SANTA CRUZ BIOTECHNOLOGY, INC.

SEC11C siRNA (h): sc-76464

BACKGROUND

Amino terminal signal sequence of proteins targeted to the endoplasmic reticulum (ER) is usually removed by a membrane signal peptidase during or shortly after translocation into the ER. SEC11C, also known as SPC21, SPCS4C, or SEC11L3, is a 192 amino acid catalytic subunit of the microsomal signal peptidase complex that belongs to the peptidase S26B family. SEC11C is a microsome membrane protein that removes signal peptides from nascent proteins as they are translocated into the lumen of the ER. SEC11C is a component of the microsomal signal peptidase complex that consists of five members: SEC11A, SEC11C, SPCS1, SPCS2 and SPCS3.

REFERENCES

1. Böhni, P.C., Deshaies, R.J. and Schekman, R.W. 1988. SEC11 is required for signal peptide processing and yeast cell growth. J. Cell Biol. 106: 1035-1042.
2. Greenburg, G., Shelness, G.S. and Blobel, G. 1989. A subunit of mammalian signal peptidase is homologous to yeast SEC11 protein. J. Biol. Chem. 264: 15762-15765.
3. Shelness, G.S. and Blobel, G. 1990. Two subunits of the canine signal peptidase complex are homologous to yeast SEC11 protein. J. Biol. Chem. 265: 9512-9519.
4. YaDeau, J.T., Klein, C. and Blobel, G. 1991. Yeast signal peptidase contains a glycoprotein and the SEC11 gene product. Proc. Natl. Acad. Sci. USA 88: 517-521.
5. van Dijl, J.M., de Jong, A., Vehmaanperä, J., Venema, G. and Bron, S. 1992. Signal peptidase I of *Bacillus subtilis:* patterns of conserved amino acids in prokaryotic and eukaryotic type I signal peptidases. EMBO J. 11: 2819-2828.
6. Shelness, G.S., Lin, L. and Nicchitta, C.V. 1993. Membrane topology and biogenesis of eukaryotic signal peptidase. J. Biol. Chem. 268: 5201-5208.

CHROMOSOMAL LOCATION

Genetic locus: SEC11C (human) mapping to 18q21.32.

PRODUCT

SEC11C 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SEC11C shRNA Plasmid (h): sc-76464-SH and SEC11C shRNA (h) Lentiviral Particles: sc-76464-V as alternate gene silencing products.

For independent verification of SEC11C (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-76464A, sc-76464B and sc-76464C.

PROTOCOLS

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

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

SEC11C siRNA (h) is recommended for the inhibition of SEC11C 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 SEC11C gene expression knockdown using RT-PCR Primer: SEC11C (h)-PR: sc-76464-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.