

PRMT1 (G-13): sc-13393

BACKGROUND

A class of proteins termed type 1 protein arginine N-methyltransferase (PRMT) enzymes contribute to posttranslational modification of RNA-binding proteins, but differ in substrate specificities, oligomerization properties and subcellular localization. PRMT1, the predominant form in mammalian cells, is located in the nucleus, while PRMT3 is present in the cytoplasm. At the carboxy-terminus, interleukin enhancer-binding factor 3 (ILF3) binds PRMT1, thereby regulating PRMT1 activity. Alternative mRNA splicing of the PRMT gene results in three isoforms of PRMT1 that differ in their amino-terminus regions. All three splice variants of PRMT1 are enzymatically active. PRMT3 recognizes and binds to RNA-associated substrates with a zinc-finger domain in its amino-terminus. The zinc-liganded form of this domain is required for the enzyme to recognize RNA-associated substrates.

CHROMOSOMAL LOCATION

Genetic locus: PRMT1 (human) mapping to 19q13.33; Prmt1 (mouse) mapping to 7 B4.

SOURCE

PRMT1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PRMT1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13393 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PRMT1 (G-13) is recommended for detection of splice variants 1, 2 and 3 of PRMT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PRMT1 (G-13) is also recommended for detection of splice variants 1, 2 and 3 of PRMT1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PRMT1 siRNA (h): sc-41069, PRMT1 siRNA (m): sc-41070, PRMT1 shRNA Plasmid (h): sc-41069-SH, PRMT1 shRNA Plasmid (m): sc-41070-SH, PRMT1 shRNA (h) Lentiviral Particles: sc-41069-V and PRMT1 shRNA (m) Lentiviral Particles: sc-41070-V.

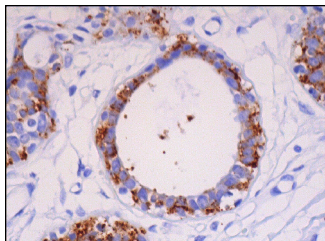
Molecular Weight of PRMT1: 42-45 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, PC-3 nuclear extract: sc-2152 or K-562 whole cell lysate: sc-2203.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PRMT1 (G-13): sc-13393. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells and myoepithelial cells.

SELECT PRODUCT CITATIONS

- Mowen, K.A., et al. 2004. Arginine methylation of NIP45 modulates cytokine gene expression in effector T lymphocytes. *Mol. Cell* 15: 559-571.
- Huang, S., et al. 2007. USF1 recruits histone modification complexes and is critical for maintenance of a chromatin barrier. *Mol. Cell. Biol.* 27: 7991-8002.
- Gupta, P., et al. 2008. PKCepsilon stimulated arginine methylation of RIP140 for its nuclear-cytoplasmic export in adipocyte differentiation PLoS ONE 3: 3: e2658.

RESEARCH USE

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

PROTOCOLS

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


 MONOS
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Try **PRMT1 (B-2): sc-166963** or **PRMT1 (G-6): sc-271404**, our highly recommended monoclonal alternatives to PRMT1 (G-13).