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SUV39H2 Recombinant Rabbit mAb

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Catalog # AP94254

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9H5I1
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	46682
Physical State	Liquid
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus. Chromosome > centromere. Associates with centromeric constitutive heterochromatin.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Distinct modifications of histone tails, such as acetylation, phosphorylation and methylation, regulate nuclear processes by organizing chromatin into higher order structures. Higher order chromatin influences chromosome function and epigenetic gene regulation. SUV39H2 is a 410 amino acid protein that localizes to the centromere and contains one SET domain, one pre-SET domain, one post-SET domain and one chromo domain. Expressed at high levels in adult testis, SUV39H2 functions as a histone methyltransferase that trimethylates the Lys-9 residue of Histone H3, thereby playing an essential role in establishing constitutive heterochromatin at pericentric and telomere regions. SUV39H2 conveys its enzymatic activity via its multiple catalytic domains, which are necessary for both stable binding of SUV39H2 to chromatin and for SUV39H2 methyltransferase activity. Multiple isoforms of SUV39H2 exist due to alternative splicing events.

Additional Information

Gene ID	79723
Other Names	Histone-lysine N-methyltransferase SUV39H2, 2.1.1.-, Histone H3-K9 methyltransferase 2, H3-K9-HMTase 2, Lysine N-methyltransferase 1B, Suppressor of variegation 3-9 homolog 2, Su(var)3-9 homolog 2, SUV39H2, KMT1B
Dilution	WB=1:500-2000,IHC-P=1:50-200,IHC-F=1:50-200,IF=1:50-200
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

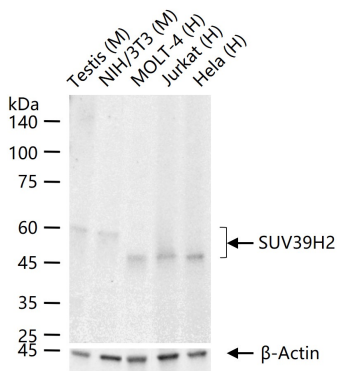
Protein Information

Name	SUV39H2
Synonyms	KMT1B
Function	Histone methyltransferase that specifically mediates trimethylation of 'Lys-9' of histone H3 (H3K9me3) using monomethylated H3 'Lys-9' (H3K9me1) as substrate (PubMed:10949293). H3 'Lys-9' trimethylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 (CBX1, CBX3 and/or CBX5) proteins to methylated histones (PubMed:10949293). Mainly functions in heterochromatin regions, thereby playing a central role in the establishment of constitutive heterochromatin at pericentric and telomere regions (PubMed:10949293). H3 'Lys-9' trimethylation is also required to direct DNA methylation at pericentric repeats (PubMed:10949293, PubMed:41094145). SUV39H2 is targeted to histone H3 via its interaction with RB1 and is involved in many processes, such as cell cycle regulation, transcriptional repression and regulation of telomere length (PubMed:14765126). May participate in regulation of higher-order chromatin organization during spermatogenesis (By similarity). Recruited by the large PER complex to the E-box elements of the circadian target genes such as PER2 itself or PER1, contributes to the conversion of local chromatin to a heterochromatin-like repressive state through H3 'Lys-9' trimethylation (By similarity).
Cellular Location	Nucleus. Chromosome. Chromosome, centromere {ECO:0000250|UniProtKB:Q9EQQ0}. Note=Associates with centromeric constitutive heterochromatin (By similarity). Recruited to pericentromeric heterochromatin via its chromo domain, which specifically recognizes and binds histone H3 monoubiquitinated at 'Lys- 14' (H3K14ub) (PubMed:41094145). {ECO:0000250|UniProtKB:Q9EQQ0, ECO:0000269|PubMed:41094145}

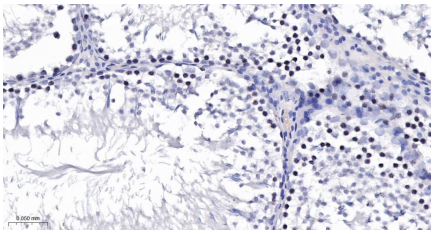
Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Images



25 ug total protein per lane of various lysates (see on figure) probed with SUV39H2 monoclonal antibody, unconjugated (AP94254) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded Rat Testicles; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with SUV39H2 Monoclonal Antibody, Unconjugated (AP94254) at 1:200 overnight at 4°C, followed by conjugation to the AP94254-HRP and DAB (C-0010) staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.