SANTA CRUZ BIOTECHNOLOGY, INC.

Sec24B siRNA (h): sc-88987

BACKGROUND

Sec24B (SEC24 family, member B), also known as SEC24, is a 1,268 amino acid protein belonging to the Sec24 subfamily of the Sec23/Sec24 protein family. Members of this family participate in vesicle trafficking from the endoplasmic reticulum (ER) to the Golgi apparatus. Sec24B is one of four mammalian proteins, namely Sec24A, Sec24B, Sec24C and Sec24D, that are highly related to the *Saccharomyces cerevisiae* protein Sec24, a component of the coat protein complex COPII that mediates the selective export of membrane proteins from the ER. Similar to its yeast counterpart, Sec24B functions as a component of the cytoplasmic COPII complex. Expressed in hepatocytes, lymphocytes and fibroblasts, Sec24B exists as two alternatively spliced isoforms that localize to cytoplasm, golgi apparatus membrane and endoplasmic reticulum membrane.

REFERENCES

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2. Pagano, A., et al. 1999. Sec24 proteins and sorting at the endoplasmic reticulum. J. Biol. Chem. 274: 7833-7840.
3. Lippincott-Schwartz, J., et al. 2000. Secretory protein trafficking and organelle dynamics in living cells. Annu. Rev. Cell Dev. Biol. 16: 557-589.
4. Kirchhausen, T. 2000. Three ways to make a vesicle. Nat. Rev. Mol. Cell Biol. 1: 187-198.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607184. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Mancias, J.D., et al. 2007. The transport signal on Sec22 for packaging into COPII-coated vesicles is a conformational epitope. Mol. Cell 26: 403-414.
7. Townley, A.K., et al. 2008. Efficient coupling of Sec23-Sec24 to Sec13-Sec31 drives COPII-dependent collagen secretion and is essential for normal craniofacial development. J. Cell Sci. 121: 3025-3034.

CHROMOSOMAL LOCATION

Genetic locus: SEC24B (human) mapping to 4q25.

PRODUCT

Sec24B 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 Sec24B shRNA Plasmid (h): sc-88987-SH and Sec24B shRNA (h) Lentiviral Particles: sc-88987-V as alternate gene silencing products.

For independent verification of Sec24B (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-88987A, sc-88987B and sc-88987C.

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

Sec24B siRNA (h) is recommended for the inhibition of Sec24B 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 Sec24B gene expression knockdown using RT-PCR Primer: Sec24B (h)-PR: sc-88987-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.