SANTA CRUZ BIOTECHNOLOGY, INC.

Hog1 (yC-15): sc-33983

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Yeast cells regulate their internal osmolarity in response to the environment via a MAP kinase cascade. MAP kinase cascades, which transmit extracellular signals to the cytoplasm or nucleuscomprise, comprise an essential branch of signal transduction. The core of these cascades consist of a MAP kinase (mitogen activated protein kinase, also called ERK, for extracellular-regulated protein kinase) as well as one or more up-stream regulatory kinases (MAPKKs or MEKs, for MAP/ERK kinase). High external osmolarity leads to the activation of the MAPKK Pbs2, which activates the MAP kinase Hog1. Hog1 (also called Ssk3) is thought to activate a transcription factor that upregulates the production of osmo-regulatory proteins.

REFERENCES

1. Boguslawski, G. 1992. PBS2, a yeast gene encoding a putative protein kinase, interacts with the RAS2 pathway and affects osmotic sensitivity of *Saccharomyces cerevisiae*. J. Gen. Microbiol. 138: 2425-2432.
2. Brewster, J.L., de Valoir, T., Dwyer, N.D., Winter, E. and Gustin, M.C. 1993. An osmosensing signal transduction pathway in yeast. Science 259: 1760-1763.
3. Schüller, C., et al. 1994. The Hog pathway controls osmotic regulation of transcription via the stress response element (STRE) of the *Saccharomyces cerevisiae* CTT1 gene. EMBO J. 13: 4382-4389.
4. Herskowitz, I. 1995. MAP kinase pathways in yeast: for mating and more. Cell 80: 187-197.
5. Maeda, T., Takekawa, M. and Saito, H. 1995. Activation of yeast Pbs2 MAPKK by MAPKKKs or by binding of an SH3-containing osmosensor. Science 269: 554-558.
6. Posas, F., et al. 1996. Yeast Hog1 MAP kinase cascade is regulated by a multistep phosphorelay mechanism in the SLN1-YPD1-SSK1 "two-component" osmosensor. Cell 86: 865-875.

SOURCE

Hog1 (yC-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Hog1 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-33983 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Hog1 (yC-15) is recommended for detection of Hog1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Hog1: 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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.