# SSK1 (yE-16): sc-79734



The Power to Question

#### **BACKGROUND**

SSK1 (osomolarity two-component system protein SSK1) is a 712 amino acid cytoplasmic protein. SSK1 is the final receptor of the Sln1-YPD1-SSK1 two-component regulatory system, which, in response to changes in the osmolarity of the extracellular environment, regulates the activity of the Hog1 pathway. During normal osmolarity, the phosphorelay intermediate protein YPD1 maintains SSK1 in a phosphorylated and inactive state. Under high osmolarity conditions, the unphosphorylated form of SSK1 activates SSK2 and SSK22, proteins which further stimulate the Pbs2-Hog1 MAPKK-MAPK pathway.

## **REFERENCES**

- Sotelo, J. and Rodríguez-Gabriel, M.A. 2006. Mitogen-activated protein kinase Hog1 is essential for the response to arsenite in *Saccharomyces* cerevisiae. Eukaryotic Cell 5: 1826-1830.
- Menon, V., Li, D., Chauhan, N., Rajnarayanan, R., Dubrovska, A., West, A.H. and Calderone, R. 2006. Functional studies of the Ssk1p response regulator protein of *Candida albicans* as determined by phenotypic analysis of receiver domain point mutants. Mol. Microbiol. 62: 997-1013.
- Menon, V., Li, D., Chauhan, N., Rajnarayanan, R., Dubrovska, A., West, A.H. and Calderone, R. 2007. Two-component response regulators Ssk1p and Skn7p additively regulate high-osmolarity adaptation and fungicide sensitivity in *Cochliobolus heterostrophus*. Eukaryotic Cell 6: 171-181.
- 4. Horie, T., Tatebayashi, K., Yamada, R. and Saito, H. 2008. Phosphorylated SSK1 prevents unphosphorylated SSK1 from activating the SSK2 mitogenactivated protein kinase kinase kinase in the yeast high-osmolarity glycerol osmoregulatory pathway. Mol. Cell. Biol. 28: 5172-5183.
- Kaserer, A.O., Andi, B., Cook, P.F. and West, A.H. 2009. Effects of osmolytes on the SIn1-YPD1-SSK1 phosphorelay system from *Saccharomyces cere*visiae. Biochemistry 48: 8044-8050.
- Krantz, M., Ahmadpour, D., Ottosson, L.G., Warringer, J., Waltermann, C., Nordlander, B., Klipp, E., Blomberg, A., Hohmann, S. and Kitano, H. 2009. Robustness and fragility in the yeast high osmolarity glycerol (HOG) signal-transduction pathway. Mol. Syst. Biol. 5: 281.

#### **SOURCE**

SSK1 (yE-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SSK1 of *Saccharomyces cerevisiae* origin.

# **PRODUCT**

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

Blocking peptide available for competition studies, sc-79734 P, (100  $\mu$ g 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.

### **APPLICATIONS**

SSK1 (yE-16) is recommended for detection of SSK1 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 SSK1: 79 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.

# **PROTOCOLS**

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

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**