

RBM16 siRNA (m): sc-152729

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. RBM16 (RNA-binding motif protein 16), also known as CCAP7 (CDC5L complex-associated protein 7), is a 1,271 amino acid protein that contains one CID domain and one RRM (RNA recognition motif) domain. RBM16 interacts with Pol II (via C-terminus), with a much higher affinity for phosphorylated Pol II. Identified in a complex with Cdc5L and other spliceosomal proteins, RBM16 may associate with the spliceosome. The RBM16 gene is conserved in chimpanzee, canine, bovine, rat, chicken and zebrafish, and maps to human chromosome 6q25.2.

REFERENCES

1. Varani, G. and Nagai, K. 1998. RNA recognition by RNP proteins during RNA processing. *Annu. Rev. Biophys. Biomol. Struct.* 27: 407-445.
2. Patturajan, M., Wei, X., Berezney, R. and Corden, J.L. 1998. A nuclear matrix protein interacts with the phosphorylated C-terminal domain of RNA polymerase II. *Mol. Cell. Biol.* 18: 2406-2415.
3. Mungall, A.J., Palmer, S.A., Sims, S.K., Edwards, C.A., Ashurst, J.L., Wilming, L., Jones, M.C., Horton, R., Hunt, S.E., Scott, C.E., Gilbert, J.G., Clamp, M.E., Bethel, G., Milne, S., Ainscough, R., Almeida, J.P., et al. 2003. The DNA sequence and analysis of human chromosome 6. *Nature* 425: 805-811.
4. Maris, C., Dominguez, C. and Allain, F.H. 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., Rintala-Maki, N.D., White, R.D. and Morin, C.D. 2005. RNA binding motif (RBM) proteins: a novel family of apoptosis modulators? *J. Cell. Biochem.* 94: 5-24.
6. Dephoure, N., Zhou, C., Villen, J., Beausoleil, S.A., Bakalarski, C.E., Elledge, S.J. and Gygi, S.P. 2008. A quantitative atlas of mitotic phosphorylation. *Proc. Natl. Acad. Sci. USA* 105: 10762-10767.
7. Fukuda, T., Naiki, T., Saito, M. and Irie, K. 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: Scaf8 (mouse) mapping to 17 A1.

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

RBM16 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 RBM16 shRNA Plasmid (m): sc-152729-SH and RBM16 shRNA (m) Lentiviral Particles: sc-152729-V as alternate gene silencing products.

For independent verification of RBM16 (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-152729A, sc-152729B and sc-152729C.

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

RBM16 siRNA (m) is recommended for the inhibition of RBM16 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 RBM16 gene expression knockdown using RT-PCR Primer: RBM16 (m)-PR: sc-152729-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.