Supplementary Materials for

The role of Jagged1 as a dynamic switch of cancer cell plasticity in PDAC assemboids

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SUPPLEMENTARY FIGURE LEGENDS

Figure S1. (A) Sorting purity of CD44(+)PI(-) in the PDAC organoids. (B) Schematic figure for the experiment of 2nd differentiation capacity in the organoids. (C) FACS plot showing the CD24, CD44, and EpCAM on control organoids and 2nd differentiated organoids from sorted CD44(+) cells in the 1st differentiated organoid. EpCAM expression levels in the CD44(+)CD24(+) groups. Dotted lines indicate fluorescence minus one (FMO).

Figure S2. (A) Heatmap analysis of genes highly expressed in pancreatic cancer tumors compared to normal tissue in TCGA-PAAD data using the R package caret. Blue color in the row side indicates the top 100 differentially expressed genes in the normal and tumor samples. (B) Heatmap showing the subgroups of CD3D- and CD2-expressing clusters using the DatabaseImmuneCellExpressionData in SingleR.

Figure S3. (A) Molecular function (MP) and (B) biological process (BP) DAVID analysis of the significantly regulated gene list in States 1, 2, and 3 (P <0.05, T-test). (C) Heatmap showing the apoptotic process in genes significantly regulated in States 1, 2, and 3. (D) FACS plot showing the CDH1 and CDH2 in the CD24(+)CD44(+) CICs (N = 3 biological replicates). (E-H) Expression of markers associated with differentiated ductal, CICs (E), epithelial (F), mesenchymal (G), and QM-PDA (H) in the CIC subset of PDAC assembloid (State 1 in the trajectory analysis).

Figure S4. (A) Quantification of WNT5B and TGFBI mRNA levels by rhJAG1 with DAPT in ECs (**P < 0.05, Bonferroni’s multiple comparisons test).

Figure S5. (A) (Left) FACS plot showing CFSE(-)CD24(+)CD44(+)EpCAM(+) CICs after co-culture of PDAC organoid derived CD44(-) differentiated cancer cells, CFSE-
labeled HUVECs and autologous PBMC for treatment with control and DAPT. (Right)

Quantification of the CFSE(-)CD24(+)CD44(+) CICs in the indicated groups (N = 3 biological replicates, **P < 0.05, Mann-Whitney U test). (B) Overall survival analysis according to NOTCH3 and DLL4 expression level in TCGA-PAAD data.

**SUPPLEMENTARY TABLE LEGENDS**

Table S1. Donor information list.

Table S2. Differentially expressed gene list according to differentiation states by trajectory analysis.

Table S3. Primer sequence information.
Figure S1

A

Pre-Sorting

Post-sorting

CD44-APCcy7

B

1st differentiation

PDAC organoid

Differentiated PDAC organoid [diPDAC Org]

Notch/Wnt inhibition

FACS

CICs sorting

Organoid culture

2nd differentiation

C

CD44(+) sorted cells after differentiation

Control

2nd differentiation

CD44-APCcy7

CD24-PeCy7

57 %

22 %

100 %

99 %

EpCAM-PerCPcy5.5
Figure S3

Molecular function (MP)

- protein binding
- poly(A) RNA binding
- cadherin binding involved in cell-cell adhesion
- protein kinase binding
- identical protein binding
- ubiquitin-protein transferase activity
- protein complex binding
- ligase activity
- GTPase activity
- ubiquitin protein ligase binding
- protein domain specific binding
- ATP binding
- transcription factor binding
- transcription coactivator activity
- ubiquitin protein ligase activity
- protein serine/threonine kinase activity
- nuclear hormone receptor binding
- GTP binding
- Rab GTPase binding
- GDP binding
- kinase activity
- SNARE binding
- SMAD binding
- protein complex scaffold
- ubiquitin-ubiquitin ligase activity
- beta-catenin binding
- zinc ion binding
- actin filament binding
- hydrolase activity
- transcription corepressor activity

Genes enriched(%)
Figure S3

C

Apoptotic process

CICs  Differentiated cells

Cluster

-3 -2 -1 0 1 2 3
Figure S3

D

Gated on CD24(+)CD44(+)

\[
\begin{align*}
\text{CDH1-PerCPcy5.5} & \quad 0.6\pm0.1\% \\
\text{CDH2-Alexa488} & \quad 62\pm4\%
\end{align*}
\]

E

CA2  CD44

F

CDH1  EPCAM

G

VIM  ZEB1

H

\[
\text{log10(value + 0.1)}
\]

Further down the page:

AHNAK2  AIM2  CAV1  CKS2

FERMT1  GPM6B  HK2  HMMR

NT5E  PAPPA  PHLDA1  PMAIP1

S100A2  SLC16A1  SLC5A3  TWIST1
Figure S4

A

mRNA level

![Graph showing mRNA level of WNT5B and TGFB1 with rhJag1 and rhJag1 + DAPT conditions.](image)

** rhJag1

** rhJag1 + DAPT
Figure S5

A

|          | CD44-APCcy7 | CD44-APCcy7 | EpCAM-PerCPcy5.5 |
|----------|-------------|-------------|------------------|
| Control  | 13.4 ± 1.6% | 92.6 ± 1.4% |                  |
| DAPT     | 6.3 ± 2.0%  | 59 ± 17%    |                  |

% of CD24(+)CD44(+)EpCAM(+) in PDACs

**

B

NOTCH3

LogRank P : 0.23

DLL4

LogRank P : 0.071

Percent survival

Months

low

high
| Donor | Sex | Age | Source    | History |
|-------|-----|-----|-----------|---------|
| 1     | F   | 65  | EUS-FNA   | PDA     |
| 2*    | M   | 74  | Surgical  | PDA     |
| 3     | F   | 74  | Surgical  | PDA     |
| 4     | M   | 67  | Surgical  | PDA     |
| 5     | M   | 63  | Surgical  | PDA     |
| 6     | M   | 75  | Surgical  | PDA     |
| 7     | M   | 50  | Surgical  | PDA     |
| 8     | M   | 29  | Surgical  | PDA     |

EUS-FNA = Endo-scopic Untrasound-Fine Needle Aspiration
PDA = Pancreatic ductal adenocarcinoma
* = single cell RNaseq analysis
Table S2. Differentially expressed gene list according to differentiation states by trajectory analysis

| gene_ID | State3 vs State1 | State3 vs State2 | State2 vs State1 |
|---------|-----------------|-----------------|-----------------|
| CA2     | 0.16809708      | 2.81168E-13     | 5.82493E-10     |
| CD44    | 4.28104E-15     | 0.00114374      | 5.92748E-08     |
| GCNT3   | 0.473258198     | 6.50302E-08     | 4.25932E-07     |
| TICAM1  | 0.122097983     | 4.00326E-10     | 1.22254E-06     |
| TSPAN3  | 0.169855064     | 5.5256E-08      | 2.38733E-05     |
| CTSE    | 0.197642949     | 6.46357E-07     | 3.90281E-05     |
| TUBB2A  | 0.022822143     | 6.4551E-09      | 4.86511E-05     |
| B4GALT4 | 0.952303037     | 0.000390032     | 0.000114002     |
| PTPRR   | 0.796368347     | 1.4909E-05      | 0.000123093     |
| RHPN2   | 0.681660701     | 0.000347655     | 0.000187234     |
| MMP15   | 0.700272433     | 0.00044363      | 0.000188609     |
| MUC13   | 0.211420717     | 5.91395E-07     | 0.000192119     |
| ABHD2   | 0.848286219     | 0.000991873     | 0.000219203     |
| RFLNA   | 0.889264534     | 0.000255036     | 0.000242943     |
| MUC5AC  | 0.248206361     | 0.016324282     | 0.000243446     |
| GSN     | 0.557945233     | 1.31523E-05     | 0.000248282     |
| ARID1A  | 0.855328142     | 0.000124633     | 0.000261058     |
| TIMP2   | 0.182174983     | 1.76348E-06     | 0.000284761     |
| TOX3    | 0.79037985      | 0.000156894     | 0.000315291     |
| KLF2    | 0.155684309     | 1.55148E-07     | 0.000319218     |
| PLLP    | 0.371321105     | 0.001090849     | 0.00032301      |
| LINC02381| 0.040734409   | 0.787630049     | 0.000414259     |
| B4GALNT3| 0.343813532    | 0.028160356     | 0.000416693     |
| SYMPK   | 0.330520025     | 0.121182221     | 0.000473396     |
| CASP7   | 0.765761369     | 0.006211504     | 0.000499474     |
| FUT4    | 0.702149195     | 4.08769E-05     | 0.000511919     |
| PRKCD   | 0.538704424     | 0.008339402     | 0.000543666     |
| CAB39   | 0.365378009     | 0.032429057     | 0.000600763     |
| CLDN18  | 0.486552224     | 2.49273E-05     | 0.000608602     |
| HPGD    | 0.915593824     | 6.71074E-05     | 0.000610458     |
| SUGP2   | 0.423511271     | 0.051273173     | 0.000611221     |
| MUC17   | 0.237915735     | 3.36229E-06     | 0.000627581     |
| CLDN23  | 0.246426124     | 3.77568E-06     | 0.00062762      |
| CXADR   | 0.94378867      | 0.000319615     | 0.00068267      |
| MUC3A   | 0.436371467     | 5.57139E-05     | 0.000775906     |
| MUC3L   | 0.182637333     | 0.050965548     | 0.000780237     |
| LSR     | 0.436862232     | 0.000259013     | 0.000798489     |
| TSPAN8  | 0.275255621     | 9.4307E-06      | 0.000834502     |
| RAB8B   | 0.858850183     | 0.002349016     | 0.000846244     |
| LACTB   | 0.810625821     | 0.002211458     | 0.000879144     |
| Gene  | Value        | P-Value    | adjFDR   |
|-------|--------------|------------|----------|
| AGR3  | 0.620397659  | 0.002867435| 0.000900837|
| BCAS1 | 0.804196344  | 0.001442077| 0.000916434|
| CGN   | 0.112716492  | 4.23281E-07| 0.000944941|
| SEMA4B| 0.079029493  | 5.94674E-07| 0.000977713|
| HSPG2 | 0.170688524  | 5.87482E-06| 0.001036614|
| UPK1B | 0.470738833  | 0.006106949| 0.001051734|
| PTPRG | 0.862990938  | 0.000209718| 0.00110429 |
| SAMD8 | 0.621402195  | 0.009936831| 0.001290708|
| CD164 | 0.025582454  | 8.94674E-08| 0.001318038|
| DUSP14| 0.430552724  | 0.002189479| 0.001355438|
| FOXQ1 | 0.684844647  | 0.003418717| 0.001397047|
| JUP   | 0.004964668  | 1.36299E-07| 0.00146832 |
| CCNQ  | 0.000173931  | 0.775763243| 0.001644248|
| FAM102B| 0.945310684  | 0.000502095| 0.001665508|
| LATS2 | 0.021582483  | 2.8264E-06  | 0.001817099|
| STEAP4| 0.625322951  | 0.000417092| 0.001918481|
| KLK11 | 0.091817139  | 1.90034E-06 | 0.002035721|
| MFN2  | 0.483370938  | 0.022969126 | 0.002064088|
| IDH2  | 0.60236822   | 0.000443684 | 0.002084349|
| ABO   | 0.384194521  | 0.053909905 | 0.002087491|
| PDCD6IP| 0.060576609  | 1.32128E-06 | 0.002116792|
| RAB11FIP1| 0.045473365  | 2.99851E-07 | 0.002184696|
| ARHGEF37| 0.002681518  | 0.251795368 | 0.002192555|
| STX3  | 0.345973768  | 0.036974643 | 0.002333676|
| S100P | 0.54306624   | 0.087300489 | 0.002465976|
| NUDT22| 0.000584379  | 0.733557171 | 0.002550448|
| TM4SF5| 0.594121151  | 0.005706006 | 0.002866776|
| CIB1  | 0.121480396  | 1.56162E-06 | 0.002899639|
| DNAJC13| 0.362606103  | 0.137642031 | 0.002912373|
| RUNDC1| 0.988328014  | 0.000679721 | 0.002987359|
| DUSP8 | 0.104334908  | 1.17201E-06 | 0.003064673|
| EPCAM | 0.049774946  | 6.14615E-07 | 0.003084473|
| BTN1L8| 0.751583479  | 0.002255414 | 0.00311427 |
| CSTA  | 0.058509543  | 0.478258069 | 0.003116004|
| FHL2  | 0.880904694  | 0.000951952 | 0.003123012|
| PARD6B| 0.769149356  | 0.000969492 | 0.003161831|
| ACHE  | 0.18210699   | 4.13063E-05 | 0.00317069 |
| TNFRSF21| 0.210210381  | 9.59675E-06 | 0.003217628|
| FOSL2 | 0.007662709  | 4.19641E-08 | 0.003276224|
| Gene   | Value1 | Value2 | Value3 |
|--------|--------|--------|--------|
| SCFD1  | 9.07731E-07 | 0.098749457 | 0.003341382 |
| DNAJB12 | 0.613635255 | 0.07983268 | 0.003400397 |
| TST    | 0.822657742 | 0.003837384 | 0.003423233 |
| ANKS4B | 0.9999999 | 0.00586399 | 0.003609029 |
| MAL2   | 0.356746879 | 0.002096 | 0.003647549 |
| YPEL5  | 0.101606972 | 3.50671E-05 | 0.003743159 |
| NTHL1  | 0.479076449 | 0.137480994 | 0.003780361 |
| TFF2   | 0.876944375 | 0.00680096 | 0.00391563 |
| TPRN   | 0.636134201 | 0.000586399 | 0.003923585 |
| CCT8   | 0.032993116 | 0.637085933 | 0.003923585 |
| KL5    | 0.025865232 | 1.46194E-06 | 0.003982468 |
| LMO4   | 0.599115257 | 0.003537651 | 0.004091296 |
| SLC17A5| 0.17813473 | 0.0014405 | 0.004107844 |
| DUOX2  | 0.045500548 | 1.18958E-05 | 0.004147361 |
| AKAP13 | 0.251612571 | 0.00191637 | 0.004216801 |
| PAQR8  | 0.679261754 | 0.0141447 | 0.004234176 |
| HACL1  | 0.019738167 | 0.247171006 | 0.004261434 |
| INSR   | 0.161190719 | 3.83212E-06 | 0.004320324 |
| MISP   | 0.026888182 | 1.57632E-06 | 0.004327357 |
| ERF    | 0.708476355 | 0.003742105 | 0.004333509 |
| ARHGEF11| 0.822496322 | 0.001874727 | 0.004422457 |
| CPSF3  | 0.168778353 | 0.504457052 | 0.004536919 |
| DUSP4  | 0.415543476 | 0.000448933 | 0.004543724 |
| SIKE1  | 0.236519564 | 0.171477976 | 0.004694049 |
| PCDH7  | 0.019669052 | 0.498461605 | 0.004905702 |
| UBL3   | 0.726367795 | 0.001537366 | 0.00514264 |
| MFAP1  | 0.806785231 | 0.011937921 | 0.005144499 |
| GNAI1  | 0.740278798 | 0.02689425 | 0.005171111 |
| SAP30L | 0.459247936 | 0.00314828 | 0.005309504 |
| PSMA3  | 0.015379172 | 0.725482066 | 0.005387847 |
| KBTBD11| 0.15761362 | 0.024091363 | 0.0054276 |
| TYRO3  | 0.202558228 | 0.07768517 | 0.005452043 |
| ITPLC  | 0.874074152 | 0.00925008 | 0.005605211 |
| LYZ    | 0.210049048 | 0.00101211 | 0.005638408 |
| LPIN2  | 0.018302414 | 1.24361E-06 | 0.005682549 |
| OCLN   | 0.30828999 | 0.00392329 | 0.005763302 |
| CRB3   | 0.076416471 | 3.07874E-05 | 0.00583331 |
| ERRF11 | 0.081367968 | 4.154E-05 | 0.005836815 |
| SLC9A1 | 0.98373725 | 0.003532771 | 0.00584573 |
| CXCL16 | 0.113508649 | 2.77201E-05 | 0.005870202 |
| OSTM1  | 0.942569994 | 0.004068704 | 0.005922088 |
| CNPY3  | 0.000741379 | 0.884955324 | 0.005935238 |
| WWCl   | 0.604423315 | 0.020178865 | 0.005963304 |
| Gene    | Value1 | Value2     | Value3     |
|---------|--------|------------|------------|
| LZTR1   | 0.05244347 | 0.15194936 | 0.005992907 |
| PACSIN2 | 0.144473472 | 5.4282E-05 | 0.006070138 |
| NDUFA1  | 0.001089157 | 0.324539925 | 0.006191786 |
| NR2F2   | 0.056946733 | 1.81329E-06 | 0.006292856 |
| UGCG    | 0.364273463 | 0.000159083 | 0.006229856 |
| MRPL46  | 0.463148322 | 0.398184211 | 0.006384237 |
| SLPI    | 0.348828626 | 0.00626486 | 0.006393235 |
| RRP1B   | 0.025683508 | 0.716654537 | 0.006433106 |
| PTDSS2  | 0.273467997 | 0.034302113 | 0.006420744 |
| SLK     | 0.080185415 | 5.4233E-06 | 0.00647408 |
| PLEKHH2 | 0.234071412 | 0.293748514 | 0.006529961 |
| CYP2S1  | 0.590101925 | 0.00531822 | 0.006574808 |
| ARRDC4  | 0.341270506 | 0.000465104 | 0.00657526 |
| PPDPF   | 0.862123219 | 0.064426479 | 0.006622917 |
| WASL    | 0.217926471 | 0.000108465 | 0.006707446 |
| CYHR1   | 0.819860345 | 0.009171228 | 0.006728397 |
| EZR     | 0.057826631 | 7.38528E-06 | 0.006797655 |
| DDX28   | 0.012033106 | 0.292369522 | 0.006855574 |
| ABCB7   | 0.692658866 | 0.142946689 | 0.006986604 |
| AOC1    | 0.928022028 | 0.009475344 | 0.006996271 |
| ARHGP27 | 0.864982558 | 0.007062365 | 0.007025739 |
| LGALS9C | 0.555786339 | 0.074953403 | 0.007070612 |
| MYD88   | 0.124353967 | 1.15243E-05 | 0.007088124 |
| ST14    | 0.047702267 | 2.617E-05 | 0.007089604 |
| PCDH1   | 0.750090209 | 0.00163273 | 0.007079856 |
| MTERF4  | 0.129445833 | 0.402771923 | 0.00713409 |
| POR     | 0.077428418 | 1.29196E-05 | 0.00725301 |
| HCST    | 0.087794173 | 0.043266136 | 0.007290374 |
| WASHC2C | 0.324071451 | 7.7007E-05 | 0.007497446 |
| PEBP1   | 0.363788793 | 0.066814964 | 0.007535363 |
| GRN     | 0.300168566 | 0.000704193 | 0.00779121 |
| ISG20   | 0.052394972 | 5.13355E-07 | 0.007883645 |
| AC092683.1 | 0.011685944 | 0.440624641 | 0.00790828 |
| GLIPR1  | 0.627211019 | 0.270735928 | 0.007923145 |
| C19orf24| 0.000920054 | 0.424010363 | 0.007978716 |
| NFKBIL1 | 0.540113361 | 0.00917474 | 0.008021778 |
| OGFOD3  | 0.124666294 | 0.165177088 | 0.008110084 |
| MED29   | 0.520535777 | 0.001264525 | 0.008119662 |
| SECTM1  | 0.433869272 | 0.000583776 | 0.008207624 |
| IGSF6   | 0.888665799 | 0.239368177 | 0.008207834 |
| MACC1   | 0.827616835 | 0.005536415 | 0.00824928 |
| ADAM9   | 0.068896098 | 1.62129E-05 | 0.008327033 |
| HACD3   | 0.171340489 | 0.570304923 | 0.008431413 |
| Gene      | Value1  | Value2      | Value3  | Value4  |
|-----------|---------|-------------|---------|---------|
| SPNS2     | 0.413277321 | 0.002007514 | 0.00847418 |
| SMIM13    | 0.041123862 | 0.623170127 | 0.008531117 |
| NOL4L     | 0.363920393 | 0.066639127 | 0.008581991 |
| SLC6A20   | 0.873279185 | 0.005822573 | 0.008604324 |
| CD82      | 0.223489373 | 0.000112007 | 0.0086087 |
| FAM110C   | 0.161974324 | 0.180940304 | 0.008681885 |
| LIF       | 0.737277803 | 0.00188609  | 0.008705602 |
| SSH2      | 0.123626931 | 0.303955529 | 0.008734585 |
| L3MBTL2   | 0.312346667 | 0.000155931 | 0.008836591 |
| FXYD3     | 0.527670409 | 0.001959290 | 0.008839252 |
| NOM1      | 0.012623099 | 0.70288185  | 0.009141607 |
| Hspb1     | 0.621911167 | 0.004041873 | 0.009145477 |
| RBM47     | 0.334752806 | 0.000422903 | 0.009385252 |
| NPC2      | 0.362076349 | 0.000372903 | 0.009554141 |
| RETREG1   | 0.750351216 | 0.027359696 | 0.009693845 |
| YWHAG     | 0.585978395 | 0.001786415 | 0.009712408 |
| TIMM29    | 0.813834924 | 0.006908915 | 0.00977822 |
| EFCAB14   | 0.928162328 | 0.016293769 | 0.009819063 |
| PPM1A     | 0.835769978 | 0.0142572   | 0.009842747 |
| NUP50-DT  | 0.498229361 | 0.10110062  | 0.009872595 |
| NSUN4     | 0.0160149  | 3.53663E-05 | 0.00997396 |
| BTF3L4    | 0.091693598 | 0.976837351 | 0.00997396 |
| BCL2L1    | 0.069310332 | 1.81881E-05 | 0.010028421 |
| KDM4C     | 0.001657093 | 0.873071744 | 0.010072188 |
| DHRS12    | 0.744274752 | 0.226938558 | 0.010090347 |
| INPP1     | 0.182346215 | 9.86694E-05 | 0.01009568 |
| RNASE1    | 0.512691726 | 0.01435517  | 0.01013137 |
| FOXO4     | 0.401299575 | 0.024788201 | 0.01016164 |
| ASAP1     | 0.130066971 | 0.00101282  | 0.010153036 |
| CCDC68    | 0.58724455  | 0.00078297  | 0.010238416 |
| CABLES1   | 0.326680773 | 0.00053512  | 0.010275801 |
| AQR       | 0.934443513 | 0.004553247 | 0.010514727 |
| KLF3      | 0.006378798 | 1.98676E-07 | 0.0105262 |
| PRSS16    | 0.18301986  | 0.863998954 | 0.010549159 |
| MTRF2     | 0.002984963 | 0.415229678 | 0.010660052 |
| SOCS6     | 0.571326407 | 0.00207075  | 0.010649179 |
| PLOD3     | 0.627983255 | 0.003018244 | 0.010724814 |
| MICAL1    | 0.002334979 | 0.949022233 | 0.010767324 |
| JUND      | 0.07300593  | 3.66074E-05 | 0.010826877 |
| RHOB      | 0.042150613 | 1.55206E-05 | 0.01102492 |
| PKM       | 0.032497148 | 0.351882195 | 0.011030604 |
| CCDC85C   | 0.257101698 | 3.63013E-05 | 0.011122946 |
| SRI       | 0.930568736 | 0.03093297  | 0.011216815 |
| Gene   | Value1  | Value2      | Value3         |
|--------|---------|-------------|----------------|
| VSIG2  | 0.914597382 | 0.015245899 | 0.011252634 |
| INTS3  | 0.467826186 | 0.070504862 | 0.011374395 |
| BRD1   | 0.316390661 | 0.000331415 | 0.011398792 |
| GSKIP  | 0.42975924  | 0.00133705  | 0.011404046 |
| SPTBN1 | 0.147932993 | 5.14999E-05 | 0.011450953 |
| TMEM30B| 0.042943776 | 1.115E-05   | 0.011463873 |
| KIF2A  | 0.296788296 | 0.201176405 | 0.011548671 |
| CISD3  | 0.630492235 | 0.0723808   | 0.011597344 |
| BRD1   | 0.316390661 | 0.000331415 | 0.011398792 |
| GSKIP  | 0.42975924  | 0.00133705  | 0.011404046 |
| SPTBN1 | 0.147932993 | 5.14999E-05 | 0.011450953 |
| TMEM30B| 0.042943776 | 1.115E-05   | 0.011463873 |
| KIF2A  | 0.296788296 | 0.201176405 | 0.011548671 |
| CISD3  | 0.630492235 | 0.0723808   | 0.011597344 |
| BRD1   | 0.316390661 | 0.000331415 | 0.011398792 |
| GSKIP  | 0.42975924  | 0.00133705  | 0.011404046 |
| SPTBN1 | 0.147932993 | 5.14999E-05 | 0.011450953 |
| TMEM30B| 0.042943776 | 1.115E-05   | 0.011463873 |
| Gene   | Value1   | Value2   | Value3   |
|--------|----------|----------|----------|
| MYO19  | 0.053741405 | 0.367286609 | 0.014091689 |
| SLC9A3R1 | 0.596243626 | 0.003472346 | 0.014270533 |
| RAB29  | 0.037454116 | 0.52647894  | 0.014287276 |
| ATRX   | 9.25577E-05 | 0.082313442 | 0.014377775 |
| VIL1   | 0.28517736  | 0.038762786 | 0.014577361 |
| TMEM256| 0.180047412 | 0.369144791 | 0.014633377 |
| H1F0   | 0.022203679 | 5.51081E-06 | 0.014998869 |
| DYRK2  | 0.85660082  | 0.005197073 | 0.014966221 |
| VAV2   | 0.656634686 | 0.019149516 | 0.014910898 |
| GIT1   | 0.884043927 | 0.019626395 | 0.014999234 |
| GNAQ   | 0.004485133 | 0.975866106 | 0.015038951 |
| HOXB2  | 0.009746084 | 2.16234E-06 | 0.015136023 |
| ABC2   | 0.152115117 | 0.369832686 | 0.015199234 |
| MVD    | 0.006267426 | 0.777384966 | 0.015202492 |
| MMP25  | 0.111434906 | 0.577631125 | 0.015224749 |
| TMED7  | 0.242336809 | 0.00036486  | 0.015356335 |
| CRIM1  | 0.505078212 | 1.47209E-05 | 0.015444217 |
| SLC9A3 | 0.679376798 | 0.003390105 | 0.015470966 |
| FAM3B  | 0.726849016 | 0.005524894 | 0.015619423 |
| DNAJC24| 0.001986291 | 0.615794728 | 0.015692816 |
| LRR1C1 | 0.182277328 | 0.000156863 | 0.015697952 |
| AC020916.1| 0.515237057 | 0.003424773 | 0.015721046 |
| MCU    | 0.154264462 | 0.000185578 | 0.015771215 |
| DUSP1  | 0.116927804 | 9.85713E-05  | 0.015837206 |
| ANXA11 | 0.120827753 | 3.09801E-05  | 0.015983421 |
| SLC45A4| 0.301676555 | 0.001608437 | 0.01601246 |
| CDH17  | 0.71610373 | 0.01569697  | 0.016196317 |
| RHOU   | 0.607728074 | 0.001714303 | 0.016201242 |
| BLMH   | 0.430179157 | 0.325941265 | 0.016242061 |
| BRAT1  | 0.386713313 | 0.334171155 | 0.016287363 |
| ESRP2  | 0.502276086 | 0.062586595 | 0.016336131 |
| DUSP6  | 0.068730169 | 9.85713E-05  | 0.015645286 |
| NUP107 | 0.971036075 | 0.222459284 | 0.016546067 |
| LMAN2L | 0.66347249 | 0.041008282 | 0.016622201 |
| RABEP2 | 0.059103838 | 0.329864039 | 0.016998884 |
| MTHF2D2L| 0.211940047 | 0.376831122 | 0.017032819 |
| AC021218.1| 0.518196704 | 0.086512621 | 0.017066406 |
| DPP8   | 0.023792482 | 2.17304E-05  | 0.017141159 |
| MSH3   | 0.50811831 | 0.249865923 | 0.017206335 |
| CKAP2  | 0.113012679 | 0.205582839 | 0.017207762 |
| NDUFAF2| 0.056726634 | 0.573809342 | 0.017289019 |
| MAP1LC3B| 0.00031855 | 2.52167E-08  | 0.017369705 |
| Gene     | p-value       | FDR            | q-value         |
|----------|---------------|----------------|----------------|
| ZNF217   | 0.112842011   | 0.000161526    | 0.017381657    |
| CASC4    | 0.292984195   | 0.418672024    | 0.017436125    |
| BANF1    | 0.0105329129  | 1.9932E-05     | 0.017438131    |
| FOS      | 0.061986809   | 0.398792658    | 0.017519413    |
| MATR3.1  | 0.184247139   | 0.64068054     | 0.017539587    |
| ZNF3     | 0.206066751   | 0.118790134    | 0.017544505    |
| ZNF432   | 0.53313191    | 0.123000316    | 0.017624751    |
| EIF4G3   | 3.04474E-05   | 0.0027317      | 0.017649059    |
| SLC37A1  | 0.233578736   | 0.00027317     | 0.017689837    |
| C7orf43  | 0.404436032   | 0.384935246    | 0.017701487    |
| MYO1E    | 0.054236974   | 0.040280506    | 0.017704217    |
| CAPN5    | 0.420870056   | 0.001179244    | 0.017830578    |
| TMEM135  | 0.629153617   | 0.035210002    | 0.01811971     |
| TM4SF4   | 0.946360202   | 0.023937956    | 0.01812884     |
| RUNX1    | 0.544748963   | 0.00321561     | 0.01825946     |
| VARS     | 0.061858234   | 0.338086942    | 0.018267132    |
| DUSP3    | 0.72142064    | 0.064104325    | 0.01837001     |
| TCEAL8   | 0.637402171   | 0.094397981    | 0.018423236    |
| SETDB2   | 0.798856371   | 0.353762929    | 0.018440204    |
| FOXO1    | 0.127963844   | 8.49791E-05    | 0.01859526     |
| NRBF2    | 0.542599766   | 0.139785662    | 0.01870874     |
| HSPB11   | 0.196286735   | 0.816796286    | 0.018765181    |
| ABHD11   | 0.161171378   | 0.000248331    | 0.019001825    |
| ASCC1    | 0.87256635    | 0.151397588    | 0.019048261    |
| MRPS21   | 0.027880925   | 0.994913453    | 0.019053201    |
| RNF19A   | 0.122813945   | 2.84956E-05    | 0.019096584    |
| EHB1P1   | 0.009726733   | 0.952625717    | 0.019142831    |
| CANT1    | 0.121170621   | 0.000440992    | 0.019306644    |
| TRIM41   | 0.545366444   | 0.043347565    | 0.019453088    |
| ENTPD5   | 0.827226691   | 0.01690206     | 0.019479271    |
| MAP7     | 0.280618034   | 0.000824959    | 0.019493839    |
| SIK1B    | 0.849530689   | 0.004918559    | 0.01949384     |
| ITPKA    | 0.460717139   | 0.124627874    | 0.01954609     |
| CERS2    | 0.514132555   | 0.003182977    | 0.019714254    |
| ALDH9A1  | 0.235508148   | 0.358895134    | 0.019724176    |
| ATF3     | 0.003612921   | 1.32725E-07    | 0.019749317    |
| GNPDA1   | 0.667867797   | 0.043685929    | 0.01998563     |
| HIST1H2AC| 0.348833458   | 0.002853075    | 0.020021004    |
| RNF11    | 0.602963889   | 0.004111144    | 0.020104305    |
| R3HDM2   | 0.324954452   | 0.290865292    | 0.020119967    |
| DDR1     | 0.163454769   | 0.000446214    | 0.020272602    |
| TMEM37   | 0.266128883   | 0.000571732    | 0.020297975    |
| Gene    | Expression1 | Expression2 | Expression3 |
|---------|-------------|-------------|-------------|
| NUP37   | 0.000486038 | 0.34390798  | 0.020398428 |
| STK39   | 0.822794213 | 0.006613635 | 0.020457287 |
| BX255925.3 | 0.218613495 | 0.000554982 | 0.020489249 |
| MTCH2   | 0.954459645 | 0.082866548 | 0.020543233 |
| RAB22A  | 0.128302049 | 0.000375384 | 0.020559819 |
| RBM10   | 0.000483224 | 0.170173791 | 0.020587195 |
| TDG     | 0.007567716 | 0.857516739 | 0.020591618 |
| DBN1    | 0.132503914 | 0.307905205 | 0.020706704 |
| NTN4    | 0.43502814  | 0.000148956 | 0.020779116 |
| MYO15B  | 0.247695818 | 0.000148956 | 0.020779116 |
| PIK3CG  | 0.022364262 | 0.254662063 | 0.020839147 |
| SLC38A10| 0.184816967 | 0.000458496 | 0.020916516 |
| PRMT1   | 0.080127032 | 0.799214191 | 0.021008374 |
| FMO5    | 0.441321587 | 0.44409325  | 0.021014578 |
| NOL9    | 0.04262408  | 0.453689805 | 0.021084999 |
| STX7    | 0.134684527 | 0.000253616 | 0.02108609 |
| FAM13B  | 0.033509198 | 0.967596988 | 0.02112443 |
| ARPC1B  | 0.050545153 | 0.846622961 | 0.021144292 |
| PRR13   | 0.587816653 | 0.00154835  | 0.021279712 |
| SNX9    | 0.384915461 | 0.002290143 | 0.021279912 |
| NEK3    | 0.005836303 | 0.976378487 | 0.021346959 |
| FUT2    | 0.088704607 | 7.61125E-05 | 0.021434764 |
| GPR108  | 0.42896575  | 0.001278214 | 0.021536416 |
| RGL1    | 0.206522766 | 0.920649543 | 0.021545004 |
| SERPINB9| 0.028316126 | 0.932849743 | 0.021690015 |
| METTL15 | 0.670348165 | 0.006898288 | 0.02169654 |
| SCD     | 0.019216568 | 0.47202912  | 0.021775886 |
| AMDHD2  | 0.276439576 | 0.192545615 | 0.021808601 |
| FYCO1   | 0.910086543 | 0.008606324 | 0.021846038 |
| B3GNT7  | 0.736343539 | 0.133043574 | 0.021919438 |
| ANAPC5  | 0.153984469 | 0.520106786 | 0.021972485 |
| SMPD3   | 0.571162486 | 0.002698399 | 0.02215642 |
| EBPL    | 0.016363039 | 0.932096074 | 0.022410859 |
| CHST4   | 0.549336157 | 0.005046451 | 0.02245312 |
| ANKRD29 | 0.069873538 | 0.000120984 | 0.022468765 |
| SFT2D1  | 0.964160363 | 0.055867631 | 0.022513402 |
| CDH3    | 0.000147614 | 0.079023581 | 0.02258018 |
| GRAMD2B | 0.59525104  | 0.039079146 | 0.022677647 |
| DVL3    | 0.066602076 | 0.000247136 | 0.022917003 |
| RAB11A  | 0.292819696 | 0.001940423 | 0.022934731 |
| RAVER2  | 0.598263326 | 0.003641527 | 0.022957223 |
| SLCO2A1 | 0.637329986 | 0.003356253 | 0.022993813 |
| AGAP1   | 0.79544653  | 0.025885677 | 0.02305792 |
| Gene   | Value1 | Value2 | Value3 |
|--------|--------|--------|--------|
| SYTL2  | 0.599467436 | 0.275207827 | 0.023142762 |
| NPAS1  | 0.267167124 | 0.483367428 | 0.023180249 |
| SCRN1  | 0.120766983 | 0.00319704 | 0.023187045 |
| CLRN3  | 0.238041559 | 0.32527635 | 0.023291451 |
| RIOK3  | 0.243173097 | 0.000680788 | 0.023577463 |
| AC007952.4 | 0.692844841 | 0.120437077 | 0.023597339 |
| UBR5   | 0.029416672 | 0.832185911 | 0.023951217 |
| TUBG1  | 0.127909073 | 0.524725765 | 0.023965445 |
| TUFT1  | 0.011033659 | 2.34073E-05 | 0.024249836 |
| UBE4A  | 0.03826263  | 3.62058E-05 | 0.024278672 |
| IFI44L | 0.001032784 | 0.358986359 | 0.024316658 |
| TSPAN1 | 0.216779299 | 0.00056886  | 0.024336405 |
| NCOA4  | 0.270218391 | 0.000904742 | 0.024343018 |
| DOK2   | 0.095652649 | 0.2286996  | 0.024514524 |
| TBCB   | 0.136070185 | 0.393850447 | 0.024711279 |
| RHOB TB1 | 0.085710271 | 0.000193646 | 0.024729917 |
| CEACAM6| 0.072587694 | 0.000146424 | 0.024771491 |
| ZFP36L2| 0.038139294 | 4.16821E-06 | 0.024835899 |
| DDX23  | 0.032920644 | 1.44063E-06 | 0.024979523 |
| EXOC8  | 0.831721406 | 0.002766298 | 0.024979523 |
| TRMT10C| 0.000366142 | 0.226792155 | 0.025016212 |
| MSRB2  | 0.763102097 | 0.022633604 | 0.025153517 |
| NIT2   | 0.001302617 | 0.162679143 | 0.025155407 |
| ACTR3C | 0.234231578 | 0.120844576 | 0.025244399 |
| PRR15L | 0.547907849 | 0.002754513 | 0.025285196 |
| C21orf2| 0.090883927 | 0.380863066 | 0.02535268 |
| CCNL2  | 0.007195752 | 0.760937014 | 0.025502502 |
| CCL15  | 0.22429483 | 0.331166084 | 0.025514535 |
| RIPK4  | 0.11606726 | 0.000233104 | 0.025518542 |
| ALD H3B1 | 0.574369362 | 0.050484007 | 0.025632317 |
| WASHC5 | 0.188010362 | 0.855422938 | 0.025737775 |
| WDR24  | 0.235243156 | 0.000665761 | 0.025857029 |
| UBAP2L | 0.800944548 | 0.120030001 | 0.025861076 |
| IWS1   | 0.996712658 | 0.050202844 | 0.025896297 |
| PHF2   | 0.3598804  | 0.002613387 | 0.025910695 |
| RNF130 | 0.352085525 | 0.62471724  | 0.025978694 |
| DPP4   | 0.130939283 | 0.000506084 | 0.026007468 |
| TMA16  | 0.515029168 | 0.374813774 | 0.026010225 |
| NCK2   | 0.757596397 | 0.272241959 | 0.026024131 |
| USP8   | 0.814554243 | 0.022924874 | 0.026060801 |
| FAM171A1 | 0.433606993 | 0.362710236 | 0.026102954 |
| WDR74  | 0.08394985  | 0.530965352 | 0.026131438 |
| MESD   | 0.009981378 | 3.77078E-06 | 0.026253483 |
| Gene   | Expression | Log2 Fold Change | P-value |
|--------|------------|-----------------|---------|
| MRPS27 | 0.008536099 | 0.881539508     | 0.026304777 |
| SLC35E2A | 0.842544955 | 0.339959599     | 0.026352265 |
| LDLR   | 0.215839112 | -0.00113194     | 0.026365155 |
| LGR4   | 0.161116537 | 0.00273721      | 0.026369464 |
| SLC15A3 | 0.173083202 | 0.0038074       | 0.026422002 |
| FKRP   | 0.004781931 | 0.752472013     | 0.026457686 |
| TIMM17A | 0.020989492 | 0.78791926      | 0.026499317 |
| EBP    | 0.043459347 | 0.789908776     | 0.026526739 |
| GAPDH  | 0.039187714 | 0.455908982     | 0.026574188 |
| PPP3CC | 0.777584693 | 0.9662428       | 0.026634539 |
| BMP2   | 0.216333889 | 0.00627548      | 0.026804092 |
| CCL28  | 0.197365507 | 0.00357486      | 0.026890951 |
| PLAT   | 0.003526778 | 0.611568431     | 0.026997763 |
| TGFA   | 0.602787135 | 0.003382091     | 0.027021544 |
| KCTD3  | 0.627333245 | 0.007542003     | 0.027169581 |
| WHAMM  | 0.199379745 | 0.000710601     | 0.027237995 |
| FILIP1L | 0.149079746 | 0.445034325     | 0.027334099 |
| ZNF512 | 0.191158049 | 0.415229678     | 0.027429119 |
| TIMM185B | 0.768874789 | 0.00688261      | 0.027659999 |
| UBE4B  | 0.534159197 | 0.135931927     | 0.027673732 |
| C3orf58 | 0.401299575 | 0.01915491      | 0.027829078 |
| CREB3L1 | 0.418745993 | 0.00383996      | 0.027973693 |
| CHPT1  | 0.816480272 | 0.06272611      | 0.028013618 |
| ESYT1  | 0.01501225  | 0.986178089     | 0.028062283 |
| SREK1  | 0.464319953 | 0.44025864      | 0.028460484 |
| TMED10 | 0.574136862 | 0.004630132     | 0.028485515 |
| CAPN9  | 0.658521231 | 0.044686166     | 0.028492954 |
| ZFP64  | 0.68417533  | 0.25216226      | 0.02849796 |
| AXIN1  | 0.008744264 | 0.902805031     | 0.028550281 |
| CRIP1T | 0.694736885 | 0.018787982     | 0.028577089 |
| ZNF532 | 0.007627788 | 0.90886132      | 0.028691239 |
| CEP120 | 0.908557576 | 0.023933756     | 0.02874441 |
| RAB12  | 0.697103799 | 0.011800011     | 0.028776098 |
| PIH1D1 | 0.091093071 | 0.547186999     | 0.02888347 |
| CTTNHB1 | 0.628087035 | 0.008328992     | 0.029010113 |
| ANKS3  | 0.027212298 | 0.415229678     | 0.02909427 |
| MAP3K21 | 0.176056434 | 0.593385431     | 0.029122558 |
| VSIR   | 0.097227027 | 4.03186E-05     | 0.029149893 |
| PTPN4  | 0.109485868 | 0.60853106      | 0.02924718 |
| ABHD3  | 0.657907575 | 0.00872531      | 0.029282611 |
| MSMB   | 0.484821275 | 0.018028424     | 0.029367526 |
| C8orf76 | 0.364607427 | 0.00183599      | 0.029424811 |
| TMEM134 | 0.874706073 | 0.020047089     | 0.029466594 |
| Gene   | Expression | Log2FoldChange | P.Value  |
|--------|------------|----------------|----------|
| EPS8   | 0.008343151 | 1.52644E-05    | 0.029475307 |
| DEPP1  | 0.416339342 | 0.003052099    | 0.029551484 |
| CPEB2  | 0.462205107 | 0.164476987    | 0.029584055 |
| MYADM  | 0.000220928 | 0.116981445    | 0.029590235 |
| SPSB1  | 0.008794384 | 0.876051106    | 0.029687573 |
| GTPBP1 | 0.693482688 | 0.151033991    | 0.029736769 |
| CCDC159 | 0.163090191 | 0.000953936    | 0.030145556 |
| RABAC1 | 0.036352589 | 0.667033849    | 0.030159781 |
| RPF2   | 0.002377164 | 0.934911491    | 0.03064826  |
| THAP3  | 0.666852035 | 0.667033849    | 0.03064826  |
| STK38L | 0.462205107 | 0.013125283    | 0.030602656 |
| LINC00342 | 0.000953936 | 0.667033849    | 0.03064826  |
| WDR20  | 0.124629153 | 0.934911491    | 0.03064826  |
| PVR    | 0.591812281 | 0.008385999    | 0.030534065 |
| ITGA1  | 0.031605165 | 0.008385999    | 0.030534065 |
| SMCO2  | 0.031605165 | 0.008385999    | 0.030534065 |
| RGS19  | 0.013125283 | 0.934911491    | 0.03064826  |
| GCSH   | 0.666852035 | 0.934911491    | 0.03064826  |
| BLOC1S1| 0.000953936 | 0.934911491    | 0.03064826  |
| DPY30  | 0.000953936 | 0.934911491    | 0.03064826  |
| LINC02001| 0.000953936 | 0.934911491    | 0.03064826  |
| GPBAR1 | 0.358667164 | 0.013125283    | 0.030602656 |
| TMEM128| 0.522188954 | 0.013125283    | 0.030602656 |
| CHCHD4 | 0.430836543 | 0.013125283    | 0.030602656 |
| MIRLET7BHG| 0.000953936 | 0.934911491    | 0.03064826  |
| RAB3GAP1| 0.000953936 | 0.934911491    | 0.03064826  |
| FRK    | 0.351826819 | 0.351826819    | 0.031182961 |
| TXK    | 0.071539944 | 0.071539944    | 0.031182961 |
| MPP3   | 0.008652843 | 0.008652843    | 0.031182961 |
| SCAND1 | 0.249118327 | 0.249118327    | 0.031182961 |
| TMEM70 | 0.178611082 | 0.178611082    | 0.031340087 |
| TJP3   | 0.460234346 | 0.460234346    | 0.031340087 |
| ZBED1  | 0.593391628 | 0.593391628    | 0.0314028   |
| MIB2   | 0.008450293 | 0.008450293    | 0.031414373 |
| NISCH  | 0.597243069 | 0.597243069    | 0.031414373 |
| DNAJC3-DT| 0.016028624 | 0.016028624    | 0.031513022 |
| MLL6   | 0.002284424 | 0.002284424    | 0.031513022 |
| NAJA30 | 0.263817392 | 0.263817392    | 0.031513022 |
| ERCC1  | 0.074349006 | 0.074349006    | 0.031719582 |
| OPA3   | 0.397582974 | 0.397582974    | 0.031719582 |
| TACC2  | 0.894343308 | 0.894343308    | 0.031784477 |
| NDUFB11| 0.268064231 | 0.268064231    | 0.031854877 |
| Gene     | Log2FoldChange | pValue   | Adj. pValue |
|----------|----------------|----------|-------------|
| SLC4A2   | 0.597743867    | 0.171616 | 0.031872255 |
| PELI2    | 0.96286259     | 0.016599 | 0.031883107 |
| MARCKS   | 0.057780622    | 4.7226   | 0.031960114 |
| LTB4R    | 0.0151836      | 0.41523  | 0.032013331 |
| CD55     | 0.002627975    | 1.30179  | 0.032041914 |
| RHOA     | 0.195524511    | 0.000178 | 0.032088579 |
| SRM      | 0.112217972    | 0.577388 | 0.03211987  |
| GIT2     | 0.234348463    | 0.746481 | 0.032237497 |
| DNAJC5   | 0.941794308    | 0.056874 | 0.032242151 |
| SLBP     | 0.046668471    | 0.795318 | 0.032280048 |
| IRS1     | 0.5099066      | 0.006768 | 0.032314758 |
| CLDND1   | 0.139439345    | 0.333123 | 0.032530737 |
| ZNF559   | 0.401299575    | 0.024418 | 0.032558023 |
| C2CD4B   | 0.193367509    | 0.156382 | 0.03264164  |
| HADHB    | 0.004680875    | 0.558636 | 0.032648801 |
| P3H1     | 0.074739241    | 0.463678 | 0.032673628 |
| SARNP    | 0.376572494    | 0.881980 | 0.032770684 |
| COPE     | 0.00650923     | 0.472956 | 0.032843017 |
| C9orf64  | 0.265064584    | 0.002118 | 0.032882877 |
| RFX5     | 0.415361122    | 0.003593 | 0.032948074 |
| CYP2C18  | 0.014679218    | 4.19015  | 0.032974023 |
| TUSC1    | 0.239003352    | 0.001988 | 0.033013174 |
| WNT7B    | 0.042820395    | 0.633352 | 0.033176223 |
| SAV1     | 0.131619233    | 0.000879 | 0.033284585 |
| TUBA1A   | 0.02395565     | 0.570035 | 0.033440398 |
| E2F3     | 0.000626776    | 0.219300 | 0.033516766 |
| ADM      | 0.944230979    | 0.024267 | 0.033516922 |
| METRNL   | 0.339518614    | 0.002778 | 0.033551888 |
| P4HTM    | 0.696403702    | 0.006850 | 0.033668564 |
| SMC2     | 0.858236973    | 0.091324 | 0.033701881 |
| CCDC186  | 0.078652919    | 9.04353  | 0.033821551 |
| METTL26  | 0.592181423    | 0.104841 | 0.033822306 |
| EDEM2    | 0.025375454    | 0.891132 | 0.033862395 |
| CFI      | 0.17211621     | 0.147659 | 0.033914006 |
| CDCP1    | 0.024746414    | 2.78418  | 0.033959059 |
| ABCD1    | 0.563337142    | 0.005846 | 0.033990217 |
| PML      | 0.000106065    | 0.051920 | 0.034013989 |
| TMEM126B | 0.663154308    | 0.320284 | 0.034086474 |
| MEPCE    | 0.001347289    | 0.263644 | 0.034129349 |
| C2CD4A   | 0.105018494    | 0.157248 | 0.034143736 |
| FAM104A  | 0.940069758    | 0.080040 | 0.034193787 |
| FLNA     | 0.007697484    | 0.702052 | 0.034199863 |
| PKP2     | 0.449921356    | 0.103555 | 0.034255879 |
| Gene  | Value 1   | Value 2   | Value 3   | Value 4   |
|-------|----------|----------|----------|----------|
| CBX4  | 0.775214011 | 0.040621808 | 0.034367436 |
| LYPD3 | 0.009931337 | 0.9999999 | 0.034407859 |
| CAPG  | 0.341822486 | 0.336003353 | 0.034453524 |
| SIK1  | 0.498464616 | 0.082411688 | 0.034600989 |
| UFS1P1 | 0.815806783 | 0.018173363 | 0.034612921 |
| KLF6  | 0.055120144 | 0.012559443 | 0.034664379 |
| LMO7  | 0.001430339 | 2.1787E-07  | 0.034689948 |
| HACD4 | 0.050706661 | 0.415229678 | 0.034820980 |
| HR    | 0.9999999 | 0.012813944 | 0.035013219 |
| ACTL6A| 0.040036733 | 0.987971817 | 0.035021906 |
| APH1B | 0.314918076 | 0.53701047  | 0.035063024 |
| DDx10 | 0.815806783 | 0.018173363 | 0.035080279 |
| TRIM15| 0.095947642 | 7.8512E-05  | 0.035118335 |
| AL691432.2 | 0.401299575 | 0.652014622 | 0.035118335 |
| B2M   | 0.024557489 | 1.53241E-05 | 0.035327352 |
| NEK9  | 0.003158525 | 0.447660191 | 0.035337283 |
| ARHGAP17 | 0.75970682 | 0.010618233 | 0.035381513 |
| CCR1  | 0.932263869 | 0.41529678  | 0.035430026 |
| ANP32E| 0.352091038 | 0.08865566  | 0.03543724  |
| ILVBL | 0.825033434 | 0.14063893  | 0.03548887  |
| STEAP1| 0.006003032 | 0.875826039 | 0.0355525   |
| OSR2  | 0.851232608 | 0.03860277  | 0.03566362  |
| FAM114A1 | 0.581606115 | 0.011465462 | 0.0358111   |
| SAXO2 | 0.9999999 | 0.012819394 | 0.03553182  |
| F2RL1 | 0.066805415 | 1.8985E-05  | 0.03573126  |
| MAFF  | 0.002214774 | 4.12589E-07 | 0.035752349 |
| BATF  | 0.323793359 | 0.327981955 | 0.035817347 |
| GIPC1 | 0.856349652 | 0.032341666 | 0.035866464 |
| PLCB4 | 0.9999999 | 0.013056376 | 0.03603065  |
| SMIM5 | 0.996185378 | 0.07165419  | 0.03603652  |
| MKRN1 | 0.319894204 | 0.001593361 | 0.036180732 |
| MIR29B2CHG | 0.011015288 | 0.839062218 | 0.036210741 |
| STRN4 | 0.693772915 | 0.245947423 | 0.036248907 |
| ZBTB17 | 0.812680534 | 0.035531175 | 0.036274167 |
| SSBP2 | 0.429558269 | 0.343954338 | 0.036286597 |
| RNF20 | 0.900111391 | 0.109730028 | 0.03632084 |
| KHNYN | 0.283955895 | 0.00144127  | 0.036323618 |
| RPUSD4 | 0.902613724 | 0.048597441 | 0.03636682  |
| INPP4B | 0.00513703 | 0.457078245 | 0.036387858 |
| PGS1  | 0.008906838 | 0.912536027 | 0.03644184  |
| APIP  | 0.254321125 | 0.878477533 | 0.036470967 |
| ZNF324| 0.014565311 | 0.918253569 | 0.036480219 |
| Gene       | Fold Change | p-value     | q-value   |
|------------|-------------|-------------|-----------|
| RTN4R      | 0.034354164 | 2.99352E-05 | 0.036533887 |
| LDHB       | 0.230414489 | 0.13001061  | 0.036609132 |
| C1orf21    | 0.360040432 | 0.21413535  | 0.036637483 |
| ADGRF1     | 0.067826727 | 6.98594E-05 | 0.036702965 |
| DSTN       | 0.151500591 | 0.000122968 | 0.036715638 |
| TRAPPC5    | 0.010905091 | 0.9999999   | 0.036758592 |
| BBS12      | 0.401299575 | 0.06893887  | 0.036917892 |
| MDN1       | 0.355907941 | 0.44471921  | 0.036963544 |
| AC090912.2 | 0.234641166 | 0.11294687  | 0.037011437 |
| SEZ6L2     | 0.629694087 | 0.048649388 | 0.037095528 |
| NPM1       | 0.141350113 | 0.570488077 | 0.037104966 |
| AKR1C3     | 0.467679326 | 0.384970598 | 0.03713386  |
| ANXA6      | 0.031338836 | 0.688149108 | 0.037135744 |
| CAMK2D     | 0.03509605  | 1.47202E-05 | 0.037217076 |
| HLA-F      | 0.067181203 | 0.000228378 | 0.037314625 |
| WDTC1      | 0.875408733 | 0.026052283 | 0.037387577 |
| SPG11      | 0.20897747  | 0.902048854 | 0.03739568  |
| CFP1       | 0.421762444 | 0.007430136 | 0.037413031 |
| SOWAHC     | 0.231922382 | 0.001074727 | 0.037589576 |
| TMEM168    | 0.338123817 | 0.002816614 | 0.037660222 |
| SRGN       | 0.40001387  | 0.000348146 | 0.037637746 |
| MRPL41     | 0.015310095 | 0.841625249 | 0.037909934 |
| UBE2O      | 0.001333774 | 0.194483016 | 0.037929772 |
| AC025263.1 | 0.122384236 | 0.474594373 | 0.037942928 |
| TRIM21     | 0.03079798  | 4.9421E-05  | 0.038084649 |
| TIA1       | 0.001490418 | 0.281255391 | 0.038092864 |
| DUSP5      | 0.382363331 | 0.002307034 | 0.03814912  |
| HDAC8      | 0.001374057 | 0.249367603 | 0.038209796 |
| SUFU       | 0.278077597 | 0.047777777 | 0.038226375 |
| CD2        | 0.193746587 | 0.146906172 | 0.038404251 |
| ACE2       | 0.431659194 | 0.480768719 | 0.038446051 |
| SBNO1      | 0.314913459 | 0.001926345 | 0.038464812 |
| POLR3B     | 0.091157153 | 0.324809394 | 0.038542041 |
| BLVRA      | 0.530992168 | 0.19297696  | 0.038570739 |
| SELENOW    | 0.610368735 | 0.02379015  | 0.038801176 |
| DPM2       | 0.000257976 | 0.154631058 | 0.03891982  |
| NOMO1      | 0.150788802 | 0.344827903 | 0.038997486 |
| ATP2B4     | 0.000103227 | 0.019743459 | 0.039202341 |
| RNF186     | 0.65761219  | 0.020972238 | 0.039443904 |
| ZHX1       | 0.603888324 | 0.223467436 | 0.039587332 |
| SHROOM3    | 0.018749583 | 1.21154E-05 | 0.039639494 |
| ZRANB2     | 0.002483776 | 0.254692831 | 0.039655606 |
| CFAP298    | 0.011510338 | 0.423490576 | 0.039791077 |
| Gene          | Value1     | Value2     | p-value   |
|--------------|------------|------------|-----------|
| THOC3        | 0.634767574 | 0.125658907 | 0.039841023 |
| KLHDC7B      | 0.012285226 | 0.9999999   | 0.039989061 |
| RNASEH2C     | 0.247870811 | 0.484387181 | 0.040030872 |
| CFH          | 0.044098134 | 0.68057781  | 0.040042251 |
| CLPB         | 0.000608352 | 0.118229097 | 0.040073213 |
| MXRA5        | 0.088898087 | 0.366659076 | 0.04100026  |
| BMPR1A       | 0.388678066 | 0.003176135 | 0.041026342 |
| SMIM22       | 0.027258205 | 5.69623E-05 | 0.041034784 |
| SLC16A7      | 0.97956708  | 0.048313766 | 0.040208895 |
| EXOC6B       | 0.674661003 | 0.013199106 | 0.040216999 |
| AREG         | 0.636829785 | 0.013752814 | 0.040291761 |
| HECTD1       | 0.555924133 | 0.367055686 | 0.040403101 |
| FGFR1OP2     | 0.003702457 | 0.345169577 | 0.040413077 |
| NIT1         | 6.43661E-05 | 0.079768899 | 0.040625764 |
| CNIH1        | 0.317719568 | 0.514178847 | 0.040711331 |
| NCAPD3       | 0.575384155 | 0.190873154 | 0.040773245 |
| AVPL1        | 0.54716063  | 0.003410409 | 0.040780338 |
| GKN1         | 0.423969979 | 0.004490237 | 0.040831775 |
| USP2         | 0.401299575 | 0.124966747 | 0.040851716 |
| TRAF3IP2-AS1 | 0.235068737 | 0.144239917 | 0.040878035 |
| PSAPL1       | 0.342940171 | 0.55806834  | 0.041148125 |
| CAPRIN1      | 0.000249739 | 0.148509403 | 0.041226592 |
| ZNF322       | 0.855296653 | 0.055146636 | 0.041288475 |
| AC016831.7   | 0.617779939 | 0.119181623 | 0.041348939 |
| TTC8         | 0.291951531 | 0.881715262 | 0.041394818 |
| AP000866.2   | 0.9999999   | 0.015734792 | 0.041397608 |
| CDHR5        | 0.952234634 | 0.025555321 | 0.041411325 |
| ITGB5        | 0.973054966 | 0.020962854 | 0.041617448 |
| COQ5         | 0.671202392 | 0.209984295 | 0.041697792 |
| TRAC         | 0.029457734 | 0.430840167 | 0.041738361 |
| LIPH         | 0.003247786 | 3.33396E-07 | 0.04176673 |
| PSD3         | 0.707314563 | 0.081216872 | 0.041797082 |
| TRIM66       | 0.013091396 | 0.9999999   | 0.041827309 |
| CAMK2N1      | 0.2510727   | 0.000431906 | 0.041885544 |
| PLAC8        | 0.751907368 | 0.01108122  | 0.041923273 |
| MMP9         | 0.863760272 | 0.05520448  | 0.041954541 |
| PRRC2B       | 0.048526232 | 0.900661498 | 0.04203945  |
| TUBA4A       | 0.051176667 | 0.912958175 | 0.042059302 |
| HDAC7        | 0.020388245 | 0.836905129 | 0.042097264 |
| ACOX1        | 0.726679676 | 0.072534945 | 0.042138329 |
| LINC00926    | 0.708852635 | 0.032675931 | 0.042178695 |
| LARP4B       | 0.239581414 | 0.000351118 | 0.042217375 |
| ATPAF1       | 0.984136988 | 0.02871716  | 0.042436307 |
| gene  | log2FoldChange | adj.Pvalue | FDR  |
|-------|----------------|------------|------|
| NFKBIE| 0.937297407    | 0.069107131| 0.042462344|
| MED22 | 0.16474172     | 0.069107131| 0.042462344|
| CNOT8 | 0.104360178    | 0.069107131| 0.042462344|
| MFSD10| 0.067517982    | 0.069107131| 0.042462344|
| CAMSAP2| 0.001341405   | 0.069107131| 0.042462344|
| ATP8B1| 0.918208095    | 0.069107131| 0.042462344|
| CLDN4 | 0.01009016     | 2.17479E-05| 0.042462344|
| AL441992.1| 0.183338462  | 0.069107131| 0.042462344|
| CDC42EP5| 0.062993246   | 0.069107131| 0.042462344|
| NRP1  | 0.016090602    | 0.069107131| 0.042462344|
| SMG8  | 0.23259715     | 0.069107131| 0.042462344|
| SMAD5 | 0.333573332    | 0.069107131| 0.042462344|
| MFNG  | 0.43758366     | 0.069107131| 0.042462344|
| SFR1  | 0.7474175      | 0.069107131| 0.042462344|
| SPATA2| 0.240142374    | 0.069107131| 0.042462344|
| BUB1  | 0.373792955    | 0.069107131| 0.042462344|
| SPATA6| 0.11511207     | 0.069107131| 0.042462344|
| PLS1  | 0.106979415    | 0.069107131| 0.042462344|
| AC020656.1| 0.576554475  | 0.069107131| 0.042462344|
| DCCBLD2| 0.029484905    | 0.069107131| 0.042462344|
| NCOA7 | 0.082936652    | 0.069107131| 0.042462344|
| PRSS8 | 0.031030798    | 0.069107131| 0.042462344|
| SIAE  | 0.594312803    | 0.069107131| 0.042462344|
| DEGS1 | 9.72805E-05    | 0.069107131| 0.042462344|
| PPAR8 | 0.365141114    | 0.069107131| 0.042462344|
| TBC1D22A| 0.437320138   | 0.069107131| 0.042462344|
| PIGA  | 0.771431787    | 0.069107131| 0.042462344|
| LAMTOR2| 0.000486668   | 0.069107131| 0.042462344|
| NFX1  | 0.398223509    | 0.069107131| 0.042462344|
| ASXL1 | 0.00555868     | 0.069107131| 0.042462344|
| FGF2  | 0.005487637    | 0.069107131| 0.042462344|
| CDX2  | 0.071078194    | 0.069107131| 0.042462344|
| PDS5A | 0.493265581    | 0.069107131| 0.042462344|
| CDC20 | 0.109097254    | 0.069107131| 0.042462344|
| DPYD  | 0.0001655      | 0.069107131| 0.042462344|
| DAG1  | 0.063702775    | 0.069107131| 0.042462344|
| WDFY2 | 0.010158735    | 0.069107131| 0.042462344|
| LDHA  | 0.027826759    | 0.069107131| 0.042462344|
| TBK1  | 0.561347378    | 0.069107131| 0.042462344|
| ABHD17C| 0.055767715    | 0.069107131| 0.042462344|
| ACAP2 | 0.78998957     | 0.069107131| 0.042462344|
| DARS  | 0.00046603     | 0.069107131| 0.042462344|
| ZC3H7B| 0.123360442    | 0.069107131| 0.042462344|
| Gene   | Value1  | Value2  | Value3  |
|--------|---------|---------|---------|
| PEX5   | 0.999999 | 0.01780049 | 0.045380045 |
| HMG20B | 0.221880477 | 0.002657295 | 0.04546333 |
| CD53   | 0.007842222 | 0.660431434 | 0.045505032 |
| ITGB7  | 0.004685066 | 0.340090347 | 0.045555873 |
| TTKB2  | 0.005947217 | 0.601338908 | 0.045628572 |
| LTBP1  | 0.868662963 | 0.03872973 | 0.045687168 |
| ESRP1  | 0.677314242 | 0.075734894 | 0.045768875 |
| CYTIP  | 0.769996278 | 0.016787117 | 0.045824573 |
| SNAI3-AS1 | 0.014898865 | 0.9999999 | 0.045834733 |
| NHS    | 0.965110682 | 0.016787117 | 0.045842573 |
| EHD2   | 0.348402912 | 0.225753128 | 0.045882248 |
| SNU13  | 0.018452587 | 0.528544877 | 0.045997843 |
| RAB27B | 0.761552889 | 0.022943829 | 0.046082248 |
| OPLAH  | 0.419998865 | 0.216517857 | 0.0462172 |
| CLDN3  | 0.314973014 | 0.001206086 | 0.046246907 |
| SIRT1  | 0.554854776 | 0.132049675 | 0.046283756 |
| ARL6IP4 | 0.055668813 | 0.873253811 | 0.046387687 |
| KAZALD1| 0.838825558 | 0.024585953 | 0.046450944 |
| ABI1   | 0.246126786 | 0.003180593 | 0.046483896 |
| ACAT1  | 0.12804618 | 0.508831865 | 0.046679685 |
| APC    | 0.243735454 | 0.002127555 | 0.046807575 |
| KIAA1522| 0.620973474 | 0.014891843 | 0.0468503 |
| SORBS3 | 0.835714837 | 0.022322543 | 0.04721604 |
| TCN1   | 0.17646931 | 0.002082919 | 0.047286299 |
| HOXA3  | 0.820366654 | 0.191496499 | 0.047416218 |
| TMOD3  | 0.479724877 | 0.010608425 | 0.04762977 |
| RRAS2  | 0.49261771 | 0.016113095 | 0.047744119 |
| AC073332.1 | 0.237674218 | 0.213179665 | 0.047783305 |
| LIMA1  | 0.331538811 | 0.005020337 | 0.047980177 |
| GRK3   | 0.207327551 | 0.002082919 | 0.048043931 |
| POLE2  | 0.249507312 | 0.415229678 | 0.048369694 |
| KLK6   | 0.032577687 | 0.464444849 | 0.048326955 |
| HOXB3  | 0.087640542 | 0.000266414 | 0.04836118 |
| SEMA6B | 0.017354415 | 0.976378487 | 0.048487043 |
| AC105446.1 | 0.016140676 | 0.9999999 | 0.048506916 |
| BRD3   | 0.560085851 | 0.105077543 | 0.048568042 |
| AEN    | 0.947640497 | 0.035673558 | 0.048651556 |
| TNFSF9 | 0.936470552 | 0.067714654 | 0.048707125 |
| KLHL15 | 0.037342443 | 0.415229678 | 0.048736596 |
| RPL4   | 0.142503685 | 0.578732959 | 0.048796256 |
| ZNF341 | 0.510569531 | 0.415229678 | 0.048804235 |
| FRRS1  | 0.016292399 | 0.9999999 | 0.048829277 |
| CYP1B1 | 0.841461009 | 0.062357423 | 0.048965789 |
| Gene     | Value1  | Value2  | Value3  |
|----------|---------|---------|---------|
| IQSEC1   | 0.354011043 | 0.525196867 | 0.049080779 |
| SIVA1    | 0.332744952 | 0.501289202 | 0.049086176 |
| DDX17    | 0.005008511 | 0.289975134 | 0.04908901 |
| GARS     | 0.022329751 | 0.848691154 | 0.04912752 |
| CHD7     | 0.498136944 | 0.261453488 | 0.04914666 |
| ARL5B    | 0.857075123 | 0.052702747 | 0.049154521 |
| SNAPIN   | 0.998832366 | 0.071139813 | 0.04916719 |
| RASAL3   | 0.284642828 | 0.308013701 | 0.049304358 |
| RGMB     | 0.003904641 | 0.296842032 | 0.049514976 |
| SPA17    | 0.227792543 | 0.00298842  | 0.049630056 |
| KCNAB2   | 0.187968823 | 0.708953441 | 0.050257703 |
| IL7      | 0.468123883 | 0.316489669 | 0.050804814 |
| FKBPI1   | 0.32600318  | 0.004952714 | 0.05088685 |
| PPP1R26  | 0.055487102 | 0.00295629  | 0.05088636 |
| VSIG10   | 0.047941532 | 0.391541448 | 0.05172631 |
| CXCL17   | 0.04940973  | 0.785077932 | 0.05172631 |
| TRAPPC11 | 0.270600972 | 0.014036814 | 0.052017718 |
| AC026401.3| 0.017144369 | 0.9999999   | 0.052337415 |
| TMEM219  | 0.311777934 | 0.006699307 | 0.052865072 |
| SAYS1D1  | 0.507234295 | 0.04283807  | 0.053163061 |
| AC103591.3| 0.027712742 | 0.000225315 | 0.053252329 |
| MAGI3    | 0.241992314 | 0.00155599  | 0.053335917 |
| EEF1A2   | 0.010551676 | 0.000216306 | 0.053335917 |
| MED20    | 0.394156261 | 0.00816543  | 0.053335917 |
| EXOC1    | 0.792134821 | 0.033132872 | 0.053335917 |
| PIP4K2C  | 0.128581636 | 0.000597906 | 0.053335917 |
| MAGI3    | 0.027712742 | 0.000225315 | 0.053335917 |
| EEF1A2   | 0.091571067 | 0.000216306 | 0.053335917 |
| AC103591.3| 0.03201348  | 0.393286766 | 0.053335917 |
| VILL     | 0.300001023 | 0.007239019 | 0.053335917 |
| RPS4Y1   | 0.01591761  | 0.706900767 | 0.053335917 |
| ACTN4    | 0.009286553 | 3.00648E-05 | 0.053335917 |
| PICALM   | 0.032489452 | 0.000145018 | 0.053335917 |
| CEP57    | 0.022471144 | 0.751588202 | 0.053335917 |
| CAND1    | 0.500048654 | 0.012942308 | 0.053335917 |
| MED20    | 0.835476985 | 0.02000061  | 0.053335917 |
| AZGP1    | 0.065404136 | 0.000126203 | 0.053335917 |
| BDKR82   | 0.297121152 | 0.003570952 | 0.053335917 |
| MRPS15   | 0.007185195 | 0.451810844 | 0.053335917 |
| TAF13    | 0.543868422 | 0.009142389 | 0.053335917 |
| APH1A    | 0.698210352 | 0.046098368 | 0.053335917 |
| CCDC122  | 0.043848425 | 0.415296784 | 0.053335917 |
| Gene     | log2FoldChange | pvalue        | padj           |
|----------|----------------|---------------|----------------|
| EPN1     | 0.015852368    | 7.26481E-06   | 0.053454683    |
| SPATA7   | 0.768020305    | 0.042151387   | 0.053519259    |
| PSIP1    | 0.010762437    | 0.600126791   | 0.053569716    |
| LITAF    | 0.069821464    | 0.000131126   | 0.053647243    |
| GPR35    | 0.858300311    | 0.046215364   | 0.05385459     |
| ECHDC3   | 0.18727399     | 0.9999999     | 0.053891821    |
| FEZF1-AS1| 0.489473045    | 0.008357829   | 0.053894313    |
| RNF135   | 0.026132161    | 0.732984129   | 0.053975478    |
| LINC01003| 0.368888133    | 0.005519161   | 0.054180565    |
| MAN2C1   | 0.760240315    | 0.01534632    | 0.054284933    |
| RAB17    | 0.967976981    | 0.033471563   | 0.054328152    |
| STX1A    | 0.000265789    | 0.207105805   | 0.054521426    |
| KIF3B    | 0.27448418     | 0.001631419   | 0.054804021    |
| MYO1B    | 0.57103882     | 0.014001396   | 0.054804021    |
| FAM3D    | 0.00939179     | 1.19369E-05   | 0.055080106    |
| SLF1     | 0.039710722    | 0.66764579    | 0.055192641    |
| AP3M1    | 0.013327091    | 0.663753268   | 0.055223483    |
| CHCHD2   | 0.760240315    | 0.01534632    | 0.055322047    |
| UBL5     | 0.001823107    | 0.12911217    | 0.055534358    |
| TTC22    | 0.42793017     | 0.000159202   | 0.055620515    |
| NEAT1    | 0.013400398    | 0.488080774   | 0.05587107     |
| CLIC5    | 0.034840419    | 7.96546E-06   | 0.056003898    |
| NCEH1    | 0.089671054    | 0.00184418    | 0.056009743    |
| SPTSSA   | 0.00525759     | 0.36436035    | 0.056090405    |
| SH3BGRL3 | 0.008521623    | 0.402161723   | 0.056128799    |
| TRAF4    | 0.057496826    | 0.000362998   | 0.056377238    |
| APP      | 0.003873718    | 8.87911E-07   | 0.056398575    |
| RARA     | 0.231386643    | 0.001783189   | 0.056413615    |
| DSG3     | 0.028519024    | 0.247235212   | 0.056577918    |
| HIST2H2BE| 0.049450978    | 0.00163419    | 0.056636422    |
| AC005550.2| 0.401299575    | 0.047671317   | 0.056922898    |
| GPR153   | 0.998897365    | 0.027830184   | 0.057040468    |
| TMEM54   | 0.235937821    | 0.001449496   | 0.057101261    |
| GMEB2    | 0.50530042     | 0.005843397   | 0.057353813    |
| KIF5B    | 0.278638902    | 0.004575659   | 0.05743193     |
| PSMD5    | 0.423408094    | 0.005606303   | 0.057634362    |
| HDAC10   | 0.402099489    | 0.006201872   | 0.057723409    |
| MYH10    | 0.976692737    | 0.026332202   | 0.057754912    |
| NRROS    | 0.020681172    | 0.9999999     | 0.057818409    |
| PELI1    | 0.658999929    | 0.020308464   | 0.058051262    |
| LGALS1   | 0.139689194    | 0.006869785   | 0.058380905    |
| GTSE1    | 0.022774929    | 0.833750565   | 0.058382482    |
| C1orf198 | 0.764931684    | 0.019190192   | 0.058390824    |
| Gene    | p-value  | FDR      | z-score   |
|---------|----------|----------|-----------|
| MORN3   | 0.020975197 | 0.9999999 | 0.058399958 |
| TMEM204 | 0.030253401  | 0.415229678 | 0.058409167 |
| HEXB    | 0.125583531  | 0.001357623 | 0.058706352 |
| YWHAZ   | 0.045939953  | 6.55942E-05 | 0.058885318 |
| CCNK    | 0.418792298  | 0.012493699 | 0.059028377 |
| SLC39A14 | 0.773737519  | 0.017918808 | 0.059066587 |
| NAA60   | 0.354648644  | 0.01090635  | 0.059403883 |
| SP2     | 0.021065508  | 0.000582699 | 0.059540633 |
| GBP3    | 0.202183227  | 0.001724857 | 0.059679253 |
| MYPOP   | 0.020731031  | 0.96821775  | 0.06015741  |
| NIF3L1  | 0.744456686  | 0.027355183 | 0.060172856 |
| HAVCR2  | 0.021870883  | 0.9999999   | 0.060172856 |
| MID1IP1 | 0.008691961  | 0.442334142 | 0.060172856 |
| CCDC124 | 0.021541684  | 0.683420086 | 0.060191863 |
| KANTR   | 0.021892169  | 0.9999999   | 0.060198923 |
| WLS     | 0.413159647  | 0.006154718 | 0.060390839 |
| PPP1R7  | 0.338645078  | 0.006609708 | 0.060434407 |
| RHNO1   | 0.453754792  | 0.009215822 | 0.060440491 |
| NUDT7   | 0.012181554  | 0.550191433 | 0.06064807  |
| LINCO1215 | 0.022155955  | 0.9999999   | 0.060653419 |
| GATA3   | 0.024229532  | 0.9063136   | 0.060779074 |
| IFT140  | 0.926871385  | 0.045562724 | 0.061455103 |
| WDR48   | 0.780516412  | 0.022473396 | 0.061462814 |
| FAM98A  | 0.001860685  | 0.188720314 | 0.06149218  |
| TNFRSF10B | 0.019764927  | 0.68462116  | 0.061612507 |
| ITGAL   | 0.031689799  | 0.878320377 | 0.061632895 |
| BOD1L1  | 0.03523581   | 0.44363E-05 | 0.061792616 |
| DNAJC30 | 0.002173467  | 0.47020332  | 0.06197269  |
| IFNAR1  | 0.06262533   | 2.81705E-05 | 0.061982653 |
| IPO8    | 0.920190592  | 0.032275656 | 0.062044173 |
| NPTN    | 0.547822493  | 0.009127533 | 0.062062578 |
| WAC     | 0.034073132  | 0.86459E-05 | 0.062143956 |
| MTMR2   | 0.360927565  | 0.003559644 | 0.062241003 |
| TAF1D   | 0.010821717  | 0.593930834 | 0.062363599 |
| SULT1A1 | 0.381377663  | 0.005816152 | 0.06243327 |
| QRTT2   | 0.032241272  | 0.676817501 | 0.062604873 |
| C2orf68 | 0.710376194  | 0.01542356  | 0.062643185 |
| CHAC1   | 0.511922524  | 0.013445349 | 0.062691184 |
| RHOD    | 0.132018636  | 0.000706496 | 0.062787478 |
| BIRC3   | 0.125139059  | 0.000206551 | 0.063149234 |
| CARD8-AS1 | 0.039932014  | 0.415229678 | 0.063197011 |
| VPS13D  | 0.010958654  | 0.68218018  | 0.063366653 |
| WASF2   | 0.007111075  | 1.22182E-05 | 0.06360951  |
| Gene   | Expression Value | Log2 Fold Change | P-Value |
|--------|------------------|------------------|---------|
| RPRD1B | 0.58280574       | 0.01912667       | 0.063609167 |
| CD24   | 0.637202884      | 0.029343127      | 0.06381049 |
| WDFY3  | 0.653212874      | 0.013127998      | 0.063900223 |
| N4BP2L1| 0.46361537       | 0.006471729      | 0.064148386 |
| CCDC69 | 0.004113893      | 0.203454471      | 0.064153879 |
| PIGR   | 0.047555745      | 0.000201072      | 0.064270885 |
| LIMD2  | 0.04361537       | 0.006381049      | 0.064545088 |
| RPL12  | 0.043353354      | 0.926520159      | 0.06455088 |
| ORC2   | 0.015092622      | 0.72310482       | 0.064572587 |
| RNASET2| 0.03259887       | 0.622425282      | 0.064625751 |
| ZNF490 | 0.831417096      | 0.032078662      | 0.064680722 |
| ITGAV  | 0.601657125      | 0.016504222      | 0.064850353 |
| TOR1B  | 0.001412785      | 0.041254697      | 0.064994917 |
| YWHAH  | 0.121612052      | 0.000843442      | 0.065144211 |
| ZDHHC2 | 0.03345104       | 0.949983435      | 0.065192925 |
| SCAF1  | 0.737637555      | 0.02437357       | 0.065325844 |
| CCDC71 | 0.97568242       | 0.026803462      | 0.065385244 |
| B4GALT5| 0.052268372      | 0.00185827       | 0.06538829 |
| RAB35  | 0.782206912      | 0.037444714      | 0.065929959 |
| TRIM31 | 0.001765437      | 4.65523E-08      | 0.065937089 |
| SPINT1 | 0.002694953      | 3.8805E-06       | 0.066252163 |
| MAT2B  | 0.068603809      | 0.00262493       | 0.06655173 |
| B3GNT3 | 0.07566622       | 0.00645448       | 0.066651721 |
| LMTK2  | 0.004867587      | 2.36299E-05      | 0.066679305 |
| GYS1   | 0.016526436      | 0.716143773      | 0.066715337 |
| CYB5R4 | 0.286101252      | 0.03206113       | 0.06687639 |
| TP53INP2| 0.183149688     | 0.001069577      | 0.066892912 |
| ZDHHC13| 0.017444274      | 0.000109102      | 0.067122096 |
| SSBP3  | 0.144666109      | 0.001106164      | 0.067382323 |
| FUBP3  | 0.298403708      | 0.002514888      | 0.067823923 |
| SP4    | 0.003540004      | 0.225200933      | 0.06784723 |
| CC1L8  | 0.040876484      | 0.744861787      | 0.067970211 |
| CITED2 | 0.764180816      | 0.022815357      | 0.068041674 |
| CPOX   | 0.029476565      | 0.860977355      | 0.068254173 |
| ARHGAP6| 0.056243084      | 0.000336545      | 0.068263427 |
| USP20  | 0.004339118      | 0.093406877      | 0.068302411 |
| CCDC18 | 0.017043093      | 0.74807678       | 0.068303966 |
| CREBZF | 0.001393332      | 0.75288605       | 0.068549478 |
| ICMT   | 0.034920928      | 5.43523E-05      | 0.06859481 |
| RRNAD1 | 0.004723053      | 0.468829996      | 0.068796033 |
| CYTH4  | 0.026427947      | 0.9999999        | 0.068804037 |
| MAN1A2 | 0.037092095      | 0.860956144      | 0.0690693 |
| Gene       | Score 1 | Score 2  | Score 3  |
|------------|---------|----------|----------|
| SYT13      | 0.257758391 | 0.005036909 | 0.069155325 |
| GALT       | 0.21428201 | 0.701152474 | 0.069208077 |
| ESD        | 0.338226202 | 0.042869092 | 0.069346978 |
| TACC1      | 0.448619251 | 0.07687361 | 0.069377369 |
| BACE2      | 0.408228076 | 0.016665437 | 0.069414795 |
| FAIM       | 0.037251433 | 0.976378487 | 0.06943186 |
| FAM222B    | 0.138570324 | 0.00432287 | 0.069461728 |
| LAMA5      | 0.003758387 | 0.182114137 | 0.070036018 |
| MIR3945HG  | 0.9999999 | 0.031753013 | 0.07007499 |
| AL357033.4 | 0.9999999 | 0.031847428 | 0.070255432 |
| TRIM14     | 0.04922773 | 0.75578487 | 0.070401309 |
| GPR68      | 0.019892317 | 0.671446916 | 0.07047178 |
| MYRF       | 0.012967494 | 5.04333E-06 | 0.070546469 |
| MCF2L-AS1  | 0.9999999 | 0.031981026 | 0.0706255432 |
| ARRDC3     | 0.002748585 | 0.17657955 | 0.07070303437 |
| PRKD2      | 0.286120615 | 0.005667579 | 0.07078436 |
| PROM1      | 0.355055247 | 0.008720917 | 0.070814724 |
| HSD17B11   | 0.014911358 | 3.80913E-05 | 0.0708325797 |
| RAB1A      | 0.022912985 | 2.59581E-05 | 0.070834732 |
| PAN3       | 0.00459453 | 0.324422449 | 0.070924493 |
| MIB1       | 0.703670461 | 0.021346512 | 0.071036214 |
| SDR16C5    | 0.098859986 | 0.000220748 | 0.071099844 |
| TMEM82     | 0.9999999 | 0.032261002 | 0.0711014519 |
| LRFN4      | 0.031190011 | 0.899796097 | 0.0711572214 |
| TBRG4      | 0.969133627 | 0.392106444 | 0.071215797 |
| AC108134.3 | 0.9999999 | 0.032419403 | 0.071293819 |
| GPRC5A     | 0.000889498 | 9.49468E-09 | 0.0712941867 |
| DUOXA2     | 0.016979525 | 1.00491E-05 | 0.071324385 |
| ARG2       | 0.007676798 | 0.225200933 | 0.071427203 |
| RASA3      | 0.028059843 | 0.589272319 | 0.071478762 |
| REXO1      | 0.008278461 | 0.506561732 | 0.071545042 |
| STXBP3     | 0.576455046 | 0.014611696 | 0.071664442 |
| SGP2P2     | 0.057541419 | 0.000130011 | 0.071762105 |
| HEATR1     | 0.003516351 | 0.182290383 | 0.072018924 |
| C2orf72    | 0.9999999 | 0.033254627 | 0.072335968 |
| API5       | 0.007481797 | 0.458026584 | 0.072433768 |
| GPATCH2    | 0.006683857 | 0.414083895 | 0.072548307 |
| ZNF620     | 0.236072962 | 0.002264888 | 0.072487223 |
| EAF1       | 0.656212762 | 0.02543122 | 0.073046553 |
| B3GNT9     | 0.9999999 | 0.033776945 | 0.073183525 |
| HNF4G      | 0.121935869 | 0.00176159 | 0.073314722 |
| DMWD       | 0.096274264 | 0.000648887 | 0.07336897 |
| AC022966.1 | 0.9999999 | 0.033934868 | 0.073439148 |
| Gene     | ZIN | Abb | VAF  |
|----------|-----|-----|------|
| UBOX5    | 0.9999999 | 0.033945975 | 0.073457115 |
| ZNF737   | 0.9999999 | 0.034014875 | 0.073568541 |
| KCTD11   | 0.758903408 | 0.036191480 | 0.073575698 |
| DENR     | 0.000484117 | 0.099531805 | 0.073820427 |
| RPS6KA2  | 0.000388156 | 0.056347604 | 0.073828775 |
| CTSS     | 0.122294463 | 0.001295960 | 0.073829036 |
| ANKRD11  | 0.001938581 | 0.183277026 | 0.074466997 |
| CHMP7    | 0.000388156 | 0.056347604 | 0.073829036 |
| GGA3     | 0.190859384 | 0.001295960 | 0.073829036 |
| BICDL2   | 0.756703539 | 0.030959632 | 0.074466997 |
| UTP14C   | 0.559540383 | 0.015253433 | 0.074904797 |
| C17orf100| 0.9999999 | 0.034881212 | 0.074964897 |
| CCT3     | 0.024698130 | 0.605489226 | 0.074958977 |
| MEAF6    | 0.619975969 | 0.014503228 | 0.075105652 |
| CSRNP1   | 0.000354193 | 1.73986E-07  | 0.075145746 |
| COASY    | 0.009056381 | 0.401027143 | 0.075152776 |
| HEPH     | 0.9999999 | 0.035091650 | 0.075302787 |
| MTSS1    | 0.060623415 | 0.349897859 | 0.075352732 |
| GALNT3   | 0.036730086 | 0.001262686 | 0.075362574 |
| CAPZA2   | 0.282053379 | 0.004544853 | 0.075400402 |
| FAM43A   | 0.592678998 | 0.016232552 | 0.075405046 |
| CCNL1    | 0.020664506 | 1.44653E-05  | 0.075468785 |
| TFF1     | 0.489292713 | 0.010870208 | 0.075482592 |
| TSN      | 0.229825183 | 0.001526529 | 0.075501697 |
| RALB     | 0.536648395 | 0.014068764 | 0.075535792 |
| SERTAD3  | 0.600327229 | 0.019348098 | 0.075834777 |
| TUBD1    | 0.027212131 | 0.839539555 | 0.075850093 |
| AC087741.1| 0.042444659 | 0.833750565 | 0.075870363 |
| TRA2A    | 0.017147332 | 0.510888747 | 0.075991248 |
| TM2D2    | 0.040811776 | 0.000353201 | 0.076283523 |
| ZFAS1    | 0.021660841 | 0.544480448 | 0.076368173 |
| BTBD3    | 0.092622751 | 0.001562142 | 0.076433056 |
| VNN3     | 0.633100548 | 0.018991617 | 0.076463866 |
| IL15RA   | 0.010182163 | 0.000318791 | 0.076566044 |
| C15orf53 | 0.042244482 | 0.415229678 | 0.076680339 |
| FRMD5    | 0.924004987 | 0.046747817 | 0.076754233 |
| BTBD1    | 0.283009535 | 0.009542949 | 0.076786733 |
| IGHV3-7  | 0.9999999 | 0.363488115 | 0.077311144 |
| EIF3I    | 0.035745615 | 0.741035019 | 0.077360099 |
| TMEM163  | 0.690339622 | 0.035424848 | 0.077594839 |
| HLA-DMA  | 0.308205189 | 0.004179211 | 0.077601246 |
| LINC01348| 0.9999999 | 0.036630464 | 0.077758734 |
| C3       | 0.016289804 | 0.440071599 | 0.078109361 |
| Gene       | Pearson Correlation  | Spearman Correlation | Bonferroni Corrected p-value |
|------------|----------------------|----------------------|-----------------------------|
| NME3       | 0.001236632          | 0.106507826          | 0.078128774                 |
| IL21R      | 0.038348832          | 0.775682398          | 0.07826181                  |
| ADCK1      | 0.9999999            | 0.037098252          | 0.078500276                 |
| S1PR4      | 0.010191506          | 0.018217567          | 0.078610652                 |
| TES        | 0.077933452          | 0.000515809          | 0.078668204                 |
| FGD6       | 0.312273897          | 0.00827368           | 0.078915885                 |
| LAMTOR5    | 0.501640203          | 0.018678524          | 0.07903791                  |
| NBPF1      | 0.411721277          | 0.008194338          | 0.079093791                 |
| MPST       | 0.266009161          | 0.660682556          | 0.079264827                 |
| TPGS2      | 0.044779366          | 0.814100611          | 0.079264827                 |
| NCR3LG1    | 0.9999999            | 0.037609903          | 0.079308735                 |
| DYNLT3     | 0.270599089          | 0.002809558          | 0.079355941                 |
| PI4KA      | 0.000268992          | 0.08042589           | 0.079355941                 |
| PLA2G15    | 0.306921325          | 0.009559034          | 0.079679335                 |
| SPG7       | 0.028175703          | 0.800913969          | 0.080046085                 |
| TMEM45B    | 0.118381121          | 0.001315418          | 0.080400599                 |
| TPST2      | 0.009926695          | 0.031509812          | 0.080551519                 |
| YEATS2     | 0.19154098           | 0.000269504          | 0.080780402                 |
| KIAA1191   | 0.187920944          | 0.003169221          | 0.080780402                 |
| PI3        | 0.002188242          | 0.001758163          | 0.0808803                   |
| GPRC5B     | 0.100700041          | 0.003171163          | 0.081597683                 |
| ARHGEF35   | 0.415628115          | 0.010959393          | 0.081769311                 |
| EIF4EBP2   | 0.567419455          | 0.025194984          | 0.081819062                 |
| SPINT2     | 0.084878356          | 0.0096874            | 0.081955697                 |
| MTHFR      | 0.122913839          | 0.002224353          | 0.081971799                 |
| LHFPL2     | 0.560278845          | 0.012087496          | 0.081979066                 |
| TTC31      | 0.002338211          | 0.019221839          | 0.082122231                 |
| VIM        | 0.220701391          | 0.026835247          | 0.082242518                 |
| SCAF8      | 0.065475081          | 0.000269504          | 0.082542922                 |
| LTBR       | 0.695066031          | 0.027296593          | 0.082617942                 |
| LINC00672  | 0.04892312           | 0.82739457           | 0.082643444                 |
| VAPA       | 0.009112373          | 0.275911737          | 0.082932298                 |
| ZBTB7B     | 0.129806143          | 0.002783657          | 0.082986061                 |
| ZNF45      | 0.018172515          | 0.727918745          | 0.083052934                 |
| ZNF623     | 0.040166861          | 0.00083297           | 0.083193101                 |
| NGLY1      | 0.007788273          | 0.299267491          | 0.083362212                 |
| PEX11A     | 0.239003352          | 0.008010202          | 0.083661216                 |
| GATA4      | 0.931688612          | 0.033783124          | 0.083663466                 |
| RNF128     | 0.270406378          | 0.006032221          | 0.083961833                 |
| IQGAP1     | 0.034032375          | 8.16728E-05          | 0.08398945                  |
| AC112220.4 | 0.001743403          | 0.208427999          | 0.084065364                 |
| RPS6KA5    | 0.547548964          | 0.027280778          | 0.084077193                 |
| Gene   | Value1  | Value2         | Value3  |
|--------|---------|----------------|---------|
| C1orf226 | 0.836168078 | 0.035133421 | 0.084156992 |
| AC100810.1 | 0.035216412 | 0.781562932 | 0.084175369 |
| MAP4K3  | 0.330091612 | 0.007431183 | 0.084236936 |
| GGCX    | 0.029606142 | 0.751472142 | 0.08432674 |
| CD109   | 0.222313693 | 0.015354346 | 0.084429091 |
| SCN9A   | 0.032772305 | 0.940515124 | 0.084513616 |
| POIF1B  | 0.077011832 | 8.6097E-05  | 0.084586398 |
| ABHD4   | 0.040694933 | 0.835271627 | 0.084694919 |
| MAGI2   | 0.9999999   | 0.041126191 | 0.084794497 |
| ST3GAL1 | 0.007741108 | 0.269421365 | 0.085154232 |
| RAD1    | 0.041311434 | 0.962766519 | 0.085365107 |
| KMT2E   | 0.172481984 | 0.004181001 | 0.085400265 |
| YARS    | 0.0089049   | 0.374363076 | 0.085430843 |
| ATP6V1E1| 0.077146351 | 0.001031771 | 0.085460341 |
| SLC39A4 | 0.013881837 | 0.490541035 | 0.085472364 |
| LRCCH3  | 0.002586652 | 0.215282962 | 0.085624741 |
| RWDD2B  | 0.015927847 | 0.636294099 | 0.085790767 |
| HSDL1   | 0.427201357 | 0.019352633 | 0.085829363 |
| ELAVL1  | 0.034566387 | 0.600393796 | 0.085964505 |
| REL     | 0.013271802 | 0.000230636 | 0.086146951 |
| BAG4    | 0.003346187 | 0.471789655 | 0.086196189 |
| FAM98C  | 0.032083892 | 0.822712605 | 0.086229745 |
| EFB2    | 0.248842453 | 0.003602472 | 0.086253846 |
| CLDN1   | 0.018652056 | 0.000182854 | 0.086602234 |
| FKB8    | 0.028442421 | 0.477662009 | 0.086717108 |
| POLD4   | 0.036475562 | 0.819724679 | 0.086844725 |
| RPS7    | 0.026634035 | 0.595445641 | 0.086934344 |
| UGT1A1  | 0.9999999   | 0.042858292 | 0.08745433 |
| RABGAP1L| 0.148389366 | 0.002204201 | 0.087492683 |
| PLEKHF2 | 0.145346406 | 0.004236898 | 0.087525651 |
| ALPG    | 0.9999999   | 0.429846310 | 0.087647306 |
| PRSS3   | 0.292818182 | 0.00130213  | 0.087691954 |
| COBLL1  | 0.542308895 | 0.014882273 | 0.087816055 |
| FGD2    | 0.037252587 | 0.9999999   | 0.087822817 |
| ATP6AP1L| 0.037426247 | 0.9999999   | 0.088114077 |
| LINCO1559| 0.132085656 | 0.001679248 | 0.08824772 |
| SSSA2   | 0.304587992 | 0.01058193  | 0.088317806 |
| PLP2    | 0.020406929 | 0.595483992 | 0.088480721 |
| WFS1    | 0.373633228 | 0.004165159 | 0.088562248 |
| BACH1   | 0.006283209 | 5.33292E-05  | 0.088801171 |
| H1FX    | 0.025788236 | 0.000720326 | 0.088898402 |
| AL138724.1| 0.012236725 | 0.225200933 | 0.088927725 |
| AC007364.1| 0.037925621 | 0.9999999   | 0.088949526 |
| Gene | adj.p | plink.e | funcomp.e |
|------|-------|---------|-----------|
| HOXB9 | 0.037992302 | 0.9999999 | 0.08906085 |
| CELF1 | 0.048853459 | 0.67741209 | 0.089084835 |
| PTDS51 | 0.002480564 | 0.205967556 | 0.089114886 |
| AGER | 0.038097259 | 0.9999999 | 0.089235965 |
| SGK1 | 0.001356937 | 0.149875554 | 0.089353804 |
| C4BPA | 0.016689038 | 0.523232558 | 0.089369655 |
| SERPINB7 | 0.018057464 | 0.496354654 | 0.089375123 |
| AL591845.1 | 0.038506571 | 0.9999999 | 0.089417594 |
| NKTR | 0.048853459 | 0.205967556 | 0.089453804 |
| ZYG11B | 0.002480564 | 0.205967556 | 0.089483804 |
| NECTIN2 | 0.016689038 | 0.523232558 | 0.089493804 |
| IMPAD1 | 0.002799982 | 0.184711141 | 0.089593804 |
| CD200R1 | 0.001356937 | 0.149875554 | 0.089653804 |
| TTLL10 | 0.001356937 | 0.149875554 | 0.089673804 |
| MLK1 | 0.038097259 | 0.9999999 | 0.089693804 |
| RHBD1 | 0.038097259 | 0.9999999 | 0.089693804 |
| CLASP2 | 0.016689038 | 0.523232558 | 0.089713804 |
| F11R | 0.001356937 | 0.149875554 | 0.089733804 |
| GTF1 | 0.001356937 | 0.149875554 | 0.089733804 |
| RNF213 | 0.001356937 | 0.149875554 | 0.089733804 |
| COP1 | 0.001356937 | 0.149875554 | 0.089733804 |
| ETK1 | 0.001356937 | 0.149875554 | 0.089733804 |
| AC002467.1 | 0.016689038 | 0.523232558 | 0.089753804 |
| BANK1 | 0.001356937 | 0.149875554 | 0.089773804 |
| CMPK1 | 0.001356937 | 0.149875554 | 0.089773804 |
| PIK3CB | 0.001356937 | 0.149875554 | 0.089773804 |
| AL357060.1 | 0.038097259 | 0.9999999 | 0.089793804 |
| AP003068.2 | 0.001356937 | 0.149875554 | 0.089793804 |
| KLHL25 | 0.001356937 | 0.149875554 | 0.089793804 |
| KIF24 | 0.001356937 | 0.149875554 | 0.089793804 |
| TMEM243 | 0.001356937 | 0.149875554 | 0.089793804 |
| EIF3F | 0.001356937 | 0.149875554 | 0.089793804 |
| CLTCL1 | 0.001356937 | 0.149875554 | 0.089793804 |
| CD99L2 | 0.001356937 | 0.149875554 | 0.089793804 |
| AC011676.2 | 0.001356937 | 0.149875554 | 0.089793804 |
| THOC2 | 0.001356937 | 0.149875554 | 0.089793804 |
| GTF2IRD1 | 0.001356937 | 0.149875554 | 0.089793804 |
| MS4A8 | 0.001356937 | 0.149875554 | 0.089793804 |
| CMTM7 | 0.001356937 | 0.149875554 | 0.089793804 |
| ZN529-AS1 | 0.001356937 | 0.149875554 | 0.089793804 |
| ADAT3 | 0.001356937 | 0.149875554 | 0.089793804 |
| E4F1 | 0.001356937 | 0.149875554 | 0.089793804 |
| Gene   | Value1  | Value2   | Score  |
|--------|---------|----------|--------|
| LPCAT4 | 0.206981936 | 0.002620772 | 0.094469455 |
| APOBR  | 0.041270928 | 0.9999999 | 0.094469571 |
| ZNF627 | 0.021554786 | 0.67025996 | 0.094492421 |
| PLEKHS1| 0.194203462 | 0.006216485 | 0.094531181 |
| ZNF182 | 0.041319583 | 0.9999999 | 0.094548913 |
| NAA20  | 0.003570084 | 0.171200689 | 0.094695075 |
| TRMT6  | 0.008605706 | 0.355646426 | 0.094793766 |
| ABCA5  | 0.029495256 | 0.637825175 | 0.095008072 |
| NR2F6  | 0.163847153 | 0.001700443 | 0.095054037 |
| ZNF638 | 0.000763049 | 0.103831174 | 0.095243016 |
| MT-ND3 | 0.004223809 | 0.141319210 | 0.095376129 |
| FAM220A| 0.745112122 | 0.022365833 | 0.095421984 |
| DCAF8  | 0.05801652  | 0.258079689 | 0.095467086 |
| TMC4   | 0.003486897 | 0.283015252 | 0.095520987 |
| UBE2D1 | 0.279581401 | 0.008808337 | 0.095652934 |
| HDAC5  | 0.258806641 | 0.001001904 | 0.095674540 |
| AC093525.4| 0.042021086 | 0.9999999 | 0.095690003 |
| PNPLA2 | 0.050773298 | 7.29941E-05  | 0.095763939 |
| GTF3C2 | 0.007154749 | 0.000268743 | 0.096135624 |
| VTN    | 0.9999999 | 0.048671582 | 0.096198185 |
| AXL    | 0.042455628 | 0.9999999 | 0.096394184 |
| TGM2   | 0.002667329 | 0.216423121 | 0.09668896 |
| GSPT1  | 0.008212047 | 0.301055041 | 0.096874826 |
| VGLL4  | 0.001427962 | 2.8313E-06  | 0.097042558 |
| HDGFL2 | 0.203806007 | 0.004764006 | 0.0970855 |
| SLC25A37| 0.013182032 | 0.312043116 | 0.097215167 |
| PRRG1  | 0.695392792 | 0.043527955 | 0.097290834 |
| SLC22A23| 0.747714347 | 0.044133562 | 0.097549232 |
| NIFK-AS1| 0.239003352 | 0.017679096 | 0.097676736 |
| AMOTL2 | 0.49539159  | 0.024864636 | 0.097721077 |
| RAB3IP | 0.017091409 | 0.000288033 | 0.097818692 |
| CDKN1B | 0.613851982 | 0.024350719 | 0.097841821 |
| SERGEF | 0.021213221 | 0.640337558 | 0.098069024 |
| VAMP8  | 0.207282518 | 0.03349607  | 0.098072978 |
| MICAL2 | 0.207327435 | 0.005133468 | 0.098488227 |
| HECTD2 | 0.043791701 | 0.9999999 | 0.098548889 |
| CAVIN1 | 0.043859095 | 0.9999999 | 0.098654986 |
| ZNF503 | 0.190422185 | 0.008583827 | 0.098683026 |
| LMBRD2 | 0.014617928 | 0.636883324 | 0.098851461 |
| GPSM3  | 0.028028217 | 0.608193855 | 0.098912778 |
| ZFP14  | 0.005365454 | 0.306204085 | 0.098974273 |
| FBXW11 | 0.073923013 | 0.001417007 | 0.099240833 |
| Gene       | Log2FC   | p-value  | q-value |
|------------|----------|----------|---------|
| AC234772.3 | 0.044296653 | 0.9999999 | 0.099355707 |
| PRSS22     | 0.007258674 | 0.273976937 | 0.09938395 |
| MITF       | 0.041672251 | 0.806865555 | 0.099510429 |
| PARP14     | 3.08015E-07  | 0.001813067 | 0.09952345 |
| KIAA0040   | 0.350185917 | 0.014826219 | 0.099875422 |
| NNT-AS1    | 0.359852074 | 0.007126694 | 0.099956377 |
| PRKD3      | 0.003995741 | 0.0177051  | 0.100033579 |
| TMEM106C   | 0.003152372 | 0.106277117 | 0.100049685 |
| TRANK1     | 0.342122415 | 0.02029155 | 0.100254649 |
| B3GALT5-AS1| 0.095787987 | 0.00169483 | 0.100371771 |
| PDLM7      | 0.006625187 | 0.360143733 | 0.100507234 |
| AC002401.4 | 0.045026076 | 0.9999999 | 0.100519575 |
| PIWIL4     | 0.827054533 | 0.0408961 | 0.10080025 |
| TMEM131L   | 0.032481684 | 0.695444399 | 0.100877036 |
| TBC1D10A   | 0.004158846 | 0.26356951 | 0.100922418 |
| RTL8A      | 0.552019792 | 0.020478076 | 0.101059008 |
| AC142472.1 | 0.045433889 | 0.9999999 | 0.101168002 |
| PACRG1     | 0.007440798 | 0.225200933 | 0.101169859 |
| AC005726.1 | 0.045436238 | 0.9999999 | 0.101171732 |
| OSBPL11    | 0.027420803 | 0.008341368 | 0.101457071 |
| RUSC1      | 0.00247344  | 0.129931355 | 0.101467865 |
| RALA       | 0.201672465 | 0.002838305 | 0.101485988 |
| SH3KBP1    | 0.35587399  | 0.02071904  | 0.101561665 |
| AC010618.3 | 0.045687791 | 0.9999999 | 0.101570894 |
| EDEM3      | 0.02938559  | 0.000262076 | 0.101784815 |
| SNRPG      | 0.030211311 | 0.585981498 | 0.101910101 |
| NDUFA13    | 0.001845074 | 0.089353458 | 0.102193833 |
| C15orf61   | 0.795010082 | 0.046287975 | 0.102218129 |
| LRP5       | 0.244574934 | 0.006412741 | 0.10229073 |
| EHF        | 0.364530509 | 0.006842473 | 0.102515834 |
| DAAM1      | 0.369763466 | 0.010211809 | 0.102550496 |
| NFIX       | 0.011839987 | 0.462175754 | 0.102774322 |
| BMP1       | 0.006033151 | 0.27359956  | 0.102859272 |
| CCDC51     | 0.623977922 | 0.032321042 | 0.103337192 |
| SLC9A7     | 0.000506633 | 0.09454082  | 0.103449481 |
| TWF1       | 0.085512781 | 0.000519207 | 0.103722099 |
| TPM3       | 0.010486691 | 1.41047E-06 | 0.104022243 |
| CDC34      | 0.08864721  | 0.001121204 | 0.104257745 |
| LINC002481 | 0.047470581 | 0.9999999 | 0.104382614 |
| ATP2B1     | 0.084135907 | 0.000649078 | 0.104850832 |
| CCDC88A    | 0.028783731 | 0.028582889 | 0.104861459 |
| IGSF9      | 0.180925379 | 0.018022503 | 0.105054423 |
| UVSSA      | 0.23444281  | 0.006106991 | 0.105613056 |
| Gene   | 0.634559918 | 0.010577161 | 0.105636205 |
|--------|-------------|-------------|-------------|
| ZNF83  |             |             |             |
| RPS19  | 0.024763751 | 0.500419306 | 0.105651863 |
| NEIL3  | 0.048315344 | 0.9999999   | 0.105704692 |
| TMC5   | 0.110150272 | 0.00133758  | 0.105847243 |
| ALKBH3 | 0.074610073 | 0.000333772 | 0.105906101 |
| ATG16L1| 0.002426574 | 0.022841995 | 0.106123885 |
| FOSL1  | 0.36513644  | 0.009231029 | 0.106165933 |
| RAP1A  | 0.005199714 | 0.209425208 | 0.106413796 |
| GOLPH3 | 0.367427722 | 0.012566286 | 0.10723043  |
| NDUFA3 | 0.006703148 | 0.253643695 | 0.10751762  |
| PLPP6  | 0.032830541 | 0.001404806 | 0.10770704  |
| RXRB   | 0.896454873 | 0.041336099 | 0.10751762  |
| MIR4435-2HG| 0.007151714 | 0.11509904  | 0.10770704  |
| GMFG   | 0.040946699 | 0.889001287 | 0.108722405 |
| GNA11  | 0.368757599 | 0.014946594 | 0.108752865 |
| ITM2A  | 0.048957669 | 0.921411863 | 0.109043767 |
| ADAM8  | 0.001260175 | 0.064753143 | 0.109190214 |
| NRM    | 0.034104336 | 0.407975213 | 0.109195861 |
| KAT6A  | 0.304919043 | 0.008769949 | 0.109274337 |
| COA3   | 0.446756621 | 0.035331944 | 0.109563722 |
| DGKH   | 0.006041116 | 0.187759127 | 0.109634444 |
| TNFSF12| 0.010615647 | 0.086566659 | 0.109909634 |
| GPBP1L1| 0.103629581 | 0.000465679 | 0.110026051 |
| CIITA  | 0.373614967 | 0.008226526 | 0.110425061 |
| AMN    | 0.136860221 | 0.001474161 | 0.110489591 |
| GBA2   | 0.586120144 | 0.029727616 | 0.110589465 |
| TCTA   | 0.079198797 | 0.00799168 | 0.110711818 |
| SDCBP2 | 0.191773492 | 0.003712734 | 0.11093616 |
| RDX    | 0.111565375 | 0.015395675 | 0.11110729 |
| GPR137B| 0.213889322 | 0.00358943 | 0.111659936 |
| STAU1  | 0.1828067   | 0.004596604 | 0.111694082 |
| CAAP1  | 0.43307063  | 0.028971303 | 0.112062462 |
| SH2D1B | 0.093675586 | 0.002264595 | 0.11226462 |
| FARP1  | 0.134556197 | 0.001213795 | 0.112274917 |
| SELENOP| 0.25714906  | 0.003574292 | 0.112291552 |
| BIRC5  | 0.922249558 | 0.034148415 | 0.112421652 |
| CEP290 | 0.047635007 | 0.000463752 | 0.112883975 |
| HELZ   | 0.037046115 | 0.000154959 | 0.113168745 |
| MIER3  | 0.168070959 | 0.002091041 | 0.113255335 |
| MIR194-2HG| 0.385443772 | 0.012531385 | 0.113301188 |
| GNG12  | 0.318934807 | 0.009667889 | 0.113371039 |
| EYA3   | 0.00152049  | 0.022264397 | 0.113383378 |
| WBP2   | 0.16709168  | 0.006199963 | 0.11364224 |
| Gene       | Score 1 | Score 2 | Score 3 |
|------------|---------|---------|---------|
| PRDM16     | 0.7867  | 0.0434  | 0.1137  |
| BABAM1     | 0.0091  | 0.2222  | 0.1138  |
| DENND4C    | 0.0117  | 0.3237  | 0.1138  |
| ZNF629     | 0.7274  | 0.0252  | 0.1139  |
| GALNT7     | 0.2340  | 0.0040  | 0.1139  |
| HINT1      | 0.0332  | 0.5562  | 0.1139  |
| ALDOC      | 0.0153  | 0.2238  | 0.1140  |
| SMIM8      | 0.0348  | 0.6603  | 0.1148  |
| TOX4       | 0.0085  | 1.3973  | 0.1149  |
| NR2C2AP    | 0.0121  | 0.3313  | 0.1145  |
| CENPT      | 0.0207  | 1.4384  | 0.1148  |
| TMPRSS2    | 0.0128  | 0.3479  | 0.1151  |
| DHPS       | 0.0073  | 0.1885  | 0.1150  |
| PYCARD-AS1 | 0.2390  | 0.0357  | 0.1157  |
| PIGK       | 0.0016  | 0.1117  | 0.1157  |
| CIPC       | 0.0308  | 0.7037  | 0.1158  |
| RNF113A    | 0.1450  | 0.0030  | 0.1163  |
| ARPC3      | 0.0049  | 0.1138  | 0.1164  |
| CTPS1      | 0.0080  | 0.1754  | 0.1164  |
| ATP5MC2    | 0.0186  | 0.3478  | 0.1165  |
| IRX5       | 0.5292  | 0.0365  | 0.1165  |
| DTD2       | 0.2390  | 0.0122  | 0.1166  |
| FAM210B    | 0.0218  | 0.0001  | 0.1167  |
| CA13       | 0.0133  | 7.2724  | 0.1167  |
| QSOX1      | 0.1129  | 0.0012  | 0.1167  |
| PBXIP1     | 0.0223  | 0.0001  | 0.1168  |
| MAP3K1     | 0.1320  | 0.0049  | 0.1172  |
| SLC25A24   | 0.1054  | 0.0024  | 0.1173  |
| HIST1H4C   | 0.1798  | 0.0001  | 0.1174  |
| AKR1B1     | 0.0253  | 0.4071  | 0.1174  |
| LAPT5M5    | 0.7786  | 0.0309  | 0.1177  |
| LAMTOR3    | 0.3430  | 0.0122  | 0.1177  |
| ZNF185     | 0.0499  | 0.8041  | 0.1178  |
| CPT1A      | 0.5638  | 0.0009  | 0.1179  |
| NDUFB3     | 0.0438  | 0.5551  | 0.1180  |
| HSD17B2    | 0.1287  | 0.0006  | 0.1182  |
| PTTG1IP    | 0.0001  | 1.1598  | 0.1182  |
| ITGA3      | 0.0183  | 0.3265  | 0.1185  |
| MCRIP2     | 0.0213  | 0.0004  | 0.1186  |
| NFIB       | 0.4257  | 0.0093  | 0.1189  |
| YES1       | 0.2512  | 0.0067  | 0.1189  |
| MBIP       | 0.0252  | 0.0002  | 0.1189  |
| Gene  | Signal   | P-Value  | Log2 Fold Change |
|-------|----------|----------|-----------------|
| MEIS1 | 0.055068265 | 0.004123659 | 0.119007827 |
| RAMP1 | 0.224396057 | 0.00523454 | 0.119146769 |
| PAFAH1B2 | 0.285618596 | 0.00484903 | 0.119308249 |
| SEC11A | 0.020204591 | 0.303596451 | 0.119518334 |
| TFG  | 0.325902256 | 0.012231527 | 0.119574257 |
| PLA2G10 | 0.016355989 | 0.201391764 | 0.120117172 |
| GATA6 | 0.269976024 | 0.008350737 | 0.120586266 |
| GADD45GIP1 | 0.051318786 | 0.000484903 | 0.120179549 |
| EXOC3L4 | 0.000372481 | 0.16015753 | 0.120419155 |
| FRAT2 | 0.01940105 | 0.001114622 | 0.12059431 |
| ZNF761 | 0.020725567 | 0.225200933 | 0.122068048 |
| COPS4 | 0.065249026 | 0.01196797 | 0.122204716 |
| JUN  | 0.003822481 | 0.138093186 | 0.122325444 |
| CYBA | 0.643374347 | 0.038287406 | 0.12247336 |
| UBD  | 0.120760345 | 0.009272672 | 0.122500933 |
| POLR1A | 0.61368569 | 0.040028687 | 0.122608048 |
| PAPSS1 | 0.504577801 | 0.047787367 | 0.12260462 |
| MTIF3 | 0.020725567 | 0.225200933 | 0.122608048 |
| INTS6L | 0.01940105 | 0.001114622 | 0.122608048 |
| CCL2 | 0.003822481 | 0.138093186 | 0.122608048 |
| AC027644.3 | 0.643374347 | 0.038287406 | 0.122608048 |
| TIGD1 | 0.003822481 | 0.138093186 | 0.122608048 |
| IGBP1 | 0.643374347 | 0.038287406 | 0.122608048 |
| ZNF669 | 0.000406844 | 0.089972238 | 0.12315221 |
| CCDC97 | 0.020725567 | 0.225200933 | 0.12315221 |
| MT-CO3 | 0.002585654 | 0.092443609 | 0.12315221 |
| ZBTB43 | 0.120760345 | 0.009272672 | 0.12315221 |
| PAWR | 0.012209876 | 4.50519E-05 | 0.123859881 |
| TERF1 | 0.012209876 | 4.50519E-05 | 0.123859881 |
| STK35 | 0.01474089 | 0.608602528 | 0.123859881 |
| PDLIM5 | 0.01474089 | 0.608602528 | 0.123859881 |
| IKBKB | 0.01474089 | 0.608602528 | 0.123859881 |
| BCAM | 0.01474089 | 0.608602528 | 0.123859881 |
| MAOB | 0.01474089 | 0.608602528 | 0.123859881 |
| TMEM238L | 0.01474089 | 0.608602528 | 0.123859881 |
| UBXN2A | 0.01474089 | 0.608602528 | 0.123859881 |
| KPNA3 | 0.01474089 | 0.608602528 | 0.123859881 |
| AC116366.1 | 0.01474089 | 0.608602528 | 0.123859881 |
| C2CD2L | 0.01474089 | 0.608602528 | 0.123859881 |
| SUB1 | 0.01474089 | 0.608602528 | 0.123859881 |
| PIM3 | 0.01474089 | 0.608602528 | 0.123859881 |
| NFE2L1 | 0.01474089 | 0.608602528 | 0.123859881 |
| Gene   | Value1 | Value2  | Value3  |
|--------|--------|---------|---------|
| SELENOS | 0.193300184 | 0.004388862 | 0.125225193 |
| TM9SF2 | 0.269857035 | 0.015184811 | 0.125420133 |
| TNFRSF12A | 0.063363276 | 0.000241419 | 0.126151612 |
| MPDU1 | 0.011518137 | 0.322727876 | 0.126434672 |
| DOPEY2 | 0.655573366 | 0.042032365 | 0.126777053 |
| C11orf54 | 0.010235891 | 0.000207378 | 0.126986419 |
| KIF9 | 0.000839513 | 0.099842 | 0.127002501 |
| AGA | 0.041290757 | 0.274904321 | 0.127377914 |
| C17orf75 | 0.00352637 | 0.019783155 | 0.127599312 |
| TNFRSF12A | 0.063363276 | 0.000241419 | 0.126151612 |
| MPDU1 | 0.011518137 | 0.322727876 | 0.126434672 |
| DOPEY2 | 0.655573366 | 0.042032365 | 0.126777053 |
| C11orf54 | 0.010235891 | 0.000207378 | 0.126986419 |
| KIF9 | 0.000839513 | 0.099842 | 0.127002501 |
| AGA | 0.041290757 | 0.274904321 | 0.127377914 |
| C17orf75 | 0.00352637 | 0.019783155 | 0.127599312 |
| TNFRSF12A | 0.063363276 | 0.000241419 | 0.126151612 |
| MPDU1 | 0.011518137 | 0.322727876 | 0.126434672 |
| DOPEY2 | 0.655573366 | 0.042032365 | 0.126777053 |
| C11orf54 | 0.010235891 | 0.000207378 | 0.126986419 |
| KIF9 | 0.000839513 | 0.099842 | 0.127002501 |
| AGA | 0.041290757 | 0.274904321 | 0.127377914 |
| C17orf75 | 0.00352637 | 0.019783155 | 0.127599312 |
| TNFRSF12A | 0.063363276 | 0.000241419 | 0.126151612 |
| MPDU1 | 0.011518137 | 0.322727876 | 0.126434672 |
| DOPEY2 | 0.655573366 | 0.042032365 | 0.126777053 |
| Gene   | Value1 | Value2     | Value3     | Value4     |
|--------|--------|------------|------------|------------|
| IL18BP | 0.162993138 | 0.003928993 | 0.13276493 |            |
| SGMS1  | 0.001191815  | 0.043182498 | 0.13325662 |            |
| AC009414.2 | 0.645886669 | 0.04243813  | 0.1335487  |            |
| PTS    | 0.46728625   | 0.032412515 | 0.134808671|            |
| WWC3   | 0.028444499  | 0.493796792 | 0.13408876 |            |
| UCK1   | 0.000713245  | 0.018921342 | 0.134808671|            |
| EPO1   | 0.010682847  | 0.000361245 | 0.135281879|            |
| HDAC9  | 0.0001191815 | 0.000361245 | 0.135281879|            |
| PLEKHM2 | 0.022788369  | 0.010482223 | 0.136399603|            |
| MALP1  | 0.001387483  | 0.000361245 | 0.136399603|            |
| CAV1N4 | 0.642292229  | 0.033638898 | 0.13572302 |            |
| AURKAP1| 0.012848034  | 0.189981166 | 0.13572302 |            |
| JOSD2  | 0.283339119  | 0.008769189 | 0.13572302 |            |
| PQLC1  | 0.011645459  | 0.363187373 | 0.135824291|            |
| WWTR1  | 0.055341174  | 0.001693929 | 0.135962812|            |
| ADPGK  | 0.037817492  | 0.657952434 | 0.136249542|            |
| ZNF66  | 0.140541284  | 0.010482223 | 0.136399603|            |
| PIK3C2B| 0.08436825   | 0.000361245 | 0.136399603|            |
| TRAPP12| 0.031118423  | 0.557845837 | 0.136671035|            |
| MT-ATP6| 0.003764282  | 0.064641362 | 0.1367394308|            |
| RTP4   | 0.359843387  | 0.011023476 | 0.137400945|            |
| ANO6   | 0.0014760031 | 0.386700635 | 0.137431186|            |
| CTTNBP2NL | 0.309164001 | 0.030350139 | 0.1375198  |            |
| MYORL  | 0.023094835  | 0.00099075  | 0.137562233|            |
| CARD14 | 0.22689318   | 0.009670331 | 0.138177079|            |
| ATP6V1H| 0.120838426  | 0.0035465   | 0.138318024|            |
| EPSL3  | 0.13476152   | 0.002094874 | 0.138416049|            |
| MFGE8  | 0.001063422  | 0.000226285 | 0.138571194|            |
| TMEM176B| 0.55839263  | 0.047098511 | 0.138767707|            |
| SOX9   | 0.037021004  | 0.281852E-05| 0.139057041|            |
| SPHK2  | 0.032116015  | 0.565049279 | 0.139181495|            |
| TPBG   | 0.036459866  | 0.000466407 | 0.139266067|            |
| RPS15  | 0.005474562  | 0.090524866 | 0.139771174|            |
| RNF123 | 0.22235829   | 0.008528153 | 0.139925189|            |
| ABCA10 | 0.04904322   | 0.049763966 | 0.140037834|            |
| PRICKLE2| 0.015888196  | 0.290898904 | 0.140236102|            |
| CYSTM1 | 0.477012165  | 0.039357545 | 0.140277655|            |
| EFNA1  | 0.185224913  | 0.008497784 | 0.140295091|            |
| AC099518.5 | 0.02257469 | 0.225200933 | 0.140466528|            |
| ANKRD39| 0.006284085  | 0.105165282 | 0.140622917|            |
| KIF13A | 0.563957554  | 0.042132955 | 0.141097125|            |
| TMEM41A| 0.541698629  | 0.035205044 | 0.141105896|            |
| AL139393.2 | 0.019733829 | 0.225200933 | 0.141236439|            |
| Gene       | Value 1  | Value 2  | Value 3  |
|------------|---------|---------|---------|
| EMP2       | 0.113196575 | 0.000147909 | 0.141677611 |
| LEMD1      | 0.534907922  | 0.018047787  | 0.141810043 |
| SLC15A1    | 0.040613957  | 0.587687779  | 0.142067394 |
| TRIM29     | 0.155041478  | 0.00479013  | 0.142745276 |
| MFS6       | 0.154509625  | 0.004213679  | 0.14283553 |
| PCBD1      | 0.016501512  | 0.345579292  | 0.14286383 |
| UBE2L6     | 0.451371064  | 0.017393702  | 0.143292212 |
| CDC14B     | 0.305698006  | 0.018379079  | 0.143412092 |
| LYN        | 0.135347064  | 0.003443731  | 0.143550132 |
| AL118506.1 | 0.011335312  | 0.087772526  | 0.143740003 |
| PDGFB      | 0.018211086  | 0.225200933  | 0.144139981 |
| ITGB8      | 0.164843039  | 0.002972791  | 0.144170365 |
| WDR4       | 0.016790022  | 0.40341115  | 0.144215061 |
| CSAD       | 0.036263172  | 0.607380903  | 0.144351784 |
| H2AFJ      | 0.425384109  | 0.02714288  | 0.14478551 |
| SMCHD1     | 0.214767136  | 0.011874815  | 0.14486951 |
| GNB1       | 0.222375753  | 0.005496811  | 0.144893837 |
| ANAPC7     | 0.016109837  | 0.443097889  | 0.14556636 |
| EPN2       | 0.093775134  | 0.002178313  | 0.14580783 |
| AAMP       | 0.185739245  | 0.00549708  | 0.145715531 |
| GNL3       | 0.026484231  | 0.315384339  | 0.145786967 |
| SNX14      | 0.003197372  | 0.031788325  | 0.145888233 |
| MAD2L2     | 0.027795071  | 0.509785253  | 0.145959428 |
| AARS1D1    | 0.019561512  | 0.225200933  | 0.146119503 |
| STS        | 0.66086763  | 0.044596027  | 0.146263328 |
| IFIT1      | 0.025857622  | 0.059349247  | 0.146289935 |
| PRDX1      | 0.016106436  | 0.196188065  | 0.146782661 |
| RTN3       | 0.034060961  | 0.45753586  | 0.146877121 |
| SETD4      | 0.006327487  | 0.06746273  | 0.147130818 |
| UBA6       | 0.039270464  | 0.47445248  | 0.147359347 |
| MFHAS1     | 0.075997034  | 0.00205978  | 0.147440743 |
| TNIP1      | 0.020371915  | 9.39481E-05  | 0.147575542 |
| ABL2       | 0.009481582  | 0.095878721  | 0.147703172 |
| YPEL3      | 0.097646488  | 0.005100477  | 0.148025287 |
| RCN2       | 0.323627325  | 0.012019206  | 0.148697333 |
| GATAD1     | 0.289451936  | 0.020142286  | 0.148765537 |
| BPHL       | 0.182729764  | 0.008683789  | 0.148974373 |
| GTF2H2C    | 0.011404958  | 0.278879028  | 0.149114144 |
| NIPSNA1P1  | 0.000138282  | 0.01564795  | 0.149312488 |
| PAK1       | 0.360550756  | 0.025177697  | 0.149350591 |
| STX8       | 0.003578867  | 0.217773748  | 0.149384171 |
| HNMT       | 0.380721643  | 0.008280346  | 0.149574918 |
| TMEM115    | 0.245208017  | 0.017857447  | 0.149635381 |
| Gene     | Gene          | Value | Value | Value |
|----------|---------------|-------|-------|-------|
| SENP2    | 0.517652915   | 0.030143226 | 0.149694705 |
| GPATCH3  | 0.036400385   | 0.394988768 | 0.149741942 |
| SLC10A3  | 0.001427299   | 0.051349133 | 0.14976588 |
| TAPT1    | 0.338356835   | 0.225200933 | 0.149910207 |
| BEAN1    | 0.043669449   | 0.000699754 | 0.150090928 |
| PPTC7    | 0.000699754   | 0.036400385 | 0.150433889 |
| HK2      | 0.168621839   | 0.003448007 | 0.150614151 |
| NR3C2    | 0.427739445   | 0.00138634  | 0.150614622 |
| BCL10    | 0.002465297   | 0.005577889 | 0.150824199 |
| RAB11FIP5| 0.371519812   | 0.000653888 | 0.151126803 |
| POLR2J3.1| 0.005577889   | 9.76419E-05 | 0.151180624 |
| DNAJA2   | 0.154377408   | 0.008813731 | 0.151602592 |
| IFI16    | 9.76419E-05   | 0.00138634  | 0.151810624 |
| RAB9A    | 0.379456204   | 0.005577889 | 0.151810624 |
| PPP1R15A | 0.000653888   | 9.76419E-05 | 0.151810624 |
| ARF6     | 0.399170989   | 0.042660825 | 0.152466871 |
| AASDHPPPT| 0.196123375   | 0.010551313 | 0.152798436 |
| TIPARP   | 2.51539E-06   | 1.54237E-07 | 0.153144821 |
| MCHP1    | 0.007575957   | 0.026799019 | 0.153456419 |
| MOB3B    | 0.023207322   | 0.00160984  | 0.15355263 |
| NGRN     | 0.499683029   | 0.037338648 | 0.153708915 |
| TAF8     | 0.042531927   | 0.663000699 | 0.153856952 |
| MDM2     | 0.014610693   | 0.236247786 | 0.153881717 |
| CALM2    | 0.372210802   | 0.027445848 | 0.15398146 |
| ICA1     | 0.434201246   | 0.029741841 | 0.154078488 |
| LRRC75B  | 0.132153278   | 0.005282559 | 0.154194125 |
| WDR6     | 0.008279047   | 0.455462763 | 0.154300028 |
| PGP      | 0.021937705   | 0.426480913 | 0.154402993 |
| PLEKHA6  | 0.000256071   | 0.004030198 | 0.154452733 |
| ICAM1    | 0.025482159   | 0.003018715 | 0.154733834 |
| RANBP6   | 0.001516018   | 0.041316948 | 0.155012493 |
| NAB1     | 0.035414762   | 0.001061463 | 0.1551798 |
| SHPRH    | 0.003750364   | 0.063378007 | 0.155784733 |
| ADAM10   | 0.025549393   | 0.000509966 | 0.155792589 |
| TUBB6    | 0.047140188   | 0.564466663 | 0.156665802 |
| SIGIRR   | 0.170215988   | 0.008605875 | 0.156962457 |
| PUS7L    | 0.000926283   | 0.023676709 | 0.15750215 |
| PINX1.1  | 0.040955249   | 0.301769333 | 0.157693052 |
| EPS8L1   | 0.102076666   | 0.00108807  | 0.157753854 |
| ANXA1    | 0.060346983   | 0.000821344 | 0.158001757 |
| GEMIN5   | 0.239003352   | 0.040054648 | 0.158184905 |
| TPP2     | 0.002307009   | 0.116463935 | 0.158260898 |
| Gene | Value1 | Value2 | Value3 |
|------|--------|--------|--------|
| ENC1 | 0.025076239 | 0.350669487 | 0.158367745 |
| MAPK1 | 0.01490174 | 0.000387937 | 0.158459199 |
| RBX1 | 0.035325518 | 0.40301988 | 0.158568201 |
| AP001107.9 | 0.451075582 | 0.028712991 | 0.158930628 |
| TBC1D1 | 0.421239196 | 0.018915889 | 0.158969253 |
| LR1P10 | 0.044443796 | 0.00129207 | 0.159042153 |
| PHLDA1 | 0.001329035 | 0.045247748 | 0.15934341 |
| CKAP4 | 0.068243523 | 9.32711E-05 | 0.159360239 |
| SPATA5 | 0.035325518 | 0.40301988 | 0.159417916 |
| COPS2 | 0.063596635 | 0.001674534 | 0.159769041 |
| SERP1N6 | 0.000164934 | 0.001190889 | 0.159860968 |
| MUL1 | 0.407861884 | 0.019104892 | 0.159969218 |
| ZMYM2 | 0.015582021 | 0.237813353 | 0.160089079 |
| TSC22D3 | 0.023621615 | 4.49368E-06 | 0.160478233 |
| KLHL7 | 0.021566782 | 0.498049862 | 0.161186403 |
| DSP | 0.117429135 | 4.49368E-06 | 0.161298291 |
| SMYD3 | 0.320701814 | 0.001674534 | 0.161472581 |
| STAM2 | 0.341249685 | 0.01542771 | 0.16170366 |
| HOMER1 | 0.006970052 | 0.16179092 | 0.161744348 |
| SYS1 | 0.009242679 | 0.215200882 | 0.161804351 |
| FANCA | 0.029183798 | 0.657724528 | 0.161933129 |
| EFCAB11 | 0.022185742 | 0.405671311 | 0.161974966 |
| ZNF615 | 0.097624692 | 0.011335791 | 0.162032205 |
| CDC42BPB | 0.000218994 | 0.013656271 | 0.162494956 |
| PRSS21 | 0.040897215 | 0.225200933 | 0.162505078 |
| TRMT5 | 0.380936116 | 0.012393154 | 0.162751813 |
| DSG2 | 0.163381857 | 0.009115579 | 0.162918522 |
| MTAP | 0.346808543 | 0.022975478 | 0.162965767 |
| TATDN1 | 0.033926302 | 0.4397612 | 0.163024873 |
| FOXC1 | 0.22836799 | 0.00017853 | 0.163389978 |
| MARCH6 | 0.007524771 | 0.333293839 | 0.163822869 |
| CDK5RAP1 | 0.000218994 | 0.013656271 | 0.162494956 |
| HRAS | 0.02916318 | 0.404188594 | 0.163733043 |
| KIF23 | 0.041001682 | 0.08294518 | 0.163822869 |
| GPATCH8 | 0.000787757 | 0.02519381 | 0.164040148 |
| COBL | 0.100049639 | 0.004660049 | 0.164099415 |
| STK40 | 0.041729397 | 0.001095776 | 0.164173838 |
| RIOK1 | 0.026186795 | 0.423976501 | 0.164643691 |
| BNIP2 | 0.026751504 | 0.002815701 | 0.164751185 |
| AHCYL2 | 0.026799745 | 0.00017853 | 0.164801343 |
| IRF1 | 0.011757616 | 0.00026592 | 0.164939006 |
| PAM | 0.037441145 | 0.397847056 | 0.165270941 |
| STX2 | 0.002649082 | 0.010700634 | 0.165559392 |
| Gene  | Value 1  | Value 2   | Value 3   |
|-------|---------|-----------|-----------|
| CHMP4B | 0.001299089 | 4.946E-06 | 0.165739538 |
| PRKCSH | 0.001277952 | 0.020495342 | 0.166243612 |
| KRT8   | 0.083603651 | 0.001032843 | 0.166298738 |
| EZH1   | 0.001074434 | 0.059337744 | 0.166451502 |
| IFI27  | 0.017540889 | 7.15367E-06 | 0.166526811 |
| APBB2  | 0.011199525 | 0.147192704 | 0.167210531 |
| JAG1   | 0.330017153 | 0.010127576 | 0.167382144 |
| CHFR   | 0.025656210 | 0.5440874   | 0.167778124 |
| BCAP31 | 0.018251521 | 0.147192704 | 0.167795374 |
| RSN1L  | 0.034215237 | 0.40370389  | 0.168087187 |
| ADPRM  | 0.323623526 | 0.005724601 | 0.168301084 |
| UQCRH  | 0.023258195 | 0.311704085 | 0.168387620 |
| PTPN11 | 0.022478051 | 0.43744929  | 0.168465799 |
| MAP2   | 0.028526871 | 0.225200933 | 0.168476208 |
| TET2   | 0.083350767 | 0.001063288 | 0.168585888 |
| TMEM9B | 0.070994341 | 0.002317516 | 0.169014315 |
| NADK2  | 0.013989672 | 0.292977057 | 0.169208166 |
| EXOC5  | 0.439223491 | 0.005724601 | 0.169344076 |
| GOLPH3L| 0.365082785 | 0.022116552 | 0.169761503 |
| INTS5  | 0.010712589 | 0.239692816 | 0.169914315 |
| TNFSF10| 0.08467519  | 0.001983091 | 0.170436889 |
| PFDN6  | 0.040649442 | 0.519657717 | 0.170626706 |
| PARM1  | 0.118020718 | 0.001847358 | 0.170654996 |
| GPRC5C | 0.380978831 | 0.028458972 | 0.171051994 |
| RASSF6 | 0.150236774 | 0.002576931 | 0.171310509 |
| ADD1   | 0.02619588  | 0.000299244 | 0.171650539 |
| SYF2   | 0.11849485  | 0.001242986 | 0.172001330 |
| BRD8   | 0.168895237 | 0.008747722 | 0.172049775 |
| CDKN1C | 0.050046021 | 0.00393081  | 0.172168222 |
| UPP1   | 0.020577945 | 0.252535769 | 0.17221823 |
| ATF6B  | 0.209560824 | 0.013020303 | 0.172397916 |
| ZFP36  | 0.001126762 | 2.81422E-06 | 0.17245336 |
| AC027307.2 | 0.239003352 | 0.04449859 | 0.172583916 |
| CCDC32 | 0.218243388 | 0.008654111 | 0.172786576 |
| RPL13  | 0.033998376 | 0.488854655 | 0.172843338 |
| BAG5   | 0.206022312 | 0.013937722 | 0.173305682 |
| DNAJH6 | 0.111020238 | 0.007971473 | 0.173528128 |
| ERP29  | 0.00384179  | 0.070532642 | 0.173797544 |
| KLF4   | 0.003058645 | 4.87275E-09 | 0.173806139 |
| LPAR5  | 0.239003352 | 0.031909542 | 0.174166235 |
| IST1   | 0.005119787 | 8.18847E-05 | 0.17419694 |
| STK17A | 0.00334297  | 0.03018588 | 0.174575799 |
| PLEKHA2| 0.047038032 | 0.003115564 | 0.17485659 |
| Gene  | Expression | FPKM   | q-value  |
|-------|------------|--------|----------|
| RPL18 | 0.030477789| 0.370481856| 0.175262764|
| DUOXA1| 0.061681052| 0.002305319| 0.175335132|
| POMGNT1| 0.668065674| 0.042957924| 0.178384529|
| SH3GL1| 0.337978495| 0.020899138| 0.176190231|
| A4GALT| 0.229341762| 0.006308994| 0.176430922|
| FAM76B| 0.002412534| 0.029261662| 0.176510034|
| GRIP2 | 0.239003352| 0.038589185| 0.176582329|
| RAB30-AS1| 0.009482674| 0.191346066| 0.176682992|
| NPNT  | 0.415625306| 0.002788386| 0.176738136|
| PRELID1| 0.020941784| 0.196765818| 0.176937058|
| RPL39 | 0.047687277| 0.527344258| 0.177123635|
| INTS12| 0.032247697| 0.000606407| 0.177231315|
| AC137932.3| 0.239003352| 0.013312919| 0.177296844|
| ERBIN | 0.037181709| 0.000857304| 0.177848207|
| RBM12 | 0.143020927| 0.006519606| 0.177928958|
| SCAF11| 0.015861131| 0.002123613| 0.178290992|
| HACE1 | 0.021714303| 0.225009333| 0.178380869|
| MARCKSL1| 0.082885987| 0.001486141| 0.178384529|
| CEBPG | 0.463074184| 0.044653208| 0.178501055|
| LAGE3 | 0.017231312| 0.274630212| 0.179289858|
| STT3B | 0.028686718| 0.473507957| 0.179727488|
| KCTD13| 0.051940047| 0.002710098| 0.179967994|
| TOMM70 | 0.514884006| 0.038847243| 0.180104068|
| HLA-DRA| 0.222893339| 0.005708096| 0.180272411|
| EIF3J-DT| 0.153028483| 0.004924931| 0.180569902|
| MGAT4B| 0.192126546| 0.010152676| 0.181389756|
| S100A14| 0.142661364| 0.001541332| 0.181465205|
| ZFP36L1| 0.00486719| 0.000373558| 0.181481752|
| MTUS1 | 0.150003248| 0.002910994| 0.18184503|
| YTHDF2| 0.0674038| 0.002076985| 0.182384816|
| MCL1 | 0.074016948| 0.001863187| 0.183286555|
| RND3  | 0.038105911| 0.001260828| 0.183401999|
| MYLIP | 0.240245015| 0.017075992| 0.1835055|
| TRERF1| 0.233718296| 0.01277971| 0.183670743|
| FAM83H| 0.580658122| 0.048682236| 0.183776018|
| PITX1 | 0.150635211| 0.007366265| 0.184278482|
| HLA-A | 0.030868893| 0.000797369| 0.184426877|
| KPNAs | 0.481121791| 0.04213007| 0.184451091|
| NEK1  | 0.035538426| 0.207944948| 0.184798007|
| H6PD  | 0.021994395| 0.233730996| 0.18521509|
| GMDS  | 0.294941717| 0.017396441| 0.185650372|
| FBXW4 | 0.24487201| 0.01327128| 0.185890869|
| Gene        | Log2Ratio | FoldChange | pvalue         |
|-------------|-----------|------------|----------------|
| LAIR2       | 0.530147954| 0.040974846| 0.186280511    |
| SFPQ        | 0.038359088| 0.425293608| 0.186771136    |
| SEC62       | 0.000307297| 0.006085601| 0.186856079    |
| PPM1M       | 0.019120671| 0.094516284| 0.186913543    |
| TRAF5       | 0.012601101| 0.008359060| 0.18696484     |
| PUM3        | 0.016948236| 0.168026646| 0.187013112    |
| ZNF431      | 0.014750072| 0.156764677| 0.187089909    |
| TMEM8A      | 0.085567454| 0.03793482  | 0.187125906    |
| GGT6        | 0.021710744| 0.225200933| 0.187367864    |
| PCNP        | 0.128013874| 0.05947528  | 0.187431562    |
| TCEAL4      | 0.469059601| 0.04072053  | 0.187722607    |
| ABT1        | 0.014288738| 0.202017556| 0.187850239    |
| MT-CYB      | 0.000685812| 0.00911338  | 0.188093721    |
| SLC2A1      | 0.099933323| 0.126693105| 0.18811083     |
| PLXNA2      | 0.185680717| 0.014237277| 0.188123328    |
| PJA1        | 0.001665556| 0.143925119| 0.188144649    |
| DUSP10      | 0.00031253 | 0.00872618 | 0.188192526    |
| DR1         | 0.187402127| 0.015520584| 0.188875221    |
| TMEM176A    | 0.226355567| 0.012591968| 0.189027872    |
| TMEM43      | 0.000464218| 0.050329398| 0.189098989    |
| FUT3        | 0.004872648| 2.70905E-05 | 0.189199125    |
| MOSPD1      | 0.023792785| 0.004740824| 0.189337954    |
| SLC40A1     | 0.537483358| 0.045533344| 0.189370885    |
| AP002807.1  | 0.481530784| 0.035208026| 0.189413511    |
| FAM16OB1    | 0.404596097| 0.032125949| 0.189588242    |
| PURA        | 0.017473994| 0.27830518 | 0.190081844    |
| ZDHHC18     | 0.123498584| 0.003386551| 0.190149091    |
| METTL2A     | 0.001803664| 0.026290759| 0.190722566    |
| AFAP1       | 0.149626152| 0.007641581| 0.190809364    |
| PPFIA1      | 0.158333956| 0.007331219| 0.190895199    |
| TTC7A       | 0.014255911| 4.65343E-05 | 0.190923233    |
| TM4SF1      | 0.202059628| 0.004274576| 0.191041755    |
| PHF13       | 0.019680438| 0.261570569| 0.19131947     |
| OASL        | 0.041666771| 0.027054711| 0.191366838    |
| BTC         | 0.176449147| 0.006954189| 0.191426455    |
| ZNF316      | 0.017358604| 0.335239406| 0.191588593    |
| CTDPP1      | 0.023366534| 0.436936554| 0.191611305    |
| GSE1        | 0.041601942| 0.423117008| 0.1917347      |
| ZNF107      | 0.000892316| 0.027379301| 0.191935259    |
| TAF3        | 0.021313732| 0.306139577| 0.191940475    |
| C19orf18    | 0.042273625| 0.515406916| 0.191955064    |
| GTF2F2      | 0.30687254 | 0.047085399| 0.192054021    |
| MX2         | 0.012114143| 0.000980131| 0.192070257    |
| Gene       | Value 1   | Value 2   | Value 3   |
|------------|-----------|-----------|-----------|
| NOSIP      | 0.01399321| 0.19331829| 0.192091305|
| TRIT1      | 0.239003352| 0.033473084| 0.192120143|
| PRELID3B   | 0.039412611| 0.001381926| 0.192193371|
| STAP2      | 0.009780008| 0.00217112| 0.192313572|
| KLHL17     | 0.376780146| 0.043360841| 0.192417947|
| ACOX3      | 0.006041473| 0.037433948| 0.19245812|
| C6orf106   | 0.043005449| 0.38683799| 0.192547298|
| EGLN1      | 0.001871448| 0.047765843| 0.19261044|
| AL078604.2 | 0.239003352| 0.034021304| 0.192648088|
| PSMA3-AS1  | 0.0055659| 0.149683753| 0.192656483|
| DNTTIP2    | 0.245896969| 0.032984002| 0.19286074|
| CDKN2A     | 0.015058075| 0.2282675| 0.192981583|
| NEMF       | 0.015226088| 0.027787811| 0.193407711|
| FOXM1      | 0.015931945| 0.051272499| 0.193501456|
| FBXL8      | 0.032612323| 0.083178769| 0.193561101|
| CPLANE1    | 0.093994507| 0.003860843| 0.19361101|
| SS18L1     | 0.000430502| 0.003404829| 0.194325195|
| TDMPSSS4   | 0.149879431| 0.00169329| 0.194655253|
| VDAC2      | 0.026707015| 0.324728395| 0.194755534|
| G3BP2      | 0.001285806| 0.008343457| 0.195347821|
| ACO44849.1 | 0.014769231| 0.166334066| 0.195457744|
| PLIN3      | 0.073852443| 0.001075061| 0.195546646|
| MBP        | 0.023056589| 0.2583308| 0.196575493|
| ISCA1      | 0.012916912| 0.002911537| 0.196603169|
| DOCK11     | 0.000430502| 0.003404829| 0.19683342|
| TGDS       | 0.038604586| 0.642243196| 0.19712383|
| ATG12      | 0.030093127| 0.360244057| 0.197177892|
| SEPT8      | 0.314492283| 0.016505356| 0.197457821|
| TOB2       | 0.133276508| 0.04587062| 0.19768405|
| ANKRHD27   | 0.239003352| 0.039875723| 0.19769686|
| ZDHHC14    | 0.073970331| 0.00146611| 0.19785493|
| NEK11      | 0.023056589| 0.2583308| 0.19803169|
| CEP162     | 0.240291829| 0.00893579| 0.198197892|
| CNN2       | 0.002698226| 0.035539348| 0.19883219|
| ATXN7L3    | 0.31364594| 0.032022646| 0.199777892|
| RHOF       | 0.015444054| 0.6728783-005| 0.197745451|
| STAMBP     | 0.154166291| 0.010280086| 0.198107799|
| DD5X8      | 0.009645327| 0.260759594| 0.198199816|
| FAM83E     | 0.277940389| 0.016929112| 0.198546812|
| MED24      | 0.034970457| 0.437447866| 0.198715413|
| ALG5       | 0.036384116| 0.319860781| 0.19884332|
| USP47      | 0.154595932| 0.002182737| 0.19886562|
| COX6A1     | 0.001325264| 0.031772377| 0.198968546|
| Gene    | Value 1  | Value 2  | Value 3  |
|---------|---------|---------|---------|
| WDHD1   | 0.093213351 | 0.03993127 | 0.199029187 |
| HSD17B8 | 0.023472821 | 0.322670244 | 0.199090754 |
| B3GNT5  | 0.084415096 | 0.003871852 | 0.199380715 |
| PDP2    | 0.105186314 | 0.008963422 | 0.199694624 |
| KDM4A   | 0.385021827 | 0.023779089 | 0.199987084 |
| MFSD3   | 0.244554942 | 0.026655017 | 0.199998928 |
| TBP     | 0.002532871 | 0.001007355 | 0.200020901 |
| TLE4    | 0.089787593 | 0.134197555 | 0.200501784 |
| OSBPL2  | 0.058657066 | 0.022299551 | 0.200616663 |
| PPP4C   | 0.207711227 | 0.008840168 | 0.200779852 |
| AL392172.1 | 0.432646531 | 0.048471401 | 0.200764729 |
| PRPF39  | 0.000577701 | 0.287068061 | 0.200894842 |
| LSAMP   | 0.000577701 | 0.287068061 | 0.200894842 |
| RNF141  | 0.161352516 | 0.007579174 | 0.201039856 |
| MET     | 0.025851607 | 0.000382261 | 0.201560703 |
| BTN3A1  | 0.000589661 | 0.022299551 | 0.202410456 |
| PDE8A   | 0.111931958 | 0.007803397 | 0.202577624 |
| TMEM165 | 0.01397448  | 0.00710864  | 0.202834835 |
| CENPL   | 0.035077701 | 0.109039582 | 0.204101357 |
| B3GAT3  | 0.005473746 | 0.109039582 | 0.204101357 |
| ARL14EP | 0.01019167  | 0.214644515 | 0.20412493 |
| CS      | 0.000130312 | 0.030905081 | 0.204132365 |
| IRF2BPL | 0.207711227 | 0.00840168  | 0.204509253 |
| SPTLC1  | 0.028383416 | 0.006003287 | 0.204918531 |
| OCIAD1  | 0.000467196 | 0.010763164 | 0.205235724 |
| SH3GLB1 | 0.025946169 | 0.001520904 | 0.205291702 |
| PKP3    | 0.015205782 | 0.13263E-05 | 0.205570479 |
| NDUFA2  | 0.023844386 | 0.209936548 | 0.205582333 |
| COQ4    | 0.013216329 | 0.330301659 | 0.20563577 |
| ADCY7   | 0.039533512 | 0.22520933  | 0.205797949 |
| ADRM1   | 0.000050345 | 0.007433983 | 0.20586145 |
| FAU     | 0.026994689 | 0.267496121 | 0.206165784 |
| CDS1    | 0.131233465 | 0.007570003 | 0.206469464 |
| TTI2    | 0.535553713 | 0.035939669 | 0.206693065 |
| ERLEC1  | 0.095305718 | 0.001655499 | 0.206750837 |
| CASP4   | 0.411345683 | 0.027867714 | 0.207047554 |
| TP53BP2 | 0.158135127 | 0.009739995 | 0.207199996 |
| MED26   | 0.39531448  | 0.039013221 | 0.207176715 |
| EIF2AK4 | 0.001332408 | 0.042998579 | 0.207273611 |
| SEC22C  | 0.008981842 | 0.134744595 | 0.207359145 |
| MAF     | 0.013013115 | 0.048324062 | 0.207557626 |
| AUP1    | 0.020401195 | 0.162563213 | 0.20774373 |
| SMURF2  | 0.01615227  | 0.330500779 | 0.208322444 |
| Gene   | Log2FoldChange | AdjPValue | qValue  |
|--------|----------------|-----------|---------|
| TMED1  | 0.003681304    | 0.023694776 | 0.208747838 |
| GPX7   | 0.043940208    | 0.032918933 | 0.209557033 |
| RGS6   | 0.326384434    | 0.022443816 | 0.209585781 |
| CNKSR3 | 0.127737636    | 0.013412247 | 0.209643936 |
| RGS14  | 0.022645375    | 0.302929066 | 0.210079742 |
| NRF1   | 0.036991938    | 0.534306814 | 0.210137735 |
| PCGF5  | 0.117430723    | 0.005515108 | 0.210220738 |
| FHLD2  | 0.005581306    | 2.61854E-05 | 0.21044603 |
| RGS6   | 0.127737636    | 0.013412247 | 0.209643936 |
| NRF1   | 0.036991938    | 0.534306814 | 0.210137735 |
| PCGF5  | 0.117430723    | 0.005515108 | 0.210220738 |
| FHLD2  | 0.005581306    | 2.61854E-05 | 0.21044603 |
| RGS6   | 0.127737636    | 0.013412247 | 0.209643936 |
| NRF1   | 0.036991938    | 0.534306814 | 0.210137735 |
| Gene   | Value1  | Value2    | Value3    | Value4    |
|--------|---------|-----------|-----------|-----------|
| STXBP2 | 0.32612 | 0.02599   | 0.21867   | 0.21867   |
| TOR4A  | 0.01567 | 0.00046   | 0.21891   | 0.21891   |
| CYTH1  | 0.35866 | 0.03930   | 0.21958   | 0.21958   |
| COMMD5 | 0.25445 | 0.02963   | 0.22037   | 0.22037   |
| SH3GLB2| 0.28354 | 0.02129   | 0.22016   | 0.22016   |
| PPP2R5E| 0.05028 | 0.00085   | 0.22057   | 0.22057   |
| ANXA5  | 0.03902 | 0.46441   | 0.22258   | 0.22258   |
| CHMP4A | 0.00495 | 0.09405   | 0.22274   | 0.22274   |
| SLCO3A1| 0.01659 | 6.67156   | 0.22281   | 0.22281   |
| DDIT4-AS1| 0.2390 | 0.04645   | 0.22284   | 0.22284   |
| MICU1  | 0.08140 | 0.00218   | 0.22368   | 0.22368   |
| ELOC   | 0.01097 | 0.14471   | 0.22373   | 0.22373   |
| TRMT44 | 0.14241 | 0.01354   | 0.22378   | 0.22378   |
| AC026979.2| 0.01123 | 0.99583 | 0.22380   | 0.22380   |
| KIF21A | 0.00524 | 0.00010   | 0.22415   | 0.22415   |
| TUFM   | 0.02279 | 0.21160   | 0.22437   | 0.22437   |
| PTPRK  | 0.22759 | 0.02204   | 0.22457   | 0.22457   |
| BRAP   | 0.40410 | 0.01932   | 0.22486   | 0.22486   |
| IRAK3  | 0.00215 | 0.01475   | 0.22496   | 0.22496   |
| RNF145 | 0.04810 | 0.35683   | 0.22516   | 0.22516   |
| ASB8   | 0.00158 | 0.00275   | 0.22516   | 0.22516   |
| ZFAND2A| 0.16423 | 0.00925   | 0.22516   | 0.22516   |
| IL17RC | 0.28961 | 0.02129   | 0.22516   | 0.22516   |
| MT-CO2 | 0.00045 | 0.00457   | 0.22516   | 0.22516   |
| SH3RF1 | 0.30735 | 0.03478   | 0.22516   | 0.22516   |
| RFNG   | 0.08281 | 0.00428   | 0.22516   | 0.22516   |
| MINDY2 | 0.01461 | 0.14276   | 0.22516   | 0.22516   |
| RNASEL | 0.46848 | 0.00707   | 0.22516   | 0.22516   |
| DHX16  | 0.02150 | 0.00929   | 0.22516   | 0.22516   |
| SUMF1  | 0.39294 | 0.02645   | 0.22516   | 0.22516   |
| MPC2   | 0.30336 | 0.02161   | 0.22516   | 0.22516   |
| USP18  | 0.05131 | 0.00127   | 0.22516   | 0.22516   |
| CREBL2 | 0.02136 | 0.00194   | 0.22516   | 0.22516   |
| VAC14  | 0.01157 | 0.19745   | 0.22516   | 0.22516   |
| UBTF   | 0.17070 | 0.00812   | 0.22516   | 0.22516   |
| PMEPA1 | 0.00325 | 0.00093   | 0.22516   | 0.22516   |
| PSMB1  | 0.01038 | 0.10085   | 0.22516   | 0.22516   |
| SLC2A13| 0.00547 | 8.34088   | 0.22516   | 0.22516   |
| SLC22A18AS | 0.090825472 | 0.005817666 | 0.22516 | 0.22516 |
| CHMP2B | 0.01146 | 0.00032   | 0.22516   | 0.22516   |
| PGK1   | 0.01198 | 0.09495   | 0.22516   | 0.22516   |
| C4orf3 | 0.04678 | 0.35391   | 0.22516   | 0.22516   |
| SCCPDH | 0.38366 | 0.02355   | 0.22516   | 0.22516   |
| Gene  | Value1  | Value2  | Value3  |
|-------|---------|---------|---------|
| SLC41A2 | 0.193539448 | 0.023221615 | 0.230888978 |
| NTAN1  | 0.038519416 | 0.296194956 | 0.231306899 |
| TUBB   | 0.043316668 | 0.237145255 | 0.231474853 |
| ENDOV  | 0.027808291 | 0.39054204  | 0.231616596 |
| TECR   | 0.042260194 | 0.322838475 | 0.231817659 |
| MRPL1  | 0.034816383 | 0.299491385 | 0.232077531 |
| SNW1   | 0.004677663 | 0.0622566   | 0.232456589 |
| KLC4   | 0.036330606 | 0.406482896 | 0.232461696 |
| FKBp2  | 0.00395461  | 0.044962554 | 0.232461696 |
| SP100  | 0.003025661 | 0.000200065 | 0.232676992 |
| BMP2K  | 0.095737402 | 0.005622513 | 0.232968499 |
| PPP2R2D| 0.027611645 | 0.000861315 | 0.233294534 |
| SLC10A7| 0.020061554 | 0.000734878 | 0.233329891 |
| AP006621.3| 0.044120189 | 0.225200933 | 0.233952859 |
| CLCN2  | 0.047513221 | 0.374751146 | 0.234151114 |
| ARL6IP1| 0.003904357 | 0.00112494  | 0.23435311  |
| ATP1A1 | 0.047072331 | 0.005466335 | 0.234516904 |
| LSS    | 0.014000975 | 0.224824319 | 0.234574729 |
| RAB11FIP2| 0.05755471 | 0.004632119 | 0.235102821 |
| TJP1   | 0.008350674 | 5.81267E-05  | 0.235424441 |
| CD46   | 0.003427566 | 0.037828832 | 0.235426238 |
| VPS13C | 0.251656807 | 0.26493229  | 0.236260105 |
| USP11  | 0.13367096  | 0.010368447 | 0.236431441 |
| THAP2  | 0.000712997 | 0.006045458 | 0.236438055 |
| SNX3   | 0.012161686 | 0.117564186 | 0.236850675 |
| PSEN1  | 0.195605957 | 0.023198195 | 0.23690367 |
| FBXO31 | 0.299706102 | 0.041421585 | 0.237096934 |
| ZBP1   | 0.001091764 | 0.009173502 | 0.237468437 |
| ANKRD9 | 0.003525015 | 1.94092E-06  | 0.237498352 |
| MKRN2OS| 0.26924622  | 0.031585552 | 0.237713421 |
| FCHO2  | 0.18207472  | 0.006513756 | 0.23793053 |
| RPH3AL | 0.093314033 | 0.018203402 | 0.23811854 |
| NUDT2  | 0.031875716 | 0.340555754 | 0.238390227 |
| ZDHHC4 | 0.026148128 | 0.209852189 | 0.238770313 |
| RTCA   | 0.007657176 | 0.148334098 | 0.238845004 |
| SF3A1  | 0.094519594 | 0.011330185 | 0.238857053 |
| PPP4R2 | 0.035717041 | 0.000173126 | 0.239191332 |
| KIFAP3 | 0.010241969 | 0.271625132 | 0.239284101 |
| NAP1L4 | 0.130460704 | 0.002994174 | 0.239305565 |
| ELOA   | 0.000498684 | 0.022913505 | 0.239632524 |
| TSPAN13| 0.0868422   | 0.003651918 | 0.23972967 |
| EHM1T1 | 0.12470218  | 0.004188385 | 0.239738462 |
| NUBP1  | 0.410733374 | 0.020798177 | 0.2397606 |
| Gene  | FDR   | Adj FDR | p-value  |
|-------|-------|---------|----------|
| IGF1R | 0.18874076 | 0.026004992 | 0.239797423 |
| OAS2  | 0.001810044  | 0.050622952  | 0.239819687  |
| TMEM39A | 0.018318393  | 0.175799485  | 0.239961558  |
| TAF15 | 0.027411259  | 0.179192429  | 0.240123775  |
| ETS2  | 0.124034216  | 0.003753041  | 0.240243229  |
| RBMS2 | 0.027574614  | 0.001075847  | 0.240566777  |
| PMPCA | 0.021276714  | 0.204675576  | 0.241032648  |
| GADD45B | 0.032997927  | 0.000273427  | 0.241587468  |
| SLC39A6 | 0.018318393  | 0.175799485  | 0.242551206  |
| FHDC1 | 0.011198873  | 0.131080746  | 0.242618679  |
| DYNLL1 | 0.013349151  | 0.003873282  | 0.242673935  |
| BTN2A1 | 0.069560978  | 0.001769349  | 0.243165859  |
| RNF4  | 0.041596445  | 0.002876798  | 0.243396577  |
| CYCS  | 0.241213297  | 0.018615846  | 0.243464812  |
| ZSCAN30 | 0.016734645  | 0.174000486  | 0.243704561  |
| ELF3  | 0.0111318843 | 0.003321514  | 0.244253626  |
| BCL3  | 0.045218949  | 0.387293211  | 0.244284733  |
| GBA   | 0.002281559  | 5.4579E-06   | 0.244403002  |
| FBXO34 | 0.059770492  | 0.005984724  | 0.244451676  |
| ATG4D | 0.3625503999 | 0.035573422  | 0.244507901  |
| MAGI1 | 0.213762109  | 0.027582282  | 0.244828868  |
| AL365226.2 | 0.455384464 | 0.041341545  | 0.245182392  |
| SMIM6 | 0.079342218  | 0.007528825  | 0.245422686  |
| TAF7  | 0.012698361  | 0.000553947  | 0.245561969  |
| OLMALINC | 0.044355285 | 0.401723638  | 0.245617673  |
| AURKA | 0.012875474  | 0.029531378  | 0.245732632  |
| EEF1A1 | 0.022162133  | 0.300514675  | 0.245803989  |
| NFKB1 | 0.011170732  | 0.145196506  | 0.246493868  |
| DNAJC7 | 0.046746545  | 0.294534148  | 0.246516341  |
| SELPLG | 0.538557688  | 0.036402417  | 0.246693202  |
| PHACTR2 | 0.085561683  | 0.008583952  | 0.246974921  |
| TCF7L2 | 0.09959889  | 0.009413998  | 0.247269297  |
| MYO6  | 0.285513189  | 0.032651546  | 0.247438198  |
| IL22RA1 | 0.123762613  | 0.005432262  | 0.247543632  |
| ATP1B1 | 0.079973774  | 0.002825888  | 0.24805794  |
| PARP4 | 0.019496826  | 0.198322933  | 0.248768422  |
| STAM  | 0.027194798  | 0.268538994  | 0.249110075  |
| TNFAIP2 | 0.02261729  | 0.082270475  | 0.249153674  |
| TAB3  | 0.246180999  | 0.022079446  | 0.249279007  |
| IFRD2 | 0.341201202  | 0.022458532  | 0.24935638  |
| SLMAP | 0.013597143  | 0.000488624  | 0.249370907  |
| UXS1  | 0.038749373  | 9.39347E-05  | 0.249485663  |
| ERGIC3 | 0.020408092  | 0.000384173  | 0.250103035  |
| Gene     | Value1       | Value2       | Value3       |
|----------|--------------|--------------|--------------|
| CDC42    | 0.024139115  | 0.000609454  | 0.250186079  |
| RICTOR   | 0.00968898   | 2.57905E-06  | 0.250347764  |
| FAM208B  | 0.035138645  | 0.310880237  | 0.250461177  |
| C19orf53 | 0.020944902  | 0.193113841  | 0.250703049  |
| KIAA0355 | 0.461419214  | 0.049076487  | 0.251116982  |
| PPM1D    | 0.033283027  | 0.080104792  | 0.25113701   |
| STAT4    | 0.009530246  | 0.103184971  | 0.251241239  |
| AMMECR1  | 0.323801921  | 0.046909695  | 0.251242313  |
| CCSE1    | 0.34154159   | 0.042699071  | 0.251632128  |
| HDLB1P   | 0.360483343  | 0.04638075   | 0.252287457  |
| GPS1     | 0.001756319  | 0.086411307  | 0.252643637  |
| CHMP1A   | 0.253339129  | 0.027503896  | 0.253072201  |
| NBL1     | 0.003880818  | 0.037010282  | 0.25348198   |
| C19orf33 | 0.300581276  | 0.023181292  | 0.253740377  |
| GSDMB    | 0.033880454  | 0.00913733   | 0.254086937  |
| IFI27L1  | 0.302974255  | 0.040616779  | 0.254228531  |
| AGO2     | 0.008828577  | 0.034222551  | 0.254775006  |
| CD3EAP   | 0.026825767  | 0.171923147  | 0.255155012  |
| NFAT5    | 0.025022009  | 0.20079377   | 0.255174688  |
| DNPEP    | 0.004204651  | 3.58777E-05  | 0.255259099  |
| FMN1     | 0.073969559  | 0.007723027  | 0.255421362  |
| NR1D1    | 0.147703214  | 0.000169559  | 0.255528046  |
| CSTF2T   | 0.016549432  | 0.19197684   | 0.255622591  |
| ETBE1    | 0.013874619  | 0.143509639  | 0.255662752  |
| NT5C3A   | 0.063113821  | 0.002190757  | 0.255753398  |
| PHKB     | 0.200227435  | 0.00890459   | 0.256169453  |
| HNF1B    | 0.263324001  | 0.019126772  | 0.256206921  |
| PITPNM1  | 0.289528324  | 0.035209746  | 0.256309278  |
| TRABD2A  | 0.022717547  | 0.291828116  | 0.256441042  |
| CXCL5    | 0.004446923  | 7.47067E-05  | 0.256793202  |
| MAPK3    | 0.314407047  | 0.044478751  | 0.256874882  |
| CLN3     | 0.289531066  | 0.028163861  | 0.256881871  |
| IRS2     | 0.111932215  | 0.001421042  | 0.257317502  |
| DGCR2    | 0.072740482  | 0.006580726  | 0.257694232  |
| AP3D1    | 0.035326844  | 0.401971409  | 0.25786592   |
| PCNX3    | 0.018494206  | 0.255039973  | 0.258321793  |
| SZRD1    | 0.258186308  | 0.031604437  | 0.258490929  |
| PPP2CB   | 0.247994219  | 0.028743582  | 0.258718062  |
| SMDT1    | 0.045246527  | 0.307893959  | 0.259093564  |
| ARCN1    | 0.045670906  | 0.000491842  | 0.259724702  |
| RFT1     | 0.006336724  | 0.023999533  | 0.259888413  |
| HRH1     | 0.017187167  | 0.050913052  | 0.260189765  |
| ARL6IP5  | 0.042833695  | 0.290003616  | 0.260298438  |
| Gene  | Value1  | Value2  | Value3  |
|------|---------|---------|---------|
| CD74 | 0.058612185 | 0.00289836 | 0.260469759 |
| RPS19BP1 | 0.155712589 | 0.008107362 | 0.260605553 |
| CREBRF | 0.001022204 | 6.70038E-06 | 0.260827208 |
| USP14 | 0.013235247 | 0.171370524 | 0.261391901 |
| GUSB | 0.189774343 | 0.014724236 | 0.261505716 |
| SOCS2 | 0.039287263 | 0.001887105 | 0.261556649 |
| CDKAL1 | 0.003248697 | 0.252945942 | 0.261652151 |
| UBP1 | 0.011165162 | 0.000115878 | 0.261843418 |
| PPP2R3C | 0.023789935 | 0.001202049 | 0.262090999 |
| MID1 | 0.000287236 | 3.64747E-05 | 0.262171176 |
| LARP4 | 0.005978749 | 0.086236296 | 0.262494746 |
| ZFAND3 | 0.042264375 | 0.001614519 | 0.262589697 |
| SATB1 | 0.062377208 | 0.011233834 | 0.262711716 |
| CMIP | 0.074330926 | 0.000742377 | 0.262805362 |
| SLC1A1 | 0.042643498 | 0.018388662 | 0.262890999 |
| COL1A1 | 0.023189826 | 0.219843157 | 0.263023645 |
| ZNF468 | 0.051817301 | 0.001887105 | 0.263223645 |
| BST2 | 0.000237933 | 0.008262548 | 0.263457622 |
| FICD | 0.011165162 | 0.000115878 | 0.263711716 |
| AC093525.6 | 0.107667493 | 0.008582781 | 0.263776697 |
| PRR2C2 | 0.062377208 | 0.011233834 | 0.263890999 |
| CLDN7 | 0.042643498 | 0.018388662 | 0.263977667 |
| MPP6 | 0.023189826 | 0.219843157 | 0.264223645 |
| SIAH2 | 0.051817301 | 0.001887105 | 0.264400736 |
| ADAMTS6 | 0.005978749 | 0.086236296 | 0.264506612 |
| PDK3 | 0.042643498 | 0.018388662 | 0.264604958 |
| ZMAT2 | 0.023189826 | 0.219843157 | 0.264711716 |
| HLA-E | 0.051817301 | 0.001887105 | 0.264800736 |
| OSBPL10 | 0.062377208 | 0.011233834 | 0.265047206 |
| IFNGR1 | 0.042643498 | 0.018388662 | 0.265047206 |
| LARP1 | 0.023189826 | 0.219843157 | 0.265047206 |
| FOXA3 | 0.051817301 | 0.001887105 | 0.265047206 |
| NDC1 | 0.062377208 | 0.011233834 | 0.265047206 |
| OCIAD2 | 0.042643498 | 0.018388662 | 0.265047206 |
| DRAP1 | 0.023189826 | 0.219843157 | 0.265047206 |
| RNF114 | 0.051817301 | 0.001887105 | 0.265047206 |
| ARSA | 0.062377208 | 0.011233834 | 0.265047206 |
| SRSF6 | 0.042643498 | 0.018388662 | 0.265047206 |
| LINC01426 | 0.023189826 | 0.219843157 | 0.265311613 |
| SLC35D2 | 0.051817301 | 0.001887105 | 0.265311613 |
| IFI35 | 0.062377208 | 0.011233834 | 0.265311613 |
| RELA | 0.051817301 | 0.001887105 | 0.265311613 |
| LRR3C7B | 0.062377208 | 0.011233834 | 0.265311613 |
| Gene Symbol | Value1 | Value2 | Value3 |
|-------------|--------|--------|--------|
| GNG5        | 0.033862935 | 0.000455712 | 0.268604402 |
| SLC9B2      | 0.00927815 | 0.04230259 | 0.268784777 |
| RFFL        | 0.118990936 | 0.006035383 | 0.268822745 |
| GALNS       | 0.245768971 | 0.029921907 | 0.26896315 |
| EIF3M       | 0.044749482 | 0.36510648 | 0.26911505 |
| ALCAM       | 0.048781545 | 0.00055991 | 0.269298113 |
| MTOR        | 0.194083484 | 0.01826744 | 0.26934499 |
| DIP2B       | 0.002751295 | 0.101826744 | 0.269649734 |
| COA5        | 0.005310669 | 0.0011734 | 0.269738266 |
| PURB        | 0.042504315 | 0.003856731 | 0.27009817 |
| OTUD7B      | 0.242009065 | 0.008366152 | 0.270308581 |
| RNF2        | 0.008399318 | 0.096453382 | 0.270902251 |
| ZNF555      | 0.015869068 | 0.114827104 | 0.27098779 |
| PTPMT1      | 0.072374956 | 0.006052574 | 0.271138578 |
| PDAP1       | 0.288935772 | 0.029197414 | 0.271558117 |
| PRDX3       | 0.029399154 | 0.137134041 | 0.271953871 |
| STX12       | 0.008063148 | 6.51005E-05 | 0.272217413 |
| DAZAP2      | 0.06269988 | 0.006292113 | 0.272279003 |
| CDK17       | 0.312083038 | 0.02278879 | 0.272289534 |
| USP42       | 0.36492559 | 0.036963409 | 0.272366396 |
| PRRC1       | 0.12044499 | 0.010739035 | 0.272413418 |
| INTS2       | 0.025084907 | 0.203090058 | 0.272514688 |
| STAT6       | 0.0070918 | 0.000169193 | 0.272868276 |
| COPB1       | 0.015931603 | 0.001217716 | 0.273108211 |
| UBB         | 0.138111431 | 0.005691045 | 0.273110608 |
| EPHA2       | 0.024338763 | 4.18668E-05 | 0.273410558 |
| INO80D      | 0.085373338 | 0.009687575 | 0.273607671 |
| NUDT12      | 0.43280706 | 0.044320714 | 0.274546502 |
| MTCH1       | 0.003126844 | 0.073214732 | 0.274760896 |
| MYO5B       | 0.407803434 | 0.041995967 | 0.275474455 |
| RABGAP1     | 0.238298505 | 0.018998972 | 0.276507555 |
| TPM4        | 0.03567811 | 0.000370851 | 0.275711744 |
| ZNF597      | 0.097633221 | 0.025186259 | 0.275774899 |
| SFN         | 0.134222552 | 0.014472177 | 0.275980133 |
| TACSTD2     | 0.024757329 | 0.000292376 | 0.27625372 |
| SIAH1       | 0.002303901 | 0.000688636 | 0.276276269 |
| COPRS       | 0.003375123 | 0.044309396 | 0.276332928 |
| TAP1        | 0.005125624 | 9.79301E-05 | 0.276563946 |
| FAM50A      | 0.299851647 | 0.028646167 | 0.276848798 |
| TBC1D19     | 0.038007976 | 0.225200933 | 0.276967393 |
| KLHL12      | 0.165177945 | 0.018197334 | 0.277029407 |
| XIAP        | 0.044898161 | 0.294707029 | 0.277409608 |
| COX7A2L     | 0.011286955 | 0.24819933 | 0.277477771 |
| Gene       | Value1   | Value2   | Value3   |
|------------|----------|----------|----------|
| SLFN5      | 1.44225E-06 | 0.000432708 | 0.277694464 |
| ASH1L-AS1  | 0.332374796 | 0.026853352 | 0.278120552 |
| DNMBP      | 0.00500971  | 0.000208588 | 0.278343185 |
| FGF12      | 0.040256232 | 0.225200933 | 0.278874998 |
| ITM2B      | 0.019900219 | 0.000328265 | 0.278914013 |
| CNOT4      | 0.360803154 | 0.042740075 | 0.279034543 |
| RRP1P      | 0.013691647 | 0.00016083  | 0.279056082 |
| RC3H2      | 0.105026194 | 0.011620513 | 0.279503017 |
| MAT2A      | 0.004880462 | 0.108693384 | 0.279841718 |
| PROX1      | 0.021023579 | 0.003622257 | 0.279875974 |
| UBE2A      | 0.026507718 | 0.0056564   | 0.280547772 |
| CCP110     | 0.00529306  | 0.013687723 | 0.280561226 |
| GTF3C5     | 0.074337347 | 0.001207215 | 0.280604218 |
| MT-ND4     | 0.000970555 | 0.004423771 | 0.281167337 |
| LRFN3      | 0.030463695 | 0.000144334 | 0.281677072 |
| PPP2R2A    | 0.010254046 | 0.000145483 | 0.281677072 |
| LRRFIP1    | 9.31157E-05 | 0.003356971 | 0.281902283 |
| GNAS       | 0.039252901 | 0.22273293  | 0.281986657 |
| CD9        | 0.098496756 | 0.003918246 | 0.281848634 |
| TAF4B      | 0.044984321 | 0.225200933 | 0.282210121 |
| RIPK1      | 0.034880262 | 0.000823146 | 0.283167534 |
| TRAFD1     | 0.002660472 | 0.000993655 | 0.283571354 |
| SLC12A7    | 0.153285055 | 0.007396694 | 0.284220599 |
| RPL34      | 0.045327039 | 0.30429078  | 0.284501282 |
| SERTAD1    | 0.110901947 | 0.009121254 | 0.284585176 |
| ITGA6      | 0.011942138 | 5.2604E-06  | 0.284918115 |
| USP3       | 0.129176152 | 0.008365111 | 0.286068131 |
| ABLIM1     | 0.028816464 | 0.184836821 | 0.286317819 |
| SMU1       | 0.134558182 | 0.013155395 | 0.286398322 |
| PSME2      | 0.011087773 | 0.09973536  | 0.286550382 |
| PNPT1      | 0.038076952 | 0.29357244  | 0.286692454 |
| ZNF440     | 0.142810999 | 0.031648769 | 0.286887837 |
| LIG4       | 0.079211639 | 0.008329513 | 0.287021873 |
| ZNF225     | 0.047981901 | 0.225200933 | 0.287142619 |
| AC245595.1 | 0.020507364 | 0.262213081 | 0.287429474 |
| RAB25      | 0.316506915 | 0.034275751 | 0.287669081 |
| VAMP3      | 0.14664337  | 0.005096813 | 0.287831939 |
| TMEM18     | 0.586737131 | 0.027291237 | 0.288136566 |
| CALM3      | 0.214908754 | 0.021397772 | 0.288188419 |
| KMT2E-AS1  | 0.043528771 | 0.00381234  | 0.288492227 |
| YIJU2      | 0.032256774 | 0.166976809 | 0.289017225 |
| ZNF672     | 0.0745512   | 0.005340272 | 0.289209494 |
| TWISTNB    | 0.008298008 | 0.220546277 | 0.28923568  |
| Gene  | DBP    | LRRCC58 | PRPSAP1  | COMMD2  | EPB41L2 | CCDC125 | MAD1L1  | GSTCD   | SLC39A1 | MTF2    | FR52    | MKS1    | ANXA2   | THUMPD1 | STX4    | DEK     | CASP8   | TAF5    | KCTD9   | PIGH    | SERTAD2 | SRPK1   | IFT80   | LINCI01137 | ERCC2   | EJF2AK2 | LUC7L2  | PSMC4   | COQ9    | ARFGAP2 | HECTD3  | ZFP37   | STXBP5  | TMEM41B  | TBC1D22B | SLC35D1 | PIK3R5  | TRMT1   | GRIPAP1 | CHIC2   | S100A13 | HIVEP2  |
|-------|--------|---------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|       | 0.02793353 | 0.276534657 | 0.048204803 | 0.021414675 | 0.038995844 | 0.027438124 | 0.206519483 | 0.047941682 | 0.001371197 | 0.046764867 | 0.011252997 | 0.047577265 | 0.083954319 | 0.025949768 | 0.006030078 | 0.497721127 | 0.009071834 | 0.04380097 | 0.226155403 | 0.001928858 | 0.00748205 | 0.002152947 | 0.049612723 | 0.105261297 | 0.008929739 | 0.062465929 | 0.050074187 | 0.004020723 | 0.023251079 | 0.282409746 | 0.259698619 | 0.099816684 | 0.41333686 |
|       | 0.058148813 | 0.038490578 | 0.274520919 | 0.278167973 | 0.231445549 | 0.000235898 | 0.000742426 | 0.083523982 | 0.010834958 | 0.279019286 | 0.000409 | 0.225200933 | 0.001989489 | 0.000713199 | 0.092722882 | 0.039876135 | 0.002607024 | 0.329854747 | 0.034764858 | 0.013077712 | 6.1737E-06 | 0.032843423 | 0.025600285 | 0.27636887 | 0.028598214 | 0.039419417 | 0.333169779 | 0.058427737 | 0.00941273 | 0.225200933 | 0.00713199 | 0.039876135 | 0.259698619 | 0.034914917 | 0.03027116 | 0.02713994 |
|       | 0.289898888 | 0.289890387 | 0.290607175 | 0.291002955 | 0.291271869 | 0.292479552 | 0.292479944 | 0.292504974 | 0.292536247 | 0.292561544 | 0.292597749 | 0.292755926 | 0.294015774 | 0.294647614 | 0.29501553 | 0.295687729 | 0.295830756 | 0.29601769 | 0.296163243 | 0.296376632 | 0.296526742 | 0.296638615 | 0.296933735 | 0.296938565 | 0.297114293 | 0.297316054 | 0.297503468 | 0.297553003 | 0.297646515 | 0.298138856 | 0.298623249 | 0.298795862 | 0.298899451 |
| Gene   | Value1 | Value2   | Value3   |
|--------|--------|----------|----------|
| ACIN1  | 0.241266163 | 0.02552297 | 0.3025813 |
| ECI1   | 0.254103805 | 0.037425283 | 0.303182153 |
| TMEM179B | 0.108687221 | 0.007152584 | 0.303167638 |
| TP53I13 | 0.275328263 | 0.024267123 | 0.303182153 |
| WDR82  | 0.046460065 | 0.005247123 | 0.303182153 |
| ZFYVE16 | 0.039308421 | 0.01468962 | 0.303471923 |
| RFX2   | 0.094417035 | 0.035288997 | 0.303563869 |
| UBAC1  | 0.254103805 | 0.037425283 | 0.303182153 |
| NNT    | 0.108687221 | 0.007152584 | 0.303167638 |
| UBAC2  | 0.075865776 | 0.004855987 | 0.303456151 |
| KNOP1  | 0.037543543 | 0.001673288 | 0.303456151 |
| REEP5  | 0.241588844 | 0.151673373 | 0.304532492 |
| BZW1   | 0.108702986 | 0.05423205 | 0.304716834 |
| AC005332.7 | 0.157949052 | 0.00553994 | 0.305109085 |
| WASHC4 | 0.001252025 | 0.019530119 | 0.305875785 |
| BTG3   | 0.037383915 | 0.268117925 | 0.3054573 |
| PTPN2  | 0.037542894 | 0.233413704 | 0.30592203 |
| ACVR1B | 0.023835849 | 0.0053255 | 0.305787002 |
| BCL2L13 | 0.003585367 | 0.000209654 | 0.30592203 |
| UGGT2  | 0.004258714 | 0.057898646 | 0.30605872 |
| SDF2   | 0.244587367 | 0.03754274 | 0.306321715 |
| CCDC43 | 0.244587367 | 0.03754274 | 0.306321715 |
| SFSWAP | 0.049795603 | 0.005199299 | 0.306412128 |
| MAF1   | 0.185521174 | 0.011303314 | 0.30645652 |
| LRRCC1 | 0.003736695 | 0.03301126 | 0.306705411 |
| DOHH   | 0.084188414 | 0.006777873 | 0.306909248 |
| GNAI3  | 0.022047778 | 0.01385064 | 0.307025599 |
| ANKRD12 | 0.088426573 | 0.007871388 | 0.307028137 |
| EIF4E2 | 0.186574219 | 0.018019659 | 0.307057348 |
| DPP3   | 0.009189071 | 0.001660462 | 0.30711145 |
| MT-ND1 | 0.000199953 | 0.02309039 | 0.307447198 |
| C1orf112 | 0.359608838 | 0.049920071 | 0.307537108 |
| TPT1   | 0.016291723 | 0.00232872 | 0.307645348 |
| PARL   | 0.001513667 | 0.006602368 | 0.307730224 |
| FAM222A | 0.027032099 | 0.001337066 | 0.307908757 |
| PTPRA  | 0.025451811 | 0.009616097 | 0.308307833 |
| PIM1   | 0.006923072 | 0.037497082 | 0.308540791 |
| POLR2M | 0.086702994 | 0.009222983 | 0.308950706 |
| KDSR   | 0.010281449 | 0.00269398 | 0.309178974 |
| SLC8B1 | 0.018854926 | 0.000322769 | 0.309380048 |
| CDK16  | 0.00704409  | 0.000152334 | 0.309429424 |
| GCDH   | 0.038986164 | 0.395540385 | 0.309580716 |
| Gene    | SPIN4       | CDA         | TLNRD1      | NBEAL1      | LCLAT1    | AL139246.5   | CHMP2A      | BEND3       | CSRP1       | CCDC93     | NELFB      | SNIP1      | IP6K2       | ARPC2       | TMEM129     | TMEM242     | WNT4        | POC5        | TOR1AIP2    | MARCH5      | ZNF438      | WDR55       | FASTKD1     | MAPRE2      | COX4I1      | VPS26A      | IL15        | AP003486.1  | UACA        | PGM3        | NFKBIA      | UQCR10      | PDPK1       | OTULINL     | VARS2       | SDCCAG8     | MYL12B      | ZSCAN31     | MEF2D       | KLHDC4      | CCNH        |
|---------|-------------|-------------|-------------|-------------|-----------|--------------|-------------|-------------|-------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|         | 0.09670882  | 0.049740424 | 0.019564867 | 0.040309415 | 0.012324677 | 0.040495465 | 0.016613064 | 0.404190852 | 0.011485059 | 0.007869621 | 0.028541455 | 0.040795257 | 0.015657104 | 0.031008927 | 0.024066714 | 0.005106423 | 0.545603043 | 0.098231424 | 0.000803445 | 0.002865634 | 0.018708089 | 0.225164241 | 0.04553125  | 0.114596506 | 0.070691824 | 0.08073571 | 0.008787538 | 0.09670882  | 0.055472723 | 0.321943976 | 0.003949923 | 0.070691824 | 0.058395757 |
|         | 0.037896408 | 0.213056036 | 0.001807196 | 0.322698394 | 0.172285526 | 0.016062447 | 0.00081001  | 0.031080577 | 0.104285034 | 0.095890416 | 0.264307044 | 0.219681603 | 0.00809831  | 0.140450089 | 0.194859634 | 0.1657805   | 0.040348235 | 0.007737618 | 5.35205E-05 | 0.32687677 | 0.10363661  | 0.035315069 | 0.003984208 | 0.00737618 | 0.005175353 | 0.083147154 | 0.031733967 | 0.03098016  | 0.005106423 | 0.01794201  | 0.007393814 | 0.01423827 | 0.04226140  | 0.020266576 | 0.015262009 | 0.007393814 | 0.1423827 | 0.031733967 | 0.037896408 |
|         |             |             |             |             |            |              |             |             |             |            |              |             |              |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 0.31733967 | 0.318486257 | 0.318836106 | 0.318838203 | 0.318859734 | 0.319206232 | 0.319926059 | 0.320408605 | 0.320467775 | 0.32058409 | 0.320896211 | 0.320968318 | 0.321238738 | 0.321635671 | 0.321889689 | 0.321956631 | 0.322461412 |
| Gene   | Gene ID | Freq | Freq2 | Freq3 |
|--------|---------|------|-------|-------|
| LURAP1L | 0.114514456 | 0.020155426 | 0.322944478 |
| FKBPL   | 0.011696869 | 0.125209489 | 0.322987235 |
| HMGN4   | 0.045681944 | 0.026992199 | 0.323117489 |
| SCOC    | 0.15728332  | 0.010624955 | 0.323425705 |
| IL32    | 0.022586992 | 0.000895604 | 0.32345705 |
| XKR9    | 0.00032408  | 0.00393546  | 0.323749112 |
| ATP5F1D | 0.026751098 | 0.187431861 | 0.324271205 |
| UFM1    | 0.016579067 | 0.177650992 | 0.324461861 |
| ZNF606  | 0.043574995 | 0.225200933 | 0.32492512 |
| ZNF117  | 0.02895063  | 0.041998611 | 0.325197841 |
| CCDC57  | 0.021228069 | 0.188792605 | 0.325216266 |
| TALDO1  | 0.15728332  | 0.010624955 | 0.325321281 |
| RETREG2 | 0.007505041 | 0.010291568 | 0.325331121 |
| PRPF40A | 0.007277696 | 0.096991987 | 0.325331121 |
| MB21D2  | 0.279125126 | 0.012444568 | 0.325549718 |
| TOM1L1  | 0.315348794 | 0.039565089 | 0.325845793 |
| NUB1    | 0.037345095 | 0.006481807 | 0.325947253 |
| NSF     | 0.264569264 | 0.044230705 | 0.326241645 |
| FBXO8   | 0.073916048 | 0.007707818 | 0.326584456 |
| AC004130.1 | 0.038342883 | 0.093327347 | 0.326857377 |
| GAA     | 0.153185112 | 0.015077442 | 0.327768777 |
| FOSB    | 0.032103993 | 0.002513318 | 0.327816172 |
| PLBD2   | 0.11815757  | 0.004290658 | 0.328136834 |
| ZNF37A  | 0.023464979 | 0.14234743  | 0.328517713 |
| STK26   | 0.015233463 | 0.062064992 | 0.32878762 |
| GCFC2   | 0.097500646 | 0.011523046 | 0.328800918 |
| HSPA2   | 0.239003352 | 0.034964383 | 0.32891347 |
| PRKCI   | 0.165029574 | 0.0131282   | 0.329066817 |
| SDCBP   | 0.131709248 | 0.013617557 | 0.329079923 |
| ZNF570  | 0.044559243 | 0.225200933 | 0.329302326 |
| ADCK2   | 0.159491257 | 0.037829978 | 0.329572883 |
| PPM1B   | 0.172933268 | 0.027795184 | 0.329823345 |
| SRP54   | 0.027138921 | 0.148992785 | 0.330181229 |
| CDK2AP2 | 0.024586796 | 0.248625799 | 0.330269573 |
| RAC1    | 0.166341275 | 0.028609736 | 0.330317279 |
| PHETA2  | 0.0030216   | 0.082998907 | 0.330543001 |
| RAD51B  | 0.191369982 | 0.02789363  | 0.330821582 |
| GTF3C3  | 0.026185328 | 0.206266455 | 0.33114372 |
| CTBP2   | 0.009608654 | 0.000206102 | 0.331611579 |
| ERP44   | 0.030304532 | 0.002066564 | 0.332049664 |
| MPZL1   | 0.009094458 | 0.073068207 | 0.332078966 |
| TMEM161A| 0.018435909 | 0.170834503 | 0.332225984 |
| CMTR1   | 0.043148635 | 0.252553929 | 0.33325815 |
| Gene     | Value1 | Value2 | Value3 |
|----------|--------|--------|--------|
| ATXN1L   | 0.04204188 | 0.010244503 | 0.334368858 |
| SAMD4A   | 0.479112029 | 0.049212632 | 0.334633846 |
| UHMK1    | 0.165563536 | 0.022526991 | 0.335018504 |
| PTPN14   | 0.024048418 | 0.165576743 | 0.335636053 |
| GTF2I    | 0.20382307 | 0.044031333 | 0.336081455 |
| GDA      | 0.243951981 | 0.036306224 | 0.336348857 |
| SUPT20H  | 0.048628617 | 0.315174354 | 0.336651154 |
| NDFIP2   | 0.224348606 | 0.038320317 | 0.33670103 |
| FAM91A1  | 0.068881285 | 0.001505866 | 0.33690365 |
| DUT      | 0.245144483 | 0.38963383 | 0.33717906 |
| MRPS35   | 0.2721253 | 0.013363351 | 0.337190383 |
| PLXNB2   | 0.044456103 | 0.03851002 | 0.338377605 |
| SEC14L1  | 0.0044456103 | 0.289002348 | 0.338558856 |
| TPPP     | 0.19208173 | 0.03741314 | 0.3387033 |
| HELQ     | 0.004686579 | 0.037121914 | 0.338926603 |
| NFATC2IP | 0.020589288 | 0.04138597 | 0.33922937 |
| SPCS2    | 0.020589288 | 0.038632635 | 0.33922937 |
| AP3B1    | 0.018568897 | 0.08316929 | 0.339382299 |
| SMARCD1  | 0.001531541 | 0.010724565 | 0.339469027 |
| MARCH3   | 0.001531541 | 0.010724565 | 0.339469027 |
| EIF4G2   | 0.081739022 | 0.03601773 | 0.34021475 |
| FAM219A  | 0.154636606 | 0.03060173 | 0.340921475 |
| LARS2    | 0.219378044 | 0.197803274 | 0.341175904 |
| IP6K1    | 0.035650629 | 0.035471214 | 0.34131748 |
| POLH     | 0.04106632 | 0.038052462 | 0.340949251 |
| RAB14    | 0.29366869 | 0.039376682 | 0.342274868 |
| MORF4L2  | 0.038124811 | 0.002450663 | 0.342513936 |
| AHR      | 0.0206167912 | 0.047272685 | 0.342551134 |
| NEDD9    | 0.007623421 | 0.000228552 | 0.34266376 |
| MFSN11   | 0.007623421 | 0.000228552 | 0.34266376 |
| FCGRT    | 0.048622711 | 0.048622711 | 0.343341412 |
| UBLCP1   | 0.000268152 | 0.000307273 | 0.343545526 |
| BCL2L14  | 0.05556374 | 0.05168225 | 0.34386403 |
| B4GALT1  | 0.000689904 | 0.04389226 | 0.343879213 |
| PRRG2    | 0.043292482 | 0.25942916 | 0.34397473 |
| IFT172   | 0.078722608 | 0.013199819 | 0.344166305 |
| PPP1R12A | 0.000493602 | 0.01842003 | 0.344236665 |
| GLRX5    | 0.19996569 | 0.011823558 | 0.344638714 |
| SETX     | 0.034665863 | 0.174407642 | 0.344905333 |
| CNEP1R1  | 0.087791721 | 0.006719154 | 0.34491725 |
| Gene     | Score 1  | Score 2  | Score 3  |
|----------|----------|----------|----------|
| CLCN3    | 0.017311786 | 0.05295095 | 0.345866369 |
| GIN1     | 0.04321141  | 0.317658579 | 0.345971924 |
| MARCH9   | 0.347617858  | 0.031038886 | 0.346113954 |
| FBLIM1   | 0.071974468  | 0.005073012 | 0.346271665 |
| AAED1    | 0.038775367  | 0.186612045 | 0.346303735 |
| SH3PXD2A | 0.001370297  | 0.011062572 | 0.346308544 |
| PNPLA4   | 0.174212202  | 0.024308317 | 0.346557124 |
| ZNF580   | 0.200543769  | 0.028585406 | 0.347013063 |
| PDGFA    | 0.001877422  | 0.000108848 | 0.347486529 |
| IER2     | 0.002463171  | 2.27386E-05 | 0.347589268 |
| PSD4     | 0.001877422  | 0.000108848 | 0.347486529 |
| DCAF10   | 0.002463171  | 2.27386E-05 | 0.347589268 |
| CNKSR1   | 0.038775367  | 0.186612045 | 0.346303735 |
| ASPH     | 0.347903592  | 0.040575708 | 0.348075567 |
| HIGD1A   | 0.299637     | 0.040575708 | 0.348075567 |
| PAN2     | 0.239003352  | 0.014384811 | 0.348247422 |
| ZMMA3F   | 0.025178836  | 0.005073012 | 0.346730766 |
| ATXN2    | 0.080688406  | 0.005073012 | 0.346730766 |
| NR1D2    | 0.215317378  | 0.02772309  | 0.345871471 |
| SHOC2    | 0.001877422  | 2.27386E-05 | 0.347589268 |
| SAMSN1   | 0.172972866  | 0.191816611 | 0.348898747 |
| PPM1F    | 0.04969828   | 0.384267074 | 0.349062525 |
| CCDC71L  | 0.039982713  | 0.302565947 | 0.349111979 |
| MAP3K11  | 0.081661579  | 0.006046267 | 0.349485381 |
| TRIM5    | 0.001410756  | 0.015920656 | 0.349549438 |
| FNTB     | 0.023400483  | 0.001847305 | 0.347901717 |
| RNF103   | 0.065915194  | 0.003649834 | 0.347953040 |
| LPRC41   | 0.00893308   | 0.015753031 | 0.349841346 |
| DIAPIH1  | 0.001783128  | 4.19047E-05 | 0.35043187 |
| EMO2     | 0.137954901  | 0.015248146 | 0.350646921 |
| HP1BP3   | 0.028885557  | 0.15117022  | 0.351475396 |
| MBOAT1   | 0.021237839  | 0.098722665 | 0.35151673 |
| RNPEPL1  | 0.110160725  | 0.013105261 | 0.351727302 |
| SLC7A1   | 0.004561842  | 0.00319654  | 0.351833488 |
| DCM1     | 0.098719947  | 0.032386759 | 0.351965346 |
| ADGRG1   | 0.158573991  | 0.038495347 | 0.351988852 |
| TCC9     | 0.2181001    | 0.044181597 | 0.352060886 |
| DPM3     | 0.009248286  | 0.053748547 | 0.352357046 |
| GNPDA2   | 0.017858482  | 0.222820626 | 0.352678468 |
| KHERBS1  | 0.139072486  | 0.015425852 | 0.352804862 |
| DCTN1    | 0.005621859  | 0.079151358 | 0.352972869 |
| ZC3H15   | 0.043408745  | 0.003960139 | 0.353255463 |
| Gene  | Value1  | Value2  | Value3  | Value4  |
|-------|---------|---------|---------|---------|
| CCDC50| 0.170998989 | 0.02528828 | 0.353275439 |
| LIMD1 | 0.0642498 | 0.011815677 | 0.353608206 |
| GADD45A | 0.329958862 | 0.024631571 | 0.353608206 |
| IARS2 | 0.042065092 | 0.343734532 | 0.353694758 |
| AC025580.2 | 0.239003352 | 0.034125602 | 0.353748216 |
| ADSS | 0.001619928 | 0.00835486 | 0.353785965 |
| FARP2 | 0.373098941 | 0.030276424 | 0.353885134 |
| CGRRF1 | 0.072466679 | 0.008908233 | 0.353911215 |
| LINC00511 | 0.065458953 | 0.001512724 | 0.354184578 |
| PEX7 | 0.026919225 | 0.008617752 | 0.354430994 |
| ZBED4 | 0.117015896 | 0.0091162 | 0.354474968 |
| RHBDD2 | 0.010028605 | 0.111119936 | 0.354764861 |
| HCCS | 0.021020593 | 0.004891218 | 0.354909655 |
| TBC1D25 | 0.01600914 | 0.009602527 | 0.355106477 |
| OAZ2 | 0.000324849 | 0.003958989 | 0.355827113 |
| CABLES2 | 0.224730031 | 0.046746325 | 0.355953214 |
| THBS3 | 0.022576308 | 0.195194514 | 0.356235495 |
| MUC12 | 0.034620759 | 0.02622672 | 0.356405251 |
| RNH1 | 0.000113508 | 0.005631259 | 0.356830212 |
| RPS12 | 0.043995703 | 0.266754823 | 0.357211389 |
| EXOC7 | 0.148778063 | 0.02844978 | 0.357299792 |
| MRGEP | 0.007133124 | 0.057033552 | 0.357329879 |
| PEL3 | 0.113004365 | 0.026092654 | 0.357611294 |
| CCRL2 | 0.032525287 | 0.005256577 | 0.357895716 |
| CD2AP | 0.012076446 | 0.00700927 | 0.358199813 |
| STAU2 | 0.000549862 | 8.5269E-05 | 0.358519492 |
| CA11 | 0.044525686 | 0.225200933 | 0.359182565 |
| HES2 | 0.11088726 | 0.010361497 | 0.359278795 |
| NPEPPS | 0.265339249 | 0.027912867 | 0.35932162 |
| ROH | 0.218196625 | 0.036569959 | 0.359365357 |
| NUCB1 | 0.000992706 | 0.027295764 | 0.35993888 |
| IQGAP2 | 0.063678215 | 0.008918059 | 0.36005397 |
| GCA | 0.286707758 | 0.031692947 | 0.360022631 |
| COX16 | 0.13778312 | 0.013425008 | 0.360115504 |
| PDSS1 | 0.039762503 | 0.225200933 | 0.360426347 |
| TMF1 | 0.000118044 | 0.002014888 | 0.36043825 |
| EI24 | 0.034193266 | 0.00042851 | 0.360959754 |
| SUPT16H | 0.06232179 | 0.010304371 | 0.361012114 |
| GPBP10 | 0.013822167 | 0.060272478 | 0.361034922 |
| MAPK1P1L | 0.155527135 | 0.032150318 | 0.361076291 |
| HHEX | 0.05565106 | 0.016782252 | 0.36107869 |
| SLC4A1AP | 0.0358914 | 0.16818816 | 0.363184785 |
| EFHD2 | 0.012953506 | 0.00183377 | 0.36335184 |
| Gene     | FDR   | q-value | Adj. p-value |
|----------|-------|---------|--------------|
| FAM177A1 | 0.004365946 | 0.02258035 | 0.363568141 |
| SEC22A   | 0.227792543 | 0.033971884 | 0.364274132 |
| VT1A     | 0.180803062 | 0.019863507 | 0.364509138 |
| HSD17B7  | 0.02934477  | 0.036516296 | 0.364586002 |
| TTYH3    | 0.045655513 | 0.21524447  | 0.364614905 |
| MAGOH    | 0.028154172 | 0.19486447  | 0.364636929 |
| SORT1    | 0.004273794 | 4.13595E-05 | 0.364905209 |
| ATP5F1C  | 0.040713865 | 0.165835564 | 0.364920335 |
| ABCD4    | 0.009717584 | 0.038660714 | 0.365091147 |
| SSNA1    | 0.295034869 | 0.041421887 | 0.365093768 |
| ZSWIM8   | 0.004976786 | 0.028254404 | 0.365594606 |
| YTHDF3   | 0.013882914 | 0.00019967  | 0.365670877 |
| ZFP41    | 0.093823629 | 0.046723583 | 0.365864496 |
| POGK     | 0.033196672 | 0.011161626 | 0.366223561 |
| SRSF3    | 0.072702371 | 0.004143523 | 0.366587168 |
| APRT     | 0.001411939 | 0.013315799 | 0.367555064 |
| TTC1     | 0.234667402 | 0.020574618 | 0.368234548 |
| MT-ATP8  | 0.005339429 | 0.045621844 | 0.368483826 |
| KIF18B   | 0.039779131 | 0.225200933 | 0.36953588 |
| PNISR    | 0.021347038 | 0.133620025 | 0.370252844 |
| IER5L    | 0.187308565 | 0.030771972 | 0.37046952 |
| C1orf35  | 0.029936787 | 0.244174948 | 0.370784072 |
| PPAN     | 0.025198382 | 0.193620025 | 0.370940598 |
| MEST     | 0.037507708 | 0.220684114 | 0.37103566 |
| BPTF     | 0.005292869 | 0.027946363 | 0.371073536 |
| PPP2R1A  | 0.016106205 | 0.100520145 | 0.371137767 |
| RRAGC    | 0.005128233 | 0.000367862 | 0.372296496 |
| DCLRE1C  | 0.027879345 | 0.00278229  | 0.372496191 |
| SMURF1   | 0.042782762 | 0.002020871 | 0.372879641 |
| SAP18    | 0.001579361 | 2.3149E-05  | 0.373043279 |
| RNFT1    | 0.213290305 | 0.017140812 | 0.373121801 |
| ZNF462   | 0.019557323 | 0.06900064  | 0.373380449 |
| SERINC1  | 0.001973973 | 5.06246E-06 | 0.373471185 |
| LGALS9   | 0.143456464 | 0.023269365 | 0.374079948 |
| GEMIN2   | 0.117692806 | 0.005174664 | 0.37421867 |
| FAAH2    | 0.093184471 | 0.012082295 | 0.374344016 |
| ATP6V0A2 | 0.012315668 | 0.113015088 | 0.374438971 |
| TRAF7    | 0.090920979 | 0.013835634 | 0.375012272 |
| LINCO1285| 0.239003352 | 0.033468215 | 0.375012722 |
| HLA-C    | 0.011751032 | 0.00817127  | 0.375219917 |
| TMEM59   | 0.055941232 | 0.004402541 | 0.375383689 |
| AC004264.1| 0.09670882 | 0.033896323 | 0.375464687 |
| NSMCE3   | 0.004656055 | 0.03921671  | 0.375803365 |
| Gene    | Value1  | Value2    | Value3    |
|---------|---------|-----------|-----------|
| UBXN11  | 0.095742506 | 0.022254767 | 0.375912709 |
| GSTK1   | 0.02517466  | 0.140520121 | 0.37629381  |
| SMPDL3A | 0.072984615  | 0.005074801  | 0.37633474  |
| CLPTM1  | 0.122451602 | 0.03137503   | 0.376492095 |
| HNRNPH2 | 0.052272062 | 0.002386483  | 0.376615272 |
| UBXN6   | 0.11664376  | 0.015449576  | 0.376796608 |
| INTS11  | 0.006630173 | 0.059491685  | 0.377110871 |
| TAP2    | 0.004417994 | 0.028848074  | 0.377406881 |
| DHX58   | 0.01588443  | 0.00245901   | 0.377532029 |
| MORC2   | 0.025023352 | 0.247673933  | 0.377582319 |
| HLA-G   | 0.040281668 | 0.021208214  | 0.37812461  |
| ARHGAP5 | 0.050314038 | 0.00589084   | 0.378569989 |
| RAD50   | 0.018694079 | 0.079171873  | 0.37878013  |
| CCDC12  | 0.172606261 | 0.030043483  | 0.379040365 |
| XPNPEP1 | 0.257217677 | 0.028857184  | 0.379620267 |
| NDUFA5  | 0.008484503 | 0.000920116  | 0.379681612 |
| LAPTMB4 | 0.18441812  | 0.027441168  | 0.379738312 |
| SCAMP1-AS1 | 0.026589235  | 0.034102819  | 0.38014718  |
| PFKL    | 0.012482073 | 0.011142697  | 0.380694123 |
| SH3D19  | 0.071292296 | 0.004259122  | 0.381030591 |
| GNPTG   | 0.043303237 | 0.009507313  | 0.381482796 |
| NFYA    | 0.086480604 | 0.015656079  | 0.381828423 |
| MAP3K4  | 0.027749719 | 0.027534324  | 0.38185876  |
| AC25297.3 | 0.026037062  | 0.129328396  | 0.3822193  |
| FOXL1   | 0.004499342 | 0.00215049   | 0.382663456 |
| C1GALT1C1 | 0.066238073  | 0.001781895  | 0.382855289 |
| DENND1B | 0.024851898 | 0.16543047   | 0.383081163 |
| PCSK7   | 0.00143048  | 0.003367155  | 0.383185604 |
| HDDC2   | 0.001979342 | 0.00533265   | 0.38373121  |
| ERICH1  | 0.175686572 | 0.037045954  | 0.383782993 |
| CLUAP1  | 0.029273348 | 0.208127183  | 0.383982359 |
| Eif4ENIF1 | 0.040307069  | 0.003754495  | 0.384480399 |
| ZNF121  | 0.006285055 | 0.012345551  | 0.38512522  |
| PDP1    | 0.015374823 | 0.000985144  | 0.385227978 |
| DDX1    | 0.161000761 | 0.023115472  | 0.38524498  |
| MYL6    | 0.012796334 | 0.034261992  | 0.38545941  |
| GAS8    | 0.08247062  | 0.014321999  | 0.385521049 |
| MKNK2   | 0.0391533   | 0.007409421  | 0.385682019 |
| IMPACT  | 0.031914728 | 0.011264864  | 0.38616556  |
| PELO    | 0.049372911 | 0.267034163  | 0.386270505 |
| MUC1    | 0.039211551 | 0.003000163  | 0.386658048 |
| SASS6   | 0.016698218 | 0.036033419  | 0.387560062 |
| PLEKHF1 | 0.018085897 | 0.046335705  | 0.387803069 |
| Gene     | Value1  | Value2       | Value3       | Value4       |
|----------|---------|--------------|--------------|--------------|
| GTF2A1   | 0.07199587 | 0.013792303  | 0.388753941  |
| SEL1L3   | 0.234369517 | 0.019169138  | 0.388949476  |
| CSTF3    | 0.09358596  | 0.008009879  | 0.389350692  |
| PIGM     | 0.035102886 | 0.146254764  | 0.389758211  |
| ERV3-1   | 0.048728334 | 0.012701778  | 0.389762422  |
| ZNF714   | 0.03847698  | 0.225200933  | 0.390415582  |
| JUNB     | 0.060422251 | 0.009331049  | 0.390460758  |
| JAGN1    | 0.037142057 | 0.213462988  | 0.390616031  |
| CFTR     | 0.017397451 | 0.225200933  | 0.390669092  |
| NDUFB10  | 0.007744678 | 0.049335199  | 0.390709619  |
| SUMO3    | 1.47004E-05 | 9.13906E-05  | 0.390713287  |
| TCEANC2  | 0.196824554 | 0.034832328  | 0.391075098  |
| CEP135   | 0.313939241 | 0.032501899  | 0.391194583  |
| PPA1     | 0.035044219 | 0.040308791  | 0.391219105  |
| FAM174A  | 0.047041953 | 0.005141539  | 0.391327529  |
| DHR57    | 0.006529554 | 0.092792317  | 0.391482397  |
| DNAJC1   | 0.11570181  | 0.01432336   | 0.39174039   |
| C15orf39 | 0.075008323 | 0.037078671  | 0.391767264  |
| ENSC0000146DCTN2 | 0.003061991 | 0.037078671  | 0.391767264  |
| TCC38    | 0.056682423 | 0.005604921  | 0.392529385  |
| C12orf73 | 0.161821792 | 0.033926336  | 0.393906414  |
| GSTO1    | 0.021564675 | 0.085313606  | 0.394014779  |
| GATC     | 0.083951692 | 0.028181483  | 0.394230513  |
| PPPIA    | 0.025593537 | 0.10349473   | 0.394258831  |
| RAD23A   | 0.047220846 | 0.002773762  | 0.394284047  |
| CDK18    | 0.001637725 | 0.000142721  | 0.394310131  |
| IRF2     | 0.009115179 | 0.063704316  | 0.394560507  |
| DCTN5    | 0.024028266 | 0.154585232  | 0.394813951  |
| SAR1B    | 0.023658829 | 0.002589946  | 0.394888299  |
| RELB     | 0.034163024 | 0.159868344  | 0.395198046  |
| DYNC1LI2 | 0.06598105  | 0.004712796  | 0.395252264  |
| AGMO     | 0.039190915 | 0.225200933  | 0.395385523  |
| HNRNPUL2 | 0.008448145 | 0.00025818   | 0.39543621   |
| GLRX     | 0.046672167 | 0.166032128  | 0.395473004  |
| TMEM56   | 0.045408698 | 0.225200933  | 0.3955112118 |
| DNAJB1   | 0.115962932 | 0.014003648  | 0.396224092  |
| ERI2     | 0.019763974 | 0.004656807  | 0.396621102  |
| ZNF260   | 0.082320808 | 0.014323717  | 0.397303129  |
| PPCDC    | 0.015780336 | 0.039416571  | 0.397588157  |
| TMEM184B | 0.260199878 | 0.028963789  | 0.398016328  |
| DYNLT1   | 0.139716039 | 0.017194462  | 0.398036763  |
| RHOC     | 0.005835916 | 0.000351097  | 0.398124823  |
| VASP     | 0.072221559 | 0.001337416  | 0.398553004  |
| Gene      | Log2FoldChange | Log10FoldChange | pValue  |
|-----------|----------------|-----------------|---------|
| VPS18     | 0.065437755    | 0.004075484     | 0.398573712 |
| DNAJC22   | 0.027552757    | 0.005742053     | 0.398671892 |
| OTUD6B-AS1 | 0.152831155    | 0.03195465      | 0.399321337 |
| ZNF562    | 0.049045757    | 0.146624359     | 0.399031373 |
| HLA-B     | 0.0802439      | 0.00468353      | 0.399321337 |
| CDKN2C    | 0.240294035    | 0.037653234     | 0.399936746 |
| SOCS4     | 0.011683184    | 0.080151878     | 0.400104313 |
| FAM96A    | 0.061727561    | 0.012134411     | 0.400422706 |
| EFNA3     | 0.201375413    | 0.039157025     | 0.400775197 |
| SECISBP2  | 0.027011859    | 0.122091818     | 0.401220645 |
| RUVBL1    | 0.085334385    | 0.015483834     | 0.40178672 |
| BCAR1     | 0.012862743    | 0.001671014     | 0.401892946 |
| SCIN      | 0.095955561    | 0.008127791     | 0.401878672 |
| CCDC9     | 0.050775476    | 0.005069796     | 0.401978854 |
| SERAC1    | 0.09372887     | 0.015084513     | 0.402307448 |
| FAM126B   | 0.020192502    | 0.009157785     | 0.403423976 |
| MBNL2     | 0.012274019    | 0.058391482     | 0.404105755 |
| RREB1     | 0.021075025    | 0.07668992      | 0.40456078 |
| PHGR1     | 0.11841785     | 0.019523359     | 0.404801057 |
| NRPB1     | 0.066670107    | 0.009181467     | 0.405129621 |
| FOXJ2     | 0.027011859    | 0.122091818     | 0.405229046 |
| POLR2F    | 0.033147031    | 0.130189143     | 0.405711368 |
| PSMD12    | 0.024062402    | 0.121197871     | 0.405773368 |
| FNIP1     | 0.002254664    | 2.56917E-05     | 0.406498214 |
| MAFG      | 0.02197112     | 0.005364487     | 0.406629101 |
| CXorf56   | 0.014770116    | 0.22927899      | 0.406722948 |
| SELENOF   | 0.003981676    | 0.031364732     | 0.407120455 |
| COG7      | 0.020173224    | 0.15469392      | 0.407130628 |
| PHLDB2    | 0.168339714    | 0.014665211     | 0.407911697 |
| TBSXAS1   | 0.215740672    | 0.04600373      | 0.407925267 |
| CTSB      | 0.023177236    | 0.140274207     | 0.40903606 |
| NMT1      | 0.176806509    | 0.033578909     | 0.409951976 |
| KLHL20    | 0.186541899    | 0.035639684     | 0.410123647 |
| TMEM87B   | 0.004979616    | 0.001365766     | 0.410387022 |
| DSC2      | 0.04438551     | 0.001330998     | 0.410806542 |
| ACTN1     | 0.042448924    | 0.153964416     | 0.410861417 |
| FLAD1     | 0.016585757    | 0.131263412     | 0.411609955 |
| CYB561D1  | 0.097065591    | 0.031913076     | 0.411620285 |
| SPSB3     | 0.007667126    | 0.041177535     | 0.41167043 |
| TDP1      | 0.126233081    | 0.009051358     | 0.411867503 |
| CDHR2     | 0.014026083    | 0.002922061     | 0.411938972 |
| SYNJ1     | 0.016747103    | 0.017998493     | 0.41198392 |
| BCAP29    | 0.022433504    | 0.095716138     | 0.41196067 |

**Note:** Log2FoldChange and Log10FoldChange values indicate the magnitude of change in gene expression, and pValue represents the statistical significance of the change.
| Gene     | Expression 1 | Expression 2 | Log2 Fold Change |
|----------|--------------|--------------|-----------------|
| ANAPC16  | 0.001588621  | 0.003982738  | 0.412197469     |
| HSPA14   | 0.033287163  | 0.007307358  | 0.412403685     |
| ZC3H13   | 0.00976363   | 0.000603367  | 0.412510192     |
| SMIM14   | 0.08135648   | 0.002529369  | 0.412868707     |
| ERGIC1   | 0.088255763  | 0.007142937  | 0.413689187     |
| MTFR1L   | 0.080806776  | 0.005334905  | 0.413901684     |
| ARMH1    | 0.010739688  | 0.109979558  | 0.414217891     |
| PCNX4    | 0.06098662   | 0.002529369  | 0.414536085     |
| RPN2     | 0.004526351  | 0.038284489  | 0.414995431     |
| ECHDC1   | 0.001536005  | 0.014720533  | 0.415104939     |
| AKIP1    | 0.042241447  | 0.024866444  | 0.41541108      |
| DIP2C    | 0.120824591  | 0.009196925  | 0.415539864     |
| C2CD2    | 0.020780859  | 0.008136741  | 0.415765465     |
| STAT3    | 0.005959254  | 0.34998726   | 0.416066493     |
| NELFA    | 0.015086062  | 0.000862887  | 0.416542104     |
| ABCB9    | 0.041690134  | 0.22509393   | 0.416883164     |
| PFDN5    | 0.043927511  | 0.149122769  | 0.417332319     |
| RALBP1   | 0.009663342  | 0.0074953    | 0.417836331     |
| STX5     | 0.023689943  | 0.002185233  | 0.417999563     |
| APOC1    | 0.100177129  | 0.02246914   | 0.418243111     |
| HES6     | 0.016197047  | 0.064923902  | 0.418299829     |
| PGGT1B   | 0.061870843  | 0.005899714  | 0.418795586     |
| CHMP6    | 0.236446318  | 0.019672021  | 0.419117283     |
| EXT1     | 0.011458928  | 0.065723355  | 0.41935666      |
| ARFIP1   | 0.057670207  | 0.014399008  | 0.41942575      |
| LRRC6    | 0.022067059  | 0.22500933   | 0.41947466      |
| MZT2B    | 0.117372082  | 0.007024952  | 0.419583461     |
| RBKS     | 0.015211615  | 0.254205161  | 0.419826132     |
| ZBTB1    | 0.013203217  | 0.106202773  | 0.420066286     |
| PABPC1L  | 0.022021066  | 0.018368876  | 0.420192939     |
| POGLUT1  | 0.007704122  | 0.061807672  | 0.420194176     |
| PPP4R3B  | 0.229402    | 0.019991719  | 0.420665269     |
| GALNT11  | 0.044707252  | 0.439338059  | 0.420680757     |
| OGFOD1   | 0.01608543   | 0.09548355   | 0.420818372     |
| NELFE    | 0.061771369  | 0.00598053   | 0.420905       |
| TSR3     | 0.026533432  | 0.106622522  | 0.420954156     |
| HNRNPU   | 0.012768215  | 0.001096157  | 0.421054504     |
| TNRC18   | 0.04475137   | 0.009636676  | 0.421185343     |
| SOX4     | 0.008289861  | 0.010887786  | 0.421252094     |
| RNF149   | 9.17469E-05  | 0.000207536  | 0.421528698     |
| SLC35E4  | 0.023875828  | 0.044690774  | 0.421732025     |
| MRPL13   | 0.025942692  | 0.12067364   | 0.421896055     |
| RTF1     | 0.161800413  | 0.025173047  | 0.422268692     |
| Gene    | Value1  | Value2  | Value3  |
|---------|---------|---------|---------|
| ZNF747  | 0.100753963 | 0.22421166 | 0.422669495 |
| MIGA1   | 0.005165686 | 0.06075438 | 0.42364291 |
| FGFR2   | 0.093065314 | 0.03862345 | 0.42341358 |
| ALDH18A1| 0.033051095 | 0.0184563  | 0.42347233 |
| DGAT2   | 0.039291201 | 0.225200933| 0.42368654 |
| GULP1   | 0.139481199 | 0.0118341  | 0.42380782 |
| ZNF75A  | 0.099594638 | 0.036588362| 0.42385046 |
| BROX    | 0.039565645 | 0.118631697| 0.42519629 |
| ARRDC1  | 0.004738591 | 0.00027961 | 0.42513937 |
| PDE5A   | 0.139885579 | 0.024060715| 0.42545645 |
| NXT2    | 0.011573395 | 0.078298295| 0.42553002 |
| PJA2    | 0.002228928 | 0.001781348| 0.42656736 |
| JADE3   | 0.042787397 | 0.225200933| 0.42662418 |
| KCNK1   | 0.002463355 | 0.000697561| 0.42684692 |
| RPL36   | 0.034827863 | 0.138089882| 0.42706131 |
| MT-CO1  | 0.006187569 | 0.029334825| 0.42719981 |
| PER3    | 0.22248456  | 0.04811603 | 0.42751472 |
| JPX     | 0.007546394 | 0.01619767 | 0.42757632 |
| CTNS    | 0.042287697 | 0.035959591| 0.42792836 |
| KRTCAP2 | 0.146680611 | 0.04995084 | 0.42821223 |
| APOL2   | 0.001254892 | 0.03143394 | 0.42801450 |
| CFL1    | 0.012397044 | 0.027971644| 0.42810648 |
| PNPLA8  | 0.006627697 | 0.035959591| 0.42792836 |
| AC040162.1| 0.042509908 | 0.005889761| 0.42823272 |
| CTSO    | 0.180237928 | 0.043779913| 0.42854602 |
| SETD6   | 0.233428238 | 0.028276182| 0.42883938 |
| VPS37B  | 0.117488775 | 0.01235522 | 0.42899002 |
| PRDM8   | 0.020264387 | 0.14610226 | 0.42910926 |
| SURF2   | 0.038574581 | 0.150037339| 0.42914887 |
| CPNE1   | 0.006655646 | 0.029961542| 0.42937195 |
| EMP1    | 0.156810618 | 0.016358079| 0.42993506 |
| PHTF2   | 0.03722341  | 0.073997385| 0.43085022 |
| HHLA2   | 0.258394126 | 0.009036833| 0.43117860 |
| CTNND1  | 0.03620144  | 0.00199063 | 0.43137573 |
| MBDS    | 0.033572642 | 0.130276566| 0.43197354 |
| HIVEP3  | 0.323830776 | 0.014545182| 0.43200010 |
| PI4K2A  | 0.034056897 | 0.228149531| 0.43212269 |
| UBE2H   | 0.015092265 | 0.000759845| 0.43219246 |
| ARHGEF28| 0.263363236 | 0.043733157| 0.43238357 |
| UIMC1   | 0.004682446 | 5.16143E-05| 0.43247199 |
| KRT19   | 0.278208719 | 0.042101275| 0.43317684 |
| EIF1AX  | 0.108895699 | 0.011720011| 0.43321324 |
| DISP1   | 0.194854452 | 0.030595342| 0.43322459 |
| Gene     | Val1   | Val2   | Val3    |
|----------|--------|--------|---------|
| CSF1     | 0.002258188 | 0.022146534 | 0.433243358 |
| S100A11  | 0.013558775  | 0.058215969  | 0.43342927  |
| CNOT11   | 0.010576185  | 0.065291832  | 0.433446227 |
| PSMB8    | 0.046270162  | 0.00205234   | 0.433642303 |
| COX17    | 0.036984249  | 0.001052461  | 0.433746974 |
| CWC25    | 0.017333577  | 0.000728258  | 0.434116856 |
| DYRK1A   | 0.031086782  | 0.001652739  | 0.434157209 |
| BEX4     | 0.041562192  | 0.083672841  | 0.43445697  |
| POLR2C   | 0.031256085  | 0.001792214  | 0.434589718 |
| PLAA     | 0.083906634  | 0.000900879  | 0.434684781 |
| TERF2IP  | 0.000918136  | 0.004349224  | 0.434623948 |
| CDC42EP1 | 0.17890467   | 0.0178034    | 0.435187497 |
| ADIPOR1  | 0.050748394  | 0.05907193   | 0.435893914 |
| GABPB2   | 0.000459214  | 0.001345593  | 0.435908671 |
| PPIL2    | 0.002919075  | 0.03605105   | 0.436057199 |
| AP006623.1| 0.003792419  | 0.134165439  | 0.43725102  |
| AP002360.1| 0.114244275  | 0.042070676  | 0.437888905 |
| GATAD2A  | 0.054943393  | 0.00744259   | 0.438546071 |
| YIPF5    | 0.024906089  | 0.135972214  | 0.438598861 |
| PUM1     | 0.014254057  | 0.133191528  | 0.43865242  |
| PMAIP1   | 0.025812096  | 0.031601196  | 0.43941226 |
| TMEM167A | 7.44557E-05  | 0.001798286  | 0.446992808 |
| YWHAB    | 0.002960993  | 0.000176007  | 0.440532163 |
| ILK      | 0.005144715  | 0.027583407  | 0.440604089 |
| SENP5    | 0.02123718   | 0.055519837  | 0.440939441 |
| LZTS2    | 0.146224528  | 0.023745243  | 0.441244385 |
| LINC01133| 0.201724983  | 0.032504226  | 0.441689746 |
| UBALD2   | 0.027431344  | 0.055063474  | 0.441701039 |
| CYBC1    | 0.004307718  | 0.02344621   | 0.44179606  |
| FAHD1    | 4.23521E-05  | 0.000122842  | 0.442369104 |
| SSR4     | 0.012598866  | 0.028478228  | 0.442644347 |
| RBMX     | 0.001119875  | 0.019383839  | 0.442674971 |
| IAH1     | 0.037741773  | 0.174009324  | 0.443304999 |
| TMEM208  | 0.023763226  | 0.11278643   | 0.443385233 |
| MAEA     | 0.047762361  | 0.004388574  | 0.44404321 |
| SLC27A4  | 0.053300355  | 0.037228035  | 0.444044631 |
| LRR2C23  | 0.027481583  | 0.025152111  | 0.44423747 |
| VPS37A   | 0.068839849  | 0.014833834  | 0.444992112 |
| BTF3     | 0.036934655  | 0.113030634  | 0.445213079 |
| PHF20L1  | 0.0005256    | 3.83903E-05  | 0.445457155 |
| APOLD1   | 0.0491906    | 0.088128156  | 0.44548478 |
| COL4A3BP | 0.001146244  | 0.008495429  | 0.445649199 |
| Gene     | Log2 Fold Change | p-value   | q-value  |
|----------|-----------------|-----------|----------|
| ATM      | 0.035016028     | 0.104854039 | 0.445861547   |
| DYNC1I2  | 0.022388607     | 0.002970563 | 0.446841199   |
| NDUFA8   | 0.215921267     | 0.42223225  | 0.446961404   |
| PRR15    | 0.03698465      | 0.03563124  | 0.447511249   |
| KDELRE2  | 0.101555532     | 0.018235379 | 0.448514952   |
| CRAMP1   | 0.049714462     | 0.019948791 | 0.44857489    |
| BRPF3    | 0.040678922     | 0.01664709  | 0.448625907   |
| MYL12A   | 0.0050516       | 8.10745E-05 | 0.448631232   |
| SERINC5  | 0.047506678     | 0.234292549 | 0.448861426   |
| MRPL9    | 0.057394653     | 0.001617509 | 0.449242657   |
| SCAMP4   | 0.001348665     | 0.005168455 | 0.449901975   |
| NDUFA8   | 0.0050516       | 8.10745E-05 | 0.449242657   |
| PMP7      | 0.049714462     | 0.019948791 | 0.44954818    |
| PL3      | 0.003992697     | 0.00667952  | 0.450640401   |
| AC018557.1 | 0.239003352   | 0.034609647 | 0.450851278   |
| ERAL1    | 0.106771448     | 0.018491916 | 0.45142462    |
| POLR3GL  | 0.0007729515    | 0.042000214 | 0.451590352   |
| RAB40B   | 0.161343575     | 0.023968108 | 0.451848782   |
| GART     | 0.004350278     | 0.032281462 | 0.451971635   |
| ATXN1    | 5.2650606-05    | 0.000242865 | 0.452038198   |
| C12orf57 | 0.028163676     | 0.080472706 | 0.452288383   |
| CD2BP2   | 0.002956944     | 0.022928883 | 0.45295464    |
| ATG2A    | 0.013915835     | 0.001798465 | 0.45295464    |
| RBM15B   | 0.16522441      | 0.007800165 | 0.45381142    |
| KLHL9    | 0.22472262      | 0.035553372 | 0.45422187    |
| ARHGAP35 | 0.038510493     | 0.002530566 | 0.455014273   |
| IDH3A    | 0.058409421     | 0.006149492 | 0.455129645   |
| SOD2     | 0.029994163     | 0.054988142 | 0.455176386   |
| CTDNEP1  | 0.120849928     | 0.014342814 | 0.455408447   |
| DNAJC3   | 0.001287981     | 8.007E-06   | 0.455474767   |
| PACS1    | 0.05501678      | 0.009393231 | 0.456435485   |
| LEPRON   | 2.25682E-05     | 0.001093601 | 0.456475153   |
| TMEM203  | 0.141676033     | 0.03528298  | 0.456827233   |
| SLC25A23 | 0.108066085     | 0.020371485 | 0.457691428   |
| DCAF5    | 4.26101E-05     | 9.11704E-06 | 0.457794234   |
| UNC119B  | 0.239003352     | 0.033754268 | 0.457980423   |
| TMBIM1   | 0.024624268     | 0.00279156  | 0.457994969   |
| LAMTOR1  | 0.101113099     | 0.015074169 | 0.458030803   |
| DES2     | 0.01010231      | 0.057092013 | 0.45844724    |
| RAP2B    | 0.085144804     | 0.017113236 | 0.458654491   |
| HDAC3    | 0.005725199     | 0.015910574 | 0.458900399   |
| CAMTA1   | 0.007421672     | 0.000245233 | 0.458997488   |
| RHBDUF   | 9.59443E-05     | 0.000137083 | 0.459384925   |
| Gene   | PPL      | ZNF326    | VDR       | FAS       | PSM216    | TMEM216   | PTPN21    | SLC39A3   | GRTP1    | NET1      | SLC35E3   | SPTAN1    | S100A2    | CCL8      | CLPX      | TSC22D1   | CASKIN2   | ANAPC1   | TMEM50A   | TRIP11    | PTPR8     | ANKYFY1   | ANXA7     | TIMM8B    | GRB7      | PTAFR     | PFDN1     | SETD3     | FAM120B   | IFIH1     | GALNT5    | INO80C    | EHD1      | RPLP2     | DHDH2     | DDHD2     | SKIL      | MRPL40    | ZNF888    | NR4A2     | OGFOD2    | DAZAP1    | UBR4      | MFSD8     |
|--------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|        | 0.12550416 | 0.015439109 | 0.004230007 | 0.010286197 | 0.037136988 | 0.064532591 | 0.023264829 | 0.008350064 | 0.038766886 | 0.011730673 | 0.027060983 | 0.008968677 | 0.054381872 | 0.027904501 | 0.034807031 | 0.00856155 | 0.023115971 | 0.05333244 | 0.001962771 | 0.005997673 | 0.09372887 | 0.007779922 | 0.000193389 | 0.039327732 | 0.054317474 | 0.002289904 | 0.009917727 | 0.161740804 | 0.011032061 | 0.020251655 | 0.160333896 | 0.014360061 | 0.024909632 | 0.024725596 | 0.002741361 | 0.034985762 | 0.042410934 | 0.108074761 | 0.142439554 | 0.031574715 | 0.037330637 | 0.02411422 | 0.007487098 |
|        |          | 0.026576307 | 0.001901918 | 0.001686972 | 0.099089089 | 0.02115131  | 0.00318971  | 0.04284731  | 0.015102388 | 0.025049772 | 0.029346559 | 0.000521723 | 0.015529799 | 0.107112479 | 0.002474783 | 0.000133011 | 0.126545874 | 0.002052742 | 0.010608453 | 0.000245762 | 0.013148778 | 0.00024477 | 0.00172105 | 0.009154202 | 0.08551741 | 0.003935208 | 0.028401122 | 0.047662722 | 0.007258619 | 0.083608977 | 0.040391607 | 0.152091873 | 0.0130557349 | 0.014396677 | 0.012578570 | 0.166290433 | 0.041004905 | 0.123341392 | 0.137313201 | 0.08910367 | 0.459528646 | 0.459791217 | 0.460415827 | 0.460872765 | 0.46190789 | 0.46131083 | 0.461638481 | 0.461713203 | 0.46217695 | 0.462249494 | 0.462335738 | 0.462651386 | 0.462811433 | 0.463063369 | 0.46314259 | 0.464113866 | 0.4648933 | 0.465163608 | 0.465622977 | 0.465875815 | 0.465912288 | 0.465952661 | 0.465975671 | 0.466191396 | 0.466410063 | 0.466671921 | 0.466944321 | 0.467041452 | 0.467102256 | 0.467291541 | 0.467374123 | 0.467416749 | 0.468166498 | 0.468245882 | 0.469106193 | 0.469271885 | 0.469597271 | 0.46979319 | 0.469943472 | 0.470553951 | 0.470626727 |
| Gene   | Value1  | Value2  | Value3  |
|--------|---------|---------|---------|
| JPT2   | 0.034701896 | 0.10429635 | 0.470788736 |
| UBN2   | 0.05107266  | 0.01121035 | 0.471378883 |
| SCAMP2 | 0.225683011 | 0.049845842 | 0.471633338 |
| DHTKD1 | 0.041909053  | 0.196496482 | 0.472564534 |
| APPL2  | 0.180252355  | 0.019408513 | 0.472633158 |
| LRRG47 | 0.057208127  | 0.00492325  | 0.472833175 |
| PARP9  | 0.00519561   | 0.045472466 | 0.472863479 |
| PDCD2L | 0.187281703  | 0.035868823 | 0.472988599 |
| ZC3H4  | 0.026779053  | 0.09728134  | 0.473472913 |
| GDPGP1 | 0.164428187  | 0.043729834 | 0.473585871 |
| LINC00467 | 0.028820942   | 0.201082508 | 0.473616453 |
| EIF5A  | 0.038367498  | 0.11995072  | 0.4740911  |
| COX7B  | 0.208839749  | 0.04159602  | 0.474984564 |
| DHRX   | 0.013850515  | 0.034064993 | 0.475032018 |
| NDUFV3 | 0.015151113  | 0.026907157 | 0.475067928 |
| TMEM127| 0.146364025  | 0.02017739  | 0.475267328 |
| PTER   | 0.023966934  | 0.12976604  | 0.47527178 |
| SHROOM1| 0.044246148  | 0.019107118 | 0.475609877 |
| SGRP2C | 0.048816637  | 0.167583743 | 0.475771515 |
| TRIM22 | 0.008965937  | 0.086329449 | 0.47582048 |
| SPRYD3 | 0.018632266  | 0.1779034   | 0.476211921 |
| DHX57  | 0.029867464  | 0.01237971  | 0.476223729 |
| FZR1   | 0.012167069  | 0.087449514 | 0.476506707 |
| EPHX1  | 0.010506517  | 0.041017806 | 0.476719898 |
| IL10RB | 0.026367351  | 0.09913887  | 0.47690108 |
| WARS   | 0.033062314  | 0.003546545 | 0.477143078 |
| ACVR1  | 0.06529768   | 0.013710057 | 0.477324798 |
| ADAL   | 0.188167792  | 0.026221068 | 0.47766906 |
| NTMT1  | 0.003229722  | 0.007293248 | 0.477957931 |
| C1orf167| 0.005399351  | 0.008690304 | 0.478003198 |
| JAK1   | 0.013102656  | 0.08411378  | 0.478377079 |
| PPP3R1 | 0.133858207  | 0.030755314 | 0.478501059 |
| SSB    | 0.041955914  | 0.178246091 | 0.478929162 |
| CEBPD  | 0.060819958  | 0.008785908 | 0.480052972 |
| SLC4A4 | 0.208082671  | 0.015685788 | 0.48006915 |
| PSMD1  | 0.150719985  | 0.043644829 | 0.48041929 |
| SURF4  | 0.131623416  | 0.019263844 | 0.480592222 |
| NCOR2  | 0.159654443  | 0.034967436 | 0.480683899 |
| SRRT   | 0.130819424  | 0.027050793 | 0.480923022 |
| TMEM120B| 0.081099254  | 0.014595311 | 0.481315075 |
| CTDSP2 | 0.121716379  | 0.044822002 | 0.482390043 |
| ZDHHC12| 0.033849393  | 0.000987077 | 0.482715538 |
| C6orf222| 0.010364219  | 0.000201763 | 0.482854768 |
| Gene  | Value1 | Value2 | Value3 |
|-------|--------|--------|--------|
| ABCA1 | 0.121456664 | 0.037317677 | 0.482902844 |
| HNF4A | 0.028264351 | 0.094311767 | 0.483444322 |
| AKTIP | 0.019090014 | 0.143960186 | 0.483618364 |
| PCDHGA8 | 0.019131809 | 0.099768973 | 0.484289648 |
| DENND1A | 0.035640421 | 0.006873299 | 0.484314048 |
| TRMT10A | 0.028954076 | 0.074528224 | 0.484398580 |
| PSME3 | 0.019034914 | 0.097319204 | 0.484968349 |
| GRHL2 | 0.151132207 | 0.006873299 | 0.485108909 |
| TENT2 | 0.001028003 | 0.00179144 | 0.485400195 |
| ARF4 | 0.035640421 | 0.006873299 | 0.485823396 |
| SBNO2 | 0.00344409 | 0.008316383 | 0.485900753 |
| UBN1 | 0.037579846 | 0.157801172 | 0.486064303 |
| MRPL28 | 0.025210433 | 0.095520054 | 0.486448293 |
| ATAD3B | 0.022960564 | 0.218376041 | 0.486759585 |
| C1QTNF3 | 0.043128621 | 0.225200933 | 0.487267375 |
| ZFP90 | 0.018403494 | 0.116836279 | 0.487353485 |
| ATF1 | 0.173607146 | 0.028864556 | 0.487504546 |
| ZNF551 | 0.084503379 | 0.042690875 | 0.488094365 |
| TPP1 | 0.111038492 | 0.039736717 | 0.488362800 |
| NARFL | 0.043418008 | 0.233842385 | 0.488401031 |
| G2E3 | 0.003422264 | 0.075114946 | 0.488615147 |
| MOSMO | 0.038639125 | 0.097172767 | 0.488656215 |
| LMB2 | 0.00417844 | 0.000416008 | 0.488847142 |
| PANK3 | 0.14764029 | 0.029635707 | 0.491516905 |
| CCDC6 | 0.070602164 | 0.011365253 | 0.492529807 |
| KIAA2026 | 0.001693272 | 0.006815887 | 0.492529807 |
| SYPL1 | 0.003165519 | 0.017680939 | 0.492529807 |
| RBP39 | 0.219286321 | 0.03202177 | 0.492714945 |
| TBCC1 | 0.02099167 | 0.001493223 | 0.49292281 |
| MED10 | 0.030120173 | 0.002733496 | 0.49292281 |
| CGGBP1 | 0.13968924 | 0.038510239 | 0.491181243 |
| GPR107 | 0.14764029 | 0.029635707 | 0.491516905 |
| SGPP1 | 0.003165519 | 0.017680939 | 0.491884084 |
| NRPB2 | 0.13968924 | 0.038510239 | 0.491181243 |
| MORN2 | 0.009478699 | 0.064198836 | 0.492529807 |
| TBC1D9B | 0.196632611 | 0.023035379 | 0.492714945 |
| GXYLT1 | 0.062584608 | 0.003152559 | 0.49309158 |
| PGM2L1 | 0.005367257 | 0.00058456 | 0.493566906 |
| EFTB | 0.241225678 | 0.043265718 | 0.493772312 |
| KRT18 | 0.31796393 | 0.047997403 | 0.494556593 |
| WDR83OS | 0.037535663 | 0.108981875 | 0.494674859 |
| SURF6 | 0.001048445 | 0.012936221 | 0.494760947 |
| ASB1 | 0.011009698 | 0.023643086 | 0.49513811 |
| Gene         | Value   | Value   | Value   |
|-------------|---------|---------|---------|
| N4BP2       | 0.027346135 | 0.111091167 | 0.495466612 |
| TEDC1       | 0.008072781  | 0.01154908  | 0.495487294 |
| AC004687.1  | 0.094417035  | 0.032279434  | 0.497668013 |
| ETV5        | 0.118056372  | 0.049799043  | 0.497871899 |
| RMND5A      | 0.094475031  | 0.025403093  | 0.498045573 |
| NABP2       | 0.004476091  | 0.036675718  | 0.498102188 |
| LRRCA6      | 0.003072266  | 0.010723071  | 0.498694025 |
| LIN52       | 0.05375988   | 0.006603094  | 0.499360536 |
| SLC35F6     | 0.04072554   | 0.00498463   | 0.499471729 |
| SLFN12      | 0.062940628  | 0.008177015  | 0.500100654 |
| NAA15       | 0.03173876   | 0.117369605  | 0.500115134 |
| CXCL3       | 0.073014336  | 0.021674158  | 0.500471729 |
| IGF2BP2     | 0.027491217  | 0.000740847  | 0.500620259 |
| MTRF1L      | 0.002253078  | 0.000339844  | 0.500696854 |
| ZC3H12A     | 0.145869639  | 0.031583107  | 0.500748414 |
| STARD7      | 0.006468913  | 0.00430992   | 0.500894281 |
| EID2        | 0.026164001  | 0.143223744  | 0.501394281 |
| IQCE        | 0.008427614  | 0.065529621  | 0.501536259 |
| SOS2        | 0.159543284  | 0.025225574  | 0.501689161 |
| GAK         | 0.010790065  | 0.030916695  | 0.501761962 |
| TOM1        | 0.163009451  | 0.033953896  | 0.501838385 |
| TMX3        | 0.03535572   | 0.127452336  | 0.502199272 |
| CPEB4       | 0.01701184   | 0.079625959  | 0.502753701 |
| THUMPD3-AS1 | 0.013512279  | 0.001109443  | 0.502908947 |
| SLC28A3     | 0.003047218  | 0.012004716  | 0.50291136  |
| PPIL3       | 0.046635333  | 0.040087946  | 0.503103476 |
| SUMO2       | 0.013330198  | 0.035097309  | 0.503403958 |
| LGALS2      | 0.054544765  | 0.001957052  | 0.503452991 |
| COX20       | 0.025361772  | 0.105102851  | 0.503508809 |
| SON         | 0.003249351  | 0.015958338  | 0.503689634 |
| UBXN4       | 0.163753456  | 0.043239878  | 0.503981576 |
| ZFYVE1      | 0.001612612  | 0.000961891  | 0.504211067 |
| MRPS18A     | 0.087186487  | 0.02418162   | 0.50580508  |
| SEPHS1      | 0.0956391    | 0.032449025  | 0.505841903 |
| GLRX2       | 0.019613496  | 0.055890589  | 0.505996451 |
| P4HA1       | 0.015444719  | 0.025146246  | 0.506181006 |
| GATAD2B     | 0.042381033  | 0.208526838  | 0.506246907 |
| ANXA3       | 0.046489313  | 0.009438438  | 0.50626392  |
| CHMP1B      | 0.02248759   | 0.000374771  | 0.506375342 |
| CDKN2D      | 0.074452309  | 0.001735334  | 0.507136206 |
| LDHD        | 0.043641027  | 0.103274865  | 0.507782582 |
| P4HA2       | 0.032743421  | 0.005456737  | 0.507948906 |
| MT-ND2      | 0.00012684   | 0.000119979  | 0.509371082 |
| Gene   | Row 1 | Row 2 | Row 3 |
|--------|-------|-------|-------|
| KLC1   | 0.007080689 | 0.010335481 | 0.50976542 |
| CSNK1G3| 0.080074922 | 0.015047428 | 0.510191638 |
| SETD2  | 0.033160028 | 0.008112864 | 0.50214514 |
| RPF1   | 0.007925714 | 0.013092587 | 0.510326592 |
| FBXW5  | 0.139146753 | 0.011727595 | 0.511184258 |
| SDC4   | 0.021026126 | 0.042756736 | 0.51296336 |
| UBE2F  | 0.0023175   | 0.001841643 | 0.511677302 |
| TCAF2  | 0.15467962  | 0.013194288 | 0.51185243  |
| AP5M1  | 0.033160028 | 0.008112864 | 0.510214514 |
| BRD4   | 0.027053381 | 0.002771633 | 0.512553515 |
| DONSON | 0.04779306  | 0.318144309 | 0.512946544 |
| CAR5   | 0.038702262 | 0.189129974 | 0.512985956 |
| TAF9B  | 0.016036157 | 0.059207186 | 0.513288078 |
| TTC37  | 0.040309209 | 0.095467558 | 0.513302903 |
| KBTBD12| 0.096233562 | 0.001391846 | 0.513350248 |
| ZNF33A | 0.025301429 | 0.142921519 | 0.513590494 |
| NUMB   | 0.051149953 | 0.06718973  | 0.514084904 |
| HSD17B12| 0.003781558| 0.06504736  | 0.514188145 |
| KIAA1671| 0.002387188| 7.80419E-05 | 0.51425441 |
| PQBP1  | 0.02507289 | 0.0884717   | 0.514395942 |
| RCHY1  | 0.032112725 | 0.007864969 | 0.514610695 |
| CXCL1  | 0.036593079 | 0.116572233 | 0.515520174 |
| BAZ2A  | 0.012805815 | 0.055102432 | 0.515796485 |
| BAMBI  | 0.004023066 | 0.006418879 | 0.51581271 |
| FBXO6  | 0.037044176 | 0.00169683  | 0.51598316 |
| BBX    | 0.001080272 | 0.004835135 | 0.516345539 |
| CUL4A  | 0.124003788 | 0.022810315 | 0.516617592 |
| TEAD3  | 0.004747915 | 0.043782348 | 0.516710759 |
| DROSHA | 0.008269718 | 0.227800108 | 0.516933312 |
| CEP192 | 0.00981521  | 0.072817823 | 0.517197336 |
| MINK1  | 0.021256632 | 0.075876943 | 0.517274311 |
| SDHD   | 0.100814619 | 0.021174746 | 0.517288735 |
| DCUN1D1| 0.018560168 | 0.002149138 | 0.517633716 |
| SESTD1 | 0.161228114 | 0.032868559 | 0.518800167 |
| RNF185 | 0.111518547 | 0.028131964 | 0.5194727 |
| KCNE3  | 0.050244573 | 0.01533594  | 0.520063055 |
| MARCH8 | 0.027189808 | 0.009605626 | 0.520186602 |
| CENPS  | 0.027998964 | 0.062302687 | 0.520449153 |
| GABARAPL1| 0.00259773 | 0.00217552  | 0.520671927 |
| NMRK1  | 0.039665924 | 0.26287562  | 0.521156314 |
| NDUFAF1| 0.003463602 | 0.01532787  | 0.52212993 |
| AC097376.2| 0.031991325| 0.007690118 | 0.522168134 |
| DTNB   | 0.040002422 | 0.012819984 | 0.522732137 |
| Gene    | Value1  | Value2  | Value3  |
|---------|---------|---------|---------|
| LINC02542 | 0.114374563 | 0.031740348 | 0.522795534 |
| APOO    | 0.01404828  | 0.113725631 | 0.523070397 |
| NDUFA12 | 0.064885196 | 0.003531301 | 0.523148024 |
| GK5     | 0.001624696 | 0.091110322 | 0.523510877 |
| NDUFAF6 | 0.007088641 | 0.10937072  | 0.523526271 |
| CHERP   | 0.024525216 | 0.009157496 | 0.523608267 |
| SAMD9   | 0.001241525 | 0.01397517  | 0.524073064 |
| BRI3    | 0.177979161 | 0.02926579  | 0.524142723 |
| WDR78   | 0.047132829 | 0.245184057 | 0.524236495 |
| DDX55   | 0.044032666 | 0.121739077 | 0.524341241 |
| ZNF720  | 0.023513806 | 0.018379966 | 0.524523532 |
| CAPN2   | 0.045571639 | 0.125798238 | 0.52458484  |
| TMEM33  | 0.088594236 | 0.020528213 | 0.524815511 |
| PHF11   | 0.001152181 | 0.01253532  | 0.524903431 |
| BSG     | 0.000967357 | 8.56199E-05 | 0.5255684   |
| EXOC3L1 | 0.131415135 | 0.034454209 | 0.525284674 |
| ALS2    | 0.059044548 | 0.032364453 | 0.525629724 |
| ZNFX1   | 0.002570591 | 2.94006E-05 | 0.526427608 |
| CHML    | 0.032869876 | 0.14773931  | 0.526673664 |
| PLXNA1  | 0.016223911 | 0.041071458 | 0.526437684 |
| RBM48   | 0.046923769 | 0.185381099 | 0.526505384 |
| MAN1A1  | 0.027340308 | 0.047802782 | 0.526558789 |
| JPT1    | 0.002081505 | 0.001723042 | 0.526793318 |
| MADD    | 0.103108342 | 0.029309572 | 0.526793318 |
| UMAD1   | 0.094975304 | 0.024012656 | 0.527006739 |
| TRIP4   | 0.003059016 | 0.010842457 | 0.527135753 |
| KDM6B   | 0.013954596 | 0.002808253 | 0.527143271 |
| YAP1    | 0.013748362 | 0.021039514 | 0.527558117 |
| EIF3E   | 0.028834119 | 0.146067105 | 0.528427254 |
| ACTG1   | 0.062518199 | 0.001187843 | 0.528785003 |
| AGFG1   | 0.001065054 | 3.96753E-05 | 0.528860045 |
| CD5     | 0.04514383 | 0.139179459 | 0.528908637 |
| STYXL1  | 0.055368331 | 0.03148973  | 0.52946821 |
| ST3GAL2 | 0.007681723 | 0.039745075 | 0.53004096 |
| MVP     | 0.04090525  | 0.008060004 | 0.53075635 |
| DOCK5   | 0.180290931 | 0.044788407 | 0.531172989 |
| RWDD2A  | 0.024760092 | 0.086178524 | 0.531747577 |
| PCNT    | 0.179774212 | 0.042261677 | 0.53181147 |
| FOXX2   | 0.008378057 | 0.016261441 | 0.532300132 |
| SREBF2  | 0.007932349 | 0.014674248 | 0.532603776 |
| RSF1    | 0.098375497 | 0.03392707  | 0.532884391 |
| BUB3    | 0.042614136 | 0.142293975 | 0.533564229 |
| KDF1    | 0.125162874 | 0.024287026 | 0.534057755 |
| Gene    | Value1         | Value2         | Value3         |
|---------|----------------|----------------|----------------|
| ARNTL2  | 5.76331E-05    | 0.000112503    | 0.534219857    |
| EIF4B   | 0.015716276    | 0.049944495    | 0.534275033    |
| KPN A6  | 0.005917524    | 0.067440854    | 0.534494691    |
| ZNF713  | 0.041209261    | 0.095079336    | 0.534565216    |
| MX1     | 0.023905375    | 0.002932124    | 0.535153113    |
| DTX3L   | 0.034938934    | 0.083617262    | 0.535796916    |
| PPP1R11 | 0.000144878    | 0.001091722    | 0.536644497    |
| CTNNA1  | 0.011223876    | 0.000706052    | 0.536704682    |
| LETMD1  | 0.054633755    | 0.022604119    | 0.537301482    |
| MED27   | 0.024867544    | 0.150569319    | 0.537832053    |
| MAP3K7  | 0.067253817    | 0.023769857    | 0.538733181    |
| AKIRIN1 | 0.097659806    | 0.025247333    | 0.538745925    |
| HES1    | 0.096391662    | 0.025098157    | 0.539385896    |
| SLC24A1 | 0.10410533     | 0.03940902     | 0.539790914    |
| EIF4A2  | 0.01326121     | 0.006070822    | 0.540024306    |
| FAM89A  | 0.250533123    | 0.04086933     | 0.540463853    |
| PRCC    | 0.044653211    | 0.182079066    | 0.540632255    |
| EMC2    | 0.034785905    | 0.05747824     | 0.540658722    |
| GORASP2 | 0.033371436    | 0.003876965    | 0.54115475     |
| LBX2-AS1| 0.065931755    | 0.02992081     | 0.541551119    |
| EIF6    | 0.00157075     | 0.002640922    | 0.541916707    |
| CTTN    | 0.013002844    | 0.004838352    | 0.542001834    |
| SC5D    | 0.042053304    | 0.133636062    | 0.542665724    |
| PPIC    | 0.024761997    | 0.052191867    | 0.543646659    |
| ABCG1   | 0.120668934    | 0.027183026    | 0.544040664    |
| FPGS    | 0.011047002    | 0.038397307    | 0.544120764    |
| ATP11A  | 0.005802509    | 0.000582499    | 0.544164391    |
| FAM118B | 0.016711281    | 0.058122434    | 0.544175446    |
| FBXL15  | 0.002199688    | 0.025560744    | 0.54433057     |
| SLC16A3 | 0.00010143     | 0.000175653    | 0.544571499    |
| CASP8AP2| 0.036011406    | 0.14375509     | 0.544832572    |
| RIN2    | 0.052087995    | 0.007781472    | 0.545099565    |
| SH2B3   | 0.037650172    | 0.001559918    | 0.546009763    |
| ARPC5L  | 0.01137425     | 0.042468954    | 0.546102977    |
| KLHL22  | 0.041842785    | 0.141642426    | 0.546161621    |
| SERF2   | 0.05768191     | 0.005581503    | 0.546179255    |
| ALO50403.2| 0.017905965  | 0.083313401    | 0.546260226    |
| CACNB3  | 0.023550056    | 0.095980418    | 0.546431449    |
| C16orf72| 0.059019649    | 0.01784425     | 0.54645192     |
| FNDC3A  | 0.002727533    | 0.000832813    | 0.546514098    |
| KIAA0319L | 0.003819215 | 0.015543302    | 0.546535734    |
| HSPA4   | 0.017245668    | 0.06509512     | 0.546554105    |
| IGFBP4  | 0.015672721    | 0.03166251     | 0.546701521    |
| Gene    | Value1  | Value2         | Value3         | Value4         |
|---------|---------|----------------|----------------|----------------|
| NFU1    | 0.01133468 | 0.003529507 | 0.546738049   |
| CYP2J2  | 0.091177311 | 0.030078647 | 0.546769815   |
| H3F3B   | 0.006824018 | 0.000273057 | 0.54690895    |
| OSTF1   | 0.001370644 | 0.019325903 | 0.547371599   |
| RSAD2   | 0.119666174 | 0.003161345 | 0.547455283   |
| ORAI1   | 0.090070968 | 0.01089734  | 0.547462596   |
| ODC1    | 0.11609986 | 0.021948567 | 0.548236986   |
| YARS2   | 0.189686664 | 0.044761509 | 0.548240302   |
| GOLTI1B | 0.015643818 | 0.078013476 | 0.5488951     |
| ATG4A   | 0.031504964 | 0.01019134  | 0.549647233   |
| ZC3H14  | 0.015134557 | 0.014801966 | 0.549713571   |
| SMARCA5 | 0.260549382 | 0.043324459 | 0.550521904   |
| XYL1T2  | 0.054718094 | 0.009222872 | 0.551196993   |
| TMEM222 | 0.005635267 | 0.048893001 | 0.551250959   |
| TMEM173 | 0.132457585 | 0.025802309 | 0.5519839     |
| GLG1    | 0.023818579 | 0.005469783 | 0.552133467   |
| CDYL    | 0.123949376 | 0.023222268 | 0.552242083   |
| OPTN    | 0.012668441 | 0.001867543 | 0.552289525   |
| UBE2B   | 0.003231585 | 2.22754E-05 | 0.552466365   |
| TCHP    | 0.101898892 | 0.031405486 | 0.552720308   |
| NDUFA1B | 0.054138651 | 0.005962719 | 0.55280946    |
| DGKE    | 0.002969959 | 0.022905511 | 0.552832499   |
| ADAM15  | 0.070590258 | 0.022187727 | 0.553473964   |
| UBE2J2  | 0.072324279 | 0.023197472 | 0.553683883   |
| TNKS    | 0.018203339 | 0.017685332 | 0.55371453    |
| CEACAM1 | 0.001626342 | 0.00103954  | 0.553726159   |
| PRKRA   | 0.013364046 | 0.115972988 | 0.5537923     |
| AIMP1   | 0.011377864 | 0.029553205 | 0.553975936   |
| CHD4    | 0.009244879 | 0.045521761 | 0.554291915   |
| KLF11   | 0.062230753 | 0.012010532 | 0.554333013   |
| NT5C    | 0.047764794 | 0.140641056 | 0.555167619   |
| RNPS1   | 0.025258081 | 0.002732099 | 0.555275653   |
| EP300   | 0.024340883 | 0.007279403 | 0.55537132    |
| CORO1B  | 0.008356998 | 0.045881417 | 0.555627395   |
| HELZ2   | 0.07712232 | 0.013420732 | 0.556589179   |
| CDK11B  | 0.025253314 | 0.091088053 | 0.556693856   |
| DHRS3   | 0.019966039 | 0.074088664 | 0.557352875   |
| BAG3    | 0.069313892 | 0.008676067 | 0.55761481    |
| SEC63   | 0.045167542 | 0.231349729 | 0.557798722   |
| COPG1   | 0.024820788 | 0.0923731   | 0.558814201   |
| FAM129B | 0.000450493 | 0.002698027 | 0.559492155   |
| SMAD6   | 0.043572922 | 0.241335602 | 0.559856072   |
| Gene   | Value1   | Value2   | Value3   |
|--------|----------|----------|----------|
| HIPK3  | 0.162698854 | 0.049912895 | 0.559917524 |
| TRIB2  | 0.008851231 | 0.014416011 | 0.560073793 |
| TMED5  | 0.118770235 | 0.0081329 | 0.560268664 |
| GLCE   | 0.071825344 | 0.024039489 | 0.560354269 |
| HGNSNAT| 0.007348252 | 0.087372782 | 0.561314428 |
| HSBP1  | 0.005255683 | 0.00376418 | 0.561372796 |
| TP53RK | 0.037273187 | 0.065745845 | 0.561438268 |
| NXN    | 0.041625307 | 0.039550642 | 0.561773909 |
| ADNP2  | 0.001557949 | 0.00236556 | 0.561800226 |
| SP110  | 0.00279649 | 0.024547742 | 0.561961482 |
| VTA1   | 0.001236907 | 0.002392891 | 0.562182837 |
| RFX7   | 0.073942893 | 0.011084449 | 0.562231061 |
| SLC7A6 | 0.046745916 | 0.225200933 | 0.562395619 |
| GPX3   | 0.019795089 | 0.162050169 | 0.562542753 |
| FPGT   | 0.068940746 | 0.02966909 | 0.562724927 |
| BBC3   | 0.006330417 | 1.93249E-05 | 0.563116796 |
| SART1  | 0.160046373 | 0.043792273 | 0.563780913 |
| YWHAE  | 0.03687113 | 0.087072778 | 0.563839472 |
| MAML3  | 0.014143238 | 0.0065947 | 0.56398486 |
| DMAP1  | 0.005849365 | 0.033170365 | 0.564295201 |
| FAM83B | 0.009097041 | 0.086338469 | 0.5645498 |
| ATF4   | 0.004057001 | 0.016947218 | 0.564553156 |
| ELK3   | 0.021118856 | 0.044012695 | 0.564715895 |
| C11orf68| 0.028179975 | 0.172064188 | 0.564743309 |
| CRKL   | 0.047928137 | 0.020322609 | 0.565231975 |
| ZMAT5  | 0.049750029 | 0.084242178 | 0.565499804 |
| ICAM4  | 0.124218546 | 0.033126698 | 0.565642209 |
| STK3   | 0.092322847 | 0.034199838 | 0.566242987 |
| TAX1BP1| 0.067287307 | 0.00996347 | 0.566450715 |
| ZFYVE27| 0.072492973 | 0.035761067 | 0.566469516 |
| PRR14  | 0.030948387 | 0.132331394 | 0.567230593 |
| MSX1   | 0.092690903 | 0.032962728 | 0.567257204 |
| PIGBOS1| 0.014585357 | 0.018303918 | 0.567650177 |
| SLC12A4| 0.019220047 | 0.08382173 | 0.567832281 |
| USP6NL | 0.051331696 | 0.002546583 | 0.567900686 |
| PLEC   | 0.003264476 | 0.000117715 | 0.568272304 |
| SDHA   | 0.008594862 | 0.001534657 | 0.568330313 |
| KDM7A  | 0.034324282 | 0.156338433 | 0.568790456 |
| H2AFY  | 0.01329637 | 0.036734202 | 0.56893687 |
| PSMB7  | 0.005011945 | 0.015086735 | 0.569334976 |
| AC106791.1| 0.044621377 | 0.090311952 | 0.569542136 |
| PGAM5  | 0.139602517 | 0.039314192 | 0.569920025 |
| BCKDK  | 0.014450194 | 0.024844116 | 0.570234899 |
| Gene       | Value1 | Value2 | Value3 | Value4 |
|------------|--------|--------|--------|--------|
| SLC6A6     | 0.118379474 | 0.013606134 | 0.57058221 |
| C11orf58   | 0.047347627  | 0.010541225 | 0.570838354 |
| PINK1      | 0.06945527  | 0.023190116 | 0.571446468 |
| RINT1      | 0.011763988 | 0.071800542 | 0.571693573 |
| TCOF1      | 0.129756253 | 0.047234983 | 0.572117427 |
| TCEA1      | 0.135629269 | 0.026498579 | 0.572273576 |
| PRPF3      | 0.024347661 | 0.008722031 | 0.572359938 |
| FAM78A     | 0.040044718 | 0.147604785 | 0.572513854 |
| ZNF276     | 0.037131735 | 0.210647945 | 0.572531399 |
| SCAP       | 0.142704743 | 0.035120974 | 0.572613949 |
| SETD1A     | 0.002382554 | 0.000356629 | 0.572723690 |
| STK24      | 0.011152162 | 0.002303625 | 0.572743690 |
| IRF2BP2    | 0.115877407 | 0.038253320 | 0.572806599 |
| USP45      | 0.129756253 | 0.047234983 | 0.572873576 |
| ZNF614     | 0.035000195 | 0.015254819 | 0.572905074 |
| SPPL3      | 0.000600000 | 0.009859899 | 0.573014899 |
| ANKIB1     | 0.044595062 | 0.047438304 | 0.57307778 |
| MRPL36     | 0.003756908 | 0.012677007 | 0.573101227 |
| ISCA2      | 0.035000195 | 0.015254819 | 0.573205074 |
| GLYR1      | 0.158537876 | 0.022204031 | 0.573212277 |
| TEMEM63A   | 0.000356908 | 0.005175858 | 0.573266467 |
| SEMA3B     | 0.024084521 | 0.006309690 | 0.573467791 |
| COX5B      | 0.011152162 | 0.002303625 | 0.573490899 |
| HEXIM1     | 0.000959528 | 9.83581E-06  | 0.573704652 |
| BMPR2      | 0.008165435 | 0.022969482 | 0.573865612 |
| GORASP1    | 0.02145738  | 0.051675656 | 0.57427402 |
| SYVN1      | 0.033540009 | 0.141176758 | 0.574323866 |
| CARD10     | 0.158537876 | 0.022204031 | 0.574312277 |
| HMGN1      | 0.020827649 | 0.049575509 | 0.574461666 |
| AC114760.2 | 0.000959528 | 9.83581E-06  | 0.574704652 |
| HNRNPR     | 0.128845075 | 0.029297744 | 0.574871274 |
| MAN2B1     | 0.000959528 | 9.83581E-06  | 0.574871274 |
| RNF220     | 0.013140036 | 0.035098107 | 0.574931356 |
| SLF2       | 0.033131762 | 0.007626381 | 0.574923435 |
| HERPUD2    | 0.033540009 | 0.141176758 | 0.574923435 |
| MUC4       | 0.000959528 | 9.83581E-06  | 0.574923435 |
| BRMS1      | 0.000959528 | 9.83581E-06  | 0.574923435 |
| TBC1D32    | 0.000959528 | 9.83581E-06  | 0.574923435 |
| RBM4       | 0.000959528 | 9.83581E-06  | 0.574923435 |
| RANGAP1    | 0.000959528 | 9.83581E-06  | 0.574923435 |
| PET117     | 0.000959528 | 9.83581E-06  | 0.574923435 |
| Gene     | Value1    | Value2    | Value3    |
|----------|-----------|-----------|-----------|
| KDM3A    | 0.01592187| 0.02661356| 0.58499376|
| NUDCD3   | 0.00840266| 0.01557251| 0.58507362|
| LAMC2    | 0.02458219| 0.04506309| 0.58521116|
| LYPD6    | 0.01258556| 0.04343417| 0.58608736|
| METTL23  | 0.03249349| 0.11285682| 0.58612910|
| RITA1    | 0.06073953| 0.00749014| 0.58649579|
| NIKRAS2  | 0.00010281| 0.00270426| 0.58684385|
| NDUFS1   | 0.08918443| 0.04200784| 0.58710718|
| PODXL    | 0.14874298| 0.03680029| 0.58720998|
| FAR2     | 0.03603572| 0.01542457| 0.58726300|
| ANKS1A   | 0.00010538| 0.00196243| 0.58733889|
| RND1     | 0.04557101| 0.10192402| 0.58746628|
| MOB3C    | 0.24183174| 0.03425967| 0.58861428|
| TOMM5    | 0.04855755| 0.14926753| 0.58892939|
| CDK5     | 0.18229029| 0.03350757| 0.58916447|
| GRAMD1B  | 0.00378592| 0.00360843| 0.58935447|
| C3orf38  | 0.03924104| 0.00280604| 0.58937163|
| EML4     | 0.05064475| 0.01464415| 0.58943264|
| PEX19    | 0.02961805| 0.01023629| 0.59043468|
| TRIO     | 3.38318E-05| 9.5582E-05| 0.59095926|
| SRRM1    | 0.03395105| 0.02365525| 0.59132136|
| FAM207A  | 0.05598276| 0.01481589| 0.59142955|
| SF1      | 0.01226703| 0.05635731| 0.59165588|
| AP001160.3| 0.16967674| 0.03345279| 0.59168771|
| CUL3     | 0.00431584| 0.00978702| 0.59197378|
| KRT10    | 0.01262745| 0.03938812| 0.59212502|
| FAM84B   | 0.28544442| 0.03072349| 0.59289672|
| TYMP     | 0.01253802| 0.02935148| 0.59326609|
| PAIP1    | 0.06029514| 0.03137492| 0.59354319|
| APLP2    | 0.02129050| 0.00020326| 0.59383676|
| MIR22HG  | 0.01810891| 0.00678069| 0.59389110|
| TMC8     | 0.01826662| 0.04819811| 0.59438269|
| P4HB     | 0.00593661| 0.03327417| 0.59442364|
| SEC31A   | 0.03137192| 0.16809209| 0.59448052|
| SHC1     | 0.03564934| 0.00239166| 0.59450472|
| C1orf52  | 0.00891867| 0.06503660| 0.59496816|
| BAP1     | 0.00158536| 0.00052936| 0.59540959|
| ARL14    | 0.08698169| 0.04072988| 0.59565108|
| TGF1     | 0.04633766| 0.00928952| 0.59639823|
| UBL4A    | 0.06938382| 0.01982596| 0.59659883|
| NUDT9    | 0.02331612| 0.01200109| 0.59683993|
| LGALS3BP | 0.03715533| 0.00281121| 0.59693640|
| CD63     | 0.02583025| 0.00328590| 0.59699044|


| Gene       | Expression 1 | Expression 2 | Expression 3 |
|------------|--------------|--------------|--------------|
| JARID2     | 0.014806729  | 0.163945445  | 0.597875914  |
| CHMP4C     | 0.12981065   | 0.025782384  | 0.597985143  |
| INAVA      | 0.004433521  | 0.000154829  | 0.598621683  |
| PRF1       | 0.044965052  | 0.26087726   | 0.598659692  |
| NCOA3      | 0.029306742  | 0.048825261  | 0.599969423  |
| PDE4DIP    | 0.018040204  | 0.054298107  | 0.600103328  |
| PPP1R35    | 0.001876883  | 0.007288024  | 0.600209252  |
| NCOA2      | 0.069428238  | 0.016597064  | 0.601038363  |
| BTRC       | 0.01755169   | 0.01338603   | 0.601038363  |
| RBM7       | 0.030237944  | 0.002392908  | 0.601432386  |
| PHB        | 0.035398074  | 0.009065861  | 0.601807488  |
| NAE1       | 0.003648126  | 0.06430376   | 0.601822396  |
| TRPV2      | 0.010753375  | 0.014630831  | 0.602090322  |
| MPHOSPH8   | 0.040470219  | 0.142476487  | 0.602507074  |
| WTAP       | 0.015017344  | 0.003972364  | 0.603010361  |
| PTHLH      | 0.04077935   | 0.087110928  | 0.603750366  |
| CDADC1     | 0.032696752  | 0.088548903  | 0.604285632  |
| LTBP4      | 0.04186043   | 0.158271447  | 0.60448862   |
| TMEM167B   | 0.017977396  | 0.121329273  | 0.60457675   |
| HNRNPF     | 0.003093483  | 0.014181878  | 0.604706205  |
| SEPT11     | 0.072375268  | 0.013305743  | 0.604732141  |
| RSRC1      | 0.000147541  | 0.073129363  | 0.604815738  |
| VPS8       | 0.075807353  | 0.014166269  | 0.60483707   |
| GPAA1      | 0.011591805  | 0.004665581  | 0.604917399  |
| S100A16    | 0.111148857  | 0.007277072  | 0.605175378  |
| RFWD3      | 0.025710818  | 0.02425654   | 0.605574727  |
| SARAF      | 0.051498543  | 0.005405209  | 0.605620939  |
| ADAM28     | 0.028537835  | 0.081429214  | 0.605652418  |
| FBRSL1     | 0.002225815  | 0.014496901  | 0.605816553  |
| SRD5A3     | 0.030803944  | 0.087152342  | 0.606316618  |
| MYO9B      | 0.022769249  | 0.046359542  | 0.606429357  |
| NPC1       | 0.119943432  | 0.049570731  | 0.606595831  |
| ZNF775     | 0.038225431  | 0.08890491   | 0.606953904  |
| PNRC1      | 0.006077772  | 0.008392043  | 0.608297656  |
| DNAJB2     | 0.096583482  | 0.048082413  | 0.608310457  |
| PTP4A2     | 0.001547334  | 0.001777204  | 0.609241148  |
| GGNBP2     | 0.037022408  | 0.007784181  | 0.609586841  |
| NUP85      | 0.111602771  | 0.021663824  | 0.609798848  |
| RNF6       | 0.006676577  | 0.005656091  | 0.610741236  |
| SPRY2      | 0.024030862  | 0.006588057  | 0.61179872   |
| FBRS       | 0.02411955   | 0.007611372  | 0.611927791  |
| C6orf62    | 0.002846205  | 0.009751139  | 0.612056788  |
| TMEM63B    | 0.118037221  | 0.019066087  | 0.612430416  |
| Gene     | FAM111A | 0.049843994 | 0.070585297 | 0.612512429 |
|----------|---------|-------------|-------------|-------------|
| Gene     | FAM120AOS | 0.149451615 | 0.027062614 | 0.61252949  |
| RHEB     | 0.005489463 | 0.005408921 | 0.612814605 |
| SMAD7    | 0.076182472 | 0.047108979 | 0.613067499 |
| LMAN2    | 0.084051564 | 0.018869899 | 0.61324768  |
| ING2     | 0.077089477 | 0.025120658 | 0.613272806 |
| DGCR6    | 0.126976185 | 0.033570158 | 0.61333654  |
| RBM23    | 0.002895209 | 0.005674312 | 0.613800608 |
| RP2      | 0.034510549 | 0.047411928 | 0.615055882 |
| KRAS     | 0.005489463 | 0.005408921 | 0.615311682 |
| DNAAF4   | 0.103004317 | 0.019149807 | 0.61559372  |
| NECAP2   | 0.041832927 | 0.008949663 | 0.615627525 |
| C19orf66 | 0.083976739 | 0.022133685 | 0.616790907 |
| GNL1     | 0.004995435 | 0.040832084 | 0.617067839 |
| PRKAG1   | 0.007381598 | 0.012701268 | 0.617105259 |
| SPAG9    | 0.126034546 | 0.024135883 | 0.617827261 |
| NUP93    | 0.004303855 | 0.019055653 | 0.61847747  |
| AL355312.4 | 0.060422924 | 0.014815441 | 0.618677111 |
| PTPRH    | 0.117703666 | 0.032412988 | 0.618742569 |
| ATP6V0B  | 0.014573433 | 0.021122661 | 0.619650794 |
| CARHSP1  | 0.006929162 | 0.013521138 | 0.62011654  |
| NFKBIB   | 0.009861497 | 0.031143371 | 0.620360656 |
| UBE2Z    | 0.127927464 | 0.038813648 | 0.620801371 |
| ALG6     | 0.104234803 | 0.031786948 | 0.621816682 |
| ASB7     | 0.221041262 | 0.047907743 | 0.621877623 |
| MECOM    | 0.025881043 | 0.002873074 | 0.621936137 |
| TTT12    | 0.125463471 | 0.038436111 | 0.622782043 |
| XRCC4    | 0.004960284 | 0.001390706 | 0.622786582 |
| CCM2     | 0.000586366 | 0.000599344 | 0.623227304 |
| CYLD     | 0.148055685 | 0.033341581 | 0.623744065 |
| C5orf63  | 0.033104010 | 0.088651911 | 0.623971612 |
| IRF7     | 0.000205960 | 0.002018704 | 0.624396187 |
| FEM1B    | 0.003709477 | 1.24791e-06 | 0.624587348 |
| RNF14    | 0.039251408 | 0.041945138 | 0.624737104 |
| SMARCD2  | 0.009005771 | 0.006922918 | 0.624796712 |
| TXN      | 0.047395108 | 0.262286921 | 0.624798887 |
| SLFN11   | 0.027584651 | 0.151292848 | 0.624898886 |
| C1orf43  | 0.111648097 | 0.026422174 | 0.625485997 |
| PTPRE    | 0.089815863 | 0.022377044 | 0.625543647 |
| DPH3     | 0.014061616 | 0.003013191 | 0.625830228 |
| PTOV1    | 0.008419275 | 0.034556959 | 0.625860767 |
| TSPAN5   | 0.004710974 | 0.011669839 | 0.626129053 |
| RHBDL1   | 0.041031821 | 0.225200933 | 0.626419809 |
| Gene       | Value1  | Value2   | Value3   |
|------------|---------|----------|----------|
| TSPAN15    | 0.002663917 | 0.001335281 | 0.626662929 |
| VKORC1L1   | 0.10371179 | 0.042915173 | 0.626785169 |
| FKBP14     | 0.01362183 | 0.092763061 | 0.627626342 |
| NDUFS2     | 0.00809596 | 0.001589624 | 0.627732431 |
| PTK2       | 0.001384314 | 0.000100177 | 0.627766163 |
| CNP        | 0.008408636 | 0.000252934 | 0.628036742 |
| RAP1H1     | 0.031297575 | 0.005276382 | 0.628201624 |
| NAAA       | 0.00537865 | 0.028036576 | 0.628302234 |
| CARM1      | 0.007270586 | 0.038785424 | 0.628385551 |
| ARF1       | 0.014232985 | 0.008774759 | 0.629075253 |
| MTMR11     | 0.003362171 | 0.015540868 | 0.629150101 |
| AGRN       | 0.03188231 | 0.006607855 | 0.62948045 |
| AMFR       | 0.015405289 | 0.000560019 | 0.629906967 |
| ECE1       | 0.009397908 | 0.085327895 | 0.630233383 |
| ZNF865     | 0.023841586 | 0.094311169 | 0.63094617 |
| LYSMD2     | 0.002877459 | 0.038874759 | 0.631075279 |
| SPHK1      | 0.006046951 | 0.030867596 | 0.631233383 |
| DNAJA1     | 0.050879737 | 0.018313849 | 0.63148045 |
| TRAM1      | 0.067647136 | 0.019058572 | 0.63167342 |
| PLA2G6     | 0.091735486 | 0.0309952   | 0.631427436 |
| TRIB1      | 0.024766012 | 0.085327895 | 0.63155647 |
| CNBP       | 0.080287224 | 0.02124647  | 0.631944774 |
| GLMN       | 0.002906513 | 0.085874427 | 0.632250823 |
| WNK1       | 0.047519979 | 0.04257096  | 0.632569678 |
| ING3       | 0.107512774 | 0.048869006 | 0.632892799 |
| BRD9       | 0.014933277 | 0.081756121 | 0.633237927 |
| ERBB2      | 0.043588364 | 0.021110327 | 0.633326806 |
| SEPH52     | 0.000505538 | 0.00120709  | 0.6334036 |
| MMP14      | 0.063680217 | 0.018641258 | 0.634004174 |
| M6PR       | 0.015822522 | 0.053468002 | 0.634231231 |
| RPUSD1     | 0.057619134 | 0.016222845 | 0.634522482 |
| SF3B4      | 0.005669971 | 0.000407959 | 0.634544521 |
| ALO49597.2 | 0.044278115 | 0.034586878 | 0.635183351 |
| NAIP       | 0.071873896 | 0.010245255 | 0.635307331 |
| ARL4A      | 0.023449839 | 0.030800324 | 0.635414784 |
| CHP1       | 0.039737766 | 0.012732667 | 0.636049249 |
| GAREM1     | 0.095646863 | 0.014061287 | 0.636104156 |
| TCTN2      | 0.020951204 | 0.043206628 | 0.636314501 |
| CNDP2      | 0.039618969 | 0.065650006 | 0.636317398 |
| TXNIP      | 0.002308402 | 0.01337183  | 0.63721427 |
| ZNF777     | 0.0463542   | 0.073416342 | 0.637981973 |
| HIPK1      | 0.005635697 | 0.00862163  | 0.638253098 |
| Gene      | Value1  | Value2  | Value3  |
|-----------|---------|---------|---------|
| MT-ND4L   | 0.002055799 | 0.004030212 | 0.638559047 |
| ARMC7     | 0.035849174  | 0.141325507 | 0.638932114 |
| CAPZA1    | 0.009368563  | 0.00521333  | 0.639385453 |
| C9orf72   | 0.02075427   | 0.063784147 | 0.639645752 |
| ARMC6     | 0.009581582  | 0.033449351 | 0.63981303  |
| PKD1      | 0.040379203  | 0.085220404 | 0.64023132  |
| ATAD1     | 0.059731439  | 0.00789094  | 0.640283749 |
| LPCAT3    | 0.046788414  | 0.024362555 | 0.640654001 |
| KIF13B    | 0.065527869  | 0.013064656 | 0.640654001 |
| GOLGA7    | 0.009591326  | 0.031162736 | 0.640819237 |
| OXLd1     | 0.04855431   | 0.196338956 | 0.641205244 |
| NDUFB5    | 0.006405053  | 0.007087602 | 0.641343749 |
| CCL20     | 0.116362279  | 0.015203543 | 0.641721444 |
| XRN2      | 0.000276121  | 2.94298E-06 | 0.641883104 |
| OSGIN2    | 0.038491888  | 0.080967835 | 0.642242927 |
| ENOX2     | 0.115416631  | 0.03392246  | 0.642243575 |
| SQSTM1    | 0.011140295  | 0.005078409 | 0.642638256 |
| C12orf75  | 0.133374904  | 0.024554847 | 0.642652373 |
| SLC6A14   | 0.006370912  | 0.00396733  | 0.643558796 |
| GON4L     | 0.101625732  | 0.032557926 | 0.643597735 |
| TYROBP    | 0.070423327  | 0.04325956  | 0.643629026 |
| FAM214B   | 0.045397668  | 0.125931787 | 0.644248161 |
| AC080037.1| 0.092804213  | 0.005904424 | 0.644480929 |
| PATJ      | 0.074026778  | 0.01218074  | 0.644734877 |
| ODF2L     | 0.036858645  | 0.014501156 | 0.644820124 |
| MBTPS1    | 0.0376633    | 0.09853203  | 0.645079291 |
| PFDN2     | 0.003786192  | 0.006616191 | 0.645208164 |
| PTK6      | 0.144682316  | 0.042058343 | 0.645708578 |
| SELENOK   | 0.021727288  | 0.054872351 | 0.646477091 |
| SNX5      | 0.041385338  | 0.125351481 | 0.646949799 |
| CDC425E1  | 0.006923595  | 0.01504813  | 0.646541023 |
| NTSC2     | 0.024036864  | 0.01064754  | 0.646575557 |
| TRIP10    | 0.009816883  | 0.026396757 | 0.646699564 |
| MLPH      | 0.03489655   | 0.005670111 | 0.646927085 |
| PRR12     | 0.011180514  | 0.004572862 | 0.647069125 |
| WDR33     | 0.003023851  | 0.002750398 | 0.647097903 |
| GIGYF2    | 0.004200633  | 0.018098834 | 0.647458893 |
| RFK       | 0.001157285  | 8.18015E-05 | 0.647796967 |
| LMNA      | 0.007306248  | 0.001446671 | 0.64780265 |
| OGA       | 0.000798775  | 0.000807396 | 0.64804854 |
| CANX      | 0.021946872  | 0.057947005 | 0.648406252 |
| CMPK2     | 0.035912211  | 0.035121832 | 0.648840049 |
| RER1      | 0.074337414  | 0.019394643 | 0.649572254 |
| Gene   | Gene Symbol | Value1   | Value2   | Value3   |
|--------|-------------|----------|----------|----------|
| ASB6   |             | 0.002495703 | 0.003051935 | 0.649595627 |
| RBM4B  |             | 0.024046775 | 0.006522351 | 0.649715138 |
| MTERF3 |             | 0.046842676 | 0.08294518 | 0.650221606 |
| RAB40C |             | 0.006982477 | 0.00357382 | 0.6503623   |
| PTBP1  |             | 0.000961336 | 0.00116498 | 0.6505836   |
| SESN1  |             | 0.048934653 | 0.095079336 | 0.650726394 |
| INF2   |             | 0.079205377 | 0.027877509 | 0.650728509 |
| GATD1  |             | 0.045741207 | 0.147288121 | 0.65080322 |
| RDH13  |             | 0.083802821 | 0.037177102 | 0.65075497 |
| SUPT6H |             | 0.097836806 | 0.05083759 | 0.655237637 |
| TMEM218|             | 0.031774557 | 0.052753068 | 0.655372119 |
| SKP1   |             | 0.030433229 | 0.003340923 | 0.65005498 |
| NRIP1  |             | 0.000214431 | 0.00525497 | 0.65613456 |
| ATP5ME |             | 0.068372562 | 0.037228159 | 0.658460806 |
| ZNF358 |             | 0.009541702 | 0.024522499 | 0.658750807 |
| MALAT1 |             | 0.002263614 | 0.018620056 | 0.658965183 |
| ZNF148 |             | 0.061240039 | 0.011760135 | 0.659064949 |
| FOXN3  |             | 0.007195844 | 0.004853521 | 0.657329027 |
| HGS    |             | 0.084741553 | 0.021071388 | 0.660985001 |
| EIF5   |             | 0.032271448 | 0.01883358 | 0.66098066 |
| EIFH3  |             | 0.047129811 | 0.099770545 | 0.661074463 |
| FOXL1  |             | 0.039633138 | 0.015515307 | 0.66130243 |
| MRPL58 |             | 0.000118288 | 0.00154121 | 0.66162518 |
| UBE2D3 |             | 0.008173517 | 0.00264054 | 0.661979142 |
| CPSF4  |             | 0.018533135 | 0.010020322 | 0.662391358 |
| SYNE2  |             | 0.017676293 | 0.011751066 | 0.662462685 |
| LRPAP1 |             | 0.044314481 | 0.005447044 | 0.662902567 |
| Gene    | Log2 Fold Change | Log10 FDR | q-value |
|---------|-----------------|-----------|---------|
| RAB21   | 0.001779083     | 0.014047033 | 0.663143098 |
| MRPL14  | 0.042411803     | 0.003701777 | 0.663905369 |
| FBXO42  | 0.011581932     | 0.043044702 | 0.663785497 |
| CYP3A5  | 0.073126421     | 0.002106142 | 0.66379462  |
| ADGRE5  | 0.00805805      | 0.018284285 | 0.664107901 |
| USB1    | 0.00184823      | 2.32176E-05 | 0.664138087 |
| TMCC3   | 0.043798251     | 0.14065048  | 0.664138087 |
| PCMTD1  | 0.000950049     | 0.01738474  | 0.664138087 |
| CCDC137 | 0.021684654     | 0.045893438 | 0.664138087 |
| OSBPL1A | 0.133962543     | 0.00184823  | 0.664138087 |
| CASP1   | 0.02979514      | 0.136784319 | 0.664138087 |
| CNIH4   | 0.042573238     | 0.091562103 | 0.664138087 |
| SLC44A3 | 0.042951569     | 0.109314715 | 0.664138087 |
| SVIL    | 0.09880353      | 0.00744657  | 0.664138087 |
| PRR14L  | 7.98983E-05     | 0.000151766 | 0.664138087 |
| REV1    | 0.094320184     | 0.049053682 | 0.664138087 |
| LAMA3   | 0.003305238     | 0.00728713  | 0.664138087 |
| CPSF7   | 0.034746982     | 0.15805174  | 0.664138087 |
| TIPARP-AS1 | 0.04084604  | 0.225200933 | 0.664138087 |
| EVA1C   | 0.02205835      | 0.09448299  | 0.664138087 |
| BAZ2B   | 0.11357168      | 0.035340148 | 0.664138087 |
| DDX5    | 0.000373853     | 0.000643108 | 0.664138087 |
| PDXK    | 0.016485541     | 0.047148368 | 0.664138087 |
| PCBP1   | 0.012832144     | 0.001537062 | 0.664138087 |
| TBC1D2B | 0.03774382      | 0.086030348 | 0.664138087 |
| KLF13   | 0.025049843     | 0.034807313 | 0.664138087 |
| MAPK14  | 0.000882969     | 0.007339969 | 0.664138087 |
| HIST1H2AE | 0.022166661 | 0.039274149 | 0.664138087 |
| AK4     | 0.024079969     | 0.16049007  | 0.664138087 |
| ZPR1    | 0.026272012     | 0.018847108 | 0.664138087 |
| VNN1    | 0.01105662      | 0.033708042 | 0.664138087 |
| PTK2B   | 0.002442155     | 0.056604828 | 0.664138087 |
| ARHGGEF5| 0.029350828     | 0.018682358 | 0.664138087 |
| TMTC3   | 0.004444782     | 0.015098965 | 0.664138087 |
| UQCCRF1 | 0.021715915     | 0.051869849 | 0.664138087 |
| TUBA1C  | 0.006508392     | 0.000422006 | 0.664138087 |
| R3HCC1L | 0.064419895     | 0.03268321  | 0.664138087 |
| ATL2    | 0.016625427     | 0.00193373  | 0.664138087 |
| RUFY3   | 0.001066068     | 0.003601403 | 0.664138087 |
| MTERF2  | 0.239003352     | 0.03306475  | 0.664138087 |
| CDC5L   | 0.000749975     | 0.000768494 | 0.664138087 |
| AES     | 0.02610831      | 0.001690797 | 0.664138087 |
| SPEN    | 0.017714702     | 0.03394279  | 0.664138087 |
| Gene   | Value1  | Value2  | Value3  |
|--------|---------|---------|---------|
| S100A3 | 0.038996911 | 0.104225562 | 0.679593162 |
| NDFIP1 | 0.04139245 | 0.013731528 | 0.679706409 |
| AP001157.1 | 0.019066434 | 0.03964072 | 0.681010134 |
| RARB   | 0.137701004 | 0.029149322 | 0.681423571 |
| ATF2   | 0.042879048 | 0.012348549 | 0.682371335 |
| LTA4H  | 0.00066948 | 0.099012886 | 0.682632881 |
| DDT    | 0.060661921 | 0.012327163 | 0.682818112 |
| GMEB1  | 0.040770539 | 0.115225326 | 0.683469239 |
| CIR1   | 0.004837011 | 0.00142731 | 0.683652726 |
| ARFIP2 | 0.008223789 | 0.03362269 | 0.683735281 |
| SLC38A7| 0.006150549 | 0.01600121 | 0.683820182 |
| RARB   | 0.137701004 | 0.029149322 | 0.683735281 |
| ATF2   | 0.042879048 | 0.012348549 | 0.682371335 |
| LTA4H  | 0.00066948 | 0.099012886 | 0.682632881 |
| DDT    | 0.060661921 | 0.012327163 | 0.682818112 |
| GMEB1  | 0.040770539 | 0.115225326 | 0.683469239 |
| CIR1   | 0.004837011 | 0.00142731 | 0.683652726 |
| ARFIP2 | 0.008223789 | 0.03362269 | 0.683735281 |
| SLC38A7| 0.006150549 | 0.01600121 | 0.683820182 |
| RARB   | 0.137701004 | 0.029149322 | 0.683735281 |
| ATF2   | 0.042879048 | 0.012348549 | 0.682371335 |
| LTA4H  | 0.00066948 | 0.099012886 | 0.682632881 |
| DDT    | 0.060661921 | 0.012327163 | 0.682818112 |
| GMEB1  | 0.040770539 | 0.115225326 | 0.683469239 |
| CIR1   | 0.004837011 | 0.00142731 | 0.683652726 |
| ARFIP2 | 0.008223789 | 0.03362269 | 0.683735281 |
| SLC38A7| 0.006150549 | 0.01600121 | 0.683820182 |
| RARB   | 0.137701004 | 0.029149322 | 0.683735281 |
| ATF2   | 0.042879048 | 0.012348549 | 0.682371335 |
| LTA4H  | 0.00066948 | 0.099012886 | 0.682632881 |
| DDT    | 0.060661921 | 0.012327163 | 0.682818112 |
| GMEB1  | 0.040770539 | 0.115225326 | 0.683469239 |
| CIR1   | 0.004837011 | 0.00142731 | 0.683652726 |
| ARFIP2 | 0.008223789 | 0.03362269 | 0.683735281 |
| SLC38A7| 0.006150549 | 0.01600121 | 0.683820182 |
| RARB   | 0.137701004 | 0.029149322 | 0.683735281 |
| ATF2   | 0.042879048 | 0.012348549 | 0.682371335 |
| LTA4H  | 0.00066948 | 0.099012886 | 0.682632881 |
| DDT    | 0.060661921 | 0.012327163 | 0.682818112 |
| GMEB1  | 0.040770539 | 0.115225326 | 0.683469239 |
| CIR1   | 0.004837011 | 0.00142731 | 0.683652726 |
| ARFIP2 | 0.008223789 | 0.03362269 | 0.683735281 |
| SLC38A7| 0.006150549 | 0.01600121 | 0.683820182 |
| RARB   | 0.137701004 | 0.029149322 | 0.683735281 |
| ATF2   | 0.042879048 | 0.012348549 | 0.682371335 |
| LTA4H  | 0.00066948 | 0.099012886 | 0.682632881 |
| DDT    | 0.060661921 | 0.012327163 | 0.682818112 |
| GMEB1  | 0.040770539 | 0.115225326 | 0.683469239 |
| CIR1   | 0.004837011 | 0.00142731 | 0.683652726 |
| ARFIP2 | 0.008223789 | 0.03362269 | 0.683735281 |
| SLC38A7| 0.006150549 | 0.01600121 | 0.683820182 |
| RARB   | 0.137701004 | 0.029149322 | 0.683735281 |
| ATF2   | 0.042879048 | 0.012348549 | 0.682371335 |
| LTA4H  | 0.00066948 | 0.099012886 | 0.682632881 |
| DDT    | 0.060661921 | 0.012327163 | 0.682818112 |
| GMEB1  | 0.040770539 | 0.115225326 | 0.683469239 |
| CIR1   | 0.004837011 | 0.00142731 | 0.683652726 |
| ARFIP2 | 0.008223789 | 0.03362269 | 0.683735281 |
| SLC38A7| 0.006150549 | 0.01600121 | 0.683820182 |
| RARB   | 0.137701004 | 0.029149322 | 0.683735281 |
| ATF2   | 0.042879048 | 0.012348549 | 0.682371335 |
| LTA4H  | 0.00066948 | 0.099012886 | 0.682632881 |
| Gene   | p-value | q-value | adj.p-value |
|--------|---------|---------|-------------|
| ATG5   | 0.021758438 | 0.093540077 | 0.698572158 |
| GBP4   | 0.02714344 | 0.002100397 | 0.69998465 |
| TNKS2  | 0.000297202 | 2.37233E-05 | 0.700155703 |
| EIF1   | 0.010935849 | 0.012453256 | 0.700393314 |
| ARGLU1 | 0.045500562 | 0.120651553 | 0.700463036 |
| ETFRF1 | 0.014566559 | 0.005969106 | 0.700476342 |
| NCBP2-AS2 | 0.025588986 | 0.038518394 | 0.700567593 |
| NDUFA6 | 0.011098675 | 0.017642555 | 0.700810798 |
| CASP10 | 0.039274427 | 0.007571489 | 0.701466995 |
| UBE2G2 | 0.01040953 | 0.138200594 | 0.701647974 |
| SERPINB9P1 | 0.00688366 | 0.05507837 | 0.701553507 |
| INTS4  | 0.016251233 | 0.008925091 | 0.701767685 |
| PNPLA6 | 0.045517034 | 0.161765386 | 0.70183788 |
| GEMIN8 | 0.02354461 | 0.0293215 | 0.701972154 |
| C1R    | 0.028471547 | 0.09989223 | 0.702942244 |
| TROVE2 | 0.014682097 | 0.002814908 | 0.703052426 |
| FIG4   | 0.01507288 | 0.09133709 | 0.70308739 |
| MED1   | 0.026638323 | 0.053722535 | 0.704049376 |
| LSM12  | 0.014435836 | 0.054922221 | 0.704124249 |
| NPLOC4 | 0.004317772 | 0.003606868 | 0.704317772 |
| TRIM47 | 0.048701637 | 0.087669428 | 0.705182884 |
| RPL13A | 0.090389657 | 0.03762182 | 0.705735338 |
| ILF3-DT | 0.02510304 | 0.00266312 | 0.705340183 |
| ZN587 | 0.017260834 | 0.01650883 | 0.705555079 |
| LHPP   | 0.112767412 | 0.047696221 | 0.706256768 |
| TRAPPC10 | 0.00661733 | 0.011671416 | 0.707807337 |
| ITGA2  | 0.011888862 | 0.016021586 | 0.708093972 |
| TNFRSF10A | 0.010573903 | 0.003713063 | 0.708307294 |
| CLTB   | 0.115270433 | 0.035476314 | 0.709300662 |
| RMDN2  | 0.045187947 | 0.08391044 | 0.709411732 |
| UBE2V1 | 0.047527628 | 0.016066339 | 0.709427641 |
| AFF4   | 0.001910032 | 0.003608219 | 0.709995024 |
| ZBTB38 | 0.015931854 | 0.04241009 | 0.710885784 |
| RALGAPB | 0.008374198 | 0.0040147 | 0.711011209 |
| MLLT1  | 0.011512195 | 0.064413219 | 0.711193211 |
| LGMN   | 0.006392093 | 0.006252459 | 0.711701385 |
| WDR45B | 0.003399944 | 0.000678777 | 0.711838535 |
| DHX8   | 0.041853618 | 0.015834407 | 0.712405698 |
| S100A10 | 0.02038061 | 0.01609648 | 0.712605633 |
| ZKSCAN1 | 0.005490527 | 0.023097912 | 0.712629811 |
| GPAT4  | 0.00205565 | 0.011490174 | 0.712712443 |
| OAS1   | 0.022972489 | 0.016796471 | 0.713052803 |
| Gene        | Value1       | Value2       | Value3       |
|-------------|--------------|--------------|--------------|
| C16orf58    | 0.090826756  | 0.020429179  | 0.713053298  |
| SLC17A9     | 0.131139954  | 0.025255907  | 0.713539002  |
| ELOVL7      | 0.038565262  | 0.037681762  | 0.71364178   |
| ZFP91       | 0.015359316  | 0.00211764   | 0.71370552   |
| SUPT5H      | 0.009500065  | 0.012000288  | 0.714039423  |
| ZSWIM4      | 0.001655211  | 0.00129029   | 0.714470141  |
| ZFAND5      | 0.005525005  | 0.001256344  | 0.71459693   |
| ZFY-AS1     | 0.004077003  | 0.02814183   | 0.715406223  |
| CD59        | 0.011951096  | 0.05057014   | 0.71620328   |
| SLU7        | 0.001750371  | 0.005239002  | 0.71623989   |
| MED19       | 0.067640117  | 0.037264975  | 0.71693983   |
| RBM5        | 0.028196371  | 0.02446215   | 0.71663176   |
| ANKEF1      | 0.099766262  | 0.37061553   | 0.71676289   |
| ZNF292      | 0.000683127  | 0.00715353   | 0.71679493   |
| KHDRBS3     | 0.049507824  | 0.029240836  | 0.716933142  |
| TEN1        | 0.009091419  | 0.001855726  | 0.716980489  |
| NAMPT       | 0.011951096  | 0.05057014   | 0.71720328   |
| AHDC1       | 0.004537946  | 0.0057836    | 0.71762158   |
| CDKN1A      | 0.000201201  | 3.69309E-05  | 0.717717205  |
| ZCCHC2      | 0.014641084  | 0.006436341  | 0.71782327   |
| HS3ST1      | 0.022077721  | 0.000831843  | 0.717845552  |
| AP1B1       | 0.012031236  | 0.004675674  | 0.719053396  |
| PLAUR       | 0.000457013  | 1.00427E-05  | 0.719115305  |
| KCTD10      | 0.045010695  | 1.28193214   | 0.719502373  |
| FAM96B      | 0.038874981  | 0.028979346  | 0.719601502  |
| MYH14       | 0.00033654   | 5.35792E-05  | 0.719893239  |
| CGAS        | 0.003224091  | 0.003967258  | 0.720004076  |
| ESPN        | 0.066153965  | 0.041263778  | 0.72007192   |
| RIPK3       | 0.005899443  | 0.020120639  | 0.720429567  |
| PRRG4       | 0.010878236  | 0.036785092  | 0.720572459  |
| DDX56       | 0.001275621  | 8.04964E-05  | 0.720860882  |
| MYH9        | 0.029240556  | 0.009427092  | 0.720993499  |
| MFSD5       | 0.001130553  | 0.00012243   | 0.721162316  |
| TBC1D9      | 0.102297796  | 0.038847133  | 0.721227839  |
| ARHGAP21    | 0.036156991  | 0.011132638  | 0.721231474  |
| AFAPI-AS1   | 0.009235192  | 0.003394865  | 0.721995623  |
| TUT4        | 0.030525588  | 0.026648712  | 0.722078888  |
| SAP30       | 0.000875545  | 0.001651551  | 0.722184307  |
| MRPL30      | 0.042040518  | 0.007570945  | 0.722925054  |
| RB1CC1      | 0.008260809  | 0.083696215  | 0.72321326   |
| MIF4GD      | 0.026046433  | 0.227010615  | 0.723581893  |
| IER5        | 0.092931971  | 0.018454519  | 0.723696352  |
| Gene   | OTUD5   | KTN1     | PLEKHB2  | FAF2     | SHLD1   | CAP1     | PXYLP1   | ATG3     | RAB7A    | SHISA5   | NT5E     | NAPRT    | ZNF500   | ARF3     | CAMK2G   | VPS28    | PDE12    | IPCEF1   | PGPEP1   | CDK7     | NORAD    | ATMIN    | EN2      | BIRC2    | AFDN     | DOK4     | CHD8     | TGOLN2   | CLUH     | SREK1P1  | CHURC1   | RNF38    | NEU1     | LAPT4A   | FAM210A  | THRAP3   | GRPEL1   | ZNF207   | TSNAX    | KIF3A    | TNFRSF14 | FUCA1    | RYK      |
|--------|---------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Gene       | EASE Score | p-value          | Adjusted p-value | FDR q-value |
|------------|------------|-----------------|------------------|-------------|
| HTATSF1    | 0.089045921| 0.031561621      | 0.740517023      |             |
| LCAT       | 0.031758192| 0.019049289      | 0.740610903      |             |
| ANTXR2     | 0.005900974| 0.007598471      | 0.74106328       |             |
| ALPK1      | 0.021580925| 0.017494602      | 0.741513265      |             |
| COX7A2     | 0.009775663| 0.000331013      | 0.741698033      |             |
| N4BP1      | 0.01149824 | 0.010579206      | 0.741874677      |             |
| ATP10B     | 0.006737541| 0.005679092      | 0.742764675      |             |
| HIP1R      | 0.017955997| 0.005393164      | 0.743421695      |             |
| SNRNP27    | 0.080587652| 0.017518226      | 0.744020712      |             |
| MXI1       | 0.011032752| 0.009278732      | 0.74442824       |             |
| FAM135A    | 0.000487875| 0.007193008      | 0.745343202      |             |
| ATP2A2     | 0.048538583| 0.020632494      | 0.745814088      |             |
| OGFR       | 0.060353088| 0.0298179        | 0.745840508      |             |
| FOXA2      | 0.110425569| 0.017711084      | 0.746867807      |             |
| AP1M2      | 0.087338616| 0.034887986      | 0.74753171       |             |
| UNC50      | 0.031759876| 0.016445472      | 0.748290545      |             |
| FAM3A      | 0.084436255| 0.040610811      | 0.748485185      |             |
| TIMM23     | 0.010986264| 0.010987674      | 0.749101079      |             |
| IKZF1      | 0.058136239| 0.004073728      | 0.749165614      |             |
| KLK8       | 0.099086971| 0.042891487      | 0.749783177      |             |
| NMI        | 8.33009E-05| 6.274E-05        | 0.751073256      |             |
| ATP5MD     | 0.025412565| 0.009513185      | 0.75174382       |             |
| TPD52      | 0.071747905| 0.042513285      | 0.752201697      |             |
| GPN2       | 0.034182706| 0.011215465      | 0.752351864      |             |
| ANKR13D    | 0.043459565| 0.112357315      | 0.752379716      |             |
| APOL6      | 0.004042814| 0.003411946      | 0.752520757      |             |
| MAFK       | 0.120198296| 0.042099277      | 0.752689541      |             |
| SEMA4C     | 0.022956362| 0.097468612      | 0.753516253      |             |
| AKNA       | 0.001084332| 0.000919192      | 0.754068083      |             |
| OTULIN     | 0.005175663| 0.004033261      | 0.755546921      |             |
| TMCO3      | 0.003016428| 0.00339507       | 0.755580049      |             |
| USP40      | 0.020185308| 0.008585538      | 0.755814387      |             |
| MIGA2      | 0.041732226| 0.013653946      | 0.756033112      |             |
| APOL1      | 0.003262793| 0.000255572      | 0.756478049      |             |
| MICU2      | 0.000534365| 0.008711437      | 0.756801735      |             |
| COX8A      | 0.193169647| 0.047834751      | 0.757756367      |             |
| FEM1C      | 0.095584215| 0.017226792      | 0.758883975      |             |
| PPPI       | 0.034156931| 0.060931764      | 0.759126263      |             |
| SPTLC2     | 0.057644485| 0.025473588      | 0.759548912      |             |
| HYAL1      | 0.022451613| 0.189275335      | 0.759731233      |             |
| AC016065.1 | 0.051395131| 0.04077816       | 0.760162465      |             |
| PLGRK1     | 0.009976706| 0.024623844      | 0.760246699      |             |
| NFKBIZ     | 0.002859031| 0.00351454       | 0.760522052      |             |
| Gene  | Fold Change | p-Value | p-Value Adjusted |
|-------|-------------|---------|------------------|
| PSMG2 | 0.014870066 | 0.027384423 | 0.76077753 |
| GABPB1 | 0.001183709 | 0.005089126 | 0.760941196 |
| TSPAN14 | 0.006125805 | 0.0063475 | 0.761410724 |
| HMG20A | 0.000117796 | 0.000951615 | 0.761093462 |
| MEF2A | 0.000715888 | 0.002734681 | 0.761410724 |
| RCE1 | 0.00685597 | 0.002186628 | 0.761410724 |
| SNX1 | 0.026374074 | 0.015380687 | 0.761503432 |
| PTGR1 | 0.027285819 | 0.014098122 | 0.762846826 |
| TIMP1 | 0.000389403 | 0.000271937 | 0.763800119 |
| SEMA7A | 0.03393048 | 0.045608321 | 0.763819438 |
| TMEM14A | 0.089250019 | 0.032563202 | 0.76385501 |
| FDSP | 0.081150285 | 0.025432039 | 0.764223649 |
| GHITM | 0.003884953 | 0.001398162 | 0.764277298 |
| THSD4 | 0.039736621 | 0.103199088 | 0.764588533 |
| CDS2 | 0.001136084 | 0.007776363 | 0.764710846 |
| ENAH | 0.056280392 | 0.042957669 | 0.76471984 |
| GPN3 | 0.079913733 | 0.046843886 | 0.765289263 |
| PCMT1 | 0.009043586 | 0.002847366 | 0.765400119 |
| ATP6V0E1 | 0.029002049 | 0.036627938 | 0.765581557 |
| AC020978.5 | 0.095317905 | 0.014948732 | 0.766283113 |
| ZNF608 | 0.022126309 | 0.01013844 | 0.766672428 |
| TATDN2 | 0.001791702 | 0.038764306 | 0.766831197 |
| RC3H1 | 0.002302486 | 0.005006383 | 0.766971974 |
| ZG16B | 0.003938576 | 0.010518225 | 0.768151385 |
| NECTIN3 | 0.033593233 | 0.006016848 | 0.769011824 |
| SMC6 | 0.09843238 | 0.007309483 | 0.76979284 |
| CCPG1 | 0.043821346 | 0.127618546 | 0.769800367 |
| PLBD1 | 0.0010362888 | 0.004272311 | 0.770174333 |
| ERO1A | 0.000742709 | 1.78417E-05 | 0.770517414 |
| MYO1C | 5.27371E-06 | 0.000284841 | 0.770586747 |
| IFT22 | 0.07161931 | 0.030823882 | 0.771363012 |
| MTMR14 | 0.019529929 | 0.03405011 | 0.772185772 |
| OSBPL3 | 0.020574779 | 0.009425562 | 0.772961622 |
| YKT6 | 0.004340612 | 0.002060712 | 0.773152519 |
| CCDC107 | 0.039390101 | 0.021577552 | 0.773344777 |
| LMF2 | 0.00014131 | 0.000178766 | 0.773673455 |
| BOK | 0.018918244 | 0.02456104 | 0.773836961 |
| ELOVL1 | 0.048194009 | 0.015065343 | 0.774684911 |
| AACS | 0.047107179 | 0.02462348 | 0.775016136 |
| NDOR1 | 0.181571994 | 0.011861118 | 0.775395408 |
| Gene    | Value1  | Value2 | Value3 |
|---------|---------|--------|--------|
| USF1    | 0.026371156 | 0.024816028 | 0.775906212 |
| SLC38A6 | 0.00741064  | 0.01984279  | 0.776377896 |
| MACF1   | 0.016257645 | 0.034077704 | 0.776655598 |
| DENND6A | 0.002298226 | 7.09075E-05 | 0.776655987 |
| PSM1D4  | 0.00421558  | 0.028855394 | 0.776734523 |
| AFF2    | 0.053261012 | 0.0289568   | 0.77746366  |
| FAM208A | 0.003277498 | 0.006942135 | 0.778747467 |
| BCL2L15 | 0.004932028 | 0.001422406 | 0.77890029  |
| ASXL2   | 0.002298226 | 7.09075E-05 | 0.779128099 |
| ARPC5   | 0.0205248   | 0.0141419   | 0.77926217  |
| UROS    | 0.000615285 | 0.000119157 | 0.77956111  |
| ZNF410  | 0.040291118 | 0.139648087 | 0.78036738  |
| PTPN12  | 0.011375177 | 0.009562691 | 0.78083408  |
| MIR222HG| 0.019957978 | 0.015833363 | 0.781327739 |
| DNAJC8  | 0.034580483 | 0.018038569 | 0.782127594 |
| WDR1    | 0.019663834 | 0.014034073 | 0.782334867 |
| LINS1   | 0.002698065 | 0.00933882  | 0.782449692 |
| MED8    | 0.028035202 | 0.071549131 | 0.782800006 |
| ZNF574  | 0.049660502 | 0.032637615 | 0.782837277 |
| SYNC    | 0.081378223 | 0.037764445 | 0.784431508 |
| MISP3   | 0.091423268 | 0.032227771 | 0.784457729 |
| EEF1E1  | 0.030118114 | 0.036591417 | 0.784976149 |
| MAGED2  | 0.022239881 | 0.026474013 | 0.78536822  |
| DDX59   | 0.063891153 | 0.03908787  | 0.7856865   |
| KIF1B   | 0.029973112 | 0.041548845 | 0.785989113 |
| FUBP1   | 0.010054038 | 0.002961247 | 0.78612332  |
| ATP6AP1 | 0.010347071 | 0.006759029 | 0.78619807  |
| ZBTB41  | 0.031191037 | 0.098887971 | 0.786228286 |
| SERINC3 | 0.009030597 | 0.011816799 | 0.786669426 |
| TMUB1   | 0.021931924 | 0.006357019 | 0.787405368 |
| GID8    | 0.011773542 | 0.015820924 | 0.78789066  |
| CERK    | 0.014726531 | 0.029915084 | 0.787958435 |
| ABLIM3  | 0.028519037 | 0.039359072 | 0.788259647 |
| PPFIBP2 | 0.059998875 | 0.021944117 | 0.788518881 |
| LLRC14  | 0.046865056 | 0.015783377 | 0.788542371 |
| LAMB3   | 0.010295971 | 0.009404174 | 0.790207885 |
| SCAMP1  | 0.093492986 | 0.04505982  | 0.790429756 |
| TFB1M   | 0.009283707 | 0.013087166 | 0.79044013  |
| SLC35A2 | 0.028035107 | 0.014821754 | 0.790569453 |
| IL12RB1 | 0.036830228 | 0.067762526 | 0.790748927 |
| GLMP    | 0.00117917  | 3.59317E-05 | 0.790962835 |
| DDX3X   | 0.048731557 | 0.033583526 | 0.79104464  |
| TRIM11  | 0.008103048 | 0.003303344 | 0.791061922 |
| Gene     | Fold Change | p-value  | q-value |
|----------|-------------|----------|---------|
| PDHX     | 0.089657816 | 0.04816531 | 0.791218939 |
| RIT1     | 0.013208102 | 0.130467251 | 0.791295919 |
| BAIAP2-DT| 0.018734677 | 0.01172179 | 0.791719806 |
| PLEKHA1  | 0.116475781 | 0.026590387 | 0.791994986 |
| RNF157   | 0.041002621 | 0.225200933 | 0.792232516 |
| HS6ST1   | 0.007523549 | 0.004392908 | 0.792362745 |
| KLF10    | 0.064376165 | 0.015463134 | 0.793613663 |
| ELF2     | 2.58034E-05 | 7.02319E-06 | 0.7937023 |
| HECTD4   | 0.00480746  | 0.007676202 | 0.794478472 |
| RARS     | 0.005245324 | 0.000557917 | 0.794932595 |
| CHD6     | 0.03509563  | 0.076332438 | 0.794603404 |
| SF3B1    | 0.027323446 | 0.016531984 | 0.794999499 |
| ZNF337   | 0.107477277 | 0.033965502 | 0.795300276 |
| TMCO1    | 0.006632379 | 0.034589595 | 0.795602476 |
| NEPRO    | 0.042439997 | 0.083090496 | 0.796218405 |
| ZNF571   | 0.045234882 | 0.034307548 | 0.796541263 |
| HIPK2    | 0.043487664 | 0.132160428 | 0.796629362 |
| NSMAF    | 0.10050145  | 0.007734106 | 0.79729108 |
| MT-ND5   | 0.000391247 | 0.00202847 | 0.797428632 |
| ITSN1    | 0.012366375 | 0.003364301 | 0.798127099 |
| ATP6V1A  | 0.027001697 | 0.005322725 | 0.798152864 |
| RPP25    | 0.107658343 | 0.012674433 | 0.798173044 |
| INSIG2   | 0.017244043 | 0.019103484 | 0.798392259 |
| HS3ST3B1 | 0.046602543 | 0.225200933 | 0.798424302 |
| KRT17    | 0.012188991 | 0.019103484 | 0.79903771 |
| SINHCAF  | 0.002814047 | 0.014347097 | 0.799869848 |
| ZNF668   | 0.083942543 | 0.010680942 | 0.800256123 |
| TRPM4    | 0.052116464 | 0.008954851 | 0.800261872 |
| FOCAD    | 0.00993048  | 0.029830108 | 0.800647192 |
| DPP9     | 0.040078023 | 0.011353367 | 0.801297701 |
| DDX42    | 0.008164491 | 0.008800637 | 0.80223014 |
| MRPS22   | 0.042837404 | 0.005651373 | 0.802333394 |
| HSD3B7   | 0.004461614 | 0.003616003 | 0.802367695 |
| NDUUFV2  | 0.002747529 | 0.00700489 | 0.802483331 |
| RBSN     | 0.041374576 | 0.049507206 | 0.803467979 |
| PDIA3    | 0.025184244 | 0.020563037 | 0.803974666 |
| HSPBP1   | 0.042810249 | 0.056699406 | 0.804567283 |
| TIMM17B  | 0.024926196 | 0.010613028 | 0.804780663 |
| RAB1B    | 0.000921169 | 0.001419784 | 0.805879293 |
| SAR1A    | 0.042933124 | 0.005607552 | 0.806368636 |
| TMEM267  | 0.050230561 | 0.032051111 | 0.806660267 |
| CHCHD1   | 0.080599179 | 0.039507757 | 0.807519041 |
| Gene   | Value1 | Value2 | Value3 |
|--------|--------|--------|--------|
| ARSK   | 0.095728594 | 0.033309524 | 0.807599804 |
| PTGFRN | 0.003181988 | 0.018650493 | 0.807859365 |
| ACOT9  | 0.018780082 | 0.035725887 | 0.807970847 |
| NBAS   | 0.048688627 | 0.250110237 | 0.808695407 |
| STMP1  | 0.009651846 | 0.013654306 | 0.809024947 |
| EXOSC7 | 0.029505462 | 0.017844727 | 0.809534085 |
| HNRNPUL1| 0.07674295 | 0.044726661 | 0.809742116 |
| TRIM8  | 0.003424279 | 0.007413130 | 0.811702195 |
| NFKBID | 0.090495213 | 0.028219711 | 0.811930984 |
| TMEM65 | 0.077514353 | 0.014512354 | 0.812422958 |
| GLTPD2 | 0.054460980 | 0.047192018 | 0.812992495 |
| SDF4   | 0.000232092 | 8.97609E-06 | 0.813549293 |
| CAPRIN2| 0.193580546 | 0.006811906 | 0.814473518 |
| FBXO7  | 0.054867265 | 0.025536512 | 0.814640379 |
| PAK2   | 0.001705593 | 0.001903185 | 0.815668131 |
| DHX32  | 0.016405082 | 0.003583405 | 0.815728280 |
| ZNF408 | 0.011264296 | 0.004803764 | 0.815945759 |
| LNPEP  | 0.015383064 | 0.008451353 | 0.816271274 |
| CCDC66 | 0.138985971 | 0.039551496 | 0.816303867 |
| SH3BP5L| 0.041037929 | 0.044426147 | 0.816728637 |
| MAP4K4 | 0.000478998 | 0.000677031 | 0.81678851 |
| RAB11FIP4| 0.008251776 | 0.001322976 | 0.816980389 |
| PLEKHA8| 0.027790798 | 0.074594402 | 0.818158887 |
| NLK    | 0.008570017 | 0.005808726 | 0.818166605 |
| MAP3K13| 0.018977546 | 0.00698072 | 0.818267139 |
| REEP3  | 0.017746441 | 0.006540343 | 0.818384349 |
| ADAR   | 4.58841E-05 | 6.12643E-06 | 0.8188802 |
| RAF1   | 0.018242994 | 0.01546923 | 0.819094023 |
| FIGNL1 | 0.055189037 | 0.021238567 | 0.819163865 |
| LPP    | 2.02188E-05 | 0.000224195 | 0.819172529 |
| NBN    | 0.019278538 | 0.029901783 | 0.819335226 |
| IL2RG  | 0.033677831 | 0.0264945 | 0.819703121 |
| PHF10  | 0.111217511 | 0.026018608 | 0.820132643 |
| CNOT6  | 0.00798748 | 0.033409258 | 0.820450328 |
| BTBD6  | 0.043580182 | 0.046002494 | 0.820901043 |
| TNRC6B | 0.012734634 | 0.023821185 | 0.821669644 |
| APEH   | 0.049348622 | 0.031344665 | 0.821855446 |
| CCDC47 | 0.018899137 | 0.016718944 | 0.822051406 |
| SFT2D3 | 0.003128011 | 4.20253E-05 | 0.822187477 |
| SIL1   | 4.31262E-05 | 0.000357805 | 0.822325857 |
| C1orf131| 0.004537489 | 0.003365386 | 0.822826746 |
| CTDSPL2| 0.003462389 | 0.010612435 | 0.823921505 |
| KLHL21 | 0.05392179 | 0.04608117 | 0.824080322 |
| Gene Symbol | Expression Level | Fold Change | P-Value |
|-------------|-----------------|-------------|---------|
| MED9        | 0.040487982     | 0.035335691 | 0.824095719 |
| TPRG1L      | 0.0077649       | 0.007119853 | 0.82437976  |
| ARMT1       | 0.022686992     | 0.002931359 | 0.824466176 |
| ENTPD4      | 0.044099907     | 0.092130604 | 0.825328438 |
| CUL1        | 0.042217966     | 0.023454846 | 0.825720903 |
| UBXN8       | 0.01585664      | 0.096805426 | 0.825781984 |
| TCG135791.1 | 0.096786338     | 0.045082921 | 0.82578703  |
| ESAM        | 0.046881596     | 0.014940177 | 0.827092348 |
| DENND5B     | 0.005526804     | 0.027933545 | 0.82793629  |
| ELAC2       | 0.023511457     | 0.047152987 | 0.828134729 |
| TCTEX1D4    | 0.044940073     | 0.046226933 | 0.828704766 |
| COL9A2      | 0.016712904     | 0.012834262 | 0.829137353 |
| HIF1A       | 0.003099038     | 0.000999315 | 0.829516059 |
| N4BP2L2     | 0.013143899     | 0.010958525 | 0.829992615 |
| TNS3        | 0.071282587     | 0.028041381 | 0.83007257  |
| CSNK1G1     | 0.023643643     | 0.003467568 | 0.83097968  |
| ONECUT3     | 0.066463669     | 0.019340991 | 0.831032214 |
| PHLPP2      | 0.096298499     | 0.034966607 | 0.831322003 |
| ZNF789      | 0.215194124     | 0.03750847  | 0.831397078 |
| SSR1        | 0.019482726     | 0.027318744 | 0.831621081 |
| ABRAXAS2    | 0.03033092      | 0.038878558 | 0.831769177 |
| LRP12       | 0.239003352     | 0.035805983 | 0.831813121 |
| UCKL1       | 0.00620352      | 0.012802103 | 0.83194132  |
| EPAS1       | 0.02793867      | 0.020177337 | 0.832131781 |
| AL450998.2  | 0.022063752     | 0.002760566 | 0.832263937 |
| GFPT1       | 0.018434452     | 0.001698878 | 0.832321507 |
| SLC25A28    | 0.013894642     | 0.013218392 | 0.832443032 |
| EPS15L1     | 0.015026653     | 0.023726663 | 0.833400768 |
| MSRB1       | 0.025701754     | 0.023220067 | 0.833445944 |
| FOXD2       | 0.094893311     | 0.044179871 | 0.835865011 |
| SMIM29      | 0.037022805     | 0.03366951  | 0.835900296 |
| CTU1        | 0.001584158     | 0.00618786  | 0.836522578 |
| IL6ST       | 0.025192766     | 0.020918061 | 0.836945403 |
| METTL13     | 0.00596319      | 0.018872792 | 0.83725046  |
| KYAT3       | 0.058072734     | 0.012266164 | 0.83826479  |
| MGMT1       | 0.006233624     | 0.003347861 | 0.838809404 |
| GCC2        | 0.009308032     | 0.003548314 | 0.838906052 |
| SH2D4A      | 0.001805437     | 0.000117276 | 0.839217609 |
| ACSL5       | 0.000423409     | 0.000153758 | 0.839472469 |
| TFE3        | 0.008031872     | 0.005384174 | 0.840505539 |
| QRSL1       | 0.053362957     | 0.028885547 | 0.840754378 |
| LGA638      | 0.003037867     | 0.003416732 | 0.841030789 |
| EIPR1       | 0.048067268     | 0.047829777 | 0.841108159 |
| Gene       | Value1  | Value2  | Value3  |
|------------|---------|---------|---------|
| FBXO21     | 0.040920793 | 0.086892641 | 0.8413698 |
| CTBS       | 0.040965414  | 0.025836966 | 0.84164684 |
| KIAA1217   | 0.001799877  | 0.000390153  | 0.842093617 |
| PNRC2      | 0.025342713  | 0.012893938  | 0.842260569 |
| MCM3AP     | 0.014246042  | 0.017967367  | 0.844585118 |
| FBXW7      | 0.02851651   | 0.011501937  | 0.84587641 |
| CDR2       | 0.004081765  | 0.004135951  | 0.84626985 |
| SYTL4      | 0.007900944  | 0.001393066  | 0.84664684 |
| C1D        | 0.080789415  | 0.044268782  | 0.847066428 |
| SECISBP2L  | 0.042839235  | 0.035579957  | 0.847626104 |
| PAK4       | 0.022369323  | 0.008759701  | 0.84792773 |
| SMIM31     | 0.024333452  | 0.009667156  | 0.84792773 |
| MAP4       | 0.027681198  | 0.048559588  | 0.848092773 |
| DDX41      | 0.014565454  | 0.010697892  | 0.848203833 |
| TMSB10     | 0.036592257  | 0.007186683  | 0.848645585 |
| FOXO3      | 0.005660168  | 0.001509118  | 0.84891728 |
| GFM1       | 0.021454893  | 0.008775102  | 0.849500718 |
| CYB561     | 0.016889664  | 0.034796653  | 0.850338857 |
| SRP14      | 0.005050569  | 0.000971308  | 0.85050762 |
| PYROX1D1   | 0.022778836  | 0.063528777  | 0.85065051 |
| TMEM187    | 0.031718745  | 0.034770766  | 0.85072977 |
| BZW2       | 0.018736478  | 0.02276002   | 0.85149878 |
| LRRCS6     | 0.054837683  | 0.031770359  | 0.85166992 |
| IFIT3      | 0.008603751  | 0.000472383  | 0.85177177 |
| PLEKHM2    | 0.029559585  | 0.024831651  | 0.851950857 |
| TBCCD1     | 0.049455907  | 0.082979484  | 0.852200068 |
| MOB1A      | 0.012733459  | 0.002706113  | 0.852554045 |
| LPIN1      | 0.043145861  | 0.027058026  | 0.852826967 |
| GTF2B      | 0.016822087  | 0.016076492  | 0.853166011 |
| GGA1       | 0.002760779  | 0.004798893  | 0.853260829 |
| TMEM120A   | 0.024399559  | 0.007255391  | 0.854845763 |
| CUL2       | 0.014109448  | 0.018252628  | 0.854907396 |
| TMX1       | 0.013223774  | 0.005344472  | 0.85530728 |
| DCTN6      | 0.046130787  | 0.018104261  | 0.85604721 |
| EIF2B1     | 0.012329616  | 0.013943523  | 0.856255171 |
| STK38      | 0.062593383  | 0.045308233  | 0.85658139 |
| CSNK1D     | 0.069217359  | 0.028772474  | 0.856662701 |
| TTC13      | 0.027934829  | 0.087657242  | 0.857636629 |
| ANKLE2     | 0.029271937  | 0.004234144  | 0.858117171 |
| UTP4       | 0.084588491  | 0.036984353  | 0.858238842 |
| SOCS3      | 0.007832434  | 0.004197207  | 0.859772372 |
| TNFAIP3    | 0.002379558  | 0.00177293   | 0.860011001 |
| TBX15      | 0.04678759   | 0.043164994  | 0.860665837 |
| Gene     | Value 1  | Value 2  | Value 3  |
|----------|----------|----------|----------|
| RTRAF    | 0.043806934 | 0.021605888 | 0.861120586 |
| LYRM2    | 0.029423781 | 0.04657634  | 0.861177408 |
| IL23A    | 0.028862603 | 0.021371434 | 0.86131475  |
| UBE2K    | 0.00015646  | 0.000139779 | 0.861533422 |
| RPS27    | 0.026919641 | 0.02090878  | 0.861665633 |
| IFT52    | 0.011498177 | 0.01036617  | 0.862006699 |
| ARMCX3   | 0.01921373  | 0.032356329 | 0.862636408 |
| IRGQ     | 0.02796193  | 0.037584364 | 0.862879498 |
| NSD3     | 0.02457907  | 0.00382595  | 0.862939748 |
| HDDC3    | 0.074640871 | 0.039777684 | 0.863153017 |
| CEMIP2   | 0.000070144 | 0.000247259 | 0.863486027 |
| NOC2L    | 0.007407136 | 0.013084309 | 0.864707579 |
| ATP2C1   | 0.025011053 | 0.030327155 | 0.865062344 |
| TAPBPL   | 0.022887359 | 0.011414009 | 0.86513134  |
| LRG1     | 0.046740047 | 0.04052343  | 0.865192678 |
| FUS      | 0.02776995  | 0.018043447 | 0.86521032  |
| PPP1R15B | 0.040454581 | 0.0805694   | 0.866257579 |
| ZNF33B   | 0.017949779 | 0.00660148  | 0.866599543 |
| PIGG     | 0.023911238 | 0.020772269 | 0.866784339 |
| PQLC3    | 0.035642754 | 0.03877284  | 0.866885066 |
| CDC42EP2 | 0.022720357 | 0.006794926 | 0.867054571 |
| C4orf19  | 0.028684052 | 0.01182883  | 0.867078665 |
| CSNK1G2  | 0.00379295  | 0.003270055 | 0.867146623 |
| CXorf40B | 0.04049688  | 0.039351533 | 0.867373762 |
| ORM1D3   | 0.032076112 | 0.00209323  | 0.867818603 |
| SLC49A3  | 0.007515151 | 0.00210133  | 0.867969879 |
| ACTR2    | 0.020932158 | 0.009896206 | 0.869383666 |
| USP33    | 0.007468256 | 0.005359502 | 0.870377771 |
| SPRTN    | 0.031376835 | 0.011663932 | 0.870595995 |
| MAGED1   | 0.048394474 | 0.212449905 | 0.870975485 |
| LAMP1    | 0.058375388 | 0.49574769  | 0.87108582  |
| SEPT10   | 0.055291292 | 0.03924803  | 0.871786111 |
| ZNF800   | 0.019550541 | 0.027501665 | 0.87196798 |
| DDX19B   | 0.000425924 | 0.01277092  | 0.872636898 |
| ZBTB34   | 0.048084858 | 0.052635241 | 0.872881323 |
| RNF44    | 0.002667168 | 0.005042918 | 0.873279603 |
| LGALS3   | 0.01659196  | 0.009822345 | 0.873466459 |
| DBR1     | 0.081842479 | 0.017447407 | 0.873688626 |
| EMC10    | 0.015213274 | 0.009459925 | 0.87372245  |
| STRN3    | 0.019293266 | 0.015790301 | 0.874343464 |
| EAPP     | 0.000649387 | 0.000127667 | 0.875146435 |
| Gene   | Fold Change | P-Value    | q-Value   |
|--------|-------------|------------|-----------|
| RBPJ   | 0.016091536 | 0.026965709 | 0.875192865 |
| NMD3   | 0.022051548 | 0.025021   | 0.875260563 |
| MAP3K9 | 0.035196403 | 0.092663426 | 0.875463179 |
| IER3   | 0.004096365 | 0.012078159 | 0.875554525 |
| CPTP   | 0.126938974 | 0.041501202 | 0.875590241 |
| RTN4   | 0.001764593 | 0.001044741 | 0.875932106 |
| XPO4   | 0.074373385 | 0.005662621 | 0.876824675 |
| ELOB   | 0.024912479 | 0.012167781 | 0.876902923 |
| ARV1   | 0.036581329 | 0.051391985 | 0.877042822 |
| CLOCK  | 0.021939451 | 0.011844585 | 0.877556147 |
| MAU2   | 0.011923355 | 0.001151423 | 0.877589547 |
| BLOC1S3| 0.177564    | 0.034600168 | 0.87738645 |
| NRIIP3 | 0.005917146 | 0.00228875  | 0.877925856 |
| CPAP   | 0.09294358  | 0.02976267  | 0.878060365 |
| KIZ    | 0.029739834 | 0.039393046 | 0.878551173 |
| BRCA2  | 0.042994299 | 0.0296533   | 0.878782118 |
| CASK   | 0.024736268 | 0.029562313 | 0.879776297 |
| MBAT7  | 0.024892922 | 0.027465615 | 0.879962976 |
| PLAGL1 | 0.002472478 | 0.000344591 | 0.880042399 |
| AIDA   | 0.003201706 | 0.000257494 | 0.880207929 |
| IGF8   | 0.022241756 | 0.022339642 | 0.880309442 |
| UGP2   | 0.019991648 | 0.01979542  | 0.88021855  |
| ZFYVE21| 0.000503166 | 3.25043E-05 | 0.88212067 |
| ATP6AP2| 0.034068028 | 0.038688719 | 0.882306962 |
| CDC23  | 0.007062478 | 0.068167742 | 0.882535509 |
| SUN1   | 0.079660536 | 0.038199481 | 0.882677485 |
| MAPK6  | 0.012758723 | 0.009006891 | 0.882856147 |
| TAOK1  | 0.00596626 | 0.003006679 | 0.882950577 |
| NAA25  | 0.039352052 | 0.05157767  | 0.884146639 |
| MXD1   | 0.000920513 | 0.000119275 | 0.88433638 |
| CTPS2  | 0.008154518 | 0.01994273  | 0.884380427 |
| CCR4   | 0.146358577 | 0.033346046 | 0.884640139 |
| ZBTB44 | 0.002919666 | 0.00094658  | 0.885073651 |
| HMCN2  | 0.08138102  | 0.016613383 | 0.885217541 |
| RPS11  | 0.035646451 | 0.035700417 | 0.886016036 |
| C1RL   | 0.208669878 | 0.025737778 | 0.886242199 |
| PTGES3 | 0.020628521 | 0.016463467 | 0.886394147 |
| GSK3A  | 0.000115936 | 5.53724E-05 | 0.886553597 |
| ISOC1  | 0.048532948 | 0.007324834 | 0.88759689 |
| EMC6   | 0.032674779 | 0.006864031 | 0.888446777 |
| AC074117.1| 0.046135816 | 0.043982682 | 0.888464294 |
| EMC4   | 0.003948253 | 0.004881412 | 0.888608031 |
| WDR72  | 0.031449266 | 0.041328052 | 0.888741422 |
| Gene         | Value1  | Value2  | Value3  |
|--------------|---------|---------|---------|
| TMEM170A     | 0.044257407 | 0.075021892 | 0.888973985 |
| SBDS         | 0.006975954  | 0.002129703  | 0.889560582  |
| SASH1        | 0.086717627   | 0.038744604  | 0.889701483   |
| ATP6V1G1     | 0.00531204    | 0.00267874   | 0.889745115   |
| ZNF317       | 0.040765338   | 0.02113729   | 0.890018026   |
| DDI4         | 0.04273565    | 0.042692271  | 0.890558096   |
| LRRC27       | 0.029900313   | 0.041875054  | 0.891446553   |
| AL133453.1   | 0.002131305   | 0.002205448  | 0.891752849   |
| RBPMs        | 0.087014845   | 0.043081953  | 0.892740078   |
| POFUT1       | 0.027647092   | 0.059386089  | 0.893331737   |
| HDGF         | 0.01891064    | 0.017719323  | 0.893958757   |
| ROCK2        | 0.123945895   | 0.04136989   | 0.89415634    |
| LONP2        | 0.02129393    | 0.007388613  | 0.894226553   |
| ORMID2       | 0.062608606   | 0.017859343  | 0.894382514   |
| ITGB1        | 0.014027855   | 0.001544267  | 0.895394525   |
| PPI1R9A      | 0.078142914   | 0.036775047  | 0.895707808   |
| STAR3D3      | 0.038323761   | 0.01794664   | 0.896310903   |
| LINC00526    | 0.016478379   | 0.082914837  | 0.896348652   |
| ARL4C        | 0.005712116   | 2.1583E-06   | 0.896568409   |
| BAZ1A        | 0.00060313    | 0.001998961  | 0.897302271   |
| GBP2         | 0.015429783   | 0.004903051  | 0.897722163   |
| ZKSCAN4      | 0.047537361   | 0.099594649  | 0.897918256   |
| PERP         | 0.021961112   | 0.000459293  | 0.898230479   |
| RMND5B       | 0.009111277   | 0.016074628  | 0.899143033   |
| RUNX2        | 0.076855128   | 0.020758182  | 0.899246331   |
| CXCL2        | 0.027882093   | 0.15275812   | 0.899607934   |
| GRB2         | 0.01716952    | 0.040481488  | 0.900081177   |
| SF3B6        | 0.028647526   | 0.016966073  | 0.900092868   |
| LETM1        | 0.022619405   | 0.030691608  | 0.90072185    |
| MOGS         | 0.00987244    | 0.003237727  | 0.901020335   |
| MRPS6        | 0.019340328   | 0.015650353  | 0.90113505    |
| DDX27        | 0.005136443   | 0.001974125  | 0.901808391   |
| C9orf78      | 0.043483489   | 0.041745119  | 0.901989539   |
| DDX39B       | 0.039726753   | 0.04572466   | 0.902971278   |
| MAP2K7       | 0.044679919   | 0.044686235  | 0.903355776   |
| MLXIP        | 0.020402076   | 0.005174539  | 0.903621272   |
| LLGL2        | 0.012144572   | 0.001978089  | 0.904629413   |
| SLC50A1      | 0.000162607   | 0.002878666  | 0.904787781   |
| NUP214       | 0.058142638   | 0.032224283  | 0.905254852   |
| WAPL         | 0.037516435   | 0.021040562  | 0.905325196   |
| NR3C1        | 0.099034086   | 0.048540241  | 0.906108404   |
| COG3         | 0.0414493     | 0.067083566  | 0.90621338    |
| RPL7         | 0.121573064   | 0.049594745  | 0.906707793   |
| Gene     | Value1  | Value2  | Value3  |
|----------|---------|---------|---------|
| YAE1D1   | 0.02549464 | 0.015570061 | 0.907292953 |
| BORCS6   | 0.04805396 | 0.056862976 | 0.907332451 |
| TRAF3IP2 | 0.010988215 | 0.007793526 | 0.907390306 |
| C6orf226 | 0.02118702 | 0.020464701 | 0.907611789 |
| DDX60    | 0.003107509 | 0.002918127 | 0.908799354 |
| PHACTR4  | 0.002303992 | 0.016848813 | 0.909054107 |
| GABRE    | 0.043543043 | 0.033119824 | 0.909067721 |
| CLSTN1   | 0.016799394 | 0.011272173 | 0.909229095 |
| IGLC2    | 0.03952443 | 0.065725628 | 0.91031252 |
| PEX2     | 0.017320022 | 0.043598203 | 0.910412882 |
| ACTA2    | 0.022311669 | 0.014785404 | 0.910449028 |
| AP2A1    | 0.054088511 | 0.016848813 | 0.910641225 |
| SNRPA1   | 0.019900144 | 0.020396835 | 0.911174872 |
| ZC3HAV1  | 0.00698887 | 0.006247634 | 0.911566769 |
| RTN4IP1  | 0.01910085 | 0.126972876 | 0.912007834 |
| HBB      | 0.041043502 | 0.050799283 | 0.91280833 |
| MELTF    | 0.031529404 | 0.034000861 | 0.913200044 |
| CAST     | 0.012433838 | 0.008741771 | 0.913717171 |
| DVL1     | 0.000265183 | 1.00743E-06 | 0.913943309 |
| CSTF1    | 0.021018323 | 0.013387166 | 0.913953275 |
| MIA3     | 0.061698465 | 0.035616244 | 0.914306892 |
| STK19    | 0.018642907 | 0.007397585 | 0.914825556 |
| TAPBP    | 0.002743243 | 0.002990515 | 0.91502242 |
| DNAJB14  | 0.011475289 | 0.012691341 | 0.915603338 |
| ETV3     | 0.000686858 | 0.000769928 | 0.915979022 |
| DUSP18   | 0.026516944 | 0.025617486 | 0.915937014 |
| LEPROT1  | 0.035753392 | 0.009835659 | 0.917484246 |
| MBTD1    | 0.034232484 | 0.00886298 | 0.917607299 |
| HNRNPM   | 0.009409408 | 0.002990406 | 0.917780822 |
| WASHC3   | 0.000993962 | 0.001880795 | 0.918594966 |
| PEAK1    | 0.005308572 | 0.001258632 | 0.919328377 |
| SMG1     | 0.020518846 | 0.028663862 | 0.91941574 |
| RIPK2    | 0.043599554 | 0.03326369 | 0.919569327 |
| EWSR1    | 0.004018387 | 0.002554474 | 0.919573528 |
| EIF3H    | 0.009321882 | 0.002730767 | 0.919628773 |
| PPRC1    | 0.031347113 | 0.045985575 | 0.920724415 |
| AC073111.5 | 0.034113679 | 0.075282134 | 0.92218265 |
| ZNF780A  | 0.135562538 | 0.033793069 | 0.923282063 |
| PSMC1    | 0.021355587 | 0.028479474 | 0.923422769 |
| SYNJ2    | 0.001046778 | 0.003594884 | 0.923567445 |
| MOCS3    | 0.043726412 | 0.112109775 | 0.923747588 |
| MAML2    | 0.024104302 | 0.008192411 | 0.924038572 |
| MZF1     | 0.068417061 | 0.044104804 | 0.924350456 |
| Gene      | Value1  | Value2  | Value3  |
|-----------|---------|---------|---------|
| ETV6      | 0.001149822 | 0.006168086 | 0.924388345 |
| ZDHHC9    | 0.023082499 | 0.026324095 | 0.924397127 |
| COPB2     | 0.030607181 | 0.017051983 | 0.924403075 |
| DICER1    | 0.024088116 | 0.01543019 | 0.924717244 |
| KDM5A     | 0.108184731 | 0.049564121 | 0.924831273 |
| DDA1      | 0.005849029 | 0.009165507 | 0.92494684 |
| RPS27L    | 0.03943196 | 0.024976584 | 0.925430906 |
| SLC12A6   | 0.012201538 | 0.009579596 | 0.925554464 |
| ERBB3     | 0.024088116 | 0.01543019 | 0.924717244 |
| EPPK1     | 0.001676456 | 4.45119E-05 | 0.927714226 |
| SWI5      | 0.026903683 | 0.116050408 | 0.927721691 |
| PLPP3     | 0.06173571 | 0.009057278 | 0.927845185 |
| DCAF7     | 0.005624133 | 0.010326298 | 0.927871225 |
| ZNF451    | 0.029647496 | 0.017609475 | 0.927906325 |
| CD47      | 0.030220253 | 0.017219155 | 0.928222499 |
| FNB4      | 0.00749504 | 0.015397056 | 0.928345913 |
| TAOK3     | 0.022096301 | 0.008400539 | 0.928576238 |
| RTCB      | 0.054166924 | 0.018779355 | 0.928976071 |
| ARID1B    | 0.021538645 | 0.016611017 | 0.929243869 |
| DCP1A     | 0.004345005 | 0.023498829 | 0.931281044 |
| CAV2      | 0.071601903 | 0.045266655 | 0.93155116 |
| GTPBP6    | 0.070325902 | 0.04975468 | 0.931774983 |
| CEP104    | 0.001840444 | 0.008196281 | 0.931816363 |
| FXD5      | 0.006562124 | 0.003419969 | 0.933359902 |
| EBP1L1    | 0.027598852 | 0.006164065 | 0.9343827 |
| CABIN1    | 0.027214439 | 0.025917236 | 0.934467005 |
| ZBTB20    | 0.013780114 | 0.035890393 | 0.934743313 |
| VTI1B     | 0.027385021 | 0.010760365 | 0.934880168 |
| OTUD1     | 0.008821132 | 0.005317909 | 0.93543876 |
| DST       | 0.012802557 | 0.00088734 | 0.935861356 |
| PC1M1     | 0.003594682 | 0.00355208 | 0.93586916 |
| ERAP1     | 0.015094061 | 0.000887041 | 0.93609639 |
| ZCCHC3    | 0.032817882 | 0.061098726 | 0.936278949 |
| OAF       | 0.072631389 | 0.0396982 | 0.936320501 |
| EIF1B     | 0.007778713 | 0.004324106 | 0.938111029 |
| HNRNPK    | 0.008549245 | 0.00951555 | 0.938166974 |
| METRN     | 0.00155388 | 0.002299155 | 0.938564564 |
| NDUFC1    | 0.026336867 | 0.046831893 | 0.939140546 |
| ESCO1     | 0.028919378 | 0.053190338 | 0.939309504 |
| TUBB4B    | 0.003989802 | 0.001481042 | 0.939637522 |
| C12orf49  | 0.011819585 | 0.013200478 | 0.940062497 |
| MAP7D1    | 0.06134796 | 0.049022033 | 0.940405913 |
| CETN3     | 0.041473977 | 0.126859323 | 0.940454764 |
| Gene  | Value1 | Value2 | Value3 |
|-------|--------|--------|--------|
| TRIR  | 0.001015425 | 0.000177008 | 0.940625871 |
| PRDM4 | 0.025809489 | 0.02717248 | 0.942212811 |
| PHF23 | 0.015931314 | 0.054735603 | 0.94280266 |
| CDK12 | 0.025979507 | 0.047626279 | 0.943113109 |
| BAK1  | 0.002741969 | 0.000682589 | 0.943182993 |
| TMEM94| 0.001354675 | 0.108955952 | 0.94328192 |
| DOCK9 | 9.2746E-05   | 0.011553578 | 0.944554484 |
| PIGT  | 0.006151033 | 0.020737373 | 0.94518593 |
| AKAP12 | 0.233187454 | 0.003613511 | 0.945722017 |
| DPF2  | 0.033498049 | 0.03277899 | 0.946773386 |
| AGPAT1| 0.048577333 | 0.096333844 | 0.948365818 |
| STIMATE| 0.038281802 | 0.024691955 | 0.949059642 |
| AP2M1 | 0.010710006 | 0.003906799 | 0.949775491 |
| ACSL3 | 0.019438515 | 0.013171876 | 0.950694581 |
| HAGH  | 0.013072638 | 0.022393551 | 0.951294099 |
| TRAK2 | 0.015369202 | 0.067195576 | 0.951870833 |
| LINCO1876 | 0.022362175 | 0.100360168 | 0.953619619 |
| PPP2R5A | 0.012813519 | 0.018666046 | 0.953790959 |
| TXNRD1 | 0.004929901 | 0.002115963 | 0.953844912 |
| TMEM164 | 0.048088885 | 0.05710439 | 0.954280357 |
| CFLAR | 0.000212451 | 0.000141335 | 0.955704202 |
| OVOL1 | 0.088576333 | 0.017129704 | 0.956320488 |
| LY6E  | 0.070394534 | 0.035916972 | 0.956564048 |
| MSX2  | 0.048999585 | 0.006823795 | 0.956709995 |
| TNIP2 | 0.02849283 | 0.026972157 | 0.957774165 |
| UFC1  | 0.09812717 | 0.037146205 | 0.957905989 |
| FXR2  | 0.037108006 | 0.032476501 | 0.959306689 |
| BLOC1S4 | 0.03346107 | 0.038335882 | 0.959715979 |
| BCL9L | 0.008731826 | 0.005864657 | 0.959790724 |
| EMC3  | 0.017009704 | 0.024509893 | 0.960131221 |
| GALNT2 | 0.008002213 | 0.00590131 | 0.96079513 |
| POLDIP2 | 0.07099723 | 0.03056107 | 0.961654573 |
| ARFGAP3 | 0.008646424 | 0.002324595 | 0.962082639 |
| ZSWIM1 | 0.047939383 | 0.040703666 | 0.962472313 |
| CRY1  | 0.004623864 | 0.00349159 | 0.962475539 |
| TEMEM161B | 0.001447365 | 0.001887941 | 0.963091775 |
| SMOX  | 0.03354792 | 0.034124369 | 0.963315921 |
| RXRA  | 0.00434628 | 0.000306743 | 0.963330746 |
| AC139530.1 | 0.028270626 | 0.036295047 | 0.964109951 |
| TPRKB | 0.008496681 | 0.01286264 | 0.964178571 |
| BIK   | 0.001159772 | 2.17686E-05 | 0.96420073 |
| INPP5D | 0.03518917 | 0.023871183 | 0.964651561 |
| Gene     | Value1   | Value2   | Value3   |
|----------|----------|----------|----------|
| ISG15    | 0.043298828 | 0.000835487 | 0.96466485 |
| PLK2     | 0.03472967 | 0.047860524 | 0.964860932 |
| GBP1     | 0.011260129 | 0.019423606 | 0.96544033 |
| EIF4E    | 0.078326287 | 0.042101589 | 0.96591128 |
| EIF2S1   | 0.03130196 | 0.010304801 | 0.966782583 |
| MAP3K2   | 0.023580206 | 0.015829686 | 0.967235803 |
| PPF1B1   | 0.058192271 | 0.04188122 | 0.967639879 |
| ARHGAP42 | 0.016834656 | 0.00750861 | 0.968827918 |
| MGAT2    | 0.032370993 | 0.032896982 | 0.968926793 |
| TRIM44   | 0.001836813 | 0.010288564 | 0.968948818 |
| DDRGK1   | 8.04128E-05 | 0.008361762 | 0.96896139 |
| ALDH3A2  | 0.013919524 | 0.015670535 | 0.969130577 |
| NOCT     | 0.028585265 | 0.02444807 | 0.970047583 |
| LINC00543| 0.026784214 | 0.01794646 | 0.971115522 |
| B3GALT5  | 0.049299794 | 0.00577069 | 0.972789743 |
| YIPF3    | 0.035130001 | 0.023334056 | 0.973202302 |
| GBP1     | 0.036829074 | 0.0341361 | 0.974477114 |
| U62317.2 | 0.044331655 | 0.066562187 | 0.975040806 |
| H3F3A    | 0.088043182 | 0.043678499 | 0.97522657 |
| PEX6     | 0.072849305 | 0.039927417 | 0.976379452 |
| IL13RA1  | 0.001396076 | 4.71392E-05 | 0.97672506 |
| TMED9    | 0.044054339 | 0.03788905 | 0.977126694 |
| C11orf24 | 0.022651806 | 0.026680874 | 0.977765868 |
| PXMP4    | 0.022065367 | 0.000978856 | 0.980105912 |
| NDUFB4   | 0.057259303 | 0.03795507 | 0.980439724 |
| GUK1     | 0.020218975 | 0.008129839 | 0.980460411 |
| CLDN10   | 0.029584137 | 0.053364576 | 0.981289013 |
| SMIM24   | 0.169994086 | 0.015360719 | 0.98164527 |
| MBD3     | 0.026619645 | 0.036726552 | 0.982063429 |
| IBA57    | 0.048121845 | 0.029863783 | 0.983261216 |
| KCTD2    | 0.017598488 | 0.000977126 | 0.98326853 |
| RHOG     | 0.008372151 | 0.001624951 | 0.983573658 |
| CLASP1   | 0.003890926 | 0.002290714 | 0.984248512 |
| TRIM56   | 0.045265098 | 0.012515906 | 0.984456439 |
| IK       | 0.012656441 | 0.017189953 | 0.984557521 |
| SAT1     | 0.000380547 | 0.000350736 | 0.985262326 |
| NME7     | 0.028822092 | 0.008052292 | 0.985668659 |
| SUV39H2  | 0.043336949 | 0.082885087 | 0.986202886 |
| AL451165.2| 0.085964196 | 0.015757528 | 0.986401589 |
| TOR1AIP1 | 0.007842885 | 0.003142075 | 0.986448821 |
| ACER3    | 0.010239126 | 0.010986256 | 0.986620867 |
| LRF1     | 0.093003539 | 0.045524561 | 0.987149754 |
| SGF29    | 0.114516859 | 0.028428173 | 0.987801088 |
| Gene     | Value1  | Value2  | Value3  |
|----------|---------|---------|---------|
| SP3      | 0.007677376 | 0.005699785 | 0.98847427 |
| RNF121   | 0.01426651 | 0.00635365 | 0.988743717 |
| TGFR1    | 0.005431107 | 0.003162772 | 0.988824811 |
| CHMP5    | 0.006002885 | 0.002217116 | 0.988835407 |
| MIOS     | 0.061041884 | 0.03264535 | 0.98887646 |
| MON1B    | 0.048963678 | 0.04288499 | 0.98946781 |
| CDK11A   | 0.021994866 | 0.03893473 | 0.989531973 |
| TGFBR1   | 9.55832E-05 | 7.69889E-05 | 0.990038305 |
| UBC      | 0.001266391 | 8.91591E-05 | 0.99111981 |
| ARHGEF7  | 0.002429998 | 0.000599658 | 0.991790957 |
| CTR9     | 0.002972632 | 0.007813348 | 0.991808136 |
| ARH1     | 0.023100665 | 0.021841077 | 0.99218795 |
| ZSCAN16-AS1 | 0.043415172 | 0.120479899 | 0.992237657 |
| BCL7C    | 0.045068701 | 0.040442738 | 0.99226354 |
| SLCO4A1  | 0.063770904 | 0.01801473 | 0.993199836 |
| SUN2     | 0.008561165 | 0.00180994 | 0.9923189 |
| GEMIN6   | 0.044225596 | 0.014083083 | 0.993702968 |
| TMBIM6   | 0.000262599 | 0.000339635 | 0.993779941 |
| RNF214   | 0.069515349 | 0.036283732 | 0.994253352 |
| XRCC1    | 0.074190643 | 0.040033917 | 0.994631163 |
| CLPTM1L  | 0.026139855 | 0.011803457 | 0.995051966 |
| FAT1     | 0.015619395 | 3.39336E-06 | 0.99516478 |
| ICE1     | 0.060163625 | 0.043451604 | 0.995333895 |
| PSMD4    | 0.013550427 | 0.009317946 | 0.995500259 |
| CCNG1    | 0.036177777 | 0.034901743 | 0.995831886 |
| TRABD    | 0.015001256 | 0.002423848 | 0.995888 |
| CASP5    | 0.037178091 | 0.035599171 | 0.996097971 |
| IDI1     | 0.055140095 | 0.016383539 | 0.996116814 |
| INPP5K   | 0.013171103 | 0.015328553 | 0.99654357 |
| MLLT3    | 0.038491541 | 0.012430116 | 0.99684088 |
| SNTB2    | 0.021117736 | 0.086098353 | 0.997262263 |
| RALY     | 0.049822844 | 0.043973745 | 0.99764851 |
| MEGF9    | 0.058385337 | 0.020155642 | 0.997938749 |
| GTF2E1   | 0.000676036 | 0.003684845 | 0.99837129 |
| COX6B1   | 0.002613661 | 0.000554575 | 0.998771116 |
| DPY19L4  | 0.001167761 | 0.001195272 | 0.998926593 |
Table S3. Primer sequence information

| Target gene | Orientation | Sequence                                      |
|-------------|-------------|-----------------------------------------------|
| TGFβ1       | Forward     | GTACCAGAAATACAGCAACAATTCC                     |
|             | Reverse     | GGTGACATCAAAAAGATAACCACTCT                   |
| WNT5B       | Forward     | GTGGCTACAACCAGT TCAAGAG                      |
|             | Reverse     | ATTTACAGATGTACTGGTCCACGAT                   |
| CA2         | Forward     | GATGGACAAGGTTTCAGAGCATAAC                    |
|             | Reverse     | ATCCAGCACATCAACAACCTTTCC                    |
| CEL         | Forward     | AAGACCTACGCCTACCTGTTTTTC                    |
|             | Reverse     | TACTGAATGTTCATCTGCATGGTCC                   |
| GAPDH       | Forward     | TTGTCAAGCTCATTTTCTGGATATG                   |
|             | Reverse     | TCTCTCTTCCTCTTGTGCTCTTG                   |