

Syntaxin 8 siRNA (h): sc-93822

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 8, also known as STX8 or CARB, is a 236 amino acid single-pass type IV membrane protein that contains one t-SNARE coiled-coil homology domain and belongs to the Syntaxin family. Highly expressed in liver, brain, kidney, lung, placenta, spleen, pancreas and skeletal muscle, Syntaxin 8 functions in the early secretory pathway as a vesicle trafficking protein that shuttles proteins from the *cis*-Golgi membrane to the endoplasmic reticulum (ER). In addition, Syntaxin 8 associates with Syntaxin 7, v-SNARE Vti1p and endobrevin to form a SNARE complex that plays a role in the homotypic fusion of late endosomes.

REFERENCES

1. Steegmaier, M., et al. 1998. Three novel proteins of the Syntaxin/SNAP 25 family. *J. Biol. Chem.* 273: 34171-34179.
2. Prekeris, R., et al. 1999. Differential roles of Syntaxin 7 and Syntaxin 8 in endosomal trafficking. *Mol. Biol. Cell* 10: 3891-3908.
3. Thoreau, V., et al. 1999. Molecular cloning, expression analysis, and chromosomal localization of human Syntaxin 8 (STX8). *Biochem. Biophys. Res. Commun.* 257: 577-583.
4. Online Mendelian Inheritance in Man, OMIM[™]. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604203. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Bogdanovic, A., et al. 2002. Syntaxin 7, Syntaxin 8, Vti1 and VAMP-7 (vesicle-associated membrane protein 7) form an active SNARE complex for early macropinosytic compartment fusion in *Dictyostelium discoideum*. *Biochem. J.* 368: 29-39.
6. Xu, Y., et al. 2002. GS15 forms a SNARE complex with Syntaxin 5, GS28, and Ykt6 and is implicated in traffic in the early cisternae of the Golgi apparatus. *Mol. Biol. Cell* 13: 3493-3507.
7. Antonin, W., et al. 2002. Crystal structure of the endosomal SNARE complex reveals common structural principles of all SNAREs. *Nat. Struct. Biol.* 9: 107-111.

CHROMOSOMAL LOCATION

Genetic locus: STX8 (human) mapping to 17p13.1.

PRODUCT

Syntaxin 8 siRNA (h) is a pool of 2 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 8 shRNA Plasmid (h): sc-93822-SH and Syntaxin 8 shRNA (h) Lentiviral Particles: sc-93822-V as alternate gene silencing products.

For independent verification of Syntaxin 8 (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-93822A and sc-93822B.

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 8 siRNA (h) is recommended for the inhibition of Syntaxin 8 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.

GENE EXPRESSION MONITORING

Syntaxin 8 (A-9): sc-376521 is recommended as a control antibody for monitoring of Syntaxin 8 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Syntaxin 8 gene expression knockdown using RT-PCR Primer: Syntaxin 8 (h)-PR: sc-93822-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.