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SIMP siRNA (m): sc-153468

BACKGROUND

SIMP (source of immunodominant MHC-associated peptides), also known as STT3B (STT3, subunit of the oligosaccharyltransferase complex, homolog B), is an 826 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and belongs to the STT3 family. Expressed in liver, heart, placenta, kidney, brain, muscle and pancreatic tissue, SIMP exists as a component of the multi-protein oligosaccharyltransferase (OST) complex and functions to catalyze the N-glycosylation of target proteins. More specifically, SIMP mediates the transfer of high mannose oligosaccharides from lipid-linked oligosaccharide donors to target asparagine residues on polypeptide chains. The gene encoding SIMP maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608605. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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5. Kelleher, D.J. and Gilmore, R. 2006. An evolving view of the eukaryotic oligosaccharyltransferase. *Glycobiology* 16: 47R-62R.
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CHROMOSOMAL LOCATION

Genetic locus: Stt3b (mouse) mapping to 9 F3.

PRODUCT

SIMP 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 SIMP shRNA Plasmid (m): sc-153468-SH and SIMP shRNA (m) Lentiviral Particles: sc-153468-V as alternate gene silencing products.

For independent verification of SIMP (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-153468A, sc-153468B and sc-153468C.

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

SIMP siRNA (m) is recommended for the inhibition of SIMP 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 SIMP gene expression knockdown using RT-PCR Primer: SIMP (m)-PR: sc-153468-PR (20 μ l, 592 bp). 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.