SANTA CRUZ BIOTECHNOLOGY, INC.

PRMT7 (E-9): sc-376077

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Arginine methylation is an irreversible protein modification catalyzed by Arginine methyltransferases, such as PRMT7, which uses S-adenosylmethionine (AdoMet) as the methyl donor. Arginine methylation is implicated in signal transduction, RNA transport and RNA splicing. PRMT7 has two methyltransferase domains, each containing a putative AdoMet-binding motif. The N-terminal methyltransferase domain closely resembles the catalytic core of PRMT5, and the C-terminal domain is most similar to that of PRMT1. Three PRMT7 splice variants have been identified by database analysis. PRMT7 is localized to the nucleus and cytoplasm and moderate expression is observed in adult brain and lung tissues.

CHROMOSOMAL LOCATION

Genetic locus: PRMT7 (human) mapping to 16q22.1; Prmt7 (mouse) mapping to 8 D3.

SOURCE

PRMT7 (E-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 363-401 within an internal region of PRMT7 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PRMT7 (E-9) is available conjugated to agarose (sc-376077 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376077 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376077 PE), fluorescein (sc-376077 FITC), Alexa Fluor® 488 (sc-376077 AF488), Alexa Fluor® 546 (sc-376077 AF546), Alexa Fluor® 594 (sc-376077 AF594) or Alexa Fluor® 647 (sc-376077 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376077 AF680) or Alexa Fluor® 790 (sc-376077 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376077 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PRMT7 (E-9) is recommended for detection of PRMT7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for PRMT7 siRNA (h): sc-61405, PRMT7 siRNA (m): sc-61406, PRMT7 shRNA Plasmid (h): sc-61405-SH, PRMT7 shRNA Plasmid (m): sc-61406-SH, PRMT7 shRNA (h) Lentiviral Particles: sc-61405-V and PRMT7 shRNA (m) Lentiviral Particles: sc-61406-V.

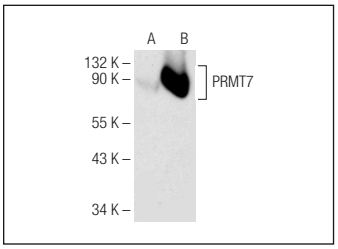
Molecular Weight of PRMT7: 74 kDa.

Positive Controls: PRMT7 (m3): 293T Lysate: sc-122784.

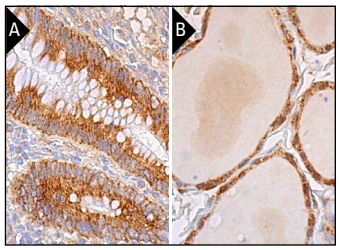
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PRMT7 (E-9): sc-376077. Western blot analysis of PRMT7 expression in non-transfected: sc-117752 (**A**) and mouse PRMT7 transfected: sc-122784 (**B**) 293T whole cell lysates.



PRMT7 (E-9): sc-376077. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells (**A**,**B**).

SELECT PRODUCT CITATIONS

1. vanLieshout, T.L., et al. 2019. Protein arginine methyltransferase biology in humans during acute and chronic skeletal muscle plasticity. J. Appl. Physiol. 127: 867-880.
2. Liu, Y., et al. 2020. Arginine methylation of SHANK2 by PRMT7 promotes human breast cancer metastasis through activating endosomal FAK signalling. Elife 9: e57617.
3. Ma, T., et al. 2022. Protein arginine methyltransferase 7 modulates neuronal excitability by interacting with $Na_V1.9$. Pain 163: 753-764.
4. vanLieshout, T.L., et al. 2022. The CARM1 transcriptome and arginine methylproteome mediate skeletal muscle integrative biology. Mol. Metab. 64: 101555.

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.