SANTA CRUZ BIOTECHNOLOGY, INC.

Sec31B (P-14): sc-165454



BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. Sec31B (SEC31 homolog B *(S. cerevisiae))*, also known as SEC31L2 (SEC31-like 2), is a 1,179 amino acid peripheral membrane protein that plays a role in vesicle budding and cargo export from the endoplasmic reticulum and belongs to the WD repeat SEC31 family. Existing as five alternatively spliced isoforms, Sec31B is ubiquitously expressed and is a component of the coat protein complex II (COPII).

REFERENCES

- Tang, B.L., Zhang, T., Low, D.Y., Wong, E.T., Horstmann, H. and Hong, W. 2000. Mammalian homologues of yeast sec31p. An ubiquitously expressed form is localized to endoplasmic reticulum (ER) exit sites and is essential for ER-Golgi transport. J. Biol. Chem. 275: 13597-13604.
- Grupe, A., Li, Y., Rowland, C., Nowotny, P., Hinrichs, A.L., Smemo, S., Kauwe, J.S., Maxwell, T.J., Cherny, S., Doil, L., Tacey, K., van Luchene, R., Myers, A., Wavrant-De Vrièze, F., Kaleem, M., et al. A scan of chromosome 10 identifies a novel locus showing strong association with lateonset Alzheimer disease. Am. J. Hum. Genet. 78: 78-88.
- 3. Stankewich, M.C., Stabach, P.R. and Morrow, J.S. 2006. Human Sec31B: a family of new mammalian orthologues of yeast Sec31p that associate with the COPII coat. J. Cell Sci. 119: 958-969.
- 4. Stagg, S.M., Gürkan, C., Fowler, D.M., LaPointe, P., Foss, T.R., Potter, C.S., Carragher, B. and Balch, W.E. 2006. Structure of the Sec13/31 COPII coat cage. Nature 439: 234-238.
- 5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610258. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Townley, A.K., Feng, Y., Schmidt, K., Carter, D.A., Porter, R., Verkade, P. and 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: SEC31B (human) mapping to 10q24.31; Sec31b (mouse) mapping to 19 C3.

SOURCE

Sec31B (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Sec31B of human origin.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

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

Blocking peptide available for competition studies, sc-165454 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Sec31B (P-14) is recommended for detection of Sec31B of mouse, rat and 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 Sec31 or Sec31A.

Sec31B (P-14) is also recommended for detection of Sec31B in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Sec31B siRNA (h): sc-90568, Sec31B siRNA (m): sc-153315, Sec31B shRNA Plasmid (h): sc-90568-SH, Sec31B shRNA Plasmid (m): sc-153315-SH, Sec31B shRNA (h) Lentiviral Particles: sc-90568-V and Sec31B shRNA (m) Lentiviral Particles: sc-153315-V.

Molecular Weight of Sec31B: 129 kDa.

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluo-rescence: 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™ 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.