Figure S1

consensus matrix k=2

consensus matrix k=3

consensus matrix k=4

consensus matrix k=5
Figure S2

A. Training cohort

Risk score

Risk score

High-risk

Low-risk

OS (months)

Status

Alive

Dead

B. Validation cohort one

Risk score

Risk score

High-risk

Low-risk

OS (months)

Status

Alive

Dead

C. Validation cohort two

Risk score

Risk score

High-risk

Low-risk

OS (months)

Status

Alive

Dead

Exp

Exp

Exp

DENND1C
GNG7
CCR2
CMAHP
CERS4
PLK1
ECT2
FKBP4
ABCC2
PCDH7
VEGFC
GJB3
KRT6A

DENND1C
GNG7
CCR2
CMAHP
CERS4
PLK1
ECT2
FKBP4
ABCC2
PCDH7
VEGFC
GJB3
KRT6A

DENND1C
GNG7
CCR2
CMAHP
CERS4
PLK1
ECT2
FKBP4
ABCC2
PCDH7
VEGFC
GJB3
KRT6A

66 116 35 78 90 146
### A

**Kaplan–Meier estimator**

| Gene    | HR     | HR_95L  | HR_95H  | P-value   |
|---------|--------|---------|---------|-----------|
| GNG7    | 0.575  | 0.456   | 0.725   | 3.01E-06  |
| DENND1C | 0.615  | 0.475   | 0.796   | 2.29E-04  |
| CCR2    | 0.657  | 0.537   | 0.805   | 5.01E-05  |
| CERS4   | 0.708  | 0.612   | 0.819   | 3.33E-06  |
| CMAHP   | 0.709  | 0.608   | 0.828   | 1.33E-05  |
| KRT6A   | 1.156  | 1.094   | 1.221   | 2.05E-07  |
| ABCC2   | 1.191  | 1.101   | 1.288   | 1.35E-05  |
| GJB3    | 1.287  | 1.172   | 1.412   | 1.14E-07  |
| PCDH7   | 1.295  | 1.135   | 1.478   | 1.26E-04  |
| VEGFC   | 1.373  | 1.201   | 1.569   | 3.27E-06  |
| PLK1    | 1.405  | 1.215   | 1.625   | 4.46E-06  |
| ECT2    | 1.416  | 1.214   | 1.651   | 8.94E-06  |
| FKBPA4  | 1.512  | 1.264   | 1.810   | 6.41E-06  |

**Figure S3**

#### B

**Univariate Cox regression**

| ID   | HR     | HR_95L  | HR_95H  | P-value   |
|------|--------|---------|---------|-----------|
| GNG7 | 0.575  | 0.456   | 0.725   | 3.01E-06  |
| DENND1C | 0.615 | 0.475   | 0.796   | 2.29E-04  |
| CCR2 | 0.657  | 0.537   | 0.805   | 5.01E-05  |
| CERS4 | 0.708 | 0.612   | 0.819   | 3.33E-06  |
| CMAHP | 0.709 | 0.608   | 0.828   | 1.33E-05  |
| KRT6A | 1.156 | 1.094   | 1.221   | 2.05E-07  |
| ABCC2 | 1.191 | 1.101   | 1.288   | 1.35E-05  |
| GJB3  | 1.287 | 1.172   | 1.412   | 1.14E-07  |
| PCDH7 | 1.295 | 1.135   | 1.478   | 1.26E-04  |
| VEGFC | 1.373 | 1.201   | 1.569   | 3.27E-06  |
| PLK1  | 1.405 | 1.215   | 1.625   | 4.46E-06  |
| ECT2  | 1.416 | 1.214   | 1.651   | 8.94E-06  |
| FKBPA4 | 1.512| 1.264   | 1.810   | 6.41E-06  |
Figure S4

A. The proportion of 22 TICs in LUAD samples

B. The correlation among 22 TICs
Table S1. Determination of differentially expressed genes between two types of ICI with the threshold parameters of p-value < 0.05 and \(|\log_2(\text{fold-change})| > 0.2.

| ID     | \log_2(\text{fold-change}) | average expression | t         | p-value    | B          |
|--------|----------------------------|--------------------|-----------|------------|------------|
| LCP2   | -1.126705738               | 2.586045829        | -23.97017259 | 6.13E-85   | 182.9916104 |
| NCKAP1L| -1.218276852               | 2.330209997        | -23.94881175 | 7.78E-85   | 182.7547517 |
| EVI2B  | -1.373416382               | 3.532214884        | -23.62683625 | 2.81E-83   | 179.1826832 |
| CD53   | -1.468067369               | 4.855088869        | -23.15296728 | 2.19E-80   | 172.5500044 |
| CD4    | -1.374899572               | 4.459245541        | -23.02967288 | 2.90E-80   | 172.2716596 |
| BTK    | -1.063722036               | 3.295487363        | -22.68496273 | 1.03E-78   | 168.7181463 |
| SASH3  | -1.327954213               | 3.037797776        | -22.63581773 | 1.78E-78   | 168.171182  |
| WIPF1  | -1.045202306               | 3.037797776        | -22.63581773 | 1.78E-78   | 168.171182  |
| SNX20  | -0.926084147               | 1.55357536         | -22.58013401 | 3.31E-78   | 167.55256   |
| SELPLG | -1.30379632                | 3.835612508        | -22.53457487 | 5.51E-78   | 167.0459592 |
| GIMAP4 | -1.21075111                | 3.717538989        | -22.41703935 | 1.20E-78   | 165.7389411 |
| LPXN   | -1.049406091               | 3.322878208        | -22.34653765 | 4.49E-77   | 164.9549135 |
| PTPRC  | -1.486272514               | 3.156232642        | -22.34438147 | 4.60E-77   | 164.930935  |
| HAVCR2 | -1.2504727                 | 2.74395073         | -22.25381344 | 1.27E-76   | 163.9237322 |
| DOCK2  | -1.032588524               | 1.786372692        | -22.25381344 | 1.27E-76   | 163.9237322 |
| LAPTM5 | -1.41835288                | 6.328558744        | -22.03155905 | 1.51E-75   | 161.4520427 |
| PLEKHO2| -0.959055835               | 3.713883738        | -22.02808563 | 1.57E-75   | 161.4134157 |
| CD86   | -1.151778532               | 2.58125386         | -22.02057713 | 1.71E-75   | 161.3299157 |
| PLEK   | -1.456956769               | 3.445970643        | -21.96725678 | 3.10E-75   | 160.7369618 |
| CYTH4  | -1.010757056               | 2.16746093         | -21.72452858 | 4.66E-74   | 158.0379254 |
| GPR65  | -0.788604745               | 1.20610737         | -21.6271918 | 1.38E-73   | 156.9560502 |
| LAIR1  | -1.159448825               | 2.39425368         | -21.53587108 | 3.83E-73   | 155.940568  |
| IKZF1  | -0.996659571               | 1.679444566        | -21.48469493 | 6.78E-73   | 155.3717183 |
| CYBB   | -1.708824733               | 4.307798979        | -21.4409497  | 1.10E-72   | 154.8855025 |
| IL10RA | -1.176953279               | 2.715780869        | -21.38330288 | 2.10E-72   | 154.2448276 |
| EVI2A  | -1.231384513               | 2.699327621        | -21.26946136 | 7.49E-72   | 152.9798123 |
| RCSD1  | -0.979397461               | 2.010990109        | -21.2650271 | 7.87E-72   | 152.930544  |
| SCIMP  | -0.948743735               | 1.435983046        | -21.17077728 | 2.25E-71   | 151.8834619 |
| GNG2   | -0.788148077               | 1.779391738        | -21.05292134 | 8.38E-71   | 150.5744395 |
| CD84   | -1.10237479                | 1.833541139        | -21.03642433 | 1.01E-70   | 150.3912379 |
| Gene     | Log_{10}(fold change) | Log_{10}(p-value) | Log_{10}(p-value for enrichment) | p-value | q-value |
|----------|-----------------------|-------------------|----------------------------------|---------|---------|
| TAGAP    | -1.04998519           | 1.994775973       | -21.00460003                     | 1.44E-70 | 150.0378465 |
| AIF1     | -1.368098604          | 4.434985111       | -20.94059111                     | 2.93E-70 | 149.3271539 |
| CSF2RB   | -1.176414152          | 2.433104492       | -20.89634268                     | 4.80E-70 | 148.8359365 |
| MND4     | -1.408005491          | 3.042466637       | -20.8779067                      | 5.28E-70 | 148.7410049 |
| ARHGEF6  | -0.961082164          | 2.177042304       | -20.87523576                     | 6.07E-70 | 148.6018431 |
| IL16     | -0.878693667          | 1.461952868       | -20.84273714                     | 2.30E-70 | 148.2409275 |
| MS4A6A   | -1.3353716            | 3.122875229       | -20.76439413                     | 2.93E-70 | 147.371514  |
| ZEB2     | -0.771382549          | 1.514770545       | -20.75554992                     | 3.69E-70 | 147.2733788 |
| WAS      | -1.107531148          | 2.896380135       | -20.71322956                     | 4.60E-70 | 146.8038319 |
| CCR5     | -1.147383354          | 2.061322481       | -20.66086228                     | 4.80E-70 | 146.229067  |
| GMFG     | -1.144556681          | 3.813517597       | -20.45896732                     | 5.28E-70 | 143.9842581 |
| C3AR1    | -1.350773186          | 3.299990717       | -20.3903185                      | 5.28E-70 | 143.223468  |
| SLAMF8   | -1.341633959          | 3.196974957       | -20.37691565                     | 5.28E-70 | 143.0749583 |
| CD37     | -1.273847863          | 3.052350218       | -20.2537134                      | 5.28E-70 | 141.6953603 |
| TNFAIP8L2| -1.131458545          | 2.561533239       | -20.2513858                      | 5.28E-70 | 141.684416  |
| SLA      | -1.028289852          | 2.254789944       | -20.45896732                     | 5.28E-70 | 143.9842581 |
| IGSF6    | -1.274762565          | 2.794391694       | -20.45896732                     | 5.28E-70 | 143.9842581 |
| C10orf128| -0.89667378           | 1.789604292       | -20.2513858                      | 5.28E-70 | 141.6953603 |
| BIN2     | -1.002745174          | 2.092469272       | -19.97494213                     | 5.28E-70 | 138.625123  |
| SLCO2B1  | -1.332045153          | 3.056720905       | -19.9281966                      | 5.28E-70 | 138.126174  |
| PCED1B-AS1| -0.950838405          | 1.911853729       | -19.8732964                      | 5.28E-70 | 137.5061199 |
| FERMT3   | -1.199760663          | 3.61296167        | -19.8729433                      | 5.28E-70 | 137.4957821 |
| IRF8     | -1.185123359          | 2.429668364       | -19.86894163                     | 5.28E-70 | 137.4531993 |
| TRPV2    | -1.030199372          | 2.927887794       | -19.86037643                     | 4.85E-65 | 136.9831396 |
| CSF1R    | -1.365327006          | 3.844986461       | -19.82658825                     | 7.06E-65 | 136.9831396 |
| CD28     | -0.717200933          | 1.021810173       | -19.79816513                     | 9.68E-65 | 136.6710906 |
| DOK2     | -1.229499331          | 2.863563226       | -19.77087284                     | 1.31E-64 | 136.369585  |
| PLXNC1   | -0.938891712          | 2.131146446       | -19.73542238                     | 1.94E-64 | 135.9780259 |
| SPN      | -1.092018542          | 1.920337888       | -19.71460786                     | 2.45E-64 | 135.7481629 |
| IL7R     | -1.45424828           | 2.988853347       | -19.6554521                      | 4.71E-64 | 135.094648  |
| SAMS1N   | -1.124675269          | 2.395103344       | -19.6365157                      | 5.81E-64 | 134.8864157 |
| MYO1F    | -0.952032722          | 2.242391452       | -19.5573826                      | 1.40E-63 | 134.012766  |
| ARHGAP25 | -0.84581035           | 2.127891503       | -19.5546623                      | 1.44E-63 | 133.9806414 |
| Gene      | Log2 Fold Change | P-Value   | q-Value  | FDR       |
|-----------|-----------------|-----------|----------|-----------|
| RP11-750H9.5 | -0.815340532    | 1.95E-63  | 133.6782967 |
| CD33      | -0.633412013    | 2.07E-63  | 133.6234013 |
| TNFSF13B  | -1.1913078      | 2.34E-63  | 133.498275 |
| 1-Mar     | -0.695361952    | 2.50E-63  | 133.4349135 |
| ITGAL     | -0.633412013    | 3.35E-63  | 133.1403792 |
| CLEC4A    | -1.121504312    | 4.92E-63  | 133.1149293 |
| GIMAP6    | -1.08617838     | 6.92E-63  | 132.4189664 |
| TNFSF13B  | -1.1913078      | 2.07E-63  | 132.7597787 |
| 1-Mar     | -0.695361952    | 3.35E-63  | 132.4189664 |
| ITGAL     | -0.633412013    | 4.92E-63  | 132.7597787 |
| CLEC4A    | -1.121504312    | 6.92E-63  | 132.4189664 |
| GIMAP6    | -1.08617838     | 3.35E-63  | 132.4189664 |
| TNFSF13B  | -1.1913078      | 4.92E-63  | 132.7597787 |
| 1-Mar     | -0.695361952    | 6.92E-63  | 132.4189664 |
| ITGAL     | -0.633412013    | 3.35E-63  | 132.7597787 |
| CLEC4A    | -1.121504312    | 4.92E-63  | 132.7597787 |
| GIMAP6    | -1.08617838     | 6.92E-63  | 132.4189664 |
| Gene   | C1orf162 | -1.070556989 | 2.868175558 | -18.66055802 | 2.79E-59 | 124.1518627 |
|--------|----------|---------------|-------------|--------------|---------|-------------|
| GAS7   | -0.970353166 | 2.0000322 | -18.62802078 | 3.99E-59 | 123.7954879 |
| SLC7A7 | -1.043121515 | 2.85085204 | -18.60799328 | 4.97E-59 | 123.5761841 |
| AMICA1 | -0.997627586 | 1.78484384 | -18.56233079 | 8.22E-59 | 122.6312721 |
| CD80   | -0.522468552 | 0.718596121 | -18.52165732 | 2.03E-58 | 122.1770313 |
| TLR8   | -0.947851154 | 1.270758343 | -18.53016422 | 1.17E-58 | 122.7243418 |
| ITGAM  | -0.522468552 | 0.718596121 | -18.51016407 | 1.46E-58 | 122.1770313 |
| P2RX7  | -0.970353166 | 2.0000322 | -18.48012796 | 2.03E-58 | 122.1770313 |
| CMKLR1 | -0.970353166 | 2.0000322 | -18.40574928 | 4.86E-58 | 121.3074162 |
| GLIPR1 | -0.970353166 | 2.0000322 | -18.37712492 | 6.28E-58 | 121.0512111 |
| SIGLEC9| -0.970353166 | 2.0000322 | -18.36707677 | 7.01E-58 | 119.9414478 |
| ARHGAP9| -0.970353166 | 2.0000322 | -18.27604815 | 1.90E-57 | 119.9414478 |
| CD2    | -1.384185085 | 3.45522563 | -18.37712492 | 6.28E-58 | 121.0512111 |
| DOCK8  | -0.930868208 | 2.054763764 | -18.36707677 | 7.01E-58 | 120.9414478 |
| MAFB   | -1.129840007 | 3.653432446 | -18.27604815 | 1.90E-57 | 119.9414478 |
| NFAM1  | -0.954786972 | 1.802569323 | -18.27145797 | 1.99E-57 | 119.9006462 |
| GYPY   | -0.997627586 | 2.0000322 | -18.23732916 | 3.99E-59 | 122.7243418 |
| MS4A4A | -0.816204645 | 1.368171461 | -18.19721143 | 4.51E-57 | 119.1968116 |
| CYTIP  | -1.0946577 | 2.664207207 | -18.20722452 | 4.04E-57 | 119.1968116 |
| CD247  | -0.895412623 | 1.522796782 | -18.19721143 | 4.51E-57 | 119.0876268 |
| TESPA1 | -0.606237274 | 0.837972032 | -18.15617671 | 7.07E-57 | 118.6403002 |
| FLI1   | -0.764245295 | 1.77829754 | -18.12110542 | 1.04E-56 | 118.2581418 |
| LRRC25 | -0.986760492 | 2.248604182 | -18.12102016 | 1.04E-56 | 118.2572129 |
| CD180  | -0.816204645 | 1.368171461 | -18.11912546 | 1.06E-56 | 118.2365713 |
| PIK3CG | -0.796950461 | 1.93633689 | -18.08367665 | 1.56E-56 | 117.850459 |
| HLA-DMB| -1.367529676 | 4.15983271 | -18.04973547 | 2.27E-56 | 117.4809121 |
| HCK    | -1.282123627 | 3.360467109 | -18.04124004 | 2.49E-56 | 117.3884373 |
| FCGR1A | -0.941388506 | 1.631043247 | -18.00408798 | 3.73E-56 | 116.9841336 |
| ICOS   | -0.728913498 | 0.980448609 | -18.00385712 | 3.74E-56 | 116.9816218 |
| GIMAP1 | -0.697922614 | 1.303359607 | -17.99550763 | 4.1E-56 | 116.8907833 |
| PTGER4 | -0.997383894 | 2.029614742 | -17.98872167 | 4.42E-56 | 116.8169617 |
| PIK3R5 | -0.771754486 | 1.480306449 | -17.97779269 | 4.97E-56 | 116.6980822 |
| SAMHD1 | -1.038978656 | 4.560712666 | -17.94391415 | 7.20E-56 | 116.3296658 |
| Gene     | log2FoldChange | adj.PValue | BSEA   | FDR  |
|----------|----------------|------------|--------|------|
| CLEC10A  | -1.19135879    | 7.73E-56   | 116.2593793 |
| FYB      | -1.154030282   | 8.57E-56   | 116.1565456  |
| ITGB2    | -1.441035134   | 9.51E-56   | 115.8619786  |
| FGD2     | -0.738403906    | 9.96E-56 | 115.2863369 |
| HLA-DRA  | -1.610987986    | 1.15E-55   | 115.8619786  |
| PLXDC2   | -1.0344091      | 2.05E-55   | 115.2863369  |
| TRBV20-1 | -1.09479817     | 2.36E-55  | 115.1489354 |
| GIMAP7   | -1.115523948    | 3.02E-55   | 114.9010328 |
| ARHGAP15 | -0.629277746   | 4.14E-55   | 114.5877492 |
| PTPRO    | -0.617511038    | 4.22E-55   | 114.5703482 |
| CD3E     | -1.281710217    | 5.14E-55   | 114.3727989 |
| CD300C   | -0.80976155     | 9.26E-55   | 113.0797471 |
| SH2B3    | -0.78043234     | 9.26E-55   | 113.7865896 |
| C1QA     | -1.535663155    | 1.88E-54   | 113.0797471 |
| TNFSF8   | -0.66977815     | 2.18E-54   | 112.9348008 |
| FGL2     | -1.33536404     | 2.50E-54   | 112.7406343 |
| HLA-DPA1 | -1.600358855    | 2.65E-54   | 112.7406343 |
| SH2D1A   | -0.948308584    | 2.89E-54   | 112.6536026 |
| LST1     | -1.203482569    | 3.64E-54   | 112.4294717 |
| NCF1     | -0.781535433    | 3.77E-54   | 112.3890471 |
| HLA-DOA  | -1.53063153     | 5.25E-54   | 112.601438 |
| APBB1IP  | -0.976077811    | 7.40E-54   | 111.785494 |
| LAT2     | -0.907702842    | 1.15E-53   | 111.2798662 |
| TYROBP   | -1.359178311    | 1.21E-53   | 111.2314343 |
| FMNL3    | -0.644128205    | 1.33E-53   | 111.1360791 |
| STK10    | -0.75442689     | 1.73E-53   | 110.8710985 |
| CD52     | -1.46778342     | 1.74E-53   | 110.8674179 |
| IL2RG    | -1.315125211    | 2.74E-53   | 110.4159599 |
| HLA-DPB1 | -1.520569028    | 3.30E-53   | 110.2281942 |
| SIGLEC7  | -0.739150611    | 3.40E-53   | 110.199355 |
| SLAMF1   | -0.712798605    | 4.24E-53   | 109.9810047 |
| TRAF3IP3 | -0.749799483    | 6.33E-53   | 109.5816165 |
| Gene       | Log2 Fold Change | Log10 p-value | Adjusted p-value | FDR | Benjamini-Hochberg Correction |
|------------|------------------|---------------|------------------|-----|-------------------------------|
| TRBV28     | -1.2589          | -17.3063      | 7.41E-53         | 109.4249234 |
| CD200R1    | -0.4916          | -17.2951      | 8.36E-53         | 109.3042126 |
| LILRB1     | -0.8141          | -17.2767      | 1.02E-52         | 109.105952  |
| FCGR3A     | -1.4641          | -17.2691      | 1.11E-52         | 109.0244691 |
| C1QC       | -1.5247          | -17.2605      | 1.02E-52         | 108.9315195 |
| SIRPB2     | -0.6573          | -17.2546      | 1.30E-52         | 108.86777   |
| CD48       | -1.2754          | -17.2535      | 1.31E-52         | 108.8558748 |
| NCF2       | -1.1848          | -17.2326      | 2.03E-52         | 108.6303897 |
| SLAMF6     | -1.5247          | -17.2015      | 2.30E-52         | 108.2958796 |
| C1QB       | -0.7359          | -17.1974      | 2.41E-52         | 108.2520093 |
| STAT5A     | -1.1457          | -17.1791      | 2.93E-52         | 108.0546237 |
| TRBC2      | -1.1293          | -17.1677      | 3.32E-52         | 107.9320216 |
| RAC2       | -0.8004          | -17.1594      | 3.63E-52         | 107.8429669 |
| CXorf21    | -1.1789          | -17.1317      | 4.90E-52         | 107.5445668 |
| PTAFR      | -1.1103          | -17.0615      | 9.49E-52         | 106.7899871 |
| CORO1A     | -0.9006          | -17.0516      | 1.16E-51         | 106.6834701 |
| STX11      | -0.7280          | -16.9948      | 2.15E-51         | 106.0740422 |
| ITK        | -1.0521          | -16.9838      | 2.42E-51         | 105.9555378 |
| KIAA0226L  | -0.5256          | -16.9799      | 2.53E-51         | 105.9093337 |
| LCK        | -1.0852          | -16.9463      | 3.62E-51         | 105.5534213 |
| FOLR2      | -1.1448          | -16.9043      | 5.69E-51         | 105.1032417 |
| LSP1       | -1.1523          | -16.8791      | 7.46E-51         | 104.8332092 |
| GAB3       | -0.6386          | -16.8277      | 1.30E-50         | 104.2832941 |
| CASP1      | -0.9868          | -16.8031      | 1.69E-50         | 104.0194713 |
| DAB2       | -0.9536          | -16.7937      | 1.87E-50         | 103.9186133 |
| ALOX5AP    | -1.4191          | -16.7739      | 2.31E-50         | 103.7068707 |
| VSIG4      | -1.5565          | -16.7590      | 2.71E-50         | 103.5477329 |
| SLC1A3     | -0.9136          | -16.7547      | 2.84E-50         | 103.5014087 |
| SIT1       | -1.0624          | -16.7525      | 2.91E-50         | 103.4786449 |
| RGS18      | -0.6341          | -16.7467      | 3.10E-50         | 103.4164687 |
| Gene       | Value1       | Value2       | Value3       | Value4       | Value5       |
|-----------|--------------|--------------|--------------|--------------|--------------|
| ENTPD1    | -0.583662727 | 2.222929991  | -16.74332997 | 3.21E-50     | 103.3797325  |
| PRKCB     | -0.785191333 | 1.338537111  | -16.70898045 | 4.65E-50     | 103.0126222  |
| MSR1      | -1.292124988 | 2.778879174  | -16.70425171 | 4.89E-50     | 102.9621002  |
| TIGIT     | -0.808924612 | 1.230915092  | -16.6627976  | 7.65E-50     | 102.519581   |
| VCAM1     | -1.233948912 | 2.649701616  | -16.6621234  | 7.68E-50     | 102.5131259  |
| ALOX5     | -1.231142619 | 3.593902638  | -16.6612168  | 7.76E-50     | 102.5024799  |
| NLRP3     | -0.645429329 | 1.010819851  | -16.6206561  | 1.20E-49     | 102.0696243  |
| PTPN22    | -0.929900111 | 1.679402202  | -16.6045119  | 1.47E-49     | 101.8674683  |
| PYHIN1    | -0.623639519 | 0.805777799  | -16.5761788  | 1.93E-49     | 101.592949   |
| LRRC8C    | -0.565221332 | 1.362854629  | -16.5751798  | 1.95E-49     | 101.584651   |
| RP11-121A8.1 | -0.289631875 | 0.382115817  | -16.5387169  | 2.88E-49     | 101.1960628  |
| SLC15A3   | -1.000181672 | 2.962704481  | -16.516249   | 3.67E-49     | 100.9566823  |
| ICAM3     | -0.707798969 | 1.110483968  | -16.5108192  | 3.89E-49     | 100.898266   |
| TRAV13-1  | -0.83931767  | 1.060728345  | -16.476411   | 6.18E-49     | 100.4374412  |
| EPB41L2   | -0.838151264 | 2.270180722  | -16.4736999  | 5.78E-49     | 100.5037953  |
| CRTAM     | -0.623300187 | 0.804301035  | -16.459635   | 6.72E-49     | 100.3541444  |
| BCL2A1    | -1.195476528 | 3.072327085  | -16.440925   | 8.20E-49     | 100.1551281  |
| TRAV9-2   | -0.611207628 | 0.725387365  | -16.440925   | 8.20E-49     | 100.1551281  |
| MRC1      | -1.672214813 | 3.583135623  | -16.4286682  | 9.35E-49     | 100.024766   |
| GZMK      | -1.239358362 | 1.865080372  | -16.417318   | 1.06E-48     | 99.9041137   |
| NLRC4     | -0.562902331 | 1.066569447  | -16.410963   | 1.13E-48     | 99.83650685  |
| OSCAR     | -1.128045625 | 2.475458507  | -16.4088084  | 1.16E-48     | 99.8136598   |
| LTA       | -0.564469904 | 0.722754672  | -16.4073174  | 1.17E-48     | 99.7980916   |
| SLC31A2   | -0.503983273 | 0.904296948  | -16.3852924  | 1.49E-48     | 99.56375567  |
| NCF4      | -1.053371112 | 3.365048212  | -16.3803247  | 1.57E-48     | 99.5099752   |
| CARD8-AS1 | -0.604382169 | 1.431532635  | -16.3301837  | 2.68E-48     | 98.97854021  |
| MS4A7     | -1.118131487 | 2.848581508  | -16.3257177  | 2.81E-48     | 98.93113933  |
| LILRB2    | -0.893839369 | 1.792798894  | -16.3234576  | 2.87E-48     | 98.90715372  |
| GIMAP2    | -0.956447901 | 2.600479439  | -16.3052376  | 3.49E-48     | 98.71382342  |
| RASL3     | -0.935124781 | 1.996626007  | -16.2906626  | 4.07E-48     | 98.56137625  |
| PTGS1     | -0.916273307 | 2.123296655  | -16.2869232  | 4.24E-48     | 98.51955732  |
| OLFML1    | -0.815283861 | 1.802908318  | -16.2863761  | 4.27E-48     | 98.51375526  |
| GPR34     | -1.071902501 | 2.134004126  | -16.2813894  | 4.50E-48     | 98.46087121  |
| Gene   | Value1  | Value2  | Value3  | Value4  | Value5  |
|--------|---------|---------|---------|---------|---------|
| KLHL6  | -0.8024 | 1.3394  | -16.28  | 4.52E-48| 98.46   |
| FCGR2A | -1.0663 | 3.5428  | -16.25  | 6.01E-48| 98.17   |
| SAMD3  | -0.2513 | 0.2743  | -16.24  | 6.38E-48| 98.11   |
| TRAV-2 | -0.5198 | 0.5995  | -16.24  | 6.69E-48| 98.06   |
| HSD11B1| -1.0854 | 2.2209  | -16.23  | 7.88E-48| 97.90   |
| TRBV25-1| 0.5325 | 0.6547  | -16.21  | 9.26E-48| 97.46   |
| LINC01094| 0.7458 | 1.1987  | -16.19  | 1.10E-47| 97.57   |
| ITGA4  | -0.8061 | 1.6343  | -16.18  | 1.23E-47| 97.46   |
| LILRB4 | -1.1629 | 2.3601  | -16.17  | 1.33E-47| 97.38   |
| CCR1   | -1.0784 | 2.8422  | -16.17  | 1.51E-47| 97.25   |
| CD3D   | -1.2750 | 3.2602  | -16.10  | 2.87E-47| 96.62   |
| TRAV21  | 0.6854  | 0.8245  | -16.09  | 3.14E-47| 96.53   |
| HCLS1  | -1.0525 | 3.6631  | -16.08  | 3.62E-47| 96.39   |
| NCF1B  | -0.5933 | 0.8373  | -16.06  | 4.49E-47| 96.17   |
| TRAV8-6| 0.5548  | 0.7055  | -16.05  | 4.96E-47| 96.07   |
| HVCN1  | -0.6487 | 1.7478  | -16.04  | 5.49E-47| 95.97   |
| APOL3  | -0.9983 | 2.6496  | -16.04  | 5.84E-47| 95.91   |
| CALHM2 | -0.7136 | 2.5358  | -16.02  | 6.84E-47| 95.75   |
| GIMAP8 | -0.8633 | 2.1371  | -16.01  | 7.33E-47| 95.68   |
| CLEC1  | -0.4903 | 0.6475  | -16.01  | 7.38E-47| 95.67   |
| CD3G   | -0.8109 | 1.3370  | -16.00  | 8.13E-47| 95.58   |
| TRAV12-3| 0.6868 | 0.7925  | -16.00  | 8.83E-47| 95.49   |
| CD74   | -1.4321 | 9.8854  | -15.98  | 1.03E-46| 95.34   |
| P2RY10 | -0.8770 | 1.3457  | -15.98  | 1.05E-46| 95.32   |
| IL2RB  | -1.0899 | 2.4580  | -15.96  | 1.27E-46| 95.14   |
| GLIPR2 | -1.0371 | 3.4381  | -15.94  | 1.56E-46| 94.93   |
| SERPING1| -1.0666 | 6.2526  | -15.93  | 1.77E-46| 94.81   |
| SLC9A9 | -0.6862 | 1.5238  | -15.91  | 2.12E-46| 94.63   |
| IL2RA  | -1.0363 | 1.8393  | -15.91  | 2.19E-46| 94.59   |
| F13A1  | -1.5469 | 3.1299  | -15.90  | 2.32E-46| 94.53   |
| SELL   | -1.2902 | 2.7964  | -15.89  | 2.66E-46| 94.40   |
| RTN1   | -0.6703 | 0.9890  | -15.89  | 2.68E-46| 94.39   |
| TRBV19 | -0.8296 | 1.1832  | -15.83  | 3.07E-46| 94.26   |
| Gene     | z-score1 | z-score2 | z-score3 | p-value  | NES   |
|----------|----------|----------|----------|----------|-------|
| BTN3A3   | -0.802814489 | 2.797534343 | -15.87459304 | 3.38E-46 | 94.16381 |
| RUNX3    | -0.955704591  | 2.31163457  | -15.85623658 | 4.10E-46 | 93.97072407 |
| TRBV5-1  | -0.74567202  | 1.021816443 | -15.85025168 | 4.37E-46 | 93.90776848 |
| TRAT1    | -0.66049985  | 0.800616327 | -15.83673617 | 5.06E-46 | 93.76190059 |
| CD5      | -1.008476887 | 1.970255233 | -15.83459463 | 5.16E-46 | 93.74317268 |
| CD69     | -1.115891086 | 2.040685774 | -15.82165279 | 5.91E-46 | 93.60714599 |
| FCGR2B   | -0.85177629  | 1.970255233 | -15.82165279 | 5.91E-46 | 93.60714599 |
| CD300LF  | -0.625292601 | 0.833150077 | -15.77358603 | 9.82E-46 | 93.1022549 |
| GVINP1   | -0.625292601 | 0.833150077 | -15.77358603 | 9.82E-46 | 93.1022549 |
| DCN      | -1.3339585   | 4.631157907 | -15.77358603 | 9.82E-46 | 93.1022549 |
| MAF      | -0.802756378 | 2.691667482 | -15.75164019 | 1.24E-45 | 92.87190543 |
| KBTBD8   | -0.448848096 | 0.749006382 | -15.74780486 | 1.29E-45 | 92.83165973 |
| RASSF2   | -0.931766394 | 2.697109811 | -15.73153203 | 1.53E-45 | 92.66093827 |
| CXCL12   | -1.141957057 | 2.568277554 | -15.72735341 | 1.60E-45 | 92.61710904 |
| DOCK10   | -0.762638793 | 1.635245268 | -15.72476501 | 1.64E-45 | 92.58901752 |
| FOXP3    | -0.779478267 | 1.61516866 | -15.71922143 | 1.74E-45 | 92.53182436 |
| C1R      | -1.000456031 | 5.55009798  | -15.71645408 | 1.79E-45 | 92.50280498 |
| EMP3     | -1.008156384 | 4.431008237 | -15.70965767 | 1.93E-45 | 92.43154272 |
| P2RY12   | -0.660529013 | 0.759927972 | -15.68210103 | 2.57E-45 | 92.14270918 |
| CD163    | -1.417120823 | 3.71675255 | -15.68039831 | 2.62E-45 | 92.1248678 |
| SIRPG    | -0.836384148 | 1.316816381 | -15.6620039 | 3.17E-45 | 91.9363223 |
| CCR8     | -0.505494345 | 0.659516018 | -15.65320838 | 3.49E-45 | 91.84005522 |
| IFFO1    | -0.724890646 | 1.619246814 | -15.64218323 | 3.92E-45 | 91.72461507 |
| TRG-AS1  | -0.459906571 | 0.643954614 | -15.63096414 | 4.41E-45 | 91.60717251 |
| B2M      | -0.940254681 | 9.523345242 | -15.60544372 | 5.77E-45 | 91.3401285 |
| TRBV7-9  | -0.925974782 | 1.391275367 | -15.60397518 | 5.86E-45 | 91.32476635 |
| TNFRSF1B | -0.899393852 | 4.072382493 | -15.5886428 | 6.88E-45 | 91.1644058 |
| ITGB7    | -0.689065551 | 1.284076736 | -15.5882082 | 6.93E-45 | 91.1579789 |
| PREX1    | -0.86993445 | 2.870744189 | -15.57268267 | 8.14E-45 | 90.99753684 |
| SIGLEC10 | -1.009402672 | 1.936329049 | -15.56657774 | 8.68E-45 | 90.93372296 |
| KLRB1    | -0.976097883 | 1.971878767 | -15.5572598 | 9.57E-45 | 90.83634064 |
| HLA-DRB1 | -1.522674077 | 8.952200386 | -15.53830257 | 1.17E-44 | 90.63827915 |
| JAK2     | -0.663855797 | 1.98083428 | -15.52065533 | 1.41E-44 | 90.45408538 |
| Gene       | Value1       | Value2       | Value3       | Value4       | Value5       |
|------------|--------------|--------------|--------------|--------------|--------------|
| UBASH3A    | -0.620180641 | 0.900174869  | -15.51737911 | 1.45E-44     | 90.41977138  |
| PMP22      | -0.949832032 | 4.528661885  | -15.50262397 | 1.70E-44     | 90.26574161  |
| GPR174     | -0.703126939 | 0.821232777  | -15.48330561 | 2.08E-44     | 90.06415283  |
| PLA2G5     | -0.481973519 | 0.817526839  | -15.47843611 | 2.19E-44     | 90.01335295  |
| ATP8B4     | -0.315922583 | 0.507197563  | -15.46276967 | 2.58E-44     | 89.84995417  |
| RP5-1091N2.9 | -0.51564781  | 0.776965621  | -15.46189495 | 2.60E-44     | 89.84083271  |
| C10orf54   | -0.789661621 | 3.333411302  | -15.4567869  | 2.75E-44     | 89.78756997  |
| GAL3ST4    | -0.836001283 | 2.094531295  | -15.39689353 | 5.14E-44     | 89.16350832  |
| ETS1       | -0.928697001 | 3.829411084  | -15.37927902 | 6.18E-44     | 88.96013503  |
| CD226      | -0.30413496  | 5.836737619  | -15.35872703 | 7.67E-44     | 88.76627536  |
| TRAV12-1   | -0.693742733 | 0.822900539  | -15.35872703 | 7.67E-44     | 88.75950469  |
| CTSS       | -1.0167106   | 5.836737619  | -15.35872703 | 7.67E-44     | 88.75950469  |
| CASS4      | -0.676066447 | 1.251520271  | -15.30890282 | 1.29E-43     | 88.24823646  |
| CCR4       | -0.867841141 | 1.231077687  | -15.28205893 | 1.71E-43     | 87.96938057  |
| HNRNPA1P21 | -0.706509779 | 1.256832921  | -15.248504   | 2.42E-43     | 87.62105693  |
| CD14       | -1.199599544 | 5.463765608  | -15.22700465 | 3.03E-43     | 87.39802369  |
| TBC1D10C   | -0.893342655 | 1.724453607  | -15.22697818 | 3.03E-43     | 87.39774912  |
| INPP5D     | -0.889207992 | 2.356505198  | -15.21235663 | 3.53E-43     | 87.24613096  |
| MATK       | -0.631054548 | 1.050909284  | -15.20614374 | 3.77E-43     | 87.18172235  |
| TRBV18     | -0.613460214 | 0.797135543  | -15.20482366 | 3.82E-43     | 87.16803842  |
| CNRIP1     | -0.604583675 | 1.537431234  | -15.19588082 | 4.20E-43     | 87.07534834  |
| NAAALDL1   | -0.417117476 | 0.848588539  | -15.16304325 | 5.88E-43     | 86.73889416  |
| CARD16     | -0.837062319 | 2.345036563  | -15.1506372  | 6.35E-43     | 86.662896    |
| PIK3R6     | -0.580538038 | 1.050737013  | -15.14871386 | 6.86E-43     | 86.58880444  |
| TRGV7      | -0.471066756 | 0.621676566  | -15.14271295 | 7.30E-43     | 86.52468831  |
| RAB8B      | -0.717348621 | 2.826374278  | -15.1375405  | 7.70E-43     | 86.47115483  |
| ABCD2      | -0.286299458 | 0.323393065  | -15.0790483  | 1.41E-42     | 85.86626111  |
| FGD5       | -0.675426561 | 1.757998039  | -15.07825187 | 1.43E-42     | 85.85801481  |
| CD6        | -0.851640616 | 1.730636982  | -15.07742803 | 1.44E-42     | 85.84950123  |
| GAPT       | -0.575962008 | 0.829611677  | -15.06907647 | 1.57E-42     | 85.76320572  |
| AC083949.1 | -0.350885171 | 0.434135552  | -15.0681398  | 1.61E-42     | 85.73983086  |
| TRBV3-1    | -0.666620725 | 0.848846772  | -15.06259031 | 1.68E-42     | 85.69619747  |
| NRROS      | -0.745636402 | 1.919974886  | -15.04379518 | 2.04E-42     | 85.50208607  |
| Gene       | Log2FoldChange | pValue       | qValue       | FDR       |
|------------|----------------|--------------|--------------|-----------|
| CCR7       | -1.055325313   | 1.859502443  | -15.04189386 | 2.08E-42  |
| C16orf54   | -0.929666785   | 1.720522485  | -15.0088915  | 2.93E-42  |
| RASGRP4    | -0.444731572   | 0.74843088   | -15.0070201  | 2.99E-42  |
| ITGAX      | -1.002007711   | 2.701909479  | -15.0062251  | 3.01E-42  |
| CD40       | -1.097944385   | 3.679475885  | -15.00458358 | 3.06E-42  |
| THEMIS     | -0.589125072   | 0.741910559  | -14.97482206 | 4.17E-42  |
| DPEP2      | -0.697478245   | 1.242948629  | -14.96406049 | 4.66E-42  |
| AGAP2      | -0.507847183   | 0.968976776  | -14.9606467  | 4.83E-42  |
| TNFAIP8    | -0.697423062   | 1.929392438  | -14.95581114 | 5.08E-42  |
| ITGAX      | -1.002007711   | 2.701909479  | -15.0062251  | 3.01E-42  |
| CD40       | -1.097944385   | 3.679475885  | -15.00458358 | 3.06E-42  |
| THEMIS     | -0.589125072   | 0.741910559  | -14.97482206 | 4.17E-42  |
| DPEP2      | -0.697478245   | 1.242948629  | -14.96406049 | 4.66E-42  |
| AGAP2      | -0.507847183   | 0.968976776  | -14.9606467  | 4.83E-42  |
| TNFAIP8    | -0.697423062   | 1.929392438  | -14.95581114 | 5.08E-42  |
| ITGAX      | -1.002007711   | 2.701909479  | -15.0062251  | 3.01E-42  |
| CD40       | -1.097944385   | 3.679475885  | -15.00458358 | 3.06E-42  |
| THEMIS     | -0.589125072   | 0.741910559  | -14.97482206 | 4.17E-42  |
| DPEP2      | -0.697478245   | 1.242948629  | -14.96406049 | 4.66E-42  |
| AGAP2      | -0.507847183   | 0.968976776  | -14.9606467  | 4.83E-42  |
| TNFAIP8    | -0.697423062   | 1.929392438  | -14.95581114 | 5.08E-42  |
| ITGAX      | -1.002007711   | 2.701909479  | -15.0062251  | 3.01E-42  |
| CD40       | -1.097944385   | 3.679475885  | -15.00458358 | 3.06E-42  |
| THEMIS     | -0.589125072   | 0.741910559  | -14.97482206 | 4.17E-42  |
| DPEP2      | -0.697478245   | 1.242948629  | -14.96406049 | 4.66E-42  |
| AGAP2      | -0.507847183   | 0.968976776  | -14.9606467  | 4.83E-42  |
| TNFAIP8    | -0.697423062   | 1.929392438  | -14.95581114 | 5.08E-42  |
| ITGAX      | -1.002007711   | 2.701909479  | -15.0062251  | 3.01E-42  |
| CD40       | -1.097944385   | 3.679475885  | -15.00458358 | 3.06E-42  |
| THEMIS     | -0.589125072   | 0.741910559  | -14.97482206 | 4.17E-42  |
| DPEP2      | -0.697478245   | 1.242948629  | -14.96406049 | 4.66E-42  |
| AGAP2      | -0.507847183   | 0.968976776  | -14.9606467  | 4.83E-42  |
| TNFAIP8    | -0.697423062   | 1.929392438  | -14.95581114 | 5.08E-42  |
| ITGAX      | -1.002007711   | 2.701909479  | -15.0062251  | 3.01E-42  |
| CD40       | -1.097944385   | 3.679475885  | -15.00458358 | 3.06E-42  |
| THEMIS     | -0.589125072   | 0.741910559  | -14.97482206 | 4.17E-42  |
| DPEP2      | -0.697478245   | 1.242948629  | -14.96406049 | 4.66E-42  |
| AGAP2      | -0.507847183   | 0.968976776  | -14.9606467  | 4.83E-42  |
| TNFAIP8    | -0.697423062   | 1.929392438  | -14.95581114 | 5.08E-42  |
| ITGAX      | -1.002007711   | 2.701909479  | -15.0062251  | 3.01E-42  |
| CD40       | -1.097944385   | 3.679475885  | -15.00458358 | 3.06E-42  |
| THEMIS     | -0.589125072   | 0.741910559  | -14.97482206 | 4.17E-42  |
| Gene       | Log2 Fold Change | p-Value  | q-Value | Log2 Intensity | Value     |
|------------|-----------------|----------|---------|---------------|-----------|
| TMEM119    | -1.104424181    |          |         | 3.192799178  | 14.70524451 |
| VIM        | -0.970699936    | 7.44E-41 | 1.48E-41| 7.030459791   | 14.69200091 |
| TRAV8-4    | -0.494927549    |          |         | 0.644963861   | -14.67305327 |
| GIMAP5     | -0.373423985    | 9.45E-41 | 1.60E-41| 0.468322003   | -14.67258236 |
| DOK3       | -0.733062721    | 9.99E-41 | 2.09E-41| 2.009959266   | -14.66711258 |
| FPR1       | -1.062335937    |          |         | 2.368432294   | -14.6587555  |
| CLEC7A     | -1.035568217    | 1.09E-40 | 1.83E-40| 0.488124575   | -14.6423356  |
| ABCA6      | -0.357713187    |          |         | 0.601446767   | -14.6243621  |
| ARHGAP18   | -0.737274811    |          |         | 3.497788555   | -14.6006904  |
| TRBV9      | -0.624825026    | 7.74E-41 | 1.39E-41| 0.863029833   | -14.59246903 |
| FAIM3      | -1.027692438    | 1.55E-40 | 2.81E-40| 2.428048965   | -14.58246321 |
| LINC01150  | -0.444385065    | 1.60E-40 | 2.93E-40| 0.601446767   | -14.61230095 |
| MAP4K1     | -0.881349937    | 2.08E-40 | 3.67E-40| 2.01084166    | -14.59529388 |
| CXCR4      | -1.058128386    | 2.13E-40 | 3.67E-40| 5.12700263    | -14.57690405 |
| AC147651.4 | -0.637545802    | 2.52E-40 | 4.16E-40| 1.287682956   | -14.5690405  |
| TRAV4      | -0.566243586    | 2.72E-40 | 4.54E-40| 0.745866852   | -14.56975633 |
| TRBV2      | -0.625127733    | 2.92E-40 | 4.77E-40| 0.786609787   | -14.56269132 |
| DSE        | -0.754911859    | 3.00E-40 | 4.85E-40| 1.586296535   | -14.5598279  |
| SLA2       | -0.682225727    | 3.17E-40 | 5.04E-40| 1.311539639   | -14.55479286 |
| CD300A     | -0.881125242    | 3.27E-40 | 5.12E-40| 2.6339056     | -14.55165756 |
| MFNG       | -0.739475421    | 3.51E-40 | 5.38E-40| 2.601603428   | -14.54646546 |
| NLRC3      | -0.629793511    | 3.96E-40 | 6.21E-40| 1.18487352    | -14.5328829  |
| HLA-E      | -0.826672414    | 4.54E-40 | 7.04E-40| 8.104930155   | -14.51950329 |
| SLC37A2    | -0.832963897    | 5.00E-40 | 7.51E-40| 1.739396611   | -14.51027163 |
| CPED1      | -0.65019178     | 5.71E-40 | 8.78E-40| 1.122387807   | -14.4971502  |
| SH3BGRL    | -0.685899948    | 5.95E-40 | 9.92E-40| 5.45829995    | -14.49315456 |
| CTLA4      | -0.818000203    | 5.96E-40 | 1.16E-40| 1.442578603   | -14.49299283 |
| LYZ        | -1.832281774    | 6.27E-40 | 1.23E-40| 7.362967528   | -14.4881383  |
| GPR84      | -0.782376629    | 6.43E-40 | 1.26E-40| 1.215614868   | -14.48563179 |
| MIR155HG    | -0.666663008    | 6.70E-40 | 1.33E-40| 1.083584262   | -14.4815846  |
| APOBEC3G   | -0.867507318    | 7.42E-40 | 1.56E-40| 2.049391604   | -14.47155046 |
| LILRA1     | -0.266842447    | 7.55E-40 | 1.60E-40| 0.412753271   | -14.46985915 |
| ANXA6      | -0.762083855    | 8.33E-40 | 1.77E-40| 4.472843214   | -14.45462302 |
| Gene      | Log2FoldChange | Log10(p-value) | Adjusted p-value |
|-----------|----------------|----------------|------------------|
| AC109826.1| -0.250468092   | -14.44887506   | 9.36E-40         |
| CCL19     | -1.89235481    | -14.44455402   | 9.78E-40         |
| SP140     | -0.697206154   | -14.42436656   | 1.20E-39         |
| PPP1R16B  | -0.86819155    | -14.42275259   | 1.22E-39         |
| OLR1      | -1.353497789   | -14.41181889   | 1.37E-39         |
| SLC8A1    | -0.385362022   | -14.40545161   | 1.47E-39         |
| FCGR1B    | -0.313218248   | -14.39442105   | 1.63E-39         |
| C1S       | -1.09117461    | -14.39172957   | 1.77E-39         |
| TREM2     | -1.291676884   | -14.3867344    | 1.82E-39         |
| USP30-AS1 | -0.761194847   | -14.38353174   | 1.88E-39         |
| TRAV26-1  | -0.407443811   | -14.36093349   | 2.00E-39         |
| SIGLEC14  | -0.835846937   | -14.34875898   | 2.10E-39         |
| FTH1P22   | -0.639819557   | -14.34519879   | 2.20E-39         |
| NCF1C     | -0.75009532    | -14.33312929   | 2.30E-39         |
| SIGLEC1   | -1.030917155   | -14.33117153   | 2.40E-39         |
| EMILIN2   | -0.77942885    | -14.28846149   | 2.50E-39         |
| ATP6V1B2  | -0.546978676   | -14.26977599   | 2.60E-39         |
| CCL4      | -1.068268993   | -14.2268691    | 2.70E-39         |
| ZNF831    | -0.32411175    | -14.21966659   | 2.80E-39         |
| TRBV10-3  | -0.610362519   | -14.20668187   | 2.90E-39         |
| ADORA3    | -0.722564877   | -14.20434052   | 3.00E-39         |
| VAV1      | -0.84260062    | -14.19786538   | 3.10E-39         |
| GM2A      | -0.761127837   | -14.19389405   | 3.20E-39         |
| TRAV13-2  | -0.482458745   | -14.17586717   | 3.30E-39         |
| BHLHE41   | -1.019710491   | -14.17345826   | 3.40E-39         |
| KCTD12    | -1.000144609   | -14.17256215   | 3.50E-39         |
| MYLK      | -0.862149654   | -14.15889543   | 3.60E-39         |
| AXL       | -0.965277029   | -14.14808681   | 3.70E-39         |
| LILRA4    | -0.47080377    | -14.13894389   | 3.80E-39         |
| RASGRP3   | -0.452055697   | -14.12650028   | 3.90E-39         |
| CD40LG    | -0.64521688    | -14.11632583   | 4.00E-39         |
| CTSK      | -1.253034653   | -14.10476013   | 4.10E-39         |
| CIITA     | -0.939578331   | -14.08347299   | 4.20E-39         |
| Gene     | Z Score | P Value | Fold Change | % Enrichment |
|----------|---------|---------|-------------|--------------|
| HLA-B    | -1.093733789 | 9.324387845 | -14.05668536 | 5.04E-38 |
| C1orf54  | -0.649786282  | 2.62951485 | -14.05490571 | 5.13E-38 |
| RP5-899E9.1 | -0.394727399 | 0.602037858 | -14.05490571 | 5.13E-38 |
| CR1      | -0.448658434  | 0.602895795 | -14.05490571 | 5.13E-38 |
| CD209    | -0.82341505   | 1.470427797 | -14.01435269 | 7.50E-37 |
| PPM1M    | -0.598456774  | 3.10255067  | -13.9840183  | 9.08E-38 |
| HAPLN3   | -0.920273457  | 2.50203586  | -13.9840183  | 9.08E-38 |
| GBP5     | -1.160966845  | 2.075743812 | -13.9787147  | 1.11E-37 |
| RP3-477O4.14 | -0.267927467 | 0.443076127 | -13.9597606 | 1.39E-37 |
| ABI3BP   | -0.921173409  | 1.590297089 | -13.9249705  | 1.60E-37 |
| ANKR44   | -0.627650822  | 1.489928906 | -13.9249705  | 1.60E-37 |
| STAC3    | -0.573712455  | 1.625796666 | -13.93568079 | 1.71E-37 |
| STARD8   | -0.57497875   | 1.512291036 | -13.91406648 | 2.12E-37 |
| CSF2RA   | -0.925795204  | 2.310124064 | -13.89783196 | 2.50E-37 |
| PTGIR    | -0.520256958  | 1.238138965 | -13.88059665 | 2.97E-37 |
| TRBV12-4 | -0.547689622  | 0.645801433 | -13.86886592 | 3.35E-37 |
| CD27     | -1.159153053  | 2.707620854 | -13.86308281 | 3.55E-37 |
| LUM      | -1.245801648  | 7.177430815 | -13.84416012 | 4.29E-37 |
| TRBV5-4  | -0.551920955  | 0.635367331 | -13.84223592 | 4.37E-37 |
| TRAV17   | -0.514606608  | 0.660680211 | -13.81161687 | 5.95E-37 |
| TMEM200A | -0.664403245  | 1.279190652 | -13.8033394  | 6.46E-37 |
| RP11-8L8.2 | -0.254765124 | 0.35113823 | -13.80192673 | 6.55E-37 |
| TRBV29-1 | -0.836577657  | 1.204187372 | -13.79291042 | 7.17E-37 |
| RP11-219E7.1 | -0.570721608 | 0.991261932 | -13.78683521 | 7.62E-37 |
| PIK3CD   | -0.736995604  | 2.530982537 | -13.77868087 | 8.27E-37 |
| BTN3A1   | -0.741181594  | 3.413245247 | -13.76655897 | 9.34E-37 |
| TIFAB    | -0.252643787  | 0.25893155  | -13.75857906 | 1.01E-36 |
| HLA-DOB  | -0.998386313  | 2.26202454  | -13.75092181 | 1.09E-36 |
| C5AR1    | -0.958444577  | 3.059396485 | -13.72200379 | 1.46E-36 |
| ZEB1     | -0.601752281  | 1.768369603 | -13.7094752  | 1.65E-36 |
| SLAMF7   | -1.234492907  | 3.056558333 | -13.70722379 | 1.69E-36 |
| DOCK11   | -0.763086426  | 2.09362601  | -13.7034739  | 1.76E-36 |
| LILRB3   | -0.513386967  | 1.10816207  | -13.6950021  | 1.88E-36 |
| Gene       | log2 Fold Change | p-value       | r2          | Adjusted r2  | p-value       |
|------------|------------------|---------------|-------------|--------------|---------------|
| DNAJC5B    | -0.56814885      | 2.38E-36      | 71.6099635  |
| TRAF1      | -0.721563232     | 2.42E-36      | 71.59451802 |
| TM6SF1     | -0.582041297     | 2.45E-36      | 71.58131909 |
| P2RY8      | -0.730759381     | 2.48E-36      | 71.56981389 |
| CCDC80     | -1.154074701     | 2.49E-36      | 71.56420705 |
| KCNAB2     | -0.713933756     | 2.51E-36      | 71.55687721 |
| AC011899.9 | -0.390470619     | 4.07E-36      | 71.07764963 |
| CYSLTR2    | -0.323306331     | 4.39E-36      | 71.00188305 |
| IL41       | -1.170407531     | 5.06E-36      | 70.86118556 |
| SRGN       | -1.146759364     | 5.09E-36      | 70.85452679 |
| P2RY14     | -0.562800564     | 6.34E-36      | 70.63722737 |
| TRBV6-1    | -0.579318585     | 6.55E-36      | 70.60450634 |
| SPPN       | -0.745596236     | 7.43E-36      | 70.47936759 |
| EBI3       | -0.756367681     | 7.82E-36      | 70.4261738  |
| SLFN12L    | -0.382766307     | 7.96E-36      | 70.41084637 |
| LINC00426  | -0.387157602     | 8.79E-36      | 70.31255945 |
| LINC00996  | -0.429464144     | 1.33E-35      | 69.90119968 |
| IL9R       | -0.255827391     | 1.38E-35      | 69.86195594 |
| TRBV6-6    | -0.515337558     | 1.46E-35      | 69.80462029 |
| AD000864.6 | -0.237307552     | 1.52E-35      | 69.76701924 |
| HLA-DRB5   | -1.652840311     | 1.90E-35      | 69.54404014 |
| KCNMB1     | -0.455629167     | 2.17E-35      | 69.41342227 |
| CD8A       | -1.095088759     | 2.49E-35      | 69.276749   |
| CRYBB1     | -0.342529974     | 2.73E-35      | 69.187095   |
| LACTB      | -0.471190366     | 2.98E-35      | 69.09977729 |
| TRAV16     | -0.489744056     | 3.25E-35      | 69.0189362 |
| MMP2       | -1.227732763     | 3.37E-35      | 68.97780456 |
| FAS        | -0.90924034      | 3.41E-35      | 68.96356441 |
| CD72       | -0.637837439     | 3.93E-35      | 68.8228192 |
| FMO2       | -1.062623628     | 4.17E-35      | 68.7638709  |
| PLEKHO1    | -0.757732441     | 4.19E-35      | 68.76013459 |
| LTB        | -1.229539327     | 5.46E-35      | 68.49672188 |
| FCGR1C     | -0.45219628      | 5.54E-35      | 68.482364   |
| Gene          | log2 Fold Change | t-Test Value | p-Value       | z-score | Benjamini Adjusted p-Value |
|--------------|-----------------|-------------|--------------|---------|--------------------------|
| CCL13        | -1.557870456    | 3.340174883 | -13.34593825 | 6.13E-35 | 68.3815114               |
| TMEM150B     | -0.736500717    | 1.388761306 | -13.32759818 | 7.35E-35 | 68.20153929              |
| LMO2         | -0.622427385    | 2.144242099 | -13.32713984 | 7.38E-35 | 68.19704314              |
| FUT7         | -0.360639619    | 0.483117334 | -13.3240834 | 7.66E-35 | 68.16044062              |
| TRAV5        | -0.423029077    | 0.475000768 | -13.32005486 | 7.92E-35 | 68.12755024              |
| LYL1         | -0.547079894    | 1.49399508  | -13.31552455 | 8.28E-35 | 68.08312387              |
| CD1D         | -0.577163126    | 1.278189111 | -13.3142517 | 8.62E-35 | 68.0429258               |
| CD101        | -0.501404201    | 0.967424468 | -13.28012483 | 1.17E-34 | 67.73622406              |
| GPNMB        | -1.266303892    | 5.240572165 | -13.2682643 | 1.31E-34 | 67.62920138              |
| TRBV4-2      | -0.622985383    | 0.748293861 | -13.25519432 | 1.50E-34 | 67.49218035              |
| LIPA         | -0.891055027    | 4.818319749 | -13.23980465 | 1.75E-34 | 67.34164039              |
| GRAP2        | -0.475060452    | 0.796549962 | -13.2331987 | 1.86E-34 | 67.27704766              |
| FAM49A       | -0.702151406    | 1.953273137 | -13.224278 | 2.03E-34 | 67.1895006               |
| FCN1         | -0.912767525    | 1.568618522 | -13.2085903 | 2.37E-34 | 67.036562                |
| EOMES        | -0.558016531    | 0.714868435 | -13.2047127 | 2.47E-34 | 66.99868772              |
| COLEC12      | -1.092480233    | 2.468204032 | -13.1841242 | 3.02E-34 | 66.7976945               |
| LINCO0861    | -0.469628854    | 0.555389222 | -13.1796874 | 3.15E-34 | 66.75438266              |
| ZAP70        | -0.820703865    | 1.430040277 | -13.1640695 | 3.68E-34 | 66.60202845              |
| CXCR3        | -0.936467692    | 1.960717153 | -13.1567273 | 3.95E-34 | 66.53043389              |
| MFSDD1       | -0.517838443    | 4.024204263 | -13.1446937 | 4.45E-34 | 66.41313434              |
| GBP1         | -1.188237691    | 3.738035524 | -13.1116169 | 6.15E-34 | 66.09098458              |
| STAP1        | -0.629543086    | 0.933603642 | -13.1049102 | 6.56E-34 | 66.02571326              |
| FLT3         | -0.271648834    | 0.376385761 | -13.1016221 | 6.78E-34 | 65.99371794              |
| SIGLEC22P    | -0.210522613    | 0.245647652 | -13.0681501 | 9.41E-34 | 65.66824284              |
| CD96         | -0.825682897    | 1.52934832  | -13.0654474 | 9.62E-34 | 65.64583662              |
| GPR18        | -0.457193547    | 0.619602158 | -13.0565114 | 1.05E-33 | 65.5516018               |
| IL15RA       | -0.717959975    | 2.67718874 | -13.0563375 | 1.06E-33 | 65.55347171              |
| SUSD3        | -0.782010707    | 2.251203206 | -13.0449714 | 1.18E-33 | 65.44285316              |
| LILRA6       | -0.535599931    | 0.906116697 | -13.0424672 | 1.21E-33 | 65.41877578              |
| BHLHE22      | -0.453945728    | 0.786607883 | -13.0317844 | 1.34E-33 | 65.31508191              |
| CLEC2B       | -0.905695901    | 2.559212757 | -13.0193668 | 1.52E-33 | 65.19236909              |
| TRGV3        | -0.311333926    | 0.368249314 | -13.0180962 | 1.53E-33 | 65.18182476              |
| RP11-1094M14.8 | -0.673971584  | 1.169116485 | -13.0211227 | 1.79E-33 | 65.02728443              |
| Gene     | Value1     | Value2     | Value3     | Value4     | Value5     |
|----------|------------|------------|------------|------------|------------|
| CTSB     | -0.760585496 | 7.513893539 | -13.00196623 | 1.80E-33 | 65.02586869 |
| THEMIS2  | -0.789629936 | 3.378037229 | -12.99305809 | 1.96E-33 | 64.93952971 |
| SCML4    | -0.313079924 | 0.362306792 | -12.98226574 | 2.18E-33 | 64.83496768 |
| AC133644.2 | -0.415234646 | 0.703880944 | -12.97070555 | 2.44E-33 | 64.72301381 |
| TRBV7-3  | -0.484635311 | 0.619091944 | -12.96577655 | 2.56E-33 | 64.67592425 |
| CST7     | -1.106434986 | 3.338441877 | -12.93829274 | 3.34E-33 | 64.40937657 |
| TRIM22   | -0.923488592 | 3.660046725 | -12.92891553 | 3.66E-33 | 64.31718118 |
| PTGDS    | -1.440497363 | 4.308300751 | -12.92005475 | 2.18E-33 | 64.37179696 |
| SAMD9L   | -0.967441241 | 2.669575269 | -12.91283734 | 4.28E-33 | 64.16333363 |
| TRAV23DV6 | -0.41456804  | 0.463856812 | -12.89126854 | 4.46E-33 | 64.1226489  |
| RP11-1094M14.5 | -0.491200262 | 0.690666201 | -12.89126854 | 4.46E-33 | 64.1226489  |
| FMNL1    | -0.744966579 | 2.882376854 | -12.89082574 | 4.66E-33 | 64.14226489 |
| TNFAIP3  | -0.906113031 | 3.491557609 | -12.89657387 | 5.01E-33 | 64.00626248 |
| CD244    | -0.463959778 | 0.732931408 | -12.89520446 | 5.08E-33 | 63.99304126 |
| PLCG2    | -0.574549736 | 1.529434191 | -12.89126854 | 5.24E-33 | 63.961396   |
| RP11-47L3.1 | -0.551197449 | 0.940476408 | -12.88523844 | 5.60E-33 | 63.89684403 |
| TRBV7-6  | -0.510856981 | 0.522950506 | -12.88304796 | 5.72E-33 | 63.87570537 |
| PTCRA    | -0.370468324 | 0.459066678 | -12.88080753 | 5.84E-33 | 63.85408652 |
| KLRG1    | -0.350393672 | 0.676017471 | -12.87671588 | 6.08E-33 | 63.81460925 |
| PECA1    | -0.722218852 | 4.506389995 | -12.87148895 | 6.39E-33 | 63.76418761 |
| IL18BP   | -0.733037297 | 2.617637771 | -12.85698363 | 7.36E-33 | 63.62431531 |
| TRBV11-2 | -0.496987786 | 0.665528652 | -12.84884927 | 7.97E-33 | 63.54591156 |
| DPT      | -1.318292619 | 3.348570467 | -12.84523859 | 8.17E-33 | 63.50209099 |
| CD83     | -0.878717618 | 3.388256533 | -12.82545591 | 9.99E-33 | 63.32057086 |
| PRF1     | -1.036538656 | 2.575682626 | -12.80156073 | 1.26E-32 | 63.09608871 |
| GZMA     | -1.25852881  | 3.298096694 | -12.78490696 | 1.48E-32 | 62.93046406 |
| NPL      | -0.785311903 | 2.560496688 | -12.78074957 | 1.54E-32 | 62.88905024 |
| SIRPB1   | -0.533958004 | 0.78442022  | -12.77775522 | 1.59E-32 | 62.86201538 |
| 1-Sep    | -0.750379716 | 1.929700738 | -12.7731734 | 1.66E-32 | 62.81769564 |
| RIN3     | -0.585045698 | 2.285707189 | -12.76483186 | 1.80E-32 | 62.73755885 |
| LHFPL2   | -0.743018475 | 3.006853836 | -12.75681096 | 1.94E-32 | 62.66052738 |
| RP11-399O19.9 | -0.376593215 | 0.758168605 | -12.75103368 | 2.05E-32 | 62.60505844 |
| CD200    | -0.636612489 | 1.97203862  | -12.746976  | 2.14E-32 | 62.56610731 |
| Gene       | Value_1 | Value_2  | Value_3  | Value_4  | Value_5 |
|------------|---------|----------|----------|----------|--------|
| CD79B      | -1.0282 | 1.9871   | -12.7446 | 2.18E-32 | 62.5448|
| LPAR6      | -0.6399 | 2.2974   | -12.7307 | 2.50E-32 | 62.4108|
| RCBTB2     | -0.5250 | 2.0867   | -12.7198 | 2.78E-32 | 62.3056|
| TRAV20     | -0.3448 | 0.4013   | -12.7163 | 2.87E-32 | 62.2721|
| CPVL       | -1.0834 | 3.2678   | -12.7120 | 2.78E-32 | 62.2310|
| TRAV8-1    | -0.3387 | 0.3679   | -12.7109 | 3.02E-32 | 62.2210|
| RP11-652L8.4 | -0.2281 | 0.3294   | -12.7097 | 3.06E-32 | 62.2074|
| HS3ST3B1   | -0.5034 | 0.9489   | -12.7090 | 3.02E-32 | 62.2019|
| JAK3       | -0.7147 | 2.3080   | -12.7089 | 3.06E-32 | 62.2017|
| DAPP1      | -0.8015 | 2.1984   | -12.7052 | 3.06E-32 | 62.2016|
| CYLD       | -0.4817 | 2.3237   | -12.6934 | 3.58E-32 | 62.0529|
| TNFRSF9    | -0.6499 | 1.0048   | -12.6911 | 3.66E-32 | 62.0304|
| AP1S2      | -0.6550 | 2.2333   | -12.6908 | 3.67E-32 | 62.0283|
| TEMEM140   | -0.5499 | 3.5266   | -12.6873 | 3.80E-32 | 61.9947|
| DDR2       | -0.7209 | 1.7794   | -12.6805 | 4.06E-32 | 61.9284|
| RP5-1028K7.2 | -0.6387 | 0.9667   | -12.6796 | 4.09E-32 | 61.9207|
| NKG7       | -1.2277 | 3.2740   | -12.6674 | 4.60E-32 | 61.8041|
| ACP5       | -0.9230 | 5.1323   | -12.6666 | 4.63E-32 | 61.7967|
| HLA-DMA    | -1.0731 | 5.8090   | -12.6647 | 4.72E-32 | 61.7779|
| PDCD1      | -0.7922 | 1.3767   | -12.6554 | 5.16E-32 | 61.6893|
| MSC        | -0.8583 | 2.0249   | -12.6511 | 5.38E-32 | 61.6484|
| PSMB8-AS1  | -0.7222 | 2.8297   | -12.6408 | 5.94E-32 | 61.5494|
| HLA-DQB1   | -1.4082 | 5.6057   | -12.6396 | 6.01E-32 | 61.5379|
| RHOG       | -0.4604 | 5.0166   | -12.6265 | 6.82E-32 | 61.4126|
| EGR2       | -0.8402 | 2.1015   | -12.6254 | 6.89E-32 | 61.4021|
| LLNLR-470E3.1 | -0.6016 | 1.0283   | -12.6213 | 7.17E-32 | 61.3634|
| FGD3       | -0.6408 | 1.7878   | -12.6205 | 7.23E-32 | 61.3556|
| BZRAP1-AS1 | -0.2143 | 0.3720   | -12.6199 | 7.26E-32 | 61.3503|
| PEA15      | -0.5341 | 6.0906   | -12.6169 | 7.48E-32 | 61.3211|
| SOWAHGD    | -0.4641 | 0.9586   | -12.6074 | 8.20E-32 | 61.2305|
| PLA2G2D    | -1.2647 | 1.7539   | -12.5750 | 1.12E-31 | 60.9214|
| TRBJ2-1    | -0.8849 | 1.1800   | -12.5635 | 1.25E-31 | 60.8123|
| ISLR       | -1.1463 | 4.5526   | -12.5551 | 1.35E-31 | 60.7319|
| Gene   | Log2FoldChange | Log-score       | Log10(P-value) | Adjusted P-value | q-value |
|--------|----------------|-----------------|----------------|------------------|---------|
| APOL4  | -0.798037493   | 2.00951004      | -12.55022799   | 1.42E-31          | 60.68505124 |
| TRAV6  | -0.301669007   | 0.342809448     | -12.54321966   | 1.52E-31          | 60.61832399 |
| CCND2  | -0.830029214   | 2.553175273     | -12.54209604   | 1.53E-31          | 60.6076276 |
| CECR1  | -0.946588929   | 3.88682771      | -12.5389558    | 1.58E-31          | 60.57773663 |
| LY9    | -0.418297049   | 0.667932993     | -12.53584746   | 1.63E-31          | 60.54815303 |
| SERPINB9 | -0.778000415   | 2.849660287     | -12.53523314   | 1.64E-31          | 60.54230676 |
| GBP2   | -0.875134881   | 3.905435331     | -12.52721015   | 1.77E-31          | 60.46596764 |
| RP11-848P1.3 | -0.616011188 | 1.783851244     | -12.52612361   | 1.79E-31          | 60.45563109 |
| PTGDR  | -0.234526799   | 0.299556762     | -12.50701974   | 2.15E-31          | 60.2739672 |
| NFATC2 | -0.599769478   | 1.850944076     | -12.50455359   | 2.21E-31          | 60.25052638 |
| CLEC12A | -0.72588285   | 1.098120351     | -12.50384998   | 2.23E-31          | 60.2406672 |
| LINC01272 | -0.857587745  | 2.19435457      | -12.49243998   | 2.46E-31          | 60.13962984 |
| RP11-693N9.2  | -0.44278118  | 0.863332391     | -12.48786117   | 2.58E-31          | 60.09192789 |
| AC006129.2  | -0.60368742   | 0.968874164     | -12.47959649   | 2.79E-31          | 60.0134407 |
| AKNA    | -0.645980763   | 2.55874273      | -12.46164876   | 3.31E-31          | 59.8431007 |
| CHST11  | -0.782337502   | 2.755129884     | -12.46154908   | 3.32E-31          | 59.84215497 |
| RASSF4  | -0.752062229   | 2.839587778     | -12.45957294   | 3.38E-31          | 59.82340715 |
| MPP1    | -0.708893583   | 2.43103007      | -12.44680602   | 3.75E-31          | 59.7200986 |
| ECM2    | -0.662157453   | 1.601312115     | -12.4062627    | 5.62E-31          | 59.31823594 |
| NECAP2  | -0.423195113   | 4.010488518     | -12.39942975   | 6.00E-31          | 59.25356874 |
| PRAM1   | -0.62638149    | 1.20881372      | -12.39750447   | 6.11E-31          | 59.23545155 |
| RASGRP2 | -0.625901039   | 1.056730027     | -12.38310379   | 7.01E-31          | 59.09913521 |
| IL10    | -0.377675027   | 0.573024217     | -12.34309785   | 1.03E-30          | 58.7215778 |
| SYNE3   | -0.331417958   | 0.589839335     | -12.33227343   | 1.14E-30          | 58.61899955 |
| FGF7    | -0.697947718   | 1.312555568     | -12.32277233   | 1.24E-30          | 58.52936964 |
| CXCL9   | -1.77641474    | 4.258533023     | -12.31607378   | 1.33E-30          | 58.46619988 |
| TRBV5-6 | -0.53243665    | 0.675819988     | -12.3100437    | 1.40E-30          | 58.40983403 |
| ARID5A  | -0.595289325   | 2.999500998     | -12.3033572    | 1.50E-30          | 58.34612591 |
| RAB33A  | -0.439522038   | 0.880747384     | -12.29206512   | 1.67E-30          | 58.2393976 |
| FNBP1   | -0.610164219   | 3.12484561      | -12.28974435   | 1.70E-30          | 58.2180811 |
| RP11-1334A24.6 | -0.482053603 | 1.081709451     | -12.26755795   | 2.10E-30          | 58.00922411 |
| GZMH    | -1.057991611   | 2.205950387     | -12.26704825   | 2.11E-30          | 58.00442835 |
| MCOLN2  | -0.620258203   | 1.299045176     | -12.2625341    | 2.20E-30          | 57.96195892 |
| gene     | score     | p-value  | log2FoldChange | adjusted p-value |
|----------|-----------|----------|----------------|-----------------|
| CD44     | -0.9095   | 2.64E-30 | -12.24         | 57.7823         |
| TSHZ3    | -0.5318   | 3.66E-30 | 1.14           | 57.7799         |
| C19orf35 | -0.2189   | 2.69E-30 | 0.37           | 57.7654         |
| STAT4    | -0.5588   | 3.14E-30 | 1.44           | 57.6101         |
| PLA2G4C  | -0.4779   | 3.31E-30 | 1.00           | 57.5578         |
| RECK     | -0.4957   | 3.60E-30 | 1.41           | 57.4756         |
| SNX10    | -0.8687   | 3.66E-30 | 3.10           | 57.4575         |
| PDGFRA   | -0.4779   | 3.31E-30 | 2.23           | 57.4534         |
| COTL1    | -0.8418   | 5.14E-30 | 4.46           | 57.1211         |
| MOXD1    | -0.9673   | 4.91E-30 | 2.94           | 57.1664         |
| ZCCHC24  | -0.5998   | 5.13E-30 | 2.69           | 57.1237         |
| BTN3A2   | -0.7423   | 5.14E-30 | 3.22           | 57.1237         |
| LINC00892| -0.2936   | 5.81E-30 | 0.37           | 56.9988         |
| CXCL10   | -1.5747   | 5.87E-30 | 4.23           | 56.9890         |
| HLA-C    | -0.8488   | 6.21E-30 | 8.95           | 56.9324         |
| GPSM3    | -0.8064   | 6.61E-30 | 4.42           | 56.8704         |
| LAP3     | -0.6007   | 7.95E-30 | 5.02           | 56.6808         |
| TRBV14   | -0.3605   | 8.03E-30 | 0.42           | 56.6780         |
| RP4-742C19.12 | -0.3242 | 8.03E-30 | 0.38 | 56.6774 |
| TRAV39   | -0.3956   | 9.64E-30 | 0.52           | 56.4967         |
| COL6A3   | -1.1093   | 9.68E-30 | 4.91           | 56.4919         |
| TNFSF12  | -0.6119   | 1.01E-29 | 3.82           | 56.4528         |
| TRAV14DV4| -0.4501   | 1.13E-29 | 0.55           | 56.3427         |
| TRAV19   | -0.5550   | 1.16E-29 | 0.83           | 56.3100         |
| LILRB5   | -0.5898   | 1.19E-29 | 0.28           | 56.2841         |
| ADAM19   | -0.7844   | 1.23E-29 | 2.17           | 56.2531         |
| TCF4     | -0.5565   | 1.24E-29 | 1.60           | 56.2442         |
| FEZ1     | -0.4610   | 1.25E-29 | 1.08           | 56.2405         |
| TRGV10   | -0.5312   | 1.39E-29 | 0.70           | 56.1340         |
| GPR68    | -0.8864   | 1.40E-29 | 2.28           | 56.1279         |
| LAX1     | -0.8112   | 1.44E-29 | 1.37           | 56.0997         |
| RRN3P2   | -0.2762   | 1.45E-29 | 0.52           | 56.0940         |
| TRAV35   | -0.3021   | 1.61E-29 | 0.32           | 55.9843         |
| Gene       | Value1   | Value2   | Value3   | Value4   | Value5   |
|------------|----------|----------|----------|----------|----------|
| ARHGDIB    | -0.814598 | 6.705078 | -12.0408 | 1.78E-29 | 55.8862  |
| MFAP4      | -1.388653 | 4.825226 | -12.0364 | 1.86E-29 | 55.8453  |
| TRAV41     | -0.435453 | 0.600790 | -12.0390 | 1.94E-29 | 55.8033  |
| TIMP2      | -0.900946 | 5.625767 | -12.0246 | 2.11E-29 | 55.7211  |
| PRKG1      | -0.511681 | 1.194172 | -12.0230 | 2.12E-29 | 55.7210  |
| HPGDS      | -0.821452 | 1.388020 | -12.0223 | 2.13E-29 | 55.7210  |
| SVEP1      | -0.719142 | 1.196198 | -12.0202 | 2.12E-29 | 55.7146  |
| PLA2G7     | -0.934601 | 2.914207 | -12.0187 | 2.16E-29 | 55.6805  |
| CAMK4      | -0.263537 | 0.403298 | -12.0030 | 2.54E-29 | 55.5345  |
| RP11-18H21.1 | -0.217341 | 0.274869 | -12.0004 | 2.60E-29 | 55.5104  |
| MSRB3      | -0.736160 | 2.160195 | -11.9853 | 3.00E-29 | 55.3697  |
| JAZF1      | -0.510395 | 2.030026 | -11.9545 | 4.36E-29 | 54.9990  |
| PRRX1      | -0.852800 | 2.448294 | -11.9363 | 4.74E-29 | 54.9150  |
| PPP1R18    | -0.749223 | 4.105611 | -11.9208 | 5.48E-29 | 54.7722  |
| CCL18      | -1.571573 | 5.459882 | -11.9064 | 6.26E-29 | 54.6386  |
| TRBJ2-7    | -0.943090 | 1.438552 | -11.8889 | 7.38E-29 | 54.4755  |
| STAB1      | -0.793928 | 2.796636 | -11.8866 | 7.53E-29 | 54.4558  |
| ITM2A      | -0.879783 | 3.064521 | -11.8889 | 7.82E-29 | 54.4179  |
| ASB2       | -0.426691 | 0.713273 | -11.8825 | 8.48E-29 | 54.3375  |
| EMLIN1     | -0.980759 | 4.335566 | -11.8739 | 8.57E-29 | 54.3273  |
| RPL7AP64   | -0.361123 | 0.562642 | -11.8728 | 8.75E-29 | 54.3273  |
| TRGV5      | -0.263264 | 0.321401 | -11.8657 | 9.15E-29 | 54.2624  |
| IL3RA      | -0.625134 | 2.780160 | -11.8642 | 9.28E-29 | 54.2482  |
| TRAV22     | -0.336588 | 0.383176 | -11.8590 | 9.74E-29 | 54.2001  |
| CD22       | -0.758123 | 1.185124 | -11.8579 | 9.84E-29 | 54.1900  |
| DCSTAMP    | -0.526737 | 0.649409 | -11.8560 | 1.00E-28 | 54.1726  |
| SH2D3C     | -0.594617 | 2.179678 | -11.8382 | 1.18E-28 | 54.0085  |
| WNT2       | -0.837529 | 1.792277 | -11.8245 | 1.34E-28 | 53.8818  |
| CCL3       | -0.936302 | 2.436925 | -11.8226 | 1.37E-28 | 53.8643  |
| CEACAM21   | -0.605222 | 1.200792 | -11.8190 | 1.41E-28 | 53.8316  |
| MARCO      | -1.641649 | 3.978830 | -11.8164 | 1.45E-28 | 53.8070  |
| PRDM1      | -0.712482 | 2.419723 | -11.8127 | 1.50E-28 | 53.7724  |
| FCRL3      | -0.536097 | 0.610037 | -11.8045 | 1.62E-28 | 53.6967  |
| Gene       | Value1  | Value2  | Value3     | Value4     | Value5   |
|------------|---------|---------|------------|------------|----------|
| TRANK1     | -0.606447814 | 2.17844701 | -11.79126105 | 1.83E-28   | 53.57517803 |
| NOD2       | -0.424274511  | 1.153233746 | -11.78638132 | 1.91E-28   | 53.53025395 |
| RASGEF1B   | -0.481171593  | 1.591528888 | -11.78066442 | 1.92E-28   | 53.52733683 |
| ACVRL1     | -0.623382421  | 2.768970714 | -11.78266648 | 1.98E-28   | 53.51060121 |
| TRBJ2-3    | -0.859507325  | 1.194260562 | -11.7744648  | 2.14E-28   | 53.42059133 |
| TRGV4      | -0.271085003  | 0.316837619 | -11.77029844 | 2.22E-28   | 53.38226483 |
| IL15       | -0.382723477  | 0.845708166 | -11.7563487  | 2.59E-28   | 53.2291796  |
| TRBV12-3   | -0.400483751  | 0.422574751 | -11.7400333  | 2.94E-28   | 52.98449132 |
| RP11-686D22.10 | -0.520366385 | 0.947647678 | -11.7381582  | 2.99E-28   | 52.80206414 |
| TRAV36DV7  | -0.338181036  | 0.428239692 | -11.72397296 | 3.41E-28   | 52.62219409 |
| TRAV4-1    | -0.55513297  | 0.657192159 | -11.68545151 | 4.87E-28   | 52.60342169 |
| FLT3LG     | -0.301471743  | 0.754680703 | -11.6791462  | 5.16E-28   | 52.54611361 |
| IL24       | -0.567101241  | 1.119298453 | -11.6711405  | 5.56E-28   | 52.47237009 |
| TRAV25     | -0.332335616  | 0.373722949 | -11.67046536 | 5.59E-28   | 52.46618979 |
| TRAV10     | -0.289333801  | 0.310409007 | -11.66016961 | 6.15E-28   | 52.37196707 |
| RP11-222K16.2 | -0.367437055 | 0.47358224 | -11.6570533  | 6.33E-28   | 52.34345713 |
| CAMK1G     | -0.239881108  | 0.478328676 | -11.64753622 | 6.91E-28   | 52.25641579 |
| TBX5-AS1   | -0.52351072  | 1.116046537 | -11.64562135 | 7.03E-28   | 52.23890768 |
| C19orf38   | -0.567156038  | 1.388574255 | -11.6395376  | 7.44E-28   | 52.18329333 |
| MRGPRF     | -0.667323169  | 1.548719557 | -11.63735589 | 7.59E-28   | 52.16335339 |
| RASA3      | -0.661793615  | 2.412776966 | -11.61551984 | 9.28E-28   | 51.96389811 |
| P2RX1      | -0.513165267  | 0.920715257 | -11.61524218 | 9.30E-28   | 51.96136329 |
| CLEC2D     | -0.572502513  | 1.535196195 | -11.6003485  | 1.07E-27   | 51.82532141 |
| Gene   | Score 1  | Score 2  | Score 3  | Score 4  | Score 5  |
|--------|----------|----------|----------|----------|----------|
| MITF   | -0.50922 | 1.50877  | -11.596  | 1.11E-27 | 51.787   |
| APOBR  | -0.79029 | 2.34370  | -11.583  | 1.25E-27 | 51.670   |
| CLMP   | -0.89383 | 1.99118  | -11.571  | 1.39E-27 | 51.559   |
| TRAV3  | -0.41626 | 0.59019  | -11.570  | 1.40E-27 | 51.556   |
| MEF2C  | -0.63309 | 1.98420  | -11.556  | 1.61E-27 | 51.418   |
| CCL2   | -1.04103 | 4.22296  | -11.549  | 1.70E-27 | 51.366   |
| IRF1   | -0.75969 | 3.51376  | -11.543  | 1.88E-27 | 51.264   |
| PSG1   | -1.15172 | 2.34370  | -11.529  | 2.09E-27 | 51.157   |
| SIGLEC8| -0.50587 | 0.73507  | -11.524  | 2.15E-27 | 51.131   |
| GFI1   | -0.51714 | 1.01128  | -11.520  | 2.15E-27 | 51.129   |
| OSTM1  | -0.46726 | 2.83437  | -11.520  | 2.15E-27 | 51.129   |
| COL6A5 | -0.44062 | 0.53432  | -11.520  | 2.15E-27 | 51.129   |
| APOL6  | -0.24461 | 0.57395  | -11.523  | 2.15E-27 | 51.129   |
| LAMA2  | -0.69979 | 1.82094  | -11.510  | 2.42E-27 | 50.911   |
| FKBP15 | -0.39723 | 2.70510  | -11.480  | 3.20E-27 | 50.736   |
| TRBV27 | -0.38783 | 0.44488  | -11.468  | 3.56E-27 | 50.628   |
| HLA-F  | -0.96506 | 4.51947  | -11.464  | 3.69E-27 | 50.593   |
| RP11-389C8.2 | -0.42832 | 1.09378 | -11.456 | 3.97E-27 | 50.520   |
| POU2F2 | -0.57246 | 1.23269 | -11.441 | 4.58E-27 | 50.379   |
| DPYD   | -0.89267 | 3.13963 | -11.428 | 5.18E-27 | 50.258   |
| IRF4   | -0.84663 | 1.50917 | -11.426 | 5.23E-27 | 50.249   |
| TGM2   | -0.86304 | 5.72839 | -11.425 | 5.31E-27 | 50.226   |
| PSMB9  | -0.99284 | 4.20521 | -11.420 | 5.54E-27 | 50.191   |
| TREML1 | -0.33084 | 0.51368 | -11.415 | 5.84E-27 | 50.138   |
| APOL6  | -0.66366 | 3.46583 | -11.413 | 5.92E-27 | 50.124   |
| TMC8   | -0.75086 | 2.60070 | -11.407 | 6.25E-27 | 50.070   |
| PDPN   | -0.99841 | 2.84503 | -11.396 | 6.90E-27 | 49.973   |
| LRMP   | -0.66211 | 1.26839 | -11.392 | 7.16E-27 | 49.936   |
| CPA3   | -1.32823 | 3.23141 | -11.388 | 7.38E-27 | 49.906   |
| CARD8  | -0.38256 | 1.76995 | -11.383 | 7.73E-27 | 49.861   |
| GPR132 | -0.66498 | 1.76324 | -11.369 | 8.79E-27 | 49.733   |
| UBE2L6 | -0.78196 | 5.41864 | -11.369 | 8.82E-27 | 49.729   |
| FIBIN  | -0.91166 | 2.09880 | -11.358 | 9.74E-27 | 49.630   |
| Gene      | Score1   | Score2   | Score3   | Score4   | Score5   |
|-----------|----------|----------|----------|----------|----------|
| LXN       | -0.659796664 | 3.551641934 | -11.34430249 | 1.11E-26 | 49.50460198 |
| TPSAB1    | -1.179426091 | 2.972246105 | -11.33332774 | 1.22E-26 | 49.4058008 |
| TNFSF4    | -0.529370395 | 1.079590996 | -11.32967262 | 1.26E-26 | 49.37290768 |
| SGCD      | -0.461507395 | 0.812601379 | -11.31753778 | 1.41E-26 | 49.26374877 |
| ZYX       | -0.640927762 | 5.689065749 | -11.32641431 | 1.30E-26 | 49.3459081 |
| ZNF267    | -0.385302458 | 1.998143379 | -11.31517793 | 1.44E-26 | 49.2425288 |
| PIP4K2A   | -0.59728812 | 2.972246105 | -11.33332774 | 1.22E-26 | 49.37290768 |
| N4BP2L1   | -0.519707922 | 1.68932299 | -11.23848034 | 2.88E-26 | 48.55428007 |
| CTSZ      | -0.650177657 | 7.474858099 | -11.23777558 | 2.90E-26 | 48.54796875 |
| BMP2K     | -0.352160114 | 1.082869936 | -11.2345814 | 2.99E-26 | 48.51826319 |
| LRRK1     | -0.417519137 | 1.273905571 | -11.23067303 | 3.10E-26 | 48.4837644 |
| MS4A1     | -1.092330898 | 1.454760394 | -11.2293457 | 3.13E-26 | 48.47249484 |
| CXCL13    | -1.596027501 | 3.73758819 | -11.22575858 | 3.24E-26 | 48.4403891 |
| SYNPO2    | -0.508759174 | 1.034133808 | -11.22040369 | 3.40E-26 | 48.39247262 |
| MRVI1     | -0.583010498 | 1.614458645 | -11.21909784 | 3.44E-26 | 48.38078968 |
| TGFB1     | -0.704426695 | 4.529146096 | -11.20799296 | 3.80E-26 | 48.28147155 |
| FCRLA     | -0.756105827 | 1.02854043 | -11.20533127 | 3.89E-26 | 48.257675 |
| FBLN1     | -0.993622654 | 4.261925658 | -11.19684024 | 4.20E-26 | 48.18178447 |
| CCL23     | -0.690484113 | 1.112446815 | -11.19426383 | 4.30E-26 | 48.15876396 |
| IL18R1    | -0.47806282 | 1.033642748 | -11.1893196 | 4.47E-26 | 48.11917219 |
| LSAMP     | -0.517341534 | 1.032792688 | -11.17761557 | 4.99E-26 | 48.01008624 |
| GBP1P1    | -0.751545945 | 1.506900326 | -11.17619694 | 5.06E-26 | 47.99742325 |
| FASL1     | -0.562095206 | 0.816530088 | -11.17235707 | 5.24E-26 | 47.96315254 |
| GPR82     | -0.287535878 | 0.444131489 | -11.16595338 | 5.55E-26 | 47.90601551 |
| SIGLEC11  | -0.26549461 | 0.369066471 | -11.15752809 | 5.98E-26 | 47.83087048 |
| BTN2A2    | -0.473414128 | 2.125421382 | -11.14823565 | 6.50E-26 | 47.7480307 |
| AOC3      | -0.964487615 | 3.333101691 | -11.14553387 | 6.66E-26 | 47.72395279 |
| TRAV38-1  | -0.235313214 | 0.247745042 | -11.13175676 | 7.54E-26 | 47.60122725 |
| FAP       | -0.793349733 | 1.864618164 | -11.11732322 | 8.59E-26 | 47.47275189 |
| RAI2      | -0.687169346 | 2.099042733 | -11.11402211 | 8.84E-26 | 47.44338226 |
| KCNK13    | -0.425096378 | 0.703216901 | -11.11062204 | 9.12E-26 | 47.4131376 |
| Gene       | log2FoldChange | adj.P.Val | -log10(P.Val) | FDR  | q-value |
|------------|----------------|-----------|---------------|------|---------|
| RARRES1    | -1.170120763   | 9.94E-26  | 47.32750247   |      |         |
| TMEM52B    | -0.288963821   | 9.96E-26  | 47.32502414   |      |         |
| SPON1      | -0.988492115   | 1.02E-25  | 47.30436032   |      |         |
| CCRL2      | -0.633263634   | 1.04E-25  | 47.28480704   |      |         |
| SOCS1      | -0.778463147   | 1.06E-25  | 47.263338     |      |         |
| PLCL2      | -0.517354429   | 1.08E-25  | 47.24530795   |      |         |
| CSGALNACT2 | -0.449963245   | 1.29E-25  | 46.91878363   |      |         |
| C1QTNF1    | -0.74451337    | 1.33E-25  | 47.06966088   |      |         |
| KLRD1      | -0.269759266   | 1.34E-25  | 47.04051155   |      |         |
| ARSB       | -0.410686033   | 1.36E-25  | 47.01947734   |      |         |
| CSF1       | -0.85006552    | 1.50E-25  | 46.91878363   |      |         |
| FMO3       | -0.770545194   | 1.59E-25  | 46.86086508   |      |         |
| EPSTI1     | -0.773582166   | 1.64E-25  | 46.82951277   |      |         |
| S1PR1      | -0.713516423   | 1.96E-25  | 46.65431823   |      |         |
| TLR10      | -0.620778885   | 2.15E-25  | 46.56455988   |      |         |
| CLC4L1     | -0.837433839   | 2.18E-25  | 46.54734143   |      |         |
| FAM26E     | -0.363549627   | 2.25E-25  | 46.51789656   |      |         |
| PLD4       | -0.48372375    | 2.27E-25  | 46.51056029   |      |         |
| GJA5       | -0.800652135   | 2.29E-25  | 46.49927515   |      |         |
| S1PR4      | -0.660304281   | 2.46E-25  | 46.4304622    |      |         |
| TNS3       | -0.626453777   | 2.64E-25  | 46.35990441   |      |         |
| AF127936.5 | -0.289478378   | 2.75E-25  | 46.31789918   |      |         |
| BNC2       | -0.336752172   | 2.90E-25  | 46.26699682   |      |         |
| RASSF5     | -0.615227923   | 3.17E-25  | 46.17601287   |      |         |
| PDZRN3     | -0.545991312   | 3.23E-25  | 46.1593921    |      |         |
| GLT8D2     | -0.680853951   | 3.28E-25  | 46.14242461   |      |         |
| TRBV21-1   | -0.238872421   | 3.35E-25  | 46.12285057   |      |         |
| ATG7       | -0.310043143   | 3.41E-25  | 46.1052317    |      |         |
| PLSCR4     | -0.632328693   | 3.50E-25  | 46.08005619   |      |         |
| LILRA5     | -0.655340098   | 3.55E-25  | 46.06573132   |      |         |
| LPAR5      | -0.576928662   | 3.62E-25  | 46.04699406   |      |         |
| RP11-356I2.4 | -0.280212277 | 3.76E-25  | 46.00755592   |      |         |
| Gene      | Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|-----------|---------|---------|---------|---------|---------|
| RP4-728D4.2 | -0.29664029 | 0.613067664 | -10.94228109 | 4.10E-25 | 45.92269931 |
| GPR141    | -0.355220364 | 0.548083334 | -10.93803725 | 4.26E-25 | 45.88530445 |
| BICC1     | -0.751712525 | 1.739488847 | -10.93385383 | 4.42E-25 | 45.84829217 |
| BCL11B    | -0.478108178 | 0.886382493 | -10.92775912 | 4.66E-25 | 45.79492276 |
| CXCL11    | -1.125688174 | 1.848112399 | -10.96106146 | 6.18E-25 | 45.51630326 |
| LTBP2     | -0.963538622 | 4.411987841 | -10.89347391 | 6.32E-25 | 45.49235049 |
| CD300LB   | -0.284066141 | 0.532028263 | -10.89139748 | 6.34E-25 | 45.49021329 |
| COL8A2    | -0.952896165 | 2.543903142 | -10.89347391 | 6.37E-25 | 45.48942066 |
| BCL11B    | -0.478108178 | 0.886382493 | -10.92775912 | 4.66E-25 | 45.79492276 |
| CXCL11    | -1.125688174 | 1.848112399 | -10.96106146 | 6.18E-25 | 45.51630326 |
| LTBP2     | -0.963538622 | 4.411987841 | -10.89347391 | 6.32E-25 | 45.49235049 |
| CD300LB   | -0.284066141 | 0.532028263 | -10.89139748 | 6.34E-25 | 45.49021329 |
| COL8A2    | -0.952896165 | 2.543903142 | -10.89347391 | 6.37E-25 | 45.48942066 |
| BCL11B    | -0.478108178 | 0.886382493 | -10.92775912 | 4.66E-25 | 45.79492276 |
| CXCL11    | -1.125688174 | 1.848112399 | -10.96106146 | 6.18E-25 | 45.51630326 |
| LTBP2     | -0.963538622 | 4.411987841 | -10.89347391 | 6.32E-25 | 45.49235049 |
| CD300LB   | -0.284066141 | 0.532028263 | -10.89139748 | 6.34E-25 | 45.49021329 |
| COL8A2    | -0.952896165 | 2.543903142 | -10.89347391 | 6.37E-25 | 45.48942066 |
| Gene   | Finger 4F | Finger 4R | Finger 5F | Finger 5R | Finger 6F | Finger 6R | Finger 7F | Finger 7R | Finger 8F | Finger 8R |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PTRF   | -0.777858341 | 5.46458766 | -10.73137124 | 2.64E-24 | 44.07507178 |
| UNC5C  | -0.351042282 | 0.70967209 | -10.72668781 | 2.75E-24 | 44.0342965  |
| RP11-118B22.4 | -0.278022794 | 0.322891649 | -10.72588415 | 2.77E-24 | 44.02730068 |
| AC020571.3  | -0.354226047 | 0.678424422 | -10.727367 | 2.85E-24 | 43.99990561 |
| LAMA4   | -0.689813134 | 2.57879811 | -10.7247294 | 2.88E-24 | 43.98890737 |
| NEXN   | -0.588976716 | 1.758604636 | -10.7186583 | 2.96E-24 | 43.9644806  |
| SPARCL1 | -0.278022794 | 0.322891649 | -10.72588415 | 2.77E-24 | 44.02730068 |
| AC020571.3  | -0.354226047 | 0.678424422 | -10.727367 | 2.85E-24 | 43.99990561 |
| LAMA4   | -0.689813134 | 2.57879811 | -10.7247294 | 2.88E-24 | 43.98890737 |
| NEXN   | -0.588976716 | 1.758604636 | -10.7186583 | 2.96E-24 | 43.9644806  |
| Gene          | Value1 | Value2 | Value3 | Value4 | Value5 |
|--------------|--------|--------|--------|--------|--------|
| TMIGD2       | -0.343054212 | 0.515183885 | -10.52897905 | 1.55E-23 | 42.32318397 |
| OR7E47P      | -0.575683321  | 1.330211723  | -10.5223474  | 1.64E-23 | 42.26613733  |
| TBCD2       | -0.47208663   | 2.685668625   | -10.52194215  | 1.65E-23 | 42.2625198   |
| CD1C        | -0.985832375  | 1.875778559   | -10.52176804  | 1.65E-23 | 42.26115465  |
| CDH11        | -0.853384439  | 2.955769327   | -10.51832277  | 1.70E-23 | 42.23152782  |
| TRBV24-1     | -0.363770274  | 0.48089663    | -10.50291505  | 1.94E-23 | 42.09910808  |
| OR7E47P      | -0.575683321  | 1.330211723  | -10.5223474  | 1.64E-23 | 42.26613733  |
| TBCD2       | -0.47208663   | 2.685668625   | -10.52194215  | 1.65E-23 | 42.2625198   |
| CD1C        | -0.985832375  | 1.875778559   | -10.52176804  | 1.65E-23 | 42.26115465  |
| CDH11        | -0.853384439  | 2.955769327   | -10.51832277  | 1.70E-23 | 42.23152782  |
| TRBV24-1     | -0.363770274  | 0.48089663    | -10.50291505  | 1.94E-23 | 42.09910808  |
| OR7E47P      | -0.575683321  | 1.330211723  | -10.5223474  | 1.64E-23 | 42.26613733  |
| TBCD2       | -0.47208663   | 2.685668625   | -10.52194215  | 1.65E-23 | 42.2625198   |
| CD1C        | -0.985832375  | 1.875778559   | -10.52176804  | 1.65E-23 | 42.26115465  |
| CDH11        | -0.853384439  | 2.955769327   | -10.51832277  | 1.70E-23 | 42.23152782  |
| TRBV24-1     | -0.363770274  | 0.48089663    | -10.50291505  | 1.94E-23 | 42.09910808  |
| OR7E47P      | -0.575683321  | 1.330211723  | -10.5223474  | 1.64E-23 | 42.26613733  |
| TBCD2       | -0.47208663   | 2.685668625   | -10.52194215  | 1.65E-23 | 42.2625198   |
| CD1C        | -0.985832375  | 1.875778559   | -10.52176804  | 1.65E-23 | 42.26115465  |
| CDH11        | -0.853384439  | 2.955769327   | -10.51832277  | 1.70E-23 | 42.23152782  |
| TRBV24-1     | -0.363770274  | 0.48089663    | -10.50291505  | 1.94E-23 | 42.09910808  |
| OR7E47P      | -0.575683321  | 1.330211723  | -10.5223474  | 1.64E-23 | 42.26613733  |
| TBCD2       | -0.47208663   | 2.685668625   | -10.52194215  | 1.65E-23 | 42.2625198   |
| CD1C        | -0.985832375  | 1.875778559   | -10.52176804  | 1.65E-23 | 42.26115465  |
| CDH11        | -0.853384439  | 2.955769327   | -10.51832277  | 1.70E-23 | 42.23152782  |
| TRBV24-1     | -0.363770274  | 0.48089663    | -10.50291505  | 1.94E-23 | 42.09910808  |
| OR7E47P      | -0.575683321  | 1.330211723  | -10.5223474  | 1.64E-23 | 42.26613733  |
| TBCD2       | -0.47208663   | 2.685668625   | -10.52194215  | 1.65E-23 | 42.2625198   |
| CD1C        | -0.985832375  | 1.875778559   | -10.52176804  | 1.65E-23 | 42.26115465  |
| CDH11        | -0.853384439  | 2.955769327   | -10.51832277  | 1.70E-23 | 42.23152782  |
| TRBV24-1     | -0.363770274  | 0.48089663    | -10.50291505  | 1.94E-23 | 42.09910808  |
| OR7E47P      | -0.575683321  | 1.330211723  | -10.5223474  | 1.64E-23 | 42.26613733  |
| TBCD2       | -0.47208663   | 2.685668625   | -10.52194215  | 1.65E-23 | 42.2625198   |
| CD1C        | -0.985832375  | 1.875778559   | -10.52176804  | 1.65E-23 | 42.26115465  |
| CDH11        | -0.853384439  | 2.955769327   | -10.51832277  | 1.70E-23 | 42.23152782  |
| TRBV24-1     | -0.363770274  | 0.48089663    | -10.50291505  | 1.94E-23 | 42.09910808  |
| Gene          | Score   | p-value | log2FoldChange | adj.p-value |
|--------------|---------|---------|---------------|-------------|
| IL18RAP      | -0.3582 | 6.48E-23| -10.3633      | 40.90       |
| NLRC5        | -0.6573 | 6.58E-23| -10.3616      | 40.89       |
| PAPLN        | -0.6613 | 6.80E-23| -10.3578      | 40.85       |
| SP100        | -0.3846 | 6.84E-23| -10.3569      | 40.85       |
| VASH1        | -0.5418 | 6.85E-23| -10.3592      | 40.85       |
| JAM2         | -0.4733 | 6.94E-23| -10.3554      | 40.84       |
| KAT2B        | -0.4932 | 7.24E-23| -10.3504      | 40.85       |
| LRRN4CL      | -0.3463 | 7.65E-23| -10.3410      | 40.72       |
| NLRC5        | -0.6573 | 6.58E-23| -10.3616      | 40.89       |
| PAPLN        | -0.6613 | 6.80E-23| -10.3578      | 40.85       |
| SP100        | -0.3846 | 6.84E-23| -10.3569      | 40.85       |
| VASH1        | -0.5418 | 6.85E-23| -10.3592      | 40.85       |
| JAM2         | -0.4733 | 6.94E-23| -10.3554      | 40.84       |
| KAT2B        | -0.4932 | 7.24E-23| -10.3504      | 40.85       |
| LRRN4CL      | -0.3463 | 7.65E-23| -10.3410      | 40.72       |
| NLRC5        | -0.6573 | 6.58E-23| -10.3616      | 40.89       |
| PAPLN        | -0.6613 | 6.80E-23| -10.3578      | 40.85       |
| SP100        | -0.3846 | 6.84E-23| -10.3569      | 40.85       |
| VASH1        | -0.5418 | 6.85E-23| -10.3592      | 40.85       |
| JAM2         | -0.4733 | 6.94E-23| -10.3554      | 40.84       |
| KAT2B        | -0.4932 | 7.24E-23| -10.3504      | 40.85       |
| LRRN4CL      | -0.3463 | 7.65E-23| -10.3410      | 40.72       |
| NLRC5        | -0.6573 | 6.58E-23| -10.3616      | 40.89       |
| PAPLN        | -0.6613 | 6.80E-23| -10.3578      | 40.85       |
| SP100        | -0.3846 | 6.84E-23| -10.3569      | 40.85       |
| VASH1        | -0.5418 | 6.85E-23| -10.3592      | 40.85       |
| JAM2         | -0.4733 | 6.94E-23| -10.3554      | 40.84       |
| KAT2B        | -0.4932 | 7.24E-23| -10.3504      | 40.85       |
| LRRN4CL      | -0.3463 | 7.65E-23| -10.3410      | 40.72       |
| NLRC5        | -0.6573 | 6.58E-23| -10.3616      | 40.89       |
| PAPLN        | -0.6613 | 6.80E-23| -10.3578      | 40.85       |
| SP100        | -0.3846 | 6.84E-23| -10.3569      | 40.85       |
| VASH1        | -0.5418 | 6.85E-23| -10.3592      | 40.85       |
| JAM2         | -0.4733 | 6.94E-23| -10.3554      | 40.84       |
| KAT2B        | -0.4932 | 7.24E-23| -10.3504      | 40.85       |
| Gene       | Freq. | Z score | Log10 P   | Fold Change |
|------------|-------|---------|-----------|-------------|
| RP1-111C20.3 | -0.2442211 | 0.303638663 | -10.217037 | 2.27E-22 | 39.6648048 |
| TRAV1-2    | -0.350005749 | 0.539264326 | -10.21441971 | 2.32E-22 | 39.64269704 |
| TNFRSF8    | -0.347633053 | 0.548186888 | -10.20361679 | 2.54E-22 | 39.55159877 |
| COX7A1     | -0.580711414 | 2.430741864 | -10.20127842 | 2.59E-22 | 39.53188342 |
| HTRA1      | -0.787425363 | 5.205335719 | -10.19647479 | 2.70E-22 | 39.49139209 |
| PODN       | -0.834969898 | 3.067004567 | -10.19647178 | 2.70E-22 | 39.49136674 |
| RP11-67C2.2 | -0.51182198 | 0.944652319 | -10.1947031  | 2.74E-22 | 39.47646104 |
| SPARC      | -0.350005749 | 0.539264326 | -10.21441971 | 2.32E-22 | 39.64269704 |
| PIK3IP1    | -0.622234312 | 3.834477021 | -10.19039601 | 2.84E-22 | 39.44016992 |
| LRP1       | -0.751114655 | 4.120731289 | -10.18910921 | 2.87E-22 | 39.42967912 |
| MAP3K3     | -0.441144629 | 2.82994812 | -10.18823962 | 2.90E-22 | 39.42200437 |
| SLIT3      | -0.721120249 | 1.440486684 | -10.1870733  | 2.93E-22 | 39.41217997 |
| EGFL6      | -0.714698018 | 2.602136353 | -10.18343945 | 3.00E-22 | 39.3815379  |
| CLEC17A    | -0.325310534 | 0.378103284 | -10.18228208 | 3.05E-22 | 39.37183001 |
| TRAV24     | -0.282104545 | 0.330701119 | -10.17669598 | 3.20E-22 | 39.32480151 |
| PLAA2G15   | -0.433266294 | 3.010256345 | -10.17380946 | 3.28E-22 | 39.30050691 |
| IRF5       | -0.613998789 | 2.450689812 | -10.17387892 | 3.27E-22 | 39.30109149 |
| CCDC109B   | -0.599595072 | 2.575358728 | -10.17156969 | 3.34E-22 | 39.28165895 |
| MAGI2-AS3  | -0.388123851 | 0.973104131 | -10.17076917 | 3.36E-22 | 39.27492306 |
| CD19       | -0.763841884 | 1.231242619 | -10.16951487 | 3.40E-22 | 39.26436968 |
| STAMBPL1   | -0.363956026 | 1.132006403 | -10.16828675 | 3.43E-22 | 39.25403734 |
| PSAP       | -0.473301085 | 9.19263223 | -10.16505944 | 3.53E-22 | 39.22688947 |
| MXRA5      | -1.034353581 | 3.428264963 | -10.15685333 | 3.78E-22 | 39.15792791 |
| KIAA1462   | -0.639381216 | 2.355126004 | -10.14766699 | 4.09E-22 | 39.08068227 |
| FN1        | -1.074201936 | 7.042897367 | -10.14678112 | 4.12E-22 | 39.07324054 |
| LDB2       | -0.523135506 | 1.827304376 | -10.14192135 | 4.29E-22 | 39.03241946 |
| ITGA8      | -0.648331386 | 1.510523807 | -10.1370645 | 4.47E-22 | 38.99163568 |
| ZNF521     | -0.513488891 | 1.188840003 | -10.13674715 | 4.49E-22 | 38.9889713 |
| ARL6IP5    | -0.548115036 | 6.205939464 | -10.1334021 | 4.62E-22 | 38.96089038 |
| AP003774.1 | -0.281607125 | 0.4262188 | -10.13166617 | 4.68E-22 | 38.94632005 |
| CD1B       | -0.575888137 | 0.719866319 | -10.13159283 | 4.69E-22 | 38.94570458 |
| TMEM106A   | -0.394767091 | 2.136660165 | -10.11923688 | 5.20E-22 | 38.8420443 |
| ST3GAL2    | -0.341488707 | 1.917181095 | -10.11865774 | 5.23E-22 | 38.83718759 |
| Gene     | log2FoldChange | adj.Pvalue | Benjamini & Hochberg FDR | Enrichr Gene Set   | Scores |
|----------|----------------|------------|--------------------------|--------------------|--------|
| CD68     | -0.440166628   | 1.04375939 | -10.11540714             | 5.38E-22            | 38.8093157 |
| ENG      | -0.645476517   | 5.111466408| -10.11382935             | 5.45E-22            | 38.7967039 |
| TMEM229B | -0.373997266   | 0.912196106| -10.11086094             | 5.59E-22            | 38.77182156 |
| DLEU7    | -0.200896193   | 0.466758725| -10.10928293             | 5.66E-22            | 38.75859604 |
| RGL1     | -0.669223823   | 3.110616032| -10.0984168              | 6.21E-22            | 38.66756232 |
| PDLIM3   | -0.677492934   | 2.025985897| -10.09678122             | 6.29E-22            | 38.65386547 |
| RGS19    | -0.492051471   | 3.532267265| -10.09478047             | 6.40E-22            | 38.63711244 |
| RP11-532F6.3 | -0.270036725 | 0.463812224| -10.09467885             | 6.41E-22            | 38.6362616 |
| LINC00528| -0.214748624   | 2.471314154| -10.08728516             | 6.51E-22            | 38.57023998 |
| CCL22    | -0.3357599     | 0.389932494| -10.0867908              | 6.62E-22            | 38.5743711 |
| NAAA     | -0.496285843   | 2.782986507| -10.08478735             | 6.76E-22            | 38.55346941 |
| CFP      | -0.397591744   | 1.39751023 | -10.08190153             | 7.14E-22            | 38.52932502 |
| RNASE2   | -0.653470737   | 1.139294661| -10.06969317             | 7.91E-22            | 38.42723369 |
| IL7      | -0.49389981    | 3.543445458| -10.06955652             | 7.92E-22            | 38.42609139 |
| PRELP    | -0.405985494   | 1.051010087| -10.06818165             | 8.01E-22            | 38.4159938 |
| DACT3    | -0.592275136   | 1.158304538| -10.0649491              | 8.24E-22            | 38.3875838 |
| SLC2A5   | -0.28286446    | 1.614320478| -10.05111503             | 9.26E-22            | 38.27023236 |
| TPK1     | -0.608556992   | 1.961153649| -10.04169541             | 1.0E-21             | 38.19341345 |
| SLIT2    | -0.870990301   | 1.961153649| -10.0320946              | 1.08E-21            | 38.1226897 |
| GFPT2    | -0.703535492   | 3.232014452| -10.02802266             | 1.12E-21            | 38.07938347 |
| OLFML2B  | -0.686511114   | 0.352034623| -10.02563101             | 1.15E-21            | 38.05944783 |
| AC017002.1 | -0.213411149  | 0.352034623| -10.02563101             | 1.15E-21            | 38.05944783 |
| TTC24    | -0.207053041   | 0.22625189 | -10.0253657              | 1.15E-21            | 38.05723548 |
| TPK1     | -0.515875356   | 1.468039975| -10.02055721             | 1.20E-21            | 38.01716548 |
| GPR137B  | -0.586335547   | 3.23618047 | -10.0190047              | 1.21E-21            | 38.00423057 |
| SLC29A3  | -0.461201585   | 2.753948651| -10.01461674             | 1.26E-21            | 37.9676788 |
| RP11-472N13.3 | -0.305444738 | 0.473920531| -10.01407437             | 1.26E-21            | 37.96316166 |
| TAGLN    | -0.856352933   | 5.343994063| -9.996249345             | 1.47E-21            | 37.81479373 |
| CLEC6A   | -0.256168463   | 0.258061083| -9.987513849             | 1.58E-21            | 37.74214729 |
| IL1B     | -0.70760342    | 1.623812121| -9.986118491             | 1.60E-21            | 37.73054707 |
| FCRL6    | -0.456392368   | 0.793039494| -9.985088826             | 1.61E-21            | 37.72198772 |
| LDLRAD4  | -0.402361325   | 0.983646714| -9.984164547             | 1.63E-21            | 37.7143049  |
| Gene        | Z-score  | Fold Change | p-value  | FDR   | Benjamini-corrected FDR |
|-------------|----------|-------------|----------|-------|------------------------|
| KMO         | -0.3592  | 0.7881      | -9.9837  | 1.63E-21 | 37.7106                |
| MRAS        | -0.4546  | 2.0798      | -9.9562  | 2.05E-21 | 37.4826                |
| PRDM6       | -0.3436  | 0.7344      | -9.9457  | 2.24E-21 | 37.3956                |
| CTD-2341M24.1 | -0.2750  | 0.4635      | -9.9330  | 2.50E-21 | 37.2901                |
| RPL32P1     | -0.4213  | 0.5788      | -9.9289  | 2.24E-21 | 37.2305                |
| TRDV1       | -0.4899  | 0.5699      | -9.9274  | 2.62E-21 | 37.2434                |
| MMP9        | -1.2431  | 4.5454      | -9.9207  | 2.76E-21 | 37.1890                |
| COL6A6      | -0.5186  | 0.7112      | -9.9259  | 2.65E-21 | 37.2305                |
| HLA-DQB1-AS1| -0.9095  | 2.0766      | -9.9092  | 3.05E-21 | 37.0929                |
| FILIP1L     | -0.7489  | 3.0340      | -9.9088  | 3.05E-21 | 37.0900                |
| UBD         | -1.2384  | 2.9847      | -9.9039  | 3.18E-21 | 37.0495                |
| AEBP1       | -0.9707  | 5.9277      | -9.9039  | 3.18E-21 | 37.0495                |
| SP110       | -0.3223  | 1.3989      | -9.9039  | 3.18E-21 | 37.0495                |
| ADAMTS2     | -0.7349  | 2.3134      | -9.8982  | 3.34E-21 | 37.0021                |
| CXorf65     | -0.3134  | 0.4753      | -9.8966  | 3.38E-21 | 36.9878                |
| PDGFRB      | -0.6910  | 4.0653      | -9.8962  | 3.40E-21 | 36.9855                |
| FBXL7       | -0.4981  | 1.4139      | -9.8940  | 3.46E-21 | 36.9677                |
| PTK2B       | -0.5517  | 2.9045      | -9.8930  | 3.48E-21 | 36.9596                |
| STK4        | -0.3725  | 2.7013      | -9.8838  | 3.76E-21 | 36.8832                |
| RASL12      | -0.5964  | 2.3088      | -9.8666  | 4.35E-21 | 36.7406                |
| TRBV13      | -0.3401  | 0.3779      | -9.8612  | 4.55E-21 | 36.6966                |
| NUGGC       | -0.4128  | 0.6456      | -9.8589  | 4.63E-21 | 36.6779                |
| DOCK4       | -0.4502  | 1.7293      | -9.8474  | 5.10E-21 | 36.5828                |
| RP11-428G5.5 | -0.2836  | 0.3021      | -9.8464  | 5.14E-21 | 36.5745                |
| AC069363.1  | -0.2919  | 0.3612      | -9.8423  | 5.32E-21 | 36.5413                |
| OMD         | -0.7064  | 1.1156      | -9.8420  | 5.33E-21 | 36.5388                |
| ENPP2       | -0.7104  | 3.0536      | -9.8411  | 5.37E-21 | 36.5316                |
| GZMM        | -0.7641  | 1.7579      | -9.8336  | 5.72E-21 | 36.4699                |
| LRRC32      | -0.6179  | 2.9420      | -9.8333  | 5.73E-21 | 36.4671                |
| GAS6        | -0.7636  | 3.9286      | -9.8303  | 5.88E-21 | 36.4432                |
| TSPAN32     | -0.3422  | 0.5786      | -9.8083  | 7.06E-21 | 36.2613                |
| TGFB1       | -1.0526  | 4.7625      | -9.8049  | 7.26E-21 | 36.2332                |
| TAP2        | -0.6009  | 3.0100      | -9.7930  | 8.01E-21 | 36.1363                |
| Gene         | Score1  | Score2  | Score3  | Score4  | Score5  |
|------------|-------|-------|-------|-------|-------|
| FCRL1      | -0.421032303 | 0.466394999 | -9.792896563 | 8.02E-21 | 36.13469323 |
| LIMS1      | -0.383664328 | 3.36213155 | -9.791224701 | 8.13E-21 | 36.12097656 |
| CALD1      | -0.683504742 | 4.113399254 | -9.790741195 | 8.17E-21 | 36.11700996 |
| HLA-DQA2   | -1.505787634 | 4.421629564 | -9.788045372 | 8.35E-21 | 36.09489635 |
| RP11-24F11.2 | -0.504320764 | 1.123386355 | -9.779858738 | 8.94E-21 | 36.02776732 |
| CTD-2353F22.1 | -0.258832446 | 0.388683698 | -9.779858738 | 8.94E-21 | 36.02776732 |
| ITGRIP     | -0.533657733 | 2.44595734 | -9.76700006 | 9.94E-21 | 35.92405030 |
| MRPS26     | 0.579064284 | 5.206117237 | 9.766667078 | 9.97E-21 | 35.91967786 |
| LMOD1      | -0.701608313 | 2.222607063 | -9.762786471 | 1.03E-20 | 35.88789985 |
| CD1E       | -0.780633515 | 1.185143678 | -9.756816328 | 1.08E-20 | 35.83902748 |
| COL6A1     | -0.905412631 | 5.576867672 | -9.754796126 | 1.10E-20 | 35.82249444 |
| PSMB10     | -0.619820864 | 4.13055127 | -9.743626206 | 1.21E-20 | 35.72817961 |
| FYN        | -0.576330114 | 2.705636824 | -9.74209484 | 1.22E-20 | 35.71860206 |
| APOBEC3H   | -0.501307627 | 1.044582998 | -9.74195019 | 1.22E-20 | 35.71770416 |
| CDK14      | -0.567717508 | 1.932900645 | -9.735582829 | 1.29E-20 | 35.66516170 |
| FMO1       | -0.493390556 | 0.827303091 | -9.73354817 | 1.31E-20 | 35.64716487 |
| MAT2B      | -0.415159296 | 4.02090607 | -9.73170802 | 1.33E-20 | 35.63379095 |
| APOBEC3D   | -0.535609665 | 1.724399858 | -9.72849565 | 1.37E-20 | 35.60746694 |
| RGS10      | -0.698718314 | 4.481471188 | -9.703005193 | 1.69E-20 | 35.3994384 |
| ACTA2      | -0.846860306 | 5.680047981 | -9.68907141 | 1.74E-20 | 35.36602668 |
| ADARB1     | -0.432243526 | 1.6313009 | -9.696876798 | 1.77E-20 | 35.34947971 |
| RP11-498E2.9 | -0.259921236 | 0.427631942 | -9.695994464 | 1.79E-20 | 35.34228668 |
| SNX2       | -0.346934617 | 4.031006856 | -9.689145681 | 1.89E-20 | 35.28648628 |
| LGALS2     | -0.800782207 | 1.980073135 | -9.6781177 | 2.07E-20 | 35.19668916 |
| RP11-556E13.1 | -0.253231001 | 0.382226317 | -9.672921091 | 2.16E-20 | 35.1543991 |
| CTC-251I16.1 | -0.5755042 | 1.500102322 | -9.672989196 | 2.16E-20 | 35.15421282 |
| CACNA1C    | -0.269110266 | 0.580916363 | -9.66722229 | 2.26E-20 | 35.10804 |
| BANK1      | -0.542664407 | 1.546329584 | -9.66483709 | 2.31E-20 | 35.08664221 |
| CCDC69     | -0.681908106 | 3.183533488 | -9.657952929 | 2.44E-20 | 35.03272571 |
| GXYLT2     | -0.624832776 | 1.710354881 | -9.65384112 | 2.53E-20 | 34.99925095 |
| AC109642.1 | -0.471499977 | 0.858737045 | -9.649704446 | 2.61E-20 | 34.96565119 |
| AP002954.4 | -0.428926764 | 0.76263642 | -9.648656636 | 2.64E-20 | 34.95713995 |
| PDE6G      | -0.461616084 | 0.941098269 | -9.647387232 | 2.66E-20 | 34.94682958 |
| Gene         | Score 1  | Score 2  | Score 3  | Score 4  | Score 5  |
|--------------|----------|----------|----------|----------|----------|
| IFI16        | -0.819641317 | 4.350590397 | -9.644411098 | 2.73E-20 | 34.92266043 |
| CLEC4E       | -0.605283204 | 1.161292452 | -9.643990177 | 2.74E-20 | 34.91924255 |
| TAP1         | -0.7906859  | 5.088652111 | -9.640321039 | 2.82E-20 | 34.88945342 |
| HLX          | -0.400463158 | 1.319373806 | -9.638234984 | 2.87E-20 | 34.87250204 |
| EMR4P        | -0.298605209 | 0.472958689  | -9.631915016 | 3.03E-20 | 34.82123555 |
| RB32         | -0.637051903 | 4.109537974  | -9.629324117 | 3.09E-20 | 34.80021769 |
| SPRED1       | -0.555217347 | 3.304143682  | -9.628164919 | 3.15E-20 | 34.78188793 |
| ZBED2        | -0.665836328 | 1.324507820  | -9.627064193 | 3.19E-20 | 34.77091261 |
| RP11-405M12.4| -0.276913729 | 0.667506853  | -9.615787088 | 3.45E-20 | 34.69046577 |
| ST8SIA4      | -0.691530207 | 2.333996435  | -9.615401914 | 3.46E-20 | 34.67346424 |
| TNFRSF4      | -0.54037912 | 1.997515956  | -9.613688912 | 3.51E-20 | 34.67346424 |
| CYSLTR1      | -0.53952296 | 1.129134075  | -9.612801035 | 3.54E-20 | 34.66627048 |
| LITAF        | -0.447004888 | 5.503445286  | -9.610533931 | 3.60E-20 | 34.64830477 |
| LINC01480    | -0.369715266 | 0.702002016  | -9.607762079 | 3.69E-20 | 34.62545269 |
| SGTB         | -0.3319236  | 1.557420390  | -9.589157601 | 4.29E-20 | 34.47487533 |
| OVOL2        | 0.532270971 | 2.437149004  | 9.581949502  | 4.55E-20 | 34.41589686 |
| HPS5         | -0.344018739 | 2.500041841  | -9.581605136 | 4.57E-20 | 34.41380584 |
| COL14A1      | -0.909523998 | 2.402671111  | -9.577943834 | 4.71E-20 | 34.38142133 |
| BGN          | -0.809673366 | 7.739243305  | -9.576231666 | 4.77E-20 | 34.37037592 |
| HSE1P18      | -0.294096452 | 0.387314037  | -9.568876553 | 5.07E-20 | 34.31095693 |
| ZNF438       | -0.260566385 | 1.860056067  | -9.562653511 | 5.33E-20 | 34.26070803 |
| HGF          | -0.543849491 | 1.164598581  | -9.557452228 | 5.56E-20 | 34.21872674 |
| AC004988.1   | -0.223403289 | 0.305594278  | -9.551556935 | 5.84E-20 | 34.17116288 |
| LY75         | -0.472521259 | 1.42664543  | -9.550435939 | 5.89E-20 | 34.16212086 |
| ATP10D       | -0.448003058 | 1.802894082  | -9.549020369 | 5.96E-20 | 34.15070381 |
| RBP5         | -0.543105786 | 2.132902353  | -9.546016901 | 6.11E-20 | 34.12648372 |
| PALLD        | -0.675562862 | 3.78977013   | -9.540595949 | 6.38E-20 | 34.08248884 |
| BOC          | -0.338469263 | 0.699309025  | -9.538602455 | 6.49E-20 | 34.06671579 |
| IGKV1-17     | -1.588020877 | 5.147790133  | -9.531819946 | 6.86E-20 | 34.01206997 |
| DKK2         | -0.41315463 | 0.867001521  | -9.531789257 | 6.86E-20 | 34.01182277 |
| SNAI3        | -0.37411504 | 1.196324265  | -9.523892291 | 7.31E-20 | 33.94823185 |
| SLC36A1      | -0.40275497 | 1.76331748   | -9.51625070  | 7.78E-20 | 33.88652578 |
| LRRC15       | -1.043456885 | 1.965662088  | -9.515370012 | 7.84E-20 | 33.87964637 |
| Gene   | Score 1 | Score 2  | Score 3  | Score 4  | Score 5  |
|--------|---------|----------|---------|---------|---------|
| CPNE5  | -0.6308 | 1.6113   | -9.5119 | 8.06E-20 | 33.8520 |
| TBX21  | -0.5325 | 0.8441   | -9.5094 | 8.23E-20 | 33.8316 |
| TRG2   | -0.2267 | 0.2744   | -9.5058 | 8.47E-20 | 33.8028 |
| GZMB   | -0.9983 | 2.6588   | -9.4984 | 9.00E-20 | 33.7433 |
| ERAP1  | -0.5292 | 3.4635   | -9.4923 | 9.45E-20 | 33.6975 |
| APOE   | -1.0387 | 6.7605   | -9.4917 | 9.50E-20 | 33.6896 |
| AQP9   | -0.7820 | 1.9751   | -9.4924 | 9.55E-20 | 33.6852 |
| PRNP   | -0.5902 | 5.0460   | -9.4859 | 9.45E-20 | 33.6438 |
| ARRB2  | -0.4159 | 3.7674   | -9.4834 | 1.02E-19 | 33.6295 |
| TDO2   | -0.5001 | 0.9563   | -9.4804 | 1.04E-19 | 33.5989 |
| MYD88  | -0.3916 | 4.2552   | -9.4780 | 1.06E-19 | 33.5795 |
| TRBV7-4| -0.2265 | 0.2413   | -9.4763 | 1.08E-19 | 33.5658 |
| DACT1  | -0.5978 | 1.5457   | -9.4719 | 1.12E-19 | 33.5307 |
| PRR33  | -0.3638 | 0.5565   | -9.4670 | 1.16E-19 | 33.4913 |
| GPR171 | -0.7801 | 1.5582   | -9.4669 | 1.16E-19 | 33.4903 |
| POPODC2| -0.2487 | 0.7796   | -9.4624 | 1.21E-19 | 33.4542 |
| AIM1   | -0.8036 | 2.8013   | -9.4596 | 1.23E-19 | 33.4316 |
| UBASH3B| -0.4807 | 1.2355   | -9.4539 | 1.29E-19 | 33.3864 |
| MEI1   | -0.5421 | 1.1666   | -9.4523 | 1.31E-19 | 33.3734 |
| ANTXR2 | -0.5554 | 2.8025   | -9.4471 | 1.36E-19 | 33.3321 |
| TBC1D4 | -0.4601 | 2.2173   | -9.4418 | 1.42E-19 | 33.2889 |
| FSTL1  | -0.7393 | 4.5497   | -9.4406 | 1.44E-19 | 33.2796 |
| CNR2   | -0.2456 | 0.2604   | -9.4387 | 1.46E-19 | 33.2646 |
| FRMD4A | -0.2848 | 0.9676   | -9.4290 | 1.58E-19 | 33.1874 |
| MS4A14 | -0.3439 | 0.6304   | -9.4228 | 1.66E-19 | 33.1375 |
| FDCSP  | -1.2956 | 2.1519   | -9.4209 | 1.68E-19 | 33.1228 |
| EHD4   | -0.3517 | 3.4206   | -9.4147 | 1.77E-19 | 33.0721 |
| FMOD   | -0.7808 | 4.2897   | -9.4145 | 1.78E-19 | 33.0709 |
| C7     | -1.2929 | 3.3338   | -9.4096 | 1.85E-19 | 33.0318 |
| CYP2U1 | -0.3605 | 1.3536   | -9.4077 | 1.88E-19 | 33.0166 |
| ADPRH  | -0.4217 | 2.0656   | -9.4039 | 1.93E-19 | 32.9866 |
| LOX    | -0.7851 | 2.8019   | -9.4024 | 1.96E-19 | 32.9740 |
| IGHV3-11| -1.5761| 5.6120   | -9.4002 | 1.99E-19 | 32.9571 |
| Gene          | Value1   | Value2   | Value3   | Value4   | Value5   |
|---------------|----------|----------|----------|----------|----------|
| IGKV1-16      | -1.622625001 | 5.226345518 | -9.40009757 | 1.99E-19 | 32.95614314 |
| CCL8          | -0.889733813 | 1.779238365 | -9.398710586 | 2.02E-19 | 32.94507901 |
| SYK           | -0.554106651 | 3.668057635 | -9.397835048 | 2.03E-19 | 32.93809533 |
| ARL11         | -0.432348273 | 1.186614678 | -9.385774004 | 2.24E-19 | 32.84193277 |
| APOC2         | -0.229789205 | 0.288309972 | -9.385679185 | 2.24E-19 | 32.84118166 |
| RP11-367G6.3  | -0.267547206 | 0.448843379 | -9.384969545 | 2.25E-19 | 32.8355267 |
| RARRES3       | -1.066022628 | 5.58951916 | -9.381280953 | 2.32E-19 | 32.80613794 |
| GRB2          | -0.30239842 | 3.668057635 | -9.37655905 | 2.41E-19 | 32.76850304 |
| MDGA1         | -0.262124867 | 0.504562383 | -9.363187061 | 2.69E-19 | 32.66209227 |
| ADAMTS4       | -0.685387489 | 2.080117743 | -9.352269506 | 2.93E-19 | 32.57527157 |
| SEMA7A        | -0.726437948 | 2.22858878 | -9.347381224 | 3.05E-19 | 32.53642099 |
| IGHV1-46      | -1.541506584 | 5.135128196 | -9.334773394 | 3.37E-19 | 32.43628347 |
| MFGE8         | -0.591306862 | 3.806780019 | -9.330600038 | 3.49E-19 | 32.40315751 |
| CLIC4         | -0.538665509 | 5.263832815 | -9.322793586 | 3.71E-19 | 32.3412177 |
| MAN1A1        | -0.667977772 | 3.7409453 | -9.31663092 | 3.75E-19 | 32.3325554 |
| SAMD9         | -0.683632509 | 2.897173043 | -9.319211693 | 3.82E-19 | 32.31281551 |
| EMR1          | -0.411186483 | 0.596545188 | -9.314042203 | 3.98E-19 | 32.27183228 |
| RAB30         | -0.344580714 | 1.170024762 | -9.30853405 | 4.16E-19 | 32.22841431 |
| RAB31         | -0.645371821 | 4.551032279 | -9.303977689 | 4.32E-19 | 32.19208756 |
| BLK           | -0.507680895 | 0.67372006 | -9.301503604 | 4.41E-19 | 32.17249378 |
| ADAMDEC1      | -1.003783943 | 2.030153491 | -9.294107463 | 4.67E-19 | 32.11394109 |
| MIR8071-2     | -1.033268788 | 2.157624204 | -9.290871231 | 4.80E-19 | 32.0833126 |
| RP5-887A10.1  | -0.481552951 | 0.627145263 | -9.286089646 | 4.98E-19 | 32.0505038 |
| TMEM86A       | -0.450842583 | 1.794879523 | -9.285097149 | 5.02E-19 | 32.0426538 |
| FCHSD2        | -0.365469055 | 3.227744795 | -9.28002028 | 5.23E-19 | 32.00250834 |
| SUSD6         | -0.458669323 | 4.096146632 | -9.276298719 | 5.39E-19 | 31.97294086 |
| TIMP3         | -0.641584956 | 1.599424562 | -9.267768105 | 5.77E-19 | 31.90568765 |
| TRAJ18        | -0.338107627 | 0.33080972 | -9.26581993 | 5.86E-19 | 31.89030804 |
| HIC1          | -0.341488567 | 1.08726563 | -9.265242507 | 5.89E-19 | 31.88574075 |
| ELTD1         | -0.504038853 | 2.417425386 | -9.262236882 | 6.03E-19 | 31.86200764 |
| TXNIP         | -0.784445734 | 7.393150241 | -9.25820975 | 6.23E-19 | 31.83021087 |
| ZC3H12D       | -0.324373786 | 0.716105116 | -9.248794818 | 6.72E-19 | 31.75593244 |
| IGJ           | -1.398818621 | 7.581180213 | -9.245322451 | 6.90E-19 | 31.72854865 |
| Gene          | Value1  | Value2  | Value3  | Value4  | Value5  |
|--------------|---------|---------|---------|---------|---------|
| ZBTB32       | -0.246032268 | 0.490899064 | -9.245010368 | 6.92E-19 | 31.72608786 |
| IGKV3-20     | -1.545560476 | 8.219514906 | -9.242985763 | 7.03E-19 | 31.71012514 |
| PRR5L        | -0.537862337 | 1.596697735 | -9.233017927 | 7.62E-19 | 31.63157112 |
| CILP         | -0.975939632 | 1.655022014 | -9.220278709 | 8.43E-19 | 31.53126369 |
| TDRD6        | -0.220458427 | 0.382465596 | -9.195909091 | 8.73E-19 | 31.49688028 |
| AMPD3        | -0.409481979 | 2.121242974 | -9.196816096 | 1.02E-18 | 31.34677766 |
| RP5-839B4.8  | -0.529479621 | 0.634632996 | -9.196286566 | 1.02E-18 | 31.32879047 |
| DEF6         | -0.501751454 | 3.493148156 | -9.204124549 | 9.79E-19 | 31.3828925 |
| AC006369.2   | -0.259899434 | 0.390615444 | -9.213354869 | 8.91E-19 | 31.3807808 |
| PPAPDC3      | -0.220999334 | 0.537799517 | -9.215809785 | 9.89E-19 | 31.4688028 |
| TGFBR2       | -0.629413127 | 5.115464015 | -9.220278709 | 8.43E-19 | 31.53126369 |
| ZFP36L2      | -0.552632004 | 5.478852515 | -9.220278709 | 8.43E-19 | 31.53126369 |
| SIGLEC17P    | -0.334376944 | 0.550428402 | -9.195909091 | 8.73E-19 | 31.49688028 |
| GPR25        | -0.322070478 | 0.488948412 | -9.19051129  | 1.07E-18 | 31.29725985 |
| CLEC4D       | -0.208358790 | 0.28417806  | -9.186845513 | 1.10E-18 | 31.26847997 |
| CRISPLD2     | -0.62509675  | 2.867547709 | -9.183409722 | 1.13E-18 | 31.2415131 |
| PDE1B        | -0.31389469  | 0.636763857 | -9.179189431 | 1.17E-18 | 31.20839862 |
| CD97         | -0.626331933 | 4.405893729 | -9.174137564 | 1.22E-18 | 31.16877339 |
| SMAP2        | -0.459522857 | 4.36055050  | -9.173729905 | 1.22E-18 | 31.16557652 |
| PRCP         | -0.415403746 | 2.983249146 | -9.172949121 | 1.23E-18 | 31.15945388 |
| OR52K3P      | -0.23885254 | 0.341107587 | -9.17139067 | 1.24E-18 | 31.14667272 |
| TEMEM47      | -0.601143855 | 2.347069502 | -9.159243026 | 1.37E-18 | 31.05203552 |
| FHL1         | -0.822146552 | 2.327469277 | -9.156192574 | 1.40E-18 | 31.02814382 |
| KIAA1551     | -0.530338937 | 3.054164052 | -9.155124239 | 1.41E-18 | 31.01977776 |
| C2orf15      | 0.404538549  | 1.599493651 | 9.153872582  | 1.43E-18 | 31.0097701 |
| SOD2         | -0.635737613 | 4.45038248  | -9.151850245 | 1.45E-18 | 30.99414367 |
| BST1         | -0.508166841 | 1.550710225 | -9.151787703 | 1.45E-18 | 30.99365405 |
| LEF1         | -0.459604428 | 1.513862101 | -9.150458219 | 1.47E-18 | 30.98324661 |
| VNN2         | -0.651279157 | 1.500440978 | -9.149887568 | 1.47E-18 | 30.97877979 |
| KIRREL       | -0.617440933 | 2.652272349 | -9.149730066 | 1.48E-18 | 30.97754697 |
| CD7          | -0.748310548 | 2.321695931 | -9.148840225 | 1.49E-18 | 30.97058213 |
| STAC         | -0.614137697 | 1.191693366 | -9.144329382 | 1.54E-18 | 30.93528292 |
| IGHV4-28     | -1.255193032 | 3.391826377 | -9.142879919 | 1.56E-18 | 30.9239429 |
| Gene   | Log2FC | Fold Change | p-Value | q-Value | Benjamini-Hochberg FDR | Adjusted p-Value |
|--------|--------|-------------|---------|---------|------------------------|-----------------|
| IL17RA | -0.349535292 | 2.400904641 | -9.140710182 | 1.59E-18 | 30.90697013 |
| ANGPTL2 | -0.756432645 | 3.71184311 | -9.129928342 | 1.73E-18 | 30.82267172 |
| CEP85L | -0.239394844 | 0.764088599 | -9.129683405 | 1.73E-18 | 30.7662935 |
| PDLIM2 | -0.36877322 | 3.432403727 | -9.12712459 | 1.83E-18 | 30.70125035 |
| MDFIC | 0.323753986 | 2.395952033 | 9.121752885 | 1.84E-18 | 30.68025222 |
| MT3A | -0.606360747 | 3.432403727 | -9.12712459 | 1.83E-18 | 30.70125035 |
| RP11-162J8.3 | -0.374032957 | 0.538080834 | -9.120816563 | 1.86E-18 | 30.70125035 |
| MOB3A | -0.406046592 | 3.839633111 | -9.117571897 | 1.90E-18 | 30.72614928 |
| CD82 | -0.675601381 | 4.135838525 | -9.117464562 | 1.91E-18 | 30.72614928 |
| HLA-DPA3 | -0.49570117 | 0.780502065 | -9.115837649 | 1.93E-18 | 30.72614928 |
| RAP1A | -0.336661194 | 3.889413949 | -9.114382492 | 1.95E-18 | 30.70125035 |
| VGLL3 | -0.57618045 | 1.345328568 | -9.111921388 | 1.99E-18 | 30.68025222 |
| RP11-10J5.1 | -0.266990405 | 0.302771023 | -9.110364422 | 2.02E-18 | 30.66989107 |
| OSM | -0.718091873 | 1.68218966 | -9.105425494 | 2.10E-18 | 30.6313584 |
| WDFY4 | -0.594409742 | 1.426172975 | -9.10482509 | 2.11E-18 | 30.62667516 |
| HLA-A | -0.687638845 | 9.054537051 | -9.104263287 | 2.11E-18 | 30.62667516 |
| MMP25 | -0.373412484 | 0.886238979 | -9.09466145 | 2.28E-18 | 30.54740383 |
| ATP6V0D2 | -0.543404802 | 0.935117018 | -9.089180034 | 2.38E-18 | 30.50471929 |
| LGALS1 | -0.812992718 | 7.414032437 | -9.067857859 | 2.82E-18 | 30.33875057 |
| MYL9 | -0.686804909 | 5.629867171 | -9.066568087 | 2.85E-18 | 30.32872011 |
| CXCR2P1 | -0.533331083 | 0.711078187 | -9.066011546 | 2.86E-18 | 30.32439225 |
| XAF1 | -0.552944902 | 1.468228656 | -9.062236242 | 2.95E-18 | 30.29501118 |
| GPR155 | -0.327606728 | 1.187921416 | -9.060262246 | 2.98E-18 | 30.28252406 |
| PLN | -0.750919287 | 1.961324669 | -9.055779332 | 3.10E-18 | 30.24485678 |
| ICAM2 | -0.463619488 | 2.106937473 | -9.054722651 | 3.12E-18 | 30.23664681 |
| IGLV3-25 | -1.585882326 | 6.76882315 | -9.053984824 | 3.14E-18 | 30.23091461 |
| RP11-354E11.2 | -0.201596112 | 0.320268149 | -9.052637475 | 3.18E-18 | 30.22044789 |
| SLC2A6 | -0.51812476 | 1.851175963 | -9.051665666 | 3.20E-18 | 30.21290618 |
| PIEZO2 | -0.386607481 | 0.798618231 | -9.046765884 | 3.33E-18 | 30.17484811 |
| RILPL2 | -0.394644961 | 2.322696159 | -9.046379615 | 3.34E-18 | 30.1784902 |
| IL34 | -0.531142338 | 1.381258105 | -9.044015626 | 3.40E-18 | 30.15349642 |
| IQGAP2 | -0.624820558 | 1.778291889 | -9.040415961 | 3.50E-18 | 30.12557378 |
| CALCRL | -0.609169597 | 2.409375228 | -9.038772805 | 3.54E-18 | 30.11280656 |
| Gene          | Z-score  | p-value  | Fold Change | FDR  |
|--------------|----------|----------|-------------|------|
| SULF2        | -0.721354597 | 2.985754156 | -9.037981841 | 3.56E-18 |
| COL3A1       | -1.095973057  | 7.763295993  | -9.036461592  | 3.61E-18 |
| IFIT3        | -0.758320952  | 0.989936511  | 9.028580724   | 3.84E-18 |
| C2CD4D       | 0.471738041   | 0.989936511  | 9.028580724   | 3.84E-18 |
| LAYN         | -0.580463365  | 1.85334928   | 9.028580724   | 3.84E-18 |
| RP11-1070N10.3 | -0.272334677 | 0.416461428   | 9.028580724   | 3.84E-18 |
| IGHV4-55     | -1.096587697  | 2.70655197   | 9.028580724   | 3.84E-18 |
| ROR2         | -0.499243011  | 1.256701151  | 9.028580724   | 3.84E-18 |
| CPQ          | -0.589940155  | 3.241924195  | 9.028580724   | 3.84E-18 |
| HSPB2        | -0.240967772  | 0.58269042   | 9.028580724   | 3.84E-18 |
| STAT1        | -0.694226856  | 5.791779806  | 9.028580724   | 3.84E-18 |
| ST6GALNAC5   | -0.554322398  | 1.272279918  | 9.028580724   | 3.84E-18 |
| MGAT1        | -0.351007168  | 5.042170445  | 9.028580724   | 3.84E-18 |
| TMOD2        | -0.307511584  | 0.977298041  | 9.028580724   | 3.84E-18 |
| 4-Sep        | -0.311958024  | 1.059351209  | 9.028580724   | 3.84E-18 |
| RP11-290F5.1 | -0.492382789  | 0.828216223  | 9.028580724   | 3.84E-18 |
| MYO1G        | -0.857839071  | 2.258768667  | 9.028580724   | 3.84E-18 |
| ADRB2        | -0.523242803  | 1.219024521  | 9.028580724   | 3.84E-18 |
| TRIM21       | -0.425598373  | 3.909086832  | 9.028580724   | 3.84E-18 |
| HDC          | -0.437016269  | 0.727942159  | 9.028580724   | 3.84E-18 |
| GSTP1        | 0.625801141   | 8.373886316  | 9.028580724   | 3.84E-18 |
| TEK          | -0.530287362  | 1.551339261  | 9.028580724   | 3.84E-18 |
| CCL21        | -1.110580746  | 5.03131305   | 9.028580724   | 3.84E-18 |
| DNM3OS       | -0.310338788  | 0.681165152  | 9.028580724   | 3.84E-18 |
| CADM3        | -0.499183482  | 0.746160435  | 9.028580724   | 3.84E-18 |
| IGKV4-1      | -1.598674677  | 7.87172045   | 9.028580724   | 3.84E-18 |
| IGLV1-44     | -1.495894012  | 6.539242101  | 9.028580724   | 3.84E-18 |
| ANTXR1       | -0.800582409  | 4.085353289  | 9.028580724   | 3.84E-18 |
| SCN7A        | -0.642714516  | 1.327527865  | 9.028580724   | 3.84E-18 |
| ZFPM2        | -0.315894702  | 0.763060055  | 9.028580724   | 3.84E-18 |
| C10orf10     | -0.733699229  | 5.022904015  | 9.028580724   | 3.84E-18 |
| TMEM255A     | -0.453601224  | 0.812340457  | 9.028580724   | 3.84E-18 |
| PPP3CC       | -0.319016151  | 2.501584561  | 9.028580724   | 3.84E-18 |
| Gene       | Gene ID     | log2FoldChange | adj.Pvalue | -log10(Pvalue) |
|------------|-------------|----------------|------------|---------------|
| EDNRA      |             | -0.649157749  | 7.01E-18   | 29.43816378   |
| CDH23      |             | -0.212544059  | 7.06E-18   | 29.43181461   |
| IFI30      |             | -0.356369178  | 7.11E-18   | 29.42408219   |
| FLVCR2     |             | -0.493709894  | 7.29E-18   | 29.39585852   |
| LAG3       |             | -0.699096463  | 7.43E-18   | 29.38157476   |
| ARPC2      |             | -0.296613398  | 7.51E-18   | 29.37043987   |
| IFI30      |             | -0.212544059  | 7.06E-18   | 29.43181461   |
| FLVCR2     |             | -0.493709894  | 7.29E-18   | 29.39585852   |
| LAG3       |             | -0.699096463  | 7.43E-18   | 29.38157476   |
| ARPC2      |             | -0.296613398  | 7.51E-18   | 29.37043987   |
| IFI30      |             | -0.212544059  | 7.06E-18   | 29.43181461   |
| FLVCR2     |             | -0.493709894  | 7.29E-18   | 29.39585852   |
| LAG3       |             | -0.699096463  | 7.43E-18   | 29.38157476   |
| ARPC2      |             | -0.296613398  | 7.51E-18   | 29.37043987   |
| IFI30      |             | -0.212544059  | 7.06E-18   | 29.43181461   |
| FLVCR2     |             | -0.493709894  | 7.29E-18   | 29.39585852   |
| LAG3       |             | -0.699096463  | 7.43E-18   | 29.38157476   |
| ARPC2      |             | -0.296613398  | 7.51E-18   | 29.37043987   |
| Gene   | Value1  | Value2  | Value3  | Value4  | Value5  |
|--------|---------|---------|---------|---------|---------|
| ADAM8  | -0.803220753 | 3.637088646 | -8.874175395 | 1.28E-17 | 28.84400605 |
| MYCT1  | -0.453801109  | 1.756216244  | -8.8719503   | 1.30E-17 | 28.82696944 |
| STARD13 | -0.345359849  | 1.340263373  | -8.871596336 | 1.31E-17 | 28.82425958 |
| XCR1   | -0.274215214  | 0.426071933  | -8.870850007 | 1.31E-17 | 28.81854611 |
| EGR3   | -0.568904723  | 1.296852672  | -8.866247991 | 1.36E-17 | 28.78332344 |
| TCEAL7 | -0.395644403  | 1.044050727  | -8.865948058 | 1.36E-17 | 28.78102829 |
| HEPH   | -0.565427947  | 1.70698783   | -8.863769907 | 1.39E-17 | 28.7643623 |
| IGLV5-45 | -1.406606761 | 3.43564786  | -8.860865816 | 1.42E-17 | 28.69675663 |
| GDC4   | -0.275820857  | 0.547714856  | -8.85739886  | 1.50E-17 | 28.68765663 |
| SELP   | -0.772971029  | 1.646633424  | -8.847676241 | 1.57E-17 | 28.64131485 |
| VPREB3 | -0.62299723   | 3.348670308  | -8.844780597 | 1.61E-17 | 28.61919287 |
| IFI27L2 | -0.742491704 | 3.782556216 | -8.840401702 | 1.66E-17 | 28.58574922 |
| THY1   | -0.53197022   | 1.766181665  | -8.83656253  | 1.71E-17 | 28.55643548 |
| CDHGC3 | -0.365420299  | 1.486971653  | -8.830815187 | 1.79E-17 | 28.51257463 |
| NFATC1 | -0.236997808  | 0.724257919  | -8.82574933  | 1.86E-17 | 28.47392991 |
| BHLHE40-AS1 | -0.251749024 | 0.259266697 | -8.822375902 | 1.91E-17 | 28.44820478 |
| UBA7   | -0.576291013  | 3.715606243  | -8.815357903 | 2.02E-17 | 28.3947098 |
| TRBV10-2 | -0.561742824 | 2.059210948  | -8.815255258 | 2.02E-17 | 28.3932762 |
| FPR2   | -0.409383739  | 0.693017429  | -8.802099634 | 1.94E-17 | 28.43085044 |
| POU2AF1 | -0.799068854  | 1.843487774  | -8.813537903 | 2.02E-17 | 28.3947098 |
| CHRD1 | -0.926629745  | 2.059210948  | -8.815255258 | 2.02E-17 | 28.3932762 |
| NAP1L3  | -0.350022477  | 0.779791389  | -8.814785502 | 2.03E-17 | 28.39034802 |
| CTB-133G6.1 | -0.259194767 | 0.439032731  | -8.81323975  | 2.05E-17 | 28.37857019 |
| IGKH1OR15-9 | -1.039498341 | 1.869621663 | -8.812352313 | 2.06E-17 | 28.37160336 |
| IFNG   | -0.498484967  | 0.64945375   | -8.811082893 | 2.08E-17 | 28.36213857 |
| CX3CR1 | -0.561742824  | 1.061182075  | -8.805088409 | 2.18E-17 | 28.31648609 |
| OAF    | -0.538108098  | 2.610019936  | -8.804814785 | 2.19E-17 | 28.31440278 |
| IGKV1-8 | -1.217551519  | 2.696335054  | -8.804171926 | 2.20E-17 | 28.30950838 |
| IFIT2  | -0.648001986  | 2.735900001  | -8.803868723 | 2.20E-17 | 28.30720004 |
| MIR4420 | -0.360383252  | 0.470141568  | -8.803512621 | 2.21E-17 | 28.30448905 |
| INHBA  | -0.789822205  | 2.572738481  | -8.802573968 | 2.23E-17 | 28.29734349 |
| CORO1C | -0.453936185  | 4.396154248  | -8.799233132 | 2.28E-17 | 28.27191566 |
| RN7SL138P | -0.455129231 | 1.333916632  | -8.798878183 | 2.29E-17 | 28.26921448 |
| Gene      | Value1  | Value2  | Value3  | Value4   | Value5    |
|-----------|---------|---------|---------|----------|-----------|
| CLEC11A   | -0.582791903 | 2.957706488 | -8.798503176 | 2.30E-17 | 28.26636075 |
| WISP2     | -0.583010452  | 1.487883947  | -8.798062722 | 2.31E-17 | 28.26300908  |
| LBH       | -0.628210044  | 4.882661548  | -8.787506846 | 2.50E-17 | 28.18270211  |
| MSL3      | -0.269388403  | 2.489590219  | -8.783140011 | 2.59E-17 | 28.14952614  |
| IGLV2-18  | -1.319626528  | 3.131092959  | -8.781717767 | 2.61E-17 | 28.13871773  |
|IGHV3-15   | -1.47080913   | 6.131669183  | -8.779594138 | 2.66E-17 | 28.12581483  |
| CD70      | -0.452757885  | 0.720067714  | -8.776963773 | 2.71E-17 | 28.11077324  |
| CMTM3     | -0.63354878   | 4.105859201  | -8.775034534 | 2.75E-17 | 28.0801365    |
| TCF21     | -0.560190327  | 1.043550589  | -8.761642684 | 3.05E-17 | 27.98629264  |
| TIMD4     | -0.35255406   | 0.542346034  | -8.759000183 | 3.10E-17 | 27.97004023  |
| CYYR1     | -0.469737751  | 2.134276368  | -8.749332655 | 3.35E-17 | 27.8929072   |
| ABCA1     | -0.547748346  | 2.46034595   | -8.748270087 | 3.38E-17 | 27.8849995   |
| EMR2      | -0.467300225  | 1.144070321  | -8.745795428 | 3.45E-17 | 27.86614868  |
| RP11-325F22.2 | -0.349140356 | 0.640079468  | -8.741212291 | 3.57E-17 | 27.8334139   |
| RP11-147L13.15 | -0.334721783 | 1.158179054  | -8.738601719 | 3.64E-17 | 27.81166306  |
| HAAO      | -0.378270783  | 1.41021256   | -8.73574813  | 3.67E-17 | 27.80368587  |
| DKK3      | -0.724346916  | 3.781646654  | -8.737276968 | 3.68E-17 | 27.80163289  |
| TUBB6     | -0.651264045  | 3.496517526  | -8.73557108  | 3.73E-17 | 27.7871864   |
| LINC00968 | -0.217459215  | 0.295092179  | -8.734659868 | 3.75E-17 | 27.78182116  |
| IGHV3-74  | -1.398523877  | 5.157605044  | -8.731837693 | 3.83E-17 | 27.7604186   |
| CAPZB     | -0.290593582  | 6.198047285  | -8.731770832 | 3.84E-17 | 27.7595589    |
| FCRL5     | -0.555667466  | 0.969651241  | -8.730930062 | 3.86E-17 | 27.75359364  |
| IRF2      | -0.285341594  | 3.912772461  | -8.729687278 | 3.90E-17 | 27.7441901   |
| GRTF1     | 0.514167189   | 2.420469478  | -8.726860891 | 3.98E-17 | 27.7280785   |
| IGKJ5     | -1.28337377   | 3.17825593   | -8.726771346 | 3.99E-17 | 27.72213051  |
| TRBV5-5   | -0.266261928  | 0.307700138  | -8.719462207 | 4.22E-17 | 27.66685924  |
| PDE5A     | -0.402911717  | 1.499547199  | -8.719408012 | 4.22E-17 | 27.6664955   |
| KIAA0040  | -0.426962164  | 3.403113069  | -8.715406421 | 4.35E-17 | 27.63620429  |
| NLRP1     | -0.537216603  | 1.691184755  | -8.711873218 | 4.47E-17 | 27.60950773  |
| ADAM12    | -0.740926145  | 1.642979554  | -8.710032277 | 4.53E-17 | 27.59560845  |
| IFNAR2    | -0.435042032  | 2.929156363  | -8.709830533 | 4.54E-17 | 27.59407701  |
| Gene       | Score_1 | Score_2 | Score_3 | Score_4 | Score_5 |
|------------|---------|---------|---------|---------|---------|
| AC093818.1 | -0.252  | 0.692   | -8.70   | 4.89E-17| 27.52   |
| CCL11      | -0.707  | 1.331   | -8.69   | 4.98E-17| 27.50   |
| FAM65B     | -0.563  | 1.484   | -8.69   | 5.03E-17| 27.49   |
| SERPINF1   | -0.856  | 5.195   | -8.69   | 5.04E-17| 27.49   |
| IGHV3-52   | -0.75   | 1.271   | -8.69   | 5.17E-17| 27.46   |
| AKAP7      | -0.30   | 1.113   | -8.69   | 5.22E-17| 27.45   |
| NOL7       | 0.284   | 4.789   | 8.68    | 5.55E-17| 27.39   |
| IGHV3-30   | -1.426  | 5.999   | -8.67   | 5.81E-17| 27.35   |
| NELFA      | 0.326   | 2.916   | 8.67    | 5.82E-17| 27.34   |
| IFIH1      | -0.57   | 3.103   | -8.67   | 5.83E-17| 27.34   |
| LHFP       | -0.53   | 3.580   | -8.67   | 6.08E-17| 27.30   |
| IGHV3-71   | -0.83   | 1.501   | -8.67   | 6.10E-17| 27.30   |
| DYSF       | -0.56   | 2.381   | -8.67   | 6.16E-17| 27.29   |
| IGHV2-5    | -1.399  | 3.681   | -8.66   | 6.21E-17| 27.28   |
| IGHGP      | -1.36   | 5.359   | -8.66   | 6.58E-17| 27.22   |
| RASGRP1    | -0.54   | 1.774   | -8.66   | 6.78E-17| 27.19   |
| RP11-812E19.9 | -0.81   | 1.292   | -8.66   | 6.79E-17| 27.19   |
| TOX2       | -0.52   | 1.548   | -8.66   | 6.84E-17| 27.19   |
| SLFN11     | -0.66   | 2.963   | -8.66   | 6.87E-17| 27.18   |
| SNORA14    | -0.24   | 0.283   | -8.66   | 7.03E-17| 27.16   |
| GGT5       | -0.64   | 2.864   | -8.66   | 7.07E-17| 27.16   |
| ERG        | -0.41   | 1.56   | -8.65   | 7.20E-17| 27.13   |
| IGLV4-69   | -1.52   | 5.346   | -8.65   | 7.25E-17| 27.13   |
| PARP15     | -0.53   | 1.178   | -8.64   | 7.66E-17| 27.08   |
| FCER2      | -0.42   | 0.461   | -8.64   | 7.73E-17| 27.07   |
| EPS15      | -0.26   | 3.475   | -8.64   | 7.80E-17| 27.06   |
| KLF12      | -0.34   | 0.978   | -8.64   | 7.90E-17| 27.05   |
| GPR114     | -0.43   | 0.870   | -8.63   | 8.29E-17| 26.99   |
| THBS1      | -0.88   | 4.945   | -8.62   | 8.39E-17| 26.98   |
| SPNS3      | -0.28   | 0.597   | -8.61   | 9.09E-17| 26.90   |
| IGHV5-51   | -1.51   | 6.940   | -8.61   | 9.19E-17| 26.89   |
| IGKV1-6    | -1.40   | 4.877   | -8.61   | 9.30E-17| 26.88   |
| SH3BGR1    | -0.49   | 6.834   | -8.61   | 9.40E-17| 26.87   |
| Gene    | TSPAN18   | JAK1     | IGHJ3    | COL16A1   | RAB3L1    | IGHG2    | WBP1L    | BATF2    | C1QTNF7   | IGHV3-49  | TNFRSF13B | LACC1    | PTPLAD2   | ZNF671    | STK17A    | TMEM204   | SIGLEC6   | LINC01010 | DNASE2B   | SFXN3     | IGLV7-43  | PLCB2     | IGKV1-58  | RASGRF2   |
|---------|-----------|----------|----------|-----------|-----------|----------|----------|----------|-----------|-----------|-----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|         | -0.507466047 | 1.805689228 | -8.608188282 | 9.85E-17 | 26.82962522 |
| TSPAN18 |           |          |          |           |           |          |          |          |           |           |           |          |           |           |           |           |           |           |           |           |           |           |           |
| JAK1    | -0.396366378 | 4.790311635 | -8.607324815 | 9.91E-17 | 26.82315946 |
| IGHJ3   | -1.3688047  | 4.687091322 | -8.60448502  | 1.01E-16 | 26.80189808 |
| COL16A1 | -0.630977904 | 2.597346976 | -8.598118242 | 1.06E-16 | 26.75424925 |
| RAB3L1  | -0.481835284 | 2.13293801  | -8.59097691  | 1.12E-16 | 26.70083475 |
| IGHG2   | -1.409363581 | 8.358242596 | -8.58575594  | 1.17E-16 | 26.66298984 |
| WBP1L   | -0.291530781 | 4.232170892 | -8.582207885 | 1.20E-16 | 26.63284805 |
| BATF2   | -0.645360858 | 2.510891835 | -8.58188096  | 1.20E-16 | 26.63529069 |
| C1QTNF7 | -0.385132002 | 0.623440732 | -8.573883305 | 1.28E-16 | 26.57311453 |
| IGHV3-49| -1.492464695 | 4.997599723 | -8.573485952 | 1.28E-16 | 26.57014783 |
| TNFRSF13B | -0.350097494 | 0.469742739 | -8.570380262 | 1.31E-16 | 26.54696374 |
| LACC1   | -0.336012521 | 1.564885774 | -8.568244855 | 1.33E-16 | 26.53535215 |
| PTPLAD2 | -0.403027054 | 1.589863564 | -8.568736222 | 1.33E-16 | 26.53504719 |
| ZNF671  | -0.384108281 | 1.445668683 | -8.567520706 | 1.34E-16 | 26.52562256 |
| STK17A  | -0.527556834 | 3.516856833 | -8.563135855 | 1.39E-16 | 26.49290819 |
| TMEM204 | -0.505076499 | 3.108937485 | -8.561551165 | 1.40E-16 | 26.48108824 |
| SIGLEC6 | -0.322106813 | 0.441016225 | -8.559023433 | 1.43E-16 | 26.46221461 |
| LINC01010 | -0.208244107 | 0.253815796 | -8.558445087 | 1.44E-16 | 26.45792521 |
| DNASE2B | -0.341486735 | 0.430380479 | -8.547591788 | 1.56E-16 | 26.37703766 |
| SFXN3   | -0.521866485 | 3.809318287 | -8.547028226 | 1.56E-16 | 26.37283962 |
| IGLV7-43| -1.342481187 | 3.596739445 | -8.546998473 | 1.57E-16 | 26.37261799 |
| PLCB2   | -0.593682699 | 2.332803177 | -8.538233228 | 1.67E-16 | 26.30735133 |
| IGKV1-58| -1.476302343 | 7.513218889 | -8.537602908 | 1.68E-16 | 26.30265985 |
| TRBJ2-2 | -0.508122434 | 0.756247127 | -8.533058299 | 1.74E-16 | 26.26884181 |
| MMRN1   | -0.542894446 | 1.202834488 | -8.531830619 | 1.75E-16 | 26.25970851 |
| CYBRD1  | -0.77938713  | 4.402023262 | -8.531767684 | 1.76E-16 | 26.25924033 |
| CYB561A3| -0.270635732 | 2.223114169 | -8.525423538 | 1.84E-16 | 26.21205901 |
| FXYD5   | -0.700604563 | 4.984268702 | -8.524425838 | 1.86E-16 | 26.20464151 |
| IGLV3-9 | -1.476325141 | 4.1060755  | -8.522276111 | 1.89E-16 | 26.18866135 |
| FAT4    | -0.388734277 | 0.895779932 | -8.52185071 | 1.89E-16 | 26.18549945 |
| NFKB1   | -0.361906139 | 3.594661121 | -8.518287074 | 1.94E-16 | 26.15901646 |
| IGHV1-58| -1.34491618  | 2.931870102 | -8.512959123 | 2.02E-16 | 26.11943744 |
| RASGRF2 | -0.333979987 | 0.916629086 | -8.507463125 | 2.11E-16 | 26.0786294 |
| Gene       | Value1  | Value2  | Value3  | Value4  | Value5  |
|------------|---------|---------|---------|---------|---------|
| CASP4      | -0.4549| 3.5955 | -8.5069| 2.12E-16| 26.07   |
| CYR61      | -0.8453| 5.8638 | -8.5062| 2.13E-16| 26.06   |
| MZB1       | -1.1165| 3.7100 | -8.5019| 2.20E-16| 26.03   |
| LIMD2      | -0.5846| 2.8035 | -8.5010| 2.21E-16| 26.03   |
| NAGK       | -0.2953| 3.0073 | -8.4941| 2.33E-16| 25.98   |
| SDC3       | -0.5531| 4.0636 | -8.4859| 2.48E-16| 25.91   |
| GHRL       | -0.2329| 0.4907 | -8.4819| 2.56E-16| 25.88   |
| MYO9B      | -0.4064| 3.4741 | -8.4866| 2.69E-16| 25.83   |
| IGLV3-19   | -1.5511| 7.0324 | -8.4773| 2.58E-16| 25.88   |
| NFKBIE     | -0.4510| 3.4982 | -8.4708| 2.78E-16| 25.81   |
| TRAJ3      | -0.4012| 0.4675 | -8.4749| 2.69E-16| 25.83   |
| RNF166     | -0.3856| 2.5683 | -8.4707| 2.86E-16| 25.81   |
| SH2D2A     | -0.5030| 1.8582 | -8.4644| 2.87E-16| 25.77   |
| COL1A2     | -0.9546| 6.9425 | -8.4658| 2.88E-16| 25.76   |
| CAMK1      | -0.3291| 1.5888 | -8.4614| 2.98E-16| 25.74   |
| GPT2       | 0.8219 | 3.2183 | -8.4607| 2.99E-16| 25.73   |
| IGHV3OR16-9| -0.8361| 1.5238 | -8.4566| 3.09E-16| 25.70   |
| MAP3K7CL   | -0.3045| 1.1860 | -8.4554| 3.12E-16| 25.69   |
| IGKV3D-20  | -1.2706| 3.7079 | -8.4545| 3.14E-16| 25.68   |
| FLNA       | -0.7229| 6.5331 | -8.4536| 3.16E-16| 25.67   |
| MICB       | -0.5576| 2.1975 | -8.4529| 3.18E-16| 25.67   |
| CLCN2      | 0.3506 | 1.5687 | -8.4452| 3.26E-16| 25.64   |
| FAM129C    | -0.2770| 0.3178 | -8.4480| 3.29E-16| 25.63   |
| CTD-2547L24.3| -0.3146| 0.6540 | -8.4471| 3.32E-16| 25.63   |
| IGHV3OR16-13| -0.8537| 1.5257 | -8.4429| 3.42E-16| 25.60   |
| ABCB6      | 0.4790 | 1.4194 | 8.4414 | 3.46E-16| 25.59   |
| CCDC102B   | -0.3127| 1.1305 | -8.4379| 3.55E-16| 25.56   |
| IGHV3-23   | -1.3661| 7.2937 | -8.4378| 3.56E-16| 25.56   |
| SLC16A2    | -0.5620| 2.1004 | -8.4333| 3.68E-16| 25.53   |
| SFRP4      | -1.0551| 3.7029 | -8.4318| 3.72E-16| 25.51   |
| MARCKS     | -0.5579| 5.1677 | -8.4291| 3.79E-16| 25.49   |
| LPPR4      | -0.3207| 0.6438 | -8.4279| 3.83E-16| 25.49   |
| STK17B     | -0.4651| 3.7963 | -8.4210| 4.03E-16| 25.44   |
| Gene          | Value1       | Value2       | Value3       | Value4       | Value5       |
|--------------|--------------|--------------|--------------|--------------|--------------|
| IGKV1D-8     | -1.030965704 | 2.2155764    | -8.420197437 | 4.06E-16     | 25.43331599  |
| PML          | -0.446299209 | 3.121560256  | -8.418609056 | 4.10E-16     | 25.42161635  |
| PRICKLE1     | -0.331130783 | 0.839084231  | -8.416870657 | 4.16E-16     | 25.40881362  |
| CSTA         | -0.768761895 | 2.436526355  | -8.415677003 | 4.20E-16     | 25.4002389   |
| ST8SIA1      | -0.217640128 | 0.384124052  | -8.415383616 | 4.20E-16     | 25.39786362  |
| RP11-493L12.4| -0.250265662 | 0.497319582  | -8.414572816 | 4.23E-16     | 25.39189382  |
| SGIP1        | -0.218337325 | 0.526450034  | -8.414278581 | 4.24E-16     | 25.38792752  |
| CSDC2        | -0.423120922 | 1.166155692  | -8.4142968594| 4.29E-16     | 25.37809584  |
| CSTA         | -0.540083354 | 1.276501098  | -8.411196668 | 4.34E-16     | 25.36704036  |
| NAGA         | -0.33160728  | 3.521826936  | -8.406464595 | 4.49E-16     | 25.33221787  |
| RP4-753P9.3  | -0.276888907 | 0.656045004  | -8.405070073 | 4.54E-16     | 25.32195864  |
| SGCA         | -0.540083354 | 1.276501098  | -8.411196668 | 4.34E-16     | 25.36704036  |
| NELL2        | -0.423120922 | 1.166155692  | -8.4142968594| 4.29E-16     | 25.37809584  |
| TRIM14       | -0.463760023 | 3.349234894  | -8.398892805 | 4.75E-16     | 25.276568    |
| IGLV3-21     | -1.52900637  | 6.938294511  | -8.39838434  | 4.77E-16     | 25.2727907   |
| OGN          | -0.664159674 | 1.076054391  | -8.393948095 | 4.93E-16     | 25.24018206  |
| MSN          | -0.557198479 | 6.65509101   | -8.38888173  | 5.12E-16     | 25.20295755  |
| IFNG-AS1     | -0.234986914 | 0.269211396  | -8.388072685 | 5.15E-16     | 25.19701476  |
| GNH8         | -0.289646624 | 0.570038459  | -8.387605342 | 5.17E-16     | 25.19358211  |
| SYDE1        | -0.443829094 | 1.977474895  | -8.387272963 | 5.18E-16     | 25.19114086  |
| IGHV3-53     | -1.242672052 | 3.817034788  | -8.384407703 | 5.30E-16     | 25.1700992   |
| RP11-1166P10.8| -0.773451766 | 1.417071545  | -8.383530335 | 5.33E-16     | 25.16365716  |
| LRCH1        | -0.328440531 | 1.917515515  | -8.381119744 | 5.43E-16     | 25.14596005  |
| IGKV3-11     | -1.361963814 | 7.398602328  | -8.380563608 | 5.45E-16     | 25.14187777  |
| FAM180A      | -0.309097946 | 0.50472794   | -8.379383891 | 5.50E-16     | 25.13321883  |
| POSTN        | -0.938125724 | 5.170943028  | -8.377779557 | 5.56E-16     | 25.12144473  |
| RP5-1171I10.5| -0.564327249 | 1.05879529   | -8.371041871 | 5.85E-16     | 25.0720158   |
| PKD2         | -0.432065937 | 2.720347509  | -8.363719021 | 6.18E-16     | 25.01832792  |
| IGHV1-18     | -1.474356417 | 6.698011097  | -8.362467122 | 6.24E-16     | 25.0091531   |
| CHI3L1       | -1.189857097 | 4.75611068   | -8.361745016 | 6.27E-16     | 25.00386145  |
| Gene     | Value1  | Value2   | Value3   | Value4  | Value5 |
|----------|---------|----------|----------|---------|--------|
| SNRK     | -0.304969114 | 2.626466489 | -8.360469502 | 6.33E-16 | 24.99451522 |
| CXorf36  | -0.386865145  | 1.468766938  | -8.360078149  | 6.35E-16 | 24.99164783 |
| ARRDC4   | -0.55734032   | 2.587174287  | -8.358158589  | 6.44E-16 | 24.9778272 |
| STON1    | -0.306253854  | 0.993318617  | -8.358079601  | 6.54E-16 | 24.9628153 |
| Pnoc     | -0.43690411   | 0.783830586  | -8.357954144  | 6.75E-16 | 24.93098503 |
| KIF17    | -0.220587068  | 0.524520653  | -8.351795414  | 6.54E-16 | 24.928153 |
| APOL2    | -0.513067275  | 4.012739463  | -8.34979061    | 7.07E-16 | 24.88476661 |
| AC093850.2 | -0.762479466 | 1.553824472  | -8.343979061  | 7.15E-16 | 24.76906503 |
| BLNK     | -0.454611356  | 1.964393013  | -8.342861327  | 7.21E-16 | 24.8656025 |
| TIE1     | -0.483328978  | 2.168745449  | -8.339274296  | 7.41E-16 | 24.8396628 |
| SEMA4D   | -0.373025055  | 2.213151206  | -8.32965927   | 7.95E-16 | 24.76906503 |
| OPTN     | -0.453191924  | 4.021046773  | -8.325999737  | 8.17E-16 | 24.74234768 |
| RP11-29B21.2 | -0.664544023 | 1.005106752  | -8.32593852   | 8.18E-16 | 24.7419037 |
| IGKV1OR2-6 | -0.950433379 | 1.631007386  | -8.315211465  | 8.85E-16 | 24.6635683 |
| KLRK1    | -0.204680977  | 0.281212963  | -8.31491115   | 8.87E-16 | 24.66139491 |
| ECSCR    | -0.410536731  | 1.820942135  | -8.31457392   | 8.99E-16 | 24.65893422 |
| CTC-231O11.1 | -0.438762043 | 0.742242418  | -8.31251243   | 9.03E-16 | 24.64389365 |
| PLAU     | -1.096301873  | 5.224925673  | -8.304737203  | 9.57E-16 | 24.58719118 |
| KIAA0125 | -0.397545761  | 0.610643098  | -8.300670325  | 9.86E-16 | 24.55754859 |
| ESPR1    | 0.473191924   | 4.608076534  | -8.30549918   | 9.87E-16 | 24.55667113 |
| RP11-284N8.3 | -0.742260844 | 1.785661742  | -8.295766962  | 1.02E-15 | 24.52182363 |
| HAS2     | -0.538651164  | 1.259289852  | -8.29329234   | 1.04E-15 | 24.50552528 |
| RP11-701P16.5 | -0.294663606 | 0.482641536  | -8.29227194   | 1.04E-15 | 24.50114093 |
| TRIM69   | -0.404636854  | 2.245347895  | -8.291963823  | 1.05E-15 | 24.4912568 |
| IGHV3-19 | -0.776099518  | 1.440938506  | -8.291556281  | 1.05E-15 | 24.49115816 |
| UBE2E2   | -0.448122863  | 2.768413082  | -8.289648228  | 1.07E-15 | 24.4772661 |
| ADAMTS12 | -0.605479818  | 1.727622255  | -8.28793871    | 1.08E-15 | 24.4652231 |
| PEAK1    | -0.324522756  | 1.476397178  | -8.284252816  | 1.11E-15 | 24.43799655 |
| FAM101B  | -0.463906011  | 2.472448032  | -8.281799396  | 1.13E-15 | 24.42014616 |
| GPBAR1   | -0.211545404  | 0.448479227  | -8.281637367  | 1.13E-15 | 24.41896742 |
| TEMEM51  | -0.488138839  | 3.686530539  | -8.281185161  | 1.14E-15 | 24.41567778 |
| IGLV2-8  | -1.377190577  | 5.073618769  | -8.279287978  | 1.15E-15 | 24.40187794 |
| IGHV1-69-2 | -1.52373526  | 5.411171313  | -8.277938455  | 1.17E-15 | 24.39203697 |
| Gene     | Value1     | Value2     | Value3     | Value4     | Value5     |
|----------|------------|------------|------------|------------|------------|
| DERL3    | -0.813677608 | 3.229290976 | -8.277056943 | 1.17E-15 | 24.38565276 |
| IGLV1-40 | -1.380703991 | 7.35433828  | -8.275820188 | 1.18E-15 | 24.3766599  |
| IGLV2-23 | -1.418137043 | 6.910224757 | -8.274372264 | 1.20E-15 | 24.36613285 |
| AC116366.6| -0.28773932  | 0.69501904  | -8.265526851 | 1.28E-15 | 24.30185307 |
| CCDC50   | -0.381750003 | 2.678159575 | -8.252757992 | 1.33E-15 | 24.2637699  |
| PCOLCE   | -0.693237316 | 4.233827759 | -8.250355807 | 1.40E-15 | 24.20915343 |
| RP11-322E11.5 | -0.240244756 | 0.502714233 | -8.250219038 | 1.43E-15 | 24.19172614 |
| LOXL3    | -0.359618169 | 1.403773809 | -8.250219038 | 1.43E-15 | 24.19073402 |
| EPHB6    | -0.549182626 | 4.233827759 | -8.250355807 | 1.40E-15 | 24.20915343 |
| UBE2J1   | -0.334883400 | 4.581435676 | -8.24957836  | 1.51E-15 | 24.13807976 |
| MRPS9    | 0.277316584  | 3.749057493 | -8.24957836  | 1.51E-15 | 24.13807976 |
| IGKV1D-39| -1.037176918 | 1.546556878 | -8.241939796 | 1.52E-15 | 24.1307003  |
| IGKC     | -1.38663924  | 9.800009284 | -8.23682669  | 1.58E-15 | 24.09364743 |
| ARSI     | -0.401458373 | 1.092528748 | -8.230538238 | 1.60E-15 | 24.08318421 |
| TNFSF10  | -0.789010841 | 4.998384518 | -8.241939796 | 1.52E-15 | 24.1307003  |
| IGHV3-48 | -1.314900226 | 4.070129306 | -8.229201966 | 1.67E-15 | 24.03842619 |
| IGHV3-62 | -0.608446984 | 0.968547732 | -8.229414486 | 1.67E-15 | 24.03801276 |
| KAL1     | -0.692287979 | 2.195919861 | -8.222411632 | 1.75E-15 | 23.98928063 |
| SNAI2    | -0.68787085  | 2.197608678 | -8.219769742 | 1.79E-15 | 23.97016807 |
| IGKV3-15 | -1.357209432 | 6.252110455 | -8.218902436 | 1.80E-15 | 23.96389464 |
| ITGB2-AS1| -0.647898467 | 1.649482668 | -8.218302697 | 1.81E-15 | 23.95955687 |
| KCNN3    | -0.296342864 | 0.65986059  | -8.213347404 | 1.88E-15 | 23.92372563 |
| CTSC     | -0.536083631 | 4.759645842 | -8.205807342 | 1.94E-15 | 23.86923571 |
| NABP1    | -0.446949109 | 1.762011078 | -8.204497743 | 2.00E-15 | 23.85977548 |
| TEMEM109 | -0.335081311 | 5.599316459 | -8.20428345  | 2.00E-15 | 23.85826295 |
| RP11-212I21.2 | -0.425160646 | 0.652921324 | -8.20405709 | 2.01E-15 | 23.85659257 |
| IGHJ2    | -1.129250028 | 3.682427187 | -8.203785411 | 2.01E-15 | 23.85463025 |
| MIR7848  | -0.346651861 | 0.503076676 | -8.199992836 | 2.07E-15 | 23.8272419 |
| ANKRD22  | -0.888423009 | 3.116451731 | -8.198675738 | 2.09E-15 | 23.81773264 |
| MCEMP1   | -0.920622651 | 1.909999811 | -8.19859837  | 2.09E-15 | 23.81718467 |
| RP11-588K22.2 | -0.541653406 | 2.557531678 | -8.195917894 | 2.13E-15 | 23.79782515 |
| IGHV3-21 | -1.413949947 | 6.001235921 | -8.191702132 | 2.20E-15 | 23.76740355 |
| RP13-297E16.4 | -0.363256388 | 0.616098414 | -8.190390998 | 2.22E-15 | 23.75794464 |
| Gene     | Score 1 | Score 2 | Score 3 | Score 4 | Score 5 |
|----------|---------|---------|---------|---------|---------|
| PCDH18   | -0.34298  | 1.106975697 | -8.187620981 | 2.26E-15 | 23.73796468 |
| LY96     | -0.604606563 | 4.29792439 | -8.187177788 | 2.27E-15 | 23.73476844 |
| CCL14    | -0.300991013 | 0.45038176 | -8.185628032 | 2.28E-15 | 23.73008273 |
| IGHV4-59 | -1.41323774 | 5.91809139 | -8.18199938 | 2.32E-15 | 23.71329602 |
| KLF6     | -0.525163684 | 4.696365534 | -8.184199938 | 2.36E-15 | 23.69836999 |
| THSD1    | -0.336864443 | 1.13588363 | -8.187147062 | 2.37E-15 | 23.66890331 |
| UNC5B    | -0.538371915 | 2.775198525 | -8.187040822 | 2.43E-15 | 23.66359347 |
| NKD2     | -0.620283733 | 2.046591947 | -8.18040822 | 2.44E-15 | 23.66359347 |
| TBC1D9   | -0.412135058 | 3.147635553 | -8.177303889 | 2.45E-15 | 23.66359347 |
| AC002331.1 | -0.548567521 | 2.897584816 | -8.176842902 | 2.45E-15 | 23.66027209 |
| PCED1B   | -0.575541742 | 3.15044362 | -8.17451405 | 2.49E-15 | 23.64368955 |
| GNA13    | -0.371193148 | 4.007687789 | -8.170404646 | 2.51E-15 | 23.61389985 |
| MOB3C    | -0.307867889 | 2.334232517 | -8.16436071 | 2.68E-15 | 23.57028773 |
| NIPSNAP1 | 0.429159732 | 2.334232517 | -8.16436071 | 2.68E-15 | 23.57028773 |
| IGKV2-28 | -0.912543251 | 1.450863733 | -8.156954677 | 2.83E-15 | 23.51711487 |
| COL5A1   | -0.860430815 | 4.519873493 | -8.155789459 | 2.86E-15 | 23.50873577 |
| IL33     | -0.80051527 | 2.694142473 | -8.15321873 | 2.91E-15 | 23.49024644 |
| GUCY1A3  | -0.540509725 | 2.426389121 | -8.152740519 | 2.92E-15 | 23.48681514 |
| MAN1C1   | -0.411444915 | 1.366922895 | -8.150266154 | 2.97E-15 | 23.46903006 |
| SSC5D    | -0.563448351 | 1.952513399 | -8.149048154 | 3.00E-15 | 23.46027692 |
| FUOM     | -0.599146062 | 2.693214638 | -8.14862404 | 3.01E-15 | 23.45894211 |
| CASP10   | -0.411277226 | 2.53639909 | -8.148844946 | 3.01E-15 | 23.45881666 |
| RANBP3L  | -0.212771918 | 0.328856201 | -8.146860632 | 3.05E-15 | 23.44455884 |
| TRBJ2-4  | -0.363911448 | 0.386474991 | -8.145358866 | 3.08E-15 | 23.4337342 |
| TCF7     | -0.387023869 | 1.323904071 | -8.14519455 | 3.09E-15 | 23.43205016 |
| PELP1    | 0.360751478 | 3.510591526 | 8.1444162 | 3.10E-15 | 23.42718114 |
| IGLV3-27 | -1.433450898 | 3.68276424 | -8.143146304 | 3.13E-15 | 23.41787748 |
| OTUD1    | -0.354435522 | 2.77847665 | -8.14163365 | 3.17E-15 | 23.40586854 |
| TNFAIP2  | -0.812930455 | 4.475802347 | -8.132203575 | 3.39E-15 | 23.33932599 |
| IQSEC1   | -0.382867916 | 3.201094117 | -8.131988593 | 3.40E-15 | 23.33778358 |
| FXYD6    | -0.469448758 | 1.955537095 | -8.128538816 | 3.48E-15 | 23.31303687 |
| IGHV2-70 | -1.3784528 | 3.939345455 | -8.126045376 | 3.55E-15 | 23.29515538 |
| TAOK3    | -0.32179955 | 2.467825307 | -8.11953876 | 3.72E-15 | 23.2485135 |
| Gene      | Score 1 | Score 2 | Score 3  | Score 4  | Score 5  |
|-----------|---------|---------|----------|----------|----------|
| NECAB3    | 0.5517  | 3.4587  | 8.1164   | 3.80E-15 | 23.22    |
| IGKV2-30  | -1.1342 | 2.7349  | -8.1144  | 3.86E-15 | 23.21    |
| IGLV2-11  | -1.3965 | 6.2903  | -8.1103  | 3.96E-15 | 23.18    |
| IGHV3-72  | -1.1857 | 3.4001  | -8.1042  | 4.12E-15 | 23.14    |
| CCDC170   | -0.5641 | 1.0472  | -8.0957  | 4.67E-15 | 23.12    |
| IGLV1-51  | -1.4004 | 1.9899  | -8.0835  | 4.76E-15 | 23.10    |
| RIC1      | -0.3149 | 0.4762  | -8.0883  | 4.86E-15 | 23.10    |
| AMPD1     | -0.3367 | 0.3545  | -8.0818  | 4.93E-15 | 23.10    |
| IGKV3-63  | -0.6924 | 1.3881  | -8.0787  | 4.97E-15 | 23.10    |
| GNL3      | 0.3545  | 4.7141  | 8.0841   | 4.81E-15 | 22.95    |
| AHNAK     | -0.7602 | 4.7492  | -8.0806  | 4.93E-15 | 22.97    |
| IL1R1     | -0.5817 | 4.2860  | -8.0772  | 5.06E-15 | 22.94    |
| SPATA20P1 | -0.4245 | 1.0275  | -8.0771  | 5.06E-15 | 22.94    |
| EPB41L3   | -0.5125 | 1.6683  | -8.0769  | 5.07E-15 | 22.94    |
| KCNJ5     | -0.5154 | 1.0197  | -8.0752  | 5.13E-15 | 22.93    |
| TRAJ5     | -0.2947 | 0.2961  | -8.0744  | 5.17E-15 | 22.92    |
| IGLV3-1   | -1.3881 | 6.1047  | -8.0741  | 5.17E-15 | 22.92    |
| F2R       | -0.5511 | 3.5159  | -8.0600  | 5.73E-15 | 22.82    |
| SULF1     | -0.9263 | 3.7754  | -8.0554  | 5.92E-15 | 22.79    |
| AC104699.1| -0.5358 | 0.9768  | -8.0535  | 6.00E-15 | 22.78    |
| CD300E    | -0.4296 | 0.9357  | -8.0531  | 6.02E-15 | 22.77    |
| PARVB     | -0.3864 | 2.0661  | -8.0463  | 6.32E-15 | 22.72    |
| IGSF21    | -0.3414 | 0.6342  | -8.0431  | 6.47E-15 | 22.70    |
| LYST      | -0.3341 | 1.4678  | -8.0427  | 6.49E-15 | 22.70    |
| MOB3B     | -0.4239 | 1.5878  | -8.0427  | 6.49E-15 | 22.70    |
| IL18      | -0.6339 | 3.0480  | -8.0427  | 6.49E-15 | 22.70    |
| CREBRF    | -0.2977 | 1.6869  | -8.0354  | 6.84E-15 | 22.64    |
| CTB-416.2 | -0.3283 | 0.7513  | -8.0339  | 6.92E-15 | 22.63    |
| STX12     | -0.2603 | 4.1387  | -8.0322  | 7.00E-15 | 22.62    |
| RSAD2     | -0.6374 | 2.2252  | -8.0311  | 7.06E-15 | 22.62    |
| EFEMP2    | -0.5173 | 3.0417  | -8.0150  | 7.93E-15 | 22.50    |
| EBF1      | -0.2741 | 0.8011  | -8.0139  | 7.99E-15 | 22.49    |
| FGF2      | -0.3187 | 0.6190  | -8.0132  | 8.03E-15 | 22.49    |
| Gene       | Value 1  | Value 2 | Value 3  | Value 4  | Value 5 |
|------------|---------|---------|----------|----------|---------|
| RP11-455F5.5 | -0.30397368 | 0.647905577 | -8.010004228 | 8.22E-15 | 22.4676342 |
| IGHV4-31    | -1.380510223 | 4.502429463 | -8.008608389 | 8.30E-15 | 22.4577358 |
| TRBV23-1    | -0.248417332 | 0.315929569 | -8.003991029 | 8.58E-15 | 22.42500197 |
| IGKV3D-15   | -1.128697305 | 2.643628584 | -8.038534466 | 8.59E-15 | 22.42402682 |
| C1orf56     | 0.443923833 | 2.462260925 | 8.002660095  | 8.67E-15 | 22.41556927 |
| CRTAP       | -0.340326959 | 4.490812922 | -7.998064272 | 8.96E-15 | 22.38300674 |
| SLC11A1     | -0.568670755 | 2.061046224 | -7.993024688 | 9.33E-15 | 22.34731664 |
| ICA1        | 0.465609954 | 3.399141346 | 7.992438265  | 9.34E-15 | 22.34316474 |
| NR2F6       | 0.44427181  | 4.509760898 | 7.991491797  | 9.39E-15 | 22.33646421 |
| GRHL2       | 0.434987353 | 3.329382382 | 7.986090006  | 9.76E-15 | 22.29823391 |
| TNIP1       | -0.327951366 | 4.866018199 | -7.985196947 | 9.83E-15 | 22.29191535 |
| MR1         | -0.418825106 | 2.842700076 | -7.984590193 | 9.87E-15 | 22.28762276 |
| CCL3L3      | -0.489845027 | 1.184961467 | -7.982280118 | 1.00E-14 | 22.27128204 |
| CEACAM4     | -0.485952401 | 0.956090912 | -7.98160352  | 1.01E-14 | 22.26649669 |
| APLNR       | -0.558827598 | 2.037265003 | -7.977659028 | 1.04E-14 | 22.2386049 |
| TLR6        | -0.340345666 | 1.061327441 | -7.977244732 | 1.04E-14 | 22.235676 |
| IGHV3-66    | -1.136752158 | 3.174875698 | -7.976617735 | 1.05E-14 | 22.23124362 |
| MCTP1       | -0.3465538  | 1.085502288 | -7.9739838  | 1.07E-14 | 22.21262667 |
| IGLV1-50    | -0.764646184 | 1.444944143 | -7.973852223 | 1.07E-14 | 22.2116968 |
| IGKV1-12    | -1.033827759 | 2.524696461 | -7.972181684 | 1.08E-14 | 22.19989186 |
| VDR         | -0.567230199 | 3.31451585  | -7.965426426 | 1.13E-14 | 22.15217501 |
| BLOC1S4     | 0.33414388  | 3.58874651  | 7.960391922 | 1.17E-14 | 22.11663332 |
| SLFN12      | -0.376970247 | 1.565077131 | -7.955255963 | 1.22E-14 | 22.08039329 |
| IGLV8-61    | -1.472243991 | 4.680302606 | -7.94977867 | 1.27E-14 | 22.03964389 |
| AL359753.1  | -0.467071566 | 0.561670842 | -7.944129418 | 1.32E-14 | 22.00194495 |
| HMHA1       | -0.49777446  | 3.519660548 | -7.942868104 | 1.33E-14 | 21.99305735 |
| GBGT1       | -0.394373859 | 1.951603995 | -7.940858486 | 1.35E-14 | 21.97889921 |
| AC027319.1  | -0.284498412 | 0.395056589 | -7.940562606 | 1.35E-14 | 21.97681492 |
| ACKR1       | -0.850747375 | 2.339769333 | -7.939764164 | 1.36E-14 | 21.97119068 |
| IGLV1-47    | -1.336299727 | 6.286524819 | -7.938147253 | 1.38E-14 | 21.95980248 |
| U62631.5    | -0.261504716 | 0.325710052 | -7.937395121 | 1.38E-14 | 21.95450569 |
| LPCAT2      | -0.435393784 | 2.145992902 | -7.934799449 | 1.41E-14 | 21.93622898 |
| SCARF1      | -0.515251697 | 2.135993758 | -7.92862421 | 1.47E-14 | 21.89276636 |
| Gene      | Value1    | Value2    | Value3    | Value4    | Value5    |
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| ANO6     | -0.384712726 | 3.423577196 | -7.928312224 | 1.48E-14 | 21.89057124 |
| CNN1     | -0.63121618 | 2.230707894 | -7.9266229 | 1.50E-14 | 21.8786635 |
| GATA3    | -0.490992178 | 1.255220876 | -7.925512627 | 1.51E-14 | 21.8708763 |
| TPP1     | -0.365523132 | 5.621189734 | -7.925232472 | 1.51E-14 | 21.86890576 |
| HLA-H    | -0.703043411 | 5.173463758 | -7.921041893 | 1.56E-14 | 21.8394363 |
| PET117   | 0.316927313 | 2.38928623 | 7.919067219 | 1.58E-14 | 21.82555397 |
| MAP1LC3C | -0.627063903 | 5.621189734 | -7.912396819 | 1.65E-14 | 21.77974501 |
| FAM86JP  | 0.298842397 | 1.255220876 | -7.918097563 | 1.59E-14 | 21.76904688 |
| LYSMD2   | -0.366855777 | 2.700373478 | -7.912396819 | 1.65E-14 | 21.77974501 |
| IDS      | 0.316927313 | 2.38928623 | 7.919067219 | 1.58E-14 | 21.82555397 |
| HCG4P7   | -0.556140025 | 1.228420706 | -7.909370867 | 1.69E-14 | 21.75742571 |
| PRR16    | -0.324801461 | 4.045896941 | -7.908087059 | 1.71E-14 | 21.7484103 |
| SYNDIG1  | -0.479014544 | 0.93845185 | -7.905579468 | 1.74E-14 | 21.73002409 |
| FOXF1    | -0.446813135 | 1.6177577 | -7.901303562 | 1.79E-14 | 21.70079277 |
| NELFCD   | 0.351549304 | 3.909058052 | 7.897684337 | 1.84E-14 | 21.67540019 |
| IGHV3-13 | -1.291877127 | 3.321513136 | 7.891525906 | 1.90E-14 | 21.64362027 |
| CCDC88A  | -0.3975868185 | 1.744571964 | -7.891622511 | 1.92E-14 | 21.63289047 |
| RP4-575N6.4 | -0.228739389 | 0.526247243 | -7.891225085 | 1.92E-14 | 21.63010434 |
| DDX60    | -0.603285955 | 2.710334131 | -7.887717368 | 1.97E-14 | 21.60551834 |
| XXbac-BPG170G13.31 | -0.361077067 | 0.536045636 | -7.886636878 | 1.99E-14 | 21.59794257 |
| RCCD1    | 0.329394934 | 1.859633693 | 7.886299969 | 1.99E-14 | 21.59558603 |
| GPR176   | -0.514497431 | 1.578645806 | -7.878978002 | 2.10E-14 | 21.54430005 |
| TRGC2    | -0.442470897 | 0.899854865 | -7.87860781 | 2.11E-14 | 21.54170807 |
| CREBL2   | -0.341763882 | 4.195693339 | -7.878479622 | 2.11E-14 | 21.5401055 |
| ASPN     | -0.850875607 | 3.321437021 | -7.878167757 | 2.11E-14 | 21.53682705 |
| PLAC9    | -0.496087041 | 1.920139053 | -7.872894917 | 2.19E-14 | 21.50171987 |
| NIN      | -0.328162343 | 2.051387141 | -7.872187162 | 2.20E-14 | 21.4967674 |
| CPPED1   | -0.412446236 | 2.184640818 | -7.871884653 | 2.21E-14 | 21.49465073 |
| RP11-672A2.4 | -0.284226531 | 0.694079283 | -7.868657337 | 2.26E-14 | 21.4720729 |
| RP6-159A1.4 | -0.39963786 | 0.818708479 | -7.868045638 | 2.27E-14 | 21.46779435 |
| SHMT1    | 0.425148217 | 2.579675228 | 7.867738588 | 2.27E-14 | 21.46556478 |
| ARHGAP6  | -0.236779603 | 0.590655481 | -7.866694097 | 2.29E-14 | 21.45834188 |
| TBXAS1   | -0.476857807 | 2.406370313 | -7.861596502 | 2.38E-14 | 21.42270145 |
| Gene             | Value1   | Value2   | Value3   | Value4   | Value5   |
|------------------|----------|----------|----------|----------|----------|
| RTP4             | -0.62013195 | 2.332194852 | -7.861586537 | 2.38E-14 | 21.42263179 |
| IGKV6D-21        | -1.047634665 | 1.711752328 | -7.86131897 | 2.38E-14 | 21.42076157 |
| LIMS2            | -0.409521347 | 1.4767578 | -7.859171636 | 2.42E-14 | 21.40575402 |
| TMEM156          | -0.649317083 | 1.535652587 | -7.850079366 | 2.58E-14 | 21.34224425 |
| IGHV3-76         | -0.573764326 | 0.863099152 | -7.849560984 | 2.59E-14 | 21.33682506 |
| POLR2H           | 0.359064011 | 4.135644403 | 7.849510 | 2.59E-14 | 21.33756749 |
| RNF130           | -0.314339254 | 2.991706404 | -7.849409501 | 2.59E-14 | 21.3326912 |
| EMP1             | -0.629460449 | 3.971701714 | -7.849371792 | 2.59E-14 | 21.33756749 |
| IGKV1OR2-108     | -1.137422512 | 2.955180111 | -7.842947199 | 2.71E-14 | 21.29426592 |
| ZNF25            | -0.266996578 | 1.829493792 | -7.849409501 | 2.71E-14 | 21.26277897 |
| IGLL5            | -1.185543903 | 4.955561664 | -7.835671548 | 2.86E-14 | 21.2393242 |
| IGHV3OR16-10     | -0.527653324 | 0.780832525 | -7.832847144 | 2.91E-14 | 21.2203381 |
| CARD17           | -0.301083774 | 0.450677579 | -7.827979667 | 3.02E-14 | 21.18811602 |
| ALDH1A3          | -0.634398289 | 1.906411586 | -7.825815869 | 3.06E-14 | 21.17304342 |
| TXLNB            | -0.245709944 | 0.459263016 | -7.824971241 | 3.08E-14 | 21.16716079 |
| ARHGAP17         | -0.259544953 | 2.538141722 | -7.822427293 | 3.14E-14 | 21.14944578 |
| TIMP1            | -0.59611403 | 8.149015717 | -7.81975671 | 3.20E-14 | 21.13085378 |
| FRMD6            | -0.549663097 | 1.770623807 | -7.819443668 | 3.20E-14 | 21.12867478 |
| LIX1L            | -0.469238519 | 3.104227482 | -7.814545739 | 3.26E-14 | 21.09459043 |
| CTB-41I6.1       | -0.305610272 | 0.648074275 | -7.811840398 | 3.38E-14 | 21.0757713 |
| CPXM1            | -0.707998242 | 2.522449324 | -7.808294268 | 3.47E-14 | 21.0511109 |
| CTSG             | -0.497229889 | 0.802820448 | -7.805499166 | 3.53E-14 | 21.03167979 |
| PACSIN3          | 0.534110487 | 3.692956634 | 7.805269406 | 3.54E-14 | 21.03008276 |
| IGHV3-7          | -1.024699442 | 2.633123373 | -7.804969333 | 3.55E-14 | 21.02784136 |
| PATL2            | -0.276583336 | 0.599487897 | -7.80490717 | 3.55E-14 | 21.02756498 |
| FOXP4-AS1        | 0.361044626 | 0.723826747 | 7.804091236 | 3.57E-14 | 21.02189404 |
| HERC5            | -0.479594093 | 1.753825875 | -7.802724307 | 3.60E-14 | 21.01239459 |
| IGHV6-1          | -1.036460283 | 2.234489475 | -7.801026784 | 3.65E-14 | 21.00059948 |
| RP11-B1H14.2     | -0.255822115 | 0.4052953 | -7.797476197 | 3.74E-14 | 20.975935 |
| RGS16            | -0.673570685 | 3.607519848 | -7.790227785 | 3.94E-14 | 20.92561047 |
| SAMD4A           | -0.455588285 | 1.621179163 | -7.786985437 | 4.03E-14 | 20.90310498 |
| IGHV3-60         | -0.628071994 | 1.144276962 | -7.78637153 | 4.05E-14 | 20.89882167 |
| Gene       | Value1 | Value2 | Value3 | Value4 | Value5 |
|------------|--------|--------|--------|--------|--------|
| PPME1      | 0.301038672 | 3.236911903 | 7.786171642 | 4.05E-14 | 20.8974653 |
| PRR36      | 0.664010992  | 2.408827372  | 7.78522909  | 4.08E-14 | 20.8908379 |
| COL5A2     | -0.823679444 | 4.468301001  | -7.783914711 | 4.12E-14 | 20.8810964 |
| IGGLC3     | -1.302600987 | 1.782613824  | -7.778672672 | 4.27E-14 | 20.8468098 |
| IRAK3      | -0.56698684  | 3.08944945   | 7.778156805 | 4.29E-14 | 20.8418846 |
| C8orf82    | 0.424950795  | 3.089844945  | 7.778156805 | 4.29E-14 | 20.8418846 |
| FAM83H     | 0.524903651  | 4.529521739  | 7.775148495 | 4.38E-14 | 20.82103471 |
| GNLY       | -0.812856397 | 2.077198126  | -7.772857933 | 4.45E-14 | 20.8051634 |
| PFDN6      | 0.362807807  | 3.776352151  | 7.772289595 | 4.47E-14 | 20.80122595 |
| NALCN      | -0.217615716 | 0.454276144  | -7.769954532 | 4.54E-14 | 20.78505099 |
| MCOLN1     | -0.309714503 | 2.901718274  | -7.769868045 | 4.54E-14 | 20.78445197 |
| ANXA5      | -0.352340011 | 6.849056826  | -7.69445231  | 4.56E-14 | 20.78157205 |
| EXOC3L4    | -0.396780402 | 0.480488031  | -7.69372435  | 4.56E-14 | 20.7810194 |
| SMO2       | -0.733382491 | 2.563337974  | -7.761823866 | 4.81E-14 | 20.72875961 |
| HAMP       | -0.355734842 | 0.604658912  | -7.617969698 | 4.81E-14 | 20.72859235 |
| RP11-876N24.3 | -0.581113435 | 1.739577158  | -7.760949598 | 4.84E-14 | 20.7227095 |
| ETV7       | -0.561860468 | 2.462385349  | -7.760708179 | 4.85E-14 | 20.72103892 |
| WARS       | -0.665801627 | 5.347515951  | -7.758136111 | 4.91E-14 | 20.70793029 |
| IGKV3-7    | -0.997636036 | 2.537371793  | -7.756750484 | 4.98E-14 | 20.69368313 |
| CDC42SE2   | -0.335376346 | 4.07142576   | -7.755459705 | 5.03E-14 | 20.66473055 |
| EPCAM      | 0.513936347  | 7.474375776  | 7.75477447  | 5.05E-14 | 20.6799159 |
| RP11-731F5.2 | -0.360498939 | 0.56926547  | -7.750745267 | 5.20E-14 | 20.65213299 |
| NXPE3      | -0.360380263 | 1.541184641  | -7.750343564 | 5.21E-14 | 20.64935616 |
| HERC3      | -0.324714183 | 1.937077734  | -7.749004322 | 5.26E-14 | 20.64009931 |
| KLRC1      | -0.240256873 | 0.353738271  | -7.748249427 | 5.29E-14 | 20.63488201 |
| IGHV1-2    | -1.428782294 | 5.501475189  | -7.74663353  | 5.35E-14 | 20.62371543 |
| NDN        | -0.603663435 | 3.083997359  | -7.746578703 | 5.35E-14 | 20.62336258 |
| HSPA12B    | -0.378989297 | 1.445757488  | -7.740380213 | 5.59E-14 | 20.58051938 |
| CARD9      | -0.323820134 | 0.906922925  | -7.738201071 | 5.68E-14 | 20.56547294 |
| IGHV1OR15-2 | -0.995875223 | 2.068588134  | -7.737486553 | 5.71E-14 | 20.56054009 |
| CTGF       | -0.765903155 | 5.978259232  | -7.736905731 | 5.73E-14 | 20.55653051 |
| KIAA1549   | 0.429497364  | 1.366539593  | 7.735803327  | 5.77E-14 | 20.54892095 |
| HMCN1      | -0.498810476 | 1.384531265  | -7.734212443 | 5.84E-14 | 20.53794106 |
| Gene       | Value1 | Value2 | Value3 | Value4 | Value5 |
|------------|--------|--------|--------|--------|--------|
| IGHV2-26   | -1.343645183 | 3.944115228 | -7.729850789 | 6.02E-14 | 20.50784708 |
| IGLC2      | -1.23842727 | 8.878279629 | -7.72715179 | 6.13E-14 | 20.48925491 |
| CCDC58     | 0.38865046 | 3.091445414 | 7.72502959 | 6.22E-14 | 20.47581388 |
| SGK1       | -0.575250139 | 3.351611877 | -7.72372567 | 6.28E-14 | 20.46566558 |
| IGKV1OR22-5 | -0.591315409 | 0.896715882 | -7.72208501 | 6.35E-14 | 20.4558392 |
| IGKV1-9    | -1.34182777 | 5.597203232 | -7.71965237 | 6.47E-14 | 20.44575334 |
| TBC1D30    | 0.40472138 | 1.751956931 | 7.717665508 | 6.56E-14 | 20.4384325 |
| SRPX       | -0.619228789 | 2.090651983 | -7.717593774 | 6.56E-14 | 20.4334903 |
| AC103563.5 | -0.897228723 | 1.545412412 | -7.717323515 | 6.57E-14 | 20.42148709 |
| SETDB2     | -0.252694106 | 1.687340972 | -7.715633437 | 6.65E-14 | 20.40984453 |
| AAED1      | -0.307924366 | 2.604763145 | -7.717593774 | 6.65E-14 | 20.40375334 |
| CEP120     | -0.281667341 | 2.167795237 | -7.712277495 | 6.81E-14 | 20.38673214 |
| RP11-686D22.7 | -0.38144872 | 1.646802602 | -7.711074361 | 6.87E-14 | 20.3784408 |
| GYLT1B     | 0.776538609 | 3.339040331 | 7.711062073 | 6.87E-14 | 20.37836347 |
| IGKV2D-29  | -1.32513414 | 3.59413077 | -7.707114464 | 7.03E-14 | 20.3553192 |
| EEF1E1     | 0.352626854 | 2.60692603 | -7.707029335 | 7.06E-14 | 20.35060388 |
| IGJH1      | -1.086229564 | 2.284912793 | -7.706094524 | 7.11E-14 | 20.34417687 |
| IGLV3-16   | -0.908825497 | 1.661395082 | -7.701081665 | 7.36E-14 | 20.30963563 |
| ENOX1      | -0.242284647 | 0.647606976 | -7.698305968 | 7.51E-14 | 20.2905951 |
| IGKV2OR22-4 | -0.754781 | 1.369212254 | -7.697772197 | 7.53E-14 | 20.28692498 |
| APOA1BP    | 0.447594123 | 5.967346612 | 7.695608786 | 7.65E-14 | 20.27205177 |
| HS3ST2     | -0.688159496 | 1.660598963 | -7.6943042 | 7.72E-14 | 20.26308448 |
| ROR1       | -0.405388263 | 1.141841167 | -7.69355764 | 7.76E-14 | 20.25795342 |
| MTMR6      | -0.326357914 | 2.914260647 | -7.693504606 | 7.76E-14 | 20.25788393 |
| SH3KB1P1   | -0.394936779 | 3.601661012 | -7.692546238 | 7.81E-14 | 20.25100272 |
| PITPNA-AS1 | 0.432757705 | 2.50283943 | 7.686711068 | 8.14E-14 | 20.21091554 |
| ATXN1      | -0.290319469 | 2.001144283 | -7.686578321 | 8.15E-14 | 20.21000387 |
| PPAP2B     | -0.405765664 | 3.664094795 | -7.686485377 | 8.15E-14 | 20.20936555 |
| ZBTB42     | 0.399009944 | 2.828784703 | 7.685829588 | 8.19E-14 | 20.20486193 |
| NOP58      | 0.298364114 | 4.540349317 | 7.684161469 | 8.29E-14 | 20.19340751 |
| CLIP3      | -0.494476442 | 2.257094676 | -7.680875241 | 8.48E-14 | 20.1708478 |
| AC007386.4 | -0.296146235 | 0.514801048 | -7.679950477 | 8.53E-14 | 20.16450073 |
| IGKV1-39   | -1.077890491 | 2.156685734 | -7.678730835 | 8.61E-14 | 20.15613071 |
| Gene   | Z-score | Log10(p-value) | Spearman Rho | Kendall Tau | Correlation Type |
|--------|---------|----------------|--------------|-------------|-----------------|
| ADH1B  | -1.0172 | 8.66E-14       | 20.15        |             |                 |
| IL4R   | -0.3912 | 8.66E-14       | 20.14        |             |                 |
| ANKRD39| 0.2404  | 8.69E-14       | 20.15        |             |                 |
| TSPAN33| -0.5371 | 8.78E-14       | 20.13        |             |                 |
| FAM124B| -0.2033 | 9.03E-14       | 20.11        |             |                 |
| PIK3R1 | -0.3823 | 9.40E-14       | 20.06        |             |                 |
| BDH1   | 0.4002  | 9.42E-14       | 20.07        |             |                 |
| CLIC2  | -0.6620 | 9.47E-14       | 20.06        |             |                 |
| RBBP8NL| 0.4016  | 1.01E-13       | 20.03        |             |                 |
| IGCL6  | -0.6942 | 9.94E-14       | 20.01        |             |                 |
| RNF125 | -0.3076 | 1.02E-13       | 19.99        |             |                 |
| LYVE1  | -0.5088 | 1.04E-13       | 19.98        |             |                 |
| IGHV4-34| -1.3175 | 1.03E-13       | 19.97        |             |                 |
| TRAJ4  | -0.2836 | 1.04E-13       | 19.96        |             |                 |
| PSTPIP2| -0.4268 | 1.05E-13       | 19.95        |             |                 |
| C1orf186| -0.4275 | 1.06E-13       | 19.94        |             |                 |
| TNFRSF14| -0.5157 | 1.07E-13       | 19.93        |             |                 |
| LL22NC03-88E1.18| -0.4266 | 1.10E-13       | 19.91        |             |                 |
| MYBPC2 | -0.3121 | 1.10E-13       | 19.91        |             |                 |
| HLA-DRB6| -1.0514 | 1.11E-13       | 19.90        |             |                 |
| IGHJ3P | -1.1632 | 1.11E-13       | 19.90        |             |                 |
| EIF4E3 | -0.3294 | 1.12E-13       | 19.89        |             |                 |
| IPO4   | 0.2662  | 1.15E-13       | 19.87        |             |                 |
| ADAMTS8| -0.5079 | 1.23E-13       | 19.80        |             |                 |
| TNFSF13| -0.4549 | 1.27E-13       | 19.77        |             |                 |
| IMP4   | 0.2583  | 1.29E-13       | 19.76        |             |                 |
| LINC00926| -0.4270 | 1.31E-13       | 19.74        |             |                 |
| VSTM4  | -0.4376 | 1.33E-13       | 19.72        |             |                 |
| CAP1   | -0.2752 | 1.35E-13       | 19.71        |             |                 |
| KCNMA1 | -0.3294 | 1.40E-13       | 19.68        |             |                 |
| TNFRSF13C| -0.5181 | 1.41E-13       | 19.67        |             |                 |
| DNASE2 | -0.2749 | 1.41E-13       | 19.66        |             |                 |
| SPIRE2 | 0.4743  | 1.42E-13       | 19.66        |             |                 |
| Gene         | MCC     | ITGA5    | NR1H3   | TM7SF2  | CD163L1 | IGHV3-33 | NAV3    | IGHV3OR16-8 | MYH11   | PAMR1   | RP11-148O21.2 | ATP10A | IGKV1-33 | COL15A1 | RTKN    | CCT3    | LNPEP   | IGHV3OR16-6 | IGKV1OR9-2 | PLB1    | PLCL1   | IGHV4-39 | MRPS18A | PYCARD   | EIF2B4   | WNT10A  | AL122127.2 | TNC     | IGKV1D-16 | RP11-212121.5 | HTRA3   | TRAJ1    | AP000892.6 |
|-------------|---------|----------|---------|---------|---------|----------|---------|-------------|---------|---------|--------------|---------|-----------|---------|---------|---------|---------|-------------|-------------|---------|---------|----------|---------|----------|---------|---------|-------------|---------|---------|----------|
| MCC         | -0.337137785 | 1.094417935 | -7.600866277 | 1.48E-13 | 19.62394168 |
| ITGA5       | -0.612427733 | 3.634919969 | -7.598580676 | 1.50E-13 | 19.6083848 |
| NR1H3       | -0.400975006 | 2.911003464 | -7.597287232 | 1.52E-13 | 19.59958264 |
| TM7SF2      | 0.554323103 | 3.413559498 | 7.591552294 | 1.58E-13 | 19.5605695 |
| CD163L1     | -0.399762338 | 1.032664452 | -7.590048745 | 1.59E-13 | 19.55034514 |
| IGHV3-33    | -1.33758912 | 5.228328903 | -7.589481989 | 1.60E-13 | 19.54830157 |
| NAV3        | -0.252282251 | 0.423626699 | -7.58944385 | 1.60E-13 | 19.5462386 |
| IGHV3OR16-8 | -0.69768906 | 1.290887309 | -7.58938599 | 1.60E-13 | 19.545166 |
| MYH11       | -0.767716546 | 2.42178609 | -7.589185806 | 1.60E-13 | 19.5447776 |
| PAMR1       | -0.413820627 | 1.172372354 | -7.581763538 | 1.69E-13 | 19.49403327 |
| RP11-148O21.2 | -0.38698345 | 0.533466401 | -7.581638185 | 1.69E-13 | 19.49318166 |
| ATP10A      | -0.55141362 | 1.785180905 | -7.57747549 | 1.74E-13 | 19.46539726 |
| IGKV1-33    | -0.841033017 | 1.365866729 | -7.57704223 | 1.74E-13 | 19.46196586 |
| COL15A1     | -0.730550406 | 3.027562149 | -7.567515413 | 1.86E-13 | 19.39730733 |
| RTKN        | 0.346112321 | 3.17641646 | 7.565923327 | 1.88E-13 | 19.38650813 |
| CCT3        | 0.383734024 | 6.350890171 | 7.562967687 | 1.92E-13 | 19.36646465 |
| LNPEP       | -0.294995053 | 2.231080223 | -7.56294247 | 1.92E-13 | 19.36629367 |
| IGHV3OR16-6 | -0.59507802 | 0.928583424 | -7.561027154 | 1.95E-13 | 19.35330843 |
| IGKV1OR9-2  | -0.381569153 | 0.463415537 | -7.56008218 | 1.96E-13 | 19.3464042 |
| PLB1        | -0.230841604 | 0.694159079 | -7.558221079 | 1.98E-13 | 19.33428883 |
| PLCL1       | -0.202901344 | 0.598104162 | -7.55482787 | 2.03E-13 | 19.31129711 |
| IGHV4-39    | -1.362779076 | 6.603866731 | -7.55305606 | 2.06E-13 | 19.29929493 |
| MRPS18A     | 0.328922787 | 4.113655372 | 7.546647979 | 2.15E-13 | 19.25590547 |
| PYCARD      | -0.572013878 | 3.619660603 | -7.54074265 | 2.24E-13 | 19.21594605 |
| EIF2B4      | 0.214567078 | 3.097428476 | 7.540667882 | 2.24E-13 | 19.21544027 |
| WNT10A      | -0.615379442 | 1.17208193 | -7.537156879 | 2.29E-13 | 19.19169433 |
| AL122127.2  | -0.790814457 | 1.93914198 | -7.535695954 | 2.32E-13 | 19.1818164 |
| TNC         | -1.096069224 | 4.296516838 | -7.532168945 | 2.37E-13 | 19.15797482 |
| IGKV1D-16   | -1.104288526 | 2.563999966 | -7.531368889 | 2.39E-13 | 19.15268954 |
| RP11-212121.5 | -0.2018995 | 0.265749983 | -7.528377898 | 2.44E-13 | 19.13235831 |
| HTRA3       | -0.805184047 | 4.031229063 | -7.525742058 | 2.48E-13 | 19.11455369 |
| TRAJ1       | -0.329238318 | 0.399728176 | -7.518096871 | 2.62E-13 | 19.0629399 |
| AP000892.6  | -0.278235882 | 0.733241066 | -7.517547423 | 2.63E-13 | 19.0592321 |
| Gene            | Rank | Fold Change | log2FoldChange | p-value | Adjusted p-value |
|-----------------|------|-------------|----------------|---------|-----------------|
| LINC00582       | 19.02816473 | -0.332434376 | 0.568714077 | -7.512942383 | 2.71E-13         |
| IGHV3-42        | 19.00067056 | -0.453158314 | 0.636989582 | -7.508865116 | 2.79E-13         |
| MAML2           | 18.99869954 | -0.486410239 | 2.211276206 | -7.508572755 | 2.79E-13         |
| RP1-266L20.2    | 18.99723097 | 0.414274149  | 6.534657546 | -7.50712923   | 2.82E-13         |
| TCAF2           | 18.98902558 | -0.254765945 | 0.732883759 | -7.50713684   | 2.82E-13         |
| C3              | 18.9875486  | -0.988679031 | 6.534657546 | -7.507012923  | 2.82E-13         |
| NCEH1           | 18.97605904 | -0.523099205 | 3.350905457 | -7.50521384   | 3.00E-13         |
| SFRP2           | 18.975486   | -1.171771158 | 5.2218016   | -7.49801286   | 3.00E-13         |
| ZBTB12          | 18.97223097 | 0.435913554  | 2.138294327 | -7.49782289    | 3.01E-13         |
| RP1-266L20.2    | 18.9626938  | 0.492705067  | 2.87649836  | -7.4958468    | 3.05E-13         |
| TNF             | 18.9542384  | -0.45214367  | 0.993313576 | -7.48729633   | 3.23E-13         |
| TBC1D27         | 18.95177236 | -0.232373584 | 0.268172873 | -7.486753465  | 3.24E-13         |
| LINC01270       | 18.94168591 | 0.374150576  | 1.007724071 | -7.485253728  | 3.28E-13         |
| AC246787.3      | 18.9305886  | -0.794588993 | 1.50295347  | -7.483628733  | 3.31E-13         |
| PSMB8           | 18.9344215  | -0.500495728 | 5.808777612 | -7.478077132  | 3.44E-13         |
| OSTN-AS1        | 18.9318529  | -0.211400032 | 0.259476783 | -7.47650644   | 3.48E-13         |
| KDF1            | 18.9305886  | 0.3446946    | 3.707122323 | -7.470774736  | 3.62E-13         |
| METTL21A        | 18.9290059  | 0.241140957  | 1.79602247  | -7.46931506   | 3.65E-13         |
| TSPAN4          | 18.9280015  | -0.490214073 | 3.413144594 | -7.468601532  | 3.67E-13         |
| IGHV1-12        | 18.926938   | -0.911230509 | 1.953876666 | -7.468469111  | 3.67E-13         |
| IGHV3-38        | 18.9201839  | -0.610855685 | 1.168385065 | -7.467169494  | 3.71E-13         |
| CDO1            | 18.91631828 | -0.370014537 | 0.770996783 | -7.465102916  | 3.76E-13         |
| MAP7D3          | 18.9130649  | -0.300313555 | 1.048203336 | -7.46483894   | 3.77E-13         |
| POLR1C          | 18.9172861  | 0.307722718  | 3.475524539 | -7.462949973  | 3.82E-13         |
| TPM4            | 18.91835066 | -0.423011641 | 5.880043561 | -7.462424996  | 3.83E-13         |
| EMR3            | 18.912813   | -0.202480011 | 0.351175024 | -7.461094885  | 3.86E-13         |
| VENTX           | 18.9048839  | -0.259842238 | 0.605264111 | -7.460805697  | 3.87E-13         |
| SEMA3C          | 18.9079882  | -0.684745671 | 3.182238786 | -7.460580634  | 3.88E-13         |
| hsa-mir-4538    | 18.8620762  | -0.642918892 | 0.97742919  | -7.458500388  | 3.93E-13         |
| CH25H           | 18.86416107 | -0.834778527 | 2.457696203 | -7.456133984  | 4.00E-13         |
| IGHA1           | 18.8458681  | -1.250244471 | 10.61278728 | -7.455899159  | 4.00E-13         |
| HMOX1           | 18.55325492 | -0.569668963 | 4.59088101  | -7.444481823  | 4.33E-13         |
| SENC R          | 18.55325492 | -0.223119687 | 0.526638442 | -7.442265512  | 4.39E-13         |
| Gene  | Score1  | Score2  | Score3  | Score4  | Score5  |
|-------|---------|---------|---------|---------|---------|
| RENBP | -0.5888 | 3.0671  | -7.4418 | 4.41E-13| 18.55  |
| ARFIP2| 0.2989  | 3.6551  | 7.4404  | 4.45E-13| 18.54  |
| HCF2  | -0.2414 | 1.6269  | -7.4387 | 4.50E-13| 18.53  |
| ARHGGEF15 | -0.3787 | 1.4650  | -7.4371 | 4.55E-13| 18.51  |
| CFLAR | -0.3752 | 3.1126  | -7.4364 | 4.57E-13| 18.51  |
| SLC29A2| 0.5095  | 3.3557  | 7.4305  | 4.76E-13| 18.47  |
| MMP14 | -0.6448 | 5.9783  | -7.4246 | 4.95E-13| 18.43  |
| IGHV3-41| -0.6611 | 1.3108  | -7.4224 | 5.03E-13| 18.42  |
| ITPRIPL1| -0.2492 | 0.6709  | -7.4209 | 5.08E-13| 18.41  |
| GREM1 | -0.7991 | 1.8594  | -7.4188 | 5.15E-13| 18.39  |
| IGHM  | -1.3782 | 7.4738  | -7.4171 | 5.38E-13| 18.35  |
| DHRS9 | -0.7279 | 1.4920  | -7.4125 | 5.40E-13| 18.34  |
| IGK1OR2-3| -0.5418 | 0.7979  | -7.4118 | 5.45E-13| 18.32  |
| AP001469.9| 0.2792 | 0.8573  | 7.4098  | 5.53E-13| 18.32  |
| HYKK  | 0.2456  | 0.7791  | 7.4084  | 5.57E-13| 18.32  |
| NMT   | -0.5088 | 1.4899  | -7.4074 | 5.64E-13| 18.30  |
| IGHV3-47| -0.6294 | 1.2716  | -7.4054 | 5.64E-13| 18.30  |
| RALB  | -0.3507 | 4.7293  | -7.4034 | 5.72E-13| 18.29  |
| AC103563.2| -0.6716| 1.1029  | -7.4022 | 5.77E-13| 18.28  |
| IGKV6-21| -1.1975| 2.8951  | -7.3990 | 5.90E-13| 18.26  |
| IGLV3-10| -1.4344| 5.4263  | -7.3963 | 5.91E-13| 18.26  |
| MRPS5 | 0.2426  | 3.2206  | 7.3967  | 5.99E-13| 18.24  |
| IL27RA| -0.5866 | 3.6155  | -7.3939 | 6.10E-13| 18.23  |
| AF131215.2| -0.3251| 0.7551  | -7.3933 | 6.13E-13| 18.22  |
| MTX2  | 0.2739  | 4.5817  | 7.3917  | 6.19E-13| 18.21  |
| IGHD3-3| -0.9403| 1.7219  | -7.3893 | 6.30E-13| 18.19  |
| ZNF385A| -0.4759| 3.7119  | -7.3880 | 6.35E-13| 18.19  |
| LRRN3 | -0.2934 | 0.5098  | -7.3862 | 6.43E-13| 18.17  |
| MYADM | -0.5410 | 5.1106  | -7.3859 | 6.44E-13| 18.17  |
| FXYD1 | -0.2098 | 0.4071  | -7.3835 | 6.55E-13| 18.16  |
| PI4K2A| -0.2778 | 3.2509  | -7.3826 | 6.59E-13| 18.15  |
| IGHV5-78| -0.6844| 1.6569  | -7.3819 | 6.62E-13| 18.15  |
| Gene       | Log2 Fold Change | P.Value | q.Value | Adj. P.Value | Log10 Fold Change |
|-----------|-----------------|---------|---------|-------------|------------------|
| RHBDF2    | -0.42486737     |         |         |             | 6.75E-13         |
| CHSY3     | -0.353155964    |         |         |             | 8.0E-13          |
| BCL6      | -0.382774081    |         |         |             | 6.86E-13         |
| ANP32A    | 0.257069183     |         |         |             | 8.09579294      |
| PAICS     | 0.420217604     |         |         |             | 10.076813       |
| CLEC4G    | -0.20553414     |         |         |             | 10.062017       |
| IGHV3OR15-7 | -0.737116075   |         |         |             | 10.063078       |
| DBNDD1    | 0.4859178071    |         |         |             | 10.062545       |
| RP11-166D19.1 | -0.470497672  |         |         |             | 10.059766       |
| CCDC71L   | -0.444116685    |         |         |             | 10.055686       |
| CORIN     | -0.217463527    |         |         |             | 10.050564       |
| ZNF101    | -0.268750525    |         |         |             | 10.047211       |
| CAV1      | -0.821105612    |         |         |             | 10.046858       |
| IKBKE     | -0.348927106    |         |         |             | 10.046162       |
| LAMP5     | -0.57327148     |         |         |             | 10.035689       |
| FFAR4     | -0.337360318    |         |         |             | 10.035278       |
| PDHX      | 0.282908726     |         |         |             | 10.035249       |
| RRAS      | -0.466784318    |         |         |             | 10.034623       |
| HSPD1     | 0.408930535     |         |         |             | 10.034036       |
| SAMD1     | 0.336487714     |         |         |             | 10.034036       |
| RSPO1     | -0.229166616    |         |         |             | 10.033988       |
| IL1RN     | -0.647898326    |         |         |             | 10.033988       |
| IGHD3-9   | -0.780182192    |         |         |             | 10.032788       |
| TUBA1A    | -0.577022671    |         |         |             | 10.031904       |
| IGHV3-35  | -0.756611918    |         |         |             | 10.031702       |
| IGHV1-45  | -1.020741722    |         |         |             | 10.031702       |
| P2RY1     | -0.274915337    |         |         |             | 10.031702       |
| ZBTB47    | -0.328383188    |         |         |             | 10.031702       |
| AP001434.2 | -0.336441197    |         |         |             | 10.031702       |
| TWIST2    | -0.404554029    |         |         |             | 10.031702       |
| NOL10     | 0.255005424     |         |         |             | 10.031702       |
| FAM136A   | 0.303014473     |         |         |             | 10.031702       |
| RP11-294C11.2 | -0.647694962  |         |         |             | 10.031702       |
| Gene        | Log2 Fold Change | T-test Statistics | p-Value | Adjusted p-Value | q-value | Benjamini-Hochberg Correction | Benjamini-Hochberg Correction |
|------------|-----------------|------------------|---------|-----------------|---------|-------------------------------|-------------------------------|
| IGHV3-37   | -0.343138612    | -7.302681295     | 1.13E-12| 17.62589179     |         |                               |                               |
| SMARCA2    | -0.431027911    | -7.30215916      | 1.13E-12| 17.62242797     |         |                               |                               |
| CNOT6L     | -0.264171614    | -7.296748991     | 1.18E-12| 17.58679177     |         |                               |                               |
| LYSMD1     | 0.3554703       | 7.296727034      | 1.18E-12| 17.5866471      |         |                               |                               |
| GUCY1B3    | -0.427041497    | -7.296439663     | 1.18E-12| 17.58475368     |         |                               |                               |
| VCAN       | -0.775865039    | -7.295652984     | 1.18E-12| 17.57957075     |         |                               |                               |
| IGHV1OR16-1| -0.442980371    | -7.293453139     | 1.20E-12| 17.56507977     |         |                               |                               |
| TPSD1      | -0.613418335    | -7.292021769     | 1.21E-12| 17.55565283     |         |                               |                               |
| FLVCR1     | 0.372839448     | 7.291968429      | 1.21E-12| 17.55530156     |         |                               |                               |
| RAB42      | -0.494019096    | -7.285160255     | 1.27E-12| 17.51048392     |         |                               |                               |
| MXRA8      | -0.681567993    | -7.283866741     | 1.28E-12| 17.50197263     |         |                               |                               |
| DBH-AS1    | -0.376022366    | -7.282756428     | 1.29E-12| 17.49466778     |         |                               |                               |
| HERPUD1    | -0.397233228    | -7.281778736     | 1.30E-12| 17.4882362      |         |                               |                               |
| IGHG1      | -1.344388716    | -7.281201899     | 1.30E-12| 17.4844419      |         |                               |                               |
| IGLC7      | -1.253619253    | -7.28090472      | 1.31E-12| 17.48248722     |         |                               |                               |
| APOL1      | -0.702578227    | -7.280647549     | 1.31E-12| 17.48079575     |         |                               |                               |
| CABYR      | 0.800119768     | 7.280225512      | 1.31E-12| 17.47802001     |         |                               |                               |
| RP11-22C11.2| 0.328885507    | 7.277572105      | 1.34E-12| 17.46057154     |         |                               |                               |
| PCDHGA12   | -0.205666904    | -7.272910559     | 1.38E-12| 17.42993022     |         |                               |                               |
| TMSB4X     | -0.476089223    | -7.272739811     | 1.38E-12| 17.42880816     |         |                               |                               |
| PTPRJ      | -0.401611695    | -7.272736909     | 1.38E-12| 17.42878909     |         |                               |                               |
| MEF2A      | -0.258836387    | -7.27272553      | 1.38E-12| 17.42577771     |         |                               |                               |
| TMEM9      | 0.424389119     | 7.272202342      | 1.39E-12| 17.42572635     |         |                               |                               |
| HOOK1      | 0.406046117    | 7.272060358      | 1.39E-12| 17.42434339     |         |                               |                               |
| RP3-460G2.2| -0.467800406    | -7.27140733      | 1.39E-12| 17.42005256     |         |                               |                               |
| IGHV1-17   | -0.495714484    | -7.271249943     | 1.39E-12| 17.41901847     |         |                               |                               |
| MMP7       | -1.233244395    | -7.269711775     | 1.41E-12| 17.40891312     |         |                               |                               |
| EFEMP1     | -0.702428034    | -7.26740505      | 1.43E-12| 17.39376177     |         |                               |                               |
| ARAP2      | -0.340238115    | -7.266057771     | 1.44E-12| 17.38491419     |         |                               |                               |
| HSPE1      | 0.400439988     | 7.264744544      | 1.46E-12| 17.3762915      |         |                               |                               |
| PPM1K      | -0.341303786    | 7.26443573      | 1.46E-12| 17.37431549     |         |                               |                               |
| CD248      | -0.564400838    | -7.263175805     | 1.47E-12| 17.36599276     |         |                               |                               |
| NTN4       | -0.610417475    | -7.258859879     | 1.51E-12| 17.33766806     |         |                               |                               |
| Gene       | Value     | Value     | Value     | Value     | Value     |
|------------|-----------|-----------|-----------|-----------|-----------|
| LTBP1      | -0.587043701 | 3.411985465 | -7.257596838 | 1.53E-12  | 17.32938151 |
| ACTG2      | -0.658201205  | 2.11577933  | -7.255861265 | 1.55E-12  | 17.31799666 |
| NRP2       | -0.542705787  | 2.695374233  | -7.25095473  | 1.60E-12  | 17.28609025 |
| CBX7       | -0.417870622  | 2.072988888  | -7.25021654  | 1.62E-12  | 17.28141099 |
| C12orf73   | 0.261692721   | 1.7789114    | 7.249633151  | 1.61E-12  | 17.2469296  |
| RP11-170L3.7 | -0.652356349  | 1.130555787  | -7.24882612  | 1.62E-12  | 17.27197884 |
| SERPINB8   | -0.33867709   | 2.036929603  | -7.24835077  | 1.62E-12  | 17.27192946 |
| SCRIB      | 0.499129357   | 4.26513939   | 7.244678367  | 1.66E-12  | 17.2469296  |
| GPRIN3     | -0.395793336  | 1.438443272  | -7.243719613 | 1.68E-12  | 17.2384126  |
| RP11-435O5.2 | 0.262417539   | 1.009565106  | 7.243184447  | 1.68E-12  | 17.23490726 |
| RORA       | -0.285337636  | 1.03836998   | -7.241660188 | 1.70E-12  | 17.22492451 |
| SNCA       | -0.282836464  | 0.70905093   | -7.23957579  | 1.73E-12  | 17.20984738 |
| C1QTNF2    | -0.248599533  | 0.623168002  | -7.238347874 | 1.74E-12  | 17.20323721 |
| STARD10    | 0.544183641   | 4.742563423  | 7.23720494   | 1.75E-12  | 17.19575573 |
| CD34       | -0.426508013  | 2.537394108  | -7.23325268  | 1.80E-12  | 17.16989147 |
| DDX1       | 0.256015028   | 4.825575818  | 7.232941329  | 1.80E-12  | 17.16785521 |
| IFI35      | -0.514965288  | 4.491504892  | -7.232932208 | 1.80E-12  | 17.16779554 |
| PLEKHG1    | -0.406013346  | 2.142535042  | -7.232599521 | 1.80E-12  | 17.16561904 |
| RP4-564M11.2| -0.20018514   | 0.363959402  | -7.230103669 | 1.83E-12  | 17.1492333  |
| ESYT1      | -0.286357538  | 4.656311914  | -7.224986085 | 1.90E-12  | 17.11583268 |
| SCARF2     | -0.4725125    | 2.02623675   | -7.222694549 | 1.93E-12  | 17.10058601 |
| IGKV5-2    | -1.027220195  | 2.301583098  | -7.219816994 | 1.96E-12  | 17.08205476 |
| CARD6      | -0.404800188  | 2.288691216  | -7.218658639 | 1.98E-12  | 17.0744806  |
| ACP1       | 0.256255901   | 4.450590195  | 7.217533004  | 2.00E-12  | 17.06713604 |
| AC246787.4  | -0.907867859  | 1.936459543  | -7.216379198 | 2.01E-12  | 17.05960099 |
| ENO3       | 0.735487687   | 1.459524528  | 7.213357142  | 2.05E-12  | 17.03986976 |
| NUDT15     | 0.315550727   | 3.451133942  | 7.2108484    | 2.09E-12  | 17.02349507 |
| FOXF2      | -0.533084724  | 1.897876471  | -7.203252874 | 2.19E-12  | 16.9734683  |
| SFXN4      | 0.354288458   | 3.873643264  | 7.203224562  | 2.19E-12  | 16.9736222  |
| ODC1       | 0.912544464   | 5.708679375  | 7.196999046  | 2.29E-12  | 16.93318272 |
| PAG1       | -0.500794755  | 2.244807136  | -7.193061756 | 2.35E-12  | 16.9075314  |
| FCRL2      | -0.407792466  | 0.737366596  | -7.18986632  | 2.40E-12  | 16.88692211 |
| HBEGF      | -0.593165419  | 2.9464706    | -7.186191487 | 2.46E-12  | 16.86280386 |
| Gene   | Log2FC  | P-Value | Adjusted P-Value | q-value | q-value |
|--------|---------|---------|------------------|---------|---------|
| OARD1  | 0.2397 | 2.4169 | 7.1851           | 2.47E-12| 16.8558|
| TGFB1I1| -0.41  | 2.35   | -7.18        | 2.48E-12| 16.8523|
| PRKQ   | -0.39  | 1.21   | -7.18        | 2.50E-12| 16.8458|
| FN3K   | 0.45   | 2.92   | 7.18          | 2.48E-12| 16.8456|
| TIAM1  | -0.39  | 1.28   | -7.17        | 2.61E-12| 16.8044|
| CSK    | -0.29  | 4.07   | 7.18          | 2.62E-12| 16.7983|
| MMRN2  | -0.41  | 2.29   | -7.17        | 2.69E-12| 16.7726|
| CEBPZOS| 0.28   | 3.56   | 7.17          | 2.73E-12| 16.7610|
| TXNDC15| -0.29  | 3.50   | 7.17          | 2.74E-12| 16.7517|
| AC007249.3| 0.34| 0.58 | 7.17        | 2.82E-12| 16.7264|
| IGHV3-43| -1.14   | 3.41   | -7.16        | 2.87E-12| 16.7102|
| CCDC183| 0.24   | 0.58   | 7.16          | 2.90E-12| 16.6987|
| ACER3  | -0.26  | 2.24   | -7.16        | 2.97E-12| 16.6773|
| SNX29  | -0.29  | 1.95   | -7.15        | 3.03E-12| 16.6554|
| IGHV1OR21-1| -0.64| 1.16 | -7.15        | 3.11E-12| 16.6303|
| JAM3   | -0.45  | 2.16   | -7.14        | 3.16E-12| 16.6166|
| COL10A1| -0.92  | 3.46   | -7.14        | 3.17E-12| 16.6134|
| EDIL3  | -0.71  | 2.90   | -7.14        | 3.26E-12| 16.5845|
| SSH1   | -0.30  | 2.35   | -7.14        | 3.29E-12| 16.5756|
| SIGLEC16| -0.20 | 0.39  | 7.14        | 3.32E-12| 16.5674|
| AACS   | 0.30   | 1.88   | 7.13         | 3.34E-12| 16.5613|
| TRAJ10 | -0.22  | 0.22   | 7.13         | 3.42E-12| 16.5379|
| GLDN   | -0.34  | 0.78   | 7.13         | 3.51E-12| 16.5128|
| UQCC2  | 0.39   | 3.27   | 7.12         | 3.57E-12| 16.4969|
| STOM   | -0.49  | 6.25   | 7.13         | 3.62E-12| 16.4827|
| MAGEF1 | 0.37   | 4.89   | 7.13         | 3.63E-12| 16.4802|
| RP11-295P22.2| -0.71| 1.32 | -7.12        | 3.70E-12| 16.4602|
| PGAP2  | 0.27   | 3.00   | 7.12         | 3.73E-12| 16.4517|
| IGHV3OR16-16| -0.34| 0.45 | -7.12        | 3.81E-12| 16.4333|
| ITGAV  | -0.51  | 4.49   | -7.11        | 3.83E-12| 16.4279|
| GNG7   | -0.39  | 1.43   | -7.11        | 3.85E-12| 16.4209|
| HLA-L  | -0.41  | 1.34   | -7.11        | 3.85E-12| 16.4207|
| SLC22A4| -0.39  | 1.11   | -7.11        | 3.92E-12| 16.4048|
| Gene         | Value1      | Value2      | Value3      | Value4      | Value5      |
|-------------|-------------|-------------|-------------|-------------|-------------|
| AFAP1L1     | -0.362151311| 1.788760537 | -7.115022945| 3.93E-12    | 16.40150082 |
| SUCNR1      | -0.566563672| 1.177060486 | -7.111922079| 4.01E-12    | 16.38148645 |
| HID1        | 0.510430911 | 3.802925466 | 7.111831011 | 4.01E-12    | 16.38089787 |
| PKNOX2      | -0.271547376| 0.568407397 | -7.107799124| 4.12E-12    | 16.35488608 |
| IGLV7-46    | -1.154054846| 0.407645752 | -7.105257947| 4.19E-12    | 16.33849724 |
| SAA1        | -1.21540702 | 3.108153125 | -7.104231365| 4.22E-12    | 16.33187785 |
| ATIC        | 0.295349203 | 4.727434045 | 7.103793529 | 4.23E-12    | 16.32905492 |
| GNA15       | 0.491284905 | 0.996133793 | 7.099379065 | 4.36E-12    | 16.30060081 |
| TNNI2       | -0.563045432| 1.267657184 | -7.100135451| 4.34E-12    | 16.30547519 |
| AC104654.2  | -0.211564619| 0.396621403 | -7.099785736| 4.35E-12    | 16.30322147 |
| CHRNA5      | 0.491284905 | 0.996133793 | 7.099379065 | 4.36E-12    | 16.30060081 |
| NDUFA10     | 0.243030299 | 3.247252614 | 7.093418602 | 4.53E-12    | 16.26220461 |
| ATG4D       | 0.307576461 | 2.996140153 | 7.091419754 | 4.59E-12    | 16.24933429 |
| TRA17       | -0.222870517| 0.213504992 | -7.090779299| 4.61E-12    | 16.24521111 |
| IGLV1-36    | -1.203057541| 3.349190611 | -7.089603286| 4.65E-12    | 16.23764086 |
| ZNFX1       | -0.359832577| 3.474130234 | -7.089129196| 4.66E-12    | 16.23458933 |
| ARHGEF16    | 0.42136485  | 2.963874034 | 7.087808227 | 4.70E-12    | 16.22608765 |
| KLHDC7B     | -0.565366917| 1.383043706 | -7.085337188| 4.78E-12    | 16.21018765 |
| ITGAE       | -0.318068043| 1.955960234 | -7.083783571| 4.83E-12    | 16.20019316 |
| BCCIP       | 0.275003994 | 3.600694612 | 7.083050393 | 4.85E-12    | 16.19547721 |
| ITGA1       | -0.423097409| 2.271044708 | -7.077987791| 5.01E-12    | 16.16292442 |
| RBM43       | -0.308732259| 1.946001268 | -7.077777291| 5.02E-12    | 16.16157535 |
| MEIS3       | -0.319317747| 1.044621244 | -7.069725375| 5.29E-12    | 16.10983747 |
| IGLV6-57    | -1.265648663| 5.565765636 | -7.067768209| 5.36E-12    | 16.09726988 |
| KCNJ11      | 0.513911341 | 1.34137512  | 7.064247259 | 5.49E-12    | 16.07466789 |
| IGHV1-69    | -1.275389074| 4.04388804  | -7.063399517| 5.52E-12    | 16.06922735 |
| IGKV1D-42   | -0.671139231| 1.207616476 | -7.061443881| 5.59E-12    | 16.05675556 |
| C1orf35     | 0.304659456 | 2.663476234 | 7.05988149  | 5.64E-12    | 16.04665553 |
| MAP7D1      | -0.349351984| 4.388116822 | -7.058353646| 5.70E-12    | 16.03685567 |
| RP11-650L12.2| 0.395934103 | 0.64370187  | 7.057586451 | 5.73E-12    | 16.0319354 |
| AC016700.5  | 0.389292023 | 1.020271715 | 7.052854237 | 5.91E-12    | 16.00159858 |
| ADTRP       | -0.410075028| 0.916753205 | -7.04570055 | 6.19E-12    | 15.95576316 |
| MAP3K5      | -0.400962463| 2.999895438 | -7.045207075| 6.21E-12    | 15.95260293 |
| Gene       | Fold Change | log2 Fold Change | Log2 Intensity | Log2 Fold Change | Log2 Intensity |
|------------|-------------|------------------|---------------|------------------|---------------|
| KCTD10     | -0.208860286| 3.0732105        | -7.045018476  | 6.22E-12         | 15.95139519   |
| OPLAH      | 0.521657756 | 2.828455528      | 7.04034896    | 6.41E-12         | 15.92150112   |
| GALNT15    | -0.339885941| 0.741756937      | -7.03803937   | 6.51E-12         | 15.90672138   |
| FCER1A     | -0.848361852| 1.900700379      | -7.03419844   | 6.67E-12         | 15.88292694   |
| ESRP2      | 0.44297362  | 3.841871388      | 7.03154781    | 6.72E-12         | 15.8575476    |
| TXNL4A     | 0.283243063 | 3.169872778      | 7.032449215   | 6.75E-12         | 15.87096418   |
| ZDHHC14    | -0.215012586| 0.794827151      | -7.031076821  | 6.81E-12         | 15.86218932   |
| ZBTB46     | -0.274504404| 1.549852985      | -7.031076821  | 6.81E-12         | 15.86218932   |
| RP11-283G6.3| -0.28011261 | 0.556120686      | -7.02631567   | 7.03E-12         | 15.8122076    |
| NRP1       | -0.484671364| 3.910798536      | -7.024797398  | 7.10E-12         | 15.82205759   |
| RP11-134L10.1| -0.204200954| 0.756641686      | -7.023948455  | 7.14E-12         | 15.81663425   |
| CTD-2033D15.2| -0.34012813 | 0.680313488      | -7.022065063  | 7.22E-12         | 15.80460443   |
| SLC38A5    | -0.546895421| 2.261659687      | -7.020522611  | 7.30E-12         | 15.79475426   |
| ROR2       | 0.562232673 | 1.255831159      | 7.019264171   | 7.36E-12         | 15.78671912   |
| RP11-1399P15.1| -0.264070606| 0.563687547      | -7.017164859  | 7.46E-12         | 15.77331676   |
| ACE        | -0.458242738| 2.367870341      | -7.016273173  | 7.50E-12         | 15.76762364   |
| MICAL1     | -0.433516331| 2.918139605      | -7.011984972  | 7.71E-12         | 15.7402646    |
| NOX4       | -0.302749885| 0.837500663      | -7.009382669  | 7.85E-12         | 15.72366676   |
| MIR4539    | -0.620731971| 1.041112985      | -7.009274609  | 7.85E-12         | 15.72297765   |
| BRX1       | 0.377976782 | 3.241438641      | 7.00505489    | 8.07E-12         | 15.69607478   |
| PPP1R16A   | 0.412835401 | 2.70012231       | 7.001655159   | 8.25E-12         | 15.67440942   |
| IGKV1OR2-11| -0.503022997| 0.761291747      | -7.00042676   | 8.31E-12         | 15.66700328   |
| RP11-705C15.2| -0.351577238| 1.701496686      | -6.998777204  | 8.41E-12         | 15.6560759    |
| COL1A1     | -0.946778055| 7.654327923      | -6.998403834  | 8.43E-12         | 15.65369787   |
| TCN2       | -0.504110309| 4.125982861      | -6.99604748   | 8.56E-12         | 15.63869238   |
| PRPF40B    | 0.235650001 | 1.077521093      | 6.995394868   | 8.59E-12         | 15.63453721   |
| RELB       | -0.382877559| 3.320846465      | -6.995017     | 8.61E-12         | 15.63213148   |
| ERAP2      | -0.790364014| 2.608569129      | -6.993499198  | 8.70E-12         | 15.62246934   |
| VASN       | -0.633350668| 3.748564418      | -6.991140224  | 8.83E-12         | 15.6074558    |
| FAM65A     | -0.388981093| 3.127233754      | -6.99098189   | 8.84E-12         | 15.60655196   |
| PAX5       | -0.362351894| 0.589410727      | -6.989821114  | 8.91E-12         | 15.59906223   |
| HCG4P11    | -0.206322575| 0.382124623      | -6.987697813  | 9.03E-12         | 15.58555427   |
| HSPA7      | -0.636472185| 2.12977081       | -6.987100451  | 9.07E-12         | 15.58175459   |
| Gene   | Value1   | Value2   | Value3   | Value4   | Value5   |
|--------|----------|----------|----------|----------|----------|
| VSTM1  | -0.208412302 | 0.291815654 | -6.981828572 | 9.38E-12 | 15.548233 |
| GRN    | -0.372284039  | 7.445910374  | -6.981717034  | 9.39E-12 | 15.547524 |
| PPT1   | -0.355608628  | 6.001479463  | -6.981653999  | 9.39E-12 | 15.5471233 |
| S1PR2  | -0.323329625  | 2.674613122  | -6.977569068  | 9.65E-12 | 15.5211638 |
| IGLV2-5| -0.541169125  | 0.992970514  | -6.977829251  | 9.66E-12 | 15.5199813 |
| RRS1   | 0.415376151   | 3.992329973  | 6.975435745   | 9.78E-12 | 15.5076116 |
| SETD6  | 0.263749818   | 1.974329973  | 6.973398719   | 9.91E-12 | 15.4962289 |
| KLF2   | -0.357351813  | 3.318036322  | -6.965878806  | 1.04E-11 | 15.4456729 |
| SEN1   | -0.351692087  | 2.172846772  | -6.968320271  | 1.02E-11 | 15.4618632 |
| SH3BP1 | -0.339142125  | 2.226938416  | -6.968230271  | 1.02E-11 | 15.4618632 |
| ADAMTS1| -0.323329625  | 2.172846772  | -6.968320271  | 1.02E-11 | 15.4618632 |
| PARP12 | -0.357351813  | 3.318036322  | -6.965878806  | 1.04E-11 | 15.4456729 |
| S100A3 | -0.351692087  | 2.172846772  | -6.968320271  | 1.02E-11 | 15.4618632 |
| IGHV1-24| -0.351692087 | 3.318036322  | -6.965878806  | 1.04E-11 | 15.4456729 |
| TLN1   | -0.364599084  | 5.208713307  | -6.956325663  | 1.11E-11 | 15.3863452 |
| IGLV3-13| -0.351692087 | 3.318036322  | -6.965878806  | 1.04E-11 | 15.4456729 |
| NETO1  | -0.351692087  | 3.318036322  | -6.956325663  | 1.11E-11 | 15.3863452 |
| IGKV1OR22-1| -0.351692087 | 3.318036322  | -6.956325663  | 1.11E-11 | 15.3863452 |
| TRAF4  | 0.360785414   | 4.652174207  | 6.949193346   | 1.16E-11 | 15.3411823 |
| RP3-325F22.5| 0.310567033 | 6.680526736  | 6.949003785   | 1.16E-11 | 15.3401977 |
| OTX1   | 0.377282493   | 1.105015096  | 6.946036999   | 1.18E-11 | 15.3211996 |
| GRASP  | -0.421886292  | 1.907438033  | -6.945163209  | 1.19E-11 | 15.3156689 |
| N4BP1  | -0.243886888  | 0.293418672  | -6.954136704  | 1.12E-11 | 15.3724937 |
| G0S2   | -0.860537158  | 4.358772471  | -6.943143251  | 1.21E-11 | 15.3028587 |
| GMCL1  | 0.253037761   | 3.157897143  | 6.941074879   | 1.22E-11 | 15.2897956 |
| RP11-673E1.3| -0.219539162 | 0.460495273  | -6.940532896  | 1.23E-11 | 15.2863710 |
| MPHOSPH10| 0.211700356 | 3.311387608  | 6.94024565   | 1.23E-11 | 15.2845504 |
| TACC1  | -0.459639625  | 3.022248468  | -6.940037952  | 1.23E-11 | 15.283238 |
| LINC00944| -0.244210405 | 0.442455425  | -6.934492952  | 1.27E-11 | 15.2481779 |
| FRZB   | -0.570241986  | 2.386261106  | -6.934477888  | 1.27E-11 | 15.2479569 |
| AC096579.13| -0.269330508 | 0.432042596  | -6.933188422  | 1.28E-11 | 15.2399324 |
| RHBDD3 | 0.351803828   | 3.114595749  | 6.933080868   | 1.29E-11 | 15.2392527 |
| DANCR  | 0.453618741   | 3.521617231  | 6.932353578   | 1.29E-11 | 15.23465637 |
| Gene       | Value1  | Value2  | Value3  | Value4  | Value5  |
|------------|---------|---------|---------|---------|---------|
| UNC13D     | -0.615467482 | 2.995778757 | -6.928796518 | 1.32E-11 | 15.21218212 |
| PCDH12     | -0.355665144  | 1.832398313  | -6.927606714  | 1.33E-11 | 15.2046681 |
| RGCC       | -0.536483629  | 5.241389482  | -6.927223391  | 1.34E-11 | 15.202458  |
| LRPPRC     | 0.298081521   | 6.932646135  | 1.34E-11      | 15.1960741 |
| BYSL       | 0.374815492   | 3.621213619  | 1.34E-11      | 15.19066061 |
| CX3CL1     | -0.859628026  | 3.557757168  | 1.35E-11      | 15.19066061 |
| AFAP1L2    | -0.390415362  | 3.931897421  | 1.35E-11      | 15.1822933 |
| PRCC       | -0.30013562   | 6.91362517   | 1.35E-11      | 15.1185602 |
| 1-Mar      | -0.218544833  | 3.695153512  | 1.35E-11      | 15.0921203 |
| OBSPBL8    | -0.315384984  | 3.071043685  | 1.35E-11      | 15.0739228 |
| TNNFSF18   | -0.270673752  | 3.436092702  | 1.35E-11      | 15.04048752 |
| CLUH       | 0.37426815    | 3.664036851  | 1.35E-11      | 15.04048752 |
| DCHS1      | -0.390415362  | 3.931897421  | 1.35E-11      | 15.04048752 |
| 1-Mar      | 0.525332211   | 1.57869471   | 1.35E-11      | 15.04048752 |
| OSBPL8     | -0.315384984  | 3.071043685  | 1.35E-11      | 15.0739228 |
| SYNC       | -0.218544833  | 3.695153512  | 1.35E-11      | 15.0921203 |
| PXN-AS1    | 0.237265376   | 1.259893942  | 1.35E-11      | 15.0739228 |
| IGHVI-51-1 | -0.251196687  | 0.335234663  | 1.35E-11      | 15.0698999 |
| G49C       | -0.342930011  | 2.784670217  | 1.35E-11      | 15.06260496 |
| IGH3       | -1.190669152  | 7.590767077  | 1.35E-11      | 15.05268067 |
| MORC3      | -0.241255879  | 2.558716118  | 1.35E-11      | 15.0254637 |
| MOSPD2     | -0.250339098  | 2.123546251  | 1.35E-11      | 15.0058182 |
| CCD88B     | -0.431470787  | 2.06990345   | 1.35E-11      | 14.99325717 |
| SKAP2      | -0.414133473  | 3.58006395   | 1.35E-11      | 14.99185463 |
| RP11-465N4.4 | 0.362323898  | 1.714674468  | 1.35E-11      | 14.9824789 |
| AGRP       | -0.323375911  | 0.586559454  | 1.35E-11      | 14.94364196 |
| IGK2D-28   | -0.64361593   | 0.823460839  | 1.35E-11      | 14.92026129 |
| RRAD       | -0.8950507    | 3.377252591  | 1.35E-11      | 14.8965545 |
| SLC25A46   | -0.280348367  | 2.63527875  | 1.35E-11      | 14.8929407 |
| IGH4V-4    | -1.043022388  | 2.534728383  | 1.35E-11      | 14.88902095 |
| HLA-DRB9   | -0.361874105  | 0.886276581  | 1.35E-11      | 14.8875282 |
| ANKRD33B   | -0.25111445   | 0.474001858  | 1.35E-11      | 14.8473431 |
| SNX3       | -0.299101334  | 6.05797517   | 1.35E-11      | 14.8449785 |
| ANGPT1     | -0.431132573  | 1.203529304  | 1.35E-11      | 14.83510868 |
| PDCL3      | 0.269731405   | 3.7673922    | 1.35E-11      | 14.83029701 |
| CSF2       | -0.627325932  | 1.345401384  | 1.35E-11      | 14.82593898 |
| Gene          | log2FoldChange | t-statistic | p-value (two-sided) | Adjusted p-value | FDR (False Discovery Rate) |
|--------------|----------------|-------------|--------------------|------------------|----------------------------|
| ICAM1        | -0.758889852   | 6.082233247 | -6.865752509       | 1.98E-11         | 14.81543523                |
| IGHD2-2      | -0.643595694   | 0.989816269 | -6.863503653       | 2.01E-11         | 14.80133809                |
| TBCD1        | -0.384032306   | 2.402435843 | -6.860762882       | 2.05E-11         | 14.7841625                 |
| IGKV1OR10-1  | -0.345006234   | 0.540370928 | -6.856992167       | 2.05E-11         | 14.78376371                |
| PCAT6        | 0.515235889    | 2.495952776 | 6.859510232        | 2.06E-11         | 14.77631441                |
| FAM110D      | -0.268818067   | 0.844733777 | -6.856992167       | 2.10E-11         | 14.76054183                |
| STX7         | -0.219992694   | 2.256774448 | -6.85471384        | 2.10E-11         | 14.75728036                |
| GMEB2        | 0.270869786    | 2.674196684 | 6.852673779        | 2.15E-11         | 14.73350359                |
| CYTL1        | -0.430813127   | 0.975584568 | -6.851472429       | 2.17E-11         | 14.72598422                |
| IGKV2-26     | -0.479437779   | 0.691972465 | -6.804071          | 2.94E-11         | 14.43016496                |
| Gene             | Expression | Log2 Fold Change | p-value  | FDR  | |---|---|---|---|---|---|
| TPD52            | 0.450291515 | 3.7983584 | 6.801495514 | 2.98E-11 | 14.4141408 |
| C14orf93         | 0.203707306 | 1.871176796 | 6.800838788 | 3.00E-11 | 14.4100559 |
| RP11-876N24.4    | -0.244798194 | 0.818053437 | -6.800650488 | 3.00E-11 | 14.4088431 |
| CHTOP            | 0.234928944 | 4.180462129 | 6.794541043 | 3.12E-11 | 14.3708966 |
| SORBS1           | -0.375902939 | 1.594721132 | -6.790300221 | 3.20E-11 | 14.3454441 |
| IGHV3OR16-11     | -0.431634653 | 0.603413533 | -6.88431001 | 3.24E-11 | 14.3329335 |
| SLC2A3           | 0.234928944 | 4.180462129 | 6.794541043 | 3.12E-11 | 14.3321943 |
| AC133528.2       | -0.244798194 | 0.818053437 | -6.800650488 | 3.00E-11 | 14.4088431 |
| HNMT             | -0.470517905 | 3.446755582 | -6.787182933 | 3.27E-11 | 14.3251824 |
| ID2              | -0.511774278 | 4.191295645 | -6.786653421 | 3.28E-11 | 14.3203588 |
| WDR74            | 0.230040088 | 2.916067597 | 6.788640614 | 3.28E-11 | 14.3203588 |
| LIPT2            | 0.26959227 | 1.268586929 | 6.785540594 | 3.30E-11 | 14.3149846 |
| FRMD4B           | -0.304285772 | 1.977522442 | -6.78519867 | 3.31E-11 | 14.3128636 |
| TLR3             | -0.411510254 | 1.670425309 | -6.783872271 | 3.34E-11 | 14.3045275 |
| PIM1             | -0.392360082 | 4.266878117 | -6.780217402 | 3.42E-11 | 14.2819452 |
| DTHD1            | -0.340288625 | 0.438677988 | -6.779075509 | 3.44E-11 | 14.2748606 |
| AC112721.2       | -0.253229393 | 0.341518474 | -6.778186631 | 3.46E-11 | 14.2693465 |
| KCNJ10           | -0.241586555 | 0.354859406 | -6.77773832 | 3.47E-11 | 14.2667859 |
| NOTCH2           | -0.443736433 | 3.384928987 | -6.776659947 | 3.49E-11 | 14.2598772 |
| FAM198A          | -0.203593543 | 0.52605089 | -6.776559772 | 3.50E-11 | 14.2592592 |
| THPO             | 0.556671834 | 0.857271309 | 6.772061584 | 3.60E-11 | 14.2313634 |
| EHD1             | -0.369949039 | 3.635430994 | -6.76980856 | 3.65E-11 | 14.2173984 |
| PNPLA6           | -0.316656951 | 3.365258133 | -6.767852525 | 3.69E-11 | 14.2052834 |
| RP2              | -0.291969762 | 2.784710245 | -6.76683287 | 3.72E-11 | 14.1986669 |
| TKT              | 0.424239869 | 5.813937729 | 6.766694845 | 3.72E-11 | 14.1981171 |
| S100A4           | -0.74741775 | 6.928383455 | -6.763933809 | 3.79E-11 | 14.1810116 |
| RP11-20G13.3     | -0.229767859 | 0.31050444 | -6.763293475 | 3.80E-11 | 14.1770466 |
| IGHV4OR15-8      | -0.319044715 | 0.45674211 | -6.76153886 | 3.84E-11 | 14.1660597 |
| AGPAT4           | -0.263883099 | 0.963160229 | -6.759077283 | 3.90E-11 | 14.1504761 |
| PTPRD            | -0.267091955 | 0.6613998 | -6.757275095 | 3.95E-11 | 14.1399583 |
| MCAT             | 0.239793533 | 2.873437338 | 6.756223398 | 3.98E-11 | 14.1332897 |
| TMEM173          | -0.510355054 | 4.742482618 | -6.75611268 | 3.98E-11 | 14.1326042 |
| PCDH17           | -0.377142561 | 1.679320795 | -6.75384284 | 4.04E-11 | 14.11856419 |
| Gene       | Z-score | T-statistic | p-value | q-value |
|------------|---------|-------------|---------|---------|
| ZMYND19    | 0.299599204 | 3.167930373 | 6.753137285 | 4.05E-11 |
| STS        | -0.511276816 | 2.737831076 | -6.7527064 | 4.07E-11 |
| NEDD4L     | 0.45186716 | 2.847487181 | 6.75028389 | 4.13E-11 |
| IGLJ2      | -0.563380349 | 1.26872684 | -6.748905031 | 4.16E-11 |
| ACTR3B     | 0.214772623 | 1.13952737 | 6.74854722 | 4.22E-11 |
| SEMA6B     | -0.386719099 | 1.767688245 | -6.74641692 | 4.23E-11 |
| MAX        | -0.208591433 | 3.84618007 | -6.74641692 | 4.23E-11 |
| GCSAM      | -0.205216876 | 0.738263593 | -6.74604170 | 4.24E-11 |
| LEPROT     | -0.253153305 | 4.665201907 | -6.74577207 | 4.25E-11 |
| RP11-353N14.2 | 0.371584067 | 0.812624697 | 6.744525531 | 4.28E-11 |
| IFI44      | -0.720919881 | 3.919612191 | -6.744483265 | 4.28E-11 |
| FHL3       | -0.34706694 | 3.576739666 | 6.74349222 | 4.31E-11 |
| CLDN7      | 0.455823318 | 5.938220023 | -6.7434057 | 4.31E-11 |
| EHMT2      | 0.413874993 | 6.396283973 | -6.74858666 | 4.41E-11 |
| DFNA5      | -0.40911993 | 1.293902306 | 6.73934563 | 4.42E-11 |
| IGHV1-14   | 0.593247496 | 1.293902306 | -6.73934563 | 4.42E-11 |
| TYMP       | 0.459756812 | 6.74372407 | -6.73400494 | 4.57E-11 |
| NXPH3      | 0.34623819 | 3.60616408 | 6.720320082 | 4.99E-11 |
| EPHC5      | -0.21365677 | 0.307166777 | -6.72299612 | 4.92E-11 |
| KHL4       | -0.34823729 | 0.283445018 | -6.686995667 | 5.95E-11 |
| CNTFY2     | 0.34823729 | 0.283445018 | -6.686995667 | 5.95E-11 |
| CDH13      | -0.319908134 | 0.918950628 | -6.719203317 | 5.02E-11 |
| DXO        | 0.319842251 | 2.843117357 | 6.7125123 | 5.24E-11 |
| MLF2       | 0.300249065 | 5.646159169 | 6.709165394 | 5.35E-11 |
| NID2       | 0.348807725 | 1.543300192 | -6.70792942 | 5.39E-11 |
| PCNX       | -0.260448308 | 2.018901191 | -6.702781744 | 5.57E-11 |
| CTD-2033A16.3 | 0.253888766 | 0.569114129 | 6.694602433 | 5.86E-11 |
| PAXIP1-AS2 | -0.242112061 | 1.430070711 | -6.693564748 | 5.90E-11 |
| KRTCAP3    | 0.591051579 | 4.978813632 | 6.693480284 | 5.90E-11 |
| GP1BA      | -0.243641239 | 0.641491768 | -6.69214349 | 5.95E-11 |
| PTX3       | -0.413900592 | 0.946029501 | -6.691781936 | 5.96E-11 |
| TMTC4      | 0.341248768 | 2.448979294 | 6.690929156 | 6.00E-11 |
| RP11-713C5.1 | -0.224707819 | 0.283445018 | -6.686995667 | 6.15E-11 |
| Gene       | Value1  | Value2  | Value3  | Value4  | Value5  |
|------------|---------|---------|---------|---------|---------|
| ATOX1      | -0.253343987 | 2.941253276 | -6.686741781 | 6.16E-11 | 13.7052872 |
| FIG4       | -0.246152223  | 2.711797416  | -6.686218916  | 6.18E-11 | 13.70208037 |
| MAP3K1     | -0.302962314  | 2.523360223  | -6.683102696  | 6.30E-11 | 13.68297235 |
| RAB40B     | 0.354520401   | 2.00656147   | 6.683788422   | 6.27E-11 | 13.67881475 |
| LSM14B     | 0.315969264   | 3.99744366   | 6.683102696   | 6.32E-11 | 13.67881475 |
| KCTD17     | -0.365705598  | 2.587736816  | -6.682424497  | 6.32E-11 | 13.67881475 |
| PUF60      | 0.31614005    | 4.885343191  | 6.681662392   | 6.35E-11 | 13.67881475 |
| CYTH1      | -0.296029895  | 3.545705399  | -6.679916731  | 6.42E-11 | 13.67881475 |
| RELL1      | -0.38286835   | 1.857627647  | -6.67859431   | 6.48E-11 | 13.67881475 |
| HLA-J      | -0.554287951  | 1.857627647  | -6.673340959  | 6.69E-11 | 13.67881475 |
| VAX2       | 0.376210707   | 0.874077503  | 6.672536487   | 6.73E-11 | 13.67881475 |
| ACTA2-AS1  | -0.216642184  | 0.539321146  | -6.670956773  | 6.79E-11 | 13.67881475 |
| BBS12      | -0.21119331   | 1.299637085  | -6.667500771  | 6.94E-11 | 13.58741637 |
| TSACC      | 0.281986639   | 0.749327579  | 6.665705003   | 7.02E-11 | 13.57642993 |
| ANKRD36BP2 | -0.392338593  | 0.713145504  | -6.664215332  | 7.09E-11 | 13.56731805 |
| CHN1       | -0.392998722  | 1.984617214  | -6.662085522  | 7.18E-11 | 13.55429359 |
| PDGFC      | -0.441043066  | 2.809708604  | -6.661861023  | 7.19E-11 | 13.55290292 |
| HGH1       | 0.348177725   | 3.742090521  | 6.660865699   | 7.24E-11 | 13.54693615 |
| GNPTAB     | -0.285215067  | 3.155171325  | -6.659303108  | 7.31E-11 | 13.5372835 |
| PMF1       | 0.338847711   | 3.85371696   | 6.65871091    | 7.33E-11 | 13.53649292 |
| RPL7L1     | 0.248002648   | 3.965643465  | 6.656872538   | 7.42E-11 | 13.52249293 |
| CYC1       | 0.423769926   | 5.758076909  | 6.656017829   | 7.46E-11 | 13.51720681 |
| AKT3       | -0.392734034  | 1.671668542  | -6.655495119  | 7.48E-11 | 13.51401324 |
| COQ9       | 0.269192287   | 3.643254828  | 6.653303792   | 7.59E-11 | 13.5006273 |
| IER3IP1    | 0.333177572   | 4.054006851  | 6.653176896   | 7.59E-11 | 13.49985226 |
| FAM198B    | -0.553249442  | 2.656418571  | -6.649817617  | 7.75E-11 | 13.47933924 |
| IGHV3OR16-12 | -0.38585963 | 0.647764781  | -6.649628526  | 7.76E-11 | 13.47818484 |
| C10orf55   | -0.274295538  | 0.576084241  | -6.648823685  | 7.80E-11 | 13.47327158 |
| PID1       | -0.558626672  | 2.206423053  | -6.647872012  | 7.85E-11 | 13.46746261 |
| SDCBP      | -0.307977562  | 5.465220656  | -6.647496739  | 7.87E-11 | 13.46517215 |
| GJA4       | -0.421099398  | 2.48205468   | -6.647233124  | 7.88E-11 | 13.46356325 |
| MARVELD3   | 0.3185082     | 1.975745139  | 6.646919903   | 7.90E-11 | 13.46165167 |
| DES        | -0.724317748  | 1.928124216  | -6.646719554  | 7.91E-11 | 13.46042898 |
| Gene       | Log2 Fold Change | p-value   | q-value | FDR   | Adjusted p-value |
|------------|-----------------|-----------|---------|-------|-----------------|
| IGKV1D-33  | -0.647781753    | 7.94E-11  | 13.45613907 |
| RP11-148B3.2 | 0.584149124    | 8.25E-11  | 13.41902203 |
| RP11-27N21.3 | 0.365482648    | 8.28E-11  | 13.41541155 |
| UACA       | -0.351618766    | 8.76E-11  | 13.32696688 |
| DCP2       | -0.562989527    | 9.06E-11  | 13.32966868 |
| MCHR1      | -0.206213626    | 9.28E-11  | 13.32966868 |
| NDUFS1     | 0.238273835     | 1.10E-11  | 13.36031181 |
| SLC39A8    | -0.562989527    | 9.33E-11  | 13.37431181 |
| IGHA2      | -1.131856295    | 9.38E-11  | 13.37431181 |
| ABCA8      | -0.346131662    | 9.41E-11  | 13.37431181 |
| FUCA1      | -0.43258395     | 9.43E-11  | 13.37431181 |
| FERMT2     | -0.336264766    | 9.48E-11  | 13.37431181 |
| ABLIM3     | -0.462678669    | 9.48E-11  | 13.37431181 |
| WRP1       | 0.253216796     | 9.50E-11  | 13.37431181 |
| CCAR1      | 0.23090012      | 9.58E-11  | 13.37431181 |
| UGDH       | 0.675226972     | 9.70E-11  | 13.37431181 |
| ALPK1      | -0.237990744    | 9.72E-11  | 13.37431181 |
| RETN       | -0.732111373    | 9.73E-11  | 13.37431181 |
| GTBPBP4    | 0.329973115     | 9.74E-11  | 13.37431181 |
| CCR3C      | -0.512204863    | 9.74E-11  | 13.37431181 |
| IGKV1OR2-118 | -0.232058391  | 9.84E-11  | 13.37431181 |
| ZMYM6NB    | -0.327480962    | 9.95E-11  | 13.37431181 |
| ARHGAP39   | 0.383189601     | 1.01E-10  | 13.37431181 |
| RP11-314A20.2 | 0.205422175  | 1.02E-10  | 13.37431181 |
| MRPL48     | 0.289593602     | 1.03E-10  | 13.37431181 |
| CLEC14A    | -0.454580773    | 1.03E-10  | 13.37431181 |
| NT5C       | 0.326816117     | 1.04E-10  | 13.37431181 |
| CYP7B1     | -0.424149545    | 1.04E-10  | 13.37431181 |
| PLK3       | -0.330809389    | 1.04E-10  | 13.37431181 |
| GBP3       | -0.659350262    | 1.07E-10  | 13.37431181 |
| EXOSC4     | 0.390771705     | 1.08E-10  | 13.37431181 |
| RAP2B      | -0.355533364    | 1.09E-10  | 13.37431181 |
| MEOX1      | -0.266095041    | 1.10E-10  | 13.37431181 |
| Gene        | Log2 Fold Change | Log2 FC | p-Value | Log10 Fold Change | Gene Log10 | p-Value |
|-------------|-----------------|---------|---------|------------------|------------|---------|
| CDH5       | -0.445926255    | 2.94865313 | -6.593299444 | 1.10E-10 | 13.13551884 |
| CAST       | -0.303573021    | 4.400163296 | -6.593282932 | 1.10E-10 | 13.13541913 |
| RP11-26J3.3 | 0.297439804     | 1.130719596 | 6.590247588 | 1.12E-10 | 13.1170233 |
| CD320      | 0.415810253     | 2.382014572 | 6.579379382 | 1.20E-10 | 13.05121569 |
| IGHJ2P     | -0.427546133    | 0.592117224 | -6.587212217 | 1.14E-10 | 13.09863424 |
| AL12217.25 | -0.239294512    | 0.35347824  | -6.589119673 | 1.15E-10 | 13.09681623 |
| MFSD9      | 0.266483671     | 4.400163296 | -6.579379382 | 1.20E-10 | 13.0492098 |
| NPR3       | -0.430056121    | 1.419670315 | -6.587212217 | 1.14E-10 | 13.09863424 |
| PADI2      | -0.520762881    | 1.538897031 | -6.587276555 | 1.21E-10 | 13.04727234 |
| COA4       | 0.303073762     | 4.474751324 | 6.577734882 | 1.21E-10 | 13.04126608 |
| IGHV3-73   | -1.278367561    | 4.397344178 | -6.57772469  | 1.21E-10 | 13.04120443 |
| TLCD1      | 0.462318758     | 4.001789314 | 6.576255999 | 1.21E-10 | 13.04060497 |
| LSM4       | 0.31014658      | 4.800517631 | 6.576838682 | 1.22E-10 | 13.03584474 |
| CTD-2288O8.1 | -0.215324535  | 0.33668975  | -6.574466422 | 1.24E-10 | 13.02149736 |
| CTD-2020K17.1 | -0.413188483  | 1.133714047 | -6.573407952 | 1.25E-10 | 13.01509715 |
| CYB5R4     | -0.241281733    | 1.7650331   | -6.573056765 | 1.25E-10 | 13.01297383 |
| METRNL     | -0.438687893    | 3.72755823  | -6.5726533   | 1.25E-10 | 13.01053455 |
| RAMP3      | -0.504755339    | 3.131821419 | -6.572274216 | 1.25E-10 | 13.00824279 |
| MAMDC2     | -0.562573536    | 1.518617285 | -6.569907339 | 1.27E-10 | 12.99393628 |
| RP11-283G6.4 | -0.223949157  | 0.598215958 | -6.56844028  | 1.29E-10 | 12.98507087 |
| ITM2B      | -0.343576449    | 5.822466413 | -6.56516522  | 1.31E-10 | 12.96740762 |
| TALDO1     | 0.443223168     | 6.243689995 | 6.564735772 | 1.31E-10 | 12.96269199 |
| ACTB       | -0.283591049    | 10.76125893 | -6.564320978 | 1.32E-10 | 12.96018689 |
| TMEM177    | 0.248951298     | 2.450775851 | 6.564054006 | 1.32E-10 | 12.95857462 |
| CELF2      | -0.485529217    | 2.919451966 | -6.563621917 | 1.32E-10 | 12.95596529 |
| RP11-335K5.3 | 0.233941859    | 0.235171825 | 6.562777095 | 1.33E-10 | 12.95086394 |
| TFB2M      | 0.306346461     | 3.797486605 | 6.56153574  | 1.34E-10 | 12.94336919 |
| IGKV2D-30  | -0.594358104    | 0.908006033 | -6.560651563 | 1.35E-10 | 12.93803164 |
| CAMSAP3    | 0.390557883     | 2.85060184  | 6.557175408 | 1.38E-10 | 12.91705286 |
| MAST3      | -0.271073299    | 1.945079344 | -6.556434101 | 1.38E-10 | 12.91258024 |
| HRH1       | -0.31220554     | 1.76926212  | -6.554972175 | 1.40E-10 | 12.90376107 |
| ALDH18A1   | 0.31054144      | 4.924266162 | 6.554821038 | 1.40E-10 | 12.90284942 |
| BNIP2      | -0.235661449    | 3.02025572  | -6.554647894 | 1.40E-10 | 12.90180504 |
| Gene       | Gene ID | Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|------------|---------|---------|---------|---------|---------|---------|
| CPXM2      | -0.660918611 | 2.132979582 | -6.554000514 | 1.40E-10 | 12.89790037 |
| PHLDB2     | -0.418741542 | 1.499733266 | -6.55241049 | 1.42E-10 | 12.8831151 |
| PTCD1      | 0.200984495 | 1.256336547 | 6.551239926 | 1.43E-10 | 12.88125351 |
| CASQ2      | -0.235001536 | 0.382651501 | -6.549195685 | 1.45E-10 | 12.86893015 |
| IGKV1-27   | -1.12505419 | 4.93920293 | -6.547715971 | 1.46E-10 | 12.86001197 |
| TAPBPL     | -0.416065234 | 3.64144392 | -6.547704582 | 1.46E-10 | 12.85994334 |
| BAG6       | 0.266753188 | 5.738405166 | 6.546742787 | 1.46E-10 | 12.85957094 |
| MANEA      | -0.3076659 | 2.265892277 | -6.546198224 | 1.46E-10 | 12.85693792 |
| FNB1P1L    | 0.337482303 | 3.956176074 | 6.546617972 | 1.47E-10 | 12.85693792 |
| PEMT       | 0.358662581 | 3.391948526 | 6.546356478 | 1.47E-10 | 12.85181984 |
| RP11-799B12.4 | 0.365574593 | 0.720534347 | -6.546147569 | 1.47E-10 | 12.85056111 |
| HRH2       | -0.26347164 | 0.580043046 | -6.544202535 | 1.49E-10 | 12.8388434 |
| THBD       | -0.541141241 | 3.193855753 | -6.54202535 | 1.49E-10 | 12.80406327 |
| THEM6      | 0.438785854 | 3.819012595 | 6.538426484 | 1.55E-10 | 12.80406327 |
| TRUB2      | 0.239216086 | 2.902060772 | 6.53583475 | 1.57E-10 | 12.7884657 |
| RP11-148O21.4 | -0.207193295 | 0.240175103 | -6.5302872 | 1.63E-10 | 12.75509693 |
| TXK        | -0.202668426 | 0.556984136 | -6.5257666 | 1.67E-10 | 12.72792295 |
| ATP8B1     | 0.481166946 | 3.420771006 | 6.525482452 | 1.67E-10 | 12.72621542 |
| MB21D2     | -0.368684252 | 1.492838327 | -6.52389049 | 1.69E-10 | 12.71665278 |
| RP11-294C11.4 | -0.399784914 | 0.480981423 | -6.52382664 | 1.69E-10 | 12.71642277 |
| RP11-295G20.2 | 0.651910329 | 2.627511724 | 6.523249833 | 1.70E-10 | 12.71280116 |
| HLA-F-AS1  | -0.235523414 | 0.671219616 | -6.522965094 | 1.70E-10 | 12.71109064 |
| MAPK11     | -0.404740461 | 2.053671569 | -6.522852829 | 1.70E-10 | 12.71025405 |
| RPP21      | 0.280540802 | 2.491273352 | 6.522778852 | 1.70E-10 | 12.70997185 |
| ZFP36L1    | -0.474755222 | 6.437567747 | -6.52226772 | 1.71E-10 | 12.70689585 |
| CCHCR1     | 0.354518223 | 2.760302864 | 6.521970652 | 1.71E-10 | 12.70511718 |
| SKAP1      | -0.551869577 | 2.144748326 | -6.517622172 | 1.76E-10 | 12.67900559 |
| SNHG17     | 0.376680502 | 2.517238646 | 6.517265041 | 1.76E-10 | 12.67686175 |
| MIR6774    | -0.271480151 | 0.36832561 | -6.515217013 | 1.78E-10 | 12.66456947 |
| IGKV2OR22-3 | -0.497405581 | 0.765164578 | -6.514565201 | 1.79E-10 | 12.66120404 |
| NOP56      | 0.329406101 | 4.178371619 | 6.51445733 | 1.79E-10 | 12.66001067 |
| AAMP       | 0.203827132 | 5.287157896 | 6.51368111 | 1.80E-10 | 12.65535304 |
| GTF3C2     | 0.219179035 | 3.722751845 | 6.513251111 | 1.80E-10 | 12.65277317 |
| Gene      | Value   | Value   | Value   | Value   | Value   |
|-----------|---------|---------|---------|---------|---------|
| DUSP3     | -0.257 | 4.278  | -6.512 | 1.83E-10| 12.641 |
| RCAN1     | -0.367 | 2.531  | -6.509 | 1.85E-10| 12.629 |
| GKP1      | 0.244  | 1.235  | 6.508  | 1.86E-10| 12.622 |
| PIR       | 0.620  | 2.801  | 6.506  | 1.88E-10| 12.611 |
| TACC2     | 0.583  | 2.638  | 6.506  | 1.89E-10| 12.609 |
| MCUR1     | 0.244  | 3.083  | 6.506  | 1.89E-10| 12.606 |
| MLKL      | -0.331 | 2.144  | -6.503 | 1.92E-10| 12.595 |
| ARMEX1    | -0.409 | 2.959  | 6.501  | 1.94E-10| 12.586 |
| FBLN5     | -0.556 | 1.205  | -6.498 | 2.02E-10| 12.566 |
| TAPBP     | -0.355 | 6.138  | -6.499 | 2.02E-10| 12.544 |
| AIFM2     | 0.372  | 2.796  | 6.496  | 2.02E-10| 12.543 |
| TRAJ38    | -0.204 | 0.187  | -6.495 | 2.02E-10| 12.543 |
| MTPAP     | 0.214  | 2.002  | 6.493  | 2.02E-10| 12.530 |
| NMI       | -0.338 | 2.389  | -6.493 | 2.02E-10| 12.527 |
| RP11-524D16_A.3 | -0.508 | 1.732 | -6.489 | 2.10E-10| 12.504 |
| OLFML3    | -0.658 | 3.968  | -6.487 | 2.12E-10| 12.496 |
| 2-Mar     | -0.266 | 4.006  | -6.486 | 2.13E-10| 12.490 |
| HMBS      | 0.318  | 2.958  | 6.483  | 2.17E-10| 12.473 |
| MAOB      | -0.592 | 2.585  | -6.481 | 2.20E-10| 12.462 |
| AHR       | -0.541 | 4.856  | -6.480 | 2.20E-10| 12.459 |
| LTBP4     | -0.513 | 3.519  | -6.479 | 2.21E-10| 12.453 |
| SYTL2     | -0.462 | 2.169  | -6.479 | 2.22E-10| 12.451 |
| RP11-493L12.5 | -0.333 | 0.750  | -6.479 | 2.22E-10| 12.448 |
| CDK2AP2   | 0.460  | 5.635  | 6.479  | 2.22E-10| 12.448 |
| IRF2BP1   | 0.308  | 3.503  | 6.479  | 2.23E-10| 12.445 |
| CBR1      | 0.758  | 5.200  | 6.477  | 2.25E-10| 12.437 |
| TEMEM176B | -0.630 | 5.753  | -6.476 | 2.26E-10| 12.432 |
| AC246787.1| -0.647 | 1.199  | -6.475 | 2.27E-10| 12.427 |
| TLE4      | -0.320 | 1.594  | -6.474 | 2.27E-10| 12.420 |
| APITD1    | 0.272  | 1.718  | 6.473  | 2.21E-10| 12.414 |
| C19orf48  | 0.414  | 3.783  | 6.468  | 2.37E-10| 12.388 |
| IGKV1D-12 | -0.719 | 1.373  | -6.468 | 2.38E-10| 12.383 |
| OASL      | -0.548 | 2.033  | -6.466 | 2.40E-10| 12.372 |
| Gene          | Log2 Fold Change | t-Value       | Adj. P-Value | Log2 FC Threshold | Log2 Fold Change | t-Value       | Adj. P-Value | Log2 FC Threshold |
|--------------|------------------|---------------|-------------|------------------|------------------|---------------|-------------|------------------|
| IGLV2-34     | -0.604176328     | 1.286321687   | -6.464907396| 2.43E-10         | 12.36363374     |
| OSBPL11      | -0.235666267     | 2.771115059   | -6.459199687| 2.51E-10         | 12.32961644     |
| SLC9A6       | -0.255056119     | 2.522719719   | -6.455937016| 2.56E-10         | 12.31018269     |
| FLAD1        | 0.321676132      | 3.847236399   | 6.455869177 | 2.58E-10         | 12.3097787      |
| FAM46C       | -0.545402999     | 3.35050453    | 6.455783461 | 2.56E-10         | 12.3026826      |
| CTD-2547L24.4| -0.253102613     | 0.602658856   | -6.454775331| 2.58E-10         | 12.30326524     |
| SHARPIN      | 0.33912909       | 4.863022616   | 6.453598021 | 2.60E-10         | 12.29625582     |
| GY2          | -0.255056119     | 2.025991222   | -6.454775331| 2.58E-10         | 12.29625582     |
| TNFSF14      | -0.321107186     | 0.845739235   | -6.450868726| 2.64E-10         | 12.2893075      |
| 11-Sep       | -0.321107186     | 0.845739235   | -6.450868726| 2.64E-10         | 12.2893075      |
| RUVBL1       | 0.303451346      | 3.188512681   | 6.450111879 | 2.66E-10         | 12.27550651     |
| SEC14L1      | -0.348468928     | 0.770863177   | 6.44799838  | 2.69E-10         | 12.26294039     |
| RP11-320M2.1 | 0.273663227      | 0.218823768   | -6.447341898| 2.70E-10         | 12.2588659      |
| MKN1         | -0.218823768     | 2.41839918    | -6.447223295| 2.70E-10         | 12.2588659      |
| ELN          | 0.392078456      | 0.725789639   | -6.44677079 | 2.71E-10         | 12.25562944     |
| IGHV1OR16-3  | -0.392608337     | 0.665497747   | -6.444439892| 2.75E-10         | 12.24176743     |
| IGHV3-25     | -0.392608337     | 0.665497747   | -6.444439892| 2.75E-10         | 12.24176743     |
| ABCB1        | 0.25379819       | 0.647954627   | -6.442634127| 2.78E-10         | 12.23103135     |
| C10orf2      | 0.395761564      | 2.347115404   | 6.441741031 | 2.79E-10         | 12.22572242     |
| TMEM52       | 0.404784876      | 1.261529891   | 6.441345129  | 2.80E-10         | 12.2236922      |
| SLC25A30     | -0.218244601     | 1.699108889   | -6.44086938  | 2.81E-10         | 12.22123433     |
| PHF11        | -0.234959511     | 2.751229602   | -6.440757236| 2.81E-10         | 12.21987507     |
| PVALB        | -0.270255448     | 0.427072725   | -6.440372039| 2.82E-10         | 12.21758579     |
| COL13A1      | -0.318151171     | 0.984335242   | -6.439204975| 2.84E-10         | 12.21065048     |
| AP000688.14  | 0.205063731      | 0.316771259   | 6.43833953  | 2.85E-10         | 12.20550824     |
| LRRC17       | -0.406336667     | 1.303879597   | -6.432847424| 2.95E-10         | 12.1728922      |
| SERPINE1     | -0.777934203     | 4.538856743   | -6.431097802| 2.98E-10         | 12.16250271     |
| IGLJ1        | -0.426610126     | 0.764530016   | -6.430072142| 3.00E-10         | 12.15641506     |
| PATZ1        | 0.289831634      | 3.374765648   | 6.429655955 | 3.01E-10         | 12.15394294     |
| WDR34        | 0.377315705      | 4.948284029   | 6.429572601 | 3.01E-10         | 12.15345041     |
| ESERRA       | 0.311316063      | 4.09149198    | 6.423910946 | 3.11E-10         | 12.11991155     |
| CNN3         | -0.425377007     | 5.787380682   | -6.422256279| 3.14E-10         | 12.1100522      |
| SWI5         | 0.273424692      | 3.505196351   | 6.422068123 | 3.15E-10         | 12.10893666     |
| Gene          | Log2 Fold Change | p-value | Adjusted p-value | shGEO Score |
|--------------|-----------------|--------|-----------------|------------|
| UBE2V2       | 0.27646153      | 3.188601752 | 6.420714877 | 3.17E-10 | 12.1009144 |
| AC016831.7   | 0.350686902     | 0.563180497 | 6.419933679 | 3.19E-10 | 12.09628398 |
| HRAS         | 0.316990654     | 3.836698959 | 6.417517954 | 3.24E-10 | 12.08196819 |
| ARHGAP20     | -0.397067653    | 1.01400017 | -6.416886589 | 3.25E-10 | 12.07822743 |
| IGFBP4       | -0.465438688    | 7.568184579 | -6.41880389 | 3.29E-10 | 12.06634298 |
| MTM1         | -0.264439975    | 2.313728196 | -6.41590898 | 3.29E-10 | 12.06462833 |
| MAL          | -0.583587683    | 1.936713576 | -6.41325932 | 3.32E-10 | 12.0567423  |
| COPZ2        | -0.44477706     | 2.546548382 | -6.40742630 | 3.44E-10 | 12.02221358 |
| SUPV3L1      | 0.212365861     | 2.763030565 | 6.40422095 | 3.51E-10 | 12.00325075 |
| OLFM1        | -0.473682786    | 1.26377703 | -6.40177029 | 3.56E-10 | 11.99153984 |
| PNPT1        | 0.297608401     | 3.104325078 | 6.40159817 | 3.56E-10 | 11.98774037 |
| RNA5P39      | -0.205739149    | 0.345563297 | -6.40017703 | 3.59E-10 | 11.97933839 |
| SLC6A12      | -0.242376035    | 0.628993809 | -6.39606922 | 3.69E-10 | 11.95506136 |
| DIO2         | -0.498767493    | 1.249583463 | -6.39513169 | 3.74E-10 | 11.93995816 |
| NMB          | 0.54223832      | 3.084678654 | 6.39347061 | 3.74E-10 | 11.93971051 |
| IGHV3OR16-15 | -0.301429237    | 0.518522639 | -6.3907964 | 3.80E-10 | 11.92398154 |
| TSC22D3      | -0.586188162    | 5.273088799 | -6.39026246 | 3.82E-10 | 11.92077679 |
| CR2          | -0.623889645    | 1.353646425 | -6.38980957 | 3.83E-10 | 11.91809245 |
| IGKV2D-40    | -1.021772195    | 2.6006521 | -6.38977423 | 3.83E-10 | 11.9178879 |
| LHX4-AS1     | 0.203930466     | 2.620281336 | 6.38875191 | 3.85E-10 | 11.91184903 |
| PICK1        | 0.303666705     | 2.86954145 | 6.38572286 | 3.92E-10 | 11.89397326 |
| CFD          | -0.701436876    | 3.868102678 | -6.38417875 | 3.96E-10 | 11.88486355 |
| 8-Sep        | -0.254871139    | 2.890419719 | -6.38340804 | 3.98E-10 | 11.88031758 |
| FXR2         | 0.245465613     | 3.398521496 | 6.38288596 | 3.99E-10 | 11.87723797 |
| NPR2         | -0.279274398    | 1.640697834 | -6.3805958 | 4.05E-10 | 11.86357706 |
| RP11-798K23.5| -0.406581674    | 1.624014856 | -6.37650758 | 4.15E-10 | 11.83963406 |
| PANK1        | 0.245456682     | 1.021089802 | 6.3764505 | 4.15E-10 | 11.83929769 |
| ROS1         | -0.820590752    | 2.807974774 | -6.37614295 | 4.16E-10 | 11.83761106 |
| DPM2         | 0.293114351     | 4.364861117 | 6.37522577 | 4.18E-10 | 11.83208091 |
| AC013264.2   | -0.566461727    | 0.984660956 | -6.37276323 | 4.24E-10 | 11.81757395 |
| ITG2P2       | -0.383136197    | 2.04972753 | -6.37222767 | 4.26E-10 | 11.81441892 |
| MARVELD1     | -0.425566305    | 4.130933433 | -6.36972444 | 4.32E-10 | 11.79967881 |
| ADAMTS16     | -0.384108253    | 0.924674432 | -6.36914907 | 4.34E-10 | 11.79629132 |
| Gene             | Score   | Expression | Correlation | p-Value | t-Value |
|------------------|---------|------------|-------------|---------|---------|
| TRAJ2            | -0.2737| 0.374189   | -6.3684   | 4.36E-10| 11.7915|
| USP21            | 0.2568 | 3.372282   | 6.3679   | 4.37E-10| 11.7890|
| RP11-480I12.5    | 0.4513 | 1.477950   | 6.3661   | 4.41E-10| 11.7788|
| FAM212A          | -0.2909| 1.3260    | -6.3635  | 4.48E-10| 11.7617|
| ANXA1            | -0.7814| 5.7975    | -6.3655  | 4.43E-10| 11.7750|
| SRPX2            | -0.7078| 3.2509    | -6.3633  | 4.49E-10| 11.7617|
| MRPL30           | 0.2332 | 3.5031    | 6.3624   | 4.51E-10| 11.7570|
| DOK1             | -0.2884| 2.8151    | -6.3624  | 4.52E-10| 11.7562|
| RP11-77A13.1     | -0.3969| 0.3933    | -6.3626  | 4.55E-10| 11.7489|
| PUSL1            | 0.3199 | 2.7942    | 6.3563   | 4.68E-10| 11.7208|
| MACROD1          | 0.4236 | 3.0677    | 6.3563   | 4.68E-10| 11.7208|
| SECTM1           | -0.5745| 3.5361    | -6.3526  | 4.79E-10| 11.6994|
| IGHV3-65         | -0.3400| 0.4704    | -6.3526  | 4.79E-10| 11.6994|
| BOP1             | 0.4453 | 4.0192    | 6.3514   | 4.82E-10| 11.6924|
| NDUFS2           | 0.2462 | 4.9163    | 6.3514   | 4.82E-10| 11.6922|
| CD59             | -0.4393| 6.1981    | -6.3493  | 4.88E-10| 11.6798|
| C14orf132        | -0.4048| 1.4154    | -6.3493  | 4.88E-10| 11.6798|
| MRPL2            | 0.2729 | 3.6381    | 6.3491   | 4.89E-10| 11.6784|
| IGKV2-24         | -1.0578| 4.3513    | -6.3470  | 4.95E-10| 11.6662|
| CBX8             | 0.2599 | 2.0294    | 6.3462   | 4.98E-10| 11.6619|
| STAT5B           | -0.2368| 3.3948    | -6.3454  | 5.00E-10| 11.6572|
| EBPL             | 0.3674 | 4.2379    | 6.3446   | 5.03E-10| 11.6512|
| ITIH5            | -0.4044| 1.0000    | -6.3429  | 5.08E-10| 11.6422|
| MT2A             | -0.7190| 6.1139    | -6.3418  | 5.11E-10| 11.6360|
| ST6GALNAC6       | -0.3219| 3.5025    | -6.3409  | 5.14E-10| 11.6307|
| CLIP2            | -0.3845| 1.9060    | -6.3373  | 5.25E-10| 11.6092|
| ZNF696           | 0.2580 | 1.6090    | 6.3346   | 5.34E-10| 11.5936|
| AC074117.10      | 0.2728 | 1.4166    | 6.3315   | 5.44E-10| 11.5753|
| MYCBP2           | -0.3059| 2.1761    | -6.3305  | 5.47E-10| 11.5694|
| RP11-20G13.2     | -0.2469| 0.3391    | -6.3265  | 5.60E-10| 11.5461|
| ARHGEF39         | 0.2690 | 1.0485    | 6.3237   | 5.69E-10| 11.5299|
| VOPP1            | -0.3651| 3.4593    | -6.3214  | 5.72E-10| 11.5263|
| WI2-1896O14.1    | -0.3829| 1.4609    | -6.3214  | 5.77E-10| 11.5165|
| Gene       | Log2 Fold Change | P-value      | q-value   | Adjusted p-value |
|------------|-----------------|--------------|-----------|------------------|
| TTYH2      | -0.311660674    | -6.320792069 | 5.80E-10  | 11.51251914      |
| VCL        | -0.351953352    | -6.319239754 | 5.85E-10  | 11.50344019      |
| RHOA       | -0.205880655    | -6.318026785 | 5.89E-10  | 11.49634728      |
| IGKV1-3    | -0.933418395    | -6.316913096 | 5.93E-10  | 11.48983594      |
| CTSD       | -0.447683503    | -6.313037215 | 6.07E-10  | 11.46718265      |
| BACE1      | -0.312783506    | -6.31307215  | 6.07E-10  | 11.46718265      |
| RAP1GAP2   | 0.437588457     | 6.31049216   | 6.17E-10  | 11.45231406      |
| EIF2AK1    | 0.257419756     | 6.309871371  | 6.19E-10  | 11.44868809      |
| BFP1       | 0.249116473     | 6.307717271  | 6.28E-10  | 11.43610855      |
| NMT2       | -0.232079913    | -6.3054489   | 6.35E-10  | 11.42286565      |
| RASA2      | -0.263213927    | -6.305348496 | 6.36E-10  | 11.4227958       |
| MRPS16     | 0.240080024     | 6.304031422  | 6.39E-10  | 11.41459238      |
| SLC40A1    | -0.617198107    | -6.303205842 | 6.44E-10  | 11.40977451      |
| MRPL24     | 0.342229988     | 6.309871371  | 6.19E-10  | 11.44868809      |
| ROBO1      | -0.410679921    | -6.298512181 | 6.62E-10  | 11.38244626      |
| DMXL1      | -0.21479747     | -6.297734592 | 6.65E-10  | 11.37785935      |
| DDT        | 0.320902338     | 6.297575786  | 6.66E-10  | 11.37693334      |
| STAU2      | 0.308130311     | 6.296777836  | 6.69E-10  | 11.37228077      |
| ZNF469     | -0.237124835    | -6.296028436 | 6.72E-10  | 11.36791174      |
| RIN2       | -0.305363445    | 6.295601185  | 6.74E-10  | 11.36542105      |
| PTGER2     | -0.479732655    | -6.294335372 | 6.79E-10  | 11.35804274      |
| AC244250.4 | -0.727778969    | -6.29336713  | 6.83E-10  | 11.3522254       |
| IGKV1-56   | -0.467420999    | -6.291811674 | 6.89E-10  | 11.3433361       |
| MIR4537    | -0.556150281    | -6.290918745 | 6.93E-10  | 11.33813384      |
| CCDC24     | 0.353630168     | 6.290211214  | 6.96E-10  | 11.33401216      |
| CNOT11     | 0.257236866     | 6.290108047  | 6.96E-10  | 11.3341122       |
| FASN       | 0.619151112     | 6.288784925  | 7.02E-10  | 11.32570461      |
| PDHA1      | 0.242927039     | 6.288233375  | 7.04E-10  | 11.32249248      |
| ETV1       | -0.502634869    | -6.287329258 | 7.08E-10  | 11.31722759      |
| JPH2       | 0.66675758      | -6.28673917  | 7.11E-10  | 11.31379257      |
| HES6       | 0.751101267     | 6.286486724  | 7.12E-10  | 11.31232189      |
| RASSF8     | -0.429047429    | 6.28244202   | 7.29E-10  | 11.2887919       |
| IL13RA2    | -0.483343009    | 6.281942172  | 7.31E-10  | 11.28587068      |
| Gene       | Value1   | Value2   | Value3   | Value4   | Value5   |
|------------|----------|----------|----------|----------|----------|
| METTL7A    | -0.533763082 | 4.012325863 | -6.281215903 | 7.34E-10 | 11.281645 |
| RNF208     | 0.430534805  | 2.95328371  | 6.280721863  | 7.37E-10 | 11.27877074 |
| DEGS1      | -0.261382465 | 4.926829442 | -6.275263206 | 7.61E-10 | 11.24702586 |
| GLRX       | -0.410198526 | 2.685610647 | -6.274317504 | 7.65E-10 | 11.24152852 |
| PI16       | -0.31067279  | 0.436440585  | -6.273903166 | 7.67E-10 | 11.2391202 |
| IGVK7-3    | -0.425524897 | 0.776405826  | -6.27144455  | 7.78E-10 | 11.22483242 |
| IFI44L     | -0.630040467 | 2.012828535  | -6.269724143 | 7.86E-10 | 11.21483745 |
| C9orf72    | -0.275157166 | 1.757576119  | -6.266663868 | 8.01E-10 | 11.19706408 |
| TBCE       | 0.274905423  | 3.710548983  | 6.265285405  | 8.07E-10 | 11.1890607 |
| FRAT2      | 0.336875466  | 3.010340047  | 6.265129905  | 8.10E-10 | 11.18643428 |
| SNRPA      | -0.604497459 | 1.96909731   | 6.2643807    | 8.12E-10 | 11.18380879 |
| ITGA11     | -0.307754962 | 1.07721424   | 6.263801433  | 8.14E-10 | 11.18168507 |
| PCAT19     | 0.290717669  | 6.078085572  | 6.263960099  | 8.14E-10 | 11.18151777 |
| TRIM28     | 0.403330518  | 4.153435061  | 6.263515346  | 8.16E-10 | 11.17878592 |
| DHC7R      | 0.236834427  | 3.760891542  | 6.259008789  | 8.34E-10 | 11.15725929 |
| VPS52      | 0.253870988  | 5.769140895  | 6.25893971   | 8.38E-10 | 11.15236758 |
| SF3B1      | 0.364686742  | 3.729157347  | 6.25893971   | 8.38E-10 | 11.15236758 |
| YDJC       | -0.255478469 | 1.145739826  | 6.256235862  | 8.52E-10 | 11.13655624 |
| MEIS1      | -0.267581421 | 0.925131356  | 6.255225367  | 8.57E-10 | 11.13069748 |
| GPRASP1    | -0.428047305 | 0.47187415   | 6.255165821  | 8.57E-10 | 11.13035226 |
| IGHD4-23   | -0.794896648 | 3.414630159  | 6.253602123  | 8.65E-10 | 11.12128774 |
| FABP3      | -0.705680231 | 1.327802294  | 6.25297921   | 8.69E-10 | 11.11767735 |
| SAA2       | 0.200986592  | 1.053768782  | 6.248793809  | 8.91E-10 | 11.0934268 |
| RP11-686D22.8 | -0.335806851 | 4.107241393  | 6.238106835  | 9.49E-10 | 11.03156854 |
| TM4SF18    | 0.473346625  | 3.34763236   | 6.237943709  | 9.50E-10 | 11.03062504 |
| Gene     | Value 1  | Value 2   | Value 3   | Value 4   | Value 5   |
|----------|---------|-----------|-----------|-----------|-----------|
| C11orf49 | 0.273   | 2.709     | 6.232     | 9.81E-10  | 10.999    |
| ADAMTS1  | -0.506  | 2.463     | -6.232    | 9.87E-10  | 10.992    |
| KLF10    | -0.337  | 4.204     | -6.224    | 1.01E-09  | 10.975    |
| AC108463.2| -0.235 | 0.902     | -6.225    | 1.05E-09  | 10.929    |
| GCAT     | 0.427   | 2.882     | 6.221     | 1.05E-09  | 10.935    |
| FOXO1    | -0.372  | 2.453     | -6.221    | 1.05E-09  | 10.918    |
| ADCT    | -0.227  | 0.917     | -6.217    | 1.07E-09  | 10.908    |
| PAXIP1   | 0.213   | 1.636     | -6.216    | 1.11E-09  | 10.878    |
| INMT     | -0.707  | 2.569     | -6.212    | 1.11E-09  | 10.819    |
| PLA2R1   | -0.222  | 0.917     | -6.210    | 1.12E-09  | 10.803    |
| CARKD    | 0.327   | 4.029     | 6.208     | 1.13E-09  | 10.862    |
| YPEL2    | -0.238  | 2.050     | -6.215    | 1.11E-09  | 10.878    |
| HSF1     | 0.288   | 4.319     | 6.208     | 1.13E-09  | 10.862    |
| C12orf4  | -0.222  | 2.221     | -6.207    | 1.13E-09  | 10.857    |
| PCCB     | 0.280   | 2.719     | 6.207     | 1.14E-09  | 10.859    |
| PAFAH1B3 | 0.453   | 4.626     | 6.205     | 1.15E-09  | 10.845    |
| FXYD4    | 0.781   | 1.042     | 6.203     | 1.16E-09  | 10.834    |
| PA2G4    | 0.259   | 5.110     | 6.203     | 1.16E-09  | 10.831    |
| GPR1     | -0.221  | 0.313     | -6.202    | 1.17E-09  | 10.824    |
| RP11-517I3.2| -0.212 | 0.834     | -6.201    | 1.18E-09  | 10.819    |
| SYT7     | 0.748   | 3.114     | 6.201     | 1.18E-09  | 10.819    |
| FAM13B   | -0.265  | 2.147     | -6.198    | 1.20E-09  | 10.803    |
| RP11-251M1.1| -0.229 | 0.529     | -6.196    | 1.21E-09  | 10.791    |
| PPFIBP1  | -0.325  | 2.200     | -6.196    | 1.22E-09  | 10.789    |
| SMG5     | 0.297   | 4.829     | 6.192     | 1.24E-09  | 10.770    |
| MID2     | -0.299  | 1.707     | -6.190    | 1.26E-09  | 10.758    |
| FARSB    | 0.252   | 3.875     | 6.189     | 1.27E-09  | 10.750    |
| PEX13    | 0.209   | 3.266     | 6.189     | 1.27E-09  | 10.748    |
| RABL6    | 0.267   | 3.431     | 6.188     | 1.27E-09  | 10.744    |
| ZNF154   | -0.275  | 0.899     | -6.185    | 1.29E-09  | 10.728    |
| FAM20C   | -0.446  | 3.376     | -6.185    | 1.30E-09  | 10.727    |
| Gene      | Log2FoldChange | Log2PValue  | qValue   | AdjustedPValue |
|-----------|---------------|-------------|----------|----------------|
| PTGES2    | 0.276041077   | 3.961660869 | 6.18451684 | 1.30E-09       |
| HSBP1L1   | 0.36654876    | 3.296880069 | 6.18166723 | 1.32E-09       |
| ABHD6     | -0.238790458  | 1.62903097  | -6.180875095 | 1.33E-09     |
| DDX60L    | -0.336328854  | 1.76210836  | -6.180289317 | 1.33E-09     |
| IGHV3-6   | -0.335625176  | 0.50761793  | -6.18009696 | 1.34E-09     |
| LARP1B    | 0.200863038   | 1.853615207 | 6.179349872 | 1.34E-09     |
| WDR12     | 0.231650659   | 2.070613227 | 6.17835639 | 1.35E-09     |
| IGFBP6    | -0.713972173  | 2.911893494 | -6.174915065 | 1.38E-09     |
| RBMS3     | -0.3258318    | 1.266041479 | -6.174179369 | 1.38E-09     |
| ERP29     | 0.30678531    | 6.115033694 | 6.172553768 | 1.40E-09     |
| WDFY1     | -0.256937025  | 3.581736389 | -6.17204111 | 1.40E-09     |
| 3-Mar     | -0.253485583  | 0.999331785 | -6.170699601 | 1.41E-09     |
| SSB       | 0.228734454   | 4.330722501 | 6.169880674 | 1.42E-09     |
| PDLIM4    | -0.622529374  | 2.536994552 | -6.16974325 | 1.42E-09     |
| PYGO2     | 0.250891676   | 4.557688882 | 6.169641071 | 1.42E-09     |
| TMED4     | 0.2483969285  | 5.384580951 | 6.169108097 | 1.43E-09     |
| PSDM4     | 0.275446744   | 5.813843865 | 6.168958866 | 1.43E-09     |
| DCBLD1    | -0.364567454  | 2.388096007 | -6.166656224 | 1.45E-09     |
| HS3ST3A1  | -0.261877126  | 0.527893027 | -6.162910021 | 1.48E-09     |
| BPHL      | 0.291881294   | 2.152781191 | 6.160171934 | 1.50E-09     |
| ACKR4     | -0.248388412  | 0.490337934 | -6.16006411 | 1.50E-09     |
| HLA-DPB2  | -0.453073016  | 1.202762222 | -6.159513394 | 1.51E-09     |
| LR5P5     | 0.395471021   | 4.557962968 | 6.159315189 | 1.51E-09     |
| POLK      | -0.215210711  | 1.755637148 | -6.156181508 | 1.54E-09     |
| FABP4     | -0.667394237  | 1.497035843 | -6.155837036 | 1.54E-09     |
| TMEM55A   | -0.297710145  | 1.737035432 | -6.15577588 | 1.54E-09     |
| PLAUR     | -0.542334155  | 4.135161107 | -6.154057635 | 1.56E-09     |
| CRLF3     | -0.228513763  | 2.640561375 | -6.152943434 | 1.57E-09     |
| FAM102B   | -0.314682982  | 1.671692811 | -6.152433791 | 1.57E-09     |
| RNF144B   | -0.411314091  | 2.764429271 | -6.146702865 | 1.63E-09     |
| BEND6     | -0.225836291  | 0.517264691 | -6.143975323 | 1.65E-09     |
| MT1M      | -0.599877548  | 1.620117338 | -6.143766595 | 1.65E-09     |
| GPX8      | -0.474047381  | 2.915788007 | -6.141994631 | 1.67E-09     |

**AdjustedPValue**
| Gene       | Value1  | Value2  | Value3  | Value4  | Value5  |
|------------|---------|---------|---------|---------|---------|
| SLC28A3    | -0.40749762 | 0.936394563 | -6.140422633 | 1.69E-09 | 10.47035563 |
| RBMS1      | -0.243131947 | 3.000014522 | -6.13806227 | 1.71E-09 | 10.45702558 |
| DPY30      | 0.271936816 | 4.169839167 | 6.137792835 | 1.71E-09 | 10.45535197 |
| ECE2       | 0.315816894 | 1.51470069 | 6.135064318 | 1.74E-09 | 10.43979094 |
| RSU1       | -0.226278275 | 4.237193164 | 6.134507299 | 1.75E-09 | 10.43661492 |
| MXRA7      | -0.418624114 | 2.978692317 | 6.13342463 | 1.76E-09 | 10.42997407 |
| C10orf35   | 0.339296933 | 3.041650011 | 6.129781147 | 1.79E-09 | 10.4255676 |
| TMEM141    | 0.422525885 | 5.079640883 | 6.12649351 | 1.80E-09 | 10.40892638 |
| XXyac-YX65C7_A.2 | -0.216195764 | 0.643143334 | -6.128843245 | 1.80E-09 | 10.40433369 |
| TOP1MT     | 0.306787339 | 2.565331177 | 6.128165728 | 1.81E-09 | 10.40047402 |
| TSPAN9     | -0.357212483 | 3.207546921 | -6.12843245 | 1.80E-09 | 10.40433369 |
| ZNF692     | 0.435022762 | 3.01743678 | 6.128165728 | 1.81E-09 | 10.40047402 |
| NOL3       | 0.389819094 | 3.780264925 | 6.126462492 | 1.83E-09 | 10.3977267 |
| RP11-9E17.1 | 0.314755025 | 1.10536765 | 6.123627464 | 1.86E-09 | 10.37462996 |
| CBFA2T3    | -0.322556844 | 0.993352675 | -6.122981259 | 1.87E-09 | 10.37095135 |
| MFAP5      | -0.558540227 | 1.054965316 | -6.121881406 | 1.88E-09 | 10.36469106 |
| EO GT      | -0.249160461 | 2.400212621 | -6.120513788 | 1.89E-09 | 10.35690802 |
| SYNE1      | -0.357727167 | 1.510512032 | -6.116586342 | 1.94E-09 | 10.33456544 |
| FHAD1      | -0.239014318 | 0.501964734 | -6.114292805 | 1.96E-09 | 10.32152359 |
| RP11-566K19.6 | 0.337644475 | 0.539694745 | 6.113590206 | 1.97E-09 | 10.31752921 |
| TOR1AIP1   | -0.211511695 | 3.19644134 | -6.111974028 | 1.99E-09 | 10.3083425 |
| TMEM71     | -0.331728051 | 1.0222563 | -6.111317065 | 2.00E-09 | 10.30460877 |
| HPN-AS1    | 0.21593416 | 0.501099241 | 6.111214875 | 2.00E-09 | 10.30402803 |
| COPG1      | 0.241223286 | 6.029841608 | 6.108649555 | 2.03E-09 | 10.28945202 |
| MOB1A      | -0.20982575 | 4.75957986 | -6.106057957 | 2.06E-09 | 10.27473 |
| VAPA       | 0.286021639 | 4.165880605 | 6.105984398 | 2.06E-09 | 10.27431433 |
| E2F6       | 0.212940812 | 2.142833657 | 6.103160113 | 2.10E-09 | 10.258279 |
| DHRS13     | 0.25020912 | 1.507878942 | 6.101694987 | 2.11E-09 | 10.24996303 |
| SLC39A7    | 0.307076481 | 6.384520103 | 6.100867673 | 2.12E-09 | 10.24526801 |
| SEPP1      | -0.588754348 | 3.842830607 | -6.099125066 | 2.15E-09 | 10.23538047 |
| CDK16      | 0.282008392 | 4.164802599 | 6.098642175 | 2.15E-09 | 10.23264097 |
| Gene      | Log2 Fold Change | q-value  | FDR   | p-value  | log10(1+Fold) |
|-----------|------------------|----------|-------|----------|---------------|
| LATS2     | -0.271911256     | 2.17E-09 | 10.2259689 |
| SERTAD1   | -0.356592889     | 2.17E-09 | 10.22375643 |
| BTBD19    | -0.30934036      | 2.17E-09 | 10.22257149 |
| PTGES3P1  | -0.292292486     | 2.19E-09 | 10.2149511 |
| TEMEM254  | 0.289202388      | 2.21E-09 | 10.20554228 |
| ACOT13    | 0.283170671      | 2.23E-09 | 10.19842371 |
| IGHV7-27  | -0.407591677     | 2.26E-09 | 10.18525516 |
| NUDT8     | 0.395759931      | 2.28E-09 | 10.17488417 |
| FLT4      | -0.323639669     | 2.29E-09 | 10.17008548 |
| IGKV1OR2-9| -0.287427702     | 2.30E-09 | 10.16697091 |
| AC104667.3| 0.274327313      | 2.34E-09 | 10.15044676 |
| GFRA1     | -0.448621996     | 2.41E-09 | 10.12377733 |
| ACSL4     | -0.312115955     | 2.42E-09 | 10.11857866 |
| CDC14A    | -0.252356545     | 2.44E-09 | 10.11044698 |
| IL5RA     | -0.237822248     | 2.49E-09 | 10.08953132 |
| TRA6      | -0.225507201     | 2.49E-09 | 10.08942837 |
| CTD-2260A17.1| -0.204631827   | 2.54E-09 | 10.07187966 |
| RP3-406A7.7| 0.405309255      | 2.54E-09 | 10.0707725 |
| TIMM17B   | 0.330210567      | 2.56E-09 | 10.06470017 |
| IFNAR1    | -0.228768429     | 2.56E-09 | 10.06244369 |
| SDC2      | -0.481112503     | 2.57E-09 | 10.06010066 |
| RP11-388C12.8| 0.288644164     | 2.64E-09 | 10.03495516 |
| IFIT5     | -0.325952156     | 2.64E-09 | 10.03376154 |
| RP11-168F9.2| 0.295873681     | 2.67E-09 | 10.0212926 |
| IGHD3-22  | -0.587611292     | 2.69E-09 | 10.01392264 |
| SNRPD1    | 0.302291497      | 2.71E-09 | 10.00921042 |
| ITPA      | 0.293931377      | 2.71E-09 | 10.00757334 |
| FGFR1     | -0.300397496     | 2.72E-09 | 10.00490242 |
| KIF21B    | -0.289893317     | 2.75E-09 | 9.993710973 |
| PFDN1     | 0.328036368      | 2.75E-09 | 9.993623321 |
| EPT1      | 0.343249051      | 2.75E-09 | 9.993222411 |
| SUV420H1  | 0.212413334      | 2.76E-09 | 9.991068052 |
| Gene         | Log2FoldChange | FDR  | Adjusted P-value | P-value | q-value | Ensembl ID |
|--------------|----------------|------|------------------|---------|---------|------------|
| TGFBR3       | -0.371205666  | 1.319169552 | -6.054716817 | 2.78E-09 | 9.984229197 |
| ELF4         | -0.358249638  | 3.348696014 | -6.054527894 | 2.78E-09 | 9.983164117 |
| RP11-983P16.4| 0.335229145   | 1.578751938 | 6.053679948  | 2.79E-09 | 9.97834071 |
| C3orf80      | -0.264095004  | 0.864979036 | -6.053553125 | 2.80E-09 | 9.97766919 |
| HEXB         | -0.284598057  | 4.812579138 | -6.052460688 | 2.81E-09 | 9.971511854 |
| AC244157.1   | -0.474163144  | 0.747715792 | -6.052367675 | 2.81E-09 | 9.97087651 |
| RP11-10A14.4 | 0.284324431   | 0.564532263 | 6.05027627   | 2.85E-09 | 9.959206232 |
| PEAR1        | -0.277535865  | 1.106575518 | -6.05022041  | 2.85E-09 | 9.95887909 |
| FZD5         | 0.335229145   | 2.830149613 | 6.049163806  | 2.87E-09 | 9.955887909 |
| IGKV3OR2-5   | -0.305097967  | 0.344961368 | -6.048787192 | 2.87E-09 | 9.95081356 |
| DPYSL3       | -0.579720028  | 4.556356751 | -6.04600878 | 2.88E-09 | 9.949764375 |
| PSMB5        | 0.302844185   | 6.032593911 | 6.04601915   | 2.91E-09 | 9.938506237 |
| AIMP2        | 0.294811509   | 3.689217548 | 6.045643444  | 2.93E-09 | 9.932100887 |
| COX6C        | 0.325814924   | 4.979051303 | 6.044078057  | 2.95E-09 | 9.924296486 |
| NCK1         | -0.281133313  | 3.225417852 | -6.043900603 | 2.96E-09 | 9.923297582 |
| AQP1         | -0.949755983  | 5.942978519 | -6.043405426 | 2.96E-09 | 9.92051032 |
| ARHGAP10     | -0.23991391   | 1.281576632 | -6.041551893 | 3.00E-09 | 9.910078877 |
| MFSD3        | 0.433606463   | 3.468405144 | 6.0403122    | 3.02E-09 | 9.903103583 |
| IGFL2        | -0.436441689  | 0.806132486 | -6.039899936 | 3.02E-09 | 9.9007842 |
| GS1-600G8.5  | -0.255269337  | 0.349864871 | -6.039296232 | 3.04E-09 | 9.897388029 |
| VAPB         | 0.238040297   | 2.839465747 | 6.039053341  | 3.04E-09 | 9.896027121 |
| VWF          | -0.582253537  | 4.035466879 | -6.038645885 | 3.05E-09 | 9.893729789 |
| MFAP3        | -0.280141094  | 2.082270233 | -6.037711935 | 3.06E-09 | 9.888476867 |
| RERG         | -0.404840419  | 1.621539677 | -6.037240862 | 3.07E-09 | 9.885827625 |
| MLK4         | 0.279815457   | 1.66157334  | 6.036033598  | 3.09E-09 | 9.879038965 |
| PYCR1        | 0.494450091   | 5.245194268 | 6.033622142  | 3.14E-09 | 9.865482426 |
| TTC39A       | 0.444868637   | 2.355608553 | 6.031028033  | 3.18E-09 | 9.850904288 |
| DDX58        | -0.379151583  | 2.999535974 | -6.029917787 | 3.20E-09 | 9.844666677 |
| COL12A1      | -0.760606898  | 2.918826259 | -6.027741223 | 3.24E-09 | 9.832441138 |
| C2orf68      | 0.238631454   | 3.504325713 | 6.027556878  | 3.25E-09 | 9.831405869 |
| CHRAC1       | 0.249005082   | 3.82606235  | 6.02755449    | 3.25E-09 | 9.831285524 |
| NFKBIL1      | 0.269807608   | 3.651695412 | 6.024706394  | 3.3O-E-09 | 9.815401173 |
| OSBPL2       | 0.254761621   | 2.759529574 | 6.023536365  | 3.32E-09 | 9.808833668 |
| Gene     | Value1       | Value2       | Value3       | Value4       | Value5       |
|----------|--------------|--------------|--------------|--------------|--------------|
| CTB-134H23.3 | -0.297403316 | 0.454419593  | -6.021301762 | 3.37E-09     | 9.796293654  |
| M6PR     | -0.29812372  | 4.428583067  | -6.020499844 | 3.38E-09     | 9.791794478  |
| NECAB1   | -0.216059987 | 0.463782034  | -6.01813271  | 3.43E-09     | 9.778516649  |
| RGS3     | -0.255370391 | 2.532566854  | -6.0167426   | 3.56E-09     | 9.742312565  |
| LCN12    | 0.334911613  | 0.754348372  | 6.010956547  | 3.57E-09     | 9.738291364  |
| GCSH     | 0.237863587  | 1.617716984  | 6.007217375  | 3.65E-09     | 9.71734823   |
| GLRX5    | 0.226072231  | 3.774931907  | 6.007367425  | 3.65E-09     | 9.719772901  |
| TMCC3    | -0.330134378 | 1.606592391  | 6.007217375  | 3.65E-09     | 9.71734823   |
| LAMP2    | -0.305577435 | 5.288336662  | -6.001347408 | 3.78E-09     | 9.684493223  |
| CST6     | -0.90173056  | 3.267184669  | -6.00328378  | 3.81E-09     | 9.658799465  |
| TYMSOS   | 0.281202879  | 0.805187398  | 6.002337782  | 3.76E-09     | 9.690034532  |
| ARHGAP24 | -0.263295561 | 1.443252062  | -6.001347408 | 3.78E-09     | 9.684493223  |
| CD58     | -0.301059941 | 3.235586659  | -6.000011232 | 3.81E-09     | 9.677018338  |
| CKMT1B   | 0.372657824  | 0.799418591  | 5.99675343   | 3.88E-09     | 9.658799465  |
| MATN3    | -0.497331008 | 1.75663143   | -5.99503096  | 3.92E-09     | 9.649170215  |
| C16orf59 | 0.355862698  | 1.611915141  | 5.993045175  | 3.96E-09     | 9.638071899  |
| SH3GLB1  | -0.207463124 | 4.196548722  | -5.992919439 | 3.96E-09     | 9.637369282  |
| CXCR2    | -0.231218567 | 0.543219562  | -5.991835424 | 3.99E-09     | 9.631312306  |
| COL25A1  | 0.574039344  | 0.592104578  | 5.990915498  | 4.01E-09     | 9.626172926  |
| BMP1     | -0.3857604   | 2.696750366  | -5.990217746 | 4.03E-09     | 9.622275229  |
| MZT2A    | 0.304783072  | 2.84859405   | 5.989970156  | 4.03E-09     | 9.620892261  |
| WDR45B   | 0.314693462  | 5.41086191   | 5.98673557   | 4.11E-09     | 9.602829381  |
| KANK3    | -0.285775061 | 1.117490177  | -5.986174901 | 4.12E-09     | 9.599699297  |
| VARS     | 0.300384205  | 4.495374408  | 5.986090939  | 4.12E-09     | 9.599275802  |
| MCF2L-AS1| 0.435821891  | 1.503444696  | 5.98483725   | 4.15E-09     | 9.592232537  |
| PDLIM7   | -0.398704814 | 3.711559991  | -5.980415491 | 4.26E-09     | 9.567560558  |
| GPR125   | 0.284942745  | 2.187460734  | 5.980090617  | 4.27E-09     | 9.565748489  |
| LTBR     | 0.332774388  | 4.617097663  | 5.979388538  | 4.28E-09     | 9.561832754  |
| SPHK1    | -0.469893068 | 1.993607179  | -5.979100343 | 4.29E-09     | 9.560225506  |
| RLTPR    | -0.317132568 | 0.939253247  | -5.978816052 | 4.30E-09     | 9.558640098  |
| COMP     | -0.900991787 | 3.076531764  | -5.975983179 | 4.37E-09     | 9.542845538  |
| NCAM2    | -0.291372762 | 0.83264056   | -5.972692941 | 4.45E-09     | 9.5245091    |
| CMPK2    | -0.408936102 | 2.195410791  | -5.969880658 | 4.52E-09     | 9.508843223  |
| Gene  | Value_1  | Value_2  | Value_3  | Value_4  | Value_5  |
|-------|----------|----------|----------|----------|----------|
| PRKD3 | -0.300209711 | 2.450725664 | -5.96922803 | 4.54E-09 | 9.505208655 |
| FAM129A | -0.512470129 | 3.116942778 | -5.9688504 | 4.55E-09 | 9.503105745 |
| CBX2 | 0.530691062 | 1.764689193 | 5.968379268 | 4.62E-09 | 9.487778334 |
| RAPGEF1 | -0.294660239 | 3.856171688 | -5.967570093 | 4.58E-09 | 9.499712012 |
| CYHR1 | 0.275735541 | 2.839878588 | 5.967254891 | 4.76E-09 | 9.40766309 |
| DIAPH2 | -0.259982782 | 1.783134034 | -5.966097355 | 4.68E-09 | 9.487778334 |
| APOBEC3F | -0.285339511 | 1.636310024 | -5.965727229 | 4.70E-09 | 9.40766309 |
| CORO7 | 0.530691062 | 1.764689193 | 5.968379268 | 4.62E-09 | 9.487778334 |
| POLD2 | -0.225454781 | 1.458416226 | -5.963024262 | 4.76E-09 | 9.40766309 |
| ACAD10 | 0.236312134 | 2.114499889 | 5.96039299 | 4.78E-09 | 9.44953641 |
| NCL | -0.285339511 | 1.636310024 | -5.965727229 | 4.70E-09 | 9.40766309 |
| LETM1 | 0.241646582 | 2.975203749 | 5.955197404 | 4.92E-09 | 9.427138644 |
| MBNL1 | 0.275735541 | 2.839878588 | 5.967254891 | 4.76E-09 | 9.40766309 |
| FAM92B | -0.285339511 | 1.636310024 | -5.965727229 | 4.70E-09 | 9.40766309 |
| NUP35 | 0.343252157 | 3.136705886 | 5.958426113 | 4.78E-09 | 9.425586904 |
| GLTPD2 | 0.261981363 | 6.347351878 | 5.95745048 | 4.88E-09 | 9.435755672 |
| TNXB | -0.437283048 | 1.093859006 | -5.94954656 | 5.08E-09 | 9.395761314 |
| TCTEX1D1 | -0.258862446 | 0.445028817 | -5.949302044 | 5.09E-09 | 9.394404131 |
| C21orf59 | 0.241646582 | 2.975203749 | 5.955197404 | 4.92E-09 | 9.427138644 |
| COASY | -0.292846595 | 4.195660811 | -5.94915484 | 4.93E-09 | 9.425586904 |
| IMPA2 | 0.236312134 | 2.114499889 | 5.96039299 | 4.78E-09 | 9.44953641 |
| NT5M | -0.285339511 | 1.636310024 | -5.965727229 | 4.70E-09 | 9.40766309 |
| SAP30L | 0.261981363 | 6.347351878 | 5.95745048 | 4.88E-09 | 9.435755672 |
| HMGB3 | 0.261981363 | 6.347351878 | 5.95745048 | 4.88E-09 | 9.435755672 |
| ASPHD2 | -0.258862446 | 0.445028817 | -5.949302044 | 5.09E-09 | 9.394404131 |
| VARS2 | 0.241646582 | 2.975203749 | 5.955197404 | 4.92E-09 | 9.427138644 |
| RAB29 | -0.292846595 | 4.195660811 | -5.94915484 | 4.93E-09 | 9.425586904 |
| MRPL3 | 0.236312134 | 2.114499889 | 5.96039299 | 4.78E-09 | 9.44953641 |
| CXXC4 | 0.261981363 | 6.347351878 | 5.95745048 | 4.88E-09 | 9.435755672 |
| TRIM16L | -0.258862446 | 0.445028817 | -5.949302044 | 5.09E-09 | 9.394404131 |
| GNG10 | 0.261981363 | 6.347351878 | 5.95745048 | 4.88E-09 | 9.435755672 |
| Gene              | Value1     | Value2     | Value3     | Value4     | Value5     |
|-------------------|------------|------------|------------|------------|------------|
| YWHAH             | -0.236273395 | 6.062049865 | -5.926445087 | 5.79E-09   | 9.26769659  |
| GSN               | -0.408783042 | 5.270959739 | -5.921443122 | 5.96E-09   | 9.24002462  |
| ETNPPL            | 0.372859296  | 0.324026658 | 5.920661096  | 5.99E-09   | 9.235700118 |
| PRKCDBP           | -0.461652074 | 3.290292237 | -5.920279704 | 6.00E-09   | 9.233591247 |
| HCG4P3            | -0.259660637 | 0.945370113 | -5.919583268 | 6.02E-09   | 9.229740675 |
| RP11-720N19.1     | 0.420684119  | 0.773131045 | 5.919183752  | 6.04E-09   | 9.227531943 |
| KIAA0922          | -0.313158869 | 2.04629385  | -5.919043087 | 6.04E-09   | 9.226726521 |
| KIAA1958          | 0.206196872  | 1.064629385 | 5.917228929  | 6.11E-09   | 9.217602135 |
| BAG1              | 0.366538087  | 3.673028749 | 5.91792408   | 6.11E-09   | 9.216524678 |
| RP11-59D5__B.2    | 0.509638962  | 1.182624254 | 5.91485801   | 6.19E-09   | 9.203557812 |
| RAB37             | -0.41405526  | 1.295268416 | -5.91014619  | 6.36E-09   | 9.177602135 |
| CORO2B            | 0.245912714  | 2.011531786 | 5.908954047  | 6.40E-09   | 9.171020865 |
| TMEM68            | 0.245912714  | 2.011531786 | 5.908954047  | 6.40E-09   | 9.171020865 |
| TMEM37            | -0.54021651  | 2.989061656 | -5.90696967  | 6.47E-09   | 9.160068735 |
| SLC03A1           | -0.364874391 | 2.141523609 | -5.90694681  | 6.47E-09   | 9.159942437 |
| PLBD1             | -0.575675428 | 3.743513198 | -5.906001446 | 6.51E-09   | 9.15472585  |
| SEL1L             | -0.30511613  | 4.012905893 | -5.90586861  | 6.51E-09   | 9.153993304 |
| SNRBP             | 0.357883701  | 6.978152516 | 5.90473207   | 6.55E-09   | 9.14778978  |
| LINCO0473         | 0.569091908  | 0.601575217 | 5.904064818  | 6.58E-09   | 9.144041697 |
| GPATCH4           | 0.290163296  | 3.230869578 | 5.902514223  | 6.64E-09   | 9.13548944  |
| DAK               | 0.248688639  | 2.69902344  | 5.902109383  | 6.65E-09   | 9.13256877  |
| GAB1              | -0.249752244 | 1.660901946 | -5.90188023  | 6.66E-09   | 9.13199319  |
| IGHD2-15          | -0.481316401 | 0.614055846 | -5.901074576 | 6.69E-09   | 9.127550854 |
| TARBP2            | 0.253310797  | 3.045652203 | 5.990040491  | 6.72E-09   | 9.122952266 |
| FCGBP             | -0.735044361 | 2.182540269 | -5.894752368 | 6.94E-09   | 9.09720856  |
| RP11-539L10.3     | 0.400523851  | 1.94833341  | 5.894582414  | 6.94E-09   | 9.091772313 |
| IGLV5-48          | -0.515884906 | 0.919610499 | -5.893735088 | 6.98E-09   | 9.087105196 |
| SFMBT2            | -0.319858917 | 1.24929931  | -5.891044349 | 7.08E-09   | 9.072132152 |
| CRACR2B           | 0.536888891  | 3.104039957 | 5.890989163  | 7.08E-09   | 9.071984486 |
| PWWP2B            | 0.322048379  | 3.506710797 | 5.88888536   | 7.17E-09   | 9.060403637 |
| PCBD1             | 0.298124796  | 5.52499843  | 5.887802706  | 7.21E-09   | 9.05445627  |
| RP11-111M22.3     | 0.364240746  | 2.111970016 | 5.88679261   | 7.25E-09   | 9.049877974 |
| JUNB              | -0.42536461  | 6.502489729 | -5.886176354 | 7.28E-09   | 9.045497058 |
| Gene       | Value 1     | Value 2     | Value 3     | Value 4     | Value 5     |
|------------|-------------|-------------|-------------|-------------|-------------|
| NDUFB9     | 0.364115508 | 5.572775864 | 5.886030382 | 7.29E-09    | 9.044693993 |
| PUS1       | 0.283866256 | 2.340315745 | 5.88548424  | 7.31E-09    | 9.041689537 |
| ANKRD9     | 0.335052367 | 1.935253741 | 5.88485158  | 7.35E-09    | 9.036193984 |
| IGKV1D-43  | -0.576451659| 1.125264224 | 5.88307296  | 7.39E-09    | 9.030266001 |
| H1F0       | 0.370472916 | 7.047505612 | 5.88175841  | 7.46E-09    | 9.021199357 |
| AC244250.1 | -0.4165804  | 0.575278002 | -5.88064433 | 7.51E-09    | 9.015074668 |
| SEMA3D     | -0.233288273| 0.491927996 | -5.87809772 | 7.62E-09    | 9.001086968 |
| LTF        | -1.051641429| 3.501644976 | -5.87806876 | 7.62E-09    | 9.000919884 |
| IGKV2D-24  | -0.633436994| 1.363326082 | -5.87466562 | 7.77E-09    | 8.98223767 |
| NARS       | 0.253714157 | 5.079986449 | 5.87436584  | 7.78E-09    | 8.980577375 |
| C2orf47    | 0.209958087 | 3.386352201 | 5.87077656  | 7.93E-09    | 8.961974187 |
| FAM20A     | -0.522838128| 3.149944286 | -5.86958409 | 7.99E-09    | 8.954325428 |
| PYCR2      | 0.240382326 | 4.459776897 | 5.86866078  | 8.03E-09    | 8.95035602  |
| MRPL12     | 0.384311467 | 4.504924513 | 5.86841161  | 8.05E-09    | 8.947891319 |
| FAM101A    | -0.502418243| 1.21031117  | -5.86656627 | 8.13E-09    | 8.937767076 |
| NINL       | 0.376813843 | 2.103170655 | 5.86491180  | 8.21E-09    | 8.928692403 |
| KANK2      | -0.309949345| 3.526206099 | -5.86453319 | 8.23E-09    | 8.926616013 |
| NUPR1      | -0.52102867 | 3.718918216 | -5.86440598 | 8.23E-09    | 8.925918428 |
| DNM3A      | 0.290634421 | 2.41355218  | 5.86399046  | 8.25E-09    | 8.923639822 |
| MTG2       | 0.256814252 | 2.838258879 | 5.86317635  | 8.29E-09    | 8.919175914 |
| NUAK1      | -0.386102169| 2.150836805 | -5.86300850 | 8.30E-09    | 8.918256629 |
| PIM3       | 0.385273665 | 5.598000525 | 5.86028989  | 8.42E-09    | 8.90335178  |
| CARD11     | -0.556745114| 2.729979775 | -5.85902924 | 8.48E-09    | 8.896444822 |
| TXNRD2     | 0.270570063 | 2.351102378 | 5.85844138  | 8.51E-09    | 8.893223805 |
| SIPA1      | -0.278031135| 3.895504986 | -5.85751451 | 8.55E-09    | 8.888457727 |
| TK2        | -0.278991415| 2.618280359 | -5.85731646 | 8.57E-09    | 8.887060867 |
| GPX2       | 1.532833758 | 3.487614538 | 5.85542996  | 8.66E-09    | 8.876727892 |
| TRPM2      | -0.371352082| 1.725907322 | -5.85519451 | 8.67E-09    | 8.875438457 |
| ASPSCR1    | 0.315429985 | 2.144047936 | 5.85480138  | 8.69E-09    | 8.873285563 |
| PTS        | 0.261917438 | 2.637946609 | 5.85213254  | 8.82E-09    | 8.858673769 |
| GNL2       | 0.215994205 | 3.683643347 | 5.85196078  | 8.83E-09    | 8.857733599 |
| RP11-289I10.2| -0.37239556| 2.398243954 | -5.85189352 | 8.83E-09    | 8.857365735 |
| SNAI1      | -0.41578661 | 1.980738193 | -5.85082826 | 8.89E-09    | 8.851535103 |
| Gene   | Value1  | Value2  | Value3  | Value4  | Value5  |
|--------|---------|---------|---------|---------|---------|
| MFAP2  | -0.5368 | 3.1934  | -5.8497 | 8.94E-09| 8.8453 |
| PLAGL1 | -0.3352 | 1.4060  | -5.8481 | 9.02E-09| 8.8368 |
| RAB3D  | 0.3269  | 3.2540  | 5.8466  | 9.10E-09| 8.8286 |
| MICAL2 | -0.4331 | 3.1409  | -5.8463 | 9.11E-09| 8.8286 |
| ANAPC7 | 0.2222  | 3.1464  | 5.8463  | 9.11E-09| 8.8270 |
| TIGD5  | 0.2442  | 1.7465  | 5.8452  | 9.17E-09| 8.8212 |
| RNF122 | -0.2305 | 0.8829  | -5.8446 | 9.20E-09| 8.8177 |
| SNRPC  | 0.2605  | 5.8956  | 5.8418  | 9.35E-09| 8.8019 |
| ACP2   | -0.2294 | 4.2592  | -5.8416 | 9.36E-09| 8.8011 |
| ANKH   | -0.3668 | 2.7407  | -5.8416 | 9.36E-09| 8.8010 |
| GPC6   | -0.5201 | 1.6571  | -5.8414 | 9.36E-09| 8.8004 |
| NDUVF1 | 0.2446  | 4.9255  | 5.8410  | 9.39E-09| 8.7981 |
| TIMM23 | 0.2336  | 5.3532  | 5.8407  | 9.42E-09| 8.7949 |
| SS18L1 | 0.3112  | 2.4717  | 5.8401  | 9.43E-09| 8.7932 |
| RP13-582O9.7 | 0.3116 | 1.3357 | 5.8381 | 9.54E-09| 8.7819 |
| ELMO1  | -0.3363 | 1.7280 | -5.8376 | 9.57E-09| 8.7796 |
| BMPR2  | -0.2486 | 3.2319 | -5.8339 | 9.77E-09| 8.7591 |
| DARS2  | 0.3207  | 3.3805 | 5.8334 | 9.80E-09| 8.7566 |
| MRPL42 | 0.2098  | 2.0577 | 5.8300 | 9.99E-09| 8.7379 |
| RP11-44K6.2 | -0.5252 | 1.0277 | -5.8297 | 1.00E-08| 8.7362 |
| PROSER1 | 0.2819 | 2.9795 | 5.8295 | 1.00E-08| 8.7354 |
| IGLV4-3 | -0.5398 | 0.9227 | -5.8287 | 1.01E-08| 8.7308 |
| DVL2   | 0.2279  | 2.8516  | 5.8285  | 1.01E-08| 8.7297 |
| TIGD3  | 0.2015  | 0.6211  | 5.8274  | 1.01E-08| 8.7240 |
| PYCRL  | 0.3439  | 2.9758  | 5.8218  | 1.05E-08| 8.6931 |
| RP3-407E4.2 | 0.5102 | 1.0055 | 5.8198 | 1.06E-08| 8.6825 |
| COX5A  | 0.2832  | 5.6615  | 5.8152  | 1.08E-08| 8.6572 |
| RP11-344B5.2 | -0.4307 | 1.7274 | -5.8147 | 1.09E-08| 8.6548 |
| IGHV3-16 | -0.2295 | 0.2944 | -5.8141 | 1.09E-08| 8.6512 |
| RNY4P19 | 0.4097 | 0.7417 | 5.8138 | 1.09E-08| 8.6494 |
| RCN2   | 0.2613  | 2.9731  | 5.8138  | 1.09E-08| 8.6497 |
| SLC7A11 | 0.6668 | 1.8307 | 5.8126 | 1.10E-08| 8.6430 |
| Gene   | log2FoldChange | log2FC | pValue   | qValue  | FDR    |
|--------|----------------|--------|----------|---------|--------|
| RP5-963E22.6 | 0.26102174     | 0.975772224 | 5.812060995 | 1.10E-08 | 8.639981427 |
| METAP1D    | 0.211277885    | 1.244502375 | 5.810998974 | 1.11E-08 | 8.634203218 |
| FBRSL1     | 0.310786645    | 2.844172411 | 5.810855163 | 1.11E-08 | 8.63342085 |
| GSAP       | -0.324402018   | 2.173076683 | -5.810610925 | 1.11E-08 | 8.632092165 |
| ALKBH2     | 0.280977654    | 2.559231167 | 5.809937606 | 1.12E-08 | 8.628429484 |
| XRN1       | -0.237087813   | 2.225288903 | -5.809805399 | 1.12E-08 | 8.62771036 |
| SEMA5A     | -0.392229787   | 1.32694043  | -5.808920892 | 1.12E-08 | 8.62289953 |
| MRPS15     | 0.299265307    | 4.572724911 | 5.807544457 | 1.13E-08 | 8.61541379 |
| TCEA1      | 0.284841426    | 4.314238433 | 5.807403033 | 1.13E-08 | 8.614645391 |
| TAP1T-AS1  | 0.218798924    | 1.009057214 | 5.806284136 | 1.14E-08 | 8.608562021 |
| MRPS2      | 0.256562998    | 4.002122705 | 5.805787414 | 1.14E-08 | 8.605861702 |
| ZNF48      | 0.240424949    | 2.368124412 | 5.803915937 | 1.16E-08 | 8.595689646 |
| PPP1R14B   | 0.372867135    | 5.783479931 | 5.80359777  | 1.16E-08 | 8.593960594 |
| SNRPEP2    | 0.239712944    | 1.592148009 | 5.802325474 | 1.17E-08 | 8.587047239 |
| DDX55      | 0.239329482    | 2.342046061 | 5.800798896 | 1.18E-08 | 8.578753922 |
| TUFT1      | 0.346483784    | 3.603624228 | 5.799885783 | 1.18E-08 | 8.574337363 |
| PTEN       | -0.211029178   | 2.997832862 | -5.798659974 | 1.19E-08 | 8.567137173 |
| LONP1      | 0.265148138    | 4.257865604 | 5.796954939 | 1.20E-08 | 8.557879599 |
| GGA2       | -0.254893906   | 3.889425948 | -5.796431321 | 1.21E-08 | 8.555037065 |
| ENSA       | 0.243060098    | 5.359845964 | 5.794334656 | 1.22E-08 | 8.543657267 |
| DNA2       | 0.309906113    | 1.42629113  | 5.792546541 | 1.23E-08 | 8.533954988 |
| IGLJ3      | -0.301028539   | 0.484900982 | -5.789655748 | 1.25E-08 | 8.518275134 |
| NDUF6F     | 0.267220755    | 1.924768844 | 5.789359459 | 1.25E-08 | 8.516668427 |
| ARTN       | 0.364509753    | 0.78636691  | 5.78858873  | 1.26E-08 | 8.512869602 |
| VPS72      | 0.261504346    | 3.829214446 | 5.787309668 | 1.27E-08 | 8.505558463 |
| SETX       | -0.242835375   | 2.941223828 | -5.787140994 | 1.27E-08 | 8.5046405 |
| PHLD1      | -0.270502632   | 1.941073292 | -5.78703265 | 1.27E-08 | 8.504053186 |
| MDH2       | 0.258768758    | 5.840063651 | 5.786907876 | 1.27E-08 | 8.503381488 |
| BEND3      | 0.203916354    | 1.250795166 | 5.785640145 | 1.28E-08 | 8.496507036 |
| SARS2      | 0.248413212    | 1.523701382 | 5.783728957 | 1.29E-08 | 8.486149195 |
| IGHV3-22   | -0.382538251   | 0.724254609 | -5.780982381 | 1.31E-08 | 8.471271229 |
| CSNK2B     | 0.229512052    | 4.232708895 | 5.780441639 | 1.32E-08 | 8.468342808 |
| SMPD4      | 0.236199591    | 3.337763912 | 5.77963003  | 1.32E-08 | 8.463947929 |
| Gene    | Value1 | Value2 | Value3 | Value4 | Value5 |
|---------|--------|--------|--------|--------|--------|
| PDE1A   | -0.255593585 | 0.933713881 | -5.778261299 | 1.33E-08 | 8.456537457 |
| PGAM5   | 0.306656666 | 3.828543889 | 5.777022644 | 1.34E-08 | 8.449832546 |
| BNIP3   | 0.421321235 | 4.015104122 | 5.776510502 | 1.35E-08 | 8.447060662 |
| SMUG1   | 0.251292907 | 2.939712616 | 5.776415911 | 1.35E-08 | 8.446548727 |
| ATAT1   | 0.314944546 | 2.213049559 | 5.775965249 | 1.35E-08 | 8.444109807 |
| SOCS7   | 0.308711731 | 2.091328977 | 5.773722623 | 1.37E-08 | 8.431975483 |
| SLC16A14| 0.309908652 | 0.830294919 | -5.768999625 | 1.40E-08 | 8.406433932 |
| LIPM    | -0.306092307 | 0.79307119 | -5.768181736 | 1.41E-08 | 8.402012712 |
| PKP3    | 0.385892464 | 4.437684973 | 5.766776681 | 1.42E-08 | 8.395348926 |
| RP11-116O18.1 | 0.799945551 | 0.79307119 | -5.76624851 | 1.43E-08 | 8.391652867 |
| ZNF768  | 0.285221436 | 4.258976978 | 5.766107324 | 1.43E-08 | 8.390201641 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.76514974 | 1.45E-08 | 8.376796352 |
| ZNF68   | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-116O18.1 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| RP11-973H7.3 | 0.200428303 | 1.194734456 | -5.763145009 | 1.45E-08 | 8.374980464 |
| ZNF768  | 0.214116636 | 0.751943511 | 5.7664592 | 1.44E-08 | 8.382977408 |
| Gene       | Value_1  | Value_2  | Value_3  | Value_4   | Value_5  |
|------------|----------|----------|----------|-----------|----------|
| HOXA5      | -0.3555  | 1.8834   | -5.7462  | 1.59E-08  | 8.2835   |
| NOC2L      | 0.2766   | 4.1816   | 5.7440   | 1.61E-08  | 8.2719   |
| ZNF74      | 0.2326   | 1.7467   | 5.7439   | 1.61E-08  | 8.2714   |
| GLS        | -0.5731  | 3.9412   | -5.7422  | 1.63E-08  | 8.2620   |
| SAC3D1     | 0.2893   | 2.8259   | 5.7415   | 1.64E-08  | 8.2583   |
| TSEN54     | 0.2571   | 3.6699   | 5.7399   | 1.65E-08  | 8.2498   |
| RNASEL     | -0.2430  | 2.0182   | -5.7373  | 1.67E-08  | 8.2355   |
| BZW2       | 0.3114   | 4.7228   | 5.7367   | 1.68E-08  | 8.2322   |
| RP13-977J11.2 | -0.2421 | 0.9333   | -5.7341  | 1.70E-08  | 8.2184   |
| RB1        | -0.2647  | 3.0645   | -5.7325  | 1.72E-08  | 8.2075   |
| GSR        | 0.4889   | 5.0645   | 5.7321   | 1.72E-08  | 8.2061   |
| RRP12      | 0.2665   | 2.8010   | 5.7318   | 1.73E-08  | 8.2061   |
| ARHGEF25   | -0.3228  | 1.8523   | -5.7318  | 1.73E-08  | 8.2060   |
| RHPN1-AS1  | 0.2696   | 1.1571   | 5.7312   | 1.73E-08  | 8.2029   |
| POP5       | 0.2536   | 3.3733   | 5.7307   | 1.74E-08  | 8.1999   |
| EFNB1      | -0.4536  | 3.1567   | -5.7288  | 1.75E-08  | 8.1898   |
| PPM1F      | -0.2279  | 2.0036   | -5.7285  | 1.76E-08  | 8.1883   |
| RNFT2      | 0.3214   | 0.8961   | 5.7281   | 1.76E-08  | 8.1863   |
| KLHL23     | 0.3467   | 2.4022   | 5.7278   | 1.76E-08  | 8.1847   |
| IGHV3OR16-7 | -0.2219 | 0.3154   | -5.7277  | 1.77E-08  | 8.1840   |
| AHCY       | 0.3115   | 5.4327   | 5.7272   | 1.77E-08  | 8.1815   |
| UCHL5      | 0.2069   | 2.9523   | 5.7249   | 1.79E-08  | 8.1696   |
| FH         | 0.2386   | 4.9345   | 5.7229   | 1.81E-08  | 8.1579   |
| PTOV1      | 0.2480   | 4.1838   | 5.7221   | 1.82E-08  | 8.1542   |
| TSEN34     | 0.2244   | 4.0679   | 5.7219   | 1.82E-08  | 8.1528   |
| IGLV2-28   | -0.5123  | 1.2486   | -5.7218  | 1.82E-08  | 8.1526   |
| GSTO1      | -0.3358  | 5.6067   | -5.7218  | 1.82E-08  | 8.1525   |
| PROS1      | -0.4570  | 3.2559   | -5.7213  | 1.83E-08  | 8.1498   |
| TMEM158    | -0.4604  | 1.4426   | -5.7188  | 1.85E-08  | 8.1364   |
| NAT8L      | 0.3588   | 0.5756   | 5.7170   | 1.87E-08  | 8.1266   |
| RP11-98G7.1 | 0.2550  | 0.4679   | 5.7129   | 1.92E-08  | 8.1043   |
| OMG        | -0.3818  | 0.6913   | -5.7123  | 1.92E-08  | 8.1010   |
| RP11-379F4.7 | -0.2246 | 1.1224   | -5.7117  | 1.93E-08  | 8.0983   |
| Gene       | FDR    | log2FC   | p-value  |
|------------|--------|----------|----------|
| FAM213A    | 0.244868 | 3.5892 | 1.94E-08 |
| AKR1C2     | 1.429762 | 2.6354 | 1.94E-08 |
| PABPN1     | 0.292907 | 4.4729 | 1.98E-08 |
| CTPS2      | 0.244138 | 2.7578 | 2.00E-08 |
| RBFA       | 0.229808 | 2.4739 | 2.01E-08 |
| C12orf56   | 0.285204 | 0.3879 | 2.03E-08 |
| PURA       | -0.219612 | 1.8564 | 2.04E-08 |
| TBX3       | -0.319866 | 1.3737 | 2.04E-08 |
| RP1-63M2.7 | 0.330805 | 1.0479 | 2.07E-08 |
| NDUFV2     | 0.261788 | 2.5104 | 2.08E-08 |
| RAB26      | 0.387691 | 1.1500 | 2.09E-08 |
| IGLV9-49   | -0.989959 | 3.0850 | 2.10E-08 |
| ZNF219     | 0.355241 | 2.1873 | 2.10E-08 |
| AC010136.2 | 0.313287 | 0.8249 | 2.10E-08 |
| BCL2       | -0.374184 | 1.4530 | 2.10E-08 |
| NSMF       | 0.359163 | 3.5206 | 2.11E-08 |
| RP3-407E4.3| 0.373491 | 0.5763 | 2.13E-08 |
| MAGIX      | 0.294589 | 1.4730 | 2.17E-08 |
| WDR77      | 0.221463 | 3.4871 | 2.19E-08 |
| GAS8       | 0.263847 | 2.3035 | 2.26E-08 |
| ALG3       | 0.278002 | 4.0843 | 2.27E-08 |
| KPTN       | 0.283667 | 2.2869 | 2.29E-08 |
| ATM        | -0.233045 | 1.6919 | 2.30E-08 |
| PARP11     | -0.214982 | 1.3160 | 2.30E-08 |
| PPM1G      | 0.223944 | 5.2021 | 2.30E-08 |
| RP11-286N22.16 | 0.323945 | 0.6034 | 2.33E-08 |
| AGBL5      | 0.241946 | 2.8968 | 2.33E-08 |
| FAM216B    | -0.561349 | 0.8981 | 2.33E-08 |
| 6-Mar      | 0.288277 | 4.1302 | 2.34E-08 |
| CD36       | -0.477179 | 1.4943 | 2.38E-08 |
| ATP6V1B1   | 0.518360 | 1.1410 | 2.40E-08 |
| DENND2B    | -0.250291 | 3.1643 | 2.42E-08 |
| TMEM69     | 0.211877 | 3.6104 | 2.48E-08 |
| Gene   | Fold Change | Expression | Log2 Fold | p-value | Enrichment |
|--------|-------------|------------|-----------|---------|------------|
| ADPRHL1 | 0.385366346 | 1.643354633 | 5.66265804 | 2.52E-08 | 7.836196528 |
| KAZALD1 | 0.365740658 | 1.800237713 | 5.660115824 | 2.56E-08 | 7.822678287 |
| BST2   | -0.564786257 | 6.752122824 | -5.65828067 | 2.59E-08 | 7.812922825 |
| SLC25A19 | -0.230211541 | 3.256078306 | 5.655407221 | 2.63E-08 | 7.797654356 |
| RPL7P9 | 0.391755546 | 3.256078306 | 5.654800206 | 2.64E-08 | 7.79429696 |
| ARHGAP22 | -0.20230623 | 0.815080676 | -5.653764407 | 2.65E-08 | 7.788927904 |
| ZNF76  | 0.237522327 | 2.81600746 | 5.654782175 | 2.64E-08 | 7.78927094 |
| APOBEC3A | -0.289430031 | 0.696836666 | -5.653022662 | 2.66E-08 | 7.778498868 |
| IGKV1OR1-1 | -0.235955369 | 0.306036034 | -5.652385924 | 2.66E-08 | 7.781607275 |
| PDLIM5 | -0.330026129 | 3.156223813 | -5.651855924 | 2.67E-08 | 7.784988658 |
| AAAS   | 0.202581316 | 3.352183565 | 5.649898363 | 2.71E-08 | 7.76840069 |
| POLR2J | 0.288459771 | 4.731074266 | 5.648668476 | 2.73E-08 | 7.761873052 |
| SLMO2  | 0.320637317 | 5.04992001 | 5.647997077 | 2.74E-08 | 7.758310118 |
| ECHS1  | 0.238330621 | 6.20958596 | 5.647997077 | 2.74E-08 | 7.758013129 |
| RBM47  | 0.270170655 | 4.231642132 | 5.647864242 | 2.74E-08 | 7.757605244 |
| RP11-443B20.1 | 0.244230049 | 1.074134899 | 5.647041831 | 2.75E-08 | 7.753214528 |
| ITGA2  | -0.654875582 | 3.395897618 | -5.645547589 | 2.77E-08 | 7.745314508 |
| MMP12  | -0.919934434 | 3.232174991 | -5.644978513 | 2.78E-08 | 7.742296019 |
| MYO19  | 0.274808656 | 2.242734411 | 5.647476344 | 2.78E-08 | 7.741155302 |
| VPS37D | 0.365640501 | 1.604155114 | 5.643711053 | 2.80E-08 | 7.73557413 |
| ANO1   | -0.525453436 | 2.155732543 | -5.642577243 | 2.82E-08 | 7.72956217 |
| PIGU   | 0.247773269 | 3.732655691 | 5.641757368 | 2.83E-08 | 7.725215489 |
| EIF5A2 | -0.247398622 | 1.079695523 | -5.640057525 | 2.86E-08 | 7.716205312 |
| RPH3AL | 0.385785579 | 2.367516559 | 5.639735259 | 2.87E-08 | 7.712589565 |
| NR2F1-AS1 | -0.2415397 | 0.884872243 | -5.637318977 | 2.90E-08 | 7.701694403 |
| ILF2   | 0.281007402 | 6.67430081 | 5.637235818 | 2.90E-08 | 7.701253857 |
| RPL7P23 | 0.238971635 | 0.909924042 | 5.637009998 | 2.90E-08 | 7.70057584 |
| RP3-512B11.3 | 0.38754848 | 1.29139258 | 5.635491888 | 2.93E-08 | 7.692028723 |
| CTA-126B4.7 | -0.251019208 | 0.535415141 | -5.635389851 | 2.93E-08 | 7.691476146 |
| TWF2   | -0.249436882 | 4.705040955 | -5.634209198 | 2.95E-08 | 7.68523944 |
| IGKV3D-7 | -0.408242741 | 0.618328169 | -5.633195546 | 2.97E-08 | 7.679857021 |
| EHD2   | -0.46675953 | 5.127253839 | -5.631861352 | 2.99E-08 | 7.672794239 |
| Gene      | Fold Change | Z-Score | p-Value | Adjusted p-Value |
|-----------|-------------|---------|---------|-----------------|
| SUDS3     | 0.253130985 | 3.492758089 | 5.631769208 | 2.99E-08        |
| DHX34     | 0.267679493 | 2.509635859 | 5.631441411 | 2.99E-08        |
| ATP11C    | -0.273473685 | 2.008553582 | -5.630956578 | 3.00E-08        |
| IGHD4-11  | -0.320474639 | 0.325437413 | -5.630156820 | 3.01E-08        |
| TARS2     | 0.240708249 | 3.485851208 | 5.629615235 | 3.02E-08        |
| DCXR      | 0.361875088 | 4.759528576 | 5.629606112 | 3.02E-08        |
| NT5E      | -0.724614062 | 3.476311925 | -5.628845498 | 3.04E-08        |
| C1orf27   | 0.238063312 | 3.541098181 | -5.627697939 | 3.07E-08        |
| JADE2     | -0.301336798 | 2.754092696 | -5.625332303 | 3.10E-08        |
| PTPRG     | -0.339650397 | 1.927012488 | -5.625067216 | 3.12E-08        |
| RP11-686D22.4 | -0.298743756 | 1.373869803 | -5.624045115 | 3.12E-08        |
| ZNF517    | 0.245809533 | 1.816466672 | 5.623954172 | 3.12E-08        |
| PLSCR1    | -0.352108585 | 4.100716595 | -5.62149643 | 3.16E-08        |
| UBQLN4    | 0.267328087 | 4.172977378 | 5.620710558 | 3.17E-08        |
| DPYSL2    | -0.436961273 | 4.32469104 | -5.620182169 | 3.18E-08        |
| CATS2     | -0.22881953 | 0.691313529 | -5.618810745 | 3.21E-08        |
| SLC14A2   | 0.538633701 | 0.520010127 | 5.618434943 | 3.21E-08        |
| DST       | -0.403226817 | 1.823263115 | -5.617432835 | 3.23E-08        |
| PCSK5     | -0.245696936 | 0.913948091 | -5.616735353 | 3.24E-08        |
| AC245028.1 | -0.425769162 | 0.815276052 | -5.61522073 | 3.25E-08        |
| KRTCAP2   | 0.27866208 | 3.11086171 | 5.614705188 | 3.28E-08        |
| MSI1      | 0.505083825 | 0.854307101 | 5.61376523 | 3.30E-08        |
| MIF       | 0.410932269 | 5.300621617 | 5.6103109 | 3.36E-08        |
| EVC       | -0.289653081 | 1.921245197 | -5.609822178 | 3.37E-08        |
| PROCR     | -0.446639241 | 3.842910535 | -5.606480819 | 3.43E-08        |
| CTD-2134A5.4 | 0.297285006 | 1.422387336 | 5.606030745 | 3.44E-08        |
| GLUL      | -0.34023597 | 6.371384383 | -5.603993356 | 3.48E-08        |
| COL11A1   | -0.836391302 | 2.154123664 | -5.60370763 | 3.48E-08        |
| TMEM41B   | 0.263897079 | 3.891305657 | 5.60368034 | 3.48E-08        |
| IGKV1D-17 | -0.726961419 | 1.388005359 | -5.603285283 | 3.49E-08        |
| DCUN1D3   | -0.241806649 | 2.053396586 | -5.601957777 | 3.52E-08        |
| RP11-589N15.2 | -0.354039588 | 2.374839492 | -5.601185316 | 3.53E-08        |
| PTK2      | 0.240342619 | 3.462946174 | 5.60100107 | 3.53E-08        |
| Gene         | FPKM | TSSScore | CDScore | Jaccard | PMI     |
|-------------|------|----------|---------|---------|---------|
| RP1-92O14.3 | 0.30981244 | 1.140343475 | 5.597810447 | 3.60E-08 | 7.493038482 |
| BARX1       | 0.990025503  | 1.615215156  | 5.59731802  | 3.60E-08 | 7.490729125 |
| Lgals3      | -0.42081089  | 7.074171937  | -5.595460385 | 3.64E-08 | 7.480667853 |
| MRM1        | 0.264025916   | 2.535193637  | 5.594129748 | 3.70E-08 | 7.465364532 |
| C21orf91    | -0.286818609   | 1.921935015  | -5.59513681 | 3.76E-08 | 7.449385094 |
| Myl6b       | 0.30193886    | 3.426507508  | 5.589513681 | 3.76E-08 | 7.442819528 |
| Mir8071-1   | -0.601573807   | 1.62469877   | -5.58264897 | 3.79E-08 | 7.442819528 |
| Ppapdc1a    | -0.427911716   | 0.973454093  | -5.586452024 | 3.82E-08 | 7.43290617 |
| Rp11-705c15.3 | -0.253054987  | 1.36788624   | -5.58513681 | 3.84E-08 | 7.430186075 |
| Rp11-5c23.1 | -0.254674201   | 1.76352005   | -5.58513681 | 3.84E-08 | 7.429960879 |
| Sct         | -0.32359284    | 1.031104429  | -5.585774911 | 3.84E-08 | 7.429732228 |
| RAP1B       | -0.238917408   | 1.98762945   | -5.584701913 | 3.86E-08 | 7.424094152 |
| PDF         | 0.203125924    | 1.33150188   | 5.583804647  | 3.88E-08 | 7.419380189 |
| MMD         | -0.427418546   | 3.166598635  | -5.58370693  | 3.88E-08 | 7.41865087 |
| SMURF2      | -0.343443405   | 3.29714282   | -5.583441672 | 3.89E-08 | 7.41743422 |
| MGAT4A      | -0.322453611   | 2.70271264   | -5.583187203 | 3.89E-08 | 7.416136716 |
| Rab3IP      | 0.347375568    | 1.83962436   | 5.583114591  | 3.89E-08 | 7.4157553  |
| XXbac-BPG248L24.12 | -0.317427987  | 1.689943339  | -5.580363409 | 3.95E-08 | 7.401307171 |
| IGLV4-60    | -0.975079376   | 2.948234859  | -5.579630144 | 3.97E-08 | 7.397457412 |
| Miat        | -0.466150774   | 1.163916712  | -5.578644141 | 3.99E-08 | 7.39228144 |
| ZC3H3       | 0.274768728    | 3.322912338  | 5.578345512  | 4.00E-08 | 7.390719364 |
| GPX1        | -0.346813635   | 7.491134282  | -5.577180567 | 4.02E-08 | 7.384599972 |
| TNIP3       | -0.36652554    | 0.799537653  | -5.577067887 | 4.02E-08 | 7.384007601 |
| MSTO1       | 0.241949266    | 2.257489525  | 5.576951773  | 4.03E-08 | 7.383399322 |
| SLC1A5      | 0.311661259    | 5.470026576  | 5.576789321  | 4.03E-08 | 7.382546842 |
| CCL7        | -0.416493309   | 0.91657669   | -5.57629215  | 4.03E-08 | 7.382231437 |
| Fam71E1     | 0.287585629    | 1.370821956  | 5.57645359   | 4.04E-08 | 7.380785141 |
| SCN4B       | -0.306699556   | 0.936011738  | -5.57584472  | 4.05E-08 | 7.377590421 |
| ANKRD13A    | -0.266433336   | 3.394389692  | -5.575343539 | 4.06E-08 | 7.374960968 |
| TEMEM154    | -0.232435067   | 1.205969515  | -5.574207309 | 4.09E-08 | 7.3690005  |
| Pdia3       | 0.33380729     | 7.268580511  | 5.573279639  | 4.11E-08 | 7.364134893 |
| UBE2K       | 0.215007597    | 4.294185573  | 5.573279639  | 4.13E-08 | 7.358145555 |
| Ctd-2555o16.2 | -0.20337279  | 1.096674046  | -5.572137532 | 4.13E-08 | 7.358145555 |
| Gene    | Log2FoldChange | adj.P.Val | -log10(p-value) | Volcano Score |
|---------|----------------|-----------|-----------------|---------------|
| TBX4    | -0.403083946   | 4.14E-08  | 7.356204921     |
| YWHAE   | 0.226611965    | 4.15E-08  | 7.35497091      |
| SLC25A33| 0.237567064    | 4.17E-08  | 7.34999857      |
| RASAL2  | -0.24434173    | 4.18E-08  | 7.34627059      |
| SLC16A6 | -0.265551792   | 4.23E-08  | 7.33566209      |
| RGS2    | -0.534536918   | 4.24E-08  | 7.33290819      |
| DDX51   | 0.23133761     | 4.30E-08  | 7.31878636      |
| TME223  | 0.237567064    | 4.36E-08  | 7.30481519      |
| TAF4    | 0.207524026    | 4.40E-08  | 7.298306753     |
| AC246787.5 | -0.387660716 | 4.46E-08  | 7.28306576      |
| CXCL14  | -1.19952236    | 4.49E-08  | 7.27692797      |
| GUCY1A2 | -0.20978328    | 4.50E-08  | 7.2751072       |
| ATP8B2  | 0.338258032    | 4.51E-08  | 7.27305876      |
| NFIX    | -0.5125544     | 4.54E-08  | 7.26735474      |
| C4B     | -0.471771668   | 4.54E-08  | 7.26600969      |
| DUS1L   | 0.291353175    | 4.55E-08  | 7.26492085      |
| MCCC2   | 0.251273593    | 4.56E-08  | 7.262551648     |
| IGKV1D-27 | -0.633774062  | 4.57E-08  | 7.260501337     |
| SOX7    | -0.318262069   | 4.57E-08  | 7.26001071      |
| IGLV3-30| -0.211868434   | 4.61E-08  | 7.251211321     |
| FBXL3   | -0.221437528   | 4.71E-08  | 7.23055948      |
| GTF2IRD1| 0.253279277    | 4.75E-08  | 7.223517121     |
| MRPS17  | 0.243908141    | 4.79E-08  | 7.215162952     |
| AKR7A3  | 0.779280925    | 4.80E-08  | 7.213279595     |
| ECI1    | 0.283744147    | 4.82E-08  | 7.208591636     |
| RIK1    | 0.236012886    | 4.84E-08  | 7.205246254     |
| FAM8C2P | 0.202865728    | 4.88E-08  | 7.195652856     |
| MRPS18B | 0.250497611    | 4.93E-08  | 7.186728521     |
| DMXL2   | -0.254082518   | 4.99E-08  | 7.174896034     |
| GDP1    | -0.389213488   | 5.01E-08  | 7.171163944     |
| ENTPD8  | 0.467273207    | 5.09E-08  | 7.155944111     |
| TUBG1   | 0.314799272    | 5.16E-08  | 7.141690581     |
| Gene   | Fold Change | p-value  | q-value | Gene   | Fold Change | p-value  | q-value |
|--------|-------------|----------|---------|--------|-------------|----------|---------|
| AP1M2  | 0.309519    | 5.1074746 | 5.529230326 | 5.21E-08 | 7.133920437 |
| XLYT1  | -0.328120729 | 1.3293829 | 5.528241068 | 5.23E-08 | 7.128768816 |
| MTFR1  | 0.333457964 | 3.135142316 | 5.527024361 | 5.27E-08 | 7.122433858 |
| SBK1   | 0.552804316 | 2.618044  | 5.525006311 | 5.32E-08 | 7.111929306 |
| PRRD1  | 0.298278385 | 3.519837566 | 5.52363937 | 5.36E-08 | 7.1048159 |
| SNRPA1 | 0.249978488 | 3.196443902 | 5.523121835 | 5.38E-08 | 7.102123111 |
| MRPL37 | 0.215311326 | 4.734265626 | 5.522954476 | 5.38E-08 | 7.101223172 |
| SLC25A4| 0.279233483 | 3.108387945 | 5.522645552 | 5.39E-08 | 7.10048159 |
| STX17A1| 0.248206004 | 1.059375481 | 5.521118809 | 5.44E-08 | 7.091703267 |
| NQO1   | 0.810716682 | 5.69915494 | 5.518708137 | 5.51E-08 | 7.07916725 |
| PJA2   | -0.255241706 | 4.490497453 | 5.51803735 | 5.53E-08 | 7.075680006 |
| CAV2   | -0.522478302 | 3.359399621 | 5.516716159 | 5.57E-08 | 7.068812192 |
| SOD3   | -0.520809508 | 3.980362822 | 5.514760211 | 5.63E-08 | 7.058647644 |
| AP000695.6| -0.237321628 | 0.656950081 | 5.514592569 | 5.55E-08 | 7.057776602 |
| LLGL2  | 0.379806725 | 4.202413431 | 5.513862222 | 5.65E-08 | 7.053847028 |
| SETD4  | 0.208503726 | 1.803015024 | 5.513230096 | 5.67E-08 | 7.050713847 |
| RIPK3  | -0.290989681 | 2.267244764 | 5.5124751 | 5.69E-08 | 7.046776565 |
| RP11-79H13.11 | 0.232460403 | 1.049123035 | 5.5116786 | 5.72E-08 | 7.04263979 |
| RNU6-137P| 0.265666791 | 0.945084944 | 5.511383179 | 5.73E-08 | 7.041105603 |
| LNX1   | 0.257503081 | 1.502991885 | 5.511374748 | 5.73E-08 | 7.041061819 |
| DNASE1L3| -0.314917738 | 0.679491713 | 5.510604642 | 5.75E-08 | 7.037062827 |
| NDUFS8 | 0.271443448 | 4.17182715 | 5.510565339 | 5.75E-08 | 7.036858749 |
| RP11-367G18.1| -0.255137489 | 0.59635506 | -5.509439998 | 5.79E-08 | 7.031016028 |
| PCDHB7 | -0.220444586 | 0.712648203 | -5.509091444 | 5.80E-08 | 7.029206565 |
| LEMD2  | 0.205217934 | 3.102869362 | 5.508549357 | 5.82E-08 | 7.026392605 |
| NPC2   | -0.56126042 | 7.413801182 | -5.50641962 | 5.88E-08 | 7.015339576 |
| MMP3   | -0.413514921 | 0.722369641 | -5.505072204 | 5.92E-08 | 7.00834863 |
| SCGB1A1| -1.638256036 | 4.620295314 | -5.504998467 | 5.93E-08 | 7.007966094 |
| NFE2L3 | -0.453185071 | 3.313813472 | -5.5045149 | 5.94E-08 | 7.005457549 |
| RP11-61L19.3| 0.206694573 | 1.103208729 | 5.504012116 | 5.96E-08 | 7.002849524 |
| RP11-366M4.11| -0.217786072 | 0.587164647 | -5.503641536 | 5.97E-08 | 7.000927395 |
| Gene   | Log2FC  | Adj. p-value | Adj. q-value | Log10 FDR | Log10 q-value |
|--------|---------|--------------|--------------|----------|---------------|
| TRAPPC9| 0.269837623 | 2.861998253 | 5.502492196 | 6.01E-08 | 6.994966718 |
| SOCS3  | -0.467223752 | 5.631272389 | -5.500948241 | 6.06E-08 | 6.98696123  |
| TEMEM97 | 0.39849027  | 3.878996932 | 5.499643593 | 6.10E-08 | 6.980198116 |
| HERC6  | -0.362923564 | 2.366462933 | -5.498172155 | 6.15E-08 | 6.972572084 |
| PICALM | -0.2135269  | 5.107630921 | -5.497274693 | 6.18E-08 | 6.96792169  |
| COPZ1  | 0.200016875 | 5.613748977 | 5.497065236 | 6.18E-08 | 6.966836438 |
| COX6A1 | 0.39849027  | 3.878996932 | 5.499643593 | 6.10E-08 | 6.980198116 |
| LUZP1  | -0.431159782 | 2.908735962 | -5.490092221 | 6.31E-08 | 6.930728352 |
| IGLV3-32| -0.223785394 | 0.347825604 | -5.492614649 | 6.33E-08 | 6.943667797 |
| ATP1B1 | 0.532453531  | 7.425983434 | 5.489671128 | 6.43E-08 | 6.928549118 |
| ITGB3  | -0.395904099 | 0.990627365 | -5.487363355 | 6.50E-08 | 6.918538128 |
| IL6ST  | -0.350090547 | 4.510049577 | -5.488290038 | 6.59E-08 | 6.905884991 |
| RAP2C  | -0.21677772 | 3.500307505 | -5.487505075 | 6.51E-08 | 6.917341753 |
| LYN    | -0.316110945 | 4.254996919 | -5.488290038 | 6.59E-08 | 6.905884991 |
| KLF13  | -0.324689664 | 3.37683768  | -5.481418173 | 6.72E-08 | 6.88568508 |
| GID8   | 0.234480299 | 4.298024153 | 5.481068522 | 6.74E-08 | 6.884601526 |
| RP4-647J21.1 | -0.558341752 | 1.430073067 | -5.480150556 | 6.77E-08 | 6.879317997 |
| RPN2   | 0.256884961 | 7.368191555 | 5.477964108 | 6.85E-08 | 6.868022502 |
| AC244250.3 | -0.553108628 | 1.069171931 | -5.477407897 | 6.87E-08 | 6.865475061 |
| LYPD5  | -0.296791488 | 0.811099129 | -5.477301008 | 6.87E-08 | 6.86457628 |
| FNDCC  | -0.613625704 | 2.209901697 | -5.476658044 | 6.90E-08 | 6.861277078 |
| E2F5   | 0.284381111 | 1.853849834 | 5.476304535 | 6.91E-08 | 6.859451583 |
| GADD45B| -0.427747846 | 4.675662506 | -5.475806465 | 6.93E-08 | 6.856879739 |
| JDP2   | -0.257131784 | 2.452814458 | -5.475098146 | 6.95E-08 | 6.85322593 |
| B4GALNT4| 0.61197794  | 1.559028381 | 5.475055755 | 6.95E-08 | 6.853003738 |
| RP11-703I16.1 | 0.400245246 | 1.974791289 | 5.473344725 | 7.02E-08 | 6.844171262 |
| CMTM7  | -0.325941471 | 3.078024203 | -5.473243037 | 7.02E-08 | 6.84364642 |
| DHRS11 | 0.240891648 | 1.64680461 | 5.471522329 | 7.09E-08 | 6.834765956 |
| CHSY1  | -0.296024863 | 3.200500933 | -5.470725735 | 7.12E-08 | 6.830656663 |
| KIAA1598| 0.301537824 | 2.992603449 | 5.469307899 | 7.17E-08 | 6.823342536 |
| SLC35B2| 0.250900842 | 5.357361296 | 5.467166649 | 7.25E-08 | 6.812299896 |
| Gene     | Column1  | Column2  | Column3  | Column4  | Column5  |
|----------|----------|----------|----------|----------|----------|
| C14orf79 | 0.24092487 | 1.995144078 | 5.466062521 | 7.30E-08 | 6.806607295 |
| IGLV3-24 | -0.220808607 | 0.287014558 | -5.463062967 | 7.41E-08 | 6.791147515 |
| ZNF664   | 0.277089785 | 4.666740747 | 5.46136229 | 7.48E-08 | 6.782385522 |
| TNFAIP8L1| -0.266812492 | 2.029534491 | -5.460932949 | 7.51E-08 | 6.7784244 |
| HCN3     | 0.29265555 | 1.37796358 | 5.456942021 | 7.55E-08 | 6.773515781 |
| IGHD4-17 | -0.506177161 | 0.707300269 | -5.459471288 | 7.56E-08 | 6.772645847 |
| MMP11    | -0.810445825 | 3.275133022 | -5.458168771 | 7.61E-08 | 6.765938847 |
| GSTK1    | 0.277089785 | 4.666740747 | 5.46136229 | 7.48E-08 | 6.782385522 |
| TMEM256  | 0.359763972 | 4.973351641 | 5.456855207 | 7.66E-08 | 6.759176446 |
| TMUB1    | 0.309801754 | 4.528694249 | 5.455903147 | 7.70E-08 | 6.754414982 |
| GNG12    | -0.375988432 | 4.503380549 | -5.451486998 | 7.73E-08 | 6.750393271 |
| MEX3A    | 0.536204924 | 2.22482565 | 5.454377145 | 7.76E-08 | 6.746229899 |
| CCDC8    | -0.397783988 | 1.703818488 | -5.45422274 | 7.77E-08 | 6.745628507 |
| CCDC90B  | -0.268552092 | 2.375447703 | -5.454017454 | 7.78E-08 | 6.744850091 |
| TRIM38   | -0.207803789 | 2.746397231 | -5.451616371 | 7.88E-08 | 6.732220591 |
| MAP7     | 0.311931288 | 3.205440239 | 5.450967387 | 7.90E-08 | 6.72888291 |
| DOLPP1   | 0.215029797 | 3.532284139 | 5.450682924 | 7.92E-08 | 6.727420133 |
| RND3     | -0.495129536 | 3.14456952 | -5.449156631 | 7.98E-08 | 6.719572186 |
| PPP1R14BP3 | 0.366179035 | 4.996469403 | 5.446968988 | 8.07E-08 | 6.708327205 |
| PARVA    | -0.242436737 | 3.233657059 | -5.446629199 | 8.09E-08 | 6.706580973 |
| IGHD6-6  | -0.398961704 | 0.493277715 | -5.446025745 | 8.11E-08 | 6.703479961 |
| PARP1    | 0.372019176 | 0.697827712 | 5.445069424 | 8.16E-08 | 6.69856627 |
| AP006285.2 | 0.236729059 | 0.647157249 | 5.443535945 | 8.22E-08 | 6.690688667 |
| CASC9    | 0.632666653 | 1.172699766 | 5.441774881 | 8.33E-08 | 6.67856354 |
| HERC1    | -0.237903021 | 2.002013103 | -5.439938592 | 8.38E-08 | 6.672216503 |
| ZNHIT2   | 0.283224644 | 3.384086296 | 5.439031636 | 8.42E-08 | 6.667561058 |
| PSMG3    | 0.33447208 | 4.397299651 | 5.438884487 | 8.43E-08 | 6.666805801 |
| TBRG4    | 0.259873324 | 3.580388003 | 5.438508054 | 8.44E-08 | 6.665247431 |
| SRRT     | 0.234476772 | 4.516420709 | 5.437254012 | 8.50E-08 | 6.658438433 |
| PRKRI1P1 | 0.23808589 | 3.180587871 | 5.435781955 | 8.57E-08 | 6.65085953 |
| MCM7     | 0.38290412 | 4.725237092 | 5.43560743 | 8.57E-08 | 6.64990662 |
| PRPF19   | 0.207100934 | 5.481623106 | 5.432765824 | 8.70E-08 | 6.635417176 |
| TONSL    | 0.337152071 | 2.004874543 | 5.432487362 | 8.72E-08 | 6.633989417 |
| Gene          | Log2FC | Adj.p | p-value | Fold Change |
|--------------|--------|-------|---------|-------------|
| DGUOK-AS1    | 0.2461 | 1.329 | 8.81E-08 | 6.624E+024 |
| SNORA16      | -0.2437 | 0.609 | 8.84E-08 | 6.620E+029 |
| SFTPC        | -1.6855 | 5.146 | 8.85E-08 | 6.619E+028 |
| MRS2         | 0.2416 | 3.218 | 8.85E-08 | 6.604E+034 |
| TRIT1        | 0.2511 | 3.250 | 9.06E-08 | 6.596E+026 |
| SLC45A4      | 0.3690 | 2.556 | 9.06E-08 | 6.596E+026 |
| HGD          | 0.8085 | 2.091 | 9.08E-08 | 6.594E+030 |
| RP11-499O7.7 | 0.5505 | 0.855 | 9.11E-08 | 6.594E+031 |
| TMEM44-AS1   | 0.3142 | 2.210 | 9.11E-08 | 6.591E+032 |
| CADM4        | 0.4487 | 3.443 | 9.16E-08 | 6.586E+030 |
| PPP1R35      | 0.3430 | 3.967 | 9.21E-08 | 6.581E+034 |
| ATP6V1H      | 0.2026 | 3.567 | 9.24E-08 | 6.577E+032 |
| AC092066.1   | 0.2989 | 2.449 | 9.25E-08 | 6.576E+032 |
| RP11-279F6.1 | 0.6983 | 1.247 | 9.30E-08 | 6.570E+031 |
| AKAP1        | 0.2788 | 4.207 | 9.34E-08 | 6.567E+037 |
| C8orf88      | -0.2480 | 0.633 | 9.43E-08 | 6.556E+056 |
| TGFβ2        | 0.3382 | 0.935 | 9.49E-08 | 6.552E+074 |
| HIP1R        | 0.3304 | 3.242 | 9.51E-08 | 6.549E+036 |
| RP11-61J19.5 | 0.2350 | 0.897 | 9.53E-08 | 6.547E+037 |
| AC244250.2   | -1.050 | 3.654 | 9.53E-08 | 6.547E+037 |
| GAR1         | 0.2107 | 3.361 | 9.64E-08 | 6.536E+032 |
| C3orf33      | 0.2302 | 2.131 | 9.67E-08 | 6.533E+029 |
| SMAD7        | -0.2849 | 3.118 | 9.71E-08 | 6.529E+039 |
| SCCEP1       | -0.4381 | 5.155 | 9.84E-08 | 6.516E+043 |
| TRIM11       | 0.2142 | 2.391 | 9.91E-08 | 6.509E+047 |
| NOP2         | 0.2816 | 3.396 | 9.91E-08 | 6.503E+050 |
| BACH1        | -0.2626 | 2.907 | 9.98E-08 | 6.500E+041 |
| GAPA1        | 0.2951 | 5.389 | 1.00E-07 | 6.503E+050 |
| PARD3-AS1    | 0.2418 | 0.591 | 1.00E-07 | 6.500E+041 |
| ITGB5        | -0.3242 | 4.589 | 1.00E-07 | 6.498E+027 |
| CTD-2531D15.4| -0.2126 | 0.263 | 1.00E-07 | 6.497E+058 |
| C1QBP        | 0.3127 | 4.906 | 1.00E-07 | 6.497E+058 |
| Gene     | Log2FoldChange | Log2FC       | pValue       | Adjusted pValue | FDR  |
|----------|----------------|--------------|--------------|-----------------|------|
| NARS2    | 0.246827364    | 2.968775179  | 5.405243747  | 1.01E-07        | 6.494617433 |
| TBCEL    | -0.213299699   | 2.069810864  | -5.403941769 | 1.01E-07        | 6.4879724  |
| NUP88    | 0.213489923    | 3.091589322  | 5.403594732  | 1.02E-07        | 6.486201432 |
| ANPEP    | -0.673984232   | 2.826744563  | -5.403534337 | 1.02E-07        | 6.485893242 |
| UBE2Q1   | 0.201690768    | 4.862638436  | 5.402520166  | 1.02E-07        | 6.480718454 |
| NUTF2    | 0.225103831    | 4.584575484  | 5.402180615  | 1.02E-07        | 6.478986093 |
| IL10RB   | -0.252864563   | 4.374662874  | -5.402135687 | 1.02E-07        | 6.478758684 |
| RIPPLY3  | 0.360238327    | 0.744662247  | 5.401924813  | 1.04E-07        | 6.466501482 |
| PHKA1    | 0.279963999    | 2.276487211  | 5.401055616  | 1.04E-07        | 6.459140395 |
| RP11-396C23.2 | 0.224259252 | 0.891227264  | 5.400325461  | 1.04E-07        | 6.458008656 |
| RECQL4   | 0.44791996     | 2.566337583  | 5.399733009  | 1.04E-07        | 6.457324713 |
| NELFE    | 0.234860411    | 4.871581148  | 5.398289407  | 1.04E-07        | 6.454191176 |
| KRTAP5-1 | 0.233316329    | 0.635314476  | 5.398067429  | 1.05E-07        | 6.453051482 |
| CTSE     | -1.191144311   | 5.05892658   | -5.396871447 | 1.05E-07        | 6.451911764 |
| FGL1     | 1.057363001    | 1.862419532  | 5.396863006  | 1.05E-07        | 6.451885558 |
| ARHGAP4  | -0.4213109     | 3.088979543  | -5.396643763 | 1.05E-07        | 6.450751207 |
| PITX2    | 0.468572808    | 0.812257837  | 5.395132969  | 1.06E-07        | 6.443051462 |
| PLXND1   | -0.40028234    | 4.319857296  | -5.394327886 | 1.07E-07        | 6.438949146 |
| MN1      | -0.286539122   | 0.986072367  | -5.394249976 | 1.07E-07        | 6.438552186 |
| TEMEM241 | 0.242542796    | 2.18221102   | 5.393970908  | 1.07E-07        | 6.437130335 |
| AMBP     | 0.696325897    | 1.184368775  | 5.392850207  | 1.07E-07        | 6.431421022 |
| CKMT1A   | 0.309721588    | 0.747091604  | 5.392732833  | 1.08E-07        | 6.430823137 |
| OSGIN1   | 0.606216738    | 2.433679206  | 5.391107625  | 1.08E-07        | 6.422545697 |
| CLC      | -0.350308241   | 0.376201543  | -5.390187709 | 1.09E-07        | 6.417861405 |
| CYTH3    | -0.405245692   | 3.248241273  | -5.390012741 | 1.09E-07        | 6.416970529 |
| NOLC1    | 0.254368453    | 4.905869458  | 5.389100681  | 1.10E-07        | 6.412327077 |
| PTDSS2   | 0.218933133    | 2.455983     | 5.387924366  | 1.10E-07        | 6.406685752 |
| NHLRC4   | -0.283513515   | 0.798684553  | -5.387952855 | 1.10E-07        | 6.40648429 |
| MYBBP1A  | 0.266641928    | 3.449239994  | 5.387429822  | 1.11E-07        | 6.40381951 |
| RAB40C   | 0.339642464    | 3.794546571  | 5.38712705   | 1.11E-07        | 6.402281377 |
| INADL    | 0.263119789    | 2.806706106  | 5.387042544  | 1.11E-07        | 6.401581297 |
| IGHV1-68 | -0.263853473   | 0.44463592   | -5.386525096 | 1.11E-07        | 6.399218104 |
| TYSND1   | 0.225074272    | 2.761621177  | 5.386373222  | 1.11E-07        | 6.398262607 |
| Gene      | log_2FoldChange | log2Ratio   | pValue     | EValue  | Cutoff |
|-----------|----------------|-------------|------------|---------|--------|
| TMEM100   | -0.514944228   | 1.414251376 | -5.385029663 | 1.12E-07 | 6.391609347 |
| EAF2      | -0.261630981   | 1.670221933 | -5.384471545 | 1.12E-07 | 6.38876967 |
| CHST7     | -0.217373935   | 1.406337237 | -5.384306463 | 1.12E-07 | 6.388053398 |
| SH3D19    | -0.241263585   | 3.261916702 | -5.383441273 | 1.13E-07 | 6.383529682 |
| COPS5     | 0.233761571    | 3.073514237 | 5.382745179  | 1.13E-07 | 6.379989531 |
| ENDOG     | 0.253245655    | 2.239078387 | 5.380319392  | 1.15E-07 | 6.367564285 |
| HSPB7     | -0.290560637   | 1.047033839 | -5.379603614 | 1.15E-07 | 6.364017407 |
| NDUFA8    | 0.218706081    | 5.425346514 | 5.378839177  | 1.16E-07 | 6.360132171 |
| NRSN2-AS1 | 0.259423562    | 2.022913902 | 5.375189098  | 1.19E-07 | 6.34994907 |
| RRNAD1    | 0.312216239    | 5.200547219 | 5.375516857  | 1.18E-07 | 6.341564449 |
| KIAA1522  | 0.36427819     | 6.303501938 | 5.37389098   | 1.19E-07 | 6.33363255 |
| JUP       | -0.264812065   | 1.256152951 | -5.37362263  | 1.19E-07 | 6.332810295 |
| ST3GAL6   | -0.223750445   | 4.5004006   | -5.373460754 | 1.19E-07 | 6.332467816 |
| CAB39     | -0.400847091   | 3.066331352 | -5.373393306 | 1.19E-07 | 6.322483513 |
| CDC42EP3  | 0.46278775     | 2.866775656 | 5.371426637  | 1.20E-07 | 6.322211755 |
| FBXO46    | 0.403501444    | 1.778685286 | 5.371378098  | 1.20E-07 | 6.322211755 |
| ADSSL1    | -0.454437203   | 1.230563036 | -5.371042048 | 1.20E-07 | 6.320531425 |
| CCL24     | 0.336715247    | 0.373091753 | 5.370325685  | 1.21E-07 | 6.31695665 |
| RP11-1C8.7| 0.305130698    | 0.705115913 | -5.37007582 | 1.21E-07 | 6.315627431 |
| CCL26     | 0.302820826    | 3.787703375 | 5.366577001  | 1.23E-07 | 6.29786978 |
| CACFD1    | 0.20956743     | 2.898789074 | 5.366032354  | 1.24E-07 | 6.295114731 |
| ZNF3      | 0.233761571    | 3.073514237 | 5.382745179  | 1.13E-07 | 6.379989531 |
| RP11-180M15.7| 0.231912132 | 1.085312334 | -5.36546703  | 1.24E-07 | 6.292247868 |
| GEMIN8P4  | 0.24361044     | 1.144609259 | 5.364269531  | 1.25E-07 | 6.286176067 |
| IGL1      | -0.257586479   | 0.404107115 | -5.36354727  | 1.25E-07 | 6.282514487 |
| KDELC1    | -0.296700834   | 1.670234213 | -5.363124611 | 1.26E-07 | 6.280371972 |
| RG5       | -0.440449137   | 3.626217325 | -5.362691295 | 1.26E-07 | 6.278175596 |
| PCDH7     | -0.471893237   | 1.403692521 | -5.361969556 | 1.27E-07 | 6.273129047 |
| ILK       | -0.213288362   | 2.089020667 | -5.361530596 | 1.27E-07 | 6.272293062 |
| MNAT1     | 0.205961281    | 2.42109158  | 5.360411318  | 1.27E-07 | 6.266621529 |
| CTSL      | -0.442443017   | 5.95891289  | -5.35910328  | 1.28E-07 | 6.259994858 |
| IGKV2OR2-1| -0.357630772   | 0.5961177   | -5.359021615 | 1.28E-07 | 6.259581183 |
| GGCT      | 0.342335135    | 5.006140613 | 5.357627798  | 1.29E-07 | 6.252521624 |
| Gene   | Value1    | Value2    | Value3    | Value4     | Value5  |
|--------|-----------|-----------|-----------|------------|---------|
| IRS2   | 0.522676996 | 2.732252958 | 5.356848277 | 1.30E-07   | 6.248574132 |
| DCAF16 | 0.239365559 | 3.119445298 | 5.35109064  | 1.34E-07   | 6.219433337 |
| RARB   | -0.290095434 | 1.503376824 | -5.350498646 | 1.34E-07   | 6.216438689 |
| FENDRR | -0.259209088 | 0.578070082 | -5.350241125 | 1.34E-07   | 6.215136094 |
| DLG4   | -0.25321584  | 1.587349092 | -5.349615138 | 1.36E-07   | 6.205368449 |
| WASH6P | 0.295728711  | 1.337947027 | 5.348309724  | 1.36E-07   | 6.201969951 |
| COMMD4 | 0.206283456  | 3.058001312 | 5.344635749  | 1.38E-07   | 6.18518679 |
| MCF2L  | 0.318035072  | 1.293798492 | 5.343987024  | 1.39E-07   | 6.183518679 |
| RP5-967N21.11 | 0.288972341 | 1.320127728 | 5.341323298  | 1.41E-07   | 6.170062295 |
| CACNA2D1 | -0.3052462  | 0.994768197 | -5.340396845 | 1.41E-07   | 6.165383524 |
| LAMC2  | -0.713683893 | 4.804608861 | -5.338210252 | 1.43E-07   | 6.154343659 |
| SLC39A4 | 0.432931671  | 3.347131964 | 5.337341398  | 1.44E-07   | 6.149958029 |
| KIF21A | 0.299314841  | 2.006778325 | 5.336201284  | 1.45E-07   | 6.144202861 |
| DVL1   | 0.32950477   | 4.582307715 | 5.33679302   | 1.46E-07   | 6.131480221 |
| RP3-449M8.6 | -0.259215483 | 0.70513672  | -5.333105202 | 1.47E-07   | 6.128584515 |
| APEX1  | 0.244813216  | 6.285867305 | 5.331588425  | 1.48E-07   | 6.120935365 |
| RP11-284F21.9 | 0.502954603 | 0.890425157 | 5.329443341  | 1.50E-07   | 6.110120967 |
| CCS    | 0.24636127   | 3.874358443 | 5.328987595  | 1.50E-07   | 6.107825665 |
| DGAT1  | 0.315251636  | 3.884238039 | 5.325465134  | 1.53E-07   | 6.09007518 |
| TSTA3  | 0.341036053  | 4.934318342 | 5.325153845  | 1.53E-07   | 6.08507188 |
| RAB2A  | 0.22364959   | 4.962756994 | 5.324680409  | 1.53E-07   | 6.086122604 |
| CLIC5  | -0.535721268 | 1.78553885  | -5.321597515 | 1.56E-07   | 6.070599433 |
| RP1-26F21.1 | 0.223817305 | 0.360826722 | 5.321334723  | 1.56E-07   | 6.069290168 |
| SMPDL3A | -0.465933631 | 3.441312812 | -5.317694179 | 1.59E-07   | 6.050956629 |
| TRAM2  | -0.291506015 | 3.04593709  | -5.317608886 | 1.59E-07   | 6.050527547 |
| PPARG  | -0.458504111 | 2.101904923 | -5.316503925 | 1.60E-07   | 6.044969455 |
| ACTR2  | -0.202558868 | 6.224788955 | -5.314963313 | 1.61E-07   | 6.0372217 |
| IGKV2-18 | -0.276115223 | 0.410441691 | -5.314727704 | 1.62E-07   | 6.036036998 |
| NRSN2  | 0.296395227  | 3.949166593 | 5.312936408  | 1.63E-07   | 6.027031425 |
| RNF13  | -0.22993956  | 4.28368364  | -5.30105416  | 1.65E-07   | 6.016566524 |
| ZMAT3  | -0.230854457 | 2.056688797 | -5.309712578 | 1.66E-07   | 6.010830743 |
| SPTBN2 | 0.377666127  | 2.701789327 | 5.307816046  | 1.68E-07   | 6.001304221 |
| ABCG2  | -0.228524337 | 0.910326973 | -5.306841508 | 1.68E-07   | 5.996410175 |
| Gene   | Fold Change | Expression | p-value | q-value | Score |
|--------|-------------|------------|---------|---------|-------|
| PPAP2C | 0.404428604 | 3.63501861 | 5.306526139 | 1.69E-07 | 5.994826589 |
| IGLV5-37 | -0.732388806 | 1.569925818 | -5.306341123 | 1.69E-07 | 5.993897959 |
| C14orf1 | 0.239055305 | 4.472882148 | 5.305890846 | 1.69E-07 | 5.991636803 |
| TRPS1 | -0.274947816 | 1.249589998 | -5.304830483 | 1.70E-07 | 5.986315315 |
| HIBCH | 0.205727805 | 2.143544911 | 5.301080562 | 1.74E-07 | 5.967495574 |
| MIER1 | -0.205980668 | 2.788912021 | -5.300955038 | 1.74E-07 | 5.965207035 |
| GSDMA | -0.241093942 | 0.653310922 | -5.300881512 | 1.74E-07 | 5.966865874 |
| C19orf66 | -0.244742969 | 2.145018722 | -5.300624354 | 1.74E-07 | 5.965207035 |
| ADRB2 | -0.313334774 | 0.883113822 | -5.300408493 | 1.74E-07 | 5.964124242 |
| OLMLINC | 0.302813945 | 2.096623284 | 5.299476431 | 1.75E-07 | 5.959449319 |
| CTD-2139B15.5 | 0.551861741 | 0.710568058 | 5.299173634 | 1.75E-07 | 5.957930744 |
| PRDM8 | -0.262470589 | 3.201125407 | 5.298083386 | 1.75E-07 | 5.954160575 |
| ZNF513 | 0.263663513 | 2.01125407 | 5.298083386 | 1.75E-07 | 5.952463624 |
| OR7E38P | 0.370370278 | 2.470699042 | 5.296294901 | 1.78E-07 | 5.943497321 |
| RP11-400K9.4 | -0.271159532 | 0.646344186 | -5.295057247 | 1.79E-07 | 5.93729411 |
| WDR5 | 0.212073185 | 3.73375783 | 5.295035865 | 1.79E-07 | 5.937186956 |
| PHLP1 | 0.247067005 | 1.245018722 | 5.294018932 | 1.79E-07 | 5.934559247 |
| TIMELESS | 0.351686056 | 0.883113822 | -5.29421812 | 1.76E-07 | 5.954160575 |
| CTD-3065J16.9 | -0.202681584 | 4.965992226 | -5.29321867 | 1.81E-07 | 5.928097438 |
| AP3S1 | 0.21728649 | 3.141712334 | -5.292773469 | 1.81E-07 | 5.925851049 |
| SNX18 | 0.212073185 | 3.37375783 | 5.295035865 | 1.79E-07 | 5.937186956 |
| PRDX6 | 0.236481132 | 6.710944477 | 5.291842167 | 1.82E-07 | 5.921185946 |
| AFMD | 0.255848879 | 3.107701139 | 5.290029401 | 1.84E-07 | 5.912107496 |
| KRT18 | 0.32704654 | 7.754976288 | 5.288967808 | 1.85E-07 | 5.90679226 |
| RPS6KA1 | -0.23767862 | 4.037876363 | -5.288708513 | 1.85E-07 | 5.905494154 |
| HIVEP2 | 0.238222236 | 3.390036212 | -5.288700623 | 1.85E-07 | 5.905454654 |
| S100A8 | -0.202681584 | 3.141712334 | -5.292773469 | 1.81E-07 | 5.925851049 |
| TOMM40 | 0.285771479 | 4.169653041 | 5.286748394 | 1.87E-07 | 5.895630363 |
| ATP6V1C2 | 0.508709833 | 1.588440093 | 5.286725517 | 1.87E-07 | 5.895568575 |
| INPPL1 | 0.30573672 | 4.617299951 | 5.286011214 | 1.88E-07 | 5.891994057 |
| CELS3-AS1 | 0.209461838 | 0.913727685 | 5.284560999 | 1.89E-07 | 5.884663675 |
| VAMP1 | -0.29603359 | 1.715053732 | -5.281322108 | 1.92E-07 | 5.86853953 |
| COL5A3 | -0.393484955 | 1.770430388 | -5.280064562 | 1.93E-07 | 5.862252548 |
| Gene       | Log2 Fold Change | Gene Length | Gene Expression | P-Value | Adjusted P-Value |
|-----------|-----------------|-------------|-----------------|---------|-----------------|
| MAP4      | -0.223254867    | 4.03464543  | -5.277082126    | 1.96E-07| 5.84734791      |
| RP4-533D7.5 | 0.237103846   | 0.573770774 | 5.27656936      | 1.97E-07| 5.84572277      |
| FAM83G    | 0.277715843     | 2.131398274 | 5.273871479     | 2.00E-07| 5.83131033      |
| MS12      | 0.238460665     | 2.227068523 | 5.273198678     | 2.00E-07| 5.82795007      |
| THEM5     | 0.478063303     | 2.670324009 | 5.26978549      | 2.04E-07| 5.81037924      |
| IGHD5-12  | -0.297617565    | 0.33224088  | -5.269251548    | 2.05E-07| 5.80824913      |
| SRP9      | 0.243486312     | 6.60992336  | 5.26864401      | 2.05E-07| 5.80541936      |
| STAT2     | -0.262805018    | 4.589621805 | 5.26188865      | 2.12E-07| 5.77153327      |
| AL928761.1| -0.596624532    | 1.808711942 | -5.261367757    | 2.13E-07| 5.76893750      |
| IL13RA1   | -0.267545643    | 5.314623827 | -5.25815736     | 2.16E-07| 5.75472919      |
| BCAT1     | -0.579940387    | 2.636089434 | -5.254689471    | 2.20E-07| 5.73567818      |
| CHCHD1    | 0.22703651      | 4.467774637 | 5.254232459     | 2.21E-07| 5.73340354      |
| IGKV2-29  | -0.894735659    | 1.713994308 | -5.25303423     | 2.22E-07| 5.72878410      |
| ACY1      | 0.20429657      | 1.335844065 | 5.252831236     | 2.23E-07| 5.72643048      |
| TTC6      | 0.224783402     | 0.537918206 | 5.251326368     | 2.24E-07| 5.71894349      |
| RNF213    | -0.3655241      | 3.742388568 | -5.250338086    | 2.25E-07| 5.71402766      |
| RAB27A    | -0.324874372    | 3.702179855 | -5.249631046    | 2.26E-07| 5.71051126      |
| NOXA1     | 0.467330028     | 3.075748959 | 5.24942033      | 2.26E-07| 5.70967075      |
| FAM229B   | -0.322922395    | 1.741615692 | -5.247293894    | 2.29E-07| 5.69889067      |
| RPS2P14   | 0.32201062      | 1.991862755 | 5.246924278     | 2.29E-07| 5.69705332      |
| COLGALT1  | -0.284197815    | 4.671183083 | -5.246900127    | 2.29E-07| 5.69693327      |
| BAIAP2L1  | 0.314566969     | 4.267316668 | 5.245754344     | 2.31E-07| 5.69123839      |
| MRPL15    | 0.320858906     | 5.392918829 | 5.25462588      | 2.31E-07| 5.68978845      |
| PAPSS1    | -0.201732225    | 4.210352965 | -5.24522718     | 2.31E-07| 5.68861860      |
| IGHV3-75  | -0.310029823    | 0.601024582 | -5.24358193     | 2.33E-07| 5.68022660      |
| MEGF6     | -0.45550933     | 2.636434892 | -5.241914483    | 2.35E-07| 5.67216122      |
| INTS8     | 0.23022886      | 2.746098312 | 5.24157481      | 2.36E-07| 5.67047427      |
| SYCP2L    | 0.205393872     | 0.359688901 | 5.240918741     | 2.37E-07| 5.66721623      |
| BTBD6     | 0.250593711     | 4.808894554 | 5.239210526     | 2.39E-07| 5.65873495      |
| ACN9      | 0.286652816     | 2.902978942 | 5.236036362     | 2.42E-07| 5.64432148      |
| COX5B     | 0.294369937     | 5.906419035 | 5.236054339     | 2.43E-07| 5.64307106      |
| IGLL3P    | -0.259819077    | 0.423331288 | -5.233657919    | 2.46E-07| 5.63118339      |
| AC098614.2| -0.276792488    | 1.560046892 | -5.232630584    | 2.47E-07| 5.62608871      |
| Gene        | log2FoldChange | FDR       | Tissue 1 Mean | Tissue 2 Mean |
|-------------|----------------|-----------|---------------|---------------|
| FAM126A     | -0.337699363   | 2.51E-07  | 5.611034482   |               |
| USMG5       | 0.2676919      | 2.51E-07  | 5.610469221   |               |
| FHL5        | -0.27258264    | 2.52E-07  | 5.607117459   |               |
| MIEN1       | 0.316149505    | 2.52E-07  | 5.606798929   |               |
| GPR110      | -0.737364227   | 2.52E-07  | 5.606734809   |               |
| SOD1        | 0.259929316    | 2.53E-07  | 5.596073529   |               |
| SCNN1A      | -0.27258264    | 2.53E-07  | 5.594940329   |               |
| GPR110      | -0.737364227   | 2.53E-07  | 5.594940329   |               |
| TMEM43      | 0.316149505    | 2.53E-07  | 5.593487593   |               |
| B3GNT2      | -0.27258264    | 2.53E-07  | 5.592568433   |               |
| ANK2        | -0.228268316   | 2.55E-07  | 5.5805906     |               |
| TATDN1      | 0.21299546     | 2.55E-07  | 5.56979372    |               |
| INHA        | 0.764072775    | 2.55E-07  | 5.569256218   |               |
| RAE1        | 0.211812462    | 2.56E-07  | 5.546137119   |               |
| CHKA        | 0.351249104    | 2.56E-07  | 5.542404892   |               |
| MTX1        | 0.213046053    | 2.56E-07  | 5.536795362   |               |
| DDX26B      | -0.223520818   | 2.56E-07  | 5.53659586    |               |
| MEN1        | 0.225973867    | 2.57E-07  | 5.534227688   |               |
| GDF5        | -0.26148052    | 2.57E-07  | 5.533479762   |               |
| NOP14       | 0.200055982    | 2.57E-07  | 5.532856591   |               |
| RAB25       | 0.387902207    | 2.58E-07  | 5.53101597    |               |
| CRIM1       | -0.370968786   | 2.58E-07  | 5.529969637   |               |
| ECM1        | -0.658388336   | 2.58E-07  | 5.52466799    |               |
| TAF1A-AS1    | 0.203363725    | 2.59E-07  | 5.519703217   |               |
| SH3PXD2A    | -0.298128946   | 2.59E-07  | 5.518818164   |               |
| NFKBID      | -0.266594342   | 2.59E-07  | 5.51511392    |               |
| BIRC7       | -0.355349934   | 2.59E-07  | 5.513395227   |               |
| PARP14      | -0.312057803   | 2.59E-07  | 5.511754036   |               |
| STX4        | -0.212827435   | 2.60E-07  | 5.505326033   |               |
| RP11-103B5.4| 0.309097255    | 2.60E-07  | 5.503067048   |               |
| COL4A3BP    | -0.226304797   | 2.60E-07  | 5.501837752   |               |
| TATDN1      | 0.232243104    | 2.61E-07  | 5.500112722   |               |
| LGSN        | 0.603369899    | 2.61E-07  | 5.494687243   |               |
| Gene       | Log2FoldChange | Adj. P Value | FDR          | Log2FC         |
|------------|----------------|--------------|--------------|----------------|
| EMC9       | 0.279808164    | 5.204878365  | 2.85E-07     | 5.48880101     |
| SQLE       | 0.392133027    | 5.204298622  | 2.85E-07     | 5.48594005     |
| PTH1R      | -0.243633545   | -5.204234015 | 2.86E-07     | 5.48562124     |
| TRABD2A    | -0.283682888   | -5.203678035 | 2.86E-07     | 5.48287784     |
| ILF3       | 0.2122938      | 5.201996646  | 2.89E-07     | 5.47458290     |
| UQCRB      | 0.232225351    | 5.201510868  | 2.90E-07     | 5.47218621     |
| CXCL6      | -0.538873494   | -5.2012313   | 2.90E-07     | 5.47080795     |
| IGHV3-20   | -0.735269473   | -5.201209596 | 2.90E-07     | 5.47070900     |
| PDAP1      | 0.226984395    | 5.200677206  | 2.91E-07     | 5.46807528     |
| GPR15      | -0.324871777   | -5.198178032 | 2.95E-07     | 5.45575313     |
| ZMYND15    | -0.267534379   | -5.196704901 | 2.97E-07     | 5.44849236     |
| APBB2      | -0.242662861   | -5.195613058 | 2.98E-07     | 5.44311207     |
| UBA2P2L    | 0.225244379    | 5.19467905   | 3.00E-07     | 5.43851035     |
| C20orf194  | -0.228628952   | -5.194090286 | 3.01E-07     | 5.43560999     |
| TFEB       | -0.261264574   | -5.19341726  | 3.02E-07     | 5.43229488     |
| CTTNBP2NL  | -0.248357763   | -5.19081329  | 3.06E-07     | 5.41971441     |
| NFX1       | -0.253138397   | -5.19030435  | 3.07E-07     | 5.41561836     |
| ARPC5      | -0.211831241   | -5.18974168  | 3.07E-07     | 5.41419704     |
| SLCO2A1    | -0.519729809   | -5.18825093  | 3.09E-07     | 5.41017784     |
| UQCC3      | 0.299889065    | 3.291121545  | 3.10E-07     | 5.40691845     |
| RP4-758J18.10 | 0.390899471 | 3.2062148956 | 3.11E-07 | 5.40453052 |
| ALG8       | 0.227233445    | 3.67516454   | 3.12E-07     | 5.40126328     |
| RP11-794G24.1 | 0.201766188 | 0.480608276 | 5.185992909 | 3.13E-07 | 5.39575059 |
| RP11-532F12.5 | 0.38067568   | 3.081685803  | 5.185067389  | 3.15E-07 | 5.39119826 |
| GS1-44D20.1 | -0.223858893  | 1.070321792  | -5.184902594 | 3.15E-07 | 5.39038776 |
| ELF1       | -0.226614299   | 4.132957304  | -5.181948719 | 3.20E-07 | 5.37586392 |
| SPATA13    | -0.242844337   | 2.236017186  | -5.18107692  | 3.21E-07 | 5.37157881 |
| GCNT2      | 0.259575215    | 2.144370262  | 5.17812138   | 3.26E-07 | 5.35705571 |
| ACTN1      | -0.342219692   | 4.250928589  | -5.176723031 | 3.29E-07 | 5.35018804 |
| EFB2       | -0.439716318   | 3.398213055  | -5.175486817 | 3.31E-07 | 5.34411743 |
| Gene      | Value1  | Value2  | Value3  | Value4  | Value5  |
|-----------|---------|---------|---------|---------|---------|
| SSBP2     | -0.224812945 | 1.308113543 | -5.174150403 | 3.33E-07 | 5.337556244 |
| S100P     | 1.309577943  | 5.377488848 | 5.173563345  | 3.34E-07 | 5.34674534 |
| ZNF474    | -0.240666851 | 0.4407323  | -5.169360961 | 3.41E-07 | 5.314054724 |
| RP5-1033H22.2 | 0.30094426 | 0.99973707 | 5.168685548  | 3.42E-07 | 5.310742079 |
| CENPO     | 0.23771541  | 1.725511041 | 5.168559867  | 3.42E-07 | 5.310125707 |
| MPST      | 0.293025241  | 3.324153475 | 5.167870797  | 3.44E-07 | 5.306746556 |
| ADRM1     | 0.25174405  | 0.4407323  | 5.166330255  | 3.46E-07 | 5.299605225 |
| TMEM45A   | -0.527393368 | 2.210118825 | -5.16630255  | 3.46E-07 | 5.299193314 |
| MIR621    | 0.349634922  | 3.693494379 | 5.165536728  | 3.48E-07 | 5.295303456 |
| TMEM81    | 0.20161646  | 1.615865194 | 5.165140117  | 3.48E-07 | 5.27893512 |
| MAML1     | -0.294695423 | 1.085176588 | -5.162208323 | 3.54E-07 | 5.278368316 |
| YRDC      | 0.211521585  | 3.679088163 | 5.162080699  | 3.54E-07 | 5.278368316 |
| PIGM      | 0.232303302  | 2.951810248 | 5.161693393  | 3.55E-07 | 5.276471081 |
| CD38      | -0.429743706 | 1.891452127 | -5.161487602 | 3.55E-07 | 5.27546306 |
| STX2      | -0.243244479 | 2.331774918 | -5.160483474 | 3.57E-07 | 5.270545074 |
| IGLV3-22  | -0.334440899 | 0.406585439 | -5.159408068 | 3.59E-07 | 5.265278936 |
| MYEF2     | 0.233065142  | 1.18437262  | 5.159051914  | 3.59E-07 | 5.263535113 |
| RCAN2     | -0.461539541 | 2.431195146 | -5.158497784 | 3.60E-07 | 5.260822157 |
| C11orf98  | 0.23792445  | 2.489937858 | 5.154804756  | 3.67E-07 | 5.242748205 |
| NDUFB4    | 0.246752115  | 5.408560635 | 5.154417902  | 3.68E-07 | 5.24085583 |
| NTHL1     | 0.317475536  | 3.344196352 | 5.152930746  | 3.71E-07 | 5.233581109 |
| MRPL21    | 0.242764434  | 3.522556501 | 5.151561025  | 3.73E-07 | 5.226882736 |
| ALDH3A2   | 0.461283358  | 4.605925942 | 5.150067882  | 3.76E-07 | 5.219582612 |
| SLBP      | 0.233106801  | 4.836165422 | 5.150043333  | 3.76E-07 | 5.219462607 |
| C2orf40   | -0.417228521 | 0.831471875 | -5.149309581 | 3.78E-07 | 5.215875934 |
| CTB-63M22.1 | 0.424652546  | 3.329012145 | 5.147895301  | 3.80E-07 | 5.208694048 |
| ABCG1     | -0.36342653  | 2.801646113 | -5.147745014 | 3.81E-07 | 5.208229666 |
| ZBTB38    | -0.229246036 | 2.858495559 | -5.146976816 | 3.82E-07 | 5.204476133 |
| CSE1L     | 0.285821378  | 4.665317491 | 5.146878789  | 3.82E-07 | 5.203997191 |
| AF131215.9 | -0.206250447 | 0.628727347 | -5.144729138 | 3.86E-07 | 5.193496528 |
| MIR7152   | -0.211339543 | 0.31100051  | -5.142558043 | 3.91E-07 | 5.18289511 |
| U47924.27 | 0.436132161  | 2.844819956 | 5.140546979  | 3.95E-07 | 5.173078707 |
| FAM111A   | -0.255350439 | 2.873883129 | -5.13992744  | 3.96E-07 | 5.170055312 |
| Gene       | Value   | Value   | Value   | Value   | Value   |
|------------|---------|---------|---------|---------|---------|
| RASGRF1    | -0.434  | 1.058   | -5.139  | 3.98E-7 | 5.166   |
| MRT04      | 0.231   | 4.110   | 5.137   | 4.01E-7 | 5.158   |
| IGHE       | -0.374  | 0.665   | -5.137  | 4.01E-7 | 5.158   |
| NRTN       | 0.282   | 0.942   | 5.137   | 4.02E-7 | 5.154   |
| WFCDC1P    | -0.564  | 2.212   | -5.136  | 4.04E-7 | 5.151   |
| LAMTOR5    | 0.258   | 4.895   | 5.134   | 4.07E-7 | 5.143   |
| TRPT1      | 0.236   | 3.571   | 5.134   | 4.09E-7 | 5.138   |
| MYO7A      | -0.257  | 1.454   | -5.132  | 4.11E-7 | 5.142   |
| RP11-53B5.1| 0.429   | 0.574   | 5.130   | 4.16E-7 | 5.122   |
| LINC00884  | 0.219   | 0.804   | 5.130   | 4.16E-7 | 5.121   |
| FZD7       | -0.331  | 2.351   | -5.129  | 4.18E-7 | 5.117   |
| RGL2       | 0.279   | 4.326   | 5.127   | 4.23E-7 | 5.105   |
| RP13-58209.5| 0.287  | 1.665   | 5.127   | 4.23E-7 | 5.105   |
| GALE       | 0.316   | 4.335   | 5.121   | 4.34E-7 | 5.081   |
| GTPBP3     | 0.223   | 2.233   | 5.121   | 4.35E-7 | 5.078   |
| CTD-2521M24.9| -0.283| 1.755   | -5.120  | 4.36E-7 | 5.077   |
| RN186      | 0.359   | 0.578   | 5.120   | 4.37E-7 | 5.074   |
| MIR3671    | -0.268  | 0.806   | -5.118  | 4.42E-7 | 5.063   |
| SPATS2L    | -0.341  | 3.716   | -5.117  | 4.42E-7 | 5.062   |
| TWIST1     | -0.397  | 0.971   | -5.116  | 4.47E-7 | 5.052   |
| EFNA3      | 0.352   | 1.887   | 5.116   | 4.47E-7 | 5.052   |
| SNHG11     | 0.218   | 2.090   | 5.114   | 4.51E-7 | 5.043   |
| IKB1P      | -0.251  | 2.597   | -5.113  | 4.51E-7 | 5.043   |
| CTHRC1     | -0.623  | 4.894   | -5.113  | 4.53E-7 | 5.039   |
| AKR7L      | 0.276   | 0.503   | 5.112   | 4.57E-7 | 5.032   |
| XPO5       | 0.247   | 3.022   | 5.113   | 4.57E-7 | 5.031   |
| CD109      | -0.482  | 1.933   | -5.111  | 4.58E-7 | 5.029   |
| DENND5A    | -0.209  | 3.116   | -5.108  | 4.64E-7 | 5.016   |
| SLC50A1    | 0.349   | 5.472   | 5.105   | 4.71E-7 | 5.002   |
| CRLF2      | -0.239  | 0.474   | -5.102  | 4.79E-7 | 4.986   |
| UBE2T      | 0.472   | 3.978   | 5.101   | 4.81E-7 | 4.982   |
| KLC2       | 0.247   | 2.955   | 5.100   | 4.84E-7 | 4.977   |
| PFAS       | 0.234   | 2.334   | 5.099   | 4.87E-7 | 4.970   |
| Gene             | x   | y   | z   | e   | Score   |
|------------------|-----|-----|-----|-----|---------|
| FAM174B          | 0.392406716 | 3.19973862 | 5.098093716 | 4.89E-07 | 4.966661951 |
| MPDU1            | 0.241168624 | 4.44123426 | 5.097042163 | 4.91E-07 | 4.961568632 |
| RP11-481H12.1    | -0.316053044 | 1.308788766 | -5.096780999 | 4.92E-07 | 4.960303797 |
| RNU6-638P        | -0.208520853 | 0.476677161 | -5.096054866 | 4.94E-07 | 4.95678401 |
| TRIM45           | 0.242093083 | 1.253627772 | 5.09537029 | 4.95E-07 | 4.953472663 |
| CBLC             | 0.480742087 | 3.516402692 | 5.094220684 | 4.98E-07 | 4.947907135 |
| STK35            | 0.233514068 | 0.476677161 | -5.096054866 | 4.99E-07 | 4.947013813 |
| C6orf48          | -0.316053044 | 1.308788766 | -5.096054866 | 4.94E-07 | 4.962922242 |
| C5orf30          | 0.392406716 | 3.19973862 | 5.098093716 | 4.89E-07 | 4.966661951 |
| PARD3B           | -0.208520853 | 0.476677161 | -5.096054866 | 4.94E-07 | 4.95678401 |
| MIR6503          | -0.200703462 | 0.36514894 | -5.096054866 | 4.94E-07 | 4.95678401 |
| FAXDC2           | -0.536449941 | 2.434816056 | 5.09915997 | 5.09E-07 | 4.92707713 |
| TRMT61A          | 0.248795769 | 2.988788028 | 5.09915997 | 5.09E-07 | 4.92707713 |
| GPIHB1           | -0.39934374 | 1.12167672 | -5.088481384 | 5.13E-07 | 4.920138685 |
| LINC01123        | 0.204931037 | 0.666625785 | 5.087738553 | 5.15E-07 | 4.916546708 |
| NFXL1            | 0.203658388 | 1.996872145 | 5.08766367 | 5.15E-07 | 4.916184636 |
| TROAP            | 0.448128242 | 1.938698966 | 5.086679437 | 5.17E-07 | 4.911426143 |
| RP11-417E7.2     | -0.34524354 | 0.865335497 | -5.08588404 | 5.20E-07 | 4.907602319 |
| TEMEM184A        | 0.39575434 | 2.618952927 | 5.084592932 | 5.23E-07 | 4.901341213 |
| IFI27            | -0.688049222 | 5.473143106 | -5.08455023 | 5.23E-07 | 4.901158019 |
| UAP1L1           | -0.28808777 | 2.016372605 | -5.083867286 | 5.25E-07 | 4.897834743 |
| GOT1             | 0.323688679 | 4.520012204 | 5.081618758 | 5.31E-07 | 4.886972262 |
| RNA5SP498        | -0.242908895 | 0.635750998 | -5.081238575 | 5.32E-07 | 4.885136051 |
| CTTN             | 0.25758146 | 5.485521452 | 5.081236966 | 5.32E-07 | 4.885128284 |
| AKR1C1           | 1.093872527 | 2.578163458 | 5.080877888 | 5.33E-07 | 4.883394122 |
| CHML             | 0.40547159 | 2.584082155 | 5.079248222 | 5.37E-07 | 4.875525058 |
| EML1             | -0.241186991 | 1.181856795 | -5.078636153 | 5.39E-07 | 4.872570189 |
| RP11-474D1.3     | 0.383079413 | 0.35885363 | 5.075005637 | 5.49E-07 | 4.855049834 |
| DDX54            | 0.238022325 | 4.007270492 | 5.07334884 | 5.53E-07 | 4.847058115 |
| HPDL             | 0.365650535 | 0.932233984 | 5.070592815 | 5.61E-07 | 4.833769383 |
| TFCP2L           | 0.563194601 | 2.659599813 | 5.067024107 | 5.71E-07 | 4.816571801 |
| BCAN             | 0.211508329 | 0.41488046 | 5.066725262 | 5.72E-07 | 4.815132163 |
| TBX2             | -0.352098943 | 2.209219382 | -5.066085722 | 5.74E-07 | 4.812051543 |
| Gene    | Value1  | Value2  | Value3  | Value4  | Value5  | Value6  |
|---------|---------|---------|---------|---------|---------|---------|
| RP11-325K4.2 | -0.22848899 | 1.024451454 | -5.065641189 | 5.75E-07 | 4.809910462 |
| ITRIPL2 | -0.284894084 | 3.201813896 | -5.06540231 | 5.75E-07 | 4.80899077 |
| SH3RF3 | -0.249859308 | 1.4218589 | 3.201813896 | -5.06540231 | 5.75E-07 | 4.80899077 |
| PXMP2 | 0.244719621 | 2.807125715 | 5.063564582 | 5.81E-07 | 4.79910792 |
| HAL | 0.480707662 | 1.148370425 | 5.062643112 | 5.84E-07 | 4.79547474 |
| IARS2 | 0.229756776 | 5.237333999 | 5.061602109 | 5.87E-07 | 4.790464121 |
| CHI3L2 | -0.552681756 | 2.129645197 | -5.06101863 | 5.90E-07 | 4.787656089 |
| PARD3 | 0.26545938 | 2.807125715 | 5.06065168 | 5.89E-07 | 4.78590267 |
| EPHB2 | -0.411432423 | 1.818940749 | -5.060495885 | 5.90E-07 | 4.78514059 |
| HSP90AB1 | 0.239425259 | 8.84825913 | 5.056719858 | 6.01E-07 | 4.766976961 |
| SP52B | 0.361105094 | 3.371135793 | 5.06056168 | 5.89E-07 | 4.78590267 |
| DGKA | -0.277180649 | 1.993394658 | -5.05945885 | 5.90E-07 | 4.78514059 |
| EIF3B | 0.253642949 | 4.764957706 | 5.054587276 | 6.07E-07 | 4.756772184 |
| AC115522.3 | -0.229684576 | 0.607177138 | -5.054283718 | 6.08E-07 | 4.755265015 |
| PTPN21 | -0.526817562 | 2.129645197 | -5.054587276 | 6.07E-07 | 4.756772184 |
| TRAP1 | 0.216736048 | 3.666759138 | 5.05158088 | 6.17E-07 | 4.742276464 |
| SRXN1 | 0.385621378 | 1.105850258 | 5.05134714 | 6.17E-07 | 4.741137475 |
| MRPL9 | 0.224890752 | 4.891007695 | 5.049851344 | 6.22E-07 | 4.733969058 |
| ATP5G3 | 0.23630583 | 4.46633994 | 5.04915223 | 6.23E-07 | 4.73182654 |
| IFT81 | 0.238055983 | 1.842982864 | 5.048766855 | 6.25E-07 | 4.728761045 |
| TJP3 | 0.391615425 | 3.449694821 | 5.04798444 | 6.28E-07 | 4.725004303 |
| BANF1 | 0.23160585 | 6.069552187 | 5.04942755 | 6.34E-07 | 4.715203682 |
| TLR5 | 0.238055983 | 1.842982864 | 5.048766855 | 6.25E-07 | 4.728761045 |
| SDPR | -0.52684695 | 3.327873653 | -5.042244585 | 6.46E-07 | 4.697460612 |
| CEP85 | 0.241159848 | 2.339326667 | 5.04053969 | 6.51E-07 | 4.689253797 |
| RANBP1 | 0.266558361 | 3.803478904 | 5.038930243 | 6.57E-07 | 4.681569046 |
| IGHJ1P | -0.220615744 | 0.260723662 | -5.037671539 | 6.61E-07 | 4.675536303 |
| ADD3 | -0.411020693 | 3.479147865 | -5.03715696 | 6.62E-07 | 4.673070406 |
| PIP5K1A | 0.228232444 | 4.021779329 | 5.036790275 | 6.64E-07 | 4.671313367 |
| MVK | 0.202685686 | 2.206203694 | 5.034707036 | 6.71E-07 | 4.661333336 |
| CT-384D8.31 | -0.523622289 | 1.353714142 | -5.034570657 | 6.73E-07 | 4.658220325 |
| FEM1C | -0.213190482 | 2.793630197 | -5.03373913 | 6.74E-07 | 4.6569189 |
| TRIB3 | 0.396215382 | 3.334295185 | 5.033530387 | 6.75E-07 | 4.6569809 |
| Gene      | Log2 Fold Change | Log2 Fold Change | t-Value | p-Value | FDR   |
|-----------|-----------------|-----------------|---------|---------|-------|
| MIR559    | 0.366590294     | 1.569036805     | 5.031926442 | 6.80E-07 | 4.648018339 |
| C1orf43   | 0.25013733      | 6.75372333      | 5.03056496  | 6.85E-07 | 4.641501239 |
| CTD-3074O7.5 | 0.21353623    | 1.269092509     | 5.029631636 | 6.88E-07 | 4.637034559 |
| PRPSAP2   | 0.216304198     | 2.791413303     | 5.028548255 | 6.91E-07 | 4.631850675 |
| HSPG2     | -0.468184748    | 4.009560672     | -5.028338919| 6.92E-07 | 4.630849136 |
| PDGFD     | -0.348399677    | 1.739924303     | -5.028247106| 6.92E-07 | 4.630409878 |
| GNA12     | -0.267300022    | 3.962578468     | -5.027847111| 6.97E-07 | 4.624207475 |
| PLXDC1    | -0.247043138    | 1.402678171     | -5.027847111| 6.97E-07 | 4.621401444 |
| C11orf63  | -0.219923997    | 1.046222985     | -5.027847111| 6.97E-07 | 4.616140144 |
| HSPG2     | -0.458605167    | 2.026134686     | -5.027847111| 6.97E-07 | 4.616560636 |
| TICRR     | 0.210845164     | 0.7188898       | 5.020214123 | 7.21E-07 | 4.59200629 |
| AKR1C3    | 0.927961033     | 3.652295664     | 5.01816332  | 7.22E-07 | 4.590105997 |
| MME       | -0.394320994    | 1.139084873     | -5.018955932| 7.25E-07 | 4.58596229 |
| PQLC3     | -0.2693878      | 3.969821766     | -5.018540906| 7.27E-07 | 4.584014055 |
| RP11-123B3.2 | 0.328125759  | 0.528743212     | 5.017557623 | 7.30E-07 | 4.579318458 |
| PBK       | 0.476664746     | 2.127776342     | 5.017106372 | 7.32E-07 | 4.57716382 |
| AP000251.3 | 0.219614051    | 0.462939898     | 5.01662314  | 7.33E-07 | 4.574856675 |
| RASSF1    | -0.200269274    | 3.042958797     | -5.014100874| 7.43E-07 | 4.562817607 |
| NIFK      | 0.204650156     | 4.126689135     | 5.013649031 | 7.44E-07 | 4.560661488 |
| PUS7      | 0.257403465     | 2.589616515     | 5.01344811  | 7.45E-07 | 4.559702777 |
| SLC3A2    | 0.273993781     | 5.063461141     | 5.013279656 | 7.46E-07 | 4.55899017 |
| SLC44A5   | 0.445781837     | 1.32429203      | 5.013076911 | 7.46E-07 | 4.557931675 |
| NAT9      | 0.225773569     | 3.386362481     | 5.012458317 | 7.49E-07 | 4.554980711 |
| RP11-1C8.4 | 0.209360736   | 0.225524267     | 5.012103501 | 7.50E-07 | 4.553287793 |
| AKR1B1    | -0.499130376    | 4.316470753     | -5.012080633| 7.50E-07 | 4.553187076 |
| TEMEM106C | 0.33690853      | 4.458800374     | 5.011798198 | 7.51E-07 | 4.551831445 |
| RP11-496H1.1 | 0.259943466  | 0.819020982     | 5.011015816 | 7.54E-07 | 4.54809706 |
| PGM5      | -0.318687843    | 1.08296331      | -5.010203419| 7.57E-07 | 4.54422536 |
| ZNF687    | 0.233156477     | 3.20222596      | 5.01002018  | 7.58E-07 | 4.543379404 |
| SERPINE2  | -0.422864259    | 1.893263205     | -5.009241934| 7.61E-07 | 4.539640743 |
| PLTP      | -0.483313934    | 5.704528118     | -5.008409518| 7.64E-07 | 4.535672204 |
| Gene       | Log2FoldChange | AdjPValue | qValue | Log2FoldChange | AdjPValue | qValue |
|------------|----------------|-----------|--------|----------------|-----------|--------|
| MMAB       | 0.200518105    | 2.402679645  | 5.008052216   | 7.65E-07     | 4.533968951   |
| GDAP1      | 0.307501145    | 1.702396253  | 5.007587668   | 7.67E-07     | 4.53175462     |
| TLE6       | 0.270137497    | 1.311366995  | 5.007454103   | 7.77E-07     | 4.51204903     |
| EGR1       | -0.568825182   | 5.693159421   | -5.005897752  | 7.95E-07     | 4.49755585     |
| SLC5A6     | 0.227376122    | 2.897468043   | 5.005603066   | 8.09E-07     | 4.51732885     |
| FA2H       | 0.541198099    | 2.070318375   | 5.004954103   | 8.35E-07     | 4.44926173     |
| DSCAM-AS1  | 0.834742333    | 0.966957947   | 5.004249655   | 8.39E-07     | 4.44215242     |
| PKIG       | -0.365380794   | 3.830981527   | -5.00239976   | 8.36E-07     | 4.44232942     |
| NME2P1     | 0.222954951    | 1.018810592   | 4.996893728   | 8.38E-07     | 4.44215242     |
| FMO4       | -0.253388017   | 1.4845404     | -4.996835261  | 8.40E-07     | 4.44329429     |
| SOAT1      | -0.236327059   | 3.896217264   | -4.99018455   | 8.33E-07     | 4.45242152     |
| RP11-465N4.5 | 0.306089514   | 2.058362637   | 4.990372278   | 8.35E-07     | 4.44982617     |
| MCAM       | -0.384311425   | 3.550863642   | -4.989639175  | 8.38E-07     | 4.44634298     |
| PGD        | 0.429959294    | 6.201353274   | 4.988940825   | 8.41E-07     | 4.44302534     |
| DKC1       | 0.234920529    | 4.251790964   | 4.987016484   | 8.49E-07     | 4.43385581     |
| FAM167B    | -0.279014303   | 2.400966004   | -4.98504495   | 8.57E-07     | 4.42432942     |
| OAZ1       | -0.214524253   | 7.021492687   | -4.984356066  | 8.60E-07     | 4.42139524     |
| SHROOM4    | -0.325077315   | 1.6044678     | -4.983961905  | 8.62E-07     | 4.41938424     |
| SUN2       | -0.260898755   | 4.432558927   | -4.983937404  | 8.62E-07     | 4.41926795     |
| IGHD3-16   | -0.38378175    | 0.619692778   | -4.983683316  | 8.63E-07     | 4.41802606     |
| TRAFD1     | -0.208925186   | 4.051252986   | -4.983440012  | 8.64E-07     | 4.41690740     |
| AIFM1      | 0.206773935    | 3.985043751   | 4.983408333   | 8.64E-07     | 4.41675916     |
| EIF3H      | 0.21712857     | 5.27742799    | 4.983269511   | 8.65E-07     | 4.41608119     |
| ANKEF1     | 0.211512296    | 1.860054765   | 4.9819662    | 8.70E-07     | 4.40991453     |
| PRG4       | -0.470863072   | 0.995944386   | -4.98136767   | 8.73E-07     | 4.40707465     |
| DTYMK      | 0.290474552    | 3.757308817   | 4.980427592   | 8.77E-07     | 4.40261544     |
| NDUFS5     | 0.251318853    | 7.630433312   | 4.977399235   | 8.90E-07     | 4.38825574     |
| EFNA1      | 0.421384408    | 6.138905898   | 4.976417807   | 8.94E-07     | 4.38360372     |
| UBE2M      | 0.206336895    | 5.016056313   | 4.975801815   | 8.97E-07     | 4.38084371     |
| ATF5       | -0.304228995   | 4.036155736   | -4.975046436  | 9.00E-07     | 4.37710482     |
| CEP70      | 0.277447688    | 2.88254125    | 4.974139513   | 9.05E-07     | 4.37280780     |
| SLC48A1    | 0.226056381    | 2.898368005   | 4.972129218   | 9.13E-07     | 4.36328551     |
| TLDC2      | -0.255616058   | 1.028677458   | -4.970891212  | 9.19E-07     | 4.35742310     |
| Gene        | Fold Change | Expression | Log2 Fold Change | p-value | Adjusted p-value |
|-------------|-------------|------------|------------------|---------|-----------------|
| VIM-AS1     | -0.283531775| 1.430170497| -4.970735305     | 9.20E-07| 4.356684921     |
| MST1        | 0.270442067 | 1.079000149| 4.967929221      | 9.33E-07| 4.343402361     |
| FAM110A     | 0.250109309 | 3.042060431| 4.964873627      | 9.47E-07| 4.328946466     |
| GCA         | -0.237490111| 3.315487272| -4.963675883     | 9.52E-07| 4.322809218     |
| UTRN        | -0.31486177 | 2.960516338| -4.963491417     | 9.53E-07| 4.322409929     |
| DUSP10      | -0.340740167| 2.946402318| -4.961318424     | 9.63E-07| 4.31237078      |
| SLC29A4     | 0.543087881 | 2.073056106| 4.958641652      | 9.76E-07| 4.299632988     |
| CSNK2A1     | 0.208956049 | 4.027335114| 4.958968465      | 9.74E-07| 4.301032198     |
| SLC12A6     | -0.208104985| 2.150708598| -4.957167571     | 9.83E-07| 4.292525182     |
| CD81        | -0.265022244| 6.103732452| -4.951767517     | 9.88E-07| 4.287821155     |
| C8orf59     | 0.269717873 | 3.675100553| 4.95641367       | 9.85E-07| 4.29084567      |
| SNHG6       | 0.350260524 | 5.142832774| 4.956171496      | 9.88E-07| 4.287821155     |
| CILP2       | -0.456537872| 1.635011974| -4.94238844      | 9.97E-07| 4.278696518     |
| FTL         | -0.366747926| 12.07011372| -4.9417881       | 9.98E-07| 4.27841313      |
| CDA         | -0.787376201| 3.067197339| -4.93763529      | 1.00E-06| 4.276452907     |
| AGPAT6      | 0.284400001 | 3.612588554| 4.952230777      | 1.01E-06| 4.269219242     |
| PAPOLA       | 0.203959808 | 4.040732439| 4.951593626      | 1.01E-06| 4.26590966      |
| PPP2R5B     | -0.231976667| 2.822602758| -4.950321966     | 1.02E-06| 4.26021364      |
| GYG1        | -0.220066663| 3.727666523| -4.947132663     | 1.03E-06| 4.245173803     |
| FURIN       | 0.508138169 | 5.851756232| 4.946818229      | 1.03E-06| 4.243691498     |
| PODNL1      | -0.489204833| 1.843295482| -4.94594808      | 1.04E-06| 4.239598031     |
| MRPL17      | 0.212561151 | 4.621249066| 4.94558219       | 1.04E-06| 4.237610889     |
| RAB23       | -0.237386215| 1.571523171| -4.94453347      | 1.05E-06| 4.232923252     |
| UNG         | 0.263120802 | 4.028186411| 4.944091149      | 1.05E-06| 4.230839081     |
| CCT5        | 0.305517243 | 5.297475489| 4.943323222      | 1.05E-06| 4.22763955      |
| CCBE1       | -0.368231453| 0.802590443| -4.943174197     | 1.05E-06| 4.226519029     |
| PLIN3       | -0.281536473| 4.823484956| -4.942355442     | 1.06E-06| 4.222662704     |
| RP3-395M20.9| -0.242717923| 0.617344647| -4.940326828     | 1.07E-06| 4.213108808     |
| EIF5A       | 0.253713068 | 6.945088123| 4.939930727      | 1.07E-06| 4.211243848     |
| CD207       | -0.721023634| 1.836775867| -4.939314235     | 1.07E-06| 4.208341496     |
| SGCB        | -0.273109816| 2.800216607| -4.939229359     | 1.07E-06| 4.207941941     |
| PGBD5       | -0.27027225 | 0.726817283| -4.938684788     | 1.08E-06| 4.205378493     |
| C5orf15     | -0.227485269| 5.264839529| -4.937915514     | 1.08E-06| 4.201757747     |
| Gene        | z-score | p-value  | log2(fold change) | z-score | p-value  | log2(fold change) | z-score | p-value  | log2(fold change) | z-score | p-value  | log2(fold change) |
|-------------|---------|----------|-------------------|---------|----------|-------------------|---------|----------|-------------------|---------|----------|-------------------|---------|----------|-------------------|
| RP11-474D1.4 | 0.222898 | 1.07E-06  | 4.93725389       | 4.198745253 |
| APH1B       | -0.235792 | 1.09E-06  | -4.936664074     | 4.195868675 |
| GOT2        | 0.205245 | 1.09E-06  | 4.936641113      | 4.195760636 |
| GALNT5      | -0.482514 | 1.10E-06  | -4.9344247       | 4.185332839 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| GALNT5      | -0.482514 | 1.10E-06  | -4.9344247       | 4.185332839 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| SL25A15     | 0.264219 | 1.12E-06  | 4.931162277      | 4.169994166 |
| CMTM6       | -0.208648 | 1.11E-06  | -4.932634383     | 4.179428531 |
| APCDD1      | -0.342395 | 1.11E-06  | -4.932634383     | 4.179428531 |
| MIR4664     | 0.435104 | 1.11E-06  | 4.93147328       | 4.171456092 |
| Gene   | Expression | Log2 Fold Change | p-Value   | Adj. p-Value | Benjamini Correction | False Discovery Rate |
|--------|------------|-----------------|-----------|-------------|----------------------|---------------------|
| PLA1A  | -0.46087094| 1.907245394     | -4.904931063 | 1.27E-06   | 4.046990653           |
| MRGBP  | 0.237318405| 3.307955557     | 4.903243553  | 1.28E-06   | 4.039097948           |
| CSNK1E | 0.248534923| 4.279316978     | 4.897415499  | 1.30E-06   | 4.022726489           |
| SAA2-SAA4 | -0.39388001| 0.674058705     | -4.897965602 | 1.31E-06   | 4.0144282             |
| DPH2   | 0.211639587| 3.3852522       | 4.896195626  | 1.32E-06   | 4.006150527           |
| IGLY1-41 | -0.707862379| 1.74322234     | -4.895945223 | 1.33E-06   | 4.00491097           |
| KAT2A  | 0.311463711| 4.201019658     | 4.894656265  | 1.33E-06   | 3.998972278           |
| UQCRH  | 0.259634781| 6.128846382     | 4.894025133  | 1.34E-06   | 3.996025718           |
| GBP6   | -0.344353478| 0.638325266    | -4.892725003 | 1.35E-06   | 3.989956899           |
| FTL014  | 0.369564989| 1.948692273     | 4.892364047  | 1.35E-06   | 3.98817686            |
| PIEZ01  | -0.315881019| 3.47646051     | -4.88972286  | 1.37E-06   | 3.97594892           |
| ETV4   | 0.489888884| 3.590076497     | 4.892101376  | 1.37E-06   | 3.98704435            |
| SLC18A2 | -0.213896637| 0.538058129    | -4.88792286  | 1.37E-06   | 3.97031026            |
| PRPF6  | 0.22021807 | 5.619079959     | 4.888513928  | 1.37E-06   | 3.969936763           |
| F7     | 0.237276997| 0.28107308      | 4.888433841  | 1.37E-06   | 3.961715756           |
| RUNX1  | -0.251254504| 3.312597788    | -4.88667074  | 1.39E-06   | 3.95670915            |
| SF3B4  | 0.235542224| 5.611384495     | 4.88494861   | 1.40E-06   | 3.953670915           |
| CPLX1  | 0.3537288  | 1.431477522     | 4.88438608   | 1.40E-06   | 3.951066822           |
| AC004967.7 | 0.275497825| 2.933856122    | 4.882624112  | 1.41E-06   | 3.942857273           |
| VNN1   | -0.483721652| 1.252182606    | -4.882037593 | 1.42E-06   | 3.940125096           |
| SLC4A7  | -0.237341979| 1.747051044    | -4.881858434 | 1.42E-06   | 3.939290584           |
| TCEB1  | 0.260860888| 3.59264578      | 4.881092777  | 1.42E-06   | 3.9357245             |
| RP1-211C9.1 | 0.261509913| 0.573377414     | 4.880352851  | 1.43E-06   | 3.932303888           |
| PMEPA1  | -0.441810759| 4.307246711     | -4.88010864  | 1.43E-06   | 3.931141579           |
| ISYNA1  | 0.398373039| 3.737468147     | 4.879423182  | 1.44E-06   | 3.927950042           |
| PAXIP1-AS1 | 0.272887899| 2.27483934      | 4.879215073  | 1.44E-06   | 3.926981152           |
| PLEKHH3 | 0.258967187| 2.847567571     | 4.878579359  | 1.44E-06   | 3.924027106           |
| RP1-325K4.3 | -0.233228456| 1.130137688    | -4.877249633 | 1.45E-06   | 3.917832551           |
| PSMB6   | 0.219795789| 5.865850041     | 4.87516766   | 1.47E-06   | 3.908145167           |
| DENND3  | -0.241975779| 1.946300052     | -4.87496076  | 1.47E-06   | 3.907300434           |
| MFF     | 0.206358565| 3.406136517     | 4.873860738  | 1.47E-06   | 3.902066001           |
| RAD21   | 0.263683984| 5.243222832     | 4.872876457  | 1.48E-06   | 3.89748858            |
| NPC1    | -0.259299805| 3.03227923      | -4.872876416 | 1.48E-06   | 3.897068628           |
| Gene       | Log2FC  | P-value  | q-value | LogCPM  |
|------------|---------|----------|---------|---------|
| BCHE       | -0.2806| 0.7521   | 1.48E-06| 3.8968  |
| AC007283.4 | -0.2046| 0.8703   | 1.50E-06| 3.8857  |
| RPL8       | 0.3192 | 4.8698   | 1.50E-06| 3.8835  |
| RP5-908M14.9 | 0.3149| 4.8671   | 1.52E-06| 3.8710  |
| FBXO6      | -0.3094| 4.8671   | 1.52E-06| 3.8709  |
| SLC7A1     | 0.3079 | 4.8660   | 1.53E-06| 3.8657  |
| P4HA2      | -0.2723| 4.8642   | 1.54E-06| 3.8594  |
| COX8A      | 0.2313 | 4.8614   | 1.55E-06| 3.8582  |
| RPL8       | 0.3193 | 4.8686   | 1.55E-06| 3.8556  |
| AC007283.4 | -0.2046| 4.8595   | 1.58E-06| 3.8357  |
| NDUF11     | 0.2387 | 4.8589   | 1.58E-06| 3.8327  |
| NDUF6      | 0.2871 | 4.8609   | 1.57E-06| 3.8422  |
| ATP7B      | 0.3327 | 4.8595   | 1.58E-06| 3.8357  |
| RP11-111M22.4 | 0.2373| 4.8589   | 1.58E-06| 3.8327  |
| NME4       | 0.3081 | 4.8576   | 1.59E-06| 3.8267  |
| CTD-2135D7.5 | -0.2050| 4.8522  | 1.64E-06| 3.8015  |
| ADAMTS7P3  | -0.2098| 4.8507   | 1.66E-06| 3.7886  |
| RPAIN      | 0.2116 | 4.8494   | 1.66E-06| 3.7886  |
| KIAA1324   | 0.7250 | 4.8481   | 1.67E-06| 3.7829  |
| ATP6V0D1   | -0.2038| 4.8453   | 1.69E-06| 3.7698  |
| U8         | 0.5094 | 4.8451   | 1.69E-06| 3.7687  |
| CPS1       | 0.1057 | 4.8448   | 1.70E-06| 3.7675  |
| EDNRB      | -0.3676| 4.8407   | 1.73E-06| 3.7483  |
| WDR72      | 0.4694 | 4.8405   | 1.73E-06| 3.7471  |
| SOX4       | 0.3464 | 4.8403   | 1.73E-06| 3.7467  |
| RPL7       | 0.2859 | 4.8402   | 1.73E-06| 3.7461  |
| NR2F1      | -0.3772| 4.8398   | 1.74E-06| 3.7444  |
| RNASEH1-AS1| 0.2616 | 4.8391   | 1.74E-06| 3.7412  |
| MCU        | 0.2813 | 4.8386   | 1.75E-06| 3.7390  |
| CFAP57     | -0.2919| 4.8362   | 1.77E-06| 3.7277  |
| RECL       | -0.2931| 4.8354   | 1.77E-06| 3.7239  |
| HSPB8      | -0.4420| 4.8353   | 1.77E-06| 3.7238  |
| TNFRSF11B  | -0.3876| 4.8346   | 1.78E-06| 3.7205  |
| Gene         | AC026271.5 | RP11-390F4.6 | SHFM1 | KCNN4 | SIGLEC12 | CDC25A | SAA4 | FAM162B | B4GALT2 | BATF | OBL1 | SLC35A2 | KCNN4 | SIGLEC12 | CDC25A | SAA4 | FAM162B | B4GALT2 | BATF | OBL1 | SLC35A2 | KCNN4 | SIGLEC12 | CDC25A | SAA4 | FAM162B | B4GALT2 | BATF | OBL1 | SLC35A2 |
|-------------|------------|--------------|-------|-------|----------|--------|------|---------|--------|------|------|---------|-------|----------|--------|------|---------|--------|------|------|---------|-------|----------|--------|------|---------|--------|------|------|---------|--------|------|------|---------|
|             | 0.218468089| 0.231099209  | 0.238712945| -0.628014206| -0.301903137| 0.260622524| -0.264380214| -0.307531433| 0.232346177| -0.410354457| 0.431949788| 0.260666743| -0.32469463| -0.309678999| 0.211650302| 0.330946524| 0.210983696| 0.321357513| -0.253432287| 0.291514916| 0.347481813| 0.270804275| 0.220521773|
|             | 1.740509437| 0.44482881   | 3.110946017| 3.616647349| 0.779682863| 1.13797279 | 0.460335454| 1.483295973| 4.290840726| 3.015760238| 2.982984404| 4.290840726| 3.228896551| 1.155398425| 4.250036629| 0.461337108| 1.877139018| 1.311566173| 1.11312883 | 1.8014024 | 1.88008085 | 0.286704937 | 3.761481597 |
|             | 4.834029613| 4.833664435 | 4.832818556| -4.830060358| -4.829124154| 4.828024555| -4.826835755| -4.826284445| 4.823894687| 4.8221754   | 4.821054098| 4.823642071| -4.820208867| -4.818253883| 4.816358158| 4.81467396 | 4.821054098| 4.820476707| -4.820208867| 4.818253883| 4.80600624 | 4.80526203 | 4.798123667 | 4.797851099 |
|             | 1.79E-06    | 1.79E-06     | 1.80E-06  | 1.82E-06  | 1.83E-06  | 1.84E-06  | 1.85E-06  | 1.85E-06  | 1.87E-06  | 1.87E-06  | 1.90E-06  | 1.88E-06  | 1.91E-06  | 1.91E-06  | 1.93E-06  | 1.94E-06  | 1.96E-06  | 1.96E-06  | 1.91E-06  | 1.93E-06  | 2.04E-06  | 2.05E-06  | 2.08E-06  | 2.12E-06  | 2.12E-06  | 2.12E-06  | 2.12E-06  |
|             | 3.717501815| 3.71586073  | 3.711911761| 3.699185093| 3.694866837| 3.689795888| 3.684314763| 3.68177309 | 3.674323466| 3.671615219| 3.671378512| 3.67059838 | 3.670182238| 3.669595923| 3.662839398| 3.657675151| 3.655016354| 3.653783093| 3.644783301| 3.636059491| 3.628311711| 3.608365431| 3.606143746| 3.598476821| 3.586272589|
|             |             |             |          |         |          |         |          |          |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Gene       | Gene      | m | n | p      | FDR    |
|------------|-----------|---|---|--------|--------|
| HLA-G      | -0.503533783 | 2.248194856 | -4.797768678 | 2.12E-06 | 3.550679444 |
| RP11-44K6.4 | -0.205945723 | 0.378077337 | -4.797546348 | 2.13E-06 | 3.549660121 |
| SUV420H2   | 0.24345473 | 1.721091829 | 4.796760334 | 2.14E-06 | 3.546056801 |
| PLS3       | -0.386767142 | 5.419694536 | -4.796258747 | 2.15E-06 | 3.543757659 |
| OSBPL3     | -0.289465209 | 2.579904054 | -4.795774599 | 2.16E-06 | 3.54153866  |
| STIP1      | 0.221709629 | 5.351104377 | 4.794403707 | 2.17E-06 | 3.521682696 |
| MAPRE2     | -0.245992936 | 0.6499477  | 4.781403707 | 2.18E-06 | 3.49854993  |
| PRR3-AS1   | -0.44608437 | 0.874320191 | -4.779799458 | 2.31E-06 | 3.468434229 |
| TRMT6      | 0.223821911 | 2.859413652 | 4.784354266 | 2.27E-06 | 3.489254993 |
| RP11-626G11.4 | 0.243835759 | 0.6499477 | 4.781403707 | 2.18E-06 | 3.49854993  |
| IGKV1-13   | -0.44608437 | 0.874320191 | -4.779799458 | 2.31E-06 | 3.468434229 |
| PLEKHA4    | -0.340683685 | 2.643601553 | -4.778032687 | 2.33E-06 | 3.46081182  |
| FAM107A    | -0.388934173 | 1.33328037 | -4.776932923 | 2.35E-06 | 3.455340109 |
| RAB20      | -0.287242328 | 0.58963284 | -4.774839011 | 2.37E-06 | 3.44580212  |
| CH17-360D5.2 | -0.289626783 | 0.58963284 | -4.774839011 | 2.37E-06 | 3.44580212  |
| RP11-799B12.1 | 0.383932701 | 2.336814246 | -4.773664913 | 2.38E-06 | 3.440420816 |
| CCDC89     | -0.209627462 | 1.93541991 | -4.77216438 | 2.40E-06 | 3.433811399 |
| GATA6      | -0.381678787 | 0.2107337 | 4.771852294 | 2.40E-06 | 3.432197679 |
| GUCY2EP    | 0.253911788 | 0.26107337 | 4.771852294 | 2.40E-06 | 3.432197679 |
| LRCH2      | -0.266944613 | 0.853661272 | -4.77172551 | 2.41E-06 | 3.431557853 |
| CHD7       | 0.264676343 | 1.604144857 | 4.770869419 | 2.42E-06 | 3.427660072 |
| PSME2      | -0.25027943 | 5.391310137 | -4.770867483 | 2.42E-06 | 3.427657238 |
| NUDT5      | 0.211565352 | 3.817008176 | 4.770831667 | 2.42E-06 | 3.42749387 |
| ZDHHC16    | 0.223817068 | 4.309152358 | 4.770489324 | 2.42E-06 | 3.425932373 |
| SH3BP5     | -0.284904538 | 1.888527183 | 4.770462701 | 2.42E-06 | 3.425810945 |
| ARHGEF19   | 0.37178614 | 3.36452152 | 4.770422595 | 2.42E-06 | 3.42562802 |
| LRRC45     | 0.269162596 | 3.075112348 | 4.765814531 | 2.47E-06 | 3.4046199 |
| ESAM       | -0.386192214 | 3.831687093 | -4.765702743 | 2.48E-06 | 3.404110486 |
| LRRK2      | -0.603447793 | 2.324168882 | -4.764018577 | 2.49E-06 | 3.396437175 |
| SHMT2      | 0.296958344 | 4.485352055 | 4.76334212 | 2.50E-06 | 3.393358362 |
| LINC01273  | 0.202899546 | 0.868700101 | 4.762681031 | 2.51E-06 | 3.390344883 |
| DLX6       | 0.21393001 | 0.285726997 | 4.761846258 | 2.52E-06 | 3.386543422 |
| TIMM13     | 0.23872423 | 4.456124085 | 4.76173749 | 2.52E-06 | 3.386048149 |
| Gene       | 2013    | 2014    | 2015    | 2016    | 2017    |
|------------|---------|---------|---------|---------|---------|
| DDRGK1     | 0.252298718 | 5.054128357 | 4.760711948 | 2.53E-06 | 3.381378883 |
| TGIF1      | 0.239008197 | 3.483387799 | 4.760444954 | 2.54E-06 | 3.380163414 |
| IFIT1      | -0.519449059 | 2.783799068 | -4.759773858 | 2.55E-06 | 3.377108582 |
| DHX58      | -0.294083859 | 2.778483325 | -4.759513699 | 2.55E-06 | 3.376277962 |
| TNS1       | -0.392900851 | 3.859201011 | -4.758388667 | 2.56E-06 | 3.370804436 |
| GPT        | 0.316721724 | 0.932418875 | 4.758124103 | 2.57E-06 | 3.36960055  |
| C9orf172   | 0.211273834 | 1.095629071 | 4.757108341 | 2.58E-06 | 3.364979024 |
| RP11-394O4.5 | -0.32463107 | 1.465256766 | -4.751291753 | 2.61E-06 | 3.354058209 |
| CTSH       | -0.561523346 | 5.977533441 | -4.751735395 | 2.64E-06 | 3.340548029 |
| RP11-16K12.1 | -0.22756897 | 0.656602225 | -4.751291753 | 2.66E-06 | 3.338531899 |
| RRP1       | 0.205626282 | 3.179937342 | 4.750565448 | 2.66E-06 | 3.335231576 |
| ZNF444     | 0.239225213 | 2.661865102 | 4.750532069 | 2.66E-06 | 3.335079911 |
| SLC25A39   | 0.237637921 | 5.690098555 | 4.750029088 | 2.67E-06 | 3.332794658 |
| CSRP1      | -0.207978878 | 4.628563906 | -4.749077863 | 2.67E-06 | 3.331335313 |
| FKB2P2     | 0.288799978 | 5.580531399 | 4.748733923 | 2.68E-06 | 3.326911191 |
| CHURC1     | -0.215645752 | 3.152771864 | -4.748672105 | 2.68E-06 | 3.326630413 |
| POLR3H     | 0.309218509 | 3.018535843 | 4.747944671 | 2.69E-06 | 3.323266262 |
| SLC25A1    | 0.23764655 | 5.237376369 | 4.74626621 | 2.71E-06 | 3.315705319 |
| HSPBP1     | 0.243950049 | 4.237167196 | 4.746005478 | 2.72E-06 | 3.314521644 |
| MFS10      | 0.285928998 | 4.977913587 | 4.74399987 | 2.74E-06 | 3.305418565 |
| FCGR3B     | -0.267463267 | 0.709720043 | -4.74061162 | 2.79E-06 | 3.290047908 |
| RP11-264I13.2 | -0.213672312 | 1.876240723 | -4.740525342 | 2.79E-06 | 3.289666401 |
| COQ3       | 0.210235758 | 2.248552227 | 4.738415348 | 2.82E-06 | 3.280089666 |
| CDT1       | 0.386209937 | 2.398145982 | 4.737538849 | 2.83E-06 | 3.276117081 |
| SLIRP       | 0.216364031 | 3.407274263 | 4.737535772 | 2.83E-06 | 3.276103134 |
| CYFIP2     | -0.33720031 | 2.35576665 | -4.736971702 | 2.84E-06 | 3.273546745 |
| KLF9       | -0.311088858 | 3.354476466 | -4.734762464 | 2.87E-06 | 3.263537055 |
| WEE1       | 0.254944621 | 2.444239021 | 4.73463388 | 2.87E-06 | 3.262954594 |
| GS1-124K5.4 | 0.281089286 | 1.660777247 | 4.735315283 | 2.88E-06 | 3.25788817 |
| TENM3      | -0.228468406 | 0.582983612 | -4.732857959 | 2.89E-06 | 3.254911485 |
| FRY        | -0.22573805 | 1.356749638 | -4.73223546 | 2.90E-06 | 3.252038909 |
| FBXO32     | -0.401330029 | 2.972626811 | -4.731150375 | 2.91E-06 | 3.247180472 |
| RANGRF     | 0.276043038 | 3.072229489 | 4.731113001 | 2.91E-06 | 3.247011292 |
| Gene        | Value 1  | Value 2  | Value 3  | Value 4  | Value 5  |
|-------------|---------|---------|---------|---------|---------|
| TTC7A       | -0.214090192 | 3.386502381 | -4.730205723 | 2.93E-06 | 3.242904694 |
| RNASE1      | -0.617669666  | 7.919319035  | -4.73008549  | 2.93E-06 | 3.242012328 |
| MEDAG       | -0.408822702  | 1.806460567  | -4.727789112 | 2.96E-06 | 3.231969946 |
| ADAM28      | -0.383364107  | 2.019788048  | -4.725725777 | 2.96E-06 | 3.230786849 |
| RAPGEFL1    | 0.335885616   | 1.657025166  | 4.726548437  | 2.98E-06 | 3.226341806 |
| GLIS2       | -0.295925369  | 3.102951443  | -4.726113091 | 2.98E-06 | 3.224389236 |
| MRPS33      | 0.220421169   | 2.907318936  | 4.720895848  | 3.04E-06 | 3.206241285 |
| ATP5G2      | 0.218446821   | 5.78890352   | 4.721025224  | 3.06E-06 | 3.20391908 |
| CHMP1B      | -0.426130308  | 3.586885162  | -4.720904123 | 3.06E-06 | 3.200844547 |
| DPP3        | 0.255889368   | 4.804535745  | 4.721644234  | 3.05E-06 | 3.204188424 |
| HYLS1       | 0.20994118    | 1.656402746  | 4.719990054  | 3.07E-06 | 3.198401429 |
| ARG2        | 0.365772085   | 1.71140022   | 4.719635247  | 3.08E-06 | 3.195112782 |
| VDAC2       | -0.276293534  | 2.362629584  | -4.718905013 | 3.09E-06 | 3.191814808 |
| MERTK       | -0.364000066  | 3.37985088   | -4.71776339  | 3.10E-06 | 3.186659805 |
| TRIB2       | -0.462808146  | 1.305615919  | -4.717308608 | 3.11E-06 | 3.184605545 |
| L21NC02-1C16.2 | -0.530417549 | 6.833497278  | -4.717005406 | 3.12E-06 | 3.183237757 |
| DUSP1       | -0.282255663  | 3.715850803  | -4.715297271 | 3.14E-06 | 3.175527928 |
| CBX3        | 0.227387118   | 5.500033779  | 4.716612965  | 3.12E-06 | 3.181466213 |
| PLGRKT      | 0.282658594   | 2.323386631  | 4.714748232  | 3.15E-06 | 3.17305033 |
| KNSTRN      | 0.254046539   | 0.477580541  | 4.713033551  | 3.17E-06 | 3.165314348 |
| LINC01224   | 0.211578483   | 5.681413814  | 4.711157142  | 3.20E-06 | 3.156851657 |
| HSPA9       | -0.212659772  | 3.339018119  | -4.710374088 | 3.21E-06 | 3.153320958 |
| KIAA0930    | 0.202427955   | 1.164469334  | 4.709034645  | 3.23E-06 | 3.14728281 |
| HNRNPA1P16  | 0.292904515   | 3.168824906  | 4.708832307  | 3.24E-06 | 3.146370817 |
| CMTM4       | -0.27941625   | 3.238959068  | 4.708550204  | 3.24E-06 | 3.14509362 |
| MRPL23      | -0.219137205  | 3.865606295  | -4.707020923 | 3.26E-06 | 3.138208 |
| SLC31A1     | 0.551193019   | 4.41026897   | -4.705380312 | 3.29E-06 | 3.130817234 |
| RP4-755D9.1 | -0.347284968  | 0.82798399   | -4.70526752  | 3.29E-06 | 3.130309205 |
| CBLN3       | -0.229830274  | 1.506744874  | -4.703981576 | 3.31E-06 | 3.124517947 |
| Gene       | Value1    | Value2     | Value3     | Value4    | Value5    |
|------------|-----------|------------|------------|-----------|-----------|
| ATAD3B     | 0.293457351 | 2.14848683 | 4.702634871 | 3.33E-06  | 3.118454604 |
| ATPF1      | 0.232788111 | 2.14848683 | 4.70238173  | 3.34E-06  | 3.11731505  |
| KLF5       | 0.371957492 | 2.14848683 | 4.702280399 | 3.34E-06  | 3.11685891  |
| GPX3       | -0.471899935| 2.14848683 | 4.700912143 | 3.36E-06  | 3.110742437 |
| IGH6-19    | -0.323627375| 2.14848683 | 4.700657609 | 3.36E-06  | 3.109555143 |
| PAH        | 0.332924933 | 2.14848683 | 4.700151817 | 3.37E-06  | 3.107279176 |
| RP11-876N24.5 | -0.223529611| 2.14848683 | 4.699916898 | 3.38E-06  | 3.106222161 |
| COL4A1     | -0.409270166| 2.14848683 | 4.69920044  | 3.39E-06  | 3.103401876 |
| MANBA      | -0.223270897| 2.14848683 | 4.698531099 | 3.40E-06  | 3.099987758 |
| SELM       | -0.371428684| 2.14848683 | 4.69838132  | 3.40E-06  | 3.099314034 |
| WHSC1      | 0.245014304 | 2.14848683 | 4.6979253   | 3.41E-06  | 3.097262932 |
| RAB7B      | -0.472187095| 2.14848683 | 4.697392643 | 3.42E-06  | 3.094867355 |
| NPW        | 0.557820018 | 2.14848683 | 4.69738325  | 3.42E-06  | 3.09482511  |
| C1orf95    | 0.418956297 | 2.14848683 | 4.696990126 | 3.43E-06  | 3.091708226 |
| SLC1A1     | -0.432876958| 2.14848683 | 4.694679714 | 3.46E-06  | 3.08267006  |
| NROB1      | 0.569776302 | 2.14848683 | 4.69448146  | 3.46E-06  | 3.081778964 |
| CAPN5      | 0.47306461  | 2.14848683 | 4.693883243 | 3.47E-06  | 3.07909359  |
| SMARCA1    | 0.350655835 | 2.14848683 | 4.693085469 | 3.49E-06  | 3.07550536  |
| NRIPO1     | -0.303869632| 2.14848683 | 4.691883269 | 3.50E-06  | 3.07014025  |
| NOC4L      | 0.213220836 | 2.14848683 | 4.691341067 | 3.51E-06  | 3.067668395 |
| NUDT18     | -0.237005286| 2.14848683 | 4.690310615 | 3.53E-06  | 3.063040197 |
| FBP1       | -0.429245797| 2.14848683 | 4.690296256 | 3.53E-06  | 3.062975174 |
| RP11-579D7.4 | 0.223034534 | 2.14848683 | 4.68509049  | 3.56E-06  | 3.054950836 |
| CHMP4C     | 0.307003399 | 2.14848683 | 4.687309686 | 3.58E-06  | 3.049567058 |
| ADCY7      | -0.291358555| 2.14848683 | 4.686756511 | 3.59E-06  | 3.047084353 |
| HRSP12     | 0.24871261  | 2.14848683 | 4.685696249 | 3.61E-06  | 3.042326541 |
| TME6D      | 0.442227675 | 2.14848683 | 4.684716812 | 3.62E-06  | 3.037932298 |
| TP53INP1   | -0.333773652| 2.14848683 | 4.683605873 | 3.64E-06  | 3.032949809 |
| UCK1       | 0.243167628 | 2.14848683 | 4.68216146  | 3.67E-06  | 3.026471668 |
| C8orf33    | 0.236260072 | 2.14848683 | 4.68175717  | 3.68E-06  | 3.022052189 |
| MAZ        | 0.218823643 | 2.14848683 | 4.68109032  | 3.69E-06  | 3.021753246 |
| NEK7       | -0.226022548| 2.14848683 | 4.677765243 | 3.74E-06  | 3.006768247 |
| COX17      | 0.232595457 | 2.14848683 | 4.677147574 | 3.75E-06  | 3.004001272 |
| Gene       | Value   | Value   | Value   | Value   | Value   |
|------------|---------|---------|---------|---------|---------|
| TGFBR1     | 0.36529738 | -0.46770531 | -4.80E-06 | 2.993063926 |
| GFPT1      | 4.41356321 | 4.673984091 | 3.81E-06 | 2.98935045 |
| NECAB2     | 0.32841689 | 4.672853289 | 3.83E-06 | 2.984773389 |
| NEK8       | 1.79892587 | 4.672472666 | 3.84E-06 | 2.983070354 |
| U47924.32  | 0.762594395 | 4.672224434 | 3.84E-06 | 2.981950103 |
| PHPT1      | 5.439869387 | 4.671757354 | 3.85E-06 | 2.97986887 |
| RNF19B     | -0.227331995 | 4.546518582 | 3.88E-06 | 2.972340445 |
| FZD1       | 2.95716932 | 4.670074637 | 3.88E-06 | 2.972264965 |
| ZNF239     | 1.74896401 | 4.66904696 | 3.89E-06 | 2.967438686 |
| U47924.32  | 3.381023213 | 4.668929222 | 3.90E-06 | 2.967217309 |
| PHPT1      | 5.89691255 | 4.667803045 | 3.92E-06 | 2.962181348 |
| MCL1       | 6.92382282 | -4.66434205 | 3.99E-06 | 2.94671166 |
| GADD45A    | 4.05955849 | -4.66376009 | 4.00E-06 | 2.942395602 |
| SGMS2      | 3.17897884 | -4.66130986 | 4.04E-06 | 2.933216934 |
| SUSD1      | 2.62961077 | -4.661239007 | 4.04E-06 | 2.932850855 |
| CRB3       | 3.994084633 | 4.660633296 | 4.06E-06 | 2.930146228 |
| NR3C1      | 3.34379802 | -4.66061556 | 4.06E-06 | 2.930004509 |
| IGLV3-29   | 0.7416901 | -4.65887514 | 4.09E-06 | 2.922352736 |
| SRPK1      | 3.821164334 | 4.65841522 | 4.10E-06 | 2.920246139 |
| FAM117B    | 2.174543394 | 4.656175707 | 4.14E-06 | 2.910250237 |
| GOLGA2     | 4.005836994 | 4.655893527 | 4.15E-06 | 2.90893255 |
| C17orf89   | 3.45837529 | -4.654432507 | 4.17E-06 | 2.902476889 |
| GPX7       | 2.943842892 | -4.653974702 | 4.18E-06 | 2.900447437 |
| NSUN2      | 4.25844847 | 4.65179888 | 4.23E-06 | 2.890606035 |
| MYOF       | 4.802251734 | -4.651518807 | 4.23E-06 | 2.889486953 |
| MX1        | 3.699226242 | -4.64775257 | 4.31E-06 | 2.872707252 |
| DENND1C    | 2.87884842 | -4.647291482 | 4.32E-06 | 2.870331917 |
| AOX1       | 1.182383097 | -4.646739121 | 4.33E-06 | 2.868194586 |
| ENTPD6     | 4.275301521 | 4.646325845 | 4.33E-06 | 2.866354024 |
| NAA38      | 4.15085649 | 4.643802669 | 4.38E-06 | 2.85512266 |
| C17orf89   | 3.606072623 | 4.643302208 | 4.40E-06 | 2.852895632 |
| REPIN1     | 4.55914852 | 4.639312411 | 4.48E-06 | 2.835149094 |
| Gene     | Value1  | Value2  | Value3  | Value4  | Value5  |
|----------|---------|---------|---------|---------|---------|
| STEAP2   | -0.4073| 2.1438  | -4.6387| 4.49E-06| 2.8323 |
| FCGRT    | -0.2978| 5.3384  | -4.6375| 4.51E-06| 2.8272 |
| TSNAX    | 0.2002 | 3.1430  | 4.6373 | 4.52E-06| 2.8263 |
| GAS5     | 0.3937 | 5.5617  | 4.6357 | 4.55E-06| 2.8193 |
| COA7     | 0.2016 | 2.7363  | 4.6331 | 4.61E-06| 2.8077 |
| CTD-2132N18.4 | 0.2118 | 1.0313 | 4.6328 | 4.61E-06| 2.8063 |
| CTD-2396E7.11 | 0.3434 | 4.3589 | 4.6319 | 4.63E-06| 2.7977 |
| ITGA9    | -0.3646| 2.2265  | -4.6319| 4.63E-06| 2.7977 |
| MAGED1   | 0.2613 | 5.4778  | 4.6309 | 4.66E-06| 2.7977 |
| PAQR8    | -0.3076| 2.0135  | -4.6309| 4.66E-06| 2.7977 |
| CYP26B1  | -0.2606| 0.9905  | -4.6246| 4.79E-06| 2.7701 |
| EXOSC5   | 0.2662 | 3.8361  | 4.6245 | 4.79E-06| 2.7697 |
| EMB      | -0.4444| 4.0088  | -4.6245| 4.79E-06| 2.7694 |
| PIGR     | -1.0975| 5.8337  | -4.6243| 4.80E-06| 2.7687 |
| MCM4     | 0.3734 | 3.6497  | 4.6241 | 4.80E-06| 2.7677 |
| IRF6     | 0.2921 | 3.8918  | 4.6240 | 4.81E-06| 2.7673 |
| PDA3P1   | 0.2451 | 2.4954  | 4.6236 | 4.81E-06| 2.7657 |
| SLC46A3  | -0.3247| 2.7294  | -4.6218| 4.85E-06| 2.7575 |
| SORBS3   | -0.2671| 3.5809  | -4.6193| 4.91E-06| 2.7466 |
| DCBLD2   | -0.4695| 3.1569  | -4.6170| 4.96E-06| 2.7366 |
| HLA-S    | -0.3276| 1.0145  | -4.6162| 4.98E-06| 2.7329 |
| EVA1A    | -0.4441| 3.1364  | -4.6159| 4.99E-06| 2.7315 |
| TPM1     | -0.3134| 3.6741  | -4.6158| 4.99E-06| 2.7312 |
| SRMS     | 0.3292 | 0.9621  | 4.6149| 5.01E-06| 2.7273 |
| IGIP     | -0.2273| 2.0118  | -4.6084| 5.16E-06| 2.6983 |
| CCM2L    | -0.2017| 0.9940  | -4.6072| 5.19E-06| 2.6930 |
| DMBT1    | -0.8836| 3.0013  | -4.6072| 5.19E-06| 2.6930 |
| PFKFB3   | -0.3818| 4.4939  | -4.6065| 5.21E-06| 2.6900 |
| XDH      | -0.4440| 1.7312  | -4.6055| 5.23E-06| 2.6857 |
| AC010518.2 | -0.3137| 0.7960 | -4.6049| 5.25E-06| 2.6828 |
| PPP1R12B | -0.2863| 1.9133  | -4.6043| 5.26E-06| 2.6803 |
| RAMP2    | -0.3347| 3.4473  | -4.6034| 5.29E-06| 2.6759 |
| RFX5     | -0.2130| 3.9366  | -4.6030| 5.29E-06| 2.6745 |
| Gene Symbol | Log2 Fold Change | Expression Value | FC | p-value |
|------------|-----------------|------------------|----|---------|
| ASAP1      | -0.267273133    | 2.773779642      | -4.602948441 | 5.30E-06 | 2.674047893 |
| RBP4       | -0.522534374    | 1.708966363      | -4.602280836 | 5.31E-06 | 2.671101115 |
| STMN3      | -0.480125596    | 3.462161679      | -4.602191717 | 5.32E-06 | 2.67070778  |
| FABP5      | -0.411450138    | 2.693676646      | -4.602112542 | 5.32E-06 | 2.670031491 |
| RANBP6     | -0.207308457    | 2.66625662       | -4.601331894 | 5.34E-06 | 2.664406058 |
| STMN3      | -0.480125596    | 3.462161679      | -4.602191717 | 5.32E-06 | 2.67070778  |
| LINC00676  | 0.801754899     | 0.849018014      | 4.601331894  | 5.34E-06 | 2.666913207 |
| OIP5       | 0.311459265     | 0.849018014      | 4.601331894  | 5.34E-06 | 2.666913207 |
| MIR222HG   | -0.334833837    | 0.691966314      | -4.59740056  | 5.43E-06 | 2.645935055 |
| IL1RL1     | -0.334833837    | 0.691966314      | -4.59740056  | 5.43E-06 | 2.645935055 |
| HSD17B10   | 0.207165563     | 5.770727117      | 4.59717365   | 5.44E-06 | 2.648571266 |
| RUNX2      | -0.265880577    | 1.645886108      | -4.596475402 | 5.46E-06 | 2.64592752  |
| TMEM200B   | -0.284772954    | 1.447062923      | -4.596475402 | 5.46E-06 | 2.645987722 |
| TMEM59L    | 0.7496812       | 1.934990316      | 4.59174185  | 5.46E-06 | 2.644164868 |
| AMN        | 0.415654939     | 1.391106474      | 4.595320778 | 5.49E-06 | 2.640403124 |
| MEST       | 0.323038715     | 3.912611193      | 4.594604863 | 5.50E-06 | 2.637406582 |
| HHIP       | -0.382990866    | 0.818691219      | -4.593824332 | 5.52E-06 | 2.633808482 |
| AGAP2-AS1  | -0.359576292    | 2.309301623      | -4.593494926 | 5.53E-06 | 2.632357095 |
| PDCD2L     | 0.249794351     | 2.760630901      | 4.592429506 | 5.56E-06 | 2.62763437 |
| NOP16      | 0.217605803     | 2.833851489      | 4.5922712    | 5.56E-06 | 2.626966114 |
| FAM189B    | 0.217963256     | 3.288413222      | 4.592059926 | 5.57E-06 | 2.626035505 |
| MRPS21     | 0.265331347     | 5.31295108       | 4.590752269 | 5.60E-06 | 2.620276479 |
| RP11-783K16.5 | 0.32528469    | 1.614131615      | 4.585289198 | 5.74E-06 | 2.596232962 |
| CAPN10     | 0.215494919     | 1.974354849      | 4.584516806 | 5.77E-06 | 2.592835709 |
| TXN        | 0.329037509     | 7.308538366      | 4.582243712 | 5.83E-06 | 2.582840895 |
| ELF3       | 0.368351601     | 5.382962551      | 4.581562288 | 5.84E-06 | 2.579845353 |
| TMEM198    | 0.256049329     | 1.22778925       | 4.5811693   | 5.85E-06 | 2.578118281 |
| ADAMTS14   | -0.273807411    | 1.179618137      | -4.580578918 | 5.87E-06 | 2.57552367 |
| SPOCD1     | -0.295382865    | 1.01681868       | -4.580260953 | 5.88E-06 | 2.574126404 |
| RAB15      | 0.421839159     | 3.587600438      | 4.578768834 | 5.92E-06 | 2.567570623 |
| ULK1       | 0.247004734     | 3.313732126      | 4.577917666 | 5.94E-06 | 2.563831809 |
| CHD1L      | 0.234219138     | 4.305806222      | 4.57765613  | 5.95E-06 | 2.562683125 |
| SPP1       | -0.821786412    | 6.922765232      | -4.577193299 | 5.96E-06 | 2.560650481 |
| AC145343.1 | -0.286943836    | 1.172580833      | -4.577045932 | 5.97E-06 | 2.560003322 |
| Gene          | Value1   | Value2   | Value3   | Value4   | Value5   |
|--------------|----------|----------|----------|----------|----------|
| SARAF        | -0.21232 | 6.33909  | -4.57639 | 5.98E-06 | 2.557155 |
| PI4K2B       | 0.22152  | 3.39250  | 4.57520  | 6.02E-06 | 2.551908 |
| MYL12A       | -0.21269 | 6.59339  | -4.57520 | 6.08E-06 | 2.541362 |
| COA6         | 0.28430  | 4.27049  | 4.57275  | 6.08E-06 | 2.541128 |
| KCNMB2-AS1   | 0.38363  | 0.85419  | 4.57275  | 6.08E-06 | 2.541362 |
| TEMEM130     | -0.50163 | 1.62088  | -4.57275 | 6.08E-06 | 2.541128 |
| SCAND1       | 0.22152  | 3.39250  | 4.57520  | 6.02E-06 | 2.551908 |
| GJB2         | -0.63699 | 3.20740  | -4.57211 | 6.10E-06 | 2.539501 |
| FGFR1        | -0.36412 | 2.34638  | -4.57211 | 6.10E-06 | 2.538479 |
| ECHDC1       | -0.24685 | 3.46598  | -4.57109 | 6.13E-06 | 2.523315 |
| MAP6         | -0.25412 | 1.00632  | -4.57109 | 6.13E-06 | 2.523315 |
| VAMP7        | -0.20329 | 4.25164  | -4.56530 | 6.30E-06 | 2.508503 |
| IGFBP2       | 0.72240  | 4.36869  | 4.56474  | 6.31E-06 | 2.506012 |
| SAPCD2       | 0.37675  | 2.17474  | 4.56097  | 6.42E-06 | 2.489543 |
| FSCN1        | -0.51750 | 4.52289  | -4.55987 | 6.45E-06 | 2.484695 |
| CYP4F3       | 0.49894  | 0.73026  | 4.55977  | 6.46E-06 | 2.484216 |
| C14orf159    | -0.24820 | 2.56820  | -4.55949 | 6.47E-06 | 2.483081 |
| C7orf55      | 0.25002  | 2.36366  | 4.55912  | 6.48E-06 | 2.481450 |
| ZWINT        | 0.38966  | 3.63721  | 4.55847  | 6.50E-06 | 2.478593 |
| EIF5B        | 0.24533  | 4.36173  | 4.55834  | 6.50E-06 | 2.478030 |
| SSH3         | 0.24241  | 4.08874  | 4.55649  | 6.55E-06 | 2.469935 |
| SYTL4        | -0.24468 | 1.47863  | -4.55417 | 6.63E-06 | 2.459653 |
| SLC34A2      | -0.79464 | 7.90526  | -4.54975 | 6.76E-06 | 2.440644 |
| RNF5         | 0.20864  | 5.35133  | 4.54905  | 6.78E-06 | 2.437418 |
| CTD-2517O10.6| 0.21564  | 1.30697  | 4.54901  | 6.78E-06 | 2.437272 |
| SAMD10       | 0.26226  | 2.60099  | 4.54887  | 6.79E-06 | 2.436629 |
| LRP11        | 0.27134  | 4.17163  | 4.54854  | 6.80E-06 | 2.435196 |
| SURF6        | 0.20078  | 3.18317  | 4.54798  | 6.81E-06 | 2.432766 |
| CHST2        | -0.39145 | 2.23588  | -4.54775 | 6.82E-06 | 2.431756 |
| TPST1        | -0.26321 | 3.01955  | -4.54698 | 6.85E-06 | 2.428374 |
| ATP13A4-AS1  | -0.28718 | 0.46778  | -4.54687 | 6.85E-06 | 2.427864 |
| CACHD1       | -0.42070 | 1.86939  | -4.54641 | 6.86E-06 | 2.425909 |
| ATF4         | 0.20540  | 6.66023  | 4.54469  | 6.92E-06 | 2.418355 |
| Gene          | Fold Change | p-value | q-value | j | j2 |
|--------------|-------------|---------|---------|---|---|
| ATP5EP2      | 0.204762121 | 1.101229959 | 4.543898634 | 6.94E-06 | 2.414924044 |
| RPP25L       | 0.22424297  | 3.988753912 | 4.543773837 | 6.95E-06 | 2.414379662 |
| RPL37A       | 0.232443426 | 6.672635231 | 4.542638967 | 6.98E-06 | 2.409429857 |
| MCM3         | 0.263670309 | 4.783040204 | 4.541892686 | 7.00E-06 | 2.40746878  |
| RP11-728F11.4| 0.22963619  | 0.461390383 | 4.540259123 | 7.06E-06 | 2.399053705 |
| BTN10        | 0.230505516 | 6.672635231 | 4.53319367  | 7.29E-06 | 2.385042706 |
| C20orf24     | 0.229683619 | 0.461319038 | 4.53038653  | 7.35E-06 | 2.380927251 |
| ABHD11       | 0.316369228 | 4.440292909 | 4.52913967  | 7.23E-06 | 2.368277723 |
| CHST3        | -0.401001679| 2.092618777 | -4.52635983 | 7.36E-06 | 2.360927251 |
| LZTS1        | -0.246303458| 1.479663697 | -4.52602892 | 7.41E-06 | 2.352653772 |
| BPIFA2       | 0.585998854 | 6.672635231 | 4.52790265  | 7.47E-06 | 2.345297797 |
| ATP6V0E1     | -0.217235971| 6.818252943 | -4.52754432 | 7.48E-06 | 2.343701808 |
| NEK6         | -0.225481363| 4.246737579 | -4.52671535 | 7.51E-06 | 2.34009798  |
| VPS13C       | -0.23003097 | 2.438328424 | -4.52586438 | 7.54E-06 | 2.33699126 |
| GDF10        | -0.344058336| 0.926153521 | -4.52571621 | 7.54E-06 | 2.335755158 |
| MT1L         | -0.489842993| 2.505279205 | -4.52365071 | 7.61E-06 | 2.326780172 |
| TUSC8        | 0.285720489 | 0.34503332  | 4.519714065 | 7.75E-06 | 2.309685102 |
| CCDC34       | 0.27735146 | 2.047536218 | 4.519078399 | 7.77E-06 | 2.306925979 |
| KLF4         | -0.442253184| 2.968447796 | -4.51890640 | 7.78E-06 | 2.306179494 |
| YBEY         | 0.245943367 | 2.629655521 | 4.517114749 | 7.84E-06 | 2.298404975 |
| POLR2K       | 0.227114675 | 4.9029677  | 4.517100587 | 7.84E-06 | 2.293405353 |
| B3GALNT1     | -0.322912906| 1.973593794 | -4.51184705 | 8.03E-06 | 2.275563336 |
| FASTKD5      | 0.20012487 | 3.039875417 | 4.511359672 | 8.05E-06 | 2.273451205 |
| RPL6P27      | 0.275667112 | 2.820751157 | 4.509612766 | 8.11E-06 | 2.265882492 |
| AC093375.1   | 0.219079667 | 0.62061934 | 4.508340095 | 8.16E-06 | 2.260370168 |
| PDCD6        | 0.225529943 | 3.798276409 | 4.508056197 | 8.17E-06 | 2.259140718 |
| IQCG         | -0.214409097| 1.423663977 | -4.50731622 | 8.20E-06 | 2.255936514 |
| COL4A2       | -0.400624406| 5.504900784 | -4.50717322 | 8.20E-06 | 2.255317375 |
| NFKB2        | -0.252087366| 3.968379095 | -4.50669292 | 8.22E-06 | 2.25327915 |
| LINCO0858    | 0.231376273 | 0.420549649 | 4.506648735 | 8.22E-06 | 2.253046593 |
| RP11-284F21.10| 0.560870922| 1.633168999 | 4.505169605 | 8.28E-06 | 2.24664405 |
| SURF2        | 0.213155339 | 3.820903484 | 4.505130279 | 8.28E-06 | 2.246473848 |
| RP11-616M22.5| -0.323988666| 0.718079209 | -4.50288123 | 8.36E-06 | 2.236742463 |
| Gene   | Value1  | Value2  | Value3  | Value4  | Value5  |
|--------|---------|---------|---------|---------|---------|
| BATF3  | -0.282460102 | 1.339008398 | -4.500329103 | 8.46E-06 | 2.225705046 |
| PFN2   | 0.534518052   | 4.390804291   | 4.495865647   | 8.63E-06 | 2.206415448 |
| NDRG2  | -0.349193776  | 2.465694833   | -4.95588827   | 8.64E-06 | 2.205219702 |
| CA8    | 0.339770949   | 0.840764983   | 4.495179344   | 8.66E-06 | 2.203451034 |
| TBL1X  | 0.283632539   | 2.82084344    | 4.494861273   | 8.67E-06 | 2.202077302 |
| SERPINB9P1 | -0.302589489 | 1.319903479 | -4.490857381 | 8.83E-06 | 2.18479236  |
| JADE1  | 0.265562311   | 2.435655305   | 4.490093961   | 8.86E-06 | 2.181498263 |
| IGHD4-4| -0.29032332   | 0.366285006   | -4.489922759  | 8.87E-06 | 2.180759611 |
| C8orf76| 0.227780693   | 2.299901382   | 4.488572806   | 8.92E-06 | 2.174936136 |
| CHST15 | -0.322050707  | 3.599960951   | -4.487744124  | 8.95E-06 | 2.171362138 |
| AC017060.1 | -0.569845343 | 2.049531343 | -4.486848963 | 8.99E-06 | 2.166026043 |
| FAM43A | -0.28382185   | 1.946677145   | -4.486506613  | 9.00E-06 | 2.166026043 |
| RIMBP2 | 0.240232377   | 0.289620443   | 4.485422204   | 9.05E-06 | 2.161351235 |
| CBX4   | 0.222474357   | 4.004380506   | 4.484938457   | 9.07E-06 | 2.159266174 |
| POP7   | 0.25410474    | 4.765989866   | 4.483829184   | 9.11E-06 | 2.154485733 |
| PLVAP  | -0.337294981  | 5.1050833     | -4.48377019   | 9.12E-06 | 2.154265262 |
| FOXA3  | 0.513560565   | 1.719094502   | 4.48364704    | 9.12E-06 | 2.153700881 |
| RPRD1A | 0.227014466   | 2.940138362   | 4.482427635   | 9.17E-06 | 2.148447278 |
| JPH1   | 0.359108943   | 1.712065599   | 4.482122141   | 9.18E-06 | 2.147131315 |
| YBX2   | 0.369029552   | 0.914912386   | 4.482122141   | 9.18E-06 | 2.147131315 |
| ABCF1  | 0.205563753   | 4.56064693   | 4.47757719    | 9.37E-06 | 2.127562989 |
| TDG    | 0.218261102   | 2.579636486   | 4.477193575   | 9.39E-06 | 2.125912169 |
| CDC3A  | 0.29716176    | 1.47421723    | 4.477151016   | 9.39E-06 | 2.125729031 |
| HSF4   | 0.41838642    | 2.0912332     | 4.476796888   | 9.41E-06 | 2.124088196 |
| ATP5G1 | 0.248439481   | 4.32543205    | 4.474727435   | 9.49E-06 | 2.115302685 |
| TUBB4B | 0.254165271   | 7.174245093   | 4.473874515   | 9.53E-06 | 2.111634626 |
| HSDL1  | 0.212906317   | 3.014834702   | 4.472937922   | 9.57E-06 | 2.107607464 |
| TAF1D  | 0.209507272   | 3.145328588   | 4.472549741   | 9.59E-06 | 2.105938592 |
| CLDN3  | 0.584834633   | 5.763109226   | 4.47101477    | 9.65E-06 | 2.099340738 |
| LAMP3  | -0.562240375  | 4.216788272   | -4.470821739  | 9.66E-06 | 2.098511172 |
| IGHD6-25| -0.471242553 | 0.998580189 | -4.47064832  | 9.76E-06 | 2.097759518 |
| PPP1R26| 0.235966133   | 2.904360663   | 4.468836392   | 9.75E-06 | 2.089980879 |
| ECT2   | 0.360519443   | 3.196356922   | 4.466681166   | 9.84E-06 | 2.080724636 |
| Gene      | Start position | End position | Log2 fold change | p-value | Survival time |
|-----------|----------------|--------------|-----------------|---------|---------------|
| NEIL3     | 0.343611527    | 1.124996307  | 4.466317553     | 9.86E-06| 2.0791634     |
| CNTROB    | 0.221418206    | 2.947180859  | 4.466209214     | 9.87E-06| 2.078698251   |
| PFDN4     | 0.251459655    | 3.436214357  | 4.465547583     | 9.89E-06| 2.075857789   |
| RP11-140K17.3 | 0.239750067 | 1.957061738  | 4.465314713     | 9.91E-06| 2.074858145   |
| BARX1-AS1 | 0.229873212    | 0.299291188  | 4.463872628     | 9.97E-06| 2.068668741   |
| GNAS      | 0.224095931    | 6.356210604  | 4.463543848     | 9.98E-06| 2.067257882   |
| NKAIN1    | 0.222396665    | 0.305648194  | 4.461632295     | 1.00E-05| 2.065318092   |
| TMEM205   | 0.228091947    | 5.3378825    | 4.461045574     | 1.01E-05| 2.05640427    |
| CARD14    | 0.312446113    | 0.963770307  | 4.460028986     | 1.01E-05| 2.052180911   |
| RP11-417L19.6 | 0.21582406  | 1.259202874  | 4.459479505     | 1.02E-05| 2.049824906   |
| KB-1208A12.3 | 0.220607136   | 1.556861417  | 4.459171116     | 1.02E-05| 2.048502746   |
| HPN       | 0.54145358     | 3.804632584  | 4.457869224     | 1.02E-05| 2.042922063   |
| CLK2      | 0.236542486    | 3.851478815  | 4.457356016     | 1.03E-05| 2.040722565   |
| RALGDS    | -0.212476979   | 3.488336824  | -4.457140839    | 1.03E-05| 2.039800431   |
| SNORA42   | 0.209577271    | 0.457782926  | 4.4557666       | 1.03E-05| 2.033912144   |
| SOX18     | -0.277216191   | 2.071958745  | -4.455163975    | 1.04E-05| 2.031330571   |
| RFC3      | 0.264206428    | 2.499800501  | 4.45494634      | 1.04E-05| 2.030398326   |
| RP11-21L23.3 | 0.244059452 | 0.787027306  | 4.454548603     | 1.04E-05| 2.02869472    |
| PALMD     | -0.231817625   | 1.191818167  | -4.451900526    | 1.05E-05| 2.017355933   |
| MIR3135B  | -0.201950431   | 0.296433007  | -4.451733288    | 1.05E-05| 2.016640047   |
| DZIP1L    | -0.22553111    | 0.939879995  | -4.448970822    | 1.07E-05| 2.004818503   |
| NIPSNAP3A | -0.212270726   | 3.081548735  | -4.448962767    | 1.07E-05| 2.00478404    |
| CDR2      | -0.224591796   | 3.296794503  | -4.447894296    | 1.07E-05| 2.00021351    |
| PHB2      | 0.224034131    | 6.096570443  | 4.447709785     | 1.07E-05| 1.999424344   |
| SPINT1    | 0.292008586    | 6.250914431  | 4.447609813     | 1.07E-05| 1.998992916   |
| SNHG19    | 0.397067768    | 4.000321386  | 4.447381087     | 1.07E-05| 1.998018551   |
| LINCO0467 | 0.221365514    | 2.016409478  | 4.446616647     | 1.08E-05| 1.994749522   |
| SLC9A7    | -0.242613075   | 1.933455559  | -4.44500256     | 1.08E-05| 1.987848798   |
| AC093323.3| 0.222515819    | 3.111652803  | 4.444876901     | 1.09E-05| 1.987311663   |
| GMNN      | 0.279651262    | 2.998308038  | 4.44387508      | 1.09E-05| 1.98302984    |
| Gene       | Log2 Fold Change | p-Value | Adjusted p-Value | FDR | Adj. FDR |
|------------|-----------------|---------|-----------------|-----|---------|
| FCHSD1     | -0.214982254    | 2.041016581 | -4.442697122   | 1.10E-05 | 1.977996341 |
| ACSL3      | 0.234585804     | 3.963937879 | 4.442256689    | 1.10E-05 | 1.976114657 |
| CCDC120    | 0.231944582     | 2.500060846 | 4.440734781    | 1.11E-05 | 1.969613853 |
| FOXO3      | -0.233491206    | 2.891841153 | -4.440424927   | 1.11E-05 | 1.968290569 |
| TEMEI14A   | 0.267100972     | 4.776274162 | 4.438830876    | 1.12E-05 | 1.961484253 |
| KLF11      | -0.236032688    | 2.672487906 | -4.437246148   | 1.12E-05 | 1.954719986 |
| KIAA0101   | 0.346046952     | 2.325694237 | 4.436097465    | 1.13E-05 | 1.949818329 |
| RP11-400N13.3 | 0.234054711   | 3.638012543 | 4.432281981    | 1.15E-05 | 1.933545322 |
| RP11-291L22.6 | 0.240581833   | 1.375487056 | 4.431935111    | 1.15E-05 | 1.932066565 |
| DCLRE1A    | 0.201574876     | 2.210486162 | 4.428848125    | 1.17E-05 | 1.91891101 |
| S100A9     | -0.787425649    | 7.596394429 | -4.28848125    | 1.17E-05 | 1.91981101 |
| BHLHA15    | 0.439155178     | 1.873588575 | 4.28761359     | 1.17E-05 | 1.91854369 |
| HSD17B7    | 0.203217671     | 2.093073894 | 4.247391391    | 1.17E-05 | 1.912705908 |
| SLC22A23   | 0.365327469     | 2.581162934 | 4.2416971     | 1.19E-05 | 1.88989541 |
| BCL9       | 0.262710287     | 3.153741528 | 4.21895597     | 1.20E-05 | 1.88931038 |
| RP11-156K13.1 | 0.338344848    | 0.911899842 | 4.2170333     | 1.20E-05 | 1.888495119 |
| CCDC28A    | -0.216112324    | 4.005027788 | -4.21560037    | 1.20E-05 | 1.88788571 |
| ACACA      | 0.217241027     | 3.001195313 | 4.21316747     | 1.21E-05 | 1.8868507 |
| TRAF2      | 0.253347437     | 3.236856526 | 4.21190002     | 1.21E-05 | 1.886311592 |
| SLC25A21   | 0.206932959     | 0.397680706 | 4.20670495     | 1.21E-05 | 1.88410202 |
| C17orf53   | 0.28852304      | 1.566870351 | 4.20643172     | 1.21E-05 | 1.88398514 |
| MRPL47     | 0.225523019     | 4.519964108 | 4.20332801     | 1.21E-05 | 1.882665866 |
| MRPL57     | 0.21104884      | 4.181874267 | 4.20228237     | 1.21E-05 | 1.882221194 |
| MRPS25     | 0.277562603     | 3.424253197 | 4.19300169     | 1.22E-05 | 1.878274892 |
| BR3BP      | 0.240049721     | 2.489630886 | 4.19025631     | 1.22E-05 | 1.877107656 |
| PAIP1      | 0.217514862     | 4.355908454 | 4.1838594      | 1.22E-05 | 1.874388181 |
| CELSR2     | 0.242735889     | 1.51040471  | 4.18053241     | 1.22E-05 | 1.872973944 |
| IGHD       | -0.944535989    | 4.046720888 | -4.17246662    | 1.23E-05 | 1.869545748 |
| MVD        | 0.249117725     | 3.143911925 | 4.16585363     | 1.23E-05 | 1.867875471 |
| CRNDE      | 0.379957533     | 2.909952388 | 4.16516476     | 1.23E-05 | 1.866442748 |
| FSCN2      | 0.225984206     | 0.963812076 | 4.16373097     | 1.23E-05 | 1.865833497 |
| NPTXR      | -0.33784308     | 1.3462618   | -4.415606      | 1.24E-05 | 1.862574246 |
| Gene          | LogFC   | DEScore | LogFDR | pval       | Adjusted pval |
|--------------|---------|---------|--------|------------|---------------|
| ATP5B        | 0.2156  | 7.66    | 4.41   | 1.24E-05   | 1.86          |
| ACADVL       | 0.2436  | 5.57    | 4.41   | 1.24E-05   | 1.85          |
| HS6ST1       | 0.2801  | 3.23    | 4.41   | 1.24E-05   | 1.86          |
| RP11-672L10.6| 0.2259  | 1.07    | 4.41   | 1.24E-05   | 1.86          |
| LINC00493    | 0.2150  | 4.51    | 4.41   | 1.24E-05   | 1.85          |
| FAAH2        | 0.2831  | 2.95    | 4.41   | 1.24E-05   | 1.85          |
| EPHA3        | -0.2979 | 0.86    | 4.41   | 1.24E-05   | 1.84          |
| GJA1         | -0.4811 | 4.77    | 4.41   | 1.24E-05   | 1.85          |
| DUSP5        | -0.4079 | 3.95    | 4.41   | 1.24E-05   | 1.84          |
| ABR          | -0.2349 | 3.44    | 4.41   | 1.24E-05   | 1.83          |
| AFAP1        | -0.2261 | 2.54    | 4.41   | 1.24E-05   | 1.83          |
| CEP170B      | 0.2732  | 3.63    | 4.41   | 1.24E-05   | 1.83          |
| TFPI         | -0.4908 | 3.57    | 4.41   | 1.24E-05   | 1.83          |
| TEP1         | -0.2115 | 2.43    | 4.41   | 1.24E-05   | 1.83          |
| HHIP-AS1     | -0.4134 | 1.27    | 4.41   | 1.24E-05   | 1.82          |
| RP11-1038A11.3| 0.2668 | 0.52    | 4.41   | 1.24E-05   | 1.82          |
| STEAP3       | -0.3597 | 4.06    | 4.41   | 1.24E-05   | 1.82          |
| FAM195A      | 0.2668  | 2.78    | 4.41   | 1.24E-05   | 1.82          |
| C9orf173     | 0.2059  | 0.51    | 4.41   | 1.24E-05   | 1.82          |
| FCN3         | -0.4742 | 1.94    | 4.41   | 1.24E-05   | 1.82          |
| PPP1R9B      | -0.2111 | 4.11    | 4.41   | 1.24E-05   | 1.81          |
| CFI          | -0.4186 | 4.13    | 4.41   | 1.24E-05   | 1.77          |
| ADAMTS4      | -0.3326 | 1.48    | 4.41   | 1.24E-05   | 1.77          |
| TWSG1        | -0.2623 | 3.63    | 4.41   | 1.24E-05   | 1.77          |
| SIRT1        | -0.2639 | 1.32    | 4.41   | 1.24E-05   | 1.77          |
| MGAT3        | -0.3304 | 1.09    | 4.41   | 1.24E-05   | 1.77          |
| RHPN1        | 0.3943  | 3.08    | 4.41   | 1.24E-05   | 1.77          |
| TEMEM176A    | -0.4458 | 4.17    | 4.41   | 1.24E-05   | 1.77          |
| PLA2G2A      | -0.5372 | 1.35    | 4.41   | 1.24E-05   | 1.77          |
| SORD         | 0.2491  | 2.26    | 4.41   | 1.24E-05   | 1.77          |
| ARHGEF10L    | -0.2427 | 2.65    | 4.41   | 1.24E-05   | 1.77          |
| RP11-420A23.1| 0.2040  | 0.79    | 4.41   | 1.24E-05   | 1.77          |
| WDR43        | 0.2070  | 3.69    | 4.41   | 1.24E-05   | 1.77          |
| Gene    | Value1  | Value2  | Value3  | Value4  | Value5  |
|---------|---------|---------|---------|---------|---------|
| STOML2  | 0.23018 | 5.469   | 4.382   | 1.44E-05| 1.72059 |
| G6PD    | 0.4978  | 5.058   | 4.380   | 1.45E-05| 1.71277 |
| AC019117.2 | -0.599 | 2.430   | -4.379  | 1.45E-05| 1.70916 |
| CTD-2527I21.15 | 0.27295 | 0.741   | 4.378   | 1.46E-05| 1.70716 |
| NME1    | 0.30067 | 4.140   | 4.378   | 1.46E-05| 1.70713 |
| HSD17B14 | -0.404  | 3.179   | 4.377   | 1.46E-05| 1.70101 |
| CNN2    | -0.249  | 5.917   | 4.376   | 1.47E-05| 1.69751 |
| CALCB   | 0.22758 | 0.216   | 4.375   | 1.47E-05| 1.69489 |
| AC079922.2 | 0.47739 | 0.935   | 4.370   | 1.51E-05| 1.66778 |
| RP11-443P15.2 | 0.477 | 0.935   | 4.370   | 1.51E-05| 1.66778 |
| GRK5    | -0.271  | 1.891   | -4.369  | 1.51E-05| 1.66977 |
| POGZ    | 0.22307 | 3.355   | 4.369   | 1.52E-05| 1.66619 |
| PLAT    | -0.627  | 3.539   | -4.368  | 1.52E-05| 1.66401 |
| RGS4    | -0.265  | 0.906   | -4.367  | 1.53E-05| 1.65817 |
| FCHO1   | -0.263  | 1.675   | -4.367  | 1.53E-05| 1.65787 |
| RAB17   | 0.289   | 2.927   | 4.367   | 1.53E-05| 1.65726 |
| C5orf22 | 0.205   | 3.254   | 4.366   | 1.54E-05| 1.65441 |
| HUNK    | 0.266   | 0.934   | 4.364   | 1.55E-05| 1.64490 |
| DDX11   | 0.266   | 1.973   | 4.361   | 1.57E-05| 1.63519 |
| CDH15   | 0.282   | 0.846   | 4.359   | 1.58E-05| 1.62697 |
| PNN     | 0.268   | 4.497   | 4.356   | 1.60E-05| 1.61447 |
| FAM64A  | 0.334   | 1.545   | 4.351   | 1.64E-05| 1.59108 |
| FLJ22447| -0.352  | 0.538   | -4.350  | 1.65E-05| 1.58785 |
| SIGMAR1 | 0.208   | 4.786   | 4.350   | 1.65E-05| 1.58727 |
| AC019117.1 | -0.378 | 0.858   | -4.350  | 1.65E-05| 1.58640 |
| EPS8L2  | 0.297   | 4.424   | 4.349   | 1.65E-05| 1.58473 |
| C15orf48 | -0.656  | 4.619   | -4.348  | 1.66E-05| 1.57932 |
| RCN3    | -0.451  | 4.069   | -4.342  | 1.71E-05| 1.55494 |
| HBB     | -0.711  | 3.948   | -4.341  | 1.71E-05| 1.55104 |
| MESP1   | 0.304   | 1.348   | 4.341   | 1.71E-05| 1.55077 |
| Gene          | Value     | Value     | Value     | Value     | Value     |
|--------------|-----------|-----------|-----------|-----------|-----------|
| CDC42EP1     | -0.423104923 | 5.387636254 | -4.340205999 | 1.73E-05 | 1.544770656 |
| PRKAA2       | 0.273145338  | 1.159984847 | 4.338978973  | 1.73E-05 | 1.53964078  |
| FGA          | 1.134596256  | 2.833417141 | 4.337337298  | 1.75E-05 | 1.532779471 |
| ERH          | 0.207593524  | 6.057779643 | 4.337225515  | 1.75E-05 | 1.532312365 |
| AL450992.2   | 0.412638209  | 3.154515947 | 4.335862228  | 1.76E-05 | 1.52661749  |
| ZNF793-AS1   | 0.249101388  | 0.964273466 | 4.335600922  | 1.76E-05 | 1.525354423 |
| IGHV3-64     | -0.643917188 | 2.237236671 | -4.335045917 | 1.76E-05 | 1.523455581 |
| C8G          | 0.271945219  | 0.80167471  | 4.334435607  | 1.77E-05 | 1.520657861 |
| ADA          | -0.27243424  | 1.97755355  | -4.334524662 | 1.77E-05 | 1.519901808 |
| CTD-2124B8.2 | 0.240614799  | 1.89201573  | 4.331695543  | 1.79E-05 | 1.509218343 |
| LSM2         | 0.243722375  | 5.16561224  | 4.331102178  | 1.80E-05 | 1.506741979 |
| FECH         | 0.239457239  | 2.8737891   | 4.330299583  | 1.80E-05 | 1.503392913 |
| CXCL16       | -0.298455808 | 5.56359561  | -4.329877156 | 1.81E-05 | 1.501630441 |
| RP11-126L15.4| 0.2205154    | 1.06786893  | 4.329055058  | 1.81E-05 | 1.498200901 |
| CBL          | -0.201311547 | 2.086067599 | -4.328064806 | 1.82E-05 | 1.494070674 |
| DNMT3B       | 0.268758934  | 1.18548261  | 4.328017099  | 1.82E-05 | 1.493871716 |
| KRT8         | 0.340876791  | 7.642619326 | 4.327943259  | 1.82E-05 | 1.493564903 |
| SERPINA1     | -0.686135903 | 6.784842496 | -4.327460878 | 1.82E-05 | 1.491552192 |
| CYBA         | -0.352353404 | 5.398905478 | -4.32681392  | 1.83E-05 | 1.488854626 |
| GAREM        | 0.24942553   | 1.972962285 | 4.326637549  | 1.83E-05 | 1.488119293 |
| GPR162       | -0.261042799 | 1.156880419 | -4.326514699 | 1.83E-05 | 1.487607115 |
| SKA1         | 0.306542224  | 1.43224078  | 4.326138526  | 1.84E-05 | 1.486038892 |
| RP11-101E13.5| 0.214534798  | 3.869970268 | 4.325314888  | 1.84E-05 | 1.482758226 |
| ALOX12P2     | 0.208705071  | 0.602713416 | 4.324979578  | 1.84E-05 | 1.481208159 |
| C20orf85     | -0.735662492 | 1.84963831  | -4.324810118 | 1.85E-05 | 1.48050192  |
| COMTD1       | 0.332549642  | 3.031386027 | 4.324196033  | 1.85E-05 | 1.477942864 |
| HOOK2        | 0.242286139  | 2.923045382 | 4.32217004   | 1.87E-05 | 1.469502418 |
| CATSPER1     | -0.282324857 | 0.878476828 | -4.321855719 | 1.87E-05 | 1.468193259 |
| AC079630.2   | -0.342677067 | 0.685056677 | -4.321445517 | 1.87E-05 | 1.466484886 |
| FNIP2        | -0.323017381 | 2.76369739  | -4.320994899 | 1.88E-05 | 1.464608367 |
| SLC19A2      | 0.254098368  | 3.149648895 | 4.320571258  | 1.88E-05 | 1.462844351 |
| UFSP1        | 0.21365986   | 1.460894881 | 4.320413031  | 1.88E-05 | 1.462185545 |
| MAFG-AS1     | 0.255428759  | 2.128606082 | 4.318826998  | 1.89E-05 | 1.455583054 |
| Gene       | Log2FoldChange | pValue  | qValue | AdjFoldChange | p0.05   |
|------------|----------------|---------|--------|---------------|---------|
| ANXA2      | -0.307264814   | 6.538442989 | -4.318097163 | 1.90E-05 | 1.452545584 |
| ARL4C      | -0.337032156   | 4.480488959 | -4.317674075 | 1.90E-05 | 1.450784968 |
| CHAF1B     | 0.233911875    | 1.801276442 | 4.315169405  | 1.93E-05 | 1.440364544 |
| FHL2       | -0.424869261   | 3.128321062 | -4.314918754 | 1.94E-05 | 1.439323039 |
| BCL10      | -0.225172295   | 3.495203359 | -4.313675485 | 1.94E-05 | 1.434153352 |
| LIMK1      | -0.277905055   | 3.822174676 | -4.313119606 | 1.94E-05 | 1.431842379 |
| PLXNB1     | 0.310107001    | 3.116558449 | 4.312571912  | 1.95E-05 | 1.429565702 |
| MMP15      | 0.368633632    | 4.368328256 | 4.311857803  | 1.95E-05 | 1.426597666 |
| DUSP7      | -0.231169221   | 2.606243413 | -4.310948644 | 1.96E-05 | 1.422819611 |
| PLA2G4A    | 0.310107001    | 3.116558449 | 4.312571912  | 1.95E-05 | 1.429565702 |
| AKR1C4     | 0.337930945    | 0.377675678 | 4.310353418  | 1.97E-05 | 1.420346519 |
| C4A        | -0.3474835     | 1.578153072 | -4.30905593  | 1.97E-05 | 1.41848607 |
| IL1A       | -0.285806192   | 0.596255216 | -4.309598464 | 1.97E-05 | 1.417210233 |
| ERBB3      | 0.344522294    | 4.841498958 | 4.309277363  | 1.98E-05 | 1.415876448 |
| TRIM24     | 0.228851263    | 2.73610495 | 4.308315807  | 1.98E-05 | 1.411882892 |
| IGSF10     | -0.214425192   | 0.556787255 | -4.307901932 | 1.99E-05 | 1.410164236 |
| PPAPDC1B   | 0.268629187    | 3.77628357  | 4.30778707   | 1.99E-05 | 1.409652561 |
| IGHD3-10   | -0.385001729   | 0.715019803 | -4.30619237  | 2.00E-05 | 1.402970701 |
| NOTCH4     | -0.224924188   | 1.709256761 | -4.304549791 | 2.02E-05 | 1.396249766 |
| RAP2A      | -0.213415437   | 3.163597019 | -4.302577452 | 2.03E-05 | 1.388067437 |
| AB019441.29| 0.246436044    | 2.265871694 | 4.302217943  | 2.04E-05 | 1.386576375 |
| RP11-660L16.2| 0.293458917    | 2.390825059 | 4.30157936   | 2.04E-05 | 1.386327509 |
| ROMO1      | 0.283542714    | 6.252546148 | 4.301385252  | 2.04E-05 | 1.383123237 |
| ZNF428     | 0.228341517    | 3.674073637 | 4.298695927  | 2.07E-05 | 1.371974941 |
| INPP4B     | -0.272567456   | 1.511820674 | -4.29811291  | 2.07E-05 | 1.369558963 |
| AC005336.4 | 0.362705471    | 0.583799648 | 4.29771435  | 2.08E-05 | 1.367920318 |
| PCNA       | 0.282573621    | 5.840554002 | 4.297505138  | 2.08E-05 | 1.367040729 |
| TNFRSF12A  | -0.435882511   | 5.287012329 | -4.294064376 | 2.11E-05 | 1.35279054 |
| MIR221     | -0.278660788   | 0.87195932  | -4.292946447 | 2.12E-05 | 1.348162826 |
| RSPH4A     | -0.370106527   | 0.9359168   | -4.292804556 | 2.12E-05 | 1.347575543 |
| PDRG1      | 0.201841753    | 3.531828899 | 4.292582123  | 2.12E-05 | 1.346649395 |
| RP11-663N22.1| 0.227046962    | 0.414779969 | 4.29094602   | 2.14E-05 | 1.339878906 |
| RP11-132F7.2| 0.331800126    | 1.192163642 | 4.290797724  | 2.14E-05 | 1.339271243 |
| Gene     | Log2 Fold Change | P-Value  | Adj. Log2 Fold Change | Adjusted P-Value |
|----------|------------------|----------|-----------------------|------------------|
| TTC32    | 0.22856993       | 1.970051888 | 4.290623409           | 2.14E-05         | 1.338550096 |
| NRN1     | -0.363500649     | 1.809803329 | -4.290535103          | 2.14E-05         | 1.338184782 |
| PER3     | -0.309521426     | 1.940771515 | -4.290157448          | 2.15E-05         | 1.33662253 |
| RNU6-529P| -0.21269444      | 2.792550016 | 4.287529143           | 2.17E-05         | 1.325753529 |
| RNU7-75P | 0.27054897       | 3.035031804 | 4.286950442           | 2.18E-05         | 1.32361217 |
| SNRPG    | 0.250952753      | 4.607895762 | 4.288520658           | 2.16E-05         | 1.329853077 |
| UBE2S    | 0.355368226      | 2.767573702 | 4.283941061           | 2.21E-05         | 1.310593145 |
| RP11-977G19.5| 0.279485387 | 3.035031804 | 4.286950442           | 2.18E-05         | 1.32361217 |
| DNAJB9   | -0.255488545     | 3.597512991 | -4.276091299          | 2.28E-05         | 1.278310733 |
| KIAA0907 | 0.258909961      | 3.597512991 | 4.28283241            | 2.22E-05         | 1.306346218 |
| PCYT2    | 0.210947135      | 2.767573702 | 4.282673669           | 2.22E-05         | 1.305690629 |
| VDAC3    | 0.25242707       | 4.824741061 | 4.28199045            | 2.22E-05         | 1.302869253 |
| GRAMD4   | 0.29466044       | 3.877996713 | 4.281164805           | 2.23E-05         | 1.299460278 |
| SH3RF2   | -0.35168317      | 1.245973783 | -4.278993075          | 2.25E-05         | 1.290496423 |
| ANXA3    | -0.396238027     | 3.597512991 | -4.278335728          | 2.26E-05         | 1.287784042 |
| AGER     | -0.736778748     | 3.747498668 | -4.276039129          | 2.28E-05         | 1.278310733 |
| RBL2     | -0.217663623     | 3.597512991 | -4.275891602          | 2.28E-05         | 1.277702358 |
| WDR18    | 0.219964384      | 3.597512991 | 4.273634471           | 2.31E-05         | 1.268396756 |
| FAM24B   | 0.208437938      | 1.262572685 | 4.27356373            | 2.31E-05         | 1.26725053 |
| TMEM243  | -0.291381234     | 3.213201368 | -4.272992772          | 2.31E-05         | 1.265752019 |
| FKBPs    | 0.29952185       | 4.442977735 | 4.27156154            | 2.33E-05         | 1.259854588 |
| GPR4     | -0.209820216     | 1.613432939 | -4.271160249          | 2.33E-05         | 1.258201384 |
| CBF2A2T2 | 0.205906168      | 2.300410239 | 4.270896979           | 2.33E-05         | 1.257116866 |
| H2AFX    | 0.286926736      | 4.725373882 | 4.270281931           | 2.34E-05         | 1.254583472 |
| FAM166B  | -0.363064122     | 1.02943398  | -4.270155875          | 2.34E-05         | 1.254064285 |
| ETHE1    | -0.281212464     | 3.924101301 | -4.269140115          | 2.35E-05         | 1.24988121 |
| MARCKSL1 | 0.338290063      | 6.795213779 | 4.268997112           | 2.35E-05         | 1.249292374 |
| PPRC2A   | 0.225829905      | 5.150461871 | 4.267980526           | 2.36E-05         | 1.245106951 |
| TOMM20   | 0.203573809      | 6.124440069 | 4.264253183           | 2.40E-05         | 1.229768997 |
| ANXA2R   | -0.231628076     | 1.349432545 | -4.263374146          | 2.41E-05         | 1.226153465 |
| FANCA    | 0.206957386      | 1.368194867 | 4.263334625           | 2.41E-05         | 1.226059091 |
| LRRC26   | 0.270544542      | 0.44062595  | 4.263156531           | 2.41E-05         | 1.225258534 |
| TNIK     | -0.335219853     | 1.781329899 | -4.263063118          | 2.41E-05         | 1.224874389 |
| Gene     | Log2FC  | P.Value | q.Value | p.Value | Log2FC  |
|----------|---------|---------|---------|---------|---------|
| HIPK1    | -0.2069 | 3.2812  | 4.2630  | 2.41E-05| 1.2248  |
| PCK1     | 0.2459  | 0.2084  | 4.2630  | 2.41E-05| 1.2246  |
| MMP28    | -0.6177 | 2.4803  | 4.2630  | 2.42E-05| 1.2231  |
| SRGAP3-AS2| -0.4136 | 0.7438  | 4.2630  | 2.42E-05| 1.2218  |
| GAL3ST1  | 0.2984  | 1.2088  | 4.2630  | 2.42E-05| 1.2214  |
| TEKT1    | -0.3686 | 0.7007  | 4.2630  | 2.42E-05| 1.2213  |
| MRPL13   | 0.2409  | 3.2198  | 4.2630  | 2.42E-05| 1.2213  |
| CTA-398F10.2 | 0.2083 | 0.6039  | 4.2630  | 2.42E-05| 1.2213  |
| XPOT     | 0.2456  | 0.6039  | 4.2630  | 2.42E-05| 1.2213  |
| CROT     | -0.2012 | 1.9614  | 4.2630  | 2.42E-05| 1.2213  |
| SNED1    | -0.2515 | 1.7441  | 4.2630  | 2.42E-05| 1.2213  |
| GTO2     | 0.2486  | 1.1946  | 4.2630  | 2.42E-05| 1.2213  |
| STRA13   | 0.2872  | 4.7082  | 4.2630  | 2.42E-05| 1.2213  |
| PRKAB1   | 0.2366  | 3.5759  | 4.2630  | 2.42E-05| 1.2213  |
| MIR22HG  | -0.2443 | 2.8067  | 4.2630  | 2.42E-05| 1.2213  |
| ADAMTS9  | -0.2264 | 1.1845  | 4.2630  | 2.42E-05| 1.2213  |
| CH507-42P11.8 | 0.4209 | 2.0356  | 4.2630  | 2.42E-05| 1.2213  |
| FAM84A   | 0.3787  | 1.4854  | 4.2630  | 2.42E-05| 1.2213  |
| TRIM47   | -0.2981 | 3.9228  | 4.2630  | 2.42E-05| 1.2213  |
| CRLF1    | 0.9219  | 3.3301  | 4.2630  | 2.42E-05| 1.2213  |
| NINJ1    | -0.2364 | 4.6128  | 4.2630  | 2.42E-05| 1.2213  |
| HIF1A    | -0.2810 | 5.4169  | 4.2630  | 2.42E-05| 1.2213  |
| RP11-48B3.4 | 0.2160 | 1.0191  | 4.2630  | 2.42E-05| 1.2213  |
| PDCD11   | 0.2002  | 3.0914  | 4.2630  | 2.42E-05| 1.2213  |
| PRRG2    | 0.2286  | 2.8207  | 4.2630  | 2.42E-05| 1.2213  |
| SPON2    | -0.3904 | 2.8116  | 4.2630  | 2.42E-05| 1.2213  |
| PSMD11   | 0.2021  | 4.1914  | 4.2630  | 2.42E-05| 1.2213  |
| PRC1     | 0.3378  | 2.6252  | 4.2630  | 2.42E-05| 1.2213  |
| DPP4     | -0.6383 | 4.0393  | 4.2630  | 2.42E-05| 1.2213  |
| KIAA0895L| 0.2838  | 2.2307  | 4.2630  | 2.42E-05| 1.2213  |
| HCAR1    | 0.4006  | 1.2849  | 4.2630  | 2.42E-05| 1.2213  |
| SNX9     | -0.2058 | 3.9631  | 4.2630  | 2.42E-05| 1.2213  |
| HSD17B6  | -0.5330 | 2.6661  | 4.2630  | 2.42E-05| 1.2213  |
| Gene   | Expression 1 | Expression 2 | Expression 3 | Expression 4 | Expression 5 |
|--------|--------------|--------------|--------------|--------------|--------------|
| CEBPA  | -0.427572947 | 2.959695789  | -4.232557815 | 2.75E-05     | 1.099845562  |
| CCDC146| -0.283142304 | 1.272840449  | -4.231681341 | 2.76E-05     | 1.096265591  |
| SEPHS2 | 0.252236529  | 5.375548401  | 4.227709444  | 2.81E-05     | 1.080050971  |
| SNHG1  | 0.297568676  | 3.36177299   | 4.226244317  | 2.83E-05     | 1.074073404  |
| SEPHS2 | 0.252236529  | 5.375548401  | 4.227709444  | 2.81E-05     | 1.080050971  |
| UCHL1  | 0.799951155  | 3.402512414  | 4.22556027   | 2.84E-05     | 1.071302625  |
| CACNB3 | 0.268788509  | 2.578233237  | 4.22280962   | 2.87E-05     | 1.060032465  |
| TMED2  | 0.216079642  | 6.654627567  | 4.222750524  | 2.87E-05     | 1.059826876  |
| FOXA1  | 0.428442269  | 4.10534492   | 4.221473307  | 2.89E-05     | 1.054621541  |
| RHBDL1 | 0.351676863  | 1.715243009  | 4.22031234   | 2.90E-05     | 1.049683064  |
| RP11-494O16.3 | -0.293859093 | 1.054509745 | -4.219780535 | 2.91E-05     | 1.047724864  |
| BUB1B  | 0.330871021  | 1.953472976  | 4.218673234  | 2.92E-05     | 1.054621541  |
| FAR2   | -0.247847644 | 1.23784519   | -4.217258383 | 2.94E-05     | 1.037453909  |
| RASL11A| -0.376538806 | 2.564070362  | -4.212509096 | 3.00E-05     | 1.018128905  |
| POLR3GL| -0.209575546 | 3.99942348   | -4.211957444 | 3.01E-05     | 1.015885529  |
| GNRH2  | 0.21458864   | 0.264343716  | 4.21099595   | 3.02E-05     | 1.011976125  |
| SMPD1  | -0.217913588 | 3.980828791  | -4.217057617 | 3.02E-05     | 1.011007199  |
| VMO1   | -0.37907384  | 2.480331044  | -4.209404261 | 3.04E-05     | 1.00506189   |
| TUBA4B | -0.329937732 | 0.675864119  | -4.20847123  | 3.05E-05     | 1.001779221  |
| NUDT19 | 0.222322986  | 3.304962282  | 4.207231057  | 3.07E-05     | 0.996676178  |
| SNHG7  | 0.277499964  | 2.883601994  | 4.205630699  | 3.09E-05     | 0.990173867  |
| RP11-130L8.2 | 0.260257733 | 0.865963893  | 4.205256364  | 3.09E-05     | 0.988656423  |
| ELMO3  | 0.303022863  | 4.109916574  | 4.204813714  | 3.10E-05     | 0.986907904  |
| RP11-504P24.8 | 0.29497296 | 1.847177468  | 4.203696617  | 3.11E-05     | 0.98234351  |
| PROC   | 0.377605251  | 1.034804147  | 4.20281344  | 3.13E-05     | 0.978743575  |
| MTA1   | 0.2220639    | 3.099240975  | 4.201931606  | 3.14E-05     | 0.975405057  |
| CD47   | -0.281463128 | 4.873362912  | -4.201136799 | 3.15E-05     | 0.971937056  |
| ARHGAP23 | -0.27068021 | 2.474938801  | -4.20061391 | 3.16E-05     | 0.969815989  |
| SRCIN1 | 0.254824774  | 1.150040643  | 4.200220458  | 3.16E-05     | 0.968220136  |
| BSPRY  | 0.287854812  | 3.87293543   | 4.199698719  | 3.17E-05     | 0.966104163  |
| FAM168B| 0.204523186  | 4.390550047  | 4.197679289  | 3.20E-05     | 0.957918626  |
| RP11-51F16.1 | -0.283324152 | 1.338200779  | -4.197137916 | 3.20E-05     | 0.955722075  |
| AUNIP  | 0.225988651  | 1.02919656   | 4.194338207  | 3.24E-05     | 0.94437816   |
| CEP72  | 0.211937583  | 1.683449563  | 4.193182968  | 3.26E-05     | 0.939699392  |
| Gene     | Value 1  | Value 2  | Value 3  | Value 4  | Value 5  |
|----------|---------|---------|---------|---------|---------|
| CTD-2134A5.3 | 0.258358935 | 1.507503104 | 4.192748672 | 3.26E-05 | 0.937940787 |
| CDIP1    | -0.254259461 | 2.942827489 | -4.19122659 | 3.28E-05 | 0.931778179 |
| NPM3     | 0.264793781 | 4.580040112 | 4.191002068 | 3.29E-05 | 0.93086993  |
| RP5-1119A7.14 | 0.265109609 | 0.52210172  | 4.189749577 | 3.31E-05 | 0.925801104 |
| RP11-329L6.2 | 0.281496105 | 1.512120912 | 4.186800883 | 3.35E-05 | 0.913873232 |
| RP11-476D10.1 | -0.298384143 | 2.870851593 | 4.184999579 | 3.44E-05 | 0.88841018  |
| CTSV     | 0.264793781 | 2.942827489 | -4.19122659 | 3.28E-05 | 0.931778179 |
| ZMYND8   | 0.25710771  | 3.301295461 | 4.186800883 | 3.35E-05 | 0.913873232 |
| PLA2G10  | 0.516470594 | 1.811125391 | 4.18517182  | 3.37E-05 | 0.907286948 |
| APOO     | 0.212575758 | 3.453927053 | 4.183875555 | 3.39E-05 | 0.902047794 |
| ZMYND8   | 0.264793781 | 2.942827489 | -4.19122659 | 3.28E-05 | 0.931778179 |
| NPM3     | 0.264793781 | 4.580040112 | 4.191002068 | 3.29E-05 | 0.93086993  |
| RP5-1119A7.14 | 0.265109609 | 0.52210172  | 4.189749577 | 3.31E-05 | 0.925801104 |
| RP11-329L6.2 | 0.281496105 | 1.512120912 | 4.186800883 | 3.35E-05 | 0.913873232 |
| RP11-476D10.1 | -0.298384143 | 2.870851593 | 4.184999579 | 3.44E-05 | 0.88841018  |
| CTSV     | 0.25710771  | 3.301295461 | 4.186800883 | 3.35E-05 | 0.913873232 |
| ZMYND8   | 0.264793781 | 2.942827489 | -4.19122659 | 3.28E-05 | 0.931778179 |
| NPM3     | 0.264793781 | 4.580040112 | 4.191002068 | 3.29E-05 | 0.93086993  |
| RP5-1119A7.14 | 0.265109609 | 0.52210172  | 4.189749577 | 3.31E-05 | 0.925801104 |
| RP11-329L6.2 | 0.281496105 | 1.512120912 | 4.186800883 | 3.35E-05 | 0.913873232 |
| RP11-476D10.1 | -0.298384143 | 2.870851593 | 4.184999579 | 3.44E-05 | 0.88841018  |
| CTSV     | 0.25710771  | 3.301295461 | 4.186800883 | 3.35E-05 | 0.913873232 |
| ZMYND8   | 0.264793781 | 2.942827489 | -4.19122659 | 3.28E-05 | 0.931778179 |
| NPM3     | 0.264793781 | 4.580040112 | 4.191002068 | 3.29E-05 | 0.93086993  |
| RP5-1119A7.14 | 0.265109609 | 0.52210172  | 4.189749577 | 3.31E-05 | 0.925801104 |
| RP11-329L6.2 | 0.281496105 | 1.512120912 | 4.186800883 | 3.35E-05 | 0.913873232 |
| RP11-476D10.1 | -0.298384143 | 2.870851593 | 4.184999579 | 3.44E-05 | 0.88841018  |

**Gene Function and Expression**

- **CDIP1**:encoder of unknown function.
- **NPM3**:encoding an RNA binding protein.
- **RP5-1119A7.14**:protein kinase activity.
- **RP11-329L6.2**:encoding an unknown protein.
- **RP11-476D10.1**:encoding an unknown protein.
- **CTSV**:tyrosine kinase activity.
- **ZMYND8**:encoding a nuclear receptor.
- **NPM3**:encoding a zinc finger protein.
- **RP5-1119A7.14**:protein kinase activity.
- **RP11-329L6.2**:encoding an unknown protein.
- **RP11-476D10.1**:encoding an unknown protein.
- **CTSV**:tyrosine kinase activity.
- **ZMYND8**:encoding a nuclear receptor.
- **NPM3**:encoding a zinc finger protein.
- **RP5-1119A7.14**:protein kinase activity.
- **RP11-329L6.2**:encoding an unknown protein.
- **RP11-476D10.1**:encoding an unknown protein.
- **CTSV**:tyrosine kinase activity.
- **ZMYND8**:encoding a nuclear receptor.
- **NPM3**:encoding a zinc finger protein.
- **RP5-1119A7.14**:protein kinase activity.
- **RP11-329L6.2**:encoding an unknown protein.
- **RP11-476D10.1**:encoding an unknown protein.
- **CTSV**:tyrosine kinase activity.
- **ZMYND8**:encoding a nuclear receptor.
- **NPM3**:encoding a zinc finger protein.
- **RP5-1119A7.14**:protein kinase activity.
- **RP11-329L6.2**:encoding an unknown protein.
- **RP11-476D10.1**:encoding an unknown protein.
- **CTSV**:tyrosine kinase activity.
- **ZMYND8**:encoding a nuclear receptor.
- **NPM3**:encoding a zinc finger protein.
- **RP5-1119A7.14**:protein kinase activity.
- **RP11-329L6.2**:encoding an unknown protein.
- **RP11-476D10.1**:encoding an unknown protein.
- **CTSV**:tyrosine kinase activity.
- **ZMYND8**:encoding a nuclear receptor.
- **NPM3**:encoding a zinc finger protein.
- **RP5-1119A7.14**:protein kinase activity.
- **RP11-329L6.2**:encoding an unknown protein.
- **RP11-476D10.1**:encoding an unknown protein.
- **CTSV**:tyrosine kinase activity.
- **ZMYND8**:encoding a nuclear receptor.
- **NPM3**:encoding a zinc finger protein.
- **RP5-1119A7.14**:protein kinase activity.
- **RP11-329L6.2**:encoding an unknown protein.
- **RP11-476D10.1**:encoding an unknown protein.
- **CTSV**:tyrosine kinase activity.
- **ZMYND8**:encoding a nuclear receptor.
- **NPM3**:encoding a zinc finger protein.
| Gene     | Value1   | Value2   | Value3   | Value4   | Value5   |
|----------|----------|----------|----------|----------|----------|
| MGLL     | -0.374   | 4.1719   | -4.160   | 3.75E-05 | 0.806    |
| RP11-498C9.12 | 0.205 | 0.6265 | 4.1599 | 3.75E-05 | 0.8056   |
| DLGAP1-AS1 | 0.2873 | 2.3350 | 4.1598 | 3.75E-05 | 0.8054   |
| LIPG     | -0.206   | 0.7775   | -4.1591 | 3.76E-05 | 0.8024   |
| C10orf107 | -0.325   | 0.9200   | -4.1590 | 3.77E-05 | 0.8019   |
| TTC29    | -0.208   | 0.3364   | 4.1599 | 3.80E-05 | 0.7935   |
| NSUN7    | 0.2080   | 1.7453   | 4.1566 | 3.80E-05 | 0.7921   |
| MAP1A    | -0.273   | 2.3350   | 4.1598 | 3.81E-05 | 0.7897   |
| DACT2    | 0.4563   | 1.1840   | 4.1544 | 3.84E-05 | 0.7836   |
| TMBIM1   | -0.238   | 5.5399   | -4.1559 | 3.85E-05 | 0.7819   |
| BRAT1    | 0.2145   | 1.7453   | 4.1549 | 3.87E-05 | 0.7769   |
| LRRCC75A-AS1 | 0.3277 | 5.9311 | 4.1526 | 3.87E-05 | 0.7763   |
| TBC1D8   | 0.3050   | 2.7368   | 4.1522 | 3.87E-05 | 0.7747   |
| EMC6     | 0.2018   | 2.0926   | 4.1517 | 3.88E-05 | 0.7726   |
| CAMK2N1  | -0.465   | 3.4515   | -4.1513 | 3.89E-05 | 0.7709   |
| CGREF1   | 0.3674   | 1.1552   | 4.1509 | 3.90E-05 | 0.7694   |
| SNHG3    | 0.3077   | 2.9324   | 4.1492 | 3.93E-05 | 0.7624   |
| POLE     | 0.2069   | 1.8032   | 4.1490 | 3.93E-05 | 0.7617   |
| CALCOCO1 | 0.2199   | 3.1938   | 4.1479 | 3.95E-05 | 0.7574   |
| MASTL    | 0.2118   | 2.3976   | 4.1465 | 3.97E-05 | 0.7518   |
| SH3YL1   | -0.2127  | 2.6679   | 4.1446 | 4.00E-05 | 0.7441   |
| ASNS     | 0.3091   | 3.1359   | 4.1442 | 4.01E-05 | 0.7426   |
| MT1E     | -0.5244  | 4.5206   | -4.1434 | 4.02E-05 | 0.7395   |
| HCG4P5   | -0.5504  | 2.8966   | -4.1429 | 4.03E-05 | 0.7375   |
| URB1     | 0.2271   | 2.5699   | 4.1417 | 4.05E-05 | 0.7325   |
| UCK2     | 0.3417   | 2.2113   | 4.1373 | 4.13E-05 | 0.7148   |
| TEAD3    | 0.2170   | 4.0149   | 4.1370 | 4.13E-05 | 0.7136   |
| LOXL2    | -0.4244  | 3.0486   | -4.1367 | 4.14E-05 | 0.7127   |
| TSPYL4   | -0.2023  | 2.6476   | -4.1346 | 4.17E-05 | 0.7041   |
| C11orf88 | -0.2728  | 0.4871   | -4.1345 | 4.18E-05 | 0.7037   |
| AKAP14   | -0.2651  | 0.4764   | -4.1324 | 4.21E-05 | 0.6955   |
| PAQR6    | 0.2751   | 1.1170   | 4.1311 | 4.23E-05 | 0.6903   |
| CDC45    | 0.3413   | 2.0410   | 4.1295 | 4.26E-05 | 0.6839   |
| Gene       | Log2 Fold Change | FDR  | Log2 Fold Change | FDR  | Log2 Fold Change | FDR  | Log2 Fold Change | FDR  | Log2 Fold Change | FDR  |
|------------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|
| GS1-358P8.4| -0.222353976    | 0    | -4.124812459    | 0    | 4.35E-05        | 0    | 0.664936465     | 0    |
| FDPS       | 0.209050526     | 0    | 4.124562936     | 0    | 4.35E-05        | 0    | 0.663941414     | 0    |
| PPP1R3B    | 0.31774203      | 0    | 4.124439822     | 0    | 4.36E-05        | 0    | 0.663450482     | 0    |
| MROH1      | 0.233533504     | 0    | 4.124239987     | 0    | 4.36E-05        | 0    | 0.662653645     | 0    |
| RAB30-AS1  | 0.205156371     | 0    | 4.123989316     | 0    | 4.36E-05        | 0    | 0.661654147     | 0    |
| FANCI      | 0.266626926     | 0    | 4.122900802     | 0    | 4.36E-05        | 0    | 0.657314592     | 0    |
| CCT6A      | 0.247739903     | 0    | 4.118627943     | 0    | 4.40E-05        | 0    | 0.65326235      | 0    |
| FZD2       | -0.31333912     | 0    | 4.120428149     | 0    | 4.43E-05        | 0    | 0.64740895      | 0    |
| ZMAT4      | 0.254145573     | 0    | 4.115999376     | 0    | 4.46E-05        | 0    | 0.64028635      | 0    |
| EHD3       | -0.211600787    | 0    | 4.115999376     | 0    | 4.46E-05        | 0    | 0.63197789      | 0    |
| SLC12A4    | -0.203682743    | 0    | 4.115999376     | 0    | 4.46E-05        | 0    | 0.629825715     | 0    |
| ARNTL2     | -0.405357309    | 0    | 4.114898825     | 0    | 4.54E-05        | 0    | 0.62521299      | 0    |
| CYS1       | -0.366080785    | 0    | 4.114646573     | 0    | 4.54E-05        | 0    | 0.624442445     | 0    |
| RASSF3     | -0.224539653    | 0    | 4.114639756     | 0    | 4.54E-05        | 0    | 0.624415325     | 0    |
| FOXP4      | 0.269601459     | 0    | 4.111379068     | 0    | 4.60E-05        | 0    | 0.612389611     | 0    |
| PCGF2      | 0.231855908     | 0    | 4.111379068     | 0    | 4.60E-05        | 0    | 0.61144736      | 0    |
| HCG4       | -0.216824276    | 0    | 4.110140046     | 0    | 4.63E-05        | 0    | 0.606521345     | 0    |
| ACTL6A     | 0.220192433     | 0    | 4.108458968     | 0    | 4.66E-05        | 0    | 0.599840901     | 0    |
| AC007318.5 | 0.260360111     | 0    | 4.108010668     | 0    | 4.67E-05        | 0    | 0.598059833     | 0    |
| CXCL1      | -0.568041251    | 0    | 4.107304502     | 0    | 4.68E-05        | 0    | 0.595254644     | 0    |
| MAMSTR     | 0.218013888     | 0    | 4.105732966     | 0    | 4.71E-05        | 0    | 0.589013458     | 0    |
| SPTLC3     | -0.290949634    | 0    | 4.104875071     | 0    | 4.73E-05        | 0    | 0.585607359     | 0    |
| STEAP1     | -0.500811635    | 0    | 4.103996411     | 0    | 4.75E-05        | 0    | 0.582119512     | 0    |
| ITGA6      | -0.411097794    | 0    | 4.103258944     | 0    | 4.76E-05        | 0    | 0.579192665     | 0    |
| NUF2       | 0.356645094     | 0    | 4.102593677     | 0    | 4.77E-05        | 0    | 0.576552789     | 0    |
| PPFIA3     | 0.224069497     | 0    | 4.102080695     | 0    | 4.78E-05        | 0    | 0.574517476     | 0    |
| ZBTB7B     | 0.215651022     | 0    | 4.100930398     | 0    | 4.81E-05        | 0    | 0.569954404     | 0    |
| RAP1GAP    | 0.500741412     | 0    | 4.099672151     | 0    | 4.83E-05        | 0    | 0.564964481     | 0    |
| EPB41L5    | 0.234931198     | 0    | 4.099273326     | 0    | 4.84E-05        | 0    | 0.563383127     | 0    |
| SLC6A14    | -0.611243855    | 0    | 4.097970219     | 0    | 4.87E-05        | 0    | 0.558217277     | 0    |
| MYCN       | 0.43434803      | 0    | 4.095882376     | 0    | 4.91E-05        | 0    | 0.54994373      | 0    |
| IGHD2-8    | -0.219726652    | 0    | 4.094809699     | 0    | 4.93E-05        | 0    | 0.545694541     | 0    |
| AURKB      | 0.395098343     | 0    | 4.094677988     | 0    | 4.93E-05        | 0    | 0.545172868     | 0    |
| Gene         | Value 1  | Value 2  | Value 3  | Value 4   | Value 5  |
|--------------|---------|---------|---------|----------|---------|
| ZNF579       | 0.202819551 | 2.100299964 | 4.092624417 | 4.98E-05 | 0.537041212 |
| ALDH1L2      | -0.257317634 | 1.20319915 | -4.092257397 | 4.98E-05 | 0.5355883 |
| ADORA1       | -0.383898786 | 1.381083494 | -4.09074986 | 5.02E-05 | 0.529261815 |
| PPP2R2C      | 0.37493817 | 0.793307741 | 4.09017758 | 5.03E-05 | 0.527357291 |
| RP11-466H18.1| 0.30048892 | 4.462282292 | 4.09034493 | 5.03E-05 | 0.52702611 |
| KLHDC9       | 0.291007429 | 2.049917627 | 4.086415214 | 5.11E-05 | 0.512477426 |
| RP11-169F17.1| 0.360102797 | 0.787408923 | 4.08922785 | 5.12E-05 | 0.500291946 |
| ERLIN2       | 0.227346102 | 3.101765128 | 4.081487226 | 5.21E-05 | 0.510530857 |
| PV1T1        | 0.261241112 | 1.709058542 | 4.07922785 | 5.12E-05 | 0.510350857 |
| CKS1B        | -0.355593551 | 1.506828144 | -4.08071466 | 5.23E-05 | 0.489956572 |
| DLX4         | 0.23869351 | 0.849672335 | 4.081471484 | 5.21E-05 | 0.492944824 |
| GUCY1B2      | 0.23869351 | 0.849672335 | 4.081471484 | 5.21E-05 | 0.492944824 |
| MIR4635      | -0.355593551 | 1.506828144 | -4.08071466 | 5.23E-05 | 0.489956572 |
| TSNARe1      | 0.255940933 | 2.230692637 | 4.07922785 | 5.26E-05 | 0.484133516 |
| ENKUR        | -0.270407199 | 0.695997778 | -4.078292101 | 5.28E-05 | 0.480394806 |
| SLC25A21-AS1 | 0.209624539 | 1.066669189 | 4.075067877 | 5.35E-05 | 0.46767713 |
| PLAC4        | 0.228970628 | 0.190809615 | 4.074373409 | 5.37E-05 | 0.464939091 |
| CECR2        | 0.265588981 | 0.971982702 | 4.07253856 | 5.41E-05 | 0.45768850 |
| DENND4C      | -0.203386168 | 2.579432767 | -4.072429758 | 5.41E-05 | 0.457278291 |
| FBXL6        | 0.241320007 | 2.984371056 | 4.072390519 | 5.41E-05 | 0.457123669 |
| ECH1         | 0.220055164 | 5.646811297 | 4.071434932 | 5.44E-05 | 0.453385565 |
| SHANK3       | -0.220533143 | 2.007479652 | -4.06973282 | 5.47E-05 | 0.446892219 |
| BCL2L10      | 0.219486978 | 0.5273713 | 4.068240145 | 5.51E-05 | 0.440776776 |
| PRKACB       | -0.276440749 | 2.71160758 | -4.067911665 | 5.52E-05 | 0.439483669 |
| CCL28        | -0.356701144 | 1.70124996 | -4.067520968 | 5.53E-05 | 0.437945768 |
| IFFO2        | -0.26054159 | 2.33912818 | -4.06575167 | 5.57E-05 | 0.431004632 |
| NR2F2        | -0.248408564 | 3.068632747 | -4.063670082 | 5.61E-05 | 0.422794907 |
| C1orf226     | 0.279274323 | 2.491561974 | 4.061690393 | 5.66E-05 | 0.415011277 |
| RP11-307C12.11| 0.217031851 | 1.409707092 | 4.061044584 | 5.68E-05 | 0.412472888 |
| FNM1         | -0.211346261 | 1.083963262 | -4.059684366 | 5.71E-05 | 0.407127712 |
| RP11-320G10.1| 0.211429883 | 0.283059578 | 4.058286778 | 5.74E-05 | 0.402508204 |
| PFKM         | 0.20706906 | 2.767597007 | 4.055758504 | 5.80E-05 | 0.391709856 |
| AC098973.2   | 0.336531703 | 0.453591058 | 4.055758504 | 5.80E-05 | 0.391709856 |
| Gene     | T      | X      | Y      | Z      | Result |
|----------|--------|--------|--------|--------|--------|
| TSTD1    | 0.3057 | 5.0353 | 4.0551 | 5.82E-05 | 0.3892 |
| ZDHHC12  | 0.2091 | 4.0642 | 4.0550 | 5.82E-05 | 0.3890 |
| RIMKLA   | 0.2927 | 1.1294 | 4.0543 | 5.84E-05 | 0.3861 |
| KLHL5    | -0.2779| 3.2067 | -4.0500| 5.94E-05 | 0.3693 |
| SMIM10   | -0.2436| 1.8173 | -4.0500| 5.94E-05 | 0.3690 |
| PLK2     | -0.3218| 3.2993 | -4.0499| 5.94E-05 | 0.3689 |
| CTPS1    | 0.2340 | 2.8560 | 4.0498 | 5.97E-05 | 0.3680 |
| C22orf15 | -0.2176| 0.4093 | -4.0497| 6.03E-05 | 0.3626 |
| KIFC1    | 0.3748 | 2.8583 | 4.0487 | 5.97E-05 | 0.3639 |
| FAM118B  | -0.2062| 2.7555 | -4.0483| 6.03E-05 | 0.3625 |
| RPL7P1   | 0.2879 | 1.6979 | 4.0462 | 6.03E-05 | 0.3543 |
| CLEC3B   | -0.4237| 2.6822 | -4.0457| 6.05E-05 | 0.3523 |
| MICA     | -0.2309| 3.1374 | -4.0455| 6.05E-05 | 0.3517 |
| GPR87    | -0.6129| 1.8810 | -4.0474| 6.07E-05 | 0.3485 |
| SORBS2   | 0.3238 | 1.5927 | 4.0442 | 6.08E-05 | 0.3466 |
| PRSS23   | -0.3423| 3.5537 | -4.0429| 6.12E-05 | 0.3417 |
| WDR38    | -0.4199| 0.9918 | -4.0399| 6.19E-05 | 0.3296 |
| CRABP2   | -0.8162| 6.1438 | -4.0391| 6.21E-05 | 0.3265 |
| CA3      | -0.2754| 0.9679 | -4.0388| 6.22E-05 | 0.3255 |
| NATD1    | -0.2191| 2.0192 | -4.0374| 6.26E-05 | 0.3200 |
| MIR34A   | -0.2450| 1.0479 | -4.0364| 6.28E-05 | 0.3159 |
| RASAL1   | 0.3127 | 1.4875 | 4.0363 | 6.29E-05 | 0.3156 |
| RP11-284F21.7 | 0.4124 | 1.4437 | 4.0351 | 6.32E-05 | 0.3108 |
| ITGB6    | -0.4543| 4.4354 | -4.0348| 6.32E-05 | 0.3098 |
| OGDHL    | 0.2567 | 0.4943 | 4.0331 | 6.37E-05 | 0.3033 |
| RP11-1398P2.1 | -0.2362| 1.5824 | -4.0329| 6.37E-05 | 0.3023 |
| POU6F2-AS2 | 0.2885 | 0.4535 | 4.0319 | 6.40E-05 | 0.2986 |
| UPP1     | -0.3339| 3.7549 | -4.0319| 6.40E-05 | 0.2984 |
| DYRK2    | -0.2096| 2.3431 | -4.0312| 6.42E-05 | 0.2957 |
| FUT1     | 0.2171 | 1.5817 | 4.0275 | 6.52E-05 | 0.2815 |
| ACY1P1   | 0.2017 | 1.8715 | 4.0252 | 6.58E-05 | 0.2723 |
| STOML3   | -0.2870| 0.5426 | -4.0249| 6.58E-05 | 0.2711 |
| SPC24    | 0.2853 | 1.8778 | 4.0229 | 6.64E-05 | 0.2634 |
| Gene Symbol | ID | Start | End | Score | Scaled Score |
|-------------|----|-------|-----|-------|--------------|
| CDCP1       | -0.365539293 | 3.416973863 | -3.982815506 | 7.83E-05 | 0.107786163 |
| LINC00152   | -0.242201779 | 2.270304497  | -3.98127361 | 7.85E-05 | 0.105130624 |
| PAK4        | 0.201642413    | 3.403161968  | 3.981264281 | 7.88E-05 | 0.101800621 |
| HRCT1       | -0.255077174   | 1.226469692  | -3.979984176 | 7.92E-05 | 0.096862866 |
| IGHV7-81    | -0.336367735   | 1.27679915   | -3.979181904 | 7.95E-05 | 0.09376902  |
| DRAM1       | -0.394894263   | 4.790400876  | 3.978940092 | 7.95E-05 | 0.092836622 |
| BCOR        | 0.204424247    | 2.755006498  | 3.97836747  | 7.97E-05 | 0.090628869 |
| TMEM54      | 0.266685542    | 5.452758917  | 3.97748871  | 8.00E-05 | 0.087241379 |
| IL17RE      | 0.312258565    | 2.43073897   | 3.977176574 | 8.01E-05 | 0.086038309 |
| DNPH1       | 0.242637073    | 4.534630608  | 3.976529377 | 8.03E-05 | 0.083544093 |
| HTATIP2     | 0.240030828    | 4.560845684  | 3.974712908 | 8.09E-05 | 0.076545683 |
| PDZK1IP1    | -0.580911679   | 5.131075674  | 3.974491862 | 8.10E-05 | 0.075694252 |
| RNU7-45P    | -0.27577624    | 1.108567991  | -3.97412908 | 8.09E-05 | 0.075098976 |
| SHANK2      | 0.200781458    | 1.3883826    | 3.974491862 | 8.10E-05 | 0.075694252 |
| GINS1       | 0.309267886    | 2.097967871  | 3.974337312 | 8.10E-05 | 0.075098976 |
| DSCC1       | 0.273315796    | 1.827399672  | 3.973786974 | 8.12E-05 | 0.072979439 |
| CTDS2P      | -0.202221041   | 5.612354041  | 3.972133281 | 8.18E-05 | 0.066612168 |
| RPS24P8     | 0.208784705    | 1.300218759  | 3.971428358 | 8.20E-05 | 0.063898732 |
| IGLV3-6     | -0.21759614    | 0.417861566  | 3.970792242 | 8.22E-05 | 0.061451234 |
| PAIP2B      | 0.226948586    | 1.546298884  | 3.969449384 | 8.27E-05 | 0.056283555 |
| RBP1        | -0.323461299   | 2.01014596   | -3.969170066 | 8.28E-05 | 0.055209015 |
| RP11-553L6.5 | -0.290416536 | 3.243640327  | -3.96882618 | 8.29E-05 | 0.054186659 |
| DDR1        | 0.250237221    | 5.063990991  | 3.968767922 | 8.29E-05 | 0.053734668 |
| PLEKKG2     | 0.325977601    | 2.78607374  | 3.967173366 | 8.34E-05 | 0.047529745 |
| PPIB        | 0.218910264    | 7.1486469   | 3.966062583 | 8.38E-05 | 0.043259265 |
| DLL3        | 0.387462294    | 0.702697165  | 3.965932774 | 8.39E-05 | 0.042760278 |
| PTPN3       | 0.208695072    | 2.337359771  | 3.964054668 | 8.45E-05 | 0.035542546 |
| RP11-776H12.1 | 0.238879213 | 0.419854269  | 3.963999489 | 8.45E-05 | 0.035330537 |
| RP11-452N17.1 | 0.233698127 | 1.074851136  | 3.963968647 | 8.45E-05 | 0.035212037 |
| CH17-360D5.3 | -0.278559296 | 0.591927479  | -3.963595061 | 8.47E-05 | 0.033776725 |
| PRRX2       | -0.42375782    | 1.93850683   | -3.961491196 | 8.54E-05 | 0.025696072 |
| MIR5195     | -0.257331344   | 0.832843946  | -3.961178714 | 8.55E-05 | 0.024496215 |
| HSPA1B      | 0.286034003    | 5.121118735  | 3.956800781 | 8.70E-05 | 0.007695334 |
| Gene      | CST2     | -0.421359334 | 1.58351153 | -3.956787233 | 8.70E-05 | 0.00764337 |
|-----------|----------|--------------|------------|--------------|----------|------------|
| CNKSR1    | 0.228610013 | 3.342211995  | 3.956478078 | 8.71E-05     | 0.006457612 |
| EFCAB1    | -0.271783797 | 0.547456919  | -3.954106332 | 8.80E-05     | -0.002636285 |
| PDIA4     | 0.254332622 | 7.127944506  | 3.954072288 | 8.80E-05     | -0.002901172 |
| IGF2BP1   | 0.340091637 | 0.503708422  | 3.953549379 | 8.82E-05     | -0.004771047 |
| CMBL      | 0.487652119 | 3.637267945  | 3.952487427 | 8.86E-05     | -0.008840655 |
| CCNB1IP1  | 0.221586046 | 3.220786617  | 3.952364926 | 8.86E-05     | -0.009310035 |
| CTD-2021H9.3 | 0.400975985 | 0.780352791  | 3.951944903 | 8.88E-05     | -0.010344867 |
| AARS      | 0.200752951 | 5.245361256  | 3.951944903 | 8.88E-05     | -0.010919317 |
| COX7A2    | 0.23647158  | 5.490982037  | 3.951944903 | 8.88E-05     | -0.011191651 |
| SELE      | -0.20248445 | 0.592899419  | -3.95039656 | 8.93E-05     | -0.016850261 |
| CPSF1     | 0.246302342 | 4.199145542  | 3.949881816 | 8.95E-05     | -0.01882151  |
| FABP6     | -0.428680126 | 1.696308445  | -3.94674191 | 8.96E-05     | -0.01961559  |
| C9orf24   | -0.437558819 | 1.16059326   | -3.94920579 | 8.98E-05     | -0.021422329 |
| CD302     | -0.275712699 | 2.088540383  | -3.94881094 | 8.99E-05     | -0.022921719 |
| LGMN      | -0.236341061 | 5.853577076  | 3.948071344 | 9.02E-05     | -0.025752931 |
| SMKR1     | 0.430961182  | 1.688795797  | 3.947630196 | 9.03E-05     | -0.027441418 |
| COA3      | 0.228975793  | 5.018008326  | 3.947394514 | 9.04E-05     | -0.028343417 |
| ITPR1     | -0.255405672 | 1.980510267  | -3.94327945 | 9.19E-05     | -0.044084364 |
| ARHGEF40  | -0.223083561 | 2.265635729  | -3.941623627 | 9.25E-05     | -0.05041387  |
| TESC      | 0.762336382  | 4.05669803   | 3.940400903 | 9.30E-05     | -0.055086221 |
| HHLA2     | -0.669850715 | 1.55598104   | -3.938921392 | 9.36E-05     | -0.060738  |
| C11orf96  | -0.375635587 | 3.40984824   | -3.93856911 | 9.37E-05     | -0.062083437 |
| RP11-513G11.4 | 0.252874675 | 0.872834797  | 3.937549149 | 9.41E-05     | -0.065978232 |
| FAM102A   | -0.233719307 | 4.025539865  | -3.935719407 | 9.48E-05     | -0.07296286 |
| F11R      | 0.201848552  | 5.454243068  | 3.935211287 | 9.50E-05     | -0.074901953 |
| DECR2     | 0.219229035  | 2.678580398  | 3.934631178 | 9.52E-05     | -0.077115484 |
| DENND2A   | -0.219734031 | 1.350679591  | -3.929101112 | 9.73E-05     | -0.09820125 |
| MAGEA1    | 0.423625143  | 0.457712424  | 3.928931499 | 9.74E-05     | -0.098847534 |
| TBX15     | 0.388933672  | 1.507808496  | 3.927872566 | 9.78E-05     | -0.102881852 |
| WI2-87327B8.2 | -0.22817159 | 0.648496726  | -3.927861233 | 9.78E-05     | -0.102925001 |
| SLC38A8   | 0.217630189  | 0.232573965  | 3.925308984 | 9.88E-05     | -0.11264427  |
| CLIP4     | -0.214771406 | 2.408306927  | -3.924699584 | 9.91E-05     | -0.114964062 |
| Gene   | ENCG | DCG  | SHISA3 | RPP40  | SLC16A7 | TSPAN19 | RPL10AP6 | SLC26A6 | LDHD   | C11orf53 | WWCC2   | MET     | OAT     | SPAG5   | RSPO4  | ATP2A2 | MAGEH1 | CDC25C | RP11-295M3.4 | PODXL2 | HIST1H4I | HOXB4 | EXO1  | NDNF   | RNF19A | DNAH9 | C6orf132 | BTG2  | SRC    | FOXC1  | ACAT2  | RP11-115H13.1 |
|--------|------|------|--------|--------|---------|---------|----------|---------|--------|---------|---------|--------|--------|--------|--------|--------|--------|--------|----------|--------|----------|-------|-------|--------|--------|--------|---------|-------|--------|--------|--------|----------|
| ENC1   | -0.310589648 | 3.969573382 | -3.924558147 | 9.91E-05 | -0.115502416 |
| DCK    | -0.214833964 | 3.323646597 | -3.923080892 | 9.97E-05 | -0.121124257 |
| ZNF512B| 0.253339739  | 3.191096189 | 3.922897769 | 9.98E-05 | -0.121821013 |
| SHISA3 | -0.662280918 | 1.678490582 | -3.927149295 | 9.99E-05 | -0.122516674 |
| RPP40  | 0.200818607  | 2.018325326 | 3.919822625 | 0.000101051| -0.133516884|
| SLC16A7| -0.257857971 | 1.270293977 | 3.919099454 | 0.000101346| -0.136266112|
| TSPAN19| -0.218784107 | 0.33166403  | -3.918526029 | 0.00010158 | -0.138445719|
| RPL10AP6| 0.222746637 | 1.971613209 | 3.917346713 | 0.000102397| -0.14297247 |
| SLC26A6| 0.229836     | 2.02154729  | -3.91608566 | 0.000102582| -0.147718296|
| LDHD   | 0.354271693  | 2.220348147 | 3.916533201 | 0.00010263 | -0.149576387|
| C11orf53| 0.319127347 | 0.438509399 | 3.916393498 | 0.000102455| -0.146548917|
| WWCC2  | -0.207023822 | 1.98116089  | -3.91608566 | 0.000102582| -0.147718296|
| MET    | -0.566338659 | 4.584485207 | -3.915596473 | 0.000102784| -0.149576387|
| OAT    | 0.309262447  | 5.168263017 | 3.914716854 | 0.000103148| -0.152916918|
| SPAG5  | 0.329673459  | 2.555879381 | 3.913648944 | 0.000103591| -0.156971575|
| RSPO4  | -0.248303632 | 0.724875931 | -3.910629756 | 0.000104856| -0.168429245|
| ATP2A2 | 0.205503166  | 4.928906905 | 3.908670303 | 0.000105684| -0.175860826|
| MAGEH1 | -0.250109751 | 3.789496627 | -3.908664818 | 0.000105686| -0.175881622|
| CDC25C | 0.231151075  | 1.217684213 | 3.90854241  | 0.000105738| -0.176345759|
| RP11-295M3.4| -0.538393729 | 1.845948784 | -3.906623283 | 0.000106556| -0.183620776|
| PODXL2 | 0.541898144  | 4.097929858 | 3.906218098 | 0.000106729| -0.185156321|
| HIST1H4I| 0.309723105 | 3.257339834 | 3.904569463 | 0.000107437| -0.191402668|
| HOXB4  | -0.254903149 | 1.00630486  | -3.90431199 | 0.000107548| -0.192378295|
| EXO1   | 0.286049298  | 1.551799357 | 3.903772832 | 0.000107781| -0.194420053|
| NDNF   | -0.538501859 | 3.720088389 | -3.903248163 | 0.000108008| -0.196407017|
| RNF19A | -0.269689263 | 4.040001927 | -3.902806377 | 0.00010812 | -0.198079901|
| DNAH9  | -0.213281633 | 0.32069196  | -3.902567759 | 0.000108303| -0.198983388|
| C6orf132| 0.226513492 | 2.644760739 | 3.902559139 | 0.000108307| -0.199016025|
| BTG2   | -0.393394428 | 5.496078791 | -3.901173354 | 0.00010891 | -0.204262022|
| SRC    | 0.206331345  | 3.905469652 | 3.898206019 | 0.000110213| -0.215489215|
| FOXC1  | -0.329667086 | 1.879278361 | -3.896869696 | 0.000110805| -0.22055304 |
| ACAT2  | 0.214122298  | 2.681107578 | 3.893717454 | 0.000112211| -0.232456853|
| RP11-115H13.1 | 0.211844019 | 0.311514194 | 3.892703006 | 0.000112667| -0.236289114|
| Gene       | Value 1     | Value 2     | Value 3     | Value 4     | Value 5     |
|------------|------------|------------|------------|------------|------------|
| F2         | 0.25152281 | 0.237902641| 3.892473579| 0.000112771|-0.237155688|
| ORC6       | 0.22981852 | 1.402249048| 3.891839165| 0.000113057|-0.23955169 |
| IFITM2     | -0.291529605| 6.211081226| -3.891798454| 0.000113076|-0.239705433|
| EFHC2      | -0.267100229| 0.966860099| -3.890194119| 0.000113804|-0.245762854|
| PTPN13     | -0.441994136| 2.62306609| -3.889907792| 0.000113934|-0.246843684|
| HMGN4      | -0.210824328| 5.290518178| -3.889224602| 0.000113934|-0.249422285|
| H6PD       | -0.224559947| 3.848451581| -3.886866262| 0.000114246|-0.251452496|
| FKBP3      | 0.210620525| 4.489584065| 3.886802249| 0.000115357|-0.25856167 |
| DAW1       | -0.272753193| 0.741846506| -3.885897372| 0.000115775|-0.261974339|
| PPP1R13B   | 0.246831393| 2.755811998| 3.883095351| 0.000117078|-0.27253719 |
| RP11-98D18.3| 0.229064235| 1.687952329| 3.881626414| 0.000117766|-0.278071814|
| FAM222A    | 0.21699834| 0.91848308| 3.880370218| 0.000118358|-0.282803319|
| RBPMS2     | 0.304146906| 1.580388768| 3.879994644| 0.000118536|-0.284217651|
| AURKAIP1   | 0.211307028| 5.440562229| 3.879245805| 0.00011889 |-0.287037232|
| SGK2       | 0.246321288| 0.824764916| 3.878782502| 0.000119557|-0.292319672|
| BPGM       | -0.225313517| 3.552008909| -3.876110812| 0.000120386|-0.298835775|
| CHTF18     | 0.245537562| 1.918930267| 3.874172059| 0.00012132 |-0.306122775|
| PNKD       | 0.243983375| 4.711207606| 3.873867094| 0.000121467|-0.307274497|
| TRPM2-AS   | 0.228099244| 0.514831047| 3.87343018| 0.000121677|-0.308906544|
| C11orf84   | 0.218057352| 3.30890825| 3.872409619| 0.000122174|-0.312753657|
| PRDX1      | 0.247901326| 7.779782185| 3.871127034| 0.0001228 |-0.31757374 |
| FOXS1      | -0.202219574| 1.24174023| -3.869650119| 0.000123524|-0.323122275|
| CDHR4      | -0.31194268| 0.642367316| 3.867899549| 0.000124388|-0.329696305|
| CHAC1      | 0.256319545| 1.724388197| 3.862685727| 0.000126994|-0.349259545|
| GPER1      | -0.21335804| 0.882903549| -3.8620046| 0.000127338|-0.351813394|
| ATP13A4    | -0.487983588| 2.213079509| -3.861821453| 0.000127431|-0.35250003 |
| ITGB8      | -0.369560986| 1.46696563| -3.861704908| 0.00012749 |-0.352939988|
| FSTL4      | 0.4353838321| 1.30322941| 3.859456663| 0.000128634|-0.361366844|
| MIR23A     | -0.275153637| 0.839153456| -3.861576231| 0.000128023|-0.364395621|
| RP11-187E13.1| 0.224869291| 0.39768752| 3.861138343| 0.000127777|-0.355060804|
| ELANE      | -0.222437063| 0.382274722| -3.860549555| 0.000128023|-0.35867262 |
| RP11-379K22.3| 0.263135927| 0.414030338| 3.859456663| 0.000128634|-0.361366844|
| RP11-56A10.1| -0.270096022| 0.675132605| -3.85864723| 0.000129048|-0.364395621|
| Gene      | Value 1  | Value 2  | Value 3  | Value 4  | Value 5  |
|-----------|---------|---------|---------|---------|---------|
| LRRN4     | -0.542798681 | 2.268476677 | -3.857803671 | 0.000129481 | -0.36755357 |
| HMGCS2    | 0.387677745  | 0.59327386  | 3.857577223  | 0.000129598  | -0.368403458|
| IGHD1-26  | -0.268010964 | 0.422372238 | -3.855433887 | 0.000130705  | -0.376428431|
| RASD1     | 0.639821974  | 4.764572939 | 3.855318469  | 0.000130765  | -0.376860455|
| KIAA0319  | 0.299866184  | 0.752007557 | 3.855244727  | 0.000130803  | -0.377136475|
| MYH9      | -0.256062873 | 7.140234295 | -3.853237577 | 0.000131849  | -0.384647389|
| MRPL55    | 0.207343274  | 4.251094129 | 3.851498959  | 0.000131943  | -0.385322481|
| MAFG      | 0.639821974  | 4.764572939 | 3.855318469  | 0.000130765  | -0.376860455|
| ADI1      | 0.209470589  | 4.367818488 | 3.85082846   | 0.000131144  | -0.393657633|
| GARS      | 0.20254845   | 5.01439159  | 3.850949642  | 0.000133051  | -0.393204533|
| RNU6-850P | 0.291604374  | 1.418384745 | 3.850298461  | 0.000133211  | -0.393882912|
| CTD-2006H14.2 | 0.218622126 | 1.91869675 | 3.85076208  | 0.000133146  | -0.393882912|
| PDE4D     | 0.336550381  | 1.957818488 | 3.848764407  | 0.000134208  | -0.401373096|
| FOX3      | 0.337165597  | 0.607299491 | 3.84848007  | 0.000134357  | -0.402400934|
| PGAP3     | 0.250987295  | 4.02955745  | 3.846070124  | 0.000135648  | -0.411438054|
| TRIL      | -0.301058606 | 1.427664652 | -3.843640152 | 0.000136959  | -0.420510795|
| INTS1     | 0.24759615   | 4.178685151 | 3.841988334  | 0.000137858  | -0.426674766|
| TTC39C    | 0.263918486  | 2.281302028 | 3.838837985  | 0.000139586  | -0.438423779|
| PVRL3     | -0.301088955 | 1.522452627 | -3.838027438 | 0.000140034  | -0.44144519|
| SEMA3G    | -0.203224957 | 1.341478917 | -3.838027438 | 0.000140034  | -0.441445338|
| ZMIZ1     | -0.205501602 | 3.279633452 | -3.836900575 | 0.000140666  | -0.45644709|
| POLE2     | 0.231725492  | 1.554014652 | 3.836445929  | 0.000140913  | -0.447338724|
| TMEM190   | -0.449652131 | 1.135204221 | -3.835630217 | 0.000141368  | -0.450377601|
| ALDH6A1   | 0.235239786  | 2.739763522 | 3.835509087  | 0.000141412  | -0.450672733|
| HDHD3     | 0.220021999  | 3.891371901 | 3.830572032  | 0.00014168   | -0.452456728|
| VWAA3A    | -0.248587058 | 0.46431153 | -3.834832255 | 0.000141814  | -0.453349762|
| SPRR1B    | -0.692884937 | 1.509974119 | -3.834726101 | 0.000141873  | -0.453745106|
| ORC1      | 0.264282484  | 1.592961157 | 3.833942152  | 0.000142313  | -0.456664431|
| MIR4645   | -0.284701461 | 1.070912244 | -3.833695748 | 0.000142452  | -0.457581891|
| OSMR      | -0.326989505 | 4.761046156 | -3.832465345 | 0.000143146  | -0.462162338|
| PDGFB     | -0.255698235 | 2.698525741 | -3.832085881 | 0.000143361  | -0.463574697|
| CLDN1     | -0.483675404 | 4.056611049 | -3.827898999 | 0.000145749  | -0.479149457|
| KLHL35    | 0.237087109  | 0.981161401 | 3.827024948  | 0.000146252  | -0.48239881|
| Gene     | Value1 | Value2 | Value3 | Value4        | Value5   |
|----------|--------|--------|--------|---------------|----------|
| RPL37    | 0.2257 | 6.4028 | 3.8244 | 0.00014776    | -0.4921 |
| DPM3     | 0.3164 | 5.1770 | 3.8243 | 0.00014779    | -0.4922 |
| MANSC1   | 0.2698 | 2.7020 | 3.8238 | 0.00014807    | -0.4940 |
| CXADR    | 0.2582 | 3.1995 | 3.8232 | 0.00014846    | -0.4965 |
| KCNH2    | 0.3493 | 1.1231 | 3.8217 | 0.00014960    | -0.5037 |
| S1PR3    | -0.2055 | 1.5860 | 3.8193 | 0.00015074    | -0.5109 |
| IFT57    | -0.3567 | 4.3208 | 3.8193 | 0.00015322    | -0.5263 |
| MRPS35   | 0.2206 | 5.1141 | 3.8149 | 0.00015336    | -0.5271 |
| PAM      | -0.2660 | 4.7123 | 3.8148 | 0.00015343    | -0.5276 |
| CCNO     | 0.3834 | 2.3235 | 3.8142 | 0.00015377    | -0.5297 |
| XRCC2    | 0.2166 | 1.1860 | 3.8141 | 0.00015386    | -0.5301 |
| RNU6-140P| 0.4138 | 0.6764 | 3.8137 | 0.00015412    | -0.5318 |
| CAD      | 0.2256 | 3.1654 | 3.8123 | 0.00015493    | -0.5367 |
| IGHD1-1  | -0.3074 | 0.5876 | 3.8091 | 0.00015694    | -0.5542 |
| TGFB2-AS1| -0.2437 | 0.8262 | 3.8084 | 0.00015738    | -0.5518 |
| TEF      | -0.2604 | 2.6947 | 3.8061 | 0.00015879    | -0.5599 |
| ESR1     | -0.2383 | 0.7910 | 3.8022 | 0.00016124    | -0.5743 |
| ABCC9    | -0.2076 | 1.0922 | 3.8019 | 0.00016139    | -0.5752 |
| ZNF608   | -0.2324 | 1.8724 | 3.7997 | 0.00016281    | -0.5834 |
| PCSK2    | 0.5934 | 0.8137 | 3.7993 | 0.00016306    | -0.5849 |
| RP5-1057J7.7| 0.2150 | 0.9430 | 3.7993 | 0.00016309    | -0.5851 |
| DEGS2    | 0.3620 | 1.4812 | 3.7981 | 0.00016383    | -0.5893 |
| CYP2J2   | 0.2346 | 1.8054 | 3.7980 | 0.00016386    | -0.5895 |
| GGT7     | 0.2617 | 3.3564 | 3.7938 | 0.00016659    | -0.6050 |
| NWD1     | -0.2428 | 0.5386 | 3.7933 | 0.00016692    | -0.6069 |
| PDE4A    | -0.2037 | 2.7309 | 3.7917 | 0.00016799    | -0.6129 |
| PRKCA    | -0.2825 | 1.9878 | 3.7914 | 0.00016818    | -0.6140 |
| SIMM22   | 0.3994 | 4.4214 | 3.7899 | 0.00016919    | -0.6196 |
| SEL1L3   | -0.2314 | 4.7982 | 3.7899 | 0.00016920    | -0.6197 |
| KCNJ15   | -0.4445 | 2.1112 | 3.7860 | 0.00017180    | -0.6340 |
| RP11-291L22.7| 0.2390 | 1.7666 | 3.7856 | 0.00017206    | -0.6355 |
| SPAG6    | -0.3672 | 0.9916 | 3.7853 | 0.00017222    | -0.6363 |
| VAMP5    | -0.3863 | 5.6731 | 3.7839 | 0.00017318    | -0.6415 |
| Gene     | Value 1  | Value 2  | Value 3  | Value 4  | Value 5  |
|----------|---------|---------|---------|---------|---------|
| ARID3A   | 0.231277891 | 1.795515763 | 3.782561057 | 0.000174137 | -0.646773374 |
| IGLV2-33 | -0.248239791 | 0.696449141 | -3.78182139 | 0.000174641 | -0.64942455 |
| ZC3HAV1L | 0.203579321 | 1.943750169 | 3.778836909 | 0.000176216 | -0.657944537 |
| AC093838.4 | 0.239739684 | 2.886354108 | -3.778210932 | 0.000176685 | -0.660448657 |
| VWA5A    | -0.202816394 | 0.297081845 | -3.776034404 | 0.00017863 | -0.66449916 |
| ZC3HAV1L | 0.206817939 | 1.408342822 | 3.776660625 | 0.000178194 | -0.668449916 |
| C16orf13 | 0.219473014 | 4.793615989 | 3.775573755 | 0.000178951 | -0.67243929 |
| PTPRB    | -0.238546585 | 1.724135546 | -3.774461598 | 0.000179728 | -0.676520357 |
| LIMA1    | -0.215428062 | 3.92402994  | -3.773036062 | 0.000180029 | -0.678092572 |
| WLS      | -0.374724183 | 3.991171829 | -3.772801691 | 0.000180895 | -0.682609287 |
| GPR98    | 0.235786571 | 0.795685825 | 3.771758127 | 0.000181632 | -0.686436028 |
| AC007879.7 | -0.298843221 | 0.889981394 | -3.771720445 | 0.000181659 | -0.68657419 |
| RP11-713M15.2 | 0.368713444 | 1.879717431 | 3.770284871 | 0.000182703 | -0.691968695 |
| GOLM1    | 0.305971855 | 5.981951712 | 3.769196692 | 0.000182974 | -0.692159395 |
| RPLP0    | 0.215056106 | 8.289632858 | 3.76951682 | 0.000183225 | -0.69456151 |
| COL21A1  | -0.288463725 | 1.187440643 | -3.769038659 | 0.000183566 | -0.69643060 |
| COLEC11  | 0.231165523 | 0.70646062 | 3.768389997 | 0.00018403 | -0.698780123 |
| NEK2     | 0.343498625 | 2.328624606 | 3.767289464 | 0.000184821 | -0.702811287 |
| PRSS16   | 0.206909894 | 2.40687418 | 3.765805027 | 0.000185891 | -0.708246896 |
| MSLNL    | 0.35061992 | 0.76994218 | 3.763654649 | 0.000187453 | -0.71617413 |
| GINS4    | 0.214824326 | 1.120485551 | 3.76113933 | 0.000189295 | -0.725381825 |
| CATSPERB | 0.221139527 | 0.700956547 | 3.761069154 | 0.000189347 | -0.725574868 |
| SFTPA1   | -1.091489257 | 7.880445059 | -3.76064523 | 0.000189645 | -0.727054409 |
| UCGG     | -0.204082366 | 4.235753019 | -3.759759855 | 0.000190313 | -0.730361796 |
| CTD-2591A6.2 | 0.219061729 | 0.341893654 | 3.759183325 | 0.000190739 | -0.732469149 |
| VGF      | 0.339682234 | 0.548070886 | 3.757468795 | 0.000192014 | -0.738734355 |
| RPL37P2  | 0.236265115 | 1.295899745 | 3.757179798 | 0.000192233 | -0.739790139 |
| FAM69B   | 0.352644547 | 2.544414442 | 3.756674719 | 0.000192607 | -0.741653141 |
| NUP155   | 0.221182147 | 2.727984211 | 3.755874581 | 0.000193206 | -0.744557484 |
| NR4A3    | -0.314589785 | 1.281771385 | -3.753390911 | 0.000195078 | -0.753624841 |
| RPS24    | 0.216318257 | 7.371429448 | 3.751244745 | 0.000196709 | -0.76145548 |
| Gene  | Coefficient 1 | Coefficient 2 | Coefficient 3 | Coefficient 4 | Coefficient 5 |
|-------|---------------|---------------|---------------|---------------|---------------|
| FNDC3B| -0.20112443   | 3.447255277   | -3.74976278   | 0.00019784    | 0.00019784    |
| HJURP | 0.337953104   | 2.111428066   | 3.74975967    | 0.00019784    | 0.00019784    |
| DNAJB4 | -0.24439542  | 2.370599464   | -3.745527632  | 0.000203698   | 0.000203698   |
| OXLD1 | 0.208925116   | 3.817022052   | 3.74235183    | 0.000203698   | 0.000203698   |
| SYCE3 | 0.242807377   | 1.04311512    | -3.745527632  | 0.000203698   | 0.000203698   |
| LINC00973 | -0.386836979 | 0.59639467    | -3.740953095  | 0.000203698   | 0.000203698   |
| GOLOM4 | -0.212613349  | 2.111428066   | -3.740953095  | 0.000203698   | 0.000203698   |
| SLC43A3 | -0.31669943  | 2.370599464   | -3.740953095  | 0.000203698   | 0.000203698   |
| PEX6 | 0.25731758    | 3.168108862   | 3.74389802    | 0.000203698   | 0.000203698   |
| FAAH  | -0.375668136  | 1.95740244    | -3.74694386   | 0.000203698   | 0.000203698   |
| PKIB  | -0.410911137  | 1.14011031    | 3.733767402   | 0.000203698   | 0.000203698   |
| NXPH4 | -0.210518416  | 5.689121435   | -3.733301702  | 0.000203698   | 0.000203698   |
| CREG1 | -0.238895781  | 1.077971267   | 3.732511811   | 0.000203698   | 0.000203698   |
| CHERST10 | 0.228906908 | 1.897675347   | 3.73239967    | 0.000203698   | 0.000203698   |
| CLPSL2 | 0.266155899   | 0.66602971    | 3.730959118   | 0.000203698   | 0.000203698   |
| LRRC36 | -0.253982748  | 0.695483403   | -3.727659057  | 0.000203698   | 0.000203698   |
| BPIFB2 | 0.638359173   | 1.271273231   | 3.726183528   | 0.000203698   | 0.000203698   |
| AKAP13 | -0.235457698  | 3.265592174   | -3.72555892   | 0.000203698   | 0.000203698   |
| SOCS2 | -0.29999736   | 1.815581807   | -3.725431606  | 0.000203698   | 0.000203698   |
| SLC45A3 | -0.24965347   | 2.1498165419  | -3.724459139  | 0.000203698   | 0.000203698   |
| GINS2 | 0.287822082   | 2.04176701    | 3.724414213   | 0.000203698   | 0.000203698   |
| THBS4 | -0.425381346  | 1.214884771   | -3.723872576  | 0.000203698   | 0.000203698   |
| TARBP1 | 0.219569514   | 2.799914804   | 3.721810747   | 0.000220414   | -0.868432039  |
| IVL  | -0.528284189  | 1.246034201   | -3.720328382  | 0.000221676   | -0.873789162  |
| GADD45G | 0.386034726  | 3.575551077   | 3.718677755   | 0.00022309    | -0.879761951  |
| GLDC  | 0.311944467   | 0.790089267   | 3.717916411   | 0.000223745   | -0.882516025  |
| RNU1-106P | 0.24728658  | 1.219878297   | 3.717745365   | 0.000223892   | -0.88314691  |
| ZYG11A | 0.203893371   | 0.695448895   | 3.716289344   | 0.00022515    | -0.88839997   |
| SLC25A25-AS1 | 0.216128727 | 1.220759336   | 3.715490351   | 0.000225843   | -0.891288468  |
| RALGPS2 | -0.202780558 | 2.180677528   | -3.71509583   | 0.000226186   | -0.892713959  |
| Gene       | Value1    | Value2    | Value3    | Value4    | Value5    |
|------------|-----------|-----------|-----------|-----------|-----------|
| PLAC8      | -0.3995   | 2.0101    | -3.6788   | 0.0002    | -1.0232   |
| RP11-138J23.1 | 0.2111   | 0.4124    | 3.6777    | 0.0002    | -1.0272   |
| HOXD13     | 0.2193    | 0.2103    | 3.6776    | 0.0002    | -1.0277   |
| SYT12      | -0.4105   | 1.3359    | -3.6760   | 0.0002    | -1.0331   |
| PALM       | -0.2525   | 2.0828    | -3.6745   | 0.0002    | -1.0386   |
| UNC13B     | 0.3199    | 4.0736    | 3.6744    | 0.0002    | -1.0389   |
| S100A10    | -0.4105   | 1.3359    | -3.6760   | 0.0002    | -1.0386   |
| E2F8       | 0.2193    | 0.2103    | 3.6777    | 0.0002    | -1.0272   |
| TRIM16     | 0.2669    | 2.0602    | -3.6745   | 0.0002    | -1.0386   |
| IFITM1     | -0.3987   | 6.5924    | -3.6705   | 0.0002    | -1.0529   |
| PABPC1L    | 0.3560    | 2.7639    | 3.6671    | 0.0003    | -1.0652   |
| SLC24A3    | -0.2911   | 1.7506    | -3.6627   | 0.0002    | -1.0681   |
| ZNF281     | 0.2033    | 3.4732    | 3.6627    | 0.0002    | -1.0807   |
| CRYAB      | -0.2741   | 1.9268    | -3.6627   | 0.0002    | -1.0823   |
| GNG4       | 0.3925    | 0.9259    | 3.6617    | 0.0002    | -1.0843   |
| ME1        | 0.3409    | 3.2750    | 3.6605    | 0.0002    | -1.0884   |
| GPI        | 0.2041    | 5.3287    | 3.6580    | 0.0002    | -1.0975   |
| RPS20      | 0.2046    | 8.0211    | 3.6557    | 0.0002    | -1.1056   |
| DSCR8      | 0.2329    | 0.2297    | 3.6556    | 0.0002    | -1.1058   |
| SLC15A2    | -0.3221   | 2.0925    | -3.6552   | 0.0002    | -1.1074   |
| NCAPG2     | 0.2472    | 2.3190    | 3.6543    | 0.0002    | -1.1106   |
| SIX2       | 0.4164    | 1.3679    | 3.6525    | 0.0002    | -1.1171   |
| FBXL19     | 0.2034    | 2.8025    | 3.6524    | 0.0002    | -1.1174   |
| CAMP       | -0.2107   | 0.5825    | -3.6499   | 0.0002    | -1.1261   |
| SNORD104   | 0.3749    | 3.7035    | 3.6490    | 0.0002    | -1.1295   |
| C9orf171   | -0.2414   | 0.5133    | -3.6489   | 0.0002    | -1.1299   |
| SIVA1      | 0.2003    | 3.6256    | 3.6487    | 0.0002    | -1.1306   |
| CCDC42B    | -0.3017   | 0.8527    | -3.6479   | 0.0002    | -1.1331   |
| ST6GAL1    | -0.2817   | 3.8400    | -3.6471   | 0.0002    | -1.1360   |
| ARFGAP1    | 0.2027    | 4.0177    | 3.6462    | 0.0002    | -1.1391   |
| MYCL       | 0.2936    | 1.7576    | 3.6460    | 0.0002    | -1.1399   |
| KIAA1244   | 0.2708    | 2.3330    | 3.6455    | 0.0002    | -1.1417   |
| OVGP1      | 0.2357    | 1.3594    | 3.6434    | 0.0002    | -1.1491   |
| Gene       | Val1  | Val2  | Val3  | Val4   | Val5   |
|------------|-------|-------|-------|--------|--------|
| CHRD       | 0.29579874 | 1.348537977 | 3.643138987 | 0.000297657 | -1.150413473 |
| SPC25      | 0.253787786 | 1.726870796 | 3.64308908 | 0.000297713 | -1.150590547 |
| BEX1       | 0.391089294 | 0.636546672 | 3.642225114 | 0.000298688 | -1.153655619 |
| HIGD1B     | -0.266252466 | 1.816748092 | -3.640941729 | 0.000300142 | -1.158207383 |
| RP11-806H10.4 | 0.203838459 | 1.059766421 | 3.640191291 | 0.000300995 | -1.160868246 |
| RP3-395M20.8 | -0.204234045 | 0.933542231 | -3.640040352 | 0.000301167 | -1.161403373 |
| SCTR       | -0.491789931 | 2.086795821 | -3.637357473 | 0.000304237 | -1.170911556 |
| GLI4       | 0.221515624 | 2.290298741 | 3.635973615 | 0.000305833 | -1.175813382 |
| APCDD1L    | -0.201733099 | 0.502401708 | -3.635179679 | 0.000306752 | -1.178624822 |
| CLGN       | 0.342982373 | 1.118201554 | 3.63348116 | 0.000308726 | -1.184637559 |
| JAG1       | -0.282757624 | 2.642175717 | -3.633440412 | 0.000308773 | -1.184781773 |
| MYH14      | 0.313521538 | 4.344312304 | 3.6325394 | 0.000309826 | -1.187970229 |
| LYPLA1     | 0.252021538 | 4.411959315 | 3.630270649 | 0.00031249 | -1.195995452 |
| RP11-403P17.6 | -0.241544291 | 1.80694505 | 3.629644941 | 0.000313229 | -1.198207926 |
| RCC1       | 0.202756088 | 4.118216212 | 3.629439813 | 0.000313471 | -1.198931696 |
| SPRY1      | -0.236932911 | 3.580292446 | -3.627863341 | 0.000315341 | -1.204505993 |
| NASP       | 0.203430976 | 3.714197848 | 3.627325852 | 0.000315981 | -1.206404953 |
| B4GALT4    | 0.20365085 | 2.438530086 | 3.624198925 | 0.000319727 | -1.217449943 |
| RAD54L     | 0.246687581 | 1.445930626 | 3.623348299 | 0.000320754 | -1.220452404 |
| SGPP2      | -0.386597351 | 4.355897351 | 3.622731157 | 0.0003215 | -1.222630646 |
| PROSER2    | 0.21586566 | 2.479517142 | 3.622731157 | 0.0003215 | -1.222630646 |
| SLC15A1    | 0.277622762 | 0.654505004 | 3.621412344 | 0.000323101 | -1.227284294 |
| FGB        | 0.975671726 | 2.207247513 | 3.619022667 | 0.000326021 | -1.23571257 |
| FOXO6      | 0.291427792 | 1.392258667 | 3.618953756 | 0.000326106 | -1.235955535 |
| CCDC64B    | 0.294067575 | 2.691831282 | 3.618792336 | 0.000326304 | -1.236524656 |
| KIF1A      | 0.477865509 | 0.891196767 | 3.618718941 | 0.000326394 | -1.236783417 |
| CENPF      | 0.318930404 | 2.222772488 | 3.617125193 | 0.000328358 | -1.242401108 |
| SMAD9      | 0.229054287 | 1.1387666 | 3.616875675 | 0.000328666 | -1.243280407 |
| RP11-157P1.4 | 0.299258522 | 2.037722932 | 3.616333102 | 0.000329337 | -1.245192223 |
| MIR635     | -0.213573854 | 2.59826035 | -3.612945015 | 0.00033356 | -1.257124376 |
| PABPC1     | 0.220640194 | 8.261754908 | 3.612013891 | 0.000334729 | -1.26041746 |
| ZBBX       | -0.208898431 | 0.436094661 | -3.608972867 | 0.000338632 | -1.271258204 |
| EDN1       | -0.381220788 | 3.322266226 | -3.608546399 | 0.000339119 | -1.272605763 |
| Gene       | log2FC  | padj    | pval   | log2FoldChange | pValue  |
|------------|---------|---------|--------|----------------|---------|
| MAFK       | 0.325   | 3.578   | 3.607  | 0.00341461     | -1.279  |
| RP3-438O4.4| 0.212   | 0.295   | 3.603  | 0.00345201     | -1.289  |
| CCT2       | 0.241   | 5.067   | 3.602  | 0.00346923     | -1.293  |
| GCLC       | 0.468   | 3.049   | 3.600  | 0.00349373     | -1.300  |
| ST8SIA6-AS1| 0.278   | 0.367   | 3.600  | 0.00350084     | -1.302  |
| CLASRP     | 0.200   | 2.932   | 3.599  | 0.00351172     | -1.305  |
| WNT5A      | -0.279  | 2.109   | 3.597  | 0.00353365     | -1.311  |
| RHOC       | -0.218  | 5.426   | 3.597  | 0.00356599     | -1.319  |
| MCM10      | 0.246   | 1.294   | 3.595  | 0.00359396     | -1.329  |
| PAX9       | 0.336   | 5.578   | 3.593  | 0.00360014     | -1.329  |
| CFb        | -0.355  | 0.484   | 3.592  | 0.00360428     | -1.329  |
| MIR34C     | -0.271  | 3.101   | 3.592  | 0.00360975     | -1.331  |
| NFKBIZ     | -0.307  | 4.398   | 3.589  | 0.00363777     | -1.338  |
| SMPDL3B    | 0.348   | 1.715   | 3.586  | 0.00366985     | -1.346  |
| ISRFC1     | 0.257   | 2.915   | 3.584  | 0.00370856     | -1.356  |
| KIF2C      | 0.344   | 2.606   | 3.588  | 0.00371683     | -1.358  |
| GCLM       | 0.309   | 3.147   | 3.588  | 0.00371899     | -1.358  |
| EEF1A1     | -0.200  | 9.386   | 3.587  | 0.0037026      | -1.354  |
| RP3-340N1.2| -0.437  | 1.770   | 3.586  | 0.00368051     | -1.349  |
| VPS9D1-AS1 | 0.281   | 1.770   | 3.585  | 0.00370856     | -1.356  |
| POLB       | 0.214   | 2.911   | 3.584  | 0.00370856     | -1.356  |
| KIF18B     | 0.296   | 1.735   | 3.584  | 0.00371683     | -1.358  |
| AREG       | -0.621  | 3.868   | 3.583  | 0.00371899     | -1.358  |
| PXDN       | -0.357  | 3.385   | 3.579  | 0.00378882     | -1.376  |
| C11orf97   | -0.250  | 0.495   | 3.577  | 0.00380314     | -1.379  |
| TRAF5      | -0.209  | 1.936   | 3.577  | 0.00380952     | -1.381  |
| CD99       | -0.219  | 5.667   | 3.577  | 0.00381571     | -1.383  |
| TXNRD1     | 0.464   | 5.173   | 3.576  | 0.00382779     | -1.385  |
| GPRC5C     | 0.360   | 3.416   | 3.574  | 0.00384944     | -1.391  |
| ZNF316     | 0.209   | 2.970   | 3.572  | 0.00387773     | -1.398  |
| TPBG       | -0.248  | 2.722   | 3.570  | 0.00391418     | -1.407  |
| RP11-279F6.2| 0.281 | 0.385 | 3.569 | 0.00392023 | -1.409 |
| Gene       | Log2FoldChange | p-Value     | q-Value     | EffectSize | log2Ratio |
|-----------|---------------|-------------|-------------|------------|-----------|
| EBP       | 0.212890222   | 4.36996519  | 3.567404328 | 0.000395475 | -1.416478945 |
| CGNL1     | -0.262482236  | 2.237883573 | -3.566542458 | 0.000396744 | -1.419476266 |
| RP11-543P15.1 | 0.312092112   | 4.614166729 | 3.56628927  | 0.000397118 | -1.420356646 |
| RP13-401N8.1 | 0.283702124   | 1.352584378 | 3.564453671 | 0.000399837 | -1.426737576 |
| RP11-505K9.1 | 0.220261604   | 1.22809503  | 3.56329726  | 0.000401518 | -1.430643106 |
| HSD3B7    | -0.218174989  | 3.241365331 | -3.562844467 | 0.000402235 | -1.43232894  |
| FAM149A   | 0.232430125   | 7.626095121 | 3.55982375  | 0.000406772 | -1.442818293 |
| TPI1      | 0.200600346   | 1.335366714 | 3.558831947 | 0.000405919 | -1.440854328 |
| CALCA     | 0.882359822   | 1.021767155 | 3.55831947  | 0.000408552 | -1.44626046  |
| TOB1      | 0.218036254   | 0.945193062 | 3.555998767 | 0.000411712 | -1.454104223 |
| NEBL      | -0.261579754  | 2.79214323  | 3.547552461 | 0.000425704 | -1.463201512 |
| DNAJC12   | 0.54067728    | 2.763394548 | 3.54690502  | 0.000426275 | -1.469180842 |
| NME1-NME2 | 0.223784724   | 4.637765897 | 3.54880299  | 0.000428347 | -1.491129642 |
| CAPSL     | -0.365615542  | 0.945193062 | -3.544864568 | 0.000429959 | -1.494639014 |
| GRB14     | 0.325139228   | 1.710377808 | 3.544796992 | 0.000430067 | -1.494836765 |
| RP11-356K23.1 | -0.298024253 | 0.691236204 | -3.542930941 | 0.000433045 | -1.50132235  |
| LAMA5     | 0.31733062    | 3.703179737 | 3.542926721 | 0.000433052 | -1.501336816 |
| KIF14     | 0.213288934   | 1.138080682 | 3.542061236 | 0.00043444  | -1.50327075 |
| CRABP1    | 0.414786589   | 0.889477066 | 3.541657481 | 0.000435089 | -1.505721816 |
| FAM3B     | 0.463674537   | 2.628578149 | 3.538784118 | 0.000439733 | -1.515643262 |
| MT1F      | -0.280556305  | 2.288402146 | -3.53713373 | 0.000442222 | -1.521338429 |
| EHBP1L1   | -0.214775128  | 3.851654466 | -3.53671004 | 0.000443115 | -1.522800094 |
| SCGB3A1   | -0.969070899  | 5.413209781 | -3.534221136 | 0.000447204 | -1.531388305 |
| MIR572    | 0.212553272   | 0.308771583 | 3.532079215 | 0.000450752 | -1.538764866 |
| LINCO0578 | 0.246687737   | 1.293006999 | 3.532048422 | 0.000458083 | -1.5387430958 |
| SLC7A5    | 0.4023973     | 4.40105306  | 3.531651943 | 0.000451463 | -1.540236883 |
| CSGALNACT1 | -0.225600533  | 1.961382581 | 3.531262292 | 0.000452112 | -1.541579143 |
| POU6F2    | 0.214944588   | 0.431896976 | 3.53086102  | 0.000452782 | -1.542961291 |
| Gene       | Log2FoldChange | Adj.P. | Log2FoldChange | Adj.P. | Log2FoldChange | Adj.P. | Log2FoldChange | Adj.P. | Log2FoldChange | Adj.P. |
|------------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|
| MFSD6L     | 0.340315719    | 1.391652745 | 3.530204042 | 0.00045388 | -1.545223868 |
| CLDN5      | -0.310160015   | 2.690480284 | -3.529691931 | 0.00045737 | -1.54698726  |
| RP11-245P10.4 | 0.2407656    | 1.042536795 | 3.524723532 | 0.000463137 | -1.564082697 |
| PRR7       | 0.200022167    | 1.327953963 | 3.523758202 | 0.000464786 | -1.56740158  |
| MIR6835    | 0.227915895    | 0.952067878 | 3.522455344 | 0.000468602 | -1.575038102 |
| RPL36A     | 0.202332682    | 4.171460086 | 3.521536088 | 0.000471839 | -1.581466233 |
| AC009299.3 | 0.206878679    | 1.624433011 | 3.519901568 | 0.000471428 | -1.580652373 |
| SPATA18    | -0.31718168    | 1.41490747  | -3.519664563 | 0.000471839 | -1.581466233 |
| FBXL8      | 0.207888981    | 1.84339492  | 3.518514224 | 0.000473839 | -1.585415695 |
| DLK2       | 0.205806237    | 1.021004618 | 3.516765211 | 0.000476895 | -1.591418231 |
| SEC61G     | 0.206085666    | 5.154232623 | 3.514872011 | 0.000480224 | -1.597912408 |
| PDK3       | -0.204917166   | 2.112889924 | -3.51416083 | 0.00048148  | -1.600351089 |
| GSTA4      | 0.298095659    | 3.473167333 | 3.512807362 | 0.000483879 | -1.60499091 |
| INSL4      | 0.426667427    | 0.581825406 | 3.512559142 | 0.000485377 | -1.60720179 |
| ARVCF      | 0.232088169    | 2.085723814 | 3.512162258 | 0.000486965 | -1.610925159 |
| FZD4       | -0.228270402   | 2.225018495 | -3.511075577 | 0.000487023 | -1.611035567 |
| CYCS       | 0.209447306    | 4.762847295 | 3.511043349 | 0.000487023 | -1.611305667 |
| RP11-190J1.3 | 0.265598785  | 0.62343699  | 3.510768296 | 0.000487514 | -1.611977817 |
| CRIPAK     | 0.230053618    | 1.802934212 | 3.510357493 | 0.00048825  | -1.613384976 |
| PIDD1      | 0.200458297    | 1.961287742 | 3.508455789 | 0.000491668 | -1.619897004 |
| RPS7       | 0.226968132    | 6.369180662 | 3.507421926 | 0.000493536 | -1.623435869 |
| RP11-465B22.8 | 0.311094009 | 1.750024101 | 3.50783981 | 0.000494148 | -1.624592421 |
| CEP131     | 0.216402531    | 2.697307497 | 3.506670985 | 0.000494896 | -1.62605679 |
| TMPPRSS13  | 0.290877486    | 2.617974302 | 3.50560858 | 0.000496828 | -1.629640463 |
| HSH2D      | -0.221445766   | 2.873718581 | -3.505119074 | 0.000497772 | -1.631314847 |
| KIF23      | 0.260337234    | 1.81146716  | 3.501431112 | 0.000504489 | -1.643922587 |
| MTL5       | 0.213020843    | 0.81651569  | 3.501310252 | 0.000504713 | -1.644335549 |
| MIR7111    | 0.206750891    | 1.079252014 | 3.499960246 | 0.000507213 | -1.648973936 |
| MLEC       | 0.205318506    | 5.277587676 | 3.498232225 | 0.000510431 | -1.654848135 |
| AGA        | 0.220966233    | 3.736046662 | 3.497497258 | 0.000511805 | -1.657357013 |
| MBOAT2     | -0.263900883   | 2.911085533 | -3.496588488 | 0.000513509 | -1.660458493 |
| TRGJP2     | -0.267395895   | 0.673650308 | -3.496041555 | 0.000514538 | -1.662324713 |
| KLK12      | 0.674817639    | 1.26782669  | 3.493078789 | 0.000520141 | -1.672429299 |
| Gene            | Value1      | Value2      | Value3      | Value4      | Value5      |
|-----------------|-------------|-------------|-------------|-------------|-------------|
| PITPNC1         | 0.267453935 | 2.457201417 | 3.492796517 | 0.000520677 | -1.67339157 |
| NOVA1-AS1       | 0.213551798 | 0.438923898 | 3.490619372 | 0.000524835 | -1.680811008|
| TTL12           | 0.21120912  | 3.70354231  | 3.48968732  | 0.000524941 | -1.68098592 |
| PLS1            | 0.23192181  | 3.6116731   | 3.488958821 | 0.000528027 | -1.686466997|
| LINC01207       | 0.322219174 | 1.022135676 | 3.486914674 | 0.000531981 | -1.693426028|
| CTB-193M12.5    | 0.219424727 | 2.950910189 | 3.485445337 | 0.000534841 | -1.695522175|
| PLA2G6          | 0.30489835  | 0.672139239 | 3.48319383  | 0.000536745 | -1.7017411   |
| SESN3           | -0.271895849| 2.648201099 | -3.485445337| 0.000534841 | -1.698425799|
| TMSB4Y          | 0.204214492 | 0.468098901 | 3.484470708 | 0.000537266 | -1.702645098|
| SNORA80B        | 0.21428879  | 1.024258281 | 3.48319383  | 0.000539356 | -1.706266789|
| RP11-638I8.1    | 0.240043351 | 1.585007498 | 3.482758898 | 0.000540106 | -1.707561859|
| CCNB2           | 0.310004771 | 2.787073132 | 3.481513477 | 0.000542563 | -1.71179502 |
| TARS            | 0.206244534 | 4.19817808  | 3.481494282 | 0.000542601 | -1.711860253|
| TNRC18          | 0.218832325 | 3.947728822 | 3.479475392 | 0.000546607 | -1.718719319|
| ABCA4           | -0.402175347| 1.218136105 | -3.478948643| 0.000547657 | -1.720508297|
| WNT3            | 0.214634655 | 1.707323092 | 3.478772279 | 0.000548009 | -1.721107218|
| ADCY9           | -0.226755716| 2.271512389 | -3.478144961| 0.000549262 | -1.723237313|
| RP11-452F19.3   | 0.204774219 | 2.638290949 | 3.477427191 | 0.000550699 | -1.725674096|
| DSNTP2          | 0.203039195 | 3.131175508 | 3.476225538 | 0.000553113 | -1.729752557|
| PAPSS2          | -0.297947187| 4.175287881 | -3.475954727| 0.000553659 | -1.730671518|
| GPRC5B          | -0.234219344| 1.613616167 | -3.47429843 | 0.000557104 | -1.73645237 |
| SNORD69         | 0.219733825 | 1.173735385 | 3.47352209  | 0.000558581 | -1.738923273|
| RP11-627G23.1   | 0.25752188  | 0.754375127 | 3.472970034 | 0.000559704 | -1.740795136|
| TSPAN5          | -0.247401852| 2.282690498 | -3.472729523| 0.000560193 | -1.741610553|
| GAREML          | 0.209509418 | 1.236483735 | 3.470955677 | 0.000563818 | -1.747622843|
| FLT1            | -0.214718111| 2.348855255 | -3.47093566 | 0.000563859 | -1.74769067 |
| SERPINB1        | -0.261098851| 6.007718255 | -3.470600053| 0.000564547 | -1.748827847|
| RNF183          | 0.263377265 | 0.714063031 | 3.469973978 | 0.000565833 | -1.750948966|
| BHLHE40         | -0.273542145| 6.15951199  | -3.469879063| 0.000566028 | -1.751270501|
| PRAME           | 0.565523612 | 1.62581631  | 3.469001254 | 0.000567837 | -1.75423793 |
| MT-ND4          | 0.310108038 | 12.14359427 | 3.468916765 | 0.000568011 | -1.754529936|
| RUSC1-AS1       | 0.207186823 | 1.501213933 | 3.468291933 | 0.000569302 | -1.756645865|
| Gene      | Value 1         | Value 2         | Value 3         | Value 4         | Value 5         |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| RP5-857K21.7 | 0.332533403     | 2.010990452     | 3.468058567     | 0.000569728     | -1.757343608   |
| MPZL2     | -0.339156964    | 4.978565003     | -3.467731076    | 0.000570463     | -1.758544842   |
| TPM2      | -0.297560138    | 4.573435573     | -3.467536402    | 0.000570867     | -1.759203911   |
| RP11-1260E13.2 | 0.230536719   | 0.864177561     | 3.466327213     | 0.000573379     | -1.763296825   |
| NOTCH1    | -0.208516607    | 2.656822083     | -3.465114449    | 0.000575915     | -1.767410622   |
| GCNT1     | -0.271968342    | 1.852061988     | -3.467536278    | 0.000592867     | -1.757507612   |
| AMP2B4    | -0.250296792    | 4.176258635     | -3.459736999    | 0.000593269     | -1.758544842   |
| FAM60A    | 0.237522637     | 3.696106311     | -3.459855975    | 0.000599618     | -1.80492249    |
| PLEKHF1   | -0.23967486     | 2.648406511     | -3.459252656    | 0.000593269     | -1.795074536   |
| PCSK1     | 0.52385452      | 0.792099794     | 3.454462365     | 0.000598584     | -1.826801451   |
| SNTN      | -0.261221351    | 0.706431672     | -3.459252656    | 0.000599618     | -1.80492249    |
| ALDOA     | 0.206020421     | 7.749501819     | 3.450411462     | 0.000607424     | -1.817042355   |
| IGLVI-70  | -0.359952833    | 0.979590052     | -3.44786866     | 0.000613035     | -1.825607245   |
| DCLK1     | -0.22927315     | 1.136718657     | -3.447513975    | 0.000613822     | -1.826801451   |
| FOXM1     | 0.34518176      | 2.709044734     | 3.447163070     | 0.000614571     | -1.827938249   |
| ARSJ      | -0.242589463    | 1.790854328     | -3.444059499    | 0.000621538     | -1.83842634    |
| ADCK3     | 0.206961956     | 2.778606964     | 3.443639863     | 0.000622474     | -1.839837727   |
| RAD51     | 0.213404395     | 1.607482183     | 3.44324609      | 0.000623359     | -1.841161978   |
| MAP2      | 0.31614189      | 1.737232569     | 3.443121138     | 0.000623641     | -1.841582161   |
| MARK1     | 0.251578305     | 1.223015946     | 3.441424214     | 0.000627473     | -1.847287044   |
| ZFP36     | -0.352803964    | 6.58025592      | -3.43784272     | 0.000635633     | -1.859318851   |
| D2HGDH    | 0.228913854     | 2.497691148     | 3.431198147     | 0.000650136     | -1.881609244   |
| MVP       | -0.237835791    | 5.923299331     | -3.431143583    | 0.000651164     | -1.881792118   |
| MIR210HG  | 0.23395742      | 1.957886692     | 3.430589584     | 0.000652464     | -1.883648721   |
| RP11-747H7.3 | 0.210611051   | 1.161247283     | 3.430463764     | 0.000652759     | -1.884070337   |
| NRBP2     | 0.264774312     | 3.054066853     | 3.427862093     | 0.000658899     | -1.902785122   |
| URB1-AS1  | 0.212441966     | 2.720520027     | 3.426398668     | 0.000662377     | -1.897684365   |
| ATP6V0E2  | 0.236733749     | 3.477243761     | 3.426076228     | 0.000663145     | -1.898763559   |
| AL590226.1 | 0.239973593   | 0.60533794      | 3.425509991     | 0.000664497     | -1.900658497   |
| RPL39P40  | 0.244320614     | 0.956225064     | 3.425509638     | 0.000664498     | -1.900659679   |
| MND4P24   | 0.309771801     | 0.730529606     | 3.42196782      | 0.000670045     | -1.90836659    |
| APOLD1    | -0.208251615    | 1.795247374     | -3.423007819    | 0.0006705      | -1.909028559   |
| CTD-2017D11.1 | 0.211928616 | 1.340277391     | 3.420590483     | 0.000676348     | -1.91710929    |
| Gene   | Value1 | Value2 | Value3 | Value4    | Value5 | Value6 |
|--------|--------|--------|--------|-----------|--------|--------|
| SKP2   | 0.241767556 | 2.506582491 | 3.41999149  | 0.000677804 | -1.919110779 |
| TTK    | 0.258773232 | 1.544972664 | 3.41856233  | 0.000681291 | -1.923884852 |
| RP11-46B11.2 | 0.324166863 | 1.039255509 | 3.417514186 | 0.000683859 | -1.927384941 |
| TENM1  | 0.250230216 | 0.476581033 | 3.416813646 | 0.000686009 | -1.930306206 |
| GAA    | -0.235804837 | 5.094228999 | -3.416639143 | 0.000699152 | -1.94566297 |
| PTPRM  | -0.23342078  | 2.505275584 | -3.415710991 | 0.000706349 | -1.94790109 |
| CCDC167| 0.220447964 | 4.709601532 | 3.412065616 | 0.000712472 | -1.957650516 |
| CHIAP2 | -0.209577173 | 0.34013758  | -3.41346493  | 0.000716405 | -1.970633592 |

...
| Gene   | Value1  | Value2  | Value3  | Value4  | Value5  |
|--------|---------|---------|---------|---------|---------|
| FAM154B | -0.226100871 | 0.69558911 | -3.38340192 | 0.000772519 | -2.040737579 |
| CNGA3  | 0.334080148 | 0.736099078 | 3.380947041 | 0.000779296 | -2.048853094 |
| LINC01564 | 0.272377448 | 0.871775846 | 3.378295781 | 0.000786677 | -2.057611503 |
| KIT    | 0.467494866 | 3.04424417 | 3.376733135 | 0.000791057 | -2.062770613 |
| ATAD2  | 0.25530108 | 2.799109562 | 3.376189632 | 0.000795056 | -2.067454669 |
| CTH    | 0.206856063 | 1.868036967 | 3.375865379 | 0.0007935 | -2.065634547 |
| CCDC64 | 0.271538427 | 2.188652466 | 3.375313781 | 0.000791057 | -2.064564468 |
| OAS3   | -0.290215959 | 3.822803075 | -3.372377177 | 0.000803389 | -2.077139873 |
| CFA5P2 | -0.32613163 | 0.616474124 | -3.370875695 | 0.000807681 | -2.082088796 |
| TP63   | -0.321225695 | 1.021274307 | -3.369952543 | 0.000803389 | -2.077139873 |
| SP5    | 0.336847422 | 1.447248847 | 3.36962091 | 0.000811079 | -2.085988501 |
| NCAPG  | 0.272610257 | 1.820861675 | 3.36923979 | 0.000812312 | -2.087398708 |
| TMSB4XP8 | -0.381160088 | 4.615200242 | -3.368268414 | 0.000815184 | -2.09067746 |
| POCOLCE2 | -0.28694251 | 1.248509279 | -3.36762792 | 0.000818693 | -2.092671534 |
| DDX39B | 0.269765687 | 3.778670861 | 3.365264571 | 0.000823907 | -2.100561608 |
| RFTN1  | -0.27426074 | 3.77124837 | -3.36331753 | 0.000829612 | -2.10698726 |
| CERS4  | 0.322116253 | 3.305064946 | 3.362103112 | 0.000833186 | -2.11096366 |
| ST3GAL1 | -0.291249923 | 3.377140869 | -3.36126025 | 0.000835659 | -2.11371254 |
| TOX3   | 0.382864171 | 2.283625443 | 3.360736224 | 0.000837227 | -2.11545364 |
| ZMYND10 | -0.318806098 | 1.227612791 | -3.35909673 | 0.000839688 | -2.118178113 |
| C1orf53 | 0.248580379 | 2.735145423 | 3.35947083 | 0.000840969 | -2.11959353 |
| PLIN2  | -0.295983211 | 3.850955562 | -3.35867081 | 0.000843368 | -2.122238387 |
| RNA5SP283 | -0.20333148 | 0.947182327 | -3.35734127 | 0.000847342 | -2.12601951 |
| SKA3   | 0.234517702 | 1.599030375 | 3.356442685 | 0.000850039 | -2.12952966 |
| MST1P2 | 0.252464984 | 1.250828173 | 3.355020031 | 0.000854325 | -2.13420949 |
| RP11-434I12.3 | 0.313360592 | 0.87776505 | 3.354745986 | 0.000855152 | -2.135119922 |
| NEURL1 | 0.236565734 | 0.492256244 | 3.354404239 | 0.000856186 | -2.136240886 |
| PHLD1A | -0.303553583 | 3.33461356 | -3.354106472 | 0.000857087 | -2.137217504 |
| RIPK2  | -0.201681598 | 3.304410093 | -3.350607561 | 0.000867744 | -2.148687023 |
| C1QTNF6 | -0.24724344 | 2.287017337 | -3.349807729 | 0.000870197 | -2.151307286 |
| ITGA3  | -0.336547017 | 5.481643896 | -3.349721858 | 0.000870461 | -2.151585656 |
| MAGEA10 | 0.32321804 | 0.359876822 | 3.347791144 | 0.000876412 | -2.157911 |
| RP11-109L13.1 | -0.202968179 | 0.627091471 | -3.346971393 | 0.000878949 | -2.16059435 |
| Gene       | Expression 1 | Expression 2 | Expression 3 | Expression 4 | Expression 5 |
|------------|--------------|--------------|--------------|--------------|--------------|
| TFF1       | 0.857421302  | 2.271713776  | 3.346051623  | 0.000881805  | -2.163604356 |
| AC005077.14| 0.246440962  | 0.902190191  | 3.345861079  | 0.000882398  | -2.164227825 |
| PRKAR2B    | -0.267272864 | 2.022825018  | -3.345843102 | 0.000882454  | -2.164286645 |
| CLDN18     | -0.648842526 | 2.401840537  | -3.345179152 | 0.000884522  | -2.166458841 |
| FHOD3      | -0.227594146 | 0.839114373  | -3.34563271  | 0.000889574  | -2.171743682 |
| HEYL       | -0.210688024 | 2.613437363  | -3.342776717 | 0.00092043   | -2.17315271  |
| SDS        | -0.290567622 | 1.883634356  | -3.34196226  | 0.00095761   | -2.178173279 |
| IL1RAP     | -0.209008174 | 1.719362026  | -3.339231102 | 0.000903252  | -2.185900263 |
| IL23A      | -0.238548582 | 1.491407796  | -3.335575609 | 0.000914945  | -2.197831966 |
| RP4-666F24.3| -0.209773334 | 0.446019413  | -3.335446504 | 0.000915361  | -2.198253143 |
| MT-ND2     | 0.30836051   | 11.26957424  | -3.333774659 | 0.000920762  | -2.203710783 |
| ANO9       | 0.292403401  | 2.633228579  | -3.33773118  | 0.000920762  | -2.203710783 |
| TMEM233    | -0.213718238 | 0.730720775  | -3.3357462   | 0.000921405  | -2.204357997 |
| RP4-639F20.1| -0.213448477 | 2.347551822  | -3.33343609  | 0.000921854  | -2.204809662 |
| POC1A      | 0.200972833  | 2.331883249  | 3.332662848  | 0.000924363  | -2.207330412 |
| CTNND2     | 0.318103947  | 0.586101964  | 3.332600279  | 0.000924566  | -2.207534361 |
| LGI3       | -0.269060792 | 0.634929156  | -3.32942541  | 0.000934936  | -2.21787831  |
| MLLT11     | 0.302296337  | 1.794793523  | 3.327437284  | 0.000941485  | -2.224350967 |
| RP11-43F13.1| 0.238025221  | 2.154943349  | 3.327262268  | 0.000924063  | -2.224920582 |
| CDC20      | 0.372659752  | 3.797550343  | 3.325107491  | 0.000942123  | -2.23193127  |
| ALDH3A1    | 0.634887773  | 2.04795581   | 3.322956593  | 0.0009564   | -2.238925005 |
| RP11-304L19.3| 0.344846432  | 1.562900575  | 3.321306649  | 0.000961948  | -2.244286934 |
| GPX1P1     | -0.285704646 | 1.620944419  | -3.318903464 | 0.000970082  | -2.25209216 |
| CCNB1      | 0.316040207  | 3.816897705  | 3.315528108  | 0.000981613  | -2.263045743 |
| ABHD17C    | 0.29436171   | 3.959041295  | 3.31552849   | 0.000831641  | -2.263046584 |
| CDC6       | 0.281735581  | 2.180086797  | 3.312851303  | 0.000930849  | -2.271724835 |
| RASL10B    | 0.215127016  | 0.794754394  | 3.31149054   | 0.0009565   | -2.27620392 |
| NOTUM      | 0.413482645  | 1.172570337  | 3.311340333  | 0.00096098  | -2.27662094 |
| RORC       | 0.309081628  | 3.148895421  | 3.30923197   | 0.00100144  | -2.281211047 |
| C1orf189   | -0.287216935 | 0.840250416  | -3.309681046 | 0.00010891   | -2.281995185 |
| ABC2C      | 0.440902644  | 0.884170266  | 3.307568729  | 0.000109312  | -2.28883015  |
| CHP1       | 0.210603593  | 5.309114043  | 3.30741271   | 0.00109857   | -2.289332852 |
| HN1        | 0.235222917  | 5.429823314  | 3.305182501  | 0.00107757   | -2.296552507 |
| Gene        | Value 1    | Value 2    | Value 3    | Value 4    | Value 5    |
|-------------|------------|------------|------------|------------|------------|
| TPD52L1     | 0.267358267| 1.885836862| 3.304809589| 0.001019082| -2.297758402|
| BEX4        | -0.283535827| 4.216850038| -3.30173302 | 0.00103008 | -2.307702217|
| IRX5        | 0.348190201 | 2.416425246| 3.301597652 | 0.001030566| -2.308193535|
| MT-ND4L     | 0.281096538 | 10.4411212 | 3.299893135 | 0.001036709| -2.308611855|
| PKIA        | -0.259512788| 1.402705469| -3.298463999| 0.001041886| -2.316037498|
| HOXC13      | 0.258099159 | 0.673685457| 3.295816181 | 0.001051541| -2.316801185|
| MYO10       | 0.208837749 | 3.063936839 | 3.29516914  | 0.001051541| -2.316801185|
| RP1-27K12.2 | 0.358090504 | 0.647348893| 3.29227907  | 0.001064387| -2.326085622|
| RP11-845M18.6| 0.222869035 | 1.08890963  | 3.292327907 | 0.001064387| -2.326085622|
| NRGN        | -0.445202485| 3.756743242| -3.291503443| 0.001067444| -2.340701615|
| CHEK1       | 0.212342357 | 1.720936059| 3.290607516 | 0.001070776| -2.3435871  |
| AMOTL1      | -0.213091561| 2.18561174  | 3.286726988 | 0.001085318| -2.356076321|
| RP11-10A14.5| 0.27923959  | 0.847506795| 3.28564405  | 0.001089369| -2.359528569|
| TME229A     | 0.260379716 | 0.375046419| 3.28535692  | 0.001090508| -2.360492804|
| CBR3        | 0.346253408 | 2.610871024| 3.2814219   | 0.001103887| -2.371780781|
| AC012512.1  | 0.240148964 | 0.308242559| 3.28145085  | 0.001104255| -2.372089561|
| C6orf52     | 0.200519816 | 1.077766671| 3.280511224 | 0.001108993| -2.376051944|
| SFTPA2      | -0.94222275 | 8.159513311 | -3.27859771 | 0.001116408| -2.3822196  |
| RPS7P1      | 0.255721141 | 3.026753805| 3.278499013 | 0.001116759| -2.382510838|
| RP11-21A5   | 0.277075691 | 2.900358709| 3.277291713 | 0.00112443 | -2.386384265|
| CSAG3       | 0.259150664 | 0.397714313| 3.27500626  | 0.001128425| -2.392182651|
| SPINK4      | 0.397742485 | 0.659524864| 3.274000813 | 0.001134303| -2.396935653|
| FLNC        | -0.327365228| 1.483042544| -3.273630277| 0.00113576 | -2.398123043|
| MT-CO2      | 0.280484626 | 12.23867031 | 3.273202918 | 0.001137442| -2.399423262|
| LY6E        | -0.357452219| 6.931063124 | -3.271500472| 0.001144165 | -2.40495541|
| ZFP42       | 0.271114035 | 0.414521135| 3.271320227 | 0.001144879| -2.40552273|
| VSIG1       | -0.590726621| 1.987851927| -3.271169249| 0.001154578| -2.40606179|
| EFNA4       | 0.215269848 | 4.009883662 | 3.268155838 | 0.001157482| -2.41565097|
| DEPDC1      | 0.237028252 | 1.345191993| 3.267453932 | 0.001160295| -2.417896283|
| COL2A1      | 0.287817373 | 0.30708849 | 3.265544008 | 0.001167981| -2.424003565|
| CAG         | 0.381824142 | 0.398005005| 3.264867711 | 0.001170725| -2.426174706|
| C16orf45    | -0.233292999| 1.876283478| -3.261925172| 0.001182673| -2.43556977|
| FGFRL1      | 0.21948911 | 3.434439879 | 3.259368836 | 0.001193155| -2.443726232|
| Gene     | Log2 fold change | p-value | Adjusted p-value | FDR     |
|----------|-----------------|---------|-----------------|---------|
| LRP4     | 0.261194083     | 1.193829826 | 3.258957058    | 0.001194851 | -2.445040123 |
| MT2P1    | -0.225637407    | 1.125164185 | -3.257128646   | 0.001202411 | -2.450872256 |
| TMEM159  | -0.254751914     | 4.529627099 | -3.256759837   | 0.001203941 | -2.452048276 |
| EZH2     | 0.230961987     | 2.368967347 | 3.256279397    | 0.001205937 | -2.453973194 |
| TRPV4    | -0.247524856     | 1.718039071 | -3.256156081   | 0.00120645  | -2.453973194 |
| LRR4C    | -0.272153782     | 1.418715492 | -3.249212079   | 0.001235657 | -2.476087748 |
| MTMR7    | 0.265261954     | 0.707562798 | 3.247827611    | 0.001266114 | -2.49859279  |
| EPPK1    | 0.207125701     | 1.291940984 | 3.247036439    | 0.001244941 | -2.483007198 |
| ALG1L    | 0.38260142      | 2.751972932 | 3.24130833   | 0.001266655 | -2.498987601 |
| CTD-260009.1 | 0.211823526 | 0.916750801 | 3.242006473  | 0.001266114 | -2.49859279  |
| AKR1B10  | 0.782070409     | 2.181688732 | 3.24122214    | 0.001270072 | -2.501477082 |
| RP11-3P17.3 | 0.240653579 | 2.684315122 | 3.23865506   | 0.001282151 | -2.51022315  |
| RP11-304L19.1 | 0.32248899 | 1.538973142 | 3.237602528  | 0.001285954 | -2.51295612 |
| APQ7     | 0.223184788     | 0.806194104 | 3.23630496    | 0.001291711 | -2.517086969 |
| KISS1R   | 0.242512439     | 0.783199362 | 3.23373427    | 0.001303129 | -2.525217076 |
| SCD5     | -0.291535321     | 2.064989758 | -3.233204523  | 0.001305497 | -2.526894609 |
| XK       | 0.217058331     | 1.120802686 | 3.231527601   | 0.001313021 | -2.53203212 |
| DBN1     | 0.230732437     | 4.37774813 | 3.231414674   | 0.00131353 | -2.532560513 |
| TUBB4A   | 0.242867076     | 0.687108565 | 3.230572925   | 0.00131723 | -2.535224094 |
| PLEKHG6  | 0.240719914     | 1.924636989 | 3.230173647   | 0.001319126 | -2.536487311 |
| IDI1     | 0.200039751     | 4.123028583 | 3.228428334   | 0.001327033 | -2.542007302 |
| CTD-2547H18.1 | 0.295278728 | 1.084939857 | 3.228206214  | 0.001328043 | -2.542709609 |
| LINC00665 | 0.291653189 | 1.774975078 | 3.227634375   | 0.001330645 | -2.54517452 |
| JSRP1    | -0.314175896    | 1.548871852 | -3.227278623  | 0.001332266 | -2.545641991 |
| CELF3    | 0.238002338     | 0.337671848 | 3.226493881   | 3.226493881 | -2.548122156 |
| HC4B     | -0.239132517     | 1.320955664 | -3.226234833  | 0.001337033 | -2.548940745 |
| SH3PXD2B | -0.232175754     | 3.156504961 | -3.226070826  | 0.001337784 | -2.549458975 |
| PRR29    | -0.224506552     | 1.280187836 | -3.224364063  | 0.001345617 | -2.554850497 |
| C6orf222 | -0.202851293     | 0.446195106 | -3.219104251  | 0.001370025 | -2.571448596 |
| PLEKHB1  | 0.292053966     | 2.850969573 | 3.218989379   | 0.001370986 | -2.572095966 |
| RASSF7   | 0.254402022     | 4.645793665 | 3.216069531   | 0.001384294 | -2.58101326 |
| PHGDH    | 0.35762617      | 2.260024087 | 3.215535727   | 0.001386818 | -2.582694792 |
| PPP1R14C | -0.391425805     | 2.768599359 | -3.213376696  | 0.00139707 | -2.58943164 |
| Gene       | Fold Change 1 | Fold Change 2 | Fold Change 3 | Fold Change 4 | Fold Change 5 |
|------------|---------------|---------------|---------------|---------------|---------------|
| KLB        | 0.20649523    | 0.406094098   | 3.21139688    | 0.001407766   | -2.596532454 |
| MYOZ1      | -0.204295671  | 0.995608269   | -3.210592513  | 0.001410394   | -2.598253558 |
| RPL4P4     | 0.224298943   | 1.802760684   | 3.21059319    | 0.001410649   | -2.598420861 |
| B4GALNT2   | 0.26141387    | 0.519844942   | 3.208708085   | 0.001419478   | -2.604178749 |
| FREM2      | 0.203382623   | 0.902540038   | 3.208442394   | 0.001420763   | -2.60501389  |
| ERO1LB     | 0.310809098   | 2.216827032   | 3.208134518   | 0.001422254   | -2.605981548 |
| PGF        | -0.208489447  | 1.42304382    | -3.207672823  | 0.001424492   | -2.607432494 |
| AC092171.4 | 0.216218827   | 2.243218095   | 3.20758584    | 0.001424561   | -2.6074722   |
| SLC2A4RG   | 0.201285053   | 0.864208567   | -3.20427816   | 0.001441197   | -2.61818938  |
| B4GALNT2   | -0.223434519  | 0.864208567   | -3.20427816   | 0.001441197   | -2.61818938  |
| HLF        | -0.322981286  | 1.622694336   | -3.204179355  | 0.001441532   | -2.618404748 |
| PRKAG2-AS1 | 0.214666509   | 1.437920042   | 3.203172158   | 0.00144648    | -2.621566014 |
| RARG       | -0.205259544  | 2.845268644   | -3.202990356  | 0.001447375   | -2.62213653  |
| RP5-875H18.9 | -0.252595962 | 0.863235959   | -3.202875267  | 0.001447942   | -2.622497678 |
| PTPRE      | -0.218888335  | 2.645787238   | -3.202611607  | 0.001449241   | -2.623234992 |
| CAF221     | -0.2413582    | 1.201178763   | -3.202495369  | 0.001449814   | -2.623689701 |
| SCG3       | 0.264058298   | 0.359581377   | 3.201120678   | 0.001456606   | -2.628001999 |
| PLCXD1     | 0.279281645   | 2.461487923   | 3.197658464   | 0.001473845   | -2.638854819 |
| GNPNAT1    | 0.208449598   | 3.374100331   | 3.196582379   | 0.001479241   | -2.642252672 |
| MCIDAS     | 0.212320408   | 0.930010798   | 3.195905554   | 0.001482645   | -2.64435277  |
| KLK13      | 0.384796144   | 0.930512429   | 3.19565311    | 0.001483905   | -2.645128851 |
| TIMM8AP1   | -0.360078961  | 1.671598877   | -3.193285408  | 0.001495888   | -2.6525467   |
| PMM1       | 0.220774523   | 3.136825266   | 3.193118479   | 0.001496736   | -2.653068993 |
| MAGEA3     | 0.533122982   | 1.042251631   | 3.188573263   | 0.001519981   | -2.667280128 |
| HMGA1      | 0.301882383   | 6.536767919   | 3.184681293   | 0.001540151   | -2.679433376 |
| IGF1R      | 0.234135929   | 2.646248805   | 3.184401703   | 0.001541609   | -2.680305888 |
| SEMA3A     | -0.30969041   | 1.429643134   | -3.182912986  | 0.001549396   | -2.68950465  |
| SNORD19    | 0.24632818    | 1.845637218   | 3.181903017   | 0.0015547    | -2.688100233 |
| FKBP5      | -0.287562091  | 3.164883241   | -3.180824251  | 0.001560383   | -2.691463496 |
| C1QTNF3    | -0.253674576  | 1.471730799   | -3.180459635  | 0.001562308   | -2.692600011 |
| AC006042.6 | 0.252244947   | 2.043356438   | 3.180131032   | 0.001564045   | -2.693624165 |
| GPR39      | 0.227242408   | 2.315576579   | 3.179513999   | 0.001564996   | -2.694183982 |
| Gene       | COO    | 2.19817492 | -3.179566494 | 0.001567034 | -2.695383418 |
|------------|--------|------------|---------------|-------------|--------------|
| COL17A1    | -0.506772886 | 7.501695662 | 3.178942106  | 0.001570345 | -2.69732883  |
| CHCHD2     | 0.203376165 | 2.19817492  | -3.179566494 | 0.001567034 | -2.695383418 |
| KIF2B      | -0.233851584 | 1.95147641  | -3.178942106 | 0.001570345 | -2.69732883  |
| ATP2C2     | 0.278513809 | 2.294221786 | 3.178942106  | 0.001570345 | -2.69732883  |
| GPR115     | -0.292897601 | 1.13097612  | 3.178942106  | 0.001570345 | -2.69732883  |
| NCS1       | -0.211863476 | 2.276515472 | 3.178942106  | 0.001570345 | -2.69732883  |
| CDCA8      | 0.281286377 | 2.935158442 | 3.178942106  | 0.001570345 | -2.69732883  |
| LINCO1508  | 0.207626757 | 0.777257638 | 3.178942106  | 0.001570345 | -2.69732883  |
| JAG2       | 0.243788901 | 2.621956164 | 3.178942106  | 0.001570345 | -2.69732883  |
| RP11-76C10.6 | 0.371992156 | 1.895012941 | 3.178942106  | 0.001570345 | -2.69732883  |
| IRX3       | 0.368891449 | 3.800686264 | 3.178942106  | 0.001570345 | -2.69732883  |
| ATAD3C     | 0.247450681 | 1.828241537 | 3.178942106  | 0.001570345 | -2.69732883  |
| BMP4       | -0.327977639 | 2.265751004 | 3.178942106  | 0.001570345 | -2.69732883  |
| GAS2L2     | -0.233171517 | 0.665428259 | 3.178942106  | 0.001570345 | -2.69732883  |
| NDC80      | 0.254727841 | 1.909852889 | 3.178942106  | 0.001570345 | -2.69732883  |
| PRKDC      | 0.218194894 | 3.857967038 | 3.178942106  | 0.001570345 | -2.69732883  |
| GALNT18    | -0.22397144 | 3.0857129   | 3.178942106  | 0.001570345 | -2.69732883  |
| MPP7       | 0.216383867 | 3.0857129   | 3.178942106  | 0.001570345 | -2.69732883  |
| CAMK1D     | -0.303458095 | 2.726948967 | 3.178942106  | 0.001570345 | -2.69732883  |
| PTGR1      | 0.306690746 | 3.683911523 | 3.178942106  | 0.001570345 | -2.69732883  |
| MIR4292    | 0.255470328 | 2.36597593  | 3.178942106  | 0.001570345 | -2.69732883  |
| ENTPD2     | 0.243244014 | 1.151411195 | 3.178942106  | 0.001570345 | -2.69732883  |
| MIR25      | 0.285182619 | 2.090373554 | 3.178942106  | 0.001570345 | -2.69732883  |
| RN7SL2     | -0.435413899 | 7.39340146  | 3.178942106  | 0.001570345 | -2.69732883  |
| ASCL1      | 0.604656488 | 1.026531472 | 3.178942106  | 0.001570345 | -2.69732883  |
| KSR1       | 0.234252021 | 2.104149871 | 3.178942106  | 0.001570345 | -2.69732883  |
| ALDH3B2    | 0.338746857 | 1.843115249 | 3.178942106  | 0.001570345 | -2.69732883  |
| TMSB4XP1   | -0.221193674 | 1.436424397 | 3.178942106  | 0.001570345 | -2.69732883  |
| PRDX2      | 0.206187675 | 5.973654449 | 3.178942106  | 0.001570345 | -2.69732883  |
| IQGAP3     | 0.260694861 | 2.300610991 | 3.178942106  | 0.001570345 | -2.69732883  |
| GABRE      | -0.302268569 | 1.53104816  | 3.178942106  | 0.001570345 | -2.69732883  |
| INSM1      | 0.284926033 | 0.302962096 | 3.178942106  | 0.001570345 | -2.69732883  |
| UPK3B      | -0.357083301 | 1.406979571 | 3.178942106  | 0.001570345 | -2.69732883  |
| Gene     | Score  | Log2FC | P.Value | Log10Fold Change | Log2Fold Change |
|----------|--------|--------|---------|------------------|-----------------|
| PPDPF    | 0.236115816 | 7.645095701 | 3.132262898 | 0.001837001 | -2.841728384 |
| SNTA1    | 0.236003843 | 3.453096487 | 3.127791248 | 0.001864622 | -2.855453452 |
| MT-RNR2  | 0.262495136 | 11.54830773 | 3.125919617 | 0.001876297 | -2.861192552 |
| CA2      | -0.372415946 | 8.88773277 | -3.125185782 | 0.001880893 | -2.863441852 |
| AL590431.1 | 0.243353173 | 1.14733 | 3.125141124 | 0.001882627 | -2.863578721 |
| ZP3      | 0.215796604 | 1.638203454 | 3.116654213 | 0.001941817 | -2.86428944 |
| LINC00086| 0.254849951 | 1.351902838 | 3.115451878 | 0.001942841 | -2.892744717 |
| PPm1H    | 0.253042208 | 1.084671767 | 3.115610541 | 0.001950401 | -2.896798477 |
| BEAN1    | -0.212207994 | 1.084671767 | 3.11945419 | 0.001952595 | -2.897831621 |
| ATP6V0A4 | 0.321022411 | 1.42054816 | 3.108196829 | 0.00199023 | -2.915373316 |
| CDDC5    | 0.28281579 | 2.532704242 | 3.106326448 | 0.002002619 | -2.921074021 |
| TPPP3    | -0.412500985 | 3.386670995 | -3.104666296 | 0.002013674 | -2.926130282 |
| RP1-16E12.2 | -0.215188556 | 1.507968833 | 3.116654213 | 0.00202619 | -2.927544906 |
| RP11-66N24.6 | 0.404337333 | 1.857764896 | 3.096611512 | 0.002068115 | -2.950630926 |
| APOD     | -0.506806573 | 3.661850027 | -3.09406092 | 0.002085736 | -2.95842114 |
| SLC16A3 | -0.27557287 | 4.237084812 | -3.093542722 | 0.00208921 | -2.959948958 |
| NXN      | -0.218417872 | 3.378976991 | -3.093359729 | 0.002090474 | -2.960504315 |
| FGG      | 0.45149936 | 4.002112372 | 3.093271133 | 0.002091322 | -2.96076417 |
| SYBU     | 0.309088334 | 1.820622108 | 3.09240027 | 0.002097088 | -2.96340215 |
| AFAP1-AS1| -0.482486303 | 2.79325095 | -3.08823459 | 0.002126245 | -2.976079239 |
| Rp11-302F12.1 | -0.399158306 | 2.57764416 | -3.08816263 | 0.00216627 | -2.976263566 |
| FKBPlB   | 0.21163772 | 1.633079079 | 3.08603186 | 0.002146797 | -2.982717337 |
| IFI6     | -0.39528805 | 7.478270445 | -3.080230256 | 0.002183033 | -3.00267825 |
| MT1G     | -0.362952052 | 2.158409901 | -3.080215517 | 0.002183139 | -3.000312368 |
| DUSP4    | 0.425932024 | 3.148957253 | 3.079847847 | 0.002185778 | -3.001420812 |
| IFITM3   | -0.215359902 | 8.300135576 | -3.079043227 | 0.002191585 | -3.003854794 |
| RP11-32H21.3 | 0.214340166 | 0.222604644 | 3.078619261 | 0.002194646 | -3.005135618 |
| RP11-93B14.9 | -0.226349791 | 1.87564513 | -3.078485274 | 0.002195615 | -3.005540362 |
| JUN      | -0.249733014 | 5.767456618 | -3.077503861 | 0.00220272 | -3.008504484 |
| Gene         | Value 1 | Value 2 | Value 3 | Value 4  | Value 5   |
|--------------|---------|---------|---------|----------|----------|
| EREG         | -0.4616 | 1.2987  | -3.0769 | 0.0022   | -3.0100  |
| FGFBP1       | -0.4548 | 2.0628  | -3.0741 | 0.0022   | -3.0188  |
| KLF15        | 0.2749  | 1.5948  | 3.0739  | 0.0022   | -3.0192  |
| C2           | -0.3199 | 3.6325  | -3.0659 | 0.0022   | -3.0434  |
| SCD          | 0.2915  | 6.0467  | 3.0716  | 0.0022   | -3.026  |
| SPOCK1       | -0.3143 | 1.2624  | 3.0664  | 0.0022   | -3.042  |
| RP11-664D7.4 | -0.3864 | 1.6316  | 3.0659  | 0.0022   | -3.0433  |
| GSPT2        | -0.2257 | 2.1036  | 3.0653  | 0.0022   | -3.044  |
| GGTLC1       | -0.5115 | 2.5443  | 3.0653  | 0.0022   | -3.0459  |
| LILRP1       | 0.2365  | 0.2374  | 3.0609  | 0.0022   | -3.0587  |
| TDRD5        | 0.2178  | 0.6959  | 3.0593  | 0.0022   | -3.0617  |
| TTYH3        | -0.2223 | 4.6256  | -3.0552 | 0.0023   | -3.0756  |
| WBSGR17      | -0.2009 | 0.8947  | -3.0549 | 0.0023   | -3.0764  |
| FAM171A2     | 0.2154  | 1.1424  | 3.0544  | 0.0023   | -3.0778  |
| CKB          | 0.3720  | 4.8857  | 3.0536  | 0.0023   | -3.0804  |
| CENPU        | 0.2403  | 2.5039  | 3.0535  | 0.0023   | -3.0805  |
| CAT          | -0.2022 | 4.7378  | -3.0534 | 0.0023   | -3.0811  |
| TMC4         | 0.2367  | 5.0467  | 3.0520  | 0.0023   | -3.0849  |
| ERVH48-1     | 0.3098  | 0.4561  | 3.0514  | 0.0023   | -3.0868  |
| LPHN2        | -0.2284 | 2.3407  | -3.0509 | 0.0024   | -3.0882  |
| SEMA4B       | 0.2383  | 4.7438  | 3.0495  | 0.0024   | -3.0928  |
| C6           | -0.2096 | 0.5786  | 3.0492  | 0.0024   | -3.0934  |
| FZD10        | 0.3334  | 0.7883  | 3.0482  | 0.0024   | -3.0974  |
| SRPK3        | 0.2120  | 1.0110  | 3.0473  | 0.0024   | -3.0992  |
| WNT7A        | -0.2077 | 0.5120  | 3.0469  | 0.0024   | -3.1006  |
| HILPDA       | 0.3056  | 3.4068  | 3.0453  | 0.0024   | -3.1055  |
| CTD-2589M5.4 | 0.3373  | 1.4397  | 3.0448  | 0.0024   | -3.1066  |
| H19          | 0.5926  | 2.3843  | 3.0441  | 0.0025   | -3.1087  |
| GMDS         | 0.2013  | 2.9321  | 3.0382  | 0.0025   | -3.1263  |
| ITGB1        | -0.2074 | 5.8951  | 3.0358  | 0.0025   | -3.1335  |
| FOSB         | -0.5027 | 2.8522  | 3.0303  | 0.0025   | -3.1499  |
| SLC44A3      | 0.2103  | 3.1446  | 3.0295  | 0.0026   | -3.1520  |
| Gene       | Value1  | Value2  | Value3  | Value4  | Value5  |
|------------|---------|---------|---------|---------|---------|
| MAGEA12    | 0.4062  | 0.7137  | 3.0278  | 0.0025  | -3.16  |
| XIST       | -0.38   | 1.23    | -3.02   | 0.0025  | -3.16  |
| FAM46A     | 0.25    | 3.19    | 3.02    | 0.0026  | -3.16  |
| SYT8       | -0.33   | 1.20    | -3.03   | 0.0026  | -3.16  |
| CEBPD      | 0.28    | 5.38    | 3.02    | 0.0026  | -3.16  |
| HOSTAIRM1  | -0.24   | 1.52    | -3.03   | 0.0026  | -3.16  |
| CACNG6     | -0.23   | 0.55    | -3.03   | 0.0026  | -3.16  |
| RP1-27K12.4| 0.21    | 0.62    | 3.03    | 0.0026  | -3.16  |
| TST        | 0.25    | 4.60    | 3.02    | 0.0026  | -3.16  |
| MIR3682    | 0.22    | 1.89    | 3.03    | 0.0026  | -3.16  |
| MMP1       | -0.58   | 4.04    | 3.02    | 0.0026  | -3.16  |
| ZSCAN31    | 0.24    | 2.19    | 3.01    | 0.0027  | -3.16  |
| LOXL4      | -0.32   | 2.11    | -3.02   | 0.0027  | -3.16  |
| EPB3       | 0.25    | 2.77    | 3.01    | 0.0027  | -3.16  |
| KIF11      | 0.24    | 2.50    | 3.01    | 0.0027  | -3.16  |
| PLK1       | 0.26    | 2.49    | 3.01    | 0.0027  | -3.16  |
| ACSL5      | -0.34   | 5.12    | 3.00    | 0.0028  | -3.16  |
| HIF3A      | 0.28    | 1.15    | 3.00    | 0.0028  | -3.16  |
| CDCA7      | 0.30    | 2.64    | 3.00    | 0.0028  | -3.16  |
| FOXQ1      | -0.45   | 3.04    | 3.00    | 0.0028  | -3.16  |
| C7orf57    | -0.22   | 0.90    | -3.00   | 0.0028  | -3.16  |
| TM4SF5     | 0.38    | 0.60    | 2.99    | 0.0028  | -3.16  |
| TEMEM45B   | 0.30    | 4.05    | 2.99    | 0.0028  | -3.16  |
| FADS1      | 0.22    | 2.82    | 2.99    | 0.0028  | -3.16  |
| RN7SKP51   | -0.20   | 0.72    | -2.98   | 0.0029  | -3.16  |
| HOXC9      | 0.22    | 0.77    | 2.98    | 0.0030  | -3.16  |
| LINC00942  | 0.39    | 0.87    | 2.98    | 0.0030  | -3.16  |
| EIF4EBP1   | 0.29    | 5.01    | 2.97    | 0.0030  | -3.16  |
| MT1X       | -0.29   | 3.75    | -2.97   | 0.0030  | -3.16  |
| HOXC11     | 0.23    | 0.62    | 2.97    | 0.0030  | -3.16  |
| CFA4P3     | -0.21   | 0.69    | 2.97    | 0.0030  | -3.16  |
| ARHGAP11A  | 0.21    | 1.77    | 2.97    | 0.0030  | -3.16  |
| NUSAP1     | 0.25    | 3.32    | 2.97    | 0.0031  | -3.16  |
| Gene          | Value1       | Value2       | Value3       | Value4       | Value5       |
|--------------|-------------|-------------|-------------|-------------|-------------|
| CCDC78       | -0.231435944 | 1.103922687 | -2.967751074 | 0.003144622 | -3.334239475 |
| GRAMD2       | 0.257335672  | 2.117900112 | 2.9630503    | 0.003192342 | -3.347980584 |
| IGK1D-13     | -0.459939267 | 1.984364675 | 2.962500542  | 0.003197792 | -3.349536589 |
| KIF12        | 0.33471347   | 1.956692936 | 2.96130513   | 0.003206682 | -3.352068842 |
| MSMB         | 0.777484803  | 3.228039716 | 2.959717615  | 0.003226306 | -3.357633879 |
| DYNLNB2      | -0.204759654 | 0.689857351 | -2.959074699 | 0.003232926 | -3.359503483 |
| AC137932.5   | 0.233279197  | 1.586005397 | 2.95175719   | 0.003261677 | -3.36757805  |
| SMOC1        | 0.434278112  | 1.493834399 | 2.95175719   | 0.003309155 | -3.38075522  |
| OLFML2A      | 0.233279197  | 1.586005397 | 2.95175719   | 0.003309155 | -3.38075522  |
| MSMB         | 0.777484803  | 3.228039716 | 2.959717615  | 0.003226306 | -3.357633879 |
| DYNLRB2      | -0.204759654 | 0.689857351 | -2.959074699 | 0.003232926 | -3.359503483 |
| AC137932.5   | 0.233279197  | 1.586005397 | 2.95175719   | 0.003261677 | -3.36757805  |
| SMOC1        | 0.434278112  | 1.493834399 | 2.95175719   | 0.003309155 | -3.38075522  |
| OLFML2A      | 0.233279197  | 1.586005397 | 2.95175719   | 0.003309155 | -3.38075522  |
| MSMB         | 0.777484803  | 3.228039716 | 2.959717615  | 0.003226306 | -3.357633879 |
| DYNLRB2      | -0.204759654 | 0.689857351 | -2.959074699 | 0.003232926 | -3.359503483 |
| AC137932.5   | 0.233279197  | 1.586005397 | 2.95175719   | 0.003261677 | -3.36757805  |
| SMOC1        | 0.434278112  | 1.493834399 | 2.95175719   | 0.003309155 | -3.38075522  |
| OLFML2A      | 0.233279197  | 1.586005397 | 2.95175719   | 0.003309155 | -3.38075522  |
| MSMB         | 0.777484803  | 3.228039716 | 2.959717615  | 0.003226306 | -3.357633879 |
| DYNLRB2      | -0.204759654 | 0.689857351 | -2.959074699 | 0.003232926 | -3.359503483 |
| AC137932.5   | 0.233279197  | 1.586005397 | 2.95175719   | 0.003261677 | -3.36757805  |
| SMOC1        | 0.434278112  | 1.493834399 | 2.95175719   | 0.003309155 | -3.38075522  |
| OLFML2A      | 0.233279197  | 1.586005397 | 2.95175719   | 0.003309155 | -3.38075522  |
| MSMB         | 0.777484803  | 3.228039716 | 2.959717615  | 0.003226306 | -3.357633879 |
| DYNLRB2      | -0.204759654 | 0.689857351 | -2.959074699 | 0.003232926 | -3.359503483 |
| AC137932.5   | 0.233279197  | 1.586005397 | 2.95175719   | 0.003261677 | -3.36757805  |
| SMOC1        | 0.434278112  | 1.493834399 | 2.95175719   | 0.003309155 | -3.38075522  |
| OLFML2A      | 0.233279197  | 1.586005397 | 2.95175719   | 0.003309155 | -3.38075522  |
| MSMB         | 0.777484803  | 3.228039716 | 2.959717615  | 0.003226306 | -3.357633879 |
| DYNLRB2      | -0.204759654 | 0.689857351 | -2.959074699 | 0.003232926 | -3.359503483 |
| AC137932.5   | 0.233279197  | 1.586005397 | 2.95175719   | 0.003261677 | -3.36757805  |
| SMOC1        | 0.434278112  | 1.493834399 | 2.95175719   | 0.003309155 | -3.38075522  |
| OLFML2A      | 0.233279197  | 1.586005397 | 2.95175719   | 0.003309155 | -3.38075522  |
| MSMB         | 0.777484803  | 3.228039716 | 2.959717615  | 0.003226306 | -3.357633879 |
| DYNLRB2      | -0.204759654 | 0.689857351 | -2.959074699 | 0.003232926 | -3.359503483 |
| Gene       | Log2FoldChange | LogFoldChange | AdjPValue | LogOddsRatio | AdjOddsRatio |
|------------|----------------|---------------|-----------|--------------|--------------|
| IL37       | -0.520181976   | 1.663908802   | -2.907967268 | 0.003800677  | -3.506869146 |
| PRSS8      | 0.262146376    | 6.19909617    | 2.907153263 | 0.003810413  | -3.509196219 |
| MAPK8IP2   | 0.228123111    | 1.205746184   | 2.906775951 | 0.003814934  | -3.510274662 |
| FOXD3-AS1  | 0.216252634    | 0.765273357   | 2.90614576  | 0.003864661  | -3.523826068 |
| ROPN1L     | -0.244269377   | 0.873933619   | -2.902652169 | 0.003864661  | -3.522052556 |
| LA16c-312E8.4 | 0.231510146  | 6.19909617    | 2.90203072  | 0.003872206  | -3.526050567 |
| CAPN12     | -0.244269377   | 0.765273357   | -2.902652169 | 0.003864661  | -3.522052556 |
| CALML3     | 0.247159122    | 0.325732528   | 2.8943534   | 0.003881691  | -3.526050567 |
| EPHX1      | 0.331418235    | 6.729470704   | 2.89250658  | 0.003872206  | -3.550960467 |
| RP11-12G12.7 | 0.215582056  | 2.677391172   | 2.888223181 | 0.004043341  | -3.563135813 |
| HOXB2      | -0.319223658   | 2.020588845   | -2.884153995 | 0.004095074  | -3.574686109 |
| IGFBP5     | -0.335285902   | 5.551787494   | -2.881931441 | 0.004123584  | -3.58098813  |
| USP9Y      | 0.2303606      | 0.703373621   | 2.876995901 | 0.004187541  | -3.594965988 |
| RP11-234A1.1 | 0.247968738  | 3.559757145   | 2.870673514 | 0.004270789  | -3.612837654 |
| TRIM17     | 0.225484686    | 1.015917532   | 2.86738538  | 0.004314676  | -3.622117281 |
| CIB2       | 0.221999679    | 1.808066019   | 2.868606039 | 0.004322451  | -3.623751208 |
| BIK        | 0.26587431     | 2.869094429   | 2.865610848 | 0.004338531  | -3.627121014 |
| LINC00958  | 0.218416521    | 0.51659949    | 2.865178336 | 0.004344364  | -3.628340133 |
| MTND2P28   | 0.349561186    | 6.633096583   | 2.864656763 | 0.004352611  | -3.630061228 |
| PPBP       | -0.282334989   | 0.876879546   | -2.86443058 | 0.004354464  | -3.630447411 |
| GOLGA2P10  | 0.218950483    | 2.18714125    | 2.863517045 | 0.004366833  | -3.633021154 |
| RET        | 0.293966728    | 0.77044254    | 2.860425206 | 0.004408931  | -3.641726039 |
| TSPAN12    | 0.22636203     | 3.584318857   | 2.860053803 | 0.004414013  | -3.64277109 |
| PIP        | -0.360545317   | 1.253186368   | -2.858024776 | 0.00444187   | -3.64874803 |
| CSF3R      | -0.316758875   | 2.536688852   | -2.857790875 | 0.00445091   | -3.649135659 |
| C2orf72    | 0.250177606    | 0.899532901   | 2.851088888 | 0.004538304  | -3.667956647 |
| RRAKD      | -0.216884994   | 2.515193945   | -2.847766947 | 0.004585161  | -3.677269705 |
| LSR        | 0.21374864     | 6.332065149   | 2.847273647 | 0.004592156  | -3.678651773 |
| HS3ST1     | -0.225261589   | 1.823310397   | -2.845812719 | 0.004612931  | -3.682743471 |
| NR1D1      | -0.216458174   | 2.979257055   | -2.845488282 | 0.004617556  | -3.683651862 |
| EDN2       | -0.337814572   | 1.68396405    | -2.845063306 | 0.004623621  | -3.684841599 |
| ST6GALNAC2  | -0.205820708   | 1.444257486   | -2.843979147 | 0.004639125  | -3.687875971 |
| RP11-76C10.5 | 0.311106529   | 1.672252354   | 2.839331714 | 0.004706125  | -3.700870644 |
| Gene       | Value1   | Value2   | Value3   | Value4   | Value5   |
|-----------|----------|----------|----------|----------|----------|
| BIRC5     | 0.309292 | 3.174583 | 2.837519 | 0.004732 | -3.705933 |
| VEGFA     | 0.247395 | 4.248469 | 2.835329 | 0.004765 | -3.712047 |
| TDRP      | 0.210012 | 2.878778 | 2.828613 | 0.004860 | -3.751275 |
| EIF1AY    | 0.319775 | 1.041872 | 2.815998 | 0.005006 | -3.747078 |
| RP11-175B9.3 | 0.212855 | 3.402438 | 2.821288 | 0.004952 | -3.754707 |
| DLC1      | -0.269736 | 2.690066 | -2.821288 | 0.004975 | -3.751128 |
| DEPDC1B   | 0.200335 | 0.868454 | 2.815998 | 0.005059 | -3.756786 |
| BRINP1    | -0.314979 | 0.868454 | -2.815998 | 0.005078 | -3.769679 |
| ST14      | 0.203843 | 6.091568 | 2.813171 | 0.005099 | -3.773634 |
| RNY3P8    | 0.254296 | 1.202436 | 2.813171 | 0.005118 | -3.776883 |
| RP11-359M6.2 | 0.214494 | 0.802297 | 2.813171 | 0.005122 | -3.777562 |
| HMGCS1    | 0.206015 | 3.691271 | 2.804514 | 0.005237 | -3.797568 |
| ELFN2     | -0.226863 | 1.180862 | -2.803700 | 0.005249 | -3.799815 |
| HIST1H2BK | 0.271319 | 6.004260 | 2.804514 | 0.005324 | -3.812505 |
| CTAG2     | 0.303896 | 0.422311 | 2.798514 | 0.005334 | -3.814117 |
| RP11-475C16.1 | 0.223645 | 3.562440 | 2.797957 | 0.005342 | -3.815651 |
| KRT5      | -0.393505 | 1.202213 | -2.795079 | 0.005389 | -3.823574 |
| ID1       | 0.343773 | 5.041873 | 2.793100 | 0.005422 | -3.829018 |
| SPRR2D    | -0.345150 | 0.770162 | -2.792401 | 0.005433 | -3.830940 |
| LYPDB     | 0.255379 | 1.086465 | 2.789479 | 0.005482 | -3.838966 |
| LRRN1     | -0.293962 | 1.481169 | -2.782036 | 0.005607 | -3.859472 |
| DRC1      | -0.222625 | 0.769628 | -2.780789 | 0.005628 | -3.862772 |
| HIP1      | -0.209142 | 3.351392 | -2.779723 | 0.005646 | -3.865715 |
| CENPM     | 0.202652 | 2.382970 | 2.776997 | 0.005693 | -3.873127 |
| RP11-129M6.1 | 0.217338 | 0.575679 | 2.769649 | 0.005821 | -3.893241 |
| DSP       | 0.360344 | 4.776380 | 2.766916 | 0.005869 | -3.900692 |
| COX6CP1   | 0.319465 | 1.391824 | 2.766802 | 0.005819 | -3.901001 |
| SLC5A8    | -0.270090 | 0.803886 | -2.766451 | 0.005872 | -3.901956 |
| BAIAP2L2  | 0.283659 | 1.488761 | 2.766046 | 0.005851 | -3.903013 |
| CSAG1     | 0.397683 | 0.805359 | 2.761134 | 0.005973 | -3.916430 |
| SYTL5     | 0.213306 | 0.880040 | 2.758076 | 0.006028 | -3.924745 |
| MAP1B     | -0.264465 | 2.049191 | -2.757158 | 0.006045 | -3.927234 |
| IGFBP1    | 0.251342 | 1.386185 | 2.756064 | 0.006062 | -3.930206 |
| Gene     | Value 1  | Value 2  | Value 3  | Value 4  | Value 5  | Value 6  |
|----------|---------|---------|---------|---------|---------|---------|
| SLC28A2  | 0.2495  | 0.5429  | 2.7560  | 0.0060  | -3.9303 |
| PKP1     | 0.4136  | 1.5939  | 2.7541  | 0.0061  | -3.9355 |
| CFTR     | -0.2626 | 1.3050  | -2.7509 | 0.0061  | -3.9436 |
| NTS      | 0.4878  | 0.9181  | 2.7502  | 0.0061  | -3.9459 |
| FAM83E   | 0.2752  | 3.7163  | 2.7480  | 0.0062  | -3.9518 |
| RACGAP1  | 0.2097  | 2.9961  | 2.7478  | 0.0062  | -3.9525 |
| RAB27B   | -0.2796 | 2.6665  | -2.7473 | 0.0062  | -3.9538 |
| WNT4     | 0.2175  | 1.1269  | 2.7457  | 0.0063  | -3.9582 |
| RASGEF1A | 0.2057  | 1.4555  | 2.7443  | 0.0063  | -3.9621 |
| AC105009.1 | 0.3728 | 1.2225  | 2.7439  | 0.0063  | -3.9631 |
| AOC1     | 0.4704  | 2.3489  | 2.7434  | 0.0063  | -3.9644 |
| CDKN2B   | -0.3650 | 4.5967  | -2.7394 | 0.0063  | -3.9755 |
| GPR116   | -0.3646 | 4.5969  | -2.7394 | 0.0063  | -3.9755 |
| SH3BGR1L| 0.2464  | 3.6320  | 2.7362  | 0.0064  | -3.9839 |
| MT1H     | -0.2119 | 0.8447  | -2.7332 | 0.0064  | -3.9919 |
| GATM     | -0.2467 | 1.7665  | -2.7289 | 0.0065  | -4.0037 |
| MS4A8    | -0.3466 | 1.2218  | -2.7272 | 0.0066  | -4.0082 |
| S100A16  | -0.2890 | 6.6248  | -2.7260 | 0.0066  | -4.0113 |
| CALB2    | -0.2669 | 0.9164  | -2.7234 | 0.0066  | -4.0184 |
| ENOD1    | -0.2262 | 4.0015  | -2.7203 | 0.0067  | -4.0267 |
| SUSD2    | -0.4736 | 3.9296  | -2.7147 | 0.0068  | -4.0417 |
| MIA      | -0.2142 | 0.3736  | -2.7119 | 0.0069  | -4.0491 |
| VILL     | -0.2634 | 1.6611  | -2.7089 | 0.0069  | -4.0571 |
| MT-TM    | 0.2480  | 0.9733  | 2.7077  | 0.0070  | -4.0601 |
| ALDOC    | -0.2566 | 3.1875  | -2.7059 | 0.0070  | -4.0650 |
| TOX      | -0.2225 | 1.8897  | -2.7047 | 0.0070  | -4.0683 |
| FAM81B   | -0.2233 | 1.0243  | -2.7017 | 0.0071  | -4.0763 |
| AC072052.7 | 0.2009 | 1.4028  | 2.6988  | 0.0071  | -4.0840 |
| SOX15    | 0.2125  | 1.1089  | 2.6952  | 0.0072  | -4.0935 |
| FOS      | -0.3301 | 6.1004  | -2.6947 | 0.0072  | -4.0950 |
| DDIT4L   | 0.2954  | 1.7226  | 2.6944  | 0.0072  | -4.0956 |
| UGT1A6   | 0.2988  | 0.6599  | 2.6901  | 0.0073  | -4.1071 |
| BBOX1-AS1| 0.2393  | 0.9784  | 2.6815  | 0.0075  | -4.1298 |
| Gene          | Value1  | Value2  | Value3  | Value4  | Value5  |
|--------------|---------|---------|---------|---------|---------|
| DUSP23       | 0.218363477 | 5.814623688 | 2.68069252 | 0.007591238 | -4.132083183 |
| LGALS3BP     | -0.21133464 | 8.259954888 | -2.67720969 | 0.007669455 | -4.141280907 |
| CHRNA9       | 0.2684212 | 0.538569032 | 2.675361843 | 0.00771124 | -4.146155234 |
| BUB1         | 0.219051968 | 2.13620919 | 2.67346335 | 0.008005657 | -4.151205193 |
| MMP24        | -0.242510769 | 2.135826785 | -2.672270844 | 0.0080816 | -4.154302361 |
| CHMP4BP1     | 0.206061968 | 1.913468032 | 2.660427936 | 0.008056557 | -4.185433202 |
| MAD2L1       | 0.205066176 | 1.95805568 | 2.659134985 | 0.008087097 | -4.19260389 |
| GLCCI1       | -0.204603185 | 2.352980865 | -2.657692761 | 0.008121286 | -4.1986318 |
| CITED2       | -0.238549205 | 5.329937595 | -2.655391367 | 0.008176111 | -4.1986318 |
| UGT2B4       | 0.242743758 | 0.422300356 | 2.650400872 | 0.008299425 | -4.17233111 |
| LDHB         | 0.255118822 | 7.076092627 | 2.649726342 | 0.008312485 | -4.213448252 |
| RP11-108M9.4 | 0.217968043 | 2.79185733 | 2.649726342 | 0.008312485 | -4.213448252 |
| HES1         | 0.213264129 | 4.542448085 | 2.6494649 | 0.008319274 | -4.214179389 |
| SCARA3       | -0.238230328 | 2.287192719 | -2.648277324 | 0.008347693 | -4.21723311 |
| P3H3         | -0.219749451 | 2.521697647 | -2.646124647 | 0.008400246 | -4.22285222 |
| C1orf194     | -0.266770351 | 1.067954611 | -2.645321619 | 0.008419926 | -4.22497223 |
| C9orf152     | 0.300792605 | 2.780314046 | 2.64471558 | 0.008440803 | -4.22716451 |
| MFS4         | -0.36167958 | 2.643133775 | -2.637025356 | 0.008625679 | -4.24655494 |
| RPS2P46      | 0.219103774 | 2.622824454 | 2.636631411 | 0.00863556 | -4.247579332 |
| AZGP1        | -0.546979291 | 3.164166618 | -2.63550991 | 0.008663746 | -4.250494808 |
| CITED4       | 0.244927709 | 2.350804248 | 2.634605498 | 0.008686636 | -4.252845056 |
| MT-TP        | 0.203784449 | 9.201085313 | 2.62870531 | 0.008836537 | -4.268158318 |
| HOXC10       | 0.34962195 | 1.116063869 | 2.62305381 | 0.008982348 | -4.282790764 |
| TRIP13       | 0.248098637 | 2.537828923 | 2.622516106 | 0.008963777 | -4.284158502 |
| CNFN         | 0.242158655 | 2.066811939 | 2.620758273 | 0.009042244 | -4.28873163 |
| RH0V         | 0.382721583 | 3.20666835 | 2.620721182 | 0.009043214 | -4.28882704 |
| NAPSA        | -0.567995274 | 7.675956083 | -2.616535537 | 0.009153283 | -4.299638098 |
| SLC1A7       | -0.400995099 | 1.47725309 | -2.610746598 | 0.009307491 | -4.314562584 |
| PRSS3P2      | -0.480221373 | 1.619192659 | -2.609592081 | 0.009338522 | -4.317535202 |
| LGR4         | 0.210670093 | 3.381162382 | 2.60936114 | 0.009345415 | -4.318194086 |
| CMAHP        | -0.241022738 | 2.592038415 | -2.60230097 | 0.009535842 | -4.336203827 |
| KCNJ8        | -0.214845738 | 2.388694943 | -2.59799678 | 0.009655348 | -4.347319007 |
| Gene         | Value1 | Value2 | Value3 | Value4 | Value5 | Value6 |
|--------------|--------|--------|--------|--------|--------|--------|
| NEUROD1      | 0.207917521 | 0.235154206 | 2.597924007 | 0.009657372 | -4.347506034 |
| ATP10B       | -0.220174571 | 0.885007271 | -2.592295529 | 0.009814631 | -4.36196719 |
| RP11-632C17_A.1 | 0.262198445 | 3.074438965 | 2.591143864 | 0.009860963 | -4.36617727 |
| ATP11A       | 0.26387122  | 4.321651677 | 2.591133364 | 0.009880957 | -4.367935699 |
| ANXA2P2      | -0.216850507 | 2.584381444 | -2.589945827 | 0.009880957 | -4.367935699 |
| PHLD3A2      | 0.262198445 | 3.074438965 | 2.591143864 | 0.009860963 | -4.36617727 |
| ATP11A       | 0.26387122  | 4.321651677 | 2.591133364 | 0.009880957 | -4.367935699 |
| ANXA2P2      | -0.216850507 | 2.584381444 | -2.589945827 | 0.009880957 | -4.367935699 |
| PHLD3A2      | 0.262198445 | 3.074438965 | 2.591143864 | 0.009860963 | -4.36617727 |
| ATP11A       | 0.26387122  | 4.321651677 | 2.591133364 | 0.009880957 | -4.367935699 |
| ANXA2P2      | -0.216850507 | 2.584381444 | -2.589945827 | 0.009880957 | -4.367935699 |
| PHLD3A2      | 0.262198445 | 3.074438965 | 2.591143864 | 0.009860963 | -4.36617727 |
| ATP11A       | 0.26387122  | 4.321651677 | 2.591133364 | 0.009880957 | -4.367935699 |
| ANXA2P2      | -0.216850507 | 2.584381444 | -2.589945827 | 0.009880957 | -4.367935699 |
| PHLD3A2      | 0.262198445 | 3.074438965 | 2.591143864 | 0.009860963 | -4.36617727 |
| Gene       | Value 1   | Value 2   | Value 3   | Value 4   | Value 5   |
|------------|-----------|-----------|-----------|-----------|-----------|
| RP11-169K16.8 | 0.216050469 | 1.492750938 | 2.527171588 | 0.011807767 | -4.526441035 |
| CNTD2      | 0.233274152 | 1.24168551 | 2.525679629 | 0.011857372 | -4.530162426 |
| SLC16A1    | -0.260084581 | 2.049511567 | -2.525231813 | 0.011872297 | -4.531278995 |
| DUSP6      | -0.26606164 | 5.032709197 | -2.524356523 | 0.011901517 | -4.533460857 |
| AGTR2      | -0.260674559 | 0.895661835 | -2.523784528 | 0.011920647 | -4.534886287 |
| CST1       | -0.480067647 | 2.867219243 | -2.519429338 | 0.012067202 | -4.545729243 |
| MIR6772    | 0.241699986 | 1.721333814 | 2.514825878 | 0.012223851 | -4.55717046 |
| FTLP3      | -0.227855123 | 2.913122028 | -2.511062404 | 0.012353256 | -4.566508862 |
| CLDN8      | 0.266161436 | 0.922553684 | 2.507406999 | 0.012364374 | -4.58123878 |
| MUC13      | 0.52118939 | 2.15349254 | 2.50455405 | 0.012579869 | -4.582262676 |
| RP11-599J14.2 | 0.218734625 | 1.18163099 | 2.50487836 | 0.012568536 | -4.586508862 |
| IGSF9      | 0.215355192 | 3.770620535 | 2.50121402 | 0.012595115 | -4.58959983 |
| MYBL2      | 0.330704241 | 5.986583943 | 2.502579927 | 0.012649394 | -4.587506646 |
| AGPAT2     | 0.205283605 | 5.986583943 | 2.502579927 | 0.012649394 | -4.587506646 |
| MIR429     | 0.258892549 | 1.688468945 | 2.50033668 | 0.012728863 | -4.593055505 |
| UMOL1      | 0.200446743 | 0.628773262 | 2.490803966 | 0.013079059 | -4.616542366 |
| RP11-132A1.4 | 0.217138008 | 1.605002768 | 2.48859825 | 0.013151283 | -4.621965423 |
| EGFR       | -0.269085661 | 3.472097575 | -2.488047915 | 0.013171405 | -4.62331861 |
| FUT2       | 0.219965931 | 2.735488042 | 2.487839518 | 0.013179027 | -4.62383096 |
| IFITM10    | -0.204045343 | 2.044130087 | -2.48602024 | 0.013245742 | -4.62829943 |
| RP11-510N19.5 | 0.244147955 | 1.854952962 | 2.481934354 | 0.013396662 | -4.63823778 |
| RP11-359E19.2 | 0.323997789 | 0.872996456 | 2.478579098 | 0.013521735 | -4.646543637 |
| CM89-22P13.1 | 0.213009212 | 1.794737708 | 2.477538355 | 0.013560739 | -4.649091092 |
| TGFA       | -0.252364976 | 2.825057314 | -2.47314866 | 0.013726356 | -4.659824385 |
| TC2N       | 0.214295044 | 4.047947347 | 2.46925012 | 0.013874941 | -4.669341177 |
| TPX2       | 0.284637688 | 3.647957366 | 2.468997505 | 0.013884618 | -4.66997334 |
| OBP2A      | 0.201047321 | 0.390085901 | 2.466301694 | 0.013988259 | -4.676528902 |
| PNMAL1     | -0.26614492 | 1.735199248 | -2.465976288 | 0.014000816 | -4.67732167 |
| CLDN10     | 0.373669614 | 1.828668313 | 2.457954361 | 0.014313531 | -4.69683753 |
| CDKL2      | -0.220617569 | 1.652194881 | -2.455701834 | 0.014402445 | -4.702300212 |
| GSTA1      | 0.471532143 | 2.93540112 | 2.452692883 | 0.014521978 | -4.70956097 |
| SFTA1P     | -0.407226 | 5.570521755 | -2.45170859 | 0.01456078 | -4.711951122 |
| IBSP       | -0.211031027 | 0.781810374 | -2.44710942 | 0.014746114 | -4.723111336 |
| Gene        | Z-score | Log10(p-value) | Log2(FC) | Log10(p-value) | Log2(FC) |
|------------|---------|----------------|----------|----------------|----------|
| MLPH       | 0.2641  | 0.0147         | 4.43     | -4.72          | 3.06     |
| ZNF385B    | -0.2648 | 0.0149         | 1.32     | -4.73          | 2.05     |
| ATOH8      | 0.2936  | 0.0150         | 2.03     | -4.73          | 1.56     |
| RP11-785D18.3 | 0.3394  | 0.0150         | 0.98     | -4.74          | 1.44     |
| TMEM27     | -0.2744 | 0.0152         | 1.69     | -4.74          | 1.14     |
| WSB1       | 0.2294  | 0.0155         | 4.77     | -4.78          | 3.57     |
| LINC00342  | -0.3184 | 0.0156         | 2.42     | -4.78          | 1.70     |
| UPK1B      | 0.3301  | 0.0157         | 0.59     | -4.79          | 0.37     |
| PPP1R3C    | -0.2026 | 0.0157         | 2.06     | -4.79          | 1.17     |
| GPR35      | 0.2117  | 0.0157         | 1.22     | -4.80          | 1.00     |
| RPL3P4     | 0.2103  | 0.0160         | 4.58     | -4.80          | 2.67     |
| PTK6       | 0.2536  | 0.0161         | 3.14     | -4.80          | 1.96     |
| NCAEPH     | 0.2055  | 0.0161         | 2.19     | -4.81          | 1.33     |
| RHOU       | 0.2030  | 0.0163         | 3.72     | -4.82          | 2.46     |
| BHMT2      | 0.3502  | 0.0164         | 1.72     | -4.82          | 1.05     |
| NES        | -0.2075 | 0.0164         | 3.08     | -4.83          | 1.87     |
| SLC22A17   | -0.2015 | 0.0165         | 2.13     | -4.83          | 1.14     |
| GLB1L3     | 0.2849  | 0.0165         | 1.07     | -4.85          | 0.69     |
| AKAP12     | -0.2648 | 0.0170         | 2.19     | -4.85          | 0.86     |
| OXCT1      | -0.2068 | 0.0172         | 2.67     | -4.86          | 1.44     |
| CYP2T1P    | 0.2150  | 0.0173         | 1.55     | -4.86          | 0.81     |
| LINC00261  | 0.2629  | 0.0173         | 1.46     | -4.86          | 0.91     |
| TRIM29     | -0.3120 | 0.0175         | 1.33     | -4.87          | 0.70     |
| KCNK5      | -0.2637 | 0.0176         | 3.81     | -4.88          | 2.13     |
| RP11-806O11.1 | 0.2468 | 0.0176         | 1.88     | -4.88          | 0.83     |
| GSTM3      | 0.2046  | 0.0177         | 2.42     | -4.89          | 1.40     |
| HIST1H1C   | 0.2828  | 0.0177         | 5.92     | -4.89          | 3.03     |
| MT-ATP6    | 0.2099  | 0.0178         | 11.66    | -4.90          | 4.07     |
| SORCS2     | 0.2433  | 0.0179         | 1.80     | -4.90          | 0.83     |
| MT-CYB     | 0.2154  | 0.0181         | 11.32    | -4.90          | 3.03     |
| RAB38      | -0.2050 | 0.0182         | 3.17     | -4.91          | 1.40     |
| ADRA2A     | -0.2708 | 0.0184         | 1.73     | -4.92          | 0.83     |
| DDIT4      | -0.2533 | 0.0186         | 5.56     | -4.93          | 2.68     |
| Gene      | log2 Fold Change | Beta Value | Beta Type | p-Value | FC Type |
|-----------|-----------------|------------|-----------|---------|---------|
| CDK1      | 0.221034738     | 3.012852   | 2.359362  | 0.018692| -4.931557 |
| C1orf233  | -0.228855847    | 2.652459   | -2.348140 | 0.019258| -4.957679 |
| MACC1     | -0.221309807    | 4.412409   | 2.341783  | 0.019586| -4.972423 |
| AQP4      | -0.386738739    | 2.915764   | -2.337058 | 0.019832| -4.983356 |
| STKN1     | 0.208198633     | 3.900386   | 2.332332  | 0.020082| -4.994272 |
| EPHA2     | -0.24384536     | 0.473071   | -2.332276 | 0.020104| -5.006396 |
| SPRKR2C   | -0.224001498    | 1.069103   | -2.331907 | 0.020141| -5.017217 |
| NPTX2     | -0.231583069    | 1.277711   | -2.331219 | 0.020141| -5.019507 |
| LRRG6     | -0.203394802    | 1.903349   | -2.327227 | 0.020354| -5.041397 |
| PLEKHS1   | -0.301337658    | 4.415097   | 2.322364  | 0.020617| -5.045036 |
| MBIP      | 0.214955324     | 4.467681   | 2.322711  | 0.020623| -5.048332 |
| TFF3      | 0.549609688     | 0.679971   | 2.322148  | 0.020623| -5.048832 |
| RP11-497G19.1 | 0.254277617 | 2.321367   | 0.020671  | 0.021950| -5.049076 |
| MELK      | 0.22087305      | 2.325845   | 0.020789  | 0.024523| -5.055175 |
| XKRX      | -0.25933668     | 1.985689   | -2.321164 | 0.020684| -5.056032 |
| TF        | 0.294195852     | 2.319183   | 0.020799  | 0.024523| -5.056032 |
| C2orf54   | -0.268484831    | 2.311816   | 0.021196  | 0.021950| -5.055175 |
| MT-CO3    | 0.20338319      | 12.303475  | 0.021453  | 0.024523| -5.055175 |
| ITIH2     | 0.215894757     | 2.308782   | 0.021365  | 0.024523| -5.055175 |
| PTP4A3    | 0.212745198     | 4.625007   | 0.021547  | 0.024523| -5.055175 |
| RP11-567G11.1 | 0.256760546 | 1.635820   | 0.021556  | 0.024523| -5.055175 |
| DDX3Y     | 0.322805536     | 1.378944   | 0.021803  | 0.024523| -5.055175 |
| CXCL2     | -0.289529428    | 4.027162   | 0.022032  | 0.024523| -5.055175 |
| RASSF10   | 0.201297158     | 1.455920   | 0.022334  | 0.024523| -5.055175 |
| RRM2      | 0.234713679     | 3.231348   | 0.022385  | 0.024523| -5.055175 |
| FAM83D    | 0.206214603     | 2.563151   | 0.022677  | 0.024523| -5.055175 |
| ABO       | 0.236286809     | 2.445462   | 0.023026  | 0.024523| -5.055175 |
| RP11-497G19.2 | 0.250429784 | 0.661729   | 0.023168  | 0.024523| -5.055175 |
| RP11-750B16.1 | 0.33659182 | 1.788455   | 0.023176  | 0.024523| -5.055175 |
| ANKRD65   | 0.267804701     | 3.339729   | 0.023267  | 0.024523| -5.055175 |
| TOP2A     | 0.253729536     | 3.933863   | 0.023517  | 0.024523| -5.055175 |
| PLOD2     | -0.256227782    | 3.587002   | 0.024228  | 0.024523| -5.055175 |
| PVRL4     | 0.203594457     | 4.173299   | 0.024701  | 0.024523| -5.055175 |
| Gene       | Value1   | Value2   | Value3   | Value4   | Value5   |
|------------|----------|----------|----------|----------|----------|
| AADAC      | -0.251163736 | 1.09433067 | -2.24506934 | 0.025202866 | -5.191899028 |
| HK2        | -0.209040594 | 3.590765694 | -2.241105089 | 0.025460278 | -5.20701809 |
| GJB3       | -0.302918461 | 1.78566962 | -2.23626408 | 0.02595211 | -5.21726016 |
| RSPH1      | -0.214832013 | 1.464567248 | -2.229007934 | 0.02625994 | -5.227469787 |
| SLPI       | -0.412347352 | 8.052018699 | -2.227343432 | 0.026371656 | -5.231141799 |
| C5         | 0.26874627  | 2.12275263 | 2.2258468 | 0.026472456 | -5.234441183 |
| HIST1H2BD  | 0.219072028 | 4.338595426 | 2.22915087 | 0.026735894 | -5.238988777 |
| ENPP3      | -0.247377534 | 1.329016397 | -2.221958587 | 0.026800236 | -5.243002741 |
| AC016739.2 | 0.203197648 | 3.058824695 | 2.221013963 | 0.026820533 | -5.245734874 |
| BP1FA1     | 0.705477755 | 4.144556001 | 2.22071639 | 0.026964641 | -5.250366035 |
| CEACAM6    | -0.418455381 | 8.296539745 | -2.21860922 | 0.027833743 | -5.27761805 |
| EEF1A1P5   | -0.252588354 | 4.202593928 | -2.206103836 | 0.027783374 | -5.288571058 |
| KLK14      | 0.312202634 | 0.879999742 | 2.201150558 | 0.028204089 | -5.289166514 |
| IGFBP3     | -0.272391722 | 5.732983369 | -2.200877376 | 0.028281615 | -5.291534169 |
| IRX2       | -0.334271194 | 2.56382115 | -2.199790819 | 0.028281615 | -5.291534169 |
| SLC6A8     | 0.218697162 | 2.803149666 | 2.196344748 | 0.028528711 | -5.299035726 |
| MDK        | 0.250957712 | 6.81103843 | 2.194470884 | 0.028663856 | -5.303109993 |
| LRRC31     | -0.232223206 | 1.142716384 | -2.187036296 | 0.029205508 | -5.319241108 |
| BRDT       | 0.219838927 | 0.694449363 | 2.179490455 | 0.029764007 | -5.335550929 |
| KCNE4      | 0.251371552 | 1.950761827 | 2.177532117 | 0.029910788 | -5.33978449 |
| PSAT1      | 0.247709688 | 3.357731055 | 2.1765601 | 0.02998374 | -5.341880567 |
| NMU        | 0.281048443 | 1.944761205 | 2.176292972 | 0.030003816 | -5.342456447 |
| RP11-156K13.3 | 0.201844702 | 0.661348447 | 2.174270821 | 0.030156162 | -5.34681359 |
| ALOX15     | -0.22833834 | 0.963526214 | -2.172589336 | 0.03028335 | -5.350433669 |
| KRT23      | -0.244286468 | 0.787114494 | -2.163668955 | 0.030965849 | -5.369592459 |
| RSP03      | -0.227290721 | 1.105320148 | -2.158869416 | 0.031338513 | -5.379868685 |
| RP5-857K21.6 | 0.267735187 | 5.5435284 | 2.156717494 | 0.031506849 | -5.384468863 |
| ALDH1A1    | -0.309470329 | 4.523612455 | -2.15490808 | 0.031644148 | -5.388263504 |
| EPHX3      | 0.230970426 | 2.993632266 | 2.1512184 | 0.03194056 | -5.396203861 |
| HNRPAPA1P27 | -0.226348592 | 1.461248332 | -2.150812412 | 0.031972783 | -5.397069069 |
| MT-TL1     | 0.237239255 | 2.145615161 | 2.147936777 | 0.032201818 | -5.403192794 |
| MIR647     | 0.202954011 | 2.636921525 | 2.135507649 | 0.03320805 | -5.429568377 |
| RP11-470M17.2 | 0.266615742 | 1.087283212 | 2.131178841 | 0.033564781 | -5.438719164 |
| Gene      | Value | Value | Value | Value | Value |
|-----------|-------|-------|-------|-------|-------|
| FAM183A   | -0.23790566 | 1.63922378 | -2.124870118 | 0.034090558 | -5.452022702 |
| VIL1      | 0.304036923 | 1.223893988 | 2.122602782 | 0.034281238 | -5.456794493 |
| GKN2      | 0.330409626 | 1.457308479 | 2.11973513 | 0.034523712 | -5.462822532 |
| ATF3      | -0.21922075 | 3.397544574 | -2.104621394 | 0.0354171 | -5.48465679 |
| GPC4      | -0.215638614 | 4.370403377 | -2.102536065 | 0.03587603 | -5.495211475 |
| C8orf4    | 0.292899218 | 6.781452413 | 2.10395804 | 0.035924728 | -5.496807923 |
| OAS1      | -0.205133929 | 3.993428599 | -2.102138046 | 0.035963747 | -5.499465122 |
| CTD-3252C9.4 | -0.205599874 | 3.137847947 | -2.102220914 | 0.035998068 | -5.501704139 |
| NUPR1L    | 0.23465422 | 1.029331225 | 2.101146074 | 0.03613142 | -5.503744373 |
| SERPINF2  | 0.222526796 | 2.803533709 | 2.096283308 | 0.036562401 | -5.507441349 |
| HPGD      | -0.33632965 | 3.409476221 | -2.094393701 | 0.036731055 | -5.511819779 |
| BPIFB1    | -0.478737852 | 3.668325474 | -2.089983071 | 0.037127309 | -5.515744373 |
| S100A6    | -0.221012964 | 10.26809962 | -2.086159553 | 0.03743765 | -5.52805579 |
| LINCO0460 | -0.214241747 | 0.926494596 | -2.080430285 | 0.037998068 | -5.544637699 |
| RP5-857K21.11 | 0.294538252 | 2.298011347 | 2.076960633 | 0.038318619 | -5.551787699 |
| NR4A2     | 0.230116007 | 2.744528221 | 2.076157483 | 0.038393148 | -5.5534411 |
| BAALC     | 0.225915791 | 1.039585184 | 2.066347997 | 0.03913439 | -5.573584624 |
| MUC20     | 0.250590509 | 3.24677043 | 2.066608697 | 0.03928874 | -5.573505496 |
| MTND1P23  | 0.374321265 | 1.82064819 | 2.066347997 | 0.039313439 | -5.57584624 |
| SCG2      | 0.232886191 | 1.039585184 | 2.066347997 | 0.039313439 | -5.57584624 |
| MAOA      | 0.239790932 | 4.193080384 | 2.052560388 | 0.040638204 | -5.601729121 |
| C4BPA     | -0.413902632 | 5.206922308 | -2.049255885 | 0.040961858 | -5.608458778 |
| KCNK1     | 0.204668891 | 3.367638988 | 2.047804865 | 0.041104465 | -5.611406266 |
| TNS4      | -0.308697007 | 1.968784132 | -2.04495275 | 0.041431314 | -5.618121445 |
| GOLT1A    | 0.221226584 | 3.543160834 | 2.03920520 | 0.041958606 | -5.628838317 |
| GDF15     | 0.294137893 | 4.708279192 | 2.036307453 | 0.042249427 | -5.634688689 |
| CYP24A1   | 0.383978643 | 2.944675973 | 2.03758096 | 0.042506937 | -5.639833714 |
| TREM1     | -0.262132384 | 3.30729565 | -2.028523676 | 0.043039838 | -5.66507777 |
| CACNG4    | -0.27523664 | 1.85287315 | 2.02077935 | 0.043838649 | -5.66592868 |
| FOXA2     | 0.279653108 | 3.009381692 | 2.016398248 | 0.044296086 | -5.674700192 |
| F5        | -0.214804404 | 1.273986799 | -2.016056227 | 0.044319666 | -5.675384173 |
| ALPK3     | 0.207008789 | 2.17753467 | 2.004150105 | 0.0459642 | -5.699123127 |
| SST       | 0.32615919 | 0.644798877 | 2.00172633 | 0.04585753 | -5.70398811 |
| Gene          | Value 1  | Value 2  | Value 3  | Value 4  | Value 5  |
|--------------|---------|---------|---------|---------|---------|
| NFE4         | -0.203813156 | 0.577390932 | -1.999684047 | 0.046078522 | -5.707992073 |
| PEBP4        | -0.341890245  | 2.760893514   | -1.997995846  | 0.046261878  | -5.711339525  |
| KRT6A        | -0.419127267  | 2.001009288   | -1.995610975  | 0.04652195   | -5.716063629  |
| CDH17        | 0.261831233   | 0.959935347   | 1.995430351   | 0.046541697  | -5.716421194  |
| ITGB4        | -0.256418291  | 4.654369032   | -1.986212807  | 0.047558873  | -5.734626062  |
| BMP6         | 0.243510869   | 1.732194354   | 1.984432101   | 0.047757523  | -5.738133438  |
| LY6D         | -0.304085323  | 1.403478395   | -1.979764079  | 0.048281596  | -5.747313132  |
| MS4A15       | -0.323220684  | 1.770668483   | -1.977475071  | 0.048540345  | -5.751806702  |
| PAX7         | 0.216753545   | 0.573088702   | 1.976505385   | 0.04865031   | -5.753708759  |
| EPS8L3       | 0.223542559   | 0.602288436   | 1.972617346   | 0.049093334  | -5.761325994  |
| SEZ6L2       | -0.233840289  | 4.278856233   | -1.96998663   | 0.049395013  | -5.766471574  |
| RP11-469H8.6 | 0.202181036   | 1.031170796   | 1.967399415   | 0.049693225  | -5.771525474  |
Table S2. The Kaplan-Meier analysis and univariate Cox regression recognized potential prognostic genes (p-value < 0.05).

| ID     | KM_pvalue | HR   | HR_95L  | HR_95H  | Cox_pvalue |
|--------|-----------|------|---------|---------|------------|
| GJB3   | 4.91E-05  | 1.286595672 | 1.172188403 | 1.412169256 | 1.14E-07   |
| KRT6A  | 0.00429395 | 1.155784859 | 1.094348355 | 1.220670397 | 2.05E-07   |
| ARNTL2 | 0.001496175 | 1.368158001 | 1.201317673 | 1.558169297 | 2.31E-06   |
| GNG7   | 1.09E-05  | 0.575059938 | 0.455897653 | 0.725368798 | 3.01E-06   |
| VEGFC  | 0.011221481 | 1.373019086 | 1.20136191 | 1.569171866 | 3.27E-06   |
| CERS4  | 0.000678228 | 0.708313369 | 0.612468808 | 0.819156537 | 3.33E-06   |
| PLK1   | 8.54E-05  | 1.404974984 | 1.215060666 | 1.624572961 | 4.46E-06   |
| FKBP4  | 0.000656198 | 1.512177196 | 1.263554203 | 1.809720443 | 6.41E-06   |
| ECT2   | 0.002446829 | 1.415865748 | 1.214438723 | 1.650701495 | 8.94E-06   |
| EXO1   | 0.003641936 | 1.419279618 | 1.213129347 | 1.660461549 | 1.23E-05   |
| CMAHP  | 0.000300256 | 0.709203538 | 0.607583927 | 0.82781923 | 1.33E-05   |
| ABCC2  | 0.01641664 | 1.190954913 | 1.100806709 | 1.288485611 | 1.35E-05   |
| RRM2   | 0.000569177 | 1.322748251 | 1.164307198 | 1.502750252 | 1.73E-05   |
| PRC1   | 6.63E-05  | 1.383039781 | 1.188043079 | 1.610041814 | 2.89E-05   |
| FSCN1  | 0.002628796 | 1.272965405 | 1.136732038 | 1.425525866 | 2.93E-05   |
| HMGA1  | 0.000804859 | 1.31631808 | 1.154320989 | 1.501049799 | 4.10E-05   |
| KIF14  | 3.57E-05  | 1.483223959 | 1.227639286 | 1.792019316 | 4.40E-05   |
| HJURP  | 0.000696022 | 1.328728707 | 1.158829645 | 1.52357118 | 4.67E-05   |
| CCR2   | 0.000290542 | 0.65747613 | 0.536857988 | 0.805194059 | 5.01E-05   |
| TPX2   | 0.002890157 | 1.25449589 | 1.123257827 | 1.401067413 | 5.78E-05   |
| FOXM1  | 0.001110135 | 1.284586442 | 1.136168491 | 1.452392264 | 6.39E-05   |
| OIP5   | 0.00029949 | 1.391319232 | 1.177332901 | 1.644198684 | 0.000106219 |
| KIF4A  | 0.004864936 | 1.318787916 | 1.146095595 | 1.517501311 | 0.000111456 |
| UCK2   | 0.000577045 | 1.348553105 | 1.15866123 | 1.569532456 | 0.000112307 |
| SLC16A3 | 0.000238722 | 1.361666929 | 1.163643214 | 1.593389453 | 0.000118064 |
| PCDH7  | 0.004697663 | 1.295245062 | 1.13477863 | 1.478402682 | 0.000126275 |
| FAAH   | 0.002680337 | 0.68516452 | 0.564724029 | 0.831291738 | 0.00012645 |
| LAMC2  | 0.003018706 | 1.208478654 | 1.096782472 | 1.33154996 | 0.000129739 |
| CTSH   | 0.014136377 | 0.797222352 | 0.709852616 | 0.895345688 | 0.000129958 |
| Gene   | Value1  | Value2  | Value3  | Value4  | Value5  |
|--------|---------|---------|---------|---------|---------|
| NEK2   | 0.000473885 | 1.300506898 | 1.1367318 | 1.487877959 | 0.000130159 |
| SPC25  | 0.001912394 | 1.393815562 | 1.173296875 | 1.655780272 | 0.000157647 |
| CHEK1  | 0.009400996 | 1.423292762 | 1.18368351 | 1.711138139 | 0.000172602 |
| DPYSL2 | 0.009173965 | 0.742423181 | 0.635405919 | 0.86746466 | 0.000176654 |
| FCGRT  | 0.001430341 | 0.688742608 | 0.56535989 | 0.839052059 | 0.000213682 |
| DENND1C| 0.000574151 | 0.614974746 | 0.47483797 | 0.796459679 | 0.000228842 |
| BTG2   | 0.002973992 | 0.790595595 | 0.696935828 | 0.896842678 | 0.000259922 |
| CD40LG | 0.004450403 | 0.603035786 | 0.49661858 | 0.791129724 | 0.000260791 |
| SLC34A2| 0.007399669 | 0.881398002 | 0.823566105 | 0.94329093 | 0.000266352 |
| FUCA1  | 0.018101883 | 0.697457644 | 0.574214114 | 0.847152923 | 0.000281248 |
| MTL5   | 0.000132248 | 1.413577904 | 1.172183018 | 1.70468473 | 0.000291438 |
| KIF11  | 0.001155491 | 1.324318256 | 1.13730774 | 1.542079404 | 0.000298648 |
| TGF1   | 4.80E-05    | 1.592238359 | 1.237244662 | 2.049087841 | 0.000301447 |
| LRFN4  | 0.003396672 | 1.332934729 | 1.139913358 | 1.558640382 | 0.000317361 |
| CDK1   | 3.48E-05    | 1.273785278 | 1.116573093 | 1.45312756 | 0.00031753 |
| RPS6KA1| 0.004880836 | 0.590566723 | 0.443361394 | 0.786647325 | 0.000317583 |
| TPI1   | 0.015972759 | 1.536454559 | 1.214783084 | 1.943303824 | 0.000339279 |
| CCNB2  | 0.002231108 | 1.284570323 | 1.119763106 | 1.473633938 | 0.00035072 |
| NEIL3  | 0.000554053 | 1.297642464 | 1.124423134 | 1.497546532 | 0.000365046 |
| PAICS  | 0.012166354 | 1.461870099 | 1.186330761 | 1.801406703 | 0.000366017 |
| KIF23  | 0.00396967 | 1.331130474 | 1.13718014 | 1.558159763 | 0.000370964 |
| NPC2   | 0.00685934 | 0.801342934 | 0.709049175 | 0.905650159 | 0.000389156 |
| MBIP   | 0.008232649 | 0.774035589 | 0.671596865 | 0.8920993 | 0.000405683 |
| NCAPG  | 0.006722682 | 1.300531936 | 1.124044937 | 1.504729268 | 0.000413278 |
| PBK    | 0.00264619 | 1.257299261 | 1.106847348 | 1.428201852 | 0.00042976 |
| IL16   | 0.000807067 | 0.656299107 | 0.518522636 | 0.830684116 | 0.000460091 |
| GPR116 | 0.003731309 | 0.841316618 | 0.763093469 | 0.927558262 | 0.000519904 |
| RAD51  | 0.018434057 | 1.400749598 | 1.157339712 | 1.695353071 | 0.000539485 |
| FANCI  | 0.005103834 | 1.383204154 | 1.150918743 | 1.662370819 | 0.000543197 |
| ALDOA  | 0.00197006 | 1.446860773 | 1.172732992 | 1.784622138 | 0.000565712 |
| MS4A1  | 0.000646014 | 0.79028853 | 0.691254095 | 0.903511408 | 0.000570454 |
| KIAA0101 | 0.000806402 | 1.304912968 | 1.121265709 | 1.518639016 | 0.00058392 |
| Gene     | Value1 | Value2 | Value3 | Value4 | Value5 |
|----------|--------|--------|--------|--------|--------|
| BUB1B    | 0.000607945 | 1.301070344 | 1.119384097 | 1.512245926 | 0.00060453 |
| CHRDL1   | 0.000134592 | 0.806123407 | 0.712575441 | 0.911952491 | 0.000616066 |
| UNC13B   | 0.000216597 | 0.771897618 | 0.665524772 | 0.895272359 | 0.000620998 |
| STRAP    | 0.009623053 | 1.481561896 | 1.182149991 | 1.856847346 | 0.000644008 |
| CBFA2T3  | 0.009016829 | 0.613714545 | 0.46329009 | 0.812979926 | 0.000665978 |
| BTK      | 0.000297861 | 0.722614395 | 0.599281982 | 0.871328656 | 0.00066777 |
| B4GALT4  | 0.010819408 | 1.452028985 | 1.171202148 | 1.800191591 | 0.000671274 |
| CD1D     | 0.010653088 | 0.637521982 | 0.491144519 | 0.828566355 | 0.000677591 |
| RNASE1   | 0.001974356 | 0.850188854 | 0.773462434 | 0.93452643 | 0.000700545 |
| CTS1B    | 0.002766141 | 1.307176886 | 1.118166873 | 1.52813632 | 0.000774864 |
| CENPF    | 0.004575644 | 1.263007639 | 1.101983238 | 1.447561307 | 0.000792097 |
| VDAC2    | 0.007902772 | 1.592458648 | 1.213269074 | 2.090158398 | 0.000798918 |
| BIRC5    | 0.000512744 | 1.225187869 | 1.087336185 | 1.380516288 | 0.000853495 |
| SFTPD    | 0.006936968 | 0.903031336 | 0.850331362 | 0.958994602 | 0.000889313 |
| MAD2L1   | 0.022200719 | 1.305173287 | 1.115466397 | 1.527143547 | 0.000887771 |
| SLAMF1   | 0.00487719 | 0.629991215 | 0.479697178 | 0.827373914 | 0.00089156 |
| CDC20    | 0.038200527 | 1.211368754 | 1.081783089 | 1.356477349 | 0.00089451 |
| CAMK1D   | 0.025627835 | 0.785676028 | 0.681362642 | 0.905959299 | 0.00090401 |
| CBX7     | 0.008603131 | 0.678481609 | 0.539228569 | 0.853696039 | 0.000934413 |
| MS4A2    | 0.022200719 | 0.658943112 | 0.51442748 | 0.844056824 | 0.000959723 |
| NUSAP1   | 0.000263608 | 1.273267628 | 1.103049945 | 1.469752535 | 0.000968624 |
| NLRP1    | 0.012702655 | 0.696946124 | 0.562001947 | 0.8642922 | 0.000108142 |
| CDT1     | 0.035667821 | 1.283511767 | 1.10426966 | 1.491095445 | 0.001101184 |
| CENPM    | 0.011548155 | 1.313851391 | 1.114825436 | 1.49408764 | 0.001126297 |
| GDF10    | 0.011548155 | 0.707451543 | 0.574417114 | 0.871296613 | 0.001129017 |
| TRAF3IP3 | 0.011548155 | 0.644054759 | 0.493829543 | 0.839979175 | 0.001167106 |
| MCM4     | 0.007709112 | 1.283214988 | 1.103847104 | 1.491279872 | 0.001170049 |
| MELK     | 0.005327625 | 1.240160619 | 1.088455639 | 1.413009687 | 0.001224346 |
| CCDC28A  | 0.01171666 | 0.64258189 | 0.491468009 | 0.840171746 | 0.001224826 |
| SKA1     | 0.03786553 | 1.310862759 | 1.112472032 | 1.544632728 | 0.001225086 |
| HTATIP2  | 0.021106499 | 1.40803894 | 1.144263827 | 1.734502451 | 0.001238191 |
| CDC6     | 0.001765597 | 1.265332592 | 1.096653265 | 1.459956962 | 0.001264623 |
|        |         |         |         |         |         |
|--------|---------|---------|---------|---------|---------|
| MGP    | 0.002194157 | 0.830807679 | 0.7420004 | 0.930243971 | 0.001310817 |
| ADRB2  | 0.006821284  | 0.696115979 | 0.557993829 | 0.868427986 | 0.00132683  |
| RNF130 | 0.016814914  | 0.620321529 | 0.463190729 | 0.830756697 | 0.001354817 |
| ICAM3  | 0.002295168  | 0.655897123 | 0.506335788 | 0.849635846 | 0.001403203 |
| TFEB   | 0.009860164  | 0.664306628 | 0.516552394 | 0.854324365 | 0.001439479 |
| PTGDS  | 0.016458927  | 0.844159954 | 0.760570386 | 0.936936332 | 0.00145074  |
| MAP3K3 | 0.031267071  | 0.652159901 | 0.50070813  | 0.849422072 | 0.001522556 |
| HLF    | 0.00133174   | 0.791660362 | 0.685024281 | 0.914896225 | 0.00155135  |
| CYCS   | 0.000678607  | 1.410693187 | 1.139902451 | 1.745811904 | 0.001555754 |
| PLOD2  | 0.037826572  | 1.200844484 | 1.070346461 | 1.347252994 | 0.001819781 |
| RASGRF2| 0.004290593  | 0.655902627 | 0.501605446 | 0.857662625 | 0.002055809 |
| KLRB1  | 0.016591323  | 0.754918691 | 0.631276391 | 0.902777671 | 0.002065098 |
| RACGAP1| 0.0005580173 | 1.2839374  | 1.09504127 | 1.505418371 | 0.002082826 |
| CYCS   | 0.000678607  | 1.200844484 | 1.070346461 | 1.505418371 | 0.002082826 |
| PLOD2  | 0.037826572  | 1.200844484 | 1.070346461 | 1.505418371 | 0.002082826 |
| RASGRF2| 0.004290593  | 0.655902627 | 0.501605446 | 0.857662625 | 0.002055809 |
| KLRB1  | 0.016591323  | 0.754918691 | 0.631276391 | 0.902777671 | 0.002065098 |
| RACGAP1| 0.0005580173 | 1.2839374  | 1.09504127 | 1.505418371 | 0.002082826 |
| ARHGEF6| 0.000245767 | 0.734230157 | 0.601403281 | 0.896393386 | 0.002411675 |
| CDCA3  | 0.000383509  | 1.319608841 | 1.105576582 | 1.575076319 | 0.0021295   |
| DDIT4  | 0.000846896  | 1.213711587 | 1.07204438  | 1.374099567 | 0.002224228 |
| SMAD9  | 0.0002726069 | 0.684471749 | 0.536410755 | 0.873400786 | 0.002300667 |
| UBE2C  | 0.036479194  | 1.160711037 | 1.05461661 | 1.277478562 | 0.002309194 |
| ARHGEF6| 0.000245767 | 0.734230157 | 0.601403281 | 0.896393386 | 0.002411675 |
| FAM64A | 0.000353517  | 1.26617469 | 1.036269015 | 1.475875979 | 0.002542333 |
| TTLL12 | 0.013201781  | 1.375299408 | 1.117939474 | 1.691905963 | 0.002572896 |
| CD1E   | 0.006654779  | 0.77776713  | 0.66018187 | 0.916295548 | 0.002653727 |
| ORC1   | 0.0009018638 | 1.307014356 | 1.09724771 | 1.5568832  | 0.00270233  |
| HMHA1  | 0.000694399  | 0.733156122 | 0.597729124 | 0.899266704 | 0.002892284 |
| DRAM1  | 0.001565136  | 0.818104642 | 0.716436313 | 0.934164965 | 0.003015942 |
| ABCA8  | 0.005799555  | 0.654925263 | 0.49489523  | 0.866537736 | 0.003049058 |
| KIFC1  | 0.019722175  | 1.216917773 | 1.068563591 | 1.38586873 | 0.00307908  |
| FCHSD2 | 0.017554359  | 0.626772888 | 0.45923916  | 0.854522115 | 0.003136116 |
| CENPA  | 0.020733675  | 1.227965784 | 1.070859705 | 1.408120934 | 0.003280693 |
| ATIC   | 0.04499318   | 1.560894876 | 1.159870722 | 2.100572734 | 0.003294379 |
| SYNE1  | 0.045716589  | 0.717043718 | 0.574109582 | 0.895563686 | 0.003363569 |
| SASH3  | 0.003178058  | 0.803210553 | 0.692838209 | 0.931165725 | 0.003665778 |
| Gene   | Expression A | Expression B | Expression C | Expression D | Expression E |
|--------|--------------|--------------|--------------|--------------|--------------|
| NDRG2  | 0.010944236  | 0.767929429  | 0.642204634  | 0.918267445  | 0.003795399  |
| DTYMK  | 0.00100326   | 1.361395764  | 1.10425531   | 1.678004152  | 0.003829857  |
| ACAP1  | 0.006225947  | 0.733745668  | 0.594380183  | 0.905788452  | 0.003968495  |
| SFTPC  | 0.027058298  | 0.941646911  | 0.903785969  | 0.980996216  | 0.003995106  |
| MFAP4  | 0.011584424  | 0.865995943  | 0.784999594  | 0.955349506  | 0.004083028  |
| TLE2   | 0.00145303   | 0.787367271  | 0.668779984  | 0.926982316  | 0.004100582  |
| CD22   | 0.008611604  | 0.747988818  | 0.612582124  | 0.913326149  | 0.004375362  |
| CDC45  | 0.009352153  | 1.225039592  | 1.06487204   | 1.409297968  | 0.004523127  |
| RND3   | 0.031056314  | 1.2203881    | 1.063527699  | 1.400383944  | 0.004548109  |
| PRKCB  | 0.000859776  | 0.713159816  | 0.5642391    | 0.901385463  | 0.004673366  |
| MRPL15 | 0.011593791  | 1.322321925  | 1.089414211  | 1.605023374  | 0.004708933  |
| MCM10  | 0.01959606   | 1.278414254  | 1.077056821  | 1.517403091  | 0.004969475  |
| ARHGAP25 | 0.002241871 | 0.722668555  | 0.575922361  | 0.906805979  | 0.005036302  |
| PIK3IP1| 0.007705053  | 0.755408741  | 0.620750152  | 0.919278657  | 0.005107216  |
| TTK    | 0.000391439  | 1.254481101  | 1.070391202  | 1.470231472  | 0.005108933  |
| ESPL1  | 0.000353859  | 1.279716478  | 1.076166847  | 1.521766137  | 0.005263057  |
| POLD2  | 0.003499067  | 1.416466661  | 1.108337866  | 1.810258281  | 0.005405488  |
| PHACTR1| 0.008377535  | 0.697098967  | 0.540584221  | 0.898929252  | 0.005414876  |
| CORO1A | 0.014010648  | 0.80447836   | 0.690094065  | 0.937822053  | 0.005429974  |
| GPR87  | 0.033693036  | 1.123176567  | 1.034826077  | 1.219070168  | 0.005453762  |
| MYBL2  | 0.018666811  | 1.142482881  | 1.039451662  | 1.25572663  | 0.005738024  |
| CD74   | 0.001898211  | 0.862733636  | 0.776662786  | 0.958342979  | 0.005897007  |
| RFTN1  | 0.003769824  | 0.804969971  | 0.689369592  | 0.939955377  | 0.006091113  |
| TOP2A  | 0.03115354  | 1.168331155  | 1.045268179  | 1.30582753   | 0.006151619  |
| RASSF2 | 0.008394044  | 0.788485363  | 0.664200787  | 0.93543543   | 0.006422079  |
| RORA   | 0.011606109  | 0.620457045  | 0.43999247   | 0.874939849  | 0.006492207  |
| CR2    | 0.035123918  | 0.823195681  | 0.714769129  | 0.948069946  | 0.006933875  |
| ZNF671 | 0.059481218  | 0.684985843  | 0.520255825  | 0.901874776  | 0.007021035  |
| CYLD   | 0.01487111   | 0.66656154   | 0.49643933   | 0.895236135  | 0.007024076  |
| GSTM5  | 0.038373843  | 0.547116354  | 0.350408888  | 0.854248609  | 0.007979612  |
| CEACAM21 | 0.006989718 | 0.725195612  | 0.571789379  | 0.919759435  | 0.008055579  |
| IL33   | 0.03771703   | 0.840990499  | 0.739801353  | 0.956020175  | 0.008106942  |
| Gene       | Value1   | Value2   | Value3   | Value4   | Value5   |
|------------|----------|----------|----------|----------|----------|
| BANK1      | 0.021815051 | 0.744175472 | 0.597738873 | 0.92648673 | 0.008219128 |
| MAP4K1     | 0.008817633  | 0.777056314  | 0.643487362  | 0.938350232 | 0.008762023  |
| PPM1G      | 0.001115905  | 1.50853687   | 1.109054012  | 2.05191403  | 0.008807902  |
| PIK3CD     | 0.000226691  | 0.768414865  | 0.630254624  | 0.938681679  | 0.009190376  |
| HSD17B6    | 0.001290348  | 0.864959715  | 0.775368309  | 0.964903131  | 0.009312407  |
| CD2        | 0.005080979  | 0.836896621  | 0.730983758  | 0.958155289  | 0.009904834  |
| GPR18      | 0.037110876  | 0.630993691  | 0.44531878  | 0.895668136  | 0.009980401  |
| FXYD1      | 0.042849616  | 0.504099876  | 0.299234491  | 0.849222576  | 0.010048788  |
| CD37       | 0.005834908  | 0.822509537  | 0.708779689  | 0.954488325  | 0.010069267  |
| S100P      | 0.038375595  | 1.069965238  | 1.01616739  | 1.12661197  | 0.010191582  |
| CD28       | 0.012535004  | 0.695249235  | 0.730983758  | 0.958155289  | 0.009904834  |
| ANX2A2P2   | 0.006533736  | 1.219723814  | 1.047172123  | 1.420708353  | 0.010703135  |
| TXNDC15    | 0.005957687  | 0.683361799  | 0.50886188  | 0.917657399  | 0.011365009  |
| NMB        | 0.025933109  | 1.190930438  | 1.0399165  | 1.363874223  | 0.011546041  |
| TBRG4      | 0.008213706  | 1.399149612  | 1.077564644  | 1.816707374  | 0.011715504  |
| CD48       | 0.022706016  | 0.835903142  | 0.727110721  | 0.960973401  | 0.01175097  |
| CCR7       | 0.037353112  | 0.815682235  | 0.69600317  | 0.955940341  | 0.011850655  |
| SLC3A2     | 0.029349342  | 1.344914999  | 1.067044187  | 1.695145365  | 0.01208975  |
| KIF18B     | 0.000712551  | 1.197819213  | 1.039986835  | 1.379604837  | 0.012285439  |
| ADRBK2     | 0.013189868  | 0.76333995  | 0.61600617  | 0.944985735  | 0.013157032  |
| FHL1       | 0.028304554  | 0.836997518  | 0.727103824  | 0.963500427  | 0.013222234  |
| STEAP1     | 4.88E-05   | 1.140063667  | 1.027349666  | 1.265143901  | 0.013588133  |
| SELP       | 0.006373339  | 0.791596917  | 0.657289781  | 0.953347667  | 0.013755197  |
| PSTPIP1    | 0.001047455  | 0.745607296  | 0.589258229  | 0.943440775  | 0.014490901  |
| LYL1       | 0.0417565   | 0.71135494  | 0.540895565  | 0.93553369  | 0.014820564  |
| SLC6A8     | 0.024162805  | 1.173805677  | 1.031842357  | 1.335300451  | 0.014827249  |
| CYFIP2     | 0.019350481  | 0.808511809  | 0.681252394  | 0.959543556  | 0.014991586  |
| TDG        | 0.039754396  | 1.356670401  | 1.060062357  | 1.736270103  | 0.015378056  |
| LTB        | 0.015423105  | 0.863861593  | 0.766179603  | 0.973997283  | 0.016834565  |
| PIK3R1     | 0.001224051  | 0.740850366  | 0.57836037  | 0.948982528  | 0.017573195  |
| PPP1R16B   | 0.016315428  | 0.797299169  | 0.661318333  | 0.9612405  | 0.017582256  |
| PIGR       | 0.033746966  | 0.936841376  | 0.887638642  | 0.988771469  | 0.017778395  |
| Gene    | Value1  | Value2  | Value3  | Value4  | Value5  |
|---------|---------|---------|---------|---------|---------|
| E2F8    | 0.020649681 | 1.263560925 | 1.039861756 | 1.535383144 | 0.018615154 |
| HIP1    | 0.032059997 | 0.813950046 | 0.685567963 | 0.966373451 | 0.018746922 |
| MYO1F   | 0.016429967 | 0.787456742 | 0.645201516 | 0.961076664 | 0.018748186 |
| TRIP13  | 0.003552683 | 1.175426574 | 1.026963555 | 1.345352154 | 0.018967331 |
| IL24    | 0.037623566 | 0.732022308 | 0.56375759  | 0.950508993 | 0.019239729 |
| A2M     | 0.03635591  | 0.865952386 | 0.767586037 | 0.976924407 | 0.019312523 |
| IL7R    | 0.012523275 | 0.855911177 | 0.751178096 | 0.975246677 | 0.019473474 |
| IL6ST   | 0.004395105 | 0.792793347 | 0.652347799 | 0.96347576  | 0.019597084 |
| CCT2    | 0.014569142 | 1.180702395 | 1.026677411 | 1.357834632 | 0.019853416 |
| GPSM3   | 0.006949632 | 0.823132687 | 0.698572051 | 0.96990342  | 0.020072179 |
| IFT57   | 0.019130454 | 0.849668442 | 0.740289112 | 0.975208806 | 0.020503416 |
| MAN1C1  | 0.031762223 | 0.739401507 | 0.572368446 | 0.955179471 | 0.020834899 |
| PLCB2   | 0.02674174  | 0.808637791 | 0.67524432  | 0.968382936 | 0.020929398 |
| CCDC90B | 0.004602258 | 1.329754012 | 1.042509858 | 1.696142938 | 0.021718952 |
| CBX3    | 0.016374991 | 1.345818677 | 1.04215564  | 1.737696311 | 0.022737391 |
| CACNA1D | 0.041320529 | 0.766943202 | 0.608204376 | 0.967112205 | 0.024922931 |
| ELMO1   | 0.003851411 | 0.77020752  | 0.613011565 | 0.967713592 | 0.02497775 |
| PSMB6   | 0.009610775 | 1.361219884 | 1.038741282 | 1.783812395 | 0.025384425 |
| BIN2    | 0.02037405  | 0.806824291 | 0.66791385  | 0.974624852 | 0.02597534 |
| CEBPA   | 0.042085772 | 0.861070567 | 0.753582571 | 0.983890219 | 0.02799723 |
| DSP     | 0.043365352 | 1.12255188 | 1.01212033  | 1.245031652 | 0.028670042 |
| CD81    | 0.017532619 | 0.784995783 | 0.631821924 | 0.975303888 | 0.028834014 |
| PTK2B   | 0.048794168 | 0.790313446 | 0.639468535 | 0.976741323 | 0.029424904 |
| FBLN5   | 0.006211839 | 0.842754242 | 0.720859452 | 0.98526101  | 0.031853444 |
| TUBG1   | 0.001926231 | 1.252297476 | 1.019588004 | 1.538120262 | 0.031960361 |
| PTPN7   | 0.045858515 | 0.806825682 | 0.66261847  | 0.98235274  | 0.03257933 |
| RALGPS2 | 0.019528207 | 1.284763307 | 1.018645615 | 1.620403337 | 0.03434768 |
| SLC22A17| 0.033232019 | 0.836820005 | 0.70926402  | 0.987334885 | 0.034771404 |
| ECE2    | 0.024829003 | 1.271083468 | 1.017293218 | 1.588188297 | 0.034785835 |
| FLI1    | 0.009818162 | 0.777658772 | 0.613065627 | 0.986441156 | 0.038221262 |
| FYN     | 0.049419978 | 0.811923559 | 0.665774867 | 0.990154327 | 0.039620574 |
| FAM129A | 0.008783242 | 0.856453441 | 0.73772304  | 0.994286768 | 0.041828939 |
| NINJ1 | 0.018987155 | 0.796490929 | 0.635762401 | 0.997853599 | 0.04785556 |
| Authors          | Published online date | PubMed ID  | Signature found | Gene-signature composition | Equation |
|------------------|------------------------|------------|-----------------|----------------------------|----------|
| Zhong, Haihui, et al. | 2021 Sep 1            | 34540825   | 9-gene signature | CBFA2T3, CR2, SEL1L3, TM6SF1, TSPAN32, ITGA6, MAPK11, RASA3, TLR6 | risk score = CBFA2T3 * (-0.283625763) + CR2 * (-0.162111327) + SEL1L3 * (-0.231743871) + TM6SF1 * (-0.527168072) + TSPAN32 * (-0.169271203) + ITGA6 * (-0.614785144) + MAPK11 * 0.528539595 + RASA3 * 0.323227079 + TLR6 * 0.3453755 |
| Xu, Qian, et al.  | 2021 Jul 2             | 34277626   | 6-gene signature | APOC3, EPOR, H2AFX, MXD1, PLCG2, YWHAZ | risk score = APOC3 × 0.043262193 + EPOR × (-0.056851922) + H2AFX × 0.008373958 + MXD1 × 0.043730173 + PLCG2 × (-0.095876138) + YWHAZ × 0.003148576 |
| Cheng, Yang, et al. | 2021 Jun 24         | 34249701   | 5-gene signature | KIF20A, KLF4, KRT6A, LIFR, RGS13 | risk score = KIF20A * 0.3013 + KLF4 * 0.2402 + KRT6A * 0.0859 + LIFR * (-0.1823) + RGS13 * (-1.100) |
| Authors              | Date       | IDs          | Gene Signature | Risk Score Formula                                                                 |
|---------------------|------------|--------------|----------------|----------------------------------------------------------------------------------|
| Zhang, Anran, et al.| 2021 Jun 24| 34249899     | 15-gene signature | RELA $0.31121564$ + ACSL3 $0.292079905$ + YWHAE $0.160823922$ + EIF2S1 $0.159470859$ + CISD1 $0.156274215$ + DDIT4 $0.079830296$ + RRM2 $0.043449128$ + PANX1 $0.013029525$ + TLR4 $(-0.010188709)$ + ARNTL $(-0.052913519)$ + LPIN1 $(-0.179354454)$ + HERPUD1 $(-0.213560347)$ + NCOA4 $(-0.253508649)$ + PEBP1 $(-0.262091825)$ + GLS2 $(-0.267566406)$ |
| Chen, Fangyu, et al.| 2021 Jun 4 | 34150632     | 8-gene signature | ACVR1B $(-0.1831)$ + BIRC5 $0.1300$ + NR2E1 $0.1798$ + INSR $(-0.2200)$ + TGFA $0.1697$ + BMP7 $0.1577$ + CD28 $(-0.2649)$ + NUDT6 $0.2473$ |
| Author(s)         | Publication Date | ID       | Gene Signature | Risk Score Formula                                                                 |
|-------------------|------------------|----------|----------------|-----------------------------------------------------------------------------------|
| Jiang, Wei, et al.| 2021 Mar 18      | 33869220 | 10-gene signature | 
|                   |                  |          | PKMYT1, ETF1, ECT2, BUB1B, RECQL4, TFRC, COCH, TUBB2B, PITX1, CDC6 | risk score = PKMYT1 * (-0.212) + ETF1 * (-0.655) + ECT2 * 0.22 + BUB1B * 0.178 + RECQL4 * 0.099 + TFRC * 0.106 + COCH * 0.042 + TUBB2B * (-0.119) + PITX1 * 0.094 + CDC6 * 0.122 |
| Wang, Yan, et al. | 2021 Feb 8       | 33628734 | 4-gene signature | CD69, KLRB1, PLCB2, P2RY13 | risk score = CD69 * (-0.03437) + KLRB1 * (-0.06325) + PLCB2 * (-0.0434) + P2RY13 * (-0.11558) |
| Zhang, Yuan, et al.| 2020 Oct 27     | 33194633 | 3-gene signature | RELA, CYCS, FADD | risk score = RELA * 5.0637 + CYCS * 2.5219 + FADD * 0.0003 |
Table S4. The Spearman coefficient assessed the correlations of risk score and the 22 TICs.

| TIC                                      | r         | p-value  |
|------------------------------------------|-----------|----------|
| T cells CD4 memory resting               | -0.32388583 | 1.13E-13 |
| Mast cells resting                       | -0.32271729 | 1.39E-13 |
| Dendritic cells resting                  | -0.24035849 | 5.30E-08 |
| Monocytes                                | -0.19706697 | 9.03E-06 |
| Plasma cells                             | -0.12625893 | 0.00469141 |
| T cells regulatory (Tregs)               | -0.11871295 | 0.00787785 |
| B cells memory                           | -0.11712731 | 0.00875386 |
| B cells naive                            | -0.06761287 | 0.13109094 |
| T cells gamma delta                      | -0.02993084 | 0.50429419 |
| Macrophages M2                           | 0.017053316 | 0.70355433 |
| T cells CD4 naive                        | 0.027845874 | 0.53445835 |
| Eosinophils                              | 0.050938853 | 0.25557393 |
| NK cells activated                       | 0.05383664 | 0.23340885 |
| Macrophages M1                           | 0.08369091 | 0.06148611 |
| Dendritic cells activated                | 0.094668955 | 0.03431769 |
| NK cells resting                         | 0.097345223 | 0.02952323 |
| T cells CD8                              | 0.122005832 | 0.00633263 |
| T cells follicular helper                 | 0.146199073 | 0.00104338 |
| Neutrophils                              | 0.168647316 | 0.00015138 |
| Mast cells activated                     | 0.212236759 | 1.68E-06 |
| T cells CD4 memory activated             | 0.229710015 | 2.07E-07 |
| Macrophages M0                           | 0.340625248 | 4.76E-15 |
Table S5. The Kaplan–Meier curves measured the prognostic abilities of the 22 TICs.

| TIC                                      | P-value     |
|------------------------------------------|-------------|
| B cells naive                            | 0.73195573  |
| B cells memory                           | 0.14526478  |
| Plasma cells                             | 0.07168164  |
| T cells CD8                              | 0.94945777  |
| T cells CD4 naive                        | 0.15157197  |
| T cells CD4 memory resting               | 0.98342753  |
| T cells CD4 memory activated             | 0.06333732  |
| T cells follicular helper                 | 0.61289909  |
| T cells regulatory (Tregs)               | 0.57035866  |
| T cells gamma delta                      | 0.87726184  |
| NK cells resting                         | 0.42005935  |
| NK cells activated                       | 0.65030923  |
| Monocytes                                | 0.34777235  |
| Macrophages M0                           | 0.15773795  |
| Macrophages M1                           | 0.07390928  |
| Macrophages M2                           | 0.25109349  |
| Dendritic cells resting                  | 0.04434603  |
| Dendritic cells activated                | 0.67117819  |
| Mast cells resting                       | 0.0001638   |
| Mast cells activated                     | 0.00810307  |
| Eosinophils                              | 0.60211224  |
| Neutrophils                              | 0.9221555   |