**Supplemental table S2. Up-regulated genes in NPTr cells**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **PCV2b/H1N1** | | **PCV2b** | | **H1N1** | |
| Gene ID | Fold change | Gene ID | Fold change | Gene ID | Fold change |
| PRDM5 | 250,86 | CCK | 161,38 | SERPINH1 | 12,97 |
| CHRNG | 99,44 | PRDM5 | 101,99 | SDCBP | 10,46 |
| CXCL8 | 96,60 | TGFBR3 | 20,66 | gene:ENSSSCG00000001917 | 9,15 |
| CXCL2 | 65,63 | gene:ENSSSCG00000046628 | 18,52 | PSMB1 | 7,91 |
| CCK | 62,28 | CXCL2 | 17,51 | gene:ENSSSCG00000012119 | 6,77 |
| VAT1L | 53,32 | PPP1R14C | 17,45 | NDRG1 | 6,51 |
| gene:ENSSSCG00000046628 | 31,74 | DNAJB6 | 11,12 | TACSTD2 | 5,61 |
| LTF | 29,40 | PSPH | 11,12 | SLC25A3 | 5,27 |
| PPP1R14C | 24,66 | SNRPA1 | 10,20 | CCN1 | 5,21 |
| PROK2 | 22,62 | PPP1R10 | 9,29 | FADS2 | 5,03 |
| CCN2 | 22,03 | TNIP3 | 9,28 | MRFAP1 | 4,87 |
| PSPH | 21,36 | EDN1 | 9,02 | TAX1BP3 | 4,35 |
| IQUB | 19,57 | DDX52 | 8,64 | SLC50A1 | 4,30 |
| ALYREF | 19,44 | ZNF646 | 8,51 | ERBB3 | 4,20 |
| NPM3 | 18,04 | CSKMT | 7,95 | MGST3 | 4,04 |
| IL1A | 17,54 | gene:ENSSSCG00000047320 | 7,22 | IGFBP2 | 3,86 |
| SRSF7 | 16,52 | ZNF131 | 6,99 | gene:ENSSSCG00000035570 | 3,86 |
| MRPL15 | 15,61 | DUSP4 | 6,57 | UNC5B | 3,83 |
| PLAU | 14,81 | SGK1 | 6,53 | ITM2C | 3,83 |
| CDC42SE1 | 14,20 | TRIB3 | 6,53 | SKP1 | 3,73 |
| SEC61G | 14,12 | RCSD1 | 6,51 | FHL2 | 3,72 |
| SDCBP | 13,51 | ZNF12 | 5,88 | CLDN1 | 3,69 |
| TNIP3 | 13,13 | NCLN | 5,79 | LGALS3 | 3,55 |
| RCSD1 | 13,09 | MAGOH | 5,79 | PTP4A1 | 3,54 |
| P2RY1 | 12,59 | SRSF6 | 5,75 | ATP5PO | 3,45 |
| CSKMT | 12,50 | ZC3H12A | 5,74 | PRKAR1A | 3,45 |
| CCN1 | 12,21 | ODC1 | 5,49 | ESD | 3,33 |
| SGK1 | 11,82 | UBTF | 5,45 | PICALM | 3,32 |
| ZNF646 | 11,71 | CUTC | 5,45 | FTL | 3,28 |
| NSFL1C | 11,71 | SLC38A2 | 5,18 | NDUFC2 | 3,26 |
| gene:ENSSSCG00000012119 | 10,95 | GIPC1 | 5,05 | PFKFB3 | 3,22 |
| CHCHD1 | 10,89 | gene:ENSSSCG00000033786 | 4,74 | HINT1 | 3,17 |
| ART4 | 10,64 | HSPH1 | 4,50 | PGK1 | 3,11 |
| SNRPA1 | 10,09 | PTGS2 | 4,42 | MMP13 | 3,09 |
| GPATCH4 | 9,91 | MED9 | 4,38 | PPP1CB | 3,08 |
| DDX52 | 9,86 | AMD1 | 4,32 | NIBAN2 | 3,07 |
| ANKRD49 | 9,28 | ANKRD1 | 4,27 | DDR1 | 3,05 |
| gene:ENSSSCG00000051136 | 9,02 | SAFB2 | 4,26 | UBB | 2,81 |
| ODC1 | 8,82 | PPP1R15A | 4,25 | WASL | 2,80 |
| TRIB3 | 8,79 | ETS2 | 4,21 | HPS5 | 2,80 |
| NUDT16 | 8,73 | gene:ENSSSCG00000016733 | 4,11 | RPS29 | 2,80 |
| MRPS18C | 8,68 | PCLAF | 3,90 | gene:ENSSSCG00000017509 | 2,76 |
| ZNF639 | 8,68 | TNFSF9 | 3,75 | PSAP | 2,60 |
| gene:ENSSSCG00000044847 | 8,36 | AAK1 | 3,75 | ITM2B | 2,58 |
| RND1 | 8,35 | MAFF | 3,74 | gene:ENSSSCG00000007743 | 2,57 |
| CCNB1IP1 | 8,22 | SYS1 | 3,73 | DDIT4 | 2,57 |
| DUSP4 | 8,21 | WDR74 | 3,66 | HES1 | 2,54 |
| SLC38A2 | 8,07 | BRIX1 | 3,66 | MMP7 | 2,46 |
| H2AFZ | 7,86 | NOP56 | 3,66 | MAL2 | 2,41 |
| MAGOH | 7,85 | HSPA8 | 3,65 | gene:ENSSSCG00000014071 | 2,35 |
| DUSP5 | 7,64 | ELOA | 3,64 | gene:ENSSSCG00000004489 | 2,33 |
| MMP13 | 7,63 | NOP58 | 3,63 | NFKBIA | 2,29 |
| OSTC | 7,46 | TNFAIP3 | 3,62 | CST3 | 2,27 |
| SEMA7A | 7,45 | PEDS1 | 3,59 | gene:ENSSSCG00000005453 | 2,22 |
| TGFBR3 | 7,40 | gene:ENSSSCG00000022322 | 3,52 | gene:ENSSSCG00000033697 | 2,22 |
| PSMB1 | 7,36 | MUC13 | 3,52 | RAC1 | 2,15 |
| PPP1R15A | 7,06 | PEA15 | 3,46 | RPLP0 | 2,12 |
| NOP58 | 6,97 | ZNF207 | 3,44 | PMEPA1 | 2,09 |
| THOC6 | 6,81 | GATAD2A | 3,41 | RPL23 | 2,04 |
| gene:ENSSSCG00000030300 | 6,70 | TCF7L2 | 3,37 | RPS3A | 2,00 |
| UGCG | 6,69 | PDRG1 | 3,24 | RPS25 | 2,00 |
| CTSC | 6,65 | GID4 | 3,23 | ALDH1A1 | 2,00 |
| DYNLT1 | 6,59 | STK4 | 3,13 | RPS7 | 1,97 |
| WDR74 | 6,41 | RNF44 | 3,12 | RPL34 | 1,95 |
| PNO1 | 6,39 | gene:ENSSSCG00000034711 | 3,11 | EIF3E | 1,95 |
| MCL1 | 6,38 | gene:ENSSSCG00000011803 | 3,10 | TPT1 | 1,91 |
| PTGS2 | 6,38 | MKNK2 | 3,10 | RPL27 | 1,85 |
| RELA | 6,21 | RNPS1 | 3,07 | LAPTM4A | 1,83 |
| CDC42EP3 | 6,19 | CTR9 | 3,06 | ENO1 | 1,82 |
| SRSF6 | 6,17 | CTSC | 3,03 | SPP1 | 1,81 |
| NLRP3 | 6,16 | SAT1 | 2,94 | ZFP36L2 | 1,80 |
| EDN1 | 6,12 | SRXN1 | 2,89 |  |  |
| NOP56 | 6,09 | RBM8A | 2,89 |  |  |
| SAFB2 | 6,08 | ZNFX1 | 2,87 |  |  |
| AMD1 | 6,07 | POLR3D | 2,79 |  |  |
| KRT10 | 6,03 | DDX23 | 2,79 |  |  |
| PCLAF | 5,91 | EIF3J | 2,78 |  |  |
| gene:ENSSSCG00000050998 | 5,86 | ING3 | 2,75 |  |  |
| MLLT11 | 5,86 | PSMD7 | 2,73 |  |  |
| HILPDA | 5,84 | R3HDM4 | 2,65 |  |  |
| gene:ENSSSCG00000032059 | 5,82 | ZFP36L1 | 2,62 |  |  |
| ZNF131 | 5,76 | FUNDC2 | 2,61 |  |  |
| AKAP8 | 5,76 | DHX38 | 2,60 |  |  |
| MRPL43 | 5,76 | TXNIP | 2,58 |  |  |
| PNP | 5,74 | ETV3 | 2,58 |  |  |
| TIMM8B | 5,59 | SQSTM1 | 2,48 |  |  |
| TMEM87B | 5,51 | DDX3X | 2,42 |  |  |
| CLDN1 | 5,43 | IDI1 | 2,35 |  |  |
| TACSTD2 | 5,36 | HBEGF | 2,34 |  |  |
| FERMT1 | 5,31 | gene:ENSSSCG00000009211 | 2,33 |  |  |
| AAK1 | 5,30 | IER3 | 2,29 |  |  |
| NFKBIA | 5,27 | TM4SF1 | 2,29 |  |  |
| gene:ENSSSCG00000029160 | 5,22 | MT1A | 2,21 |  |  |
| RBP4 | 5,19 | PSMD8 | 2,17 |  |  |
| EIF3J | 5,16 | FNDC7 | 2,17 |  |  |
| TRAPPC8 | 5,15 | UBE2Q1 | 2,08 |  |  |
| TFRC | 5,15 | CD24 | 1,95 |  |  |
| CUTC | 5,15 | COX1 | 1,89 |  |  |
| TNFSF9 | 5,14 |  |  |  |  |
| HSPA8 | 5,13 |  |  |  |  |
| gene:ENSSSCG00000009211 | 5,11 |  |  |  |  |
| PRNP | 5,04 |  |  |  |  |
| PEDS1 | 5,02 |  |  |  |  |
| S100A8 | 4,83 |  |  |  |  |
| gene:ENSSSCG00000047320 | 4,81 |  |  |  |  |
| GRPEL2 | 4,76 |  |  |  |  |
| gene:ENSSSCG00000017626 | 4,76 |  |  |  |  |
| RPL7L1 | 4,73 |  |  |  |  |
| RAN | 4,67 |  |  |  |  |
| CYCS | 4,64 |  |  |  |  |
| ELOA | 4,59 |  |  |  |  |
| MED9 | 4,51 |  |  |  |  |
| POLR2G | 4,49 |  |  |  |  |
| SMCR8 | 4,48 |  |  |  |  |
| gene:ENSSSCG00000011803 | 4,47 |  |  |  |  |
| gene:ENSSSCG00000014031 | 4,43 |  |  |  |  |
| SNRPG | 4,42 |  |  |  |  |
| TRA2A | 4,39 |  |  |  |  |
| gene:ENSSSCG00000005478 | 4,30 |  |  |  |  |
| gene:ENSSSCG00000033786 | 4,21 |  |  |  |  |
| TXNIP | 4,20 |  |  |  |  |
| SRSF3 | 4,15 |  |  |  |  |
| gene:ENSSSCG00000022322 | 4,12 |  |  |  |  |
| ERBB3 | 4,12 |  |  |  |  |
| TRA2B | 4,11 |  |  |  |  |
| RNF220 | 4,10 |  |  |  |  |
| ZC3H12A | 4,07 |  |  |  |  |
| RNF19B | 4,03 |  |  |  |  |
| NDUFB1 | 4,03 |  |  |  |  |
| MPHOSPH10 | 4,03 |  |  |  |  |
| HSPH1 | 4,01 |  |  |  |  |
| HINT1 | 4,00 |  |  |  |  |
| MRFAP1 | 3,98 |  |  |  |  |
| OSER1 | 3,89 |  |  |  |  |
| RNF126 | 3,87 |  |  |  |  |
| TRMT13 | 3,81 |  |  |  |  |
| NADK | 3,79 |  |  |  |  |
| LGALS3 | 3,76 |  |  |  |  |
| VMP1 | 3,68 |  |  |  |  |
| ITPRID2 | 3,67 |  |  |  |  |
| PSMD12 | 3,65 |  |  |  |  |
| SREK1IP1 | 3,54 |  |  |  |  |
| EXOSC1 | 3,49 |  |  |  |  |
| PPP1R14B | 3,49 |  |  |  |  |
| PTP4A1 | 3,46 |  |  |  |  |
| RIT1 | 3,41 |  |  |  |  |
| DKC1 | 3,36 |  |  |  |  |
| gene:ENSSSCG00000039071 | 3,33 |  |  |  |  |
| RNPS1 | 3,32 |  |  |  |  |
| SNRPB | 3,31 |  |  |  |  |
| EREG | 3,28 |  |  |  |  |
| HNRNPA0 | 3,27 |  |  |  |  |
| MAP2K3 | 3,27 |  |  |  |  |
| gene:ENSSSCG00000040889 | 3,26 |  |  |  |  |
| RBM8A | 3,25 |  |  |  |  |
| SLIRP | 3,23 |  |  |  |  |
| DHRS9 | 3,23 |  |  |  |  |
| PSMD7 | 3,20 |  |  |  |  |
| BRD2 | 3,20 |  |  |  |  |
| PABPN1 | 3,19 |  |  |  |  |
| TM4SF1 | 3,18 |  |  |  |  |
| MAP7D1 | 3,14 |  |  |  |  |
| HNRNPC | 3,13 |  |  |  |  |
| PBDC1 | 3,07 |  |  |  |  |
| ITM2B | 3,04 |  |  |  |  |
| HNRNPA3 | 3,04 |  |  |  |  |
| YTHDF2 | 3,04 |  |  |  |  |
| DDX3X | 3,00 |  |  |  |  |
| KRR1 | 2,96 |  |  |  |  |
| DENND2C | 2,95 |  |  |  |  |
| IFNAR1 | 2,94 |  |  |  |  |
| DDX21 | 2,87 |  |  |  |  |
| gene:ENSSSCG00000038359 | 2,84 |  |  |  |  |
| DDX5 | 2,84 |  |  |  |  |
| gene:ENSSSCG00000003079 | 2,83 |  |  |  |  |
| SYS1 | 2,78 |  |  |  |  |
| FHAD1 | 2,74 |  |  |  |  |
| DNAJA1 | 2,73 |  |  |  |  |
| BRIX1 | 2,72 |  |  |  |  |
| H2AZ2 | 2,72 |  |  |  |  |
| SMIM7 | 2,71 |  |  |  |  |
| gene:ENSSSCG00000005453 | 2,69 |  |  |  |  |
| USP1 | 2,69 |  |  |  |  |
| PTBP1 | 2,68 |  |  |  |  |
| gene:ENSSSCG00000034572 | 2,68 |  |  |  |  |
| THBS1 | 2,62 |  |  |  |  |
| DDX27 | 2,61 |  |  |  |  |
| MCM4 | 2,58 |  |  |  |  |
| ETS2 | 2,54 |  |  |  |  |
| ZFP36L1 | 2,50 |  |  |  |  |
| ZNFX1 | 2,49 |  |  |  |  |
| COX7A2 | 2,49 |  |  |  |  |
| RTF1 | 2,48 |  |  |  |  |
| POLR2K | 2,46 |  |  |  |  |
| PEA15 | 2,41 |  |  |  |  |
| COX1 | 2,39 |  |  |  |  |
| EMP1 | 2,39 |  |  |  |  |
| ETF1 | 2,38 |  |  |  |  |
| MT1A | 2,37 |  |  |  |  |
| FAM133B | 2,34 |  |  |  |  |
| BCLAF1 | 2,34 |  |  |  |  |
| POMP | 2,31 |  |  |  |  |
| MRPL57 | 2,30 |  |  |  |  |
| MKNK2 | 2,29 |  |  |  |  |
| TNFAIP3 | 2,28 |  |  |  |  |
| PSMD8 | 2,27 |  |  |  |  |
| CCT5 | 2,22 |  |  |  |  |
| RSL24D1 | 2,16 |  |  |  |  |
| PRDX1 | 2,14 |  |  |  |  |
| PNN | 2,08 |  |  |  |  |
| ANXA1 | 2,07 |  |  |  |  |
| gene:ENSSSCG00000000377 | 2,02 |  |  |  |  |
| ATP6 | 1,88 |  |  |  |  |

Fold change of gene expression in infected cells comparing to control (mock-infected cells).