

PRMT6 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP1009a

Specification

PRMT6 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession [O96LA8](#)

PRMT6 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 55170

Other Names

Protein arginine N-methyltransferase 6, 211-, Heterogeneous nuclear ribonucleoprotein methyltransferase-like protein 6, Histone-arginine N-methyltransferase PRMT6, PRMT6, HRMT1L6

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1009a](/product/products/AP1009a) was selected from the N-term region of human PRMT6. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PRMT6 Antibody (N-term) Blocking Peptide - 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](http://www.uniprot.org/citations/17898714) target="_blank">17898714, PubMed: [18077460](http://www.uniprot.org/citations/18077460) target="_blank">18077460, PubMed: [18079182](http://www.uniprot.org/citations/18079182) target="_blank">18079182, PubMed: [19405910](http://www.uniprot.org/citations/19405910) target="_blank">19405910, PubMed: [30420520](http://www.uniprot.org/citations/30420520) target="_blank">30420520). Preferentially methylates arginyl residues present in a glycine and arginine-rich domain and displays preference for monomethylated substrates (PubMed: <a

<http://www.uniprot.org/citations/17898714> target="_blank">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.

PRMT6 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

PRMT6 Antibody (N-term) Blocking Peptide - Images

PRMT6 Antibody (N-term) Blocking Peptide - Background

Arginine methylation is an irreversible post translational modification which has only recently been linked to protein activity. At least three types of PRMT enzymes have been identified in mammalian cells. These enzymes have been shown to have essential regulatory functions by methylation of key proteins in several fundamental areas. These protein include nuclear proteins, IL enhancer binding factor, nuclear factors, cell cycle proteins, signal transduction proteins, apoptosis proteins, and viral proteins. The mammalian PRMT family currently consists of 7 members that share two large domains of homology. Outside of these domains, epitopes were identified and antibodies against all 7 PRMT members have been developed.

PRMT6 Antibody (N-term) Blocking Peptide - References

Frankel A., et al. J. Biol. Chem. 277:3537-3543(2002). Pal, S., et al., Mol. Cell. Biol. 23(21):7475-7487 (2003). Rho, J., et al., J. Biol. Chem. 276(14):11393-11401 (2001). Pollack, B.P., et al., J. Biol. Chem. 274(44):31531-31542 (1999). Gilbreth, M., et al., Proc. Natl. Acad. Sci. U.S.A. 95(25):14781-14786 (1998).