AIRN | chr6 | 160424322 | 160428696 | 4375 | antisense of IGF2R non-protein coding RNA |
| IGF2R | chr6 | 160390130 | 160527583 | 137454 | insulin-like growth factor 2 receptor |
| SLC22A1 | chr6 | 160542862 | 160579750 | 36889 | solute carrier family 22 (organic cation transporter), member 1 |
| SLC22A2 | chr6 | 160637793 | 160679963 | 42171 | solute carrier family 22 (organic cation transporter), member 2 |
| SLC22A3 | chr6 | 160769404 | 160873611 | 104208 | solute carrier family 22 (organic cation transporter), member 3 |
| LPAL2 | chr6 | 160887586 | 160932156 | 44571 | lipoprotein, Lp(a)-like 2, pseudogene |
| LPA | chr6 | 160952514 | 161087407 | 134894 | lipoprotein, Lp(a) |
| PLG | chr6 | 161123224 | 161175085 | 51862 | plasminogen |
| MAP3K4 | chr6 | 161412758 | 161538417 | 125660 | mitogen-activated protein kinase kinase kinase 4 |
| AGPAT4-IT1 | chr6 | 161581163 | 161583014 | 1852 | AGPAT4 intronic transcript 1 (non-protein coding) |
| AGPAT4 | chr6 | 161551056 | 161695107 | 144052 | 1-acylglycerol-3-phosphate O-acyltransferase 4 |
| PARK2 | chr6 | 161768589 | 163148834 | 1380246 | parkin RBR E3 ubiquitin protein ligase |
| PACRG | chr6 | 163148163 | 163736524 | 588362 | PARK2 co-regulated |
| LOC101929235 | chr6 | 163464011 | 163475193 | 11183 | uncharacterized LOC101929235 |
| AK058177 | chr6 | 163464011 | 163475193 | 11183 | |
| AK296276 | chr6 | 163586445 | 163612840 | 26396 | |
| LOC729658 | chr6 | 163602676 | 163613034 | 10359 | uncharacterized LOC729658 |
| AK311212 | chr6 | 163603634 | 163613034 | 9401 | |
| DKFZp451B08c | chr6 | 163759373 | 163768065 | 8693 | uncharacterized LOC401282 |
| CAHM | chr6 | 163834096 | 163834982 | 887 | colon adenocarcinoma hypermethylated (non-protein coding) |
| QKI | chr6 | 163835674 | 163999628 | 163955 | QKI, KH domain containing, RNA binding |
| AK093114 | chr6 | 164092635 | 164195657 | 103023 | |
| AK090788 | chr6 | 165206863 | 165235542 | 28680 | |
| C6orf118 | chr6 | 165693152 | 165723111 | 29960 | chromosome 6 open reading frame 118 |
| PDE10A | chr6 | 165740775 | 166075588 | 334814 | phosphodiesterase 10A |
| AK090688 | chr6 | 166193756 | 166399984 | 206229 | |
| LINC00473 | chr6 | 166337535 | 166401527 | 63993 | long intergenic non-protein coding RNA 473 |
| LINC00602 | chr6 | 166401038 | 166403103 | 2066 | long intergenic non-protein coding RNA 602 |
| T | chr6 | 166571145 | 166582157 | 11013 | T, brachyury homolog (mouse) |
| LOC101929297 | chr6 | 166650456 | 166670432 | 19977 | uncharacterized LOC101929297 |
| PRR18 | chr6 | 166719167 | 166721871 | 2705 | proline rich 18 |
| SFT2D1 | chr6 | 166733516 | 166755991 | 22476 | SFT2 domain containing 1 |
| LOC100289495 | chr6 | 166756118 | 166764957 | 8840 | uncharacterized LOC100289495 |
| MPC1 | chr6 | 166778407 | 166796501 | 18095 | mitochondrial pyruvate carrier 1 |
| RPS6KA2-IT1 | chr6 | 166874150 | 166878871 | 4722 | RPS6KA2 intronic transcript 1 (non-protein coding) |
| MIR1913 | chr6 | 166922841 | 166922921 | 81 | microRNA 1913 |
| RPS6KA2 | chr6 | 166822853 | 167275771 | 452919 | ribosomal protein S6 kinase, 90kDa, polypeptide 2 |
| RPS6KA2-AS1 | chr6 | 167317185 | 167318557 | 1373 | RPS6KA2 antisense RNA 1 |
| MIR3939 | chr6 | 167411294 | 167411400 | 107 | microRNA 3939 |
| FGFR1OP | chr6 | 167412804 | 167455906 | 43103 | FGFR1 oncogene partner |
| CCR6 | chr6 | 167412815 | 167552629 | 139815 | chemokine (C-C motif) receptor 6 |
| GPR31 | chr6 | 167570359 | 167571319 | 961 | G protein-coupled receptor 31 |
| TCP10L2 | chr6 | 167584080 | 167596396 | 12317 | t-complex 10-like 2 |
| UNC93A | chr6 | 167704802 | 167729502 | 24701 | unc-93 homolog A (C. elegans) |
| TLL2 | chr6 | 167738573 | 167756177 | 17605 | tubulin tyrosine ligase-like family, member 2 |
| TCP10 | chr6 | 167770520 | 167797998 | 27479 | t-complex 10 |

| | | | | | |
|-----------------------|-------|-----------|-----------|--------|--|
| LOC401286 | chr6 | 168067521 | 168079903 | 12383 | uncharacterized LOC401286 |
| AK127120 | chr6 | 168067523 | 168079903 | 12381 | |
| LOC441178 | chr6 | 168080305 | 168084736 | 4432 | uncharacterized LOC441178 |
| AL832737 | chr6 | 168080305 | 168096970 | 16666 | |
| C6orf123 | chr6 | 168185218 | 168197539 | 12322 | chromosome 6 open reading frame 123 |
| MLLT4-AS1 | chr6 | 168224569 | 168227476 | 2908 | MLLT4 antisense RNA 1 (head to head) |
| MLL/AF6 fusion | chr6 | 168265223 | 168265426 | 204 | |
| MLLT4 | chr6 | 168227670 | 168372700 | 145031 | myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 4 |
| BX649158 | chr6 | 168362689 | 168365707 | 3019 | |
| HGC6.3 | chr6 | 168376603 | 168377619 | 1017 | uncharacterized LOC100128124 |
| HGC6.1.1 | chr6 | 168393501 | 168397757 | 4257 | non-protein coding RNA 300 |
| KIF25-AS1 | chr6 | 168394866 | 168397757 | 2892 | KIF25 antisense RNA 1 |
| KIF25 | chr6 | 168399771 | 168445769 | 45999 | kinesin family member 25 |
| FRMD1 | chr6 | 168456463 | 168482237 | 25775 | FERM domain containing 1 |
| LOC101929420 | chr6 | 168643617 | 168663258 | 19642 | uncharacterized LOC101929420 |
| DACT2 | chr6 | 168693509 | 168720434 | 26926 | dishevelled-binding antagonist of beta-catenin 2 |
| SMOC2 | chr6 | 168841830 | 169068674 | 226845 | SPARC related modular calcium binding 2 |
| LOC101929504 | chr6 | 169575398 | 169582835 | 7438 | uncharacterized LOC101929504 |
| AF086258 | chr6 | 169575398 | 169582835 | 7438 | |
| THBS2 | chr6 | 169615874 | 169654209 | 38336 | thrombospondin 2 |
| AK055570 | chr6 | 169773775 | 169788480 | 14706 | |
| WDR27 | chr6 | 169857302 | 170102159 | 244858 | WD repeat domain 27 |
| AK128656 | chr6 | 170060912 | 170063234 | 2323 | |
| C6orf120 | chr6 | 170102232 | 170106402 | 4171 | chromosome 6 open reading frame 120 |
| PHF10 | chr6 | 170104001 | 170124106 | 20106 | PHD finger protein 10 |
| TCTE3 | chr6 | 170140214 | 170151638 | 11425 | t-complex-associated-testis-expressed 3 |
| AK023627 | chr6 | 170149607 | 170151679 | 2073 | |
| C6orf70 | chr6 | 170151720 | 170181617 | 29898 | ER membrane-associated RNA degradation |
| ERMARD | chr6 | 170151717 | 170181680 | 29964 | ER membrane-associated RNA degradation |
| LINC00242 | chr6 | 170188885 | 170198921 | 10037 | long intergenic non-protein coding RNA 242 |
| LINC00574 | chr6 | 170190168 | 170202969 | 12802 | long intergenic non-protein coding RNA 574 |
| LOC154449 | chr6 | 170563421 | 170571657 | 8237 | uncharacterized LOC154449 |
| LOC285804 | chr6 | 170575756 | 170585850 | 10095 | uncharacterized LOC285804 |
| FLJ38122 | chr6 | 170581561 | 170588554 | 6994 | uncharacterized LOC401289 |
| DLL1 | chr6 | 170591293 | 170599697 | 8405 | delta-like 1 (Drosophila) |
| MIR4644 | chr6 | 170639848 | 170639932 | 85 | microRNA 4644 |
| FAM120B | chr6 | 170599790 | 170716159 | 116370 | family with sequence similarity 120B |
| PSMB1 | chr6 | 170780106 | 170862417 | 82312 | proteasome (prosome, macropain) subunit, beta type, 1 |
| TBP | chr6 | 170863420 | 170881958 | 18539 | TATA box binding protein |
| PDCD2 | chr6 | 170884659 | 170893780 | 9122 | programmed cell death 2 |
| BC036251 | chr6 | 171004401 | 171006035 | 1635 | |
| TCR V3-JP2-C γ | chr7 | 38288826 | 38295990 | 7165 | |
| TRGC2 | chr7 | 38279180 | 38356821 | 77642 | T cell receptor gamma constant 2 |
| TARP | chr7 | 38279180 | 38357589 | 78410 | TCR gamma alternate reading frame protein |
| TCRGC2 | chr7 | 38288843 | 38356709 | 67867 | T cell receptor gamma constant 2 (2x) |
| TCRGV | chr7 | 38339411 | 38339881 | 471 | |
| AK096766 | chr7 | 38342348 | 38344378 | 2031 | |
| B4GALNT4 | chr11 | 369794 | 382117 | 12324 | beta-1,4-N-acetyl-galactosaminyl transferase 4 |
| PKP3 | chr11 | 392598 | 404908 | 12311 | plakophilin 3 |
| SIGIRR | chr11 | 405715 | 417397 | 11683 | single immunoglobulin and toll-interleukin 1 receptor (TIR) domain |
| ANO9 | chr11 | 417929 | 442011 | 24083 | anoctamin 9 |
| Metazoa_SRP | chr11 | 440404 | 440693 | 290 | |
| PTDSS2 | chr11 | 450279 | 491387 | 41109 | phosphatidylserine synthase 2 |
| RNH1 | chr11 | 494511 | 507283 | 12773 | ribonuclease/angiogenesis inhibitor 1 |
| HRAS | chr11 | 532241 | 535550 | 3310 | Harvey rat sarcoma viral oncogene homolog |
| LRRC56 | chr11 | 537521 | 554916 | 17396 | leucine rich repeat containing 56 |
| LMNTD2 | chr11 | 554849 | 560779 | 5931 | lamin tail domain containing 2 |
| C11orf35 | chr11 | 554849 | 560779 | 5931 | lamin tail domain containing 2 |
| AX748330 | chr11 | 557594 | 560107 | 2514 | |
| BC031953 | chr11 | 559476 | 560107 | 632 | |
| RASSF7 | chr11 | 560970 | 564025 | 3056 | Ras association (RalGDS/AF-6) domain family (N-terminal) member 7 |
| MIR210HG | chr11 | 565656 | 568457 | 2802 | MIR210 host gene (non-protein coding) |
| MIR210 | chr11 | 568088 | 568198 | 111 | microRNA 210 |
| CD151 | chr11 | 832951 | 838835 | 5885 | CD151 molecule (Raph blood group) |
| POLR2L | chr11 | 839720 | 842529 | 2810 | polymerase (RNA) II (DNA directed) polypeptide L, 7.6kDa |
| TSPAN4 | chr11 | 842823 | 867116 | 24294 | tetraspanin 4 |
| AK126635 | chr11 | 856879 | 858707 | 1829 | |
| AX747537 | chr11 | 880866 | 881475 | 610 | |
| CHID1 | chr11 | 867356 | 915058 | 47703 | chitinase domain containing 1 |
| BRSK2 | chr11 | 1411128 | 1483919 | 72792 | BR serine/threonine kinase 2 |
| MOB2 | chr11 | 1490677 | 1508009 | 17333 | MOB kinase activator 2 |
| DUSP8 | chr11 | 1575280 | 1593150 | 17871 | dual specificity phosphatase 8 |
| KRTAP5-1 | chr11 | 1605571 | 1606513 | 943 | keratin associated protein 5-1 |
| KRTAP5-AS1 | chr11 | 1593970 | 1620414 | 26445 | KRTAP5-1/KRTAP5-2 antisense RNA 1 |
| KRTAP5-2 | chr11 | 1618406 | 1619524 | 1119 | keratin associated protein 5-2 |
| KRTAP5-3 | chr11 | 1628794 | 1629693 | 900 | keratin associated protein 5-3 |
| KRTAP5-4 | chr11 | 1642187 | 1643368 | 1182 | keratin associated protein 5-4 |
| MIR483 | chr11 | 2155363 | 2155439 | 77 | microRNA 483 |
| IGF2 | chr11 | 2150341 | 2170833 | 20493 | insulin-like growth factor 2 |
| IGF2-AS | chr11 | 2161757 | 2169896 | 8140 | IGF2 antisense RNA |

| | | | | | |
|---------------|-------|---------|---------|--------|--|
| INS-IGF2 | chr11 | 2150341 | 2182439 | 32099 | INS-IGF2 readthrough |
| INS | chr11 | 2181008 | 2182439 | 1432 | insulin |
| TH | chr11 | 2185158 | 2193035 | 7878 | tyrosine hydroxylase |
| MIR4686 | chr11 | 2194292 | 2194368 | 77 | microRNA 4686 |
| C11orf21 | chr11 | 2317506 | 2323143 | 5638 | chromosome 11 open reading frame 21 |
| TSPAN32 | chr11 | 2323242 | 2339430 | 16189 | tetraspanin 32 |
| CD81-AS1 | chr11 | 2349978 | 2399222 | 49245 | CD81 antisense RNA 1 |
| BC019904 | chr11 | 2349978 | 2399222 | 49245 | |
| CD81 | chr11 | 2397406 | 2418649 | 21244 | CD81 molecule |
| TSSC4 | chr11 | 2421717 | 2425108 | 3392 | tumor suppressing subtransferable candidate 4 |
| TRPM5 | chr11 | 2425745 | 2444275 | 18531 | transient receptor potential cation channel, subfamily M, member 5 |
| KCNQ1 | chr11 | 2466220 | 2870340 | 404121 | potassium voltage-gated channel, KQT-like subfamily, member 1 |
| KCNQ1OT1 | chr11 | 2629557 | 2721228 | 91672 | KCNQ1 overlapping transcript 1 |
| KCNQ1DN | chr11 | 2891262 | 2893336 | 2075 | KCNQ1 downstream neighbor (non-protein coding) |
| SLC22A18AS | chr11 | 2909326 | 2925175 | 15850 | solute carrier family 22 (organic cation transporter), member 18 antisense |
| SLC22A18 | chr11 | 2920950 | 2946476 | 25527 | solute carrier family 22, member 18 |
| ZNF195 | chr11 | 3379156 | 3400452 | 21297 | zinc finger protein 195 |
| OR7E12P | chr11 | 3411936 | 3413145 | 1210 | olfactory receptor, family 7, subfamily E, member 12 pseudogene |
| TSSC2 | chr11 | 3402190 | 3430378 | 28189 | tumor suppressing subtransferable candidate 2 pseudogene |
| LOC650368 | chr11 | 3402190 | 3430378 | 28189 | tumor suppressing subtransferable candidate 2 pseudogene |
| AB231779 | chr11 | 3638461 | 3647749 | 9289 | |
| TRPC2 | chr11 | 3647689 | 3658789 | 11101 | transient receptor potential cation channel, subfamily C, member 2, pseudogene |
| ART5 | chr11 | 3659735 | 3663546 | 3812 | ADP-ribosyltransferase 5 |
| ART1 | chr11 | 3666360 | 3685646 | 19287 | ADP-ribosyltransferase 1 |
| CHRNA10 | chr11 | 3686816 | 3692614 | 5799 | cholinergic receptor, nicotinic, alpha 10 (neuronal) |
| NUP98 | chr11 | 3696239 | 3819022 | 122784 | nucleoporin 98kDa |
| PGAP2 | chr11 | 3818953 | 3847601 | 28649 | post-GPI attachment to proteins 2 |
| RHOG | chr11 | 3848207 | 3862213 | 14007 | ras homolog family member G |
| MIR4687 | chr11 | 3877291 | 3877371 | 81 | microRNA 4687 |
| STIM1 | chr11 | 3876932 | 4114440 | 237509 | stromal interaction molecule 1 |
| RRM1 | chr11 | 4115923 | 4223883 | 107961 | ribonucleotide reductase M1 |
| LOC100506082 | chr11 | 4208381 | 4223883 | 15503 | uncharacterized LOC100506082 |
| OR52B4 | chr11 | 4388492 | 4389616 | 1125 | olfactory receptor, family 52, subfamily B, member 4 |
| TRIM21 | chr11 | 4406126 | 4414926 | 8801 | tripartite motif containing 21 |
| OR52K2 | chr11 | 4470524 | 4471591 | 1068 | olfactory receptor, family 52, subfamily K, member 2 |
| OR52K1 | chr11 | 4510108 | 4511138 | 1031 | olfactory receptor, family 52, subfamily K, member 1 |
| OR52M1 | chr11 | 4566420 | 4567374 | 955 | olfactory receptor, family 52, subfamily M, member 1 |
| C11orf40 | chr11 | 4592652 | 4599050 | 6399 | chromosome 11 open reading frame 40 |
| OR52I2 | chr11 | 4608020 | 4609135 | 1116 | olfactory receptor, family 52, subfamily I, member 2 |
| OR52I1 | chr11 | 4615268 | 4616243 | 976 | olfactory receptor, family 52, subfamily I, member 1 |
| TRIM68 | chr11 | 4619901 | 4629489 | 9589 | tripartite motif containing 68 |
| OR51D1 | chr11 | 4660944 | 4662068 | 1125 | olfactory receptor, family 51, subfamily D, member 1 |
| OR51E1 | chr11 | 4665155 | 4676716 | 11562 | olfactory receptor, family 51, subfamily E, member 1 |
| OR51E2 | chr11 | 4701400 | 4719076 | 17677 | olfactory receptor, family 51, subfamily E, member 2 |
| OR51F1 | chr11 | 4790208 | 4791147 | 940 | olfactory receptor, family 51, subfamily F, member 1 |
| OR52R1 | chr11 | 4824662 | 4825610 | 949 | olfactory receptor, family 52, subfamily R, member 1 |
| OR51F2 | chr11 | 4842615 | 4843644 | 1030 | olfactory receptor, family 51, subfamily F, member 2 |
| OR51S1 | chr11 | 4869466 | 4870438 | 973 | olfactory receptor, family 51, subfamily S, member 1 |
| OR51T1 | chr11 | 4903048 | 4904113 | 1066 | olfactory receptor, family 51, subfamily T, member 1 |
| OR51A7 | chr11 | 4928599 | 4929538 | 940 | olfactory receptor, family 51, subfamily A, member 7 |
| OR51G2 | chr11 | 4935948 | 4936893 | 946 | olfactory receptor, family 51, subfamily G, member 2 |
| OR51G1 | chr11 | 4944603 | 4945569 | 967 | olfactory receptor, family 51, subfamily G, member 1 |
| OR51A4 | chr11 | 4967388 | 4968330 | 943 | olfactory receptor, family 51, subfamily A, member 4 |
| OR51A2 | chr11 | 4976001 | 4976943 | 943 | olfactory receptor, family 51, subfamily A, member 2 |
| MMP26 | chr11 | 5009423 | 5013659 | 4237 | matrix metalloproteinase 26 |
| OR51L1 | chr11 | 5020212 | 5021160 | 949 | olfactory receptor, family 51, subfamily L, member 1 |
| OR52J3 | chr11 | 5067755 | 5068691 | 937 | olfactory receptor, family 52, subfamily J, member 3 |
| OR52E2 | chr11 | 5079879 | 5080857 | 979 | olfactory receptor, family 52, subfamily E, member 2 |
| DQ656008 | chr11 | 5142384 | 5145743 | 3360 | |
| OR52A5 | chr11 | 5152921 | 5153872 | 952 | olfactory receptor, family 52, subfamily A, member 5 |
| OR52A1 | chr11 | 5172660 | 5173599 | 940 | olfactory receptor, family 52, subfamily A, member 1 |
| OR52Z1 | chr11 | 5199340 | 5199783 | 444 | olfactory receptor, family 52, subfamily Z, member 1 (gene/pseudogene) |
| OR51V1 | chr11 | 5220964 | 5221930 | 967 | olfactory receptor, family 51, subfamily V, member 1 |
| CoTC_ribozyme | chr11 | 5245677 | 5245869 | 193 | |
| DL074624 | chr11 | 5246721 | 5246744 | 24 | |
| HBB | chr11 | 5246695 | 5248301 | 1607 | hemoglobin, beta |
| HBD | chr11 | 5254058 | 5255858 | 1801 | hypophosphatemic bone disease |
| HBBP1 | chr11 | 5263184 | 5264822 | 1639 | hemoglobin, beta pseudogene 1 |
| BGLT3 | chr11 | 5265783 | 5266776 | 994 | beta globin locus transcript 3 (non-protein coding) |
| HBG1 | chr11 | 5269501 | 5271087 | 1587 | hemoglobin, gamma A |
| OR51B4 | chr11 | 5322243 | 5323176 | 934 | olfactory receptor, family 51, subfamily B, member 4 |
| OR51B2 | chr11 | 5344527 | 5345582 | 1056 | olfactory receptor, family 51, subfamily B, member 2 |
| OR51B6 | chr11 | 5372737 | 5373676 | 940 | olfactory receptor, family 51, subfamily B, member 6 |
| HBE1 | chr11 | 5289579 | 5526882 | 237304 | hemoglobin, epsilon 1 |
| OR51M1 | chr11 | 5410606 | 5411664 | 1059 | olfactory receptor, family 51, subfamily M, member 1 |
| OR51Q1 | chr11 | 5443340 | 5444436 | 1097 | olfactory receptor, family 51, subfamily Q, member 1 |
| OR51B5 | chr11 | 5362112 | 5526882 | 164771 | olfactory receptor, family 51, subfamily B, member 5 |
| OR51I1 | chr11 | 5461771 | 5462783 | 1013 | olfactory receptor, family 51, subfamily I, member 1 |
| HBG2 | chr11 | 5269501 | 5667011 | 397511 | hemoglobin, gamma G |
| OR51I2 | chr11 | 5474637 | 5475707 | 1071 | olfactory receptor, family 51, subfamily I, member 2 |

| | | | | | |
|------------------|-------|---------|---------|--------|--|
| OR52D1 | chr11 | 5509914 | 5510978 | 1065 | olfactory receptor, family 52, subfamily D, member 1 |
| UBQLN3 | chr11 | 5528529 | 5531153 | 2625 | ubiquilin 3 |
| UBQLNL | chr11 | 5535622 | 5537956 | 2335 | ubiquilin-like |
| OR52H1 | chr11 | 5565790 | 5566753 | 964 | olfactory receptor, family 52, subfamily H, member 1 |
| OR52B6 | chr11 | 5602106 | 5603114 | 1009 | olfactory receptor, family 52, subfamily B, member 6 |
| TRIM6 | chr11 | 5617330 | 5634188 | 16859 | tripartite motif containing 6 |
| TRIM6-TRIM34 | chr11 | 5617864 | 5665625 | 47762 | TRIM6-TRIM34 readthrough |
| TRIM34 | chr11 | 5641173 | 5665625 | 24453 | tripartite motif containing 34 |
| TRIPartite motif | chr11 | 5686441 | 5687610 | 1170 | |
| OR56B1 | chr11 | 5757677 | 5758768 | 1092 | olfactory receptor, family 56, subfamily B, member 1 |
| TRIM22 | chr11 | 5710816 | 5821759 | 110944 | tripartite motif containing 22 |
| OR52N4 | chr11 | 5775922 | 5776959 | 1038 | olfactory receptor, family 52, subfamily N, member 4 |
| OR52N5 | chr11 | 5798863 | 5799897 | 1035 | olfactory receptor, family 52, subfamily N, member 5 |
| OR52N1 | chr11 | 5809083 | 5810046 | 964 | olfactory receptor, family 52, subfamily N, member 1 |
| TRIM5 | chr11 | 5684424 | 5959849 | 275426 | tripartite motif containing 5 |
| OR52N2 | chr11 | 5841565 | 5842531 | 967 | olfactory receptor, family 52, subfamily N, member 2 |
| OR52E6 | chr11 | 5862185 | 5863127 | 943 | olfactory receptor, family 52, subfamily E, member 6 |
| OR52E8 | chr11 | 5877978 | 5878932 | 955 | olfactory receptor, family 52, subfamily E, member 8 |
| OR52E4 | chr11 | 5905522 | 5906461 | 940 | olfactory receptor, family 52, subfamily E, member 4 |
| OR56A3 | chr11 | 5968576 | 5969524 | 949 | olfactory receptor, family 56, subfamily A, member 3 |
| OR56A5 | chr11 | 5988782 | 5989724 | 943 | olfactory receptor, family 56, subfamily A, member 5 |
| OR52L1 | chr11 | 6007121 | 6008215 | 1095 | olfactory receptor, family 52, subfamily L, member 1 |
| OR56A4 | chr11 | 6023280 | 6024378 | 1099 | olfactory receptor, family 56, subfamily A, member 4 |
| OR56A1 | chr11 | 6047900 | 6048971 | 1072 | olfactory receptor, family 56, subfamily A, member 1 |
| OR56B4 | chr11 | 6129008 | 6129968 | 961 | olfactory receptor, family 56, subfamily B, member 4 |
| OLFR690 | chr11 | 6172912 | 6173819 | 908 | |
| OR52B2 | chr11 | 6190584 | 6191556 | 973 | olfactory receptor, family 52, subfamily B, member 2 |
| OR52W1 | chr11 | 6220453 | 6221416 | 964 | olfactory receptor, family 52, subfamily W, member 1 |
| C11orf42 | chr11 | 6226797 | 6232365 | 5569 | chromosome 11 open reading frame 42 |
| FAM160A2 | chr11 | 6232563 | 6255941 | 23379 | family with sequence similarity 160, member A2 |
| CNGA4 | chr11 | 6255994 | 6265709 | 9716 | cyclic nucleotide gated channel alpha 4 |
| CCKBR | chr11 | 6280903 | 6293357 | 12455 | cholecystokinin B receptor |
| PRKCDBP | chr11 | 6340175 | 6341740 | 1566 | protein kinase C, delta binding protein |
| DNHD1 | chr11 | 6518525 | 6593254 | 74730 | dynein heavy chain domain 1 |
| GVINP1 | chr11 | 6734380 | 6767670 | 33291 | GTPase, very large interferon inducible pseudogene 1 |
| OR2AG2 | chr11 | 6789237 | 6790188 | 952 | olfactory receptor, family 2, subfamily AG, member 2 |
| OR2AG1 | chr11 | 6806247 | 6807245 | 999 | olfactory receptor, family 2, subfamily AG, member 1 |
| OR6A2 | chr11 | 6815755 | 6817139 | 1385 | olfactory receptor, family 6, subfamily A, member 2 |
| OR10A5 | chr11 | 6866913 | 6867867 | 955 | olfactory receptor, family 10, subfamily A, member 5 |
| OR10A2 | chr11 | 6890985 | 6891897 | 913 | olfactory receptor, family 10, subfamily A, member 2 |
| OR10A4 | chr11 | 6897855 | 6898850 | 996 | olfactory receptor, family 10, subfamily A, member 4 |
| OR2D2 | chr11 | 6912804 | 6913731 | 928 | olfactory receptor, family 2, subfamily D, member 2 |
| OR2D3 | chr11 | 6942232 | 6943225 | 994 | olfactory receptor, family 2, subfamily D, member 3 |
| ZNF215 | chr11 | 6947653 | 7005861 | 58209 | zinc finger protein 215 |
| ZNF214 | chr11 | 7020548 | 7041586 | 21039 | zinc finger protein 214 |
| NLRP14 | chr11 | 7041699 | 7092757 | 51059 | NLR family, pyrin domain containing 14 |
| JB175177 | chr11 | 7078055 | 7078075 | 21 | |
| RBMXL2 | chr11 | 7110164 | 7112379 | 2216 | RNA binding motif protein, X-linked-like 2 |
| SYT9 | chr11 | 7260008 | 7490276 | 230269 | synaptotagmin IX |
| BC040358 | chr11 | 7458867 | 7487042 | 28176 | |
| LOC100506258 | chr11 | 7458867 | 7487066 | 28200 | uncharacterized LOC100506258 |
| AK128569 | chr11 | 7448496 | 7526103 | 77608 | |
| OLFML1 | chr11 | 7506599 | 7532606 | 26008 | olfactomedin-like 1 |
| PPFIBP2 | chr11 | 7534995 | 7678358 | 143364 | PTPRF interacting protein, binding protein 2 (liprin beta 2) |
| CYB5R2 | chr11 | 7686325 | 7694994 | 8670 | cytochrome b5 reductase 2 |
| OVCH2 | chr11 | 7711154 | 7727941 | 16788 | ovochoymase 2 (gene/pseudogene) |
| PJCG1 | chr11 | 7794439 | 7795197 | 759 | |
| OR5P2 | chr11 | 7817520 | 7818489 | 970 | olfactory receptor, family 5, subfamily P, member 2 |
| OR5P3 | chr11 | 7846583 | 7847519 | 937 | olfactory receptor, family 5, subfamily P, member 3 |
| OR5E1P | chr11 | 7870597 | 7871118 | 522 | olfactory receptor, family 5, subfamily E, member 1 pseudogene |
| LOC283299 | chr11 | 7872297 | 7927502 | 55206 | uncharacterized LOC283299 |
| U6 | chr11 | 7910728 | 7910826 | 99 | RNA, U6 small nuclear 50, pseudogene |
| OR10A6 | chr11 | 7949264 | 7950209 | 946 | olfactory receptor, family 10, subfamily A, member 6 |
| OR10A3 | chr11 | 7960122 | 7961067 | 946 | olfactory receptor, family 10, subfamily A, member 3 |
| NLRP10 | chr11 | 7981155 | 7985059 | 3905 | NLR family, pyrin domain containing 10 |
| EIF3F | chr11 | 8008444 | 8017719 | 9276 | eukaryotic translation initiation factor 3, subunit F |
| BC027619 | chr11 | 8032824 | 8038036 | 5213 | |
| CASC23 | chr11 | 8032824 | 8038056 | 5233 | cancer susceptibility candidate 23 (non-protein coding) |
| TUB | chr11 | 8040790 | 8127654 | 86865 | tubby bipartite transcription factor |
| TUB-AS1 | chr11 | 8081584 | 8090920 | 9337 | TUB antisense RNA 1 |
| AK055772 | chr11 | 8081584 | 8090920 | 9337 | |
| RIC3 | chr11 | 8127596 | 8190590 | 62995 | RIC3 acetylcholine receptor chaperone |
| LMO1 | chr11 | 8245850 | 8290182 | 44333 | LIM domain only 1 (rhombotin 1) |
| STK33 | chr11 | 8413412 | 8615836 | 202425 | serine/threonine kinase 33 |
| SCARNA20 | chr11 | 8576562 | 8576693 | 132 | small Cajal body-specific RNA 20 |
| TRIM66 | chr11 | 8633583 | 8693413 | 59831 | tripartite motif containing 66 |
| BC068088 | chr11 | 8693132 | 8701271 | 8140 | |
| SNORA3 | chr11 | 8705773 | 8705903 | 131 | small nucleolar RNA, H/ACA box 45A |
| SNORA45A | chr11 | 8705773 | 8705903 | 131 | small nucleolar RNA, H/ACA box 45A |
| SNORA45 | chr11 | 8706985 | 8707116 | 132 | small nucleolar RNA, H/ACA box 45B |

| | | | | | |
|--------------|-------|---------|---------|--------|--|
| SNORA45B | chr11 | 8706985 | 8707116 | 132 | small nucleolar RNA, H/ACA box 45B |
| RPL27A | chr11 | 8703994 | 8711419 | 7426 | ribosomal protein L27a |
| LOC102724784 | chr11 | 8790324 | 8831823 | 41500 | uncharacterized LOC102724784 |
| ST5 | chr11 | 8714898 | 8932498 | 217601 | suppression of tumorigenicity 5 |
| 5S_rRNA | chr11 | 8866809 | 8866905 | 97 | |
| AKIP1 | chr11 | 8932700 | 8941626 | 8927 | A kinase (PRKA) interacting protein 1 |
| C11orf16 | chr11 | 8941622 | 8954553 | 12932 | chromosome 11 open reading frame 16 |
| ASCL3 | chr11 | 8959118 | 8964580 | 5463 | achaete-scute family bHLH transcription factor 3 |
| TMEM9B | chr11 | 8968747 | 8986558 | 17812 | TMEM9 domain family, member B |
| TMEM9B-AS1 | chr11 | 8986221 | 8997830 | 11610 | TMEM9B antisense RNA 1 |
| NRIP3 | chr11 | 9002122 | 9025596 | 23475 | nuclear receptor interacting protein 3 |
| SCUBE2 | chr11 | 9041046 | 9113150 | 72105 | signal peptide, CUB domain, EGF-like 2 |
| MIR5691 | chr11 | 9111858 | 9111926 | 69 | microRNA 5691 |
| KRT8P41 | chr11 | 9115909 | 9117737 | 1829 | keratin 8 pseudogene 41 |
| DENND5A | chr11 | 9160374 | 9286873 | 126500 | DENN/MADD domain containing 5A |
| TRNA_Leu | chr11 | 9296789 | 9296863 | 75 | |
| TMEM41B | chr11 | 9302200 | 9336315 | 34116 | transmembrane protein 41B |
| F379 | chr12 | 67610 | 69070 | 1461 | chromosome 1 F379 retina specific protein |
| FAM138D | chr12 | 67606 | 69079 | 1474 | family with sequence similarity 138, member D |
| DKFZp434K13c | chr12 | 74271 | 87703 | 13433 | hypothetical protein LOC58481 |
| LOC100288778 | chr12 | 73879 | 91263 | 17385 | WAS protein family homolog 1 pseudogene |
| DDX11L11 | chr12 | 91352 | 93018 | 1667 | DEAD/H (Asp-Glu-Ala-Asp/His) box helicase 11 like 11 |
| IQSEC3 | chr12 | 176048 | 287625 | 111578 | IQ motif and Sec7 domain 3 |
| KDM5A | chr12 | 389222 | 498621 | 109400 | lysine (K)-specific demethylase 5A |
| CCDC77 | chr12 | 498515 | 551806 | 53292 | coiled-coil domain containing 77 |
| B4GALNT3 | chr12 | 569542 | 671058 | 101517 | beta-1,4-N-acetyl-galactosaminyl transferase 3 |
| U4atac | chr12 | 890298 | 890424 | 127 | |
| WNK1 | chr12 | 862088 | 1020618 | 158531 | WNK lysine deficient protein kinase 1 |
| HSN2 | chr12 | 976959 | 978360 | 1402 | hereditary sensory neuropathy, type II |
| AK128619 | chr12 | 1011721 | 1016190 | 4470 | |
| RAD52 | chr12 | 1020901 | 1099219 | 78319 | RAD52 homolog (S. cerevisiae) |
| BC039168 | chr12 | 1084462 | 1099219 | 14758 | |
| ERC1 | chr12 | 1100373 | 1605099 | 504727 | ELKS/RAB6-interacting/CAST family member 1 |
| LINC00942 | chr12 | 1609656 | 1613590 | 3935 | long intergenic non-protein coding RNA 942 |
| AX746535 | chr12 | 1615335 | 1616484 | 1150 | |
| FBXL14 | chr12 | 1675158 | 1703331 | 28174 | F-box and leucine-rich repeat protein 14 |
| WNT5B | chr12 | 1683822 | 1756378 | 72557 | wingless-type MMTV integration site family, member 5B |
| MIR3649 | chr12 | 1769480 | 1769546 | 67 | microRNA 3649 |
| ADIPOR2 | chr12 | 1800246 | 1897845 | 97600 | adiponectin receptor 2 |
| LRTM2 | chr12 | 1929432 | 1945918 | 16487 | leucine-rich repeats and transmembrane domains 2 |
| CACNA2D4 | chr12 | 1901122 | 2027870 | 126749 | calcium channel, voltage-dependent, alpha 2/delta subunit 4 |
| LINC00940 | chr12 | 2038367 | 2045742 | 7376 | long intergenic non-protein coding RNA 940 |
| CACNA1C | chr12 | 2080228 | 2080366 | 139 | calcium channel, voltage-dependent, L type, alpha 1C subunit |
| DCP1B | chr12 | 2050756 | 2113677 | 62922 | decapping mRNA 1B |
| CACNA1C-IT2 | chr12 | 2157517 | 2158628 | 1112 | CACNA1C intronic transcript 2 (non-protein coding) |
| AK308652 | chr12 | 2229490 | 2229863 | 374 | |
| CACNA1C-AS4 | chr12 | 2329702 | 2332647 | 2946 | CACNA1C antisense RNA 4 |
| CACNA1C-IT3 | chr12 | 2378941 | 2397911 | 18971 | CACNA1C intronic transcript 3 (non-protein coding) |
| CACNA1C | chr12 | 2162415 | 2807115 | 644701 | calcium channel, voltage-dependent, L type, alpha 1C subunit |
| LOC100507424 | chr12 | 2945981 | 2968961 | 22981 | uncharacterized LOC100507424 |
| FOXM1 | chr12 | 2966846 | 2986321 | 19476 | forkhead box M1 |
| RHNO1 | chr12 | 2985423 | 2998691 | 13269 | RAD9-HUS1-RAD1 interacting nuclear orphan 1 |
| TULP3 | chr12 | 2986364 | 3050306 | 63943 | tubby like protein 3 |
| TEAD4 | chr12 | 3068477 | 3149842 | 81366 | TEA domain family member 4 |
| TSPAN9 | chr12 | 3186520 | 3395730 | 209211 | tetraspanin 9 |
| AK056228 | chr12 | 3405367 | 3409390 | 4024 | |
| AK095365 | chr12 | 3427883 | 3434509 | 6627 | |
| BC047090 | chr12 | 3445188 | 3445980 | 793 | |
| DQ574680 | chr12 | 3553532 | 3553563 | 32 | |
| DQ597527 | chr12 | 3565649 | 3565688 | 40 | |
| DQ591569 | chr12 | 3567721 | 3570074 | 2354 | |
| DQ590472 | chr12 | 3575436 | 3575477 | 42 | |
| DQ590289 | chr12 | 3579507 | 3579548 | 42 | |
| DQ591331 | chr12 | 3579697 | 3579731 | 35 | |
| DQ599425 | chr12 | 3580294 | 3580328 | 35 | |
| DQ584103 | chr12 | 3581012 | 3581048 | 37 | |
| DQ583990 | chr12 | 3581870 | 3581899 | 30 | |
| DQ573743 | chr12 | 3584206 | 3584271 | 66 | |
| DQ594563 | chr12 | 3584318 | 3584352 | 35 | |
| DQ601344 | chr12 | 3584494 | 3584528 | 35 | |
| DQ600002 | chr12 | 3585019 | 3585049 | 31 | |
| DQ570426 | chr12 | 3585610 | 3585642 | 33 | |
| DQ589173 | chr12 | 3586923 | 3586953 | 31 | |
| DQ587099 | chr12 | 3586955 | 3586984 | 30 | |
| DQ594785 | chr12 | 3587759 | 3587799 | 41 | |
| DQ588300 | chr12 | 3590068 | 3590097 | 30 | |
| DQ596092 | chr12 | 3590833 | 3590862 | 30 | |
| DQ583138 | chr12 | 3591678 | 3591708 | 31 | |
| DQ579489 | chr12 | 3592511 | 3592544 | 34 | |
| PRMT8 | chr12 | 3490514 | 3703138 | 212625 | protein arginine methyltransferase 8 |

| | | | | | |
|--------------|-------|---------|---------|--------|---|
| AK125333 | chr12 | 3592879 | 3601985 | 9107 | |
| EFCAB4B | chr12 | 3716317 | 3862366 | 146050 | |
| CRACR2A | chr12 | 3724493 | 3862366 | 137874 | calcium release activated channel regulator 2A |
| PARP11 | chr12 | 3918026 | 3982614 | 64589 | poly (ADP-ribose) polymerase family, member 11 |
| CCND2-AS1 | chr12 | 4357932 | 4385350 | 27419 | CCND2 antisense RNA 1 |
| CCND2 | chr12 | 4382901 | 4414522 | 31622 | cyclin D2 |
| C12orf5 | chr12 | 4430358 | 4469190 | 38833 | chromosome 12 open reading frame 5 |
| FGF23 | chr12 | 4477392 | 4488894 | 11503 | fibroblast growth factor 23 |
| FGF6 | chr12 | 4543307 | 4554780 | 11474 | fibroblast growth factor 6 |
| C12orf4 | chr12 | 4596900 | 4647637 | 50738 | chromosome 12 open reading frame 4 |
| RAD51AP1 | chr12 | 4647949 | 4669213 | 21265 | RAD51 associated protein 1 |
| DYRK4 | chr12 | 4671369 | 4723054 | 51686 | dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 4 |
| AKAP3 | chr12 | 4724673 | 4758213 | 33541 | A kinase (PRKA) anchor protein 3 |
| NDUFA9 | chr12 | 4758263 | 4796720 | 38458 | NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 9, 39kDa |
| LOC101929549 | chr12 | 4809582 | 4829268 | 19687 | uncharacterized LOC101929549 |
| GALNT8 | chr12 | 4829751 | 4881892 | 52142 | N-acetylgalactosaminyltransferase 8 |
| KCNA6 | chr12 | 4918341 | 4960278 | 41938 | potassium voltage-gated channel, shaker-related subfamily, member 6 |
| KCNA1 | chr12 | 5019072 | 5027422 | 8351 | potassium voltage-gated channel, shaker-related subfamily, member 1 (episodic ataxia with myokymia) |
| KCNA5 | chr12 | 5153084 | 5155954 | 2871 | potassium voltage-gated channel, shaker-related subfamily, member 5 |
| LOC101929584 | chr12 | 5343161 | 5352317 | 9157 | uncharacterized LOC101929584 |
| BC031884 | chr12 | 5347213 | 5352317 | 5105 | |
| NTF3 | chr12 | 5541279 | 5604465 | 63187 | neurotrophin 3 |
| ANO2 | chr12 | 5671816 | 6055398 | 383583 | anoctamin 2, calcium activated chloride channel |
| VWF | chr12 | 6058039 | 6233836 | 175798 | von Willebrand factor |
| Metazoa_SRP | chr12 | 6204863 | 6205136 | 274 | |
| CD9 | chr12 | 6309481 | 6347437 | 37957 | CD9 molecule |
| PLEKHG6 | chr12 | 6419601 | 6437672 | 18072 | pleckstrin homology domain containing, family G (with RhoGef domain) member 6 |
| TNFRSF1A | chr12 | 6437922 | 6451283 | 13362 | tumor necrosis factor receptor superfamily, member 1A |
| SCNN1A | chr12 | 6456008 | 6486523 | 30516 | sodium channel, non-voltage-gated 1 alpha subunit |
| LTBR | chr12 | 6484533 | 6500737 | 16205 | lymphotoxin beta receptor (TNFR superfamily, member 3) |
| CD27-AS1 | chr12 | 6548166 | 6560683 | 12518 | CD27 antisense RNA 1 |
| CD27 | chr12 | 6554050 | 6560884 | 6835 | CD27 molecule |
| TAPBPL | chr12 | 6561176 | 6575601 | 14426 | TAP binding protein-like |
| VAMP1 | chr12 | 6571403 | 6580065 | 8663 | vesicle-associated membrane protein 1 (synaptobrevin 1) |
| MRPL51 | chr12 | 6601315 | 6602471 | 1157 | mitochondrial ribosomal protein L51 |
| SCARNA10 | chr12 | 6619387 | 6619717 | 331 | small Cajal body-specific RNA 10 |
| NCAPD2 | chr12 | 6603297 | 6641132 | 37836 | non-SMC condensin I complex, subunit D2 |
| GAPDH | chr12 | 6643570 | 6647541 | 3972 | glyceraldehyde-3-phosphate dehydrogenase |
| DL491527 | chr12 | 6645665 | 6645791 | 127 | |
| IFFO1 | chr12 | 6647538 | 6665249 | 17712 | intermediate filament family orphan 1 |
| NOP2 | chr12 | 6666035 | 6677498 | 11464 | NOP2 nucleolar protein |
| SCARNA11 | chr12 | 6690638 | 6690775 | 138 | small Cajal body-specific RNA 11 |
| AK096395 | chr12 | 6687787 | 6693905 | 6119 | |
| CHD4 | chr12 | 6679247 | 6716599 | 37353 | chromodomain helicase DNA binding protein 4 |
| LPAR5 | chr12 | 6728000 | 6748203 | 20204 | lysophosphatidic acid receptor 5 |
| ACRBP | chr12 | 6747241 | 6756580 | 9340 | acrosin binding protein |
| ING4 | chr12 | 6759703 | 6772308 | 12606 | inhibitor of growth family, member 4 |
| ZNF384 | chr12 | 6775642 | 6798738 | 23097 | zinc finger protein 384 |
| PIANP | chr12 | 6802956 | 6810009 | 7054 | PILR alpha associated neural protein |
| COPS7A | chr12 | 6833149 | 6841041 | 7893 | COP9 signalosome subunit 7A |
| MLF2 | chr12 | 6857157 | 6876641 | 19485 | myeloid leukemia factor 2 |
| PTMS | chr12 | 6875540 | 6880118 | 4579 | parathyrosin |
| LAG3 | chr12 | 6881669 | 6887621 | 5953 | lymphocyte-activation gene 3 |
| CD4 | chr12 | 6898637 | 6929976 | 31340 | CD4 molecule |
| GPR162 | chr12 | 6930962 | 6939175 | 8214 | G protein-coupled receptor 162 |
| LEPREL2 | chr12 | 6937537 | 6949018 | 11482 | leprecan-like 2 |
| GNB3 | chr12 | 6949117 | 6956559 | 7443 | guanine nucleotide binding protein (G protein), beta polypeptide 3 |
| AK097957 | chr12 | 6954022 | 6957970 | 3949 | |
| CDCA3 | chr12 | 6953962 | 6961230 | 7269 | cell division cycle associated 3 |
| USP5 | chr12 | 6961284 | 6975795 | 14512 | ubiquitin specific peptidase 5 (isopeptidase T) |
| TPI1 | chr12 | 6976583 | 6980110 | 3528 | triosephosphate isomerase 1 |
| SPSB2 | chr12 | 6980099 | 6982521 | 2423 | splA/ryanodine receptor domain and SOCS box containing 2 |
| RRPL13L | chr12 | 6982789 | 6993768 | 10980 | |
| RPL13P5 | chr12 | 6993144 | 6993768 | 625 | ribosomal protein L13 pseudogene 5 |
| DSTNP2 | chr12 | 6993845 | 6994950 | 1106 | destrin (actin depolymerizing factor) pseudogene 2 |
| LRRC23 | chr12 | 7013896 | 7023406 | 9511 | leucine rich repeat containing 23 |
| ENO2 | chr12 | 7023613 | 7032859 | 9247 | enolase 2 (gamma, neuronal) |
| ATN1 | chr12 | 7033625 | 7051484 | 17860 | atrophin 1 |
| C12orf57 | chr12 | 7052140 | 7055166 | 3027 | chromosome 12 open reading frame 57 |
| PTPN6 | chr12 | 7055739 | 7070479 | 14741 | protein tyrosine phosphatase, non-receptor type 6 |
| MIR200C | chr12 | 7072861 | 7072929 | 69 | microRNA 200c |
| MIR141 | chr12 | 7073259 | 7073354 | 96 | microRNA 141 |
| SCARNA12 | chr12 | 7076499 | 7076769 | 271 | small Cajal body-specific RNA 12 |
| PHB2 | chr12 | 7074514 | 7079916 | 5403 | prohibitin 2 |
| EMG1 | chr12 | 7079943 | 7105520 | 25578 | EMG1 N1-specific pseudouridine methyltransferase |
| LPCAT3 | chr12 | 7085346 | 7125842 | 40497 | lysophosphatidylcholine acyltransferase 3 |
| C1S | chr12 | 7096259 | 7178335 | 82077 | complement component 1, s subcomponent |
| C1R | chr12 | 7187514 | 7245043 | 57530 | complement component 1, r subcomponent |
| C1RL | chr12 | 7247145 | 7261874 | 14730 | complement component 1, r subcomponent-like |
| C1RL-AS1 | chr12 | 7260903 | 7274447 | 13545 | C1RL antisense RNA 1 |

| | | | | | |
|--------------|-------|----------|----------|---------|--|
| RBP5 | chr12 | 7276279 | 7281466 | 5188 | retinol binding protein 5, cellular |
| CLSTN3 | chr12 | 7282966 | 7311530 | 28565 | calsyntenin 3 |
| PEX5 | chr12 | 7341758 | 7371169 | 29412 | peroxisomal biogenesis factor 5 |
| ACSM4 | chr12 | 7456927 | 7480969 | 24043 | acyl-CoA synthetase medium-chain family member 4 |
| CD163L1 | chr12 | 7507555 | 7596781 | 7596781 | CD163 molecule-like 1 |
| CD163 | chr12 | 7623411 | 7656414 | 33004 | CD163 molecule |
| APOBEC1 | chr12 | 7801995 | 7818502 | 16508 | apolipoprotein B mRNA editing enzyme, catalytic polypeptide 1 |
| GDF3 | chr12 | 7842380 | 7848360 | 5981 | growth differentiation factor 3 |
| DPPA3 | chr12 | 7864088 | 7870152 | 6065 | developmental pluripotency associated 3 |
| CLEC4C | chr12 | 7882010 | 7902069 | 20060 | C-type lectin domain family 4, member C |
| NANOGNB | chr12 | 7917811 | 7926717 | 8907 | NANOG neighbor homeobox |
| NANOG | chr12 | 7941991 | 7948657 | 6667 | Nanog homeobox |
| Y_RNA | chr12 | 7999883 | 7999978 | 96 | |
| SLC2A14 | chr12 | 7965107 | 8043792 | 78686 | solute carrier family 2 (facilitated glucose transporter), member 14 |
| CLEC4A | chr12 | 8276227 | 8291203 | 14977 | C-type lectin domain family 4, member A |
| POU5F1P3 | chr12 | 8286364 | 8287448 | 1085 | POU class 5 homeobox 1 pseudogene 3 |
| ZNF705A | chr12 | 8325149 | 8332642 | 7494 | zinc finger protein 705A |
| FAM66C | chr12 | 8332804 | 8368747 | 35944 | family with sequence similarity 66, member C |
| FAM90A1 | chr12 | 8373855 | 8380214 | 6360 | family with sequence similarity 90, member A1 |
| FAM86FP | chr12 | 8383644 | 8395542 | 11899 | family with sequence similarity 86, member A pseudogene |
| LOC101927905 | chr12 | 8388010 | 8395160 | 7151 | uncharacterized LOC101927905 |
| LINC00937 | chr12 | 8509559 | 8549399 | 39841 | long intergenic non-protein coding RNA 937 |
| CLEC6A | chr12 | 8608590 | 8630926 | 22337 | C-type lectin domain family 6, member A |
| CLEC4D | chr12 | 8666135 | 8674960 | 8826 | C-type lectin domain family 4, member D |
| CLEC4E | chr12 | 8685900 | 8693558 | 7659 | C-type lectin domain family 4, member E |
| AICDA | chr12 | 8754761 | 8765442 | 10682 | activation-induced cytidine deaminase |
| MFAP5 | chr12 | 8798538 | 8815484 | 16947 | microfibrillar associated protein 5 |
| RIMKLB | chr12 | 8834272 | 8935694 | 101423 | ribosomal modification protein rimK-like family member B |
| A2ML1 | chr12 | 8975149 | 9039597 | 64449 | alpha-2-macroglobulin-like 1 |
| PHC1 | chr12 | 9067315 | 9094060 | 26746 | polyhomeotic homolog 1 (Drosophila) |
| M6PR | chr12 | 9092956 | 9102357 | 9402 | mannose-6-phosphate receptor (cation dependent) |
| KLRG1 | chr12 | 9142220 | 9163340 | 21121 | killer cell lectin-like receptor subfamily G, member 1 |
| LINC00612 | chr12 | 9208184 | 9217666 | 9483 | long intergenic non-protein coding RNA 612 |
| A2M-AS1 | chr12 | 9217772 | 9220651 | 2880 | A2M antisense RNA 1 (head to head) |
| A2M | chr12 | 9220303 | 9268558 | 48256 | alpha-2-macroglobulin |
| JB175316 | chr12 | 9280497 | 9280518 | 22 | |
| PZP | chr12 | 9301435 | 9360966 | 59532 | pregnancy-zone protein |
| A2MP1 | chr12 | 9381128 | 9386803 | 5676 | alpha-2-macroglobulin pseudogene 1 |
| MIR1244-1 | chr12 | 9392065 | 9392147 | 83 | microRNA 1244-1 |
| MIR1244-2 | chr12 | 9392065 | 9392147 | 83 | microRNA 1244-2 |
| MIR1244-3 | chr12 | 9392065 | 9392147 | 83 | microRNA 1244-3 |
| LINC00987 | chr12 | 9392598 | 9395645 | 3048 | long intergenic non-protein coding RNA 987 |
| LOC100499405 | chr12 | 9392598 | 9395645 | 3048 | long intergenic non-protein coding RNA 987 |
| SNORA75 | chr12 | 9439268 | 9439418 | 151 | small nucleolar RNA, H/ACA box 75 |
| LOC642846 | chr12 | 9436252 | 9466684 | 30433 | DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 11-like |
| DQ582774 | chr12 | 9481705 | 9481733 | 29 | |
| DQ586985 | chr12 | 9481920 | 9481986 | 67 | |
| DQ577612 | chr12 | 9485756 | 9485790 | 35 | |
| DQ586485 | chr12 | 9488358 | 9488396 | 39 | |
| DQ577180 | chr12 | 9488431 | 9488461 | 31 | |
| DQ585706 | chr12 | 9488849 | 9488879 | 31 | |
| DQ575612 | chr12 | 9492398 | 9492435 | 38 | |
| DQ592342 | chr12 | 9499998 | 9500028 | 31 | |
| LOC10192803C | chr12 | 9524377 | 9534018 | 9642 | uncharacterized LOC101928030 |
| LOC101930452 | chr12 | 9520059 | 9550213 | 30155 | uncharacterized LOC101930452 |
| DQ599803 | chr12 | 9555037 | 9555064 | 28 | |
| DDX12P | chr12 | 9570286 | 9600768 | 30483 | DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 12, pseudogene |
| SNORA75 | chr12 | 9597653 | 9597801 | 149 | small nucleolar RNA, H/ACA box 75 |
| BX647938 | chr12 | 9709909 | 9728864 | 18956 | |
| KLRB1 | chr12 | 9747869 | 9760497 | 12629 | killer cell lectin-like receptor subfamily B, member 1 |
| LOC374443 | chr12 | 9769879 | 9811010 | 41132 | C-type lectin domain family 2, member D pseudogene |
| CLEC2D | chr12 | 9822303 | 9852151 | 29849 | C-type lectin domain family 2, member D |
| CLECL1 | chr12 | 9868455 | 9885895 | 17441 | C-type lectin-like 1 |
| CD69 | chr12 | 9905081 | 9913497 | 8417 | CD69 molecule |
| KLRF1 | chr12 | 9980076 | 9997603 | 17528 | killer cell lectin-like receptor subfamily F, member 1 |
| CLEC2B | chr12 | 10004967 | 10022458 | 17492 | C-type lectin domain family 2, member B |
| KLRF2 | chr12 | 10034087 | 10048432 | 14346 | killer cell lectin-like receptor subfamily F, member 2 |
| CLEC2A | chr12 | 10051271 | 10084980 | 33710 | C-type lectin domain family 2, member A |
| LOC100506155 | chr12 | 10089177 | 10096094 | 6918 | uncharacterized LOC100506159 |
| CLEC12A | chr12 | 10103914 | 10138194 | 34281 | C-type lectin domain family 12, member A |
| CLEC1B | chr12 | 10145661 | 10151899 | 6239 | C-type lectin domain family 1, member B |
| CLEC12B | chr12 | 10163230 | 10171399 | 8170 | C-type lectin domain family 12, member B |
| LOC10272402C | chr12 | 10167950 | 10183205 | 15256 | uncharacterized LOC102724020 |
| CLEC9A | chr12 | 10183275 | 10218565 | 35291 | C-type lectin domain family 9, member A |
| CLEC1A | chr12 | 10222152 | 10251664 | 29513 | C-type lectin domain family 1, member A |
| CLEC7A | chr12 | 10269375 | 10282868 | 13494 | C-type lectin domain family 7, member A |
| QLR1 | chr12 | 10310898 | 10324790 | 13893 | oxidized low density lipoprotein (lectin-like) receptor 1 |
| GABARAPL1 | chr12 | 10365488 | 10375724 | 10237 | GABA(A) receptor-associated protein like 1 |
| KLRD1 | chr12 | 10457049 | 10469850 | 12802 | killer cell lectin-like receptor subfamily D, member 1 |
| LOC10192810C | chr12 | 10516367 | 10551105 | 34739 | uncharacterized LOC101928100 |

| | | | | | |
|--------------|-------|----------|----------|--------|---|
| AK096314 | chr12 | 10516367 | 10551105 | 34739 | |
| KLRK1 | chr12 | 10524951 | 10544490 | 19540 | killer cell lectin-like receptor subfamily K, member 1 |
| KLRC4-KLRK1 | chr12 | 10524951 | 10562745 | 37795 | KLRC4-KLRK1 readthrough |
| KLRC4 | chr12 | 10559982 | 10562356 | 2375 | killer cell lectin-like receptor subfamily C, member 4 |
| KLRC3 | chr12 | 10564913 | 10588592 | 23680 | killer cell lectin-like receptor subfamily C, member 3 |
| KLRC2 | chr12 | 10579192 | 10588592 | 9401 | killer cell lectin-like receptor subfamily C, member 2 |
| KLRC1 | chr12 | 10594862 | 10607215 | 12354 | killer cell lectin-like receptor subfamily C, member 1 |
| KLRAF1 | chr12 | 10741076 | 10752434 | 11359 | killer cell lectin-like receptor subfamily A pseudogene 1 |
| MAGOHB | chr12 | 10756363 | 10766208 | 9846 | mago-nashi homolog B (Drosophila) |
| STYK1 | chr12 | 10771537 | 10826891 | 55355 | serine/threonine/tyrosine kinase 1 |
| YBX3 | chr12 | 10851675 | 10875953 | 24279 | Y box binding protein 3 |
| LOC101928162 | chr12 | 10902832 | 10930050 | 27219 | uncharacterized LOC101928162 |
| TAS2R7 | chr12 | 10954130 | 10955226 | 1097 | taste receptor, type 2, member 7 |
| TAS2R8 | chr12 | 10958649 | 10959579 | 931 | taste receptor, type 2, member 8 |
| TAS2R9 | chr12 | 10961692 | 10962767 | 1076 | taste receptor, type 2, member 9 |
| TAS2R10 | chr12 | 10977944 | 10978868 | 925 | taste receptor, type 2, member 10 |
| PRR4 | chr12 | 10998447 | 11002075 | 3629 | proline rich 4 (lacrimal) |
| TAS2R13 | chr12 | 11060524 | 11062161 | 1638 | taste receptor, type 2, member 13 |
| PRH2 | chr12 | 11081833 | 11087444 | 5612 | proline-rich protein HaeIII subfamily 2 |
| TAS2R14 | chr12 | 11090852 | 11091806 | 955 | taste receptor, type 2, member 14 |
| TAS2R50 | chr12 | 11138511 | 11139511 | 1001 | taste receptor, type 2, member 50 |
| TAS2R20 | chr12 | 11148560 | 11150474 | 1915 | taste receptor, type 2, member 20 |
| PRH1-PRR4 | chr12 | 10998447 | 11324224 | 325778 | PRH1-PRR4 readthrough |
| TAS2R19 | chr12 | 11174270 | 11175170 | 901 | taste receptor, type 2, member 19 |
| PRH1 | chr12 | 11033559 | 11324222 | 290664 | proline-rich protein HaeIII subfamily 1 |
| TAS2R31 | chr12 | 11182985 | 11184006 | 1022 | taste receptor, type 2, member 31 |
| TAS2R46 | chr12 | 11213963 | 11214893 | 931 | taste receptor, type 2, member 46 |
| TAS2R43 | chr12 | 11243885 | 11244912 | 1028 | taste receptor, type 2, member 43 |
| PRB4 | chr12 | 11033559 | 11463369 | 429811 | proline-rich protein BstNI subfamily 4 |
| TAS2R30 | chr12 | 11285883 | 11286843 | 961 | taste receptor, type 2, member 30 |
| LOC100129361 | chr12 | 11323779 | 11328619 | 4841 | chromosome X open reading frame 69-like |
| TAS2R42 | chr12 | 11338598 | 11339543 | 946 | taste receptor, type 2, member 42 |
| PRB3 | chr12 | 11418846 | 11422641 | 3796 | proline-rich protein BstNI subfamily 3 |
| PRB1 | chr12 | 11504756 | 11508524 | 3769 | proline-rich protein BstNI subfamily 1 |
| PRB2 | chr12 | 11544473 | 11548498 | 4026 | proline-rich protein BstNI subfamily 2 |
| LINC01252 | chr12 | 11700963 | 11717335 | 16373 | long intergenic non-protein coding RNA 1252 |
| LOC338817 | chr12 | 11700963 | 11717335 | 16373 | long intergenic non-protein coding RNA 1252 |
| RNU6-19P | chr12 | 11944823 | 12079107 | 134285 | RNA, U6 small nuclear 19, pseudogene |
| ETV6 | chr12 | 11802787 | 12268261 | 465475 | ets variant 6 |
| BC038742 | chr12 | 12202797 | 12208703 | 5907 | |
| MIR1244-1 | chr12 | 12264885 | 12264967 | 83 | microRNA 1244-1 |
| BCL2L14 | chr12 | 12223877 | 12363947 | 140071 | BCL2-like 14 (apoptosis facilitator) |
| LRP6 | chr12 | 12268960 | 12419811 | 150852 | low density lipoprotein receptor-related protein 6 |
| MANSC1 | chr12 | 12482217 | 12503169 | 20953 | MANSC domain containing 1 |
| LOH12CR1 | chr12 | 12510012 | 12619838 | 109827 | loss of heterozygosity, 12, chromosomal region 1 |
| DUSP16 | chr12 | 12626215 | 12715448 | 89234 | dual specificity phosphatase 16 |
| CREBL2 | chr12 | 12764766 | 12798042 | 33277 | cAMP responsive element binding protein-like 2 |
| GPR19 | chr12 | 12813994 | 12849121 | 35128 | G protein-coupled receptor 19 |
| GPRC5A | chr12 | 13043955 | 13066600 | 22646 | G protein-coupled receptor, class C, group 5, member A |
| MIR614 | chr12 | 13068762 | 13068852 | 91 | microRNA 614 |
| GPRC5D | chr12 | 13093708 | 13103318 | 9611 | G protein-coupled receptor, class C, group 5, member D |
| LOC100506314 | chr12 | 13132770 | 13137576 | 4807 | uncharacterized LOC100506314 |
| HEBP1 | chr12 | 13127798 | 13153243 | 25446 | heme binding protein 1 |
| HTR7P1 | chr12 | 13153375 | 13157764 | 4390 | 5-hydroxytryptamine (serotonin) receptor 7 pseudogene 1 |
| AK125676 | chr12 | 13153380 | 13192604 | 39225 | |
| 5S_rRNA | chr12 | 13199088 | 13199193 | 106 | |
| KIAA1467 | chr12 | 13197314 | 13236383 | 39070 | KIAA1467 |
| GSG1 | chr12 | 13236470 | 13256630 | 20161 | germ cell associated 1 |
| EMP1 | chr12 | 13349601 | 13369708 | 20108 | epithelial membrane protein 1 |
| C12orf36 | chr12 | 13523604 | 13529679 | 6076 | chromosome 12 open reading frame 36 |
| 7SK | chr12 | 13836475 | 13836820 | 346 | RNA, 7SK small nuclear |
| GRIN2B | chr12 | 13714409 | 14133022 | 418614 | glutamate receptor, ionotropic, N-methyl D-aspartate 2B |
| BC067269 | chr12 | 14577938 | 14579759 | 1822 | |
| ATF7IP | chr12 | 14518565 | 14655869 | 137305 | activating transcription factor 7 interacting protein |
| PLBD1 | chr12 | 14656596 | 14720791 | 64196 | phospholipase B domain containing 1 |
| PLBD1-AS1 | chr12 | 14720665 | 14772689 | 52025 | PLBD1 antisense RNA 1 |
| GUCY2C | chr12 | 14765567 | 14849519 | 83953 | guanylate cyclase 2C (heat stable enterotoxin receptor) |
| HIST4H4 | chr12 | 14920932 | 14924065 | 3134 | histone cluster 4, H4 |
| H2AFJ | chr12 | 14927269 | 14930936 | 3668 | H2A histone family, member J |
| WBP11 | chr12 | 14939411 | 14956401 | 16991 | WW domain binding protein 11 |
| SMCO3 | chr12 | 14957583 | 14967116 | 9534 | single-pass membrane protein with coiled-coil domains 3 |
| C12orf60 | chr12 | 14956505 | 14976791 | 20287 | chromosome 12 open reading frame 60 |
| ART4 | chr12 | 14982244 | 14996413 | 14170 | ADP-ribosyltransferase 4 (Dombrock blood group) |
| MGP | chr12 | 15034114 | 15038853 | 4740 | matrix Gla protein |
| ERP27 | chr12 | 15066960 | 15091483 | 24524 | endoplasmic reticulum protein 27 |
| ARHGDI | chr12 | 15094949 | 15114562 | 19614 | Rho GDP dissociation inhibitor (GDI) beta |
| PDE6H | chr12 | 15125955 | 15134799 | 8845 | phosphodiesterase 6H, cGMP-specific, cone, gamma |
| LINC01489 | chr12 | 15154766 | 15159617 | 4852 | long intergenic non-protein coding RNA 1489 |
| RERG-AS1 | chr12 | 15304856 | 15308215 | 3360 | RERG antisense RNA 1 |
| RERG | chr12 | 15260715 | 15374411 | 113697 | RAS-like, estrogen-regulated, growth inhibitor |

| | | | | | |
|--------------|-------|----------|----------|---------|--|
| PTPRO | chr12 | 15475190 | 15751265 | 276076 | protein tyrosine phosphatase, receptor type, O |
| EPS8 | chr12 | 15773074 | 15942510 | 169437 | epidermal growth factor receptor pathway substrate 8 |
| STRAP | chr12 | 16035287 | 16056410 | 21124 | serine/threonine kinase receptor associated protein |
| DERA | chr12 | 16064105 | 16190315 | 126211 | deoxyribose-phosphate aldolase (putative) |
| SLC15A5 | chr12 | 16341418 | 16430619 | 89202 | solute carrier family 15, member 5 |
| MGST1 | chr12 | 16500075 | 16530123 | 30049 | microsomal glutathione S-transferase 1 |
| LMO3 | chr12 | 16701305 | 16762758 | 61454 | LIM domain only 3 (rhombotin-like 2) |
| SKP1P2 | chr12 | 17141680 | 17143562 | 1883 | S-phase kinase-associated protein 1 pseudogene 2 |
| U6 | chr12 | 17224331 | 17224439 | 109 | RNA, U6 small nuclear 50, pseudogene |
| MIR3974 | chr12 | 17826232 | 17826328 | 97 | microRNA 3974 |
| REGL | chr12 | 18233802 | 18243127 | 9326 | RERG/RAS-like |
| PIK3C2G | chr12 | 18414473 | 18801352 | 386880 | phosphatidylinositol-4-phosphate 3-kinase, catalytic subunit type 2 gamma |
| PLCZ1 | chr12 | 18836109 | 18890993 | 54885 | phospholipase C, zeta 1 |
| CAPZA3 | chr12 | 18891044 | 18892122 | 1079 | capping protein (actin filament) muscle Z-line, alpha 3 |
| PLEKHA5 | chr12 | 19282625 | 19529333 | 246709 | pleckstrin homology domain containing, family A member 5 |
| AEBP2 | chr12 | 19592607 | 19675173 | 82567 | AE binding protein 2 |
| LOC100506393 | chr12 | 20167618 | 20251802 | 84185 | uncharacterized LOC100506393 |
| PDE3A | chr12 | 20522178 | 20837041 | 314864 | phosphodiesterase 3A, cGMP-inhibited |
| SLCO1C1 | chr12 | 20848288 | 20906320 | 58033 | solute carrier organic anion transporter family, member 1C1 |
| SLCO1B3 | chr12 | 20963637 | 21243040 | 279404 | solute carrier organic anion transporter family, member 1B3 |
| SLCO1B7 | chr12 | 20968607 | 21243040 | 274434 | solute carrier organic anion transporter family, member 1B7 (non-functional) |
| SLCO1B1 | chr12 | 21284127 | 21392730 | 108604 | solute carrier organic anion transporter family, member 1B1 |
| SLCO1A2 | chr12 | 21417533 | 21548371 | 130839 | solute carrier organic anion transporter family, member 1A2 |
| IAPP | chr12 | 21525801 | 21532914 | 7114 | islet amyloid polypeptide |
| PYROXD1 | chr12 | 21590537 | 21624182 | 33646 | pyridine nucleotide-disulphide oxidoreductase domain 1 |
| RECQL | chr12 | 21621843 | 21654603 | 32761 | RecQ helicase-like |
| GOLT1B | chr12 | 21654698 | 21671337 | 16640 | golgi transport 1B |
| C12orf39 | chr12 | 21679255 | 21684210 | 4956 | spexin hormone |
| SPX | chr12 | 21679255 | 21684210 | 4956 | spexin hormone |
| GYS2 | chr12 | 21689122 | 21757781 | 68660 | glycogen synthase 2 (liver) |
| LDHB | chr12 | 21788274 | 21810789 | 22516 | lactate dehydrogenase B |
| KCNJ8 | chr12 | 21917888 | 21927755 | 9868 | potassium inwardly-rectifying channel, subfamily J, member 8 |
| ABCC9 | chr12 | 21950323 | 22094336 | 144014 | ATP-binding cassette, sub-family C (CFTR/MRP), member 9 |
| CMAS | chr12 | 22199109 | 22218606 | 19498 | cytidine monophosphate N-acetylneuraminic acid synthetase |
| ST8SIA1 | chr12 | 22346324 | 22487648 | 141325 | ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 1 |
| C2CD5 | chr12 | 22601479 | 22697480 | 96002 | C2 calcium-dependent domain containing 5 |
| ETNK1 | chr12 | 22778075 | 22843608 | 65534 | ethanolamine kinase 1 |
| Mir_720 | chr12 | 22853863 | 22853963 | 101 | |
| AK094733 | chr12 | 23117505 | 23327057 | 209553 | |
| LOC101928441 | chr12 | 23328569 | 23344521 | 15953 | uncharacterized LOC101928441 |
| SOX5 | chr12 | 23685230 | 24715383 | 1030154 | SRY (sex determining region Y)-box 5 |
| MIR920 | chr12 | 24365354 | 24365429 | 76 | microRNA 920 |
| LOC101928471 | chr12 | 24376204 | 24390899 | 14696 | uncharacterized LOC101928471 |
| LINC00477 | chr12 | 24719897 | 24737102 | 17206 | long intergenic non-protein coding RNA 477 |
| BCAT1 | chr12 | 24962957 | 25102393 | 139437 | branched chain amino-acid transaminase 1, cytosolic |
| C12orf77 | chr12 | 25146364 | 25150453 | 4090 | chromosome 12 open reading frame 77 |
| LRMP | chr12 | 25205180 | 25261269 | 56090 | lymphoid-restricted membrane protein |
| CASC1 | chr12 | 25261222 | 25348094 | 86873 | cancer susceptibility candidate 1 |
| LYRM5 | chr12 | 25348149 | 25357949 | 9801 | LYR motif containing 5 |
| KRAS | chr12 | 25357722 | 25403865 | 46144 | Kirsten rat sarcoma viral oncogene homolog |
| DD157417 | chr12 | 25398274 | 25398297 | 24 | |
| IFLTD1 | chr12 | 25629015 | 25801496 | 172482 | lamin tail domain containing 1 |
| LMNTD1 | chr12 | 25629015 | 25801496 | 172482 | lamin tail domain containing 1 |
| MIR4302 | chr12 | 26026952 | 26027012 | 61 | microRNA 4302 |
| RASSF8-AS1 | chr12 | 26097789 | 26112375 | 14587 | RASSF8 antisense RNA 1 |
| RASSF8 | chr12 | 26111963 | 26232825 | 120863 | Ras association (RalGDS/AF-6) domain family (N-terminal) member 8 |
| BHLHE41 | chr12 | 26272958 | 26278003 | 5046 | basic helix-loop-helix family, member e41 |
| BC041929 | chr12 | 26287896 | 26334217 | 46322 | |
| SSPN | chr12 | 26348268 | 26405853 | 57586 | sarcospan |
| ITPR2 | chr12 | 26488284 | 26986131 | 497848 | inositol 1,4,5-trisphosphate receptor, type 2 |
| ASUN | chr12 | 27058111 | 27091254 | 33144 | asunder spermatogenesis regulator |
| FGFR1OP2 | chr12 | 27091304 | 27119581 | 28278 | FGFR1 oncogene partner 2 |
| TM7SF3 | chr12 | 27124505 | 27167339 | 42835 | transmembrane 7 superfamily member 3 |
| MED21 | chr12 | 27175454 | 27183606 | 8153 | mediator complex subunit 21 |
| C12orf71 | chr12 | 27233989 | 27235455 | 1467 | chromosome 12 open reading frame 71 |
| STK38L | chr12 | 27397077 | 27478890 | 81814 | serine/threonine kinase 38 like |
| ARNTL2 | chr12 | 27485786 | 27578746 | 92961 | aryl hydrocarbon receptor nuclear translocator-like 2 |
| BC043511 | chr12 | 27542721 | 27599558 | 56838 | |
| ARNTL2-AS1 | chr12 | 27542721 | 27599567 | 56847 | ARNTL2 antisense RNA 1 |
| SMCO2 | chr12 | 27619742 | 27655118 | 35377 | single-pass membrane protein with coiled-coil domains 2 |
| PPFIBP1 | chr12 | 27677044 | 27848497 | 171454 | PTPRF interacting protein, binding protein 1 (liprin beta 1) |
| AK000807 | chr12 | 27809602 | 27810048 | 447 | |
| TRNA_Lys | chr12 | 27843305 | 27843378 | 74 | |
| REP15 | chr12 | 27849427 | 27850566 | 1140 | RAB15 effector protein |
| MRPS35 | chr12 | 27863705 | 27909237 | 45533 | mitochondrial ribosomal protein S35 |
| MANSC4 | chr12 | 27915598 | 27924209 | 8612 | MANSC domain containing 4 |
| KLHL42 | chr12 | 27933186 | 27955973 | 22788 | kelch-like family member 42 |
| PTH LH | chr12 | 28111016 | 28124916 | 13901 | parathyroid hormone-like hormone |
| CCDC91 | chr12 | 28332209 | 28703099 | 370891 | coiled-coil domain containing 91 |
| FAR2 | chr12 | 29301935 | 29488549 | 186615 | fatty acyl CoA reductase 2 |

| | | | | | |
|-----------------|-------|----------|----------|--------|--|
| LOC100506606 | chr12 | 29433348 | 29470781 | 37434 | uncharacterized LOC100506606 |
| AX746523 | chr12 | 29433350 | 29470781 | 37432 | |
| ERGIC2 | chr12 | 29493578 | 29534143 | 40566 | ERGIC and golgi 2 |
| OVCH1-AS1 | chr12 | 29542226 | 29640257 | 98032 | OVCH1 antisense RNA 1 |
| OVCH1 | chr12 | 29580488 | 29650619 | 70132 | ovochoyase 1 |
| TMTC1 | chr12 | 29653745 | 29937692 | 283948 | transmembrane and tetratricopeptide repeat containing 1 |
| IPO8 | chr12 | 30781914 | 30848929 | 67016 | importin 8 |
| CAPRIN2 | chr12 | 30862485 | 30907448 | 44964 | caprin family member 2 |
| LINC00941 | chr12 | 30948614 | 30955645 | 7032 | long intergenic non-protein coding RNA 941 |
| TSPAN11 | chr12 | 31079361 | 31149537 | 70177 | tetraspanin 11 |
| DDX11-AS1 | chr12 | 31173696 | 31226781 | 53086 | DDX11 antisense RNA 1 |
| DDX11 | chr12 | 31226778 | 31257725 | 30948 | DEAD/H (Asp-Glu-Ala-Asp/His) box helicase 11 |
| DKFZp434C06 | chr12 | 31264585 | 31274400 | 9816 | |
| OVOS2 | chr12 | 31267684 | 31359088 | 91405 | ovostatin 2 |
| hsa-miR-3194 | chr12 | 31379257 | 31379277 | 21 | |
| FAM60A | chr12 | 31433519 | 31479159 | 45641 | family with sequence similarity 60, member A |
| FLJ13224 | chr12 | 31477249 | 31478879 | 1631 | uncharacterized LOC79857 |
| BC039477 | chr12 | 31516414 | 31522235 | 5822 | |
| DENND5B | chr12 | 31535156 | 31743952 | 208797 | DENND/MADD domain containing 5B |
| U5 | chr12 | 31747026 | 31747140 | 115 | |
| DENND5B-AS1 | chr12 | 31742856 | 31768285 | 25430 | DENND5B antisense RNA 1 |
| METTL20 | chr12 | 31800093 | 31822016 | 21924 | methyltransferase like 20 |
| AMN1 | chr12 | 31824070 | 31882108 | 58039 | antagonist of mitotic exit network 1 homolog (S. cerevisiae) |
| H3F3C | chr12 | 31944118 | 31945175 | 1058 | H3 histone, family 3C |
| KIAA1551 | chr12 | 32112352 | 32146043 | 33692 | KIAA1551 |
| RNU6-78P | chr12 | 32146772 | 32146802 | 31 | RNA, U6 small nuclear 78, pseudogene |
| BICD1 | chr12 | 32260184 | 32531141 | 270958 | bicaudal D homolog 1 (Drosophila) |
| TCRA | chr14 | 22314718 | 22534581 | 219864 | T cell receptor alpha constant |
| TRA@ | chr14 | 22362569 | 22534581 | 172013 | |
| TRAV20 | chr14 | 22508842 | 22509396 | 555 | T cell receptor alpha variable 20 |
| AV30S1 | chr14 | 22509128 | 22509405 | 278 | |
| TCRA | chr14 | 22538905 | 22539467 | 563 | T cell receptor alpha constant |
| TCRVA13 | chr14 | 22539214 | 22539470 | 257 | |
| AV2S1A1 | chr14 | 22356036 | 22745911 | 389876 | |
| TCRA | chr14 | 22554668 | 22555238 | 571 | T cell receptor alpha constant |
| TCRAVN1 | chr14 | 22580299 | 22580985 | 687 | |
| TRA@ | chr14 | 22591337 | 22592252 | 916 | |
| TCRA | chr14 | 22600965 | 22600989 | 25 | T cell receptor alpha constant |
| TCRA | chr14 | 22636292 | 22636879 | 588 | T cell receptor alpha constant |
| U39094 | chr14 | 22636757 | 22636881 | 125 | |
| TCRA | chr14 | 22293655 | 23021097 | 727443 | T cell receptor alpha constant |
| TCR-alpha | chr14 | 22336979 | 23000088 | 663110 | |
| V alpha immun | chr14 | 22675417 | 22676029 | 613 | |
| AV2S1 | chr14 | 22689762 | 22690367 | 606 | |
| TRA | chr14 | 22458652 | 23016719 | 558068 | T cell receptor alpha locus |
| TCR | chr14 | 22739820 | 22740442 | 623 | |
| T-cell receptor | chr14 | 22740275 | 22740445 | 171 | |
| TRD | chr14 | 22465824 | 23016719 | 550896 | T cell receptor delta locus |
| TRAC | chr14 | 22466122 | 23021097 | 554976 | T cell receptor alpha constant |
| av27s1 | chr14 | 22771875 | 22772438 | 564 | |
| TCR- alpha V 3 | chr14 | 22782884 | 22783343 | 460 | |
| TCR-alpha | chr14 | 22788567 | 22789122 | 556 | |
| hADV29S1 | chr14 | 22631190 | 23000088 | 368899 | T cell receptor alpha variable 29/delta variable 5 (gene/pseudogene) |
| TRA@ | chr14 | 22615959 | 23021097 | 405139 | |
| AV4S1 | chr14 | 22670486 | 22981890 | 311405 | |
| hADV36S1 | chr14 | 22694611 | 23016719 | 322109 | T cell receptor alpha variable 36/delta variable 7 |
| hADV38S2 | chr14 | 22748987 | 22962976 | 213990 | T cell receptor alpha variable 38-2/delta variable 8 |
| hDV102S1 | chr14 | 22891471 | 22892033 | 563 | T cell receptor delta variable 2 |
| AK125397 | chr14 | 22886527 | 22901726 | 15200 | |
| AK093552 | chr14 | 22849082 | 22951948 | 102867 | |
| TCRDV2J2 | chr14 | 22918106 | 22925700 | 7595 | |
| TRDC | chr14 | 22919080 | 22934912 | 15833 | T cell receptor delta constant |
| TCRDV2 | chr14 | 22928088 | 22934912 | 6825 | |
| hDV103S1 | chr14 | 22938034 | 22938658 | 625 | T cell receptor delta variable 3 |
| X61074 | chr14 | 22946618 | 22948187 | 1570 | |
| ATP9B | chr18 | 76829396 | 77138282 | 308887 | ATPase, class II, type 9B |
| RBFAFN | chr18 | 77806899 | 77839206 | 32308 | RBFA downstream neighbor (non-protein coding) |
| RBFA | chr18 | 77794345 | 77853788 | 59444 | ribosome binding factor A (putative) |
| ADNP2 | chr18 | 77866914 | 77898228 | 31315 | ADNP homeobox 2 |
| PARD6G-AS1 | chr18 | 77905806 | 77936315 | 30510 | PARD6G antisense RNA 1 |
| PARD6G | chr18 | 77915116 | 78005397 | 90282 | par-6 family cell polarity regulator gamma |
| IGLL1 | chr22 | 23915312 | 23922495 | 7184 | immunoglobulin lambda-like polypeptide 1 |
| DQ586720 | chr22 | 23952777 | 23952803 | 27 | |
| C22orf43 | chr22 | 23950638 | 23974508 | 23871 | aspartate-rich 1 |
| DRICH1 | chr22 | 23950638 | 23974508 | 23871 | aspartate-rich 1 |
| GUSBP11 | chr22 | 23980674 | 24059610 | 78937 | glucuronidase, beta pseudogene 11 |
| RGL4 | chr22 | 24032960 | 24041363 | 8404 | ral guanine nucleotide dissociation stimulator-like 4 |
| ZNF70 | chr22 | 24083771 | 24093279 | 9509 | zinc finger protein 70 |
| VPREB3 | chr22 | 24094929 | 24096630 | 1702 | pre-B lymphocyte 3 |
| C22orf15 | chr22 | 24105207 | 24108050 | 2844 | chromosome 22 open reading frame 15 |

| | | | | | |
|-------------|-------|----------|----------|--------|---|
| CHCHD10 | chr22 | 24108020 | 24110159 | 2140 | coiled-coil-helix-coiled-coil-helix domain containing 10 |
| MMP11 | chr22 | 24115035 | 24126503 | 11469 | matrix metalloproteinase 11 (stromelysin 3) |
| CABIN1 | chr22 | 24407764 | 24574596 | 166833 | calcineurin binding protein 1 |
| SUSD2 | chr22 | 24577443 | 24585074 | 7632 | sushi domain containing 2 |
| GGT5 | chr22 | 24615621 | 24641110 | 25490 | gamma-glutamyltransferase 5 |
| UNQ2565 | chr22 | 24647952 | 24649256 | 1305 | POM121-like |
| POM121L9P | chr22 | 24647588 | 24661492 | 13905 | POM121 transmembrane nucleoporin-like 9, pseudogene |
| DQ576853 | chr22 | 24658457 | 24658483 | 27 | |
| SPECC1L | chr22 | 24666784 | 24838325 | 171542 | sperm antigen with calponin homology and coiled-coil domains 1-like |
| SPECC1L-ADC | chr22 | 24666784 | 24838328 | 171545 | SPECC1L-ADORA2A readthrough (NMD candidate) |
| ADORA2A | chr22 | 24813708 | 24838328 | 24621 | adenosine A2a receptor |
| EU036692 | chr22 | 24827818 | 24828694 | 877 | |
| ADORA2A-AS1 | chr22 | 24825177 | 24890783 | 65607 | ADORA2A antisense RNA 1 |
| UPB1 | chr22 | 24863205 | 24922553 | 59349 | ureidopropionase, beta |
| PIWIL3 | chr22 | 25115000 | 25170687 | 55688 | piwi-like RNA-mediated gene silencing 3 |
| TOP1P2 | chr22 | 25160467 | 25161986 | 1520 | topoisomerase (DNA) I pseudogene 2 |
| CRYBB2 | chr22 | 25615611 | 25627836 | 12226 | crystallin, beta B2 |
| BC040576 | chr22 | 25677208 | 25679061 | 1854 | |
| IGLL3P | chr22 | 25714223 | 25716193 | 1971 | immunoglobulin lambda-like polypeptide 3, pseudogene |
| LRP5L | chr22 | 25747384 | 25777544 | 30161 | low density lipoprotein receptor-related protein 5-like |
| MIR6817 | chr22 | 25851612 | 25851678 | 67 | microRNA 6817 |
| CRYBB2P1 | chr22 | 25844053 | 25907585 | 63533 | crystallin, beta B2 pseudogene 1 |
| ADRBK2 | chr22 | 25960860 | 26125258 | 164399 | adrenergic, beta, receptor kinase 2 |
| MYO18B | chr22 | 26138119 | 26427007 | 288889 | myosin XVIIIB |
| SEZ6L | chr22 | 26565439 | 26779563 | 214125 | seizure related 6 homolog (mouse)-like |
| ASPHD2 | chr22 | 26825279 | 26840978 | 15700 | aspartate beta-hydroxylase domain containing 2 |
| HPS4 | chr22 | 26846848 | 26879829 | 32982 | Hermansky-Pudlak syndrome 4 |
| SRRD | chr22 | 26879845 | 26887904 | 8060 | SRR1 domain containing |
| TFIP11 | chr22 | 26887893 | 26908437 | 20545 | tufelin interacting protein 11 |
| MIR548J | chr22 | 26951177 | 26951289 | 113 | microRNA 548j |
| TPST2 | chr22 | 26921713 | 26986089 | 64377 | tyrosylprotein sulfotransferase 2 |
| CRYBB1 | chr22 | 26995361 | 27013991 | 18631 | crystallin, beta B1 |
| CRYBA4 | chr22 | 27017927 | 27026636 | 8710 | crystallin, beta A4 |
| MIAT | chr22 | 27053445 | 27072440 | 18996 | myocardial infarction associated transcript (non-protein coding) |
| AK124820 | chr22 | 27063655 | 27068617 | 4963 | |
| AK026502 | chr22 | 27068848 | 27114949 | 46102 | |
| MIATNB | chr22 | 27068805 | 27176856 | 108052 | MIAT neighbor (non-protein coding) |
| LINC01422 | chr22 | 27299254 | 27316573 | 17320 | long intergenic non-protein coding RNA 1422 |
| AK055980 | chr22 | 27444105 | 27456467 | 12363 | |
| BC015159 | chr22 | 27619257 | 27622760 | 3504 | |
| AX748308 | chr22 | 28276021 | 28277106 | 1086 | |
| PITPNB | chr22 | 28247656 | 28315294 | 67639 | phosphatidylinositol transfer protein, beta |
| MIR3199-1 | chr22 | 28316512 | 28316600 | 89 | microRNA 3199-1 |
| MIR3199-2 | chr22 | 28316513 | 28316599 | 87 | microRNA 3199-2 |
| TTC28-AS1 | chr22 | 28315363 | 28404267 | 88905 | TTC28 antisense RNA 1 |
| TTC28 | chr22 | 28374001 | 29075853 | 701853 | tetratricopeptide repeat domain 28 |
| MIR5739 | chr22 | 28855856 | 28855936 | 81 | microRNA 5739 |
| CHEK2 | chr22 | 29083730 | 29137822 | 54093 | checkpoint kinase 2 |
| ZNRF3 | chr22 | 29279754 | 29453476 | 173723 | zinc and ring finger 3 |
| ZNRF3-AS1 | chr22 | 29420986 | 29427464 | 6479 | ZNRF3 antisense RNA 1 |
| C22orf31 | chr22 | 29454659 | 29457907 | 3249 | chromosome 22 open reading frame 31 |
| KREMEN1 | chr22 | 29469065 | 29564321 | 95257 | kringle containing transmembrane protein 1 |
| EMID1 | chr22 | 29601900 | 29655586 | 53687 | EMI domain containing 1 |
| RHBDD3 | chr22 | 29655843 | 29663914 | 8072 | rhomboid domain containing 3 |
| EWSR1 | chr22 | 29663997 | 29696515 | 32519 | EWS RNA-binding protein 1 |
| RFPL1S | chr22 | 29833003 | 29838118 | 5116 | RFPL1 antisense RNA 1 |
| RFPL1 | chr22 | 29834571 | 29838444 | 3874 | ret finger protein-like 1 |
| NEFH | chr22 | 29876180 | 29887277 | 11098 | neurofilament, heavy polypeptide |
| KIAA0845 | chr22 | 29885264 | 29887277 | 2014 | |
| THOC5 | chr22 | 29904155 | 29949736 | 45582 | THO complex 5 |
| NIPSNAP1 | chr22 | 29950797 | 29977326 | 26530 | nipsnap homolog 1 (C. elegans) |
| NF2 | chr22 | 29999544 | 30094589 | 95046 | neurofibromin 2 (merlin) |
| CABP7 | chr22 | 30116343 | 30127820 | 11478 | calcium binding protein 7 |
| ZMAT5 | chr22 | 30126944 | 30163000 | 36057 | zinc finger, matrin-type 5 |
| MTMR3 | chr22 | 30279157 | 30426857 | 147701 | myotubularin related protein 3 |
| MIR6818 | chr22 | 30403037 | 30403102 | 66 | microRNA 6818 |
| HORMAD2-AS | chr22 | 30404730 | 30476469 | 71740 | HORMAD2 antisense RNA 1 |
| HORMAD2 | chr22 | 30476452 | 30573062 | 96611 | HORMA domain containing 2 |
| PES1 | chr22 | 30972611 | 31003000 | 30390 | pescadillo ribosomal biogenesis factor 1 |
| TCN2 | chr22 | 31003069 | 31023047 | 19979 | transcobalamin II |
| SLC35E4 | chr22 | 31031792 | 31065003 | 33212 | solute carrier family 35, member E4 |
| DUSP18 | chr22 | 31048037 | 31063872 | 15836 | dual specificity phosphatase 18 |
| MIR3200 | chr22 | 31127543 | 31127628 | 86 | microRNA 3200 |
| OSBP2 | chr22 | 31089768 | 31303811 | 214044 | oxysterol binding protein 2 |
| MORC2-AS1 | chr22 | 31318294 | 31322640 | 4347 | MORC2 antisense RNA 1 |
| MORC2 | chr22 | 31322599 | 31364187 | 41589 | MORC family CW-type zinc finger 2 |
| TUG1 | chr22 | 31365196 | 31375380 | 10185 | taurine up-regulated 1 (non-protein coding) |
| SMTN | chr22 | 31477281 | 31500610 | 23330 | smoothelin |
| AX747817 | chr22 | 31497861 | 31500743 | 2883 | |
| SELM | chr22 | 31500762 | 31503551 | 2790 | selenoprotein M |

| | | | | | |
|--------------|-------|----------|----------|--------|---|
| INPP5J | chr22 | 31503960 | 31530683 | 26724 | inositol polyphosphate-5-phosphatase J |
| PLA2G3 | chr22 | 31530792 | 31536593 | 5802 | phospholipase A2, group III |
| MIR3928 | chr22 | 31556047 | 31556105 | 59 | microRNA 3928 |
| RNF185 | chr22 | 31556137 | 31603005 | 46869 | ring finger protein 185 |
| BC069815 | chr22 | 31601248 | 31601602 | 355 | |
| Y_RNA | chr22 | 31626056 | 31626158 | 103 | |
| LIMK2 | chr22 | 31608249 | 31676066 | 67818 | LIM domain kinase 2 |
| Mir_1302 | chr22 | 32452438 | 32452490 | 53 | |
| SLC5A1 | chr22 | 32439018 | 32509011 | 69994 | solute carrier family 5 (sodium/glucose cotransporter), member 1 |
| AP1B1P1 | chr22 | 32517963 | 32529456 | 11494 | adaptor-related protein complex 1, beta 1 subunit pseudogene 1 |
| JB175027 | chr22 | 32524336 | 32524357 | 22 | |
| C22orf42 | chr22 | 32545518 | 32555243 | 9726 | chromosome 22 open reading frame 42 |
| RFPL2 | chr22 | 32586421 | 32600718 | 14298 | ret finger protein-like 2 |
| SLC5A4 | chr22 | 32614462 | 32651318 | 36857 | solute carrier family 5 (glucose activated ion channel), member 4 |
| JB153905 | chr22 | 32744122 | 32744144 | 23 | |
| RFPL3 | chr22 | 32750871 | 32757148 | 6278 | ret finger protein-like 3 |
| RFPL3S | chr22 | 32755892 | 32767251 | 11360 | RFPL3 antisense |
| LOC339666 | chr22 | 32772650 | 32780329 | 7680 | uncharacterized LOC339666 |
| RTCB | chr22 | 32783561 | 32808274 | 24714 | RNA 2',3'-cyclic phosphate and 5'-OH ligase |
| BPIFC | chr22 | 32809833 | 32860433 | 50601 | BPI fold containing family C |
| FBXO7 | chr22 | 32870706 | 32894818 | 24113 | F-box protein 7 |
| AK123891 | chr22 | 32896531 | 32898414 | 1884 | |
| 5S_rRNA | chr22 | 33031087 | 33031184 | 98 | |
| SYN3 | chr22 | 32908539 | 33454377 | 545839 | synapsin III |
| TIMP3 | chr22 | 33196801 | 33259028 | 62228 | TIMP metalloproteinase inhibitor 3 |
| MIR4764 | chr22 | 33832567 | 33832655 | 89 | microRNA 4764 |
| LARGE | chr22 | 33669061 | 34318584 | 649524 | like-glycosyltransferase |
| SNORA50 | chr22 | 34100771 | 34100908 | 138 | small nucleolar RNA, H/ACA box 76A |
| LARGE-AS1 | chr22 | 34120971 | 34146803 | 25833 | LARGE antisense RNA 1 |
| ISX | chr22 | 35462129 | 35483380 | 21252 | intestine-specific homeobox |
| HMGXB4 | chr22 | 35653444 | 35691800 | 38357 | HMG box domain containing 4 |
| TOM1 | chr22 | 35695267 | 35743987 | 48721 | target of myb1 (chicken) |
| MIR3909 | chr22 | 35731632 | 35731751 | 120 | microRNA 3909 |
| MIR6069 | chr22 | 35732713 | 35732792 | 80 | microRNA 6069 |
| RASD2 | chr22 | 35937351 | 35950045 | 12695 | RASD family, member 2 |
| MB | chr22 | 36002810 | 36019401 | 16592 | myoglobin |
| LOC284912 | chr22 | 36023037 | 36031181 | 8145 | uncharacterized LOC284912 |
| APOL6 | chr22 | 36044423 | 36064456 | 20034 | apolipoprotein L, 6 |
| APOL5 | chr22 | 36113918 | 36125529 | 11612 | apolipoprotein L, 5 |
| RBFOX2 | chr22 | 36134782 | 36424585 | 289804 | RNA binding protein, fox-1 homolog (C. elegans) 2 |
| APOL3 | chr22 | 36536370 | 36562225 | 25856 | apolipoprotein L, 3 |
| APOL4 | chr22 | 36585175 | 36600879 | 15705 | apolipoprotein L, 4 |
| APOL2 | chr22 | 36622254 | 36636000 | 13747 | apolipoprotein L, 2 |
| MFNG | chr22 | 37865100 | 37882478 | 17379 | MFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase |
| CARD10 | chr22 | 37875382 | 37915378 | 39997 | caspase recruitment domain family, member 10 |
| GTPBP1 | chr22 | 39101806 | 39129592 | 27787 | GTP binding protein 1 |
| SUN2 | chr22 | 39130718 | 39190161 | 59444 | Sad1 and UNC84 domain containing 2 |
| DNAL4 | chr22 | 39174512 | 39190161 | 15650 | dynein, axonemal, light chain 4 |
| NPTXR | chr22 | 39214455 | 39240017 | 25563 | neuronal pentraxin receptor |
| CBX6 | chr22 | 39260247 | 39268258 | 8012 | chromobox homolog 6 |
| CACNA11 | chr22 | 39966757 | 40085740 | 118984 | calcium channel, voltage-dependent, T type, alpha 11 subunit |
| ENTHD1 | chr22 | 40139048 | 40289794 | 150747 | ENTH domain containing 1 |
| GRAP2 | chr22 | 40297085 | 40369346 | 72262 | GRB2-related adaptor protein 2 |
| FAM83F | chr22 | 40390952 | 40426043 | 35092 | family with sequence similarity 83, member F |
| LOC100130899 | chr22 | 40428335 | 40432581 | 4247 | uncharacterized LOC100130899 |
| TNRC6B | chr22 | 40440820 | 40731812 | 290993 | trinucleotide repeat containing 6B |
| ADSL | chr22 | 40742503 | 40762575 | 20073 | adenylosuccinate lyase |
| SGSM3 | chr22 | 40766594 | 40806293 | 39700 | small G protein signaling modulator 3 |
| MKL1 | chr22 | 40806284 | 41032723 | 226440 | Megakaryoblastic leukemia 1 |
| LOC101927257 | chr22 | 40917803 | 40922711 | 4909 | uncharacterized LOC101927257 |
| LINC01315 | chr22 | 42760405 | 42765214 | 4810 | long intergenic non-protein coding RNA 1315 |
| BC038245 | chr22 | 42760534 | 42765180 | 4647 | |
| NFAM1 | chr22 | 42776413 | 42828401 | 51989 | NFAT activating protein with ITAM motif 1 |
| SERHL | chr22 | 42896584 | 42908566 | 11983 | serine hydrolase-like |
| RRP7A | chr22 | 42904340 | 42915829 | 11490 | ribosomal RNA processing 7 homolog A (S. cerevisiae) |
| SERHL2 | chr22 | 42949867 | 42970388 | 20522 | serine hydrolase-like 2 |
| RRP7B | chr22 | 42951228 | 42978017 | 26790 | ribosomal RNA processing 7 homolog B (S. cerevisiae) |
| POLDIP3 | chr22 | 42979726 | 43010968 | 31243 | polymerase (DNA-directed), delta interacting protein 3 |
| CS330190 | chr22 | 43172869 | 43172890 | 22 | |
| DQ595055 | chr22 | 43182195 | 43182228 | 34 | |
| ARFGAP3 | chr22 | 43192531 | 43253408 | 60878 | ADP-ribosylation factor GTPase activating protein 3 |
| PACSN2 | chr22 | 43265771 | 43411184 | 145414 | protein kinase C and casein kinase substrate in neurons 2 |
| EFCAB6 | chr22 | 43924623 | 44208217 | 283595 | EF-hand calcium binding domain 6 |
| AX747137 | chr22 | 44220386 | 44222913 | 2528 | |
| SULT4A1 | chr22 | 44220386 | 44258378 | 37993 | sulfotransferase family 4A, member 1 |
| PNPLA5 | chr22 | 44275557 | 44287893 | 12337 | patatin-like phospholipase domain containing 5 |
| PNPLA3 | chr22 | 44319618 | 44360433 | 40816 | patatin-like phospholipase domain containing 3 |
| LOC101927526 | chr22 | 44839206 | 44840668 | 1463 | uncharacterized LOC101927526 |
| LDOC1L | chr22 | 44888449 | 44894005 | 5557 | leucine zipper, down-regulated in cancer 1-like |
| LINC00207 | chr22 | 44965219 | 44968329 | 3111 | long intergenic non-protein coding RNA 207 |

| | | | | | |
|--------------|-------|----------|----------|---------|--|
| LINC00229 | chr22 | 45002207 | 45021299 | 19093 | long intergenic non-protein coding RNA 229 |
| PRR5 | chr22 | 45064426 | 45133561 | 69136 | proline rich 5 (renal) |
| PRR5-ARHGAF | chr22 | 45098077 | 45258664 | 160588 | PRR5-ARHGAP8 readthrough |
| ARHGAP8 | chr22 | 45148437 | 45258664 | 110228 | Rho GTPase activating protein 8 |
| PHF21B | chr22 | 45277042 | 45405809 | 128768 | PHD finger protein 21B |
| NUP50-AS1 | chr22 | 45529638 | 45559662 | 30025 | NUP50 antisense RNA 1 (head to head) |
| LOC100506714 | chr22 | 45529638 | 45559662 | 30025 | NUP50 antisense RNA 1 (head to head) |
| NUP50 | chr22 | 45559725 | 45583890 | 24166 | nucleoporin 50kDa |
| ATXN10 | chr22 | 46067677 | 46241187 | 173511 | ataxin 10 |
| MIR4762 | chr22 | 46156403 | 46156478 | 76 | microRNA 4762 |
| MIRLET7BHG | chr22 | 46449725 | 46509808 | 60084 | MIRLET7B host gene (non-protein coding) |
| MIRLET7B | chr22 | 46509565 | 46509648 | 84 | microRNA let-7b |
| PPARA | chr22 | 46546498 | 46639653 | 93156 | peroxisome proliferator-activated receptor alpha |
| LOC101927722 | chr22 | 47857047 | 47882860 | 25814 | uncharacterized LOC101927722 |
| BC037972 | chr22 | 47857047 | 47882860 | 25814 | |
| LINC00898 | chr22 | 48016791 | 48027318 | 10528 | long intergenic non-protein coding RNA 898 |
| BC039485 | chr22 | 48027451 | 48038545 | 11095 | |
| LOC284930 | chr22 | 48027422 | 48251349 | 223928 | uncharacterized LOC284930 |
| AK093107 | chr22 | 48027451 | 48251349 | 223899 | |
| MIR3201 | chr22 | 48670175 | 48670227 | 53 | microRNA 3201 |
| LOC284933 | chr22 | 48934711 | 48943199 | 8489 | uncharacterized LOC284933 |
| FAM19A5 | chr22 | 48885271 | 49147747 | 262477 | family with sequence similarity 19 (chemokine (C-C motif)-like), member A5 |
| MIR4535 | chr22 | 49176106 | 49176165 | 60 | microRNA 4535 |
| LINC01310 | chr22 | 49262581 | 49294198 | 31618 | long intergenic non-protein coding RNA 1310 |
| LOC100128946 | chr22 | 49262581 | 49294198 | 31618 | long intergenic non-protein coding RNA 1310 |
| C22orf34 | chr22 | 49808173 | 50051190 | 243018 | chromosome 22 open reading frame 34 |
| BC033837 | chr22 | 49808173 | 50051190 | 243018 | |
| DMD | chrX | 31137344 | 33357726 | 2220383 | dystrophin |
| JA783513 | chrX | 32827657 | 32827688 | 32 | |
| JA783507 | chrX | 32834568 | 32834591 | 24 | |
| JA202257 | chrX | 32834661 | 32834692 | 32 | |
| JA783500 | chrX | 32862888 | 32862913 | 26 | |
| JA783498 | chrX | 32862937 | 32862967 | 31 | |
| JA783489 | chrX | 32867872 | 32867918 | 47 | |
| JA783482 | chrX | 33038257 | 33038311 | 55 | |