

**PRMT5 Antibody (C-term C487)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1007b**

**Specification**

**PRMT5 Antibody (C-term C487) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q14744</a>
Other Accession	<a href="#">Q6NUA1</a> , <a href="#">Q8CIG8</a> , <a href="#">Q4R5M3</a> , <a href="#">A7YW45</a>
Reactivity Predicted	Human Bovine, Monkey, Mouse, Xenopus
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	72684
Antigen Region	473-499

**PRMT5 Antibody (C-term C487) - Additional Information**

**Gene ID** 10419

**Other Names**

Protein arginine N-methyltransferase 5, 211-, 72 kDa ICh-binding protein, Histone-arginine N-methyltransferase PRMT5, Jak-binding protein 1, Shk1 kinase-binding protein 1 homolog, SKB1 homolog, SKB1Hs, Protein arginine N-methyltransferase 5, N-terminally processed, PRMT5, HRMT1L5, IBP72, JBP1, SKB1

**Target/Specificity**

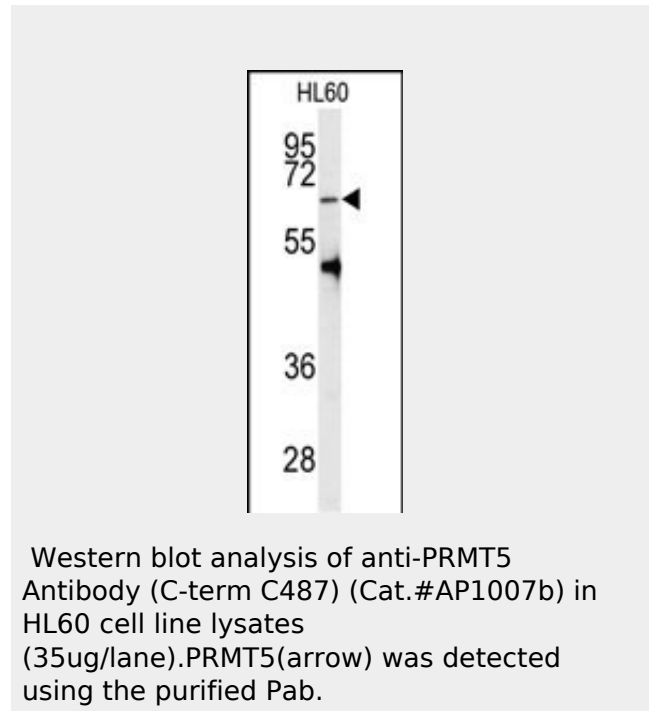
This PRMT5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 473-499 amino acids from the C-terminal region of human PRMT5.

**Dilution**

WB~~1:1000

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation



**PRMT5 Antibody (C-term C487) - 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.

**PRMT5 Antibody (C-term C487) - References**

Pal, S., et al., Mol. Cell. Biol. 23(21):7475-7487

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

PRMT5 Antibody (C-term C487) is for research use only and not for use in diagnostic or therapeutic procedures.

### PRMT5 Antibody (C-term C487) - Protein Information

**Name** PRMT5

**Synonyms** HRMT1L5, IBP72, JBP1, SKB1

### Function

Arginine methyltransferase that can both catalyze the formation of omega-N monomethylarginine (MMA) and symmetrical dimethylarginine (sDMA), with a preference for the formation of MMA (PubMed:<<http://www.uniprot.org/citations/10531356>>10531356</a>, PubMed:<<http://www.uniprot.org/citations/11152681>>11152681</a>, PubMed:<<http://www.uniprot.org/citations/11747828>>11747828</a>, PubMed:<<http://www.uniprot.org/citations/12411503>>12411503</a>, PubMed:<<http://www.uniprot.org/citations/15737618>>15737618</a>, PubMed:<<http://www.uniprot.org/citations/17709427>>17709427</a>, PubMed:<<http://www.uniprot.org/citations/20159986>>20159986</a>, PubMed:<<http://www.uniprot.org/citations/20810653>>20810653</a>, PubMed:<<http://www.uniprot.org/citations/21258366>>21258366</a>, PubMed:<<http://www.uniprot.org/citations/21917714>>21917714</a>),

(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).

PubMed:<a href="http://www.uniprot.org/citations/22269951" target="\_blank">22269951</a>, PubMed:<a href="http://www.uniprot.org/citations/21081503" target="\_blank">21081503</a>). Specifically mediates the symmetrical dimethylation of arginine residues in the small nuclear ribonucleoproteins Sm D1 (SNRPD1) and Sm D3 (SNRPD3); such methylation being required for the assembly and biogenesis of snRNP core particles (PubMed:<a href="http://www.uniprot.org/citations/12411503" target="\_blank">12411503</a>, PubMed:<a href="http://www.uniprot.org/citations/11747828" target="\_blank">11747828</a>, PubMed:<a href="http://www.uniprot.org/citations/17709427" target="\_blank">17709427</a>). Methylates SUPT5H and may regulate its transcriptional elongation properties (PubMed:<a href="http://www.uniprot.org/citations/12718890" target="\_blank">12718890</a>). Mono- and dimethylates arginine residues of myelin basic protein (MBP) in vitro. May play a role in cytokine-activated transduction pathways. Negatively regulates cyclin E1 promoter activity and cellular proliferation. Methylates histone H2A and H4 'Arg-3' during germ cell development (By similarity). Methylates histone H3 'Arg-8', which may repress transcription (By similarity). Methylates the Piwi proteins (PIWIL1, PIWIL2 and PIWIL4), methylation of Piwi proteins being required for the interaction with Tudor domain-containing proteins and subsequent localization to the meiotic nuage (By similarity). Methylates RPS10. Attenuates EGF signaling through the MAPK1/MAPK3 pathway acting at 2 levels. First, monomethylates EGFR; this enhances EGFR 'Tyr-1197' phosphorylation and PTPN6 recruitment, eventually leading to reduced SOS1 phosphorylation (PubMed:<a href="http://www.uniprot.org/citations/21917714" target="\_blank">21917714</a>, PubMed:<a href="http://www.uniprot.org/citations/21258366" target="\_blank">21258366</a>). Second, methylates RAF1 and probably BRAF, hence destabilizing these 2 signaling proteins and reducing their catalytic activity (PubMed:<a href="http://www.uniprot.org/citations/2191

7714" target="\_blank">21917714</a>). Required for induction of E-selectin and VCAM-1, on the endothelial cells surface at sites of inflammation. Methylates HOXA9 (PubMed:<a href="http://www.uniprot.org/citations/22269951" target="\_blank">22269951</a>). Methylates and regulates SRGAP2 which is involved in cell migration and differentiation (PubMed:<a href="http://www.uniprot.org/citations/20810653" target="\_blank">20810653</a>). Acts as a transcriptional corepressor in CRY1-mediated repression of the core circadian component PER1 by regulating the H4R3 dimethylation at the PER1 promoter (By similarity). Methylates GM130/GOLGA2, regulating Golgi ribbon formation (PubMed:<a href="http://www.uniprot.org/citations/20421892" target="\_blank">20421892</a>). Methylates H4R3 in genes involved in glioblastomagenesis in a CHTOP- and/or TET1-dependent manner (PubMed:<a href="http://www.uniprot.org/citations/25284789" target="\_blank">25284789</a>). Symmetrically methylates POLR2A, a modification that allows the recruitment to POLR2A of proteins including SMN1/SMN2 and SETX. This is required for resolving RNA-DNA hybrids created by RNA polymerase II, that form R-loop in transcription terminal regions, an important step in proper transcription termination (PubMed:<a href="http://www.uniprot.org/citations/26700805" target="\_blank">26700805</a>). Along with LYAR, binds the promoter of gamma-globin HBG1/HBG2 and represses its expression (PubMed:<a href="http://www.uniprot.org/citations/25092918" target="\_blank">25092918</a>). Symmetrically methylates NCL (PubMed:<a href="http://www.uniprot.org/citations/21081503" target="\_blank">21081503</a>). Methylates TP53; methylation might possibly affect TP53 target gene specificity (PubMed:<a href="http://www.uniprot.org/citations/19011621" target="\_blank">19011621</a>). Involved in spliceosome maturation and mRNA splicing in prophase I spermatocytes through the catalysis of the symmetrical arginine dimethylation of SNRNPB (small nuclear ribonucleoprotein-associated protein) and the interaction with tudor domain-containing protein TDRD6 (By

similarity).

**Cellular Location**

Cytoplasm. Nucleus. Chromosome. Golgi apparatus. Note=Localizes to promoter regions of target genes on chromosomes.

**Tissue Location**

Ubiquitous..

**PRMT5 Antibody (C-term C487) - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)