SANTA CRUZ BIOTECHNOLOGY, INC.

VAMP-5 siRNA (h): sc-94732

BACKGROUND

The Syntaxin family of proteins anchor themselves to the cytoplasmic surface of cellular membranes and bind to proteins that are involved in exocytosis, including VAMPs (vesicle-associated membrane proteins), NSF (N-ethylmaleimide-sensitive factor), SNAP 25 (synaptosomal-associated protein of 25 kDa), SNAPs (soluble NSF attachment proteins) and synaptotagmin. VAMPs are vesicular factors that are important components of the machinery controlling docking and/or fusion of secretory vesicles. VAMPs are thought to function as inhibitors of exocytosis. VAMP-5 (vesicle-associated membrane protein 5) is a 116 amino acid single-pass type IV membrane protein that belongs to the synaptobrevin family. VAMP-5 may participate in trafficking events that are associated with myogenesis, such as myoblast fusion and/or Glut4 trafficking. Containing one v-SNARE coiled-coil homology domain, VAMP-5 localizes to the Golgi apparatus and is encoded by a gene located on human chromosome 2p11.2.

REFERENCES

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7. Elfving, B., et al. 2008. Differential expression of synaptic vesicle proteins after repeated electroconvulsive seizures in rat frontal cortex and hippocampus. Synapse 62: 662-670.
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CHROMOSOMAL LOCATION

Genetic locus: VAMP5 (human) mapping to 2p11.2.

PRODUCT

VAMP-5 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 VAMP-5 shRNA Plasmid (h): sc-94732-SH and VAMP-5 shRNA (h) Lentiviral Particles: sc-94732-V as alternate gene silencing products.

For independent verification of VAMP-5 (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-94732A and sc-94732B.

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

VAMP-5 siRNA (h) is recommended for the inhibition of VAMP-5 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 VAMP-5 gene expression knockdown using RT-PCR Primer: VAMP-5 (h)-PR: sc-94732-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.

PROTOCOLS

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