

# Syntaxin 17 siRNA (h): sc-92492

## 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 17, also known as STX17, is a 302 amino acid single-pass type IV membrane protein that contains one t-SNARE coiled-coil homology domain and belongs to the syntaxin family. Thought to localize to the endoplasmic reticulum, Syntaxin 17 plays a role in vesicle trafficking to lysosomes and may be involved in processes related to cell division. The gene encoding Syntaxin 17 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

- Hay, J.C., Chao, D.S., Kuo, C.S. and Scheller, R.H. 1997. Protein interactions regulating vesicle transport between the endoplasmic reticulum and Golgi apparatus in mammalian cells. *Cell* 89: 149-158.
- Steegmaier, M., Yang, B., Yoo, J.S., Huang, B., Shen, M., Yu, S., Luo, Y. and Scheller, R.H. 1998. Three novel proteins of the syntaxin/SNAP 25 family. *J. Biol. Chem.* 273: 34171-34179.
- Hay, J.C., Klumperman, J., Oorschot, V., Steegmaier, M., Kuo, C.S. and Scheller, R.H. 1998. Localization, dynamics, and protein interactions reveal distinct roles for ER and Golgi SNAREs. *J. Cell Biol.* 141: 1489-1502.

## CHROMOSOMAL LOCATION

Genetic locus: STX17 (human) mapping to 9q31.1.

## PRODUCT

Syntaxin 17 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Syntaxin 17 shRNA Plasmid (h): sc-92492-SH and Syntaxin 17 shRNA (h) Lentiviral Particles: sc-92492-V as alternate gene silencing products.

For independent verification of Syntaxin 17 (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-92492A, sc-92492B and sc-92492C.

## 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

Syntaxin 17 siRNA (h) is recommended for the inhibition of Syntaxin 17 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  $\mu$ 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.

## GENE EXPRESSION MONITORING

Syntaxin 17 (A-11): sc-518187 is recommended as a control antibody for monitoring of Syntaxin 17 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Syntaxin 17 gene expression knockdown using RT-PCR Primer: Syntaxin 17 (h)-PR: sc-92492-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

- Ren, H., Elgner, F., Jiang, B., Himmelsbach, K., Medvedev, R., Ploen, D. and Hildt, E. 2016. The autophagosomal SNARE protein Syntaxin 17 is an essential factor for the hepatitis C virus life cycle. *J. Virol.* 90: 5989-6000.
- Lai, J.K.F., Sam, I.C., Verlhac, P., Bagnuet, J., Eskelinen, E.L., Faure, M. and Chan, Y.F. 2017. 2BC non-structural protein of enterovirus A71 interacts with SNARE proteins to trigger autolysosome formation. *Viruses* 9: 169.

## 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.