**Supplementary Table** Senescene-related genes in the

|  |
| --- |
| *ACLY* |
| *AAK1* |
| *ABI3* |
| *ADCK5* |
| *AKR1B1* |
| *AGT* |
| *AKT1* |
| *ALOX15B* |
| *AR* |
| *ARPC1B* |
| *ASF1A* |
| *ASPH* |
| *ATF7IP* |
| *ATM* |
| *AURKA* |
| *AXL* |
| *BAG3* |
| *BHLHE40* |
| *BCL6* |
| *BLK* |
| *BLVRA* |
| *BMI1* |
| *BRAF* |
| *BRD7* |
| *BRCA1* |
| *BTG3* |
| *C11orf31* |
| *CAV1* |
| *CBX7* |
| *CBX8* |
| *CCND1* |
| *CDK1* |
| *CDK18* |
| *CDK2AP1* |
| *CDK6* |
| *CDK4* |
| *CDKN1A* |
| *CDKN1C* |
| *CDKN1B* |
| *CDKN2A* |
| *CDKN2AIP* |
| *CDKN2B* |
| *CENPA* |
| *CEBPB* |
| *CHEK1* |
| *CKB* |
| *CPEB1* |
| *CSNK1A1* |
| *CTNNAL1* |
| *CSNK2A1* |
| *CXCL1* |
| *DDB2* |
| *CYR61* |
| *DEK* |
| *DGCR8* |
| *DHCR24* |
| *DLX2* |
| *DHX9* |
| *DPY30* |
| *DUSP3* |
| *DUSP16* |
| *E2F1* |
| *EHF* |
| *ENDOG* |
| *EPHA3* |
| *ERRFI1* |
| *ETS1* |
| *ETS2* |
| *EWSR1* |
| *FASTK* |
| *EZH2* |
| *FBXO31* |
| *FOXM1* |
| *FOS* |
| *FOXO3* |
| *FXR1* |
| *G6PD* |
| *GAPDH* |
| *GKN1* |
| *GATA4* |
| *GNG11* |
| *GLB1* |
| *GRK6* |
| *HDAC4* |
| *HDAC1* |
| *HEPACAM* |
| *HJURP* |
| *HIVEP1* |
| *HK3* |
| *HMGB1* |
| *HRAS* |
| *HSPA5* |
| *HSPB2* |
| *ID1* |
| *ID4* |
| *IGFBP1* |
| *IFNG* |
| *IGFBP3* |
| *IGFBP6* |
| *IGFBP5* |
| *IL1A* |
| *IL8* |
| *ING1* |
| *ING2* |
| *IRF3* |
| *IRF5* |
| *IRF7* |
| *ITPK1* |
| *ITGB4* |
| *ITPKB* |
| *ITSN2* |
| *KCNJ12* |
| *KDM4A* |
| *KDM5B* |
| *KIAA1524* |
| *KL* |
| *KSR2* |
| *LATS1* |
| *LEO1* |
| *LGALS3* |
| *LIMA1* |
| *LIMK1* |
| *MAGEA2* |
| *MAGOH* |
| *MAD2L1* |
| *MAGOHB* |
| *MAP2K1* |
| *MAP2K3* |
| *MAP2K2* |
| *MAP2K6* |
| *MAP3K6* |
| *MAP2K7* |
| *MAP4K1* |
| *MAP3K7* |
| *MAPK12* |
| *MAPKAPK5* |
| *5-Mar* |
| *MAPK14* |
| *MAST1* |
| *MATK* |
| *MCL1* |
| *MDH1* |
| *MCRS1* |
| *MECP2* |
| *MOB3A* |
| *MMP9* |
| *MORC3* |
| *MORF4* |
| *MXD4* |
| *MVK* |
| *MYC* |
| *MYLK* |
| *NADK* |
| *NANOG* |
| *NDRG1* |
| *NEK1* |
| *NEK4* |
| *NEK6* |
| *NFE2L2* |
| *NINJ1* |
| *NOTCH3* |
| *NOX4* |
| *NR2E1* |
| *NTN4* |
| *NUAK1* |
| *OTX2* |
| *P3H1* |
| *PATZ1* |
| *PAK4* |
| *PBRM1* |
| *PCGF2* |
| *PDCD10* |
| *PDIK1L* |
| *PDZD2* |
| *PDPK1* |
| *PEBP1* |
| *PEX19* |
| *PIAS4* |
| *PIK3R5* |
| *PIK3C2A* |
| *PIM1* |
| *PLA2R1* |
| *PKM* |
| *PML* |
| *PNPT1* |
| *PMVK* |
| *POT1* |
| *POU5F1* |
| *PPM1B* |
| *PPM1D* |
| *PRMT6* |
| *PRKCH* |
| *PRKCD* |
| *PROX1* |
| *PRPF19* |
| *PSMB5* |
| *PTRF* |
| *PTTG1* |
| *PSMD14* |
| *RAD21* |
| *RAF1* |
| *RB1* |
| *RBP2* |
| *RBX1* |
| *RNASEL* |
| *RPS6KA6* |
| *RSL1D1* |
| *RUNX1* |
| *RUVBL2* |
| *SENP1* |
| *SENP2* |
| *SENP7* |
| *SERPINE1* |
| *SFN* |
| *SIK1* |
| *SGK1* |
| *SIN3B* |
| *SIRT1* |
| *SIRT6* |
| *SIX1* |
| *SLC13A3* |
| *SLC16A7* |
| *SMARCA4* |
| *SMG1* |
| *SMARCB1* |
| *SMURF2* |
| *SNAI1* |
| *SOCS1* |
| *SOD1* |
| *SORBS2* |
| *SOX2* |
| *SPIN1* |
| *SOX5* |
| *SP1* |
| *SPOP* |
| *SRC* |
| *SREBF1* |
| *SRSF1* |
| *STAT5B* |
| *STK32C* |
| *STK40* |
| *SUPT5H* |
| *SYK* |
| *TACC3* |
| *TERC* |
| *TBX2* |
| *TERF2* |
| *TERT* |
| *TFAP4* |
| *TFDP1* |
| *TGFB1I1* |
| *TLR3* |
| *TMSB4X* |
| *TNFSF13* |
| *TNFSF15* |
| *TOP1* |
| *TP63* |
| *TPR* |
| *TP53* |
| *TRIM28* |
| *TRPM8* |
| *TXN* |
| *TXNIP* |
| *UBTD1* |
| *TYK2* |
| *VENTX* |
| *USP1* |
| *VEGFA* |
| *WNT16* |
| *WNT2* |
| *WRN* |
| *WT1* |
| *XAF1* |
| *WWP1* |
| *YAP1* |
| *YPEL3* |
| *ZFP36* |
| *ZMAT3* |
| *ZNF148* |