SANTA CRUZ BIOTECHNOLOGY, INC.

# PRMT7 siRNA (h): sc-61405

## 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.

## REFERENCES


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2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610087. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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6. Zheng, Z., Schmidt-Ott, K.M., Chua, S., Foster, K.A., Frankel, R.Z., Pavlidis, P., Barasch, J., D'Agati, V.D. and Gharavi, A.G. 2005. A mendelian locus on chromosom nephropathy in the mouse. Proc. Natl. Acad. Sci. USA 102: 2502-2507.


## CHROMOSOMAL LOCATION

Genetic locus: PRMT7 (human) mapping to 16q22.1.

## PRODUCT

PRMT7 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PRMT7 shRNA Plasmid (h): sc-61405-SH and PRMT7 shRNA (h) Lentiviral Particles: sc-61405-V as alternate gene silencing products.

For independent verification of PRMT7 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61405A, sc-61405B and sc-61405C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

PRMT7 siRNA (h) is recommended for the inhibition of PRMT7 expression in human cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

PRMT7 (E-9): sc-376077 is recommended as a control antibody for monitoring of PRMT7 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PRMT7 gene expression knockdown using RT-PCR Primer: PRMT7 (h)-PR: sc-61405-PR (20 µl, 452 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## 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.