SANTA CRUZ BIOTECHNOLOGY, INC.

RBM27 siRNA (h): sc-106929

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. RBM27 (RNA-binding motif protein 27) is a 1,060 amino acid protein that contains one C3H1-type zinc finger and one RRM (RNA recognition motif) domain. Incorporated into the nuclear speckles and to speckles proximal to the nuclear periphery, RBM27 also localizes to punctate structures in the cytoplasm termed cytospeckles mediated by RBM27's RRM domain. The RBM27 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 5q32.

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. Schmutz, J., Martin, J., Terry, A., Couronne, O., Grimwood, J., Lowry, S., Gordon, L.A., Scott, D., Xie, G., Huang, W., Hellsten, U., Tran-Gyamfi, M., She, X., Prabhakar, S., Aerts, A., Altherr, M., Bajorek, E., Black, S., et al. 2004. The DNA sequence and comparative analysis of human chromosome 5. Nature 431: 268-274.
3. 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.
4. 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.
5. Sowa, M.E., Bennett, E.J., Gygi, S.P. and Harper, J.W. 2009. Defining the human deubiquitinating enzyme interaction landscape. Cell 138: 389-403.
6. 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: RBM27 (human) mapping to 5q32.

PRODUCT

RBM27 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 RBM27 shRNA Plasmid (h): sc-106929-SH and RBM27 shRNA (h) Lentiviral Particles: sc-106929-V as alternate gene silencing products.

For independent verification of RBM27 (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-106929A, sc-106929B and sc-106929C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

RBM27 siRNA (h) is recommended for the inhibition of RBM27 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.

GENE EXPRESSION MONITORING

RBM27 (H-9): sc-515704 is recommended as a control antibody for monitoring of RBM27 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor RBM27 gene expression knockdown using RT-PCR Primer: RBM27 (h)-PR: sc-106929-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.