

PRMT5 (C-20): sc-22132

BACKGROUND

The formation of the spliceosome includes the assembly of Sm proteins in an ordered manner onto snRNAs. This process is mediated by the survival of motor neuron (SMN) protein and is enhanced by modification of specific arginine residues in the Sm proteins to symmetrical dimethylarginines (sDMAs). sDMA modification of Sm proteins is catalyzed by the methylosome, a complex comprised of the type II methyltransferase PRMT5 (also designated Jak-binding protein 1, JBP1), pICln and two novel factors. PRMT5 binds the Sm proteins via their arginine- and glycine-rich (RG) domains, while pICln binds the Sm domains. PRMT5 is a distinct member of the protein-arginine methyltransferase (PRMT) family and predominantly localizes to the cytoplasm in a wide variety of tissues. PRMT5 also associates specifically with the transcription start site region of the cyclin E1 promoter, and therefore, is involved in the control of transcription and proliferation. The gene encoding human PRMT5 maps to chromosome 14q11.2.

CHROMOSOMAL LOCATION

Genetic locus: PRMT5 (human) mapping to 14q11.2; Prmt5 (mouse) mapping to 14 C3.

SOURCE

PRMT5 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PRMT5 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-22132 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PRMT5 (C-20) is recommended for detection of PRMT5 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).

PRMT5 (C-20) is also recommended for detection of PRMT5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PRMT5 siRNA (h): sc-41073, PRMT5 siRNA (m): sc-41074, PRMT5 shRNA Plasmid (h): sc-41073-SH, PRMT5 shRNA Plasmid (m): sc-41074-SH, PRMT5 shRNA (h) Lentiviral Particles: sc-41073-V and PRMT5 shRNA (m) Lentiviral Particles: sc-41074-V.

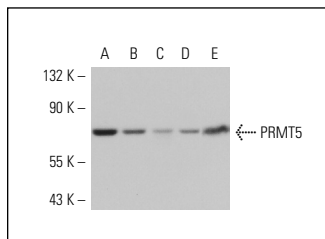
Molecular Weight of PRMT5: 72 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, ES-2 cell lysate: sc-24674 or HeLa whole cell lysate: sc-2200.

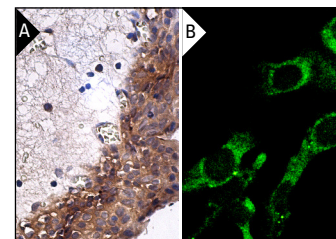
STORAGE

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

DATA



PRMT5 (C-20): sc-22132. Western blot analysis of PRMT5 expression in Hep G2 (A), ES-2 (B), HeLa (C) and NIH/3T3 (D) whole cell lysates and mouse embryo tissue extract (E).



PRMT5 (C-20): sc-22132. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (A). Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Mallappa, C., et al. 2010. The expression of myogenic microRNAs indirectly requires protein arginine methyltransferase (Prmt)5 but directly requires Prmt4. *Nucleic Acids Res.* 39: 1243-1255.
- Andreu-Pérez, P., et al. 2011. Protein arginine methyltransferase 5 regulates ERK1/2 signal transduction amplitude and cell fate through CRAF. *Sci. Signal.* 4: 58.
- Xu, Z., et al. 2012. Synergistic effect of SRY and its direct target, WDR5, on Sox9 expression. *PLoS ONE* 7: e34327.
- Kanade, S.R. and Eckert, R.L. 2012. Protein arginine methyltransferase 5 (PRMT5) signaling suppresses protein kinase C α - and p38 α -dependent signaling and keratinocyte differentiation. *J. Biol. Chem.* 287: 7313-7323.

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.



Try **PRMT5 (A-11): sc-376937** or **PRMT5 (23C7): sc-136202**, our highly recommended monoclonal alternatives to PRMT5 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PRMT5 (A-11): sc-376937**.