

SEC24A (T-15): sc-169281

BACKGROUND

SEC24A (SEC24 family, member A) is a 1,093 amino acid protein belonging to the Sec24 subfamily and the Sec23/Sec24 protein family. Members of this family participate in vesicle trafficking from the endoplasmic reticulum (ER) to the Golgi apparatus. Sec24A 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, Sec24A functions as a component of the cytoplasmic COPII complex. The COPII complex acts as a coat, covering ER-derived transport vesicles and promoting the transport of secretory proteins to the Golgi apparatus. Localizing to the cytoplasm, SEC24A is expressed in fibroblasts, hepatocytes, and lymphocytes. SEC24A has the ability to form heterodimers with SEC24B and SEC24C, and exists as two alternatively spliced isoforms.

REFERENCES

1. Tang, B.L., Kausalya, J., Low, D.Y., Lock, M.L. and 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, L. and Paccaud, J.P. 1999. Sec24 proteins and sorting at the endoplasmic reticulum. *J. Biol. Chem.* 274: 7833-7840.
3. Wendeler, M.W., Paccaud, J.P. and Hauri, H.P. 2007. Role of Sec24 isoforms in selective export of membrane proteins from the endoplasmic reticulum. *EMBO Rep.* 8: 258-264.
4. Mancias, J.D. and Goldberg, J. 2007. The transport signal on Sec22 for packaging into COPII-coated vesicles is a conformational epitope. *Mol. Cell.* 26: 403-414.
5. Mancias, J.D. and Goldberg, J. 2008. Structural basis of cargo membrane protein discrimination by the human COPII coat machinery. *EMBO J.* 27: 2918-2928.
6. Faso, C., Chen, Y.N., Tamura, K., Held, M., Zemelis, S., Marti, L., Saravanan, R., Hummel, E., Kung, L., Miller, E., Hawes, C. and Brandizzi, F. 2009. A missense mutation in the *Arabidopsis* COPII coat protein Sec24A induces the formation of clusters of the endoplasmic reticulum and Golgi apparatus. *Plant Cell.* 21: 3655-3671.
7. Nakano, R.T., Matsushima, R., Ueda, H., Tamura, K., Shimada, T., Li, L., Hayashi, Y., Kondo, M., Nishimura, M. and Hara-Nishimura, I. 2009. GNOM-LIKE1/ERMO1 and SEC24a/ERMO2 are required for maintenance of endoplasmic reticulum morphology in *Arabidopsis thaliana*. *Plant Cell.* 21: 3672-3685.
8. Bonnon, C., Wendeler, M.W., Paccaud, J.P. and Hauri, H.P. 2010. Selective export of human GPI-anchored proteins from the endoplasmic reticulum. *J. Cell Sci.* 123: 1705-1715.

CHROMOSOMAL LOCATION

Genetic locus: SEC24A (human) mapping to 5q31.1; Sec24a (mouse) mapping to 11 B1.3.

SOURCE

SEC24A (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SEC24A of human origin.

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-169281 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SEC24A (T-15) is recommended for detection of SEC24A 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 other SEC24 family members.

SEC24A (T-15) is also recommended for detection of SEC24A in additional species, including bovine.

Suitable for use as control antibody for SEC24A siRNA (m): sc-153310, SEC24A shRNA Plasmid (m): sc-153310-SH and SEC24A shRNA (m) Lentiviral Particles: sc-153310-V.

Molecular Weight of SEC24A isoforms 1: 120 kDa.

Molecular Weight of SEC24A isoform 2: 66 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.

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.



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Try **SEC24A (4D9): sc-517155**, our highly recommended monoclonal alternative to SEC24A (T-15).