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- Expressversand

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# SURF-4 siRNA (m): sc-153935

## BACKGROUND

SURF-4 (surfeit 4), also known as ERV29, is a 269 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and contains several putative transmembrane regions. Existing as multiple alternatively spliced isoforms, SURF-4 is thought to be involved in protein transport between the endoplasmic reticulum and golgi compartments. Human SURF-4 shares 99% sequence identity with its mouse counterpart, strongly suggesting a conserved role between species. The gene encoding SURF-4 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

## REFERENCES

1. Reeves, J.E. and Fried, M. 1995. The SURF-4 gene encodes a novel 30 kDa integral membrane protein. *Mol. Membr. Biol.* 12: 201-208.
2. Garson, K., et al. 1996. Tissue-specific processing of the SURF-5 and SURF-4 mRNAs. *Gene Expr.* 6: 209-218.
3. Duhig, T., et al. 1998. The human surfeit locus. *Genomics* 52: 72-78.
4. Belden, W.J. and Barlowe, C. 2001. Role of ERV29p in collecting soluble secretory proteins into ER-derived transport vesicles. *Science* 294: 1528-1531.
5. Breuza, L., et al. 2004. Proteomics of endoplasmic reticulum-Golgi intermediate compartment (ERGIC) membranes from brefeldin A-treated Hep G2 cells identifies ERGIC-32, a new cycling protein that interacts with human ERV46. *J. Biol. Chem.* 279: 47242-47253.
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7. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 185660. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: Surf4 (mouse) mapping to 2 A3.

## PRODUCT

SURF-4 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SURF-4 shRNA Plasmid (m): sc-153935-SH and SURF-4 shRNA (m) Lentiviral Particles: sc-153935-V as alternate gene silencing products.

For independent verification of SURF-4 (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-153935A, sc-153935B and sc-153935C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

SURF-4 siRNA (m) is recommended for the inhibition of SURF-4 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  $\mu$ M in 66  $\mu$ 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 SURF-4 gene expression knockdown using RT-PCR Primer: SURF-4 (m)-PR: sc-153935-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.