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

PRMT1 Recombinant Mouse mAb

Catalog # AP96378

Product Information

Application	WB
Reactivity	Rat, Human, Mouse
Host	Mouse
Clonality	Recombinant
Physical State	Liquid
Isotype	IgG1, Kappa
Purity	affinity purified by Protein G
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the protein arginine N-methyltransferase family.
SUBUNIT	Homodimer and heterodimer with PRMT8. Individual homodimers can associate to form a homohexamer. Interacts with BTG1, BTG2, NFATC2IP and IFNAR1 (By similarity). Interacts with and methylates CHTOP, thereby enabling the interaction of CHTOP with the 5FMC complex (By similarity). Interacts with ILF3 and SUPT5H. Interacts with and methylates FOXO1, leading to the nuclear retention of FOXO1 and the stimulation of FOXO1 transcriptional activity. Methylation of FOXO1 is increased upon oxidative stress.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	PRMTs are a family of proteins that either monomethylate or dimethylate the guanidino nitrogen atoms of arginine side chains. PRMT1 methylates Histone H4 on R3 and acts synergistically with p300/CBP to enhance transcriptional activation by nuclear receptors. PRMT1 also methylates a number of non-histone proteins such as the orphan nuclear receptor HNF4, components of the heterogeneous nuclear ribonucleoprotein (hnRNP) particle, interleukin enhancer-binding factor 3 (ILF3), and interferon alpha and beta receptors. This suggests roles for PRMT1 in transcriptional regulation, mRNA processing and signal transduction. PRMT1 is also a coactivator for p53, methylating histone H4 to facilitate p53-mediated transcription.

Additional Information

Other Names	ANM1; HCP1; HRMT1L2; IR1B4; 6720434D09Rik; Mrmt1; ANM1_HUMAN; PRMT1; Histone-arginine N-methyltransferase PRMT1; Interferon receptor 1-bound protein 4; 2.1.1.319; HMT2; ANM1_MOUSE; ANM1_RAT; protein arginine methyltransferase 1; HMT1 (hnRNP methyltransferase, S. cerevisiae)-like 2; HMT1 hnRNP methyltransferase-like 2 (S. cerevisiae); highly conserved protein 1
Dilution	WB=1:500-2000
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.

Name	PRMT1 Recombinant Mouse mAb
Function	Arginine methyltransferase that methylates (mono and asymmetric dimethylation) the guanidino nitrogens of arginyl residues present in proteins such as ESR1, histone H2, H3 and H4, PIAS1, HNRNPA1, HNRNPD, NFATC2IP, SUPT5H, TAF15 and EWS. Constitutes the main enzyme that mediates monomethylation and asymmetric dimethylation of histone H4 'Arg-4' (H4R3me1 and H4R3me2a, respectively), a specific tag for epigenetic transcriptional activation. Together with dimethylated PIAS1, represses STAT1 transcriptional activity, in the late phase of interferon gamma (IFN-gamma) signaling. May be involved in the regulation of TAF15 transcriptional activity, act as an activator of estrogen receptor (ER)-mediated transactivation, play a key role in neurite outgrowth and act as a negative regulator of megakaryocytic differentiation, by modulating p38 MAPK pathway. Methylates FOXO1 and retains it in the nucleus increasing its transcriptional acivity.

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