



RBMS3 siRNA (h): sc-78166

BACKGROUND

RBMS3 (RNA binding motif, single stranded interacting protein 3) is a member of the MSSP family of proteins. The MSSP family is comprised of proteins that bind to single stranded DNA/RNA. Through an interaction with the c-Myc protein, members of this family are involved in a wide variety of cellular functions, including gene transcription, DNA replication, apoptosis and cell cycle progression. Localizing to the cytoplasm, RBMS3 is expressed in fetal and adult brain, lung and liver, as well as adult heart, placenta, muscle, pancreas and kidney. RBMS3 contains two RNP domains, namely RNP1-A and RNP1-B, both of which are necessary for RNA binding. RBMS3 specifically binds to poly(A) and poly(U) oligoribonucleotides *in vitro* and is believed to participate in RNA metabolism. In addition, RBMS3 expression is upregulated in activated hepatic stellate cells (HSCs) and it is believed to bind to and stabilize PRX1 mRNA, thereby contributing to the upregulation of collagen expression in liver fibrosis. Due to alternative splicing events, various isoforms exist for RBMS3.

REFERENCES

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2. Negishi, Y., et al. 1994. Identification and cDNA cloning of single-stranded DNA binding proteins that interact with the region upstream of the human c-myc gene. *Oncogene* 9: 1133-1143.
3. Haigermoser, C., et al. 1996. Cloning and characterization of the genomic DNA of the human MSSP genes. *Nucleic Acids Res.* 24: 3846-3857.
4. Penkov, D., et al. 2000. Cloning of a human gene closely related to the genes coding for the c-myc single-strand binding proteins. *Gene* 243: 27-36.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605786. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Fritz, D. and Stefanovic, B. 2007. RNA-binding protein RBMS3 is expressed in activated hepatic stellate cells and liver fibrosis and increases expression of transcription factor Prx1. *J. Mol. Biol.* 371: 585-595.

CHROMOSOMAL LOCATION

Genetic locus: RBMS3 (human) mapping to 3p24.1.

PRODUCT

RBMS3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RBMS3 shRNA Plasmid (h): sc-78166-SH and RBMS3 shRNA (h) Lentiviral Particles: sc-78166-V as alternate gene silencing products.

For independent verification of RBMS3 (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-78166A, sc-78166B and sc-78166C.

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

RBMS3 siRNA (h) is recommended for the inhibition of RBMS3 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 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 RBMS3 gene expression knockdown using RT-PCR Primer: RBMS3 (h)-PR: sc-78166-PR (20 μ l). 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.