

## Anti-PRMT5 Antibody (4Z547)

## Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	4Z547
Purification:	Affinity-chromatography

## Applications

Verified Activity:	<p>1. Western Blot</p> <ul style="list-style-type: none"><li>-Positive WB detected in: Raji whole cell lysate, Hela whole cell lysate, HL60 whole cell lysate, Jurkat whole cell lysate, A549 whole cell lysate</li><li>-All lanes: PRMT5 antibody at 1:2000</li><li>-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution</li><li>-Predicted band size: 73, 72, 54, 68, 67 kDa</li></ul> <p>-Observed band size: 73 kDa</p> <p>2. IHC image of TMAH-01008 diluted at 1:100 and staining in paraffin-embedded human prostate cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.</p>
Application:	ELISA,IHC,WB
Recommended	WB:1:500-1:5000; IHC:1:50-1:200.

## Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

## Antigen Details

Immunogen:	A synthetic peptide: Human PRMT5
Antigen Species:	Human
Gene ID:	10419
Uniprot ID:	O14744
Synonyms:	SKB1Hs;SKB1;IBP72;HRMT1L5;JBP1;HSL7
Biology Area:	Epigenetics and Nuclear Signaling

## Research Background

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. 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. Methylates SUPT5H and may regulate its transcriptional elongation properties. 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. Methylates histone H3 'Arg-8', which may repress transcription. 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. 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. Second, methylates RAF1 and probably BRAF, hence destabilizing these 2 signaling proteins and reducing their catalytic activity. Required for induction of E-selectin and VCAM-1, on the endothelial cells surface at sites of inflammation. Methylates HOXA9. Methylates and regulates SRGAP2 which is involved in cell migration and differentiation. Acts as a transcriptional corepressor in CRY1-mediated repression of the core circadian component PER1 by regulating the H4R3 dimethylation at the PER1 promoter. Methylates GM130/GOLGA2, regulating Golgi ribbon formation. Methylates H4R3 in genes involved in glioblastomagenesis in a CHTOP- and/or TET1-dependent manner. 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. Along with LYAR, binds the promoter of gamma-globin HBG1/HBG2 and represses its expression. Symmetrically methylates NCL. Methylates TP53; methylation might possibly affect TP53 target gene specificity. 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.

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