

# SEC22B (29-F7): sc-101267

## BACKGROUND

The *S. cerevisiae* protein Sec22p functions as a v-SNARE of transport vesicles and plays a role in both retrograde and anterograde vesicular transport between the Golgi and the endoplasmic reticulum (ER). There are three mammalian homologs to Sec22p, namely SEC22A, SEC22B and SEC22C. SEC22B (SEC22 vesicle trafficking protein homolog B, *S. cerevisiae*), also known as SEC22L1 (SEC22 vesicle-trafficking protein-like 1) or ERS-24, is a single pass type IV membrane protein that belongs to the synaptobrevin family. SEC22B contains one v-SNARE coiled-coil homology domain and one longin domain. Localizing to the ER-Golgi intermediate compartment and found on ER-derived vesicles, SEC22B functions as a v-SNARE and is required for ER-Golgi transport. The cognate t-SNARE found on pre-Golgi intermediate compartments is comprised of Syntaxin 5, Bet1 and GS27. In addition, SEC22B can be found in a SNARE complex with Syntaxin 18, Nip1 and USE1 (p31).

## REFERENCES

- Zhang, T., et al. 1999. Morphological and functional association of SEC22B/ERS-24 with the pre-Golgi intermediate compartment. *Mol. Biol. Cell* 10: 435-453.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604029. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: SEC22B (human) mapping to 1q21.1; Sec22b (mouse) mapping to 3 F2.2.

## SOURCE

SEC22B (29-F7) is a mouse monoclonal antibody raised against a partial recombinant protein mapping within amino acids 1-110 of SEC22B of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SEC22B (29-F7) is recommended for detection of SEC22B 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).

Suitable for use as control antibody for SEC22B siRNA (h): sc-88456, SEC22B siRNA (m): sc-153306, SEC22B shRNA Plasmid (h): sc-88456-SH, SEC22B shRNA Plasmid (m): sc-153306-SH, SEC22B shRNA (h) Lentiviral Particles: sc-88456-V and SEC22B shRNA (m) Lentiviral Particles: sc-153306-V.

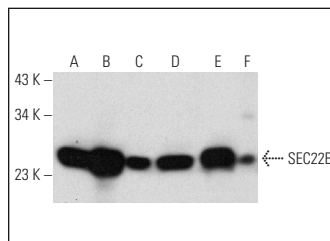
Molecular Weight of SEC22B: 24 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, SW480 cell lysate: sc-2219 or HeLa whole cell lysate: sc-2200.

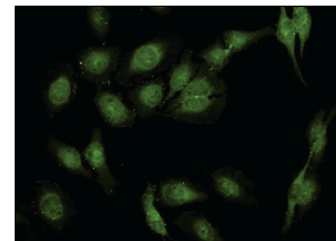
## STORAGE

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

## DATA



SEC22B (29-F7): sc-101267. Western blot analysis of SEC22B expression in HeLa (A), U-87 MG (B), SW480 (C), NIH/3T3 (D) and A-10 (E) whole cell lysates and mouse skeletal muscle tissue extract (F).



SEC22B (29-F7): sc-101267. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Adolf, F., et al. 2013. Scission of COPI and COPII vesicles is independent of GTP hydrolysis. *Traffic* 14: 922-932.
- Zhang, Y., et al. 2015. Genetic vaccines to potentiate the effective CD103<sup>+</sup> dendritic cell-mediated cross-priming of antitumor immunity. *J. Immunol.* 194: 5937-5947.
- Scharn, C.R., et al. 2016. Heme oxygenase-1 regulates inflammation and mycobacterial survival in human macrophages during *Mycobacterium tuberculosis* infection. *J. Immunol.* 196: 4641-4649.
- Fan, J., et al. 2017. CTAGE5 deletion in pancreatic β cells impairs proinsulin trafficking and Insulin biogenesis in mice. *J. Cell Biol.* 216: 4153-4164.
- Dingjan, I., et al. 2017. VAMP8-mediated NOX2 recruitment to endosomes is necessary for antigen release. *Eur. J. Cell Biol.* 96: 705-714.
- Wu, S.J., et al. 2017. A critical analysis of the role of SNARE protein SEC22B in antigen cross-presentation. *Cell Rep.* 19: 2645-2656.
- Moretti, J., et al. 2017. STING senses microbial viability to orchestrate stress-mediated autophagy of the endoplasmic reticulum. *Cell* 171: 809-823.
- Alloatti, A., et al. 2017. Critical role for SEC22B-dependent antigen cross-presentation in antitumor immunity. *J. Exp. Med.* 214: 2231-2241.
- Dolina, J.S., et al. 2017. Cross-presentation of soluble and cell-associated antigen by murine hepatocytes is enhanced by collectrin expression. *J. Immunol.* 198: 2341-2351.
- Adolf, F., et al. 2019. Proteomic profiling of mammalian COPII and COPI vesicles. *Cell Rep.* 26: 250-265.
- Su, L., et al. 2019. Cideb controls sterol-regulated ER export of SREBP/SCAP by promoting cargo loading at ER exit sites. *EMBO J.* 38: e100156.

## RESEARCH USE

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