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PRMT6 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1347a

Product Information

Application	WB, E
Primary Accession	Q96LA8
Reactivity	Human, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	4G2
Isotype	IgG1
Calculated MW	41938
Description	Protein arginine N-methyltransferases, such as PRMT6, catalyze the sequential transfer of a methyl group from S-adenosyl-L-methionine to the side chain nitrogens of arginine residues within proteins to form methylated arginine derivatives and S-adenosyl-L-homocysteine.
Immunogen	Purified recombinant fragment of human PRMT6 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	55170
Other Names	Protein arginine N-methyltransferase 6, 2.1.1.-, Heterogeneous nuclear ribonucleoprotein methyltransferase-like protein 6, Histone-arginine N-methyltransferase PRMT6, 2.1.1.125, PRMT6, HRMT1L6
Dilution	WB~~1/500 - 1/2000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PRMT6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PRMT6
Synonyms	HRMT1L6

Function	Arginine methyltransferase that can catalyze the formation of both omega-N monomethylarginine (MMA) and asymmetrical dimethylarginine (aDMA), with a strong preference for the formation of aDMA (PubMed:17898714, PubMed:18077460, PubMed:18079182, PubMed:19405910, PubMed:30420520). Preferentially methylates arginyl residues present in a glycine and arginine-rich domain and displays preference for monomethylated substrates (PubMed:17898714, PubMed:18077460, PubMed:18079182, PubMed:19405910). Specifically mediates the asymmetric dimethylation of histone H3 'Arg-2' to form H3R2me2a (PubMed:17898714, PubMed:18077460, PubMed:18079182). H3R2me2a represents a specific tag for epigenetic transcriptional repression and is mutually exclusive with methylation on histone H3 'Lys-4' (H3K4me2 and H3K4me3) (PubMed:17898714, PubMed:18077460). Acts as a transcriptional repressor of various genes such as HOXA2, THBS1 and TP53 (PubMed:19509293). Repression of TP53 blocks cellular senescence (By similarity). Also methylates histone H2A and H4 'Arg-3' (H2AR3me and H4R3me, respectively). Acts as a regulator of DNA base excision during DNA repair by mediating the methylation of DNA polymerase beta (POLB), leading to the stimulation of its polymerase activity by enhancing DNA binding and processivity (PubMed:16600869). Methylates HMGA1 (PubMed:16157300, PubMed:16159886). Regulates alternative splicing events. Acts as a transcriptional coactivator of a number of steroid hormone receptors including ESR1, ESR2, PGR and NR3C1. Promotes fasting-induced transcriptional activation of the gluconeogenic program through methylation of the CRTC2 transcription coactivator (By similarity). May play a role in innate immunity against HIV-1 in case of infection by methylating and impairing the function of various HIV-1 proteins such as Tat, Rev and Nucleocapsid protein p7 (NC) (PubMed:17267505). Methylates GPS2, protecting GPS2 from ubiquitination and degradation (By similarity). Methylates SIRT7, inhibiting SIRT7 histone deacetylase activity and promoting mitochondria biogenesis (PubMed:30420520).
Cellular Location	Nucleus.
Tissue Location	Highly expressed in kidney and testis.

References

1. Gene. 1994 Jan 28;138(1-2):171-4. 2. J Biol Chem. 2002 Feb 1;277(5):3537-43. 3. Nat Genet. 2004 Jan;36(1):40-5.

Images

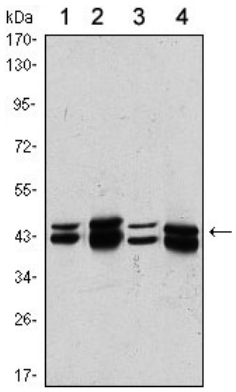


Figure 1: Western blot analysis using PRMT6 mouse mAb against A431 (1), Hela (2), A549 (3) and HEK293 (4) cell lysate.

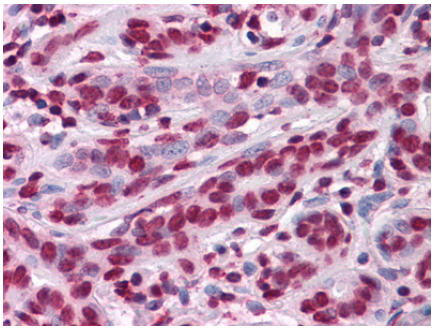


Figure 2: Immunohistochemical analysis of paraffin-embedded human Breast tissues using anti-ZBTB7B mouse mAb

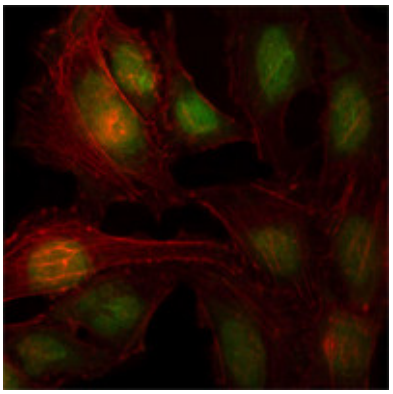


Figure 2: Immunofluorescence analysis of Hela cells using ZBTB7B mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin

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