



## Tor1 (yN-15): sc-11900

### BACKGROUND

Tor proteins, which encode putative phosphatidylinositol kinases, are involved in a signal transduction pathway in *S. cerevisiae* that activates cell wall expansion and protein synthesis in response to nutrient availability. Tor1, a 281 kDa protein, mediates protein synthesis via the phosphorylation of Tap42, which inhibits type-2A phosphatases. Tor1 and Tor2 also regulate G<sub>1</sub> progression in yeast, and loss of Tor or treatment with rapamycin causes cells to arrest in early G<sub>1</sub>. In addition to its overlapping function with Tor1, Tor2 is essential for the regulation of the cell-cycle-dependent organization of the actin cytoskeleton. The Tor signaling pathway is thought to mediate cell growth by harboring transcription factors in the cytoplasm, which mediate nutrient metabolism.

### REFERENCES

1. Kunz, J., Henriquez, R., Schneider, U., Deuter-Reinhard, M., Mowva, N.R. and Hall, M.N. 1993. Target of rapamycin in yeast, Tor2, is an essential phosphatidylinositol kinase homolog required for G<sub>1</sub> progression. *Cell* 73: 585-596.
2. Helliwell, S.B., Wagner, P., Kunz, J., Deuter-Reinhard, M., Henriquez, R. and Hall, M.N. 1994. Tor1 and Tor2 are structurally and functionally similar but not identical phosphatidylinositol kinase homologues in yeast. *Mol. Biol. Cell* 5: 105-118.
3. Schmidt, A., Kunz, J. and Hall, M.N. 1996. Tor2 is required for organization of the actin cytoskeleton in yeast. *Proc. Natl. Acad. Sci. USA* 93: 13780-13785.
4. Schmidt, A., Beck T., Koller, A., Kunz, J. and Hall, M.N. 1998. The Tor nutrient signalling pathway phosphorylates NPR1 and inhibits turnover of the tryptophan permease. *EMBO J.* 17: 6924-6931.
5. Helliwell, S.B., Howald, I., Barbet, N. and Hall, M.N. 1998. Tor2 is part of two related signaling pathways coordinating cell growth in *Saccharomyces cerevisiae*. *Genetics* 148: 99-112.
6. Jiang, Y. and Broach, J.R. 1999. Tor proteins and protein phosphatase 2A reciprocally regulate Tap42 in controlling cell growth in yeast. *EMBO* 18: 2782-2792.
7. Beck, T. and Hall, M.N. 1999. The Tor signalling pathway controls nuclear localization of nutrient-regulated transcription factors. *Nature* 402: 689-692.

### SOURCE

Tor1 (yN-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Tor1 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-11900 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Tor1 (yN-15) is recommended for detection of Tor1 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 Tor1: 281 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.

### 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.