SANTA CRUZ BIOTECHNOLOGY, INC.

RNPS1 siRNA (h): sc-38309

BACKGROUND

RNA-binding protein S1 (RNPS1) activates pre-mRNA splicing by synergizing with serine rich (SR) proteins. RNPS1 contains as an RNA-recognition motif preceded by an extensive serine-rich domain. RNPS1 specifically interacts with PITSLRE p110, a member of the p34cdc2 superfamily. Like PITSLRE, RNPS1 localizes to nuclear speckles. RNPS1 also interacts with SART-3, a squamous-cell carcinoma antigen expressed in the nuclei of proliferating cells. RNPS1, SRm160, DEK, Y14 and REF are part of an exon-exon junction complex (EJC) that provides a strong binding site for mRNA export factors and serves as a platform for nonsense-mediated decay (NMD) factors. Specifically, RNPS1 induces NMD when tethered to the 3' untranslated region of β-globin mRNA. The gene encoding human RNPS1 maps to chromosome 16p13.3.

REFERENCES

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2. Loyer, P., Trembley, J.H., Lahti, J.M. and Kidd, V.J. 1998. The RNP protein, RNPS1, associates with specific isoforms of the p34cdc2-related PITSLRE protein kinase *in vivo*. J. Cell Sci. 111: 1495-1506.
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5. Le Hir, H., Gatfield, D., Izaurralde, E. and Moore, M.J. 2001. The exon-exon junction complex provides a binding platform for factors involved in mRNA export and nonsense-mediated mRNA decay. EMBO J. 20: 4987-4997.
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CHROMOSOMAL LOCATION

Genetic locus: RNPS1 (human) mapping to 16p13.3.

PRODUCT

RNPS1 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 RNPS1 shRNA Plasmid (h): sc-38309-SH and RNPS1 shRNA (h) Lentiviral Particles: sc-38309-V as alternate gene silencing products.

For independent verification of RNPS1 (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-38309A, sc-38309B and sc-38309C.

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

RNPS1 siRNA (h) is recommended for the inhibition of RNPS1 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 RNPS1 gene expression knockdown using RT-PCR Primer: RNPS1 (h)-PR: sc-38309-PR (20 µl, 394 bp). 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.