



## Tim17 (yV-19): sc-14039

### BACKGROUND

The targeting and subsequent import process involves the commitment of a Tim (translocase in the inner mitochondrial membrane) translocation complex in the mitochondrial inner membrane. The Tim23 complex mediates the import of nuclear encoded preproteins that contain a matrix targeting signal. Tim23 is composed of the integral membrane proteins Tim17 and Tim23 and the membrane protein Tim44, which recruits the mitochondrial HSP70 to the sites of protein import. While the Tim23 complex mediates import of preproteins with a positively charged matrix targeting signal, the Tim22 complex facilitates the insertion of a class of hydrophobic proteins with internal targeting signals into the inner membrane. The Tim22 complex contains the peripheral subunits Tim9, Tim10, and Tim12 and the integral membrane subunits Tim22 and Tim54.

### REFERENCES

- Schulke, N., Sepuri, N.B., Gordon, D.M., Saxena, S., Dancis, A. and Pain, D. 1999. A multisubunit complex of outer and inner mitochondrial membrane protein translocases stabilized *in vivo* by translocation intermediates. *J. Biol. Chem.* 274: 22847-22854.
- Koehler, C.M., Murphy, M.P., Bally, N.A., Leuenberger, D., Oppliger, W., Dolfini, L., Junne, T., Schatz, G. and Or, E. 2000. Tim18p, a new subunit of the Tim22 complex that mediates insertion of imported proteins into the yeast mitochondrial inner membrane. *Mol. Cell. Biol.* 20: 1187-1193.
- Lithgow, T. 2000. Targeting of proteins to mitochondria. *FEBS Lett.* 476: 22-26.
- Bauer, M.F. and Neupert, W. 2001. Import of proteins into mitochondria: a novel pathomechanism for progressive neurodegeneration. *J. Inherit. Metab. Dis.* 24: 166-180.
- Milisav, I., Moro, F., Neupert, W. and Brunner, M. 2001. Modular structure of the Tim23 preprotein translocase of mitochondria. *J. Biol. Chem.* 276: 25856-25861.

### SOURCE

Tim17 (yV-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Tim17 of *Saccharomyces cerevisiae* 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-14039 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.

### RESEARCH USE

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

### APPLICATIONS

Tim17 (yV-19) is recommended for detection of Tim17 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Tim17: 17 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.

### PROTOCOLS

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