

# **Anti-PRMT5 Rabbit Monoclonal Antibody**

**Catalog # ABO13639** 

# **Specification**

# **Anti-PRMT5 Rabbit Monoclonal Antibody - Product Information**

Application WB, IHC, IF, ICC, FC

Primary Accession

Host
Rabbit
Isotype
Rabbit IgG

Reactivity Rat, Human, Mouse

Clonality Monoclonal Format Liquid

**Description** 

Anti-PRMT5 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

# **Anti-PRMT5 Rabbit Monoclonal Antibody - Additional Information**

**Gene ID** 10419

#### **Other Names**

Protein arginine N-methyltransferase 5, PRMT5, 2.1.1.320, 72 kDa ICIn-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

Calculated MW 72684 MW KDa

# **Application Details**

WB 1:5000-1:10000<br>IHC 1:50-1:200<br>ICC/IF 1:50-1:200<br>FC 1:50</br>

## **Subcellular Localization**

Cytoplasm. Nucleus. Golgi apparatus.

# **Tissue Specificity**

Ubiquitous...

#### **Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

#### **Immunogen**

A synthesized peptide derived from human PRMT5

#### **Purification**

Affinity-chromatography

Storage Store at -20°C for one year. For short term



storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

# **Anti-PRMT5 Rabbit Monoclonal Antibody - Protein Information**

Name PRMT5

Synonyms HRMT1L5, IBP72, JBP1, SKB1

#### **Function**

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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:<a href="http://www.uniprot.org/citations/10531356" target="_blank">10531356</a>, PubMed:<a href="http://www.uniprot.org/citations/11152681" target="_blank">11152681</a>,
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/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/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
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(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..

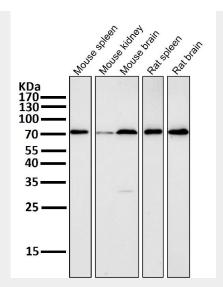
#### Anti-PRMT5 Rabbit Monoclonal Antibody - Protocols

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

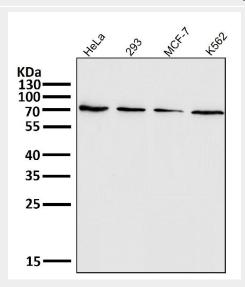
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Anti-PRMT5 Rabbit Monoclonal Antibody - Images

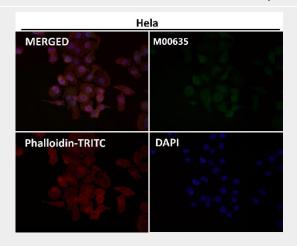




All lanes use the Antibody at 1:1W dilution for 1 hour at room temperature.

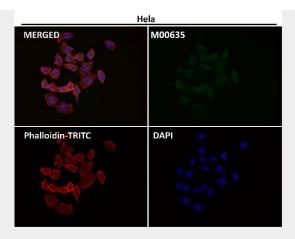


All lanes use the Antibody at 1:1W dilution for 1 hour at room temperature.

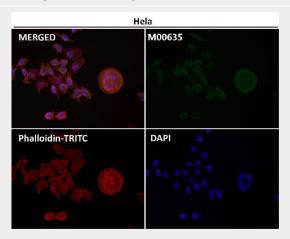


Immunofluorescent analysis using the Antibody at 1:50 dilution.

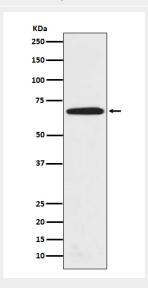




Immunofluorescent analysis using the Antibody at 1:150 dilution.

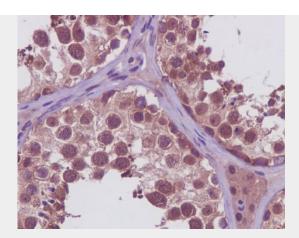


Immunofluorescent analysis using the Antibody at 1:150 dilution.

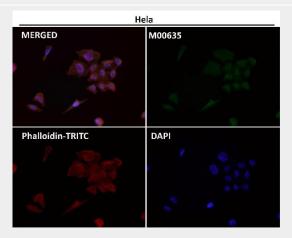


Western blot analysis of PRMT5 expression in HeLa cell lysate.





Immunohistochemical analysis of paraffin-embedded human testis, using PRMT5 Antibody.



Immunofluorescent analysis using the Antibody at 1:50 dilution.