

SREC-II siRNA (h): sc-76577

BACKGROUND

SREC-II (scavenger receptor expressed by endothelial cells 2 protein), also known as SCARF2 (scavenger receptor class F, member 2), NSR1 or SREPCR, is an 866 amino acid single-pass type I membrane protein that contains six EGF-like domains. Expressed predominately in endothelial cells found in lung, heart, spleen, placenta, ovary and small intestine, SREC-II is thought to function as an adhesion protein that mediates heterophilic and homophilic interactions via extracellular domains. The gene encoding SREC-II maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia. Additionally, translocations between chromosomes 9 and 22 may lead to the formation of the Philadelphia chromosome and the subsequent production of the novel fusion protein Bcr-Abl, a potent cell proliferation activator found in several types of leukemias.

REFERENCES

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2. Schwab, S.G. and Wildenauer, D.B. 1999. Chromosome 22 workshop report. *Am. J. Med. Genet.* 88: 276-278.
3. Ishii, J., et al. 2002. SREC-II, a new member of the scavenger receptor type F family, *trans*-interacts with SREC-I through its extracellular domain. *J. Biol. Chem.* 277: 39696-39702.
4. Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. *J. Hum. Genet.* 51: 1037-1045.
5. Paylor, R., et al. 2006. Tbx1 haploinsufficiency is linked to behavioral disorders in mice and humans: implications for 22q11 deletion syndrome. *Proc. Natl. Acad. Sci. USA* 103: 7729-7734.

CHROMOSOMAL LOCATION

Genetic locus: SCARF2 (human) mapping to 22q11.21.

PRODUCT

SREC-II 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 SREC-II shRNA Plasmid (h): sc-76577-SH and SREC-II shRNA (h) Lentiviral Particles: sc-76577-V as alternate gene silencing products.

For independent verification of SREC-II (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-76577A, sc-76577B and sc-76577C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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

SREC-II siRNA (h) is recommended for the inhibition of SREC-II 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 SREC-II gene expression knockdown using RT-PCR Primer: SREC-II (h)-PR: sc-76577-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.