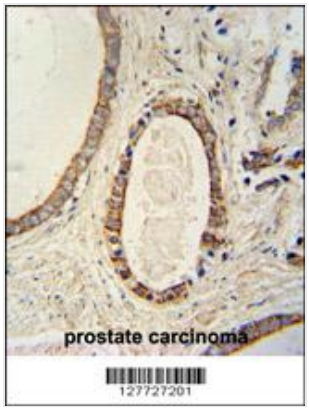
PRMT4 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PRMT4, Polyclonal Antibody
Full Product Name	PRMT4, CT (Protein Arginine N-Methyltransferase 4, CARM1) (APC)
Product Gene Name	anti-PRMT4 antibody
Product Synonym Names	Protein Arginine N-Methyltransferase 4; CARM1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Allophycocyanin (APC).
Purity/Purification	Purified by Protein G Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: APC conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	608
OMIM	603934
3D Structure	ModBase 3D Structure for Q86X55
Immunogen	PRMT4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide selected from the C-terminal region of human PRMT4.
Conjugate	APC
Note	Preservative Free
Special Handling	Light sensitive
Product Categories/Family for anti-PRMT4 antibody	Antibodies; Enzymes; Methyltransferase
Applications Tested/Suitable for anti-PRMT4 antibody	Immunohistochemistry (IHC), FLISA, Western Blot (WB)
Application Notes for anti-PRMT4 antibody	IHC: 1:10-50 FLISA: 1:1,000 WB: 1:100-500 Applications are based on unconjugated antibody.
Related Product Information for anti-PRMT4 antibody	Arginine methylation is an irreversible post translational modification which has only recently been linked to protein activity. At least three types of PRMT enzymes have been identified in mammalian cells. These enzymes have been shown to have essential regulatory functions by methylation of key proteins in several fundamental areas. These protein include nuclear proteins, IL enhancer binding factor, nuclear factors, cell cycle proteins, signal transduction proteins, apoptosis proteins, and viral proteins. The mammalian PRMT family currently consists of 7 members that share two large domains of homology. Outside of these domains, epitopes were identified and antibodies against all 7 PRMT members have been developed.

Product References and Citations for anti-PRMT4 antibody	Wada K, et al. Biochim Biophys Acta. 2002. 1591:1. Cimato TR, et al. J Neurosci Res. 2002. 67:435. Frankel A, et al. J Biol Chem. 2002. 277:3537. Brahms H, et al. RNA. 2001. 7:1531. Pelletier M, et al. Mol Biochem Parasitol. 2001. 118:49. Belyanskaya LL, et al. J Biol Chem. 2001. 276:18681. Rho J, et al. J Biol Chem. 2001. 276:11393. Scorilas A, et al. Biochem Biophys Res Commun. 2000. 278:349. Frankel A, et al. J Biol Chem. 2000. 275:32974. Zhang X, et al. EMBO J. 19:3509. Tang J, et al. J Biol Chem. 1998. 273:16935.
Other Notes	Small volumes of anti-PRMT4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PRMT4 purchase	MBS6337502 is an antibody targeting PRMT4. Also known as PRMT4, CT (Protein Arginine N-Methyltransferase 4, CARM1) (APC). Reactive in Human. Host: Rabbit.



Immunohistochemistry (IHC) of anti-PRMT4 antibody
Formalin-fixed and paraffin-embedded human prostate carcinoma tissue reacted with PRMT4 antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PRMT4. It may not necessarily be applicable to this product.

NCBI GI #	308153622
NCBI GeneID	10498
NCBI Accession #	Q86X55.3
UniProt Primary Accession #	Q86X55
UniProt Secondary Accession #	A6NN38
UniProt Related Accession #	Q86X55
NCBI Official Full Name	Histone-arginine methyltransferase CARM1
NCBI Official Synonym Full Names	coactivator-associated arginine methyltransferase 1
NCBI Official Symbol	CARM1
NCBI Official Synonym Symbols	PRMT4
UniProt Protein Name	Histone-arginine methyltransferase CARM1
UniProt Synonym Protein Names	Coactivator-associated arginine methyltransferase 1; Protein arginine N-methyltransferase 4
UniProt Gene Name	CARM1
UniProt Synonym Gene Names	PRMT4
UniProt Entry Name	CARM1_HUMAN
NCBI Protein Information	histone-arginine methyltransferase CARM1; protein arginine N-methyltransferase 4

NCBI Summary for PRMT4	This gene belongs to the protein arginine methyltransferase (PRMT) family. The encoded enzyme catalyzes the methylation of guanidino nitrogens of arginyl residues of proteins. The enzyme acts specifically on histones and other chromatin-associated proteins and is involved in regulation of gene expression. The enzyme may act in association with other proteins or within multi-protein complexes and may play a role in cell type-specific functions and cell lineage specification. A related pseudogene is located on chromosome 9. [provided by RefSeq, Aug 2013]
UniProt Comments for PRMT4	CARM1: a protein arginine methyltransferase that methylates histones and other proteins involved in DNA packaging, transcription regulation, pre-mRNA splicing, and mRNA stability. Methylates (mono- and asymmetric dimethylation) the guanidino nitrogens of arginine residues. A key epigenetic regulator of hematopoiesis affecting multiple lineages. Recruited to promoters upon gene activation together with histone acetyltransferases from P300 and p160 families, methylates histone H3 at R17 (H3R17me), forming mainly asymmetric dimethylarginine (H3R17me2a), leading to activate transcription via chromatin remodeling. During nuclear hormone receptor activation and TCF7L2 activation, acts synergically with P300 and either one of the p160 histone acetyltransferases SRC1, NCoA2 and SRC-3 or CTNNB1 to activate transcription. During myogenic transcriptional activation, acts together with SRC-3 as a coactivator for MEF2C. During monocyte inflammatory stimulation, acts together with P300 as a coactivator for NF-kappa-B. Acts as coactivator for PPARG, promotes adipocyte differentiation and the accumulation of brown fat tissue. Plays a role in the regulation of pre-mRNA alternative splicing by methylation of splicing factors. Also seems to be involved in p53 transcriptional activation. Methylates P300, both at R 2142, which may loosen its interaction with NCoA2, and at R580 and R604 in the KIX domain, which impairs its interaction with CREB and inhibits CREB-dependent transcriptional activation. Methylates RNA-binding proteins PABPC1, ELAVL1 and ELAV4, which may affect their mRNA- stabilizing properties and the half-life of their target mRNAs. Interacts with the C-terminus of NCoA2, SRC-3 and SRC1. Part of a complex consisting of CARM1, P300 and NCoA2. Interacts with FLII, TP53, myogenic factor MEF2, P300, TRIM24, CREBBP and CTNNB1. Identified in a complex containing CARM1, TRIM24 and NCoA2. Interacts with SRC3. Interacts with SNRPC. Interacts with NR1H4. Interacts with RELA. Interacts with HTLV-1 Tax-1. Overexpressed in prostate adenocarcinomas and high-grade prostatic intraepithelial neoplasia. Methylation of H3R17 (H3R17me) by CARM1 is stimulated by preacetylation of H3 K18 (H3K18ac) H3 K23 (H3K23ac) by EP300 and blocked by citrullination of H3 R17 (H3R17ci) by PADI4. Belongs to the protein arginine N-methyltransferase family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: EC 2.1.1.125; Methyltransferase, protein arginine; Methyltransferase; Nuclear receptor co-regulator Chromosomal Location of Human Ortholog: 19p13.2 Cellular Component: nucleoplasm; cytoplasm; nucleus; cytosol Molecular Function: histone methyltransferase activity; protein-arginine omega-N asymmetric methyltransferase activity; protein binding; protein-arginine N-methyltransferase activity; protein homodimerization activity; ligand-dependent nuclear receptor transcription coactivator activity; transcription coactivator activity; histone-arginine N-methyltransferase activity; beta-catenin binding; protein methyltransferase activity Biological Process: regulation of estrogen receptor signaling pathway; establishment and/or maintenance of chromatin architecture; response to cAMP; estrogen receptor signaling pathway; transcription, DNA-dependent; viral reproduction; pathogenesis; peptidyl-arginine methylation, to asymmetrical-dimethyl arginine; cellular lipid metabolic process; histone methylation; regulation of transcription, DNA-dependent; positive regulation of cell proliferation; positive regulation of fat cell differentiation; negative regulation of protein binding
Research Articles on PRMT4	**1.** PBMCs from patients with ACS showed higher levels of CARM1 mRNA and protein expression.CARM1 regulated the transcription of IP-10, IL-8, and MCP-1. miR-15a modulated CARM1 expression through targeted binding to CARM1 3'-UTR.
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