

Sec63 (1A8): sc-517139

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

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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. Scidmore, M.A., et al. 1993. Genetic interactions between KAR2 and SEC63, encoding eukaryotic homologues of DnaK and DnaJ in the endoplasmic reticulum. *Mol. Biol. Cell* 4: 1145-1159.
4. Rapoport, T.A., et al. 1996. Protein transport across the eukaryotic endoplasmic reticulum and bacterial inner membranes. *Annu. Rev. Biochem.* 65: 271-303.
5. Hanein, D., et al. 1996. Oligomeric rings of the Sec61p complex induced by ligands required for protein translocation. *Cell* 87: 721-732.
6. Daimon, M., et al. 1997. Identification of a human cDNA homologue to the *Drosophila* translocation protein 1 (Dtrp1). *Biochem. Biophys. Res. Commun.* 230: 100-104.
7. Beckmann, R., et al. 1997. Alignment of conduits for the nascent polypeptide chain in the ribosome-Sec61 complex. *Science* 278: 2123-2126.
8. Meyer, H.A., et al. 2000. Mammalian Sec61 is associated with Sec62 and Sec63. *J. Biol. Chem.* 275: 14550-14557.
9. Davila, S., et al. 2004. Mutations in SEC63 cause autosomal dominant polycystic liver disease. *Nat. Genet.* 36: 575-577.

CHROMOSOMAL LOCATION

Genetic locus: SEC63 (human) mapping to 6q21; Sec63 (mouse) mapping to 10 B2.

SOURCE

Sec63 (1A8) is a mouse monoclonal antibody raised against amino acids 631-728 representing partial length Sec63 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Sec63 (1A8) is recommended for detection of Sec63 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 Sec63 siRNA (h): sc-41288, Sec63 siRNA (m): sc-41289, Sec63 shRNA Plasmid (h): sc-41288-SH, Sec63 shRNA Plasmid (m): sc-41289-SH, Sec63 shRNA (h) Lentiviral Particles: sc-41288-V and Sec63 shRNA (m) Lentiviral Particles: sc-41289-V.

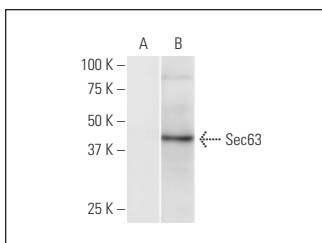
Molecular Weight of Sec63: 97 kDa.

Positive Controls: Sec63 transfected 293T whole cell lysate.

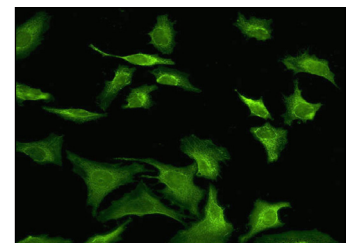
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Sec63 (1A8): sc-517139. Western blot analysis of Sec63 expression in non-transfected (A) and Sec63 transfected (B) 293T whole cell lysates.



Sec63 (1A8): sc-517139. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization.

SELECT PRODUCT CITATIONS

1. Divers, J., et al. 2020. GWAS for time to failure of kidney transplants from African American deceased donors. *Clin. Transplant.* E-published.

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.