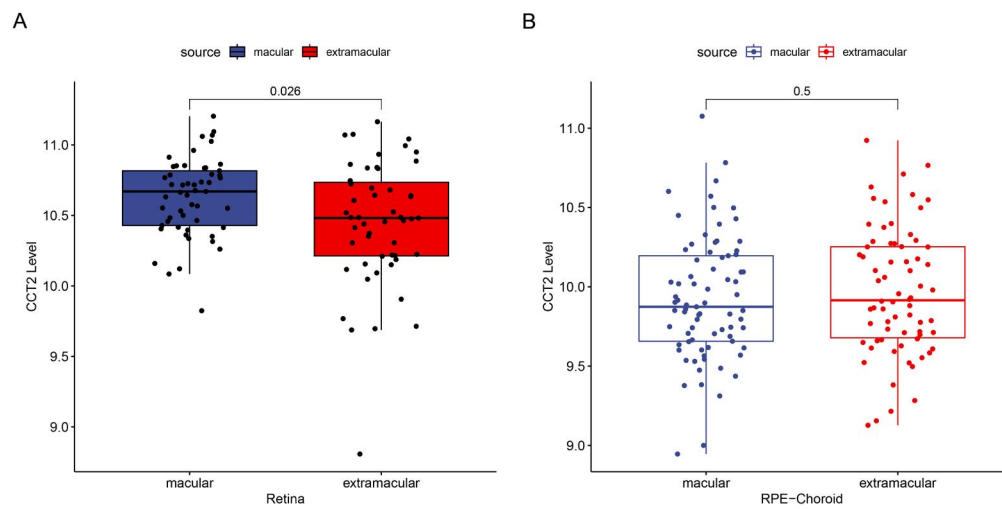
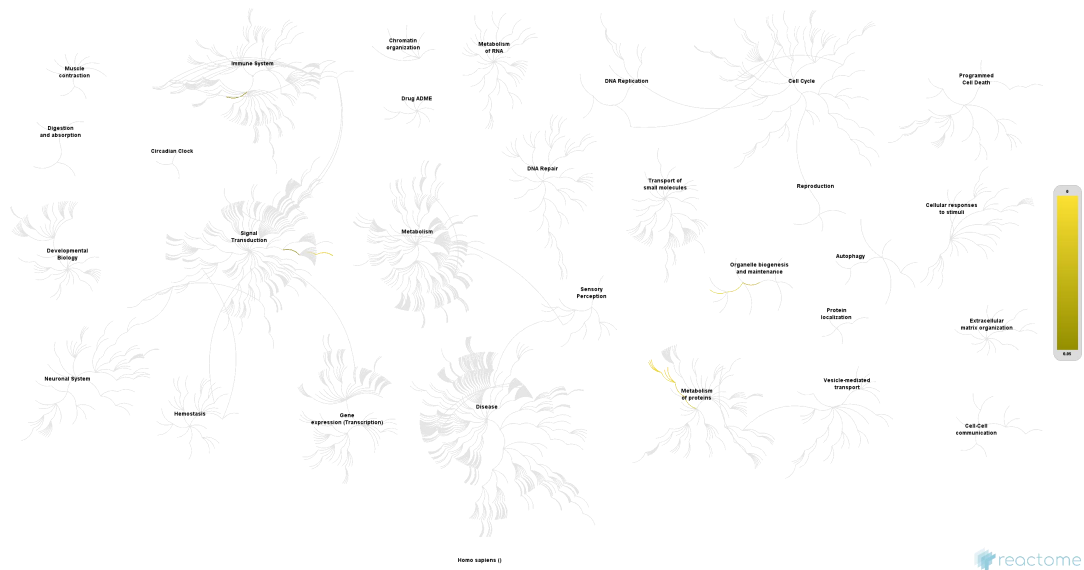


## Supplementary figure 1



**Supplementary figure 1** The chaperonin containing TCP1 subunit 2 (CCT2) expression level between macular and extramacular region within the same tissue. (A) Retina. (B) RPE-choroid.

## Supplementary figure 2



**Supplementary figure 2** A genome-wide analysis of the chaperonin containing TCP1 subunit 2 (CCT2) Reactome pathway. Colors from light to dark represent p values from small to large.

**Supplementary Table 1 386 genes correlated with CCT2 in the macular region**

| Genes        | R         | pvalue   | Regulation |
|--------------|-----------|----------|------------|
| CCT2         | 1         | 0        | postive    |
| RNF14        | 7.97E-01  | 4.74E-08 | postive    |
| ANXA7        | 7.78E-01  | 1.63E-07 | postive    |
| SAE1         | 7.73E-01  | 2.16E-07 | postive    |
| VEGFA        | -7.72E-01 | 2.32E-07 | negative   |
| NAP1L5       | 7.55E-01  | 6.05E-07 | postive    |
| TIMM17A      | 7.51E-01  | 7.25E-07 | postive    |
| GNG2         | 7.49E-01  | 8.02E-07 | postive    |
| NAT5         | 7.46E-01  | 9.53E-07 | postive    |
| CHP          | 7.43E-01  | 1.12E-06 | postive    |
| ACAT1        | 7.39E-01  | 1.35E-06 | postive    |
| PIGB         | 7.35E-01  | 1.64E-06 | postive    |
| ZFYVE27      | 7.29E-01  | 2.19E-06 | postive    |
| RXRA         | -7.27E-01 | 2.50E-06 | negative   |
| ANGPTL4      | -7.19E-01 | 3.49E-06 | negative   |
| FAM82A2      | 7.18E-01  | 3.78E-06 | postive    |
| CYB5R4       | 7.16E-01  | 4.05E-06 | postive    |
| LOC100128439 | -7.15E-01 | 4.17E-06 | negative   |
| TXNDC13      | 7.10E-01  | 5.23E-06 | postive    |
| C10orf10     | -7.10E-01 | 5.27E-06 | negative   |
| WDR77        | 7.08E-01  | 5.71E-06 | postive    |
| FBXL5        | 7.08E-01  | 5.74E-06 | postive    |
| VPS45        | 7.07E-01  | 5.97E-06 | postive    |
| LIPT1        | 7.06E-01  | 6.39E-06 | postive    |
| CXXC5        | -7.03E-01 | 7.14E-06 | negative   |
| C18orf10     | 7.00E-01  | 8.13E-06 | postive    |
| SAP30        | -6.99E-01 | 8.55E-06 | negative   |
| ABHD7        | 6.98E-01  | 8.99E-06 | postive    |
| FCER1G       | -6.92E-01 | 1.13E-05 | negative   |
| LOC152217    | 6.91E-01  | 1.19E-05 | postive    |
| USP46        | 6.91E-01  | 1.22E-05 | postive    |
| SH3GL2       | 6.87E-01  | 1.41E-05 | postive    |
| TM9SF2       | 6.86E-01  | 1.47E-05 | postive    |
| RNMTL1       | 6.85E-01  | 1.54E-05 | postive    |
| IGFBP5       | -6.84E-01 | 1.60E-05 | negative   |
| SLC2A1       | -6.84E-01 | 1.61E-05 | negative   |
| PLK2         | 6.82E-01  | 1.70E-05 | postive    |
| P4HA1        | -6.82E-01 | 1.72E-05 | negative   |
| CFL2         | 6.82E-01  | 1.75E-05 | postive    |
| VPS4B        | 6.81E-01  | 1.76E-05 | postive    |
| MTMR9        | 6.80E-01  | 1.88E-05 | postive    |
| DIRAS2       | 6.78E-01  | 2.04E-05 | postive    |

|           |           |          |          |
|-----------|-----------|----------|----------|
| PSEN2     | 6.77E-01  | 2.07E-05 | postive  |
| EHD2      | -6.77E-01 | 2.10E-05 | negative |
| POLR2B    | 6.76E-01  | 2.18E-05 | postive  |
| INPP5A    | 6.75E-01  | 2.24E-05 | postive  |
| ADM       | -6.72E-01 | 2.55E-05 | negative |
| GLRX5     | 6.70E-01  | 2.73E-05 | postive  |
| SUSD1     | 6.68E-01  | 2.94E-05 | postive  |
| AK3L1     | -6.67E-01 | 3.07E-05 | negative |
| DYNC1LI1  | 6.67E-01  | 3.07E-05 | postive  |
| IRF7      | -6.66E-01 | 3.18E-05 | negative |
| SRPRB     | 6.66E-01  | 3.18E-05 | postive  |
| TAGLN3    | 6.66E-01  | 3.23E-05 | postive  |
| PSMC1     | 6.65E-01  | 3.26E-05 | postive  |
| GTPBP2    | -6.65E-01 | 3.27E-05 | negative |
| USP8      | 6.64E-01  | 3.41E-05 | postive  |
| PPP1R3B   | -6.64E-01 | 3.42E-05 | negative |
| FES       | -6.64E-01 | 3.43E-05 | negative |
| UROS      | 6.64E-01  | 3.45E-05 | postive  |
| KIAA0317  | 6.63E-01  | 3.59E-05 | postive  |
| TGM2      | -6.63E-01 | 3.61E-05 | negative |
| SRCRB4D   | 6.62E-01  | 3.72E-05 | postive  |
| CYP4X1    | 6.61E-01  | 3.81E-05 | postive  |
| BAI3      | 6.61E-01  | 3.86E-05 | postive  |
| LANCL1    | 6.60E-01  | 3.97E-05 | postive  |
| CCT6P1    | 6.60E-01  | 4.02E-05 | postive  |
| LILRB3    | -6.57E-01 | 4.41E-05 | negative |
| CLTC      | 6.57E-01  | 4.43E-05 | postive  |
| TOR1A     | 6.57E-01  | 4.47E-05 | postive  |
| SLC39A14  | -6.56E-01 | 4.60E-05 | negative |
| EPS8L2    | -6.54E-01 | 4.90E-05 | negative |
| CMPK1     | 6.54E-01  | 4.96E-05 | postive  |
| TIMM23    | 6.54E-01  | 4.99E-05 | postive  |
| MTERFD3   | 6.53E-01  | 5.05E-05 | postive  |
| CDS2      | 6.53E-01  | 5.14E-05 | postive  |
| PPP2CA    | 6.52E-01  | 5.27E-05 | postive  |
| YARS2     | 6.52E-01  | 5.28E-05 | postive  |
| MLX       | 6.51E-01  | 5.39E-05 | postive  |
| SLC25A20  | 6.51E-01  | 5.43E-05 | postive  |
| SLC6A12   | -6.51E-01 | 5.43E-05 | negative |
| SH3BGRL2  | 6.51E-01  | 5.50E-05 | postive  |
| MTCH1     | 6.51E-01  | 5.51E-05 | postive  |
| FOSL2     | -6.51E-01 | 5.54E-05 | negative |
| LOC344595 | 6.49E-01  | 5.88E-05 | postive  |
| KCNC2     | 6.48E-01  | 5.97E-05 | postive  |

|                 |           |          |          |
|-----------------|-----------|----------|----------|
| CDC37L1         | 6.48E-01  | 5.98E-05 | postive  |
| IMPAD1          | 6.48E-01  | 6.07E-05 | postive  |
| MRLC2           | 6.48E-01  | 6.11E-05 | postive  |
| GOT1            | 6.47E-01  | 6.21E-05 | postive  |
| LRRC49          | 6.47E-01  | 6.36E-05 | postive  |
| TIMM22          | 6.46E-01  | 6.52E-05 | postive  |
| PPP1R13L        | -6.46E-01 | 6.53E-05 | negative |
| ARRDC2          | -6.44E-01 | 6.89E-05 | negative |
| GBP2            | -6.44E-01 | 7.01E-05 | negative |
| PNMA3           | 6.43E-01  | 7.11E-05 | postive  |
| HIG2            | -6.43E-01 | 7.24E-05 | negative |
| FBXO42          | -6.41E-01 | 7.76E-05 | negative |
| ATP6V1G2        | 6.40E-01  | 8.06E-05 | postive  |
| C16orf88        | 6.39E-01  | 8.19E-05 | postive  |
| KLHL34          | -6.39E-01 | 8.32E-05 | negative |
| PAK6            | 6.39E-01  | 8.39E-05 | postive  |
| SLC17A8         | 6.38E-01  | 8.56E-05 | postive  |
| MAFF            | -6.37E-01 | 8.90E-05 | negative |
| GDF15           | -6.37E-01 | 8.90E-05 | negative |
| HIST1H1D        | -6.37E-01 | 8.96E-05 | negative |
| RCN2            | 6.36E-01  | 9.11E-05 | postive  |
| RNF220          | 6.36E-01  | 9.13E-05 | postive  |
| GABRG2          | 6.36E-01  | 9.22E-05 | postive  |
| NTRK1           | 6.34E-01  | 9.91E-05 | postive  |
| ZNF627          | 6.33E-01  | 9.97E-05 | postive  |
| C1orf162        | -6.33E-01 | 1.00E-04 | negative |
| ARL1            | 6.33E-01  | 1.01E-04 | postive  |
| PABPC1          | -6.33E-01 | 1.02E-04 | negative |
| POP7            | 6.33E-01  | 1.02E-04 | postive  |
| IMMT            | 6.32E-01  | 1.04E-04 | postive  |
| MAP2K6          | 6.31E-01  | 1.07E-04 | postive  |
| PFKFB4          | -6.31E-01 | 1.08E-04 | negative |
| SLPI            | -6.30E-01 | 1.11E-04 | negative |
| TRIM37          | 6.30E-01  | 1.11E-04 | postive  |
| ANKHD1-EIF4EBP3 | -6.30E-01 | 1.12E-04 | negative |
| TSPYL5          | 6.30E-01  | 1.13E-04 | postive  |
| STRAP           | 6.29E-01  | 1.16E-04 | postive  |
| TBCE            | 6.29E-01  | 1.16E-04 | postive  |
| CYP1B1          | -6.29E-01 | 1.17E-04 | negative |
| MAGEE1          | 6.28E-01  | 1.18E-04 | postive  |
| ATXN7           | -6.28E-01 | 1.19E-04 | negative |
| DCTPP1          | 6.28E-01  | 1.21E-04 | postive  |
| ITFG1           | 6.27E-01  | 1.22E-04 | postive  |
| DHX36           | 6.27E-01  | 1.23E-04 | postive  |

|           |           |          |          |
|-----------|-----------|----------|----------|
| BBX       | -6.26E-01 | 1.26E-04 | negative |
| PSMD5     | 6.26E-01  | 1.27E-04 | postive  |
| TPI1      | -6.25E-01 | 1.31E-04 | negative |
| SUCLA2    | 6.25E-01  | 1.33E-04 | postive  |
| GNL3      | 6.25E-01  | 1.33E-04 | postive  |
| POU4F1    | 6.24E-01  | 1.34E-04 | postive  |
| TCERG1L   | 6.23E-01  | 1.39E-04 | postive  |
| FLJ40142  | 6.23E-01  | 1.41E-04 | postive  |
| FLJ10038  | 6.22E-01  | 1.43E-04 | postive  |
| FAM92A1   | 6.21E-01  | 1.51E-04 | postive  |
| OPA1      | 6.20E-01  | 1.55E-04 | postive  |
| KIAA0644  | 6.19E-01  | 1.59E-04 | postive  |
| SLC25A5   | 6.19E-01  | 1.60E-04 | postive  |
| THTPA     | 6.19E-01  | 1.60E-04 | postive  |
| UXS1      | 6.19E-01  | 1.61E-04 | postive  |
| VDAC3     | 6.18E-01  | 1.62E-04 | postive  |
| ZNF395    | -6.18E-01 | 1.63E-04 | negative |
| PSMD14    | 6.18E-01  | 1.64E-04 | postive  |
| SLC11A1   | -6.18E-01 | 1.65E-04 | negative |
| SYT13     | 6.18E-01  | 1.66E-04 | postive  |
| GPRASP2   | 6.18E-01  | 1.66E-04 | postive  |
| SH3GL3    | 6.17E-01  | 1.67E-04 | postive  |
| MRPL39    | 6.17E-01  | 1.69E-04 | postive  |
| SC5DL     | 6.17E-01  | 1.70E-04 | postive  |
| ADAM8     | -6.17E-01 | 1.70E-04 | negative |
| FAM162A   | -6.17E-01 | 1.70E-04 | negative |
| ADRA2C    | -6.17E-01 | 1.71E-04 | negative |
| ATP6V1A   | 6.16E-01  | 1.73E-04 | postive  |
| LRRN3     | 6.16E-01  | 1.73E-04 | postive  |
| ENOX2     | 6.16E-01  | 1.74E-04 | postive  |
| LOC257396 | 6.16E-01  | 1.74E-04 | postive  |
| RBMX2     | 6.16E-01  | 1.75E-04 | postive  |
| CA9       | -6.15E-01 | 1.82E-04 | negative |
| JMJD6     | -6.14E-01 | 1.88E-04 | negative |
| B4GALT1   | -6.13E-01 | 1.91E-04 | negative |
| IFITM2    | -6.13E-01 | 1.93E-04 | negative |
| NDUFA8    | 6.12E-01  | 1.96E-04 | postive  |
| LEPROTL1  | 6.11E-01  | 2.01E-04 | postive  |
| LDHB      | 6.11E-01  | 2.01E-04 | postive  |
| MIA3      | 6.11E-01  | 2.05E-04 | postive  |
| HK2       | -6.11E-01 | 2.05E-04 | negative |
| PXN       | -6.11E-01 | 2.06E-04 | negative |
| KCNAB1    | 6.10E-01  | 2.08E-04 | postive  |
| PFKM      | 6.10E-01  | 2.08E-04 | postive  |

|           |           |          |          |
|-----------|-----------|----------|----------|
| SRGN      | -6.10E-01 | 2.10E-04 | negative |
| MYF6      | 6.10E-01  | 2.12E-04 | postive  |
| DOLK      | 6.10E-01  | 2.13E-04 | postive  |
| SLC6A1    | 6.08E-01  | 2.22E-04 | postive  |
| OSTM1     | 6.08E-01  | 2.24E-04 | postive  |
| ACTR10    | 6.08E-01  | 2.25E-04 | postive  |
| IFITM4P   | -6.07E-01 | 2.30E-04 | negative |
| TUSC2     | 6.07E-01  | 2.30E-04 | postive  |
| PNMA1     | 6.07E-01  | 2.31E-04 | postive  |
| EPB41L3   | 6.07E-01  | 2.32E-04 | postive  |
| SLC39A2   | 6.06E-01  | 2.34E-04 | postive  |
| TMEM41B   | 6.06E-01  | 2.38E-04 | postive  |
| SERTAD4   | 6.06E-01  | 2.39E-04 | postive  |
| ATP1B1    | 6.06E-01  | 2.40E-04 | postive  |
| COPG      | 6.05E-01  | 2.41E-04 | postive  |
| LDOC1L    | 6.05E-01  | 2.48E-04 | postive  |
| ZNF57     | 6.04E-01  | 2.50E-04 | postive  |
| ABHD14B   | -6.04E-01 | 2.52E-04 | negative |
| MST150    | -6.04E-01 | 2.54E-04 | negative |
| KIAA0652  | -6.04E-01 | 2.55E-04 | negative |
| MFSD4     | 6.03E-01  | 2.56E-04 | postive  |
| ANG       | -6.03E-01 | 2.56E-04 | negative |
| RELA      | -6.03E-01 | 2.57E-04 | negative |
| CTPS      | 6.03E-01  | 2.57E-04 | postive  |
| REEP5     | 6.03E-01  | 2.58E-04 | postive  |
| C5orf44   | 6.03E-01  | 2.63E-04 | postive  |
| PTDSS1    | 6.01E-01  | 2.76E-04 | postive  |
| PPARGC1A  | 6.00E-01  | 2.81E-04 | postive  |
| ATP5O     | 6.00E-01  | 2.82E-04 | postive  |
| POLR3F    | 6.00E-01  | 2.85E-04 | postive  |
| C1QBP     | 6.00E-01  | 2.85E-04 | postive  |
| DYRK2     | -6.00E-01 | 2.87E-04 | negative |
| WDR12     | 5.99E-01  | 2.90E-04 | postive  |
| SMS       | 5.99E-01  | 2.95E-04 | postive  |
| TIGD5     | 5.98E-01  | 3.02E-04 | postive  |
| MRPS15    | 5.98E-01  | 3.04E-04 | postive  |
| DDHD2     | 5.97E-01  | 3.07E-04 | postive  |
| IL6R      | -5.97E-01 | 3.12E-04 | negative |
| C10orf137 | 5.97E-01  | 3.14E-04 | postive  |
| IMPA1     | 5.96E-01  | 3.16E-04 | postive  |
| JUN       | -5.96E-01 | 3.17E-04 | negative |
| MLLT11    | 5.96E-01  | 3.17E-04 | postive  |
| GLCCI1    | -5.95E-01 | 3.27E-04 | negative |
| PSMB7     | 5.95E-01  | 3.27E-04 | postive  |

|           |           |          |          |
|-----------|-----------|----------|----------|
| OCIAD1    | 5.95E-01  | 3.28E-04 | postive  |
| LOC338756 | 5.94E-01  | 3.37E-04 | postive  |
| ACTN1     | -5.94E-01 | 3.38E-04 | negative |
| GMFB      | 5.94E-01  | 3.40E-04 | postive  |
| TNFRSF10B | -5.94E-01 | 3.42E-04 | negative |
| LOC145783 | 5.93E-01  | 3.43E-04 | postive  |
| CCDC56    | 5.93E-01  | 3.47E-04 | postive  |
| KLHDC5    | 5.93E-01  | 3.49E-04 | postive  |
| PPP2R3C   | 5.92E-01  | 3.53E-04 | postive  |
| PLOD2     | -5.92E-01 | 3.53E-04 | negative |
| CETN2     | 5.92E-01  | 3.54E-04 | postive  |
| ACOT7     | 5.92E-01  | 3.54E-04 | postive  |
| CNNM3     | -5.92E-01 | 3.56E-04 | negative |
| CGREF1    | 5.92E-01  | 3.56E-04 | postive  |
| HNRNPA1   | 5.91E-01  | 3.67E-04 | postive  |
| DCUN1D2   | 5.90E-01  | 3.82E-04 | postive  |
| PAWR      | -5.90E-01 | 3.84E-04 | negative |
| ADRB2     | 5.89E-01  | 3.94E-04 | postive  |
| PSME2     | -5.88E-01 | 3.98E-04 | negative |
| DEM1      | 5.88E-01  | 3.99E-04 | postive  |
| TRUB1     | 5.88E-01  | 4.00E-04 | postive  |
| AMACR     | 5.88E-01  | 4.02E-04 | postive  |
| GALNT10   | -5.87E-01 | 4.09E-04 | negative |
| EXOC1     | 5.87E-01  | 4.09E-04 | postive  |
| FBXO3     | 5.87E-01  | 4.11E-04 | postive  |
| TM2D2     | 5.87E-01  | 4.13E-04 | postive  |
| NKX3-1    | 5.87E-01  | 4.14E-04 | postive  |
| EIF5      | 5.87E-01  | 4.17E-04 | postive  |
| GPR84     | -5.87E-01 | 4.17E-04 | negative |
| HINT1     | 5.86E-01  | 4.21E-04 | postive  |
| BCL3      | -5.86E-01 | 4.23E-04 | negative |
| TMEM30A   | 5.86E-01  | 4.28E-04 | postive  |
| CD86      | -5.86E-01 | 4.30E-04 | negative |
| COQ3      | 5.85E-01  | 4.34E-04 | postive  |
| UBAC1     | 5.85E-01  | 4.34E-04 | postive  |
| SLBP      | 5.85E-01  | 4.39E-04 | postive  |
| FOXO1     | -5.85E-01 | 4.42E-04 | negative |
| PKIB      | 5.84E-01  | 4.44E-04 | postive  |
| PPIA      | 5.84E-01  | 4.44E-04 | postive  |
| SNX13     | 5.84E-01  | 4.47E-04 | postive  |
| LOC728324 | 5.84E-01  | 4.49E-04 | postive  |
| LOC399491 | -5.84E-01 | 4.50E-04 | negative |
| S1PR2     | -5.84E-01 | 4.50E-04 | negative |
| C9orf125  | 5.84E-01  | 4.56E-04 | postive  |

|          |           |          |          |
|----------|-----------|----------|----------|
| MCF2     | 5.84E-01  | 4.56E-04 | postive  |
| SRPK2    | 5.83E-01  | 4.57E-04 | postive  |
| AIFM3    | 5.83E-01  | 4.59E-04 | postive  |
| LIMS1    | -5.81E-01 | 4.83E-04 | negative |
| FAM134B  | 5.81E-01  | 4.87E-04 | postive  |
| SYNGR3   | 5.81E-01  | 4.93E-04 | postive  |
| C7orf54  | -5.81E-01 | 4.95E-04 | negative |
| TMEM200A | 5.80E-01  | 4.99E-04 | postive  |
| LYPD6B   | 5.80E-01  | 5.00E-04 | postive  |
| KIAA1219 | 5.80E-01  | 5.04E-04 | postive  |
| FKBP11   | -5.80E-01 | 5.06E-04 | negative |
| FPR1     | -5.79E-01 | 5.13E-04 | negative |
| UCHL1    | 5.79E-01  | 5.14E-04 | postive  |
| CASD1    | 5.79E-01  | 5.23E-04 | postive  |
| STRC     | -5.78E-01 | 5.26E-04 | negative |
| VGLL3    | 5.78E-01  | 5.31E-04 | postive  |
| RHOG     | -5.78E-01 | 5.36E-04 | negative |
| ADPRHL1  | 5.77E-01  | 5.39E-04 | postive  |
| CABIN1   | -5.77E-01 | 5.53E-04 | negative |
| GBAS     | 5.76E-01  | 5.54E-04 | postive  |
| KIAA1618 | -5.76E-01 | 5.67E-04 | negative |
| PXDNL    | 5.75E-01  | 5.70E-04 | postive  |
| ABCC6    | 5.75E-01  | 5.71E-04 | postive  |
| COMMD4   | 5.75E-01  | 5.72E-04 | postive  |
| ASPHD1   | 5.75E-01  | 5.79E-04 | postive  |
| UTP18    | 5.74E-01  | 5.87E-04 | postive  |
| ATF3     | -5.74E-01 | 5.92E-04 | negative |
| SPOCD1   | -5.74E-01 | 5.98E-04 | negative |
| GSTA4    | 5.73E-01  | 6.02E-04 | postive  |
| ABAT     | 5.73E-01  | 6.03E-04 | postive  |
| MRPS27   | 5.73E-01  | 6.05E-04 | postive  |
| CEBPD    | -5.73E-01 | 6.05E-04 | negative |
| LGALS3BP | -5.73E-01 | 6.15E-04 | negative |
| SDC2     | -5.72E-01 | 6.19E-04 | negative |
| SRFBP1   | 5.72E-01  | 6.23E-04 | postive  |
| ZNF134   | 5.72E-01  | 6.23E-04 | postive  |
| GPC3     | 5.72E-01  | 6.24E-04 | postive  |
| CRYBB3   | 5.71E-01  | 6.39E-04 | postive  |
| MAK16    | 5.71E-01  | 6.39E-04 | postive  |
| VISA     | -5.71E-01 | 6.42E-04 | negative |
| PXMP3    | 5.70E-01  | 6.55E-04 | postive  |
| YEATS2   | -5.70E-01 | 6.59E-04 | negative |
| PRDM13   | 5.69E-01  | 6.72E-04 | postive  |
| NDUFS5   | 5.69E-01  | 6.76E-04 | postive  |

|              |           |          |          |
|--------------|-----------|----------|----------|
| RWDD2B       | 5.69E-01  | 6.78E-04 | postive  |
| BTBD10       | 5.69E-01  | 6.78E-04 | postive  |
| CCDC44       | 5.69E-01  | 6.83E-04 | postive  |
| PELI2        | 5.68E-01  | 6.89E-04 | postive  |
| BEX2         | 5.68E-01  | 6.91E-04 | postive  |
| LOC100134167 | 5.68E-01  | 6.98E-04 | postive  |
| PRPSAP1      | 5.68E-01  | 7.02E-04 | postive  |
| FKBP9        | 5.68E-01  | 7.03E-04 | postive  |
| GCSH         | 5.68E-01  | 7.03E-04 | postive  |
| REPS2        | 5.67E-01  | 7.07E-04 | postive  |
| YRDC         | 5.67E-01  | 7.11E-04 | postive  |
| UBQLN1       | 5.67E-01  | 7.12E-04 | postive  |
| EBF1         | 5.66E-01  | 7.26E-04 | postive  |
| LRRC8B       | 5.66E-01  | 7.29E-04 | postive  |
| MEX3B        | 5.66E-01  | 7.29E-04 | postive  |
| SYT4         | 5.66E-01  | 7.30E-04 | postive  |
| MTF1         | -5.66E-01 | 7.42E-04 | negative |
| C7orf28B     | 5.65E-01  | 7.51E-04 | postive  |
| SLC35A1      | 5.65E-01  | 7.61E-04 | postive  |
| MRPL45       | 5.64E-01  | 7.68E-04 | postive  |
| NPM2         | 5.64E-01  | 7.75E-04 | postive  |
| PPP2R1A      | 5.64E-01  | 7.77E-04 | postive  |
| TMEM62       | 5.64E-01  | 7.77E-04 | postive  |
| LSM14B       | 5.64E-01  | 7.78E-04 | postive  |
| IL6          | -5.63E-01 | 7.92E-04 | negative |
| TUBB3        | 5.63E-01  | 7.96E-04 | postive  |
| MAP3K6       | -5.63E-01 | 7.98E-04 | negative |
| PRPS1        | 5.63E-01  | 7.99E-04 | postive  |
| SHMT2        | -5.62E-01 | 8.06E-04 | negative |
| HOXB2        | -5.62E-01 | 8.11E-04 | negative |
| CRHR1        | 5.62E-01  | 8.12E-04 | postive  |
| PRKRIP1      | -5.62E-01 | 8.15E-04 | negative |
| OAT          | 5.62E-01  | 8.22E-04 | postive  |
| SCN4B        | 5.62E-01  | 8.23E-04 | postive  |
| GADD45B      | -5.62E-01 | 8.23E-04 | negative |
| CHMP2B       | 5.62E-01  | 8.24E-04 | postive  |
| LOC389895    | 5.61E-01  | 8.40E-04 | postive  |
| GTF3C3       | 5.61E-01  | 8.40E-04 | postive  |
| C8orf58      | -5.61E-01 | 8.46E-04 | negative |
| EPDR1        | 5.60E-01  | 8.52E-04 | postive  |
| BACE2        | -5.60E-01 | 8.53E-04 | negative |
| SLC25A46     | 5.60E-01  | 8.54E-04 | postive  |
| FLJ11151     | 5.60E-01  | 8.55E-04 | postive  |
| PNMA5        | 5.60E-01  | 8.56E-04 | postive  |

|              |           |          |          |
|--------------|-----------|----------|----------|
| MFF          | 5.59E-01  | 8.72E-04 | postive  |
| PRRT3        | 5.59E-01  | 8.76E-04 | postive  |
| GFM1         | 5.59E-01  | 8.82E-04 | postive  |
| FAM158A      | -5.59E-01 | 8.84E-04 | negative |
| C6orf168     | 5.59E-01  | 8.91E-04 | postive  |
| MARCKS       | 5.59E-01  | 8.93E-04 | postive  |
| C11orf1      | 5.58E-01  | 9.05E-04 | postive  |
| SCFD2        | 5.58E-01  | 9.08E-04 | postive  |
| C4orf49      | 5.58E-01  | 9.09E-04 | postive  |
| SAV1         | -5.57E-01 | 9.21E-04 | negative |
| FREQ         | 5.57E-01  | 9.23E-04 | postive  |
| NDUFB8       | 5.57E-01  | 9.30E-04 | postive  |
| AFAP1L1      | -5.57E-01 | 9.30E-04 | negative |
| SPIRE1       | 5.57E-01  | 9.39E-04 | postive  |
| PPIAL4A      | 5.56E-01  | 9.41E-04 | postive  |
| KCNE4        | -5.56E-01 | 9.43E-04 | negative |
| HDHD2        | 5.56E-01  | 9.46E-04 | postive  |
| AZI2         | 5.56E-01  | 9.46E-04 | postive  |
| SLC26A6      | -5.56E-01 | 9.47E-04 | negative |
| RAB38        | -5.56E-01 | 9.48E-04 | negative |
| NPR3         | 5.56E-01  | 9.51E-04 | postive  |
| IER3         | -5.56E-01 | 9.56E-04 | negative |
| XK           | 5.56E-01  | 9.62E-04 | postive  |
| SLC35F1      | 5.55E-01  | 9.73E-04 | postive  |
| IRF1         | -5.55E-01 | 9.74E-04 | negative |
| TSKU         | -5.55E-01 | 9.75E-04 | negative |
| C21orf33     | 5.55E-01  | 9.79E-04 | postive  |
| IER5L        | -5.55E-01 | 9.82E-04 | negative |
| ILF2         | 5.55E-01  | 9.83E-04 | postive  |
| RAC2         | -5.55E-01 | 9.88E-04 | negative |
| KIFAP3       | 5.54E-01  | 9.90E-04 | postive  |
| NEFL         | 5.54E-01  | 9.91E-04 | postive  |
| STMN3        | 5.54E-01  | 9.97E-04 | postive  |
| EIF3K        | 5.54E-01  | 9.97E-04 | postive  |
| JARID1A      | -5.54E-01 | 9.97E-04 | negative |
| LOC100132763 | -5.54E-01 | 9.99E-04 | negative |

**Supplementary Table 2 1250 genes correlated with CCT2 in the extramacular****region**

| <b>Genes</b> | <b>R</b>  | <b>pvalue</b> | <b>Regulation</b> |
|--------------|-----------|---------------|-------------------|
| CCT2         | 1         | 0             | postive           |
| EID2B        | 6.41E-01  | 1.01E-04      | postive           |
| FAM162B      | -6.41E-01 | 1.02E-04      | negative          |
| PAIP2        | 6.41E-01  | 1.03E-04      | postive           |
| ABCB10       | 6.41E-01  | 1.03E-04      | postive           |
| RBPJ         | -6.41E-01 | 1.03E-04      | negative          |
| RPS6KA5      | 6.40E-01  | 1.04E-04      | postive           |
| SLC25A46     | 6.40E-01  | 1.05E-04      | postive           |
| VPS4B        | 6.40E-01  | 1.05E-04      | postive           |
| SLC25A3      | 6.40E-01  | 1.06E-04      | postive           |
| BAIAP2L2     | -6.40E-01 | 1.07E-04      | negative          |
| ARFIP1       | 6.40E-01  | 1.07E-04      | postive           |
| CLDN19       | -6.40E-01 | 1.07E-04      | negative          |
| ZNF407       | 6.39E-01  | 1.08E-04      | postive           |
| SFRS2        | 6.39E-01  | 1.08E-04      | postive           |
| LARP6        | -6.39E-01 | 1.08E-04      | negative          |
| MIA          | -6.39E-01 | 1.10E-04      | negative          |
| FAM135A      | 6.39E-01  | 1.10E-04      | postive           |
| C7orf28A     | 6.39E-01  | 1.10E-04      | postive           |
| PRDM4        | 6.39E-01  | 1.10E-04      | postive           |
| FANCF        | 6.39E-01  | 1.10E-04      | postive           |
| LOC727865    | 6.39E-01  | 1.10E-04      | postive           |
| TRIM63       | -6.39E-01 | 1.10E-04      | negative          |
| MTDH         | 6.39E-01  | 1.11E-04      | postive           |
| DNAJC9       | 6.38E-01  | 1.12E-04      | postive           |
| REEP3        | -6.38E-01 | 1.13E-04      | negative          |
| C15orf44     | 6.38E-01  | 1.13E-04      | postive           |
| C3orf75      | 6.38E-01  | 1.14E-04      | postive           |
| SSBP1        | 6.38E-01  | 1.14E-04      | postive           |
| LONRF2       | 6.38E-01  | 1.15E-04      | postive           |
| LOC100128079 | -6.37E-01 | 1.15E-04      | negative          |
| PSMA2        | 6.37E-01  | 1.15E-04      | postive           |
| LOC220906    | 6.37E-01  | 1.15E-04      | postive           |
| TCEB2        | 6.37E-01  | 1.16E-04      | postive           |
| FXYD5        | -6.37E-01 | 1.16E-04      | negative          |
| TGM2         | -6.37E-01 | 1.17E-04      | negative          |
| BCAS2        | 6.37E-01  | 1.17E-04      | postive           |
| EIF4EBP1     | -6.37E-01 | 1.18E-04      | negative          |
| TMEM66       | 6.37E-01  | 1.18E-04      | postive           |

|           |           |          |          |
|-----------|-----------|----------|----------|
| VSTM2A    | 6.36E-01  | 1.19E-04 | postive  |
| HIST1H2BG | -6.36E-01 | 1.20E-04 | negative |
| C1orf212  | 6.36E-01  | 1.21E-04 | postive  |
| CLNS1A    | 6.36E-01  | 1.21E-04 | postive  |
| PI16      | -6.36E-01 | 1.22E-04 | negative |
| NUDT5     | 6.36E-01  | 1.22E-04 | postive  |
| TDRKH     | 6.36E-01  | 1.22E-04 | postive  |
| CAMK2G    | 6.36E-01  | 1.22E-04 | postive  |
| C7orf40   | 6.35E-01  | 1.23E-04 | postive  |
| ARV1      | 6.35E-01  | 1.23E-04 | postive  |
| APEH      | 6.35E-01  | 1.24E-04 | postive  |
| SFMBT1    | 6.35E-01  | 1.24E-04 | postive  |
| RFXAP     | 6.35E-01  | 1.24E-04 | postive  |
| PSMB3     | 6.35E-01  | 1.25E-04 | postive  |
| SCARNA17  | -6.35E-01 | 1.26E-04 | negative |
| PHLDB2    | -6.35E-01 | 1.26E-04 | negative |
| MORF4L1   | 6.35E-01  | 1.26E-04 | postive  |
| FAM110A   | -6.34E-01 | 1.27E-04 | negative |
| MBD6      | -6.34E-01 | 1.27E-04 | negative |
| PCDHA11   | 6.34E-01  | 1.27E-04 | postive  |
| DHTKD1    | 6.34E-01  | 1.28E-04 | postive  |
| MIF       | -6.34E-01 | 1.28E-04 | negative |
| PAPD4     | 6.34E-01  | 1.28E-04 | postive  |
| NCKAP1    | 6.34E-01  | 1.28E-04 | postive  |
| RPL5      | 6.34E-01  | 1.28E-04 | postive  |
| PPP1R15A  | -6.34E-01 | 1.28E-04 | negative |
| TMEM109   | 6.34E-01  | 1.29E-04 | postive  |
| MTA1      | -6.34E-01 | 1.30E-04 | negative |
| PHAX      | 6.33E-01  | 1.31E-04 | postive  |
| VASH1     | -6.33E-01 | 1.32E-04 | negative |
| RPS18     | 6.33E-01  | 1.34E-04 | postive  |
| SCD5      | 6.33E-01  | 1.34E-04 | postive  |
| HDAC7     | -6.33E-01 | 1.34E-04 | negative |
| SMS       | 6.32E-01  | 1.36E-04 | postive  |
| SYT9      | 6.32E-01  | 1.39E-04 | postive  |
| PHB2      | 6.32E-01  | 1.39E-04 | postive  |
| MAK16     | 6.31E-01  | 1.40E-04 | postive  |
| FAM158A   | -6.31E-01 | 1.40E-04 | negative |
| CBWD2     | 6.31E-01  | 1.41E-04 | postive  |
| WDR90     | -6.31E-01 | 1.41E-04 | negative |
| TNFAIP8   | -6.31E-01 | 1.41E-04 | negative |
| H3F3B     | 6.31E-01  | 1.41E-04 | postive  |
| ARMCX1    | 6.31E-01  | 1.43E-04 | postive  |
| LAMB2     | -6.30E-01 | 1.45E-04 | negative |

|               |           |          |          |
|---------------|-----------|----------|----------|
| NIF3L1        | 6.30E-01  | 1.46E-04 | postive  |
| RP11-129H15.2 | 6.30E-01  | 1.46E-04 | postive  |
| SLC25A36      | -6.30E-01 | 1.47E-04 | negative |
| ANXA7         | 6.30E-01  | 1.48E-04 | postive  |
| NUDCD1        | 6.30E-01  | 1.48E-04 | postive  |
| SUMO3         | 6.29E-01  | 1.50E-04 | postive  |
| LOC376693     | -6.29E-01 | 1.51E-04 | negative |
| PRRT2         | -6.29E-01 | 1.52E-04 | negative |
| INO80         | 6.28E-01  | 1.53E-04 | postive  |
| MECR          | 6.28E-01  | 1.54E-04 | postive  |
| IGF2AS        | -6.28E-01 | 1.54E-04 | negative |
| LONRF1        | 6.28E-01  | 1.55E-04 | postive  |
| MTUS1         | 6.28E-01  | 1.56E-04 | postive  |
| SIRT1         | 6.28E-01  | 1.56E-04 | postive  |
| OCIAD2        | 6.28E-01  | 1.56E-04 | postive  |
| LOC131055     | 6.28E-01  | 1.56E-04 | postive  |
| SSU72         | 6.28E-01  | 1.57E-04 | postive  |
| STX4          | -6.28E-01 | 1.58E-04 | negative |
| APEX1         | 6.27E-01  | 1.58E-04 | postive  |
| FAM18B        | 6.27E-01  | 1.58E-04 | postive  |
| YRDC          | 6.27E-01  | 1.58E-04 | postive  |
| AK3L1         | -6.27E-01 | 1.59E-04 | negative |
| NME7          | 6.27E-01  | 1.59E-04 | postive  |
| MYO1F         | -6.27E-01 | 1.59E-04 | negative |
| RNF24         | -6.27E-01 | 1.61E-04 | negative |
| TMEM126B      | 6.27E-01  | 1.61E-04 | postive  |
| ANKK1         | -6.27E-01 | 1.61E-04 | negative |
| C13orf23      | 6.27E-01  | 1.62E-04 | postive  |
| BEX4          | 6.27E-01  | 1.62E-04 | postive  |
| KRT18         | -6.27E-01 | 1.63E-04 | negative |
| ADRA2C        | -6.26E-01 | 1.63E-04 | negative |
| TLE3          | -6.26E-01 | 1.64E-04 | negative |
| DGCR6L        | 6.26E-01  | 1.65E-04 | postive  |
| SELI          | 6.26E-01  | 1.65E-04 | postive  |
| BATF3         | -6.26E-01 | 1.65E-04 | negative |
| PHF10         | -6.26E-01 | 1.66E-04 | negative |
| SNX4          | 6.26E-01  | 1.66E-04 | postive  |
| CBX1          | -6.26E-01 | 1.67E-04 | negative |
| LIMA1         | 6.26E-01  | 1.68E-04 | postive  |
| PPP1R10       | 6.26E-01  | 1.68E-04 | postive  |
| PRKAR1A       | 6.25E-01  | 1.68E-04 | postive  |
| LOC728380     | 6.25E-01  | 1.69E-04 | postive  |
| ATP6V1G1      | 6.25E-01  | 1.69E-04 | postive  |
| BAI3          | 6.25E-01  | 1.70E-04 | postive  |

|           |           |          |          |
|-----------|-----------|----------|----------|
| GALNT10   | -6.24E-01 | 1.74E-04 | negative |
| C11orf31  | 6.24E-01  | 1.74E-04 | postive  |
| LOC645884 | 6.24E-01  | 1.75E-04 | postive  |
| GOLGA7    | 6.24E-01  | 1.76E-04 | postive  |
| KIF1C     | -6.24E-01 | 1.78E-04 | negative |
| DAZAP2    | 6.23E-01  | 1.82E-04 | postive  |
| C5orf30   | 6.23E-01  | 1.83E-04 | postive  |
| POU2AF1   | -6.23E-01 | 1.83E-04 | negative |
| ZNF3      | 6.23E-01  | 1.83E-04 | postive  |
| TIMM23    | 6.23E-01  | 1.84E-04 | postive  |
| LCMT2     | 6.22E-01  | 1.85E-04 | postive  |
| EGFL6     | -6.22E-01 | 1.85E-04 | negative |
| POLR3B    | 6.22E-01  | 1.86E-04 | postive  |
| ATMIN     | 6.22E-01  | 1.87E-04 | postive  |
| FOSL2     | -6.22E-01 | 1.87E-04 | negative |
| TMEM209   | 6.22E-01  | 1.88E-04 | postive  |
| VTI1B     | 6.22E-01  | 1.89E-04 | postive  |
| TUB       | 6.21E-01  | 1.90E-04 | postive  |
| GTF2F2    | 6.21E-01  | 1.91E-04 | postive  |
| MAGED2    | 6.21E-01  | 1.92E-04 | postive  |
| IFT80     | 6.21E-01  | 1.93E-04 | postive  |
| PRPS1     | 6.21E-01  | 1.94E-04 | postive  |
| SFRS3     | 6.21E-01  | 1.95E-04 | postive  |
| RNF149    | 6.21E-01  | 1.95E-04 | postive  |
| NAV2      | -6.21E-01 | 1.96E-04 | negative |
| PRSS35    | 6.20E-01  | 1.96E-04 | postive  |
| RNF138    | 6.20E-01  | 1.97E-04 | postive  |
| TSGA14    | 6.20E-01  | 1.98E-04 | postive  |
| ECHDC1    | 6.20E-01  | 1.99E-04 | postive  |
| C18orf55  | 6.20E-01  | 1.99E-04 | postive  |
| LSG1      | 6.20E-01  | 2.00E-04 | postive  |
| PAFAH1B2  | 6.20E-01  | 2.01E-04 | postive  |
| C12orf47  | 6.20E-01  | 2.01E-04 | postive  |
| SSH1      | -6.20E-01 | 2.01E-04 | negative |
| RSRC2     | 6.20E-01  | 2.01E-04 | postive  |
| BBS10     | 6.20E-01  | 2.01E-04 | postive  |
| ZNF624    | 6.20E-01  | 2.02E-04 | postive  |
| KCTD16    | -6.20E-01 | 2.02E-04 | negative |
| RBM45     | 6.19E-01  | 2.02E-04 | postive  |
| MECP2     | -6.19E-01 | 2.03E-04 | negative |
| BCKDHA    | -6.19E-01 | 2.04E-04 | negative |
| TM7SF3    | 6.19E-01  | 2.04E-04 | postive  |
| NOX4      | 6.19E-01  | 2.04E-04 | postive  |
| SLBP      | 6.19E-01  | 2.05E-04 | postive  |

|              |           |          |          |
|--------------|-----------|----------|----------|
| NUDT6        | 6.19E-01  | 2.06E-04 | postive  |
| MRPL10       | 6.19E-01  | 2.06E-04 | postive  |
| C2orf64      | 6.19E-01  | 2.06E-04 | postive  |
| KIAA0999     | 6.19E-01  | 2.06E-04 | postive  |
| SPATA5L1     | 6.19E-01  | 2.07E-04 | postive  |
| BACE2        | -6.19E-01 | 2.07E-04 | negative |
| DPYSL4       | -6.19E-01 | 2.07E-04 | negative |
| LZTFL1       | 6.19E-01  | 2.08E-04 | postive  |
| RPA3         | 6.18E-01  | 2.09E-04 | postive  |
| GRHPR        | 6.18E-01  | 2.10E-04 | postive  |
| KIAA1012     | 6.18E-01  | 2.10E-04 | postive  |
| SEC31B       | -6.18E-01 | 2.11E-04 | negative |
| WIF1         | 6.18E-01  | 2.11E-04 | postive  |
| LYSMD2       | 6.18E-01  | 2.12E-04 | postive  |
| CRBN         | 6.18E-01  | 2.13E-04 | postive  |
| NDUFAF1      | 6.17E-01  | 2.15E-04 | postive  |
| TMEM138      | 6.17E-01  | 2.16E-04 | postive  |
| SON          | 6.17E-01  | 2.17E-04 | postive  |
| NDUFA5       | 6.17E-01  | 2.17E-04 | postive  |
| AP1M1        | 6.17E-01  | 2.17E-04 | postive  |
| GNPTG        | 6.17E-01  | 2.19E-04 | postive  |
| SLC7A5       | -6.16E-01 | 2.22E-04 | negative |
| RALA         | 6.16E-01  | 2.23E-04 | postive  |
| EIF4A2       | 6.16E-01  | 2.24E-04 | postive  |
| EHD2         | -6.16E-01 | 2.25E-04 | negative |
| CTR9         | 6.16E-01  | 2.26E-04 | postive  |
| PDCD6IP      | 6.16E-01  | 2.27E-04 | postive  |
| TP53BP2      | 6.16E-01  | 2.27E-04 | postive  |
| IL6          | -6.16E-01 | 2.28E-04 | negative |
| PQLC1        | -6.15E-01 | 2.30E-04 | negative |
| SEPX1        | 6.15E-01  | 2.32E-04 | postive  |
| HDAC2        | 6.15E-01  | 2.32E-04 | postive  |
| KIAA1468     | 6.15E-01  | 2.33E-04 | postive  |
| CCDC34       | 6.15E-01  | 2.34E-04 | postive  |
| LMBRD1       | 6.15E-01  | 2.34E-04 | postive  |
| RPL23        | -6.15E-01 | 2.35E-04 | negative |
| UNK          | -6.14E-01 | 2.35E-04 | negative |
| INTS10       | 6.14E-01  | 2.39E-04 | postive  |
| C4orf27      | 6.14E-01  | 2.41E-04 | postive  |
| COG8         | 6.14E-01  | 2.42E-04 | postive  |
| DYNLL1       | 6.13E-01  | 2.43E-04 | postive  |
| LOC100128822 | 6.13E-01  | 2.46E-04 | postive  |
| CYB5R4       | 6.13E-01  | 2.46E-04 | postive  |
| FAM3C        | 6.13E-01  | 2.48E-04 | postive  |

|              |           |          |          |
|--------------|-----------|----------|----------|
| PSMG1        | 6.13E-01  | 2.49E-04 | postive  |
| ASH2L        | 6.13E-01  | 2.49E-04 | postive  |
| CDK7         | 6.13E-01  | 2.50E-04 | postive  |
| MED9         | 6.12E-01  | 2.50E-04 | postive  |
| LOC100130289 | 6.12E-01  | 2.53E-04 | postive  |
| DIRAS1       | -6.12E-01 | 2.53E-04 | negative |
| CHD6         | 6.12E-01  | 2.54E-04 | postive  |
| SMARCA1      | 6.12E-01  | 2.55E-04 | postive  |
| FAM119A      | -6.12E-01 | 2.55E-04 | negative |
| KIN          | 6.12E-01  | 2.56E-04 | postive  |
| ZMIZ2        | -6.11E-01 | 2.59E-04 | negative |
| STAB1        | -6.11E-01 | 2.60E-04 | negative |
| REV3L        | 6.11E-01  | 2.60E-04 | postive  |
| C12orf43     | 6.11E-01  | 2.61E-04 | postive  |
| TIMP2        | -6.11E-01 | 2.61E-04 | negative |
| UGP2         | 6.11E-01  | 2.62E-04 | postive  |
| TMEM106B     | 6.11E-01  | 2.62E-04 | postive  |
| C2orf44      | 6.11E-01  | 2.62E-04 | postive  |
| LOC100131482 | 6.11E-01  | 2.64E-04 | postive  |
| ADAMTS9      | -6.11E-01 | 2.65E-04 | negative |
| PREB         | 6.10E-01  | 2.68E-04 | postive  |
| SYT4         | 6.10E-01  | 2.69E-04 | postive  |
| LRPPRC       | 6.10E-01  | 2.69E-04 | postive  |
| LOC344595    | 6.10E-01  | 2.70E-04 | postive  |
| CLN6         | 6.10E-01  | 2.71E-04 | postive  |
| LAGE3        | 6.09E-01  | 2.74E-04 | postive  |
| HK2          | -6.09E-01 | 2.74E-04 | negative |
| TNNC1        | -6.09E-01 | 2.74E-04 | negative |
| TWF1         | 6.09E-01  | 2.76E-04 | postive  |
| LRRC8B       | 6.09E-01  | 2.78E-04 | postive  |
| RTCD1        | 6.09E-01  | 2.80E-04 | postive  |
| SETBP1       | -6.09E-01 | 2.81E-04 | negative |
| LYPLAL1      | 6.09E-01  | 2.81E-04 | postive  |
| TSEN2        | 6.08E-01  | 2.81E-04 | postive  |
| RINT1        | 6.08E-01  | 2.82E-04 | postive  |
| HTRA4        | -6.08E-01 | 2.83E-04 | negative |
| P2RX7        | -6.08E-01 | 2.83E-04 | negative |
| EID2         | 6.08E-01  | 2.85E-04 | postive  |
| FGF13        | 6.08E-01  | 2.85E-04 | postive  |
| JAG1         | 6.08E-01  | 2.87E-04 | postive  |
| NCRNA00152   | -6.08E-01 | 2.87E-04 | negative |
| FAM120AOS    | 6.08E-01  | 2.89E-04 | postive  |
| RPL26L1      | 6.07E-01  | 2.91E-04 | postive  |
| GABRR1       | 6.07E-01  | 2.91E-04 | postive  |

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|----------|-----------|----------|----------|
| KIAA1618 | -6.07E-01 | 2.92E-04 | negative |
| ESF1     | 6.07E-01  | 2.93E-04 | postive  |
| SLC30A5  | 6.07E-01  | 2.93E-04 | postive  |
| PIGX     | 6.07E-01  | 2.95E-04 | postive  |
| MAGI2    | 6.07E-01  | 2.97E-04 | postive  |
| USP16    | 6.06E-01  | 2.99E-04 | postive  |
| SMEK2    | 6.06E-01  | 3.02E-04 | postive  |
| SLC35F1  | 6.06E-01  | 3.03E-04 | postive  |
| ZNF354A  | 6.06E-01  | 3.05E-04 | postive  |
| ST3GAL5  | -6.06E-01 | 3.05E-04 | negative |
| SF3A2    | -6.06E-01 | 3.06E-04 | negative |
| DEK      | 6.06E-01  | 3.07E-04 | postive  |
| IMPG1    | 6.05E-01  | 3.08E-04 | postive  |
| CHCHD1   | 6.05E-01  | 3.08E-04 | postive  |
| BSCL2    | 6.05E-01  | 3.10E-04 | postive  |
| HDHD2    | 6.05E-01  | 3.13E-04 | postive  |
| SIRPA    | -6.05E-01 | 3.15E-04 | negative |
| TUSC1    | 6.05E-01  | 3.16E-04 | postive  |
| TNS1     | -6.04E-01 | 3.17E-04 | negative |
| KRT18P33 | -6.04E-01 | 3.19E-04 | negative |
| TRIP4    | 6.04E-01  | 3.20E-04 | postive  |
| C11orf9  | -6.04E-01 | 3.25E-04 | negative |
| ZNF518A  | 6.03E-01  | 3.28E-04 | postive  |
| C12orf29 | 6.03E-01  | 3.28E-04 | postive  |
| THBD     | -6.03E-01 | 3.29E-04 | negative |
| TEP1     | -6.03E-01 | 3.29E-04 | negative |
| ZNHIT3   | 6.03E-01  | 3.29E-04 | postive  |
| COX4I1   | 6.03E-01  | 3.30E-04 | postive  |
| C19orf68 | -6.03E-01 | 3.30E-04 | negative |
| HIG2     | -6.03E-01 | 3.31E-04 | negative |
| CTSC     | -6.03E-01 | 3.34E-04 | negative |
| FEZ1     | 6.02E-01  | 3.40E-04 | postive  |
| LZTS2    | -6.02E-01 | 3.41E-04 | negative |
| C2orf68  | 6.02E-01  | 3.43E-04 | postive  |
| ERRFI1   | 6.02E-01  | 3.44E-04 | postive  |
| ZHX1     | 6.01E-01  | 3.45E-04 | postive  |
| IL6R     | -6.01E-01 | 3.46E-04 | negative |
| MSRB2    | 6.01E-01  | 3.49E-04 | postive  |
| TMSB15B  | 6.01E-01  | 3.50E-04 | postive  |
| AGK      | 6.01E-01  | 3.51E-04 | postive  |
| ETV6     | -6.01E-01 | 3.51E-04 | negative |
| IGFALS   | -6.01E-01 | 3.52E-04 | negative |
| PPP1R13L | -6.01E-01 | 3.53E-04 | negative |
| C6orf64  | 6.00E-01  | 3.58E-04 | postive  |

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|-----------|-----------|----------|----------|
| GNPAT     | 6.00E-01  | 3.62E-04 | postive  |
| TMEM108   | 6.00E-01  | 3.64E-04 | postive  |
| RNF170    | 6.00E-01  | 3.64E-04 | postive  |
| BIVM      | 5.99E-01  | 3.65E-04 | postive  |
| FKSG24    | 5.99E-01  | 3.66E-04 | postive  |
| FAM84B    | 5.99E-01  | 3.67E-04 | postive  |
| BRSK2     | -5.99E-01 | 3.70E-04 | negative |
| GTF3C2    | 5.99E-01  | 3.71E-04 | postive  |
| LPPR4     | 5.99E-01  | 3.71E-04 | postive  |
| PCYOX1    | 5.99E-01  | 3.72E-04 | postive  |
| ANGPTL4   | -5.98E-01 | 3.78E-04 | negative |
| C3orf63   | 5.98E-01  | 3.80E-04 | postive  |
| GLRX5     | 5.98E-01  | 3.80E-04 | postive  |
| PSMD10    | 5.98E-01  | 3.82E-04 | postive  |
| PRKAB1    | 5.98E-01  | 3.82E-04 | postive  |
| LOC149501 | -5.98E-01 | 3.83E-04 | negative |
| DEM1      | 5.98E-01  | 3.83E-04 | postive  |
| MAGEL2    | 5.98E-01  | 3.84E-04 | postive  |
| GNG13     | -5.98E-01 | 3.85E-04 | negative |
| ZCCHC8    | 5.97E-01  | 3.87E-04 | postive  |
| AHCYL1    | 5.97E-01  | 3.88E-04 | postive  |
| TTC15     | 5.97E-01  | 3.88E-04 | postive  |
| SERPINH1  | -5.97E-01 | 3.89E-04 | negative |
| SLC25A22  | -5.97E-01 | 3.89E-04 | negative |
| MRPL20    | 5.97E-01  | 3.89E-04 | postive  |
| LOC25845  | 5.97E-01  | 3.90E-04 | postive  |
| UMPS      | 5.97E-01  | 3.91E-04 | postive  |
| LSM3      | 5.97E-01  | 3.92E-04 | postive  |
| PRX       | -5.97E-01 | 3.94E-04 | negative |
| OTUD1     | 5.97E-01  | 3.94E-04 | postive  |
| DGCR8     | -5.97E-01 | 3.96E-04 | negative |
| SLITRK2   | -5.96E-01 | 3.98E-04 | negative |
| CAT       | 5.96E-01  | 3.98E-04 | postive  |
| EEF1G     | 5.96E-01  | 4.00E-04 | postive  |
| WDR22     | -5.96E-01 | 4.00E-04 | negative |
| RBBP4     | 5.96E-01  | 4.02E-04 | postive  |
| GFPT1     | 5.96E-01  | 4.04E-04 | postive  |
| NDUFB10   | 5.96E-01  | 4.05E-04 | postive  |
| ALG6      | 5.96E-01  | 4.06E-04 | postive  |
| ECOP      | 5.96E-01  | 4.06E-04 | postive  |
| TIPRL     | 5.96E-01  | 4.08E-04 | postive  |
| MRPL15    | 5.96E-01  | 4.08E-04 | postive  |
| LOC441896 | 5.95E-01  | 4.10E-04 | postive  |
| RFFL      | 5.95E-01  | 4.11E-04 | postive  |

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|----------|-----------|----------|----------|
| MTERFD3  | 5.95E-01  | 4.11E-04 | postive  |
| TMEM185B | 5.95E-01  | 4.12E-04 | postive  |
| USP46    | 5.95E-01  | 4.17E-04 | postive  |
| SAMD7    | 5.95E-01  | 4.17E-04 | postive  |
| DCUN1D4  | 5.95E-01  | 4.17E-04 | postive  |
| EEF1A1   | 5.95E-01  | 4.18E-04 | postive  |
| TMEM9B   | 5.95E-01  | 4.19E-04 | postive  |
| KIAA0232 | 5.95E-01  | 4.19E-04 | postive  |
| ATPIF1   | 5.95E-01  | 4.19E-04 | postive  |
| PIK3C3   | 5.95E-01  | 4.19E-04 | postive  |
| FN3KRP   | 5.94E-01  | 4.21E-04 | postive  |
| UXT      | 5.94E-01  | 4.22E-04 | postive  |
| NDUFS3   | 5.94E-01  | 4.23E-04 | postive  |
| COL4A1   | -5.94E-01 | 4.23E-04 | negative |
| FAM168B  | 5.94E-01  | 4.24E-04 | postive  |
| SNAPC5   | 5.94E-01  | 4.26E-04 | postive  |
| MGRN1    | -5.94E-01 | 4.27E-04 | negative |
| VTA1     | 5.94E-01  | 4.28E-04 | postive  |
| FAM60A   | -5.94E-01 | 4.28E-04 | negative |
| SPIN3    | 5.94E-01  | 4.29E-04 | postive  |
| HOMER1   | 5.94E-01  | 4.31E-04 | postive  |
| PLVAP    | -5.94E-01 | 4.32E-04 | negative |
| HNRNPA1  | 5.93E-01  | 4.33E-04 | postive  |
| GTF2A2   | 5.93E-01  | 4.34E-04 | postive  |
| COX8A    | 5.93E-01  | 4.34E-04 | postive  |
| PCMTD2   | 5.93E-01  | 4.34E-04 | postive  |
| ZNF622   | 5.93E-01  | 4.35E-04 | postive  |
| COG3     | 5.93E-01  | 4.36E-04 | postive  |
| IFI16    | -5.93E-01 | 4.38E-04 | negative |
| GPS1     | 5.93E-01  | 4.42E-04 | postive  |
| LGR4     | 5.93E-01  | 4.42E-04 | postive  |
| TXNDC17  | 5.93E-01  | 4.42E-04 | postive  |
| DYNC1I2  | 5.93E-01  | 4.43E-04 | postive  |
| LCLAT1   | 5.92E-01  | 4.45E-04 | postive  |
| EXOC3L2  | -5.92E-01 | 4.46E-04 | negative |
| GLUL     | 5.92E-01  | 4.50E-04 | postive  |
| VAPA     | 5.92E-01  | 4.51E-04 | postive  |
| CAPN2    | 5.92E-01  | 4.52E-04 | postive  |
| NUPR1    | -5.92E-01 | 4.52E-04 | negative |
| INO80E   | -5.92E-01 | 4.54E-04 | negative |
| PIGM     | 5.91E-01  | 4.60E-04 | postive  |
| ZFR      | 5.91E-01  | 4.62E-04 | postive  |
| DUSP8    | -5.91E-01 | 4.64E-04 | negative |
| COQ5     | 5.91E-01  | 4.64E-04 | postive  |

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|-----------|-----------|----------|----------|
| SEC22C    | 5.91E-01  | 4.65E-04 | postive  |
| C18orf8   | 5.91E-01  | 4.66E-04 | postive  |
| CDC40     | 5.91E-01  | 4.68E-04 | postive  |
| PPP3CB    | 5.90E-01  | 4.71E-04 | postive  |
| MYL6      | 5.90E-01  | 4.72E-04 | postive  |
| SRI       | 5.90E-01  | 4.73E-04 | postive  |
| C12orf35  | 5.90E-01  | 4.74E-04 | postive  |
| C14orf126 | 5.90E-01  | 4.76E-04 | postive  |
| SIP1      | 5.90E-01  | 4.77E-04 | postive  |
| RELB      | -5.90E-01 | 4.77E-04 | negative |
| NUS1      | 5.90E-01  | 4.81E-04 | postive  |
| PPP3CA    | 5.90E-01  | 4.81E-04 | postive  |
| ELOVL4    | 5.89E-01  | 4.85E-04 | postive  |
| PDXDC1    | 5.89E-01  | 4.86E-04 | postive  |
| PDLIM5    | -5.89E-01 | 4.87E-04 | negative |
| CHP       | 5.89E-01  | 4.88E-04 | postive  |
| POMP      | 5.89E-01  | 4.88E-04 | postive  |
| LOC388122 | 5.89E-01  | 4.93E-04 | postive  |
| KRT18P42  | -5.89E-01 | 4.93E-04 | negative |
| GEMIN6    | 5.89E-01  | 4.95E-04 | postive  |
| MAP9      | 5.89E-01  | 4.95E-04 | postive  |
| WASF2     | -5.89E-01 | 4.97E-04 | negative |
| MESDC2    | 5.88E-01  | 4.97E-04 | postive  |
| STRC      | -5.88E-01 | 4.99E-04 | negative |
| FBXO9     | 5.88E-01  | 5.03E-04 | postive  |
| CARKD     | 5.88E-01  | 5.09E-04 | postive  |
| TAF7      | 5.88E-01  | 5.10E-04 | postive  |
| PFKFB2    | 5.88E-01  | 5.11E-04 | postive  |
| PSMA4     | 5.88E-01  | 5.11E-04 | postive  |
| CCDC5     | 5.87E-01  | 5.14E-04 | postive  |
| DYNC2LI1  | 5.87E-01  | 5.14E-04 | postive  |
| FAM134B   | 5.87E-01  | 5.18E-04 | postive  |
| CALY      | 5.87E-01  | 5.19E-04 | postive  |
| ARFGAP3   | 5.87E-01  | 5.19E-04 | postive  |
| LOC728449 | -5.87E-01 | 5.20E-04 | negative |
| C1orf168  | -5.87E-01 | 5.23E-04 | negative |
| UBE2O     | -5.87E-01 | 5.24E-04 | negative |
| MRPL4     | 5.87E-01  | 5.25E-04 | postive  |
| TRIO      | -5.86E-01 | 5.26E-04 | negative |
| LOC728732 | 5.86E-01  | 5.28E-04 | postive  |
| ATG5      | 5.86E-01  | 5.28E-04 | postive  |
| MTMR15    | 5.86E-01  | 5.31E-04 | postive  |
| SRP9      | 5.86E-01  | 5.31E-04 | postive  |
| KRT18P30  | -5.86E-01 | 5.32E-04 | negative |

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|---------------|-----------|----------|----------|
| TCEAL1        | 5.86E-01  | 5.33E-04 | postive  |
| UQCRFS1       | 5.86E-01  | 5.34E-04 | postive  |
| LARP7         | 5.86E-01  | 5.36E-04 | postive  |
| ATP9B         | 5.86E-01  | 5.39E-04 | postive  |
| HMGCS1        | 5.85E-01  | 5.41E-04 | postive  |
| NAV1          | -5.85E-01 | 5.44E-04 | negative |
| PEX19         | 5.85E-01  | 5.45E-04 | postive  |
| CTSG          | -5.85E-01 | 5.49E-04 | negative |
| FOXN3         | -5.85E-01 | 5.51E-04 | negative |
| DMXL1         | 5.85E-01  | 5.51E-04 | postive  |
| PSMB5         | 5.85E-01  | 5.51E-04 | postive  |
| DHX29         | 5.85E-01  | 5.54E-04 | postive  |
| SERGEF        | -5.84E-01 | 5.55E-04 | negative |
| HSPA6         | -5.84E-01 | 5.56E-04 | negative |
| NAPEPLD       | 5.84E-01  | 5.58E-04 | postive  |
| LOC441073     | 5.84E-01  | 5.61E-04 | postive  |
| SLITRK5       | 5.84E-01  | 5.64E-04 | postive  |
| COL1A1        | -5.84E-01 | 5.66E-04 | negative |
| MORF4L2       | 5.84E-01  | 5.68E-04 | postive  |
| C1orf107      | 5.84E-01  | 5.69E-04 | postive  |
| VDAC1         | 5.84E-01  | 5.69E-04 | postive  |
| CASP4         | -5.83E-01 | 5.71E-04 | negative |
| LOC642076     | 5.83E-01  | 5.74E-04 | postive  |
| PPA1          | 5.83E-01  | 5.75E-04 | postive  |
| KPNA5         | 5.83E-01  | 5.76E-04 | postive  |
| THYN1         | 5.83E-01  | 5.77E-04 | postive  |
| CLIP1         | 5.83E-01  | 5.77E-04 | postive  |
| LOC100190890  | -5.83E-01 | 5.77E-04 | negative |
| SFRS2B        | 5.83E-01  | 5.78E-04 | postive  |
| HMGCR         | 5.83E-01  | 5.79E-04 | postive  |
| PAWR          | -5.83E-01 | 5.79E-04 | negative |
| DIO3OS        | -5.83E-01 | 5.80E-04 | negative |
| SAFB2         | -5.83E-01 | 5.81E-04 | negative |
| ANGPTL2       | -5.83E-01 | 5.82E-04 | negative |
| XRCC4         | 5.83E-01  | 5.82E-04 | postive  |
| SNX15         | 5.83E-01  | 5.82E-04 | postive  |
| DKFZP586B0319 | -5.83E-01 | 5.83E-04 | negative |
| GDF15         | -5.83E-01 | 5.84E-04 | negative |
| NT5C3         | 5.83E-01  | 5.84E-04 | postive  |
| RWDD1         | 5.83E-01  | 5.84E-04 | postive  |
| DZIP3         | 5.83E-01  | 5.85E-04 | postive  |
| CRYZ          | 5.82E-01  | 5.88E-04 | postive  |
| PXMP2         | 5.82E-01  | 5.89E-04 | postive  |
| C10orf35      | 5.82E-01  | 5.89E-04 | postive  |

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|-----------|-----------|----------|----------|
| GTF3A     | 5.82E-01  | 5.89E-04 | postive  |
| C1orf31   | 5.82E-01  | 5.91E-04 | postive  |
| LOC728820 | -5.82E-01 | 5.95E-04 | negative |
| RTN4      | 5.82E-01  | 5.95E-04 | postive  |
| MTHFS     | 5.82E-01  | 5.95E-04 | postive  |
| S100A12   | -5.82E-01 | 5.96E-04 | negative |
| TEAD4     | -5.82E-01 | 5.97E-04 | negative |
| URB2      | 5.82E-01  | 6.00E-04 | postive  |
| BATF      | -5.82E-01 | 6.00E-04 | negative |
| PPP2CA    | 5.82E-01  | 6.00E-04 | postive  |
| QTRTD1    | 5.82E-01  | 6.01E-04 | postive  |
| POLR1C    | 5.81E-01  | 6.02E-04 | postive  |
| DAGLB     | 5.81E-01  | 6.02E-04 | postive  |
| VPS26A    | 5.81E-01  | 6.05E-04 | postive  |
| GPRASP1   | 5.81E-01  | 6.07E-04 | postive  |
| STAT5A    | -5.81E-01 | 6.08E-04 | negative |
| FCER1G    | -5.81E-01 | 6.09E-04 | negative |
| THTPA     | 5.81E-01  | 6.09E-04 | postive  |
| CCDC117   | 5.81E-01  | 6.09E-04 | postive  |
| SLC25A11  | 5.81E-01  | 6.11E-04 | postive  |
| SDS       | -5.81E-01 | 6.12E-04 | negative |
| KIAA0196  | 5.80E-01  | 6.19E-04 | postive  |
| FLJ10213  | -5.80E-01 | 6.22E-04 | negative |
| C4orf39   | 5.80E-01  | 6.28E-04 | postive  |
| POT1      | 5.80E-01  | 6.29E-04 | postive  |
| C13orf37  | 5.80E-01  | 6.30E-04 | postive  |
| CCDC86    | -5.80E-01 | 6.30E-04 | negative |
| C10orf141 | 5.80E-01  | 6.30E-04 | postive  |
| LOC643932 | 5.80E-01  | 6.32E-04 | postive  |
| TCEB1     | 5.80E-01  | 6.34E-04 | postive  |
| TMED5     | 5.79E-01  | 6.37E-04 | postive  |
| TM9SF3    | 5.79E-01  | 6.39E-04 | postive  |
| DPH2      | 5.79E-01  | 6.40E-04 | postive  |
| SLC2A14   | -5.79E-01 | 6.45E-04 | negative |
| SYNE1     | 5.79E-01  | 6.45E-04 | postive  |
| OPA1      | 5.79E-01  | 6.47E-04 | postive  |
| CBX3      | 5.79E-01  | 6.47E-04 | postive  |
| CYP1B1    | -5.79E-01 | 6.49E-04 | negative |
| HSPA8     | 5.79E-01  | 6.50E-04 | postive  |
| WWTR1     | -5.79E-01 | 6.50E-04 | negative |
| KIAA0090  | 5.79E-01  | 6.51E-04 | postive  |
| MYCT1     | -5.78E-01 | 6.53E-04 | negative |
| JUND      | -5.78E-01 | 6.54E-04 | negative |
| ATP13A3   | 5.78E-01  | 6.54E-04 | postive  |

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|-----------|-----------|----------|----------|
| AEBP1     | -5.78E-01 | 6.58E-04 | negative |
| C9orf80   | 5.78E-01  | 6.59E-04 | postive  |
| TNFRSF1A  | -5.78E-01 | 6.60E-04 | negative |
| PSMB2     | 5.78E-01  | 6.60E-04 | postive  |
| NR3C2     | 5.78E-01  | 6.61E-04 | postive  |
| EIF3I     | 5.78E-01  | 6.62E-04 | postive  |
| TUSC2     | 5.78E-01  | 6.64E-04 | postive  |
| DUSP10    | 5.78E-01  | 6.65E-04 | postive  |
| AAMP      | 5.78E-01  | 6.65E-04 | postive  |
| TFAM      | 5.78E-01  | 6.68E-04 | postive  |
| C10orf10  | -5.78E-01 | 6.68E-04 | negative |
| ICAM1     | -5.77E-01 | 6.75E-04 | negative |
| MMP2      | -5.77E-01 | 6.76E-04 | negative |
| GMPS      | -5.77E-01 | 6.76E-04 | negative |
| PTGES3    | 5.77E-01  | 6.78E-04 | postive  |
| UCHL5     | 5.77E-01  | 6.78E-04 | postive  |
| TNKS      | 5.77E-01  | 6.79E-04 | postive  |
| PPP1R3E   | -5.77E-01 | 6.81E-04 | negative |
| MADD      | 5.77E-01  | 6.82E-04 | postive  |
| ISG20     | -5.77E-01 | 6.82E-04 | negative |
| C1orf96   | -5.77E-01 | 6.82E-04 | negative |
| WDR77     | 5.77E-01  | 6.85E-04 | postive  |
| MCM3AP    | 5.77E-01  | 6.86E-04 | postive  |
| RHBDD2    | 5.77E-01  | 6.87E-04 | postive  |
| HIST2H2BE | 5.76E-01  | 6.89E-04 | postive  |
| STRADB    | 5.76E-01  | 6.91E-04 | postive  |
| SLC11A1   | -5.76E-01 | 6.94E-04 | negative |
| EEF1D     | -5.76E-01 | 6.95E-04 | negative |
| BBX       | -5.76E-01 | 6.96E-04 | negative |
| TFEB      | -5.76E-01 | 6.96E-04 | negative |
| NPM1      | 5.76E-01  | 6.98E-04 | postive  |
| JMJD2D    | 5.76E-01  | 6.98E-04 | postive  |
| IGHMBP2   | 5.76E-01  | 7.01E-04 | postive  |
| C1orf38   | -5.76E-01 | 7.02E-04 | negative |
| SKP1      | 5.76E-01  | 7.02E-04 | postive  |
| SENP2     | 5.76E-01  | 7.05E-04 | postive  |
| EIF2S2    | 5.76E-01  | 7.06E-04 | postive  |
| GNE       | 5.75E-01  | 7.07E-04 | postive  |
| INPP5E    | 5.75E-01  | 7.11E-04 | postive  |
| POLH      | -5.75E-01 | 7.12E-04 | negative |
| C14orf135 | 5.75E-01  | 7.12E-04 | postive  |
| UBTF      | 5.75E-01  | 7.13E-04 | postive  |
| UBR1      | 5.75E-01  | 7.16E-04 | postive  |
| HAX1      | 5.75E-01  | 7.17E-04 | postive  |

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|-----------|-----------|----------|----------|
| SFRS18    | -5.75E-01 | 7.18E-04 | negative |
| TMEM147   | 5.75E-01  | 7.18E-04 | postive  |
| ZNF347    | 5.75E-01  | 7.18E-04 | postive  |
| LOC401397 | 5.75E-01  | 7.20E-04 | postive  |
| UBAP2     | 5.75E-01  | 7.20E-04 | postive  |
| DCTN6     | 5.75E-01  | 7.21E-04 | postive  |
| C8orf58   | -5.75E-01 | 7.22E-04 | negative |
| C17orf42  | 5.75E-01  | 7.23E-04 | postive  |
| IL10RA    | -5.75E-01 | 7.24E-04 | negative |
| MRS2      | 5.75E-01  | 7.24E-04 | postive  |
| CD93      | -5.74E-01 | 7.25E-04 | negative |
| LYPLA2P1  | 5.74E-01  | 7.27E-04 | postive  |
| NCOA7     | 5.74E-01  | 7.29E-04 | postive  |
| EPS8L2    | -5.74E-01 | 7.29E-04 | negative |
| FAM21A    | 5.74E-01  | 7.29E-04 | postive  |
| KIAA1545  | -5.74E-01 | 7.29E-04 | negative |
| CCDC90B   | 5.74E-01  | 7.30E-04 | postive  |
| RPL18     | 5.74E-01  | 7.33E-04 | postive  |
| SRP14     | 5.74E-01  | 7.34E-04 | postive  |
| STOM      | -5.74E-01 | 7.36E-04 | negative |
| CLDN3     | -5.74E-01 | 7.38E-04 | negative |
| CST7      | -5.74E-01 | 7.42E-04 | negative |
| TRRAP     | 5.74E-01  | 7.43E-04 | postive  |
| GJA4      | -5.73E-01 | 7.45E-04 | negative |
| METTL2B   | 5.73E-01  | 7.47E-04 | postive  |
| PRR17     | -5.73E-01 | 7.48E-04 | negative |
| HNRNPA1L2 | 5.73E-01  | 7.48E-04 | postive  |
| AQP1      | -5.73E-01 | 7.49E-04 | negative |
| RWDD3     | 5.73E-01  | 7.52E-04 | postive  |
| DACT1     | -5.73E-01 | 7.59E-04 | negative |
| ZNF30     | 5.73E-01  | 7.63E-04 | postive  |
| WDR61     | 5.72E-01  | 7.65E-04 | postive  |
| COX7A2L   | 5.72E-01  | 7.65E-04 | postive  |
| VEZT      | 5.72E-01  | 7.65E-04 | postive  |
| RDH12     | 5.72E-01  | 7.67E-04 | postive  |
| SLCO4A1   | -5.72E-01 | 7.70E-04 | negative |
| H19       | -5.72E-01 | 7.70E-04 | negative |
| SETD6     | 5.72E-01  | 7.71E-04 | postive  |
| MBTD1     | 5.72E-01  | 7.72E-04 | postive  |
| SGTA      | -5.72E-01 | 7.74E-04 | negative |
| NDFIP2    | 5.72E-01  | 7.74E-04 | postive  |
| CACNA2D3  | 5.72E-01  | 7.74E-04 | postive  |
| IL3RA     | -5.72E-01 | 7.75E-04 | negative |
| CLASP2    | 5.72E-01  | 7.77E-04 | postive  |

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|----------|-----------|----------|----------|
| USP8     | 5.72E-01  | 7.80E-04 | postive  |
| RRN3     | 5.72E-01  | 7.82E-04 | postive  |
| MDH2     | 5.72E-01  | 7.83E-04 | postive  |
| ZNF135   | 5.72E-01  | 7.84E-04 | postive  |
| CCDC44   | 5.71E-01  | 7.85E-04 | postive  |
| IMPAD1   | 5.71E-01  | 7.86E-04 | postive  |
| SH3GL3   | 5.71E-01  | 7.87E-04 | postive  |
| KBTBD7   | 5.71E-01  | 7.88E-04 | postive  |
| ZNF271   | 5.71E-01  | 7.89E-04 | postive  |
| APOL1    | -5.71E-01 | 7.93E-04 | negative |
| LOC26010 | 5.71E-01  | 7.93E-04 | postive  |
| SRPK2    | 5.71E-01  | 7.94E-04 | postive  |
| SLC30A9  | 5.71E-01  | 7.95E-04 | postive  |
| S100P    | -5.71E-01 | 8.00E-04 | negative |
| ERGIC1   | -5.71E-01 | 8.01E-04 | negative |
| CNDP1    | -5.70E-01 | 8.07E-04 | negative |
| TTC33    | 5.70E-01  | 8.07E-04 | postive  |
| POLR2H   | -5.70E-01 | 8.08E-04 | negative |
| TTRAP    | 5.70E-01  | 8.14E-04 | postive  |
| LCE1D    | -5.70E-01 | 8.19E-04 | negative |
| TCF7L1   | -5.70E-01 | 8.19E-04 | negative |
| MDM1     | 5.70E-01  | 8.20E-04 | postive  |
| NTHL1    | 5.70E-01  | 8.25E-04 | postive  |
| HADH     | 5.69E-01  | 8.28E-04 | postive  |
| KRCC1    | 5.69E-01  | 8.29E-04 | postive  |
| FUT8     | 5.69E-01  | 8.32E-04 | postive  |
| C16orf88 | 5.69E-01  | 8.33E-04 | postive  |
| SCAND3   | 5.69E-01  | 8.33E-04 | postive  |
| LRCH3    | 5.69E-01  | 8.34E-04 | postive  |
| AP2A2    | -5.69E-01 | 8.41E-04 | negative |
| NUP88    | 5.68E-01  | 8.50E-04 | postive  |
| SPAG9    | 5.68E-01  | 8.50E-04 | postive  |
| CREBL2   | 5.68E-01  | 8.51E-04 | postive  |
| TGFB1    | -5.68E-01 | 8.53E-04 | negative |
| ABCD4    | 5.68E-01  | 8.56E-04 | postive  |
| TEX261   | 5.68E-01  | 8.61E-04 | postive  |
| S100A9   | -5.68E-01 | 8.61E-04 | negative |
| PSMD5    | 5.68E-01  | 8.64E-04 | postive  |
| TGOLN2   | 5.68E-01  | 8.65E-04 | postive  |
| SAE1     | 5.67E-01  | 8.79E-04 | postive  |
| EEF1B2   | 5.67E-01  | 8.80E-04 | postive  |
| RNF34    | 5.67E-01  | 8.85E-04 | postive  |
| ZNRD1    | 5.67E-01  | 8.86E-04 | postive  |
| ZNF546   | 5.67E-01  | 8.87E-04 | postive  |

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|--------------|-----------|----------|----------|
| SOCS3        | -5.67E-01 | 8.89E-04 | negative |
| SEMA3A       | 5.66E-01  | 8.97E-04 | postive  |
| COX7A2       | 5.66E-01  | 9.00E-04 | postive  |
| CALM1        | 5.66E-01  | 9.02E-04 | postive  |
| GGCT         | 5.66E-01  | 9.03E-04 | postive  |
| CHAC2        | 5.66E-01  | 9.07E-04 | postive  |
| CRYZL1       | 5.66E-01  | 9.11E-04 | postive  |
| TRAM1L1      | 5.66E-01  | 9.11E-04 | postive  |
| SCARB1       | -5.66E-01 | 9.12E-04 | negative |
| PTS          | 5.66E-01  | 9.14E-04 | postive  |
| YARS2        | 5.65E-01  | 9.17E-04 | postive  |
| GTF2H5       | 5.65E-01  | 9.23E-04 | postive  |
| LOC100131601 | -5.65E-01 | 9.24E-04 | negative |
| SPON1        | 5.65E-01  | 9.24E-04 | postive  |
| ATP5G1       | 5.65E-01  | 9.25E-04 | postive  |
| CMKLR1       | -5.65E-01 | 9.26E-04 | negative |
| EEF2         | 5.65E-01  | 9.30E-04 | postive  |
| KIAA1370     | 5.65E-01  | 9.30E-04 | postive  |
| SNAP25       | 5.65E-01  | 9.34E-04 | postive  |
| AQP9         | -5.65E-01 | 9.37E-04 | negative |
| S1PR4        | -5.64E-01 | 9.44E-04 | negative |
| C1orf103     | 5.64E-01  | 9.46E-04 | postive  |
| HBM          | -5.64E-01 | 9.51E-04 | negative |
| NBR1         | 5.64E-01  | 9.52E-04 | postive  |
| CD8A         | -5.64E-01 | 9.56E-04 | negative |
| PTPLAD1      | 5.63E-01  | 9.64E-04 | postive  |
| RAPGEF2      | 5.63E-01  | 9.70E-04 | postive  |
| CUL4B        | 5.63E-01  | 9.73E-04 | postive  |
| PRO0478      | -5.63E-01 | 9.77E-04 | negative |
| HEG1         | 5.63E-01  | 9.78E-04 | postive  |
| MAPK10       | 5.63E-01  | 9.81E-04 | postive  |
| C15orf23     | 5.63E-01  | 9.81E-04 | postive  |
| ZNF554       | 5.63E-01  | 9.85E-04 | postive  |
| LOC440895    | 5.63E-01  | 9.88E-04 | postive  |
| TMEM60       | 5.62E-01  | 9.89E-04 | postive  |
| PGRMC2       | -5.62E-01 | 9.90E-04 | negative |
| ORAI1        | -5.62E-01 | 9.98E-04 | negative |
| TASP1        | 5.62E-01  | 9.98E-04 | postive  |
| C3orf23      | 5.62E-01  | 9.98E-04 | postive  |
| FLJ40142     | 7.53E-01  | 1.00E-06 | postive  |
| TSKU         | -7.53E-01 | 1.00E-06 | negative |
| CLDND1       | 7.03E-01  | 1.01E-05 | postive  |
| NOL7         | 7.53E-01  | 1.02E-06 | postive  |
| FLJ10038     | 7.03E-01  | 1.04E-05 | postive  |

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|----------|-----------|----------|----------|
| SNRPC    | 7.53E-01  | 1.04E-06 | postive  |
| SFRS10   | 7.93E-01  | 1.06E-07 | postive  |
| BRWD2    | 7.02E-01  | 1.07E-05 | postive  |
| TM9SF2   | 7.52E-01  | 1.08E-06 | postive  |
| CNBP     | 7.52E-01  | 1.09E-06 | postive  |
| ARPC1A   | 7.92E-01  | 1.09E-07 | postive  |
| XPOT     | 7.02E-01  | 1.10E-05 | postive  |
| HSBP1    | 7.01E-01  | 1.11E-05 | postive  |
| PDC      | 7.01E-01  | 1.12E-05 | postive  |
| FBXO3    | 7.51E-01  | 1.12E-06 | postive  |
| ACOT2    | 7.01E-01  | 1.13E-05 | postive  |
| ZADH2    | -7.01E-01 | 1.14E-05 | negative |
| ZNF444   | -7.01E-01 | 1.14E-05 | negative |
| CISD1    | 7.00E-01  | 1.15E-05 | postive  |
| PCNP     | 7.00E-01  | 1.15E-05 | postive  |
| RBBP6    | -7.51E-01 | 1.15E-06 | negative |
| PSMA1    | 7.91E-01  | 1.15E-07 | postive  |
| BDKRB2   | -7.00E-01 | 1.16E-05 | negative |
| SEC14L1  | -7.00E-01 | 1.16E-05 | negative |
| TXNDC13  | 7.00E-01  | 1.16E-05 | postive  |
| TBCC     | 7.00E-01  | 1.17E-05 | postive  |
| ATXN10   | 8.25E-01  | 1.17E-08 | postive  |
| C1QBP    | 7.50E-01  | 1.18E-06 | postive  |
| CCT6A    | 8.52E-01  | 1.18E-09 | postive  |
| PSMA6    | 7.00E-01  | 1.19E-05 | postive  |
| EEF1E1   | 6.99E-01  | 1.20E-05 | postive  |
| FLJ23185 | -6.99E-01 | 1.21E-05 | negative |
| HTRA2    | 6.99E-01  | 1.22E-05 | postive  |
| CXXC5    | -7.90E-01 | 1.25E-07 | negative |
| DDX47    | 7.49E-01  | 1.26E-06 | postive  |
| HSPA9    | 7.90E-01  | 1.27E-07 | postive  |
| KIAA1147 | 6.98E-01  | 1.28E-05 | postive  |
| TAF1B    | 6.98E-01  | 1.28E-05 | postive  |
| FAM50B   | 7.49E-01  | 1.28E-06 | postive  |
| NDUFB6   | 7.90E-01  | 1.28E-07 | postive  |
| SCFD1    | 7.48E-01  | 1.29E-06 | postive  |
| POLR2B   | 6.97E-01  | 1.30E-05 | postive  |
| GFM1     | 7.89E-01  | 1.30E-07 | postive  |
| ATXN7    | -6.97E-01 | 1.31E-05 | negative |
| MAP3K3   | -6.97E-01 | 1.32E-05 | negative |
| COPS5    | 7.48E-01  | 1.32E-06 | postive  |
| C21orf33 | 6.97E-01  | 1.33E-05 | postive  |
| RCN2     | 6.97E-01  | 1.34E-05 | postive  |
| SRPRB    | 7.48E-01  | 1.34E-06 | postive  |

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|---------|-----------|----------|----------|
| TMEM50B | 7.89E-01  | 1.34E-07 | postive  |
| OSBPL11 | 6.97E-01  | 1.35E-05 | postive  |
| SEC11C  | 6.97E-01  | 1.35E-05 | postive  |
| ECHS1   | 7.47E-01  | 1.36E-06 | postive  |
| FUSIP1  | 6.96E-01  | 1.37E-05 | postive  |
| BRP44L  | 6.96E-01  | 1.39E-05 | postive  |
| STARD7  | 6.96E-01  | 1.39E-05 | postive  |
| UCHL3   | 6.96E-01  | 1.39E-05 | postive  |
| SERINC1 | 6.95E-01  | 1.41E-05 | postive  |
| MRPL3   | 8.50E-01  | 1.41E-09 | postive  |
| TRIM44  | 6.95E-01  | 1.45E-05 | postive  |
| SGEF    | 6.94E-01  | 1.47E-05 | postive  |
| PRPSAP1 | 7.87E-01  | 1.47E-07 | postive  |
| USP1    | 7.46E-01  | 1.48E-06 | postive  |
| XPA     | 7.46E-01  | 1.48E-06 | postive  |
| POLR2G  | 6.94E-01  | 1.49E-05 | postive  |
| GPI     | -7.46E-01 | 1.49E-06 | negative |
| ARMCX2  | 7.45E-01  | 1.50E-06 | postive  |
| CNIH    | 6.94E-01  | 1.52E-05 | postive  |
| STAC2   | -6.93E-01 | 1.52E-05 | negative |
| TMEM203 | 6.93E-01  | 1.53E-05 | postive  |
| OCIAD1  | 7.87E-01  | 1.53E-07 | postive  |
| MRPL9   | 7.45E-01  | 1.54E-06 | postive  |
| MAPRE1  | 6.93E-01  | 1.57E-05 | postive  |
| RSL1D1  | 7.44E-01  | 1.57E-06 | postive  |
| RASSF7  | -7.86E-01 | 1.58E-07 | negative |
| ACTR6   | 6.92E-01  | 1.59E-05 | postive  |
| PPP2CB  | 7.44E-01  | 1.59E-06 | postive  |
| JMJD1B  | 6.92E-01  | 1.60E-05 | postive  |
| ZKSCAN1 | -6.92E-01 | 1.61E-05 | negative |
| GPAM    | 6.92E-01  | 1.62E-05 | postive  |
| MRPS31  | 6.92E-01  | 1.62E-05 | postive  |
| RAB1A   | 6.92E-01  | 1.63E-05 | postive  |
| SMC3    | 6.92E-01  | 1.63E-05 | postive  |
| TMEM14B | 6.92E-01  | 1.63E-05 | postive  |
| BUD31   | 6.91E-01  | 1.66E-05 | postive  |
| ZBTB7A  | -6.91E-01 | 1.66E-05 | negative |
| PSMD14  | 8.20E-01  | 1.67E-08 | postive  |
| MNT     | -7.43E-01 | 1.68E-06 | negative |
| DHX36   | 7.85E-01  | 1.70E-07 | postive  |
| ARRDC2  | -8.20E-01 | 1.70E-08 | negative |
| GMFB    | 8.20E-01  | 1.71E-08 | postive  |
| CRADD   | 6.90E-01  | 1.74E-05 | postive  |
| DSTN    | 6.90E-01  | 1.74E-05 | postive  |

|          |           |          |          |
|----------|-----------|----------|----------|
| TSN      | 6.90E-01  | 1.76E-05 | postive  |
| FXC1     | 6.90E-01  | 1.77E-05 | postive  |
| NME1     | 7.84E-01  | 1.79E-07 | postive  |
| PELI2    | 7.84E-01  | 1.80E-07 | postive  |
| MAGEH1   | 8.48E-01  | 1.80E-09 | postive  |
| C3orf14  | 6.89E-01  | 1.81E-05 | postive  |
| UBA2     | 6.89E-01  | 1.81E-05 | postive  |
| LRRC49   | 7.42E-01  | 1.81E-06 | postive  |
| TPD52    | 6.89E-01  | 1.83E-05 | postive  |
| F11R     | -6.89E-01 | 1.84E-05 | negative |
| ARFGEF1  | 6.89E-01  | 1.85E-05 | postive  |
| NOL3     | -6.88E-01 | 1.86E-05 | negative |
| B3GALT6  | 7.84E-01  | 1.86E-07 | postive  |
| EHMT1    | 6.88E-01  | 1.87E-05 | postive  |
| PSMB4    | 6.88E-01  | 1.87E-05 | postive  |
| SBDS     | 6.88E-01  | 1.87E-05 | postive  |
| TRAF3IP1 | 7.83E-01  | 1.87E-07 | postive  |
| GFM2     | 8.18E-01  | 1.87E-08 | postive  |
| NUP160   | 7.41E-01  | 1.88E-06 | postive  |
| SEC23B   | 7.40E-01  | 1.92E-06 | postive  |
| SCYL3    | 6.87E-01  | 1.94E-05 | postive  |
| UBR2     | 6.87E-01  | 1.94E-05 | postive  |
| KIAA0317 | 8.18E-01  | 1.94E-08 | postive  |
| NARS     | 7.40E-01  | 1.95E-06 | postive  |
| SLC25A17 | 6.87E-01  | 1.96E-05 | postive  |
| C15orf24 | 6.87E-01  | 1.97E-05 | postive  |
| PPP2R3C  | 7.83E-01  | 1.97E-07 | postive  |
| CACNB2   | 6.87E-01  | 1.98E-05 | postive  |
| HERC1    | 6.87E-01  | 2.00E-05 | postive  |
| ADD3     | 6.86E-01  | 2.01E-05 | postive  |
| APPBP2   | 6.86E-01  | 2.02E-05 | postive  |
| PTBP2    | 6.86E-01  | 2.02E-05 | postive  |
| TRMT12   | 6.86E-01  | 2.02E-05 | postive  |
| C15orf28 | -6.86E-01 | 2.04E-05 | negative |
| CUL4A    | 6.86E-01  | 2.04E-05 | postive  |
| LDOC1L   | 6.86E-01  | 2.04E-05 | postive  |
| SLC25A33 | 6.86E-01  | 2.04E-05 | postive  |
| FOXD2    | -7.82E-01 | 2.04E-07 | negative |
| NME5     | 6.86E-01  | 2.07E-05 | postive  |
| UBE2A    | 7.39E-01  | 2.09E-06 | postive  |
| PTPRF    | -6.85E-01 | 2.10E-05 | negative |
| CNGA1    | 6.85E-01  | 2.11E-05 | postive  |
| PHLPPL   | 6.85E-01  | 2.11E-05 | postive  |
| ZNF395   | -6.85E-01 | 2.11E-05 | negative |

|          |           |          |          |
|----------|-----------|----------|----------|
| PPIL1    | 6.85E-01  | 2.13E-05 | postive  |
| DIABLO   | 7.38E-01  | 2.13E-06 | postive  |
| MLH1     | 6.85E-01  | 2.15E-05 | postive  |
| MED4     | 7.38E-01  | 2.18E-06 | postive  |
| PLRG1    | 7.38E-01  | 2.20E-06 | postive  |
| ZNF655   | 8.16E-01  | 2.21E-08 | postive  |
| MFAP1    | 7.37E-01  | 2.22E-06 | postive  |
| BICD2    | 8.69E-01  | 2.23E-10 | postive  |
| BCL7B    | 6.84E-01  | 2.24E-05 | postive  |
| TMCO1    | 6.84E-01  | 2.25E-05 | postive  |
| EXOC1    | 7.37E-01  | 2.25E-06 | postive  |
| PSMD9    | 7.37E-01  | 2.25E-06 | postive  |
| TSPYL1   | 7.37E-01  | 2.25E-06 | postive  |
| NAP1L5   | 6.83E-01  | 2.26E-05 | postive  |
| WDSOF1   | 7.37E-01  | 2.26E-06 | postive  |
| SH3BGRL3 | -6.83E-01 | 2.32E-05 | negative |
| RPS6KB1  | 7.37E-01  | 2.32E-06 | postive  |
| GLRX3    | 7.80E-01  | 2.32E-07 | postive  |
| TXNDC9   | 6.83E-01  | 2.33E-05 | postive  |
| EIF3J    | 6.82E-01  | 2.37E-05 | postive  |
| SPHK1    | -6.82E-01 | 2.37E-05 | negative |
| HSD11B1  | -7.36E-01 | 2.39E-06 | negative |
| GTF3C6   | 7.79E-01  | 2.39E-07 | postive  |
| SLC35A1  | 7.36E-01  | 2.40E-06 | postive  |
| ATP5A1   | 6.82E-01  | 2.41E-05 | postive  |
| RARA     | -7.79E-01 | 2.41E-07 | negative |
| PDZD7    | -6.82E-01 | 2.42E-05 | negative |
| WIPF1    | -6.82E-01 | 2.42E-05 | negative |
| OAT      | 7.36E-01  | 2.42E-06 | postive  |
| RTN4IP1  | 6.81E-01  | 2.43E-05 | postive  |
| MRPS35   | 7.35E-01  | 2.44E-06 | postive  |
| ZNF75D   | 8.15E-01  | 2.44E-08 | postive  |
| B4GALT1  | -6.81E-01 | 2.49E-05 | negative |
| CD40     | -6.81E-01 | 2.49E-05 | negative |
| WDR3     | 6.81E-01  | 2.49E-05 | postive  |
| NFS1     | 6.81E-01  | 2.50E-05 | postive  |
| MAPKAPK5 | 6.80E-01  | 2.54E-05 | postive  |
| SAP18    | 8.68E-01  | 2.54E-10 | postive  |
| VEGFA    | -6.80E-01 | 2.55E-05 | negative |
| ZFP112   | 6.80E-01  | 2.57E-05 | postive  |
| C10orf32 | 7.78E-01  | 2.57E-07 | postive  |
| SF3B14   | 6.80E-01  | 2.60E-05 | postive  |
| SH3GL2   | 6.79E-01  | 2.63E-05 | postive  |
| TAF9     | 6.79E-01  | 2.63E-05 | postive  |

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|----------|-----------|----------|----------|
| TMTC4    | 6.80E-01  | 2.63E-05 | postive  |
| MAN2B1   | -6.79E-01 | 2.65E-05 | negative |
| NUP133   | 6.79E-01  | 2.65E-05 | postive  |
| PMS1     | 6.79E-01  | 2.65E-05 | postive  |
| RRAGC    | -6.79E-01 | 2.65E-05 | negative |
| GPR125   | 7.77E-01  | 2.72E-07 | postive  |
| GPM6A    | 6.79E-01  | 2.73E-05 | postive  |
| MRPL16   | 7.33E-01  | 2.73E-06 | postive  |
| MRLC2    | 8.13E-01  | 2.73E-08 | postive  |
| FMN1     | 6.78E-01  | 2.74E-05 | postive  |
| SCRN3    | 7.33E-01  | 2.74E-06 | postive  |
| NHS      | 7.77E-01  | 2.74E-07 | postive  |
| SLC25A5  | 6.78E-01  | 2.75E-05 | postive  |
| HAT1     | 7.33E-01  | 2.75E-06 | postive  |
| PSMF1    | 7.33E-01  | 2.75E-06 | postive  |
| TDRD7    | 7.33E-01  | 2.75E-06 | postive  |
| RAD17    | 7.77E-01  | 2.76E-07 | postive  |
| IDE      | 7.77E-01  | 2.79E-07 | postive  |
| CD200    | 6.78E-01  | 2.82E-05 | postive  |
| ACSL6    | 7.32E-01  | 2.84E-06 | postive  |
| ZDHHC13  | 6.77E-01  | 2.85E-05 | postive  |
| MREG     | 7.32E-01  | 2.85E-06 | postive  |
| NHP2L1   | 6.77E-01  | 2.91E-05 | postive  |
| CCT6P1   | 7.32E-01  | 2.92E-06 | postive  |
| CASP8AP2 | 6.77E-01  | 2.93E-05 | postive  |
| PLEKHO1  | -6.76E-01 | 2.95E-05 | negative |
| FAM82A2  | 7.31E-01  | 2.95E-06 | postive  |
| UBE2E3   | 7.76E-01  | 2.95E-07 | postive  |
| EED      | 6.76E-01  | 2.98E-05 | postive  |
| LEPROTL1 | 8.12E-01  | 2.98E-08 | postive  |
| FBXO8    | 7.31E-01  | 3.00E-06 | postive  |
| C7orf28B | 7.75E-01  | 3.00E-07 | postive  |
| CHCHD4   | 6.76E-01  | 3.01E-05 | postive  |
| PJA1     | 7.31E-01  | 3.03E-06 | postive  |
| RFX5     | 6.76E-01  | 3.05E-05 | postive  |
| ENOPH1   | 6.75E-01  | 3.06E-05 | postive  |
| RASL12   | -6.75E-01 | 3.07E-05 | negative |
| BHLHB9   | 7.30E-01  | 3.09E-06 | postive  |
| ADSS     | 6.75E-01  | 3.10E-05 | postive  |
| CASC4    | 6.75E-01  | 3.12E-05 | postive  |
| ATP5F1   | 6.75E-01  | 3.14E-05 | postive  |
| LSP1     | -6.75E-01 | 3.14E-05 | negative |
| PWP1     | 6.75E-01  | 3.14E-05 | postive  |
| MDH1     | 6.74E-01  | 3.19E-05 | postive  |

|           |           |          |          |
|-----------|-----------|----------|----------|
| PSMB7     | 6.74E-01  | 3.19E-05 | postive  |
| FANCL     | 7.74E-01  | 3.19E-07 | postive  |
| DACH1     | 7.29E-01  | 3.26E-06 | postive  |
| C5orf44   | 6.73E-01  | 3.29E-05 | postive  |
| KIAA2018  | 6.73E-01  | 3.29E-05 | postive  |
| ZNF180    | 6.73E-01  | 3.31E-05 | postive  |
| DLD       | 7.29E-01  | 3.32E-06 | postive  |
| PRMT6     | 6.73E-01  | 3.39E-05 | postive  |
| TIMM17A   | 7.73E-01  | 3.39E-07 | postive  |
| FLJ22795  | -6.73E-01 | 3.40E-05 | negative |
| DHX9      | 6.72E-01  | 3.41E-05 | postive  |
| MTX2      | 7.28E-01  | 3.41E-06 | postive  |
| COPS4     | 8.10E-01  | 3.41E-08 | postive  |
| LOC390424 | 7.28E-01  | 3.42E-06 | postive  |
| RAD23B    | 6.72E-01  | 3.43E-05 | postive  |
| GPR4      | -6.72E-01 | 3.45E-05 | negative |
| TJP1      | 6.72E-01  | 3.47E-05 | postive  |
| PNRC2     | 7.28E-01  | 3.48E-06 | postive  |
| MRPL24    | 6.72E-01  | 3.49E-05 | postive  |
| EIF4G2    | 6.72E-01  | 3.53E-05 | postive  |
| SLC38A1   | 6.71E-01  | 3.54E-05 | postive  |
| SEC61B    | 6.71E-01  | 3.55E-05 | postive  |
| TCAP      | -6.71E-01 | 3.55E-05 | negative |
| SELS      | 7.72E-01  | 3.56E-07 | postive  |
| TPRKB     | 6.71E-01  | 3.57E-05 | postive  |
| DCTPP1    | 7.27E-01  | 3.59E-06 | postive  |
| ACAT1     | 7.27E-01  | 3.61E-06 | postive  |
| C16orf63  | 7.72E-01  | 3.61E-07 | postive  |
| UBE2N     | 7.27E-01  | 3.62E-06 | postive  |
| GNG10     | 7.27E-01  | 3.63E-06 | postive  |
| MIA3      | 7.26E-01  | 3.74E-06 | postive  |
| FCHSD2    | 6.70E-01  | 3.75E-05 | postive  |
| ERH       | 8.08E-01  | 3.78E-08 | postive  |
| SC5DL     | 6.70E-01  | 3.79E-05 | postive  |
| ALS2CR4   | 6.69E-01  | 3.83E-05 | postive  |
| SEC23A    | 6.69E-01  | 3.83E-05 | postive  |
| TMEM17    | 6.69E-01  | 3.85E-05 | postive  |
| SUCLA2    | 6.69E-01  | 3.86E-05 | postive  |
| B3GALNT1  | 7.26E-01  | 3.86E-06 | postive  |
| CEBPE     | -6.69E-01 | 3.87E-05 | negative |
| DNAJA3    | 6.69E-01  | 3.87E-05 | postive  |
| BSDC1     | -6.69E-01 | 3.88E-05 | negative |
| SCO1      | 8.08E-01  | 3.88E-08 | postive  |
| CYTIP     | -6.69E-01 | 3.90E-05 | negative |

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|-----------|-----------|----------|----------|
| MRPS27    | 6.69E-01  | 3.93E-05 | postive  |
| DOLK      | 6.68E-01  | 3.97E-05 | postive  |
| ACTR3B    | 7.25E-01  | 3.97E-06 | postive  |
| CD47      | 7.25E-01  | 3.98E-06 | postive  |
| C20orf142 | 7.70E-01  | 4.03E-07 | postive  |
| HINT1     | 6.68E-01  | 4.06E-05 | postive  |
| C15orf61  | 7.70E-01  | 4.06E-07 | postive  |
| PXN       | -8.07E-01 | 4.09E-08 | negative |
| HTATSF1   | 6.67E-01  | 4.12E-05 | postive  |
| PDCD10    | 6.67E-01  | 4.13E-05 | postive  |
| PGM2      | 6.67E-01  | 4.13E-05 | postive  |
| CISH      | -7.24E-01 | 4.16E-06 | negative |
| LRRC25    | -6.67E-01 | 4.17E-05 | negative |
| ORMDL2    | 6.67E-01  | 4.17E-05 | postive  |
| FBXL5     | 8.84E-01  | 4.20E-11 | postive  |
| AGPAT2    | -6.67E-01 | 4.22E-05 | negative |
| C20orf24  | 7.24E-01  | 4.23E-06 | postive  |
| VPS29     | 6.66E-01  | 4.26E-05 | postive  |
| TM2D2     | 7.23E-01  | 4.26E-06 | postive  |
| CBL       | -6.66E-01 | 4.27E-05 | negative |
| BBS7      | 6.66E-01  | 4.28E-05 | postive  |
| C21orf119 | 6.66E-01  | 4.28E-05 | postive  |
| KIAA1219  | 8.63E-01  | 4.30E-10 | postive  |
| GOLGA5    | 6.66E-01  | 4.37E-05 | postive  |
| SDR39U1   | 7.69E-01  | 4.40E-07 | postive  |
| HIGD1A    | 6.65E-01  | 4.43E-05 | postive  |
| GOPC      | 7.22E-01  | 4.52E-06 | postive  |
| IMPA1     | 8.37E-01  | 4.53E-09 | postive  |
| MRPS28    | 7.22E-01  | 4.54E-06 | postive  |
| ZNF562    | 6.64E-01  | 4.57E-05 | postive  |
| ITPA      | 6.64E-01  | 4.60E-05 | postive  |
| BTRC      | 6.64E-01  | 4.67E-05 | postive  |
| BEX1      | 8.05E-01  | 4.68E-08 | postive  |
| COMMD1    | 6.64E-01  | 4.70E-05 | postive  |
| RBX1      | 8.05E-01  | 4.70E-08 | postive  |
| NSD1      | 6.63E-01  | 4.75E-05 | postive  |
| CYB5R1    | 7.21E-01  | 4.76E-06 | postive  |
| KLHL9     | 7.67E-01  | 4.79E-07 | postive  |
| ZBTB16    | -6.63E-01 | 4.83E-05 | negative |
| C7orf36   | 6.63E-01  | 4.85E-05 | postive  |
| RCBTB1    | 7.20E-01  | 4.88E-06 | postive  |
| LENG8     | -7.67E-01 | 4.89E-07 | negative |
| NDUFC2    | 7.67E-01  | 4.89E-07 | postive  |
| PPP1R9B   | -7.20E-01 | 4.90E-06 | negative |

|          |           |          |          |
|----------|-----------|----------|----------|
| POLR3F   | 7.20E-01  | 4.92E-06 | postive  |
| UBAC1    | 7.20E-01  | 4.93E-06 | postive  |
| SYVN1    | 6.62E-01  | 4.98E-05 | postive  |
| DDX5     | 6.62E-01  | 4.99E-05 | postive  |
| PRR11    | -6.62E-01 | 5.02E-05 | negative |
| C11orf67 | -6.62E-01 | 5.06E-05 | negative |
| FAM96A   | 7.66E-01  | 5.06E-07 | postive  |
| SRFBP1   | 6.61E-01  | 5.09E-05 | postive  |
| DPY19L4  | 6.61E-01  | 5.13E-05 | postive  |
| POLR3K   | 6.61E-01  | 5.13E-05 | postive  |
| RABEPK   | 7.66E-01  | 5.13E-07 | postive  |
| HARS2    | 6.61E-01  | 5.14E-05 | postive  |
| NKIRAS1  | 6.61E-01  | 5.14E-05 | postive  |
| CASP3    | 6.61E-01  | 5.16E-05 | postive  |
| SELT     | 6.61E-01  | 5.16E-05 | postive  |
| C20orf30 | 6.61E-01  | 5.17E-05 | postive  |
| CCT5     | 6.61E-01  | 5.17E-05 | postive  |
| ZNF706   | 7.19E-01  | 5.17E-06 | postive  |
| SCHIP1   | 7.19E-01  | 5.19E-06 | postive  |
| CCDC53   | 6.61E-01  | 5.20E-05 | postive  |
| YWHAQ    | 6.61E-01  | 5.24E-05 | postive  |
| C9orf5   | 7.19E-01  | 5.28E-06 | postive  |
| CAMTA1   | 6.60E-01  | 5.30E-05 | postive  |
| MRPS33   | 6.60E-01  | 5.30E-05 | postive  |
| TAF11    | 6.60E-01  | 5.31E-05 | postive  |
| TSFM     | 6.60E-01  | 5.32E-05 | postive  |
| PAIP1    | 6.60E-01  | 5.34E-05 | postive  |
| NUDT9    | 6.60E-01  | 5.36E-05 | postive  |
| PDCD6    | 8.03E-01  | 5.37E-08 | postive  |
| ATP5J    | 7.65E-01  | 5.38E-07 | postive  |
| IARS     | 7.18E-01  | 5.39E-06 | postive  |
| SEC13    | 6.60E-01  | 5.41E-05 | postive  |
| C19orf50 | -6.60E-01 | 5.42E-05 | negative |
| GTPBP4   | 8.34E-01  | 5.42E-09 | postive  |
| MMP14    | -7.18E-01 | 5.43E-06 | negative |
| CETN2    | 7.65E-01  | 5.43E-07 | postive  |
| TFG      | 7.65E-01  | 5.47E-07 | postive  |
| NUP35    | 7.65E-01  | 5.50E-07 | postive  |
| TBC1D3   | -6.59E-01 | 5.51E-05 | negative |
| GCC1     | 6.59E-01  | 5.52E-05 | postive  |
| MRPL32   | 6.59E-01  | 5.54E-05 | postive  |
| TMEM126A | 6.59E-01  | 5.56E-05 | postive  |
| POLR2C   | 7.17E-01  | 5.57E-06 | postive  |
| C14orf1  | 6.59E-01  | 5.58E-05 | postive  |

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|--------------|-----------|----------|----------|
| DPH3         | 6.59E-01  | 5.59E-05 | postive  |
| EPRS         | 7.17E-01  | 5.62E-06 | postive  |
| HS3ST3B1     | 6.58E-01  | 5.65E-05 | postive  |
| PEX3         | 6.58E-01  | 5.69E-05 | postive  |
| RBL2         | 6.58E-01  | 5.73E-05 | postive  |
| SNAP47       | 6.58E-01  | 5.76E-05 | postive  |
| PXMP3        | 7.64E-01  | 5.79E-07 | postive  |
| NME2P1       | 6.58E-01  | 5.80E-05 | postive  |
| TMEM2        | 6.58E-01  | 5.80E-05 | postive  |
| PSMD6        | 7.64E-01  | 5.80E-07 | postive  |
| ATP6V1A      | 7.64E-01  | 5.83E-07 | postive  |
| PPT1         | 6.58E-01  | 5.84E-05 | postive  |
| TRUB1        | 6.58E-01  | 5.84E-05 | postive  |
| SF3A3        | 7.64E-01  | 5.84E-07 | postive  |
| C9orf167     | -6.57E-01 | 5.86E-05 | negative |
| HNRNPK       | 6.57E-01  | 5.86E-05 | postive  |
| PFKFB3       | -6.57E-01 | 5.89E-05 | negative |
| TTC7A        | -6.57E-01 | 5.89E-05 | negative |
| CCNDBP1      | 6.57E-01  | 5.90E-05 | postive  |
| SASH1        | -6.57E-01 | 5.90E-05 | negative |
| HACE1        | 6.57E-01  | 5.93E-05 | postive  |
| DDX1         | 7.63E-01  | 5.96E-07 | postive  |
| MPHOSPH6     | 7.63E-01  | 5.99E-07 | postive  |
| ZNF148       | -7.63E-01 | 5.99E-07 | negative |
| DNAJA2       | 7.63E-01  | 6.01E-07 | postive  |
| C17orf79     | 6.57E-01  | 6.02E-05 | postive  |
| FLJ45055     | -7.16E-01 | 6.04E-06 | negative |
| DMPK         | -6.56E-01 | 6.10E-05 | negative |
| NOL11        | 7.63E-01  | 6.10E-07 | postive  |
| SOX2         | 6.56E-01  | 6.14E-05 | postive  |
| FRY          | 7.15E-01  | 6.15E-06 | postive  |
| HBZ          | -6.56E-01 | 6.24E-05 | negative |
| PSMC6        | 6.56E-01  | 6.25E-05 | postive  |
| ARHGEF7      | 7.15E-01  | 6.26E-06 | postive  |
| IER3IP1      | 6.55E-01  | 6.32E-05 | postive  |
| ABI1         | 7.62E-01  | 6.32E-07 | postive  |
| LOC100190939 | -6.55E-01 | 6.34E-05 | negative |
| CAPN3        | -6.55E-01 | 6.35E-05 | negative |
| PSMB1        | 6.55E-01  | 6.35E-05 | postive  |
| IGFBP5       | -6.55E-01 | 6.36E-05 | negative |
| ADAD2        | -6.55E-01 | 6.41E-05 | negative |
| ACTR10       | 7.62E-01  | 6.42E-07 | postive  |
| HISPPD1      | 7.14E-01  | 6.47E-06 | postive  |
| MKI67IP      | 6.55E-01  | 6.48E-05 | postive  |

|               |           |          |          |
|---------------|-----------|----------|----------|
| CCDC56        | 8.00E-01  | 6.50E-08 | postive  |
| TTC27         | 6.54E-01  | 6.53E-05 | postive  |
| CHURC1        | 7.14E-01  | 6.55E-06 | postive  |
| ATP2A2        | 6.54E-01  | 6.56E-05 | postive  |
| ATP5G3        | 7.61E-01  | 6.57E-07 | postive  |
| GTF3C3        | 6.54E-01  | 6.60E-05 | postive  |
| DKFZp686E2433 | 7.13E-01  | 6.63E-06 | postive  |
| SDHB          | 6.54E-01  | 6.64E-05 | postive  |
| WDR35         | 6.54E-01  | 6.64E-05 | postive  |
| CDC123        | 7.13E-01  | 6.67E-06 | postive  |
| UPF3A         | 6.54E-01  | 6.69E-05 | postive  |
| MAP3K6        | -6.54E-01 | 6.70E-05 | negative |
| RBM18         | 6.54E-01  | 6.71E-05 | postive  |
| C1orf156      | 7.13E-01  | 6.73E-06 | postive  |
| LZIC          | -6.53E-01 | 6.74E-05 | negative |
| MGAT2         | 7.13E-01  | 6.75E-06 | postive  |
| COPS8         | 7.61E-01  | 6.76E-07 | postive  |
| CABIN1        | -6.53E-01 | 6.81E-05 | negative |
| ARID4B        | 6.53E-01  | 6.85E-05 | postive  |
| SNX2          | 7.13E-01  | 6.88E-06 | postive  |
| IFT57         | 7.12E-01  | 6.91E-06 | postive  |
| NAT10         | 6.53E-01  | 6.93E-05 | postive  |
| UQCC          | 6.53E-01  | 6.93E-05 | postive  |
| UBE4A         | 6.53E-01  | 6.94E-05 | postive  |
| OSTM1         | 7.60E-01  | 6.94E-07 | postive  |
| KIFAP3        | 6.52E-01  | 6.96E-05 | postive  |
| BEX2          | 7.60E-01  | 6.96E-07 | postive  |
| SLC4A1AP      | 7.60E-01  | 6.98E-07 | postive  |
| MSH2          | 7.12E-01  | 6.99E-06 | postive  |
| SLMO2         | 6.52E-01  | 7.02E-05 | postive  |
| DENND1A       | -7.60E-01 | 7.02E-07 | negative |
| OXCT1         | 7.60E-01  | 7.04E-07 | postive  |
| UNC50         | 7.60E-01  | 7.04E-07 | postive  |
| UBP1          | 7.12E-01  | 7.16E-06 | postive  |
| SFXN4         | 6.51E-01  | 7.23E-05 | postive  |
| SRRM2         | -7.11E-01 | 7.23E-06 | negative |
| C6orf130      | 7.60E-01  | 7.23E-07 | postive  |
| AGL           | 6.51E-01  | 7.26E-05 | postive  |
| GALNT11       | 7.59E-01  | 7.28E-07 | postive  |
| PIM1          | -7.11E-01 | 7.31E-06 | negative |
| TCEA1         | 7.11E-01  | 7.36E-06 | postive  |
| BCL3          | -7.59E-01 | 7.37E-07 | negative |
| SIDT2         | -7.59E-01 | 7.39E-07 | negative |
| LSM1          | 6.51E-01  | 7.41E-05 | postive  |

|           |           |          |          |
|-----------|-----------|----------|----------|
| GNL3      | 7.59E-01  | 7.44E-07 | postive  |
| C1orf162  | -6.50E-01 | 7.47E-05 | negative |
| CCDC17    | -6.50E-01 | 7.47E-05 | negative |
| CHCHD7    | 7.59E-01  | 7.50E-07 | postive  |
| RPL27     | 6.50E-01  | 7.51E-05 | postive  |
| VEGFB     | -6.50E-01 | 7.51E-05 | negative |
| TMEM42    | 7.10E-01  | 7.57E-06 | postive  |
| ZCCHC3    | 6.50E-01  | 7.62E-05 | postive  |
| ADAMTS7   | -7.10E-01 | 7.64E-06 | negative |
| PIGF      | 6.50E-01  | 7.66E-05 | postive  |
| HTRA3     | -6.50E-01 | 7.68E-05 | negative |
| JTB       | 7.58E-01  | 7.70E-07 | postive  |
| TMEM41B   | 7.10E-01  | 7.80E-06 | postive  |
| ENTPD4    | 7.58E-01  | 7.82E-07 | postive  |
| ATP2B1    | 7.09E-01  | 7.91E-06 | postive  |
| LOC728324 | 7.58E-01  | 7.96E-07 | postive  |
| BXDC5     | 6.48E-01  | 7.97E-05 | postive  |
| ZCCHC9    | 6.48E-01  | 7.97E-05 | postive  |
| CHMP2B    | 7.09E-01  | 7.97E-06 | postive  |
| MTMR9     | 8.56E-01  | 7.98E-10 | postive  |
| C14orf100 | 6.48E-01  | 8.00E-05 | postive  |
| HIVEP2    | -6.48E-01 | 8.07E-05 | negative |
| TSG101    | 7.58E-01  | 8.07E-07 | postive  |
| LIX1L     | 6.48E-01  | 8.14E-05 | postive  |
| NOP10     | 6.48E-01  | 8.14E-05 | postive  |
| NSMCE4A   | 6.48E-01  | 8.15E-05 | postive  |
| COPB2     | 7.09E-01  | 8.18E-06 | postive  |
| RAD51C    | 7.57E-01  | 8.19E-07 | postive  |
| DNHD1     | -6.48E-01 | 8.21E-05 | negative |
| PCSK2     | 6.48E-01  | 8.22E-05 | postive  |
| CMPK1     | 7.08E-01  | 8.23E-06 | postive  |
| NDUFAB1   | 7.97E-01  | 8.24E-08 | postive  |
| KCNQ1OT1  | -7.08E-01 | 8.26E-06 | negative |
| C1orf50   | 6.47E-01  | 8.28E-05 | postive  |
| UROS      | 6.47E-01  | 8.30E-05 | postive  |
| WDR12     | 6.47E-01  | 8.30E-05 | postive  |
| HSPE1     | 7.57E-01  | 8.30E-07 | postive  |
| TSPYL5    | 7.08E-01  | 8.31E-06 | postive  |
| PSMA5     | 7.08E-01  | 8.32E-06 | postive  |
| RTF1      | 6.47E-01  | 8.34E-05 | postive  |
| PDE4C     | -6.47E-01 | 8.35E-05 | negative |
| CDH3      | -6.47E-01 | 8.41E-05 | negative |
| CCNC      | 6.47E-01  | 8.47E-05 | postive  |
| CLTC      | 7.08E-01  | 8.51E-06 | postive  |

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|--------------|-----------|----------|----------|
| PCMT1        | 6.46E-01  | 8.52E-05 | postive  |
| RG9MTD1      | 6.46E-01  | 8.54E-05 | postive  |
| ROBLD3       | 6.46E-01  | 8.60E-05 | postive  |
| NAT5         | 8.29E-01  | 8.62E-09 | postive  |
| PSMA3        | 7.07E-01  | 8.63E-06 | postive  |
| DNTTIP1      | 7.56E-01  | 8.65E-07 | postive  |
| TBCE         | 7.56E-01  | 8.65E-07 | postive  |
| MGST3        | 6.46E-01  | 8.67E-05 | postive  |
| LOC402026    | 6.46E-01  | 8.71E-05 | postive  |
| ZNF167       | 6.46E-01  | 8.72E-05 | postive  |
| C1QTNF5      | -6.46E-01 | 8.74E-05 | negative |
| LPP          | -6.46E-01 | 8.76E-05 | negative |
| TMEM14C      | 6.46E-01  | 8.77E-05 | postive  |
| MRPL39       | 7.07E-01  | 8.77E-06 | postive  |
| HIBCH        | 6.46E-01  | 8.80E-05 | postive  |
| DUSP12       | 7.56E-01  | 8.80E-07 | postive  |
| SLC35B1      | 6.45E-01  | 8.81E-05 | postive  |
| FCN1         | -6.45E-01 | 8.88E-05 | negative |
| LRP1B        | 7.07E-01  | 8.91E-06 | postive  |
| LEPREL2      | -6.45E-01 | 8.94E-05 | negative |
| DYX1C1       | 6.45E-01  | 8.95E-05 | postive  |
| ILF2         | 8.28E-01  | 8.95E-09 | postive  |
| RB1CC1       | 7.06E-01  | 8.98E-06 | postive  |
| SLC9A6       | 6.45E-01  | 9.00E-05 | postive  |
| MRPS26       | 6.45E-01  | 9.03E-05 | postive  |
| RFWD2        | 7.06E-01  | 9.14E-06 | postive  |
| LOC100128439 | -6.44E-01 | 9.15E-05 | negative |
| RBM4B        | 6.44E-01  | 9.17E-05 | postive  |
| DDX46        | 6.44E-01  | 9.18E-05 | postive  |
| PIGY         | 6.44E-01  | 9.18E-05 | postive  |
| LOC645693    | 6.44E-01  | 9.22E-05 | postive  |
| RAN          | 7.55E-01  | 9.25E-07 | postive  |
| PKIB         | 7.06E-01  | 9.26E-06 | postive  |
| SMARCAL1     | 7.06E-01  | 9.27E-06 | postive  |
| TRAK2        | 7.55E-01  | 9.27E-07 | postive  |
| TNFRSF10B    | -7.06E-01 | 9.28E-06 | negative |
| CNN2         | -7.55E-01 | 9.28E-07 | negative |
| CCDC82       | 6.44E-01  | 9.32E-05 | postive  |
| TMEM145      | -7.55E-01 | 9.32E-07 | negative |
| BHLHE22      | 6.44E-01  | 9.34E-05 | postive  |
| BLOC1S2      | 6.44E-01  | 9.41E-05 | postive  |
| GINS3        | 6.43E-01  | 9.43E-05 | postive  |
| RNF122       | -6.43E-01 | 9.44E-05 | negative |
| FAM44B       | 6.43E-01  | 9.46E-05 | postive  |

|           |           |          |          |
|-----------|-----------|----------|----------|
| RCHY1     | 6.43E-01  | 9.47E-05 | postive  |
| SLC16A3   | -7.05E-01 | 9.47E-06 | negative |
| RNF14     | 7.54E-01  | 9.47E-07 | postive  |
| CALM2     | 7.05E-01  | 9.52E-06 | postive  |
| FTSJD1    | 6.43E-01  | 9.53E-05 | postive  |
| ZC3H15    | 6.43E-01  | 9.53E-05 | postive  |
| TMEM185A  | -6.43E-01 | 9.56E-05 | negative |
| NRXN2     | -6.43E-01 | 9.61E-05 | negative |
| ARL1      | 7.05E-01  | 9.61E-06 | postive  |
| NSUN2     | 7.05E-01  | 9.61E-06 | postive  |
| FAM136A   | 6.43E-01  | 9.67E-05 | postive  |
| KLHDC5    | 6.43E-01  | 9.67E-05 | postive  |
| ACTN1     | -6.42E-01 | 9.77E-05 | negative |
| CDC16     | 6.42E-01  | 9.78E-05 | postive  |
| C2orf47   | 7.04E-01  | 9.79E-06 | postive  |
| PPCS      | 7.54E-01  | 9.79E-07 | postive  |
| LOC643779 | 6.42E-01  | 9.81E-05 | postive  |
| FPR1      | -6.42E-01 | 9.85E-05 | negative |
| DPM1      | 7.04E-01  | 9.85E-06 | postive  |
| CCT8      | 6.42E-01  | 9.86E-05 | postive  |
| KIAA0776  | 7.04E-01  | 9.89E-06 | postive  |
| THAP6     | 7.04E-01  | 9.91E-06 | postive  |
| NDUFA12   | 6.42E-01  | 9.92E-05 | postive  |