SANTA CRUZ BIOTECHNOLOGY, INC.

Synaptotagmin XV siRNA (h): sc-90540

BACKGROUND

Synaptotagmin XV (SytXV), also known as Synaptotagmin-15 (SYT15) or Chr10Syt, is a 421 amino acid single-pass type III membrane protein that belongs to the synaptotagmin family and contains two C2 domains. Both C2 domains are located on the C-terminal of Synaptotagmin XV and neither one mediates calcium-dependent or -independent phospholipid binding. Acting in non-neuronal tissues, Synaptotagmin XV may be involved in the trafficking and exocytosis of secretory vesicles. Synaptotagmin XV exists as four alternatively spliced isoforms that form homodimers. The gene that encodes Synaptotagmin XV contains 15,957 bases and maps to human chromosome 10q11.22. Making up nearly 4.5% of the human genome, chromosome 10 contains over 800 genes and 135 million nucleotides. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, Cockayne syndrome and porphyria.

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CHROMOSOMAL LOCATION

Genetic locus: SYT15 (human) mapping to 10q11.22.

PROTOCOLS

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

PRODUCT

Synaptotagmin XV 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Synaptotagmin XV shRNA Plasmid (h): sc-90540-SH and Synaptotagmin XV shRNA (h) Lentiviral Particles: sc-90540-V as alternate gene silencing products.

For independent verification of Synaptotagmin XV (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-90540A and sc-90540B.

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

Synaptotagmin XV siRNA (h) is recommended for the inhibition of Synaptotagmin XV 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 Synaptotagmin XV gene expression knockdown using RT-PCR Primer: Synaptotagmin XV (h)-PR: sc-90540-PR (20 µl). 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.