



RBM19 siRNA (m): sc-152732

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. RBM19 (RNA-binding motif protein 19) is a 960 amino acid member of the RRM MRD1 family that contains 6 RRM (RNA recognition motif) domains. Playing a role in embryo pre-implantation development, RBM19 may be involved in regulating ribosome biogenesis. The RBM19 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *C. elegans*, *S. pombe*, *S. cerevisiae*, *K. lactis*, *E. gossypii*, *M. grisea*, *N. crassa*, *A. thaliana*, rice and *P. falciparum*, and maps to human chromosome 12q24.13.

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. Mayer, A.N. and Fishman, M.C. 2003. Nil per os encodes a conserved RNA recognition motif protein required for morphogenesis and cytodifferentiation of digestive organs in zebrafish. *Development* 130: 3917-3928.
3. Colland, F., Jacq, X., Trouplin, V., Mouglin, C., Groizeleau, C., Hamburger, A., Meil, A., Wojcik, J., Legrain, P. and Gauthier, J.M. 2004. Functional proteomics mapping of a human signaling pathway. *Genome Res.* 14: 1324-1332.
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. Lorenzen, J.A., Bonacci, B.B., Palmer, R.E., Wells, C., Zhang, J., Haber, D.A., Goldstein, A.M. and Mayer, A.N. 2005. Rbm19 is a nucleolar protein expressed in crypt/progenitor cells of the intestinal epithelium. *Gene Expr. Patterns* 6: 45-56.
6. 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.
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: Rbm19 (mouse) mapping to 5 F.

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

RBM19 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 RBM19 shRNA Plasmid (m): sc-152732-SH and RBM19 shRNA (m) Lentiviral Particles: sc-152732-V as alternate gene silencing products.

For independent verification of RBM19 (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-152732A, sc-152732B and sc-152732C.

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

RBM19 siRNA (m) is recommended for the inhibition of RBM19 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 RBM19 gene expression knockdown using RT-PCR Primer: RBM19 (m)-PR: sc-152732-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.