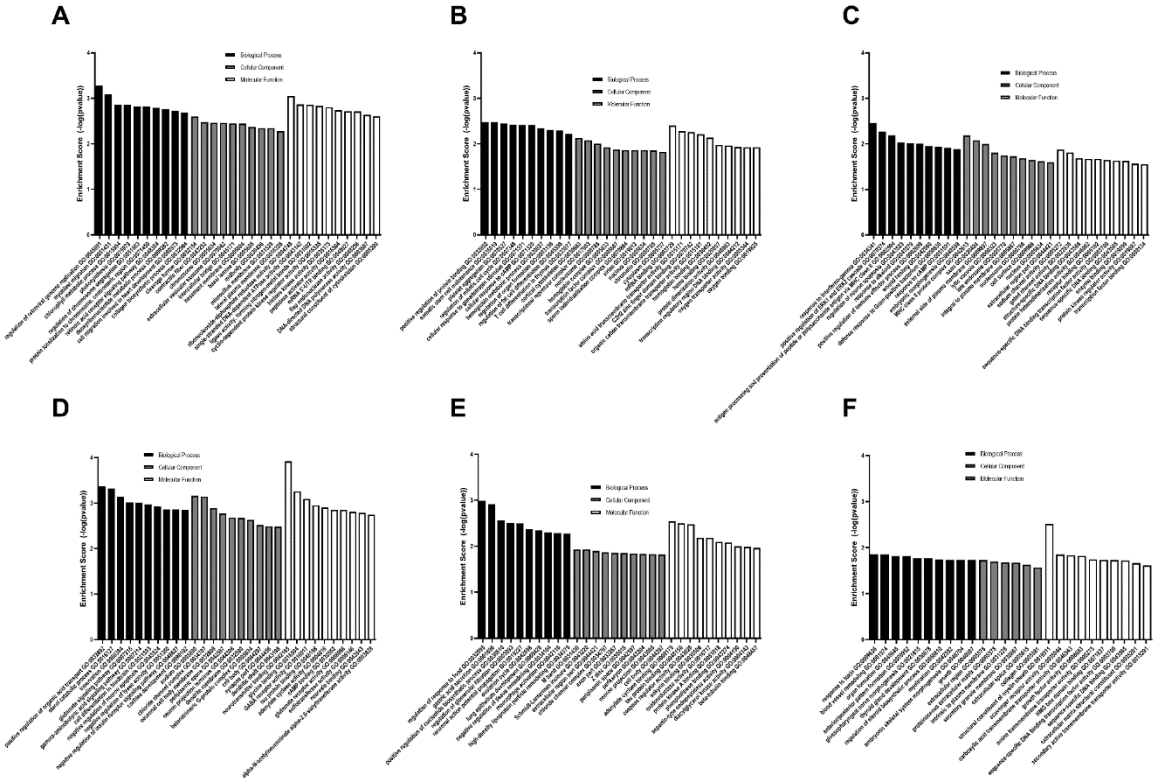



Figure S1: Top 10 GO biological processes, cellular components, and molecular functions enriched from DEGS that are upregulated (A-C) or downregulated (D-F) in MMC spinal cords compared to control at E15 (A,D), E17 (B,E), and E20 (C,F).

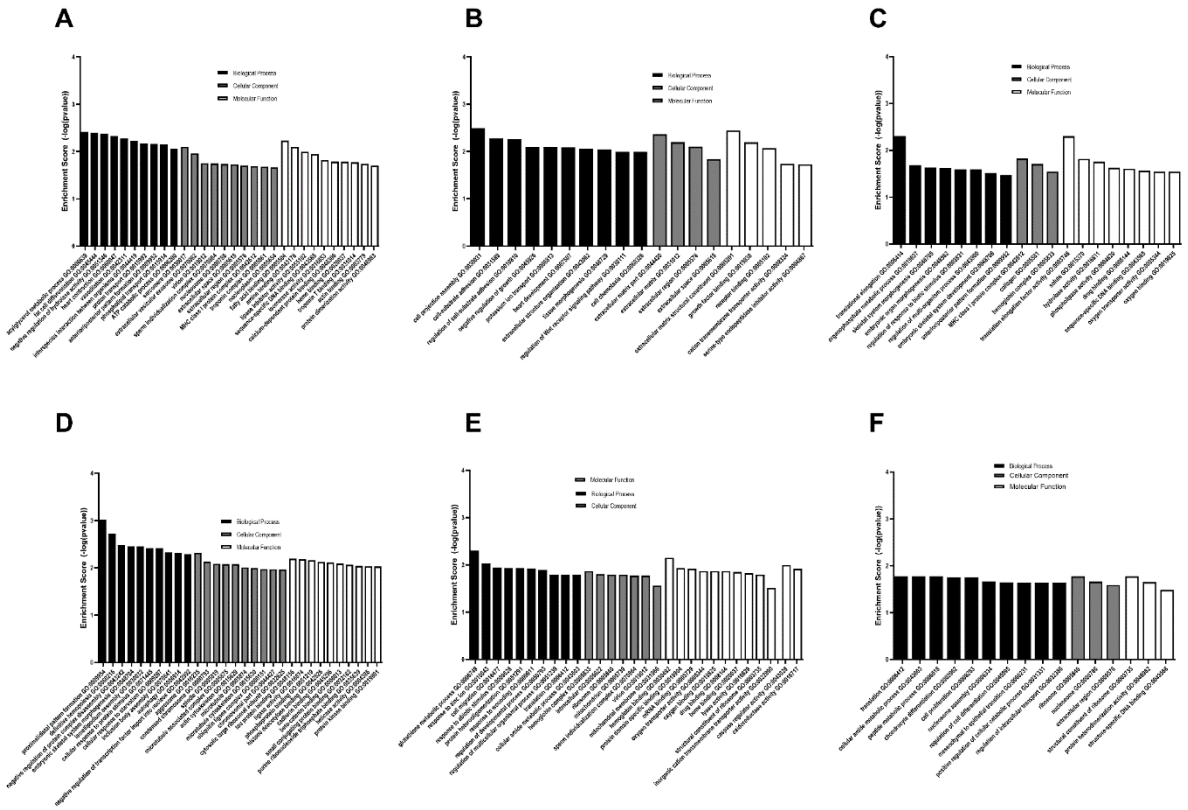



Figure S2: Top 10 GO biological processes, cellular components, and molecular functions enriched from DEGS that are upregulated (A-C) or downregulated (D-F) in vehicle spinal cords compared to control at E15 (A,D), E17 (B,E), and E20 (C,F).

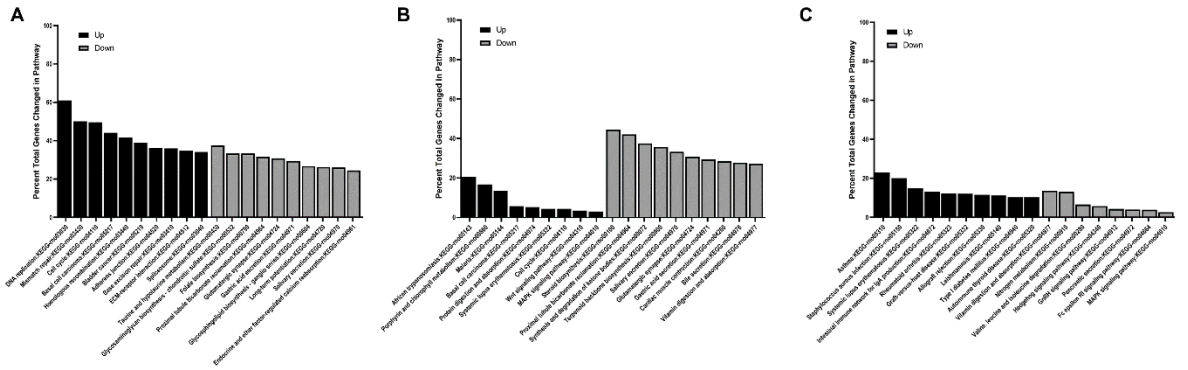



Figure S3: Top 10 KEGG pathways upregulated and downregulated between MMC and control at E15 (A), E17 (B), and E20 (C) as determined by percent total changed genes in each pathway.

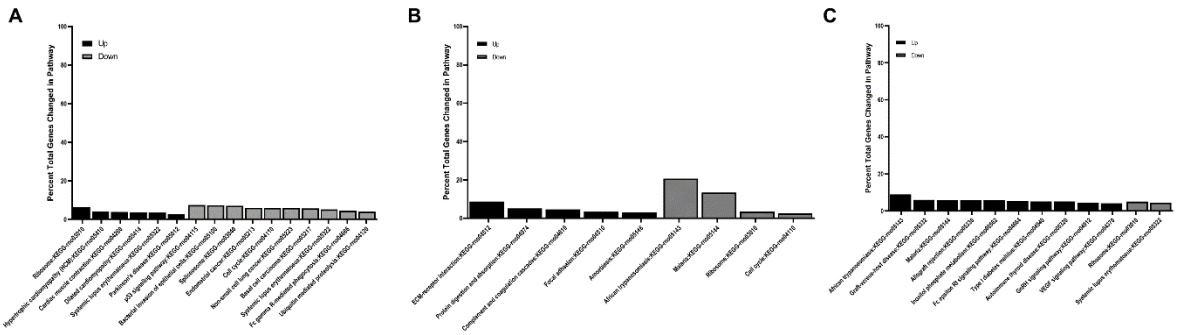



Figure S4: Top 10 KEGG pathways upregulated and downregulated between vehicle and control at E15 (A), E17 (B), and E20 (C) as determined by percent total changed genes in each pathway.

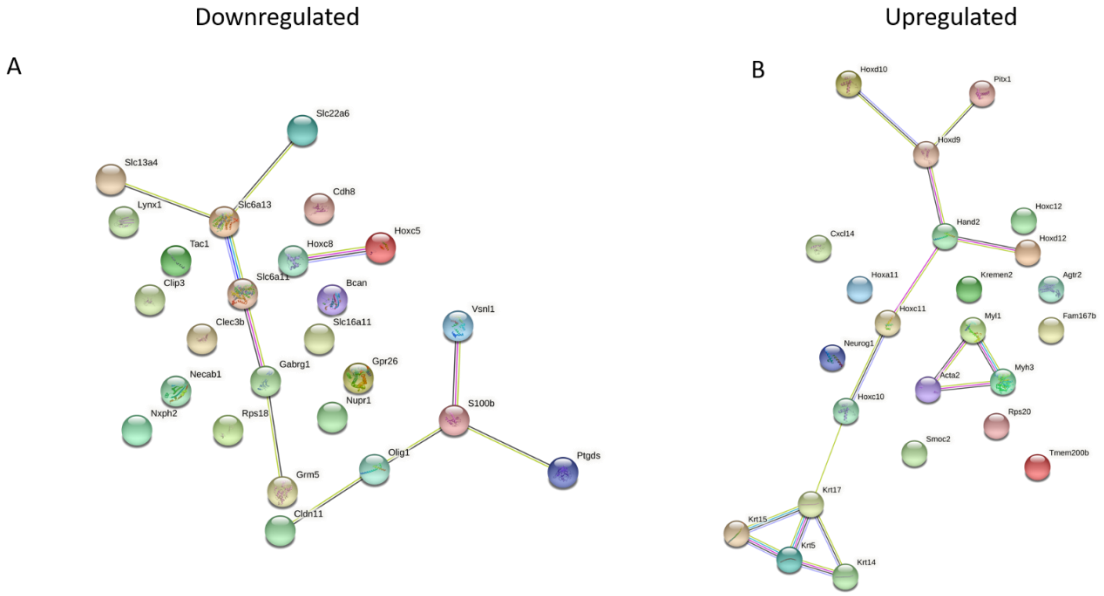



Figure S5: Protein-protein interaction network analysis based on top 25 downregulated (A) and upregulated (B) differentially expressed genes between MMC and control at E15.

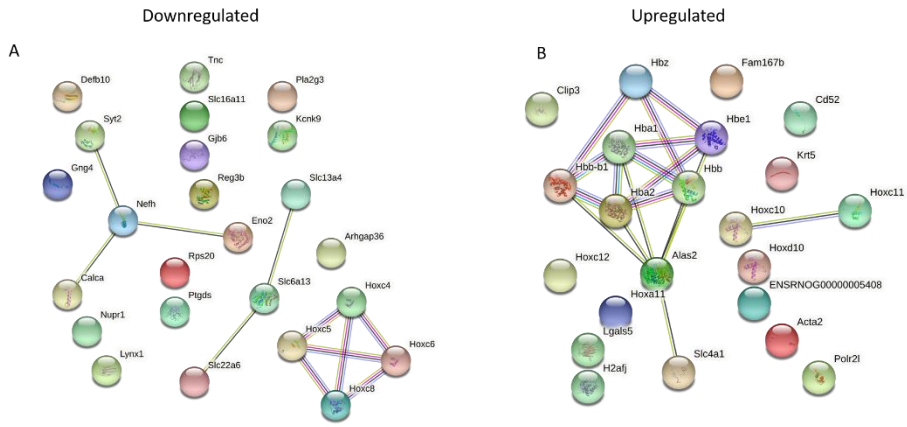


Figure S6: Protein-protein interaction network analysis based on top 25 downregulated (A) and upregulated (B) differentially expressed genes between MMC and control at E17.

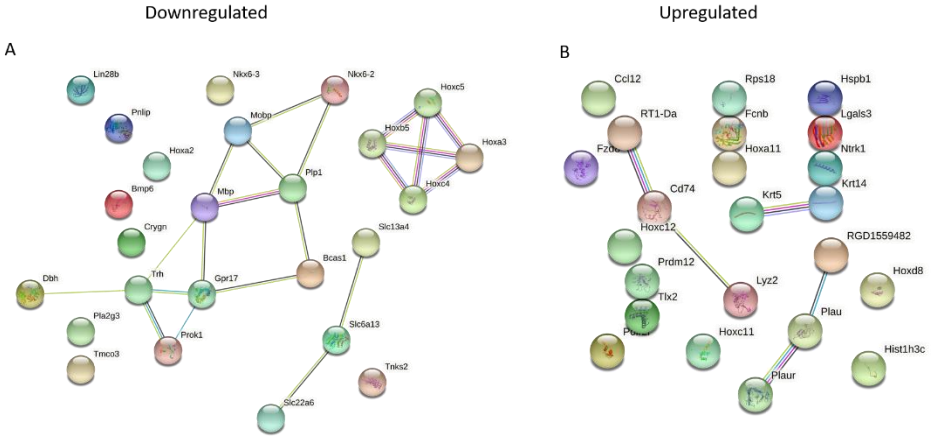



Figure S7: Protein-protein interaction network analysis based on top 25 downregulated (A) and upregulated (B) differentially expressed genes between MMC and control at E20.

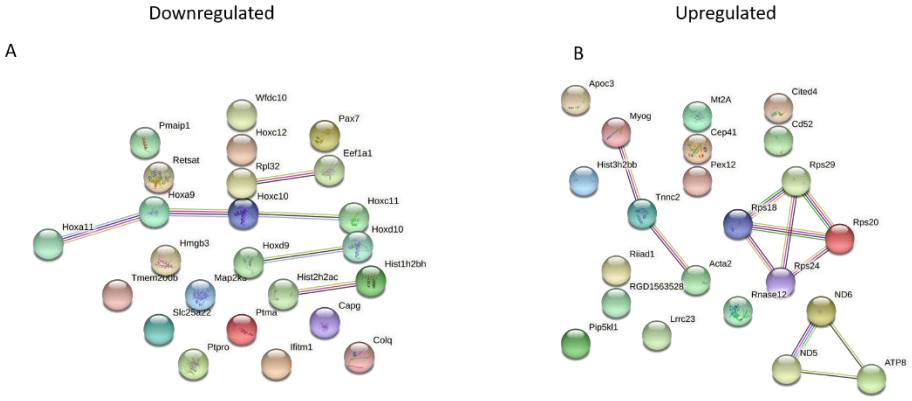



Figure S8: Protein-protein interaction network analysis based on top 25 downregulated (A) and upregulated (B) differentially expressed genes between vehicle and control at E15.

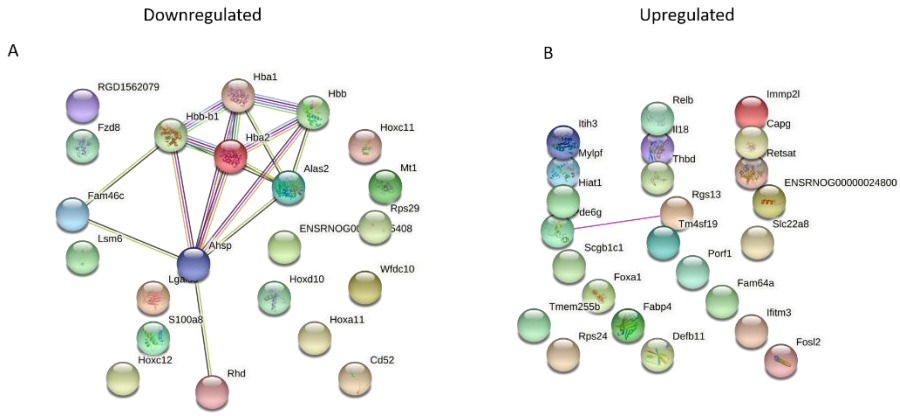


Figure S9: Protein-protein interaction network analysis based on top 25 downregulated (A) and upregulated (B) differentially expressed genes between vehicle and control at E17.

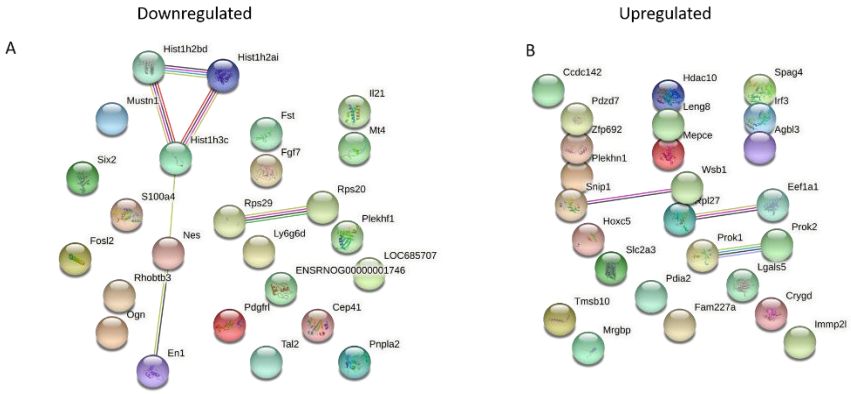



Figure S10: Protein-protein interaction network analysis based on top 25 downregulated (A) and upregulated (B) differentially expressed genes between vehicle and control at E20.

Table S1. Top 25 upregulated and downregulated genes between MMC and control groups at E15.

| Gene Symbol | Full Gene Name | Fold Change | P value |
|---|---|---|---|
| Hoxc10 | Homeobox C10 | 103.61 | 6.35E-04 |
| Hoxc11 | Homeobox C11 | 79.38 | 1.27E-04 |
| Hoxc12 | Homeobox C12 | 74.09 | 8.39E-03 |
| Hoxd10 | Homeobox D10 | 67.05 | 8.20E-06 |
| Hoxd9 | Homeobox D9 | 36.56 | 9.35E-04 |
| Krt5 | Keratin, type II cytoskeletal 5 | 14.25 | 9.20E-03 |
| Hoxa11 | Homeobox A11 | 13.10 | 7.74E-04 |
| Actc1 | Actin, alpha cardiac muscle 1 | 12.77 | 9.60E-04 |
| Fam167b | Family with sequence similarity 167, member B | 11.62 | 1.57E-04 |
| Krt14 | Keratin, type 1 cytoskeletal 14 | 11.52 | 2.54E-03 |
| Neurog1 | Neurogenin-1 | 11.17 | 3.79E-04 |
| Myh3 | Myosin-3 | 10.61 | 1.45E-04 |
| Agtr2 | Type-2 angiotensin II receptor | 10.48 | 5.51E-04 |
| Cxcl14 | C-X-C motif chemokine 14 precursor | 9.75 | 8.08E-04 |
| Hand2 | Heart-and neural crest derivatives expressed protein 2 | 9.45 | 3.04E-04 |
| Rps20 | 40S ribosomal protein S20 | 9.14 | 4.66E-03 |
| Pitx1 | Pituitary homeobox 1 | 8.63 | 1.12E-03 |
| Myl1 | Mysoin light chain 1/3, skeletal muscle isoform | 8.30 | 1.42E-03 |
| Smoc2 | SPARC-related modular calcium-binding protein 2 precursor | 8.29 | 4.39E-05 |
| Kremen2 | kremen protein 2 precursor | 8.16 | 5.95E-04 |
| Hoxd12 | homeo box D12 | 7.58 | 1.65E-02 |
| Krt15 | Keratin, type I cytoskeletal 15 | 7.58 | 2.82E-03 |
| Hoxa11 | Protein Hoxa10 | 7.36 | 1.91E-02 |
| Tmem200b | transmembrane protein 200b | 7.30 | 1.71E-04 |
| Krt17 | Keratin, type I cytoskeletal 17 | 6.97 | 5.95E-04 |
| Clip3 | Protein Clip3 | -11.02 | 1.15E-02 |
| Bcan | Brevican core protein isoform 1 precursor | -10.51 | 1.98E-06 |
| Clec3b | C-type lectin domain family 3, member b | -9.94 | 2.03E-06 |
| S100b | Protein S100-B | -9.76 | 1.01E-05 |
| Lynx1 | Ly-6/neurotoxin like protein 1 precursor | -8.44 | 4.39E-06 |
| Slc6a13 | Sodium and chloride dependent GABA transporter 2 | -8.22 | 4.51E-06 |

| | | | |
|---|---|---|---|
| Necab1 | N-terminal EF-hand calcium binding protein 1 | -7.76 | 5.64E-05 |
| Ptgds | Prostaglandin-H2 D isomerase | -6.99 | 2.06E-05 |
| Slc13a4 | Solute carrier family 13 member 4 precursor | -6.91 | 8.56E-04 |
| Slc6a11 | Sodium and chloride dependent GABA transporter 3 | -6.05 | 7.65E-06 |
| Hoxc8 | Homeobox protein Hox-C8 | -5.80 | 9.63E-04 |
| Grm5 | Metabotropic glutamate receptor 5 | -5.75 | 6.46E-06 |
| Vsnl1 | Visinin-like protein 1 | -5.32 | 7.08E-05 |
| RPS18 | 40s ribosomal protein S18 | -5.31 | 2.89E-02 |
| Cldn11 | Claudin-11 | -5.18 | 2.84E-05 |
| Slc16a11 | Solute carrier family 16, member 11 | -5.02 | 1.13E-05 |
| Slc22a6 | Solute carrier family 22 member 6 | -4.83 | 1.48E-03 |
| Hoxc5 | Homeo box C5 | -4.81 | 8.88E-05 |
| Nxph2 | Neurexophilin | -4.63 | 4.11E-04 |
| Tac1 | Protachykinin precursor 1 | -4.54 | 1.32E-03 |
| Gabrg1 | Gamma-aminobutyric acid receptor | -4.51 | 5.14E-04 |
| Olig1 | Oligodendrocyte transcription factor 1 | -4.50 | 1.79E-04 |
| NUPR1 | Nuclear protein 1 | -4.41 | 4.56E-04 |
| CDh8 | Cadherin-8 precursor | -4.41 | 2.36E-04 |
| Gpr26 | G-protein coupled receptor 26 | -4.35 | 1.77E-05 |

Table S2. Top 25 upregulated and downregulated genes between MMC and control groups at E17.

| Gene Symbol | Full Gene Name | Fold Change | P value |
|---|---|---|---|
| Hoxc12 | homeobox protein Hox-C12 | 148.87 | 5.58E-03 |
| Hoxc11 | homeobox C11 | 78.95 | 9.01E-05 |
| Gtlf3b | Protein Gtlf3b | 18.66 | 9.15E-04 |
| Hoxa11 | Protein Hoxa10; RCG52455 | 12.66 | 2.69E-04 |
| H2AFJ | H2A.J histone | 11.65 | 3.39E-05 |
| Actc1 | Actin, alpha cardiac muscle 1 | 11.12 | 4.81E-02 |
| Hoxa11 | Protein Hoxa10; RCG52455 | 10.61 | 6.65E-05 |
| Krt5 | keratin, type II cytoskeletal 5 | 10.56 | 4.39E-02 |
| HBB | Hemoglobin subunit beta-2 | 10.06 | 6.64E-03 |
| Hoxa11 | homeobox A11 | 7.93 | 2.07E-03 |
| Cd52 | CAMPATH-1 antigen precursor | 6.81 | 8.26E-03 |
| Hoxd10 | homeo box D10 | 6.78 | 4.48E-03 |

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|---|---|---|---|
| Fam167b | family with sequence similarity 167, member B | 6.70 | 2.29E-02 |
| Hbz | hemoglobin, zeta | 6.66 | 2.43E-02 |
| Hoxc10 | Homeo box C10 | 5.14 | 3.69E-03 |
| Alas2 | 5-aminolevulinate synthase, erythroid-specific, mitochondrial | 5.12 | 6.27E-03 |
| Hba-a2 | Hemoglobin subunit alpha-1/2 | 5.07 | 5.27E-03 |
| Hbe1 | hemoglobin, epsilon 1 | 5.07 | 3.17E-02 |
| Slc4a1 | Band 3 anion transport protein | 4.85 | 8.24E-03 |
| Hba2 | Hemoglobin subunit alpha-1/2 | 4.73 | 5.59E-03 |
| Polr2l | RNA Polymerase II, I And III Subunit L | 4.69 | 1.09E-02 |
| Hbb-b1 | hemoglobin, beta adult major chain | 4.67 | 3.20E-03 |
| Clip3 | Protein Clip3 | 4.64 | 6.93E-02 |
| HBA1 | globin, alpha | 4.60 | 5.20E-03 |
| Lgals5 | galectin-5 | 4.47 | 9.25E-04 |
| Ptgds | Prostaglandin-H2 D-isomerase | -86.34 | 9.95E-06 |
| Eno2 | Enolase 2 | -11.07 | 5.93E-04 |
| Rps20 | 40S ribosomal protein S20 | -9.70 | 7.81E-04 |
| Hoxc5 | homeo box C5 | -7.93 | 1.40E-04 |
| Lynx1 | ly-6/neurotoxin-like protein 1 precursor | -7.13 | 3.60E-03 |
| Calca | Calcitonin | -6.87 | 8.21E-04 |
| Slc13a4 | solute carrier family 13 member 4 precursor | -6.74 | 8.64E-05 |
| Gm10068 | predicted gene 10068 | -6.63 | 3.31E-03 |
| Slc22a6 | Solute carrier family 22 member 6 | -6.07 | 1.02E-04 |
| Gng4 | Guanine nucleotide-binding protein subunit gamma | -5.46 | 3.17E-03 |
| Hoxc8 | homeobox protein Hox-C8 | -4.89 | 4.74E-05 |
| Pla2g3 | group 3 secretory phospholipase A2 precursor | -4.79 | 4.52E-04 |
| Defb10 | Beta-defensin 10 | -4.71 | 2.29E-03 |
| Nefh | neurofilament heavy polypeptide | -4.69 | 7.48E-04 |
| Slc6a13 | Sodium- and chloride-dependent GABA transporter 2 | -4.68 | 5.09E-05 |
| Hoxc4 | homeobox protein Hox-C4 | -4.55 | 1.23E-04 |
| Slc16a11 | solute carrier family 16, member 11 | -4.49 | 5.94E-04 |
| Reg3b | Regenerating islet-derived protein 3-beta | -4.30 | 1.56E-02 |
| Tnc | tenascin C precursor | -4.14 | 1.97E-03 |
| Kcnk9 | Potassium channel subfamily K member 9 | -4.04 | 2.45E-03 |
| Hoxc6 | Homeo box C6 | -4.00 | 5.30E-04 |
| Gjb6 | gap junction beta-6 protein | -3.99 | 4.03E-03 |
| Arhgap36 | Rho GTPase Activating Protein 36 | -3.96 | 3.49E-02 |
| NUPR1 | Nuclear protein 1 | -3.86 | 3.15E-03 |
| Syt2 | synaptotagmin-2 | -3.80 | 2.57E-03 |

Table S3. Top 25 upregulated and downregulated genes between MMC and control groups at E20.

| Gene Symbol | Full Gene Name | Fold Change | P value |
|---|---|---|---|
| Hoxc11 | homeobox C11 | 54.19 | 2.59E-03 |
| Krt5 | keratin, type II cytoskeletal 5 | 51.42 | 2.67E-02 |
| Krt14 | Keratin, type I cytoskeletal 14 | 22.17 | 3.03E-02 |
| Polr2l | RNA Polymerase II, I And III Subunit L | 15.90 | 3.36E-02 |
| Hoxc12 | homeobox protein Hox-C12 | 13.79 | 3.20E-02 |
| Hoxa11 | homeobox protein Hox a10 | 9.33 | 7.79E-03 |
| Hoxa11 | homeobox A11 | 8.91 | 3.33E-03 |
| Hoxa11 | homeobox protien Hox a10 | 7.67 | 3.30E-03 |
| Lgals3 | Galectin-3 | 7.64 | 7.48E-03 |
| RT1-Da | RT1 class II, locus Da precursor | 6.68 | 2.48E-03 |
| Lyz2 | lysozyme C-1 precursor | 6.07 | 4.74E-02 |
| Plaur | urokinase plasminogen activator surface receptor isoform 2 precursor | 5.90 | 3.35E-02 |
| Fcnb | Ficolin-2 | 5.55 | 2.33E-02 |
| Prdm12 | PR domain zinc finger protein 12 | 5.14 | 7.06E-03 |
| RPS18 | 40S ribosomal protein S18 | 4.92 | 3.93E-02 |
| FZD8 | Frizzled 8 | 4.84 | 7.16E-03 |
| RGD1559482 | immune activating receptor CD300d1 precursor | 4.70 | 2.06E-02 |
| Ntrk1 | High affinity nerve growth factor receptor | 4.63 | 5.14E-03 |
| Cd74 | H-2 class II histocompatibility antigen gamma chain | 4.61 | 2.53E-03 |
| Hoxd8 | homeobox D8 | 4.59 | 2.50E-02 |
| Ccl12 | chemokine (C-C motif) ligand 12 precursor | 4.52 | 1.90E-02 |
| Hist1h2ail | Histone H3.1 | 4.42 | 6.48E-04 |
| Hspb1 | heat shock protein beta-1 | 4.29 | 2.55E-02 |
| Plau | urokinase-type plasminogen activator precursor | 4.24 | 2.53E-02 |
| Tlx2 | T-cell leukemia, homeobox 2 | 4.21 | 3.02E-02 |
| Pla2g3 | group 3 secretory phospholipase A2 precursor | -12.18 | 8.95E-03 |
| Hoxb5 | homeo box B5 | -10.21 | 2.15E-02 |
| Hoxc4 | homeobox protein Hox-C4 | -9.16 | 1.32E-03 |
| Mobp | Myelin-associated oligodendrocyte basic protein | -8.34 | 1.89E-04 |
| Nkx6-2 | NK6 homeobox 2 | -7.60 | 1.96E-03 |
| Slc13a4 | solute carrier family 13 member 4 precursor | -7.59 | 1.18E-02 |

| | | | |
|---|---|---|---|
| Slc22a6 | Solute carrier family 22 member 6 | -6.89 | 5.63E-04 |
| Slc6a13 | Sodium- and chloride-dependent GABA transporter 2 | -6.83 | 1.30E-03 |
| Trh | Prothyroliberin Thyroliberin | -6.44 | 1.74E-02 |
| Mbp | Myelin basic protein S | -6.42 | 4.62E-03 |
| Gpr17 | Uracil nucleotide/cysteinyl leukotriene receptor | -6.30 | 3.57E-02 |
| Bcas1 | breast carcinoma-amplified sequence 1 homolog | -6.03 | 2.88E-02 |
| Prok1 | Prokineticin-1 | -5.70 | 8.07E-03 |
| Crygn | gamma-crystallin N | -5.45 | 2.89E-02 |
| Pnlip | pancreatic triacylglycerol lipase precursor | -5.43 | 1.72E-03 |
| Hoxc5 | homeo box C5 | -5.37 | 1.09E-03 |
| Nkx6-3 | homeobox protein Nkx-6.3 | -5.34 | 9.69E-03 |
| Tnks2 | Protein Tnks2 | -5.31 | 1.48E-03 |
| Hoxa2 | homeobox protein Hox-A2 | -4.94 | 2.14E-02 |
| Bmp6 | Bone morphogenetic protein 6 | -4.92 | 3.10E-03 |
| Hoxa3 | homeobox protein Hox-A3 | -4.83 | 1.36E-02 |
| Plp1 | Myelin proteolipid protein | -4.76 | 4.45E-03 |
| Dbh | dopamine beta-hydroxylase | -4.43 | 1.53E-02 |
| Tmco3 | Transmembrane And Coiled-Coil Domains 3 | -4.29 | 1.09E-02 |
| Lin28b | Lin-28 Homolog B | -4.27 | 4.19E-02 |

Table S4. Top 25 upregulated and downregulated genes between control and vehicle groups at E15.

| Gene Symbol | Full Gene Name | Fold Change | P value |
|---|---|---|---|
| RPS18 | 40S ribosomal protein S18 | 5.57 | 2.23E-02 |
| Actc1 | Actin, alpha cardiac muscle 1 | 5.35 | 5.50E-03 |
| Rps24 | 40S ribosomal protein S24 | 3.32 | 2.63E-03 |
| RGD1563528 | brain protein 44-like protein 2 | 3.20 | 3.76E-04 |
| Tnnc2 | troponin C, skeletal muscle | 3.19 | 3.23E-02 |
| Lrrc23 | Leucine rich repeat containing 23 | 3.18 | 1.81E-03 |
| Riiad1 | RIIa domain-containing protein | 2.87 | 3.56E-04 |
| ND5 | NADH dehydrogenase subunit 5 (mitochondrion) | 2.79 | 4.91E-02 |
| Trav10d | T cell receptor alpha variable 10D | 2.61 | 2.04E-03 |
| Tsga14 | Testis Specific Protein A14 | 2.61 | 3.88E-02 |
| PEX12 | Peroxisomal biogenesis factor 12 | 2.61 | 3.88E-02 |
| ATP8 | ATP synthase F0 subunit 8 (mitochondrion) | 2.60 | 1.09E-02 |
| Hist3h2bb | histone cluster 3, H2bb | 2.55 | 1.72E-02 |
| Myog | myogenin | 2.53 | 5.22E-02 |
| Mt2A | Metallothionein-2 | 2.52 | 4.33E-02 |
| ATP5F1E | ATP synthase subunit epsilon, mitochondrial | 2.35 | 6.78E-04 |
| RPS29 | 40S ribosomal protein S29 | 2.29 | 2.79E-02 |
| Rnase12 | Ribonuclease-like protein 12 | 2.24 | 2.38E-02 |
| ND6 | NADH dehydrogenase subunit 6 (mitochondrion) | 2.22 | 1.21E-01 |
| Rps20 | 40S ribosomal protein S20 | 2.21 | 3.35E-02 |
| Apoc3 | Apolipoprotein C-III | 2.19 | 3.42E-03 |
| Cd52 | CAMPATH-1 antigen precursor | 2.15 | 3.85E-02 |
| Rpl32-ps1 | Ribosomal protein L32, psueodgene 1 | 2.12 | 4.31E-02 |
| Pip5kl1 | phosphatidylinositol-4-phosphate 5-kinase-like 1 | 2.02 | 4.05E-03 |
| Cited4 | Cbp/p300-interacting transactivator 4 | 2.01 | 1.28E-02 |
| EF1A | Elongation factor 1-alpha | -213.11 | 1.28E-05 |
| Hoxc10 | Homeo box C10 | -46.52 | 1.23E-03 |
| Hoxd10 | homeo box D10 | -33.73 | 1.35E-06 |
| Hoxc12 | homeobox protein Hox-C12 | -28.62 | 1.30E-05 |
| Hoxd9 | Homeobox protein Hox-D9 | -24.44 | 1.24E-03 |
| Hoxc11 | homeobox C11 | -23.20 | 1.10E-06 |
| Hoxa11 | Homeo box A10 | -4.61 | 2.61E-03 |

| | | | |
|---|---|---|---|
| Colq | acetylcholinesterase collagenic tail peptide precursor | -2.99 | 2.67E-03 |
| MAP2K3 | Mitogen activated protein kinase 3 | -2.77 | 1.29E-02 |
| Hoxa11 | homeobox A11 | -2.66 | 8.22E-03 |
| Hist2h2ac | Histone H2A | -2.34 | 2.20E-02 |
| Ptpro | receptor-type tyrosine-protein phosphatase O precursor | -2.34 | 1.74E-04 |
| Pmaip1 | Phorbol-12-myristate-13-acetate-induced protein 1 | -2.33 | 9.94E-04 |
| Rpl32 | ribosomal protein L32 | -2.30 | 2.38E-03 |
| HMGB3 | High mobility group protein B3 | -2.26 | 5.78E-02 |
| Wfdc10 | WAP four-disulfide core domain 10 precursor | -2.23 | 8.54E-03 |
| Capg | Macrophage-capping protein | -2.20 | 1.04E-03 |
| Ifitm1 | interferon-induced transmembrane protein 1 | -2.13 | 1.99E-03 |
| Retsat | all-trans-retinol 13,14-reductase precursor | -2.12 | 4.60E-04 |
| Hoxa9 | Homeo box A9 | -2.12 | 1.86E-03 |
| Hist1h2bl | histone H2B type 1 | -2.09 | 5.72E-03 |
| Ptma | Prothymosin alpha Thymosin alpha | -2.06 | 3.74E-02 |
| Slc25a22 | Solute carrier family 25 (Mitochondrial carrier, glutamate), member 22 | -2.04 | 3.61E-03 |
| Pax7 | paired box protein Pax-7 | -2.02 | 1.10E-03 |
| Tmem200b | transmembrane protein 200B | -1.98 | 1.07E-02 |

Table S5. Top 25 upregulated and downregulated genes between vehicle and control groups at E17.

| Gene Symbol | Full Gene Name | Fold Change | P value |
|---|---|---|---|
| Myl2 | myosin regulatory light chain 2, ventricular/cardiac muscle isoform | 6.51 | 3.71E-03 |
| Retsat | all-trans-retinol 13,14-reductase precursor | 4.47 | 1.66E-05 |
| Capg | Macrophage-capping protein | 3.49 | 6.72E-05 |
| Defb11 | Beta-defensin 11 | 2.90 | 3.44E-03 |
| Trav3-4 | T cell receptor alpha variable 3-4 | 2.64 | 9.00E-05 |
| Rgs13 | Regulator Of G Protein Signaling 13 | 2.43 | 1.62E-02 |
| HIAT1 | Hippocampus abundant gene transcript 1 | 2.23 | 2.67E-02 |
| PORF1 | Putative preoptic regulatory factor 1 | 2.18 | 2.16E-04 |
| Pde6g | phosphodiesterase 6G, cGMP-specific, rod, gamma | 2.09 | 1.42E-02 |
| Fosl2 | fos-related antigen 2 isoform 1 | 2.07 | 1.80E-02 |
| Diap2 | diaphanous homolog 2 (Drosophila) ] | 2.00 | 3.87E-02 |
| Rps24 | 40S ribosomal protein S24 | 1.98 | 2.73E-02 |
| Scgb1c1 | Secretoglobin family 1C member 1 | 1.90 | 1.42E-03 |
| Tm4sf19 | transmembrane 4 L6 family member 19 | 1.86 | 9.06E-03 |
| Fam70b | Family With Sequence Similarity 70, Member B | 1.85 | 1.27E-02 |
| Relb | avian reticuloendotheliosis viral (v-rel) oncogene related B | 1.82 | 4.94E-03 |
| Ifitm3 | Interferon-induced transmembrane protein 3 | 1.82 | 1.40E-02 |
| Thbd | thrombomodulin precursor | 1.81 | 1.04E-02 |
| Immp2l | Inner Mitochondrial Membrane Peptidase Subunit 2 | 1.80 | 4.49E-02 |
| Il18 | Interleukin-18 | 1.75 | 3.60E-02 |
| Foxa1 | hepatocyte nuclear factor 3-alpha | 1.75 | 1.81E-02 |
| Fabp4 | fatty acid-binding protein, adipocyte | 1.74 | 4.12E-03 |
| Itih3 | Inter-alpha-trypsin inhibitor heavy chain H3 | 1.73 | 2.38E-02 |
| Slc22a8 | Solute carrier family 22 member 8 | 1.70 | 1.40E-02 |
| Fam64a | Family With Sequence Similarity 64 Member A | 1.69 | 5.52E-03 |
| Hoxc12 | homeobox protein Hox-C12 | -22.90 | 2.69E-03 |
| Gtlf3b | gene trap locus F3b | -10.78 | 3.43E-05 |
| Hoxc11 | homeobox C11 | -10.22 | 1.98E-03 |
| SDHAF1 | Succinate dehydrogenase assembly factor 1, mitochondrial | -6.07 | 3.09E-02 |
| S100a8 | Protein S100-A8 | -4.00 | 1.33E-02 |

| | | | |
|---|---|---|---|
| Cd52 | CAMPATH-1 antigen precursor | -3.34 | 3.04E-02 |
| RPS29 | 40S ribosomal protein S29 | -3.23 | 2.60E-03 |
| Hoxa11 | homeobox A11 | -3.16 | 7.59E-04 |
| Hbb | Hemoglobin subunit beta-1 | -2.92 | 5.27E-03 |
| Hbb-b1 | hemoglobin, beta adult major chain | -2.82 | 3.63E-03 |
| Hba-a2 | Hemoglobin subunit alpha-1/2 | -2.80 | 1.66E-02 |
| Alas2 | 5-aminolevulinate synthase, erythroid-specific, mitochondrial | -2.75 | 2.94E-02 |
| Hba1 | globin, alpha | -2.65 | 2.81E-02 |
| Hba2 | Hemoglobin subunit alpha-1/2 | -2.65 | 1.88E-02 |
| FZD8 | Frizzled 8 | -2.62 | 3.25E-03 |
| Lgals5 | galectin-5 | -2.54 | 2.42E-03 |
| MT1 | Metallothionein-1 | -2.49 | 2.59E-03 |
| Ahsp | alpha-hemoglobin-stabilizing protein | -2.48 | 9.60E-03 |
| Hoxd10 | homeo box D10 | -2.40 | 4.56E-02 |
| Fam46c | family with sequence similarity 46, member C | -2.33 | 2.10E-02 |
| Hbb-b1 | Hemoglobin subunit beta-1 | -2.32 | 6.19E-03 |
| Hbb-b2 | Hemoglobin subunit beta-2 | -2.28 | 7.83E-03 |
| Rhd | Blood group Rh(D) polypeptide | -2.24 | 4.81E-02 |
| Lsm6 | Protein Lsm6 | -2.24 | 4.72E-03 |
| Wfdc10 | WAP four-disulfide core domain 10 precursor | -2.15 | 8.20E-03 |

Table S6. Top 25 upregulated and downregulated genes between vehicle and control groups at E20.

| Gene Symbol | Full Gene Name | Fold Change | P value |
|---|---|---|---|
| EF1A | Elongation factor 1-alpha | 104.82 | 1.65E-04 |
| Prok1 | Prokineticin-1 | 5.80 | 1.56E-02 |
| TMSB10 | Thymosin Beta-10 | 4.76 | 3.99E-04 |
| Immp2l | Inner mitochondrial membrane protease subunit 2 | 4.58 | 8.32E-03 |
| Hoxc5 | homeo box C5 | 3.58 | 4.50E-02 |
| Agbl3 | Protein Agbl3 | 3.52 | 5.00E-03 |
| Prok2 | Prokineticin-2 | 3.50 | 3.54E-04 |
| Hdac10 | Histone deacetylase 10 | 3.26 | 3.41E-02 |
| Mepce | Methylphosphate capping enzyme | 3.23 | 4.59E-04 |
| Fam227a | Family with sequence similarity 227 member A | 3.23 | 3.48E-02 |
| Slc2a3 | solute carrier family 2, facilitated glucose transporter member 3 | 3.03 | 1.13E-03 |
| RPL27 | 60S ribosomal protein L27 | 2.97 | 3.04E-02 |
| Plekhn1 | pleckstrin homology domain containing, family N member 1 | 2.96 | 3.69E-02 |
| ZFP692 | zinc finger protein 692 | 2.93 | 3.69E-02 |
| Irf3 | interferon regulatory factor 3 | 2.87 | 7.27E-03 |
| SNIP1 | Smad nuclear interacting protein 1 | 2.83 | 3.03E-03 |
| Pdzd7 | PDZ domain containing 7 | 2.74 | 4.67E-02 |
| Spag4 | sperm-associated antigen 4 protein | 2.70 | 9.00E-03 |
| Crygd | Gamma-crystallin D | 2.62 | 2.35E-02 |
| Mrgbp | MRG domain binding protein | 2.62 | 2.33E-02 |
| Pdia2 | protein disulfide-isomerase A2 precursor | 2.61 | 3.25E-02 |
| Ccdc142 | coiled coil domain containing 142 | 2.60 | 2.94E-02 |
| Lgals5 | galectin-5 | 2.59 | 4.82E-02 |
| Leng8 | leukocyte receptor cluster member 8 | 2.57 | 4.72E-02 |
| Wsb1 | WD repeat and SOCS box-containing 1 isoform 1 | 2.56 | 3.70E-02 |
| Mustn1 | Musculoskeletal embryonic nuclear protein 1 | -11.68 | 5.55E-03 |
| NCBP2 | Nuclear cap binding protein subunit 2 | -11.21 | 2.95E-03 |
| Ly6g6d | Lymphocyte antigen 6 complex locus protein G6d | -3.83 | 1.43E-02 |
| Hist1h2ai | histone cluster 1, H2an | -3.39 | 4.49E-04 |
| Six2 | homeobox protein SIX2 | -2.84 | 1.98E-03 |
| Tsga14 | Testis Specific Protein A14 | -2.71 | 7.66E-03 |
| Hist1h2ail1 | Histone H3.1 | -2.66 | 5.79E-03 |

| | | | |
|---|---|---|---|
| Pnpla2 | Patatin-like phospholipase domain-containing protein 2 | -2.60 | 1.98E-02 |
| RPS29 | 40S ribosomal protein S29 | -2.43 | 3.27E-02 |
| En1 | Engrailed homeobox 1 | -2.38 | 2.06E-02 |
| Plekhf1 | Pleckstrin homology domain-containing family F member 1 | -2.32 | 1.17E-02 |
| Fgf7 | fibroblast growth factor 7 precursor | -2.19 | 2.56E-02 |
| Fst | Follistatin | -2.19 | 9.79E-03 |
| Fosl2 | fos-related antigen 2 isoform 1 | -2.13 | 1.03E-02 |
| Nes | nestin | -2.10 | 9.47E-03 |
| Il21 | Interleukin-21 | -2.08 | 2.85E-02 |
| Pdgfrl | Platelet-derived growth factor receptor-like protein | -2.05 | 4.58E-02 |
| Mt4 | metallothionein-4 | -2.03 | 4.09E-03 |
| Rhobtb3 | rho-related BTB domain-containing protein 3 | -2.01 | 2.54E-02 |
| Nav1 | neuron navigator 1 | -2.01 | 2.66E-02 |
| Rps20 | 40S ribosomal protein S20 | -2.00 | 1.89E-03 |
| Hist1h2bd | histone cluster 1, H2bd | -1.97 | 4.91E-02 |
| S100a4 | Protein S100-A4 | -1.93 | 2.44E-02 |
| Tal2 | T-cell acute lymphocytic leukemia 2 | -1.91 | 5.61E-03 |
| Ogn | mimecan precursor | -1.87 | 1.36E-02 |