SANTA CRUZ BIOTECHNOLOGY, INC.

RBM23 siRNA (h): sc-92324

BACKGROUND

Proteins containing RNA recognition motifs, including various hnRNP proteins, are implicated in the regulation of alternative splicing and protein components of snRNPs. The RBM (RNA-binding motif) gene family encodes proteins with an RNA binding motif that have been suggested to play a role in the modulation of apoptosis. RBM23 (RNA-binding motif protein 23), also known as RNPC4 (RNA-binding region-containing protein 4), is a 439 amino acid member of the splicing factor SR family that contains two RRM (RNA recognition motif) domains and localizes to nucleus. The RBM23 protein interacts with some steroid nuclear receptors, localizes to the promoter of a steroid-responsive gene and increases transcription of steroid-responsive transcriptional reporters in a hormone-dependent manner. Existing as five alternatively spliced isoforms, the RBM23 gene is conserved in chimpanzee, canine and borine, and maps to human chromosome 14q11.2.

REFERENCES

1. Maruyama, K., et al. 1994. Oligo-capping: a simple method to replace the cap structure of eukaryotic mRNAs with oligoribonucleotides. Gene 138: 171-174.
2. Varani, G., et al. 1998. RNA recognition by RNP proteins during RNA processing. Annu. Rev. Biophys. Biomol. Struct. 27: 407-445.
3. Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. Nature 421: 601-607.
4. Maris, C., et al. 2005. The RNA recognition motif, a plastic RNA-binding platform to regulate post-transcriptional gene expression. FEBS J. 272: 2118-2131.
5. Sutherland, L.C., et al. 2005. RNA binding motif (RBM) proteins: a novel family of apoptosis modulators? J. Cell. Biochem. 94: 5-24.
6. Dowhan, D.H., et al. 2005. Steroid hormone receptor coactivation and alternative RNA splicing by U2AF65-related proteins CAPERα and CAPERβ. Mol. Cell 17: 429-439.
7. Fukuda, T., et al. 2009. hnRNP K interacts with RNA binding motif protein 42 and functions in the maintenance of cellular ATP level during stress conditions. Genes Cells 14: 113-128.

CHROMOSOMAL LOCATION

Genetic locus: RBM23 (human) mapping to 14q11.2.

PRODUCT

RBM23 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 RBM23 shRNA Plasmid (h): sc-92324-SH and RBM23 shRNA (h) Lentiviral Particles: sc-92324-V as alternate gene silencing products.

For independent verification of RBM23 (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-92324A, sc-92324B and sc-92324C.

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

RBM23 siRNA (h) is recommended for the inhibition of RBM23 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor RBM23 gene expression knockdown using RT-PCR Primer: RBM23 (h)-PR: sc-92324-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.