

# Anti-PRMT4 Antibody (2B9-H11-H10)

Mouse Monoclonal Antibody

Catalog # ABV12073

## Product Information

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<b>Application</b>	WB, IP
<b>Primary Accession</b>	<a href="#">Q86X55</a>
<b>Reactivity</b>	Human, Mouse
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	Mouse IgG1
<b>Clone Names</b>	2B9-H11-H10
<b>Calculated MW</b>	65854

## Additional Information

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<b>Gene ID</b>	10498
<b>Application &amp; Usage</b>	WB: HeLa, A431 and K562 cell lysates; IP: HeLa cells
<b>Other Names</b>	Histone-arginine methyltransferase CARM1, Coactivator-associated arginine methyltransferase 1, Protein arginine N-methyltransferase 4, PRMT4, CARM1
<b>Target/Specificity</b>	Histone-arginine methyltransferase CARM1
<b>Antibody Form</b>	Liquid
<b>Appearance</b>	Colorless liquid
<b>Formulation</b>	In buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 0.1mg/ml BSA and 50% glycerol
<b>Handling</b>	The antibody solution should be gently mixed before use.
<b>Reconstitution &amp; Storage</b>	-20 °C
<b>Background Descriptions</b>	
<b>Precautions</b>	Anti-PRMT4 Antibody (2B9-H11-H10) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CARM1
<b>Synonyms</b>	PRMT4
<b>Function</b>	Methylates (mono- and asymmetric dimethylation) the guanidino nitrogens

of arginyl residues in several proteins involved in DNA packaging, transcription regulation, pre-mRNA splicing, and mRNA stability (PubMed:[12237300](#), PubMed:[16497732](#), PubMed:[19405910](#)). Recruited to promoters upon gene activation together with histone acetyltransferases from EP300/P300 and p160 families, methylates histone H3 at 'Arg-17' (H3R17me), forming mainly asymmetric dimethylarginine (H3R17me2a), leading to activation of transcription via chromatin remodeling (PubMed:[12237300](#), PubMed:[16497732](#), PubMed:[19405910](#)). During nuclear hormone receptor activation and TCF7L2/TCF4 activation, acts synergically with EP300/P300 and either one of the p160 histone acetyltransferases NCOA1/SRC1, NCOA2/GRIP1 and NCOA3/ACTR or CTNNB1/beta-catenin to activate transcription (By similarity). During myogenic transcriptional activation, acts together with NCOA3/ACTR as a coactivator for MEF2C (By similarity). During monocyte inflammatory stimulation, acts together with EP300/P300 as a coactivator for NF-kappa-B (By similarity). Acts as a coactivator for PPARG, promotes adipocyte differentiation and the accumulation of brown fat tissue (By similarity). Plays a role in the regulation of pre-mRNA alternative splicing by methylation of splicing factors (By similarity). Also seems to be involved in p53/TP53 transcriptional activation (By similarity). Methylates EP300/P300, both at 'Arg-2142', which may loosen its interaction with NCOA2/GRIP1, and at 'Arg-580' and 'Arg-604' in the KIX domain, which impairs its interaction with CREB and inhibits CREB-dependent transcriptional activation (PubMed:[15731352](#)). Also methylates arginine residues in RNA-binding proteins PABPC1, ELAVL1 and ELAV4, which may affect their mRNA- stabilizing properties and the half-life of their target mRNAs (By similarity). Acts as a transcriptional coactivator of ACACA/acetyl-CoA carboxylase by enriching H3R17 methylation at its promoter, thereby positively regulating fatty acid synthesis (By similarity). Independently of its methyltransferase activity, involved in replication fork progression: promotes PARP1 recruitment to replication forks, leading to poly-ADP-ribosylation of chromatin at replication forks and reduced fork speed (PubMed:[33412112](#)).

<b>Cellular Location</b>	Nucleus. Cytoplasm. Chromosome. Note=Mainly nuclear during the G1, S and G2 phases of the cell cycle (PubMed:19843527). Cytoplasmic during mitosis, after breakup of the nuclear membrane (PubMed:19843527) Localizes to replication forks (PubMed:33412112)
<b>Tissue Location</b>	Overexpressed in prostate adenocarcinomas and high- grade prostatic intraepithelial neoplasia

## Background

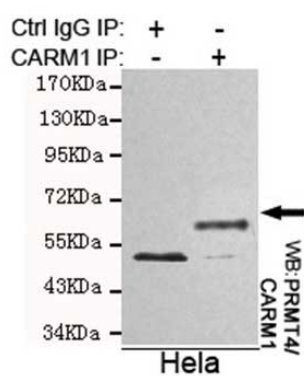
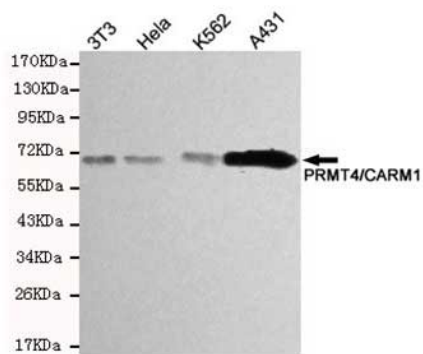
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Probably plays a role in facilitating the assembly of multimeric protein complexes inside the endoplasmic reticulum. Involved in the correct folding of proteins and degradation of misfolded proteins via its interaction with DNAJC10, probably to facilitate the release of DNAJC10 from its substrate.

## Images

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Western blot detection of PRMT4/CARM1 in HeLa, A431 and K562 cell lysates using PRMT4 Antibody



Immunoprecipitation analysis of HeLa cell lysates using PRMT4 Antibody

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.