EHMT1 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	EHMT1, Monoclonal Antibody
Full Product Name	EHMT1 (Histone H3-K9 Methyltransferase 5, H3-K9-HMTase 5, Euchromatic Histone-lysine N-methyltransferase 1, Eu-HMTase1, G9a-like Protein 1, GLP1, Lysine N-methyltransferase 1D, EHMT1, EUHMTASE1, KIAA1876, KMT1D, bA188C12.1, DEL9q34, DKFZp667M072, FLJ12879
Product Gene Name	anti-EHMT1 antibody
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Number	3G1
Host	Mouse
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human EHMT1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amo only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight750 conjugates are sensitive to light. For maximum recov of product, centrifuge the original vial prior to removing the cap.
OMIM	AK022941 mRNA
3D Structure	ModBase 3D Structure for Q9H9B1
Immunogen	Partial recombinant corresponding to aa1-101 from human EHMT1 (NP_079033) with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	MAADEGSAEKQAGEAHMAADGETNGSCENSDASSHANAAKHTQDSARVNPQDGTNTLTRIAENGVSERDSEAAKQNHVTADDFVQTSVIGSNGYILNK
Conjugate	MaxLight750
Product Categories/Family for anti-EHMT1 antibody	Antibodies; Enzymes; Methyltransferase
Applications Tested/Suitable for anti-EHMT1 antibody	FLISA, Immunofluorescence (IF), Western Blot (WB)
Application Notes for anti-EHMT1 antibody	IF: 10ug/ml Applications are based on unconjugated antibody.
Related Product Information for anti-EHMT1 antibody	MBS6232638 is an antibody targeting EHMT1. Also known as EHMT1 (Histone H3-K9 Methyltransferase 5, H3-K9-HMTase 5, Euchromatic Histone-lysine N-methyltransferase 1, Eu-HMTase1, G9a-like Protein 1, GLP1, Lysine N-methyltransferase 1D, EHMT1, EUHMTASE1, KIAA1876, KMT1D, bA188C12.1, DEL9q34, DKFZp667M072, FLJ12879. Reactive in Human. Host: Mouse.

Other Notes	Small volumes of anti-EHMT1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for EHMT1. It may not necessarily be applicable to this product.

NCBI GI #	224465233
NCBI GeneID	79813
NCBI Accession #	NP_079033
UniProt Primary Accession #	Q9H9B1
UniProt Related Accession #	Q9H9B1
GenBank Nucleotide #	NM_024757
NCBI Official Full Name	histone-lysine N-methyltransferase EHMT1 isoform 1
NCBI Official Synonym Full Names	euchromatic histone lysine methyltransferase 1
NCBI Official Symbol	EHMT1
NCBI Official Synonym Symbols	GLP; GLP1; KMT1D; KLEFS1; FP13812; EHMT1-IT1; EUHMTASE1; Eu-HMTase1
UniProt Protein Name	Histone-lysine N-methyltransferase EHMT1
UniProt Synonym Protein Names	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
Protein Family	Histone-lysine N-methyltransferase
UniProt Gene Name	EHMT1
UniProt Synonym Gene Names	EUHMTASE1; GLP; KIAA1876; KMT1D; Eu-HMTase1; GLP; GLP1; H3-K9-HMTase 5
NCBI Protein Information	histone-lysine N-methyltransferase EHMT1
NCBI Summary for EHMT1	The protein encoded by this gene is a histone methyltransferase that methylates the lysine-9 position of histone H3. This action marks the genomic region packaged with these methylated histones for transcriptional repression. This protein may be involved in the silencing of MYC- and E2F-responsive genes and therefore could play a role in the G0/G1 cell cycle transition. Defects in this gene are a cause of chromosome 9q subtelomeric deletion syndrome (9q-syndrome, also known as Kleefstra syndrome). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2017]

UniProt Comments for EHMT1	EHMT1: 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. Defects in EHMT1 are the cause of chromosome 9q subtelomeric deletion syndrome (9q- syndrome). Common features seen in these patients are severe mental retardation, hypotonia, brachy(micro)cephaly, epileptic seizures, flat face with hypertelorism, synophrys, anteverted nares, cupid bow or tented upper lip, everted lower lip, prognathism, macroglossia, conotruncal heart defects, and behavioral problems. Belongs to the histone-lysine methyltransferase family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Amino Acid Metabolism - lysine degradation; EC 2.1.1.43; Methyltransferase; Methyltransferase, protein lysine Chromosomal Location of Human Ortholog: 9q34.3 Cellular Component: nuclear body; nucleoplasm; nucleus Molecular Function: histone lysine N-methyltransferase activity (H3-K27 specific); histone lysine N-methyltransferase activity (H3-K9 specific); histone-lysine N-methyltransferase activity; methyltransferase activity; p53 binding; protein binding; protein-lysine N-methyltransferase activity Biological Process: DNA methylation; embryonic development; establishment and/or maintenance of chromatin architecture; histone methylation; negative regulation of transcription, DNA-dependent; peptidyl-lysine di-methylation; peptidyl-lysine mono-methylation Disease: Kleefstra Syndrome
Research Articles on EHMT1	**1.** The authors show that IFI16 is in complex with the H3K9 methyltransferase SUV39H1 and GLP and recruits them to the human herpesvirus 8 genome during de novo infection and latency. The resulting depositions of H3K9me2/me3 serve as a docking site for the heterochromatin-inducing HP1alpha protein leading into the IFI16-dependent epigenetic modifications and silencing of the virus lytic genes.
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