SANTA CRUZ BIOTECHNOLOGY, INC.

RBMY1A1 siRNA (m): sc-38307

BACKGROUND

The RBM (RNA-binding motif) gene family encodes proteins with an RNA binding motif. RBMY1A1 encodes a germ-cell specific nuclear protein that is involved in spermatogenesis and belongs to the RBM family. The RBM gene family is comprised of at least 30 genes and pseudogenes, found on both arms of the Y chromosome. RBMX, an ancestral X chromosome homolog of the Y chromosome RBMY1A1 gene, encodes hnRNP G, which is widely expressed, whereas the RBMY1A1 gene evolved a male-specific function in spermatogenesis. Micro-deletions of the AZFb region of the Y chromosome, which contains a number of RBMY genes, usually result in severe consequences for spermatogenesis. The human RBMX gene maps to chromosome Xq26 and the RMBY gene family is found on all mammalian Y chomosomes.

REFERENCES

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2. Mazeyrat, S., Saut, N., Mattei, M.G. and Mitchell, M.J. 1999. RBMY evolved on the Y chromosome from a ubiquitously transcribed X-Y identical gene. Nat. Genet. 22: 224-226.
3. Elliott, D.J., Bourgeois, C.F., Klink, A., Stevenin, J. and Cooke, H.J. 2000. A mammalian germ cell-specific RNA-binding protein interacts with ubiquitously expressed proteins involved in splice site selection. Proc. Natl. Acad. Sci. USA 97: 5717-5722.
4. Elliott, D.J. 2000. RBMY genes and AZFb deletions. J. Endocrinol. Invest. 23: 652-668.
5. Venables, J.P., Elliott, D.J., Makarova, O.V., Makarov, E.M., Cooke, H.J. and Eperon, I.C. 2000. RBMY, a probable human spermatogenesis factor, and other hnRNP G proteins interact with Tra2β and affect splicing. Hum. Mol. Genet. 9: 685-694.
6. LocusLink Report. (LocusID: 27316) http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Rbmy1a1 (mouse) mapping to Y A1.

PRODUCT

RBMY1A1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RBMY1A1 shRNA Plasmid (m): sc-38307-SH and RBMY1A1 shRNA (m) Lentiviral Particles: sc-38307-V as alternate gene silencing products.

For independent verification of RBMY1A1 (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-38307A, sc-38307B and sc-38307C.

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

RBMY1A1 siRNA (m) is recommended for the inhibition of RBMY1A1 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 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 RBMY1A1 gene expression knockdown using RT-PCR Primer: RBMY1A1 (m)-PR: sc-38307-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.