

## Sec24B (N-14): sc-160787

### 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

1. Tang, B.L., Kausalya, J., Low, D.Y., Lock and M.L., Hong, W. 1999. A family of mammalian proteins homologous to yeast Sec24p. *Biochem. Biophys. Res. Commun.* 258: 679-684.
2. Pagano, A., Letourneur, F., Garcia-Estefania, D., Carpentier, J.L., Orci and L., Paccaud, J.P. 1999. Sec24 proteins and sorting at the endoplasmic reticulum. *J. Biol. Chem.* 274: 7833-7840.
3. Lippincott-Schwartz, J., Roberts and T.H., Hirschberg, K. 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<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607184. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Mancias, J.D., Goldberg, J. 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., Feng, Y., Schmidt, K., Carter, D.A., Porter, R., Verkade and P., Stephens, D.J. 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; Sec24b (mouse) mapping to 3 G3.

### SOURCE

Sec24B (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Sec24B of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160787 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Sec24B (N-14) is recommended for detection of Sec24B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 Sec24 family members.

Sec24B (N-14) is also recommended for detection of Sec24B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Sec24B siRNA (h): sc-88987, Sec24B siRNA (m): sc-153311, Sec24B shRNA Plasmid (h): sc-88987-SH, Sec24B shRNA Plasmid (m): sc-153311-SH, Sec24B shRNA (h) Lentiviral Particles: sc-88987-V and Sec24B shRNA (m) Lentiviral Particles: sc-153311-V.

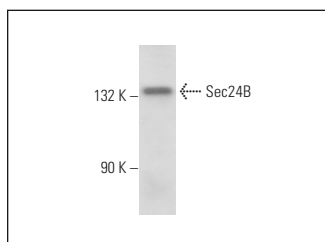
Molecular Weight of Sec24B: 137 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### DATA



Sec24B (N-14): sc-160787. Western blot analysis of Sec24B expression in SH-SY5Y whole cell lysate.

### RESEARCH USE

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