

CARM1 (M-16): sc-5421

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 co-activator through its association with p160 co-activators. 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 (M-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CARM1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-5421 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-5421 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CARM1 (M-16) is recommended for detection of CARM1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (M-16) 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 (M-16) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of CARM1 isoform 1: 64 kDa.

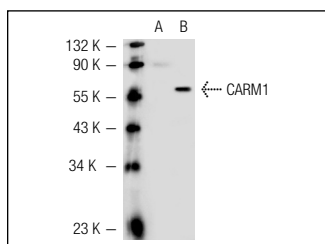
Molecular Weight of CARM1 isoform 2: 45 kDa.

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

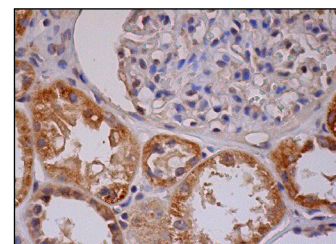
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CARM1 (M-16): sc-5421. Western blot analysis of CARM1 expression in non-transfected: sc-117752 (A) and mouse CARM1 transfected: sc-119000 (B) 293T whole cell lysates.



CARM1 (M-16): sc-5421. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing nuclear staining of subset of cells in glomeruli and cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Metivier, R., et al. 2003. Estrogen receptor α directs ordered, cyclical, and combinatorial recruitment of cofactors on a natural target promoter. *Cell* 115: 751-763.
2. Fietze, S., et al. 2008. CARM1 regulates estrogen-stimulated breast cancer growth through up-regulation of E2F1. *Cancer Res.* 68: 301-306.
3. Hsu, C.H., et al. 2012. The HPV E6 oncoprotein targets histone methyltransferases for modulating specific gene transcription. *Oncogene* 31: 2335-2349.

STORAGE

Store at 4° C, **DO 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.



Try **CARM1 (D-6): sc-390656** or **CARM1 (B-10): sc-398818**, our highly recommended monoclonal alternatives to CARM1 (M-16).