SANTA CRUZ BIOTECHNOLOGY, INC.

SRrp130 siRNA (h): sc-95414

BACKGROUND

SRrp130 (serine-arginine-rich-splicing regulatory protein 130), also known as SFRS18 (splicing factor, arginine/serine-rich 18), is an 805 amino acid protein that localizes to nuclear speckles and belongs to the splicing factor SR family. Existing as multiple alternatively spliced isoforms that are expressed in thymus, liver, spleen, heart, placenta and skeletal muscle, SRrp130 interacts with Pinin and may be involved in pre-mRNA splicing. SRrp130 is subject to DNA damage-dependent phosphorylation, probably by Atm or ATR. The gene encoding SRrp130 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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2. Tacke, R., et al. 1999. Determinants of SR protein specificity. Curr. Opin. Cell Biol. 11: 358-362.
3. Makino, N., et al. 2001. Isolation and characterization of the human gene homologous to the *Drosophila* headcase (hdc) gene in chromosome bands 6q23-q24, a region of common deletion in human pancreatic cancer. DNA Seq. 11: 547-553.
4. Zimowska, G., et al. 2003. Pinin/DRS/memA interacts with SRp75, SRm300 and SRrp130 in corneal epithelial cells. Invest. Ophthalmol. Vis. Sci. 44: 4715-4723.
5. Long, J.C., et al. 2009. The SR protein family of splicing factors: master regulators of gene expression. Biochem. J. 417: 15-27.
6. Wang, X., et al. 2009. Differential display of expressed genes reveals a novel function of SFRS18 in regulation of intramuscular fat deposition. Int. J. Biol. Sci. 5: 28-33.

CHROMOSOMAL LOCATION

Genetic locus: PNISR (human) mapping to 6q16.2.

PRODUCT

SRrp130 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 SRrp130 shRNA Plasmid (h): sc-95414-SH and SRrp130 shRNA (h) Lentiviral Particles: sc-95414-V as alternate gene silencing products.

For independent verification of SRrp130 (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-95414A, sc-95414B and sc-95414C.

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

SRrp130 siRNA (h) is recommended for the inhibition of SRrp130 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 SRrp130 gene expression knockdown using RT-PCR Primer: SRrp130 (h)-PR: sc-95414-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.