Supplemental Table 1. List of PCR primers used for genotyping of Dot1L-KO mice

| Symbol   | Reference seq | Forward primer                      | Reverse primer                                      | Amplicon |
|----------|---------------|-------------------------------------|-----------------------------------------------------|----------|
| Dot1L    | NC_000076.7   | Cm-F-TGGACACTTACCAGCACTTCC          | WT-R-GAGGGAGATGCTTTTGACAGTA                        | 326bp    |
| Dot1L-KO | NC_000076.7   | Cm-F-TGGACACTTACCAGCACTTCC          | KO-R-TTTGAGCACCAGGACATCCG                         | 271bp    |

Cm-F, Common Forward. WT-R, Wildtype Reverse. KO-R, Knockout Reverse.

Supplemental Table 2. List of PCR primers used for genotyping of Dot1L-MM mice

| Symbol   | Reference seq | Forward primer                      | Reverse primer                                      | Amplicon |
|----------|---------------|-------------------------------------|-----------------------------------------------------|----------|
| Dot1L    | NC_000076.7   | WT-F-AATAACTTTGCTTGGTCTCT           | Cm-R-CTCCACAAGGACAGCATGT                           | 426bp    |
| Dot1l-MM | NC_000076.7   | MM-F-GCTAATTTGCTTTCGGACCA           | Cm-R-CTCCACAAGGACAGCATGT                           | 426bp    |

WT-F, Wildtype Forward. MM-F, Methyl mutant Forward. Cm-R, Common Reverse.

Supplemental Table 3. List of PCR primers used for RT-qPCR assays

| Symbol   | Reference seq | Forward primer                      | Reverse primer                                      | Amplicon |
|----------|---------------|-------------------------------------|-----------------------------------------------------|----------|
| Hoxa9    | NM_010456.3   | 197F-CCACGCTTTGACACTCACA           | 424R-GTTCCAGCGTCTGTTGTTT                            | 228bp    |
| Mpl      | NM_001122949.2| 1029F-CACCTGGGAGAAATGTGAAGA        | 1262R-AACTCCAGCTCCACTTGA                           | 234bp    |
| Mpo      | NM_010824.2   | 1037F-CCTTCTTCACTGCGCCTCAAC        | 1199R-TTGCGAATGGTGATTTGTT                          | 163bp    |
| Dnmt3b   | NM_001003961.4| 534F-CCAGCTTTGAGGAATCTCT         | 702R-CAGAGCCATCCACTCATCT                          | 169bp    |
| Flt3     | NM_010229     | 2734F-GAGACATCCTGAGCGACCTCC       | 2897R-AGGGTTTCACACCAGTGAAAA                       | 164bp    |
| Flt3l    | NM_013520.3   | 197F-CCCATCTCTCCTCAACTTCA         | 480R-AGGTTGAGATGGTGATTTG                          | 284bp    |
| Cebpa    | NM_007678.3   | 962F-TGGACAAAGACAGCAAGGAG         | 1088R-TCACTGCTCAGCTCAGGAC                       | 127bp    |
| Cdkn1c   | NM_001161624.1| 96F-ACTGAGAGCAAGCGACAGG           | 2897R-GCGCTATCCACTGGGAAGGTA                      | 194bp    |
| Cdkn2b   | NM_007670.4   | 325F-AGATCCCACGCTCCTGAA           | 469R-GTCGTCACAGGCTCTGTA                        | 145bp    |
| Rn18s    | NR_003278.3   | 1617F-GCGATTATCCACAGGAC           | 1740R-GGCCTCCTAACCAGTCA                          | 124bp    |

The primer names indicate the relative nucleotide position in reference mRNA sequence.
Supplemental Table 4. Upregulated genes in \textit{Dot1L}-KO ESRE cells in common with \textit{Dot1L}-MM cells (n=773)

| Name   | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL          |
|--------|------------|----------------|------------------|-------------|---------|-----------------|
| St5    | 11         | 16.860         | 1.00             | 2.00        | 0.01    | ENSMUSG00000020385 |
| Gns    | 2          | 2.390          | 1.00             | 2.00        | 0.03    | ENSMUSG00000027381 |
| Pdk2   | 13         | 116.470        | 1.00             | 2.01        | 0.00    | ENSMUSG00000044792 |
| Nefh   | 10         | 55.970         | 1.01             | 2.01        | 0.00    | ENSMUSG00000078440 |
| Otub2  | 6          | 196.040        | 1.01             | 2.01        | 0.01    | ENSMUSG00000025889 |
| Plec   | 7          | 5.990          | 1.01             | 2.01        | 0.03    | ENSMUSG00000031024 |
| Ncf4   | 1          | 9.760          | 1.01             | 2.01        | 0.03    | ENSMUSG00000026637 |
| App    | 13         | 29.180         | 1.01             | 2.02        | 0.00    | ENSMUSG00000021417 |
| Trove2 | 5          | 26.570         | 1.01             | 2.02        | 0.01    | ENSMUSG00000005514 |
| Grina  | 5          | 56.280         | 1.01             | 2.02        | 0.01    | ENSMUSG00000043510 |
| Shld1  | 10         | 19.500         | 1.01             | 2.02        | 0.02    | ENSMUSG00000034707 |
| Pcmtd2 | 1          | 49.200         | 1.02             | 2.03        | 0.00    | ENSMUSG00000033124 |
| Ptms   | 8          | 8.570          | 1.02             | 2.03        | 0.01    | ENSMUSG0000003575  |
| Crybg1 | 4          | 8.060          | 1.03             | 2.04        | 0.00    | ENSMUSG00000028803 |
| Plekhn3| 17         | 38.380         | 1.03             | 2.04        | 0.00    | ENSMUSG00000039770 |
| Trim56 | 11         | 21.290         | 1.03             | 2.04        | 0.00    | ENSMUSG00000020894 |
| Vim    | 11         | 45.030         | 1.04             | 2.05        | 0.00    | ENSMUSG00000017119 |
| 44805  | 15         | 74.390         | 1.03             | 2.05        | 0.00    | ENSMUSG00000022365 |
| Atg4a  | 7          | 11.450         | 1.04             | 2.05        | 0.01    | ENSMUSG00000030986 |
| Tnxis  | 11         | 134.900        | 1.04             | 2.05        | 0.01    | ENSMUSG00000020485 |
| Tnfrsf10b| 11       | 9.090          | 1.04             | 2.05        | 0.01    | ENSMUSG00000020932 |
| Bicra  | 2          | 36.060         | 1.03             | 2.05        | 0.05    | ENSMUSG00000017760 |
| H1f0   | 9          | 36.910         | 1.05             | 2.06        | 0.00    | ENSMUSG00000034908 |
| Trim12c| 11         | 11.380         | 1.04             | 2.06        | 0.00    | ENSMUSG00000020142 |
| Calcrl | 10         | 129.100        | 1.04             | 2.06        | 0.00    | ENSMUSG00000020235 |
| Mfhas1 | 1          | 16.930         | 1.05             | 2.06        | 0.01    | ENSMUSG00000016200 |
| Fam53b | 11         | 6.040          | 1.04             | 2.06        | 0.04    | ENSMUSG00000038967 |
| Serinc1| 17         | 6.730          | 1.04             | 2.06        | 0.05    | ENSMUSG00000024193 |
| Naa80  | 1          | 22.790         | 1.05             | 2.07        | 0.00    | ENSMUSG00000026027 |
| Fam117a| X          | 49.180         | 1.05             | 2.07        | 0.00    | ENSMUSG00000034160 |
| Gene  | M. | FPKM  | q-value | Log2FoldChange | RefSeq       |
|-------|----|-------|---------|----------------|--------------|
| Lgals3| 7  | 21.230| 1.05    | 2.07           | ENSMUSG00000045282 |
| Itga5 | 5  | 33.420| 1.05    | 2.07           | ENSMUSG00000066278 |
| Ccng2 | 17 | 13.810| 1.05    | 2.07           | ENSMUSG00000047123 |
| Slc43a2| 11 | 45.300| 1.06    | 2.08           | ENSMUSG00000051510 |
| Slc25a51| 19 | 21.940| 1.06    | 2.08           | ENSMUSG00000024773 |
| Akap2 | 7  | 3.880 | 1.06    | 2.08           | ENSMUSG0000003752  |
| Sgms1 | 15 | 45.500| 1.06    | 2.09           | ENSMUSG00000042351 |
| Peg3  | 11 | 3.890 | 1.06    | 2.09           | ENSMUSG00000020396 |
| Loxl2 | 12 | 43.150| 1.07    | 2.10           | ENSMUSG00000021203 |
| Stk17b| 8  | 20.260| 1.07    | 2.10           | ENSMUSG00000026317 |
| Cpeb4 | 11 | 16.450| 1.07    | 2.10           | ENSMUSG00000020715 |
| Pim1  | 15 | 6.970 | 1.07    | 2.10           | ENSMUSG00000022565 |
| Kdm5b | 15 | 18.210| 1.07    | 2.10           | ENSMUSG00000071715 |
| Nudt18| 3  | 6.920 | 1.07    | 2.10           | ENSMUSG00000028042 |
| Tns1  | 16 | 6.070 | 1.07    | 2.10           | ENSMUSG00000022892 |
| Cdr2  | 16 | 13.010| 1.08    | 2.11           | ENSMUSG00000022946 |
| Tpm1  | 18 | 119.970| 1.08     | 2.11          | ENSMUSG00000032656 |
| Map1lc3a| 11 | 36.100| 1.08    | 2.11           | ENSMUSG0000003119  |
| Flnc  | 15 | 92.810| 1.07    | 2.11           | ENSMUSG00000022452 |
| Il6st | 13 | 37.130| 1.08    | 2.11           | ENSMUSG00000058672 |
| Cdc42ep4| 5  | 55.460| 1.08    | 2.11           | ENSMUSG00000042744 |
| Clk1  | 1  | 7.860 | 1.08    | 2.12           | ENSMUSG00000018199 |
| Anxa2 | 19 | 24.660| 1.09    | 2.13           | ENSMUSG00000010110 |
| Fam129b| 15 | 312.520| 1.09     | 2.13          | ENSMUSG00000022564 |
| Gm7694 | 4  | 14.570| 1.09    | 2.13           | ENSMUSG00000050188 |
| Timp2 | 2  | 231.520| 1.10     | 2.14          | ENSMUSG00000027078 |
| Fbxo9 | 7  | 9.890 | 1.10    | 2.14           | ENSMUSG00000025484 |
| Gba2  | 13 | 23.230| 1.10    | 2.14           | ENSMUSG00000060147 |
| Hecw1 | 2  | 7.850 | 1.10    | 2.14           | ENSMUSG00000044991 |
| Zfp473 | 4  | 23.720| 1.10    | 2.15           | ENSMUSG00000028559 |
| Evi5  | 7  | 32.440| 1.11    | 2.15           | ENSMUSG00000039202 |
| Ifnar2| 7  | 22.520| 1.10    | 2.15           | ENSMUSG00000030847 |
| Sfxn3 | 2  | 12.060| 1.10    | 2.15           | ENSMUSG00000027589 |
| Gene      | Fold Change | Expression | Value 1 | Value 2 | Value 3 | Value 4 | Gene ID               |
|-----------|-------------|------------|---------|---------|---------|---------|-----------------------|
| Gabarapl2| 5           | 44.580     | 1.11    | 2.15    | 0.00    | ENSMUSG00000028995   |
| Fgfr1     | 2           | 14.820     | 1.10    | 2.15    | 0.01    | ENSMUSG00000027230   |
| Uap1l1    | 7           | 4.860      | 1.10    | 2.15    | 0.02    | ENSMUSG00000030671   |
| Plkd3     | 16          | 66.290     | 1.11    | 2.16    | 0.00    | ENSMUSG0000008393    |
| Ezhh1     | 12          | 11.760     | 1.11    | 2.16    | 0.00    | ENSMUSG00000020653   |
| Dedd2     | 7           | 7.000      | 1.11    | 2.16    | 0.00    | ENSMUSG00000038520   |
| Ctsd      | 7           | 5.960      | 1.11    | 2.16    | 0.00    | ENSMUSG00000058761   |
| Cstb      | 13          | 3.710      | 1.11    | 2.16    | 0.01    | ENSMUSG00000021460   |
| S100a11   | 6           | 53.160     | 1.11    | 2.16    | 0.00    | ENSMUSG00000030122   |
| Htatip2   | 10          | 2.150      | 1.11    | 2.16    | 0.03    | ENSMUSG00000019866   |
| Mpp1      | 6           | 3.970      | 1.11    | 2.16    | 0.04    | ENSMUSG00000032652   |
| Bcl2l1    | 16          | 16.210     | 1.11    | 2.16    | 0.05    | ENSMUSG00000022500   |
| Emp1      | 6           | 7.310      | 1.12    | 2.17    | 0.00    | ENSMUSG00000030203   |
| Pla2g16   | 9           | 9.520      | 1.12    | 2.17    | 0.00    | ENSMUSG00000034563   |
| Ulk1      | 1           | 1.860      | 1.12    | 2.17    | 0.02    | ENSMUSG00000051344   |
| Dennd4a   | 2           | 42.810     | 1.12    | 2.18    | 0.00    | ENSMUSG00000027215   |
| Fndc3b    | 5           | 18.550     | 1.12    | 2.18    | 0.00    | ENSMUSG00000043279   |
| Hdac5     | 7           | 15.470     | 1.13    | 2.18    | 0.00    | ENSMUSG00000034825   |
| Fbxo30    | 2           | 55.770     | 1.13    | 2.18    | 0.01    | ENSMUSG00000026728   |
| Calcoco1  | 4           | 3.490      | 1.12    | 2.18    | 0.04    | ENSMUSG00000028927   |
| Itgb7     | 7           | 358.590    | 1.13    | 2.19    | 0.01    | ENSMUSG00000038539   |
| Dnase1l1  | 17          | 8.110      | 1.13    | 2.19    | 0.01    | ENSMUSG00000024074   |
| Nlgn2     | 9           | 6.990      | 1.13    | 2.19    | 0.02    | ENSMUSG00000037971   |
| Zfpm949   | 16          | 2.320      | 1.13    | 2.19    | 0.03    | ENSMUSG00000071669   |
| Cedc92b   | 1           | 65.610     | 1.14    | 2.20    | 0.00    | ENSMUSG00000026203   |
| Tax1bp1   | 7           | 24.970     | 1.14    | 2.20    | 0.00    | ENSMUSG00000011096   |
| Cd68      | 7           | 25.680     | 1.14    | 2.20    | 0.00    | ENSMUSG0000000486    |
| Trib3     | 7           | 21.710     | 1.14    | 2.20    | 0.00    | ENSMUSG00000079418   |
| 1810013L24Rik | 18     | 98.160     | 1.14    | 2.20    | 0.00    | ENSMUSG00000024404   |
| Tmem67    | 3           | 42.310     | 1.14    | 2.20    | 0.00    | ENSMUSG00000038393   |
| Cdkn1c    | 19          | 22.860     | 1.13    | 2.20    | 0.03    | ENSMUSG00000016495   |
| Hmg20b    | 14          | 3.840      | 1.14    | 2.20    | 0.05    | ENSMUSG00000022074   |
| Rnh1      | 7           | 12.540     | 1.15    | 2.21    | 0.00    | ENSMUSG00000007808   |
| Gene   | Start | End   | Length | FC   | p-value | ENSMUSG  |
|--------|-------|-------|--------|------|---------|----------|
| Slc30a1| 15    |      | 58.010 | 1.15 | 2.21    | 0.00     |
| Tinagl1| 1     |      | 72.810 | 1.15 | 2.21    | 0.00     |
| Zfp874b| 17    |      | 23.010 | 1.14 | 2.21    | 0.00     |
| Gstm5  | 19    |      | 12.800 | 1.15 | 2.21    | 0.01     |
| Hbp1   | X     |      | 36.480 | 1.15 | 2.21    | 0.01     |
| Carmil1| 17    |      | 31.320 | 1.15 | 2.22    | 0.00     |
| Mical2 | 1     |      | 17.200 | 1.15 | 2.22    | 0.00     |
| Rit1   | 11    |      | 18.360 | 1.15 | 2.22    | 0.00     |
| Adipor1| 15    |      | 2059.280 | 1.15 | 2.22  | 0.00   |
| Ranbp10| 1     |      | 13.720 | 1.16 | 2.23    | 0.00     |
| Cdkn1b | 15    |      | 36.840 | 1.16 | 2.23    | 0.03     |
| Dnajb9 | 7     |      | 3.230  | 1.17 | 2.24    | 0.04     |
| Mgli   | 1     |      | 87.910 | 1.17 | 2.25    | 0.00     |
| Zkscan14| 2    |      | 5.080  | 1.17 | 2.25    | 0.02     |
| Abi3   | 8     |      | 2.250  | 1.17 | 2.25    | 0.04     |
| Axl    | 7     |      | 17.050 | 1.18 | 2.26    | 0.00     |
| Stk40  | 10    |      | 73.550 | 1.17 | 2.26    | 0.00     |
| Plagl1 | 9     |      | 11.690 | 1.18 | 2.26    | 0.00     |
| Ucp2   | 7     |      | 36.480 | 1.18 | 2.26    | 0.00     |
| Xpo7   | 5     |      | 47.060 | 1.18 | 2.26    | 0.00     |
| Glrx   | 9     |      | 15.430 | 1.18 | 2.26    | 0.00     |
| Mmp2   | 1     |      | 9.290  | 1.18 | 2.26    | 0.00     |
| Lpin1  | 10    |      | 51.020 | 1.18 | 2.26    | 0.03     |
| Crebrf | X     |      | 6.150  | 1.19 | 2.27    | 0.03     |
| Mtturn | 11    |      | 107.840| 1.19 | 2.28    | 0.00     |
| Spec1  | 19    |      | 12.060 | 1.19 | 2.28    | 0.00     |
| Ckap4  | 8     |      | 34.850 | 1.19 | 2.28    | 0.00     |
| Rusc2  | 1     |      | 5.410  | 1.19 | 2.28    | 0.01     |
| Btg1   | 14    |      | 22.120 | 1.19 | 2.28    | 0.01     |
| Tent5c | 9     |      | 2.480  | 1.19 | 2.28    | 0.02     |
| Ndr4g4 | 6     |      | 5.740  | 1.19 | 2.28    | 0.02     |
| Ahnak  | 15    |      | 7.720  | 1.19 | 2.28    | 0.05     |
| Anxa1  | 5     |      | 23.320 | 1.20 | 2.29    | 0.00     |
| Gene     | Type | Rank | Value | Fold | p-value | EnsemblID       |
|----------|------|------|-------|------|----------|-----------------|
| Tnfrsf12a | 4    | 11.360 | 1.19  | 2.29 | 0.01     | ENSMUSG00000045268 |
| Kirrel   | X    | 11.330 | 1.20  | 2.29 | 0.01     | ENSMUSG00000031161 |
| Suox     | 11   | 12.700 | 1.20  | 2.30 | 0.00     | ENSMUSG00000038178 |
| Lhfpl2   | 11   | 5.560  | 1.20  | 2.30 | 0.02     | ENSMUSG00000018474 |
| Mettl27  | X    | 9.210  | 1.20  | 2.30 | 0.05     | ENSMUSG00000031149 |
| Dcaf12   | 13   | 3.870  | 1.20  | 2.30 | 0.05     | ENSMUSG000000071291 |
| Smtn     | 2    | 32.650 | 1.21  | 2.31 | 0.00     | ENSMUSG00000090213 |
| Rsrp1    | 4    | 74.280 | 1.21  | 2.31 | 0.00     | ENSMUSG00000045973 |
| Micall1  | 4    | 4.710  | 1.21  | 2.31 | 0.05     | ENSMUSG00000038729 |
| Hspg2    | 19   | 15.290 | 1.22  | 2.32 | 0.00     | ENSMUSG00000040451 |
| Sertad3  | 11   | 12.860 | 1.22  | 2.32 | 0.00     | ENSMUSG00000020859 |
| Vsir     | 17   | 14.520 | 1.22  | 2.32 | 0.00     | ENSMUSG00000024197 |
| Fads3    | 7    | 35.860 | 1.22  | 2.32 | 0.01     | ENSMUSG0000002265 |
| Prnp     | 11   | 126.810 | 1.22 | 2.33 | 0.00     | ENSMUSG00000073063 |
| S100a6   | 14   | 10.820 | 1.22  | 2.33 | 0.04     | ENSMUSG00000034205 |
| Rras     | 1    | 22.040 | 1.22  | 2.34 | 0.00     | ENSMUSG00000026094 |
| Fstl1    | 7    | 28.050 | 1.23  | 2.34 | 0.00     | ENSMUSG00000066406 |
| Bmp1     | 11   | 125.680 | 1.23 | 2.34 | 0.00     | ENSMUSG00000020300 |
| Stag3    | 17   | 354.170 | 1.23 | 2.34 | 0.00     | ENSMUSG00000024014 |
| Gstm1    | 7    | 6.050  | 1.23  | 2.34 | 0.02     | ENSMUSG00000045868 |
| Klf6     | 9    | 20.870 | 1.23  | 2.34 | 0.02     | ENSMUSG00000025647 |
| Fhl1     | 13   | 21.280 | 1.23  | 2.35 | 0.00     | ENSMUSG00000074794 |
| Alas2    | 8    | 51.590 | 1.23  | 2.35 | 0.00     | ENSMUSG00000031812 |
| Ttc12    | 9    | 7.210  | 1.23  | 2.35 | 0.00     | ENSMUSG00000032449 |
| Pllp3    | 3    | 18.360 | 1.23  | 2.35 | 0.00     | ENSMUSG00000027845 |
| Nid1     | 1    | 7.430  | 1.24  | 2.36 | 0.00     | ENSMUSG00000042207 |
| Sertad1  | 11   | 18.570 | 1.24  | 2.36 | 0.00     | ENSMUSG00000020400 |
| Nos1ap   | 14   | 4.920  | 1.24  | 2.36 | 0.01     | ENSMUSG00000045211 |
| Ltbp2    | 5    | 7.890  | 1.24  | 2.36 | 0.02     | ENSMUSG00000008090 |
| Bn1al1   | 1    | 6.140  | 1.24  | 2.37 | 0.00     | ENSMUSG00000055322 |
| Ets1     | 16   | 12.610 | 1.25  | 2.38 | 0.00     | ENSMUSG00000022641 |
| Fhdc1    | 7    | 194.160 | 1.25 | 2.38 | 0.00     | ENSMUSG00000030878 |
| Mafk     | 9    | 93.360 | 1.26  | 2.39 | 0.00     | ENSMUSG00000032366 |
| Protein   | Genotype | p-value | FDR  | log2FC | Reference          |
|-----------|----------|---------|------|--------|--------------------|
| Tbcel     | 14       | 0.00    | 0.00 | 2.39   | ENSMUSG00000034354 |
| Pik3r1    | 7        | 0.00    | 0.00 | 2.39   | ENSMUSG0000003873  |
| Letm2     | 12       | 0.00    | 0.00 | 2.39   | ENSMUSG00000021285 |
| Tnks1bp1  | 2        | 0.00    | 0.01 | 1.25   | ENSMUSG00000027602 |
| Slc6a8    | 6        | 0.03    | 0.00 | 2.39   | ENSMUSG00000068699 |
| Tmem131l  | 2        | 0.00    | 0.00 | 1.26   | ENSMUSG00000041598 |
| Ptgs2     | 11       | 0.03    | 0.00 | 2.39   | ENSMUSG00000032231 |
| Naprt     | 13       | 0.01    | 0.00 | 2.39   | ENSMUSG00000017466 |
| Tnfaip3   | 11       | 0.00    | 0.00 | 2.39   | ENSMUSG00000018677 |
| Ube2h     | 1        | 0.00    | 0.00 | 2.40   | ENSMUSG00000102752 |
| Prr15l    | 11       | 0.00    | 0.00 | 2.40   | ENSMUSG00000031803 |
| Hspb1     | 9        | 0.01    | 0.00 | 2.40   | ENSMUSG00000001366 |
| Igf2      | 2        | 0.02    | 0.00 | 2.41   | ENSMUSG00000011831 |
| Fermt2    | 1        | 0.02    | 0.00 | 2.41   | ENSMUSG00000028467 |
| Khnyn     | 11       | 0.04    | 0.00 | 2.41   | ENSMUSG00000056121 |
| Cd36      | 8        | 0.05    | 0.00 | 2.41   | ENSMUSG00000039568 |
| Abcc3     | 7        | 0.00    | 0.00 | 2.42   | ENSMUSG00000021301 |
| Klhl25    | 9        | 0.00    | 0.00 | 2.42   | ENSMUSG00000048012 |
| Mbd6      | 19       | 0.00    | 0.00 | 2.42   | ENSMUSG00000056121 |
| Hbb-bs    | 12       | 0.00    | 0.00 | 2.43   | ENSMUSG00000030103 |
| Cavin1    | 4        | 0.00    | 0.00 | 2.43   | ENSMUSG00000001183 |
| Fam129a   | 17       | 0.00    | 0.00 | 2.43   | ENSMUSG00000025212 |
| Dnajb4    | 6        | 0.03    | 0.00 | 2.44   | ENSMUSG00000008677 |
| Pnrc1     | 16       | 0.00    | 0.00 | 2.44   | ENSMUSG00000021285 |
| Mxd1      | 13       | 0.03    | 0.00 | 2.44   | ENSMUSG00000041773 |
| Myadm     | 7        | 0.04    | 0.00 | 2.44   | ENSMUSG000000048012 |
| Agrn      | 5        | 0.00    | 0.00 | 2.45   | ENSMUSG00000011831 |
| Ablim1    | 16       | 0.00    | 0.00 | 2.45   | ENSMUSG00000022971 |
| Ehd2      | 19       | 0.03    | 0.00 | 2.45   | ENSMUSG00000001183 |
| Col1a2    | 13       | 0.03    | 0.00 | 2.45   | ENSMUSG00000025212 |
| Smad1     | 12       | 0.04    | 0.00 | 2.45   | ENSMUSG000000048012 |
| Farp1     | 8        | 0.00    | 0.00 | 2.46   | ENSMUSG000000031950 |
| Ube2b     | 17       | 0.00    | 0.00 | 2.46   | ENSMUSG00000061232 |
| Gene  | Log2FC | Fold Change | P-Value | ENSMUSG_ID              |
|-------|--------|-------------|---------|-------------------------|
| Il4ra | 8      | 6.470       | 1.30    | 2.46                    | 0.01 | ENSMUSG00000031565 |
| Zrsr1 | 2      | 11.000      | 1.30    | 2.46                    | 0.03 | ENSMUSG00000026956 |
| Hba-a2| 17     | 12.350      | 1.30    | 2.46                    | 0.04 | ENSMUSG00000007038 |
| Per1  | 7      | 8.780       | 1.30    | 2.46                    | 0.05 | ENSMUSG00000019734 |
| Col5a1| 7      | 36.600      | 1.30    | 2.47                    | 0.00 | ENSMUSG00000003363 |
| Aqp9  | 11     | 9.400       | 1.30    | 2.47                    | 0.00 | ENSMUSG00000006920 |
| Fbxo32| 8      | 18.340      | 1.30    | 2.47                    | 0.01 | ENSMUSG00000036840 |
| Tagln | 6      | 111.090     | 1.31    | 2.48                    | 0.00 | ENSMUSG00000030342 |
| RhoC  | 2      | 4.020       | 1.31    | 2.48                    | 0.05 | ENSMUSG00000027221 |
| Wdr45 | 3      | 10.920      | 1.32    | 2.49                    | 0.00 | ENSMUSG00000027663 |
| Ifngr2| 7      | 75.120      | 1.32    | 2.49                    | 0.00 | ENSMUSG00000054499 |
| Anxa3 | 7      | 390.030     | 1.32    | 2.49                    | 0.00 | ENSMUSG00000007891 |
| Nrbp2 | 14     | 5.110       | 1.32    | 2.49                    | 0.01 | ENSMUSG00000021770 |
| Dstn  | 10     | 84.120      | 1.32    | 2.49                    | 0.01 | ENSMUSG0000005054  |
| Gstp3 | 2      | 5.390       | 1.32    | 2.49                    | 0.01 | ENSMUSG00000045319 |
| Srxn1 | 3      | 65.340      | 1.32    | 2.49                    | 0.03 | ENSMUSG00000027907 |
| Pink1 | 19     | 27.470      | 1.32    | 2.50                    | 0.00 | ENSMUSG00000047423 |
| Sh3pxd2a| 11    | 8.650       | 1.32    | 2.50                    | 0.01 | ENSMUSG00000018507 |
| Wnt2  | 7      | 56.910      | 1.33    | 2.51                    | 0.00 | ENSMUSG00000039745 |
| Abtb1 | 6      | 27.760      | 1.33    | 2.51                    | 0.00 | ENSMUSG00000029534 |
| Arhgef10| X     | 130.890     | 1.33    | 2.51                    | 0.00 | ENSMUSG00000031402 |
| Atg14 | 2      | 118.130     | 1.33    | 2.51                    | 0.00 | ENSMUSG00000007659 |
| Cpeb2 | 3      | 61.250      | 1.33    | 2.51                    | 0.00 | ENSMUSG0000001865  |
| Cyp1b1| 6      | 9.240       | 1.33    | 2.51                    | 0.04 | ENSMUSG00000030208 |
| Gpepd1| 19     | 7.550       | 1.34    | 2.52                    | 0.00 | ENSMUSG00000060675 |
| Fn3k  | 5      | 106.250     | 1.33    | 2.52                    | 0.00 | ENSMUSG00000029512 |
| Coll11a1| 9     | 113.160     | 1.34    | 2.52                    | 0.00 | ENSMUSG00000053641 |
| Smtn2 | 11     | 6.540       | 1.33    | 2.52                    | 0.03 | ENSMUSG00000023764 |
| Slc16a10| 3     | 4.470       | 1.33    | 2.52                    | 0.05 | ENSMUSG00000039286 |
| Csf2rb| 11     | 20.200      | 1.34    | 2.53                    | 0.00 | ENSMUSG00000088855 |
| Isg15 | 10     | 46.970      | 1.34    | 2.53                    | 0.00 | ENSMUSG00000047648 |
| Mxi1  | 15     | 38.850      | 1.34    | 2.53                    | 0.00 | ENSMUSG00000023055 |
| Hist2h2be| 15    | 15.730      | 1.34    | 2.53                    | 0.00 | ENSMUSG0000001281 |
| Gene   | ID   | Value  | log2FC | p-value | ENSMUSG00000000000 |
|--------|------|--------|--------|---------|---------------------|
| Pmaip1 | 16   | 8.390  | 1.34   | 2.53    | 0.00                |
| Acta2  | X    | 17.540 | 1.34   | 2.53    | 0.00               |
| Fbxl22 | 11   | 3.060  | 1.34   | 2.53    | 0.01               |
| Dusp1  | 9    | 8.340  | 1.35   | 2.54    | 0.00               |
| Snx21  | 18   | 8.200  | 1.34   | 2.54    | 0.01               |
| Fbxl22 | 11   | 2.060  | 1.34   | 2.54    | 0.03               |
| Dsc2   | 9    | 10.580 | 1.35   | 2.54    | 0.05               |
| Zswim4 | 11   | 49.660 | 1.35   | 2.55    | 0.00               |
| Btg2   | 11   | 6.430  | 1.35   | 2.55    | 0.01               |
| Tmem98 | 14   | 0.580  | 1.35   | 2.55    | 0.04               |
| Sowaha | 1    | 21.270 | 1.35   | 2.56    | 0.00               |
| Pdzk1ip1 | 13  | 20.580 | 1.36   | 2.56    | 0.01               |
| Wwtr1  | 6    | 120.880| 1.37   | 2.58    | 0.00               |
| Tmem43 | 10   | 813.520| 1.36   | 2.58    | 0.00               |
| Rnasel | 7    | 14.260 | 1.37   | 2.58    | 0.00               |
| Fam214b| 11   | 27.150 | 1.37   | 2.58    | 0.03               |
| Lcp1   | 2    | 153.630| 1.37   | 2.59    | 0.00               |
| Cma1   | 16   | 32.390 | 1.38   | 2.60    | 0.00               |
| Lpp    | 4    | 2.040  | 1.38   | 2.60    | 0.02               |
| Tcp11l2| 9    | 9.550  | 1.38   | 2.60    | 0.05               |
| Col5a2 | 7    | 49.370 | 1.38   | 2.61    | 0.02               |
| Mboat2 | 8    | 6.290  | 1.39   | 2.61    | 0.02               |
| Camk2d | 10   | 41.230 | 1.39   | 2.62    | 0.00               |
| Slc48a1| 7    | 43.500 | 1.39   | 2.62    | 0.00               |
| Phospho1| 1  | 20.650 | 1.39   | 2.62    | 0.00               |
| Fam213a| 4    | 58.100 | 1.39   | 2.62    | 0.00               |
| Tob1   | 17   | 15.210 | 1.39   | 2.62    | 0.00               |
| Myof   | 13   | 8.690  | 1.39   | 2.62    | 0.01               |
| Gtpbp2 | 14   | 36.620 | 1.40   | 2.63    | 0.00               |
| Inka2  | 3    | 72.150 | 1.40   | 2.63    | 0.00               |
| Rnf128 | 12   | 35.720 | 1.39   | 2.63    | 0.00               |
| Hook1  | 13   | 2.320  | 1.39   | 2.63    | 0.01               |
| Gadd45b| 5    | 12.900 | 1.39   | 2.63    | 0.03               |
| Gene      | Type | Gene ID | Reference | Alteration | Expression | p-value |
|-----------|------|---------|-----------|------------|-----------|---------|
| Lima1     | 7    | 1.430   | 1.40      | 2.63       | 0.05      |
| Trim58    | 3    | 24.360  | 1.40      | 2.64       | 0.00      |
| Gm4070    | 1    | 232.910 | 1.40      | 2.64       | 0.00      |
| Prkab2    | 8    | 263.300 | 1.40      | 2.64       | 0.00      |
| Celf4     | 2    | 6.790   | 1.40      | 2.64       | 0.02      |
| Smpdl3a   | 10   | 5.140   | 1.40      | 2.64       | 0.03      |
| Slfn14    | 6    | 36.120  | 1.41      | 2.65       | 0.00      |
| Coll1a    | 12   | 15.360  | 1.41      | 2.65       | 0.00      |
| Kank2     | 6    | 7.850   | 1.41      | 2.65       | 0.00      |
| Cbfa2t3   | 5    | 5.750   | 1.41      | 2.65       | 0.01      |
| Tmcc2     | 11   | 2.400   | 1.41      | 2.65       | 0.02      |
| Phf23     | 7    | 5.160   | 1.41      | 2.65       | 0.04      |
| Fbn1      | 13   | 43.680  | 1.40      | 2.65       | 0.04      |
| Mocos     | 4    | 51.050  | 1.41      | 2.65       | 0.00      |
| Ddit3_1   | 15   | 82.340  | 1.41      | 2.66       | 0.00      |
| Ppp1r15a  | 10   | 6.150   | 1.41      | 2.66       | 0.03      |
| Pak6      | 7    | 707.110 | 1.41      | 2.67       | 0.00      |
| Mettl7a1  | 14   | 73.600  | 1.42      | 2.67       | 0.00      |
| Ubb       | 13   | 95.950  | 1.42      | 2.67       | 0.00      |
| Epha4     | 8    | 11.220  | 1.42      | 2.67       | 0.01      |
| Arhgef37  | 12   | 8.670   | 1.42      | 2.68       | 0.00      |
| Atg16l2   | 17   | 8.030   | 1.42      | 2.68       | 0.00      |
| Nfkb2     | 11   | 36.340  | 1.42      | 2.68       | 0.00      |
| Actg2     | 6    | 1.070   | 1.42      | 2.68       | 0.05      |
| Rab30     | 7    | 96.710  | 1.43      | 2.69       | 0.00      |
| Sptbn4    | 11   | 94.050  | 1.43      | 2.69       | 0.00      |
| Prokr1    | 10   | 13.050  | 1.43      | 2.69       | 0.02      |
| Resfl     | 17   | 3.960   | 1.43      | 2.69       | 0.02      |
| Fam213b   | 4    | 2.160   | 1.43      | 2.69       | 0.05      |
| Vwa5a     | 10   | 22.800  | 1.43      | 2.70       | 0.00      |
| Stard10   | 3    | 422.300 | 1.43      | 2.70       | 0.00      |
| Fsd11     | 1    | 303.540 | 1.43      | 2.70       | 0.00      |
| Acot2     | 5    | 3.110   | 1.43      | 2.70       | 0.03      |
| Gene ID | Gene Symbol | Length | Exp. Fold | q-value | ENSMUSG ID   |
|---------|-------------|--------|-----------|---------|--------------|
| Klhl21  |             | 8      | 2.020     | 1.43    | 2.70         | 0.04 ENSMUSG00000036564 |
| Ubap1   |             | 4      | 185.770   | 1.44    | 2.71         | 0.00 ENSMUSG00000028906 |
| Itga3   |             | 19     | 9.120     | 1.44    | 2.71         | 0.00 ENSMUSG00000069833 |
| Camk2a  |             | 19     | 17.270    | 1.44    | 2.71         | 0.02 ENSMUSG00000024659 |
| Reln    |             | 17     | 16.550    | 1.44    | 2.71         | 0.05 ENSMUSG00000023905 |
| Ddr2    |             | 3      | 1.190     | 1.45    | 2.72         | 0.04 ENSMUSG00000041734 |
| Atf3    |             | 10     | 3.010     | 1.44    | 2.72         | 0.05 ENSMUSG00000049858 |
| Emp2    |             | 11     | 327.030   | 1.45    | 2.73         | 0.00 ENSMUSG00000018567 |
| Padi3   |             | 14     | 17.240    | 1.45    | 2.73         | 0.00 ENSMUSG00000022180 |
| Pard3   |             | 7      | 12.150    | 1.45    | 2.73         | 0.02 ENSMUSG00000062300 |
| Bnli10  |             | 13     | 1.410     | 1.45    | 2.73         | 0.04 ENSMUSG00000045312 |
| Abca1   |             | 5      | 25.030    | 1.46    | 2.74         | 0.00 ENSMUSG00000040557 |
| Bsdc1   |             | 2      | 121.310   | 1.46    | 2.74         | 0.00 ENSMUSG00000056501 |
| Hya1l   |             | 12     | 10.330    | 1.45    | 2.74         | 0.04 ENSMUSG00000057963 |
| Ube2o   |             | 11     | 0.550     | 1.45    | 2.74         | 0.05 ENSMUSG00000020275 |
| Trp53inp2 |          | 4      | 168.080   | 1.46    | 2.75         | 0.00 ENSMUSG00000028436 |
| Spsb1   |             | 11     | 6.450     | 1.46    | 2.75         | 0.00 ENSMUSG00000020439 |
| Ype14   |             | 17     | 4.470     | 1.46    | 2.75         | 0.03 ENSMUSG00000037098 |
| H2-T22  |             | 4      | 214.450   | 1.46    | 2.76         | 0.00 ENSMUSG00000037266 |
| Gpr157  |             | 19     | 3848.930  | 1.47    | 2.76         | 0.00 ENSMUSG00000024661 |
| Tg      |             | 15     | 4.840     | 1.47    | 2.76         | 0.00 ENSMUSG00000033039 |
| Ubd1    |             | 1      | 175.650   | 1.47    | 2.77         | 0.00 ENSMUSG00000026626 |
| Kctd11  |             | 4      | 7.320     | 1.47    | 2.77         | 0.03 ENSMUSG00000028763 |
| Kdm6b   |             | 7      | 68.770    | 1.47    | 2.78         | 0.00 ENSMUSG00000055200 |
| Gadd45a |             | 12     | 42.290    | 1.47    | 2.78         | 0.00 ENSMUSG00000021133 |
| Ccde80  |             | 10     | 3.600     | 1.48    | 2.78         | 0.00 ENSMUSG00000020101 |
| Ccde88a |             | 19     | 5.960     | 1.47    | 2.78         | 0.02 ENSMUSG00000024664 |
| Mfsd12  |             | 2      | 51.310    | 1.48    | 2.79         | 0.00 ENSMUSG00000079037 |
| Ephx1   |             | 2      | 26.710    | 1.48    | 2.79         | 0.00 ENSMUSG00000035399 |
| Abhd6   |             | 3      | 41.350    | 1.48    | 2.79         | 0.03 ENSMUSG0000001025  |
| Cyp2b10 |             | 7      | 17.350    | 1.49    | 2.80         | 0.01 ENSMUSG00000038387 |
| Postn   |             | 16     | 9.310     | 1.48    | 2.80         | 0.02 ENSMUSG00000022816 |
| Gene     | Log2FoldChange | Mean | SD  | Pval | ENSMUSG00000000000 |
|----------|----------------|------|-----|------|-------------------|
| Fam160a1 | 14             | 4.140| 1.49| 2.80 | 0.04              |
| Traf1    | 11             | 72145.140 | 1.49| 2.81 | 0.00              |
| Sesn2    | 5              | 3.340 | 1.49| 2.81 | 0.00              |
| Csrnp2   | 7              | 7.150 | 1.49| 2.82 | 0.01              |
| Csf1     | 7              | 8.490 | 1.50| 2.82 | 0.01              |
| Gstt2    | 3              | 25.110 | 1.50| 2.82 | 0.03              |
| Crem     | 13             | 41.490 | 1.50| 2.83 | 0.00              |
| Angptl2  | 15             | 1.530 | 1.50| 2.83 | 0.04              |
| Scl25a33 | X              | 20.170 | 1.51| 2.84 | 0.00              |
| Plvap    | X              | 1643.240 | 1.51| 2.85 | 0.00              |
| Abhd4    | 9              | 4.070 | 1.51| 2.85 | 0.00              |
| Hist1h1c | 4              | 1.400 | 1.51| 2.85 | 0.05              |
| Apoe     | 13             | 13.200 | 1.51| 2.85 | 0.05              |
| Rhbdf2   | 7              | 66.460 | 1.51| 2.86 | 0.00              |
| Tmem106a | 1              | 3.810 | 1.52| 2.86 | 0.01              |
| Fbxl3    | 12             | 1.740 | 1.51| 2.86 | 0.01              |
| Hist1h1c | 2              | 0.780 | 1.52| 2.86 | 0.05              |
| Masp1    | 8              | 1.250 | 1.51| 2.86 | 0.05              |
| Aif1l    | 7              | 3.890 | 1.52| 2.86 | 0.05              |
| Zfp945   | 13             | 10.940 | 1.52| 2.87 | 0.00              |
| Hs3st3a1 | 7              | 8.130 | 1.52| 2.87 | 0.00              |
| Phlda1   | 9              | 1.640 | 1.52| 2.87 | 0.04              |
| Adrb2    | 3              | 117.640 | 1.53| 2.89 | 0.00              |
| Tmem88   | 2              | 46.100 | 1.53| 2.89 | 0.03              |
| Npr2     | 8              | 7.190 | 1.53| 2.89 | 0.05              |
| Ccrl2    | 5              | 83.900 | 1.54| 2.90 | 0.00              |
| Gch1     | 9              | 81.180 | 1.54| 2.90 | 0.00              |
| Ankrd33b | 11             | 4.200 | 1.53| 2.90 | 0.03              |
| Mad2l1b  | 13             | 21.990 | 1.54| 2.91 | 0.00              |
| Tgif1    | 8              | 2.550 | 1.54| 2.91 | 0.01              |
| Stk32a   | 3              | 1.950 | 1.55| 2.92 | 0.04              |
| Cpt1c    | 9              | 9.540 | 1.54| 2.92 | 0.05              |
| Gatm     | 2              | 2.760 | 1.55| 2.93 | 0.02              |
| Gene  | X   | Value 1    | Value 2 | Value 3 | Value 4 | Gene ID                                      |
|-------|-----|------------|---------|---------|---------|---------------------------------------------|
| Mkrn1 | X   | 7.270      | 1.55    | 2.93    | 0.03    | ENSMUSG00000019558                          |
| Avpi1 | 3   | 75.440     | 1.56    | 2.94    | 0.00    | ENSMUSG000000033767                        |
| Mef2d | 1   | 1.950      | 1.55    | 2.94    | 0.02    | ENSMUSG00000032487                        |
| Dcn   | 15  | 2.920      | 1.56    | 2.94    | 0.03    | ENSMUSG00000022574                        |
| Mustn1| 2   | 2.560      | 1.56    | 2.94    | 0.03    | ENSMUSG000000061186                        |
| Hopx  | 10  | 2.320      | 1.56    | 2.95    | 0.02    | ENSMUSG000000019850                        |
| Rbm11 | 6   | 143.690    | 1.57    | 2.96    | 0.03    | ENSMUSG000000039159                        |
| Mfsd4b1| 11  | 1.270      | 1.56    | 2.96    | 0.03    | ENSMUSG00000047040                        |
| Nodal | 10  | 5.170      | 1.57    | 2.97    | 0.02    | ENSMUSG000000020023                        |
| Tfap2c| 5   | 57.560     | 1.57    | 2.97    | 0.03    | ENSMUSG00000004951                        |
| H2-D1 | 11  | 2.680      | 1.57    | 2.98    | 0.02    | ENSMUSG000000052949                        |
| Tbx6  | 5   | 1.690      | 1.58    | 2.99    | 0.04    | ENSMUSG000000037979                        |
| Jund  | 7   | 110.490    | 1.58    | 2.99    | 0.04    | ENSMUSG000000048583                        |
| Patl2 | 14  | 5.280      | 1.58    | 2.99    | 0.04    | ENSMUSG000000037712                        |
| Plk3  | 14  | 28.780     | 1.58    | 3.00    | 0.00    | ENSMUSG000000047153                        |
| Arid5b| 5   | 2.100      | 1.58    | 3.00    | 0.02    | ENSMUSG00000002944                        |
| Sema6a| 11  | 1.040      | 1.58    | 3.00    | 0.03    | ENSMUSG000000020865                        |
| Gm13889| 9   | 2.850      | 1.59    | 3.01    | 0.01    | ENSMUSG000000032470                        |
| Dnm1  | 7   | 17.010     | 1.60    | 3.02    | 0.00    | ENSMUSG000000055652                        |
| Samd11| 10  | 75.600     | 1.60    | 3.02    | 0.00    | ENSMUSG000000025409                        |
| Dapk2 | 7   | 115630.810 | 1.60    | 3.02    | 0.00    | ENSMUSG000000052305                        |
| Lpin2 | 11  | 8.390      | 1.59    | 3.02    | 0.01    | ENSMUSG00000004044                        |
| Hist1h2ab| 1  | 2.420      | 1.59    | 3.02    | 0.01    | ENSMUSG000000026483                        |
| Ppp2r5b| X   | 5.310      | 1.59    | 3.02    | 0.01    | ENSMUSG000000031133                        |
| Cbx7  | 5   | 1.640      | 1.59    | 3.02    | 0.04    | ENSMUSG000000051339                        |
| Nfkbia| 3   | 35.810     | 1.60    | 3.03    | 0.00    | ENSMUSG000000028035                        |
| Ahnak2| 4   | 67.200     | 1.60    | 3.03    | 0.00    | ENSMUSG000000040128                        |
| Dstyk | 6   | 174.010    | 1.60    | 3.03    | 0.00    | ENSMUSG000000001156                        |
| Ptpdc1| 7   | 20.890     | 1.60    | 3.03    | 0.01    | ENSMUSG000000068566                        |
| Akr1b8| 4   | 17.510     | 1.61    | 3.04    | 0.00    | ENSMUSG000000041936                        |
| Col4a6| 19  | 1.700      | 1.60    | 3.04    | 0.05    | ENSMUSG000000025085                        |
| Zfp703| 7   | 3.210      | 1.61    | 3.05    | 0.01    | ENSMUSG000000074364                        |
| Mid2  | 6   | 18.450     | 1.61    | 3.05    | 0.03    | ENSMUSG000000029661                        |
| Gene   | Log2fold Change | Log2Fold Change | q-value | Entrez Gene ID       |
|--------|----------------|----------------|---------|----------------------|
| Jph2   | 1.370          | 1.61           | 3.05    | ENSMUSG00000031681  |
| Inhbb  | 5.530          | 1.61           | 3.05    | ENSMUSG00000031700  |
| Pcolce2| 3.290          | 1.61           | 3.05    | ENSMUSG00000026821  |
| Ltbp3  | 3.260          | 1.61           | 3.05    | ENSMUSG00000025555  |
| Rhbdf1 | 74.990         | 1.62           | 3.07    | ENSMUSG00000029674  |
| Fn1    | 90.980         | 1.61           | 3.06    | ENSMUSG00000030748  |
| Hist1h1d| 55.620        | 1.61           | 3.06    | ENSMUSG00000067212  |
| Oas3   | 6.670          | 1.61           | 3.06    | ENSMUSG00000029674  |
| Tns2   | 16.320         | 1.62           | 3.07    | ENSMUSG00000044068  |
| Zfp36  | 118554.950     | 1.62           | 3.07    | ENSMUSG00000069917  |
| Mlph   | 43.580         | 1.62           | 3.08    | ENSMUSG00000020893  |
| Tgfa   | 18.220         | 1.62           | 3.08    | ENSMUSG00000026837  |
| Hist1h3b| 3.960          | 1.62           | 3.08    | ENSMUSG00000032204  |
| Bpgm   | 20.190         | 1.62           | 3.08    | ENSMUSG00000032233  |
| Daam2  | 24.260         | 1.63           | 3.09    | ENSMUSG00000032085  |
| Fat1   | 30.480         | 1.63           | 3.10    | ENSMUSG00000029665  |
| Scl7a11| 20.190         | 1.63           | 3.10    | ENSMUSG00000029484  |
| Met    | 11.750         | 1.63           | 3.10    | ENSMUSG00000039382  |
| Prs23  | 10.120         | 1.63           | 3.10    | ENSMUSG00000022358  |
| Hist1h2ae| 2.250         | 1.63           | 3.10    | ENSMUSG00000075590  |
| Mcam   | 284.400        | 1.64           | 3.11    | ENSMUSG00000015932  |
| Slc6a20a| 8.210          | 1.64           | 3.11    | ENSMUSG00000030630  |
| Thbs2  | 18.110         | 1.64           | 3.11    | ENSMUSG00000058216  |
| Elmo1  | 85.090         | 1.64           | 3.12    | ENSMUSG00000032802  |
| Mycn   | 60.730         | 1.64           | 3.12    | ENSMUSG00000028756  |
| Suco   | 4.870          | 1.64           | 3.12    | ENSMUSG00000020263  |
| Ak1    | 4.920          | 1.64           | 3.12    | ENSMUSG00000022090  |
| Slit3  | 2.320          | 1.64           | 3.13    | ENSMUSG00000053617  |
| Gja4   | 3.970          | 1.64           | 3.13    | ENSMUSG00000010797  |
| Hist2h3c2| 12.910        | 1.65           | 3.14    | ENSMUSG00000050390  |
| Bmp8a  | 63.120         | 1.65           | 3.14    | ENSMUSG00000030605  |
| Dusp8  | 4.330          | 1.65           | 3.14    | ENSMUSG00000041488  |
| Ptger4 | 51.850         | 1.65           | 3.15    | ENSMUSG00000030083  |
| Gene     | ID   | Fold Change | P-Value | Expression |
|----------|------|-------------|---------|------------|
| Ddit4    | 8    | 1.490       | 3.15    | 0.04       |
| Hist1h4i | 14   | 25.210      | 3.16    | 0.00       |
| Ldlrad4  | 5    | 4.940       | 3.16    | 0.00       |
| Trp53inp1| 11   | 2.240       | 3.16    | 0.02       |
| Sik1     | 17   | 0.770       | 3.16    | 0.05       |
| Psca     | 3    | 19.170      | 3.16    | 0.00       |
| Csf2rb2  | 2    | 116.020     | 3.17    | 0.00       |
| Ccdc141  | 11   | 2.460       | 3.17    | 0.01       |
| Itpr2    | 3    | 3.540       | 3.17    | 0.01       |
| Smim24   | 2    | 6.090       | 3.17    | 0.01       |
| Lama5    | 4    | 3.140       | 3.17    | 0.03       |
| Cx3cl1   | 10   | 118.570     | 3.18    | 0.00       |
| Notch3   | 15   | 376.220     | 3.19    | 0.00       |
| Dyrk3    | 4    | 18.870      | 3.19    | 0.02       |
| Tcp1l1   | 19   | 26.310      | 3.20    | 0.00       |
| Plau     | 3    | 5.520       | 3.21    | 0.00       |
| Slec4a1  | 18   | 6.390       | 3.21    | 0.00       |
| Hmgcs2   | 19   | 48.350      | 3.21    | 0.01       |
| Myocd    | 9    | 0.810       | 3.21    | 0.05       |
| Prune2   | 17   | 38.600      | 3.22    | 0.00       |
| Agtr1a   | 2    | 15.900      | 3.22    | 0.00       |
| Ypel2    | 13   | 15.990      | 3.22    | 0.00       |
| Myh11    | 18   | 2.270       | 3.22    | 0.02       |
| Adgrf5   | 19   | 2.030       | 3.22    | 0.04       |
| Col3a1   | 11   | 213.640     | 3.22    | 0.04       |
| Rhov     | 8    | 16.590      | 3.23    | 0.00       |
| Cacna2d3 | 1    | 136.530     | 3.23    | 0.00       |
| Cdc9b    | 8    | 8.360       | 3.23    | 0.04       |
| Tent5b   | 11   | 2.530       | 3.24    | 0.03       |
| Cd109    | 7    | 7663.920    | 3.25    | 0.00       |
| Igfbp2   | 12   | 7.350       | 3.25    | 0.03       |
| Rapgef3  | 15   | 3.770       | 3.25    | 0.04       |
| Hr       | 11   | 15.820      | 3.26    | 0.00       |
| Gene   | ID   | Log2 Fold Change | P-Value | ENSMUSG ID       |
|--------|------|------------------|---------|-----------------|
| Bmp4   | 4    | 25.540           | 3.26    | 0.00 ENSMUSG00000028716 |
| Sqstm1 | 3    | 3.670            | 3.26    | 0.02 ENSMUSG00000027803 |
| Svep1  | 6    | 25.560           | 3.27    | 0.00 ENSMUSG00000030095 |
| Tnc    | 1    | 1.430            | 3.27    | 0.04 ENSMUSG00000041757 |
| Nfil3  | 1    | 14.180           | 3.28    | 0.00 ENSMUSG00000066800 |
| Nfic   | 13   | 114.060          | 3.29    | 0.00 ENSMUSG00000036002 |
| Anxa8  | 14   | 39.180           | 3.31    | 0.00 ENSMUSG00000021998 |
| Osgin1 | 14   | 21.010           | 3.31    | 0.00 ENSMUSG00000022225 |
| BC107364 | 16 | 1.650            | 3.31    | 0.02 ENSMUSG00000033306 |
| Htra1  | 3    | 1.130            | 3.31    | 0.04 ENSMUSG00000031286 |
| Ypel3  | 10   | 199.180          | 3.32    | 0.00 ENSMUSG00000020034 |
| 1700017B05Rik | 1 | 6.100 | 3.32 | 0.01 ENSMUSG00000026042 |
| Bcl6   | X    | 3.820            | 3.32    | 0.02 ENSMUSG00000040147 |
| Lox    | 3    | 0.600            | 3.32    | 0.05 ENSMUSG00000053706 |
| Hlx    | 12   | 1.610            | 3.33    | 0.00 ENSMUSG00000020646 |
| Cacna1g| 3    | 1.130            | 3.33    | 0.01 ENSMUSG00000053819 |
| Pvr    | 4    | 2.410            | 3.33    | 0.05 ENSMUSG00000061859 |
| Kcnb1  | 15   | 98.730           | 3.34    | 0.00 ENSMUSG00000081534 |
| Fabp4  | 11   | 285.500          | 3.34    | 0.00 ENSMUSG00000050860 |
| Lgmn   | 10   | 2.460            | 3.34    | 0.01 ENSMUSG00000020020 |
| Gfpt2  | 19   | 102.480          | 3.34    | 0.05 ENSMUSG00000024990 |
| Cd80   | 14   | 119.110          | 3.35    | 0.00 ENSMUSG00000021792 |
| Tgml1  | 11   | 18.820           | 3.35    | 0.00 ENSMUSG00000037573 |
| Aldh1a1| 19   | 4.970            | 3.35    | 0.02 ENSMUSG00000048612 |
| Plekha4| 15   | 16.820           | 3.35    | 0.02 ENSMUSG00000022150 |
| Zfp773 | X    | 1.820            | 3.35    | 0.03 ENSMUSG00000046942 |
| Mafa   | 11   | 2.340            | 3.35    | 0.04 ENSMUSG00000017639 |
| Myo5c  | 17   | 164.160          | 3.36    | 0.00 ENSMUSG00000023952 |
| Lhfp   | 3    | 9.120            | 3.36    | 0.00 ENSMUSG00000048458 |
| Sema3a | 7    | 15.400           | 3.36    | 0.03 ENSMUSG00000025504 |
| Rpp25  | X    | 49.500           | 3.37    | 0.00 ENSMUSG00000031438 |
| Pnp2   | 4    | 1.710            | 3.37    | 0.01 ENSMUSG00000028572 |
| gene   | rank | log2FC | adj.p | corr.  | gene_id                  |
|--------|------|--------|-------|--------|--------------------------|
| Vegfd  | 10   | 8.810  | 1.75  | 3.37   | ENSMUSG00000015312       |
| Hbq1a  | 15   | 5.340  | 1.75  | 3.37   | ENSMUSG00000023022       |
| Nlrc5  | 9    | 7.860  | 1.75  | 3.37   | ENSMUSG000000046402      |
| Bbc3   | 11   | 43.010 | 1.76  | 3.38   | ENSMUSG000000037124      |
| Hist1h2bc | 7 | 7.170 | 1.76  | 3.38   | ENSMUSG000000078606      |
| Pdk4   | 3    | 8.770  | 1.76  | 3.38   | ENSMUSG000000038205      |
| Pltp   | 18   | 3.120  | 1.76  | 3.38   | ENSMUSG000000024268      |
| Hectd2 | 10   | 3.640  | 1.76  | 3.38   | ENSMUSG000000019872      |
| Perm1  | 15   | 17.300 | 1.76  | 3.38   | ENSMUSG000000036606      |
| Cryaa  | 7    | 8.030  | 1.76  | 3.38   | ENSMUSG000000042759      |
| Ugdh   | 11   | 94.610 | 1.76  | 3.39   | ENSMUSG000000082101      |
| Npal4  | 11   | 74.950 | 1.76  | 3.39   | ENSMUSG00000001506       |
| Gm2163 | 9    | 3.480  | 1.76  | 3.39   | ENSMUSG000000032194      |
| Gprin2 | 8    | 21.520 | 1.77  | 3.40   | ENSMUSG000000063636      |
| Eda2r  | 9    | 6.010  | 1.77  | 3.41   | ENSMUSG000000037405      |
| Msln   | 10   | 1.390  | 1.77  | 3.41   | ENSMUSG000000020019      |
| Raetl1 | 1    | 2242.630 | 1.77 | 3.42   | ENSMUSG000000042066      |
| Medag  | 11   | 56.460 | 1.78  | 3.42   | ENSMUSG000000018572      |
| Zfp874a| 2    | 2.580  | 1.77  | 3.42   | ENSMUSG000000027204      |
| Gpat2  | 18   | 1.490  | 1.77  | 3.42   | ENSMUSG000000039616      |
| Cav1   | 10   | 349.650 | 1.78 | 3.43   | ENSMUSG000000025408      |
| Eepd1  | 7    | 787.630 | 1.78 | 3.43   | ENSMUSG000000040435      |
| Zfp365 | 2    | 4.060  | 1.78  | 3.43   | ENSMUSG000000074923       |
| Hist1h2bg | 7 | 6.680 | 1.78  | 3.43   | ENSMUSG000000030494      |
| Hsd3b6 | 15   | 22.220 | 1.78  | 3.44   | ENSMUSG000000054619      |
| Cdkn1a | 11   | 2657.960 | 1.78 | 3.44   | ENSMUSG000000019505      |
| Nsmf   | 1    | 2.540  | 1.78  | 3.44   | ENSMUSG000000026235      |
| Col12a1| 18   | 1.180  | 1.78  | 3.44   | ENSMUSG000000045094      |
| Jag1   | 7    | 0.710  | 1.78  | 3.44   | ENSMUSG000000047767      |
| Peli3  | 19   | 14.610 | 1.79  | 3.45   | ENSMUSG000000025225      |
| Junb   | 7    | 1.380  | 1.79  | 3.45   | ENSMUSG000000025584      |
| Serpine1 | 8 | 3.900  | 1.79  | 3.45   | ENSMUSG000000039960      |
| Tmem88b| 6    | 4.340  | 1.79  | 3.45   | ENSMUSG000000059430      |
| Gene      | Exon | ES  | ES  | Score | PM      |
|-----------|------|-----|-----|-------|---------|
| Ildr2     | 7    | 2.75 | 1.79 | 3.46  | 0.00    |
| Gramd2    | 7    | 0.33 | 1.79 | 3.46  | 0.03    |
| Gstp2     | 6    | 13.90| 1.80 | 3.48  | 0.00    |
| Pyroxd2   | 6    | 61.55| 1.80 | 3.48  | 0.00    |
| Fam220a_1 | 5    | 4.90 | 1.80 | 3.48  | 0.03    |
| Cemip     | 4    | 1.77 | 1.80 | 3.48  | 0.04    |
| Rerg      | 9    | 23.02| 1.80 | 3.49  | 0.00    |
| Fas1      | 10   | 84.29| 1.80 | 3.49  | 0.00    |
| Hist1h3d  | 7    | 19.33| 1.80 | 3.49  | 0.00    |
| Eml1      | 4    | 0.23 | 1.80 | 3.49  | 0.04    |
| Blhhe41   | 12   | 10.13| 1.81 | 3.50  | 0.00    |
| Gm4779    | 3    | 10.54| 1.81 | 3.50  | 0.02    |
| Tmem140   | 4    | 26.34| 1.82 | 3.52  | 0.00    |
| Tac2      | 4    | 105.90| 1.82 | 3.52  | 0.00    |
| Abhd3     | 11   | 7.49 | 1.82 | 3.52  | 0.02    |
| Cep112    | 11   | 3.48 | 1.82 | 3.52  | 0.03    |
| Hspb7     | 18   | 0.17 | 1.81 | 3.52  | 0.05    |
| Hist1h4m  | 18   | 0.35 | 1.82 | 3.53  | 0.04    |
| Tecta     | 5    | 12.91| 1.82 | 3.54  | 0.00    |
| D630023F18Rik | 1  | 93.47| 1.83 | 3.54  | 0.00    |
| Mapre3    | 10   | 2.19 | 1.82 | 3.54  | 0.05    |
| Gcm2      | 1    | 0.31 | 1.82 | 3.54  | 0.05    |
| Zfp354b   | X    | 30.69| 1.83 | 3.56  | 0.00    |
| Gja5      | 1    | 32.86| 1.83 | 3.56  | 0.00    |
| Gpc1      | 16   | 4.56 | 1.83 | 3.56  | 0.03    |
| Serpina3n | 3    | 1.69 | 1.83 | 3.56  | 0.04    |
| Lef1      | 10   | 15.50| 1.83 | 3.56  | 0.04    |
| Isg20     | 4    | 0.84 | 1.84 | 3.57  | 0.05    |
| Mmp12     | 8    | 2.71 | 1.84 | 3.58  | 0.00    |
| Dst       | 11   | 3.69 | 1.84 | 3.58  | 0.00    |
| Fosl2     | 3    | 1.04 | 1.84 | 3.58  | 0.05    |
| Hist2h2aa2| 11   | 40.47| 1.84 | 3.59  | 0.02    |
| Clgn      | 17   | 22.71| 1.85 | 3.60  | 0.00    |
| Gene   | RefSeq | Ratio | FPKM | 1.8 | 3.6 | 0.0 |
|--------|--------|-------|------|-----|-----|-----|
| Trim43a| 4      | 1.060 | 1.85 | 3.60| 0.02|
| Olfml2b| 6      | 12.310| 1.85 | 3.60| 0.03|
| AW011738| 4   | 177.880| 1.85 | 3.61| 0.00|
| Lbp4   | 9      | 2.420 | 1.86 | 3.63| 0.00|
| Rab39b | 5      | 2.290 | 1.86 | 3.63| 0.01|
| Ppl    | 11     | 527.550| 1.87 | 3.64| 0.00|
| Plk2   | 4      | 3.140 | 1.87 | 3.65| 0.00|
| Cystm1 | 2      | 11.160| 1.87 | 3.66| 0.00|
| Lexm   | 4      | 3.530 | 1.87 | 3.65| 0.02|
| Spag8  | 2      | 244.400| 1.87 | 3.66| 0.00|
| Hist3h2a| 17  | 8.130 | 1.87 | 3.66| 0.00|
| Runde3a| 4      | 0.940 | 1.87 | 3.66| 0.02|
| Rnf227 | 15     | 0.330 | 1.87 | 3.66| 0.03|
| Des    | 11     | 2.200 | 1.88 | 3.67| 0.01|
| Apoll1b| 16     | 3.680 | 1.88 | 3.67| 0.05|
| Apol10a| 13     | 7.360 | 1.87 | 3.67| 0.05|
| Cygb   | 11     | 45.820| 1.88 | 3.68| 0.00|
| Tgfb3  | 6      | 859.210| 1.88 | 3.68| 0.00|
| Hist1h2bb| 15 | 0.630 | 1.88 | 3.68| 0.01|
| Hist1h2bj| 16 | 1.280 | 1.88 | 3.68| 0.02|
| Unc5cl | 2      | 2.270 | 1.88 | 3.68| 0.03|
| Col8a1 | 13     | 3.360 | 1.88 | 3.68| 0.03|
| Wbp2nl | 2      | 0.880 | 1.88 | 3.69| 0.04|
| A530064D06Rik| 11 | 8.790 | 1.89 | 3.70| 0.00|
| Tmem200b| 10    | 1.360 | 1.89 | 3.70| 0.03|
| Cyp17a1| 6      | 14.690| 1.89 | 3.70| 0.03|
| Ins16  | 10     | 34.200| 1.89 | 3.71| 0.00|
| Pgm5   | 3      | 51.320| 1.89 | 3.71| 0.00|
| Lama2  | 1      | 3.630 | 1.89 | 3.71| 0.01|
| Neo1   | 14     | 4.160 | 1.89 | 3.72| 0.00|
| Osr1   | 5      | 3.880 | 1.90 | 3.72| 0.04|
| Jun    | 7      | 0.770 | 1.90 | 3.72| 0.05|
| Gene   | Chromosome | Expression | FDR   | Log Fold Change | Ensembl ID       |
|--------|------------|------------|-------|----------------|------------------|
| Thy1   | 6          | 11.870     | 1.90  | 3.73           | 0.00 ENSMUSG00000038451 |
| Cd163  | 3          | 52.040     | 1.90  | 3.73           | 0.00 ENSMUSG000000103034 |
| 1700014D04Rik | 3      | 7.650      | 1.90  | 3.73           | 0.02 ENSMUSG00000027750   |
| Bgn    | X          | 20.530     | 1.90  | 3.74           | 0.00 ENSMUSG00000041688   |
| Rnf32  | 3          | 4.800      | 1.90  | 3.74           | 0.00 ENSMUSG00000051000   |
| Histh4n| 10         | 13.040     | 1.90  | 3.74           | 0.02 ENSMUSG00000020099   |
| P2rx7  | 5          | 26.380     | 1.91  | 3.75           | 0.00 ENSMUSG00000042726   |
| Cfap69 | 7          | 0.580      | 1.91  | 3.75           | 0.05 ENSMUSG00000063110   |
| Rsph9  | 4          | 162.340    | 1.91  | 3.76           | 0.00 ENSMUSG00000028893   |
| Ace2   | 15         | 1.670      | 1.91  | 3.76           | 0.01 ENSMUSG00000044636   |
| Tmem71 | 8          | 0.780      | 1.91  | 3.77           | 0.03 ENSMUSG0000002908    |
| Histh3i| 19         | 13.260     | 1.92  | 3.78           | 0.00 ENSMUSG00000083282   |
| Ugt8a  | 10         | 5.610      | 1.92  | 3.78           | 0.00 ENSMUSG00000033318   |
| Lama4  | 6          | 4.690      | 1.92  | 3.78           | 0.01 ENSMUSG00000115766   |
| Tll1   | 14         | 0.100      | 1.92  | 3.78           | 0.05 ENSMUSG00000049092   |
| Ifitm10| 18         | 4.140      | 1.92  | 3.79           | 0.00 ENSMUSG00000063889   |
| Foxf1  | 3          | 7.970      | 1.92  | 3.79           | 0.02 ENSMUSG00000028164   |
| Igfbp5 | 8          | 26.140     | 1.92  | 3.79           | 0.03 ENSMUSG00000003030   |
| Radil  | 2          | 1.520      | 1.92  | 3.79           | 0.04 ENSMUSG0000004105    |
| Hsd11b1| 11         | 10.730     | 1.92  | 3.79           | 0.04 ENSMUSG00000018569   |
| Sspn   | 4          | 14.860     | 1.93  | 3.80           | 0.00 ENSMUSG00000028982   |
| Khil38 | 8          | 4.120      | 1.93  | 3.80           | 0.01 ENSMUSG00000034845   |
| Pla2r1 | 3          | 3.560      | 1.93  | 3.80           | 0.04 ENSMUSG00000028064   |
| Igfn1  | 5          | 2.250      | 1.93  | 3.80           | 0.05 ENSMUSG00000029330   |
| Paqr9  | 14         | 56.020     | 1.93  | 3.81           | 0.00 ENSMUSG00000040997   |
| Histh2ac| 13        | 146.050    | 1.93  | 3.81           | 0.00 ENSMUSG00000036181   |
| Nrt1n  | 7          | 270.240    | 1.93  | 3.81           | 0.01 ENSMUSG0000002985    |
| Serinc2| 17         | 5.360      | 1.93  | 3.81           | 0.05 ENSMUSG00000044279   |
| Cldn10 | 11         | 30.200     | 1.93  | 3.82           | 0.00 ENSMUSG00000020806   |
| Mindy4 | 11         | 5.860      | 1.93  | 3.82           | 0.01 ENSMUSG00000034947   |
| Rph3al | 9          | 1.440      | 1.93  | 3.82           | 0.05 ENSMUSG00000053646   |
| Arhgef19| 14        | 35.800     | 1.94  | 3.83           | 0.00 ENSMUSG00000022124   |
| Tmprss9| 13         | 2.160      | 1.94  | 3.83           | 0.01 ENSMUSG00000051627   |
| Gene       | RefSeq | FPKM  | MVI  | MFPK | ENSMUSG00000018822 |
|------------|--------|-------|------|------|-------------------|
| Cacna2d4   | 16     | 1.560 | 1.94 | 3.83 | 0.01              |
| Klhl22     | 2      | 1.570 | 1.94 | 3.83 | 0.03              |
| Kcnj4      | 8      | 0.820 | 1.94 | 3.83 | 0.04              |
| Thegl      | 17     | 2.600 | 1.94 | 3.83 | 0.00              |
| Shroom4    | 13     | 5.630 | 1.94 | 3.83 | 0.03              |
| Gm10382    | 4      | 1.020 | 1.94 | 3.83 | 0.04              |
| Hist1h2bf  | 7      | 0.980 | 1.94 | 3.83 | 0.05              |
| Apoll1a    | 11     | 0.220 | 1.94 | 3.85 | 0.05              |
| Tmtc1      | 10     | 29.630| 1.95 | 3.86 | 0.00              |
| Spata31d1a | 18     | 116.230| 1.95 | 3.86 | 0.00              |
| Grhl3      | 15     | 165.690| 1.95 | 3.86 | 0.02              |
| Hist3h2ba  | 15     | 0.420 | 1.95 | 3.86 | 0.02              |
| Hist2h2aa1 | 11     | 0.870 | 1.95 | 3.86 | 0.03              |
| Gm45208    | 11     | 3.900 | 1.95 | 3.86 | 0.03              |
| Ackr3      | 4      | 0.630 | 1.95 | 3.86 | 0.04              |
| Gm2115     | 12     | 6.080 | 1.95 | 3.86 | 0.04              |
| Hist1h2be  | 9      | 43.200| 1.96 | 3.88 | 0.00              |
| Eln        | 14     | 11.340| 1.96 | 3.88 | 0.00              |
| Oprd1      | 15     | 1.430 | 1.96 | 3.88 | 0.01              |
| Relb       | 6      | 7.120 | 1.95 | 3.88 | 0.03              |
| Xhr4a      | 17     | 4.060 | 1.95 | 3.88 | 0.05              |
| Galnt6     | 17     | 116.200| 1.96 | 3.90 | 0.00              |
| Hmox1      | 17     | 5.060 | 1.96 | 3.90 | 0.00              |
| Nog        | 18     | 0.410 | 1.96 | 3.90 | 0.03              |
| Adm        | 9      | 477.970| 1.96 | 3.90 | 0.04              |
| Cdkn2b     | 7      | 5.390 | 1.97 | 3.91 | 0.00              |
| C1ra       | 2      | 2.260 | 1.97 | 3.91 | 0.01              |
| Rapgef4    | 6      | 440.530| 1.97 | 3.92 | 0.00              |
| Klk6       | 19     | 25.710| 1.97 | 3.92 | 0.00              |
| Trim34b    | 10     | 0.160 | 1.97 | 3.92 | 0.03              |
| Sox8       | 3      | 9.870 | 1.98 | 3.93 | 0.02              |
| Me3        | 3      | 39.640| 1.98 | 3.94 | 0.00              |
| Hist2h2bb  | 10     | 6.050 | 1.98 | 3.94 | 0.02              |
| gene  | geneID | p   | q   | log2FC | symbol  |
|-------|--------|-----|-----|--------|---------|
| Brdt  | ENSMUSG00000042485 | 0.710 | 1.98 | 3.94  | 0.05    |
| Mx2   | ENSMUSG00000054932 | 2637.210 | 1.98 | 3.94  | 0.05    |
| Mmp13 | ENSMUSG00000059325 | 18.060 | 1.98 | 3.95  | 0.00    |
| II1r2 | ENSMUSG00000059493 | 0.310 | 1.98 | 3.95  | 0.05    |
| Foxd1 | ENSMUSG00000044393 | 6.010 | 1.99 | 3.96  | 0.03    |
| Mettl7a2 | ENSMUSG00000032940 | 0.470 | 1.99 | 3.96  | 0.03    |
| Kcnj12 | ENSMUSG00000099041 | 1.320 | 1.99 | 3.97  | 0.02    |
| Col5a3 | ENSMUSG00000038522 | 1.190 | 1.99 | 3.97  | 0.04    |
| Mmp27 | ENSMUSG00000009545 | 0.270 | 1.99 | 3.97  | 0.04    |
| Bmp8b | ENSMUSG00000039479 | 7.780 | 1.99 | 3.98  | 0.04    |
| Ptx3  | ENSMUSG00000039329 | 1.860 | 1.99 | 3.98  | 0.05    |
| Serpina3m | ENSMUSG00000037171 | 0.760 | 1.99 | 3.99  | 0.02    |
| Mmel1 | ENSMUSG00000044037 | 1.640 | 2.00 | 3.99  | 0.04    |
| Mrgprf | ENSMUSG00000045667 | 1.950 | 2.00 | 4.00  | 0.01    |
| Igfbp6 | ENSMUSG00000028640 | 0.320 | 2.00 | 4.00  | 0.05    |
| Ptpn14 | ENSMUSG00000026994 | 1.920 | 2.01 | 4.01  | 0.05    |
| Slc10a6 | ENSMUSG00000073411 | 167.950 | 2.01 | 4.02  | 0.00    |
| Rassf10 | ENSMUSG00000030699 | 11.970 | 2.01 | 4.02  | 0.00    |
| Gm45716 | ENSMUSG00000071076 | 330.520 | 2.01 | 4.03  | 0.00    |
| Tmem28 | ENSMUSG00000072825 | 10.580 | 2.01 | 4.03  | 0.01    |
| Col22a1 | ENSMUSG00000027233 | 1.930 | 2.01 | 4.03  | 0.01    |
| Foxe1  | ENSMUSG00000041343 | 0.490 | 2.01 | 4.04  | 0.03    |
| Fosl1  | ENSMUSG00000046352 | 5.020 | 2.02 | 4.05  | 0.05    |
| Arl4c  | ENSMUSG00000028680 | 10.600 | 2.02 | 4.06  | 0.00    |
| Ttc22  | ENSMUSG00000042659 | 6.720 | 2.02 | 4.06  | 0.03    |
| Vgf   | ENSMUSG00000054474 | 3.040 | 2.02 | 4.06  | 0.05    |
| Oasl2  | ENSMUSG00000032080 | 353.910 | 2.02 | 4.06  | 0.05    |
| Prelp  | ENSMUSG00000019947 | 2.610 | 2.03 | 4.07  | 0.00    |
| Mettl7a3 | ENSMUSG00000019647 | 2.130 | 2.02 | 4.07  | 0.00    |
| Map3k19 | ENSMUSG00000087006 | 4.640 | 2.03 | 4.07  | 0.01    |
| Gm43518 | ENSMUSG00000026825 | 1.180 | 2.03 | 4.07  | 0.03    |
| Gdf1  | ENSMUSG00000096351 | 39.640 | 2.03 | 4.08  | 0.00    |
| Name          | ID | Log2 FC | P-Value | Gene ID             |
|---------------|----|---------|---------|---------------------|
| Apol9a        | 9  | 13.660  | 4.08    | ENSMUSG00000032380  |
| Zfp750        | 17 | 183.450 | 4.09    | ENSMUSG00000024052  |
| H2-Bl         | 6  | 6.920   | 4.10    | ENSMUSG00000033542  |
| Tex11         | 13 | 2.170   | 4.11    | ENSMUSG00000061615  |
| Dglucy        | 19 | 8.330   | 4.13    | ENSMUSG00000024777  |
| Fam196b       | 5  | 118.710 | 4.13    | ENSMUSG00000047501  |
| Dusp13        | 15 | 9.000   | 4.14    | ENSMUSG00000053411  |
| Cebpa         | 7  | 10.110  | 4.14    | ENSMUSG00000010760  |
| Hist1h2bq     | 12 | 23.440  | 4.15    | ENSMUSG00000021025  |
| Meioc         | 12 | 4.150   | 4.15    | ENSMUSG00000072812  |
| Nuak2         | 7  | 10.260  | 4.15    | ENSMUSG0000003420   |
| Tnxb          | 5  | 3.950   | 4.15    | ENSMUSG00000070780  |
| Npffr1        | 1  | 14.730  | 4.16    | ENSMUSG00000042046  |
| Pbx4          | 12 | 5.770   | 4.16    | ENSMUSG00000021062  |
| Col14a1       | 13 | 0.370   | 4.16    | ENSMUSG00000038042  |
| Spink8        | 6  | 4.160   | 4.17    | ENSMUSG00000029762  |
| Prrg3         | 10 | 1.810   | 4.17    | ENSMUSG00000020121  |
| Plac9b        | 8  | 10.530  | 4.19    | ENSMUSG00000085795  |
| Ankrd34b      | 12 | 9.580   | 4.19    | ENSMUSG00000022893  |
| Fmod          | 16 | 9.430   | 4.19    | ENSMUSG00000028591  |
| Tcim          | 4  | 0.200   | 4.19    | ENSMUSG0000000266   |
| Fbxo27        | X  | 1.030   | 4.20    | ENSMUSG00000017817  |
| Lrtm2         | 7  | 2.990   | 4.20    | ENSMUSG00000001514  |
| Nyx           | 1  | 0.240   | 4.20    | ENSMUSG00000037035  |
| Gdgd3         | 10 | 0.440   | 4.21    | ENSMUSG00000039981  |
| Gli1          | 9  | 0.160   | 4.21    | ENSMUSG00000015354  |
| Prex2         | 2  | 13.850  | 4.22    | ENSMUSG00000017009  |
| Irf2bpl       | 19 | 0.640   | 4.23    | ENSMUSG00000024940  |
| Hist1h2br     | 11 | 19.810  | 4.24    | ENSMUSG00000020282  |
| Gm49337       | 15 | 0.450   | 4.24    | ENSMUSG00000061740  |
| Hist1h2ao     | X  | 10.950  | 4.25    | ENSMUSG00000031410  |
| Fam71a        | 1  | 109.590 | 4.26    | ENSMUSG00000026193  |
| Gene  | PDE | Heat 1 | Heat 2 | Heat 3 | p  |
|-------|-----|--------|--------|--------|----|
| Gdf15 | 13  | 0.580  | 2.09   | 4.26   | 0.01 |
| Nnmt  | 18  | 6.200  | 2.10   | 4.27   | 0.03 |
| Rsad2 | 5   | 0.310  | 2.09   | 4.27   | 0.03 |
| Cd79a | 11  | 3.100  | 2.10   | 4.28   | 0.04 |
| Kcnh3 | 3   | 0.840  | 2.10   | 4.28   | 0.04 |
| Lypd5 | X   | 33.500 | 2.10   | 4.29   | 0.01 |
| Galnt15| 15  | 2.760  | 2.10   | 4.29   | 0.01 |
| Itgb1 | 18  | 29.730 | 2.10   | 4.29   | 0.03 |
| Abca8b| 13  | 2.630  | 2.10   | 4.29   | 0.04 |
| Slc25a31| 7   | 36.250 | 2.11   | 4.30   | 0.00 |
| Hist1h2ad| 10  | 4.520  | 2.11   | 4.30   | 0.05 |
| Tmc3  | 1   | 3.140  | 2.11   | 4.31   | 0.01 |
| Cyp2a5| 6   | 2.240  | 2.11   | 4.31   | 0.01 |
| II1r1 | 13  | 1.760  | 2.11   | 4.31   | 0.03 |
| II1r2 | 6   | 307.300| 2.11   | 4.32   | 0.00 |
| Scg2  | 17  | 1.100  | 2.11   | 4.32   | 0.05 |
| Chga  | 8   | 2.900  | 2.11   | 4.33   | 0.00 |
| Aqp1  | 17  | 3.190  | 2.12   | 4.33   | 0.02 |
| Spata31d1d| 3   | 6.500  | 2.12   | 4.34   | 0.02 |
| Gm14226| 9   | 6.430  | 2.12   | 4.35   | 0.03 |
| Klk1b22| 3   | 6.410  | 2.13   | 4.36   | 0.00 |
| Ybx2  | 5   | 4.270  | 2.13   | 4.36   | 0.01 |
| Ly6k  | 9   | 11.060 | 2.13   | 4.37   | 0.01 |
| Acsml | 10  | 8.150  | 2.13   | 4.37   | 0.02 |
| Zfp37 | 13  | 0.250  | 2.13   | 4.38   | 0.01 |
| Fam180a| 6   | 2.630  | 2.14   | 4.39   | 0.00 |
| Ephx4 | 2   | 5.240  | 2.14   | 4.40   | 0.00 |
| Piwil2| 13  | 3.940  | 2.14   | 4.40   | 0.02 |
| Papolb| 9   | 2.570  | 2.14   | 4.41   | 0.03 |
| Rm4rl2| 9   | 0.930  | 2.14   | 4.42   | 0.01 |
| Gpbar1| 17  | 0.340  | 2.14   | 4.42   | 0.03 |
| Efemp1| 14  | 2.940  | 2.14   | 4.42   | 0.04 |
| Sstr5 | 9   | 0.350  | 2.14   | 4.42   | 0.05 |
| Gene   |chr|Mean|SD|Score|Pval|EntrezGeneID |
|--------|---|----|---|-----|-----|--------------|
| Myod1  |13 |6.080|2.15|4.43|0.00|ENSMUSG00000041112|
| Bcas1  |12 |5.460|2.15|4.43|0.00|ENSMUSG00000037169|
| Sim2   |4  |5.200|2.15|4.43|0.03|ENSMUSG00000029032|
| Il1f9  |11 |0.370|2.15|4.43|0.05|ENSMUSG00000023781|
| Tac1   |1  |75.350|2.15|4.44|0.00|ENSMUSG00000040297|
| Usp17ld|2  |2.360|2.15|4.44|0.00|ENSMUSG00000026817|
| Foxe2  |11 |0.610|2.15|4.44|0.02|ENSMUSG00000056427|
| Prmd   |3  |39.450|2.15|4.44|0.03|ENSMUSG00000050359|
| Ms4a4d |4  |3.330|2.15|4.45|0.00|ENSMUSG00000050234|
| Olig2  |3  |4.050|2.15|4.45|0.01|ENSMUSG00000081058|
| Prg4   |4  |0.670|2.15|4.45|0.02|ENSMUSG00000032726|
| Slc19a3|7  |34.140|2.16|4.46|0.00|ENSMUSG00000037887|
| Ugt1a8 |15 |9.670|2.16|4.46|0.00|ENSMUSG00000039942|
| Gm9780 |17 |3.420|2.16|4.46|0.02|ENSMUSG00000035929|
| Sprr2k |10 |42.390|2.16|4.47|0.00|ENSMUSG00000020108|
| Gpr139 |11 |0.470|2.16|4.47|0.03|ENSMUSG00000043099|
| Gm20547|3  |1.720|2.17|4.49|0.03|ENSMUSG00000015850|
### Supplemental Table 5. Downregulated genes in *Dot1L*-KO ESRE cells in common with *Dot1L*-MM cells (n=205)

| Name    | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL         |
|---------|------------|----------------|------------------|-------------|---------|----------------|
| Ncan    | 8          | 0.160          | -7.35            | -163.54     | 0.01    | ENSMUSG0000002341 |
| BC035044 | 6          | 0.640          | -7.29            | -156.30     | 0.00    | ENSMUSG0000009164 |
| Sert2   | 2          | 0.270          | -7.06            | -133.05     | 0.01    | ENSMUSG00000060257 |
| Cacng4  | 11         | 0.260          | -7.04            | -131.20     | 0.01    | ENSMUSG00000020723 |
| Mpo     | 11         | 37.630         | -6.88            | -118.14     | 0.00    | ENSMUSG00000009350 |
| Dcx     | X          | 0.260          | -6.64            | -99.52      | 0.00    | ENSMUSG00000031285 |
| Igfbpl1 | 4          | 0.230          | -6.59            | -96.45      | 0.02    | ENSMUSG00000035551 |
| Brsk2   | 7          | 0.110          | -6.53            | -92.38      | 0.02    | ENSMUSG00000053046 |
| Nr2fl1  | 13         | 0.130          | -6.53            | -92.38      | 0.02    | ENSMUSG00000069171 |
| Pax2    | 19         | 0.120          | -6.53            | -92.38      | 0.02    | ENSMUSG0000004231 |
| Astn1   | 1          | 0.070          | -6.50            | -90.35      | 0.02    | ENSMUSG00000026587 |
| Ptpn5   | 7          | 0.170          | -6.46            | -88.32      | 0.02    | ENSMUSG00000030854 |
| Prl2b1  | 13         | 0.620          | -6.42            | -85.57      | 0.01    | ENSMUSG00000069258 |
| Il12a   | 3          | 0.360          | -6.28            | -77.54      | 0.02    | ENSMUSG00000027776 |
| Fli3    | 5          | 0.810          | -6.20            | -73.38      | 0.00    | ENSMUSG00000042817 |
| Sprr1b  | 3          | 0.580          | -6.13            | -70.01      | 0.03    | ENSMUSG00000048455 |
| Prtn3   | 10         | 7.170          | -6.09            | -68.28      | 0.00    | ENSMUSG00000057729 |
| Rab3c   | 13         | 0.050          | -6.09            | -67.97      | 0.03    | ENSMUSG00000021700 |
| Apba2   | 7          | 0.110          | -5.85            | -57.80      | 0.03    | ENSMUSG00000030519 |
| Nhlh2   | 3          | 0.070          | -5.75            | -53.73      | 0.04    | ENSMUSG00000048540 |
| Gm32687 | 10         | 0.140          | -5.72            | -52.66      | 0.03    | ENSMUSG000000112640 |
| B3gat1  | 9          | 0.070          | -5.57            | -47.62      | 0.04    | ENSMUSG00000045994 |
| Dcc     | 18         | 0.110          | -5.51            | -45.45      | 0.00    | ENSMUSG00000060534 |
| Actl6b  | 5          | 0.160          | -5.38            | -41.51      | 0.05    | ENSMUSG00000029712 |
| Gm9833  | 3          | 0.140          | -5.34            | -40.44      | 0.05    | ENSMUSG00000049230 |
| Bex6    | 16         | 0.210          | -5.05            | -33.10      | 0.05    | ENSMUSG00000075269 |
| Trim67  | 8          | 0.080          | -4.83            | -28.36      | 0.01    | ENSMUSG00000036913 |
| Plppr3  | 10         | 1.030          | -4.81            | -28.09      | 0.00    | ENSMUSG00000035835 |
| Chl1    | 6          | 0.070          | -4.77            | -27.33      | 0.00    | ENSMUSG00000030077 |
| Stmn3   | 2          | 0.550          | -4.69            | -25.80      | 0.01    | ENSMUSG00000027581 |
| Gene       | Rank | Fold Change | Log2 Fold | Log2 p-value | Ensembl   |
|------------|------|-------------|-----------|-------------|-----------|
| Map2       | 1    | 0.340       | -4.68     | -25.67      | 0.00      |
| Lrrc4b     | 7    | 0.240       | -4.59     | -24.13      | 0.01      |
| Lhx1       | 11   | 0.160       | -4.47     | -22.20      | 0.02      |
| Gria2      | 3    | 0.050       | -4.41     | -21.30      | 0.01      |
| Fxyd2      | 9    | 1.820       | -4.35     | -20.43      | 0.00      |
| Atcay      | 10   | 0.130       | -4.33     | -20.11      | 0.02      |
| 44807      | 15   | 0.340       | -4.25     | -19.00      | 0.00      |
| Elavl3     | 9    | 0.220       | -4.07     | -16.76      | 0.00      |
| Myt1       | 2    | 0.120       | -3.99     | -15.84      | 0.02      |
| Shd        | 17   | 0.180       | -3.92     | -15.09      | 0.03      |
| Nfasc      | 1    | 0.080       | -3.88     | -14.67      | 0.01      |
| Stmn2      | 3    | 0.800       | -3.86     | -14.49      | 0.01      |
| Apc2       | 10   | 0.310       | -3.82     | -14.09      | 0.00      |
| Celf3      | 3    | 0.280       | -3.81     | -14.03      | 0.02      |
| Nefl       | 14   | 0.220       | -3.70     | -12.98      | 0.02      |
| Chrna4     | 2    | 0.180       | -3.61     | -12.20      | 0.01      |
| Gng3       | 19   | 0.170       | -3.55     | -11.70      | 0.05      |
| Zfp979     | 4    | 2.320       | -3.53     | -11.55      | 0.00      |
| St8sia1    | 6    | 0.090       | -3.50     | -11.30      | 0.01      |
| Psma8      | 18   | 0.990       | -3.41     | -10.60      | 0.00      |
| Mug1       | 6    | 0.090       | -3.38     | -10.40      | 0.02      |
| Exoc3l2    | 7    | 1.210       | -3.20     | -9.19       | 0.00      |
| Klk8       | 7    | 1.520       | -3.13     | -8.76       | 0.00      |
| St8sia4    | 1    | 0.210       | -3.12     | -8.72       | 0.00      |
| Nsg2       | 11   | 0.250       | -3.04     | -8.25       | 0.03      |
| Serpinb10  | 1    | 2.290       | -3.03     | -8.18       | 0.00      |
| Serpina3f  | 12   | 0.560       | -2.88     | -7.37       | 0.01      |
| Ccr9       | 9    | 0.090       | -2.80     | -6.95       | 0.03      |
| Gm49391    | 13   | 5.780       | -2.75     | -6.74       | 0.00      |
| Serpina3g  | 12   | 2.640       | -2.75     | -6.74       | 0.00      |
| Mpl        | 4    | 9.910       | -2.73     | -6.61       | 0.00      |
| Tmprss7    | 16   | 0.360       | -2.53     | -5.79       | 0.02      |
| Amd2       | 10   | 4.840       | -2.53     | -5.78       | 0.00      |
| gene_name | fold | t-test_p | log2fc | start | end   |
|-----------|------|----------|--------|-------|-------|
| Slc35d3  | 10   | -2.50    | -5.67  | 0.00  | ENSMUSG00000050473 |
| Crtam     | 9    | -2.48    | -5.58  | 0.01  | ENSMUSG00000032021 |
| Ripor2    | 13   | -2.40    | -5.28  | 0.00  | ENSMUSG00000036006 |
| Myct1     | 10   | -2.38    | -5.22  | 0.01  | ENSMUSG00000046916 |
| Traf3ip3  | 1    | -2.38    | -5.20  | 0.01  | ENSMUSG00000037318 |
| Fst       | 13   | -2.35    | -5.11  | 0.04  | ENSMUSG00000021765 |
| Slco4a1   | 2    | -2.34    | -5.06  | 0.04  | ENSMUSG00000038963 |
| Cdh17     | 4    | -2.34    | -5.06  | 0.04  | ENSMUSG00000028217 |
| Trpc6     | 9    | -2.33    | -5.03  | 0.01  | ENSMUSG00000031997 |
| Plcb1     | 2    | -2.28    | -4.86  | 0.03  | ENSMUSG00000051177 |
| Mef2c     | 13   | -2.25    | -4.77  | 0.00  | ENSMUSG0000005583  |
| Med12l    | 3    | -2.25    | -4.77  | 0.00  | ENSMUSG00000056476 |
| Robo3     | 9    | -2.24    | -4.72  | 0.00  | ENSMUSG00000032128 |
| F2rl3     | 8    | -2.22    | -4.66  | 0.00  | ENSMUSG00000050147 |
| Cth       | 3    | -2.21    | -4.64  | 0.01  | ENSMUSG00000028179 |
| Ptpn22    | 3    | -2.17    | -4.51  | 0.02  | ENSMUSG00000027843 |
| Gucy1a1   | 3    | -2.16    | -4.45  | 0.00  | ENSMUSG00000033910 |
| Arhgap15  | 2    | -2.15    | -4.43  | 0.01  | ENSMUSG00000049744 |
| Dnmt3b    | 2    | -2.14    | -4.42  | 0.00  | ENSMUSG00000027478 |
| Tmem163   | 1    | -2.14    | -4.42  | 0.02  | ENSMUSG00000026347 |
| Meis1     | 11   | -2.14    | -4.40  | 0.00  | ENSMUSG00000020160 |
| Ripor3    | 2    | -2.13    | -4.38  | 0.00  | ENSMUSG00000074577 |
| Plcg2     | 8    | -2.07    | -4.20  | 0.00  | ENSMUSG00000034330 |
| Dlg2      | 7    | -2.05    | -4.14  | 0.02  | ENSMUSG00000052572 |
| Slamf1    | 1    | -2.04    | -4.12  | 0.00  | ENSMUSG00000015316 |
| Cd69      | 6    | -2.03    | -4.08  | 0.04  | ENSMUSG00000030156 |
| Slh2      | 2    | -2.02    | -4.06  | 0.00  | ENSMUSG00000027636 |
| Cd226     | 18   | -2.01    | -4.02  | 0.01  | ENSMUSG00000034028 |
| Trem1l    | 17   | -2.00    | -4.01  | 0.00  | ENSMUSG00000023993 |
| Draxin    | 4    | -1.98    | -3.95  | 0.02  | ENSMUSG00000029005 |
| Gbx2      | 1    | -1.93    | -3.81  | 0.05  | ENSMUSG00000034486 |
| 44810     | X     | -1.92    | -3.79  | 0.00  | ENSMUSG00000050379 |
| Cmah      | 13   | -1.92    | -3.77  | 0.01  | ENSMUSG00000016756 |
| Gene   | Log2FoldChange | P.Value | q.Value | ENSMUSGID         |
|--------|----------------|---------|---------|------------------|
| Tnfsf14 | 4.510          | -1.90   | -3.72   | ENSMUSG0000005824 |
| Peg12   | 1.940          | -1.88   | -3.68   | ENSMUSG00000070526 |
| Rab37   | 2.180          | -1.87   | -3.66   | ENSMUSG00000020732 |
| Gp1bb   | 21.440         | -1.86   | -3.64   | ENSMUSG00000050761 |
| F5      | 3.720          | -1.86   | -3.63   | ENSMUSG00000026579 |
| Mrnr1   | 6.550          | -1.86   | -3.63   | ENSMUSG00000054641 |
| Capn3   | 0.720          | -1.83   | -3.55   | ENSMUSG00000079110 |
| Hhex    | 3.860          | -1.82   | -3.53   | ENSMUSG00000024986 |
| Gp5     | 22.080         | -1.80   | -3.49   | ENSMUSG00000047953 |
| Gmfg    | 5.900          | -1.80   | -3.48   | ENSMUSG00000060791 |
| Fli1    | 8.690          | -1.79   | -3.46   | ENSMUSG00000016087 |
| Prkca   | 4.140          | -1.76   | -3.38   | ENSMUSG00000050965 |
| Prodh   | 1.720          | -1.75   | -3.37   | ENSMUSG0000003526  |
| Fmn1l   | 4.810          | -1.74   | -3.34   | ENSMUSG00000055805 |
| Bahcc1  | 2.230          | -1.73   | -3.31   | ENSMUSG00000039741 |
| P2rx1   | 10.910         | -1.72   | -3.29   | ENSMUSG00000020787 |
| Rbpsms2 | 10.140         | -1.72   | -3.28   | ENSMUSG00000032387 |
| Serpinb2| 5.940          | -1.72   | -3.28   | ENSMUSG00000062345 |
| Prelid2 | 9.180          | -1.71   | -3.28   | ENSMUSG00000056671 |
| Slc22a3 | 1.070          | -1.71   | -3.28   | ENSMUSG00000023828 |
| Dctd    | 4.890          | -1.69   | -3.23   | ENSMUSG00000031562 |
| mt-Nd3  | MT             | 577.770 | -1.69   | -3.22   | ENSMUSG00000064360 |
| Ubash3a | 1.710          | -1.67   | -3.18   | ENSMUSG00000042345 |
| Mfng    | 3.120          | -1.66   | -3.16   | ENSMUSG00000018169 |
| Kena3   | 1.930          | -1.65   | -3.15   | ENSMUSG00000047959 |
| Ptprcap | 4.410          | -1.64   | -3.11   | ENSMUSG00000045826 |
| Itgb3   | 86.020         | -1.62   | -3.06   | ENSMUSG00000020689 |
| Slc24a5 | 3.850          | -1.61   | -3.06   | ENSMUSG00000035183 |
| Mtss1l  | 3.500          | -1.60   | -3.04   | ENSMUSG00000033763 |
| Cced116 | 2.420          | -1.60   | -3.04   | ENSMUSG00000022768 |
| Rasal3  | 3.530          | -1.60   | -3.04   | ENSMUSG00000052142 |
| Nlrlp6  | 2.240          | -1.60   | -3.02   | ENSMUSG00000038745 |
| Cced85c | 4.820          | -1.59   | -3.01   | ENSMUSG00000084883 |
| Gene   | Log2FC | Fold Change | p-value | Entrez Gene ID   |
|--------|--------|-------------|---------|-----------------|
| Gp1ba  | 14.750 | -1.57       | 0.00    | ENSMUSG00000050675 |
| Gp9    | 18.500 | -1.55       | 0.00    | ENSMUSG00000030054 |
| Clec1b | 10.450 | -1.54       | 0.01    | ENSMUSG00000030159 |
| Mrap   | 11.250 | -1.54       | 0.00    | ENSMUSG00000039956 |
| Dok2   | 11.510 | -1.52       | 0.00    | ENSMUSG00000022102 |
| Rasgrp2| 5.500  | -1.53       | 0.04    | ENSMUSG000000032946 |
| Gp6    | 1.510  | -1.52       | 0.04    | ENSMUSG000000078810 |
| Rpp40  | 1.480  | -1.52       | 0.04    | ENSMUSG000000021418 |
| Adgr3  | 3.100  | -1.46       | 0.02    | ENSMUSG00000060470 |
| Zfp991 | 9.090  | -1.45       | 0.04    | ENSMUSG00000067916 |
| Lrc32  | 2.910  | -1.50       | 0.01    | ENSMUSG00000090958 |
| Guyc1b | 3.300  | -1.46       | 0.02    | ENSMUSG00000028005 |
| Kcnk6  | 4.170  | -1.45       | 0.01    | ENSMUSG00000046410 |
| Rps6ka6| 5.290  | -1.44       | 0.01    | ENSMUSG00000025665 |
| Pde5a  | 3.340  | -1.44       | 0.01    | ENSMUSG00000053965 |
| Slk    | 9.930  | -1.43       | 0.00    | ENSMUSG00000022372 |
| Pppb   | 20.660 | -1.42       | 0.00    | ENSMUSG00000029372 |
| Ankrd13b| 4.780 | -1.42       | 0.01    | ENSMUSG00000037907 |
| Unc119 | 18.560 | -1.41       | 0.00    | ENSMUSG0000002058 |
| Tnik   | 1.630  | -1.41       | 0.01    | ENSMUSG00000027692 |
| Impa2  | 2.620  | -1.40       | 0.02    | ENSMUSG00000024525 |
| Stk26  | 1.910  | -1.40       | 0.05    | ENSMUSG00000031112 |
| Klhl6  | 7.440  | -1.38       | 0.01    | ENSMUSG00000043008 |
| Rnf219 | 1.980  | -1.38       | 0.05    | ENSMUSG00000022120 |
| Bmi1   | 6.930  | -1.37       | 0.01    | ENSMUSG00000026739 |
| Cdk6   | 7.360  | -1.36       | 0.00    | ENSMUSG00000040274 |
| Itgal  | 3.600  | -1.36       | 0.01    | ENSMUSG00000030830 |
| Agap2  | 1.990  | -1.35       | 0.02    | ENSMUSG00000025422 |
| Spns2  | 16.280 | -1.35       | 0.00    | ENSMUSG00000040447 |
| Sms    | 11.510 | -1.35       | 0.00    | ENSMUSG00000071708 |
| Lat    | 10.940 | -1.34       | 0.03    | ENSMUSG00000030742 |
| Ptger3 | 13.960 | -1.34       | 0.00    | ENSMUSG00000040016 |
| Mrvi1  | 9.920  | -1.32       | 0.00    | ENSMUSG0000005611 |
| Gene     | GeneID | Fold Change | Log2 Fold Change | p-value | Accession    |
|----------|--------|-------------|-----------------|---------|--------------|
| Smyd5    |        | 13.740      | -1.30           | -2.47   | ENSMUSG00000033706 |
| Ydjc     | 16     | 4.730       | -1.30           | -2.47   | ENSMUSG00000041774 |
| Lrmp     | 6      | 28.090      | -1.30           | -2.46   | ENSMUSG000000030263 |
| Slc25a13 | 6      | 6.950       | -1.27           | -2.41   | ENSMUSG000000015112 |
| Atp2a3   | 11     | 24.700      | -1.26           | -2.40   | ENSMUSG000000020788 |
| Shmt1    | 11     | 8.160       | -1.26           | -2.40   | ENSMUSG000000020534 |
| Kcnab2   | 4      | 4.560       | -1.26           | -2.39   | ENSMUSG000000028931 |
| Rasa3    | 8      | 14.330      | -1.24           | -2.35   | ENSMUSG000000031453 |
| Hmga1b   | 11     | 154.650     | -1.22           | -2.33   | ENSMUSG000000078249 |
| Lin28b   | 10     | 13.290      | -1.21           | -2.32   | ENSMUSG000000063804 |
| Thbs1    | 2      | 154.090     | -1.21           | -2.31   | ENSMUSG000000040152 |
| Pdk1     | 2      | 24.630      | -1.20           | -2.30   | ENSMUSG000000064949 |
| Alox12   | 11     | 16.560      | -1.20           | -2.29   | ENSMUSG00000000320 |
| Mylk     | 16     | 3.600       | -1.19           | -2.29   | ENSMUSG00000022836 |
| Suclg2   | 6      | 12.310      | -1.19           | -2.28   | ENSMUSG00000061838 |
| Rrp15    | 1      | 25.070      | -1.19           | -2.28   | ENSMUSG00000001305 |
| F2rl2    | 13     | 7.810       | -1.18           | -2.27   | ENSMUSG00000021675 |
| Eno1     | 4      | 178.420     | -1.17           | -2.25   | ENSMUSG00000063524 |
| Riox1    | 12     | 11.030      | -1.16           | -2.24   | ENSMUSG000000046791 |
| Bzw2     | 12     | 29.370      | -1.15           | -2.22   | ENSMUSG00000020547 |
| Psd4     | 2      | 3.580       | -1.15           | -2.22   | ENSMUSG00000026979 |
| Zip992   | 4      | 4.730       | -1.15           | -2.22   | ENSMUSG00000070605 |
| Cdc47    | 2      | 25.420      | -1.13           | -2.19   | ENSMUSG00000055612 |
| Anp32a   | 9      | 34.980      | -1.13           | -2.18   | ENSMUSG000000032249 |
| Fastkd2  | 1      | 6.530       | -1.13           | -2.18   | ENSMUSG00000025962 |
| Igf2bp1  | 11     | 10.530      | -1.11           | -2.16   | ENSMUSG00000013415 |
| Gphn     | 12     | 7.320       | -1.11           | -2.16   | ENSMUSG00000047454 |
| Polr3g   | 13     | 6.840       | -1.11           | -2.16   | ENSMUSG00000035834 |
| Phgdh    | 3      | 75.230      | -1.10           | -2.14   | ENSMUSG00000053398 |
| Slc38a1l | 15     | 12.310      | -1.10           | -2.14   | ENSMUSG00000023169 |
| Trmt6    | 2      | 14.050      | -1.10           | -2.14   | ENSMUSG00000037376 |
| Cdc47l   | 12     | 6.430       | -1.10           | -2.14   | ENSMUSG00000021175 |
| Tpi1     | 6      | 212.280     | -1.09           | -2.12   | ENSMUSG00000023456 |
|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| Chd7 | 4   | 14.770 | -1.07 | -2.10 | 0.00 |
| Vwf  | 6   | 13.250 | -1.07 | -2.10 | 0.00 |
| Chst11 | 10 | 6.610  | -1.06 | -2.08 | 0.01 |
| Enoph1 | 5  | 10.040 | -1.06 | -2.08 | 0.04 |
| Bin2 | 15  | 37.920 | -1.04 | -2.06 | 0.00 |
| Map4k1 | 7   | 5.730  | -1.04 | -2.06 | 0.04 |
| Bend3 | 10  | 4.300  | -1.03 | -2.05 | 0.03 |
| Ppif | 14  | 47.020 | -1.03 | -2.04 | 0.00 |
| Trmt61a | 12 | 8.790  | -1.03 | -2.04 | 0.04 |
| Elf1 | 14  | 20.450 | -1.00 | -2.00 | 0.00 |
Supplemental Table 5. Downregulated genes in Dot1L-KO ESRE cells in common with Dot1L-MM cells (n=205)
**Supplemental Table 6. Upregulated genes in *Dot1L* KO ESRE cells that are unique to these mutant cells (n=635)**

| Gene Name | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL |
|-----------|------------|----------------|------------------|-------------|---------|---------|
| Clk4      | 13         | 61.020         | 2.17             | 4.50        | 0.00    | ENSMUSG00000060639 |
| Bel2l11   | 18         | 4.720          | 2.17             | 4.50        | 0.00    | ENSMUSG00000024544 |
| Isca1     | 4          | 28.940         | 2.17             | 4.51        | 0.00    | ENSMUSG00000028211 |
| Dohh      | 17         | 10.260         | 2.17             | 4.51        | 0.00    | ENSMUSG00000024042 |
| Snca      | 15         | 35.750         | 2.17             | 4.51        | 0.00    | ENSMUSG00000022598 |
| Traf5     | 15         | 134.060        | 2.18             | 4.53        | 0.00    | ENSMUSG000000071714 |
| Eci2      | 2          | 1.350          | 2.18             | 4.53        | 0.00    | ENSMUSG00000044033 |
| Por       | 10         | 3.890          | 2.18             | 4.53        | 0.02    | ENSMUSG00000026211 |
| Hscb      | 9          | 2.680          | 2.18             | 4.53        | 0.04    | ENSMUSG00000003309 |
| Atg9a     | 6          | 6.720          | 2.18             | 4.54        | 0.00    | ENSMUSG00000030287 |
| Crtc1     | 10         | 3.220          | 2.18             | 4.54        | 0.01    | ENSMUSG00000078439 |
| Nipal3    | 2          | 17.900         | 2.19             | 4.55        | 0.00    | ENSMUSG00000015647 |
| Ypel5     | 8          | 1.240          | 2.19             | 4.56        | 0.01    | ENSMUSG00000031778 |
| Vamp2     | 5          | 0.410          | 2.19             | 4.56        | 0.02    | ENSMUSG00000060961 |
| Nbr1      | 9          | 13.890         | 2.19             | 4.57        | 0.00    | ENSMUSG00000032323 |
| Derl1     | 17         | 0.740          | 2.19             | 4.57        | 0.00    | ENSMUSG00000038146 |
| Dhx32     | 11         | 104.300        | 2.20             | 4.58        | 0.00    | ENSMUSG00000016526 |
| Supt4a    | 2          | 5.850          | 2.19             | 4.58        | 0.00    | ENSMUSG00000027175 |
| Gfap      | 14         | 4.090          | 2.20             | 4.58        | 0.00    | ENSMUSG00000021822 |
| Ctsa      | 16         | 3.270          | 2.20             | 4.58        | 0.02    | ENSMUSG00000051065 |
| Sidt2     | 4          | 3.520          | 2.20             | 4.58        | 0.03    | ENSMUSG00000044254 |
| Slc1a4    | 10         | 0.410          | 2.20             | 4.59        | 0.02    | ENSMUSG0000009654  |
| Fzr1      | 4          | 8.120          | 2.20             | 4.60        | 0.00    | ENSMUSG00000028412 |
| Syt14     | 3          | 4.310          | 2.20             | 4.61        | 0.00    | ENSMUSG00000027875 |
| Phf1      | X          | 15.500         | 2.20             | 4.61        | 0.00    | ENSMUSG00000031434 |
| Stradlb   | X          | 42.560         | 2.21             | 4.61        | 0.01    | ENSMUSG00000052854 |
| Ogt       | 19         | 0.580          | 2.21             | 4.62        | 0.03    | ENSMUSG00000061451 |
| Tmem86b   | 11         | 4.030          | 2.21             | 4.62        | 0.03    | ENSMUSG00000034427 |
| Vps37b    | 11         | 0.090          | 2.21             | 4.62        | 0.05    | ENSMUSG00000020542 |
| Ticam1    | 2          | 10.380         | 2.21             | 4.63        | 0.01    | ENSMUSG00000018459 |
| Gene  | ID | Observed Count | Log2FoldChange | Log2NTP | ENSMUSG | 
|-------|----|----------------|----------------|---------|---------|
| Mafg  | 2  | 0.990          | 2.21           | 4.64    | 0.04    |
| Atg2a | 19 | 15.060         | 2.22           | 4.65    | 0.00    |
| Itpke | 9  | 39.770         | 2.22           | 4.66    | 0.02    |
| Grap2 | 13 | 0.450          | 2.22           | 4.66    | 0.02    |
| Cln8  | 11 | 5.320          | 2.22           | 4.67    | 0.00    |
| Ern1  | 16 | 0.480          | 2.23           | 4.68    | 0.01    |
| Zbtb7b| 10 | 0.120          | 2.23           | 4.68    | 0.04    |
| Dop1b | 3  | 1.240          | 2.23           | 4.69    | 0.01    |
| 44623 | 17 | 0.660          | 2.23           | 4.69    | 0.02    |
| Cdk12 | 1  | 22.700         | 2.23           | 4.70    | 0.00    |
| Smdt1 | 2  | 0.970          | 2.23           | 4.70    | 0.01    |
| Tubb2a| 3  | 2.540          | 2.23           | 4.70    | 0.02    |
| Hectd4| 14 | 1.490          | 2.24           | 4.72    | 0.00    |
| Stx5a | 2  | 0.620          | 2.24           | 4.72    | 0.02    |
| Lsm10 | 5  | 3.810          | 2.24           | 4.72    | 0.02    |
| Ube2l6| 4  | 0.480          | 2.24           | 4.72    | 0.03    |
| Bet1l | 9  | 1.240          | 2.24           | 4.73    | 0.01    |
| Serpinb6a| 1 | 6.930 | 2.24 | 4.74 | 0.00 |
| Osbp19| 15 | 0.290          | 2.25           | 4.75    | 0.03    |
| Abhd2 | 14 | 0.430          | 2.25           | 4.76    | 0.01    |
| Bag3  | 14 | 1.350          | 2.25           | 4.76    | 0.03    |
| Fam126a| 11| 552.190        | 2.25           | 4.77    | 0.00    |
| Creb3l1| 4 | 0.190          | 2.25           | 4.77    | 0.02    |
| Pde3b | 13 | 1.540          | 2.25           | 4.77    | 0.04    |
| Carhsp1| 7 | 5.500          | 2.26           | 4.78    | 0.00    |
| Klf11 | 4  | 5.620          | 2.26           | 4.78    | 0.01    |
| Tbc1d17 | 5 | 1.020          | 2.26           | 4.78    | 0.04    |
| Rnf169| 13 | 2.670          | 2.26           | 4.78    | 0.05    |
| Auh   | 1  | 4.950          | 2.26           | 4.79    | 0.02    |
| Crebl2| 11 | 2.260          | 2.26           | 4.79    | 0.03    |
| Litaf | 13 | 7.720          | 2.26           | 4.80    | 0.00    |
| Dusp16| 1  | 3.710          | 2.26           | 4.80    | 0.00    |
| Ccpg1 | 5  | 0.330          | 2.27           | 4.81    | 0.05    |
| gene     | cat. | expression | log2 fold | p-value | gene_symbol  |
|----------|------|------------|-----------|---------|-------------|
| Cd82     | 10   | 7.830      | 2.27      | 4.82    | 0.00        |
| Nrip3    | 1    | 15.210     | 2.27      | 4.82    | 0.00        |
| Padi2    | 14   | 5.320      | 2.27      | 4.82    | 0.00        |
| Atf5     | 8    | 1.460      | 2.27      | 4.82    | 0.01        |
| Crim1    | 3    | 0.250      | 2.27      | 4.83    | 0.05        |
| 1110032A03Rik | 11 | 6.580      | 2.28      | 4.85    | 0.01        |
| Snx29    | 17   | 7.110      | 2.28      | 4.85    | 0.01        |
| Dnajb2   | 7    | 6.480      | 2.28      | 4.86    | 0.00        |
| Akt1s1   | 7    | 1.200      | 2.28      | 4.86    | 0.01        |
| Riok3    | 14   | 6.020      | 2.28      | 4.86    | 0.01        |
| Plgrkt   | 4    | 1.810      | 2.28      | 4.86    | 0.03        |
| Retreg2  | 4    | 2.580      | 2.28      | 4.86    | 0.03        |
| Agpat4   | 11   | 2.520      | 2.28      | 4.86    | 0.04        |
| Gm340    | 7    | 256.680    | 2.28      | 4.87    | 0.00        |
| Foxo4    | 7    | 2.090      | 2.28      | 4.87    | 0.01        |
| Zfand3   | 1    | 75.270     | 2.28      | 4.87    | 0.03        |
| Ube2f    | 9    | 119.700    | 2.29      | 4.89    | 0.00        |
| Acbd4    | 14   | 1.140      | 2.29      | 4.90    | 0.02        |
| Pabpc1   | 16   | 4.310      | 2.30      | 4.91    | 0.00        |
| Erfe     | 18   | 14.950     | 2.30      | 4.92    | 0.00        |
| Ndrg1    | X    | 9.610      | 2.30      | 4.92    | 0.00        |
| Cnppd1   | 1    | 1.590      | 2.30      | 4.92    | 0.05        |
| Usp3     | 1    | 8.470      | 2.31      | 4.95    | 0.00        |
| Bnip3    | 11   | 0.490      | 2.31      | 4.95    | 0.00        |
| Iscu     | 7    | 6.160      | 2.31      | 4.95    | 0.00        |
| Sft2d2   | 2    | 2.000      | 2.31      | 4.95    | 0.03        |
| Cd63     | 13   | 0.230      | 2.31      | 4.95    | 0.05        |
| Gla      | 2    | 0.110      | 2.31      | 4.97    | 0.03        |
| Pi4k2a   | 10   | 0.500      | 2.32      | 4.99    | 0.02        |
| Ier2     | 9    | 0.680      | 2.32      | 4.99    | 0.03        |
| Pigc     | 19   | 5.180      | 2.32      | 4.99    | 0.03        |
| Dmxl2    | 3    | 4.040      | 2.32      | 5.00    | 0.00        |
| Etfbkmt  | 12   | 224.690    | 2.32      | 5.01    | 0.00        |
| Gene | Exp | Freq | **AHC** | **Pval** | ENSMUSG00000020363 |
|------|-----|------|---------|---------|-------------------|
| Zfp691 | 11 | 3.010 | 2.32    | 5.01    | 0.00              |
| Hdac6  | 16 | 1.190 | 2.32    | 5.01    | 0.00              |
| Chad3  | 14 | 1.370 | 2.33    | 5.01    | 0.00              |
| Praf2  | 3  | 3.920 | 2.32    | 5.01    | 0.01              |
| Zfp58  | 11 | 6.090 | 2.32    | 5.01    | 0.02              |
| Tmem189 | 19 | 10.920 | 2.33   | 5.02    | 0.00              |
| Spag9  | 18 | 212.970 | 2.33    | 5.02    | 0.02              |
| Plin3  | 12 | 0.350 | 2.33    | 5.04    | 0.05              |
| Hbq1b  | 12 | 2.100 | 2.34    | 5.05    | 0.00              |
| Akap13 | 7  | 1.590 | 2.34    | 5.07    | 0.00              |
| Gvin1  | 7  | 1.200 | 2.34    | 5.07    | 0.03              |
| Shisa5 | 3  | 0.860 | 2.34    | 5.08    | 0.05              |
| Arrdc3 | 1  | 0.690 | 2.35    | 5.09    | 0.04              |
| Map1lc3b | 7 | 0.840 | 2.35    | 5.10    | 0.00              |
| Slc25a36 | 10 | 1.770 | 2.35    | 5.11    | 0.01              |
| Dclrc1b | 7  | 1.900 | 2.35    | 5.11    | 0.02              |
| Tnip1  | 16 | 7.270 | 2.36    | 5.12    | 0.02              |
| Fgfrl1 | 10 | 12.040 | 2.36    | 5.13    | 0.02              |
| Bbx    | 15 | 0.140 | 2.36    | 5.14    | 0.05              |
| Mtmr3  | 9  | 1.650 | 2.36    | 5.15    | 0.00              |
| Bax    | X  | 0.900 | 2.36    | 5.15    | 0.01              |
| Ppp1r13b | 3 | 1.230 | 2.36    | 5.15    | 0.01              |
| Ccndbp1 | 2  | 0.770 | 2.37    | 5.16    | 0.04              |
| Borcs6 | 5  | 0.060 | 2.37    | 5.16    | 0.05              |
| SICl25a39 | 9 | 2.820 | 2.37    | 5.17    | 0.01              |
| B3gnt3 | 19 | 2.950 | 2.37    | 5.17    | 0.01              |
| Cox6b2 | 14 | 5.200 | 2.37    | 5.18    | 0.00              |
| Cdc42bp1 | X | 0.910 | 2.38    | 5.20    | 0.01              |
| Zfp36l1 | 2  | 0.450 | 2.38    | 5.20    | 0.02              |
| Fez2   | 11 | 1.010 | 2.38    | 5.21    | 0.05              |
| Bhlhe40 | 11 | 25.560 | 2.38    | 5.22    | 0.00              |
| Ubald1 | 8  | 0.030 | 2.39    | 5.23    | 0.04              |
| Enc1   | 7  | 218.740 | 2.39    | 5.26    | 0.00              |
| Gene   | Log2FoldChange | p-Value | ENSMUSGID         |
|--------|---------------|---------|------------------|
| Fos    | 15            | 0.920   | ENSMUSG0000000530|
| H2-K1  | 13            | 72.060  | ENSMUSG0000018102|
| Neu1   | 6             | 3.550   | ENSMUSG0000019577|
| Tmc4   | 2             | 4.600   | ENSMUSG0000039157|
| Siah1a | 2             | 3.140   | ENSMUSG0000017754|
| Cd9    | 8             | 0.660   | ENSMUSG0000032349|
| Chst1  | 19            | 3.440   | ENSMUSG0000041180|
| Zmat3  | 4             | 1.020   | ENSMUSG0000078486|
| Samd8  | 3             | 20.880  | ENSMUSG0000058952|
| Proser2| 17            | 0.370   | ENSMUSG0000024041|
| AI837181| 5             | 38.810  | ENSMUSG0000029201|
| Trpv2  | 7             | 0.630   | ENSMUSG0000054662|
| St7    | 17            | 2.570   | ENSMUSG0000059481|
| Cpa3   | 13            | 13.150  | ENSMUSG0000034918|
| Sfi1   | 11            | 0.130   | ENSMUSG0000020411|
| Hspa13 | 4             | 0.210   | ENSMUSG0000095779|
| Egr1   | 14            | 0.150   | ENSMUSG0000071531|
| Nedd4l | 3             | 1.560   | ENSMUSG0000027931|
| Me1    | X             | 8.790   | ENSMUSG0000034457|
| Dvl2   | 19            | 0.280   | ENSMUSG0000067545|
| Atp8a2 | 6             | 0.110   | ENSMUSG0000052861|
| Tert   | X             | 0.940   | ENSMUSG0000067771|
| Gadd45g| 17            | 3.320   | ENSMUSG0000063011|
| Oaz1   | 10            | 0.130   | ENSMUSG0000053219|
| Dyrk1b | 6             | 0.390   | ENSMUSG0000030134|
| Slco2a1| 14            | 0.190   | ENSMUSG0000021997|
| Hook2  | 16            | 1.220   | ENSMUSG0000005958|
| Vegfa  | 7             | 58.650  | ENSMUSG0000002992|
| Cltn5  | 16            | 25.250  | ENSMUSG0000022875|
| P2rx4  | 5             | 0.170   | ENSMUSG0000029659|
| Itgav  | 13            | 7.550   | ENSMUSG0000069206|
| Agpat3 | 6             | 2.800   | ENSMUSG0000038167|
| Cts1   | 2             | 0.310   | ENSMUSG0000046338|
| Gene   | Entry | log2FC | t-test | p-value | EnsemblID       |
|--------|-------|--------|--------|---------|-----------------|
| Naga   | 17    | 0.170  | 2.46   | 5.51    | 0.03 ENSMUSG00000061126 |
| Scpep1 | 6     | 6.260  | 2.47   | 5.52    | 0.00 ENSMUSG00000007655 |
| Cd81   | 9     | 2.680  | 2.47   | 5.53    | 0.00 ENSMUSG000000036611 |
| Afdn   | 10    | 0.240  | 2.47   | 5.54    | 0.01 ENSMUSG00000037855 |
| Creg1  | 13    | 6.690  | 2.47   | 5.55    | 0.00 ENSMUSG00000058385 |
| Atg9b  | 4     | 0.700  | 2.47   | 5.55    | 0.00 ENSMUSG00000012123 |
| Slc7a8 | 11    | 0.850  | 2.48   | 5.58    | 0.00 ENSMUSG00000027869 |
| Cd81   | 9     | 2.680  | 2.47   | 5.53    | 0.00 ENSMUSG00000037855 |
| Afdn   | 10    | 0.240  | 2.47   | 5.54    | 0.01 ENSMUSG00000037855 |
| Creg1  | 13    | 6.690  | 2.47   | 5.55    | 0.00 ENSMUSG00000058385 |
| Atg9b  | 4     | 0.700  | 2.47   | 5.55    | 0.00 ENSMUSG00000012123 |
| Epb41  | 11    | 0.250  | 2.48   | 5.57    | 0.02 ENSMUSG00000038560 |
| Neurl3 | 3     | 51.600 | 2.48   | 5.58    | 0.00 ENSMUSG00000027869 |
| Gabarap| 12    | 2.970  | 2.48   | 5.58    | 0.02 ENSMUSG00000066438 |
| Scpep1 | 6     | 6.260  | 2.47   | 5.52    | 0.00 ENSMUSG00000007655 |
| Cd81   | 9     | 2.680  | 2.47   | 5.53    | 0.00 ENSMUSG000000036611 |
| Afdn   | 10    | 0.240  | 2.47   | 5.54    | 0.01 ENSMUSG00000037855 |
| Creg1  | 13    | 6.690  | 2.47   | 5.55    | 0.00 ENSMUSG00000058385 |
| Atg9b  | 4     | 0.700  | 2.47   | 5.55    | 0.00 ENSMUSG00000012123 |
| Slc7a8 | 11    | 0.850  | 2.48   | 5.58    | 0.00 ENSMUSG00000027869 |
| Cebpb  | 2     | 11.160 | 2.48   | 5.59    | 0.00 ENSMUSG00000006476 |
| Itpk1  | 17    | 0.750  | 2.49   | 5.60    | 0.04 ENSMUSG00000037446 |
| Neurl3 | 3     | 51.600 | 2.48   | 5.58    | 0.00 ENSMUSG00000027869 |
| Gabarap| 12    | 2.970  | 2.48   | 5.58    | 0.02 ENSMUSG00000066438 |
| Slc7a8 | 11    | 0.850  | 2.48   | 5.58    | 0.00 ENSMUSG00000027869 |
| Nectin2| 17    | 367.920| 2.48   | 5.59    | 0.00 ENSMUSG00000027869 |
| Cebpb  | 2     | 11.160 | 2.48   | 5.59    | 0.00 ENSMUSG00000027869 |
| Itpk1  | 17    | 0.750  | 2.49   | 5.60    | 0.04 ENSMUSG00000037446 |
| Rel    | 9     | 3.600  | 2.49   | 5.61    | 0.00 ENSMUSG00000032332 |
| Rab11fip3| 2    | 0.560  | 2.49   | 5.61    | 0.00 ENSMUSG00000027276 |
| Fth1   | 19    | 0.430  | 2.50   | 5.65    | 0.01 ENSMUSG00000024901 |
| Ppp2r5a| 1     | 0.140  | 2.50   | 5.65    | 0.04 ENSMUSG000000091476 |
| Susd6  | 7     | 15.390 | 2.50   | 5.66    | 0.01 ENSMUSG00000030739 |
| Susd6  | 7     | 15.390 | 2.50   | 5.66    | 0.01 ENSMUSG00000030739 |
| Oserl1 | 12    | 20.340 | 2.50   | 5.67    | 0.02 ENSMUSG00000021278 |
| Hba-a1 | 11    | 0.340  | 2.51   | 5.69    | 0.03 ENSMUSG0000000782 |
| Mapk1ip1| 8    | 147.120| 2.51   | 5.70    | 0.00 ENSMUSG000000052837 |
| Aqp8   | 5     | 62.210 | 2.51   | 5.70    | 0.00 ENSMUSG000000052837 |
| Phf21b | 4     | 0.240  | 2.51   | 5.70    | 0.02 ENSMUSG000000073680 |
| Notch1 | 1     | 0.170  | 2.51   | 5.71    | 0.02 ENSMUSG000000040612 |
| 1700030J22Rik| 9 | 0.280  | 2.51   | 5.71    | 0.05 ENSMUSG00000074259 |
| Pik3ip1| 5     | 5.460  | 2.53   | 5.77    | 0.03 ENSMUSG00000038582 |
| Gm37240| 1     | 181.970| 2.53   | 5.79    | 0.00 ENSMUSG000000118332 |
| Pkp3   | 19    | 2.180  | 2.52   | 5.72    | 0.01 ENSMUSG00000038155 |
| Ppp1r13l| 9    | 5.460  | 2.53   | 5.77    | 0.03 ENSMUSG00000038582 |
| Gsn    | 2     | 0.200  | 2.52   | 5.75    | 0.05 ENSMUSG00000033368 |
| Rbpms  | 3     | 0.470  | 2.53   | 5.77    | 0.03 ENSMUSG00000033882 |
| Pik3ip1| 10    | 5.460  | 2.53   | 5.77    | 0.03 ENSMUSG00000038582 |
| Gm37240| 5     | 181.970| 2.53   | 5.79    | 0.00 ENSMUSG000000118332 |
| St14   | 7     | 0.830  | 2.53   | 5.79    | 0.00 ENSMUSG00000052353 |
| Sfmbt2 | 6     | 0.160  | 2.53   | 5.79    | 0.05 ENSMUSG00000030222 |
| Gene      | Count | Value1 | Value2 | Value3 | Value4 | Gene ID       |
|-----------|-------|--------|--------|--------|--------|---------------|
| Tmcc3     | 2     | 1.120  | 2.54   | 5.80   | 0.01   | ENSMUSG00000027253 |
| Rnf157    | 2     | 1.010  | 2.54   | 5.81   | 0.02   | ENSMUSG00000044349 |
| Ccde92    | 1     | 2.040  | 2.54   | 5.82   | 0.00   | ENSMUSG00000000817 |
| Mras      | 12    | 0.890  | 2.54   | 5.82   | 0.01   | ENSMUSG00000036523 |
| Arhgef6   | 7     | 0.410  | 2.54   | 5.82   | 0.02   | ENSMUSG00000025480 |
| 2900026A02Rik | 1 | 6.120  | 2.54   | 5.83   | 0.02   | ENSMUSG000000048126 |
| Gpt2      | 11    | 1.120  | 2.54   | 5.83   | 0.02   | ENSMUSG00000034227 |
| Ralgds    | 13    | 3.320  | 2.55   | 5.84   | 0.00   | ENSMUSG000000099583 |
| H2-T23    | 12    | 0.620  | 2.55   | 5.85   | 0.01   | ENSMUSG00000058070 |
| Limk1     | 8     | 0.860  | 2.55   | 5.85   | 0.04   | ENSMUSG00000033579 |
| Fah       | 17    | 2.800  | 2.55   | 5.86   | 0.05   | ENSMUSG00000024225 |
| Appl2     | 6     | 0.980  | 2.55   | 5.87   | 0.00   | ENSMUSG000000030256 |
| Pdlim2    | 12    | 44.310 | 2.55   | 5.87   | 0.01   | ENSMUSG00000020609 |
| C77080    | 3     | 8.710  | 2.55   | 5.87   | 0.02   | ENSMUSG000000027954 |
| Mfge8     | 9     | 0.670  | 2.55   | 5.87   | 0.03   | ENSMUSG000000032079 |
| Stx3      | X     | 1.660  | 2.56   | 5.89   | 0.00   | ENSMUSG000000045010 |
| Tnk1      | 16    | 1.370  | 2.56   | 5.90   | 0.02   | ENSMUSG00000022868 |
| Rap2b     | 6     | 17.820 | 2.57   | 5.93   | 0.00   | ENSMUSG000000057137 |
| Tbc1d2    | 10    | 2.980  | 2.57   | 5.94   | 0.00   | ENSMUSG00000025400 |
| Cd274     | 2     | 12.260 | 2.58   | 5.96   | 0.01   | ENSMUSG00000026726 |
| Gpx3      | 15    | 0.110  | 2.58   | 5.98   | 0.05   | ENSMUSG000000022383 |
| Bcar1     | 3     | 11.170 | 2.58   | 5.99   | 0.02   | ENSMUSG000000040600 |
| Ftl1      | 18    | 0.210  | 2.58   | 5.99   | 0.04   | ENSMUSG00000002475 |
| Dlk1      | 7     | 34.930 | 2.58   | 6.00   | 0.01   | ENSMUSG000000040564 |
| Fam83h    | 11    | 0.080  | 2.59   | 6.00   | 0.04   | ENSMUSG00000020728 |
| Plekha6   | 4     | 2.760  | 2.59   | 6.01   | 0.01   | ENSMUSG00000006221 |
| Dsp       | 13    | 6.020  | 2.59   | 6.03   | 0.01   | ENSMUSG000000069306 |
| Glt28d2   | 9     | 1.480  | 2.59   | 6.04   | 0.00   | ENSMUSG000000037705 |
| Maob      | 1     | 0.290  | 2.59   | 6.04   | 0.01   | ENSMUSG000000044816 |
| B430305J03Rik | 5 | 3.990  | 2.60   | 6.05   | 0.00   | ENSMUSG000000029166 |
| Patj      | 13    | 0.540  | 2.60   | 6.08   | 0.01   | ENSMUSG00000021362 |
| Usp44     | 7     | 4.060  | 2.60   | 6.08   | 0.01   | ENSMUSG00000001249 |
| Rbp4      | 11    | 0.260  | 2.61   | 6.10   | 0.03   | ENSMUSG00000020335 |
| Gene    | LogFC | P.Value | Gene_log2FC | FDR | Gene_id  |
|---------|-------|---------|-------------|-----|----------|
| Dab2    | 0.490 | 0.040   | 2.61        | 6.10| ENSMUSG00000024992 |
| Mageb16 | 0.040 | 0.119   | 2.61        | 6.10| ENSMUSG00000025196 |
| Rab11fip4| 2.800 | 0.040   | 2.61        | 6.10| ENSMUSG00000034220 |
| Eps8l2  | 4.160 | 0.040   | 2.62        | 6.10| ENSMUSG000000025196 |
| Rbp1    | 0.840 | 0.040   | 2.62        | 6.10| ENSMUSG000000026715 |
| Plxnb2  | 2.800 | 0.040   | 2.61        | 6.10| ENSMUSG00000039518 |
| Apobr   | 0.680 | 0.040   | 2.63        | 6.10| ENSMUSG00000021091 |
| Icam1   | 0.270 | 0.040   | 2.63        | 6.10| ENSMUSG00000032357 |
| Nm4     | 6.250 | 0.040   | 2.63        | 6.10| ENSMUSG00000010529 |
| Rhpn2   | 0.110 | 0.040   | 2.64        | 6.10| ENSMUSG00000027985 |
| Pde8a   | 1.620 | 0.040   | 2.64        | 6.10| ENSMUSG00000046070 |
| Rhou    | 55.690| 0.040   | 2.65        | 6.10| ENSMUSG00000039236 |
| Shroom3 | 2.650 | 0.040   | 2.65        | 6.10| ENSMUSG00000021751 |
| Mdm2    | 17    | 0.170   | 2.65        | 6.10| ENSMUSG00000049723 |
| F3      | 0.040 | 0.119   | 2.65        | 6.10| ENSMUSG00000026131 |
| Trim47  | 5.990 | 0.040   | 2.66        | 6.10| ENSMUSG00000029135 |
| Apcdd1  | 56.380| 0.040   | 2.66        | 6.10| ENSMUSG00000063954 |
| Phlda3  | 0.190 | 0.040   | 2.67        | 6.10| ENSMUSG00000059994 |
| Susd2   | 0.700 | 0.040   | 2.68        | 6.10| ENSMUSG0000002190 |
| Tmem144 | 2.650 | 0.040   | 2.68        | 6.10| ENSMUSG00000027070 |
| Creb3l3 | 5.180 | 0.040   | 2.68        | 6.10| ENSMUSG00000021678 |
| Chmp4c  | 0.420 | 0.040   | 2.67        | 6.10| ENSMUSG00000090693 |
| Krt19   | 3.980 | 0.040   | 2.68        | 6.10| ENSMUSG00000037254 |
| Tpsab1  | 0.270 | 0.040   | 2.68        | 6.10| ENSMUSG00000067279 |
| Gpcre5a | 0.680 | 0.040   | 2.69        | 6.10| ENSMUSG00000038463 |
| Nyap1   | 0.260 | 0.040   | 2.69        | 6.10| ENSMUSG00000021579 |
| Espn    | 32.450| 0.040   | 2.69        | 6.10| ENSMUSG00000078349 |
| Clic6   | 0.620 | 0.040   | 2.69        | 6.10| ENSMUSG00000040488 |
| Gm49496 | 0.190 | 0.119   | 2.69        | 6.10| ENSMUSG00000031202 |
| Pdxd2   | 0.990 | 0.040   | 2.69        | 6.10| ENSMUSG00000039457 |
| Depdc7  | 58.770| 0.040   | 2.69        | 6.10| ENSMUSG00000028001 |
| Hist1h2bk| 0.180 | 0.040   | 2.70        | 6.10| ENSMUSG00000036218 |
| Prrg4   | 15    | 0.180   | 2.70        | 6.52| ENSMUSG00000021701 |
| Gene     | Symbol | Gene Symbol | Transcript | Value1 | Value2 | Value3 | Value4 | Value5 | Value6 | Value7 | Value8 | Value9 | Value10 |
|----------|--------|-------------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 44629    | Tmem150a | 18          | 1.530      | 2.71   | 6.54   | 0.01   | ENSMUSG00000002771 |
| Psrc1    | 4      | 16.180      | 2.71       | 6.56   | 0.00   | ENSMUSG000000046727 |
| Baiap211 | 4      | 0.160       | 2.71       | 6.56   | 0.04   | ENSMUSG000000066196 |
| Spsb2    | 11     | 37.020      | 2.72       | 6.59   | 0.00   | ENSMUSG000000078851 |
| Gm8797   | 11     | 66.670      | 2.72       | 6.59   | 0.00   | ENSMUSG00000006575 |
| Amot     | 11     | 0.570       | 2.72       | 6.59   | 0.01   | ENSMUSG000000043419 |
| Unc5b    | 16     | 0.060       | 2.72       | 6.60   | 0.05   | ENSMUSG000000052316 |
| Zbtb32   | 1      | 3.190       | 2.73       | 6.61   | 0.00   | ENSMUSG000000026208 |
| Kcnn1    | 15     | 9.950       | 2.73       | 6.63   | 0.00   | ENSMUSG000000091694 |
| Eps8     | 15     | 0.080       | 2.73       | 6.63   | 0.04   | ENSMUSG000000050982 |
| Gpr137c  | 11     | 0.220       | 2.73       | 6.63   | 0.05   | ENSMUSG000000018919 |
| Manba    | 11     | 0.380       | 2.73       | 6.64   | 0.02   | ENSMUSG000000020810 |
| Cdh1     | 12     | 0.790       | 2.74       | 6.68   | 0.01   | ENSMUSG000000021253 |
| Cldn7    | 7      | 2.100       | 2.74       | 6.68   | 0.01   | ENSMUSG000000053175 |
| Sema4a   | 13     | 2.630       | 2.74       | 6.69   | 0.01   | ENSMUSG000000075031 |
| Cds1     | 9      | 828.610     | 2.74       | 6.70   | 0.01   | ENSMUSG000000032554 |
| Crb3     | 5      | 2.220       | 2.74       | 6.70   | 0.01   | ENSMUSG000000029370 |
| Pxnbl1   | 13     | 5.160       | 2.75       | 6.71   | 0.00   | ENSMUSG000000069300 |
| Gm10643  | 17     | 2.150       | 2.75       | 6.72   | 0.00   | ENSMUSG000000043592 |
| Pxdc1    | 16     | 1.020       | 2.75       | 6.75   | 0.00   | ENSMUSG000000068196 |
| Epb4114b | 15     | 0.200       | 2.76       | 6.76   | 0.03   | ENSMUSG000000022455 |
| Usp35    | X      | 0.350       | 2.76       | 6.76   | 0.03   | ENSMUSG000000079428 |
| Selenop  | 17     | 4.590       | 2.76       | 6.78   | 0.01   | ENSMUSG00000007034 |
| Celsr1   | 17     | 0.050       | 2.76       | 6.78   | 0.04   | ENSMUSG000000043939 |
| Acsf2    | X      | 1.060       | 2.76       | 6.78   | 0.04   | ENSMUSG000000037010 |
| Plekhh1  | 17     | 5.090       | 2.76       | 6.79   | 0.00   | ENSMUSG000000048905 |
| Rab11fip5 | 4     | 0.370       | 2.76       | 6.79   | 0.03   | ENSMUSG000000070720 |
| Clic5    | 19     | 0.080       | 2.77       | 6.80   | 0.04   | ENSMUSG00000003555 |
| Apoa1    | 12     | 1.110       | 2.77       | 6.80   | 0.05   | ENSMUSG000000071177 |
| Nav3     | 14     | 0.150       | 2.77       | 6.81   | 0.05   | ENSMUSG00000022220 |
| Mttp     | 12     | 1.560       | 2.77       | 6.82   | 0.02   | ENSMUSG00000004791 |
| Afp      | 7      | 0.140       | 2.78       | 6.85   | 0.04   | ENSMUSG000000030543 |
| Gene  | Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|-------|---------|---------|---------|---------|---------|
| Nhs   | 19      | 0.610   | 2.78    | 6.87    | 0.03    | ENSMUSG0000050957 |
| Dsg2  | 1       | 0.120   | 2.78    | 6.88    | 0.05    | ENSMUSG0000010311 |
| Gm28035 | 19     | 0.260   | 2.79    | 6.91    | 0.01    | ENSMUSG00000041731 |
| Fam135a | 15      | 0.580   | 2.79    | 6.92    | 0.00    | ENSMUSG0000023032 |
| Kcnq1 | 10      | 0.120   | 2.79    | 6.93    | 0.01    | ENSMUSG0000019899 |
| Cyp2s1 | 9       | 4.760   | 2.80    | 6.96    | 0.00    | ENSMUSG0000033240 |
| Tex19.1 | 3      | 80.670  | 2.80    | 6.96    | 0.01    | ENSMUSG00000033831 |
| Als2cl | 12      | 0.460   | 2.81    | 7.01    | 0.01    | ENSMUSG00000048387 |
| Smtnl2 | 19      | 0.680   | 2.82    | 7.04    | 0.02    | ENSMUSG0000024922 |
| Galnt3 | 4       | 94.740  | 2.82    | 7.05    | 0.00    | ENSMUSG0000052684 |
| Cep170b | 9      | 0.320   | 2.82    | 7.05    | 0.01    | ENSMUSG00000032011 |
| Ankrd42 | 6      | 0.050   | 2.82    | 7.05    | 0.04    | ENSMUSG0000008845 |
| Gjb2  | 7       | 1.210   | 2.82    | 7.05    | 0.05    | ENSMUSG00000074336 |
| Arrdc4 | X       | 0.840   | 2.82    | 7.06    | 0.04    | ENSMUSG0000031382 |
| Thnsl2 | 2       | 0.810   | 2.82    | 7.07    | 0.01    | ENSMUSG0000068079 |
| Apoa4 | 13      | 0.730   | 2.83    | 7.09    | 0.00    | ENSMUSG00000051054 |
| Arhgef5 | X      | 13.240  | 2.83    | 7.10    | 0.00    | ENSMUSG0000031375 |
| Cldn4 | 13      | 0.440   | 2.83    | 7.12    | 0.04    | ENSMUSG0000052485 |
| Phlda2 | 11      | 0.190   | 2.83    | 7.13    | 0.04    | ENSMUSG0000019368 |
| Fcgrt | 12      | 5.390   | 2.84    | 7.15    | 0.01    | ENSMUSG0000066366 |
| Rbm47 | 5       | 0.140   | 2.84    | 7.16    | 0.03    | ENSMUSG0000029130 |
| Rab15 | 18      | 0.160   | 2.84    | 7.16    | 0.04    | ENSMUSG0000037346 |
| Srgap1 | 13      | 9.720   | 2.84    | 7.18    | 0.00    | ENSMUSG0000069305 |
| Adamts1 | 5      | 1.020   | 2.85    | 7.22    | 0.00    | ENSMUSG00000029468 |
| Pramef12 | 15     | 1.070   | 2.85    | 7.23    | 0.04    | ENSMUSG0000022149 |
| Slc22a18 | 5     | 0.060   | 2.86    | 7.24    | 0.04    | ENSMUSG0000040473 |
| Zc3h12d | 14     | 0.120   | 2.86    | 7.24    | 0.04    | ENSMUSG0000057606 |
| Sdc4  | 14      | 0.700   | 2.86    | 7.25    | 0.02    | ENSMUSG00000072572 |
| Cyp2d22 | 17     | 16.850  | 2.86    | 7.28    | 0.00    | ENSMUSG0000023966 |
| Nxf7  | 1       | 0.700   | 2.87    | 7.29    | 0.01    | ENSMUSG00000043629 |
| Lims2 | 13      | 0.250   | 2.87    | 7.30    | 0.04    | ENSMUSG0000036110 |
| Hand1 | 16      | 4.100   | 2.87    | 7.31    | 0.01    | ENSMUSG0000022871 |
| Rarres1 | X      | 0.620   | 2.87    | 7.34    | 0.01    | ENSMUSG0000015405 |
| Gene   | P.Value | Log2 | Fold Change | p.Val | ENSMUSG Accession      |
|--------|---------|------|-------------|-------|------------------------|
| Gpc3   | 9       | 0.430| 2.88        | 7.34  | ENSMUSG00000044976     |
| Spink1 | 15      | 1.950| 2.88        | 7.35  | ENSMUSG00000036944     |
| Hist1h2an | 13     | 3.850| 2.88        | 7.39  | ENSMUSG00000101972     |
| Tjp3   | 17      | 1.450| 2.89        | 7.41  | ENSMUSG00000073418     |
| Trim15 | 3       | 0.320| 2.89        | 7.43  | ENSMUSG00000032854     |
| Gipc2  | 10      | 0.890| 2.89        | 7.44  | ENSMUSG00000019846     |
| Vill   | 8       | 0.170| 2.90        | 7.44  | ENSMUSG00000053626     |
| Abcb1b | 2       | 0.330| 2.90        | 7.46  | ENSMUSG00000027560     |
| Lamb2  | 7       | 0.840| 2.90        | 7.47  | ENSMUSG00000045777     |
| Erbb3  | 4       | 0.630| 2.90        | 7.47  | ENSMUSG00000029074     |
| Ryr2   | 8       | 0.740| 2.91        | 7.49  | ENSMUSG00000042812     |
| Chdh   | 1       | 5.320| 2.91        | 7.50  | ENSMUSG00000026185     |
| Esyt3  | 5       | 0.610| 2.91        | 7.50  | ENSMUSG00000029576     |
| Arhgef16 | 1       | 0.660| 2.91        | 7.50  | ENSMUSG00000016194     |
| Hes7   | 6       | 0.080| 2.91        | 7.50  | ENSMUSG00000030255     |
| Sprr1a | 15      | 0.240| 2.91        | 7.51  | ENSMUSG00000022357     |
| H2-Q4  | 4       | 2.240| 2.91        | 7.53  | ENSMUSG00000001604     |
| Hic1   | 2       | 0.440| 2.91        | 7.54  | ENSMUSG00000054580     |
| Adams4l4 | X     | 0.930| 2.92        | 7.55  | ENSMUSG00000054034     |
| Obs1l  | 1       | 0.160| 2.93        | 7.60  | ENSMUSG00000051985     |
| Ap1m2  | 9       | 24.430| 2.93       | 7.61  | ENSMUSG00000064225     |
| Slc4a4 | 13      | 3.370| 2.93        | 7.61  | ENSMUSG00000069270     |
| Cyp11a1| 17      | 16.790| 2.93       | 7.62  | ENSMUSG00000039481     |
| Mb21d2 | 4       | 8.080| 2.93        | 7.63  | ENSMUSG00000023232     |
| Peshk9 | 3       | 4.290| 2.94        | 7.66  | ENSMUSG00000074489     |
| Oit3   | 14      | 0.340| 2.94        | 7.67  | ENSMUSG00000022132     |
| More4  | 6       | 0.100| 2.95        | 7.71  | ENSMUSG00000038022     |
| Nrk    | 14      | 0.500| 2.95        | 7.71  | ENSMUSG00000079364     |
| Tmem151a | 11     | 1.770| 2.95        | 7.73  | ENSMUSG00000020847     |
| Myo15b | 4       | 0.120| 2.95        | 7.74  | ENSMUSG00000028919     |
| Slc13a3 | 10     | 0.580| 2.95        | 7.75  | ENSMUSG00000059406     |
| Bend7  | 19      | 0.190| 2.95        | 7.75  | ENSMUSG00000090369     |
| Plet1  | 6       | 0.280| 2.96        | 7.79  | ENSMUSG00000041460     |
| Gene      | Gene | Log2 fold change | p-value | ENSMUSG00000001155 |
|-----------|------|-----------------|---------|---------------------|
| Arfgef3   | 10   | 1.000           | 2.96    | 7.79                |
| Fmo5      | 14   | 0.350           | 2.97    | 7.83                |
| Mgst2     | 5    | 0.300           | 2.97    | 7.83                |
| Sel1l3    | 16   | 12.840          | 2.97    | 7.85                |
| Hist1h4b  | 15   | 0.080           | 2.97    | 7.86                |
| Gm49369   | 5    | 0.200           | 2.98    | 7.87                |
| Stbd1     | 12   | 2.220           | 2.98    | 7.88                |
| Fbp2      | 12   | 3.190           | 2.98    | 7.89                |
| Irf6      | 7    | 0.230           | 2.98    | 7.90                |
| Myl7      | X    | 3.820           | 2.99    | 7.92                |
| Rgl1      | 12   | 0.140           | 2.99    | 7.94                |
| Abcb1a    | 10   | 3.950           | 2.99    | 7.96                |
| Itgb4     | 5    | 0.620           | 2.99    | 7.96                |
| C2        | 7    | 0.180           | 3.00    | 7.98                |
| Lyve1     | 4    | 0.580           | 3.00    | 7.99                |
| Lmo7      | 13   | 3.360           | 3.00    | 8.00                |
| Ihnrl1    | 15   | 0.620           | 3.00    | 8.01                |
| Cnksr1    | 7    | 0.500           | 3.01    | 8.05                |
| Igfbp3    | 15   | 1.860           | 3.01    | 8.08                |
| Alpk3     | 8    | 0.090           | 3.02    | 8.14                |
| Apoa2     | 6    | 12.930          | 3.03    | 8.18                |
| Neil2     | 14   | 0.150           | 3.05    | 8.25                |
| Cited1    | 2    | 2.750           | 3.05    | 8.26                |
| Bok       | 4    | 1.170           | 3.05    | 8.30                |
| Ckmt1     | 13   | 0.110           | 3.06    | 8.33                |
| Irx1      | 4    | 0.150           | 3.06    | 8.33                |
| Ptprr     | 12   | 10.870          | 3.06    | 8.36                |
| Tpbg      | 14   | 0.830           | 3.07    | 8.39                |
| Sema4g    | 3    | 0.350           | 3.07    | 8.41                |
| Mtmr11    | 11   | 11.810          | 3.07    | 8.43                |
| Krt20     | 3    | 72.550          | 3.08    | 8.46                |
| Ttr       | 13   | 2.050           | 3.08    | 8.47                |
| Ttc9      | 11   | 1.270           | 3.08    | 8.47                |
| Gene       | X | 0.340 | 3.09 | 8.49 | 0.02 | ENSMUSG00000109493 |
|------------|---|-------|------|------|------|--------------------|
| TmC7       | 11| 1.130 | 3.09 | 8.51 | 0.00 | ENSMUSG00000020486 |
| Sle44a3    | 1 | 44.780| 3.09 | 8.52 | 0.00 | ENSMUSG00000044337 |
| Gpr55      | 4 | 0.050 | 3.09 | 8.52 | 0.05 | ENSMUSG00000028602 |
| Cpm        | 7 | 0.030 | 3.09 | 8.53 | 0.04 | ENSMUSG00000097789 |
| Fam83e     | 13| 1.530 | 3.09 | 8.54 | 0.00 | ENSMUSG00000047246 |
| KnG2       | 4 | 0.080 | 3.09 | 8.54 | 0.04 | ENSMUSG00000028738 |
| Hkdc1      | 5 | 0.110 | 3.10 | 8.56 | 0.02 | ENSMUSG00000029675 |
| 8030474K03Rik | 4 | 0.040 | 3.11 | 8.61 | 0.04 | ENSMUSG00000050511 |
| Pamr1      | 7 | 12.280| 3.11 | 8.62 | 0.00 | ENSMUSG0000002983 |
| Abcc2      | X | 1.780 | 3.11 | 8.63 | 0.00 | ENSMUSG00000079845 |
| Bfsp1      | 15| 6.290 | 3.12 | 8.72 | 0.00 | ENSMUSG00000037280 |
| Serpinfl   | X | 0.070 | 3.13 | 8.77 | 0.05 | ENSMUSG00000047686 |
| Acvrl1     | X | 1.920 | 3.13 | 8.78 | 0.02 | ENSMUSG00000083695 |
| Fam102a    | 6 | 0.280 | 3.14 | 8.80 | 0.04 | ENSMUSG00000029868 |
| Hsf4       | 8 | 3.670 | 3.14 | 8.84 | 0.00 | ENSMUSG00000034472 |
| Cfi        | 8 | 915.130| 3.15 | 8.85 | 0.00 | ENSMUSG00000005413 |
| Ano9       | 11| 0.050 | 3.15 | 8.88 | 0.05 | ENSMUSG00000052921 |
| Plg        | 13| 0.030 | 3.16 | 8.97 | 0.04 | ENSMUSG00000033063 |
| Cdhr2      | 11| 0.780 | 3.17 | 8.99 | 0.00 | ENSMUSG00000048616 |
| Npr1       | 7 | 1.530 | 3.17 | 9.00 | 0.01 | ENSMUSG00000030790 |
| Olfr1419   | 4 | 15.510| 3.17 | 9.01 | 0.00 | ENSMUSG00000073802 |
| Dnah6      | 6 | 0.160 | 3.18 | 9.05 | 0.02 | ENSMUSG00000055172 |
| Gm14685    | 3 | 2.650 | 3.18 | 9.06 | 0.01 | ENSMUSG00000074207 |
| Rasgefla   | 8 | 0.940 | 3.19 | 9.10 | 0.01 | ENSMUSG00000031651 |
| LrC63      | 2 | 3.600 | 3.19 | 9.14 | 0.00 | ENSMUSG00000049044 |
| Ephb3      | 7 | 0.290 | 3.19 | 9.15 | 0.03 | ENSMUSG00000050063 |
| Apoc2      | 8 | 0.780 | 3.20 | 9.16 | 0.04 | ENSMUSG00000031980 |
| KnG1       | 7 | 0.380 | 3.20 | 9.20 | 0.01 | ENSMUSG00000090215 |
| Plekhg6    | 17| 0.090 | 3.20 | 9.21 | 0.02 | ENSMUSG00000024176 |
| Cyp4f39    | 3 | 60.770| 3.20 | 9.22 | 0.02 | ENSMUSG00000068893 |
| Crybg2     | 7 | 0.030 | 3.20 | 9.22 | 0.04 | ENSMUSG00000030621 |
| Sp6        | 2 | 0.410 | 3.21 | 9.23 | 0.01 | ENSMUSG00000015090 |
| Gene    | Rank | Expression Level | Fold Change | p-value | Gene ID                  |
|---------|------|------------------|-------------|---------|-------------------------|
| Plekhd1 | 7    | 0.100            | 3.21        | 9.23    | 0.03                    |
| Card14  | 3    | 3.990            | 3.21        | 9.24    | 0.00                    |
| Tulp1   | 3    | 4.960            | 3.21        | 9.24    | 0.03                    |
| Catspere2 | 6  | 0.110            | 3.21        | 9.27    | 0.04                    |
| Myh14   | 8    | 0.160            | 3.21        | 9.27    | 0.04                    |
| Amn     | 5    | 0.490            | 3.21        | 9.28    | 0.00                    |
| Tcf7    | 14   | 0.060            | 3.22        | 9.29    | 0.03                    |
| Trim69  | 16   | 1.320            | 3.23        | 9.36    | 0.00                    |
| Rbm46   | 13   | 4.310            | 3.23        | 9.36    | 0.00                    |
| Misp    | 9    | 0.560            | 3.23        | 9.36    | 0.00                    |
| Lrp4    | 13   | 0.820            | 3.24        | 9.45    | 0.02                    |
| Snhg11  | 1    | 5.740            | 3.24        | 9.48    | 0.00                    |
| Greb1   | 3    | 3.680            | 3.25        | 9.49    | 0.01                    |
| Syce1   | 13   | 0.050            | 3.25        | 9.49    | 0.03                    |
| Col6a3  | 15   | 1.950            | 3.26        | 9.59    | 0.00                    |
| Foxj1   | 1    | 3.620            | 3.26        | 9.61    | 0.00                    |
| Fa2h    | 11   | 0.350            | 3.27        | 9.63    | 0.00                    |
| Clps    | 9    | 0.360            | 3.28        | 9.75    | 0.00                    |
| Apob    | 15   | 0.430            | 3.29        | 9.78    | 0.02                    |
| Efna1   | 5    | 0.140            | 3.29        | 9.78    | 0.02                    |
| Apoa5   | 9    | 0.180            | 3.30        | 9.83    | 0.01                    |
| Ahsrg   | 4    | 0.040            | 3.30        | 9.86    | 0.05                    |
| Cubn    | 3    | 0.380            | 3.30        | 9.88    | 0.01                    |
| Ppara   | 9    | 0.130            | 3.31        | 9.89    | 0.02                    |
| Eps813  | 12   | 0.130            | 3.31        | 9.91    | 0.03                    |
| Apoc1   | 4    | 0.360            | 3.31        | 9.92    | 0.01                    |
| Hpn     | 6    | 3.210            | 3.31        | 9.94    | 0.01                    |
| Pde6c   | 17   | 0.660            | 3.32        | 9.98    | 0.02                    |
| Cpn1    | 7    | 0.040            | 3.32        | 10.02   | 0.04                    |
| Serpinc1| 9    | 1.840            | 3.33        | 10.04   | 0.01                    |
| Cdsn    | 3    | 96.620           | 3.34        | 10.12   | 0.01                    |
| Tinag   | 7    | 0.120            | 3.35        | 10.18   | 0.02                    |
| Gm266   | 4    | 17.560           | 3.35        | 10.21   | 0.00                    |
| Gene     | Log2FC | p-value | FDR   | Ensembl ID         |
|----------|--------|---------|-------|--------------------|
| Igfals   | 0.140  | 3.36    | 10.24 | ENSMUSG00000031070 |
| Acox2    | 1.330  | 3.37    | 10.33 | ENSMUSG00000023046 |
| Fcrl1    | 12.980 | 3.37    | 10.34 | ENSMUSG00000026604 |
| Lrp2     | 0.210  | 3.37    | 10.36 | ENSMUSG00000029321 |
| F2rl1    | 0.290  | 3.38    | 10.33 | ENSMUSG00000029321 |
| Itih2    | 12.980 | 3.37    | 10.34 | ENSMUSG00000110344 |
| Lrrc14b  | 0.210  | 3.37    | 10.36 | ENSMUSG00000029321 |
| F2rl1    | 0.290  | 3.38    | 10.33 | ENSMUSG00000029321 |
| Itih2    | 12.980 | 3.37    | 10.34 | ENSMUSG00000110344 |
| Lrrc14b  | 0.210  | 3.37    | 10.36 | ENSMUSG00000029321 |
| F2rl1    | 0.290  | 3.38    | 10.33 | ENSMUSG00000029321 |
| Itih2    | 12.980 | 3.37    | 10.34 | ENSMUSG00000110344 |
| Lrrc14b  | 0.210  | 3.37    | 10.36 | ENSMUSG00000029321 |
| Gene      |Chr| Val1  | Val2  | Val3  | Val4  | ENSMUSG0000000000   |
|-----------|----|-------|-------|-------|-------|---------------------|
| Hrh4      | 1  | 0.330 | 3.58  | 11.92 | 0.00  | ENSMUSG00000051590  |
| C9        | 2  | 0.780 | 3.59  | 12.03 | 0.01  | ENSMUSG00000038751  |
| Colq      | 5  | 0.370 | 3.59  | 12.07 | 0.02  | ENSMUSG00000105875  |
| Slc39a2   | 8  | 0.110 | 3.61  | 12.18 | 0.03  | ENSMUSG00000109523  |
| 1700019D03Rik | 8 | 0.020 | 3.62  | 12.30 | 0.05  | ENSMUSG00000031789  |
| Slc17a2   | 15 | 0.100 | 3.62  | 12.30 | 0.05  | ENSMUSG00000057346  |
| Fetub     | 11 | 13.710| 3.63  | 12.34 | 0.00  | ENSMUSG00000039238  |
| Wdr72     | 5  | 0.060 | 3.63  | 12.36 | 0.04  | ENSMUSG00000029015  |
| C4b       | 17 | 0.510 | 3.66  | 12.67 | 0.01  | ENSMUSG00000073406  |
| Dok5      | X  | 0.230 | 3.67  | 12.70 | 0.00  | ENSMUSG0000009670   |
| Tull10    | 12 | 0.600 | 3.67  | 12.74 | 0.00  | ENSMUSG00000021185  |
| Tce3      | 6  | 0.100 | 3.67  | 12.76 | 0.02  | ENSMUSG00000030359  |
| Tcet5     | 11 | 0.030 | 3.68  | 12.78 | 0.03  | ENSMUSG00000069911  |
| Bglap3    | 12 | 0.050 | 3.68  | 12.81 | 0.03  | ENSMUSG00000047415  |
| Gm3558    | 14 | 1.560 | 3.69  | 12.91 | 0.00  | ENSMUSG00000021768  |
| 4933411K16Rik | 7 | 47.320| 3.71  | 13.07 | 0.00  | ENSMUSG00000034957  |
| Ftd6      | 3  | 0.140 | 3.71  | 13.13 | 0.05  | ENSMUSG00000027761  |
| Gm2974    | 19 | 0.090 | 3.71  | 13.13 | 0.05  | ENSMUSG00000025197  |
| Gm17019   | 7  | 0.090 | 3.72  | 13.20 | 0.01  | ENSMUSG00000058662  |
| Clmn      | X  | 0.060 | 3.72  | 13.21 | 0.04  | ENSMUSG00000079534  |
| Papln     | 4  | 0.320 | 3.73  | 13.26 | 0.04  | ENSMUSG00000059816  |
| Car11     | 13 | 19.200| 3.73  | 13.28 | 0.00  | ENSMUSG00000069307  |
| Degr52    | 11 | 0.180 | 3.73  | 13.29 | 0.00  | ENSMUSG00000051455  |
| Ggt1      | 11 | 0.410 | 3.73  | 13.30 | 0.02  | ENSMUSG00000046697  |
| Slec28a1  | 2  | 7.790 | 3.78  | 13.72 | 0.00  | ENSMUSG00000026831  |
| Hcerr1    | 1  | 4.730 | 3.78  | 13.74 | 0.00  | ENSMUSG00000009772  |
| Ccde155   | 11 | 0.150 | 3.79  | 13.82 | 0.02  | ENSMUSG00000057967  |
| Prph      | 17 | 0.150 | 3.80  | 13.94 | 0.00  | ENSMUSG00000033327  |
| Hhip      | 10 | 0.410 | 3.81  | 14.03 | 0.00  | ENSMUSG00000020090  |
| Gm3739    | 8  | 4.220 | 3.82  | 14.16 | 0.00  | ENSMUSG00000031860  |
| Phgr1     | 16 | 1.420 | 3.83  | 14.20 | 0.00  | ENSMUSG00000022821  |
| Col15a1   | 15 | 1.100 | 3.83  | 14.25 | 0.01  | ENSMUSG00000022371  |
| Serpina1b | 9  | 0.760 | 3.84  | 14.31 | 0.00  | ENSMUSG00000050074  |
| Gene      | ID | X   | Log2FC | pval | GeneID             |
|-----------|----|-----|--------|------|--------------------|
| Mcpt4     |    | 0.410 | 3.85  | 14.39| 0.00 ENSMUSG00000033361 |
| Clca4a    | 5  | 0.200 | 3.85  | 14.44| 0.01 ENSMUSG0000005373 |
| Hist1h2bp | 14 | 1.480 | 3.86  | 14.52| 0.00 ENSMUSG00000072674 |
| Ace       | 6  | 0.700 | 3.86  | 14.52| 0.00 ENSMUSG00000068587 |
| 44808     | 13 | 0.090 | 3.87  | 14.60| 0.00 ENSMUSG00000045034 |
| Tnfrsf8   | 1  | 0.230 | 3.87  | 14.61| 0.00 ENSMUSG00000041559 |
| Tas1r2    | 8  | 0.390 | 3.88  | 14.76| 0.01 ENSMUSG00000056313 |
| Rtl3      | 7  | 0.060 | 3.88  | 14.76| 0.03 ENSMUSG00000037463 |
| Rnf138rt1 | 6  | 0.490 | 3.89  | 14.83| 0.00 ENSMUSG00000055003 |
| Trpv6     |    | 7.630 | 3.90  | 14.93| 0.00 ENSMUSG00000051228 |
| Rasd2     | 1  | 1.220 | 3.91  | 15.03| 0.01 ENSMUSG00000096633 |
| Arhgef15  | 7  | 10.740| 3.92  | 15.10| 0.00 ENSMUSG00000030703 |
| Cntnap3   | 6  | 0.460 | 3.92  | 15.13| 0.01 ENSMUSG00000030244 |
| Adh1      | 17 | 14.410| 3.92  | 15.18| 0.01 ENSMUSG00000024365 |
| Triml1    | 10 | 0.270 | 3.93  | 15.21| 0.00 ENSMUSG00000025407 |
| Agt       | 1  | 0.130 | 3.93  | 15.27| 0.00 ENSMUSG00000048960 |
| Sprr2a2   | 12 | 16.500| 3.94  | 15.33| 0.00 ENSMUSG00000034168 |
| Ptgds     | 7  | 0.560 | 3.96  | 15.52| 0.00 ENSMUSG0000006154  |
| Mrgrprb2  | 13 | 5.460 | 3.96  | 15.55| 0.00 ENSMUSG00000069303 |
| Sprr2a3   | 4  | 0.300 | 3.97  | 15.62| 0.01 ENSMUSG000000111410 |
| Asz1      | 13 | 5.380 | 3.99  | 15.91| 0.00 ENSMUSG00000094248 |
| Ces2b     | 1  | 0.190 | 4.00  | 16.02| 0.00 ENSMUSG00000091017 |
| Hist1h1a  | 9  | 0.170 | 4.01  | 16.06| 0.00 ENSMUSG00000038508 |
| Esml      | 17 | 5.760 | 4.02  | 16.10| 0.03 ENSMUSG00000032271 |
| Sprr2a1   | 12 | 32.960| 4.02  | 16.21| 0.00 ENSMUSG00000020641 |
| Lamb3     | 7  | 0.870 | 4.03  | 16.34| 0.00 ENSMUSG0000003379 |
| Ugt3a2    | 15 | 1.880 | 4.04  | 16.49| 0.00 ENSMUSG00000037579 |
| Celf6     | 6  | 0.070 | 4.05  | 16.53| 0.01 ENSMUSG00000030249 |
| Oxct2a    | 13 | 0.070 | 4.06  | 16.69| 0.02 ENSMUSG00000021620 |
| Rarres2   | 17 | 0.230 | 4.06  | 16.72| 0.00 ENSMUSG00000073407 |
| Pgc       | 7  | 0.150 | 4.09  | 16.98| 0.01 ENSMUSG00000030484 |
| Mrgrprx2  | 14 | 0.040 | 4.14  | 17.59| 0.01 ENSMUSG00000021903 |
| Gene       | N   | Value  | Fold Change | p-Value | ENSMUSG00000021319 |
|------------|-----|--------|-------------|---------|--------------------|
| Slc38a3    | 13  | 0.050  | 4.14        | 17.60   | 0.01               |
| Fgg        | 1   | 0.080  | 4.15        | 17.75   | 0.02               |
| Gfy        | 14  | 0.050  | 4.15        | 17.80   | 0.01               |
| Gm17657    | 11  | 1.830  | 4.19        | 18.22   | 0.00               |
| Ovol2      | 3   | 0.410  | 4.22        | 18.67   | 0.00               |
| Slc16a11   | 13  | 4.100  | 4.26        | 19.20   | 0.00               |
| Tranl      | 7   | 0.720  | 4.27        | 19.24   | 0.00               |
| Methig1    | 6   | 0.640  | 4.27        | 19.26   | 0.00               |
| Cla4b      | 7   | 0.130  | 4.29        | 19.52   | 0.00               |
| Ccdc194    | 2   | 0.150  | 4.32        | 19.97   | 0.01               |
| Mep1a      | 1   | 5.320  | 4.32        | 20.00   | 0.00               |
| Fam3b      | 1   | 6.530  | 4.41        | 21.23   | 0.00               |
| Slc15a1    | 1   | 2.780  | 4.46        | 21.94   | 0.00               |
| Speer4e    | 12  | 15.430 | 4.47        | 22.16   | 0.00               |
| Trim54     | 6   | 92.150 | 4.48        | 22.32   | 0.00               |
| Nos2       | 7   | 0.090  | 4.49        | 22.41   | 0.02               |
| Duox2      | 13  | 0.080  | 4.55        | 23.35   | 0.01               |
| Serpinb6c  | 17  | 0.290  | 4.55        | 23.48   | 0.01               |
| Mcoln3     | 11  | 0.210  | 4.58        | 23.98   | 0.01               |
| Kbtd13     | 2   | 0.440  | 4.59        | 24.13   | 0.00               |
| Ptk6       | 1   | 0.130  | 4.60        | 24.21   | 0.01               |
| Cngb1      | 7   | 3.040  | 4.75        | 26.94   | 0.00               |
| Slc26a5    | 11  | 0.510  | 4.81        | 27.96   | 0.00               |
| Pzp        | 15  | 1.200  | 4.82        | 28.19   | 0.00               |
| Gpr68      | 7   | 0.190  | 4.82        | 28.27   | 0.01               |
| Aadac      | 4   | 2.700  | 4.89        | 29.63   | 0.00               |
| Cyp2c23    | 6   | 0.420  | 4.93        | 30.42   | 0.00               |
| Olfr69     | 6   | 2.270  | 5.03        | 32.64   | 0.00               |
| Gm5640     | 4   | 0.090  | 5.12        | 34.77   | 0.05               |
| Shisal2a   | 3   | 0.090  | 5.21        | 37.03   | 0.05               |
| Enpp7      | 2   | 0.010  | 5.22        | 37.19   | 0.05               |
| 1700007K13Rik| 5   | 0.480  | 5.22        | 37.32   | 0.00               |
| Fgf18      | 3   | 0.200  | 5.29        | 39.22   | 0.05               |
| Gene       | N. | Log2FC | z-value | p-value | Accession          |
|------------|----|--------|---------|---------|--------------------|
| Hgd        | 4  | 0.070  | 5.29    | 39.22   | 0.05 ENSMUSG00000029656 |
| Mlxipl     | 6  | 0.030  | 5.29    | 39.22   | 0.05 ENSMUSG00000047228 |
| Mgam       | 8  | 0.060  | 5.29    | 39.22   | 0.05 ENSMUSG00000055730 |
| G0s2       | 15 | 0.070  | 5.29    | 39.22   | 0.05 ENSMUSG00000022579 |
| Gys2       | 15 | 0.040  | 5.31    | 39.66   | 0.05 ENSMUSG00000022144 |
| Cyp21a1    | 10 | 0.100  | 5.32    | 40.01   | 0.04 ENSMUSG00000020216 |
| H2-Q10     | 14 | 0.030  | 5.32    | 40.03   | 0.04 ENSMUSG00000033644 |
| Abcc9      | 7  | 0.030  | 5.34    | 40.38   | 0.05 ENSMUSG00000049848 |
| Acot12     | 19 | 0.040  | 5.35    | 40.82   | 0.05 ENSMUSG00000024846 |
| Gm6034     | 5  | 0.030  | 5.36    | 40.94   | 0.04 ENSMUSG00000074817 |
| Sfrp4      | 10 | 0.070  | 5.36    | 40.94   | 0.04 ENSMUSG00000046922 |
| D1Pas1     | 19 | 0.130  | 5.39    | 41.93   | 0.04 ENSMUSG0000005339 |
| Aass       | 5  | 0.070  | 5.40    | 42.31   | 0.05 ENSMUSG00000055235 |
| Dlx2       | 16 | 0.260  | 5.40    | 42.31   | 0.05 ENSMUSG00000110573 |
| Usp17lc    | 2  | 21.730 | 5.47    | 44.28   | 0.00 ENSMUSG00000050896 |
| Trim40     | 7  | 0.090  | 5.50    | 45.39   | 0.05 ENSMUSG00000078815 |
| Sectm1a    | 17 | 0.120  | 5.51    | 45.64   | 0.04 ENSMUSG00000045027 |
| Serpinb5   | 11 | 0.080  | 5.52    | 45.80   | 0.04 ENSMUSG00000072963 |
| Clec2h     | 9  | 0.040  | 5.54    | 46.57   | 0.04 ENSMUSG00000032446 |
| Edn2       | 1  | 0.170  | 5.55    | 46.82   | 0.04 ENSMUSG00000064272 |
| S100a7a    | 16 | 0.180  | 5.56    | 47.04   | 0.03 ENSMUSG00000071552 |
| Prokr2     | 11 | 2.530  | 5.61    | 48.72   | 0.00 ENSMUSG00000020467 |
| Sprr2h     | 9  | 0.090  | 5.66    | 50.58   | 0.03 ENSMUSG00000041737 |
| C8b        | 14 | 0.080  | 5.75    | 53.67   | 0.03 ENSMUSG00000021933 |
| A2ml1      | 17 | 0.410  | 5.76    | 54.13   | 0.00 ENSMUSG00000050824 |
| Ces2a      | 1  | 0.040  | 5.77    | 54.66   | 0.04 ENSMUSG00000025991 |
| Gpihbp1    | 7  | 0.540  | 5.77    | 54.70   | 0.00 ENSMUSG00000009471 |
| Gdnf       | 2  | 0.070  | 5.78    | 55.02   | 0.03 ENSMUSG00000013523 |
| Jsrp1      | 4  | 0.090  | 5.99    | 63.68   | 0.03 ENSMUSG00000028940 |
| Ceacam19    | 16 | 0.060  | 6.01    | 64.66   | 0.02 ENSMUSG00000062713 |
| Cst6       | 2  | 0.150  | 6.02    | 64.90   | 0.02 ENSMUSG00000044103 |
| Gpr6       | 6  | 0.150  | 6.09    | 68.28   | 0.02 ENSMUSG00000061762 |
| Fcer1a     | 7  | 0.100  | 6.12    | 69.61   | 0.02 ENSMUSG00000057321 |
| Gene   | LogFC | p-value | Fold Change | Gene Name | ENSMUSG00000000000 |
|--------|-------|---------|-------------|-----------|------------------|
| Wdr86  | 8     | 0.090   | 6.26        | 76.86     | 0.02  |
| Gm5485 | 2     | 0.110   | 6.69        | 103.44    | 0.01  |
| Cacng6 | 19    | 0.270   | 6.71        | 104.67    | 0.01  |
| Prss22 | 16    | 0.140   | 6.75        | 107.32    | 0.01  |
| Gm10447| 1     | 0.090   | 6.76        | 108.26    | 0.01  |
| Eomes  | 1     | 0.160   | 6.93        | 122.17    | 0.01  |
| Tigit  | 1     | 0.180   | 6.98        | 125.81    | 0.01  |
| Tmem45b| 14    | 0.470   | 7.48        | 178.85    | 0.00  |
| Gucy1b2| 3     | 1.240   | 7.63        | 197.52    | 0.00  |
| Cps1   | 7     | 0.190   | 7.98        | 252.47    | 0.00  |
| Hes2   | 17    | 0.370   | 8.45        | 348.82    | 0.00  |
Supplemental Table 7. Downregulated genes in *DotIL*-KO ESRE cells that are unique to these mutant cells (n=177).

| Name   | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL       |
|--------|------------|----------------|------------------|-------------|---------|---------------|
| Ctsg   | 14         | 1.560          | -7.91            | -241.28     | 0.00    | ENSMUSG00000040314 |
| Prl3b1 | 13         | 1.120          | -7.51            | -182.64     | 0.00    | ENSMUSG00000038891 |
| Prl7d1 | 13         | 0.310          | -7.45            | -174.74     | 0.00    | ENSMUSG00000021348 |
| Prl2c3 | 13         | 0.830          | -7.09            | -136.61     | 0.01    | ENSMUSG00000056457 |
| Ctsq   | 13         | 0.620          | -6.98            | -126.46     | 0.01    | ENSMUSG00000021439 |
| Gm26920| 7          | 0.290          | -6.81            | -112.36     | 0.01    | ENSMUSG00000058447 |
| Ctsj   | 13         | 2.850          | -6.54            | -93.07      | 0.00    | ENSMUSG00000055298 |
| Fnd3c2 | X          | 0.160          | -6.46            | -87.92      | 0.01    | ENSMUSG00000073012 |
| Cdk5r2 | 1          | 0.210          | -6.40            | -84.25      | 0.02    | ENSMUSG00000090071 |
| Ear6   | 14         | 0.550          | -6.38            | -83.25      | 0.01    | ENSMUSG00000062148 |
| Gm49387| 14         | 0.310          | -6.35            | -81.60      | 0.02    | ENSMUSG00000115022 |
| Ngfr   | 11         | 0.160          | -6.33            | -80.18      | 0.02    | ENSMUSG00000000120 |
| Seg3   | 9          | 0.200          | -6.13            | -70.01      | 0.03    | ENSMUSG00000032181 |
| Gm49776| 16         | 0.720          | -6.12            | -69.38      | 0.02    | ENSMUSG00000116925 |
| Adam11 | 11         | 0.090          | -6.04            | -65.87      | 0.02    | ENSMUSG00000020926 |
| Prl2c5 | 13         | 0.400          | -6.03            | -65.22      | 0.02    | ENSMUSG00000055360 |
| Ctsr   | 13         | 0.300          | -5.99            | -63.67      | 0.02    | ENSMUSG00000055679 |
| Prl2c2 | 13         | 0.420          | -5.95            | -61.81      | 0.02    | ENSMUSG00000079092 |
| Hoxd10 | 2          | 0.230          | -5.90            | -59.83      | 0.03    | ENSMUSG00000050368 |
| Ntrk2  | 13         | 0.020          | -5.80            | -55.81      | 0.03    | ENSMUSG00000055254 |
| Cadps  | 14         | 0.040          | -5.63            | -49.69      | 0.04    | ENSMUSG00000054423 |
| Stra6  | 9          | 0.070          | -5.63            | -49.57      | 0.03    | ENSMUSG00000032327 |
| Oas1g  | 5          | 0.140          | -5.50            | -45.36      | 0.03    | ENSMUSG00000066861 |
| Caskin1| 17         | 0.050          | -5.44            | -43.53      | 0.04    | ENSMUSG00000033597 |
| Gpm6a  | 8          | 0.090          | -5.38            | -41.51      | 0.05    | ENSMUSG00000031517 |
| Hoxa9  | 6          | 0.300          | -5.32            | -40.08      | 0.00    | ENSMUSG00000038227 |
| Lbx1   | 19         | 0.110          | -5.30            | -39.48      | 0.05    | ENSMUSG00000025216 |
| Fgf7   | 2          | 0.080          | -5.23            | -37.44      | 0.05    | ENSMUSG00000027208 |
| Trem1  | 17         | 0.280          | -5.15            | -35.48      | 0.00    | ENSMUSG00000042265 |
| Pkib   | 10         | 0.040          | -5.13            | -35.12      | 0.05    | ENSMUSG00000019876 |
| Gene  | ID | Expression | Log2 FC | Z Score | P Value | Ensembl ID      |
|-------|----|------------|---------|---------|---------|-----------------|
| Epx   | 11 | 0.080      | -5.05   | -33.10  | 0.05    | ENSMUG00000052234 |
| Spata9| 13 | 0.170      | -5.05   | -33.08  | 0.05    | ENSMUG00000021590 |
| Stfa1 | 16 | 1.180      | -4.40   | -21.13  | 0.00    | ENSMUSG00000071562 |
| Clec12a| 6  | 0.720      | -4.37   | -20.68  | 0.00    | ENSMUSG00000053063 |
| Brinp1| 4  | 0.150      | -4.33   | -20.10  | 0.01    | ENSMUSG00000028351 |
| Snap25| 2  | 0.200      | -3.97   | -15.70  | 0.03    | ENSMUSG00000027273 |
| Rbfox3| 11 | 0.070      | -3.88   | -14.71  | 0.04    | ENSMUSG00000025576 |
| Ghrh  | 2  | 0.560      | -3.84   | -14.34  | 0.03    | ENSMUSG00000027643 |
| Elane | 10 | 0.520      | -3.71   | -13.12  | 0.01    | ENSMUSG00000020125 |
| Klhl4 | X  | 0.080      | -3.65   | -12.57  | 0.03    | ENSMUSG00000025597 |
| Hoxc10| 15 | 0.790      | -3.63   | -12.38  | 0.02    | ENSMUSG00000022484 |
| Ms4a3 | 19 | 0.690      | -3.62   | -12.33  | 0.01    | ENSMUSG00000024681 |
| Snap91| 9  | 0.100      | -3.49   | -11.22  | 0.04    | ENSMUSG00000033419 |
| Gm4724| 2  | 0.870      | -3.44   | -10.87  | 0.00    | ENSMUSG00000078897 |
| Hoxa3 | 6  | 0.090      | -3.37   | -10.33  | 0.05    | ENSMUSG00000079560 |
| Gpr174| X  | 0.280      | -3.29   | -9.80   | 0.00    | ENSMUSG00000073008 |
| Zfp981| 4  | 0.120      | -3.28   | -9.72   | 0.02    | ENSMUSG00000056300 |
| Ccm2l | 2  | 0.330      | -3.25   | -9.50   | 0.01    | ENSMUSG00000027474 |
| Prss35| 9  | 0.720      | -3.21   | -9.26   | 0.01    | ENSMUSG00000033491 |
| Scn3a | 2  | 0.050      | -3.09   | -8.50   | 0.04    | ENSMUSG00000057182 |
| Pdzph1| 17 | 0.080      | -3.06   | -8.36   | 0.03    | ENSMUSG00000024227 |
| Pou3f3| 1  | 0.080      | -3.05   | -8.30   | 0.04    | ENSMUSG00000045515 |
| Zfhx4 | 3  | 0.090      | -3.04   | -8.20   | 0.02    | ENSMUSG00000025255 |
| Gm26965|13 | 0.360      | -3.00   | -7.99   | 0.04    | ENSMUSG00000097565 |
| Dpysl4| 7  | 0.430      | -2.85   | -7.21   | 0.04    | ENSMUSG00000025478 |
| Csf3r | 4  | 0.970      | -2.85   | -7.19   | 0.00    | ENSMUSG00000028859 |
| Stx1b | 7  | 0.140      | -2.84   | -7.14   | 0.05    | ENSMUSG00000030806 |
| Sell  | 1  | 0.390      | -2.81   | -7.03   | 0.00    | ENSMUSG00000026581 |
| Crmp1 | 5  | 1.080      | -2.80   | -6.94   | 0.01    | ENSMUSG00000029121 |
| Has2  | 15 | 0.130      | -2.78   | -6.88   | 0.03    | ENSMUSG00000022367 |
| Ebf3  | 7  | 0.140      | -2.75   | -6.73   | 0.05    | ENSMUSG00000010476 |
| Hoxa7 | 6  | 0.140      | -2.72   | -6.61   | 0.04    | ENSMUSG00000038236 |
| Kcnk12| 17 | 0.360      | -2.72   | -6.60   | 0.02    | ENSMUSG00000050138 |
| Gene   | Fold | Log2FC | Log2FoldChange | Log10P | EntrezID       |
|--------|------|--------|----------------|--------|----------------|
| Clec5a | 6    | 0.220  | -2.70          | -6.50  | 0.02           |
| Ebi3   | 17   | 1.530  | -2.66          | -6.33  | 0.00           |
| Olfm4  | 14   | 0.810  | -2.64          | -6.25  | 0.00           |
| P2ry12 | 3    | 0.190  | -2.62          | -6.17  | 0.04           |
| Gm10131| 8    | 5.610  | -2.58          | -5.99  | 0.01           |
| Phactr1| 13   | 0.090  | -2.55          | -5.84  | 0.05           |
| Cd52   | 4    | 3.490  | -2.52          | -5.72  | 0.01           |
| Asxl3  | 18   | 0.060  | -2.50          | -5.66  | 0.03           |
| Nefm   | 14   | 0.280  | -2.50          | -5.66  | 0.04           |
| Rapsn  | 2    | 0.440  | -2.49          | -5.60  | 0.04           |
| Atp8b4 | 2    | 0.550  | -2.46          | -5.50  | 0.01           |
| S100a8 | 3    | 9.990  | -2.40          | -5.28  | 0.00           |
| Gm14325| 2    | 1.120  | -2.40          | -5.27  | 0.01           |
| Ticam2 | 18   | 0.150  | -2.39          | -5.25  | 0.05           |
| Tifab  | 13   | 0.440  | -2.33          | -5.03  | 0.02           |
| A930033I|10  | 5.110  | -2.29          | -4.89  | 0.00           |
| BC10053| 16   | 3.050  | -2.28          | -4.86  | 0.01           |
| Hp     | 8    | 4.980  | -2.27          | -4.81  | 0.00           |
| Rnf17  | 14   | 0.700  | -2.26          | -4.79  | 0.01           |
| Ccr2   | 9    | 0.150  | -2.25          | -4.75  | 0.04           |
| Dot1l  | 10   | 26.100 | -2.22          | -4.65  | 0.00           |
| Mctp1  | 13   | 0.500  | -2.17          | -4.50  | 0.02           |
| Rgs7bp | 13   | 0.240  | -2.16          | -4.47  | 0.02           |
| Gpr141 | 13   | 0.490  | -2.15          | -4.45  | 0.03           |
| 2210418C|2  | 1.220  | -2.10          | -4.29  | 0.01           |
| Angpt1 | 15   | 1.310  | -2.09          | -4.26  | 0.00           |
| Clec4a2| 6    | 0.280  | -2.08          | -4.23  | 0.05           |
| Sardh  | 2    | 0.840  | -2.03          | -4.07  | 0.02           |
| Card9  | 2    | 1.140  | -2.01          | -4.03  | 0.03           |
| mt-Atp8 MT | 1481.130 | -1.96    | -3.89        | 0.00 |
| Ftl1-ps1|13 | 213.590 | -1.96          | -3.88  | 0.00           |
| Il16   | 7    | 0.250  | -1.92          | -3.78  | 0.04           |
| Igsf6  | 7    | 1.560  | -1.89          | -3.70  | 0.03           |
| gene       | symbol | log2FC | adj.p-value | fold.changes | ENSMUSG00000000000 |
|------------|--------|--------|-------------|--------------|---------------------|
| Rhobtb3    | 13     | 2.700  | -1.85       | -3.60        | 0.00                |
| Zfp982     | 4      | 1.220  | -1.85       | -3.60        | 0.05                |
| Zfp820     | 17     | 0.520  | -1.81       | -3.50        | 0.05                |
| Sash3      | X      | 3.800  | -1.78       | -3.44        | 0.01                |
| Zfp990     | 4      | 2.300  | -1.77       | -3.41        | 0.03                |
| Lama1      | 17     | 6.620  | -1.77       | -3.41        | 0.03                |
| Kcnq5      | 1      | 0.430  | -1.69       | -3.24        | 0.05                |
| Zfp946     | 17     | 1.210  | -1.69       | -3.22        | 0.04                |
| Mpeg1      | 19     | 4.200  | -1.68       | -3.21        | 0.01                |
| S100a9     | 3      | 11.120 | -1.63       | -3.10        | 0.03                |
| Srl        | 16     | 0.970  | -1.62       | -3.08        | 0.03                |
| Gm13212    | 4      | 1.350  | -1.61       | -3.06        | 0.04                |
| Ncf1       | 5      | 3.820  | -1.55       | -2.94        | 0.01                |
| Zfp984     | 4      | 5.450  | -1.52       | -2.86        | 0.01                |
| Emb        | 13     | 3.950  | -1.50       | -2.83        | 0.01                |
| Nfam1      | 15     | 0.750  | -1.48       | -2.80        | 0.04                |
| Limd2      | 11     | 6.000  | -1.47       | -2.78        | 0.00                |
| Tbxas1     | 6      | 2.710  | -1.47       | -2.78        | 0.04                |
| Gdf3       | 6      | 10.260 | -1.46       | -2.76        | 0.01                |
| Srgap3     | 6      | 1.290  | -1.43       | -2.69        | 0.02                |
| Nlrx1      | 9      | 1.450  | -1.42       | -2.68        | 0.05                |
| Zbed3      | 13     | 3.950  | -1.41       | -2.65        | 0.05                |
| Ssc24a3    | 2      | 2.740  | -1.39       | -2.62        | 0.03                |
| Arhgap30   | 1      | 3.940  | -1.37       | -2.59        | 0.01                |
| Psmb10     | 8      | 12.270 | -1.34       | -2.53        | 0.01                |
| Lyz2       | 10     | 10.500 | -1.32       | -2.50        | 0.03                |
| Gm4631     | 2      | 2.070  | -1.32       | -2.50        | 0.05                |
| Hgh1       | 15     | 8.060  | -1.31       | -2.49        | 0.02                |
| Hmga1      | 17     | 97.720 | -1.27       | -2.41        | 0.00                |
| Sh3bgrl    | X      | 12.960 | -1.23       | -2.35        | 0.00                |
| Ctbp2      | 7      | 5.630  | -1.23       | -2.34        | 0.01                |
| Celf2      | 2      | 1.840  | -1.23       | -2.34        | 0.02                |
| CT030661    | 17     | 3.280  | -1.22       | -2.33        | 0.04                |
| Gene   | ID   | Value1 | Value2 | Value3 | Value4 | ENSEMBL_ID       |
|--------|------|--------|--------|--------|--------|------------------|
| Etv6   | 6    | 5.970  | -1.22  | -2.32  | 0.00   | ENSMUSG00000030199 |
| Wdfy4  | 14   | 1.760  | -1.20  | -2.30  | 0.02   | ENSMUSG00000051506 |
| Slc35g1| 19   | 4.430  | -1.20  | -2.30  | 0.03   | ENSMUSG00000044026 |
| Zfp770 | 2    | 2.550  | -1.20  | -2.30  | 0.05   | ENSMUSG00000040321 |
| Sort1  | 3    | 2.760  | -1.18  | -2.27  | 0.02   | ENSMUSG00000068747 |
| Itpr1  | 6    | 2.220  | -1.16  | -2.24  | 0.02   | ENSMUSG00000030102 |
| Naf1   | 8    | 10.930 | -1.16  | -2.23  | 0.01   | ENSMUSG00000014907 |
| Nars2  | 7    | 3.860  | -1.15  | -2.23  | 0.03   | ENSMUSG00000018995 |
| Lmo4   | 3    | 9.050  | -1.14  | -2.21  | 0.02   | ENSMUSG00000028266 |
| Cpnc7  | 8    | 21.840 | -1.13  | -2.19  | 0.01   | ENSMUSG00000034796 |
| Hbb-bh1| 7    | 224.390| -1.13  | -2.18  | 0.00   | ENSMUSG00000052217 |
| Prdm11 | 2    | 2.000  | -1.12  | -2.18  | 0.01   | ENSMUSG00000075028 |
| Pla2g4a| 1    | 5.300  | -1.12  | -2.18  | 0.03   | ENSMUSG00000056220 |
| Eef1e1 | 13   | 12.510 | -1.12  | -2.17  | 0.01   | ENSMUSG0000001707 |
| Zfp593 | 4    | 7.560  | -1.11  | -2.16  | 0.04   | ENSMUSG00000028840 |
| Ssca1  | 2    | 30.720 | -1.10  | -2.15  | 0.03   | ENSMUSG00000079478 |
| Kbtbd8 | 6    | 3.050  | -1.11  | -2.15  | 0.05   | ENSMUSG00000030031 |
| Hacd1  | 2    | 12.700 | -1.09  | -2.13  | 0.02   | ENSMUSG00000063275 |
| Tsfm   | 10   | 9.010  | -1.09  | -2.13  | 0.03   | ENSMUSG00000040521 |
| Isoc1  | 18   | 11.600 | -1.08  | -2.12  | 0.03   | ENSMUSG00000024601 |
| Pip4k2b| 11   | 9.740  | -1.08  | -2.11  | 0.00   | ENSMUSG00000018547 |
| Coro1a | 7    | 20.260 | -1.08  | -2.11  | 0.02   | ENSMUSG00000030707 |
| Twf2   | 9    | 9.510  | -1.08  | -2.11  | 0.03   | ENSMUSG00000023277 |
| Timm8a1| X    | 33.090 | -1.06  | -2.09  | 0.01   | ENSMUSG00000048007 |
| Slc19a1| 10   | 7.770  | -1.07  | -2.09  | 0.02   | ENSMUSG0000001436 |
| Cox10  | 11   | 7.360  | -1.06  | -2.09  | 0.03   | ENSMUSG00000042148 |
| Ube2cl | 14   | 16.460 | -1.06  | -2.09  | 0.05   | ENSMUSG00000021774 |
| Rrp9   | 9    | 32.600 | -1.06  | -2.08  | 0.00   | ENSMUSG00000041506 |
| mt-Nd2 | MT   | 839.290| -1.05  | -2.08  | 0.01   | ENSMUSG00000064345 |
| Egln1  | 8    | 24.510 | -1.05  | -2.07  | 0.00   | ENSMUSG00000031987 |
| Ddx10  | 9    | 13.210 | -1.05  | -2.07  | 0.02   | ENSMUSG00000053289 |
| Tmed5  | 5    | 3.370  | -1.05  | -2.07  | 0.04   | ENSMUSG00000063406 |
| Vps13a | 19   | 4.680  | -1.05  | -2.06  | 0.00   | ENSMUSG00000046230 |
| Gene   | ID   | Log2 Ratio | Fold Change | q-value | Gene ID                  |
|--------|------|------------|-------------|---------|--------------------------|
| Npm1   | 11   | -1.04      | -2.06       | 0.01    | ENSMUSG00000057113       |
| Ptpn4  | 1    | -1.04      | -2.06       | 0.04    | ENSMUSG00000026384       |
| Ttc27  | 17   | -1.03      | -2.05       | 0.02    | ENSMUSG00000024078       |
| Mapre2 | 18   | -1.03      | -2.04       | 0.00    | ENSMUSG00000024277       |
| Setdb1 | 3    | -1.02      | -2.03       | 0.00    | ENSMUSG00000015697       |
| Tomm5  | 4    | -1.02      | -2.03       | 0.01    | ENSMUSG00000078713       |
| Heatr1 | 13   | -1.01      | -2.02       | 0.00    | ENSMUSG00000050244       |
| Dcaf4  | 12   | -1.02      | -2.02       | 0.00    | ENSMUSG00000021222       |
| Fam49b | 15   | -1.02      | -2.02       | 0.02    | ENSMUSG00000022378       |
| Psen2  | 1    | -1.02      | -2.02       | 0.05    | ENSMUSG00000010609       |
| Dock8  | 19   | -1.01      | -2.01       | 0.01    | ENSMUSG00000052085       |
| Gtf2h2 | 13   | -1.00      | -2.01       | 0.05    | ENSMUSG0000021639        |
| Thumpd1| 7    | -1.00      | -2.00       | 0.01    | ENSMUSG00000030942       |
| Pnpt1  | 11   | -1.00      | -2.00       | 0.02    | ENSMUSG00000020464       |
| Slc7a6 | 8    | -1.00      | -2.00       | 0.02    | ENSMUSG00000031904       |
### Supplemental Table 8. Upregulated genes in *Dot1L-MM* ESRE cells in common with *Dot1L-KO* cells (n=756)

| Gene Name | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL               |
|-----------|------------|----------------|------------------|-------------|---------|-----------------------|
| Aqp1      | 6          | 0.000          | 4.47             | 22.19       | 0.00    | ENSMUSG0000004655     |
| Tmtc1     | 6          | 0.000          | 2.92             | 7.55        | 0.00    | ENSMUSG00000030306    |
| Paqr9     | 9          | 0.000          | 2.98             | 7.90        | 0.00    | ENSMUSG00000064225    |
| Rsad2     | 12         | 0.000          | 4.78             | 27.51       | 0.00    | ENSMUSG00000020641    |
| Chga      | 12         | 0.000          | 4.61             | 24.41       | 0.00    | ENSMUSG00000021194    |
| Isg20     | 7          | 0.000          | 2.50             | 5.65        | 0.00    | ENSMUSG00000039236    |
| Pttn14    | 1          | 0.000          | 2.95             | 7.73        | 0.00    | ENSMUSG00000026604    |
| Il1r1l2   | 1          | 0.000          | 3.49             | 11.23       | 0.00    | ENSMUSG00000070942    |
| Il1r1     | 1          | 0.000          | 3.76             | 13.50       | 0.00    | ENSMUSG00000026072    |
| Hist1h2bq | 13         | 0.000          | 3.35             | 10.20       | 0.00    | ENSMUSG00000069307    |
| Hist3h2a  | 11         | 0.000          | 2.69             | 6.45        | 0.00    | ENSMUSG00000078851    |
| Vgf       | 5          | 0.000          | 3.20             | 9.19        | 0.00    | ENSMUSG00000037428    |
| Ackr3     | 1          | 0.000          | 2.64             | 6.24        | 0.00    | ENSMUSG00000044337    |
| Rtn4rl2   | 2          | 0.000          | 4.00             | 15.97       | 0.00    | ENSMUSG00000050896    |
| Jun       | 4          | 0.000          | 2.45             | 5.48        | 0.00    | ENSMUSG00000052684    |
| Dapk2     | 9          | 0.000          | 2.60             | 6.08        | 0.00    | ENSMUSG00000032380    |
| Hsd3b6    | 3          | 0.000          | 2.28             | 4.86        | 0.00    | ENSMUSG00000027869    |
| Serpine1  | 5          | 0.000          | 2.62             | 6.14        | 0.00    | ENSMUSG00000037411    |
| Prune2    | 19         | 0.000          | 2.24             | 4.74        | 0.00    | ENSMUSG00000039126    |
| Sowaha    | 11         | 0.000          | 1.97             | 3.93        | 0.00    | ENSMUSG00000044352    |
| Dst       | 1          | 0.000          | 2.38             | 5.20        | 0.00    | ENSMUSG00000026131    |
| AW011738  | 4          | 0.000          | 2.37             | 5.18        | 0.00    | ENSMUSG00000078349    |
| Klhl22    | 16         | 0.000          | 2.62             | 6.16        | 0.00    | ENSMUSG00000022750    |
| Hopx      | 5          | 0.000          | 2.35             | 5.08        | 0.00    | ENSMUSG00000059325    |
| Abca8b    | 11         | 0.000          | 3.39             | 10.48       | 0.00    | ENSMUSG00000020620    |
| Gm45716   | 11         | 0.000          | 3.12             | 8.71        | 0.00    | ENSMUSG000000110344   |
| Cebpa     | 7          | 0.000          | 2.69             | 6.47        | 0.00    | ENSMUSG00000034957    |
| Zfp874a   | 13         | 0.000          | 2.39             | 5.25        | 0.00    | ENSMUSG00000069206    |
| Tmem140   | 6          | 0.000          | 2.24             | 4.71        | 0.00    | ENSMUSG00000057137    |
| Col11a1   | 3          | 0.000          | 3.50             | 11.34       | 0.00    | ENSMUSG000000027966   |
| Gene     | Count | FDR   | Exp   | p-value | EntrezGeneID       |
|----------|-------|-------|-------|---------|--------------------|
| Ugdh     | 5     | 0.000 | 2.10  | 4.28    | ENSMUSG00000029201 |
| Oasl2    | 5     | 0.000 | 3.22  | 9.31    | ENSMUSG00000029561 |
| Plgl1    | 10    | 0.000 | 3.21  | 9.27    | ENSMUSG00000019817 |
| Masp1    | 16    | 0.000 | 3.82  | 14.10   | ENSMUSG00000022887 |
| Shroom4  | X     | 0.000 | 2.60  | 6.04    | ENSMUSG00000068270 |
| Fstl1    | 16    | 0.000 | 3.16  | 8.95    | ENSMUSG00000022816 |
| Hist2h2aa1| 3   | 0.000 | 2.73  | 6.63    | ENSMUSG00000064220 |
| Cd36     | 5     | 0.000 | 2.66  | 6.33    | ENSMUSG00000022944 |
| Ccdc92b  | 11    | 0.000 | 1.91  | 3.75    | ENSMUSG00000069814 |
| Col5a1   | 2     | 0.000 | 3.00  | 8.01    | ENSMUSG00000026837 |
| Snx21    | 2     | 0.000 | 1.83  | 3.55    | ENSMUSG00000050373 |
| Nyx      | X     | 0.000 | 2.70  | 6.52    | ENSMUSG00000051228 |
| Rapgef4  | 2     | 0.000 | 2.74  | 6.68    | ENSMUSG00000049044 |
| Dusp8    | 7     | 0.000 | 1.97  | 3.91    | ENSMUSG00000037887 |
| Igfbp2   | 1     | 0.000 | 3.38  | 10.41   | ENSMUSG00000039323 |
| Acta2    | 19    | 0.000 | 3.53  | 11.58   | ENSMUSG00000035783 |
| Hist3h2ba| 11    | 0.000 | 3.27  | 9.63    | ENSMUSG00000056895 |
| Mmel1    | 4     | 0.000 | 2.52  | 5.74    | ENSMUSG00000058183 |
| Prnp     | 2     | 0.000 | 1.62  | 3.08    | ENSMUSG00000079037 |
| Clgn     | 8     | 0.000 | 3.87  | 14.58   | ENSMUSG0000002190 |
| Rnasel   | 1     | 0.000 | 1.63  | 3.08    | ENSMUSG00000066800 |
| Jph2     | 2     | 0.000 | 3.61  | 12.25   | ENSMUSG00000017817 |
| Efemp1   | 11    | 0.000 | 4.67  | 25.43   | ENSMUSG00000020467 |
| Samd11   | 4     | 0.000 | 1.69  | 3.22    | ENSMUSG00000096351 |
| Slec44a1 | 4     | 0.000 | 1.70  | 3.26    | ENSMUSG00000028412 |
| Galnt6   | 15    | 0.000 | 2.58  | 5.99    | ENSMUSG00000037280 |
| Mettl7a1 | 15    | 0.000 | 1.58  | 2.99    | ENSMUSG00000054619 |
| Hist1h2bc| 13    | 0.000 | 1.96  | 3.90    | ENSMUSG00000018102 |
| Rundc3a  | 11    | 0.000 | 2.27  | 4.81    | ENSMUSG0000006575 |
| Col8a1   | 16    | 0.000 | 3.86  | 14.51   | ENSMUSG00000068196 |
| Tns1     | 1     | 0.000 | 2.09  | 4.27    | ENSMUSG00000055322 |
| Irf2bp1  | 12    | 0.000 | 3.02  | 8.10    | ENSMUSG00000034168 |
| Rhbdf1   | 11    | 0.000 | 1.86  | 3.64    | ENSMUSG00000020282 |
| Gene   | ID | Fold Change | Expression | p-Value | Gene ID                  |
|--------|----|-------------|------------|---------|-------------------------|
| Zfp37  | 4  | 3.63        | 12.41      | 0.00    | ENSMUSG00000028389      |
| Mfhas1 | 8  | 2.44        | 5.41       | 0.00    | ENSMUSG00000070056      |
| Rsph9  | 17 | 2.68        | 6.41       | 0.00    | ENSMUSG00000023966      |
| Fbn1   | 2  | 3.02        | 8.09       | 0.00    | ENSMUSG00000027204      |
| Mboat2 | 12 | 2.30        | 4.92       | 0.00    | ENSMUSG00000020646      |
| Ypel4  | 8  | 1.85        | 3.60       | 0.00    | ENSMUSG00000002983      |
| Hist2h2aa2 | 3 | 2.55 | 5.87   | 0.00    | ENSMUSG00000063954      |
| Vwa5a  | 9  | 1.60        | 3.04       | 0.00    | ENSMUSG00000023186      |
| Relb   | 7  | 2.46        | 5.49       | 0.00    | ENSMUSG00000002983      |
| Itrp2  | 6  | 1.75        | 3.37       | 0.00    | ENSMUSG00000030287      |
| Csf2rb2 | 15 | 1.85        | 3.61       | 0.00    | ENSMUSG00000071714      |
| Myh11  | 16 | 4.05        | 16.52      | 0.00    | ENSMUSG00000018830      |
| Pld3   | 7  | 1.59        | 3.00       | 0.00    | ENSMUSG00000003363      |
| Prss23 | 7  | 3.14        | 8.79       | 0.00    | ENSMUSG00000039405      |
| Cystm1 | 18 | 2.01        | 4.03       | 0.00    | ENSMUSG00000046727      |
| Arl4c  | 1  | 2.39        | 5.25       | 0.00    | ENSMUSG00000049866      |
| CelF4  | 18 | 2.29        | 4.88       | 0.00    | ENSMUSG00000024268      |
| Tcp1111 | 2 | 1.96        | 3.90       | 0.00    | ENSMUSG00000027175      |
| Ypel3  | 7  | 1.85        | 3.62       | 0.00    | ENSMUSG00000042675      |
| Lgmn   | 12 | 1.82        | 3.52       | 0.00    | ENSMUSG00000021190      |
| Timp2  | 11 | 2.60        | 6.07       | 0.00    | ENSMUSG00000017466      |
| Trim58 | 11 | 1.58        | 2.98       | 0.00    | ENSMUSG00000037124      |
| Lox    | 18 | 2.90        | 7.45       | 0.00    | ENSMUSG00000024529      |
| Vsir   | 10 | 2.05        | 4.13       | 0.00    | ENSMUSG00000020101      |
| Klk1b22| 7  | 4.77        | 27.37      | 0.00    | ENSMUSG00000060177      |
| Ehd2   | 7  | 2.64        | 6.22       | 0.00    | ENSMUSG00000074364      |
| Col5a2 | 1  | 3.18        | 9.06       | 0.00    | ENSMUSG00000026042      |
| Suco   | 1  | 1.86        | 3.63       | 0.00    | ENSMUSG00000040297      |
| Khnyn  | 14 | 1.49        | 2.80       | 0.00    | ENSMUSG00000047153      |
| Stard10| 7  | 1.81        | 3.51       | 0.00    | ENSMUSG00000030688      |
| Elmo1  | 13 | 1.82        | 3.52       | 0.00    | ENSMUSG00000041112      |
| Il1r2  | 1  | 3.25        | 9.51       | 0.00    | ENSMUSG00000026073      |
| Fam220a_1 | 5 | 1.85        | 3.60       | 0.00    | ENSMUSG00000118332      |
| Gene   | Gpm | Fpm | Lfm | Tlm | Lmd | Empl | Nml |
|--------|-----|-----|-----|-----|-----|------|-----|
| Hmox1  | 8   | 0.000 | 2.25 | 4.75 | 0.00 | ENSMUSG00000005413 |
| Gdf15  | 8   | 0.000 | 2.93 | 7.64 | 0.00 | ENSMUSG00000038508 |
| Igfbp5 | 1   | 0.000 | 2.80 | 6.97 | 0.00 | ENSMUSG00000026185 |
| Lama2  | 10  | 0.000 | 4.53 | 23.14 | 0.00 | ENSMUSG00000019899 |
| Rnf128 | X   | 0.000 | 1.53 | 2.89 | 0.00 | ENSMUSG00000031438 |
| Hist1h1c | 13  | 0.000 | 1.77 | 3.41 | 0.00 | ENSMUSG00000036181 |
| Pla2r1 | 2   | 0.000 | 3.75 | 13.45 | 0.00 | ENSMUSG00000002083 |
| Btc3  | 7   | 0.000 | 1.91 | 3.76 | 0.00 | ENSMUSG0000000706 |
| Bntl1 | 13  | 0.000 | 1.62 | 3.07 | 0.00 | ENSMUSG00000031438 |
| Mad2l1bp | 17  | 0.000 | 1.64 | 3.11 | 0.00 | ENSMUSG00000034509 |
| Gpc1  | 1   | 0.000 | 2.52 | 5.75 | 0.00 | ENSMUSG00000034220 |
| Klf6  | 15  | 0.000 | 1.47 | 2.77 | 0.00 | ENSMUSG0000000078 |
| Lpin1 | 12  | 0.000 | 1.37 | 2.59 | 0.00 | ENSMUSG00000020593 |
| Fosl2 | 5   | 0.000 | 2.18 | 4.53 | 0.00 | ENSMUSG00000029135 |
| Cdkn2b | 4   | 0.000 | 2.45 | 5.45 | 0.00 | ENSMUSG000000073802 |
| Tagln | 9   | 0.000 | 3.01 | 8.03 | 0.00 | ENSMUSG00000032085 |
| Mx2   | 16  | 0.000 | 3.25 | 9.49 | 0.00 | ENSMUSG00000023341 |
| Pard3 | 8   | 0.000 | 2.07 | 4.20 | 0.00 | ENSMUSG00000025812 |
| Cemip | 7   | 0.000 | 3.40 | 10.57 | 0.00 | ENSMUSG00000052353 |
| S125a33 | 4   | 0.000 | 1.95 | 3.88 | 0.00 | ENSMUSG00000028982 |
| Thy1  | 9   | 0.000 | 4.32 | 20.01 | 0.00 | ENSMUSG00000032011 |
| Arid5b | 10  | 0.000 | 2.30 | 4.91 | 0.00 | ENSMUSG00000019947 |
| Gch1  | 14  | 0.000 | 1.80 | 3.48 | 0.00 | ENSMUSG00000037580 |
| Mgl1  | 6   | 0.000 | 1.48 | 2.79 | 0.00 | ENSMUSG00000033174 |
| Cx3cl1 | 8   | 0.000 | 3.14 | 8.81 | 0.00 | ENSMUSG00000031778 |
| Abtb1 | 6   | 0.000 | 1.41 | 2.66 | 0.00 | ENSMUSG00000030803 |
| Sqst1 | 11  | 0.000 | 1.99 | 3.97 | 0.00 | ENSMUSG00000015837 |
| Abhd4 | 14  | 0.000 | 1.55 | 2.93 | 0.00 | ENSMUSG00000040997 |
| Mfsd12 | 10  | 0.000 | 1.47 | 2.78 | 0.00 | ENSMUSG00000034854 |
| Loxl2 | 14  | 0.000 | 2.75 | 6.72 | 0.00 | ENSMUSG00000034205 |
| Neo1  | 9   | 0.000 | 2.16 | 4.47 | 0.00 | ENSMUSG00000032340 |
| Ldlrad4 | 18  | 0.000 | 2.20 | 4.59 | 0.00 | ENSMUSG00000024544 |
| Gene   | Exp | Log2FC | fold change | p-value | Gene ID         |
|--------|-----|--------|-------------|---------|----------------|
| Svep1  | 4   | 0.000  | 3.78        | 13.71   | 0.000 ENSMUSG00000028369 |
| Cd163  | 6   | 0.000  | 5.30        | 39.52   | 0.000 ENSMUSG00000008845  |
| Bsdcl  | 4   | 0.000  | 1.64        | 3.13    | 0.000 ENSMUSG00000040859  |
| Fabp4  | 3   | 0.000  | 2.85        | 7.20    | 0.000 ENSMUSG00000062515  |
| Fmod   | 1   | 0.000  | 4.85        | 28.76   | 0.000 ENSMUSG00000041559  |
| Tll1   | 8   | 0.000  | 4.13        | 17.46   | 0.000 ENSMUSG00000053626  |
| Adrb2  | 18  | 0.000  | 4.13        | 17.46   | 0.000 ENSMUSG00000045730  |
| Fam213a| 14  | 0.000  | 1.46        | 2.75    | 0.000 ENSMUSG00000021792  |
| Hmgcs2 | 3   | 0.000  | 2.72        | 6.60    | 0.000 ENSMUSG00000027875  |
| Dstyk  | 1   | 0.000  | 1.48        | 2.80    | 0.000 ENSMUSG00000042046  |
| Dcn    | 10  | 0.000  | 3.26        | 9.60    | 0.000 ENSMUSG00000019929  |
| Gtpbp2 | 17  | 0.000  | 1.64        | 3.13    | 0.000 ENSMUSG00000023952  |
| Pgm5   | 19  | 0.000  | 4.29        | 19.62   | 0.000 ENSMUSG00000041731  |
| Cav1   | 6   | 0.000  | 2.73        | 6.64    | 0.000 ENSMUSG00000007655  |
| Fosl1  | 19  | 0.000  | 2.38        | 5.19    | 0.000 ENSMUSG00000024912  |
| Bmi10  | 11  | 0.000  | 2.10        | 4.30    | 0.000 ENSMUSG00000020490  |
| Gm4070 | 7   | 0.000  | 1.48        | 2.78    | 0.000 ENSMUSG00000078606  |
| Htra1  | 7   | 0.000  | 2.94        | 7.69    | 0.000 ENSMUSG0000006205  |
| Ltbp4  | 7   | 0.000  | 3.53        | 11.58   | 0.000 ENSMUSG00000040488  |
| Rph3al | 11  | 0.000  | 2.74        | 6.70    | 0.000 ENSMUSG00000020847  |
| Hsd11b1| 1   | 0.000  | 3.97        | 15.64   | 0.000 ENSMUSG00000016194  |
| Junb   | 8   | 0.000  | 1.82        | 3.53    | 0.000 ENSMUSG00000052837  |
| Fn3k   | 11  | 0.000  | 2.11        | 4.31    | 0.000 ENSMUSG00000025175  |
| Hlx    | 1   | 0.000  | 1.97        | 3.90    | 0.000 ENSMUSG00000039377  |
| Tmem71 | 15  | 0.000  | 2.74        | 6.66    | 0.000 ENSMUSG00000036944  |
| Medag  | 5   | 0.000  | 4.10        | 17.16   | 0.000 ENSMUSG00000029659  |
| Hist1h2ac | 13 | 0.000 | 2.81      | 7.03 | 0.000 ENSMUSG00000069270 |
| Ppp2r5b| 19  | 0.000  | 1.77        | 3.42    | 0.000 ENSMUSG00000024777  |
| Prokr1 | 6   | 0.000  | 1.39        | 2.62    | 0.000 ENSMUSG00000049409  |
| Pltp   | 2   | 0.000  | 3.06        | 8.36    | 0.000 ENSMUSG00000017754  |
| Cdkn1b | 6   | 0.000  | 1.48        | 2.79    | 0.000 ENSMUSG0000003031  |
| Meioc  | 11  | 0.000  | 4.39        | 21.00   | 0.000 ENSMUSG00000051455  |
| Lpin2  | 17  | 0.000  | 1.65        | 3.14    | 0.000 ENSMUSG00000024052  |
| Gene   | FPKM | FC   | Adj p | Fold   | EntrezGeneID       |
|--------|------|------|-------|--------|--------------------|
| App    | 16   | 0.000| 2.10  | 4.28   | 0.00               |
| Slc7a11| 3    | 0.000| 1.62  | 3.07   | 0.00               |
| Isg15  | 4    | 0.000| 2.65  | 6.28   | 0.00               |
| Wdr45  | X    | 0.000| 1.41  | 2.67   | 0.00               |
| Sertad3| 7    | 0.000| 1.46  | 2.76   | 0.00               |
| Gdpd3  | 7    | 0.000| 3.60  | 12.13  | 0.00               |
| Ccr12  | 9    | 0.000| 1.59  | 3.01   | 0.00               |
| Zrsr1  | 11   | 0.000| 1.40  | 2.64   | 0.00               |
| Ccng2  | 5    | 0.000| 1.19  | 2.28   | 0.00               |
| Maged1 | X    | 0.000| 1.53  | 2.89   | 0.00               |
| Ube2b  | 11   | 0.000| 1.42  | 2.68   | 0.00               |
| Oas3   | 5    | 0.000| 3.48  | 11.16  | 0.00               |
| Flnc   | 6    | 0.000| 2.03  | 4.10   | 0.00               |
| Trp53inp1| 4   | 0.000| 1.38  | 2.60   | 0.00               |
| Abhd6  | 14   | 0.000| 2.09  | 4.26   | 0.00               |
| Crem   | 18   | 0.000| 1.80  | 3.48   | 0.00               |
| Ctsf   | 19   | 0.000| 1.74  | 3.33   | 0.00               |
| Reln   | 5    | 0.000| 1.32  | 2.50   | 0.00               |
| H1f0   | 15   | 0.000| 1.25  | 2.38   | 0.00               |
| Kdm5b  | 1    | 0.000| 1.20  | 2.29   | 0.00               |
| 1700017B05Rik| 9 | 0.000| 1.80  | 3.48   | 0.00               |
| Lhfp   | 3    | 0.000| 3.19  | 9.14   | 0.00               |
| Lgals3 | 14   | 0.000| 1.74  | 3.35   | 0.00               |
| Axl    | 7    | 0.000| 2.50  | 5.66   | 0.00               |
| Nuak2  | 1    | 0.000| 2.43  | 5.39   | 0.00               |
| Naa80  | 9    | 0.000| 1.17  | 2.25   | 0.00               |
| Smpdl3a| 10   | 0.000| 2.22  | 4.66   | 0.00               |
| Gba2   | 4    | 0.000| 1.27  | 2.41   | 0.00               |
| Mmp2   | 8    | 0.000| 1.66  | 3.17   | 0.00               |
| H2-D1  | 17   | 0.000| 1.51  | 2.85   | 0.00               |
| Ccdc141| 2    | 0.000| 1.82  | 3.52   | 0.00               |
| Col11a1| 11   | 0.000| 2.78  | 6.85   | 0.00               |
| Ccdc9b | 2    | 0.000| 3.01  | 8.05   | 0.00               |
| Gene       | Gene ID | Log2 Fold Change | Adj. P Value | FDR | Ensembl ID       |
|------------|---------|-----------------|--------------|-----|------------------|
| Sh3pxd2a  |         | 19.00000        | 2.33         | 5.03| 0.0000000053617  |
| Btg2      |         | 1.00000         | 1.50         | 2.84| 0.000000020423   |
| Pbx4      |         | 8.00000         | 2.97         | 7.85| 0.000000031860   |
| Mxd1      |         | 6.00000         | 1.52         | 2.88| 0.00000001156    |
| Hist1h4i  |         | 13.00000        | 1.71         | 3.27| 0.0000000660639  |
| Hist1h2br |         | 13.00000        | 3.33         | 10.05| 0.000000069303    |
| Atg4a     |         | X.00000         | 1.18         | 2.27| 0.000000079418    |
| Atf3      |         | 1.00000         | 1.43         | 2.69| 0.000000026628    |
| Sgms1     |         | 19.00000        | 1.19         | 2.28| 0.000000040451    |
| Ube2h     |         | 6.00000         | 1.48         | 2.79| 0.000000039159    |
| Nfil3     |         | 13.00000        | 1.97         | 3.93| 0.000000056749    |
| Ahnak     |         | 19.00000        | 1.71         | 3.27| 0.000000069833    |
| Stk32a    |         | 18.00000        | 2.98         | 7.91| 0.000000039954    |
| Slc16a10  |         | 10.00000        | 1.53         | 2.89| 0.000000019838    |
| Zswim4    |         | 8.00000         | 1.35         | 2.55| 0.000000035671    |
| S100a11   |         | 3.00000         | 1.95         | 3.88| 0.000000027907    |
| Ddit4     |         | 10.00000        | 1.52         | 2.86| 0.000000020108    |
| Mef2d     |         | 3.00000         | 1.36         | 2.57| 0.00000001419    |
| Atg14     |         | 14.00000        | 1.29         | 2.45| 0.000000037526    |
| Acot2     |         | 12.00000        | 1.75         | 3.36| 0.000000021226    |
| Eps8l1    |         | 7.00000         | 4.23         | 18.81| 0.00000006154    |
| Slc6a20a  |         | 9.00000         | 2.71         | 6.55| 0.000000036814    |
| Ankrd33b  |         | 15.00000        | 2.24         | 4.74| 0.000000022237    |
| Slfn14    |         | 11.00000        | 1.50         | 2.83| 0.000000082101    |
| Anxa8     |         | 14.00000        | 2.65         | 6.27| 0.000000021950    |
| Dnajb9    |         | 12.00000        | 1.38         | 2.60| 0.000000014905    |
| Col12a1   |         | 9.00000         | 2.73         | 6.64| 0.000000032332    |
| Zfp750    |         | 11.00000        | 2.04         | 4.12| 0.000000039238    |
| Nfkb2     |         | 19.00000        | 1.34         | 2.53| 0.000000025225    |
| Gstt2     |         | 10.00000        | 1.87         | 3.64| 0.000000033318    |
| Dnajb4    |         | 3.00000         | 1.36         | 2.58| 0.000000028035    |
| Itgb7     |         | 15.00000        | 1.33         | 2.52| 0.00000001281    |
| Pik3r1    |         | 13.00000        | 1.27         | 2.42| 0.000000041417    |
| Gene   | Rank | Value  | Fold | Raw | ENSMUSG | Description   |
|--------|------|--------|------|-----|---------|--------------|
| Dusp1  | 17   | 0.000  | 1.43 | 2.69| 0.00    | ENSMUSG00000024190 |
| Bcl6   | 16   | 0.000  | 1.89 | 3.70| 0.00    | ENSMUSG00000022508 |
| Ccde88a| 11   | 0.000  | 1.28 | 2.44| 0.00    | ENSMUSG00000032740 |
| Zfp773 | 7    | 0.000  | 2.43 | 5.40| 0.00    | ENSMUSG00000063535 |
| Fbxl3  | 14   | 0.000  | 1.41 | 2.66| 0.00    | ENSMUSG00000022124 |
| Zfp703 | 8    | 0.000  | 1.59 | 3.00| 0.00    | ENSMUSG00000085795 |
| Kdm6b  | 11   | 0.000  | 1.39 | 2.63| 0.00    | ENSMUSG00000018476 |
| Fhl1   | X    | 0.000  | 1.28 | 2.43| 0.00    | ENSMUSG00000023092 |
| P2rx7  | 5    | 0.000  | 2.58 | 5.97| 0.00    | ENSMUSG00000029468 |
| 1-Sep  | 7    | 0.000  | 1.21 | 2.31| 0.00    | ENSMUSG0000000486 |
| Hist1h3d| 13   | 0.000  | 2.74 | 6.70| 0.00    | ENSMUSG00000099583 |
| Tmcc2  | 1    | 0.000  | 1.52 | 2.86| 0.00    | ENSMUSG00000042066 |
| Trp53imp2| 2   | 0.000  | 1.54 | 2.90| 0.00    | ENSMUSG00000038375 |
| Jag1   | 2    | 0.000  | 2.78 | 6.85| 0.00    | ENSMUSG00000027276 |
| Serinc2| 4    | 0.000  | 1.93 | 3.81| 0.00    | ENSMUSG00000023232 |
| Unc5cl | 17   | 0.000  | 2.88 | 7.38| 0.00    | ENSMUSG00000043592 |
| Ptgs2  | 1    | 0.000  | 2.08 | 4.23| 0.00    | ENSMUSG00000032487 |
| Slit3  | 11   | 0.000  | 3.04 | 8.25| 0.00    | ENSMUSG00000056427 |
| Per1   | 11   | 0.000  | 1.21 | 2.32| 0.00    | ENSMUSG00000020893 |
| Tcep11l2| 10  | 0.000  | 1.07 | 2.71| 0.00    | ENSMUSG00000020034 |
| Hdac5  | 11   | 0.000  | 1.44 | 2.10| 0.00    | ENSMUSG00000008855 |
| Nfic   | 10   | 0.000  | 1.57 | 2.97| 0.00    | ENSMUSG00000055053 |
| Mmp27  | 9    | 0.000  | 4.24 | 18.93| 0.00    | ENSMUSG00000070323 |
| Cdc42ep4| 11  | 0.000  | 1.19 | 2.28| 0.00    | ENSMUSG00000041598 |
| Dyrk3  | 1    | 0.000  | 1.52 | 2.88| 0.00    | ENSMUSG00000016526 |
| Zfp36  | 7    | 0.000  | 1.67 | 3.18| 0.00    | ENSMUSG00000044786 |
| Ugt8a  | 3    | 0.000  | 3.15 | 8.87| 0.00    | ENSMUSG00000032854 |
| Mafk   | 5    | 0.000  | 1.31 | 2.47| 0.00    | ENSMUSG00000018143 |
| Ahnak2 | 12   | 0.000  | 2.07 | 4.20| 0.00    | ENSMUSG00000072812 |
| Mcam   | 9    | 0.000  | 3.28 | 9.74| 0.00    | ENSMUSG00000032135 |
| Resfl  | 6    | 0.000  | 1.38 | 2.61| 0.00    | ENSMUSG00000032712 |
| Bicra  | 7    | 0.000  | 1.01 | 2.01| 0.00    | ENSMUSG00000070808 |
| Illdr2 | 1    | 0.000  | 3.44 | 10.83| 0.00    | ENSMUSG00000040612 |
| Gene   | Total | P-val | Log2 fold change | C-value | EntrezID     |
|--------|-------|-------|------------------|---------|--------------|
| Lhfpl2 | 13    | 0.000 | 2.06             | 4.18    | ENSMUSG00000045312 |
| Dglucy | 12    | 0.000 | 3.07             | 8.39    | ENSMUSG00000021185 |
| Hist1h2ad | 13  | 0.000 | 3.62             | 12.31   | ENSMUSG000000071478 |
| Prkab2 | 3     | 0.000 | 1.23             | 2.34    | ENSMUSG00000038205 |
| Rit1   | 3     | 0.000 | 1.15             | 2.23    | ENSMUSG00000028057 |
| Rab30  | 7     | 0.000 | 1.58             | 2.99    | ENSMUSG000000030643 |
| Rsrp1  | 4     | 0.000 | 1.36             | 2.56    | ENSMUSG000000037266 |
| Gcm2   | 13    | 0.000 | 3.33             | 10.05   | ENSMUSG00000021362 |
| Sfxn3  | 19    | 0.000 | 1.82             | 3.54    | ENSMUSG00000025212 |
| Postn  | 3     | 0.000 | 2.83             | 7.13    | ENSMUSG00000027750 |
| Mettl27 | 5    | 0.000 | 1.12             | 2.17    | ENSMUSG000000040557 |
| Phlda1 | 10    | 0.000 | 1.29             | 2.45    | ENSMUSG000000020205 |
| CoI3a1 | 1     | 0.000 | 2.89             | 7.43    | ENSMUSG00000026043 |
| Mkrn1  | 6     | 0.000 | 1.48             | 2.79    | ENSMUSG00000029922 |
| Abcc3  | 11    | 0.000 | 2.24             | 4.73    | ENSMUSG00000020865 |
| Fbxo30 | 10    | 0.000 | 1.19             | 2.29    | ENSMUSG000000047648 |
| Vim    | 2     | 0.000 | 1.67             | 3.18    | ENSMUSG000000026728 |
| Slc43a2| 11    | 0.000 | 1.12             | 2.18    | ENSMUSG000000038178 |
| Csf2rb | 15    | 0.000 | 1.36             | 2.56    | ENSMUSG000000071713 |
| Gadd45a| 6     | 0.000 | 1.49             | 2.81    | ENSMUSG00000036390 |
| Klhl25 | 7     | 0.000 | 1.30             | 2.47    | ENSMUSG000000055652 |
| Hist1h2ao | 13 | 0.000 | 3.62             | 12.30   | ENSMUSG000000094248 |
| Bgn    | X     | 0.000 | 3.02             | 8.09    | ENSMUSG000000031375 |
| Npr2   | 4     | 0.000 | 2.84             | 7.15    | ENSMUSG000000028469 |
| Ezlh1  | 11    | 0.000 | 1.08             | 2.12    | ENSMUSG00000006920 |
| Smtnl1 | 2     | 0.000 | 1.95             | 3.86    | ENSMUSG00000027077 |
| Hr     | 14    | 0.000 | 2.67             | 6.36    | ENSMUSG000000022096 |
| Jund   | 8     | 0.000 | 1.52             | 2.87    | ENSMUSG000000071076 |
| Hyal1  | 9     | 0.000 | 1.87             | 3.65    | ENSMUSG000000010051 |
| Fam214b| 4     | 0.000 | 1.34             | 2.53    | ENSMUSG000000036002 |
| Hbp1   | 12    | 0.000 | 1.19             | 2.28    | ENSMUSG00000002996 |
| Tnxb   | 17    | 0.000 | 3.31             | 9.92    | ENSMUSG000000033327 |
| Kirrel | 3     | 0.000 | 2.10             | 4.28    | ENSMUSG000000041734 |
| Gene   | Start | p-value | Expression | FDR | EntrezGeneID   |
|--------|-------|---------|------------|-----|----------------|
| Agrn   | 4     | 0.000   | 1.29       | 2.45| ENSMUSG00000041936 |
| Tent5b | 4     | 0.000   | 3.06       | 8.34| ENSMUSG00000046694 |
| Xpo7   | 14    | 0.000   | 1.41       | 2.66| ENSMUSG00000022100 |
| Lcp1   | 14    | 0.000   | 1.23       | 2.34| ENSMUSG00000021998 |
| Ube2o  | 11    | 0.000   | 1.42       | 2.68| ENSMUSG00000020802 |
| Cavin1 | 11    | 0.000   | 1.86       | 3.64| ENSMUSG00000004044 |
| Fam53b | 7     | 0.000   | 1.09       | 2.13| ENSMUSG00000030956 |
| Ubap1  | 4     | 0.000   | 1.33       | 2.51| ENSMUSG00000028437 |
| Ddit3_1| 10    | 0.000   | 1.32       | 2.50| ENSMUSG00000025408 |
| Btg1   | 10    | 0.000   | 1.11       | 2.15| ENSMUSG00000036478 |
| Gstp3  | 19    | 0.000   | 1.68       | 3.20| ENSMUSG00000058216 |
| Mxi1   | 19    | 0.000   | 1.29       | 2.44| ENSMUSG00000025025 |
| Anxa1  | 19    | 0.000   | 1.81       | 3.50| ENSMUSG00000024659 |
| Stk17b | 1     | 0.000   | 1.10       | 2.14| ENSMUSG00000026094 |
| Plk3   | 4     | 0.000   | 1.59       | 3.00| ENSMUSG00000028680 |
| Ptpdc1 | 13    | 0.000   | 2.78       | 6.85| ENSMUSG00000038042 |
| Rnh1   | 7     | 0.000   | 1.10       | 2.15| ENSMUSG00000038650 |
| Serpina3n | 12 | 0.000 | 2.99 | 7.96 | ENSMUSG00000021091 |
| Kcnh3  | 15    | 0.000   | 2.57       | 5.92| ENSMUSG00000037579 |
| Hist2h2be | 3 | 0.000 | 1.80 | 3.47 | ENSMUSG00000068854 |
| Klh21  | 4     | 0.000   | 1.23       | 2.34| ENSMUSG00000073700 |
| Tgfb3  | 12    | 0.000   | 3.25       | 9.55| ENSMUSG00000021253 |
| Dnase1I| X     | 0.000   | 1.26       | 2.39| ENSMUSG00000019088 |
| Aldh1a1| 19    | 0.000   | 1.58       | 3.00| ENSMUSG00000053279 |
| Ptg4   | 15    | 0.000   | 1.62       | 3.07| ENSMUSG00000039942 |
| Cdkn1c | 7     | 0.000   | 1.97       | 3.92| ENSMUSG00000037664 |
| Cd109  | 9     | 0.000   | 2.52       | 5.72| ENSMUSG00000046186 |
| Tpm1   | 9     | 0.000   | 1.23       | 2.35| ENSMUSG00000032366 |
| Thbs2  | 17    | 0.000   | 3.02       | 8.09| ENSMUSG00000023885 |
| Pdzk1ip1| 4  | 0.000 | 1.54 | 2.91 | ENSMUSG00000028716 |
| Fhdc1  | 3     | 0.000   | 1.28       | 2.42| ENSMUSG00000041842 |
| Phospho1| 11 | 0.000 | 1.35 | 2.55 | ENSMUSG00000050860 |
| Lef1   | 3     | 0.000   | 3.81       | 14.01| ENSMUSG00000027985 |
| Gene      | Mean | Log2FC | P.Value | GeneID          |
|-----------|------|--------|---------|-----------------|
| Arhgef19  | 4    | 0.000  | 3.85    | 0.00 ENSMUSG00000028919 |
| Sesn2     | 4    | 0.000  | 1.46    | 0.00 ENSMUSG00000028893 |
| Pnrc1     | 4    | 0.000  | 1.21    | 0.00 ENSMUSG00000040128 |
| Hmg20b    | 10   | 0.000  | 1.01    | 0.00 ENSMUSG00000020232 |
| Trove2    | 1    | 0.000  | 1.01    | 0.00 ENSMUSG00000018199 |
| Fn1       | 1    | 0.000  | 2.32    | 0.00 ENSMUSG00000026193 |
| Tbix6     | 7    | 0.000  | 1.65    | 0.00 ENSMUSG00000030699 |
| Zfp945    | 17   | 0.000  | 1.78    | 0.00 ENSMUSG00000059142 |
| Nrtn      | 17   | 0.000  | 2.12    | 0.00 ENSMUSG00000039481 |
| Ccdc80    | 16   | 0.000  | 2.46    | 0.00 ENSMUSG00000022665 |
| Prrg3     | X    | 0.000  | 3.35    | 0.00 ENSMUSG00000033361 |
| Fars2     | 13   | 0.000  | 1.22    | 0.00 ENSMUSG00000021420 |
| Fam117a   | 11   | 0.000  | 1.04    | 0.00 ENSMUSG00000038893 |
| Aqp9      | 9    | 0.000  | 1.66    | 0.00 ENSMUSG00000032204 |
| Slc48a1   | 15   | 0.000  | 1.17    | 0.00 ENSMUSG00000081534 |
| Sspn      | 6    | 0.000  | 4.04    | 0.00 ENSMUSG00000030255 |
| Htatip2   | 7    | 0.000  | 1.11    | 0.00 ENSMUSG00000039745 |
| Trim34b   | 7    | 0.000  | 3.75    | 0.00 ENSMUSG00000090215 |
| Il4ra     | 7    | 0.000  | 1.29    | 0.00 ENSMUSG00000030748 |
| Plac9b    | 14   | 0.000  | 3.77    | 0.00 ENSMUSG00000072674 |
| Pnp2      | 14   | 0.000  | 2.25    | 0.00 ENSMUSG000000068417 |
| Crebrf    | 17   | 0.000  | 1.13    | 0.00 ENSMUSG00000048249 |
| Gatm      | 2    | 0.000  | 2.26    | 0.00 ENSMUSG00000027199 |
| Cdkn1a    | 17   | 0.000  | 1.49    | 0.00 ENSMUSG00000023067 |
| Hbq1a     | 11   | 0.000  | 1.76    | 0.00 ENSMUSG00000020295 |
| Ifngr2    | 16   | 0.000  | 1.27    | 0.00 ENSMUSG00000022965 |
| Tbcel     | 9    | 0.000  | 1.26    | 0.00 ENSMUSG00000037287 |
| Pcmtd2    | 2    | 0.000  | 1.04    | 0.00 ENSMUSG00000027589 |
| Gpcpd1    | 2    | 0.000  | 1.38    | 0.00 ENSMUSG00000027346 |
| Cpt1c     | 7    | 0.001  | 1.62    | 0.00 ENSMUSG00000007783 |
| Pink1     | 4    | 0.001  | 1.19    | 0.00 ENSMUSG00000028756 |
| Angptl2   | 2    | 0.001  | 2.79    | 0.00 ENSMUSG00000004105 |
| Hist1h2be | 13   | 0.001  | 2.65    | 0.00 ENSMUSG00000047246 |
| Gene   | ID  | FDR  | Fold | P   | ID               |
|--------|-----|------|------|-----|------------------|
| Foxf1  | 8   | 0.001| 3.38 | 10.38| ENSMUSG00000042812 |
| Bmp1   | 14  | 0.001| 2.27 | 4.82 | ENSMUSG00000022098 |
| Raet1e | 10  | 0.001| 3.74 | 13.33| ENSMUSG00000053219 |
| Ctsd   | 7   | 0.001| 1.28 | 2.42 | ENSMUSG00000007891 |
| Gabarapl2 | 8 | 0.001| 1.09 | 2.12 | ENSMUSG00000031950 |
| Trim56 | 5   | 0.001| 1.02 | 2.03 | ENSMUSG00000043279 |
| Sertad1| 7   | 0.001| 1.32 | 2.50 | ENSMUSG00000008384 |
| Tmem67 | 4   | 0.001| 1.62 | 3.06 | ENSMUSG00000049488 |
| Fam180a | 6  | 0.001| 3.22 | 9.30 | ENSMUSG00000049720 |
| Otub2  | 12  | 0.001| 1.05 | 2.06 | ENSMUSG00000021203 |
| Ifitm10| 7   | 0.001| 2.59 | 6.01 | ENSMUSG00000045777 |
| Clk1   | 1   | 0.001| 1.12 | 2.18 | ENSMUSG00000026034 |
| Prr15l | 11  | 0.001| 2.04 | 4.12 | ENSMUSG00000047040 |
| Agtr1a | 13  | 0.001| 2.65 | 6.28 | ENSMUSG00000049115 |
| Abca1  | 4   | 0.001| 2.23 | 4.68 | ENSMUSG00000015243 |
| Srxn1  | 2   | 0.001| 1.14 | 2.20 | ENSMUSG00000032802 |
| Serinc1| 10  | 0.001| 1.03 | 2.04 | ENSMUSG00000019877 |
| Evi5   | 5   | 0.001| 1.04 | 2.06 | ENSMUSG00000011831 |
| Apol11b| 15  | 0.001| 1.62 | 3.08 | ENSMUSG00000091694 |
| Dennd4a| 9   | 0.001| 1.23 | 2.34 | ENSMUSG00000053641 |
| Ptx3   | 3   | 0.001| 3.54 | 11.64| ENSMUSG00000027832 |
| Stag3  | 5   | 0.001| 1.44 | 2.72 | ENSMUSG00000036928 |
| Fbxo9  | 9   | 0.001| 1.07 | 2.09 | ENSMUSG0000001366 |
| Me3    | 7   | 0.001| 4.59 | 24.03| ENSMUSG00000036062 |
| Tac2   | 10  | 0.001| 2.45 | 5.46 | ENSMUSG00000025400 |
| Calcoco1| 15 | 0.001| 1.05 | 2.07 | ENSMUSG00000023055 |
| Tmem1311| 3 | 0.001| 1.18 | 2.27 | ENSMUSG00000033767 |
| Sstr5  | 17  | 0.001| 4.29 | 19.63| ENSMUSG00000050824 |
| Ak1    | 2   | 0.001| 2.22 | 4.67 | ENSMUSG00000026817 |
| Hist1h2bf | 13 | 0.001| 2.71 | 6.56 | ENSMUSG00000069268 |
| Traf1  | 5   | 0.001| 1.14 | 2.20 | ENSMUSG00000042726 |
| Msln   | 17  | 0.001| 2.40 | 5.29 | ENSMUSG00000063011 |
| Slc30a1| 1   | 0.001| 1.19 | 2.28 | ENSMUSG00000037434 |
| Gene     | No. | P-value | Log2FoldChange | q-value | ENSMUSGID     |
|----------|-----|---------|----------------|---------|---------------|
| Inhbb    | 1   | 0.001   | 2.89           | 7.42    | ENSMUSG0000037035 |
| Ypel2    | 11  | 0.001   | 1.49           | 2.81    | ENSMUSG0000018427 |
| Ttc12    | 9   | 0.001   | 1.47           | 2.77    | ENSMUSG0000040219 |
| Nfkbia   | 12  | 0.001   | 1.47           | 2.78    | ENSMUSG0000021025 |
| Dusp13   | 14  | 0.001   | 2.67           | 6.35    | ENSMUSG0000021768 |
| 1810013L24Rik | 16 | 0.001 | 1.14           | 2.20    | ENSMUSG0000022507 |
| Gstm5    | 3   | 0.001   | 1.09           | 2.13    | ENSMUSG0000004032 |
| Hspb7    | 4   | 0.001   | 2.72           | 6.57    | ENSMUSG0000006221 |
| Fat1     | 8   | 0.001   | 2.19           | 4.55    | ENSMUSG00000070047 |
| Tmem98   | 11  | 0.001   | 2.08           | 4.23    | ENSMUSG00000035413 |
| Pivap    | 8   | 0.001   | 1.79           | 3.46    | ENSMUSG00000034845 |
| Plk2     | 13  | 0.001   | 1.63           | 3.08    | ENSMUSG00000021701 |
| Naprt    | 15  | 0.001   | 1.89           | 3.71    | ENSMUSG00000022574 |
| Glrx     | 13  | 0.001   | 1.46           | 2.76    | ENSMUSG00000021591 |
| Fads3    | 19  | 0.001   | 1.67           | 3.19    | ENSMUSG00000024664 |
| Nsmf     | 2   | 0.001   | 1.50           | 2.82    | ENSMUSG00000006476 |
| Ybx2     | 11  | 0.001   | 3.88           | 14.75   | ENSMUSG00000018554 |
| Hist1h3i | 13  | 0.001   | 3.00           | 8.00    | ENSMUSG00000101972 |
| Slc25a51 | 4   | 0.001   | 1.05           | 2.07    | ENSMUSG00000045973 |
| Rerg     | 6   | 0.001   | 3.54           | 11.62   | ENSMUSG00000030222 |
| Gm14226  | 2   | 0.001   | 3.40           | 10.56   | ENSMUSG00000084897 |
| Fam213b  | 4   | 0.001   | 2.38           | 5.20    | ENSMUSG00000029059 |
| Gfpt2    | 11  | 0.001   | 1.82           | 3.54    | ENSMUSG00000020363 |
| Cpeb4    | 11  | 0.001   | 1.19           | 2.29    | ENSMUSG00000020300 |
| Hist1h1d | 13  | 0.001   | 2.12           | 4.36    | ENSMUSG00000052565 |
| Slc10a6  | 5   | 0.001   | 3.91           | 15.02   | ENSMUSG00000029321 |
| Camk2d   | 3   | 0.001   | 1.73           | 3.32    | ENSMUSG00000053819 |
| Brdt     | 5   | 0.001   | 2.59           | 6.01    | ENSMUSG00000029279 |
| Plau     | 14  | 0.001   | 2.03           | 4.09    | ENSMUSG00000021822 |
| Hecew1   | 13  | 0.002   | 1.38           | 2.60    | ENSMUSG00000021301 |
| Pla2g16  | 19  | 0.002   | 1.03           | 2.05    | ENSMUSG00000060675 |
| Hspg2    | 4   | 0.002   | 2.09           | 4.27    | ENSMUSG00000028763 |
| Cyp2b10  | 7   | 0.002   | 2.65           | 6.30    | ENSMUSG00000030483 |
| gene   | log2FC | P.Value | fold_change | AUC | gi      |
|--------|--------|----------|-------------|-----|---------|
| Cyp2a5 | 7      | 0.002    | 4.78        | 27.54 | 0.00    |
| Tob1   | 11     | 0.002    | 1.19        | 2.28  | 0.00    |
| Tcim   | 8      | 0.002    | 4.10        | 17.19 | 0.00    |
| Pmd    | 2      | 0.002    | 8.18        | 289.20| 0.00    |
| Smtn   | 11     | 0.002    | 1.33        | 2.52  | 0.00    |
| Lpp    | 16     | 0.002    | 2.08        | 4.24  | 0.00    |
| Pim1   | 17     | 0.002    | 1.21        | 2.31  | 0.00    |
| Mrgprf | 7      | 0.002    | 3.74        | 13.36 | 0.00    |
| Ets1   | 9      | 0.002    | 1.82        | 3.54  | 0.00    |
| Cldn10 | 14     | 0.002    | 2.88        | 7.38  | 0.00    |
| Serpina3m | 12   | 0.002    | 4.28        | 19.46 | 0.00    |
| Col22a1| 15     | 0.002    | 4.98        | 31.63 | 0.00    |
| Hectd2 | 19     | 0.002    | 1.56        | 2.95  | 0.00    |
| Dstn   | 2      | 0.002    | 1.24        | 2.36  | 0.00    |
| St5    | 7      | 0.002    | 1.10        | 2.14  | 0.00    |
| Tent5c | 3      | 0.002    | 1.16        | 2.23  | 0.00    |
| Aif11  | 2      | 0.002    | 2.47        | 5.53  | 0.00    |
| Nrbp2  | 15     | 0.002    | 1.60        | 3.02  | 0.00    |
| Rhbdf2 | 11     | 0.002    | 1.17        | 2.25  | 0.00    |
| Ankrd34b | 13    | 0.002    | 3.81        | 13.99 | 0.00    |
| Tmem43 | 6      | 0.002    | 1.00        | 2.00  | 0.00    |
| Fbxo27 | 7      | 0.002    | 4.87        | 29.28 | 0.00    |
| Hist2h3e2 | 3    | 0.002 | 2.33    | 5.04  | 0.00    |
| Hist1h2bj | 13   | 0.002 | 2.49    | 5.62  | 0.00    |
| Caclg1g | 11     | 0.002    | 2.08        | 4.24  | 0.00    |
| Dedd2  | 7      | 0.002    | 1.04        | 2.05  | 0.00    |
| Map3k19 | 1      | 0.002    | 2.68        | 6.41  | 0.00    |
| Nodal  | 10     | 0.002    | 2.32        | 4.98  | 0.00    |
| Stk40  | 4      | 0.002    | 1.00        | 2.00  | 0.00    |
| Emp1   | 6      | 0.002    | 1.85        | 3.60  | 0.00    |
| Ndr4   | 8      | 0.002    | 1.63        | 3.10  | 0.00    |
| Trim12c | 7      | 0.002    | 1.43        | 2.70  | 0.00    |
| Mpp1   | X      | 0.002    | 1.00        | 2.01  | 0.00    |
| gene   | symbol | fold change | p value | log2 fold change | expression ID    |
|--------|--------|-------------|---------|-----------------|-----------------|
| Ppl    | 16     | 0.002       | 2.41    | 5.30            | 0.00 ENSMUSG00000039457 |
| Bel2l1 | 2      | 0.002       | 1.10    | 2.15            | 0.00 ENSMUSG00000007659 |
| Hist1h4n | 13    | 0.002       | 2.17    | 4.49            | 0.00 ENSMUSG00000069305 |
| Ifnar2 | 16     | 0.002       | 1.05    | 2.07            | 0.00 ENSMUSG00000022971 |
| Des    | 1      | 0.002       | 2.20    | 4.60            | 0.00 ENSMUSG00000026208 |
| Rab39b | X      | 0.002       | 2.83    | 7.13            | 0.00 ENSMUSG00000031202 |
| Tex11  | X      | 0.002       | 3.22    | 9.30            | 0.00 ENSMUSG00000009670 |
| Zfp949 | 9      | 0.002       | 1.17    | 2.25            | 0.00 ENSMUSG00000032425 |
| Tfap2c | 2      | 0.003       | 2.51    | 5.68            | 0.00 ENSMUSG00000028640 |
| Ulk1   | 5      | 0.003       | 1.09    | 2.13            | 0.00 ENSMUSG00000029512 |
| Alas2  | X      | 0.003       | 1.11    | 2.16            | 0.00 ENSMUSG00000025270 |
| Phf23  | 11     | 0.003       | 1.19    | 2.29            | 0.00 ENSMUSG00000018572 |
| Mbd6   | 10     | 0.003       | 1.09    | 2.13            | 0.00 ENSMUSG00000025409 |
| Ranbp10| 8      | 0.003       | 1.15    | 2.22            | 0.00 ENSMUSG00000037415 |
| Ltbp3  | 19     | 0.003       | 2.66    | 6.31            | 0.00 ENSMUSG00000024940 |
| Eph4   | 1      | 0.003       | 1.60    | 3.04            | 0.00 ENSMUSG00000026235 |
| Ppp1r15a| 7     | 0.003       | 1.24    | 2.36            | 0.00 ENSMUSG00000040435 |
| Ephx4  | 5      | 0.003       | 3.88    | 14.72           | 0.00 ENSMUSG00000033805 |
| Nefh   | 11     | 0.003       | 1.27    | 2.41            | 0.00 ENSMUSG00000020396 |
| Hbb-bs | 7      | 0.003       | 1.14    | 2.20            | 0.00 ENSMUSG00000052305 |
| Cbx7   | 15     | 0.003       | 1.43    | 2.70            | 0.00 ENSMUSG00000053411 |
| Tg     | 15     | 0.003       | 2.06    | 4.16            | 0.00 ENSMUSG00000053469 |
| Adipor1| 1      | 0.003       | 1.05    | 2.07            | 0.00 ENSMUSG00000026457 |
| Ucp2   | 7      | 0.003       | 1.07    | 2.10            | 0.00 ENSMUSG00000033685 |
| Igf2   | 7      | 0.003       | 2.16    | 4.46            | 0.00 ENSMUSG00000048583 |
| Sema3a | 5      | 0.003       | 3.07    | 8.38            | 0.00 ENSMUSG00000028883 |
| Cdr2   | 7      | 0.003       | 1.10    | 2.14            | 0.00 ENSMUSG00000030878 |
| Bmp4   | 14     | 0.003       | 2.74    | 6.66            | 0.00 ENSMUSG00000021835 |
| Calcr1 | 2      | 0.003       | 1.24    | 2.36            | 0.00 ENSMUSG00000059588 |
| Gja4   | 4      | 0.003       | 1.91    | 3.76            | 0.00 ENSMUSG00000050234 |
| Sox8   | 17     | 0.003       | 3.60    | 12.11           | 0.00 ENSMUSG00000024176 |
| Trib3  | 2      | 0.003       | 1.08    | 2.11            | 0.00 ENSMUSG00000032715 |
| Cbfa2t3| 8      | 0.003       | 1.15    | 2.22            | 0.00 ENSMUSG0000006362 |
| Gene   | ID | p-value | Fold Change | q-value | ENSMUSG000000038729 |
|--------|----|---------|-------------|---------|---------------------|
| Akap2  | 4  | 0.003   | 1.55        | 2.93    | 0.00                |
| Peg3   | 7  | 0.003   | 1.23        | 2.35    | 0.00                |
| Tmem28 | X  | 0.003   | 3.59        | 12.07   | 0.00                |
| Patl2  | 2  | 0.003   | 1.84        | 3.59    | 0.00                |
| Klhl38 | 15 | 0.003   | 3.18        | 9.07    | 0.00                |
| Grina  | 15 | 0.003   | 1.02        | 2.03    | 0.00                |
| Perm1  | 4  | 0.004   | 1.98        | 3.94    | 0.00                |
| Tnks1bp1 | 2 | 0.004   | 1.73        | 3.31    | 0.00                |
| Eln    | 5  | 0.004   | 3.56        | 11.75   | 0.00                |
| Ckap4  | 10 | 0.004   | 1.51        | 2.84    | 0.00                |
| Hba-a2 | 11 | 0.004   | 1.15        | 2.21    | 0.00                |
| Myof   | 19 | 0.004   | 1.90        | 3.73    | 0.00                |
| Ckbp1  | 6  | 0.004   | 1.05        | 2.07    | 0.00                |
| Lama5  | 2  | 0.004   | 1.65        | 3.14    | 0.00                |
| Nudt18 | 14 | 0.004   | 1.25        | 2.37    | 0.00                |
| Plec   | 15 | 0.004   | 1.16        | 2.24    | 0.00                |
| Micalll| 15 | 0.004   | 1.17        | 2.25    | 0.00                |
| Dcaf12 | 4  | 0.004   | 1.11        | 2.15    | 0.00                |
| Scg2   | 1  | 0.004   | 2.14        | 4.39    | 0.00                |
| Mapre3 | 5  | 0.004   | 1.91        | 3.75    | 0.00                |
| Ketd11 | 11 | 0.004   | 1.77        | 3.42    | 0.00                |
| Mettl7a2| 15| 0.004   | 2.47        | 5.53    | 0.00                |
| Inka2  | 3  | 0.004   | 1.05        | 2.07    | 0.00                |
| Vegfdl | X  | 0.004   | 2.30        | 4.93    | 0.00                |
| Lexm   | 4  | 0.004   | 2.10        | 4.29    | 0.00                |
| Zfp365 | 10 | 0.004   | 2.55        | 5.84    | 0.00                |
| Itgb1  | 14 | 0.004   | 4.52        | 23.00   | 0.00                |
| Olfml2b| 1  | 0.004   | 2.75        | 6.74    | 0.00                |
| Rnf227 | 11 | 0.004   | 2.54        | 5.81    | 0.00                |
| Tinagl1| 4  | 0.004   | 1.22        | 2.32    | 0.00                |
| Cd68   | 11 | 0.004   | 1.44        | 2.71    | 0.00                |
| Akr1b8 | 6  | 0.005   | 2.04        | 4.10    | 0.00                |
| Ace2   | X  | 0.005   | 2.80        | 6.99    | 0.00                |
| Gene  | Locus | Status | Fold Change | p Value | ENSMUSG00000000000 |
|-------|-------|--------|-------------|---------|---------------------|
| Foxd1 | 13    | 0.005  | 3.83        | 0.00    | ENSMUSG00000000000 |
| Cacna2d3 | 14    | 0.005  | 1.75        | 0.00    | ENSMUSG00000000000 |
| Tgif1  | 17    | 0.005  | 1.33        | 0.00    | ENSMUSG00000000000 |
| Txnip  | 3     | 0.005  | 1.01        | 0.00    | ENSMUSG00000000000 |
| Tnc    | 4     | 0.005  | 2.31        | 0.01    | ENSMUSG00000000000 |
| Ubb    | 11    | 0.005  | 1.10        | 0.01    | ENSMUSG00000000000 |
| Gm9780 | 14    | 0.005  | 6.99        | 0.01    | ENSMUSG00000000000 |
| Tgm1   | 14    | 0.005  | 1.97        | 0.01    | ENSMUSG00000000000 |
| Smad1  | 8     | 0.005  | 1.58        | 0.01    | ENSMUSG00000000000 |
| Mlph   | 1     | 0.006  | 2.01        | 0.01    | ENSMUSG00000000000 |
| Fasl   | 1     | 0.006  | 1.89        | 0.01    | ENSMUSG00000000000 |
| Il6st  | 13    | 0.006  | 1.23        | 0.01    | ENSMUSG00000000000 |
| Sik1   | 17    | 0.006  | 1.21        | 0.01    | ENSMUSG00000000000 |
| Fbxl22 | 9     | 0.006  | 1.86        | 0.01    | ENSMUSG00000000000 |
| Ptms   | 6     | 0.006  | 1.18        | 0.01    | ENSMUSG00000000000 |
| Specc1 | 11    | 0.006  | 1.03        | 0.01    | ENSMUSG00000000000 |
| Spsb1  | 4     | 0.006  | 2.02        | 0.01    | ENSMUSG00000000000 |
| Npffr1 | 10    | 0.006  | 2.70        | 0.01    | ENSMUSG00000000000 |
| Nlgn2  | 11    | 0.006  | 1.29        | 0.01    | ENSMUSG00000000000 |
| Gm2115 | 7     | 0.006  | 3.63        | 0.01    | ENSMUSG00000000000 |
| Gm20547| 17    | 0.006  | 7.42        | 0.01    | ENSMUSG00000000000 |
| Gprin2 | 14    | 0.006  | 2.37        | 0.01    | ENSMUSG00000000000 |
| Hist1h3b| 13    | 0.006  | 2.26        | 0.01    | ENSMUSG00000000000 |
| Nlrc5  | 8     | 0.006  | 2.97        | 0.01    | ENSMUSG00000000000 |
| Cpeb2  | 13    | 0.007  | 1.05        | 0.01    | ENSMUSG00000000000 |
| Anxa2  | 9     | 0.007  | 1.30        | 0.01    | ENSMUSG00000000000 |
| Ly6k   | 15    | 0.007  | 3.44        | 0.01    | ENSMUSG00000000000 |
| Rhov   | 10    | 0.007  | 2.12        | 0.01    | ENSMUSG00000000000 |
| Zfp874b| 13    | 0.007  | 1.14        | 0.01    | ENSMUSG00000000000 |
| Spag8  | 4     | 0.007  | 3.16        | 0.01    | ENSMUSG00000000000 |
| Sema6a | 18    | 0.007  | 1.42        | 0.01    | ENSMUSG00000000000 |
| Mustn1 | 14    | 0.007  | 2.34        | 0.01    | ENSMUSG00000000000 |
| Tgfa   | 6     | 0.007  | 2.05        | 0.01    | ENSMUSG00000000000 |
| Gene    | Count | FDR  | Log2FoldChange | AdjPvalue | EntrezGeneID          |
|---------|-------|------|----------------|-----------|-----------------------|
| Cyp17a1 | 19    | 0.007| 3.23           | 9.41      | ENSMUSG0000003555     |
| Tmem88  | 11    | 0.007| 2.10           | 4.28      | ENSMUSG00000045377    |
| Igfn1   | 1     | 0.008| 2.35           | 5.11      | ENSMUSG00000051985    |
| S100a6  | 3     | 0.008| 1.69           | 3.22      | ENSMUSG0000001025     |
| Prlep   | 1     | 0.008| 2.33           | 5.01      | ENSMUSG00000041577    |
| Atg16l2 | 7     | 0.008| 1.74           | 3.34      | ENSMUSG00000047767    |
| Eepd1   | 9     | 0.008| 1.74           | 3.34      | ENSMUSG00000036611    |
| Bmp8a   | 4     | 0.008| 2.10           | 4.28      | ENSMUSG00000032726    |
| Hist2h2bb| 3    | 0.008| 2.32           | 5.01      | ENSMUSG000000105827   |
| Ins16   | 19    | 0.008| 2.97           | 7.86      | ENSMUSG00000050957    |
| Anxa3   | 5     | 0.008| 1.62           | 3.07      | ENSMUSG00000029484    |
| Ftl1-ps1| 13    | 0.008| 1.53           | 2.88      | ENSMUSG00000062382    |
| Col1a2  | 6     | 0.008| 1.91           | 3.75      | ENSMUSG00000029661    |
| Psca    | 15    | 0.008| 1.59           | 3.02      | ENSMUSG00000022598    |
| Hs3st3a1| 11    | 0.008| 2.23           | 4.68      | ENSMUSG00000047759    |
| Hist1h1e| 13    | 0.008| 1.76           | 3.40      | ENSMUSG00000051627    |
| Lypd5   | 7     | 0.008| 3.52           | 11.45     | ENSMUSG00000030484    |
| Ugt1a8  | 1     | 0.008| 6.78           | 110.21    | ENSMUSG00000089675    |
| Carmill | 13    | 0.008| 1.26           | 2.40      | ENSMUSG00000021338    |
| Fbxo32  | 15    | 0.008| 1.81           | 3.51      | ENSMUSG00000022358    |
| Letm2   | 8     | 0.009| 1.20           | 2.29      | ENSMUSG00000037363    |
| Gm45208 | X     | 0.009| 3.11           | 8.62      | ENSMUSG000000109493   |
| Hist1h4m| 13    | 0.009| 2.31           | 4.97      | ENSMUSG00000069306    |
| Tmem88b | 4     | 0.009| 2.30           | 4.92      | ENSMUSG00000073680    |
| Lima1   | 15    | 0.009| 1.86           | 3.64      | ENSMUSG00000023022    |
| Daam2   | 17    | 0.009| 2.47           | 5.55      | ENSMUSG00000040260    |
| Crybg1  | 10    | 0.009| 1.10           | 2.15      | ENSMUSG00000019866    |
| Eda2r   | X     | 0.009| 1.16           | 2.23      | ENSMUSG00000034457    |
| Myadm   | 7     | 0.009| 1.60           | 3.04      | ENSMUSG00000068566    |
| Mturm   | 6     | 0.009| 1.50           | 2.82      | ENSMUSG00000038065    |
| Apol10a | 15    | 0.009| 3.13           | 8.76      | ENSMUSG00000050982    |
| Mindy4  | 6     | 0.009| 2.70           | 6.50      | ENSMUSG0000003822     |
| Adm     | 7     | 0.009| 2.83           | 7.10      | ENSMUSG00000030790    |
| Gene    | Fold  | FDR  | log2FC | 
|---------|-------|------|--------| 
| Gns     | 10    | 0.009| 1.10   | 2.15   | 0.01 | ENSMUSG00000034707 
| Eml1    | 12    | 0.010| 2.24   | 4.74   | 0.01 | ENSMUSG00000058070 
| Galnt15 | 14    | 0.010| 4.09   | 17.05  | 0.01 | ENSMUSG00000021903 
| Plekhm3 | 1     | 0.010| 2.30   | 2.10   | 0.01 | ENSMUSG00000051344 
| D630023F18Rik | 1 | 0.010| 2.50   | 4.80   | 0.01 | ENSMUSG00000044816 
| Fam129a | 1     | 0.010| 2.33   | 2.54   | 0.01 | ENSMUSG00000026483 
| Nos1ap  | 1     | 0.010| 1.98   | 2.18   | 0.01 | ENSMUSG00000038473 
| Fam129b | 2     | 0.010| 1.24   | 2.36   | 0.01 | ENSMUSG00000026796 
| Pak6    | 2     | 0.010| 1.27   | 2.23   | 0.01 | ENSMUSG00000074923 
| Map1lc3a| 2     | 0.010| 1.66   | 2.00   | 0.01 | ENSMUSG00000027602 
| Slc25a31| 3     | 0.010| 1.57   | 8.53   | 0.01 | ENSMUSG00000069041 
| Fam160a1| 3    | 0.010| 1.88   | 2.25   | 0.01 | ENSMUSG00000051000 
| Gm2163  | 4     | 0.010| 1.11   | 5.13   | 0.01 | ENSMUSG00000095779 
| Fsd1l   | 4     | 0.010| 2.75   | 3.61   | 0.01 | ENSMUSG00000054752 
| Tmem200b| 4     | 0.010| 2.72   | 6.87   | 0.01 | ENSMUSG00000070720 
| Radil   | 5     | 0.010| 1.69   | 3.93   | 0.01 | ENSMUSG00000029576 
| Wnt2    | 6     | 0.010| 2.29   | 3.15   | 0.01 | ENSMUSG00000010797 
| Cd79a   | 7     | 0.010| 1.96   | 5.78   | 0.01 | ENSMUSG00000003379 
| Sptbn4  | 7     | 0.010| 2.78   | 3.30   | 0.01 | ENSMUSG00000011751 
| Zfp473  | 7     | 0.010| 6.34   | 2.28   | 0.01 | ENSMUSG00000048012 
| Gpr139  | 7     | 0.010| 1.50   | 81.23  | 0.01 | ENSMUSG00000066197 
| Fgfr1   | 8     | 0.010| 3.30   | 2.16   | 0.01 | ENSMUSG00000031565 
| Gdf1    | 8     | 0.010| 1.13   | 17.25  | 0.01 | ENSMUSG00000109523 
| Mmp12   | 9     | 0.010| 1.42   | 6.21   | 0.01 | ENSMUSG00000049723 
| Col5a3  | 9     | 0.010| 1.18   | 5.67   | 0.01 | ENSMUSG00000004098 
| Mfsd4b1 | 10    | 0.010| 1.85   | 3.29   | 0.01 | ENSMUSG00000038522 
| Nog     | 11    | 0.010| 1.51   | 5.31   | 0.01 | ENSMUSG00000048616 
| Cygb    | 11    | 0.010| 2.43   | 6.17   | 0.01 | ENSMUSG00000020810 
| Ltbp2   | 12    | 0.010| 1.47   | 2.19   | 0.01 | ENSMUSG00000020200 
| Hist1h2bg| 13    | 0.010| 2.08   | 3.49   | 0.01 | ENSMUSG00000058385 
| Spata31d1a | 13 | 0.010| 3.09   | 6.01   | 0.01 | ENSMUSG00000050876 
| 1700014D04Rik | 13 | 0.010| 2.36   | 3.91   | 0.01 | ENSMUSG00000051054 
| Ncf4    | 15    | 0.010| 2.41   | 2.03   | 0.01 | ENSMUSG00000071715 |
| Gene     | Chromosome | Log2 Fold Change | Mean Log2 Fold Change | q-value | Gene ID        |
|----------|------------|------------------|----------------------|---------|----------------|
| Rapgef3  | 15         | 0.010            | 1.51                 | 4.91    | 0.01           | ENSMUSG00000022469 |
| Mettl7a3 | 15         | 0.010            | 4.15                 | 5.41    | 0.01           | ENSMUSG00000058057 |
| Igfbp6   | 15         | 0.010            | 1.57                 | 5.07    | 0.01           | ENSMUSG00000023046 |
| Adgrf5   | 17         | 0.010            | 1.49                 | 4.04    | 0.01           | ENSMUSG00000056492 |
| A530064D06Rik| 17     | 0.010            | 2.68                 | 8.35    | 0.01           | ENSMUSG00000043939 |
| Dsc2     | 18         | 0.010            | 4.11                 | 5.41    | 0.01           | ENSMUSG00000056492 |
| Arhgef37 | 18         | 0.010            | 2.34                 | 2.94    | 0.01           | ENSMUSG00000045094 |
| Avpi1    | 19         | 0.010            | 2.75                 | 2.35    | 0.01           | ENSMUSG00000018821 |
| Npl      | 1          | 0.020            | 1.78                 | 2.56    | 0.02           | ENSMUSG00000042684 |
| Gm7694   | 1          | 0.020            | 2.13                 | 2.06    | 0.02           | ENSMUSG000000102752 |
| Ephx1    | 1          | 0.020            | 1.59                 | 3.01    | 0.02           | ENSMUSG00000038776 |
| Gm13889  | 2          | 0.020            | 2.81                 | 3.05    | 0.02           | ENSMUSG000000087006 |
| Shld1    | 2          | 0.020            | 6.24                 | 2.12    | 0.02           | ENSMUSG00000044991 |
| Sprr2k   | 3          | 0.020            | 1.93                 | 72.15   | 0.02           | ENSMUSG00000054215 |
| Gstm1    | 3          | 0.020            | 1.87                 | 2.68    | 0.02           | ENSMUSG00000058135 |
| Hook1    | 4          | 0.020            | 1.88                 | 2.45    | 0.02           | ENSMUSG00000028572 |
| Ppp3     | 4          | 0.020            | 2.29                 | 3.06    | 0.02           | ENSMUSG00000028517 |
| Oprd1    | 4          | 0.020            | 1.44                 | 9.34    | 0.02           | ENSMUSG00000050511 |
| Grhl3    | 4          | 0.020            | 1.18                 | 7.02    | 0.02           | ENSMUSG00000037188 |
| Rnf32    | 5          | 0.020            | 1.78                 | 7.27    | 0.02           | ENSMUSG00000029130 |
| Zkscan14 | 5          | 0.020            | 1.11                 | 2.04    | 0.02           | ENSMUSG00000029627 |
| Pdk4     | 6          | 0.020            | 1.75                 | 3.43    | 0.02           | ENSMUSG00000019577 |
| Cacna2d4 | 6          | 0.020            | 2.14                 | 3.63    | 0.02           | ENSMUSG00000041460 |
| Lrtm2    | 6          | 0.020            | 3.05                 | 3.97    | 0.02           | ENSMUSG00000055003 |
| Bhlhe41  | 6          | 0.020            | 1.61                 | 3.31    | 0.02           | ENSMUSG00000030256 |
| Klk6     | 7          | 0.020            | 2.23                 | 8.18    | 0.02           | ENSMUSG00000050063 |
| Rras     | 7          | 0.020            | 1.95                 | 2.36    | 0.02           | ENSMUSG00000038387 |
| Plekha4  | 7          | 0.020            | 2.36                 | 2.78    | 0.02           | ENSMUSG00000040428 |
| Osgin1   | 8          | 0.020            | 1.30                 | 3.43    | 0.02           | ENSMUSG00000074063 |
| Foxc2    | 8          | 0.020            | 2.51                 | 75.83   | 0.02           | ENSMUSG00000046714 |
| Kan5k    | 9          | 0.020            | 1.92                 | 3.36    | 0.02           | ENSMUSG00000032194 |
| Nmmt     | 9          | 0.020            | 1.73                 | 15.05   | 0.02           | ENSMUSG00000032271 |
| Myo5c    | 9          | 0.020            | 3.91                 | 2.85    | 0.02           | ENSMUSG00000033590 |
| Gene   | Chromosome | Start | End | Expression | p-value | Ensembl ID |
|--------|------------|-------|-----|------------|---------|------------|
| Spink8 | 9          | 0.020 | 2.85| 7.21       | 0.02    | ENSMUSG00000050074 |
| Tmprss9| 10         | 0.020 | 2.31| 3.86       | 0.02    | ENSMUSG00000059406  |
| Gadd45b| 10         | 0.020 | 2.03| 2.47       | 0.02    | ENSMUSG00000015312  |
| Fam196b| 11         | 0.020 | 2.46| 13.52      | 0.02    | ENSMUSG00000069911  |
| Zfp354b| 11         | 0.020 | 1.21| 5.15       | 0.02    | ENSMUSG00000020335  |
| Itga3  | 11         | 0.020 | 1.80| 3.22       | 0.02    | ENSMUSG0000001507   |
| Mycn   | 12         | 0.020 | 2.02| 2.09       | 0.02    | ENSMUSG00000037169  |
| Hist1h2ae| 13     | 0.020 | 1.47| 3.60       | 0.02    | ENSMUSG00000069272  |
| Hist1h2bb| 13    | 0.020 | 2.04| 4.08       | 0.02    | ENSMUSG00000075031  |
| Spata31d1d| 13   | 0.020 | 3.17| 12.59      | 0.02    | ENSMUSG00000043986  |
| Cma1   | 14         | 0.020 | 1.08| 2.28       | 0.02    | ENSMUSG00000022225  |
| Tnfrsf10b| 14     | 0.020 | 2.91| 2.19       | 0.02    | ENSMUSG00000022074  |
| Farp1  | 14         | 0.020 | 2.64| 3.36       | 0.02    | ENSMUSG00000025555  |
| Kcnj4  | 15         | 0.020 | 3.55| 10.14      | 0.02    | ENSMUSG00000044216  |
| Csrnp2 | 15         | 0.020 | 1.23| 2.76       | 0.02    | ENSMUSG00000044636  |
| Tns2   | 15         | 0.020 | 2.34| 3.15       | 0.02    | ENSMUSG00000037003  |
| Lrc15  | 16         | 0.020 | 1.99| 7.74       | 0.02    | ENSMUSG00000052316  |
| Olig2  | 16         | 0.020 | 1.76| 62.18      | 0.02    | ENSMUSG00000039830  |
| Tnfrsf12a| 17     | 0.020 | 1.01| 2.96       | 0.02    | ENSMUSG00000023905  |
| Mocos  | 18         | 0.020 | 1.08| 3.09       | 0.02    | ENSMUSG00000039616  |
| Pmaip1 | 18         | 0.020 | 3.80| 2.41       | 0.02    | ENSMUSG00000024521  |
| Gstp2  | 19         | 0.020 | 2.30| 3.54       | 0.02    | ENSMUSG00000038155  |
| Pyroxd2| 19         | 0.020 | 1.30| 4.42       | 0.02    | ENSMUSG00000060224  |
| Slc6a8 | X          | 0.020 | 3.22| 2.91       | 0.02    | ENSMUSG00000019558  |
| Gm4779 | X          | 0.020 | 1.89| 3.43       | 0.02    | ENSMUSG00000045010  |
| Prex2  | 1          | 0.030 | 1.22| 6.23       | 0.03    | ENSMUSG00000048960  |
| Gpbar1 | 1          | 0.030 | 1.33| 52.13      | 0.03    | ENSMUSG00000064272  |
| Prg4   | 1          | 0.030 | 2.76| 46.08      | 0.03    | ENSMUSG00000006014  |
| Gpat2  | 2          | 0.030 | 1.75| 4.19       | 0.03    | ENSMUSG00000046338  |
| Kcnb1  | 2          | 0.030 | 2.07| 4.20       | 0.03    | ENSMUSG00000050556  |
| Wwtr1  | 3          | 0.030 | 1.94| 2.59       | 0.03    | ENSMUSG00000027803  |
| Rhoc   | 3          | 0.030 | 1.85| 2.57       | 0.03    | ENSMUSG0000002233   |
| Gm49337| 4          | 0.030 | 2.18| 9.89       | 0.03    | ENSMUSG00000111410  |
| Gene  | Exp | P-Value | Log2 Fold Change | q-value | Gene ID       |
|-------|-----|---------|-----------------|---------|---------------|
| Cfap69 | 5   | 0.030   | 2.30            | 6.58    | ENSMUSG00000040473 |
| Hspb1  | 5   | 0.030   | 1.91            | 2.78    | ENSMUSG0000004951 |
| C1ra   | 6   | 0.030   | 2.56            | 6.24    | ENSMUSG00000055172 |
| Pvr    | 7   | 0.030   | 3.55            | 3.09    | ENSMUSG00000040511 |
| Tecta  | 9   | 0.030   | 2.02            | 2.64    | ENSMUSG00000037705 |
| Grand2 | 9   | 0.030   | 2.60            | 5.48    | ENSMUSG00000074259 |
| Trim43a| 9   | 0.030   | 1.53            | 4.41    | ENSMUSG00000090693 |
| Tnfaip3| 10  | 0.030   | 2.42            | 2.18    | ENSMUSG00000019850 |
| C1ra   | 10  | 0.030   | 2.02            | 2.64    | ENSMUSG00000037705 |
| Smim24 | 10  | 0.030   | 1.66            | 3.02    | ENSMUSG00000078439 |
| Gli1   | 10  | 0.030   | 1.54            | 5.41    | ENSMUSG00000025407 |
| Kcnj12 | 11  | 0.030   | 1.66            | 4.50    | ENSMUSG0000004529 |
| Pdk2   | 11  | 0.030   | 1.01            | 2.01    | ENSMUSG00000038967 |
| Osr1   | 12  | 0.030   | 1.56            | 4.60    | ENSMUSG00000048387 |
| Nid1   | 13  | 0.030   | 1.64            | 2.97    | ENSMUSG0000005397 |
| Fermt2 | 14  | 0.030   | 2.39            | 2.93    | ENSMUSG00000037712 |
| Apoll1a| 15  | 0.030   | 1.59            | 4.00    | ENSMUSG00000091650 |
| Wbp2nl | 15  | 0.030   | 2.11            | 5.87    | ENSMUSG00000022455 |
| Emp2   | 16  | 0.030   | 1.30            | 3.11    | ENSMUSG00000022505 |
| H2-T22 | 17  | 0.030   | 3.31            | 2.11    | ENSMUSG00000056116 |
| Peli3  | 19  | 0.030   | 1.10            | 3.52    | ENSMUSG00000024901 |
| Tnfaip3| 21  | 0.040   | 3.63            | 4.29    | ENSMUSG00000079845 |
| Slc19a3| 1   | 0.040   | 3.32            | 39.60   | ENSMUSG00000038496 |
| Fam71a | 1   | 0.040   | 2.65            | 6.69    | ENSMUSG00000091017 |
| Dnm1   | 2   | 0.040   | 1.64            | 3.30    | ENSMUSG00000026825 |
| Foxe1  | 4   | 0.040   | 1.50            | 9.97    | ENSMUSG00000070990 |
| Gpr157 | 4   | 0.040   | 1.31            | 2.79    | ENSMUSG00000047875 |
| Thegl  | 5   | 0.040   | 5.31            | 6.00    | ENSMUSG00000029248 |
| Aflm   | 5   | 0.040   | 3.32            | 6.51    | ENSMUSG00000029369 |
| Gm43518| 5   | 0.040   | 1.09            | 7.24    | ENSMUSG00000105875 |
| Gm10382| 5   | 0.040   | 1.86            | 4.31    | ENSMUSG00000072612 |
| Tac1   | 6   | 0.040   | 2.14            | 43.13   | ENSMUSG00000061762 |
| Gene    | Rank | Fold Change | Log_{2} Fold Change | p-value | ENSMUSG00000009376 |
|---------|------|-------------|---------------------|---------|---------------------|
| Met     | 6    | 0.040       | 2.74                | 2.13    | 0.04                |
| Apoe    | 7    | 0.040       | 5.47                | 2.52    | 0.04                |
| Myod1   | 7    | 0.040       | 1.20                | 8.03    | 0.04                |
| Tmc3    | 7    | 0.040       | 1.55                | 4.05    | 0.04                |
| Usp17ld | 7    | 0.040       | 2.02                | 43.56   | 0.04                |
| Rassf10 | 7    | 0.040       | 3.55                | 4.65    | 0.04                |
| Acsm1   | 7    | 0.040       | 1.14                | 11.69   | 0.04                |
| Arhgef10| 8    | 0.040       | 1.56                | 2.61    | 0.04                |
| Mmp13   | 9    | 0.040       | 1.19                | 3.78    | 0.04                |
| Rpp25   | 9    | 0.040       | 1.71                | 3.04    | 0.04                |
| Lama4   | 10   | 0.040       | 1.52                | 3.68    | 0.04                |
| Tmem106a| 11   | 0.040       | 5.44                | 2.58    | 0.04                |
| Hist1h2ab| 13  | 0.040       | 1.37                | 3.68    | 0.04                |
| Has2    | 15   | 0.040       | 3.18                | 3.67    | 0.04                |
| Cd80    | 16   | 0.040       | 5.31                | 2.63    | 0.04                |
| Rbm11   | 16   | 0.040       | 2.49                | 3.08    | 0.04                |
| Sim2    | 16   | 0.040       | 1.46                | 39.73   | 0.04                |
| Abhd3   | 18   | 0.040       | 1.35                | 5.14    | 0.04                |
| Camk2a  | 18   | 0.040       | 2.36                | 2.87    | 0.04                |
| Ms4a4d  | 19   | 0.040       | 1.70                | 46.93   | 0.04                |
| Ubtd1   | 19   | 0.040       | 1.78                | 2.29    | 0.04                |
| Col4a6  | X    | 0.040       | 1.95                | 3.23    | 0.04                |
| Il1f9   | 2    | 0.050       | 1.78                | 36.97   | 0.05                |
| Uap11l  | 2    | 0.050       | 2.36                | 2.05    | 0.05                |
| Bcas1   | 2    | 0.050       | 5.19                | 38.88   | 0.05                |
| Ttc22   | 4    | 0.050       | 2.15                | 5.80    | 0.05                |
| Papollb | 5    | 0.050       | 5.20                | 36.76   | 0.05                |
| Abi3    | 11   | 0.050       | 1.42                | 2.03    | 0.05                |
| Col14a1 | 15   | 0.050       | 1.02                | 6.12    | 0.05                |
| Cryaa   | 17   | 0.050       | 3.18                | 4.34    | 0.05                |
| Notch3  | 17   | 0.050       | 1.32                | 2.50    | 0.05                |
| H2-BI   | 17   | 0.050       | 2.48                | 5.59    | 0.05                |
Supplemental Table 9. Downregulated genes in *DotIL-MM* ESRE cells in common with *DotIL-KO* cells (n=198)

| Name   | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL     |
|--------|------------|----------------|------------------|-------------|---------|-------------|
| Atp2a3 | 11         | 24.700         | -1.85            | -3.61       | 0.00    | ENSMUSG00000020788 |
| Itgb3  | 11         | 86.020         | -2.33            | -5.03       | 0.00    | ENSMUSG00000020689 |
| Alox12 | 11         | 16.560         | -2.51            | -5.68       | 0.00    | ENSMUSG00000000320 |
| Hmga1b | 11         | 154.650        | -2.06            | -4.17       | 0.00    | ENSMUSG00000078249 |
| Mpl    | 4          | 9.910          | -3.01            | -8.08       | 0.00    | ENSMUSG0000006389  |
| Mpo    | 11         | 37.630         | -2.60            | -6.05       | 0.00    | ENSMUSG00000009350 |
| Gp5    | 16         | 22.080         | -2.62            | -6.15       | 0.00    | ENSMUSG00000047953 |
| Trem1l | 17         | 21.970         | -2.89            | -7.41       | 0.00    | ENSMUSG00000023993 |
| Gp1bb  | 16         | 21.440         | -2.35            | -5.09       | 0.00    | ENSMUSG00000050761 |
| Rasgrp2| 19         | 5.500          | -2.48            | -5.56       | 0.00    | ENSMUSG00000032946 |
| Vwf    | 6          | 13.250         | -1.66            | -3.15       | 0.00    | ENSMUSG0000001930  |
| Slc35d3| 10         | 5.700          | -2.94            | -7.66       | 0.00    | ENSMUSG00000050473 |
| F2rl2  | 13         | 7.810          | -2.29            | -4.90       | 0.00    | ENSMUSG00000021675 |
| Mmrn1  | 6          | 6.550          | -2.57            | -5.94       | 0.00    | ENSMUSG00000054641 |
| Gp1ba  | 11         | 14.750         | -2.02            | -4.06       | 0.00    | ENSMUSG00000050675 |
| Exoc3l2| 7          | 1.210          | -3.71            | -13.06      | 0.00    | ENSMUSG00000011263 |
| Mrvi1  | 7          | 9.920          | -1.66            | -3.17       | 0.00    | ENSMUSG0000005611  |
| Ppbp   | 5          | 20.660         | -2.27            | -4.81       | 0.00    | ENSMUSG00000029372 |
| Anp32a | 9          | 34.980         | -1.23            | -2.34       | 0.00    | ENSMUSG00000032249 |
| Clec1b | 6          | 18.500         | -2.31            | -4.97       | 0.00    | ENSMUSG00000030159 |
| Gp9    | 6          | 37.980         | -2.08            | -4.24       | 0.00    | ENSMUSG00000030054 |
| Robo3  | 9          | 2.050          | -3.11            | -8.66       | 0.00    | ENSMUSG00000032128 |
| F5     | 1          | 3.720          | -2.20            | -4.60       | 0.00    | ENSMUSG00000026579 |
| Ppif   | 14         | 47.020         | -1.26            | -2.39       | 0.00    | ENSMUSG00000021868 |
| P2rx1  | 11         | 10.910         | -2.25            | -4.74       | 0.00    | ENSMUSG00000020787 |
| Prkca  | 11         | 4.140          | -1.87            | -3.66       | 0.00    | ENSMUSG00000050965 |
| Med12l | 3          | 0.950          | -2.52            | -5.73       | 0.00    | ENSMUSG00000056476 |
| Rbphps2| 9          | 10.140         | -1.92            | -3.78       | 0.00    | ENSMUSG00000032387 |
| Lrmp   | 6          | 28.090         | -1.45            | -2.73       | 0.00    | ENSMUSG00000030263 |
| Fli3   | 5          | 0.810          | -3.62            | -12.33      | 0.00    | ENSMUSG00000042817 |
| Gene      | Rank | Log2 Fold Change | P-value | FDR | ENSMUG000000X | 
|-----------|------|-----------------|---------|-----|---------------|
| Serpinb2  | 1    | 5.940           | -2.61   | -6.12 | 0.00 | ENSMUSG00000062345 |
| Dnmt3b    | 2    | 3.730           | -2.16   | -4.46 | 0.00 | ENSMUSG00000027478 |
| Fli1      | 9    | 8.690           | -1.96   | -3.88 | 0.00 | ENSMUSG00000016087 |
| Slc38a1   | 15   | 12.310          | -1.37   | -2.58 | 0.00 | ENSMUSG00000023169 |
| Rasa3     | 8    | 14.330          | -1.21   | -2.32 | 0.00 | ENSMUSG00000031453 |
| Trpc6     | 9    | 0.630           | -3.16   | -8.95 | 0.00 | ENSMUSG00000031997 |
| Pdk1      | 2    | 24.630          | -1.19   | -2.27 | 0.00 | ENSMUSG00000006494 |
| Ripor2    | 13   | 1.260           | -2.44   | -5.45 | 0.00 | ENSMUSG00000036006 |
| Tnfsf14   | 17   | 4.510           | -2.71   | -6.55 | 0.00 | ENSMUSG00000005824 |
| Tpi1      | 6    | 212.280         | -1.21   | -2.31 | 0.00 | ENSMUSG00000023456 |
| Gucy1a1   | 3    | 1.920           | -2.49   | -5.62 | 0.00 | ENSMUSG00000033910 |
| Mylk      | 16   | 3.600           | -1.79   | -3.45 | 0.00 | ENSMUSG00000022836 |
| Bahcc1    | 11   | 2.230           | -1.80   | -3.48 | 0.00 | ENSMUSG00000039741 |
| Spns2     | 11   | 16.280          | -1.61   | -3.06 | 0.00 | ENSMUSG00000040447 |
| Slamf1    | 1    | 4.100           | -2.39   | -5.23 | 0.00 | ENSMUSG00000015316 |
| Ripor3    | 2    | 1.990           | -2.52   | -5.74 | 0.00 | ENSMUSG00000074577 |
| Lat       | 7    | 10.940          | -2.11   | -4.31 | 0.00 | ENSMUSG00000030742 |
| Bin2      | 15   | 37.920          | -1.08   | -2.11 | 0.00 | ENSMUSG00000098112 |
| Tnik      | 3    | 1.630           | -1.74   | -3.35 | 0.00 | ENSMUSG00000027692 |
| Psma8     | 18   | 0.990           | -3.29   | -9.76 | 0.00 | ENSMUSG00000036743 |
| Pde5a     | 3    | 3.340           | -1.60   | -3.02 | 0.00 | ENSMUSG00000053965 |
| Bzw2      | 12   | 29.370          | -1.09   | -2.13 | 0.00 | ENSMUSG00000020547 |
| Chd7      | 4    | 14.770          | -1.04   | -2.05 | 0.00 | ENSMUSG00000041235 |
| F2rl3     | 8    | 3.790           | -2.42   | -5.35 | 0.00 | ENSMUSG00000050147 |
| 6-Sep     | X    | 2.220           | -1.81   | -3.50 | 0.00 | ENSMUSG00000050379 |
| Cdk6      | 5    | 7.360           | -1.10   | -2.14 | 0.00 | ENSMUSG00000040274 |
| Zfp979    | 4    | 2.320           | -2.59   | -6.04 | 0.00 | ENSMUSG00000066000 |
| Cd226     | 18   | 1.290           | -2.36   | -5.14 | 0.00 | ENSMUSG00000034028 |
| Map2      | 1    | 0.340           | -4.28   | -19.45| 0.00 | ENSMUSG00000015222 |
| Phgdh     | 3    | 75.230          | -1.08   | -2.11 | 0.00 | ENSMUSG00000053398 |
| Plcg2     | 8    | 9.960           | -1.52   | -2.86 | 0.00 | ENSMUSG00000034330 |
| Lin28b    | 10   | 13.290          | -1.23   | -2.35 | 0.00 | ENSMUSG00000063804 |
| Dcx       | X    | 0.260           | -5.34   | -40.59| 0.00 | ENSMUSG00000031285 |
| Gene  | ID | Log2 | Fold Change | p-Value | ENSMUSG ID          |
|-------|----|------|-------------|---------|---------------------|
| Sla   | 15 | 9.930| -1.60       | -3.04   | 0.00               |
| Ccdc85c | 12 | 4.820| -1.58       | -2.98   | 0.00               |
|Dlg2  | 7  | 0.360| -2.63       | -6.18   | 0.00               |
| Ubash3a | 17 | 1.710| -1.83       | -3.55   | 0.00               |
| Mef2c | 13 | 2.360| -1.60       | -3.03   | 0.00               |
| Sms   | X  | 11.51| -1.31       | -2.49   | 0.00               |
| Itgal | 7  | 3.600| -1.65       | -3.13   | 0.00               |
| Capn3 | 2  | 0.720| -2.80       | -6.98   | 0.00               |
| Ptger3| 3  | 13.96| -1.28       | -2.44   | 0.00               |
| Serpinb10 | 1 | 2.290| -2.73       | -6.65   | 0.00               |
| Psd4  | 2  | 3.580| -1.24       | -2.37   | 0.00               |
| Pipp3 | 10 | 1.030| -2.67       | -6.36   | 0.00               |
| Gucy1b1 | 3 | 3.300| -2.01       | -4.03   | 0.00               |
| Myctl | 10 | 1.240| -2.49       | -5.63   | 0.00               |
| Sla2  | 2  | 3.110| -2.06       | -4.17   | 0.00               |
| Gp6   | 7  | 1.510| -2.07       | -4.21   | 0.00               |
| Igf2bp1 | 11| 10.53| -1.13       | -2.19   | 0.00               |
| Slco4a1 | 2 | 4.060| -2.39       | -5.24   | 0.00               |
| Elf1  | 14 | 20.450| -1.04      | -2.06   | 0.00               |
| Rasal3| 17 | 3.530| -1.75       | -3.37   | 0.00               |
| Mtss1l | 8 | 3.500| -1.45       | -2.73   | 0.00               |
| Meis1 | 11 | 1.430| -2.01       | -4.02   | 0.00               |
| Tmprss7 | 16| 0.360| -3.46       | -11.02  | 0.00               |
| Rab37 | 11 | 2.180| -2.03       | -4.07   | 0.00               |
| Dok2  | 14 | 11.250| -1.49      | -2.80   | 0.00               |
| Rps6ka6 | X | 5.290| -1.41       | -2.66   | 0.00               |
| Kcnk6 | 7  | 4.170| -1.45       | -2.73   | 0.00               |
| Bmi1  | 2  | 6.930| -1.35       | -2.55   | 0.00               |
| Cdeca7 | 2 | 25.420| -1.00      | -2.01   | 0.00               |
| Slc22a3 | 17| 1.070| -2.27       | -4.84   | 0.00               |
| Nfasc | 1  | 0.080| -5.22       | -37.32  | 0.00               |
| Serpina3g | 12| 2.640| -2.13       | -4.39   | 0.00               |
| St8sia4 | 1 | 0.210| -2.23       | -4.70   | 0.00               |
| Gene   | Accession | Fold Change | Log2 Fold Change | p-value | ENSMUSG00000000000  |
|--------|-----------|-------------|-----------------|---------|---------------------|
| Unc119 | 11        | 18.560      | -1.21           | -2.31   | 0.00                |
| Mfng   | 15        | 3.120       | -1.90           | -3.73   | 0.00                |
| Gphn   | 12        | 7.320       | -1.24           | -2.36   | 0.00                |
| Stmn2  | 3         | 0.800       | -3.75           | -13.43  | 0.00                |
| Trmt6  | 2         | 14.050      | -1.10           | -2.15   | 0.00                |
| Fxyd2  | 9         | 1.820       | -3.27           | -9.66   | 0.00                |
| Prl2b1 | 13        | 0.620       | -4.69           | -25.88  | 0.00                |
| Kcna3  | 3         | 1.930       | -2.09           | -4.26   | 0.00                |
| Tmem163| 1         | 0.710       | -2.26           | -4.80   | 0.00                |
| 3-Sep  | 15        | 0.340       | -3.63           | -12.35  | 0.00                |
| BC035044| 6        | 0.640       | -2.94           | -7.68   | 0.00                |
| St8sia1| 6         | 0.090       | -3.28           | -9.71   | 0.00                |
| Apc2   | 10        | 0.310       | -2.68           | -6.41   | 0.00                |
| Lrrc32 | 7         | 2.910       | -1.47           | -2.76   | 0.00                |
| Suclg2 | 6         | 12.310      | -1.02           | -2.03   | 0.01                |
| Smyd5  | 6         | 13.740      | -1.12           | -2.17   | 0.01                |
| Chl1   | 6         | 0.070       | -3.61           | -12.20  | 0.01                |
| Ncan   | 8         | 0.160       | -7.49           | -179.71 | 0.01                |
| Agap2  | 10        | 1.990       | -1.55           | -2.92   | 0.01                |
| Mugl   | 6         | 0.090       | -4.38           | -20.87  | 0.01                |
| Dcc    | 18        | 0.110       | -7.43           | -173.01 | 0.01                |
| Ankrd13b| 11       | 4.780       | -1.17           | -2.25   | 0.01                |
| Mrap   | 16        | 10.450      | -1.59           | -3.01   | 0.01                |
| Myt1   | 2         | 0.120       | -4.79           | -27.64  | 0.01                |
| Cer9   | 9         | 0.090       | -3.77           | -13.65  | 0.01                |
| Thbs1  | 2         | 154.090     | -1.06           | -2.08   | 0.01                |
| Chrna4 | 2         | 0.180       | -7.17           | -143.94 | 0.01                |
| Impa2  | 18        | 2.620       | -1.37           | -2.58   | 0.01                |
| Cdec116| 16        | 2.420       | -1.62           | -3.08   | 0.01                |
| Serpina3f| 12     | 0.560       | -2.56           | -5.89   | 0.01                |
| Crtam  | 9         | 0.290       | -2.28           | -4.86   | 0.01                |
| mt-Nd3 | MT        | 577.770     | -1.04           | -2.06   | 0.01                |
| Rrp15  | 1         | 25.070      | -1.07           | -2.10   | 0.01                |
| Prelid2 | 18  | 9.180 | -1.68 | -3.20 | 0.01 | ENSMUSG00000056671 |
|---------|-----|-------|-------|-------|------|------------------|
| Prtn3   | 10  | 7.170 | -1.82 | -3.54 | 0.01 | ENSMUSG000000057729 |
| Eno1    | 4   | 178.420 | -1.01 | -2.01 | 0.01 | ENSMUSG00000063524 |
| Lhx1    | 11  | 0.160 | -4.78 | -27.38 | 0.01 | ENSMUSG00000018698 |
| Nlrp6   | 7   | 2.240 | -1.51 | -2.85 | 0.01 | ENSMUSG00000038745 |
| Arhgap15 | 2  | 0.840 | -1.89 | -3.70 | 0.01 | ENSMUSG00000049744 |
| Klhl6   | 16  | 7.440 | -1.28 | -2.43 | 0.01 | ENSMUSG00000043008 |
| Draxin  | 4   | 0.590 | -1.98 | -3.94 | 0.01 | ENSMUSG00000029005 |
| Bend3   | 10  | 4.300 | -1.06 | -2.09 | 0.01 | ENSMUSG00000038214 |
| Polr3g  | 13  | 6.840 | -1.18 | -2.27 | 0.01 | ENSMUSG00000035834 |
| Klk8    | 7   | 1.520 | -2.18 | -4.52 | 0.01 | ENSMUSG00000064023 |
| Slc25a13 | 6  | 6.950 | -1.21 | -2.32 | 0.01 | ENSMUSG00000015112 |
| Shmt1   | 11  | 8.160 | -1.14 | -2.20 | 0.01 | ENSMUSG00000020534 |
| Cacng4  | 11  | 0.260 | -3.63 | -12.37 | 0.01 | ENSMUSG00000020723 |
| Fastkd2 | 1   | 6.530 | -1.08 | -2.12 | 0.01 | ENSMUSG00000025962 |
| Scrt2   | 2   | 0.270 | -3.60 | -12.16 | 0.01 | ENSMUSG00000060257 |
| Stnn3   | 2   | 0.550 | -6.63 | -99.22 | 0.01 | ENSMUSG00000027581 |
| Il12a   | 3   | 0.360 | -6.42 | -85.49 | 0.01 | ENSMUSG00000027776 |
| Gria2   | 3   | 0.050 | -3.74 | -13.40 | 0.01 | ENSMUSG00000033981 |
| Celf3   | 3   | 0.280 | -3.73 | -13.25 | 0.01 | ENSMUSG00000028137 |
| Igfbpl1 | 4   | 0.230 | -6.73 | -105.93 | 0.01 | ENSMUSG00000035551 |
| Map4k1  | 7   | 5.730 | -1.14 | -2.20 | 0.01 | ENSMUSG00000037337 |
| Brsk2   | 7   | 0.110 | -4.04 | -16.48 | 0.01 | ENSMUSG00000053046 |
| Trim67  | 8   | 0.080 | -6.76 | -108.17 | 0.01 | ENSMUSG00000036913 |
| Chst11  | 10  | 6.610 | -1.00 | -2.01 | 0.01 | ENSMUSG00000034612 |
| Riox1   | 12  | 11.030 | -1.05 | -2.07 | 0.01 | ENSMUSG00000046791 |
| Cdeca7l | 12  | 6.430 | -1.11 | -2.16 | 0.01 | ENSMUSG00000021175 |
| Gm49391 | 13  | 5.780 | -1.56 | -2.94 | 0.01 | ENSMUSG000000114432 |
| Nefl    | 14  | 0.220 | -3.35 | -10.19 | 0.01 | ENSMUSG00000022055 |
| Ptprcap | 19  | 4.410 | -1.62 | -3.08 | 0.01 | ENSMUSG00000045826 |
| Astn1   | 1   | 0.070 | -3.92 | -15.13 | 0.02 | ENSMUSG00000026587 |
| Slc24a5 | 2   | 3.850 | -1.46 | -2.74 | 0.02 | ENSMUSG00000035183 |
| Plcb1   | 2   | 0.200 | -2.19 | -4.55 | 0.02 | ENSMUSG00000051177 |
| Gene     | Strain | Freq | Fold Change | Log2Fold | Adj.Pval | ENSMUSGID    |
|----------|--------|------|-------------|----------|----------|--------------|
| Sprr1b   | 3      | 0.580| -6.26       | -76.86   | 0.02     | ENSMUSG00000048455 |
| Cth      | 3      | 1.700| -1.77       | -3.41    | 0.02     | ENSMUSG000000028179 |
| Zfp992   | 4      | 4.730| -1.15       | -2.23    | 0.02     | ENSMUSG000000076065 |
| Cd69     | 6      | 0.720| -2.08       | -4.22    | 0.02     | ENSMUSG00000030156  |
| Gmfg     | 7      | 5.900| -1.47       | -2.78    | 0.02     | ENSMUSG00000060791  |
| Lrcc4b   | 7      | 0.240| -3.59       | -12.08   | 0.02     | ENSMUSG00000047085  |
| Ptpn5    | 7      | 0.170| -6.60       | -96.98   | 0.02     | ENSMUSG00000030854  |
| Adg3g3   | 8      | 3.100| -1.49       | -2.80    | 0.02     | ENSMUSG00000060470  |
| Amd2     | 10     | 4.840| -1.25       | -2.38    | 0.02     | ENSMUSG00000063953  |
| Atcay    | 10     | 0.130| -6.26       | -76.86   | 0.02     | ENSMUSG00000034958  |
| Fmn1l    | 11     | 4.810| -1.11       | -2.16    | 0.02     | ENSMUSG00000055805  |
| Trmt61a  | 12     | 8.790| -1.11       | -2.16    | 0.02     | ENSMUSG00000060950  |
| Fst      | 13     | 1.130| -2.51       | -5.69    | 0.02     | ENSMUSG00000021765  |
| Ydjc     | 16     | 4.730| -1.10       | -2.14    | 0.02     | ENSMUSG00000041774  |
| Shd      | 17     | 0.180| -4.02       | -16.23   | 0.02     | ENSMUSG00000039154  |
| Hhex     | 19     | 3.860| -1.37       | -2.58    | 0.02     | ENSMUSG00000024986  |
| Traf3ip3 | 1      | 0.860| -1.60       | -3.03    | 0.03     | ENSMUSG00000037318  |
| Nhll2    | 3      | 0.070| -5.88       | -58.97   | 0.03     | ENSMUSG00000048540  |
| Ptpn22   | 3      | 1.360| -1.87       | -3.65    | 0.03     | ENSMUSG00000027843  |
| Cdh17    | 4      | 0.180| -2.19       | -4.55    | 0.03     | ENSMUSG00000028217  |
| Zfp991   | 4      | 9.090| -1.10       | -2.15    | 0.03     | ENSMUSG00000067916  |
| Kcnab2   | 4      | 4.560| -1.01       | -2.01    | 0.03     | ENSMUSG00000028931  |
| Enoph1   | 5      | 10.040| -1.01      | -2.02    | 0.03     | ENSMUSG00000029326  |
| Peg12    | 7      | 1.940| -1.55       | -2.93    | 0.03     | ENSMUSG000000070526  |
| Apba2    | 7      | 0.110| -5.99       | -63.44   | 0.03     | ENSMUSG00000030519  |
| Gm32687  | 10     | 0.140| -5.87       | -58.51   | 0.03     | ENSMUSG000000112640 |
| Cmah     | 13     | 0.520| -1.43       | -2.70    | 0.03     | ENSMUSG00000016756  |
| Nr2f1    | 13     | 0.130| -3.15       | -8.90    | 0.03     | ENSMUSG00000069171  |
| Rab3c    | 13     | 0.050| -3.57       | -11.86   | 0.03     | ENSMUSG00000021700  |
| Prodh    | 16     | 1.720| -1.40       | -2.64    | 0.03     | ENSMUSG0000003526  |
| Dctd     | 8      | 4.890| -1.07       | -2.11    | 0.04     | ENSMUSG00000031562  |
| Elavl3   | 9      | 0.220| -2.54       | -5.80    | 0.04     | ENSMUSG0000003410  |
| B3gat1   | 9      | 0.070| -5.71       | -52.26   | 0.04     | ENSMUSG00000045994  |
| Gene | Fold Change | Beta(T) | Beta(G) | P-value | GeneID         |
|------|-------------|---------|---------|---------|----------------|
| Nsg2 | 0.250       | -2.57   | -5.94   | 0.04    | ENSMUSG00000020297 |
| Rpp40| 1.480       | -1.28   | -2.43   | 0.04    | ENSMUSG00000021418 |
| Pax2 | 0.120       | -3.09   | -8.50   | 0.04    | ENSMUSG0000004231  |
### Supplemental Table 10. Upregulated genes in Dot1L-MM ESRE cells that are unique to these mutant cells (n=893)

| Gene Name | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL |
|-----------|------------|----------------|------------------|-------------|---------|---------|
| Tsopo2    | 17         | 0.000          | 2.88             | 7.38        | 0.00    | ENSMUSG00000023995 |
| Nacad     | 11         | 0.000          | 3.01             | 8.07        | 0.00    | ENSMUSG00000041073 |
| Inhba     | 13         | 0.000          | 3.80             | 13.91       | 0.00    | ENSMUSG00000041324 |
| Cdhl2     | 18         | 0.000          | 3.35             | 10.22       | 0.00    | ENSMUSG00000024304 |
| Cald1     | 6          | 0.000          | 2.57             | 5.93        | 0.00    | ENSMUSG00000029761 |
| Zim1      | 7          | 0.000          | 3.18             | 9.04        | 0.00    | ENSMUSG00000022666 |
| Tgfb2     | 1          | 0.000          | 3.12             | 8.67        | 0.00    | ENSMUSG00000039239 |
| Adamts2   | 11         | 0.000          | 3.20             | 9.19        | 0.00    | ENSMUSG00000036545 |
| Actg2     | 6          | 0.000          | 3.75             | 13.48       | 0.00    | ENSMUSG00000059430 |
| Rgs5      | 1          | 0.000          | 4.03             | 16.39       | 0.00    | ENSMUSG00000026678 |
| Gas6      | 8          | 0.000          | 2.47             | 5.55        | 0.00    | ENSMUSG00000031451 |
| Vgll3     | 16         | 0.000          | 3.14             | 8.83        | 0.00    | ENSMUSG00000091243 |
| Cxcl12    | 6          | 0.000          | 3.20             | 9.18        | 0.00    | ENSMUSG00000061353 |
| Col4a5    | X          | 0.000          | 2.89             | 7.44        | 0.00    | ENSMUSG00000031274 |
| Tpm2      | 4          | 0.000          | 3.08             | 8.46        | 0.00    | ENSMUSG00000028464 |
| Adam12    | 7          | 0.000          | 3.08             | 8.44        | 0.00    | ENSMUSG00000054555 |
| Gpnmb     | 6          | 0.000          | 2.12             | 4.34        | 0.00    | ENSMUSG00000029816 |
| Megf6     | 4          | 0.000          | 4.12             | 17.34       | 0.00    | ENSMUSG00000057751 |
| Adamts5   | 16         | 0.000          | 3.62             | 12.33       | 0.00    | ENSMUSG00000022894 |
| Zic3      | X          | 0.000          | 4.68             | 25.64       | 0.00    | ENSMUSG00000067860 |
| Hand2     | 8          | 0.000          | 2.89             | 7.41        | 0.00    | ENSMUSG00000038193 |
| Cen4      | 15         | 0.000          | 2.64             | 6.24        | 0.00    | ENSMUSG0000005124  |
| Lmod1     | 1          | 0.000          | 3.88             | 14.72       | 0.00    | ENSMUSG00000048096 |
| Adam19    | 11         | 0.000          | 2.74             | 6.69        | 0.00    | ENSMUSG00000011256 |
| Ifit1     | 19         | 0.000          | 2.14             | 4.39        | 0.00    | ENSMUSG00000034459 |
| Amotl1    | 9          | 0.000          | 2.55             | 5.84        | 0.00    | ENSMUSG00000013076 |
| Rmc1      | 18         | 0.000          | 1.34             | 2.52        | 0.00    | ENSMUSG00000024410 |
| Adam8     | 7          | 0.000          | 2.28             | 4.85        | 0.00    | ENSMUSG00000025473 |
| Erv3      | 2          | 0.000          | 4.30             | 19.65       | 0.00    | ENSMUSG00000037482 |
| C1qc      | 4          | 0.000          | 2.18             | 4.52        | 0.00    | ENSMUSG00000036896 |
| Gene  | ID   | Value | Log2FC | q-value | Ensembl Gene ID |
|-------|------|-------|--------|---------|-----------------|
| Lrrc75b | 10   | 0.000 | 3.91   | 15.05   | ENSMUSG00000046807 |
| Hs6st2  | X    | 0.000 | 2.40   | 5.29    | ENSMUSG00000062184 |
| Loxl4   | 19   | 0.000 | 3.73   | 13.30   | ENSMUSG00000025185 |
| Grem2   | 1    | 0.000 | 3.25   | 9.51    | ENSMUSG00000050069 |
| Cyp1b1  | 17   | 0.000 | 3.08   | 8.46    | ENSMUSG00000024087 |
| Lrp1    | 10   | 0.000 | 2.18   | 4.55    | ENSMUSG00000040249 |
| Csfl    | 3    | 0.000 | 2.68   | 6.40    | ENSMUSG00000014599 |
| Hoxa11  | 6    | 0.000 | 3.93   | 15.29   | ENSMUSG00000038210 |
| Pdlim3  | 8    | 0.000 | 4.48   | 22.38   | ENSMUSG00000031636 |
| Igfbp7  | 5    | 0.000 | 3.10   | 8.55    | ENSMUSG00000036256 |
| Crispld2| 8    | 0.000 | 2.44   | 5.42    | ENSMUSG00000031825 |
| Lpl     | 8    | 0.000 | 1.41   | 2.66    | ENSMUSG00000015568 |
| Pcolce  | 5    | 0.000 | 2.82   | 7.07    | ENSMUSG00000029718 |
| Adgre1  | 17   | 0.000 | 2.03   | 4.10    | ENSMUSG00000004730 |
| Ddr2    | 1    | 0.000 | 3.13   | 8.77    | ENSMUSG00000026674 |
| Tbx20   | 9    | 0.000 | 3.16   | 8.92    | ENSMUSG00000031965 |
| C1qa    | 4    | 0.000 | 2.36   | 5.13    | ENSMUSG00000036887 |
| Serpine2| 1    | 0.000 | 2.11   | 4.32    | ENSMUSG00000026249 |
| Zdbf2   | 1    | 0.000 | 2.54   | 5.82    | ENSMUSG00000027520 |
| Ece1    | 4    | 0.000 | 2.20   | 4.58    | ENSMUSG00000057530 |
| Ncam1   | 9    | 0.000 | 2.36   | 5.15    | ENSMUSG00000039542 |
| Myocd   | 11   | 0.000 | 3.83   | 14.24   | ENSMUSG00000020542 |
| Nipal4  | 11   | 0.000 | 4.31   | 19.86   | ENSMUSG00000020411 |
| Ptn     | 6    | 0.000 | 3.03   | 8.15    | ENSMUSG00000029838 |
| Fbln2   | 6    | 0.000 | 2.26   | 4.78    | ENSMUSG00000064080 |
| Fndc1   | 17   | 0.000 | 3.96   | 15.59   | ENSMUSG00000071984 |
| Mrc2    | 11   | 0.000 | 2.62   | 6.17    | ENSMUSG00000020695 |
| C3ar1   | 6    | 0.000 | 1.84   | 3.58    | ENSMUSG00000040552 |
| Itgb5   | 16   | 0.000 | 2.33   | 5.02    | ENSMUSG00000022817 |
| Vcam1   | 3    | 0.000 | 3.68   | 12.85   | ENSMUSG00000027962 |
| Cmkrl1  | 5    | 0.000 | 2.87   | 7.32    | ENSMUSG00000042190 |
| Kif26b  | 1    | 0.000 | 3.11   | 8.62    | ENSMUSG00000026494 |
| Mamdc2  | 19   | 0.000 | 2.93   | 7.63    | ENSMUSG00000033207 |
| Gene      | Value | P-value | Fold Change | Log2 Fold Change | ENSMUSG00000000000 |
|-----------|-------|---------|-------------|-----------------|---------------------|
| Lynx1     | 15    | 0.000   | 4.50        | 22.56           | 0.00 ENSMUSG00000022594 |
| Adamts13  | 7     | 0.000   | 5.35        | 40.69           | 0.00 ENSMUSG00000070469 |
| Nuak1     | 10    | 0.000   | 2.62        | 6.15            | 0.00 ENSMUSG00000020032 |
| Ccn5      | 2     | 0.000   | 4.08        | 16.88           | 0.00 ENSMUSG00000027656 |
| Psap      | 10    | 0.000   | 1.16        | 2.24            | 0.00 ENSMUSG0000004207 |
| Enho      | 4     | 0.000   | 3.51        | 11.42           | 0.00 ENSMUSG00000028445 |
| Gprc5b    | 7     | 0.000   | 2.08        | 4.23            | 0.00 ENSMUSG00000008734 |
| Clea3a1   | 3     | 0.000   | 2.57        | 5.95            | 0.00 ENSMUSG00000056025 |
| Wnt5a     | 14    | 0.000   | 3.08        | 8.44            | 0.00 ENSMUSG00000021994 |
| Dtna      | 18    | 0.000   | 3.74        | 13.35           | 0.00 ENSMUSG00000024302 |
| Myl9      | 2     | 0.000   | 2.88        | 4.85            | 0.00 ENSMUSG00000067818 |
| Mafb      | 2     | 0.000   | 2.51        | 5.70            | 0.00 ENSMUSG00000074622 |
| Ccn3      | 15    | 0.000   | 4.62        | 24.55           | 0.00 ENSMUSG00000037362 |
| Clqb      | 4     | 0.000   | 1.97        | 3.90            | 0.00 ENSMUSG00000036905 |
| Siglecg   | 7     | 0.000   | 3.33        | 10.06           | 0.00 ENSMUSG00000030468 |
| Nrp1      | 8     | 0.000   | 2.45        | 5.45            | 0.00 ENSMUSG00000025810 |
| Thsd7a    | 6     | 0.000   | 2.88        | 7.37            | 0.00 ENSMUSG00000032625 |
| Zcchc24   | 14    | 0.000   | 2.25        | 4.74            | 0.00 ENSMUSG00000055538 |
| Adamts12  | 15    | 0.000   | 2.91        | 7.52            | 0.00 ENSMUSG00000047497 |
| Wscd2     | 5     | 0.000   | 3.88        | 14.74           | 0.00 ENSMUSG00000063430 |
| Vcan      | 13    | 0.000   | 2.62        | 6.15            | 0.00 ENSMUSG00000021614 |
| Rbms3     | 9     | 0.000   | 2.82        | 7.07            | 0.00 ENSMUSG00000039607 |
| Tnnt2     | 1     | 0.000   | 2.63        | 6.20            | 0.00 ENSMUSG00000026414 |
| Itga11    | 9     | 0.000   | 4.82        | 28.24           | 0.00 ENSMUSG00000032243 |
| Tcfl5     | 2     | 0.000   | 3.74        | 13.34           | 0.00 ENSMUSG00000038932 |
| Rippy1    | X     | 0.000   | 3.74        | 13.34           | 0.00 ENSMUSG00000072945 |
| Parva     | 7     | 0.000   | 2.30        | 4.94            | 0.00 ENSMUSG00000030770 |
| Prrx1     | 1     | 0.000   | 3.33        | 10.06           | 0.00 ENSMUSG00000026586 |
| Adcy3     | 12    | 0.000   | 2.40        | 5.29            | 0.00 ENSMUSG00000020654 |
| Pitx2     | 3     | 0.000   | 2.68        | 6.41            | 0.00 ENSMUSG00000028023 |
| Tnnt3     | 7     | 0.000   | 3.69        | 12.86           | 0.00 ENSMUSG00000061723 |
| Palld     | 8     | 0.001   | 2.09        | 4.26            | 0.00 ENSMUSG00000058056 |
| Gene   | Count | q-value | Log2FC | P-value | ENSMUSG00000000000 |
|--------|-------|---------|--------|---------|-------------------|
| Nptx2  | 5     | 0.001   | 3.75   | 13.48   | 0.00              |
| Fscn1  | 5     | 0.001   | 2.19   | 4.55    | 0.00              |
| Cavin3 | 7     | 0.001   | 2.59   | 6.04    | 0.00              |
| Spon1  | 7     | 0.001   | 2.76   | 6.79    | 0.00              |
| Nfib   | 4     | 0.001   | 2.63   | 6.19    | 0.00              |
| Fndc5  | 4     | 0.001   | 2.67   | 6.35    | 0.00              |
| Marveld1 | 19 | 0.001   | 2.13   | 4.37    | 0.00              |
| Fam20a | 11    | 0.001   | 3.73   | 13.31   | 0.00              |
| Tbx4   | 11    | 0.001   | 3.13   | 8.78    | 0.00              |
| Olfr78 | 7     | 0.001   | 4.53   | 23.10   | 0.00              |
| Slc37a2| 9     | 0.001   | 1.95   | 3.87    | 0.00              |
| Loxl1  | 9     | 0.001   | 2.41   | 5.30    | 0.00              |
| Marcks | 10    | 0.001   | 1.80   | 3.48    | 0.00              |
| Adamts15 | 9   | 0.001   | 2.72   | 6.57    | 0.00              |
| Aff2   | X     | 0.001   | 2.66   | 6.34    | 0.00              |
| Tmem119| 5     | 0.001   | 2.85   | 7.23    | 0.00              |
| Trabd2b| 4     | 0.001   | 2.79   | 6.90    | 0.00              |
| Mmp14  | 14    | 0.001   | 2.18   | 4.54    | 0.00              |
| Itga5  | 15    | 0.001   | 1.70   | 3.24    | 0.00              |
| Kcnv2  | 19    | 0.001   | 4.49   | 22.45   | 0.00              |
| Ust    | 10    | 0.001   | 2.71   | 6.54    | 0.00              |
| Hoxa13 | 6     | 0.001   | 3.75   | 13.44   | 0.00              |
| Dkk3   | 7     | 0.001   | 3.19   | 9.12    | 0.00              |
| Cts5   | 3     | 0.001   | 1.87   | 3.65    | 0.00              |
| Padi3  | 4     | 0.001   | 2.59   | 6.03    | 0.00              |
| Mill2  | 7     | 0.001   | 3.44   | 10.88   | 0.00              |
| Anxa5  | 3     | 0.001   | 1.43   | 2.70    | 0.00              |
| Ankrd1 | 19    | 0.001   | 2.58   | 5.99    | 0.00              |
| Cen2   | 10    | 0.001   | 2.02   | 4.06    | 0.00              |
| Shisa4 | 1     | 0.001   | 2.75   | 6.74    | 0.00              |
| Ly6a   | 15    | 0.001   | 2.37   | 5.16    | 0.00              |
| Sulf2  | 2     | 0.001   | 2.28   | 4.86    | 0.00              |
| Apol9a | 15    | 0.001   | 5.56   | 47.07   | 0.00              |
| Gene   | Log2 Fold Change | Fold Change | p-value | ENSMUSG0000000000 |
|--------|-----------------|-------------|---------|-------------------|
| Grn    | 11              | 0.001       | 1.35    | 2.56              | 0.00 | ENSMUSG00000034708 |
| Dkk2   | 3               | 0.001       | 3.41    | 10.63             | 0.00 | ENSMUSG00000028031 |
| Cpne2  | 8               | 0.001       | 2.57    | 5.92              | 0.00 | ENSMUSG00000034361 |
| Msrb3  | 10              | 0.001       | 2.26    | 4.78              | 0.00 | ENSMUSG00000051236 |
| Cd248  | 19              | 0.001       | 1.70    | 3.25              | 0.00 | ENSMUSG00000056481 |
| Tubb6  | 18              | 0.001       | 1.83    | 3.57              | 0.00 | ENSMUSG00000001473 |
| Syde1  | 10              | 0.001       | 2.58    | 5.99              | 0.00 | ENSMUSG00000032714 |
| Fstd3  | 10              | 0.001       | 2.49    | 5.61              | 0.00 | ENSMUSG00000020325 |
| Hmgell1| 9               | 0.001       | 2.87    | 7.32              | 0.00 | ENSMUSG0000007908 |
| Phactr2| 10              | 0.001       | 1.62    | 3.08              | 0.00 | ENSMUSG00000062866 |
| Sern1  | 6               | 0.001       | 2.28    | 4.87              | 0.00 | ENSMUSG00000019124 |
| Plxna1 | 6               | 0.001       | 1.08    | 2.12              | 0.00 | ENSMUSG00000030084 |
| Nav2   | 7               | 0.001       | 1.42    | 2.67              | 0.00 | ENSMUSG00000052512 |
| Sdc2   | 15              | 0.001       | 2.84    | 7.15              | 0.00 | ENSMUSG00000022261 |
| Pdgfc  | 3               | 0.001       | 2.69    | 6.45              | 0.00 | ENSMUSG00000028019 |
| Col16a1| 4               | 0.001       | 2.39    | 5.24              | 0.00 | ENSMUSG00000040690 |
| Ms4a6d | 19              | 0.001       | 2.31    | 4.98              | 0.00 | ENSMUSG00000024679 |
| Il6ra  | 3               | 0.001       | 1.43    | 2.69              | 0.00 | ENSMUSG00000027947 |
| Ahi1   | 10              | 0.001       | 1.21    | 2.31              | 0.00 | ENSMUSG00000019986 |
| Pitx1  | 13              | 0.001       | 2.85    | 7.21              | 0.00 | ENSMUSG00000021506 |
| Bdnf   | 2               | 0.001       | 3.13    | 8.74              | 0.00 | ENSMUSG00000048482 |
| Slc1a6 | 10              | 0.001       | 4.66    | 25.29             | 0.00 | ENSMUSG0000005357 |
| Gbgt1  | 2               | 0.001       | 4.31    | 19.90             | 0.00 | ENSMUSG00000026829 |
| Cnn1   | 9               | 0.001       | 3.09    | 8.51              | 0.00 | ENSMUSG0000001349 |
| Pls3   | X               | 0.001       | 1.61    | 3.04              | 0.00 | ENSMUSG00000016382 |
| Adam23 | 1               | 0.001       | 2.78    | 6.87              | 0.00 | ENSMUSG00000025964 |
| Mrcl   | 2               | 0.001       | 1.80    | 3.49              | 0.00 | ENSMUSG00000026712 |
| Nbl1   | 4               | 0.001       | 2.42    | 5.36              | 0.00 | ENSMUSG00000041120 |
| Adam22 | 5               | 0.001       | 2.48    | 5.58              | 0.00 | ENSMUSG00000040537 |
| Ngp    | 9               | 0.001       | 2.30    | 4.94              | 0.00 | ENSMUSG00000032484 |
| C1qtnf2| 11              | 0.001       | 3.57    | 11.87             | 0.00 | ENSMUSG00000046491 |
| Tcp11  | 17              | 0.001       | 3.72    | 13.21             | 0.00 | ENSMUSG00000062859 |
| Ngf    | 3               | 0.001       | 3.75    | 13.48             | 0.00 | ENSMUSG00000027859 |
| Gene      | Rank | FDR  | Fold Change | p-Value | ENSMUSG00000000000 |
|-----------|------|------|-------------|---------|------------------|
| Numbl     | 7    | 0.001| 1.69        | 3.23    | 0.00  | ENSMUSG000000063160 |
| Trem2     | 17   | 0.001| 2.23        | 4.68    | 0.00  | ENSMUSG00000023992  |
| Ldb3      | 14   | 0.001| 3.53        | 11.54   | 0.00  | ENSMUSG00000021798  |
| Mxra8     | 4    | 0.001| 2.26        | 4.80    | 0.00  | ENSMUSG00000029070  |
| Mgst1     | 6    | 0.001| 2.65        | 6.27    | 0.00  | ENSMUSG00000008540  |
| Apol6     | 15   | 0.001| 4.91        | 30.12   | 0.00  | ENSMUSG00000033576  |
| Klf14     | 6    | 0.001| 3.51        | 11.43   | 0.00  | ENSMUSG00000073209  |
| 2310022B05Rik | 8  | 0.001| 1.01        | 2.02    | 0.00  | ENSMUSG00000031983  |
| Actn1     | 12   | 0.001| 1.53        | 2.88    | 0.00  | ENSMUSG00000015143  |
| Cdk18     | 1    | 0.001| 2.20        | 4.59    | 0.00  | ENSMUSG00000026437  |
| Cdh13     | 8    | 0.002| 3.05        | 8.26    | 0.00  | ENSMUSG00000031841  |
| Aox1      | 1    | 0.002| 3.46        | 11.00   | 0.00  | ENSMUSG00000063558  |
| C1qtnf1   | 11   | 0.002| 2.73        | 6.64    | 0.00  | ENSMUSG00000017446  |
| Tex15     | 8    | 0.002| 2.32        | 4.99    | 0.00  | ENSMUSG0000009628   |
| Xdh       | 17   | 0.002| 2.42        | 5.36    | 0.00  | ENSMUSG00000024066  |
| Rgs4      | 5    | 0.002| 3.26        | 9.60    | 0.00  | ENSMUSG00000038530  |
| Hspb8     | 1    | 0.002| 1.48        | 2.78    | 0.00  | ENSMUSG00000041548  |
| Kcnmb1    | 11   | 0.002| 3.00        | 7.99    | 0.00  | ENSMUSG00000020155  |
| Fzd1      | 5    | 0.002| 2.84        | 7.18    | 0.00  | ENSMUSG00000044674  |
| Vasn      | 16   | 0.002| 2.27        | 4.82    | 0.00  | ENSMUSG00000039646  |
| Tppp3     | 8    | 0.002| 2.05        | 4.14    | 0.00  | ENSMUSG00000014846  |
| Tsku      | 7    | 0.002| 2.41        | 5.30    | 0.00  | ENSMUSG00000049580  |
| Pea15a    | 1    | 0.002| 1.72        | 3.30    | 0.00  | ENSMUSG00000013698  |
| Ifi204    | 1    | 0.002| 2.46        | 5.49    | 0.00  | ENSMUSG00000073489  |
| Plekhg4   | 8    | 0.002| 3.36        | 10.30   | 0.00  | ENSMUSG00000014782  |
| Ly6c1     | 15   | 0.002| 3.63        | 12.37   | 0.00  | ENSMUSG00000079018  |
| Pappa     | 4    | 0.002| 2.63        | 6.18    | 0.00  | ENSMUSG00000028370  |
| Eya4      | 10   | 0.002| 2.99        | 7.92    | 0.00  | ENSMUSG00000010461  |
| Dclk2     | 3    | 0.002| 1.34        | 2.54    | 0.00  | ENSMUSG00000028078  |
| Arhgap31  | 16   | 0.002| 1.58        | 2.99    | 0.00  | ENSMUSG00000022799  |
| Cpa6      | 1    | 0.002| 4.22        | 18.58   | 0.00  | ENSMUSG00000042501  |
| Cpe       | 8    | 0.002| 1.94        | 3.84    | 0.00  | ENSMUSG00000037852  |
| Evx1      | 6    | 0.002| 5.18        | 36.37   | 0.00  | ENSMUSG00000005503  |
| Gene   | Fold Change | Log2 Fold Change | p-Value | Entrez Gene ID       |
|--------|-------------|------------------|---------|----------------------|
| Nectin1| 9           | 1.92             | 0.00    | ENSMUSG0000032012   |
| Selenon| 4           | 1.56             | 0.00    | ENSMUSG0000050989   |
| Msrl   | 8           | 2.40             | 0.00    | ENSMUSG0000025044   |
| Prag1  | 8           | 2.23             | 0.00    | ENSMUSG0000050271   |
| Npc1   | 18          | 1.15             | 0.00    | ENSMUSG0000024413   |
| Gpr50  | X           | 3.75             | 0.00    | ENSMUSG0000056380   |
| Dusp27 | 1           | 3.30             | 0.00    | ENSMUSG0000026564   |
| Serpinb9b| 13         | 2.13             | 0.00    | ENSMUSG0000021403   |
| Lum    | 10          | 2.63             | 0.00    | ENSMUSG0000036446   |
| Fzd2   | 11          | 2.42             | 0.00    | ENSMUSG0000050288   |
| Amotl2 | 9           | 1.76             | 0.00    | ENSMUSG0000032531   |
| Il17rc | 6           | 2.82             | 0.00    | ENSMUSG0000030281   |
| Piezo2 | 18          | 3.05             | 0.00    | ENSMUSG0000041482   |
| Rspos3 | 10          | 3.41             | 0.00    | ENSMUSG0000019880   |
| Coro6  | 11          | 3.53             | 0.00    | ENSMUSG0000020836   |
| Fam149a| 8           | 2.65             | 0.00    | ENSMUSG0000070044   |
| Plin4  | 17          | 7.72             | 0.00    | ENSMUSG000002831    |
| Gasl   | 13          | 2.38             | 0.00    | ENSMUSG0000052957   |
| Gpx7   | 4           | 2.87             | 0.00    | ENSMUSG0000028597   |
| Snai2  | 16          | 2.90             | 0.00    | ENSMUSG0000022676   |
| Fkbp10 | 11          | 2.13             | 0.00    | ENSMUSG000001555    |
| Tgfbi  | 13          | 2.35             | 0.00    | ENSMUSG0000035493   |
| Tro    | X           | 2.40             | 0.00    | ENSMUSG0000025272   |
| Tead1  | 7           | 2.03             | 0.00    | ENSMUSG0000055320   |
| Mocs1  | 17          | 1.09             | 0.00    | ENSMUSG0000064120   |
| Ssc5d  | 7           | 2.50             | 0.00    | ENSMUSG0000035279   |
| Igf2r  | 17          | 1.19             | 0.00    | ENSMUSG0000023830   |
| Asb12  | X           | 3.36             | 0.00    | ENSMUSG0000031204   |
| Tmem184a| 5           | 1.21             | 0.00    | ENSMUSG0000036687   |
| Tpbgl1 | 7           | 2.26             | 0.00    | ENSMUSG0000096606   |
| Rab34  | 11          | 2.22             | 0.00    | ENSMUSG000002059    |
| Irs1   | 1           | 2.49             | 0.00    | ENSMUSG0000055980   |
| Siglec1| 2           | 2.17             | 0.00    | ENSMUSG0000027322   |
| Protein | Log2 FC | FDR   | p-value | Log10 p-value | ENSMUSG00000000000 |
|---------|---------|-------|---------|---------------|---------------------|
| Ak5     | 3       | 0.003 |         | 2.98          | 7.89                | 0.00 ENSMUSG00000039058 |
| C5ar1   | 7       | 0.003 |         | 2.08          | 4.21                | 0.00 ENSMUSG00000049130 |
| Suox    | 10      | 0.003 |         | 1.63          | 3.10                | 0.00 ENSMUSG00000049858 |
| Cen1    | 3       | 0.003 |         | 1.92          | 3.78                | 0.00 ENSMUSG00000028195 |
| Nrep    | 18      | 0.003 |         | 2.54          | 5.81                | 0.00 ENSMUSG00000042834 |
| Pcdh18  | 3       | 0.003 |         | 2.79          | 6.91                | 0.00 ENSMUSG00000037892 |
| Ghrhr   | 6       | 0.003 |         | 3.95          | 15.44               | 0.00 ENSMUSG0000004654  |
| Efemp2  | 19      | 0.003 |         | 2.16          | 4.47                | 0.00 ENSMUSG00000024909 |
| Ef3b    | 12      | 0.003 |         | 2.36          | 5.14                | 0.00 ENSMUSG00000020658 |
| Hk3     | 13      | 0.003 |         | 1.91          | 3.75                | 0.00 ENSMUSG00000025877 |
| Sdk1    | 5       | 0.003 |         | 2.52          | 5.72                | 0.00 ENSMUSG00000039683 |
| Mest    | 6       | 0.003 |         | 1.55          | 2.92                | 0.00 ENSMUSG00000051855 |
| Nox4    | 7       | 0.003 |         | 3.23          | 9.41                | 0.00 ENSMUSG00000030562 |
| Spire2  | 8       | 0.003 |         | 1.97          | 3.93                | 0.00 ENSMUSG00000010154 |
| Heg1    | 16      | 0.003 |         | 1.26          | 2.40                | 0.00 ENSMUSG00000075254 |
| Crlf1   | 8       | 0.003 |         | 2.05          | 4.14                | 0.00 ENSMUSG00000078888 |
| Ms4a14  | 19      | 0.003 |         | 3.15          | 8.89                | 0.00 ENSMUSG00000099398 |
| Mxra7   | 11      | 0.003 |         | 2.33          | 5.01                | 0.00 ENSMUSG00000020814 |
| Anpep   | 7       | 0.003 |         | 1.21          | 2.31                | 0.00 ENSMUSG00000039062 |
| Sh3tc2  | 18      | 0.003 |         | 1.04          | 2.06                | 0.00 ENSMUSG00000045629 |
| Pianp   | 6       | 0.003 |         | 2.99          | 7.93                | 0.00 ENSMUSG00000030329 |
| Tnfrsf1b| 4       | 0.004 |         | 1.47          | 2.77                | 0.00 ENSMUSG00000028599 |
| Ndn     | 7       | 0.004 |         | 2.10          | 4.29                | 0.00 ENSMUSG00000033585 |
| Hrasls  | 16      | 0.004 |         | 4.15          | 17.79               | 0.00 ENSMUSG00000022525 |
| Sla2a4  | 11      | 0.004 |         | 1.23          | 2.35                | 0.00 ENSMUSG00000018566 |
| Irgm1   | 11      | 0.004 |         | 1.25          | 2.38                | 0.00 ENSMUSG00000046879 |
| Lipa    | 19      | 0.004 |         | 1.08          | 2.11                | 0.00 ENSMUSG00000024781 |
| Htra3   | 5       | 0.004 |         | 2.67          | 6.36                | 0.00 ENSMUSG00000029096 |
| Cbr3    | 16      | 0.004 |         | 2.98          | 7.90                | 0.00 ENSMUSG00000022947 |
| Gprl76  | 2       | 0.004 |         | 2.72          | 6.59                | 0.00 ENSMUSG00000040133 |
| Oas2    | 5       | 0.004 |         | 2.56          | 5.90                | 0.00 ENSMUSG00000032690 |
| Chst2   | 9       | 0.004 |         | 2.58          | 5.98                | 0.00 ENSMUSG00000033350 |
| Apol9b  | 15      | 0.004 |         | 3.13          | 8.75                | 0.00 ENSMUSG00000068246 |
| Gene   | Rank | P.Value | Log2FC | FDR  | ENSMUSG00000000000 |
|--------|------|---------|--------|------|--------------------|
| Sorbs3 | 14   | 0.004   | 2.10   | 4.30 | 0.00               |
| Fgf15  | 7    | 0.004   | 2.89   | 7.43 | 0.00               |
| Tead2  | 7    | 0.004   | 2.26   | 4.79 | 0.00               |
| Lipo3  | 19   | 0.004   | 2.27   | 4.84 | 0.00               |
| C1qtnf6| 15   | 0.004   | 2.33   | 5.04 | 0.00               |
| Khl30  | 1    | 0.004   | 2.69   | 6.44 | 0.00               |
| Kcnab1 | 3    | 0.004   | 2.82   | 7.07 | 0.00               |
| Ug1la6a| 1    | 0.004   | 3.10   | 8.60 | 0.00               |
| Klf4   | 7    | 0.004   | 2.69   | 6.44 | 0.00               |
| Filip1l| 16   | 0.004   | 2.05   | 4.13 | 0.00               |
| Adamts9| 6    | 0.004   | 1.90   | 3.73 | 0.00               |
| Cpeb1  | 7    | 0.004   | 2.47   | 5.54 | 0.00               |
| Cacna2d1| 5   | 0.004   | 2.41   | 5.30 | 0.00               |
| Gpr1   | 1    | 0.004   | 3.19   | 9.11 | 0.00               |
| Cpne5  | 17   | 0.004   | 1.49   | 2.81 | 0.00               |
| Hnmt   | 2    | 0.004   | 3.44   | 10.84| 0.00               |
| Chil3  | 3    | 0.005   | 2.89   | 7.43 | 0.00               |
| Metrnl | 11   | 0.005   | 2.27   | 4.82 | 0.00               |
| Zfp287 | 11   | 0.005   | 2.96   | 7.77 | 0.00               |
| Lipe   | 7    | 0.005   | 1.19   | 2.28 | 0.00               |
| Igf1   | 10   | 0.005   | 1.76   | 3.39 | 0.00               |
| Fmn1   | 2    | 0.005   | 1.94   | 3.83 | 0.00               |
| Epb41l3| 17   | 0.005   | 2.26   | 4.80 | 0.00               |
| Synpo2 | 3    | 0.005   | 2.00   | 4.01 | 0.00               |
| Fbnl5  | 12   | 0.005   | 2.57   | 5.92 | 0.00               |
| Sema3c | 5    | 0.005   | 2.44   | 5.42 | 0.00               |
| P2ry6  | 7    | 0.005   | 1.94   | 3.85 | 0.00               |
| Rab7b  | 1    | 0.005   | 1.87   | 3.66 | 0.00               |
| Arc    | 15   | 0.005   | 2.62   | 6.15 | 0.01               |
| Ifi207 | 1    | 0.005   | 1.83   | 3.55 | 0.01               |
| Gja5   | 3    | 0.005   | 3.24   | 9.48 | 0.01               |
| Sdc3   | 4    | 0.005   | 1.84   | 3.58 | 0.01               |
| Nes    | 3    | 0.005   | 2.23   | 4.69 | 0.01               |
| Gene     | Rank | FDR  | Log2 Fold | p-Value | Ensembl ID      |
|----------|------|------|-----------|---------|----------------|
| Akap12   | 10   | 0.005| 1.78      | 3.43    | ENSMUSG00000038587 |
| Phldb1   | 9    | 0.005| 1.19      | 2.28    | ENSMUSG00000048537 |
| Flrt2    | 12   | 0.005| 2.11      | 4.33    | ENSMUSG00000047414 |
| Scl7a10  | 7    | 0.005| 4.41      | 21.23   | ENSMUSG00000030495 |
| Mid2     |     | 0.005| 2.53      | 5.78    | ENSMUSG00000000266 |
| Mfap5    | 6    | 0.005| 4.67      | 25.53   | ENSMUSG00000030116 |
| Lpar4    |     | 0.006| 3.05      | 8.28    | ENSMUSG00000049929 |
| Bend6    | 1    | 0.006| 3.85      | 14.45   | ENSMUSG00000042182 |
| Gxylt2   | 6    | 0.006| 3.11      | 8.64    | ENSMUSG00000030074 |
| Gli3     | 13   | 0.006| 2.32      | 4.98    | ENSMUSG00000021318 |
| Parp14   | 16   | 0.006| 1.36      | 2.57    | ENSMUSG00000034422 |
| Efs      | 14   | 0.006| 2.71      | 6.55    | ENSMUSG00000022203 |
| Plxdc1   | 11   | 0.006| 2.41      | 5.32    | ENSMUSG00000017417 |
| Ms4a4a   | 19   | 0.006| 2.18      | 4.52    | ENSMUSG000000101389 |
| Azin2    | 4    | 0.006| 2.31      | 4.96    | ENSMUSG00000028789 |
| Pde4dip  | 3    | 0.006| 1.25      | 2.38    | ENSMUSG00000038170 |
| Dlc1     | 8    | 0.006| 1.61      | 3.04    | ENSMUSG00000031523 |
| Ifit3b   | 19   | 0.006| 2.80      | 6.95    | ENSMUSG00000062488 |
| Ppp1r14a | 7    | 0.006| 2.99      | 7.92    | ENSMUSG00000037166 |
| Speg     | 1    | 0.006| 2.02      | 4.05    | ENSMUSG00000026207 |
| Larp6    | 9    | 0.006| 4.44      | 21.74   | ENSMUSG00000034839 |
| Cmtm3    | 8    | 0.006| 1.65      | 3.14    | ENSMUSG00000031875 |
| Art3     | 5    | 0.006| 2.48      | 5.58    | ENSMUSG00000034842 |
| Gbp2     | 3    | 0.006| 2.42      | 5.35    | ENSMUSG00000028270 |
| 3830417A13Rik | X    | 0.006| 3.07      | 8.40    | ENSMUSG00000031179 |
| Antxr2   | 5    | 0.006| 1.75      | 3.36    | ENSMUSG00000029338 |
| Serpinh1 | 7    | 0.007| 1.80      | 3.47    | ENSMUSG00000070436 |
| Steap2   | 5    | 0.007| 2.26      | 4.80    | ENSMUSG00000015653 |
| Col8a2   | 4    | 0.007| 2.53      | 5.79    | ENSMUSG00000056174 |
| Lats2    | 14   | 0.007| 1.20      | 2.30    | ENSMUSG00000021959 |
| Lrrc55   | 2    | 0.007| 3.32      | 9.99    | ENSMUSG00000075224 |
| Lmcd1    | 6    | 0.007| 2.35      | 5.10    | ENSMUSG00000057604 |
| Gene   | Rank | FDR   | Z-score | p-value | Ensembl ID         |
|--------|------|-------|---------|---------|-------------------|
| Plcd1  | 9    | 0.007 | 2.16    | 4.46    | ENSMUSG00000010660|
| Prmea1 | 2    | 0.007 | 2.08    | 4.22    | ENSMUSG00000038400|
| P4ha3  | 7    | 0.007 | 2.09    | 4.26    | ENSMUSG00000051048|
| Cd300ld5 | 11  | 0.007 | 2.98    | 7.91    | ENSMUSG00000089722|
| Pdzm3  | 6    | 0.007 | 2.17    | 4.51    | ENSMUSG00000035357|
| Lgdc4  | 9    | 0.007 | 2.34    | 5.06    | ENSMUSG00000032816|
| Padi1  | 4    | 0.007 | 2.90    | 7.48    | ENSMUSG00000025329|
| Map6   | 7    | 0.007 | 2.26    | 4.80    | ENSMUSG00000055407|
| Mchr1  | 15   | 0.007 | 3.13    | 8.77    | ENSMUSG00000050164|
| Pparg  | 6    | 0.007 | 1.96    | 3.89    | ENSMUSG00000004440|
| Naalad2| 9    | 0.007 | 3.32    | 9.98    | ENSMUSG00000043943|
| Sgsm1  | 5    | 0.007 | 2.43    | 5.39    | ENSMUSG00000042216|
| Gpr153 | 4    | 0.008 | 2.40    | 5.27    | ENSMUSG00000042804|
| Tmem26 | 10   | 0.008 | 3.45    | 10.92   | ENSMUSG00000060044|
| Gbp6   | 5    | 0.008 | 3.06    | 8.37    | ENSMUSG000000104713|
| Samd4  | 14   | 0.008 | 1.83    | 3.56    | ENSMUSG00000021838|
| Mcc    | 18   | 0.008 | 2.22    | 4.66    | ENSMUSG00000071856|
| Parm1  | 5    | 0.008 | 1.62    | 3.06    | ENSMUSG00000034981|
| Hspb2  | 9    | 0.008 | 3.15    | 8.89    | ENSMUSG00000038086|
| Ccl2   | 11   | 0.008 | 2.34    | 5.06    | ENSMUSG00000035385|
| Lgals3bp| 11  | 0.008 | 1.66    | 3.15    | ENSMUSG00000038880|
| Slc11a1| 1    | 0.008 | 1.87    | 3.65    | ENSMUSG00000026177|
| Hspb1l1| 18   | 0.008 | 3.33    | 10.07   | ENSMUSG00000078963|
| Sipa1l2| 8    | 0.008 | 1.46    | 2.74    | ENSMUSG00000001995|
| Nexn   | 3    | 0.008 | 2.36    | 5.14    | ENSMUSG00000039103|
| Corin  | 5    | 0.008 | 3.00    | 7.98    | ENSMUSG0000005220|
| Khde8a | 1    | 0.008 | 2.54    | 5.82    | ENSMUSG00000042115|
| Dse    | 10   | 0.008 | 1.81    | 3.51    | ENSMUSG00000039497|
| Uggt2  | 14   | 0.008 | 2.29    | 4.91    | ENSMUSG00000042104|
| Mmp23  | 4    | 0.008 | 2.43    | 5.41    | ENSMUSG00000029061|
| Edn1   | 13   | 0.008 | 2.83    | 7.09    | ENSMUSG00000021367|
| Cdhl3  | 8    | 0.008 | 2.03    | 4.08    | ENSMUSG00000061048|
| Dbn1   | 13   | 0.008 | 1.86    | 3.63    | ENSMUSG00000034675|
| Gene      | Start | ID   | Log2FoldChange | p-Value | EntrezID       |
|-----------|-------|------|--------------|---------|---------------|
| Pdgfrb    | 18    | 0.009| 1.48         | 2.79    | ENSMUSG00000024620 |
| N4bp2l1   | 5     | 0.009| 1.08         | 2.11    | ENSMUSG00000041132 |
| Pkd2      | 5     | 0.009| 1.43         | 2.69    | ENSMUSG00000034462 |
| Insc      | 7     | 0.009| 3.35         | 10.21   | ENSMUSG00000048782 |
| Man1cl1   | 4     | 0.009| 1.59         | 3.01    | ENSMUSG00000037306 |
| Adama14   | 10    | 0.009| 2.33         | 5.03    | ENSMUSG00000059901 |
| Gpr137b   | 13    | 0.009| 1.45         | 2.74    | ENSMUSG00000021306 |
| Asb4      | 6     | 0.009| 2.57         | 5.95    | ENSMUSG00000042607 |
| Sgk1      | 10    | 0.009| 1.53         | 2.88    | ENSMUSG00000019970 |
| Ror1      | 4     | 0.009| 2.94         | 7.66    | ENSMUSG00000035305 |
| Ms4a6c    | 19    | 0.009| 1.72         | 3.29    | ENSMUSG00000079419 |
| Ce2d2a    | 5     | 0.009| 2.31         | 4.97    | ENSMUSG00000039765 |
| Col7a1    | 9     | 0.009| 1.83         | 3.56    | ENSMUSG00000025650 |
| Sult5a1   | 8     | 0.009| 1.71         | 3.26    | ENSMUSG0000000739 |
| Tlr13     | X     | 0.009| 1.78         | 3.44    | ENSMUSG00000033777 |
| Nfatc4    | 14    | 0.009| 2.15         | 4.44    | ENSMUSG00000023411 |
| Pnma2     | 14    | 0.009| 3.16         | 8.95    | ENSMUSG00000046204 |
| Gnao1     | 8     | 0.010| 2.17         | 4.51    | ENSMUSG00000031748 |
| Limch1    | 5     | 0.010| 2.26         | 4.80    | ENSMUSG00000037736 |
| Cdk15     | 1     | 0.010| 3.56         | 11.80   | ENSMUSG00000026023 |
| Tspyl5    | 15    | 0.010| 2.77         | 6.83    | ENSMUSG00000038984 |
| Ptgrfn    | 3     | 0.010| 1.68         | 3.21    | ENSMUSG00000027864 |
| Bmp1      | 9     | 0.010| 2.36         | 5.15    | ENSMUSG00000031963 |
| Tcaf2     | 6     | 0.010| 2.38         | 5.21    | ENSMUSG00000029851 |
| Trpc4     | 3     | 0.010| 2.85         | 7.23    | ENSMUSG00000027748 |
| Sulf1     | 1     | 0.010| 1.07         | 5.33    | ENSMUSG00000016918 |
| Nrp2      | 1     | 0.010| 1.16         | 3.36    | ENSMUSG00000025969 |
| Pid1      | 1     | 0.010| 4.01         | 3.95    | ENSMUSG00000045658 |
| Twist2    | 1     | 0.010| 1.02         | 5.93    | ENSMUSG00000007805 |
| Mr1       | 1     | 0.010| 1.56         | 4.46    | ENSMUSG00000026471 |
| Tnr       | 1     | 0.010| 1.75         | 4.56    | ENSMUSG00000015829 |
| Ifi211    | 1     | 0.010| 1.35         | 5.26    | ENSMUSG00000026536 |
| Adamts12  | 2     | 0.010| 2.19         | 7.47    | ENSMUSG00000036040 |
| Gene  | Fold Change | p-value | q-value | ENSMUSG ID   |
|-------|-------------|---------|---------|--------------|
| Abtb2 | 2.07        | 0.01    | 0.01    | ENSMUSG00000032724 |
| Zfp334| 2.07        | 0.01    | 0.01    | ENSMUSG00000017667 |
| Prr9  | 2.07        | 0.01    | 0.01    | ENSMUSG00000056270 |
| Dpyd  | 2.07        | 0.01    | 0.01    | ENSMUSG00000033308 |
| Cnn3  | 2.07        | 0.01    | 0.01    | ENSMUSG00000053931 |
| Tull7 | 2.07        | 0.01    | 0.01    | ENSMUSG00000036745 |
| Mmp16 | 2.07        | 0.01    | 0.01    | ENSMUSG00000028226 |
| Hrctl | 2.07        | 0.01    | 0.01    | ENSMUSG00000071001 |
| Reck  | 2.07        | 0.01    | 0.01    | ENSMUSG00000028476 |
| Mpdz  | 2.07        | 0.01    | 0.01    | ENSMUSG00000028402 |
| Plod1 | 2.07        | 0.01    | 0.01    | ENSMUSG00000019055 |
| Nppb  | 2.07        | 0.01    | 0.01    | ENSMUSG00000029019 |
| Fam114a1 | 2.07  | 0.01    | 0.01    | ENSMUSG00000029185 |
| Ttc28 | 2.07        | 0.01    | 0.01    | ENSMUSG00000033209 |
| Pdgfa | 2.07        | 0.01    | 0.01    | ENSMUSG00000025856 |
| Akrlb7| 2.07        | 0.01    | 0.01    | ENSMUSG00000052131 |
| Parp12| 2.07        | 0.01    | 0.01    | ENSMUSG00000038507 |
| Dennd2a| 2.07       | 0.01    | 0.01    | ENSMUSG00000038456 |
| Prickle2| 2.07      | 0.01    | 0.01    | ENSMUSG00000030020 |
| Cd4   | 2.07        | 0.01    | 0.01    | ENSMUSG00000023274 |
| Mgp   | 2.07        | 0.01    | 0.01    | ENSMUSG00000030218 |
| Pla2g4c| 2.07       | 0.01    | 0.01    | ENSMUSG00000033847 |
| Lgi4  | 2.07        | 0.01    | 0.01    | ENSMUSG00000036560 |
| Atp10a| 2.07        | 0.01    | 0.01    | ENSMUSG00000025324 |
| Inpp11| 2.07        | 0.01    | 0.01    | ENSMUSG00000032737 |
| Irf7  | 2.07        | 0.01    | 0.01    | ENSMUSG00000025498 |
| Osbpl5| 2.07        | 0.01    | 0.01    | ENSMUSG00000037606 |
| Adam9 | 2.07        | 0.01    | 0.01    | ENSMUSG00000031555 |
| Lonrf1| 2.07        | 0.01    | 0.01    | ENSMUSG00000039633 |
| Tenm3 | 2.07        | 0.01    | 0.01    | ENSMUSG00000031561 |
| Maf   | 2.07        | 0.01    | 0.01    | ENSMUSG00000055435 |
| Map10 | 2.07        | 0.01    | 0.01    | ENSMUSG00000050930 |
| Cadm1 | 2.07        | 0.01    | 0.01    | ENSMUSG00000032076 |
| Gene | Chromosome | Log2 Fold Change | p-Value | ENSMUSG0000000000 |
|------|------------|----------------|---------|--------------------|
| Il18 | 9          | 0.010          | 2.03    | 0.01 ENSMUSG00000039217 |
| Cryab | 9          | 0.010          | 2.57    | 0.01 ENSMUSG00000032060 |
| Unc13c  | 9          | 0.010          | 2.16    | 0.01 ENSMUSG000000062151 |
| Htr1b | 9          | 0.010          | 1.05    | 0.01 ENSMUSG00000049511 |
| Parp3 | 9          | 0.010          | 1.17    | 0.01 ENSMUSG000000023249 |
| Ltf | 9          | 0.010          | 2.98    | 0.01 ENSMUSG000000032496 |
| Stac | 9          | 0.010          | 2.45    | 0.01 ENSMUSG00000032502 |
| Glh8d2 | 10         | 0.010          | 2.95    | 0.01 ENSMUSG00000020251 |
| Osbp2 | 11         | 0.010          | 3.65    | 0.01 ENSMUSG00000020435 |
| Adra1b | 11         | 0.010          | 1.15    | 0.01 ENSMUSG000000050541 |
| Sparc | 11         | 0.010          | 2.50    | 0.01 ENSMUSG000000018593 |
| Lypd8 | 11         | 0.010          | 3.68    | 0.01 ENSMUSG00000013643 |
| Sat2 | 11         | 0.010          | 2.13    | 0.01 ENSMUSG000000069835 |
| Bel6b | 11         | 0.010          | 2.68    | 0.01 ENSMUSG0000000317 |
| Kif1c | 11         | 0.010          | 1.96    | 0.01 ENSMUSG00000020821 |
| Slfn8 | 11         | 0.010          | 1.60    | 0.01 ENSMUSG00000035208 |
| Copz2 | 11         | 0.010          | 2.57    | 0.01 ENSMUSG00000018672 |
| Nags | 11         | 0.010          | 1.97    | 0.01 ENSMUSG00000048217 |
| Cbx2 | 11         | 0.010          | 2.01    | 0.01 ENSMUSG00000025577 |
| Etv1 | 12         | 0.010          | 2.60    | 0.01 ENSMUSG00000004151 |
| Ifi27l2a | 12       | 0.010          | 1.23    | 0.01 ENSMUSG00000079017 |
| Bdkrb2 | 12         | 0.010          | 2.90    | 0.01 ENSMUSG00000021070 |
| Gm3453 | 14         | 0.010          | 1.80    | 0.01 ENSMUSG00000090643 |
| Nid2 | 14         | 0.010          | 1.92    | 0.01 ENSMUSG00000021806 |
| Cfa7p70 | 14        | 0.010          | 1.18    | 0.01 ENSMUSG00000039543 |
| Rbp3 | 14         | 0.010          | 1.97    | 0.01 ENSMUSG00000041534 |
| Rnase4 | 14         | 0.010          | 6.28    | 0.01 ENSMUSG00000021876 |
| Nynrin | 14        | 0.010          | 1.22    | 0.01 ENSMUSG00000075592 |
| Dzip1 | 14         | 0.010          | 2.53    | 0.01 ENSMUSG00000042156 |
| Myo10 | 15         | 0.010          | 1.05    | 0.01 ENSMUSG00000022272 |
| Gpr20 | 15         | 0.010          | 1.59    | 0.01 ENSMUSG00000045281 |
| Mroh6 | 15         | 0.010          | 1.72    | 0.01 ENSMUSG00000098678 |
| Phldb2 | 16        | 0.010          | 2.34    | 0.01 ENSMUSG00000033149 |
| Gene   | Chromosome | FDR  | Log2 Fold Change | p-value | Refseq ID            |
|--------|------------|------|------------------|---------|---------------------|
| Mdga1  | 17         | 0.010| 1.00             | 2.59    | ENSMUSG00000043557  |
| 91300008F23Rik | 17 | 0.010| 2.48             | 5.02    | ENSMUSG00000054951  |
| Apobec2 | 17          | 0.010| 2.00             | 6.06    | ENSMUSG00000040694  |
| Arhgap28| 17          | 0.010| 1.71             | 2.49    | ENSMUSG00000024043  |
| Pedhgc3 | 18          | 0.010| 1.08             | 5.54    | ENSMUSG00000102918  |
| Prdm6  | 18          | 0.010| 2.40             | 6.07    | ENSMUSG00000069378  |
| Fam189a2| 19          | 0.010| 1.86             | 5.06    | ENSMUSG00000071604  |
| Dmrt2  | 19          | 0.010| 1.37             | 6.71    | ENSMUSG00000048138  |
| Entpd1 | 19          | 0.010| 1.32             | 3.38    | ENSMUSG00000048120  |
| Blnk   | 19          | 0.010| 2.47             | 5.18    | ENSMUSG00000061132  |
| Plp2   | X           | 0.010| 2.37             | 2.23    | ENSMUSG00000031146  |
| Timp1  | X           | 0.010| 1.15             | 4.08    | ENSMUSG0000001131   |
| Fhl2   | 1           | 0.020| 1.63             | 3.51    | ENSMUSG0000008136   |
| Plcl1  | 1           | 0.020| 1.86             | 4.57    | ENSMUSG00000038349  |
| Pm20d1 | 1           | 0.020| 1.61             | 5.34    | ENSMUSG00000042251  |
| Fcgr4  | 1           | 0.020| 1.58             | 3.79    | ENSMUSG00000059089  |
| Fcgr3  | 1           | 0.020| 2.24             | 2.02    | ENSMUSG00000059498  |
| Ifi209 | 1           | 0.020| 3.22             | 5.50    | ENSMUSG00000043263  |
| Ifi208 | 1           | 0.020| 1.92             | 15.59   | ENSMUSG00000066677  |
| Pld5   | 1           | 0.020| 1.25             | 11.72   | ENSMUSG00000055214  |
| Rxra   | 2           | 0.020| 2.17             | 2.11    | ENSMUSG00000015846  |
| Lcn2   | 2           | 0.020| 1.58             | 3.20    | ENSMUSG00000026822  |
| Crb2   | 2           | 0.020| 3.19             | 4.58    | ENSMUSG00000035403  |
| Tanc1  | 2           | 0.020| 3.22             | 2.41    | ENSMUSG00000035168  |
| Nr1h3  | 2           | 0.020| 2.13             | 3.93    | ENSMUSG0000002108   |
| Pax6   | 2           | 0.020| 1.68             | 4.49    | ENSMUSG00000027168  |
| Map1a  | 2           | 0.020| 2.25             | 2.70    | ENSMUSG00000027254  |
| Mertk  | 2           | 0.020| 3.06             | 3.10    | ENSMUSG00000014361  |
| Sirpa  | 2           | 0.020| 1.22             | 2.03    | ENSMUSG00000037902  |
| Snta1  | 2           | 0.020| 2.77             | 3.34    | ENSMUSG00000027488  |
| Pex5l  | 3           | 0.020| 2.57             | 9.01    | ENSMUSG00000027674  |
| Cecd39 | 3           | 0.020| 2.37             | 13.89   | ENSMUSG00000027676  |
| Arhgef26| 3          | 0.020| 1.69             | 4.09    | ENSMUSG00000036885  |
| Gene   | Log2FoldChange | p.Value | Ensembl ID     |
|--------|----------------|---------|----------------|
| Slc22a15 | 3  | 0.020 | 1.53 | 3.01 | 0.02 | ENSMUSG00000033147 |
| Wnt2b  | 3  | 0.020 | 3.34 | 4.84 | 0.02 | ENSMUSG00000027840 |
| Samd13 | 3  | 0.020 | 2.95 | 10.57 | 0.02 | ENSMUSG000000048652 |
| Wls    | 3  | 0.020 | 2.11 | 2.31 | 0.02 | ENSMUSG00000028173 |
| Rusc2  | 4  | 0.020 | 1.41 | 3.00 | 0.02 | ENSMUSG000000035969 |
| Lpar1  | 4  | 0.020 | 2.62 | 3.67 | 0.02 | ENSMUSG00000038668 |
| Slc31a2 | 4  | 0.020 | 2.95 | 10.57 | 0.02 | ENSMUSG00000035969 |
| Wls    | 3  | 0.020 | 2.11 | 2.31 | 0.02 | ENSMUSG00000028173 |
| Rusc2  | 4  | 0.020 | 1.41 | 3.00 | 0.02 | ENSMUSG000000035969 |
| Lpar1  | 4  | 0.020 | 2.62 | 3.67 | 0.02 | ENSMUSG00000038668 |
| Slc31a2 | 4  | 0.020 | 2.95 | 10.57 | 0.02 | ENSMUSG00000035969 |
| Wls    | 3  | 0.020 | 2.11 | 2.31 | 0.02 | ENSMUSG00000028173 |
| Rusc2  | 4  | 0.020 | 1.41 | 3.00 | 0.02 | ENSMUSG000000035969 |
| Lpar1  | 4  | 0.020 | 2.62 | 3.67 | 0.02 | ENSMUSG00000038668 |
| Slc31a2 | 4  | 0.020 | 2.95 | 10.57 | 0.02 | ENSMUSG00000035969 |
| Wls    | 3  | 0.020 | 2.11 | 2.31 | 0.02 | ENSMUSG00000028173 |
| Rusc2  | 4  | 0.020 | 1.41 | 3.00 | 0.02 | ENSMUSG000000035969 |
| Lpar1  | 4  | 0.020 | 2.62 | 3.67 | 0.02 | ENSMUSG00000038668 |
| Slc31a2 | 4  | 0.020 | 2.95 | 10.57 | 0.02 | ENSMUSG00000035969 |
| Wls    | 3  | 0.020 | 2.11 | 2.31 | 0.02 | ENSMUSG00000028173 |
| Rusc2  | 4  | 0.020 | 1.41 | 3.00 | 0.02 | ENSMUSG000000035969 |
| Lpar1  | 4  | 0.020 | 2.62 | 3.67 | 0.02 | ENSMUSG00000038668 |
| Slc31a2 | 4  | 0.020 | 2.95 | 10.57 | 0.02 | ENSMUSG00000035969 |
| Wls    | 3  | 0.020 | 2.11 | 2.31 | 0.02 | ENSMUSG00000028173 |
| Rusc2  | 4  | 0.020 | 1.41 | 3.00 | 0.02 | ENSMUSG000000035969 |
| Lpar1  | 4  | 0.020 | 2.62 | 3.67 | 0.02 | ENSMUSG00000038668 |
| Slc31a2 | 4  | 0.020 | 2.95 | 10.57 | 0.02 | ENSMUSG00000035969 |
| Wls    | 3  | 0.020 | 2.11 | 2.31 | 0.02 | ENSMUSG00000028173 |
| Rusc2  | 4  | 0.020 | 1.41 | 3.00 | 0.02 | ENSMUSG000000035969 |
| Lpar1  | 4  | 0.020 | 2.62 | 3.67 | 0.02 | ENSMUSG00000038668 |
| Gene       | KDR | Fold Change | Log2 Fold Change | p-value | Ensembl ID         |
|------------|-----|-------------|------------------|---------|--------------------|
| Fkbp14     | 6   | 1.27        | 3.78             | 0.02    | ENSMUSG00000038074 |
| Aicda      | 6   | 1.78        | 9.32             | 0.02    | ENSMUSG00000040627 |
| Clec4a3    | 6   | 2.20        | 6.27             | 0.02    | ENSMUSG00000043832 |
| Six5       | 7   | 2.27        | 3.47             | 0.02    | ENSMUSG00000040841 |
| Plekhg2    | 7   | 3.82        | 2.26             | 0.02    | ENSMUSG00000037552 |
| Acp7       | 7   | 1.03        | 7.99             | 0.02    | ENSMUSG00000037469 |
| Clip3      | 7   | 2.35        | 3.78             | 0.02    | ENSMUSG00000013921 |
| Sbsn       | 7   | 1.34        | 3.37             | 0.02    | ENSMUSG00000046056 |
| Wtip       | 7   | 2.85        | 3.25             | 0.02    | ENSMUSG00000036459 |
| Ren3       | 7   | 1.88        | 2.47             | 0.02    | ENSMUSG00000019539 |
| Slco2b1    | 7   | 1.51        | 2.75             | 0.02    | ENSMUSG00000030737 |
| Arhgefl7   | 7   | 4.02        | 3.32             | 0.02    | ENSMUSG00000032875 |
| Rras2      | 7   | 5.96        | 2.53             | 0.02    | ENSMUSG00000055723 |
| Tgfb1i1    | 7   | 1.54        | 2.32             | 0.02    | ENSMUSG00000030782 |
| Mtnr1a     | 8   | 1.27        | 63.72            | 0.02    | ENSMUSG00000054764 |
| Tlr3       | 8   | 1.74        | 5.42             | 0.02    | ENSMUSG00000031639 |
| Bst2       | 8   | 2.03        | 2.61             | 0.02    | ENSMUSG00000046718 |
| Nkd1       | 8   | 6.17        | 4.50             | 0.02    | ENSMUSG00000031661 |
| Adamts18   | 8   | 3.40        | 75.79            | 0.02    | ENSMUSG00000053399 |
| Zechc14    | 8   | 2.37        | 2.69             | 0.02    | ENSMUSG00000061410 |
| Yap1       | 9   | 2.86        | 3.29             | 0.02    | ENSMUSG00000053110 |
| Trim29     | 9   | 3.03        | 6.81             | 0.02    | ENSMUSG00000032013 |
| Cspg4      | 9   | 2.17        | 3.64             | 0.02    | ENSMUSG00000032911 |
| Fam81a     | 9   | 1.43        | 6.17             | 0.02    | ENSMUSG00000032224 |
| Myo1e      | 9   | 1.72        | 2.96             | 0.02    | ENSMUSG00000032220 |
| Tbx18      | 9   | 2.62        | 6.15             | 0.02    | ENSMUSG00000032419 |
| Pcolce2    | 9   | 1.86        | 4.11             | 0.02    | ENSMUSG00000015354 |
| Samd5      | 10  | 1.42        | 4.42             | 0.02    | ENSMUSG00000060487 |
| Adgrg6     | 10  | 1.89        | 3.62             | 0.02    | ENSMUSG00000039116 |
| Raet1d     | 10  | 2.52        | 5.94             | 0.02    | ENSMUSG00000078452 |
| Tcf21      | 10  | 1.06        | 61.08            | 0.02    | ENSMUSG00000045680 |
| Traf3ip2   | 10  | 1.98        | 3.73             | 0.02    | ENSMUSG00000019842 |
| Mfsd4b3    | 10  | 1.19        | 7.21             | 0.02    | ENSMUSG00000071335 |
| Gene     | N.  | FDR  | Log2Fold | Pval  | ID            |
|----------|-----|------|----------|-------|---------------|
| Ggt5     | 10  | 0.020| 2.97     | 4.70  | ENSMUSG0000006344 |
| Aldh1l2  | 10  | 0.020| 1.46     | 4.36  | ENSMUSG00000020256 |
| Selenom  | 11  | 0.020| 1.56     | 3.00  | ENSMUSG00000075702 |
| Slc35e4  | 11  | 0.020| 1.73     | 2.68  | ENSMUSG00000048807 |
| Castor1  | 11  | 0.020| 1.06     | 2.95  | ENSMUSG00000020424 |
| Flt4     | 11  | 0.020| 3.96     | 4.06  | ENSMUSG00000020357 |
| Pmp22    | 11  | 0.020| 2.41     | 2.15  | ENSMUSG00000018217 |
| Hs3st3b1 | 11  | 0.020| 1.23     | 3.71  | ENSMUSG00000070407 |
| Cxcl16   | 11  | 0.020| 2.52     | 3.38  | ENSMUSG00000018920 |
| Tax1bp3  | 11  | 0.020| 2.73     | 2.12  | ENSMUSG00000040158 |
| Fltnb    | 11  | 0.020| 1.92     | 2.72  | ENSMUSG00000020846 |
| Slfn9    | 11  | 0.020| 2.65     | 2.16  | ENSMUSG00000069793 |
| Skap1    | 11  | 0.020| 5.99     | 4.80  | ENSMUSG00000057058 |
| Tubg2    | 11  | 0.020| 1.38     | 5.73  | ENSMUSG00000045007 |
| Acot6    | 12  | 0.020| 1.45     | 3.82  | ENSMUSG00000043487 |
| Ifit43   | 12  | 0.020| 1.11     | 3.84  | ENSMUSG0000007867 |
| Ifi27    | 12  | 0.020| 2.42     | 3.80  | ENSMUSG00000064215 |
| Itgb8    | 12  | 0.020| 1.54     | 8.27  | ENSMUSG00000025321 |
| Hist1h3c | 13  | 0.020| 2.00     | 3.69  | ENSMUSG00000069310 |
| Serpinb9 | 13  | 0.020| 1.86     | 2.89  | ENSMUSG00000045827 |
| Serpinb9g| 13   | 0.020| 2.70     | 5.35  | ENSMUSG00000057726 |
| Nrn1     | 13  | 0.020| 1.81     | 7.49  | ENSMUSG00000039114 |
| Adamts16 | 13  | 0.020| 1.89     | 6.22  | ENSMUSG00000049538 |
| Hexb     | 13  | 0.020| 1.24     | 2.01  | ENSMUSG00000021665 |
| Gpx8     | 13  | 0.020| 1.48     | 3.94  | ENSMUSG00000021760 |
| Flnb     | 14  | 0.020| 1.46     | 2.16  | ENSMUSG00000025278 |
|Dlg5   | 14  | 0.020| 1.86     | 2.90  | ENSMUSG00000021782 |
| Grid1    | 14  | 0.020| 2.04     | 9.31  | ENSMUSG00000041078 |
| Slc7a7   | 14  | 0.020| 2.14     | 2.78  | ENSMUSG0000000958 |
| Scara3   | 14  | 0.020| 1.94     | 9.85  | ENSMUSG00000034463 |
| Slitrk6  | 14  | 0.020| 2.64     | 7.85  | ENSMUSG00000045871 |
| Laptm4b  | 15  | 0.020| 2.51     | 2.89  | ENSMUSG00000022257 |
| Zfpm2    | 15  | 0.020| 1.54     | 5.13  | ENSMUSG00000022306 |
| Gene   | Chromosome | p-value | Fold Change (Log2)| p-value | p-value | Ensembl| 
|--------|------------|---------|-------------------|---------|---------|--------| 
| Mal2   | 15         | 0.020   | 2.19              | 4.94    | 0.02    | ENSMUSG00000024479 |
| Eppk1  | 15         | 0.020   | 1.04              | 4.01    | 0.02    | ENSMUSG000000115388 |
| Rbfox2 | 15         | 0.020   | 1.92              | 2.86    | 0.02    | ENSMUSG00000033565 |
| Csdc2  | 15         | 0.020   | 1.68              | 4.08    | 0.02    | ENSMUSG00000042109 |
| Lrrk2  | 15         | 0.020   | 1.42              | 4.11    | 0.02    | ENSMUSG00000036273 |
| Scarf2 | 16         | 0.020   | 1.79              | 3.66    | 0.02    | ENSMUSG00000012017 |
| St6gal1| 16         | 0.020   | 1.86              | 2.89    | 0.02    | ENSMUSG00000022885 |
| Meltf  | 16         | 0.020   | 1.57              | 6.22    | 0.02    | ENSMUSG00000022780 |
| Cd200  | 16         | 0.020   | 1.51              | 4.57    | 0.02    | ENSMUSG00000022661 |
| Abi3bp | 16         | 0.020   | 5.93              | 16.23   | 0.02    | ENSMUSG00000035258 |
| Tiam2  | 17         | 0.020   | 2.26              | 4.73    | 0.02    | ENSMUSG00000023800 |
| Fgd2   | 17         | 0.020   | 1.65              | 3.63    | 0.02    | ENSMUSG00000024013 |
| Cyp4f16| 17         | 0.020   | 1.53              | 3.43    | 0.02    | ENSMUSG00000048440 |
| Ptdh4  | 17         | 0.020   | 2.19              | 73.41   | 0.02    | ENSMUSG00000042256 |
| Efna5  | 17         | 0.020   | 1.78              | 3.70    | 0.02    | ENSMUSG00000048915 |
| Dsc3   | 18         | 0.020   | 1.01              | 9.32    | 0.02    | ENSMUSG00000059898 |
| Synpo  | 18         | 0.020   | 1.02              | 3.79    | 0.02    | ENSMUSG00000043079 |
| Lipg   | 18         | 0.020   | 1.59              | 3.32    | 0.02    | ENSMUSG00000053846 |
| Myrf   | 19         | 0.020   | 3.65              | 3.12    | 0.02    | ENSMUSG00000036098 |
| Pcsk5  | 19         | 0.020   | 1.70              | 4.32    | 0.02    | ENSMUSG00000024713 |
| Nkx2-3 | 19         | 0.020   | 1.75              | 8.26    | 0.02    | ENSMUSG00000044220 |
| Ablim1 | 19         | 0.020   | 2.63              | 3.27    | 0.02    | ENSMUSG00000025085 |
| Gpc4   | X          | 0.020   | 1.90              | 2.38    | 0.02    | ENSMUSG00000031119 |
| Rtl8b  | X          | 0.020   | 1.30              | 2.65    | 0.02    | ENSMUSG00000067924 |
| Gabre  | X          | 0.020   | 2.03              | 5.70    | 0.02    | ENSMUSG00000031340 |
| Efnb1  | X          | 0.020   | 1.53              | 2.90    | 0.02    | ENSMUSG00000031217 |
| Srpx2  | X          | 0.020   | 1.82              | 6.50    | 0.02    | ENSMUSG00000031253 |
| Trpc5os| X          | 0.020   | 1.64              | 6.14    | 0.02    | ENSMUSG00000072934 |
| Pir    | X          | 0.020   | 1.71              | 2.09    | 0.02    | ENSMUSG00000031379 |
| 1500015O10Rik | 1  | 0.030   | 1.66              | 47.25   | 0.03    | ENSMUSG00000026051 |
| Raph1  | 1          | 0.030   | 1.43              | 2.33    | 0.03    | ENSMUSG00000026014 |
| Myl1   | 1          | 0.030   | 5.81              | 6.72    | 0.03    | ENSMUSG00000061816 |
| Sp100  | 1          | 0.030   | 1.07              | 3.37    | 0.03    | ENSMUSG00000026222 |
| Gene   | N | p-value | Log2FoldChange | FDR | Entrez Gene ID     |
|--------|---|---------|----------------|-----|-------------------|
| Glrp1  | 1 | 0.030   | 2.39           | 6.19| 0.03              |
| Sh3bp4 | 1 | 0.030   | 1.40           | 3.15| 0.03              |
| Marco  | 1 | 0.030   | 2.18           | 4.29| 0.03              |
| Gpr161 | 1 | 0.030   | 1.34           | 3.42| 0.03              |
| Pogk   | 1 | 0.030   | 3.06           | 2.07| 0.03              |
| Adamts4| 1 | 0.030   | 3.66           | 4.12| 0.03              |
| Rgs7   | 1 | 0.030   | 2.13           | 46.15| 0.03              |
| Itga8  | 2 | 0.030   | 2.10           | 2.96| 0.03              |
| Armc3  | 2 | 0.030   | 1.02           | 46.15| 0.03              |
| Ppp1r26| 2 | 0.030   | 2.64           | 5.35| 0.03              |
| Chst14 | 2 | 0.030   | 5.70           | 2.70| 0.03              |
| Foxs1  | 2 | 0.030   | 2.04           | 6.10| 0.03              |
| Fndc3b | 3 | 0.030   | 1.42           | 2.68| 0.03              |
| Cd5l   | 3 | 0.030   | 1.71           | 6.13| 0.03              |
| Adam15 | 3 | 0.030   | 2.52           | 2.20| 0.03              |
| Kcnn3  | 3 | 0.030   | 2.64           | 5.24| 0.03              |
| Crtc1  | 3 | 0.030   | 1.88           | 6.40| 0.03              |
| Hao2   | 3 | 0.030   | 2.00           | 46.04| 0.03              |
| Gstm2  | 3 | 0.030   | 1.88           | 3.84| 0.03              |
| Tram111| 3 | 0.030   | 1.45           | 6.14| 0.03              |
| Cel27a | 4 | 0.030   | 2.14           | 3.63| 0.03              |
| Gm13305| 4 | 0.030   | 1.86           | 55.99| 0.03              |
| Palm2  | 4 | 0.030   | 1.21           | 9.97| 0.03              |
| Cntln  | 4 | 0.030   | 1.69           | 2.45| 0.03              |
| Guca2b | 4 | 0.030   | 1.89           | 6.91| 0.03              |
| Asap3  | 4 | 0.030   | 2.55           | 3.46| 0.03              |
| Rap1gap| 4 | 0.030   | 1.99           | 3.16| 0.03              |
| Fblim1 | 4 | 0.030   | 1.74           | 3.28| 0.03              |
| Errf1l | 4 | 0.030   | 1.57           | 2.21| 0.03              |
| Steap1 | 5 | 0.030   | 5.63           | 4.93| 0.03              |
| Plb1   | 5 | 0.030   | 5.85           | 5.73| 0.03              |
| Uchl1  | 5 | 0.030   | 1.85           | 4.06| 0.03              |
| Ereg   | 5 | 0.030   | 1.78           | 49.36| 0.03              |
| Gene       | Fold | FDR   | q-value | ENSMUSG Number             |
|------------|------|-------|---------|----------------------------|
| Tbx5       | 5    | 0.030 | 1.63    | 57.61                      | 0.03 | ENSMUSG00000018263 |
| Oas1a      | 5    | 0.030 | 1.65    | 3.35                       | 0.03 | ENSMUSG00000052776 |
| Hip1       | 5    | 0.030 | 1.90    | 2.48                       | 0.03 | ENSMUSG00000039959 |
| Zcwpw1     | 5    | 0.030 | 1.91    | 2.47                       | 0.03 | ENSMUSG00000037108 |
| Cav2       | 6    | 0.030 | 2.45    | 3.60                       | 0.03 | ENSMUSG00000000058 |
| Wnt16      | 6    | 0.030 | 1.12    | 46.15                      | 0.03 | ENSMUSG00000029671 |
| Creb3l2    | 6    | 0.030 | 1.99    | 2.51                       | 0.03 | ENSMUSG00000038648 |
| Tmsb10     | 6    | 0.030 | 2.39    | 2.10                       | 0.03 | ENSMUSG00000079523 |
| Loxl3      | 6    | 0.030 | 1.01    | 2.97                       | 0.03 | ENSMUSG00000000693 |
| Plxnd1     | 6    | 0.030 | 2.43    | 2.14                       | 0.03 | ENSMUSG00000030123 |
| Beat1      | 6    | 0.030 | 2.09    | 3.58                       | 0.03 | ENSMUSG00000030268 |
| Rassf8     | 6    | 0.030 | 1.96    | 3.43                       | 0.03 | ENSMUSG00000030259 |
| Amn1       | 6    | 0.030 | 2.77    | 2.90                       | 0.03 | ENSMUSG00000068250 |
| Lair1      | 7    | 0.030 | 2.16    | 3.69                       | 0.03 | ENSMUSG00000055541 |
| Lrfn3      | 7    | 0.030 | 1.64    | 4.28                       | 0.03 | ENSMUSG00000036957 |
| Scn1b      | 7    | 0.030 | 1.82    | 3.14                       | 0.03 | ENSMUSG00000019194 |
| Kctd15     | 7    | 0.030 | 2.07    | 4.01                       | 0.03 | ENSMUSG00000030499 |
| Trpm4      | 7    | 0.030 | 2.61    | 3.61                       | 0.03 | ENSMUSG00000038260 |
| Arpin      | 7    | 0.030 | 2.62    | 3.74                       | 0.03 | ENSMUSG00000039043 |
| Scnn1b     | 7    | 0.030 | 2.72    | 5.51                       | 0.03 | ENSMUSG00000030873 |
| Lpar2      | 8    | 0.030 | 2.02    | 2.69                       | 0.03 | ENSMUSG00000031861 |
| Cdh11      | 8    | 0.030 | 1.47    | 3.77                       | 0.03 | ENSMUSG00000031673 |
| Nol3       | 8    | 0.030 | 1.92    | 3.76                       | 0.03 | ENSMUSG00000014776 |
| Tsnaxip1   | 8    | 0.030 | 1.25    | 3.79                       | 0.03 | ENSMUSG00000031893 |
| Rgl3       | 9    | 0.030 | 1.62    | 5.23                       | 0.03 | ENSMUSG00000040146 |
| Jam3       | 9    | 0.030 | 1.12    | 3.67                       | 0.03 | ENSMUSG00000031990 |
| Adamts8    | 9    | 0.030 | 1.52    | 5.21                       | 0.03 | ENSMUSG00000031994 |
| Arhgap32   | 9    | 0.030 | 1.47    | 2.37                       | 0.03 | ENSMUSG00000041444 |
| Cdon       | 9    | 0.030 | 5.63    | 3.15                       | 0.03 | ENSMUSG00000038119 |
| Kdelc2     | 9    | 0.030 | 2.00    | 3.07                       | 0.03 | ENSMUSG00000034487 |
| Cib2       | 9    | 0.030 | 1.08    | 4.53                       | 0.03 | ENSMUSG00000037493 |
| Islr       | 9    | 0.030 | 1.91    | 5.04                       | 0.03 | ENSMUSG00000037206 |
| Lrrc49     | 9    | 0.030 | 1.37    | 2.73                       | 0.03 | ENSMUSG00000047766 |
| Gene     | Log2FC | P.Value | Fold Change | FDR   | Accession     |
|----------|--------|---------|-------------|-------|---------------|
| Camp     | 9      | 0.030   | 5.53        | 3.52  | 0.03          | ENSMUSG00000038357 |
| Tgfbr2   | 9      | 0.030   | 1.05        | 2.17  | 0.03          | ENSMUSG00000032440 |
| Lyzl4    | 9      | 0.030   | 5.53        | 10.84 | 0.03          | ENSMUSG00000032530 |
| Perp     | 10     | 0.030   | 5.53        | 2.14  | 0.03          | ENSMUSG00000019851 |
| E030030I06Rik | 10 | 0.030   | 1.37        | 4.16  | 0.03          | ENSMUSG00000097327 |
| Slc18b1  | 10     | 0.030   | 1.14        | 3.21  | 0.03          | ENSMUSG00000037455 |
| Col6a1   | 10     | 0.030   | 1.86        | 3.50  | 0.03          | ENSMUSG0000001119  |
| 1500009L16Rik | 10 | 0.030   | 5.53        | 4.84  | 0.03          | ENSMUSG00000087651 |
| Ptprb    | 10     | 0.030   | 1.57        | 3.97  | 0.03          | ENSMUSG00000020154 |
| Gabral   | 11     | 0.030   | 2.10        | 10.81 | 0.03          | ENSMUSG00000010803 |
| Pdlim4   | 11     | 0.030   | 2.46        | 4.32  | 0.03          | ENSMUSG00000020388 |
| Wnt9a    | 11     | 0.030   | 1.43        | 3.63  | 0.03          | ENSMUSG0000000126  |
| Mmp28    | 11     | 0.030   | 2.33        | 5.25  | 0.03          | ENSMUSG00000020682 |
| Ccl6     | 11     | 0.030   | 1.68        | 3.42  | 0.03          | ENSMUSG00000018927 |
| Naglu    | 11     | 0.030   | 2.44        | 2.31  | 0.03          | ENSMUSG0000001751  |
| Slc26a11 | 11     | 0.030   | 1.58        | 2.88  | 0.03          | ENSMUSG00000039908 |
| Pxdn     | 12     | 0.030   | 1.57        | 3.00  | 0.03          | ENSMUSG00000020674 |
| Zc2hc1c  | 12     | 0.030   | 1.49        | 6.77  | 0.03          | ENSMUSG00000045064 |
| Jdp2     | 12     | 0.030   | 3.70        | 2.94  | 0.03          | ENSMUSG00000034271 |
| Rapgef5  | 12     | 0.030   | 1.86        | 3.22  | 0.03          | ENSMUSG00000041992 |
| Serpinb6b| 13     | 0.030   | 5.63        | 2.53  | 0.03          | ENSMUSG00000042842 |
| Adtrp    | 13     | 0.030   | 1.37        | 7.80  | 0.03          | ENSMUSG00000058022 |
| Adgrv1   | 13     | 0.030   | 1.08        | 6.90  | 0.03          | ENSMUSG00000069170 |
| Plpp1    | 13     | 0.030   | 2.96        | 2.81  | 0.03          | ENSMUSG00000021759 |
| Hcn1     | 13     | 0.030   | 1.41        | 8.34  | 0.03          | ENSMUSG00000021730 |
| Ptprg    | 14     | 0.030   | 5.56        | 2.76  | 0.03          | ENSMUSG00000021745 |
| Gdf10    | 14     | 0.030   | 1.77        | 5.89  | 0.03          | ENSMUSG00000021943 |
| Npy4r    | 14     | 0.030   | 2.61        | 49.44 | 0.03          | ENSMUSG00000048337 |
| Rnase2a  | 14     | 0.030   | 2.68        | 12.60 | 0.03          | ENSMUSG00000047222 |
| Adra1a   | 14     | 0.030   | 1.29        | 4.26  | 0.03          | ENSMUSG00000045875 |
| Gfra2    | 14     | 0.030   | 1.79        | 3.88  | 0.03          | ENSMUSG000000222103|
| Ednrb    | 14     | 0.030   | 1.74        | 4.52  | 0.03          | ENSMUSG00000022122 |
| Sema5a   | 15     | 0.030   | 1.30        | 4.39  | 0.03          | ENSMUSG00000022231 |
| Gene    | Chromosome | Log2 Fold Change | Beta | Benjamini P-Value | Gene Accession |
|---------|------------|-----------------|------|------------------|----------------|
| Nipal2  | 15         | 1.84            | 4.05 | 0.03             | ENSMUSG00000038879 |
| Cthrc1  | 15         | 2.38            | 3.70 | 0.03             | ENSMUSG00000054196 |
| Samd12  | 15         | 3.44            | 12.99| 0.03             | ENSMUSG00000058656 |
| Tnfrsf11b | 15     | 1.81            | 6.81 | 0.03             | ENSMUSG00000063727 |
| Slc38a4 | 15         | 1.77            | 4.46 | 0.03             | ENSMUSG00000022464 |
| Grasp   | 15         | 1.55            | 3.62 | 0.03             | ENSMUSG0000000531  |
| Zdhhc8  | 16         | 2.15            | 2.46 | 0.03             | ENSMUSG00000060166 |
| Gm49333 | 16         | 1.98            | 12.40| 0.03             | ENSMUSG00000115293 |
| BC117090| 16         | 1.91            | 11.70| 0.03             | ENSMUSG00000079594 |
| Ip6k3   | 17         | 2.75            | 49.69| 0.03             | ENSMUSG00000024210 |
| Abcg1   | 17         | 2.63            | 2.11 | 0.03             | ENSMUSG00000024030 |
| Tff3    | 17         | 5.52            | 3.75 | 0.03             | ENSMUSG00000024029 |
| Tap1    | 17         | 1.36            | 2.58 | 0.03             | ENSMUSG00000037321 |
| Slc25a27| 17         | 2.79            | 3.11 | 0.03             | ENSMUSG00000023912 |
| Dyncl1  | 17         | 1.14            | 3.98 | 0.03             | ENSMUSG00000024253 |
| Snx24   | 18         | 1.31            | 3.34 | 0.03             | ENSMUSG00000024535 |
| Best1   | 19         | 1.10            | 4.45 | 0.03             | ENSMUSG00000037418 |
| Dagla   | 19         | 2.06            | 3.94 | 0.03             | ENSMUSG00000035735 |
| Ms4a7   | 19         | 2.28            | 3.33 | 0.03             | ENSMUSG00000024672 |
| Ch25h   | 19         | 3.43            | 7.80 | 0.03             | ENSMUSG00000050370 |
| Tdrd1   | 19         | 2.17            | 6.07 | 0.03             | ENSMUSG00000025081 |
| Tspan7  | X          | 2.96            | 3.77 | 0.03             | ENSMUSG00000058254 |
| Plac1   | X          | 2.79            | 5.88 | 0.03             | ENSMUSG00000061082 |
| Spin4   | X          | 2.56            | 2.65 | 0.03             | ENSMUSG00000071722 |
| Itm2a   | X          | 1.76            | 2.59 | 0.03             | ENSMUSG00000031329 |
| Esx1    | X          | 2.10            | 3.38 | 0.03             | ENSMUSG00000023443 |
| Mum111  | X          | 1.82            | 2.89 | 0.03             | ENSMUSG00000042515 |
| Tbc1d8b | X          | 1.74            | 2.03 | 0.03             | ENSMUSG00000042473 |
| Xkr4    | 1          | 1.83            | 5.02 | 0.04             | ENSMUSG00000051951 |
| Gulpl   | 1          | 1.33            | 3.54 | 0.04             | ENSMUSG00000056870 |
| Ugt1a7c | 1          | 1.43            | 2.51 | 0.04             | ENSMUSG00000090124 |
| Rbm44   | 1          | 2.11            | 9.97 | 0.04             | ENSMUSG00000070732 |
| Soat1   | 1          | 1.72            | 2.06 | 0.04             | ENSMUSG00000026600 |
| Gene     | Level | FDR  | Log2FoldChange | p-value | ENSMUSG00000029994 |
|----------|-------|------|----------------|---------|-------------------|
| Gata3    | 2     | 0.040| 1.92           | 3.78    | 0.04              |
| Slc39a12 | 2     | 0.040| 1.46           | 39.72   | 0.04              |
| Il1rn    | 2     | 0.040| 1.27           | 4.50    | 0.04              |
| Ntng2    | 2     | 0.040| 1.59           | 3.25    | 0.04              |
| Phyhd1   | 2     | 0.040| 5.54           | 3.29    | 0.04              |
| Rnd3     | 2     | 0.040| 5.55           | 2.86    | 0.04              |
| Cd302    | 2     | 0.040| 1.20           | 4.16    | 0.04              |
| Sestd1   | 2     | 0.040| 1.72           | 2.78    | 0.04              |
| Them7    | 2     | 0.040| 1.49           | 5.49    | 0.04              |
| Sqor     | 2     | 0.040| 1.58           | 3.51    | 0.04              |
| Rin2     | 2     | 0.040| 1.32           | 2.81    | 0.04              |
| Atp9a    | 2     | 0.040| 2.14           | 2.98    | 0.04              |
| Hist2h3c1| 3     | 0.040| 2.63           | 2.49    | 0.04              |
| BC107364 | 3     | 0.040| 1.48           | 4.42    | 0.04              |
| Hsd3b3   | 3     | 0.040| 1.58           | 44.21   | 0.04              |
| Slc6a17  | 3     | 0.040| 2.58           | 6.33    | 0.04              |
| Palmd    | 3     | 0.040| 1.93           | 6.20    | 0.04              |
| Fabp2    | 3     | 0.040| 5.43           | 5.60    | 0.04              |
| Gbp3     | 3     | 0.040| 2.22           | 3.86    | 0.04              |
| Orm3     | 4     | 0.040| 1.38           | 39.86   | 0.04              |
| Artn     | 4     | 0.040| 1.40           | 2.29    | 0.04              |
| Fabp3    | 4     | 0.040| 1.97           | 2.76    | 0.04              |
| Sema3e   | 5     | 0.040| 2.52           | 2.70    | 0.04              |
| Slc5a1   | 5     | 0.040| 1.56           | 10.89   | 0.04              |
| Spon2    | 5     | 0.040| 2.20           | 2.99    | 0.04              |
| Cpz      | 5     | 0.040| 1.72           | 3.68    | 0.04              |
| Evc      | 5     | 0.040| 5.31           | 2.48    | 0.04              |
| Sparcl1  | 5     | 0.040| 1.07           | 5.30    | 0.04              |
| Mfsd7a   | 5     | 0.040| 1.78           | 3.81    | 0.04              |
| Crybb1   | 5     | 0.040| 1.79           | 6.20    | 0.04              |
| Mdfic    | 6     | 0.040| 1.05           | 2.93    | 0.04              |
| Nagk     | 6     | 0.040| 1.92           | 2.46    | 0.04              |
| Anxa4    | 6     | 0.040| 1.72           | 2.36    | 0.04              |
| Gene      | Log2FoldChange | p-value | FPKM  | ENSMGUSG00000000000 |
|-----------|----------------|---------|-------|---------------------|
| Sox5      | 1.81           | 0.04    | 3.99  | ENSMGUSG00000041540 |
| Saa3      | 2.41           | 0.04    | 3.30  | ENSMGUSG00000040026 |
| Pde2a     | 1.24           | 0.04    | 4.69  | ENSMGUSG00000110195 |
| Sbf2      | 2.23           | 0.04    | 2.40  | ENSMGUSG00000038371 |
| Tnfrsf23  | 1.53           | 0.04    | 2.82  | ENSMGUSG00000037613 |
| Npy1r     | 1.73           | 0.04    | 4.57  | ENSMGUSG00000036437 |
| Slc27a1   | 1.64           | 0.04    | 2.65  | ENSMGUSG00000031808 |
| Large1    | 1.63           | 0.04    | 2.51  | ENSMGUSG00000004383 |
| Kctd19    | 5.31           | 0.04    | 6.26  | ENSMGUSG00000051648 |
| Casp1     | 1.58           | 0.04    | 3.87  | ENSMGUSG00000025888 |
| Chrnb4    | 2.36           | 0.04    | 42.17 | ENSMGUSG00000035200 |
| Neil1     | 2.02           | 0.04    | 2.84  | ENSMGUSG00000032298 |
| Cgas      | 1.69           | 0.04    | 2.39  | ENSMGUSG00000032344 |
| Foxl2     | 2.33           | 0.04    | 9.09  | ENSMGUSG00000050397 |
| Hebp2     | 3.32           | 0.04    | 3.92  | ENSMGUSG0000019853  |
| Pde7b     | 5.31           | 0.04    | 3.65  | ENSMGUSG00000019990 |
| Gm48551   | 2.06           | 0.04    | 2.74  | ENSMGUSG00000113262 |
| Csrp2     | 2.66           | 0.04    | 2.48  | ENSMGUSG00000020186 |
| Aebp1     | 1.95           | 0.04    | 3.44  | ENSMGUSG00000020473 |
| Zbtb4     | 5.32           | 0.04    | 2.54  | ENSMGUSG0000018750  |
| Doc2b     | 3.44           | 0.04    | 5.75  | ENSMGUSG00000020848 |
| Slfn2     | 2.86           | 0.04    | 2.58  | ENSMGUSG00000072620 |
| Krt13     | 1.30           | 0.04    | 36.66 | ENSMGUSG00000044041 |
| Jup       | 2.00           | 0.04    | 2.20  | ENSMGUSG00000001552 |
| Pld3      | 1.27           | 0.04    | 2.88  | ENSMGUSG00000020937 |
| Ttyh2     | 1.33           | 0.04    | 2.41  | ENSMGUSG00000034714 |
| Gpsec5c   | 1.95           | 0.04    | 2.95  | ENSMGUSG00000051043 |
| Cd300c2   | 5.40           | 0.04    | 3.32  | ENSMGUSG00000044811 |
| Dact1     | 1.50           | 0.04    | 3.11  | ENSMGUSG00000044548 |
| Hhip1     | 1.61           | 0.04    | 2.95  | ENSMGUSG00000021260 |
| Hist1h4c  | 1.87           | 0.04    | 3.09  | ENSMGUSG00000060678 |
| Serpinb9f | 1.88           | 0.04    | 4.61  | ENSMGUSG00000038327 |
| Ror2      | 2.51           | 0.04    | 5.68  | ENSMGUSG00000021464 |
| Gene  | Start | Log2 FC | Fold Change | p-value | ENSMUSG0000000000 |
|-------|-------|---------|-------------|---------|-------------------|
| Plac9a| 14    | 0.040   | 5.50        | 45.40   | 0.04              |
| Gdf2  | 14    | 0.040   | 1.71        | 4.75    | 0.04              |
| Ephx2 | 14    | 0.040   | 1.96        | 3.30    | 0.04              |
| Amigo2| 15    | 0.040   | 1.52        | 3.28    | 0.04              |
| Hes1  | 16    | 0.040   | 1.32        | 2.52    | 0.04              |
| Igfsf11| 16   | 0.040   | 2.46        | 3.88    | 0.04              |
| Mmp25 | 17    | 0.040   | 1.88        | 9.09    | 0.04              |
| Rsph1 | 17    | 0.040   | 1.31        | 39.73   | 0.04              |
| Cbs   | 17    | 0.040   | 2.63        | 3.85    | 0.04              |
| H2-Ab1| 17    | 0.040   | 1.09        | 3.01    | 0.04              |
| Aifl  | 17    | 0.040   | 1.33        | 4.79    | 0.04              |
| Mymx  | 17    | 0.040   | 3.01        | 46.54   | 0.04              |
| Srd5a2| 17    | 0.040   | 2.19        | 9.97    | 0.04              |
| Colec12| 18   | 0.040   | 1.88        | 2.28    | 0.04              |
| Sh3rf2| 18    | 0.040   | 5.20        | 4.06    | 0.04              |
| Ppic  | 18    | 0.040   | 2.25        | 2.10    | 0.04              |
| Megf10| 18    | 0.040   | 1.87        | 3.44    | 0.04              |
| Fbn2  | 18    | 0.040   | 2.26        | 3.28    | 0.04              |
| Aldh3b1| 19   | 0.040   | 1.09        | 3.12    | 0.04              |
| Ms4a6b| 19    | 0.040   | 2.17        | 3.46    | 0.04              |
| Il33  | 19    | 0.040   | 1.47        | 5.13    | 0.04              |
| Papss2| 19    | 0.040   | 2.70        | 2.12    | 0.04              |
| Plce1 | 19    | 0.040   | 3.18        | 3.64    | 0.04              |
| Afap1l2| 19   | 0.040   | 1.37        | 4.40    | 0.04              |
| Rtl8a | X     | 0.040   | 1.33        | 2.49    | 0.04              |
| Stard8| X     | 0.040   | 1.39        | 2.13    | 0.04              |
| Fam178b| 1    | 0.050   | 1.18        | 4.19    | 0.05              |
| Mixl1 | 1     | 0.050   | 2.14        | 36.46   | 0.05              |
| Eng   | 2     | 0.050   | 1.95        | 2.56    | 0.05              |
| Lypd6 | 2     | 0.050   | 1.54        | 3.42    | 0.05              |
| Ryr3  | 2     | 0.050   | 2.61        | 11.16   | 0.05              |
| Greml1| 2     | 0.050   | 2.07        | 4.98    | 0.05              |
| Gene       | Log2 Fold Change | P-value | FDR   | ENSMUSG00000000000  |
|------------|-----------------|---------|-------|---------------------|
| Cldn11     | 3               | 0.050   | 5.21  | 36.81               | 0.05 ENSMUSG00000037625 |
| Fam198b    | 3               | 0.050   | 1.35  | 2.27                | 0.05 ENSMUSG00000027955 |
| Paqr6      | 3               | 0.050   | 1.78  | 2.59                | 0.05 ENSMUSG000000041423 |
| Cd160      | 3               | 0.050   | 2.32  | 10.10               | 0.05 ENSMUSG00000038304 |
| Ctnbp2nl   | 3               | 0.050   | 5.28  | 2.67                | 0.05 ENSMUSG000000062127 |
| Arsj       | 3               | 0.050   | 5.20  | 10.73               | 0.05 ENSMUSG00000046561 |
| Col24a1    | 3               | 0.050   | 3.34  | 4.45                | 0.05 ENSMUSG00000028197 |
| Pakap      | 4               | 0.050   | 3.42  | 4.66                | 0.05 ENSMUSG00000089945 |
| Padi4      | 4               | 0.050   | 2.54  | 5.48                | 0.05 ENSMUSG00000025330 |
| Cpa4       | 6               | 0.050   | 3.18  | 9.09                | 0.05 ENSMUSG00000039070 |
| Tmem176b   | 6               | 0.050   | 1.43  | 2.70                | 0.05 ENSMUSG00000029810 |
| Antxr1     | 6               | 0.050   | 1.54  | 4.40                | 0.05 ENSMUSG00000033420 |
| P3h3       | 6               | 0.050   | 5.26  | 3.43                | 0.05 ENSMUSG00000023191 |
| Plaur      | 7               | 0.050   | 2.31  | 2.37                | 0.05 ENSMUSG00000046223 |
| Tmem86a    | 7               | 0.050   | 1.52  | 2.91                | 0.05 ENSMUSG00000010307 |
| Nr2f2      | 7               | 0.050   | 2.09  | 3.56                | 0.05 ENSMUSG00000030551 |
| Cyb5r2     | 7               | 0.050   | 2.10  | 38.39               | 0.05 ENSMUSG00000048065 |
| Syt17      | 7               | 0.050   | 1.14  | 5.14                | 0.05 ENSMUSG00000058420 |
| Slc5a2     | 7               | 0.050   | 2.17  | 2.83                | 0.05 ENSMUSG00000030781 |
| 2210011C24Rik | 8          | 0.050   | 2.03  | 3.85                | 0.05 ENSMUSG00000074217 |
| Plod2      | 9               | 0.050   | 1.23  | 2.51                | 0.05 ENSMUSG00000032374 |
| Clec10a    | 11              | 0.050   | 1.37  | 2.83                | 0.05 ENSMUSG0000000318 |
| Gsdma      | 11              | 0.050   | 2.22  | 2.91                | 0.05 ENSMUSG00000017204 |
| Hist1h2bl  | 13              | 0.050   | 2.45  | 4.94                | 0.05 ENSMUSG00000094338 |
| Sox4       | 13              | 0.050   | 1.83  | 2.14                | 0.05 ENSMUSG00000076431 |
| Ogdhl      | 14              | 0.050   | 1.50  | 2.87                | 0.05 ENSMUSG00000021913 |
| KhlL33     | 14              | 0.050   | 1.50  | 9.09                | 0.05 ENSMUSG00000090799 |
| Mafa       | 15              | 0.050   | 1.10  | 4.24                | 0.05 ENSMUSG00000047591 |
| Ddr1       | 17              | 0.050   | 1.45  | 2.74                | 0.05 ENSMUSG0000003534 |
| Capn11     | 17              | 0.050   | 2.66  | 6.33                | 0.05 ENSMUSG00000058626 |
| Plekhh2    | 17              | 0.050   | 2.90  | 4.28                | 0.05 ENSMUSG00000040852 |
| Rhoq       | 17              | 0.050   | 2.23  | 2.21                | 0.05 ENSMUSG00000024143 |
| Ankrd29    | 18              | 0.050   | 1.20  | 4.51                | 0.05 ENSMUSG00000057766 |
| Gene   | Value | p-value | q-value | Age | ENSMUSG00000024430 |
|--------|-------|---------|---------|-----|--------------------|
| Cabyr  | 18    | 0.050   | 1.04    | 4.08| 0.05               |
| Cyp2c70| 19    | 0.050   | 3.48    | 7.47| 0.05               |
| DXBay18| X     | 0.050   | 1.25    | 4.69| 0.05               |
| Nhsl2  | X     | 0.050   | 1.33    | 2.34| 0.05               |
| Armcx2 | X     | 0.050   | 2.12    | 2.30| 0.05               |
| Name    | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL          |
|---------|------------|----------------|------------------|-------------|---------|-----------------|
| Ptprj   | 2          | 9.630          | -1.23            | -2.34       | 0.00    | ENSMUSG00000025314 |
| Elovl6  | 3          | 11.510         | -1.35            | -2.55       | 0.00    | ENSMUSG00000041220 |
| Pf4     | 5          | 212.790        | -1.67            | -3.17       | 0.00    | ENSMUSG00000029373 |
| Itga2b  | 11         | 82.050         | -1.43            | -2.69       | 0.00    | ENSMUSG00000034664 |
| Ctl2a   | 13         | 54.440         | -1.56            | -2.95       | 0.00    | ENSMUSG00000044258 |
| Shank3  | 15         | 1.750          | -1.87            | -3.66       | 0.00    | ENSMUSG00000022623 |
| Pttn7   | 1          | 21.750         | -1.14            | -2.21       | 0.00    | ENSMUSG00000031506 |
| Kit     | 5          | 26.840         | -1.20            | -2.30       | 0.00    | ENSMUSG00000005672 |
| Mpig6b  | 17         | 3.270          | -2.25            | -4.75       | 0.00    | ENSMUSG00000073414 |
| Gm45837 | 7          | 0.290          | -5.74            | -53.48      | 0.00    | ENSMUSG00000030653 |
| Gbx2    | 1          | 0.550          | -3.76            | -13.52      | 0.00    | ENSMUSG00000034486 |
| Ubash3b | 9          | 6.190          | -1.33            | -2.52       | 0.00    | ENSMUSG00000032020 |
| Pecam1  | 11         | 3.750          | -1.74            | -3.33       | 0.00    | ENSMUSG00000020717 |
| Ly6g6f  | 17         | 6.080          | -2.36            | -5.15       | 0.00    | ENSMUSG00000034923 |
| Slc6a4  | 11         | 19.190         | -1.45            | -2.74       | 0.00    | ENSMUSG00000020838 |
| Pfk1    | 10         | 38.990         | -1.00            | -2.01       | 0.00    | ENSMUSG00000020777 |
| Clec9a  | 6          | 0.330          | -3.42            | -10.74      | 0.00    | ENSMUSG00000046080 |
| Gabrg3  | 7          | 0.090          | -3.52            | -11.46      | 0.00    | ENSMUSG00000055026 |
| St3gal6 | 16         | 11.420         | -1.01            | -2.01       | 0.00    | ENSMUSG00000022747 |
| Ldha    | 7          | 222.860        | -1.10            | -2.15       | 0.00    | ENSMUSG00000063229 |
| Gnaz    | 10         | 4.390          | -1.56            | -2.94       | 0.00    | ENSMUSG00000040009 |
| Rgs10   | 7          | 30.400         | -1.27            | -2.42       | 0.00    | ENSMUSG00000030844 |
| Gipr    | 7          | 1.170          | -2.91            | -7.49       | 0.00    | ENSMUSG00000030406 |
| Ptpre   | 7          | 3.080          | -1.43            | -2.70       | 0.00    | ENSMUSG00000041836 |
| Ankrd28 | 14         | 6.090          | -1.06            | -2.08       | 0.00    | ENSMUSG00000014946 |
| Gm28048 | 11         | 1.090          | -2.43            | -5.38       | 0.00    | ENSMUSG00000098650 |
| Adra2a  | 19         | 1.020          | -2.09            | -4.26       | 0.00    | ENSMUSG00000033717 |
| Rnf165  | 18         | 0.140          | -3.85            | -14.39      | 0.00    | ENSMUSG00000025427 |
| Tuba8   | 6          | 5.370          | -1.54            | -2.91       | 0.00    | ENSMUSG00000030137 |
| Polr2k  | 15         | 21.480         | -1.60            | -3.02       | 0.00    | ENSMUSG00000045996 |

Supplemental Table 11. Downregulated genes in *Dot1L*- MM ESRE cells that are unique to these mutant cells (n=130)
| Gene      | X | Mid1 | Rab27b | Gpatch4 | Galk1 | Cd96 | Tie1 | Icam2 | Pkm | Zic1 | Acap1 | Gbe1 | Arhgap6 | Mettl1 | Il10ra | Cd34 | Susd1 | Otop1 | Tesc | Akr1b3 | Gimap6 | Gm3055 | Ctl2a | D16Ertd472e | Pglyrp2 | Kif21b | Rgs18 | Cass4 | P2ry1 | Elavl4 | Zfp534 | Ajap1 | Cxcl5 | Ctnna2 |
|-----------|---|------|--------|---------|-------|------|------|-------|-----|-----|-------|------|---------|--------|-------|------|-------|------|------|-------|--------|--------|------|-------------|--------|------|-------|------|-------|-------|------|-------|-------|-------|
|           |   | 3.860| 5.310  | 17.580  | 34.290| 0.240| 1.050| 2.690  | 215.600 | 0.150 | 7.150 | 3.580  | 1.840 | 11.840  | 7.380  | 7.690  | 7.310 | 0.170 | 4.940 | 64.620 | 0.590  | 0.080 | 4.380  | 1.850  | 0.240 | 3.850  | 11.240 | 0.530  | 0.500  | 1.120  | 0.280  | 0.080  |
|           |   |    |       |         |       |     |      |       |      |     |       |       |       |       |       |       |     |      |      |      |      |      |       |       |     |      |       |      |      |       |     |      |      |      |       |
|           |   | -1.74| -1.25  | -1.06   | -1.05 | -3.28| -2.01| -1.93  | -1.05 | -7.08 | -1.21  | -1.24 | -1.28  | -1.06  | -1.19  | -1.04 | -3.77 | -1.69 | -1.10 | -2.17 | -3.21 | -1.68  | -1.33 | -2.59 | -1.14  | -1.08  | -1.85  | -1.02  | -3.67  | -2.31  | -2.20  | -4.38  |
|           |   |     |         |         |       |     |      |       |      |     |       |       |       |       |       |       |     |      |      |      |      |      |       |       |     |      |       |      |      |       |     |      |      |      |       |
|           |   | -3.33| -2.38  | -2.09   | -2.07 | -9.69| -4.04 | -3.81  | -2.08 | -135.00 | -2.32  | -2.35  | -2.43  | -2.08  | -2.29  | -2.29  | -2.06 | -13.61 | -3.23 | -2.14 | -4.50  | -9.22  | -3.20  | -2.51  | -6.00  | -2.21  | -12.72 | -4.95  | -4.59  | -6.33  | -20.75 |      |
|           |   |     |         |         |       |     |      |       |      |     |       |       |       |       |       |       |     |      |      |      |      |      |       |       |     |      |       |      |      |       |     |      |      |      |       |
|           |   | 0.00 |         |         |       |     |      |       |      |     |       |       |       |       |       |       |     |      |      |      |      |      |       |       |     |      |       |      |      |       |     |      |      |      |       |
|           |   |     |         |         |       |     |      |       |      |     |       |       |       |       |       |       |     |      |      |      |      |      |       |       |     |      |       |      |      |       |     |      |      |      |       |
| Gene   | Symbol | log2FC | p-value | q-value |
|--------|--------|--------|---------|---------|
| Txnr3  | 3      | 5.220  | -1.06   | -2.08   |
| Nova2  | 7      | 0.160  | -2.92   | -7.58   |
| F10    | 8      | 2.420  | -1.46   | -2.75   |
| Tma16  | 8      | 5.160  | -1.03   | -2.05   |
| Gm10282| 8      | 15.270 | -1.25   | -2.38   |
| Gm6793 | 8      | 13.360 | -1.02   | -2.02   |
| Kcnj5  | 9      | 0.640  | -1.65   | -3.14   |
| Timm9  | 12     | 5.250  | -1.01   | -2.01   |
| Vash1  | 12     | 1.980  | -1.58   | -2.99   |
| Mtx3   | 13     | 1.660  | -1.31   | -2.48   |
| Ltb4r2 | 14     | 2.130  | -1.86   | -3.62   |
| Rab26  | 17     | 0.120  | -2.97   | -7.83   |
| Nrxn2  | 19     | 0.140  | -2.63   | -6.21   |
| Tmem223| 19     | 15.490 | -1.21   | -2.31   |
| Lypd1  | 1      | 1.280  | -1.34   | -2.53   |
| 6820408C15Rik | 2 | 0.190 | -2.75 | -6.75 |
| Gm14440| 2      | 0.090  | -5.64   | -49.97  |
| Rhoh   | 5      | 0.180  | -1.92   | -3.79   |
| Fam69a | 5      | 4.670  | -1.05   | -2.07   |
| Ttyh1  | 7      | 0.080  | -5.77   | -54.48  |
| Mcf2l  | 8      | 0.400  | -1.62   | -3.07   |
| Rab27a | 9      | 2.600  | -1.31   | -2.48   |
| Adora2a| 10     | 0.760  | -1.62   | -3.08   |
| Sez6   | 11     | 0.080  | -5.77   | -54.48  |
| Fam169a| 13     | 3.000  | -1.01   | -2.01   |
| Arl15  | 13     | 2.260  | -1.34   | -2.53   |
| Rnf219 | 14     | 1.980  | -1.29   | -2.45   |
| Ciita  | 16     | 0.030  | -3.47   | -11.11  |
| Reep2  | 18     | 1.200  | -1.70   | -3.26   |
| Trub1  | 19     | 2.770  | -1.08   | -2.12   |
| Stk26  | X      | 1.910  | -1.39   | -2.62   |
| Susd4  | 1      | 0.870  | -1.48   | -2.79   |
| Dusp2  | 2      | 1.350  | -1.62   | -3.08   |
| Gene  | Rank | ES Score | Fold Change | FDR     | Ensembl ID         |
|-------|------|----------|-------------|---------|--------------------|
| Vstm2l| 2    | 0.250    | -3.88       | 0.04    | ENSMUSG00000037843|
| Ada   | 2    | 6.520    | -1.01       | 0.04    | ENSMUSG00000017697|
| Gpr171| 3    | 0.280    | -2.07       | 0.04    | ENSMUSG00000050075|
| Actl6b| 5    | 0.160    | -5.51       | 0.04    | ENSMUSG00000029712|
| Gimap5| 6    | 0.180    | -2.64       | 0.04    | ENSMUSG00000043505|
| Lhfpl4| 6    | 0.080    | -2.32       | 0.04    | ENSMUSG00000042873|
| Tnnt1 | 7    | 0.910    | -1.73       | 0.04    | ENSMUSG00000064179|
| Ptgir | 7    | 1.340    | -1.40       | 0.04    | ENSMUSG00000043017|
| Pagr1b| 7    | 1.370    | -2.44       | 0.04    | ENSMUSG00000092534|
| Prr36 | 8    | 0.140    | -2.62       | 0.04    | ENSMUSG00000064125|
| Arhgap18| 10  | 2.840    | -1.05       | 0.04    | ENSMUSG00000039031|
| Tet1  | 10   | 0.630    | -1.25       | 0.04    | ENSMUSG00000047146|
| Atp23 | 10   | 3.630    | -1.37       | 0.04    | ENSMUSG00000025436|
| Camkk1| 11   | 1.070    | -1.47       | 0.04    | ENSMUSG00000020785|
| Znhit3| 11   | 12.780   | -1.06       | 0.04    | ENSMUSG00000020526|
| Cuedc1| 11   | 3.880    | -1.07       | 0.04    | ENSMUSG00000018378|
| Acr   | 15   | 0.140    | -5.27       | 0.04    | ENSMUSG00000022622|
| Adcy9 | 16   | 2.400    | -1.02       | 0.04    | ENSMUSG00000005580|
| Bex6  | 16   | 0.210    | -5.19       | 0.04    | ENSMUSG00000075269|
| Gng3  | 19   | 0.170    | -3.62       | 0.04    | ENSMUSG00000071658|
| Il2rg | X    | 7.820    | -1.07       | 0.04    | ENSMUSG00000031304|
| P2ry10| X    | 0.170    | -1.96       | 0.04    | ENSMUSG00000050921|
| mt-Nd6| MT   | 46.280   | -1.06       | 0.04    | ENSMUSG00000064368|
| Gm9833| 3    | 0.140    | -5.50       | 0.05    | ENSMUSG00000049230|
| Kirrel2| 7   | 0.200    | -2.43       | 0.05    | ENSMUSG00000036915|
| Il2orb| 9    | 0.900    | -1.44       | 0.05    | ENSMUSG00000044244|
| Adat2 | 10   | 6.080    | -1.16       | 0.05    | ENSMUSG00000019808|
| Mgat5b| 11   | 0.060    | -5.44       | 0.05    | ENSMUSG00000043857|
| Unc79 | 12   | 0.040    | -3.17       | 0.05    | ENSMUSG00000021198|
| Mcce2 | 13   | 4.100    | -1.13       | 0.05    | ENSMUSG00000021646|
| Rnf180| 13   | 0.320    | -1.56       | 0.05    | ENSMUSG00000021720|
| Ranbp3l| 15  | 0.050    | -5.19       | 0.05    | ENSMUSG00000048424|
| Kcng2 | 18   | 0.520    | -1.70       | 0.05    | ENSMUSG00000059852|
| Pank1 | 19 | 0.960 | -1.19 | -2.29 | 0.05 | ENSMUSG00000033610 |
Supplemental Table 12. Upregulated genes in *Dot1L* -MM ESRE cells compared to *Dot1L* -KO cells (n=233)

| Name    | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL             |
|---------|------------|----------------|------------------|-------------|---------|---------------------|
| Tubb6   | 18         | 11.96          | 1.00             | 2.00        | 0.05    | ENSMUSG0000001473  |
| App     | 16         | 14.25          | 1.00             | 2.00        | 0.01    | ENSMUSG00000022892 |
| Ehd2    | 7          | 7.93           | 1.01             | 2.01        | 0.04    | ENSMUSG00000074364 |
| Tcrg1   | 19         | 5.14           | 1.03             | 2.05        | 0.02    | ENSMUSG00000001750 |
| Tcaf1   | 6          | 1.52           | 1.05             | 2.06        | 0.05    | ENSMUSG00000036667 |
| Rnaset2b| 17         | 3.41           | 1.04             | 2.06        | 0.05    | ENSMUSG00000094724 |
| Arhgap30| 1          | 2.67           | 1.04             | 2.06        | 0.04    | ENSMUSG00000048865 |
| Tead1   | 7          | 2.78           | 1.05             | 2.07        | 0.05    | ENSMUSG00000055320 |
| Cd36    | 5          | 5.31           | 1.06             | 2.08        | 0.02    | ENSMUSG0000002944  |
| Axl     | 7          | 12.61          | 1.06             | 2.09        | 0.04    | ENSMUSG0000002602  |
| Cpe     | 8          | 7.57           | 1.07             | 2.10        | 0.05    | ENSMUSG00000037852 |
| Ckb     | 12         | 8.40           | 1.08             | 2.12        | 0.05    | ENSMUSG0000001270  |
| mt-Atp8 | MT         | 686.88         | 1.09             | 2.12        | 0.01    | ENSMUSG00000064356 |
| Ece1    | 4          | 6.23           | 1.09             | 2.13        | 0.02    | ENSMUSG00000057530 |
| Rnf213  | 11         | 4.26           | 1.09             | 2.14        | 0.00    | ENSMUSG00000070327 |
| Tyrobp  | 7          | 22.40          | 1.11             | 2.15        | 0.04    | ENSMUSG00000030579 |
| Zechc24 | 14         | 2.46           | 1.12             | 2.17        | 0.05    | ENSMUSG00000055538 |
| Igfbp2  | 1          | 19.24          | 1.12             | 2.17        | 0.05    | ENSMUSG00000039323 |
| Clgn    | 8          | 1.72           | 1.14             | 2.20        | 0.05    | ENSMUSG0000002190  |
| Fscn1   | 5          | 14.96          | 1.15             | 2.21        | 0.03    | ENSMUSG00000029581 |
| Wnt4    | 4          | 2.96           | 1.16             | 2.23        | 0.03    | ENSMUSG00000036856 |
| Adamts9 | 6          | 2.06           | 1.16             | 2.23        | 0.02    | ENSMUSG00000030022 |
| Irgm1   | 11         | 11.92          | 1.16             | 2.23        | 0.01    | ENSMUSG00000046879 |
| Lpl     | 8          | 14.90          | 1.16             | 2.24        | 0.00    | ENSMUSG00000015568 |
| Fbhn2   | 6          | 26.96          | 1.17             | 2.25        | 0.01    | ENSMUSG00000064080 |
| Ugt1a7c | 1          | 1.50           | 1.19             | 2.28        | 0.05    | ENSMUSG00000090124 |
| Ren3    | 7          | 15.57          | 1.19             | 2.28        | 0.02    | ENSMUSG00000019539 |
| Sulf2   | 2          | 4.31           | 1.20             | 2.29        | 0.04    | ENSMUSG0000006800  |
| Cd300a  | 11         | 1.23           | 1.20             | 2.30        | 0.05    | ENSMUSG00000034652 |
| Snrpn   | 7          | 5.01           | 1.20             | 2.30        | 0.03    | ENSMUSG00000102252 |
| Gene     | Fold | FDR   | q-value | ENSMUSG000000038147 |
|----------|------|-------|---------|---------------------|
| Cd84     | 1    | 1.24  | 1.21    | 2.31                |
| Abcd2    | 15   | 1.29  | 1.21    | 2.31                |
| Tgfb1i1  | 7    | 3.95  | 1.21    | 2.31                |
| Ifit1    | 19   | 7.01  | 1.21    | 2.32                |
| Rab7b    | 1    | 1.66  | 1.22    | 2.33                |
| Itgb5    | 16   | 11.09 | 1.22    | 2.33                |
| Fbn1     | 2    | 7.33  | 1.22    | 2.33                |
| Slfn5    | 11   | 1.24  | 1.23    | 2.34                |
| Ifr7     | 7    | 6.10  | 1.23    | 2.34                |
| Csrp2    | 10   | 4.37  | 1.24    | 2.36                |
| Clea3a1  | 3    | 1.93  | 1.25    | 2.37                |
| Hmg2     | 10   | 11.79 | 1.25    | 2.37                |
| Mfhas1   | 8    | 6.67  | 1.25    | 2.37                |
| Dcn      | 10   | 16.61 | 1.25    | 2.38                |
| Dtx4     | 19   | 1.36  | 1.26    | 2.39                |
| Ccde102a | 8    | 2.26  | 1.26    | 2.40                |
| Lrp1     | 10   | 10.84 | 1.26    | 2.40                |
| Elk3     | 10   | 1.61  | 1.27    | 2.41                |
| Une93b1  | 19   | 4.65  | 1.27    | 2.41                |
| Serpinb9 | 13   | 1.91  | 1.28    | 2.43                |
| Ddr2     | 1    | 1.01  | 1.29    | 2.45                |
| Myl9     | 2    | 19.65 | 1.29    | 2.45                |
| Mertk    | 2    | 2.11  | 1.30    | 2.47                |
| Timp2    | 11   | 14.59 | 1.31    | 2.47                |
| Epb41l3  | 17   | 2.18  | 1.31    | 2.48                |
| Mrc1     | 2    | 4.10  | 1.31    | 2.48                |
| Myrf     | 19   | 1.49  | 1.31    | 2.49                |
| Ifitm3   | 7    | 13.55 | 1.31    | 2.49                |
| Crispld2 | 8    | 4.86  | 1.33    | 2.51                |
| Stab1    | 14   | 4.80  | 1.32    | 2.51                |
| Wls      | 3    | 5.48  | 1.33    | 2.52                |
| Tagln    | 9    | 69.27 | 1.34    | 2.53                |
| Col5a1   | 2    | 55.55 | 1.35    | 2.55                |
| Gene   | Value1 | Value2 | Value3 | Value4 | GeneID               |
|--------|--------|--------|--------|--------|----------------------|
| Sirpa  | 2      | 8.34   | 1.35   | 2.55   | ENSMUSG00000037902   |
| Ldlrad3| 2      | 1.13   | 1.36   | 2.57   | ENSMUSG00000048058   |
| Oas3   | 5      | 1.04   | 1.37   | 2.58   | ENSMUSG00000032661   |
| Tmem184a| 5     | 6.43   | 1.37   | 2.58   | ENSMUSG00000036687   |
| Map6   | 7      | 1.34   | 1.37   | 2.59   | ENSMUSG00000055407   |
| Vcan   | 13     | 1.91   | 1.38   | 2.60   | ENSMUSG00000021614   |
| Pnepa1 | 2      | 2.57   | 1.38   | 2.61   | ENSMUSG00000038400   |
| Serpine2| 1    | 11.87  | 1.39   | 2.62   | ENSMUSG00000026249   |
| Fkbp10 | 11     | 11.98  | 1.39   | 2.62   | ENSMUSG00000001555   |
| Ldlrad3| 2      | 1.13   | 1.36   | 2.57   | ENSMUSG00000048058   |
| Oas3   | 5      | 1.04   | 1.37   | 2.58   | ENSMUSG00000032661   |
| Tmem184a| 5     | 6.43   | 1.37   | 2.58   | ENSMUSG00000036687   |
| Map6   | 7      | 1.34   | 1.37   | 2.59   | ENSMUSG00000055407   |
| Vcan   | 13     | 1.91   | 1.38   | 2.60   | ENSMUSG00000021614   |
| Pnepa1 | 2      | 2.57   | 1.38   | 2.61   | ENSMUSG00000038400   |
| Serpine2| 1    | 11.87  | 1.39   | 2.62   | ENSMUSG00000026249   |
| Fkbp10 | 11     | 11.98  | 1.39   | 2.62   | ENSMUSG00000001555   |
| Ldlrad3| 2      | 1.13   | 1.36   | 2.57   | ENSMUSG00000048058   |
| Oas3   | 5      | 1.04   | 1.37   | 2.58   | ENSMUSG00000032661   |
| Tmem184a| 5     | 6.43   | 1.37   | 2.58   | ENSMUSG00000036687   |
| Map6   | 7      | 1.34   | 1.37   | 2.59   | ENSMUSG00000055407   |
| Vcan   | 13     | 1.91   | 1.38   | 2.60   | ENSMUSG00000021614   |
| Pnepa1 | 2      | 2.57   | 1.38   | 2.61   | ENSMUSG00000038400   |
| Serpine2| 1    | 11.87  | 1.39   | 2.62   | ENSMUSG00000026249   |
| Fkbp10 | 11     | 11.98  | 1.39   | 2.62   | ENSMUSG00000001555   |
| Ldlrad3| 2      | 1.13   | 1.36   | 2.57   | ENSMUSG00000048058   |
| Oas3   | 5      | 1.04   | 1.37   | 2.58   | ENSMUSG00000032661   |
| Tmem184a| 5     | 6.43   | 1.37   | 2.58   | ENSMUSG00000036687   |
| Map6   | 7      | 1.34   | 1.37   | 2.59   | ENSMUSG00000055407   |
| Vcan   | 13     | 1.91   | 1.38   | 2.60   | ENSMUSG00000021614   |
| Pnepa1 | 2      | 2.57   | 1.38   | 2.61   | ENSMUSG00000038400   |
| Serpine2| 1    | 11.87  | 1.39   | 2.62   | ENSMUSG00000026249   |
| Fkbp10 | 11     | 11.98  | 1.39   | 2.62   | ENSMUSG00000001555   |
| Gene  | Rank | Log2 Ratio | Log2 Fold Change | q-value | ENSMUSG00000000000 |
|-------|------|------------|------------------|---------|---------------------|
| Amotl1| 9    | 4.19       | 1.52             | 2.86    | 0.00                |
| Jph2  | 2    | 3.60       | 1.52             | 2.87    | 0.01                |
| C1qa  | 4    | 21.12      | 1.52             | 2.87    | 0.01                |
| Tmem119| 5    | 1.56       | 1.53             | 2.88    | 0.04                |
| Gas6  | 8    | 38.72      | 1.55             | 2.92    | 0.00                |
| Irf8  | 8    | 10.04      | 1.55             | 2.93    | 0.05                |
| Aff2  | 4    | 1.27       | 1.57             | 2.98    | 0.02                |
| Igals3bp| 11   | 10.23      | 1.58             | 2.98    | 0.01                |
| Mrc2  | 11   | 2.59       | 1.59             | 3.01    | 0.01                |
| Gpx7  | 4    | 2.13       | 1.61             | 3.05    | 0.05                |
| Csf1  | 3    | 5.42       | 1.61             | 3.06    | 0.00                |
| Cald1 | 6    | 19.57      | 1.61             | 3.06    | 0.00                |
| Atp10a| 7    | 1.34       | 1.62             | 3.08    | 0.01                |
| Slc37a2| 9    | 1.89       | 1.62             | 3.08    | 0.01                |
| Vgll3 | 16   | 2.18       | 1.64             | 3.11    | 0.00                |
| Dennd2a| 6    | 1.06       | 1.65             | 3.13    | 0.02                |
| Sern1 | 6    | 1.14       | 1.64             | 3.13    | 0.01                |
| Fstl1 | 16   | 35.70      | 1.65             | 3.14    | 0.00                |
| Azin2 | 4    | 1.07       | 1.65             | 3.15    | 0.03                |
| Igfbp7| 5    | 30.90      | 1.66             | 3.17    | 0.00                |
| Lyz2  | 10   | 11.09      | 1.66             | 3.17    | 0.00                |
| Mmp23 | 4    | 1.66       | 1.67             | 3.19    | 0.05                |
| Nradd | 9    | 1.15       | 1.69             | 3.22    | 0.05                |
| Cd53  | 3    | 2.33       | 1.69             | 3.22    | 0.01                |
| Adam19| 11   | 4.99       | 1.69             | 3.22    | 0.00                |
| Hrct1 | 4    | 1.00       | 1.71             | 3.28    | 0.05                |
| Ifi204| 1    | 1.77       | 1.72             | 3.29    | 0.02                |
| Fzd2  | 11   | 2.42       | 1.73             | 3.31    | 0.01                |
| Ptk7  | 17   | 2.62       | 1.73             | 3.32    | 0.02                |
| Hp    | 8    | 2.95       | 1.73             | 3.32    | 0.02                |
| Cxcl12| 6    | 6.17       | 1.74             | 3.34    | 0.00                |
| Nuak1 | 10   | 2.75       | 1.75             | 3.35    | 0.00                |
| Ccn4  | 15   | 7.85       | 1.75             | 3.36    | 0.00                |
| Gene    | Log2FC | Fold Change | p-value | GeneID       |
|---------|--------|-------------|---------|--------------|
| Tmem86a | 1.95   | 1.75        | 3.37    | 0.02 ENSMUSG00000010307 |
| Ms4a7   | 1.43   | 1.76        | 3.38    | 0.03 ENSMUSG00000024672 |
| Lsp1    | 1.62   | 1.77        | 3.40    | 0.02 ENSMUSG00000018819 |
| Adam8   | 6.90   | 1.76        | 3.40    | 0.00 ENSMUSG00000025473 |
| Plagl1  | 23.72  | 1.77        | 3.40    | 0.00 ENSMUSG00000019817 |
| Itgam   | 1.63   | 1.77        | 3.42    | 0.01 ENSMUSG00000030786 |
| Parp3   | 1.46   | 1.78        | 3.43    | 0.01 ENSMUSG00000023249 |
| Cd300c2 | 2.11   | 1.78        | 3.44    | 0.04 ENSMUSG00000044811 |
| Tpm2    | 12.39  | 1.79        | 3.46    | 0.00 ENSMUSG00000028464 |
| Tlr13   | 1.82   | 1.79        | 3.47    | 0.01 ENSMUSG00000033777 |
| Ccn5    | 1.28   | 1.80        | 3.48    | 0.05 ENSMUSG00000027656 |
| Myh11   | 2.06   | 1.80        | 3.48    | 0.01 ENSMUSG00000018830 |
| Ms4a4a  | 6.12   | 1.80        | 3.49    | 0.02 ENSMUSG000000101389 |
| Gpr153  | 1.06   | 1.81        | 3.50    | 0.02 ENSMUSG00000042804 |
| C1qb    | 30.43  | 1.81        | 3.51    | 0.00 ENSMUSG00000036905 |
| Acta2   | 196.49 | 1.82        | 3.53    | 0.00 ENSMUSG00000035783 |
| Col11a1 | 16.35  | 1.82        | 3.53    | 0.00 ENSMUSG00000027966 |
| Trabd2b | 1.21   | 1.82        | 3.54    | 0.01 ENSMUSG00000070867 |
| Pitx2   | 2.00   | 1.83        | 3.55    | 0.01 ENSMUSG00000028023 |
| Clip3   | 2.10   | 1.84        | 3.58    | 0.01 ENSMUSG00000013921 |
| A930033H14Rik | 3.13 | 1.84 | 3.58 | 0.00 ENSMUSG00000090622 |
| Masp1   | 6.52   | 1.85        | 3.60    | 0.00 ENSMUSG00000022887 |
| P2ry6   | 2.57   | 1.86        | 3.62    | 0.00 ENSMUSG00000048779 |
| Lcn2    | 2.70   | 1.89        | 3.70    | 0.01 ENSMUSG00000026822 |
| Mafb    | 2.71   | 1.89        | 3.71    | 0.00 ENSMUSG00000074622 |
| Zim1    | 5.50   | 1.90        | 3.73    | 0.00 ENSMUSG00000022666 |
| Gm49450 | 27.19  | 1.93        | 3.80    | 0.04 ENSMUSG00000116358 |
| Tbx20   | 1.82   | 1.93        | 3.80    | 0.00 ENSMUSG00000031965 |
| Gm10131 | 2.99   | 1.93        | 3.81    | 0.03 ENSMUSG00000063412 |
| Actg2   | 18.50  | 1.93        | 3.81    | 0.01 ENSMUSG00000059430 |
| Tspo2   | 98.44  | 1.95        | 3.85    | 0.00 ENSMUSG00000023995 |
| Lmod1   | 1.53   | 1.95        | 3.86    | 0.01 ENSMUSG00000048096 |
| Ankrd1  | 5.68   | 1.95        | 3.88    | 0.01 ENSMUSG00000024803 |
| Gene  | N    | Fold Change | Log2 FC | P value | Refseq   |
|------|------|-------------|--------|---------|----------|
| Tgfbi | 13   | 12.03       | 1.96   | 3.88    | 0.01     | ENSMUSG00000035493 |
| Spp1  | 5    | 9.83        | 1.96   | 3.89    | 0.00     | ENSMUSG00000029304 |
| C1qc  | 4    | 33.23       | 1.96   | 3.89    | 0.00     | ENSMUSG00000036896 |
| Slc15a3 | 19   | 1.94        | 1.98   | 3.95    | 0.01     | ENSMUSG00000024737 |
| Mdga1 | 17   | 1.03        | 1.98   | 3.95    | 0.00     | ENSMUSG00000043557 |
| Adgre1 | 17  | 5.96        | 1.98   | 3.95    | 0.00     | ENSMUSG00000004730 |
| Ccl9  | 11   | 2.62        | 1.99   | 3.96    | 0.00     | ENSMUSG00000019122 |
| Clec4a1 | 6   | 1.18        | 2.00   | 4.00    | 0.01     | ENSMUSG00000049037 |
| Oas1a | 5    | 1.19        | 2.00   | 4.00    | 0.01     | ENSMUSG00000052776 |
| Nbl1  | 4    | 5.37        | 2.00   | 4.01    | 0.00     | ENSMUSG00000041120 |
| Camp  | 9    | 1.41        | 2.03   | 4.08    | 0.02     | ENSMUSG00000038357 |
| Snai2 | 16   | 1.47        | 2.06   | 4.16    | 0.02     | ENSMUSG00000022676 |
| Iff207 | 1   | 3.08        | 2.06   | 4.16    | 0.00     | ENSMUSG00000073490 |
| Mpeg1 | 19   | 4.61        | 2.06   | 4.18    | 0.00     | ENSMUSG00000046805 |
| Gpnmb | 6    | 65.25       | 2.06   | 4.18    | 0.00     | ENSMUSG00000029816 |
| Ms4a6b | 19  | 1.48        | 2.08   | 4.22    | 0.01     | ENSMUSG00000024677 |
| Fcgr1 | 3    | 1.34        | 2.08   | 4.24    | 0.01     | ENSMUSG00000015947 |
| Mfap2 | 4    | 3.51        | 2.09   | 4.25    | 0.01     | ENSMUSG00000060572 |
| Adamts2 | 11  | 6.66        | 2.09   | 4.25    | 0.00     | ENSMUSG00000036545 |
| Tgfb2 | 1    | 2.96        | 2.09   | 4.26    | 0.00     | ENSMUSG00000039239 |
| Loxl1 | 9    | 5.62        | 2.10   | 4.28    | 0.00     | ENSMUSG00000032334 |
| Ccl3  | 11   | 3.02        | 2.10   | 4.29    | 0.01     | ENSMUSG0000000982 |
| Hand2 | 8    | 8.14        | 2.10   | 4.30    | 0.00     | ENSMUSG00000038193 |
| Cmklr1 | 5   | 3.31        | 2.12   | 4.34    | 0.00     | ENSMUSG00000042190 |
| Rtp4  | 16   | 1.06        | 2.12   | 4.35    | 0.02     | ENSMUSG00000033355 |
| Bcl2a1b | 9  | 1.53        | 2.14   | 4.41    | 0.03     | ENSMUSG00000089929 |
| Gm5483 | 16  | 1.78        | 2.17   | 4.51    | 0.02     | ENSMUSG00000079597 |
| Dot11 | 10   | 21.47       | 2.17   | 4.51    | 0.00     | ENSMUSG00000061589 |
| Adamts5 | 16 | 1.06        | 2.18   | 4.55    | 0.00     | ENSMUSG00000022894 |
| Trem2 | 17   | 8.00        | 2.19   | 4.56    | 0.00     | ENSMUSG00000023992 |
| Ccl2  | 11   | 3.55        | 2.19   | 4.57    | 0.01     | ENSMUSG00000035385 |
| Ptn   | 6    | 4.67        | 2.19   | 4.58    | 0.00     | ENSMUSG00000029838 |
| Ctss  | 3    | 17.03       | 2.22   | 4.65    | 0.00     | ENSMUSG00000038642 |
| Gene       | X | 1.08 | 2.22 | 4.67 | 0.00 | ENSMUSG00000067276 |
|------------|---|------|------|------|------|-------------------|
| Capn6      | X | 1.12 | 2.23 | 4.68 | 0.00 | ENSMUSG00000033453 |
| Adamts15   | 9 | 2.54 | 2.27 | 4.84 | 0.00 | ENSMUSG00000054555 |
| Stfa21l    | 16| 2.57 | 2.25 | 4.76 | 0.01 | ENSMUSG00000059657 |
| Adam12     | 7 | 2.97 | 2.30 | 4.92 | 0.00 | ENSMUSG00000033207 |
| Cd200      | 16| 1.04 | 2.28 | 4.87 | 0.02 | ENSMUSG00000022661 |
| Adey3      | 12| 1.21 | 2.30 | 4.91 | 0.00 | ENSMUSG00000020654 |
| Cthrc1     | 15| 4.53 | 2.30 | 4.92 | 0.00 | ENSMUSG00000054196 |
| Mmdc2      | 19| 2.97 | 2.30 | 4.92 | 0.00 | ENSMUSG00000033207 |
| Igfl1      | 10| 1.02 | 2.31 | 4.95 | 0.00 | ENSMUSG00000020053 |
| Mmp8       | 9 | 1.78 | 2.32 | 5.00 | 0.00 | ENSMUSG00000058000 |
| Hk3        | 13| 2.34 | 2.35 | 5.08 | 0.00 | ENSMUSG00000025877 |
| Ms4a6c     | 19| 3.56 | 2.36 | 5.14 | 0.00 | ENSMUSG00000079419 |
| Ifi27l2a   | 12| 2.38 | 2.37 | 5.18 | 0.01 | ENSMUSG00000079017 |
| Ms4a6d     | 19| 5.03 | 2.38 | 5.20 | 0.00 | ENSMUSG00000024679 |
| Ngp        | 9 | 6.23 | 2.39 | 5.25 | 0.00 | ENSMUSG00000032484 |
| Igsf6      | 7 | 1.89 | 2.39 | 5.26 | 0.00 | ENSMUSG00000035004 |
| Spon1      | 7 | 1.31 | 2.41 | 5.31 | 0.00 | ENSMUSG00000038156 |
| Ifit3      | 19| 1.89 | 2.42 | 5.34 | 0.00 | ENSMUSG00000074896 |
| Nrep       | 18| 3.31 | 2.43 | 5.38 | 0.00 | ENSMUSG00000042834 |
| Inhba      | 13| 3.11 | 2.52 | 5.75 | 0.00 | ENSMUSG00000041324 |
| Cdh2       | 18| 8.44 | 2.53 | 5.77 | 0.00 | ENSMUSG00000024304 |
| S100a9     | 3 | 18.07| 2.57 | 5.95 | 0.00 | ENSMUSG00000056071 |
| Pitx1      | 13| 1.47 | 2.77 | 6.81 | 0.00 | ENSMUSG00000021506 |
| Nacad      | 11| 10.21| 2.79 | 6.90 | 0.00 | ENSMUSG00000041073 |
| BC100530   | 16| 3.96 | 2.86 | 7.26 | 0.00 | ENSMUSG00000071561 |
| Grem2      | 1 | 2.86 | 3.19 | 9.10 | 0.00 | ENSMUSG00000050069 |
| S100a8     | 3 | 15.00| 3.19 | 9.13 | 0.00 | ENSMUSG00000056054 |
| 3830417A13Rik | X | 1.08 | 3.19 | 9.14 | 0.00 | ENSMUSG00000031179 |
| Rgs5       | 1 | 1.29 | 3.22 | 9.30 | 0.00 | ENSMUSG00000026678 |
| Ftl1-ps1   | 13| 503.73| 3.46 | 11.02 | 0.00 | ENSMUSG00000062382 |
| Erv3       | 2 | 1.74 | 3.48 | 11.18 | 0.00 | ENSMUSG00000037482 |
| Hoxa11     | 6 | 1.06 | 3.61 | 12.20 | 0.00 | ENSMUSG00000038210 |
| Enho       | 4 | 1.86 | 3.84 | 14.32 | 0.00 | ENSMUSG00000028445 |
| Gene  | ID    | Value1 | Value2 | Value3 | Value4 | Value5 |
|-------|-------|--------|--------|--------|--------|--------|
| Fcgr4 | 1     | 1.58   | 3.91   | 15.01  | 0.00   | ENSMUSG00000059089 |
| Prtn3 | 10    | 1.73   | 4.25   | 18.96  | 0.00   | ENSMUSG00000057729 |
| Mpo   | 11    | 5.30   | 4.26   | 19.10  | 0.00   | ENSMUSG00000009350 |
| Ctsj  | 13    | 2.73   | 6.79   | 110.40 | 0.00   | ENSMUSG00000055298 |
| Ctsq  | 13    | 1.47   | 8.50   | 362.79 | 0.00   | ENSMUSG00000021439 |
Supplemental Table 13. Downregulated genes in Dot1L-MM ESRE cells compared to Dot1L-KO cells (n=126)

| Name   | Chromosome | Max group mean | Log₂ fold change | Fold change | P-value | ENSEMBL           |
|--------|------------|----------------|------------------|-------------|---------|-------------------|
| Sik1   | 17         | 10.26          | -1.00            | -2.00       | 0.02    | ENSMUSG00000024042 |
| Nsmf   | 2          | 11.16          | -1.01            | -2.01       | 0.03    | ENSMUSG00000006476 |
| Cdkn1a | 17         | 367.92         | -1.01            | -2.02       | 0.03    | ENSMUSG00000023067 |
| Serinc2| 4          | 8.08           | -1.03            | -2.04       | 0.03    | ENSMUSG00000023232 |
| Amot   | X          | 20.53          | -1.03            | -2.04       | 0.03    | ENSMUSG00000041688 |
| Cebpα  | 7          | 47.32          | -1.04            | -2.05       | 0.03    | ENSMUSG00000034957 |
| Psrc1  | 3          | 51.32          | -1.04            | -2.06       | 0.00    | ENSMUSG00000068744 |
| Met    | 6          | 2.63           | -1.09            | -2.12       | 0.03    | ENSMUSG0000009376  |
| Cpa3   | 3          | 61.25          | -1.10            | -2.14       | 0.01    | ENSMUSG0000001865  |
| Plk2   | 13         | 15.29          | -1.10            | -2.14       | 0.03    | ENSMUSG00000021701 |
| Mycn   | 12         | 5.46           | -1.11            | -2.16       | 0.01    | ENSMUSG00000037169 |
| Arl4c  | 1          | 9.07           | -1.11            | -2.16       | 0.01    | ENSMUSG00000049866 |
| Fosl1  | 19         | 14.26          | -1.12            | -2.17       | 0.03    | ENSMUSG00000024912 |
| Apol11b| 15         | 9.95           | -1.12            | -2.18       | 0.02    | ENSMUSG00000091694 |
| Tspan13| 12         | 6.08           | -1.13            | -2.19       | 0.05    | ENSMUSG00000020577 |
| Gm47283| Y          | 142.59         | -1.15            | -2.21       | 0.00    | ENSMUSG00000096768 |
| Sh3bgrl2| 9         | 2.42           | -1.14            | -2.21       | 0.02    | ENSMUSG00000032261 |
| Cttnb2p| 6          | 1.46           | -1.16            | -2.23       | 0.04    | ENSMUSG0000000416  |
| H2-T24 | 17         | 18.52          | -1.17            | -2.25       | 0.01    | ENSMUSG00000053835 |
| Ctsc   | 7          | 8.64           | -1.18            | -2.27       | 0.03    | ENSMUSG00000030560 |
| Nyx    | X          | 7.63           | -1.22            | -2.32       | 0.01    | ENSMUSG00000051228 |
| Tecta  | 9          | 1.48           | -1.22            | -2.33       | 0.04    | ENSMUSG00000037705 |
| H2-T23 | 17         | 55.62          | -1.22            | -2.34       | 0.00    | ENSMUSG00000067212 |
| Gm10638| 8          | 11.12          | -1.23            | -2.34       | 0.02    | ENSMUSG00000074178 |
| Zip37  | 4          | 2.70           | -1.27            | -2.42       | 0.03    | ENSMUSG00000028389 |
| Nyap1  | 5          | 2.29           | -1.28            | -2.43       | 0.04    | ENSMUSG00000045348 |
| Aqp8   | 7          | 8.49           | -1.29            | -2.44       | 0.01    | ENSMUSG00000030762 |
| Eda2r  | X          | 8.79           | -1.30            | -2.46       | 0.00    | ENSMUSG00000034457 |
| More4  | X          | 15.50          | -1.30            | -2.46       | 0.05    | ENSMUSG00000031434 |
| Alox12 | 11         | 4.87           | -1.33            | -2.52       | 0.01    | ENSMUSG0000000320  |
| Gene      | Tissue | Value 1 | Value 2 | Value 3 | Value 4 | ENSMUSG00000000000 |
|-----------|--------|---------|---------|---------|---------|------------------|
| Abcb1b    | 5      | 4.27    | -1.37   | -2.58   | 0.04    | ENSMUSG00000028970 |
| Nuak2     | 4      | 4.73    | -1.38   | -2.60   | 0.00    | ENSMUSG00000009772 |
| Gm8797    | 3      | 52.04   | -1.39   | -2.62   | 0.03    | ENSMUSG00000103034 |
| Vegfa     | 17     | 15.21   | -1.41   | -2.65   | 0.00    | ENSMUSG00000023951 |
| Cited1    | X      | 9.61    | -1.41   | -2.65   | 0.03    | ENSMUSG00000051159 |
| Maob      | X      | 3.82    | -1.41   | -2.66   | 0.02    | ENSMUSG00000040147 |
| Ak4       | 4      | 1.45    | -1.42   | -2.68   | 0.05    | ENSMUSG00000028527 |
| Rtn4rl2   | 2      | 21.73   | -1.49   | -2.80   | 0.00    | ENSMUSG00000050896 |
| Espn      | 4      | 3.14    | -1.48   | -2.80   | 0.00    | ENSMUSG00000028943 |
| Gm16867   | 14     | 17.88   | -1.48   | -2.80   | 0.05    | ENSMUSG00000093954 |
| Cldn4     | 5      | 118.71  | -1.49   | -2.80   | 0.05    | ENSMUSG00000047501 |
| Kcnh3     | 15     | 1.88    | -1.50   | -2.83   | 0.02    | ENSMUSG00000037579 |
| Fam102a   | 2      | 4.60    | -1.52   | -2.87   | 0.04    | ENSMUSG00000039157 |
| Dsg2      | 18     | 6.01    | -1.54   | -2.90   | 0.05    | ENSMUSG00000044393 |
| Muc13     | 16     | 15.48   | -1.55   | -2.93   | 0.05    | ENSMUSG00000022824 |
| Zfp750    | 11     | 13.71   | -1.60   | -3.02   | 0.00    | ENSMUSG00000039238 |
| Papln     | 12     | 3.19    | -1.63   | -3.09   | 0.05    | ENSMUSG00000021223 |
| F2rl1     | 13     | 5.18    | -1.64   | -3.11   | 0.05    | ENSMUSG00000021678 |
| Myh14     | 7      | 15.39   | -1.64   | -3.11   | 0.05    | ENSMUSG00000030739 |
| Itpk1     | 12     | 10.33   | -1.67   | -3.18   | 0.02    | ENSMUSG00000057963 |
| Lrp2      | 2      | 6.25    | -1.67   | -3.19   | 0.03    | ENSMUSG00000027070 |
| Kng1      | 16     | 25.25   | -1.68   | -3.20   | 0.05    | ENSMUSG00000022875 |
| Ntn4      | 10     | 1.39    | -1.73   | -3.31   | 0.01    | ENSMUSG00000020019 |
| Grin2d    | 7      | 1.53    | -1.73   | -3.31   | 0.03    | ENSMUSG00000002771 |
| Plet1     | 9      | 39.77   | -1.73   | -3.32   | 0.02    | ENSMUSG00000032068 |
| Alpk3     | 7      | 2.09    | -1.74   | -3.34   | 0.02    | ENSMUSG00000038763 |
| Tpsab1    | 17     | 22.71   | -1.77   | -3.41   | 0.00    | ENSMUSG00000024173 |
| Car4      | 11     | 9.39    | -1.78   | -3.44   | 0.04    | ENSMUSG0000000805  |
| Amn       | 12     | 20.34   | -1.81   | -3.49   | 0.05    | ENSMUSG00000021278 |
| Fam180a   | 6      | 2.27    | -1.83   | -3.55   | 0.02    | ENSMUSG00000047420 |
| Sprr1a    | 3      | 39.45   | -1.86   | -3.62   | 0.04    | ENSMUSG00000050359 |
| 4930539E08Rik | 17 | 5.09    | -1.86   | -3.64   | 0.04    | ENSMUSG00000048905 |
| Hpn       | 7      | 4.06    | -1.91   | -3.75   | 0.02    | ENSMUSG0000001249  |
| Gene ID | Gene Symbol | Log2 Fold Change | Tpm | q-value | Gene ID | Gene Symbol | Log2 Fold Change | Tpm | q-value |
|--------|-------------|-----------------|-----|---------|--------|-------------|-----------------|-----|---------|
| Tjp3   | 10          | 4.52            | -1.93 | -3.82 | 0.04 | ENSMUSG00000034917 |
| Slc3a1 | 17          | 1.08            | -1.94 | -3.83 | 0.04 | ENSMUSG00000024131 |
| Igf23  | 7           | 4.83            | -1.94 | -3.83 | 0.04 | ENSMUSG00000040498 |
| Slc15a1| 14          | 1.67            | -1.95 | -3.86 | 0.05 | ENSMUSG00000025557 |
| Sema4g | 19          | 5.18            | -1.95 | -3.87 | 0.04 | ENSMUSG00000025207 |
| Apoc2  | 7           | 58.65           | -1.96 | -3.90 | 0.04 | ENSMUSG0000002992 |
| Hist1h1a| 13         | 4.31            | -1.98 | -3.96 | 0.02 | ENSMUSG00000049539 |
| Abcc2  | 19          | 2.95            | -1.99 | -3.98 | 0.01 | ENSMUSG00000025194 |
| Mcoln3 | 3           | 2.98            | -1.99 | -3.98 | 0.02 | ENSMUSG00000036853 |
| Nt5e   | 9           | 2.71            | -2.01 | -4.02 | 0.01 | ENSMUSG00000032420 |
| Cblc   | 7           | 1.66            | -2.02 | -4.04 | 0.04 | ENSMUSG00000040525 |
| Myl7   | 11          | 2.26            | -2.02 | -4.05 | 0.02 | ENSMUSG00000020469 |
| Igfbp1 | 11          | 47.91           | -2.04 | -4.11 | 0.03 | ENSMUSG00000020429 |
| Cubn   | 2           | 12.26           | -2.04 | -4.12 | 0.01 | ENSMUSG00000026726 |
| Mid1   | X           | 3.75            | -2.08 | -4.22 | 0.00 | ENSMUSG00000035299 |
| Bglap3 | 3           | 4.29            | -2.08 | -4.23 | 0.05 | ENSMUSG000000074489 |
| Clmn   | 12          | 2.22            | -2.10 | -4.28 | 0.02 | ENSMUSG00000021097 |
| Foxj1  | 11          | 1.12            | -2.10 | -4.28 | 0.03 | ENSMUSG00000034227 |
| Gjb1   | X           | 2.71            | -2.11 | -4.32 | 0.05 | ENSMUSG00000047797 |
| Cfi    | 3           | 20.88           | -2.13 | -4.37 | 0.02 | ENSMUSG00000058952 |
| Apoa2  | 1           | 75.27           | -2.13 | -4.38 | 0.02 | ENSMUSG00000005681 |
| Vtn    | 11          | 4.77            | -2.13 | -4.38 | 0.05 | ENSMUSG00000017344 |
| Habp2  | 19          | 4.77            | -2.16 | -4.47 | 0.02 | ENSMUSG00000025075 |
| Fetub  | 16          | 4.10            | -2.16 | -4.47 | 0.03 | ENSMUSG00000022871 |
| Rasd2  | 8           | 3.67            | -2.17 | -4.49 | 0.01 | ENSMUSG00000034472 |
| Pcsk9  | 4           | 3.52            | -2.17 | -4.51 | 0.02 | ENSMUSG00000044254 |
| Lamb3  | 1           | 3.62            | -2.17 | -4.51 | 0.02 | ENSMUSG00000026639 |
| Slc7a9 | 7           | 2.52            | -2.17 | -4.51 | 0.03 | ENSMUSG00000030492 |
| Sprr2a1| 3           | 3.68            | -2.18 | -4.53 | 0.04 | ENSMUSG00000078664 |
| Trf    | 9           | 828.61          | -2.19 | -4.55 | 0.02 | ENSMUSG00000032554 |
| Serpina1a| 12     | 5.39            | -2.19 | -4.58 | 0.02 | ENSMUSG00000066366 |
| Apob   | 12          | 44.31           | -2.20 | -4.60 | 0.01 | ENSMUSG00000020609 |
| Cadm4  | 7           | 1.58            | -2.21 | -4.62 | 0.02 | ENSMUSG00000054793 |
| Gene    | Bit Score | Fold Change | Log2 Fold Change | p Value | Gene ID                          |
|---------|-----------|-------------|------------------|---------|----------------------------------|
| Cpn1    | 19        | 4.16        | -2.23            | -4.69   | 0.03 ENSMUSG00000025196        |
| Serpind1 | 16        | 3.58        | -2.24            | -4.71   | 0.04 ENSMUSG00000022766        |
| Fgb     | 3         | 80.67       | -2.26            | -4.79   | 0.02 ENSMUSG00000033831        |
| Ace     | 11        | 1.27        | -2.27            | -4.83   | 0.03 ENSMUSG00000020681        |
| Ehf     | 2         | 1.17        | -2.28            | -4.87   | 0.03 ENSMUSG00000012350        |
| Ckmt1   | 2         | 2.00        | -2.30            | -4.92   | 0.01 ENSMUSG00000000308        |
| Ahsg    | 16        | 1.37        | -2.30            | -4.94   | 0.01 ENSMUSG00000022868        |
| Sgc2    | 1         | 2.78        | -2.34            | -5.08   | 0.00 ENSMUSG00000050711        |
| 1700007K13Rik | 2 | 7.79 | -2.38 | -5.22 | 0.00 ENSMUSG00000026831 |
| Rarres2 | 6         | 3.21        | -2.41            | -5.32   | 0.05 ENSMUSG00000009281        |
| Ggt1    | 10        | 3.95        | -2.41            | -5.33   | 0.01 ENSMUSG00000006345        |
| RPS10-NUDT3 | 17 | 1.18 | -2.43 | -5.40 | 0.05 ENSMUSG00000117338 |
| A2m     | 6         | 6.28        | -2.48            | -5.57   | 0.02 ENSMUSG00000030111        |
| Fga     | 3         | 58.77       | -2.51            | -5.70   | 0.01 ENSMUSG00000028001        |
| Npr1    | 3         | 1.56        | -2.56            | -5.91   | 0.01 ENSMUSG00000027931        |
| Snhg11  | 2         | 1.01        | -2.58            | -5.98   | 0.00 ENSMUSG00000044349        |
| Serpina1d | 12    | 1.11        | -2.63            | -6.19   | 0.02 ENSMUSG00000071177        |
| Plg     | 17        | 2.57        | -2.67            | -6.38   | 0.01 ENSMUSG00000059481        |
| Efna3   | 3         | 1.09        | -2.67            | -6.38   | 0.01 ENSMUSG00000028039        |
| Sprr2a2 | 3         | 60.77       | -2.80            | -6.95   | 0.01 ENSMUSG00000068893        |
| Steap4  | 5         | 1.93        | -2.88            | -7.37   | 0.02 ENSMUSG00000012428        |
| Sprr2a3 | 3         | 4.96        | -2.92            | -7.55   | 0.01 ENSMUSG00000074445        |
| Comp    | 8         | 3.42        | -2.96            | -7.79   | 0.00 ENSMUSG00000031849        |
| Efna1   | 3         | 8.71        | -3.03            | -8.16   | 0.00 ENSMUSG00000027954        |
| Slc38a3 | 9         | 1.84        | -3.03            | -8.17   | 0.01 ENSMUSG00000010064        |
| Fgg     | 3         | 96.62       | -3.15            | -8.88   | 0.00 ENSMUSG00000033860        |
| C4b     | 17        | 1.45        | -3.60            | -12.15  | 0.00 ENSMUSG00000073418        |
| Apln    | X         | 1.06        | -3.69            | -12.91  | 0.00 ENSMUSG00000037010        |
| H2-Q10  | 17        | 5.76        | -3.74            | -13.32  | 0.00 ENSMUSG00000067235        |
| Cyp21a1 | 17        | 14.41       | -3.90            | -14.89  | 0.00 ENSMUSG00000024365        |
### Supplemental Table 14. Differentiation of hematopoietic progenitor cells (Dot1L-KO)

| Genes in dataset | Prediction | Expr Fold Change | Findings     | ENSEMBL ID       |
|------------------|------------|------------------|--------------|-----------------|
| CD79A            | Affected   | 17.39            | Affects (1)  | ENSMUSG00000003379 |
| CEBPA            | Increased  | 13.87            | Increases (11)| ENSMUSG000000034957  |
| FOSL1            | Increased  | 11.80            | Increases (2)| ENSMUSG000000024912  |
| NOG              | Increased  | 9.55             | Increases (1)| ENSMUSG000000048616  |
| CDKN2B           | Increased  | 9.47             | Increases (1)| ENSMUSG000000073802  |
| HIST1H3F         | Affected   | 7.90             | Affects (1)  | ENSMUSG000000101972  |
| HIST1H4L         | Decreased  | 7.60             | Decreases (2)| ENSMUSG000000069305  |
| JUN              | Decreased  | 7.48             | Decreases (1)| ENSMUSG000000052684  |
| HIST1H3A         | Affected   | 6.20             | Affects (1)  | ENSMUSG000000099583  |
| JUNB             | Increased  | 6.06             | Increases (1)| ENSMUSG000000052837  |
| CDKN1A           | Increased  | 5.94             | Increases (1)| ENSMUSG000000023067  |
| JAG1             | Increased  | 5.92             | Increases (1)| ENSMUSG00000027276  |
| HSD3B1           | Increased  | 5.85             | Increases (1)| ENSMUSG00000027869  |
| PNP              | Increased  | 5.40             | Increases (1)| ENSMUSG00000068417  |
| LOX              | Affected   | 5.23             | Affects (1)  | ENSMUSG00000024529  |
| HIST4H4          | Decreased  | 4.76             | Decreases (2)| ENSMUSG00000060639  |
| CSF2RB           | Affected   | 4.76             | Affects (2)  | ENSMUSG00000071714  |
| FN1              | Increased  | 4.47             | Increases (1)| ENSMUSG00000026193  |
| NFKB1A           | Increased  | 4.40             | Increases (2)| ENSMUSG00000021025  |
| PPP1R15A         | Decreased  | 3.63             | Decreases (1)| ENSMUSG00000040435  |
| EPHA4            | Increased  | 3.59             | Increases (1)| ENSMUSG00000026235  |
| BTG2             | Increased  | 3.41             | Increases (1)| ENSMUSG00000020423  |
| MAFK             | Increased  | 3.06             | Increases (1)| ENSMUSG00000018143  |
| CDKN1B           | Increased  | 2.79             | Increases (2)| ENSMUSG00000003031  |
| VEGFA            | Increased  | 2.73             | Increases (4)| ENSMUSG00000023951  |
| EGR1             | Increased  | 2.69             | Increases (2)| ENSMUSG00000038418  |
| BCL2L1           | Increased  | 2.64             | Increases (10)| ENSMUSG00000007659  |
| MAFG             | Increased  | 2.19             | Increases (1)| ENSMUSG00000051510  |
| RAF1             | Decreased  | 2.07             | Decreases (2)| ENSMUSG0000000441  |
| RUNX1T1          | Decreased  | 2.05             | Decreases (1)| ENSMUSG00000006586  |
| Gene   | Effect   | Change  | Action   | ENSMUSG00000000   |
|--------|----------|---------|----------|------------------|
| HMGA1  | Decreased| -2.32   | Increases (3) | ENSMUSG000000046711 |
| CDK6   | Affected | -2.46   | Affects (2) | ENSMUSG000000040274 |
| GP1BA  | Affected | -2.83   | Affects (2) | ENSMUSG000000050675 |
| PRKCA  | Increased| -3.22   | Decreases (1) | ENSMUSG000000050965 |
| FLI1   | Increased| -3.29   | Decreases (6) | ENSMUSG000000016087 |
| PLCG2  | Decreased| -3.98   | Increases (2) | ENSMUSG000000034330 |
| Meis1  | Increased| -4.18   | Decreases (1) | ENSMUSG000000020160 |
| MEF2C  | Affected | -4.55   | Affects (1) | ENSMUSG00000005583 |
| S100A8 | Increased| -5.08   | Decreases (2) | ENSMUSG000000056054 |
| MPL    | Affected | -6.30   | Affects (1) | ENSMUSG00000006389 |
| CSF3R  | Affected | -6.92   | Affects (2) | ENSMUSG000000028859 |
| ZNF616 | Affected | -11.09  | Affects (1) | ENSMUSG000000066000 |
| HOXA9  | Affected | -38.02  | Affects (3) | ENSMUSG000000038227 |
| FLT3   | Decreased| -70.41  | Increases (8) | ENSMUSG000000042817 |
Supplemental Table 15. Differentiation of hematopoietic progenitor cells (*Dot1L*-MM)

| Genes in dataset | Prediction | Expr Fold Change | Findings | ENSEMBL ID            |
|------------------|------------|------------------|----------|-----------------------|
| MYH11            | Decreased  | 16.522           | Decreases (2) | ENSMUSG00000018830    |
| INHBA            | Increased  | 13.912           | Increases (5) | ENSMUSG00000041324    |
| SIGLEC10         | Affected   | 10.064           | Affects (1) | ENSMUSG00000030468    |
| CXCL12           | Increased  | 9.177            | Increases (3) | ENSMUSG00000061353    |
| THBS2            | Affected   | 8.086            | Affects (1) | ENSMUSG00000023885    |
| HIST1H3F         | Affected   | 7.995            | Affects (1) | ENSMUSG000000101972    |
| LOX              | Affected   | 7.451            | Affects (1) | ENSMUSG00000024529    |
| JAG1             | Increased  | 6.849            | Increases (1) | ENSMUSG00000027276    |
| HIST1H3A         | Affected   | 6.699            | Affects (1) | ENSMUSG00000099583    |
| CEBPA            | Increased  | 6.468            | Increases (11) | ENSMUSG00000034957    |
| PITX2            | Increased  | 6.406            | Increases (1) | ENSMUSG00000028023    |
| CSF1             | Increased  | 6.397            | Increases (6) | ENSMUSG00000014599    |
| MAFB             | Affected   | 5.702            | Affects (3) | ENSMUSG00000074622    |
| AXL              | Increased  | 5.66             | Increases (2) | ENSMUSG0000002602    |
| FSTL3            | Affected   | 5.611            | Affects (1) | ENSMUSG00000020325    |
| JUN              | Decreased  | 5.477            | Decreases (1) | ENSMUSG00000052684    |
| CDKN2B           | Increased  | 5.446            | Increases (1) | ENSMUSG00000073802    |
| FOSL1            | Increased  | 5.189            | Increases (2) | ENSMUSG00000024912    |
| FN1              | Increased  | 4.99             | Increases (1) | ENSMUSG00000026193    |
| HSD3B1           | Increased  | 4.856            | Increases (1) | ENSMUSG00000027869    |
| MYL9             | Increased  | 4.848            | Increases (2) | ENSMUSG00000067818    |
| PNP              | Increased  | 4.753            | Increases (1) | ENSMUSG00000068417    |
| PALLD            | Increased  | 4.258            | Increases (1) | ENSMUSG00000058056    |
| PTGS2            | Affected   | 4.228            | Affects (2) | ENSMUSG00000032487    |
| Cdkn1c           | Increased  | 3.92             | Increases (3) | ENSMUSG00000037664    |
| CSF2RB           | Affected   | 3.612            | Affects (2) | ENSMUSG00000071714    |
| JUNB             | Increased  | 3.534            | Increases (1) | ENSMUSG00000052837    |
| Marcks           | Increased  | 3.479            | Increases (1) | ENSMUSG00000069662    |
| HIST4H4          | Decreased  | 3.272            | Decreases (2) | ENSMUSG00000060639    |
| BTG2             | Increased  | 2.838            | Increases (1) | ENSMUSG00000020423    |
| Gene    | Change | Value  | Effect | ENSMUSG ID                  |
|---------|--------|--------|--------|----------------------------|
| CDKN1A  | Increased | 2.804  | Increases (1) | ENSMUSG00000023067        |
| CDKN1B  | Increased | 2.793  | Increases (2) | ENSMUSG00000003031        |
| NFKBIA  | Increased | 2.777  | Increases (2) | ENSMUSG00000021025        |
| IL6R    | Increased | 2.694  | Increases (4) | ENSMUSG00000027947        |
| MAFK    | Increased | 2.471  | Increases (1) | ENSMUSG00000018143        |
| CDK6    | Affected  | -2.14  | Affects (2) | ENSMUSG00000040274        |
| KIT     | Affected  | -2.299 | Affects (3) | ENSMUSG00000005672        |
| ITGA2B  | Affected  | -2.693 | Affects (1) | ENSMUSG00000034664        |
| PLCG2   | Decreased | -2.861 | Increases (2) | ENSMUSG00000034330        |
| MEF2C   | Affected  | -3.028 | Affects (1) | ENSMUSG00000005583        |
| PF4     | Increased | -3.171 | Decreases (2) | ENSMUSG00000029373        |
| PECAM1  | Increased | -3.333 | Decreases (6) | ENSMUSG00000020717        |
| PRKCA   | Increased | -3.661 | Decreases (1) | ENSMUSG00000050965        |
| FLI1    | Increased | -3.877 | Decreases (6) | ENSMUSG00000016087        |
| GP1BA   | Affected  | -4.065 | Affects (2) | ENSMUSG00000050675        |
| HMGA1   | Decreased | -4.171 | Increases (3) | ENSMUSG00000078249        |
| LAT     | Decreased | -4.306 | Increases (3) | ENSMUSG00000030742        |
| MPIG6B  | Affected  | -4.748 | Affects (2) | ENSMUSG00000073414        |
| ZNF616  | Affected  | -6.041 | Affects (1) | ENSMUSG00000066000        |
| MPL     | Affected  | -8.076 | Affects (1) | ENSMUSG0000006389        |
### Supplemental Table 16. Proliferation of hematopoietic progenitor cells (*Dot1L*-KO)

| Genes in dataset | Prediction | Expr Fold Change | Findings | ENSEMBL ID         |
|------------------|------------|------------------|----------|-------------------|
| CD79A            | Increased  | 17.39            | Increases (5) | ENSMUSG00000003379 |
| GDF15            | Decreased  | 17.14            | Decreases (1) | ENSMUSG000000038508 |
| CEBPA            | Decreased  | 13.87            | Decreases (3) | ENSMUSG000000034957 |
| JUNB             | Decreased  | 6.06             | Decreases (4) | ENSMUSG000000052837 |
| GSTP1            | Decreased  | 6.04             | Decreases (5) | ENSMUSG000000038155 |
| CDKN1A           | Decreased  | 5.94             | Decreases (1) | ENSMUSG00000023067 |
| BBC3             | Increased  | 5.56             | Increases (1) | ENSMUSG00000002083 |
| LOX              | Increased  | 5.23             | Increases (1) | ENSMUSG000000024529 |
| TP53INP1         | Decreased  | 4.76             | Decreases (1) | ENSMUSG00000028211 |
| CSF2RB           | Affected   | 4.76             | Affects (1)  | ENSMUSG000000071714 |
| NFKBIA           | Affected   | 4.40             | Affects (2)  | ENSMUSG00000021025 |
| RHBDF2           | Decreased  | 4.04             | Decreases (1) | ENSMUSG00000020806 |
| MDM2             | Increased  | 3.69             | Increases (4) | ENSMUSG00000020184 |
| IL4R             | Increased  | 3.22             | Increases (7) | ENSMUSG00000030748 |
| AGRN             | Increased  | 3.20             | Increases (1) | ENSMUSG00000041936 |
| TNFAIP3          | Decreased  | 3.12             | Decreases (1) | ENSMUSG000000019850 |
| PIK3R1           | Increased  | 3.07             | Increases (1) | ENSMUSG00000041417 |
| CEBPB            | Increased  | 2.89             | Increases (1) | ENSMUSG00000056501 |
| BTG1             | Decreased  | 2.85             | Decreases (1) | ENSMUSG00000036478 |
| LPIN1            | Decreased  | 2.80             | Decreases (1) | ENSMUSG00000020593 |
| CDKN1B           | Decreased  | 2.79             | Decreases (8) | ENSMUSG00000003031 |
| VEGFA            | Increased  | 2.73             | Increases (5) | ENSMUSG00000023951 |
| EGR1             | Increased  | 2.69             | Increases (1) | ENSMUSG00000038418 |
| BCL2L1           | Increased  | 2.64             | Increases (6) | ENSMUSG00000007659 |
| FGFR1            | Affected   | 2.59             | Affects (1)  | ENSMUSG00000031565 |
| IFNAR2           | Increased  | 2.59             | Increases (2) | ENSMUSG00000022971 |
| PIM1             | Increased  | 2.47             | Increases (2) | ENSMUSG00000024014 |
| GRAP2            | Increased  | 2.20             | Increases (1) | ENSMUSG00000042351 |
| MAFG             | Decreased  | 2.19             | Decreases (1) | ENSMUSG00000051510 |
| RAF1             | Increased  | 2.07             | Increases (1) | ENSMUSG00000000441 |
| Gene    | Regulation | Change | Effect | ENSMUSG Identifier          |
|---------|------------|--------|--------|-----------------------------|
| RUNX1T1 | Increased  | 2.05   | Increases (2) | ENSMUSG0000006586           |
| SHB     | Affected   | 2.03   | Affects (1)  | ENSMUSG0000044813           |
| FLI1    | Decreased  | -3.29  | Increases (2) | ENSMUSG000016087            |
| Meis1   | Decreased  | -4.18  | Increases (1) | ENSMUSG00020160             |
| MEF2C   | Decreased  | -4.55  | Increases (2) | ENSMUSG00005583             |
| MPL     | Increased  | -6.30  | Decreases (9) | ENSMUSG0006389             |
| CSF3R   | Affected   | -6.92  | Affects (1)  | ENSMUSG00028859             |
| HOXA9   | Decreased  | -38.02 | Increases (4) | ENSMUSG00038227            |
| FLT3    | Decreased  | -70.41 | Increases (18)| ENSMUSG00042817           |
### Supplemental Table 17. Development of hematopoietic progenitor cells (Dot1L-MM)

| Genes in dataset | Prediction | Expr Fold Change | Findings | ENSEMBL ID                  |
|------------------|------------|------------------|----------|-----------------------------|
| INHBA            | Increased  | 13.912           | Increases (2) | ENSMUSG00000041324          |
| THBS2            | Affected   | 8.086            | Affects (1) | ENSMUSG00000023885          |
| HIST1H3F         | Affected   | 7.995            | Affects (1) | ENSMUSG00000101972          |
| LOX              | Affected   | 7.451            | Affects (1) | ENSMUSG00000024529          |
| JAG1             | Increased  | 6.849            | Increases (1) | ENSMUSG00000027276          |
| HIST1H3A         | Affected   | 6.699            | Affects (1) | ENSMUSG00000099583          |
| CEBPA            | Increased  | 6.468            | Increases (1) | ENSMUSG00000034957          |
| CSF1             | Increased  | 6.397            | Increases (29) | ENSMUSG00000014599         |
| FNDCC5           | Increased  | 6.351            | Increases (1) | ENSMUSG0000001334          |
| AXL              | Increased  | 5.66             | Increases (1) | ENSMUSG00000002602          |
| CDKN2B           | Increased  | 5.446            | Increases (1) | ENSMUSG00000073802          |
| FN1              | Increased  | 4.99             | Increases (1) | ENSMUSG00000026193          |
| HSD3B1           | Increased  | 4.856            | Increases (1) | ENSMUSG00000027869          |
| MYL9             | Increased  | 4.848            | Increases (2) | ENSMUSG00000067818          |
| NFIL3            | Increased  | 3.925            | Increases (2) | ENSMUSG00000056749          |
| CSF2RB           | Affected   | 3.612            | Affects (5) | ENSMUSG00000071714          |
| LGMN             | Decreased  | 3.525            | Decreases (3) | ENSMUSG00000021190          |
| Marcks           | Increased  | 3.479            | Increases (1) | ENSMUSG00000069662          |
| HIST4H4          | Decreased  | 3.272            | Decreases (2) | ENSMUSG00000060639          |
| CDKN1A           | Increased  | 2.804            | Increases (1) | ENSMUSG00000023067          |
| NFKBIA           | Increased  | 2.777            | Increases (2) | ENSMUSG00000021025          |
| IL6R             | Increased  | 2.694            | Increases (1) | ENSMUSG00000027947          |
| MAFK             | Increased  | 2.471            | Increases (1) | ENSMUSG00000018143          |
| KIT              | Affected   | -2.299           | Affects (1) | ENSMUSG00000005672          |
| ITGA2B           | Affected   | -2.693           | Affects (1) | ENSMUSG00000034664          |
| MEF2C            | Affected   | -3.028           | Affects (1) | ENSMUSG00000005583          |
| ITGAL            | Decreased  | -3.13            | Increases (1) | ENSMUSG00000030830          |
| PF4              | Increased  | -3.171           | Decreases (2) | ENSMUSG00000029373          |
| PECAM1           | Increased  | -3.333           | Decreases (6) | ENSMUSG00000020717          |
| FLI1             | Decreased  | -3.877           | Increases (3) | ENSMUSG00000016087          |
| Gene   | Status     | Change | Effect       | BioMart ID     |
|--------|------------|--------|--------------|----------------|
| GP1BA  | Affected   | -4.065 | Affects (2)  | ENSMUSG00000050675 |
| HMGA1  | Increased  | -4.171 | Decreases (1)| ENSMUSG00000078249 |
| MPIG6B | Affected   | -4.748 | Affects (2)  | ENSMUSG00000073414 |
| MPL    | Affected   | -8.076 | Affects (1)  | ENSMUSG0000006389  |
| FLT3   | Decreased  | -12.33 | Increases (1)| ENSMUSG00000042817  |