



SEC11B (N-16): sc-87431

BACKGROUND

The amino terminal signal sequences of proteins targeted to the endoplasmic reticulum (ER) are usually removed by a membrane signal peptidase during or shortly after translocation into the ER. SEC11B (SEC11 homolog C), also known as SPC21, SPCS4C or SEC11L3, is a 166 amino acid single-pass type II membrane protein belonging to the peptidase S26B family. SEC11B may be a component of a signal peptidase complex which removes signal peptides from nascent proteins as they are translocated into the lumen of the endoplasmic reticulum. SEC11B is encoded by a gene located on human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies.

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 Dijk, 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.
7. Fang, H., Mullins, C. and Green, N. 1997. In addition to SEC11, a newly identified gene, SPC3, is essential for signal peptidase activity in the yeast endoplasmic reticulum. *J. Biol. Chem.* 272: 13152-13158.
8. Tjalsma, H., Bolhuis, A., van Roosmalen, M.L., Wiegert, T., Schumann, W., Broekhuizen, C.P., Quax, W.J., Venema, G., Bron, S. and van Dijk, J.M. 1998. Functional analysis of the secretory precursor processing machinery of *Bacillus subtilis*: identification of a eubacterial homolog of archaeal and eukaryotic signal peptidases. *Genes Dev.* 12: 2318-2331.
9. Liang, H., VanValkenburgh, C., Chen, X., Mullins, C., Van Kaer, L., Green, N. and Fang, H. 2003. Genetic complementation in yeast reveals functional similarities between the catalytic subunits of mammalian signal peptidase complex. *J. Biol. Chem.* 278: 50932-50939.

CHROMOSOMAL LOCATION

Genetic locus: SEC11B (human) mapping to 8q11.23.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

SOURCE

SEC11B (N-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of SEC11B of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-87431 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SEC11B (N-16) is recommended for detection of SEC11B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other SEC family members.

Suitable for use as control antibody for SEC11B siRNA (h): sc-77453, SEC11B shRNA Plasmid (h): sc-77453-SH and SEC11B shRNA (h) Lentiviral Particles: sc-77453-V.

Molecular Weight of SEC11B: 19 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

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