

SFMBT1 siRNA (m): sc-153397

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 α 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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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 (mouse) mapping to 14 B.

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.

PRODUCT

SFMBT1 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SFMBT1 shRNA Plasmid (m): sc-153397-SH and SFMBT1 shRNA (m) Lentiviral Particles: sc-153397-V as alternate gene silencing products.

For independent verification of SFMBT1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-153397A, sc-153397B and sc-153397C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SFMBT1 siRNA (m) is recommended for the inhibition of SFMBT1 expression in mouse 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 μ M in 66 μ l. 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SFMBT1 gene expression knockdown using RT-PCR Primer: SFMBT1 (m)-PR: sc-153397-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.