

SRp30c siRNA (m): sc-153822

BACKGROUND

Pre-mRNA splicing enhancer elements are short RNA sequences capable of activating weak splice sites in nearby introns that are required for accurate splice site recognition and the control of alternative splicing. Splicing enhancer elements contain specific binding sites for serine/arginine (SR)-rich splicing factors, most of which contain one or more RNA recognition motifs (RRM) and an arginine/serine (RS)-rich domain. SRs are not only essential for constitutive splicing, but also regulate splicing in a concentration-dependent manner by influencing the selection of alternative splice sites. SRp30c, also known as SFRS9 (splicing factor, arginine/serine-rich 9), is a 221 amino acid protein that localizes to various areas within the nucleus and contains two RRM domains. Expressed at high levels in placenta, heart, pancreas and kidney, SRp30c functions as an SR-rich splicing factor that interacts with a variety of proteins and is capable of modulating the selection of alternative splice sites.

REFERENCES

1. Screaton, G.R., et al. 1995. Identification and characterization of three members of the human SR family of pre-mRNA splicing factors. *EMBO J.* 14: 4336-4349.
2. Stoss, O., et al. 1999. Alternative splicing determines the intracellular localization of the novel nuclear protein Nop30 and its interaction with the splicing factor SRp30c. *J. Biol. Chem.* 274: 10951-10962.
3. Hofmann, Y., et al. 2000. Htra2- β 1 stimulates an exonic splicing enhancer and can restore full-length SMN expression to survival motor neuron 2 (SMN2). *Proc. Natl. Acad. Sci. USA* 97: 9618-9623.
4. Young, P.J., et al. 2002. SRp30c-dependent stimulation of survival motor neuron (SMN) exon 7 inclusion is facilitated by a direct interaction with hTra2 β 1. *Hum. Mol. Genet.* 11: 577-587.
5. Zhu, J., et al. 2007. Bombesin attenuates pre-mRNA splicing of glucocorticoid receptor by regulating the expression of serine-arginine protein p30c (SRp30c) in prostate cancer cells. *Biochim. Biophys. Acta* 1773: 1087-1094.
6. Paradis, C., et al. 2007. hnRNP I/PTB can antagonize the splicing repressor activity of SRp30c. *RNA* 13: 1287-1300.

CHROMOSOMAL LOCATION

Genetic locus: Srsf9 (mouse) mapping to 5 F.

PRODUCT

SRp30c 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 SRp30c shRNA Plasmid (m): sc-153822-SH and SRp30c shRNA (m) Lentiviral Particles: sc-153822-V as alternate gene silencing products.

For independent verification of SRp30c (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-153822A, sc-153822B and sc-153822C.

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

SRp30c siRNA (m) is recommended for the inhibition of SRp30c 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.

GENE EXPRESSION MONITORING

SRp30c (1G7): sc-293314 is recommended as a control antibody for monitoring of SRp30c 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 SRp30c gene expression knockdown using RT-PCR Primer: SRp30c (m)-PR: sc-153822-PR (20 μ l). 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.