10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EHMT1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1018a

Product Information

Application	WB, E
Primary Accession	Q9H9B1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB13017
Calculated MW	141466
Antigen Region	203-233

Additional Information

Gene ID	79813
Other Names	Histone-lysine N-methyltransferase EHMT1, 211-, Euchromatic histone-lysine N-methyltransferase 1, Eu-HMTase1, G9a-like protein 1, GLP, GLP1, Histone H3-K9 methyltransferase 5, H3-K9-HMTase 5, Lysine N-methyltransferase 1D, EHMT1, EUHMTASE1, GLP, KIAA1876, KMT1D
Target/Specificity	This EHMT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 203-233 amino acids from the N-terminal region of human EHMT1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EHMT1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EHMT1
Synonyms	EUHMTASE1, GLP, KIAA1876, KMT1D

Function	Histone methyltransferase that specifically mono- and dimethylates 'Lys-9' of histone H3 (H3K9me1 and H3K9me2, respectively) in euchromatin. H3K9me represents a specific tag for epigenetic transcriptional repression by recruiting HP1 proteins to methylated histones. Also weakly methylates 'Lys-27' of histone H3 (H3K27me). Also required for DNA methylation, the histone methyltransferase activity is not required for DNA methylation, suggesting that these 2 activities function independently. Probably targeted to histone H3 by different DNA-binding proteins like E2F6, MGA, MAX and/or DP1. During G0 phase, it probably contributes to silencing of MYC- and E2F-responsive genes, suggesting a role in G0/G1 transition in cell cycle. In addition to the histone methyltransferase activity, also methylates non-histone proteins: mediates dimethylation of 'Lys-373' of p53/TP53. Represses the expression of mitochondrial function-related genes, perhaps by occupying their promoter regions, working in concert with probable chromatin reader BAZ2B (By similarity).
Cellular Location	Nucleus. Chromosome. Note=Associates with euchromatic regions
Tissue Location	Widely expressed..

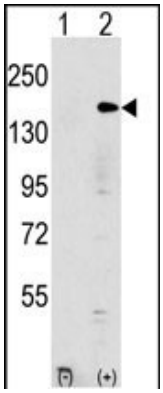
Background

EHMT1, also known as EUHMTASE1, is a histone methyltransferase. This protein methylates 'Lys-9' of histone H3 in vitro. H3 'Lys-9' methylation represents a specific tag for epigenetic transcriptional repression by recruiting HP1 proteins to methylated histones. EHMT1 is Probably targeted to histone H3 by different DNA-binding proteins like E2F6, MGA, MAX and/or DP1. During G0 phase, it probably contributes to silencing of MYC- and E2F-responsive genes, suggesting a role in the G0/G1 transition of the cell cycle.

References

Ogawa H.,Science 296:1132-1136(2002).
Ota T.,Nat. Genet. 36:40-45(2004).
Nagase T.,DNA Res. 8:85-95(2001).

Images



Western blot analysis of EHMT1 (arrow) using rabbit polyclonal EHMT1 Antibody (N-term) (Cat# AP1018a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the EHMT1 gene (Lane 2) (Origene Technologies).