

# Sec62 (N-15): sc-12324

## BACKGROUND

In mammalian cells, protein translocation across the endoplasmic reticulum (ER) membrane is almost exclusively co-translational. This transport depends on the Sec61 complex, which is homologous to the yeast Sec61p complex and has been identified in mammals as a ribosome-bound pore-forming membrane protein complex. The Sec61 complex associates with two ubiquitous ER membrane proteins Sec62 (also designated human translocation protein 1 or HTP1) and Sec63. The Sec61 complex forms the hydrophilic pore in the membrane through which the nascent polypeptide is translocated. Sec61p seems to be the evolutionary conserved component since homologues of Sec61p have been found both in bacteria and mammals. Sec62 is expressed in various human tissues such as the heart, brain, placenta, liver and pancreas.

## REFERENCES

1. Simon, S.M. and Blobel, G. 1991. A protein-conducting channel in the endoplasmic reticulum. *Cell* 65: 371-380.
2. Görlich, D. and Rapoport, T.A. 1993. Protein translocation into proteoliposomes reconstituted from purified components of the endoplasmic reticulum membrane. *Cell* 75: 615-630.
3. Hanein, D., Matlack, K.E., Jungnickel, B., Plath, K., Kalies, K.U., Miller, K.R., Rapoport, T.A. and Akey, C.W. 1996. Oligomeric rings of the Sec61p complex induced by ligands required for protein translocation. *Cell* 87: 721-732.
4. Rapoport, T.A., Jungnickel, B. and Kutay, U. 1996. Protein transport across the eukaryotic endoplasmic reticulum and bacterial inner membranes. *Annu. Rev. Biochem.* 65: 271-303.
5. Daimon, M., Susa, S., Suzuki, K., Kato, T., Yamatani, K. and Sasaki, H. 1997. Identification of a human cDNA homologue to the *Drosophila* translocation protein 1 (Dtrp1). *Biochem. Biophys. Res. Commun.* 230: 100-104.
6. Beckmann, R., Bubeck, D., Grassucci, R., Penczek, P., Verschoor, A., Blobel, G. and Frank, J. 1997. Alignment of conduits for the nascent polypeptide chain in the ribosome-Sec61 complex. *Science* 278: 2123-2126.

## CHROMOSOMAL LOCATION

Genetic locus: TLOC1 (human) mapping to 3q26.2; Tloc1 (mouse) mapping to 3 A3.

## SOURCE

Sec62 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Sec62 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-12324 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Sec62 (N-15) is recommended for detection of Sec62 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).

Sec62 (N-15) is also recommended for detection of Sec62 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Sec62 siRNA (h): sc-41286, Sec62 siRNA (m): sc-41287, Sec62 shRNA Plasmid (h): sc-41286-SH, Sec62 shRNA Plasmid (m): sc-41287-SH, Sec62 shRNA (h) Lentiviral Particles: sc-41286-V and Sec62 shRNA (m) Lentiviral Particles: sc-41287-V.

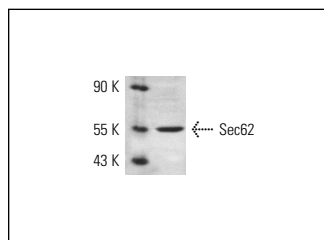
Molecular Weight of Sec62: 55 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Sec62 (N-15): sc-12324. Western blot analysis of Sec62 expression in NIH/3T3 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Ali, B.R., Edwards, L.C. and Field, M.C. 2005. Reconstitution of glycopeptide export in mixed detergent-solubilised and resealed microsomes depleted of luminal components. *J. Biochem. Biophys. Methods* 62: 1-12.

## RESEARCH USE

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