SANTA CRUZ BIOTECHNOLOGY, INC.

RBM28 siRNA (h): sc-89378

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The Power to Question

BACKGROUND

The RBM (RNA-binding motif) gene family encodes proteins with an RNA binding motif. RBM28 (RNA-binding motif protein 28) is a 759 amino acid protein that is suggested to be involved in ribosomal biogenesis. Localized to the nucleolus, the four RNA recognition motif (RRM) domain-containing RBM28 has been identified to interact with spliceosomal small nuclear RNAs (snRNAs). Mutations in the RRM3 domain of yeast NOP4 (a homolog of RBM28) lead to ribosomal depletion due to defective assembly of the 60S subunit, suggesting a functional role of RBM28 in the production of ribosomal machinery. A homozygous missense mutation in RBM28 is the cause of alopecia, neurological defects and endocrinopathy (ANE) syndrome, in which affected individuals suffer hair loss, severe mental retardation and central hypogonadotropic hypogonadism. The afflictions of this disease suggest that RBM28 is required for normal development of the hair follicle, the hypothalamic-hypophyseal axis and the nervous system.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: RBM28 (human) mapping to 7q32.1.

PRODUCT

RBM28 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 RBM28 shRNA Plasmid (h): sc-89378-SH and RBM28 shRNA (h) Lentiviral Particles: sc-89378-V as alternate gene silencing products.

For independent verification of RBM28 (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-89378A, sc-89378B and sc-89378C.

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

RBM28 siRNA (h) is recommended for the inhibition of RBM28 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 RBM28 gene expression knockdown using RT-PCR Primer: RBM28 (h)-PR: sc-89378-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.