SANTA CRUZ BIOTECHNOLOGY, INC.

Tor1 (yL-20): sc-11902

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The Power to Question

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_1 progression in yeast, and loss of Tor or treatment with rapamycin causes cells to arrest in early G_1. 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

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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 (yL-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-11902 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tor1 (yL-20) 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 or our catalog for detailed protocols and support products.