**Appendix 4.** Genes up-regulated in response to PNN reduction

| **Gene symbol** | **P-adj** | **Log2FoldChange** | **Gene name** |
| --- | --- | --- | --- |
| ALPK2 | 1.12E-41 | 3.85 | alpha-kinase 2 |
| UBC | 7.48E-33 | 2.73 | ubiquitin C |
| MMP13 | 1.69E-28 | 2.63 | matrix metallopeptidase 13 (collagenase 3) |
| TMPRSS11E | 3.82E-28 | 4.26 | transmembrane protease, serine 11E |
| MMP1 | 7.32E-20 | 2.22 | matrix metallopeptidase 1 (interstitial collagenase) |
| BNIP3P4 | 5.40E-14 | 3.54 | BCL2/adenovirus E1B 19kDa interacting protein 3 pseudogene 4 |
| EGLN1 | 2.93E-13 | 2.83 | egl-9 family hypoxia-inducible factor 1 |
| SLC7A11 | 1.09E-10 | 1.57 | solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 11 |
| CEACAM6 | 2.38E-10 | 2.12 | carcinoembryonic antigen-related cell adhesion molecule 6 (non-specific cross reacting antigen) |
| CNGB1 | 5.10E-09 | 1.47 | cyclic nucleotide gated channel beta 1 |
| NEFL | 1.38E-08 | 3.12 | neurofilament, light polypeptide |
| MYH15 | 2.83E-08 | 1.76 | myosin, heavy chain 15 |
| PSAT1 | 2.96E-08 | 1.61 | phosphoserine aminotransferase 1 |
| KRT6A | 7.54E-08 | 2.98 | keratin 6A |
| ANKRD22 | 7.54E-08 | 1.70 | ankyrin repeat domain 22 |
| MMP10 | 1.42E-06 | 2.17 | matrix metallopeptidase 10 (stromelysin 2) |
| B3GNT2 | 7.58E-06 | 1.19 | UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 2 |
| ADORA2B | 1.82E-05 | 1.22 | adenosine A2b receptor |
| LOC102723439 | 1.86E-05 | 1.62 | uncharacterized LOC102723439 |
| MYO1E | 3.19E-05 | 1.20 | myosin IE |
| HMGB3P32 | 3.46E-05 | 3.35 | high mobility group box 3 pseudogene 32 |
| ADAMTS6 | 5.05E-05 | 1.12 | ADAM metallopeptidase with thrombospondin type 1 motif, 6 |
| FERMT1 | 5.25E-05 | 1.39 | fermitin family member 1 |
| LURAP1L | 5.54E-05 | 1.82 | leucine rich adaptor protein 1-like |
| EGFR | 7.55E-05 | 1.49 | epidermal growth factor receptor |
| ANXA2 | 0.00010484 | 1.19 | annexin A2 |
| EFNB2 | 0.0001548 | 1.06 | ephrin-B2 |
| AGPAT9 | 0.00016073 | 3.05 | 1-acylglycerol-3-phosphate O-acyltransferase 9 |
| PLA2G4E | 0.00016778 | 3.47 | phospholipase A2, group IVE |
| NEGR1 | 0.00020682 | 1.53 | neuronal growth regulator 1 |
| SLC20A1 | 0.00039474 | 1.44 | solute carrier family 20 (phosphate transporter), member 1 |
| CLMP | 0.00054279 | 1.36 | CXADR-like membrane protein |
| TMEM17 | 0.00061775 | 1.42 | transmembrane protein 17 |
| RFX8 | 0.00062341 | 1.37 | RFX family member 8, lacking RFX DNA binding domain |
| STC2 | 0.00066741 | 1.00 | stanniocalcin 2 |
| CXCL3 | 0.0007258 | 2.88 | chemokine (C-X-C motif) ligand 3 |
| SERPINB2 | 0.00087358 | 5.50 | serpin peptidase inhibitor, clade B (ovalbumin), member 2 |
| LSM10 | 0.00107128 | 1.64 | LSM10, U7 small nuclear RNA associated |
| XPOT | 0.00107128 | 0.98 | exportin, tRNA |
| GARS | 0.00121023 | 0.97 | glycyl-tRNA synthetase |
| MTHFD2L | 0.0012744 | 2.73 | methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2-like |
| MMP9 | 0.0012744 | 1.55 | matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase) |
| ENDOD1 | 0.0012744 | 0.99 | endonuclease domain containing 1 |
| STC1 | 0.00129076 | 1.11 | stanniocalcin 1 |
| MIR100HG | 0.00238888 | 1.04 | mir-100-let-7a-2 cluster host gene (non-protein coding) |
| PTHLH | 0.00289013 | 0.96 | parathyroid hormone-like hormone |
| NQO1 | 0.00296333 | 1.33 | NAD(P)H dehydrogenase, quinone 1 |
| HK2 | 0.00305634 | 1.04 | hexokinase 2 |
| ADAM19 | 0.00334767 | 1.47 | ADAM metallopeptidase domain 19 |
| ICE2P1 | 0.00339985 | 1.76 | interactor of little elongator complex ELL subunit 2 pseudogene 1 |
| NWD2 | 0.0034106 | 2.93 | NACHT and WD repeat domain containing 2 |
| CD55 | 0.00364702 | 1.08 | CD55 molecule, decay accelerating factor for complement (Cromer blood group) |
| SERPINB5 | 0.00404741 | 0.90 | serpin peptidase inhibitor, clade B (ovalbumin), member 5 |
| TMTC2 | 0.00414313 | 1.68 | transmembrane and tetratricopeptide repeat containing 2 |
| SH3RF1 | 0.00572168 | 0.89 | SH3 domain containing ring finger 1 |
| CXCL1 | 0.00618049 | 2.13 | chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha) |
| NAA38 | 0.00624224 | 1.64 | N(alpha)-acetyltransferase 38, NatC auxiliary subunit |
| PNLIPRP3 | 0.00649533 | 1.64 | pancreatic lipase-related protein 3 |
| RPS16 | 0.00657578 | 1.04 | ribosomal protein S16 |
| CD44 | 0.00713659 | 0.87 | CD44 molecule (Indian blood group) |