

CARM1 (m): 293T Lysate: sc-119000

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.

REFERENCES

- Chen, D., et al. 1999. Regulation of transcription by a protein methyltransferase. *Science* 284: 2174-2177.
- Frankel, A., et al. 2002. The novel human protein arginine N-methyltransferase PRMT6 is a nuclear enzyme displaying unique substrate specificity. *J. Biol. Chem.* 277: 3537-3543.
- Chen, S.L., et al. 2002. The coactivator-associated arginine methyltransferase is necessary for muscle differentiation: CARM1 coactivates myocyte enhancer factor-2. *J. Biol. Chem.* 277: 4324-4333.
- An, W., et al. 2004. Ordered cooperative functions of PRMT1, p300, and CARM1 in transcriptional activation by p53. *Cell* 117: 735-748.
- Ohkura, N., et al. 2005. Coactivator-associated arginine methyltransferase 1, CARM1, affects pre-mRNA splicing in an isoform-specific manner. *J. Biol. Chem.* 280: 28927-28935.
- El Messaoudi, S., et al. 2006. Coactivator-associated arginine methyltransferase 1 (CARM1) is a positive regulator of the Cyclin E1 gene. *Proc. Natl. Acad. Sci. USA* 103: 13351-13356.
- Cheng, D., et al. 2007. The arginine methyltransferase CARM1 regulates the coupling of transcription and mRNA processing. *Mol. Cell* 25: 71-83.
- Higashimoto, K., et al. 2007. Phosphorylation-mediated inactivation of coactivator-associated arginine methyltransferase 1. *Proc. Natl. Acad. Sci. USA* 104: 12318-12323.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 603934. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Carm1 (mouse) mapping to 9 A3.

PRODUCT

CARM1 (m): 293T Lysate represents a lysate of mouse CARM1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

CARM1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive CARM1 antibodies. Recommended use: 10-20 µl per lane.

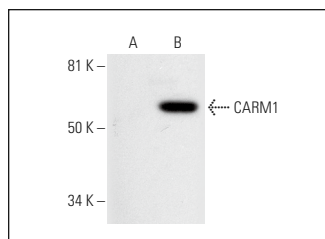
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CARM1 (G-2): sc-393381 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse CARM1 expression in CARM1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

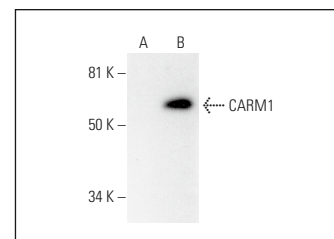
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CARM1 (G-2): sc-393381. 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. Western blot analysis of CARM1 expression in non-transfected: sc-117752 (A) and mouse CARM1 transfected: sc-119000 (B) 293T whole cell lysates.

RESEARCH USE

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