



SFRS8 siRNA (h): sc-95838

BACKGROUND

SWAP (suppressor of white apricot protein homolog), also known as SFRS8 (splicing factor, arginine/serine-rich 8), is the 951 amino acid human homolog of a *Drosophila* splicing protein. Localized to the nucleus, SWAP contains two SURP repeats through which it is thought to mediate splicing events, possibly regulating the alternative splicing of Fibronectin and CD45RC. SWAP regulates its own expression levels (via control of splicing in its first two introns) and may act in tandem with other arginine/serine-rich splicing factors to control protein expression. The gene encoding SWAP is located on a region of chromosome 12 that is related to asthma susceptibility, possibly indicating a role for SWAP in the development of asthma. Multiple isoforms of SWAP exist due to alternative splicing events.

REFERENCES

1. Zachar, Z., Chou, T.B. and Bingham, P.M. 1987. Evidence that a regulatory gene autoregulates splicing of its transcript. *EMBO J.* 6: 4105-4111.
2. Denhez, F. and Lafyatis, R. 1994. Conservation of regulated alternative splicing and identification of functional domains in vertebrate homologs to the *Drosophila* splicing regulator, suppressor-of-white-apricot. *J. Biol. Chem.* 269: 16170-16179.
3. Sarkissian, M., Winne, A. and Lafyatis, R. 1996. The mammalian homolog of suppressor-of-white-apricot regulates alternative mRNA splicing of CD45 exon 4 and fibronectin III/CS. *J. Biol. Chem.* 271: 31106-31114.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 601945. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Casas, K., Bykhovskaya, Y., Mengesha, E., Wang, D., Yang, H., Taylor, K., Inbal, A. and Fischel-Ghodsian, N. 2004. Gene responsible for mitochondrial myopathy and sideroblastic anemia (MSA) maps to chromosome 12q24.33. *Am. J. Med. Genet. A* 127A: 44-49.
6. Brasch-Andersen, C., Tan, Q., Børglum, A.D., Haagerup, A., Larsen, T.R., Vestbo, J. and Kruse, T.A. 2006. Significant linkage to chromosome 12q24.32-q24.33 and identification of SFRS8 as a possible asthma susceptibility gene. *Thorax* 61: 874-879.

CHROMOSOMAL LOCATION

Genetic locus: SFSWAP (human) mapping to 12q24.33.

PRODUCT

SFRS8 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SFRS8 shRNA Plasmid (h): sc-95838-SH and SFRS8 shRNA (h) Lentiviral Particles: sc-95838-V as alternate gene silencing products.

For independent verification of SFRS8 (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-95838A, sc-95838B and sc-95838C.

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

SFRS8 siRNA (h) is recommended for the inhibition of SFRS8 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 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 SFRS8 gene expression knockdown using RT-PCR Primer: SFRS8 (h)-PR: sc-95838-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.