

Appendix 1:

Genes commonly regulated by IONC and IONT that follow opposite regulation

| <i>Gene Symbol</i> | IONT 12h | IONT 24h | IONT 48h | IONT 3d | IONT 7d | IONT 15d | IONC 12h | IONC 24h | IONC 48h | IONC 3d | IONC 7d |
|---------------------|-------------|-------------|-------------|------------|------------|-------------|-------------|-------------|-------------|------------|------------|
| <i>Dtnb</i> | | | | | | 1.42 | 0.31 | | | | |
| <i>Nrm</i> | | 0.41 | | | | | | | 2.26 | | |
| <i>Tdrd3</i> | 1.28 | 1.11 | 1.01 | 1.01 | 1.08 | 1.37 | 0.66 | 0.62 | 0.62 | 0.71 | 0.64 |
| <i>Thbs2</i> | 12.7 | 1.34 | 4.89 | 1.15 | | | 0.26 | | | | |
| <i>Slc7a3</i> | | | 0.78 | 1.32 | 1.23 | | 0.25 | | | | |
| <i>Slc7a5</i> | 1.38 | 0.44 | 0.92 | 0.64 | | | 0.44 | | | | |
| <i>Prickle1</i> | | | | | 1.37 | | 0.43 | | | | |
| <i>Snap23</i> | | 1.78 | 0.38 | 1.26 | | | 0.42 | | | | |
| <i>Son</i> | 1.82 | 0.63 | 0.9 | 0.48 | | | 0.22 | | | | |
| <i>Cebpg</i> | | 1.58 | 1.1 | 1.25 | | | 0.22 | | | | |
| <i>Appbp1</i> | | 1.26 | 0.86 | 0.93 | | | 0.59 | | | | |
| <i>Bclaf1</i> | | 1.52 | 1.18 | 1.32 | 0.61 | | 0.65 | | | | |
| <i>Cnbp1</i> | | | | 1.18 | 1.05 | 1.29 | 0.78 | | | | |
| <i>Jun</i> | 2.41 | 1.16 | 1.13 | 1.28 | | | 0.38 | 0.39 | 0.35 | 0.34 | 0.36 |
| <i>Nrbf2</i> | | 1.71 | | | | | 0.57 | | | | |
| <i>Rbl2</i> | | 1.49 | | | | | 0.57 | | | | |
| <i>Ubtf</i> | | | | | | 1.9 | 0.64 | 0.65 | | | |
| <i>Lars</i> | | | | | | 1.94 | | 0.64 | 0.63 | 0.55 | |
| <i>Sars1</i> | 1.26 | 1.05 | 1.2 | 1.26 | 0.69 | | 0.39 | | | | |
| <i>Mrps9</i> | | | | | | 1.62 | 0.75 | | | | |
| <i>Trim25_mappe</i> | 2.69 | 1.83 | 2.37 | 2.06 | 1.22 | 1.62 | 0.35 | 0.59 | 0.55 | | |
| <i>Arlh1</i> | 1.66 | 0.72 | 0.96 | 0.46 | | | 0.43 | | | | |
| <i>Chfr</i> | | 1.67 | 0.85 | 1.25 | | | 0.65 | | | | |
| <i>Usp15</i> | 1.28 | 0.72 | 0.88 | 0.66 | | | 0.56 | | | | |
| <i>Nsdhl</i> | | | 1.36 | 0.68 | | | | 0.6 | | | |
| <i>Uble1b</i> | | 1.23 | 1.01 | 1.07 | 0.61 | | 0.63 | | | | |
| <i>Thns1l</i> | | 1.33 | 0.57 | | | | | 0.52 | | | |
| <i>Cpox</i> | | 1.44 | 0.64 | 0.99 | 0.71 | | 0.41 | | | | |
| <i>Arpc5l</i> | | | | | | 1.54 | 0.58 | | | | |
| <i>Kif2c</i> | | 1.67 | 0.62 | 0.88 | 0.56 | | 0.28 | | | | |
| <i>Col10a1</i> | | 1.28 | 0.67 | | | | 0.42 | | | | |
| <i>Sap1</i> | | 1.23 | 0.61 | 0.93 | 0.58 | | 0.34 | | | | |
| <i>Serpini1</i> | | 1.5 | 0.64 | 0.85 | 0.66 | | 0.62 | | | | |
| <i>Slb</i> | | 1.21 | 0.59 | 0.95 | 0.56 | | 0.46 | | | | |
| <i>Cpox</i> | | 1.44 | 0.64 | 0.99 | 0.71 | | 0.41 | | | | |
| <i>Ndufs1</i> | | 4.68 | 0.99 | 3.09 | 1.07 | 2.17 | 0.63 | | | | |
| <i>Arhgef12</i> | | 3.21 | | | | | 0.48 | 0.66 | 0.52 | | |
| <i>Csnk1e</i> | | | | | | 1.67 | 0.46 | 0.44 | | | |
| <i>Gas6</i> | | 0.48 | | | | | | | 1.24 | 1.31 | 1.08 |
| <i>Mpdz</i> | | 1.45 | 0.54 | 1 | 0.74 | | 0.44 | | | | |
| <i>Plcb1</i> | | 1.24 | 0.33 | 0.68 | 0.28 | | 0.28 | | | | |
| <i>Rbl</i> | | 1.99 | 1.79 | 1.83 | | | | | 0.83 | 0.84 | 0.84 |
| <i>Cops8</i> | | | | 1.9 | | | 0.69 | | | | |
| <i>Ghitm</i> | | | 1.35 | 1.12 | 1.13 | 1.71 | 0.64 | | | | |
| <i>Pde4dip</i> | | 1.48 | 1.11 | 1.27 | | | 0.52 | 0.54 | 0.54 | 0.43 | |
| <i>PORF-2</i> | | | | | 0.48 | | | | 2.04 | | |
| <i>St7l</i> | 1.33 | 0.81 | 0.68 | 0.9 | 0.64 | 1.54 | 0.49 | | | | |
| <i>Prpf4b</i> | | | | | | 1.46 | | | 0.35 | | |
| <i>Ddx24</i> | | | | | 1.87 | | | 0.86 | 0.86 | 0.79 | 0.86 |