SANTA CRUZ BIOTECHNOLOGY, INC.

# SFMBT1 siRNA (h): sc-78271

## BACKGROUND

SFMBT1 (scm-like with four MBT domains protein 1), also known as renal ubiquitous protein 1 (RU1), is a 866 amino acid protein with high sequence similarity to the *Drosophila* scm protein. *Drosophila* scm is a transcriptional repressor essential for *Drosophila* development. SFMBT1 is expressed in all cell lines and normal tissues, including the thymus, and localizes to the nucleus. SFMBT1 contains four MBT repeats and one SAM (sterile $\alpha$ motif) domain. The MBT motif has been identified as a key domain capable of methyl-lysine histone recognition. Considered a polycomb protein, SFMBT1 strongly associates with chromatin and may function as a transcriptional repressor. Two isoforms exist due to alternative splicing events.

## REFERENCES


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2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607319. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Boccuni, P., MacGrogan, D., Scandura, J.M. and Nimer, S.D. 2003. The human L(3)MBT polycomb group protein is a transcriptional repressor and interacts physically and functionally with TEL (ETV6). J. Biol. Chem. 278: 15412-15420.
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5. Wu, S., Trievel, R.C. and Rice, J.C. 2007. Human SFMBT is a transcriptional repressor protein that selectively binds the N-terminal tail of histone H3. FEBS Lett. 581: 3289-3296.
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## CHROMOSOMAL LOCATION

Genetic locus: SFMBT1 (human) mapping to 3p21.1.

## PRODUCT

SFMBT1 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 SFMBT1 shRNA Plasmid (h): sc-78271-SH and SFMBT1 shRNA (h) Lentiviral Particles: sc-78271-V as alternate gene silencing products.

For independent verification of SFMBT1 (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-78271A, sc-78271B and sc-78271C.

## 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

SFMBT1 siRNA (h) is recommended for the inhibition of SFMBT1 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

SFMBT1 (FT-34): sc-135559 is recommended as a control antibody for monitoring of SFMBT1 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 SFMBT1 gene expression knockdown using RT-PCR Primer: SFMBT1 (h)-PR: sc-78271-PR (20 µl). 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.