

Goat Anti-PRMT5 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1866a

Specification

Goat Anti-PRMT5 Antibody - Product Information

| | |
|-------------------|---|
| Application | WB |
| Primary Accession | O14744 |
| Other Accession | NP_001034708 , 10419 , 27374 (mouse) , 364382 (rat) |
| Reactivity | Human |
| Predicted | Mouse, Rat, Pig, Dog |
| Host | Goat |
| Clonality | Polyclonal |
| Concentration | 100ug/200ul |
| Isotype | IgG |
| Calculated MW | 72684 |

Goat Anti-PRMT5 Antibody - Additional Information

Gene ID 10419

Other Names

Protein arginine N-methyltransferase 5, 2.1.1.-, 72 kDa ICh-binding protein, Histone-arginine N-methyltransferase PRMT5, 2.1.1.125, 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

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

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

Goat Anti-PRMT5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-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, PubMed:11152681, PubMed:11747828, PubMed:12411503, PubMed:15737618, PubMed:17709427, PubMed:20159986, PubMed:20810653, PubMed:21081503, PubMed:21258366, PubMed:21917714, PubMed:22269951). 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:11747828, PubMed:12411503, PubMed:17709427). Methylates SUPT5H and may regulate its transcriptional elongation properties (PubMed:12718890). May methylate the N-terminal region of MBD2 (PubMed:16428440). 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:21258366, PubMed:21917714). Second, methylates RAF1 and probably BRAF, hence destabilizing these 2 signaling proteins and reducing their catalytic activity (PubMed:21917714). Required for induction of E-selectin and VCAM-1, on the endothelial cells surface at sites of inflammation. Methylates HOXA9 (PubMed:22269951). Methylates and regulates SRGAP2 which is involved in cell migration and differentiation (PubMed:20810653). 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:20421892). Methylates H4R3 in genes involved in glioblastomagenesis in a CHTOP- and/or TET1-dependent manner (PubMed:25284789). 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:26700805). Along with LYAR, binds the promoter of gamma-globin HBG1/HBG2 and represses its expression (PubMed:25092918). Symmetrically methylates NCL (PubMed:21081503). Methylates p53/TP53; methylation might possibly affect

p53/TP53 target gene specificity (PubMed:19011621). 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..

Goat Anti-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](#)

Goat Anti-PRMT5 Antibody - Images



AF1866a staining (2 µg/ml) of Jurkat lysate (RIPA buffer, 35 µg total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.

Goat Anti-PRMT5 Antibody - References

The core binding factor CBF negatively regulates skeletal muscle terminal differentiation. Philipot O, et al. PLoS One, 2010 Feb 25. PMID 20195544.

The Kruppel-like zinc finger protein ZNF224 recruits the arginine methyltransferase PRMT5 on the

transcriptional repressor complex of the aldolase A gene. Cesaro E, et al. J Biol Chem, 2009 Nov 20. PMID 19741270.

PRMT5-mediated methylation of histone H4R3 recruits DNMT3A, coupling histone and DNA methylation in gene silencing. Zhao Q, et al. Nat Struct Mol Biol, 2009 Mar. PMID 19234465.

Fibroblast growth factor 2 (FGF-2) is a novel substrate for arginine methylation by PRMT5. Bruns AF, et al. Biol Chem, 2009 Jan. PMID 19086919.

Ski co-repressor complexes maintain the basal repressed state of the TGF-beta target gene, SMAD7, via HDAC3 and PRMT5. Tabata T, et al. Genes Cells, 2009 Jan. PMID 19032343.