**Supplementary Table 3.** Differentially expressed genes in the comparison group of Control and LOAD with a threshold FC = 2 and *p*-value < 0.05

|  |  |  |
| --- | --- | --- |
| Gene | log FC | p-value |
| WIPF2 | -2.40912 | 0.000701 |
| ZBED9 | -1.27782 | 0.000596 |
| CD44-AS1 | -1.25692 | 9.31E-05 |
| AL359955.1 | -1.20128 | 0.001335 |
| SPARCL1 | -1.13175 | 0.001021 |
| PDCL3P2 | -1.12956 | 0.000561 |
| AC073130.1 | -1.10871 | 0.000879 |
| LINC02068 | -1.10307 | 0.000472 |
| REXO1L1P | -1.10175 | 0.000271 |
| SNX18P7 | -1.05447 | 0.001061 |
| ATP5F1AP10 | -1.01313 | 0.000168 |
| CENPB | 1.000203 | 0.000601 |
| KIRREL1 | 1.004529 | 0.000557 |
| CPT1A | 1.0067 | 0.000276 |
| CMTM3 | 1.007593 | 0.00155 |
| PON2 | 1.008116 | 0.000365 |
| CDC14A | 1.010259 | 0.001346 |
| RGL3 | 1.012853 | 0.001197 |
| CSPG4 | 1.013052 | 5.03E-05 |
| ZCCHC24 | 1.015605 | 0.000684 |
| C3orf70 | 1.015702 | 0.000136 |
| ARHGAP30 | 1.015894 | 0.000504 |
| FHL3 | 1.01654 | 0.000815 |
| EMILIN1 | 1.017804 | 6.26E-05 |
| HEBP2 | 1.019724 | 0.000177 |
| NKD1 | 1.021202 | 0.001482 |
| SLC12A4 | 1.024176 | 0.00047 |
| HELZ2 | 1.031878 | 0.000417 |
| LTBR | 1.032037 | 3.09E-05 |
| ETNPPL | 1.032303 | 0.000245 |
| LMO2 | 1.033928 | 0.000558 |
| PCDHGC3 | 1.034222 | 0.00069 |
| RAB13 | 1.034849 | 0.000544 |
| CD99P1 | 1.036587 | 0.001413 |
| ATP1B2 | 1.037712 | 0.001517 |
| FLI1 | 1.038958 | 0.000584 |
| PARP9 | 1.040384 | 0.000732 |
| BCL3 | 1.041658 | 0.000468 |
| PLTP | 1.041904 | 0.000405 |
| CRTAP | 1.042423 | 0.001461 |
| BOC | 1.046117 | 5.89E-05 |
| RREB1 | 1.046753 | 0.000094 |
| UBALD2 | 1.048882 | 0.000195 |
| ABHD4 | 1.050826 | 0.001199 |
| PDLIM5 | 1.05212 | 0.000824 |
| LIMK2 | 1.053464 | 9.92E-05 |
| LCP2 | 1.054399 | 0.001224 |
| PXN | 1.056678 | 0.000142 |
| CRIM1 | 1.059962 | 0.000353 |
| SLC2A1 | 1.063697 | 0.001003 |
| NOTCH1 | 1.071883 | 0.000429 |
| TCIRG1 | 1.072537 | 0.000648 |
| GYG2 | 1.072868 | 0.000111 |
| TSPO | 1.073914 | 0.001395 |
| ADGRG1 | 1.074226 | 7.44E-05 |
| SH3TC1 | 1.074901 | 0.000157 |
| NFAM1 | 1.077355 | 0.000163 |
| SLC1A3 | 1.079613 | 0.000957 |
| HYAL1 | 1.079773 | 0.000931 |
| CMAHP | 1.080585 | 0.001499 |
| TBX2 | 1.081362 | 0.000887 |
| EFCAB14 | 1.085052 | 0.001418 |
| F11R | 1.085471 | 0.001009 |
| GFAP | 1.08567 | 0.000668 |
| OLFML3 | 1.088792 | 0.001453 |
| PLEKHO2 | 1.089139 | 7.91E-05 |
| TMBIM1 | 1.090626 | 6.05E-05 |
| KLF15 | 1.09249 | 0.001261 |
| GIMAP1 | 1.092532 | 0.000499 |
| NTN3 | 1.095133 | 0.001385 |
| CDC42EP4 | 1.096791 | 0.000232 |
| FCGRT | 1.097653 | 5.71E-05 |
| CKS1B | 1.097702 | 0.001322 |
| LAPTM5 | 1.098459 | 0.000162 |
| ARRDC4 | 1.099439 | 0.000536 |
| LFNG | 1.103043 | 0.000293 |
| TNFAIP3 | 1.105042 | 0.000873 |
| ACOX2 | 1.106409 | 0.00088 |
| GIMAP8 | 1.107981 | 0.000722 |
| S100A16 | 1.108832 | 0.000267 |
| RAB32 | 1.109051 | 0.000601 |
| KCTD15 | 1.113528 | 0.000409 |
| PLEKHA4 | 1.113793 | 0.000298 |
| BCRP2 | 1.114003 | 0.000446 |
| ARID5A | 1.114172 | 1.99E-05 |
| SUSD2 | 1.115987 | 0.000651 |
| PLAAT4 | 1.119032 | 0.001096 |
| PRICKLE3 | 1.122452 | 0.000441 |
| ABI3 | 1.123033 | 3.55E-05 |
| MLC1 | 1.123879 | 0.001344 |
| AL031121.2 | 1.124253 | 0.000286 |
| RGS19 | 1.125177 | 0.000846 |
| BCL6 | 1.12541 | 0.000224 |
| DOK1 | 1.127852 | 0.000234 |
| IL13RA1 | 1.128131 | 0.000376 |
| COL18A1 | 1.131026 | 0.00061 |
| PIEZO1 | 1.132289 | 9.74E-05 |
| GSDMD | 1.133443 | 0.001045 |
| GNA12 | 1.133593 | 0.000207 |
| PRKX | 1.135024 | 0.001506 |
| PTTG1IP | 1.135966 | 7.22E-06 |
| SMOX | 1.136086 | 0.001059 |
| FTL | 1.137335 | 0.000345 |
| MSN | 1.137924 | 1.05E-05 |
| TPM2 | 1.139565 | 0.000518 |
| HSD3B7 | 1.139885 | 9.89E-05 |
| PAQR6 | 1.140783 | 0.001013 |
| MCL1 | 1.141996 | 3.35E-05 |
| TRIM56 | 1.144959 | 4.05E-05 |
| YES1 | 1.145078 | 0.000466 |
| PPP2CB | 1.148523 | 0.000701 |
| CYBA | 1.152771 | 3.21E-06 |
| TNIP2 | 1.154844 | 2.52E-05 |
| FBLN1 | 1.154938 | 0.000241 |
| AQP1 | 1.155951 | 0.001556 |
| AGTRAP | 1.161598 | 3.31E-05 |
| GAL3ST4 | 1.161994 | 5.33E-06 |
| KIF1C | 1.162561 | 0.0013 |
| ACER2 | 1.167195 | 0.001157 |
| RASIP1 | 1.167554 | 0.000483 |
| LHX2 | 1.168022 | 0.000773 |
| IRF1 | 1.171469 | 0.000557 |
| JUN | 1.17416 | 0.001244 |
| TGFB1 | 1.175809 | 0.000545 |
| CMTM6 | 1.182132 | 0.001356 |
| LYL1 | 1.182415 | 0.000108 |
| MAFK | 1.182581 | 0.000763 |
| A4GALT | 1.183397 | 0.000485 |
| RFX4 | 1.186021 | 0.000347 |
| TAGLN2 | 1.186191 | 0.000184 |
| CLEC14A | 1.192341 | 0.000353 |
| ITPKB | 1.1936 | 0.000473 |
| GYPC | 1.194536 | 0.000219 |
| PLP2 | 1.197647 | 0.001545 |
| FGFRL1 | 1.200305 | 0.000157 |
| EBI3 | 1.201618 | 0.00138 |
| RARRES2 | 1.209353 | 0.000198 |
| ANXA1 | 1.209966 | 0.001443 |
| PPP1R13L | 1.212637 | 0.000184 |
| SHE | 1.213055 | 0.000437 |
| SLC30A1 | 1.214101 | 0.00146 |
| CEBPB | 1.21502 | 0.000428 |
| SLC39A1 | 1.218041 | 2.49E-05 |
| FES | 1.220003 | 4.78E-05 |
| RHOC | 1.221144 | 7.42E-05 |
| AL391422.4 | 1.224667 | 0.001369 |
| CASZ1 | 1.227235 | 0.000366 |
| NES | 1.23068 | 0.000162 |
| S1PR1 | 1.235386 | 0.00054 |
| FBLN2 | 1.237052 | 0.000296 |
| ZBTB42 | 1.239355 | 0.000429 |
| PDK4 | 1.239926 | 0.000239 |
| PCOLCE | 1.240054 | 0.000226 |
| ID4 | 1.240674 | 0.000762 |
| ZBED6CL | 1.240681 | 0.000597 |
| ZC3HAV1 | 1.241289 | 0.000453 |
| ZIC1 | 1.241512 | 0.000708 |
| CAVIN1 | 1.243963 | 6.67E-05 |
| PLIN5 | 1.243973 | 0.000241 |
| DCN | 1.24649 | 0.000827 |
| PLCG2 | 1.249277 | 6.08E-06 |
| TSPAN12 | 1.250409 | 0.000163 |
| RRAS | 1.251898 | 0.000433 |
| KCTD12 | 1.252414 | 2.97E-05 |
| VEGFC | 1.260043 | 0.000145 |
| TNFRSF1B | 1.260347 | 0.000101 |
| SEMA3F | 1.260374 | 0.000404 |
| GIMAP6 | 1.260459 | 0.000656 |
| TXNIP | 1.260893 | 0.000205 |
| TSPAN4 | 1.262261 | 7.77E-05 |
| RELL1 | 1.265605 | 0.000106 |
| CD302 | 1.26824 | 0.001216 |
| STEAP3 | 1.268505 | 0.000128 |
| ARHGAP31 | 1.269902 | 0.00057 |
| FAM181A | 1.270171 | 3.32E-05 |
| MTURN | 1.270324 | 0.001273 |
| COL6A2 | 1.272544 | 0.000761 |
| SOX9 | 1.272766 | 0.000466 |
| FXYD1 | 1.282204 | 4.91E-05 |
| POLD1 | 1.284659 | 0.000596 |
| TMEM176A | 1.284711 | 0.000144 |
| EGFL7 | 1.284938 | 0.000114 |
| SYTL4 | 1.285019 | 0.001255 |
| LATS2 | 1.286221 | 0.001521 |
| IGFBP4 | 1.286763 | 0.000241 |
| DOCK6 | 1.291311 | 0.000445 |
| NEDD9 | 1.292783 | 0.000111 |
| ELOVL7 | 1.296985 | 0.000781 |
| AC125807.2 | 1.299018 | 0.000474 |
| FAM89A | 1.306263 | 0.000649 |
| ITGB4 | 1.306979 | 1.42E-05 |
| TRIP10 | 1.308091 | 0.001402 |
| CSF2RB | 1.310239 | 0.0002 |
| LRP10 | 1.310276 | 4.48E-05 |
| RASL12 | 1.312404 | 9.15E-05 |
| EPHB4 | 1.315228 | 0.000126 |
| HYAL2 | 1.315979 | 0.000158 |
| ZIC2 | 1.316889 | 0.001019 |
| TNFRSF10B | 1.318169 | 5.22E-05 |
| RHOJ | 1.31906 | 0.000486 |
| LGALS3 | 1.320935 | 0.000154 |
| ZFP36L1 | 1.325235 | 6.02E-05 |
| SOX21 | 1.325768 | 0.000873 |
| TOR4A | 1.325967 | 0.000371 |
| STAB1 | 1.326997 | 8.44E-05 |
| EPAS1 | 1.328032 | 0.00025 |
| ORAI1 | 1.328691 | 0.000195 |
| NECTIN2 | 1.33225 | 3.27E-05 |
| SOX18 | 1.334801 | 0.000987 |
| WWTR1 | 1.338529 | 0.000142 |
| CD99 | 1.341149 | 2.23E-05 |
| GPX3 | 1.345063 | 0.000318 |
| TBX18 | 1.345576 | 0.000493 |
| INHBB | 1.346516 | 7.26E-05 |
| SERTAD1 | 1.346696 | 0.000578 |
| FN1 | 1.351599 | 0.000402 |
| STOM | 1.355855 | 0.000154 |
| PAIP2B | 1.358475 | 0.001314 |
| LAMB2 | 1.361296 | 3.44E-05 |
| SIX5 | 1.365657 | 0.000241 |
| CBX2 | 1.376915 | 0.00073 |
| SLC7A5 | 1.378235 | 0.000863 |
| TMEM176B | 1.385302 | 9.79E-05 |
| ACVRL1 | 1.387519 | 5.87E-05 |
| NIBAN2 | 1.390382 | 8.61E-06 |
| COL4A1 | 1.390618 | 3.74E-05 |
| BGN | 1.393003 | 1.39E-05 |
| ADAMTS1 | 1.393768 | 0.00034 |
| MRC2 | 1.39432 | 4.95E-05 |
| WFIKKN2 | 1.39587 | 0.000739 |
| LCP1 | 1.396064 | 0.000022 |
| SYDE1 | 1.400272 | 0.000326 |
| TNFRSF1A | 1.403215 | 4.21E-06 |
| C1QA | 1.404585 | 0.00025 |
| GNG11 | 1.407339 | 0.000127 |
| NFKB2 | 1.409224 | 0.000468 |
| YAP1 | 1.410789 | 0.00048 |
| TMEM100 | 1.412822 | 0.000881 |
| IGFBP7 | 1.413166 | 3.41E-05 |
| MYL9 | 1.418101 | 0.000591 |
| PLSCR4 | 1.419168 | 0.000126 |
| RGR | 1.419666 | 0.000613 |
| EMILIN2 | 1.435768 | 1.41E-05 |
| C1QC | 1.443322 | 7.48E-05 |
| ATOH8 | 1.451708 | 7.95E-05 |
| TBX15 | 1.456583 | 0.001556 |
| AL158206.1 | 1.462472 | 0.001061 |
| VSIG4 | 1.465817 | 0.000929 |
| AURKA | 1.466526 | 0.000397 |
| CEBPD | 1.469045 | 5.86E-05 |
| CASP4 | 1.470546 | 0.000208 |
| MFNG | 1.470717 | 0.0004 |
| JUNB | 1.472863 | 0.000396 |
| SQOR | 1.473366 | 5.77E-05 |
| PODXL | 1.474184 | 0.00015 |
| TIE1 | 1.482204 | 0.000531 |
| STON2 | 1.483444 | 4.01E-05 |
| ZIC4 | 1.48356 | 0.001395 |
| TMEM204 | 1.488619 | 0.000714 |
| SMAD6 | 1.489537 | 0.00111 |
| OSMR | 1.493094 | 0.000179 |
| HIC1 | 1.497074 | 0.000737 |
| LINC01354 | 1.497447 | 0.000615 |
| SRARP | 1.499809 | 9.83E-06 |
| TINAGL1 | 1.500137 | 0.000115 |
| C4A | 1.502685 | 0.000766 |
| S1PR3 | 1.507837 | 2.97E-05 |
| CDH5 | 1.511707 | 7.74E-05 |
| MXRA8 | 1.513472 | 0.00012 |
| AHNAK | 1.513483 | 1.46E-05 |
| CLIC1 | 1.516211 | 0.000212 |
| PRX | 1.517099 | 0.001216 |
| GGT5 | 1.517854 | 1.38E-05 |
| ERG | 1.522833 | 0.000328 |
| ICAM2 | 1.524966 | 2.91E-05 |
| ESAM | 1.527859 | 0.000231 |
| AFAP1L1 | 1.528468 | 0.00067 |
| EVC2 | 1.528986 | 0.000101 |
| NXN | 1.53108 | 0.000116 |
| PKN3 | 1.533335 | 5.67E-05 |
| SLC7A2 | 1.535596 | 0.001606 |
| GABRE | 1.536663 | 5.65E-06 |
| MYOF | 1.538804 | 4.67E-05 |
| HS3ST3B1 | 1.540138 | 0.000342 |
| FAM107A | 1.542334 | 3.72E-05 |
| COL1A2 | 1.543254 | 0.000316 |
| MT2A | 1.54438 | 0.001053 |
| MMRN2 | 1.546516 | 9.34E-05 |
| CARD10 | 1.549997 | 0.000986 |
| GJA5 | 1.557309 | 0.000873 |
| SRGN | 1.559916 | 0.00137 |
| C4B | 1.562929 | 0.000136 |
| HGF | 1.563272 | 0.000245 |
| GATA2-AS1 | 1.565531 | 0.00055 |
| CHST14 | 1.569884 | 0.000128 |
| VIM | 1.572653 | 1.39E-05 |
| CDKN1A | 1.57308 | 0.000797 |
| DDIT4 | 1.588109 | 0.000915 |
| TENT5A | 1.588521 | 0.000393 |
| BMP6 | 1.588632 | 0.000312 |
| GNG12 | 1.591758 | 0.000548 |
| MT1X | 1.5953 | 0.000236 |
| ITPRIP | 1.596617 | 0.0001 |
| HHEX | 1.609015 | 0.000629 |
| CCN2 | 1.612393 | 0.000772 |
| PEAR1 | 1.612853 | 0.000686 |
| FGR | 1.613206 | 1.16E-05 |
| TGFBR2 | 1.614335 | 1.28E-05 |
| LMOD1 | 1.627133 | 0.000295 |
| MSX1 | 1.629915 | 0.000939 |
| TNFRSF11B | 1.63474 | 7.26E-05 |
| ITGA5 | 1.638881 | 7.54E-05 |
| IL4R | 1.641533 | 2.55E-05 |
| VSIR | 1.642313 | 6.56E-07 |
| CAVIN2 | 1.644325 | 0.00037 |
| BST2 | 1.650565 | 0.000147 |
| ANGPTL4 | 1.651197 | 0.000577 |
| TDRD10 | 1.659662 | 0.000449 |
| PRELP | 1.661065 | 1.12E-05 |
| CDK2 | 1.661385 | 0.000186 |
| DDAH2 | 1.674842 | 3.96E-05 |
| NID1 | 1.680193 | 8.03E-06 |
| ICAM1 | 1.688736 | 8.41E-05 |
| AL929091.1 | 1.697101 | 0.001383 |
| SLCO4A1 | 1.700536 | 6.77E-05 |
| IFITM3 | 1.70455 | 8.34E-06 |
| ID3 | 1.704624 | 8.58E-06 |
| CFH | 1.705024 | 0.000243 |
| PGF | 1.705634 | 2.75E-05 |
| PECAM1 | 1.707126 | 5.23E-06 |
| KIAA0040 | 1.71201 | 0.000263 |
| FOXC1 | 1.713341 | 0.000139 |
| FLT1 | 1.733582 | 0.000158 |
| IFITM2 | 1.761349 | 0.000555 |
| ITPR3 | 1.765778 | 1.69E-05 |
| CP | 1.774757 | 0.00079 |
| C1R | 1.776947 | 3.27E-07 |
| NOS3 | 1.77717 | 4.28E-06 |
| HERC2P3 | 1.779472 | 0.000461 |
| GATA2 | 1.781581 | 0.000239 |
| EVA1B | 1.791685 | 1.44E-05 |
| ANO2 | 1.807527 | 0.000401 |
| TBX3 | 1.808039 | 0.000325 |
| CYP1B1 | 1.811073 | 0.000265 |
| MT1M | 1.811463 | 0.001148 |
| ADAMTS9 | 1.823259 | 0.000494 |
| VSIG2 | 1.82446 | 0.001098 |
| TGM2 | 1.83279 | 6.73E-07 |
| ADH1B | 1.834353 | 0.000155 |
| IL32 | 1.841259 | 0.000372 |
| TMPRSS3 | 1.84772 | 0.000562 |
| MRC1 | 1.853244 | 0.000189 |
| PGR | 1.869036 | 0.001165 |
| ZFP36 | 1.872694 | 8.03E-05 |
| SIK1B | 1.873313 | 0.000231 |
| ANGPT2 | 1.882722 | 2.78E-05 |
| FOS | 1.882723 | 0.00104 |
| PODN | 1.891604 | 0.000107 |
| TUBB6 | 1.896787 | 1.15E-07 |
| DLL4 | 1.927618 | 1.42E-05 |
| EMP1 | 1.936333 | 8.03E-06 |
| SLC52A3 | 1.941792 | 0.000375 |
| C10orf105 | 1.950582 | 0.000255 |
| IFITM1 | 1.951565 | 4.75E-06 |
| YBX3 | 1.962857 | 6.4E-06 |
| TIMP1 | 1.963201 | 8.19E-08 |
| NAGS | 1.96539 | 0.000011 |
| IL1R1 | 1.967963 | 3.19E-06 |
| THBD | 1.970127 | 3.61E-05 |
| TGFBI | 1.977034 | 4.74E-05 |
| TM4SF1 | 2.002095 | 0.000112 |
| PNP | 2.005333 | 8.59E-05 |
| SLAMF8 | 2.014005 | 0.000899 |
| MT1L | 2.021771 | 0.000117 |
| CLDN5 | 2.055548 | 3.75E-05 |
| FOXF1 | 2.064285 | 0.000273 |
| CD93 | 2.0834 | 3.6E-06 |
| SLC16A12 | 2.097223 | 0.000283 |
| CXCL2 | 2.108181 | 0.00019 |
| LRRC32 | 2.117698 | 3.5E-06 |
| PERP | 2.134596 | 7.7E-06 |
| FOXJ1 | 2.168824 | 0.000642 |
| MPZL2 | 2.1762 | 0.000032 |
| HSPB1 | 2.232733 | 0.00029 |
| SERPINA3 | 2.340807 | 0.000134 |
| AC114757.1 | 2.359838 | 0.000326 |
| DEPP1 | 2.362384 | 9.72E-06 |
| TNFRSF10D | 2.372361 | 1.17E-05 |
| FAM167B | 2.385528 | 0.000344 |
| HBA2 | 2.412895 | 0.000702 |
| HBB | 2.444148 | 0.001244 |
| HBA1 | 2.46041 | 0.00058 |
| IL1RL1 | 2.483562 | 0.000346 |
| GPR4 | 2.49057 | 1.18E-06 |
| PLA1A | 2.493369 | 5.4E-06 |
| SOCS3 | 2.528051 | 4.22E-05 |
| CXCL1 | 2.591912 | 1.75E-05 |
| SERPINH1 | 2.602374 | 0.001453 |
| PDLIM1 | 2.700665 | 4.92E-07 |
| IL3RA | 2.74828 | 0.00012 |
| MTCO3P12 | 3.190935 | 0.000626 |
| ABL2 | 3.660448 | 0.000085 |
| STC1 | 3.704457 | 0.000105 |
| TNFRSF6B | 3.723283 | 3.78E-06 |
| HSPA6 | 3.777726 | 0.000455 |