

ARG53996 anti-CARM1 / PRMT4 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes CARM1 / PRMT4
Tested Reactivity	Hu, Ms
Tested Application	IP, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Target Name	CARM1 / PRMT4
Species	Human
Immunogen	E.coli derived recombinant human PRMT4/CARM1 protein fragments.
Conjugation	Un-conjugated
Alternate Names	Protein arginine N-methyltransferase 4; EC 2.1.1.125; PRMT4; EC 2.1.1.-; Coactivator-associated arginine methyltransferase 1; Histone-arginine methyltransferase CARM1

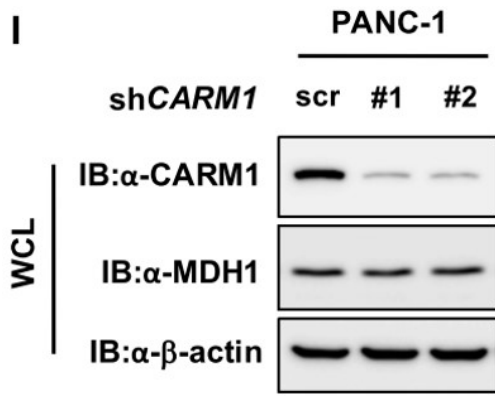
Application Instructions

Application table	Application	Dilution
	IP	Assay-dependent
	WB	1:200 - 1:500
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Affinity purified
Buffer	100 mM Tris (pH 7.4), 150 mM NaCl, 0.1 mg/ml BSA, 50% Glycerol and 0.2% Sodium azide.
Preservative	0.2% Sodium azide
Stabilizer	0.1 mg/ml BSA, 50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Database links	GeneID: 10498 Human GeneID: 59035 Mouse Swiss-port # Q86X55 Human Swiss-port # Q9WVG6 Mouse
Gene Symbol	CARM1
Gene Full Name	coactivator-associated arginine methyltransferase 1
Background	<p>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. 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 activate transcription via chromatin remodeling. 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. During myogenic transcriptional activation, acts together with NCOA3/ACTR as a coactivator for MEF2C. During monocyte inflammatory stimulation, acts together with EP300/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/TP53 transcriptional activation. 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. 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</p>
Function	<p>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. 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 activate transcription via chromatin remodeling. 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. During myogenic transcriptional activation, acts together with NCOA3/ACTR as a coactivator for MEF2C. During monocyte inflammatory stimulation, acts together with EP300/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/TP53 transcriptional activation. 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. 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. [UniProt]</p>
Highlight	<p>Related products: PRMT4 antibodies; Anti-Mouse IgG secondary antibodies; Related news: TCA intermediate fumarate promotes mitobiogenesis</p>
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Gene Regulation antibody; Metabolism antibody; Signaling Transduction antibody
Calculated Mw	66 kDa
PTM	<p>Auto-methylated on Arg-550. Methylation enhances transcription coactivator activity. Methylation is required for its role in the regulation of pre-mRNA alternative splicing (By similarity). Phosphorylation at Ser-216 interferes with S-adenosyl-L-methionine binding and strongly reduces methyltransferase activity (By similarity). Phosphorylation at Ser-216 is strongly increased during mitosis, and decreases rapidly to a very low, basal level after entry into the G1 phase of the cell cycle. Phosphorylation at Ser-216 may promote location in the cytosol.</p>
Cellular Localization	Nucleus. Cytoplasm



ARG53996 anti-CARM1 / PRMT4 antibody WB image

Western blot: PANC-1/shControl and PANC-1/shCARM1 cell lysate stained with ARG53996 anti-CARM1 / PRMT4 antibody. Data showed CARM1 signal was decreased in CARM1 knockdown cells (PANC-1/shCARM1).

Data from: Wang YP et al. Arginine Methylation of MDH1 by CARM1 Inhibits Glutamine Metabolism and Suppresses Pancreatic Cancer. [Molecular Cell 2016, 64, 673–687.](#)