



Synaptotagmin XIII siRNA (h): sc-96460

BACKGROUND

Synaptotagmin XIII (SytXIII), also known as Synaptotagmin-13 (SYT13), is a 426 amino acid single-pass membrane protein that belongs to the Synaptotagmin family and contains two C2 domains. As a transmembrane protein, Synaptotagmin XIII has an extracellular N-terminus and a cytoplasmic C-terminus that contains both C2 domains. While the first C2 domain (C2A) does not mediate calcium-dependent phospholipid binding, the second C2 domain (C2B) binds phospholipids regardless of whether calcium is present. Synaptotagmin XIII interacts with neuroligin 1, which acts as a cell adhesion molecule and receptor. Expressed in brain, pancreas and kidney, Synaptotagmin XIII may be involved in transport vesicle docking to the plasma membrane. The gene that encodes Synaptotagmin XIII contains 46,033 bases and maps to human chromosome 11p11.2.

REFERENCES

1. Fukuda, M. and Mikoshiba, K. 2001. Characterization of KIAA1427 protein as an atypical synaptotagmin (Syt XIII). *Biochem. J.* 354: 249-257.
2. Craxton, M. 2001. Genomic analysis of synaptotagmin genes. *Genomics* 77: 43-49.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607716. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Rickman, C., Craxton, M., Osborne, S. and Davletov, B. 2004. Comparative analysis of tandem C2 domains from the mammalian synaptotagmin family. *Biochem. J.* 378: 681-686.
5. Grass, I., Thiel, S., Höning, S. and Haucke, V. 2004. Recognition of a basic AP-2 binding motif within the C2B domain of synaptotagmin is dependent on multimerization. *J. Biol. Chem.* 279: 54872-54880.
6. Jahn, J.E. and Coleman, W.B. 2008. Re-expression of tumorigenicity after attenuation of human synaptotagmin 13 in a suppressed microcell hybrid cell line. *Int. J. Oncol.* 32: 441-449.

CHROMOSOMAL LOCATION

Genetic locus: SYT13 (human) mapping to 11p11.2.

PRODUCT

Synaptotagmin XIII 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 Synaptotagmin XIII shRNA Plasmid (h): sc-96460-SH and Synaptotagmin XIII shRNA (h) Lentiviral Particles: sc-96460-V as alternate gene silencing products.

For independent verification of Synaptotagmin XIII (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-96460A, sc-96460B and sc-96460C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

Synaptotagmin XIII siRNA (h) is recommended for the inhibition of Synaptotagmin XIII 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 Synaptotagmin XIII gene expression knockdown using RT-PCR Primer: Synaptotagmin XIII (h)-PR: sc-96460-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.