

SEC22A (A-13): sc-100145

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. There are three mammalian homologs to Sec22p, namely SEC22A, SEC22B and SEC22C. SEC22A is a 307 amino acid protein that belongs to the synaptobrevin family and the SEC22 family of vesicle trafficking proteins. Localizing to endoplasmic reticulum, SEC22A is a multi-pass membrane protein that contains one longin domain. Amyotrophic lateral sclerosis (ALS) is caused by ALS2, a mutated protein that targets the SEC22A gene. The rat and yeast Sec22a proteins share 32% overall sequence identity. The SEC22A gene is conserved in chimpanzee, cow, mouse, rat, chicken and zebrafish, and maps to human chromosome 3q21.1.

REFERENCES

- Hay, J.C., et al. 1996. Mammalian vesicle trafficking proteins of the endoplasmic reticulum and Golgi apparatus. *J. Biol. Chem.* 271: 5671-5679.
- Hay, J.C., et al. 1997. Protein interactions regulating vesicle transport between the endoplasmic reticulum and Golgi apparatus in mammalian cells. *Cell* 89: 149-158.
- Tang, B.L., et al. 1998. Hsec22c: a homolog of yeast Sec22p and mammalian rsec22a and msec22b/ERS-24. *Biochem. Biophys. Res. Commun.* 243: 885-891.
- 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.
- 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.
- Online Mendelian Inheritance in Man, OMIM[™]. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612442. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Cheung, V.G., et al. 2010. Polymorphic *cis*- and *trans*-regulation of human gene expression. *PLoS Biol.* 8 pii: e1000480.

CHROMOSOMAL LOCATION

Genetic locus: SEC22A (human) mapping to 3q21.1; Sec22a (mouse) mapping to 16 B3.

SOURCE

SEC22A (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SEC22A 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.

RESEARCH USE

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

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-100145 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SEC22A (A-13) is recommended for detection of SEC22A 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).

Suitable for use as control antibody for SEC22A siRNA (h): sc-78487, SEC22A siRNA (m): sc-153305, SEC22A shRNA Plasmid (h): sc-78487-SH, SEC22A shRNA Plasmid (m): sc-153305-SH, SEC22A shRNA (h) Lentiviral Particles: sc-78487-V and SEC22A shRNA (m) Lentiviral Particles: sc-153305-V.

Molecular Weight of SEC22A: 35 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) 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[™] Mounting Medium: sc-24941.

PROTOCOLS

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