

**PRMT5 Antibody**  
Rabbit mAb  
Catalog # AP90458

## Specification

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### PRMT5 Antibody - Product Information

Application	WB, IHC, FC, ICC
Primary Accession	<a href="#">O14744</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
HRMT1L5; IBP72; JBP1; SKB1; SKB1Hs; PRMT5; Skb1Hs Methyltransferase;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	72684 Da

### PRMT5 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human PRMT5
Description	Involved in regulation of cell cycle progression through G2 by negatively regulating Swe1p, a protein tyrosine kinase that phosphorylates and inhibits Cdc28p. An Hsl7p homologue, Skb1, was identified in fission yeast by virtue of its yeast two-hybrid interaction with Shk1p, a p21 (cdc42p/Rac) activated kinase (PAK).
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

### PRMT5 Antibody - 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: [10531356](http://www.uniprot.org/citations/10531356), PubMed: [11152681](http://www.uniprot.org/citations/11152681), PubMed: [11747828](http://www.uniprot.org/citations/11747828), PubMed: [12411503](http://www.uniprot.org/citations/12411503)),

PubMed: <a href="http://www.uniprot.org/citations/15737618" target="\_blank">15737618</a>, PubMed: <a href="http://www.uniprot.org/citations/17709427" target="\_blank">17709427</a>, PubMed: <a href="http://www.uniprot.org/citations/20159986" target="\_blank">20159986</a>, PubMed: <a href="http://www.uniprot.org/citations/20810653" target="\_blank">20810653</a>, PubMed: <a href="http://www.uniprot.org/citations/21081503" target="\_blank">21081503</a>, PubMed: <a href="http://www.uniprot.org/citations/21258366" target="\_blank">21258366</a>, PubMed: <a href="http://www.uniprot.org/citations/21917714" target="\_blank">21917714</a>, PubMed: <a href="http://www.uniprot.org/citations/22269951" target="\_blank">22269951</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/11747828" target="\_blank">11747828</a>, PubMed: <a href="http://www.uniprot.org/citations/12411503" target="\_blank">12411503</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>). May methylate the N-terminal region of MBD2 (PubMed: <a href="http://www.uniprot.org/citations/16428440" target="\_blank">16428440</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/21258366" target="\_blank">21258366</a>, PubMed: <a href="http://www.uniprot.org/citations/21917714" target="\_blank">21917714</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/21917714" 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 p53/TP53; methylation might possibly affect p53/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 SNRPB (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 (PubMed:33376131). Localizes to methylated chromatin (PubMed:16428440).

### Tissue Location

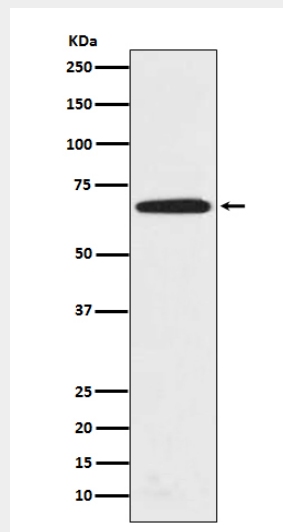
Ubiquitous..

### PRMT5 Antibody - 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](#)

### PRMT5 Antibody - Images



Western blot analysis of PRMT5 expression in HeLa cell lysate.