



Anti-SUV39H1 (aa 150-250) polyclonal antibody (DPABH-21576)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Antigen Description

Histone methyltransferase that specifically trimethylates Lys-9 of histone H3 using monomethylated H3 Lys-9 as substrate. Also weakly methylates histone H1 (in vitro). H3 Lys-9 trimethylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 (CBX1, CBX3 and/or CBX5) proteins to methylated histones. Mainly functions in heterochromatin regions, thereby playing a central role in the establishment of constitutive heterochromatin at pericentric and telomere regions. H3 Lys-9 trimethylation is also required to direct DNA methylation at pericentric repeats. SUV39H1 is targeted to histone H3 via its interaction with RB1 and is involved in many processes, such as repression of MYOD1-stimulated differentiation, regulation of the control switch for exiting the cell cycle and entering differentiation, repression by the PML-RARA fusion protein, BMP-induced repression, repression of switch recombination to IgA and regulation of telomere length. Component of the eNoSC (energy-dependent nucleolar silencing) complex, a complex that mediates silencing of rDNA in response to intracellular energy status and acts by recruiting histone-modifying enzymes. The eNoSC complex is able to sense the energy status of cell: upon glucose starvation, elevation of NAD(+)/NADP(+) ratio activates SIRT1, leading to histone H3 deacetylation followed by dimethylation of H3 at Lys-9 (H3K9me2) by SUV39H1 and the formation of silent chromatin in the rDNA locus.

Immunogen	Synthetic peptide conjugated to KLH derived from within residues 150 - 250 of Human KMT1A/ SUV39H1.
Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Mouse, Rat, Human
Purification	Immunogen affinity purified
Conjugate	Unconjugated

Applications	WB
Format	Liquid
Size	100 µg
Buffer	pH: 7.40; Constituent: PBS
Preservative	0.02% Sodium Azide
Storage	Store at 4°C short term (1-2 weeks). Aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

GENE INFORMATION

Gene Name	SUV39H1 suppressor of variegation 3-9 homolog 2 (Drosophila) [Homo sapiens]
Official Symbol	SUV39H1
Synonyms	SUV39H1; suppressor of variegation 3-9 homolog 1 (Drosophila); MG44; KMT1A; SUV39H; H3-K9-HMTase 1; histone-lysine N-methyltransferase SUV39H1; Su(var)3-9 homolog 1; lysine N-methyltransferase 1A; histone H3-K9 methyltransferase 1; position-effect variegation 3-9 homolog; histone-lysine N-methyltransferase, H3 lysine-9 specific 1;
Entrez Gene ID	6839
Protein Refseq	NP_001269095.1
UniProt ID	O43463
Pathway	Epigenetic regulation of gene expression; Lysine degradation; Negative epigenetic regulation of rRNA expression; Regulation of retinoblastoma protein
Function	S-adenosylmethionine-dependent methyltransferase activity; chromatin binding; histone methyltransferase activity; histone methyltransferase activity (H3-K9 specific)