

| GeneID   | Length | Symbol   | log2FoldChange<br>(CTNS <sup>-/-</sup> /CTNS <sup>+/+</sup> ) | P <sub>value</sub> | P <sub>adj</sub> |
|----------|--------|----------|---------------------------------------------------------------|--------------------|------------------|
| 8653     | 4476   | DDX3Y    | 8.66                                                          | 1.69E-99           | 1.33E-97         |
| 8287     | 9284   | USP9Y    | 8.30                                                          | 1.04E-114          | 1.05E-112        |
| 2028     | 3400   | ENPEP    | 7.86                                                          | 4.78E-247          | 1.89E-244        |
| 590      | 2449   | BCHE     | 7.59                                                          | 9.06E-76           | 4.52E-74         |
| 7404     | 6186   | UTY      | 7.42                                                          | 1.10E-60           | 3.92E-59         |
| 9086     | 1411   | EIF1AY   | 7.37                                                          | 1.16E-59           | 4.05E-58         |
| 7544     | 5312   | ZFY      | 7.33                                                          | 6.46E-64           | 2.50E-62         |
| 55655    | 3590   | NLRP2    | 7.29                                                          | 5.33E-63           | 2.02E-61         |
| 8209     | 1623   | C21orf33 | 7.28                                                          | 3.81E-82           | 2.14E-80         |
| 4237     | 1124   | MFAP2    | 7.17                                                          | 6.02E-147          | 9.64E-145        |
| 5947     | 913    | RBP1     | 7.11                                                          | 2.40E-87           | 1.51E-85         |
| 151258   | 2158   | SLC38A11 | 6.88                                                          | 9.51E-50           | 2.55E-48         |
| 22829    | 4262   | NLGN4Y   | 6.68                                                          | 5.92E-46           | 1.42E-44         |
| 1.01E+08 | 702    | KRBOX1   | 6.63                                                          | 4.33E-57           | 1.42E-55         |
| 846      | 5270   | CASR     | 6.54                                                          | 2.22E-43           | 4.95E-42         |
| 26762    | 2044   | HAVCR1   | 6.53                                                          | 0.00E+00           | 0.00E+00         |
| 9476     | 1605   | NAPSA    | 6.44                                                          | 6.17E-42           | 1.31E-40         |
| 5672     | 2113   | PSG4     | 6.34                                                          | 1.70E-54           | 5.23E-53         |
| 3547     | 2846   | IGSF1    | 6.33                                                          | 5.89E-40           | 1.17E-38         |
| 1E+08    | 5427   | C4B_2    | 6.24                                                          | 7.35E-38           | 1.37E-36         |
| 10568    | 4165   | SLC34A2  | 6.23                                                          | 0.00E+00           | 0.00E+00         |
| 6678     | 3603   | SPARC    | 6.15                                                          | 0.00E+00           | 0.00E+00         |
| 84557    | 1047   | MAP1LC3A | 6.10                                                          | 1.82E-65           | 7.28E-64         |
| 204962   | 4825   | SLC44A5  | 6.10                                                          | 1.39E-172          | 2.77E-170        |
| 9971     | 1877   | NR1H4    | 6.06                                                          | 1.87E-48           | 4.76E-47         |
| 9365     | 4633   | KL       | 6.05                                                          | 5.19E-58           | 1.73E-56         |
| 154664   | 16575  | ABCA13   | 6.04                                                          | 2.91E-51           | 8.04E-50         |
| 9547     | 1989   | CXCL14   | 6.03                                                          | 0.00E+00           | 0.00E+00         |
| 54627    | 5455   | MAP10    | 5.99                                                          | 1.24E-34           | 2.06E-33         |
| 2242     | 2714   | FES      | 5.95                                                          | 2.23E-49           | 5.88E-48         |
| 84898    | 11392  | PLXDC2   | 5.77                                                          | 3.53E-48           | 8.85E-47         |
| 165      | 4095   | AEBP1    | 5.76                                                          | 7.78E-56           | 2.46E-54         |
| 55258    | 2226   | THNSL2   | 5.64                                                          | 6.10E-43           | 1.34E-41         |
| 6568     | 2009   | SLC17A1  | 5.64                                                          | 2.27E-40           | 4.58E-39         |
| 85453    | 4478   | TSPYL5   | 5.62                                                          | 2.69E-129          | 3.46E-127        |
| 7373     | 6792   | COL14A1  | 5.60                                                          | 5.78E-74           | 2.77E-72         |
| 1577     | 1617   | CYP3A5   | 5.52                                                          | 5.90E-43           | 1.30E-41         |
| 26539    | 1127   | OR10H1   | 5.51                                                          | 6.98E-28           | 9.06E-27         |
| 138065   | 2971   | RNF183   | 5.49                                                          | 6.80E-58           | 2.26E-56         |
| 81031    | 4232   | SLC2A10  | 5.45                                                          | 3.14E-71           | 1.42E-69         |
| 26287    | 1520   | ANKRD2   | 5.36                                                          | 2.07E-35           | 3.53E-34         |
| 83690    | 4286   | CRISPLD1 | 5.36                                                          | 1.01E-129          | 1.33E-127        |

|          |       |          |      |           |           |
|----------|-------|----------|------|-----------|-----------|
| 56477    | 2175  | CCL28    | 5.31 | 1.95E-73  | 9.18E-72  |
| 79781    | 3185  | IQCA1    | 5.26 | 2.86E-102 | 2.37E-100 |
| 5174     | 2100  | PDZK1    | 5.26 | 0.00E+00  | 0.00E+00  |
| 6913     | 3463  | TBX15    | 5.23 | 5.02E-199 | 1.39E-196 |
| 10417    | 1825  | SPON2    | 5.21 | 1.99E-28  | 2.64E-27  |
| 2348     | 1140  | FOLR1    | 5.19 | 0.00E+00  | 0.00E+00  |
| 8808     | 2712  | IL1RL2   | 5.17 | 6.90E-28  | 8.96E-27  |
| 10537    | 1006  | UBD      | 5.16 | 1.87E-70  | 8.26E-69  |
| 9087     | 1702  | TMSB4Y   | 5.16 | 1.30E-23  | 1.40E-22  |
| 56142    | 5430  | PCDHA6   | 5.16 | 6.05E-32  | 9.19E-31  |
| 137970   | 8985  | UNC5D    | 5.14 | 5.98E-36  | 1.04E-34  |
| 114805   | 5683  | GALNT13  | 5.13 | 2.46E-27  | 3.11E-26  |
| 51365    | 1801  | PLA1A    | 5.03 | 3.47E-140 | 5.31E-138 |
| 10786    | 1649  | SLC17A3  | 5.01 | 1.41E-33  | 2.27E-32  |
| 143686   | 9443  | SES3     | 5.00 | 1.02E-209 | 3.06E-207 |
| 216      | 2378  | ALDH1A1  | 4.97 | 5.61E-224 | 1.85E-221 |
| 124976   | 4349  | SPNS2    | 4.95 | 0.00E+00  | 0.00E+00  |
| 1285     | 7277  | COL4A3   | 4.95 | 6.84E-169 | 1.34E-166 |
| 6750     | 665   | SST      | 4.94 | 3.08E-21  | 2.95E-20  |
| 222611   | 5135  | ADGRF2   | 4.94 | 6.76E-23  | 6.99E-22  |
| 140886   | 3447  | PABPC5   | 4.93 | 1.51E-26  | 1.85E-25  |
| 1396     | 480   | CRIP1    | 4.89 | 3.93E-38  | 7.43E-37  |
| 54328    | 4269  | GPR173   | 4.89 | 1.69E-73  | 7.99E-72  |
| 202374   | 4059  | STK32A   | 4.88 | 1.47E-20  | 1.37E-19  |
| 5625     | 2008  | PRODH    | 4.86 | 3.24E-20  | 2.96E-19  |
| 4094     | 6143  | MAF      | 4.84 | 1.57E-69  | 6.79E-68  |
| 6328     | 8756  | SCN3A    | 4.83 | 2.03E-52  | 5.86E-51  |
| 57556    | 6643  | SEMA6A   | 4.79 | 5.40E-106 | 4.80E-104 |
| 57586    | 5184  | SYT13    | 4.78 | 4.12E-251 | 1.70E-248 |
| 284217   | 8782  | LAMA1    | 4.78 | 0.00E+00  | 0.00E+00  |
| 56521    | 1111  | DNAJC12  | 4.75 | 8.47E-43  | 1.86E-41  |
| 26471    | 887   | NUPR1    | 4.74 | 5.32E-211 | 1.66E-208 |
| 6539     | 3234  | SLC6A12  | 4.74 | 1.22E-37  | 2.26E-36  |
| 1.03E+08 | 2544  | CBSL     | 4.73 | 0.00E+00  | 0.00E+00  |
| 6519     | 2350  | SLC3A1   | 4.72 | 2.66E-29  | 3.67E-28  |
| 3115     | 4055  | HLA-DPB1 | 4.72 | 1.75E-71  | 7.94E-70  |
| 1E+08    | 2671  | ZNF730   | 4.71 | 2.43E-20  | 2.23E-19  |
| 2263     | 3977  | FGFR2    | 4.69 | 1.61E-198 | 4.41E-196 |
| 728689   | 2090  | EIF3CL   | 4.66 | 5.89E-131 | 7.99E-129 |
| 389840   | 4419  | MAP3K15  | 4.65 | 7.24E-29  | 9.80E-28  |
| 10690    | 12894 | FUT9     | 4.63 | 5.03E-81  | 2.77E-79  |
| 341640   | 16179 | FREM2    | 4.62 | 1.19E-50  | 3.25E-49  |
| 56144    | 5365  | PCDHA4   | 4.61 | 9.61E-18  | 7.79E-17  |
| 4057     | 2648  | LTF      | 4.60 | 3.48E-71  | 1.57E-69  |
| 3936     | 3708  | LCP1     | 4.60 | 1.27E-181 | 2.75E-179 |
| 710      | 1844  | SERPING1 | 4.58 | 8.56E-237 | 3.17E-234 |
| 81615    | 1906  | TMEM163  | 4.57 | 8.86E-127 | 1.05E-124 |
| 1580     | 1982  | CYP4B1   | 4.56 | 3.70E-42  | 7.98E-41  |

|          |       |              |      |           |           |
|----------|-------|--------------|------|-----------|-----------|
| 4881     | 4196  | NPR1         | 4.56 | 1.40E-18  | 1.18E-17  |
| 167410   | 3979  | LIX1         | 4.55 | 7.21E-32  | 1.09E-30  |
| 153218   | 509   | SPINK13      | 4.54 | 9.02E-42  | 1.91E-40  |
| 151651   | 1984  | EFHB         | 4.52 | 6.16E-39  | 1.19E-37  |
| 91156    | 11711 | IGFN1        | 4.50 | 3.04E-271 | 1.46E-268 |
| 8706     | 3356  | B3GALNT1     | 4.50 | 1.13E-70  | 4.99E-69  |
| 123      | 2026  | PLIN2        | 4.49 | 1.52E-235 | 5.50E-233 |
| 388630   | 5146  | TRABD2B      | 4.48 | 8.06E-228 | 2.81E-225 |
| 340578   | 2612  | DCAF12L2     | 4.48 | 9.98E-21  | 9.36E-20  |
| 8631     | 1378  | SKAP1        | 4.46 | 1.40E-36  | 2.50E-35  |
| 56098    | 4623  | PCDHGC4      | 4.46 | 8.34E-53  | 2.43E-51  |
| 4246     | 521   | SCGB2A1      | 4.46 | 7.43E-18  | 6.07E-17  |
| 1.03E+08 | 450   | LINC01835    | 4.45 | 7.57E-18  | 6.17E-17  |
| 6540     | 1758  | SLC6A13      | 4.42 | 1.01E-32  | 1.56E-31  |
| 51477    | 2192  | ISYNA1       | 4.39 | 0.00E+00  | 0.00E+00  |
| 26167    | 2926  | PCDHB5       | 4.39 | 3.62E-36  | 6.34E-35  |
| 139221   | 4143  | MUM1L1       | 4.38 | 9.75E-24  | 1.05E-22  |
| 203859   | 6658  | ANO5         | 4.38 | 5.65E-25  | 6.43E-24  |
| 1.01E+08 | 2281  | TBC1D3D      | 4.37 | 1.04E-90  | 6.84E-89  |
| 7620     | 2100  | ZNF69        | 4.34 | 1.89E-46  | 4.59E-45  |
| 55466    | 3011  | DNAJA4       | 4.33 | 3.40E-47  | 8.42E-46  |
| 6696     | 1635  | SPP1         | 4.31 | 0.00E+00  | 0.00E+00  |
| 1.02E+08 | 2247  | LOC101929839 | 4.31 | 8.15E-98  | 6.16E-96  |
| 5502     | 1689  | PPP1R1A      | 4.31 | 0.00E+00  | 0.00E+00  |
| 122402   | 4245  | TDRD9        | 4.30 | 5.43E-19  | 4.67E-18  |
| 1.08E+08 | 2247  | LOC107987205 | 4.30 | 1.15E-74  | 5.59E-73  |
| 729085   | 3449  | FAM198A      | 4.28 | 3.32E-16  | 2.46E-15  |
| 729877   | 2048  | TBC1D3H      | 4.27 | 8.23E-15  | 5.64E-14  |
| 26157    | 1523  | GIMAP2       | 4.26 | 7.22E-21  | 6.81E-20  |
| 2615     | 4130  | LRRC32       | 4.24 | 5.18E-105 | 4.54E-103 |
| 25999    | 3391  | CLIP3        | 4.22 | 8.47E-131 | 1.14E-128 |
| 1644     | 2058  | DDC          | 4.22 | 2.65E-28  | 3.49E-27  |
| 151354   | 6366  | FAM84A       | 4.20 | 5.63E-39  | 1.09E-37  |
| 222643   | 3128  | UNC5CL       | 4.19 | 1.56E-79  | 8.43E-78  |
| 8756     | 3397  | ADAM7        | 4.18 | 1.93E-23  | 2.05E-22  |
| 9022     | 815   | CLIC3        | 4.16 | 8.22E-47  | 2.02E-45  |
| 91543    | 3607  | RSAD2        | 4.16 | 9.93E-29  | 1.33E-27  |
| 5063     | 6571  | PAK3         | 4.16 | 2.00E-37  | 3.68E-36  |
| 680      | 1413  | BRS3         | 4.14 | 4.95E-15  | 3.43E-14  |
| 153020   | 2918  | RASGEF1B     | 4.12 | 1.02E-43  | 2.31E-42  |
| 79836    | 7765  | LONRF3       | 4.12 | 1.63E-38  | 3.11E-37  |
| 115701   | 5720  | ALPK2        | 4.08 | 0.00E+00  | 0.00E+00  |
| 5669     | 2050  | PSG1         | 4.07 | 6.40E-37  | 1.15E-35  |
| 827      | 3604  | CAPN6        | 4.06 | 1.45E-55  | 4.56E-54  |
| 7367     | 2099  | UGT2B17      | 4.06 | 1.55E-17  | 1.25E-16  |
| 342527   | 2019  | SMTNL2       | 4.06 | 7.36E-59  | 2.50E-57  |
| 80059    | 3464  | LRRTM4       | 4.05 | 2.82E-13  | 1.73E-12  |
| 4939     | 3192  | OAS2         | 4.05 | 3.40E-78  | 1.76E-76  |

|          |       |              |      |           |           |
|----------|-------|--------------|------|-----------|-----------|
| 9938     | 2140  | ARHGAP25     | 4.04 | 2.58E-18  | 2.15E-17  |
| 85409    | 2026  | NKD2         | 4.03 | 3.72E-16  | 2.75E-15  |
| 79656    | 1849  | BEND5        | 4.02 | 2.99E-19  | 2.62E-18  |
| 1.08E+08 | 2525  | LOC107986351 | 4.02 | 2.59E-23  | 2.73E-22  |
| 9215     | 3308  | LARGE1       | 4.01 | 1.39E-93  | 9.77E-92  |
| 3702     | 4065  | ITK          | 4.00 | 8.95E-15  | 6.11E-14  |
| 353345   | 3685  | GPR141       | 3.99 | 7.46E-13  | 4.44E-12  |
| 57633    | 5976  | LRRN1        | 3.97 | 1.82E-15  | 1.30E-14  |
| 2331     | 3271  | FMOD         | 3.97 | 1.85E-48  | 4.71E-47  |
| 7412     | 3197  | VCAM1        | 3.95 | 1.39E-191 | 3.34E-189 |
| 10516    | 2637  | FBLN5        | 3.94 | 4.19E-54  | 1.27E-52  |
| 83988    | 3581  | NCALD        | 3.93 | 3.53E-18  | 2.92E-17  |
| 5314     | 13813 | PKHD1        | 3.93 | 1.08E-122 | 1.22E-120 |
| 10912    | 1049  | GADD45G      | 3.91 | 3.65E-24  | 3.99E-23  |
| 11262    | 1359  | SP140        | 3.91 | 9.54E-32  | 1.44E-30  |
| 63910    | 2605  | SLC17A9      | 3.91 | 5.46E-71  | 2.44E-69  |
| 84968    | 2278  | PNMA6A       | 3.88 | 4.70E-12  | 2.65E-11  |
| 3764     | 2396  | KCNJ8        | 3.88 | 2.35E-33  | 3.74E-32  |
| 26223    | 1794  | FBXL21       | 3.86 | 1.56E-14  | 1.05E-13  |
| 5973     | 1473  | RENBP        | 3.86 | 3.59E-19  | 3.12E-18  |
| 79170    | 1491  | PRR15L       | 3.86 | 9.21E-13  | 5.46E-12  |
| 9245     | 2240  | GCNT3        | 3.86 | 5.57E-73  | 2.60E-71  |
| 9201     | 6637  | DCLK1        | 3.85 | 1.15E-97  | 8.64E-96  |
| 133688   | 2789  | UGT3A1       | 3.85 | 7.84E-12  | 4.36E-11  |
| 2678     | 2506  | GGT1         | 3.84 | 0.00E+00  | 0.00E+00  |
| 79589    | 2851  | RNF128       | 3.84 | 1.09E-118 | 1.17E-116 |
| 1837     | 4997  | DTNA         | 3.84 | 3.73E-60  | 1.32E-58  |
| 140733   | 4139  | MACROD2      | 3.83 | 4.67E-98  | 3.55E-96  |
| 91937    | 2965  | TIMD4        | 3.83 | 2.42E-24  | 2.67E-23  |
| 27255    | 3511  | CNTN6        | 3.81 | 6.49E-84  | 3.78E-82  |
| 3772     | 3689  | KCNJ15       | 3.80 | 0.00E+00  | 0.00E+00  |
| 57631    | 4876  | LRCH2        | 3.79 | 7.27E-109 | 6.80E-107 |
| 728957   | 3465  | ZNF705D      | 3.79 | 4.38E-13  | 2.64E-12  |
| 64344    | 5374  | HIF3A        | 3.78 | 2.07E-19  | 1.83E-18  |
| 5919     | 765   | RARRES2      | 3.78 | 2.20E-127 | 2.67E-125 |
| 3248     | 2834  | HPGD         | 3.77 | 1.83E-108 | 1.69E-106 |
| 6444     | 6042  | SGCD         | 3.77 | 1.90E-15  | 1.35E-14  |
| 3748     | 5075  | KCNC3        | 3.77 | 9.44E-94  | 6.68E-92  |
| 80704    | 3927  | SLC19A3      | 3.76 | 1.89E-15  | 1.35E-14  |
| 3026     | 3069  | HABP2        | 3.75 | 1.55E-71  | 7.04E-70  |
| 5455     | 4525  | POU3F3       | 3.74 | 8.06E-289 | 4.34E-286 |
| 9075     | 2932  | CLDN2        | 3.74 | 1.12E-205 | 3.31E-203 |
| 55228    | 3679  | PNMA8A       | 3.74 | 1.77E-58  | 5.98E-57  |
| 9369     | 7215  | NRXN3        | 3.73 | 7.00E-92  | 4.77E-90  |
| 570      | 3377  | BAAT         | 3.71 | 7.29E-41  | 1.49E-39  |
| 10246    | 2205  | SLC17A2      | 3.71 | 6.52E-11  | 3.43E-10  |
| 8284     | 6697  | KDM5D        | 3.69 | 2.12E-165 | 4.01E-163 |
| 163351   | 4853  | GBP6         | 3.69 | 2.76E-12  | 1.58E-11  |

|          |      |              |      |           |           |
|----------|------|--------------|------|-----------|-----------|
| 57101    | 3593 | ANO2         | 3.68 | 6.63E-20  | 5.99E-19  |
| 440077   | 3438 | ZNF705A      | 3.67 | 2.19E-11  | 1.19E-10  |
| 2239     | 3714 | GPC4         | 3.66 | 3.24E-234 | 1.15E-231 |
| 3627     | 1227 | CXCL10       | 3.65 | 2.88E-11  | 1.55E-10  |
| 249      | 2487 | ALPL         | 3.64 | 5.07E-41  | 1.05E-39  |
| 131616   | 997  | TMEM42       | 3.64 | 1.35E-22  | 1.37E-21  |
| 84680    | 2039 | ACCS         | 3.64 | 2.48E-58  | 8.37E-57  |
| 23302    | 5766 | WSCD1        | 3.64 | 1.61E-112 | 1.60E-110 |
| 346689   | 1514 | KLRG2        | 3.63 | 5.62E-61  | 2.03E-59  |
| 4316     | 1153 | MMP7         | 3.61 | 0.00E+00  | 0.00E+00  |
| 26289    | 2489 | AK5          | 3.60 | 3.25E-85  | 1.96E-83  |
| 115908   | 1261 | CTHRC1       | 3.60 | 2.31E-252 | 9.75E-250 |
| 1437     | 800  | CSF2         | 3.60 | 5.33E-17  | 4.16E-16  |
| 6819     | 2778 | SULT1C2      | 3.60 | 6.10E-94  | 4.33E-92  |
| 1268     | 6589 | CNR1         | 3.60 | 6.02E-42  | 1.28E-40  |
| 162514   | 6133 | TRPV3        | 3.59 | 8.28E-13  | 4.92E-12  |
| 1593     | 2407 | CYP27A1      | 3.59 | 2.32E-98  | 1.77E-96  |
| 5909     | 3309 | RAP1GAP      | 3.59 | 3.43E-77  | 1.75E-75  |
| 55026    | 3338 | TMEM255A     | 3.59 | 3.24E-48  | 8.17E-47  |
| 440044   | 2371 | SLC22A20P    | 3.58 | 3.54E-20  | 3.23E-19  |
| 80333    | 3509 | KCNIP4       | 3.58 | 1.85E-11  | 1.00E-10  |
| 1.08E+08 | 5946 | LOC107986797 | 3.57 | 1.40E-24  | 1.56E-23  |
| 79132    | 2572 | DHX58        | 3.55 | 8.10E-52  | 2.29E-50  |
| 162967   | 6217 | ZNF320       | 3.54 | 1.97E-46  | 4.78E-45  |
| 1.02E+08 | 4683 | MEI4         | 3.54 | 7.07E-10  | 3.40E-09  |
| 1.08E+08 | 4067 | LOC107987345 | 3.53 | 7.77E-10  | 3.73E-09  |
| 51314    | 2327 | NME8         | 3.53 | 7.54E-10  | 3.62E-09  |
| 196740   | 6018 | VSTM4        | 3.52 | 1.60E-60  | 5.70E-59  |
| 220388   | 2434 | CCDC89       | 3.52 | 2.61E-12  | 1.50E-11  |
| 93082    | 1553 | NEURL3       | 3.51 | 4.79E-16  | 3.52E-15  |
| 23600    | 3330 | AMACR        | 3.51 | 0.00E+00  | 0.00E+00  |
| 163404   | 3046 | PLPPR5       | 3.51 | 1.01E-13  | 6.43E-13  |
| 23072    | 6701 | HECW1        | 3.50 | 4.05E-15  | 2.82E-14  |
| 56141    | 2370 | PCDHA7       | 3.50 | 1.15E-09  | 5.43E-09  |
| 200150   | 3531 | PLD5         | 3.50 | 5.15E-70  | 2.25E-68  |
| 6192     | 910  | RPS4Y1       | 3.49 | 5.99E-09  | 2.68E-08  |
| 79190    | 2513 | IRX6         | 3.49 | 4.18E-12  | 2.37E-11  |
| 50507    | 2499 | NOX4         | 3.49 | 9.35E-29  | 1.26E-27  |
| 146227   | 2896 | BEAN1        | 3.49 | 8.77E-66  | 3.54E-64  |
| 1.08E+08 | 4669 | LOC107984449 | 3.49 | 3.63E-10  | 1.79E-09  |
| 283208   | 2299 | P4HA3        | 3.48 | 8.83E-75  | 4.33E-73  |
| 170679   | 913  | PSORS1C1     | 3.47 | 1.52E-27  | 1.94E-26  |
| 3429     | 633  | IFI27        | 3.47 | 3.77E-22  | 3.77E-21  |
| 353189   | 5086 | SLCO4C1      | 3.45 | 7.53E-281 | 3.72E-278 |
| 2015     | 2630 | ADGRE1       | 3.44 | 6.94E-10  | 3.34E-09  |
| 79887    | 1951 | PLBD1        | 3.43 | 1.06E-27  | 1.37E-26  |
| 5521     | 2098 | PPP2R2B      | 3.43 | 1.05E-11  | 5.79E-11  |
| 1.05E+08 | 1098 | LOC105372824 | 3.42 | 1.54E-15  | 1.11E-14  |

|          |      |              |      |           |           |
|----------|------|--------------|------|-----------|-----------|
| 128218   | 1979 | TMEM125      | 3.42 | 1.22E-11  | 6.72E-11  |
| 10117    | 5674 | ENAM         | 3.41 | 3.34E-19  | 2.91E-18  |
| 6414     | 2164 | SELENOP      | 3.41 | 1.11E-16  | 8.51E-16  |
| 5121     | 566  | PCP4         | 3.40 | 3.98E-09  | 1.81E-08  |
| 113802   | 1768 | HENMT1       | 3.40 | 3.30E-10  | 1.63E-09  |
| 920      | 3049 | CD4          | 3.40 | 3.74E-17  | 2.94E-16  |
| 91227    | 1004 | GGTLC2       | 3.40 | 3.87E-10  | 1.90E-09  |
| 59353    | 2086 | TMEM35A      | 3.40 | 4.37E-09  | 1.98E-08  |
| 139065   | 6161 | SLITRK4      | 3.39 | 1.69E-74  | 8.17E-73  |
| 122970   | 1703 | ACOT4        | 3.39 | 3.75E-26  | 4.50E-25  |
| 388125   | 1576 | C2CD4B       | 3.39 | 5.10E-09  | 2.29E-08  |
| 1286     | 9907 | COL4A4       | 3.37 | 2.02E-197 | 5.35E-195 |
| 22986    | 4515 | SORCS3       | 3.36 | 4.90E-13  | 2.95E-12  |
| 260293   | 2074 | CYP4X1       | 3.36 | 2.19E-09  | 1.01E-08  |
| 3694     | 4558 | ITGB6        | 3.36 | 6.16E-122 | 6.80E-120 |
| 56911    | 1795 | MAP3K7CL     | 3.35 | 1.11E-92  | 7.70E-91  |
| 286676   | 2827 | ILDR1        | 3.35 | 8.00E-09  | 3.54E-08  |
| 28       | 1580 | ABO          | 3.34 | 6.09E-26  | 7.23E-25  |
| 3131     | 5341 | HLF          | 3.33 | 1.12E-89  | 7.23E-88  |
| 5158     | 2723 | PDE6B        | 3.33 | 3.48E-29  | 4.77E-28  |
| 200407   | 2384 | CREG2        | 3.32 | 1.39E-18  | 1.18E-17  |
| 29114    | 1220 | TAGLN3       | 3.32 | 4.41E-37  | 7.98E-36  |
| 1.08E+08 | 3507 | LOC107986352 | 3.32 | 3.88E-27  | 4.87E-26  |
| 54843    | 2609 | SYTL2        | 3.31 | 0.00E+00  | 0.00E+00  |
| 255743   | 4443 | NPNT         | 3.30 | 9.51E-228 | 3.25E-225 |
| 1080     | 6143 | CFTR         | 3.30 | 2.42E-51  | 6.70E-50  |
| 29881    | 4913 | NPC1L1       | 3.29 | 4.25E-10  | 2.08E-09  |
| 10875    | 4268 | FGL2         | 3.29 | 2.06E-12  | 1.19E-11  |
| 53942    | 6198 | CNTN5        | 3.29 | 1.61E-08  | 6.93E-08  |
| 55504    | 3915 | TNFRSF19     | 3.29 | 6.55E-90  | 4.23E-88  |
| 7216     | 4298 | TRO          | 3.28 | 3.76E-84  | 2.22E-82  |
| 84251    | 8467 | SGIP1        | 3.28 | 9.72E-73  | 4.51E-71  |
| 27012    | 6996 | KCNV1        | 3.28 | 1.92E-13  | 1.20E-12  |
| 2705     | 1623 | GJB1         | 3.26 | 7.86E-09  | 3.48E-08  |
| 10964    | 3515 | IFI44L       | 3.26 | 4.09E-106 | 3.65E-104 |
| 220416   | 3136 | LRRC63       | 3.25 | 5.27E-15  | 3.65E-14  |
| 4688     | 2186 | NCF2         | 3.25 | 1.21E-49  | 3.22E-48  |
| 23024    | 3738 | PDZRN3       | 3.25 | 7.83E-10  | 3.75E-09  |
| 55195    | 2533 | CCDC198      | 3.24 | 1.82E-131 | 2.49E-129 |
| 341359   | 3286 | SYT10        | 3.24 | 7.77E-11  | 4.05E-10  |
| 1.08E+08 | 3332 | LOC107987433 | 3.24 | 4.61E-17  | 3.61E-16  |
| 27233    | 2612 | SULT1C4      | 3.24 | 3.40E-12  | 1.94E-11  |
| 256764   | 5497 | WDR72        | 3.24 | 3.71E-55  | 1.15E-53  |
| 79799    | 2972 | UGT2A3       | 3.24 | 3.17E-09  | 1.45E-08  |
| 147463   | 3678 | ANKRD29      | 3.22 | 2.19E-70  | 9.59E-69  |
| 4645     | 9520 | MYO5B        | 3.21 | 4.88E-163 | 8.76E-161 |
| 158866   | 2277 | ZDHHC15      | 3.20 | 6.22E-10  | 3.00E-09  |
| 460      | 7304 | ASTN1        | 3.18 | 2.17E-08  | 9.28E-08  |

|          |       |              |      |           |           |
|----------|-------|--------------|------|-----------|-----------|
| 23779    | 1603  | ARHGAP8      | 3.18 | 3.94E-42  | 8.46E-41  |
| 55084    | 6036  | SOBP         | 3.18 | 1.92E-20  | 1.77E-19  |
| 8424     | 1880  | BBOX1        | 3.16 | 1.00E-08  | 4.42E-08  |
| 1410     | 967   | CRYAB        | 3.15 | 5.39E-288 | 2.82E-285 |
| 83401    | 1479  | ELOVL3       | 3.15 | 3.54E-15  | 2.48E-14  |
| 132946   | 2211  | ARL9         | 3.15 | 1.12E-09  | 5.31E-09  |
| 54463    | 3226  | RETREG1      | 3.15 | 4.74E-186 | 1.08E-183 |
| 29887    | 2482  | SNX10        | 3.15 | 1.60E-221 | 5.07E-219 |
| 55086    | 3829  | CXorf57      | 3.14 | 1.20E-32  | 1.87E-31  |
| 2196     | 14621 | FAT2         | 3.14 | 1.55E-56  | 5.00E-55  |
| 84752    | 2722  | B3GNT9       | 3.13 | 4.55E-76  | 2.29E-74  |
| 2596     | 1747  | GAP43        | 3.13 | 1.63E-08  | 7.02E-08  |
| 1428     | 1559  | CRYM         | 3.13 | 1.96E-12  | 1.14E-11  |
| 486      | 584   | FXYP2        | 3.12 | 8.65E-264 | 3.84E-261 |
| 55553    | 8910  | SOX6         | 3.12 | 1.40E-41  | 2.94E-40  |
| 1.03E+08 | 2184  | LOC102724788 | 3.11 | 4.22E-71  | 1.89E-69  |
| 4920     | 3264  | ROR2         | 3.10 | 8.59E-80  | 4.65E-78  |
| 3773     | 4008  | KCNJ16       | 3.10 | 2.99E-258 | 1.30E-255 |
| 6649     | 1546  | SOD3         | 3.10 | 5.45E-127 | 6.50E-125 |
| 4685     | 4374  | NCAM2        | 3.10 | 1.43E-07  | 5.64E-07  |
| 23500    | 6228  | DAAM2        | 3.10 | 2.92E-46  | 7.06E-45  |
| 84179    | 2077  | SLC49A3      | 3.08 | 1.84E-33  | 2.94E-32  |
| 25924    | 4851  | MYRIP        | 3.07 | 1.06E-08  | 4.66E-08  |
| 2938     | 1377  | GSTA1        | 3.06 | 2.04E-07  | 7.92E-07  |
| 9098     | 7897  | USP6         | 3.06 | 1.33E-91  | 8.91E-90  |
| 27010    | 2410  | TPK1         | 3.06 | 1.10E-37  | 2.03E-36  |
| 1608     | 5701  | DGKG         | 3.05 | 2.16E-07  | 8.38E-07  |
| 64108    | 1027  | RTP4         | 3.05 | 1.22E-41  | 2.57E-40  |
| 25891    | 3151  | PAMR1        | 3.05 | 2.91E-18  | 2.42E-17  |
| 91977    | 3493  | MYOZ3        | 3.04 | 2.70E-11  | 1.46E-10  |
| 56999    | 7295  | ADAMTS9      | 3.03 | 8.95E-111 | 8.69E-109 |
| 140766   | 4190  | ADAMTS14     | 3.02 | 2.10E-173 | 4.24E-171 |
| 2702     | 3198  | GJA5         | 3.02 | 3.31E-07  | 1.26E-06  |
| 10178    | 10703 | TENM1        | 3.02 | 1.65E-07  | 6.48E-07  |
| 5678     | 2048  | PSG9         | 3.01 | 2.38E-16  | 1.78E-15  |
| 25797    | 1719  | QPCT         | 3.01 | 2.64E-177 | 5.53E-175 |
| 94234    | 2338  | FOXQ1        | 3.01 | 7.12E-51  | 1.95E-49  |
| 5345     | 2297  | SERPINF2     | 3.01 | 3.16E-69  | 1.36E-67  |
| 30835    | 4051  | CD209        | 3.01 | 1.03E-08  | 4.53E-08  |
| 340267   | 3339  | COL28A1      | 3.00 | 1.40E-43  | 3.15E-42  |
| 285195   | 3435  | SLC9A9       | 3.00 | 5.66E-15  | 3.91E-14  |
| 6425     | 1883  | SFRP5        | 3.00 | 4.30E-09  | 1.95E-08  |
| 90665    | 2144  | TBL1Y        | 2.99 | 4.08E-07  | 1.54E-06  |
| 9473     | 2724  | THEMIS2      | 2.99 | 5.56E-18  | 4.55E-17  |
| 93100    | 1753  | NAPRT        | 2.98 | 4.06E-56  | 1.29E-54  |
| 56121    | 2891  | PCDHB15      | 2.98 | 1.70E-14  | 1.14E-13  |
| 3113     | 1788  | HLA-DPA1     | 2.98 | 4.34E-35  | 7.36E-34  |
| 54033    | 2452  | RBM11        | 2.97 | 8.32E-10  | 3.98E-09  |

|          |       |              |      |           |           |
|----------|-------|--------------|------|-----------|-----------|
| 115749   | 1674  | C12orf56     | 2.97 | 1.74E-08  | 7.49E-08  |
| 6690     | 623   | SPINK1       | 2.97 | 5.14E-07  | 1.92E-06  |
| 5284     | 4279  | PIGR         | 2.97 | 2.07E-29  | 2.87E-28  |
| 30820    | 2031  | KCNIP1       | 2.96 | 4.09E-129 | 5.23E-127 |
| 79628    | 26588 | SH3TC2       | 2.96 | 5.29E-21  | 5.01E-20  |
| 55586    | 2179  | MIOX         | 2.95 | 3.97E-10  | 1.94E-09  |
| 56147    | 3452  | PCDHA1       | 2.95 | 7.15E-08  | 2.91E-07  |
| 5265     | 2184  | SERPINA1     | 2.95 | 3.69E-271 | 1.73E-268 |
| 114      | 4100  | ADCY8        | 2.94 | 6.80E-07  | 2.50E-06  |
| 11279    | 7442  | KLF8         | 2.94 | 1.01E-46  | 2.47E-45  |
| 1907     | 1253  | EDN2         | 2.94 | 3.87E-192 | 9.54E-190 |
| 1307     | 4382  | COL16A1      | 2.93 | 1.57E-158 | 2.73E-156 |
| 80183    | 3575  | RUBCNL       | 2.93 | 1.76E-07  | 6.89E-07  |
| 56113    | 3709  | PCDHGA2      | 2.92 | 7.76E-15  | 5.32E-14  |
| 4345     | 3377  | CD200        | 2.92 | 4.11E-97  | 3.08E-95  |
| 56101    | 4316  | PCDHGB5      | 2.92 | 8.57E-95  | 6.16E-93  |
| 56111    | 4496  | PCDHGA4      | 2.92 | 5.26E-18  | 4.31E-17  |
| 57639    | 3333  | CCDC146      | 2.91 | 1.68E-92  | 1.16E-90  |
| 440533   | 1936  | PSG8         | 2.91 | 2.37E-07  | 9.15E-07  |
| 126364   | 2430  | LRRC25       | 2.91 | 9.21E-08  | 3.70E-07  |
| 117289   | 3516  | TAGAP        | 2.91 | 5.04E-07  | 1.88E-06  |
| 23743    | 2651  | BHMT2        | 2.89 | 1.45E-30  | 2.10E-29  |
| 56108    | 4117  | PCDHGA7      | 2.89 | 6.97E-35  | 1.17E-33  |
| 342125   | 3303  | TMC3         | 2.88 | 1.27E-06  | 4.55E-06  |
| 5016     | 2258  | OVGP1        | 2.88 | 1.35E-28  | 1.80E-27  |
| 57007    | 2078  | ACKR3        | 2.88 | 9.89E-11  | 5.11E-10  |
| 22871    | 6841  | NLGN1        | 2.87 | 4.72E-86  | 2.91E-84  |
| 200010   | 3187  | SLC5A9       | 2.87 | 2.26E-07  | 8.75E-07  |
| 6402     | 2442  | SELL         | 2.87 | 3.34E-07  | 1.27E-06  |
| 1.05E+08 | 3261  | LOC105373310 | 2.87 | 1.89E-10  | 9.54E-10  |
| 183      | 2587  | AGT          | 2.87 | 3.09E-28  | 4.06E-27  |
| 5168     | 3111  | ENPP2        | 2.86 | 1.94E-46  | 4.71E-45  |
| 84460    | 3314  | ZMAT1        | 2.86 | 3.20E-32  | 4.90E-31  |
| 2620     | 2448  | GAS2         | 2.86 | 5.05E-15  | 3.50E-14  |
| 7038     | 8340  | TG           | 2.86 | 4.83E-35  | 8.19E-34  |
| 56145    | 4455  | PCDHA3       | 2.86 | 5.12E-07  | 1.91E-06  |
| 158584   | 1914  | FAAH2        | 2.85 | 6.05E-16  | 4.43E-15  |
| 201305   | 1715  | SPNS3        | 2.84 | 4.64E-15  | 3.22E-14  |
| 343450   | 5200  | KCNT2        | 2.84 | 2.70E-54  | 8.25E-53  |
| 728441   | 2663  | GGT2         | 2.83 | 1.13E-14  | 7.63E-14  |
| 1004     | 7291  | CDH6         | 2.83 | 2.33E-281 | 1.18E-278 |
| 1.03E+08 | 2220  | LOC102724823 | 2.83 | 2.14E-06  | 7.50E-06  |
| 84419    | 850   | C15orf48     | 2.82 | 1.51E-50  | 4.09E-49  |
| 79605    | 3373  | PGBD5        | 2.82 | 3.22E-36  | 5.66E-35  |
| 7103     | 1088  | TSPAN8       | 2.82 | 1.26E-06  | 4.52E-06  |
| 125206   | 2021  | SLC5A10      | 2.81 | 3.01E-08  | 1.27E-07  |
| 140462   | 1798  | ASB9         | 2.81 | 4.37E-25  | 5.00E-24  |
| 26033    | 4713  | ATRNL1       | 2.81 | 3.05E-66  | 1.24E-64  |



|          |      |          |      |           |           |
|----------|------|----------|------|-----------|-----------|
| 56104    | 4590 | PCDHGB1  | 2.80 | 4.31E-07  | 1.62E-06  |
| 56133    | 2779 | PCDHB2   | 2.80 | 6.50E-19  | 5.56E-18  |
| 259      | 1450 | AMBP     | 2.80 | 3.07E-09  | 1.41E-08  |
| 1795     | 7650 | DOCK3    | 2.80 | 9.78E-52  | 2.75E-50  |
| 1E+08    | 1431 | MKRN2OS  | 2.79 | 2.11E-10  | 1.06E-09  |
| 170680   | 1185 | PSORS1C2 | 2.79 | 9.30E-10  | 4.43E-09  |
| 114800   | 3371 | CCDC85A  | 2.79 | 4.05E-07  | 1.53E-06  |
| 5196     | 878  | PF4      | 2.79 | 2.97E-06  | 1.02E-05  |
| 126969   | 2169 | SLC44A3  | 2.78 | 2.48E-61  | 9.10E-60  |
| 54988    | 1813 | ACSM5    | 2.77 | 5.71E-11  | 3.01E-10  |
| 3172     | 3852 | HNF4A    | 2.77 | 4.37E-08  | 1.81E-07  |
| 3382     | 2083 | ICA1     | 2.76 | 3.23E-53  | 9.54E-52  |
| 130733   | 1601 | TMEM178A | 2.76 | 1.64E-87  | 1.04E-85  |
| 3037     | 3275 | HAS2     | 2.75 | 2.51E-06  | 8.70E-06  |
| 159989   | 1738 | DEUP1    | 2.74 | 2.76E-06  | 9.53E-06  |
| 51473    | 4709 | DCDC2    | 2.73 | 1.57E-249 | 6.35E-247 |
| 1.08E+08 | 955  | NA       | 2.73 | 1.10E-09  | 5.24E-09  |
| 5592     | 6219 | PRKG1    | 2.73 | 7.45E-08  | 3.02E-07  |
| 22996    | 2219 | TTC39A   | 2.73 | 2.25E-118 | 2.40E-116 |
| 9508     | 5842 | ADAMTS3  | 2.72 | 6.66E-167 | 1.27E-164 |
| 8989     | 5582 | TRPA1    | 2.72 | 1.68E-06  | 5.94E-06  |
| 79849    | 2500 | PDZD3    | 2.72 | 8.79E-07  | 3.19E-06  |
| 8796     | 3160 | SCEL     | 2.72 | 2.93E-17  | 2.32E-16  |
| 90527    | 2127 | DUOXA1   | 2.72 | 9.45E-07  | 3.42E-06  |
| 81491    | 5973 | GPR63    | 2.72 | 6.56E-16  | 4.79E-15  |
| 10218    | 2307 | ANGPTL7  | 2.72 | 1.79E-06  | 6.32E-06  |
| 3730     | 5733 | ANOS1    | 2.72 | 6.33E-36  | 1.10E-34  |
| 4257     | 945  | MGST1    | 2.71 | 1.97E-194 | 4.93E-192 |
| 3359     | 2260 | HTR3A    | 2.71 | 1.00E-06  | 3.63E-06  |
| 1.01E+08 | 2622 | APELA    | 2.71 | 1.04E-06  | 3.76E-06  |
| 114769   | 793  | CARD16   | 2.71 | 5.79E-13  | 3.46E-12  |
| 4312     | 2081 | MMP1     | 2.70 | 3.37E-11  | 1.81E-10  |
| 93986    | 6537 | FOXP2    | 2.70 | 1.24E-44  | 2.88E-43  |
| 54578    | 2251 | UGT1A6   | 2.70 | 3.52E-39  | 6.87E-38  |
| 373863   | 1681 | DND1     | 2.70 | 9.58E-24  | 1.03E-22  |
| 6549     | 5464 | SLC9A2   | 2.70 | 4.14E-06  | 1.41E-05  |
| 2243     | 2381 | FGA      | 2.70 | 7.26E-53  | 2.12E-51  |
| 83716    | 4617 | CRISPLD2 | 2.69 | 0.00E+00  | 0.00E+00  |
| 1230     | 2690 | CCR1     | 2.69 | 6.05E-07  | 2.24E-06  |
| 3208     | 1440 | HPCA     | 2.68 | 1.32E-06  | 4.71E-06  |
| 57209    | 4148 | ZNF248   | 2.67 | 2.68E-158 | 4.58E-156 |
| 1573     | 1927 | CYP2J2   | 2.67 | 9.84E-17  | 7.56E-16  |
| 166824   | 6020 | RASSF6   | 2.67 | 2.88E-57  | 9.52E-56  |
| 719      | 1985 | C3AR1    | 2.67 | 2.38E-20  | 2.18E-19  |
| 83543    | 3453 | AIF1L    | 2.67 | 0.00E+00  | 0.00E+00  |
| 7903     | 4535 | ST8SIA4  | 2.66 | 3.68E-41  | 7.64E-40  |
| 196410   | 1531 | METTL7B  | 2.66 | 5.25E-47  | 1.29E-45  |
| 112817   | 2234 | HOGA1    | 2.66 | 5.48E-145 | 8.70E-143 |

|          |       |              |      |           |           |
|----------|-------|--------------|------|-----------|-----------|
| 387695   | 788   | C10orf99     | 2.65 | 3.01E-19  | 2.63E-18  |
| 285349   | 5937  | ZNF660       | 2.65 | 7.84E-08  | 3.17E-07  |
| 10396    | 8125  | ATP8A1       | 2.64 | 4.05E-46  | 9.75E-45  |
| 158326   | 9615  | FREM1        | 2.64 | 7.12E-06  | 2.36E-05  |
| 33       | 2664  | ACADL        | 2.63 | 4.62E-18  | 3.80E-17  |
| 6928     | 2746  | HNF1B        | 2.63 | 7.00E-163 | 1.24E-160 |
| 2259     | 2646  | FGF14        | 2.63 | 9.17E-15  | 6.26E-14  |
| 5801     | 2650  | PTPRR        | 2.62 | 2.26E-07  | 8.75E-07  |
| 51296    | 2137  | SLC15A3      | 2.61 | 1.92E-82  | 1.09E-80  |
| 84941    | 2730  | HSH2D        | 2.61 | 4.05E-19  | 3.51E-18  |
| 3119     | 1655  | HLA-DQB1     | 2.61 | 1.83E-15  | 1.30E-14  |
| 1.02E+08 | 2859  | LOC101928193 | 2.60 | 1.41E-05  | 4.50E-05  |
| 57126    | 2238  | CD177        | 2.60 | 2.80E-09  | 1.29E-08  |
| 3787     | 6173  | KCNS1        | 2.60 | 1.85E-13  | 1.15E-12  |
| 347733   | 2019  | TUBB2B       | 2.59 | 1.67E-139 | 2.49E-137 |
| 1.02E+08 | 2402  | LOC101929599 | 2.59 | 6.82E-06  | 2.26E-05  |
| 8635     | 1245  | RNASET2      | 2.59 | 0.00E+00  | 0.00E+00  |
| 3769     | 3373  | KCNJ13       | 2.59 | 4.25E-06  | 1.44E-05  |
| 8644     | 1250  | AKR1C3       | 2.58 | 9.14E-105 | 7.92E-103 |
| 10333    | 6683  | TLR6         | 2.58 | 2.04E-22  | 2.07E-21  |
| 3111     | 3485  | HLA-DOA      | 2.58 | 5.40E-35  | 9.13E-34  |
| 202333   | 12760 | CMYA5        | 2.58 | 1.83E-10  | 9.25E-10  |
| 2731     | 3820  | GLDC         | 2.58 | 9.35E-75  | 4.56E-73  |
| 2562     | 5581  | GABRB3       | 2.58 | 2.31E-13  | 1.43E-12  |
| 57600    | 7043  | FNIP2        | 2.58 | 1.54E-245 | 5.96E-243 |
| 10050    | 3217  | SLC17A4      | 2.58 | 5.47E-08  | 2.25E-07  |
| 130013   | 1768  | ACMSD        | 2.57 | 4.84E-09  | 2.18E-08  |
| 64284    | 2180  | RAB17        | 2.56 | 7.82E-37  | 1.40E-35  |
| 1188     | 2188  | CLCNKB       | 2.56 | 3.41E-17  | 2.69E-16  |
| 23136    | 3719  | EPB41L3      | 2.56 | 2.14E-05  | 6.66E-05  |
| 374      | 1290  | AREG         | 2.56 | 2.71E-152 | 4.54E-150 |
| 862      | 6954  | RUNX1T1      | 2.56 | 5.24E-06  | 1.76E-05  |
| 91703    | 1495  | ACY3         | 2.55 | 1.66E-05  | 5.25E-05  |
| 221416   | 5238  | C6orf223     | 2.54 | 2.60E-12  | 1.49E-11  |
| 163115   | 3142  | ZNF781       | 2.54 | 5.90E-06  | 1.97E-05  |
| 3934     | 863   | LCN2         | 2.54 | 3.38E-241 | 1.28E-238 |
| 440836   | 970   | ODF3B        | 2.53 | 2.18E-06  | 7.62E-06  |
| 7594     | 6787  | ZNF43        | 2.53 | 3.48E-13  | 2.12E-12  |
| 4147     | 3771  | MATN2        | 2.53 | 2.24E-165 | 4.18E-163 |
| 79822    | 5442  | ARHGAP28     | 2.53 | 1.19E-18  | 1.01E-17  |
| 11227    | 5721  | GALNT5       | 2.52 | 8.73E-15  | 5.97E-14  |
| 1520     | 4107  | CTSS         | 2.52 | 3.98E-105 | 3.50E-103 |
| 685      | 2779  | BTC          | 2.52 | 1.24E-29  | 1.72E-28  |
| 114088   | 4888  | TRIM9        | 2.52 | 1.03E-50  | 2.81E-49  |
| 1551     | 2099  | CYP3A7       | 2.50 | 3.17E-05  | 9.64E-05  |
| 27285    | 1521  | TEKT2        | 2.50 | 8.66E-06  | 2.83E-05  |
| 55888    | 3071  | ZKSCAN7      | 2.50 | 1.66E-11  | 9.06E-11  |
| 25805    | 1732  | BAMBI        | 2.50 | 3.16E-23  | 3.31E-22  |

|          |       |              |      |           |             |
|----------|-------|--------------|------|-----------|-------------|
| 6564     | 3142  | SLC15A1      | 2.50 | 2.70E-15  | 1.91E-14    |
| 64798    | 3689  | DEPTOR       | 2.50 | 1.18E-49  | 3.14E-48    |
| 80763    | 2331  | SPX          | 2.50 | 6.34E-39  | 1.22E-37    |
| 5730     | 837   | PTGDS        | 2.49 | 3.14E-10  | 1.55E-09    |
| 1.08E+08 | 6094  | LOC107986554 | 2.49 | 1.10E-08  | 4.83E-08    |
| 9963     | 2340  | SLC23A1      | 2.49 | 1.41E-16  | 1.07E-15    |
| 56977    | 10294 | STOX2        | 2.49 | 1.26E-83  | 7.25E-82    |
| 4121     | 4307  | MAN1A1       | 2.49 | 2.40E-122 | 2.68E-120   |
| 53630    | 2446  | BCO1         | 2.48 | 1.03E-15  | 7.45E-15    |
| 4599     | 2837  | MX1          | 2.48 | 3.73E-71  | 1.68E-69    |
| 23498    | 1598  | HAAO         | 2.48 | 1.12E-09  | 5.29E-09    |
| 5641     | 2003  | LGMN         | 2.48 | 4.26E-267 | 1.94E-264   |
| 2918     | 3300  | GRM8         | 2.47 | 3.77E-18  | 3.12E-17    |
| 8842     | 3970  | PROM1        | 2.47 | 1.45E-148 | 2.34E-146   |
| 127534   | 1986  | GJB4         | 2.47 | 4.37E-07  | 1.64E-06    |
| 1E+08    | 2917  | ERVMER34-1   | 2.47 | 4.55E-59  | 1.56E-57    |
| 84034    | 4009  | EMILIN2      | 2.46 | 1.48E-18  | 1.25E-17    |
| 3790     | 2373  | KCNS3        | 2.46 | 1.98E-74  | 9.55E-73    |
| 256076   | 7339  | COL6A5       | 2.46 | 1.35E-05  | 4.32E-05    |
| 81693    | 1574  | AMN          | 2.46 | 7.40E-07  | 2.71E-06    |
| 4741     | 2835  | NEFM         | 2.46 | 1.31E-29  | 1.82E-28    |
| 4045     | 9401  | LSAMP        | 2.46 | 4.90E-14  | 3.21E-13    |
| 57722    | 6327  | IGDCC4       | 2.46 | 1.01E-111 | 9.89E-110   |
| 55351    | 3035  | STK32B       | 2.45 | 1.27E-149 | 2.11E-147   |
| 7104     | 1624  | TM4SF4       | 2.45 | 6.31E-06  | 2.10E-05    |
| 9037     | 11677 | SEMA5A       | 2.45 | 1.46E-60  | 5.21E-59    |
| 1.05E+08 | 1344  | LOC105373102 | 2.45 | 6.05E-24  | 6.56E-23    |
| 10125    | 4683  | RASGRP1      | 2.45 | 4.37E-18  | 3.60E-17    |
| 27237    | 2918  | ARHGEF16     | 2.45 | 2.22E-50  | 5.98E-49    |
| 221393   | 3180  | ADGRF4       | 2.45 | 6.85E-19  | 5.87E-18    |
| 347404   | 5910  | LANCL3       | 2.44 | 9.39E-06  | 3.06E-05    |
| 84944    | 1845  | MAEL         | 2.44 | 3.24E-12  | 1.85E-11    |
| 125113   | 1735  | KRT222       | 2.44 | 4.50E-18  | 3.70E-17    |
| 84676    | 1771  | TRIM63       | 2.44 | 1.16E-06  | 4.17E-06    |
| 29108    | 780   | PYCARD       | 2.43 | 2.86E-48  | 7.23E-47    |
| 134285   | 1255  | TMEM171      | 2.43 | 1.11E-41  | 2.33E-40    |
| 54769    | 4386  | DIRAS2       | 2.42 | 2.44E-18  | 2.03E-17    |
| 4889     | 2489  | NPY5R        | 2.42 | 1.69E-16  | 1.28E-15    |
| 1264     | 1629  | CNN1         | 2.42 | 3.47E-79  | 1.85E-77    |
| 152816   | 1884  | ODAPH        | 2.42 | 5.88E-20  | 5.33E-19    |
| 26507    | 5988  | CNNM1        | 2.42 | 4.71E-19  | 4.06E-18    |
| 6809     | 3490  | STX3         | 2.42 | 3.92E-163 | 7.11E-161   |
| 256435   | 2925  | ST6GALNAC3   | 2.41 | 3.79E-07  | 1.44E-06    |
| 55061    | 2633  | SUSD4        | 2.41 | 5.54E-54  | 1.67E-52    |
| 1582     | 3950  | CYP8B1       | 2.41 | 7.29E-06  | 2.41E-05    |
| 85477    | 2920  | SCIN         | 2.41 | 1.71E-102 | 1.43E-100   |
| 130576   | 1420  | LYPD6B       | 2.40 | 5.25E-05  | 0.000155117 |
| 5671     | 1922  | PSG3         | 2.40 | 5.38E-08  | 2.21E-07    |

|        |      |            |      |             |             |
|--------|------|------------|------|-------------|-------------|
| 5570   | 1385 | PKIB       | 2.40 | 1.49E-18    | 1.26E-17    |
| 113220 | 2192 | KIF12      | 2.40 | 1.38E-137   | 2.01E-135   |
| 50617  | 3152 | ATP6V0A4   | 2.40 | 7.30E-10    | 3.51E-09    |
| 7364   | 1593 | UGT2B7     | 2.39 | 5.06E-140   | 7.68E-138   |
| 7113   | 3135 | TMPRSS2    | 2.39 | 5.70E-31    | 8.39E-30    |
| 64078  | 4047 | SLC28A3    | 2.38 | 4.02E-07    | 1.52E-06    |
| 83953  | 2659 | FCAMR      | 2.38 | 4.29E-08    | 1.78E-07    |
| 796    | 1256 | CALCA      | 2.38 | 7.91E-05    | 0.000228142 |
| 64926  | 3277 | RASAL3     | 2.38 | 1.24E-05    | 3.98E-05    |
| 340273 | 2396 | ABCB5      | 2.38 | 1.82E-05    | 5.72E-05    |
| 259307 | 1809 | IL4I1      | 2.38 | 5.32E-53    | 1.56E-51    |
| 51127  | 3011 | TRIM17     | 2.37 | 3.95E-11    | 2.11E-10    |
| 1139   | 3763 | CHRNA7     | 2.37 | 7.22E-20    | 6.51E-19    |
| 653602 | 2058 | NA         | 2.37 | 1.12E-05    | 3.60E-05    |
| 22866  | 5658 | CNKSR2     | 2.37 | 3.29E-09    | 1.50E-08    |
| 50940  | 7979 | PDE11A     | 2.37 | 1.72E-30    | 2.48E-29    |
| 728888 | 3497 | NPIPBI1    | 2.36 | 4.34E-37    | 7.85E-36    |
| 23426  | 5369 | GRIP1      | 2.36 | 2.43E-21    | 2.34E-20    |
| 2330   | 3598 | FMO5       | 2.36 | 9.85E-27    | 1.21E-25    |
| 55753  | 3611 | OGDHL      | 2.36 | 2.54E-73    | 1.19E-71    |
| 56935  | 983  | SMCO4      | 2.36 | 6.62E-48    | 1.66E-46    |
| 284293 | 816  | HMSD       | 2.36 | 4.38E-07    | 1.65E-06    |
| 285533 | 1531 | RNF175     | 2.36 | 5.96E-28    | 7.77E-27    |
| 6641   | 4901 | SNTB1      | 2.35 | 4.59E-114   | 4.61E-112   |
| 1462   | 6505 | VCAN       | 2.35 | 2.71E-204   | 7.91E-202   |
| 9720   | 5327 | CCDC144A   | 2.35 | 1.60E-21    | 1.55E-20    |
| 79817  | 6528 | MOB3B      | 2.35 | 6.51E-17    | 5.05E-16    |
| 2045   | 5853 | EPHA7      | 2.35 | 2.61E-16    | 1.95E-15    |
| 23286  | 4744 | WWC1       | 2.34 | 3.02E-292   | 1.68E-289   |
| 128414 | 1547 | NKAIN4     | 2.34 | 9.62E-21    | 9.04E-20    |
| 6424   | 2974 | SFRP4      | 2.34 | 3.12E-06    | 1.07E-05    |
| 366    | 2744 | AQP9       | 2.34 | 2.79E-17    | 2.21E-16    |
| 54457  | 2186 | TAF7L      | 2.34 | 2.86E-05    | 8.75E-05    |
| 653857 | 2747 | ACTR3C     | 2.33 | 8.59E-69    | 3.68E-67    |
| 5920   | 779  | RARRES3    | 2.33 | 2.15E-158   | 3.71E-156   |
| 84868  | 2448 | HAVCR2     | 2.33 | 8.45E-10    | 4.04E-09    |
| 1824   | 4849 | DSC2       | 2.33 | 1.14E-86    | 7.13E-85    |
| 54360  | 1019 | CYTL1      | 2.33 | 4.51E-36    | 7.89E-35    |
| 643707 | 4563 | GOLGA6L4   | 2.32 | 3.84E-52    | 1.10E-50    |
| 22885  | 4038 | ABLIM3     | 2.32 | 7.70E-129   | 9.70E-127   |
| 56139  | 5420 | PCDHA10    | 2.32 | 0.000119721 | 0.000335946 |
| 8382   | 1237 | NME5       | 2.32 | 8.96E-11    | 4.64E-10    |
| 147798 | 2172 | TMC4       | 2.31 | 1.56E-12    | 9.12E-12    |
| 9053   | 4028 | MAP7       | 2.31 | 3.68E-75    | 1.81E-73    |
| 10317  | 2934 | B3GALT5    | 2.31 | 1.63E-11    | 8.89E-11    |
| 3899   | 8673 | AFF3       | 2.31 | 3.34E-09    | 1.52E-08    |
| 92291  | 3270 | CAPN13     | 2.31 | 8.77E-08    | 3.53E-07    |
| 81849  | 5317 | ST6GALNAC5 | 2.30 | 3.81E-06    | 1.30E-05    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 55281    | 2072  | TMEM140      | 2.30 | 1.51E-19    | 1.34E-18    |
| 389114   | 5584  | ZNF662       | 2.30 | 3.58E-24    | 3.90E-23    |
| 163732   | 1312  | CITED4       | 2.30 | 8.02E-35    | 1.34E-33    |
| 330      | 6295  | BIRC3        | 2.29 | 4.39E-183   | 9.75E-181   |
| 1645     | 1515  | AKR1C1       | 2.29 | 1.33E-20    | 1.24E-19    |
| 2901     | 3940  | GRIK5        | 2.29 | 4.03E-18    | 3.33E-17    |
| 728780   | 2466  | ANKDD1B      | 2.29 | 9.11E-07    | 3.31E-06    |
| 134288   | 1758  | TMEM174      | 2.29 | 0.00015305  | 0.000423649 |
| 65267    | 11110 | WNK3         | 2.28 | 1.23E-12    | 7.25E-12    |
| 51703    | 3374  | ACSL5        | 2.28 | 1.06E-35    | 1.83E-34    |
| 8710     | 1951  | SERPINB7     | 2.28 | 1.94E-05    | 6.07E-05    |
| 288      | 7351  | ANK3         | 2.28 | 3.87E-67    | 1.61E-65    |
| 57576    | 3823  | KIF17        | 2.28 | 2.23E-06    | 7.76E-06    |
| 10068    | 2023  | IL18BP       | 2.27 | 1.17E-49    | 3.13E-48    |
| 648791   | 1745  | PPP1R3G      | 2.27 | 4.65E-08    | 1.92E-07    |
| 341208   | 5951  | HEPHL1       | 2.27 | 1.95E-12    | 1.13E-11    |
| 85301    | 6056  | COL27A1      | 2.26 | 2.22E-161   | 3.91E-159   |
| 79919    | 2517  | C2orf54      | 2.26 | 0.000151784 | 0.000420714 |
| 2353     | 2158  | FOS          | 2.26 | 1.43E-66    | 5.88E-65    |
| 1288     | 6333  | COL4A6       | 2.26 | 1.75E-15    | 1.25E-14    |
| 79623    | 2362  | GALNT14      | 2.26 | 1.18E-175   | 2.42E-173   |
| 3371     | 6703  | TNC          | 2.26 | 2.23E-176   | 4.60E-174   |
| 83478    | 3634  | ARHGAP24     | 2.26 | 1.71E-85    | 1.04E-83    |
| 92292    | 2192  | GLYATL1      | 2.26 | 5.85E-10    | 2.83E-09    |
| 54502    | 4625  | RBM47        | 2.26 | 1.03E-137   | 1.51E-135   |
| 203111   | 1403  | ERICH5       | 2.25 | 5.59E-28    | 7.30E-27    |
| 1187     | 2553  | CLCNKA       | 2.25 | 0.000164625 | 0.000453639 |
| 1.03E+08 | 2028  | LOC102724197 | 2.25 | 2.52E-08    | 1.07E-07    |
| 8637     | 728   | EIF4EBP3     | 2.25 | 7.85E-05    | 0.000226577 |
| 56146    | 3070  | PCDHA2       | 2.25 | 0.000167725 | 0.000461322 |
| 2880     | 1334  | GPX5         | 2.25 | 0.000194806 | 0.000530714 |
| 56102    | 4727  | PCDHGB3      | 2.25 | 2.34E-08    | 9.95E-08    |
| 27143    | 4413  | PALD1        | 2.25 | 2.75E-12    | 1.57E-11    |
| 9413     | 2171  | FAM189A2     | 2.25 | 3.39E-21    | 3.24E-20    |
| 3965     | 1725  | LGALS9       | 2.25 | 1.19E-15    | 8.60E-15    |
| 240      | 2566  | ALOX5        | 2.25 | 2.80E-25    | 3.22E-24    |
| 5648     | 3451  | MASP1        | 2.25 | 6.76E-06    | 2.24E-05    |
| 259217   | 5558  | HSPA12A      | 2.24 | 3.28E-116   | 3.43E-114   |
| 84302    | 4293  | TMEM246      | 2.24 | 3.27E-58    | 1.10E-56    |
| 3081     | 1757  | HGD          | 2.24 | 4.67E-63    | 1.78E-61    |
| 6356     | 925   | CCL11        | 2.24 | 0.000185022 | 0.000505531 |
| 340527   | 13034 | NHSL2        | 2.23 | 1.30E-07    | 5.15E-07    |
| 201501   | 4435  | ZBTB7C       | 2.23 | 2.14E-10    | 1.07E-09    |
| 727684   | 847   | C1orf195     | 2.23 | 0.000227579 | 0.000613228 |
| 219285   | 6528  | SAMD9L       | 2.22 | 1.27E-78    | 6.65E-77    |
| 5627     | 3599  | PROS1        | 2.22 | 5.50E-130   | 7.29E-128   |
| 1277     | 5596  | COL1A1       | 2.22 | 2.80E-96    | 2.08E-94    |
| 58473    | 2030  | PLEKHB1      | 2.22 | 3.03E-39    | 5.93E-38    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 127707   | 5070  | KLHDC7A      | 2.21 | 1.81E-66    | 7.41E-65    |
| 1238     | 2978  | ACKR2        | 2.21 | 3.33E-06    | 1.14E-05    |
| 1400     | 3074  | CRMP1        | 2.21 | 1.13E-48    | 2.90E-47    |
| 10265    | 2107  | IRX5         | 2.21 | 3.13E-34    | 5.12E-33    |
| 2312     | 12747 | FLG          | 2.21 | 1.49E-19    | 1.32E-18    |
| 54869    | 2395  | EPS8L1       | 2.21 | 3.25E-07    | 1.24E-06    |
| 287      | 8312  | ANK2         | 2.21 | 4.41E-69    | 1.89E-67    |
| 148268   | 5544  | ZNF570       | 2.20 | 2.71E-16    | 2.02E-15    |
| 79679    | 2441  | VTCN1        | 2.20 | 2.62E-05    | 8.05E-05    |
| 149466   | 1506  | C1orf210     | 2.20 | 9.87E-05    | 0.00028088  |
| 8448     | 2232  | DOC2A        | 2.20 | 6.01E-07    | 2.23E-06    |
| 1.02E+08 | 1759  | LOC101929773 | 2.19 | 3.11E-06    | 1.07E-05    |
| 143689   | 3214  | PIWIL4       | 2.19 | 2.38E-13    | 1.47E-12    |
| 56704    | 4256  | JPH1         | 2.19 | 1.18E-37    | 2.19E-36    |
| 148753   | 2903  | FAM163A      | 2.19 | 5.50E-05    | 0.000162046 |
| 51129    | 1890  | ANGPTL4      | 2.18 | 5.89E-36    | 1.03E-34    |
| 7033     | 1054  | TFF3         | 2.18 | 0.000301882 | 0.000799379 |
| 23643    | 647   | LY96         | 2.17 | 2.84E-05    | 8.69E-05    |
| 148523   | 1255  | CIART        | 2.17 | 1.14E-14    | 7.70E-14    |
| 6280     | 586   | S100A9       | 2.17 | 5.82E-05    | 0.000170596 |
| 2747     | 2348  | GLUD2        | 2.17 | 3.90E-05    | 0.000117235 |
| 2939     | 1320  | GSTA2        | 2.17 | 0.000325062 | 0.000857439 |
| 2946     | 1232  | GSTM2        | 2.17 | 3.06E-25    | 3.51E-24    |
| 26996    | 1990  | GPR160       | 2.17 | 1.65E-48    | 4.20E-47    |
| 115361   | 6160  | GBP4         | 2.16 | 7.10E-49    | 1.83E-47    |
| 7096     | 3786  | TLR1         | 2.16 | 7.38E-31    | 1.08E-29    |
| 2357     | 1337  | FPR1         | 2.16 | 1.46E-23    | 1.56E-22    |
| 1E+08    | 3441  | ZNF705E      | 2.16 | 2.74E-07    | 1.05E-06    |
| 375616   | 3767  | KCP          | 2.15 | 1.98E-40    | 4.00E-39    |
| 26045    | 5628  | LRRTM2       | 2.15 | 1.18E-12    | 6.96E-12    |
| 164045   | 3490  | HFM1         | 2.15 | 1.95E-06    | 6.85E-06    |
| 153328   | 1850  | SLC25A48     | 2.15 | 0.000373677 | 0.000976683 |
| 56143    | 5218  | PCDHA5       | 2.14 | 0.000380859 | 0.000994869 |
| 6288     | 580   | SAA1         | 2.14 | 1.09E-189   | 2.59E-187   |
| 730755   | 880   | KRTAP2-3     | 2.14 | 2.57E-16    | 1.93E-15    |
| 2264     | 3063  | FGFR4        | 2.14 | 1.96E-68    | 8.36E-67    |
| 346389   | 9167  | MACC1        | 2.14 | 4.04E-49    | 1.06E-47    |
| 3434     | 4409  | IFIT1        | 2.14 | 5.96E-41    | 1.23E-39    |
| 56110    | 2442  | PCDHGA5      | 2.13 | 1.20E-06    | 4.31E-06    |
| 57717    | 4549  | PCDHB16      | 2.13 | 0.000113687 | 0.00032053  |
| 5332     | 5600  | PLCB4        | 2.13 | 1.74E-124   | 2.00E-122   |
| 26253    | 1264  | CLEC4E       | 2.12 | 1.39E-53    | 4.13E-52    |
| 26249    | 6664  | KLHL3        | 2.12 | 7.47E-25    | 8.41E-24    |
| 79993    | 3840  | ELOVL7       | 2.12 | 1.07E-85    | 6.55E-84    |
| 1E+08    | 967   | SHISAL2B     | 2.11 | 0.00037121  | 0.00097052  |
| 152078   | 1147  | PQLC2L       | 2.11 | 1.37E-05    | 4.38E-05    |
| 51676    | 2374  | ASB2         | 2.11 | 6.55E-07    | 2.41E-06    |
| 395      | 4127  | ARHGAP6      | 2.11 | 2.37E-36    | 4.20E-35    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 387755   | 2385  | INSC         | 2.11 | 0.000195526 | 0.000532429 |
| 8048     | 1464  | CSRP3        | 2.11 | 0.000482616 | 0.001238642 |
| 283848   | 2426  | CES4A        | 2.11 | 4.49E-53    | 1.32E-51    |
| 59272    | 3519  | ACE2         | 2.10 | 0.000373778 | 0.000976805 |
| 5317     | 5384  | PKP1         | 2.10 | 3.67E-06    | 1.25E-05    |
| 5588     | 3295  | PRKCQ        | 2.10 | 5.62E-34    | 9.15E-33    |
| 5673     | 1598  | PSG5         | 2.10 | 1.89E-12    | 1.10E-11    |
| 401024   | 20787 | FSIP2        | 2.10 | 6.39E-05    | 0.000186428 |
| 7846     | 1934  | TUBA1A       | 2.10 | 7.65E-143   | 1.18E-140   |
| 5027     | 6246  | P2RX7        | 2.10 | 3.68E-09    | 1.67E-08    |
| 143903   | 2873  | LAYN         | 2.09 | 1.03E-22    | 1.05E-21    |
| 6347     | 760   | CCL2         | 2.09 | 1.37E-53    | 4.07E-52    |
| 1.08E+08 | 2697  | LOC107984026 | 2.09 | 6.33E-55    | 1.95E-53    |
| 171019   | 5076  | ADAMTS19     | 2.09 | 0.00053595  | 0.001365271 |
| 1.02E+08 | 1347  | LOC101929141 | 2.09 | 3.09E-05    | 9.41E-05    |
| 342979   | 2303  | PALM3        | 2.08 | 3.80E-06    | 1.29E-05    |
| 1134     | 2019  | CHRNA1       | 2.08 | 0.000446839 | 0.001154156 |
| 23639    | 3479  | LRRC6        | 2.08 | 2.79E-27    | 3.52E-26    |
| 54749    | 2325  | EPDR1        | 2.08 | 2.23E-107   | 2.03E-105   |
| 401494   | 4242  | HACD4        | 2.08 | 4.63E-36    | 8.10E-35    |
| 56833    | 2547  | SLAMF8       | 2.08 | 3.94E-10    | 1.93E-09    |
| 254295   | 1528  | PHYHD1       | 2.08 | 2.36E-90    | 1.54E-88    |
| 392255   | 3716  | GDF6         | 2.07 | 1.37E-05    | 4.38E-05    |
| 440348   | 1291  | NPIP15       | 2.07 | 4.14E-29    | 5.66E-28    |
| 1E+08    | 4296  | LOC100129940 | 2.07 | 2.83E-10    | 1.40E-09    |
| 256987   | 6245  | SERINC5      | 2.07 | 5.45E-99    | 4.23E-97    |
| 79772    | 4142  | MCTP1        | 2.06 | 5.94E-65    | 2.35E-63    |
| 107      | 10155 | ADCY1        | 2.06 | 2.90E-10    | 1.44E-09    |
| 83539    | 3349  | CHST9        | 2.06 | 8.74E-49    | 2.25E-47    |
| 57460    | 5730  | PPM1H        | 2.06 | 1.21E-95    | 8.78E-94    |
| 51478    | 1518  | HSD17B7      | 2.06 | 2.86E-49    | 7.51E-48    |
| 10561    | 1965  | IFI44        | 2.06 | 1.00E-46    | 2.45E-45    |
| 56114    | 4602  | PCDHGA1      | 2.05 | 1.87E-10    | 9.44E-10    |
| 1576     | 2792  | CYP3A4       | 2.05 | 0.000551328 | 0.001403237 |
| 503835   | 3346  | DUXA         | 2.05 | 4.61E-05    | 0.000137196 |
| 56138    | 6848  | PCDHA11      | 2.05 | 0.000646225 | 0.00162562  |
| 752014   | 1374  | CEMP1        | 2.05 | 1.25E-16    | 9.52E-16    |
| 7070     | 2259  | THY1         | 2.05 | 0.000277805 | 0.000740036 |
| 53632    | 3412  | PRKAG3       | 2.04 | 0.00068226  | 0.001710271 |
| 353219   | 1382  | KAAG1        | 2.04 | 1.99E-09    | 9.27E-09    |
| 956      | 2805  | ENTPD3       | 2.04 | 2.41E-15    | 1.71E-14    |
| 144110   | 3676  | TMEM86A      | 2.04 | 4.77E-49    | 1.24E-47    |
| 3687     | 4196  | ITGAX        | 2.04 | 6.32E-07    | 2.33E-06    |
| 144195   | 2782  | SLC2A14      | 2.03 | 0.000750624 | 0.001870034 |
| 131368   | 3639  | ZPLD1        | 2.03 | 0.000143351 | 0.000398539 |
| 55714    | 10128 | TENM3        | 2.03 | 2.65E-46    | 6.42E-45    |
| 4060     | 2116  | LUM          | 2.03 | 1.19E-92    | 8.26E-91    |
| 129607   | 2992  | CMPK2        | 2.02 | 1.10E-17    | 8.87E-17    |

|        |       |           |      |             |             |
|--------|-------|-----------|------|-------------|-------------|
| 401145 | 14306 | CCSER1    | 2.02 | 1.51E-23    | 1.61E-22    |
| 5021   | 4408  | OXTR      | 2.02 | 5.67E-34    | 9.23E-33    |
| 2104   | 5444  | ESRRG     | 2.02 | 2.02E-13    | 1.25E-12    |
| 23475  | 2187  | QPRT      | 2.02 | 4.16E-135   | 5.92E-133   |
| 10826  | 3381  | FAXDC2    | 2.02 | 5.08E-29    | 6.91E-28    |
| 26585  | 4114  | GREM1     | 2.02 | 5.18E-102   | 4.28E-100   |
| 54716  | 5396  | SLC6A20   | 2.02 | 6.19E-09    | 2.77E-08    |
| 84952  | 7253  | CGNL1     | 2.02 | 9.79E-85    | 5.84E-83    |
| 51171  | 1233  | HSD17B14  | 2.02 | 6.33E-12    | 3.55E-11    |
| 6289   | 714   | SAA2      | 2.02 | 1.17E-163   | 2.14E-161   |
| 79054  | 5946  | TRPM8     | 2.01 | 8.15E-05    | 0.000234366 |
| 6559   | 4688  | SLC12A3   | 2.01 | 0.000332343 | 0.000875344 |
| 256815 | 2036  | C10orf67  | 2.00 | 1.34E-06    | 4.79E-06    |
| 6236   | 1468  | RRAD      | 2.00 | 1.08E-78    | 5.71E-77    |
| 155368 | 969   | METTL27   | 2.00 | 2.79E-09    | 1.28E-08    |
| 5341   | 2866  | PLEK      | 2.00 | 3.36E-09    | 1.53E-08    |
| 285513 | 12762 | GPRIN3    | 2.00 | 2.56E-16    | 1.92E-15    |
| 1015   | 3698  | CDH17     | 1.99 | 0.00038862  | 0.001013802 |
| 8170   | 3765  | SLC14A2   | 1.99 | 1.82E-06    | 6.40E-06    |
| 29958  | 7079  | DMGDH     | 1.99 | 3.30E-11    | 1.77E-10    |
| 90139  | 4241  | TSPAN18   | 1.99 | 7.49E-51    | 2.05E-49    |
| 4129   | 2600  | MAOB      | 1.99 | 1.94E-10    | 9.76E-10    |
| 161291 | 4443  | TMEM30B   | 1.99 | 5.68E-05    | 0.000166837 |
| 9626   | 886   | GUCA1C    | 1.99 | 0.000958292 | 0.00234337  |
| 387758 | 3024  | FIBIN     | 1.99 | 1.77E-08    | 7.63E-08    |
| 84519  | 1886  | ACRBP     | 1.98 | 4.23E-05    | 0.000126527 |
| 5042   | 2430  | PABPC3    | 1.98 | 0.00100589  | 0.002450659 |
| 343990 | 4127  | KIAA1211L | 1.98 | 2.04E-32    | 3.14E-31    |
| 144453 | 2799  | BEST3     | 1.98 | 4.38E-07    | 1.65E-06    |
| 79674  | 2383  | VEPH1     | 1.98 | 6.72E-58    | 2.24E-56    |
| 23529  | 1860  | CLCF1     | 1.98 | 2.78E-92    | 1.90E-90    |
| 1316   | 4671  | KLF6      | 1.98 | 1.08E-191   | 2.63E-189   |
| 3078   | 1103  | CFHR1     | 1.97 | 0.000244095 | 0.000655149 |
| 11250  | 1725  | GPR45     | 1.97 | 0.000590384 | 0.001496426 |
| 164312 | 2910  | LRRN4     | 1.97 | 1.27E-74    | 6.19E-73    |
| 1804   | 3918  | DPP6      | 1.97 | 0.00106914  | 0.002594792 |
| 1646   | 3419  | AKR1C2    | 1.97 | 7.68E-08    | 3.11E-07    |
| 4192   | 925   | MDK       | 1.97 | 1.26E-14    | 8.49E-14    |
| 10158  | 894   | PDZK1IP1  | 1.97 | 5.45E-198   | 1.47E-195   |
| 145581 | 4889  | LRFN5     | 1.97 | 8.64E-08    | 3.48E-07    |
| 5153   | 3407  | PDE1B     | 1.97 | 0.000479747 | 0.001231813 |
| 22917  | 1377  | ZP1       | 1.97 | 2.41E-08    | 1.02E-07    |
| 83729  | 2453  | INHBE     | 1.97 | 1.72E-06    | 6.06E-06    |
| 3663   | 2860  | IRF5      | 1.96 | 1.49E-49    | 3.93E-48    |
| 1088   | 2333  | CEACAM8   | 1.96 | 0.001031193 | 0.002506806 |
| 728215 | 3800  | FAM155A   | 1.96 | 2.12E-34    | 3.49E-33    |
| 23562  | 1674  | CLDN14    | 1.96 | 0.000516666 | 0.001319931 |
| 56134  | 6036  | PCDHAC2   | 1.95 | 0.001117826 | 0.002701515 |



|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 10418    | 5154  | SPON1        | 1.95 | 9.51E-07    | 3.44E-06    |
| 4862     | 3772  | NPAS2        | 1.95 | 4.40E-49    | 1.15E-47    |
| 53938    | 1142  | PPIL3        | 1.95 | 9.10E-63    | 3.43E-61    |
| 6505     | 3771  | SLC1A1       | 1.95 | 3.56E-47    | 8.80E-46    |
| 4314     | 1906  | MMP3         | 1.94 | 0.001237917 | 0.002967848 |
| 9957     | 2432  | HS3ST1       | 1.94 | 3.89E-19    | 3.38E-18    |
| 1272     | 5277  | CNTN1        | 1.94 | 0.000962888 | 0.002352667 |
| 167838   | 4915  | TXLNB        | 1.94 | 0.001310451 | 0.003126055 |
| 6317     | 1793  | SERPINB3     | 1.94 | 4.02E-10    | 1.96E-09    |
| 83445    | 2497  | GSG1         | 1.94 | 5.99E-05    | 0.000175277 |
| 56100    | 4599  | PCDHGB6      | 1.93 | 2.55E-07    | 9.79E-07    |
| 23052    | 4693  | ENDOD1       | 1.93 | 4.37E-96    | 3.21E-94    |
| 92483    | 1773  | LDHAL6B      | 1.93 | 7.31E-05    | 0.000211631 |
| 26059    | 6272  | ERC2         | 1.93 | 5.95E-08    | 2.44E-07    |
| 57412    | 2477  | AS3MT        | 1.93 | 1.84E-59    | 6.36E-58    |
| 6768     | 3319  | ST14         | 1.93 | 6.08E-44    | 1.39E-42    |
| 25801    | 1844  | GCA          | 1.93 | 4.17E-34    | 6.80E-33    |
| 353324   | 2543  | SPATA12      | 1.93 | 0.000673226 | 0.001689292 |
| 1.05E+08 | 1252  | LOC105376678 | 1.93 | 5.38E-05    | 0.000158802 |
| 2329     | 2274  | FMO4         | 1.93 | 1.23E-14    | 8.31E-14    |
| 91653    | 3765  | BOC          | 1.92 | 1.98E-30    | 2.84E-29    |
| 139067   | 606   | SPANXN3      | 1.92 | 0.001412299 | 0.003352088 |
| 1E+08    | 1866  | ZNF705G      | 1.92 | 0.001468015 | 0.00347412  |
| 9737     | 5341  | GPRASP1      | 1.92 | 4.39E-09    | 1.99E-08    |
| 9242     | 2075  | MSC          | 1.91 | 6.29E-11    | 3.31E-10    |
| 94120    | 2812  | SYTL3        | 1.91 | 4.87E-30    | 6.88E-29    |
| 284021   | 1503  | MILR1        | 1.91 | 1.26E-18    | 1.07E-17    |
| 83937    | 2907  | RASSF4       | 1.91 | 3.98E-99    | 3.10E-97    |
| 353088   | 4274  | ZNF429       | 1.91 | 1.10E-14    | 7.44E-14    |
| 1308     | 5610  | COL17A1      | 1.90 | 2.80E-14    | 1.86E-13    |
| 54858    | 6329  | PGPEP1       | 1.90 | 1.13E-75    | 5.63E-74    |
| 8857     | 16407 | FCGBP        | 1.90 | 1.44E-40    | 2.91E-39    |
| 1.08E+08 | 3002  | LOC107985425 | 1.90 | 0.000463009 | 0.001192972 |
| 56135    | 5475  | PCDHAC1      | 1.90 | 0.001597703 | 0.003752047 |
| 254228   | 9796  | CALHM5       | 1.89 | 2.85E-05    | 8.72E-05    |
| 388      | 2387  | RHOB         | 1.89 | 2.99E-186   | 6.90E-184   |
| 2272     | 1892  | FHIT         | 1.89 | 8.24E-15    | 5.64E-14    |
| 145407   | 5638  | C14orf37     | 1.89 | 2.55E-27    | 3.23E-26    |
| 124961   | 5011  | ZFP3         | 1.89 | 2.54E-05    | 7.82E-05    |
| 80036    | 3370  | TRPM3        | 1.89 | 2.06E-05    | 6.42E-05    |
| 9415     | 3181  | FADS2        | 1.89 | 1.05E-128   | 1.32E-126   |
| 6364     | 849   | CCL20        | 1.89 | 1.24E-09    | 5.85E-09    |
| 6335     | 9768  | SCN9A        | 1.89 | 3.63E-16    | 2.69E-15    |
| 167127   | 2385  | UGT3A2       | 1.89 | 0.001597953 | 0.003752137 |
| 9079     | 2636  | LDB2         | 1.88 | 4.95E-06    | 1.66E-05    |
| 284076   | 3559  | TTLL6        | 1.88 | 1.38E-43    | 3.10E-42    |
| 222584   | 6269  | FAM83B       | 1.88 | 3.23E-13    | 1.97E-12    |
| 6299     | 5155  | SALL1        | 1.88 | 4.57E-127   | 5.48E-125   |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 285671   | 5430  | RNF180       | 1.88 | 7.01E-08    | 2.85E-07    |
| 1.08E+08 | 2559  | LOC107986113 | 1.88 | 1.97E-10    | 9.92E-10    |
| 7093     | 6788  | TLL2         | 1.87 | 4.36E-49    | 1.14E-47    |
| 1.01E+08 | 2298  | LOC100505650 | 1.87 | 1.35E-42    | 2.96E-41    |
| 283463   | 25332 | MUC19        | 1.87 | 6.76E-07    | 2.49E-06    |
| 5924     | 7711  | RASGRF2      | 1.87 | 1.17E-62    | 4.41E-61    |
| 4485     | 2723  | MST1         | 1.87 | 1.29E-44    | 2.98E-43    |
| 54894    | 5318  | RNF43        | 1.87 | 4.16E-16    | 3.06E-15    |
| 133923   | 1979  | ZNF474       | 1.86 | 0.000769732 | 0.00191415  |
| 389376   | 462   | SFTA2        | 1.86 | 0.001681502 | 0.003932727 |
| 1.08E+08 | 1049  | LOC107985384 | 1.86 | 0.002023593 | 0.00466496  |
| 84911    | 2819  | ZNF382       | 1.86 | 0.00036578  | 0.000956886 |
| 4856     | 2601  | NOV          | 1.86 | 2.49E-29    | 3.43E-28    |
| 6318     | 1724  | SERPINB4     | 1.86 | 1.13E-06    | 4.05E-06    |
| 57571    | 5062  | CARNS1       | 1.86 | 5.53E-13    | 3.31E-12    |
| 10631    | 3225  | POSTN        | 1.85 | 0.001209767 | 0.002907107 |
| 130940   | 2301  | CCDC148      | 1.85 | 3.58E-13    | 2.18E-12    |
| 80157    | 1925  | CWH43        | 1.85 | 0.002016227 | 0.004650094 |
| 8572     | 2303  | PDLIM4       | 1.85 | 2.43E-107   | 2.20E-105   |
| 3880     | 1490  | KRT19        | 1.85 | 8.47E-107   | 7.60E-105   |
| 55630    | 731   | SLC39A4      | 1.85 | 2.89E-35    | 4.92E-34    |
| 130367   | 4863  | SGPP2        | 1.85 | 6.54E-110   | 6.28E-108   |
| 4072     | 1731  | EPCAM        | 1.84 | 2.20E-74    | 1.06E-72    |
| 8991     | 1731  | SELENBP1     | 1.84 | 1.59E-32    | 2.47E-31    |
| 64332    | 3889  | NFKBIZ       | 1.84 | 5.31E-24    | 5.75E-23    |
| 2841     | 2471  | GPR18        | 1.84 | 0.002173622 | 0.004980132 |
| 1.05E+08 | 1685  | LOC105369972 | 1.83 | 4.44E-06    | 1.50E-05    |
| 440345   | 5447  | NPIPB4       | 1.83 | 7.27E-16    | 5.29E-15    |
| 221692   | 5424  | PHACTR1      | 1.83 | 8.38E-20    | 7.52E-19    |
| 2212     | 2286  | FCGR2A       | 1.83 | 0.000619826 | 0.001563468 |
| 113763   | 2896  | ZBED6CL      | 1.83 | 1.01E-68    | 4.32E-67    |
| 57604    | 9800  | TRMT9B       | 1.83 | 3.19E-14    | 2.11E-13    |
| 22891    | 4052  | ZNF365       | 1.83 | 6.82E-14    | 4.41E-13    |
| 51361    | 5865  | HOOK1        | 1.82 | 1.69E-73    | 7.99E-72    |
| 80017    | 2916  | DGLUCY       | 1.82 | 8.89E-85    | 5.32E-83    |
| 22941    | 9301  | SHANK2       | 1.82 | 7.15E-86    | 4.40E-84    |
| 285498   | 1181  | RNF212       | 1.82 | 0.002419246 | 0.005496824 |
| 56097    | 4641  | PCDHGC5      | 1.82 | 1.79E-06    | 6.29E-06    |
| 339965   | 4346  | CCDC158      | 1.82 | 0.00244572  | 0.005553425 |
| 1950     | 5435  | EGF          | 1.82 | 5.55E-13    | 3.32E-12    |
| 134265   | 5730  | AFAP1L1      | 1.82 | 1.07E-60    | 3.84E-59    |
| 27071    | 2716  | DAPP1        | 1.82 | 0.000219806 | 0.000593724 |
| 57379    | 2794  | AICDA        | 1.81 | 0.001192051 | 0.002867248 |
| 259294   | 1002  | TAS2R19      | 1.81 | 0.00183171  | 0.004255469 |
| 56899    | 5907  | ANKS1B       | 1.81 | 1.06E-06    | 3.81E-06    |
| 9388     | 4188  | LIPG         | 1.81 | 5.52E-63    | 2.09E-61    |
| 10203    | 5543  | CALCRL       | 1.81 | 4.41E-11    | 2.35E-10    |
| 1154     | 2548  | CISH         | 1.80 | 2.24E-32    | 3.45E-31    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 1622     | 637   | DBI          | 1.80 | 3.64E-91    | 2.40E-89    |
| 1282     | 6532  | COL4A1       | 1.80 | 1.40E-149   | 2.30E-147   |
| 595      | 4304  | CCND1        | 1.80 | 1.01E-91    | 6.85E-90    |
| 29119    | 10063 | CTNNA3       | 1.80 | 0.002912245 | 0.006522725 |
| 387264   | 942   | KRTAP5-1     | 1.80 | 0.001969954 | 0.004549278 |
| 440603   | 4986  | BCL2L15      | 1.79 | 1.76E-27    | 2.25E-26    |
| 6271     | 607   | S100A1       | 1.79 | 5.34E-22    | 5.29E-21    |
| 5822     | 3277  | PWP2         | 1.79 | 5.63E-23    | 5.84E-22    |
| 9586     | 8427  | CREB5        | 1.79 | 8.91E-52    | 2.51E-50    |
| 126410   | 2620  | CYP4F22      | 1.79 | 0.002792424 | 0.006270953 |
| 8437     | 4695  | RASAL1       | 1.79 | 9.14E-40    | 1.82E-38    |
| 999      | 4808  | CDH1         | 1.79 | 7.18E-22    | 7.08E-21    |
| 646643   | 1568  | SBK2         | 1.79 | 0.001219865 | 0.002927807 |
| 57482    | 6562  | KIAA1211     | 1.79 | 1.14E-12    | 6.69E-12    |
| 1953     | 7128  | MEGF6        | 1.79 | 1.86E-52    | 5.38E-51    |
| 126868   | 3232  | MAB21L3      | 1.79 | 1.30E-18    | 1.10E-17    |
| 64881    | 4926  | PCDH20       | 1.79 | 5.58E-13    | 3.34E-12    |
| 1890     | 1689  | TYMP         | 1.78 | 9.77E-11    | 5.05E-10    |
| 284297   | 4899  | SSC5D        | 1.78 | 5.97E-39    | 1.16E-37    |
| 221806   | 5088  | VWDE         | 1.78 | 2.40E-14    | 1.60E-13    |
| 196446   | 3142  | MYRFL        | 1.78 | 0.000363719 | 0.000951917 |
| 6584     | 2748  | SLC22A5      | 1.78 | 1.21E-51    | 3.39E-50    |
| 128344   | 2340  | PIFO         | 1.77 | 4.31E-10    | 2.10E-09    |
| 2053     | 2228  | EPHX2        | 1.77 | 2.75E-07    | 1.05E-06    |
| 92359    | 1026  | CRB3         | 1.77 | 1.12E-20    | 1.05E-19    |
| 6565     | 4524  | SLC15A2      | 1.77 | 0.000176785 | 0.000484664 |
| 285386   | 6029  | TPRG1        | 1.77 | 0.000686284 | 0.001719386 |
| 3750     | 4185  | KCND1        | 1.77 | 6.78E-30    | 9.55E-29    |
| 11145    | 1215  | PLA2G16      | 1.77 | 6.33E-122   | 6.94E-120   |
| 79071    | 3052  | ELOVL6       | 1.77 | 1.42E-103   | 1.21E-101   |
| 2099     | 2888  | ESR1         | 1.77 | 1.45E-12    | 8.50E-12    |
| 2982     | 6529  | GUCY1A1      | 1.77 | 1.86E-23    | 1.97E-22    |
| 10873    | 2203  | ME3          | 1.77 | 2.23E-28    | 2.94E-27    |
| 388698   | 8690  | FLG2         | 1.76 | 0.003283164 | 0.007285533 |
| 3816     | 886   | KLK1         | 1.76 | 0.00127457  | 0.003045529 |
| 8291     | 6777  | DYSF         | 1.76 | 1.25E-69    | 5.44E-68    |
| 6876     | 1182  | TAGLN        | 1.76 | 2.59E-85    | 1.57E-83    |
| 307      | 2196  | ANXA4        | 1.76 | 2.37E-132   | 3.29E-130   |
| 148808   | 3827  | MFSD4A       | 1.76 | 1.71E-06    | 6.04E-06    |
| 70       | 3693  | ACTC1        | 1.76 | 0.001624318 | 0.003809012 |
| 1.08E+08 | 2988  | LOC107984115 | 1.76 | 5.51E-14    | 3.59E-13    |
| 84451    | 5793  | MAP3K21      | 1.76 | 5.79E-49    | 1.50E-47    |
| 1258     | 4914  | CNGB1        | 1.76 | 2.01E-07    | 7.82E-07    |
| 9514     | 1732  | GAL3ST1      | 1.76 | 8.58E-11    | 4.46E-10    |
| 1.05E+08 | 3120  | LOC105379177 | 1.76 | 7.18E-05    | 0.000208124 |
| 116211   | 1053  | TM4SF19      | 1.76 | 3.19E-05    | 9.70E-05    |
| 8876     | 3844  | VNN1         | 1.75 | 9.30E-11    | 4.81E-10    |
| 149628   | 1666  | PYHIN1       | 1.75 | 0.000222562 | 0.000600619 |

|        |       |           |      |             |             |
|--------|-------|-----------|------|-------------|-------------|
| 56103  | 4475  | PCDHGB2   | 1.75 | 3.49E-22    | 3.50E-21    |
| 6579   | 7695  | SLCO1A2   | 1.75 | 0.00083139  | 0.002052255 |
| 81035  | 3134  | COLEC12   | 1.75 | 1.68E-64    | 6.60E-63    |
| 5343   | 3011  | PLGLB1    | 1.75 | 0.001224498 | 0.002937737 |
| 4938   | 1885  | OAS1      | 1.75 | 1.32E-27    | 1.69E-26    |
| 55160  | 4082  | ARHGEF10L | 1.74 | 6.14E-76    | 3.08E-74    |
| 89795  | 9285  | NAV3      | 1.74 | 1.87E-11    | 1.01E-10    |
| 729873 | 2260  | TBC1D3    | 1.74 | 0.00286567  | 0.006426507 |
| 7114   | 657   | TMSB4X    | 1.74 | 1.18E-81    | 6.55E-80    |
| 11213  | 8273  | IRAK3     | 1.74 | 4.36E-40    | 8.73E-39    |
| 3224   | 2290  | HOXC8     | 1.74 | 6.28E-35    | 1.06E-33    |
| 348938 | 3279  | NIPAL4    | 1.74 | 1.77E-39    | 3.49E-38    |
| 196996 | 3564  | GRAMD2A   | 1.74 | 2.05E-07    | 7.97E-07    |
| 128434 | 1981  | VSTM2L    | 1.74 | 2.05E-25    | 2.38E-24    |
| 440738 | 1367  | MAP1LC3C  | 1.73 | 3.54E-06    | 1.21E-05    |
| 9985   | 2478  | REC8      | 1.73 | 2.80E-22    | 2.82E-21    |
| 4544   | 2935  | MTNR1B    | 1.73 | 0.003768784 | 0.008284517 |
| 10361  | 1163  | NPM2      | 1.73 | 4.12E-10    | 2.01E-09    |
| 283710 | 885   | LOC283710 | 1.72 | 0.004173565 | 0.009095788 |
| 84418  | 926   | CYSTM1    | 1.72 | 2.31E-55    | 7.19E-54    |
| 26166  | 2732  | RGS22     | 1.72 | 0.004338615 | 0.009433248 |
| 503834 | 648   | DPRX      | 1.72 | 0.003932806 | 0.008608859 |
| 283284 | 4360  | IGSF22    | 1.72 | 0.003911925 | 0.008568427 |
| 79366  | 1941  | HMG5      | 1.72 | 2.59E-39    | 5.08E-38    |
| 58528  | 4965  | RRAGD     | 1.72 | 3.86E-63    | 1.47E-61    |
| 387597 | 8053  | ILDR2     | 1.72 | 6.07E-66    | 2.46E-64    |
| 80270  | 2193  | HSD3B7    | 1.72 | 1.29E-34    | 2.14E-33    |
| 117153 | 2351  | NA        | 1.72 | 8.93E-15    | 6.10E-14    |
| 1379   | 1837  | CR1L      | 1.71 | 0.00259168  | 0.005860138 |
| 51176  | 2554  | LEF1      | 1.71 | 2.86E-94    | 2.04E-92    |
| 167681 | 2527  | PRSS35    | 1.71 | 9.37E-05    | 0.000267424 |
| 1649   | 1051  | DDIT3     | 1.71 | 1.73E-32    | 2.68E-31    |
| 114793 | 5178  | FMNL2     | 1.71 | 1.15E-115   | 1.18E-113   |
| 60506  | 3059  | NYX       | 1.71 | 0.004508706 | 0.009785108 |
| 10154  | 7023  | PLXNC1    | 1.71 | 3.22E-10    | 1.59E-09    |
| 333926 | 1762  | PPM1J     | 1.71 | 8.26E-10    | 3.95E-09    |
| 8187   | 2783  | ZNF239    | 1.70 | 4.66E-19    | 4.02E-18    |
| 5169   | 3247  | ENPP3     | 1.70 | 2.18E-05    | 6.79E-05    |
| 84842  | 1803  | HPDL      | 1.70 | 2.33E-06    | 8.09E-06    |
| 80255  | 8592  | SLC35F5   | 1.70 | 1.87E-100   | 1.50E-98    |
| 3316   | 858   | HSPB2     | 1.70 | 5.56E-05    | 0.000163692 |
| 51146  | 1830  | A4GNT     | 1.70 | 0.001478307 | 0.003497545 |
| 375061 | 1516  | FAM89A    | 1.70 | 7.93E-06    | 2.61E-05    |
| 59307  | 1701  | SIGIRR    | 1.70 | 2.34E-28    | 3.09E-27    |
| 10129  | 10390 | FRY       | 1.69 | 2.44E-11    | 1.32E-10    |
| 79413  | 2226  | ZBED2     | 1.69 | 4.83E-25    | 5.51E-24    |
| 415    | 2130  | ARSE      | 1.69 | 3.79E-41    | 7.85E-40    |
| 8878   | 2694  | SQSTM1    | 1.69 | 1.79E-125   | 2.09E-123   |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 341346   | 4154  | SMCO2        | 1.68 | 8.18E-05    | 0.000235202 |
| 8519     | 733   | IFITM1       | 1.68 | 1.61E-43    | 3.60E-42    |
| 51635    | 2042  | DHRS7        | 1.68 | 1.89E-82    | 1.08E-80    |
| 27094    | 1811  | KCNMB3       | 1.68 | 4.24E-13    | 2.56E-12    |
| 596      | 5588  | BCL2         | 1.68 | 5.68E-36    | 9.92E-35    |
| 92558    | 3039  | BICDL1       | 1.68 | 1.31E-43    | 2.94E-42    |
| 1.03E+08 | 1139  | LOC102725009 | 1.68 | 4.43E-05    | 0.000132319 |
| 1489     | 1678  | CTF1         | 1.68 | 1.10E-11    | 6.06E-11    |
| 5334     | 5977  | PLCL1        | 1.68 | 0.004829497 | 0.010422749 |
| 7097     | 4197  | TLR2         | 1.68 | 3.37E-31    | 4.99E-30    |
| 2537     | 838   | IFI6         | 1.68 | 3.95E-09    | 1.79E-08    |
| 7915     | 5144  | ALDH5A1      | 1.67 | 9.24E-32    | 1.40E-30    |
| 133396   | 3903  | IL31RA       | 1.67 | 0.000903252 | 0.002217934 |
| 60676    | 9604  | PAPPA2       | 1.67 | 0.003566436 | 0.007872833 |
| 154215   | 3031  | NKAIN2       | 1.67 | 0.005575849 | 0.011884798 |
| 84870    | 2322  | RSPO3        | 1.67 | 7.96E-29    | 1.08E-27    |
| 79780    | 3124  | CCDC82       | 1.67 | 3.93E-81    | 2.17E-79    |
| 414157   | 1264  | C10orf62     | 1.67 | 0.00342026  | 0.007562366 |
| 338440   | 2769  | ANO9         | 1.67 | 1.96E-44    | 4.51E-43    |
| 56271    | 1282  | BEX4         | 1.67 | 1.21E-29    | 1.69E-28    |
| 132989   | 1398  | C4orf36      | 1.67 | 1.41E-10    | 7.17E-10    |
| 1.01E+08 | 1680  | LOC100652901 | 1.67 | 5.22E-13    | 3.13E-12    |
| 79815    | 4508  | NIPAL2       | 1.67 | 5.38E-27    | 6.73E-26    |
| 84766    | 3600  | CRACR2A      | 1.66 | 0.002740183 | 0.006162983 |
| 148641   | 3049  | SLC35F3      | 1.66 | 1.58E-15    | 1.13E-14    |
| 6695     | 4841  | SPOCK1       | 1.66 | 7.53E-140   | 1.13E-137   |
| 58472    | 1942  | SQOR         | 1.66 | 3.40E-65    | 1.35E-63    |
| 3398     | 1402  | ID2          | 1.66 | 1.07E-54    | 3.28E-53    |
| 10083    | 2180  | USH1C        | 1.66 | 0.005933816 | 0.012573886 |
| 1.08E+08 | 1918  | LOC107984341 | 1.66 | 0.000206521 | 0.000560138 |
| 10123    | 4014  | ARL4C        | 1.66 | 2.88E-117   | 3.03E-115   |
| 158880   | 4436  | USP51        | 1.66 | 1.15E-16    | 8.82E-16    |
| 1767     | 13300 | DNAH5        | 1.66 | 8.64E-10    | 4.13E-09    |
| 134526   | 3271  | ACOT12       | 1.66 | 0.000184947 | 0.000505531 |
| 255631   | 6500  | COL24A1      | 1.65 | 0.000277076 | 0.000738204 |
| 387700   | 4523  | SLC16A12     | 1.65 | 2.98E-56    | 9.52E-55    |
| 56123    | 3503  | PCDHB13      | 1.65 | 6.71E-05    | 0.000195212 |
| 339768   | 3511  | ESPNL        | 1.65 | 1.48E-08    | 6.41E-08    |
| 1491     | 2240  | CTH          | 1.65 | 1.42E-15    | 1.02E-14    |
| 284307   | 4206  | ZIK1         | 1.65 | 3.37E-10    | 1.66E-09    |
| 25903    | 3857  | OLFML2B      | 1.65 | 6.14E-07    | 2.27E-06    |
| 11001    | 2408  | SLC27A2      | 1.65 | 1.35E-18    | 1.14E-17    |
| 80731    | 4566  | THSD7B       | 1.65 | 0.005585373 | 0.011902244 |
| 1794     | 5926  | DOCK2        | 1.64 | 2.45E-18    | 2.04E-17    |
| 5624     | 1776  | PROC         | 1.64 | 0.001124421 | 0.002716343 |
| 1.03E+08 | 1581  | LOC102724720 | 1.64 | 0.005268566 | 0.011293508 |
| 57088    | 3282  | PLSCR4       | 1.64 | 1.83E-18    | 1.54E-17    |
| 477      | 5496  | ATP1A2       | 1.64 | 0.006184223 | 0.013071766 |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 199699   | 1732  | DAND5        | 1.64 | 5.90E-05    | 0.000172888 |
| 941      | 2433  | CD80         | 1.64 | 0.005818775 | 0.012359594 |
| 58189    | 1479  | WFDC1        | 1.64 | 0.006655759 | 0.013984908 |
| 340371   | 3605  | NRBP2        | 1.64 | 1.82E-59    | 6.33E-58    |
| 132014   | 2407  | IL17RE       | 1.64 | 4.60E-13    | 2.77E-12    |
| 7139     | 1165  | TNNT2        | 1.63 | 0.006733394 | 0.014127474 |
| 389434   | 3706  | IYD          | 1.63 | 0.00666336  | 0.01399794  |
| 4065     | 6936  | LY75         | 1.63 | 1.65E-08    | 7.12E-08    |
| 29091    | 3922  | STXBP6       | 1.63 | 4.42E-06    | 1.50E-05    |
| 1.07E+08 | 1715  | PRH1-TAS2R14 | 1.63 | 0.000154886 | 0.000427997 |
| 4131     | 11830 | MAP1B        | 1.63 | 1.13E-125   | 1.33E-123   |
| 401944   | 3990  | LDLRAD2      | 1.63 | 0.005359669 | 0.011466659 |
| 352999   | 1201  | C6orf58      | 1.63 | 0.005513757 | 0.011758094 |
| 440107   | 3267  | PLEKHG7      | 1.63 | 0.00499433  | 0.01073935  |
| 132160   | 2108  | PPM1M        | 1.63 | 1.30E-32    | 2.03E-31    |
| 57624    | 5104  | NYAP2        | 1.63 | 0.001233565 | 0.002958293 |
| 79152    | 2148  | FA2H         | 1.63 | 2.06E-05    | 6.43E-05    |
| 3760     | 4523  | KCNJ3        | 1.63 | 0.006553539 | 0.013783532 |
| 124739   | 4185  | USP43        | 1.62 | 3.67E-29    | 5.02E-28    |
| 222235   | 4429  | FBXL13       | 1.62 | 0.000201465 | 0.000547344 |
| 9162     | 8025  | DGKI         | 1.62 | 2.96E-21    | 2.84E-20    |
| 10247    | 1011  | RIDA         | 1.62 | 1.26E-23    | 1.36E-22    |
| 200132   | 2372  | TCTEX1D1     | 1.62 | 0.006082061 | 0.012871136 |
| 2745     | 1116  | GLRX         | 1.62 | 3.81E-58    | 1.28E-56    |
| 151871   | 1224  | DPPA2        | 1.62 | 0.006281171 | 0.013249893 |
| 120892   | 6507  | LRRK2        | 1.62 | 2.62E-30    | 3.75E-29    |
| 7504     | 5089  | XK           | 1.62 | 0.006725673 | 0.014113825 |
| 340547   | 3187  | VSIG1        | 1.62 | 1.95E-10    | 9.82E-10    |
| 89866    | 4024  | SEC16B       | 1.61 | 4.46E-11    | 2.37E-10    |
| 11077    | 3882  | HSF2BP       | 1.61 | 5.73E-16    | 4.20E-15    |
| 8999     | 4623  | CDKL2        | 1.61 | 1.31E-34    | 2.17E-33    |
| 11343    | 4268  | MGLL         | 1.61 | 7.14E-79    | 3.80E-77    |
| 1E+08    | 1701  | PRSS43       | 1.61 | 0.006268026 | 0.013226875 |
| 2846     | 4208  | LPAR4        | 1.61 | 8.06E-07    | 2.94E-06    |
| 174      | 2057  | AFP          | 1.61 | 0.007090518 | 0.014797313 |
| 221687   | 3392  | RNF182       | 1.61 | 4.40E-13    | 2.65E-12    |
| 54848    | 2703  | ARHGEF38     | 1.61 | 0.002677743 | 0.006040901 |
| 23255    | 6297  | MTCL1        | 1.61 | 1.53E-81    | 8.51E-80    |
| 10451    | 3127  | VAV3         | 1.61 | 2.71E-18    | 2.26E-17    |
| 201176   | 3565  | ARHGAP27     | 1.61 | 1.88E-63    | 7.18E-62    |
| 238      | 6267  | ALK          | 1.61 | 0.00722354  | 0.015050171 |
| 3898     | 2869  | LAD1         | 1.60 | 2.95E-06    | 1.02E-05    |
| 1601     | 4615  | DAB2         | 1.60 | 1.79E-79    | 9.64E-78    |
| 25961    | 2044  | NUDT13       | 1.60 | 1.51E-09    | 7.06E-09    |
| 2915     | 7855  | GRM5         | 1.60 | 0.006855481 | 0.014354017 |
| 56311    | 1358  | ANKRD7       | 1.60 | 0.000627014 | 0.001580029 |
| 9881     | 10352 | TRANK1       | 1.60 | 2.05E-47    | 5.11E-46    |
| 165631   | 4182  | PARP15       | 1.59 | 1.78E-65    | 7.12E-64    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 79081    | 1357  | LBHD1        | 1.59 | 6.78E-14    | 4.38E-13    |
| 23705    | 4397  | CADM1        | 1.59 | 1.50E-23    | 1.59E-22    |
| 116372   | 3633  | LYPD1        | 1.59 | 4.84E-44    | 1.11E-42    |
| 55679    | 1926  | LIMS2        | 1.59 | 5.98E-42    | 1.27E-40    |
| 80201    | 3689  | HKDC1        | 1.59 | 3.88E-71    | 1.74E-69    |
| 6262     | 16051 | RYP2         | 1.59 | 0.008521611 | 0.017506299 |
| 55530    | 6425  | SVOP         | 1.59 | 3.52E-05    | 0.000106528 |
| 445328   | 2474  | ARHGEF35     | 1.59 | 1.86E-34    | 3.08E-33    |
| 4056     | 680   | LTC4S        | 1.58 | 0.00126098  | 0.003016709 |
| 166012   | 1792  | CHST13       | 1.58 | 0.007361681 | 0.015318228 |
| 147719   | 4116  | LYPD4        | 1.58 | 0.008865444 | 0.018160158 |
| 64922    | 3624  | LRRC19       | 1.58 | 0.006826097 | 0.014300918 |
| 114770   | 2599  | PGLYRP2      | 1.57 | 0.00897271  | 0.018356604 |
| 84707    | 912   | BEX2         | 1.57 | 6.39E-12    | 3.58E-11    |
| 441457   | 3193  | NUTM2G       | 1.57 | 0.000248839 | 0.000667175 |
| 642587   | 978   | MIR205HG     | 1.57 | 5.31E-07    | 1.97E-06    |
| 10647    | 454   | SCGB1D2      | 1.57 | 0.007764868 | 0.016083723 |
| 55314    | 3047  | TMEM144      | 1.57 | 3.16E-17    | 2.50E-16    |
| 1.01E+08 | 508   | LOC100996747 | 1.56 | 0.009594082 | 0.019515472 |
| 26353    | 2056  | HSPB8        | 1.56 | 1.55E-57    | 5.15E-56    |
| 361      | 5236  | AQP4         | 1.56 | 0.000299188 | 0.00079272  |
| 150590   | 1545  | C2orf15      | 1.56 | 3.41E-07    | 1.30E-06    |
| 27132    | 2531  | CPNE7        | 1.56 | 2.70E-60    | 9.55E-59    |
| 9752     | 6237  | PCDHA9       | 1.56 | 0.008417087 | 0.017303574 |
| 1235     | 3216  | CCR6         | 1.56 | 0.001523183 | 0.003593191 |
| 440712   | 1704  | RHEX         | 1.56 | 4.59E-49    | 1.19E-47    |
| 1.03E+08 | 1761  | LOC102723872 | 1.56 | 1.00E-05    | 3.24E-05    |
| 64063    | 1391  | PRSS22       | 1.55 | 0.008383357 | 0.017242213 |
| 946      | 3847  | SIGLEC6      | 1.55 | 0.002208677 | 0.005053931 |
| 4015     | 4898  | LOX          | 1.55 | 3.40E-115   | 3.48E-113   |
| 2888     | 2151  | GRB14        | 1.55 | 1.97E-28    | 2.61E-27    |
| 140458   | 3624  | ASB5         | 1.55 | 0.008342467 | 0.017168051 |
| 8715     | 2880  | NOL4         | 1.55 | 0.008642431 | 0.017738097 |
| 64081    | 2562  | PBLD         | 1.55 | 1.32E-35    | 2.27E-34    |
| 133522   | 10525 | PPARGC1B     | 1.55 | 7.08E-12    | 3.95E-11    |
| 79587    | 1880  | CARS2        | 1.54 | 2.11E-70    | 9.30E-69    |
| 6327     | 4922  | SCN2B        | 1.54 | 0.008825718 | 0.018087123 |
| 57804    | 1749  | POLD4        | 1.54 | 1.89E-50    | 5.12E-49    |
| 64080    | 1328  | RBKS         | 1.54 | 3.87E-11    | 2.07E-10    |
| 5025     | 1701  | P2RX4        | 1.54 | 1.78E-41    | 3.71E-40    |
| 1E+08    | 1146  | SMIM6        | 1.54 | 9.51E-06    | 3.09E-05    |
| 1E+08    | 1318  | LIMS4        | 1.54 | 4.44E-13    | 2.67E-12    |
| 399726   | 2006  | CASC10       | 1.54 | 1.87E-07    | 7.29E-07    |
| 1.08E+08 | 3361  | LOC107984512 | 1.54 | 0.000796751 | 0.001973881 |
| 84978    | 5034  | FRMD5        | 1.54 | 1.98E-26    | 2.40E-25    |
| 642938   | 3536  | FAM196A      | 1.53 | 0.000444578 | 0.001149484 |
| 81788    | 3212  | NUAK2        | 1.53 | 4.24E-76    | 2.14E-74    |
| 8714     | 4634  | ABCC3        | 1.53 | 1.18E-78    | 6.20E-77    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 55283    | 2756  | MCOLN3       | 1.53 | 8.88E-43    | 1.95E-41    |
| 9495     | 6487  | AKAP5        | 1.53 | 2.43E-59    | 8.39E-58    |
| 1.03E+08 | 2520  | LOC102724994 | 1.53 | 0.000818918 | 0.002024283 |
| 3976     | 3916  | LIF          | 1.53 | 3.19E-55    | 9.88E-54    |
| 55064    | 3810  | SPATA6L      | 1.53 | 9.75E-13    | 5.77E-12    |
| 64506    | 3150  | CPEB1        | 1.53 | 1.57E-09    | 7.34E-09    |
| 1.05E+08 | 4017  | LOC105371419 | 1.53 | 0.00637755  | 0.013442029 |
| 1075     | 2057  | CTSC         | 1.52 | 8.33E-99    | 6.41E-97    |
| 1.08E+08 | 963   | LOC107986877 | 1.52 | 0.008681909 | 0.017810896 |
| 1287     | 6348  | COL4A5       | 1.52 | 1.70E-72    | 7.84E-71    |
| 1586     | 1895  | CYP17A1      | 1.52 | 0.010336463 | 0.020889248 |
| 79056    | 4654  | PRRG4        | 1.52 | 3.39E-32    | 5.19E-31    |
| 817      | 5284  | CAMK2D       | 1.52 | 1.36E-44    | 3.14E-43    |
| 23007    | 6114  | PLCH1        | 1.52 | 1.37E-17    | 1.11E-16    |
| 23780    | 2590  | APOL2        | 1.52 | 4.09E-127   | 4.95E-125   |
| 1.08E+08 | 1146  | LOC107985770 | 1.52 | 3.45E-06    | 1.18E-05    |
| 8620     | 854   | NPFF         | 1.52 | 1.13E-05    | 3.65E-05    |
| 55092    | 1960  | TMEM51       | 1.52 | 2.88E-59    | 9.92E-58    |
| 123103   | 5821  | KLHL33       | 1.51 | 3.55E-15    | 2.48E-14    |
| 27098    | 2643  | CLUL1        | 1.51 | 0.000687412 | 0.00172197  |
| 22822    | 5913  | PHLDA1       | 1.51 | 2.26E-55    | 7.05E-54    |
| 160419   | 3879  | C12orf50     | 1.51 | 2.40E-32    | 3.69E-31    |
| 26011    | 11114 | TENM4        | 1.51 | 7.03E-93    | 4.92E-91    |
| 5328     | 2396  | PLAU         | 1.51 | 2.40E-56    | 7.69E-55    |
| 4810     | 8352  | NHS          | 1.51 | 2.01E-42    | 4.36E-41    |
| 112609   | 2146  | MRAP2        | 1.51 | 0.001664797 | 0.003897248 |
| 6376     | 3338  | CX3CL1       | 1.51 | 7.79E-41    | 1.59E-39    |
| 162993   | 3410  | ZNF846       | 1.51 | 8.43E-20    | 7.57E-19    |
| 339559   | 2412  | ZFP69        | 1.51 | 1.60E-08    | 6.91E-08    |
| 1262     | 3271  | CNGA4        | 1.51 | 0.011961575 | 0.023837288 |
| 7164     | 1249  | TPD52L1      | 1.50 | 7.41E-44    | 1.69E-42    |
| 6582     | 2512  | SLC22A2      | 1.50 | 0.01037782  | 0.020965674 |
| 4588     | 8003  | MUC6         | 1.50 | 0.004022213 | 0.008792653 |
| 54798    | 6527  | DCHS2        | 1.50 | 9.90E-06    | 3.21E-05    |
| 343505   | 1611  | NBPF7        | 1.50 | 0.00020666  | 0.000560428 |
| 57761    | 2263  | TRIB3        | 1.50 | 2.97E-35    | 5.05E-34    |
| 57821    | 1899  | CCDC181      | 1.50 | 0.000123483 | 0.000345628 |
| 22837    | 9414  | COBLL1       | 1.50 | 1.43E-70    | 6.30E-69    |
| 1.01E+08 | 1208  | HERC2P11     | 1.50 | 0.000282483 | 0.000751822 |
| 1E+08    | 1176  | NA           | 1.49 | 0.012936686 | 0.025612912 |
| 89848    | 3394  | FCHSD1       | 1.49 | 6.37E-68    | 2.70E-66    |
| 9050     | 3026  | PSTPIP2      | 1.49 | 3.20E-50    | 8.61E-49    |
| 5788     | 1545  | PTPRC        | 1.49 | 0.012325922 | 0.024505649 |
| 10891    | 6358  | PPARGC1A     | 1.49 | 6.51E-31    | 9.54E-30    |
| 4642     | 5501  | MYO1D        | 1.49 | 2.95E-57    | 9.71E-56    |
| 29760    | 2641  | BLNK         | 1.49 | 5.70E-14    | 3.70E-13    |
| 728841   | 4624  | NBPF8        | 1.49 | 1.74E-42    | 3.78E-41    |
| 2150     | 2883  | F2RL1        | 1.49 | 2.68E-72    | 1.23E-70    |



|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 51561    | 1090  | IL23A        | 1.49 | 0.000139179 | 0.000387424 |
| 9687     | 5671  | GREB1        | 1.49 | 2.40E-12    | 1.38E-11    |
| 9229     | 4391  | DLGAP1       | 1.49 | 0.000457655 | 0.001180547 |
| 11067    | 2060  | DEPP1        | 1.48 | 2.11E-18    | 1.77E-17    |
| 64859    | 3212  | NABP1        | 1.48 | 2.19E-39    | 4.30E-38    |
| 132864   | 6785  | CPEB2        | 1.48 | 1.02E-37    | 1.89E-36    |
| 1813     | 2626  | DRD2         | 1.48 | 0.013678473 | 0.026977368 |
| 146857   | 5263  | SLFN13       | 1.48 | 1.50E-44    | 3.46E-43    |
| 80117    | 1335  | ARL14        | 1.48 | 0.007971977 | 0.016460905 |
| 55507    | 1227  | GPRC5D       | 1.48 | 0.007158329 | 0.014928309 |
| 84851    | 2721  | TRIM52       | 1.48 | 9.67E-32    | 1.46E-30    |
| 6553     | 3586  | SLC9A5       | 1.48 | 6.69E-16    | 4.88E-15    |
| 10625    | 4351  | IVNS1ABP     | 1.48 | 2.82E-105   | 2.49E-103   |
| 144608   | 1168  | C12orf60     | 1.48 | 0.000937773 | 0.002298254 |
| 8398     | 2847  | PLA2G6       | 1.48 | 2.66E-22    | 2.67E-21    |
| 7784     | 1462  | ZP3          | 1.48 | 5.60E-06    | 1.88E-05    |
| 10673    | 2654  | TNFSF13B     | 1.47 | 2.46E-05    | 7.61E-05    |
| 79703    | 2146  | C11orf80     | 1.47 | 2.82E-54    | 8.59E-53    |
| 647309   | 3624  | GMNC         | 1.47 | 0.010304537 | 0.020836578 |
| 140876   | 3793  | RIPOR3       | 1.47 | 5.75E-28    | 7.50E-27    |
| 6792     | 9936  | CDKL5        | 1.47 | 1.00E-21    | 9.79E-21    |
| 11000    | 2430  | SLC27A3      | 1.47 | 3.11E-13    | 1.90E-12    |
| 1.08E+08 | 1253  | LOC107986084 | 1.47 | 0.000789206 | 0.00195628  |
| 241      | 921   | ALOX5AP      | 1.47 | 1.51E-08    | 6.54E-08    |
| 5629     | 8268  | PROX1        | 1.47 | 0.000772885 | 0.001920914 |
| 126069   | 3100  | ZNF491       | 1.47 | 0.000490263 | 0.001256816 |
| 79750    | 2382  | ZNF385D      | 1.47 | 7.13E-07    | 2.61E-06    |
| 3437     | 2524  | IFIT3        | 1.47 | 8.20E-29    | 1.11E-27    |
| 123920   | 1995  | CMTM3        | 1.47 | 6.95E-67    | 2.86E-65    |
| 1.05E+08 | 1963  | LOC105370399 | 1.47 | 0.014751679 | 0.028907888 |
| 2352     | 603   | FOLR3        | 1.46 | 0.011862646 | 0.023642792 |
| 139411   | 12949 | PTCHD1       | 1.46 | 0.012333077 | 0.024517131 |
| 5325     | 3351  | PLAGL1       | 1.46 | 2.09E-43    | 4.66E-42    |
| 1E+08    | 3127  | CTAGE8       | 1.46 | 3.54E-15    | 2.48E-14    |
| 8807     | 1897  | IL18RAP      | 1.46 | 0.01542765  | 0.030136158 |
| 135656   | 5306  | DPCR1        | 1.46 | 0.006724011 | 0.014112003 |
| 23245    | 3440  | ASTN2        | 1.46 | 6.85E-39    | 1.32E-37    |
| 339416   | 2652  | ANKRD45      | 1.46 | 0.000661567 | 0.001661915 |
| 91526    | 6901  | ANKRD44      | 1.46 | 1.51E-28    | 2.01E-27    |
| 3695     | 2738  | ITGB7        | 1.45 | 3.59E-05    | 0.000108267 |
| 23117    | 3638  | NPIP3        | 1.45 | 3.43E-07    | 1.30E-06    |
| 1.03E+08 | 2394  | LOC102723360 | 1.45 | 0.005955745 | 0.01261885  |
| 10791    | 694   | VAMP5        | 1.45 | 0.002444315 | 0.005550943 |
| 10060    | 8325  | ABCC9        | 1.45 | 2.56E-34    | 4.20E-33    |
| 57864    | 2518  | SLC46A2      | 1.45 | 0.011267514 | 0.022583326 |
| 338645   | 4181  | LUZP2        | 1.45 | 0.013055899 | 0.0258269   |
| 7363     | 1899  | UGT2B4       | 1.45 | 0.013055899 | 0.0258269   |
| 6446     | 2423  | SGK1         | 1.45 | 5.31E-82    | 2.98E-80    |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 66000    | 3843 | TMEM108      | 1.45 | 0.00703871  | 0.014703009 |
| 123876   | 3351 | ACSM2A       | 1.45 | 0.008898965 | 0.018214123 |
| 6514     | 2734 | SLC2A2       | 1.45 | 0.013150305 | 0.025999179 |
| 92285    | 6210 | ZNF585B      | 1.45 | 0.004074375 | 0.008896828 |
| 1E+08    | 560  | TSTD1        | 1.44 | 4.11E-24    | 4.47E-23    |
| 79083    | 2825 | MLPH         | 1.44 | 1.58E-35    | 2.72E-34    |
| 27122    | 2568 | DKK3         | 1.44 | 9.61E-89    | 6.14E-87    |
| 1.01E+08 | 2490 | C5orf66      | 1.44 | 4.16E-08    | 1.73E-07    |
| 51380    | 2572 | CSAD         | 1.44 | 1.89E-26    | 2.29E-25    |
| 7718     | 1379 | ZNF165       | 1.44 | 1.42E-11    | 7.74E-11    |
| 8690     | 3366 | JRKL         | 1.44 | 5.28E-40    | 1.06E-38    |
| 1E+08    | 3827 | NPIPB5       | 1.44 | 2.00E-06    | 7.00E-06    |
| 5274     | 1711 | SERPINI1     | 1.44 | 6.20E-07    | 2.29E-06    |
| 2857     | 2157 | GPR34        | 1.44 | 0.009574549 | 0.019482432 |
| 9982     | 1369 | FGFBP1       | 1.43 | 0.006872341 | 0.01438254  |
| 5480     | 1241 | PPIC         | 1.43 | 5.72E-56    | 1.81E-54    |
| 28971    | 587  | AAMDC        | 1.43 | 3.02E-25    | 3.47E-24    |
| 3620     | 1944 | IDO1         | 1.43 | 0.000733375 | 0.00182937  |
| 6326     | 8667 | SCN2A        | 1.43 | 3.43E-08    | 1.44E-07    |
| 83959    | 3326 | SLC4A11      | 1.43 | 3.03E-38    | 5.75E-37    |
| 90249    | 3759 | UNC5A        | 1.43 | 1.42E-20    | 1.32E-19    |
| 341880   | 1563 | SLC35F4      | 1.43 | 0.017565688 | 0.033913631 |
| 3586     | 1629 | IL10         | 1.43 | 0.017278008 | 0.033412673 |
| 3049     | 653  | HBQ1         | 1.43 | 0.016169476 | 0.03145727  |
| 1.03E+08 | 700  | LOC102724813 | 1.42 | 9.69E-05    | 0.000276118 |
| 147710   | 1179 | IGSF23       | 1.42 | 0.006987814 | 0.014608715 |
| 12       | 1629 | SERPINA3     | 1.42 | 6.82E-07    | 2.51E-06    |
| 3777     | 4407 | KCNK3        | 1.42 | 1.54E-20    | 1.43E-19    |
| 27286    | 2206 | SRPX2        | 1.42 | 9.14E-05    | 0.000261076 |
| 81872    | 776  | KRTAP2-1     | 1.42 | 0.010493152 | 0.021172192 |
| 1.05E+08 | 2782 | LOC105370641 | 1.42 | 0.018794638 | 0.036039621 |
| 728047   | 4847 | GOLGA8O      | 1.42 | 2.53E-08    | 1.07E-07    |
| 23101    | 5598 | MCF2L2       | 1.42 | 4.23E-11    | 2.25E-10    |
| 4053     | 8307 | LTBP2        | 1.42 | 2.70E-53    | 7.98E-52    |
| 7069     | 1182 | THRSP        | 1.42 | 0.014832789 | 0.029060425 |
| 285489   | 2307 | DOK7         | 1.42 | 1.39E-11    | 7.63E-11    |
| 286343   | 2112 | LURAP1L      | 1.42 | 1.30E-05    | 4.15E-05    |
| 253512   | 3579 | SLC25A30     | 1.42 | 5.05E-45    | 1.19E-43    |
| 118788   | 4515 | PIK3AP1      | 1.42 | 6.05E-39    | 1.17E-37    |
| 57715    | 4243 | SEMA4G       | 1.41 | 7.10E-14    | 4.58E-13    |
| 55282    | 2370 | LRRC36       | 1.41 | 3.19E-09    | 1.46E-08    |
| 53905    | 5041 | DUOX1        | 1.41 | 0.000271733 | 0.00072473  |
| 6833     | 3137 | ABCC8        | 1.41 | 0.015050421 | 0.029453911 |
| 55803    | 2757 | ADAP2        | 1.41 | 0.000206217 | 0.000559399 |
| 389941   | 2493 | C1QL3        | 1.41 | 3.46E-05    | 0.00010457  |
| 2983     | 3252 | GUCY1B1      | 1.41 | 1.56E-33    | 2.50E-32    |
| 6150     | 758  | MRPL23       | 1.41 | 1.88E-31    | 2.81E-30    |
| 9762     | 4354 | LZTS3        | 1.41 | 2.27E-43    | 5.05E-42    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 57674    | 17504 | RNF213       | 1.41 | 2.48E-82    | 1.41E-80    |
| 1803     | 3513  | DPP4         | 1.41 | 3.79E-84    | 2.23E-82    |
| 5149     | 1822  | PDE6H        | 1.41 | 0.011096898 | 0.022279059 |
| 389118   | 2514  | CDHR4        | 1.41 | 0.010207945 | 0.020653013 |
| 55024    | 3087  | BANK1        | 1.41 | 7.09E-06    | 2.35E-05    |
| 284071   | 4688  | MEIOC        | 1.40 | 1.39E-12    | 8.12E-12    |
| 945      | 1807  | CD33         | 1.40 | 0.018290709 | 0.035149181 |
| 1.08E+08 | 4984  | LOC107986062 | 1.40 | 2.08E-09    | 9.66E-09    |
| 57194    | 4800  | ATP10A       | 1.40 | 1.58E-37    | 2.91E-36    |
| 29995    | 1836  | LMCD1        | 1.40 | 1.23E-42    | 2.68E-41    |
| 64167    | 5191  | ERAP2        | 1.40 | 2.49E-95    | 1.81E-93    |
| 84217    | 1782  | ZMYND12      | 1.40 | 0.019766453 | 0.03770374  |
| 56901    | 1445  | NDUFA4L2     | 1.40 | 0.004164756 | 0.009080793 |
| 8470     | 5114  | SORBS2       | 1.39 | 2.11E-25    | 2.45E-24    |
| 203447   | 8042  | NRK          | 1.39 | 1.08E-72    | 4.99E-71    |
| 2635     | 3001  | GBP3         | 1.39 | 3.15E-37    | 5.73E-36    |
| 9404     | 2295  | LPXN         | 1.39 | 9.39E-15    | 6.40E-14    |
| 80004    | 4021  | ESRP2        | 1.39 | 3.49E-16    | 2.58E-15    |
| 4758     | 2088  | NEU1         | 1.39 | 2.01E-54    | 6.15E-53    |
| 147      | 2839  | ADRA1B       | 1.39 | 2.65E-06    | 9.16E-06    |
| 3219     | 2711  | HOXB9        | 1.39 | 6.08E-53    | 1.78E-51    |
| 118663   | 1877  | BTBD16       | 1.39 | 0.018175765 | 0.034950972 |
| 84439    | 4419  | HHIPL1       | 1.39 | 0.006880213 | 0.014395621 |
| 29015    | 2695  | SLC43A3      | 1.39 | 1.91E-80    | 1.05E-78    |
| 64420    | 3051  | SUSD1        | 1.39 | 2.12E-44    | 4.87E-43    |
| 55863    | 1167  | TMEM126B     | 1.38 | 5.44E-42    | 1.16E-40    |
| 80128    | 2934  | TRIM46       | 1.38 | 1.90E-09    | 8.88E-09    |
| 3698     | 3198  | ITIH2        | 1.38 | 0.020531602 | 0.038987444 |
| 481      | 2212  | ATP1B1       | 1.38 | 4.38E-84    | 2.57E-82    |
| 7145     | 9894  | TNS1         | 1.38 | 1.67E-63    | 6.38E-62    |
| 84171    | 3639  | LOXL4        | 1.38 | 6.16E-13    | 3.68E-12    |
| 11063    | 3938  | SOX30        | 1.38 | 0.00166561  | 0.003898637 |
| 1E+08    | 1626  | DPH3P1       | 1.38 | 1.60E-06    | 5.67E-06    |
| 200879   | 3411  | LIPH         | 1.38 | 1.91E-10    | 9.64E-10    |
| 79931    | 6810  | TNIP3        | 1.38 | 2.79E-46    | 6.76E-45    |
| 1.01E+08 | 1122  | FXYP6-FXYD2  | 1.38 | 0.009051759 | 0.018499156 |
| 387911   | 1377  | C1QTNF9B     | 1.38 | 0.021870774 | 0.041278937 |
| 6772     | 3928  | STAT1        | 1.38 | 1.69E-100   | 1.36E-98    |
| 283209   | 8516  | PGM2L1       | 1.38 | 7.45E-41    | 1.53E-39    |
| 11320    | 6890  | MGAT4A       | 1.38 | 2.99E-16    | 2.22E-15    |
| 1.01E+08 | 700   | LOC100996414 | 1.37 | 2.11E-07    | 8.18E-07    |
| 54596    | 3894  | L1TD1        | 1.37 | 0.00346863  | 0.007664546 |
| 64127    | 4063  | NOD2         | 1.37 | 0.015636762 | 0.030514441 |
| 134549   | 3461  | SHROOM1      | 1.37 | 5.87E-36    | 1.02E-34    |
| 150365   | 3767  | MEI1         | 1.37 | 0.002735858 | 0.006154036 |
| 10846    | 8194  | PDE10A       | 1.37 | 4.77E-61    | 1.73E-59    |
| 26022    | 1798  | TMEM98       | 1.37 | 5.13E-55    | 1.58E-53    |
| 219790   | 5468  | RTKN2        | 1.37 | 2.30E-31    | 3.43E-30    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 9615     | 4524  | GDA          | 1.37 | 1.45E-41    | 3.03E-40    |
| 8034     | 2634  | SLC25A16     | 1.37 | 3.01E-32    | 4.61E-31    |
| 257144   | 3760  | GCSAM        | 1.37 | 3.81E-05    | 0.000114797 |
| 9980     | 7338  | DOPEY2       | 1.37 | 1.43E-42    | 3.11E-41    |
| 3570     | 5816  | IL6R         | 1.37 | 1.69E-21    | 1.64E-20    |
| 10874    | 830   | NMU          | 1.37 | 0.000868228 | 0.00213725  |
| 4606     | 3598  | MYBPC2       | 1.37 | 0.001268119 | 0.003031339 |
| 54963    | 2334  | UCKL1        | 1.36 | 1.53E-40    | 3.08E-39    |
| 10507    | 4742  | SEMA4D       | 1.36 | 2.73E-81    | 1.51E-79    |
| 3909     | 6770  | LAMA3        | 1.36 | 6.90E-80    | 3.75E-78    |
| 7923     | 1002  | HSD17B8      | 1.36 | 1.24E-08    | 5.39E-08    |
| 221458   | 2677  | KIF6         | 1.36 | 0.023830345 | 0.044617236 |
| 1E+08    | 1072  | LOC100287036 | 1.36 | 0.023517138 | 0.044109839 |
| 80736    | 2517  | SLC44A4      | 1.36 | 0.012933492 | 0.025610418 |
| 26503    | 3278  | SLC17A5      | 1.36 | 1.51E-39    | 2.97E-38    |
| 85441    | 8336  | HELZ2        | 1.36 | 4.58E-30    | 6.50E-29    |
| 7366     | 2264  | UGT2B15      | 1.36 | 0.02391265  | 0.044747758 |
| 8345     | 425   | HIST1H2BH    | 1.36 | 0.018345429 | 0.035246711 |
| 23704    | 3190  | KCNE4        | 1.36 | 0.023869229 | 0.04467121  |
| 22875    | 4697  | ENPP4        | 1.36 | 1.05E-24    | 1.17E-23    |
| 55359    | 2836  | STYK1        | 1.36 | 5.21E-14    | 3.40E-13    |
| 400950   | 3721  | C2orf91      | 1.36 | 0.002923845 | 0.006546229 |
| 353500   | 4535  | BMP8A        | 1.36 | 6.83E-05    | 0.000198319 |
| 4739     | 4235  | NEDD9        | 1.36 | 6.45E-60    | 2.26E-58    |
| 84561    | 3449  | SLC12A8      | 1.35 | 2.52E-34    | 4.14E-33    |
| 6906     | 2384  | SERPINA7     | 1.35 | 0.019134827 | 0.036624755 |
| 9235     | 1057  | IL32         | 1.35 | 1.38E-62    | 5.18E-61    |
| 80032    | 1647  | ZNF556       | 1.35 | 0.023562803 | 0.044181499 |
| 8483     | 4157  | CILP         | 1.35 | 0.003349568 | 0.007417139 |
| 5066     | 3815  | PAM          | 1.35 | 5.98E-118   | 6.33E-116   |
| 1102     | 2885  | RCBTB2       | 1.35 | 8.59E-23    | 8.83E-22    |
| 1.08E+08 | 2785  | LOC107986805 | 1.35 | 4.74E-19    | 4.08E-18    |
| 165140   | 1819  | OXER1        | 1.35 | 0.022121845 | 0.041712931 |
| 54437    | 4523  | SEMA5B       | 1.35 | 0.012807061 | 0.025396858 |
| 55137    | 10316 | FIGN         | 1.35 | 2.36E-31    | 3.51E-30    |
| 83935    | 1866  | NA           | 1.35 | 2.20E-08    | 9.40E-08    |
| 25854    | 2922  | FAM149A      | 1.34 | 1.52E-26    | 1.86E-25    |
| 388886   | 1177  | LRRC75B      | 1.34 | 5.75E-14    | 3.74E-13    |
| 51301    | 3436  | GCNT4        | 1.34 | 0.001628461 | 0.003818223 |
| 8869     | 2381  | ST3GAL5      | 1.34 | 1.40E-15    | 1.00E-14    |
| 8082     | 4385  | SSPN         | 1.34 | 2.80E-14    | 1.86E-13    |
| 2204     | 2291  | FCAR         | 1.34 | 0.026258245 | 0.048767272 |
| 23586    | 4759  | DDX58        | 1.34 | 3.87E-34    | 6.33E-33    |
| 158471   | 5680  | PRUNE2       | 1.34 | 9.97E-68    | 4.19E-66    |
| 8564     | 3708  | KMO          | 1.34 | 0.000167169 | 0.000460006 |
| 28986    | 1485  | MAGEH1       | 1.34 | 9.85E-15    | 6.71E-14    |
| 2170     | 1528  | FABP3        | 1.34 | 0.000744281 | 0.001856053 |
| 84436    | 4000  | ZNF528       | 1.34 | 1.33E-13    | 8.37E-13    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 1E+08    | 3803  | LOC100130705 | 1.34 | 2.74E-07    | 1.05E-06    |
| 6095     | 11028 | RORA         | 1.33 | 9.01E-06    | 2.94E-05    |
| 389177   | 1902  | TMEM212      | 1.33 | 4.76E-29    | 6.48E-28    |
| 5167     | 7086  | ENPP1        | 1.33 | 7.23E-26    | 8.55E-25    |
| 137994   | 2324  | LETM2        | 1.33 | 2.79E-10    | 1.38E-09    |
| 646019   | 2252  | CBY3         | 1.33 | 0.017654542 | 0.034077774 |
| 23213    | 5047  | SULF1        | 1.33 | 0.006110193 | 0.012922975 |
| 8988     | 787   | HSPB3        | 1.33 | 0.020800676 | 0.039443586 |
| 8742     | 1407  | TNFSF12      | 1.33 | 9.61E-14    | 6.13E-13    |
| 2892     | 2519  | GRIA3        | 1.33 | 0.002887297 | 0.006469293 |
| 10307    | 2155  | APBB3        | 1.33 | 2.24E-26    | 2.71E-25    |
| 653149   | 4432  | NBPF6        | 1.33 | 0.026272442 | 0.048783441 |
| 23682    | 1488  | RAB38        | 1.33 | 1.18E-15    | 8.53E-15    |
| 84293    | 1927  | FAM213A      | 1.33 | 6.10E-49    | 1.58E-47    |
| 11274    | 2043  | USP18        | 1.33 | 1.60E-13    | 1.00E-12    |
| 2822     | 5609  | GPLD1        | 1.33 | 0.000950375 | 0.002327214 |
| 9729     | 8124  | KIAA0408     | 1.32 | 0.020692438 | 0.039259288 |
| 645426   | 1325  | TMEM191C     | 1.32 | 0.006187118 | 0.013076331 |
| 7498     | 5720  | XDH          | 1.32 | 7.10E-14    | 4.58E-13    |
| 80310    | 3993  | PDGFD        | 1.32 | 7.51E-14    | 4.83E-13    |
| 4988     | 15427 | OPRM1        | 1.32 | 0.013328033 | 0.026330053 |
| 3638     | 2944  | INSIG1       | 1.32 | 3.77E-47    | 9.30E-46    |
| 10475    | 6371  | TRIM38       | 1.32 | 3.24E-54    | 9.84E-53    |
| 26137    | 26951 | ZBTB20       | 1.32 | 2.91E-52    | 8.33E-51    |
| 57578    | 8607  | UNC79        | 1.32 | 0.020996564 | 0.039764117 |
| 760      | 1666  | CA2          | 1.32 | 5.64E-22    | 5.58E-21    |
| 57730    | 5014  | ANKRD36B     | 1.31 | 4.35E-23    | 4.53E-22    |
| 340120   | 3729  | ANKRD34B     | 1.31 | 1.18E-20    | 1.10E-19    |
| 140700   | 2237  | SAMD10       | 1.31 | 1.82E-13    | 1.13E-12    |
| 8671     | 7682  | SLC4A4       | 1.31 | 7.20E-27    | 8.94E-26    |
| 389602   | 2050  | LOC389602    | 1.31 | 0.020013001 | 0.038116733 |
| 6383     | 3327  | SDC2         | 1.31 | 2.88E-71    | 1.30E-69    |
| 57562    | 6977  | CEP126       | 1.31 | 5.86E-17    | 4.57E-16    |
| 166336   | 8145  | PRICKLE2     | 1.31 | 1.18E-41    | 2.48E-40    |
| 22806    | 9092  | IKZF3        | 1.31 | 2.33E-06    | 8.12E-06    |
| 114299   | 9500  | PALM2        | 1.31 | 5.63E-08    | 2.32E-07    |
| 79608    | 2464  | RIC3         | 1.31 | 8.20E-12    | 4.55E-11    |
| 151126   | 2710  | ZNF385B      | 1.31 | 3.28E-08    | 1.38E-07    |
| 55083    | 11566 | KIF26B       | 1.31 | 1.10E-19    | 9.79E-19    |
| 3375     | 1923  | IAPP         | 1.31 | 0.022745739 | 0.042762279 |
| 23554    | 2446  | TSPAN12      | 1.31 | 1.35E-25    | 1.58E-24    |
| 1.05E+08 | 10052 | LOC105376204 | 1.31 | 6.40E-07    | 2.36E-06    |
| 5365     | 6211  | PLXNB3       | 1.31 | 5.55E-13    | 3.32E-12    |
| 5800     | 7274  | PTPRO        | 1.31 | 0.010122385 | 0.020489238 |
| 80263    | 3683  | TRIM45       | 1.31 | 1.66E-20    | 1.54E-19    |
| 8218     | 4375  | CLTCL1       | 1.31 | 1.33E-25    | 1.56E-24    |
| 55001    | 3645  | TTC22        | 1.30 | 6.06E-07    | 2.24E-06    |
| 653567   | 5454  | TMEM236      | 1.30 | 0.012511376 | 0.024846555 |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 80737    | 4348 | VWA7         | 1.30 | 1.70E-16    | 1.28E-15    |
| 1E+08    | 2626 | CTAGE4       | 1.30 | 3.60E-09    | 1.64E-08    |
| 79086    | 1343 | SMIM7        | 1.30 | 2.73E-54    | 8.33E-53    |
| 3908     | 9696 | LAMA2        | 1.30 | 0.000155128 | 0.000428532 |
| 622      | 3824 | BDH1         | 1.30 | 2.35E-22    | 2.37E-21    |
| 130872   | 4046 | AHSA2P       | 1.30 | 8.29E-34    | 1.34E-32    |
| 7482     | 2689 | WNT2B        | 1.30 | 1.64E-10    | 8.33E-10    |
| 1.05E+08 | 2492 | LOC105379547 | 1.30 | 1.98E-05    | 6.20E-05    |
| 2121     | 6299 | EVC          | 1.30 | 2.52E-52    | 7.24E-51    |
| 132299   | 789  | OCIAD2       | 1.30 | 2.20E-30    | 3.17E-29    |
| 285220   | 3456 | EPHA6        | 1.30 | 1.15E-07    | 4.57E-07    |
| 257019   | 4894 | FRMD3        | 1.30 | 8.00E-06    | 2.63E-05    |
| 23138    | 4676 | N4BP3        | 1.29 | 7.97E-19    | 6.80E-18    |
| 1.08E+08 | 3377 | LOC107984745 | 1.29 | 0.001825316 | 0.004242279 |
| 26999    | 6427 | CYFIP2       | 1.29 | 2.97E-28    | 3.91E-27    |
| 374407   | 1344 | DNAJB13      | 1.29 | 6.76E-06    | 2.25E-05    |
| 115273   | 1896 | RAB42        | 1.29 | 2.17E-21    | 2.09E-20    |
| 5874     | 6168 | RAB27B       | 1.29 | 5.08E-23    | 5.28E-22    |
| 8992     | 894  | ATP6V0E1     | 1.29 | 2.44E-64    | 9.56E-63    |
| 28970    | 3058 | C11orf54     | 1.29 | 4.63E-39    | 9.01E-38    |
| 83641    | 3238 | FAM107B      | 1.29 | 1.20E-56    | 3.88E-55    |
| 1.03E+08 | 1156 | LOC102724770 | 1.29 | 5.84E-14    | 3.80E-13    |
| 1717     | 2668 | DHCR7        | 1.29 | 4.58E-42    | 9.78E-41    |
| 196403   | 2441 | DTX3         | 1.29 | 3.80E-29    | 5.20E-28    |
| 282679   | 2153 | AQP11        | 1.29 | 0.000341404 | 0.000897809 |
| 3112     | 1388 | HLA-DOB      | 1.29 | 0.001389128 | 0.003299766 |
| 80258    | 3269 | EFHC2        | 1.29 | 0.02477583  | 0.046231563 |
| 54540    | 3280 | FAM193B      | 1.29 | 1.68E-36    | 2.99E-35    |
| 388559   | 4005 | ZNF888       | 1.29 | 7.61E-27    | 9.44E-26    |
| 51310    | 2318 | SLC22A17     | 1.28 | 2.19E-50    | 5.90E-49    |
| 1.08E+08 | 3008 | LOC107984203 | 1.28 | 1.94E-07    | 7.56E-07    |
| 57393    | 1580 | CLTRN        | 1.28 | 0.000155966 | 0.000430713 |
| 79668    | 6000 | PARP8        | 1.28 | 1.73E-35    | 2.97E-34    |
| 126695   | 1826 | KDF1         | 1.28 | 0.000304144 | 0.00080513  |
| 2950     | 986  | GSTP1        | 1.28 | 2.41E-62    | 8.98E-61    |
| 55748    | 2667 | CNDP2        | 1.28 | 1.03E-84    | 6.14E-83    |
| 80781    | 5445 | COL18A1      | 1.28 | 1.26E-104   | 1.08E-102   |
| 158046   | 1332 | NXNL2        | 1.27 | 4.27E-08    | 1.77E-07    |
| 10379    | 1699 | IRF9         | 1.27 | 7.13E-35    | 1.20E-33    |
| 3955     | 2163 | LFNG         | 1.27 | 5.68E-42    | 1.21E-40    |
| 1.01E+08 | 5280 | GVQW3        | 1.27 | 1.92E-11    | 1.04E-10    |
| 11226    | 4628 | GALNT6       | 1.27 | 6.99E-28    | 9.06E-27    |
| 26154    | 8416 | ABCA12       | 1.27 | 2.37E-22    | 2.38E-21    |
| 8301     | 3670 | PICALM       | 1.27 | 5.73E-90    | 3.72E-88    |
| 6277     | 650  | S100A6       | 1.27 | 1.62E-52    | 4.68E-51    |
| 2166     | 2105 | FAAH         | 1.27 | 5.88E-10    | 2.85E-09    |
| 1368     | 6667 | CPM          | 1.27 | 1.43E-59    | 4.96E-58    |
| 51560    | 5561 | RAB6B        | 1.27 | 9.78E-20    | 8.76E-19    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 65999    | 2043  | LRRC61       | 1.27 | 1.36E-25    | 1.59E-24    |
| 117177   | 7302  | RAB3IP       | 1.27 | 9.53E-45    | 2.22E-43    |
| 55423    | 1194  | SIRPG        | 1.27 | 0.018201568 | 0.034989231 |
| 132430   | 4944  | PABPC4L      | 1.26 | 1.82E-13    | 1.14E-12    |
| 57489    | 4537  | ODF2L        | 1.26 | 1.54E-31    | 2.32E-30    |
| 6920     | 1761  | TCEA3        | 1.26 | 1.31E-19    | 1.17E-18    |
| 286006   | 1710  | LSMEM1       | 1.26 | 0.000781197 | 0.001939118 |
| 282890   | 3077  | ZNF311       | 1.26 | 1.02E-09    | 4.84E-09    |
| 56950    | 1689  | SMYD2        | 1.26 | 3.40E-39    | 6.64E-38    |
| 7169     | 1207  | TPM2         | 1.26 | 8.51E-60    | 2.98E-58    |
| 1E+08    | 5635  | CCDC180      | 1.26 | 3.25E-09    | 1.49E-08    |
| 163255   | 3237  | ZNF540       | 1.26 | 0.00379261  | 0.008331737 |
| 2707     | 1925  | GJB3         | 1.26 | 2.57E-10    | 1.28E-09    |
| 83733    | 2090  | SLC25A18     | 1.26 | 0.009332406 | 0.019028942 |
| 7130     | 1439  | TNFAIP6      | 1.26 | 0.011720822 | 0.023386364 |
| 203522   | 3851  | INTS6L       | 1.26 | 1.61E-24    | 1.79E-23    |
| 3162     | 1606  | HMOX1        | 1.26 | 4.02E-37    | 7.28E-36    |
| 51390    | 1655  | AIG1         | 1.26 | 3.67E-61    | 1.33E-59    |
| 51168    | 11876 | MYO15A       | 1.25 | 0.017276286 | 0.033412673 |
| 1.03E+08 | 1369  | LOC102724993 | 1.25 | 3.04E-25    | 3.49E-24    |
| 83851    | 9410  | SYT16        | 1.25 | 2.20E-08    | 9.38E-08    |
| 200035   | 1486  | NUDT17       | 1.25 | 6.25E-06    | 2.08E-05    |
| 6948     | 2092  | TCN2         | 1.25 | 3.11E-51    | 8.58E-50    |
| 1.02E+08 | 3480  | LOC101928212 | 1.25 | 0.002961953 | 0.006623203 |
| 492311   | 2900  | IGIP         | 1.25 | 4.34E-13    | 2.62E-12    |
| 347736   | 2763  | NME9         | 1.25 | 0.000383771 | 0.001002034 |
| 1E+08    | 582   | FAM86KP      | 1.25 | 0.025665937 | 0.04775208  |
| 219293   | 3859  | ATAD3C       | 1.25 | 1.18E-08    | 5.16E-08    |
| 150094   | 4706  | SIK1         | 1.25 | 2.48E-08    | 1.05E-07    |
| 84258    | 2813  | SYT3         | 1.25 | 0.000842899 | 0.00207922  |
| 5002     | 1555  | SLC22A18     | 1.25 | 1.33E-21    | 1.30E-20    |
| 1.01E+08 | 1800  | LOC101060341 | 1.24 | 0.000185783 | 0.000507456 |
| 1.01E+08 | 3807  | NBPF19       | 1.24 | 2.66E-35    | 4.53E-34    |
| 5764     | 1551  | PTN          | 1.24 | 1.34E-37    | 2.47E-36    |
| 10402    | 3378  | ST3GAL6      | 1.24 | 1.64E-14    | 1.10E-13    |
| 55607    | 9366  | PPP1R9A      | 1.24 | 1.64E-22    | 1.66E-21    |
| 534      | 1587  | ATP6V1G2     | 1.24 | 7.30E-08    | 2.97E-07    |
| 79946    | 1469  | C10orf95     | 1.24 | 0.002972567 | 0.006646101 |
| 63951    | 2302  | DMRTA1       | 1.24 | 1.67E-06    | 5.90E-06    |
| 2027     | 1696  | ENO3         | 1.24 | 9.78E-12    | 5.42E-11    |
| 55277    | 1648  | FGGY         | 1.24 | 4.35E-09    | 1.97E-08    |
| 54625    | 7707  | PARP14       | 1.24 | 2.99E-48    | 7.55E-47    |
| 2744     | 4635  | GLS          | 1.24 | 1.27E-73    | 6.04E-72    |
| 80144    | 15643 | FRAS1        | 1.24 | 9.86E-20    | 8.82E-19    |
| 284406   | 5564  | ZFP82        | 1.24 | 0.001256529 | 0.003007275 |
| 143872   | 6863  | ARHGAP42     | 1.24 | 3.57E-30    | 5.08E-29    |
| 23224    | 5227  | SYNE2        | 1.24 | 2.12E-56    | 6.81E-55    |
| 90990    | 3274  | KIFC2        | 1.24 | 6.17E-59    | 2.10E-57    |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 127255   | 1162 | LRRIQ3       | 1.24 | 0.017494451 | 0.033801806 |
| 51166    | 2195 | AADAT        | 1.24 | 9.56E-21    | 8.99E-20    |
| 441273   | 4899 | SPDYE2       | 1.23 | 5.87E-10    | 2.84E-09    |
| 4324     | 4268 | MMP15        | 1.23 | 3.10E-38    | 5.87E-37    |
| 1636     | 3806 | ACE          | 1.23 | 0.008487893 | 0.0174451   |
| 629      | 2646 | CFB          | 1.23 | 1.58E-17    | 1.27E-16    |
| 54675    | 2673 | CRLS1        | 1.23 | 9.15E-56    | 2.89E-54    |
| 613037   | 4270 | NPIPB13      | 1.23 | 1.55E-05    | 4.93E-05    |
| 5918     | 1535 | RARRES1      | 1.23 | 6.46E-07    | 2.38E-06    |
| 23321    | 6303 | TRIM2        | 1.23 | 1.74E-45    | 4.13E-44    |
| 114780   | 1769 | PKD1L2       | 1.23 | 0.020977757 | 0.039732735 |
| 1958     | 3136 | EGR1         | 1.23 | 5.60E-09    | 2.51E-08    |
| 4299     | 8650 | AFF1         | 1.22 | 1.54E-47    | 3.83E-46    |
| 246721   | 1987 | POLR2J2      | 1.22 | 2.66E-13    | 1.64E-12    |
| 10584    | 3096 | COLEC10      | 1.22 | 0.021798764 | 0.041151767 |
| 7280     | 1622 | TUBB2A       | 1.22 | 7.64E-34    | 1.24E-32    |
| 9175     | 9106 | MAP3K13      | 1.22 | 5.35E-17    | 4.17E-16    |
| 280      | 2253 | AMY2B        | 1.22 | 3.50E-13    | 2.14E-12    |
| 23564    | 1394 | DDAH2        | 1.22 | 4.68E-39    | 9.10E-38    |
| 29103    | 2792 | DNAJC15      | 1.22 | 1.31E-49    | 3.46E-48    |
| 642658   | 2092 | SCX          | 1.22 | 7.84E-14    | 5.03E-13    |
| 1010     | 3714 | CDH12        | 1.22 | 0.01534096  | 0.029976705 |
| 1.08E+08 | 2573 | LOC107987276 | 1.22 | 0.004659739 | 0.010091935 |
| 9723     | 6615 | SEMA3E       | 1.22 | 4.65E-07    | 1.74E-06    |
| 283130   | 2828 | SLC25A45     | 1.22 | 2.19E-12    | 1.27E-11    |
| 89832    | 5439 | CHRFAM7A     | 1.22 | 1.76E-16    | 1.33E-15    |
| 2047     | 3910 | EPHB1        | 1.22 | 1.27E-10    | 6.48E-10    |
| 23491    | 3182 | CES3         | 1.22 | 8.11E-14    | 5.19E-13    |
| 56895    | 7830 | AGPAT4       | 1.22 | 1.70E-25    | 1.97E-24    |
| 201163   | 3675 | FLCN         | 1.21 | 1.56E-30    | 2.25E-29    |
| 10723    | 5315 | SLC12A7      | 1.21 | 9.36E-39    | 1.80E-37    |
| 3430     | 1243 | IFI35        | 1.21 | 1.74E-28    | 2.32E-27    |
| 2256     | 2541 | FGF11        | 1.21 | 5.27E-08    | 2.17E-07    |
| 494513   | 2083 | PJKV         | 1.21 | 6.23E-07    | 2.30E-06    |
| 2644     | 713  | GCHFR        | 1.21 | 1.87E-12    | 1.09E-11    |
| 57001    | 2068 | SDHAF3       | 1.21 | 4.60E-12    | 2.60E-11    |
| 1.08E+08 | 2973 | LOC107986800 | 1.21 | 6.69E-11    | 3.51E-10    |
| 9699     | 4871 | RIMS2        | 1.21 | 1.24E-28    | 1.65E-27    |
| 158747   | 2768 | MOSPD2       | 1.21 | 7.36E-25    | 8.30E-24    |
| 199745   | 1825 | THAP8        | 1.21 | 2.38E-10    | 1.19E-09    |
| 5140     | 4383 | PDE3B        | 1.21 | 0.020146108 | 0.038333266 |
| 90592    | 2897 | ZNF700       | 1.21 | 3.60E-26    | 4.32E-25    |
| 728      | 2331 | C5AR1        | 1.21 | 1.36E-06    | 4.83E-06    |
| 388849   | 1913 | CCDC188      | 1.21 | 0.000646296 | 0.00162562  |
| 54914    | 5682 | FOCAD        | 1.21 | 1.02E-29    | 1.43E-28    |
| 126432   | 3056 | RINL         | 1.21 | 7.83E-09    | 3.48E-08    |
| 57834    | 2973 | CYP4F11      | 1.21 | 3.94E-08    | 1.64E-07    |
| 342918   | 765  | C19orf81     | 1.21 | 2.62E-05    | 8.06E-05    |



|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 25837    | 1679 | RAB26        | 1.21 | 4.91E-13    | 2.95E-12    |
| 2153     | 9179 | F5           | 1.20 | 0.008901921 | 0.018218076 |
| 1E+08    | 3748 | FAM157B      | 1.20 | 9.11E-05    | 0.000260234 |
| 6447     | 1241 | SCG5         | 1.20 | 0.002531372 | 0.005736184 |
| 1.05E+08 | 1080 | LOC105376752 | 1.20 | 0.000798182 | 0.001976598 |
| 26140    | 3662 | TTLL3        | 1.20 | 4.16E-08    | 1.73E-07    |
| 64582    | 8231 | GPR135       | 1.20 | 1.66E-09    | 7.79E-09    |
| 4322     | 2735 | MMP13        | 1.20 | 3.43E-11    | 1.84E-10    |
| 118881   | 1041 | COMTD1       | 1.20 | 3.21E-15    | 2.25E-14    |
| 761      | 1753 | CA3          | 1.20 | 0.00146334  | 0.003464441 |
| 93145    | 1804 | OLFM2        | 1.20 | 0.007906011 | 0.016343689 |
| 96459    | 6599 | FNIP1        | 1.20 | 3.69E-37    | 6.69E-36    |
| 4935     | 1711 | GPR143       | 1.20 | 7.97E-08    | 3.22E-07    |
| 26472    | 1038 | PPP1R14B     | 1.20 | 7.74E-45    | 1.81E-43    |
| 55738    | 3292 | ARFGAP1      | 1.20 | 1.38E-51    | 3.85E-50    |
| 8651     | 1216 | SOCS1        | 1.19 | 7.24E-11    | 3.79E-10    |
| 7710     | 6914 | ZNF154       | 1.19 | 0.004173681 | 0.009095788 |
| 93099    | 1111 | DMKN         | 1.19 | 2.16E-31    | 3.23E-30    |
| 3176     | 2837 | HNMT         | 1.19 | 3.56E-21    | 3.40E-20    |
| 22798    | 2771 | LAMB4        | 1.19 | 0.013282187 | 0.026245319 |
| 8676     | 4224 | STX11        | 1.19 | 2.88E-08    | 1.22E-07    |
| 1E+08    | 7650 | ZNF737       | 1.19 | 1.96E-05    | 6.13E-05    |
| 30011    | 3066 | SH3KBP1      | 1.19 | 1.59E-38    | 3.03E-37    |
| 91523    | 2184 | PCED1B       | 1.19 | 6.78E-06    | 2.25E-05    |
| 1E+08    | 1567 | FAM47E       | 1.19 | 0.003284295 | 0.007287132 |
| 6609     | 2485 | SMPD1        | 1.19 | 2.30E-42    | 4.98E-41    |
| 55349    | 5259 | CHDH         | 1.19 | 9.70E-20    | 8.70E-19    |
| 375248   | 5522 | ANKRD36      | 1.18 | 2.31E-22    | 2.33E-21    |
| 7006     | 3724 | TEC          | 1.18 | 5.15E-12    | 2.90E-11    |
| 5243     | 4718 | ABCB1        | 1.18 | 7.82E-35    | 1.31E-33    |
| 79924    | 4045 | ADM2         | 1.18 | 1.14E-13    | 7.26E-13    |
| 10110    | 1994 | SGK2         | 1.18 | 1.12E-10    | 5.76E-10    |
| 1.08E+08 | 1624 | LOC107984648 | 1.18 | 0.00029402  | 0.000780073 |
| 144402   | 3692 | CPNE8        | 1.18 | 1.54E-24    | 1.71E-23    |
| 5593     | 3656 | PRKG2        | 1.18 | 0.002302939 | 0.005253385 |
| 79094    | 1639 | CHAC1        | 1.18 | 3.70E-15    | 2.58E-14    |
| 55769    | 2840 | ZNF83        | 1.18 | 4.92E-29    | 6.69E-28    |
| 285676   | 3481 | ZNF454       | 1.18 | 6.80E-05    | 0.000197657 |
| 87769    | 2935 | GGACT        | 1.18 | 1.17E-06    | 4.20E-06    |
| 5000     | 6512 | ORC4         | 1.18 | 4.62E-38    | 8.70E-37    |
| 9866     | 9519 | TRIM66       | 1.18 | 6.57E-11    | 3.45E-10    |
| 141      | 3431 | ADPRH        | 1.18 | 1.07E-13    | 6.82E-13    |
| 128178   | 2891 | EDARADD      | 1.18 | 0.008209319 | 0.016909712 |
| 23231    | 4488 | SEL1L3       | 1.18 | 1.62E-58    | 5.49E-57    |
| 747      | 5678 | DAGLA        | 1.18 | 4.62E-28    | 6.05E-27    |
| 404220   | 1914 | C6orf201     | 1.18 | 0.025264992 | 0.047080061 |
| 10251    | 9106 | SPRY3        | 1.17 | 1.26E-05    | 4.04E-05    |
| 8507     | 5564 | ENC1         | 1.17 | 4.62E-32    | 7.05E-31    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 10007    | 2334  | GNPDA1       | 1.17 | 2.85E-45    | 6.75E-44    |
| 10287    | 1553  | RGS19        | 1.17 | 7.44E-14    | 4.79E-13    |
| 146779   | 1545  | EFCAB3       | 1.17 | 0.015873468 | 0.030925415 |
| 26548    | 1453  | ITGB1BP2     | 1.17 | 0.007595129 | 0.015756013 |
| 10493    | 2758  | VAT1         | 1.17 | 2.60E-58    | 8.74E-57    |
| 79758    | 1392  | DHRS12       | 1.17 | 2.40E-10    | 1.20E-09    |
| 3897     | 5021  | L1CAM        | 1.17 | 1.00E-48    | 2.57E-47    |
| 8553     | 3061  | BHLHE40      | 1.17 | 7.86E-47    | 1.93E-45    |
| 25894    | 4590  | PLEKHG4      | 1.17 | 1.32E-34    | 2.19E-33    |
| 79669    | 2284  | C3orf52      | 1.17 | 4.08E-13    | 2.47E-12    |
| 1.01E+08 | 3190  | LOC101060022 | 1.17 | 3.19E-06    | 1.09E-05    |
| 306      | 1634  | ANXA3        | 1.17 | 2.76E-51    | 7.63E-50    |
| 27063    | 1994  | ANKRD1       | 1.17 | 2.72E-23    | 2.86E-22    |
| 440270   | 6156  | GOLGA8B      | 1.17 | 8.00E-09    | 3.54E-08    |
| 3786     | 10665 | KCNQ3        | 1.17 | 3.44E-10    | 1.70E-09    |
| 91351    | 5421  | DDX60L       | 1.16 | 9.38E-23    | 9.62E-22    |
| 7436     | 5211  | VLDLR        | 1.16 | 6.24E-37    | 1.12E-35    |
| 55191    | 2453  | NADSYN1      | 1.16 | 2.00E-39    | 3.93E-38    |
| 2101     | 2329  | ESRRA        | 1.16 | 1.37E-26    | 1.68E-25    |
| 150709   | 4023  | ANKAR        | 1.16 | 0.000411437 | 0.001069399 |
| 728642   | 3202  | CDK11A       | 1.16 | 3.12E-30    | 4.45E-29    |
| 22902    | 3824  | RUFY3        | 1.16 | 8.60E-27    | 1.06E-25    |
| 1.08E+08 | 5108  | LOC107987163 | 1.16 | 0.000169554 | 0.000466135 |
| 150946   | 3938  | GAREM2       | 1.16 | 1.46E-17    | 1.17E-16    |
| 81932    | 1605  | HDHD3        | 1.16 | 1.59E-17    | 1.27E-16    |
| 4897     | 6357  | NRCAM        | 1.16 | 3.47E-43    | 7.71E-42    |
| 3767     | 3378  | KCNJ11       | 1.16 | 0.010963798 | 0.022036737 |
| 161247   | 1064  | FITM1        | 1.16 | 0.022892288 | 0.043010486 |
| 81493    | 3465  | SYNC         | 1.16 | 1.02E-30    | 1.48E-29    |
| 25890    | 5163  | ABI3BP       | 1.16 | 2.40E-12    | 1.38E-11    |
| 9914     | 4393  | ATP2C2       | 1.16 | 0.003341412 | 0.007400924 |
| 10457    | 2778  | GPNUMB       | 1.16 | 1.69E-21    | 1.64E-20    |
| 56243    | 7020  | KIAA1217     | 1.15 | 3.29E-41    | 6.85E-40    |
| 6515     | 3938  | SLC2A3       | 1.15 | 6.40E-25    | 7.24E-24    |
| 7407     | 3728  | VAR5         | 1.15 | 1.58E-50    | 4.30E-49    |
| 9026     | 4431  | HIP1R        | 1.15 | 2.16E-45    | 5.11E-44    |
| 10763    | 5591  | NES          | 1.15 | 3.51E-08    | 1.47E-07    |
| 199221   | 3271  | DZIP1L       | 1.15 | 2.11E-20    | 1.94E-19    |
| 2852     | 2691  | GPFR1        | 1.15 | 0.000356904 | 0.000935459 |
| 134429   | 4092  | STARD4       | 1.15 | 1.16E-36    | 2.07E-35    |
| 4047     | 4222  | LSS          | 1.15 | 9.24E-40    | 1.83E-38    |
| 81856    | 4412  | ZNF611       | 1.15 | 8.92E-16    | 6.48E-15    |
| 51765    | 3210  | STK26        | 1.15 | 9.64E-18    | 7.81E-17    |
| 643911   | 674   | CRNDE        | 1.15 | 2.70E-07    | 1.03E-06    |
| 8406     | 1908  | SRPX         | 1.15 | 1.05E-19    | 9.41E-19    |
| 27185    | 6456  | DISC1        | 1.15 | 1.01E-08    | 4.46E-08    |
| 643680   | 1161  | MS4A4E       | 1.15 | 4.45E-11    | 2.36E-10    |
| 80243    | 10122 | PREX2        | 1.15 | 1.67E-23    | 1.78E-22    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 389084   | 1589  | SNORC        | 1.15 | 0.005825515 | 0.01237243  |
| 1.08E+08 | 3326  | LOC107986987 | 1.15 | 0.001445128 | 0.003424974 |
| 387849   | 1139  | REP15        | 1.14 | 0.023621346 | 0.044267912 |
| 4636     | 1350  | MYL5         | 1.14 | 1.31E-13    | 8.25E-13    |
| 120227   | 3225  | CYP2R1       | 1.14 | 5.40E-14    | 3.53E-13    |
| 347902   | 3470  | AMIGO2       | 1.14 | 4.55E-37    | 8.22E-36    |
| 114899   | 3644  | C1QTNF3      | 1.14 | 7.39E-06    | 2.44E-05    |
| 1.08E+08 | 1448  | LOC107984156 | 1.14 | 0.000119366 | 0.000335055 |
| 5436     | 852   | POLR2G       | 1.14 | 2.65E-40    | 5.33E-39    |
| 1290     | 6770  | COL5A2       | 1.14 | 6.07E-08    | 2.49E-07    |
| 388403   | 5242  | YPEL2        | 1.14 | 7.39E-20    | 6.65E-19    |
| 84830    | 2005  | ADTRP        | 1.14 | 0.009360016 | 0.019083048 |
| 10045    | 2061  | SH2D3A       | 1.14 | 7.52E-08    | 3.05E-07    |
| 6581     | 3372  | SLC22A3      | 1.14 | 6.68E-06    | 2.22E-05    |
| 9734     | 4854  | HDAC9        | 1.14 | 4.81E-16    | 3.54E-15    |
| 4864     | 4839  | NPC1         | 1.14 | 7.40E-52    | 2.09E-50    |
| 10962    | 2180  | MLLT11       | 1.14 | 4.40E-25    | 5.03E-24    |
| 8310     | 2909  | ACOX3        | 1.14 | 1.69E-17    | 1.35E-16    |
| 51761    | 9289  | ATP8A2       | 1.14 | 3.47E-05    | 0.0001049   |
| 166785   | 5800  | MMAA         | 1.14 | 6.19E-12    | 3.47E-11    |
| 58157    | 1885  | NGB          | 1.14 | 0.013794358 | 0.027193848 |
| 1962     | 3919  | EHHADH       | 1.14 | 1.47E-21    | 1.42E-20    |
| 9636     | 685   | ISG15        | 1.14 | 3.42E-13    | 2.08E-12    |
| 114823   | 5503  | LENG8        | 1.14 | 1.47E-06    | 5.23E-06    |
| 55902    | 2944  | ACSS2        | 1.14 | 2.33E-53    | 6.91E-52    |
| 23767    | 4208  | FLRT3        | 1.14 | 6.41E-07    | 2.36E-06    |
| 132321   | 1645  | C4orf33      | 1.13 | 6.67E-17    | 5.18E-16    |
| 50853    | 2889  | VILL         | 1.13 | 2.37E-06    | 8.25E-06    |
| 23228    | 4155  | PLCL2        | 1.13 | 1.89E-05    | 5.93E-05    |
| 368      | 1396  | ABCC6        | 1.13 | 3.00E-18    | 2.50E-17    |
| 254552   | 771   | NUDT8        | 1.13 | 1.76E-09    | 8.25E-09    |
| 84125    | 4110  | LRRIQ1       | 1.13 | 3.44E-09    | 1.57E-08    |
| 2100     | 4228  | ESR2         | 1.13 | 0.000572889 | 0.001454155 |
| 9788     | 4654  | MTSS1        | 1.13 | 1.08E-36    | 1.92E-35    |
| 7168     | 1889  | TPM1         | 1.13 | 5.92E-54    | 1.78E-52    |
| 5155     | 3113  | PDGFB        | 1.13 | 9.09E-22    | 8.92E-21    |
| 6296     | 2146  | ACSM3        | 1.12 | 5.61E-06    | 1.88E-05    |
| 284040   | 2515  | CDRT4        | 1.12 | 0.020773815 | 0.039401061 |
| 112849   | 2504  | L3HYPDH      | 1.12 | 1.27E-17    | 1.03E-16    |
| 340277   | 1384  | FAM221A      | 1.12 | 1.25E-06    | 4.48E-06    |
| 729220   | 2100  | FLJ45513     | 1.12 | 0.012153268 | 0.024189455 |
| 57538    | 10915 | ALPK3        | 1.12 | 0.003123064 | 0.00696156  |
| 26973    | 3211  | CHORDC1      | 1.12 | 1.04E-26    | 1.28E-25    |
| 339977   | 5373  | LRRC66       | 1.12 | 0.010734022 | 0.021609121 |
| 4218     | 2163  | RAB8A        | 1.12 | 3.04E-62    | 1.13E-60    |
| 1.08E+08 | 2575  | LOC107987457 | 1.12 | 3.23E-05    | 9.80E-05    |
| 57473    | 5522  | ZNF512B      | 1.12 | 1.06E-26    | 1.30E-25    |
| 2526     | 6063  | FUT4         | 1.12 | 2.75E-19    | 2.41E-18    |

|          |       |          |      |             |             |
|----------|-------|----------|------|-------------|-------------|
| 8313     | 4045  | AXIN2    | 1.12 | 4.48E-12    | 2.53E-11    |
| 553      | 1773  | AVPR1B   | 1.12 | 0.02136632  | 0.040404084 |
| 253461   | 6904  | ZBTB38   | 1.12 | 7.70E-45    | 1.80E-43    |
| 3824     | 3160  | KLRD1    | 1.12 | 1.72E-05    | 5.44E-05    |
| 83707    | 1003  | TRPT1    | 1.12 | 6.59E-24    | 7.12E-23    |
| 91624    | 2826  | NEXN     | 1.12 | 2.93E-30    | 4.19E-29    |
| 408186   | 4121  | OVOS     | 1.11 | 0.005467589 | 0.011670846 |
| 4439     | 2783  | MSH5     | 1.11 | 1.92E-13    | 1.20E-12    |
| 29933    | 3788  | GPR132   | 1.11 | 0.000128907 | 0.00035971  |
| 1513     | 1825  | CTSK     | 1.11 | 4.30E-07    | 1.62E-06    |
| 1350     | 448   | COX7C    | 1.11 | 3.99E-38    | 7.55E-37    |
| 11282    | 2538  | MGAT4B   | 1.11 | 1.32E-60    | 4.72E-59    |
| 79098    | 5392  | C1orf116 | 1.11 | 6.26E-10    | 3.02E-09    |
| 55049    | 837   | REX1BD   | 1.11 | 1.30E-15    | 9.35E-15    |
| 154      | 2058  | ADRB2    | 1.11 | 1.86E-06    | 6.55E-06    |
| 79644    | 2722  | SRD5A3   | 1.11 | 3.74E-19    | 3.24E-18    |
| 5031     | 2245  | P2RY6    | 1.11 | 1.66E-12    | 9.70E-12    |
| 56245    | 3976  | C21orf62 | 1.11 | 0.000984655 | 0.002403207 |
| 2026     | 2423  | ENO2     | 1.10 | 2.19E-66    | 8.94E-65    |
| 728239   | 2613  | MAGED4   | 1.10 | 1.82E-18    | 1.53E-17    |
| 55605    | 6492  | KIF21A   | 1.10 | 1.64E-30    | 2.36E-29    |
| 2354     | 3668  | FOSB     | 1.10 | 1.31E-05    | 4.20E-05    |
| 1.03E+08 | 4724  | SIK1B    | 1.10 | 5.42E-43    | 1.20E-41    |
| 4126     | 3050  | MANBA    | 1.10 | 2.32E-29    | 3.21E-28    |
| 80146    | 1997  | UXS1     | 1.10 | 4.33E-50    | 1.16E-48    |
| 11030    | 1867  | RBPMS    | 1.10 | 6.80E-31    | 9.96E-30    |
| 56624    | 3213  | ASAH2    | 1.10 | 0.000316172 | 0.000834856 |
| 378884   | 2134  | NHLRC1   | 1.10 | 4.55E-05    | 0.000135494 |
| 374739   | 1701  | TEPP     | 1.10 | 0.004443721 | 0.009648789 |
| 283      | 1167  | ANG      | 1.10 | 0.000211302 | 0.000571709 |
| 10161    | 2512  | LPAR6    | 1.10 | 7.03E-11    | 3.68E-10    |
| 255928   | 11318 | SYT14    | 1.10 | 1.38E-14    | 9.33E-14    |
| 90342    | 5868  | FER1L5   | 1.10 | 0.001124036 | 0.002715783 |
| 220992   | 3063  | ZNF485   | 1.10 | 6.28E-05    | 0.000183291 |
| 50855    | 1270  | PARD6A   | 1.09 | 6.70E-06    | 2.23E-05    |
| 92105    | 3335  | INTS4    | 1.09 | 6.37E-26    | 7.55E-25    |
| 9635     | 4000  | CLCA2    | 1.09 | 2.14E-07    | 8.30E-07    |
| 166348   | 5533  | KBTBD12  | 1.09 | 0.000474498 | 0.001219921 |
| 90019    | 1535  | SYT8     | 1.09 | 0.000732852 | 0.001828578 |
| 26240    | 1673  | FAM50B   | 1.09 | 2.49E-07    | 9.57E-07    |
| 3613     | 1521  | IMPA2    | 1.09 | 9.67E-29    | 1.30E-27    |
| 401251   | 917   | SAPCD1   | 1.09 | 7.59E-06    | 2.50E-05    |
| 28966    | 2211  | SNX24    | 1.09 | 6.20E-27    | 7.72E-26    |
| 6274     | 738   | S100A3   | 1.09 | 0.000242944 | 0.000652255 |
| 9246     | 1291  | UBE2L6   | 1.09 | 5.03E-33    | 7.91E-32    |
| 400745   | 3693  | SH2D5    | 1.09 | 1.09E-07    | 4.36E-07    |
| 10381    | 1794  | TUBB3    | 1.08 | 1.48E-28    | 1.97E-27    |
| 3417     | 2403  | IDH1     | 1.08 | 3.12E-35    | 5.30E-34    |

|          |       |          |      |             |             |
|----------|-------|----------|------|-------------|-------------|
| 58513    | 3105  | EPS15L1  | 1.08 | 8.60E-44    | 1.95E-42    |
| 9209     | 2651  | LRRFIP2  | 1.08 | 2.18E-49    | 5.75E-48    |
| 401720   | 4982  | FIGNL2   | 1.08 | 0.007022917 | 0.014676718 |
| 1E+08    | 2299  | CD24     | 1.08 | 3.91E-54    | 1.18E-52    |
| 10924    | 1910  | SMPDL3A  | 1.08 | 3.77E-10    | 1.85E-09    |
| 23649    | 3006  | POLA2    | 1.08 | 1.38E-47    | 3.44E-46    |
| 23263    | 5174  | MCF2L    | 1.08 | 1.10E-08    | 4.83E-08    |
| 1946     | 5681  | EFNA5    | 1.08 | 2.31E-56    | 7.44E-55    |
| 6520     | 1953  | SLC3A2   | 1.08 | 3.22E-47    | 7.98E-46    |
| 54986    | 4002  | ULK4     | 1.08 | 1.76E-10    | 8.89E-10    |
| 80230    | 2277  | RUFY1    | 1.08 | 2.20E-38    | 4.20E-37    |
| 11330    | 3342  | CTRC     | 1.08 | 0.013024151 | 0.025772704 |
| 22881    | 4990  | ANKRD6   | 1.08 | 1.87E-12    | 1.09E-11    |
| 390927   | 7179  | ZNF793   | 1.08 | 9.84E-08    | 3.94E-07    |
| 1.03E+08 | 2412  | TBC1D3E  | 1.07 | 1.47E-15    | 1.05E-14    |
| 10263    | 1269  | CDK2AP2  | 1.07 | 5.52E-25    | 6.29E-24    |
| 51454    | 3407  | GULP1    | 1.07 | 2.67E-23    | 2.80E-22    |
| 127845   | 883   | GOLT1A   | 1.07 | 0.022502139 | 0.042349116 |
| 84327    | 1437  | ZBED3    | 1.07 | 1.19E-06    | 4.26E-06    |
| 3569     | 1376  | IL6      | 1.07 | 4.89E-17    | 3.82E-16    |
| 122509   | 838   | IFI27L1  | 1.07 | 1.89E-17    | 1.51E-16    |
| 3983     | 6919  | ABLIM1   | 1.07 | 2.15E-48    | 5.45E-47    |
| 8536     | 1484  | CAMK1    | 1.07 | 1.03E-26    | 1.27E-25    |
| 4883     | 6569  | NPR3     | 1.07 | 1.28E-15    | 9.18E-15    |
| 6242     | 2236  | RTKN     | 1.07 | 4.14E-26    | 4.95E-25    |
| 219970   | 1488  | GLYATL2  | 1.07 | 2.93E-07    | 1.12E-06    |
| 79191    | 2546  | IRX3     | 1.07 | 4.42E-21    | 4.20E-20    |
| 4908     | 1280  | NTF3     | 1.07 | 0.000638337 | 0.001607421 |
| 2628     | 2742  | GATM     | 1.07 | 0.015545276 | 0.030349244 |
| 22854    | 4535  | NTNG1    | 1.06 | 1.54E-30    | 2.22E-29    |
| 387882   | 1383  | C12orf75 | 1.06 | 1.36E-29    | 1.89E-28    |
| 146712   | 2119  | B3GNTL1  | 1.06 | 5.98E-07    | 2.22E-06    |
| 23414    | 4029  | ZFPM2    | 1.06 | 0.007253147 | 0.015104773 |
| 29121    | 5249  | CLEC2D   | 1.06 | 7.69E-14    | 4.94E-13    |
| 4026     | 17866 | LPP      | 1.06 | 4.72E-67    | 1.96E-65    |
| 84619    | 1926  | ZGPAT    | 1.06 | 5.53E-17    | 4.31E-16    |
| 3574     | 2293  | IL7      | 1.06 | 0.000235289 | 0.000632755 |
| 65084    | 4152  | TMEM135  | 1.06 | 4.33E-21    | 4.12E-20    |
| 81557    | 2582  | MAGED4B  | 1.06 | 4.32E-26    | 5.16E-25    |
| 84105    | 2395  | PCBD2    | 1.06 | 2.60E-11    | 1.40E-10    |
| 79612    | 3862  | NAA16    | 1.06 | 2.25E-20    | 2.07E-19    |
| 6480     | 4235  | ST6GAL1  | 1.06 | 2.38E-23    | 2.50E-22    |
| 84109    | 2370  | QRFP     | 1.06 | 4.65E-06    | 1.57E-05    |
| 54209    | 882   | TREM2    | 1.06 | 0.024622905 | 0.045965515 |
| 57053    | 2349  | CHRNA10  | 1.06 | 0.002870278 | 0.006435218 |
| 134637   | 8505  | ADAT2    | 1.06 | 2.74E-14    | 1.82E-13    |
| 338376   | 1501  | IFNE     | 1.06 | 0.012817693 | 0.025415107 |
| 6374     | 2505  | CXCL5    | 1.06 | 8.37E-25    | 9.40E-24    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 6231     | 699   | RPS26        | 1.06 | 1.87E-46    | 4.57E-45    |
| 284266   | 1523  | SIGLEC15     | 1.06 | 0.000533087 | 0.001359536 |
| 1612     | 5587  | DAPK1        | 1.06 | 1.66E-46    | 4.06E-45    |
| 4661     | 5550  | MYT1         | 1.06 | 0.01856861  | 0.035652374 |
| 55796    | 9711  | MBNL3        | 1.06 | 9.16E-17    | 7.04E-16    |
| 283537   | 3262  | SLC46A3      | 1.06 | 1.66E-07    | 6.52E-07    |
| 1.01E+08 | 2370  | TBC1D3L      | 1.06 | 1.35E-20    | 1.26E-19    |
| 206412   | 3357  | C6orf163     | 1.06 | 0.000144702 | 0.000402043 |
| 7084     | 4789  | TK2          | 1.05 | 1.74E-26    | 2.11E-25    |
| 6648     | 4069  | SOD2         | 1.05 | 6.19E-38    | 1.16E-36    |
| 160851   | 16923 | DGKH         | 1.05 | 1.79E-18    | 1.50E-17    |
| 89884    | 5140  | LHX4         | 1.05 | 0.000225643 | 0.000608104 |
| 9764     | 7217  | KIAA0513     | 1.05 | 7.31E-21    | 6.89E-20    |
| 7274     | 3814  | TPPA         | 1.05 | 6.35E-07    | 2.34E-06    |
| 387712   | 4489  | ENO4         | 1.05 | 0.004835149 | 0.010432413 |
| 58191    | 2259  | CXCL16       | 1.05 | 3.38E-23    | 3.54E-22    |
| 83992    | 5979  | CTTNBP2      | 1.05 | 3.84E-16    | 2.84E-15    |
| 81029    | 2184  | WNT5B        | 1.05 | 2.76E-09    | 1.27E-08    |
| 1843     | 2040  | DUSP1        | 1.05 | 6.69E-43    | 1.47E-41    |
| 57698    | 4138  | SHTN1        | 1.05 | 2.75E-30    | 3.93E-29    |
| 834      | 1766  | CASP1        | 1.05 | 1.10E-16    | 8.42E-16    |
| 285464   | 4467  | CRIPAK       | 1.05 | 4.47E-11    | 2.38E-10    |
| 197259   | 2680  | MLKL         | 1.05 | 1.97E-13    | 1.23E-12    |
| 23034    | 6477  | SAMD4A       | 1.05 | 1.14E-30    | 1.66E-29    |
| 23461    | 8630  | ABCA5        | 1.04 | 2.17E-20    | 2.00E-19    |
| 641371   | 1099  | ACOT1        | 1.04 | 2.50E-05    | 7.70E-05    |
| 22898    | 4625  | DENND3       | 1.04 | 8.05E-26    | 9.51E-25    |
| 3491     | 2295  | CYR61        | 1.04 | 1.53E-63    | 5.89E-62    |
| 55715    | 2747  | DOK4         | 1.04 | 4.66E-29    | 6.36E-28    |
| 57577    | 3956  | CCDC191      | 1.04 | 3.04E-09    | 1.39E-08    |
| 9900     | 3087  | SV2A         | 1.04 | 3.39E-30    | 4.82E-29    |
| 1.08E+08 | 1471  | LOC107983998 | 1.04 | 7.44E-06    | 2.45E-05    |
| 84286    | 1923  | TMEM175      | 1.04 | 4.13E-21    | 3.94E-20    |
| 222236   | 4156  | NAPEPLD      | 1.04 | 3.40E-16    | 2.52E-15    |
| 653073   | 4170  | GOLGA8J      | 1.04 | 0.004826347 | 0.010417862 |
| 1.08E+08 | 915   | LOC107986794 | 1.04 | 0.000850129 | 0.0020956   |
| 6775     | 2835  | STAT4        | 1.04 | 1.34E-11    | 7.33E-11    |
| 26229    | 1694  | B3GAT3       | 1.04 | 2.89E-38    | 5.48E-37    |
| 192668   | 2719  | CYS1         | 1.04 | 1.21E-21    | 1.18E-20    |
| 29945    | 2034  | ANAPC4       | 1.04 | 1.52E-24    | 1.69E-23    |
| 9781     | 5428  | RNF144A      | 1.04 | 2.64E-10    | 1.31E-09    |
| 1.08E+08 | 1043  | LOC107985355 | 1.04 | 0.001136205 | 0.002742947 |
| 1528     | 859   | CYB5A        | 1.04 | 1.89E-27    | 2.40E-26    |
| 5563     | 9444  | PRKAA2       | 1.04 | 9.77E-20    | 8.75E-19    |
| 8997     | 5107  | KALRN        | 1.04 | 1.12E-10    | 5.78E-10    |
| 3431     | 2629  | SP110        | 1.04 | 1.81E-27    | 2.30E-26    |
| 2668     | 3571  | GDNF         | 1.03 | 1.93E-05    | 6.05E-05    |
| 727800   | 1095  | RNF208       | 1.03 | 8.94E-07    | 3.25E-06    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 7050     | 1590  | TGIF1        | 1.03 | 2.27E-33    | 3.62E-32    |
| 341676   | 2963  | NEK5         | 1.03 | 0.020650308 | 0.039187725 |
| 5122     | 5166  | PCSK1        | 1.03 | 0.011148726 | 0.022373001 |
| 23254    | 3731  | KAZN         | 1.03 | 6.42E-34    | 1.04E-32    |
| 84334    | 1790  | APOPT1       | 1.03 | 2.52E-21    | 2.42E-20    |
| 54923    | 1385  | LIME1        | 1.03 | 2.26E-07    | 8.74E-07    |
| 201799   | 3230  | TMEM154      | 1.03 | 3.54E-12    | 2.01E-11    |
| 221491   | 988   | SMIM29       | 1.03 | 2.29E-08    | 9.76E-08    |
| 9317     | 3483  | PTER         | 1.03 | 8.39E-22    | 8.26E-21    |
| 1.02E+08 | 1731  | LOC101929400 | 1.03 | 0.002166113 | 0.004964207 |
| 2912     | 2534  | GRM2         | 1.03 | 0.017950495 | 0.034585165 |
| 1.01E+08 | 2022  | PTGES3L      | 1.03 | 0.000867141 | 0.002135166 |
| 54951    | 1485  | COMMD8       | 1.03 | 2.09E-12    | 1.21E-11    |
| 8566     | 6828  | PDXK         | 1.03 | 8.37E-54    | 2.51E-52    |
| 5872     | 1162  | RAB13        | 1.03 | 4.16E-41    | 8.61E-40    |
| 57477    | 8955  | SHROOM4      | 1.03 | 1.90E-11    | 1.03E-10    |
| 7204     | 10327 | TRIO         | 1.03 | 7.59E-46    | 1.81E-44    |
| 4124     | 7090  | MAN2A1       | 1.02 | 9.39E-40    | 1.86E-38    |
| 27089    | 1585  | UQCRQ        | 1.02 | 7.39E-33    | 1.16E-31    |
| 79841    | 3099  | AGBL2        | 1.02 | 0.000722533 | 0.001804605 |
| 84033    | 22729 | OBSCN        | 1.02 | 2.40E-17    | 1.91E-16    |
| 79632    | 3912  | FAM184A      | 1.02 | 1.31E-05    | 4.18E-05    |
| 10588    | 2342  | MTHFS        | 1.02 | 2.01E-10    | 1.01E-09    |
| 9884     | 4688  | LRRC37A      | 1.02 | 1.45E-12    | 8.48E-12    |
| 357      | 5380  | SHROOM2      | 1.02 | 4.22E-21    | 4.01E-20    |
| 9168     | 482   | TMSB10       | 1.02 | 8.75E-35    | 1.46E-33    |
| 3426     | 2201  | CFI          | 1.02 | 4.20E-39    | 8.17E-38    |
| 1.08E+08 | 660   | LOC107984841 | 1.02 | 0.000107508 | 0.000304075 |
| 80164    | 4518  | PRR36        | 1.02 | 9.75E-07    | 3.53E-06    |
| 3690     | 4894  | ITGB3        | 1.02 | 4.68E-29    | 6.38E-28    |
| 728734   | 1626  | NPIPB8       | 1.02 | 1.26E-08    | 5.48E-08    |
| 3171     | 2046  | FOXA3        | 1.02 | 0.000649328 | 0.001632553 |
| 6307     | 2218  | MSMO1        | 1.01 | 1.77E-21    | 1.71E-20    |
| 9170     | 1845  | LPAR2        | 1.01 | 6.37E-14    | 4.12E-13    |
| 3756     | 7978  | KCNH1        | 1.01 | 5.56E-10    | 2.70E-09    |
| 285989   | 3857  | ZNF789       | 1.01 | 3.57E-13    | 2.17E-12    |
| 8649     | 4280  | LAMTOR3      | 1.01 | 7.07E-28    | 9.16E-27    |
| 29911    | 3276  | HOOK2        | 1.01 | 7.72E-14    | 4.95E-13    |
| 7171     | 2683  | TPM4         | 1.01 | 1.47E-49    | 3.90E-48    |
| 92591    | 2139  | ASB16        | 1.01 | 4.21E-05    | 0.000126154 |
| 117608   | 2200  | ZNF354B      | 1.01 | 1.43E-13    | 9.04E-13    |
| 3992     | 4432  | FADS1        | 1.01 | 3.04E-59    | 1.05E-57    |
| 10057    | 4687  | ABCC5        | 1.01 | 9.96E-25    | 1.12E-23    |
| 80023    | 2132  | NRSN2        | 1.01 | 5.74E-23    | 5.95E-22    |
| 4199     | 3428  | ME1          | 1.01 | 9.49E-19    | 8.07E-18    |
| 79710    | 3749  | MORC4        | 1.01 | 1.91E-30    | 2.75E-29    |
| 11098    | 3953  | PRSS23       | 1.01 | 1.60E-48    | 4.09E-47    |
| 284656   | 2152  | EPHA10       | 1.01 | 0.010599048 | 0.02136645  |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 400916   | 718   | CHCHD10      | 1.01 | 1.09E-14    | 7.41E-14    |
| 80206    | 5088  | FHOD3        | 1.01 | 1.26E-50    | 3.43E-49    |
| 85462    | 6499  | FHDC1        | 1.01 | 3.07E-24    | 3.37E-23    |
| 54795    | 3687  | TRPM4        | 1.01 | 7.56E-20    | 6.80E-19    |
| 2182     | 5056  | ACSL4        | 1.01 | 2.56E-34    | 4.20E-33    |
| 7849     | 3930  | PAX8         | 1.01 | 1.18E-33    | 1.89E-32    |
| 93953    | 2798  | GCNA         | 1.00 | 0.003045605 | 0.006799988 |
| 126823   | 1329  | KLHDC9       | 1.00 | 0.001357278 | 0.003230558 |
| 51747    | 2948  | LUC7L3       | 1.00 | 1.51E-27    | 1.93E-26    |
| 4069     | 1516  | LYZ          | 1.00 | 0.005325351 | 0.011406133 |
| 158399   | 10324 | ZNF483       | 1.00 | 2.55E-08    | 1.08E-07    |
| 51807    | 2124  | TUBA8        | 1.00 | 5.07E-07    | 1.89E-06    |
| 57545    | 3070  | CC2D2A       | 1.00 | 9.53E-13    | 5.64E-12    |
| 344387   | 3124  | CDKL4        | 1.00 | 0.001462997 | 0.003464091 |
| 79064    | 954   | TMEM223      | 1.00 | 5.35E-15    | 3.70E-14    |
| 4835     | 1245  | NQO2         | 1.00 | 1.60E-16    | 1.21E-15    |
| 200162   | 6734  | SPAG17       | 1.00 | 0.025885312 | 0.048129994 |
| 10449    | 1952  | ACAA2        | 1.00 | 1.33E-27    | 1.71E-26    |
| 3716     | 4985  | JAK1         | 1.00 | 2.11E-56    | 6.80E-55    |
| 10312    | 2677  | TCIRG1       | 1.00 | 3.52E-48    | 8.85E-47    |
| 55356    | 4544  | SLC22A15     | 1.00 | 6.99E-14    | 4.51E-13    |
| 147011   | 1513  | PROCA1       | 1.00 | 0.000749954 | 0.001869151 |
| 152756   | 2174  | FAM218A      | 1.00 | 0.000995363 | 0.002427342 |
| 389015   | 4074  | SLC9A4       | 1.00 | 0.00117743  | 0.002834381 |
| 63917    | 2682  | GALNT11      | 1.00 | 4.59E-26    | 5.47E-25    |
| 1040     | 4493  | CDS1         | 1.00 | 1.01E-07    | 4.06E-07    |
| 26575    | 1415  | RGS17        | 1.00 | 0.000152124 | 0.000421478 |
| 286527   | 683   | TMSB15B      | 1.00 | 6.74E-05    | 0.000196002 |
| 255231   | 2926  | MCOLN2       | 1.00 | 0.00029452  | 0.000781165 |
| 114960   | 2058  | TSGA13       | 1.00 | 0.012772065 | 0.025333115 |
| 5359     | 1960  | PLSCR1       | 0.99 | 5.77E-27    | 7.20E-26    |
| 3801     | 3504  | KIFC3        | 0.99 | 5.37E-32    | 8.18E-31    |
| 51005    | 3101  | AMDHD2       | 0.99 | 5.31E-22    | 5.26E-21    |
| 197021   | 2567  | LCTL         | 0.99 | 0.021168743 | 0.040073112 |
| 245973   | 2867  | ATP6V1C2     | 0.99 | 0.001981785 | 0.00457422  |
| 6002     | 3979  | RGS12        | 0.99 | 2.93E-28    | 3.85E-27    |
| 400986   | 8072  | ANKRD36C     | 0.99 | 4.64E-10    | 2.26E-09    |
| 1.08E+08 | 1121  | LOC107985911 | 0.99 | 0.001524109 | 0.003594898 |
| 1.05E+08 | 1599  | LOC105374378 | 0.99 | 0.016375276 | 0.031836734 |
| 3993     | 2673  | LLGL2        | 0.99 | 1.12E-14    | 7.61E-14    |
| 4982     | 2354  | TNFRSF11B    | 0.99 | 1.49E-19    | 1.32E-18    |
| 646588   | 1343  | LOC646588    | 0.99 | 0.016392599 | 0.031866925 |
| 8974     | 2768  | P4HA2        | 0.99 | 1.21E-41    | 2.53E-40    |
| 55784    | 6732  | MCTP2        | 0.99 | 4.16E-24    | 4.53E-23    |
| 80975    | 2321  | TMPRSS5      | 0.99 | 0.025556122 | 0.047567691 |
| 8502     | 4140  | PKP4         | 0.99 | 4.42E-46    | 1.06E-44    |
| 143570   | 4704  | XRR1A        | 0.99 | 8.11E-09    | 3.59E-08    |
| 151242   | 1079  | PPP1R1C      | 0.99 | 0.022377292 | 0.04213647  |



|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 27040    | 1680  | LAT          | 0.99 | 0.00029356  | 0.00077897  |
| 90060    | 4130  | CCDC120      | 0.99 | 5.15E-16    | 3.79E-15    |
| 8792     | 4458  | TNFRSF11A    | 0.99 | 4.11E-09    | 1.86E-08    |
| 5732     | 2494  | PTGER2       | 0.99 | 1.57E-23    | 1.67E-22    |
| 4983     | 7481  | OPHN1        | 0.99 | 4.41E-22    | 4.40E-21    |
| 5251     | 5091  | PHEX         | 0.99 | 0.002072205 | 0.004764972 |
| 8907     | 2373  | AP1M1        | 0.98 | 5.75E-39    | 1.11E-37    |
| 387921   | 3526  | NHLRC3       | 0.98 | 1.51E-20    | 1.41E-19    |
| 84803    | 2616  | GPAT3        | 0.98 | 3.36E-07    | 1.28E-06    |
| 28978    | 1015  | TMEM14A      | 0.98 | 7.95E-19    | 6.78E-18    |
| 6352     | 1249  | CCL5         | 0.98 | 3.20E-05    | 9.72E-05    |
| 3373     | 2734  | HYAL1        | 0.98 | 1.20E-10    | 6.15E-10    |
| 25956    | 4631  | SEC31B       | 0.98 | 2.17E-13    | 1.35E-12    |
| 221336   | 3113  | BEND6        | 0.98 | 8.19E-07    | 2.98E-06    |
| 4494     | 456   | MT1F         | 0.98 | 2.59E-15    | 1.83E-14    |
| 132884   | 4372  | EVC2         | 0.98 | 1.84E-13    | 1.15E-12    |
| 9443     | 1140  | MED7         | 0.98 | 2.64E-14    | 1.76E-13    |
| 144363   | 1180  | ETFRF1       | 0.98 | 2.74E-11    | 1.48E-10    |
| 60492    | 2335  | CCDC90B      | 0.98 | 5.95E-28    | 7.76E-27    |
| 51131    | 1504  | PHF11        | 0.98 | 4.30E-13    | 2.59E-12    |
| 65109    | 2371  | UPF3B        | 0.98 | 2.37E-19    | 2.09E-18    |
| 727866   | 3046  | FAM156B      | 0.98 | 2.41E-18    | 2.02E-17    |
| 1269     | 5679  | CNR2         | 0.98 | 0.021656851 | 0.04092155  |
| 7295     | 886   | TXN          | 0.98 | 1.07E-28    | 1.43E-27    |
| 253639   | 2979  | ZNF620       | 0.98 | 6.34E-08    | 2.59E-07    |
| 79026    | 13763 | AHNAK        | 0.98 | 2.92E-62    | 1.08E-60    |
| 1.05E+08 | 4282  | LOC105369199 | 0.98 | 0.000638647 | 0.001607975 |
| 1E+08    | 1672  | GOLGA6L3     | 0.98 | 0.021661222 | 0.040922552 |
| 1.01E+08 | 3987  | ARPC4-TTLL3  | 0.98 | 6.67E-15    | 4.59E-14    |
| 7786     | 3592  | MAP3K12      | 0.98 | 2.05E-22    | 2.08E-21    |
| 55558    | 6386  | PLXNA3       | 0.98 | 3.90E-24    | 4.25E-23    |
| 81786    | 1575  | TRIM7        | 0.97 | 6.28E-08    | 2.57E-07    |
| 32       | 8887  | ACACB        | 0.97 | 7.21E-12    | 4.02E-11    |
| 2444     | 3097  | FRK          | 0.97 | 1.17E-05    | 3.78E-05    |
| 284      | 3741  | ANGPT1       | 0.97 | 0.019543296 | 0.037326161 |
| 5054     | 3151  | SERPINE1     | 0.97 | 4.34E-30    | 6.16E-29    |
| 51347    | 4433  | TAOK3        | 0.97 | 1.66E-27    | 2.12E-26    |
| 51020    | 1615  | HDHC2        | 0.97 | 5.55E-18    | 4.55E-17    |
| 822      | 1321  | CAPG         | 0.97 | 4.50E-31    | 6.65E-30    |
| 56990    | 3616  | CDC42SE2     | 0.97 | 7.26E-34    | 1.18E-32    |
| 10929    | 4345  | SRSF8        | 0.97 | 6.95E-25    | 7.85E-24    |
| 284001   | 4543  | CCDC57       | 0.97 | 3.22E-19    | 2.81E-18    |
| 1029     | 1091  | CDKN2A       | 0.97 | 2.55E-31    | 3.79E-30    |
| 79868    | 2992  | ALG13        | 0.97 | 2.07E-22    | 2.09E-21    |
| 55251    | 3929  | PCMTD2       | 0.97 | 5.72E-23    | 5.94E-22    |
| 112483   | 973   | SAT2         | 0.97 | 1.64E-19    | 1.45E-18    |
| 55567    | 9045  | DNAH3        | 0.97 | 0.01507692  | 0.029493198 |
| 6659     | 4912  | SOX4         | 0.97 | 6.16E-38    | 1.15E-36    |

|          |       |          |      |             |             |
|----------|-------|----------|------|-------------|-------------|
| 4703     | 25046 | NEB      | 0.97 | 0.022829648 | 0.042915487 |
| 2571     | 2989  | GAD1     | 0.97 | 3.89E-07    | 1.47E-06    |
| 55227    | 3261  | LRRC1    | 0.97 | 7.85E-18    | 6.39E-17    |
| 10903    | 2996  | MTMR11   | 0.97 | 8.04E-14    | 5.15E-13    |
| 84514    | 2506  | GHDC     | 0.97 | 3.19E-21    | 3.05E-20    |
| 26017    | 1489  | FAM32A   | 0.97 | 1.18E-34    | 1.96E-33    |
| 9441     | 3184  | MED26    | 0.96 | 1.77E-17    | 1.41E-16    |
| 147166   | 2049  | TRIM16L  | 0.96 | 8.87E-17    | 6.82E-16    |
| 91433    | 2694  | RCCD1    | 0.96 | 3.12E-18    | 2.59E-17    |
| 3918     | 5558  | LAMC2    | 0.96 | 1.16E-27    | 1.50E-26    |
| 57616    | 4995  | TSHZ3    | 0.96 | 1.05E-14    | 7.15E-14    |
| 54504    | 1656  | CPVL     | 0.96 | 0.0055007   | 0.011731658 |
| 414236   | 2516  | C10orf55 | 0.96 | 0.001740055 | 0.004058452 |
| 2760     | 3690  | GM2A     | 0.96 | 8.31E-31    | 1.21E-29    |
| 79960    | 5471  | JADE1    | 0.96 | 9.72E-41    | 1.99E-39    |
| 55608    | 2070  | ANKRD10  | 0.96 | 3.82E-27    | 4.80E-26    |
| 9920     | 6744  | KBTBD11  | 0.96 | 1.84E-21    | 1.77E-20    |
| 63901    | 3638  | FAM111A  | 0.96 | 5.08E-45    | 1.19E-43    |
| 5813     | 5304  | PURA     | 0.96 | 3.38E-25    | 3.88E-24    |
| 147645   | 3674  | VSIG10L  | 0.96 | 1.29E-05    | 4.14E-05    |
| 8767     | 2364  | RIPK2    | 0.96 | 1.57E-16    | 1.19E-15    |
| 114569   | 2818  | MAL2     | 0.96 | 5.91E-27    | 7.37E-26    |
| 258010   | 942   | SVIP     | 0.96 | 5.05E-18    | 4.14E-17    |
| 56898    | 2827  | BDH2     | 0.96 | 5.15E-23    | 5.36E-22    |
| 91662    | 3709  | NLRP12   | 0.95 | 0.017913907 | 0.034529648 |
| 51657    | 1214  | STYXL1   | 0.95 | 7.73E-18    | 6.30E-17    |
| 140885   | 3917  | SIRPA    | 0.95 | 5.80E-52    | 1.64E-50    |
| 6712     | 9303  | SPTBN2   | 0.95 | 1.07E-33    | 1.72E-32    |
| 11154    | 4027  | AP4S1    | 0.95 | 7.99E-09    | 3.54E-08    |
| 80194    | 1060  | TMEM134  | 0.95 | 4.55E-15    | 3.16E-14    |
| 80176    | 3130  | SPSB1    | 0.95 | 4.91E-20    | 4.46E-19    |
| 11118    | 3765  | BTN3A2   | 0.95 | 3.80E-26    | 4.55E-25    |
| 9467     | 2603  | SH3BP5   | 0.95 | 2.38E-16    | 1.78E-15    |
| 55556    | 3641  | ENOSF1   | 0.95 | 1.13E-19    | 1.01E-18    |
| 4837     | 1579  | NNMT     | 0.95 | 5.50E-33    | 8.63E-32    |
| 80167    | 3218  | ABHD18   | 0.95 | 4.47E-14    | 2.93E-13    |
| 26007    | 2839  | TKFC     | 0.95 | 2.68E-25    | 3.08E-24    |
| 2774     | 5568  | GNAL     | 0.95 | 0.002111422 | 0.004849501 |
| 259295   | 1914  | TAS2R20  | 0.95 | 0.024784856 | 0.046243549 |
| 64121    | 2746  | RRAGC    | 0.95 | 1.17E-20    | 1.09E-19    |
| 23308    | 3029  | ICOSLG   | 0.95 | 0.002712701 | 0.006110456 |
| 252983   | 5055  | STXBP4   | 0.95 | 1.09E-11    | 6.03E-11    |
| 79745    | 3924  | CLIP4    | 0.95 | 8.00E-20    | 7.20E-19    |
| 715      | 2497  | C1R      | 0.95 | 4.33E-57    | 1.42E-55    |
| 4214     | 7533  | MAP3K1   | 0.95 | 3.13E-23    | 3.28E-22    |
| 27294    | 1098  | DHDH     | 0.95 | 0.002610179 | 0.005897464 |
| 1.08E+08 | 1924  | UPK3BL2  | 0.95 | 5.21E-10    | 2.53E-09    |
| 144406   | 3560  | WDR66    | 0.95 | 0.00355978  | 0.007859117 |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 25780    | 6004 | RASGRP3      | 0.94 | 0.002141183 | 0.004911508 |
| 9111     | 1496 | NMI          | 0.94 | 4.43E-21    | 4.21E-20    |
| 56853    | 3670 | CELF4        | 0.94 | 0.021332579 | 0.040353163 |
| 9510     | 4670 | ADAMTS1      | 0.94 | 1.07E-28    | 1.44E-27    |
| 5921     | 3885 | RASA1        | 0.94 | 1.45E-24    | 1.62E-23    |
| 400818   | 4813 | NBPF9        | 0.94 | 3.27E-16    | 2.43E-15    |
| 50614    | 2222 | GALNT9       | 0.94 | 0.02383669  | 0.044624413 |
| 51750    | 5060 | RTEL1        | 0.94 | 2.39E-20    | 2.20E-19    |
| 339883   | 2668 | C3orf35      | 0.94 | 0.010000439 | 0.020263178 |
| 25989    | 2652 | ULK3         | 0.94 | 2.19E-20    | 2.02E-19    |
| 23555    | 1723 | TSPAN15      | 0.94 | 5.87E-14    | 3.81E-13    |
| 2017     | 3139 | CTTN         | 0.94 | 1.04E-42    | 2.27E-41    |
| 720      | 5441 | C4A          | 0.94 | 8.08E-07    | 2.94E-06    |
| 768211   | 3622 | RELL1        | 0.94 | 2.08E-22    | 2.11E-21    |
| 9130     | 1369 | FAM50A       | 0.94 | 7.73E-25    | 8.69E-24    |
| 93233    | 3508 | CCDC114      | 0.94 | 0.024923779 | 0.046478348 |
| 2180     | 3794 | ACSL1        | 0.94 | 1.27E-33    | 2.04E-32    |
| 2634     | 4148 | GBP2         | 0.94 | 1.19E-28    | 1.59E-27    |
| 26355    | 838  | FAM162A      | 0.94 | 6.78E-21    | 6.40E-20    |
| 7423     | 1798 | VEGFB        | 0.94 | 1.06E-25    | 1.24E-24    |
| 1.08E+08 | 4607 | LOC107985914 | 0.94 | 0.004033543 | 0.008815251 |
| 135295   | 3553 | SRSF12       | 0.94 | 0.000213067 | 0.000576221 |
| 23174    | 6584 | ZCCHC14      | 0.94 | 1.96E-27    | 2.49E-26    |
| 79695    | 2539 | GALNT12      | 0.94 | 2.59E-16    | 1.94E-15    |
| 11083    | 7416 | DIDO1        | 0.93 | 2.66E-34    | 4.35E-33    |
| 127018   | 1892 | LYPLAL1      | 0.93 | 3.96E-12    | 2.25E-11    |
| 285955   | 2924 | SPDYE1       | 0.93 | 0.004860476 | 0.010483027 |
| 203427   | 2552 | SLC25A43     | 0.93 | 1.75E-13    | 1.10E-12    |
| 79939    | 5109 | SLC35E1      | 0.93 | 5.94E-38    | 1.11E-36    |
| 2633     | 3050 | GBP1         | 0.93 | 1.03E-26    | 1.27E-25    |
| 92017    | 8029 | SNX29        | 0.93 | 8.95E-26    | 1.05E-24    |
| 5452     | 6907 | POU2F2       | 0.93 | 1.44E-10    | 7.31E-10    |
| 10111    | 6597 | RAD50        | 0.93 | 8.22E-36    | 1.42E-34    |
| 51523    | 2323 | CXXC5        | 0.93 | 5.13E-46    | 1.23E-44    |
| 54841    | 3709 | BIVM         | 0.93 | 1.01E-26    | 1.25E-25    |
| 5523     | 5525 | PPP2R3A      | 0.93 | 1.57E-22    | 1.60E-21    |
| 55604    | 5438 | CARMIL1      | 0.93 | 1.47E-27    | 1.88E-26    |
| 51313    | 4854 | FAM198B      | 0.93 | 3.86E-08    | 1.61E-07    |
| 57480    | 7237 | PLEKHG1      | 0.93 | 3.58E-06    | 1.22E-05    |
| 116983   | 3736 | ACAP3        | 0.93 | 2.85E-29    | 3.92E-28    |
| 79621    | 1522 | RNASEH2B     | 0.93 | 1.33E-16    | 1.01E-15    |
| 10437    | 1034 | IFI30        | 0.93 | 4.36E-22    | 4.35E-21    |
| 5145     | 4092 | PDE6A        | 0.92 | 4.31E-06    | 1.46E-05    |
| 23229    | 4978 | ARHGEF9      | 0.92 | 1.67E-19    | 1.47E-18    |
| 3710     | 8902 | ITPR3        | 0.92 | 1.14E-35    | 1.96E-34    |
| 349667   | 2220 | RTN4RL2      | 0.92 | 6.97E-06    | 2.31E-05    |
| 29943    | 3749 | PADI1        | 0.92 | 0.005855685 | 0.012430564 |
| 3226     | 2017 | HOXC10       | 0.92 | 4.04E-16    | 2.98E-15    |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 144321 | 1795  | GLIPR1L2 | 0.92 | 4.15E-05    | 0.00012449  |
| 4144   | 3022  | MAT2A    | 0.92 | 2.07E-32    | 3.19E-31    |
| 4356   | 2189  | MPP3     | 0.92 | 7.81E-07    | 2.85E-06    |
| 83872  | 17961 | HMCN1    | 0.92 | 8.84E-06    | 2.89E-05    |
| 147968 | 3129  | CAPN12   | 0.92 | 0.000729118 | 0.001820029 |
| 25816  | 2042  | TNFAIP8  | 0.92 | 7.68E-23    | 7.92E-22    |
| 84525  | 1117  | HOPX     | 0.92 | 0.001157101 | 0.002789473 |
| 10221  | 3053  | TRIB1    | 0.92 | 1.21E-23    | 1.29E-22    |
| 64116  | 2785  | SLC39A8  | 0.92 | 1.06E-27    | 1.37E-26    |
| 25824  | 899   | PRDX5    | 0.92 | 2.51E-34    | 4.13E-33    |
| 80723  | 2080  | SLC35G2  | 0.92 | 2.59E-06    | 8.96E-06    |
| 266977 | 4996  | ADGRF1   | 0.92 | 1.91E-06    | 6.71E-06    |
| 59338  | 3809  | PLEKHA1  | 0.92 | 6.42E-36    | 1.12E-34    |
| 79776  | 13767 | ZFHX4    | 0.92 | 1.08E-27    | 1.39E-26    |
| 64146  | 1180  | PDF      | 0.91 | 5.09E-10    | 2.48E-09    |
| 10861  | 2869  | SLC26A1  | 0.91 | 0.00011904  | 0.000334191 |
| 157773 | 1463  | C8orf48  | 0.91 | 0.001088067 | 0.002636766 |
| 11147  | 872   | HHLA3    | 0.91 | 7.16E-08    | 2.91E-07    |
| 9949   | 5395  | AMMECR1  | 0.91 | 2.00E-24    | 2.21E-23    |
| 387104 | 11818 | SOGA3    | 0.91 | 1.96E-13    | 1.22E-12    |
| 10318  | 2854  | TNIP1    | 0.91 | 1.75E-35    | 3.00E-34    |
| 157869 | 4584  | SBSPON   | 0.91 | 0.002727497 | 0.006139114 |
| 1429   | 1898  | CRYZ     | 0.91 | 2.03E-32    | 3.14E-31    |
| 91862  | 2348  | MARVELD3 | 0.91 | 0.002388522 | 0.005434659 |
| 27293  | 1901  | SMPDL3B  | 0.91 | 9.70E-12    | 5.37E-11    |
| 153396 | 2395  | TMEM161B | 0.91 | 7.13E-16    | 5.20E-15    |
| 4118   | 1099  | MAL      | 0.91 | 0.001330305 | 0.003170606 |
| 84304  | 1063  | NUDT22   | 0.91 | 2.91E-13    | 1.78E-12    |
| 4338   | 3746  | MOCS2    | 0.91 | 3.36E-19    | 2.93E-18    |
| 57035  | 1560  | RSRP1    | 0.91 | 1.94E-16    | 1.46E-15    |
| 80380  | 2429  | PDCD1LG2 | 0.91 | 2.37E-06    | 8.23E-06    |
| 7352   | 2372  | UCP3     | 0.91 | 0.00207407  | 0.004768196 |
| 114801 | 3054  | TMEM200A | 0.91 | 6.74E-07    | 2.48E-06    |
| 10149  | 4692  | ADGRG2   | 0.91 | 9.25E-07    | 3.35E-06    |
| 25937  | 5050  | WWTR1    | 0.91 | 1.37E-48    | 3.50E-47    |
| 10616  | 2016  | RBCK1    | 0.91 | 3.74E-27    | 4.70E-26    |
| 1406   | 4482  | CRX      | 0.91 | 9.91E-06    | 3.22E-05    |
| 23092  | 8261  | ARHGAP26 | 0.91 | 6.23E-17    | 4.85E-16    |
| 25906  | 880   | ANAPC15  | 0.91 | 8.09E-17    | 6.24E-16    |
| 26013  | 3233  | L3MBTL1  | 0.90 | 1.89E-06    | 6.64E-06    |
| 402    | 990   | ARL2     | 0.90 | 2.08E-15    | 1.47E-14    |
| 2286   | 713   | FKBP2    | 0.90 | 3.07E-22    | 3.08E-21    |
| 2791   | 964   | GNG11    | 0.90 | 2.40E-17    | 1.91E-16    |
| 157697 | 3104  | ERICH1   | 0.90 | 1.46E-13    | 9.22E-13    |
| 58494  | 3967  | JAM2     | 0.90 | 1.18E-08    | 5.14E-08    |
| 55727  | 5856  | BTBD7    | 0.90 | 1.85E-26    | 2.25E-25    |
| 4833   | 1083  | NME4     | 0.90 | 5.88E-14    | 3.82E-13    |
| 286256 | 1945  | LCN12    | 0.90 | 0.004585845 | 0.009941593 |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 169200   | 4796  | TMEM64       | 0.90 | 1.52E-15    | 1.09E-14    |
| 261729   | 6557  | STEAP2       | 0.90 | 1.56E-09    | 7.31E-09    |
| 388697   | 9632  | HRNR         | 0.90 | 0.004479177 | 0.009722211 |
| 55785    | 9288  | FGD6         | 0.90 | 9.57E-19    | 8.14E-18    |
| 9208     | 4042  | LRRFIP1      | 0.90 | 2.67E-37    | 4.86E-36    |
| 55005    | 1963  | RMND1        | 0.90 | 1.99E-13    | 1.24E-12    |
| 1627     | 2943  | DBN1         | 0.90 | 1.39E-44    | 3.21E-43    |
| 64112    | 2435  | MOAP1        | 0.90 | 1.22E-20    | 1.14E-19    |
| 670      | 1905  | BPHL         | 0.90 | 3.64E-10    | 1.79E-09    |
| 8120     | 3746  | AP3B2        | 0.90 | 7.22E-09    | 3.21E-08    |
| 57116    | 3392  | ZNF695       | 0.90 | 0.000796916 | 0.001974014 |
| 117144   | 2634  | CATSPER1     | 0.90 | 0.000893172 | 0.002194701 |
| 132671   | 3938  | SPATA18      | 0.90 | 5.53E-08    | 2.27E-07    |
| 5608     | 5288  | MAP2K6       | 0.90 | 4.16E-08    | 1.73E-07    |
| 146206   | 4514  | CARMIL2      | 0.90 | 0.002141943 | 0.004912178 |
| 6773     | 4389  | STAT2        | 0.89 | 5.35E-30    | 7.55E-29    |
| 4253     | 2841  | MIA2         | 0.89 | 3.77E-21    | 3.59E-20    |
| 4940     | 6609  | OAS3         | 0.89 | 6.06E-31    | 8.91E-30    |
| 439921   | 2110  | MXRA7        | 0.89 | 7.17E-53    | 2.10E-51    |
| 1.01E+08 | 1410  | TGFBR3L      | 0.89 | 0.008058675 | 0.016624466 |
| 11054    | 2423  | OGFR         | 0.89 | 2.08E-16    | 1.56E-15    |
| 57146    | 1943  | TMEM159      | 0.89 | 8.01E-10    | 3.84E-09    |
| 80864    | 1311  | EGFL8        | 0.89 | 5.75E-05    | 0.000168727 |
| 51205    | 2023  | ACP6         | 0.89 | 1.48E-10    | 7.52E-10    |
| 51397    | 1645  | COMMD10      | 0.89 | 1.28E-12    | 7.51E-12    |
| 4286     | 5393  | MITF         | 0.89 | 1.26E-19    | 1.12E-18    |
| 153733   | 2479  | CCDC112      | 0.89 | 4.84E-12    | 2.73E-11    |
| 655      | 4049  | BMP7         | 0.89 | 0.016491456 | 0.032041574 |
| 79823    | 1629  | CAMKMT       | 0.89 | 7.86E-07    | 2.87E-06    |
| 94121    | 4060  | SYTL4        | 0.89 | 3.02E-15    | 2.13E-14    |
| 80832    | 3272  | APOL4        | 0.89 | 0.000293401 | 0.000778664 |
| 388722   | 697   | C1orf53      | 0.89 | 0.001314772 | 0.003135686 |
| 51186    | 1089  | TCEAL9       | 0.89 | 8.34E-32    | 1.26E-30    |
| 89849    | 2709  | ATG16L2      | 0.89 | 4.03E-24    | 4.39E-23    |
| 25798    | 837   | BRI3         | 0.89 | 3.76E-17    | 2.96E-16    |
| 10560    | 3289  | SLC19A2      | 0.89 | 5.44E-09    | 2.44E-08    |
| 2512     | 889   | FTL          | 0.89 | 9.00E-30    | 1.26E-28    |
| 7867     | 2561  | MAPKAPK3     | 0.89 | 5.66E-25    | 6.44E-24    |
| 1.05E+08 | 2645  | LOC105371763 | 0.89 | 0.00138201  | 0.00328429  |
| 1415     | 781   | CRYBB2       | 0.89 | 0.012887038 | 0.025535507 |
| 55129    | 2598  | ANO10        | 0.89 | 6.85E-21    | 6.47E-20    |
| 5639     | 1441  | PRRG2        | 0.89 | 0.004551169 | 0.009868827 |
| 9829     | 5803  | DNAJC6       | 0.89 | 4.27E-09    | 1.93E-08    |
| 2762     | 1594  | GMDS         | 0.88 | 1.06E-13    | 6.75E-13    |
| 84264    | 1402  | HAGHL        | 0.88 | 7.07E-08    | 2.87E-07    |
| 28996    | 15176 | HIPK2        | 0.88 | 3.40E-39    | 6.64E-38    |
| 1270     | 1914  | CNTF         | 0.88 | 0.009209456 | 0.01879334  |
| 27147    | 3747  | DENND2A      | 0.88 | 3.30E-24    | 3.61E-23    |

|          |       |           |      |             |             |
|----------|-------|-----------|------|-------------|-------------|
| 54830    | 1775  | NUP62CL   | 0.88 | 1.59E-05    | 5.02E-05    |
| 1212     | 1195  | CLTB      | 0.88 | 2.36E-23    | 2.49E-22    |
| 653784   | 757   | MZT2A     | 0.88 | 5.94E-21    | 5.62E-20    |
| 1519     | 2943  | CTSO      | 0.88 | 2.46E-17    | 1.96E-16    |
| 1.01E+08 | 5418  | FSBP      | 0.88 | 7.54E-08    | 3.06E-07    |
| 375287   | 4840  | RBM43     | 0.88 | 6.07E-11    | 3.20E-10    |
| 9220     | 2110  | TIAF1     | 0.88 | 0.001243416 | 0.002979503 |
| 10636    | 2430  | RGS14     | 0.88 | 2.37E-09    | 1.10E-08    |
| 83852    | 6059  | SETDB2    | 0.88 | 6.41E-10    | 3.09E-09    |
| 140701   | 1776  | ABHD16B   | 0.88 | 4.31E-05    | 0.000128994 |
| 80830    | 10161 | APOL6     | 0.88 | 2.27E-25    | 2.62E-24    |
| 153222   | 7696  | CREBRF    | 0.88 | 6.90E-15    | 4.75E-14    |
| 8503     | 5311  | PIK3R3    | 0.88 | 1.47E-21    | 1.42E-20    |
| 823      | 3025  | CAPN1     | 0.88 | 6.57E-38    | 1.23E-36    |
| 400581   | 6816  | GRAPL     | 0.88 | 0.004688927 | 0.010142787 |
| 51099    | 5377  | ABHD5     | 0.88 | 1.93E-15    | 1.37E-14    |
| 54961    | 2897  | SSH3      | 0.88 | 5.67E-25    | 6.45E-24    |
| 7552     | 4487  | ZNF711    | 0.88 | 3.02E-06    | 1.04E-05    |
| 1E+08    | 2360  | WASHC1    | 0.87 | 4.87E-22    | 4.83E-21    |
| 3636     | 4783  | INPPL1    | 0.87 | 7.64E-34    | 1.24E-32    |
| 64064    | 1824  | OXCT2     | 0.87 | 0.006810143 | 0.014274227 |
| 474170   | 5466  | LRRC37A2  | 0.87 | 7.18E-17    | 5.56E-16    |
| 255738   | 3731  | PCSK9     | 0.87 | 0.000163888 | 0.000451679 |
| 55540    | 2025  | IL17RB    | 0.87 | 1.18E-10    | 6.06E-10    |
| 115004   | 1951  | CGAS      | 0.87 | 1.24E-08    | 5.42E-08    |
| 221468   | 1978  | TMEM217   | 0.87 | 0.000728391 | 0.001818471 |
| 219539   | 2133  | YPEL4     | 0.87 | 0.00219251  | 0.005019523 |
| 26648    | 1020  | OR7E24    | 0.87 | 0.008527673 | 0.017516074 |
| 8497     | 5135  | PPFIA4    | 0.87 | 1.96E-09    | 9.11E-09    |
| 26038    | 9663  | CHD5      | 0.87 | 0.017175562 | 0.033239886 |
| 9314     | 2919  | KLF4      | 0.87 | 0.000120004 | 0.00033658  |
| 84288    | 2669  | EFCAB2    | 0.87 | 1.78E-12    | 1.04E-11    |
| 374659   | 944   | HDDC3     | 0.87 | 4.65E-07    | 1.74E-06    |
| 283635   | 2960  | FAM177A1  | 0.87 | 7.33E-28    | 9.48E-27    |
| 64374    | 1910  | SIL1      | 0.87 | 3.09E-16    | 2.30E-15    |
| 54874    | 4713  | FNBP1L    | 0.87 | 1.28E-26    | 1.56E-25    |
| 255488   | 4923  | RNF144B   | 0.87 | 1.66E-35    | 2.84E-34    |
| 27246    | 3106  | RNF115    | 0.87 | 3.70E-27    | 4.65E-26    |
| 26175    | 1019  | TMEM251   | 0.87 | 2.52E-08    | 1.07E-07    |
| 10085    | 4752  | EDIL3     | 0.87 | 4.00E-27    | 5.02E-26    |
| 55255    | 3815  | WDR41     | 0.87 | 2.55E-19    | 2.24E-18    |
| 55285    | 6495  | RBM41     | 0.87 | 1.39E-20    | 1.30E-19    |
| 3425     | 2331  | IDUA      | 0.87 | 9.86E-14    | 6.28E-13    |
| 346653   | 5195  | FAM71F2   | 0.87 | 0.000290836 | 0.000772435 |
| 728747   | 3517  | ANKRD20A4 | 0.87 | 0.004329449 | 0.009416776 |
| 27345    | 4780  | KCNMB4    | 0.87 | 2.05E-05    | 6.39E-05    |
| 337876   | 3131  | CHSY3     | 0.87 | 4.59E-05    | 0.000136814 |
| 9955     | 4232  | HS3ST3A1  | 0.86 | 4.52E-13    | 2.72E-12    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 51566    | 3428  | ARMCX3       | 0.86 | 2.89E-17    | 2.29E-16    |
| 3665     | 1545  | IRF7         | 0.86 | 2.00E-13    | 1.24E-12    |
| 7587     | 6950  | ZNF37A       | 0.86 | 7.13E-19    | 6.10E-18    |
| 22982    | 6819  | DIP2C        | 0.86 | 4.17E-17    | 3.27E-16    |
| 1E+08    | 1019  | LOC100128108 | 0.86 | 5.51E-05    | 0.000162227 |
| 285600   | 5196  | KIAA0825     | 0.86 | 0.000188204 | 0.000513753 |
| 730098   | 1041  | LOC730098    | 0.86 | 0.000185113 | 0.000505701 |
| 83858    | 2403  | ATAD3B       | 0.86 | 3.69E-19    | 3.21E-18    |
| 149013   | 7109  | NBPF12       | 0.86 | 4.87E-12    | 2.75E-11    |
| 8630     | 1629  | HSD17B6      | 0.86 | 0.001940669 | 0.004486315 |
| 254778   | 3471  | C8orf46      | 0.86 | 0.022253293 | 0.04192075  |
| 10058    | 3021  | ABCB6        | 0.86 | 1.81E-09    | 8.45E-09    |
| 8935     | 4013  | SKAP2        | 0.86 | 2.52E-27    | 3.19E-26    |
| 23094    | 8074  | SIPA1L3      | 0.86 | 2.21E-25    | 2.56E-24    |
| 56731    | 2296  | SLC2A4RG     | 0.86 | 7.76E-17    | 6.00E-16    |
| 728741   | 2209  | NPIP6        | 0.86 | 2.68E-06    | 9.27E-06    |
| 9456     | 4322  | HOMER1       | 0.86 | 3.81E-14    | 2.51E-13    |
| 9189     | 4549  | ZBED1        | 0.86 | 9.46E-22    | 9.26E-21    |
| 55331    | 6825  | ACER3        | 0.85 | 8.44E-26    | 9.95E-25    |
| 139818   | 5566  | DOCK11       | 0.85 | 4.03E-19    | 3.49E-18    |
| 1525     | 5155  | CXADR        | 0.85 | 3.66E-13    | 2.23E-12    |
| 80279    | 2671  | CDK5RAP3     | 0.85 | 2.19E-21    | 2.11E-20    |
| 3108     | 1122  | HLA-DMA      | 0.85 | 4.02E-09    | 1.82E-08    |
| 734      | 4275  | OSGIN2       | 0.85 | 4.71E-22    | 4.68E-21    |
| 3074     | 1920  | HEXB         | 0.85 | 5.97E-41    | 1.23E-39    |
| 54332    | 3853  | GDAP1        | 0.85 | 1.43E-12    | 8.38E-12    |
| 1.03E+08 | 3489  | LOC102723996 | 0.85 | 0.000395061 | 0.001029849 |
| 4891     | 4091  | SLC11A2      | 0.85 | 9.34E-22    | 9.16E-21    |
| 7165     | 2329  | TPD52L2      | 0.85 | 9.13E-30    | 1.28E-28    |
| 23253    | 7135  | ANKRD12      | 0.85 | 1.48E-28    | 1.97E-27    |
| 2246     | 3745  | FGF1         | 0.85 | 0.006560334 | 0.01379619  |
| 10717    | 3299  | AP4B1        | 0.85 | 1.55E-11    | 8.44E-11    |
| 3156     | 4561  | HMGCR        | 0.85 | 4.25E-18    | 3.51E-17    |
| 3216     | 1979  | HOXB6        | 0.85 | 4.26E-22    | 4.26E-21    |
| 140738   | 1687  | TMEM37       | 0.85 | 4.00E-07    | 1.51E-06    |
| 7678     | 2222  | ZNF124       | 0.85 | 3.36E-05    | 0.000101779 |
| 84153    | 2785  | RNASEH2C     | 0.85 | 3.04E-21    | 2.92E-20    |
| 497661   | 1557  | C18orf32     | 0.84 | 2.80E-21    | 2.69E-20    |
| 85027    | 2344  | SMIM3        | 0.84 | 1.17E-19    | 1.04E-18    |
| 55004    | 1198  | LAMTOR1      | 0.84 | 1.03E-20    | 9.67E-20    |
| 25874    | 1164  | MPC2         | 0.84 | 5.35E-16    | 3.93E-15    |
| 10409    | 1881  | BASP1        | 0.84 | 6.51E-23    | 6.74E-22    |
| 25923    | 7116  | ATL3         | 0.84 | 3.14E-31    | 4.67E-30    |
| 57453    | 6190  | DSCAML1      | 0.84 | 1.04E-07    | 4.16E-07    |
| 84240    | 1401  | ZCCHC9       | 0.84 | 2.52E-13    | 1.55E-12    |
| 116966   | 7298  | WDR17        | 0.84 | 6.92E-05    | 0.000200788 |
| 79875    | 8105  | THSD4        | 0.84 | 2.00E-28    | 2.65E-27    |
| 65065    | 16150 | NBEAL1       | 0.84 | 4.77E-16    | 3.51E-15    |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 11010    | 3921 | GLIPR1       | 0.84 | 2.54E-30    | 3.65E-29    |
| 7593     | 2795 | MZF1         | 0.84 | 2.18E-11    | 1.18E-10    |
| 1.01E+08 | 9812 | TMEM178B     | 0.84 | 2.54E-24    | 2.80E-23    |
| 5833     | 3559 | PCYT2        | 0.84 | 1.44E-14    | 9.73E-14    |
| 9973     | 1068 | CCS          | 0.84 | 2.94E-13    | 1.80E-12    |
| 29953    | 5599 | TRHDE        | 0.84 | 7.63E-09    | 3.39E-08    |
| 22993    | 5171 | HMGXB3       | 0.84 | 7.71E-27    | 9.55E-26    |
| 130271   | 6977 | PLEKHH2      | 0.84 | 0.000257404 | 0.000688686 |
| 345757   | 1363 | FAM174A      | 0.84 | 9.14E-10    | 4.36E-09    |
| 54879    | 3945 | ST7L         | 0.84 | 2.60E-09    | 1.20E-08    |
| 4671     | 4776 | NAIP         | 0.84 | 1.05E-10    | 5.43E-10    |
| 9149     | 2532 | DYRK1B       | 0.84 | 8.94E-14    | 5.72E-13    |
| 65123    | 4369 | INTS3        | 0.84 | 1.85E-22    | 1.88E-21    |
| 22932    | 1564 | POMZP3       | 0.84 | 1.04E-06    | 3.77E-06    |
| 23309    | 4762 | SIN3B        | 0.84 | 6.03E-23    | 6.25E-22    |
| 8417     | 4068 | STX7         | 0.84 | 1.87E-24    | 2.07E-23    |
| 266747   | 2897 | RGL4         | 0.84 | 2.44E-05    | 7.54E-05    |
| 1847     | 2545 | DUSP5        | 0.84 | 7.70E-15    | 5.29E-14    |
| 9472     | 9888 | AKAP6        | 0.84 | 0.004860967 | 0.010483027 |
| 646851   | 7548 | FAM227A      | 0.83 | 0.000360594 | 0.000944571 |
| 2161     | 1885 | F12          | 0.83 | 0.001711803 | 0.003998858 |
| 7416     | 1866 | VDAC1        | 0.83 | 2.19E-33    | 3.49E-32    |
| 51557    | 6376 | LGSN         | 0.83 | 0.011561416 | 0.023103035 |
| 54760    | 2643 | PCSK4        | 0.83 | 9.22E-05    | 0.00026328  |
| 7837     | 6661 | PXDN         | 0.83 | 8.58E-44    | 1.95E-42    |
| 81789    | 3988 | TIGD6        | 0.83 | 4.33E-06    | 1.47E-05    |
| 474343   | 1188 | SPIN2B       | 0.83 | 4.73E-06    | 1.59E-05    |
| 3227     | 2100 | HOXC11       | 0.83 | 0.000288684 | 0.000767062 |
| 115207   | 6255 | KCTD12       | 0.83 | 5.36E-12    | 3.01E-11    |
| 23305    | 6316 | ACSL6        | 0.83 | 0.023602722 | 0.044239081 |
| 119016   | 3685 | AGAP4        | 0.83 | 4.76E-10    | 2.32E-09    |
| 6715     | 2335 | SRD5A1       | 0.83 | 2.51E-11    | 1.35E-10    |
| 51149    | 1224 | MRNIP        | 0.83 | 0.000446801 | 0.001154156 |
| 51109    | 2578 | RDH11        | 0.83 | 1.38E-26    | 1.68E-25    |
| 272      | 4110 | AMPD3        | 0.83 | 7.18E-08    | 2.92E-07    |
| 79884    | 5102 | MAP9         | 0.83 | 1.69E-19    | 1.50E-18    |
| 729092   | 2426 | AGAP5        | 0.83 | 4.72E-05    | 0.000140419 |
| 29893    | 1468 | PSMC3IP      | 0.83 | 6.50E-12    | 3.63E-11    |
| 26034    | 6775 | IPCEF1       | 0.83 | 0.016756349 | 0.032517127 |
| 643382   | 1415 | TMEM253      | 0.82 | 0.015946404 | 0.0310607   |
| 9604     | 4189 | RNF14        | 0.82 | 2.10E-18    | 1.76E-17    |
| 5587     | 3675 | PRKD1        | 0.82 | 5.48E-12    | 3.08E-11    |
| 142684   | 3290 | RAB40A       | 0.82 | 0.004106165 | 0.008958539 |
| 1471     | 932  | CST3         | 0.82 | 2.67E-29    | 3.68E-28    |
| 284565   | 4015 | NBPF15       | 0.82 | 4.94E-15    | 3.43E-14    |
| 23438    | 2463 | HARS2        | 0.82 | 3.33E-14    | 2.20E-13    |
| 10397    | 3130 | NDRG1        | 0.82 | 6.55E-30    | 9.23E-29    |
| 1.02E+08 | 3863 | LOC101927506 | 0.82 | 0.000105295 | 0.00029829  |



|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 8717     | 1607 | TRADD        | 0.82 | 4.37E-08    | 1.81E-07    |
| 123096   | 3579 | SLC25A29     | 0.82 | 2.62E-20    | 2.40E-19    |
| 57162    | 3726 | PELI1        | 0.82 | 4.91E-11    | 2.60E-10    |
| 63920    | 2900 | ZBED8        | 0.82 | 0.000812647 | 0.002009338 |
| 729993   | 6178 | SHISA9       | 0.82 | 1.26E-28    | 1.68E-27    |
| 284114   | 2093 | TMEM102      | 0.82 | 2.03E-05    | 6.34E-05    |
| 54972    | 3602 | TMEM132A     | 0.82 | 3.69E-33    | 5.82E-32    |
| 23408    | 3250 | SIRT5        | 0.82 | 2.43E-10    | 1.21E-09    |
| 6728     | 1515 | SRP19        | 0.82 | 6.39E-19    | 5.48E-18    |
| 2617     | 2448 | GARS         | 0.82 | 2.15E-36    | 3.82E-35    |
| 256329   | 2186 | LMNTD2       | 0.82 | 3.10E-06    | 1.06E-05    |
| 440      | 1949 | ASNS         | 0.82 | 1.92E-15    | 1.37E-14    |
| 1466     | 936  | CSRP2        | 0.82 | 2.81E-20    | 2.57E-19    |
| 4707     | 433  | NDUFB1       | 0.82 | 2.38E-16    | 1.78E-15    |
| 55240    | 3971 | STEAP3       | 0.82 | 2.40E-18    | 2.00E-17    |
| 9367     | 1345 | RAB9A        | 0.81 | 6.34E-14    | 4.11E-13    |
| 828      | 2135 | CAPS         | 0.81 | 5.39E-05    | 0.000159165 |
| 7538     | 1752 | ZFP36        | 0.81 | 2.51E-10    | 1.25E-09    |
| 84441    | 6111 | MAML2        | 0.81 | 2.52E-15    | 1.78E-14    |
| 80745    | 1700 | THUMPD2      | 0.81 | 1.29E-10    | 6.61E-10    |
| 83943    | 1417 | IMMP2L       | 0.81 | 1.60E-05    | 5.07E-05    |
| 8611     | 1687 | PLPP1        | 0.81 | 3.84E-10    | 1.88E-09    |
| 3123     | 1235 | HLA-DRB1     | 0.81 | 0.000582923 | 0.001478992 |
| 26118    | 3453 | WSB1         | 0.81 | 1.65E-17    | 1.33E-16    |
| 221178   | 7072 | SPATA13      | 0.81 | 1.17E-12    | 6.89E-12    |
| 51071    | 1819 | DERA         | 0.81 | 5.33E-21    | 5.05E-20    |
| 51192    | 807  | CKLF         | 0.81 | 7.93E-14    | 5.08E-13    |
| 60489    | 1839 | APOBEC3G     | 0.81 | 1.72E-07    | 6.73E-07    |
| 729920   | 4401 | ISPD         | 0.81 | 0.000446291 | 0.001153075 |
| 643836   | 4068 | ZFP62        | 0.81 | 2.21E-11    | 1.19E-10    |
| 79713    | 1217 | IGFLR1       | 0.81 | 5.66E-05    | 0.000166218 |
| 55268    | 2338 | ECHDC2       | 0.81 | 3.50E-12    | 1.99E-11    |
| 55728    | 9318 | N4BP2        | 0.81 | 2.31E-12    | 1.33E-11    |
| 10227    | 1881 | MFSD10       | 0.81 | 4.25E-26    | 5.08E-25    |
| 5896     | 6582 | RAG1         | 0.81 | 0.017126731 | 0.033156216 |
| 83714    | 3350 | NRIP2        | 0.81 | 0.01977469  | 0.037711355 |
| 9414     | 4449 | TJP2         | 0.81 | 6.36E-28    | 8.28E-27    |
| 25897    | 4113 | RNF19A       | 0.81 | 9.99E-24    | 1.07E-22    |
| 50804    | 5789 | MYEF2        | 0.81 | 2.70E-21    | 2.59E-20    |
| 727957   | 4878 | MROH1        | 0.81 | 2.25E-14    | 1.50E-13    |
| 1.08E+08 | 2122 | LOC107986724 | 0.81 | 0.000304201 | 0.000805159 |
| 10040    | 2310 | TOM1L1       | 0.81 | 2.91E-17    | 2.30E-16    |
| 55552    | 2433 | ZNF823       | 0.81 | 1.06E-06    | 3.83E-06    |
| 151613   | 4238 | TTC14        | 0.81 | 9.47E-12    | 5.25E-11    |
| 10626    | 2920 | TRIM16       | 0.81 | 8.00E-12    | 4.45E-11    |
| 8111     | 2902 | GPR68        | 0.80 | 0.000535914 | 0.001365271 |
| 401548   | 7409 | SNX30        | 0.80 | 7.88E-17    | 6.08E-16    |
| 64770    | 4033 | CCDC14       | 0.80 | 5.36E-15    | 3.70E-14    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 23314    | 5158  | SATB2        | 0.80 | 1.14E-11    | 6.25E-11    |
| 92092    | 2813  | ZC3HAV1L     | 0.80 | 3.82E-13    | 2.32E-12    |
| 23162    | 6339  | MAPK8IP3     | 0.80 | 3.95E-17    | 3.10E-16    |
| 147184   | 2079  | TMEM99       | 0.80 | 2.72E-05    | 8.36E-05    |
| 653319   | 3416  | KIAA0895L    | 0.80 | 7.40E-10    | 3.56E-09    |
| 8092     | 1319  | ALX1         | 0.80 | 0.00027865  | 0.000742065 |
| 10257    | 5782  | ABCC4        | 0.80 | 1.28E-23    | 1.37E-22    |
| 25957    | 4419  | PNISR        | 0.80 | 4.29E-21    | 4.08E-20    |
| 23710    | 1865  | GABARAPL1    | 0.80 | 4.67E-21    | 4.43E-20    |
| 57175    | 1930  | CORO1B       | 0.80 | 1.28E-21    | 1.24E-20    |
| 57553    | 8098  | MICAL3       | 0.80 | 4.78E-20    | 4.35E-19    |
| 220064   | 2550  | ORAOV1       | 0.80 | 1.20E-08    | 5.23E-08    |
| 10559    | 1875  | SLC35A1      | 0.80 | 3.67E-13    | 2.23E-12    |
| 1191     | 2878  | CLU          | 0.80 | 2.41E-29    | 3.34E-28    |
| 6672     | 2801  | SP100        | 0.80 | 2.34E-22    | 2.36E-21    |
| 10008    | 2958  | KCNE3        | 0.80 | 0.012837358 | 0.025451259 |
| 1850     | 4581  | DUSP8        | 0.80 | 9.47E-09    | 4.18E-08    |
| 51287    | 912   | COA4         | 0.80 | 2.41E-22    | 2.42E-21    |
| 116150   | 4811  | NUS1         | 0.80 | 4.84E-26    | 5.77E-25    |
| 25827    | 2603  | FBXL2        | 0.80 | 1.58E-06    | 5.58E-06    |
| 388282   | 1607  | LOC388282    | 0.80 | 0.000272324 | 0.00072609  |
| 201895   | 5443  | SMIM14       | 0.79 | 5.51E-22    | 5.45E-21    |
| 4300     | 6545  | MLLT3        | 0.79 | 6.11E-12    | 3.43E-11    |
| 2184     | 1810  | FAH          | 0.79 | 3.75E-14    | 2.47E-13    |
| 80114    | 5392  | BICC1        | 0.79 | 9.99E-36    | 1.73E-34    |
| 342908   | 1868  | ZNF404       | 0.79 | 0.000149716 | 0.000415519 |
| 51303    | 768   | FKBP11       | 0.79 | 0.003989131 | 0.008723554 |
| 200810   | 2988  | ALG1L        | 0.79 | 0.025950826 | 0.048246759 |
| 5774     | 6918  | PTPN3        | 0.79 | 9.71E-20    | 8.70E-19    |
| 79925    | 3883  | SPEF2        | 0.79 | 0.000601712 | 0.001521883 |
| 64847    | 2774  | SPATA20      | 0.79 | 5.86E-26    | 6.96E-25    |
| 10656    | 1855  | KHDRBS3      | 0.79 | 1.60E-07    | 6.29E-07    |
| 51195    | 3644  | RAPGEFL1     | 0.79 | 1.82E-07    | 7.10E-07    |
| 5293     | 5264  | PIK3CD       | 0.79 | 1.82E-15    | 1.30E-14    |
| 1.01E+08 | 2234  | LOC100996721 | 0.79 | 8.70E-06    | 2.84E-05    |
| 324      | 10785 | APC          | 0.79 | 9.15E-20    | 8.21E-19    |
| 55577    | 1374  | NAGK         | 0.79 | 2.60E-20    | 2.38E-19    |
| 387914   | 2889  | SHISA2       | 0.79 | 8.38E-13    | 4.98E-12    |
| 1.05E+08 | 4310  | LOC105374013 | 0.79 | 0.00131765  | 0.003142129 |
| 64283    | 5366  | ARHGEF28     | 0.79 | 3.87E-23    | 4.04E-22    |
| 284996   | 2983  | RNF149       | 0.79 | 3.76E-18    | 3.11E-17    |
| 152687   | 2901  | ZNF595       | 0.78 | 1.81E-06    | 6.37E-06    |
| 55111    | 1301  | PLEKHJ1      | 0.78 | 6.91E-14    | 4.46E-13    |
| 26040    | 8810  | SETBP1       | 0.78 | 9.59E-14    | 6.12E-13    |
| 65983    | 2689  | GRAMD2B      | 0.78 | 1.43E-16    | 1.08E-15    |
| 1353     | 2809  | COX11        | 0.78 | 3.77E-23    | 3.93E-22    |
| 27242    | 3646  | TNFRSF21     | 0.78 | 2.51E-17    | 2.00E-16    |
| 10063    | 423   | COX17        | 0.78 | 1.65E-10    | 8.36E-10    |

|        |       |             |      |             |             |
|--------|-------|-------------|------|-------------|-------------|
| 114822 | 3834  | RHPN1       | 0.78 | 1.59E-13    | 9.96E-13    |
| 7345   | 1141  | UCHL1       | 0.78 | 6.27E-25    | 7.12E-24    |
| 728492 | 911   | SERF1B      | 0.78 | 1.24E-06    | 4.43E-06    |
| 55601  | 6091  | DDX60       | 0.78 | 1.49E-10    | 7.58E-10    |
| 8794   | 1512  | TNFRSF10C   | 0.78 | 0.006069969 | 0.012850138 |
| 58527  | 940   | ABRACL      | 0.78 | 6.64E-12    | 3.71E-11    |
| 3157   | 3596  | HMGCS1      | 0.78 | 2.38E-19    | 2.09E-18    |
| 54853  | 3701  | WDR55       | 0.78 | 4.48E-22    | 4.47E-21    |
| 6535   | 3264  | SLC6A8      | 0.78 | 4.70E-22    | 4.68E-21    |
| 119391 | 1680  | GSTO2       | 0.78 | 1.54E-10    | 7.83E-10    |
| 11144  | 2153  | DMC1        | 0.78 | 8.61E-05    | 0.00024684  |
| 321    | 3230  | APBA2       | 0.78 | 1.46E-06    | 5.19E-06    |
| 91     | 4478  | ACVR1B      | 0.78 | 2.76E-27    | 3.49E-26    |
| 8835   | 2484  | SOCS2       | 0.78 | 0.010218595 | 0.020669854 |
| 65258  | 2211  | MPPE1       | 0.78 | 1.19E-10    | 6.10E-10    |
| 51106  | 2491  | TFB1M       | 0.77 | 3.26E-09    | 1.49E-08    |
| 151194 | 4118  | METTL21A    | 0.77 | 4.35E-18    | 3.59E-17    |
| 871    | 2142  | SERPINH1    | 0.77 | 2.75E-30    | 3.93E-29    |
| 55008  | 3721  | HERC6       | 0.77 | 5.48E-10    | 2.66E-09    |
| 220074 | 2813  | LRTOMT      | 0.77 | 1.23E-06    | 4.41E-06    |
| 529    | 1404  | ATP6V1E1    | 0.77 | 1.16E-22    | 1.19E-21    |
| 161436 | 7500  | EML5        | 0.77 | 0.000192486 | 0.000524714 |
| 154214 | 10731 | RNF217      | 0.77 | 1.31E-12    | 7.70E-12    |
| 51466  | 2240  | EVL         | 0.77 | 9.90E-20    | 8.86E-19    |
| 3706   | 1726  | ITPKA       | 0.77 | 1.62E-07    | 6.35E-07    |
| 84833  | 447   | ATP5MD      | 0.77 | 3.47E-15    | 2.43E-14    |
| 445815 | 7504  | PALM2-AKAP2 | 0.77 | 0.020169173 | 0.038373045 |
| 393    | 3285  | ARHGAP4     | 0.77 | 0.000144084 | 0.000400451 |
| 160622 | 2252  | GRASP       | 0.77 | 0.021337999 | 0.040359118 |
| 57724  | 12524 | EPG5        | 0.77 | 2.08E-17    | 1.66E-16    |
| 53917  | 1609  | RAB24       | 0.77 | 3.44E-14    | 2.27E-13    |
| 1774   | 3286  | DNASE1L1    | 0.77 | 2.49E-12    | 1.43E-11    |
| 29964  | 1646  | PRICKLE4    | 0.77 | 2.55E-07    | 9.81E-07    |
| 6810   | 1512  | STX4        | 0.77 | 1.19E-10    | 6.10E-10    |
| 8743   | 1947  | TNFSF10     | 0.77 | 5.64E-30    | 7.96E-29    |
| 977    | 1554  | CD151       | 0.77 | 9.32E-29    | 1.26E-27    |
| 79017  | 1191  | GGCT        | 0.77 | 2.51E-16    | 1.88E-15    |
| 6319   | 5473  | SCD         | 0.77 | 1.06E-24    | 1.18E-23    |
| 3945   | 1336  | LDHB        | 0.77 | 7.54E-37    | 1.35E-35    |
| 65078  | 1924  | RTN4R       | 0.76 | 2.86E-09    | 1.31E-08    |
| 5883   | 2195  | RAD9A       | 0.76 | 4.53E-09    | 2.05E-08    |
| 1657   | 11600 | DMXL1       | 0.76 | 1.82E-20    | 1.68E-19    |
| 1014   | 2895  | CDH16       | 0.76 | 1.46E-21    | 1.41E-20    |
| 11221  | 2676  | DUSP10      | 0.76 | 2.14E-05    | 6.65E-05    |
| 56929  | 5814  | FEM1C       | 0.76 | 4.12E-15    | 2.87E-14    |
| 79080  | 2022  | CCDC86      | 0.76 | 1.29E-19    | 1.15E-18    |
| 23125  | 4474  | CAMTA2      | 0.76 | 2.58E-15    | 1.82E-14    |
| 23230  | 11068 | VPS13A      | 0.76 | 5.61E-14    | 3.65E-13    |

|        |      |              |      |             |             |
|--------|------|--------------|------|-------------|-------------|
| 85444  | 3404 | LRRCC1       | 0.76 | 1.32E-11    | 7.25E-11    |
| 51135  | 4290 | IRAK4        | 0.76 | 1.64E-08    | 7.08E-08    |
| 9223   | 7200 | MAGI1        | 0.76 | 6.23E-13    | 3.72E-12    |
| 7292   | 8104 | TNFSF4       | 0.76 | 0.017134218 | 0.033167098 |
| 10523  | 4105 | CHERP        | 0.76 | 4.06E-19    | 3.51E-18    |
| 231    | 1415 | AKR1B1       | 0.76 | 3.14E-24    | 3.45E-23    |
| 147660 | 6741 | ZNF578       | 0.76 | 0.003702573 | 0.008150065 |
| 84259  | 3497 | DCUN1D5      | 0.76 | 1.80E-18    | 1.51E-17    |
| 349565 | 2103 | NMNAT3       | 0.76 | 0.000378804 | 0.000989793 |
| 51309  | 2141 | ARMCX1       | 0.76 | 1.77E-06    | 6.24E-06    |
| 26152  | 4201 | ZNF337       | 0.76 | 9.47E-11    | 4.90E-10    |
| 1E+08  | 1056 | LOC100289561 | 0.76 | 6.21E-06    | 2.07E-05    |
| 10072  | 3088 | DPP3         | 0.76 | 2.83E-20    | 2.59E-19    |
| 54915  | 3277 | YTHDF1       | 0.76 | 6.97E-20    | 6.29E-19    |
| 4301   | 7733 | AFDN         | 0.76 | 4.86E-24    | 5.27E-23    |
| 4857   | 2363 | NOVA1        | 0.76 | 9.78E-08    | 3.92E-07    |
| 4638   | 3585 | MYLK         | 0.76 | 1.85E-33    | 2.95E-32    |
| 338692 | 2131 | ANKRD13D     | 0.75 | 5.35E-14    | 3.49E-13    |
| 79144  | 794  | PPDPF        | 0.75 | 0.000269742 | 0.000719853 |
| 7351   | 1646 | UCP2         | 0.75 | 3.26E-19    | 2.84E-18    |
| 80759  | 1435 | KHDC1        | 0.75 | 0.002091698 | 0.004807307 |
| 8831   | 6011 | SYNGAP1      | 0.75 | 3.33E-09    | 1.52E-08    |
| 84812  | 2663 | PLCD4        | 0.75 | 2.17E-06    | 7.57E-06    |
| 56954  | 1271 | NIT2         | 0.75 | 4.57E-15    | 3.18E-14    |
| 10577  | 921  | NPC2         | 0.75 | 4.82E-30    | 6.82E-29    |
| 112399 | 2513 | EGLN3        | 0.75 | 1.44E-05    | 4.60E-05    |
| 716    | 2795 | C1S          | 0.75 | 2.28E-24    | 2.51E-23    |
| 79958  | 2600 | DENND1C      | 0.75 | 0.002980662 | 0.006663362 |
| 386618 | 2133 | KCTD4        | 0.75 | 0.004824338 | 0.010416677 |
| 4694   | 502  | NDUFA1       | 0.75 | 1.21E-10    | 6.20E-10    |
| 58487  | 6246 | CREBZF       | 0.75 | 7.12E-13    | 4.25E-12    |
| 55374  | 1818 | TMCO6        | 0.75 | 3.85E-07    | 1.46E-06    |
| 51429  | 3890 | SNX9         | 0.75 | 1.08E-23    | 1.16E-22    |
| 51428  | 2503 | DDX41        | 0.75 | 3.47E-22    | 3.48E-21    |
| 55856  | 4126 | ACOT13       | 0.75 | 2.90E-13    | 1.78E-12    |
| 3215   | 1830 | HOXB5        | 0.75 | 2.64E-10    | 1.31E-09    |
| 84532  | 3447 | ACSS1        | 0.75 | 1.77E-05    | 5.58E-05    |
| 50848  | 4830 | F11R         | 0.75 | 3.03E-23    | 3.18E-22    |
| 91373  | 3292 | UAP1L1       | 0.75 | 3.17E-15    | 2.23E-14    |
| 7566   | 2530 | ZNF18        | 0.75 | 6.31E-06    | 2.10E-05    |
| 1183   | 6762 | CLCN4        | 0.75 | 1.44E-06    | 5.11E-06    |
| 23043  | 9771 | TNIK         | 0.75 | 5.40E-14    | 3.52E-13    |
| 5870   | 3045 | RAB6A        | 0.75 | 1.56E-24    | 1.73E-23    |
| 51090  | 1514 | PLLP         | 0.75 | 0.000427926 | 0.00110885  |
| 441869 | 1645 | ANKRD65      | 0.75 | 0.003306239 | 0.007331243 |
| 8906   | 2372 | AP1G2        | 0.75 | 6.68E-20    | 6.04E-19    |
| 79609  | 1965 | VCPKMT       | 0.75 | 5.11E-06    | 1.72E-05    |
| 151056 | 4972 | PLB1         | 0.75 | 0.007684629 | 0.01593052  |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 54994    | 4440  | GID8         | 0.74 | 3.08E-17    | 2.44E-16    |
| 7124     | 1686  | TNF          | 0.74 | 8.19E-06    | 2.69E-05    |
| 84167    | 3108  | C19orf44     | 0.74 | 1.72E-08    | 7.39E-08    |
| 7580     | 1319  | ZNF32        | 0.74 | 9.35E-09    | 4.13E-08    |
| 4820     | 7758  | NKTR         | 0.74 | 0.000282324 | 0.000751623 |
| 8934     | 3130  | RAB29        | 0.74 | 2.50E-13    | 1.54E-12    |
| 340348   | 2089  | TSPAN33      | 0.74 | 6.33E-15    | 4.36E-14    |
| 23499    | 17903 | MACF1        | 0.74 | 6.90E-32    | 1.05E-30    |
| 800      | 4452  | CALD1        | 0.74 | 1.92E-29    | 2.67E-28    |
| 66035    | 3036  | SLC2A11      | 0.74 | 6.99E-08    | 2.84E-07    |
| 347252   | 3559  | IGFBPL1      | 0.74 | 0.004944649 | 0.010644528 |
| 1.01E+08 | 891   | LOC100653061 | 0.74 | 2.42E-05    | 7.47E-05    |
| 8741     | 1927  | TNFSF13      | 0.74 | 2.39E-13    | 1.47E-12    |
| 138639   | 4846  | PTPDC1       | 0.74 | 2.87E-09    | 1.32E-08    |
| 84572    | 1251  | GNPTG        | 0.74 | 4.39E-18    | 3.61E-17    |
| 51134    | 3626  | CEP83        | 0.74 | 4.26E-08    | 1.77E-07    |
| 10536    | 2690  | P3H3         | 0.74 | 1.22E-19    | 1.09E-18    |
| 5411     | 3606  | PNN          | 0.74 | 6.89E-14    | 4.45E-13    |
| 51057    | 2901  | WDPCP        | 0.74 | 1.39E-06    | 4.95E-06    |
| 158431   | 4404  | ZNF782       | 0.74 | 1.62E-05    | 5.11E-05    |
| 23367    | 6538  | LARP1        | 0.74 | 2.61E-38    | 4.97E-37    |
| 400793   | 4146  | C1orf226     | 0.74 | 3.72E-07    | 1.41E-06    |
| 57657    | 3516  | HCN3         | 0.74 | 5.37E-08    | 2.21E-07    |
| 29126    | 2933  | CD274        | 0.74 | 1.69E-08    | 7.26E-08    |
| 221895   | 3068  | JAZF1        | 0.74 | 6.12E-10    | 2.95E-09    |
| 55568    | 5966  | GALNT10      | 0.74 | 4.55E-25    | 5.20E-24    |
| 3241     | 1692  | HPCAL1       | 0.74 | 4.47E-13    | 2.69E-12    |
| 3275     | 3097  | PRMT2        | 0.73 | 4.48E-22    | 4.47E-21    |
| 30008    | 2096  | EFEMP2       | 0.73 | 9.41E-31    | 1.37E-29    |
| 57142    | 2055  | RTN4         | 0.73 | 1.58E-29    | 2.20E-28    |
| 390595   | 6252  | UBAP1L       | 0.73 | 0.009194519 | 0.018768687 |
| 113452   | 1074  | TMEM54       | 0.73 | 4.56E-14    | 2.99E-13    |
| 56109    | 4605  | PCDHGA6      | 0.73 | 0.010338928 | 0.020891854 |
| 2593     | 1181  | GAMT         | 0.73 | 9.83E-09    | 4.33E-08    |
| 728498   | 5261  | GOLGA8H      | 0.73 | 1.48E-05    | 4.72E-05    |
| 167153   | 2842  | PAPD4        | 0.73 | 2.55E-15    | 1.80E-14    |
| 7762     | 3675  | ZNF215       | 0.73 | 1.78E-05    | 5.59E-05    |
| 1.02E+08 | 1558  | LOC101927789 | 0.73 | 0.009855949 | 0.020000057 |
| 6303     | 1158  | SAT1         | 0.73 | 9.27E-22    | 9.10E-21    |
| 23001    | 12775 | WDFY3        | 0.73 | 1.88E-15    | 1.34E-14    |
| 10497    | 5901  | UNC13B       | 0.73 | 1.06E-14    | 7.21E-14    |
| 10039    | 2517  | PARP3        | 0.73 | 2.69E-14    | 1.79E-13    |
| 201229   | 1516  | LYRM9        | 0.73 | 0.004529173 | 0.009825928 |
| 5699     | 1019  | PSMB10       | 0.73 | 1.17E-16    | 8.92E-16    |
| 10205    | 2718  | MPZL2        | 0.73 | 2.86E-06    | 9.86E-06    |
| 642987   | 4580  | TMEM232      | 0.73 | 0.025336921 | 0.047194298 |
| 54893    | 4948  | MTMR10       | 0.73 | 5.33E-17    | 4.16E-16    |
| 5777     | 2250  | PTPN6        | 0.73 | 4.74E-09    | 2.14E-08    |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 404281   | 2741 | YY2          | 0.73 | 0.001737588 | 0.00405323  |
| 9905     | 4496 | SGSM2        | 0.73 | 3.79E-17    | 2.98E-16    |
| 125150   | 1971 | ZSWIM7       | 0.73 | 2.23E-06    | 7.76E-06    |
| 1.01E+08 | 3043 | NPIPB9       | 0.73 | 3.90E-05    | 0.000117136 |
| 57494    | 6611 | RIMKLB       | 0.73 | 4.27E-11    | 2.27E-10    |
| 51426    | 5134 | POLK         | 0.73 | 5.44E-16    | 3.99E-15    |
| 25841    | 4919 | ABTB2        | 0.73 | 2.10E-12    | 1.21E-11    |
| 25943    | 6816 | C20orf194    | 0.72 | 7.74E-11    | 4.04E-10    |
| 4646     | 8665 | MYO6         | 0.72 | 2.36E-20    | 2.17E-19    |
| 210      | 3214 | ALAD         | 0.72 | 3.80E-17    | 2.99E-16    |
| 79829    | 3675 | NAA40        | 0.72 | 6.09E-18    | 4.98E-17    |
| 1176     | 1689 | AP3S1        | 0.72 | 1.66E-18    | 1.39E-17    |
| 23287    | 4973 | AGTPBP1      | 0.72 | 1.12E-17    | 9.06E-17    |
| 57475    | 6361 | PLEKHH1      | 0.72 | 8.03E-06    | 2.64E-05    |
| 140564   | 3152 | APOBEC3D     | 0.72 | 0.000111672 | 0.000315352 |
| 29109    | 3092 | FHOD1        | 0.72 | 4.07E-14    | 2.67E-13    |
| 440295   | 4241 | GOLGA6L9     | 0.72 | 1.79E-07    | 6.99E-07    |
| 1.08E+08 | 6396 | LOC107986211 | 0.72 | 0.006686499 | 0.014043229 |
| 80216    | 5090 | ALPK1        | 0.72 | 7.01E-09    | 3.12E-08    |
| 728294   | 2114 | D2HGDH       | 0.72 | 2.51E-08    | 1.07E-07    |
| 9600     | 4249 | PITPNM1      | 0.72 | 7.27E-16    | 5.29E-15    |
| 57060    | 2175 | PCBP4        | 0.72 | 1.53E-15    | 1.10E-14    |
| 5069     | 9509 | PAPPA        | 0.72 | 9.96E-06    | 3.23E-05    |
| 285590   | 7793 | SH3PXD2B     | 0.72 | 1.88E-17    | 1.51E-16    |
| 151556   | 7405 | GPR155       | 0.72 | 0.000486288 | 0.001247346 |
| 79627    | 8798 | OGFRL1       | 0.72 | 2.24E-23    | 2.37E-22    |
| 80765    | 1462 | STARD5       | 0.72 | 0.010532006 | 0.021248176 |
| 1.01E+08 | 1707 | ARL17B       | 0.72 | 0.009288346 | 0.018947799 |
| 29903    | 1640 | CCDC106      | 0.72 | 6.23E-08    | 2.55E-07    |
| 7422     | 2991 | VEGFA        | 0.72 | 1.00E-18    | 8.51E-18    |
| 7172     | 3289 | TPMT         | 0.72 | 3.66E-15    | 2.56E-14    |
| 51015    | 1942 | ISOC1        | 0.72 | 5.33E-12    | 3.00E-11    |
| 1.01E+08 | 923  | RBM14-RBM4   | 0.72 | 0.015748175 | 0.03070488  |
| 23635    | 2266 | SSBP2        | 0.72 | 1.16E-10    | 5.97E-10    |
| 81706    | 2215 | PPP1R14C     | 0.72 | 5.16E-11    | 2.73E-10    |
| 23142    | 4468 | DCUN1D4      | 0.72 | 1.21E-19    | 1.07E-18    |
| 9721     | 3659 | GPRIN2       | 0.72 | 0.000162068 | 0.000447007 |
| 283237   | 1118 | TTC9C        | 0.72 | 5.69E-07    | 2.11E-06    |
| 643338   | 2503 | C15orf62     | 0.71 | 0.000547897 | 0.001394704 |
| 2887     | 4826 | GRB10        | 0.71 | 4.01E-13    | 2.43E-12    |
| 10139    | 1821 | ARFRP1       | 0.71 | 7.45E-10    | 3.58E-09    |
| 89932    | 5802 | PAPLN        | 0.71 | 3.28E-16    | 2.44E-15    |
| 10682    | 1191 | EBP          | 0.71 | 3.11E-15    | 2.19E-14    |
| 10404    | 1953 | CPQ          | 0.71 | 4.20E-08    | 1.75E-07    |
| 1947     | 3344 | EFNB1        | 0.71 | 5.92E-09    | 2.65E-08    |
| 55163    | 3348 | PNPO         | 0.71 | 2.66E-16    | 1.99E-15    |
| 9953     | 5184 | HS3ST3B1     | 0.71 | 0.001339338 | 0.003189994 |
| 9315     | 1995 | NREP         | 0.71 | 2.16E-24    | 2.38E-23    |

|          |      |          |      |             |             |
|----------|------|----------|------|-------------|-------------|
| 53343    | 2746 | NUDT9    | 0.71 | 1.24E-13    | 7.87E-13    |
| 84817    | 2075 | TXNDC17  | 0.71 | 2.15E-06    | 7.51E-06    |
| 10998    | 2129 | SLC27A5  | 0.71 | 0.003929932 | 0.008603627 |
| 90933    | 3504 | TRIM41   | 0.71 | 7.46E-14    | 4.80E-13    |
| 219927   | 717  | MRPL21   | 0.71 | 2.63E-08    | 1.12E-07    |
| 5095     | 2555 | PCCA     | 0.71 | 2.95E-10    | 1.46E-09    |
| 340481   | 9733 | ZDHHC21  | 0.71 | 2.42E-08    | 1.03E-07    |
| 285362   | 2168 | SUMF1    | 0.71 | 7.21E-11    | 3.77E-10    |
| 55260    | 2545 | TMEM143  | 0.71 | 2.71E-06    | 9.35E-06    |
| 64403    | 3502 | CDH24    | 0.71 | 5.47E-11    | 2.89E-10    |
| 83699    | 4379 | SH3BGRL2 | 0.71 | 3.89E-10    | 1.91E-09    |
| 572      | 1004 | BAD      | 0.71 | 1.16E-13    | 7.33E-13    |
| 91749    | 3862 | MFSD4B   | 0.71 | 3.11E-07    | 1.18E-06    |
| 80705    | 4883 | TSGA10   | 0.71 | 0.000535928 | 0.001365271 |
| 285605   | 5731 | DTWD2    | 0.70 | 6.90E-09    | 3.08E-08    |
| 119032   | 2392 | BORCS7   | 0.70 | 2.76E-09    | 1.27E-08    |
| 8916     | 4505 | HERC3    | 0.70 | 9.62E-11    | 4.97E-10    |
| 10476    | 627  | ATP5PD   | 0.70 | 1.51E-17    | 1.21E-16    |
| 7431     | 2151 | VIM      | 0.70 | 9.07E-29    | 1.22E-27    |
| 85025    | 882  | TMEM60   | 0.70 | 1.09E-06    | 3.91E-06    |
| 80326    | 2100 | WNT10A   | 0.70 | 0.007269477 | 0.015137005 |
| 83637    | 5031 | ZMIZ2    | 0.70 | 1.54E-11    | 8.42E-11    |
| 1284     | 6264 | COL4A2   | 0.70 | 7.59E-32    | 1.15E-30    |
| 55132    | 3680 | LARP1B   | 0.70 | 3.29E-16    | 2.44E-15    |
| 85456    | 5818 | TNKS1BP1 | 0.70 | 8.31E-21    | 7.82E-20    |
| 5460     | 1936 | POU5F1   | 0.70 | 2.92E-08    | 1.23E-07    |
| 960      | 4588 | CD44     | 0.70 | 1.67E-23    | 1.78E-22    |
| 51547    | 1913 | SIRT7    | 0.70 | 2.10E-09    | 9.76E-09    |
| 284086   | 3542 | NEK8     | 0.70 | 3.34E-05    | 0.000101325 |
| 55743    | 3222 | CHFR     | 0.70 | 6.54E-12    | 3.66E-11    |
| 5371     | 3880 | PML      | 0.70 | 6.98E-20    | 6.29E-19    |
| 79891    | 2720 | ZNF671   | 0.70 | 0.003246857 | 0.007214876 |
| 1.01E+08 | 990  | C16orf95 | 0.70 | 0.006075347 | 0.012859991 |
| 1349     | 456  | COX7B    | 0.70 | 5.53E-10    | 2.68E-09    |
| 5366     | 1954 | PMAIP1   | 0.70 | 1.24E-15    | 8.90E-15    |
| 5229     | 4503 | PGGT1B   | 0.70 | 9.70E-15    | 6.61E-14    |
| 90843    | 1212 | TCEAL8   | 0.70 | 1.29E-17    | 1.04E-16    |
| 5602     | 5341 | MAPK10   | 0.70 | 0.002734097 | 0.006150853 |
| 116844   | 1780 | LRG1     | 0.70 | 7.14E-06    | 2.36E-05    |
| 10133    | 3402 | OPTN     | 0.70 | 1.23E-20    | 1.15E-19    |
| 7767     | 4037 | ZNF224   | 0.70 | 5.46E-11    | 2.89E-10    |
| 3685     | 6875 | ITGAV    | 0.70 | 1.68E-16    | 1.27E-15    |
| 113402   | 1109 | SFT2D1   | 0.70 | 2.63E-11    | 1.42E-10    |
| 55180    | 2559 | LINS1    | 0.70 | 8.11E-06    | 2.66E-05    |
| 4515     | 2329 | MTCP1    | 0.70 | 0.009873705 | 0.0200338   |
| 729440   | 2017 | CCDC61   | 0.70 | 5.07E-06    | 1.71E-05    |
| 148266   | 4016 | ZNF569   | 0.70 | 0.000634999 | 0.001599244 |
| 63915    | 2673 | BLOC1S5  | 0.70 | 9.20E-09    | 4.06E-08    |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 132001 | 1527  | TAMM41   | 0.70 | 0.000233122 | 0.000627117 |
| 64773  | 1993  | PCED1A   | 0.70 | 4.75E-14    | 3.11E-13    |
| 10282  | 1523  | BET1     | 0.69 | 8.78E-12    | 4.87E-11    |
| 130502 | 948   | TTC32    | 0.69 | 0.000723219 | 0.001806065 |
| 9463   | 2099  | PICK1    | 0.69 | 5.75E-11    | 3.03E-10    |
| 8682   | 2444  | PEA15    | 0.69 | 6.00E-22    | 5.93E-21    |
| 56063  | 1922  | TMEM234  | 0.69 | 1.33E-07    | 5.26E-07    |
| 6041   | 4258  | RNASEL   | 0.69 | 2.51E-05    | 7.73E-05    |
| 4695   | 729   | NDUFA2   | 0.69 | 0.001737418 | 0.00405323  |
| 22889  | 3009  | KHDC4    | 0.69 | 1.97E-10    | 9.90E-10    |
| 546    | 10339 | ATRX     | 0.69 | 2.08E-24    | 2.30E-23    |
| 4259   | 779   | MGST3    | 0.69 | 3.81E-18    | 3.15E-17    |
| 56288  | 5165  | PARD3    | 0.69 | 8.73E-24    | 9.41E-23    |
| 6282   | 595   | S100A11  | 0.69 | 2.14E-13    | 1.33E-12    |
| 134145 | 2276  | FAM173B  | 0.69 | 1.47E-06    | 5.22E-06    |
| 90362  | 3691  | FAM110B  | 0.69 | 0.000152962 | 0.000423471 |
| 9411   | 5506  | ARHGAP29 | 0.69 | 7.14E-27    | 8.87E-26    |
| 1E+08  | 3356  | ZNF587B  | 0.69 | 0.000242464 | 0.000651066 |
| 27152  | 2292  | INTU     | 0.69 | 0.000511493 | 0.001307858 |
| 9849   | 8330  | ZNF518A  | 0.69 | 5.33E-12    | 3.00E-11    |
| 254887 | 4877  | ZDHHC23  | 0.69 | 1.23E-07    | 4.88E-07    |
| 4683   | 4513  | NBN      | 0.69 | 8.74E-17    | 6.73E-16    |
| 435    | 1947  | ASL      | 0.69 | 3.35E-09    | 1.53E-08    |
| 617    | 1891  | BCS1L    | 0.69 | 9.65E-08    | 3.86E-07    |
| 57186  | 9420  | RALGAPA2 | 0.68 | 1.03E-11    | 5.67E-11    |
| 55589  | 6244  | BMP2K    | 0.68 | 3.56E-16    | 2.64E-15    |
| 9158   | 1433  | FIBP     | 0.68 | 1.88E-15    | 1.34E-14    |
| 1836   | 8053  | SLC26A2  | 0.68 | 2.86E-17    | 2.27E-16    |
| 26094  | 2579  | DCAF4    | 0.68 | 3.14E-07    | 1.20E-06    |
| 53916  | 1200  | RAB4B    | 0.68 | 1.96E-05    | 6.15E-05    |
| 10186  | 2135  | LHFPL6   | 0.68 | 5.43E-10    | 2.64E-09    |
| 23536  | 5103  | ADAT1    | 0.68 | 4.14E-14    | 2.72E-13    |
| 9581   | 4952  | PREPL    | 0.68 | 1.42E-14    | 9.57E-14    |
| 283234 | 3516  | CCDC88B  | 0.68 | 0.000191283 | 0.000521676 |
| 5817   | 5633  | PVR      | 0.68 | 7.77E-21    | 7.32E-20    |
| 8908   | 3177  | GYG2     | 0.68 | 5.69E-05    | 0.0001669   |
| 4327   | 3294  | MMP19    | 0.68 | 2.47E-05    | 7.62E-05    |
| 93627  | 5023  | TBCK     | 0.68 | 3.56E-08    | 1.49E-07    |
| 1845   | 4139  | DUSP3    | 0.68 | 2.34E-23    | 2.47E-22    |
| 29984  | 1145  | RHOD     | 0.68 | 2.36E-09    | 1.09E-08    |
| 7127   | 4311  | TNFAIP2  | 0.68 | 7.29E-17    | 5.64E-16    |
| 1666   | 1170  | DECR1    | 0.68 | 1.40E-10    | 7.13E-10    |
| 54822  | 7535  | TRPM7    | 0.68 | 6.88E-15    | 4.73E-14    |
| 54741  | 4474  | LEPROT   | 0.68 | 1.96E-23    | 2.07E-22    |
| 801    | 4282  | CALM1    | 0.68 | 1.31E-24    | 1.47E-23    |
| 92565  | 1809  | FANK1    | 0.68 | 0.003953949 | 0.008653008 |
| 373156 | 1090  | GSTK1    | 0.68 | 2.85E-19    | 2.49E-18    |
| 51248  | 1233  | PDZD11   | 0.68 | 3.31E-11    | 1.78E-10    |



|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 25994    | 2785  | HIGD1A       | 0.68 | 7.46E-18    | 6.09E-17    |
| 3433     | 3505  | IFIT2        | 0.68 | 1.43E-06    | 5.08E-06    |
| 116984   | 7429  | ARAP2        | 0.68 | 8.57E-09    | 3.79E-08    |
| 80833    | 2155  | APOL3        | 0.68 | 0.002407756 | 0.005472817 |
| 1119     | 3168  | CHKA         | 0.68 | 1.02E-10    | 5.25E-10    |
| 5252     | 2136  | PHF1         | 0.68 | 4.20E-15    | 2.92E-14    |
| 10811    | 1621  | NOXA1        | 0.68 | 1.63E-05    | 5.15E-05    |
| 80778    | 2816  | ZNF34        | 0.68 | 0.000397457 | 0.001035487 |
| 91319    | 2136  | DERL3        | 0.67 | 9.59E-06    | 3.12E-05    |
| 97       | 643   | ACYP1        | 0.67 | 0.000331433 | 0.000873078 |
| 4832     | 1041  | NME3         | 0.67 | 3.79E-08    | 1.58E-07    |
| 4886     | 3111  | NPY1R        | 0.67 | 4.50E-07    | 1.69E-06    |
| 55297    | 2412  | CCDC91       | 0.67 | 9.01E-11    | 4.67E-10    |
| 91355    | 2477  | LRP5L        | 0.67 | 0.000827955 | 0.002044344 |
| 342184   | 11396 | FMN1         | 0.67 | 1.09E-09    | 5.15E-09    |
| 10781    | 3573  | ZNF266       | 0.67 | 4.44E-12    | 2.51E-11    |
| 2805     | 2140  | GOT1         | 0.67 | 6.66E-14    | 4.31E-13    |
| 54677    | 2559  | CROT         | 0.67 | 1.54E-06    | 5.46E-06    |
| 866      | 1510  | SERPINA6     | 0.67 | 0.020403453 | 0.038777254 |
| 1E+08    | 3158  | NEMP2        | 0.67 | 4.04E-08    | 1.68E-07    |
| 127602   | 2591  | DNAH14       | 0.67 | 0.000194393 | 0.000529669 |
| 5074     | 5862  | PAWR         | 0.67 | 6.30E-15    | 4.35E-14    |
| 1028     | 1512  | CDKN1C       | 0.67 | 3.26E-10    | 1.61E-09    |
| 64429    | 1645  | ZDHHC6       | 0.67 | 5.18E-16    | 3.80E-15    |
| 79717    | 2080  | PPCS         | 0.67 | 7.78E-13    | 4.63E-12    |
| 490      | 6194  | ATP2B1       | 0.67 | 3.39E-20    | 3.09E-19    |
| 2647     | 590   | BLOC1S1      | 0.67 | 5.59E-11    | 2.95E-10    |
| 84976    | 4803  | DISP1        | 0.67 | 7.28E-06    | 2.41E-05    |
| 57106    | 1368  | NAT14        | 0.67 | 1.70E-11    | 9.22E-11    |
| 30833    | 967   | NT5C         | 0.67 | 1.23E-09    | 5.81E-09    |
| 116985   | 4873  | ARAP1        | 0.67 | 9.05E-22    | 8.89E-21    |
| 4130     | 10308 | MAP1A        | 0.67 | 1.09E-06    | 3.91E-06    |
| 192286   | 628   | HIGD2A       | 0.67 | 5.21E-12    | 2.94E-11    |
| 151050   | 3828  | KANSL1L      | 0.67 | 7.64E-07    | 2.79E-06    |
| 338382   | 2476  | RAB7B        | 0.67 | 0.004542008 | 0.009851366 |
| 79073    | 2412  | TMEM109      | 0.67 | 2.36E-23    | 2.48E-22    |
| 51503    | 1455  | CWC15        | 0.67 | 8.77E-16    | 6.37E-15    |
| 440026   | 3954  | TMEM41B      | 0.67 | 9.10E-14    | 5.82E-13    |
| 729830   | 10266 | FAM160A1     | 0.67 | 4.58E-07    | 1.72E-06    |
| 140680   | 1611  | C20orf96     | 0.67 | 0.00022911  | 0.000617166 |
| 3727     | 1963  | JUND         | 0.67 | 5.00E-12    | 2.82E-11    |
| 8809     | 3753  | IL18R1       | 0.67 | 0.004862684 | 0.010484184 |
| 3122     | 1312  | HLA-DRA      | 0.67 | 0.000234236 | 0.000630019 |
| 1.08E+08 | 3534  | LOC107985971 | 0.66 | 0.000384839 | 0.001004675 |
| 85007    | 2347  | PHYKPL       | 0.66 | 9.99E-10    | 4.76E-09    |
| 23261    | 1073  | CAMTA1       | 0.66 | 6.63E-15    | 4.56E-14    |
| 2197     | 579   | FAU          | 0.66 | 3.51E-13    | 2.14E-12    |
| 51097    | 2482  | SCCPDH       | 0.66 | 1.30E-18    | 1.10E-17    |

|          |       |           |      |             |             |
|----------|-------|-----------|------|-------------|-------------|
| 54487    | 3743  | DGCR8     | 0.66 | 2.34E-15    | 1.65E-14    |
| 10413    | 5304  | YAP1      | 0.66 | 7.22E-20    | 6.51E-19    |
| 84102    | 4481  | SLC41A2   | 0.66 | 2.92E-09    | 1.34E-08    |
| 10435    | 2049  | CDC42EP2  | 0.66 | 3.74E-06    | 1.27E-05    |
| 3174     | 3894  | HNF4G     | 0.66 | 0.009313571 | 0.018992715 |
| 4601     | 3219  | MXI1      | 0.66 | 9.29E-11    | 4.81E-10    |
| 89894    | 1656  | TMEM116   | 0.66 | 0.001591816 | 0.003738716 |
| 388121   | 2020  | TNFAIP8L3 | 0.66 | 0.00629471  | 0.013276877 |
| 4919     | 5211  | ROR1      | 0.66 | 1.87E-07    | 7.30E-07    |
| 54953    | 3478  | ODR4      | 0.66 | 8.17E-11    | 4.25E-10    |
| 3315     | 914   | HSPB1     | 0.66 | 1.89E-11    | 1.03E-10    |
| 135398   | 2364  | C6orf141  | 0.66 | 0.01218119  | 0.024239599 |
| 1.01E+08 | 5821  | OCLN      | 0.66 | 5.50E-09    | 2.47E-08    |
| 23250    | 8683  | ATP11A    | 0.66 | 2.41E-13    | 1.49E-12    |
| 400569   | 878   | MED11     | 0.66 | 9.32E-06    | 3.03E-05    |
| 64135    | 3617  | IFIH1     | 0.66 | 6.95E-07    | 2.55E-06    |
| 582      | 3370  | BBS1      | 0.66 | 4.94E-11    | 2.62E-10    |
| 6322     | 3194  | SCML1     | 0.66 | 1.85E-10    | 9.35E-10    |
| 5797     | 4855  | PTPRM     | 0.66 | 1.46E-18    | 1.23E-17    |
| 3084     | 3498  | NRG1      | 0.66 | 1.18E-05    | 3.81E-05    |
| 51569    | 2735  | UFM1      | 0.66 | 4.32E-18    | 3.56E-17    |
| 145957   | 3928  | NRG4      | 0.66 | 0.002557983 | 0.005789841 |
| 7741     | 2622  | ZSCAN26   | 0.66 | 8.40E-07    | 3.06E-06    |
| 2335     | 8291  | FN1       | 0.66 | 5.93E-29    | 8.05E-28    |
| 64430    | 5482  | PCNX4     | 0.66 | 1.14E-17    | 9.21E-17    |
|          |       | BCL2L2-   |      |             |             |
| 1.01E+08 | 2130  | PABPN1    | 0.66 | 8.90E-19    | 7.58E-18    |
| 143879   | 4754  | KBTBD3    | 0.66 | 0.002331831 | 0.005313835 |
| 26872    | 1330  | STEAP1    | 0.66 | 0.002516815 | 0.005706107 |
| 2073     | 4091  | ERCC5     | 0.66 | 1.97E-13    | 1.22E-12    |
| 26090    | 2057  | ABHD12    | 0.66 | 6.94E-18    | 5.67E-17    |
| 159195   | 6387  | USP54     | 0.66 | 1.08E-10    | 5.58E-10    |
| 8673     | 791   | VAMP8     | 0.66 | 2.34E-10    | 1.17E-09    |
| 22981    | 4329  | NINL      | 0.66 | 1.70E-09    | 7.94E-09    |
| 219931   | 4823  | TPCN2     | 0.66 | 8.35E-08    | 3.37E-07    |
| 8473     | 6575  | OGT       | 0.66 | 0.001745059 | 0.004068522 |
| 55692    | 2069  | LUC7L     | 0.66 | 1.88E-13    | 1.17E-12    |
| 80034    | 11788 | CSRNP3    | 0.66 | 0.008194517 | 0.01688118  |
| 55815    | 2244  | TSNAXIP1  | 0.66 | 0.016892815 | 0.032764058 |
| 6932     | 2962  | TCF7      | 0.65 | 2.48E-10    | 1.23E-09    |
| 573      | 3885  | BAG1      | 0.65 | 8.05E-10    | 3.86E-09    |
| 55286    | 4205  | C4orf19   | 0.65 | 1.49E-05    | 4.73E-05    |
| 83759    | 2199  | RBM4B     | 0.65 | 2.32E-08    | 9.86E-08    |
| 5099     | 6223  | PCDH7     | 0.65 | 5.51E-05    | 0.000162227 |
| 253152   | 1443  | EPHX4     | 0.65 | 0.000995604 | 0.002427595 |
| 3912     | 5914  | LAMB1     | 0.65 | 1.17E-22    | 1.20E-21    |
| 146330   | 3543  | FBXL16    | 0.65 | 0.023503636 | 0.044089169 |
| 22992    | 5920  | KDM2A     | 0.65 | 3.85E-17    | 3.02E-16    |

|        |      |         |      |             |             |
|--------|------|---------|------|-------------|-------------|
| 644538 | 1552 | SMIM10  | 0.65 | 1.55E-07    | 6.09E-07    |
| 5789   | 8684 | PTPRD   | 0.65 | 4.89E-13    | 2.94E-12    |
| 4582   | 1828 | MUC1    | 0.65 | 0.002127851 | 0.004885972 |
| 475    | 498  | ATOX1   | 0.65 | 2.53E-08    | 1.08E-07    |
| 84909  | 4448 | C9orf3  | 0.65 | 1.59E-12    | 9.31E-12    |
| 3223   | 1837 | HOXC6   | 0.65 | 2.84E-08    | 1.20E-07    |
| 3338   | 1318 | DNAJC4  | 0.65 | 6.55E-08    | 2.67E-07    |
| 83547  | 1793 | RILP    | 0.65 | 0.000583966 | 0.001481216 |
| 93058  | 1492 | COQ10A  | 0.65 | 5.53E-06    | 1.85E-05    |
| 119392 | 1560 | SFR1    | 0.65 | 7.96E-05    | 0.000229307 |
| 79729  | 3388 | SH3D21  | 0.65 | 7.56E-05    | 0.00021856  |
| 115123 | 4188 | MARCH3  | 0.65 | 0.000951694 | 0.002330123 |
| 55640  | 3137 | FLVCR2  | 0.65 | 0.0007597   | 0.001890791 |
| 57522  | 8200 | SRGAP1  | 0.65 | 7.52E-12    | 4.19E-11    |
| 9399   | 2052 | STOML1  | 0.65 | 6.44E-07    | 2.37E-06    |
| 10313  | 2603 | RTN3    | 0.65 | 7.66E-24    | 8.26E-23    |
| 25796  | 1045 | PGLS    | 0.65 | 1.09E-11    | 6.00E-11    |
| 9904   | 4357 | RBM19   | 0.65 | 1.50E-10    | 7.61E-10    |
| 421    | 3503 | ARVCF   | 0.65 | 1.26E-07    | 5.00E-07    |
| 51315  | 1815 | KRCC1   | 0.65 | 9.41E-09    | 4.15E-08    |
| 79661  | 1749 | NEIL1   | 0.65 | 0.000305939 | 0.000809159 |
| 9988   | 3994 | DMTF1   | 0.65 | 7.91E-11    | 4.12E-10    |
| 1690   | 2625 | COCH    | 0.65 | 7.63E-10    | 3.66E-09    |
| 83982  | 469  | IFI27L2 | 0.65 | 5.33E-09    | 2.40E-08    |
| 3914   | 4239 | LAMB3   | 0.64 | 4.56E-09    | 2.06E-08    |
| 92912  | 3045 | UBE2Q2  | 0.64 | 8.40E-13    | 4.99E-12    |
| 4354   | 1988 | MPP1    | 0.64 | 1.02E-08    | 4.46E-08    |
| 2273   | 2315 | FHL1    | 0.64 | 8.73E-17    | 6.72E-16    |
| 51619  | 3635 | UBE2D4  | 0.64 | 1.43E-05    | 4.55E-05    |
| 1211   | 1105 | CLTA    | 0.64 | 3.94E-14    | 2.59E-13    |
| 7108   | 1610 | TM7SF2  | 0.64 | 1.08E-11    | 5.94E-11    |
| 116228 | 2546 | COX20   | 0.64 | 3.23E-12    | 1.85E-11    |
| 57719  | 4906 | ANO8    | 0.64 | 2.13E-09    | 9.90E-09    |
| 6576   | 1631 | SLC25A1 | 0.64 | 7.74E-17    | 5.99E-16    |
| 6607   | 1595 | SMN2    | 0.64 | 2.09E-12    | 1.21E-11    |
| 84069  | 2423 | PLEKHN1 | 0.64 | 0.000661984 | 0.001662727 |
| 401052 | 1897 | NA      | 0.64 | 0.009624608 | 0.019573083 |
| 6894   | 3379 | TARBP1  | 0.64 | 1.65E-07    | 6.48E-07    |
| 2065   | 4939 | ERBB3   | 0.64 | 0.00011287  | 0.000318464 |
| 7098   | 3947 | TLR3    | 0.64 | 4.77E-07    | 1.78E-06    |
| 252839 | 1641 | TMEM9   | 0.64 | 1.65E-14    | 1.11E-13    |
| 55243  | 7559 | KIRREL1 | 0.64 | 3.62E-18    | 2.99E-17    |
| 79716  | 2211 | NPEPL1  | 0.64 | 1.06E-11    | 5.87E-11    |
| 440498 | 766  | HSBP1L1 | 0.64 | 8.35E-06    | 2.74E-05    |
| 79877  | 2020 | DCAKD   | 0.64 | 2.25E-13    | 1.39E-12    |
| 79441  | 2239 | HAUS3   | 0.64 | 2.38E-07    | 9.16E-07    |
| 493861 | 1486 | EID3    | 0.64 | 0.00402827  | 0.008804811 |
| 51527  | 2265 | GSKIP   | 0.64 | 8.21E-09    | 3.63E-08    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 154796   | 6621  | AMOT         | 0.64 | 3.59E-09    | 1.64E-08    |
| 9569     | 3460  | GTF2IRD1     | 0.64 | 3.30E-14    | 2.18E-13    |
| 7533     | 1807  | YWHAH        | 0.64 | 1.21E-17    | 9.80E-17    |
| 4728     | 826   | NDUFS8       | 0.64 | 1.02E-14    | 6.92E-14    |
| 2274     | 1571  | FHL2         | 0.64 | 1.88E-10    | 9.46E-10    |
| 124989   | 3690  | EFCAB13      | 0.64 | 0.00257766  | 0.005832148 |
| 6843     | 2866  | VAMP1        | 0.64 | 3.09E-06    | 1.06E-05    |
| 414189   | 2154  | AGAP6        | 0.64 | 1.70E-08    | 7.34E-08    |
| 153768   | 3625  | PRELID2      | 0.64 | 1.61E-07    | 6.32E-07    |
| 684      | 1048  | BST2         | 0.64 | 1.42E-06    | 5.05E-06    |
| 175      | 2112  | AGA          | 0.64 | 1.10E-09    | 5.21E-09    |
| 644353   | 7227  | ZCCHC18      | 0.64 | 0.001044861 | 0.002538294 |
| 8926     | 1556  | SNURF        | 0.63 | 1.98E-10    | 9.95E-10    |
| 1.05E+08 | 1874  | LOC105371303 | 0.63 | 0.000213899 | 0.000578382 |
| 55328    | 1709  | RNLS         | 0.63 | 3.58E-05    | 0.000108136 |
| 54497    | 5807  | HEATR5B      | 0.63 | 1.23E-09    | 5.81E-09    |
| 121260   | 2785  | SLC15A4      | 0.63 | 7.88E-11    | 4.11E-10    |
| 79800    | 4873  | CARF         | 0.63 | 0.000135761 | 0.000378266 |
| 414918   | 2608  | DENND6B      | 0.63 | 9.24E-05    | 0.000263788 |
| 84141    | 1866  | EVA1A        | 0.63 | 7.52E-07    | 2.75E-06    |
| 390940   | 1517  | PINLYP       | 0.63 | 0.010177449 | 0.020596005 |
| 647024   | 6742  | C6orf132     | 0.63 | 1.11E-07    | 4.44E-07    |
| 4139     | 4502  | MARK1        | 0.63 | 3.42E-05    | 0.000103539 |
| 55651    | 863   | NHP2         | 0.63 | 2.84E-11    | 1.53E-10    |
| 90121    | 1353  | TSR2         | 0.63 | 1.12E-08    | 4.89E-08    |
| 6387     | 2450  | CXCL12       | 0.63 | 0.00041367  | 0.001074731 |
| 23167    | 5390  | EFR3A        | 0.63 | 1.47E-16    | 1.12E-15    |
| 55805    | 4757  | LRP2BP       | 0.63 | 0.017255778 | 0.033383219 |
| 79969    | 2470  | ATAT1        | 0.63 | 8.39E-06    | 2.75E-05    |
| 5058     | 3100  | PAK1         | 0.63 | 7.25E-16    | 5.29E-15    |
| 5892     | 2311  | RAD51D       | 0.63 | 1.48E-05    | 4.71E-05    |
| 3182     | 1791  | HNRNPAB      | 0.63 | 8.96E-22    | 8.81E-21    |
| 10087    | 5306  | COL4A3BP     | 0.63 | 2.19E-13    | 1.35E-12    |
| 6251     | 3755  | RSU1         | 0.63 | 2.27E-14    | 1.52E-13    |
| 125988   | 897   | C19orf70     | 0.63 | 3.60E-08    | 1.51E-07    |
| 57696    | 2694  | DDX55        | 0.63 | 1.19E-13    | 7.53E-13    |
| 51260    | 1213  | PBDC1        | 0.63 | 2.45E-08    | 1.04E-07    |
| 2776     | 5846  | GNAQ         | 0.63 | 3.87E-20    | 3.52E-19    |
| 51678    | 8128  | MPP6         | 0.63 | 5.61E-09    | 2.51E-08    |
| 55500    | 6453  | ETNK1        | 0.63 | 4.70E-11    | 2.49E-10    |
| 60682    | 3197  | SMAP1        | 0.63 | 3.49E-12    | 1.99E-11    |
| 6638     | 1575  | SNRPN        | 0.63 | 2.63E-10    | 1.31E-09    |
| 4649     | 10869 | MYO9A        | 0.63 | 7.11E-14    | 4.58E-13    |
| 594      | 2650  | BCKDHB       | 0.63 | 4.58E-11    | 2.44E-10    |
| 56339    | 2016  | METTL3       | 0.63 | 5.28E-10    | 2.57E-09    |
| 57396    | 2524  | CLK4         | 0.63 | 1.25E-05    | 4.00E-05    |
| 140576   | 1235  | S100A16      | 0.63 | 8.15E-13    | 4.85E-12    |
| 57519    | 15136 | STARD9       | 0.63 | 1.02E-08    | 4.50E-08    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 55733    | 3200  | HHAT         | 0.63 | 1.87E-07    | 7.29E-07    |
| 254359   | 1361  | ZDHHHC24     | 0.63 | 5.63E-05    | 0.000165275 |
| 10336    | 6071  | PCGF3        | 0.63 | 2.43E-11    | 1.32E-10    |
| 6737     | 1946  | TRIM21       | 0.63 | 8.23E-07    | 3.00E-06    |
| 6094     | 1894  | ROM1         | 0.63 | 0.008385783 | 0.017245208 |
| 200844   | 2950  | C3orf67      | 0.63 | 0.000959964 | 0.002346491 |
| 839      | 1650  | CASP6        | 0.63 | 2.14E-08    | 9.14E-08    |
| 10806    | 2635  | SDCCAG8      | 0.63 | 6.80E-07    | 2.50E-06    |
| 4660     | 7164  | PPP1R12B     | 0.63 | 1.88E-06    | 6.59E-06    |
| 3693     | 3450  | ITGB5        | 0.63 | 1.09E-15    | 7.89E-15    |
| 329      | 3037  | BIRC2        | 0.63 | 8.32E-17    | 6.41E-16    |
| 4478     | 3981  | MSN          | 0.63 | 3.22E-14    | 2.13E-13    |
| 3280     | 1475  | HES1         | 0.63 | 1.67E-06    | 5.91E-06    |
| 8464     | 2901  | SUPT3H       | 0.63 | 7.04E-06    | 2.33E-05    |
| 5137     | 6799  | PDE1C        | 0.62 | 0.000445165 | 0.0011505   |
| 57224    | 7165  | NHSL1        | 0.62 | 2.37E-07    | 9.15E-07    |
| 837      | 1319  | CASP4        | 0.62 | 2.41E-13    | 1.49E-12    |
| 858      | 3114  | CAV2         | 0.62 | 8.37E-16    | 6.08E-15    |
| 23670    | 6156  | TMEM2        | 0.62 | 1.06E-19    | 9.50E-19    |
| 133418   | 4259  | EMB          | 0.62 | 1.42E-08    | 6.17E-08    |
| 139596   | 2518  | UPRT         | 0.62 | 7.04E-05    | 0.000204221 |
| 217      | 2074  | ALDH2        | 0.62 | 5.45E-12    | 3.06E-11    |
| 146705   | 2777  | TEPSIN       | 0.62 | 1.13E-06    | 4.06E-06    |
| 112495   | 957   | GTF3C6       | 0.62 | 1.05E-11    | 5.79E-11    |
| 9021     | 2737  | SOCS3        | 0.62 | 1.71E-15    | 1.22E-14    |
| 4208     | 5816  | MEF2C        | 0.62 | 0.010610054 | 0.021383785 |
| 5495     | 2940  | PPM1B        | 0.62 | 3.12E-15    | 2.19E-14    |
| 92675    | 1428  | DTD1         | 0.62 | 1.64E-11    | 8.93E-11    |
| 51188    | 1063  | SS18L2       | 0.62 | 1.90E-07    | 7.40E-07    |
| 387680   | 3492  | WASHC2A      | 0.62 | 1.87E-14    | 1.25E-13    |
| 79629    | 1090  | OCEL1        | 0.62 | 2.63E-06    | 9.10E-06    |
| 54470    | 1874  | ARMCX6       | 0.62 | 4.58E-06    | 1.55E-05    |
| 11034    | 1887  | DSTN         | 0.62 | 3.12E-21    | 2.98E-20    |
| 195827   | 1188  | AAED1        | 0.62 | 0.000193529 | 0.000527395 |
| 57664    | 3048  | PLEKHA4      | 0.62 | 1.11E-12    | 6.52E-12    |
| 9770     | 5462  | RASSF2       | 0.62 | 2.90E-05    | 8.86E-05    |
| 11284    | 1721  | PNKP         | 0.62 | 2.09E-11    | 1.13E-10    |
| 29896    | 2107  | TRA2A        | 0.62 | 2.62E-15    | 1.85E-14    |
| 3490     | 1136  | IGFBP7       | 0.62 | 6.28E-17    | 4.88E-16    |
| 23507    | 6648  | LRRRC8B      | 0.62 | 2.34E-06    | 8.13E-06    |
| 4437     | 4472  | MSH3         | 0.62 | 8.51E-11    | 4.42E-10    |
| 651746   | 8935  | ANKRD33B     | 0.62 | 1.64E-15    | 1.17E-14    |
| 79869    | 3598  | CPSF7        | 0.62 | 1.94E-14    | 1.30E-13    |
| 10725    | 13034 | NFAT5        | 0.62 | 0.000801977 | 0.001984891 |
| 219749   | 4111  | ZNF25        | 0.62 | 3.65E-05    | 0.00011001  |
| 54985    | 784   | HCFC1R1      | 0.61 | 5.89E-08    | 2.42E-07    |
| 1.01E+08 | 7433  | LOC100996517 | 0.61 | 0.00981387  | 0.019921251 |
| 8542     | 2883  | APOL1        | 0.61 | 2.62E-19    | 2.30E-18    |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 51078    | 1237 | THAP4        | 0.61 | 7.16E-12    | 3.99E-11    |
| 6646     | 5636 | SOAT1        | 0.61 | 5.04E-18    | 4.14E-17    |
| 10160    | 4784 | FARP1        | 0.61 | 1.59E-20    | 1.47E-19    |
| 55851    | 832  | PSENN        | 0.61 | 3.06E-11    | 1.64E-10    |
| 7046     | 6404 | TGFBR1       | 0.61 | 5.67E-13    | 3.39E-12    |
| 8038     | 7374 | ADAM12       | 0.61 | 4.61E-06    | 1.56E-05    |
| 3958     | 1016 | LGALS3       | 0.61 | 3.15E-15    | 2.21E-14    |
| 2941     | 1347 | GSTA4        | 0.61 | 0.004643929 | 0.010060147 |
| 51634    | 1528 | RBMX2        | 0.61 | 1.41E-09    | 6.64E-09    |
| 27250    | 3642 | PDCD4        | 0.61 | 6.11E-15    | 4.21E-14    |
| 8263     | 1720 | F8A1         | 0.61 | 0.002695572 | 0.006077264 |
| 1120     | 1648 | CHKB         | 0.61 | 4.85E-09    | 2.19E-08    |
| 1838     | 3024 | DTNB         | 0.61 | 9.99E-10    | 4.76E-09    |
| 57179    | 2627 | KIAA1191     | 0.61 | 2.57E-17    | 2.04E-16    |
| 283229   | 2354 | CRACR2B      | 0.61 | 0.009768499 | 0.019838461 |
| 1196     | 2441 | CLK2         | 0.61 | 6.78E-11    | 3.55E-10    |
| 1.02E+08 | 899  | LOC101929950 | 0.61 | 0.001658328 | 0.003883126 |
| 51257    | 1306 | MARCH2       | 0.61 | 2.00E-06    | 7.02E-06    |
| 56951    | 2298 | C5orf15      | 0.61 | 2.81E-21    | 2.70E-20    |
| 1E+08    | 349  | PET100       | 0.61 | 5.23E-07    | 1.95E-06    |
| 9324     | 1001 | HMGN3        | 0.61 | 5.47E-15    | 3.78E-14    |
| 2483     | 1006 | FRG1         | 0.61 | 2.21E-12    | 1.28E-11    |
| 1487     | 2921 | CTBP1        | 0.61 | 5.22E-21    | 4.95E-20    |
| 27166    | 1287 | PRELID1      | 0.61 | 1.41E-13    | 8.86E-13    |
| 83856    | 6792 | FSD1L        | 0.61 | 0.000127085 | 0.000355152 |
| 114134   | 6813 | SLC2A13      | 0.61 | 1.42E-06    | 5.06E-06    |
| 5331     | 5564 | PLCB3        | 0.61 | 9.33E-15    | 6.37E-14    |
| 5498     | 1914 | PPOX         | 0.61 | 7.61E-06    | 2.51E-05    |
| 64097    | 4732 | EPB41L4A     | 0.61 | 4.17E-09    | 1.89E-08    |
| 57018    | 3029 | CCNL1        | 0.61 | 5.71E-11    | 3.02E-10    |
| 8805     | 3946 | TRIM24       | 0.61 | 3.82E-11    | 2.04E-10    |
| 55937    | 722  | APOM         | 0.61 | 0.01778956  | 0.03431642  |
| 11015    | 1712 | KDELR3       | 0.61 | 1.24E-13    | 7.87E-13    |
| 91050    | 4003 | CCDC149      | 0.60 | 1.53E-05    | 4.84E-05    |
| 9326     | 1142 | ZNHIT3       | 0.60 | 7.85E-09    | 3.48E-08    |
| 1E+08    | 4438 | ZNF783       | 0.60 | 4.52E-05    | 0.000134759 |
| 205428   | 3295 | C3orf58      | 0.60 | 4.94E-07    | 1.84E-06    |
| 6239     | 8378 | RREB1        | 0.60 | 1.49E-09    | 6.97E-09    |
| 150472   | 2725 | CBWD2        | 0.60 | 2.33E-07    | 8.99E-07    |
| 8820     | 1901 | HESX1        | 0.60 | 0.020177514 | 0.038384805 |
| 84443    | 6798 | FRMPD3       | 0.60 | 0.023603472 | 0.044239081 |
| 154141   | 2847 | MBOAT1       | 0.60 | 1.34E-09    | 6.30E-09    |
| 10513    | 6107 | APPBP2       | 0.60 | 2.24E-16    | 1.68E-15    |
| 8837     | 7277 | CFLAR        | 0.60 | 4.73E-13    | 2.85E-12    |
| 826      | 1233 | CAPNS1       | 0.60 | 5.39E-11    | 2.85E-10    |
| 79088    | 7125 | ZNF426       | 0.60 | 1.36E-07    | 5.39E-07    |
| 40       | 3470 | ASIC2        | 0.60 | 0.013946985 | 0.027467306 |
| 219      | 3084 | ALDH1B1      | 0.60 | 3.74E-09    | 1.70E-08    |

|          |       |         |      |             |             |
|----------|-------|---------|------|-------------|-------------|
| 80021    | 2150  | TMEM62  | 0.60 | 9.03E-06    | 2.94E-05    |
| 55509    | 987   | BATF3   | 0.60 | 0.002617563 | 0.005912645 |
| 64777    | 1882  | RMND5B  | 0.60 | 1.73E-09    | 8.10E-09    |
| 124817   | 3254  | CNTD1   | 0.60 | 0.012476497 | 0.024782828 |
| 23530    | 4443  | NNT     | 0.60 | 1.18E-15    | 8.52E-15    |
| 404672   | 7502  | GTF2H5  | 0.60 | 1.14E-08    | 5.00E-08    |
| 1130     | 12631 | LYST    | 0.60 | 2.61E-06    | 9.03E-06    |
| 1E+08    | 18450 | NBPF20  | 0.60 | 2.13E-08    | 9.09E-08    |
| 7453     | 2674  | WARS    | 0.60 | 9.05E-16    | 6.57E-15    |
| 150223   | 1361  | YDJC    | 0.60 | 1.76E-07    | 6.87E-07    |
| 5092     | 1014  | PCBD1   | 0.60 | 1.39E-10    | 7.08E-10    |
| 115290   | 2289  | FBXO17  | 0.60 | 1.19E-12    | 6.99E-12    |
| 58155    | 3247  | PTBP2   | 0.60 | 1.47E-10    | 7.46E-10    |
| 1.02E+08 | 977   | AK6     | 0.60 | 8.83E-08    | 3.55E-07    |
| 9669     | 4698  | EIF5B   | 0.60 | 1.51E-19    | 1.34E-18    |
| 79874    | 2280  | RABEP2  | 0.60 | 8.62E-07    | 3.14E-06    |
| 9986     | 1488  | RCE1    | 0.60 | 8.72E-09    | 3.85E-08    |
| 10982    | 4281  | MAPRE2  | 0.60 | 3.69E-10    | 1.81E-09    |
| 7905     | 3115  | REEP5   | 0.60 | 2.57E-20    | 2.35E-19    |
| 445571   | 3084  | CBWD3   | 0.60 | 7.13E-07    | 2.61E-06    |
| 55298    | 2563  | RNF121  | 0.60 | 4.05E-11    | 2.16E-10    |
| 9853     | 5402  | RUSC2   | 0.60 | 2.35E-13    | 1.45E-12    |
| 23331    | 11808 | TTC28   | 0.60 | 1.09E-10    | 5.60E-10    |
| 9863     | 6688  | MAGI2   | 0.60 | 0.017002059 | 0.032947168 |
| 162966   | 3241  | ZNF600  | 0.60 | 0.000248253 | 0.000665704 |
| 11019    | 1596  | LIAS    | 0.60 | 0.000761909 | 0.001896022 |
| 23022    | 4503  | PALLD   | 0.60 | 1.47E-18    | 1.24E-17    |
| 125061   | 1448  | AFMID   | 0.60 | 3.73E-06    | 1.27E-05    |
| 3304     | 2551  | HSPA1B  | 0.60 | 3.57E-17    | 2.82E-16    |
| 113179   | 1643  | ADAT3   | 0.60 | 0.007785984 | 0.016123701 |
| 7597     | 2622  | ZBTB25  | 0.60 | 1.65E-05    | 5.20E-05    |
| 84062    | 1225  | DTNBP1  | 0.60 | 4.20E-08    | 1.75E-07    |
| 3705     | 3325  | ITPK1   | 0.60 | 1.77E-09    | 8.27E-09    |
| 55199    | 2053  | FAM86C1 | 0.59 | 0.000724174 | 0.001808196 |
| 143684   | 3871  | FAM76B  | 0.59 | 8.81E-11    | 4.57E-10    |
| 63933    | 4586  | MCUR1   | 0.59 | 1.17E-12    | 6.90E-12    |
| 55667    | 7822  | DENND4C | 0.59 | 7.08E-13    | 4.22E-12    |
| 4723     | 1630  | NDUFV1  | 0.59 | 7.41E-16    | 5.40E-15    |
| 284349   | 6927  | ZNF283  | 0.59 | 0.000293013 | 0.00077775  |
| 5305     | 3714  | PIP4K2A | 0.59 | 1.43E-10    | 7.29E-10    |
| 83463    | 1530  | MXD3    | 0.59 | 1.84E-09    | 8.57E-09    |
| 972      | 1520  | CD74    | 0.59 | 2.98E-19    | 2.61E-18    |
| 3187     | 3010  | HNRNPH1 | 0.59 | 6.50E-11    | 3.42E-10    |
| 9552     | 1044  | SPAG7   | 0.59 | 6.49E-09    | 2.90E-08    |
| 9440     | 3497  | MED17   | 0.59 | 1.34E-08    | 5.83E-08    |
| 55599    | 1901  | RNPC3   | 0.59 | 0.000115188 | 0.000324403 |
| 9984     | 2311  | THOC1   | 0.59 | 1.56E-10    | 7.93E-10    |
| 1351     | 521   | COX8A   | 0.59 | 2.58E-12    | 1.48E-11    |

|        |      |         |      |             |             |
|--------|------|---------|------|-------------|-------------|
| 55076  | 1634 | TMEM45A | 0.59 | 5.84E-05    | 0.000171281 |
| 84914  | 6945 | ZNF587  | 0.59 | 7.32E-07    | 2.68E-06    |
| 521    | 373  | ATP5ME  | 0.59 | 4.20E-07    | 1.58E-06    |
| 257415 | 2432 | FAM133B | 0.59 | 1.03E-09    | 4.89E-09    |
| 10553  | 1365 | HTATIP2 | 0.59 | 2.25E-07    | 8.72E-07    |
| 2054   | 3326 | STX2    | 0.59 | 6.39E-14    | 4.14E-13    |
| 170622 | 590  | COMMD6  | 0.59 | 6.25E-08    | 2.56E-07    |
| 81889  | 1683 | FAHD1   | 0.59 | 2.38E-10    | 1.19E-09    |
| 55780  | 2508 | ERMARD  | 0.59 | 1.35E-06    | 4.82E-06    |
| 55596  | 3295 | ZCCHC8  | 0.59 | 2.18E-12    | 1.26E-11    |
| 54093  | 3077 | SETD4   | 0.59 | 1.10E-05    | 3.55E-05    |
| 90624  | 6240 | LYRM7   | 0.58 | 1.55E-07    | 6.09E-07    |
| 3858   | 2162 | KRT10   | 0.58 | 3.73E-07    | 1.41E-06    |
| 54882  | 7732 | ANKHD1  | 0.58 | 4.12E-13    | 2.49E-12    |
| 140890 | 6841 | SREK1   | 0.58 | 1.10E-13    | 7.01E-13    |
| 11107  | 5073 | PRDM5   | 0.58 | 0.001418822 | 0.003367121 |
| 8605   | 2649 | PLA2G4C | 0.58 | 0.007083687 | 0.014784793 |
| 717    | 2384 | C2      | 0.58 | 0.000261297 | 0.000698049 |
| 1663   | 3970 | DDX11   | 0.58 | 1.89E-11    | 1.03E-10    |
| 9620   | 8437 | CELSR1  | 0.58 | 1.28E-15    | 9.17E-15    |
| 3841   | 4640 | KPNA5   | 0.58 | 8.54E-06    | 2.79E-05    |
| 25970  | 3211 | SH2B1   | 0.58 | 2.49E-09    | 1.15E-08    |
| 201158 | 2493 | TVP23C  | 0.58 | 0.002294176 | 0.005234068 |
| 23220  | 5434 | DTX4    | 0.58 | 4.19E-05    | 0.00012537  |
| 90     | 2892 | ACVR1   | 0.58 | 7.06E-09    | 3.14E-08    |
| 2495   | 1245 | FTH1    | 0.58 | 1.80E-11    | 9.76E-11    |
| 57037  | 2569 | ANKMY2  | 0.58 | 4.88E-08    | 2.02E-07    |
| 65997  | 1979 | RASL11B | 0.58 | 0.017040751 | 0.033005722 |
| 115817 | 1495 | DHRS1   | 0.58 | 5.60E-06    | 1.88E-05    |
| 7692   | 2917 | ZNF133  | 0.58 | 4.87E-05    | 0.000144672 |
| 152485 | 6186 | ZNF827  | 0.58 | 6.61E-12    | 3.69E-11    |
| 377677 | 3855 | CA13    | 0.58 | 0.000104218 | 0.000295477 |
| 53840  | 2255 | TRIM34  | 0.58 | 0.000787908 | 0.001953881 |
| 5720   | 1024 | PSME1   | 0.58 | 2.59E-15    | 1.83E-14    |
| 1892   | 1350 | ECHS1   | 0.58 | 4.40E-12    | 2.49E-11    |
| 6692   | 2430 | SPINT1  | 0.58 | 4.29E-10    | 2.10E-09    |
| 30844  | 2904 | EHD4    | 0.58 | 1.72E-10    | 8.70E-10    |
| 54883  | 3112 | CWC25   | 0.58 | 2.75E-09    | 1.27E-08    |
| 115201 | 2321 | ATG4A   | 0.58 | 4.93E-05    | 0.000146345 |
| 55118  | 2848 | CRTAC1  | 0.58 | 0.01256311  | 0.024943718 |
| 1500   | 5880 | CTNND1  | 0.58 | 7.77E-15    | 5.33E-14    |
| 3303   | 2445 | HSPA1A  | 0.58 | 1.46E-14    | 9.83E-14    |
| 127262 | 2440 | TPRG1L  | 0.58 | 0.000235959 | 0.000634461 |
| 3177   | 2458 | SLC29A2 | 0.57 | 2.46E-06    | 8.54E-06    |
| 56965  | 2839 | PARP6   | 0.57 | 8.59E-08    | 3.46E-07    |
| 54995  | 1948 | OXSM    | 0.57 | 0.000266362 | 0.000711152 |
| 6578   | 4171 | SLCO2A1 | 0.57 | 1.17E-07    | 4.67E-07    |
| 3340   | 7419 | NDST1   | 0.57 | 3.77E-21    | 3.60E-20    |



|        |       |         |      |             |             |
|--------|-------|---------|------|-------------|-------------|
| 51367  | 778   | POP5    | 0.57 | 3.09E-05    | 9.43E-05    |
| 9260   | 1576  | PDLIM7  | 0.57 | 5.45E-10    | 2.65E-09    |
| 84661  | 756   | DPY30   | 0.57 | 1.61E-08    | 6.95E-08    |
| 2195   | 14805 | FAT1    | 0.57 | 1.91E-20    | 1.77E-19    |
| 200030 | 5032  | NBPF11  | 0.57 | 1.66E-05    | 5.23E-05    |
| 79038  | 1471  | ZFYVE21 | 0.57 | 2.87E-08    | 1.21E-07    |
| 493753 | 1767  | COA5    | 0.57 | 8.58E-07    | 3.12E-06    |
| 90736  | 1306  | FAM104B | 0.57 | 2.63E-05    | 8.08E-05    |
| 51586  | 3401  | MED15   | 0.57 | 3.22E-12    | 1.84E-11    |
| 1294   | 9195  | COL7A1  | 0.57 | 5.72E-10    | 2.77E-09    |
| 79944  | 5300  | L2HGDH  | 0.57 | 9.36E-09    | 4.13E-08    |
| 11177  | 5585  | BAZ1A   | 0.57 | 7.06E-16    | 5.15E-15    |
| 196074 | 4207  | METTL15 | 0.57 | 7.94E-06    | 2.61E-05    |
| 29082  | 1372  | CHMP4A  | 0.57 | 1.88E-07    | 7.32E-07    |
| 90102  | 5950  | PHLDB2  | 0.57 | 2.47E-14    | 1.64E-13    |
| 10608  | 3212  | MXD4    | 0.57 | 6.13E-11    | 3.23E-10    |
| 57415  | 1538  | C3orf14 | 0.57 | 2.41E-05    | 7.47E-05    |
| 51773  | 6477  | RSF1    | 0.57 | 1.91E-18    | 1.60E-17    |
| 30818  | 2761  | KCNIP3  | 0.57 | 5.73E-10    | 2.77E-09    |
| 9686   | 3548  | VGLL4   | 0.57 | 2.45E-12    | 1.41E-11    |
| 9488   | 1852  | PIGB    | 0.57 | 0.000455408 | 0.001175094 |
| 8986   | 3000  | RPS6KA4 | 0.57 | 2.16E-09    | 1.00E-08    |
| 9140   | 4324  | ATG12   | 0.57 | 1.38E-11    | 7.54E-11    |
| 27032  | 4040  | ATP2C1  | 0.57 | 8.63E-13    | 5.12E-12    |
| 54802  | 2142  | TRIT1   | 0.57 | 4.13E-05    | 0.00012374  |
| 26298  | 5413  | EHF     | 0.57 | 5.48E-10    | 2.66E-09    |
| 2247   | 6774  | FGF2    | 0.57 | 1.76E-12    | 1.03E-11    |
| 55040  | 3944  | EPN3    | 0.57 | 0.019717407 | 0.037622303 |
| 2683   | 4207  | B4GALT1 | 0.57 | 4.92E-19    | 4.23E-18    |
| 57801  | 1077  | HES4    | 0.57 | 1.66E-07    | 6.50E-07    |
| 57558  | 3434  | USP35   | 0.57 | 0.000183416 | 0.00050176  |
| 114881 | 3452  | OSBPL7  | 0.57 | 5.16E-06    | 1.73E-05    |
| 5261   | 4499  | PHKG2   | 0.56 | 1.32E-09    | 6.23E-09    |
| 163486 | 7246  | DENND1B | 0.56 | 1.33E-06    | 4.75E-06    |
| 1E+08  | 877   | SYCE1L  | 0.56 | 0.004633579 | 0.010040174 |
| 331    | 8416  | XIAP    | 0.56 | 7.99E-15    | 5.48E-14    |
| 10207  | 7016  | PATJ    | 0.56 | 1.59E-08    | 6.87E-08    |
| 145482 | 2561  | PTGR2   | 0.56 | 2.44E-07    | 9.40E-07    |
| 9187   | 4021  | SLC24A1 | 0.56 | 1.27E-05    | 4.08E-05    |
| 24148  | 3120  | PRPF6   | 0.56 | 4.22E-11    | 2.25E-10    |
| 1495   | 3515  | CTNNA1  | 0.56 | 3.88E-17    | 3.05E-16    |
| 10346  | 3111  | TRIM22  | 0.56 | 4.55E-14    | 2.98E-13    |
| 340390 | 4978  | WDR97   | 0.56 | 0.002059403 | 0.004739828 |
| 151636 | 5768  | DTX3L   | 0.56 | 2.40E-12    | 1.38E-11    |
| 10658  | 6009  | CELF1   | 0.56 | 1.82E-16    | 1.37E-15    |
| 85459  | 7906  | CEP295  | 0.56 | 1.59E-10    | 8.04E-10    |
| 4155   | 4769  | MBP     | 0.56 | 1.89E-07    | 7.35E-07    |
| 79660  | 5536  | PPP1R3B | 0.56 | 1.15E-08    | 5.01E-08    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 92421    | 1847  | CHMP4C       | 0.56 | 0.000260023 | 0.000694958 |
| 9709     | 1943  | HERPUD1      | 0.56 | 1.52E-13    | 9.52E-13    |
| 3295     | 2712  | HSD17B4      | 0.56 | 9.98E-15    | 6.79E-14    |
| 64105    | 1919  | CENPK        | 0.56 | 1.50E-12    | 8.76E-12    |
| 9910     | 5692  | RABGAP1L     | 0.56 | 7.78E-09    | 3.45E-08    |
| 23086    | 10061 | EXPH5        | 0.56 | 0.002063617 | 0.004748296 |
| 121642   | 1084  | ALKBH2       | 0.56 | 0.000174419 | 0.000478548 |
| 80184    | 7937  | CEP290       | 0.56 | 3.26E-09    | 1.49E-08    |
| 9755     | 4104  | TBKBP1       | 0.56 | 1.00E-05    | 3.26E-05    |
| 117283   | 2717  | IP6K3        | 0.56 | 1.16E-05    | 3.73E-05    |
| 9891     | 6821  | NUAK1        | 0.56 | 8.89E-08    | 3.58E-07    |
| 5201     | 1323  | PFDN1        | 0.56 | 2.01E-13    | 1.25E-12    |
| 150274   | 1021  | HSCB         | 0.56 | 0.001402915 | 0.00333115  |
| 58500    | 4018  | ZNF250       | 0.56 | 4.03E-05    | 0.00012102  |
| 10654    | 1277  | PMVK         | 0.56 | 6.21E-07    | 2.30E-06    |
| 79169    | 1448  | C1orf35      | 0.56 | 1.99E-06    | 6.97E-06    |
| 90634    | 2646  | N4BP2L1      | 0.56 | 1.13E-05    | 3.65E-05    |
| 8815     | 900   | BANF1        | 0.56 | 6.99E-11    | 3.66E-10    |
| 80198    | 2360  | MUS81        | 0.56 | 7.40E-10    | 3.56E-09    |
| 55819    | 2323  | RNF130       | 0.55 | 2.75E-09    | 1.27E-08    |
| 54851    | 1925  | ANKRD49      | 0.55 | 5.48E-05    | 0.000161602 |
| 1.01E+08 | 2116  | TMEM265      | 0.55 | 3.08E-05    | 9.40E-05    |
| 163131   | 7612  | ZNF780B      | 0.55 | 0.000270812 | 0.000722383 |
| 23761    | 2693  | PISD         | 0.55 | 6.21E-11    | 3.27E-10    |
| 9941     | 3744  | EXOG         | 0.55 | 2.39E-07    | 9.22E-07    |
| 427      | 2576  | ASAH1        | 0.55 | 6.81E-10    | 3.28E-09    |
| 79828    | 8012  | METTL8       | 0.55 | 1.88E-05    | 5.91E-05    |
| 55109    | 4514  | AGGF1        | 0.55 | 1.43E-10    | 7.27E-10    |
| 51256    | 1256  | TBC1D7       | 0.55 | 1.50E-05    | 4.77E-05    |
| 55016    | 5405  | MARCH1       | 0.55 | 0.000360372 | 0.00094413  |
| 1.01E+08 | 684   | LOC100506248 | 0.55 | 6.11E-05    | 0.000178584 |
| 6284     | 664   | S100A13      | 0.55 | 5.40E-08    | 2.22E-07    |
| 9555     | 2055  | H2AFY        | 0.55 | 1.20E-18    | 1.02E-17    |
| 5438     | 885   | POLR2I       | 0.55 | 6.25E-07    | 2.31E-06    |
| 116412   | 2233  | ZNF837       | 0.55 | 0.021075936 | 0.039905929 |
| 8500     | 5091  | PPFIA1       | 0.55 | 1.95E-12    | 1.13E-11    |
| 6571     | 3885  | SLC18A2      | 0.55 | 0.000310669 | 0.000820691 |
| 285343   | 2816  | TCAIM        | 0.55 | 7.78E-07    | 2.84E-06    |
| 374393   | 3476  | FAM111B      | 0.55 | 4.90E-18    | 4.03E-17    |
| 2188     | 3309  | FANCF        | 0.55 | 0.000188378 | 0.000514146 |
| 121512   | 7289  | FGD4         | 0.55 | 3.16E-07    | 1.20E-06    |
| 340719   | 4036  | NANOS1       | 0.55 | 0.010120864 | 0.020488494 |
| 5936     | 1910  | RBM4         | 0.55 | 8.79E-15    | 6.01E-14    |
| 7697     | 2641  | ZNF138       | 0.55 | 0.000325717 | 0.000858782 |
| 26002    | 2852  | MOXD1        | 0.55 | 1.53E-14    | 1.03E-13    |
| 10534    | 790   | SSSCA1       | 0.55 | 7.72E-06    | 2.54E-05    |
| 26272    | 1519  | FBXO4        | 0.55 | 3.29E-05    | 9.98E-05    |
| 9848     | 6427  | MFAP3L       | 0.55 | 0.001514875 | 0.003576443 |

|          |       |            |      |             |             |
|----------|-------|------------|------|-------------|-------------|
| 2014     | 801   | EMP3       | 0.55 | 1.94E-14    | 1.30E-13    |
| 388591   | 3970  | RNF207     | 0.55 | 1.22E-05    | 3.93E-05    |
| 81537    | 3382  | SGPP1      | 0.55 | 5.65E-10    | 2.74E-09    |
| 741      | 1358  | ZNHIT2     | 0.55 | 0.001028218 | 0.0025006   |
| 80150    | 2305  | ASRGL1     | 0.55 | 9.16E-11    | 4.75E-10    |
| 169841   | 7132  | ZNF169     | 0.55 | 0.011753939 | 0.023447176 |
| 2896     | 2357  | GRN        | 0.55 | 7.32E-17    | 5.66E-16    |
| 9789     | 2731  | SPCS2      | 0.55 | 9.26E-16    | 6.71E-15    |
| 58504    | 2529  | ARHGAP22   | 0.55 | 0.002719445 | 0.006123318 |
| 51382    | 1823  | ATP6V1D    | 0.55 | 6.35E-12    | 3.56E-11    |
| 64342    | 2374  | HS1BP3     | 0.55 | 6.52E-06    | 2.17E-05    |
| 55871    | 1725  | CBWD1      | 0.55 | 1.11E-06    | 3.99E-06    |
| 9751     | 5086  | SNPH       | 0.54 | 0.000103102 | 0.000292731 |
| 55337    | 2136  | C19orf66   | 0.54 | 1.33E-08    | 5.79E-08    |
| 113146   | 18171 | AHNAK2     | 0.54 | 6.63E-09    | 2.96E-08    |
| 3035     | 2280  | HARS       | 0.54 | 1.08E-14    | 7.35E-14    |
| 388115   | 5344  | CCDC9B     | 0.54 | 3.05E-08    | 1.28E-07    |
| 57404    | 6077  | CYP20A1    | 0.54 | 4.30E-09    | 1.95E-08    |
| 10827    | 3451  | FAM114A2   | 0.54 | 1.01E-06    | 3.65E-06    |
| 80195    | 2092  | TMEM254    | 0.54 | 9.53E-05    | 0.000271527 |
| 3206     | 2648  | HOXA10     | 0.54 | 2.04E-10    | 1.02E-09    |
| 81855    | 3129  | SFXN3      | 0.54 | 1.37E-10    | 6.99E-10    |
| 2622     | 3179  | GAS8       | 0.54 | 1.58E-06    | 5.59E-06    |
| 57205    | 6094  | ATP10D     | 0.54 | 5.34E-10    | 2.60E-09    |
| 9295     | 3545  | SRSF11     | 0.54 | 5.82E-12    | 3.26E-11    |
| 54518    | 2595  | APBB1IP    | 0.54 | 0.002100775 | 0.004827545 |
| 120103   | 5579  | SLC36A4    | 0.54 | 1.30E-08    | 5.64E-08    |
| 26519    | 684   | TIMM10     | 0.54 | 6.51E-05    | 0.000189668 |
| 831      | 4147  | CAST       | 0.54 | 6.80E-17    | 5.27E-16    |
| 4860     | 2438  | PNP        | 0.54 | 3.19E-09    | 1.46E-08    |
| 57210    | 6591  | SLC45A4    | 0.54 | 0.000606226 | 0.00153199  |
| 10360    | 904   | NPM3       | 0.54 | 0.000252589 | 0.000676821 |
|          |       | NDUFC2-    |      |             |             |
| 1.01E+08 | 2341  | KCTD14     | 0.54 | 2.47E-07    | 9.48E-07    |
| 23015    | 4489  | GOLGA8A    | 0.54 | 0.014021858 | 0.027596408 |
| 64065    | 4319  | PERP       | 0.54 | 1.03E-13    | 6.58E-13    |
| 468      | 1486  | ATF4       | 0.54 | 7.99E-20    | 7.19E-19    |
| 81671    | 2197  | VMP1       | 0.54 | 3.88E-12    | 2.20E-11    |
| 79649    | 3555  | MAP7D3     | 0.54 | 2.32E-10    | 1.16E-09    |
| 53838    | 1869  | C11orf24   | 0.54 | 6.19E-07    | 2.29E-06    |
| 10589    | 1022  | DRAP1      | 0.54 | 8.26E-11    | 4.30E-10    |
| 78999    | 2505  | LRFN4      | 0.54 | 2.18E-09    | 1.01E-08    |
| 10542    | 855   | LAMTOR5    | 0.54 | 1.39E-10    | 7.10E-10    |
| 6785     | 3085  | ELOVL4     | 0.54 | 0.001308587 | 0.003122193 |
| 1486     | 3152  | CTBS       | 0.54 | 1.99E-05    | 6.23E-05    |
| 27013    | 2106  | CNPPD1     | 0.54 | 6.98E-08    | 2.84E-07    |
| 10610    | 2105  | ST6GALNAC2 | 0.54 | 0.000684013 | 0.001714181 |
| 22927    | 2593  | HABP4      | 0.54 | 7.08E-07    | 2.60E-06    |

|          |       |          |      |             |             |
|----------|-------|----------|------|-------------|-------------|
| 282991   | 2637  | BLOC1S2  | 0.54 | 2.03E-06    | 7.11E-06    |
| 6228     | 3325  | RPS23    | 0.54 | 8.29E-10    | 3.96E-09    |
| 5631     | 2156  | PRPS1    | 0.53 | 2.63E-10    | 1.31E-09    |
| 3675     | 4764  | ITGA3    | 0.53 | 4.12E-14    | 2.71E-13    |
| 137075   | 1972  | CLDN23   | 0.53 | 0.023136368 | 0.043436918 |
| 23061    | 5141  | TBC1D9B  | 0.53 | 2.20E-15    | 1.56E-14    |
| 440574   | 3728  | MINOS1   | 0.53 | 7.17E-09    | 3.19E-08    |
| 57118    | 6893  | CAMK1D   | 0.53 | 2.32E-06    | 8.07E-06    |
| 202      | 7562  | CRYBG1   | 0.53 | 4.36E-06    | 1.48E-05    |
| 55974    | 1278  | SLC50A1  | 0.53 | 1.17E-07    | 4.65E-07    |
| 124446   | 1014  | TMEM219  | 0.53 | 7.58E-09    | 3.37E-08    |
| 57605    | 6804  | PITPNM2  | 0.53 | 4.30E-06    | 1.46E-05    |
| 85359    | 1217  | DGCR6L   | 0.53 | 6.18E-07    | 2.29E-06    |
| 64852    | 2844  | TUT1     | 0.53 | 8.91E-07    | 3.24E-06    |
| 1515     | 4539  | CTSV     | 0.53 | 9.38E-08    | 3.76E-07    |
| 821      | 4316  | CANX     | 0.53 | 6.06E-24    | 6.57E-23    |
| 84267    | 2431  | C9orf64  | 0.53 | 2.19E-06    | 7.65E-06    |
| 259282   | 10579 | BOD1L1   | 0.53 | 1.65E-15    | 1.18E-14    |
| 71       | 2005  | ACTG1    | 0.53 | 3.00E-14    | 1.99E-13    |
| 51022    | 699   | GLRX2    | 0.53 | 0.000715834 | 0.001789635 |
| 54832    | 13321 | VPS13C   | 0.53 | 6.48E-10    | 3.13E-09    |
| 6574     | 3363  | SLC20A1  | 0.53 | 7.37E-15    | 5.06E-14    |
| 1783     | 4251  | DYNC1LI2 | 0.53 | 3.27E-14    | 2.16E-13    |
| 55152    | 1849  | DALRD3   | 0.53 | 1.55E-06    | 5.48E-06    |
| 11337    | 924   | GABARAP  | 0.53 | 5.04E-13    | 3.03E-12    |
| 6643     | 6566  | SNX2     | 0.53 | 6.13E-12    | 3.43E-11    |
| 84133    | 6570  | ZNRF3    | 0.53 | 3.01E-07    | 1.15E-06    |
| 378108   | 1675  | TRIM74   | 0.53 | 0.000177437 | 0.000486302 |
| 1.03E+08 | 937   | SMIM11B  | 0.53 | 0.000170749 | 0.000468914 |
| 7049     | 6338  | TGFBR3   | 0.53 | 0.000221272 | 0.00059741  |
| 2821     | 4211  | GPI      | 0.53 | 1.09E-19    | 9.71E-19    |
| 51101    | 3461  | ZC2HC1A  | 0.53 | 8.60E-06    | 2.82E-05    |
| 3033     | 1984  | HADH     | 0.53 | 6.49E-09    | 2.90E-08    |
| 64787    | 3165  | EPS8L2   | 0.53 | 6.02E-17    | 4.69E-16    |
| 57462    | 6455  | MYORG    | 0.53 | 4.49E-07    | 1.69E-06    |
| 27018    | 1038  | BEX3     | 0.53 | 5.17E-12    | 2.91E-11    |
| 207063   | 2596  | DHRX     | 0.52 | 8.79E-05    | 0.000251719 |
| 83452    | 3899  | RAB33B   | 0.52 | 6.97E-06    | 2.31E-05    |
| 83451    | 1563  | ABHD11   | 0.52 | 6.52E-08    | 2.66E-07    |
| 130340   | 4005  | AP1S3    | 0.52 | 6.05E-08    | 2.48E-07    |
| 7405     | 5154  | UVRAG    | 0.52 | 2.05E-06    | 7.17E-06    |
| 93663    | 3735  | ARHGAP18 | 0.52 | 2.00E-10    | 1.01E-09    |
|          |       | ANKHD1-  |      |             |             |
| 404734   | 8349  | EIF4EBP3 | 0.52 | 5.71E-09    | 2.56E-08    |
| 10524    | 2166  | KAT5     | 0.52 | 1.09E-08    | 4.76E-08    |
| 65009    | 3146  | NDRG4    | 0.52 | 3.35E-05    | 0.000101614 |
| 9902     | 6004  | MRC2     | 0.52 | 1.58E-19    | 1.40E-18    |
| 4791     | 3158  | NFKB2    | 0.52 | 1.13E-09    | 5.36E-09    |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 84233    | 811  | TMEM126A     | 0.52 | 0.000463601 | 0.00119398  |
| 113277   | 3266 | TMEM106A     | 0.52 | 0.008063739 | 0.016632983 |
| 10884    | 1686 | MRPS30       | 0.52 | 1.45E-06    | 5.15E-06    |
| 79675    | 4537 | FASTKD1      | 0.52 | 6.88E-06    | 2.28E-05    |
| 79631    | 3671 | EFL1         | 0.52 | 8.15E-08    | 3.29E-07    |
| 90293    | 3215 | KLHL13       | 0.52 | 2.30E-07    | 8.91E-07    |
| 9020     | 4499 | MAP3K14      | 0.52 | 2.20E-06    | 7.69E-06    |
| 1185     | 5699 | CLCN6        | 0.52 | 2.46E-05    | 7.60E-05    |
| 83930    | 1752 | STARD3NL     | 0.52 | 5.10E-07    | 1.90E-06    |
| 161582   | 1930 | DNAAF4       | 0.52 | 0.001208994 | 0.00290564  |
| 80014    | 7796 | WWC2         | 0.52 | 1.57E-12    | 9.16E-12    |
| 23262    | 5579 | PPIP5K2      | 0.52 | 1.04E-09    | 4.96E-09    |
| 39       | 1569 | ACAT2        | 0.52 | 2.21E-08    | 9.43E-08    |
| 83638    | 1568 | C11orf68     | 0.52 | 2.13E-05    | 6.63E-05    |
| 10857    | 1930 | PGRMC1       | 0.52 | 1.68E-13    | 1.05E-12    |
| 80317    | 4509 | ZKSCAN3      | 0.52 | 0.004881198 | 0.010521548 |
| 339487   | 1379 | ZBTB8OS      | 0.52 | 3.65E-06    | 1.25E-05    |
| 54460    | 1256 | MRPS21       | 0.52 | 1.11E-09    | 5.25E-09    |
| 7265     | 1499 | TTC1         | 0.52 | 1.66E-10    | 8.40E-10    |
| 128710   | 6103 | SLX4IP       | 0.52 | 0.000290263 | 0.000771141 |
| 90864    | 1559 | SPSB3        | 0.52 | 5.38E-09    | 2.42E-08    |
| 9907     | 3630 | AP5Z1        | 0.52 | 1.45E-07    | 5.71E-07    |
| 4595     | 1635 | MUTYH        | 0.52 | 0.000452849 | 0.001169    |
| 80152    | 2290 | CENPT        | 0.52 | 2.53E-10    | 1.26E-09    |
| 6897     | 2803 | TARS         | 0.52 | 3.39E-15    | 2.38E-14    |
| 256364   | 3233 | EML3         | 0.52 | 1.57E-08    | 6.78E-08    |
| 7629     | 2670 | ZNF76        | 0.52 | 6.22E-08    | 2.54E-07    |
| 81669    | 3783 | CCNL2        | 0.52 | 1.41E-09    | 6.64E-09    |
| 4669     | 2348 | NAGLU        | 0.52 | 5.16E-08    | 2.13E-07    |
| 6470     | 2415 | SHMT1        | 0.52 | 1.98E-16    | 1.49E-15    |
| 23376    | 4219 | UFL1         | 0.52 | 1.61E-09    | 7.56E-09    |
| 163033   | 2173 | ZNF579       | 0.52 | 0.000349078 | 0.000916161 |
| 2629     | 2322 | GBA          | 0.52 | 5.62E-14    | 3.66E-13    |
| 2098     | 1228 | ESD          | 0.52 | 2.36E-10    | 1.18E-09    |
| 8718     | 1537 | TNFRSF25     | 0.52 | 0.00110765  | 0.002678744 |
| 27037    | 2739 | TRMT2A       | 0.52 | 5.50E-09    | 2.47E-08    |
| 445      | 1605 | ASS1         | 0.52 | 0.013649208 | 0.026922639 |
| 114883   | 2788 | OSBPL9       | 0.52 | 5.05E-14    | 3.31E-13    |
| 8462     | 3972 | KLF11        | 0.52 | 1.57E-07    | 6.18E-07    |
| 60487    | 1936 | TRMT11       | 0.52 | 0.000178718 | 0.000489511 |
| 7320     | 2634 | UBE2B        | 0.52 | 1.62E-10    | 8.18E-10    |
| 285440   | 4657 | CYP4V2       | 0.52 | 0.000486592 | 0.001247769 |
| 81622    | 2214 | UNC93B1      | 0.52 | 7.38E-09    | 3.28E-08    |
| 8774     | 3503 | NAPG         | 0.52 | 1.82E-07    | 7.11E-07    |
| 1.08E+08 | 2691 | LOC107984138 | 0.51 | 0.000824846 | 0.002038084 |
| 126133   | 3107 | ALDH16A1     | 0.51 | 3.52E-09    | 1.60E-08    |
| 528      | 5704 | ATP6V1C1     | 0.51 | 1.50E-11    | 8.17E-11    |
| 81576    | 1797 | CCDC130      | 0.51 | 8.60E-06    | 2.82E-05    |

|        |      |           |      |             |             |
|--------|------|-----------|------|-------------|-------------|
| 4752   | 2396 | NEK3      | 0.51 | 0.002204239 | 0.00504493  |
| 129285 | 3180 | PPP1R21   | 0.51 | 0.000100799 | 0.000286469 |
| 51491  | 1219 | NOP16     | 0.51 | 1.89E-05    | 5.92E-05    |
| 51389  | 1473 | RWDD1     | 0.51 | 5.29E-09    | 2.38E-08    |
| 957    | 5317 | ENTPD5    | 0.51 | 0.000114256 | 0.000321881 |
| 81     | 3946 | ACTN4     | 0.51 | 6.20E-17    | 4.82E-16    |
| 54587  | 2919 | MXRA8     | 0.51 | 0.000541627 | 0.001379337 |
| 9556   | 675  | ATP5MPL   | 0.51 | 5.57E-08    | 2.29E-07    |
| 5357   | 3734 | PLS1      | 0.51 | 2.61E-07    | 1.00E-06    |
| 135932 | 2177 | TMEM139   | 0.51 | 1.86E-05    | 5.84E-05    |
| 7318   | 3250 | UBA7      | 0.51 | 1.32E-08    | 5.73E-08    |
| 1E+08  | 5850 | ZNF316    | 0.51 | 1.69E-07    | 6.64E-07    |
| 8987   | 2964 | STBD1     | 0.51 | 0.001679624 | 0.003928853 |
| 1E+08  | 1042 | CMC4      | 0.51 | 0.000460948 | 0.001188181 |
| 728340 | 1560 | GTF2H2C   | 0.51 | 2.89E-05    | 8.83E-05    |
| 91283  | 1810 | MSANTD3   | 0.51 | 5.49E-06    | 1.84E-05    |
| 51559  | 6965 | NT5DC3    | 0.51 | 0.000292094 | 0.000775542 |
| 3725   | 3338 | JUN       | 0.51 | 7.65E-11    | 4.00E-10    |
| 9873   | 4496 | FCHSD2    | 0.51 | 3.12E-09    | 1.43E-08    |
| 8440   | 2182 | NCK2      | 0.51 | 2.00E-07    | 7.79E-07    |
| 8569   | 2993 | MKNK1     | 0.51 | 9.26E-08    | 3.72E-07    |
| 6919   | 1773 | TCEA2     | 0.51 | 5.92E-05    | 0.000173373 |
| 5575   | 2507 | PRKAR1B   | 0.51 | 5.09E-05    | 0.000150842 |
| 51175  | 2314 | TUBE1     | 0.51 | 0.001077304 | 0.002612465 |
| 23181  | 6725 | DIP2A     | 0.51 | 6.01E-08    | 2.46E-07    |
| 9      | 1905 | NAT1      | 0.51 | 0.012920986 | 0.025594213 |
| 1535   | 824  | CYBA      | 0.51 | 7.55E-14    | 4.85E-13    |
| 10916  | 2171 | MAGED2    | 0.51 | 1.17E-08    | 5.12E-08    |
| 150678 | 456  | COPS9     | 0.51 | 0.001215381 | 0.002917964 |
| 53344  | 6813 | CHIC1     | 0.51 | 0.00014989  | 0.000415937 |
| 55669  | 4927 | MFN1      | 0.51 | 4.45E-10    | 2.17E-09    |
| 29954  | 4804 | POMT2     | 0.50 | 3.57E-06    | 1.22E-05    |
| 79979  | 4262 | TRMT2B    | 0.50 | 2.92E-06    | 1.01E-05    |
| 7581   | 6141 | ZNF33A    | 0.50 | 3.85E-06    | 1.31E-05    |
| 28512  | 4006 | NKIRAS1   | 0.50 | 0.000196993 | 0.000536014 |
| 51660  | 1004 | MPC1      | 0.50 | 8.83E-05    | 0.000252824 |
| 275    | 2115 | AMT       | 0.50 | 0.023867383 | 0.04467121  |
| 54468  | 3882 | MIOS      | 0.50 | 3.69E-08    | 1.54E-07    |
| 124936 | 1501 | CYB5D2    | 0.50 | 1.22E-05    | 3.93E-05    |
| 54981  | 1608 | NMRK1     | 0.50 | 0.001009513 | 0.002459147 |
| 57820  | 1425 | CCNB1IP1  | 0.50 | 1.88E-06    | 6.62E-06    |
| 950    | 4769 | SCARB2    | 0.50 | 2.41E-16    | 1.81E-15    |
| 83666  | 3566 | PARP9     | 0.50 | 2.04E-07    | 7.94E-07    |
| 51330  | 1048 | TNFRSF12A | 0.50 | 3.25E-12    | 1.86E-11    |
| 10352  | 2751 | WARS2     | 0.50 | 2.11E-05    | 6.57E-05    |
| 93349  | 2578 | SP140L    | 0.50 | 1.14E-07    | 4.55E-07    |
| 643155 | 2895 | SMIM15    | 0.50 | 1.23E-10    | 6.29E-10    |
| 3422   | 3017 | IDI1      | 0.50 | 4.36E-09    | 1.97E-08    |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 148327 | 1676  | CREB3L4  | 0.50 | 0.000587505 | 0.001489552 |
| 9540   | 1637  | TP53I3   | 0.50 | 6.67E-07    | 2.45E-06    |
| 93185  | 2291  | IGSF8    | 0.50 | 6.96E-08    | 2.83E-07    |
| 91289  | 2662  | LMF2     | 0.50 | 2.90E-15    | 2.05E-14    |
| 79777  | 2303  | ACBD4    | 0.50 | 0.000123885 | 0.0003467   |
| 64834  | 1527  | ELOVL1   | 0.50 | 4.42E-09    | 2.00E-08    |
| 57176  | 3524  | VAR52    | 0.50 | 5.46E-10    | 2.65E-09    |
| 128    | 2652  | ADH5     | 0.50 | 3.72E-12    | 2.12E-11    |
| 132158 | 2467  | GLYCTK   | 0.50 | 0.006249314 | 0.013192089 |
| 115426 | 3126  | UHRF2    | 0.50 | 6.76E-08    | 2.75E-07    |
| 23474  | 971   | ETHE1    | 0.50 | 8.10E-05    | 0.000233136 |
| 83933  | 2717  | HDAC10   | 0.50 | 1.52E-05    | 4.83E-05    |
| 256586 | 1360  | LYSMD2   | 0.50 | 0.020831475 | 0.039497776 |
| 738    | 2761  | VPS51    | 0.50 | 1.33E-09    | 6.28E-09    |
| 2589   | 3856  | GALNT1   | 0.50 | 1.91E-11    | 1.04E-10    |
| 6666   | 4658  | SOX12    | 0.50 | 7.42E-09    | 3.29E-08    |
| 23091  | 7118  | ZC3H13   | 0.50 | 3.80E-14    | 2.50E-13    |
| 79783  | 1578  | SUGCT    | 0.50 | 0.007572411 | 0.015710718 |
| 10966  | 1863  | RAB40B   | 0.50 | 0.001291973 | 0.003085453 |
| 55690  | 4154  | PACS1    | 0.50 | 4.91E-08    | 2.03E-07    |
| 57449  | 4737  | PLEKHG5  | 0.50 | 3.13E-06    | 1.07E-05    |
| 2803   | 7582  | GOLGA4   | 0.50 | 1.31E-09    | 6.17E-09    |
| 2055   | 6134  | CLN8     | 0.50 | 0.001745674 | 0.004069423 |
| 112    | 6118  | ADCY6    | 0.50 | 2.08E-09    | 9.65E-09    |
| 239    | 4182  | ALOX12   | 0.50 | 0.011328045 | 0.02268929  |
| 284184 | 560   | NDUFAF8  | 0.50 | 2.09E-05    | 6.52E-05    |
| 168507 | 15565 | PKD1L1   | 0.50 | 0.003263327 | 0.007247849 |
| 81894  | 1627  | SLC25A28 | 0.50 | 1.76E-06    | 6.19E-06    |
| 1E+08  | 1951  | ZNF717   | 0.50 | 0.015253314 | 0.029818558 |
| 51065  | 1084  | RPS27L   | 0.50 | 2.21E-07    | 8.58E-07    |
| 94240  | 3176  | EPSTI1   | 0.50 | 7.22E-05    | 0.000209172 |
| 55825  | 1874  | PECR     | 0.49 | 7.10E-06    | 2.35E-05    |
| 389    | 1373  | RHOC     | 0.49 | 2.30E-08    | 9.80E-08    |
| 6697   | 1466  | SPR      | 0.49 | 6.37E-05    | 0.000185884 |
| 955    | 2739  | ENTPD6   | 0.49 | 1.56E-07    | 6.13E-07    |
| 58478  | 2185  | ENOPH1   | 0.49 | 7.17E-10    | 3.45E-09    |
| 64417  | 2825  | TMEM267  | 0.49 | 0.000363675 | 0.000951917 |
| 84268  | 1663  | RPAIN    | 0.49 | 5.40E-06    | 1.81E-05    |
| 55296  | 2949  | TBC1D19  | 0.49 | 0.005410605 | 0.011561143 |
| 9445   | 1896  | ITM2B    | 0.49 | 1.40E-16    | 1.06E-15    |
| 746    | 420   | TMEM258  | 0.49 | 0.000124551 | 0.000348506 |
| 91137  | 4652  | SLC25A46 | 0.49 | 1.05E-09    | 5.01E-09    |
| 57486  | 4729  | NLN      | 0.49 | 3.20E-06    | 1.10E-05    |
| 1E+08  | 5633  | SPDYE2B  | 0.49 | 0.002604092 | 0.005885209 |
| 338699 | 3553  | ANKRD42  | 0.49 | 0.000503003 | 0.001287618 |
| 81853  | 984   | TMEM14B  | 0.49 | 1.49E-09    | 6.97E-09    |
| 24145  | 4652  | PANX1    | 0.49 | 2.76E-09    | 1.27E-08    |
| 23405  | 10296 | DICER1   | 0.49 | 1.67E-08    | 7.21E-08    |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 124790 | 1604  | HEXIM2   | 0.49 | 0.00753447  | 0.015644789 |
| 79053  | 1708  | ALG8     | 0.49 | 5.87E-08    | 2.41E-07    |
| 9667   | 3028  | SAFB2    | 0.49 | 3.59E-11    | 1.92E-10    |
| 57458  | 5886  | TMCC3    | 0.49 | 0.000722479 | 0.001804605 |
| 124565 | 3927  | SLC38A10 | 0.49 | 8.65E-11    | 4.49E-10    |
| 953    | 12376 | ENTPD1   | 0.49 | 2.23E-06    | 7.76E-06    |
| 388962 | 534   | BOLA3    | 0.49 | 0.000520994 | 0.001330032 |
| 23446  | 9817  | SLC44A1  | 0.49 | 2.73E-12    | 1.57E-11    |
| 54891  | 14048 | INO80D   | 0.49 | 4.35E-06    | 1.47E-05    |
| 646    | 4585  | BNC1     | 0.49 | 6.67E-05    | 0.000194167 |
| 23232  | 4423  | TBC1D12  | 0.49 | 4.11E-05    | 0.000123143 |
| 51599  | 2190  | LSR      | 0.49 | 4.16E-09    | 1.89E-08    |
| 23240  | 4428  | TMEM131L | 0.49 | 0.000848518 | 0.002092501 |
| 124512 | 1036  | METTL23  | 0.49 | 0.000104032 | 0.000294994 |
| 81566  | 4351  | CSRNP2   | 0.49 | 6.91E-08    | 2.82E-07    |
| 79155  | 1875  | TNIP2    | 0.49 | 1.36E-05    | 4.35E-05    |
| 662    | 1259  | BNIP1    | 0.49 | 0.003305385 | 0.007330264 |
| 55779  | 8285  | CFAP44   | 0.49 | 0.000391704 | 0.001021397 |
| 2591   | 3326  | GALNT3   | 0.49 | 0.000922662 | 0.002262782 |
| 26191  | 3678  | PTPN22   | 0.48 | 0.000502851 | 0.001287415 |
| 50618  | 6031  | ITSN2    | 0.48 | 9.07E-07    | 3.29E-06    |
| 1E+08  | 1360  | UPK3BL1  | 0.48 | 0.000100563 | 0.000285842 |
| 4718   | 2490  | NDUFC2   | 0.48 | 2.64E-10    | 1.31E-09    |
| 7582   | 6353  | ZNF33B   | 0.48 | 4.32E-07    | 1.63E-06    |
| 9812   | 4107  | KIAA0141 | 0.48 | 1.32E-07    | 5.24E-07    |
| 10252  | 2755  | SPRY1    | 0.48 | 0.018858104 | 0.036134024 |
| 151393 | 1956  | RMDN2    | 0.48 | 0.026986675 | 0.049968658 |
| 166614 | 4310  | DCLK2    | 0.48 | 0.014695476 | 0.028813642 |
| 10928  | 4368  | RALBP1   | 0.48 | 2.18E-11    | 1.18E-10    |
| 55625  | 2865  | ZDHHC7   | 0.48 | 4.32E-12    | 2.45E-11    |
| 6895   | 1535  | TARBP2   | 0.48 | 0.000204065 | 0.000553984 |
| 158158 | 5662  | RASEF    | 0.48 | 3.38E-07    | 1.28E-06    |
| 51529  | 918   | ANAPC11  | 0.48 | 0.000113921 | 0.000321141 |
| 4337   | 3634  | MOCS1    | 0.48 | 4.36E-05    | 0.00013031  |
| 54205  | 5544  | CYCS     | 0.48 | 4.98E-11    | 2.64E-10    |
| 9069   | 3641  | CLDN12   | 0.48 | 4.35E-08    | 1.80E-07    |
| 28956  | 696   | LAMTOR2  | 0.48 | 0.000167534 | 0.000460867 |
| 3212   | 1373  | HOXB2    | 0.48 | 4.32E-07    | 1.63E-06    |
| 64418  | 4969  | TMEM168  | 0.48 | 1.12E-05    | 3.60E-05    |
| 55142  | 3904  | HAUS2    | 0.48 | 1.34E-07    | 5.29E-07    |
| 55120  | 1602  | FANCL    | 0.48 | 7.15E-07    | 2.62E-06    |
| 5569   | 3969  | PKIA     | 0.48 | 5.87E-06    | 1.96E-05    |
| 79739  | 7653  | TTLL7    | 0.48 | 1.81E-05    | 5.70E-05    |
| 7700   | 4385  | ZNF141   | 0.48 | 0.00453306  | 0.00983316  |
| 26030  | 4698  | PLEKHG3  | 0.48 | 4.01E-10    | 1.96E-09    |
| 84292  | 1272  | WDR83    | 0.48 | 0.003649909 | 0.008044106 |
| 171586 | 2000  | ABHD3    | 0.48 | 4.06E-07    | 1.53E-06    |
| 56940  | 2179  | DUSP22   | 0.48 | 1.85E-05    | 5.81E-05    |



|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 6901     | 1831 | TAZ          | 0.48 | 0.000258215 | 0.000690749 |
| 541578   | 2211 | CXorf40B     | 0.48 | 6.68E-05    | 0.000194368 |
| 284371   | 4330 | ZNF841       | 0.48 | 0.002274595 | 0.005194731 |
| 80336    | 2135 | PABPC1L      | 0.48 | 2.83E-05    | 8.68E-05    |
| 1.08E+08 | 2515 | LOC107983997 | 0.48 | 0.022473168 | 0.042299073 |
| 374986   | 6249 | MIGA1        | 0.48 | 2.40E-06    | 8.33E-06    |
| 351      | 3593 | APP          | 0.47 | 1.09E-14    | 7.41E-14    |
| 91452    | 4052 | ACBD5        | 0.47 | 9.11E-06    | 2.97E-05    |
| 1629     | 5654 | DBT          | 0.47 | 5.44E-05    | 0.0001605   |
| 7105     | 2230 | TSPAN6       | 0.47 | 1.49E-07    | 5.87E-07    |
| 5638     | 4330 | PRRG1        | 0.47 | 5.56E-05    | 0.000163585 |
| 8790     | 4722 | FPGT         | 0.47 | 0.001539197 | 0.003625674 |
| 6778     | 3991 | STAT6        | 0.47 | 9.87E-13    | 5.84E-12    |
| 117583   | 7790 | PARD3B       | 0.47 | 0.000190391 | 0.000519401 |
| 280636   | 1447 | SELENOH      | 0.47 | 2.61E-06    | 9.04E-06    |
| 255783   | 849  | INAFM1       | 0.47 | 0.000304526 | 0.000805902 |
| 84081    | 2335 | NSRP1        | 0.47 | 2.45E-09    | 1.13E-08    |
| 7082     | 6865 | TJP1         | 0.47 | 4.18E-10    | 2.04E-09    |
| 84527    | 2961 | ZNF559       | 0.47 | 0.001444132 | 0.00342307  |
| 6197     | 7057 | RPS6KA3      | 0.47 | 2.82E-10    | 1.40E-09    |
| 1.01E+08 | 9687 | LOC100996724 | 0.47 | 0.001867113 | 0.004331488 |
| 5478     | 2289 | PPIA         | 0.47 | 3.17E-10    | 1.57E-09    |
| 84437    | 3093 | MSANTD4      | 0.47 | 8.29E-06    | 2.72E-05    |
| 4665     | 2689 | NAB2         | 0.47 | 3.82E-06    | 1.30E-05    |
| 283219   | 3950 | KCTD21       | 0.47 | 0.002004051 | 0.004624097 |
| 10382    | 2501 | TUBB4A       | 0.47 | 0.000134399 | 0.000374588 |
| 80298    | 2076 | MTERF2       | 0.47 | 0.000608129 | 0.001536144 |
| 51280    | 3097 | GOLM1        | 0.47 | 7.60E-13    | 4.52E-12    |
| 3622     | 1228 | ING2         | 0.47 | 0.00158817  | 0.003731632 |
| 10398    | 1180 | MYL9         | 0.47 | 5.00E-09    | 2.25E-08    |
| 118812   | 2411 | MORN4        | 0.47 | 0.009565519 | 0.019468515 |
| 58517    | 4312 | RBM25        | 0.47 | 2.07E-10    | 1.04E-09    |
| 1611     | 2385 | DAP          | 0.47 | 6.98E-11    | 3.66E-10    |
| 5090     | 2721 | PBX3         | 0.47 | 1.06E-07    | 4.22E-07    |
| 54885    | 5422 | TBC1D8B      | 0.47 | 0.001917382 | 0.004437676 |
| 94101    | 2166 | ORMDL1       | 0.47 | 3.55E-07    | 1.35E-06    |
| 291      | 4420 | SLC25A4      | 0.47 | 2.11E-05    | 6.58E-05    |
| 6902     | 688  | TBCA         | 0.47 | 3.54E-08    | 1.48E-07    |
| 65003    | 1067 | MRPL11       | 0.47 | 1.28E-07    | 5.06E-07    |
| 91947    | 4074 | ARRDC4       | 0.47 | 2.86E-05    | 8.75E-05    |
| 7220     | 4157 | TRPC1        | 0.47 | 8.67E-05    | 0.000248389 |
| 4677     | 2789 | NARS         | 0.47 | 5.48E-14    | 3.58E-13    |
| 10935    | 1638 | PRDX3        | 0.47 | 8.18E-10    | 3.92E-09    |
| 5906     | 1538 | RAP1A        | 0.47 | 3.88E-08    | 1.62E-07    |
| 56172    | 6438 | ANKH         | 0.47 | 0.00010336  | 0.00029337  |
| 64860    | 2755 | ARMCX5       | 0.46 | 0.001605403 | 0.003768636 |
| 11180    | 4150 | WDR6         | 0.46 | 1.01E-11    | 5.57E-11    |
| 125170   | 2609 | MIEF2        | 0.46 | 0.000587886 | 0.001490306 |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 57732  | 3118  | ZFYVE28  | 0.46 | 0.02242179  | 0.042215786 |
| 54629  | 9235  | MINDY2   | 0.46 | 2.69E-06    | 9.30E-06    |
| 677    | 3211  | ZFP36L1  | 0.46 | 7.36E-11    | 3.85E-10    |
| 4696   | 421   | NDUFA3   | 0.46 | 1.28E-05    | 4.09E-05    |
| 256281 | 887   | NUDT14   | 0.46 | 0.000166793 | 0.000459184 |
| 126789 | 1249  | PUSL1    | 0.46 | 0.001457332 | 0.003452055 |
| 51574  | 2235  | LARP7    | 0.46 | 1.08E-08    | 4.76E-08    |
| 16     | 3344  | AARS     | 0.46 | 2.43E-12    | 1.40E-11    |
| 51351  | 6404  | ZNF117   | 0.46 | 0.002382872 | 0.005424582 |
| 92579  | 1534  | G6PC3    | 0.46 | 3.59E-09    | 1.64E-08    |
| 51019  | 974   | WASHC3   | 0.46 | 1.86E-05    | 5.84E-05    |
| 3094   | 690   | HINT1    | 0.46 | 1.80E-09    | 8.39E-09    |
| 345778 | 7803  | MTX3     | 0.46 | 0.000107439 | 0.000303929 |
| 149473 | 1307  | CCDC24   | 0.46 | 0.006396044 | 0.01347941  |
| 29956  | 2491  | CERS2    | 0.46 | 1.99E-14    | 1.33E-13    |
| 51123  | 2779  | ZNF706   | 0.46 | 3.34E-06    | 1.14E-05    |
| 57798  | 4597  | GATAD1   | 0.46 | 1.79E-07    | 6.99E-07    |
| 90441  | 1710  | ZNF622   | 0.46 | 0.00017362  | 0.000476431 |
| 9961   | 2912  | MVP      | 0.46 | 1.51E-10    | 7.65E-10    |
| 54566  | 4041  | EPB41L4B | 0.46 | 0.007696092 | 0.015952423 |
| 8028   | 4239  | MLLT10   | 0.46 | 4.49E-06    | 1.52E-05    |
| 10957  | 2133  | PNRC1    | 0.46 | 1.06E-08    | 4.64E-08    |
| 653464 | 6081  | SRGAP2C  | 0.46 | 5.97E-10    | 2.89E-09    |
| 51596  | 982   | CUTA     | 0.46 | 4.15E-05    | 0.000124275 |
| 51027  | 911   | BOLA1    | 0.46 | 0.017350961 | 0.0335428   |
| 5893   | 2981  | RAD52    | 0.46 | 0.003765093 | 0.008277429 |
| 26010  | 2364  | SPATS2L  | 0.46 | 8.32E-09    | 3.68E-08    |
| 94134  | 4964  | ARHGAP12 | 0.46 | 4.39E-06    | 1.49E-05    |
| 55186  | 4820  | SLC25A36 | 0.46 | 4.46E-08    | 1.85E-07    |
| 4194   | 9880  | MDM4     | 0.46 | 2.84E-05    | 8.69E-05    |
| 3964   | 5471  | LGALS8   | 0.46 | 1.23E-07    | 4.88E-07    |
| 23215  | 10453 | PRRC2C   | 0.46 | 1.21E-15    | 8.72E-15    |
| 51075  | 1710  | TMX2     | 0.46 | 1.36E-09    | 6.40E-09    |
| 754    | 2841  | PTTG1IP  | 0.46 | 7.70E-14    | 4.94E-13    |
| 8091   | 3741  | HMGA2    | 0.46 | 1.07E-06    | 3.86E-06    |
| 1039   | 2702  | CDR2     | 0.46 | 2.82E-08    | 1.19E-07    |
| 8898   | 4646  | MTMR2    | 0.46 | 1.78E-09    | 8.33E-09    |
| 1072   | 1260  | CFL1     | 0.46 | 1.15E-07    | 4.59E-07    |
| 784    | 2701  | CACNB3   | 0.46 | 3.48E-09    | 1.59E-08    |
| 3508   | 3136  | IGHMBP2  | 0.46 | 4.82E-05    | 0.000143257 |
| 4071   | 1711  | TM4SF1   | 0.46 | 3.39E-08    | 1.42E-07    |
| 23033  | 9268  | DOPEY1   | 0.46 | 0.001253186 | 0.003000891 |
| 51035  | 1162  | UBXN1    | 0.46 | 1.07E-08    | 4.70E-08    |
| 5721   | 868   | PSME2    | 0.46 | 1.64E-09    | 7.67E-09    |
| 23524  | 9030  | SRRM2    | 0.46 | 0.019086871 | 0.036544775 |
| 23503  | 9470  | ZFYVE26  | 0.46 | 1.31E-06    | 4.67E-06    |
| 9145   | 1720  | SYNGR1   | 0.46 | 0.000139158 | 0.000387424 |
| 81792  | 7683  | ADAMTS12 | 0.45 | 5.42E-05    | 0.000159822 |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 10169    | 3041  | SERF2        | 0.45 | 2.67E-06    | 9.24E-06    |
| 7430     | 3001  | EZR          | 0.45 | 3.59E-15    | 2.51E-14    |
| 7746     | 1815  | ZSCAN9       | 0.45 | 0.011808015 | 0.023541833 |
| 54520    | 6639  | CCDC93       | 0.45 | 3.00E-07    | 1.14E-06    |
| 79161    | 1570  | TMEM243      | 0.45 | 1.85E-05    | 5.81E-05    |
| 90576    | 2604  | ZNF799       | 0.45 | 0.01231719  | 0.024493769 |
| 79101    | 1323  | TAF1D        | 0.45 | 1.27E-05    | 4.08E-05    |
| 54737    | 4284  | MPHOSPH8     | 0.45 | 2.93E-08    | 1.24E-07    |
| 80331    | 5344  | DNAJC5       | 0.45 | 7.05E-09    | 3.14E-08    |
| 5954     | 2529  | RCN1         | 0.45 | 3.13E-14    | 2.07E-13    |
| 3704     | 1205  | ITPA         | 0.45 | 4.92E-05    | 0.000146061 |
| 26115    | 11858 | TANC2        | 0.45 | 4.72E-07    | 1.77E-06    |
| 376940   | 10703 | ZC3H6        | 0.45 | 0.001503273 | 0.00355141  |
| 84283    | 2215  | TMEM79       | 0.45 | 0.021296079 | 0.040292698 |
| 59286    | 472   | UBL5         | 0.45 | 2.54E-06    | 8.79E-06    |
| 353      | 764   | APRT         | 0.45 | 5.74E-05    | 0.000168359 |
| 283659   | 10563 | PRTG         | 0.45 | 0.000140593 | 0.000391054 |
| 51582    | 4249  | AZIN1        | 0.45 | 4.35E-10    | 2.12E-09    |
| 967      | 885   | CD63         | 0.45 | 4.13E-12    | 2.34E-11    |
| 79572    | 7181  | ATP13A3      | 0.45 | 1.93E-12    | 1.12E-11    |
| 1.01E+08 | 7604  | LOC100996763 | 0.45 | 6.77E-06    | 2.25E-05    |
| 80205    | 10609 | CHD9         | 0.45 | 6.98E-09    | 3.11E-08    |
| 2653     | 1532  | GCSH         | 0.45 | 3.60E-06    | 1.23E-05    |
| 51506    | 978   | UFC1         | 0.45 | 2.89E-08    | 1.22E-07    |
| 64780    | 3603  | MICAL1       | 0.45 | 4.24E-07    | 1.60E-06    |
| 3659     | 2187  | IRF1         | 0.45 | 2.88E-08    | 1.22E-07    |
| 23078    | 5575  | VWA8         | 0.45 | 6.90E-06    | 2.29E-05    |
| 2585     | 2893  | GALK2        | 0.45 | 0.005435745 | 0.011609846 |
| 79918    | 2960  | SETD6        | 0.45 | 0.009734079 | 0.019779862 |
| 5890     | 2241  | RAD51B       | 0.45 | 0.011520734 | 0.023028508 |
| 9521     | 1097  | EEF1E1       | 0.45 | 0.000147335 | 0.000409102 |
| 9648     | 6818  | GCC2         | 0.45 | 8.98E-10    | 4.28E-09    |
| 81545    | 4064  | FBXO38       | 0.45 | 9.35E-07    | 3.39E-06    |
| 6342     | 1593  | SCP2         | 0.45 | 1.42E-08    | 6.17E-08    |
| 8225     | 1792  | GTPBP6       | 0.45 | 2.25E-05    | 6.98E-05    |
| 51000    | 2031  | SLC35B3      | 0.45 | 0.000122863 | 0.000344002 |
| 167227   | 9306  | DCP2         | 0.45 | 5.96E-06    | 1.99E-05    |
| 7322     | 2594  | UBE2D2       | 0.45 | 1.09E-10    | 5.63E-10    |
| 5204     | 737   | PFDN5        | 0.45 | 3.24E-06    | 1.11E-05    |
| 117854   | 3254  | TRIM6        | 0.45 | 0.004957093 | 0.010667025 |
| 113263   | 4811  | GLCCI1       | 0.45 | 0.002457229 | 0.005578845 |
| 220213   | 3125  | OTUD1        | 0.45 | 0.002396565 | 0.005451565 |
| 10094    | 961   | ARPC3        | 0.44 | 1.52E-08    | 6.56E-08    |
| 64921    | 3594  | CASD1        | 0.44 | 4.93E-05    | 0.000146256 |
| 129531   | 988   | MITD1        | 0.44 | 3.05E-05    | 9.29E-05    |
| 92335    | 2280  | STRADA       | 0.44 | 6.01E-06    | 2.01E-05    |
| 6281     | 1069  | S100A10      | 0.44 | 2.33E-08    | 9.92E-08    |
| 10749    | 6016  | KIF1C        | 0.44 | 6.00E-11    | 3.16E-10    |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 79037  | 1586  | PVRIG    | 0.44 | 0.000605978 | 0.0015318   |
| 5526   | 2445  | PPP2R5B  | 0.44 | 6.59E-05    | 0.00019208  |
| 92181  | 3015  | UBTD2    | 0.44 | 2.79E-08    | 1.18E-07    |
| 9270   | 1411  | ITGB1BP1 | 0.44 | 8.72E-07    | 3.17E-06    |
| 10327  | 1449  | AKR1A1   | 0.44 | 1.05E-06    | 3.78E-06    |
| 51699  | 1152  | VPS29    | 0.44 | 1.34E-08    | 5.84E-08    |
| 10272  | 2525  | FSTL3    | 0.44 | 2.83E-09    | 1.30E-08    |
| 134553 | 3934  | C5orf24  | 0.44 | 2.92E-11    | 1.57E-10    |
| 51504  | 1308  | TRMT112  | 0.44 | 1.25E-07    | 4.97E-07    |
| 5917   | 2154  | RARS     | 0.44 | 4.04E-09    | 1.83E-08    |
| 55291  | 5049  | PPP6R3   | 0.44 | 2.68E-12    | 1.54E-11    |
| 53918  | 2941  | PELO     | 0.44 | 0.000181642 | 0.000497215 |
| 6490   | 2142  | PMEL     | 0.44 | 0.012545755 | 0.024912045 |
| 84932  | 2850  | RAB2B    | 0.44 | 3.76E-05    | 0.000113095 |
| 79818  | 2352  | ZNF552   | 0.44 | 0.01651727  | 0.032084712 |
| 1E+08  | 509   | OST4     | 0.44 | 1.12E-05    | 3.61E-05    |
| 339231 | 1207  | ARL16    | 0.44 | 7.43E-05    | 0.000215061 |
| 92935  | 3102  | MARS2    | 0.44 | 0.016563675 | 0.032171335 |
| 84940  | 2311  | CORO6    | 0.44 | 0.000430047 | 0.001113859 |
| 9577   | 1825  | BABAM2   | 0.44 | 1.18E-06    | 4.25E-06    |
| 156    | 3302  | GRK2     | 0.44 | 3.08E-08    | 1.29E-07    |
| 1021   | 11649 | CDK6     | 0.44 | 2.78E-06    | 9.58E-06    |
| 55763  | 3444  | EXOC1    | 0.44 | 1.39E-06    | 4.94E-06    |
| 54059  | 1524  | YBEY     | 0.44 | 0.000245477 | 0.000658558 |
| 10200  | 1105  | MPHOSPH6 | 0.44 | 0.000178269 | 0.000488433 |
| 55611  | 2310  | OTUB1    | 0.44 | 3.70E-06    | 1.26E-05    |
| 56834  | 1889  | GPR137   | 0.44 | 6.44E-05    | 0.000187863 |
| 51300  | 1450  | TIMMDC1  | 0.44 | 4.00E-06    | 1.36E-05    |
| 6048   | 1176  | RNF5     | 0.44 | 5.86E-07    | 2.18E-06    |
| 9274   | 1131  | BCL7C    | 0.44 | 1.34E-06    | 4.78E-06    |
| 25847  | 1342  | ANAPC13  | 0.44 | 4.39E-07    | 1.65E-06    |
| 4637   | 795   | MYL6     | 0.44 | 1.77E-07    | 6.92E-07    |
| 83734  | 2147  | ATG10    | 0.44 | 0.00571474  | 0.012153142 |
| 7324   | 1732  | UBE2E1   | 0.44 | 8.17E-08    | 3.30E-07    |
| 126626 | 2606  | GABPB2   | 0.44 | 0.010091532 | 0.020435741 |
| 170463 | 1893  | SSBP4    | 0.44 | 2.82E-07    | 1.08E-06    |
| 7045   | 2805  | TGFBI    | 0.44 | 3.02E-09    | 1.39E-08    |
| 29801  | 4963  | ZDHHC8   | 0.44 | 4.83E-06    | 1.63E-05    |
| 201255 | 2741  | LRRC45   | 0.44 | 1.63E-05    | 5.16E-05    |
| 64743  | 1985  | WDR13    | 0.44 | 1.54E-07    | 6.05E-07    |
| 79567  | 4115  | RIPOR1   | 0.44 | 1.45E-05    | 4.60E-05    |
| 65990  | 872   | FAM173A  | 0.44 | 0.003338822 | 0.007396108 |
| 27309  | 1911  | ZNF330   | 0.44 | 1.74E-05    | 5.49E-05    |
| 389203 | 1021  | SMIM20   | 0.44 | 0.001491522 | 0.003525993 |
| 25921  | 4454  | ZDHHC5   | 0.44 | 1.90E-11    | 1.03E-10    |
| 65975  | 2353  | STK33    | 0.44 | 0.00075441  | 0.001878413 |
| 54103  | 3058  | GSAP     | 0.44 | 0.001064242 | 0.002583259 |
| 84910  | 5091  | TMEM87B  | 0.43 | 5.05E-05    | 0.000149649 |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 256643   | 6692 | BCLAF3       | 0.43 | 0.000794897 | 0.001970112 |
| 729540   | 6979 | RGPD6        | 0.43 | 0.000232428 | 0.000625345 |
| 23603    | 3596 | CORO1C       | 0.43 | 6.23E-09    | 2.78E-08    |
| 54477    | 3948 | PLEKHA5      | 0.43 | 1.11E-05    | 3.57E-05    |
| 51524    | 1312 | TMEM138      | 0.43 | 0.000191465 | 0.000522011 |
| 4817     | 1724 | NIT1         | 0.43 | 6.42E-05    | 0.000187303 |
| 10908    | 4451 | PNPLA6       | 0.43 | 1.08E-07    | 4.30E-07    |
| 114781   | 8675 | BTBD9        | 0.43 | 0.002713925 | 0.006112437 |
| 23623    | 2350 | RUSC1        | 0.43 | 6.17E-08    | 2.52E-07    |
| 6482     | 6812 | ST3GAL1      | 0.43 | 1.08E-07    | 4.30E-07    |
| 5437     | 1344 | POLR2H       | 0.43 | 5.85E-06    | 1.96E-05    |
| 3728     | 3351 | JUP          | 0.43 | 1.28E-06    | 4.56E-06    |
| 84964    | 990  | ALKBH6       | 0.43 | 0.001455345 | 0.00344781  |
| 64928    | 980  | MRPL14       | 0.43 | 5.35E-05    | 0.000158049 |
| 60592    | 1942 | SCOC         | 0.43 | 1.29E-06    | 4.60E-06    |
| 64210    | 3627 | MMS19        | 0.43 | 2.05E-08    | 8.78E-08    |
| 29761    | 4511 | USP25        | 0.43 | 5.84E-08    | 2.40E-07    |
| 134266   | 4105 | GRPEL2       | 0.43 | 4.08E-06    | 1.38E-05    |
| 283899   | 1334 | INO80E       | 0.43 | 1.07E-05    | 3.47E-05    |
| 8798     | 974  | DYRK4        | 0.43 | 0.005301456 | 0.011358527 |
| 89781    | 3331 | HPS4         | 0.43 | 1.83E-05    | 5.77E-05    |
| 54558    | 4323 | SPATA6       | 0.43 | 0.009737388 | 0.019784323 |
| 55151    | 2857 | TMEM38B      | 0.43 | 0.000209894 | 0.000568246 |
| 151525   | 1694 | WDSUB1       | 0.43 | 0.003740326 | 0.008230106 |
| 8614     | 5361 | STC2         | 0.43 | 7.32E-07    | 2.68E-06    |
| 3486     | 2617 | IGFBP3       | 0.43 | 5.77E-11    | 3.04E-10    |
| 10629    | 1978 | TAF6L        | 0.43 | 0.000151517 | 0.000420057 |
| 84274    | 1538 | COQ5         | 0.43 | 0.000304859 | 0.000806541 |
| 27075    | 1912 | TSPAN13      | 0.43 | 7.75E-05    | 0.000223609 |
| 51024    | 785  | FIS1         | 0.43 | 3.91E-05    | 0.000117505 |
| 219988   | 3824 | PATL1        | 0.43 | 3.65E-10    | 1.79E-09    |
| 22832    | 4285 | CEP162       | 0.43 | 0.000285478 | 0.000759111 |
| 1.03E+08 | 4047 | LOC102724200 | 0.43 | 0.00037017  | 0.000967944 |
| 54938    | 2077 | SARS2        | 0.43 | 1.30E-05    | 4.16E-05    |
| 11217    | 6857 | AKAP2        | 0.43 | 7.60E-11    | 3.97E-10    |
| 64359    | 2825 | NXN          | 0.43 | 8.98E-09    | 3.97E-08    |
| 26031    | 6547 | OSBPL3       | 0.43 | 1.65E-08    | 7.10E-08    |
| 50865    | 1221 | HEBP1        | 0.43 | 2.27E-05    | 7.04E-05    |
| 79786    | 7535 | KLHL36       | 0.43 | 3.43E-06    | 1.17E-05    |
| 8463     | 2027 | TEAD2        | 0.43 | 7.68E-07    | 2.81E-06    |
| 58533    | 2978 | SNX6         | 0.43 | 2.71E-09    | 1.25E-08    |
| 2296     | 3452 | FOXC1        | 0.43 | 2.91E-05    | 8.89E-05    |
| 79096    | 1740 | C11orf49     | 0.43 | 6.51E-06    | 2.17E-05    |
| 79863    | 5669 | RBFA         | 0.43 | 0.000238453 | 0.000640972 |
| 3682     | 4974 | ITGAE        | 0.43 | 0.020055325 | 0.038189156 |
| 55119    | 3787 | PRPF38B      | 0.43 | 3.34E-08    | 1.40E-07    |
| 1997     | 3646 | ELF1         | 0.43 | 2.14E-07    | 8.29E-07    |
| 91851    | 3987 | CHRD1        | 0.43 | 8.61E-06    | 2.82E-05    |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 7748     | 3181 | ZNF195       | 0.43 | 5.46E-05    | 0.000161117 |
| 90874    | 5143 | ZNF697       | 0.42 | 0.003386778 | 0.007492999 |
| 5364     | 7573 | PLXNB1       | 0.42 | 4.60E-07    | 1.73E-06    |
| 1207     | 1369 | CLNS1A       | 0.42 | 1.14E-07    | 4.53E-07    |
| 3475     | 2583 | IFRD1        | 0.42 | 0.000126671 | 0.000354049 |
| 5499     | 1481 | PPP1CA       | 0.42 | 6.92E-08    | 2.82E-07    |
| 5742     | 5107 | PTGS1        | 0.42 | 0.002872932 | 0.006440356 |
| 10981    | 1227 | RAB32        | 0.42 | 0.001097118 | 0.002656526 |
| 129880   | 3196 | BBS5         | 0.42 | 0.000297311 | 0.000787981 |
| 55048    | 2564 | VPS37C       | 0.42 | 0.000300968 | 0.000797079 |
| 83986    | 2981 | FAM234A      | 0.42 | 1.07E-09    | 5.07E-09    |
| 80179    | 3919 | MYO19        | 0.42 | 3.86E-08    | 1.61E-07    |
| 81553    | 4615 | FAM49A       | 0.42 | 6.50E-05    | 0.000189494 |
| 10138    | 2562 | YAF2         | 0.42 | 5.98E-05    | 0.00017491  |
| 117584   | 4137 | RFFL         | 0.42 | 5.58E-05    | 0.000164184 |
| 10296    | 2232 | MAEA         | 0.42 | 1.16E-06    | 4.16E-06    |
| 586      | 8469 | BCAT1        | 0.42 | 8.91E-07    | 3.23E-06    |
| 29952    | 1630 | DPP7         | 0.42 | 2.19E-08    | 9.36E-08    |
| 55615    | 1878 | PRR5         | 0.42 | 0.011255602 | 0.022561996 |
| 54949    | 1227 | SDHAF2       | 0.42 | 1.82E-05    | 5.74E-05    |
| 339229   | 1178 | OXLD1        | 0.42 | 0.001174334 | 0.002828079 |
| 8763     | 3024 | CD164        | 0.42 | 2.33E-12    | 1.34E-11    |
| 9061     | 2556 | PAPSS1       | 0.42 | 1.24E-07    | 4.92E-07    |
| 339366   | 2580 | ADAMTSL5     | 0.42 | 0.000634715 | 0.001598756 |
| 22852    | 7411 | ANKRD26      | 0.42 | 6.57E-06    | 2.18E-05    |
| 93974    | 611  | ATP5IF1      | 0.42 | 1.96E-07    | 7.63E-07    |
| 965      | 1273 | CD58         | 0.42 | 1.98E-05    | 6.18E-05    |
| 84080    | 1628 | ENKD1        | 0.42 | 0.001224458 | 0.002937737 |
| 84331    | 928  | MCRIP2       | 0.42 | 0.010843876 | 0.021815443 |
| 27030    | 6698 | MLH3         | 0.42 | 0.000196325 | 0.000534441 |
| 83636    | 4345 | C19orf12     | 0.42 | 0.000395316 | 0.001030212 |
| 3313     | 3506 | HSPA9        | 0.42 | 1.57E-11    | 8.56E-11    |
| 9532     | 2068 | BAG2         | 0.42 | 0.000139629 | 0.000388508 |
| 79184    | 3238 | BRCC3        | 0.42 | 2.43E-06    | 8.43E-06    |
|          |      | RPL36A-      |      |             |             |
| 1.01E+08 | 2655 | HNRNPH2      | 0.42 | 0.002343098 | 0.005338826 |
| 7978     | 1989 | MTERF1       | 0.42 | 0.007928759 | 0.01638309  |
| 7381     | 4839 | UQCRB        | 0.42 | 1.00E-06    | 3.63E-06    |
| 152100   | 827  | CMC1         | 0.42 | 0.010328553 | 0.020875637 |
| 55967    | 588  | NDUFA12      | 0.42 | 8.75E-06    | 2.86E-05    |
| 1.02E+08 | 1918 | LOC101928589 | 0.42 | 0.02427964  | 0.045362844 |
| 84190    | 2375 | METTL25      | 0.42 | 0.024628994 | 0.045972052 |
| 2011     | 4534 | MARK2        | 0.42 | 8.36E-07    | 3.04E-06    |
| 9658     | 8389 | ZNF516       | 0.42 | 0.000695894 | 0.001741989 |
| 51264    | 728  | MRPL27       | 0.42 | 0.000275935 | 0.000735384 |
| 134353   | 6591 | LSM11        | 0.42 | 0.007067989 | 0.01475723  |
| 285672   | 6860 | SREK1IP1     | 0.42 | 4.35E-06    | 1.47E-05    |
| 9289     | 3810 | ADGRG1       | 0.42 | 6.26E-07    | 2.31E-06    |

|        |       |           |      |             |             |
|--------|-------|-----------|------|-------------|-------------|
| 84864  | 3823  | RIOX2     | 0.41 | 0.000292348 | 0.000776101 |
| 84193  | 2728  | SETD3     | 0.41 | 4.22E-08    | 1.75E-07    |
| 10325  | 1816  | RRAGB     | 0.41 | 0.004957086 | 0.010667025 |
| 3672   | 4811  | ITGA1     | 0.41 | 4.70E-05    | 0.000139788 |
| 10184  | 4869  | LHFPL2    | 0.41 | 2.71E-06    | 9.37E-06    |
| 5468   | 1894  | PPARG     | 0.41 | 0.024158747 | 0.045160718 |
| 145553 | 756   | MDP1      | 0.41 | 0.018716317 | 0.035908813 |
| 29990  | 1438  | PILRB     | 0.41 | 0.000515692 | 0.001317632 |
| 79971  | 2692  | WLS       | 0.41 | 1.73E-06    | 6.12E-06    |
| 6793   | 5789  | STK10     | 0.41 | 0.000207889 | 0.000563505 |
| 23189  | 5336  | KANK1     | 0.41 | 5.51E-05    | 0.000162367 |
| 4598   | 2041  | MVK       | 0.41 | 0.001603204 | 0.00376397  |
| 84447  | 3071  | SYVN1     | 0.41 | 2.23E-05    | 6.94E-05    |
| 10428  | 1274  | CFDP1     | 0.41 | 5.95E-06    | 1.99E-05    |
| 55017  | 1527  | C14orf119 | 0.41 | 2.32E-06    | 8.06E-06    |
| 23216  | 2726  | TBC1D1    | 0.41 | 2.62E-07    | 1.00E-06    |
| 201254 | 836   | CENPX     | 0.41 | 0.000212071 | 0.000573614 |
| 54462  | 6944  | CCSER2    | 0.41 | 4.84E-05    | 0.000143693 |
| 80755  | 1377  | AARSD1    | 0.41 | 0.000381331 | 0.00099581  |
| 28982  | 5484  | FLVCR1    | 0.41 | 0.005103767 | 0.010954788 |
| 22890  | 3861  | ZBTB1     | 0.41 | 6.47E-07    | 2.38E-06    |
| 25832  | 10084 | NBPF14    | 0.41 | 1.37E-08    | 5.93E-08    |
| 4771   | 5419  | NF2       | 0.41 | 2.88E-09    | 1.32E-08    |
| 2260   | 5047  | FGFR1     | 0.41 | 4.70E-07    | 1.76E-06    |
| 112611 | 4051  | RWDD2A    | 0.41 | 0.006140102 | 0.012981597 |
| 9958   | 4535  | USP15     | 0.41 | 1.20E-05    | 3.85E-05    |
| 55102  | 11099 | ATG2B     | 0.41 | 3.85E-05    | 0.000115748 |
| 4750   | 5361  | NEK1      | 0.41 | 3.58E-05    | 0.000108136 |
| 55009  | 912   | C19orf24  | 0.41 | 0.002708561 | 0.00610345  |
| 58499  | 7867  | ZNF462    | 0.41 | 5.14E-05    | 0.000152135 |
| 57515  | 3218  | SERINC1   | 0.41 | 1.38E-11    | 7.58E-11    |
| 5834   | 4131  | PYGB      | 0.41 | 2.04E-07    | 7.94E-07    |
| 1983   | 5947  | EIF5      | 0.41 | 5.97E-10    | 2.89E-09    |
| 256471 | 4779  | MFSD8     | 0.41 | 0.000154563 | 0.000427237 |
| 51501  | 1141  | HIKESHI   | 0.41 | 0.00046785  | 0.001204398 |
| 7011   | 9893  | TEP1      | 0.41 | 0.000169974 | 0.000467173 |
| 23593  | 1277  | HEBP2     | 0.41 | 9.87E-06    | 3.21E-05    |
| 10569  | 2770  | SLU7      | 0.41 | 4.64E-08    | 1.92E-07    |
| 57561  | 4178  | ARRDC3    | 0.41 | 1.31E-07    | 5.18E-07    |
| 7542   | 1400  | ZFPL1     | 0.41 | 0.000224059 | 0.000604383 |
| 285550 | 4402  | FAM200B   | 0.40 | 0.002715401 | 0.006114986 |
| 4708   | 509   | NDUFB2    | 0.40 | 0.002233949 | 0.005107155 |
| 91942  | 719   | NDUFAF2   | 0.40 | 0.001292934 | 0.003087334 |
| 23173  | 2623  | METAP1    | 0.40 | 2.28E-07    | 8.81E-07    |
| 60496  | 2880  | AASDHPPT  | 0.40 | 2.55E-06    | 8.83E-06    |
| 84987  | 754   | COX14     | 0.40 | 0.003009819 | 0.006724313 |
| 84246  | 1059  | MED10     | 0.40 | 0.000390335 | 0.001017977 |
| 10209  | 1326  | EIF1      | 0.40 | 8.23E-09    | 3.64E-08    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 25950    | 1289  | RWDD3        | 0.40 | 0.01907594  | 0.036527784 |
| 7325     | 1660  | UBE2E2       | 0.40 | 0.00038869  | 0.001013835 |
| 29994    | 7764  | BAZ2B        | 0.40 | 6.01E-06    | 2.01E-05    |
| 84221    | 1263  | SPATC1L      | 0.40 | 0.001515491 | 0.003577421 |
| 81631    | 2304  | MAP1LC3B     | 0.40 | 1.37E-07    | 5.40E-07    |
| 2171     | 751   | FABP5        | 0.40 | 0.000209813 | 0.000568112 |
| 89941    | 2538  | RHOT2        | 0.40 | 3.03E-08    | 1.28E-07    |
| 23596    | 2632  | OPN3         | 0.40 | 0.000881564 | 0.002168577 |
| 23412    | 942   | COMMD3       | 0.40 | 0.00109549  | 0.002652946 |
| 10519    | 999   | CIB1         | 0.40 | 8.02E-05    | 0.000230893 |
| 57326    | 3285  | PBXIP1       | 0.40 | 5.13E-07    | 1.91E-06    |
| 65250    | 8732  | C5orf42      | 0.40 | 0.000146942 | 0.000408074 |
| 10069    | 1715  | RWDD2B       | 0.40 | 0.000827539 | 0.002043886 |
| 26056    | 4913  | RAB11FIP5    | 0.40 | 4.65E-06    | 1.57E-05    |
| 1122     | 7082  | CHML         | 0.40 | 0.000279204 | 0.000743427 |
| 9767     | 4741  | JADE3        | 0.40 | 2.67E-05    | 8.22E-05    |
| 1.01E+08 | 1999  | LOC100996709 | 0.40 | 0.000606211 | 0.00153199  |
| 126382   | 1291  | NR2C2AP      | 0.40 | 0.001841144 | 0.004275707 |
| 144100   | 4795  | PLEKHA7      | 0.40 | 0.002482087 | 0.005632404 |
| 116238   | 1016  | TLCD1        | 0.40 | 0.00483165  | 0.010426131 |
| 2237     | 2308  | FEN1         | 0.40 | 1.53E-08    | 6.63E-08    |
| 8871     | 6501  | SYNJ2        | 0.40 | 1.89E-07    | 7.35E-07    |
| 79075    | 2248  | DSCC1        | 0.40 | 0.001574369 | 0.003702144 |
| 4361     | 4989  | MRE11        | 0.40 | 2.78E-05    | 8.53E-05    |
| 394      | 8415  | ARHGAP5      | 0.40 | 2.96E-07    | 1.13E-06    |
| 283431   | 5519  | GAS2L3       | 0.40 | 6.95E-06    | 2.30E-05    |
| 79760    | 1045  | GEMIN7       | 0.40 | 0.008109564 | 0.016719742 |
| 128387   | 2453  | TATDN3       | 0.40 | 0.005750117 | 0.012223986 |
| 149041   | 10942 | RC3H1        | 0.40 | 1.37E-05    | 4.37E-05    |
| 493      | 8761  | ATP2B4       | 0.40 | 1.40E-07    | 5.51E-07    |
| 84263    | 3393  | HSDL2        | 0.40 | 8.31E-08    | 3.35E-07    |
| 4710     | 622   | NDUFB4       | 0.40 | 5.12E-07    | 1.91E-06    |
| 847      | 2300  | CAT          | 0.40 | 1.21E-07    | 4.81E-07    |
| 26091    | 4283  | HERC4        | 0.40 | 1.94E-06    | 6.79E-06    |
| 52       | 1558  | ACP1         | 0.40 | 4.36E-07    | 1.64E-06    |
| 139322   | 6337  | APOOL        | 0.40 | 0.000885173 | 0.002176248 |
| 9147     | 4486  | NEMF         | 0.40 | 5.20E-07    | 1.94E-06    |
| 6652     | 2813  | SORD         | 0.40 | 5.56E-05    | 0.000163495 |
| 5654     | 2138  | HTRA1        | 0.40 | 1.22E-06    | 4.36E-06    |
| 6940     | 2629  | ZNF354A      | 0.40 | 0.001299238 | 0.00310072  |
| 79921    | 1326  | TCEAL4       | 0.40 | 7.10E-08    | 2.89E-07    |
| 8896     | 1078  | BUD31        | 0.40 | 8.35E-06    | 2.74E-05    |
| 84669    | 6356  | USP32        | 0.40 | 2.07E-07    | 8.03E-07    |
| 55906    | 2827  | ZC4H2        | 0.40 | 0.002106429 | 0.004839911 |
| 2491     | 5477  | CENPI        | 0.40 | 6.26E-05    | 0.000182952 |
| 64901    | 3376  | RANBP17      | 0.39 | 0.008068863 | 0.01664162  |
| 83861    | 5338  | RSPH3        | 0.39 | 0.001382071 | 0.00328429  |
| 23036    | 10268 | ZNF292       | 0.39 | 2.68E-07    | 1.03E-06    |



|          |      |          |      |             |             |
|----------|------|----------|------|-------------|-------------|
| 84869    | 3454 | CBR4     | 0.39 | 0.004728475 | 0.010219626 |
| 11044    | 3832 | PAPD7    | 0.39 | 5.52E-05    | 0.000162529 |
| 54532    | 6076 | USP53    | 0.39 | 0.000245176 | 0.00065785  |
| 928      | 1321 | CD9      | 0.39 | 1.81E-10    | 9.12E-10    |
| 4709     | 775  | NDUFB3   | 0.39 | 7.75E-05    | 0.000223609 |
| 221545   | 1583 | C6orf136 | 0.39 | 0.001511787 | 0.003570101 |
| 526      | 3054 | ATP6V1B2 | 0.39 | 7.41E-06    | 2.45E-05    |
| 27072    | 3936 | VPS41    | 0.39 | 2.56E-05    | 7.88E-05    |
| 10144    | 5574 | FAM13A   | 0.39 | 0.000714931 | 0.001787629 |
| 84307    | 9709 | ZNF397   | 0.39 | 0.00609309  | 0.012891406 |
| 54875    | 4424 | CNTLN    | 0.39 | 1.26E-05    | 4.03E-05    |
| 80762    | 3599 | NDFIP1   | 0.39 | 1.61E-09    | 7.53E-09    |
| 51274    | 5502 | KLF3     | 0.39 | 0.000116979 | 0.000329081 |
| 64215    | 2206 | DNAJC1   | 0.39 | 0.000255474 | 0.000683932 |
| 55179    | 1079 | FAIM     | 0.39 | 0.000341575 | 0.000898062 |
| 10311    | 3223 | DSCR3    | 0.39 | 0.000122883 | 0.000344003 |
| 5795     | 7383 | PTPRJ    | 0.39 | 4.15E-09    | 1.88E-08    |
| 196441   | 7158 | ZFC3H1   | 0.39 | 0.000223789 | 0.000603748 |
| 126374   | 2173 | WTIP     | 0.39 | 0.002479638 | 0.005627566 |
| 476      | 3736 | ATP1A1   | 0.39 | 3.71E-12    | 2.11E-11    |
| 348013   | 1549 | TMEM255B | 0.39 | 0.018082474 | 0.034805481 |
| 29796    | 942  | UQCR10   | 0.39 | 1.56E-05    | 4.93E-05    |
| 4548     | 9846 | MTR      | 0.39 | 5.54E-06    | 1.86E-05    |
| 1.02E+08 | 666  | C11orf98 | 0.39 | 3.46E-05    | 0.000104797 |
| 9146     | 2980 | HGS      | 0.39 | 1.05E-07    | 4.21E-07    |
| 80115    | 2070 | BAIAP2L2 | 0.39 | 0.003711898 | 0.008169579 |
| 5076     | 3841 | PAX2     | 0.39 | 0.016755993 | 0.032517127 |
| 9842     | 4958 | PLEKHM1  | 0.39 | 1.20E-05    | 3.87E-05    |
| 4179     | 3296 | CD46     | 0.39 | 2.02E-06    | 7.09E-06    |
| 4343     | 3852 | MOV10    | 0.39 | 2.23E-07    | 8.63E-07    |
| 79640    | 5004 | C22orf46 | 0.39 | 0.000202445 | 0.000549755 |
| 55695    | 2035 | NSUN5    | 0.39 | 5.85E-05    | 0.000171351 |
| 1809     | 5203 | DPYSL3   | 0.39 | 1.13E-07    | 4.49E-07    |
| 5147     | 1218 | PDE6D    | 0.39 | 0.000624601 | 0.00157425  |
| 11116    | 3701 | FGFR1OP  | 0.39 | 0.000229255 | 0.000617369 |
| 121551   | 4299 | BTBD11   | 0.39 | 0.00849144  | 0.017449326 |
| 636      | 6501 | BICD1    | 0.39 | 8.19E-05    | 0.000235394 |
| 51324    | 1743 | SPG21    | 0.39 | 2.51E-06    | 8.69E-06    |
| 25855    | 1452 | BRMS1    | 0.39 | 3.34E-05    | 0.000101293 |
| 513      | 821  | ATP5F1D  | 0.39 | 6.15E-06    | 2.05E-05    |
| 10424    | 3790 | PGRMC2   | 0.39 | 3.41E-08    | 1.43E-07    |
| 1184     | 9728 | CLCN5    | 0.39 | 0.016254774 | 0.03161283  |
| 79893    | 2672 | GGNBP2   | 0.39 | 3.98E-09    | 1.81E-08    |
| 285521   | 3209 | COX18    | 0.39 | 0.003080207 | 0.006871201 |
| 221078   | 2859 | NSUN6    | 0.39 | 0.010537221 | 0.021255227 |
| 818      | 3641 | CAMK2G   | 0.39 | 3.10E-05    | 9.43E-05    |
| 10943    | 2713 | MSL3     | 0.39 | 0.000624015 | 0.001573141 |
| 664      | 1661 | BNIP3    | 0.39 | 1.38E-06    | 4.92E-06    |

|          |       |              |      |             |             |
|----------|-------|--------------|------|-------------|-------------|
| 9603     | 3720  | NFE2L3       | 0.39 | 2.94E-05    | 8.97E-05    |
| 84279    | 1105  | PRADC1       | 0.38 | 0.004371253 | 0.009499562 |
| 9465     | 2384  | AKAP7        | 0.38 | 0.017685175 | 0.034133195 |
| 51655    | 1814  | RASD1        | 0.38 | 0.009693474 | 0.019701859 |
| 93134    | 4570  | ZNF561       | 0.38 | 0.001025309 | 0.002494206 |
| 1153     | 1438  | CIRBP        | 0.38 | 4.89E-07    | 1.83E-06    |
| 54901    | 3264  | CDKAL1       | 0.38 | 0.000445111 | 0.0011505   |
| 55930    | 6937  | MYO5C        | 0.38 | 1.48E-05    | 4.69E-05    |
| 3217     | 1377  | HOXB7        | 0.38 | 1.73E-05    | 5.44E-05    |
| 2595     | 3110  | GANC         | 0.38 | 0.002289605 | 0.005224981 |
| 9194     | 11725 | SLC16A7      | 0.38 | 0.000144794 | 0.000402237 |
| 3554     | 4911  | IL1R1        | 0.38 | 1.43E-10    | 7.30E-10    |
| 145389   | 1603  | SLC38A6      | 0.38 | 0.010084573 | 0.020424335 |
| 2920     | 1234  | CXCL2        | 0.38 | 0.009182641 | 0.018749386 |
| 1.02E+08 | 9516  | LOC101928841 | 0.38 | 0.023133777 | 0.043436643 |
| 11152    | 1683  | WDR45        | 0.38 | 0.000309704 | 0.000818384 |
| 8859     | 1621  | STK19        | 0.38 | 0.018877641 | 0.036167557 |
| 200765   | 2636  | TIGD1        | 0.38 | 0.007435327 | 0.015458798 |
| 1609     | 4653  | DGKQ         | 0.38 | 0.000955271 | 0.00233726  |
| 51306    | 5352  | FAM13B       | 0.38 | 8.98E-07    | 3.26E-06    |
| 9704     | 4530  | DHX34        | 0.38 | 0.004685987 | 0.010137662 |
| 90799    | 3070  | CEP95        | 0.38 | 0.000197584 | 0.000537539 |
| 79899    | 3886  | PRR5L        | 0.38 | 0.001839356 | 0.004272673 |
| 153129   | 2455  | SLC38A9      | 0.38 | 0.001171485 | 0.002822749 |
| 5372     | 1267  | PMM1         | 0.38 | 0.001025607 | 0.00249459  |
| 10653    | 1814  | SPINT2       | 0.38 | 1.72E-05    | 5.42E-05    |
| 55793    | 2474  | MINDY1       | 0.38 | 0.003678318 | 0.008102697 |
| 5922     | 5512  | RASA2        | 0.38 | 0.000173558 | 0.000476333 |
| 80212    | 2011  | CCDC92       | 0.38 | 0.000180033 | 0.000492961 |
| 4017     | 3810  | LOXL2        | 0.38 | 9.47E-08    | 3.80E-07    |
| 80381    | 3041  | CD276        | 0.38 | 3.95E-07    | 1.49E-06    |
| 1759     | 3857  | DNM1         | 0.38 | 3.96E-05    | 0.000118968 |
| 9019     | 4914  | MPZL1        | 0.38 | 1.49E-08    | 6.45E-08    |
| 91689    | 1585  | SMDT1        | 0.38 | 0.0019639   | 0.004535887 |
| 51091    | 5658  | SEPSECS      | 0.38 | 0.009750652 | 0.019806744 |
| 23016    | 1097  | EXOSC7       | 0.38 | 0.001254335 | 0.003003237 |
| 87       | 3752  | ACTN1        | 0.38 | 3.54E-08    | 1.48E-07    |
| 55833    | 3691  | UBAP2        | 0.38 | 8.73E-05    | 0.000250232 |
| 92999    | 5524  | ZBTB47       | 0.38 | 0.000415278 | 0.001078436 |
| 1465     | 1970  | CSRP1        | 0.38 | 1.64E-06    | 5.78E-06    |
| 1340     | 590   | COX6B1       | 0.38 | 1.17E-06    | 4.19E-06    |
| 1956     | 5616  | EGFR         | 0.37 | 0.000290837 | 0.000772435 |
| 166929   | 6080  | SGMS2        | 0.37 | 3.78E-05    | 0.000113824 |
| 389541   | 641   | LAMTOR4      | 0.37 | 0.001531331 | 0.003610016 |
| 148156   | 3397  | ZNF558       | 0.37 | 0.001760148 | 0.004099397 |
| 10399    | 1125  | RACK1        | 0.37 | 4.08E-08    | 1.70E-07    |
| 55719    | 5685  | SLF2         | 0.37 | 5.93E-06    | 1.98E-05    |
| 29099    | 2643  | COMMD9       | 0.37 | 9.15E-06    | 2.98E-05    |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 9702   | 3147  | CEP57    | 0.37 | 1.09E-06    | 3.93E-06    |
| 9553   | 493   | MRPL33   | 0.37 | 0.000986131 | 0.002406243 |
| 2534   | 2880  | FYN      | 0.37 | 5.95E-05    | 0.000174319 |
| 7072   | 5877  | TIA1     | 0.37 | 3.01E-05    | 9.19E-05    |
| 50854  | 760   | C6orf48  | 0.37 | 4.68E-05    | 0.000139407 |
| 55650  | 2461  | PIGV     | 0.37 | 0.00754274  | 0.015658303 |
| 9685   | 3696  | CLINT1   | 0.37 | 1.18E-07    | 4.68E-07    |
| 27109  | 1668  | ATP5S    | 0.37 | 0.002781126 | 0.006247162 |
| 79590  | 907   | MRPL24   | 0.37 | 5.60E-05    | 0.000164636 |
| 11179  | 2299  | ZNF277   | 0.37 | 0.004280509 | 0.009316031 |
| 4267   | 1317  | CD99     | 0.37 | 4.14E-05    | 0.000124182 |
| 8764   | 1964  | TNFRSF14 | 0.37 | 0.010710003 | 0.02156321  |
| 8045   | 1710  | RASSF7   | 0.37 | 3.44E-06    | 1.18E-05    |
| 4008   | 4953  | LMO7     | 0.37 | 2.11E-05    | 6.58E-05    |
| 83989  | 5146  | FAM172A  | 0.37 | 2.48E-05    | 7.65E-05    |
| 64848  | 6119  | YTHDC2   | 0.37 | 2.57E-06    | 8.92E-06    |
| 6813   | 1904  | STXBP2   | 0.37 | 1.91E-05    | 5.99E-05    |
| 2175   | 4705  | FANCA    | 0.37 | 6.08E-05    | 0.000177896 |
| 23141  | 4389  | ANKLE2   | 0.37 | 5.94E-07    | 2.20E-06    |
| 130557 | 1977  | ZNF513   | 0.37 | 0.002388321 | 0.005434659 |
| 84936  | 2288  | ZFYVE19  | 0.37 | 0.000483001 | 0.001239451 |
| 1509   | 2141  | CTSD     | 0.37 | 7.18E-09    | 3.20E-08    |
| 84520  | 1191  | GON7     | 0.37 | 0.000651541 | 0.001637423 |
| 84280  | 2422  | BTBD10   | 0.37 | 0.000142836 | 0.000397232 |
| 1192   | 1251  | CLIC1    | 0.37 | 2.35E-07    | 9.08E-07    |
| 79624  | 2619  | ARMT1    | 0.37 | 0.000128423 | 0.000358552 |
| 10897  | 1168  | YIF1A    | 0.37 | 0.000119524 | 0.000335446 |
| 9497   | 6771  | SLC4A7   | 0.37 | 5.47E-05    | 0.00016132  |
| 1326   | 4183  | MAP3K8   | 0.37 | 0.02370751  | 0.044415334 |
| 3621   | 2174  | ING1     | 0.37 | 0.001337566 | 0.003186627 |
| 2580   | 4376  | GAK      | 0.37 | 6.19E-06    | 2.07E-05    |
| 55329  | 2023  | MNS1     | 0.37 | 0.000443937 | 0.001148162 |
| 527    | 1180  | ATP6V0C  | 0.37 | 0.000118766 | 0.000333529 |
| 92922  | 2450  | CCDC102A | 0.37 | 0.017828833 | 0.034380584 |
| 26052  | 5008  | DNM3     | 0.37 | 0.010569656 | 0.021312034 |
| 7769   | 2063  | ZNF226   | 0.37 | 0.002812621 | 0.006313918 |
| 4717   | 746   | NDUFC1   | 0.37 | 0.000138747 | 0.000386344 |
| 81844  | 10542 | TRIM56   | 0.37 | 1.84E-06    | 6.46E-06    |
| 9392   | 5375  | TGFBRAP1 | 0.37 | 3.01E-06    | 1.03E-05    |
| 51259  | 1311  | TMEM216  | 0.37 | 0.021109018 | 0.039964308 |
| 200014 | 4036  | CC2D1B   | 0.37 | 6.30E-06    | 2.10E-05    |
| 1781   | 3360  | DYNC1I2  | 0.37 | 2.11E-06    | 7.37E-06    |
| 8270   | 964   | LAGE3    | 0.37 | 0.005190877 | 0.011135036 |
| 8216   | 4332  | LZTR1    | 0.37 | 6.86E-05    | 0.000199089 |
| 81890  | 1352  | QTRT1    | 0.37 | 0.002604918 | 0.005886327 |
| 10627  | 1158  | MYL12A   | 0.37 | 1.81E-07    | 7.07E-07    |
| 6993   | 787   | DYNLT1   | 0.37 | 7.73E-05    | 0.00022305  |
| 92979  | 2985  | MARCH9   | 0.37 | 0.002819573 | 0.006328724 |

|        |       |         |      |             |             |
|--------|-------|---------|------|-------------|-------------|
| 9179   | 1811  | AP4M1   | 0.37 | 0.003142455 | 0.006999517 |
| 221749 | 2209  | PXDC1   | 0.37 | 9.39E-05    | 0.000267867 |
| 9554   | 2622  | SEC22B  | 0.37 | 2.75E-08    | 1.17E-07    |
| 1155   | 1045  | TBCB    | 0.37 | 0.000102522 | 0.000291179 |
| 55015  | 2894  | PRPF39  | 0.37 | 3.13E-05    | 9.53E-05    |
| 27086  | 6017  | FOXP1   | 0.37 | 1.07E-06    | 3.84E-06    |
| 5868   | 2548  | RAB5A   | 0.37 | 2.88E-05    | 8.80E-05    |
| 10915  | 3969  | TCERG1  | 0.36 | 9.09E-06    | 2.96E-05    |
| 84875  | 3525  | PARP10  | 0.36 | 0.000318194 | 0.000839945 |
| 64599  | 6069  | GIGYF1  | 0.36 | 0.000105285 | 0.00029829  |
| 84250  | 4523  | SLF1    | 0.36 | 0.001211602 | 0.002909941 |
| 7360   | 2140  | UGP2    | 0.36 | 7.90E-06    | 2.60E-05    |
| 11216  | 3816  | AKAP10  | 0.36 | 9.32E-05    | 0.000266016 |
| 22862  | 5991  | FNDC3A  | 0.36 | 3.62E-06    | 1.23E-05    |
| 2720   | 2607  | GLB1    | 0.36 | 8.83E-07    | 3.21E-06    |
| 55824  | 10471 | PAG1    | 0.36 | 0.003212805 | 0.007143676 |
| 54939  | 944   | COMMD4  | 0.36 | 0.000303484 | 0.000803504 |
| 192670 | 6607  | ago-04  | 0.36 | 0.001064034 | 0.002583106 |
| 26580  | 1596  |         | 0.36 | 7.84E-05    | 0.000226318 |
| 10289  | 1014  | EIF1B   | 0.36 | 0.000183528 | 0.00050199  |
| 10494  | 2314  | STK25   | 0.36 | 4.46E-07    | 1.67E-06    |
| 5080   | 4434  | PAX6    | 0.36 | 0.000868171 | 0.00213725  |
| 10380  | 2422  | BPNT1   | 0.36 | 0.000797353 | 0.001974822 |
| 5826   | 2260  | ABCD4   | 0.36 | 0.000158709 | 0.000438015 |
| 900    | 2429  | CCNG1   | 0.36 | 1.18E-06    | 4.23E-06    |
| 55711  | 3874  | FAR2    | 0.36 | 0.005841378 | 0.012403156 |
| 29901  | 1584  | SAC3D1  | 0.36 | 0.00098617  | 0.002406243 |
| 51326  | 3999  | ARL17A  | 0.36 | 0.000475649 | 0.001222351 |
| 26751  | 1817  | SH3YL1  | 0.36 | 0.00473508  | 0.010232657 |
| 1327   | 835   | COX4I1  | 0.36 | 9.48E-05    | 0.000270159 |
| 10540  | 2108  | DCTN2   | 0.36 | 3.10E-06    | 1.07E-05    |
| 57099  | 1379  | AVEN    | 0.36 | 0.025311312 | 0.04715154  |
| 254531 | 1901  | LPCAT4  | 0.36 | 0.001688213 | 0.003947385 |
| 23126  | 6365  | POGZ    | 0.36 | 6.07E-06    | 2.02E-05    |
| 4282   | 561   | MIF     | 0.36 | 0.000199428 | 0.000542059 |
| 92106  | 2777  | OXNAD1  | 0.36 | 0.007252874 | 0.015104773 |
| 7358   | 3113  | UGDH    | 0.36 | 0.000814093 | 0.002012635 |
| 203054 | 2006  | ADCK5   | 0.36 | 0.020941107 | 0.039680238 |
| 51115  | 2772  | RMDN1   | 0.36 | 0.000112882 | 0.000318464 |
| 29063  | 2880  | ZCCHC4  | 0.36 | 0.005087553 | 0.010922625 |
| 585    | 2519  | BBS4    | 0.36 | 0.007994167 | 0.016502888 |
| 29966  | 4124  | STRN3   | 0.36 | 0.00010516  | 0.000298051 |
| 8725   | 3141  | URI1    | 0.36 | 6.30E-05    | 0.000183876 |
| 54884  | 3328  | RETSAT  | 0.36 | 0.000676879 | 0.001697979 |
| 9590   | 8201  | AKAP12  | 0.36 | 3.42E-07    | 1.30E-06    |
| 131076 | 726   | CCDC58  | 0.36 | 0.00541099  | 0.011561143 |
| 255967 | 5011  | PAN3    | 0.36 | 0.000557348 | 0.00141734  |
| 80011  | 3118  | FAM192A | 0.36 | 9.35E-07    | 3.39E-06    |

|        |      |          |      |             |             |
|--------|------|----------|------|-------------|-------------|
| 374395 | 1054 | TMEM179B | 0.36 | 0.000209058 | 0.000566329 |
| 29894  | 3614 | CPSF1    | 0.36 | 5.70E-07    | 2.12E-06    |
| 1877   | 2665 | E4F1     | 0.36 | 0.001078639 | 0.002615346 |
| 8897   | 7614 | MTMR3    | 0.35 | 1.49E-05    | 4.72E-05    |
| 5052   | 1044 | PRDX1    | 0.35 | 2.83E-05    | 8.68E-05    |
| 196    | 6247 | AHR      | 0.35 | 5.42E-05    | 0.000159775 |
| 440400 | 830  | RNASEK   | 0.35 | 0.000263903 | 0.000704798 |
| 64772  | 4012 | ENGASE   | 0.35 | 0.003613488 | 0.007969768 |
| 153527 | 1644 | ZMAT2    | 0.35 | 2.70E-06    | 9.31E-06    |
| 10367  | 2338 | MICU1    | 0.35 | 8.98E-06    | 2.93E-05    |
| 54960  | 3071 | GEMIN8   | 0.35 | 0.009996764 | 0.020258041 |
| 1337   | 593  | COX6A1   | 0.35 | 1.13E-05    | 3.64E-05    |
| 94081  | 4084 | SFXN1    | 0.35 | 1.07E-05    | 3.47E-05    |
| 29781  | 2726 | NCAPH2   | 0.35 | 6.73E-05    | 0.000195733 |
| 9454   | 1553 | HOMER3   | 0.35 | 0.000932071 | 0.002284672 |
| 5600   | 2404 | MAPK11   | 0.35 | 0.007049958 | 0.014721313 |
| 323    | 8301 | APBB2    | 0.35 | 3.18E-06    | 1.09E-05    |
| 205    | 6802 | AK4      | 0.35 | 1.32E-06    | 4.69E-06    |
| 1906   | 1923 | EDN1     | 0.35 | 0.001076201 | 0.002610502 |
| 51088  | 7076 | KLHL5    | 0.35 | 3.14E-07    | 1.20E-06    |
| 51427  | 5751 | ZNF107   | 0.35 | 0.007096443 | 0.014807938 |
| 92689  | 3924 | FAM114A1 | 0.35 | 6.61E-05    | 0.000192369 |
| 9121   | 3698 | SLC16A5  | 0.35 | 0.000246522 | 0.000661263 |
| 8558   | 1857 | CDK10    | 0.35 | 4.60E-05    | 0.000136978 |
| 7267   | 7337 | TTC3     | 0.35 | 4.40E-09    | 1.99E-08    |
| 8933   | 1254 | RTL8C    | 0.35 | 0.000259446 | 0.000693626 |
| 23583  | 1432 | SMUG1    | 0.35 | 0.004082584 | 0.008912564 |
| 5007   | 5083 | OSBP     | 0.35 | 9.19E-07    | 3.33E-06    |
| 3097   | 9715 | HIVEP2   | 0.35 | 1.24E-05    | 3.98E-05    |
| 121274 | 4999 | ZNF641   | 0.35 | 0.009893049 | 0.02006584  |
| 56952  | 2002 | PRTFDC1  | 0.35 | 0.014479013 | 0.028436288 |
| 6015   | 1744 | RING1    | 0.35 | 3.21E-05    | 9.75E-05    |
| 6272   | 6868 | SORT1    | 0.35 | 1.29E-08    | 5.62E-08    |
| 7368   | 4104 | UGT8     | 0.35 | 4.35E-05    | 0.000130068 |
| 84324  | 941  | SARNP    | 0.35 | 0.000139718 | 0.000388682 |
| 26005  | 6255 | C2CD3    | 0.35 | 8.87E-05    | 0.000253831 |
| 9400   | 3694 | RECQL5   | 0.35 | 0.001636226 | 0.003833899 |
| 29074  | 995  | MRPL18   | 0.35 | 0.000605434 | 0.001530641 |
| 9296   | 748  | ATP6V1F  | 0.35 | 0.000643491 | 0.001619025 |
| 9847   | 3860 | C2CD5    | 0.35 | 5.44E-05    | 0.000160558 |
| 55593  | 2703 | OTUD5    | 0.35 | 1.03E-05    | 3.32E-05    |
| 286144 | 3644 | TRIQK    | 0.35 | 0.001534247 | 0.003614972 |
| 23113  | 6693 | CUL9     | 0.35 | 0.000822644 | 0.002033208 |
| 51571  | 2043 | FAM49B   | 0.35 | 0.000102096 | 0.000290015 |
| 284325 | 2589 | C19orf54 | 0.35 | 0.002556059 | 0.005786402 |
| 152815 | 3700 | THAP6    | 0.35 | 0.008175599 | 0.016844161 |
| 10483  | 3271 | SEC23B   | 0.35 | 2.49E-05    | 7.69E-05    |
| 28985  | 9796 | MCTS1    | 0.35 | 0.000750312 | 0.00186952  |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 22921  | 1774  | MSRB2    | 0.35 | 0.013892619 | 0.027372373 |
| 27     | 11522 | ABL2     | 0.35 | 2.82E-05    | 8.66E-05    |
| 26233  | 1797  | FBXL6    | 0.34 | 0.006228204 | 0.013156904 |
| 51128  | 6558  | SAR1B    | 0.34 | 7.85E-06    | 2.58E-05    |
| 23241  | 5070  | PACS2    | 0.34 | 2.09E-05    | 6.52E-05    |
| 2766   | 1517  | GMPR     | 0.34 | 0.013843627 | 0.027284921 |
| 53834  | 3129  | FGFRL1   | 0.34 | 0.000150518 | 0.000417483 |
| 535    | 4139  | ATP6V0A1 | 0.34 | 0.000269023 | 0.000718042 |
| 22920  | 3011  | KIFAP3   | 0.34 | 0.000958585 | 0.002343764 |
| 399512 | 2220  | SLC25A35 | 0.34 | 0.009604832 | 0.019535102 |
| 126003 | 710   | TRAPPC5  | 0.34 | 0.001254901 | 0.003004188 |
| 55745  | 3709  | AP5M1    | 0.34 | 2.83E-05    | 8.68E-05    |
| 8195   | 2960  | MKKS     | 0.34 | 0.001743195 | 0.004065243 |
| 2773   | 4748  | GNAI3    | 0.34 | 1.69E-06    | 5.95E-06    |
| 8323   | 3450  | FZD6     | 0.34 | 4.08E-07    | 1.54E-06    |
| 37     | 2291  | ACADVL   | 0.34 | 1.85E-08    | 7.96E-08    |
| 83787  | 2213  | ARMC10   | 0.34 | 0.000826152 | 0.002040743 |
| 7286   | 3069  | TUFT1    | 0.34 | 0.000288615 | 0.000766993 |
| 2287   | 1295  | FKBP3    | 0.34 | 4.97E-05    | 0.000147474 |
| 6748   | 734   | SSR4     | 0.34 | 0.001090964 | 0.002643066 |
| 8493   | 4790  | PPM1D    | 0.34 | 0.000357376 | 0.000936558 |
| 84326  | 798   | METTL26  | 0.34 | 0.006906372 | 0.014445253 |
| 10181  | 3694  | RBM5     | 0.34 | 0.000232308 | 0.000625212 |
| 10952  | 583   | SEC61B   | 0.34 | 0.000198833 | 0.000540606 |
| 901    | 2651  | CCNG2    | 0.34 | 3.89E-05    | 0.000117008 |
| 2530   | 3801  | FUT8     | 0.34 | 1.50E-05    | 4.76E-05    |
| 114991 | 8901  | ZNF618   | 0.34 | 8.20E-06    | 2.69E-05    |
| 23325  | 5737  | WASHC4   | 0.34 | 1.58E-05    | 4.99E-05    |
| 51014  | 4063  | TMED7    | 0.34 | 7.89E-07    | 2.88E-06    |
| 3214   | 2042  | HOXB4    | 0.34 | 0.019351731 | 0.036992098 |
| 23327  | 8363  | NEDD4L   | 0.34 | 6.80E-06    | 2.26E-05    |
| 9906   | 6136  | SLC35E2  | 0.34 | 0.000454313 | 0.001172438 |
| 9219   | 3007  | MTA2     | 0.34 | 2.32E-07    | 8.95E-07    |
| 6879   | 2310  | TAF7     | 0.34 | 8.60E-06    | 2.82E-05    |
| 90410  | 937   | IFT20    | 0.34 | 0.008282448 | 0.01705639  |
| 10848  | 3162  | PPP1R13L | 0.34 | 0.000220132 | 0.000594513 |
| 57563  | 5168  | KLHL8    | 0.34 | 0.000198077 | 0.000538797 |
| 129303 | 1684  | TMEM150A | 0.34 | 0.021754842 | 0.04107758  |
| 64745  | 1639  | METTL17  | 0.34 | 0.000224311 | 0.00060479  |
| 7855   | 6584  | FZD5     | 0.34 | 0.00136991  | 0.003258006 |
| 7163   | 4035  | TPD52    | 0.34 | 6.63E-05    | 0.000192938 |
| 51070  | 1152  | NOSIP    | 0.34 | 0.002554466 | 0.005784089 |
| 28958  | 808   | COA3     | 0.34 | 0.000514865 | 0.001315898 |
| 5993   | 3620  | RFX5     | 0.34 | 8.98E-06    | 2.93E-05    |
| 51     | 7565  | ACOX1    | 0.34 | 0.000285029 | 0.000758143 |
| 51575  | 3446  | ESF1     | 0.34 | 0.018822921 | 0.03608996  |
| 79020  | 1866  | C7orf25  | 0.34 | 0.006315394 | 0.013317341 |
| 5691   | 809   | PSMB3    | 0.34 | 4.79E-05    | 0.000142425 |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 284459   | 3128 | HKR1         | 0.34 | 0.002108502 | 0.004844047 |
| 65992    | 1335 | DDRGK1       | 0.34 | 8.16E-05    | 0.000234658 |
| 220002   | 2771 | CYB561A3     | 0.34 | 0.000307222 | 0.000812309 |
| 6451     | 2059 | SH3BGRL      | 0.34 | 1.03E-05    | 3.34E-05    |
| 9913     | 4637 | SUPT7L       | 0.34 | 0.000179281 | 0.000490977 |
| 1329     | 523  | COX5B        | 0.34 | 0.000349718 | 0.000917434 |
| 84954    | 1638 | MPND         | 0.34 | 0.01485859  | 0.029102329 |
| 51111    | 3715 | KMT5B        | 0.34 | 5.34E-05    | 0.00015764  |
| 2631     | 2013 | NIPSNAP2     | 0.33 | 0.000463514 | 0.001193929 |
| 253982   | 1502 | ASPHD1       | 0.33 | 0.019953649 | 0.038018062 |
| 3959     | 2277 | LGALS3BP     | 0.33 | 1.41E-05    | 4.50E-05    |
| 153642   | 3330 | ARSK         | 0.33 | 0.007820323 | 0.016179728 |
| 1.02E+08 | 1591 | LOC101929959 | 0.33 | 0.011026379 | 0.022149996 |
| 3953     | 4675 | LEPR         | 0.33 | 0.00156421  | 0.00368069  |
| 51368    | 1380 | TEX264       | 0.33 | 0.000591733 | 0.001499204 |
| 116447   | 1962 | TOP1MT       | 0.33 | 0.008791679 | 0.018021522 |
| 125488   | 3369 | TTC39C       | 0.33 | 5.12E-05    | 0.000151635 |
| 64400    | 2479 | AKTIP        | 0.33 | 0.006775981 | 0.014209326 |
| 84967    | 939  | LSM10        | 0.33 | 0.022449811 | 0.042259588 |
| 57688    | 4631 | ZSWIM6       | 0.33 | 0.001056143 | 0.002565    |
| 81848    | 5067 | SPRY4        | 0.33 | 0.022216256 | 0.041868735 |
| 283232   | 1574 | TMEM80       | 0.33 | 0.010210653 | 0.020656142 |
| 283871   | 3136 | PGP          | 0.33 | 0.001263508 | 0.003021942 |
| 143279   | 3936 | HECTD2       | 0.33 | 0.001957273 | 0.004521755 |
| 3070     | 3141 | HELLS        | 0.33 | 5.57E-05    | 0.000163882 |
| 5352     | 3747 | PLOD2        | 0.33 | 4.91E-08    | 2.03E-07    |
| 51013    | 1125 | EXOSC1       | 0.33 | 0.007549707 | 0.015670935 |
| 9092     | 2500 | SART1        | 0.33 | 3.25E-06    | 1.11E-05    |
| 27236    | 2995 | ARFIP1       | 0.33 | 0.000205888 | 0.000558591 |
| 84445    | 2982 | LZTS2        | 0.33 | 3.92E-06    | 1.33E-05    |
| 89797    | 9091 | NAV2         | 0.33 | 5.08E-05    | 0.000150544 |
| 51430    | 5443 | SUCO         | 0.33 | 9.14E-05    | 0.000261076 |
| 55668    | 5120 | GPATCH2L     | 0.33 | 0.000284619 | 0.000757166 |
| 9063     | 5911 | PIAS2        | 0.33 | 0.000928216 | 0.002275776 |
| 6237     | 1003 | RRAS         | 0.33 | 0.001192559 | 0.002868081 |
| 92344    | 2653 | GORAB        | 0.33 | 0.023254458 | 0.043640178 |
| 54758    | 1981 | KLHDC4       | 0.33 | 0.003361229 | 0.007441106 |
| 7390     | 1349 | UROS         | 0.33 | 0.000346305 | 0.00090969  |
| 147339   | 5250 | C18orf25     | 0.33 | 0.000362881 | 0.000950142 |
| 666      | 2535 | BOK          | 0.33 | 0.000339476 | 0.000892941 |
| 51650    | 705  | MRPS33       | 0.33 | 0.006917192 | 0.01446618  |
| 8517     | 2213 | IKBKG        | 0.33 | 0.002128232 | 0.004886215 |
| 1595     | 3046 | CYP51A1      | 0.33 | 0.000496545 | 0.001272003 |
| 148534   | 6845 | TMEM56       | 0.33 | 0.001037088 | 0.0025201   |
| 4641     | 4746 | MYO1C        | 0.33 | 4.71E-08    | 1.94E-07    |
| 3155     | 1563 | HMGCL        | 0.33 | 0.003893692 | 0.008530595 |
| 11112    | 2012 | HIBADH       | 0.33 | 8.93E-05    | 0.000255409 |
| 10096    | 5708 | ACTR3        | 0.33 | 2.20E-06    | 7.67E-06    |

|          |       |          |      |             |             |
|----------|-------|----------|------|-------------|-------------|
| 9462     | 10156 | RASAL2   | 0.33 | 0.00029812  | 0.000790008 |
| 55758    | 3868  | RCOR3    | 0.33 | 0.000160874 | 0.000443852 |
| 669      | 1804  | BPGM     | 0.33 | 0.008528341 | 0.017516074 |
| 114803   | 7703  | MYSM1    | 0.33 | 0.007781317 | 0.016115916 |
| 4205     | 5393  | MEF2A    | 0.33 | 5.86E-05    | 0.000171834 |
| 2023     | 2062  | ENO1     | 0.33 | 1.49E-07    | 5.85E-07    |
| 85014    | 875   | TMEM141  | 0.33 | 0.007832015 | 0.016198259 |
| 1647     | 1384  | GADD45A  | 0.33 | 5.69E-05    | 0.000167059 |
| 9860     | 9928  | LRIG2    | 0.33 | 0.01468366  | 0.02879683  |
| 55093    | 1593  | WDYHV1   | 0.33 | 0.024186645 | 0.045203357 |
| 80324    | 1462  | PUS1     | 0.33 | 0.016929704 | 0.032824856 |
| 3987     | 4252  | LIMS1    | 0.33 | 1.77E-05    | 5.58E-05    |
| 55907    | 1814  | CMAS     | 0.33 | 0.001211387 | 0.002909818 |
| 9013     | 3819  | TAF1C    | 0.32 | 0.001716125 | 0.004007901 |
| 79789    | 8883  | CLMN     | 0.32 | 0.000894854 | 0.002198225 |
| 4725     | 581   | NDUFS5   | 0.32 | 0.000719323 | 0.001797598 |
| 5510     | 1436  | PPP1R7   | 0.32 | 0.000199117 | 0.000541297 |
| 80013    | 2599  | MINDY3   | 0.32 | 0.001572509 | 0.003698747 |
| 56180    | 2350  | MOSPD1   | 0.32 | 0.019175405 | 0.036690566 |
| 2650     | 5550  | GCNT1    | 0.32 | 0.000133474 | 0.000372128 |
| 55257    | 2845  | MRGBP    | 0.32 | 0.002939247 | 0.006577397 |
| 1.01E+08 | 2168  | TIMM23B  | 0.32 | 0.01725714  | 0.033383219 |
| 119710   | 884   | C11orf74 | 0.32 | 0.012901004 | 0.02556033  |
| 64423    | 4302  | INF2     | 0.32 | 4.73E-06    | 1.59E-05    |
| 51084    | 1469  | CRYL1    | 0.32 | 0.014592614 | 0.028643567 |
| 95       | 1678  | ACY1     | 0.32 | 0.008380393 | 0.017240109 |
| 7015     | 4018  | TERT     | 0.32 | 5.05E-05    | 0.000149601 |
| 5828     | 4389  | PEX2     | 0.32 | 0.001914679 | 0.004431998 |
| 90313    | 1593  | TP53I13  | 0.32 | 0.000156599 | 0.000432394 |
| 10521    | 4806  | DDX17    | 0.32 | 0.000203338 | 0.000552095 |
| 27095    | 1343  | TRAPPC3  | 0.32 | 0.00163564  | 0.003833032 |
| 10772    | 5740  | SRSF10   | 0.32 | 0.000773985 | 0.001922842 |
| 219402   | 1065  | MTIF3    | 0.32 | 0.004720996 | 0.010205648 |
| 10011    | 1780  | SRA1     | 0.32 | 0.000127681 | 0.000356647 |
| 26268    | 2332  | FBXO9    | 0.32 | 0.000513124 | 0.001311636 |
| 10142    | 12797 | AKAP9    | 0.32 | 0.000103139 | 0.000292791 |
| 308      | 1623  | ANXA5    | 0.32 | 1.40E-07    | 5.51E-07    |
| 83862    | 1494  | TMEM120A | 0.32 | 0.014343674 | 0.028186066 |
| 84542    | 4523  | KIAA1841 | 0.32 | 0.00309214  | 0.006896089 |
| 5696     | 1188  | PSMB8    | 0.32 | 0.000344726 | 0.000905944 |
| 80005    | 9623  | DOCK5    | 0.32 | 0.001891925 | 0.004385855 |
| 55644    | 1642  | OSGEP    | 0.32 | 0.006092635 | 0.012891406 |
| 4697     | 2058  | NDUFA4   | 0.32 | 0.000330623 | 0.000871071 |
| 10651    | 1422  | MTX2     | 0.32 | 0.001483233 | 0.003508264 |
| 64432    | 4602  | MRPS25   | 0.32 | 0.002732322 | 0.006148417 |
| 91582    | 942   | RPS19BP1 | 0.32 | 0.018702211 | 0.0358895   |
| 5876     | 1531  | RABGGTB  | 0.32 | 0.005277179 | 0.011309241 |
| 56996    | 3015  | SLC12A9  | 0.32 | 0.005803406 | 0.012331209 |



|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 2717   | 1418  | GLA      | 0.32 | 0.00953884  | 0.01942089  |
| 171546 | 2538  | SPTSSA   | 0.32 | 0.00037925  | 0.000990813 |
| 5209   | 4357  | PFKFB3   | 0.32 | 7.11E-07    | 2.61E-06    |
| 326625 | 2071  | MMAB     | 0.32 | 0.011548174 | 0.02308076  |
| 8850   | 4322  | KAT2B    | 0.32 | 0.001646197 | 0.003856247 |
| 79646  | 3404  | PANK3    | 0.32 | 0.001195483 | 0.002874724 |
| 84266  | 1098  | ALKBH7   | 0.32 | 0.008556194 | 0.01757125  |
| 824    | 3368  | CAPN2    | 0.32 | 8.47E-08    | 3.42E-07    |
| 376497 | 3612  | SLC27A1  | 0.32 | 0.02091443  | 0.039633916 |
| 92170  | 1614  | MTG1     | 0.32 | 0.001622602 | 0.00380549  |
| 4016   | 1991  | LOXL1    | 0.32 | 0.00048836  | 0.001252119 |
| 7518   | 1714  | XRCC4    | 0.32 | 0.020530998 | 0.038987444 |
| 8844   | 5769  | KSR1     | 0.32 | 0.007756288 | 0.016067824 |
| 23030  | 5602  | KDM4B    | 0.31 | 2.50E-05    | 7.70E-05    |
| 9828   | 6585  | ARHGEF17 | 0.31 | 4.27E-05    | 0.000127631 |
| 8609   | 7263  | KLF7     | 0.31 | 0.000248236 | 0.000665704 |
| 221092 | 5156  | HNRNPUL2 | 0.31 | 3.48E-07    | 1.32E-06    |
| 10471  | 613   | PFDN6    | 0.31 | 0.00231172  | 0.005270709 |
| 8828   | 6502  | NRP2     | 0.31 | 0.00012491  | 0.000349403 |
| 26578  | 1304  | OSTF1    | 0.31 | 0.026393439 | 0.048992752 |
| 1514   | 1640  | CTSL     | 0.31 | 0.00034674  | 0.000910699 |
| 301    | 1555  | ANXA1    | 0.31 | 2.11E-06    | 7.37E-06    |
| 84220  | 6904  | RGPD5    | 0.31 | 0.003976482 | 0.008700177 |
| 285527 | 8899  | FRYL     | 0.31 | 0.000108824 | 0.000307651 |
| 27327  | 8156  | TNRC6A   | 0.31 | 0.000241013 | 0.000647266 |
| 4715   | 735   | NDUFB9   | 0.31 | 0.001464331 | 0.003465862 |
| 1019   | 2020  | CDK4     | 0.31 | 2.57E-05    | 7.92E-05    |
| 124401 | 2310  | ANKS3    | 0.31 | 0.016638183 | 0.032305456 |
| 23143  | 4739  | LRCH1    | 0.31 | 0.000827736 | 0.002044088 |
| 9616   | 2008  | RNF7     | 0.31 | 0.001172684 | 0.002824871 |
| 80777  | 4286  | CYB5B    | 0.31 | 1.24E-05    | 3.97E-05    |
| 6647   | 981   | SOD1     | 0.31 | 1.51E-05    | 4.79E-05    |
| 54458  | 1260  | PRR13    | 0.31 | 0.00126709  | 0.003029694 |
| 124540 | 5873  | MSI2     | 0.31 | 1.58E-06    | 5.60E-06    |
| 154810 | 8925  | AMOTL1   | 0.31 | 5.71E-05    | 0.000167554 |
| 3077   | 2435  | HFE      | 0.31 | 0.016040001 | 0.031232738 |
| 55971  | 3682  | BAIAP2L1 | 0.31 | 9.84E-05    | 0.000280029 |
| 55293  | 3656  | UEVLD    | 0.31 | 0.002352726 | 0.005359389 |
| 29915  | 5806  | HCFC2    | 0.31 | 0.026290168 | 0.048811254 |
| 55316  | 2550  | RSAD1    | 0.31 | 0.002129213 | 0.004887205 |
| 283643 | 1664  | TEDC1    | 0.31 | 0.022232529 | 0.04189496  |
| 118813 | 2874  | ZFYVE27  | 0.31 | 0.001611866 | 0.003782308 |
| 54936  | 1629  | ADPRHL2  | 0.31 | 0.002558942 | 0.005791274 |
| 8412   | 3126  | BCAR3    | 0.31 | 0.003245417 | 0.007212579 |
| 4502   | 466   | MT2A     | 0.31 | 0.000805766 | 0.001993991 |
| 80821  | 12999 | DDHD1    | 0.31 | 0.012868521 | 0.025507349 |
| 1030   | 3878  | CDKN2B   | 0.31 | 0.004445805 | 0.009651989 |
| 7159   | 4309  | TP53BP2  | 0.31 | 3.37E-05    | 0.000102094 |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 22944  | 3921  | KIN      | 0.31 | 0.014727731 | 0.028867327 |
| 10892  | 5005  | MALT1    | 0.31 | 0.00015427  | 0.000426626 |
| 57560  | 4258  | IFT80    | 0.31 | 0.000677071 | 0.001698221 |
| 29093  | 3187  | MRPL22   | 0.31 | 0.002525344 | 0.005723255 |
| 284695 | 7108  | ZNF326   | 0.31 | 0.00064959  | 0.001632981 |
| 9479   | 3234  | MAPK8IP1 | 0.31 | 0.022162666 | 0.041781035 |
| 79582  | 1537  | SPAG16   | 0.31 | 0.002932812 | 0.006564652 |
| 55768  | 2453  | NGLY1    | 0.31 | 0.004857252 | 0.010477558 |
| 159013 | 3755  | CXorf38  | 0.31 | 0.004940929 | 0.010638685 |
| 51626  | 1377  | DYNC2LI1 | 0.31 | 0.019839905 | 0.037827602 |
| 3661   | 1514  | IRF3     | 0.31 | 0.000177947 | 0.000487626 |
| 54541  | 1752  | DDIT4    | 0.31 | 0.000154075 | 0.00042622  |
| 121227 | 3930  | LRIG3    | 0.31 | 0.003655175 | 0.008053714 |
| 9529   | 4876  | BAG5     | 0.31 | 0.000388272 | 0.001013042 |
| 80169  | 6949  | CTC1     | 0.31 | 0.005859317 | 0.012435301 |
| 10146  | 4493  | G3BP1    | 0.31 | 2.65E-07    | 1.02E-06    |
| 6388   | 1423  | SDF2     | 0.31 | 0.001849899 | 0.004294917 |
| 54732  | 1402  | TMED9    | 0.31 | 8.75E-05    | 0.00025073  |
| 9867   | 4878  | PJA2     | 0.31 | 7.01E-06    | 2.32E-05    |
| 22796  | 2977  | COG2     | 0.31 | 0.006629237 | 0.013931198 |
| 28232  | 4532  | SLCO3A1  | 0.31 | 0.000710981 | 0.001778253 |
| 57478  | 10200 | USP31    | 0.31 | 0.00194183  | 0.004488413 |
| 1203   | 2817  | CLN5     | 0.31 | 0.004666758 | 0.010104675 |
| 56948  | 1240  | SDR39U1  | 0.31 | 0.000533452 | 0.001360222 |
| 220869 | 1143  | CBWD5    | 0.30 | 0.006526645 | 0.013731844 |
| 5160   | 2160  | PDHA1    | 0.30 | 1.93E-05    | 6.03E-05    |
| 5034   | 2596  | P4HB     | 0.30 | 1.47E-07    | 5.80E-07    |
| 121457 | 2219  | IKBIP    | 0.30 | 5.24E-05    | 0.000154955 |
| 6827   | 1545  | SUPT4H1  | 0.30 | 0.000600367 | 0.001519129 |
| 8674   | 5152  | VAMP4    | 0.30 | 0.009362599 | 0.019086125 |
| 54989  | 5416  | ZNF770   | 0.30 | 7.29E-05    | 0.000210959 |
| 55362  | 3333  | TMEM63B  | 0.30 | 0.000409175 | 0.001063832 |
| 54676  | 3008  | GTPBP2   | 0.30 | 5.36E-05    | 0.000158132 |
| 10755  | 1812  | GIPC1    | 0.30 | 0.000251418 | 0.000673888 |
| 9527   | 5327  | GOSR1    | 0.30 | 7.99E-05    | 0.000230291 |
| 26088  | 3314  | GGA1     | 0.30 | 0.001736622 | 0.004052041 |
| 10239  | 5934  | AP3S2    | 0.30 | 0.000667635 | 0.001676447 |
| 4848   | 3102  | CNOT2    | 0.30 | 9.16E-06    | 2.98E-05    |
| 51651  | 997   | PTRH2    | 0.30 | 0.0021342   | 0.004897388 |
| 253769 | 4076  | WDR27    | 0.30 | 0.013926951 | 0.027436974 |
| 57666  | 4610  | FBRSL1   | 0.30 | 0.004898052 | 0.010551478 |
| 10994  | 2376  | ILVBL    | 0.30 | 0.001890981 | 0.00438457  |
| 5877   | 3227  | RABIF    | 0.30 | 0.018186668 | 0.034968154 |
| 984    | 3100  | CDK11B   | 0.30 | 4.80E-05    | 0.000142838 |
| 3920   | 4557  | LAMP2    | 0.30 | 1.52E-06    | 5.39E-06    |
| 57728  | 4336  | WDR19    | 0.30 | 0.011452794 | 0.022913325 |
| 56204  | 4211  | FAM214A  | 0.30 | 0.005639408 | 0.012002995 |
| 7468   | 6343  | NSD2     | 0.30 | 2.72E-05    | 8.34E-05    |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 80097  | 966   | MZT2B    | 0.30 | 0.000515213 | 0.001316597 |
| 840    | 2521  | CASP7    | 0.30 | 0.0032516   | 0.007223609 |
| 6611   | 1867  | SMS      | 0.30 | 4.37E-06    | 1.48E-05    |
| 1911   | 5045  | PHC1     | 0.30 | 0.001226754 | 0.002942355 |
| 83594  | 3514  | NUDT12   | 0.30 | 0.022625328 | 0.042558419 |
| 10558  | 2790  | SPTLC1   | 0.30 | 0.000105501 | 0.000298745 |
| 5214   | 2484  | PFKP     | 0.30 | 6.22E-06    | 2.07E-05    |
| 79706  | 2181  | PRKRIP1  | 0.30 | 0.001918728 | 0.004440215 |
| 6788   | 2901  | STK3     | 0.30 | 0.007233159 | 0.015068445 |
| 5271   | 3109  | SERPINB8 | 0.30 | 0.015119694 | 0.029567106 |
| 153339 | 4608  | TMEM167A | 0.30 | 5.97E-05    | 0.000174819 |
| 9204   | 5159  | ZMYM6    | 0.30 | 0.01962245  | 0.037461233 |
| 55294  | 3884  | FBXW7    | 0.30 | 0.002951472 | 0.00660143  |
| 7328   | 4990  | UBE2H    | 0.30 | 2.10E-06    | 7.36E-06    |
| 7776   | 7973  | ZNF236   | 0.30 | 0.004887317 | 0.010533461 |
| 4522   | 3466  | MTHFD1   | 0.30 | 2.72E-06    | 9.38E-06    |
| 55082  | 1772  | ARGLU1   | 0.30 | 0.000325522 | 0.000858525 |
| 516    | 600   | ATP5MC1  | 0.30 | 0.002869926 | 0.006435218 |
| 57038  | 2177  | RARS2    | 0.30 | 0.000602017 | 0.001522437 |
| 353376 | 3203  | TICAM2   | 0.30 | 0.026474651 | 0.04910759  |
| 118487 | 844   | CHCHD1   | 0.30 | 0.019356404 | 0.036997052 |
| 54776  | 2964  | PPP1R12C | 0.30 | 0.000285117 | 0.000758264 |
| 10092  | 2085  | ARPC5    | 0.30 | 0.002376561 | 0.005412297 |
| 84191  | 1129  | FAM96A   | 0.29 | 0.000779381 | 0.001935166 |
| 51704  | 2927  | GPRC5B   | 0.29 | 0.002482414 | 0.005632427 |
| 10488  | 1868  | CREB3    | 0.29 | 0.00096434  | 0.002355566 |
| 79007  | 2204  | DBNDD1   | 0.29 | 0.012016033 | 0.023935075 |
| 55636  | 10472 | CHD7     | 0.29 | 0.000979808 | 0.002391705 |
| 463    | 13515 | ZFHX3    | 0.29 | 0.001376205 | 0.003271663 |
| 2052   | 1712  | EPHX1    | 0.29 | 0.000274765 | 0.000732377 |
| 1832   | 9142  | DSP      | 0.29 | 2.65E-05    | 8.14E-05    |
| 10473  | 1991  | HMGN4    | 0.29 | 8.00E-05    | 0.000230291 |
| 55207  | 3008  | ARL8B    | 0.29 | 0.000117297 | 0.000329873 |
| 55862  | 2230  | ECHDC1   | 0.29 | 0.000417073 | 0.001082781 |
| 1389   | 3823  | CREBL2   | 0.29 | 0.001024593 | 0.002493148 |
| 65117  | 2301  | RSRC2    | 0.29 | 0.000152293 | 0.000421814 |
| 57407  | 1312  | NMRAL1   | 0.29 | 0.001041504 | 0.002530486 |
| 1E+08  | 11357 | NBPF10   | 0.29 | 0.009683461 | 0.019683759 |
| 10643  | 4172  | IGF2BP3  | 0.29 | 0.000189165 | 0.000516138 |
| 51643  | 1876  | TMBIM4   | 0.29 | 0.005662718 | 0.012048278 |
| 9043   | 8167  | SPAG9    | 0.29 | 0.000164769 | 0.000453964 |
| 55188  | 4569  | RIC8B    | 0.29 | 0.009100063 | 0.018593596 |
| 84265  | 1189  | POLR3GL  | 0.29 | 0.017343379 | 0.033531791 |
| 9668   | 4578  | ZNF432   | 0.29 | 0.025433922 | 0.047365048 |
| 51633  | 3306  | OTUD6B   | 0.29 | 0.01136376  | 0.022748004 |
| 199990 | 917   | FAAP20   | 0.29 | 0.007011126 | 0.014654005 |
| 6093   | 5388  | ROCK1    | 0.29 | 1.89E-05    | 5.92E-05    |
| 23443  | 5809  | SLC35A3  | 0.29 | 0.00441292  | 0.009586596 |

|          |       |          |      |             |             |
|----------|-------|----------|------|-------------|-------------|
| 26128    | 2589  | KIF1BP   | 0.29 | 0.000512728 | 0.001310813 |
| 79659    | 12799 | DYNC2H1  | 0.29 | 0.005931236 | 0.012572918 |
| 64857    | 7713  | PLEKHG2  | 0.29 | 0.006129308 | 0.012961859 |
| 221443   | 1202  | OARD1    | 0.29 | 0.027005878 | 0.049993794 |
| 1643     | 1848  | DDB2     | 0.29 | 0.001519307 | 0.003585476 |
| 11285    | 1824  | B4GALT7  | 0.29 | 0.007196647 | 0.014999416 |
| 833      | 2570  | CARS     | 0.29 | 0.001805096 | 0.004198029 |
| 7376     | 2078  | NR1H2    | 0.29 | 0.001537354 | 0.003621812 |
| 5832     | 3252  | ALDH18A1 | 0.29 | 1.64E-05    | 5.17E-05    |
| 1345     | 874   | COX6C    | 0.29 | 0.010095929 | 0.020440344 |
| 114825   | 3350  | PWWP2A   | 0.29 | 0.005721098 | 0.012165207 |
| 9455     | 2896  | HOMER2   | 0.29 | 0.000533509 | 0.001360222 |
| 51141    | 2505  | INSIG2   | 0.29 | 0.008000002 | 0.016506366 |
| 144404   | 6361  | TMEM120B | 0.29 | 0.006252959 | 0.013198215 |
| 9692     | 2260  | KIAA0391 | 0.29 | 0.001532387 | 0.003611547 |
| 1.01E+08 | 925   | TMEM35B  | 0.29 | 0.020297895 | 0.038593151 |
| 159090   | 3473  | FAM122B  | 0.29 | 0.002139975 | 0.004910004 |
| 54811    | 6163  | ZNF562   | 0.29 | 0.004980429 | 0.010713348 |
| 9516     | 2418  | LITAF    | 0.29 | 0.000209379 | 0.000567025 |
| 11132    | 2650  | CAPN10   | 0.29 | 0.017794244 | 0.034321334 |
| 9185     | 7554  | REPS2    | 0.29 | 0.003126372 | 0.006968061 |
| 29907    | 1937  | SNX15    | 0.29 | 0.006039681 | 0.012793641 |
| 114908   | 3605  | TMEM123  | 0.29 | 2.12E-06    | 7.40E-06    |
| 6120     | 3920  | RPE      | 0.29 | 0.000642522 | 0.001616815 |
| 56927    | 1970  | GPR108   | 0.29 | 0.001157204 | 0.002789473 |
| 23534    | 4403  | TNPO3    | 0.29 | 0.000125932 | 0.000352095 |
| 8932     | 5190  | MBD2     | 0.29 | 0.000128517 | 0.000358756 |
| 23788    | 2628  | MTCH2    | 0.29 | 0.000239056 | 0.000642497 |
| 26499    | 1564  | PLEK2    | 0.29 | 0.005113511 | 0.010973051 |
| 200185   | 577   | KRTCAP2  | 0.29 | 0.001023665 | 0.002491232 |
| 4627     | 7553  | MYH9     | 0.28 | 8.90E-07    | 3.23E-06    |
| 51292    | 1803  | GMPR2    | 0.28 | 0.000747672 | 0.001863986 |
| 4643     | 5125  | MYO1E    | 0.28 | 8.15E-06    | 2.67E-05    |
| 10949    | 2983  | HNRNPA0  | 0.28 | 0.00025152  | 0.000674059 |
| 23731    | 7849  | TMEM245  | 0.28 | 9.85E-06    | 3.20E-05    |
| 80227    | 1598  | PAAF1    | 0.28 | 0.020260082 | 0.038533626 |
| 7128     | 4576  | TNFAIP3  | 0.28 | 0.002580134 | 0.005837003 |
| 115825   | 5927  | WDFY2    | 0.28 | 0.02606805  | 0.048449488 |
| 9520     | 4353  | NPEPPS   | 0.28 | 7.34E-05    | 0.000212396 |
| 401505   | 774   | TOMM5    | 0.28 | 0.001398205 | 0.003320409 |
| 4869     | 1432  | NPM1     | 0.28 | 4.58E-07    | 1.72E-06    |
| 10606    | 3280  | PAICS    | 0.28 | 4.11E-06    | 1.40E-05    |
| 64747    | 2375  | MFSD1    | 0.28 | 0.002470368 | 0.005607244 |
| 120526   | 3162  | DNAJC24  | 0.28 | 0.01224477  | 0.024357934 |
| 27125    | 8659  | AFF4     | 0.28 | 1.40E-05    | 4.47E-05    |
| 79694    | 4633  | MANEA    | 0.28 | 0.003067257 | 0.006845751 |
| 9453     | 2757  | GGPS1    | 0.28 | 0.005347605 | 0.011446362 |
| 27243    | 952   | CHMP2A   | 0.28 | 0.001502501 | 0.003550059 |

|        |      |          |      |             |             |
|--------|------|----------|------|-------------|-------------|
| 2987   | 1121 | GUK1     | 0.28 | 0.003999076 | 0.008744225 |
| 4329   | 4634 | ALDH6A1  | 0.28 | 0.009431663 | 0.019220299 |
| 10010  | 2045 | TANK     | 0.28 | 0.002777107 | 0.006238922 |
| 63875  | 2366 | MRPL17   | 0.28 | 0.003268028 | 0.007257382 |
| 84450  | 3569 | ZNF512   | 0.28 | 0.00378583  | 0.008317872 |
| 2729   | 3573 | GCLC     | 0.28 | 0.008382219 | 0.017241869 |
| 22838  | 3894 | RNF44    | 0.28 | 0.004821865 | 0.010412603 |
| 599    | 3576 | BCL2L2   | 0.28 | 0.004896131 | 0.010549898 |
| 54482  | 3766 | TRMT13   | 0.28 | 0.01954321  | 0.037326161 |
| 8603   | 4742 | FAM193A  | 0.28 | 0.002725627 | 0.006135682 |
| 10611  | 5599 | PDLIM5   | 0.28 | 0.000108993 | 0.00030808  |
| 285203 | 3702 | EOGT     | 0.28 | 0.010639452 | 0.021435738 |
| 1603   | 711  | DAD1     | 0.28 | 8.04E-05    | 0.00023139  |
| 80344  | 3939 | DCAF11   | 0.28 | 0.000709647 | 0.001775418 |
| 3073   | 2751 | HEXA     | 0.28 | 4.80E-05    | 0.000142846 |
| 129787 | 2138 | TMEM18   | 0.28 | 0.003659687 | 0.008062656 |
| 57679  | 4685 | ALS2     | 0.28 | 0.005236368 | 0.011228553 |
| 5279   | 1514 | PIGC     | 0.28 | 0.007946701 | 0.016414436 |
| 966    | 7649 | CD59     | 0.28 | 3.12E-05    | 9.51E-05    |
| 5873   | 3467 | RAB27A   | 0.28 | 0.000176715 | 0.000484547 |
| 29081  | 849  | METTL5   | 0.28 | 0.009814871 | 0.019921251 |
| 9255   | 3167 | AIMP1    | 0.28 | 0.000962807 | 0.002352667 |
| 23176  | 4270 | SEPT8    | 0.28 | 8.78E-05    | 0.000251541 |
| 509    | 1185 | ATP5F1C  | 0.28 | 5.17E-05    | 0.000152922 |
| 91612  | 3623 | CHURC1   | 0.28 | 0.009670575 | 0.019662065 |
| 694    | 4704 | BTG1     | 0.28 | 0.000543817 | 0.001384716 |
| 51522  | 1187 | TMEM14C  | 0.28 | 3.26E-05    | 9.89E-05    |
| 55869  | 1837 | HDAC8    | 0.28 | 0.010135364 | 0.020513172 |
| 255520 | 4735 | ELMOD2   | 0.28 | 0.002220123 | 0.005077505 |
| 1266   | 2114 | CNN3     | 0.28 | 0.000254098 | 0.000680556 |
| 51631  | 2656 | LUC7L2   | 0.28 | 0.004691725 | 0.010146786 |
| 55250  | 2622 | ELP2     | 0.28 | 0.011295167 | 0.022630546 |
| 10443  | 3152 | N4BP2L2  | 0.28 | 0.001264018 | 0.003022755 |
| 30001  | 5484 | ERO1A    | 0.28 | 1.84E-05    | 5.80E-05    |
| 117246 | 3586 | FTSJ3    | 0.28 | 0.001216427 | 0.002919952 |
| 4609   | 2379 | MYC      | 0.28 | 0.001114347 | 0.002694206 |
| 5601   | 3792 | MAPK9    | 0.28 | 0.001177394 | 0.002834381 |
| 253260 | 9505 | RICTOR   | 0.28 | 0.004120264 | 0.008985989 |
| 10899  | 1574 | JTB      | 0.28 | 0.000768784 | 0.00191206  |
| 5315   | 2402 | PKM      | 0.27 | 2.10E-05    | 6.54E-05    |
| 51720  | 2066 | UIMC1    | 0.27 | 0.00466763  | 0.010105331 |
| 23029  | 1828 | RBM34    | 0.27 | 0.001214433 | 0.002916347 |
| 2317   | 9479 | FLNB     | 0.27 | 9.13E-06    | 2.97E-05    |
| 57648  | 3819 | KIAA1522 | 0.27 | 6.39E-05    | 0.00018639  |
| 27173  | 2187 | SLC39A1  | 0.27 | 3.75E-05    | 0.000112825 |
| 55621  | 2181 | TRMT1    | 0.27 | 0.002755152 | 0.006194298 |
| 7706   | 5744 | TRIM25   | 0.27 | 0.00088593  | 0.00217781  |
| 5515   | 2643 | PPP2CA   | 0.27 | 9.31E-05    | 0.000265815 |

|        |       |         |      |             |             |
|--------|-------|---------|------|-------------|-------------|
| 2060   | 4908  | EPS15   | 0.27 | 0.001116925 | 0.002699703 |
| 9131   | 2280  | AIFM1   | 0.27 | 0.001632465 | 0.003826602 |
| 200894 | 3582  | ARL13B  | 0.27 | 0.003256433 | 0.007233442 |
| 9489   | 4236  | PGS1    | 0.27 | 0.008402109 | 0.017274782 |
| 23175  | 5103  | LPIN1   | 0.27 | 0.00593253  | 0.012573886 |
| 6601   | 4946  | SMARCC2 | 0.27 | 0.002180251 | 0.004993388 |
| 57003  | 3345  | CCDC47  | 0.27 | 0.000570238 | 0.001448048 |
| 8565   | 2410  | YARS    | 0.27 | 8.53E-05    | 0.00024466  |
| 51495  | 3213  | HACD3   | 0.27 | 6.23E-05    | 0.000181943 |
| 23184  | 4292  | MESD    | 0.27 | 0.000202023 | 0.000548775 |
| 57192  | 2118  | MCOLN1  | 0.27 | 0.020275955 | 0.03855935  |
| 91445  | 3189  | RNF185  | 0.27 | 0.00134133  | 0.003193883 |
| 5445   | 1633  | PON2    | 0.27 | 8.81E-05    | 0.000252291 |
| 57017  | 1699  | COQ9    | 0.27 | 0.005318543 | 0.011393763 |
| 80020  | 4841  | FOXRED2 | 0.27 | 0.001520075 | 0.003586337 |
| 3308   | 3385  | HSPA4   | 0.27 | 3.21E-05    | 9.74E-05    |
| 55735  | 3316  | DNAJC11 | 0.27 | 0.000310334 | 0.000819928 |
| 55505  | 552   | NOP10   | 0.27 | 0.010547018 | 0.021271217 |
| 522    | 920   | ATP5PF  | 0.27 | 0.002520823 | 0.005713738 |
| 1848   | 3395  | DUSP6   | 0.27 | 0.010605404 | 0.021376838 |
| 55737  | 4231  | VPS35   | 0.27 | 3.85E-05    | 0.000115833 |
| 55620  | 1463  | STAP2   | 0.27 | 0.009895143 | 0.02006584  |
| 283450 | 15450 | HECTD4  | 0.27 | 0.010744692 | 0.021625702 |
| 1891   | 1275  | ECH1    | 0.27 | 0.001888419 | 0.004379201 |
| 7347   | 972   | UCHL3   | 0.27 | 0.024213602 | 0.045248978 |
| 8625   | 1169  | RFXANK  | 0.27 | 0.004676517 | 0.010120872 |
| 729991 | 1457  | BORCS8  | 0.27 | 0.019256163 | 0.036825262 |
| 29904  | 7343  | EEF2K   | 0.27 | 0.006832385 | 0.014310718 |
| 257397 | 6575  | TAB3    | 0.27 | 0.002182549 | 0.004998005 |
| 26205  | 4221  | GMEB2   | 0.27 | 0.012406448 | 0.024657469 |
| 23201  | 6684  | FAM168A | 0.27 | 5.81E-05    | 0.000170421 |
| 7485   | 1513  | WRB     | 0.27 | 0.005499561 | 0.011730637 |
| 9652   | 5704  | TTC37   | 0.27 | 0.00037131  | 0.000970638 |
| 8996   | 1838  | NOL3    | 0.27 | 0.020570918 | 0.039057926 |
| 5019   | 3572  | OXCT1   | 0.27 | 0.000329125 | 0.000867382 |
| 27434  | 2516  | POLM    | 0.27 | 0.018853671 | 0.036129425 |
| 2037   | 4236  | EPB41L2 | 0.27 | 0.000335209 | 0.00088224  |
| 91683  | 3444  | SYT12   | 0.27 | 0.009854378 | 0.019999154 |
| 81892  | 419   | SLIRP   | 0.27 | 0.014972084 | 0.029317168 |
| 5037   | 1688  | PEBP1   | 0.27 | 0.000187169 | 0.000511003 |
| 60558  | 4189  | GUF1    | 0.27 | 0.003384618 | 0.007490086 |
| 81847  | 2681  | RNF146  | 0.27 | 0.012470783 | 0.024774249 |
| 8816   | 5637  | DCAF5   | 0.27 | 0.001558629 | 0.003668614 |
| 169792 | 6801  | GLIS3   | 0.27 | 0.001820959 | 0.004233192 |
| 4074   | 2556  | M6PR    | 0.27 | 0.000221637 | 0.000598304 |
| 6016   | 3401  | RIT1    | 0.27 | 0.003146309 | 0.007006344 |
| 56994  | 1567  | CHPT1   | 0.27 | 0.02140853  | 0.040475289 |
| 7534   | 3050  | YWHAZ   | 0.27 | 8.43E-06    | 2.76E-05    |

|        |       |          |      |             |             |
|--------|-------|----------|------|-------------|-------------|
| 2870   | 2570  | GRK6     | 0.27 | 0.003128915 | 0.00697198  |
| 55236  | 6341  | UBA6     | 0.27 | 0.000326377 | 0.000860396 |
| 113246 | 778   | C12orf57 | 0.27 | 0.004446282 | 0.009651989 |
| 83640  | 1588  | FAM103A1 | 0.27 | 0.012467137 | 0.024769773 |
| 8861   | 2976  | LDB1     | 0.26 | 0.00293811  | 0.006575682 |
| 51160  | 1001  | VPS28    | 0.26 | 0.010455008 | 0.02110002  |
| 388969 | 4023  | C2orf68  | 0.26 | 0.002711825 | 0.006109922 |
| 644    | 1094  | BLVRA    | 0.26 | 0.001640612 | 0.003843669 |
| 10605  | 2539  | PAIP1    | 0.26 | 0.000270088 | 0.000720667 |
| 79735  | 2359  | TBC1D17  | 0.26 | 0.005626279 | 0.011982228 |
| 55238  | 3869  | SLC38A7  | 0.26 | 0.007492568 | 0.01556688  |
| 5613   | 6084  | PRKX     | 0.26 | 0.006681564 | 0.014034523 |
| 9909   | 5129  | DENND4B  | 0.26 | 0.004173535 | 0.009095788 |
| 3099   | 6419  | HK2      | 0.26 | 0.011444004 | 0.022900896 |
| 84888  | 4576  | SPPL2A   | 0.26 | 0.000719928 | 0.001798857 |
| 9526   | 1547  | MPDU1    | 0.26 | 0.000503797 | 0.001289465 |
| 11193  | 2353  | WBP4     | 0.26 | 0.007173044 | 0.014951976 |
| 2125   | 6629  | EVPL     | 0.26 | 0.007038154 | 0.014703009 |
| 10714  | 3325  | POLD3    | 0.26 | 0.001444019 | 0.00342307  |
| 147991 | 5750  | DPY19L3  | 0.26 | 0.007358516 | 0.015313436 |
| 10623  | 2640  | POLR3C   | 0.26 | 0.004613975 | 0.009998915 |
| 54680  | 4887  | ZNHIT6   | 0.26 | 0.007942482 | 0.016407629 |
| 85015  | 5522  | USP45    | 0.26 | 0.024181692 | 0.045198853 |
| 79085  | 3423  | SLC25A23 | 0.26 | 0.010395625 | 0.020990742 |
| 283638 | 6132  | CEP170B  | 0.26 | 0.00498261  | 0.010716743 |
| 311    | 2531  | ANXA11   | 0.26 | 0.000681496 | 0.001708596 |
| 3257   | 2735  | HPS1     | 0.26 | 0.015079238 | 0.029494485 |
| 5451   | 13881 | POU2F1   | 0.26 | 0.006081242 | 0.012870936 |
| 353116 | 2064  | RILPL1   | 0.26 | 0.025133477 | 0.046859561 |
| 84458  | 8284  | LCOR     | 0.26 | 0.005135679 | 0.011019291 |
| 8086   | 1848  | AAAS     | 0.26 | 0.002144846 | 0.004916736 |
| 2965   | 3210  | GTF2H1   | 0.26 | 0.006534591 | 0.013746934 |
| 90338  | 4669  | ZNF160   | 0.26 | 0.013241263 | 0.026170274 |
| 9522   | 4801  | SCAMP1   | 0.26 | 0.001091609 | 0.002644268 |
| 4092   | 2468  | SMAD7    | 0.26 | 0.010042798 | 0.020342048 |
| 1E+08  | 881   | TOMM6    | 0.26 | 0.00756779  | 0.015706634 |
| 1785   | 3674  | DNM2     | 0.26 | 4.25E-05    | 0.000127162 |
| 79158  | 5595  | GNPTAB   | 0.26 | 0.001422274 | 0.003373961 |
| 9541   | 1809  | CIR1     | 0.26 | 0.000597699 | 0.001513239 |
| 91748  | 7496  | ELMSAN1  | 0.26 | 0.002217561 | 0.005072301 |
| 9879   | 4178  | DDX46    | 0.26 | 9.41E-05    | 0.000268501 |
| 56672  | 1472  | AKIP1    | 0.26 | 0.020461264 | 0.038874651 |
| 4792   | 1579  | NFKBIA   | 0.25 | 0.000674987 | 0.001693471 |
| 64866  | 5925  | CDCP1    | 0.25 | 0.000468908 | 0.001206772 |
| 2519   | 2548  | FUCA2    | 0.25 | 0.000153655 | 0.000425257 |
| 103910 | 1021  | MYL12B   | 0.25 | 6.71E-05    | 0.000195233 |
| 5792   | 7463  | PTPRF    | 0.25 | 5.52E-05    | 0.000162605 |
| 9706   | 5138  | ULK2     | 0.25 | 0.017373928 | 0.033579892 |

|          |      |              |      |             |             |
|----------|------|--------------|------|-------------|-------------|
| 11103    | 3357 | KRR1         | 0.25 | 0.001269454 | 0.003034121 |
| 10961    | 1381 | ERP29        | 0.25 | 0.002258393 | 0.005159717 |
| 55311    | 2364 | ZNF444       | 0.25 | 0.014859091 | 0.029102329 |
| 79001    | 1060 | VKORC1       | 0.25 | 0.000686115 | 0.001719207 |
| 51422    | 2650 | PRKAG2       | 0.25 | 0.000899825 | 0.002209827 |
| 64769    | 4780 | MEAF6        | 0.25 | 0.004934172 | 0.010626711 |
| 55657    | 1960 | ZNF692       | 0.25 | 0.026811615 | 0.049685939 |
| 51312    | 4151 | SLC25A37     | 0.25 | 0.006612655 | 0.013897996 |
| 57020    | 3446 | C16orf62     | 0.25 | 0.000939226 | 0.002301499 |
| 2959     | 1648 | GTF2B        | 0.25 | 0.024661599 | 0.046028077 |
| 9557     | 2835 | CHD1L        | 0.25 | 0.007077021 | 0.014772616 |
| 55749    | 4758 | CCAR1        | 0.25 | 8.32E-05    | 0.000239035 |
| 7316     | 2594 | UBC          | 0.25 | 0.000272265 | 0.00072604  |
| 51155    | 1611 | JPT1         | 0.25 | 0.001897149 | 0.004396576 |
| 79622    | 1103 | SNRNP25      | 0.25 | 0.018948749 | 0.036292053 |
| 9266     | 4364 | CYTH2        | 0.25 | 0.005913818 | 0.01254105  |
| 28974    | 934  | C19orf53     | 0.25 | 0.008162522 | 0.016823071 |
| 10644    | 3326 | IGF2BP2      | 0.25 | 0.001901763 | 0.004405543 |
| 27339    | 2342 | PRPF19       | 0.25 | 0.001696705 | 0.003965675 |
| 55275    | 7620 | VPS53        | 0.25 | 0.002268031 | 0.005180405 |
| 51372    | 491  | TMA7         | 0.25 | 0.017957581 | 0.034595067 |
| 8555     | 4896 | CDC14B       | 0.25 | 0.012355187 | 0.024558335 |
| 9851     | 4465 | KIAA0753     | 0.25 | 0.019962729 | 0.038029138 |
| 23243    | 6131 | ANKRD28      | 0.25 | 0.002177999 | 0.004989517 |
| 3321     | 6790 | IGSF3        | 0.25 | 0.001154932 | 0.00278513  |
| 274      | 2026 | BIN1         | 0.25 | 0.000457845 | 0.001180868 |
| 1476     | 940  | CSTB         | 0.25 | 0.009469566 | 0.019288691 |
| 27350    | 1127 | APOBEC3C     | 0.25 | 0.018536531 | 0.035598474 |
| 10550    | 2135 | ARL6IP5      | 0.25 | 0.000239753 | 0.000644273 |
| 55900    | 2575 | ZNF302       | 0.25 | 0.011561919 | 0.023103035 |
| 51371    | 1477 | POMP         | 0.25 | 0.007306975 | 0.01521152  |
| 7388     | 632  | UQCRH        | 0.25 | 0.00742158  | 0.015433829 |
| 221035   | 5410 | REEP3        | 0.25 | 0.001185618 | 0.002852548 |
| 5286     | 7618 | PIK3C2A      | 0.25 | 0.00373876  | 0.008227679 |
| 11214    | 9966 | AKAP13       | 0.25 | 0.000463393 | 0.001193791 |
| 29965    | 2745 | CDIP1        | 0.25 | 0.009186921 | 0.018755971 |
| 79886    | 2839 | CAAP1        | 0.25 | 0.007806235 | 0.016155612 |
| 1.03E+08 | 4007 | LOC102724985 | 0.25 | 0.001689246 | 0.003949279 |
| 23567    | 3384 | ZNF346       | 0.25 | 0.019836431 | 0.037825038 |
| 8409     | 631  | UXT          | 0.25 | 0.01062143  | 0.021401856 |
| 873      | 1331 | CBR1         | 0.25 | 0.005769576 | 0.012263886 |
| 9380     | 1257 | GRHPR        | 0.25 | 0.002047567 | 0.004715085 |
| 64343    | 2545 | AZI2         | 0.25 | 0.015764088 | 0.030732533 |
| 5211     | 2921 | PFKL         | 0.24 | 0.000524508 | 0.001338617 |
| 7041     | 1812 | TGFB1I1      | 0.24 | 0.005456709 | 0.011649021 |
| 9337     | 2466 | CNOT8        | 0.24 | 0.002016891 | 0.00465102  |
| 119504   | 3411 | ANAPC16      | 0.24 | 0.002287247 | 0.005220942 |
| 79585    | 3854 | CORO7        | 0.24 | 0.018853235 | 0.036129425 |



|        |       |         |      |             |             |
|--------|-------|---------|------|-------------|-------------|
| 25852  | 4182  | ARMC8   | 0.24 | 0.00307044  | 0.006851995 |
| 5184   | 2015  | PEPD    | 0.24 | 0.005651651 | 0.012026171 |
| 26234  | 3188  | FBXL5   | 0.24 | 0.001572852 | 0.003699064 |
| 63891  | 4345  | RNF123  | 0.24 | 0.011316956 | 0.022669636 |
| 3488   | 6333  | IGFBP5  | 0.24 | 0.021731084 | 0.041041444 |
| 399664 | 2822  | MEX3D   | 0.24 | 0.016923228 | 0.032815881 |
| 53349  | 3726  | ZFYVE1  | 0.24 | 0.025491917 | 0.047468075 |
| 57507  | 5325  | ZNF608  | 0.24 | 0.001370468 | 0.003258897 |
| 7071   | 3116  | KLF10   | 0.24 | 0.002770721 | 0.006225363 |
| 23234  | 2385  | DNAJC9  | 0.24 | 0.00239302  | 0.005444196 |
| 79672  | 1844  | FN3KRP  | 0.24 | 0.003807066 | 0.008357295 |
| 10432  | 5415  | RBM14   | 0.24 | 0.001578405 | 0.003709669 |
| 348995 | 4327  | NUP43   | 0.24 | 0.002569868 | 0.00581526  |
| 29803  | 3192  | REPIN1  | 0.24 | 0.00127019  | 0.003035471 |
| 11072  | 1523  | DUSP14  | 0.24 | 0.026420557 | 0.049037966 |
| 5791   | 4967  | PTPRE   | 0.24 | 0.015950377 | 0.031065034 |
| 56850  | 3110  | GRIPAP1 | 0.24 | 0.007378763 | 0.015350176 |
| 3856   | 1802  | KRT8    | 0.24 | 0.000863758 | 0.002127132 |
| 327    | 2474  | APEH    | 0.24 | 0.0033209   | 0.007360996 |
| 5719   | 1756  | PSMD13  | 0.24 | 0.02169287  | 0.040973628 |
| 10489  | 2947  | LRRRC41 | 0.24 | 0.001705477 | 0.003984604 |
| 4714   | 761   | NDUFB8  | 0.24 | 0.008943105 | 0.018300253 |
| 10093  | 1564  | ARPC4   | 0.24 | 0.003760335 | 0.008269014 |
| 253143 | 10914 | PRR14L  | 0.24 | 0.011363005 | 0.022748004 |
| 54978  | 3912  | SLC35F6 | 0.24 | 0.003061569 | 0.006833913 |
| 9678   | 3901  | PHF14   | 0.24 | 0.010021665 | 0.020301555 |
| 51520  | 4893  | LARS    | 0.24 | 0.000469173 | 0.001207104 |
| 118    | 3985  | ADD1    | 0.24 | 0.000250687 | 0.00067203  |
| 5612   | 3342  | THAP12  | 0.24 | 0.00271212  | 0.006109922 |
| 9360   | 2966  | PPIG    | 0.24 | 0.001077299 | 0.002612465 |
| 5292   | 2751  | PIM1    | 0.24 | 0.008610531 | 0.017674667 |
| 158427 | 3951  | TSTD2   | 0.24 | 0.01888682  | 0.036181243 |
| 51608  | 2106  | GET4    | 0.24 | 0.011055583 | 0.022203639 |
| 6749   | 2829  | SSRP1   | 0.24 | 4.41E-05    | 0.000131703 |
| 412    | 6451  | STS     | 0.24 | 0.012959711 | 0.025648045 |
| 80145  | 1026  | THOC7   | 0.23 | 0.007492395 | 0.01556688  |
| 56674  | 1933  | TMEM9B  | 0.23 | 0.009126322 | 0.018642963 |
| 56851  | 1075  | EMC7    | 0.23 | 0.002031579 | 0.004681854 |
| 518    | 2684  | ATP5MC3 | 0.23 | 0.001924807 | 0.004453122 |
| 23582  | 1864  | CCNDBP1 | 0.23 | 0.025751931 | 0.047907057 |
| 84056  | 7526  | KATNAL1 | 0.23 | 0.007976837 | 0.016469027 |
| 10628  | 2888  | TXNIP   | 0.23 | 0.000423787 | 0.001098766 |
| 4141   | 2862  | MARS    | 0.23 | 0.001079174 | 0.002616286 |
| 54663  | 1472  | WDR74   | 0.23 | 0.019218133 | 0.036760447 |
| 1312   | 1459  | COMT    | 0.23 | 0.005387747 | 0.011517023 |
| 8777   | 7629  | MPDZ    | 0.23 | 0.010667405 | 0.021482314 |
| 9322   | 2037  | TRIP10  | 0.23 | 0.002705785 | 0.006098742 |
| 10960  | 1853  | LMAN2   | 0.23 | 0.000288005 | 0.000765485 |

|        |       |         |      |             |             |
|--------|-------|---------|------|-------------|-------------|
| 392    | 3458  | ARHGAP1 | 0.23 | 0.001310557 | 0.003126055 |
| 11140  | 1696  | CDC37   | 0.23 | 0.000450691 | 0.001163935 |
| 85415  | 3546  | RHPN2   | 0.23 | 0.003793642 | 0.008332975 |
| 22848  | 21283 | AAK1    | 0.23 | 0.00299566  | 0.006695206 |
| 23786  | 3489  | BCL2L13 | 0.23 | 0.003359349 | 0.007437871 |
| 26263  | 3424  | FBXO22  | 0.23 | 0.018149851 | 0.034908699 |
| 6238   | 3739  | RRBP1   | 0.23 | 0.004683079 | 0.010132605 |
| 5927   | 10836 | KDM5A   | 0.23 | 0.001612781 | 0.003783455 |
| 10645  | 4601  | CAMKK2  | 0.23 | 0.013883218 | 0.027359917 |
| 4061   | 1192  | LY6E    | 0.23 | 0.020277947 | 0.03855935  |
| 284352 | 2947  | PPP1R37 | 0.23 | 0.011153909 | 0.022380876 |
| 28976  | 2559  | ACAD9   | 0.23 | 0.006845689 | 0.014336893 |
| 5599   | 5972  | MAPK8   | 0.23 | 0.014089796 | 0.027717837 |
| 152006 | 4892  | RNF38   | 0.23 | 0.011210465 | 0.022481663 |
| 57140  | 3047  | RNPEPL1 | 0.23 | 0.008862066 | 0.018155331 |
| 10120  | 2247  | ACTR1B  | 0.23 | 0.00556006  | 0.011852567 |
| 159    | 2796  | ADSS    | 0.23 | 0.00952396  | 0.019392817 |
| 5926   | 5783  | ARID4A  | 0.23 | 0.009134955 | 0.018656309 |
| 2621   | 2551  | GAS6    | 0.23 | 0.002883588 | 0.006462613 |
| 83990  | 5118  | BRIP1   | 0.23 | 0.011992718 | 0.023894067 |
| 22985  | 2867  | ACIN1   | 0.23 | 0.001010158 | 0.002460382 |
| 4731   | 1630  | NDUFV3  | 0.23 | 0.017271008 | 0.033406409 |
| 11342  | 2702  | RNF13   | 0.23 | 0.012087633 | 0.024069602 |
| 112398 | 2174  | EGLN2   | 0.23 | 0.012871255 | 0.025509923 |
| 473    | 6698  | RERE    | 0.23 | 0.014766885 | 0.028934496 |
| 7375   | 4076  | USP4    | 0.23 | 0.008348278 | 0.01717802  |
| 55860  | 1726  | ACTR10  | 0.23 | 0.012923003 | 0.025595353 |
| 9267   | 3602  | CYTH1   | 0.23 | 0.011243632 | 0.022540546 |
| 25828  | 1356  | TXN2    | 0.23 | 0.012108743 | 0.024108937 |
| 5165   | 10345 | PDK3    | 0.23 | 0.008270395 | 0.017033543 |
| 6443   | 4295  | SGCB    | 0.23 | 0.001650254 | 0.003864731 |
| 83440  | 2547  | ADPGK   | 0.23 | 0.007817797 | 0.016176385 |
| 79581  | 1937  | SLC52A2 | 0.22 | 0.017945318 | 0.034582691 |
| 23432  | 7909  | GPR161  | 0.22 | 0.023087212 | 0.043353792 |
| 4924   | 2581  | NUCB1   | 0.22 | 0.000311545 | 0.000822884 |
| 10490  | 1357  | VTI1B   | 0.22 | 0.022037636 | 0.041571794 |
| 6687   | 3017  | SPG7    | 0.22 | 0.015601253 | 0.030451835 |
| 5429   | 7316  | POLH    | 0.22 | 0.003914085 | 0.008572102 |
| 10455  | 1411  | ECI2    | 0.22 | 0.011365675 | 0.022749274 |
| 30850  | 3542  | CDR2L   | 0.22 | 0.023868351 | 0.04467121  |
| 50717  | 3901  | DCAF8   | 0.22 | 0.002010481 | 0.004638047 |
| 6429   | 2486  | SRSF4   | 0.22 | 0.00250386  | 0.005678909 |
| 120    | 4387  | ADD3    | 0.22 | 0.000210933 | 0.000570883 |
| 78992  | 2040  | YIPF2   | 0.22 | 0.021326695 | 0.040346328 |
| 6164   | 576   | RPL34   | 0.22 | 0.002282432 | 0.005210619 |
| 10299  | 5685  | MARCH6  | 0.22 | 0.015117639 | 0.029566341 |
| 79811  | 3865  | SLTM    | 0.22 | 0.001215435 | 0.002917964 |
| 11311  | 2434  | VPS45   | 0.22 | 0.016599678 | 0.032237739 |

|        |      |          |      |             |             |
|--------|------|----------|------|-------------|-------------|
| 1936   | 1374 | EEF1D    | 0.22 | 0.000611365 | 0.001543221 |
| 22795  | 5059 | NID2     | 0.22 | 0.004423711 | 0.009608863 |
| 64853  | 3020 | AIDA     | 0.22 | 0.005206635 | 0.011167491 |
| 64968  | 1017 | MRPS6    | 0.22 | 0.01061252  | 0.021386328 |
| 25875  | 1868 | LETMD1   | 0.22 | 0.026889393 | 0.049809293 |
| 10412  | 1212 | NSA2     | 0.22 | 0.003271462 | 0.007263193 |
| 8775   | 1800 | NAPA     | 0.22 | 0.005609645 | 0.011951099 |
| 10922  | 1916 | FASTK    | 0.22 | 0.014493811 | 0.028459061 |
| 1540   | 8288 | CYLD     | 0.22 | 0.013146567 | 0.025994681 |
| 64285  | 2925 | RHBDF1   | 0.22 | 0.010903073 | 0.021928109 |
| 91252  | 2331 | SLC39A13 | 0.22 | 0.004172921 | 0.009095788 |
| 6990   | 2230 | DYNLT3   | 0.22 | 0.024055128 | 0.044976482 |
| 79036  | 1490 | KXD1     | 0.22 | 0.011481469 | 0.022955186 |
| 376267 | 3314 | RAB15    | 0.22 | 0.024218344 | 0.04525308  |
| 23089  | 6629 | PEG10    | 0.22 | 0.002143645 | 0.004914616 |
| 3927   | 4134 | LASP1    | 0.22 | 0.004108487 | 0.008962503 |
| 79650  | 2300 | USB1     | 0.22 | 0.003082779 | 0.006876076 |
| 27336  | 2819 | HTATSF1  | 0.22 | 0.002999522 | 0.006702995 |
| 1386   | 4150 | ATF2     | 0.22 | 0.004802004 | 0.010373496 |
| 9948   | 3138 | WDR1     | 0.21 | 0.001769665 | 0.004120484 |
| 1855   | 2939 | DVL1     | 0.21 | 0.012146538 | 0.024178769 |
| 64976  | 1192 | MRPL40   | 0.21 | 0.019412064 | 0.037095457 |
| 8615   | 4189 | USO1     | 0.21 | 0.002853777 | 0.006401454 |
| 51009  | 4237 | DERL2    | 0.21 | 0.006193493 | 0.013088247 |
| 7182   | 8294 | NR2C2    | 0.21 | 0.011208434 | 0.022480127 |
| 3269   | 4333 | HRH1     | 0.21 | 0.003858507 | 0.008459766 |
| 493869 | 3786 | GPX8     | 0.21 | 0.008397376 | 0.017267049 |
| 79089  | 2251 | TMUB2    | 0.21 | 0.023935173 | 0.044780473 |
| 5836   | 2849 | PYGL     | 0.21 | 0.003855333 | 0.008453851 |
| 27020  | 2100 | NPTN     | 0.21 | 0.001852421 | 0.004300212 |
| 153241 | 4505 | CEP120   | 0.21 | 0.022599104 | 0.042513592 |
| 10956  | 2783 | OS9      | 0.21 | 0.001499391 | 0.003543182 |
| 4711   | 1061 | NDUFB5   | 0.21 | 0.022308938 | 0.042017987 |
| 6118   | 1813 | RPA2     | 0.21 | 0.006270315 | 0.013228564 |
| 55332  | 3453 | DRAM1    | 0.21 | 0.013340936 | 0.026349683 |
| 51538  | 1639 | ZCCHC17  | 0.21 | 0.020215786 | 0.038453494 |
| 25782  | 7329 | RAB3GAP2 | 0.21 | 0.010409464 | 0.021015265 |
| 29957  | 3342 | SLC25A24 | 0.21 | 0.007789696 | 0.016127765 |
| 5424   | 3461 | POLD1    | 0.21 | 0.016471433 | 0.032007474 |
| 10130  | 2349 | PDIA6    | 0.21 | 0.000530753 | 0.001353972 |
| 1937   | 1552 | EEF1G    | 0.21 | 0.000276115 | 0.000735753 |
| 1718   | 4286 | DHCR24   | 0.21 | 0.000799392 | 0.001979044 |
| 25839  | 2843 | COG4     | 0.21 | 0.018028259 | 0.034716171 |
| 27430  | 2172 | MAT2B    | 0.21 | 0.009298673 | 0.018964511 |
| 54431  | 5875 | DNAJC10  | 0.21 | 0.003286927 | 0.007292061 |
| 10548  | 2471 | TM9SF1   | 0.21 | 0.00946604  | 0.01928372  |
| 8697   | 3169 | CDC23    | 0.21 | 0.012250594 | 0.024366791 |
| 8562   | 2731 | DENR     | 0.21 | 0.004152047 | 0.009054195 |

|        |      |          |      |             |             |
|--------|------|----------|------|-------------|-------------|
| 1195   | 1936 | CLK1     | 0.21 | 0.026646897 | 0.0494013   |
| 10844  | 2347 | TUBGCP2  | 0.21 | 0.007443503 | 0.015473986 |
| 7991   | 3367 | TUSC3    | 0.20 | 0.004635065 | 0.010042171 |
| 7297   | 3862 | TYK2     | 0.20 | 0.004597191 | 0.009963757 |
| 1017   | 2293 | CDK2     | 0.20 | 0.004668706 | 0.010106429 |
| 5426   | 7622 | POLE     | 0.20 | 0.011493091 | 0.022975838 |
| 81876  | 1959 | RAB1B    | 0.20 | 0.009590449 | 0.019510316 |
| 25941  | 2692 | TPGS2    | 0.20 | 0.011479299 | 0.022953432 |
| 860    | 4226 | RUNX2    | 0.20 | 0.005374083 | 0.011490578 |
| 84164  | 2950 | ASCC2    | 0.20 | 0.015142447 | 0.029608341 |
| 51126  | 1101 | NAA20    | 0.20 | 0.018773014 | 0.036013411 |
| 55011  | 1244 | PIH1D1   | 0.20 | 0.012913787 | 0.025582804 |
| 6905   | 1977 | TBCE     | 0.20 | 0.026471454 | 0.049106785 |
| 139231 | 7302 | FAM199X  | 0.20 | 0.011280467 | 0.022604188 |
| 4926   | 7191 | NUMA1    | 0.20 | 0.002804333 | 0.006296106 |
| 51026  | 3269 | GOLT1B   | 0.20 | 0.017524486 | 0.033841437 |
| 55366  | 5248 | LGR4     | 0.20 | 0.008871342 | 0.018169647 |
| 10114  | 7195 | HIPK3    | 0.20 | 0.011078489 | 0.022247128 |
| 4190   | 1646 | MDH1     | 0.20 | 0.003876963 | 0.008496038 |
| 9138   | 3252 | ARHGEF1  | 0.20 | 0.007736451 | 0.016032337 |
| 6747   | 4331 | SSR3     | 0.20 | 0.001101436 | 0.002665529 |
| 6726   | 1533 | SRP9     | 0.20 | 0.004288541 | 0.009331226 |
| 51808  | 3641 | PHAX     | 0.20 | 0.009139359 | 0.018663157 |
| 9894   | 3307 | TELO2    | 0.20 | 0.014674503 | 0.028782048 |
| 3032   | 2197 | HADHB    | 0.20 | 0.006452735 | 0.013587339 |
| 51421  | 4491 | AMOTL2   | 0.20 | 0.00379689  | 0.008338048 |
| 5589   | 2107 | PRKCSH   | 0.20 | 0.007075005 | 0.014770142 |
| 9064   | 4016 | MAP3K6   | 0.20 | 0.023582187 | 0.044213179 |
| 6625   | 1664 | SNRNP70  | 0.19 | 0.002743378 | 0.006169389 |
| 27332  | 5313 | ZNF638   | 0.19 | 0.010387039 | 0.020977144 |
| 4041   | 4422 | LRP5     | 0.19 | 0.020433787 | 0.038826599 |
| 1635   | 2069 | DCTD     | 0.19 | 0.015000738 | 0.029360335 |
| 7077   | 3670 | TIMP2    | 0.19 | 0.003861241 | 0.008464654 |
| 23362  | 9474 | PSD3     | 0.19 | 0.020776133 | 0.039401252 |
| 2597   | 1421 | GAPDH    | 0.19 | 0.002035867 | 0.004690518 |
| 4659   | 5302 | PPP1R12A | 0.19 | 0.008705939 | 0.017858131 |
| 1186   | 4236 | CLCN7    | 0.19 | 0.003689636 | 0.008125613 |
| 56937  | 4698 | PMEPA1   | 0.19 | 0.019847163 | 0.03783738  |
| 57552  | 4286 | NCEH1    | 0.19 | 0.009772685 | 0.019844694 |
| 57222  | 2837 | ERGIC1   | 0.19 | 0.004281276 | 0.00931656  |
| 85437  | 1277 | ZCRB1    | 0.19 | 0.026220545 | 0.048702346 |
| 51768  | 4369 | TM7SF3   | 0.19 | 0.022898734 | 0.04301805  |
| 3516   | 5508 | RBPJ     | 0.18 | 0.006854757 | 0.014354017 |
| 4779   | 4697 | NFE2L1   | 0.18 | 0.001339066 | 0.003189774 |
| 1729   | 5699 | DIAPH1   | 0.18 | 0.004840514 | 0.010442721 |
| 113829 | 2954 | SLC35A4  | 0.18 | 0.018269642 | 0.035115837 |
| 3837   | 4016 | KPNB1    | 0.18 | 0.001512754 | 0.003571908 |
| 6786   | 4064 | STIM1    | 0.18 | 0.016506588 | 0.032067467 |

|        |      |           |       |             |             |
|--------|------|-----------|-------|-------------|-------------|
| 7536   | 3423 | SF1       | 0.18  | 0.018271382 | 0.035115837 |
| 8729   | 5978 | GBF1      | 0.18  | 0.024356875 | 0.045497577 |
| 7414   | 5444 | VCL       | 0.18  | 0.001526108 | 0.003598658 |
| 6166   | 592  | RPL36AL   | 0.18  | 0.008741718 | 0.017923246 |
| 23787  | 2291 | MTCH1     | 0.18  | 0.005058441 | 0.010865375 |
| 207    | 2817 | AKT1      | 0.18  | 0.006246058 | 0.013186783 |
| 10134  | 1468 | BCAP31    | 0.18  | 0.017789765 | 0.03431642  |
| 51592  | 7824 | TRIM33    | 0.18  | 0.016043185 | 0.031235515 |
| 7879   | 2240 | RAB7A     | 0.18  | 0.017805924 | 0.034340134 |
| 4134   | 5969 | MAP4      | 0.18  | 0.009019036 | 0.018440763 |
| 8496   | 5523 | PPFIBP1   | 0.18  | 0.017962935 | 0.034601629 |
| 10695  | 1765 | CNPY3     | 0.18  | 0.022855498 | 0.042950449 |
| 23317  | 6512 | DNAJC13   | 0.18  | 0.023819173 | 0.044601019 |
| 10743  | 7651 | RAI1      | 0.17  | 0.026652568 | 0.049405396 |
| 51752  | 5131 | ERAP1     | 0.17  | 0.012697183 | 0.025193025 |
| 5713   | 1686 | PSMD7     | 0.17  | 0.025167877 | 0.046913852 |
| 2181   | 4138 | ACSL3     | 0.17  | 0.012421004 | 0.024683638 |
| 51164  | 3845 | DCTN4     | 0.17  | 0.020965078 | 0.039717187 |
| 6301   | 1956 | SARS      | 0.17  | 0.011809674 | 0.023542499 |
| 832    | 1788 | CAPZB     | 0.17  | 0.02230964  | 0.042017987 |
| 6629   | 1656 | SNRPB2    | 0.17  | 0.023662163 | 0.04433973  |
| 9989   | 3932 | PPP4R1    | 0.17  | 0.015641246 | 0.03051984  |
| 135228 | 8893 | CD109     | 0.17  | 0.013981145 | 0.027525427 |
| 9747   | 5236 | TCAF1     | 0.17  | 0.011140359 | 0.022358737 |
| 57187  | 5987 | THOC2     | 0.16  | 0.010811107 | 0.021754444 |
| 23344  | 4257 | ESYT1     | 0.16  | 0.012432444 | 0.024703609 |
| 10923  | 3522 | SUB1      | 0.16  | 0.021352048 | 0.040381393 |
| 81619  | 5399 | TSPAN14   | 0.16  | 0.018056569 | 0.03476315  |
| 29968  | 2266 | PSAT1     | 0.16  | 0.022005675 | 0.041515909 |
| 9076   | 3452 | CLDN1     | 0.16  | 0.017035984 | 0.03300211  |
| 3428   | 2761 | IFI16     | 0.16  | 0.018127335 | 0.034873836 |
| 51727  | 2956 | CMPK1     | 0.16  | 0.015420644 | 0.030125783 |
| 8663   | 3111 | EIF3C     | 0.15  | 0.018455028 | 0.035449614 |
| 55740  | 9129 | ENAH      | 0.15  | 0.021903939 | 0.041332751 |
| 7357   | 3923 | UGCG      | 0.14  | 0.026654667 | 0.049405396 |
| 3939   | 2225 | LDHA      | 0.14  | 0.012746866 | 0.02528878  |
| 55752  | 5406 | SEPT11    | 0.14  | 0.019954775 | 0.038018062 |
| 23193  | 3747 | GANAB     | 0.14  | 0.007970711 | 0.016460203 |
| 3181   | 2932 | HNRNPA2B1 | 0.14  | 0.017030352 | 0.032994799 |
| 4628   | 7698 | MYH10     | 0.14  | 0.026271403 | 0.048783441 |
| 22883  | 5202 | CLSTN1    | 0.14  | 0.017762402 | 0.034274801 |
| 4735   | 3276 | SEPT2     | -0.13 | 0.023702795 | 0.044411184 |
| 718    | 5148 | C3        | -0.14 | 0.010926893 | 0.021970017 |
| 1108   | 6462 | CHD4      | -0.14 | 0.022875076 | 0.042982694 |
| 1000   | 3947 | CDH2      | -0.14 | 0.020598113 | 0.039097028 |
| 1362   | 8549 | CPD       | -0.15 | 0.023549614 | 0.044161429 |
| 4174   | 2568 | MCM5      | -0.15 | 0.019773574 | 0.037711355 |
| 81552  | 2834 | VOPP1     | -0.15 | 0.025555952 | 0.047567691 |

|       |      |          |       |             |             |
|-------|------|----------|-------|-------------|-------------|
| 8073  | 3857 | PTP4A2   | -0.16 | 0.012318866 | 0.024494362 |
| 6132  | 917  | RPL8     | -0.16 | 0.025298333 | 0.047132304 |
| 6651  | 4820 | SON      | -0.16 | 0.006471907 | 0.01362313  |
| 5728  | 8720 | PTEN     | -0.16 | 0.026999064 | 0.049986388 |
| 8669  | 2572 | EIF3J    | -0.16 | 0.025561169 | 0.047572102 |
| 29980 | 2538 | DONSON   | -0.16 | 0.02138569  | 0.040436409 |
| 54765 | 6077 | TRIM44   | -0.16 | 0.010383202 | 0.020971779 |
| 6400  | 7897 | SEL1L    | -0.16 | 0.021685279 | 0.040963644 |
| 2355  | 6477 | FOSL2    | -0.16 | 0.007108005 | 0.014830322 |
| 55353 | 2242 | LAPTM4B  | -0.16 | 0.006697453 | 0.014061248 |
| 6426  | 5524 | SRSF1    | -0.16 | 0.016955049 | 0.032866824 |
| 26064 | 4901 | RAI14    | -0.16 | 0.011769668 | 0.023470647 |
| 975   | 1324 | CD81     | -0.16 | 0.018778943 | 0.036013411 |
| 908   | 2679 | CCT6A    | -0.17 | 0.01607741  | 0.031291863 |
| 10762 | 4953 | NUP50    | -0.17 | 0.0181278   | 0.034873836 |
| 57492 | 6485 | ARID1B   | -0.17 | 0.025513464 | 0.047498243 |
| 1173  | 1956 | AP2M1    | -0.17 | 0.014687288 | 0.028800765 |
| 9993  | 4497 | DGCR2    | -0.17 | 0.015051863 | 0.029453911 |
| 2665  | 2232 | GDI2     | -0.17 | 0.009944549 | 0.020159126 |
| 5531  | 1420 | PPP4C    | -0.17 | 0.026548306 | 0.049233932 |
| 1292  | 3395 | COL6A2   | -0.17 | 0.015493463 | 0.030261389 |
| 9761  | 6337 | MLEC     | -0.17 | 0.004558859 | 0.009884297 |
| 7029  | 7658 | TFDP2    | -0.17 | 0.022922872 | 0.04305884  |
| 6427  | 2274 | SRSF2    | -0.17 | 0.023203003 | 0.043552816 |
| 6497  | 5706 | SKI      | -0.17 | 0.021179689 | 0.040081021 |
| 2590  | 4476 | GALNT2   | -0.17 | 0.015334247 | 0.029966883 |
| 9868  | 4381 | TOMM70   | -0.17 | 0.01949305  | 0.037242206 |
| 7707  | 9573 | ZNF148   | -0.17 | 0.018309845 | 0.035182149 |
| 55771 | 6487 | PRR11    | -0.17 | 0.023259469 | 0.043644972 |
| 23168 | 5038 | RTF1     | -0.17 | 0.008799104 | 0.018034662 |
| 57645 | 4359 | POGK     | -0.17 | 0.023427423 | 0.043955486 |
| 57132 | 3060 | CHMP1B   | -0.17 | 0.02596783  | 0.048273321 |
| 9601  | 2969 | PDIA4    | -0.17 | 0.020397924 | 0.038770893 |
| 6642  | 8325 | SNX1     | -0.17 | 0.02121589  | 0.040145254 |
| 27316 | 2089 | RBMX     | -0.18 | 0.002680456 | 0.006046255 |
| 8914  | 5015 | TIMELESS | -0.18 | 0.025834142 | 0.048049935 |
| 9870  | 5438 | AREL1    | -0.18 | 0.026907787 | 0.04983817  |
| 9611  | 6261 | NCOR1    | -0.18 | 0.008000497 | 0.016506366 |
| 11333 | 2707 | PDAP1    | -0.18 | 0.022245928 | 0.041911318 |
| 23451 | 3998 | SF3B1    | -0.18 | 0.014994717 | 0.029351783 |
| 51441 | 2789 | YTHDF2   | -0.18 | 0.009018263 | 0.018440763 |
| 81929 | 3464 | SEH1L    | -0.18 | 0.024527484 | 0.045801822 |
| 8761  | 3199 | PABPC4   | -0.18 | 0.006323518 | 0.013332891 |
| 5361  | 9108 | PLXNA1   | -0.18 | 0.023166734 | 0.043489333 |
| 91039 | 4279 | DPP9     | -0.18 | 0.025502323 | 0.047482477 |
| 6175  | 1233 | RPLP0    | -0.18 | 0.006687965 | 0.014044648 |
| 10526 | 5030 | IPO8     | -0.18 | 0.019877718 | 0.037887501 |
| 2969  | 4475 | GTF2I    | -0.18 | 0.001275111 | 0.003046413 |

|       |      |          |       |             |             |
|-------|------|----------|-------|-------------|-------------|
| 51187 | 1487 | RSL24D1  | -0.18 | 0.012940955 | 0.025616632 |
| 6738  | 7712 | TROVE2   | -0.18 | 0.014572058 | 0.028606377 |
| 51234 | 1036 | EMC4     | -0.18 | 0.020855177 | 0.039538495 |
| 22820 | 3114 | COPG1    | -0.18 | 0.004865745 | 0.010489512 |
| 2067  | 2569 | ERCC1    | -0.18 | 0.019908987 | 0.037938962 |
| 9640  | 7700 | ZNF592   | -0.18 | 0.024059421 | 0.044979776 |
| 29123 | 9272 | ANKRD11  | -0.18 | 0.004271282 | 0.009297088 |
| 57092 | 2386 | PCNP     | -0.18 | 0.018155302 | 0.034915403 |
| 64759 | 7575 | TNS3     | -0.18 | 0.003763473 | 0.008274891 |
| 79718 | 6957 | TBL1XR1  | -0.18 | 0.004200457 | 0.009148531 |
| 78996 | 2364 | C7orf49  | -0.19 | 0.01924653  | 0.036810802 |
| 262   | 3364 | AMD1     | -0.19 | 0.015517052 | 0.0303008   |
| 6135  | 643  | RPL11    | -0.19 | 0.002918328 | 0.006535525 |
| 10724 | 4956 | MGEA5    | -0.19 | 0.020597846 | 0.039097028 |
| 23248 | 6776 | RPRD2    | -0.19 | 0.020101612 | 0.038260894 |
| 4089  | 8789 | SMAD4    | -0.19 | 0.010316367 | 0.020855753 |
| 790   | 7091 | CAD      | -0.19 | 0.009417806 | 0.019196464 |
| 25912 | 1819 | C1orf43  | -0.19 | 0.009022527 | 0.018445778 |
| 103   | 6464 | ADAR     | -0.19 | 0.001647209 | 0.003858107 |
| 7106  | 1449 | TSPAN4   | -0.19 | 0.020597172 | 0.039097028 |
| 9782  | 4789 | MATR3    | -0.19 | 0.001036731 | 0.002519582 |
| 92799 | 2373 | SHKBP1   | -0.19 | 0.019723807 | 0.037626433 |
| 10274 | 4798 | STAG1    | -0.19 | 0.026499407 | 0.049148379 |
| 51637 | 1064 | RTRAF    | -0.19 | 0.006799346 | 0.014253278 |
| 57410 | 2651 | SCYL1    | -0.19 | 0.00898875  | 0.018385185 |
| 11078 | 3911 | TRIOBP   | -0.19 | 0.006231257 | 0.013161791 |
| 6205  | 646  | RPS11    | -0.19 | 0.019333141 | 0.036960539 |
| 5682  | 1248 | PSMA1    | -0.19 | 0.00903201  | 0.018460917 |
| 51692 | 2401 | CPSF3    | -0.19 | 0.012207803 | 0.024287117 |
| 10250 | 4048 | SRRM1    | -0.19 | 0.011580626 | 0.023137813 |
| 7353  | 1461 | UFD1     | -0.19 | 0.020520079 | 0.038973893 |
| 64710 | 6356 | NUCKS1   | -0.19 | 0.005017602 | 0.010782868 |
| 5977  | 2510 | DPF2     | -0.19 | 0.012877497 | 0.025519448 |
| 5701  | 2774 | PSMC2    | -0.19 | 0.008162507 | 0.016823071 |
| 11171 | 1919 | STRAP    | -0.19 | 0.013247627 | 0.02617994  |
| 29927 | 3656 | SEC61A1  | -0.19 | 0.002826512 | 0.006343498 |
| 5213  | 3049 | PFKM     | -0.19 | 0.02101961  | 0.039803521 |
| 1363  | 2648 | CPE      | -0.19 | 0.00349258  | 0.007714589 |
| 94056 | 3533 | SYAP1    | -0.19 | 0.009264883 | 0.018902107 |
| 4000  | 2335 | LMNA     | -0.19 | 0.014612478 | 0.028673054 |
| 161   | 4590 | AP2A2    | -0.19 | 0.010754097 | 0.021642179 |
| 4162  | 3325 | MCAM     | -0.19 | 0.00245903  | 0.005582221 |
| 79033 | 1309 | ERI3     | -0.19 | 0.019012508 | 0.036410244 |
| 26135 | 6722 | SERBP1   | -0.20 | 0.000796718 | 0.001973881 |
| 4125  | 3198 | MAN2B1   | -0.20 | 0.008838197 | 0.018110608 |
| 805   | 1395 | CALM2    | -0.20 | 0.003238131 | 0.007197288 |
| 5062  | 5850 | PAK2     | -0.20 | 0.007024471 | 0.014676718 |
| 90231 | 2797 | KIAA2013 | -0.20 | 0.022101735 | 0.041679434 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 27333  | 4220  | GOLIM4   | -0.20 | 0.023545037 | 0.044157507 |
| 9112   | 2824  | MTA1     | -0.20 | 0.01884082  | 0.036116484 |
| 80149  | 2730  | ZC3H12A  | -0.20 | 0.013946948 | 0.027467306 |
| 10376  | 1771  | TUBA1B   | -0.20 | 0.004091943 | 0.008929704 |
| 151987 | 4897  | PPP4R2   | -0.20 | 0.005480721 | 0.011696067 |
| 51691  | 12520 | LSM8     | -0.20 | 0.023723744 | 0.044441063 |
| 55700  | 3315  | MAP7D1   | -0.20 | 0.013601967 | 0.026832436 |
| 8498   | 3075  | RANBP3   | -0.20 | 0.014118286 | 0.027767733 |
| 26284  | 1919  | ERAL1    | -0.20 | 0.016982733 | 0.032913306 |
| 1786   | 5398  | DNMT1    | -0.20 | 0.00265152  | 0.005985543 |
| 55334  | 4590  | SLC39A9  | -0.20 | 0.006816756 | 0.014284924 |
| 31     | 9605  | ACACA    | -0.20 | 0.007162634 | 0.014935534 |
| 1209   | 2566  | CLPTM1   | -0.20 | 0.009541002 | 0.019423067 |
| 10121  | 2891  | ACTR1A   | -0.20 | 0.010903582 | 0.021928109 |
| 54439  | 6514  | RBM27    | -0.20 | 0.010856224 | 0.021837811 |
| 471    | 2105  | ATIC     | -0.20 | 0.017563843 | 0.033913631 |
| 4087   | 10440 | SMAD2    | -0.20 | 0.006427899 | 0.013541725 |
| 85379  | 10517 | KIAA1671 | -0.20 | 0.020725597 | 0.039313804 |
| 5714   | 1556  | PSMD8    | -0.20 | 0.011611908 | 0.023192489 |
| 3615   | 1716  | IMPDH2   | -0.20 | 0.009437239 | 0.019227252 |
| 6128   | 999   | RPL6     | -0.20 | 0.003054463 | 0.006818909 |
| 4705   | 4072  | NDUFA10  | -0.20 | 0.00733473  | 0.015265723 |
| 23413  | 4933  | NCS1     | -0.20 | 0.014957322 | 0.02929149  |
| 51433  | 2417  | ANAPC5   | -0.20 | 0.004181941 | 0.009111555 |
| 27258  | 695   | LSM3     | -0.20 | 0.026770162 | 0.049614294 |
| 5887   | 4062  | RAD23B   | -0.20 | 0.004074369 | 0.008896828 |
| 6432   | 1324  | SRSF7    | -0.20 | 0.006510554 | 0.013701235 |
| 3276   | 1401  | PRMT1    | -0.20 | 0.012800377 | 0.025386438 |
| 10425  | 4170  | ARIH2    | -0.20 | 0.004090788 | 0.008928279 |
| 23468  | 11564 | CBX5     | -0.20 | 0.000222122 | 0.000599524 |
| 57470  | 2694  | LRRC47   | -0.20 | 0.023941184 | 0.044782715 |
| 9950   | 2957  | GOLGA5   | -0.20 | 0.011581969 | 0.023137893 |
| 128637 | 4273  | TBC1D20  | -0.20 | 0.014131906 | 0.027788369 |
| 2926   | 2869  | GRSF1    | -0.20 | 0.004653137 | 0.010078866 |
| 51232  | 5127  | CRIM1    | -0.20 | 0.001463941 | 0.003465402 |
| 6141   | 893   | RPL18    | -0.20 | 0.003492361 | 0.007714589 |
| 23466  | 6140  | CBX6     | -0.21 | 0.005101445 | 0.010951128 |
| 79882  | 4234  | ZC3H14   | -0.21 | 0.004330743 | 0.009418437 |
| 22998  | 5942  | LIMCH1   | -0.21 | 0.007572282 | 0.015710718 |
| 8031   | 3533  | NCOA4    | -0.21 | 0.002556139 | 0.005786402 |
| 55421  | 4362  | NCBP3    | -0.21 | 0.008884348 | 0.018188397 |
| 9689   | 2869  | BZW1     | -0.21 | 0.001570083 | 0.003693529 |
| 6721   | 5006  | SREBF2   | -0.21 | 0.003782252 | 0.008311039 |
| 55662  | 6868  | HIF1AN   | -0.21 | 0.009633118 | 0.019588149 |
| 28972  | 1100  | SPCS1    | -0.21 | 0.004825247 | 0.010417375 |
| 64225  | 4071  | ATL2     | -0.21 | 0.017718527 | 0.034193851 |
| 80143  | 5508  | SIKE1    | -0.21 | 0.014465311 | 0.028412518 |
| 8175   | 1678  | SF3A2    | -0.21 | 0.02515539  | 0.046895496 |



|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 89910  | 4474  | UBE3B    | -0.21 | 0.011449343 | 0.022909001 |
| 10945  | 1575  | KDELR1   | -0.21 | 0.003580372 | 0.007901633 |
| 1874   | 2100  | E2F4     | -0.21 | 0.021751126 | 0.04107493  |
| 6217   | 709   | RPS16    | -0.21 | 0.010321291 | 0.020863333 |
| 9646   | 4606  | CTR9     | -0.21 | 0.013107895 | 0.025926871 |
| 5757   | 1222  | PTMA     | -0.21 | 0.001154274 | 0.002784299 |
| 682    | 1759  | BSG      | -0.21 | 0.001199341 | 0.002883222 |
| 85461  | 6855  | TANC1    | -0.21 | 0.008891164 | 0.018200254 |
| 148362 | 3874  | BROX     | -0.21 | 0.00533613  | 0.011427305 |
| 124997 | 4835  | WDR81    | -0.21 | 0.022239692 | 0.041904013 |
| 55884  | 2724  | WSB2     | -0.21 | 0.016055932 | 0.031256908 |
| 79022  | 1515  | TMEM106C | -0.21 | 0.015744909 | 0.030704565 |
| 10159  | 2044  | ATP6AP2  | -0.21 | 0.002209455 | 0.005055061 |
| 10856  | 1963  | RUVBL2   | -0.21 | 0.004411508 | 0.009584701 |
| 22828  | 4925  | SCAF8    | -0.21 | 0.005848636 | 0.012417083 |
| 54965  | 3052  | PIGX     | -0.21 | 0.019199271 | 0.036728321 |
| 6157   | 4906  | RPL27A   | -0.21 | 0.001012166 | 0.002464935 |
| 3337   | 2383  | DNAJB1   | -0.21 | 0.006244106 | 0.013184228 |
| 9749   | 9438  | PHACTR2  | -0.21 | 0.01967497  | 0.037549395 |
| 7465   | 3351  | WEE1     | -0.21 | 0.007747392 | 0.016053138 |
| 9811   | 5683  | CTIF     | -0.21 | 0.011466577 | 0.022933154 |
| 5128   | 3731  | CDK17    | -0.21 | 0.026124672 | 0.048537758 |
| 5250   | 1693  | SLC25A3  | -0.21 | 0.001867855 | 0.004332644 |
| 26003  | 2559  | GORASP2  | -0.21 | 0.005263567 | 0.011284153 |
| 55284  | 8428  | UBE2W    | -0.21 | 0.018136228 | 0.034886273 |
| 8648   | 6905  | NCOA1    | -0.21 | 0.0180633   | 0.034772342 |
| 7027   | 2591  | TFDP1    | -0.21 | 0.002024674 | 0.004666546 |
| 23645  | 2399  | PPP1R15A | -0.21 | 0.009677372 | 0.019673631 |
| 11183  | 4285  | MAP4K5   | -0.22 | 0.004963167 | 0.010678803 |
| 9820   | 4960  | CUL7     | -0.22 | 0.011479053 | 0.022953432 |
| 10075  | 14397 | HUWE1    | -0.22 | 0.000892356 | 0.002193023 |
| 6161   | 1669  | RPL32    | -0.22 | 0.001577005 | 0.00370687  |
| 537    | 2105  | ATP6AP1  | -0.22 | 0.003870586 | 0.008483111 |
| 51465  | 4356  | UBE2J1   | -0.22 | 0.0071713   | 0.014951849 |
| 7384   | 1636  | UQCRC1   | -0.22 | 0.003145018 | 0.007004348 |
| 1399   | 5336  | CRKL     | -0.22 | 0.005024726 | 0.010796873 |
| 10401  | 2902  | PIAS3    | -0.22 | 0.02564264  | 0.047713732 |
| 3566   | 3184  | IL4R     | -0.22 | 0.007852325 | 0.016236484 |
| 7175   | 9727  | TPR      | -0.22 | 0.003585396 | 0.007910755 |
| 64841  | 3947  | GNPNAT1  | -0.22 | 0.026923433 | 0.049861951 |
| 51144  | 2302  | HSD17B12 | -0.22 | 0.00339309  | 0.007506029 |
| 8723   | 2534  | SNX4     | -0.22 | 0.018777729 | 0.036013411 |
| 10694  | 2008  | CCT8     | -0.22 | 0.000337874 | 0.000888988 |
| 55701  | 5132  | ARHGEF40 | -0.22 | 0.005917593 | 0.012546993 |
| 55660  | 4111  | PRPF40A  | -0.22 | 0.001238051 | 0.002967848 |
| 59345  | 6421  | GNB4     | -0.22 | 0.008516432 | 0.017497683 |
| 4176   | 2635  | MCM7     | -0.22 | 0.000334542 | 0.000880613 |
| 22980  | 2299  | TCF25    | -0.22 | 0.00168546  | 0.003941466 |

|        |       |         |       |             |             |
|--------|-------|---------|-------|-------------|-------------|
| 5690   | 4759  | PSMB2   | -0.22 | 0.002921248 | 0.006541238 |
| 81611  | 3429  | ANP32E  | -0.22 | 0.000429478 | 0.00111271  |
| 6136   | 674   | RPL12   | -0.22 | 0.000524024 | 0.001337574 |
| 8453   | 4244  | CUL2    | -0.22 | 0.00564548  | 0.012014479 |
| 375056 | 5887  | MIA3    | -0.22 | 0.006443907 | 0.013570621 |
| 6633   | 724   | SNRPD2  | -0.22 | 0.013486135 | 0.026618712 |
| 9342   | 4277  | SNAP29  | -0.22 | 0.020059828 | 0.038193637 |
| 79728  | 4096  | PALB2   | -0.22 | 0.018715155 | 0.035908813 |
| 54726  | 6944  | OTUD4   | -0.22 | 0.00872144  | 0.017885796 |
| 84146  | 3442  | ZNF644  | -0.22 | 0.008662988 | 0.017778236 |
| 1537   | 1276  | CYC1    | -0.22 | 0.010744349 | 0.021625702 |
| 55578  | 2937  | SUPT20H | -0.22 | 0.005629366 | 0.011987365 |
| 10175  | 1423  | CNIH1   | -0.22 | 0.005368403 | 0.011479816 |
| 81620  | 2742  | CDT1    | -0.22 | 0.013189225 | 0.026070324 |
| 85377  | 4285  | MICALL1 | -0.22 | 0.018663562 | 0.035819201 |
| 9792   | 5442  | SERTAD2 | -0.22 | 0.017301544 | 0.033454547 |
| 26750  | 4026  | RPS6KC1 | -0.22 | 0.019262416 | 0.036833256 |
| 7531   | 1831  | YWHAE   | -0.22 | 0.000571576 | 0.001451238 |
| 5782   | 3168  | PTPN12  | -0.22 | 0.003346194 | 0.007410591 |
| 57102  | 3868  | C12orf4 | -0.22 | 0.024918547 | 0.046473469 |
| 55632  | 5465  | G2E3    | -0.22 | 0.026817751 | 0.049692127 |
| 80854  | 6466  | SETD7   | -0.22 | 0.003826118 | 0.008396007 |
| 399909 | 5500  | PCNX3   | -0.22 | 0.003137882 | 0.006990206 |
| 23272  | 8133  | FAM208A | -0.22 | 0.002796825 | 0.006280043 |
| 54815  | 5464  | GATAD2A | -0.22 | 0.002307789 | 0.005262422 |
| 990    | 3061  | CDC6    | -0.22 | 0.003270679 | 0.007262363 |
| 56984  | 1091  | PSMG2   | -0.22 | 0.007370776 | 0.015335358 |
| 10847  | 10491 | SRCAP   | -0.22 | 0.013810261 | 0.027222179 |
| 196527 | 6102  | ANO6    | -0.22 | 0.00189203  | 0.004385855 |
| 79269  | 7481  | DCAF10  | -0.22 | 0.006067067 | 0.012847056 |
| 1503   | 3009  | CTPS1   | -0.22 | 0.00412002  | 0.008985989 |
| 2079   | 801   | ERH     | -0.22 | 0.01436646  | 0.028224598 |
| 8731   | 4899  | RNMT    | -0.22 | 0.009435406 | 0.019225722 |
| 55631  | 2819  | LRRC40  | -0.22 | 0.012655202 | 0.025115338 |
| 4853   | 10827 | NOTCH2  | -0.22 | 0.001676868 | 0.003922922 |
| 57591  | 4208  | MKL1    | -0.22 | 0.014600536 | 0.028652786 |
| 2923   | 3060  | PDIA3   | -0.22 | 8.88E-05    | 0.00025404  |
| 5706   | 1690  | PSMC6   | -0.23 | 0.01691777  | 0.032808877 |
| 55773  | 3699  | TBC1D23 | -0.23 | 0.015867017 | 0.030916237 |
| 79719  | 3184  | AAGAB   | -0.23 | 0.026316646 | 0.04885531  |
| 8692   | 2143  | HYAL2   | -0.23 | 0.012009846 | 0.023925434 |
| 23523  | 6052  | CABIN1  | -0.23 | 0.026848149 | 0.049743266 |
| 9819   | 4761  | TSC22D2 | -0.23 | 0.0156134   | 0.030472199 |
| 51659  | 1196  | GINS2   | -0.23 | 0.015395265 | 0.03007951  |
| 79139  | 2866  | DERL1   | -0.23 | 0.000915619 | 0.00224706  |
| 60681  | 2867  | FKBP10  | -0.23 | 0.000326904 | 0.000861657 |
| 2271   | 1877  | FH      | -0.23 | 0.012618202 | 0.025044706 |
| 26509  | 6833  | MYOF    | -0.23 | 0.000342694 | 0.000900871 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 51605  | 2349  | TRMT6    | -0.23 | 0.022146552 | 0.041755087 |
| 7005   | 3023  | TEAD3    | -0.23 | 0.014598164 | 0.028651296 |
| 659    | 12086 | BMPR2    | -0.23 | 0.003288056 | 0.007293654 |
| 5373   | 2340  | PMM2     | -0.23 | 0.017891676 | 0.034494281 |
| 286077 | 5732  | FAM83H   | -0.23 | 0.00336766  | 0.007454414 |
| 26058  | 7839  | GIGYF2   | -0.23 | 0.005494178 | 0.011721969 |
| 8621   | 6906  | CDK13    | -0.23 | 0.005737821 | 0.012199307 |
| 317    | 5900  | APAF1    | -0.23 | 0.017522029 | 0.033840684 |
| 5496   | 2302  | PPM1G    | -0.23 | 0.000672855 | 0.001688599 |
| 55666  | 4370  | NPLOC4   | -0.23 | 0.000784891 | 0.001947215 |
| 387893 | 2761  | KMT5A    | -0.23 | 0.005111614 | 0.010970306 |
| 53     | 2153  | ACP2     | -0.23 | 0.013305299 | 0.026288064 |
| 9045   | 879   | RPL14    | -0.23 | 0.002687026 | 0.006059534 |
| 51729  | 2690  | WBP11    | -0.23 | 0.003466553 | 0.007660911 |
| 6605   | 2425  | SMARCE1  | -0.23 | 0.00059077  | 0.001497189 |
| 8804   | 2048  | CREG1    | -0.23 | 0.006374419 | 0.013437024 |
| 56257  | 2349  | MEPCE    | -0.23 | 0.007837984 | 0.016208717 |
| 2551   | 4859  | GABPA    | -0.23 | 0.004945126 | 0.010644528 |
| 214    | 4914  | ALCAM    | -0.23 | 0.000296201 | 0.00078539  |
| 8394   | 3687  | PIP5K1A  | -0.23 | 0.000344924 | 0.000906332 |
| 6654   | 7969  | SOS1     | -0.23 | 0.026928709 | 0.049866525 |
| 57136  | 2241  | APMAP    | -0.23 | 0.000554154 | 0.001410229 |
| 6627   | 1103  | SNRPA1   | -0.23 | 0.007447274 | 0.015480015 |
| 154007 | 4162  | SNRNP48  | -0.23 | 0.023468491 | 0.044027891 |
| 51479  | 7132  | ANKFY1   | -0.23 | 0.000954203 | 0.002335301 |
| 10971  | 2272  | YWHAQ    | -0.23 | 0.000322685 | 0.000851421 |
| 84376  | 14460 | HOOK3    | -0.23 | 0.008301639 | 0.017093931 |
| 6891   | 5598  | TAP2     | -0.23 | 0.002347544 | 0.005348271 |
| 55028  | 3611  | C17orf80 | -0.23 | 0.024510904 | 0.045775672 |
| 2934   | 2494  | GSN      | -0.23 | 0.00310214  | 0.006917523 |
| 54545  | 5145  | MTMR12   | -0.23 | 0.007649274 | 0.015864631 |
| 23265  | 4700  | EXOC7    | -0.23 | 0.001116477 | 0.002698987 |
| 1508   | 2756  | CTSB     | -0.23 | 0.00095305  | 0.0023328   |
| 57062  | 2967  | DDX24    | -0.23 | 0.000266197 | 0.000710818 |
| 6240   | 3012  | RRM1     | -0.23 | 0.001667779 | 0.0039032   |
| 9416   | 3288  | DDX23    | -0.23 | 0.005077023 | 0.010903969 |
| 25764  | 1350  | HYPK     | -0.23 | 0.020319229 | 0.038629581 |
| 22803  | 3460  | XRN2     | -0.23 | 0.000693647 | 0.001737099 |
| 9637   | 2016  | FEZ2     | -0.23 | 0.013777269 | 0.027166188 |
| 55210  | 2431  | ATAD3A   | -0.23 | 0.005386862 | 0.011516517 |
| 51125  | 1933  | GOLGA7   | -0.23 | 0.023816512 | 0.044600736 |
| 29941  | 3528  | PKN3     | -0.23 | 0.010379417 | 0.020966518 |
| 10576  | 1964  | CCT2     | -0.23 | 0.000541387 | 0.001378923 |
| 8812   | 2608  | CCNK     | -0.23 | 0.012928222 | 0.025602837 |
| 6500   | 2030  | SKP1     | -0.23 | 0.001250674 | 0.002995279 |
| 5718   | 4425  | PSMD12   | -0.23 | 0.001590005 | 0.003734955 |
| 55246  | 3651  | CCDC25   | -0.23 | 0.024616966 | 0.045959258 |
| 653121 | 7330  | ZBTB8A   | -0.23 | 0.019304281 | 0.036909337 |

|        |       |           |       |             |             |
|--------|-------|-----------|-------|-------------|-------------|
| 3842   | 8515  | TNPO1     | -0.23 | 0.001712678 | 0.004000376 |
| 8260   | 1135  | NAA10     | -0.23 | 0.020706443 | 0.039281665 |
| 57532  | 10917 | NUFIP2    | -0.23 | 0.002553446 | 0.005782517 |
| 9883   | 6351  | POM121    | -0.23 | 0.026643488 | 0.049400135 |
| 2730   | 5070  | GCLM      | -0.23 | 0.006829133 | 0.014305592 |
| 55230  | 5079  | USP40     | -0.23 | 0.007046382 | 0.014715575 |
| 8315   | 4056  | BRAP      | -0.24 | 0.017072434 | 0.033058305 |
| 84612  | 4625  | PARD6B    | -0.24 | 0.015815714 | 0.030823034 |
| 25842  | 2525  | ASF1A     | -0.24 | 0.02402776  | 0.044930041 |
| 1977   | 3780  | EIF4E     | -0.24 | 0.007796933 | 0.016139465 |
| 4841   | 3110  | NONO      | -0.24 | 4.15E-05    | 0.000124467 |
| 6878   | 2480  | TAF6      | -0.24 | 0.011296168 | 0.022630546 |
| 26100  | 4438  | WIPI2     | -0.24 | 0.002949224 | 0.006598062 |
| 6764   | 3459  | ST5       | -0.24 | 0.0006172   | 0.001557287 |
| 9908   | 4256  | G3BP2     | -0.24 | 0.000434083 | 0.001123657 |
| 498    | 1928  | ATP5F1A   | -0.24 | 0.001015356 | 0.002472027 |
| 2889   | 6184  | RAPGEF1   | -0.24 | 0.00258782  | 0.005852901 |
| 6160   | 535   | RPL31     | -0.24 | 0.013784289 | 0.027177013 |
| 1994   | 6075  | ELAVL1    | -0.24 | 0.000781859 | 0.001939961 |
| 7936   | 1391  | NELFE     | -0.24 | 0.001240433 | 0.002973157 |
| 22870  | 3654  | PPP6R1    | -0.24 | 0.000640471 | 0.00161211  |
| 4040   | 9835  | LRP6      | -0.24 | 0.013144146 | 0.025992786 |
| 80347  | 2205  | COASY     | -0.24 | 0.010244346 | 0.020717226 |
| 79142  | 2033  | PHF23     | -0.24 | 0.008848998 | 0.018130649 |
| 221154 | 1947  | MICU2     | -0.24 | 0.003821904 | 0.008387795 |
| 23348  | 7461  | DOCK9     | -0.24 | 0.007919859 | 0.016366604 |
| 25870  | 2050  | SUMF2     | -0.24 | 0.00058588  | 0.001485856 |
| 9922   | 7154  | IQSEC1    | -0.24 | 0.021175152 | 0.040080974 |
| 8570   | 3816  | KHSRP     | -0.24 | 0.005357417 | 0.011464601 |
| 1460   | 1149  | CSNK2B    | -0.24 | 0.009937992 | 0.020148133 |
| 9134   | 2734  | CCNE2     | -0.24 | 0.00507993  | 0.010908895 |
| 23595  | 2584  | ORC3      | -0.24 | 0.005352571 | 0.011455611 |
| 11345  | 1031  | GABARAPL2 | -0.24 | 0.005364722 | 0.011474706 |
| 163    | 5723  | AP2B1     | -0.24 | 7.62E-05    | 0.000220114 |
| 81887  | 2504  | LAS1L     | -0.24 | 0.003033622 | 0.006775789 |
| 10657  | 2895  | KHDRBS1   | -0.24 | 5.64E-05    | 0.00016552  |
| 84916  | 2061  | UTP4      | -0.24 | 0.004721433 | 0.010205648 |
| 115024 | 1387  | NT5C3B    | -0.24 | 0.004375443 | 0.009507505 |
| 7374   | 2090  | UNG       | -0.24 | 0.003248253 | 0.007217077 |
| 11231  | 3610  | SEC63     | -0.24 | 0.000883034 | 0.002171892 |
| 23633  | 7386  | KPNA6     | -0.24 | 0.000195362 | 0.000532147 |
| 9500   | 2723  | MAGED1    | -0.24 | 5.36E-05    | 0.000158363 |
| 22887  | 5087  | FOXJ3     | -0.24 | 0.005299131 | 0.011354915 |
| 51669  | 2056  | SARAF     | -0.24 | 0.001176017 | 0.002831748 |
| 896    | 2049  | CCND3     | -0.24 | 0.002382272 | 0.005423912 |
| 3192   | 7085  | HNRNPU    | -0.24 | 5.07E-06    | 1.71E-05    |
| 10197  | 3454  | PSME3     | -0.24 | 0.001608105 | 0.00377398  |
| 131870 | 4251  | NUDT16    | -0.24 | 0.018195738 | 0.034981809 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 57448  | 15416 | BIRC6    | -0.24 | 0.002260649 | 0.005164209 |
| 3985   | 3581  | LIMK2    | -0.24 | 0.002623815 | 0.005926012 |
| 10000  | 6446  | AKT3     | -0.24 | 0.000959279 | 0.002345139 |
| 836    | 2556  | CASP3    | -0.24 | 0.00542519  | 0.011588696 |
| 51340  | 4048  | CRNKL1   | -0.24 | 0.016451736 | 0.03197489  |
| 151011 | 3608  | SEPT10   | -0.24 | 0.000321246 | 0.000847751 |
| 9475   | 7863  | ROCK2    | -0.24 | 0.002204459 | 0.00504493  |
| 5164   | 2411  | PDK2     | -0.25 | 0.008165252 | 0.016824793 |
| 9169   | 7618  | SCAF11   | -0.25 | 0.000833838 | 0.002057727 |
| 8886   | 3790  | DDX18    | -0.25 | 0.001113598 | 0.002692761 |
| 1073   | 3193  | CFL2     | -0.25 | 0.002537475 | 0.005748548 |
| 5162   | 1542  | PDHB     | -0.25 | 0.002532477 | 0.005737957 |
| 2050   | 4218  | EPHB4    | -0.25 | 0.007317078 | 0.01523077  |
| 10867  | 4311  | TSPAN9   | -0.25 | 0.001557297 | 0.003666365 |
| 90957  | 4838  | DHX57    | -0.25 | 0.018910656 | 0.036222999 |
| 7726   | 3323  | TRIM26   | -0.25 | 0.002047591 | 0.004715085 |
| 9730   | 7206  | DCAF1    | -0.25 | 0.006566051 | 0.013806578 |
| 6599   | 5598  | SMARCC1  | -0.25 | 7.06E-05    | 0.000204587 |
| 5786   | 3269  | PTPRA    | -0.25 | 0.000954601 | 0.002335953 |
| 10477  | 1500  | UBE2E3   | -0.25 | 0.001443532 | 0.003422561 |
| 11328  | 3176  | FKBP9    | -0.25 | 0.001088806 | 0.002638197 |
| 10613  | 3213  | ERLIN1   | -0.25 | 0.003433762 | 0.007591275 |
| 79657  | 3687  | RPAP3    | -0.25 | 0.009125319 | 0.018642963 |
| 3875   | 1483  | KRT18    | -0.25 | 0.003207809 | 0.007135247 |
| 1291   | 4246  | COL6A1   | -0.25 | 0.001263002 | 0.003021139 |
| 9612   | 8811  | NCOR2    | -0.25 | 0.002592362 | 0.005860935 |
| 79682  | 2554  | CENPU    | -0.25 | 0.005341009 | 0.011434999 |
| 26994  | 3082  | RNF11    | -0.25 | 0.001504692 | 0.00355429  |
| 998    | 2180  | CDC42    | -0.25 | 0.000610518 | 0.001541301 |
| 57589  | 6420  | RIC1     | -0.25 | 0.011014903 | 0.022131946 |
| 7158   | 9769  | TP53BP1  | -0.25 | 0.002707049 | 0.006100818 |
| 5048   | 5443  | PAFAH1B1 | -0.25 | 0.000300506 | 0.000796092 |
| 3925   | 1545  | STMN1    | -0.25 | 0.000511167 | 0.001307386 |
| 85360  | 3267  | SYDE1    | -0.25 | 0.006550738 | 0.013779272 |
| 5514   | 4579  | PPP1R10  | -0.25 | 0.000848055 | 0.00209165  |
| 4241   | 2948  | MELTF    | -0.25 | 9.68E-05    | 0.000275833 |
| 59342  | 1944  | SCPEP1   | -0.25 | 0.018832119 | 0.0361037   |
| 5725   | 3328  | PTBP1    | -0.25 | 2.97E-05    | 9.07E-05    |
| 3190   | 2928  | HNRNPK   | -0.25 | 9.70E-06    | 3.15E-05    |
| 91869  | 3404  | RFT1     | -0.25 | 0.021970275 | 0.041453525 |
| 79954  | 2690  | NOL10    | -0.25 | 0.011588136 | 0.023147612 |
| 25836  | 9284  | NIPBL    | -0.25 | 0.001247651 | 0.002988441 |
| 5297   | 5225  | PI4KA    | -0.25 | 0.000196183 | 0.000534138 |
| 9144   | 1711  | SYNGR2   | -0.25 | 0.004042692 | 0.008833072 |
| 57505  | 4756  | AARS2    | -0.25 | 0.022658029 | 0.042615418 |
| 23035  | 8336  | PHLPP2   | -0.25 | 0.025429163 | 0.04736115  |
| 91010  | 12428 | FMNL3    | -0.25 | 0.003805677 | 0.008355279 |
| 23765  | 8560  | IL17RA   | -0.25 | 0.009500295 | 0.019346847 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 65125  | 9967  | WNK1     | -0.25 | 0.000774402 | 0.001923608 |
| 126917 | 5916  | IFFO2    | -0.25 | 0.010178931 | 0.020596657 |
| 29128  | 3963  | UHRF1    | -0.25 | 0.000121752 | 0.000340944 |
| 7917   | 3669  | BAG6     | -0.25 | 0.000183962 | 0.000503098 |
| 55187  | 16285 | VPS13D   | -0.25 | 0.002124075 | 0.004877933 |
| 5689   | 938   | PSMB1    | -0.25 | 0.002884323 | 0.006463446 |
| 23568  | 2026  | ARL2BP   | -0.25 | 0.015597592 | 0.030448034 |
| 387    | 1941  | RHOA     | -0.25 | 0.000364991 | 0.000955105 |
| 9929   | 3542  | JOSD1    | -0.25 | 0.00260239  | 0.005882109 |
| 27044  | 3519  | SND1     | -0.25 | 0.000135649 | 0.000378012 |
| 10427  | 3798  | SEC24B   | -0.25 | 0.003204304 | 0.007129236 |
| 2677   | 3487  | GGCX     | -0.25 | 0.006050169 | 0.012812802 |
| 10486  | 3088  | CAP2     | -0.25 | 0.012859759 | 0.025492825 |
| 64434  | 6082  | NOM1     | -0.25 | 0.014167062 | 0.027851333 |
| 90324  | 3283  | CCDC97   | -0.25 | 0.017392367 | 0.033611876 |
| 84515  | 5954  | MCM8     | -0.25 | 0.002083616 | 0.004789351 |
| 2794   | 7411  | GNL1     | -0.25 | 0.000468033 | 0.001204696 |
| 200734 | 4202  | SPRED2   | -0.25 | 0.01094125  | 0.021996394 |
| 51118  | 1353  | UTP11    | -0.25 | 0.002412756 | 0.005483481 |
| 10480  | 1446  | EIF3M    | -0.25 | 0.000170365 | 0.000468048 |
| 7249   | 5450  | TSC2     | -0.25 | 0.003741638 | 0.008231973 |
| 8683   | 1204  | SRSF9    | -0.25 | 0.001331654 | 0.003173395 |
| 26515  | 2861  | TIMM10B  | -0.25 | 0.018089944 | 0.034814146 |
| 4240   | 2058  | MFGE8    | -0.25 | 0.000107583 | 0.000304238 |
| 5685   | 1222  | PSMA4    | -0.25 | 0.000198721 | 0.000540467 |
| 8662   | 3073  | EIF3B    | -0.25 | 0.00069578  | 0.00174195  |
| 8661   | 5305  | EIF3A    | -0.25 | 0.000130056 | 0.000362824 |
| 5119   | 2360  | CHMP1A   | -0.25 | 0.000957713 | 0.002342599 |
| 11321  | 1783  | GPN1     | -0.25 | 0.014041693 | 0.027632385 |
| 4904   | 3160  | YBX1     | -0.25 | 0.0007813   | 0.001939118 |
| 9373   | 4926  | PLAA     | -0.25 | 0.001825936 | 0.004243163 |
| 9939   | 4974  | RBM8A    | -0.25 | 0.000185015 | 0.000505531 |
| 23644  | 4811  | EDC4     | -0.25 | 0.000796079 | 0.001972765 |
| 9826   | 6199  | ARHGEF11 | -0.26 | 0.003405148 | 0.007530827 |
| 10102  | 2016  | TSFM     | -0.26 | 0.019130719 | 0.036620837 |
| 3654   | 3533  | IRAK1    | -0.26 | 0.002307026 | 0.005261359 |
| 113026 | 3486  | PLCD3    | -0.26 | 0.008491913 | 0.017449326 |
| 84255  | 3284  | SLC37A3  | -0.26 | 0.0152321   | 0.029780364 |
| 4836   | 4627  | NMT1     | -0.26 | 0.00015015  | 0.000416592 |
| 10933  | 1810  | MORF4L1  | -0.26 | 0.000215185 | 0.000581596 |
| 5189   | 4029  | PEX1     | -0.26 | 0.016315555 | 0.031727567 |
| 4430   | 4794  | MYO1B    | -0.26 | 7.90E-05    | 0.000227871 |
| 9874   | 4790  | TLK1     | -0.26 | 0.000926308 | 0.002271411 |
| 22882  | 4448  | ZHX2     | -0.26 | 0.009733788 | 0.019779862 |
| 9969   | 10142 | MED13    | -0.26 | 0.000450954 | 0.001164446 |
| 10056  | 2114  | FARSB    | -0.26 | 0.002399119 | 0.005455978 |
| 50     | 2744  | ACO2     | -0.26 | 0.000671749 | 0.001686153 |
| 3660   | 2302  | IRF2     | -0.26 | 0.018611262 | 0.035726544 |

|        |       |           |       |             |             |
|--------|-------|-----------|-------|-------------|-------------|
| 57510  | 5378  | XPO5      | -0.26 | 0.001101823 | 0.002666104 |
| 84923  | 2854  | FAM104A   | -0.26 | 0.002490468 | 0.00564998  |
| 9727   | 3355  | RAB11FIP3 | -0.26 | 0.000856089 | 0.002109707 |
| 3300   | 2152  | DNAJB2    | -0.26 | 0.005621035 | 0.011973929 |
| 5223   | 1886  | PGAM1     | -0.26 | 0.002322805 | 0.005294625 |
| 54788  | 3465  | DNAJB12   | -0.26 | 0.000812511 | 0.002009283 |
| 8872   | 1441  | CDC123    | -0.26 | 0.001618495 | 0.00379636  |
| 204851 | 7430  | HIPK1     | -0.26 | 0.00107257  | 0.00260205  |
| 8925   | 15252 | HERC1     | -0.26 | 0.006870504 | 0.014380388 |
| 221937 | 11191 | FOXK1     | -0.26 | 0.000309495 | 0.000817955 |
| 65265  | 2617  | C8orf33   | -0.26 | 0.007732991 | 0.016027036 |
| 2146   | 2717  | EZH2      | -0.26 | 0.00091112  | 0.002236638 |
| 7329   | 1435  | UBE2I     | -0.26 | 0.00038528  | 0.001005678 |
| 6218   | 590   | RPS17     | -0.26 | 0.000258824 | 0.00069217  |
| 57647  | 4549  | DHX37     | -0.26 | 0.014103474 | 0.027741673 |
| 25844  | 1596  | YIPF3     | -0.26 | 0.00526987  | 0.011294939 |
| 8078   | 3141  | USP5      | -0.26 | 0.000868511 | 0.002137651 |
| 128239 | 5308  | IQGAP3    | -0.26 | 0.000907694 | 0.002228536 |
| 10771  | 4007  | ZMYND11   | -0.26 | 0.000452088 | 0.001167204 |
| 1616   | 2030  | DAXX      | -0.26 | 0.001244593 | 0.002981921 |
| 79691  | 3833  | QTRT2     | -0.26 | 0.017025243 | 0.032988496 |
| 79685  | 6243  | SAP30L    | -0.26 | 0.011731715 | 0.023405469 |
| 54801  | 5967  | HAUS6     | -0.26 | 0.001673983 | 0.003916687 |
| 8161   | 2649  | COIL      | -0.26 | 0.009892726 | 0.02006584  |
| 54926  | 4449  | UBE2R2    | -0.26 | 0.00085886  | 0.00211552  |
| 10269  | 3165  | ZMPSTE24  | -0.26 | 0.000826099 | 0.002040743 |
| 10492  | 4940  | SYNCRIP   | -0.26 | 2.45E-05    | 7.57E-05    |
| 5116   | 10515 | PCNT      | -0.26 | 0.000771542 | 0.001918115 |
| 359845 | 3895  | RFLNB     | -0.26 | 0.000874329 | 0.002151374 |
| 1455   | 2899  | CSNK1G2   | -0.26 | 0.000661243 | 0.001661335 |
| 5170   | 7550  | PDPK1     | -0.26 | 0.000788731 | 0.001955376 |
| 6493   | 4568  | SIM2      | -0.26 | 0.003627842 | 0.007998449 |
| 23223  | 4370  | RRP12     | -0.26 | 0.017895902 | 0.034498686 |
| 6122   | 1348  | RPL3      | -0.26 | 0.000414126 | 0.001075759 |
| 9813   | 5794  | EFCAB14   | -0.26 | 0.000283705 | 0.000754846 |
| 861    | 6534  | RUNX1     | -0.26 | 0.011614605 | 0.023195269 |
| 10726  | 1481  | NUDC      | -0.26 | 0.000482484 | 0.001238483 |
| 8985   | 2995  | PLOD3     | -0.26 | 0.001505192 | 0.003554997 |
| 55658  | 1663  | RNF126    | -0.26 | 0.003837276 | 0.008418412 |
| 1738   | 3612  | DLD       | -0.26 | 0.001462751 | 0.003463969 |
| 137964 | 3460  | GPAT4     | -0.26 | 0.001700992 | 0.003974648 |
| 10635  | 2231  | RAD51AP1  | -0.26 | 0.004976638 | 0.010706489 |
| 8273   | 2038  | SLC10A3   | -0.27 | 0.019198535 | 0.036728321 |
| 8883   | 1764  | NAE1      | -0.27 | 0.000599251 | 0.001516737 |
| 5598   | 2908  | MAPK7     | -0.27 | 0.011688084 | 0.023326141 |
| 1025   | 2476  | CDK9      | -0.27 | 0.000957977 | 0.002342922 |
| 5394   | 2827  | EXOSC10   | -0.27 | 0.000152738 | 0.000422916 |
| 55114  | 3526  | ARHGAP17  | -0.27 | 0.002232471 | 0.005104431 |

|        |      |          |       |             |             |
|--------|------|----------|-------|-------------|-------------|
| 27154  | 4645 | BRPF3    | -0.27 | 0.003314687 | 0.007348143 |
| 5493   | 6255 | PPL      | -0.27 | 0.002067908 | 0.004756939 |
| 7290   | 4013 | HIRA     | -0.27 | 0.003162501 | 0.007038872 |
| 54539  | 1114 | NDUFB11  | -0.27 | 0.001420819 | 0.003371408 |
| 8314   | 3715 | BAP1     | -0.27 | 0.000260471 | 0.000695947 |
| 23774  | 3678 | BRD1     | -0.27 | 0.004670104 | 0.010108223 |
| 9202   | 6879 | ZMYM4    | -0.27 | 0.000493376 | 0.001264333 |
| 10025  | 2924 | MED16    | -0.27 | 0.00221132  | 0.005058676 |
| 253959 | 7277 | RALGAPA1 | -0.27 | 0.005395603 | 0.011532427 |
| 9107   | 4170 | MTMR6    | -0.27 | 0.00494544  | 0.010644528 |
| 9375   | 3515 | TM9SF2   | -0.27 | 3.30E-05    | 0.000100099 |
| 2947   | 4144 | GSTM3    | -0.27 | 0.011081554 | 0.022250768 |
| 79074  | 3500 | C2orf49  | -0.27 | 0.016397452 | 0.031872873 |
| 83879  | 2641 | CDCA7    | -0.27 | 0.003212517 | 0.007143676 |
| 56904  | 1905 | SH3GLB2  | -0.27 | 0.000918872 | 0.002253799 |
| 9898   | 3745 | UBAP2L   | -0.27 | 0.001234014 | 0.00295897  |
| 30836  | 2725 | DNTTIP2  | -0.27 | 0.000354378 | 0.000929249 |
| 1147   | 3533 | CHUK     | -0.27 | 0.010484198 | 0.021156527 |
| 253714 | 8232 | MMS22L   | -0.27 | 0.005013565 | 0.010776799 |
| 9711   | 6946 | RUBCN    | -0.27 | 0.009024202 | 0.018447081 |
| 2739   | 2071 | GLO1     | -0.27 | 0.000103451 | 0.000293536 |
| 84836  | 2213 | ABHD14B  | -0.27 | 0.007998013 | 0.016506366 |
| 23560  | 2537 | GTPBP4   | -0.27 | 0.001481998 | 0.00350581  |
| 197131 | 7758 | UBR1     | -0.27 | 0.006520977 | 0.013721544 |
| 7094   | 8434 | TLN1     | -0.27 | 4.54E-05    | 0.000135222 |
| 55633  | 3509 | TBC1D22B | -0.27 | 0.014084109 | 0.027709716 |
| 55002  | 2997 | TMCO3    | -0.27 | 0.000406601 | 0.001057449 |
| 6942   | 7268 | TCF20    | -0.27 | 0.000649076 | 0.001632151 |
| 79876  | 3246 | UBA5     | -0.27 | 0.005859231 | 0.012435301 |
| 55095  | 4556 | SAMD4B   | -0.27 | 0.003698586 | 0.008142296 |
| 23259  | 4335 | DDHD2    | -0.27 | 0.005247374 | 0.011250796 |
| 10112  | 3471 | KIF20A   | -0.27 | 2.94E-05    | 8.97E-05    |
| 130916 | 2295 | MTERF4   | -0.27 | 0.010664338 | 0.021478572 |
| 79752  | 2105 | ZFAND1   | -0.27 | 0.012945424 | 0.025622623 |
| 292    | 1351 | SLC25A5  | -0.27 | 0.000358418 | 0.00093915  |
| 145864 | 1962 | HAPLN3   | -0.27 | 0.021658389 | 0.04092155  |
| 5984   | 1434 | RFC4     | -0.27 | 0.001488854 | 0.003520185 |
| 29079  | 2261 | MED4     | -0.27 | 0.000773234 | 0.001921514 |
| 51143  | 2517 | DYNC1LI1 | -0.27 | 0.003119679 | 0.006954889 |
| 22930  | 4844 | RAB3GAP1 | -0.27 | 0.000418014 | 0.001084907 |
| 54476  | 5771 | RNF216   | -0.27 | 0.000396377 | 0.001032825 |
| 51726  | 1698 | DNAJB11  | -0.27 | 7.49E-05    | 0.000216543 |
| 5998   | 3188 | RGS3     | -0.27 | 0.002198904 | 0.005033513 |
| 5793   | 8639 | PTPRG    | -0.27 | 0.002057926 | 0.004737043 |
| 441518 | 2038 | RTL8B    | -0.27 | 0.013887279 | 0.027364886 |
| 84687  | 3975 | PPP1R9B  | -0.27 | 0.003402236 | 0.007525324 |
| 23151  | 4348 | GRAMD4   | -0.27 | 0.012765458 | 0.025322837 |
| 11259  | 3308 | FILIP1L  | -0.27 | 0.006701501 | 0.014068085 |



|        |      |          |       |             |             |
|--------|------|----------|-------|-------------|-------------|
| 84962  | 3727 | AJUBA    | -0.27 | 0.000231856 | 0.00062409  |
| 9924   | 5298 | PAN2     | -0.27 | 0.007041793 | 0.01470772  |
| 11196  | 4891 | SEC23IP  | -0.27 | 0.000596468 | 0.001510339 |
| 11218  | 3513 | DDX20    | -0.27 | 0.009053583 | 0.018500754 |
| 8312   | 3103 | AXIN1    | -0.27 | 0.007676132 | 0.015916619 |
| 23179  | 4853 | RGL1     | -0.27 | 0.025227333 | 0.047014816 |
| 79634  | 3658 | SCRN3    | -0.27 | 0.015726747 | 0.0306732   |
| 92703  | 2513 | TMEM183A | -0.27 | 0.000518814 | 0.001325037 |
| 5709   | 2187 | PSMD3    | -0.27 | 0.000453426 | 0.00117032  |
| 25948  | 3412 | KBTBD2   | -0.27 | 0.000561722 | 0.001428101 |
| 84930  | 4197 | MASTL    | -0.27 | 0.001405888 | 0.003337763 |
| 6142   | 671  | RPL18A   | -0.27 | 0.001841135 | 0.004275707 |
| 2194   | 8481 | FASN     | -0.27 | 0.000287655 | 0.00076467  |
| 8506   | 5601 | CNTNAP1  | -0.27 | 0.009741842 | 0.019791109 |
| 79364  | 3830 | ZXDC     | -0.27 | 0.009762218 | 0.019827972 |
| 152559 | 3739 | PAQR3    | -0.27 | 0.00702379  | 0.014676718 |
| 57599  | 4031 | WDR48    | -0.27 | 0.001722403 | 0.004021505 |
| 64114  | 2388 | TMBIM1   | -0.27 | 0.000313294 | 0.000827379 |
| 2130   | 2320 | EWSR1    | -0.27 | 1.97E-06    | 6.91E-06    |
| 117178 | 5238 | SSX2IP   | -0.27 | 0.006453374 | 0.013587339 |
| 57479  | 6921 | PRR12    | -0.27 | 0.023746058 | 0.044473486 |
| 9712   | 4816 | USP6NL   | -0.27 | 0.010562729 | 0.021300484 |
| 26469  | 3317 | PTPN18   | -0.27 | 0.007007682 | 0.014648529 |
| 84272  | 1946 | YIPF4    | -0.27 | 0.007755719 | 0.016067824 |
| 9276   | 3277 | COPB2    | -0.27 | 5.42E-06    | 1.82E-05    |
| 3268   | 4352 | AGFG2    | -0.28 | 0.026458878 | 0.049088581 |
| 9968   | 6985 | MED12    | -0.28 | 0.00610262  | 0.012909414 |
| 4615   | 2710 | MYD88    | -0.28 | 0.011410408 | 0.02283624  |
| 22905  | 4356 | EPN2     | -0.28 | 0.008601435 | 0.017658035 |
| 375484 | 2841 | SIMC1    | -0.28 | 0.015773544 | 0.030747596 |
| 6950   | 2459 | TCP1     | -0.28 | 6.06E-05    | 0.000177308 |
| 7844   | 2634 | RNF103   | -0.28 | 0.003770761 | 0.008287839 |
| 8192   | 1194 | CLPP     | -0.28 | 0.002725277 | 0.006135673 |
| 80204  | 3925 | FBXO11   | -0.28 | 0.000350672 | 0.000919801 |
| 84747  | 4413 | UNC119B  | -0.28 | 0.001054949 | 0.00256245  |
| 1676   | 2511 | DFFA     | -0.28 | 0.001770497 | 0.004121881 |
| 10787  | 4550 | NCKAP1   | -0.28 | 3.30E-05    | 0.00010015  |
| 26985  | 5231 | AP3M1    | -0.28 | 0.000758142 | 0.001887177 |
| 11017  | 1452 | SNRNP27  | -0.28 | 0.003211979 | 0.007143627 |
| 3140   | 7726 | MR1      | -0.28 | 0.005828898 | 0.012378135 |
| 23070  | 4132 | CMTR1    | -0.28 | 0.000419427 | 0.001088098 |
| 9801   | 7827 | MRPL19   | -0.28 | 0.002860209 | 0.006415071 |
| 9972   | 5854 | NUP153   | -0.28 | 0.000135984 | 0.000378827 |
| 256302 | 4787 | NATD1    | -0.28 | 0.008332419 | 0.017153333 |
| 51449  | 5377 | PCYOX1   | -0.28 | 3.66E-05    | 0.000110282 |
| 10552  | 1623 | ARPC1A   | -0.28 | 0.000778421 | 0.001933051 |
| 25983  | 1163 | NGDN     | -0.28 | 0.019106903 | 0.036579189 |
| 55858  | 1995 | TMEM165  | -0.28 | 9.83E-05    | 0.000279713 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 90379  | 2274  | DCAF15   | -0.28 | 0.003455601 | 0.007637657 |
| 7733   | 4500  | ZNF180   | -0.28 | 0.017087426 | 0.033083729 |
| 8863   | 6171  | PER3     | -0.28 | 0.003308397 | 0.007335113 |
| 8533   | 1748  | COPS3    | -0.28 | 0.000204946 | 0.000556181 |
| 1478   | 2115  | CSTF2    | -0.28 | 0.019526824 | 0.037302722 |
| 23741  | 2096  | EID1     | -0.28 | 1.00E-05    | 3.25E-05    |
| 10001  | 2386  | MED6     | -0.28 | 0.006136626 | 0.012975792 |
| 1915   | 2557  | EEF1A1   | -0.28 | 4.50E-05    | 0.00013412  |
| 127253 | 3351  | TYW3     | -0.28 | 0.013344824 | 0.026354433 |
| 55122  | 1948  | AKIRIN2  | -0.28 | 0.004809702 | 0.010388863 |
| 10632  | 1343  | ATP5MG   | -0.28 | 0.001017324 | 0.002476479 |
| 51010  | 1821  | EXOSC3   | -0.28 | 0.013994091 | 0.027547863 |
| 6732   | 4380  | SRPK1    | -0.28 | 0.000182512 | 0.000499443 |
| 88455  | 3770  | ANKRD13A | -0.28 | 0.00091713  | 0.002250148 |
| 6396   | 1385  | SEC13    | -0.28 | 0.000439421 | 0.001137143 |
| 3840   | 8981  | KPNA4    | -0.28 | 9.76E-05    | 0.000277811 |
| 54535  | 2642  | CCHCR1   | -0.28 | 0.001002449 | 0.002442946 |
| 6731   | 3884  | SRP72    | -0.28 | 8.29E-05    | 0.00023822  |
| 57786  | 6527  | RBAK     | -0.28 | 0.005339288 | 0.01143269  |
| 9031   | 6569  | BAZ1B    | -0.28 | 4.65E-06    | 1.57E-05    |
| 140739 | 2185  | UBE2F    | -0.28 | 0.017497084 | 0.033803218 |
| 58525  | 4478  | WIZ      | -0.28 | 0.000679977 | 0.001705028 |
| 5886   | 1815  | RAD23A   | -0.28 | 0.002044741 | 0.004710355 |
| 5980   | 11046 | REV3L    | -0.28 | 0.001256743 | 0.003007382 |
| 6207   | 529   | RPS13    | -0.28 | 0.000211136 | 0.000571347 |
| 25902  | 2943  | MTHFD1L  | -0.28 | 0.001670699 | 0.003909518 |
| 9128   | 2939  | PRPF4    | -0.28 | 0.005515274 | 0.011759917 |
| 6165   | 512   | RPL35A   | -0.28 | 0.001358948 | 0.003233667 |
| 9277   | 2340  | WDR46    | -0.28 | 0.002023723 | 0.00466496  |
| 7469   | 2483  | NELFA    | -0.28 | 0.008557461 | 0.01757182  |
| 283489 | 3820  | CHAMP1   | -0.28 | 0.001389141 | 0.003299766 |
| 79665  | 3599  | DHX40    | -0.28 | 0.000713616 | 0.001784594 |
| 79903  | 2674  | NAA60    | -0.28 | 0.000608874 | 0.001537589 |
| 3921   | 1186  | RPSA     | -0.28 | 0.000932102 | 0.002284672 |
| 55893  | 4807  | ZNF395   | -0.28 | 7.72E-05    | 0.000222885 |
| 8773   | 2637  | SNAP23   | -0.28 | 0.000876255 | 0.002155815 |
| 132660 | 5338  | LIN54    | -0.28 | 0.00235797  | 0.005370646 |
| 8826   | 7219  | IQGAP1   | -0.28 | 4.21E-06    | 1.43E-05    |
| 23380  | 6487  | SRGAP2   | -0.28 | 0.000619924 | 0.001563493 |
| 3030   | 3048  | HADHA    | -0.28 | 9.57E-06    | 3.11E-05    |
| 55323  | 1014  | LARP6    | -0.28 | 0.023734076 | 0.044455731 |
| 6945   | 2338  | MLX      | -0.28 | 0.00126792  | 0.00303127  |
| 92856  | 3085  | IMP4     | -0.28 | 0.002441035 | 0.005544205 |
| 112574 | 5164  | SNX18    | -0.28 | 0.012937634 | 0.025612912 |
| 55276  | 3240  | PGM2     | -0.29 | 0.005028979 | 0.010804705 |
| 4763   | 11680 | NF1      | -0.29 | 0.000423432 | 0.001098007 |
| 55830  | 2034  | GLT8D1   | -0.29 | 0.001771247 | 0.004123085 |
| 10262  | 2001  | SF3B4    | -0.29 | 0.005365957 | 0.011475966 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 254065 | 12666 | BRWD3    | -0.29 | 0.014977944 | 0.029325411 |
| 64755  | 2778  | C16orf58 | -0.29 | 0.002226732 | 0.005091965 |
| 55744  | 1485  | COA1     | -0.29 | 0.000750196 | 0.001869493 |
| 57703  | 3346  | CWC22    | -0.29 | 0.003331489 | 0.007383548 |
| 57606  | 5329  | SLAIN2   | -0.29 | 0.000496695 | 0.001272203 |
| 3691   | 5695  | ITGB4    | -0.29 | 0.000153802 | 0.000425596 |
| 51157  | 1289  | ZNF580   | -0.29 | 0.01794938  | 0.034585165 |
| 4801   | 3192  | NFYB     | -0.29 | 0.00100538  | 0.002449751 |
| 23353  | 3800  | SUN1     | -0.29 | 0.000198808 | 0.000540606 |
| 11130  | 1709  | ZWINT    | -0.29 | 6.53E-05    | 0.000190205 |
| 29928  | 1691  | TIMM22   | -0.29 | 0.019642682 | 0.0374918   |
| 10969  | 1401  | EBNA1BP2 | -0.29 | 0.002069526 | 0.004760045 |
| 10460  | 2746  | TACC3    | -0.29 | 7.54E-05    | 0.000218063 |
| 51061  | 3128  | TXNDC11  | -0.29 | 0.000962253 | 0.002351762 |
| 4116   | 772   | MAGOH    | -0.29 | 0.004083922 | 0.008914389 |
| 55182  | 2090  | RNF220   | -0.29 | 0.000344434 | 0.00090531  |
| 8449   | 2663  | DHX16    | -0.29 | 0.001424166 | 0.003377997 |
| 6049   | 3431  | RNF6     | -0.29 | 0.007130503 | 0.014873771 |
| 81614  | 3063  | NIPA2    | -0.29 | 0.000128919 | 0.00035971  |
| 9659   | 6240  | PDE4DIP  | -0.29 | 0.000773926 | 0.001922842 |
| 23196  | 5069  | FAM120A  | -0.29 | 3.19E-05    | 9.69E-05    |
| 402055 | 2395  | SRRD     | -0.29 | 0.010092505 | 0.020435741 |
| 10426  | 3860  | TUBGCP3  | -0.29 | 0.001492833 | 0.003528624 |
| 5929   | 4376  | RBBP5    | -0.29 | 0.003280988 | 0.007281614 |
| 79850  | 2255  | FAM57A   | -0.29 | 0.001245856 | 0.002984546 |
| 6478   | 2632  | SIAH2    | -0.29 | 0.02610795  | 0.048513498 |
| 211    | 2288  | ALAS1    | -0.29 | 0.006586762 | 0.013845213 |
| 8289   | 8278  | ARID1A   | -0.29 | 0.000995297 | 0.002427342 |
| 6428   | 3144  | SRSF3    | -0.29 | 8.86E-06    | 2.89E-05    |
| 1317   | 4797  | SLC31A1  | -0.29 | 0.001781215 | 0.004144118 |
| 80199  | 1678  | FUZ      | -0.29 | 0.006770129 | 0.014198731 |
| 91768  | 4433  | CABLES1  | -0.29 | 0.015647766 | 0.030529208 |
| 202052 | 5113  | DNAJC18  | -0.29 | 0.011119248 | 0.022318888 |
| 23333  | 4906  | DPY19L1  | -0.29 | 0.00025502  | 0.000682923 |
| 6455   | 2459  | SH3GL1   | -0.29 | 0.000493409 | 0.001264333 |
| 65005  | 1652  | MRPL9    | -0.29 | 0.000661194 | 0.001661335 |
| 284207 | 1636  | METRNL   | -0.29 | 0.010962666 | 0.022036737 |
| 30849  | 5078  | PIK3R4   | -0.29 | 0.00358935  | 0.007918497 |
| 4942   | 2170  | OAT      | -0.29 | 0.001550269 | 0.003650786 |
| 22826  | 1765  | DNAJC8   | -0.29 | 5.84E-06    | 1.95E-05    |
| 5527   | 2228  | PPP2R5C  | -0.29 | 8.45E-05    | 0.00024254  |
| 246175 | 8866  | CNOT6L   | -0.29 | 0.000670418 | 0.001683197 |
| 3326   | 2703  | HSP90AB1 | -0.29 | 1.23E-07    | 4.88E-07    |
| 10947  | 3868  | AP3M2    | -0.29 | 0.016727646 | 0.032468518 |
| 11200  | 1638  | CHEK2    | -0.29 | 0.009952951 | 0.020173858 |
| 22949  | 1300  | PTGR1    | -0.29 | 0.000425785 | 0.001103625 |
| 85021  | 2705  | REPS1    | -0.29 | 0.006656369 | 0.013984908 |
| 83732  | 2203  | RIOK1    | -0.29 | 0.014623251 | 0.028691024 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 205564 | 6299  | SENP5    | -0.29 | 0.003654199 | 0.008052562 |
| 56270  | 2624  | WDR45B   | -0.29 | 5.47E-05    | 0.000161289 |
| 7871   | 5119  | SLMAP    | -0.29 | 0.000181173 | 0.000496006 |
| 10285  | 2064  | SMNDC1   | -0.29 | 0.001409145 | 0.003345049 |
| 7089   | 2672  | TLE2     | -0.29 | 0.016154341 | 0.031431267 |
| 5339   | 12726 | PLEC     | -0.29 | 2.35E-05    | 7.29E-05    |
| 10188  | 4096  | TNK2     | -0.29 | 0.008679918 | 0.017808866 |
| 81562  | 2398  | LMAN2L   | -0.29 | 0.0068931   | 0.014419191 |
| 6309   | 6946  | SC5D     | -0.29 | 0.013051992 | 0.025824922 |
| 79701  | 4392  | OGFOD3   | -0.29 | 0.002140636 | 0.004910886 |
| 54809  | 6832  | SAMD9    | -0.29 | 0.005634594 | 0.011995622 |
| 5605   | 1751  | MAP2K2   | -0.29 | 0.0002585   | 0.00069141  |
| 23077  | 12937 | MYCBP2   | -0.29 | 0.002071468 | 0.004763893 |
| 5036   | 2643  | PA2G4    | -0.29 | 3.21E-05    | 9.76E-05    |
| 84295  | 4389  | PHF6     | -0.29 | 0.001430504 | 0.003392578 |
| 28987  | 1775  | NOB1     | -0.29 | 0.002128595 | 0.004886417 |
| 93624  | 4339  | TADA2B   | -0.29 | 0.007237525 | 0.015075773 |
| 9810   | 5527  | RNF40    | -0.30 | 0.000105217 | 0.000298164 |
| 5338   | 3425  | PLD2     | -0.30 | 0.005404198 | 0.011549409 |
| 80155  | 5529  | NAA15    | -0.30 | 4.92E-05    | 0.000146132 |
| 440275 | 5544  | EIF2AK4  | -0.30 | 0.000208053 | 0.000563848 |
| 60684  | 4422  | TRAPPC11 | -0.30 | 0.002611349 | 0.005899358 |
| 10043  | 2374  | TOM1     | -0.30 | 0.007213076 | 0.015031894 |
| 1031   | 1685  | CDKN2C   | -0.30 | 0.000117018 | 0.00032914  |
| 28981  | 2755  | IFT81    | -0.30 | 0.002379944 | 0.005419306 |
| 64132  | 3594  | XYLT2    | -0.30 | 0.000586489 | 0.001487189 |
| 9837   | 3289  | GIN51    | -0.30 | 0.002888579 | 0.00647135  |
| 2091   | 973   | FBL      | -0.30 | 0.001211057 | 0.002909419 |
| 10491  | 6668  | CRTAP    | -0.30 | 3.68E-06    | 1.25E-05    |
| 6602   | 3399  | SMARCD1  | -0.30 | 0.000648387 | 0.00163065  |
| 6502   | 3217  | SKP2     | -0.30 | 0.000952593 | 0.002332003 |
| 8754   | 4110  | ADAM9    | -0.30 | 3.84E-05    | 0.000115577 |
| 6390   | 1161  | SDHB     | -0.30 | 0.001435231 | 0.003403335 |
| 7003   | 9433  | TEAD1    | -0.30 | 4.40E-05    | 0.000131376 |
| 118980 | 2567  | SFXN2    | -0.30 | 0.010588643 | 0.021347896 |
| 26145  | 2589  | IRF2BP1  | -0.30 | 0.006235844 | 0.013169912 |
| 5422   | 5468  | POLA1    | -0.30 | 0.000148023 | 0.00041095  |
| 3678   | 4267  | ITGA5    | -0.30 | 5.10E-05    | 0.000150925 |
| 57587  | 4916  | CFAP97   | -0.30 | 0.00474576  | 0.010254489 |
| 23481  | 2335  | PES1     | -0.30 | 0.000404605 | 0.001052875 |
| 55299  | 1303  | BRIX1    | -0.30 | 0.000199782 | 0.000542939 |
| 2077   | 2695  | ERF      | -0.30 | 0.00060654  | 0.001532567 |
| 2674   | 9200  | GFRA1    | -0.30 | 1.86E-05    | 5.84E-05    |
| 23133  | 5690  | PHF8     | -0.30 | 0.015536973 | 0.030336367 |
| 9802   | 2158  | DAZAP2   | -0.30 | 0.000103621 | 0.000293971 |
| 10066  | 2479  | SCAMP2   | -0.30 | 0.000746994 | 0.001862558 |
| 219333 | 4413  | USP12    | -0.30 | 0.000214045 | 0.00057869  |
| 54531  | 2942  | MIER2    | -0.30 | 0.019158373 | 0.03666436  |

|       |      |          |       |             |             |
|-------|------|----------|-------|-------------|-------------|
| 81034 | 3126 | SLC25A32 | -0.30 | 0.003386349 | 0.007492982 |
| 56261 | 5492 | GPCPD1   | -0.30 | 0.001821168 | 0.004233192 |
| 7739  | 3656 | ZNF185   | -0.30 | 0.000356019 | 0.000933276 |
| 55732 | 3201 | C1orf112 | -0.30 | 0.00742889  | 0.015447222 |
| 84061 | 4035 | MAGT1    | -0.30 | 4.49E-05    | 0.00013405  |
| 64927 | 3531 | TTC23    | -0.30 | 0.017874895 | 0.034465668 |
| 7798  | 8440 | LUZP1    | -0.30 | 7.93E-05    | 0.000228717 |
| 51154 | 2274 | MRT04    | -0.30 | 0.000593681 | 0.001503709 |
| 56993 | 1396 | TOMM22   | -0.30 | 0.000128353 | 0.000358411 |
| 55308 | 3015 | DDX19A   | -0.30 | 0.000115658 | 0.000325573 |
| 92345 | 3740 | NAF1     | -0.30 | 0.009195262 | 0.018768687 |
| 2767  | 4145 | GNA11    | -0.30 | 0.000117388 | 0.000330077 |
| 322   | 2496 | APBB1    | -0.30 | 0.00259509  | 0.005866357 |
| 2245  | 4291 | FGD1     | -0.30 | 0.001728379 | 0.004034927 |
| 57089 | 8564 | ENTPD7   | -0.30 | 0.006196401 | 0.013092836 |
| 6300  | 1873 | MAPK12   | -0.30 | 0.010683831 | 0.021512955 |
| 4670  | 2492 | HNRNPM   | -0.30 | 5.95E-07    | 2.21E-06    |
| 10198 | 5270 | MPHOSPH9 | -0.30 | 0.00046517  | 0.001197846 |
| 3075  | 3942 | CFH      | -0.30 | 0.000436223 | 0.001129033 |
| 55898 | 3284 | UNC45A   | -0.30 | 0.000444706 | 0.001149649 |
| 4088  | 5845 | SMAD3    | -0.30 | 1.04E-05    | 3.38E-05    |
| 51202 | 1836 | DDX47    | -0.30 | 0.00040253  | 0.001047936 |
| 5934  | 4500 | RBL2     | -0.30 | 2.01E-05    | 6.28E-05    |
| 6908  | 1921 | TBP      | -0.30 | 0.014492273 | 0.028459061 |
| 84335 | 2014 | AKT1S1   | -0.30 | 0.002289238 | 0.005224814 |
| 23335 | 6202 | WDR7     | -0.30 | 0.006795799 | 0.014247523 |
| 57718 | 3592 | PPP4R4   | -0.30 | 0.022735585 | 0.042747712 |
| 7355  | 2018 | SLC35A2  | -0.30 | 0.009783281 | 0.01986167  |
| 580   | 4812 | BARD1    | -0.30 | 0.000857432 | 0.002112432 |
| 55508 | 3705 | SLC35E3  | -0.30 | 0.005213605 | 0.011181091 |
| 83786 | 3758 | FRMD8    | -0.30 | 0.000556979 | 0.001416605 |
| 51649 | 1498 | MRPS23   | -0.30 | 0.010358144 | 0.020928304 |
| 55193 | 7860 | PBRM1    | -0.30 | 3.13E-05    | 9.54E-05    |
| 81554 | 2425 | RCC1L    | -0.30 | 0.001174279 | 0.002828079 |
| 86    | 1885 | ACTL6A   | -0.30 | 0.000178555 | 0.00048914  |
| 55704 | 8637 | CCDC88A  | -0.30 | 1.72E-05    | 5.41E-05    |
| 1939  | 2051 | EIF2D    | -0.31 | 0.000530844 | 0.001354009 |
| 27042 | 4520 | DIEXF    | -0.31 | 0.007484419 | 0.015553587 |
| 23527 | 7187 | ACAP2    | -0.31 | 0.000695473 | 0.001741427 |
| 79894 | 3101 | ZNF672   | -0.31 | 0.006068513 | 0.012848587 |
| 54838 | 4272 | WBP1L    | -0.31 | 0.000296879 | 0.000786952 |
| 25978 | 2624 | CHMP2B   | -0.31 | 0.001388298 | 0.003298646 |
| 6890  | 2541 | TAP1     | -0.31 | 0.000535177 | 0.001364084 |
| 23294 | 5387 | ANKS1A   | -0.31 | 0.014222694 | 0.027957609 |
| 48    | 3531 | ACO1     | -0.31 | 2.51E-05    | 7.74E-05    |
| 11215 | 9822 | AKAP11   | -0.31 | 0.000307621 | 0.000813243 |
| 51231 | 2084 | VRK3     | -0.31 | 0.016087347 | 0.031307774 |
| 9753  | 8381 | ZSCAN12  | -0.31 | 0.008000062 | 0.016506366 |

|        |       |         |       |             |             |
|--------|-------|---------|-------|-------------|-------------|
| 26136  | 2785  | TES     | -0.31 | 0.000195438 | 0.000532273 |
| 55222  | 3025  | LRRC20  | -0.31 | 0.005080974 | 0.010909819 |
| 23594  | 1644  | ORC6    | -0.31 | 0.007522924 | 0.01562264  |
| 22916  | 2187  | NCBP2   | -0.31 | 4.94E-05    | 0.000146539 |
| 2737   | 8223  | GLI3    | -0.31 | 0.014845945 | 0.029082993 |
| 55379  | 2933  | LRRC59  | -0.31 | 8.94E-05    | 0.000255602 |
| 53635  | 1670  | PTOV1   | -0.31 | 0.000228554 | 0.000615762 |
| 10238  | 6394  | DCAF7   | -0.31 | 1.76E-05    | 5.54E-05    |
| 115416 | 774   | MALSU1  | -0.31 | 0.012064219 | 0.024025671 |
| 10950  | 1478  | BTG3    | -0.31 | 0.001576881 | 0.00370687  |
| 140609 | 4024  | NEK7    | -0.31 | 0.000204708 | 0.000555646 |
| 84790  | 1652  | TUBA1C  | -0.31 | 3.68E-05    | 0.000111054 |
| 9444   | 7186  | QKI     | -0.31 | 1.16E-05    | 3.75E-05    |
| 55343  | 3255  | SLC35C1 | -0.31 | 0.007956109 | 0.016431959 |
| 10607  | 2618  | TBL3    | -0.31 | 0.001946967 | 0.004499117 |
| 19     | 10331 | ABCA1   | -0.31 | 0.001036733 | 0.002519582 |
| 8636   | 954   | SSNA1   | -0.31 | 0.007217539 | 0.015039432 |
| 4690   | 4382  | NCK1    | -0.31 | 0.002652766 | 0.005987594 |
| 10869  | 4325  | USP19   | -0.31 | 0.000216409 | 0.000584726 |
| 10598  | 1422  | AHSA1   | -0.31 | 0.00012605  | 0.000352369 |
| 4809   | 1575  | SNU13   | -0.31 | 0.000491176 | 0.001258976 |
| 8888   | 6324  | MCM3AP  | -0.31 | 4.66E-05    | 0.000138618 |
| 55870  | 7765  | ASH1L   | -0.31 | 0.000154667 | 0.000427457 |
| 5073   | 3062  | PARN    | -0.31 | 0.000628463 | 0.001583456 |
| 84946  | 1835  | LTV1    | -0.31 | 0.000913418 | 0.00224197  |
| 51073  | 1651  | MRPL4   | -0.31 | 0.001496705 | 0.003537304 |
| 200576 | 9568  | PIKFYVE | -0.31 | 0.001813729 | 0.004217555 |
| 7187   | 7826  | TRAF3   | -0.31 | 6.73E-05    | 0.000195506 |
| 84501  | 3364  | SPIRE2  | -0.31 | 0.016472104 | 0.032007474 |
| 9320   | 9616  | TRIP12  | -0.31 | 1.07E-06    | 3.87E-06    |
| 81608  | 3035  | FIP1L1  | -0.31 | 0.000184277 | 0.000503884 |
| 2632   | 3118  | GBE1    | -0.31 | 1.98E-05    | 6.19E-05    |
| 160418 | 6627  | TMTC3   | -0.31 | 0.000955398 | 0.00233726  |
| 58190  | 2507  | CTDSP1  | -0.31 | 0.0003683   | 0.000963338 |
| 79754  | 2736  | ASB13   | -0.31 | 0.018775633 | 0.036013411 |
| 3454   | 5613  | IFNAR1  | -0.31 | 6.68E-05    | 0.000194412 |
| 55135  | 1918  | WRAP53  | -0.31 | 0.008874558 | 0.018172542 |
| 192111 | 2776  | PGAM5   | -0.31 | 0.00132898  | 0.003167871 |
| 1802   | 2519  | DPH2    | -0.31 | 0.003834609 | 0.008413599 |
| 55683  | 5190  | KANSL3  | -0.31 | 3.23E-05    | 9.80E-05    |
| 5830   | 3251  | PEX5    | -0.31 | 0.007624776 | 0.015815668 |
| 3344   | 5368  | FOXN2   | -0.31 | 0.025564134 | 0.047572636 |
| 9221   | 3947  | NOLC1   | -0.31 | 4.18E-06    | 1.42E-05    |
| 9836   | 2860  | LCMT2   | -0.31 | 0.00958237  | 0.019496113 |
| 51094  | 2119  | ADIPOR1 | -0.31 | 6.71E-05    | 0.000195233 |
| 829    | 2711  | CAPZA1  | -0.31 | 7.54E-06    | 2.49E-05    |
| 11011  | 5278  | TLK2    | -0.31 | 0.000244029 | 0.000655069 |
| 114049 | 1257  | BUD23   | -0.31 | 0.000771787 | 0.001918455 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 23531  | 2726  | MMD      | -0.31 | 0.0020028   | 0.004622127 |
| 55626  | 5062  | AMBRA1   | -0.31 | 0.000556441 | 0.001415438 |
| 56945  | 1167  | MRPS22   | -0.31 | 0.000770322 | 0.001915349 |
| 7014   | 2993  | TERF2    | -0.31 | 0.003688988 | 0.008125194 |
| 23587  | 1669  | ELP5     | -0.31 | 0.002237717 | 0.00511511  |
| 51564  | 4136  | HDAC7    | -0.31 | 2.19E-05    | 6.82E-05    |
| 56941  | 1657  | HMCE5    | -0.31 | 0.000272708 | 0.000727004 |
| 11230  | 1316  | PRAF2    | -0.31 | 0.002662488 | 0.006007248 |
| 84273  | 2286  | NOA1     | -0.32 | 0.001449049 | 0.003433808 |
| 79902  | 2024  | NUP85    | -0.32 | 8.41E-05    | 0.000241551 |
| 131601 | 1872  | TPRA1    | -0.32 | 0.000444202 | 0.001148681 |
| 5607   | 2344  | MAP2K5   | -0.32 | 0.021883575 | 0.04129871  |
| 11159  | 2125  | RABL2A   | -0.32 | 0.022536549 | 0.042404893 |
| 201292 | 3325  | TRIM65   | -0.32 | 0.00432831  | 0.009415452 |
| 3020   | 1077  | H3F3A    | -0.32 | 3.97E-07    | 1.50E-06    |
| 142678 | 3410  | MIB2     | -0.32 | 0.000518219 | 0.001323707 |
| 57700  | 5828  | FAM160B1 | -0.32 | 0.004429855 | 0.009621031 |
| 51622  | 1834  | CCZ1     | -0.32 | 0.000139423 | 0.000388044 |
| 14     | 1842  | AAMP     | -0.32 | 0.00017516  | 0.000480359 |
| 3576   | 1718  | CXCL8    | -0.32 | 0.012191065 | 0.024256533 |
| 26073  | 2753  | POLDIP2  | -0.32 | 4.82E-05    | 0.00014316  |
| 780    | 3791  | DDR1     | -0.32 | 1.29E-05    | 4.13E-05    |
| 64151  | 3991  | NCAPG    | -0.32 | 1.30E-05    | 4.17E-05    |
| 84065  | 1629  | TMEM222  | -0.32 | 0.001135856 | 0.002742477 |
| 10295  | 2168  | BCKDK    | -0.32 | 0.001256028 | 0.003006481 |
| 29940  | 4367  | DSE      | -0.32 | 0.000119794 | 0.000336098 |
| 8744   | 1680  | TNFSF9   | -0.32 | 0.011101908 | 0.022286601 |
| 7247   | 3406  | TSN      | -0.32 | 1.36E-05    | 4.33E-05    |
| 79798  | 3938  | ARMC5    | -0.32 | 0.010537894 | 0.021255227 |
| 2931   | 2200  | GSK3A    | -0.32 | 0.004341063 | 0.009437418 |
| 7873   | 993   | MANF     | -0.32 | 0.000118445 | 0.00033268  |
| 360023 | 8263  | ZBTB41   | -0.32 | 0.021556009 | 0.040745443 |
| 3301   | 2405  | DNAJA1   | -0.32 | 2.90E-06    | 1.00E-05    |
| 10308  | 3293  | ZNF267   | -0.32 | 0.026423577 | 0.049038449 |
| 56654  | 1548  | NPDC1    | -0.32 | 0.002163781 | 0.004959503 |
| 56938  | 6750  | ARNTL2   | -0.32 | 0.001308282 | 0.003121886 |
| 79171  | 1703  | RBM42    | -0.32 | 0.000351957 | 0.000923037 |
| 4905   | 3995  | NSF      | -0.32 | 4.45E-05    | 0.000132863 |
| 57799  | 2599  | RAB40C   | -0.32 | 0.00579538  | 0.012317262 |
| 23012  | 4767  | STK38L   | -0.32 | 0.005914085 | 0.01254105  |
| 201725 | 3545  | C4orf46  | -0.32 | 0.002131858 | 0.004892643 |
| 27445  | 16317 | PCLO     | -0.32 | 0.020428455 | 0.038820619 |
| 7342   | 3873  | UBP1     | -0.32 | 3.68E-05    | 0.00011105  |
| 55432  | 6265  | YOD1     | -0.32 | 0.006818348 | 0.014286369 |
| 1981   | 5342  | EIF4G1   | -0.32 | 6.72E-08    | 2.74E-07    |
| 79018  | 3913  | GID4     | -0.32 | 0.015783665 | 0.030763948 |
| 79648  | 4793  | MCPH1    | -0.32 | 0.010450099 | 0.021092509 |
| 5298   | 3732  | PI4KB    | -0.32 | 8.26E-05    | 0.000237299 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 6117   | 4345  | RPA1     | -0.32 | 4.28E-05    | 0.000127919 |
| 27175  | 2154  | TUBG2    | -0.32 | 0.010922258 | 0.021963182 |
| 51132  | 10599 | RLIM     | -0.32 | 1.72E-05    | 5.42E-05    |
| 157769 | 5510  | FAM91A1  | -0.32 | 0.000124853 | 0.000349298 |
| 126299 | 1411  | ZNF428   | -0.32 | 0.001866245 | 0.004330039 |
| 55279  | 5267  | ZNF654   | -0.32 | 0.002142872 | 0.00491348  |
| 54529  | 2484  | ASNSD1   | -0.32 | 0.000341428 | 0.000897809 |
| 158    | 1784  | ADSL     | -0.32 | 0.000283246 | 0.000753738 |
| 22950  | 2982  | SLC4A1AP | -0.32 | 0.00016665  | 0.000458862 |
| 54946  | 2214  | SLC41A3  | -0.32 | 0.002385942 | 0.00543018  |
| 56946  | 6729  | EMSY     | -0.32 | 0.001158772 | 0.002792873 |
| 129642 | 7308  | MBOAT2   | -0.32 | 0.000108271 | 0.000306136 |
| 8666   | 1127  | EIF3G    | -0.32 | 2.53E-05    | 7.80E-05    |
| 84993  | 1416  | UBL7     | -0.32 | 0.004299205 | 0.009353285 |
| 162427 | 3729  | RETREG3  | -0.32 | 0.00018605  | 0.000508105 |
| 55791  | 2224  | LRIF1    | -0.32 | 0.006435966 | 0.013557112 |
| 10484  | 4123  | SEC23A   | -0.32 | 1.11E-05    | 3.58E-05    |
| 1020   | 1206  | CDK5     | -0.32 | 0.012658952 | 0.025119975 |
| 1876   | 3256  | E2F6     | -0.32 | 0.003648586 | 0.008042188 |
| 10054  | 2671  | UBA2     | -0.32 | 3.83E-05    | 0.000115289 |
| 10078  | 1906  | TSSC4    | -0.32 | 0.005358725 | 0.01146602  |
| 808    | 2277  | CALM3    | -0.32 | 0.000111799 | 0.000315659 |
| 5427   | 1738  | POLE2    | -0.32 | 0.005703013 | 0.012131106 |
| 4719   | 3916  | NDUFS1   | -0.32 | 1.63E-05    | 5.14E-05    |
| 54977  | 2137  | SLC25A38 | -0.32 | 0.005439874 | 0.011617269 |
| 10980  | 1441  | COPS6    | -0.32 | 1.80E-06    | 6.32E-06    |
| 25853  | 3688  | DCAF12   | -0.32 | 6.88E-05    | 0.000199776 |
| 92305  | 2494  | TMEM129  | -0.32 | 0.000121178 | 0.000339497 |
| 7317   | 3843  | UBA1     | -0.33 | 2.19E-06    | 7.66E-06    |
| 201514 | 2371  | ZNF584   | -0.33 | 0.019546732 | 0.037328712 |
| 90639  | 4896  | COX19    | -0.33 | 0.012120592 | 0.024129823 |
| 10097  | 3929  | ACTR2    | -0.33 | 7.87E-08    | 3.18E-07    |
| 92140  | 6547  | MTDH     | -0.33 | 5.58E-07    | 2.08E-06    |
| 687    | 5208  | KLF9     | -0.33 | 2.00E-05    | 6.26E-05    |
| 2932   | 7098  | GSK3B    | -0.33 | 1.69E-05    | 5.34E-05    |
| 54386  | 2196  | TERF2IP  | -0.33 | 0.000433982 | 0.00112356  |
| 166968 | 5216  | MIER3    | -0.33 | 0.000679025 | 0.001702881 |
| 57534  | 9070  | MIB1     | -0.33 | 0.000114035 | 0.00032136  |
| 3632   | 3086  | INPP5A   | -0.33 | 0.011992756 | 0.023894067 |
| 8540   | 7706  | AGPS     | -0.33 | 3.77E-06    | 1.28E-05    |
| 64431  | 2503  | ACTR6    | -0.33 | 0.005695849 | 0.012117319 |
| 5018   | 1737  | OXA1L    | -0.33 | 0.000109442 | 0.0003092   |
| 220    | 3416  | ALDH1A3  | -0.33 | 0.001938669 | 0.004483378 |
| 10038  | 1998  | PARP2    | -0.33 | 0.000575015 | 0.001459344 |
| 81565  | 2422  | NDEL1    | -0.33 | 0.002552123 | 0.005780259 |
| 166647 | 4071  | ADGRA3   | -0.33 | 2.67E-05    | 8.22E-05    |
| 29098  | 1042  | RANGRF   | -0.33 | 0.011457032 | 0.022916643 |
| 4520   | 7888  | MTF1     | -0.33 | 0.002436598 | 0.005534833 |



|        |       |            |       |             |             |
|--------|-------|------------|-------|-------------|-------------|
| 10573  | 1148  | MRPL28     | -0.33 | 5.98E-05    | 0.000175133 |
| 6194   | 829   | RPS6       | -0.33 | 2.46E-09    | 1.14E-08    |
| 10678  | 2758  | B3GNT2     | -0.33 | 0.002045829 | 0.00471225  |
| 1841   | 1217  | DTYMK      | -0.33 | 0.002681251 | 0.00604728  |
| 9736   | 11326 | USP34      | -0.33 | 3.42E-06    | 1.17E-05    |
| 51184  | 1506  | GPN3       | -0.33 | 0.011278886 | 0.02260357  |
| 1973   | 1893  | EIF4A1     | -0.33 | 7.81E-08    | 3.16E-07    |
| 10776  | 5434  | ARPP19     | -0.33 | 9.72E-07    | 3.52E-06    |
| 11176  | 8799  | BAZ2A      | -0.33 | 3.58E-06    | 1.22E-05    |
| 10518  | 1566  | CIB2       | -0.33 | 0.009894709 | 0.02006584  |
| 54455  | 6145  | FBXO42     | -0.33 | 0.000829433 | 0.002047711 |
| 2961   | 1417  | GTF2E2     | -0.33 | 0.005452643 | 0.01164174  |
| 7057   | 5952  | THBS1      | -0.33 | 5.51E-06    | 1.85E-05    |
| 128077 | 3986  | LIX1L      | -0.33 | 0.000749338 | 0.001867878 |
| 80019  | 1711  | UBTD1      | -0.33 | 0.003799549 | 0.008342855 |
| 9101   | 4748  | USP8       | -0.33 | 4.23E-05    | 0.000126515 |
| 51667  | 3137  | NUB1       | -0.33 | 0.000270778 | 0.000722383 |
| 23233  | 5366  | EXOC6B     | -0.33 | 0.00154162  | 0.0036309   |
| 26502  | 1800  | NARF       | -0.33 | 0.006438887 | 0.013561659 |
| 1854   | 1581  | DUT        | -0.33 | 3.24E-05    | 9.83E-05    |
| 6464   | 3423  | SHC1       | -0.33 | 9.52E-08    | 3.82E-07    |
| 55588  | 3663  | MED29      | -0.33 | 2.60E-05    | 8.01E-05    |
| 79134  | 5938  | TMEM185B   | -0.33 | 2.12E-05    | 6.59E-05    |
| 26470  | 3347  | SEZ6L2     | -0.33 | 2.52E-05    | 7.77E-05    |
| 7283   | 1968  | TUBG1      | -0.33 | 0.00035454  | 0.000929535 |
| 9790   | 3730  | BMS1       | -0.33 | 1.10E-05    | 3.55E-05    |
| 79809  | 5585  | TTC21B     | -0.33 | 0.012483885 | 0.024794732 |
| 25807  | 1943  | RHBDD3     | -0.33 | 0.00320619  | 0.007132539 |
| 22818  | 1945  | COPZ1      | -0.33 | 1.66E-06    | 5.86E-06    |
| 168451 | 3303  | THAP5      | -0.33 | 0.001845337 | 0.004284886 |
| 26000  | 3254  | TBC1D10B   | -0.33 | 0.000751198 | 0.001871202 |
| 55422  | 4648  | ZNF331     | -0.33 | 0.004043905 | 0.008834637 |
| 129138 | 2164  | ANKRD54    | -0.33 | 0.003075358 | 0.006861247 |
| 3839   | 4210  | KPNA3      | -0.33 | 7.87E-05    | 0.000226889 |
| 116225 | 1419  | ZMYND19    | -0.33 | 7.58E-05    | 0.000219149 |
| 7702   | 2979  | ZNF143     | -0.33 | 0.00514324  | 0.01103418  |
| 22864  | 3877  | R3HDM2     | -0.33 | 0.001083513 | 0.002626447 |
| 160    | 3459  | AP2A1      | -0.33 | 5.29E-07    | 1.97E-06    |
| 55147  | 2554  | RBM23      | -0.33 | 0.000114674 | 0.000323008 |
| 85406  | 3330  | DNAJC14    | -0.33 | 8.45E-05    | 0.00024252  |
| 9776   | 4403  | ATG13      | -0.33 | 8.16E-06    | 2.68E-05    |
| 22976  | 3822  | PAXIP1     | -0.33 | 0.000253881 | 0.000680078 |
| 84135  | 5095  | UTP15      | -0.33 | 0.001568918 | 0.003691279 |
| 663    | 6353  | BNIP2      | -0.33 | 1.23E-05    | 3.94E-05    |
| 5289   | 3595  | PIK3C3     | -0.33 | 0.000230744 | 0.000621284 |
| 54780  | 1420  | NSMCE4A    | -0.33 | 0.000476402 | 0.001223931 |
| 2110   | 2142  | ETFDH      | -0.34 | 0.013969111 | 0.027504784 |
| 91368  | 1296  | CDKN2AIPNL | -0.34 | 0.001224205 | 0.002937737 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 9831   | 3972  | ZNF623   | -0.34 | 0.013463416 | 0.026579776 |
| 182    | 5988  | JAG1     | -0.34 | 0.018583721 | 0.035677532 |
| 254394 | 4080  | MCM9     | -0.34 | 0.004677254 | 0.010121234 |
| 3068   | 2168  | HDGF     | -0.34 | 5.18E-07    | 1.93E-06    |
| 1639   | 4381  | DCTN1    | -0.34 | 2.87E-06    | 9.88E-06    |
| 84548  | 2588  | TMEM185A | -0.34 | 0.005346586 | 0.011445559 |
| 5894   | 3070  | RAF1     | -0.34 | 2.23E-06    | 7.76E-06    |
| 6193   | 755   | RPS5     | -0.34 | 6.60E-06    | 2.19E-05    |
| 79039  | 4402  | DDX54    | -0.34 | 2.42E-05    | 7.48E-05    |
| 1052   | 1269  | CEBPD    | -0.34 | 8.52E-05    | 0.000244407 |
| 55127  | 8497  | HEATR1   | -0.34 | 8.32E-05    | 0.000238867 |
| 200081 | 4819  | TXLNA    | -0.34 | 1.84E-06    | 6.46E-06    |
| 79637  | 1846  | ARMC7    | -0.34 | 0.007996813 | 0.016506366 |
| 56926  | 3746  | NCLN     | -0.34 | 2.34E-05    | 7.25E-05    |
| 23139  | 5272  | MAST2    | -0.34 | 2.69E-05    | 8.26E-05    |
| 81688  | 2585  | C6orf62  | -0.34 | 2.82E-07    | 1.08E-06    |
| 79680  | 6693  | RTL10    | -0.34 | 0.003694827 | 0.008136038 |
| 3028   | 962   | HSD17B10 | -0.34 | 0.00012146  | 0.000340179 |
| 9545   | 4290  | RAB3D    | -0.34 | 0.001183061 | 0.00284678  |
| 6201   | 745   | RPS7     | -0.34 | 2.53E-06    | 8.77E-06    |
| 548645 | 2268  | DNAJC25  | -0.34 | 0.01431073  | 0.028124439 |
| 23107  | 2797  | MRPS27   | -0.34 | 7.58E-06    | 2.50E-05    |
| 1534   | 2983  | CYB561   | -0.34 | 0.00401484  | 0.008777614 |
| 55361  | 4204  | PI4K2A   | -0.34 | 8.90E-05    | 0.000254615 |
| 114884 | 3307  | OSBPL10  | -0.34 | 3.72E-05    | 0.000112193 |
| 2907   | 1896  | GRINA    | -0.34 | 2.70E-06    | 9.31E-06    |
| 23469  | 6874  | PHF3     | -0.34 | 2.15E-06    | 7.50E-06    |
| 79603  | 1758  | CERS4    | -0.34 | 0.005636247 | 0.011997703 |
| 1314   | 5639  | COPA     | -0.34 | 1.99E-08    | 8.52E-08    |
| 7701   | 6525  | ZNF142   | -0.34 | 0.002756235 | 0.00619595  |
| 84002  | 4178  | B3GNT5   | -0.34 | 0.000116354 | 0.000327427 |
| 9401   | 3740  | RECQL4   | -0.34 | 8.19E-05    | 0.000235609 |
| 339175 | 2474  | METTL2A  | -0.34 | 0.003075103 | 0.006861247 |
| 221184 | 2252  | CPNE2    | -0.34 | 0.000393633 | 0.001026277 |
| 56474  | 3934  | CTPS2    | -0.34 | 0.001909265 | 0.004420619 |
| 64855  | 3887  | FAM129B  | -0.34 | 1.54E-05    | 4.87E-05    |
| 60672  | 1617  | MIIP     | -0.34 | 0.011225123 | 0.02250852  |
| 2976   | 3961  | GTF3C2   | -0.34 | 2.30E-05    | 7.13E-05    |
| 9512   | 2831  | PMPCB    | -0.34 | 5.87E-06    | 1.96E-05    |
| 5351   | 3047  | PLOD1    | -0.34 | 1.48E-06    | 5.27E-06    |
| 781    | 7344  | CACNA2D1 | -0.34 | 0.022191842 | 0.041827162 |
| 9716   | 5106  | AQR      | -0.34 | 2.00E-05    | 6.24E-05    |
| 5994   | 2825  | RFXAP    | -0.34 | 0.018052889 | 0.034759832 |
| 23351  | 6164  | KHNYN    | -0.34 | 9.70E-05    | 0.000276401 |
| 1454   | 2746  | CSNK1E   | -0.34 | 0.00014406  | 0.000400447 |
| 133    | 1606  | ADM      | -0.34 | 7.12E-05    | 0.000206316 |
| 2936   | 3174  | GSR      | -0.34 | 3.63E-05    | 0.000109462 |
| 79834  | 10256 | PEAK1    | -0.34 | 0.000152241 | 0.000421737 |

|        |      |         |       |             |             |
|--------|------|---------|-------|-------------|-------------|
| 11332  | 1557 | ACOT7   | -0.34 | 0.00010554  | 0.000298748 |
| 80895  | 1436 | ILKAP   | -0.34 | 0.006044878 | 0.012803123 |
| 5702   | 1618 | PSMC3   | -0.34 | 7.65E-06    | 2.52E-05    |
| 60678  | 2148 | EEFSEC  | -0.34 | 0.005933781 | 0.012573886 |
| 10920  | 2277 | COPS8   | -0.34 | 7.47E-05    | 0.000216218 |
| 79137  | 4283 | RETREG2 | -0.34 | 4.49E-06    | 1.52E-05    |
| 6196   | 5709 | RPS6KA2 | -0.34 | 0.000833969 | 0.002057765 |
| 26037  | 7187 | SIPA1L1 | -0.34 | 2.57E-05    | 7.92E-05    |
| 23219  | 5447 | FBXO28  | -0.34 | 0.000163889 | 0.000451679 |
| 131566 | 5925 | DCBLD2  | -0.34 | 3.37E-10    | 1.66E-09    |
| 11340  | 1415 | EXOSC8  | -0.34 | 7.01E-05    | 0.000203461 |
| 58509  | 3559 | CACTIN  | -0.34 | 0.001024866 | 0.002493472 |
| 85465  | 8143 | SELENOI | -0.34 | 0.000527117 | 0.001344891 |
| 219771 | 3696 | CCNY    | -0.34 | 6.12E-06    | 2.04E-05    |
| 9862   | 3559 | MED24   | -0.34 | 1.93E-05    | 6.04E-05    |
| 51684  | 4817 | SUFU    | -0.34 | 0.002940221 | 0.00657875  |
| 10438  | 1233 | C1D     | -0.34 | 0.009473614 | 0.019294724 |
| 9150   | 3346 | CTDP1   | -0.34 | 0.000710421 | 0.001777104 |
| 78994  | 2076 | PRR14   | -0.34 | 0.002011527 | 0.004639857 |
| 55177  | 2281 | RMDN3   | -0.34 | 0.000484989 | 0.001244193 |
| 4668   | 3445 | NAGA    | -0.34 | 0.000137941 | 0.000384218 |
| 3476   | 1683 | IGBP1   | -0.34 | 0.000111587 | 0.00031516  |
| 6935   | 5866 | ZEB1    | -0.34 | 0.000120471 | 0.00033773  |
| 215    | 3697 | ABCD1   | -0.35 | 0.00793782  | 0.016399906 |
| 11021  | 2890 | RAB35   | -0.35 | 7.90E-05    | 0.000227772 |
| 25926  | 2638 | NOL11   | -0.35 | 7.00E-05    | 0.000203112 |
| 65977  | 3832 | PLEKHA3 | -0.35 | 0.006784244 | 0.014224976 |
| 2771   | 2256 | GNAI2   | -0.35 | 9.47E-05    | 0.000270009 |
| 81689  | 2012 | ISCA1   | -0.35 | 0.000304843 | 0.000806541 |
| 10495  | 3750 | ENOX2   | -0.35 | 0.015058027 | 0.029462728 |
| 27097  | 3408 | TAF5L   | -0.35 | 0.000508178 | 0.001300115 |
| 55798  | 2192 | METTL2B | -0.35 | 0.013952118 | 0.02747437  |
| 5504   | 3468 | PPP1R2  | -0.35 | 6.60E-05    | 0.000192123 |
| 130074 | 5288 | FAM168B | -0.35 | 2.29E-07    | 8.84E-07    |
| 55355  | 2661 | HJURP   | -0.35 | 2.17E-05    | 6.73E-05    |
| 9618   | 2844 | TRAF4   | -0.35 | 3.01E-05    | 9.19E-05    |
| 29117  | 2497 | BRD7    | -0.35 | 1.37E-06    | 4.88E-06    |
| 51011  | 1514 | FAHD2A  | -0.35 | 0.00112677  | 0.002721648 |
| 57707  | 4380 | TLDC1   | -0.35 | 0.001097791 | 0.002657608 |
| 7804   | 6619 | LRP8    | -0.35 | 0.002281115 | 0.005208951 |
| 54682  | 2327 | MANSC1  | -0.35 | 0.006741804 | 0.014140996 |
| 3717   | 4855 | JAK2    | -0.35 | 0.011689327 | 0.023326141 |
| 11261  | 3163 | CHP1    | -0.35 | 1.09E-05    | 3.53E-05    |
| 56052  | 2513 | ALG1    | -0.35 | 0.001555052 | 0.003661565 |
| 8427   | 3698 | ZNF282  | -0.35 | 0.000519998 | 0.001327679 |
| 79180  | 2424 | EFHD2   | -0.35 | 0.000210182 | 0.000568938 |
| 85476  | 3461 | GFM1    | -0.35 | 3.11E-05    | 9.48E-05    |
| 5576   | 5769 | PRKAR2A | -0.35 | 3.82E-06    | 1.30E-05    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 153769 | 3867  | SH3RF2   | -0.35 | 0.0024185   | 0.005495832 |
| 7461   | 5458  | CLIP2    | -0.35 | 0.000565096 | 0.001436015 |
| 84678  | 4013  | KDM2B    | -0.35 | 5.35E-05    | 0.000158049 |
| 137392 | 1980  | FAM92A   | -0.35 | 0.002520337 | 0.005713364 |
| 9330   | 4232  | GTF3C3   | -0.35 | 0.000196803 | 0.000535578 |
| 83874  | 2020  | TBC1D10A | -0.35 | 0.016130764 | 0.03138883  |
| 4436   | 3235  | MSH2     | -0.35 | 2.44E-07    | 9.40E-07    |
| 29970  | 1694  | SCHIP1   | -0.35 | 0.001534167 | 0.003614972 |
| 91056  | 6595  | AP5B1    | -0.35 | 0.000732153 | 0.001827091 |
| 2801   | 4262  | GOLGA2   | -0.35 | 1.36E-06    | 4.84E-06    |
| 10728  | 2046  | PTGES3   | -0.35 | 2.11E-07    | 8.17E-07    |
| 23381  | 4566  | SMG5     | -0.35 | 1.27E-06    | 4.54E-06    |
| 6509   | 4470  | SLC1A4   | -0.35 | 1.78E-05    | 5.60E-05    |
| 54700  | 3552  | RRN3     | -0.35 | 6.39E-05    | 0.000186494 |
| 64328  | 8074  | XPO4     | -0.35 | 0.000118443 | 0.00033268  |
| 257364 | 3250  | SNX33    | -0.35 | 0.003336068 | 0.007392773 |
| 6767   | 3597  | ST13     | -0.35 | 3.04E-08    | 1.28E-07    |
| 9525   | 3396  | VPS4B    | -0.35 | 1.66E-05    | 5.25E-05    |
| 55643  | 2211  | BTBD2    | -0.35 | 0.000133935 | 0.000373353 |
| 9564   | 3295  | BCAR1    | -0.35 | 0.000223621 | 0.000603387 |
| 6498   | 7187  | SKIL     | -0.35 | 1.59E-05    | 5.04E-05    |
| 56910  | 3136  | STARD7   | -0.35 | 5.01E-06    | 1.69E-05    |
| 7477   | 3809  | WNT7B    | -0.35 | 0.000941779 | 0.002307436 |
| 10527  | 6209  | IPO7     | -0.35 | 4.43E-08    | 1.84E-07    |
| 27295  | 2712  | PDLIM3   | -0.35 | 0.011454616 | 0.02291439  |
| 25904  | 2601  | CNOT10   | -0.35 | 0.000165908 | 0.000457031 |
| 6872   | 7869  | TAF1     | -0.35 | 0.000221123 | 0.0005971   |
| 22995  | 5322  | CEP152   | -0.35 | 0.004184225 | 0.009115413 |
| 4247   | 2728  | MGAT2    | -0.35 | 0.000115398 | 0.000324893 |
| 57649  | 3911  | PHF12    | -0.35 | 0.000997947 | 0.002432641 |
| 9325   | 2063  | TRIP4    | -0.35 | 0.001376398 | 0.003271685 |
| 196513 | 2154  | DCP1B    | -0.35 | 0.026454441 | 0.049085476 |
| 89796  | 11682 | NAV1     | -0.35 | 2.86E-05    | 8.75E-05    |
| 27069  | 2449  | GHITM    | -0.35 | 2.37E-06    | 8.23E-06    |
| 116843 | 2432  | SLC18B1  | -0.35 | 0.001865066 | 0.004327869 |
| 6873   | 4908  | TAF2     | -0.35 | 1.19E-05    | 3.82E-05    |
| 7704   | 7381  | ZBTB16   | -0.35 | 0.001525919 | 0.003598658 |
| 56848  | 2930  | SPHK2    | -0.35 | 0.004691918 | 0.010146786 |
| 649    | 3490  | BMP1     | -0.35 | 3.92E-07    | 1.48E-06    |
| 728577 | 6379  | CNTNAP3B | -0.35 | 0.011360573 | 0.02274675  |
| 9733   | 4017  | SART3    | -0.35 | 5.30E-06    | 1.78E-05    |
| 51308  | 2207  | REEP2    | -0.35 | 0.001196436 | 0.002876627 |
| 3831   | 2528  | KLC1     | -0.35 | 1.18E-05    | 3.81E-05    |
| 91663  | 3126  | MYADM    | -0.35 | 1.03E-06    | 3.71E-06    |
| 51283  | 3039  | BFAR     | -0.35 | 9.26E-06    | 3.02E-05    |
| 607    | 6088  | BCL9     | -0.35 | 0.001421073 | 0.00337156  |
| 115752 | 3780  | DIS3L    | -0.35 | 0.000858924 | 0.00211552  |
| 121536 | 4059  | AEBP2    | -0.36 | 2.36E-05    | 7.29E-05    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 5978   | 7184  | REST     | -0.36 | 4.43E-05    | 0.000132319 |
| 3607   | 5262  | FOXK2    | -0.36 | 4.78E-06    | 1.61E-05    |
| 1725   | 1328  | DHPS     | -0.36 | 0.000105405 | 0.000298555 |
| 23264  | 5918  | ZC3H7B   | -0.36 | 1.51E-07    | 5.92E-07    |
| 79684  | 3436  | MSANTD2  | -0.36 | 0.00592806  | 0.012567685 |
| 6709   | 7850  | SPTAN1   | -0.36 | 4.57E-08    | 1.89E-07    |
| 23160  | 3542  | WDR43    | -0.36 | 2.56E-05    | 7.88E-05    |
| 5546   | 2134  | PRCC     | -0.36 | 2.35E-05    | 7.27E-05    |
| 57139  | 2554  | RGL3     | -0.36 | 0.00501551  | 0.010779676 |
| 64771  | 4387  | C6orf106 | -0.36 | 7.24E-07    | 2.65E-06    |
| 4850   | 3425  | CNOT4    | -0.36 | 0.000763041 | 0.001898308 |
| 4882   | 5267  | NPR2     | -0.36 | 7.29E-06    | 2.41E-05    |
| 56889  | 4349  | TM9SF3   | -0.36 | 9.05E-09    | 4.00E-08    |
| 51117  | 1581  | COQ4     | -0.36 | 0.000282483 | 0.000751822 |
| 139341 | 1170  | FUNDC1   | -0.36 | 0.001887286 | 0.004377143 |
| 6794   | 3075  | STK11    | -0.36 | 3.61E-05    | 0.000109025 |
| 54708  | 3279  | MARCH5   | -0.36 | 0.000128102 | 0.000357768 |
| 221710 | 4710  | SMIM13   | -0.36 | 0.001913432 | 0.004429689 |
| 57120  | 4616  | GOPC     | -0.36 | 1.57E-05    | 4.98E-05    |
| 64324  | 12330 | NSD1     | -0.36 | 3.68E-06    | 1.26E-05    |
| 142    | 4001  | PARP1    | -0.36 | 3.19E-06    | 1.10E-05    |
| 587    | 1562  | BCAT2    | -0.36 | 2.43E-05    | 7.52E-05    |
| 10970  | 3036  | CKAP4    | -0.36 | 1.88E-08    | 8.05E-08    |
| 57551  | 11959 | TAOK1    | -0.36 | 1.11E-05    | 3.58E-05    |
| 83607  | 4541  | AMMECR1L | -0.36 | 0.000121279 | 0.000339726 |
| 6385   | 2606  | SDC4     | -0.36 | 1.30E-07    | 5.15E-07    |
| 91147  | 4144  | TMEM67   | -0.36 | 0.009875415 | 0.020034981 |
| 1820   | 4961  | ARID3A   | -0.36 | 0.000601287 | 0.001521022 |
| 8539   | 3918  | API5     | -0.36 | 2.74E-07    | 1.05E-06    |
| 55081  | 3223  | IFT57    | -0.36 | 0.003597396 | 0.007935261 |
| 84126  | 2579  | ATRIP    | -0.36 | 0.010396135 | 0.020990742 |
| 11128  | 6652  | POLR3A   | -0.36 | 0.000427056 | 0.001106757 |
| 115708 | 3257  | TRMT61A  | -0.36 | 0.002074144 | 0.004768196 |
| 6730   | 2782  | SRP68    | -0.36 | 1.39E-05    | 4.43E-05    |
| 6856   | 2300  | SYPL1    | -0.36 | 3.01E-06    | 1.03E-05    |
| 222229 | 2285  | LRWD1    | -0.36 | 0.002848584 | 0.006391418 |
| 80218  | 6172  | NAA50    | -0.36 | 5.00E-07    | 1.87E-06    |
| 4289   | 11190 | MKLN1    | -0.36 | 7.86E-05    | 0.000226626 |
| 25814  | 3340  | ATXN10   | -0.36 | 1.78E-07    | 6.98E-07    |
| 85403  | 4499  | EAF1     | -0.36 | 0.000414595 | 0.001076819 |
| 689    | 1028  | BTF3     | -0.36 | 8.87E-08    | 3.57E-07    |
| 10168  | 5399  | ZNF197   | -0.36 | 0.000545349 | 0.001388418 |
| 131544 | 10525 | CRYBG3   | -0.36 | 0.002690789 | 0.006067252 |
| 6867   | 6608  | TACC1    | -0.36 | 4.40E-06    | 1.49E-05    |
| 65056  | 3515  | GPBP1    | -0.36 | 2.86E-07    | 1.09E-06    |
| 9188   | 4714  | DDX21    | -0.36 | 4.22E-07    | 1.59E-06    |
| 29110  | 3098  | TBK1     | -0.36 | 0.000113246 | 0.000319389 |
| 10055  | 2067  | SAE1     | -0.36 | 2.94E-06    | 1.01E-05    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 6613   | 1065  | SUMO2    | -0.36 | 6.19E-07    | 2.29E-06    |
| 1893   | 2158  | ECM1     | -0.36 | 4.42E-05    | 0.000132138 |
| 10048  | 2669  | RANBP9   | -0.37 | 1.74E-06    | 6.15E-06    |
| 27107  | 5229  | ZBTB11   | -0.37 | 6.60E-05    | 0.000192229 |
| 3199   | 1791  | HOXA2    | -0.37 | 0.007667783 | 0.015901163 |
| 2584   | 1361  | GALK1    | -0.37 | 0.002004175 | 0.004624097 |
| 54976  | 1314  | C20orf27 | -0.37 | 0.001299207 | 0.00310072  |
| 8607   | 1789  | RUVBL1   | -0.37 | 0.000730027 | 0.001822042 |
| 7088   | 3534  | TLE1     | -0.37 | 1.97E-05    | 6.17E-05    |
| 1954   | 11156 | MEGF8    | -0.37 | 8.26E-07    | 3.01E-06    |
| 201595 | 3942  | STT3B    | -0.37 | 3.53E-10    | 1.74E-09    |
| 57504  | 2931  | MTA3     | -0.37 | 7.75E-06    | 2.55E-05    |
| 7289   | 3082  | TULP3    | -0.37 | 7.62E-05    | 0.000220114 |
| 124402 | 1428  | UBALD1   | -0.37 | 0.017041563 | 0.033005722 |
| 1385   | 7487  | CREB1    | -0.37 | 4.44E-05    | 0.000132471 |
| 10801  | 3505  | SEPT9    | -0.37 | 1.39E-06    | 4.95E-06    |
| 5740   | 5603  | PTGIS    | -0.37 | 0.003336926 | 0.007393752 |
| 79596  | 3624  | RNF219   | -0.37 | 0.000639202 | 0.001609144 |
| 7913   | 2826  | DEK      | -0.37 | 8.02E-08    | 3.24E-07    |
| 116113 | 4240  | FOXP4    | -0.37 | 0.001743901 | 0.004066355 |
| 26224  | 3554  | FBXL3    | -0.37 | 8.72E-06    | 2.85E-05    |
| 55069  | 4238  | TMEM248  | -0.37 | 5.11E-08    | 2.11E-07    |
| 51639  | 783   | SF3B6    | -0.37 | 4.08E-05    | 0.000122452 |
| 7023   | 2147  | TFAP4    | -0.37 | 0.011755387 | 0.023447431 |
| 1633   | 2618  | DCK      | -0.37 | 2.52E-05    | 7.77E-05    |
| 79867  | 2885  | TCTN2    | -0.37 | 0.001345268 | 0.00320283  |
| 388272 | 1410  | C16orf87 | -0.37 | 0.009291493 | 0.018952043 |
| 1979   | 7531  | EIF4EBP2 | -0.37 | 9.47E-07    | 3.43E-06    |
| 3845   | 5739  | KRAS     | -0.37 | 2.65E-05    | 8.14E-05    |
| 129685 | 4413  | TAF8     | -0.37 | 0.000225598 | 0.000608075 |
| 64844  | 3523  | MARCH7   | -0.37 | 7.32E-08    | 2.97E-07    |
| 5905   | 3100  | RANGAP1  | -0.37 | 4.64E-06    | 1.56E-05    |
| 84912  | 6816  | SLC35B4  | -0.37 | 0.000469074 | 0.001207024 |
| 79664  | 4349  | ICE2     | -0.37 | 6.59E-05    | 0.000192102 |
| 254263 | 1356  | CNIH2    | -0.37 | 0.008754297 | 0.017946966 |
| 55707  | 2037  | NECAP2   | -0.37 | 0.000177311 | 0.000486033 |
| 9200   | 1323  | HACD1    | -0.37 | 0.008074856 | 0.016652048 |
| 25     | 5652  | ABL1     | -0.37 | 6.52E-08    | 2.66E-07    |
| 3416   | 5382  | IDE      | -0.37 | 1.48E-05    | 4.71E-05    |
| 145173 | 4166  | B3GLCT   | -0.37 | 0.000624632 | 0.00157425  |
| 23102  | 6070  | TBC1D2B  | -0.37 | 0.000103399 | 0.000293434 |
| 29072  | 8457  | SETD2    | -0.37 | 1.31E-06    | 4.67E-06    |
| 5412   | 4355  | UBL3     | -0.37 | 0.000181898 | 0.000497837 |
| 2005   | 10685 | ELK4     | -0.37 | 7.08E-06    | 2.34E-05    |
| 7262   | 937   | PHLDA2   | -0.37 | 0.013517023 | 0.026676715 |
| 23288  | 6504  | IQCE     | -0.37 | 0.000605064 | 0.001529923 |
| 65986  | 9089  | ZBTB10   | -0.37 | 0.000476671 | 0.001224445 |
| 5819   | 2403  | NECTIN2  | -0.37 | 3.33E-08    | 1.40E-07    |

|        |      |          |       |             |             |
|--------|------|----------|-------|-------------|-------------|
| 64779  | 2797 | MTHFSD   | -0.37 | 0.003277711 | 0.007276159 |
| 10600  | 2935 | USP16    | -0.37 | 1.95E-05    | 6.11E-05    |
| 10042  | 4137 | HMGXB4   | -0.37 | 2.59E-06    | 8.97E-06    |
| 8819   | 1126 | SAP30    | -0.37 | 0.006939163 | 0.01451042  |
| 11198  | 4684 | SUPT16H  | -0.37 | 1.11E-10    | 5.72E-10    |
| 144715 | 3886 | RAD9B    | -0.37 | 0.004217198 | 0.009183867 |
| 8408   | 5239 | ULK1     | -0.37 | 0.000159432 | 0.000439941 |
| 7862   | 4635 | BRPF1    | -0.37 | 5.58E-05    | 0.000164117 |
| 84284  | 926  | NTPCR    | -0.37 | 0.007797229 | 0.016139465 |
| 404093 | 3018 | CUEDC1   | -0.37 | 9.24E-06    | 3.01E-05    |
| 140612 | 5724 | ZFP28    | -0.38 | 0.020128288 | 0.038304635 |
| 284098 | 2350 | PIGW     | -0.38 | 0.001133193 | 0.002736419 |
| 3655   | 5359 | ITGA6    | -0.38 | 7.33E-05    | 0.000212264 |
| 84955  | 3965 | NUDCD1   | -0.38 | 0.000408464 | 0.001062138 |
| 80851  | 3202 | SH3BP5L  | -0.38 | 0.0004122   | 0.00107107  |
| 50808  | 4238 | AK3      | -0.38 | 2.78E-06    | 9.60E-06    |
| 54956  | 2664 | PARP16   | -0.38 | 0.008085735 | 0.016672547 |
| 83719  | 1016 | YPEL3    | -0.38 | 0.002063315 | 0.004748216 |
| 11266  | 1299 | DUSP12   | -0.38 | 0.002894885 | 0.00648466  |
| 375444 | 2939 | C5orf34  | -0.38 | 0.013134333 | 0.025976273 |
| 9351   | 2119 | SLC9A3R2 | -0.38 | 0.000855198 | 0.002107805 |
| 6189   | 953  | RPS3A    | -0.38 | 2.00E-05    | 6.25E-05    |
| 55832  | 6010 | CAND1    | -0.38 | 2.51E-08    | 1.07E-07    |
| 8884   | 3042 | SLC5A6   | -0.38 | 0.000502731 | 0.001287292 |
| 6415   | 893  | SELENOW  | -0.38 | 0.000721284 | 0.001801994 |
| 54867  | 2800 | TMEM214  | -0.38 | 8.51E-07    | 3.10E-06    |
| 84919  | 5256 | PPP1R15B | -0.38 | 6.17E-06    | 2.06E-05    |
| 85364  | 2773 | ZCCHC3   | -0.38 | 0.000409477 | 0.00106446  |
| 26015  | 4704 | RPAP1    | -0.38 | 0.00173301  | 0.004045209 |
| 51439  | 4762 | FAM8A1   | -0.38 | 3.92E-05    | 0.000117844 |
| 10052  | 7559 | GJC1     | -0.38 | 2.32E-07    | 8.95E-07    |
| 5435   | 2099 | POLR2F   | -0.38 | 0.000399612 | 0.001040796 |
| 6210   | 492  | RPS15A   | -0.38 | 0.000105034 | 0.000297741 |
| 64785  | 2226 | GINS3    | -0.38 | 0.000167004 | 0.000459693 |
| 65263  | 2678 | PYCR3    | -0.38 | 0.005037586 | 0.010821887 |
| 64979  | 633  | MRPL36   | -0.38 | 0.000718845 | 0.001796658 |
| 59274  | 3068 | TLNRD1   | -0.38 | 0.000871522 | 0.002144766 |
| 3735   | 2032 | KARS     | -0.38 | 7.25E-08    | 2.94E-07    |
| 84897  | 5345 | TBRG1    | -0.38 | 0.000458453 | 0.001182264 |
| 90678  | 3257 | LRSAM1   | -0.38 | 0.000158531 | 0.000437591 |
| 10419  | 2412 | PRMT5    | -0.38 | 9.65E-06    | 3.14E-05    |
| 5970   | 2588 | RELA     | -0.38 | 4.26E-05    | 0.000127547 |
| 10329  | 1983 | RXYLT1   | -0.38 | 0.010003574 | 0.020267218 |
| 4849   | 2934 | CNOT3    | -0.38 | 0.000482255 | 0.001238074 |
| 54505  | 4491 | DHX29    | -0.38 | 0.000132142 | 0.000368529 |
| 132320 | 2702 | SCLT1    | -0.38 | 0.001488867 | 0.003520185 |
| 2475   | 8392 | MTOR     | -0.38 | 3.74E-08    | 1.56E-07    |
| 10921  | 2222 | RNPS1    | -0.38 | 8.92E-08    | 3.59E-07    |

|        |      |           |       |             |             |
|--------|------|-----------|-------|-------------|-------------|
| 26953  | 3847 | RANBP6    | -0.38 | 3.10E-05    | 9.46E-05    |
| 54929  | 1812 | TMEM161A  | -0.38 | 0.00059347  | 0.00150339  |
| 23132  | 9982 | RAD54L2   | -0.38 | 1.50E-05    | 4.77E-05    |
| 5144   | 8400 | PDE4D     | -0.38 | 0.001031158 | 0.002506806 |
| 23318  | 5699 | ZCCHC11   | -0.38 | 3.99E-06    | 1.36E-05    |
| 4976   | 6327 | OPA1      | -0.38 | 2.00E-07    | 7.78E-07    |
| 81624  | 4430 | DIAPH3    | -0.38 | 7.05E-07    | 2.59E-06    |
| 116224 | 3874 | FAM122A   | -0.38 | 0.006254787 | 0.013200504 |
| 56623  | 3409 | INPP5E    | -0.38 | 0.000533941 | 0.001361128 |
| 79066  | 5763 | METTL16   | -0.38 | 1.57E-05    | 4.98E-05    |
| 1839   | 2381 | HBEGF     | -0.38 | 0.020973456 | 0.039728824 |
| 642    | 2543 | BLMH      | -0.38 | 1.91E-05    | 5.99E-05    |
| 10946  | 2871 | SF3A3     | -0.38 | 2.73E-08    | 1.16E-07    |
| 1523   | 6555 | CUX1      | -0.38 | 3.35E-07    | 1.27E-06    |
| 144455 | 5742 | E2F7      | -0.38 | 3.37E-05    | 0.000101959 |
| 253635 | 3877 | GPATCH11  | -0.38 | 0.000519597 | 0.001326848 |
| 7184   | 2879 | HSP90B1   | -0.38 | 3.48E-11    | 1.86E-10    |
| 8664   | 1949 | EIF3D     | -0.38 | 2.70E-08    | 1.14E-07    |
| 81567  | 3231 | TXNDC5    | -0.38 | 7.80E-08    | 3.16E-07    |
| 3021   | 2909 | H3F3B     | -0.38 | 1.73E-10    | 8.75E-10    |
| 11102  | 3497 | RPP14     | -0.38 | 2.91E-05    | 8.88E-05    |
| 80304  | 3897 | WDCP      | -0.38 | 0.016670114 | 0.03236392  |
| 25988  | 2277 | HINFP     | -0.38 | 0.016323399 | 0.031739347 |
| 3551   | 3997 | IKBKB     | -0.38 | 0.000167105 | 0.000459901 |
| 23283  | 4127 | CSTF2T    | -0.38 | 3.40E-06    | 1.16E-05    |
| 27153  | 3074 | ZNF777    | -0.38 | 0.002956843 | 0.006612611 |
| 4681   | 2101 | NBL1      | -0.38 | 0.000166061 | 0.000457383 |
| 165055 | 2564 | CCDC138   | -0.38 | 0.01582319  | 0.030834223 |
| 1390   | 1850 | CREM      | -0.38 | 0.004076522 | 0.008900424 |
| 5611   | 5557 | DNAJC3    | -0.38 | 3.85E-07    | 1.46E-06    |
| 4363   | 6221 | ABCC1     | -0.38 | 3.29E-08    | 1.39E-07    |
| 10208  | 4164 | USPL1     | -0.39 | 0.000619737 | 0.001563464 |
| 9513   | 3016 | FXR2      | -0.39 | 3.25E-05    | 9.87E-05    |
| 54465  | 3298 | ETAA1     | -0.39 | 0.000663811 | 0.001667079 |
| 9927   | 4596 | MFN2      | -0.39 | 4.66E-08    | 1.93E-07    |
| 9374   | 1991 | PPT2      | -0.39 | 0.003988478 | 0.008723201 |
| 26986  | 2872 | PABPC1    | -0.39 | 6.67E-10    | 3.21E-09    |
| 51318  | 1807 | MRPL35    | -0.39 | 0.000128665 | 0.000359115 |
| 678    | 3702 | ZFP36L2   | -0.39 | 1.79E-05    | 5.63E-05    |
| 6202   | 705  | RPS8      | -0.39 | 2.70E-07    | 1.04E-06    |
| 144983 | 2249 | HNRNPA1L2 | -0.39 | 0.00091861  | 0.002253467 |
| 9125   | 3321 | CNOT9     | -0.39 | 4.83E-07    | 1.81E-06    |
| 8050   | 2521 | PDHX      | -0.39 | 7.95E-05    | 0.000229146 |
| 221120 | 1585 | ALKBH3    | -0.39 | 0.00418023  | 0.009108944 |
| 84641  | 3021 | MFSD14B   | -0.39 | 5.24E-07    | 1.95E-06    |
| 84230  | 7140 | LRRC8C    | -0.39 | 0.000118317 | 0.000332426 |
| 10459  | 1104 | MAD2L2    | -0.39 | 0.000118005 | 0.000331652 |
| 54897  | 6158 | CASZ1     | -0.39 | 0.012612233 | 0.025035655 |



|        |      |          |       |             |             |
|--------|------|----------|-------|-------------|-------------|
| 55622  | 2926 | TTC27    | -0.39 | 0.001901151 | 0.004404701 |
| 5316   | 5191 | PKNOX1   | -0.39 | 2.29E-05    | 7.10E-05    |
| 7520   | 3448 | XRCC5    | -0.39 | 4.02E-13    | 2.43E-12    |
| 8554   | 5723 | PIAS1    | -0.39 | 1.31E-05    | 4.20E-05    |
| 80135  | 1975 | RPF1     | -0.39 | 0.000305481 | 0.000808066 |
| 54764  | 3417 | ZRANB1   | -0.39 | 1.39E-06    | 4.93E-06    |
| 6938   | 4712 | TCF12    | -0.39 | 2.42E-05    | 7.50E-05    |
| 7728   | 3842 | ZNF175   | -0.39 | 0.007172224 | 0.014951976 |
| 2806   | 2488 | GOT2     | -0.39 | 1.86E-07    | 7.26E-07    |
| 7268   | 2395 | TTC4     | -0.39 | 0.000568304 | 0.00144355  |
| 8727   | 2569 | CTNNAL1  | -0.39 | 1.17E-07    | 4.64E-07    |
| 146540 | 3235 | ZNF785   | -0.39 | 0.010312175 | 0.020849651 |
| 6483   | 4450 | ST3GAL2  | -0.39 | 2.22E-05    | 6.90E-05    |
| 5236   | 2480 | PGM1     | -0.39 | 1.02E-07    | 4.10E-07    |
| 55133  | 3700 | SRBD1    | -0.39 | 0.000781849 | 0.001939961 |
| 2000   | 3906 | ELF4     | -0.39 | 6.70E-05    | 0.000195017 |
| 23172  | 3008 | ABRAXAS2 | -0.39 | 0.000207692 | 0.000563056 |
| 55721  | 2053 | IQCC     | -0.39 | 0.022842296 | 0.042934721 |
| 84172  | 5047 | POLR1B   | -0.39 | 0.000733196 | 0.001829182 |
| 23450  | 9736 | SF3B3    | -0.39 | 5.69E-10    | 2.76E-09    |
| 87178  | 4567 | PNPT1    | -0.39 | 4.99E-06    | 1.68E-05    |
| 54947  | 5100 | LPCAT2   | -0.39 | 0.001635298 | 0.003832736 |
| 23598  | 3402 | PATZ1    | -0.39 | 1.25E-05    | 4.02E-05    |
| 23328  | 7232 | SASH1    | -0.39 | 1.29E-06    | 4.61E-06    |
| 51493  | 2081 | RTCB     | -0.39 | 5.10E-05    | 0.000150928 |
| 1026   | 2177 | CDKN1A   | -0.39 | 2.35E-05    | 7.26E-05    |
| 2235   | 3528 | FECH     | -0.39 | 0.000117662 | 0.000330794 |
| 3608   | 1934 | ILF2     | -0.39 | 2.12E-07    | 8.23E-07    |
| 57592  | 4630 | ZNF687   | -0.39 | 7.01E-05    | 0.000203413 |
| 29777  | 2264 | ABT1     | -0.39 | 0.000583879 | 0.001481206 |
| 8527   | 6104 | DGKD     | -0.39 | 0.000483553 | 0.001240689 |
| 55322  | 3396 | C5orf22  | -0.39 | 1.92E-05    | 6.02E-05    |
| 10466  | 4948 | COG5     | -0.39 | 0.000115243 | 0.000324505 |
| 56980  | 6176 | PRDM10   | -0.39 | 0.004703849 | 0.010171351 |
| 64863  | 3615 | METTL4   | -0.39 | 0.004813677 | 0.010396184 |
| 8667   | 1286 | EIF3H    | -0.39 | 4.08E-08    | 1.70E-07    |
| 9039   | 2126 | UBA3     | -0.39 | 2.24E-06    | 7.81E-06    |
| 91782  | 2791 | CHMP7    | -0.39 | 0.000948928 | 0.002323992 |
| 10452  | 1733 | TOMM40   | -0.39 | 1.08E-06    | 3.89E-06    |
| 9341   | 2212 | VAMP3    | -0.40 | 4.45E-07    | 1.67E-06    |
| 81691  | 2663 | REXO5    | -0.40 | 0.002406688 | 0.005471089 |
| 6741   | 1725 | SSB      | -0.40 | 2.27E-08    | 9.70E-08    |
| 6650   | 4958 | CAPN15   | -0.40 | 6.63E-06    | 2.20E-05    |
| 84243  | 3165 | ZDHHC18  | -0.40 | 8.27E-05    | 0.000237691 |
| 55090  | 2222 | MED9     | -0.40 | 0.000387545 | 0.001011295 |
| 23039  | 4880 | XPO7     | -0.40 | 3.04E-06    | 1.04E-05    |
| 220988 | 4930 | HNRNPA3  | -0.40 | 1.70E-12    | 9.90E-12    |
| 65059  | 9166 | RAPH1    | -0.40 | 1.19E-06    | 4.27E-06    |

|        |       |           |       |             |             |
|--------|-------|-----------|-------|-------------|-------------|
| 57343  | 4420  | ZNF304    | -0.40 | 0.003297643 | 0.007314009 |
| 81831  | 3327  | NETO2     | -0.40 | 4.08E-08    | 1.70E-07    |
| 162681 | 5609  | C18orf54  | -0.40 | 0.000321016 | 0.000847268 |
| 64645  | 2701  | MFSD14A   | -0.40 | 8.84E-06    | 2.89E-05    |
| 5931   | 2020  | RBBP7     | -0.40 | 1.60E-08    | 6.90E-08    |
| 7064   | 2642  | THOP1     | -0.40 | 1.13E-05    | 3.65E-05    |
| 2958   | 1586  | GTF2A2    | -0.40 | 3.37E-05    | 0.000102114 |
| 8545   | 4428  | CGGBP1    | -0.40 | 6.81E-09    | 3.04E-08    |
| 285704 | 4255  | RGMB      | -0.40 | 0.000411912 | 0.001070476 |
| 57466  | 4161  | SCAF4     | -0.40 | 1.65E-05    | 5.23E-05    |
| 26043  | 10125 | UBXN7     | -0.40 | 1.28E-07    | 5.07E-07    |
| 5925   | 4593  | RB1       | -0.40 | 1.78E-09    | 8.30E-09    |
| 53615  | 2431  | MBD3      | -0.40 | 1.77E-07    | 6.92E-07    |
| 10585  | 2976  | POMT1     | -0.40 | 3.23E-05    | 9.81E-05    |
| 26048  | 3866  | ZNF500    | -0.40 | 0.008872122 | 0.018169647 |
| 11014  | 2873  | KDELR2    | -0.40 | 5.76E-11    | 3.04E-10    |
| 116138 | 2029  | KLHDC3    | -0.40 | 7.45E-07    | 2.73E-06    |
| 266727 | 6380  | MDGA1     | -0.40 | 0.018621545 | 0.035742423 |
| 124944 | 903   | C17orf49  | -0.40 | 3.99E-05    | 0.000119656 |
| 79871  | 2911  | RPAP2     | -0.40 | 0.015697488 | 0.030619493 |
| 79647  | 2726  | AKIRIN1   | -0.40 | 1.51E-07    | 5.92E-07    |
| 9563   | 8663  | H6PD      | -0.40 | 1.17E-07    | 4.66E-07    |
| 7756   | 2321  | ZNF207    | -0.40 | 1.31E-09    | 6.18E-09    |
| 162989 | 1975  | DEDD2     | -0.40 | 0.002252773 | 0.005148864 |
| 64943  | 1735  | NT5DC2    | -0.40 | 1.12E-06    | 4.03E-06    |
| 83448  | 4114  | PUS7L     | -0.40 | 0.011350963 | 0.022730071 |
| 6670   | 6061  | SP3       | -0.40 | 4.63E-09    | 2.09E-08    |
| 23646  | 2136  | PLD3      | -0.40 | 5.22E-06    | 1.75E-05    |
| 10199  | 2488  | MPHOSPH10 | -0.40 | 1.58E-05    | 5.00E-05    |
| 140901 | 6489  | STK35     | -0.40 | 3.16E-05    | 9.61E-05    |
| 708    | 1163  | C1QBP     | -0.40 | 4.59E-06    | 1.55E-05    |
| 6801   | 14201 | STRN      | -0.40 | 4.32E-07    | 1.63E-06    |
| 9861   | 1478  | PSMD6     | -0.40 | 8.40E-07    | 3.06E-06    |
| 162073 | 7722  | ITPR1PL2  | -0.40 | 2.49E-06    | 8.62E-06    |
| 84342  | 2522  | COG8      | -0.40 | 0.000360861 | 0.000945132 |
| 253430 | 6130  | IPMK      | -0.40 | 0.001172632 | 0.002824871 |
| 10914  | 4493  | PAPOLA    | -0.40 | 2.28E-10    | 1.14E-09    |
| 9126   | 4131  | SMC3      | -0.40 | 2.80E-10    | 1.39E-09    |
| 7982   | 2323  | ST7       | -0.40 | 0.00061248  | 0.001545816 |
| 439    | 1298  | ASNA1     | -0.40 | 5.96E-07    | 2.21E-06    |
| 9066   | 5021  | SYT7      | -0.40 | 0.007912721 | 0.016353755 |
| 6487   | 2215  | ST3GAL3   | -0.40 | 0.001293994 | 0.00308945  |
| 23521  | 1195  | RPL13A    | -0.40 | 1.11E-07    | 4.41E-07    |
| 55038  | 2435  | CDCA4     | -0.40 | 6.38E-06    | 2.12E-05    |
| 11331  | 1456  | PHB2      | -0.40 | 1.03E-07    | 4.14E-07    |
| 3646   | 1516  | EIF3E     | -0.40 | 4.31E-10    | 2.10E-09    |
| 4076   | 4195  | CAPRIN1   | -0.40 | 1.36E-09    | 6.40E-09    |
| 7514   | 4246  | XPO1      | -0.40 | 1.24E-09    | 5.85E-09    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 23592  | 4798  | LEMD3    | -0.40 | 0.000113124 | 0.000319097 |
| 10153  | 3341  | CEBPZ    | -0.40 | 6.09E-08    | 2.49E-07    |
| 5914   | 3163  | RARA     | -0.41 | 1.33E-05    | 4.23E-05    |
| 55425  | 2576  | GPALPP1  | -0.41 | 2.48E-05    | 7.65E-05    |
| 1387   | 10149 | CREBBP   | -0.41 | 5.08E-07    | 1.90E-06    |
| 56160  | 1748  | NSMCE3   | -0.41 | 0.000469359 | 0.001207409 |
| 7112   | 3947  | TMPO     | -0.41 | 2.31E-12    | 1.33E-11    |
| 221496 | 2563  | LEMD2    | -0.41 | 8.41E-06    | 2.75E-05    |
| 6159   | 737   | RPL29    | -0.41 | 2.86E-06    | 9.84E-06    |
| 64795  | 6201  | RMND5A   | -0.41 | 4.08E-06    | 1.39E-05    |
| 54870  | 3280  | QRICH1   | -0.41 | 2.18E-08    | 9.31E-08    |
| 8100   | 2706  | IFT88    | -0.41 | 0.001395861 | 0.003315286 |
| 11133  | 1742  | KPTN     | -0.41 | 0.001782736 | 0.004147114 |
| 51710  | 2777  | ZNF44    | -0.41 | 0.017221257 | 0.033324689 |
| 11100  | 3650  | HNRNPUL1 | -0.41 | 5.80E-08    | 2.38E-07    |
| 1968   | 3486  | EIF2S3   | -0.41 | 1.09E-11    | 6.03E-11    |
| 10174  | 2072  | SORBS3   | -0.41 | 6.17E-05    | 0.000180417 |
| 10248  | 949   | POP7     | -0.41 | 8.48E-05    | 0.000243396 |
| 84277  | 2534  | DNAJC30  | -0.41 | 0.002057034 | 0.004735603 |
| 55226  | 4039  | NAT10    | -0.41 | 2.14E-06    | 7.49E-06    |
| 7314   | 1223  | UBB      | -0.41 | 3.57E-08    | 1.50E-07    |
| 114790 | 3592  | STK11IP  | -0.41 | 0.00050522  | 0.001292734 |
| 199692 | 2759  | ZNF627   | -0.41 | 0.002331479 | 0.005313715 |
| 55789  | 2510  | DEPDC1B  | -0.41 | 8.67E-05    | 0.000248482 |
| 79943  | 4686  | ZNF696   | -0.41 | 0.01550398  | 0.030278602 |
| 56902  | 1994  | PN01     | -0.41 | 0.003886391 | 0.008515649 |
| 56975  | 3392  | FAM20C   | -0.41 | 1.54E-07    | 6.04E-07    |
| 127002 | 2589  | ATXN7L2  | -0.41 | 0.02609464  | 0.048493837 |
| 55075  | 5464  | UACA     | -0.41 | 3.25E-07    | 1.24E-06    |
| 5534   | 3111  | PPP3R1   | -0.41 | 2.90E-07    | 1.11E-06    |
| 285282 | 3874  | RABL3    | -0.41 | 9.76E-05    | 0.000277848 |
| 9466   | 2685  | IL27RA   | -0.41 | 0.001938894 | 0.004483378 |
| 56897  | 2657  | WRNIP1   | -0.41 | 1.37E-06    | 4.88E-06    |
| 27440  | 1865  | HDHD5    | -0.41 | 0.000752752 | 0.00187481  |
| 55709  | 2439  | KBTBD4   | -0.41 | 0.000671785 | 0.001686153 |
| 23517  | 4222  | MTREX    | -0.41 | 6.37E-09    | 2.84E-08    |
| 113251 | 6419  | LARP4    | -0.41 | 6.89E-06    | 2.28E-05    |
| 9915   | 6576  | ARNT2    | -0.41 | 0.000787376 | 0.001952933 |
| 54344  | 432   | DPM3     | -0.41 | 0.001606743 | 0.003771284 |
| 8520   | 1705  | HAT1     | -0.41 | 1.36E-08    | 5.90E-08    |
| 27297  | 2767  | CRCP     | -0.41 | 3.71E-06    | 1.26E-05    |
| 155061 | 3869  | ZNF746   | -0.41 | 0.000362768 | 0.000949987 |
| 22808  | 4146  | MRAS     | -0.41 | 0.000100319 | 0.000285332 |
| 6925   | 6953  | TCF4     | -0.41 | 0.000325691 | 0.000858782 |
| 1723   | 2890  | DHODH    | -0.41 | 0.011037602 | 0.022170034 |
| 66036  | 6922  | MTMR9    | -0.41 | 0.001152338 | 0.002780006 |
| 2967   | 3424  | GTF2H3   | -0.41 | 5.60E-05    | 0.000164636 |
| 8239   | 10480 | USP9X    | -0.41 | 3.13E-11    | 1.68E-10    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 114904 | 3472  | C1QTNF6  | -0.41 | 0.000433338 | 0.001122057 |
| 196051 | 1716  | PLPP4    | -0.41 | 0.001755094 | 0.004088699 |
| 9857   | 13478 | CEP350   | -0.41 | 4.73E-06    | 1.59E-05    |
| 56675  | 3809  | NRIP3    | -0.41 | 0.000106867 | 0.000302358 |
| 55680  | 4135  | RUFY2    | -0.41 | 0.000151801 | 0.000420714 |
| 85315  | 4758  | PAQR8    | -0.41 | 0.000477212 | 0.001225658 |
| 51193  | 2623  | ZNF639   | -0.41 | 3.01E-05    | 9.19E-05    |
| 83932  | 3503  | SPRTN    | -0.41 | 0.000892366 | 0.002193023 |
| 5198   | 5325  | PFAS     | -0.41 | 5.10E-07    | 1.90E-06    |
| 1604   | 2348  | CD55     | -0.41 | 0.000100377 | 0.000285452 |
| 2820   | 5398  | GPD2     | -0.41 | 2.31E-06    | 8.05E-06    |
| 55841  | 6463  | WWC3     | -0.41 | 1.23E-05    | 3.94E-05    |
| 10322  | 2703  | SMYD5    | -0.41 | 0.000132035 | 0.000368288 |
| 55170  | 2665  | PRMT6    | -0.41 | 3.50E-05    | 0.000105863 |
| 6232   | 361   | RPS27    | -0.41 | 1.56E-05    | 4.95E-05    |
| 29775  | 3912  | CARD10   | -0.41 | 2.24E-06    | 7.79E-06    |
| 29088  | 1736  | MRPL15   | -0.42 | 0.000474769 | 0.001220442 |
| 5902   | 1172  | RANBP1   | -0.42 | 5.53E-08    | 2.27E-07    |
| 4291   | 1826  | MLF1     | -0.42 | 0.000895464 | 0.00219942  |
| 2734   | 9325  | GLG1     | -0.42 | 1.53E-08    | 6.61E-08    |
| 3619   | 6026  | INCENP   | -0.42 | 5.07E-08    | 2.09E-07    |
| 883    | 1955  | KYAT1    | -0.42 | 0.000885064 | 0.002176248 |
| 10314  | 4567  | LANCL1   | -0.42 | 9.16E-08    | 3.68E-07    |
| 79724  | 2302  | ZNF768   | -0.42 | 2.39E-06    | 8.29E-06    |
| 50515  | 5762  | CHST11   | -0.42 | 0.000151223 | 0.000419373 |
| 84650  | 976   | EBPL     | -0.42 | 0.000240289 | 0.000645517 |
| 9688   | 2775  | NUP93    | -0.42 | 1.09E-07    | 4.36E-07    |
| 55852  | 5192  | TEX2     | -0.42 | 1.85E-05    | 5.81E-05    |
| 23270  | 4144  | TSPYL4   | -0.42 | 2.46E-06    | 8.55E-06    |
| 10765  | 6396  | KDM5B    | -0.42 | 9.90E-09    | 4.36E-08    |
| 7525   | 4676  | YES1     | -0.42 | 5.10E-10    | 2.48E-09    |
| 8576   | 2416  | STK16    | -0.42 | 0.001859243 | 0.004315483 |
| 8501   | 2218  | SLC43A1  | -0.42 | 0.014669709 | 0.028775821 |
| 6187   | 962   | RPS2     | -0.42 | 1.40E-10    | 7.15E-10    |
| 4800   | 6181  | NFYA     | -0.42 | 2.06E-06    | 7.20E-06    |
| 8751   | 2838  | ADAM15   | -0.42 | 5.04E-08    | 2.08E-07    |
| 6397   | 5208  | SEC14L1  | -0.42 | 3.70E-08    | 1.55E-07    |
| 84166  | 5440  | NLRC5    | -0.42 | 4.37E-05    | 0.000130705 |
| 7411   | 1652  | VBP1     | -0.42 | 1.51E-06    | 5.36E-06    |
| 26173  | 6991  | INTS1    | -0.42 | 1.24E-09    | 5.85E-09    |
| 1762   | 3308  | DMWD     | -0.42 | 2.05E-05    | 6.38E-05    |
| 23279  | 4815  | NUP160   | -0.42 | 3.91E-07    | 1.48E-06    |
| 4331   | 1397  | MNAT1    | -0.42 | 4.49E-05    | 0.000133892 |
| 1431   | 2997  | CS       | -0.42 | 6.85E-10    | 3.30E-09    |
| 10478  | 2294  | SLC25A17 | -0.42 | 5.07E-05    | 0.000150205 |
| 202243 | 3041  | CCDC125  | -0.42 | 0.001718157 | 0.00401212  |
| 399665 | 3955  | FAM102A  | -0.42 | 1.49E-05    | 4.73E-05    |
| 26747  | 3487  | NUFIP1   | -0.42 | 0.000526162 | 0.001342646 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 95681  | 4609  | CEP41    | -0.42 | 0.000621368 | 0.001566912 |
| 11138  | 4453  | TBC1D8   | -0.42 | 2.62E-05    | 8.06E-05    |
| 84878  | 2318  | ZBTB45   | -0.42 | 0.005449425 | 0.011636267 |
| 4294   | 3042  | MAP3K10  | -0.42 | 0.001698479 | 0.003969298 |
| 4691   | 2732  | NCL      | -0.42 | 1.46E-14    | 9.86E-14    |
| 29960  | 1605  | MRM2     | -0.42 | 2.57E-05    | 7.92E-05    |
| 3843   | 5908  | IPO5     | -0.42 | 6.82E-12    | 3.80E-11    |
| 10298  | 2671  | PAK4     | -0.42 | 9.16E-06    | 2.98E-05    |
| 8720   | 4334  | MBTPS1   | -0.42 | 4.92E-11    | 2.61E-10    |
| 161882 | 3172  | ZFPM1    | -0.42 | 0.002511522 | 0.005695562 |
| 3145   | 1519  | HMBS     | -0.42 | 0.001939173 | 0.004483439 |
| 5001   | 1967  | ORC5     | -0.42 | 0.000462209 | 0.001191085 |
| 10253  | 2325  | SPRY2    | -0.42 | 0.009231461 | 0.018836082 |
| 9794   | 5725  | MAML1    | -0.42 | 5.32E-07    | 1.98E-06    |
| 7586   | 9121  | ZKSCAN1  | -0.42 | 1.40E-08    | 6.08E-08    |
| 23300  | 4852  | ATMIN    | -0.42 | 3.91E-07    | 1.48E-06    |
| 116988 | 2806  | AGAP3    | -0.42 | 2.42E-06    | 8.39E-06    |
| 84231  | 3681  | TRAF7    | -0.42 | 2.10E-08    | 9.00E-08    |
| 1917   | 2022  | EEF1A2   | -0.42 | 3.78E-05    | 0.00011386  |
| 50862  | 4084  | RNF141   | -0.43 | 3.47E-05    | 0.000104996 |
| 9818   | 4337  | NUP58    | -0.43 | 1.37E-08    | 5.95E-08    |
| 284129 | 2821  | SLC26A11 | -0.43 | 0.000259024 | 0.000692602 |
| 79774  | 1781  | GRTP1    | -0.43 | 0.00887941  | 0.018180381 |
| 79068  | 4413  | FTO      | -0.43 | 4.23E-08    | 1.76E-07    |
| 6632   | 1634  | SNRPD1   | -0.43 | 3.55E-08    | 1.49E-07    |
| 54617  | 5443  | INO80    | -0.43 | 6.05E-06    | 2.02E-05    |
| 9567   | 5016  | GTPBP1   | -0.43 | 1.41E-06    | 5.00E-06    |
| 116115 | 2938  | ZNF526   | -0.43 | 0.022071609 | 0.041631459 |
| 5784   | 13443 | PTPN14   | -0.43 | 4.27E-11    | 2.27E-10    |
| 64175  | 2334  | P3H1     | -0.43 | 3.59E-07    | 1.36E-06    |
| 10280  | 1716  | SIGMAR1  | -0.43 | 6.77E-08    | 2.76E-07    |
| 3134   | 1648  | HLA-F    | -0.43 | 0.000294483 | 0.000781165 |
| 84749  | 3745  | USP30    | -0.43 | 0.003846093 | 0.008435672 |
| 54861  | 4982  | SNRK     | -0.43 | 8.13E-06    | 2.67E-05    |
| 63925  | 4321  | ZNF335   | -0.43 | 1.20E-05    | 3.86E-05    |
| 79797  | 2380  | ZNF408   | -0.43 | 0.005325601 | 0.011406133 |
| 57182  | 8034  | ANKRD50  | -0.43 | 3.41E-05    | 0.000103362 |
| 80148  | 2475  | PQLC1    | -0.43 | 3.45E-05    | 0.000104298 |
| 5878   | 1703  | RAB5C    | -0.43 | 4.04E-07    | 1.53E-06    |
| 256356 | 9462  | GK5      | -0.43 | 0.000780385 | 0.001937386 |
| 5329   | 1563  | PLAUR    | -0.43 | 8.04E-05    | 0.000231331 |
| 51246  | 2069  | SHISA5   | -0.43 | 3.68E-09    | 1.67E-08    |
| 84058  | 1116  | WDR54    | -0.43 | 0.000172565 | 0.000473753 |
| 54805  | 3676  | CNNM2    | -0.43 | 0.003371033 | 0.007460951 |
| 64282  | 4361  | PAPD5    | -0.43 | 0.000486594 | 0.001247769 |
| 9690   | 5130  | UBE3C    | -0.43 | 6.07E-10    | 2.93E-09    |
| 84312  | 2604  | BRMS1L   | -0.43 | 0.001141096 | 0.002753257 |
| 80311  | 6433  | KLHL15   | -0.43 | 0.000471796 | 0.001213152 |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 5550     | 3011  | PREP         | -0.43 | 2.52E-05    | 7.77E-05    |
| 51373    | 600   | MRPS17       | -0.43 | 0.000788718 | 0.001955376 |
| 57019    | 2173  | CIAPIN1      | -0.43 | 3.95E-05    | 0.000118716 |
| 7866     | 2129  | IFRD2        | -0.43 | 7.83E-06    | 2.58E-05    |
| 51728    | 834   | POLR3K       | -0.43 | 0.00298816  | 0.006679283 |
| 90956    | 2380  | ADCK2        | -0.43 | 0.00057237  | 0.001453045 |
| 23350    | 7072  | U2SURP       | -0.43 | 1.12E-10    | 5.78E-10    |
| 23210    | 2260  | JMJD6        | -0.43 | 0.000139634 | 0.000388508 |
| 197322   | 2872  | ACSF3        | -0.43 | 0.000291698 | 0.000774605 |
| 22794    | 4070  | CASC3        | -0.43 | 1.09E-07    | 4.36E-07    |
| 55501    | 1848  | CHST12       | -0.43 | 0.000567949 | 0.001442853 |
| 10574    | 1925  | CCT7         | -0.43 | 1.85E-12    | 1.07E-11    |
| 4215     | 4649  | MAP3K3       | -0.43 | 4.56E-06    | 1.54E-05    |
| 771      | 4118  | CA12         | -0.43 | 0.000240432 | 0.000645803 |
| 26024    | 5505  | PTCD1        | -0.43 | 0.000395163 | 0.001029963 |
| 10849    | 3286  | CD3EAP       | -0.43 | 0.000824497 | 0.002037506 |
| 54925    | 2614  | ZSCAN32      | -0.43 | 0.002384914 | 0.005428536 |
| 8467     | 7926  | SMARCA5      | -0.43 | 2.91E-12    | 1.66E-11    |
| 79607    | 3046  | FAM118B      | -0.43 | 0.002761548 | 0.006207108 |
| 26286    | 2763  | ARFGAP3      | -0.43 | 9.63E-09    | 4.24E-08    |
| 6668     | 3222  | SP2          | -0.43 | 0.000149396 | 0.000414696 |
| 91300    | 1829  | R3HDM4       | -0.43 | 2.29E-05    | 7.10E-05    |
| 4814     | 1298  | NINJ1        | -0.43 | 4.44E-05    | 0.000132471 |
| 51343    | 3617  | FZR1         | -0.43 | 7.81E-07    | 2.85E-06    |
| 56252    | 6143  | YLPM1        | -0.43 | 3.51E-09    | 1.60E-08    |
| 85440    | 6822  | DOCK7        | -0.43 | 1.30E-05    | 4.17E-05    |
| 1.08E+08 | 1532  | LOC107987020 | -0.43 | 0.009994892 | 0.020256557 |
| 1512     | 1516  | CTSH         | -0.43 | 3.11E-07    | 1.19E-06    |
| 2643     | 2431  | GCH1         | -0.43 | 0.001290394 | 0.003082511 |
| 9249     | 1503  | DHRS3        | -0.43 | 2.66E-10    | 1.32E-09    |
| 5423     | 1306  | POLB         | -0.43 | 0.013996283 | 0.027549125 |
| 59343    | 3151  | SENP2        | -0.43 | 1.21E-06    | 4.35E-06    |
| 7042     | 5884  | TGFB2        | -0.43 | 3.63E-10    | 1.79E-09    |
| 9880     | 6256  | ZBTB39       | -0.43 | 0.002552016 | 0.005780259 |
| 3221     | 1726  | HOXC4        | -0.43 | 0.00315709  | 0.007027709 |
| 158586   | 5651  | ZXDB         | -0.43 | 0.011241004 | 0.022537819 |
| 25966    | 5841  | C2CD2        | -0.44 | 0.003044886 | 0.006799238 |
| 374654   | 4575  | KIF7         | -0.44 | 0.000567675 | 0.001442363 |
| 388552   | 2619  | BLOC1S3      | -0.44 | 0.007789761 | 0.016127765 |
| 23383    | 4713  | MAU2         | -0.44 | 7.87E-07    | 2.87E-06    |
| 55295    | 3122  | KLHL26       | -0.44 | 0.011762525 | 0.023459035 |
| 8295     | 12608 | TRRAP        | -0.44 | 1.44E-07    | 5.68E-07    |
| 93973    | 3742  | ACTR8        | -0.44 | 2.19E-05    | 6.80E-05    |
| 414      | 4859  | ARSD         | -0.44 | 1.31E-05    | 4.20E-05    |
| 10229    | 2667  | COQ7         | -0.44 | 6.12E-05    | 0.000179019 |
| 11120    | 2981  | BTN2A1       | -0.44 | 8.37E-05    | 0.000240198 |
| 132720   | 2730  | FAM241A      | -0.44 | 0.002142028 | 0.004912178 |
| 9805     | 5243  | SCRN1        | -0.44 | 1.47E-11    | 8.01E-11    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 57496  | 8959  | MKL2     | -0.44 | 1.25E-05    | 4.00E-05    |
| 51514  | 4607  | DTL      | -0.44 | 1.47E-08    | 6.39E-08    |
| 79968  | 4031  | WDR76    | -0.44 | 6.15E-08    | 2.52E-07    |
| 9318   | 4109  | COPS2    | -0.44 | 2.78E-09    | 1.28E-08    |
| 79145  | 1932  | CHCHD7   | -0.44 | 0.001921287 | 0.004445557 |
| 7625   | 3729  | ZNF74    | -0.44 | 0.017626707 | 0.034027742 |
| 10163  | 5446  | WASF2    | -0.44 | 9.48E-12    | 5.25E-11    |
| 665    | 3505  | BNIP3L   | -0.44 | 4.93E-08    | 2.03E-07    |
| 55183  | 10479 | RIF1     | -0.44 | 1.21E-09    | 5.73E-09    |
| 9784   | 2160  | SNX17    | -0.44 | 6.29E-06    | 2.09E-05    |
| 51594  | 5909  | NBAS     | -0.44 | 1.72E-06    | 6.07E-06    |
| 5557   | 1471  | PRIM1    | -0.44 | 9.92E-06    | 3.22E-05    |
| 80305  | 2297  | TRABD    | -0.44 | 2.91E-07    | 1.11E-06    |
| 23239  | 6411  | PHLPP1   | -0.44 | 3.34E-05    | 0.000101131 |
| 9343   | 4169  | EFTUD2   | -0.44 | 3.55E-09    | 1.62E-08    |
| 80071  | 3827  | CCDC15   | -0.44 | 0.020600725 | 0.039097808 |
| 54453  | 4188  | RIN2     | -0.44 | 4.66E-06    | 1.57E-05    |
| 51645  | 1750  | PPIL1    | -0.44 | 3.83E-06    | 1.30E-05    |
| 613    | 6927  | BCR      | -0.44 | 2.21E-07    | 8.55E-07    |
| 84950  | 3062  | PRPF38A  | -0.44 | 1.21E-08    | 5.28E-08    |
| 284403 | 3417  | WDR62    | -0.44 | 0.000102662 | 0.00029153  |
| 84294  | 3693  | UTP23    | -0.44 | 0.0001126   | 0.00031777  |
| 200895 | 3952  | DHFR2    | -0.44 | 0.00424091  | 0.009234373 |
| 55892  | 5353  | MYNN     | -0.44 | 4.10E-05    | 0.000122995 |
| 9710   | 5783  | KIAA0355 | -0.44 | 6.27E-06    | 2.09E-05    |
| 3783   | 2272  | KCNN4    | -0.44 | 0.00389604  | 0.008534685 |
| 5163   | 3874  | PDK1     | -0.44 | 4.74E-08    | 1.96E-07    |
| 8824   | 3822  | CES2     | -0.44 | 4.00E-10    | 1.96E-09    |
| 84792  | 2229  | FAM220A  | -0.44 | 0.000811919 | 0.002008098 |
| 6787   | 4311  | NEK4     | -0.44 | 7.14E-06    | 2.36E-05    |
| 4736   | 726   | RPL10A   | -0.44 | 2.81E-06    | 9.67E-06    |
| 29101  | 1319  | SSU72    | -0.44 | 3.02E-08    | 1.28E-07    |
| 60370  | 1455  | AVPI1    | -0.44 | 0.007907723 | 0.016345326 |
| 1653   | 2755  | DDX1     | -0.44 | 4.49E-09    | 2.03E-08    |
| 26292  | 2583  | MYCBP    | -0.44 | 1.42E-05    | 4.51E-05    |
| 10730  | 4224  | YME1L1   | -0.44 | 3.88E-12    | 2.20E-11    |
| 64718  | 4036  | UNKL     | -0.44 | 0.000494211 | 0.001266208 |
| 3913   | 5731  | LAMB2    | -0.44 | 4.68E-09    | 2.11E-08    |
| 6606   | 1588  | SMN1     | -0.44 | 0.000125385 | 0.000350619 |
| 23038  | 4583  | WDTC1    | -0.44 | 2.69E-07    | 1.03E-06    |
| 3069   | 6383  | HDLBP    | -0.44 | 3.38E-14    | 2.23E-13    |
| 126308 | 3347  | MOB3A    | -0.44 | 1.40E-07    | 5.54E-07    |
| 64110  | 1700  | MAGEF1   | -0.44 | 1.07E-06    | 3.85E-06    |
| 23616  | 2592  | SH3BP1   | -0.44 | 0.000229168 | 0.000617229 |
| 27303  | 7866  | RBMS3    | -0.44 | 2.40E-07    | 9.24E-07    |
| 64746  | 3581  | ACBD3    | -0.44 | 6.44E-07    | 2.37E-06    |
| 9088   | 2126  | PKMYT1   | -0.44 | 0.000237149 | 0.000637563 |
| 23154  | 3519  | NCDN     | -0.44 | 2.15E-05    | 6.69E-05    |

|        |      |           |       |             |             |
|--------|------|-----------|-------|-------------|-------------|
| 81490  | 2488 | PTDSS2    | -0.44 | 1.01E-05    | 3.26E-05    |
| 5431   | 4059 | POLR2B    | -0.44 | 1.51E-11    | 8.23E-11    |
| 7074   | 7213 | TIAM1     | -0.44 | 0.000580355 | 0.001472686 |
| 58491  | 3222 | ZNF71     | -0.45 | 0.016060155 | 0.031261704 |
| 26155  | 2817 | NOC2L     | -0.45 | 2.36E-09    | 1.09E-08    |
| 55249  | 2702 | YY1AP1    | -0.45 | 2.18E-06    | 7.62E-06    |
| 9739   | 6046 | SETD1A    | -0.45 | 3.71E-07    | 1.41E-06    |
| 54868  | 3721 | TMEM104   | -0.45 | 5.19E-05    | 0.000153657 |
| 9791   | 2573 | PTDSS1    | -0.45 | 2.04E-08    | 8.72E-08    |
| 10664  | 3791 | CTCF      | -0.45 | 4.86E-09    | 2.19E-08    |
| 28964  | 3729 | GIT1      | -0.45 | 2.60E-06    | 9.01E-06    |
| 55326  | 5535 | AGPAT5    | -0.45 | 7.60E-06    | 2.51E-05    |
| 23269  | 8380 | MGA       | -0.45 | 1.25E-06    | 4.47E-06    |
| 84108  | 2217 | PCGF6     | -0.45 | 2.72E-05    | 8.34E-05    |
| 146050 | 5570 | ZSCAN29   | -0.45 | 0.000105506 | 0.000298745 |
| 116254 | 1138 | GINM1     | -0.45 | 3.71E-07    | 1.41E-06    |
| 94103  | 2147 | ORMDL3    | -0.45 | 1.81E-08    | 7.80E-08    |
| 9093   | 2700 | DNAJA3    | -0.45 | 1.06E-06    | 3.83E-06    |
| 6595   | 3314 | SMARCA2   | -0.45 | 1.60E-08    | 6.91E-08    |
| 3299   | 2571 | HSF4      | -0.45 | 0.014377259 | 0.028242691 |
| 23074  | 5026 | UHRF1BP1L | -0.45 | 2.70E-05    | 8.28E-05    |
| 29997  | 1523 | NOP53     | -0.45 | 1.03E-12    | 6.06E-12    |
| 51719  | 3825 | CAB39     | -0.45 | 1.16E-09    | 5.50E-09    |
| 149951 | 1958 | COMMD7    | -0.45 | 4.73E-07    | 1.77E-06    |
| 200916 | 1977 | RPL22L1   | -0.45 | 0.001240875 | 0.002973815 |
| 10140  | 2243 | TOB1      | -0.45 | 3.96E-07    | 1.50E-06    |
| 1793   | 6793 | DOCK1     | -0.45 | 3.27E-10    | 1.62E-09    |
| 29959  | 2272 | NRBP1     | -0.45 | 9.85E-09    | 4.34E-08    |
| 22847  | 7730 | ZNF507    | -0.45 | 5.17E-05    | 0.000153067 |
| 5881   | 1077 | RAC3      | -0.45 | 0.000616985 | 0.001556966 |
| 9425   | 3281 | CDYL      | -0.45 | 6.05E-05    | 0.000176887 |
| 3098   | 3574 | HK1       | -0.45 | 4.01E-10    | 1.96E-09    |
| 9372   | 5813 | ZFYVE9    | -0.45 | 8.26E-05    | 0.000237268 |
| 27249  | 1466 | MMADHC    | -0.45 | 1.93E-08    | 8.27E-08    |
| 3799   | 5661 | KIF5B     | -0.45 | 1.17E-13    | 7.39E-13    |
| 6059   | 4193 | ABCE1     | -0.45 | 3.05E-09    | 1.40E-08    |
| 148479 | 3565 | PHF13     | -0.45 | 8.26E-08    | 3.33E-07    |
| 23326  | 5049 | USP22     | -0.45 | 1.19E-11    | 6.53E-11    |
| 6936   | 3099 | GCFC2     | -0.45 | 0.000173308 | 0.000475719 |
| 9167   | 1159 | COX7A2L   | -0.45 | 9.41E-08    | 3.77E-07    |
| 8675   | 4920 | STX16     | -0.45 | 5.38E-07    | 2.00E-06    |
| 27349  | 1515 | MCAT      | -0.45 | 0.001071305 | 0.002599337 |
| 6259   | 2828 | RYK       | -0.45 | 7.41E-10    | 3.56E-09    |
| 11237  | 6615 | RNF24     | -0.45 | 3.57E-06    | 1.22E-05    |
| 339318 | 2866 | ZNF181    | -0.45 | 0.005809794 | 0.012341992 |
| 130507 | 7918 | UBR3      | -0.45 | 4.54E-05    | 0.00013536  |
| 84549  | 3590 | MAK16     | -0.45 | 0.000192782 | 0.000525442 |
| 348180 | 1680 | CTU2      | -0.45 | 0.004258356 | 0.009270089 |



|          |       |         |       |             |             |
|----------|-------|---------|-------|-------------|-------------|
| 5442     | 3803  | POLRMT  | -0.45 | 5.21E-06    | 1.75E-05    |
| 64319    | 4403  | FBR5    | -0.45 | 1.21E-06    | 4.33E-06    |
| 79019    | 958   | CENPM   | -0.45 | 4.90E-05    | 0.000145689 |
| 11104    | 1839  | KATNA1  | -0.45 | 0.00011396  | 0.0003212   |
| 2992     | 1818  | GYG1    | -0.45 | 2.05E-05    | 6.39E-05    |
| 26168    | 2509  | SENP3   | -0.45 | 3.43E-08    | 1.44E-07    |
| 23019    | 8393  | CNOT1   | -0.45 | 1.21E-12    | 7.10E-12    |
| 4686     | 5023  | NCBP1   | -0.45 | 6.41E-09    | 2.86E-08    |
| 9846     | 6118  | GAB2    | -0.45 | 0.000191198 | 0.000521525 |
| 91369    | 4112  | ANKRD40 | -0.45 | 7.51E-08    | 3.05E-07    |
| 1.03E+08 | 989   | U2AF1L5 | -0.45 | 0.00107013  | 0.002596841 |
| 148206   | 8808  | ZNF714  | -0.45 | 9.29E-05    | 0.000265119 |
| 51663    | 4746  | ZFR     | -0.45 | 8.86E-11    | 4.59E-10    |
| 51104    | 3156  | ABHD17B | -0.45 | 0.001484246 | 0.003510193 |
| 254428   | 4748  | SLC41A1 | -0.45 | 2.19E-07    | 8.47E-07    |
| 57597    | 10490 | BAHCC1  | -0.45 | 0.000168367 | 0.000462943 |
| 10127    | 3182  | ZNF263  | -0.45 | 3.78E-06    | 1.29E-05    |
| 5532     | 2964  | PPP3CB  | -0.45 | 6.83E-07    | 2.51E-06    |
| 8525     | 3623  | DGKZ    | -0.45 | 1.07E-06    | 3.85E-06    |
| 7277     | 1495  | TUBA4A  | -0.46 | 4.72E-06    | 1.59E-05    |
| 135112   | 4927  | NCOA7   | -0.46 | 1.21E-06    | 4.35E-06    |
| 23431    | 6643  | AP4E1   | -0.46 | 9.10E-06    | 2.97E-05    |
| 84905    | 3574  | ZNF341  | -0.46 | 0.016779865 | 0.032559205 |
| 6389     | 2887  | SDHA    | -0.46 | 1.84E-13    | 1.15E-12    |
| 63892    | 4779  | THADA   | -0.46 | 9.70E-06    | 3.15E-05    |
| 23170    | 3421  | TTLL12  | -0.46 | 1.44E-05    | 4.58E-05    |
| 1163     | 834   | CKS1B   | -0.46 | 0.000125338 | 0.000350545 |
| 23659    | 2691  | PLA2G15 | -0.46 | 8.98E-06    | 2.93E-05    |
| 1806     | 4063  | DPYD    | -0.46 | 9.23E-05    | 0.000263529 |
| 1650     | 2144  | DDOST   | -0.46 | 5.75E-15    | 3.97E-14    |
| 10634    | 2705  | GAS2L1  | -0.46 | 0.000259732 | 0.000694287 |
| 25913    | 3848  | POT1    | -0.46 | 1.50E-05    | 4.76E-05    |
| 9486     | 2688  | CHST10  | -0.46 | 0.000105916 | 0.000299765 |
| 7301     | 4001  | TYRO3   | -0.46 | 4.42E-06    | 1.50E-05    |
| 10885    | 3877  | WDR3    | -0.46 | 1.27E-05    | 4.08E-05    |
| 11224    | 475   | RPL35   | -0.46 | 2.02E-09    | 9.41E-09    |
| 5787     | 9466  | PTPRB   | -0.46 | 0.008578569 | 0.017613128 |
| 7695     | 3251  | ZNF136  | -0.46 | 0.007827339 | 0.016190472 |
| 55215    | 4762  | FANCI   | -0.46 | 3.54E-10    | 1.74E-09    |
| 1181     | 3077  | CLCN2   | -0.46 | 0.01186123  | 0.023642623 |
| 23648    | 3110  | SSBP3   | -0.46 | 4.50E-08    | 1.86E-07    |
| 55140    | 3232  | ELP3    | -0.46 | 0.000405989 | 0.00105632  |
| 729438   | 4223  | CASTOR2 | -0.46 | 5.87E-07    | 2.18E-06    |
| 6233     | 972   | RPS27A  | -0.46 | 2.72E-11    | 1.47E-10    |
| 83938    | 852   | LRMDA   | -0.46 | 0.01332968  | 0.026330378 |
| 9780     | 8106  | PIEZO1  | -0.46 | 3.47E-10    | 1.71E-09    |
| 51142    | 966   | CHCHD2  | -0.46 | 1.45E-08    | 6.28E-08    |
| 4217     | 4988  | MAP3K5  | -0.46 | 1.48E-06    | 5.25E-06    |

|        |      |         |       |             |             |
|--------|------|---------|-------|-------------|-------------|
| 57198  | 5932 | ATP8B2  | -0.46 | 2.57E-07    | 9.87E-07    |
| 29855  | 5749 | UBN1    | -0.46 | 2.18E-09    | 1.01E-08    |
| 10152  | 6312 | ABI2    | -0.46 | 6.19E-09    | 2.77E-08    |
| 79174  | 1465 | CRELD2  | -0.46 | 5.60E-05    | 0.000164685 |
| 113115 | 1582 | MTFR2   | -0.46 | 0.006303558 | 0.013293961 |
| 558    | 4444 | AXL     | -0.46 | 1.39E-12    | 8.12E-12    |
| 84948  | 2412 | TIGD5   | -0.46 | 0.004526476 | 0.009821276 |
| 55718  | 3237 | POLR3E  | -0.46 | 3.90E-05    | 0.000117136 |
| 65082  | 2628 | VPS33A  | -0.46 | 3.01E-05    | 9.19E-05    |
| 84769  | 1360 | MPV17L2 | -0.46 | 0.000255156 | 0.000683184 |
| 375341 | 3590 | C3orf62 | -0.46 | 0.004102977 | 0.008952683 |
| 79172  | 4400 | CENPO   | -0.46 | 2.88E-07    | 1.10E-06    |
| 5827   | 977  | PXMP2   | -0.46 | 6.68E-05    | 0.000194412 |
| 7004   | 1787 | TEAD4   | -0.46 | 3.59E-05    | 0.000108338 |
| 54503  | 2340 | ZDHHC13 | -0.46 | 1.70E-06    | 6.01E-06    |
| 151230 | 4089 | KLHL23  | -0.46 | 1.80E-06    | 6.35E-06    |
| 56006  | 2341 | SMG9    | -0.46 | 2.11E-06    | 7.40E-06    |
| 6457   | 2035 | SH3GL3  | -0.46 | 0.019907799 | 0.037938962 |
| 57335  | 5513 | ZNF286A | -0.47 | 2.87E-05    | 8.78E-05    |
| 221527 | 2164 | ZBTB12  | -0.47 | 0.003473784 | 0.007674981 |
| 55274  | 1690 | PHF10   | -0.47 | 3.39E-06    | 1.16E-05    |
| 8800   | 2740 | PEX11A  | -0.47 | 0.015308917 | 0.029920674 |
| 2193   | 1853 | FARSA   | -0.47 | 3.23E-06    | 1.11E-05    |
| 51363  | 4476 | CHST15  | -0.47 | 3.35E-07    | 1.27E-06    |
| 55103  | 7449 | RALGPS2 | -0.47 | 1.11E-06    | 4.01E-06    |
| 149345 | 1667 | SHISA4  | -0.47 | 0.000999913 | 0.0024371   |
| 7270   | 3220 | TTF1    | -0.47 | 3.19E-07    | 1.21E-06    |
| 10939  | 3223 | AFG3L2  | -0.47 | 4.65E-08    | 1.92E-07    |
| 89122  | 3380 | TRIM4   | -0.47 | 8.23E-06    | 2.70E-05    |
| 9672   | 4970 | SDC3    | -0.47 | 2.50E-11    | 1.35E-10    |
| 1545   | 5160 | CYP1B1  | -0.47 | 1.48E-08    | 6.40E-08    |
| 1459   | 1672 | CSNK2A2 | -0.47 | 2.02E-05    | 6.29E-05    |
| 9895   | 8218 | TECPR2  | -0.47 | 2.95E-05    | 9.02E-05    |
| 113    | 5753 | ADCY7   | -0.47 | 8.91E-06    | 2.91E-05    |
| 84311  | 1712 | MRPL45  | -0.47 | 1.80E-06    | 6.35E-06    |
| 1827   | 2363 | RCAN1   | -0.47 | 1.64E-06    | 5.79E-06    |
| 9212   | 1249 | AURKB   | -0.47 | 3.02E-08    | 1.27E-07    |
| 9772   | 4740 | TMEM94  | -0.47 | 3.58E-08    | 1.50E-07    |
| 113174 | 1545 | SAAL1   | -0.47 | 2.24E-05    | 6.97E-05    |
| 26060  | 6061 | APPL1   | -0.47 | 1.00E-10    | 5.19E-10    |
| 118460 | 1729 | EXOSC6  | -0.47 | 0.000191417 | 0.000521962 |
| 55145  | 2104 | THAP1   | -0.47 | 0.011632243 | 0.023222663 |
| 25917  | 3457 | THUMPD3 | -0.47 | 3.47E-08    | 1.46E-07    |
| 201562 | 3602 | HACD2   | -0.47 | 3.51E-10    | 1.73E-09    |
| 220134 | 2910 | SKA1    | -0.47 | 5.74E-06    | 1.92E-05    |
| 54778  | 4882 | RNF111  | -0.47 | 7.91E-06    | 2.60E-05    |
| 56986  | 2680 | DTWD1   | -0.47 | 0.001367582 | 0.003252904 |
| 26256  | 1485 | CABYR   | -0.47 | 0.003796847 | 0.008338048 |

|        |      |             |       |             |             |
|--------|------|-------------|-------|-------------|-------------|
| 25909  | 8684 | AHCTF1      | -0.47 | 1.53E-11    | 8.34E-11    |
| 23065  | 5707 | EMC1        | -0.47 | 6.21E-11    | 3.27E-10    |
| 6144   | 582  | RPL21       | -0.47 | 9.08E-08    | 3.65E-07    |
| 2257   | 6174 | FGF12       | -0.47 | 0.016230733 | 0.031572639 |
| 54434  | 8212 | SSH1        | -0.47 | 1.12E-08    | 4.88E-08    |
| 196528 | 7968 | ARID2       | -0.47 | 3.43E-08    | 1.44E-07    |
| 26020  | 3582 | LRP10       | -0.47 | 3.85E-13    | 2.33E-12    |
| 140775 | 8327 | SMCR8       | -0.47 | 1.68E-07    | 6.57E-07    |
| 170384 | 2023 | FUT11       | -0.47 | 2.85E-05    | 8.71E-05    |
| 55659  | 2583 | ZNF416      | -0.47 | 0.025872662 | 0.048116544 |
| 23588  | 1824 | KLHDC2      | -0.47 | 1.51E-05    | 4.79E-05    |
| 4999   | 3767 | ORC2        | -0.47 | 6.63E-07    | 2.44E-06    |
| 2799   | 5144 | GNS         | -0.47 | 6.07E-13    | 3.63E-12    |
| 692312 | 3240 | PPAN-P2RY11 | -0.47 | 0.001295236 | 0.003092    |
| 81875  | 2738 | ISG20L2     | -0.47 | 9.07E-08    | 3.64E-07    |
| 55810  | 4985 | FOXJ2       | -0.47 | 1.69E-06    | 5.97E-06    |
| 6596   | 5185 | HLTF        | -0.47 | 9.23E-10    | 4.40E-09    |
| 10512  | 5172 | SEMA3C      | -0.47 | 5.05E-07    | 1.89E-06    |
| 6548   | 4259 | SLC9A1      | -0.48 | 3.60E-06    | 1.23E-05    |
| 9487   | 3810 | PIGL        | -0.48 | 0.002304721 | 0.005256776 |
| 6229   | 662  | RPS24       | -0.48 | 4.16E-15    | 2.90E-14    |
| 6683   | 5192 | SPAST       | -0.48 | 3.04E-06    | 1.04E-05    |
| 339230 | 2052 | CCDC137     | -0.48 | 2.06E-06    | 7.20E-06    |
| 22954  | 3736 | TRIM32      | -0.48 | 5.71E-07    | 2.12E-06    |
| 5127   | 3209 | CDK16       | -0.48 | 5.53E-10    | 2.68E-09    |
| 65260  | 2114 | COA7        | -0.48 | 0.000832748 | 0.002055322 |
| 133957 | 1437 | CCDC127     | -0.48 | 0.000806825 | 0.001996333 |
| 10713  | 2239 | USP39       | -0.48 | 1.44E-09    | 6.74E-09    |
| 7812   | 3890 | CSDE1       | -0.48 | 8.67E-18    | 7.04E-17    |
| 6046   | 3685 | BRD2        | -0.48 | 1.40E-12    | 8.20E-12    |
| 9797   | 4909 | TATDN2      | -0.48 | 2.34E-08    | 9.95E-08    |
| 80349  | 1370 | WDR61       | -0.48 | 7.65E-05    | 0.000220872 |
| 283742 | 4392 | FAM98B      | -0.48 | 6.78E-09    | 3.02E-08    |
| 51272  | 2850 | BET1L       | -0.48 | 6.43E-07    | 2.37E-06    |
| 26512  | 4796 | INTS6       | -0.48 | 8.53E-09    | 3.77E-08    |
| 50512  | 2209 | PODXL2      | -0.48 | 0.021585613 | 0.040797061 |
| 79692  | 4817 | ZNF322      | -0.48 | 8.31E-06    | 2.72E-05    |
| 115704 | 3835 | EVI5L       | -0.48 | 2.21E-05    | 6.85E-05    |
| 28952  | 2333 | CCDC22      | -0.48 | 0.000535683 | 0.001365177 |
| 84310  | 1336 | C7orf50     | -0.48 | 2.86E-08    | 1.21E-07    |
| 113419 | 3381 | TEX261      | -0.48 | 3.18E-09    | 1.46E-08    |
| 51759  | 1817 | C9orf78     | -0.48 | 3.44E-08    | 1.44E-07    |
| 36     | 5941 | ACADSB      | -0.48 | 8.53E-05    | 0.000244725 |
| 56997  | 2872 | COQ8A       | -0.48 | 0.00014449  | 0.000401516 |
| 1965   | 4165 | EIF2S1      | -0.48 | 9.89E-12    | 5.47E-11    |
| 54556  | 1841 | ING3        | -0.48 | 6.31E-05    | 0.00018414  |
| 3915   | 7889 | LAMC1       | -0.48 | 3.28E-16    | 2.44E-15    |
| 30968  | 1426 | STOML2      | -0.48 | 9.10E-10    | 4.34E-09    |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 23506    | 6541  | BICRAL       | -0.48 | 0.000116411 | 0.000327535 |
| 9100     | 3401  | USP10        | -0.48 | 5.38E-13    | 3.22E-12    |
| 388677   | 5324  | NOTCH2NL     | -0.48 | 0.003152303 | 0.007017932 |
| 55022    | 2609  | PID1         | -0.48 | 0.016794433 | 0.032583914 |
| 168544   | 2863  | ZNF467       | -0.48 | 0.015062611 | 0.029468451 |
| 10421    | 3439  | CD2BP2       | -0.48 | 2.42E-09    | 1.12E-08    |
| 1.08E+08 | 2306  | LOC107985803 | -0.48 | 0.001904211 | 0.00441064  |
| 55341    | 3359  | LSG1         | -0.48 | 1.18E-07    | 4.71E-07    |
| 2957     | 6106  | GTF2A1       | -0.48 | 1.81E-08    | 7.79E-08    |
| 57488    | 5957  | ESYT2        | -0.48 | 1.25E-09    | 5.89E-09    |
| 90417    | 1768  | KNSTRN       | -0.48 | 1.07E-06    | 3.86E-06    |
| 80315    | 7152  | CPEB4        | -0.48 | 2.97E-08    | 1.25E-07    |
| 127933   | 8277  | UHMK1        | -0.48 | 5.24E-11    | 2.77E-10    |
| 255403   | 4549  | ZNF718       | -0.48 | 0.002646524 | 0.005975024 |
| 84057    | 953   | MND1         | -0.49 | 0.006173278 | 0.013050185 |
| 286205   | 12168 | SCAI         | -0.49 | 2.20E-05    | 6.82E-05    |
| 29789    | 4353  | OLA1         | -0.49 | 4.60E-12    | 2.60E-11    |
| 29028    | 4696  | ATAD2        | -0.49 | 1.60E-13    | 1.00E-12    |
| 90459    | 4582  | ERI1         | -0.49 | 6.87E-06    | 2.28E-05    |
| 2649     | 7042  | NR6A1        | -0.49 | 0.002587383 | 0.005852657 |
| 63893    | 5309  | UBE2O        | -0.49 | 8.88E-07    | 3.23E-06    |
| 5595     | 1898  | MAPK3        | -0.49 | 4.63E-07    | 1.74E-06    |
| 9632     | 4527  | SEC24C       | -0.49 | 1.43E-11    | 7.83E-11    |
| 91442    | 1565  | FAAP24       | -0.49 | 0.005631687 | 0.011990871 |
| 23204    | 2417  | ARL6IP1      | -0.49 | 1.10E-16    | 8.39E-16    |
| 8895     | 4890  | CPNE3        | -0.49 | 1.34E-09    | 6.30E-09    |
| 65108    | 1562  | MARCKSL1     | -0.49 | 5.92E-07    | 2.19E-06    |
| 55920    | 4008  | RCC2         | -0.49 | 1.46E-12    | 8.56E-12    |
| 26521    | 823   | TIMM8B       | -0.49 | 0.001776476 | 0.004134175 |
| 171568   | 3995  | POLR3H       | -0.49 | 2.30E-06    | 8.00E-06    |
| 24149    | 7900  | ZNF318       | -0.49 | 3.29E-07    | 1.25E-06    |
| 7298     | 1603  | TYMS         | -0.49 | 5.20E-09    | 2.34E-08    |
| 155066   | 2741  | ATP6V0E2     | -0.49 | 5.19E-06    | 1.74E-05    |
| 54475    | 3081  | NLE1         | -0.49 | 0.000260397 | 0.000695855 |
| 1660     | 4543  | DHX9         | -0.49 | 1.27E-16    | 9.63E-16    |
| 254427   | 3460  | PROSER2      | -0.49 | 1.24E-10    | 6.35E-10    |
| 66005    | 1559  | CHID1        | -0.49 | 1.35E-08    | 5.88E-08    |
| 80028    | 7303  | FBXL18       | -0.49 | 1.38E-07    | 5.45E-07    |
| 8087     | 2667  | FXR1         | -0.49 | 3.36E-14    | 2.22E-13    |
| 57695    | 8032  | USP37        | -0.49 | 2.31E-06    | 8.05E-06    |
| 81603    | 2753  | TRIM8        | -0.49 | 2.72E-10    | 1.35E-09    |
| 26354    | 2047  | GNL3         | -0.49 | 1.38E-11    | 7.55E-11    |
| 55676    | 4625  | SLC30A6      | -0.49 | 4.27E-07    | 1.61E-06    |
| 9666     | 5310  | DZIP3        | -0.49 | 3.21E-05    | 9.74E-05    |
| 8573     | 8339  | CASK         | -0.49 | 2.34E-09    | 1.08E-08    |
| 2063     | 1804  | NR2F6        | -0.49 | 1.20E-10    | 6.16E-10    |
| 114034   | 2416  | TOE1         | -0.49 | 6.06E-06    | 2.02E-05    |
| 389072   | 7859  | PLEKHM3      | -0.49 | 0.000127286 | 0.000355599 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 1432   | 3485  | MAPK14   | -0.49 | 2.74E-09    | 1.26E-08    |
| 989    | 2416  | SEPT7    | -0.49 | 2.11E-13    | 1.31E-12    |
| 5430   | 6738  | POLR2A   | -0.49 | 2.55E-08    | 1.08E-07    |
| 26959  | 2767  | HBP1     | -0.49 | 5.87E-08    | 2.41E-07    |
| 51253  | 1489  | MRPL37   | -0.49 | 1.23E-08    | 5.36E-08    |
| 5520   | 2641  | PPP2R2A  | -0.49 | 4.54E-07    | 1.70E-06    |
| 4070   | 2080  | TACSTD2  | -0.49 | 1.47E-11    | 8.03E-11    |
| 11228  | 5326  | RASSF8   | -0.49 | 3.41E-08    | 1.43E-07    |
| 91661  | 4577  | ZNF765   | -0.49 | 0.004548004 | 0.009863168 |
| 55055  | 3207  | ZWILCH   | -0.49 | 1.08E-07    | 4.30E-07    |
| 25914  | 6743  | RTTN     | -0.49 | 1.01E-05    | 3.26E-05    |
| 29890  | 6650  | RBM15B   | -0.49 | 3.72E-08    | 1.55E-07    |
| 5903   | 10861 | RANBP2   | -0.49 | 2.24E-12    | 1.29E-11    |
| 55684  | 3073  | RABL6    | -0.49 | 5.29E-14    | 3.45E-13    |
| 55619  | 7802  | DOCK10   | -0.49 | 0.000155278 | 0.00042888  |
| 445329 | 1397  | SULT1A4  | -0.49 | 0.000915746 | 0.002247062 |
| 80325  | 1975  | ABTB1    | -0.49 | 0.00096946  | 0.002367422 |
| 27292  | 1573  | DIMT1    | -0.49 | 3.56E-05    | 0.000107635 |
| 1938   | 3163  | EEF2     | -0.49 | 3.35E-15    | 2.34E-14    |
| 440138 | 2595  | ALG11    | -0.49 | 0.003960566 | 0.008666422 |
| 27238  | 1746  | GPKOW    | -0.49 | 2.70E-05    | 8.28E-05    |
| 54707  | 1510  | GPN2     | -0.49 | 0.000422697 | 0.001096261 |
| 10113  | 2184  | PREB     | -0.49 | 7.03E-07    | 2.58E-06    |
| 1730   | 4539  | DIAPH2   | -0.49 | 0.000754817 | 0.001879163 |
| 56893  | 3617  | UBQLN4   | -0.49 | 8.87E-08    | 3.57E-07    |
| 7378   | 1492  | UPP1     | -0.50 | 0.000479124 | 0.001230392 |
| 7155   | 5453  | TOP2B    | -0.50 | 1.18E-13    | 7.44E-13    |
| 6154   | 609   | RPL26    | -0.50 | 1.60E-12    | 9.33E-12    |
| 9871   | 3973  | SEC24D   | -0.50 | 8.54E-10    | 4.08E-09    |
| 79109  | 3105  | MAPKAP1  | -0.50 | 1.70E-11    | 9.22E-11    |
| 10067  | 1583  | SCAMP3   | -0.50 | 2.80E-06    | 9.67E-06    |
| 7564   | 2550  | ZNF16    | -0.50 | 0.000459577 | 0.001184819 |
| 22938  | 2146  | SNW1     | -0.50 | 2.16E-12    | 1.25E-11    |
| 64794  | 4024  | DDX31    | -0.50 | 9.12E-06    | 2.97E-05    |
| 9368   | 2032  | SLC9A3R1 | -0.50 | 3.25E-07    | 1.24E-06    |
| 142891 | 6815  | SAMD8    | -0.50 | 4.00E-08    | 1.67E-07    |
| 29899  | 4121  | GPSM2    | -0.50 | 1.24E-07    | 4.91E-07    |
| 84449  | 5288  | ZNF333   | -0.50 | 0.003514382 | 0.007761782 |
| 347240 | 5468  | KIF24    | -0.50 | 0.000167866 | 0.000461637 |
| 5525   | 2811  | PPP2R5A  | -0.50 | 2.77E-07    | 1.06E-06    |
| 1964   | 4431  | EIF1AX   | -0.50 | 1.17E-11    | 6.42E-11    |
| 55234  | 7088  | SMU1     | -0.50 | 1.51E-11    | 8.22E-11    |
| 4644   | 12200 | MYO5A    | -0.50 | 1.15E-07    | 4.58E-07    |
| 7554   | 2210  | ZNF8     | -0.50 | 0.00548235  | 0.011698138 |
| 79673  | 3385  | ZNF329   | -0.50 | 0.001953507 | 0.004513642 |
| 10100  | 3211  | TSPAN2   | -0.50 | 0.000420295 | 0.00109019  |
| 83743  | 2456  | GRWD1    | -0.50 | 7.93E-06    | 2.61E-05    |
| 221079 | 7064  | ARL5B    | -0.50 | 3.75E-06    | 1.28E-05    |

|        |      |           |       |             |             |
|--------|------|-----------|-------|-------------|-------------|
| 1121   | 4807 | CHM       | -0.50 | 8.42E-08    | 3.40E-07    |
| 284439 | 3172 | SLC25A42  | -0.50 | 0.002654887 | 0.00599162  |
| 6138   | 2212 | RPL15     | -0.50 | 6.60E-16    | 4.82E-15    |
| 79571  | 4152 | GCC1      | -0.50 | 0.000224554 | 0.000605351 |
| 2177   | 5182 | FANCD2    | -0.50 | 2.65E-08    | 1.12E-07    |
| 10845  | 4788 | CLPX      | -0.50 | 7.65E-08    | 3.10E-07    |
| 83461  | 1921 | CDCA3     | -0.50 | 2.22E-06    | 7.73E-06    |
| 114794 | 8379 | ELFN2     | -0.50 | 4.38E-07    | 1.65E-06    |
| 375748 | 6733 | ERCC6L2   | -0.50 | 6.77E-08    | 2.76E-07    |
| 2230   | 3155 | FDX1      | -0.50 | 0.000100471 | 0.000285626 |
| 29071  | 1743 | C1GALT1C1 | -0.50 | 1.33E-06    | 4.76E-06    |
| 51714  | 3498 | SELENOT   | -0.50 | 2.51E-12    | 1.44E-11    |
| 9748   | 7705 | SLK       | -0.50 | 1.17E-10    | 6.02E-10    |
| 84722  | 1840 | PSRC1     | -0.50 | 0.000232425 | 0.000625345 |
| 6618   | 1561 | SNAPC2    | -0.50 | 0.000209113 | 0.00056639  |
| 4733   | 1467 | DRG1      | -0.50 | 1.68E-08    | 7.24E-08    |
| 222484 | 4593 | LNK2      | -0.50 | 2.39E-05    | 7.39E-05    |
| 339122 | 4497 | RAB43     | -0.50 | 0.002282173 | 0.005210619 |
| 163050 | 2963 | ZNF564    | -0.50 | 0.003926257 | 0.008596641 |
| 84662  | 3746 | GLIS2     | -0.50 | 2.16E-08    | 9.22E-08    |
| 9294   | 3589 | S1PR2     | -0.50 | 0.001155867 | 0.002787006 |
| 56681  | 3023 | SAR1A     | -0.50 | 3.04E-14    | 2.01E-13    |
| 6324   | 1668 | SCN1B     | -0.51 | 0.002184342 | 0.005001467 |
| 201627 | 4695 | DENND6A   | -0.51 | 4.73E-07    | 1.77E-06    |
| 25972  | 1169 | UNC50     | -0.51 | 2.58E-05    | 7.95E-05    |
| 1E+08  | 2940 | ZBED6     | -0.51 | 0.001358821 | 0.003233667 |
| 9897   | 3988 | WASHC5    | -0.51 | 1.14E-08    | 4.98E-08    |
| 7874   | 5249 | USP7      | -0.51 | 5.23E-13    | 3.14E-12    |
| 55320  | 4044 | MIS18BP1  | -0.51 | 4.25E-07    | 1.60E-06    |
| 51776  | 6121 | MAP3K20   | -0.51 | 1.75E-12    | 1.02E-11    |
| 23118  | 4198 | TAB2      | -0.51 | 1.08E-10    | 5.59E-10    |
| 9889   | 6897 | ZBED4     | -0.51 | 1.92E-06    | 6.75E-06    |
| 79879  | 5927 | CCDC134   | -0.51 | 2.24E-06    | 7.80E-06    |
| 9774   | 5881 | BCLAF1    | -0.51 | 3.15E-14    | 2.08E-13    |
| 22877  | 8418 | MLXIP     | -0.51 | 7.72E-14    | 4.95E-13    |
| 123811 | 2298 | FOPNL     | -0.51 | 7.42E-08    | 3.01E-07    |
| 5888   | 1756 | RAD51     | -0.51 | 0.000801586 | 0.0019842   |
| 55634  | 2452 | KRBOX4    | -0.51 | 0.001458515 | 0.003454397 |
| 2996   | 4424 | GYPE      | -0.51 | 0.00313057  | 0.006974792 |
| 124245 | 2944 | ZC3H18    | -0.51 | 2.35E-07    | 9.06E-07    |
| 3838   | 2126 | KPNA2     | -0.51 | 3.47E-16    | 2.57E-15    |
| 2021   | 1160 | ENDOG     | -0.51 | 0.003183071 | 0.007083616 |
| 8976   | 4447 | WASL      | -0.51 | 1.17E-10    | 6.01E-10    |
| 51304  | 3602 | ZDHHC3    | -0.51 | 1.91E-10    | 9.64E-10    |
| 5908   | 2165 | RAP1B     | -0.51 | 7.78E-14    | 4.99E-13    |
| 6839   | 2752 | SUV39H1   | -0.51 | 5.97E-05    | 0.000174879 |
| 93380  | 3704 | MMGT1     | -0.51 | 3.49E-08    | 1.46E-07    |
| 79035  | 1409 | NABP2     | -0.51 | 3.60E-05    | 0.000108701 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 3459   | 2144  | IFNGR1   | -0.51 | 3.20E-09    | 1.47E-08    |
| 54602  | 4671  | NDFIP2   | -0.51 | 1.14E-10    | 5.86E-10    |
| 153830 | 3592  | RNF145   | -0.51 | 9.01E-12    | 5.00E-11    |
| 3480   | 11776 | IGF1R    | -0.51 | 7.14E-10    | 3.43E-09    |
| 8318   | 1983  | CDC45    | -0.51 | 1.09E-06    | 3.93E-06    |
| 2539   | 2362  | G6PD     | -0.51 | 3.66E-08    | 1.53E-07    |
| 6857   | 4450  | SYT1     | -0.51 | 0.003838975 | 0.0084211   |
| 9451   | 4345  | EIF2AK3  | -0.51 | 1.48E-05    | 4.69E-05    |
| 79801  | 3471  | SHCBP1   | -0.51 | 7.35E-09    | 3.27E-08    |
| 79666  | 2977  | PLEKHF2  | -0.51 | 3.81E-05    | 0.000114796 |
| 51399  | 1273  | TRAPPC4  | -0.51 | 4.32E-05    | 0.000129259 |
| 55176  | 2432  | SEC61A2  | -0.51 | 0.000118221 | 0.000332209 |
| 50628  | 3882  | GEMIN4   | -0.51 | 4.96E-07    | 1.85E-06    |
| 148789 | 4672  | B3GALNT2 | -0.51 | 3.18E-08    | 1.34E-07    |
| 55809  | 7635  | TRERF1   | -0.51 | 0.001029523 | 0.00250343  |
| 49856  | 1678  | WRAP73   | -0.51 | 5.56E-05    | 0.000163495 |
| 2879   | 942   | GPX4     | -0.51 | 2.01E-08    | 8.62E-08    |
| 10236  | 2768  | HNRNPR   | -0.51 | 8.90E-19    | 7.58E-18    |
| 203245 | 3408  | NAIF1    | -0.51 | 0.000169984 | 0.000467173 |
| 4298   | 4459  | MLLT1    | -0.51 | 5.64E-10    | 2.73E-09    |
| 5433   | 2338  | POLR2D   | -0.51 | 8.06E-08    | 3.25E-07    |
| 79848  | 4276  | CSPP1    | -0.51 | 8.11E-07    | 2.96E-06    |
| 5528   | 3053  | PPP2R5D  | -0.52 | 1.14E-08    | 4.98E-08    |
| 284309 | 5292  | ZNF776   | -0.52 | 2.35E-05    | 7.27E-05    |
| 25996  | 1171  | REXO2    | -0.52 | 6.95E-07    | 2.55E-06    |
| 79892  | 3917  | MCMBP    | -0.52 | 5.32E-12    | 2.99E-11    |
| 3489   | 976   | IGFBP6   | -0.52 | 2.31E-09    | 1.07E-08    |
| 2118   | 1942  | ETV4     | -0.52 | 0.001753329 | 0.004085124 |
| 55006  | 1728  | TRMT61B  | -0.52 | 0.00070549  | 0.001765762 |
| 84236  | 5322  | RHBDD1   | -0.52 | 4.46E-06    | 1.51E-05    |
| 9887   | 5719  | SMG7     | -0.52 | 8.78E-08    | 3.53E-07    |
| 403    | 3891  | ARL3     | -0.52 | 7.83E-07    | 2.86E-06    |
| 51081  | 1432  | MRPS7    | -0.52 | 2.71E-08    | 1.15E-07    |
| 56983  | 3559  | POGLUT1  | -0.52 | 1.79E-05    | 5.64E-05    |
| 27079  | 2128  | RPUSD2   | -0.52 | 0.001735662 | 0.004050865 |
| 5434   | 2858  | POLR2E   | -0.52 | 2.90E-10    | 1.44E-09    |
| 11253  | 2844  | MAN1B1   | -0.52 | 2.15E-09    | 9.99E-09    |
| 7385   | 2226  | UQCRC2   | -0.52 | 1.32E-11    | 7.25E-11    |
| 79414  | 2440  | LRFN3    | -0.52 | 0.001365696 | 0.003248853 |
| 9724   | 5537  | UTP14C   | -0.52 | 1.25E-06    | 4.48E-06    |
| 441250 | 2618  | TYW1B    | -0.52 | 0.00110546  | 0.00267381  |
| 4928   | 6675  | NUP98    | -0.52 | 2.19E-14    | 1.47E-13    |
| 79446  | 1481  | WDR25    | -0.52 | 0.000445766 | 0.001151885 |
| 27005  | 1978  | USP21    | -0.52 | 1.36E-05    | 4.34E-05    |
| 60491  | 1610  | NIF3L1   | -0.52 | 7.18E-06    | 2.37E-05    |
| 7621   | 4018  | ZNF70    | -0.52 | 0.017469537 | 0.033757338 |
| 902    | 1646  | CCNH     | -0.52 | 7.44E-11    | 3.89E-10    |
| 80153  | 3480  | EDC3     | -0.52 | 8.06E-07    | 2.94E-06    |

|        |      |          |       |             |             |
|--------|------|----------|-------|-------------|-------------|
| 56900  | 2775 | TMEM167B | -0.52 | 1.19E-06    | 4.28E-06    |
| 84275  | 1346 | SLC25A33 | -0.52 | 0.000554913 | 0.001411754 |
| 89801  | 4840 | PPP1R3F  | -0.52 | 0.003584018 | 0.007908697 |
| 6598   | 1733 | SMARCB1  | -0.52 | 3.22E-10    | 1.59E-09    |
| 8455   | 6551 | ATRN     | -0.52 | 1.14E-11    | 6.26E-11    |
| 9610   | 2501 | RIN1     | -0.52 | 5.11E-06    | 1.72E-05    |
| 10855  | 4630 | HPSE     | -0.52 | 7.62E-08    | 3.09E-07    |
| 10592  | 5823 | SMC2     | -0.52 | 5.15E-15    | 3.57E-14    |
| 5859   | 2823 | QARS     | -0.52 | 9.48E-16    | 6.87E-15    |
| 11073  | 5139 | TOPBP1   | -0.52 | 1.04E-13    | 6.60E-13    |
| 92     | 5241 | ACVR2A   | -0.52 | 0.000174798 | 0.00047944  |
| 23518  | 4389 | R3HDM1   | -0.52 | 3.93E-07    | 1.49E-06    |
| 54919  | 3424 | DNAAF5   | -0.52 | 1.79E-07    | 6.98E-07    |
| 2068   | 3487 | ERCC2    | -0.52 | 1.47E-09    | 6.90E-09    |
| 6877   | 3297 | TAF5     | -0.52 | 0.004910892 | 0.010577855 |
| 139716 | 3897 | GAB3     | -0.52 | 0.018015405 | 0.034695178 |
| 23028  | 2921 | KDM1A    | -0.52 | 6.16E-14    | 3.99E-13    |
| 79598  | 7642 | CEP97    | -0.52 | 1.26E-06    | 4.49E-06    |
| 8665   | 1274 | EIF3F    | -0.52 | 1.29E-14    | 8.72E-14    |
| 23063  | 6258 | WAPL     | -0.52 | 1.00E-11    | 5.55E-11    |
| 8891   | 1693 | EIF2B3   | -0.53 | 2.07E-05    | 6.46E-05    |
| 7572   | 6293 | ZNF24    | -0.53 | 8.65E-13    | 5.13E-12    |
| 84933  | 1351 | C8orf76  | -0.53 | 0.001210362 | 0.002908141 |
| 770    | 1870 | CA11     | -0.53 | 3.59E-05    | 0.000108363 |
| 2790   | 1267 | GNG10    | -0.53 | 1.43E-10    | 7.29E-10    |
| 55857  | 2212 | KIZ      | -0.53 | 0.000966715 | 0.002361044 |
| 4702   | 859  | NDUFA8   | -0.53 | 7.70E-08    | 3.12E-07    |
| 79831  | 2481 | KDM8     | -0.53 | 0.017522191 | 0.033840684 |
| 221927 | 2986 | BRAT1    | -0.53 | 4.01E-08    | 1.67E-07    |
| 554282 | 2394 | FAM72C   | -0.53 | 0.001291444 | 0.003084605 |
| 401115 | 438  | C4orf48  | -0.53 | 0.000157657 | 0.000435246 |
| 7486   | 4178 | WRN      | -0.53 | 0.000154501 | 0.000427133 |
| 23510  | 3641 | KCTD2    | -0.53 | 1.25E-07    | 4.94E-07    |
| 5425   | 1655 | POLD2    | -0.53 | 5.79E-08    | 2.38E-07    |
| 90355  | 3064 | C5orf30  | -0.53 | 1.58E-05    | 5.01E-05    |
| 7980   | 2441 | TFPI2    | -0.53 | 2.37E-09    | 1.10E-08    |
| 51322  | 3619 | WAC      | -0.53 | 1.30E-14    | 8.74E-14    |
| 5708   | 2914 | PSMD2    | -0.53 | 2.33E-14    | 1.55E-13    |
| 55159  | 4918 | RFWD3    | -0.53 | 1.04E-13    | 6.62E-13    |
| 23186  | 5774 | RCOR1    | -0.53 | 1.22E-10    | 6.25E-10    |
| 84513  | 1453 | PLPP5    | -0.53 | 0.000402097 | 0.001046962 |
| 114112 | 2904 | TXNRD3   | -0.53 | 0.022682733 | 0.042657366 |
| 23411  | 3663 | SIRT1    | -0.53 | 2.21E-08    | 9.45E-08    |
| 3930   | 3821 | LBR      | -0.53 | 1.03E-15    | 7.44E-15    |
| 11060  | 3833 | WWP2     | -0.53 | 3.63E-09    | 1.65E-08    |
| 157506 | 3981 | RDH10    | -0.53 | 5.23E-05    | 0.000154744 |
| 201626 | 5496 | PDE12    | -0.53 | 2.97E-08    | 1.25E-07    |
| 127428 | 5739 | TCEANC2  | -0.53 | 6.98E-05    | 0.000202465 |



|        |      |         |       |             |             |
|--------|------|---------|-------|-------------|-------------|
| 10128  | 5399 | LRPPRC  | -0.53 | 1.11E-16    | 8.47E-16    |
| 6305   | 7089 | SBF1    | -0.53 | 2.22E-13    | 1.37E-12    |
| 390    | 2745 | RND3    | -0.53 | 9.12E-13    | 5.41E-12    |
| 27248  | 2571 | ERLEC1  | -0.53 | 3.21E-09    | 1.47E-08    |
| 6782   | 4001 | HSPA13  | -0.53 | 2.43E-09    | 1.12E-08    |
| 2921   | 1166 | CXCL3   | -0.53 | 0.011621141 | 0.023205713 |
| 8975   | 7650 | USP13   | -0.53 | 1.92E-09    | 8.94E-09    |
| 6337   | 3323 | SCNN1A  | -0.53 | 5.61E-14    | 3.65E-13    |
| 25820  | 4963 | ARIH1   | -0.53 | 6.82E-11    | 3.58E-10    |
| 653820 | 2243 | FAM72B  | -0.53 | 0.000849307 | 0.002093865 |
| 5805   | 948  | PTS     | -0.53 | 2.84E-05    | 8.71E-05    |
| 5306   | 3696 | PITPNA  | -0.53 | 1.96E-12    | 1.14E-11    |
| 83746  | 3203 | L3MBTL2 | -0.54 | 2.81E-07    | 1.08E-06    |
| 745    | 5787 | MYRF    | -0.54 | 1.47E-08    | 6.35E-08    |
| 2886   | 2273 | GRB7    | -0.54 | 2.85E-07    | 1.09E-06    |
| 199731 | 2124 | CADM4   | -0.54 | 3.71E-08    | 1.55E-07    |
| 4292   | 2589 | MLH1    | -0.54 | 3.48E-09    | 1.59E-08    |
| 10681  | 3017 | GNB5    | -0.54 | 4.79E-07    | 1.79E-06    |
| 7086   | 2190 | TKT     | -0.54 | 2.99E-13    | 1.83E-12    |
| 55165  | 2607 | CEP55   | -0.54 | 3.65E-09    | 1.66E-08    |
| 2956   | 4120 | MSH6    | -0.54 | 7.78E-17    | 6.01E-16    |
| 84895  | 3608 | MIGA2   | -0.54 | 5.77E-08    | 2.37E-07    |
| 8658   | 9478 | TNKS    | -0.54 | 2.11E-09    | 9.79E-09    |
| 54557  | 5413 | SGTB    | -0.54 | 0.000100462 | 0.000285626 |
| 2356   | 2282 | FPGS    | -0.54 | 1.47E-09    | 6.91E-09    |
| 8567   | 5744 | MADD    | -0.54 | 6.43E-09    | 2.87E-08    |
| 868    | 6307 | CBLB    | -0.54 | 3.50E-07    | 1.33E-06    |
| 286826 | 3218 | LIN9    | -0.54 | 1.08E-05    | 3.50E-05    |
| 23031  | 5965 | MAST3   | -0.54 | 2.42E-06    | 8.42E-06    |
| 9663   | 6132 | LPIN2   | -0.54 | 7.67E-10    | 3.68E-09    |
| 5621   | 2675 | PRNP    | -0.54 | 1.48E-13    | 9.31E-13    |
| 2300   | 3207 | FOXL1   | -0.54 | 0.001772504 | 0.004125471 |
| 93517  | 4082 | SDR42E1 | -0.54 | 2.93E-05    | 8.96E-05    |
| 57215  | 1903 | THAP11  | -0.54 | 2.46E-05    | 7.61E-05    |
| 388558 | 3848 | ZNF808  | -0.54 | 0.024867651 | 0.046383416 |
| 91687  | 2340 | CENPL   | -0.54 | 5.49E-05    | 0.000161691 |
| 593    | 1790 | BCKDHA  | -0.54 | 8.72E-08    | 3.51E-07    |
| 114990 | 2864 | VASN    | -0.54 | 8.60E-11    | 4.46E-10    |
| 7398   | 3594 | USP1    | -0.54 | 7.60E-16    | 5.53E-15    |
| 3309   | 3973 | HSPA5   | -0.54 | 1.24E-17    | 1.00E-16    |
| 23456  | 3442 | ABCB10  | -0.54 | 1.94E-07    | 7.56E-07    |
| 8444   | 4291 | DYRK3   | -0.54 | 0.000103785 | 0.000294389 |
| 23198  | 6940 | PSME4   | -0.54 | 6.27E-12    | 3.51E-11    |
| 63931  | 2160 | MRPS14  | -0.54 | 1.11E-06    | 3.99E-06    |
| 27106  | 2529 | ARRDC2  | -0.54 | 3.05E-07    | 1.16E-06    |
| 91860  | 4598 | CALML4  | -0.54 | 0.000171093 | 0.000469785 |
| 54918  | 3384 | CMTM6   | -0.54 | 1.69E-14    | 1.14E-13    |
| 25886  | 2102 | POC1A   | -0.54 | 1.11E-05    | 3.57E-05    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 2034   | 5123  | EPAS1    | -0.54 | 1.18E-14    | 8.00E-14    |
| 51755  | 7558  | CDK12    | -0.54 | 4.95E-11    | 2.62E-10    |
| 90580  | 1414  | TIMM29   | -0.54 | 0.001138221 | 0.002747067 |
| 27085  | 3087  | MTBP     | -0.54 | 9.34E-05    | 0.000266388 |
| 25962  | 5425  | VIRMA    | -0.54 | 1.38E-11    | 7.54E-11    |
| 11113  | 7929  | CIT      | -0.54 | 4.43E-12    | 2.51E-11    |
| 261734 | 4361  | NPHP4    | -0.54 | 3.25E-05    | 9.87E-05    |
| 2972   | 3296  | BRF1     | -0.54 | 1.98E-09    | 9.22E-09    |
| 23293  | 4451  | SMG6     | -0.54 | 4.67E-10    | 2.28E-09    |
| 84224  | 3997  | NBPF3    | -0.54 | 0.000121018 | 0.000339103 |
| 286262 | 2641  | TPRN     | -0.54 | 5.70E-05    | 0.000167268 |
| 10733  | 3783  | PLK4     | -0.54 | 5.67E-07    | 2.11E-06    |
| 4946   | 1194  | OAZ1     | -0.54 | 4.13E-13    | 2.50E-12    |
| 51182  | 2690  | HSPA14   | -0.54 | 1.04E-08    | 4.56E-08    |
| 84937  | 4590  | ZNRF1    | -0.55 | 5.82E-06    | 1.95E-05    |
| 22809  | 2111  | ATF5     | -0.55 | 1.46E-08    | 6.31E-08    |
| 3204   | 2018  | HOXA7    | -0.55 | 8.02E-08    | 3.24E-07    |
| 22836  | 5531  | RHOBTB3  | -0.55 | 2.22E-16    | 1.67E-15    |
| 26149  | 4088  | ZNF658   | -0.55 | 0.002951373 | 0.00660143  |
| 92370  | 3303  | PXYLP1   | -0.55 | 5.98E-05    | 0.00017491  |
| 9726   | 6230  | ZNF646   | -0.55 | 7.42E-07    | 2.71E-06    |
| 197407 | 3145  | ZNF48    | -0.55 | 8.22E-05    | 0.000236317 |
| 51236  | 2549  | HGH1     | -0.55 | 2.13E-06    | 7.45E-06    |
| 7110   | 6903  | TMF1     | -0.55 | 7.83E-11    | 4.08E-10    |
| 55839  | 2357  | CENPN    | -0.55 | 7.23E-09    | 3.22E-08    |
| 11094  | 2968  | CACFD1   | -0.55 | 4.32E-07    | 1.63E-06    |
| 57693  | 4051  | ZNF317   | -0.55 | 2.22E-09    | 1.03E-08    |
| 2178   | 2425  | FANCE    | -0.55 | 0.000211486 | 0.000572121 |
| 203197 | 4470  | TMEM268  | -0.55 | 6.02E-05    | 0.000176015 |
| 53373  | 5152  | TPCN1    | -0.55 | 2.86E-15    | 2.02E-14    |
| 126731 | 5121  | CCSAP    | -0.55 | 4.35E-06    | 1.47E-05    |
| 163126 | 1409  | EID2     | -0.55 | 5.54E-06    | 1.86E-05    |
| 55762  | 5244  | ZNF701   | -0.55 | 0.000154161 | 0.000426391 |
| 90701  | 834   | SEC11C   | -0.55 | 1.04E-05    | 3.38E-05    |
| 7813   | 6971  | EVI5     | -0.55 | 1.97E-06    | 6.92E-06    |
| 112939 | 4526  | NACC1    | -0.55 | 5.68E-12    | 3.19E-11    |
| 3198   | 2561  | HOXA1    | -0.55 | 0.007875669 | 0.016282859 |
| 5573   | 3807  | PRKAR1A  | -0.55 | 3.29E-13    | 2.01E-12    |
| 3658   | 6110  | IREB2    | -0.55 | 3.25E-12    | 1.86E-11    |
| 64327  | 4536  | LMBR1    | -0.55 | 5.48E-09    | 2.46E-08    |
| 84890  | 3739  | ADO      | -0.55 | 3.80E-08    | 1.59E-07    |
| 27158  | 5048  | NDOR1    | -0.55 | 1.94E-10    | 9.76E-10    |
| 60485  | 3234  | SAV1     | -0.55 | 1.11E-11    | 6.14E-11    |
| 79188  | 3347  | TMEM43   | -0.55 | 3.23E-12    | 1.84E-11    |
| 23516  | 4706  | SLC39A14 | -0.55 | 3.94E-10    | 1.93E-09    |
| 728489 | 746   | DNLZ     | -0.55 | 0.001751584 | 0.004081594 |
| 23013  | 12227 | SPEN     | -0.55 | 1.31E-09    | 6.16E-09    |
| 2002   | 2732  | ELK1     | -0.55 | 1.63E-08    | 7.02E-08    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 83939  | 2996  | EIF2A    | -0.55 | 1.01E-12    | 5.95E-12    |
| 4204   | 7016  | MECP2    | -0.55 | 3.66E-10    | 1.80E-09    |
| 3419   | 2696  | IDH3A    | -0.56 | 1.76E-08    | 7.58E-08    |
| 283464 | 7409  | GXYLT1   | -0.56 | 1.91E-10    | 9.61E-10    |
| 54852  | 5027  | PAQR5    | -0.56 | 0.006734442 | 0.014127474 |
| 84444  | 7867  | DOT1L    | -0.56 | 1.93E-08    | 8.27E-08    |
| 54464  | 9798  | XRN1     | -0.56 | 1.05E-07    | 4.21E-07    |
| 54509  | 2451  | RHOF     | -0.56 | 7.48E-08    | 3.03E-07    |
| 23473  | 4133  | CAPN7    | -0.56 | 2.16E-09    | 1.00E-08    |
| 403341 | 6627  | ZBTB34   | -0.56 | 3.06E-06    | 1.05E-05    |
| 6575   | 3753  | SLC20A2  | -0.56 | 7.37E-08    | 2.99E-07    |
| 6124   | 1458  | RPL4     | -0.56 | 5.24E-22    | 5.20E-21    |
| 375    | 1904  | ARF1     | -0.56 | 1.08E-13    | 6.89E-13    |
| 414149 | 3383  | ACBD7    | -0.56 | 4.00E-06    | 1.36E-05    |
| 10579  | 3732  | TACC2    | -0.56 | 1.17E-05    | 3.76E-05    |
| 91664  | 5591  | ZNF845   | -0.56 | 0.000224098 | 0.000604398 |
| 139285 | 8443  | AMER1    | -0.56 | 0.020876989 | 0.039571404 |
| 26099  | 3693  | SZRD1    | -0.56 | 4.00E-13    | 2.42E-12    |
| 7026   | 4201  | NR2F2    | -0.56 | 7.66E-12    | 4.27E-11    |
| 80853  | 8503  | KDM7A    | -0.56 | 0.003447698 | 0.007621137 |
| 9094   | 1466  | UNC119   | -0.56 | 5.92E-07    | 2.20E-06    |
| 60401  | 3407  | EDA2R    | -0.56 | 1.31E-05    | 4.18E-05    |
| 79832  | 9289  | QSER1    | -0.56 | 1.27E-12    | 7.48E-12    |
| 55628  | 8085  | ZNF407   | -0.56 | 3.26E-06    | 1.12E-05    |
| 83941  | 1250  | TM2D1    | -0.56 | 4.03E-06    | 1.37E-05    |
| 79989  | 4288  | TTC26    | -0.56 | 2.79E-05    | 8.56E-05    |
| 29127  | 3192  | RACGAP1  | -0.56 | 1.74E-13    | 1.09E-12    |
| 8867   | 6942  | SYNJ1    | -0.56 | 6.28E-06    | 2.09E-05    |
| 6621   | 4588  | SNAPC4   | -0.56 | 1.46E-06    | 5.20E-06    |
| 26608  | 2553  | TBL2     | -0.56 | 5.92E-07    | 2.20E-06    |
| 4171   | 3504  | MCM2     | -0.56 | 1.32E-12    | 7.75E-12    |
| 3148   | 1516  | HMGB2    | -0.56 | 1.21E-21    | 1.18E-20    |
| 2937   | 1937  | GSS      | -0.56 | 3.81E-13    | 2.31E-12    |
| 7443   | 1715  | VRK1     | -0.56 | 6.30E-08    | 2.57E-07    |
| 151648 | 2837  | SGO1     | -0.56 | 1.32E-07    | 5.22E-07    |
| 23528  | 4878  | ZNF281   | -0.56 | 7.78E-11    | 4.06E-10    |
| 123606 | 6499  | NIPA1    | -0.56 | 9.65E-10    | 4.60E-09    |
| 5310   | 13768 | PKD1     | -0.56 | 3.82E-13    | 2.32E-12    |
| 51194  | 4420  | IPO11    | -0.56 | 2.09E-07    | 8.12E-07    |
| 57613  | 4651  | FAM234B  | -0.56 | 2.50E-06    | 8.65E-06    |
| 56981  | 7282  | PRDM11   | -0.56 | 0.000101537 | 0.000288472 |
| 55612  | 5167  | FERMT1   | -0.56 | 0.011803114 | 0.023534702 |
| 9839   | 5805  | ZEB2     | -0.56 | 4.37E-06    | 1.48E-05    |
| 7326   | 4208  | UBE2G1   | -0.56 | 2.84E-10    | 1.41E-09    |
| 22936  | 5688  | ELL2     | -0.56 | 5.67E-12    | 3.18E-11    |
| 79693  | 1871  | YRDC     | -0.56 | 0.000399895 | 0.001041381 |
| 84248  | 3713  | FYTTD1   | -0.56 | 2.07E-13    | 1.29E-12    |
| 54952  | 1902  | TRNAU1AP | -0.56 | 3.41E-07    | 1.30E-06    |

|        |      |         |       |             |             |
|--------|------|---------|-------|-------------|-------------|
| 54807  | 2158 | ZNF586  | -0.56 | 0.002398983 | 0.005455978 |
| 25799  | 3339 | ZNF324  | -0.56 | 0.000231017 | 0.000621926 |
| 165324 | 2061 | UBXN2A  | -0.57 | 8.33E-07    | 3.03E-06    |
| 25778  | 7418 | DSTYK   | -0.57 | 4.16E-09    | 1.89E-08    |
| 646962 | 971  | HRCT1   | -0.57 | 0.007270575 | 0.015137518 |
| 644096 | 1147 | SDHAF1  | -0.57 | 8.98E-05    | 0.000256782 |
| 7428   | 4560 | VHL     | -0.57 | 1.04E-15    | 7.54E-15    |
| 125950 | 3579 | RAVER1  | -0.57 | 9.03E-08    | 3.63E-07    |
| 9252   | 5433 | RPS6KA5 | -0.57 | 1.37E-05    | 4.38E-05    |
| 3149   | 3586 | HMGB3   | -0.57 | 2.66E-14    | 1.77E-13    |
| 285237 | 2752 | C3orf38 | -0.57 | 1.35E-07    | 5.32E-07    |
| 7549   | 3917 | ZNF2    | -0.57 | 0.002173007 | 0.004979364 |
| 10293  | 1990 | TRAIP   | -0.57 | 0.000224266 | 0.00060476  |
| 51087  | 1606 | YBX2    | -0.57 | 0.020071174 | 0.038211145 |
| 29888  | 2953 | STRN4   | -0.57 | 8.98E-12    | 4.98E-11    |
| 5536   | 2231 | PPP5C   | -0.57 | 2.92E-16    | 2.17E-15    |
| 89890  | 5228 | KBTBD6  | -0.57 | 3.65E-06    | 1.24E-05    |
| 59339  | 5418 | PLEKHA2 | -0.57 | 4.28E-12    | 2.42E-11    |
| 10347  | 5491 | ABCA7   | -0.57 | 3.66E-11    | 1.96E-10    |
| 54537  | 3477 | FAM35A  | -0.57 | 2.01E-10    | 1.01E-09    |
| 25973  | 2403 | PARS2   | -0.57 | 0.019576095 | 0.03738077  |
| 84516  | 7216 | DCTN5   | -0.57 | 1.50E-11    | 8.21E-11    |
| 129293 | 3042 | TRABD2A | -0.57 | 7.93E-06    | 2.61E-05    |
| 56648  | 5537 | EIF5A2  | -0.57 | 3.16E-06    | 1.09E-05    |
| 488    | 8329 | ATP2A2  | -0.57 | 1.26E-18    | 1.07E-17    |
| 10454  | 3240 | TAB1    | -0.57 | 1.19E-08    | 5.19E-08    |
| 203069 | 1651 | R3HCC1  | -0.57 | 0.000116254 | 0.000327198 |
| 2009   | 4200 | EML1    | -0.57 | 0.00016243  | 0.000447936 |
| 8833   | 3239 | GMPS    | -0.57 | 2.28E-19    | 2.01E-18    |
| 29087  | 1019 | THYN1   | -0.57 | 5.00E-07    | 1.87E-06    |
| 23005  | 6067 | MAPKBP1 | -0.57 | 5.11E-07    | 1.91E-06    |
| 51616  | 2714 | TAF9B   | -0.58 | 4.85E-11    | 2.58E-10    |
| 143458 | 3824 | LDLRAD3 | -0.58 | 1.43E-05    | 4.57E-05    |
| 84271  | 3379 | POLDIP3 | -0.58 | 4.07E-13    | 2.47E-12    |
| 2117   | 5054 | ETV3    | -0.58 | 8.97E-08    | 3.60E-07    |
| 79813  | 3799 | EHMT1   | -0.58 | 4.68E-15    | 3.25E-14    |
| 6147   | 979  | RPL23A  | -0.58 | 0.002852858 | 0.006400199 |
| 3980   | 6164 | LIG3    | -0.58 | 1.30E-07    | 5.15E-07    |
| 3109   | 1412 | HLA-DMB | -0.58 | 9.94E-05    | 0.000282635 |
| 5143   | 5126 | PDE4C   | -0.58 | 0.020373899 | 0.038729372 |
| 5862   | 3811 | RAB2A   | -0.58 | 3.21E-13    | 1.96E-12    |
| 79697  | 2502 | RIOX1   | -0.58 | 3.44E-06    | 1.18E-05    |
| 8452   | 3988 | CUL3    | -0.58 | 1.39E-16    | 1.06E-15    |
| 246243 | 1877 | RNASEH1 | -0.58 | 3.70E-05    | 0.000111558 |
| 9519   | 1353 | TBPL1   | -0.58 | 7.23E-06    | 2.39E-05    |
| 1522   | 1517 | CTSZ    | -0.58 | 5.93E-16    | 4.34E-15    |
| 11168  | 2834 | PSIP1   | -0.58 | 6.37E-16    | 4.66E-15    |
| 29800  | 2016 | ZDHHC1  | -0.58 | 0.012172353 | 0.024224727 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 3712   | 4507  | IVD      | -0.58 | 2.83E-09    | 1.30E-08    |
| 1796   | 2160  | DOK1     | -0.58 | 2.40E-07    | 9.24E-07    |
| 163859 | 4029  | SDE2     | -0.58 | 1.40E-05    | 4.45E-05    |
| 3720   | 5675  | JARID2   | -0.58 | 7.94E-07    | 2.90E-06    |
| 80267  | 6563  | EDEM3    | -0.58 | 1.42E-10    | 7.22E-10    |
| 4085   | 1453  | MAD2L1   | -0.58 | 2.28E-07    | 8.81E-07    |
| 389792 | 2724  | IER5L    | -0.58 | 3.27E-06    | 1.12E-05    |
| 5597   | 4204  | MAPK6    | -0.58 | 1.46E-12    | 8.54E-12    |
| 2200   | 11695 | FBN1     | -0.58 | 9.26E-17    | 7.11E-16    |
| 57325  | 3714  | KAT14    | -0.58 | 1.27E-05    | 4.08E-05    |
| 4216   | 5505  | MAP3K4   | -0.58 | 1.42E-09    | 6.69E-09    |
| 2909   | 8968  | ARHGAP35 | -0.58 | 5.53E-19    | 4.75E-18    |
| 154743 | 3969  | BMT2     | -0.58 | 9.87E-07    | 3.57E-06    |
| 55252  | 12502 | ASXL2    | -0.58 | 4.25E-09    | 1.92E-08    |
| 199953 | 3889  | TMEM201  | -0.58 | 3.40E-08    | 1.43E-07    |
| 64682  | 7768  | ANAPC1   | -0.58 | 2.80E-13    | 1.72E-12    |
| 24137  | 4504  | KIF4A    | -0.58 | 2.47E-13    | 1.52E-12    |
| 3306   | 2802  | HSPA2    | -0.58 | 1.87E-13    | 1.17E-12    |
| 126792 | 2793  | B3GALT6  | -0.58 | 4.54E-09    | 2.05E-08    |
| 11143  | 3202  | KAT7     | -0.58 | 4.34E-11    | 2.31E-10    |
| 10972  | 4163  | TMED10   | -0.58 | 4.55E-21    | 4.31E-20    |
| 55012  | 2021  | PPP2R3C  | -0.58 | 8.77E-06    | 2.87E-05    |
| 10797  | 2128  | MTHFD2   | -0.58 | 4.83E-12    | 2.72E-11    |
| 90780  | 3227  | PYGO2    | -0.58 | 8.43E-12    | 4.68E-11    |
| 57456  | 5157  | KIAA1143 | -0.58 | 1.58E-13    | 9.89E-13    |
| 2588   | 2804  | GALNS    | -0.58 | 9.70E-10    | 4.62E-09    |
| 55775  | 3534  | TDP1     | -0.59 | 2.31E-07    | 8.92E-07    |
| 2966   | 1827  | GTF2H2   | -0.59 | 2.62E-07    | 1.00E-06    |
| 1727   | 2923  | CYB5R3   | -0.59 | 2.81E-11    | 1.51E-10    |
| 6883   | 1134  | TAF12    | -0.59 | 2.42E-07    | 9.31E-07    |
| 65979  | 6140  | PHACTR4  | -0.59 | 2.12E-15    | 1.51E-14    |
| 26995  | 1439  | TRUB2    | -0.59 | 1.52E-10    | 7.71E-10    |
| 10959  | 2126  | TMED2    | -0.59 | 3.05E-18    | 2.53E-17    |
| 116841 | 2427  | SNAP47   | -0.59 | 9.49E-08    | 3.80E-07    |
| 8224   | 7443  | SYN3     | -0.59 | 0.014285491 | 0.028077942 |
| 26112  | 3416  | CCDC69   | -0.59 | 0.000208079 | 0.000563848 |
| 56852  | 5412  | RAD18    | -0.59 | 3.49E-08    | 1.46E-07    |
| 10049  | 1761  | DNAJB6   | -0.59 | 7.57E-16    | 5.51E-15    |
| 29882  | 2733  | ANAPC2   | -0.59 | 5.24E-09    | 2.35E-08    |
| 84455  | 2485  | EFCAB7   | -0.59 | 0.000154447 | 0.000427048 |
| 56919  | 5474  | DHX33    | -0.59 | 1.82E-11    | 9.87E-11    |
| 165215 | 3557  | FAM171B  | -0.59 | 0.003031284 | 0.006771417 |
| 51460  | 8002  | SFMBT1   | -0.59 | 4.08E-08    | 1.70E-07    |
| 79905  | 4064  | TMC7     | -0.59 | 0.006816854 | 0.014284924 |
| 10363  | 4060  | HMG20A   | -0.59 | 3.32E-10    | 1.64E-09    |
| 9306   | 5786  | SOCS6    | -0.59 | 6.95E-07    | 2.55E-06    |
| 113201 | 3896  | CASC4    | -0.59 | 1.57E-15    | 1.12E-14    |
| 90233  | 3737  | ZNF551   | -0.59 | 0.001977512 | 0.004564951 |

|          |       |            |       |             |             |
|----------|-------|------------|-------|-------------|-------------|
| 54585    | 3506  | LZTFL1     | -0.59 | 1.73E-07    | 6.78E-07    |
| 7693     | 4940  | ZNF134     | -0.59 | 3.73E-08    | 1.56E-07    |
| 84223    | 1950  | IQCG       | -0.59 | 0.001450101 | 0.003435845 |
| 57536    | 5922  | KIAA1328   | -0.59 | 0.001517545 | 0.003581794 |
| 55794    | 2610  | DDX28      | -0.59 | 6.75E-06    | 2.24E-05    |
| 23208    | 5298  | SYT11      | -0.59 | 2.31E-07    | 8.92E-07    |
| 55624    | 2746  | POMGNT1    | -0.59 | 7.67E-14    | 4.93E-13    |
| 3597     | 4017  | IL13RA1    | -0.59 | 1.43E-16    | 1.08E-15    |
| 10126    | 1504  | DNAL4      | -0.59 | 0.000642471 | 0.001616815 |
| 7559     | 5074  | ZNF12      | -0.59 | 1.62E-06    | 5.74E-06    |
| 51319    | 1757  | RSRC1      | -0.59 | 4.20E-07    | 1.58E-06    |
| 2975     | 7084  | GTF3C1     | -0.59 | 2.87E-19    | 2.51E-18    |
| 2039     | 2526  | DMTN       | -0.59 | 2.40E-07    | 9.26E-07    |
| 5253     | 5346  | PHF2       | -0.59 | 6.41E-13    | 3.83E-12    |
| 56985    | 1430  | ADPRM      | -0.59 | 0.00590147  | 0.012518783 |
| 51148    | 2411  | CERCAM     | -0.59 | 2.52E-13    | 1.55E-12    |
| 23514    | 2926  | SPIDR      | -0.59 | 9.58E-11    | 4.96E-10    |
| 79990    | 3045  | PLEKHH3    | -0.59 | 4.70E-06    | 1.59E-05    |
| 11031    | 4009  | RAB31      | -0.59 | 8.54E-12    | 4.74E-11    |
| 154807   | 5988  | VKORC1L1   | -0.59 | 1.03E-14    | 6.97E-14    |
| 28511    | 2462  | NKIRAS2    | -0.59 | 1.85E-13    | 1.15E-12    |
| 1.01E+08 | 5068  | ISY1-RAB43 | -0.59 | 3.20E-09    | 1.46E-08    |
| 55315    | 2277  | SLC29A3    | -0.60 | 0.021634147 | 0.040884442 |
| 10018    | 4603  | BCL2L11    | -0.60 | 4.68E-10    | 2.28E-09    |
| 83693    | 3668  | HSDL1      | -0.60 | 3.95E-08    | 1.65E-07    |
| 80742    | 3380  | PRR3       | -0.60 | 1.34E-07    | 5.29E-07    |
| 55033    | 5086  | FKBP14     | -0.60 | 1.20E-07    | 4.76E-07    |
| 57590    | 4682  | WDFY1      | -0.60 | 6.93E-14    | 4.47E-13    |
| 55756    | 2591  | INTS9      | -0.60 | 0.000370118 | 0.000967944 |
| 1407     | 3314  | CRY1       | -0.60 | 9.15E-08    | 3.67E-07    |
| 6769     | 2939  | STAC       | -0.60 | 7.68E-07    | 2.81E-06    |
| 26505    | 4930  | CNNM3      | -0.60 | 3.70E-09    | 1.68E-08    |
| 51138    | 1769  | COPS4      | -0.60 | 6.61E-08    | 2.70E-07    |
| 3065     | 2112  | HDAC1      | -0.60 | 1.95E-21    | 1.89E-20    |
| 7760     | 3294  | ZNF213     | -0.60 | 1.94E-05    | 6.06E-05    |
| 50807    | 6221  | ASAP1      | -0.60 | 1.63E-13    | 1.02E-12    |
| 92312    | 6124  | MEX3A      | -0.60 | 1.62E-06    | 5.74E-06    |
| 29883    | 2866  | CNOT7      | -0.60 | 1.45E-13    | 9.13E-13    |
| 22990    | 11078 | PCNX1      | -0.60 | 9.61E-14    | 6.13E-13    |
| 115557   | 2434  | ARHGEF25   | -0.60 | 4.23E-08    | 1.76E-07    |
| 1265     | 2492  | CNN2       | -0.60 | 8.55E-17    | 6.59E-16    |
| 4093     | 5517  | SMAD9      | -0.60 | 0.000120643 | 0.000338104 |
| 6904     | 3708  | TBCD       | -0.60 | 1.95E-14    | 1.30E-13    |
| 51277    | 4959  | DNAJC27    | -0.60 | 0.006424866 | 0.01353694  |
| 22894    | 7576  | DIS3       | -0.60 | 1.34E-13    | 8.45E-13    |
| 5912     | 8413  | RAP2B      | -0.60 | 1.99E-10    | 1.00E-09    |
| 23165    | 6286  | NUP205     | -0.60 | 6.71E-17    | 5.20E-16    |
| 9319     | 2392  | TRIP13     | -0.60 | 2.55E-11    | 1.37E-10    |

|        |       |           |       |             |             |
|--------|-------|-----------|-------|-------------|-------------|
| 22907  | 4151  | DHX30     | -0.60 | 9.20E-14    | 5.88E-13    |
| 23020  | 7232  | SNRNP200  | -0.60 | 6.09E-21    | 5.75E-20    |
| 57104  | 2080  | PNPLA2    | -0.60 | 1.23E-09    | 5.84E-09    |
| 85457  | 4397  | CIPC      | -0.60 | 7.95E-05    | 0.000228982 |
| 23363  | 3928  | OBSL1     | -0.60 | 3.22E-16    | 2.40E-15    |
| 101    | 3172  | ADAM8     | -0.61 | 0.014047431 | 0.027640616 |
| 374819 | 4043  | LRRC37A3  | -0.61 | 4.61E-06    | 1.56E-05    |
| 4297   | 16649 | KMT2A     | -0.61 | 4.62E-14    | 3.03E-13    |
| 26122  | 4317  | EPC2      | -0.61 | 1.25E-09    | 5.89E-09    |
| 1051   | 2113  | CEBPB     | -0.61 | 7.88E-13    | 4.69E-12    |
| 3977   | 10041 | LIFR      | -0.61 | 1.32E-09    | 6.22E-09    |
| 9641   | 3460  | IKBKE     | -0.61 | 1.90E-05    | 5.95E-05    |
| 10767  | 6684  | HBS1L     | -0.61 | 9.87E-16    | 7.14E-15    |
| 2072   | 6765  | ERCC4     | -0.61 | 1.03E-05    | 3.35E-05    |
| 146223 | 4890  | CMTM4     | -0.61 | 5.88E-15    | 4.06E-14    |
| 23008  | 6346  | KLHDC10   | -0.61 | 8.69E-12    | 4.83E-11    |
| 4913   | 1103  | NTHL1     | -0.61 | 0.000163869 | 0.000451679 |
| 56967  | 7665  | C14orf132 | -0.61 | 5.29E-08    | 2.18E-07    |
| 162    | 4172  | AP1B1     | -0.61 | 1.41E-16    | 1.07E-15    |
| 8732   | 4656  | RNGTT     | -0.61 | 1.13E-08    | 4.95E-08    |
| 146059 | 4285  | CDAN1     | -0.61 | 2.76E-06    | 9.53E-06    |
| 728833 | 2518  | FAM72D    | -0.61 | 9.50E-05    | 0.000270888 |
| 1798   | 2014  | DPAGT1    | -0.61 | 1.34E-07    | 5.30E-07    |
| 57805  | 3873  | CCAR2     | -0.61 | 4.20E-15    | 2.92E-14    |
| 3202   | 1657  | HOXA5     | -0.61 | 6.44E-14    | 4.17E-13    |
| 4209   | 5960  | MEF2D     | -0.61 | 1.24E-08    | 5.38E-08    |
| 6125   | 1035  | RPL5      | -0.61 | 4.69E-23    | 4.88E-22    |
| 84881  | 2527  | RPUSD4    | -0.61 | 1.93E-05    | 6.03E-05    |
| 80709  | 5108  | AKNA      | -0.61 | 1.07E-08    | 4.68E-08    |
| 8535   | 2837  | CBX4      | -0.61 | 1.66E-07    | 6.52E-07    |
| 84187  | 5053  | TMEM164   | -0.61 | 2.76E-07    | 1.05E-06    |
| 55572  | 2104  | FOXRED1   | -0.61 | 9.22E-08    | 3.70E-07    |
| 3833   | 2260  | KIFC1     | -0.61 | 4.31E-13    | 2.60E-12    |
| 115    | 7660  | ADCY9     | -0.61 | 6.87E-10    | 3.31E-09    |
| 55254  | 4087  | TMEM39A   | -0.61 | 5.99E-08    | 2.46E-07    |
| 84321  | 1617  | THOC3     | -0.61 | 5.58E-14    | 3.63E-13    |
| 65124  | 4681  | SOWAHC    | -0.61 | 5.40E-08    | 2.22E-07    |
| 64900  | 4069  | LPIN3     | -0.61 | 2.23E-12    | 1.29E-11    |
| 23371  | 4762  | TNS2      | -0.61 | 1.45E-08    | 6.28E-08    |
| 80318  | 1628  | GKAP1     | -0.61 | 0.000162975 | 0.000449371 |
| 168374 | 3153  | ZNF92     | -0.61 | 7.21E-06    | 2.38E-05    |
| 9816   | 5652  | URB2      | -0.61 | 1.14E-05    | 3.67E-05    |
| 91754  | 5556  | NEK9      | -0.61 | 4.43E-14    | 2.90E-13    |
| 4867   | 2435  | NPHP1     | -0.61 | 0.000991147 | 0.002418057 |
| 92154  | 4766  | MTSS1L    | -0.61 | 6.03E-12    | 3.38E-11    |
| 55197  | 3732  | RPRD1A    | -0.61 | 2.84E-13    | 1.74E-12    |
| 373    | 3812  | TRIM23    | -0.61 | 0.000113685 | 0.00032053  |
| 284370 | 4027  | ZNF615    | -0.61 | 0.000504591 | 0.00129131  |

|          |       |                |       |             |             |
|----------|-------|----------------|-------|-------------|-------------|
| 22937    | 3685  | SCAP           | -0.61 | 2.44E-16    | 1.83E-15    |
| 64236    | 1967  | PDLIM2         | -0.61 | 0.000117873 | 0.000331334 |
| 9609     | 4987  | RAB36          | -0.61 | 2.66E-05    | 8.18E-05    |
| 337867   | 2301  | UBAC2          | -0.61 | 7.74E-12    | 4.31E-11    |
| 11051    | 4407  | NUDT21         | -0.61 | 6.99E-23    | 7.22E-22    |
| 55313    | 6110  | CPPED1         | -0.61 | 5.80E-14    | 3.77E-13    |
| 79709    | 3428  | COLGALT1       | -0.62 | 1.18E-14    | 7.95E-14    |
| 26156    | 5137  | RSL1D1         | -0.62 | 1.10E-20    | 1.03E-19    |
| 22929    | 3295  | SEPHS1         | -0.62 | 5.70E-16    | 4.18E-15    |
| 152189   | 1192  | CMTM8          | -0.62 | 0.002064076 | 0.004748737 |
| 56255    | 6164  | TMX4           | -0.62 | 1.95E-14    | 1.31E-13    |
| 1138     | 2682  | CHRNA5         | -0.62 | 1.02E-06    | 3.69E-06    |
| 8541     | 4728  | PPFIA3         | -0.62 | 0.00012713  | 0.000355221 |
| 9653     | 6149  | HS2ST1         | -0.62 | 6.49E-17    | 5.04E-16    |
| 25885    | 6637  | POLR1A         | -0.62 | 1.26E-09    | 5.97E-09    |
| 8703     | 2195  | B4GALT3        | -0.62 | 7.91E-09    | 3.51E-08    |
| 26119    | 3014  | LDLRAP1        | -0.62 | 6.24E-08    | 2.55E-07    |
| 50809    | 3924  | HP1BP3         | -0.62 | 4.73E-22    | 4.70E-21    |
| 114987   | 4908  | WDR31          | -0.62 | 0.001060376 | 0.002574929 |
| 4303     | 3348  | FOXO4          | -0.62 | 1.90E-05    | 5.97E-05    |
| 93       | 11373 | ACVR2B         | -0.62 | 2.26E-06    | 7.89E-06    |
| 865      | 3105  | CBFB           | -0.62 | 7.81E-19    | 6.68E-18    |
| 57521    | 6585  | RPTOR          | -0.62 | 2.92E-11    | 1.57E-10    |
| 285367   | 1231  | RPUSD3         | -0.62 | 1.50E-05    | 4.76E-05    |
| 23505    | 6667  | TMEM131        | -0.62 | 8.33E-13    | 4.95E-12    |
| 27252    | 3503  | KLHL20         | -0.62 | 7.80E-07    | 2.85E-06    |
| 3692     | 1153  | EIF6           | -0.62 | 3.30E-15    | 2.31E-14    |
| 701      | 3749  | BUB1B          | -0.62 | 1.64E-17    | 1.31E-16    |
| 63906    | 2145  | GPATCH3        | -0.62 | 2.14E-05    | 6.65E-05    |
| 57185    | 4385  | NIPAL3         | -0.62 | 6.84E-14    | 4.42E-13    |
| 402778   | 3721  | IFITM10        | -0.62 | 1.27E-05    | 4.08E-05    |
| 5885     | 3773  | RAD21          | -0.63 | 1.64E-24    | 1.82E-23    |
| 79856    | 3566  | SNX22          | -0.63 | 0.004666149 | 0.010104587 |
| 152002   | 2608  | XXYLT1         | -0.63 | 1.33E-10    | 6.80E-10    |
| 79959    | 2813  | CEP76          | -0.63 | 3.53E-05    | 0.000106714 |
| 339745   | 5737  | SPOPL          | -0.63 | 1.27E-08    | 5.53E-08    |
| 114757   | 2166  | CYGB           | -0.63 | 0.00056971  | 0.001446912 |
| 120114   | 17975 | FAT3           | -0.63 | 0.006892045 | 0.01441868  |
| 57787    | 3604  | MARK4          | -0.63 | 4.79E-10    | 2.34E-09    |
| 1.01E+08 | 6256  | C15orf38-AP3S2 | -0.63 | 0.000365728 | 0.000956886 |
| 1E+08    | 5865  | POM121C        | -0.63 | 1.39E-11    | 7.64E-11    |
| 10782    | 2347  | ZNF274         | -0.63 | 1.13E-06    | 4.06E-06    |
| 5218     | 4872  | CDK14          | -0.63 | 2.72E-08    | 1.15E-07    |
| 54892    | 3434  | NCAPG2         | -0.63 | 1.11E-18    | 9.42E-18    |
| 84629    | 10569 | TNRC18         | -0.63 | 1.12E-16    | 8.59E-16    |
| 79753    | 4605  | SNIP1          | -0.63 | 2.74E-07    | 1.05E-06    |
| 54970    | 2411  | TTC12          | -0.63 | 0.00059837  | 0.001514723 |
| 55342    | 3703  | STRBP          | -0.63 | 9.77E-12    | 5.41E-11    |



|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 85358    | 7113  | SHANK3       | -0.63 | 4.07E-06    | 1.38E-05    |
| 65094    | 2612  | JMJD4        | -0.63 | 3.81E-06    | 1.30E-05    |
| 29089    | 935   | UBE2T        | -0.63 | 1.52E-11    | 8.27E-11    |
| 9156     | 3078  | EXO1         | -0.63 | 1.80E-07    | 7.03E-07    |
| 55663    | 2227  | ZNF446       | -0.63 | 8.04E-06    | 2.64E-05    |
| 91775    | 8728  | NXPE3        | -0.63 | 2.87E-11    | 1.54E-10    |
| 408050   | 4318  | NOMO3        | -0.63 | 9.26E-09    | 4.09E-08    |
| 767558   | 3888  | LUZP6        | -0.63 | 1.65E-20    | 1.53E-19    |
| 83892    | 4179  | KCTD10       | -0.63 | 1.26E-16    | 9.57E-16    |
| 348      | 1234  | APOE         | -0.63 | 0.000316278 | 0.000835012 |
| 22874    | 7623  | PLEKHA6      | -0.63 | 2.68E-09    | 1.24E-08    |
| 60312    | 7527  | AFAP1        | -0.63 | 2.65E-12    | 1.52E-11    |
| 6776     | 3945  | STAT5A       | -0.63 | 1.35E-06    | 4.81E-06    |
| 162394   | 8555  | SLFN5        | -0.63 | 1.72E-15    | 1.23E-14    |
| 54407    | 4913  | SLC38A2      | -0.63 | 5.20E-18    | 4.27E-17    |
| 51360    | 4541  | MBTPS2       | -0.63 | 9.40E-09    | 4.15E-08    |
| 5469     | 8105  | MED1         | -0.63 | 1.76E-17    | 1.41E-16    |
| 26504    | 3801  | CNNM4        | -0.63 | 8.87E-08    | 3.57E-07    |
| 2800     | 4897  | GOLGA1       | -0.63 | 1.06E-08    | 4.67E-08    |
| 79812    | 6159  | MMRN2        | -0.63 | 0.005424575 | 0.011588696 |
| 10061    | 3172  | ABCF2        | -0.64 | 4.80E-15    | 3.33E-14    |
| 1.08E+08 | 1099  | LOC107985082 | -0.64 | 0.003923288 | 0.008591199 |
| 54665    | 6712  | RSBN1        | -0.64 | 4.37E-07    | 1.64E-06    |
| 10808    | 3570  | HSPH1        | -0.64 | 1.75E-17    | 1.40E-16    |
| 11339    | 1249  | OIP5         | -0.64 | 3.15E-05    | 9.59E-05    |
| 2671     | 2447  | GFER         | -0.64 | 3.63E-08    | 1.52E-07    |
| 2004     | 3951  | ELK3         | -0.64 | 2.60E-14    | 1.73E-13    |
| 10131    | 2304  | TRAP1        | -0.64 | 1.94E-15    | 1.38E-14    |
| 4035     | 14919 | LRP1         | -0.64 | 2.81E-19    | 2.46E-18    |
| 9990     | 7582  | SLC12A6      | -0.64 | 1.30E-10    | 6.62E-10    |
| 57670    | 12420 | KIAA1549     | -0.64 | 2.40E-06    | 8.34E-06    |
| 1112     | 7879  | FOXN3        | -0.64 | 1.36E-18    | 1.15E-17    |
| 6491     | 4622  | STIL         | -0.64 | 7.37E-14    | 4.74E-13    |
| 5796     | 5198  | PTPRK        | -0.64 | 8.02E-19    | 6.83E-18    |
| 752      | 4151  | FMNL1        | -0.64 | 9.82E-08    | 3.93E-07    |
| 56998    | 2965  | CTNNBIP1     | -0.64 | 6.26E-08    | 2.56E-07    |
| 127703   | 2934  | C1orf216     | -0.64 | 1.33E-09    | 6.28E-09    |
| 2033     | 8554  | EP300        | -0.64 | 8.43E-11    | 4.38E-10    |
| 55233    | 4920  | MOB1A        | -0.64 | 1.81E-24    | 2.01E-23    |
| 140460   | 4781  | ASB7         | -0.64 | 1.95E-08    | 8.37E-08    |
| 5082     | 3654  | PDCL         | -0.64 | 1.30E-12    | 7.60E-12    |
| 29763    | 1920  | PACSIN3      | -0.64 | 2.65E-09    | 1.22E-08    |
| 1889     | 5058  | ECE1         | -0.64 | 1.83E-24    | 2.02E-23    |
| 55739    | 2530  | NAXD         | -0.64 | 6.66E-12    | 3.72E-11    |
| 1.01E+08 | 1387  | CENPS-CORT   | -0.64 | 0.006716562 | 0.014098036 |
| 3188     | 2390  | HNRNPH2      | -0.64 | 2.14E-14    | 1.43E-13    |
| 65249    | 4437  | ZSWIM4       | -0.64 | 5.60E-09    | 2.51E-08    |
| 352954   | 3743  | GATS         | -0.64 | 8.05E-11    | 4.19E-10    |

|        |      |          |       |             |             |
|--------|------|----------|-------|-------------|-------------|
| 90007  | 3825 | MIDN     | -0.64 | 1.12E-15    | 8.12E-15    |
| 64781  | 4339 | CERK     | -0.64 | 7.26E-11    | 3.80E-10    |
| 8458   | 6241 | TTF2     | -0.65 | 8.66E-11    | 4.49E-10    |
| 8125   | 2479 | ANP32A   | -0.65 | 1.16E-21    | 1.13E-20    |
| 51096  | 1894 | UTP18    | -0.65 | 1.35E-10    | 6.91E-10    |
| 8450   | 4727 | CUL4B    | -0.65 | 1.70E-17    | 1.36E-16    |
| 54904  | 4272 | NSD3     | -0.65 | 1.61E-12    | 9.40E-12    |
| 144132 | 8884 | DNHD1    | -0.65 | 0.001588517 | 0.003731954 |
| 55722  | 2291 | CEP72    | -0.65 | 0.00158377  | 0.003721785 |
| 4794   | 2581 | NFKBIE   | -0.65 | 7.05E-06    | 2.33E-05    |
| 55290  | 2007 | BRF2     | -0.65 | 0.002926669 | 0.006551727 |
| 54107  | 2281 | POLE3    | -0.65 | 9.31E-17    | 7.15E-16    |
| 352909 | 2231 | DNAAF3   | -0.65 | 0.014707141 | 0.028833331 |
| 11346  | 5413 | SYNPO    | -0.65 | 1.04E-14    | 7.05E-14    |
| 4783   | 2039 | NFIL3    | -0.65 | 2.69E-11    | 1.45E-10    |
| 9070   | 2719 | ASH2L    | -0.65 | 1.15E-10    | 5.92E-10    |
| 124583 | 3435 | CANT1    | -0.65 | 6.35E-16    | 4.64E-15    |
| 23580  | 3146 | CDC42EP4 | -0.65 | 1.10E-10    | 5.64E-10    |
| 4706   | 799  | NDUFAB1  | -0.65 | 1.47E-05    | 4.67E-05    |
| 57555  | 4378 | NLGN2    | -0.65 | 7.05E-11    | 3.69E-10    |
| 10189  | 1113 | ALYREF   | -0.65 | 0.001188686 | 0.002859542 |
| 145508 | 4566 | CEP128   | -0.65 | 4.70E-06    | 1.58E-05    |
| 53981  | 5075 | CPSF2    | -0.65 | 3.12E-18    | 2.59E-17    |
| 150864 | 5795 | FAM117B  | -0.65 | 7.02E-07    | 2.58E-06    |
| 388566 | 7149 | ZNF470   | -0.65 | 0.000456738 | 0.001178353 |
| 115992 | 2321 | RNF166   | -0.65 | 2.28E-08    | 9.72E-08    |
| 54996  | 2139 | MARC2    | -0.65 | 4.34E-06    | 1.47E-05    |
| 255057 | 3035 | CBARP    | -0.66 | 0.000443465 | 0.001147109 |
| 10244  | 1376 | RABEPK   | -0.66 | 4.55E-06    | 1.54E-05    |
| 134957 | 9285 | STXBP5   | -0.66 | 6.64E-11    | 3.48E-10    |
| 200316 | 2033 | APOBEC3F | -0.66 | 1.14E-05    | 3.67E-05    |
| 10403  | 2209 | NDC80    | -0.66 | 8.12E-17    | 6.27E-16    |
| 58476  | 3932 | TP53INP2 | -0.66 | 2.05E-11    | 1.11E-10    |
| 7916   | 6926 | PRRC2A   | -0.66 | 2.91E-16    | 2.17E-15    |
| 10838  | 6320 | ZNF275   | -0.66 | 6.24E-07    | 2.31E-06    |
| 3151   | 1989 | HMGN2    | -0.66 | 9.14E-27    | 1.13E-25    |
| 90529  | 2771 | STPG1    | -0.66 | 5.19E-05    | 0.000153636 |
| 10531  | 3508 | PITRM1   | -0.66 | 1.52E-13    | 9.52E-13    |
| 5737   | 5260 | PTGFR    | -0.66 | 8.50E-06    | 2.78E-05    |
| 23097  | 6090 | CDK19    | -0.66 | 3.36E-13    | 2.05E-12    |
| 6018   | 6137 | RLF      | -0.66 | 3.48E-12    | 1.98E-11    |
| 55166  | 1759 | CENPQ    | -0.66 | 2.46E-05    | 7.61E-05    |
| 1912   | 2566 | PHC2     | -0.66 | 1.43E-22    | 1.45E-21    |
| 10062  | 1574 | NR1H3    | -0.66 | 0.000692616 | 0.001734762 |
| 11212  | 2576 | PLPBP    | -0.66 | 1.07E-08    | 4.70E-08    |
| 83538  | 2468 | TTC25    | -0.66 | 0.006501312 | 0.013683407 |
| 284069 | 2679 | FAM171A2 | -0.66 | 7.83E-08    | 3.17E-07    |
| 7976   | 6098 | FZD3     | -0.66 | 0.003780671 | 0.008308592 |

|          |      |           |       |             |             |
|----------|------|-----------|-------|-------------|-------------|
| 84668    | 6442 | FAM126A   | -0.66 | 3.08E-17    | 2.44E-16    |
| 1159     | 1563 | CKMT1B    | -0.66 | 0.006876944 | 0.014390477 |
| 53944    | 8163 | CSNK1G1   | -0.66 | 3.93E-11    | 2.10E-10    |
| 4351     | 2079 | MPI       | -0.66 | 1.40E-13    | 8.82E-13    |
| 93664    | 4935 | CADPS2    | -0.66 | 2.77E-05    | 8.49E-05    |
| 8623     | 2161 | ASMTL     | -0.66 | 5.16E-07    | 1.92E-06    |
| 10116    | 6805 | FEM1B     | -0.66 | 1.66E-15    | 1.18E-14    |
| 27340    | 9029 | UTP20     | -0.66 | 4.16E-12    | 2.36E-11    |
| 8795     | 4112 | TNFRSF10B | -0.66 | 2.23E-16    | 1.68E-15    |
| 29914    | 3790 | UBIAD1    | -0.66 | 2.80E-10    | 1.39E-09    |
| 51545    | 1247 | ZNF581    | -0.66 | 2.39E-08    | 1.02E-07    |
| 1.01E+08 | 5155 | ZNF891    | -0.66 | 0.022510454 | 0.042360278 |
| 993      | 3767 | CDC25A    | -0.66 | 1.80E-08    | 7.72E-08    |
| 9262     | 5129 | STK17B    | -0.66 | 8.22E-11    | 4.27E-10    |
| 124454   | 3987 | EARS2     | -0.67 | 3.75E-09    | 1.70E-08    |
| 11187    | 2843 | PKP3      | -0.67 | 0.015887993 | 0.030950319 |
| 162972   | 4122 | ZNF550    | -0.67 | 3.70E-05    | 0.000111563 |
| 54964    | 2055 | C1orf56   | -0.67 | 0.001748302 | 0.004075013 |
| 4277     | 2450 | MICB      | -0.67 | 2.13E-10    | 1.07E-09    |
| 1810     | 3222 | DR1       | -0.67 | 3.91E-12    | 2.22E-11    |
| 89874    | 2653 | SLC25A21  | -0.67 | 0.020503652 | 0.03895102  |
| 22835    | 4411 | ZFP30     | -0.67 | 2.88E-05    | 8.79E-05    |
| 3161     | 3125 | HMMR      | -0.67 | 1.15E-17    | 9.26E-17    |
| 284004   | 1956 | HEXDC     | -0.67 | 1.20E-05    | 3.87E-05    |
| 9855     | 3865 | FARP2     | -0.67 | 8.67E-06    | 2.84E-05    |
| 80346    | 1666 | REEP4     | -0.67 | 2.78E-08    | 1.18E-07    |
| 162417   | 2005 | NAGS      | -0.67 | 0.02612647  | 0.048537758 |
| 10999    | 2990 | SLC27A4   | -0.67 | 1.15E-13    | 7.28E-13    |
| 51496    | 5002 | CTDSPL2   | -0.67 | 8.34E-18    | 6.77E-17    |
| 221960   | 1854 | CCZ1B     | -0.67 | 9.18E-13    | 5.44E-12    |
| 10447    | 2552 | FAM3C     | -0.67 | 3.30E-21    | 3.16E-20    |
| 1267     | 2866 | CNP       | -0.67 | 2.69E-22    | 2.71E-21    |
| 55746    | 4170 | NUP133    | -0.67 | 2.57E-14    | 1.72E-13    |
| 342371   | 7886 | ATXN1L    | -0.67 | 1.28E-13    | 8.08E-13    |
| 5511     | 2325 | PPP1R8    | -0.67 | 1.07E-15    | 7.74E-15    |
| 8454     | 3184 | CUL1      | -0.67 | 1.02E-16    | 7.79E-16    |
| 284273   | 7716 | ZADH2     | -0.67 | 1.48E-13    | 9.31E-13    |
| 80714    | 1560 | PBX4      | -0.67 | 0.014664113 | 0.02876802  |
| 2013     | 5220 | EMP2      | -0.68 | 1.66E-21    | 1.61E-20    |
| 11149    | 5506 | BVES      | -0.68 | 1.02E-06    | 3.68E-06    |
| 89839    | 1045 | ARHGAP11B | -0.68 | 0.008335103 | 0.01715687  |
| 4953     | 2113 | ODC1      | -0.68 | 4.34E-19    | 3.75E-18    |
| 29979    | 4137 | UBQLN1    | -0.68 | 7.45E-24    | 8.04E-23    |
| 9572     | 2793 | NR1D1     | -0.68 | 2.43E-05    | 7.52E-05    |
| 6386     | 2223 | SDCBP     | -0.68 | 2.79E-16    | 2.08E-15    |
| 54784    | 2106 | ALKBH4    | -0.68 | 9.72E-05    | 0.000276801 |
| 221150   | 2826 | SKA3      | -0.68 | 2.75E-10    | 1.37E-09    |
| 55247    | 2402 | NEIL3     | -0.68 | 2.46E-07    | 9.46E-07    |

|          |      |               |       |             |             |
|----------|------|---------------|-------|-------------|-------------|
| 729533   | 2145 | FAM72A        | -0.68 | 7.22E-06    | 2.39E-05    |
| 2736     | 6646 | GLI2          | -0.68 | 5.57E-05    | 0.000163839 |
| 22846    | 5355 | VASH1         | -0.68 | 6.56E-11    | 3.44E-10    |
| 94107    | 1576 | TMEM203       | -0.68 | 1.12E-11    | 6.16E-11    |
| 81839    | 8691 | VANGL1        | -0.68 | 7.86E-17    | 6.07E-16    |
| 9925     | 4715 | ZBTB5         | -0.68 | 2.40E-09    | 1.11E-08    |
| 6449     | 2358 | SGTA          | -0.68 | 5.96E-16    | 4.37E-15    |
| 10276    | 3944 | NET1          | -0.68 | 2.38E-13    | 1.47E-12    |
| 94239    | 2182 | H2AFV         | -0.68 | 5.86E-26    | 6.96E-25    |
| 23641    | 1470 | LDOC1         | -0.68 | 1.34E-07    | 5.30E-07    |
| 10901    | 1048 | DHRS4         | -0.68 | 2.45E-06    | 8.50E-06    |
| 29946    | 1433 | SERTAD3       | -0.68 | 2.79E-07    | 1.07E-06    |
| 7092     | 7284 | TLL1          | -0.68 | 0.000418391 | 0.001085727 |
| 23180    | 2953 | RFTN1         | -0.68 | 2.02E-12    | 1.17E-11    |
| 1894     | 4205 | ECT2          | -0.68 | 1.10E-21    | 1.08E-20    |
| 5824     | 3722 | PEX19         | -0.68 | 9.20E-16    | 6.67E-15    |
| 55691    | 4809 | FRMD4A        | -0.68 | 3.71E-12    | 2.11E-11    |
| 147040   | 3081 | KCTD11        | -0.68 | 2.98E-10    | 1.47E-09    |
| 6320     | 1423 | CLEC11A       | -0.69 | 0.003982183 | 0.008710505 |
| 9584     | 3417 | RBM39         | -0.69 | 2.68E-16    | 2.00E-15    |
| 54662    | 3919 | TBC1D13       | -0.69 | 1.82E-13    | 1.14E-12    |
| 84918    | 3603 | LRP11         | -0.69 | 4.39E-17    | 3.44E-16    |
| 55010    | 2601 | PARBP         | -0.69 | 1.14E-07    | 4.54E-07    |
| 339500   | 8565 | ZNF678        | -0.69 | 7.69E-06    | 2.54E-05    |
| 64207    | 4213 | IRF2BPL       | -0.69 | 5.79E-12    | 3.25E-11    |
| 51029    | 3955 | DESI2         | -0.69 | 8.64E-15    | 5.91E-14    |
| 140707   | 1272 | BRI3BP        | -0.69 | 4.02E-05    | 0.000120772 |
| 55527    | 3844 | FEM1A         | -0.69 | 2.48E-10    | 1.24E-09    |
| 1.03E+08 | 1599 | LOC102724023  | -0.69 | 3.17E-13    | 1.94E-12    |
| 23144    | 3331 | ZC3H3         | -0.69 | 1.04E-09    | 4.95E-09    |
| 8681     | 3379 | JMJD7-PLA2G4B | -0.69 | 0.006734563 | 0.014127474 |
| 84553    | 5676 | FAXC          | -0.69 | 0.000467018 | 0.001202432 |
| 9530     | 4478 | BAG4          | -0.69 | 1.45E-07    | 5.73E-07    |
| 64789    | 2084 | EXO5          | -0.69 | 3.29E-05    | 9.97E-05    |
| 89876    | 4372 | MAATS1        | -0.69 | 0.003621272 | 0.007984954 |
| 1948     | 4439 | EFNB2         | -0.69 | 3.67E-16    | 2.72E-15    |
| 5501     | 2489 | PPP1CC        | -0.69 | 1.96E-25    | 2.27E-24    |
| 2547     | 2252 | XRCC6         | -0.69 | 7.20E-25    | 8.12E-24    |
| 5814     | 9098 | PURB          | -0.69 | 6.83E-20    | 6.17E-19    |
| 409      | 1795 | ARRB2         | -0.69 | 6.63E-11    | 3.48E-10    |
| 57539    | 6188 | WDR35         | -0.69 | 4.62E-10    | 2.25E-09    |
| 79008    | 1170 | SLX1B         | -0.69 | 1.59E-07    | 6.25E-07    |
| 548593   | 1170 | SLX1A         | -0.69 | 1.59E-07    | 6.25E-07    |
| 1969     | 3955 | EPHA2         | -0.69 | 2.09E-22    | 2.11E-21    |
| 283991   | 1604 | UBALD2        | -0.69 | 2.10E-10    | 1.05E-09    |
| 114898   | 1706 | C1QTNF2       | -0.70 | 0.004589813 | 0.00994898  |
| 4998     | 3309 | ORC1          | -0.70 | 1.08E-08    | 4.73E-08    |
| 84899    | 3551 | TMTC4         | -0.70 | 3.61E-09    | 1.64E-08    |

|        |       |         |       |             |             |
|--------|-------|---------|-------|-------------|-------------|
| 2289   | 3828  | FKBP5   | -0.70 | 2.31E-29    | 3.20E-28    |
| 55835  | 5089  | CENPJ   | -0.70 | 1.04E-10    | 5.37E-10    |
| 342357 | 7271  | ZKSCAN2 | -0.70 | 6.42E-07    | 2.36E-06    |
| 64428  | 2162  | NARFL   | -0.70 | 5.01E-08    | 2.07E-07    |
| 8531   | 1870  | YBX3    | -0.70 | 2.02E-21    | 1.95E-20    |
| 79796  | 4004  | ALG9    | -0.70 | 2.17E-10    | 1.09E-09    |
| 51606  | 2077  | ATP6V1H | -0.70 | 1.81E-13    | 1.13E-12    |
| 84726  | 11062 | PRRC2B  | -0.70 | 1.49E-21    | 1.44E-20    |
| 54932  | 1386  | EXD3    | -0.70 | 7.27E-05    | 0.000210607 |
| 60509  | 2597  | AGBL5   | -0.70 | 3.21E-15    | 2.25E-14    |
| 152519 | 5285  | NIPAL1  | -0.70 | 0.000979772 | 0.002391705 |
| 2012   | 2804  | EMP1    | -0.70 | 1.52E-19    | 1.35E-18    |
| 285761 | 3602  | DCBLD1  | -0.70 | 1.44E-11    | 7.87E-11    |
| 253832 | 5213  | ZDHHC20 | -0.70 | 2.09E-22    | 2.11E-21    |
| 55367  | 3036  | PIDD1   | -0.70 | 4.04E-16    | 2.98E-15    |
| 259173 | 3355  | ALS2CL  | -0.70 | 4.52E-10    | 2.21E-09    |
| 113130 | 2599  | CDCA5   | -0.70 | 3.67E-16    | 2.71E-15    |
| 6777   | 4990  | STAT5B  | -0.70 | 1.01E-16    | 7.75E-16    |
| 5362   | 11457 | PLXNA2  | -0.70 | 5.97E-06    | 2.00E-05    |
| 25843  | 3782  | MOB4    | -0.70 | 4.58E-11    | 2.44E-10    |
| 1      | 1766  | A1BG    | -0.70 | 0.007806848 | 0.016155612 |
| 65988  | 3541  | ZNF747  | -0.70 | 9.70E-09    | 4.28E-08    |
| 51161  | 2096  | C3orf18 | -0.70 | 3.75E-05    | 0.000112917 |
| 5711   | 3394  | PSMD5   | -0.70 | 3.80E-18    | 3.14E-17    |
| 54454  | 7991  | ATAD2B  | -0.70 | 8.15E-08    | 3.29E-07    |
| 123263 | 2785  | MTFMT   | -0.70 | 1.56E-06    | 5.53E-06    |
| 1111   | 3205  | CHEK1   | -0.70 | 1.25E-12    | 7.36E-12    |
| 3106   | 1618  | HLA-B   | -0.70 | 3.24E-24    | 3.54E-23    |
| 27346  | 2585  | TMEM97  | -0.70 | 1.19E-15    | 8.60E-15    |
| 1659   | 4250  | DHX8    | -0.71 | 1.02E-14    | 6.91E-14    |
| 3796   | 4038  | KIF2A   | -0.71 | 1.78E-16    | 1.35E-15    |
| 201164 | 2591  | PLD6    | -0.71 | 0.005888183 | 0.012492087 |
| 10150  | 4632  | MBNL2   | -0.71 | 3.62E-15    | 2.53E-14    |
| 10228  | 4444  | STX6    | -0.71 | 2.09E-15    | 1.48E-14    |
| 83694  | 3026  | RPS6KL1 | -0.71 | 0.00099245  | 0.002420902 |
| 6156   | 571   | RPL30   | -0.71 | 3.97E-19    | 3.44E-18    |
| 92400  | 3073  | RBM18   | -0.71 | 3.32E-11    | 1.78E-10    |
| 27338  | 1206  | UBE2S   | -0.71 | 1.73E-18    | 1.45E-17    |
| 813    | 4666  | CALU    | -0.71 | 9.53E-30    | 1.33E-28    |
| 9775   | 1734  | EIF4A3  | -0.71 | 1.28E-17    | 1.03E-16    |
| 57523  | 7512  | NYNRIN  | -0.71 | 0.000146289 | 0.000406324 |
| 1062   | 8308  | CENPE   | -0.71 | 3.64E-23    | 3.80E-22    |
| 257160 | 2557  | RNF214  | -0.71 | 8.80E-07    | 3.20E-06    |
| 494470 | 5542  | RNF165  | -0.71 | 1.17E-06    | 4.20E-06    |
| 220359 | 1980  | TIGD3   | -0.71 | 0.01695048  | 0.032861552 |
| 286128 | 4518  | ZFP41   | -0.71 | 1.31E-07    | 5.19E-07    |
| 904    | 6706  | CCNT1   | -0.71 | 3.77E-13    | 2.29E-12    |
| 3614   | 2400  | IMPDH1  | -0.71 | 6.45E-11    | 3.39E-10    |

|          |      |            |       |             |             |
|----------|------|------------|-------|-------------|-------------|
| 5983     | 2618 | RFC3       | -0.71 | 7.11E-15    | 4.88E-14    |
| 1.01E+08 | 942  | PMF1-BGLAP | -0.71 | 0.008729463 | 0.017900184 |
| 56606    | 3167 | SLC2A9     | -0.71 | 0.000381282 | 0.00099581  |
| 6382     | 3223 | SDC1       | -0.71 | 1.02E-25    | 1.20E-24    |
| 79901    | 4211 | CYBRD1     | -0.71 | 3.14E-27    | 3.96E-26    |
| 54993    | 2074 | ZSCAN2     | -0.71 | 0.000109185 | 0.000308524 |
| 85460    | 7962 | ZNF518B    | -0.72 | 2.98E-12    | 1.70E-11    |
| 91179    | 3447 | SCARF2     | -0.72 | 1.93E-12    | 1.12E-11    |
| 143884   | 2633 | CWF19L2    | -0.72 | 2.53E-07    | 9.74E-07    |
| 9585     | 6342 | KIF20B     | -0.72 | 1.37E-25    | 1.60E-24    |
| 25946    | 2254 | ZNF385A    | -0.72 | 5.46E-08    | 2.25E-07    |
| 3835     | 2159 | KIF22      | -0.72 | 4.62E-19    | 3.99E-18    |
| 51386    | 1950 | EIF3L      | -0.72 | 2.35E-33    | 3.74E-32    |
| 84823    | 4644 | LMNB2      | -0.72 | 3.16E-29    | 4.33E-28    |
| 22925    | 6183 | PLA2R1     | -0.72 | 1.62E-12    | 9.44E-12    |
| 9638     | 1796 | FEZ1       | -0.72 | 4.81E-10    | 2.34E-09    |
| 55959    | 6562 | SULF2      | -0.72 | 6.19E-11    | 3.26E-10    |
| 643988   | 2104 | FNDC10     | -0.72 | 7.74E-08    | 3.13E-07    |
| 54821    | 4224 | ERCC6L     | -0.72 | 4.64E-08    | 1.92E-07    |
| 90411    | 4204 | MCFD2      | -0.72 | 2.80E-27    | 3.53E-26    |
| 4899     | 3553 | NRF1       | -0.72 | 6.28E-09    | 2.81E-08    |
| 23047    | 6064 | PDS5B      | -0.72 | 9.98E-22    | 9.77E-21    |
| 8407     | 1419 | TAGLN2     | -0.72 | 9.16E-27    | 1.13E-25    |
| 79872    | 4547 | CBLL1      | -0.72 | 1.05E-11    | 5.80E-11    |
| 140685   | 5110 | ZBTB46     | -0.72 | 0.00323023  | 0.007181523 |
| 84083    | 4375 | ZRANB3     | -0.72 | 6.07E-07    | 2.25E-06    |
| 57542    | 6592 | KLHL42     | -0.72 | 1.12E-14    | 7.59E-14    |
| 283337   | 3879 | ZNF740     | -0.72 | 8.48E-14    | 5.43E-13    |
| 6392     | 1395 | SDHD       | -0.72 | 1.92E-17    | 1.53E-16    |
| 27341    | 5455 | RRP7A      | -0.72 | 2.14E-19    | 1.89E-18    |
| 85463    | 9681 | ZC3H12C    | -0.72 | 1.22E-11    | 6.68E-11    |
| 9679     | 5740 | FAM53B     | -0.72 | 2.31E-12    | 1.33E-11    |
| 23401    | 2222 | FRAT2      | -0.72 | 2.08E-05    | 6.47E-05    |
| 1634     | 2272 | DCN        | -0.72 | 1.12E-18    | 9.47E-18    |
| 7008     | 4403 | TEF        | -0.73 | 6.88E-09    | 3.07E-08    |
| 55181    | 3283 | SMG8       | -0.73 | 2.47E-10    | 1.23E-09    |
| 81930    | 2748 | KIF18A     | -0.73 | 9.67E-16    | 7.00E-15    |
| 55146    | 1437 | ZDHHC4     | -0.73 | 2.98E-11    | 1.60E-10    |
| 25959    | 5104 | KANK2      | -0.73 | 1.73E-26    | 2.10E-25    |
| 23397    | 3196 | NCAPH      | -0.73 | 1.11E-14    | 7.53E-14    |
| 83549    | 2178 | UCK1       | -0.73 | 5.14E-19    | 4.42E-18    |
| 23471    | 2992 | TRAM1      | -0.73 | 1.82E-33    | 2.92E-32    |
| 92906    | 2596 | HNRNPLL    | -0.73 | 3.03E-08    | 1.28E-07    |
| 25829    | 3572 | TMEM184B   | -0.73 | 4.94E-22    | 4.90E-21    |
| 8660     | 7014 | IRS2       | -0.73 | 1.42E-20    | 1.32E-19    |
| 7272     | 3135 | TTK        | -0.73 | 1.22E-16    | 9.34E-16    |
| 10785    | 2049 | WDR4       | -0.73 | 7.71E-06    | 2.54E-05    |
| 374887   | 1487 | YJEFN3     | -0.73 | 0.002785902 | 0.006257098 |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 283455 | 13533 | KSR2     | -0.73 | 0.019982481 | 0.038062684 |
| 8882   | 2181  | ZPR1     | -0.73 | 1.31E-08    | 5.71E-08    |
| 55007  | 2357  | FAM118A  | -0.73 | 4.14E-08    | 1.72E-07    |
| 3709   | 12599 | ITPR2    | -0.73 | 3.14E-18    | 2.61E-17    |
| 55823  | 2931  | VPS11    | -0.73 | 1.02E-14    | 6.94E-14    |
| 91801  | 3962  | ALKBH8   | -0.73 | 7.74E-06    | 2.55E-05    |
| 6604   | 1712  | SMARCD3  | -0.73 | 9.71E-11    | 5.02E-10    |
| 4673   | 3029  | NAP1L1   | -0.73 | 6.81E-40    | 1.35E-38    |
| 9429   | 4074  | ABCG2    | -0.73 | 5.63E-05    | 0.000165275 |
| 23171  | 3917  | GPD1L    | -0.73 | 4.14E-08    | 1.72E-07    |
| 57565  | 4259  | KLHL14   | -0.73 | 7.85E-07    | 2.87E-06    |
| 123169 | 2204  | LEO1     | -0.74 | 4.83E-13    | 2.91E-12    |
| 9917   | 5854  | FAM20B   | -0.74 | 1.02E-23    | 1.09E-22    |
| 2733   | 3361  | GLE1     | -0.74 | 2.55E-18    | 2.12E-17    |
| 57484  | 9267  | RNF150   | -0.74 | 2.99E-08    | 1.26E-07    |
| 54955  | 2630  | C1orf109 | -0.74 | 2.69E-08    | 1.14E-07    |
| 84876  | 1496  | ORAI1    | -0.74 | 1.92E-08    | 8.24E-08    |
| 22873  | 4841  | DZIP1    | -0.74 | 1.80E-20    | 1.66E-19    |
| 2817   | 3665  | GPC1     | -0.74 | 8.25E-27    | 1.02E-25    |
| 5537   | 4192  | PPP6C    | -0.74 | 3.20E-19    | 2.79E-18    |
| 9807   | 4366  | IP6K1    | -0.74 | 3.50E-20    | 3.19E-19    |
| 30837  | 8050  | SOCS7    | -0.74 | 1.22E-10    | 6.26E-10    |
| 55603  | 5617  | FAM46A   | -0.74 | 3.24E-11    | 1.74E-10    |
| 80119  | 2664  | PIF1     | -0.74 | 2.37E-07    | 9.15E-07    |
| 10795  | 5654  | ZNF268   | -0.74 | 5.81E-12    | 3.26E-11    |
| 147841 | 1892  | SPC24    | -0.74 | 1.53E-13    | 9.63E-13    |
| 9975   | 5076  | NR1D2    | -0.74 | 5.48E-21    | 5.19E-20    |
| 2043   | 6419  | EPHA4    | -0.74 | 3.06E-10    | 1.51E-09    |
| 643641 | 7655  | ZNF862   | -0.74 | 3.42E-07    | 1.30E-06    |
| 8372   | 1511  | HYAL3    | -0.74 | 0.000306084 | 0.000809422 |
| 22850  | 5206  | ADNP2    | -0.74 | 2.81E-17    | 2.23E-16    |
| 157922 | 7435  | CAMSAP1  | -0.74 | 6.57E-22    | 6.48E-21    |
| 283571 | 5116  | PROX2    | -0.74 | 0.011338581 | 0.022707835 |
| 8459   | 2385  | TPST2    | -0.75 | 1.42E-06    | 5.06E-06    |
| 79594  | 2492  | MUL1     | -0.75 | 2.38E-13    | 1.47E-12    |
| 2261   | 4168  | FGFR3    | -0.75 | 4.69E-11    | 2.49E-10    |
| 57508  | 5906  | INTS2    | -0.75 | 1.06E-07    | 4.23E-07    |
| 2778   | 1569  | GNAS     | -0.75 | 8.09E-29    | 1.09E-27    |
| 53339  | 3305  | BTBD1    | -0.75 | 2.84E-21    | 2.73E-20    |
| 4200   | 4635  | ME2      | -0.75 | 1.24E-16    | 9.46E-16    |
| 23169  | 6321  | SLC35D1  | -0.75 | 2.09E-08    | 8.94E-08    |
| 7561   | 2967  | ZNF14    | -0.75 | 0.001122123 | 0.00271153  |
| 5734   | 3181  | PTGER4   | -0.75 | 0.000349331 | 0.000916691 |
| 9695   | 6175  | EDEM1    | -0.75 | 3.61E-18    | 2.99E-17    |
| 10575  | 2352  | CCT4     | -0.75 | 1.48E-23    | 1.58E-22    |
| 10106  | 4852  | CTDSP2   | -0.75 | 9.80E-33    | 1.53E-31    |
| 79065  | 3890  | ATG9A    | -0.75 | 1.04E-18    | 8.85E-18    |
| 25777  | 3985  | SUN2     | -0.75 | 5.20E-27    | 6.50E-26    |

|        |      |          |       |             |             |
|--------|------|----------|-------|-------------|-------------|
| 7037   | 4981 | TFRC     | -0.75 | 3.45E-22    | 3.46E-21    |
| 11264  | 5693 | PXMP4    | -0.75 | 8.00E-08    | 3.24E-07    |
| 9793   | 6727 | CKAP5    | -0.75 | 3.90E-31    | 5.77E-30    |
| 160518 | 9380 | DENND5B  | -0.75 | 4.30E-14    | 2.83E-13    |
| 11135  | 2181 | CDC42EP1 | -0.75 | 1.52E-14    | 1.02E-13    |
| 54471  | 5772 | MIEF1    | -0.75 | 1.06E-16    | 8.10E-16    |
| 221830 | 3892 | TWISTNB  | -0.75 | 4.59E-19    | 3.96E-18    |
| 29843  | 4573 | SENP1    | -0.75 | 1.18E-15    | 8.52E-15    |
| 283987 | 3369 | HID1     | -0.75 | 0.000348305 | 0.000914404 |
| 994    | 2996 | CDC25B   | -0.75 | 6.99E-25    | 7.90E-24    |
| 6256   | 5546 | RXRA     | -0.75 | 1.22E-26    | 1.49E-25    |
| 23361  | 6094 | ZNF629   | -0.75 | 7.53E-19    | 6.44E-18    |
| 64895  | 4656 | PAPOLG   | -0.75 | 5.65E-09    | 2.53E-08    |
| 56107  | 4605 | PCDHGA9  | -0.75 | 0.027011185 | 0.04999841  |
| 983    | 1912 | CDK1     | -0.75 | 1.41E-23    | 1.50E-22    |
| 54910  | 3487 | SEMA4C   | -0.75 | 2.31E-12    | 1.33E-11    |
| 3674   | 3449 | ITGA2B   | -0.75 | 0.001976708 | 0.004563689 |
| 64946  | 1405 | CENPH    | -0.75 | 3.22E-13    | 1.97E-12    |
| 5524   | 2634 | PTPA     | -0.75 | 9.33E-22    | 9.15E-21    |
| 53947  | 2084 | A4GALT   | -0.76 | 1.34E-24    | 1.50E-23    |
| 7019   | 3810 | TFAM     | -0.76 | 3.59E-17    | 2.83E-16    |
| 2553   | 2643 | GABPB1   | -0.76 | 4.25E-11    | 2.26E-10    |
| 3676   | 7281 | ITGA4    | -0.76 | 2.69E-13    | 1.66E-12    |
| 8019   | 5262 | BRD3     | -0.76 | 2.16E-29    | 3.00E-28    |
| 23420  | 4261 | NOMO1    | -0.76 | 3.14E-24    | 3.45E-23    |
| 157638 | 5451 | FAM84B   | -0.76 | 1.73E-20    | 1.60E-19    |
| 11182  | 2497 | SLC2A6   | -0.76 | 3.65E-11    | 1.95E-10    |
| 84296  | 3841 | GINS4    | -0.76 | 7.03E-10    | 3.39E-09    |
| 79723  | 2967 | SUV39H2  | -0.76 | 8.06E-11    | 4.19E-10    |
| 10444  | 4285 | ZER1     | -0.76 | 2.03E-20    | 1.87E-19    |
| 3996   | 4175 | LLGL1    | -0.76 | 6.85E-20    | 6.18E-19    |
| 10024  | 2455 | TROAP    | -0.76 | 5.29E-13    | 3.17E-12    |
| 375346 | 4746 | STIMATE  | -0.76 | 5.30E-10    | 2.58E-09    |
| 83999  | 5935 | KREMEN1  | -0.76 | 6.60E-13    | 3.93E-12    |
| 79870  | 2859 | BAALC    | -0.76 | 9.63E-07    | 3.49E-06    |
| 9331   | 4624 | B4GALT6  | -0.76 | 1.43E-09    | 6.73E-09    |
| 27330  | 8223 | RPS6KA6  | -0.76 | 7.17E-05    | 0.000207708 |
| 83886  | 1404 | PRSS27   | -0.76 | 0.015746285 | 0.030704565 |
| 147372 | 6063 | CCBE1    | -0.76 | 2.99E-17    | 2.37E-16    |
| 54494  | 2019 | C11orf71 | -0.76 | 5.25E-05    | 0.000155044 |
| 1975   | 4062 | EIF4B    | -0.76 | 2.21E-37    | 4.05E-36    |
| 25942  | 6544 | SIN3A    | -0.76 | 6.56E-27    | 8.15E-26    |
| 25920  | 2629 | NELFB    | -0.76 | 2.05E-20    | 1.89E-19    |
| 9096   | 5881 | TBX18    | -0.77 | 2.45E-16    | 1.83E-15    |
| 57109  | 2387 | REXO4    | -0.77 | 3.36E-14    | 2.22E-13    |
| 514    | 449  | ATP5F1E  | -0.77 | 5.59E-06    | 1.87E-05    |
| 59     | 1584 | ACTA2    | -0.77 | 1.27E-08    | 5.54E-08    |
| 57189  | 7296 | KIAA1147 | -0.77 | 1.20E-12    | 7.03E-12    |



|        |       |         |       |             |             |
|--------|-------|---------|-------|-------------|-------------|
| 6248   | 2344  | RSC1A1  | -0.77 | 5.07E-06    | 1.70E-05    |
| 60468  | 9118  | BACH2   | -0.77 | 7.74E-07    | 2.83E-06    |
| 10555  | 1569  | AGPAT2  | -0.77 | 4.80E-22    | 4.77E-21    |
| 283989 | 2053  | TSEN54  | -0.77 | 1.14E-09    | 5.42E-09    |
| 252969 | 2179  | NEIL2   | -0.77 | 0.00264541  | 0.005973267 |
| 8971   | 1524  | H1FX    | -0.77 | 3.02E-30    | 4.31E-29    |
| 133022 | 2037  | TRAM1L1 | -0.77 | 0.000363658 | 0.000951917 |
| 3635   | 5083  | INPP5D  | -0.77 | 0.003567382 | 0.007873942 |
| 4077   | 4597  | NBR1    | -0.77 | 8.25E-28    | 1.07E-26    |
| 79633  | 15175 | FAT4    | -0.77 | 5.16E-09    | 2.32E-08    |
| 80335  | 4143  | WDR82   | -0.77 | 4.89E-26    | 5.82E-25    |
| 11173  | 5472  | ADAMTS7 | -0.77 | 1.13E-12    | 6.65E-12    |
| 23543  | 6864  | RBFOX2  | -0.77 | 4.05E-26    | 4.85E-25    |
| 8864   | 6342  | PER2    | -0.77 | 2.21E-07    | 8.57E-07    |
| 54880  | 6397  | BCOR    | -0.77 | 7.21E-18    | 5.89E-17    |
| 9631   | 4617  | NUP155  | -0.77 | 4.91E-20    | 4.46E-19    |
| 406    | 2772  | ARNTL   | -0.77 | 4.88E-09    | 2.20E-08    |
| 5108   | 8610  | PCM1    | -0.77 | 1.64E-25    | 1.92E-24    |
| 6675   | 2331  | UAP1    | -0.77 | 3.19E-15    | 2.24E-14    |
| 64753  | 4404  | CCDC136 | -0.77 | 6.38E-06    | 2.12E-05    |
| 64397  | 8951  | ZNF106  | -0.77 | 5.88E-25    | 6.68E-24    |
| 23660  | 4444  | ZKSCAN5 | -0.77 | 3.10E-13    | 1.90E-12    |
| 6224   | 857   | RPS20   | -0.78 | 6.26E-20    | 5.67E-19    |
| 54442  | 2479  | KCTD5   | -0.78 | 8.13E-18    | 6.61E-17    |
| 23384  | 5657  | SPECC1L | -0.78 | 2.22E-21    | 2.14E-20    |
| 55647  | 1543  | RAB20   | -0.78 | 1.87E-05    | 5.88E-05    |
| 6418   | 2836  | SET     | -0.78 | 3.17E-37    | 5.76E-36    |
| 55357  | 2936  | TBC1D2  | -0.78 | 2.60E-25    | 2.99E-24    |
| 196264 | 3986  | MPZL3   | -0.78 | 3.67E-05    | 0.000110676 |
| 80818  | 4347  | ZNF436  | -0.78 | 1.04E-08    | 4.56E-08    |
| 55194  | 1031  | EVA1B   | -0.78 | 2.97E-11    | 1.59E-10    |
| 7186   | 2472  | TRAF2   | -0.78 | 2.71E-16    | 2.02E-15    |
| 6804   | 2067  | STX1A   | -0.78 | 0.000429737 | 0.001113218 |
| 643853 | 3470  | TMPPE   | -0.78 | 0.026453423 | 0.049085476 |
| 2232   | 1881  | FDXR    | -0.78 | 1.09E-10    | 5.64E-10    |
| 10391  | 3386  | CORO2B  | -0.78 | 1.19E-06    | 4.28E-06    |
| 140809 | 2704  | SRXN1   | -0.78 | 2.90E-13    | 1.78E-12    |
| 9655   | 4494  | SOCS5   | -0.78 | 1.13E-11    | 6.24E-11    |
| 9697   | 6997  | TRAM2   | -0.78 | 6.07E-31    | 8.91E-30    |
| 7716   | 4656  | VEZF1   | -0.78 | 8.05E-25    | 9.04E-24    |
| 3146   | 4274  | HMGB1   | -0.79 | 4.64E-41    | 9.60E-40    |
| 7157   | 2591  | TP53    | -0.79 | 4.92E-26    | 5.85E-25    |
| 6603   | 2422  | SMARCD2 | -0.79 | 3.41E-19    | 2.97E-18    |
| 348487 | 1732  | FAM131C | -0.79 | 0.00394905  | 0.00864335  |
| 140831 | 2831  | ZSWIM3  | -0.79 | 0.00075389  | 0.001877381 |
| 1063   | 10315 | CENPF   | -0.79 | 5.95E-37    | 1.07E-35    |
| 11123  | 2738  | RCAN3   | -0.79 | 2.11E-09    | 9.80E-09    |
| 7273   | 82029 | TTN     | -0.79 | 2.28E-05    | 7.08E-05    |

|          |      |          |       |             |             |
|----------|------|----------|-------|-------------|-------------|
| 4603     | 4972 | MYBL1    | -0.79 | 7.41E-14    | 4.77E-13    |
| 50937    | 8213 | CDON     | -0.79 | 0.000511499 | 0.001307858 |
| 23347    | 8645 | SMCHD1   | -0.79 | 5.00E-31    | 7.37E-30    |
| 11156    | 2786 | PTP4A3   | -0.79 | 0.000170381 | 0.000468048 |
| 57541    | 5328 | ZNF398   | -0.79 | 2.80E-09    | 1.29E-08    |
| 5768     | 3199 | QSOX1    | -0.79 | 2.12E-37    | 3.89E-36    |
| 5770     | 3573 | PTPN1    | -0.79 | 6.82E-35    | 1.15E-33    |
| 27347    | 3278 | STK39    | -0.79 | 3.14E-23    | 3.29E-22    |
| 83591    | 4840 | THAP2    | -0.79 | 0.005362678 | 0.011471715 |
| 286046   | 3384 | XKR6     | -0.79 | 0.017780244 | 0.034305503 |
| 20       | 8166 | ABCA2    | -0.79 | 1.26E-18    | 1.06E-17    |
| 10291    | 5159 | SF3A1    | -0.80 | 1.47E-24    | 1.64E-23    |
| 6508     | 3571 | SLC4A3   | -0.80 | 1.21E-08    | 5.29E-08    |
| 1104     | 2624 | RCC1     | -0.80 | 1.55E-26    | 1.89E-25    |
| 22869    | 6556 | ZNF510   | -0.80 | 9.31E-10    | 4.43E-09    |
| 10587    | 2122 | TXNRD2   | -0.80 | 8.07E-12    | 4.49E-11    |
| 79029    | 2505 | SPATA5L1 | -0.80 | 9.97E-06    | 3.23E-05    |
| 146909   | 4098 | KIF18B   | -0.80 | 4.24E-13    | 2.56E-12    |
| 10565    | 7199 | ARFGEF1  | -0.80 | 1.19E-19    | 1.06E-18    |
| 4927     | 3521 | NUP88    | -0.80 | 3.62E-20    | 3.29E-19    |
| 137695   | 2518 | TMEM68   | -0.80 | 3.61E-10    | 1.78E-09    |
| 11190    | 7602 | CEP250   | -0.80 | 1.60E-25    | 1.87E-24    |
| 6834     | 1046 | SURF1    | -0.80 | 8.76E-11    | 4.54E-10    |
| 3718     | 5204 | JAK3     | -0.80 | 0.00094457  | 0.002313954 |
| 201299   | 971  | RDM1     | -0.80 | 0.013591734 | 0.026815226 |
| 162239   | 3403 | ZFP1     | -0.80 | 7.74E-10    | 3.71E-09    |
| 83658    | 723  | DYNLRB1  | -0.80 | 3.61E-21    | 3.44E-20    |
| 23177    | 5566 | CEP68    | -0.80 | 4.07E-11    | 2.17E-10    |
| 9538     | 2283 | EI24     | -0.80 | 3.82E-22    | 3.82E-21    |
| 150275   | 3784 | CCDC117  | -0.80 | 5.07E-15    | 3.51E-14    |
| 1.01E+08 | 1506 | MICA     | -0.80 | 3.55E-10    | 1.75E-09    |
| 79966    | 2618 | SCD5     | -0.80 | 7.48E-18    | 6.10E-17    |
| 1808     | 4513 | DPYSL2   | -0.80 | 2.90E-26    | 3.50E-25    |
| 6722     | 3739 | SRF      | -0.80 | 2.70E-18    | 2.25E-17    |
| 400720   | 7556 | ZNF772   | -0.80 | 1.77E-07    | 6.92E-07    |
| 8939     | 3164 | FUBP3    | -0.80 | 1.48E-31    | 2.22E-30    |
| 332      | 2650 | BIRC5    | -0.80 | 2.80E-24    | 3.09E-23    |
| 6744     | 4076 | SSFA2    | -0.80 | 2.91E-28    | 3.84E-27    |
| 4148     | 2600 | MATN3    | -0.80 | 2.26E-10    | 1.13E-09    |
| 3159     | 2029 | HMGA1    | -0.80 | 0.000119914 | 0.000336379 |
| 10370    | 1936 | CITED2   | -0.80 | 8.79E-28    | 1.14E-26    |
| 10051    | 5084 | SMC4     | -0.80 | 3.76E-42    | 8.09E-41    |
| 128346   | 6415 | C1orf162 | -0.80 | 0.004342752 | 0.009439934 |
| 27239    | 1846 | GPR162   | -0.80 | 5.50E-06    | 1.85E-05    |
| 81605    | 2710 | URM1     | -0.81 | 2.47E-20    | 2.26E-19    |
| 25928    | 1883 | SOSTDC1  | -0.81 | 0.002731668 | 0.006147724 |
| 84945    | 5316 | ABHD13   | -0.81 | 1.37E-12    | 8.00E-12    |
| 89891    | 1742 | WDR34    | -0.81 | 6.54E-28    | 8.51E-27    |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 341      | 588   | APOC1        | -0.81 | 0.000594657 | 0.001505968 |
| 891      | 2177  | CCNB1        | -0.81 | 9.18E-39    | 1.76E-37    |
| 23203    | 2199  | PMPCA        | -0.81 | 3.06E-21    | 2.93E-20    |
| 56957    | 6360  | OTUD7B       | -0.81 | 2.30E-17    | 1.83E-16    |
| 84256    | 4141  | FLYWCH1      | -0.81 | 8.11E-20    | 7.29E-19    |
| 126282   | 3850  | TNFAIP8L1    | -0.81 | 7.27E-13    | 4.33E-12    |
| 81544    | 3370  | GDPD5        | -0.81 | 3.48E-11    | 1.87E-10    |
| 399687   | 7588  | MYO18A       | -0.81 | 2.92E-24    | 3.21E-23    |
| 6586     | 9565  | SLIT3        | -0.81 | 1.98E-05    | 6.19E-05    |
| 10893    | 4249  | MMP24        | -0.81 | 4.42E-24    | 4.80E-23    |
| 1.08E+08 | 3304  | LOC107987428 | -0.81 | 0.000152714 | 0.000422915 |
| 8722     | 1909  | CTSF         | -0.81 | 1.32E-23    | 1.41E-22    |
| 9410     | 1638  | SNRNP40      | -0.81 | 6.58E-18    | 5.38E-17    |
| 7291     | 1593  | TWIST1       | -0.81 | 2.00E-08    | 8.58E-08    |
| 5955     | 2213  | RCN2         | -0.81 | 8.32E-26    | 9.81E-25    |
| 23654    | 6361  | PLXNB2       | -0.81 | 3.44E-36    | 6.04E-35    |
| 79814    | 3154  | AGMAT        | -0.82 | 0.021780054 | 0.041120815 |
| 10671    | 1126  | DCTN6        | -0.82 | 3.38E-13    | 2.07E-12    |
| 9743     | 10048 | ARHGAP32     | -0.82 | 1.13E-08    | 4.95E-08    |
| 64784    | 5253  | CRTC3        | -0.82 | 1.32E-17    | 1.07E-16    |
| 80352    | 1986  | RNF39        | -0.82 | 0.019382151 | 0.037042278 |
| 51281    | 2977  | ANKMY1       | -0.82 | 8.54E-05    | 0.000244726 |
| 10570    | 2732  | DPYSL4       | -0.82 | 1.60E-06    | 5.65E-06    |
| 10245    | 988   | TIMM17B      | -0.82 | 1.67E-10    | 8.44E-10    |
| 6191     | 956   | RPS4X        | -0.82 | 4.97E-33    | 7.82E-32    |
| 404550   | 899   | C16orf74     | -0.82 | 0.000475126 | 0.001221184 |
| 23404    | 2229  | EXOSC2       | -0.82 | 8.54E-15    | 5.84E-14    |
| 80757    | 1538  | TMEM121      | -0.82 | 0.001160457 | 0.002796556 |
| 55672    | 6183  | NBPF1        | -0.82 | 3.99E-14    | 2.63E-13    |
| 51762    | 4859  | RAB8B        | -0.82 | 4.34E-17    | 3.40E-16    |
| 84695    | 2949  | LOXL3        | -0.82 | 4.80E-05    | 0.000142675 |
| 10103    | 1589  | TSPAN1       | -0.82 | 8.12E-10    | 3.89E-09    |
| 4775     | 6379  | NFATC3       | -0.82 | 6.73E-22    | 6.64E-21    |
| 3745     | 11856 | KCNB1        | -0.82 | 0.00117849  | 0.002836549 |
| 6130     | 890   | RPL7A        | -0.82 | 4.86E-23    | 5.06E-22    |
| 3203     | 802   | HOXA6        | -0.82 | 0.000461977 | 0.001190661 |
| 80055    | 10945 | PGAP1        | -0.82 | 2.85E-13    | 1.75E-12    |
| 54704    | 4257  | PDP1         | -0.83 | 1.68E-22    | 1.71E-21    |
| 9647     | 5170  | PPM1F        | -0.83 | 1.17E-16    | 8.92E-16    |
| 50810    | 2528  | HDGFL3       | -0.83 | 1.74E-23    | 1.85E-22    |
| 5923     | 4507  | RASGRF1      | -0.83 | 0.01102439  | 0.022148503 |
| 726      | 4398  | CAPN5        | -0.83 | 4.91E-16    | 3.61E-15    |
| 38       | 1533  | ACAT1        | -0.83 | 1.35E-15    | 9.72E-15    |
| 23221    | 5110  | RHOBTB2      | -0.83 | 1.30E-12    | 7.61E-12    |
| 64762    | 6574  | GAREM1       | -0.83 | 5.35E-09    | 2.40E-08    |
| 11278    | 10853 | KLF12        | -0.83 | 5.29E-13    | 3.17E-12    |
| 80727    | 4795  | TTYH3        | -0.83 | 9.93E-29    | 1.33E-27    |
| 64129    | 2095  | TINAGL1      | -0.83 | 9.95E-26    | 1.17E-24    |

|          |      |              |       |             |             |
|----------|------|--------------|-------|-------------|-------------|
| 440590   | 3776 | ZYG11A       | -0.83 | 1.63E-06    | 5.75E-06    |
| 134      | 2822 | ADORA1       | -0.83 | 5.30E-17    | 4.14E-16    |
| 6671     | 5885 | SP4          | -0.83 | 1.09E-07    | 4.34E-07    |
| 55699    | 3549 | IARS2        | -0.83 | 6.80E-23    | 7.03E-22    |
| 55196    | 6371 | KIAA1551     | -0.83 | 3.79E-12    | 2.15E-11    |
| 55224    | 2432 | ETNK2        | -0.83 | 8.64E-14    | 5.53E-13    |
| 41       | 3860 | ASIC1        | -0.83 | 1.39E-09    | 6.52E-09    |
| 85474    | 1463 | LBX2         | -0.83 | 0.003748671 | 0.008245405 |
| 4311     | 5692 | MME          | -0.83 | 5.02E-30    | 7.09E-29    |
| 23048    | 5703 | FNBP1        | -0.84 | 1.40E-24    | 1.56E-23    |
| 57418    | 1566 | WDR18        | -0.84 | 1.56E-19    | 1.38E-18    |
| 10615    | 3824 | SPAG5        | -0.84 | 7.32E-28    | 9.47E-27    |
| 23365    | 8971 | ARHGEF12     | -0.84 | 7.79E-38    | 1.45E-36    |
| 79980    | 2231 | DSN1         | -0.84 | 1.96E-25    | 2.27E-24    |
| 3832     | 5101 | KIF11        | -0.84 | 5.55E-33    | 8.70E-32    |
| 224      | 3640 | ALDH3A2      | -0.84 | 3.12E-24    | 3.43E-23    |
| 79906    | 1556 | MORN1        | -0.84 | 0.000151475 | 0.000420006 |
| 27289    | 1665 | RND1         | -0.84 | 0.005623208 | 0.011977123 |
| 162979   | 1604 | ZNF296       | -0.84 | 0.000442842 | 0.001145664 |
| 54149    | 5451 | C21orf91     | -0.84 | 2.29E-10    | 1.14E-09    |
| 2872     | 3090 | MKNK2        | -0.84 | 8.66E-33    | 1.35E-31    |
| 54935    | 740  | DUSP23       | -0.84 | 1.87E-16    | 1.41E-15    |
| 5966     | 7529 | REL          | -0.84 | 2.74E-08    | 1.16E-07    |
| 5962     | 4232 | RDX          | -0.84 | 8.23E-27    | 1.02E-25    |
| 81628    | 2369 | TSC22D4      | -0.84 | 3.02E-16    | 2.25E-15    |
| 9827     | 1717 | RGP1         | -0.84 | 1.55E-06    | 5.49E-06    |
| 50484    | 4883 | RRM2B        | -0.84 | 1.40E-17    | 1.13E-16    |
| 1464     | 8305 | CSPG4        | -0.84 | 8.31E-17    | 6.40E-16    |
| 55248    | 1946 | TMEM206      | -0.84 | 1.30E-07    | 5.14E-07    |
| 283248   | 2621 | RCOR2        | -0.84 | 0.005005786 | 0.010762682 |
| 114879   | 3898 | OSBPL5       | -0.84 | 1.14E-15    | 8.26E-15    |
| 1654     | 4717 | DDX3X        | -0.85 | 1.39E-42    | 3.03E-41    |
| 27034    | 2411 | ACAD8        | -0.85 | 1.50E-13    | 9.45E-13    |
| 56106    | 4617 | PCDHGA10     | -0.85 | 0.01840377  | 0.035354977 |
| 3092     | 7956 | HIP1         | -0.85 | 4.70E-22    | 4.68E-21    |
| 114984   | 1050 | FLYWCH2      | -0.85 | 4.97E-11    | 2.63E-10    |
| 160760   | 3748 | PPTC7        | -0.85 | 4.38E-14    | 2.88E-13    |
| 6495     | 2685 | SIX1         | -0.85 | 4.40E-11    | 2.34E-10    |
| 650      | 3191 | BMP2         | -0.85 | 0.00041935  | 0.001088057 |
| 2581     | 3897 | GALC         | -0.85 | 2.01E-12    | 1.17E-11    |
| 6241     | 3285 | RRM2         | -0.85 | 2.77E-33    | 4.40E-32    |
| 84159    | 7022 | ARID5B       | -0.85 | 1.11E-25    | 1.30E-24    |
| 124930   | 3138 | ANKRD13B     | -0.85 | 1.61E-07    | 6.32E-07    |
| 1.02E+08 | 1968 | LOC101929895 | -0.85 | 0.002256952 | 0.005157751 |
| 3383     | 3249 | ICAM1        | -0.85 | 6.04E-35    | 1.02E-33    |
| 627      | 4120 | BDNF         | -0.85 | 4.17E-19    | 3.60E-18    |
| 91461    | 2517 | PKDCC        | -0.85 | 0.019856886 | 0.037851857 |
| 84675    | 2527 | TRIM55       | -0.85 | 3.15E-10    | 1.56E-09    |

|        |      |           |       |             |             |
|--------|------|-----------|-------|-------------|-------------|
| 109    | 4031 | ADCY3     | -0.85 | 8.57E-24    | 9.24E-23    |
| 29902  | 1226 | FAM216A   | -0.85 | 2.18E-09    | 1.01E-08    |
| 51201  | 4923 | ZDHHC2    | -0.86 | 7.02E-15    | 4.82E-14    |
| 8862   | 3238 | APLN      | -0.86 | 0.000736766 | 0.00183757  |
| 7543   | 7291 | ZFX       | -0.86 | 1.33E-22    | 1.36E-21    |
| 79595  | 4055 | SAP130    | -0.86 | 2.03E-23    | 2.14E-22    |
| 10422  | 1877 | UBAC1     | -0.86 | 6.45E-20    | 5.84E-19    |
| 80271  | 3319 | ITPKC     | -0.86 | 1.21E-10    | 6.19E-10    |
| 1825   | 7676 | DSC3      | -0.86 | 2.83E-07    | 1.08E-06    |
| 26061  | 2233 | HACL1     | -0.86 | 1.49E-15    | 1.07E-14    |
| 648    | 3435 | BMI1      | -0.86 | 3.01E-08    | 1.27E-07    |
| 22934  | 1834 | RPIA      | -0.86 | 3.57E-11    | 1.91E-10    |
| 4493   | 520  | MT1E      | -0.86 | 6.11E-29    | 8.28E-28    |
| 79734  | 1747 | KCTD17    | -0.86 | 3.56E-15    | 2.49E-14    |
| 84971  | 1938 | ATG4D     | -0.86 | 2.43E-10    | 1.21E-09    |
| 6423   | 2005 | SFRP2     | -0.86 | 1.40E-10    | 7.15E-10    |
| 25792  | 2883 | CIZ1      | -0.86 | 1.11E-29    | 1.55E-28    |
| 440689 | 495  | HIST2H2BF | -0.86 | 0.013370964 | 0.026403122 |
| 661    | 1946 | POLR3D    | -0.86 | 1.77E-05    | 5.57E-05    |
| 2288   | 3535 | FKBP4     | -0.86 | 8.70E-26    | 1.03E-24    |
| 9824   | 5802 | ARHGAP11A | -0.86 | 6.57E-31    | 9.62E-30    |
| 5476   | 3065 | CTSA      | -0.86 | 1.76E-34    | 2.91E-33    |
| 200933 | 5743 | FBXO45    | -0.86 | 2.93E-16    | 2.18E-15    |
| 59283  | 8751 | CACNG8    | -0.86 | 1.31E-06    | 4.69E-06    |
| 23200  | 8182 | ATP11B    | -0.86 | 2.06E-24    | 2.28E-23    |
| 1955   | 6227 | MEGF9     | -0.86 | 7.11E-24    | 7.68E-23    |
| 83480  | 1520 | PUS3      | -0.86 | 3.46E-06    | 1.18E-05    |
| 10712  | 3093 | FAM189B   | -0.86 | 1.85E-12    | 1.08E-11    |
| 56892  | 1841 | TCIM      | -0.86 | 4.62E-08    | 1.91E-07    |
| 203    | 2263 | AK1       | -0.86 | 6.64E-23    | 6.87E-22    |
| 64748  | 2730 | PLPPR2    | -0.86 | 3.11E-19    | 2.72E-18    |
| 641    | 3229 | BLM       | -0.86 | 5.43E-14    | 3.54E-13    |
| 541468 | 1863 | LURAP1    | -0.86 | 0.000256582 | 0.000686691 |
| 25888  | 4773 | ZNF473    | -0.86 | 6.10E-14    | 3.96E-13    |
| 7410   | 4735 | VAV2      | -0.86 | 2.58E-30    | 3.70E-29    |
| 92595  | 2814 | ZNF764    | -0.86 | 3.74E-07    | 1.42E-06    |
| 22824  | 3905 | HSPA4L    | -0.86 | 3.15E-14    | 2.09E-13    |
| 8436   | 3265 | CAVIN2    | -0.87 | 1.06E-05    | 3.44E-05    |
| 9649   | 7512 | RALGPS1   | -0.87 | 6.75E-11    | 3.54E-10    |
| 8242   | 5547 | KDM5C     | -0.87 | 2.26E-34    | 3.73E-33    |
| 89927  | 2236 | C16orf45  | -0.87 | 1.91E-09    | 8.90E-09    |
| 6752   | 2996 | SSTR2     | -0.87 | 0.019416963 | 0.037100827 |
| 9055   | 3027 | PRC1      | -0.87 | 1.20E-40    | 2.44E-39    |
| 23322  | 5765 | RPGRIP1L  | -0.87 | 3.96E-12    | 2.24E-11    |
| 57758  | 4377 | SCUBE2    | -0.87 | 2.05E-08    | 8.79E-08    |
| 157    | 9068 | GRK3      | -0.87 | 0.001259002 | 0.003012382 |
| 56905  | 4443 | C15orf39  | -0.87 | 5.29E-12    | 2.98E-11    |
| 2036   | 5928 | EPB41L1   | -0.87 | 2.43E-25    | 2.80E-24    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 4784   | 5578  | NFIX     | -0.87 | 6.19E-17    | 4.81E-16    |
| 317781 | 4738  | DDX51    | -0.87 | 3.03E-15    | 2.13E-14    |
| 399979 | 5548  | SNX19    | -0.87 | 1.63E-21    | 1.58E-20    |
| 9650   | 2698  | MTFR1    | -0.87 | 1.19E-11    | 6.55E-11    |
| 2304   | 3473  | FOX E1   | -0.87 | 3.01E-09    | 1.38E-08    |
| 5681   | 3505  | PSKH1    | -0.87 | 2.04E-16    | 1.54E-15    |
| 10400  | 1007  | PEMT     | -0.87 | 1.66E-13    | 1.04E-12    |
| 81502  | 1636  | HM13     | -0.87 | 1.24E-40    | 2.52E-39    |
| 334    | 3620  | APLP2    | -0.88 | 6.05E-57    | 1.98E-55    |
| 5150   | 3242  | PDE7A    | -0.88 | 2.21E-13    | 1.37E-12    |
| 6617   | 2684  | SNAPC1   | -0.88 | 6.41E-21    | 6.06E-20    |
| 2919   | 1184  | CXCL1    | -0.88 | 1.12E-38    | 2.15E-37    |
| 7474   | 5708  | WNT5A    | -0.88 | 1.57E-24    | 1.74E-23    |
| 1861   | 2117  | TOR1A    | -0.88 | 8.69E-30    | 1.22E-28    |
| 285368 | 3804  | PRRT3    | -0.88 | 1.45E-10    | 7.39E-10    |
| 7832   | 2718  | BTG2     | -0.88 | 1.77E-09    | 8.28E-09    |
| 54762  | 3710  | GRAMD1C  | -0.88 | 3.78E-08    | 1.58E-07    |
| 23205  | 3428  | ACSBG1   | -0.88 | 0.002745692 | 0.00617381  |
| 7336   | 1810  | UBE2V2   | -0.88 | 1.70E-25    | 1.98E-24    |
| 116987 | 10475 | AGAP1    | -0.88 | 1.24E-24    | 1.39E-23    |
| 5743   | 4507  | PTGS2    | -0.88 | 2.55E-06    | 8.82E-06    |
| 5519   | 5172  | PPP2R1B  | -0.88 | 3.82E-17    | 3.00E-16    |
| 83850  | 5427  | ESYT3    | -0.88 | 0.019624915 | 0.037461913 |
| 23064  | 7602  | SETX     | -0.88 | 1.20E-35    | 2.07E-34    |
| 55167  | 4092  | MSL2     | -0.88 | 2.84E-17    | 2.25E-16    |
| 81873  | 2107  | ARPC5L   | -0.88 | 1.71E-20    | 1.58E-19    |
| 28960  | 1473  | DCPS     | -0.88 | 3.64E-10    | 1.79E-09    |
| 9919   | 8445  | SEC16A   | -0.88 | 4.29E-42    | 9.17E-41    |
| 64782  | 3136  | AEN      | -0.89 | 2.75E-14    | 1.83E-13    |
| 79746  | 1674  | ECHDC3   | -0.89 | 7.01E-05    | 0.000203259 |
| 50624  | 2279  | CUZD1    | -0.89 | 0.016822971 | 0.032635719 |
| 9700   | 6635  | ESPL1    | -0.89 | 1.33E-22    | 1.36E-21    |
| 8425   | 5084  | LTBP4    | -0.89 | 7.84E-31    | 1.15E-29    |
| 54443  | 4780  | ANLN     | -0.89 | 1.10E-41    | 2.33E-40    |
| 57710  | 4155  | KIAA1614 | -0.89 | 7.22E-05    | 0.000209131 |
| 3234   | 1954  | HOXD8    | -0.89 | 1.06E-11    | 5.85E-11    |
| 9674   | 4592  | KIAA0040 | -0.89 | 1.00E-11    | 5.54E-11    |
| 3732   | 1855  | CD82     | -0.89 | 7.03E-23    | 7.25E-22    |
| 57573  | 6162  | ZNF471   | -0.89 | 0.000167402 | 0.000460576 |
| 51116  | 1516  | MRPS2    | -0.89 | 3.38E-19    | 2.94E-18    |
| 5738   | 6113  | PTGFRN   | -0.89 | 4.08E-47    | 1.00E-45    |
| 65251  | 3234  | ZNF649   | -0.89 | 1.90E-07    | 7.41E-07    |
| 10594  | 7311  | PRPF8    | -0.90 | 3.98E-42    | 8.54E-41    |
| 728116 | 4019  | ZBTB8B   | -0.90 | 0.012279561 | 0.024421675 |
| 8829   | 5597  | NRP1     | -0.90 | 1.13E-44    | 2.63E-43    |
| 81618  | 2100  | ITM2C    | -0.90 | 5.58E-37    | 1.00E-35    |
| 11092  | 1965  | SPACA9   | -0.90 | 1.44E-05    | 4.59E-05    |
| 10609  | 2634  | P3H4     | -0.90 | 1.71E-26    | 2.07E-25    |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 6526     | 11623 | SLC5A3       | -0.90 | 4.06E-27    | 5.08E-26    |
| 10987    | 1510  | COPS5        | -0.90 | 1.22E-15    | 8.76E-15    |
| 467      | 2106  | ATF3         | -0.90 | 5.80E-08    | 2.38E-07    |
| 78991    | 2142  | PCYOX1L      | -0.90 | 3.48E-12    | 1.99E-11    |
| 157313   | 5227  | CDCA2        | -0.90 | 6.47E-20    | 5.85E-19    |
| 90557    | 1458  | CCDC74A      | -0.90 | 7.90E-11    | 4.12E-10    |
| 10079    | 7622  | ATP9A        | -0.90 | 2.75E-33    | 4.36E-32    |
| 7840     | 12928 | ALMS1        | -0.90 | 1.17E-20    | 1.09E-19    |
| 9481     | 2156  | SLC25A27     | -0.90 | 0.011174921 | 0.022417974 |
| 80110    | 4676  | ZNF614       | -0.90 | 5.61E-11    | 2.96E-10    |
| 55200    | 2854  | PLEKHG6      | -0.90 | 0.011168667 | 0.022407958 |
| 10505    | 4162  | SEMA4F       | -0.90 | 7.50E-13    | 4.47E-12    |
| 127579   | 2381  | DCST2        | -0.90 | 0.022363891 | 0.042115699 |
| 51696    | 5621  | HECA         | -0.90 | 4.82E-15    | 3.35E-14    |
| 2524     | 3089  | FUT2         | -0.90 | 0.007825445 | 0.01618844  |
| 6431     | 3755  | SRSF6        | -0.91 | 1.09E-51    | 3.05E-50    |
| 9054     | 2385  | NFS1         | -0.91 | 1.20E-21    | 1.17E-20    |
| 6273     | 970   | S100A2       | -0.91 | 2.78E-05    | 8.51E-05    |
| 10926    | 3883  | DBF4         | -0.91 | 1.69E-23    | 1.80E-22    |
| 137886   | 4533  | UBXN2B       | -0.91 | 2.83E-18    | 2.36E-17    |
| 57178    | 7017  | ZMIZ1        | -0.91 | 8.73E-27    | 1.08E-25    |
| 3169     | 3465  | FOXA1        | -0.91 | 1.68E-05    | 5.30E-05    |
| 56652    | 2698  | TWNK         | -0.91 | 3.48E-11    | 1.87E-10    |
| 90381    | 6688  | TICRR        | -0.91 | 6.87E-15    | 4.72E-14    |
| 26039    | 4550  | SS18L1       | -0.91 | 3.22E-24    | 3.53E-23    |
| 55216    | 3250  | NKAPD1       | -0.91 | 3.19E-19    | 2.79E-18    |
| 10514    | 4131  | MYBBP1A      | -0.91 | 2.48E-25    | 2.86E-24    |
| 375057   | 7713  | STUM         | -0.91 | 0.014129254 | 0.027786231 |
| 3714     | 5845  | JAG2         | -0.91 | 9.02E-16    | 6.54E-15    |
| 3703     | 3081  | STT3A        | -0.91 | 3.49E-46    | 8.41E-45    |
| 1.08E+08 | 1904  | LOC107985388 | -0.91 | 0.002291858 | 0.005229451 |
| 170689   | 5309  | ADAMTS15     | -0.91 | 2.01E-09    | 9.36E-09    |
| 8601     | 1790  | RGS20        | -0.91 | 6.48E-09    | 2.89E-08    |
| 5580     | 2632  | PRKCD        | -0.91 | 3.39E-19    | 2.95E-18    |
| 114789   | 3399  | SLC25A25     | -0.91 | 3.72E-17    | 2.93E-16    |
| 138151   | 6899  | NACC2        | -0.91 | 3.80E-28    | 4.98E-27    |
| 57646    | 3965  | USP28        | -0.91 | 8.15E-18    | 6.63E-17    |
| 80024    | 3401  | SLC8B1       | -0.91 | 4.42E-16    | 3.25E-15    |
| 8243     | 9797  | SMC1A        | -0.91 | 2.78E-49    | 7.30E-48    |
| 10383    | 1591  | TUBB4B       | -0.91 | 1.01E-35    | 1.74E-34    |
| 10395    | 5946  | DLC1         | -0.91 | 5.79E-22    | 5.72E-21    |
| 55143    | 2468  | CDCA8        | -0.91 | 2.79E-28    | 3.67E-27    |
| 7067     | 2485  | THRA         | -0.92 | 1.55E-11    | 8.42E-11    |
| 3667     | 8743  | IRS1         | -0.92 | 5.53E-29    | 7.51E-28    |
| 6001     | 904   | RGS10        | -0.92 | 2.06E-15    | 1.46E-14    |
| 22856    | 3937  | CHSY1        | -0.92 | 3.22E-31    | 4.77E-30    |
| 9377     | 784   | COX5A        | -0.92 | 2.12E-33    | 3.38E-32    |
| 6608     | 3714  | SMO          | -0.92 | 4.55E-18    | 3.75E-17    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 219899 | 5221  | TBCEL    | -0.92 | 6.39E-13    | 3.82E-12    |
| 64764  | 6763  | CREB3L2  | -0.92 | 2.59E-29    | 3.58E-28    |
| 340156 | 5725  | MYLK4    | -0.92 | 0.006869177 | 0.014379304 |
| 730094 | 4445  | C16orf52 | -0.92 | 1.45E-13    | 9.10E-13    |
| 9442   | 1498  | MED27    | -0.92 | 1.14E-19    | 1.02E-18    |
| 26190  | 7340  | FBXW2    | -0.92 | 2.28E-28    | 3.01E-27    |
| 96764  | 3581  | TGS1     | -0.92 | 5.75E-19    | 4.94E-18    |
| 2788   | 4264  | GNG7     | -0.92 | 3.39E-06    | 1.16E-05    |
| 90120  | 2866  | TMEM250  | -0.92 | 2.10E-19    | 1.85E-18    |
| 27348  | 2710  | TOR1B    | -0.92 | 6.97E-28    | 9.05E-27    |
| 23212  | 1724  | RRS1     | -0.92 | 3.69E-14    | 2.43E-13    |
| 149420 | 4082  | PDIK1L   | -0.92 | 1.10E-08    | 4.82E-08    |
| 3054   | 7986  | HCFC1    | -0.92 | 6.05E-27    | 7.53E-26    |
| 259266 | 10008 | ASPM     | -0.92 | 6.14E-25    | 6.97E-24    |
| 93594  | 3336  | TBC1D31  | -0.92 | 1.94E-11    | 1.05E-10    |
| 577    | 5083  | ADGRB3   | -0.92 | 0.000406511 | 0.00105737  |
| 7013   | 2949  | TERF1    | -0.92 | 1.81E-22    | 1.84E-21    |
| 374946 | 2715  | DRAXIN   | -0.92 | 0.000811209 | 0.002006621 |
| 10500  | 4361  | SEMA6C   | -0.93 | 6.10E-07    | 2.26E-06    |
| 49854  | 7220  | ZBTB21   | -0.93 | 6.33E-17    | 4.92E-16    |
| 11245  | 3971  | GPR176   | -0.93 | 6.51E-24    | 7.04E-23    |
| 23313  | 6215  | KIAA0930 | -0.93 | 1.17E-28    | 1.57E-27    |
| 5695   | 1043  | PSMB7    | -0.93 | 3.21E-37    | 5.83E-36    |
| 857    | 2570  | CAV1     | -0.93 | 7.57E-37    | 1.35E-35    |
| 79187  | 1860  | FSD1     | -0.93 | 2.02E-13    | 1.25E-12    |
| 8821   | 8221  | INPP4B   | -0.93 | 5.04E-20    | 4.58E-19    |
| 23511  | 5710  | NUP188   | -0.93 | 2.25E-47    | 5.60E-46    |
| 9759   | 8367  | HDAC4    | -0.93 | 1.76E-13    | 1.10E-12    |
| 92126  | 9281  | DSEL     | -0.93 | 2.66E-14    | 1.77E-13    |
| 23060  | 8582  | ZNF609   | -0.94 | 7.64E-25    | 8.60E-24    |
| 1952   | 10562 | CELSR2   | -0.94 | 6.30E-25    | 7.14E-24    |
| 79586  | 2965  | CHPF     | -0.94 | 2.31E-26    | 2.79E-25    |
| 79805  | 4245  | VASH2    | -0.94 | 7.83E-06    | 2.58E-05    |
| 55635  | 4996  | DEPDC1   | -0.94 | 1.65E-31    | 2.47E-30    |
| 1033   | 906   | CDKN3    | -0.94 | 2.87E-17    | 2.28E-16    |
| 84247  | 5355  | RTL6     | -0.94 | 1.24E-23    | 1.33E-22    |
| 51006  | 2263  | SLC35C2  | -0.94 | 4.19E-33    | 6.61E-32    |
| 1849   | 3248  | DUSP7    | -0.94 | 1.66E-15    | 1.19E-14    |
| 339761 | 4805  | CYP27C1  | -0.95 | 3.91E-05    | 0.000117607 |
| 5744   | 1731  | PTHLH    | -0.95 | 0.007522476 | 0.01562264  |
| 9493   | 3020  | KIF23    | -0.95 | 1.10E-34    | 1.83E-33    |
| 284611 | 5359  | FAM102B  | -0.95 | 2.09E-10    | 1.05E-09    |
| 26271  | 2128  | FBXO5    | -0.95 | 2.18E-30    | 3.14E-29    |
| 5083   | 3122  | PAX9     | -0.95 | 0.024856181 | 0.046371758 |
| 81488  | 4302  | POLR2M   | -0.95 | 1.16E-27    | 1.49E-26    |
| 170961 | 3507  | ANKRD24  | -0.95 | 0.006574931 | 0.013823615 |
| 54491  | 4161  | FAM105A  | -0.95 | 2.63E-17    | 2.09E-16    |
| 115811 | 1822  | IQCD     | -0.95 | 3.07E-05    | 9.35E-05    |



|        |      |              |       |             |             |
|--------|------|--------------|-------|-------------|-------------|
| 79845  | 1864 | RNF122       | -0.95 | 0.002763892 | 0.006211591 |
| 1E+08  | 3757 | LOC100289279 | -0.95 | 0.001519928 | 0.003586337 |
| 1152   | 1476 | CKB          | -0.95 | 7.19E-22    | 7.08E-21    |
| 472    | 9657 | ATM          | -0.95 | 7.57E-26    | 8.94E-25    |
| 9787   | 2994 | DLGAP5       | -0.96 | 9.76E-38    | 1.81E-36    |
| 92196  | 551  | DAPL1        | -0.96 | 0.013580254 | 0.026795552 |
| 199800 | 2112 | ADM5         | -0.96 | 0.002733244 | 0.006149713 |
| 10807  | 2209 | SDCCAG3      | -0.96 | 3.87E-26    | 4.64E-25    |
| 79575  | 2114 | ABHD8        | -0.96 | 1.17E-13    | 7.41E-13    |
| 55901  | 3276 | THSD1        | -0.96 | 8.21E-16    | 5.97E-15    |
| 83875  | 2902 | BCO2         | -0.96 | 0.002022888 | 0.004664246 |
| 2342   | 2836 | FNTB         | -0.96 | 7.95E-12    | 4.43E-11    |
| 127544 | 2844 | RNF19B       | -0.96 | 9.31E-14    | 5.95E-13    |
| 4173   | 4808 | MCM4         | -0.96 | 3.07E-55    | 9.51E-54    |
| 51230  | 5783 | PHF20        | -0.96 | 1.27E-44    | 2.95E-43    |
| 115509 | 3565 | ZNF689       | -0.96 | 1.82E-12    | 1.06E-11    |
| 55174  | 2546 | INTS10       | -0.96 | 3.19E-15    | 2.24E-14    |
| 10868  | 4430 | USP20        | -0.96 | 8.90E-18    | 7.23E-17    |
| 54478  | 1565 | PIMREG       | -0.96 | 4.67E-25    | 5.34E-24    |
| 79000  | 2178 | AUNIP        | -0.96 | 9.92E-07    | 3.59E-06    |
| 53346  | 2360 | TM6SF1       | -0.96 | 1.21E-07    | 4.82E-07    |
| 84913  | 5873 | ATOH8        | -0.96 | 8.08E-11    | 4.20E-10    |
| 23395  | 4197 | LARS2        | -0.96 | 8.93E-21    | 8.40E-20    |
| 6917   | 2778 | TCEA1        | -0.96 | 3.47E-34    | 5.67E-33    |
| 79937  | 5229 | CNTNAP3      | -0.96 | 1.92E-09    | 8.93E-09    |
| 55706  | 4776 | NDC1         | -0.96 | 2.66E-30    | 3.81E-29    |
| 647310 | 2571 | TEX22        | -0.96 | 0.026559348 | 0.049249269 |
| 4254   | 5439 | KITLG        | -0.97 | 2.60E-36    | 4.60E-35    |
| 51333  | 1464 | ZNF771       | -0.97 | 2.22E-05    | 6.89E-05    |
| 9738   | 5448 | CCP110       | -0.97 | 1.35E-28    | 1.80E-27    |
| 1490   | 2358 | CTGF         | -0.97 | 3.08E-27    | 3.88E-26    |
| 899    | 4085 | CCNF         | -0.97 | 5.46E-32    | 8.30E-31    |
| 7464   | 5507 | CORO2A       | -0.97 | 4.14E-19    | 3.58E-18    |
| 602    | 2013 | BCL3         | -0.97 | 5.56E-23    | 5.78E-22    |
| 4957   | 3717 | ODF2         | -0.97 | 1.16E-31    | 1.74E-30    |
| 84181  | 9534 | CHD6         | -0.97 | 5.15E-38    | 9.67E-37    |
| 7185   | 4381 | TRAF1        | -0.97 | 6.41E-07    | 2.36E-06    |
| 4751   | 2144 | NEK2         | -0.97 | 1.48E-18    | 1.24E-17    |
| 64410  | 3683 | KLHL25       | -0.97 | 1.91E-06    | 6.71E-06    |
| 144699 | 1623 | FBXL14       | -0.97 | 0.000196559 | 0.000534998 |
| 30815  | 2447 | ST6GALNAC6   | -0.97 | 2.53E-31    | 3.75E-30    |
| 57405  | 1368 | SPC25        | -0.97 | 1.32E-20    | 1.23E-19    |
| 55502  | 1455 | HES6         | -0.97 | 4.59E-07    | 1.72E-06    |
| 51068  | 2864 | NMD3         | -0.97 | 8.43E-23    | 8.68E-22    |
| 79611  | 3943 | ACSS3        | -0.97 | 0.000244668 | 0.000656587 |
| 11174  | 6186 | ADAMTS6      | -0.97 | 5.32E-07    | 1.98E-06    |
| 10389  | 4143 | SCML2        | -0.98 | 4.46E-08    | 1.85E-07    |
| 147949 | 2257 | ZNF583       | -0.98 | 5.25E-05    | 0.0001552   |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 83540    | 1923  | NUF2         | -0.98 | 7.94E-27    | 9.82E-26    |
| 64840    | 1843  | PORCN        | -0.98 | 5.01E-14    | 3.28E-13    |
| 5564     | 2403  | PRKAB1       | -0.98 | 1.77E-28    | 2.35E-27    |
| 1027     | 2535  | CDKN1B       | -0.98 | 2.42E-36    | 4.28E-35    |
| 64145    | 6230  | RBSN         | -0.98 | 9.34E-23    | 9.59E-22    |
| 51552    | 4379  | RAB14        | -0.98 | 1.80E-34    | 2.97E-33    |
| 8303     | 3275  | SNN          | -0.98 | 7.98E-19    | 6.80E-18    |
| 55969    | 1138  | C20orf24     | -0.98 | 8.84E-30    | 1.24E-28    |
| 4054     | 4688  | LTBP3        | -0.98 | 8.91E-45    | 2.08E-43    |
| 83604    | 4068  | TMEM47       | -0.98 | 3.22E-33    | 5.10E-32    |
| 1032     | 1184  | CDKN2D       | -0.98 | 9.66E-14    | 6.16E-13    |
| 4193     | 7077  | MDM2         | -0.98 | 3.04E-43    | 6.76E-42    |
| 9684     | 5247  | LRRC14       | -0.99 | 1.30E-26    | 1.59E-25    |
| 57727    | 3222  | NCOA5        | -0.99 | 2.51E-37    | 4.59E-36    |
| 57190    | 4261  | SELENON      | -0.99 | 1.34E-39    | 2.66E-38    |
| 142679   | 5226  | DUSP19       | -0.99 | 0.003698238 | 0.008142296 |
| 81575    | 4752  | APOLD1       | -0.99 | 1.95E-13    | 1.21E-12    |
| 64084    | 10818 | CLSTN2       | -0.99 | 1.88E-33    | 3.00E-32    |
| 79957    | 2670  | PAQR6        | -0.99 | 1.50E-13    | 9.45E-13    |
| 25806    | 1512  | VAX2         | -0.99 | 0.000836416 | 0.002063515 |
| 23108    | 6184  | RAP1GAP2     | -0.99 | 1.58E-16    | 1.19E-15    |
| 4774     | 9336  | NFIA         | -0.99 | 6.06E-17    | 4.72E-16    |
| 7994     | 9210  | KAT6A        | -0.99 | 1.98E-25    | 2.30E-24    |
| 55755    | 5896  | CDK5RAP2     | -0.99 | 7.24E-45    | 1.70E-43    |
| 151246   | 4245  | SGO2         | -0.99 | 2.77E-26    | 3.35E-25    |
| 65062    | 5488  | TMEM237      | -0.99 | 6.45E-29    | 8.75E-28    |
| 3233     | 4053  | HOXD4        | -1.00 | 1.98E-23    | 2.09E-22    |
| 1.08E+08 | 2842  | LOC107987464 | -1.00 | 0.002403115 | 0.005463667 |
| 22821    | 4245  | RASA3        | -1.00 | 1.10E-21    | 1.07E-20    |
| 4824     | 3169  | NKX3-1       | -1.00 | 5.99E-08    | 2.46E-07    |
| 8613     | 3324  | PLPP3        | -1.00 | 6.56E-14    | 4.24E-13    |
| 56912    | 1701  | IFT46        | -1.00 | 4.38E-14    | 2.88E-13    |
| 867      | 10844 | CBL          | -1.00 | 2.66E-27    | 3.37E-26    |
| 8894     | 2210  | EIF2S2       | -1.00 | 1.44E-37    | 2.67E-36    |
| 9918     | 4806  | NCAPD2       | -1.00 | 1.30E-51    | 3.63E-50    |
| 525      | 1956  | ATP6V1B1     | -1.00 | 0.01203431  | 0.023968795 |
| 57678    | 6406  | GPAM         | -1.00 | 3.22E-20    | 2.95E-19    |
| 219854   | 3630  | TMEM218      | -1.00 | 8.73E-10    | 4.17E-09    |
| 136288   | 2149  | C7orf57      | -1.00 | 0.008361152 | 0.017202519 |
| 3902     | 1770  | LAG3         | -1.00 | 0.023931942 | 0.044779143 |
| 9354     | 6125  | UBE4A        | -1.00 | 1.16E-22    | 1.19E-21    |
| 2305     | 3542  | FOXM1        | -1.00 | 2.99E-26    | 3.60E-25    |
| 6573     | 3222  | SLC19A1      | -1.00 | 5.91E-20    | 5.36E-19    |
| 1047     | 2744  | CLGN         | -1.00 | 7.79E-23    | 8.01E-22    |
| 6230     | 514   | RPS25        | -1.00 | 1.68E-09    | 7.84E-09    |
| 1.07E+08 | 3808  | BUB1B-PAK6   | -1.01 | 0.000339191 | 0.000892322 |
| 9885     | 3918  | OSBPL2       | -1.01 | 2.80E-34    | 4.59E-33    |
| 10388    | 5554  | SYCP2        | -1.01 | 1.28E-23    | 1.37E-22    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 7529   | 3076  | YWHAB    | -1.01 | 7.88E-59    | 2.68E-57    |
| 23762  | 3604  | OSBP2    | -1.01 | 7.68E-10    | 3.69E-09    |
| 11064  | 6581  | CNTRL    | -1.01 | 2.57E-22    | 2.59E-21    |
| 2199   | 4193  | FBLN2    | -1.01 | 9.87E-09    | 4.34E-08    |
| 57568  | 6695  | SIPA1L2  | -1.01 | 9.02E-34    | 1.46E-32    |
| 84085  | 4354  | FBXO30   | -1.01 | 1.25E-24    | 1.39E-23    |
| 8065   | 5920  | CUL5     | -1.01 | 2.48E-27    | 3.14E-26    |
| 2308   | 5772  | FOXO1    | -1.01 | 2.87E-29    | 3.94E-28    |
| 222950 | 3594  | NYAP1    | -1.01 | 0.00471874  | 0.010202309 |
| 144347 | 2160  | RFLNA    | -1.01 | 3.36E-24    | 3.67E-23    |
| 56112  | 4605  | PCDHGA3  | -1.01 | 0.017919797 | 0.034537254 |
| 29780  | 1713  | PARVB    | -1.01 | 1.96E-09    | 9.13E-09    |
| 730005 | 3393  | SEC14L6  | -1.01 | 2.20E-13    | 1.36E-12    |
| 4909   | 1074  | NTF4     | -1.01 | 0.004523026 | 0.00981499  |
| 6513   | 3687  | SLC2A1   | -1.02 | 5.67E-63    | 2.14E-61    |
| 160428 | 7098  | ALDH1L2  | -1.02 | 0.003279571 | 0.007279379 |
| 2637   | 1795  | GBX2     | -1.02 | 0.000397548 | 0.001035572 |
| 256691 | 3586  | MAMDC2   | -1.02 | 8.56E-23    | 8.80E-22    |
| 54768  | 4180  | HYDIN    | -1.02 | 0.000323423 | 0.000853242 |
| 80320  | 3763  | SP6      | -1.02 | 2.10E-05    | 6.55E-05    |
| 55787  | 4407  | TXLNG    | -1.02 | 2.19E-28    | 2.90E-27    |
| 1384   | 2791  | CRAT     | -1.02 | 1.74E-37    | 3.21E-36    |
| 1041   | 2583  | CDSN     | -1.02 | 0.001904814 | 0.004411461 |
| 6838   | 2326  | SURF6    | -1.02 | 1.66E-24    | 1.84E-23    |
| 10420  | 2941  | TESK2    | -1.02 | 3.43E-07    | 1.30E-06    |
| 84928  | 3537  | TMEM209  | -1.02 | 1.18E-28    | 1.58E-27    |
| 57153  | 3392  | SLC44A2  | -1.03 | 5.30E-40    | 1.06E-38    |
| 991    | 1697  | CDC20    | -1.03 | 8.69E-44    | 1.97E-42    |
| 11238  | 5261  | CA5B     | -1.03 | 2.17E-12    | 1.25E-11    |
| 9028   | 1452  | RHBDL1   | -1.03 | 0.000263784 | 0.000704587 |
| 5244   | 4037  | ABCB4    | -1.03 | 5.22E-05    | 0.000154316 |
| 63916  | 3550  | ELMO2    | -1.03 | 4.08E-36    | 7.14E-35    |
| 8324   | 3851  | FZD7     | -1.03 | 1.16E-13    | 7.35E-13    |
| 388610 | 1968  | TRNP1    | -1.03 | 3.65E-15    | 2.55E-14    |
| 353091 | 3729  | RAET1G   | -1.03 | 0.006963709 | 0.014560036 |
| 55070  | 2296  | DET1     | -1.03 | 6.35E-06    | 2.11E-05    |
| 22901  | 3434  | ARSG     | -1.03 | 5.85E-07    | 2.17E-06    |
| 51754  | 3079  | TMEM8B   | -1.03 | 8.85E-15    | 6.05E-14    |
| 8200   | 2380  | GDF5     | -1.03 | 3.12E-06    | 1.07E-05    |
| 11047  | 1499  | ADRM1    | -1.03 | 1.71E-33    | 2.73E-32    |
| 79365  | 3796  | BHLHE41  | -1.03 | 3.93E-40    | 7.89E-39    |
| 83449  | 3433  | PMFBP1   | -1.03 | 0.025121149 | 0.046841491 |
| 57684  | 2039  | ZBTB26   | -1.03 | 4.48E-08    | 1.86E-07    |
| 7296   | 3914  | TXNRD1   | -1.03 | 1.56E-55    | 4.87E-54    |
| 56413  | 1504  | LTB4R2   | -1.03 | 0.000219766 | 0.000593705 |
| 79866  | 2768  | BORA     | -1.03 | 6.96E-14    | 4.49E-13    |
| 9875   | 10808 | URB1     | -1.03 | 6.65E-25    | 7.52E-24    |
| 57636  | 5682  | ARHGAP23 | -1.04 | 8.30E-38    | 1.54E-36    |

|          |      |              |       |             |             |
|----------|------|--------------|-------|-------------|-------------|
| 11004    | 2877 | KIF2C        | -1.04 | 1.01E-42    | 2.21E-41    |
| 55872    | 2117 | PBK          | -1.04 | 3.40E-23    | 3.55E-22    |
| 57513    | 4804 | CASKIN2      | -1.04 | 1.56E-26    | 1.90E-25    |
| 8439     | 3571 | NSMAF        | -1.04 | 1.18E-21    | 1.15E-20    |
| 51512    | 4109 | GTSE1        | -1.04 | 3.39E-42    | 7.31E-41    |
| 124359   | 8131 | CDYL2        | -1.04 | 5.01E-11    | 2.65E-10    |
| 23042    | 2880 | PDXDC1       | -1.04 | 1.79E-17    | 1.43E-16    |
| 4902     | 1141 | NRTN         | -1.04 | 0.009555772 | 0.019450906 |
| 389289   | 1280 | ANXA2R       | -1.04 | 0.006465562 | 0.013611388 |
| 84798    | 1596 | C19orf48     | -1.04 | 9.08E-31    | 1.32E-29    |
| 5342     | 3016 | PLGLB2       | -1.04 | 0.011185436 | 0.022436536 |
| 1058     | 1419 | CENPA        | -1.04 | 1.40E-16    | 1.07E-15    |
| 55175    | 7410 | KLHL11       | -1.04 | 1.37E-17    | 1.11E-16    |
| 958      | 1601 | CD40         | -1.04 | 1.05E-28    | 1.41E-27    |
| 23508    | 5217 | TTC9         | -1.04 | 1.00E-13    | 6.37E-13    |
| 115948   | 2176 | CCDC151      | -1.04 | 0.020874868 | 0.039571404 |
| 57406    | 2392 | ABHD6        | -1.04 | 9.63E-08    | 3.86E-07    |
| 9328     | 2313 | GTF3C5       | -1.04 | 3.47E-45    | 8.19E-44    |
| 84168    | 4950 | ANTXR1       | -1.04 | 2.33E-36    | 4.13E-35    |
| 6734     | 3100 | SRPRA        | -1.04 | 1.12E-40    | 2.29E-39    |
| 970      | 1187 | CD70         | -1.04 | 7.60E-33    | 1.19E-31    |
| 8269     | 1682 | TMEM187      | -1.04 | 5.83E-05    | 0.000170765 |
| 1.07E+08 | 1450 | BOLA2-SMG1P6 | -1.05 | 3.21E-20    | 2.93E-19    |
| 688      | 3172 | KLF5         | -1.05 | 8.39E-33    | 1.31E-31    |
| 1296     | 4542 | COL8A2       | -1.05 | 9.22E-16    | 6.68E-15    |
| 26035    | 5689 | GLCE         | -1.05 | 3.37E-22    | 3.38E-21    |
| 51654    | 1599 | CDK5RAP1     | -1.05 | 4.37E-30    | 6.20E-29    |
| 388341   | 2634 | LRRC75A      | -1.05 | 1.25E-07    | 4.97E-07    |
| 7153     | 5740 | TOP2A        | -1.05 | 1.35E-85    | 8.24E-84    |
| 221935   | 9053 | SDK1         | -1.05 | 2.47E-19    | 2.17E-18    |
| 10137    | 6716 | RBM12        | -1.05 | 5.42E-57    | 1.77E-55    |
| 79034    | 2127 | C7orf26      | -1.05 | 1.90E-17    | 1.52E-16    |
| 4808     | 2462 | NHLH2        | -1.05 | 0.022851106 | 0.042946737 |
| 54436    | 4336 | SH3TC1       | -1.05 | 2.27E-12    | 1.31E-11    |
| 1737     | 4330 | DLAT         | -1.06 | 3.55E-28    | 4.66E-27    |
| 54753    | 3636 | ZNF853       | -1.06 | 2.87E-08    | 1.21E-07    |
| 10194    | 4911 | TSHZ1        | -1.06 | 1.37E-27    | 1.76E-26    |
| 1656     | 6127 | DDX6         | -1.06 | 5.80E-54    | 1.75E-52    |
| 7403     | 5504 | KDM6A        | -1.06 | 1.09E-25    | 1.28E-24    |
| 50506    | 6347 | DUOX2        | -1.06 | 0.023941412 | 0.044782715 |
| 7090     | 4785 | TLE3         | -1.06 | 6.24E-27    | 7.76E-26    |
| 253943   | 5062 | YTHDF3       | -1.06 | 1.52E-45    | 3.61E-44    |
| 23637    | 4857 | RABGAP1      | -1.06 | 9.25E-45    | 2.16E-43    |
| 26586    | 3645 | CKAP2        | -1.06 | 1.96E-46    | 4.76E-45    |
| 440804   | 5429 | RIMBP3B      | -1.06 | 0.014724902 | 0.028864967 |
| 84986    | 5482 | ARHGAP19     | -1.06 | 3.45E-16    | 2.55E-15    |
| 2770     | 3306 | GNAI1        | -1.07 | 6.38E-34    | 1.04E-32    |
| 26958    | 3154 | COPG2        | -1.07 | 5.93E-33    | 9.29E-32    |

|        |       |         |       |             |             |
|--------|-------|---------|-------|-------------|-------------|
| 84078  | 3008  | KBTBD7  | -1.07 | 1.97E-07    | 7.66E-07    |
| 9057   | 6368  | SLC7A6  | -1.07 | 3.13E-30    | 4.46E-29    |
| 2819   | 3083  | GPD1    | -1.07 | 0.017370958 | 0.033577804 |
| 7150   | 3734  | TOP1    | -1.07 | 1.49E-69    | 6.44E-68    |
| 51507  | 1674  | RTF2    | -1.07 | 1.02E-40    | 2.09E-39    |
| 84253  | 3699  | GARNL3  | -1.07 | 4.14E-08    | 1.72E-07    |
| 29068  | 8746  | ZBTB44  | -1.07 | 9.58E-36    | 1.66E-34    |
| 94032  | 1360  | CAMK2N2 | -1.07 | 1.07E-12    | 6.32E-12    |
| 51526  | 1998  | OSER1   | -1.07 | 5.40E-37    | 9.74E-36    |
| 4288   | 10957 | MKI67   | -1.07 | 3.30E-48    | 8.30E-47    |
| 10509  | 3649  | SEMA4B  | -1.07 | 1.94E-50    | 5.25E-49    |
| 57030  | 2993  | SLC17A7 | -1.07 | 0.020668681 | 0.039218403 |
| 201294 | 4092  | UNC13D  | -1.07 | 0.000170601 | 0.000468579 |
| 191    | 2279  | AHCY    | -1.08 | 1.17E-49    | 3.12E-48    |
| 28989  | 1539  | NTMT1   | -1.08 | 9.95E-17    | 7.64E-16    |
| 4293   | 11071 | MAP3K9  | -1.08 | 6.02E-33    | 9.42E-32    |
| 2306   | 4675  | FOXD2   | -1.08 | 0.000607373 | 0.001534453 |
| 23025  | 9847  | UNC13A  | -1.08 | 0.017136821 | 0.033168522 |
| 63935  | 2711  | PCIF1   | -1.08 | 3.25E-35    | 5.52E-34    |
| 26018  | 4353  | LRIG1   | -1.08 | 3.74E-17    | 2.94E-16    |
| 253558 | 4877  | LCLAT1  | -1.08 | 3.22E-26    | 3.87E-25    |
| 7059   | 3447  | THBS3   | -1.08 | 8.81E-22    | 8.66E-21    |
| 84733  | 3971  | CBX2    | -1.08 | 1.60E-17    | 1.28E-16    |
| 80124  | 8176  | VCPIP1  | -1.08 | 2.56E-17    | 2.04E-16    |
| 23613  | 4916  | ZMYND8  | -1.08 | 2.82E-60    | 9.96E-59    |
| 7222   | 3455  | TRPC3   | -1.08 | 7.24E-06    | 2.39E-05    |
| 333929 | 1713  | SNAI3   | -1.08 | 0.022430437 | 0.042227591 |
| 50859  | 2552  | SPOCK3  | -1.08 | 1.37E-06    | 4.88E-06    |
| 120071 | 1857  | LARGE2  | -1.08 | 0.015300042 | 0.029906617 |
| 7753   | 3976  | ZNF202  | -1.09 | 2.52E-10    | 1.26E-09    |
| 55686  | 3213  | MREG    | -1.09 | 9.95E-06    | 3.23E-05    |
| 8509   | 2969  | NDST2   | -1.09 | 4.13E-17    | 3.24E-16    |
| 3312   | 2382  | HSPA8   | -1.09 | 2.76E-75    | 1.37E-73    |
| 2775   | 5963  | GNAO1   | -1.09 | 0.000348932 | 0.000915915 |
| 54414  | 3033  | SIAE    | -1.09 | 1.12E-12    | 6.62E-12    |
| 54842  | 4712  | MFSD6   | -1.09 | 9.87E-28    | 1.27E-26    |
| 6372   | 1677  | CXCL6   | -1.09 | 1.49E-18    | 1.26E-17    |
| 22913  | 1734  | RALY    | -1.09 | 1.74E-51    | 4.84E-50    |
| 64077  | 1388  | LHPP    | -1.09 | 6.09E-15    | 4.20E-14    |
| 5724   | 4109  | PTAFR   | -1.09 | 0.002053529 | 0.004728147 |
| 6542   | 7584  | SLC7A2  | -1.10 | 2.60E-17    | 2.06E-16    |
| 400954 | 7641  | EML6    | -1.10 | 8.35E-08    | 3.37E-07    |
| 57468  | 6066  | SLC12A5 | -1.10 | 0.000208283 | 0.000564315 |
| 23387  | 5432  | SIK3    | -1.10 | 6.00E-19    | 5.15E-18    |
| 2152   | 2371  | F3      | -1.10 | 9.55E-14    | 6.10E-13    |
| 11091  | 3165  | WDR5    | -1.10 | 9.04E-44    | 2.05E-42    |
| 54820  | 3219  | NDE1    | -1.10 | 1.01E-33    | 1.63E-32    |
| 155054 | 3244  | ZNF425  | -1.10 | 0.000112567 | 0.000317727 |

|        |       |           |       |             |             |
|--------|-------|-----------|-------|-------------|-------------|
| 10499  | 8468  | NCOA2     | -1.10 | 2.83E-26    | 3.41E-25    |
| 29116  | 2987  | MYLIP     | -1.11 | 4.55E-17    | 3.56E-16    |
| 23301  | 4573  | EHBP1     | -1.11 | 2.95E-52    | 8.45E-51    |
| 83723  | 2007  | FAM57B    | -1.11 | 0.006238082 | 0.013173074 |
| 11096  | 9583  | ADAMTS5   | -1.11 | 3.77E-24    | 4.11E-23    |
| 408    | 7483  | ARRB1     | -1.11 | 7.07E-17    | 5.48E-16    |
| 23235  | 5339  | SIK2      | -1.11 | 1.82E-23    | 1.93E-22    |
| 130574 | 4101  | LYPD6     | -1.11 | 1.32E-11    | 7.22E-11    |
| 7579   | 5215  | ZSCAN20   | -1.11 | 1.66E-11    | 9.03E-11    |
| 25802  | 3967  | LMOD1     | -1.11 | 7.39E-05    | 0.000213841 |
| 1869   | 2722  | E2F1      | -1.11 | 1.04E-45    | 2.48E-44    |
| 5376   | 1748  | PMP22     | -1.11 | 2.22E-17    | 1.77E-16    |
| 5976   | 5364  | UPF1      | -1.11 | 6.23E-61    | 2.25E-59    |
| 283820 | 4260  | NOMO2     | -1.11 | 7.65E-23    | 7.88E-22    |
| 4355   | 4318  | MPP2      | -1.11 | 2.72E-19    | 2.39E-18    |
| 126820 | 2992  | WDR63     | -1.12 | 0.000296062 | 0.000785138 |
| 1E+08  | 3232  | EPOP      | -1.12 | 4.12E-13    | 2.49E-12    |
| 1870   | 4547  | E2F2      | -1.12 | 5.83E-15    | 4.02E-14    |
| 9644   | 11366 | SH3PXD2A  | -1.12 | 6.97E-50    | 1.87E-48    |
| 10544  | 1506  | PROCR     | -1.12 | 1.02E-35    | 1.76E-34    |
| 8793   | 3569  | TNFRSF10D | -1.12 | 6.73E-24    | 7.27E-23    |
| 8705   | 1704  | B3GALT4   | -1.12 | 0.001097864 | 0.002657608 |
| 116039 | 1701  | OSR2      | -1.12 | 0.00153222  | 0.003611547 |
| 340061 | 2065  | TMEM173   | -1.12 | 3.28E-28    | 4.30E-27    |
| 158135 | 3143  | TTLL11    | -1.12 | 1.44E-07    | 5.66E-07    |
| 55741  | 1918  | EDEM2     | -1.12 | 1.30E-29    | 1.82E-28    |
| 140823 | 470   | ROMO1     | -1.12 | 7.66E-08    | 3.10E-07    |
| 4091   | 3561  | SMAD6     | -1.12 | 2.55E-16    | 1.91E-15    |
| 441294 | 2587  | CTAGE15   | -1.13 | 0.008714566 | 0.017873762 |
| 5049   | 4192  | PAFAH1B2  | -1.13 | 1.20E-52    | 3.50E-51    |
| 55924  | 5989  | FAM212B   | -1.13 | 3.71E-16    | 2.74E-15    |
| 9912   | 4249  | ARHGAP44  | -1.13 | 0.000970777 | 0.002370313 |
| 80790  | 4102  | CMIP      | -1.13 | 7.26E-44    | 1.66E-42    |
| 140459 | 4650  | ASB6      | -1.13 | 2.71E-36    | 4.78E-35    |
| 4249   | 8229  | MGAT5     | -1.13 | 2.06E-39    | 4.05E-38    |
| 26086  | 2642  | GPSM1     | -1.13 | 8.47E-32    | 1.28E-30    |
| 63905  | 1342  | MANBAL    | -1.13 | 5.24E-38    | 9.82E-37    |
| 25939  | 3728  | SAMHD1    | -1.13 | 5.10E-54    | 1.54E-52    |
| 11142  | 1199  | PKIG      | -1.14 | 2.89E-21    | 2.77E-20    |
| 58489  | 2408  | ABHD17C   | -1.14 | 3.29E-15    | 2.31E-14    |
| 8818   | 1561  | DPM2      | -1.14 | 1.99E-32    | 3.07E-31    |
| 83983  | 1459  | TSSK6     | -1.14 | 0.00867071  | 0.017792028 |
| 22839  | 3442  | DLGAP4    | -1.14 | 1.13E-35    | 1.95E-34    |
| 5509   | 3481  | PPP1R3D   | -1.14 | 2.27E-14    | 1.52E-13    |
| 57608  | 9300  | JCAD      | -1.14 | 5.70E-41    | 1.18E-39    |
| 84811  | 2226  | BUD13     | -1.14 | 1.40E-21    | 1.36E-20    |
| 389813 | 2931  | AJM1      | -1.14 | 0.000200334 | 0.000544353 |
| 144717 | 3149  | FAM109A   | -1.14 | 2.71E-10    | 1.35E-09    |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 150468   | 4770  | CKAP2L       | -1.15 | 1.43E-41    | 2.98E-40    |
| 222256   | 6415  | CDHR3        | -1.15 | 0.016232331 | 0.031572639 |
| 9821     | 6574  | RB1CC1       | -1.15 | 7.55E-46    | 1.80E-44    |
| 57148    | 7185  | RALGAPB      | -1.15 | 3.84E-59    | 1.32E-57    |
| 79183    | 6197  | TTPAL        | -1.15 | 6.34E-38    | 1.18E-36    |
| 57690    | 10595 | TNRC6C       | -1.15 | 8.33E-11    | 4.33E-10    |
| 57706    | 3423  | DENND1A      | -1.15 | 1.36E-25    | 1.59E-24    |
| 151313   | 1561  | FAHD2B       | -1.15 | 2.24E-12    | 1.30E-11    |
| 444      | 3608  | ASPH         | -1.15 | 8.62E-79    | 4.57E-77    |
| 1.05E+08 | 472   | LOC105379554 | -1.15 | 6.57E-05    | 0.000191381 |
| 29767    | 9186  | TMOD2        | -1.15 | 8.58E-09    | 3.79E-08    |
| 3034     | 2746  | HAL          | -1.16 | 0.019159646 | 0.03666436  |
| 4798     | 4861  | NFRKB        | -1.16 | 7.84E-25    | 8.81E-24    |
| 9217     | 7942  | VAPB         | -1.16 | 4.11E-70    | 1.80E-68    |
| 699      | 3630  | BUB1         | -1.16 | 5.35E-49    | 1.39E-47    |
| 84552    | 3847  | PARD6G       | -1.16 | 2.27E-10    | 1.14E-09    |
| 9718     | 1027  | ECE2         | -1.16 | 6.07E-07    | 2.25E-06    |
| 10691    | 2577  | GMEB1        | -1.16 | 5.35E-23    | 5.56E-22    |
| 51282    | 977   | SCAND1       | -1.16 | 3.44E-33    | 5.45E-32    |
| 890      | 2811  | CCNA2        | -1.16 | 1.05E-57    | 3.47E-56    |
| 51203    | 2326  | NUSAP1       | -1.16 | 2.67E-64    | 1.04E-62    |
| 84627    | 13464 | ZNF469       | -1.16 | 2.51E-07    | 9.63E-07    |
| 1E+08    | 8413  | TMEM170B     | -1.16 | 1.47E-10    | 7.47E-10    |
| 5880     | 1538  | RAC2         | -1.16 | 4.97E-28    | 6.51E-27    |
| 83468    | 2178  | GLT8D2       | -1.16 | 1.65E-16    | 1.25E-15    |
| 60526    | 3849  | LDAH         | -1.16 | 1.41E-20    | 1.31E-19    |
| 51092    | 3919  | SIDT2        | -1.16 | 3.44E-20    | 3.14E-19    |
| 6934     | 3966  | TCF7L2       | -1.16 | 3.99E-29    | 5.45E-28    |
| 9133     | 1566  | CCNB2        | -1.16 | 1.27E-55    | 3.99E-54    |
| 112616   | 1383  | CMTM7        | -1.17 | 2.66E-18    | 2.21E-17    |
| 83541    | 1881  | FAM110A      | -1.17 | 1.30E-10    | 6.65E-10    |
| 56992    | 4315  | KIF15        | -1.17 | 2.23E-36    | 3.96E-35    |
| 23051    | 9423  | ZHX3         | -1.17 | 1.46E-67    | 6.10E-66    |
| 317762   | 5020  | CCDC85C      | -1.17 | 7.44E-30    | 1.05E-28    |
| 54413    | 4471  | NLGN3        | -1.17 | 0.001971428 | 0.004552089 |
| 728715   | 576   | LOC728715    | -1.18 | 0.004939273 | 0.010636407 |
| 2122     | 4861  | MECOM        | -1.18 | 6.90E-41    | 1.42E-39    |
| 5335     | 5204  | PLCG1        | -1.18 | 1.60E-58    | 5.44E-57    |
| 57683    | 10239 | ZDBF2        | -1.18 | 2.64E-16    | 1.97E-15    |
| 6227     | 418   | RPS21        | -1.18 | 8.81E-05    | 0.000252092 |
| 1.01E+08 | 2712  | GVQW2        | -1.18 | 0.021451867 | 0.040552906 |
| 55652    | 3010  | SLC48A1      | -1.18 | 2.24E-38    | 4.27E-37    |
| 1909     | 3922  | EDNRA        | -1.18 | 2.28E-10    | 1.14E-09    |
| 116535   | 2308  | MRGPRF       | -1.18 | 0.026888143 | 0.049809293 |
| 9139     | 7339  | CBFA2T2      | -1.18 | 1.66E-44    | 3.82E-43    |
| 55156    | 3017  | ARMC1        | -1.18 | 6.69E-36    | 1.16E-34    |
| 8836     | 1444  | GGH          | -1.18 | 3.47E-33    | 5.48E-32    |
| 83849    | 3071  | SYT15        | -1.18 | 4.31E-05    | 0.000128835 |

|          |      |                |       |             |             |
|----------|------|----------------|-------|-------------|-------------|
| 1382     | 1156 | CRABP2         | -1.18 | 9.43E-15    | 6.43E-14    |
| 169714   | 4549 | QSOX2          | -1.18 | 4.28E-38    | 8.08E-37    |
| 122622   | 1780 | ADSSL1         | -1.18 | 2.14E-10    | 1.07E-09    |
| 26508    | 4131 | HEYL           | -1.18 | 0.000403356 | 0.001049776 |
| 79148    | 1246 | MMP28          | -1.18 | 7.56E-05    | 0.000218639 |
| 9398     | 3909 | CD101          | -1.19 | 0.004061826 | 0.008871608 |
| 25861    | 3394 | WHRN           | -1.19 | 1.16E-09    | 5.50E-09    |
| 6836     | 3042 | SURF4          | -1.19 | 1.93E-92    | 1.32E-90    |
| 4082     | 4322 | MARCKS         | -1.19 | 5.83E-67    | 2.41E-65    |
| 124056   | 2134 | NOXO1          | -1.19 | 0.000963694 | 0.002354313 |
| 1.01E+08 | 1941 | RPL17-C18orf32 | -1.19 | 4.83E-10    | 2.35E-09    |
| 122481   | 3222 | AK7            | -1.19 | 0.000287146 | 0.000763432 |
| 53820    | 2116 | RIPPLY3        | -1.20 | 3.67E-12    | 2.09E-11    |
| 55905    | 2478 | RNF114         | -1.20 | 1.92E-60    | 6.80E-59    |
| 5932     | 3081 | RBBP8          | -1.20 | 7.59E-75    | 3.73E-73    |
| 1949     | 3236 | EFNB3          | -1.20 | 1.31E-26    | 1.60E-25    |
| 344148   | 7145 | NCKAP5         | -1.20 | 4.90E-05    | 0.000145644 |
| 79973    | 2301 | ZNF442         | -1.20 | 0.006213682 | 0.013127788 |
| 155382   | 1609 | VPS37D         | -1.20 | 0.000565006 | 0.001435992 |
| 333      | 2514 | APLP1          | -1.20 | 2.72E-25    | 3.13E-24    |
| 6837     | 3910 | MED22          | -1.20 | 9.19E-42    | 1.94E-40    |
| 7633     | 3132 | ZNF79          | -1.20 | 1.51E-13    | 9.50E-13    |
| 84858    | 3353 | ZNF503         | -1.20 | 2.51E-31    | 3.73E-30    |
| 5157     | 1923 | PDGFRL         | -1.20 | 0.000112354 | 0.000317175 |
| 58490    | 3740 | RPRD1B         | -1.20 | 7.01E-56    | 2.22E-54    |
| 26130    | 6856 | GAPVD1         | -1.20 | 2.79E-39    | 5.47E-38    |
| 57644    | 6486 | MYH7B          | -1.21 | 0.005860135 | 0.012435552 |
| 26050    | 4698 | SLITRK5        | -1.21 | 3.35E-17    | 2.65E-16    |
| 22845    | 2267 | DOLK           | -1.21 | 1.07E-25    | 1.26E-24    |
| 81832    | 5092 | NETO1          | -1.21 | 6.73E-08    | 2.74E-07    |
| 116362   | 704  | RBP7           | -1.21 | 5.60E-11    | 2.96E-10    |
| 56262    | 4315 | LRRRC8A        | -1.21 | 3.10E-44    | 7.11E-43    |
| 26012    | 2541 | NSMF           | -1.21 | 2.16E-55    | 6.74E-54    |
| 23266    | 5993 | ADGRL2         | -1.21 | 2.30E-14    | 1.54E-13    |
| 57082    | 9419 | KNL1           | -1.21 | 2.21E-37    | 4.06E-36    |
| 27439    | 3979 | TMEM121B       | -1.21 | 0.00011411  | 0.000321521 |
| 162968   | 3481 | ZNF497         | -1.22 | 4.01E-09    | 1.82E-08    |
| 4067     | 3280 | LYN            | -1.22 | 1.93E-25    | 2.24E-24    |
| 81794    | 3646 | ADAMTS10       | -1.22 | 0.003545128 | 0.007827741 |
| 5688     | 1050 | PSMA7          | -1.22 | 6.48E-13    | 3.87E-12    |
| 6615     | 1722 | SNAI1          | -1.22 | 4.68E-12    | 2.64E-11    |
| 9928     | 6785 | KIF14          | -1.22 | 2.78E-36    | 4.90E-35    |
| 8646     | 3468 | CHRD           | -1.22 | 6.24E-07    | 2.31E-06    |
| 1942     | 1585 | EFNA1          | -1.22 | 3.53E-15    | 2.47E-14    |
| 50861    | 2441 | STMN3          | -1.22 | 9.53E-21    | 8.96E-20    |
| 2149     | 3820 | F2R            | -1.22 | 1.52E-38    | 2.91E-37    |
| 54928    | 7242 | IMPAD1         | -1.22 | 5.66E-65    | 2.24E-63    |
| 26133    | 3040 | TRPC4AP        | -1.22 | 2.38E-77    | 1.21E-75    |



|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 1951     | 11974 | CELSR3       | -1.22 | 2.24E-22    | 2.27E-21    |
| 10076    | 5378  | PTPRU        | -1.22 | 1.77E-48    | 4.51E-47    |
| 6484     | 1821  | ST3GAL4      | -1.23 | 3.75E-23    | 3.92E-22    |
| 27433    | 1597  | TOR2A        | -1.23 | 7.28E-19    | 6.22E-18    |
| 51490    | 4328  | SPOUT1       | -1.23 | 1.29E-43    | 2.90E-42    |
| 10769    | 2850  | PLK2         | -1.23 | 2.42E-80    | 1.32E-78    |
| 7764     | 5633  | ZNF217       | -1.23 | 6.33E-62    | 2.34E-60    |
| 85366    | 2793  | MYLK2        | -1.23 | 0.01499331  | 0.029351783 |
| 374899   | 5025  | ZNF829       | -1.23 | 3.74E-10    | 1.83E-09    |
| 3696     | 8271  | ITGB8        | -1.23 | 6.56E-41    | 1.35E-39    |
| 11069    | 4084  | RAPGEF4      | -1.23 | 0.00203442  | 0.004687793 |
| 54777    | 8293  | CFAP46       | -1.23 | 0.001128458 | 0.002725357 |
| 57446    | 3014  | NDRG3        | -1.23 | 7.57E-51    | 2.07E-49    |
| 128869   | 1649  | PIGU         | -1.23 | 1.31E-40    | 2.65E-39    |
| 1903     | 4404  | S1PR3        | -1.23 | 2.72E-13    | 1.67E-12    |
| 7483     | 4529  | WNT9A        | -1.23 | 4.51E-05    | 0.000134501 |
| 5979     | 4174  | RET          | -1.23 | 0.018109816 | 0.034846785 |
| 55138    | 2490  | FAM90A1      | -1.23 | 0.020088718 | 0.038240447 |
| 1.08E+08 | 3834  | LOC107985115 | -1.23 | 0.019719689 | 0.037622617 |
| 153090   | 6285  | DAB2IP       | -1.23 | 3.11E-47    | 7.72E-46    |
| 8490     | 5822  | RGS5         | -1.23 | 0.000402817 | 0.001048528 |
| 64793    | 3754  | CEP85        | -1.23 | 3.70E-27    | 4.65E-26    |
| 284434   | 6791  | NWD1         | -1.24 | 0.000332899 | 0.000876678 |
| 55534    | 7086  | MAML3        | -1.24 | 1.05E-05    | 3.39E-05    |
| 284353   | 4687  | NKPD1        | -1.24 | 0.022698519 | 0.042682535 |
| 92340    | 3046  | PRR29        | -1.24 | 2.57E-05    | 7.90E-05    |
| 6129     | 868   | RPL7         | -1.24 | 1.47E-52    | 4.27E-51    |
| 55661    | 2714  | DDX27        | -1.24 | 1.18E-56    | 3.85E-55    |
| 1.05E+08 | 2968  | LOC105377135 | -1.24 | 0.00099784  | 0.002432641 |
| 158401   | 4714  | C9orf84      | -1.24 | 0.001084051 | 0.002627392 |
| 372      | 3880  | ARCN1        | -1.24 | 6.32E-67    | 2.61E-65    |
| 53616    | 9207  | ADAM22       | -1.24 | 2.81E-16    | 2.10E-15    |
| 9183     | 2888  | ZW10         | -1.24 | 3.64E-33    | 5.75E-32    |
| 10564    | 8997  | ARFGEF2      | -1.24 | 2.72E-64    | 1.06E-62    |
| 53904    | 5229  | MYO3A        | -1.24 | 0.00380932  | 0.00836121  |
| 6546     | 6160  | SLC8A1       | -1.24 | 3.56E-13    | 2.17E-12    |
| 10434    | 2487  | LYPLA1       | -1.24 | 6.26E-35    | 1.05E-33    |
| 57169    | 6733  | ZNFX1        | -1.24 | 2.02E-74    | 9.73E-73    |
| 6874     | 4647  | TAF4         | -1.24 | 5.76E-40    | 1.15E-38    |
| 60436    | 3386  | TGIF2        | -1.25 | 9.82E-35    | 1.64E-33    |
| 286      | 8301  | ANK1         | -1.25 | 1.29E-05    | 4.12E-05    |
| 80235    | 3580  | PIGZ         | -1.25 | 8.78E-19    | 7.48E-18    |
| 114804   | 4995  | RNF157       | -1.25 | 3.09E-36    | 5.45E-35    |
| 54542    | 3858  | RC3H2        | -1.25 | 2.81E-29    | 3.87E-28    |
| 10815    | 2071  | CPLX1        | -1.25 | 0.024752129 | 0.046192189 |
| 57167    | 4505  | SALL4        | -1.25 | 1.49E-09    | 7.01E-09    |
| 9371     | 6135  | KIF3B        | -1.26 | 3.01E-68    | 1.28E-66    |
| 54898    | 3960  | ELOVL2       | -1.26 | 6.83E-25    | 7.72E-24    |

|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 57403  | 8702  | RAB22A   | -1.26 | 1.92E-59    | 6.65E-58    |
| 43     | 2012  | ACHE     | -1.26 | 0.006363723 | 0.013416068 |
| 26147  | 2330  | PHF19    | -1.26 | 1.60E-61    | 5.88E-60    |
| 7433   | 2445  | VIPR1    | -1.26 | 0.025204107 | 0.046976457 |
| 147686 | 3717  | ZNF418   | -1.26 | 1.96E-08    | 8.42E-08    |
| 23336  | 7169  | SYNM     | -1.26 | 3.05E-26    | 3.67E-25    |
| 150383 | 1502  | CDPF1    | -1.26 | 1.37E-09    | 6.44E-09    |
| 9675   | 3829  | TTI1     | -1.26 | 1.46E-55    | 4.58E-54    |
| 8701   | 13896 | DNAH11   | -1.26 | 0.022190894 | 0.041827162 |
| 3399   | 1252  | ID3      | -1.26 | 4.38E-27    | 5.48E-26    |
| 72     | 1216  | ACTG2    | -1.26 | 0.025292131 | 0.047125691 |
| 1662   | 3289  | DDX10    | -1.26 | 4.60E-32    | 7.03E-31    |
| 23526  | 3452  | ARHGAP45 | -1.26 | 3.16E-13    | 1.93E-12    |
| 23621  | 5506  | BACE1    | -1.27 | 2.80E-49    | 7.34E-48    |
| 6507   | 3255  | SLC1A3   | -1.27 | 3.51E-24    | 3.84E-23    |
| 80139  | 3380  | ZNF703   | -1.27 | 2.40E-18    | 2.00E-17    |
| 9231   | 6657  | DLG5     | -1.27 | 5.90E-72    | 2.70E-70    |
| 4863   | 6471  | NPAT     | -1.27 | 2.12E-41    | 4.42E-40    |
| 57493  | 9303  | HEG1     | -1.27 | 8.42E-105   | 7.34E-103   |
| 374900 | 3970  | ZNF568   | -1.27 | 6.59E-07    | 2.43E-06    |
| 3643   | 9392  | INSR     | -1.27 | 9.02E-25    | 1.01E-23    |
| 11249  | 2560  | NXPH2    | -1.27 | 1.87E-05    | 5.89E-05    |
| 54733  | 3184  | SLC35F2  | -1.27 | 1.82E-37    | 3.35E-36    |
| 114609 | 2106  | TIRAP    | -1.27 | 9.70E-10    | 4.62E-09    |
| 8612   | 1320  | PLPP2    | -1.27 | 0.000161434 | 0.000445328 |
| 2619   | 2844  | GAS1     | -1.27 | 0.017507675 | 0.03382     |
| 53353  | 15171 | LRP1B    | -1.27 | 0.001324229 | 0.00315697  |
| 3107   | 1586  | HLA-C    | -1.28 | 1.47E-91    | 9.81E-90    |
| 26150  | 1276  | RIBC2    | -1.28 | 6.89E-05    | 0.000199942 |
| 55861  | 1095  | DBNDD2   | -1.28 | 1.96E-50    | 5.29E-49    |
| 487    | 3399  | ATP2A1   | -1.28 | 1.73E-05    | 5.44E-05    |
| 3770   | 2851  | KCNJ14   | -1.28 | 0.000385985 | 0.00100737  |
| 8140   | 4361  | SLC7A5   | -1.28 | 5.51E-60    | 1.93E-58    |
| 9580   | 4088  | SOX13    | -1.28 | 8.66E-22    | 8.52E-21    |
| 79927  | 1568  | FAM110D  | -1.29 | 0.024611179 | 0.045953282 |
| 1482   | 1924  | NKX2-5   | -1.29 | 0.025755682 | 0.04790902  |
| 171023 | 6749  | ASXL1    | -1.29 | 2.21E-79    | 1.19E-77    |
| 399473 | 4769  | SPRED3   | -1.29 | 7.28E-11    | 3.80E-10    |
| 2303   | 1683  | FOXC2    | -1.29 | 2.21E-07    | 8.58E-07    |
| 7007   | 6468  | TECTA    | -1.29 | 0.011685766 | 0.023324274 |
| 10023  | 2651  | FRAT1    | -1.29 | 1.64E-06    | 5.79E-06    |
| 84197  | 1527  | POMK     | -1.29 | 0.003337603 | 0.007394329 |
| 10219  | 1815  | KLRG1    | -1.29 | 0.026058363 | 0.048436551 |
| 56971  | 2264  | CEACAM19 | -1.29 | 1.17E-11    | 6.42E-11    |
| 5347   | 2293  | PLK1     | -1.30 | 2.45E-52    | 7.05E-51    |
| 26084  | 5168  | ARHGEF26 | -1.30 | 3.90E-16    | 2.88E-15    |
| 55089  | 3807  | SLC38A4  | -1.30 | 0.022925294 | 0.04305884  |
| 2627   | 3785  | GATA6    | -1.30 | 3.81E-13    | 2.31E-12    |

|        |      |           |       |             |             |
|--------|------|-----------|-------|-------------|-------------|
| 3487   | 2246 | IGFBP4    | -1.30 | 2.35E-61    | 8.62E-60    |
| 1594   | 2503 | CYP27B1   | -1.30 | 0.004351796 | 0.009458436 |
| 2827   | 2149 | GPR3      | -1.30 | 1.39E-10    | 7.08E-10    |
| 55713  | 4324 | ZNF334    | -1.30 | 4.52E-12    | 2.56E-11    |
| 5349   | 1001 | FXYPD3    | -1.30 | 0.02436769  | 0.045512994 |
| 64757  | 1939 | MARC1     | -1.30 | 8.08E-09    | 3.58E-08    |
| 55388  | 4559 | MCM10     | -1.30 | 6.92E-30    | 9.73E-29    |
| 89857  | 5955 | KLHL6     | -1.30 | 0.025876952 | 0.048119486 |
| 2137   | 6176 | EXTL3     | -1.30 | 4.76E-39    | 9.25E-38    |
| 7480   | 2234 | WNT10B    | -1.30 | 0.00080902  | 0.002001486 |
| 51062  | 2687 | ATL1      | -1.31 | 1.40E-11    | 7.64E-11    |
| 367    | 8112 | AR        | -1.31 | 0.024027375 | 0.044930041 |
| 157310 | 901  | PEBP4     | -1.31 | 0.02400744  | 0.044901494 |
| 157570 | 3315 | ESCO2     | -1.31 | 4.47E-22    | 4.46E-21    |
| 85414  | 3261 | SLC45A3   | -1.31 | 1.10E-10    | 5.66E-10    |
| 64800  | 4128 | EFCAB6    | -1.31 | 0.001575209 | 0.003703627 |
| 22983  | 4615 | MAST1     | -1.31 | 5.00E-05    | 0.000148347 |
| 23539  | 1913 | SLC16A8   | -1.31 | 0.020892456 | 0.039596497 |
| 51804  | 6277 | SIX4      | -1.31 | 5.10E-28    | 6.67E-27    |
| 79827  | 2955 | CLMP      | -1.31 | 1.73E-23    | 1.84E-22    |
| 399474 | 2500 | TMEM200B  | -1.31 | 5.19E-19    | 4.46E-18    |
| 85236  | 857  | HIST1H2BK | -1.32 | 1.91E-27    | 2.42E-26    |
| 492    | 6049 | ATP2B3    | -1.32 | 0.022989463 | 0.0431748   |
| 219623 | 5162 | TMEM26    | -1.32 | 0.006269189 | 0.013227757 |
| 7001   | 1052 | PRDX2     | -1.32 | 2.64E-82    | 1.49E-80    |
| 389812 | 690  | LCN15     | -1.32 | 0.026199212 | 0.048667809 |
| 84301  | 2680 | DDI2      | -1.32 | 4.89E-08    | 2.02E-07    |
| 10179  | 3748 | RBM7      | -1.32 | 7.54E-34    | 1.22E-32    |
| 348801 | 2233 | LNP1      | -1.32 | 6.71E-07    | 2.47E-06    |
| 53826  | 1919 | FXYPD6    | -1.32 | 6.01E-16    | 4.40E-15    |
| 79041  | 1640 | TMEM38A   | -1.32 | 5.02E-14    | 3.28E-13    |
| 943    | 3616 | TNFRSF8   | -1.32 | 0.021178567 | 0.040081021 |
| 83742  | 3250 | MARVELD1  | -1.32 | 6.00E-46    | 1.43E-44    |
| 3766   | 5323 | KCNJ10    | -1.32 | 0.016968607 | 0.032889519 |
| 149986 | 2462 | LSM14B    | -1.32 | 2.78E-56    | 8.89E-55    |
| 721    | 5444 | C4B       | -1.33 | 5.21E-11    | 2.76E-10    |
| 112858 | 3384 | TP53RK    | -1.33 | 1.04E-31    | 1.56E-30    |
| 1374   | 5260 | CPT1A     | -1.33 | 5.14E-35    | 8.70E-34    |
| 83546  | 2095 | RTBDN     | -1.33 | 0.005884022 | 0.012484752 |
| 54873  | 2601 | PALMD     | -1.33 | 0.000768685 | 0.00191206  |
| 1435   | 3787 | CSF1      | -1.33 | 6.47E-65    | 2.55E-63    |
| 90204  | 2686 | ZSWIM1    | -1.33 | 1.58E-26    | 1.92E-25    |
| 8969   | 498  | HIST1H2AG | -1.33 | 0.020947732 | 0.039688559 |
| 729288 | 5328 | ZNF286B   | -1.34 | 4.15E-07    | 1.57E-06    |
| 5465   | 9036 | PPARA     | -1.34 | 5.20E-32    | 7.93E-31    |
| 1477   | 2175 | CSTF1     | -1.34 | 3.14E-61    | 1.15E-59    |
| 9480   | 5538 | ONECUT2   | -1.34 | 2.25E-08    | 9.61E-08    |
| 80129  | 5123 | CCDC170   | -1.34 | 0.014536078 | 0.028538898 |

|        |       |              |       |             |             |
|--------|-------|--------------|-------|-------------|-------------|
| 5866   | 2330  | RAB3IL1      | -1.34 | 1.43E-10    | 7.27E-10    |
| 29992  | 1323  | PILRA        | -1.34 | 4.71E-06    | 1.59E-05    |
| 56241  | 3201  | SUSD2        | -1.34 | 0.006027869 | 0.012770141 |
| 5203   | 1382  | PFDN4        | -1.34 | 6.58E-49    | 1.70E-47    |
| 1259   | 2790  | CNGA1        | -1.34 | 0.00767848  | 0.015919631 |
| 57716  | 4942  | PRX          | -1.34 | 3.04E-12    | 1.74E-11    |
| 347735 | 2066  | SERINC2      | -1.34 | 3.28E-64    | 1.27E-62    |
| 85450  | 6633  | ITPRIP       | -1.34 | 4.14E-40    | 8.31E-39    |
| 2016   | 2889  | EMX1         | -1.35 | 0.001470785 | 0.003480212 |
| 949    | 2736  | SCARB1       | -1.35 | 5.67E-25    | 6.45E-24    |
| 200931 | 1455  | SLC51A       | -1.35 | 0.024861497 | 0.046376806 |
| 57165  | 2411  | GJC2         | -1.35 | 0.00896309  | 0.018339036 |
| 386724 | 3008  | AMIGO3       | -1.35 | 7.45E-23    | 7.68E-22    |
| 84630  | 5298  | TTBK1        | -1.35 | 0.024302006 | 0.045399857 |
| 230    | 1665  | ALDOC        | -1.35 | 2.40E-37    | 4.39E-36    |
| 60437  | 2526  | CDH26        | -1.36 | 0.020515565 | 0.038969484 |
| 6261   | 15254 | RYR1         | -1.36 | 3.10E-07    | 1.18E-06    |
| 7481   | 1927  | WNT11        | -1.36 | 0.021825132 | 0.041197168 |
| 84671  | 7876  | ZNF347       | -1.36 | 3.58E-26    | 4.30E-25    |
| 388228 | 5010  | SBK1         | -1.36 | 8.79E-13    | 5.21E-12    |
| 283149 | 7389  | BCL9L        | -1.36 | 1.15E-34    | 1.92E-33    |
| 5990   | 3999  | RFX2         | -1.36 | 1.75E-18    | 1.47E-17    |
| 1E+08  | 1132  | TMEM225B     | -1.36 | 0.014733692 | 0.028875826 |
| 7802   | 2663  | DNALI1       | -1.36 | 0.00175579  | 0.004089784 |
| 974    | 988   | CD79B        | -1.36 | 0.023597248 | 0.044236749 |
| 5900   | 3693  | RALGDS       | -1.36 | 7.77E-53    | 2.27E-51    |
| 57643  | 2614  | ZSWIM5       | -1.36 | 0.019604204 | 0.037430421 |
| 57026  | 2072  | PDXP         | -1.36 | 2.43E-29    | 3.35E-28    |
| 9651   | 4765  | PLCH2        | -1.36 | 0.023236178 | 0.043610479 |
| 10005  | 1171  | ACOT8        | -1.37 | 5.56E-27    | 6.95E-26    |
| 57720  | 6853  | GPR107       | -1.37 | 1.44E-82    | 8.23E-81    |
| 80725  | 5653  | SRCIN1       | -1.37 | 3.83E-07    | 1.45E-06    |
| 1E+08  | 729   | LOC100129083 | -1.37 | 0.022080406 | 0.041643632 |
| 56155  | 4577  | TEX14        | -1.37 | 0.013945429 | 0.027467306 |
| 4851   | 9321  | NOTCH1       | -1.37 | 3.88E-67    | 1.61E-65    |
| 23394  | 6213  | ADNP         | -1.37 | 7.92E-103   | 6.67E-101   |
| 140730 | 5207  | RIMS4        | -1.37 | 0.022567923 | 0.042459431 |
| 27304  | 3050  | MOCS3        | -1.37 | 5.55E-31    | 8.17E-30    |
| 6616   | 2056  | SNAP25       | -1.37 | 4.41E-12    | 2.50E-11    |
| 7058   | 5898  | THBS2        | -1.37 | 0.004988111 | 0.010727277 |
| 30009  | 2589  | TBX21        | -1.37 | 0.018557699 | 0.035635276 |
| 815    | 4885  | CAMK2A       | -1.37 | 0.004056178 | 0.008860359 |
| 140290 | 2730  | TCP10L       | -1.37 | 0.018517624 | 0.035566009 |
| 55057  | 5194  | CRYBG2       | -1.37 | 0.002257995 | 0.005159471 |
| 5591   | 13504 | PRKDC        | -1.37 | 6.65E-111   | 6.49E-109   |
| 51364  | 1801  | ZMYND10      | -1.38 | 1.53E-06    | 5.42E-06    |
| 5159   | 5718  | PDGFRB       | -1.38 | 3.66E-13    | 2.23E-12    |
| 23109  | 3744  | DDN          | -1.38 | 0.01022311  | 0.020676632 |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 50489    | 2728  | CD207        | -1.38 | 0.018090894 | 0.034814146 |
| 9379     | 3535  | NRXN2        | -1.38 | 0.018001533 | 0.034672222 |
| 140688   | 5750  | NOL4L        | -1.38 | 3.77E-51    | 1.04E-49    |
| 1E+08    | 1962  | HSFX2        | -1.38 | 0.017229367 | 0.033336752 |
| 1.01E+08 | 2645  | INAFM2       | -1.39 | 1.95E-25    | 2.27E-24    |
| 2113     | 5153  | ETS1         | -1.39 | 9.28E-66    | 3.74E-64    |
| 54954    | 4349  | FAM120C      | -1.39 | 2.43E-25    | 2.81E-24    |
| 875      | 2631  | CBS          | -1.39 | 2.18E-43    | 4.86E-42    |
| 128866   | 1664  | CHMP4B       | -1.39 | 1.94E-94    | 1.39E-92    |
| 155051   | 1895  | CRYGN        | -1.39 | 0.020017666 | 0.038121532 |
| 10773    | 4111  | ZBTB6        | -1.39 | 5.31E-31    | 7.82E-30    |
| 1.07E+08 | 3711  | SETDB2-PHF11 | -1.39 | 0.000109165 | 0.000308518 |
| 3363     | 3280  | HTR7         | -1.39 | 0.000307709 | 0.000813354 |
| 55859    | 862   | BEX1         | -1.40 | 0.017060026 | 0.03303788  |
| 6714     | 4118  | SRC          | -1.40 | 7.62E-82    | 4.26E-80    |
| 388536   | 3093  | ZNF790       | -1.40 | 4.48E-07    | 1.68E-06    |
| 124935   | 4849  | SLC43A2      | -1.40 | 8.00E-44    | 1.82E-42    |
| 3765     | 10852 | KCNJ9        | -1.40 | 0.016711793 | 0.03244129  |
| 8190     | 529   | MIA          | -1.40 | 0.020128904 | 0.038304635 |
| 23315    | 5325  | SLC9A8       | -1.40 | 3.49E-43    | 7.74E-42    |
| 54742    | 1635  | LY6K         | -1.40 | 4.91E-05    | 0.000145938 |
| 196500   | 2657  | PIANP        | -1.40 | 1.83E-29    | 2.55E-28    |
| 6780     | 3440  | STAU1        | -1.40 | 9.35E-110   | 8.89E-108   |
| 25981    | 13126 | DNAH1        | -1.40 | 7.72E-12    | 4.30E-11    |
| 158067   | 2133  | AK8          | -1.40 | 0.000202256 | 0.000549326 |
| 1.05E+08 | 732   | LOC105370045 | -1.41 | 0.001225436 | 0.002939591 |
| 221395   | 5805  | ADGRF5       | -1.41 | 7.24E-09    | 3.22E-08    |
| 1.07E+08 | 1320  | CNPY3-GNMT   | -1.41 | 0.01970728  | 0.037607019 |
| 5142     | 3546  | PDE4B        | -1.41 | 2.94E-05    | 8.97E-05    |
| 5295     | 6166  | PIK3R1       | -1.41 | 1.22E-84    | 7.20E-83    |
| 1.01E+08 | 1184  | LOC100996574 | -1.41 | 0.010990046 | 0.022086997 |
| 54510    | 5668  | PCDH18       | -1.41 | 4.77E-06    | 1.61E-05    |
| 9744     | 2523  | ACAP1        | -1.41 | 0.001180106 | 0.002840055 |
| 80863    | 1931  | PRRT1        | -1.41 | 0.006103055 | 0.012909414 |
| 53340    | 955   | SPA17        | -1.42 | 4.03E-13    | 2.44E-12    |
| 22844    | 4933  | FRMPD1       | -1.42 | 0.01885044  | 0.036129425 |
| 29785    | 2660  | CYP2S1       | -1.42 | 4.81E-09    | 2.17E-08    |
| 114907   | 6711  | FBXO32       | -1.42 | 9.85E-29    | 1.33E-27    |
| 575      | 5535  | ADGRB1       | -1.42 | 0.013710647 | 0.027037822 |
| 57575    | 5664  | PCDH10       | -1.42 | 2.19E-10    | 1.09E-09    |
| 4313     | 3343  | MMP2         | -1.42 | 3.15E-85    | 1.90E-83    |
| 7036     | 2582  | TFR2         | -1.43 | 0.000132881 | 0.000370532 |
| 79149    | 2211  | ZSCAN5A      | -1.43 | 2.03E-10    | 1.02E-09    |
| 9227     | 4735  | LRAT         | -1.43 | 1.05E-05    | 3.40E-05    |
| 576      | 4864  | ADGRB2       | -1.43 | 7.92E-61    | 2.85E-59    |
| 1293     | 8778  | COL6A3       | -1.43 | 0.014354782 | 0.028204774 |
| 283869   | 1033  | NPW          | -1.43 | 0.001905714 | 0.004412971 |
| 9394     | 3966  | HS6ST1       | -1.44 | 4.44E-43    | 9.83E-42    |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 10882    | 1517  | C1QL1        | -1.44 | 5.96E-10    | 2.88E-09    |
| 79102    | 2836  | RNF26        | -1.44 | 4.51E-45    | 1.06E-43    |
| 4600     | 2721  | MX2          | -1.44 | 0.000300881 | 0.000796967 |
| 140706   | 2660  | CCM2L        | -1.44 | 0.001207084 | 0.002901444 |
| 1E+08    | 2881  | TCF24        | -1.44 | 0.016828175 | 0.032642251 |
| 7052     | 3974  | TGM2         | -1.44 | 1.40E-14    | 9.42E-14    |
| 90196    | 2811  | SYS1         | -1.44 | 3.18E-61    | 1.16E-59    |
| 145773   | 3468  | FAM81A       | -1.44 | 6.05E-08    | 2.48E-07    |
| 63876    | 6335  | PKNOX2       | -1.44 | 0.010843383 | 0.021815443 |
| 10411    | 3714  | RAPGEF3      | -1.44 | 2.24E-48    | 5.67E-47    |
| 257062   | 1523  | CATSPERD     | -1.44 | 0.016609317 | 0.032252934 |
| 54863    | 4069  | TOR4A        | -1.45 | 3.31E-56    | 1.05E-54    |
| 27090    | 1725  | ST6GALNAC4   | -1.45 | 1.28E-20    | 1.19E-19    |
| 56259    | 1862  | CTNNBL1      | -1.45 | 2.11E-72    | 9.70E-71    |
| 1.01E+08 | 2408  | MYZAP        | -1.45 | 1.05E-05    | 3.40E-05    |
| 8228     | 2940  | PNPLA4       | -1.45 | 4.67E-29    | 6.37E-28    |
| 51604    | 2223  | PIGT         | -1.45 | 6.04E-66    | 2.45E-64    |
| 201191   | 2858  | SAMD14       | -1.45 | 1.16E-12    | 6.84E-12    |
| 29118    | 1737  | DDX25        | -1.45 | 0.015987021 | 0.031132988 |
| 9329     | 8857  | GTF3C4       | -1.45 | 8.97E-84    | 5.21E-82    |
| 10004    | 3003  | NAALADL1     | -1.45 | 0.013484795 | 0.026618712 |
| 401236   | 1322  | STMND1       | -1.45 | 0.01338749  | 0.026432816 |
| 58512    | 3856  | DLGAP3       | -1.46 | 7.72E-05    | 0.000222885 |
| 25803    | 1866  | SPDEF        | -1.46 | 0.015651948 | 0.030534016 |
| 84466    | 7934  | MEGF10       | -1.46 | 0.007477121 | 0.015540237 |
| 1E+08    | 841   | SAP25        | -1.46 | 0.001340202 | 0.003191625 |
| 57171    | 2222  | DOLPP1       | -1.46 | 3.09E-46    | 7.46E-45    |
| 7335     | 2152  | UBE2V1       | -1.46 | 2.76E-91    | 1.84E-89    |
| 9854     | 3233  | C2CD2L       | -1.46 | 2.70E-16    | 2.02E-15    |
| 10371    | 6058  | SEMA3A       | -1.46 | 5.95E-32    | 9.05E-31    |
| 6640     | 2342  | SNTA1        | -1.46 | 3.83E-49    | 1.00E-47    |
| 50651    | 2527  | SLC45A1      | -1.46 | 3.49E-05    | 0.000105401 |
| 1.03E+08 | 3297  | LOC102724159 | -1.46 | 1.37E-23    | 1.47E-22    |
| 10297    | 10032 | APC2         | -1.46 | 0.000778241 | 0.001932875 |
| 84649    | 2331  | DGAT2        | -1.46 | 4.02E-11    | 2.15E-10    |
| 8492     | 4248  | PRSS12       | -1.46 | 2.58E-37    | 4.70E-36    |
| 3792     | 1718  | KEL          | -1.46 | 0.0106578   | 0.021468355 |
| 56956    | 3032  | LHX9         | -1.47 | 0.008160036 | 0.016821849 |
| 1.03E+08 | 2519  | LOC102724229 | -1.47 | 0.000153878 | 0.000425739 |
| 10525    | 4518  | HYOU1        | -1.47 | 1.11E-91    | 7.47E-90    |
| 8202     | 7991  | NCOA3        | -1.47 | 4.78E-66    | 1.94E-64    |
| 23732    | 1753  | FRRS1L       | -1.47 | 0.01259844  | 0.025011071 |
| 9498     | 7204  | SLC4A8       | -1.47 | 5.31E-19    | 4.57E-18    |
| 1745     | 2403  | DLX1         | -1.47 | 9.60E-15    | 6.54E-14    |
| 54206    | 3166  | ERRFI1       | -1.47 | 6.40E-100   | 5.12E-98    |
| 79864    | 3539  | JHY          | -1.47 | 5.59E-09    | 2.51E-08    |
| 83903    | 2797  | HASPIN       | -1.47 | 1.51E-18    | 1.27E-17    |
| 222865   | 2723  | TMEM130      | -1.48 | 0.00133224  | 0.003174365 |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 1.05E+08 | 5232  | LOC105372798 | -1.48 | 0.000563263 | 0.001431769 |
| 53832    | 3095  | IL20RA       | -1.48 | 0.014153536 | 0.027827822 |
| 3087     | 1772  | HHEX         | -1.48 | 2.26E-12    | 1.30E-11    |
| 140825   | 1440  | NEURL2       | -1.48 | 0.000215034 | 0.000581276 |
| 85455    | 5852  | DISP2        | -1.48 | 1.23E-13    | 7.78E-13    |
| 92749    | 1852  | DRC1         | -1.48 | 0.013156304 | 0.026008144 |
| 8480     | 1790  | RAE1         | -1.48 | 1.42E-61    | 5.23E-60    |
| 389119   | 1058  | FAM212A      | -1.49 | 0.000799196 | 0.001978835 |
| 3352     | 2857  | HTR1D        | -1.49 | 0.001785339 | 0.004152626 |
| 9543     | 2282  | IGDCC3       | -1.49 | 0.013525636 | 0.026690749 |
| 80045    | 1934  | GPR157       | -1.49 | 0.000111208 | 0.000314141 |
| 83481    | 13861 | EPPK1        | -1.49 | 6.50E-14    | 4.21E-13    |
| 22919    | 2638  | MAPRE1       | -1.49 | 2.03E-107   | 1.86E-105   |
| 3911     | 11411 | LAMA5        | -1.49 | 4.47E-125   | 5.19E-123   |
| 28231    | 3581  | SLCO4A1      | -1.50 | 5.13E-38    | 9.64E-37    |
| 24146    | 1896  | CLDN15       | -1.50 | 5.32E-13    | 3.19E-12    |
| 5577     | 3640  | PRKAR2B      | -1.50 | 4.13E-19    | 3.57E-18    |
| 339456   | 987   | TMEM52       | -1.50 | 0.000334081 | 0.00087953  |
| 1960     | 3912  | EGR3         | -1.50 | 0.005497306 | 0.011727235 |
| 168667   | 2969  | BMPER        | -1.50 | 0.009419778 | 0.019198282 |
| 113622   | 1883  | ADPRHL1      | -1.51 | 1.77E-05    | 5.58E-05    |
| 339665   | 2763  | SLC35E4      | -1.51 | 6.49E-12    | 3.63E-11    |
| 1241     | 4331  | LTB4R        | -1.51 | 1.15E-22    | 1.18E-21    |
| 3664     | 4420  | IRF6         | -1.51 | 6.35E-25    | 7.20E-24    |
| 91893    | 3081  | FDXACB1      | -1.51 | 7.19E-06    | 2.38E-05    |
| 259236   | 1861  | TMIE         | -1.51 | 6.79E-05    | 0.000197259 |
| 90203    | 2724  | SNX21        | -1.51 | 1.99E-54    | 6.08E-53    |
| 347088   | 3644  | ADGRD2       | -1.51 | 0.010416064 | 0.021026202 |
| 84632    | 3798  | AFAP1L2      | -1.52 | 1.47E-63    | 5.65E-62    |
| 219855   | 4139  | SLC37A2      | -1.52 | 1.26E-33    | 2.02E-32    |
| 1.05E+08 | 1036  | LOC105372731 | -1.52 | 0.011655627 | 0.023266731 |
| 146760   | 3625  | RTN4RL1      | -1.52 | 0.011626016 | 0.023212839 |
| 1.03E+08 | 2517  | LOC102724642 | -1.52 | 0.005706518 | 0.01213711  |
| 80301    | 3738  | PLEKHO2      | -1.52 | 1.65E-30    | 2.38E-29    |
| 3167     | 1491  | HMX2         | -1.53 | 0.009932829 | 0.020139964 |
| 6781     | 3897  | STC1         | -1.53 | 3.53E-31    | 5.23E-30    |
| 11037    | 5534  | STON1        | -1.53 | 1.95E-15    | 1.39E-14    |
| 7275     | 6150  | TUB          | -1.53 | 8.03E-18    | 6.54E-17    |
| 64843    | 1918  | ISL2         | -1.53 | 0.002178853 | 0.004990829 |
| 83737    | 6260  | ITCH         | -1.53 | 1.18E-103   | 1.01E-101   |
| 1991     | 1020  | ELANE        | -1.53 | 0.011010703 | 0.022126009 |
| 23145    | 15580 | SSPO         | -1.53 | 6.40E-07    | 2.36E-06    |
| 252995   | 3046  | FNDC5        | -1.53 | 1.00E-05    | 3.24E-05    |
| 7253     | 2746  | TSHR         | -1.54 | 9.43E-13    | 5.59E-12    |
| 83756    | 3432  | TAS1R3       | -1.54 | 0.00152898  | 0.003604952 |
| 9265     | 4482  | CYTH3        | -1.54 | 3.95E-57    | 1.30E-55    |
| 55734    | 2689  | ZFP64        | -1.54 | 4.26E-42    | 9.14E-41    |
| 387522   | 2925  | TMEM189-     | -1.54 | 0.00847973  | 0.017430338 |

UBE2V1

|        |      |            |       |             |             |
|--------|------|------------|-------|-------------|-------------|
| 55790  | 2683 | CSGALNACT1 | -1.54 | 4.96E-05    | 0.000147026 |
| 10481  | 3047 | HOXB13     | -1.54 | 1.21E-06    | 4.35E-06    |
| 401097 | 2606 | C3orf80    | -1.54 | 0.010658057 | 0.021468355 |
| 149478 | 2322 | BTBD19     | -1.54 | 5.78E-06    | 1.94E-05    |
| 116444 | 2683 | GRIN3B     | -1.54 | 0.000948868 | 0.002323992 |
| 9501   | 2470 | RPH3AL     | -1.54 | 7.21E-25    | 8.12E-24    |
| 407738 | 1758 | FAM19A1    | -1.54 | 0.009131678 | 0.018651759 |
| 3293   | 1607 | HSD17B3    | -1.54 | 0.009205157 | 0.018786726 |
| 79570  | 2930 | NKAIN1     | -1.55 | 0.00686826  | 0.014379079 |
| 79913  | 2479 | ACTR5      | -1.55 | 1.18E-23    | 1.26E-22    |
| 8785   | 2287 | MATN4      | -1.55 | 0.009569453 | 0.019474292 |
| 9334   | 4743 | B4GALT5    | -1.55 | 1.93E-120   | 2.08E-118   |
| 6789   | 6378 | STK4       | -1.55 | 1.34E-69    | 5.83E-68    |
| 57158  | 4160 | JPH2       | -1.55 | 1.39E-13    | 8.79E-13    |
| 10256  | 2475 | CNKSR1     | -1.55 | 0.002589913 | 0.005856888 |
| 729359 | 6353 | PLIN4      | -1.55 | 8.31E-06    | 2.72E-05    |
| 4826   | 1252 | NNAT       | -1.56 | 0.000511143 | 0.001307386 |
| 55244  | 3279 | SLC47A1    | -1.56 | 1.15E-15    | 8.28E-15    |
| 56917  | 1837 | MEIS3      | -1.56 | 1.49E-42    | 3.25E-41    |
| 388795 | 4133 | EFCAB8     | -1.56 | 0.009776409 | 0.019849987 |
| 155185 | 7136 | AMZ1       | -1.56 | 1.44E-39    | 2.84E-38    |
| 85452  | 4835 | CFAP74     | -1.56 | 0.008332261 | 0.017153333 |
| 8347   | 438  | HIST1H2BC  | -1.56 | 0.000848802 | 0.002092911 |
| 3887   | 1926 | KRT81      | -1.57 | 0.007129252 | 0.014872908 |
| 3240   | 1301 | HP         | -1.57 | 0.000186208 | 0.00050846  |
| 159371 | 2836 | SLC35G1    | -1.57 | 4.26E-13    | 2.57E-12    |
| 2281   | 1049 | FKBP1B     | -1.57 | 1.06E-13    | 6.76E-13    |
| 89958  | 3869 | SAPCD2     | -1.57 | 6.95E-71    | 3.10E-69    |
| 6812   | 3850 | STXBP1     | -1.57 | 7.18E-57    | 2.34E-55    |
| 1995   | 2165 | ELAVL3     | -1.57 | 0.008978582 | 0.018366503 |
| 2103   | 3451 | ESRRB      | -1.57 | 0.009011215 | 0.018429014 |
| 10953  | 2039 | TOMM34     | -1.57 | 2.15E-73    | 1.01E-71    |
| 2651   | 4037 | GCNT2      | -1.57 | 2.48E-32    | 3.82E-31    |
| 149175 | 2438 | MANEAL     | -1.57 | 2.23E-37    | 4.08E-36    |
| 9777   | 3792 | TM9SF4     | -1.58 | 1.06E-109   | 1.00E-107   |
| 8128   | 5464 | ST8SIA2    | -1.58 | 0.003861689 | 0.008464654 |
| 7079   | 1667 | TIMP4      | -1.58 | 0.000337103 | 0.000887091 |
| 442213 | 4178 | PTCHD4     | -1.58 | 1.51E-49    | 3.99E-48    |
| 131578 | 5883 | LRRC15     | -1.58 | 0.001658668 | 0.003883413 |
| 140606 | 739  | SELENOM    | -1.58 | 1.01E-36    | 1.80E-35    |
| 10602  | 5347 | CDC42EP3   | -1.58 | 9.65E-122   | 1.05E-119   |
| 6185   | 2532 | RPN2       | -1.58 | 1.86E-182   | 4.09E-180   |
| 348094 | 3122 | ANKDD1A    | -1.59 | 4.16E-12    | 2.36E-11    |
| 374907 | 3193 | B3GNT8     | -1.59 | 0.008339018 | 0.01716294  |
| 57611  | 4277 | ISLR2      | -1.59 | 0.007569627 | 0.015708612 |
| 566    | 936  | AZU1       | -1.59 | 0.007494092 | 0.015568225 |
| 23359  | 4718 | FAM189A1   | -1.59 | 1.86E-06    | 6.55E-06    |



|        |      |           |       |             |             |
|--------|------|-----------|-------|-------------|-------------|
| 59352  | 2554 | LGR6      | -1.59 | 0.001365323 | 0.003248402 |
| 339263 | 7912 | C17orf51  | -1.59 | 5.32E-25    | 6.06E-24    |
| 5522   | 4092 | PPP2R2C   | -1.60 | 0.001012493 | 0.002465392 |
| 3386   | 1277 | ICAM4     | -1.60 | 0.008165195 | 0.016824793 |
| 54734  | 1876 | RAB39A    | -1.60 | 0.00034939  | 0.00091671  |
| 51614  | 1368 | ERGIC3    | -1.60 | 2.04E-103   | 1.73E-101   |
| 147700 | 1793 | KLC3      | -1.60 | 1.98E-08    | 8.50E-08    |
| 23316  | 6695 | CUX2      | -1.60 | 0.007151657 | 0.014916146 |
| 51497  | 2320 | NELFCD    | -1.60 | 3.70E-116   | 3.84E-114   |
| 80329  | 3048 | ULBP1     | -1.60 | 2.29E-05    | 7.10E-05    |
| 4846   | 3983 | NOS3      | -1.60 | 0.00266164  | 0.006006098 |
| 23329  | 7378 | TBC1D30   | -1.60 | 0.000476198 | 0.001223584 |
| 4212   | 3116 | MEIS2     | -1.60 | 8.00E-42    | 1.69E-40    |
| 5818   | 4130 | NECTIN1   | -1.60 | 4.85E-24    | 5.26E-23    |
| 84985  | 1566 | FAM83A    | -1.61 | 0.006578257 | 0.013828971 |
| 55800  | 5682 | SCN3B     | -1.61 | 0.007541317 | 0.015657177 |
| 128497 | 752  | SPATA25   | -1.61 | 0.001945812 | 0.004497033 |
| 3768   | 5006 | KCNJ12    | -1.61 | 3.94E-15    | 2.75E-14    |
| 284422 | 908  | SMIM24    | -1.61 | 2.25E-05    | 6.97E-05    |
| 146395 | 4538 | GSG1L     | -1.61 | 0.007503327 | 0.015585588 |
| 7454   | 1844 | WAS       | -1.61 | 0.001936354 | 0.00447867  |
| 53345  | 1483 | TM6SF2    | -1.61 | 0.000345856 | 0.000908646 |
| 11151  | 1741 | CORO1A    | -1.61 | 3.95E-13    | 2.39E-12    |
| 440073 | 6474 | IQSEC3    | -1.62 | 0.006693981 | 0.01405562  |
| 131540 | 1111 | ZDHHC19   | -1.62 | 0.007417749 | 0.015427668 |
| 6543   | 3264 | SLC8A2    | -1.62 | 0.007379853 | 0.015350647 |
| 728392 | 1503 | LOC728392 | -1.62 | 5.61E-18    | 4.59E-17    |
| 5141   | 4019 | PDE4A     | -1.62 | 6.79E-07    | 2.50E-06    |
| 2494   | 4782 | NR5A2     | -1.62 | 0.006404176 | 0.013494947 |
| 80108  | 2442 | ZFP2      | -1.62 | 0.003406606 | 0.007533116 |
| 392862 | 4107 | GRID2IP   | -1.62 | 0.001898199 | 0.004398435 |
| 6590   | 625  | SLPI      | -1.63 | 9.95E-87    | 6.22E-85    |
| 10053  | 1756 | AP1M2     | -1.63 | 1.00E-05    | 3.24E-05    |
| 162466 | 1967 | PHOSPHO1  | -1.63 | 0.000609277 | 0.001538387 |
| 8193   | 2354 | DPF1      | -1.63 | 2.04E-17    | 1.63E-16    |
| 116092 | 1317 | DNTTIP1   | -1.63 | 2.22E-73    | 1.04E-71    |
| 440854 | 3691 | CAPN14    | -1.63 | 0.000333922 | 0.000879241 |
| 115650 | 934  | TNFRSF13C | -1.63 | 0.001154931 | 0.00278513  |
| 56953  | 1614 | NT5M      | -1.63 | 1.25E-16    | 9.54E-16    |
| 652    | 1825 | BMP4      | -1.63 | 1.21E-27    | 1.55E-26    |
| 4884   | 5437 | NPTX1     | -1.63 | 0.005804024 | 0.012331209 |
| 65055  | 3868 | REEP1     | -1.63 | 1.90E-08    | 8.16E-08    |
| 5798   | 3327 | PTPRN     | -1.63 | 0.005802163 | 0.012330203 |
| 728113 | 2100 | ANXA8L1   | -1.63 | 1.70E-27    | 2.17E-26    |
| 348738 | 1902 | C2orf48   | -1.63 | 8.90E-06    | 2.91E-05    |
| 400746 | 3991 | NCMAP     | -1.63 | 0.000150312 | 0.000416978 |
| 84623  | 2536 | KIRREL3   | -1.64 | 0.001736501 | 0.004052041 |
| 10904  | 2115 | BLCAP     | -1.64 | 6.70E-78    | 3.46E-76    |

|          |      |              |       |             |             |
|----------|------|--------------|-------|-------------|-------------|
| 6000     | 2441 | RGS7         | -1.64 | 9.73E-07    | 3.52E-06    |
| 84107    | 3660 | ZIC4         | -1.64 | 0.005913155 | 0.01254105  |
| 51278    | 2350 | IER5         | -1.64 | 2.25E-52    | 6.50E-51    |
| 3822     | 1223 | KLRC2        | -1.64 | 0.000716774 | 0.001791734 |
| 1143     | 2845 | CHRNA4       | -1.64 | 0.001816145 | 0.00422262  |
| 64399    | 4713 | HHIP         | -1.64 | 1.68E-11    | 9.15E-11    |
| 94031    | 2316 | HTRA3        | -1.65 | 1.33E-10    | 6.80E-10    |
| 22899    | 3241 | ARHGEF15     | -1.65 | 0.005605033 | 0.011942707 |
| 219654   | 4933 | ZCCHC24      | -1.65 | 2.84E-48    | 7.19E-47    |
| 90952    | 1629 | ESAM         | -1.65 | 0.003147637 | 0.007008423 |
| 3232     | 2556 | HOXD3        | -1.65 | 2.79E-18    | 2.32E-17    |
| 55245    | 2354 | UQCC1        | -1.65 | 2.55E-99    | 1.99E-97    |
| 9118     | 3245 | INA          | -1.65 | 3.15E-15    | 2.21E-14    |
| 3196     | 2170 | TLX2         | -1.66 | 0.005556087 | 0.01184552  |
| 51268    | 2020 | PIPOX        | -1.66 | 0.005012085 | 0.010774922 |
| 3624     | 3586 | INHBA        | -1.66 | 3.69E-37    | 6.70E-36    |
| 2298     | 2204 | FOXD4        | -1.66 | 0.000706908 | 0.001769061 |
| 79784    | 6807 | MYH14        | -1.66 | 0.005584704 | 0.011902244 |
| 2262     | 3078 | GPC5         | -1.66 | 0.001612264 | 0.003782742 |
| 27092    | 3430 | CACNG4       | -1.66 | 0.002316844 | 0.005281715 |
| 64220    | 2176 | STRA6        | -1.67 | 5.12E-05    | 0.000151535 |
| 6855     | 2449 | SYN          | -1.67 | 3.71E-07    | 1.41E-06    |
| 9825     | 4032 | SPATA2       | -1.68 | 3.33E-42    | 7.19E-41    |
| 166979   | 1912 | CDC20B       | -1.68 | 0.003745543 | 0.008239545 |
| 9034     | 1596 | CCRL2        | -1.68 | 0.005474083 | 0.011683303 |
| 1.02E+08 | 499  | LOC101927345 | -1.68 | 0.004826646 | 0.010417862 |
| 3758     | 2457 | KCNJ1        | -1.68 | 0.004897949 | 0.010551478 |
| 154790   | 1239 | CLEC2L       | -1.68 | 0.004889067 | 0.010535955 |
| 84915    | 2728 | FAM222A      | -1.68 | 5.92E-06    | 1.98E-05    |
| 202500   | 2184 | TCF7         | -1.68 | 0.003645001 | 0.008035283 |
| 54831    | 1924 | BEST2        | -1.69 | 0.00486199  | 0.010483961 |
| 56129    | 3756 | PCDHB7       | -1.69 | 0.004192521 | 0.009132367 |
| 3397     | 1068 | ID1          | -1.69 | 7.73E-64    | 2.98E-62    |
| 83593    | 3532 | RASSF5       | -1.69 | 2.77E-26    | 3.34E-25    |
| 6405     | 3379 | SEMA3F       | -1.69 | 3.74E-67    | 1.57E-65    |
| 2040     | 3198 | STOM         | -1.69 | 1.12E-123   | 1.27E-121   |
| 374860   | 4544 | ANKRD30B     | -1.69 | 0.00277015  | 0.006224867 |
| 60625    | 2548 | DHX35        | -1.70 | 4.52E-52    | 1.28E-50    |
| 3575     | 4491 | IL7R         | -1.70 | 3.30E-09    | 1.51E-08    |
| 23604    | 3494 | DAPK2        | -1.70 | 5.62E-14    | 3.66E-13    |
| 1748     | 1765 | DLX4         | -1.70 | 9.46E-09    | 4.17E-08    |
| 126393   | 1480 | HSPB6        | -1.70 | 0.000707765 | 0.001770958 |
| 390928   | 2788 | ACP7         | -1.70 | 0.004776622 | 0.010319919 |
| 51098    | 2045 | IFT52        | -1.70 | 3.91E-93    | 2.75E-91    |
| 1543     | 2701 | CYP1A1       | -1.70 | 0.00269966  | 0.006085709 |
| 948      | 4172 | CD36         | -1.71 | 0.001139421 | 0.002749589 |
| 90113    | 3552 | VWA5B2       | -1.71 | 0.000216171 | 0.00058417  |
| 8970     | 481  | HIST1H2BJ    | -1.71 | 8.75E-05    | 0.000250658 |

|        |       |           |       |             |             |
|--------|-------|-----------|-------|-------------|-------------|
| 23037  | 11093 | PDZD2     | -1.71 | 2.68E-65    | 1.07E-63    |
| 9052   | 2856  | GPRC5A    | -1.71 | 8.91E-71    | 3.96E-69    |
| 8600   | 1852  | TNFSF11   | -1.71 | 0.001062431 | 0.002579568 |
| 8817   | 1999  | FGF18     | -1.71 | 6.77E-12    | 3.78E-11    |
| 53342  | 2307  | IL17D     | -1.71 | 1.18E-06    | 4.24E-06    |
| 4772   | 2882  | NFATC1    | -1.72 | 9.71E-26    | 1.14E-24    |
| 947    | 2621  | CD34      | -1.72 | 3.56E-05    | 0.000107496 |
| 23166  | 7884  | STAB1     | -1.72 | 0.004442708 | 0.009647767 |
| 1311   | 2471  | COMP      | -1.72 | 0.001897081 | 0.004396576 |
| 952    | 5694  | CD38      | -1.72 | 0.000894849 | 0.002198225 |
| 656    | 4615  | BMP8B     | -1.72 | 3.00E-08    | 1.27E-07    |
| 63939  | 5080  | FAM217B   | -1.72 | 1.11E-65    | 4.47E-64    |
| 390937 | 2497  | LOC390937 | -1.72 | 0.002848117 | 0.006391178 |
| 146713 | 2832  | RBFOX3    | -1.72 | 0.004034267 | 0.008815749 |
| 200958 | 2611  | MUC20     | -1.72 | 2.60E-07    | 9.98E-07    |
| 128646 | 868   | SIRPD     | -1.72 | 0.004337619 | 0.009432237 |
| 56961  | 2598  | SHD       | -1.72 | 0.003979281 | 0.008705228 |
| 140686 | 1000  | WFDC3     | -1.72 | 0.000204968 | 0.000556181 |
| 7161   | 5091  | TP73      | -1.72 | 1.36E-73    | 6.46E-72    |
| 136    | 1907  | ADORA2B   | -1.73 | 8.27E-31    | 1.21E-29    |
| 2529   | 2428  | FUT7      | -1.73 | 0.00424236  | 0.0092364   |
| 9625   | 4970  | AATK      | -1.73 | 0.000120193 | 0.000337057 |
| 3671   | 2128  | ISLR      | -1.73 | 0.003851863 | 0.008447285 |
| 117248 | 4313  | GALNT15   | -1.73 | 4.00E-08    | 1.67E-07    |
| 645191 | 2130  | LINGO3    | -1.74 | 0.003754838 | 0.008257947 |
| 112936 | 3690  | VPS26B    | -1.74 | 1.21E-44    | 2.82E-43    |
| 94015  | 3375  | TTYH2     | -1.74 | 2.69E-07    | 1.03E-06    |
| 5321   | 3008  | PLA2G4A   | -1.74 | 1.13E-20    | 1.06E-19    |
| 84570  | 7087  | COL25A1   | -1.74 | 0.000138744 | 0.000386344 |
| 10955  | 4379  | SERINC3   | -1.74 | 2.49E-181   | 5.34E-179   |
| 1381   | 782   | CRABP1    | -1.74 | 0.003615065 | 0.007972258 |
| 375033 | 4518  | PEAR1     | -1.75 | 3.34E-14    | 2.21E-13    |
| 140597 | 1123  | TCEAL2    | -1.75 | 0.000498593 | 0.00127688  |
| 23054  | 6751  | NCOA6     | -1.75 | 2.88E-86    | 1.78E-84    |
| 54739  | 2562  | XAF1      | -1.75 | 1.00E-09    | 4.76E-09    |
| 1592   | 2119  | CYP26A1   | -1.75 | 0.002875045 | 0.006444278 |
| 8022   | 2197  | LHX3      | -1.75 | 0.003517193 | 0.007767025 |
| 161497 | 4638  | STRC      | -1.75 | 0.000459435 | 0.001184622 |
| 10406  | 570   | WFDC2     | -1.75 | 9.34E-110   | 8.89E-108   |
| 8813   | 1115  | DPM1      | -1.76 | 4.69E-96    | 3.43E-94    |
| 1280   | 4880  | COL2A1    | -1.76 | 1.89E-14    | 1.27E-13    |
| 84467  | 9086  | FBN3      | -1.76 | 0.003232459 | 0.007185578 |
| 4858   | 7673  | NOVA2     | -1.76 | 0.003183401 | 0.007083616 |
| 5064   | 2845  | PALM      | -1.77 | 4.94E-33    | 7.78E-32    |
| 51083  | 830   | GAL       | -1.77 | 0.003040514 | 0.006790329 |
| 63941  | 1945  | NECAB3    | -1.77 | 1.69E-90    | 1.11E-88    |
| 84628  | 2763  | NTNG2     | -1.77 | 0.001560585 | 0.003672645 |
| 6660   | 5138  | SOX5      | -1.78 | 0.000416804 | 0.001082241 |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 644943   | 2698  | RASSF10      | -1.78 | 1.90E-20    | 1.75E-19    |
| 8365     | 374   | HIST1H4H     | -1.78 | 0.001629645 | 0.003820495 |
| 2307     | 1353  | FOXS1        | -1.78 | 0.003128799 | 0.00697198  |
| 25980    | 2525  | AAR2         | -1.78 | 4.19E-96    | 3.09E-94    |
| 5414     | 1592  | SEPT4        | -1.78 | 3.74E-25    | 4.28E-24    |
| 3061     | 1926  | HCRTR1       | -1.78 | 0.003102691 | 0.006917883 |
| 1.05E+08 | 3724  | LOC105373132 | -1.79 | 0.002401566 | 0.005460844 |
| 222663   | 7476  | SCUBE3       | -1.79 | 1.36E-13    | 8.56E-13    |
| 1.08E+08 | 7801  | LOC107984282 | -1.79 | 0.003000298 | 0.006703885 |
| 50619    | 2320  | DEF6         | -1.79 | 2.51E-12    | 1.44E-11    |
| 387521   | 2295  | TMEM189      | -1.80 | 2.04E-102   | 1.70E-100   |
| 389692   | 2373  | MAFA         | -1.80 | 0.002643304 | 0.005969271 |
| 10324    | 2472  | KLHL41       | -1.80 | 0.000425033 | 0.001101835 |
| 1.08E+08 | 756   | LOC107986035 | -1.80 | 2.02E-05    | 6.31E-05    |
| 285313   | 3304  | IGSF10       | -1.81 | 2.73E-05    | 8.39E-05    |
| 54626    | 4273  | HES2         | -1.81 | 0.000650062 | 0.001633937 |
| 7134     | 705   | TNNC1        | -1.81 | 0.00176372  | 0.004107179 |
| 729956   | 6035  | SHISA7       | -1.81 | 0.000682634 | 0.001710967 |
| 140710   | 14387 | SOGA1        | -1.81 | 2.57E-79    | 1.37E-77    |
| 90668    | 4296  | CARMIL3      | -1.82 | 0.00186298  | 0.004323594 |
| 81621    | 2050  | KAZALD1      | -1.82 | 4.79E-17    | 3.74E-16    |
| 7138     | 1077  | TNNT1        | -1.82 | 1.94E-51    | 5.36E-50    |
| 199964   | 863   | TMEM61       | -1.82 | 0.001092641 | 0.002646409 |
| 161357   | 5250  | MDGA2        | -1.82 | 0.002512863 | 0.005697875 |
| 10044    | 2557  | SH2D3C       | -1.82 | 0.001105171 | 0.002673475 |
| 283576   | 3408  | ZDHHC22      | -1.82 | 0.002495841 | 0.005661445 |
| 8370     | 396   | HIST2H4A     | -1.82 | 0.000347984 | 0.000913697 |
| 554313   | 396   | HIST2H4B     | -1.82 | 0.000347984 | 0.000913697 |
| 729747   | 1982  | ZNF878       | -1.83 | 0.000470675 | 0.001210445 |
| 56884    | 4769  | FSTL5        | -1.83 | 0.001777938 | 0.004137035 |
| 127294   | 5800  | MYOM3        | -1.83 | 0.002421162 | 0.005500474 |
| 3589     | 2381  | IL11         | -1.83 | 2.11E-13    | 1.31E-12    |
| 116969   | 1196  | ART5         | -1.83 | 1.20E-06    | 4.31E-06    |
| 6926     | 4775  | TBX3         | -1.83 | 1.87E-23    | 1.98E-22    |
| 9715     | 4591  | FAM131B      | -1.84 | 6.34E-08    | 2.59E-07    |
| 9353     | 6424  | SLIT2        | -1.84 | 6.20E-19    | 5.32E-18    |
| 7349     | 813   | UCN          | -1.84 | 7.66E-05    | 0.000221272 |
| 375593   | 1358  | TRIM73       | -1.84 | 0.000469788 | 0.001208337 |
| 23237    | 2948  | ARC          | -1.84 | 0.001322909 | 0.003154246 |
| 389136   | 10257 | VGLL3        | -1.84 | 5.82E-40    | 1.16E-38    |
| 1434     | 3628  | CSE1L        | -1.84 | 3.80E-226   | 1.27E-223   |
| 440829   | 1674  | SHISA8       | -1.85 | 0.000608791 | 0.001537589 |
| 91975    | 3406  | ZNF300       | -1.85 | 1.23E-40    | 2.50E-39    |
| 79983    | 3854  | POF1B        | -1.85 | 0.002110582 | 0.0048482   |
| 125965   | 1679  | COX6B2       | -1.85 | 2.22E-07    | 8.59E-07    |
| 9901     | 6457  | SRGAP3       | -1.85 | 9.28E-18    | 7.52E-17    |
| 57333    | 1953  | RCN3         | -1.85 | 1.12E-41    | 2.36E-40    |
| 51085    | 3445  | MLXIPL       | -1.85 | 8.67E-08    | 3.49E-07    |

|        |       |           |       |             |             |
|--------|-------|-----------|-------|-------------|-------------|
| 29906  | 2097  | ST8SIA5   | -1.85 | 0.001827268 | 0.004245704 |
| 57524  | 5695  | CASKIN1   | -1.85 | 1.30E-07    | 5.14E-07    |
| 11247  | 1821  | NXPH4     | -1.86 | 9.41E-20    | 8.44E-19    |
| 375791 | 1314  | CYSRT1    | -1.86 | 6.08E-09    | 2.72E-08    |
| 3017   | 824   | HIST1H2BD | -1.86 | 1.13E-12    | 6.65E-12    |
| 1303   | 8643  | COL12A1   | -1.86 | 6.39E-132   | 8.80E-130   |
| 27296  | 1240  | TP53TG5   | -1.86 | 0.001959965 | 0.004527386 |
| 54854  | 2491  | FAM83E    | -1.87 | 0.001933159 | 0.004471862 |
| 51702  | 2938  | PADI3     | -1.87 | 0.000257386 | 0.000688686 |
| 113235 | 6422  | SLC46A1   | -1.87 | 1.21E-96    | 9.00E-95    |
| 2769   | 2311  | GNA15     | -1.87 | 0.000883817 | 0.002173518 |
| 256472 | 2546  | TMEM151A  | -1.87 | 0.00032974  | 0.000868874 |
| 255239 | 2543  | ANKK1     | -1.87 | 0.000417654 | 0.001084132 |
| 4621   | 7404  | MYH3      | -1.88 | 5.99E-16    | 4.39E-15    |
| 51012  | 2575  | PRELID3B  | -1.88 | 1.35E-104   | 1.16E-102   |
| 8514   | 3813  | KCNAB2    | -1.88 | 4.07E-33    | 6.42E-32    |
| 8938   | 4499  | BAIAP3    | -1.88 | 1.50E-18    | 1.26E-17    |
| 56963  | 3058  | RGMA      | -1.88 | 0.001749186 | 0.00407654  |
| 3005   | 2336  | H1F0      | -1.89 | 6.23E-124   | 7.14E-122   |
| 1910   | 2544  | EDNRB     | -1.89 | 0.00169376  | 0.003959312 |
| 59341  | 3095  | TRPV4     | -1.89 | 1.12E-31    | 1.68E-30    |
| 9071   | 2490  | CLDN10    | -1.89 | 7.04E-06    | 2.33E-05    |
| 3012   | 564   | HIST1H2AE | -1.89 | 1.58E-05    | 5.01E-05    |
| 387496 | 1543  | RASL11A   | -1.90 | 1.60E-26    | 1.94E-25    |
| 5326   | 5656  | PLAGL2    | -1.90 | 2.20E-77    | 1.13E-75    |
| 8334   | 546   | HIST1H2AC | -1.90 | 4.94E-09    | 2.22E-08    |
| 23057  | 5467  | NMNAT2    | -1.90 | 2.73E-07    | 1.05E-06    |
| 340745 | 3157  | LRIT2     | -1.90 | 0.000599741 | 0.00151776  |
| 140699 | 2043  | MROH8     | -1.90 | 5.34E-08    | 2.20E-07    |
| 4586   | 17474 | MUC5AC    | -1.91 | 0.001558665 | 0.003668614 |
| 4900   | 1237  | NRGN      | -1.91 | 1.02E-30    | 1.48E-29    |
| 22974  | 3361  | TPX2      | -1.91 | 2.07E-185   | 4.65E-183   |
| 283726 | 3146  | SAXO2     | -1.91 | 0.001020056 | 0.002482788 |
| 146754 | 14793 | DNAH2     | -1.91 | 0.000432444 | 0.001119904 |
| 57452  | 3971  | GALNT16   | -1.91 | 4.94E-32    | 7.54E-31    |
| 2906   | 5267  | GRIN2D    | -1.91 | 1.34E-27    | 1.72E-26    |
| 6098   | 6685  | ROS1      | -1.91 | 0.000103849 | 0.000294522 |
| 57540  | 4872  | DISP3     | -1.91 | 4.37E-06    | 1.48E-05    |
| 11248  | 5553  | NXPH3     | -1.91 | 3.23E-13    | 1.97E-12    |
| 10669  | 1783  | CGREF1    | -1.91 | 8.67E-09    | 3.83E-08    |
| 11309  | 4057  | SLCO2B1   | -1.91 | 9.87E-13    | 5.84E-12    |
| 5727   | 7894  | PTCH1     | -1.92 | 1.37E-21    | 1.33E-20    |
| 9796   | 1923  | PHYHIP    | -1.92 | 0.00014297  | 0.000397543 |
| 116151 | 3066  | FAM210B   | -1.92 | 2.22E-170   | 4.38E-168   |
| 91120  | 3164  | ZNF682    | -1.93 | 3.54E-09    | 1.61E-08    |
| 132243 | 4637  | H1FOO     | -1.93 | 0.001345893 | 0.003203888 |
| 1E+08  | 1016  | HGC6      | -1.93 | 0.001376054 | 0.003271663 |
| 2812   | 958   | GP1BB     | -1.93 | 5.05E-05    | 0.000149688 |

|          |      |              |       |             |             |
|----------|------|--------------|-------|-------------|-------------|
| 379      | 1602 | ARL4D        | -1.93 | 6.48E-123   | 7.34E-121   |
| 65989    | 2046 | DLK2         | -1.94 | 2.97E-24    | 3.26E-23    |
| 3553     | 1498 | IL1B         | -1.94 | 3.74E-06    | 1.27E-05    |
| 1136     | 3318 | CHRNA3       | -1.94 | 0.000240054 | 0.000644983 |
| 55653    | 1269 | BCAS4        | -1.94 | 1.29E-34    | 2.14E-33    |
| 5933     | 5763 | RBL1         | -1.94 | 3.39E-122   | 3.77E-120   |
| 81607    | 3520 | NECTIN4      | -1.94 | 2.68E-14    | 1.78E-13    |
| 57463    | 5123 | AMIGO1       | -1.94 | 1.93E-27    | 2.45E-26    |
| 5794     | 3924 | PTPRH        | -1.94 | 6.09E-10    | 2.94E-09    |
| 9355     | 2416 | LHX2         | -1.94 | 1.89E-05    | 5.92E-05    |
| 57121    | 2695 | LPAR5        | -1.94 | 7.63E-06    | 2.51E-05    |
| 9148     | 3940 | NEURL1       | -1.94 | 1.25E-06    | 4.47E-06    |
| 1.08E+08 | 5338 | LOC107985410 | -1.95 | 0.000787416 | 0.001952933 |
| 8349     | 2223 | HIST2H2BE    | -1.95 | 2.48E-35    | 4.23E-34    |
| 3747     | 4666 | KCNC2        | -1.95 | 0.000101195 | 0.000287548 |
| 3485     | 1119 | IGFBP2       | -1.95 | 1.63E-18    | 1.37E-17    |
| 256949   | 2801 | KANK3        | -1.95 | 0.000120217 | 0.000337071 |
| 80217    | 3670 | CFAP43       | -1.95 | 2.00E-05    | 6.25E-05    |
| 54922    | 3311 | RASIP1       | -1.95 | 4.22E-05    | 0.0001263   |
|          |      | LOC400927-   |       |             |             |
| 1.03E+08 | 2997 | CSNK1E       | -1.95 | 5.22E-07    | 1.94E-06    |
| 51334    | 1737 | PRR16        | -1.95 | 1.07E-22    | 1.09E-21    |
| 81572    | 1384 | PDRG1        | -1.96 | 3.46E-69    | 1.49E-67    |
| 30811    | 7385 | HUNK         | -1.96 | 0.00027837  | 0.00074143  |
| 3014     | 1651 | H2AFX        | -1.96 | 2.08E-75    | 1.03E-73    |
| 1.05E+08 | 2110 | LOC105373944 | -1.96 | 0.001098281 | 0.002658257 |
| 23017    | 4487 | FAIM2        | -1.96 | 0.00110278  | 0.002668054 |
| 9452     | 1851 | ITM2A        | -1.96 | 0.001137131 | 0.002744809 |
| 9537     | 3270 | TP53I11      | -1.97 | 2.21E-53    | 6.55E-52    |
| 9469     | 6998 | CHST3        | -1.97 | 1.26E-121   | 1.37E-119   |
| 11065    | 860  | UBE2C        | -1.97 | 2.45E-167   | 4.74E-165   |
| 23046    | 9339 | KIF21B       | -1.97 | 3.56E-29    | 4.88E-28    |
| 7048     | 4413 | TGFBR2       | -1.99 | 1.27E-133   | 1.77E-131   |
| 254528   | 1731 | MEIOB        | -1.99 | 0.000591542 | 0.001498934 |
| 1672     | 484  | DEFB1        | -1.99 | 2.85E-13    | 1.75E-12    |
| 23129    | 4892 | PLXND1       | -1.99 | 3.34E-110   | 3.22E-108   |
| 610      | 3459 | HCN2         | -2.00 | 9.29E-10    | 4.43E-09    |
| 169611   | 6111 | OLFML2A      | -2.00 | 1.10E-129   | 1.44E-127   |
| 5915     | 2680 | RARB         | -2.00 | 3.29E-05    | 9.98E-05    |
| 164633   | 3001 | CABP7        | -2.00 | 4.46E-05    | 0.000133035 |
| 26164    | 3684 | MTG2         | -2.00 | 1.71E-129   | 2.22E-127   |
| 4059     | 2559 | BCAM         | -2.00 | 2.01E-196   | 5.10E-194   |
| 4684     | 5342 | NCAM1        | -2.00 | 2.32E-05    | 7.18E-05    |
| 23310    | 4982 | NCAPD3       | -2.00 | 4.22E-129   | 5.36E-127   |
| 284391   | 6350 | ZNF844       | -2.00 | 2.39E-09    | 1.11E-08    |
| 1602     | 4099 | DACH1        | -2.01 | 5.98E-06    | 2.00E-05    |
| 7056     | 4048 | THBD         | -2.01 | 1.15E-08    | 5.01E-08    |
| 283948   | 2102 | NHLRC4       | -2.01 | 0.000856658 | 0.002110816 |

|          |       |              |       |             |             |
|----------|-------|--------------|-------|-------------|-------------|
| 5745     | 2007  | PTH1R        | -2.01 | 5.21E-05    | 0.000153945 |
| 6853     | 3210  | SYN1         | -2.02 | 1.96E-06    | 6.87E-06    |
| 23509    | 5232  | POFUT1       | -2.02 | 7.80E-204   | 2.24E-201   |
| 1.01E+08 | 3195  | LOC100996713 | -2.02 | 0.00076245  | 0.001897102 |
| 7732     | 2993  | RNF112       | -2.02 | 0.000601028 | 0.001520584 |
| 9143     | 2076  | SYNGR3       | -2.03 | 7.67E-18    | 6.25E-17    |
| 142680   | 2099  | SLC34A3      | -2.03 | 0.000439528 | 0.001137255 |
| 8786     | 1078  | RGS11        | -2.03 | 8.03E-05    | 0.000231065 |
| 4605     | 2783  | MYBL2        | -2.03 | 2.02E-137   | 2.91E-135   |
| 64098    | 4201  | PARVG        | -2.04 | 9.90E-09    | 4.36E-08    |
| 116835   | 2222  | HSPA12B      | -2.04 | 0.000207564 | 0.000562795 |
| 128486   | 958   | FITM2        | -2.05 | 9.60E-13    | 5.68E-12    |
| 117581   | 1186  | TWIST2       | -2.05 | 0.000629363 | 0.001585499 |
| 91752    | 4700  | ZNF804A      | -2.05 | 0.000183069 | 0.000500889 |
| 64411    | 5028  | ARAP3        | -2.05 | 3.19E-91    | 2.12E-89    |
| 1.08E+08 | 4421  | LOC107987188 | -2.05 | 0.000621647 | 0.001567393 |
| 79839    | 2132  | CCDC102B     | -2.06 | 0.0001189   | 0.000333852 |
| 23467    | 5831  | NPTXR        | -2.06 | 8.19E-102   | 6.71E-100   |
| 4133     | 6043  | MAP2         | -2.07 | 1.10E-53    | 3.28E-52    |
| 441631   | 3975  | TSPAN11      | -2.07 | 2.76E-10    | 1.37E-09    |
| 64137    | 3843  | ABCG4        | -2.07 | 5.65E-10    | 2.74E-09    |
| 1012     | 3720  | CDH13        | -2.08 | 5.56E-102   | 4.57E-100   |
| 1747     | 2613  | DLX3         | -2.08 | 0.000406061 | 0.001056352 |
| 3991     | 2762  | LIPE         | -2.08 | 2.93E-17    | 2.32E-16    |
| 2203     | 1647  | FBP1         | -2.08 | 0.00056174  | 0.001428101 |
| 1050     | 2631  | CEBPA        | -2.08 | 9.04E-07    | 3.28E-06    |
| 5138     | 3820  | PDE2A        | -2.08 | 8.97E-05    | 0.00025654  |
| 8447     | 1956  | DOC2B        | -2.08 | 0.000554735 | 0.001411504 |
| 116931   | 10440 | MED12L       | -2.09 | 3.89E-19    | 3.37E-18    |
| 6790     | 2237  | AURKA        | -2.09 | 3.76E-197   | 9.69E-195   |
| 79625    | 2911  | NDNF         | -2.10 | 5.77E-09    | 2.58E-08    |
| 4487     | 1940  | MSX1         | -2.10 | 4.62E-10    | 2.25E-09    |
| 168455   | 4426  | CCDC71L      | -2.10 | 2.96E-128   | 3.62E-126   |
| 59285    | 1748  | CACNG6       | -2.10 | 0.000188927 | 0.000515567 |
| 26232    | 1724  | FBXO2        | -2.10 | 4.19E-19    | 3.62E-18    |
| 7442     | 4133  | TRPV1        | -2.10 | 5.34E-33    | 8.39E-32    |
| 4585     | 3958  | MUC4         | -2.10 | 0.000174795 | 0.00047944  |
| 284339   | 2145  | TMEM145      | -2.11 | 3.40E-12    | 1.94E-11    |
| 978      | 985   | CDA          | -2.11 | 3.97E-15    | 2.77E-14    |
| 126567   | 3124  | C2CD4C       | -2.11 | 2.74E-12    | 1.57E-11    |
| 6004     | 2432  | RGS16        | -2.12 | 4.73E-05    | 0.000140776 |
| 8532     | 2321  | CPZ          | -2.12 | 1.03E-19    | 9.23E-19    |
| 55544    | 2401  | RBM38        | -2.12 | 1.51E-99    | 1.20E-97    |
| 57692    | 3714  | MAGEE1       | -2.12 | 4.08E-16    | 3.01E-15    |
| 5176     | 1493  | SERPINF1     | -2.13 | 2.25E-20    | 2.07E-19    |
| 100      | 1558  | ADA          | -2.13 | 1.49E-43    | 3.34E-42    |
| 10501    | 3925  | SEMA6B       | -2.14 | 9.92E-115   | 1.01E-112   |
| 4185     | 4836  | ADAM11       | -2.15 | 4.65E-18    | 3.82E-17    |

|        |      |            |       |             |             |
|--------|------|------------|-------|-------------|-------------|
| 22943  | 1815 | DKK1       | -2.15 | 2.31E-34    | 3.80E-33    |
| 112885 | 3500 | PHF21B     | -2.15 | 0.000255927 | 0.000685042 |
| 222183 | 3642 | SRRM3      | -2.15 | 2.02E-06    | 7.09E-06    |
| 6943   | 1513 | TCF21      | -2.15 | 7.14E-18    | 5.84E-17    |
| 1364   | 1859 | CLDN4      | -2.15 | 3.87E-64    | 1.50E-62    |
| 51440  | 4454 | HPCAL4     | -2.15 | 4.01E-06    | 1.36E-05    |
| 3932   | 2102 | LCK        | -2.16 | 7.14E-05    | 0.000207    |
| 66004  | 4593 | LYNX1      | -2.16 | 6.37E-63    | 2.40E-61    |
| 56479  | 6265 | KCNQ5      | -2.16 | 7.94E-06    | 2.61E-05    |
| 27115  | 5387 | PDE7B      | -2.16 | 2.20E-18    | 1.84E-17    |
| 283316 | 5953 | CD163L1    | -2.17 | 4.15E-05    | 0.000124444 |
| 4051   | 2643 | CYP4F3     | -2.17 | 0.000152022 | 0.000421262 |
| 64856  | 4630 | VWA1       | -2.17 | 7.98E-91    | 5.25E-89    |
| 2202   | 3034 | EFEMP1     | -2.17 | 6.52E-210   | 2.00E-207   |
| 84894  | 3004 | LINGO1     | -2.18 | 0.000268206 | 0.000715967 |
| 653689 | 1104 | GSTT2B     | -2.18 | 2.73E-36    | 4.82E-35    |
| 5197   | 744  | PF4V1      | -2.18 | 0.000253386 | 0.000678854 |
| 723790 | 534  | HIST2H2AA4 | -2.18 | 3.79E-22    | 3.79E-21    |
| 8337   | 534  | HIST2H2AA3 | -2.18 | 3.79E-22    | 3.79E-21    |
| 147495 | 2849 | APCDD1     | -2.18 | 0.000296775 | 0.000786795 |
| 55786  | 2106 | ZNF415     | -2.19 | 3.14E-05    | 9.55E-05    |
| 22859  | 7564 | ADGRL1     | -2.19 | 2.06E-128   | 2.56E-126   |
| 129804 | 3765 | FBLN7      | -2.19 | 5.68E-85    | 3.41E-83    |
| 11322  | 2490 | TMC6       | -2.20 | 1.53E-37    | 2.82E-36    |
| 81928  | 3785 | CABLES2    | -2.20 | 1.42E-115   | 1.46E-113   |
| 51673  | 1068 | TPPP3      | -2.20 | 0.000166515 | 0.000458562 |
| 338596 | 2195 | ST8SIA6    | -2.20 | 2.33E-07    | 8.99E-07    |
| 5266   | 579  | PI3        | -2.21 | 1.53E-08    | 6.62E-08    |
| 1571   | 1667 | CYP2E1     | -2.21 | 3.65E-10    | 1.80E-09    |
| 3855   | 1723 | KRT7       | -2.21 | 2.02E-99    | 1.59E-97    |
| 5420   | 5911 | PODXL      | -2.21 | 9.31E-28    | 1.20E-26    |
| 7539   | 2906 | ZFP37      | -2.21 | 3.70E-13    | 2.25E-12    |
| 7133   | 3641 | TNFRSF1B   | -2.22 | 4.95E-34    | 8.07E-33    |
| 388335 | 2532 | TMEM220    | -2.22 | 6.73E-42    | 1.43E-40    |
| 11240  | 3537 | PADI2      | -2.23 | 1.65E-13    | 1.03E-12    |
| 139735 | 6365 | ZFP92      | -2.23 | 1.50E-05    | 4.76E-05    |
| 388394 | 1110 | RPRML      | -2.23 | 0.000184522 | 0.000504477 |
| 27127  | 3537 | SMC1B      | -2.23 | 0.000184975 | 0.000505531 |
| 6657   | 2520 | SOX2       | -2.23 | 8.49E-05    | 0.000243502 |
| 9172   | 4916 | MYOM2      | -2.23 | 7.66E-07    | 2.80E-06    |
| 653145 | 2048 | ANXA8      | -2.24 | 4.67E-97    | 3.49E-95    |
| 5327   | 3221 | PLAT       | -2.24 | 1.38E-99    | 1.10E-97    |
| 2882   | 1246 | GPX7       | -2.25 | 4.44E-05    | 0.00013262  |
| 5152   | 1658 | PDE9A      | -2.25 | 0.000155068 | 0.000428432 |
| 94027  | 1228 | CGB7       | -2.26 | 5.48E-15    | 3.78E-14    |
| 7546   | 2991 | ZIC2       | -2.26 | 0.000106631 | 0.000301738 |
| 10235  | 3285 | RASGRP2    | -2.26 | 0.000105533 | 0.000298748 |
| 89853  | 3677 | MVB12B     | -2.27 | 6.19E-49    | 1.60E-47    |



|        |       |          |       |             |             |
|--------|-------|----------|-------|-------------|-------------|
| 11045  | 1284  | UPK1A    | -2.27 | 0.00017007  | 0.000467337 |
| 29942  | 1972  | PURG     | -2.27 | 9.70E-05    | 0.000276346 |
| 27128  | 3096  | CYTH4    | -2.28 | 3.44E-06    | 1.18E-05    |
| 54492  | 5824  | NEURL1B  | -2.28 | 1.30E-108   | 1.20E-106   |
| 314    | 2681  | AOC2     | -2.28 | 1.56E-10    | 7.93E-10    |
| 2676   | 1980  | GFRA3    | -2.28 | 2.08E-07    | 8.06E-07    |
| 8326   | 2342  | FZD9     | -2.28 | 7.11E-09    | 3.17E-08    |
| 1056   | 2386  | CEL      | -2.29 | 1.92E-28    | 2.55E-27    |
| 26251  | 2989  | KCNG2    | -2.29 | 2.50E-09    | 1.16E-08    |
| 5272   | 4287  | SERPINB9 | -2.29 | 2.17E-82    | 1.23E-80    |
| 10331  | 2720  | B3GNT3   | -2.30 | 2.10E-14    | 1.41E-13    |
| 10468  | 2431  | FST      | -2.30 | 4.46E-38    | 8.41E-37    |
| 6693   | 6911  | SPN      | -2.30 | 9.24E-06    | 3.01E-05    |
| 22997  | 3333  | IGSF9B   | -2.31 | 9.91E-05    | 0.000281985 |
| 63940  | 1501  | GPSM3    | -2.31 | 2.52E-24    | 2.77E-23    |
| 201161 | 1181  | CENPV    | -2.31 | 7.83E-27    | 9.70E-26    |
| 254439 | 1185  | C11orf86 | -2.32 | 0.000120561 | 0.000337929 |
| 3209   | 2514  | HOXA13   | -2.32 | 4.10E-05    | 0.000122865 |
| 55130  | 2811  | ARMC4    | -2.32 | 5.64E-20    | 5.12E-19    |
| 1001   | 3591  | CDH3     | -2.32 | 1.17E-19    | 1.04E-18    |
| 138429 | 2193  | PIP5KL1  | -2.33 | 5.90E-14    | 3.83E-13    |
| 79987  | 12356 | SVEP1    | -2.33 | 3.19E-14    | 2.11E-13    |
| 6653   | 9388  | SORL1    | -2.33 | 1.29E-08    | 5.63E-08    |
| 5457   | 3817  | POU4F1   | -2.33 | 1.49E-07    | 5.87E-07    |
| 147837 | 1303  | ZNF563   | -2.33 | 6.63E-08    | 2.71E-07    |
| 114795 | 9143  | TMEM132B | -2.33 | 4.43E-06    | 1.50E-05    |
| 54456  | 2236  | MOV10L1  | -2.34 | 8.13E-05    | 0.000234049 |
| 57580  | 5985  | PREX1    | -2.34 | 2.23E-65    | 8.91E-64    |
| 5413   | 2115  | SEPT5    | -2.34 | 1.49E-26    | 1.82E-25    |
| 2895   | 8137  | GRID2    | -2.34 | 1.92E-05    | 6.01E-05    |
| 10232  | 2127  | MSLN     | -2.34 | 4.10E-13    | 2.48E-12    |
| 25927  | 1687  | CNRIP1   | -2.35 | 4.18E-45    | 9.85E-44    |
| 7025   | 2115  | NR2F1    | -2.35 | 3.59E-26    | 4.32E-25    |
| 2042   | 3219  | EPHA3    | -2.36 | 1.16E-05    | 3.72E-05    |
| 116    | 3187  | ADCYAP1  | -2.36 | 9.07E-05    | 0.000259138 |
| 84958  | 1989  | SYTL1    | -2.36 | 1.03E-51    | 2.90E-50    |
| 7122   | 2332  | CLDN5    | -2.36 | 9.02E-05    | 0.000257704 |
| 1236   | 2157  | CCR7     | -2.36 | 1.68E-06    | 5.95E-06    |
| 26153  | 5902  | KIF26A   | -2.36 | 4.16E-05    | 0.000124708 |
| 2781   | 6896  | GNAZ     | -2.37 | 4.19E-24    | 4.55E-23    |
| 84152  | 1315  | PPP1R1B  | -2.37 | 6.17E-05    | 0.000180422 |
| 2902   | 3686  | GRIN1    | -2.38 | 1.36E-05    | 4.35E-05    |
| 29842  | 7041  | TFCP2L1  | -2.38 | 3.85E-25    | 4.41E-24    |
| 10326  | 1518  | SIRPB1   | -2.38 | 1.46E-87    | 9.27E-86    |
| 25992  | 7015  | SNED1    | -2.39 | 6.05E-42    | 1.28E-40    |
| 2523   | 4072  | FUT1     | -2.39 | 1.02E-16    | 7.83E-16    |
| 23349  | 5839  | PHF24    | -2.40 | 4.91E-05    | 0.000145773 |
| 441478 | 2639  | NRARP    | -2.40 | 7.37E-22    | 7.26E-21    |

|        |       |          |       |           |             |
|--------|-------|----------|-------|-----------|-------------|
| 1295   | 3042  | COL8A1   | -2.40 | 0.00E+00  | 0.00E+00    |
| 9284   | 1349  | NPIPA1   | -2.40 | 2.42E-76  | 1.23E-74    |
| 55107  | 4410  | ANO1     | -2.40 | 6.44E-05  | 0.000187863 |
| 130497 | 1911  | OSR1     | -2.41 | 3.84E-13  | 2.33E-12    |
| 163051 | 4916  | ZNF709   | -2.41 | 2.61E-12  | 1.50E-11    |
| 9001   | 3880  | HAP1     | -2.42 | 3.86E-12  | 2.19E-11    |
| 10633  | 1071  | RASL10A  | -2.42 | 7.85E-06  | 2.58E-05    |
| 126147 | 2019  | NTN5     | -2.43 | 4.61E-07  | 1.73E-06    |
| 388799 | 692   | FAM209B  | -2.43 | 1.40E-05  | 4.45E-05    |
| 2645   | 2442  | GCK      | -2.43 | 6.34E-07  | 2.34E-06    |
| 7137   | 866   | TNNI3    | -2.43 | 1.27E-05  | 4.08E-05    |
| 23149  | 3061  | FCHO1    | -2.44 | 1.40E-14  | 9.46E-14    |
| 81610  | 2445  | FAM83D   | -2.46 | 3.54E-143 | 5.51E-141   |
| 25789  | 1712  | TMEM59L  | -2.46 | 3.01E-14  | 2.00E-13    |
| 25850  | 2945  | ZNF345   | -2.47 | 7.59E-13  | 4.52E-12    |
| 1278   | 5411  | COL1A2   | -2.47 | 2.73E-05  | 8.38E-05    |
| 147906 | 2834  | DACT3    | -2.47 | 6.06E-09  | 2.71E-08    |
| 57595  | 3782  | PDZD4    | -2.47 | 4.70E-24  | 5.11E-23    |
| 4486   | 4216  | MST1R    | -2.48 | 4.44E-08  | 1.84E-07    |
| 57509  | 4152  | MTUS1    | -2.49 | 3.87E-58  | 1.30E-56    |
| 9536   | 1787  | PTGES    | -2.49 | 1.79E-51  | 4.96E-50    |
| 3581   | 3771  | IL9R     | -2.49 | 2.11E-09  | 9.82E-09    |
| 3761   | 1913  | KCNJ4    | -2.49 | 8.05E-11  | 4.19E-10    |
| 7805   | 2223  | LAPTM5   | -2.50 | 3.61E-46  | 8.69E-45    |
| 25907  | 1876  | TMEM158  | -2.50 | 1.91E-23  | 2.02E-22    |
| 5803   | 6475  | PTPRZ1   | -2.50 | 3.02E-05  | 9.21E-05    |
| 127343 | 2881  | DMBX1    | -2.52 | 1.45E-06  | 5.16E-06    |
| 2944   | 1255  | GSTM1    | -2.52 | 2.10E-31  | 3.14E-30    |
| 5026   | 2266  | P2RX5    | -2.52 | 1.63E-28  | 2.16E-27    |
| 55190  | 2413  | NUDT11   | -2.52 | 1.38E-14  | 9.34E-14    |
| 9023   | 1378  | CH25H    | -2.52 | 4.09E-07  | 1.54E-06    |
| 26301  | 1962  | GBGT1    | -2.52 | 3.10E-39  | 6.06E-38    |
| 7851   | 2405  | MALL     | -2.52 | 1.37E-155 | 2.32E-153   |
| 3782   | 11956 | KCNN3    | -2.52 | 1.82E-07  | 7.10E-07    |
| 4583   | 15720 | MUC2     | -2.53 | 9.97E-06  | 3.24E-05    |
| 57574  | 4466  | MARCH4   | -2.53 | 6.22E-10  | 3.00E-09    |
| 147138 | 3163  | TMC8     | -2.53 | 1.72E-05  | 5.43E-05    |
| 3006   | 732   | HIST1H1C | -2.53 | 9.98E-89  | 6.35E-87    |
| 1116   | 1867  | CHI3L1   | -2.54 | 2.34E-05  | 7.25E-05    |
| 347    | 1148  | APOD     | -2.54 | 1.53E-05  | 4.86E-05    |
| 2155   | 2892  | F7       | -2.54 | 2.26E-05  | 7.00E-05    |
| 149297 | 3638  | FAM78B   | -2.54 | 2.24E-05  | 6.96E-05    |
| 10659  | 7647  | CELF2    | -2.54 | 1.22E-07  | 4.84E-07    |
| 1746   | 2308  | DLX2     | -2.55 | 1.80E-10  | 9.08E-10    |
| 3560   | 4050  | IL2RB    | -2.55 | 1.32E-05  | 4.22E-05    |
| 482    | 3018  | ATP1B2   | -2.56 | 1.35E-18  | 1.14E-17    |
| 3872   | 1574  | KRT17    | -2.56 | 6.82E-35  | 1.15E-33    |
| 8912   | 7395  | CACNA1H  | -2.56 | 4.95E-18  | 4.07E-17    |

|          |       |              |       |           |           |
|----------|-------|--------------|-------|-----------|-----------|
| 1757     | 3234  | SARDH        | -2.56 | 2.25E-22  | 2.27E-21  |
| 6563     | 3519  | SLC14A1      | -2.57 | 1.18E-05  | 3.80E-05  |
| 136853   | 2806  | SSC4D        | -2.57 | 4.72E-60  | 1.66E-58  |
| 8351     | 921   | HIST1H3D     | -2.58 | 2.05E-07  | 7.96E-07  |
| 55068    | 2706  | ENOX1        | -2.58 | 1.89E-09  | 8.82E-09  |
| 1E+08    | 6199  | ZNF605       | -2.58 | 1.25E-45  | 2.97E-44  |
| 28951    | 4408  | TRIB2        | -2.58 | 7.97E-92  | 5.41E-90  |
| 768239   | 4700  | PSAPL1       | -2.59 | 1.57E-05  | 4.98E-05  |
| 5646     | 803   | PRSS3        | -2.59 | 2.69E-06  | 9.29E-06  |
| 25830    | 2068  | SULT4A1      | -2.60 | 6.51E-12  | 3.64E-11  |
| 1281     | 5490  | COL3A1       | -2.60 | 1.19E-06  | 4.28E-06  |
| 283358   | 3438  | B4GALNT3     | -2.61 | 1.27E-09  | 6.00E-09  |
| 140862   | 2610  | ISM1         | -2.61 | 1.49E-38  | 2.85E-37  |
| 3670     | 2729  | ISL1         | -2.61 | 8.53E-10  | 4.08E-09  |
| 345462   | 2605  | ZNF879       | -2.62 | 2.00E-06  | 7.02E-06  |
| 220441   | 8803  | RNF152       | -2.62 | 2.30E-19  | 2.02E-18  |
| 1.05E+08 | 1166  | LOC105371933 | -2.62 | 1.15E-05  | 3.70E-05  |
| 85352    | 6741  | SHISAL1      | -2.63 | 1.10E-05  | 3.56E-05  |
| 5139     | 7319  | PDE3A        | -2.63 | 1.10E-05  | 3.54E-05  |
| 5175     | 6831  | PECAM1       | -2.63 | 1.10E-05  | 3.54E-05  |
| 7148     | 3143  | TNXB         | -2.64 | 1.73E-06  | 6.09E-06  |
| 80022    | 7312  | MYO15B       | -2.64 | 9.95E-27  | 1.22E-25  |
| 489      | 4739  | ATP2A3       | -2.64 | 5.52E-37  | 9.93E-36  |
| 164284   | 3439  | APCDD1L      | -2.65 | 5.19E-18  | 4.26E-17  |
| 148113   | 4199  | CILP2        | -2.65 | 1.87E-08  | 8.05E-08  |
| 4046     | 1578  | LSP1         | -2.66 | 8.62E-06  | 2.82E-05  |
| 1129     | 7372  | CHRM2        | -2.66 | 5.87E-07  | 2.18E-06  |
| 954      | 2087  | ENTPD2       | -2.66 | 3.09E-09  | 1.42E-08  |
| 1E+08    | 2590  | FOXO6        | -2.66 | 2.13E-22  | 2.16E-21  |
| 2977     | 16140 | GUCY1A2      | -2.67 | 4.35E-52  | 1.24E-50  |
| 6398     | 1797  | SECTM1       | -2.67 | 5.19E-25  | 5.92E-24  |
| 60680    | 2481  | CELF5        | -2.68 | 1.01E-09  | 4.82E-09  |
| 57451    | 9090  | TENM2        | -2.68 | 6.16E-26  | 7.30E-25  |
| 9568     | 5802  | GABBR2       | -2.69 | 3.93E-11  | 2.10E-10  |
| 147948   | 2928  | ZNF582       | -2.69 | 6.54E-06  | 2.18E-05  |
| 643596   | 1395  | RNF224       | -2.70 | 1.14E-08  | 4.99E-08  |
| 2318     | 9149  | FLNC         | -2.70 | 2.53E-197 | 6.62E-195 |
| 219699   | 6440  | UNC5B        | -2.70 | 5.26E-13  | 3.16E-12  |
| 162461   | 1497  | TMEM92       | -2.70 | 1.06E-38  | 2.03E-37  |
| 8639     | 2412  | AOC3         | -2.72 | 1.60E-10  | 8.12E-10  |
| 2548     | 3679  | GAA          | -2.72 | 6.74E-138 | 9.97E-136 |
| 338761   | 1987  | C1QL4        | -2.73 | 1.78E-32  | 2.75E-31  |
| 6096     | 3604  | RORB         | -2.73 | 2.65E-06  | 9.16E-06  |
| 51162    | 1288  | EGFL7        | -2.73 | 1.13E-78  | 5.95E-77  |
| 151473   | 4252  | SLC16A14     | -2.73 | 3.17E-45  | 7.49E-44  |
| 91409    | 1470  | CCDC74B      | -2.74 | 9.79E-31  | 1.42E-29  |
| 7643     | 3767  | ZNF90        | -2.74 | 5.53E-10  | 2.68E-09  |
| 10266    | 808   | RAMP2        | -2.74 | 4.91E-20  | 4.46E-19  |

|          |       |           |       |           |           |
|----------|-------|-----------|-------|-----------|-----------|
| 9708     | 5503  | PCDHGA8   | -2.75 | 1.22E-21  | 1.19E-20  |
| 5307     | 2383  | PITX1     | -2.75 | 5.57E-33  | 8.73E-32  |
| 2044     | 7289  | EPHA5     | -2.76 | 2.40E-31  | 3.58E-30  |
| 126353   | 2891  | MISP      | -2.77 | 1.39E-07  | 5.48E-07  |
| 339983   | 5894  | NAT8L     | -2.77 | 1.40E-13  | 8.86E-13  |
| 136227   | 2751  | COL26A1   | -2.77 | 1.13E-10  | 5.82E-10  |
| 8904     | 2008  | CPNE1     | -2.79 | 0.00E+00  | 0.00E+00  |
| 1375     | 2798  | CPT1B     | -2.79 | 8.02E-76  | 4.02E-74  |
| 23251    | 7844  | KIAA1024  | -2.79 | 3.67E-14  | 2.42E-13  |
| 10630    | 2826  | PDPN      | -2.80 | 4.44E-201 | 1.25E-198 |
| 8348     | 467   | HIST1H2BO | -2.80 | 2.42E-07  | 9.33E-07  |
| 286336   | 3479  | FAM78A    | -2.80 | 1.08E-12  | 6.35E-12  |
| 26032    | 4881  | SUSD5     | -2.82 | 1.34E-86  | 8.34E-85  |
| 151742   | 9903  | PPM1L     | -2.82 | 9.81E-81  | 5.38E-79  |
| 6545     | 2323  | SLC7A4    | -2.82 | 6.85E-08  | 2.79E-07  |
| 154091   | 5367  | SLC2A12   | -2.84 | 5.48E-99  | 4.23E-97  |
| 1002     | 6530  | CDH4      | -2.84 | 8.32E-144 | 1.31E-141 |
| 7111     | 3275  | TMOD1     | -2.85 | 3.13E-36  | 5.51E-35  |
| 3479     | 5422  | IGF1      | -2.85 | 1.06E-10  | 5.49E-10  |
| 22979    | 7433  | EFR3B     | -2.87 | 6.74E-11  | 3.53E-10  |
| 53358    | 11357 | SHC3      | -2.87 | 5.07E-26  | 6.03E-25  |
| 268      | 2065  | AMH       | -2.87 | 4.04E-52  | 1.15E-50  |
| 10736    | 2178  | SIX2      | -2.89 | 1.27E-09  | 6.00E-09  |
| 64093    | 3716  | SMOC1     | -2.90 | 1.42E-30  | 2.05E-29  |
| 1.03E+08 | 3887  | HOTS      | -2.91 | 2.06E-11  | 1.12E-10  |
| 729262   | 3292  | NUTM2B    | -2.91 | 2.43E-16  | 1.82E-15  |
| 2583     | 3687  | B4GALNT1  | -2.91 | 8.27E-101 | 6.71E-99  |
| 54097    | 1452  | FAM3B     | -2.92 | 7.81E-07  | 2.85E-06  |
| 1132     | 1817  | CHRM4     | -2.92 | 8.04E-10  | 3.85E-09  |
| 1009     | 3905  | CDH11     | -2.93 | 9.14E-44  | 2.07E-42  |
| 2869     | 2448  | GRK5      | -2.93 | 2.14E-23  | 2.26E-22  |
| 84709    | 1339  | MGARP     | -2.93 | 3.27E-17  | 2.58E-16  |
| 22843    | 6465  | PPM1E     | -2.94 | 4.62E-37  | 8.34E-36  |
| 57491    | 5622  | AHRR      | -2.94 | 9.95E-32  | 1.50E-30  |
| 79883    | 2477  | PODNL1    | -2.95 | 4.83E-95  | 3.49E-93  |
| 11033    | 2264  | ADAP1     | -2.95 | 6.97E-26  | 8.25E-25  |
| 3751     | 5333  | KCND2     | -2.96 | 6.31E-20  | 5.71E-19  |
| 7424     | 2103  | VEGFC     | -2.96 | 3.10E-68  | 1.31E-66  |
| 3142     | 2308  | HLX       | -2.98 | 3.24E-23  | 3.40E-22  |
| 9311     | 2314  | ASIC3     | -2.98 | 3.49E-12  | 1.99E-11  |
| 8642     | 10765 | DCHS1     | -2.98 | 7.39E-68  | 3.11E-66  |
| 57537    | 6078  | SORCS2    | -2.98 | 9.84E-93  | 6.85E-91  |
| 10343    | 7660  | PKDREJ    | -2.99 | 6.12E-08  | 2.51E-07  |
| 79844    | 4523  | ZDHHC11   | -2.99 | 8.82E-21  | 8.30E-20  |
| 6331     | 8338  | SCN5A     | -3.00 | 1.05E-22  | 1.07E-21  |
| 768      | 1561  | CA9       | -3.01 | 1.66E-08  | 7.14E-08  |
| 10234    | 2250  | LRRC17    | -3.01 | 5.55E-10  | 2.69E-09  |
| 54102    | 4048  | CLIC6     | -3.02 | 1.54E-08  | 6.65E-08  |

|          |       |              |       |           |           |
|----------|-------|--------------|-------|-----------|-----------|
| 80303    | 1877  | EFHD1        | -3.02 | 5.39E-67  | 2.23E-65  |
| 2687     | 2283  | GGT5         | -3.04 | 8.17E-12  | 4.54E-11  |
| 54757    | 4202  | FAM20A       | -3.04 | 8.73E-12  | 4.84E-11  |
| 51450    | 1033  | PRRX2        | -3.04 | 1.79E-43  | 4.00E-42  |
| 4037     | 3714  | LRP3         | -3.05 | 1.16E-72  | 5.37E-71  |
| 4440     | 1239  | MSI1         | -3.06 | 8.88E-10  | 4.24E-09  |
| 80332    | 3435  | ADAM33       | -3.06 | 1.33E-16  | 1.01E-15  |
| 55964    | 4656  | SEPT3        | -3.06 | 3.28E-27  | 4.13E-26  |
| 90649    | 3897  | ZNF486       | -3.07 | 9.54E-23  | 9.78E-22  |
| 360205   | 518   | PRAC2        | -3.07 | 5.01E-11  | 2.65E-10  |
| 633      | 2223  | BGN          | -3.08 | 1.67E-13  | 1.04E-12  |
| 23428    | 4257  | SLC7A8       | -3.09 | 4.11E-09  | 1.86E-08  |
| 118738   | 3513  | ZNF488       | -3.09 | 1.20E-15  | 8.66E-15  |
| 51393    | 2564  | TRPV2        | -3.09 | 1.78E-25  | 2.07E-24  |
| 440193   | 5861  | CCDC88C      | -3.11 | 1.16E-47  | 2.91E-46  |
| 51316    | 1416  | PLAC8        | -3.12 | 1.89E-56  | 6.10E-55  |
| 7060     | 3109  | THBS4        | -3.12 | 3.55E-14  | 2.34E-13  |
| 6492     | 8436  | SIM1         | -3.13 | 2.27E-128 | 2.80E-126 |
| 2049     | 4234  | EPHB3        | -3.13 | 2.86E-09  | 1.32E-08  |
| 7448     | 1678  | VTN          | -3.13 | 7.70E-10  | 3.69E-09  |
| 8900     | 1892  | CCNA1        | -3.14 | 3.68E-29  | 5.03E-28  |
| 54331    | 3823  | GNG2         | -3.15 | 4.75E-61  | 1.73E-59  |
| 92815    | 496   | HIST3H2A     | -3.16 | 2.26E-10  | 1.13E-09  |
| 94137    | 7978  | RP1L1        | -3.16 | 6.23E-09  | 2.78E-08  |
| 57134    | 3480  | MAN1C1       | -3.17 | 3.93E-26  | 4.70E-25  |
| 128853   | 1112  | DUSP15       | -3.17 | 1.37E-13  | 8.65E-13  |
| 2124     | 2009  | EVI2B        | -3.17 | 8.16E-12  | 4.53E-11  |
| 9935     | 3395  | MAFB         | -3.20 | 1.29E-08  | 5.62E-08  |
| 9423     | 5954  | NTN1         | -3.21 | 1.27E-49  | 3.38E-48  |
| 1356     | 4517  | CP           | -3.21 | 6.35E-149 | 1.03E-146 |
| 57622    | 3332  | LRFN1        | -3.21 | 5.12E-14  | 3.35E-13  |
| 23098    | 7305  | SARM1        | -3.22 | 7.57E-43  | 1.67E-41  |
| 1.08E+08 | 3646  | LOC107985728 | -3.22 | 2.50E-14  | 1.66E-13  |
| 9254     | 5350  | CACNA2D2     | -3.23 | 6.21E-16  | 4.54E-15  |
| 641700   | 913   | ECSCR        | -3.23 | 8.53E-09  | 3.77E-08  |
| 126129   | 2807  | CPT1C        | -3.24 | 4.04E-18  | 3.33E-17  |
| 56776    | 4922  | FMN2         | -3.24 | 1.96E-29  | 2.72E-28  |
| 26468    | 3383  | LHX6         | -3.26 | 1.08E-30  | 1.57E-29  |
| 3606     | 1143  | IL18         | -3.26 | 9.34E-11  | 4.83E-10  |
| 3800     | 6958  | KIF5C        | -3.26 | 6.70E-39  | 1.29E-37  |
| 3400     | 3891  | ID4          | -3.27 | 1.77E-08  | 7.59E-08  |
| 5010     | 2661  | CLDN11       | -3.28 | 1.51E-164 | 2.79E-162 |
| 6909     | 3396  | TBX2         | -3.28 | 2.10E-11  | 1.13E-10  |
| 404037   | 3461  | HAPLN4       | -3.28 | 6.41E-11  | 3.37E-10  |
| 8745     | 6231  | ADAM23       | -3.28 | 1.14E-09  | 5.39E-09  |
| 54567    | 3420  | DLL4         | -3.29 | 1.06E-09  | 5.04E-09  |
| 2066     | 11600 | ERBB4        | -3.29 | 3.91E-10  | 1.92E-09  |
| 3481     | 4539  | IGF2         | -3.29 | 5.20E-23  | 5.41E-22  |

|        |       |           |       |           |           |
|--------|-------|-----------|-------|-----------|-----------|
| 5228   | 1848  | PGF       | -3.29 | 2.17E-27  | 2.75E-26  |
| 25791  | 2183  | NGEF      | -3.30 | 2.59E-32  | 3.98E-31  |
| 390205 | 2230  | LRRC10B   | -3.31 | 7.99E-10  | 3.83E-09  |
| 10991  | 2489  | SLC38A3   | -3.32 | 1.56E-77  | 8.02E-76  |
| 134548 | 3474  | SOWAHA    | -3.32 | 1.05E-19  | 9.37E-19  |
| 23542  | 4090  | MAPK8IP2  | -3.34 | 5.01E-25  | 5.71E-24  |
| 148398 | 2575  | SAMD11    | -3.35 | 1.07E-51  | 2.99E-50  |
| 59284  | 2361  | CACNG7    | -3.37 | 4.63E-09  | 2.09E-08  |
| 56242  | 2351  | ZNF253    | -3.38 | 4.24E-15  | 2.95E-14  |
| 64388  | 4275  | GREM2     | -3.42 | 2.66E-09  | 1.23E-08  |
| 3852   | 2320  | KRT5      | -3.44 | 3.27E-19  | 2.85E-18  |
| 83648  | 3989  | FAM167A   | -3.44 | 4.46E-31  | 6.59E-30  |
| 8633   | 9879  | UNC5C     | -3.45 | 3.62E-31  | 5.36E-30  |
| 1800   | 2326  | DPEP1     | -3.45 | 1.02E-16  | 7.79E-16  |
| 22801  | 6107  | ITGA11    | -3.45 | 1.17E-73  | 5.60E-72  |
| 8843   | 2152  | HCAR3     | -3.46 | 3.45E-10  | 1.70E-09  |
| 151    | 3371  | ADRA2B    | -3.47 | 6.51E-11  | 3.42E-10  |
| 2192   | 2370  | FBLN1     | -3.48 | 0.00E+00  | 0.00E+00  |
| 349136 | 2408  | WDR86     | -3.49 | 2.89E-24  | 3.18E-23  |
| 6755   | 2657  | SSTR5     | -3.54 | 4.25E-32  | 6.50E-31  |
| 6330   | 4177  | SCN4B     | -3.55 | 8.73E-23  | 8.97E-22  |
| 83857  | 8719  | TMTC1     | -3.55 | 6.93E-26  | 8.21E-25  |
| 864    | 4042  | RUNX3     | -3.55 | 7.28E-14  | 4.69E-13  |
| 9945   | 3035  | GFPT2     | -3.55 | 5.64E-112 | 5.57E-110 |
| 138311 | 2334  | FAM69B    | -3.55 | 1.16E-61  | 4.28E-60  |
| 25960  | 6050  | ADGRA2    | -3.56 | 6.19E-73  | 2.88E-71  |
| 163933 | 2640  | FAM43B    | -3.58 | 3.31E-10  | 1.64E-09  |
| 56666  | 2984  | PANX2     | -3.59 | 2.80E-20  | 2.57E-19  |
| 10319  | 3996  | LAMC3     | -3.59 | 1.98E-13  | 1.23E-12  |
| 84969  | 2227  | TOX2      | -3.59 | 2.16E-35  | 3.68E-34  |
| 84674  | 3650  | CARD6     | -3.59 | 1.67E-32  | 2.60E-31  |
| 2151   | 3295  | F2RL2     | -3.61 | 6.74E-36  | 1.17E-34  |
| 728927 | 9049  | ZNF736    | -3.61 | 3.34E-41  | 6.95E-40  |
| 26051  | 5841  | PPP1R16B  | -3.62 | 1.82E-10  | 9.19E-10  |
| 79948  | 2321  | PLPPR3    | -3.62 | 2.32E-21  | 2.23E-20  |
| 619279 | 14403 | ZNF704    | -3.63 | 1.31E-19  | 1.17E-18  |
| 4004   | 693   | LMO1      | -3.63 | 8.90E-14  | 5.69E-13  |
| 64073  | 485   | C19orf33  | -3.64 | 4.26E-52  | 1.21E-50  |
| 1299   | 2485  | COL9A3    | -3.64 | 9.20E-84  | 5.32E-82  |
| 4052   | 5870  | LTBP1     | -3.66 | 4.64E-65  | 1.84E-63  |
| 5552   | 1314  | SRGN      | -3.67 | 2.16E-298 | 1.24E-295 |
| 145781 | 4662  | GCOM1     | -3.67 | 1.21E-10  | 6.18E-10  |
| 7781   | 1816  | SLC30A3   | -3.68 | 1.09E-17  | 8.81E-17  |
| 25758  | 8103  | KIAA1549L | -3.68 | 1.04E-34  | 1.74E-33  |
| 4326   | 2432  | MMP17     | -3.69 | 6.96E-11  | 3.65E-10  |
| 23671  | 1796  | TMEFF2    | -3.69 | 2.75E-13  | 1.69E-12  |
| 9619   | 3805  | ABCG1     | -3.71 | 6.84E-68  | 2.89E-66  |
| 4811   | 5867  | NID1      | -3.71 | 0.00E+00  | 0.00E+00  |

|          |      |          |       |           |           |
|----------|------|----------|-------|-----------|-----------|
| 3235     | 1902 | HOXD9    | -3.72 | 1.05E-130 | 1.40E-128 |
| 1833     | 1553 | EPYC     | -3.73 | 3.78E-11  | 2.02E-10  |
| 4330     | 7569 | MN1      | -3.73 | 2.50E-78  | 1.30E-76  |
| 57057    | 3002 | TBX20    | -3.74 | 4.44E-21  | 4.22E-20  |
| 1.01E+08 | 2820 | TPBGL    | -3.77 | 5.97E-19  | 5.12E-18  |
| 83700    | 3515 | JAM3     | -3.78 | 3.75E-56  | 1.20E-54  |
| 83439    | 2932 | TCF7L1   | -3.78 | 1.66E-42  | 3.61E-41  |
| 2624     | 3263 | GATA2    | -3.78 | 1.81E-32  | 2.80E-31  |
| 257407   | 3595 | C2orf72  | -3.79 | 2.89E-23  | 3.04E-22  |
| 348093   | 2019 | RBPMS2   | -3.79 | 3.80E-78  | 1.97E-76  |
| 162494   | 4512 | RHBDL3   | -3.81 | 7.97E-64  | 3.07E-62  |
| 7087     | 2068 | ICAM5    | -3.81 | 1.63E-25  | 1.89E-24  |
| 79047    | 3916 | KCTD15   | -3.82 | 1.55E-25  | 1.81E-24  |
| 389816   | 1212 | LRRC26   | -3.84 | 5.29E-21  | 5.01E-20  |
| 401399   | 2411 | PRRT4    | -3.86 | 8.63E-15  | 5.91E-14  |
| 1E+08    | 7424 | ARMCX4   | -3.87 | 5.34E-17  | 4.16E-16  |
| 136259   | 1480 | KLF14    | -3.88 | 3.62E-12  | 2.06E-11  |
| 23460    | 4940 | ABCA6    | -3.88 | 5.61E-16  | 4.11E-15  |
| 23416    | 3487 | KCNH3    | -3.89 | 1.45E-40  | 2.92E-39  |
| 57476    | 7883 | GRAMD1B  | -3.89 | 8.34E-27  | 1.03E-25  |
| 1366     | 1532 | CLDN7    | -3.90 | 5.96E-84  | 3.48E-82  |
| 9464     | 2368 | HAND2    | -3.90 | 2.64E-12  | 1.52E-11  |
| 60529    | 5466 | ALX4     | -3.91 | 2.75E-15  | 1.94E-14  |
| 6817     | 1396 | SULT1A1  | -3.92 | 4.06E-76  | 2.06E-74  |
| 2786     | 5123 | GNG4     | -3.93 | 4.62E-134 | 6.52E-132 |
| 84951    | 4073 | TNS4     | -3.95 | 1.87E-31  | 2.79E-30  |
| 92241    | 3723 | RCSD1    | -3.96 | 9.60E-13  | 5.68E-12  |
| 441027   | 1888 | TMEM150C | -3.97 | 6.19E-22  | 6.12E-21  |
| 170850   | 3821 | KCNG3    | -3.98 | 6.54E-15  | 4.50E-14  |
| 55806    | 5528 | HR       | -3.98 | 1.65E-35  | 2.84E-34  |
| 1846     | 5625 | DUSP4    | -3.99 | 2.70E-62  | 1.01E-60  |
| 8913     | 7646 | CACNA1G  | -4.00 | 7.21E-23  | 7.44E-22  |
| 6474     | 3497 | SHOX2    | -4.01 | 9.23E-89  | 5.92E-87  |
| 4773     | 6732 | NFATC2   | -4.02 | 9.56E-44  | 2.16E-42  |
| 9244     | 1856 | CRLF1    | -4.03 | 2.80E-27  | 3.53E-26  |
| 338442   | 2082 | HCAR2    | -4.04 | 9.00E-18  | 7.30E-17  |
| 4804     | 3420 | NGFR     | -4.05 | 3.29E-47  | 8.16E-46  |
| 3055     | 2165 | HCK      | -4.05 | 2.37E-30  | 3.40E-29  |
| 153572   | 2760 | IRX2     | -4.08 | 1.10E-108 | 1.02E-106 |
| 126326   | 4317 | GIPC3    | -4.12 | 5.28E-61  | 1.91E-59  |
| 1404     | 4469 | HAPLN1   | -4.14 | 3.08E-15  | 2.17E-14  |
| 148252   | 3412 | DIRAS1   | -4.18 | 1.66E-20  | 1.54E-19  |
| 59271    | 2080 | EVA1C    | -4.19 | 1.01E-33  | 1.63E-32  |
| 5136     | 2592 | PDE1A    | -4.19 | 1.78E-223 | 5.75E-221 |
| 338707   | 3463 | B4GALNT4 | -4.20 | 5.26E-41  | 1.09E-39  |
| 6886     | 4171 | TAL1     | -4.29 | 3.69E-30  | 5.24E-29  |
| 5104     | 2352 | SERPINA5 | -4.30 | 1.92E-27  | 2.45E-26  |
| 1852     | 2293 | DUSP9    | -4.30 | 2.45E-19  | 2.16E-18  |

|          |      |              |       |           |           |
|----------|------|--------------|-------|-----------|-----------|
| 343578   | 2838 | ARHGAP40     | -4.32 | 2.35E-41  | 4.90E-40  |
| 283078   | 1649 | MKX          | -4.35 | 1.31E-22  | 1.34E-21  |
| 57593    | 2706 | EBF4         | -4.37 | 2.06E-44  | 4.74E-43  |
| 401207   | 5680 | C5orf63      | -4.38 | 7.25E-26  | 8.57E-25  |
| 83595    | 3278 | SOX7         | -4.38 | 1.31E-39  | 2.60E-38  |
| 5097     | 3698 | PCDH1        | -4.39 | 1.63E-101 | 1.33E-99  |
| 2018     | 2908 | EMX2         | -4.45 | 1.11E-16  | 8.47E-16  |
| 50649    | 4442 | ARHGEF4      | -4.46 | 2.65E-55  | 8.24E-54  |
| 2828     | 3014 | GPR4         | -4.47 | 7.42E-17  | 5.74E-16  |
| 56105    | 3308 | PCDHGA11     | -4.49 | 1.38E-78  | 7.23E-77  |
| 131583   | 3182 | FAM43A       | -4.53 | 5.57E-28  | 7.27E-27  |
| 1240     | 5110 | CMKLR1       | -4.55 | 1.31E-20  | 1.22E-19  |
| 53637    | 2351 | S1PR5        | -4.58 | 2.51E-32  | 3.86E-31  |
| 4854     | 8089 | NOTCH3       | -4.61 | 1.68E-109 | 1.58E-107 |
| 7020     | 3279 | TFAP2A       | -4.62 | 4.53E-87  | 2.84E-85  |
| 54039    | 1922 | PCBP3        | -4.62 | 9.75E-26  | 1.15E-24  |
| 3755     | 2237 | KCNG1        | -4.65 | 6.06E-30  | 8.55E-29  |
| 153478   | 9010 | PLEKHG4B     | -4.65 | 5.06E-59  | 1.73E-57  |
| 728118   | 5334 | NUTM2A       | -4.66 | 1.00E-53  | 2.99E-52  |
| 2022     | 3070 | ENG          | -4.67 | 5.94E-178 | 1.26E-175 |
| 5950     | 879  | RBP4         | -4.68 | 1.27E-59  | 4.44E-58  |
| 221662   | 2586 | RBM24        | -4.69 | 2.80E-22  | 2.82E-21  |
| 1301     | 5035 | COL11A1      | -4.73 | 5.57E-35  | 9.41E-34  |
| 2878     | 1779 | GPX3         | -4.80 | 0.00E+00  | 0.00E+00  |
| 23225    | 5462 | NUP210       | -4.81 | 0.00E+00  | 0.00E+00  |
| 4188     | 1451 | MDFI         | -4.86 | 7.73E-54  | 2.32E-52  |
| 8641     | 4578 | PCDHGB4      | -4.87 | 1.62E-60  | 5.75E-59  |
| 64321    | 2350 | SOX17        | -4.90 | 4.42E-38  | 8.34E-37  |
| 146664   | 4068 | MGAT5B       | -4.93 | 6.49E-31  | 9.52E-30  |
| 5087     | 5041 | PBX1         | -5.05 | 9.68E-54  | 2.90E-52  |
| 1271     | 1886 | CNTFR        | -5.26 | 2.14E-31  | 3.20E-30  |
| 65982    | 2716 | ZSCAN18      | -5.30 | 1.48E-77  | 7.63E-76  |
| 2564     | 2804 | GABRE        | -5.34 | 8.88E-75  | 4.35E-73  |
| 63934    | 6432 | ZNF667       | -5.35 | 1.50E-28  | 1.99E-27  |
| 25878    | 9800 | MXRA5        | -5.35 | 1.07E-136 | 1.53E-134 |
| 84366    | 403  | PRAC1        | -5.43 | 7.85E-27  | 9.72E-26  |
| 10170    | 1993 | DHRS9        | -5.44 | 2.34E-52  | 6.74E-51  |
| 2290     | 3216 | FOXG1        | -5.45 | 6.52E-35  | 1.10E-33  |
| 56603    | 4117 | CYP26B1      | -5.47 | 2.11E-40  | 4.25E-39  |
| 3910     | 6396 | LAMA4        | -5.47 | 3.80E-53  | 1.12E-51  |
| 1289     | 8402 | COL5A1       | -5.48 | 0.00E+00  | 0.00E+00  |
| 290      | 3658 | ANPEP        | -5.50 | 1.35E-186 | 3.16E-184 |
| 90187    | 3827 | EMILIN3      | -5.55 | 6.32E-107 | 5.70E-105 |
| 3237     | 1463 | HOXD11       | -5.58 | 7.63E-57  | 2.48E-55  |
| 4248     | 8485 | MGAT3        | -5.58 | 2.31E-42  | 4.99E-41  |
| 5739     | 2256 | PTGIR        | -5.70 | 1.26E-30  | 1.83E-29  |
| 84929    | 3119 | FIBCD1       | -5.91 | 1.18E-82  | 6.79E-81  |
| 1.08E+08 | 735  | LOC107987373 | -6.03 | 6.89E-51  | 1.89E-49  |



|       |      |        |       |           |           |
|-------|------|--------|-------|-----------|-----------|
| 1497  | 4163 | CTNS   | -6.20 | 2.04E-62  | 7.65E-61  |
| 55287 | 1845 | TMEM40 | -6.21 | 1.08E-55  | 3.41E-54  |
| 55966 | 4214 | AJAP1  | -6.22 | 1.64E-38  | 3.12E-37  |
| 2995  | 1242 | GYPC   | -6.36 | 1.12E-40  | 2.28E-39  |
| 6422  | 4482 | SFRP1  | -6.59 | 1.49E-64  | 5.84E-63  |
| 23729 | 3838 | SHPK   | -6.76 | 5.12E-52  | 1.45E-50  |
| 4232  | 2326 | MEST   | -6.83 | 0.00E+00  | 0.00E+00  |
| 2313  | 3150 | FLI1   | -6.87 | 2.56E-98  | 1.95E-96  |
| 3236  | 1814 | HOXD10 | -7.02 | 2.10E-57  | 6.94E-56  |
| 51200 | 2817 | CPA4   | -7.60 | 0.00E+00  | 0.00E+00  |
| 91607 | 5015 | SLFN11 | -7.87 | 2.22E-113 | 2.22E-111 |

---