**Table S1.** Bacterial response-related genes from MSigDB.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AADAC | CALCOCO1 | DEFB110 | GABRB2 | IL23R | MEAF6 | NUDCD3 | RAD51 | SLC28A3 | TNP2 |
| ABCA2 | CALHM1 | DEFB112 | GABRD | IL27RA | MED15 | NUP133 | RAD51AP1 | SLC29A3 | TNS1 |
| ABCB6 | CALHM6 | DEFB113 | GADL1 | IL2RA | MED24 | NUP160 | RAD51B | SLC2A5 | TOLLIP |
| ABCB8 | CALML5 | DEFB114 | GALC | IL36A | MED6 | NUP210 | RAD51C | SLC2A9 | TOMM20 |
| ABCD4 | CAMK4 | DEFB115 | GALNT1 | IL36G | MEI4 | NUP210L | RAD51D | SLC30A1 | TOMM20L |
| ABCG5 | CAMKK2 | DEFB116 | GALNT14 | IL4 | MEIOB | NUTF2 | RAD52 | SLC30A9 | TOMM22 |
| ABCG8 | CAMLG | DEFB118 | GALNT18 | IL6 | MEP1B | NXNL2 | RAD54B | SLC34A3 | TOMM34 |
| ABLIM3 | CAMP | DEFB119 | GALP | IL6R | MESP1 | OAS1 | RAD54L | SLC35A1 | TOMM40 |
| ABO | CAND1 | DEFB121 | GAP43 | IL6ST | MESP2 | OAS2 | RADX | SLC35A2 | TOMM40L |
| ABRA | CAPZA2 | DEFB123 | GAREM1 | IL7 | METTL8 | OAS3 | RAF1 | SLC35E1 | TOMM5 |
| ACACB | CARD16 | DEFB124 | GARIN1A | IL7R | MFF | OBSCN | RAG1 | SLC35F1 | TOMM6 |
| ACAN | CARD8 | DEFB125 | GARIN4 | IL9 | MFN1 | OCLN | RAG2 | SLC37A1 | TOMM7 |
| ACE | CARD9 | DEFB126 | GARIN5A | ILDR1 | MFN2 | ODAD4 | RALBP1 | SLC38A11 | TOMM70 |
| ACE2 | CARMIL3 | DEFB127 | GATC | IMMT | MFSD14B | ODR4 | RANBP10 | SLC38A4 | TONSL |
| ACOD1 | CASP1 | DEFB128 | GBP2 | IMP4 | MFSD6 | OGA | RAP1A | SLC39A4 | TOP2A |
| ACP5 | CASP3 | DEFB129 | GBP4 | INF2 | MGAM | OGN | RAP2A | SLC43A3 | TOP2B |
| ACSF3 | CASP4 | DEFB130A | GBP6 | ING3 | MGARP | OLR1 | RAP2B | SLC44A1 | TOP3A |
| ACSL1 | CASP7 | DEFB130B | GBP7 | INIP | MGAT3 | OOEP | RARRES2 | SLC45A2 | TOPBP1 |
| ACSL3 | CASP8 | DEFB131A | GCH1 | INO80 | MGMT | OPA1 | RASAL2 | SLC66A1 | TOR3A |
| ACSL4 | CAV1 | DEFB131B | GCK | INO80B | MGST1 | OPN3 | RASGRP2 | SLC6A16 | TP53BP1 |
| ACSL5 | CAVIN1 | DEFB132 | GCKR | INO80C | MGST2 | OPTN | RASL12 | SLC6A3 | TPD52 |
| ACSL6 | CBFA2T2 | DEFB133 | GCN1 | INO80D | MIAT | OR3A2 | RBBP5 | SLC6A4 | TPI1 |
| ACTB | CBL | DEFB134 | GDAP1 | INO80E | MICA | ORAI2 | RBBP7 | SLC6A5 | TPPP2 |
| ACTBL2 | CCDC115 | DEFB135 | GDF6 | INPP5A | MICAL2 | ORM1 | RBBP8 | SLC6A8 | TPPP3 |
| ACTL6A | CCDC141 | DEFB136 | GEM | INSM1 | MICOS10 | ORMDL2 | RBCK1 | SLC8A3 | TRAF1 |
| ACTN2 | CCDC146 | DEFB4A | GEMIN4 | INTS3 | MICOS13 | OSGEPL1 | RBM15 | SLC9A9 | TRAF3IP2 |
| ACTR2 | CCDC148 | DENND1C | GEMIN5 | INTS4 | MID1IP1 | OSGIN2 | RBM24 | SLF1 | TRAF3IP3 |
| ACTR5 | CCDC184 | DENND6B | GEMIN8 | INTS6 | MIEF1 | OXSM | RBPJ | SLF2 | TRAF4 |
| ACTR8 | CCDC32 | DEPDC1 | GEN1 | INTS8 | MIEF2 | OXTR | RC3H1 | SLITRK2 | TRAK1 |
| ACTRT3 | CCDC33 | DERA | GET3 | IPO5 | MIGA1 | P2RX7 | RC3H2 | SLPI | TRAM2 |
| ACY3 | CCDC40 | DESI2 | GFI1B | IPPK | MIGA2 | P2RY14 | RCAN2 | SLX1A | TRAPPC2B |
| ADAM17 | CCDC57 | DGKI | GGCT | IRF4 | MINPP1 | P3H3 | RCOR1 | SLX1B | TRAPPC3 |
| ADAM5 | CCDC70 | DHCR7 | GGCX | IRF7 | MIR1-1 | P4HA3 | RDH5 | SLX4 | TRAV27 |
| ADAM7 | CCDC88A | DHRS9 | GGT1 | IRF8 | MIR130A | P4HTM | REC114 | SMAD3 | TREM1 |
| ADAM9 | CCL20 | DHX15 | GHRHR | IRGM | MIR139 | PABIR2 | REC8 | SMAD7 | TREM2 |
| ADAMTS5 | CCL26 | DHX29 | GINS2 | ISCU | MIR140 | PABPC4 | RECQL | SMAP2 | TREML4 |
| ADAMTSL2 | CCN5 | DHX33 | GINS3 | ISG15 | MIR17 | PACRG | RECQL4 | SMARCAD1 | TREX1 |
| ADAR | CCNB1IP1 | DHX40 | GINS4 | ISG20 | MIR181B1 | PAFAH1B2 | RECQL5 | SMARCD2 | TRIM14 |
| ADCYAP1 | CCND3 | DIO1 | GIPR | ISM1 | MIR185 | PAGR1 | REG3A | SMC5 | TRIM24 |
| ADD1 | CCNK | DIPK1A | GJA4 | ITGA2 | MIR196B | PALB2 | REG3G | SMC6 | TRIM26 |
| ADGRB1 | CCNO | DIS3L | GJA5 | ITGA6 | MIR19A | PALLD | RELA | SMCHD1 | TRIM29 |
| ADGRF2 | CCR3 | DIS3L2 | GJA9 | ITGAV | MIR205 | PAQR3 | REM2 | SMCP | TRIM40 |
| ADGRG2 | CCR6 | DISC1 | GJB4 | ITPA | MIR20A | PAQR4 | RENBP | SMIM14 | TRIM42 |
| ADGRG5 | CCSER2 | DIXDC1 | GJB5 | ITPKB | MIR21 | PARN | REPIN1 | SMOC2 | TRIM50 |
| ADM | CD14 | DLEC1 | GJC1 | ITPKC | MIR217 | PARP1 | RETSAT | SMPD3 | TRIM52 |
| ADNP2 | CD160 | DMAP1 | GK | ITPR3 | MIR219A1 | PARP3 | REV3L | SMPD4 | TRIM72 |
| ADPGK | CD1D | DMBT1 | GK2 | ITPRIP | MIR222 | PARP8 | RFTN1 | SNCA | TRIO |
| ADRA2A | CD2 | DMC1 | GLA | JAG1 | MIR223 | PARPBP | RFWD3 | SNED1 | TRIP13 |
| ADRA2C | CD200R1L | DMPK | GLG1 | JAK2 | MIR340 | PAXIP1 | RGL2 | SNIP1 | TRMT10B |
| ADRB1 | CD28 | DMRT1 | GLIPR1L2 | JCHAIN | MIR370 | PBK | RGR | SNN | TRMT5 |
| ADSS2 | CD302 | DNAH17 | GLRB | JMJD1C | MIR376B | PBLD | RGS18 | SNX4 | TRPC5 |
| AFG3L1P | CD36 | DNAJB14 | GLRX3 | JMJD4 | MIR378A | PBX1 | RGS9 | SORL1 | TRPM5 |
| AGFG1 | CD4 | DNAJB9 | GMDS | JOSD2 | MIR380 | PCBD1 | RHAG | SOS2 | TRPM8 |
| AGK | CD40 | DNAJC11 | GNE | JUNB | MIR412 | PCDH12 | RHBDF2 | SOX10 | TRPV4 |
| AGO2 | CD40LG | DNM1L | GNG11 | KANK2 | MIR448 | PCDHB1 | RHBDL1 | SP2 | TRRAP |
| AGPAT1 | CD5 | DNTTIP1 | GNG2 | KASH5 | MIR450B | PCDHB13 | RHBG | SPACA3 | TSLP |
| AGPAT4 | CD52 | DOCK10 | GNG8 | KAT5 | MIR455 | PCDHB17P | RHCE | SPAG11A | TSN |
| AGPAT5 | CD59 | DOP1B | GNLY | KBTBD13 | MIR485 | PCDHB7 | RHCG | SPAG11B | TSNAXIP1 |
| AGT | CDC25A | DPP6 | GNPAT | KBTBD3 | MIR488 | PDAP1 | RHD | SPART | TSPAN1 |
| AHDC1 | CDC45 | DPYD | GNPDA1 | KCNA1 | MIR496 | PDCD10 | RHNO1 | SPAST | TSPAN10 |
| AHNAK | CDC7 | DRAM2 | GNPDA2 | KCNA3 | MIR543 | PDE2A | RHOD | SPATA1 | TSPAN14 |
| AICDA | CDH12 | DRD2 | GNS | KCNA4 | MIR551B | PDE5A | RHOG | SPATA18 | TSPAN15 |
| AIFM2 | CDH7 | DRD4 | GOLGA8A | KCNA6 | MIR653 | PDHA2 | RHOT1 | SPATA19 | TSPAN4 |
| AK9 | CDK5R2 | DRG1 | GOPC | KCNAB1 | MIR676 | PDK2 | RHOT2 | SPATA2 | TSPAN7 |
| AKAP1 | CDKN2AIP | DROSHA | GP2 | KCNC1 | MIR7-1 | PDLIM2 | RIC3 | SPATA2L | TSPO |
| AKAP17A | CDR2L | DRP2 | GPAM | KCNC3 | MIRLET7B | PDLIM5 | RIF1 | SPATA7 | TSSC4 |
| AKIRIN2 | CDRT4 | DSC3 | GPAT2 | KCNJ2 | MKRN7P | PDP2 | RIN1 | SPCS3 | TTC12 |
| AKR1A1 | CDS2 | DSCAML1 | GPATCH3 | KCNK12 | MLH1 | PDZK1IP1 | RIN3 | SPDEF | TTC3 |
| ALCAM | CEACAM5 | DSE | GPC2 | KCNK13 | MLH3 | PDZRN3 | RIPK2 | SPEN | TTC36 |
| ALDH1L2 | CEBPB | DSP | GPHA2 | KCNK18 | MLPH | PEF1 | RLF | SPIDR | TTC38 |
| ALDH3B1 | CELA3B | DUSP21 | GPIHBP1 | KCNK2 | MLST8 | PELI2 | RMDN3 | SPINK4 | TTC7B |
| ALG8 | CENPC | DYDC1 | GPN1 | KCNMB2 | MLXIP | PEX5L | RMI1 | SPINK5 | TTI2 |
| ALKAL1 | CENPS | DYNC1LI1 | GPR101 | KCNQ1 | MMEL1 | PGAM5 | RMI2 | SPINK6 | TTK |
| ALLC | CENPX | DYNLL1 | GPR156 | KCNT1 | MMP20 | PGBD5 | RNASE1 | SPINK8 | TTLL5 |
| ALPK2 | CEP126 | DYNLT5 | GPR15LG | KCNV1 | MMRN2 | PGC | RNASE10 | SPINT3 | TUBG2 |
| ALS2CL | CEP68 | DYSF | GPR161 | KCTD1 | MMS19 | PGK1 | RNASE11 | SPIRE1 | TUFM |
| ALYREF | CER1 | EAF1 | GPR20 | KCTD8 | MMS22L | PGLYRP1 | RNASE12 | SPN | TUSC2 |
| AMBRA1 | CES4A | EARS2 | GPR22 | KDM1A | MND1 | PGLYRP2 | RNASE13 | SPO11 | TXN2 |
| AMDHD2 | CFAP100 | ECE1 | GPR39 | KDM3B | MOAP1 | PGLYRP3 | RNASE2 | SPON2 | TXNL4A |
| AMIGO1 | CFAP410 | ECEL1 | GPR4 | KDM4D | MOCS3 | PGLYRP4 | RNASE3 | SPRR2A | TXNL4B |
| AMIGO3 | CFP | ECSIT | GPRC5B | KHDC1L | MOGAT2 | PGR | RNASE4 | SPRR3 | TYK2 |
| AMOTL2 | CGA | EDA | GPRIN2 | KHDC3L | MON2 | PGRMC1 | RNASE6 | SPRY2 | UBA2 |
| AMPD1 | CGAS | EEF1AKMT1 | GPX2 | KHDRBS3 | MORC4 | PHB1 | RNASE7 | SQOR | UBA52 |
| AMPH | CHCHD3 | EEF1AKMT2 | GRB7 | KIF15 | MORF4L1 | PHB2 | RNASE8 | SRC | UBAP2 |
| ANAPC13 | CHCHD6 | EFCAB10 | GRIK2 | KIF4A | MORF4L2 | PHF1 | RNASE9 | SREK1IP1 | UBAP2L |
| ANG | CHD4 | EFR3B | GRK6 | KIN | MOSPD3 | PHF2 | RNF115 | SRF | UBB |
| ANGPT4 | CHDH | EGF | GRN | KIT | MOXD1 | PHF3 | RNF123 | SRP72 | UBC |
| ANK2 | CHEK1 | EGFL6 | GSDMA | KLF11 | MPEG1 | PHKG1 | RNF13 | SRPX | UBE2B |
| ANKFN1 | CHGA | EGFR | GSDMB | KLF3 | MPO | PHLDA1 | RNF138 | SRY | UBE2J2 |
| ANKH | CHGB | EHMT1 | GSDMC | KLF5 | MPP1 | PHOX2B | RNF144B | SS18L1 | UBE2K |
| ANKLE1 | CHIC2 | EID3 | GSDMD | KLHDC2 | MR1 | PI15 | RNF168 | SSBP3 | UBE2N |
| ANKRD17 | CHMP4C | EIF2AK1 | GSDME | KLHDC3 | MRE11 | PI3 | RNF185 | SSC4D | UBE4A |
| ANKRD31 | CHMP7 | EIF2B5 | GSTA3 | KLHL1 | MRGBP | PI4KB | RNF212 | SSC5D | UBQLN1 |
| ANKRD60 | CHODL | EIF2S2 | GSTZ1 | KLHL15 | MRNIP | PIAS4 | RNF212B | SSR1 | UBQLN4 |
| ANKRD61 | CHRDL1 | EIF3B | GSX2 | KLHL23 | MRO | PIF1 | RNF213 | SSR2 | UBR2 |
| ANKS6 | CHRM5 | EIF3E | GTF2I | KLHL29 | MRPL33 | PIGBOS1 | RNF222 | SST | UCHL3 |
| ANO10 | CHST1 | EIF4B | GTPBP10 | KLHL38 | MRPL34 | PIGG | RNF31 | SSTR2 | UCHL5 |
| ANO3 | CHST2 | EIF4EBP2 | GTPBP4 | KLHL4 | MRPL46 | PIGK | RNF4 | SSTR3 | UCMA |
| ANP32B | CHST3 | ELANE | GTSF1 | KLK11 | MRPL49 | PIGR | RNF8 | ST13 | UCN |
| ANPEP | CHST4 | ELFN1 | GTSF1L | KLK3 | MRS2 | PIK3AP1 | ROM1 | ST18 | UCN2 |
| ANXA3 | CHST5 | ELL2 | GUCA2A | KLK5 | MS4A7 | PIK3C2G | ROMO1 | ST6GALNAC1 | UFSP1 |
| ANXA5 | CHST6 | ELN | GUCY1A2 | KLK7 | MSH2 | PIM2 | RORA | STAB1 | UGT2B28 |
| AOAH | CHST7 | EMD | GUCY1B2 | KLRC4-KLRK1 | MSH3 | PINK1 | RORC | STAB2 | UIMC1 |
| AOC3 | CHUK | EME1 | GUCY2D | KLRK1 | MSH4 | PIWIL4 | RPA1 | STAG1 | ULK1 |
| AP1M1 | CIDEC | EME2 | GUCY2F | KMO | MSH5 | PJA1 | RPA2 | STARD13 | UMOD |
| AP2B1 | CISD1 | EMILIN1 | GUK1 | KMT5B | MSH6 | PKHD1 | RPA3 | STARD7 | UNC45B |
| AP3S1 | CISD2 | EMILIN2 | GYPA | KMT5C | MSLN | PKN2 | RPA4 | STAT1 | UNC5B |
| AP5S1 | CKAP5 | EML1 | GYS2 | KPNA1 | MSLNL | PLA2G12B | RPAP3 | STAT3 | UNG |
| AP5Z1 | CKM | EMP2 | H1-0 | KPNA2 | MSR1 | PLA2G1B | RPL24 | STAT6 | UPF3A |
| APBB1IP | CLCA4 | ENDOG | H1-1 | KPNA6 | MSTO1 | PLA2G2A | RPL30 | STATH | UPK1A |
| APEX1 | CLCF1 | ENG | H1-10 | KRAS | MSX1 | PLA2G2D | RPL39 | STING1 | UPK3B |
| APEX2 | CLCN1 | ENO1 | H1-2 | KRBA1 | MSX2 | PLA2G4E | RPL39L | STMN1 | UPRT |
| APH1A | CLDN12 | ENSG00000289047 | H1-3 | KREMEN2 | MT3 | PLA2G6 | RPL6 | STMN4 | UQCRC2 |
| APLF | CLDN19 | ENTPD1 | H1-4 | KRT12 | MTARC1 | PLA2R1 | RPL7A | STMP1 | UROS |
| APOL3 | CLDN6 | ENTPD1-AS1 | H1-5 | KRT16 | MTARC2 | PLAAT3 | RPRM | STN1 | USE1 |
| APOL6 | CLDN8 | ENTPD7 | H1-6 | KRT2 | MTCH1 | PLAC8 | RPS11 | STT3A | USP12 |
| APOO | CLEC1A | EP400 | H1-7 | KRT23 | MTCH2 | PLB1 | RPS14 | SUCNR1 | USP15 |
| APOOL | CLEC4D | EPC1 | H1-8 | KRT27 | MTCP1 | PLBD2 | RPS19 | SUFU | USP22 |
| AQP1 | CLEC4E | EPC2 | H1-9P | KRT6A | MTERF3 | PLCD3 | RPS27A | SUGCT | USP26 |
| AQP11 | CLEC4F | EPHA2 | H2AC8 | KRT8 | MTF2 | PLCXD2 | RPS6KA2 | SUMO1 | USP30 |
| AQP8 | CLEC6A | EPHA4 | H2AX | KRTAP19-7 | MTHFD2L | PLD1 | RPS6KB1 | SUPT6H | USP32P2 |
| ARAP1 | CLEC7A | EPHB2 | H2BC10 | KRTAP26-1 | MTOR | PLD2 | RPS8 | SUPV3L1 | USP4 |
| ARF6 | CLMN | EPHB3 | H2BC11 | KRTAP7-1 | MTREX | PLD6 | RPUSD4 | SURF2 | USP42 |
| ARG1 | CLTA | EPHX1 | H2BC12 | KTN1 | MTX1 | PLEC | RRAGD | SUSD1 | USP44 |
| ARG2 | CLU | EPM2A | H2BC12L | KY | MTX2 | PLEKHH2 | RRAS | SV2B | USP51 |
| ARHGAP29 | CMA1 | EPPIN | H2BC21 | L3MBTL1 | MTX3 | PLEKHM1 | RRP1B | SWAP70 | USPL1 |
| ARHGAP36 | CMBL | EPS8 | H2BC4 | LACRT | MUC2 | PLIN5 | RRP7A | SWI5 | UTP20 |
| ARHGDIG | CMTR2 | EPX | H2BC6 | LALBA | MUL1 | PLK1 | RRP8 | SWSAP1 | UTP4 |
| ARHGEF11 | CNGA1 | ERCC1 | H2BC7 | LAMTOR3 | MUS81 | PLN | RRS1 | SYCE3 | VAMP1 |
| ARHGEF17 | CNGA4 | ERCC2 | H2BC8 | LARGE1 | MYADM | PLP1 | RSAD2 | SYCP1 | VAMP2 |
| ARHGEF40 | CNN1 | ERCC4 | HADHB | LARS1 | MYD88 | PLP2 | RSBN1 | SYCP2 | VAMP7 |
| ARHGEF5 | CNN2 | ERCC5 | HAT1 | LBP | MYH1 | PLPP3 | RSPH6A | SYK | VASH1 |
| ARID2 | CNN3 | ERCC6 | HAUS2 | LBX1 | MYH11 | PLS1 | RTEL1 | SYN2 | VAT1 |
| ARID5A | CNP | ERLIN2 | HAVCR2 | LCAT | MYH15 | PLXNB3 | RTKN | SYNE1 | VAV1 |
| ARL9 | CNR1 | ERO1B | HAX1 | LCE3A | MYL11 | PMAIP1 | RTL8C | SYNE2 | VBP1 |
| ARMC1 | CNTD1 | ESM1 | HBP1 | LCE3B | MYL3 | PML | RTN4IP1 | SYNE3 | VDAC1 |
| ARMC12 | CNTNAP1 | ESRP2 | HCK | LCE3C | MYO15B | PNMA2 | RTN4R | SYNE4 | VDAC2 |
| ARMCX1 | CNTNAP4 | ESRRA | HCN1 | LCLAT1 | MYO16 | PNMA3 | RUBCNL | SYNGAP1 | VDAC3 |
| ARMCX2 | COASY | ETNPPL | HCN4 | LCN2 | MYO19 | PNMA5 | RUNX3 | SYNJ1 | VDR |
| ARMCX3 | COL10A1 | ETV1 | HDAC10 | LCN8 | MYO1C | PNMT | RUVBL1 | SYNJ2BP | VEZT |
| ARMCX6 | COL1A2 | EVPL | HDGF | LDB3 | MYO1D | POGZ | RUVBL2 | SYNPO | VGF |
| ASAH2 | COL23A1 | EXD2 | HDGFL1 | LEAP2 | MYO7A | POLA1 | S100A12 | SYT11 | VIL1 |
| ASB11 | COL28A1 | EXO1 | HDGFL2 | LEF1 | MYOC | POLB | S100A14 | SZT2 | VIPR1 |
| ASB2 | COL6A1 | EXO5 | HDHD2 | LELP1 | MYOF | POLL | S100A7 | TACR3 | VLDLR |
| ASCC2 | COL9A1 | EXOC2 | HDLBP | LETMD1 | MYOT | POLM | S100A8 | TAF1D | VPREB1 |
| ASGR1 | COLEC12 | EXOC7 | HDX | LFNG | N4BP2 | POLN | S100A9 | TAF8 | VPS11 |
| ASH1L | COLGALT2 | EXOSC3 | HEBP1 | LGALS4 | NAA11 | POLQ | S1PR3 | TAFA3 | VPS13A |
| ASPG | COMMD8 | EXOSC6 | HEBP2 | LGI2 | NABP1 | POLR2G | SAA2 | TAFAZZIN | VPS13C |
| ASS1 | COPS3 | EXTL2 | HECW1 | LHX9 | NABP2 | POLR2M | SAA4 | TARM1 | VPS39 |
| ATAD1 | COPZ2 | F2 | HELB | LIG1 | NAF1 | POM121L2 | SAMHD1 | TAS1R3 | VPS4B |
| ATAD5 | CORO1A | F2R | HELQ | LIG3 | NAGK | POMP | SAMM50 | TBC1D2B | VPS54 |
| ATF2 | CORO7 | F2RL1 | HES7 | LIG4 | NAIP | POPDC3 | SANBR | TBC1D5 | VPS72 |
| ATF3 | COX20 | FAAP24 | HFM1 | LILRA3 | NANOS2 | POU2AF1 | SAP18 | TBC1D9B | VRK3 |
| ATG13 | COX8BP | FAF2 | HGFAC | LILRB1 | NANP | POU4F1 | SAP30BP | TBK1 | VSIG2 |
| ATM | CPA1 | FAM114A2 | HGS | LIMS1 | NANS | PPBP | SARM1 | TBX20 | VSIG8 |
| ATP10B | CPB2 | FAM117B | HIGD1A | LIPH | NAPEPLD | PPFIA2 | SARNP | TBX21 | VSTM2B |
| ATP1A1 | CPEB3 | FAM120C | HIGD1B | LMCD1 | NAPSA | PPP1CA | SASH3 | TBX5 | VWCE |
| ATP5MC1 | CPLANE1 | FAM131C | HINFP | LMTK3 | NAT1 | PPP1CC | SATB1 | TBX6 | WAS |
| ATP5MC2 | CPNE2 | FAM13B | HINT2 | LNX2 | NAV3 | PPP1R11 | SCAMP1 | TCAF2 | WASF1 |
| ATP5MC3 | CPQ | FAM168B | HIPK2 | LORICRIN | NBEA | PPP1R15A | SCLY | TCEAL8 | WDFY1 |
| ATP5MJ | CPT1A | FAM169A | HK1 | LOX | NBN | PPP1R15B | SCN11A | TCERG1L | WDHD1 |
| ATP6V0A2 | CPT1B | FAM170A | HK2 | LOXL2 | NCALD | PPP1R21 | SCN4A | TCF3 | WDR45B |
| ATP6V0D1 | CPT1C | FAM178B | HLA-A | LOXL3 | NCAM1 | PPP1R37 | SCN4B | TCF4 | WDR47 |
| ATP6V1D | CPTP | FAM187B | HLA-B | LPIN1 | NCAPG | PPP2R2B | SCNN1B | TCF7 | WDR48 |
| ATP6V1G3 | CPZ | FAM210B | HLA-DRB1 | LPL | NCDN | PPP4C | SCRT1 | TCFL5 | WDR86 |
| ATXN7L1 | CRACR2B | FAM50A | HLA-E | LPO | NCF2 | PPP4R2 | SCTR | TCHH | WFDC10A |
| ATXN7L2 | CRCT1 | FAM53C | HLF | LRFN3 | NCOR2 | PPP6R1 | SDC4 | TCL6 | WFDC10B |
| ATXN7L3 | CRHR1 | FAM83E | HLX | LRFN4 | NDFIP1 | PPRC1 | SDK1 | TCP11L2 | WFDC11 |
| AUNIP | CRLS1 | FAM86B1 | HMCES | LRIG3 | NDOR1 | PRAME | SEC14L3 | TDG | WFDC12 |
| AVIL | CRP | FAN1 | HMGB1 | LRPPRC | NDRG3 | PRB3 | SEC16B | TDRD12 | WFDC13 |
| AVPR1A | CRY1 | FANCB | HMGB2 | LRRC18 | NDUFA4 | PRC1 | SEH1L | TEKT1 | WFDC2 |
| AWAT2 | CRYAA | FANCD2 | HMGB3 | LRRC19 | NDUFS5 | PRDM13 | SEL1L | TEP1 | WFDC3 |
| AXIN1 | CRYBB1 | FANCM | HMGCL | LRRC30 | NEB | PRDM7 | SELP | TERB1 | WFDC5 |
| AXIN2 | CRYGS | FAS | HMGN2P6 | LRRC7 | NEBL | PRDM9 | SEMA3A | TERF2 | WFDC9 |
| AZU1 | CSMD3 | FASTKD1 | HMGN3 | LRRC8B | NECAB2 | PRELID3B | SEMG1 | TERF2IP | WNT1 |
| B3GALNT1 | CSRNP2 | FAT1 | HMOX1 | LRRK2 | NEK1 | PRF1 | SEMG2 | TEX11 | WNT5A |
| B3GNT8 | CST11 | FAT3 | HMX2 | LRTM2 | NEK9 | PRG2 | SENP6 | TEX15 | WRAP53 |
| B4GALT6 | CSTL1 | FATE1 | HNF1A | LSAMP | NELFA | PRKAR2A | SEPTIN11 | TEX19 | WRAP73 |
| BAD | CTCFL | FAU | HNRNPA0 | LSP1 | NEO1 | PRKCD | SEPTIN4 | TF | WRN |
| BAK1 | CTDNEP1 | FBH1 | HNRNPK | LTA | NEPRO | PRKCQ | SERPINB12 | TFAP2B | WSB2 |
| BARD1 | CTH | FBLN5 | HOMER2 | LTC4S | NET1 | PRKD1 | SERPINB13 | TFEB | WTIP |
| BATF | CTHRC1 | FBRS | HORMAD2 | LTF | NETO1 | PRKDC | SERPINB8 | TFIP11 | WWTR1 |
| BATF3 | CTNS | FBXO39 | HOXA9 | LUZP2 | NEU2 | PRKG2 | SERPINC1 | TFPT | XDH |
| BAX | CTSG | FBXO4 | HOXB3 | LY6E | NEU4 | PRKN | SERPINE1 | TFRC | XKR4 |
| BAZ1A | CTSLP3 | FBXO41 | HOXC10 | LY9 | NF1 | PRL | SERPINI2 | TGFB1 | XRCC1 |
| BAZ2B | CUL7 | FBXO48 | HOXC13 | LYG1 | NFATC1 | PRMT2 | SERTAD1 | TGFBR3 | XRCC2 |
| BBS12 | CUX1 | FCER1G | HOXC6 | LYG2 | NFATC3 | PROCA1 | SETD1A | THAP12 | XRCC3 |
| BCAP29 | CWC25 | FCER2 | HOXD11 | LYPD8 | NFE2 | PROM1 | SETD1B | THAP9 | XRCC4 |
| BCAT2 | CX3CR1 | FCGR1A | HP | LYST | NFKBID | PRPS1L1 | SETD2 | THBS1 | XRCC5 |
| BCL11B | CXCL13 | FCGR2B | HPSE | LYZ | NFKBIZ | PRR3 | SETD5 | THG1L | XRCC6 |
| BCL2 | CXCL3 | FCGR3A | HROB | LYZL4 | NFRKB | PRR5L | SETX | THNSL2 | YEATS4 |
| BCL2A1 | CXCL6 | FCGRT | HS3ST2 | LYZL6 | NGFR | PRRT3 | SEZ6L | THOC1 | YIPF1 |
| BCL2L1 | CXCL8 | FCN2 | HS3ST5 | MAD2L2 | NGRN | PRRX2 | SF1 | THOC5 | YIPF4 |
| BCL2L10 | CXCR2 | FEM1A | HSD17B7 | MAF | NHEJ1 | PRSS3 | SFN | THSD1 | YIPF7 |
| BCL2L11 | CXCR4 | FEN1 | HSD3B2 | MAGEA10 | NHLRC1 | PRSS33 | SFPQ | THUMPD1 | YJEFN3 |
| BCL2L14 | CYB5A | FER1L4 | HSF2BP | MAGEB17 | NIBAN1 | PRSS3P1 | SFR1 | TIA1 | YTHDC2 |
| BCL2L2 | CYB5B | FER1L6 | HSPA13 | MAGEF1 | NIP7 | PRSS58 | SFRP4 | TIGAR | YY1 |
| BCL3 | CYB5R3 | FFAR3 | HSPA5 | MAGI1 | NIPAL1 | PSD | SFSWAP | TIMELESS | ZBTB16 |
| BCL6 | CYBA | FFAR4 | HSPA9 | MAGI2 | NIPAL2 | PSEN1 | SFTPA1 | TIRAP | ZBTB32 |
| BEGAIN | CYC1 | FGA | HSPBAP1 | MALT1 | NIPAL4 | PSENEN | SFTPD | TLE1 | ZBTB44 |
| BICC1 | CYFIP1 | FGB | HSPD1 | MAN2B2 | NIPBL | PSKH1 | SFXN2 | TLR1 | ZBTB46 |
| BID | CYGB | FGD5 | HSPE1 | MANF | NIPSNAP2 | PSMA2 | SH3BGRL | TLR2 | ZBTB49 |
| BIN3 | CYLC1 | FGF12 | HSPG2 | MANSC1 | NKAPL | PSMA8 | SH3BP5 | TLR3 | ZBTB7A |
| BLM | CYP26B1 | FGF17 | HTN1 | MAOA | NKPD1 | PSMB11 | SH3GLB1 | TLR4 | ZBTB7B |
| BLNK | CYP27B1 | FGF18 | HTN3 | MAOB | NKX2-2 | PSMB2 | SH3RF1 | TLR5 | ZBTB9 |
| BMF | CYP2G1P | FGF22 | HTR1A | MAP3K11 | NKX3-2 | PSMC2 | SH3TC2 | TLR6 | ZC2HC1A |
| BMP2 | CYP2R1 | FGF23 | HTR3B | MAP3K3 | NLRC4 | PSMC3IP | SHARPIN | TLR9 | ZC3H12A |
| BMP6 | CYP4X1 | FGF6 | HTR6 | MAP3K9 | NLRP1 | PSMD12 | SHBG | TM2D2 | ZC3H12C |
| BMPR1B | CYP51A1 | FGFR4 | HUS1 | MAP7 | NLRP10 | PSMD14 | SHC1 | TMC5 | ZC3H12D |
| BNIP3 | CYREN | FGG | HUS1B | MAPK14 | NLRP3 | PSMD7 | SHCBP1 | TMCC1 | ZCCHC2 |
| BNIP3L | CYRIB | FGR | HYLS1 | MAPK6 | NLRP6 | PSME2 | SHFL | TMCC2 | ZCCHC3 |
| BOK | DAB1 | FHOD1 | ICA1 | MAPKAP1 | NLRX1 | PSME4 | SHISAL2A | TMCO2 | ZCCHC8 |
| BPESC1 | DACT2 | FIBIN | IDH3G | MAPKBP1 | NMBR | PSORS1C1 | SHLD1 | TMCO5A | ZCWPW1 |
| BPHL | DAG1 | FIGNL1 | IFI27 | MARCHF1 | NMI | PSORS1C2 | SHLD2 | TMEFF1 | ZDHHC11 |
| BPI | DAO | FILIP1 | IFIH1 | MARCHF11 | NMRK1 | PTCD2 | SHLD3 | TMEFF2 | ZDHHC18 |
| BPIFA1 | DAPK3 | FIS1 | IFIT3 | MARCHF2 | NOD1 | PTEN | SHOC1 | TMEM109 | ZFAND2A |
| BPIFA2 | DARS2 | FITM1 | IFIT5 | MARCHF3 | NOD2 | PTGDS | SHROOM3 | TMEM126B | ZFAND3 |
| BPIFB1 | DCAF1 | FIZ1 | IFITM3 | MARCHF5 | NOL7 | PTGIS | SIAE | TMEM164 | ZFHX3 |
| BPTF | DCD | FKBP6 | IFNA14 | MARCHF8 | NONO | PTGR3 | SIGLEC1 | TMEM165 | ZFP30 |
| BRCA1 | DCLRE1C | FKRP | IFNA4 | MARF1 | NOS2 | PTGS1 | SIGLEC16 | TMEM17 | ZFP36 |
| BRCA2 | DCP1B | FLG2 | IFNE | MARVELD3 | NOTCH1 | PTGS2 | SIGMAR1 | TMEM174 | ZFP36L1 |
| BRD8 | DCTN1 | FLI1 | IFRD2 | MAT2B | NOTCH2 | PTH2 | SIN3A | TMEM198 | ZFP57 |
| BRI3BP | DDIT3 | FLNB | IGF2BP1 | MATN2 | NOTCH4 | PTK2B | SIPA1L3 | TMEM217 | ZFR2 |
| BRIP1 | DDN | FMNL1 | IGFALS | MAVS | NOXO1 | PTPN14 | SIRT2 | TMEM229A | ZFYVE1 |
| BRME1 | DDR1 | FMNL2 | IGFBP1 | MBD1 | NPAS4 | PTPN5 | SIRT6 | TMEM268 | ZFYVE19 |
| BSX | DDX23 | FMO3 | IGHA1 | MBD2 | NPBWR2 | PTPRC | SIX4 | TMEM35A | ZFYVE26 |
| BTF3 | DDX3X | FMO5 | IGHA2 | MBD3 | NPHP3 | PTPRU | SLAMF6 | TMEM53 | ZFYVE9 |
| BTG1 | DDX46 | FNBP1L | IGHM | MBD6 | NPHS1 | PWAR5 | SLAMF8 | TMEM72 | ZG16 |
| BTNL8 | DDX52 | FOLH1 | IGKV3-20 | MBL2 | NPNT | PWWP3B | SLC11A1 | TMEM81 | ZGLP1 |
| BTRC | DDX54 | FOXB1 | IHO1 | MBTD1 | NPW | PXDN | SLC11A2 | TMEM82 | ZHX2 |
| C11orf16 | DEF8 | FOXB2 | IK | MCL1 | NPY1R | PXYLP1 | SLC12A2 | TMEM9B | ZIC3 |
| C11orf65 | DEFA1 | FOXE3 | IKZF5 | MCM2 | NQO2 | PYCARD | SLC12A4 | TMF1 | ZMYM6 |
| C11orf80 | DEFA1B | FOXI1 | IL10 | MCM3 | NR1H4 | QSOX2 | SLC12A5 | TMIGD1 | ZMYND12 |
| C14orf39 | DEFA3 | FOXO3 | IL12A | MCM3AP | NR1H5P | QTRT1 | SLC12A6 | TMPRSS11A | ZMYND8 |
| C19orf73 | DEFA4 | FOXP1 | IL12B | MCM4 | NRG3 | QTRT2 | SLC12A7 | TMTC2 | ZNF140 |
| C1QL4 | DEFA5 | FOXP3 | IL12RB1 | MCM5 | NRIP1 | RAB11FIP5 | SLC13A2 | TMX1 | ZNF202 |
| C1orf146 | DEFA6 | FPR2 | IL17A | MCM6 | NRK | RAB14 | SLC15A3 | TNF | ZNF235 |
| C2CD6 | DEFB1 | FRAT1 | IL17F | MCM7 | NRP1 | RAB15 | SLC15A4 | TNFAIP6 | ZNF335 |
| C5AR1 | DEFB103A | FREM2 | IL17RA | MCM8 | NSA2 | RAB18 | SLC16A14 | TNFAIP8L2 | ZNF365 |
| C7 | DEFB103B | FRMD3 | IL18 | MCM9 | NSD2 | RAB1A | SLC1A3 | TNFRSF10C | ZNF394 |
| C7orf25 | DEFB104A | FRMPD1 | IL18RAP | MCMDC2 | NSG1 | RAB27B | SLC22A1 | TNFRSF13C | ZNF749 |
| C9orf78 | DEFB104B | FRS2 | IL1B | MCRS1 | NSMCE1 | RAB2A | SLC22A13 | TNFRSF14 | ZNFX1 |
| CA4 | DEFB105A | FSHB | IL1R1 | MCTP1 | NSMCE2 | RAB32 | SLC22A25 | TNFRSF17 | ZNHIT2 |
| CABP5 | DEFB105B | FTO | IL1R2 | MCTP2 | NSMCE3 | RAB39A | SLC22A4 | TNFRSF1A | ZRANB3 |
| CACNA1F | DEFB106A | FUCA2 | IL1RAP | MCUR1 | NSMCE4A | RAB3GAP2 | SLC23A2 | TNFSF13 | ZSCAN4 |
| CACNB3 | DEFB106B | FUNDC1 | IL1RAPL2 | MDC1 | NSUN5 | RAB9B | SLC24A1 | TNFSF18 | ZSWIM4 |
| CACNG3 | DEFB107A | FUNDC2 | IL2 | MDGA1 | NT5C1B | RABGEF1 | SLC25A18 | TNFSF4 | ZSWIM7 |
| CACNG5 | DEFB107B | FUS | IL21R | MDH1 | NT5M | RAC2 | SLC25A24 | TNFSF8 | ZXDC |
| CADM1 | DEFB108A | FUT7 | IL22RA1 | MDM1 | NTN1 | RAD21 | SLC25A46 | TNIP1 | ZYG11A |
| CADPS2 | DEFB108B | GABPB1-IT1 | IL22RA2 | MDM4 | NTNG1 | RAD21L1 | SLC27A2 | TNMD | ZYX |
| CAGE1 | DEFB109B | GABRB1 | IL23A | ME1 | NUCKS1 | RAD50 | SLC28A2 | TNNT1 |  |