

APC-mt/MSS vs. APC-wt/MSS DEGs (379 genes were down-regulated and 117 genes were up-regulated (fold change > 1.5,  $P < 0.05$ ))

| gene    | conMean   | treatMean | logFC     | pValue    | fdr       |
|---------|-----------|-----------|-----------|-----------|-----------|
| CBLN1   | 0.4390761 | 0.9559647 | 1.1224865 | 2.29E-06  | 3.54E-05  |
| LYZ     | 584.30081 | 288.83029 | -1.016489 | 8.61E-06  | 9.83E-05  |
| ABCB11  | 0.0572556 | 0.0274769 | -1.059198 | 8.57E-05  | 0.0006097 |
| F5      | 3.2725695 | 0.8391437 | -1.963434 | 8.02E-05  | 0.0005777 |
| CAMK2N2 | 0.8597211 | 0.2696911 | -1.672561 | 1.12E-05  | 0.0001206 |
| SLC6A4  | 0.3517862 | 0.7528828 | 1.0977266 | 1.13E-06  | 2.04E-05  |
| JAKMIP1 | 0.4145564 | 0.1749528 | -1.244602 | 2.42E-09  | 2.89E-07  |
| PIWIL1  | 3.132868  | 1.1147377 | -1.49078  | 0.0215765 | 0.0480274 |
| PTPRC   | 6.7259224 | 3.1409138 | -1.098548 | 6.63E-08  | 2.52E-06  |
| MSMB    | 1.864055  | 0.3153311 | -2.563505 | 0.0020385 | 0.0075313 |
| TLR8    | 1.0051405 | 0.4805062 | -1.06477  | 4.90E-07  | 1.07E-05  |
| IQSEC3  | 0.2433163 | 0.1172169 | -1.053653 | 5.23E-05  | 0.0004106 |
| LRRC36  | 0.4273781 | 1.0891036 | 1.3495561 | 3.85E-12  | 5.87E-09  |
| CD84    | 1.8420202 | 0.8548264 | -1.107585 | 1.15E-07  | 3.74E-06  |
| CCL21   | 30.258533 | 14.973964 | -1.014886 | 0.000263  | 0.0014807 |
| SCEL    | 2.93802   | 0.4601795 | -2.674576 | 0.0002476 | 0.0014123 |
| RARRES3 | 56.772029 | 23.340222 | -1.282362 | 4.65E-09  | 4.20E-07  |
| ZNF683  | 1.1727185 | 0.464674  | -1.335566 | 2.08E-07  | 5.60E-06  |
| CDHR1   | 7.010103  | 15.07607  | 1.1047528 | 2.08E-09  | 2.67E-07  |
| PIK3R5  | 1.305336  | 0.647974  | -1.010413 | 1.35E-08  | 8.33E-07  |
| CD8A    | 4.0402588 | 1.8089788 | -1.159272 | 3.41E-09  | 3.39E-07  |
| ELOVL3  | 0.3880822 | 0.1460907 | -1.409498 | 4.49E-07  | 1.01E-05  |
| MMP25   | 1.4907544 | 0.7254612 | -1.039072 | 5.75E-06  | 7.18E-05  |
| HOXC8   | 0.3787435 | 0.1601114 | -1.242145 | 5.47E-05  | 0.0004255 |
| RAB3C   | 0.1723381 | 0.0609937 | -1.49851  | 0.0031122 | 0.0104693 |
| KCNK3   | 0.2795439 | 0.1183206 | -1.240374 | 0.0144312 | 0.0350315 |
| HCAR3   | 0.8797708 | 0.4229228 | -1.056733 | 0.0058507 | 0.0171509 |
| PRDM8   | 1.7795142 | 0.5867037 | -1.600779 | 1.36E-12  | 3.10E-09  |
| CXCL10  | 46.730721 | 23.093668 | -1.016874 | 1.01E-06  | 1.89E-05  |
| TUBB4A  | 0.2707053 | 0.0863887 | -1.647809 | 0.0001677 | 0.0010381 |
| GSDMC   | 0.2778741 | 0.1241856 | -1.161933 | 2.73E-06  | 4.01E-05  |
| CD177   | 12.353637 | 3.1835841 | -1.956212 | 2.75E-05  | 0.0002433 |
| HTR2B   | 0.8113287 | 0.2925948 | -1.471382 | 0.0026677 | 0.009293  |
| EMX1    | 0.4474101 | 0.1815268 | -1.301415 | 0.0007962 | 0.0036136 |
| XIRP1   | 0.2054705 | 0.0959989 | -1.097841 | 1.30E-05  | 0.0001359 |
| KCND3   | 1.129915  | 0.5621655 | -1.007147 | 4.79E-07  | 1.05E-05  |
| VNN2    | 2.4933224 | 0.8380003 | -1.573047 | 3.20E-11  | 1.83E-08  |
| FCRL1   | 0.2608293 | 0.1176941 | -1.148063 | 0.0031896 | 0.0106773 |
| CPN1    | 0.1483058 | 0.4910009 | 1.7271509 | 7.67E-06  | 9.01E-05  |
| DUSP4   | 14.268759 | 6.2442635 | -1.192257 | 2.10E-09  | 2.67E-07  |
| KRT23   | 13.044047 | 29.191764 | 1.1621699 | 1.58E-05  | 0.0001571 |
| HRASLS  | 0.5139923 | 0.1443001 | -1.832675 | 0.0001066 | 0.0007186 |
| GLYATL2 | 0.0612335 | 0.2655274 | 2.1164675 | 0.000442  | 0.0022547 |
| COL2A1  | 0.169523  | 0.7082831 | 2.0628449 | 2.52E-05  | 0.0002287 |
| GPR174  | 0.6602216 | 0.2652498 | -1.315599 | 3.26E-05  | 0.0002807 |

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|------------|-----------|-----------|-----------|-----------|-----------|
| ROR1       | 0.7293336 | 0.3567871 | -1.031515 | 8.62E-07  | 1.69E-05  |
| ULBP2      | 3.2236011 | 1.384457  | -1.219353 | 9.47E-11  | 3.94E-08  |
| MEOX2      | 1.0110336 | 0.3884101 | -1.380178 | 0.0013529 | 0.0054615 |
| MAGEB17    | 0.5416015 | 2.1023239 | 1.9566813 | 1.96E-09  | 2.61E-07  |
| CHST6      | 0.8793243 | 0.3161036 | -1.475998 | 2.61E-08  | 1.33E-06  |
| DRGX       | 0.4638091 | 0.154737  | -1.583713 | 0.0013903 | 0.0055826 |
| NKX3-1     | 0.7188038 | 0.3227574 | -1.155148 | 2.37E-05  | 0.0002179 |
| ZP2        | 0.0602453 | 0.1645856 | 1.4499183 | 2.10E-06  | 3.30E-05  |
| SLC38A3    | 0.1567317 | 0.3321146 | 1.0833843 | 0.0011824 | 0.0049132 |
| IZUMO2     | 0.1484569 | 0.3687753 | 1.3126974 | 5.50E-06  | 6.96E-05  |
| ABCA3      | 3.1717006 | 1.341382  | -1.241536 | 3.44E-06  | 4.85E-05  |
| CADM3      | 0.6542744 | 0.2234698 | -1.549816 | 0.0077901 | 0.021394  |
| IL1RN      | 11.855689 | 5.3280391 | -1.153903 | 6.31E-08  | 2.46E-06  |
| BEX2       | 2.1464769 | 4.405267  | 1.0372588 | 6.98E-05  | 0.0005174 |
| THBS4      | 4.0866056 | 1.9189334 | -1.090598 | 0.0158507 | 0.0377038 |
| ACKR4      | 0.6146553 | 0.2713714 | -1.179509 | 6.47E-08  | 2.50E-06  |
| TNFAIP6    | 5.4755379 | 2.6870889 | -1.026957 | 8.50E-06  | 9.75E-05  |
| TRPV6      | 0.4230044 | 0.09327   | -2.181188 | 6.74E-08  | 2.55E-06  |
| PRSS41     | 0.2735333 | 0.5535484 | 1.0169927 | 0.0078782 | 0.0215998 |
| KIAA1549L  | 0.7115795 | 0.3189061 | -1.157893 | 5.07E-05  | 0.0004003 |
| SLC39A2    | 1.544772  | 3.8796089 | 1.3285173 | 1.00E-06  | 1.88E-05  |
| BEAN1      | 0.3385535 | 0.1662076 | -1.026397 | 0.0029721 | 0.0100823 |
| FCGR3B     | 2.872245  | 0.9209939 | -1.640915 | 1.00E-05  | 0.0001105 |
| S100A9     | 118.41798 | 53.268981 | -1.152521 | 0.0159624 | 0.0378645 |
| IGSF23     | 0.3411629 | 0.6896246 | 1.0153505 | 9.80E-09  | 6.71E-07  |
| PTH1R      | 0.3406145 | 0.1638319 | -1.055923 | 0.0046211 | 0.0143142 |
| LY6G6F-LY( | 2.9107129 | 9.5852793 | 1.7194479 | 6.49E-13  | 2.23E-09  |
| PDCD1      | 1.9806234 | 0.7999369 | -1.307996 | 5.47E-10  | 1.24E-07  |
| IKZF1      | 1.605324  | 0.7872139 | -1.028037 | 4.31E-08  | 1.88E-06  |
| KCNJ15     | 0.3564106 | 0.169201  | -1.074802 | 6.54E-08  | 2.51E-06  |
| CCL4L2     | 5.2037091 | 2.4424116 | -1.091234 | 6.00E-05  | 0.0004615 |
| GRIK5      | 0.3765481 | 0.1722343 | -1.128462 | 0.0067406 | 0.0190988 |
| CA8        | 3.4445751 | 1.6452791 | -1.065994 | 6.15E-06  | 7.52E-05  |
| LHB        | 0.314683  | 0.1524984 | -1.045105 | 5.30E-05  | 0.0004146 |
| ABCD2      | 0.1447223 | 0.0723238 | -1.000746 | 1.44E-06  | 2.48E-05  |
| UBASH3B    | 1.4907115 | 0.6765234 | -1.139789 | 1.59E-13  | 1.09E-09  |
| GPR18      | 0.8000833 | 0.315312  | -1.34337  | 0.0002948 | 0.0016233 |
| ADAM11     | 0.1648228 | 0.0788117 | -1.064434 | 0.003684  | 0.012016  |
| CARTPT     | 0.5124068 | 0.199155  | -1.363398 | 0.0162071 | 0.0383454 |
| SAA2       | 4.0759089 | 1.3372764 | -1.607824 | 0.0003052 | 0.0016697 |
| LPO        | 0.0806888 | 0.1655075 | 1.0364561 | 0.0198668 | 0.0449656 |
| LRRK2      | 0.4619879 | 0.226365  | -1.029204 | 1.26E-05  | 0.0001324 |
| 1-Dec      | 0.0461214 | 0.1278958 | 1.4714593 | 2.28E-08  | 1.20E-06  |
| NFATC1     | 1.5206556 | 0.638012  | -1.253038 | 1.88E-09  | 2.53E-07  |
| B3GALT5    | 3.6133794 | 1.619328  | -1.157953 | 1.51E-06  | 2.56E-05  |
| CCR2       | 0.9920603 | 0.4896634 | -1.018637 | 3.25E-06  | 4.63E-05  |
| VNN1       | 10.933705 | 2.589117  | -2.07825  | 7.94E-09  | 5.99E-07  |
| SCRG1      | 0.1415242 | 0.0640447 | -1.143898 | 0.0008298 | 0.0037329 |
| FFAR2      | 2.2564598 | 0.847013  | -1.413605 | 9.71E-05  | 0.0006689 |
| FYB1       | 3.1329221 | 1.5632986 | -1.002916 | 1.82E-07  | 5.07E-06  |
| CCDC175    | 0.0717447 | 0.1502035 | 1.0659738 | 1.68E-05  | 0.0001658 |

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|----------|-----------|-----------|-----------|-----------|-----------|
| CCDC196  | 0.2737944 | 0.549412  | 1.0047954 | 0.0044011 | 0.0137967 |
| FCRL3    | 0.3293594 | 0.1525372 | -1.110502 | 3.66E-05  | 0.0003072 |
| ANO1     | 11.639026 | 5.7948842 | -1.006119 | 9.82E-09  | 6.71E-07  |
| PDZRN4   | 0.3397058 | 0.1676212 | -1.019081 | 0.0042443 | 0.013407  |
| HLA-DMB  | 11.462374 | 5.4386594 | -1.075583 | 2.52E-09  | 2.95E-07  |
| CLDN18   | 30.330794 | 2.281851  | -3.732507 | 1.98E-09  | 2.62E-07  |
| HLA-DRB5 | 126.68054 | 57.335147 | -1.143703 | 2.99E-05  | 0.0002611 |
| IL18RAP  | 0.5559679 | 0.2737249 | -1.022275 | 3.91E-06  | 5.31E-05  |
| CCL5     | 24.904906 | 11.423502 | -1.124425 | 1.52E-09  | 2.15E-07  |
| KRT7     | 8.2214677 | 3.3542177 | -1.29342  | 2.91E-07  | 7.21E-06  |
| DPP10    | 0.0697298 | 0.2301636 | 1.7228128 | 0.0151042 | 0.0363183 |
| FPR2     | 1.1804539 | 0.4125632 | -1.516655 | 6.28E-06  | 7.65E-05  |
| TNFSF9   | 10.855007 | 5.0822493 | -1.094822 | 2.17E-07  | 5.80E-06  |
| CAPN6    | 2.0530408 | 5.1157022 | 1.31717   | 0.0108921 | 0.0278699 |
| SIGLEC5  | 0.2086436 | 0.0967685 | -1.108432 | 4.20E-08  | 1.87E-06  |
| S100A8   | 19.820361 | 5.009603  | -1.984215 | 1.55E-05  | 0.0001551 |
| SCG3     | 0.7500228 | 0.1958258 | -1.937364 | 0.0168611 | 0.0396124 |
| CALML3   | 0.1049487 | 0.535959  | 2.3524378 | 6.55E-09  | 5.31E-07  |
| CD163    | 8.2254806 | 3.851067  | -1.094842 | 5.26E-07  | 1.14E-05  |
| NXF3     | 1.4981768 | 0.7149327 | -1.067329 | 7.10E-05  | 0.0005242 |
| RNF148   | 0.1476592 | 0.0728101 | -1.020062 | 3.06E-07  | 7.45E-06  |
| TBX21    | 0.4911238 | 0.2139985 | -1.198486 | 1.74E-09  | 2.36E-07  |
| CCR5     | 2.6514606 | 1.3209171 | -1.005247 | 9.04E-09  | 6.49E-07  |
| PTAFR    | 5.3740144 | 2.6798603 | -1.003842 | 7.79E-11  | 3.54E-08  |
| SLC26A9  | 1.1623375 | 0.28587   | -2.023598 | 0.0012024 | 0.0049799 |
| RBP2     | 2.0379827 | 8.4726885 | 2.0556781 | 2.33E-09  | 2.82E-07  |
| LRIT2    | 0.1585022 | 0.3452175 | 1.1230027 | 5.79E-09  | 4.95E-07  |
| SLC1A7   | 0.5755602 | 1.6361984 | 1.507309  | 2.91E-05  | 0.0002551 |
| RIIAD1   | 0.2059804 | 0.527204  | 1.3558543 | 1.09E-06  | 2.00E-05  |
| CD96     | 1.2941092 | 0.6426459 | -1.009863 | 1.08E-08  | 7.06E-07  |
| TMEM211  | 2.5426555 | 5.2057585 | 1.0337724 | 2.57E-05  | 0.0002326 |
| KRT83    | 0.0834163 | 0.2384055 | 1.5150168 | 0.0005982 | 0.0028716 |
| SERPINB7 | 0.800253  | 0.156015  | -2.358772 | 0.0007475 | 0.0034367 |
| ADCYAP1  | 0.5236366 | 0.2015974 | -1.377089 | 0.0116269 | 0.0293669 |
| SHISA6   | 0.1529514 | 0.5262311 | 1.7826231 | 0.0151948 | 0.0364534 |
| ITK      | 0.7471992 | 0.3543341 | -1.076382 | 5.93E-06  | 7.35E-05  |
| TRNP1    | 9.37372   | 4.1575493 | -1.172888 | 2.87E-09  | 3.11E-07  |
| FREM2    | 0.2081886 | 0.4323138 | 1.0541879 | 1.40E-05  | 0.0001438 |
| SLA      | 2.9571743 | 1.3609272 | -1.119629 | 1.22E-10  | 4.79E-08  |
| DPYD     | 2.5842319 | 1.2571986 | -1.039523 | 3.16E-09  | 3.28E-07  |
| FCGR3A   | 21.500845 | 10.016706 | -1.101985 | 8.15E-08  | 2.95E-06  |
| HLA-DOA  | 9.8749773 | 3.0371417 | -1.701063 | 2.14E-08  | 1.15E-06  |
| ADGRG6   | 5.4068498 | 2.4536042 | -1.139886 | 5.61E-10  | 1.24E-07  |
| NTRK1    | 0.1737158 | 0.078732  | -1.141706 | 7.21E-07  | 1.46E-05  |
| SAA1     | 48.959922 | 14.665883 | -1.739137 | 0.0005617 | 0.0027355 |
| PRDM13   | 0.0898709 | 0.1969959 | 1.1322398 | 9.49E-05  | 0.0006599 |
| VTCN1    | 0.2710297 | 0.1261657 | -1.103132 | 0.004168  | 0.0131994 |
| HLA-DMA  | 39.803611 | 17.233033 | -1.207723 | 1.06E-08  | 7.02E-07  |
| AC008687 | 0.2025086 | 0.0811036 | -1.320145 | 0.0076888 | 0.0212162 |
| RNF182   | 0.188694  | 0.489977  | 1.3766652 | 0.001131  | 0.0047443 |
| SAMD9    | 5.9338181 | 2.6700232 | -1.152108 | 1.64E-09  | 2.26E-07  |

|          |           |           |           |           |           |
|----------|-----------|-----------|-----------|-----------|-----------|
| RIPPLY3  | 0.3169055 | 0.6929575 | 1.1287141 | 9.71E-07  | 1.84E-05  |
| PIPOX    | 0.9858853 | 2.0304528 | 1.0423098 | 0.0049065 | 0.0149847 |
| TNNC2    | 9.2209806 | 21.232533 | 1.2032844 | 4.04E-10  | 1.02E-07  |
| LCK      | 8.9417139 | 4.0641303 | -1.137605 | 2.37E-07  | 6.16E-06  |
| FCGR1B   | 0.1767732 | 0.0826726 | -1.096418 | 3.65E-07  | 8.56E-06  |
| SNPH     | 1.7346825 | 0.782181  | -1.149097 | 2.01E-08  | 1.11E-06  |
| FAM3B    | 3.8244024 | 9.6679942 | 1.3379823 | 5.48E-06  | 6.94E-05  |
| RERGL    | 0.2067739 | 0.0710839 | -1.540459 | 0.0094806 | 0.0249942 |
| ENPP3    | 2.707888  | 6.1431669 | 1.1818145 | 4.09E-06  | 5.48E-05  |
| TRAT1    | 0.4960565 | 0.2225227 | -1.156552 | 5.75E-06  | 7.18E-05  |
| PRF1     | 6.4125951 | 3.0155486 | -1.088488 | 5.10E-09  | 4.46E-07  |
| GALR2    | 0.4052111 | 0.1661951 | -1.285796 | 0.0010987 | 0.0046463 |
| FPR1     | 5.5416606 | 2.2807732 | -1.280795 | 2.32E-06  | 3.56E-05  |
| LAG3     | 2.5589452 | 1.2301996 | -1.056657 | 1.02E-09  | 1.69E-07  |
| MYH7B    | 0.2459535 | 0.8349234 | 1.763258  | 4.98E-09  | 4.42E-07  |
| APOBEC3A | 0.6593324 | 0.273856  | -1.267588 | 0.0024913 | 0.008804  |
| DKK4     | 1.3674144 | 9.8448961 | 2.8479255 | 0.0179652 | 0.0416718 |
| GRM8     | 1.2650089 | 3.1347842 | 1.3092186 | 7.39E-10  | 1.43E-07  |
| CDH19    | 0.1669071 | 0.0601587 | -1.472199 | 2.69E-05  | 0.0002399 |
| PM20D1   | 0.1371749 | 0.0372533 | -1.880577 | 0.0038219 | 0.0123542 |
| HOXC6    | 1.3790527 | 0.4547338 | -1.600584 | 1.44E-06  | 2.48E-05  |
| NODAL    | 0.1198331 | 0.3133234 | 1.3866253 | 4.64E-07  | 1.03E-05  |
| HTR3A    | 0.2402576 | 0.0905911 | -1.407141 | 1.50E-06  | 2.55E-05  |
| NAPSA    | 0.2383925 | 0.4877191 | 1.0327114 | 0.006238  | 0.018013  |
| GRPR     | 0.1837924 | 0.5522524 | 1.5872505 | 0.0005689 | 0.0027659 |
| NCF1     | 1.1358725 | 0.5418748 | -1.067769 | 7.82E-09  | 5.93E-07  |
| LRRTM2   | 0.1732621 | 0.070973  | -1.287614 | 0.0061853 | 0.0179101 |
| GZMA     | 13.848644 | 5.5775037 | -1.312053 | 9.03E-10  | 1.57E-07  |
| CNN1     | 28.482724 | 13.170552 | -1.112771 | 0.0081292 | 0.0221509 |
| GZMK     | 1.8740384 | 0.7242028 | -1.371685 | 2.73E-09  | 3.07E-07  |
| IGF2BP3  | 1.0301804 | 0.5012321 | -1.039346 | 1.22E-06  | 2.18E-05  |
| TEKT5    | 0.1312582 | 0.2668426 | 1.023582  | 1.33E-05  | 0.0001374 |
| CHRNA3   | 0.8387575 | 0.3887907 | -1.10926  | 0.0008553 | 0.0038238 |
| SPERT    | 0.2529791 | 0.508616  | 1.0075585 | 0.0005361 | 0.002627  |
| UNC5A    | 0.6639526 | 0.1901299 | -1.804094 | 5.12E-06  | 6.57E-05  |
| FDCSP    | 8.6514942 | 2.5536053 | -1.760414 | 0.0220674 | 0.0488744 |
| ANXA1    | 35.133018 | 16.146291 | -1.121625 | 1.37E-07  | 4.16E-06  |
| SERPINB2 | 1.6189293 | 0.2890385 | -2.485706 | 0.0005732 | 0.0027799 |
| PLA2G12B | 1.6008935 | 5.0753133 | 1.6646195 | 1.07E-07  | 3.57E-06  |
| BCL2A1   | 9.5366075 | 4.069449  | -1.228643 | 1.37E-07  | 4.16E-06  |
| HOXD1    | 0.5034798 | 0.2208792 | -1.188676 | 8.30E-06  | 9.57E-05  |
| OR2I1P   | 33.868843 | 13.407809 | -1.336885 | 0.0002077 | 0.0012327 |
| PYHIN1   | 0.4962091 | 0.2373599 | -1.063872 | 3.65E-08  | 1.69E-06  |
| KRT75    | 0.4949608 | 1.1598595 | 1.228564  | 5.63E-05  | 0.0004355 |
| HAPLN3   | 9.1107373 | 4.2403792 | -1.103375 | 2.65E-12  | 4.55E-09  |
| IGFL4    | 0.4024867 | 0.8630905 | 1.1005708 | 6.41E-07  | 1.34E-05  |
| WFDC10B  | 0.2913462 | 0.6222891 | 1.0948506 | 1.75E-07  | 4.94E-06  |
| SH2D1B   | 0.2378179 | 0.1185083 | -1.004869 | 8.85E-07  | 1.72E-05  |
| APOC1    | 30.818637 | 14.511041 | -1.086652 | 0.0001046 | 0.0007078 |
| NGB      | 0.0877154 | 0.0217481 | -2.011938 | 0.0088272 | 0.023639  |
| GPNMB    | 25.514272 | 12.621177 | -1.015458 | 8.74E-07  | 1.70E-05  |

|          |           |           |           |           |           |
|----------|-----------|-----------|-----------|-----------|-----------|
| APLP1    | 1.1990823 | 0.3551588 | -1.755395 | 3.18E-05  | 0.0002746 |
| BHLHA9   | 0.082168  | 0.268167  | 1.7064828 | 0.000138  | 0.0008876 |
| CALCA    | 0.3218095 | 2.7554604 | 3.0980143 | 1.50E-05  | 0.0001514 |
| VNN3     | 0.2374174 | 0.0988524 | -1.264078 | 3.61E-05  | 0.0003039 |
| UMODL1   | 0.1019368 | 0.2436695 | 1.2572509 | 3.95E-08  | 1.80E-06  |
| AKAP12   | 6.1151439 | 2.8424479 | -1.105253 | 0.0063851 | 0.0183452 |
| HOXD3    | 0.1953342 | 0.0962087 | -1.021706 | 1.19E-08  | 7.55E-07  |
| TACR1    | 0.1570455 | 0.0700492 | -1.164741 | 0.0027952 | 0.0096246 |
| PLEK     | 10.643036 | 4.8273356 | -1.140611 | 2.12E-07  | 5.71E-06  |
| SP140    | 1.1184746 | 0.4022083 | -1.475518 | 5.56E-10  | 1.24E-07  |
| GBP1     | 18.288091 | 8.546295  | -1.097533 | 3.16E-09  | 3.28E-07  |
| FGR      | 4.0126828 | 1.9877449 | -1.013435 | 4.28E-08  | 1.88E-06  |
| CHIT1    | 1.3315056 | 0.5273886 | -1.33612  | 0.0024598 | 0.0087153 |
| GBP4     | 15.397754 | 5.5892999 | -1.46198  | 3.44E-09  | 3.39E-07  |
| NTSR1    | 2.2346609 | 0.8026116 | -1.477282 | 2.96E-05  | 0.0002592 |
| MARCO    | 5.2983063 | 2.6188407 | -1.016603 | 0.0015092 | 0.0059556 |
| ARC      | 0.5852013 | 0.2797984 | -1.064545 | 0.0016404 | 0.006351  |
| AFP      | 0.1199685 | 0.2509577 | 1.0647881 | 0.0006669 | 0.0031389 |
| ANXA10   | 3.1229867 | 0.8364546 | -1.900567 | 5.64E-08  | 2.28E-06  |
| CCK      | 0.7381939 | 0.2390235 | -1.626848 | 9.18E-06  | 0.0001033 |
| MT3      | 0.3446951 | 1.3352332 | 1.9536989 | 0.0007577 | 0.0034663 |
| ANGPTL1  | 0.8700971 | 0.3491697 | -1.317248 | 0.0003096 | 0.0016886 |
| CIITA    | 3.7757913 | 1.2890973 | -1.550418 | 2.34E-09  | 2.82E-07  |
| SPON1    | 14.731839 | 6.2564365 | -1.235524 | 7.22E-08  | 2.68E-06  |
| SNAP25   | 0.5547303 | 0.1513138 | -1.874243 | 0.0013217 | 0.0053607 |
| FOXD1    | 2.0374154 | 0.9067509 | -1.167962 | 6.77E-06  | 8.14E-05  |
| KRT40    | 0.33961   | 1.4964643 | 2.1396068 | 0.0001216 | 0.0008002 |
| HAND2    | 0.9803884 | 0.482501  | -1.022821 | 0.0039805 | 0.012762  |
| FASLG    | 0.8662114 | 0.3794299 | -1.190886 | 2.05E-07  | 5.55E-06  |
| PRSS56   | 0.4633833 | 3.7578766 | 3.0196398 | 3.28E-06  | 4.66E-05  |
| CHRD12   | 6.0260816 | 2.5417705 | -1.245386 | 0.0155459 | 0.0371138 |
| RSP03    | 2.2917649 | 0.7335241 | -1.643543 | 9.79E-07  | 1.85E-05  |
| MEFV     | 0.4445423 | 0.1849894 | -1.264878 | 1.26E-05  | 0.0001324 |
| PRR9     | 0.3643972 | 1.0395154 | 1.5123272 | 0.0028328 | 0.0097297 |
| ZBTB16   | 0.1910072 | 0.0804747 | -1.24702  | 9.11E-05  | 0.0006406 |
| HLA-DPB1 | 82.141571 | 36.776822 | -1.159316 | 9.67E-09  | 6.71E-07  |
| HCAR2    | 2.2839033 | 1.0089553 | -1.178639 | 0.0012635 | 0.0051676 |
| KIR2DL4  | 0.4584896 | 0.1817116 | -1.335239 | 1.18E-08  | 7.51E-07  |
| CCL4     | 7.2248921 | 3.0918499 | -1.224506 | 9.97E-09  | 6.76E-07  |
| TNNT1    | 4.4894985 | 2.0456853 | -1.13397  | 0.0001598 | 0.0009977 |
| PKLR     | 0.6407491 | 1.6298219 | 1.3468829 | 1.57E-05  | 0.000157  |
| ZBED2    | 1.1875039 | 0.4111688 | -1.530129 | 3.57E-09  | 3.50E-07  |
| HIST1H3J | 3.7544256 | 1.3468539 | -1.478999 | 0.0032447 | 0.0108354 |
| CARD17   | 0.4713924 | 0.2037093 | -1.210417 | 0.0001922 | 0.0011607 |
| TEX43    | 0.5410625 | 1.1238891 | 1.0546325 | 2.63E-08  | 1.34E-06  |
| STEAP4   | 0.8688716 | 0.3654224 | -1.249578 | 6.59E-07  | 1.36E-05  |
| PLCB4    | 12.829232 | 27.953289 | 1.1235833 | 7.43E-08  | 2.74E-06  |
| PSAPL1   | 0.3123007 | 0.0582269 | -2.423179 | 8.47E-07  | 1.66E-05  |
| ARHGEF4  | 0.7923602 | 0.3678101 | -1.107195 | 0.0009768 | 0.0042414 |
| WNT10B   | 0.5976048 | 0.2307372 | -1.372941 | 0.0012082 | 0.0049963 |
| OMG      | 0.1958889 | 0.078097  | -1.326695 | 0.0146004 | 0.0353772 |

|          |           |           |           |           |           |
|----------|-----------|-----------|-----------|-----------|-----------|
| PAH      | 0.2628538 | 0.7661492 | 1.5433646 | 1.41E-07  | 4.27E-06  |
| PI3      | 277.19853 | 120.04586 | -1.207334 | 0.0006974 | 0.0032537 |
| HMSD     | 0.2303666 | 0.1082856 | -1.08909  | 9.78E-06  | 0.0001084 |
| PON1     | 0.2173537 | 0.0718439 | -1.597107 | 0.016526  | 0.0389857 |
| CAV2     | 4.5845352 | 2.2759139 | -1.01033  | 2.61E-07  | 6.64E-06  |
| CTXN1    | 5.6101662 | 2.6373229 | -1.088969 | 3.91E-06  | 5.31E-05  |
| CAPN14   | 0.3264164 | 0.0992771 | -1.717181 | 0.0165378 | 0.0390002 |
| AL645941 | 0.2648203 | 0.1179922 | -1.166322 | 2.46E-06  | 3.71E-05  |
| PRPH     | 0.3320884 | 0.1074978 | -1.62726  | 0.0004635 | 0.0023372 |
| PRDM16   | 0.5996013 | 0.2890022 | -1.052923 | 1.51E-05  | 0.0001523 |
| CASQ2    | 1.0573443 | 0.459629  | -1.201904 | 0.010397  | 0.0268735 |
| APOE     | 102.36476 | 47.895904 | -1.095745 | 2.22E-06  | 3.44E-05  |
| HLA-DQA1 | 18.679691 | 7.9989717 | -1.223584 | 9.11E-09  | 6.51E-07  |
| SERPINE1 | 29.161504 | 13.428491 | -1.118768 | 0.0002263 | 0.0013191 |
| SCG2     | 2.5421647 | 1.0634915 | -1.257249 | 0.0009038 | 0.0039796 |
| PDCD1LG2 | 1.5490708 | 0.7384967 | -1.06874  | 7.22E-09  | 5.65E-07  |
| R3HDM1   | 0.5993288 | 1.6647896 | 1.4739204 | 1.26E-10  | 4.81E-08  |
| CD53     | 23.359914 | 11.492379 | -1.023357 | 1.04E-09  | 1.69E-07  |
| TRIM7    | 2.2514431 | 0.8539558 | -1.398617 | 6.77E-09  | 5.37E-07  |
| CCBE1    | 0.2803389 | 0.1393504 | -1.008455 | 2.31E-05  | 0.0002139 |
| SLC4A4   | 2.6780378 | 1.1797912 | -1.182645 | 0.0003007 | 0.0016531 |
| IDO1     | 18.76692  | 5.6114277 | -1.741752 | 4.82E-06  | 6.28E-05  |
| PLA2G2D  | 1.9831025 | 0.6881051 | -1.527058 | 7.98E-06  | 9.30E-05  |
| BACH2    | 0.3202241 | 0.1491065 | -1.102738 | 0.0004663 | 0.002345  |
| HLA-DRB1 | 359.86515 | 171.8686  | -1.06615  | 2.97E-07  | 7.27E-06  |
| KLRG2    | 0.2655466 | 0.534996  | 1.0105628 | 9.86E-05  | 0.0006772 |
| LRFN2    | 0.063059  | 0.1600382 | 1.3436411 | 0.0001459 | 0.0009269 |
| SLC2A5   | 1.7271897 | 0.7528232 | -1.198044 | 5.99E-09  | 5.01E-07  |
| ASCL5    | 0.5119242 | 1.0885869 | 1.0884545 | 5.23E-05  | 0.0004106 |
| STMND1   | 0.0974627 | 0.3020952 | 1.6320809 | 3.41E-10  | 9.75E-08  |
| WIF1     | 0.3098785 | 2.6984957 | 3.1223807 | 1.47E-05  | 0.000149  |
| MMP8     | 0.2792786 | 0.1318314 | -1.083011 | 0.021546  | 0.0479751 |
| TMOD1    | 0.7867664 | 0.3201554 | -1.297163 | 2.45E-06  | 3.71E-05  |
| NEUROG3  | 0.9457544 | 0.449752  | -1.072336 | 0.0043369 | 0.0136459 |
| HLA-DQB1 | 33.733796 | 16.203152 | -1.05792  | 7.73E-06  | 9.05E-05  |
| SLC13A3  | 0.8150687 | 1.7464666 | 1.0994455 | 0.0009813 | 0.0042581 |
| HOMER2   | 0.2806807 | 0.1029379 | -1.447156 | 2.16E-05  | 0.000202  |
| MSR1     | 3.9616903 | 1.9758935 | -1.003611 | 3.63E-06  | 5.03E-05  |
| CD7      | 5.3079258 | 2.1967441 | -1.272781 | 1.64E-10  | 5.72E-08  |
| TCL1A    | 0.8788448 | 0.3678868 | -1.256346 | 0.0006319 | 0.0029975 |
| LY6G6E   | 0.1299629 | 0.3441782 | 1.4050552 | 6.00E-10  | 1.27E-07  |
| CD274    | 2.0706156 | 0.9899809 | -1.064587 | 4.27E-09  | 4.04E-07  |
| SEMG1    | 2.360821  | 0.4507071 | -2.389026 | 3.58E-06  | 5.00E-05  |
| SLAMF9   | 0.9869282 | 0.4791753 | -1.042392 | 0.0147685 | 0.0356485 |
| CPNE6    | 0.068988  | 0.1409034 | 1.0302884 | 0.0012158 | 0.0050263 |
| TM4SF4   | 10.52312  | 2.3144695 | -2.184809 | 6.83E-05  | 0.0005089 |
| MYOC     | 0.3163878 | 0.0641116 | -2.303036 | 0.0221103 | 0.0489616 |
| ZNF831   | 0.1910177 | 0.0806494 | -1.243971 | 8.62E-07  | 1.69E-05  |
| HOXC9    | 0.5806082 | 0.2158382 | -1.427615 | 6.47E-06  | 7.83E-05  |
| RTBDN    | 0.2481602 | 0.0926118 | -1.422004 | 3.37E-05  | 0.0002878 |
| PRKCB    | 1.0878667 | 0.4964007 | -1.131925 | 3.84E-08  | 1.76E-06  |

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|-----------|-----------|-----------|-----------|-----------|-----------|
| TNMD      | 0.396789  | 0.9388482 | 1.2425201 | 9.22E-07  | 1.78E-05  |
| ATP1A3    | 1.7096097 | 0.6260704 | -1.44927  | 0.0057242 | 0.0168703 |
| RSP01     | 0.148691  | 0.0740948 | -1.004872 | 0.0094635 | 0.0249782 |
| MMP1      | 107.90289 | 50.062139 | -1.107942 | 0.0031503 | 0.0105665 |
| MEIS2     | 0.8429551 | 0.3826035 | -1.139606 | 4.98E-08  | 2.08E-06  |
| FREM1     | 1.2206606 | 2.525835  | 1.0490983 | 0.0012979 | 0.0052812 |
| XCL2      | 0.6564124 | 0.3247041 | -1.015477 | 1.50E-08  | 8.91E-07  |
| GIMAP5    | 0.2472286 | 0.1125898 | -1.134769 | 2.79E-06  | 4.07E-05  |
| ARX       | 0.4807994 | 0.1776329 | -1.436536 | 0.0010082 | 0.0043444 |
| MUCL3     | 0.2074294 | 0.0805529 | -1.364611 | 1.85E-06  | 2.97E-05  |
| CXCL13    | 10.195222 | 3.6820718 | -1.469304 | 1.70E-08  | 9.90E-07  |
| ZIC5      | 1.1643943 | 0.5646484 | -1.044155 | 0.0013932 | 0.0055897 |
| SLFN12L   | 0.2674413 | 0.1151216 | -1.216064 | 9.63E-06  | 0.0001074 |
| ADGRG3    | 1.1162625 | 0.501803  | -1.153483 | 2.96E-06  | 4.28E-05  |
| IGLON5    | 0.4502855 | 0.1464437 | -1.620494 | 0.0003605 | 0.0019113 |
| GABRP     | 5.2339091 | 1.8398004 | -1.50834  | 0.000282  | 0.0015676 |
| CD22      | 1.0222203 | 0.4550743 | -1.167532 | 0.000641  | 0.0030359 |
| AIM2      | 3.0179032 | 1.3286689 | -1.183565 | 6.34E-06  | 7.70E-05  |
| CLEC4D    | 0.2121428 | 0.0755089 | -1.490317 | 4.06E-06  | 5.46E-05  |
| SULT2A1   | 0.2293843 | 0.5534833 | 1.2707732 | 0.0028204 | 0.0097066 |
| SSTR2     | 0.2820737 | 0.1119415 | -1.333327 | 4.68E-06  | 6.12E-05  |
| RAB27B    | 3.899938  | 1.6692229 | -1.224275 | 2.49E-10  | 7.75E-08  |
| KCNA3     | 0.4136586 | 0.2046689 | -1.015149 | 0.0001034 | 0.0007037 |
| IFNG      | 0.6916691 | 0.2595647 | -1.413988 | 1.35E-05  | 0.0001399 |
| AC099489. | 0.1867268 | 0.0825799 | -1.177066 | 0.000146  | 0.0009269 |
| KIF25     | 0.1346102 | 0.2819743 | 1.0667761 | 0.0004447 | 0.0022647 |
| ZNF541    | 0.0719014 | 0.215419  | 1.583054  | 8.33E-07  | 1.65E-05  |
| CEL       | 6.1567032 | 16.830334 | 1.4508339 | 1.13E-11  | 9.13E-09  |
| NMUR2     | 0.9733269 | 0.2777732 | -1.809017 | 0.0003607 | 0.0019115 |
| TDGF1     | 3.2650511 | 7.2409345 | 1.1490703 | 3.39E-13  | 1.55E-09  |
| PTPRU     | 5.3124129 | 2.223163  | -1.256754 | 5.73E-07  | 1.22E-05  |
| IL17REL   | 0.1812225 | 0.0751239 | -1.270418 | 0.0002591 | 0.0014629 |
| SIX4      | 0.6063141 | 0.2276247 | -1.413408 | 0.0004822 | 0.0024154 |
| RAB39B    | 0.2598536 | 0.1097459 | -1.243532 | 1.05E-05  | 0.0001144 |
| NSG2      | 0.2408088 | 0.0695703 | -1.791344 | 0.010795  | 0.0276989 |
| SOX1      | 0.3976521 | 0.9874084 | 1.3121402 | 7.30E-05  | 0.0005349 |
| CLEC4E    | 1.4467728 | 0.5976555 | -1.275452 | 1.37E-07  | 4.16E-06  |
| GNG8      | 0.8402422 | 0.301789  | -1.477265 | 0.0057146 | 0.0168674 |
| CCL19     | 9.517615  | 3.9882032 | -1.254861 | 0.002065  | 0.0076005 |
| TENM3     | 0.6527118 | 0.3206083 | -1.025634 | 1.07E-05  | 0.0001162 |
| TMEM249   | 0.2022792 | 0.4370914 | 1.1115873 | 0.0041953 | 0.0132733 |
| MS4A1     | 1.303945  | 0.5627337 | -1.212359 | 0.0120801 | 0.030268  |
| BATF3     | 1.2830152 | 0.6078293 | -1.0778   | 6.52E-09  | 5.31E-07  |
| MUC6      | 3.97135   | 1.3058817 | -1.604605 | 0.0078559 | 0.0215444 |
| FSTL4     | 0.0893846 | 0.2029563 | 1.183071  | 0.000105  | 0.0007102 |
| SECTM1    | 16.047419 | 6.9066338 | -1.216287 | 2.21E-10  | 7.23E-08  |
| RXFP4     | 1.2410431 | 2.5641167 | 1.0469087 | 6.03E-10  | 1.27E-07  |
| AQP5      | 10.760398 | 2.052044  | -2.390598 | 0.0003379 | 0.0018142 |
| NPFFR1    | 0.2566369 | 0.531682  | 1.0508352 | 1.71E-08  | 9.90E-07  |
| SMTNL1    | 0.4827528 | 0.1649828 | -1.548969 | 1.46E-05  | 0.0001479 |
| CEACAM18  | 0.8346751 | 0.4100265 | -1.025498 | 0.008611  | 0.0231965 |

|          |           |           |           |           |           |
|----------|-----------|-----------|-----------|-----------|-----------|
| MUC5AC   | 7.3239791 | 2.6122182 | -1.487352 | 0.0195837 | 0.0444791 |
| COLGALT2 | 1.1294608 | 0.3492195 | -1.693428 | 0.0010434 | 0.004468  |
| ITLN2    | 0.1755083 | 0.9129086 | 2.3789314 | 0.0128358 | 0.0318112 |
| SLC19A3  | 0.9808584 | 2.2372537 | 1.1896121 | 5.55E-08  | 2.25E-06  |
| TCEAL2   | 0.6949904 | 0.1829368 | -1.925648 | 0.0157374 | 0.0374723 |
| KISS1R   | 0.4433929 | 0.1720787 | -1.365517 | 0.0034373 | 0.0113678 |
| MSH4     | 0.2406262 | 0.0915539 | -1.3941   | 0.0001891 | 0.0011466 |
| SMIM18   | 0.1590868 | 0.0392635 | -2.018554 | 0.021648  | 0.0481325 |
| GPR171   | 1.0900403 | 0.5392914 | -1.015245 | 3.00E-08  | 1.47E-06  |
| APOL3    | 6.2031876 | 3.015251  | -1.040732 | 3.63E-09  | 3.53E-07  |
| FSCN1    | 35.365227 | 15.905779 | -1.15278  | 1.81E-08  | 1.02E-06  |
| XPNPEP2  | 2.5241506 | 5.1810303 | 1.0374411 | 0.0021144 | 0.007753  |
| CD109    | 3.6943533 | 1.3876964 | -1.41263  | 8.21E-08  | 2.95E-06  |
| TMEM252  | 0.6691797 | 2.791636  | 2.0606452 | 2.94E-05  | 0.0002573 |
| MAP7D2   | 1.3226915 | 3.051313  | 1.2059536 | 1.07E-05  | 0.0001162 |
| KYNU     | 0.5303632 | 0.2576158 | -1.04176  | 5.12E-08  | 2.12E-06  |
| TPO      | 0.2081367 | 0.0703788 | -1.564319 | 3.16E-11  | 1.83E-08  |
| IFITM10  | 1.5225752 | 0.748187  | -1.025043 | 4.84E-10  | 1.17E-07  |
| CSF3R    | 2.4155425 | 0.9842771 | -1.295211 | 2.70E-06  | 3.98E-05  |
| NKX2-1   | 0.2030353 | 0.9002365 | 2.1485733 | 0.0002921 | 0.0016134 |
| SCGN     | 0.6836287 | 0.3082989 | -1.148883 | 0.0113231 | 0.028769  |
| APCDD1   | 7.2087115 | 18.992063 | 1.3975833 | 9.94E-08  | 3.37E-06  |
| CCL18    | 35.601011 | 13.082302 | -1.444302 | 2.37E-07  | 6.16E-06  |
| GPR87    | 0.4276651 | 0.0348452 | -3.617451 | 6.26E-05  | 0.0004763 |
| CEND1    | 0.298812  | 0.1457711 | -1.035534 | 0.0001389 | 0.0008923 |
| SPACA3   | 0.2721693 | 1.0689391 | 1.9736036 | 8.24E-09  | 6.18E-07  |
| ACSL6    | 0.9197702 | 2.2488972 | 1.2898723 | 1.12E-08  | 7.26E-07  |
| PCDHB8   | 0.5350099 | 0.2363955 | -1.178363 | 0.0018638 | 0.0070219 |
| IL22RA2  | 0.174068  | 0.0805766 | -1.111218 | 0.0001913 | 0.0011572 |
| HLA-DQB2 | 6.6163357 | 3.2001325 | -1.047901 | 9.57E-07  | 1.83E-05  |
| CHI3L2   | 0.8572749 | 0.3423683 | -1.324209 | 2.70E-05  | 0.0002405 |
| FER1L6   | 1.5709584 | 0.7006432 | -1.164893 | 9.76E-05  | 0.0006718 |
| NEUROG2  | 0.0709213 | 0.2649702 | 1.9015401 | 1.60E-06  | 2.68E-05  |
| TENT5B   | 1.0561545 | 0.4896282 | -1.109062 | 4.19E-06  | 5.60E-05  |
| SPDYC    | 0.5171977 | 1.0781209 | 1.0597311 | 0.0007339 | 0.0033892 |
| LONRF2   | 0.0866604 | 0.0390861 | -1.148716 | 0.0063444 | 0.0182628 |
| SELL     | 4.1996583 | 2.00957   | -1.063385 | 1.88E-05  | 0.0001813 |
| KRT16    | 6.3749417 | 1.0780821 | -2.563945 | 0.001016  | 0.0043684 |
| PRAP1    | 38.103047 | 76.985673 | 1.0146836 | 6.35E-08  | 2.46E-06  |
| HLA-DRA  | 645.00123 | 299.06134 | -1.10886  | 2.68E-09  | 3.06E-07  |
| XKR9     | 1.3506729 | 0.624111  | -1.113804 | 0.0001652 | 0.0010264 |
| DOCK2    | 1.7394746 | 0.8593035 | -1.017412 | 1.37E-07  | 4.16E-06  |
| MAP2     | 0.3050985 | 0.1198012 | -1.348632 | 0.0029598 | 0.0100602 |
| EOMES    | 0.5366722 | 0.2639276 | -1.023899 | 2.41E-08  | 1.25E-06  |
| DGKB     | 0.3184103 | 0.0818683 | -1.959509 | 0.017635  | 0.0410447 |
| HLA-DPA1 | 54.200029 | 22.60718  | -1.261513 | 4.47E-09  | 4.12E-07  |
| SEMA3D   | 0.3790558 | 0.115009  | -1.720663 | 0.0026798 | 0.0093233 |
| GPM6A    | 0.2523512 | 0.1079092 | -1.225615 | 0.0120708 | 0.0302596 |
| AHNAK2   | 3.6403671 | 1.6332607 | -1.156329 | 0.0002876 | 0.0015925 |
| TYMP     | 35.57795  | 16.622525 | -1.097844 | 8.68E-10  | 1.57E-07  |
| TP63     | 0.3118171 | 0.052707  | -2.564633 | 0.0103218 | 0.026706  |



|           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|
| SPHK1     | 5.9048058 | 2.9265263 | -1.0127   | 2.28E-08  | 1.20E-06  |
| OIT3      | 0.3808922 | 0.8467012 | 1.1524701 | 0.0003352 | 0.0018025 |
| SERPINA7  | 0.1477433 | 0.439346  | 1.5722653 | 5.29E-08  | 2.17E-06  |
| SOX8      | 1.6188351 | 0.5961984 | -1.441092 | 3.66E-06  | 5.05E-05  |
| DPEP1     | 46.623334 | 116.36345 | 1.3195139 | 6.52E-09  | 5.31E-07  |
| LDHC      | 0.0675359 | 0.2159315 | 1.6768471 | 0.0140582 | 0.0342775 |
| LY6G6D    | 6.5249197 | 20.017592 | 1.6172364 | 7.79E-12  | 7.13E-09  |
| ADCYAP1R1 | 0.0891574 | 0.0341401 | -1.384888 | 0.0027417 | 0.0094902 |
| CAMKV     | 0.1701204 | 0.4292268 | 1.3351837 | 7.16E-06  | 8.53E-05  |
| WNT7B     | 1.037742  | 0.3455207 | -1.586604 | 0.0007376 | 0.0034027 |
| SIRPB1    | 0.468675  | 0.1968308 | -1.251632 | 8.94E-08  | 3.15E-06  |
| FAM83A    | 1.0587235 | 0.3022478 | -1.808522 | 0.0119097 | 0.0299412 |
| KLRD1     | 0.3351666 | 0.1473461 | -1.185669 | 8.70E-09  | 6.35E-07  |
| SAA2-SAA4 | 1.7742982 | 0.5503093 | -1.688934 | 0.0064996 | 0.0186042 |
| AQP9      | 4.3074499 | 1.5057124 | -1.516388 | 1.27E-06  | 2.25E-05  |
| PNMA2     | 1.5980324 | 0.7437205 | -1.103464 | 0.0004476 | 0.0022744 |
| FGF20     | 0.2199096 | 0.5584214 | 1.3444436 | 0.0006308 | 0.0029975 |
| INA       | 0.3312813 | 0.1416963 | -1.225254 | 0.0127301 | 0.0315835 |
| RPS6KA6   | 0.4280893 | 1.0000844 | 1.2241382 | 2.84E-09  | 3.11E-07  |
| DNAH2     | 0.634222  | 0.3000922 | -1.079582 | 0.0008632 | 0.0038529 |
| WFDC10A   | 0.0871795 | 0.2060789 | 1.2411364 | 4.65E-06  | 6.11E-05  |
| GNLY      | 4.8656137 | 1.964786  | -1.30825  | 8.85E-07  | 1.72E-05  |
| SERPINB5  | 32.657472 | 15.864888 | -1.041576 | 1.48E-05  | 0.0001492 |
| SLC1A3    | 1.3985788 | 0.6365772 | -1.135554 | 4.22E-08  | 1.87E-06  |
| CR1       | 0.3237253 | 0.1464245 | -1.144613 | 3.44E-06  | 4.85E-05  |
| NOTUM     | 8.9627082 | 32.702775 | 1.8674064 | 1.75E-06  | 2.85E-05  |
| FM01      | 0.4752427 | 0.2092187 | -1.183652 | 5.12E-06  | 6.57E-05  |
| C3        | 47.441504 | 22.952273 | -1.047513 | 0.0022885 | 0.0082505 |
| ABCC2     | 0.6684602 | 1.3868703 | 1.0529193 | 0.0086352 | 0.0232162 |
| DCSTAMP   | 0.3111353 | 0.1526641 | -1.027181 | 0.0138845 | 0.0339628 |
| ITGAL     | 3.6387094 | 1.7358428 | -1.067791 | 9.82E-09  | 6.71E-07  |
| CTSE      | 48.718932 | 19.009835 | -1.357737 | 7.73E-06  | 9.05E-05  |
| DHRS9     | 7.6150078 | 3.5626544 | -1.095893 | 0.0032971 | 0.0109782 |
| OCA2      | 0.3007915 | 0.6256969 | 1.0567003 | 1.74E-07  | 4.93E-06  |
| SPRR3     | 5.7240273 | 1.0807734 | -2.404966 | 0.0069357 | 0.0195427 |
| LY6D      | 2.8899867 | 0.7049684 | -2.035432 | 0.0038927 | 0.0125476 |
| CCR7      | 2.1433221 | 1.0618499 | -1.013269 | 0.0040953 | 0.0130351 |
| DRD2      | 0.4825354 | 1.1067286 | 1.1975949 | 5.61E-07  | 1.20E-05  |
| SRRM3     | 0.7033346 | 0.2647954 | -1.409333 | 0.0010942 | 0.0046339 |
| HOXC4     | 0.7608272 | 0.3121945 | -1.285124 | 2.53E-08  | 1.30E-06  |
| GBP5      | 4.471447  | 1.3287729 | -1.750647 | 9.26E-10  | 1.59E-07  |
| TIGIT     | 1.1316563 | 0.5534502 | -1.03191  | 5.22E-09  | 4.53E-07  |
| SEMA3E    | 0.1789324 | 0.0395213 | -2.178714 | 0.0067845 | 0.0191796 |
| VAX2      | 0.3469257 | 0.1601741 | -1.114986 | 0.0005323 | 0.0026113 |
| OSR1      | 0.4894471 | 0.193247  | -1.340706 | 5.63E-12  | 6.44E-09  |
| FCRL6     | 0.3682621 | 0.1498343 | -1.297365 | 1.82E-08  | 1.02E-06  |
| MAOB      | 5.4014681 | 2.2723741 | -1.249151 | 1.24E-05  | 0.0001308 |
| ADRB1     | 0.8086289 | 0.2906646 | -1.476122 | 3.72E-06  | 5.13E-05  |
| CXCR1     | 1.0552745 | 0.473518  | -1.156127 | 0.0060219 | 0.0175548 |
| GLT1D1    | 0.2514668 | 0.111193  | -1.177302 | 8.17E-07  | 1.62E-05  |
| MRC1      | 5.704344  | 2.7814169 | -1.036241 | 1.29E-05  | 0.000135  |

|          |           |           |           |           |           |
|----------|-----------|-----------|-----------|-----------|-----------|
| NKD1     | 4.5118278 | 13.511729 | 1.5824284 | 4.08E-10  | 1.02E-07  |
| SPRR1B   | 12.658694 | 1.3475244 | -3.231745 | 0.0001275 | 0.0008339 |
| SAMD9L   | 5.4305558 | 2.3352863 | -1.2175   | 1.44E-10  | 5.36E-08  |
| EPHB6    | 4.3250916 | 1.3839789 | -1.643909 | 0.0007445 | 0.0034242 |
| RARRES1  | 22.69903  | 10.68084  | -1.087606 | 5.13E-10  | 1.21E-07  |
| PTPRO    | 4.3035383 | 10.911516 | 1.3422563 | 2.98E-10  | 8.71E-08  |
| LRRC2    | 0.5603881 | 1.2021217 | 1.1010848 | 1.03E-11  | 8.79E-09  |
| RASGRP1  | 0.9783198 | 0.4804302 | -1.025979 | 2.92E-09  | 3.11E-07  |
| FCAR     | 0.4639023 | 0.199037  | -1.220785 | 0.0006143 | 0.0029353 |
| SLC30A2  | 0.5619587 | 1.2886509 | 1.1973254 | 3.41E-08  | 1.62E-06  |
| SIGLEC14 | 1.5292036 | 0.7335016 | -1.059909 | 5.64E-06  | 7.07E-05  |
| HMX3     | 0.5883447 | 0.1585862 | -1.891395 | 7.36E-05  | 0.0005387 |
| HDAC9    | 0.4884548 | 0.239754  | -1.02667  | 0.009238  | 0.0244818 |
| SORCS1   | 0.1178132 | 0.0515559 | -1.192293 | 0.014721  | 0.0355651 |
| FCGR2B   | 0.9844121 | 0.4714226 | -1.062242 | 2.92E-09  | 3.11E-07  |
| CXCL9    | 27.297009 | 12.329792 | -1.146594 | 6.72E-07  | 1.39E-05  |
| DSCAML1  | 0.1784429 | 0.0680947 | -1.389848 | 0.0087562 | 0.0234953 |
| POU5F1B  | 0.9597934 | 1.9628933 | 1.032186  | 1.22E-07  | 3.89E-06  |
| UNC13A   | 0.5789163 | 0.1150228 | -2.331435 | 2.07E-05  | 0.0001956 |
| HTRA4    | 0.430862  | 0.1850132 | -1.219598 | 3.03E-07  | 7.41E-06  |
| CRTAC1   | 0.315453  | 0.1462996 | -1.1085   | 0.0092539 | 0.0245193 |
| C2CD4C   | 0.6114797 | 0.2833408 | -1.109766 | 1.64E-06  | 2.70E-05  |
| IKZF3    | 1.7419579 | 0.8320826 | -1.065911 | 2.83E-09  | 3.11E-07  |
| CTSW     | 3.3289013 | 1.4486857 | -1.200301 | 3.89E-11  | 2.13E-08  |
| ANGPTL7  | 0.1717003 | 0.0587239 | -1.547872 | 0.0025687 | 0.0090259 |
| GZMH     | 4.0858118 | 1.6975054 | -1.267207 | 7.92E-11  | 3.54E-08  |
| TNFAIP2  | 17.689371 | 7.9103349 | -1.161072 | 7.99E-11  | 3.54E-08  |
| GRAMD1B  | 1.4592692 | 0.5462814 | -1.41753  | 8.40E-07  | 1.66E-05  |
| PLP1     | 0.2335191 | 0.1106128 | -1.078022 | 0.0050888 | 0.0153978 |
| SPATC1   | 0.1907917 | 0.0844507 | -1.175817 | 7.30E-07  | 1.47E-05  |
| HOXC10   | 0.9727591 | 0.1117639 | -3.121629 | 1.94E-06  | 3.09E-05  |
| CNR1     | 0.2253584 | 0.0766402 | -1.556048 | 0.0134856 | 0.0331881 |
| CRTAM    | 0.4875029 | 0.192085  | -1.343666 | 2.02E-09  | 2.63E-07  |
| CD74     | 659.09342 | 322.96486 | -1.029106 | 1.37E-08  | 8.42E-07  |
| SYT5     | 0.2131153 | 0.0733886 | -1.538005 | 8.01E-06  | 9.31E-05  |
| NKG7     | 11.792152 | 5.0523859 | -1.22279  | 8.34E-11  | 3.58E-08  |
| RAMP1    | 28.460735 | 13.332577 | -1.094017 | 1.41E-05  | 0.0001444 |
| SMPX     | 0.2790122 | 0.8219623 | 1.5587441 | 0.0160623 | 0.0380751 |
| KCNV1    | 0.1097246 | 0.2601644 | 1.2455367 | 0.0018465 | 0.0069702 |
| LY6G6F   | 0.0921588 | 0.353545  | 1.9396997 | 2.68E-11  | 1.75E-08  |
| GAS1     | 4.6090224 | 2.2288043 | -1.048191 | 1.53E-05  | 0.0001539 |
| ONECUT2  | 0.6988229 | 0.2795758 | -1.321687 | 0.0107531 | 0.027612  |
| MMRN1    | 1.3018613 | 0.5069647 | -1.360619 | 0.0004938 | 0.0024568 |