

Syntaxin 10 siRNA (h): sc-97252

BACKGROUND

Syntaxins, a family of proteins involved in the fusion of synaptic vesicles with the plasma membrane, display broad tissue distribution and contain C-terminal hydrophobic domains that direct them to their respective intracellular compartments. Syntaxin 10, also known as STX10, SYN10 or hSyn10, is a 249 amino acid single-pass type IV membrane protein that localizes to the Golgi apparatus and contains one t-SNARE coiled-coil homology domain. Expressed at high levels in pancreas, heart and skeletal muscle, Syntaxin 10 interacts with VPS52 and functions to receive vesicles from either the endosome or from Golgi stacks. Syntaxin 10 exists as multiple alternatively spliced isoforms which are encoded by a gene that maps to human chromosome 19.

REFERENCES

1. Tang, B.L., Low, D.Y., Tan, A.E. and Hong, W. 1998. Syntaxin 10: a member of the syntaxin family localized to the *trans*-Golgi network. *Biochem. Biophys. Res. Commun.* 242: 345-350.
2. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 603765. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Liewen, H., Meinhold-Heerlein, I., Oliveira, V., Schwarzenbacher, R., Luo, G., Wadle, A., Jung, M., Pfreundschuh, M. and Stenner-Liewen, F. 2005. Characterization of the human GARP (Golgi associated retrograde protein) complex. *Exp. Cell Res.* 306: 24-34.
4. Wang, Y., Tai, G., Lu, L., Johannes, L., Hong, W. and Tang, B.L. 2005. *Trans*-Golgi network Syntaxin 10 functions distinctly from Syntaxins 6 and 16. *Mol. Membr. Biol.* 22: 313-325.
5. Bonifacino, J.S. and Rojas, R. 2006. Retrograde transport from endosomes to the *trans*-Golgi network. *Nat. Rev. Mol. Cell Biol.* 7: 568-579.
6. Ganley, I.G., Espinosa, E. and Pfeffer, S.R. 2008. A syntaxin 10-SNARE complex distinguishes two distinct transport routes from endosomes to the *trans*-Golgi in human cells. *J. Cell Biol.* 180: 159-172.

CHROMOSOMAL LOCATION

Genetic locus: STX10 (human) mapping to 19p13.2.

PRODUCT

Syntaxin 10 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 Syntaxin 10 shRNA Plasmid (h): sc-97252-SH and Syntaxin 10 shRNA (h) Lentiviral Particles: sc-97252-V as alternate gene silencing products.

For independent verification of Syntaxin 10 (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-97252A, sc-97252B and sc-97252C.

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

Syntaxin 10 siRNA (h) is recommended for the inhibition of Syntaxin 10 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 Syntaxin 10 gene expression knockdown using RT-PCR Primer: Syntaxin 10 (h)-PR: sc-97252-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.