

Table S2 The differentially expressed mRNAs

| GeneSymbol | Regulation | Fold Change (log2) |
|------------|------------|--------------------|
| Abcg1 | down | -2.440661773 |
| Fbln1 | down | -2.097782417 |
| Dpt | down | -2.093910368 |
| Col15a1 | down | -2.063687548 |
| Bcl2 | down | -2.035048289 |
| Snn | down | -2.033659755 |
| Naaa | down | -2.005174695 |
| Clec2g | down | -2.003707392 |
| Sema7a | down | -1.978198346 |
| Fam73b | down | -1.938868855 |
| Cd302 | down | -1.935031101 |
| Tnfrsf11b | down | -1.931646523 |
| Susd2 | down | -1.924362998 |
| Emb | down | -1.908191816 |
| Klhl29 | down | -1.900921633 |
| Dtx4 | down | -1.888414051 |
| Fam181b | down | -1.885826164 |
| Adams9 | down | -1.883891535 |
| Lbp | down | -1.871243252 |
| Plekha2 | down | -1.870194112 |
| Phyhipl | down | -1.865985697 |
| Nab2 | down | -1.86535418 |
| Extl2 | down | -1.85488564 |
| Lrrc17 | down | -1.83978776 |
| Gsta2 | down | -1.834973897 |
| Cyp7b1 | down | -1.827926932 |
| Mid1 | down | -1.823225735 |
| C1qtnf7 | down | -1.822392091 |
| Ccr1 | down | -1.796714079 |
| Frem1 | down | -1.796045858 |
| Glt8d2 | down | -1.783285716 |
| Hpx | down | -1.782206298 |
| Wisp1 | down | -1.781575281 |
| Ptx3 | down | -1.773810851 |
| Clec4d | down | -1.758200591 |
| Mmp16 | down | -1.757418853 |
| Etv1 | down | -1.75635611 |
| Ptn | down | -1.75213976 |
| Rnf145 | down | -1.746596152 |
| Pank1 | down | -1.737675228 |
| Spata9 | down | -1.73436244 |
| Grem2 | down | -1.728641761 |
| Nptx1 | down | -1.723024767 |
| Aspn | down | -1.722134594 |
| Prss35 | down | -1.714190004 |
| Lama1 | down | -1.69919148 |
| Traf3ip2 | down | -1.695036609 |
| Tlr8 | down | -1.689273259 |
| Cd38 | down | -1.689063501 |
| Sfrp2 | down | -1.683791801 |
| Abcc3 | down | -1.682446752 |
| Isoc1 | down | -1.671266459 |
| Spock1 | down | -1.660846536 |

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|-----------|------|--------------|
| Aox1 | down | -1.660837266 |
| Arl11 | down | -1.658942338 |
| Srebf1 | down | -1.651717872 |
| Pik3ip1 | down | -1.648920137 |
| Galnt12 | down | -1.643202829 |
| Enpp2 | down | -1.642549341 |
| Ncf2 | down | -1.642444279 |
| Gk | down | -1.63989865 |
| Tmprss11d | down | -1.639771423 |
| Tsr2 | down | -1.636080857 |
| Srpx | down | -1.630319514 |
| Cd180 | down | -1.626289691 |
| Il6r | down | -1.617860321 |
| Rnasel | down | -1.613671916 |
| Dennd3 | down | -1.61306393 |
| Slamf6 | down | -1.600694099 |
| Rnf128 | down | -1.600663925 |
| Mybph | down | -1.598693385 |
| Cybrd1 | down | -1.597927635 |
| Angpt2 | down | -1.591405974 |
| Mr1 | down | -1.586123771 |
| Pde1a | down | -1.578113867 |
| Cmklr1 | down | -1.577998404 |
| Npr3 | down | -1.570464937 |
| Gpm6b | down | -1.568246668 |
| Mmp11 | down | -1.558816876 |
| Atp6ap11 | down | -1.555681016 |
| Nat1 | down | -1.541005233 |
| Cul2 | down | -1.538340191 |
| Tnfaip6 | down | -1.530845661 |
| Abcd4 | down | -1.524945099 |
| Vcan | down | -1.517099894 |
| Flrt3 | down | -1.516022077 |
| Senp7 | down | -1.515614565 |
| Galnt13 | down | -1.513093684 |
| Ftsj2 | down | -1.508810367 |
| Gnaz | down | -1.503232442 |
| Plscr4 | down | -1.500387477 |
| Tnnt3 | down | -1.500182515 |
| Cped1 | down | -1.494761479 |
| Sult5a1 | down | -1.492242396 |
| Hr | down | -1.48917396 |
| Scara5 | down | -1.477419179 |
| Egr2 | down | -1.477009533 |
| Lipg | down | -1.473921176 |
| Serpib9 | down | -1.466610218 |
| Klk4 | down | -1.460842474 |
| Gal3st3 | down | -1.457160758 |
| Aldh3b1 | down | -1.456767429 |
| Echdc3 | down | -1.456529967 |
| Igfbp7 | down | -1.456424208 |
| Fndc1 | down | -1.445749326 |
| Soat2 | down | -1.439838 |
| Slc9a7 | down | -1.438142376 |
| Actrt3 | down | -1.430621534 |
| Lrrtm3 | down | -1.425646097 |

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|----------|------|--------------|
| Itgb6 | down | -1.423394676 |
| Ssc5d | down | -1.417197733 |
| Dtx3l | down | -1.408272563 |
| Ngfr | down | -1.401852289 |
| Nrarp | down | -1.40102289 |
| Man1a1 | down | -1.396971345 |
| Ifit2 | down | -1.396923191 |
| Cox7c | down | -1.391008403 |
| Tecr1 | down | -1.387699235 |
| Adra1b | down | -1.38429682 |
| Pdgfra | down | -1.38349751 |
| Pcdhb3 | down | -1.382119071 |
| Pbk | down | -1.375720566 |
| Hfe | down | -1.375274549 |
| Ebf3 | down | -1.37165649 |
| Arhgap8 | down | -1.371471573 |
| Frzb | down | -1.369433039 |
| Prdm6 | down | -1.368688474 |
| Elovl6 | down | -1.366798026 |
| Scgb2b24 | down | -1.366342727 |
| Kcnk6 | down | -1.364277348 |
| Fam180a | down | -1.363385817 |
| Irgm | down | -1.362463742 |
| Kcnd1 | down | -1.360793527 |
| Lpar1 | down | -1.360394335 |
| B4galt6 | down | -1.359175848 |
| Calcr1 | down | -1.3581737 |
| Reep5 | down | -1.356836456 |
| Ccnyl1 | down | -1.354234286 |
| Isg15 | down | -1.353158731 |
| Adamtsl3 | down | -1.34374126 |
| S100a3 | down | -1.342755248 |
| Trmt10b | down | -1.338772028 |
| Fcgr3a | down | -1.336967454 |
| Echdc2 | down | -1.335419121 |
| Lrrtm2 | down | -1.334740545 |
| Msr1 | down | -1.334183725 |
| Ncdn | down | -1.330892533 |
| Chd6 | down | -1.32723172 |
| Tcf21 | down | -1.320974771 |
| Rep15 | down | -1.320616761 |
| Tmprss13 | down | -1.319645704 |
| Kcnip3 | down | -1.318213522 |
| Smarca2 | down | -1.317447916 |
| Gulp1 | down | -1.316989827 |
| Slco4a1 | down | -1.316769016 |
| Epha3 | down | -1.315925586 |
| Zdhhc14 | down | -1.314589397 |
| Bcl11b | down | -1.308634969 |
| Gldn | down | -1.308613011 |
| A2m | down | -1.305427519 |
| Abhd3 | down | -1.304541797 |
| Pcdhga10 | down | -1.301718313 |
| Abhd6 | down | -1.297089216 |
| Sbsn | down | -1.296230311 |
| Angpt1 | down | -1.295571949 |

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|----------|------|--------------|
| Col24a1 | down | -1.293935995 |
| Cilp | down | -1.292305301 |
| Pla2g4a | down | -1.288307177 |
| Nags | down | -1.285731429 |
| Cars2 | down | -1.285448765 |
| Abi3bp | down | -1.284457136 |
| Pecr | down | -1.280794064 |
| Hmcn1 | down | -1.279011612 |
| Tcf7 | down | -1.275944597 |
| Nipsnap1 | down | -1.27460535 |
| Nckap11 | down | -1.274343306 |
| Clec5a | down | -1.265180077 |
| Cxcl5 | down | -1.262769105 |
| Galnt2 | down | -1.262553098 |
| Pla2g2a | down | -1.256959788 |
| Mpeg1 | down | -1.255140612 |
| Ccl11 | down | -1.254075126 |
| Ttc9 | down | -1.253186992 |
| Rbm43 | down | -1.253009309 |
| Dse | down | -1.249144884 |
| P2rx5 | down | -1.248744349 |
| Icos | down | -1.245795962 |
| Tnfrsf18 | down | -1.2454527 |
| Plcx3 | down | -1.242623986 |
| Nod1 | down | -1.242243281 |
| Cpxm2 | down | -1.241918241 |
| Igfbp6 | down | -1.241221133 |
| Ccna2 | down | -1.238049165 |
| Rtn1 | down | -1.237886314 |
| Prodh | down | -1.236554155 |
| Cntn2 | down | -1.236460896 |
| Rspo4 | down | -1.233073048 |
| Cep72 | down | -1.231998361 |
| Stc2 | down | -1.230684751 |
| Tspan5 | down | -1.2300525 |
| Apln | down | -1.22648959 |
| Arhgef19 | down | -1.22471722 |
| Tns4 | down | -1.224313362 |
| Lhfp11 | down | -1.223399241 |
| Naalad12 | down | -1.219960621 |
| Clspn | down | -1.219007633 |
| Atp8b4 | down | -1.21427477 |
| Rasd2 | down | -1.210707859 |
| Rab38 | down | -1.208872834 |
| Bdnf | down | -1.207913351 |
| Tpsg1 | down | -1.207848403 |
| Scrn1 | down | -1.205765851 |
| Nr2f2 | down | -1.203105765 |
| Fam84b | down | -1.202154348 |
| Sh3gl2 | down | -1.201974795 |
| Rnft2 | down | -1.201514339 |
| Ptgr2 | down | -1.201181371 |
| Ccdc24 | down | -1.200032607 |
| Rbfox1 | down | -1.198800011 |
| Six3 | down | -1.196989947 |
| Slc7a4 | down | -1.196517012 |

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|---------|------|--------------|
| Hoxd10 | down | -1.19419316 |
| Mpp2 | down | -1.193790314 |
| Wdr5b | down | -1.185477928 |
| Ccl3 | down | -1.184346003 |
| Jph3 | down | -1.183284431 |
| Pcdh18 | down | -1.179880395 |
| Cpa5 | down | -1.179538954 |
| Rapgef3 | down | -1.178699559 |
| Pi15 | down | -1.17751044 |
| Mrps28 | down | -1.175997462 |
| Igfbp4 | down | -1.175114107 |
| Ikbke | down | -1.173882193 |
| Ggta1p | down | -1.171218905 |
| Kcns3 | down | -1.167652536 |
| Col16a1 | down | -1.162506693 |
| Gpr150 | down | -1.158710965 |
| Ascl2 | down | -1.156788958 |
| Bche | down | -1.156599356 |
| Lap3 | down | -1.156171617 |
| Robo2 | down | -1.154013382 |
| G0s2 | down | -1.150292309 |
| Gpr135 | down | -1.147868209 |
| Siglec5 | down | -1.147835429 |
| Lurap11 | down | -1.143363896 |
| Cbx7 | down | -1.142315699 |
| St8sia2 | down | -1.138474115 |
| Gent2 | down | -1.138276922 |
| Cobl | down | -1.138183738 |
| Grap2 | down | -1.138035024 |
| Hpgds | down | -1.135222507 |
| Stat5a | down | -1.135217345 |
| Alox5 | down | -1.133597967 |
| Slit3 | down | -1.131290643 |
| Psat1 | down | -1.130827107 |
| Tap2 | down | -1.130766722 |
| Ranbp31 | down | -1.12851139 |
| Casp6 | down | -1.127628078 |
| Cd200 | down | -1.127501655 |
| Cyp4f39 | down | -1.124369709 |
| Fundc1 | down | -1.121561494 |
| Smagp | down | -1.121337147 |
| Napsa | down | -1.119698088 |
| Cstf2 | down | -1.119229265 |
| Lrrc27 | down | -1.118293187 |
| Ptprz1 | down | -1.118170641 |
| Lrrc10 | down | -1.114438096 |
| Ppp2r2b | down | -1.112946124 |
| Rbp4 | down | -1.112267718 |
| Pros1 | down | -1.111065954 |
| Nudt10 | down | -1.111013767 |
| C1qtnf1 | down | -1.110523992 |
| Akap5 | down | -1.105751005 |
| Hus1b | down | -1.104246696 |
| Gareml | down | -1.103897473 |
| Wnt5a | down | -1.101883533 |
| Pdia2 | down | -1.097745827 |

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|----------|------|--------------|
| Syt17 | down | -1.097445118 |
| Flvcr2 | down | -1.09687887 |
| Mab2113 | down | -1.095972093 |
| Ptgrfr | down | -1.095886333 |
| Dhx35 | down | -1.095290767 |
| Scn2b | down | -1.094518494 |
| Pus10 | down | -1.094429023 |
| Tnrc6a | down | -1.091420226 |
| Arhgap30 | down | -1.090194767 |
| Gpr88 | down | -1.090068624 |
| Kcnb2 | down | -1.088932902 |
| Apcdd1 | down | -1.087280146 |
| Tmem26 | down | -1.08697296 |
| Acp5 | down | -1.085329746 |
| Aoah | down | -1.081768317 |
| Car3 | down | -1.081327537 |
| Flrt2 | down | -1.080968427 |
| Crtac1 | down | -1.080647976 |
| Trem3 | down | -1.078784415 |
| Tstd3 | down | -1.078313484 |
| Tas2r138 | down | -1.07287469 |
| Aldh1a7 | down | -1.07184126 |
| Stc1 | down | -1.070721875 |
| Fibin | down | -1.069066819 |
| Nrk | down | -1.068796047 |
| Paqr7 | down | -1.068576589 |
| Hs6st2 | down | -1.068042649 |
| Gent4 | down | -1.067309386 |
| Dao | down | -1.06681687 |
| Rerg | down | -1.066503124 |
| Lrat | down | -1.065990706 |
| Dpep2 | down | -1.064680113 |
| Hells | down | -1.064277493 |
| Mrps14 | down | -1.061789124 |
| Slc2a10 | down | -1.061279195 |
| Lrrn4 | down | -1.060836165 |
| Bmper | down | -1.059052066 |
| Il1r1 | down | -1.059042452 |
| Sgcd | down | -1.058659505 |
| Tlr3 | down | -1.05814708 |
| Sorl1 | down | -1.055824924 |
| Kctd14 | down | -1.055541397 |
| Gpr81 | down | -1.052702024 |
| Tdp2 | down | -1.051728715 |
| Glrx | down | -1.051372317 |
| Nkapl | down | -1.049997383 |
| Slc4a9 | down | -1.048661968 |
| Fancb | down | -1.046917126 |
| Ly6d | down | -1.046707542 |
| Pde3a | down | -1.046165183 |
| Slc35f4 | down | -1.045417202 |
| Ces1c | down | -1.041914643 |
| Pcdhgb7 | down | -1.040175554 |
| Vcam1 | down | -1.039658507 |
| Unc79 | down | -1.037915913 |
| Obp2b | down | -1.036137556 |

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|----------|------|--------------|
| Sbspon | down | -1.035219356 |
| Postn | down | -1.034326176 |
| Helz | down | -1.033247557 |
| Il27ra | down | -1.032208358 |
| Zfp786 | down | -1.029360625 |
| Kcnk9 | down | -1.028985112 |
| Igfbp5 | down | -1.028087117 |
| Bmp15 | down | -1.027229426 |
| Clec7a | down | -1.025014008 |
| Dapp1 | down | -1.023016682 |
| Birc7 | down | -1.022322232 |
| Dkk3 | down | -1.022051691 |
| Henmt1 | down | -1.021667987 |
| Ptprc | down | -1.018934567 |
| Syt3 | down | -1.01866805 |
| Cd83 | down | -1.017684152 |
| Ntf3 | down | -1.015426664 |
| Lum | down | -1.014295119 |
| Ash11 | down | -1.013107388 |
| Vwde | down | -1.012673905 |
| Cers1 | down | -1.012420851 |
| Adamts5 | down | -1.012267649 |
| Pcdhb2 | down | -1.011525667 |
| Fmnl1 | down | -1.009282156 |
| Hhex | down | -1.008787274 |
| Slc6a15 | down | -1.008487362 |
| Acvr1l | down | -1.006956797 |
| Naalad2 | down | -1.006797993 |
| Agphd1 | down | -1.006274561 |
| Slc51a | down | -1.006243595 |
| Mrgprx2 | down | -1.005489004 |
| Adra2a | down | -1.004467647 |
| Ypel4 | down | -1.003457563 |
| Mageb4 | down | -1.002005473 |
| Lrrd1 | up | 1.000315479 |
| Ephx3 | up | 1.006769954 |
| Pax6 | up | 1.007150395 |
| Lipk | up | 1.008761638 |
| Slco6c1 | up | 1.010041493 |
| Prr7 | up | 1.012967385 |
| Obox1 | up | 1.013725704 |
| Tfap4 | up | 1.014887126 |
| Xkr4 | up | 1.02118633 |
| Mapk8ip2 | up | 1.021844722 |
| Pzp | up | 1.023534374 |
| Jakmip1 | up | 1.027912752 |
| A1bg | up | 1.032824006 |
| Tnc | up | 1.03707341 |
| Ldlr | up | 1.03739416 |
| Snx11 | up | 1.037925208 |
| Zdhhc11 | up | 1.040433286 |
| Iqcf3 | up | 1.043343516 |
| Trpv1 | up | 1.044682106 |
| Stfa2l1 | up | 1.046203053 |
| Lim2 | up | 1.046547641 |
| Pmfbp1 | up | 1.046887544 |

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|----------|----|-------------|
| Cdk5r1 | up | 1.049538772 |
| Cpn1 | up | 1.050377634 |
| Il9r | up | 1.050990319 |
| Macrod2 | up | 1.051374711 |
| Smad3 | up | 1.05156711 |
| Krt39 | up | 1.051759899 |
| Tp73 | up | 1.055005046 |
| Phox2a | up | 1.059707661 |
| Vsig2 | up | 1.062008318 |
| Dmrt1 | up | 1.062758025 |
| Nsl1 | up | 1.063012606 |
| Slc5a8 | up | 1.067884678 |
| Cd8a | up | 1.06894219 |
| Spink14 | up | 1.070313473 |
| Clec4b2 | up | 1.070755345 |
| Hyal5 | up | 1.072327531 |
| Vgf | up | 1.072392513 |
| Cdca2 | up | 1.072845986 |
| Mapk4 | up | 1.07855499 |
| Tas2r144 | up | 1.086418062 |
| Snx15 | up | 1.087176313 |
| Banf2 | up | 1.095580048 |
| Defb39 | up | 1.097655944 |
| Ube2t | up | 1.101577487 |
| Stfa3 | up | 1.109836456 |
| Nek2 | up | 1.117743926 |
| Adamts3 | up | 1.117947391 |
| Foxg1 | up | 1.120036157 |
| Disc1 | up | 1.121471127 |
| Tprg1 | up | 1.125094998 |
| Gpr119 | up | 1.127675973 |
| Plcxd2 | up | 1.128538287 |
| Dhrs9 | up | 1.132462152 |
| Asip | up | 1.135903838 |
| Nuf2 | up | 1.13986658 |
| Angptl1 | up | 1.14326261 |
| Ffar1 | up | 1.150316201 |
| Ankrd7 | up | 1.158488975 |
| Insc | up | 1.159335632 |
| Cnr1 | up | 1.159622276 |
| Cnksr2 | up | 1.162503966 |
| Asphd2 | up | 1.16503631 |
| Fabp2 | up | 1.169943687 |
| Ccdc64b | up | 1.171004798 |
| Onecut1 | up | 1.1714245 |
| Tekt5 | up | 1.174427871 |
| Cldn17 | up | 1.177639585 |
| Fam221a | up | 1.179907226 |
| Gprc5a | up | 1.180351964 |
| Asgr1 | up | 1.190605867 |
| Ing3 | up | 1.193214748 |
| Krt9 | up | 1.2004766 |
| Tmco5a | up | 1.209946536 |
| Kbtbd6 | up | 1.21446348 |
| Hoxb7 | up | 1.22492521 |
| Mbd3l2 | up | 1.225273112 |

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|---------|----|-------------|
| Spatc11 | up | 1.248484267 |
| Smim17 | up | 1.257083219 |
| Sfn | up | 1.25783444 |
| Lgi2 | up | 1.259845406 |
| Crip3 | up | 1.260004988 |
| Fam72a | up | 1.267691506 |
| Iqcg | up | 1.274539556 |
| Dcc | up | 1.277621715 |
| Ccdc7 | up | 1.278641206 |
| Lcn8 | up | 1.279705861 |
| Skap1 | up | 1.285663782 |
| Ccdc178 | up | 1.30418333 |
| Spc25 | up | 1.309224225 |
| Armc2 | up | 1.312631769 |
| Ccdc81 | up | 1.317151412 |
| Hgf | up | 1.32832054 |
| Iapp | up | 1.330606848 |
| Ica11 | up | 1.335624863 |
| Nlrp12 | up | 1.3422488 |
| Gpr143 | up | 1.352540377 |
| Sult1c2 | up | 1.359247926 |
| Lrrc30 | up | 1.380210069 |
| Gdf9 | up | 1.392296855 |
| Myo5b | up | 1.393297448 |
| Foxr1 | up | 1.3965553 |
| Chst4 | up | 1.397194194 |
| Ppfia3 | up | 1.398905222 |
| Nova2 | up | 1.407978772 |
| Cldn1 | up | 1.411452526 |
| Adrbk2 | up | 1.427199193 |
| Slc38a5 | up | 1.433459662 |
| Amhr2 | up | 1.43805935 |
| Gcg | up | 1.451062123 |
| Hoxb6 | up | 1.453300324 |
| Doc2b | up | 1.46409386 |
| Gabbr1 | up | 1.465267239 |
| Ndst4 | up | 1.473993315 |
| Crx | up | 1.485864765 |
| Spint1 | up | 1.501539767 |
| Tekt3 | up | 1.504530134 |
| Smcp | up | 1.522498445 |
| Sel1l2 | up | 1.556454865 |
| St8sia5 | up | 1.571889579 |
| Pnpla1 | up | 1.583385837 |
| Baat | up | 1.59626671 |
| Nr6a1 | up | 1.608247113 |
| Faslg | up | 1.638955618 |
| Cela3b | up | 1.665455021 |
| Txndc2 | up | 1.684564434 |
| Lalba | up | 1.945057487 |
| Kcne2 | up | 2.076914957 |