SANTA CRUZ BIOTECHNOLOGY, INC.

Opi1p (yS-20): sc-32633

BACKGROUND

In *Saccharomyces cerevisiae*, recessive mutations at the OPI1 locus result in constitutively derepressed expression of inositol 1-phosphate synthase, the product of the INO1 gene. Many of the other enzymes involved in phospholipid biosynthesis are also expressed at high derepressed levels in OPI1 mutants. Thus, the OPI1 gene is believed to encode a negative regulator that is required to repress a whole subset of structural genes encoding for phospholipid biosynthetic enzymes. The OPI1 gene is nonessential to the organism. The Opi1 protein contains a well defined heptad repeat of leucine residues that has been observed in other regulatory proteins. In addition, the protein contains poly glutamine residue stretches which have also been reported in yeast genes having regulatory functions.

REFERENCES

1. White, M.J., Hirsch, J.P. and Henry SA. 1991. The OPI1 gene of *Saccharomyces cerevisiae*, a negative regulator of phospholipid biosynthesis, encodes a protein containing polyglutamine tracts and a leucine zipper. J. Biol. Chem. 266: 863-872.
2. Grauslund, M., Lopes, J.M. and Ronnow, B.1999. Expression of GUT1, which encodes glycerol kinase in *Saccharomyces cerevisiae*, is controlled by the positive regulators Adr1p, Ino2p and Ino4p and the negative regulator Opi1p in a carbon source-dependent fashion. Nucleic Acids Res. 27: 4391-4398.
3. Graves, J.A., Henry, S.A. 2000. Regulation of the yeast INO1 gene. The products of the INO2, INO4 and OPI1 regulatory genes are not required for repression in response to inositol. Genetics 154: 1485-1495.
4. Sreenivas, A., Villa-Garcia, M.J., Henry, S.A. and Carman, G.M. 2001. Phosphorylation of the yeast phospholipid synthesis regulatory protein Opi1p by protein kinase C. J. Biol. Chem. 276: 29915-29923.
5. Kaadige, M.R. and Lopes, J.M. 2003. Opi1p, Ume6p and Sin3p control expression from the promoter of the INO2 regulatory gene via a novel regulatory cascade. Mol. Microbiol. 48: 823-832.
6. Sreenivas, A. and Carman, G.M. 2003. Phosphorylation of the yeast phospholipid synthesis regulatory protein Opi1p by protein kinase A. J. Biol. Chem. 278: 20673-20680.
7. Kaadige, M.R. and Lopes, J.M. 2006. Analysis of Opi1p repressor mutants. Curr. Genet. 49: 30-38.
8. Chang, Y.F. and Carman, G.M. 2006. Casein kinase II phosphorylation of the yeast phospholipid synthesis transcription factor Opi1p. J. Biol. Chem. Epublished ahead of print.

SOURCE

Opi1p (yS-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Opi1p 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-32633 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Opi1p (yS-20) is recommended for detection of Opi1p 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. 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.

PROTOCOLS

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