Epigenetic modifications

Created by Abcam in collaboration with Tony Kouzarides and Andy Bannister (Gurdon Institute, Cambridge).

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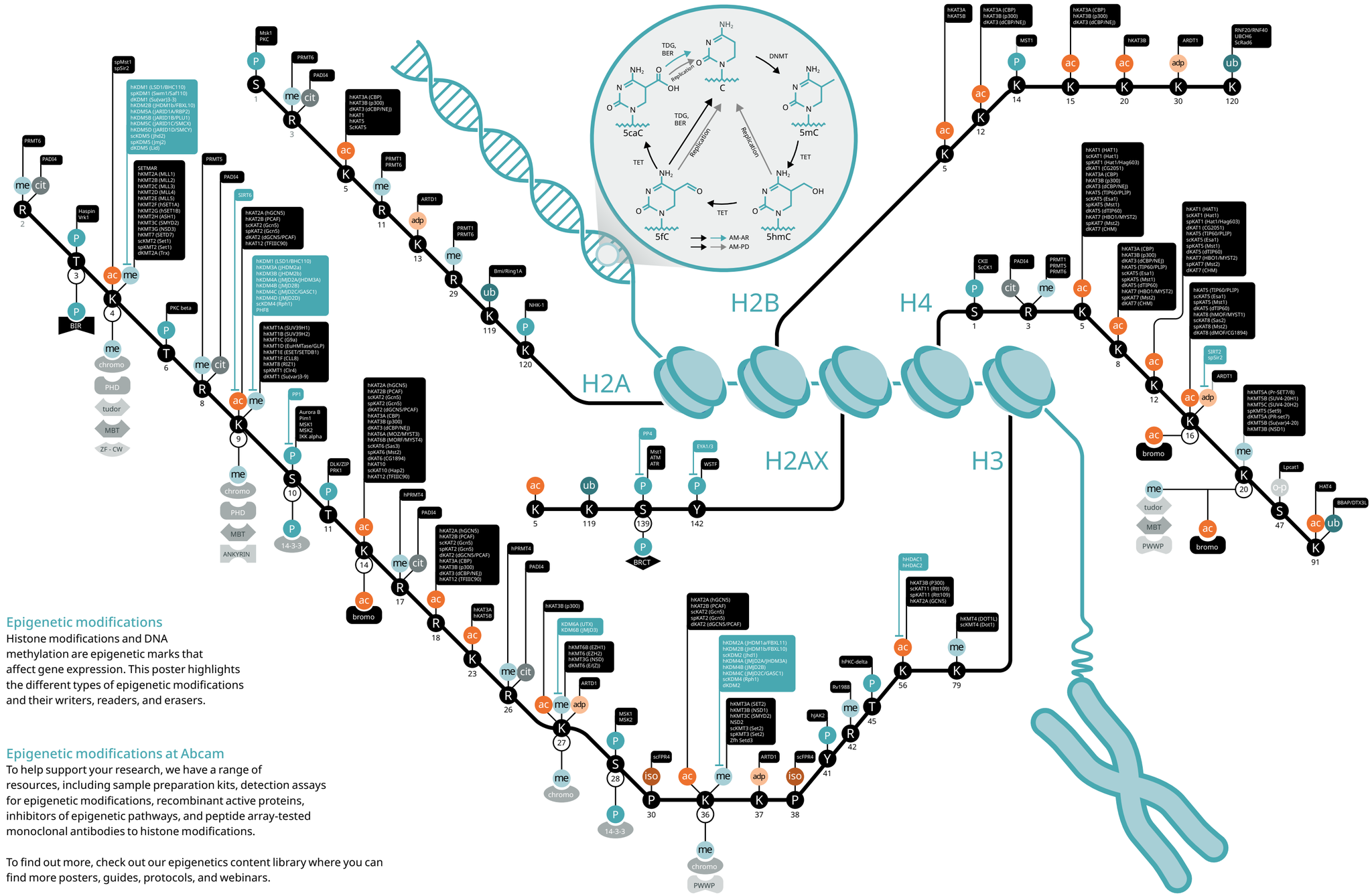

Epigenetic modifications

Histone modifications and DNA methylation are epigenetic marks that affect gene expression. This poster highlights the different types of epigenetic modifications and their writers, readers, and erasers.

Epigenetic modifications at Abcam

To help support your research, we have a range of resources, including sample preparation kits, detection assays for epigenetic modifications, recombinant active proteins, inhibitors of epigenetic pathways, and peptide array-tested monoclonal antibodies to histone modifications.

To find out more, check out our epigenetics content library where you can find more posters, guides, protocols, and webinars.

Histone modifications

ac	Acetylation	cit	Deimination	o-p	O-palmitoylation
ac ⊢	Deacetylation	P	Phosphorylation	ub	Ubiquitination
me	Methylation	P ⊢	Dephosphorylation	adp	ADPRibosylation
me ⊢	Demethylation	iso	Isomerization		

Histone modifications binding proteins

Chromodomain proteins

chromo	CHD1	H3K4me2/3
	HP1/spSwi6	H3K9me2/3
	spChp1	H3K9me2/3
	CDY1	H3K9me2/3
	PC1/PC2/PC/LHP1	H3K27me3, H3K9me3
	MSL3	H3K36me3
	hMRG15	H3K36me, H3K4me3
	scEaf3	H3K36me, H3K4me3
	CBX1,3,5	H3K9me3/2
	MPP8	H3K9me3/2
	Tip60	H3K9me3/2
	CBX2,4,6,7,8	H3K27me3/2, H3K9me3/2

MBT proteins

MBT	PHF20L1	H3K4me1, H4K20me1
	SFMBT	H3K9me1/2, H4K20me1/2
	L3MBTL1	H4K20me1/2, H1bK26me1/2
	L3MBTL1	H3K20me
	L3MBTL1/2	H3K9me
	MBTD1	H3K20me

PHD proteins

PHD	scYng1	H3K4me2/3
	ING1,2,3,4,5	H3K4me2/3
	BPTF/dmNURF301	H3K4me2/3
	scSpp1	H3K4me2/3
	scSet3	H3K4me2/3
	scJhd1	H3K4me3
	RAG2	H3K4me3
	TAF3	H3K4me3
	ICBP90 (Np95)	H3K9me2/3
	JARID1C	H3K9me3
	JARID1A	H3K4me2/3
	KIAA1718	H3K4me2/3
	Lid	H3K4me2/3
	MLL1	H3K4me2/3
	PHF2,8	H3K4me2/3
	PHO23	H3K4me2/3
	Pygo	H3K4me2/3
	CHD4	H3K9me
	ICBP90	H3K9me
	SMCX	H3K9me
	DPF3	H3K14ac

14-3-3 proteins

14-3-3	14-3-3	H3S10p, H3S28p

Tudor proteins

tudor	JMJD2A	H3K4me3, H4K20me3
	53BP1	H4K20me1/2
	spCrb2	H4K20me2
	PHF20	H4K20me2
	TDRD3	H3R17me2a, H4R3me2a
	scSgf29	H3K4me2/3
	PHF19	H3K36me3
	PHF1	H3K36me3

Bromodomain proteins

bromo	Polybromo/BAF180	H3ac
	scSnf2	H3ac, H4ac
	Brd2,3,4,7	H3ac, H4ac
	TAF1	H3ac, H4ac
	P/CAF	H3ac, H4ac, H4K16ac
	CBP/p300	H3ac, H4ac
	scBdf1	H4ac
	hBRG1	H3K14ac
	scRsc1,2,4	H3K14ac (Rsc4)
	scGcn5	H4ac, H4K16ac
	ATAD2	H3K14ac
	BRDT	H4K5ac, H4K8ac, H3K18ac
	CBP/p300	H4K20ac, H3K36ac
	GCN5	H4K16ac
	PB-2	H3K14ac
	TRIM24	H3K23ac

ZF-CW proteins

ZF - CW	ZCWPW1	H3K4me1/2

ANKYRIN proteins

ANKYRIN	G9a/GLP	H3K9me2/1

PWWP proteins

PWWP	BRPF1	H3K36me3
	DNMT3A	H3K36me3
	PDP1	H4K20me1
	HDGF2	H3K36me3

BRCT proteins

BRCT	MDC1	H2AXS139p (γH2AX)

BIR proteins

BIR	Survivin	H3T3p

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