

# SEC11A/B (T-12): sc-169278

## BACKGROUND

SEC11A is a 179 amino acid protein that belongs to the peptidase S26B family. SEC11A is a single-pass type II membrane protein localizing to microsome and endoplasmic reticulum. SEC11A is a component of the microsomal signal peptidase complex, which removes signal peptides from nascent proteins as they are translocated into the lumen of the endoplasmic reticulum. The microsomal signal peptidase complex consists of five members: SEC11A, SEC11C, SPCS1, SPCS2 and SPCS3. The SEC11A gene is conserved in chimpanzee, dog, cow, mouse, rat, chicken, zebrafish, *S. pombe*, *S. cerevisiae*, *K. lactis*, *E. gossypii*, *M. grisea*, *N. crassa*, *A. thaliana* and rice, and maps to human chromosome 15q25.3. Encoding more than 700 genes, chromosome 15 is made up of approximately 106 million base pairs and is about 3% of the human genome. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is also associated with chromosome 15 through the FBN1 gene.

## REFERENCES

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2. Suzuki, Y., et al. 1997. Construction and characterization of a full length-enriched and a 5'-end-enriched cDNA library. *Gene* 200: 149-156.
3. Stelzl, U., et al. 2005. A human protein-protein interaction network: a resource for annotating the proteome. *Cell* 122: 957-968.
4. Fine, A., et al. 2006. Cloning, expression, and purification of functional Sec11a and Sec11b, type I signal peptidases of the archaeon *Haloferax volcanii*. *J. Bacteriol.* 188: 1911-1919.
5. Zody, M.C., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. *Nature* 440: 671-675.
6. Cachón-González, M.B., et al. 2006. Effective gene therapy in an authentic model of Tay-Sachs-related diseases. *Proc. Natl. Acad. Sci. USA* 103: 10373-10378.
7. Ewing, R.M., et al. 2007. Large-scale mapping of human protein-protein interactions by mass spectrometry. *Mol. Syst. Biol.* 3: 89.

## CHROMOSOMAL LOCATION

Genetic locus: SEC11A (human) mapping to 15q25.3, SEC11B (human) mapping to 8p23.3; Sec11a (mouse) mapping to 7 D3.

## SOURCE

SEC11A/B (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SEC11A 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-169278 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SEC11A/B (T-12) is recommended for detection of SEC11A and SEC11B 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 SEC11C.

SEC11A/B (T-12) is also recommended for detection of SEC11A and SEC11B in additional species, including canine.

Suitable for use as control antibody for SEC11A siRNA (h): sc-89989, SEC11A siRNA (m): sc-153296, SEC11A shRNA Plasmid (h): sc-89989-SH, SEC11A shRNA Plasmid (m): sc-153296-SH, SEC11A shRNA (h) Lentiviral Particles: sc-89989-V and SEC11A shRNA (m) Lentiviral Particles: sc-153296-V.

Molecular Weight of SEC11A/B: 21 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.