SANTA CRUZ BIOTECHNOLOGY, INC.

Syntaxin 6 siRNA (h): sc-41332

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The Power to Question

BACKGROUND

Syntaxins, a family of proteins involved in the fusion of synaptic vesicles with the plasma membrane, display broad tissue distribution and contain carboxy-terminal hydrophobic domains that direct themselves to their respective intracellular compartments. Synaptin 6 is a 255 amino acid protein that is widely expressed, with higher expression levels in brain, lung and kidney. This synaptin co-localizes with vesicle associated membrane protein (VAMP) 4 to tubular and vesicular membranes of the Golgi apparatus. The cytosolic domain of Syntaxin 6 reduces the rate on Glut4 reinternalization upon Insulin withdrawl and is involved in a memrane-trafficking process that removes Glut4 from traffic directed to the plasma membrane. Syntaxin 6 is upregulated in activated macrophages in conjunction with an increase in the secretion of cytokines. The delivery of microdomain-associated lipids and proteins to the cell surface is regulated by Syntaxin 6.

REFERENCES

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3. Bock, J.B., et al. 1997. Syntaxin 6 functions in *trans*-Golgi network vesicle trafficking. Mol. Biol. Cell 8: 1261-1271.
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5. Wendler, F., et al. 2001. Homotypic fusion of immature secretory granules during maturation requires Syntaxin 6. Mol. Biol. Cell 12: 1699-1709.
6. Misura, K.M., et al. 2002. Three-dimensional structure of the amino-terminal domain of Syntaxin 6, a SNAPC homolog. Proc. Natl. Acad. Sci. USA 99: 9184-9189.
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8. Kuliawat, R., et al. 2004. Syntaxin 6 SNARE involvement in secretory and endocytic pathways of cultured pancreatic β cells. Mol. Biol. Cell 15: 1690-1701.
9. Murray, R.Z., et al. 2005. Syntaxin 6 and Vti1b form a novel SNARE complex, which is upregulated in activated macrophages to facilitate exocytosis of tumor necrosis factor α. J. Biol. Chem. 280: 10478-10483.

CHROMOSOMAL LOCATION

Genetic locus: STX6 (human) mapping to 1q25.3.

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.

PRODUCT

Syntaxin 6 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Syntaxin 6 shRNA Plasmid (h): sc-41332-SH and Syntaxin 6 shRNA (h) Lentiviral Particles: sc-41332-V as alternate gene silencing products.

For independent verification of Syntaxin 6 (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-41332A, sc-41332B and sc-41332C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Syntaxin 6 siRNA (h) is recommended for the inhibition of Syntaxin 6 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 µM in 66 µl. 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 6 gene expression knockdown using RT-PCR Primer: Syntaxin 6 (h)-PR: sc-41332-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.