

SFRS2IP siRNA (m): sc-153406

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, which include SC35, 9G8, SRp20 and SF2/ASF. The family of SR factors all contain one or more RNA recognition motifs (RRM) and an SR-rich domain. The SR factor family is not only essential for constitutive splicing, but also regulate splicing in a concentration-dependent manner by influencing the selection of alternative splice sites. SFRS2IP (splicing factor, arginine/serine-rich 2, interacting protein), also known as CASP11, SIP1, renal carcinoma antigen NY-REN-40 or SRRP129 (splicing regulatory protein 129), is a 1,463 amino acid nuclear protein that participates in pre-mRNA alternative splicing via regulation of spliceosome assembly. Widely expressed, SFRS2IP contains one RING-type zinc finger and interacts with SC35, U1 SnRNP 70 and U2AF65.

REFERENCES

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2. Tanner, S., et al. 1997. A novel SR-related protein specifically interacts with the carboxy-terminal domain (CTD) of RNA polymerase II through a conserved interaction domain. *Biol. Chem.* 378: 565-571.
3. Zhang, W.J., et al. 1998. Sip1, a novel RS domain-containing protein essential for pre-mRNA splicing. *Mol. Cell. Biol.* 18: 676-684.
4. van de Craen, M., et al. 1999. Identification of caspases that cleave presenilin-1 and presenilin-2. Five presenilin-1 (PS1) mutations do not alter the sensitivity of PS1 to caspases. *FEBS Lett.* 445: 149-154.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 603668. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Delunardo, F., et al. 2006. Identification and characterization of the carboxy-terminal region of Sip-1, a novel autoantigen in Behçet's disease. *Arthritis Res. Ther.* 8: R71.

CHROMOSOMAL LOCATION

Genetic locus: Scaf11 (mouse) mapping to 15 F1.

PRODUCT

SFRS2IP 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 SFRS2IP shRNA Plasmid (m): sc-153406-SH and SFRS2IP shRNA (m) Lentiviral Particles: sc-153406-V as alternate gene silencing products.

For independent verification of SFRS2IP (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-153406A, sc-153406B and sc-153406C.

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

SFRS2IP siRNA (m) is recommended for the inhibition of SFRS2IP 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SFRS2IP gene expression knockdown using RT-PCR Primer: SFRS2IP (m)-PR: sc-153406-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.