SANTA CRUZ BIOTECHNOLOGY, INC.

PRMT8 (T-21): sc-130853

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. PRMT8, also known as HRMT1L3 or HRMT1L4 (heterogenous nuclear ribonucleioprotein methyltransferase-like protein 4), is a distinct member of the type 1 PRMT family with tissue-specific expression and plasma membrane localization. PRMT8 is specifically expressed in the brain where it functions as an arginine methyltransferase with a possible role in neuronal differentiation. It is most closely related to PRMT1 and may have arisen through a gene duplication. PRMT8 can heterodimerize with PRMT1 and has similar substrate preference. Distinguishing PRMT8 from other PRMT enzymes is its unique N-terminal myristoylation motif, which is responsible for its plasma membrane localization.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610086. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Hung, C.M. and Li, C. 2004. Identification and phylogenetic analyses of the protein arginine methyltransferase gene family in fish and ascidians. Gene 340: 179-187.
3. Lee, J., et al. 2005. PRMT8, a new membrane-bound tissue-specific member of the protein arginine methyltransferase family. J. Biol. Chem. 280: 32890-32896.
4. Dong, C.W., et al. 2007. Molecular characterisation and inductive expression of a fish protein arginine methyltransferase 1 gene in response to virus infection. Fish Shellfish Immunol. 22: 380-393.
5. Taneda, T., et al. 2007. Specific regional distribution of protein arginine methyltransferase 8 (PRMT8) in the mouse brain. Brain Res. 1155: 1-9.
6. Sayegh, J., et al. 2007. Regulation of protein arginine methyltransferase 8 (PRMT8) activity by its N-terminal domain. J. Biol. Chem. 282: 36444-36453.
7. Brink, T.C., et al. 2007. The origins of human embryonic stem cells: A biological conundrum. Cells Tissues Organs 2007. E-published.

CHROMOSOMAL LOCATION

Genetic locus: PRMT8 (human) mapping to 12p13.32.

SOURCE

PRMT8 (T-21) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PRMT8 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

PRMT8 (T-21) is recommended for detection of PRMT8 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

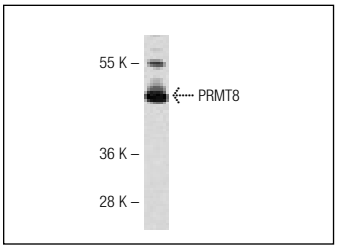
Suitable for use as control antibody for PRMT8 siRNA (h): sc-95787, PRMT8 shRNA Plasmid (h): sc-95787-SH and PRMT8 shRNA (h) Lentiviral Particles: sc-95787-V.

Molecular Weight of PRMT8: 45 kDa.

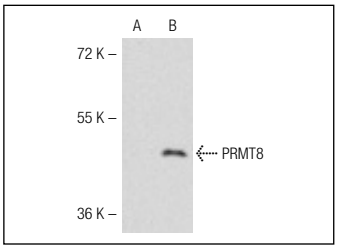
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PRMT8 (T-21): sc-130853. Western blot analysis of PRMT8 expression in K-562 whole cell lysate.



PRMT8 (T-21): sc-130853. Western blot analysis of PRMT8 expression in non-transfected (**A**) and human PRMT8 transfected (**B**) 293 whole cell lysates.

STORAGE

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

PROTOCOLS

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