SANTA CRUZ BIOTECHNOLOGY, INC.

CARM1 (D-6): sc-390656



BACKGROUND

CARM1 (coactivator-associated arginine methyltransferase 1), also known as protein arginine N-methyltransferase 4 (PRMT4), is a 585 amino acid nuclear and cytoplasmic protein belonging to the protein arginine N-methyltransferase family. As a protein arginine N-methyltransferase, CARM1 is capable of catalyzing the transfer of methyl groups from S-adenosylmethionine to the guanidino group nitrogen atoms of arginine residues in certain proteins involved in mRNA stability, DNA packaging and transcriptional regulation. The methyltransferase activity of CARM1 has been found to be negatively regulated through phosphorylation at a conserved serine residue. CARM1 acts as a positive regulator for multiple transcription factors and functions as a secondary coactivator through its association with p160 coactivators. CARM1 exists as two alternatively spliced isoforms, and is encoded by a gene that maps to human chromosome 19p13.2.

CHROMOSOMAL LOCATION

Genetic locus: CARM1 (human) mapping to 19p13.2; Carm1 (mouse) mapping to 9 A3.

SOURCE

CARM1 (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 584-607 at the C-terminus of CARM1 of mouse origin.

PRODUCT

Each vial contains 200 μ g lgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-390656 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-390656 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CARM1 (D-6) is recommended for detection of CARM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CARM1 (D-6) is also recommended for detection of CARM1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CARM1 siRNA (h): sc-44875, CARM1 siRNA (m): sc-37730, CARM1 shRNA Plasmid (h): sc-44875-SH, CARM1 shRNA Plasmid (m): sc-37730-SH, CARM1 shRNA (h) Lentiviral Particles: sc-44875-V and CARM1 shRNA (m) Lentiviral Particles: sc-37730-V.

CARM1 (D-6) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of CARM1 isoforms 1/2: 64/45 kDa.

Positive Controls: CARM1 (m): 293T Lysate: sc-119000.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





CARM1 (D-6): sc-390656. Western blot analysis of CARM1 expression in non-transfected: sc-117752 (A) and mouse CARM1 transfected: sc-119000 (B) 293T whole cell lysates.

CARM1 (D-6): sc-390656. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Wang, Y., et al. 2021. Orthogonal ubiquitin transfer reveals human papillomavirus E6 downregulates nuclear transport to disarm interferon-γ dependent apoptosis of cervical cancer cells. FASEB J. 35: e21986.
- 2. Zhang, L., et al. 2023. PRMT1 reverts the immune escape of necroptotic colon cancer through RIP3 methylation. Cell Death Dis. 14: 233.
- Liu, Z., et al. 2023. NFYC-37 promotes tumor growth by activating the mevalonate pathway in bladder cancer. Cell Rep. 42: 112963.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.