

Mpk1 (yN-19): sc-6802

BACKGROUND

Yeasts maintain the integrity of their cell walls via a MAP kinase cascade. This cascade consists of a MAP kinase (mitogen-activated protein kinase, also called ERK, for extracellular regulated kinase) as well as several upstream regulatory kinases (MAPKKs or MEKs, for MAP/ERK kinase). Pkc1 (also designated Sst1), a yeast homolog of the mammalian PKC α , β , and γ isoforms, transmits extracellular signals to Bck1, a MAPKKK (also called Slk1, Ssp31 or Las3). Bck1 then activates two MAPKKs, Mkk1 and Mkk2 (also referred to as Ssp32 and Ssp33, respectively). These in turn activate the MAP kinase Mpk1 (also called Sit2). Mutants lacking any component of this cascade exhibit a defect in cell lysis resulting from deficient cell wall synthesis. Bck2 (also designated Ctr7) has been identified as a suppressor of Pkc1 and Mpk1 deletions.

REFERENCES

- Lee, K.S., et al. 1993. A yeast mitogen-activated protein kinase homolog (Mpk1p) mediates signalling by protein kinase C. *Mol. Cell. Biol.* 13: 3067-3075.
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- Levin, D.E., et al. 1994. Dissecting the protein kinase c/map kinase signalling pathway of *Saccharomyces cerevisiae*. *Cell. Mol. Biol. Res.* 40: 229-239.
- Watanabe, M., et al. 1994. *Saccharomyces cerevisiae* PKC1 encodes a protein kinase C (PKC) homolog with a substrate specificity similar to that of mammalian PKC. *J. Biol. Chem.* 269: 16829-16836.

SOURCE

Mpk1 (yN-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Mpk1 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6802 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mpk1 (yN-19) is recommended for detection of Mpk1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of Mpk1: 60 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.

SELECT PRODUCT CITATIONS

- Saka, A., et al. 2001. Complementing yeast Rho1 mutation groups with distinct functional defects. *J. Biol. Chem.* 276: 46165-46171.
- Collister, M., et al. 2002. YIL113w encodes a functional dual-specificity protein phosphatase which specifically interacts with and inactivates the Sit2/Mpk1p MAP kinase in *S. cerevisiae*. *FEBS Lett.* 527: 186-192.
- Sekiya-Kawasaki, M., et al. 2002. Dissection of upstream regulatory components of the Rho1p effector, 1,3- β -glucan synthase, in *Saccharomyces cerevisiae*. *Genetics* 162: 663-676.
- Griffioen, G., et al. 2003. Feedback inhibition on cell wall integrity signaling by Zds1 involves Gsk3 phosphorylation of a cAMP-dependent protein kinase regulatory subunit. *J. Biol. Chem.* 278: 23460-23471.
- Alic, N., et al. 2003. Lipid hydroperoxides activate the mitogen-activated protein kinase Mpk1p in *Saccharomyces cerevisiae*. *J. Biol. Chem.* 278: 41849-41855.
- Casagrande, V., et al. 2009. Cesium chloride sensing and signaling in *Saccharomyces cerevisiae*: an interplay among the HOG and CWI MAPK pathways and the transcription factor Yaf9. *FEMS Yeast Res.* 9: 400-410.
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- Bauerschmitt, H., et al. 2010. Ribosome-binding proteins Mdm38 and Mba1 display overlapping functions for regulation of mitochondrial translation. *Mol. Biol. Cell* 21: 1937-1944.
- Kilchert, C., et al. 2010. Defects in the secretory pathway and high Ca²⁺ induce multiple P-bodies. *Mol. Biol. Cell* 21: 2624-2638.

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.


 MONOS
Satisfation
Guaranteed

Try **Mpk1 (D-1): sc-374434** or **Mpk1 (E-8): sc-374440**, our highly recommended monoclonal alternatives to Mpk1 (yN-19).