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SANTA CRUZ BIOTECHNOLOGY, INC.

SEC11A siRNA (m): sc-153296

BACKGROUND

SEC11A is a 179 amino acid protein that belongs to the peptidase S26B family. SEC11A is a single-pass type II membrane protein localizing to microsome and endoplasmic reticulum. SEC11A is a component of the microsomal signal peptidase complex, which removes signal peptides from nascent proteins as they are translocated into the lumen of the endoplasmic reticulum. The microsomal signal peptidase complex consists of five members: SEC11A, SEC11C, SPCS1, SPCS2 and SPCS3. The SEC11A gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, *S.pombe, S.cerevisiae, K.lactis, E.gossypii, M.grisea, N.crassa, A.thaliana* and rice, and maps to human chromosome 15q25.3. Encoding more than 700 genes, chromosome 15 is made up of approximately 106 million base pairs and is about 3% of the human genome. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is also associated with chromosome 15 through the FBN1 gene.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Sec11a (mouse) mapping to 7 D3.

PRODUCT

SEC11A 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 SEC11A shRNA Plasmid (m): sc-153296-SH and SEC11A shRNA (m) Lentiviral Particles: sc-153296-V as alternate gene silencing products.

For independent verification of SEC11A (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-153296A, sc-153296B and sc-153296C.

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

SEC11A siRNA (m) is recommended for the inhibition of SEC11A 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 SEC11A gene expression knockdown using RT-PCR Primer: SEC11A (m)-PR: sc-153296-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.