

Supplementary Table 1

Gene	Aliases
DNA methyltransferases (n = 4)	
<i>DNMT1</i>	CXXC9; DNMT; FLJ16293; MCMT; MGC104992
<i>TRDMT1</i>	RP11-406H21.1; DNMT2; M.HsaIIP; PuMet; RNMT1
<i>DNMT3A</i>	DNMT3A2; M.HsaIIIA
<i>DNMT3B</i>	ICF; M.HsaIIIB
Methyl-binding proteins (n = 5)	
<i>MBD1</i>	RFT; PCM1; CXXC3
<i>MBD2</i>	DMTase; NY-CO-41; DKFZp586O0821
<i>MBD3</i>	
<i>MBD4</i>	MED1
<i>MECP2</i>	RTS; RTT; PPMX; MRX16; MRX79; AUTSX3; DKFZp686A24160
HATs (n = 19)	
P300/CBP	
<i>CREBBP</i>	CBP; RTS; RSTS
<i>EP300</i>	p300
HAT1	
<i>HAT1</i>	
MYST	
<i>MYST1</i>	MOF; hMOF; FLJ14040
<i>MYST2</i>	HBO1, HBOA
<i>MYST3</i>	MOZ, RUNXBP2, ZNF220
<i>MYST4</i>	DKFZp313G1618, FLJ90335, KIAA0383, MORF, MOZ2, qkf, querkopf
<i>HTATIP</i>	TIP; ESA1; PLIP; TIP60; cPLA2; HTATIP1
GCN5	
<i>PCAF</i>	CAF; P/CAF; p300/CBP-associated factor
<i>GCN5L2</i>	GCN5; hGCN5; PCAF-b; MGC102791
p160	
<i>NCOA1</i>	SRC1; NCoA-1; RIP160; F-SRC-1; MGC129719; MGC129720
<i>NCOA3</i>	ACTR; AIB1; RAC3; SRC3; pCIP; AIB-1; CTG26; SRC-1; CAGH16; TNRC14; TNRC16; TRAM-1; MGC141848
Other	
<i>SRCAP</i>	KIAA0309
<i>TAF1</i>	BA2R, CCG1, CCGS, NSCL2, OF, P250, TAF2A, TAFII250
<i>TAF1L</i>	MGC134910, TAF2A2
<i>GTF3C4</i>	TFII90; FLJ21002; TFIIC90; MGC138450; TFIIC2-90; TFIICdelta
<i>ATF2</i>	HB16; CREB2; TREB7; CRE-BP1; MGC111558
<i>CDY1</i>	CDY; CDY1A
<i>CDYL</i>	CDYL1; MGC131936; DKFZP586C1622
HDACs (n = 13)	
Class I	
<i>HDAC1</i>	HD1; RPD3; GON-10; RPD3L1; DKFZp686H12203
<i>HDAC2</i>	RPD3; YAF1
<i>HDAC3</i>	HD3; RPD3; RPD3-2
<i>HDAC8</i>	RPD3; HDACL1
Class II	
<i>HDAC4</i>	HD4; HDACA; HA6116; HDAC-A; KIAA0288
<i>HDAC5</i>	HD5; NY-CO-9; FLJ90614
<i>HDAC6</i>	HD6; JM21; FLJ16239
<i>HDAC7A</i>	HDAC7; DKFZP586J0917
<i>HDAC9</i>	HD7; HDAC; HDRP; MITR; HDAC7; HDAC7B; HDAC9B; HDAC9FL; KIAA0744; DKFZp779K1053
<i>HDAC10</i>	MGC149722; DKFZP761B039
Class III	
<i>SIRT1</i>	SIR2L1
<i>SIRT2</i>	SIR2L; SIR2L2
Class IV	
<i>HDAC11</i>	FLJ22237
Gene	Aliases
HMTs (n = 41)	
Arginine HMTs	
<i>PRMT1</i>	ANM1; HCP1; IR1B4; HRMT1L2
<i>PRMT5</i>	JBP1; SKB1; IBP72; SKB1Hs; HRMT1L5

<i>PRMT7</i>	FLJ10640; KIAA1933
<i>PRMT8</i>	HRMT1L3; HRMT1L4
<i>CARM1</i>	PRMT4
Lysine HMTs	
<i>SUV39</i>	
<i>EHMT1</i>	GLP; FP13812; FLJ12879; KIAA1876; EUHMTASE1; Eu-HMTase1; bA188C12.1; DKFZp667M072; RP11-188C12.1
<i>EHMT2</i>	G9A; BAT8; NG36; C6orf30; FLJ35547; NG36/G9a
<i>SUV39H1</i>	MG44; SUV39H
<i>SUV39H2</i>	FLJ23414
<i>SUV420H2</i>	MGC2705
<i>SETDB1</i>	ESET; KG1T; KIAA0067
<i>SETDB2</i>	CLLL8
<i>SET1</i>	
<i>SETD7</i>	SET7; SET9; SET7/9; FLJ21193; KIAA1717
<i>SETD8</i>	SET8; SET07; PR-Set7
<i>MLL</i>	HRX; TRX1; ALL-1; CXXC7; HTRX1; MLL1A
<i>MLL2</i>	ALR
<i>MLL3</i>	HALR; FLJ12625; FLJ38309; KIAA1506; MGC119851; MGC119852; MGC119853; DKFZp686C08112
<i>MLL4</i>	HRX2; MLL2; TRX2; KIAA0304
<i>EZH1</i>	KIAA0388
<i>EZH2</i>	ENX-1; MGC9169
<i>SET2</i>	
<i>NSD1</i>	STO; SOTOS; ARA267; FLJ22263; FLJ44628; DKFZp666C163
<i>WHSC1</i>	WHS; NSD2; TRX5; MMSET; REIIBP; FLJ23286; KIAA1090
<i>WHSC1L1</i>	NSD3; pp14328; FLJ20353; MGC126766; MGC142029; DKFZp667H044
<i>ASH1L</i>	ASH1; ASH1L1; FLJ10504; KIAA1420
<i>RIZ</i>	
<i>PRDM1</i>	BLIMP1
<i>PRDM2</i>	RIZ; RIZ1; RIZ2; MTB-ZF; HUMHOXY1
<i>PRDM3</i>	EVI1, MDS1-EVI1
<i>PRDM4</i>	PFM1
<i>PRDM5</i>	PFM2
<i>PRDM6</i>	
<i>PRDM7</i>	PFM4
<i>PRDM8</i>	PFM5
<i>PRDM9</i>	PFM6
<i>PRDM10</i>	PFM7, KIAA1231
<i>PRDM11</i>	PFM8
<i>PRDM12</i>	PFM9
<i>PRDM13</i>	PFM10
<i>PRDM14</i>	PFM11
<i>PRDM15</i>	ZNF298
<i>PRDM16</i>	MEL1, PFM13
Other	
<i>SMYD3</i>	ZMYND1; ZNFN3A1; FLJ21080; MGC104324; bA74P14.1

Histone demethylases (n = 8)

<i>PADI4</i>	PAD; PDI4; PDI5; PADI5
<i>AOF2</i>	LSD1; BHC110; KIAA0601
<i>JMJD2A</i>	JMJD2; JHDM3A; KIAA0677
<i>JMJD2C</i>	GASC1; JHDM3C; FLJ25949; KIAA0780; bA146B14.1
<i>JARID1B</i>	PUT1; PLU-1; FLJ10538; FLJ12459; FLJ12491; FLJ16281; FLJ23670; RBBP2H1A
<i>JMJD1A</i>	TSGA; JMJD1; JHMD2A; KIAA0742; DKFZp686A24246; DKFZp686P07111
<i>FBXL10</i>	CXXC2; Fbl10; PCCX2; JHDM1B
<i>FBXL11</i>	FBL7; CXXC8; FBL11; JHDM1A; LILINA; FLJ00115; FLJ46431; KIAA1004; DKFZP434M1735
<i>KDM2B</i>	JHDM1B, NDY1