SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc11 (yC-14): sc-34090

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The Power to Question

BACKGROUND

Extracellular pheromones bind to cell surface receptors and stimulate the activation of the kinase Ste20. This leads to the activation of the MAPKKK Ste11 and the subsequent members of this MAP kinase cascade, Ste7, Fus3 (also called Dac2) and Kss1. These MAP kinases activate Ste12 and Far1, which effect transcriptional and morphological changes necessary for mating. Cdc42, a small GTP-binding protein, is thought to activate Ste20. Cdc42 also plays a role in the polarization of budding. Cla4, a homolog of Ste20, interacts with Cdc42 and is also involved in budding and cytokinesis. Cdc11 is also required for cytokinesis and is present at the bud neck during cell division. The kinase Elm1 regulates morphologic differentiation and is involved in controlling pseudohyphal growth.

REFERENCES

1. Errede, B. and Ammerer, G. 1989. Ste12, a protein involved in cell-type-specific transcription and signal transduction in yeast, is part of protein-DNA complexes. Genes Dev. 3: 1349-1361.
2. Johnson, D.I. and Pringle, J.R. 1990. Molecular characterization of Cdc42, a *Saccharomyces cerevisiae* gene involved in the development of cell polarity. J. Cell Biol. 111: 143-152.
3. Blacketer, M.J., et al. 1993. Regulation of dimorphism in *Saccharomyces cerevisiae:* involvement of the novel protein kinase homolog Elm1p and protein phosphatase 2A. Mol. Cell. Biol. 13: 5567-5581.
4. Peter, M., et al. 1993. Far1 links the signal transduction pathway to the cell cycle machinery in yeast. Cell 73: 747-760.
5. Ferguson, B., et al. 1994. The yeast pheromone response pathway: new insights into signal transmission. Cell. Mol. Biol. Res. 40: 223-228.
6. Cvrckova, F., et al. 1995. Ste20-like protein kinases are required for normal localization of cell growth and for cytokinesis in budding yeast. Genes Dev. 9: 1817-1830.
7. Longtine, M.S., et al. 1996. The septins: roles in cytokinesis and other processes. Curr. Opin. Cell Biol. 8: 106-119.
8. Peter, M., et al. 1996. Functional analysis of the interation between the small GTP-binding protein Cdc42 and the Ste20 protein kinase in yeast. EMBO J. 15: 7046-7059.
9. Koehler, C.M. and Myers, A.M. 1997. Serine-threonine protein kinase activity of Elm1p, a regulator of morphologic differentiation in *Saccharomyces cerevisiae*. FEBS Lett. 408: 109-114.

SOURCE

Cdc11 (yC-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cdc11 of *Saccharomyces cerevisiae* origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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-34090 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cdc11 (yC-14) is recommended for detection of Cdc11 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Cdc11: 50 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

SELECT PRODUCT CITATIONS

1. Barreto, L., et al. 2012. The short-term response of yeast to potassium starvation. Environ. Microbiol. 14: 3026-3042.

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.