**Table S2. Differential expressed genes in 4 weeks post-ACLT+MMx group**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Up-regulated** |  |  |
| *Afap1* | actin filament associated protein 1 | 1.2276  | 0.0383  |
| *Anks1b* | ankyrin repeat and sterile alpha motif domain containing 1B | 1.2406  | 0.0225  |
| *Anxa1* | annexin A1 | 1.1341  | 0.0345  |
| *Bnc2* | basonuclin 2 | 1.1265  | 0.0244  |
| *Ccl2* | chemokine (C-C motif) ligand 2 | 1.5953  | 0.0352  |
| *Cd14* | CD14 molecule | 1.1307  | 0.0268  |
| *Cdh13* | cadherin 13 | 1.2957  | 0.0161  |
| *Chi3l1* | chitinase 3-like 1 (cartilage glycoprotein-39) | 1.2512  | 0.0159  |
| *Cog3* | component of oligomeric golgi complex 3 | 1.1136  | 0.0444  |
| *Col2a1* | collagen, type II, alpha 1 | 1.4128  | 0.0244  |
| *Col5a3* | collagen, type V, alpha 3 | 1.4986  | 0.0169  |
| *Crem* | cAMP responsive element modulator | 1.1081  | 0.0395  |
| *Crip1* | cysteine-rich protein 1 (intestinal) | 1.1385  | 0.0284  |
| *Cygb* | cytoglobin | 1.2259  | 0.0358  |
| *Dcn* | decorin | 1.0573  | 0.0345  |
| *Dmxl1* | Dmx-like 1 | 1.2285  | 0.0106  |
| *Ecm1* | extracellular matrix protein 1 | 1.2124  | 0.0281  |
| *Eng* | endoglin | 1.1331  | 0.0233  |
| *Errfi1* | ERBB receptor feedback inhibitor 1 | 1.0997  | 0.0356  |
| *Fam46b* | family with sequence similarity 46, member B | 1.2800  | 0.0336  |
| *Fosl1* | fos-like antigen 1 | 1.1901  | 0.0292  |
| *Foxp1* | forkhead box P1 | 1.1056  | 0.0380  |
| *Galnt16* | UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 16 | 1.1624  | 0.0405  |
| *Gap43* | growth associated protein 43 | 1.2781  | 0.0291  |
| *Gdi2* | GDP dissociation inhibitor 2 | 1.0429  | 0.0372  |
| *Hk1* | hexokinase 1 | 1.0524  | 0.0469  |
| *Homer1* | homer homolog 1 (Drosophila) | 1.4139  | 0.0148  |
| *Hook3* | hook homolog 3 (Drosophila) | 1.0942  | 0.0417  |
| *Hpse* | heparanase | 1.3310  | 0.0413  |

**Table S2. (continued)**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Up-regulated** |  |  |
| *Hsd17b8* | hydroxysteroid (17-beta) dehydrogenase 8 | 1.0736  | 0.0433  |
| *Il11* | interleukin 11 | 1.2258  | 0.0428  |
| *Ints10* | integrator complex subunit 10 | 1.1385  | 0.0497  |
| *Lbp* | lipopolysaccharide binding protein | 1.2874  | 0.0492  |
| *Lect2* | leukocyte cell-derived chemotaxin 2 | 1.1647  | 0.0444  |
| *Lgals3* | lectin, galactoside-binding, soluble, 3 | 1.1113  | 0.0311  |
| *Lmna* | lamin A/C | 1.0800  | 0.0388  |
| *Lpin3* | lipin 3 | 1.1124  | 0.0413  |
| *Lrrc17* | leucine rich repeat containing 17 | 1.3701  | 0.0190  |
| *Lrrn4cl* | LRRN4 C-terminal like | 1.3415  | 0.0163  |
| *Ltc4s* | leukotriene C4 synthase | 1.1251  | 0.0500  |
| *Map4k4* | mitogen-activated protein kinase kinase kinase kinase 4 | 1.1255  | 0.0469  |
| *Medag* | mesenteric estrogen-dependent adipogenesis | 1.4930  | 0.0151  |
| *Mpp7* | membrane protein, palmitoylated 7 (MAGUK p55 subfamily member 7) | 1.4159  | 0.0476  |
| *Msln* | mesothelin | 1.1695  | 0.0495  |
| *Msx1* | msh homeobox 1 | 1.1418  | 0.0203  |
| *Npas2* | neuronal PAS domain protein 2 | 1.2263  | 0.0115  |
| *Nr2c2ap* | nuclear receptor 2C2-associated protein | 1.0867  | 0.0244  |
| *Plac1* | placenta-specific 1 | 1.2847  | 0.0482  |
| *Prex2* | phosphatidylinositol-3,4,5-trisphosphate-dependent Rac exchange factor 2 | 1.2412  | 0.0338  |
| *Prss23* | protease, serine, 23 | 1.3331  | 0.0311  |
| *PVR* | poliovirus receptor | 1.1847  | 0.0340  |
| *Pxdn* | peroxidasin homolog (Drosophila) | 1.1422  | 0.0315  |
| *Ralgds* | ral guanine nucleotide dissociation stimulator | 1.0983  | 0.0433  |
| *Reln* | reelin | 1.4315  | 0.0334  |
| *Ryr3* | ryanodine receptor 3 | 1.4152  | 0.0401  |
| *S100a10* | S100 calcium binding protein A10 | 1.0466  | 0.0500  |
| *Scara5* | scavenger receptor class A, member 5 (putative) | 1.6310  | 0.0212  |

**Table S2. (continued)**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Up-regulated** |  |  |
| *Serpina1* | serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1 | 1.5530  | 0.0106  |
| *Sfrp4* | secreted frizzled-related protein 4 | 1.2950  | 0.0241  |
| *Slc19a2* | solute carrier family 19 (thiamine transporter), member 2 | 1.1198  | 0.0281  |
| *Slc22a4* | solute carrier family 22 (organic cation transporter), member 4 | 1.2917  | 0.0122  |
| *Slc24a4* | solute carrier family 24 (sodium/potassium/calcium exchanger), member 4 | 1.1500  | 0.0469  |
| *Slc25a28* | solute carrier family 25 (mitochondrial iron transporter), member 28 | 1.0736  | 0.0499  |
| *Slc2a9* | solute carrier family 2 (facilitated glucose transporter), member 9 | 1.1877  | 0.0268  |
| *Slc35e4* | solute carrier family 35, member E4 | 1.1058  | 0.0115  |
| *Slc43a2* | solute carrier family 43, member 2 | 1.1476  | 0.0165  |
| *Srsf11* | serine/arginine-rich splicing factor 11 | 1.1407  | 0.0500  |
| *Tmem100* | transmembrane protein 100 | 1.2394  | 0.0223  |
| *Tnfrsf12a* | tumor necrosis factor receptor superfamily, member 12a | 1.1405  | 0.0318  |
| *Tnn* | tenascin N | 2.2523  | 0.0106  |
| *Tppp3* | tubulin polymerization-promoting protein family member 3 | 1.0953  | 0.0284  |
| *Traf3ip2* | Traf3 interacting protein 2 | 1.1876  | 0.0488  |
| *Wisp2* | WNT1 inducible signaling pathway protein 2 | 1.1939  | 0.0268  |
| *Zfand2a* | zinc finger, AN1-type domain 2A | 1.0962  | 0.0154  |
| *Znhit3* | zinc finger, HIT-type containing 3 | 1.1247  | 0.0366  |
| **Down-regulated** |  |  |
| *Abhd1* | abhydrolase domain containing 1 | 0.8974  | 0.0444  |
| *Acy1* | aminoacylase 1 | 0.9172  | 0.0268  |
| *Aftph* | aftiphilin | 0.9194  | 0.0500  |
| *Agl* | amylo-alpha-1, 6-glucosidase, 4-alpha-glucanotransferase | 0.7851  | 0.0177  |
| *Akap7* | A kinase (PRKA) anchor protein 7 | 0.9118  | 0.0444  |
| *Aldh6a1* | aldehyde dehydrogenase 6 family, member A1 | 0.9003  | 0.0356  |

**Table S2. (continued)**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Down-regulated** |  |  |
| *Anapc1* | anaphase promoting complex subunit 1 | 0.8087  | 0.0228  |
| *Aph1a* | anterior pharynx defective 1 homolog A (C. elegans) | 0.9441  | 0.0433  |
| *Arhgap6* | Rho GTPase activating protein 6 | 0.7962  | 0.0366  |
| *Atoh8* | atonal homolog 8 (Drosophila) | 0.8751  | 0.0154  |
| *Atrx* | alpha thalassemia/mental retardation syndrome X-linked | 0.8159  | 0.0356  |
| *Bckdhb* | branched chain keto acid dehydrogenase E1, beta polypeptide | 0.9199  | 0.0349  |
| *Bglap* | bone gamma-carboxyglutamate (gla) protein | 0.9270  | 0.0190  |
| *Bhlhe41* | basic helix-loop-helix family, member e41 | 0.8915  | 0.0410  |
| *Bmp3* | bone morphogenetic protein 3 | 0.7936  | 0.0311  |
| *C1qtnf1* | C1q and tumor necrosis factor related protein 1 | 0.8641  | 0.0115  |
| *Cadm1* | cell adhesion molecule 1 | 0.8388  | 0.0356  |
| *Calcr* | calcitonin receptor | 0.6550  | 0.0106  |
| *Calml3* | calmodulin-like 3 | 0.8489  | 0.0158  |
| *Ccdc80* | coiled-coil domain containing 80 | 0.9456  | 0.0399  |
| *Ccdc91* | coiled-coil domain containing 91 | 0.9268  | 0.0497  |
| *Cited2* | Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2 | 0.8631  | 0.0154  |
| *Cmbl* | carboxymethylenebutenolidase homolog (Pseudomonas) | 0.8134  | 0.0485  |
| *Cnksr3* | Cnksr family member 3 | 0.9114  | 0.0311  |
| *Coa5* | cytochrome C oxidase assembly factor 5 | 0.9456  | 0.0403  |
| *Col13a1* | collagen, type XIII, alpha 1 | 0.8664  | 0.0158  |
| *Cpz* | carboxypeptidase Z | 0.8742  | 0.0453  |
| *Cryab* | crystallin, alpha B | 0.8511  | 0.0206  |
| *Cst3* | cystatin C | 0.9613  | 0.0281  |
| *Dact1* | dishevelled-binding antagonist of beta-catenin 1 | 0.7476  | 0.0050  |
| *Dbp* | D site of albumin promoter (albumin D-box) binding protein | 0.8060  | 0.0356  |
| *Ddit4* | DNA-damage-inducible transcript 4 | 0.9419  | 0.0284  |
| *Dirc2* | disrupted in renal carcinoma 2 | 0.9333  | 0.0383  |
| *Dlx5* | distal-less homeobox 5 | 0.8853  | 0.0154  |

**Table S2. (continued)**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Down-regulated** |  |  |
| *Dmp1* | dentin matrix acidic phosphoprotein 1 | 0.8885  | 0.0244  |
| *Dmwd* | dystrophia myotonica, WD repeat containing | 0.9262  | 0.0496  |
| *Eif4ebp2* | eukaryotic translation initiation factor 4E binding protein 2 | 0.9099  | 0.0345  |
| *Eln* | elastin | 0.8169  | 0.0444  |
| *Ephx1* | epoxide hydrolase 1, microsomal (xenobiotic) | 0.7593  | 0.0154  |
| *Exoc3* | exocyst complex component 3 | 0.8769  | 0.0154  |
| *Fam110c* | family with sequence similarity 110, member C | 0.7950  | 0.0281  |
| *Fam120b* | family with sequence similarity 120B | 0.8824  | 0.0444  |
| *Fam213a* | family with sequence similarity 213, member A | 0.9260  | 0.0281  |
| *Fbp2* | fructose-1,6-bisphosphatase 2 | 0.8740  | 0.0158  |
| *Foxa2* | forkhead box A2 | 0.8000  | 0.0464  |
| *Frk* | fyn-related kinase | 0.8693  | 0.0360  |
| *Fut4* | fucosyltransferase 4 (alpha (1,3) fucosyltransferase, myeloid-specific) | 0.8708  | 0.0154  |
| *Gnai1* | guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 1 | 0.7772  | 0.0313  |
| *Gpr115* | G protein-coupled receptor 115 | 0.7868  | 0.0284  |
| *Gprasp1* | G protein-coupled receptor associated sorting protein 1 | 0.9031  | 0.0463  |
| *Grhpr* | glyoxylate reductase/hydroxypyruvate reductase | 0.9047  | 0.0352  |
| *Gsta4* | glutathione S-transferase alpha 4 | 0.7267  | 0.0154  |
| *Hey1* | hairy/enhancer-of-split related with YRPW motif 1 | 0.8399  | 0.0485  |
| *Hoga1* | 4-hydroxy-2-oxoglutarate aldolase 1 | 0.8548  | 0.0206  |
| *Hsd17b11* | hydroxysteroid (17-beta) dehydrogenase 11 | 0.9128  | 0.0272  |
| *Igsf3* | immunoglobulin superfamily, member 3 | 0.9296  | 0.0380  |
| *Il17b* | interleukin 17B | 0.8654  | 0.0349  |
| *Il1r2* | interleukin 1 receptor, type II | 0.8064  | 0.0261  |
| *Irs2* | insulin receptor substrate 2 | 0.8833  | 0.0268  |
| *Ivd* | isovaleryl-CoA dehydrogenase | 0.8863  | 0.0352  |
| *Jam2* | junctional adhesion molecule 2 | 0.8443  | 0.0206  |
| *Kcnk2* | potassium channel, subfamily K, member 2 | 0.8289  | 0.0311  |

**Table S2. (continued)**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Down-regulated** |  |  |
| *Khdrbs1* | KH domain containing, RNA binding, signal transduction associated 1 | 0.9251  | 0.0340  |
| *Klf15* | Kruppel-like factor 15 | 0.8307  | 0.0154  |
| *Klf6* | Kruppel-like factor 6 | 0.9385  | 0.0356  |
| *Krt8* | keratin 8 | 0.8604  | 0.0496  |
| *Lect1* | leukocyte cell derived chemotaxin 1 | 0.7902  | 0.0190  |
| *Lmcd1* | LIM and cysteine-rich domains 1 | 0.9109  | 0.0154  |
| *Lmo4* | LIM domain only 4 | 0.9554  | 0.0356  |
| *Lmtk2* | lemur tyrosine kinase 2 | 0.8774  | 0.0277  |
| *Lpar3* | lysophosphatidic acid receptor 3 | 0.8293  | 0.0488  |
| *Lppr4* | lipid phosphate phosphatase-related protein type 4 | 0.8338  | 0.0356  |
| *Lrrc28* | leucine rich repeat containing 28 | 0.8926  | 0.0433  |
| *Lsamp* | limbic system-associated membrane protein | 0.8127  | 0.0158  |
| *Men1* | multiple endocrine neoplasia I | 0.9139  | 0.0438  |
| *Mepe* | matrix extracellular phosphoglycoprotein | 0.8652  | 0.0225  |
| *Metrnl* | meteorin, glial cell differentiation regulator-like | 0.9100  | 0.0336  |
| *Mettl7a* | methyltransferase like 7A | 0.9129  | 0.0311  |
| *Mrps9* | mitochondrial ribosomal protein S9 | 0.9342  | 0.0500  |
| *Mthfs* | 5,10-methenyltetrahydrofolate synthetase (5-formyltetrahydrofolate cyclo-ligase) | 0.9011  | 0.0366  |
| *Mtmr10* | myotubularin related protein 10 | 0.9159  | 0.0345  |
| *Myh10* | myosin, heavy chain 10, non-muscle | 0.8764  | 0.0390  |
| *Myh14* | myosin, heavy chain 14, non-muscle | 0.8799  | 0.0500  |
| *Myoc* | myocilin, trabecular meshwork inducible glucocorticoid response | 0.7659  | 0.0350  |
| *Ndn* | necdin, melanoma antigen (MAGE) family member | 0.8970  | 0.0500  |
| *Nfatc1* | nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1 | 0.9330  | 0.0488  |
| *Nkap* | NFKB activating protein | 0.9112  | 0.0433  |
| *Nrep* | neuronal regeneration related protein | 0.9261  | 0.0154  |

**Table S2. (continued)**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Down-regulated** |  |  |
| *Pacsin2* | protein kinase C and casein kinase substrate in neurons 2 | 0.9396  | 0.0313  |
| *Pbrm1* | polybromo 1 | 0.9189  | 0.0464  |
| *Pcdh18* | protocadherin 18 | 0.8231  | 0.0117  |
| *Pcsk6* | proprotein convertase subtilisin/kexin type 6 | 0.9326  | 0.0311  |
| *Pdgfrl* | platelet-derived growth factor receptor-like | 0.9413  | 0.0357  |
| *Penk* | proenkephalin | 0.8008  | 0.0175  |
| *Phex* | phosphate regulating endopeptidase homolog, X-linked | 0.7706  | 0.0123  |
| *Pkp1* | plakophilin 1 | 0.8931  | 0.0190  |
| *Plxnb1* | plexin B1 | 0.9063  | 0.0206  |
| *Ppfibp2* | PTPRF interacting protein, binding protein 2 (liprin beta 2) | 0.8812  | 0.0221  |
| *Ppp1r3b* | protein phosphatase 1, regulatory subunit 3B | 0.7095  | 0.0163  |
| *Prr12* | proline rich 12 | 0.8468  | 0.0500  |
| *Ptprz1* | protein tyrosine phosphatase, receptor-type, Z polypeptide 1 | 0.8782  | 0.0304  |
| *Rab40b* | Rab40b, member RAS oncogene family | 0.7340  | 0.0198  |
| *Rapgef2* | Rap guanine nucleotide exchange factor (GEF) 2 | 0.9352  | 0.0392  |
| *Rapgef4* | Rap guanine nucleotide exchange factor (GEF) 4 | 0.8650  | 0.0300  |
| *Rarres1* | retinoic acid receptor responder (tazarotene induced) 1 | 0.9133  | 0.0369  |
| *Rasd1* | RAS, dexamethasone-induced 1 | 0.8900  | 0.0106  |
| *Rbp4* | retinol binding protein 4, plasma | 0.9265  | 0.0366  |
| *Reck* | reversion-inducing-cysteine-rich protein with kazal motifs | 0.9419  | 0.0500  |
| *Reep1* | receptor accessory protein 1 | 0.8158  | 0.0311  |
| *Rhpn2* | rhophilin, Rho GTPase binding protein 2 | 0.8167  | 0.0221  |
| *Rnasek* | ribonuclease, RNase K | 0.9504  | 0.0336  |
| *rnf141* | ring finger protein 141 | 0.8596  | 0.0465  |
| *Sdc3* | syndecan 3 | 0.8912  | 0.0394  |
| *Sema3b* | sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3B | 0.8427  | 0.0268  |
| *Sema4d* | sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4D | 0.7990  | 0.0449  |

**Table S2. (continued)**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Down-regulated** |  |  |
| *Sema6d* | sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D | 0.8652  | 0.0356  |
| *Senp1* | SUMO1/sentrin specific peptidase 1 | 0.7957  | 0.0281  |
| *Sh3bgr* | SH3 domain binding glutamic acid-rich protein | 0.7413  | 0.0106  |
| *Shroom2* | shroom family member 2 | 0.8070  | 0.0215  |
| *Sipa1l2* | signal-induced proliferation-associated 1 like 2 | 0.8785  | 0.0154  |
| *Slc35f2* | solute carrier family 35, member F2 | 0.8767  | 0.0420  |
| *Slc38a3* | solute carrier family 38, member 3 | 0.9079  | 0.0284  |
| *Slc6a1* | solute carrier family 6 (neurotransmitter transporter, GABA), member 1 | 0.6501  | 0.0464  |
| *Slc8a3* | solute carrier family 8 (sodium/calcium exchanger), member 3 | 0.9194  | 0.0352  |
| *Slco4a1* | solute carrier organic anion transporter family, member 4a1 | 0.7710  | 0.0365  |
| *Smad3* | SMAD family member 3 | 0.9413  | 0.0390  |
| *Smim3* | small integral membrane protein 3 | 0.9258  | 0.0500  |
| *Srgap2* | SLIT-ROBO Rho GTPase activating protein 2 | 0.8330  | 0.0169  |
| *St5* | suppression of tumorigenicity 5 | 0.9163  | 0.0311  |
| *Stau2* | staufen, RNA binding protein, homolog 2 (Drosophila) | 0.8821  | 0.0159  |
| *Sv2a* | synaptic vesicle glycoprotein 2a | 0.9072  | 0.0500  |
| *Svil* | supervillin | 0.9216  | 0.0479  |
| *Tacc2* | transforming, acidic coiled-coil containing protein 2 | 0.9398  | 0.0435  |
| *Tbx4* | T-box 4 | 0.7803  | 0.0158  |
| *Tbx5* | T-box 5 | 0.6972  | 0.0117  |
| *Tef* | thyrotrophic embryonic factor | 0.8749  | 0.0352  |
| *Tenm3* | teneurin transmembrane protein 3 | 0.7287  | 0.0495  |
| *Tmem98* | transmembrane protein 98 | 0.8949  | 0.0471  |
| *Tollip* | toll interacting protein | 0.8934  | 0.0413  |
| *Tpbg* | trophoblast glycoprotein | 0.6942  | 0.0367  |
| *Tpr* | translocated promoter region, nuclear basket protein | 0.9021  | 0.0311  |
| *Trib2* | tribbles homolog 2 (Drosophila) | 0.9233  | 0.0163  |

**Table S2. (continued)**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene | Description | FC | FDR |
| **Down-regulated** |  |  |
| *Ttc7b* | tetratricopeptide repeat domain 7B | 0.9320  | 0.0311  |
| *Uaca* | uveal autoantigen with coiled-coil domains and ankyrin repeats | 0.9034  | 0.0263  |
| *Vps26b* | vacuolar protein sorting 26 homolog B (S. pombe) | 0.8853  | 0.0433  |
| *Zbtb20* | zinc finger and BTB domain containing 20 | 0.8994  | 0.0412  |
| *Zcchc14* | zinc finger, CCHC domain containing 14 | 0.9143  | 0.0433  |
| *Zfp503* | zinc finger protein 503 | 0.9183  | 0.0433  |

Ranked by Gene symbol; FC: fold change; FDR: false discovery rate