**Table S4**. Details of DEGs-pseudogene genes (LPS vs. Ctrl)

| Gene_symbol | log2FoldChange | Padj | Gene_chrosome | Change |
|---|---|---|---|---|
| *Hmgb1-ps8* | -6.041328811 | 8.25E-10 | 10 | Down |
| *Gm21013* | -5.30528402 | 5.10E-06 | 9 | Down |
| *Alms1-ps1* | -4.577788833 | 2.07E-05 | 6 | Down |
| *Adh6-ps1* | -4.22846595 | 0.002430004 | 3 | Down |
| *Mrgprb11-ps* | -4.147725344 | 9.01E-05 | 7 | Down |
| *Nxpe1-ps* | -4.094886957 | 1.70E-05 | 9 | Down |
| *Gm8097* | -3.957692624 | 0.014557895 | X | Down |
| *Gm26956* | -3.852471539 | 0.041030197 | 13 | Down |
| *Gm47062* | -3.759874803 | 0.016417816 | 9 | Down |
| *BC064078* | -3.457558325 | 3.17E-12 | 6 | Down |
| *Gm17229* | -3.384970565 | 0.007912595 | 10 | Down |
| *Alms1-ps2* | -3.165682875 | 0.024407118 | 6 | Down |
| *Gm5454* | -3.022705584 | 5.05E-05 | 13 | Down |
| *Gm47099* | -2.94318294 | 0.036761143 | 10 | Down |
| *Gm7117* | -2.858351905 | 0.000129616 | X | Down |
| *Gm3325* | -2.855948576 | 9.65E-05 | 13 | Down |
| *Rpl19-ps3* | -2.826345172 | 0.025735582 | 14 | Down |
| *Gm4804* | -2.794321434 | 0.041900244 | 12 | Down |
| *Gm13688* | -2.755438112 | 0.000767593 | 2 | Down |
| *Gm5575* | -2.74210821 | 0.002818996 | 5 | Down |
| *Cyp4f41-ps* | -2.629797751 | 0.033053879 | 17 | Down |
| *Rpl26-ps6* | -2.611828117 | 0.010009791 | 9 | Down |
| *Gm49331* | -2.574834268 | 4.90E-10 | 12 | Down |
| *Gm9387* | -2.552258842 | 0.027028778 | 3 | Down |
| *Gm15422* | -2.549482722 | 0.009403966 | 14 | Down |
| *Gm6723* | -2.51628411 | 0.030476641 | 15 | Down |
| *Gpr137b-ps* | -2.384015129 | 3.57E-27 | 13 | Down |
| *Zkscan7* | -2.359435156 | 8.84E-05 | 9 | Down |
| *Gm36298* | -2.341998847 | 1.04E-07 | 13 | Down |
| *Gm7240* | -2.311202989 | 2.46E-05 | 13 | Down |
| *AC159187.1* | 8.454911655 | 4.51E-19 | 17 | Up |
| *Cxcl11* | 7.708606602 | 7.27E-57 | 5 | Up |
| *Gm5970* | 7.121312845 | 4.30E-53 | 18 | Up |
| *B230303A05Rik* | 6.143601795 | 1.76E-08 | 13 | Up |
| *Mx2* | 6.023557746 | 3.10E-91 | 16 | Up |
| *I830127L07Rik* | 5.854147176 | 1.42E-09 | 15 | Up |
| *Gm18445* | 5.795681939 | 2.35E-21 | 1 | Up |
| *CT025731.2* | 5.791769206 | 2.81E-08 | 17 | Up |
| *Gm12250* | 5.749528679 | 3.43E-44 | 11 | Up |
| *Ccl19-ps3* | 5.615045362 | 1.31E-10 | 4 | Up |
| *Gm6524* | 5.473606307 | 3.81E-06 | 8 | Up |
| *Serpina3h* | 5.34676281 | 1.95E-35 | 12 | Up |

| | | | | |
|---|---|---|---|---|
| *Gm8818* | 5.231636028 | 1.81E-11 | 1 | Up |
| *Gm5300* | 5.079733204 | 0.000591239 | 6 | Up |
| *Gm4240* | 4.907053932 | 7.00E-18 | 14 | Up |
| *Gm12407* | 4.844237388 | 2.24E-23 | 4 | Up |
| *Gm18853* | 4.842158327 | 1.34E-09 | 7 | Up |
| *Gm19121* | 4.716212944 | 6.55E-05 | 9 | Up |
| *Gm6610* | 4.609484729 | 0.000325266 | 15 | Up |
| *Gm18752* | 4.586042844 | 8.20E-05 | 1 | Up |
| *Gbp11* | 4.575594673 | 3.53E-29 | 5 | Up |
| *Gm18246* | 4.554268479 | 0.005900806 | 12 | Up |
| *Gm6545* | 4.515643273 | 5.89E-05 | 19 | Up |
| *Olfr753-ps1* | 4.465132525 | 0.002422735 | 17 | Up |
| *Gm7582* | 4.361514088 | 0.000640602 | 1 | Up |
| *Gm29747* | 4.322534132 | 0.002654063 | 3 | Up |
| *Gm7115* | 4.316128711 | 4.23E-06 | 3 | Up |
| *Gm45471* | 4.297995055 | 0.007556784 | 7 | Up |
| *Rps8-ps3* | 4.197622772 | 0.013260064 | 6 | Up |
| *Gm17083* | 4.168379887 | 0.001659982 | 13 | Up |

Note: down-regulated and up-regulated 30 pseudogene genes were illustrated.