**Supplementary Table S2. Gene array analysis of undifferentiated (Day 0) versus differentiated osteoblasts (Day 30 differentiation).**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **p-value** | **Fold Change** | **ID** | **Notes** | **Symbol** | **Entrez Gene Name** | **Location** | **Type(s)** |
| 0.0002 | 7.453 | Cxcl12 | D  | CXCL12 | C-X-C motif chemokine ligand 12 | Extracellular Space | cytokine |
| 0.001 | 6.201 | Ccl12 |   | CCL2 | C-C motif chemokine ligand 2 | Extracellular Space | cytokine |
| 0.001 | 23.351 | Ccl4 |   | CCL4 | C-C motif chemokine ligand 4 | Extracellular Space | cytokine |
| 0.003 | 16.290 | Ccl24 |   | CCL24 | C-C motif chemokine ligand 24 | Extracellular Space | cytokine |
| 0.003 | 33.505 | Ccl6 |   | Ccl6 | chemokine (C-C motif) ligand 6 | Extracellular Space | cytokine |
| 0.004 | 2.352 | Il20 |   | IL20 | interleukin 20 | Extracellular Space | cytokine |
| 0.007 | 6.367 | Cx3cl1 |   | CX3CL1 | C-X3-C motif chemokine ligand 1 | Extracellular Space | cytokine |
| 0.009 | 3.858 | Cxcl13 |   | CXCL13 | C-X-C motif chemokine ligand 13 | Extracellular Space | cytokine |
| 0.010 | 2.804 | Cmtm8 |   | CMTM8 | CKLF like MARVEL transmembrane domain containing 8 | Extracellular Space | cytokine |
| 0.011 | 2.188 | Scgb3a1 |   | SCGB3A1 | secretoglobin family 3A member 1 | Extracellular Space | cytokine |
| 0.012 | 6.291 | Ebi3 |   | EBI3 | Epstein-Barr virus induced 3 | Extracellular Space | cytokine |
| 0.013 | 43.869 | Ndp |   | LOC100909913/Ndp | Norrie disease (pseudoglioma) | Extracellular Space | cytokine |
| 0.014 | 5.373 | Cxcl12 | D | CXCL12 | C-X-C motif chemokine ligand 12 | Extracellular Space | cytokine |
| 0.014 | 20.766 | Cytl1 |   | CYTL1 | cytokine like 1 | Extracellular Space | cytokine |
| 0.018 | 3.946 | Il18 |   | IL18 | interleukin 18 | Extracellular Space | cytokine |
| 0.019 | 24.820 | Ccl3 |   | CCL3L3 | C-C motif chemokine ligand 3 like 3 | Extracellular Space | cytokine |
| 0.019 | 11.485 | Cxcl16 |   | CXCL16 | C-X-C motif chemokine ligand 16 | Extracellular Space | cytokine |
| 0.020 | 24.526 | Tnfsf10 |   | TNFSF10 | tumor necrosis factor superfamily member 10 | Extracellular Space | cytokine |
| 0.021 | 4.781 | Ccl9 |   | Ccl9 | chemokine (C-C motif) ligand 9 | Extracellular Space | cytokine |
| 0.022 | 12.319 | Scg2 |   | SCG2 | secretogranin II | Extracellular Space | cytokine |
| 0.023 | 2.250 | Il4 |   | IL4 | interleukin 4 | Extracellular Space | cytokine |
| 0.024 | 5.153 | Ccl17 |   | CCL17 | C-C motif chemokine ligand 17 | Extracellular Space | cytokine |
| 0.027 | 3.262 | Il1b |   | IL1B | interleukin 1 beta | Extracellular Space | cytokine |
| 0.032 | 3.574 | Ccl19 |   | CCL19 | C-C motif chemokine ligand 19 | Extracellular Space | cytokine |
| 0.040 | 2.267 | Il33 |   | IL33 | interleukin 33 | Extracellular Space | cytokine |
| 0.047 | 5.655 | Ctf1 |   | CTF1 | cardiotrophin 1 | Extracellular Space | cytokine |
| 0.0003 | 18.120 | Chi3l1 |   | CHI3L1 | chitinase 3 like 1 | Extracellular Space | enzyme |
| 0.004 | 4.074 | Cp |   | CP | ceruloplasmin (ferroxidase) | Extracellular Space | enzyme |
| 0.006 | 16.797 | Pla2g7 |   | PLA2G7 | phospholipase A2 group VII | Extracellular Space | enzyme |
| 0.007 | 9.125 | Creg2 |   | CREG2 | cellular repressor of E1A stimulated genes 2 | Extracellular Space | enzyme |
| 0.009 | 34.881 | Aoah |   | AOAH | acyloxyacyl hydrolase | Extracellular Space | enzyme |
| 0.010 | 5.986 | Plbd1 |   | PLBD1 | phospholipase B domain containing 1 | Extracellular Space | enzyme |
| 0.011 | 9.866 | Amy1 |   | AMY2A | amylase, alpha 2A (pancreatic) | Extracellular Space | enzyme |
| 0.012 | 2.616 | Amy2a5 |   | AMY2B | amylase, alpha 2B (pancreatic) | Extracellular Space | enzyme |
| 0.016 | 17.558 | F13a1 |   | F13A1 | coagulation factor XIII A chain | Extracellular Space | enzyme |
| 0.020 | 8.770 | Smpdl3a |   | SMPDL3A | sphingomyelin phosphodiesterase acid like 3A | Extracellular Space | enzyme |
| 0.023 | 7.256 | Ddhd1 |   | DDHD1 | DDHD domain containing 1 | Extracellular Space | enzyme |
| 0.024 | 2.256 | Lyz1 |   | LYZ | lysozyme | Extracellular Space | enzyme |
| 0.030 | 3.590 | Rnase6 |   | RNASE6 | ribonuclease A family member k6 | Extracellular Space | enzyme |
| 0.032 | 2.051 | Arsk |   | ARSK | arylsulfatase family member K | Extracellular Space | enzyme |
| 0.033 | 3.716 | Efemp1 |   | EFEMP1 | EGF containing fibulin-like extracellular matrix protein 1 | Extracellular Space | enzyme |
| 0.001 | 43.109 | Gdf10 |   | GDF10 | growth differentiation factor 10 | Extracellular Space | growth factor |
| 0.001 | 2.456 | Tgfb2 |   | TGFB2 | transforming growth factor beta 2 | Extracellular Space | growth factor |
| 0.003 | 15.389 | Esm1 |   | ESM1 | endothelial cell specific molecule 1 | Extracellular Space | growth factor |
| 0.004 | 12.747 | Dkk1 |   | DKK1 | dickkopf WNT signaling pathway inhibitor 1 | Extracellular Space | growth factor |
| 0.007 | 10.764 | Mdk | D | MDK | midkine (neurite growth-promoting factor 2) | Extracellular Space | growth factor |
| 0.012 | 6.097 | Fgf14 |   | FGF14 | fibroblast growth factor 14 | Extracellular Space | growth factor |
| 0.012 | 6.097 | Mdk | D | MDK | midkine (neurite growth-promoting factor 2) | Extracellular Space | growth factor |
| 0.013 | 5.505 | Gas6 |   | GAS6 | growth arrest specific 6 | Extracellular Space | growth factor |
| 0.013 | 15.139 | Igf1 | D | IGF1 | insulin like growth factor 1 | Extracellular Space | growth factor |
| 0.013 | 17.410 | Igf1 | D | IGF1 | insulin like growth factor 1 | Extracellular Space | growth factor |
| 0.019 | 24.993 | Igf1 | D | IGF1 | insulin like growth factor 1 | Extracellular Space | growth factor |
| 0.019 | 4.082 | Pdgfb |   | PDGFB | platelet derived growth factor subunit B | Extracellular Space | growth factor |
| 0.020 | 10.283 | Bmp5 |   | BMP5 | bone morphogenetic protein 5 | Extracellular Space | growth factor |
| 0.028 | 6.603 | Bmp3 |   | BMP3 | bone morphogenetic protein 3 | Extracellular Space | growth factor |
| 0.029 | 4.333 | Ogn |   | OGN | osteoglycin | Extracellular Space | growth factor |
| 0.033 | 10.160 | Fgf1 |   | FGF1 | fibroblast growth factor 1 | Extracellular Space | growth factor |
| 0.034 | 3.200 | Gdf2 |   | GDF2 | growth differentiation factor 2 | Extracellular Space | growth factor |
| 0.037 | 2.830 | Angpt1 |   | ANGPT1 | angiopoietin 1 | Extracellular Space | growth factor |
| 0.048 | 6.458 | Nov |   | NOV | nephroblastoma overexpressed | Extracellular Space | growth factor |
| 0.048 | 4.976 | Wisp3 |   | WISP3 | WNT1 inducible signaling pathway protein 3 | Extracellular Space | growth factor |
| 0.044 | 4.813 | Rspo3 |   | RSPO3 | R-spondin 3 | Extracellular Space | kinase |
| 0.00005 | 18.506 | Sepp1 |   | SEPP1 | selenoprotein P, plasma, 1 | Extracellular Space | other |
| 0.00012 | 38.400 | Lama3 |   | LAMA3 | laminin subunit alpha 3 | Extracellular Space | other |
| 0.00022 | 9.026 | Penk |   | PENK | proenkephalin | Extracellular Space | other |
| 0.00033 | 103.022 | Wfdc17 | D | Wfdc17/Wfdc18 | WAP four-disulfide core domain 18 | Extracellular Space | other |
| 0.00035  | 7.415 | Slc46a3 |   | SLC46A3 | solute carrier family 46 member 3 | Extracellular Space | other |
| 0.00041  | 14.163 | Sept8 |   | SEPT8 | septin 8 | Extracellular Space | other |
| 0.001 | 22.602 | Col14a1 |   | COL14A1 | collagen type XIV alpha 1 | Extracellular Space | other |
| 0.001 | 4.848 | Fam46c |   | FAM46C | family with sequence similarity 46 member C | Extracellular Space | other |
| 0.001 | 2.628 | Fbln5 |   | FBLN5 | fibulin 5 | Extracellular Space | other |
| 0.001 | 50.392 | Iapp |   | IAPP | islet amyloid polypeptide | Extracellular Space | other |
| 0.001 | 8.932 | Lama5 |   | LAMA5 | laminin subunit alpha 5 | Extracellular Space | other |
| 0.001 | 5.416 | Matn4 | D | MATN4 | matrilin 4 | Extracellular Space | other |
| 0.001 | 15.663 | Sh3tc1 |   | SH3TC1 | SH3 domain and tetratricopeptide repeats 1 | Extracellular Space | other |
| 0.001 | 21.990 | Spock3 | D | SPOCK3 | sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 3 | Extracellular Space | other |
| 0.002 | 6.258 | Col9a3 |   | COL9A3 | collagen type IX alpha 3 | Extracellular Space | other |
| 0.002 | 4.082 | Ibsp |   | IBSP | integrin binding sialoprotein | Extracellular Space | other |
| 0.002 | 165.035 | Matn3 |   | MATN3 | matrilin 3 | Extracellular Space | other |
| 0.002 | 18.884 | Omd |   | Omd | osteomodulin | Extracellular Space | other |
| 0.002 | 23.626 | Serpina6 |   | SERPINA6 | serpin family A member 6 | Extracellular Space | other |
| 0.002 | 56.010 | Sparcl1 |   | SPARCL1 | SPARC like 1 | Extracellular Space | other |
| 0.002 | 70.072 | Wfdc18 | D | Wfdc17/Wfdc18 | WAP four-disulfide core domain 18 | Extracellular Space | other |
| 0.003 | 55.717 | Ceacam10 |   | Ceacam10 | carcinoembryonic antigen-related cell adhesion molecule 10 | Extracellular Space | other |
| 0.003 | 2.920 | Sema3a |   | SEMA3A | semaphorin 3A | Extracellular Space | other |
| 0.003 | 6.203 | Serping1 |   | SERPING1 | serpin family G member 1 | Extracellular Space | other |
| 0.003 | 2.631 | Wfdc1 |   | WFDC1 | WAP four-disulfide core domain 1 | Extracellular Space | other |
| 0.004 | 28.571 | Ccl8 |   | Ccl8 | chemokine (C-C motif) ligand 8 | Extracellular Space | other |
| 0.004 | 4.449 | Islr |   | ISLR | immunoglobulin superfamily containing leucine-rich repeat | Extracellular Space | other |
| 0.004 | 6.751 | Mbp |   | Mbp | myelin basic protein | Extracellular Space | other |
| 0.004 | 21.788 | Slamf8 |   | SLAMF8 | SLAM family member 8 | Extracellular Space | other |
| 0.005 | 139.668 | C1qc |   | C1QC | complement component 1, q subcomponent, C chain | Extracellular Space | other |
| 0.005 | 239.438 | Ucma |   | UCMA | upper zone of growth plate and cartilage matrix associated | Extracellular Space | other |
| 0.006 | 187.482 | Scrg1 |   | SCRG1 | stimulator of chondrogenesis 1 | Extracellular Space | other |
| 0.006 | 6.286 | Smoc2 |   | SMOC2 | SPARC related modular calcium binding 2 | Extracellular Space | other |
| 0.007 | 112.876 | Ahsg |   | AHSG | alpha-2-HS-glycoprotein | Extracellular Space | other |
| 0.007 | 27.586 | Armc2 |   | ARMC2 | armadillo repeat containing 2 | Extracellular Space | other |
| 0.007 | 11.736 | 1500015O10Rik |   | C2orf40 | chromosome 2 open reading frame 40 | Extracellular Space | other |
| 0.007 | 14.943 | Cfh | D | CFH | complement factor H | Extracellular Space | other |
| 0.007 | 2.618 | Cnrip1 |   | CNRIP1 | cannabinoid receptor interacting protein 1 | Extracellular Space | other |
| 0.008 | 31.925 | Bglap2 | D | BGLAP | bone gamma-carboxyglutamate protein | Extracellular Space | other |
| 0.008 | 7.803 | Cfh | D | CFH | complement factor H | Extracellular Space | other |
| 0.008 | 2.305 | Col9a2 |   | COL9A2 | collagen type IX alpha 2 | Extracellular Space | other |
| 0.008 | 46.403 | Egfl6 |   | EGFL6 | EGF like domain multiple 6 | Extracellular Space | other |
| 0.008 | 27.345 | Otos |   | OTOS | otospiralin | Extracellular Space | other |
| 0.009 | 33.904 | Bglap3 | D | BGLAP | bone gamma-carboxyglutamate protein | Extracellular Space | other |
| 0.009 | 8.246 | Pdzk1ip1 | D | PDZK1IP1 | PDZK1 interacting protein 1 | Extracellular Space | other |
| 0.009 | 6.717 | Wnt10a |   | WNT10A | Wnt family member 10A | Extracellular Space | other |
| 0.010 | 19.500 | Mup17 |   | Mup1 (includes others) | major urinary protein 1 | Extracellular Space | other |
| 0.010 | 18.189 | Ntng1 | D | NTNG1 | netrin G1 | Extracellular Space | other |
| 0.011 | 4.657 | Bglap | D | BGLAP | bone gamma-carboxyglutamate protein | Extracellular Space | other |
| 0.011 | 49.677 | Chrdl1 |   | CHRDL1 | chordin-like 1 | Extracellular Space | other |
| 0.011 | 8.504 | Fbln7 | D | FBLN7 | fibulin 7 | Extracellular Space | other |
| 0.011 | 50.009 | Otor |   | OTOR | otoraplin | Extracellular Space | other |
| 0.012 | 6.328 | Mepe |   | MEPE | matrix extracellular phosphoglycoprotein | Extracellular Space | other |
| 0.013 | 22.704 | Adamts17 |   | ADAMTS17 | ADAM metallopeptidase with thrombospondin type 1 motif 17 | Extracellular Space | other |
| 0.014 | 5.122 | Col5a3 |   | COL5A3 | collagen type V alpha 3 | Extracellular Space | other |
| 0.014 | 14.400 | Spock3 | D | SPOCK3 | sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 3 | Extracellular Space | other |
| 0.015 | 11.577 | Lrrn3 |   | LRRN3 | leucine rich repeat neuronal 3 | Extracellular Space | other |
| 0.016 | 5.992 | C4bp |   | C4bp | complement component 4 binding protein | Extracellular Space | other |
| 0.016 | 5.775 | Fry |   | FRY | FRY microtubule binding protein | Extracellular Space | other |
| 0.016 | 15.256 | Spon1 |   | SPON1 | spondin 1 | Extracellular Space | other |
| 0.017 | 3.134 | Col8a2 |   | COL8A2 | collagen type VIII alpha 2 | Extracellular Space | other |
| 0.017 | 19.643 | Dmp1 |   | DMP1 | dentin matrix acidic phosphoprotein 1 | Extracellular Space | other |
| 0.017 | 11.908 | Ecm2 |   | ECM2 | extracellular matrix protein 2 | Extracellular Space | other |
| 0.017 | 2.956 | Tbc1d14 |   | TBC1D14 | TBC1 domain family member 14 | Extracellular Space | other |
| 0.017 | 8.966 | Wnt6 |   | WNT6 | Wnt family member 6 | Extracellular Space | other |
| 0.018 | 27.464 | Bglap3 | D | BGLAP | bone gamma-carboxyglutamate protein | Extracellular Space | other |
| 0.018 | 5.010 | Pdzk1ip1 | D | PDZK1IP1 | PDZK1 interacting protein 1 | Extracellular Space | other |
| 0.018 | 2.510 | Plxdc2 |   | PLXDC2 | plexin domain containing 2 | Extracellular Space | other |
| 0.019 | 6.088 | Acrbp | D | ACRBP | acrosin binding protein | Extracellular Space | other |
| 0.019 | 10.703 | C1qtnf7 |   | C1QTNF7 | C1q and tumor necrosis factor related protein 7 | Extracellular Space | other |
| 0.019 | 8.775 | Fbln7 | D | FBLN7 | fibulin 7 | Extracellular Space | other |
| 0.019 | 15.392 | Frem1 |   | FREM1 | FRAS1 related extracellular matrix 1 | Extracellular Space | other |
| 0.019 | 2.706 | Zpbp2 |   | ZPBP2 | zona pellucida binding protein 2 | Extracellular Space | other |
| 0.020 | 3.005 | C1qb |   | C1QB | complement component 1, q subcomponent, B chain | Extracellular Space | other |
| 0.020 | 18.464 | Olfml1 |   | OLFML1 | olfactomedin like 1 | Extracellular Space | other |
| 0.020 | 3.680 | Psg23 |   | Psg18 (includes others) | pregnancy specific glycoprotein 18 | Extracellular Space | other |
| 0.023 | 33.237 | Epyc |   | EPYC | epiphycan | Extracellular Space | other |
| 0.023 | 4.901 | Impg2 |   | IMPG2 | interphotoreceptor matrix proteoglycan 2 | Extracellular Space | other |
| 0.025 | 27.502 | Ntng1 | D | NTNG1 | netrin G1 | Extracellular Space | other |
| 0.026 | 2.215 | Gm3448 |   | TCTE3 | t-complex-associated-testis-expressed 3 | Extracellular Space | other |
| 0.026 | 4.176 | Wfikkn2 |   | WFIKKN2 | WAP, follistatin/kazal, immunoglobulin, kunitz and netrin domain containing 2 | Extracellular Space | other |
| 0.027 | 4.307 | Col18a1 |   | COL18A1 | collagen type XVIII alpha 1 | Extracellular Space | other |
| 0.027 | 4.407 | Fgf12 |   | FGF12 | fibroblast growth factor 12 | Extracellular Space | other |
| 0.027 | 2.584 | Pdzd7 |   | PDZD7 | PDZ domain containing 7 | Extracellular Space | other |
| 0.028 | 5.409 | Ly6g6d |   | LY6G6D | lymphocyte antigen 6 complex, locus G6D | Extracellular Space | other |
| 0.028 | 22.011 | Matn4 | D | MATN4 | matrilin 4 | Extracellular Space | other |
| 0.028 | 2.293 | Ndnf |   | NDNF | neuron-derived neurotrophic factor | Extracellular Space | other |
| 0.029 | 25.695 | Adipoq |   | ADIPOQ | adiponectin, C1Q and collagen domain containing | Extracellular Space | other |
| 0.029 | 4.703 | Col22a1 |   | COL22A1 | collagen type XXII alpha 1 | Extracellular Space | other |
| 0.029 | 3.819 | Col4a6 |   | COL4A6 | collagen type IV alpha 6 | Extracellular Space | other |
| 0.030 | 19.740 | Lgi4 |   | LGI4 | leucine-rich repeat LGI family member 4 | Extracellular Space | other |
| 0.031 | 8.008 | Calca |   | CALCB | calcitonin related polypeptide beta | Extracellular Space | other |
| 0.033 | 15.770 | Kera |   | KERA | keratocan | Extracellular Space | other |
| 0.033 | 4.343 | Serpind1 |   | SERPIND1 | serpin family D member 1 | Extracellular Space | other |
| 0.034 | 2.341 | Baz2b |   | BAZ2B | bromodomain adjacent to zinc finger domain 2B | Extracellular Space | other |
| 0.034 | 6.239 | Bpifb1 |   | BPIFB1 | BPI fold containing family B member 1 | Extracellular Space | other |
| 0.034 | 2.210 | Nid1 |   | NID1 | nidogen 1 | Extracellular Space | other |
| 0.035 | 5.204 | Frzb |   | FRZB | frizzled-related protein | Extracellular Space | other |
| 0.037 | 2.994 | Cfp |   | CFP | complement factor properdin | Extracellular Space | other |
| 0.037 | 3.911 | Itih3 |   | ITIH3 | inter-alpha-trypsin inhibitor heavy chain 3 | Extracellular Space | other |
| 0.037 | 6.390 | Mfap4 |   | MFAP4 | microfibrillar associated protein 4 | Extracellular Space | other |
| 0.038 | 4.418 | Col9a1 |   | COL9A1 | collagen type IX alpha 1 | Extracellular Space | other |
| 0.039 | 18.578 | Mfap2 |   | MFAP2 | microfibrillar associated protein 2 | Extracellular Space | other |
| 0.039 | 2.601 | Ntn3 |   | NTN3 | netrin 3 | Extracellular Space | other |
| 0.042 | 3.994 | Fcna |   | Fcna | ficolin A | Extracellular Space | other |
| 0.042 | 2.659 | Mtus1 |   | Mtus1 | microtubule associated tumor suppressor 1 | Extracellular Space | other |
| 0.044 | 3.781 | Chad |   | CHAD | chondroadherin | Extracellular Space | other |
| 0.044 | 2.259 | Lum |   | LUM | lumican | Extracellular Space | other |
| 0.046 | 4.474 | Aim1 |   | AIM1 | absent in melanoma 1 | Extracellular Space | other |
| 0.047 | 5.197 | Scube2 |   | SCUBE2 | signal peptide, CUB domain and EGF like domain containing 2 | Extracellular Space | other |
| 0.048 | 6.575 | Apoc1 |   | Apoc1 | apolipoprotein C-I | Extracellular Space | other |
| 0.048 | 2.204 | Ccdc114 |   | CCDC114 | coiled-coil domain containing 114 | Extracellular Space | other |
| 0.049 | 2.053 | Acrbp | D | ACRBP | acrosin binding protein | Extracellular Space | other |
| 0.050 | 2.066 | Matn2 |   | MATN2 | matrilin 2 | Extracellular Space | other |
| 0.001 | 12.397 | Cpxm2 |   | CPXM2 | carboxypeptidase X (M14 family), member 2 | Extracellular Space | peptidase |
| 0.001 | 4.069 | Dpp10 |   | DPP10 | dipeptidyl peptidase like 10 | Extracellular Space | peptidase |
| 0.001 | 338.544 | Pcsk2 | D | PCSK2 | proprotein convertase subtilisin/kexin type 2 | Extracellular Space | peptidase |
| 0.001 | 218.640 | Pcsk2 | D | PCSK2 | proprotein convertase subtilisin/kexin type 2 | Extracellular Space | peptidase |
| 0.003 | 10.161 | Cfb |   | CFB | complement factor B | Extracellular Space | peptidase |
| 0.003 | 187.951 | Cfd |   | CFD | complement factor D (adipsin) | Extracellular Space | peptidase |
| 0.004 | 7.646 | Cpb1 |   | CPB1 | carboxypeptidase B1 | Extracellular Space | peptidase |
| 0.004 | 7.099 | Klk1b11 |   | KLK3 | kallikrein related peptidase 3 | Extracellular Space | peptidase |
| 0.005 | 37.417 | Mmp12 |   | MMP12 | matrix metallopeptidase 12 | Extracellular Space | peptidase |
| 0.008 | 14.874 | Adamts15 |   | ADAMTS15 | ADAM metallopeptidase with thrombospondin type 1 motif 15 | Extracellular Space | peptidase |
| 0.008 | 3.105 | C1ra |   | C1R | complement C1r subcomponent | Extracellular Space | peptidase |
| 0.010 | 2.831 | Cpd |   | CPD | carboxypeptidase D | Extracellular Space | peptidase |
| 0.010 | 3.851 | Pappa2 |   | PAPPA2 | pappalysin 2 | Extracellular Space | peptidase |
| 0.011 | 16.360 | Adamts8 |   | ADAMTS8 | ADAM metallopeptidase with thrombospondin type 1 motif 8 | Extracellular Space | peptidase |
| 0.015 | 8.207 | Cfi |   | CFI | complement factor I | Extracellular Space | peptidase |
| 0.018 | 5.955 | Klk9 |   | KLK9 | kallikrein related peptidase 9 | Extracellular Space | peptidase |
| 0.020 | 34.268 | C4b |   | C4A/C4B | complement component 4B (Chido blood group) | Extracellular Space | peptidase |
| 0.023 | 22.802 | Cpz |   | CPZ | carboxypeptidase Z | Extracellular Space | peptidase |
| 0.030 | 4.415 | Plau |   | PLAU | plasminogen activator, urokinase | Extracellular Space | peptidase |
| 0.031 | 4.755 | Cpxm1 |   | CPXM1 | carboxypeptidase X (M14 family), member 1 | Extracellular Space | peptidase |
| 0.032 | 7.106 | Dhh |   | DHH | desert hedgehog | Extracellular Space | peptidase |
| 0.032 | 4.901 | Pamr1 |   | PAMR1 | peptidase domain containing associated with muscle regeneration 1 | Extracellular Space | peptidase |
| 0.033 | 2.467 | Htra1 |   | HTRA1 | HtrA serine peptidase 1 | Extracellular Space | peptidase |
| 0.041 | 3.038 | Pcsk6 |   | PCSK6 | proprotein convertase subtilisin/kexin type 6 | Extracellular Space | peptidase |
| 0.047 | 2.599 | Cpa3 |   | CPA3 | carboxypeptidase A3 | Extracellular Space | peptidase |
| 0.012 | 5.124 | Acpp |   | ACPP | acid phosphatase, prostate | Extracellular Space | phosphatase |
| 0.030 | 12.913 | Ptpn20 |   | PTPN20 | protein tyrosine phosphatase, non-receptor type 20 | Extracellular Space | phosphatase |
| 0.001 | 30.901 | Apoe |   | APOE | apolipoprotein E | Extracellular Space | transporter |
| 0.001 | 35.548 | Trf | D | TF | transferrin | Extracellular Space | transporter |
| 0.008 | 9.237 | Afp |   | AFP | alpha fetoprotein | Extracellular Space | transporter |
| 0.015 | 2.268 | Slc38a9 |   | SLC38A9 | solute carrier family 38 member 9 | Extracellular Space | transporter |
| 0.016 | 5.223 | Apoc2 |   | APOC2 | apolipoprotein C2 | Extracellular Space | transporter |
| 0.017 | 45.348 | Trf | D | TF | transferrin | Extracellular Space | transporter |
| 0.034 | 3.131 | Rbp4 |   | RBP4 | retinol binding protein 4 | Extracellular Space | transporter |
| 0.048 | 7.934 | Rbp1 |   | RBP1 | retinol binding protein 1 | Extracellular Space | transporter |

Note, D = duplicates