SANTA CRUZ BIOTECHNOLOGY, INC.

Synaptotagmin XII siRNA (m): sc-153978

BACKGROUND

Synaptotagmin XII (SytXII), also known as Synaptotagmin-12 (SYT12), is a 421 amino acid single-pass synaptic vesicle membrane protein that belongs to the synaptotagmin family and contains two C2 domains. While it may be involved in calcium-dependent exocytosis of secretory vesicles through calcium and phospholipid binding to the C2 domain, Synaptotagmin XII may also serve as calcium sensors in the process of vesicular trafficking and exocytosis. Synaptotagmin XII exists as either a homodimer or heterodimer. The gene that encodes Synaptotagmin XII maps to human chromosome 11q13.2. Chromosome 11 houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Syt12 (mouse) mapping to 19 A.

PROTOCOLS

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

PRODUCT

Synaptotagmin XII siRNA (m) 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 Synaptotagmin XII shRNA Plasmid (m): sc-153978-SH and Synaptotagmin XII shRNA (m) Lentiviral Particles: sc-153978-V as alternate gene silencing products.

For independent verification of Synaptotagmin XII (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-153978A, sc-153978B and sc-153978C.

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 XII siRNA (m) is recommended for the inhibition of Synaptotagmin XII expression in mouse 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 XII gene expression knockdown using RT-PCR Primer: Synaptotagmin XII (m)-PR: sc-153978-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.