

# Produktinformation



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Diagnostik & molekulare Diagnostik
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#### SANTA CRUZ BIOTECHNOLOGY, INC.

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



#### BACKGROUND

Co-activator-associated arginine methyltransferase 1 (CARM1) participates in the regulation of DNA binding and the transcriptional activation that is induced by nuclear hormone receptors. Nuclear receptors mediate the expression of target genes by associating with various cofactors, including p160 GRIP1 and SRC-1. These primary co-activators recruit CREB binding protein (CBP) and the related protein p300, which contain histone acetyltransferase (HAT) activity, to the transcriptional initiation complex, where they then induce changes in the chromatin structure and assist in gene transcription. *In vitro*, CARM1 binds to the carboxy-terminus of these primary cofactors and attenuates the expression of the targeted genes. CARM1 shares sequence homology with PRMT1 (protein arginine methyltransferase 1), and it is, likewise, able to preferentially methylate arginine residues on the Histone H3 protein. Mutations which affect this methyltransferase activity also inhibit the transcriptional co-activator properties of CARM1, suggesting that CARM1 may in part regulate transcription through methylation.

#### REFERENCES

- 1. Groffen, J., et al. 1983. Chromosomal localization of the human c-Fms oncogene. Nucleic Acids Res. 11: 6331-6341.
- Sherr, C.J., et al. 1985. The c-fms proto-oncogene product is related to the receptor for the mononuclear phagocyte growth factor, CSF-1. Cell 41: 665-676.
- 3. Roussel, M.F., et al. 1987. Transforming potential of c-Fms proto-oncogene (CSF-1 receptor). Nature 325: 549-552.
- 4. Sherr, C.J., et al. 1991. The colony-stimulating factor 1 receptor (FMS): signal transduction and hematopoietic cell transformation. In The Origins of Human Cancer. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York.
- 5. Matsushime, H., et al. 1991. Colony-stimulating factor 1 regulates novel cyclins during the G<sub>1</sub> phase of the cell cycle. Cell 65: 701-713.
- Lioubin, M.N., et al. 1996. p150Ship, a signal transduction molecule with inositol polyphosphate-5-phosphatase activity. Genes Dev. 10: 1084-1095.
- Damen, J.E., et al. 1996. The 145-kDa protein induced to associate with Shc by multiple cytokines is an inositol tetraphosphate and phosphatidylinositol 3,4,5-triphosphate 5-phosphatase. Proc. Natl. Acad. Sci. USA 93: 1689-1693.

#### 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  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

#### **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.

#### APPLICATIONS

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

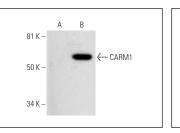
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

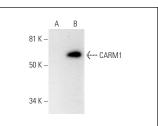
CARM1 (G-2): sc-393381 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse CARM1 expression in CARM1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

#### **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgGκ BP-HRP: sc-516102 or m-lgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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.

#### PROTOCOLS

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