

Supplementary table 1 Full list of differentially expressed genes in the transcriptome analysis. The genes were sorted according to log₂Fold change values and then grouped according to up- or down-regulated genes. Days 1, 2 and 4 are presented for the horse inoculated with rAHSV-5 (NS4) and days 1 and 2 for the horses inoculated with rAHSV-5minNS4 (minNS4). The log₂FC is indicated in bold for genes differentially expressed on the same day in both NS4 and minNS4. ^aRanks of up- or down-regulated genes in each comparison. ^{*}Involvement in innate immunity according to InnateDB.

| Gene | Upregulated genes | | | | | | Gene | | | | |
|--------------------|-------------------|----------------------------------|-------------------|----------------------------------|-------------------|----------------------------------|--------------------|-------------------|----------------------------------|-------------------|----------------------------------|
| | NS4_D1 | | NS4_D2 | | NS4_D4 | | | minNS4_D1 | | minNS4_D2 | |
| | Rank ^a | log ₂ FC ^b | Rank ^a | log ₂ FC ^b | Rank ^a | log ₂ FC ^b | | Rank ^a | log ₂ FC ^b | Rank ^a | log ₂ FC ^b |
| OAS3* | U1 | 1.62 | U16 | 4.4304 | U11 | 6.4897 | Novel02004 | U1 | 5.6909 | - | - |
| ENSECAG00000021220 | U2 | 1.5197 | U23 | 4.1436 | U64 | 3.5219 | MX2* | U2 | 5.5855 | U2 | 3.4715 |
| MX1* | U3 | 1.3585 | U8 | 5.9236 | U10 | 6.6216 | Novel00397 | U3 | 5.3207 | U1 | 4.0086 |
| STAB1 | U4 | 1.2245 | - | - | - | - | Novel02003 | U4 | 5.189 | - | - |
| TGM3 | U5 | 1.1218 | - | - | - | - | IFIT5* | U5 | 4.3476 | - | - |
| OAS2* | U6 | 1.0924 | U25 | 4.0317 | U24 | 5.0045 | IFI44 | U6 | 4.2385 | U3 | 1.9847 |
| APOBEC3Z1B | - | - | U1 | 8.0631 | U2 | 9.007 | MX1* | U7 | 3.7577 | - | - |
| Novel00397 | - | - | U2 | 7.7817 | U1 | 11.001 | HERC5* | U8 | 3.4031 | - | - |
| MX2* | - | - | U3 | 7.5321 | U3 | 8.5137 | ENSECAG00000000284 | U9 | 3.2036 | U4 | 1.6982 |
| Novel02003 | - | - | U4 | 7.2867 | U5 | 7.4986 | HERC6 | U10 | 3.1709 | - | - |
| Novel00818 | - | - | U5 | 7.2274 | U4 | 7.5143 | Novel01303 | U11 | 3.0508 | - | - |
| DDX60 | - | - | U6 | 6.9685 | U7 | 7.3932 | DDX58* | U12 | 2.8417 | - | - |
| Novel01228 | - | - | U7 | 6.3226 | U22 | 5.0633 | SPHK1* | U13 | 2.8402 | - | - |
| CCL2* | - | - | U9 | 5.7699 | U12 | 6.2304 | OASL | U14 | 2.8347 | - | - |
| Novel02081 | - | - | U10 | 5.4359 | U19 | 5.241 | Novel01876 | U15 | 2.825 | - | - |
| IFIT5* | - | - | U11 | 5.3356 | U21 | 5.1826 | OAS3* | U16 | 2.8087 | U6 | 1.5056 |
| ISG15* | - | - | U12 | 5.2103 | U8 | 7.0132 | C1R* | U17 | 2.7992 | - | - |
| ENSECAG00000000284 | - | - | U13 | 4.788 | U17 | 5.5516 | RTP4 | U18 | 2.7486 | - | - |
| HERC5* | - | - | U14 | 4.4969 | U44 | 4.0961 | FBXO39 | U19 | 2.7377 | - | - |
| IFIT1* | - | - | U15 | 4.459 | U45 | 4.0605 | IRF7* | U20 | 2.6988 | - | - |
| HSD11B1 | - | - | U17 | 4.4046 | U13 | 5.9152 | GBP2* | U21 | 2.6869 | - | - |
| IFI44 | - | - | U18 | 4.344 | U48 | 3.9876 | C2* | U22 | 2.65 | - | - |
| CXCL10* | - | - | U19 | 4.2425 | U26 | 4.8572 | ITSN1 | U23 | 2.6337 | - | - |
| ETV7 | - | - | U20 | 4.2387 | U20 | 5.2229 | CMPK2 | U24 | 2.6184 | U5 | 1.6838 |
| Novel02002 | - | - | U21 | 4.2387 | U55 | 3.7706 | ENSECAG00000005126 | U25 | 2.6017 | - | - |
| IFI6* | - | - | U22 | 4.162 | U15 | 5.7488 | ENSECAG00000012132 | U26 | 2.5958 | - | - |
| IFIH1* | - | - | U24 | 4.103 | U37 | 4.3226 | IFI6* | U27 | 2.558 | - | - |
| HERC6 | - | - | U26 | 4.0114 | U56 | 3.7248 | OAS2* | U28 | 2.5476 | U7 | 1.3382 |
| Novel01303 | - | - | U27 | 3.9936 | U38 | 4.313 | XAF1 | U29 | 2.5432 | - | - |
| IRG1 | - | - | U28 | 3.9694 | U47 | 4.0036 | HSD11B1 | U30 | 2.4699 | - | - |
| OAS1* | - | - | U29 | 3.9188 | U29 | 4.7622 | OAS1* | U31 | 2.4688 | - | - |
| IFIT3* | - | - | U30 | 3.8494 | U67 | 3.4453 | Novel02081 | U32 | 2.381 | - | - |
| ENSECAG00000010185 | - | - | U31 | 3.8455 | U73 | 3.2855 | IRG1 | U33 | 2.3481 | - | - |
| IFI44L | - | - | U32 | 3.794 | U79 | 3.1244 | Novel00654 | U34 | 2.317 | - | - |
| IRF7* | - | - | U33 | 3.7091 | U16 | 5.6167 | SPATS2L | U35 | 2.2573 | - | - |
| XAF1 | - | - | U34 | 3.693 | U35 | 4.4591 | STAT1* | U36 | 2.2151 | - | - |
| FBXO39 | - | - | U35 | 3.6748 | U53 | 3.803 | ZCCHC2 | U37 | 2.1628 | - | - |
| RTP4 | - | - | U36 | 3.67 | U36 | 4.4495 | ENSECAG00000024875 | U38 | 2.1312 | - | - |
| EIF2AK2* | - | - | U37 | 3.5122 | U102 | 2.6891 | SIGLEC1* | U39 | 2.1219 | U8 | 1.3016 |
| CMPK2 | - | - | U38 | 3.495 | U31 | 4.6301 | DTX3L | U40 | 1.9868 | - | - |
| SAMD9L | - | - | U39 | 3.4872 | U113 | 2.4844 | | | | | |
| EPSTI1 | - | - | U40 | 3.4791 | U80 | 3.0907 | | | | | |
| RSAD2* | - | - | U41 | 3.3533 | U23 | 5.0315 | | | | | |

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| RNF213 | - | - | U42 | 3.1751 | U39 | 4.2855 |
| OASL | - | - | U43 | 3.1098 | U34 | 4.5074 |
| GBP5 | - | - | U44 | 3.0003 | U204 | 1.7655 |
| DDX58* | - | - | U45 | 2.9652 | U76 | 3.2151 |
| CD274* | - | - | U46 | 2.8545 | - | - |
| ISG20* | - | - | U47 | 2.8413 | U52 | 3.8241 |
| ENSECAG00000023677 | - | - | U48 | 2.8075 | U9 | 6.6248 |
| ENSECAG00000005126 | - | - | U49 | 2.7935 | U123 | 2.3716 |
| DHX58* | - | - | U50 | 2.7626 | U43 | 4.13 |
| GBP2* | - | - | U51 | 2.7195 | U174 | 1.9736 |
| ENSECAG00000001514 | - | - | U52 | 2.717 | U33 | 4.5197 |
| SIGLEC1* | - | - | U53 | 2.6627 | U27 | 4.8531 |
| GBP6* | - | - | U54 | 2.6394 | - | - |
| MB21D1* | - | - | U55 | 2.631 | - | - |
| ENSECAG00000012132 | - | - | U56 | 2.6242 | U63 | 3.5254 |
| DTX3L | - | - | U57 | 2.6141 | U153 | 2.1728 |
| ENSECAG00000017172 | - | - | U58 | 2.6016 | U42 | 4.1752 |
| PARP15 | - | - | U59 | 2.5473 | U151 | 2.1824 |
| ENSECAG00000002575 | - | - | U60 | 2.5129 | U342 | 1.1778 |
| BATF2 | - | - | U61 | 2.5117 | U69 | 3.3539 |
| Novel01524 | - | - | U62 | 2.4028 | - | - |
| STAR13 | - | - | U63 | 2.3912 | U101 | 2.7027 |
| HELB | - | - | U64 | 2.3296 | U179 | 1.9376 |
| Novel00663 | - | - | U65 | 2.3253 | U68 | 3.3796 |
| PARP14 | - | - | U66 | 2.3215 | U229 | 1.6018 |
| ZBP1* | - | - | U67 | 2.3195 | U59 | 3.6508 |
| Novel00314 | - | - | U68 | 2.2836 | U85 | 2.9548 |
| TRANK1 | - | - | U69 | 2.256 | U71 | 3.2876 |
| BST2* | - | - | U70 | 2.2433 | U75 | 3.2208 |
| ENSECAG00000010496 | - | - | U71 | 2.2387 | U93 | 2.8198 |
| IFI35 | - | - | U72 | 2.2306 | U77 | 3.2033 |
| SMTNL1 | - | - | U73 | 2.2108 | U92 | 2.8294 |
| ENSECAG00000019932 | - | - | U74 | 2.2017 | U65 | 3.5218 |
| ADGRE1 | - | - | U75 | 2.1566 | U61 | 3.6341 |
| C2* | - | - | U76 | 2.138 | U49 | 3.9727 |
| Novel01139 | - | - | U77 | 2.1371 | U208 | 1.7405 |
| PLAC8 | - | - | U78 | 2.1368 | U175 | 1.966 |
| SOCS3* | - | - | U79 | 2.1114 | U106 | 2.5855 |
| Novel00962 | - | - | U80 | 2.1043 | U72 | 3.2871 |
| ZNFX1 | - | - | U81 | 2.0458 | U128 | 2.3426 |
| IL1RN | - | - | U82 | 2.0073 | U60 | 3.6374 |
| DDX60L* | - | - | U83 | 1.9482 | - | - |
| Novel00463 | - | - | U84 | 1.9133 | U66 | 3.4494 |
| STAT2* | - | - | U85 | 1.9109 | U109 | 2.55 |
| Novel01576 | - | - | U86 | 1.8958 | U200 | 1.7896 |
| UBA7 | - | - | U87 | 1.8798 | U81 | 3.0595 |
| STAT1* | - | - | U88 | 1.879 | U353 | 1.1349 |
| MLKL | - | - | U89 | 1.8755 | U199 | 1.8063 |
| ENSECAG00000002739 | - | - | U90 | 1.8668 | - | - |
| ZCCHC2 | - | - | U91 | 1.8297 | U270 | 1.3704 |
| HSH2D | - | - | U92 | 1.8162 | U82 | 3.0581 |
| SAMD9 | - | - | U93 | 1.8145 | - | - |
| ENSECAG00000017571 | - | - | U94 | 1.8137 | U184 | 1.9114 |
| TTC25 | - | - | U95 | 1.8125 | U144 | 2.2186 |
| ENSECAG00000016018 | - | - | U96 | 1.8004 | - | - |
| IRF9* | - | - | U97 | 1.775 | U130 | 2.3267 |

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| TNFSF10* | - | - | U98 | 1.7567 | - | - |
| ENSECAG00000023195 | - | - | U99 | 1.749 | U99 | 2.7412 |
| ENSECAG00000017295 | - | - | U100 | 1.7311 | U216 | 1.71 |
| Novel01503 | - | - | U101 | 1.7305 | - | - |
| NAMPT* | - | - | U102 | 1.711 | U259 | 1.4039 |
| IDO1* | - | - | U103 | 1.698 | - | - |
| USP15 | - | - | U104 | 1.6777 | - | - |
| Novel01769 | - | - | U105 | 1.6558 | - | - |
| FOXS1 | - | - | U106 | 1.6507 | U126 | 2.3554 |
| TMEM140 | - | - | U107 | 1.6502 | U150 | 2.1826 |
| SPATS2L | - | - | U108 | 1.6414 | U160 | 2.1108 |
| IRF1* | - | - | U109 | 1.6413 | U228 | 1.6021 |
| ENSECAG00000024430 | - | - | U110 | 1.6229 | U107 | 2.5802 |
| Novel00356 | - | - | U111 | 1.5934 | - | - |
| PARP12 | - | - | U112 | 1.5879 | U135 | 2.2861 |
| ADAR* | - | - | U113 | 1.5725 | U122 | 2.4063 |
| TRIM21* | - | - | U114 | 1.5679 | U183 | 1.9217 |
| TRAFD1* | - | - | U115 | 1.5672 | U124 | 2.3623 |
| ENSECAG00000020878 | - | - | U116 | 1.5592 | U313 | 1.2576 |
| Novel00207 | - | - | U117 | 1.5271 | U103 | 2.6852 |
| PML* | - | - | U118 | 1.5172 | U116 | 2.452 |
| CSPG5 | - | - | U119 | 1.5052 | U164 | 2.0753 |
| EGR2 | - | - | U120 | 1.5045 | U139 | 2.2659 |
| PARP9 | - | - | U121 | 1.5031 | - | - |
| LY6E | - | - | U122 | 1.4935 | U78 | 3.1486 |
| RGS1 | - | - | U123 | 1.4757 | U276 | 1.3534 |
| UBE2L6 | - | - | U124 | 1.4727 | U125 | 2.3592 |
| SNX10 | - | - | U125 | 1.4591 | - | - |
| TRPM2* | - | - | U126 | 1.457 | U91 | 2.8559 |
| EPB41L2 | - | - | U127 | 1.4524 | U87 | 2.91 |
| USP25* | - | - | U128 | 1.4505 | - | - |
| NMI | - | - | U129 | 1.4326 | - | - |
| OGFR | - | - | U130 | 1.4232 | U88 | 2.8941 |
| TLR2* | - | - | U131 | 1.4074 | U301 | 1.2722 |
| LGALS3BP | - | - | U132 | 1.4054 | U100 | 2.7294 |
| MOV10* | - | - | U133 | 1.3857 | U146 | 2.2087 |
| Novel00497 | - | - | U134 | 1.3821 | U233 | 1.5582 |
| ENSECAG00000013655 | - | - | U135 | 1.3532 | - | - |
| Novel00389 | - | - | U136 | 1.3487 | U365 | 1.0883 |
| TOR1B | - | - | U137 | 1.3482 | U140 | 2.2479 |
| CD86* | - | - | U138 | 1.3328 | U244 | 1.5078 |
| STAG3 | - | - | U139 | 1.3128 | - | - |
| ENSECAG00000011895 | - | - | U140 | 1.301 | U201 | 1.785 |
| CNDP2 | - | - | U141 | 1.2812 | U173 | 1.9746 |
| Novel02013 | - | - | U142 | 1.2805 | U89 | 2.8926 |
| PXK | - | - | U143 | 1.2777 | - | - |
| SLFN5 | - | - | U144 | 1.2751 | - | - |
| ACSL1 | - | - | U145 | 1.2725 | - | - |
| TNFSF13B | - | - | U146 | 1.2614 | - | - |
| DUSP6 | - | - | U147 | 1.2442 | U202 | 1.7826 |
| FOSB | - | - | U148 | 1.2263 | U147 | 2.2034 |
| LAP3 | - | - | U149 | 1.2161 | - | - |
| SHISA5 | - | - | U150 | 1.1888 | U120 | 2.4193 |
| ERAP2 | - | - | U151 | 1.1809 | - | - |
| CD69 | - | - | U152 | 1.1706 | - | - |
| ENSECAG00000007830 | - | - | U153 | 1.1593 | - | - |

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| MORC3 | - | - | U154 | 1.1565 | - | - |
| CD83 | - | - | U155 | 1.1523 | U211 | 1.7381 |
| ENSECAG00000019621 | - | - | U156 | 1.135 | - | - |
| WARS | - | - | U157 | 1.1177 | U289 | 1.296 |
| NR4A1 | - | - | U158 | 1.1079 | U152 | 2.1786 |
| CYCS | - | - | U159 | 1.0968 | - | - |
| CYBB* | - | - | U160 | 1.0944 | U285 | 1.3029 |
| CMTR1 | - | - | U161 | 1.0782 | U169 | 1.9947 |
| DAPK1 | - | - | U162 | 1.0592 | U112 | 2.4884 |
| ANKFY1 | - | - | U163 | 1.0586 | U255 | 1.4406 |
| Novel01422 | - | - | U164 | 1.0558 | - | - |
| B3GNT2 | - | - | U165 | 1.0532 | - | - |
| GTF2E2 | - | - | U166 | 1.0506 | - | - |
| EGR1* | - | - | U167 | 1.0494 | U187 | 1.8925 |
| SKAP2 | - | - | U168 | 1.029 | - | - |
| PHYHD1 | - | - | U169 | 1.022 | U223 | 1.623 |
| PNP | - | - | U170 | 1.0116 | U212 | 1.7347 |
| MXD1 | - | - | U171 | 1.0095 | U303 | 1.269 |
| OTUD4 | - | - | U172 | 1.0066 | - | - |
| GPRC5D | - | - | - | - | U6 | 7.449 |
| TMEM255A | - | - | - | - | U14 | 5.7956 |
| SPHK1* | - | - | - | - | U18 | 5.5241 |
| AXL* | - | - | - | - | U25 | 4.9425 |
| EPS8L1 | - | - | - | - | U28 | 4.8118 |
| COX7A1 | - | - | - | - | U30 | 4.6575 |
| ENSECAG00000009729 | - | - | - | - | U32 | 4.5626 |
| AGRN | - | - | - | - | U40 | 4.2443 |
| Novel00902 | - | - | - | - | U41 | 4.2384 |
| RGL1 | - | - | - | - | U46 | 4.016 |
| C3AR1* | - | - | - | - | U50 | 3.9335 |
| ENSECAG00000000968 | - | - | - | - | U51 | 3.8787 |
| Novel00418 | - | - | - | - | U54 | 3.7798 |
| C1R* | - | - | - | - | U57 | 3.7192 |
| CPNE2 | - | - | - | - | U58 | 3.703 |
| SDC3 | - | - | - | - | U62 | 3.5857 |
| TGM2 | - | - | - | - | U70 | 3.3477 |
| CKB | - | - | - | - | U74 | 3.224 |
| MAFB* | - | - | - | - | U83 | 3.0352 |
| RASGEF1B* | - | - | - | - | U84 | 3.0319 |
| ENSECAG00000015483 | - | - | - | - | U86 | 2.9415 |
| NR1H3* | - | - | - | - | U90 | 2.8656 |
| Novel00353 | - | - | - | - | U94 | 2.8181 |
| GPIHBP1 | - | - | - | - | U95 | 2.8166 |
| Novel00206 | - | - | - | - | U96 | 2.816 |
| ADGRG6 | - | - | - | - | U97 | 2.7943 |
| DCSTAMP | - | - | - | - | U98 | 2.7872 |
| BFSP2 | - | - | - | - | U104 | 2.6447 |
| FAM20C | - | - | - | - | U105 | 2.5907 |
| PHF7 | - | - | - | - | U108 | 2.5529 |
| C19orf38 | - | - | - | - | U110 | 2.5098 |
| NOD1* | - | - | - | - | U111 | 2.5062 |
| ENTPD3 | - | - | - | - | U114 | 2.4723 |
| GRN* | - | - | - | - | U115 | 2.4649 |
| CDA | - | - | - | - | U117 | 2.4503 |
| ENSECAG00000024882 | - | - | - | - | U118 | 2.4487 |
| C21orf2 | - | - | - | - | U119 | 2.4283 |

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| Novel00409 | - | - | - | - | U121 | 2.4075 |
| ENSECAG00000014546 | - | - | - | - | U127 | 2.3532 |
| METRNL | - | - | - | - | U129 | 2.3342 |
| HSPA6 | - | - | - | - | U131 | 2.3181 |
| Novel01030 | - | - | - | - | U132 | 2.3101 |
| SPNS3 | - | - | - | - | U133 | 2.303 |
| ENSECAG00000013276 | - | - | - | - | U134 | 2.3016 |
| TREX1 | - | - | - | - | U136 | 2.279 |
| LTB4R* | - | - | - | - | U137 | 2.2735 |
| ENSECAG00000000910 | - | - | - | - | U138 | 2.273 |
| ENSECAG000000021750 | - | - | - | - | U141 | 2.246 |
| DUSP5 | - | - | - | - | U142 | 2.2388 |
| TRIM14* | - | - | - | - | U143 | 2.2246 |
| RIN2 | - | - | - | - | U145 | 2.2089 |
| TCF7L2 | - | - | - | - | U148 | 2.1981 |
| FRMD4A | - | - | - | - | U149 | 2.1895 |
| Novel00034 | - | - | - | - | U154 | 2.1722 |
| SLC15A3 | - | - | - | - | U155 | 2.1529 |
| Novel00530 | - | - | - | - | U156 | 2.1488 |
| CHKA | - | - | - | - | U157 | 2.1483 |
| HK3 | - | - | - | - | U158 | 2.1331 |
| SOCS1* | - | - | - | - | U159 | 2.1253 |
| ILT11A | - | - | - | - | U161 | 2.1091 |
| HELZ2 | - | - | - | - | U162 | 2.1039 |
| ST14 | - | - | - | - | U163 | 2.0912 |
| TRIB1 | - | - | - | - | U165 | 2.0371 |
| DLC1 | - | - | - | - | U166 | 2.0297 |
| SLC7A5 | - | - | - | - | U167 | 2.0237 |
| ENSECAG00000019488 | - | - | - | - | U168 | 2.0075 |
| NFKBIE* | - | - | - | - | U170 | 1.9903 |
| GRASP | - | - | - | - | U171 | 1.9887 |
| Novel01715 | - | - | - | - | U172 | 1.9793 |
| CD68 | - | - | - | - | U176 | 1.9579 |
| C9orf91 | - | - | - | - | U177 | 1.9578 |
| C19orf66 | - | - | - | - | U178 | 1.956 |
| CDKN1A* | - | - | - | - | U180 | 1.9343 |
| Novel00929 | - | - | - | - | U181 | 1.9313 |
| TRIM26* | - | - | - | - | U182 | 1.9255 |
| ANGPTL6 | - | - | - | - | U185 | 1.9054 |
| ACP2 | - | - | - | - | U186 | 1.9 |
| CMKLR1 | - | - | - | - | U188 | 1.8864 |
| MECR | - | - | - | - | U189 | 1.8741 |
| EMILIN1 | - | - | - | - | U190 | 1.8727 |
| GLUL | - | - | - | - | U191 | 1.8695 |
| EIF4E1B | - | - | - | - | U192 | 1.866 |
| ENSECAG00000019726 | - | - | - | - | U193 | 1.8472 |
| NOD2* | - | - | - | - | U194 | 1.8466 |
| SLPI | - | - | - | - | U195 | 1.836 |
| LDLR | - | - | - | - | U196 | 1.8313 |
| BAHCC1 | - | - | - | - | U197 | 1.82 |
| S100P | - | - | - | - | U198 | 1.8153 |
| ENSECAG00000008912 | - | - | - | - | U203 | 1.778 |
| RHBDF2* | - | - | - | - | U205 | 1.7618 |
| HMOX1* | - | - | - | - | U206 | 1.7588 |
| NACC2 | - | - | - | - | U207 | 1.7516 |
| GSDMD | - | - | - | - | U209 | 1.7403 |

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|---------------------|---|---|---|---|------|--------|
| AMPD3 | - | - | - | - | U210 | 1.7401 |
| ENSECAG00000019765 | - | - | - | - | U213 | 1.7289 |
| GNGT2 | - | - | - | - | U214 | 1.7215 |
| LAG3 | - | - | - | - | U215 | 1.7189 |
| MFN2* | - | - | - | - | U217 | 1.6979 |
| MCF2L | - | - | - | - | U218 | 1.6979 |
| RAB20 | - | - | - | - | U219 | 1.6852 |
| B3GNT7 | - | - | - | - | U220 | 1.6757 |
| Novel00507 | - | - | - | - | U221 | 1.6691 |
| ENSECAG00000019095 | - | - | - | - | U222 | 1.636 |
| ATHL1 | - | - | - | - | U224 | 1.6226 |
| ETS2 | - | - | - | - | U225 | 1.6198 |
| SLC35F6 | - | - | - | - | U226 | 1.6144 |
| BHLHE40 | - | - | - | - | U227 | 1.6086 |
| PLOD1 | - | - | - | - | U230 | 1.5888 |
| ACVRL1 | - | - | - | - | U231 | 1.5814 |
| FAM129B | - | - | - | - | U232 | 1.5704 |
| CTSB* | - | - | - | - | U234 | 1.546 |
| PARP10 | - | - | - | - | U235 | 1.5427 |
| RIPK3* | - | - | - | - | U236 | 1.541 |
| Novel01888 | - | - | - | - | U237 | 1.5407 |
| UNC93B1* | - | - | - | - | U238 | 1.5394 |
| UBE2J2 | - | - | - | - | U239 | 1.538 |
| RNF19B | - | - | - | - | U240 | 1.5296 |
| Novel02043 | - | - | - | - | U241 | 1.527 |
| PDXK | - | - | - | - | U242 | 1.5262 |
| TAP1 | - | - | - | - | U243 | 1.5248 |
| DDIT4 | - | - | - | - | U245 | 1.4998 |
| ACOX3 | - | - | - | - | U246 | 1.4923 |
| ENSECAG00000002438 | - | - | - | - | U247 | 1.4854 |
| CHST15 | - | - | - | - | U248 | 1.4849 |
| ENSECAG00000011466 | - | - | - | - | U249 | 1.4815 |
| PLEK | - | - | - | - | U250 | 1.4655 |
| ENSECAG000000027056 | - | - | - | - | U251 | 1.4597 |
| CD8B | - | - | - | - | U252 | 1.4573 |
| ATP13A2 | - | - | - | - | U253 | 1.457 |
| TBC1D8 | - | - | - | - | U254 | 1.442 |
| BAK1 | - | - | - | - | U256 | 1.4351 |
| ENSECAG00000017970 | - | - | - | - | U257 | 1.4178 |
| Novel01196 | - | - | - | - | U258 | 1.4154 |
| SCPEP1 | - | - | - | - | U260 | 1.403 |
| SLC25A29 | - | - | - | - | U261 | 1.3991 |
| ENSECAG00000015010 | - | - | - | - | U262 | 1.3905 |
| CYTH4 | - | - | - | - | U263 | 1.3903 |
| ENSECAG00000006288 | - | - | - | - | U264 | 1.3879 |
| ADA | - | - | - | - | U265 | 1.3769 |
| TCIRG1 | - | - | - | - | U266 | 1.3747 |
| CCL3 | - | - | - | - | U267 | 1.3712 |
| ENSECAG000000021110 | - | - | - | - | U268 | 1.3709 |
| PLXNA1 | - | - | - | - | U269 | 1.3705 |
| TIMP1 | - | - | - | - | U271 | 1.3701 |
| TTYH3 | - | - | - | - | U272 | 1.3663 |
| ELF4* | - | - | - | - | U273 | 1.3645 |
| SREBF1* | - | - | - | - | U274 | 1.3582 |
| TREML2* | - | - | - | - | U275 | 1.3563 |
| PRAM1 | - | - | - | - | U277 | 1.3528 |

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|---------------------|---|---|---|---|------|--------|
| SH3BP2 | - | - | - | - | U278 | 1.3453 |
| Novel00360 | - | - | - | - | U279 | 1.3311 |
| IGHE | - | - | - | - | U280 | 1.3214 |
| SEPX1 | - | - | - | - | U281 | 1.3194 |
| MYD88* | - | - | - | - | U282 | 1.3175 |
| EHD4 | - | - | - | - | U283 | 1.313 |
| E2F2 | - | - | - | - | U284 | 1.3042 |
| NCF4 | - | - | - | - | U286 | 1.3022 |
| IL10RA | - | - | - | - | U287 | 1.3014 |
| NFKBIA* | - | - | - | - | U288 | 1.2988 |
| FGD2 | - | - | - | - | U290 | 1.2958 |
| PSME2 | - | - | - | - | U291 | 1.2957 |
| RHOB | - | - | - | - | U292 | 1.2943 |
| ARID5A | - | - | - | - | U293 | 1.2937 |
| CMTM3 | - | - | - | - | U294 | 1.2935 |
| LRRRC25 | - | - | - | - | U295 | 1.2906 |
| GRINA | - | - | - | - | U296 | 1.29 |
| PYGL | - | - | - | - | U297 | 1.2898 |
| SAT1 | - | - | - | - | U298 | 1.288 |
| FCER1G | - | - | - | - | U299 | 1.2744 |
| C6orf106 | - | - | - | - | U300 | 1.2734 |
| ABCD1 | - | - | - | - | U302 | 1.2699 |
| FCRL5* | - | - | - | - | U304 | 1.2685 |
| GLMP | - | - | - | - | U305 | 1.2684 |
| TEP1 | - | - | - | - | U306 | 1.2675 |
| ECE1 | - | - | - | - | U307 | 1.2669 |
| UBR4 | - | - | - | - | U308 | 1.266 |
| PTRJ | - | - | - | - | U309 | 1.2658 |
| DUSP2 | - | - | - | - | U310 | 1.2656 |
| ENSECAG00000027524 | - | - | - | - | U311 | 1.2621 |
| CSF1R* | - | - | - | - | U312 | 1.2604 |
| SRGAP2 | - | - | - | - | U314 | 1.2551 |
| TNFRSF1B* | - | - | - | - | U315 | 1.2518 |
| SP11* | - | - | - | - | U316 | 1.2469 |
| TMBIM1 | - | - | - | - | U317 | 1.2464 |
| HSPB1 | - | - | - | - | U318 | 1.2383 |
| PFKP | - | - | - | - | U319 | 1.2334 |
| PNKD | - | - | - | - | U320 | 1.2323 |
| LAMTOR2 | - | - | - | - | U321 | 1.2319 |
| PSMF1 | - | - | - | - | U322 | 1.2316 |
| DHRS3 | - | - | - | - | U323 | 1.2313 |
| RNASE6 | - | - | - | - | U324 | 1.2282 |
| DRAP1 | - | - | - | - | U325 | 1.2253 |
| SLC37A2 | - | - | - | - | U326 | 1.2217 |
| FGR | - | - | - | - | U327 | 1.2138 |
| ENSECAG00000013486 | - | - | - | - | U328 | 1.2102 |
| CFP* | - | - | - | - | U329 | 1.2069 |
| Novel00263 | - | - | - | - | U330 | 1.2041 |
| CLCN7 | - | - | - | - | U331 | 1.2032 |
| ENSECAG00000013955 | - | - | - | - | U332 | 1.2006 |
| ENSECAG00000001214 | - | - | - | - | U333 | 1.1936 |
| ENSECAG00000000436 | - | - | - | - | U334 | 1.1916 |
| ENSECAG000000006913 | - | - | - | - | U335 | 1.1873 |
| DLGAP4 | - | - | - | - | U336 | 1.1861 |
| DENND1A | - | - | - | - | U337 | 1.185 |
| KLF4* | - | - | - | - | U338 | 1.1832 |

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|---------------------|---|---|---|---|------|--------|
| JUN* | - | - | - | - | U339 | 1.1828 |
| B4GALT1 | - | - | - | - | U340 | 1.1818 |
| GZMH | - | - | - | - | U341 | 1.1793 |
| LPCAT3 | - | - | - | - | U343 | 1.1717 |
| Novel00194 | - | - | - | - | U344 | 1.169 |
| ABHD2 | - | - | - | - | U345 | 1.1608 |
| KIAA0513 | - | - | - | - | U346 | 1.1603 |
| SELP | - | - | - | - | U347 | 1.158 |
| PLEKHM1 | - | - | - | - | U348 | 1.1569 |
| FDPS | - | - | - | - | U349 | 1.1537 |
| ENSECAG00000014518 | - | - | - | - | U350 | 1.1402 |
| SLC15A4* | - | - | - | - | U351 | 1.1363 |
| RRBP1 | - | - | - | - | U352 | 1.1355 |
| ENSECAG00000012199 | - | - | - | - | U354 | 1.1311 |
| AGPAT3 | - | - | - | - | U355 | 1.1258 |
| SLC43A2 | - | - | - | - | U356 | 1.1248 |
| C20orf27 | - | - | - | - | U357 | 1.1225 |
| NPC2 | - | - | - | - | U358 | 1.1135 |
| ITGAX* | - | - | - | - | U359 | 1.1069 |
| RNPEP | - | - | - | - | U360 | 1.1059 |
| ENSECAG00000001649 | - | - | - | - | U361 | 1.0973 |
| ENSECAG000000003845 | - | - | - | - | U362 | 1.0969 |
| MAPKAPK3 | - | - | - | - | U363 | 1.0951 |
| SIPA1L1 | - | - | - | - | U364 | 1.0924 |
| SAFB | - | - | - | - | U366 | 1.0843 |
| CSF3R | - | - | - | - | U367 | 1.0839 |
| NLRP1* | - | - | - | - | U368 | 1.0808 |
| PSME1 | - | - | - | - | U369 | 1.0803 |
| AGTRAP | - | - | - | - | U370 | 1.0764 |
| SMARCD2 | - | - | - | - | U371 | 1.0747 |
| ENSECAG00000010990 | - | - | - | - | U372 | 1.0744 |
| PER1 | - | - | - | - | U373 | 1.0731 |
| LY86* | - | - | - | - | U374 | 1.0721 |
| MMP25 | - | - | - | - | U375 | 1.0643 |
| APH1A | - | - | - | - | U376 | 1.064 |
| ENSECAG00000017946 | - | - | - | - | U377 | 1.0573 |
| CBFA2T3 | - | - | - | - | U378 | 1.0533 |
| PLBD2 | - | - | - | - | U379 | 1.0527 |
| LRP1 | - | - | - | - | U380 | 1.0521 |
| FASN | - | - | - | - | U381 | 1.0477 |
| ELMO2 | - | - | - | - | U382 | 1.0458 |
| ATP6V0D1 | - | - | - | - | U383 | 1.0452 |
| SYNE3 | - | - | - | - | U384 | 1.0395 |
| PLEC* | - | - | - | - | U385 | 1.0394 |
| RAB8A* | - | - | - | - | U386 | 1.0389 |
| ENG | - | - | - | - | U387 | 1.0383 |
| HIVEP3 | - | - | - | - | U388 | 1.0376 |
| ENSECAG00000010117 | - | - | - | - | U389 | 1.0357 |
| ENSECAG00000009474 | - | - | - | - | U390 | 1.0352 |
| IFI27* | - | - | - | - | U391 | 1.0332 |
| GM2A | - | - | - | - | U392 | 1.0275 |
| NAV1 | - | - | - | - | U393 | 1.0253 |
| ENSECAG00000021202 | - | - | - | - | U394 | 1.0223 |
| ENSECAG00000019873 | - | - | - | - | U395 | 1.0208 |
| LYN* | - | - | - | - | U396 | 1.0204 |
| NADK | - | - | - | - | U397 | 1.02 |

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|--------|---|---|---|---|------|--------|
| PSAP | - | - | - | - | U398 | 1.0194 |
| BTG2 | - | - | - | - | U399 | 1.0157 |
| HYOU1 | - | - | - | - | U400 | 1.0117 |
| CTSZ | - | - | - | - | U401 | 1.0083 |
| ATP1A1 | - | - | - | - | U402 | 1.0053 |
| CSRNP1 | - | - | - | - | U403 | 1.0042 |

Downregulated genes

| Gene | NS4_D1 | | NS4_D2 | | NS4_D4 | | Gene | minNS4_D1 | | minNS4_D2 | |
|--------------------|-------------------|----------------------------------|-------------------|----------------------------------|-------------------|----------------------------------|-----------|-------------------|----------------------------------|-------------------|----------------------------------|
| | Rank ^a | log ₂ FC ^b | Rank ^a | log ₂ FC ^b | Rank ^a | log ₂ FC ^b | | Rank ^a | log ₂ FC ^b | Rank ^a | log ₂ FC ^b |
| ANKRD12 | D1 | -2.95 | - | - | D287 | -1.0903 | U3 | D1 | -2.993 | NA | - |
| KIF20B | D2 | -2.793 | - | - | - | - | SCARNA2 | D2 | -2.5864 | NA | - |
| SMC4 | D3 | -2.549 | - | - | D30 | -1.6915 | 5_8S_rRNA | D3 | -2.4694 | NA | - |
| CCDC88A* | D4 | -2.2886 | - | - | - | - | FN1 | D4 | -2.407 | NA | - |
| JCHAIN | D5 | -2.2698 | - | - | D302 | -1.0696 | RETN | NA | - | D1 | -3.5695 |
| FGL2 | D6 | -1.9536 | - | - | D175 | -1.2734 | MMP1 | NA | - | D2 | -1.8825 |
| SSB | D7 | -1.9388 | - | - | D188 | -1.2502 | DUSP1* | NA | - | D3 | -1.5657 |
| PPIG | D8 | -1.8348 | - | - | D190 | -1.2466 | MMP9* | NA | - | D4 | -1.3939 |
| AKAP9 | D9 | -1.5708 | - | - | D35 | -1.6584 | | | | | |
| RAD50 | D10 | -1.4676 | - | - | D71 | -1.5008 | | | | | |
| CIR1 | D11 | -1.4044 | - | - | D97 | -1.4272 | | | | | |
| DEK | D12 | -1.3508 | - | - | D67 | -1.5134 | | | | | |
| EIF5B | D13 | -1.2612 | - | - | D285 | -1.0931 | | | | | |
| ENSECAG00000007621 | D14 | -1.1675 | - | - | D47 | -1.5644 | | | | | |
| TRAT1* | D15 | -1.1375 | - | - | D163 | -1.2897 | | | | | |
| CCAR1 | D16 | -1.1033 | - | - | D187 | -1.2502 | | | | | |
| ROCK1 | D17 | -1.0914 | - | - | D240 | -1.1531 | | | | | |
| ENSECAG00000020878 | D18 | -1.0788 | - | - | - | - | | | | | |
| KTN1 | D19 | -1.0587 | - | - | D41 | -1.595 | | | | | |
| SEC62 | D20 | -1.0497 | - | - | D26 | -1.7396 | | | | | |
| TAX1BP1* | D21 | -1.0428 | - | - | D279 | -1.1015 | | | | | |
| ITGA4 | D22 | -1.0419 | - | - | - | - | | | | | |
| FN1 | - | - | D1 | -4.6842 | D1 | -4.2612 | | | | | |
| SEPP1 | - | - | D2 | -2.4215 | D7 | -2.136 | | | | | |
| ENSECAG00000007258 | - | - | D3 | -1.9357 | D33 | -1.6645 | | | | | |
| ALDH3A1 | - | - | D4 | -1.8954 | - | - | | | | | |
| GAS2L1 | - | - | D5 | -1.8869 | - | - | | | | | |
| DDIT4 | - | - | D6 | -1.6516 | - | - | | | | | |
| MMP9* | - | - | D7 | -1.4784 | D75 | -1.4914 | | | | | |
| ENSECAG00000008721 | - | - | D8 | -1.3927 | - | - | | | | | |
| ENSECAG00000009556 | - | - | D9 | -1.38 | D299 | -1.0721 | | | | | |
| VAT1 | - | - | D10 | -1.3546 | D212 | -1.2103 | | | | | |
| IRF2BP1* | - | - | D11 | -1.2827 | - | - | | | | | |
| FCGRT | - | - | D12 | -1.1567 | - | - | | | | | |
| ZNF683 | - | - | D13 | -1.137 | - | - | | | | | |
| CHST2 | - | - | D14 | -1.127 | D50 | -1.5565 | | | | | |
| LRR4B | - | - | D15 | -1.0873 | - | - | | | | | |
| GSN | - | - | D16 | -1.0166 | - | - | | | | | |
| ZFP36L1 | - | - | D17 | -1.0132 | D116 | -1.3927 | | | | | |
| MED25 | - | - | D18 | -1.0061 | - | - | | | | | |
| Novel02103 | - | - | D19 | -1.0036 | - | - | | | | | |
| MS4A2 | - | - | - | - | D2 | -2.6698 | | | | | |

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|--------------------|---|---|---|---|-----|---------|
| LRRCC1 | - | - | - | - | D3 | -2.3101 |
| ALDH1A1 | - | - | - | - | D4 | -2.2793 |
| MMP1 | - | - | - | - | D5 | -2.2367 |
| KIAA1551 | - | - | - | - | D6 | -2.1409 |
| CCNG1 | - | - | - | - | D8 | -2.0402 |
| Novel01276 | - | - | - | - | D9 | -1.9883 |
| SIRT1* | - | - | - | - | D10 | -1.9774 |
| ND1 | - | - | - | - | D11 | -1.9497 |
| AHR* | - | - | - | - | D12 | -1.8724 |
| TLR10* | - | - | - | - | D13 | -1.8715 |
| ND3 | - | - | - | - | D14 | -1.8707 |
| PCM1 | - | - | - | - | D15 | -1.8622 |
| THEMIS | - | - | - | - | D16 | -1.8502 |
| SULT1C4 | - | - | - | - | D17 | -1.85 |
| CASP8AP2 | - | - | - | - | D18 | -1.8295 |
| CCDC186 | - | - | - | - | D19 | -1.808 |
| CDC42EP3 | - | - | - | - | D20 | -1.7968 |
| SERPINB10 | - | - | - | - | D21 | -1.7568 |
| ENSECAG00000021005 | - | - | - | - | D22 | -1.7511 |
| AGL | - | - | - | - | D23 | -1.7489 |
| PTPN22 | - | - | - | - | D24 | -1.7465 |
| ZNF638 | - | - | - | - | D25 | -1.7442 |
| CENPC | - | - | - | - | D27 | -1.7319 |
| IFT57 | - | - | - | - | D28 | -1.7137 |
| PP1P5K2 | - | - | - | - | D29 | -1.7049 |
| PSIP1 | - | - | - | - | D31 | -1.672 |
| USP16 | - | - | - | - | D32 | -1.6652 |
| NPAT | - | - | - | - | D34 | -1.659 |
| GPR183 | - | - | - | - | D36 | -1.653 |
| COPS2 | - | - | - | - | D37 | -1.6384 |
| ATM* | - | - | - | - | D38 | -1.6317 |
| SECISBP2L | - | - | - | - | D39 | -1.6184 |
| RFC1 | - | - | - | - | D40 | -1.6115 |
| Novel01642 | - | - | - | - | D42 | -1.5938 |
| RBM12B | - | - | - | - | D43 | -1.5811 |
| SPAST | - | - | - | - | D44 | -1.5714 |
| ZBTB11 | - | - | - | - | D45 | -1.5695 |
| CEP57 | - | - | - | - | D46 | -1.569 |
| OSBPL8 | - | - | - | - | D48 | -1.5613 |
| STK26 | - | - | - | - | D49 | -1.5592 |
| SESN1 | - | - | - | - | D51 | -1.5555 |
| NEMF | - | - | - | - | D52 | -1.5534 |
| PHF3 | - | - | - | - | D53 | -1.5474 |
| FGFR1OP2 | - | - | - | - | D54 | -1.5439 |
| DNTTIP2 | - | - | - | - | D55 | -1.5417 |
| TOP2B | - | - | - | - | D56 | -1.5357 |
| ND2 | - | - | - | - | D57 | -1.5347 |
| CEP120 | - | - | - | - | D58 | -1.5336 |
| Novel01549 | - | - | - | - | D59 | -1.5326 |
| SACS | - | - | - | - | D60 | -1.532 |
| ARID4A | - | - | - | - | D61 | -1.5317 |
| STAG2 | - | - | - | - | D62 | -1.5202 |
| ANP32E | - | - | - | - | D63 | -1.5195 |
| DCUN1D1 | - | - | - | - | D64 | -1.5176 |
| SMC2 | - | - | - | - | D65 | -1.5144 |
| ZBTB33 | - | - | - | - | D66 | -1.5143 |

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|--------------------|---|---|---|---|------|---------|
| SMC6 | - | - | - | - | D68 | -1.5117 |
| NR1D2 | - | - | - | - | D69 | -1.5115 |
| USP1 | - | - | - | - | D70 | -1.5044 |
| CASC4 | - | - | - | - | D72 | -1.4987 |
| FOXN2 | - | - | - | - | D73 | -1.496 |
| SMC3 | - | - | - | - | D74 | -1.4916 |
| C1GALT1 | - | - | - | - | D76 | -1.4873 |
| ARAP2 | - | - | - | - | D77 | -1.4869 |
| ZC3H13 | - | - | - | - | D78 | -1.4824 |
| ANKRD13C | - | - | - | - | D79 | -1.4813 |
| RIF1 | - | - | - | - | D80 | -1.4759 |
| Novel02165 | - | - | - | - | D81 | -1.4736 |
| ENSECAG00000017875 | - | - | - | - | D82 | -1.4679 |
| PDS5A | - | - | - | - | D83 | -1.4642 |
| RECQL | - | - | - | - | D84 | -1.4579 |
| VPS13A | - | - | - | - | D85 | -1.4561 |
| RAB27A | - | - | - | - | D86 | -1.4549 |
| GCC2 | - | - | - | - | D87 | -1.4545 |
| SNRK | - | - | - | - | D88 | -1.4508 |
| PDS5B | - | - | - | - | D89 | -1.4455 |
| C2CD5 | - | - | - | - | D90 | -1.4428 |
| PHKB | - | - | - | - | D91 | -1.4427 |
| SCAF11* | - | - | - | - | D92 | -1.4399 |
| PDCD4 | - | - | - | - | D93 | -1.4386 |
| CRIM1 | - | - | - | - | D94 | -1.4358 |
| CCPG1 | - | - | - | - | D95 | -1.4322 |
| MLLT3 | - | - | - | - | D96 | -1.4289 |
| SHOC2 | - | - | - | - | D98 | -1.4259 |
| Novel01412 | - | - | - | - | D99 | -1.4252 |
| ZNF148 | - | - | - | - | D100 | -1.4225 |
| KLHL5 | - | - | - | - | D101 | -1.4222 |
| EPC2 | - | - | - | - | D102 | -1.421 |
| ENSECAG00000025018 | - | - | - | - | D103 | -1.4207 |
| SMC5 | - | - | - | - | D104 | -1.4193 |
| ENSECAG00000016479 | - | - | - | - | D105 | -1.4185 |
| DSE | - | - | - | - | D106 | -1.4165 |
| RAD21* | - | - | - | - | D107 | -1.416 |
| ENSECAG00000012882 | - | - | - | - | D108 | -1.4106 |
| TPR | - | - | - | - | D109 | -1.4093 |
| PBRM1 | - | - | - | - | D110 | -1.4082 |
| FAM214A | - | - | - | - | D111 | -1.4076 |
| SEPT7 | - | - | - | - | D112 | -1.4071 |
| SENP6 | - | - | - | - | D113 | -1.4058 |
| Novel01098 | - | - | - | - | D114 | -1.4008 |
| PJA2 | - | - | - | - | D115 | -1.3942 |
| REEP3 | - | - | - | - | D117 | -1.3925 |
| GBAS | - | - | - | - | D118 | -1.3832 |
| Novel01770 | - | - | - | - | D119 | -1.3792 |
| ATRX | - | - | - | - | D120 | -1.3786 |
| NIPBL | - | - | - | - | D121 | -1.3779 |
| EML4 | - | - | - | - | D122 | -1.3718 |
| STAG1 | - | - | - | - | D123 | -1.3689 |
| FYTTD1 | - | - | - | - | D124 | -1.3687 |
| UBE3A | - | - | - | - | D125 | -1.367 |
| TRIM33 | - | - | - | - | D126 | -1.3669 |
| ST8SIA4 | - | - | - | - | D127 | -1.366 |

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| EXOC6 | - | - | - | - | D128 | -1.3617 |
| RBL1 | - | - | - | - | D129 | -1.3615 |
| ABCA6 | - | - | - | - | D130 | -1.3594 |
| RCAN3 | - | - | - | - | D131 | -1.3586 |
| U2SURP | - | - | - | - | D132 | -1.3556 |
| HIPK3 | - | - | - | - | D133 | -1.3507 |
| Novel00674 | - | - | - | - | D134 | -1.3477 |
| ABCE1 | - | - | - | - | D135 | -1.347 |
| PRPF39 | - | - | - | - | D136 | -1.3466 |
| DENND4A | - | - | - | - | D137 | -1.3453 |
| HERC3 | - | - | - | - | D138 | -1.3437 |
| CCDC82 | - | - | - | - | D139 | -1.3411 |
| LTN1 | - | - | - | - | D140 | -1.3405 |
| ZCCHC6 | - | - | - | - | D141 | -1.3402 |
| QPCT | - | - | - | - | D142 | -1.34 |
| SUZ12 | - | - | - | - | D143 | -1.3397 |
| SCYL2 | - | - | - | - | D144 | -1.3375 |
| THOC2 | - | - | - | - | D145 | -1.3368 |
| SESN3 | - | - | - | - | D146 | -1.3335 |
| HLTF | - | - | - | - | D147 | -1.3292 |
| RBM26 | - | - | - | - | D148 | -1.3285 |
| BPTF | - | - | - | - | D149 | -1.3266 |
| HAT1 | - | - | - | - | D150 | -1.325 |
| ENSECAG00000021065 | - | - | - | - | D151 | -1.3222 |
| PPP1R12A | - | - | - | - | D152 | -1.3189 |
| FAM101B | - | - | - | - | D153 | -1.3127 |
| ZFC3H1 | - | - | - | - | D154 | -1.3101 |
| MEGF9 | - | - | - | - | D155 | -1.3091 |
| DNAJC10 | - | - | - | - | D156 | -1.3059 |
| TMF1 | - | - | - | - | D157 | -1.3059 |
| EV12B | - | - | - | - | D158 | -1.3038 |
| PTPRC* | - | - | - | - | D159 | -1.2959 |
| CWC22 | - | - | - | - | D160 | -1.2939 |
| AHCTF1 | - | - | - | - | D161 | -1.2908 |
| Novel00115 | - | - | - | - | D162 | -1.2901 |
| LRRK2* | - | - | - | - | D164 | -1.2891 |
| CEP350 | - | - | - | - | D165 | -1.2886 |
| ANO6* | - | - | - | - | D166 | -1.2862 |
| EIF3A | - | - | - | - | D167 | -1.2807 |
| ITCH* | - | - | - | - | D168 | -1.2786 |
| TAF2 | - | - | - | - | D169 | -1.2782 |
| KIAA1429 | - | - | - | - | D170 | -1.2772 |
| ADD3 | - | - | - | - | D171 | -1.2766 |
| NR3C1* | - | - | - | - | D172 | -1.2764 |
| SLF2 | - | - | - | - | D173 | -1.2751 |
| TOPORS | - | - | - | - | D174 | -1.2739 |
| PDE3B | - | - | - | - | D176 | -1.2709 |
| CLIP1 | - | - | - | - | D177 | -1.2674 |
| ENSECAG00000022703 | - | - | - | - | D178 | -1.2663 |
| CHD1 | - | - | - | - | D179 | -1.2632 |
| ND4 | - | - | - | - | D180 | -1.2625 |
| AGO4 | - | - | - | - | D181 | -1.2568 |
| USO1 | - | - | - | - | D182 | -1.2565 |
| JAML | - | - | - | - | D183 | -1.2549 |
| ZBTB1 | - | - | - | - | D184 | -1.2546 |
| GOLGB1 | - | - | - | - | D185 | -1.2538 |

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| SP4 | - | - | - | - | D186 | -1.2504 |
| UPF2 | - | - | - | - | D189 | -1.2487 |
| MALT1* | - | - | - | - | D191 | -1.243 |
| ZBTB38 | - | - | - | - | D192 | -1.2427 |
| SLK | - | - | - | - | D193 | -1.2425 |
| PAICS | - | - | - | - | D194 | -1.2363 |
| IL6ST* | - | - | - | - | D195 | -1.2335 |
| REV3L | - | - | - | - | D196 | -1.2325 |
| KMT5B | - | - | - | - | D197 | -1.2324 |
| PRKD3 | - | - | - | - | D198 | -1.231 |
| DDX46 | - | - | - | - | D199 | -1.2302 |
| REST* | - | - | - | - | D200 | -1.2298 |
| SREK1 | - | - | - | - | D201 | -1.229 |
| ZDHHC20 | - | - | - | - | D202 | -1.2271 |
| Novel01595 | - | - | - | - | D203 | -1.2264 |
| POT1 | - | - | - | - | D204 | -1.2235 |
| EHBP1 | - | - | - | - | D205 | -1.2229 |
| ND4L | - | - | - | - | D206 | -1.2191 |
| TTC37 | - | - | - | - | D207 | -1.2188 |
| DNAJC2 | - | - | - | - | D208 | -1.2143 |
| VPS54 | - | - | - | - | D209 | -1.2128 |
| RABGAP1L | - | - | - | - | D210 | -1.2116 |
| CEBPZ | - | - | - | - | D211 | -1.2114 |
| RBL2 | - | - | - | - | D213 | -1.2073 |
| GALNT1 | - | - | - | - | D214 | -1.2066 |
| RASGRP1 | - | - | - | - | D215 | -1.2058 |
| ACAP2 | - | - | - | - | D216 | -1.205 |
| KAT6B | - | - | - | - | D217 | -1.2002 |
| EIF2A | - | - | - | - | D218 | -1.1997 |
| ENSECAG00000001018 | - | - | - | - | D219 | -1.1969 |
| COX2 | - | - | - | - | D220 | -1.1958 |
| THBS1* | - | - | - | - | D221 | -1.194 |
| SEC63 | - | - | - | - | D222 | -1.1914 |
| INPP4B | - | - | - | - | D223 | -1.1899 |
| PRPF40A | - | - | - | - | D224 | -1.1865 |
| STK17B | - | - | - | - | D225 | -1.1806 |
| ZMYM2 | - | - | - | - | D226 | -1.1789 |
| INTS6 | - | - | - | - | D227 | -1.1782 |
| DOCK11 | - | - | - | - | D228 | -1.177 |
| PRPF4B | - | - | - | - | D229 | -1.175 |
| PPP4R3B | - | - | - | - | D230 | -1.1736 |
| PRKDC* | - | - | - | - | D231 | -1.1724 |
| CHSY1 | - | - | - | - | D232 | -1.1718 |
| UBR3 | - | - | - | - | D233 | -1.1703 |
| PGRMC1 | - | - | - | - | D234 | -1.1678 |
| ZNF217 | - | - | - | - | D235 | -1.1652 |
| PTBP3 | - | - | - | - | D236 | -1.1628 |
| MAN2A1 | - | - | - | - | D237 | -1.1619 |
| RPL7 | - | - | - | - | D238 | -1.1564 |
| MPHOSPH8 | - | - | - | - | D239 | -1.1553 |
| TOPBP1 | - | - | - | - | D241 | -1.1516 |
| DOPEY1 | - | - | - | - | D242 | -1.1513 |
| TCP11L2 | - | - | - | - | D243 | -1.1501 |
| SCAPER | - | - | - | - | D244 | -1.1495 |
| JMJD1C | - | - | - | - | D245 | -1.1494 |
| IPO5 | - | - | - | - | D246 | -1.1436 |

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| OXR1 | - | - | - | - | D247 | -1.143 |
| PCF11 | - | - | - | - | D248 | -1.1394 |
| IVNS1ABP | - | - | - | - | D249 | -1.139 |
| ACSL4 | - | - | - | - | D250 | -1.1383 |
| YTHDC1 | - | - | - | - | D251 | -1.1319 |
| ENSECAG00000008458 | - | - | - | - | D252 | -1.1315 |
| HECTD1 | - | - | - | - | D253 | -1.1307 |
| PHIP | - | - | - | - | D254 | -1.1305 |
| PPP1CB | - | - | - | - | D255 | -1.1305 |
| ENSECAG00000000725 | - | - | - | - | D256 | -1.1301 |
| ATR | - | - | - | - | D257 | -1.1293 |
| PUM2 | - | - | - | - | D258 | -1.1287 |
| SHPRH | - | - | - | - | D259 | -1.1275 |
| FCER1A | - | - | - | - | D260 | -1.1261 |
| RPS3A | - | - | - | - | D261 | -1.1259 |
| PRKX* | - | - | - | - | D262 | -1.1235 |
| AQR | - | - | - | - | D263 | -1.1235 |
| BOD1L1 | - | - | - | - | D264 | -1.1232 |
| CBX3 | - | - | - | - | D265 | -1.122 |
| STK4 | - | - | - | - | D266 | -1.1193 |
| RSBN1 | - | - | - | - | D267 | -1.1187 |
| CTDSPL2 | - | - | - | - | D268 | -1.1186 |
| FAR1 | - | - | - | - | D269 | -1.1178 |
| FNTA | - | - | - | - | D270 | -1.1168 |
| ARFGEF1 | - | - | - | - | D271 | -1.1165 |
| NSA2 | - | - | - | - | D272 | -1.1148 |
| PNRC2 | - | - | - | - | D273 | -1.1127 |
| VPS13C | - | - | - | - | D274 | -1.1122 |
| PDZD8 | - | - | - | - | D275 | -1.1101 |
| LMAN1 | - | - | - | - | D276 | -1.1076 |
| ARID4B | - | - | - | - | D277 | -1.1056 |
| FAM208B | - | - | - | - | D278 | -1.1034 |
| MAP3K1* | - | - | - | - | D280 | -1.1014 |
| MEF2A | - | - | - | - | D281 | -1.0988 |
| WDR43 | - | - | - | - | D282 | -1.0981 |
| HERC4 | - | - | - | - | D283 | -1.0963 |
| STT3B | - | - | - | - | D284 | -1.0961 |
| CUL3 | - | - | - | - | D286 | -1.0911 |
| ENSECAG00000021067 | - | - | - | - | D288 | -1.0902 |
| TRAPP8 | - | - | - | - | D289 | -1.0898 |
| ENSECAG00000010668 | - | - | - | - | D290 | -1.0888 |
| TMEM123 | - | - | - | - | D291 | -1.0873 |
| BCLAF1 | - | - | - | - | D292 | -1.0807 |
| DMXL1 | - | - | - | - | D293 | -1.0803 |
| ITPR2 | - | - | - | - | D294 | -1.078 |
| TMOD3 | - | - | - | - | D295 | -1.0777 |
| METAP2 | - | - | - | - | D296 | -1.075 |
| UBA2 | - | - | - | - | D297 | -1.074 |
| XRN1 | - | - | - | - | D298 | -1.0735 |
| TNFAIP8 | - | - | - | - | D300 | -1.0711 |
| SSR1 | - | - | - | - | D301 | -1.0697 |
| KLRK1 | - | - | - | - | D303 | -1.0689 |
| SKIV2L2 | - | - | - | - | D304 | -1.0672 |
| EIF3E | - | - | - | - | D305 | -1.067 |
| SLTM | - | - | - | - | D306 | -1.0668 |
| HS3ST1 | - | - | - | - | D307 | -1.0652 |

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| USP8 | - | - | - | - | D308 | -1.065 |
| LRBA | - | - | - | - | D309 | -1.0647 |
| CPD | - | - | - | - | D310 | -1.0641 |
| MBNL1 | - | - | - | - | D311 | -1.0627 |
| SRP72 | - | - | - | - | D312 | -1.0586 |
| PNN | - | - | - | - | D313 | -1.057 |
| CSE1L | - | - | - | - | D314 | -1.0554 |
| GATA2 | - | - | - | - | D315 | -1.053 |
| ZBED6 | - | - | - | - | D316 | -1.0527 |
| ACADM | - | - | - | - | D317 | -1.0515 |
| DOCK10 | - | - | - | - | D318 | -1.051 |
| GNAI3* | - | - | - | - | D319 | -1.0491 |
| GNPTAB | - | - | - | - | D320 | -1.0489 |
| USP47 | - | - | - | - | D321 | -1.0461 |
| FBXL14 | - | - | - | - | D322 | -1.0454 |
| DHX15* | - | - | - | - | D323 | -1.042 |
| STK38 | - | - | - | - | D324 | -1.036 |
| RPS6KB1 | - | - | - | - | D325 | -1.0353 |
| BMS1 | - | - | - | - | D326 | -1.0344 |
| MARCH7 | - | - | - | - | D327 | -1.0333 |
| Novel00821 | - | - | - | - | D328 | -1.0322 |
| HMGB1* | - | - | - | - | D329 | -1.0316 |
| EIF3M | - | - | - | - | D330 | -1.0288 |
| KIAA1109 | - | - | - | - | D331 | -1.0257 |
| PTEN* | - | - | - | - | D332 | -1.0228 |
| ATP2B1 | - | - | - | - | D333 | -1.0183 |
| UHRF2 | - | - | - | - | D334 | -1.0173 |
| FRYL | - | - | - | - | D335 | -1.0172 |
| HSPA4 | - | - | - | - | D336 | -1.0147 |
| SRP54 | - | - | - | - | D337 | -1.0143 |
| HSD17B4 | - | - | - | - | D338 | -1.014 |
| ENSECAG00000000140 | - | - | - | - | D339 | -1.0134 |
| TNRC6C | - | - | - | - | D340 | -1.0097 |
| ENSECAG000000015242 | - | - | - | - | D341 | -1.0095 |
| C11orf58 | - | - | - | - | D342 | -1.0077 |
| STAT4* | - | - | - | - | D343 | -1.0077 |
| KANK2 | - | - | - | - | D344 | -1.0076 |
| ITSN2 | - | - | - | - | D345 | -1.0061 |
| CHD6 | - | - | - | - | D346 | -1.0054 |
| ERLEC1 | - | - | - | - | D347 | -1.0034 |

^bLog₂Fold change