SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc11 (C-9): sc-166271

SANTA CRUZ BIOTECHNOLOGY

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. 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.

SOURCE

Cdc11 (C-9) is a mouse monoclonal antibody raised against amino acids 1-415 of Cdc11 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cdc11 (C-9) is available conjugated to agarose (sc-166271 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166271 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166271 PE), fluorescein (sc-166271 FITC), Alexa Fluor® 488 (sc-166271 AF488), Alexa Fluor® 546 (sc-166271 AF546), Alexa Fluor® 594 (sc-166271 AF594) or Alexa Fluor® 647 (sc-166271 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166271 AF680) or Alexa Fluor® 790 (sc-166271 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

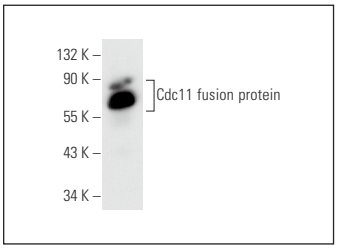
Cdc11 (C-9) is recommended for detection of Cdc11 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Cdc11: 50 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Cdc11 (C-9): sc-166271. Western blot analysis of yeast recombinant Cdc11 fusion protein (Rp 307).

SELECT PRODUCT CITATIONS

1. Homoto, S. and Izawa, S. 2018. Persistent Actin depolarization caused by ethanol induces the formation of multiple small cortical septin rings in yeast. J. Cell Sci. 131: jcs217091.
2. Garcia, I., et al. 2021. Kel1 is a phosphorylation-regulated noise suppressor of the pheromone signaling pathway. Cell Rep. 37: 110186.

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.