SANTA CRUZ BIOTECHNOLOGY, INC.

Rho1 (yN-17): sc-26180

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The Power to Question

BACKGROUND

In *Saccharomyces cerevisiae*, the small GTPase Rho1 plays an essential role in the control of cell wall synthesis and organization of the actin cytoskeleton. In the budding yeast *S. cerevisiae*, one of the main structural components of the cell wall is 1,3-beta-glucan produced by 1,3-beta-glucan synthase (GS). Rho1 is required for 1,3-beta-glucan synthase activity, as yeast GS is composed of a putative catalytic subunit encoded by FKS1 and FKS2 and a regulatory subunit encoded by Rho1. Rho1 is also required for activation of protein kinase C and the cell integrity pathway, as well as for progression into G1, cell polarization and exocytosis. Activation of PKC1 occurs via the GTPase Rho1 and the kinase pair PKH1 and PKH2. Several regulators for Rho1 are known, including the GTPase-activating proteins (GAPs) SAC7, BEM2 and BAG7. Rho1 directs formin-mediated actin ring assembly during budding yeast cytokinesis.

REFERENCES

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2. Schmelzle, T., et al. 2002. Yeast protein kinases and the Rho1 exchange factor TUS1 are novel components of the cell integrity pathway in yeast. Mol. Cell. Biol. 22: 1329-1339.
3. Schmidt, A., et al. 2002. The Rho1-GAPs SAC7, BEM2 and BAG7 control distinct Rho1 functions in *Saccharomyces cerevisiae*. Mol. Microbiol. 45: 1433-1441.
4. Sekiya-Kawasaki, M., et al. 2002. Dissection of upstream regulatory components of the Rho1p effector, 1,3-beta-glucan synthase, in *Saccharomyces cerevisiae*. Genetics 162: 663-676.
5. Tolliday, N., et al. 2002. Rho1 directs formin-mediated actin ring assembly during budding yeast cytokinesis. Curr. Biol.12: 1864-1870.
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7. Valdivia, R.H., et al. 2003. The yeasts Rho1p and Pkc1p regulate the transport of chitin synthase III (Chs3p) from internal stores to the plasma membrane. Proc. Natl. Acad. Sci. USA 100: 10287-10292.
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SOURCE

Rho1 (yN-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rho1 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-26180 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rho1 (yN-17) is recommended for detection of Rho1 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.