



Sls1 (yK-21): sc-23755

BACKGROUND

Sls1 is an endoplasmic reticulum (ER) protein that acts as a nucleotide exchange factor for yeast Kar2 (BiP). Sls1 interacts directly with the ATPase domain of Kar2, suggesting some role in modulating the activity of this vital chaperone. Sls1 (also called Sil1 or Per100) was identified as a homolog of a protein required for efficient cotranslational protein translocation in the yeast *Yarrowia lipolytica*. Sls1 is a membrane-bound regulator of transcription-coupled processes involved in *Saccharomyces cerevisiae* mitochondrial gene expression. Interaction of Kar2 and Sls1 is required for efficient cotranslational translocation of secreted proteins in the yeast *Yarrowia lipolytica*. In a dose-dependent manner, Sls1 stimulates the binding of ScKar2 on the luminal J domain of Sec63. Moreover, Sls1 promotes the Sec63-mediated activation of Kar2's ATPase activity.

REFERENCES

1. Boisrame, A., Beckerich, J.M., and Gaillardin, C. 1996. Sls1p, an endoplasmic reticulum component, is involved in the protein translocation process in the yeast *Yarrowia lipolytica*. *J. Biol. Chem.* 271: 11668-11675.
2. Boisrame, A., Kabani, M., Beckerich, J.M., Hartmann, E., and Gaillardin, C. 1998. Interaction of Kar2p and Sls1p is required for efficient co-translational translocation of secreted proteins in the yeast *Yarrowia lipolytica*. *J. Biol. Chem.* 273: 30903-30908.
3. Kabani, M., Beckerich, J.M., and Gaillardin, C. 2000. Sls1p stimulates Sec63p-mediated activation of Kar2p in a conformation-dependent manner in the yeast endoplasmic reticulum. *Mol. Cell. Biol.* 20: 6923-6934.
4. Kabani, M., Boisrame, A., Beckerich, J.M., and Gaillardin, C. 2000. A highly representative two-hybrid genomic library for the yeast *Yarrowia lipolytica*. *Gene* 241: 309-315.
5. Tyson, J.R. and Stirling, C.J. 2000. LHS1 and SIL1 provide a luminal function that is essential for protein translocation into the endoplasmic reticulum. *Embo J.* 19: 6440-6452.
6. Bryan, A.C., Rodeheffer, M.S., Wearn, C.M., and Shadel, G.S. 2002. Sls1p is a membrane-bound regulator of transcription-coupled processes involved in *Saccharomyces cerevisiae* mitochondrial gene expression. *Genetics* 160: 75-82.
7. Kabani, M., Beckerich, J.M., and Brodsky, J.L. 2002. Nucleotide exchange factor for the yeast Hsp70 molecular chaperone Ssa1p. *Mol. Cell. Biol.* 22: 4677-4689.

SOURCE

Sls1 (yK-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Sls1 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-23755 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Sls1 (yK-21) is recommended for detection of Sls1 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).

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.

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 or our catalog for detailed protocols and support products.