|  |  |  |
| --- | --- | --- |
| Gene symbol | Gene name | Epigenetic subpathway |
| *ACTL6A* | Actin-like protein 6A | histone acetylation, chromatin remodeling |
| *ACTL6B* | actin-like 6B | chromatin remodeling |
| *ACTR5* | ARP5 actin-related protein 5 homolog (yeast) | chromatin remodeling |
| *ACTR8* | ARP8 actin-related protein 8 homolog (yeast) | chromatin remodeling |
| *AEBP2* | AE binding protein 2 | other histone modification |
| *AICDA* | activation-induced cytidine deaminase | DNA demethylation, other histone modification |
| *ALKBH1* | alkB, alkylation repair homolog 1 (E. coli) | DNA demethylation |
| *ALKBH2* | alkB, alkylation repair homolog 2 (E. coli) | DNA demethylation |
| *ALKBH3* | alkB, alkylation repair homolog 3 (E. coli) | DNA demethylation |
| *APBB1* | Amyloid beta A4 precursor protein-binding family B member 1 | other histone modification |
| *APEX1* | APEX nuclease (multifunctional DNA repair enzyme) 1 | DNA demethylation |
| *APOBEC1* | apolipoprotein B mRNA editing enzyme, catalytic polypeptide 1 | DNA demethylation, other histone modification |
| *APOBEC2* | apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 2 | DNA demethylation |
| *APOBEC3A* | apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3A | DNA demethylation |
| *APOBEC3C* | apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3C | DNA demethylation |
| *APOBEC3F* | apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3F | DNA demethylation |
| *ARID1A* | AT rich interactive domain 1A (SWI-like) | chromatin remodeling |
| *ARID1B* | AT rich interactive domain 1B (SWI1-like) | chromatin remodeling |
| *ARID2* | AT rich interactive domain 2 (ARID, RFX-like) | chromatin remodeling, other histone modification |
| *ARID5A* | AT rich interactive domain 5A (MRF1-like) | histone acetylation |
| *ARRB1* | arrestin, beta 1 | histone acetylation |
| *ASF1A* | ASF1 anti-silencing function 1 homolog A (S. cerevisiae) | other histone modification |
| *ASF1B* | ASF1 anti-silencing function 1 homolog B (S. cerevisiae) | other histone modification |
| *ASH2L* | Set1/Ash2 histone methyltransferase complex subunit ASH2 | histone methylation |
| *ASXL1* | Putative Polycomb group protein ASXL1 | other histone modification |
| *ASZ1* | ankyrin repeat, SAM and basic leucine zipper domain containing 1 | DNA methylation |
| *ATAD2B* | ATPase family, AAA domain containing 2B | histone acetylation |
| *ATF7IP* | activating transcription factor 7 interacting protein | DNA methylation |
| *ATF7IP2* | activating transcription factor 7 interacting protein 2 | DNA methylation |
| *ATM* | Serine-protein kinase ATM | other histone modification |
| *ATXN3* | Ataxin-3 | histone deacetylation |
| *ATXN7* | Ataxin-7 | other histone modification |
| *ATXN7L3* | ataxin 7-like 3 | histone acetylation |
| *AURKB* | Aurora kinase B | other histone modification |
| *AURKC* | Aurora kinase C | other histone modification |
| *BABAM1* | BRISC and BRCA1 A complex member 1 | other histone modification |
| *BAG6* | BCL2-associated athanogene 6 | other histone modification |
| *BANP* | BTG3 associated nuclear protein | other histone modification |
| *BAP1* | Ubiquitin carboxyl-terminal hydrolase BAP1 | other histone modification |
| *BAZ1A* | bromodomain adjacent to zinc finger domain, 1A | chromatin remodeling |
| *BAZ1B* | bromodomain adjacent to zinc finger domain, 1B | histone acetylation |
| *BAZ2A* | bromodomain adjacent to zinc finger domain, 2A | DNA methylation, histone deacetylation, chromatin remodeling, histone methylation |
| *BMI1* | BMI1 polycomb ring finger oncogene | histone acetylation, chromatin remodeling |
| *BNIP3* | BCL2/adenovirus E1B 19kDa interacting protein 3 | chromatin remodeling |
| *BPTF* | bromodomain PHD finger transcription factor | chromatin remodeling |
| *BRCA1* | Breast cancer type 1 susceptibility protein | DNA methylation, histone methylation |
| *BRCA2* | Breast cancer type 2 susceptibility protein | histone acetylation |
| *BRD1* | Bromodomain-containing protein 1 | histone acetylation |
| *BRD2* | bromodomain containing 2 | histone acetylation, chromatin remodeling |
| *BRD3* | bromodomain containing 3 | histone acetylation, chromatin remodeling |
| *BRD4* | Bromodomain-containing protein 4 | other histone modification |
| *BRD7* | bromodomain containing 7 | histone acetylation, chromatin remodeling |
| *BRD8* | Bromodomain-containing protein 8 | histone acetylation |
| *BRD9* | bromodomain containing 9 | histone acetylation, chromatin remodeling |
| *BRDT* | bromodomain, testis-specific | histone acetylation, chromatin remodeling |
| *BRE* | brain and reproductive organ-expressed (TNFRSF1A modulator) | other histone modification |
| *BRPF1* | Peregrin | histone acetylation |
| *BRPF3* | Bromodomain and PHD finger-containing protein 3 | histone acetylation |
| *BRWD1* | bromodomain and WD repeat domain containing 1 | chromatin remodeling |
| *C11orf30* | chromosome 11 open reading frame 30 | chromatin remodeling, other histone modification |
| *CABIN1* | calcineurin binding protein 1 | other histone modification |
| *CARM1* | coactivator-associated arginine methyltransferase 1 | histone acetylation, chromatin remodeling, histone methylation |
| *CBX2* | chromobox homolog 2 | chromatin remodeling, other histone modification |
| *CBX3* | chromobox homolog 3 | chromatin remodeling |
| *CBX4* | chromobox homolog 4 | chromatin remodeling, other histone modification |
| *CBX6* | chromobox homolog 6 | chromatin remodeling, other histone modification |
| *CBX7* | chromobox homolog 7 | chromatin remodeling, other histone modification |
| *CBX8* | chromobox homolog 8 | chromatin remodeling, other histone modification |
| *CCNB1* | G2/mitotic-specific cyclin-B1 | other histone modification |
| *CDK2* | Cyclin-dependent kinase 2 | other histone modification |
| *CDK9* | Cyclin-dependent kinase 9 | other histone modification |
| *CECR2* | cat eye syndrome chromosome region, candidate 2 | chromatin remodeling, other histone modification |
| *CENPC* | centromere protein C 1 | DNA methylation |
| *CHAF1A* | chromatin assembly factor 1, subunit A (p150) | chromatin remodeling |
| *CHD1* | chromodomain helicase DNA binding protein 1 | histone acetylation, chromatin remodeling |
| *CHD2* | chromodomain helicase DNA binding protein 2 | chromatin remodeling |
| *CHD3* | chromodomain helicase DNA binding protein 3 | chromatin remodeling, other histone modification |
| *CHD4* | chromodomain helicase DNA binding protein 4 | DNA methylation, chromatin remodeling, other histone modification |
| *CHD5* | chromodomain helicase DNA binding protein 5 | other histone modification |
| *CHD6* | chromodomain helicase DNA binding protein 6 | chromatin remodeling |
| *CHD7* | chromodomain helicase DNA binding protein 7 | other histone modification |
| *CHD8* | chromodomain helicase DNA binding protein 8 | chromatin remodeling |
| *CHD9* | chromodomain helicase DNA binding protein 9 | chromatin remodeling, other histone modification |
| *CHEK1* | Serine/threonine-protein kinase Chk1 | other histone modification |
| *CHRAC1* | chromatin accessibility complex 1 | chromatin remodeling |
| *CIDEA* | cell death-inducing DFFA-like effector a | histone acetylation |
| *CLOCK* | clock circadian regulator | chromatin remodeling |
| *COPRS* | Coordinator of PRMT5 and differentiation stimulator | histone methylation |
| *CPA4* | carboxypeptidase A4 | histone acetylation |
| *CREBBP* | CREB binding protein | histone acetylation, chromatin remodeling |
| *CSRP2BP* | CSRP2 binding protein | histone acetylation |
| *CTBP1* | C-terminal binding protein 1 | histone acetylation, histone deacetylation |
| *CTCF* | CCCTC-binding factor (zinc finger protein) | DNA methylation, chromatin remodeling, histone methylation |
| *CTCFL* | CCCTC-binding factor (zinc finger protein)-like | DNA methylation, histone methylation |
| *CTR9* | RNA polymerase-associated protein CTR9 homolog | histone methylation |
| *CXXC1* | CpG-binding protein | histone methylation |
| *DAPK3* | death-associated protein kinase 3 | other histone modification |
| *DEK* | DEK oncogene | other histone modification |
| *DMAP1* | DNA methyltransferase 1 associated protein 1 | DNA methylation, histone deacetylation, chromatin remodeling |
| *DNAJC2* | DnaJ (Hsp40) homolog, subfamily C, member 2 | other histone modification |
| *DNMT1* | DNA (cytosine-5-)-methyltransferase 1 | DNA methylation, histone methylation |
| *DNMT3A* | DNA (cytosine-5-)-methyltransferase 3 alpha | DNA methylation, other histone modification |
| *DNMT3B* | DNA (cytosine-5-)-methyltransferase 3 beta | DNA methylation, histone methylation |
| *DNMT3L* | DNA (cytosine-5-)-methyltransferase 3-like | DNA methylation |
| *DNTTIP2* | deoxynucleotidyltransferase, terminal, interacting protein 2 | chromatin remodeling |
| *DOT1L* | histone-lysine N-methyltransferase, H3 lysine-79 specific | histone methylation |
| *DPF1* | D4, zinc and double PHD fingers family 1 | chromatin remodeling |
| *DPF3* | D4, zinc and double PHD fingers, family 3 | histone acetylation, chromatin remodeling |
| *DPPA2* | Developmental pluripotency-associated protein 2 | histone methylation |
| *DPPA3* | developmental pluripotency associated 3 | DNA methylation, DNA demethylation, other histone modification |
| *DPY30* | Protein dpy-30 homolog | histone methylation |
| *DR1* | Protein Dr1 | histone acetylation |
| *DRD2* | dopamine receptor D2 | DNA methylation |
| *DTX3L* | E3 ubiquitin-protein ligase DTX3L | other histone modification |
| *E2F6* | E2F transcription factor 6 | chromatin remodeling |
| *EED* | Polycomb protein EED | histone methylation |
| *EHMT1* | euchromatic histone-lysine N-methyltransferase 1 | DNA methylation, histone methylation |
| *EHMT2* | euchromatic histone-lysine N-methyltransferase 2 | DNA methylation, histone methylation |
| *EID1* | EP300 interacting inhibitor of differentiation 1 | histone acetylation |
| *ELP2* | elongator acetyltransferase complex subunit 2 | chromatin remodeling |
| *ELP3* | elongator acetyltransferase complex subunit 3 | chromatin remodeling |
| *ELP4* | elongator acetyltransferase complex subunit 4 | histone acetylation, chromatin remodeling |
| *ELP5* | elongator acetyltransferase complex subunit 5 | chromatin remodeling |
| *ELP6* | elongator acetyltransferase complex subunit 6 | chromatin remodeling |
| *ENY2* | enhancer of yellow 2 homolog (Drosophila) | histone acetylation |
| *EP300* | E1A binding protein p300 | histone acetylation, chromatin remodeling |
| *EP400* | E1A-binding protein p400 | histone acetylation |
| *EPC1* | Enhancer of polycomb homolog 1 | histone acetylation |
| *EPC2* | enhancer of polycomb homolog 2 (Drosophila) | other histone modification |
| *EYA1* | Eyes absent homolog 1 | other histone modification |
| *EYA2* | Eyes absent homolog 2 | other histone modification |
| *EYA3* | Eyes absent homolog 3 | other histone modification |
| *EYA4* | eyes absent homolog 4 (Drosophila) | other histone modification |
| *EZH2* | histone-lysine N-methyltransferase EZH2 | histone methylation |
| *FAM175A* | family with sequence similarity 175, member A | other histone modification |
| *FLCN* | folliculin | histone acetylation |
| *FOS* | FBJ murine osteosarcoma viral oncogene homolog | DNA methylation |
| *FOXA1* | forkhead box A1 | chromatin remodeling |
| *FOXA2* | forkhead box A2 | other histone modification |
| *FOXA3* | forkhead box A3 | other histone modification |
| *FTO* | fat mass and obesity associated | DNA demethylation |
| *GATA2* | GATA binding protein 2 | histone acetylation |
| *GATA3* | Trans-acting T-cell-specific transcription factor GATA-3 | histone methylation |
| *GATAD2A* | GATA zinc finger domain containing 2A | DNA methylation |
| *GFI1B* | growth factor independent 1B transcription repressor | histone methylation |
| *GNAS* | GNAS complex locus | DNA methylation |
| *GSG2* | Serine/threonine-protein kinase haspin | other histone modification |
| *GSK3B* | Glycogen synthase kinase-3 beta | DNA methylation |
| *GSTP1* | glutathione S-transferase pi 1 | DNA methylation |
| *GTF3C4* | general transcription factor IIIC, polypeptide 4, 90kDa | histone acetylation |
| *H1F0* | H1 histone family, member 0 | histones |
| *H1FNT* | H1 histone family, member N, testis-specific | histones |
| *H1FOO* | H1 histone family, member O, oocyte-specific | histones |
| *H1FX* | H1 histone family, member X | histones |
| *H2AFJ* | H2A histone family, member J | histones |
| *H2AFV* | H2A histone family, member V | histones |
| *H2AFX* | H2A histone family, member X | histones |
| *H2AFY* | H2A histone family, member Y | histone acetylation |
| *H2AFY2* | H2A histone family, member Y2 | other histone modification |
| *H2AFZ* | H2A histone family, member Z | histones |
| *H3F3B* | H3 histone, family 3B (H3.3B) | histones |
| *H3F3C* | H3 histone, family 3C | histones |
| *HAT1* | histone acetyltransferase 1 | histone acetylation, chromatin remodeling |
| *HDAC1* | histone deacetylase 1 | histone deacetylation |
| *HDAC10* | histone deacetylase 10 | histone deacetylation |
| *HDAC11* | histone deacetylase 11 | histone deacetylation |
| *HDAC2* | histone deacetylase 2 | histone deacetylation |
| *HDAC3* | histone deacetylase 3 | histone deacetylation |
| *HDAC4* | histone deacetylase 4 | histone deacetylation |
| *HDAC5* | histone deacetylase 5 | histone deacetylation, chromatin remodeling |
| *HDAC7* | histone deacetylase 7 | histone deacetylation |
| *HDAC9* | histone deacetylase 9 | histone deacetylation |
| *HELLS* | helicase, lymphoid-specific | DNA methylation, chromatin remodeling, other histone modification |
| *HEMK1* | HemK methyltransferase family member 1 | DNA methylation |
| *HIC1* | hypermethylated in cancer 1 | chromatin remodeling |
| *HILS1* | histone linker H1 domain, spermatid-specific 1, pseudogene | chromatin remodeling |
| *HIRA* | HIR histone cell cycle regulation defective homolog A (S. cerevisiae) | other histone modification |
| *HIST1H1A* | histone cluster 1, H1a | DNA methylation, chromatin remodeling |
| *HIST1H1B* | histone cluster 1, H1b | DNA methylation, chromatin remodeling |
| *HIST1H1C* | histone cluster 1, H1c | DNA methylation, chromatin remodeling |
| *HIST1H1D* | histone cluster 1, H1d | DNA methylation, chromatin remodeling |
| *HIST1H1E* | histone cluster 1, H1e | DNA methylation, chromatin remodeling |
| *HIST1H1T* | histone cluster 1, H1t | histones |
| *HIST1H2AA* | histone cluster 1, H2aa | histones |
| *HIST1H2AB* | histone cluster 1, H2ab | histones |
| *HIST1H2AC* | histone cluster 1, H2ac | histones |
| *HIST1H2AD* | histone cluster 1, H2ad | histones |
| *HIST1H2AE* | histone cluster 1, H2ae | histones |
| *HIST1H2AG* | histone cluster 1, H2ag | histones |
| *HIST1H2AH* | histone cluster 1, H2ah | histones |
| *HIST1H2AJ* | histone cluster 1, H2aj | histones |
| *HIST1H2AK* | histone cluster 1, H2ak | histones |
| *HIST1H2AL* | histone cluster 1, H2al | histones |
| *HIST1H2AM* | histone cluster 1, H2am | histones |
| *HIST1H2BA* | histone cluster 1, H2ba | histones |
| *HIST1H2BB* | histone cluster 1, H2bb | histones |
| *HIST1H2BC* | histone cluster 1, H2bc | histones |
| *HIST1H2BD* | histone cluster 1, H2bd | histones |
| *HIST1H2BE* | histone cluster 1, H2be | histones |
| *HIST1H2BF* | histone cluster 1, H2bf | histones |
| *HIST1H2BG* | histone cluster 1, H2bg | histones |
| *HIST1H2BH* | histone cluster 1, H2bh | histones |
| *HIST1H2BI* | histone cluster 1, H2bi | histones |
| *HIST1H2BJ* | histone cluster 1, H2bj | histones |
| *HIST1H2BK* | histone cluster 1, H2bk | histones |
| *HIST1H2BL* | histone cluster 1, H2bl | histones |
| *HIST1H2BM* | histone cluster 1, H2bm | histones |
| *HIST1H2BN* | histone cluster 1, H2bn | histones |
| *HIST1H2BO* | histone cluster 1, H2bo | histones |
| *HIST1H3A* | histone cluster 1, H3a | histones |
| *HIST1H3B* | histone cluster 1, H3b | histones |
| *HIST1H3C* | histone cluster 1, H3c | histones |
| *HIST1H3D* | histone cluster 1, H3d | histones |
| *HIST1H3E* | histone cluster 1, H3e | histones |
| *HIST1H3F* | histone cluster 1, H3f | histones |
| *HIST1H3G* | histone cluster 1, H3g | histones |
| *HIST1H3H* | histone cluster 1, H3h | histones |
| *HIST1H3I* | histone cluster 1, H3i | histones |
| *HIST1H3J* | histone cluster 1, H3j | histones |
| *HIST1H4A* | histone cluster 1, H4a | histones |
| *HIST1H4B* | histone cluster 1, H4b | histones |
| *HIST1H4C* | histone cluster 1, H4c | histones |
| *HIST1H4D* | histone cluster 1, H4d | histones |
| *HIST1H4E* | histone cluster 1, H4e | histones |
| *HIST1H4F* | histone cluster 1, H4f | histones |
| *HIST1H4G* | histone cluster 1, H4g | histones |
| *HIST1H4H* | histone cluster 1, H4h | histones |
| *HIST1H4I* | histone cluster 1, H4i | histones |
| *HIST1H4J* | histone cluster 1, H4j | histones |
| *HIST1H4K* | histone cluster 1, H4k | histones |
| *HIST1H4L* | histone cluster 1, H4l | histones |
| *HIST4H4* | histone cluster 4, H4 | histones |
| *HLCS* | Biotin--protein ligase | other histone modification |
| *HLTF* | helicase-like transcription factor | other histone modification |
| *HMG20A* | high mobility group 20A | other histone modification |
| *HMG20B* | high mobility group 20B | other histone modification |
| *HMGA2* | High mobility group protein HMGI-C | other histone modification |
| *HMGN3* | high mobility group nucleosomal binding domain 3 | other histone modification |
| *HNF1A* | HNF1 homeobox A | chromatin remodeling |
| *HOPX* | HOP homeobox | histone deacetylation |
| *HSF4* | Heat shock factor protein 4 | histone demethylation |
| *IDH1* | isocitrate dehydrogenase 1 | DNA methylation |
| *IDH2* | isocitrate dehydrogenase 2 | DNA methylation |
| *IKBKAP* | inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase complex-associated protein | chromatin remodeling |
| *IKZF1* | IKAROS family zinc finger 1 (Ikaros) | chromatin remodeling, other histone modification |
| *IL1B* | interleukin 1, beta | histone acetylation |
| *ING2* | inhibitor of growth family, member 2 | other histone modification |
| *ING3* | Inhibitor of growth protein 3 | histone acetylation |
| *ING4* | Inhibitor of growth protein 4 | histone acetylation |
| *ING5* | Inhibitor of growth protein 5 | histone acetylation |
| *INO80* | INO80 homolog (S. cerevisiae) | chromatin remodeling |
| *INO80B* | INO80 complex subunit B | chromatin remodeling |
| *INO80C* | INO80 complex subunit C | chromatin remodeling |
| *INO80D* | INO80 complex subunit D | chromatin remodeling |
| *INO80E* | INO80 complex subunit E | chromatin remodeling |
| *IRF4* | Interferon regulatory factor 4 | other histone modification |
| JADE1 | jade family PHD finger 1 | other histone modification |
| JADE2 | JADE2 jade family PHD finger 2 | other histone modification |
| *JAK2* | Tyrosine-protein kinase JAK2 | other histone modification |
| *JARID2* | Protein Jumonji | histone methylation |
| *JDP2* | Jun dimerization protein 2 | histone deacetylation |
| *JMJD1C* | jumonji domain containing 1C | other histone modification |
| *JMJD6* | Bifunctional arginine demethylase and lysyl-hydroxylase JMJD6 | histone demethylation |
| *KANSL2* | KAT8 regulatory NSL complex subunit 2 | other histone modification |
| *KANSL3* | KAT8 regulatory NSL complex subunit 3 | other histone modification |
| *KAT2A* | K(lysine) acetyltransferase 2A | chromatin remodeling, other histone modification |
| *KAT2B* | K(lysine) acetyltransferase 2B | histone acetylation, chromatin remodeling |
| *KAT5* | K(lysine) acetyltransferase 5 | histone acetylation |
| *KAT6A* | K(lysine) acetyltransferase 6A | histone acetylation |
| *KAT6B* | K(lysine) acetyltransferase 6B | histone acetylation |
| *KAT7* | histone acetyltransferase KAT7 | other histone modification |
| *KAT8* | K(lysine) acetyltransferase 8 | histone acetylation |
| *KDM1A* | Lysine-specific histone demethylase 1A | histone methylation, histone demethylation |
| *KDM1B* | lysine (K)-specific demethylase 1B | DNA methylation, histone demethylation |
| *KDM2A* | Lysine-specific demethylase 2A | histone demethylation |
| *KDM2B* | lysine (K)-specific demethylase 2B | histone demethylation |
| *KDM3A* | Lysine-specific demethylase 3A | histone methylation, histone demethylation |
| *KDM3B* | lysine (K)-specific demethylase 3B | other histone modification |
| *KDM4A* | lysine (K)-specific demethylase 4A | histone demethylation |
| *KDM4B* | lysine (K)-specific demethylase 4B | other histone modification |
| *KDM4C* | Lysine-specific demethylase 4C | histone demethylation |
| *KDM4D* | lysine (K)-specific demethylase 4D | other histone modification |
| *KDM4E* | lysine (K)-specific demethylase 4E | other histone modification |
| *KDM5A* | lysine (K)-specific demethylase 5A | other histone modification |
| *KDM6B* | lysine (K)-specific demethylase 6B | histone demethylation |
| *KDM7A* | lysine (K)-specific demethylase 7A | histone demethylation |
| *KDM8* | Lysine-specific demethylase 8 | histone demethylation |
| *KLF1* | Kruppel-like factor 1 (erythroid) | chromatin remodeling |
| *KMT2A* | lysine methyltransferase 2A | DNA methylation, histone methylation |
| KMT2B | lysine methyltransferase 2B | **histone methylation** |
| KMT2C | lysine methyltransferase 2C | histone methylation |
| KMT2E | lysine methyltransferase 2E | DNA methylation, histone methylation |
| *L3MBTL1* | l(3)mbt-like 1 (Drosophila) | other histone modification |
| *L3MBTL2* | l(3)mbt-like 2 (Drosophila) | chromatin remodeling, other histone modification |
| *L3MBTL3* | l(3)mbt-like 3 (Drosophila) | other histone modification |
| *L3MBTL4* | l(3)mbt-like 4 (Drosophila) | other histone modification |
| *LDB1* | LIM domain-binding protein 1 | other histone modification |
| *LEF1* | Lymphoid enhancer-binding factor 1 | other histone modification |
| *LEO1* | RNA polymerase-associated protein LEO1 | other histone modification |
| *LIF* | Leukemia inhibitory factor | other histone modification |
| *LOXL2* | Lysyl oxidase homolog 2 | other histone modification |
| *LPIN1* | lipin 1 | histone deacetylation |
| *LRWD1* | leucine-rich repeats and WD repeat domain containing 1 | DNA methylation, histone methylation |
| *MAP3K12* | Mitogen-activated protein kinase kinase kinase 12 | other histone modification |
| *MAP3K7* | Mitogen-activated protein kinase kinase kinase 7 | other histone modification |
| *MAPK11* | mitogen-activated protein kinase 11 | chromatin remodeling |
| *MAPK14* | mitogen-activated protein kinase 14 | chromatin remodeling |
| *MAPK3* | mitogen-activated protein kinase 3 | histone acetylation |
| *MAPK8* | mitogen-activated protein kinase 8 | histone deacetylation |
| *MAPKAPK3* | mitogen-activated protein kinase-activated protein kinase 3 | chromatin remodeling |
| *MAX* | MYC associated factor X | chromatin remodeling |
| *MBD1* | methyl-CpG binding domain protein 1 | DNA methylation |
| *MBD2* | methyl-CpG binding domain protein 2 | DNA methylation |
| *MBD3* | methyl-CpG binding domain protein 3 | DNA methylation, other histone modification |
| *MBIP* | MAP3K12-binding inhibitory protein 1 | other histone modification |
| *MBTD1* | mbt domain containing 1 | other histone modification |
| *MCRS1* | microspherule protein 1 | chromatin remodeling, other histone modification |
| *MEAF6* | Chromatin modification-related protein MEAF6 | histone acetylation |
| *MED24* | mediator complex subunit 24 | histone acetylation |
| *MEG3* | Very putative protein from MEG3 locus | DNA methylation |
| *MEN1* | multiple endocrine neoplasia I | chromatin remodeling, histone methylation |
| *METTL8* | methyltransferase like 8 | histone acetylation |
| *MGC16025* | uncharacterized LOC85009 | DNA methylation |
| *MGEA5* | meningioma expressed antigen 5 (hyaluronidase) | histone acetylation |
| *MGMT* | O-6-methylguanine-DNA methyltransferase | DNA methylation |
| *MLH1* | mutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli) | DNA methylation |
| *MORF4L1* | Mortality factor 4-like protein 1 | histone acetylation, histone deacetylation |
| *MPHOSPH8* | M-phase phosphoprotein 8 | DNA methylation |
| *MRGBP* | MRG/MORF4L binding protein | other histone modification |
| *MSL1* | Male-specific lethal 1 homolog | other histone modification |
| *MSL2* | E3 ubiquitin-protein ligase MSL2 | other histone modification |
| *MSL3P1* | male-specific lethal 3 homolog (Drosophila) pseudogene 1 | chromatin remodeling, other histone modification |
| *MT3* | Metallothionein-3 | other histone modification |
| *MTA1* | **metastasis associated 1** | **chromatin remodeling** |
| *MTA2* | metastasis associated 1 family, member 2 | DNA methylation, histone deacetylation |
| *MTF2* | Metal-response element-binding transcription factor 2 | histone methylation |
| *MYB* | v-myb myeloblastosis viral oncogene homolog (avian) | chromatin remodeling, histone methylation |
| *MYC* | v-myc myelocytomatosis viral oncogene homolog (avian) | chromatin remodeling |
| *MYO1C* | myosin IC | chromatin remodeling |
| *MYOCD* | myocardin | histone acetylation |
| *MYSM1* | histone H2A deubiquitinase MYSM1 | other histone modification |
| *NAA60* | N-alpha-acetyltransferase 60 | other histone modification |
| *NACC2* | NACC family member 2, BEN and BTB (POZ) domain containing | histone deacetylation |
| *NAT10* | N-acetyltransferase 10 (GCN5-related) | histone acetylation |
| *NCL* | nucleolin | chromatin remodeling |
| *NCOA1* | nuclear receptor coactivator 1 | chromatin remodeling, other histone modification |
| *NCOA3* | nuclear receptor coactivator 3 | histone acetylation |
| *NCOR1* | nuclear receptor corepressor 1 | histone deacetylation, chromatin remodeling |
| *NCOR2* | nuclear receptor corepressor 2 | chromatin remodeling |
| *NFATC2IP* | nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 interacting protein | histone acetylation |
| *NFRKB* | nuclear factor related to kappaB binding protein | chromatin remodeling |
| *NIPBL* | Nipped-B homolog (Drosophila) | histone deacetylation |
| *NOS1* | nitric oxide synthase 1 (neuronal) | histone acetylation |
| *NPM2* | nucleophosmin/nucleoplasmin 2 | chromatin remodeling |
| *NR3C1* | nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor) | chromatin remodeling |
| *NSD1* | histone-lysine N-methyltransferase, H3 lysine-36 and H4 lysine-20 specific | histone methylation |
| *OTUB1* | Ubiquitin thioesterase OTUB1 | other histone modification |
| *PADI4* | peptidyl arginine deiminase, type IV | other histone modification |
| *PAF1* | RNA polymerase II-associated factor 1 homolog | other histone modification |
| *PAX5* | Paired box protein Pax-5 | histone methylation |
| *PAXIP1* | PAX interacting (with transcription-activation domain) protein 1 | histone acetylation, histone methylation |
| *PBRM1* | polybromo 1 | chromatin remodeling |
| *PCGF1* | polycomb group ring finger 1 | chromatin remodeling, other histone modification |
| *PCGF2* | polycomb group ring finger 2 | histone acetylation, chromatin remodeling |
| *PCGF3* | polycomb group ring finger 3 | chromatin remodeling |
| *PCGF5* | polycomb group ring finger 5 | chromatin remodeling |
| *PCGF6* | polycomb group ring finger 6 | chromatin remodeling |
| *PCNA* | **proliferating cell nuclear antigen** | **DNA methylation** |
| *PHB* | prohibitin | histone deacetylation |
| *PHC1* | polyhomeotic homolog 1 (Drosophila) | chromatin remodeling |
| *PHC2* | polyhomeotic homolog 2 (Drosophila) | chromatin remodeling |
| *PHC3* | polyhomeotic homolog 3 (Drosophila) | chromatin remodeling |
| *PHF1* | PHD finger protein 1 | histone methylation |
| *PHF10* | PHD finger protein 10 | chromatin remodeling |
| *PHF13* | PHD finger protein 13 | other histone modification |
| *PHF19* | PHD finger protein 19 | histone methylation |
| *PHF20* | PHD finger protein 20 | histone acetylation |
| *PHF21A* | PHD finger protein 21A | other histone modification |
| *PHIP* | pleckstrin homology domain interacting protein | histone acetylation |
| *PICK1* | protein interacting with PRKCA 1 | DNA methylation |
| *PIK3CA* | Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform | DNA methylation |
| *PIM3* | Serine/threonine-protein kinase pim-3 | other histone modification |
| *PIWIL2* | piwi-like RNA-mediated gene silencing 2 | DNA methylation |
| *PIWIL4* | piwi-like RNA-mediated gene silencing 4 | DNA methylation |
| *PKN1* | Serine/threonine-protein kinase N1 | other histone modification |
| *PLD6* | phospholipase D family, member 6 | DNA methylation |
| *PML* | promyelocytic leukemia | histone deacetylation |
| *PMS2* | PMS2 postmeiotic segregation increased 2 (S. cerevisiae) | DNA methylation |
| *POLE3* | DNA polymerase epsilon subunit 3 | other histone modification |
| *POLE4* | DNA polymerase epsilon subunit 4 | other histone modification |
| *POU5F1* | POU domain, class 5, transcription factor 1 | other histone modification |
| *PPARGC1A* | peroxisome proliferator-activated receptor gamma, coactivator 1 alpha | histone acetylation |
| *PPP4C* | protein phosphatase 4, catalytic subunit | histone acetylation |
| *PRDM5* | PR domain containing 5 | histone deacetylation, histone methylation |
| *PRKCA* | Protein kinase C alpha type | other histone modification |
| *PRKCB* | Protein kinase C beta type | other histone modification |
| *PRKD1* | Serine/threonine-protein kinase D1 | other histone modification |
| *PRKD2* | Serine/threonine-protein kinase D2 | other histone modification |
| *PRMT1* | Protein arginine N-methyltransferase 1 | histone methylation |
| *PRMT2* | Protein arginine N-methyltransferase 2 | histone methylation |
| *PRMT5* | Protein arginine N-methyltransferase 5 | histone methylation |
| *PRMT7* | protein arginine methyltransferase 7 | DNA methylation, histone methylation |
| *PRMT8* | Protein arginine N-methyltransferase 8 | histone methylation |
| *RAG1* | V(D)J recombination-activating protein 1 | other histone modification |
| *RAG2* | recombination activating gene 2 | other histone modification |
| *RAI1* | retinoic acid induced 1 | chromatin remodeling |
| *RARA* | retinoic acid receptor, alpha | histone acetylation |
| *RB1* | retinoblastoma 1 | chromatin remodeling |
| *RBBP4* | retinoblastoma binding protein 4 | DNA methylation, histone deacetylation, chromatin remodeling |
| *RBL1* | retinoblastoma-like 1 (p107) | histone methylation |
| *RBL2* | retinoblastoma-like 2 (p130) | histone methylation |
| *RBM14* | RNA binding motif protein 14 | histone deacetylation |
| *RBPJ* | recombination signal binding protein for immunoglobulin kappa J region | chromatin remodeling |
| *RCBTB1* | regulator of chromosome condensation (RCC1) and BTB (POZ) domain containing protein 1 | chromatin remodeling, other histone modification |
| *RCOR1* | REST corepressor 1 | histone deacetylation |
| *RERE* | arginine-glutamic acid dipeptide (RE) repeats | chromatin remodeling |
| *REST* | RE1-silencing transcription factor | histone deacetylation |
| *RING1* | ring finger protein 1 | chromatin remodeling, other histone modification |
| *RNF168* | E3 ubiquitin-protein ligase RNF168 | other histone modification |
| *RNF20* | E3 ubiquitin-protein ligase BRE1A | histone methylation |
| *RNF40* | E3 ubiquitin-protein ligase BRE1B | other histone modification |
| *RNF8* | E3 ubiquitin-protein ligase RNF8 | other histone modification |
| *RPS6KA4* | ribosomal protein S6 kinase, 90kDa, polypeptide 4 | histone acetylation |
| *RPS6KA5* | ribosomal protein S6 kinase, 90kDa, polypeptide 5 | histone acetylation |
| *RRP8* | ribosomal RNA processing 8, methyltransferase, homolog (yeast) | other histone modification |
| *RSF1* | remodeling and spacing factor 1 | chromatin remodeling |
| *RTF1* | RNA polymerase-associated protein RTF1 homolog | histone methylation |
| *RUVBL1* | RuvB-like 1 | histone acetylation, chromatin remodeling |
| *RUVBL2* | RuvB-like 2 | histone acetylation, chromatin remodeling |
| *RXRA* | retinoid X receptor, alpha | histone acetylation |
| *RYBP* | RING1 and YY1-binding protein | other histone modification |
| *SALL1* | sal-like 1 (Drosophila) | histone deacetylation |
| *SAP130* | histone deacetylase complex subunit SAP130 | other histone modification |
| *SAP18* | Sin3A-associated protein, 18kDa | DNA methylation |
| *SAP30* | Sin3A-associated protein, 30kDa | DNA methylation |
| *SATB1* | SATB homeobox 1 | chromatin remodeling, histone methylation |
| *SATB2* | SATB homeobox 2 | chromatin remodeling |
| *SCMH1* | sex comb on midleg homolog 1 (Drosophila) | chromatin remodeling |
| *SET* | SET nuclear oncogene | histone acetylation |
| *SETD1A* | histone-lysine N-methyltransferase SETD1A | histone methylation |
| *SETD1B* | histone-lysine N-methyltransferase SETD1B | histone methylation |
| *SETD2* | histone-lysine N-methyltransferase SETD2 | histone methylation |
| *SETD3* | histone-lysine N-methyltransferase setd3 | histone methylation |
| *SETD7* | SET domain containing (lysine methyltransferase) 7 | other histone modification |
| *SETD8* | N-lysine methyltransferase SETD8 | histone methylation |
| *SETDB2* | histone-lysine N-methyltransferase SETDB2 | histone methylation |
| *SIN3A* | SIN3 transcription regulator homolog A (yeast) | DNA methylation, histone deacetylation |
| *SIRT1* | sirtuin 1 | histone deacetylation, chromatin remodeling |
| *SIRT2* | sirtuin 2 | histone deacetylation |
| *SIRT7* | NAD-dependent protein deacetylase sirtuin-7 | histone deacetylation |
| *SKI* | v-ski sarcoma viral oncogene homolog (avian) | histone deacetylation |
| *SKP1* | S-phase kinase-associated protein 1 | other histone modification |
| *SMARCA2* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2 | chromatin remodeling |
| *SMARCA4* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4 | DNA methylation, other histone modification |
| *SMARCA5* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 5 | chromatin remodeling |
| *SMARCAD1* | SWI/SNF-related, matrix-associated actin-dependent regulator of chromatin, subfamily a, containing DEAD/H box 1 | histone deacetylation |
| *SMARCAL1* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a-like 1 | other histone modification |
| *SMARCB1* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily b, member 1 | chromatin remodeling |
| *SMARCC1* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 1 | chromatin remodeling |
| *SMARCC2* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 2 | chromatin remodeling |
| *SMARCD1* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 1 | chromatin remodeling |
| *SMARCD2* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 2 | chromatin remodeling |
| *SMARCD3* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 3 | chromatin remodeling |
| *SMARCE1* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily e, member 1 | chromatin remodeling |
| *SMCHD1* | structural maintenance of chromosomes flexible hinge domain containing 1 | DNA methylation |
| *SMYD1* | SET and MYND domain containing 1 | chromatin remodeling |
| *SNAI2* | snail homolog 2 (Drosophila) | histone acetylation |
| *SNCA* | synuclein, alpha (non A4 component of amyloid precursor) | histone acetylation |
| *SNW1* | SNW domain-containing protein 1 | histone methylation |
| *SON* | SON DNA binding protein | chromatin remodeling |
| *SOX9* | SRY (sex determining region Y)-box 9 | chromatin remodeling |
| *SP1* | Sp1 transcription factor | chromatin remodeling |
| *SPI1* | Transcription factor PU.1 | DNA methylation, other histone modification |
| *SRCAP* | Snf2-related CREBBP activator protein | histone acetylation, chromatin remodeling |
| *SREBF1* | sterol regulatory element binding transcription factor 1 | histone deacetylation |
| *SS18L1* | synovial sarcoma translocation gene on chromosome 18-like 1 | other histone modification |
| *SUDS3* | suppressor of defective silencing 3 homolog (S. cerevisiae) | histone deacetylation |
| *SUPT16H* | suppressor of Ty 16 homolog (S. cerevisiae) | chromatin remodeling |
| *SUPT3H* | Transcription initiation protein SPT3 homolog | other histone modification |
| *SUPT4H1* | suppressor of Ty 4 homolog 1 (S. cerevisiae) | chromatin remodeling |
| *SUPT5H* | suppressor of Ty 5 homolog (S. cerevisiae) | chromatin remodeling |
| *SUPT6H* | suppressor of Ty 6 homolog (S. cerevisiae) | chromatin remodeling |
| *SUPT7L* | STAGA complex 65 subunit gamma | other histone modification |
| *SUV39H2* | suppressor of variegation 3-9 homolog 2 (Drosophila) | DNA methylation, chromatin remodeling, histone methylation |
| *SUV420H1* | histone-lysine N-methyltransferase SUV420H1 | histone methylation |
| *SUV420H2* | histone-lysine N-methyltransferase SUV420H2 | histone methylation |
| *SUZ12* | suppressor of zeste 12 homolog (Drosophila) | histone methylation |
| *TADA2A* | transcriptional adaptor 2A | histone deacetylation, chromatin remodeling |
| *TADA3* | transcriptional adaptor 3 | histone deacetylation |
| *TAF10* | Transcription initiation factor TFIID subunit 10 | other histone modification |
| *TAF12* | Transcription initiation factor TFIID subunit 12 | other histone modification |
| *TAF1L* | TAF1 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 210kDa-like | histone acetylation |
| *TAF5* | TAF5 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 100kDa | histone acetylation |
| *TAF6L* | TAF6-like RNA polymerase II, p300/CBP-associated factor (PCAF)-associated factor, 65kDa | chromatin remodeling, other histone modification |
| *TAF7* | TAF7 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 55kDa | histone acetylation |
| *TAF9* | Transcription initiation factor TFIID subunit 9 | other histone modification |
| *TBL1XR1* | transducin (beta)-like 1 X-linked receptor 1 | other histone modification |
| *TCF3* | Transcription factor E2-alpha | other histone modification |
| *TDG* | G/T mismatch-specific thymine DNA glycosylase | DNA demethylation |
| *TDRD1* | tudor domain containing 1 | DNA methylation |
| *TDRD3* | tudor domain containing 3 | other histone modification |
| *TDRD9* | tudor domain containing 9 | DNA methylation |
| *TET1* | tet methylcytosine dioxygenase 1 | DNA methylation, DNA demethylation, other histone modification |
| *TET2* | tet methylcytosine dioxygenase 2 | DNA demethylation, histone methylation, histone methylation |
| *TET3* | Methylcytosine dioxygenase TET3 | DNA methylation, DNA demethylation, histone methylation |
| *TFPT* | TCF3 (E2A) fusion partner (in childhood Leukemia) | chromatin remodeling |
| *TGFB1* | transforming growth factor, beta 1 | histone acetylation, histone deacetylation |
| *TLK1* | tousled-like kinase 1 | other histone modification |
| *TLK2* | tousled-like kinase 2 | other histone modification |
| *TNP1* | transition protein 1 (during histone to protamine replacement) | chromatin remodeling |
| *TOP1* | topoisomerase (DNA) I | chromatin remodeling |
| *TOP1MT* | topoisomerase (DNA) I, mitochondrial | chromatin remodeling |
| *TOP2B* | topoisomerase (DNA) II beta 180kDa | chromatin remodeling |
| *TOPBP1* | topoisomerase (DNA) II binding protein 1 | chromatin remodeling |
| *TP53* | tumor protein p53 | histone deacetylation |
| *TP63* | tumor protein p63 | chromatin remodeling |
| *TRDMT1* | tRNA aspartic acid methyltransferase 1 | DNA methylation |
| *TRIM16* | Tripartite motif-containing protein 16 | other histone modification |
| *TRIM24* | tripartite motif containing 24 | histone acetylation |
| *TRIM28* | **tripartite motif containing 28** | **histone modification** |
| *TRIP12* | E3 ubiquitin-protein ligase TRIP12 | other histone modification |
| *TRRAP* | transformation/transcription domain-associated protein | histone acetylation |
| *TSSK6* | testis-specific serine kinase 6 | chromatin remodeling |
| *TTF1* | transcription termination factor, RNA polymerase I | chromatin remodeling |
| *TWIST1* | twist basic helix-loop-helix transcription factor 1 | histone acetylation |
| *UBE2B* | Ubiquitin-conjugating enzyme E2 B | histone demethylation |
| *UBE2E1* | Ubiquitin-conjugating enzyme E2 E1 | other histone modification |
| *UBE2N* | Ubiquitin-conjugating enzyme E2 N | other histone modification |
| *UBN1* | ubinuclein 1 | other histone modification |
| *UBR2* | E3 ubiquitin-protein ligase UBR2 | other histone modification |
| *UBR5* | E3 ubiquitin-protein ligase UBR5 | other histone modification |
| *UHRF1* | ubiquitin-like with PHD and ring finger domains 1 | DNA methylation, other histone modification |
| *UIMC1* | BRCA1-A complex subunit RAP80 | other histone modification |
| *USP16* | Ubiquitin carboxyl-terminal hydrolase 16 | other histone modification |
| *USP22* | ubiquitin specific peptidase 22 | histone acetylation |
| *USP3* | Ubiquitin carboxyl-terminal hydrolase 3 | other histone modification |
| *USP7* | ubiquitin specific peptidase 7 (herpes virus-associated) | DNA methylation |
| *UTP3* | UTP3, small subunit (SSU) processome component, homolog (S. cerevisiae) | other histone modification |
| *VDR* | vitamin D (1,25- dihydroxyvitamin D3) receptor | chromatin remodeling |
| *VEGFA* | Vascular endothelial growth factor A | other histone modification |
| *WAC* | WW domain-containing adapter protein with coiled-coil | other histone modification |
| *WDR5* | WD repeat-containing protein 5 | histone methylation |
| *WDR61* | WD repeat-containing protein 61 | histone methylation |
| *WDR82* | WD repeat-containing protein 82 | histone methylation |
| *WDR92* | WD repeat-containing protein 92 | histone methylation |
| *WHSC1* | Wolf-Hirschhorn syndrome candidate 1 | other histone modification |
| *WHSC1L1* | histone-lysine N-methyltransferase NSD3 | histone methylation |
| *YAF2* | YY1 associated factor 2 | chromatin remodeling |
| *YEATS2* | YEATS domain-containing protein 2 | other histone modification |
| *YEATS4* | YEATS domain-containing protein 4 | histone acetylation |
| *YY1* | YY1 transcription factor | chromatin remodeling |
| *ZBTB42* | zinc finger and BTB domain containing 42 | chromatin remodeling |
| *ZFP57* | ZFP57 zinc finger protein | DNA methylation |
| *ZMYND11* | zinc finger, MYND-type containing 11 | chromatin remodeling, other histone modification |
| *ZNF541* | zinc finger protein 541 | chromatin remodeling |