



Snf1 (yK-16): sc-15622

BACKGROUND

The Snf1/AMP-activated protein kinase family has broad roles in transcriptional, metabolic, and developmental regulation in response to stress. The SNF1 gene of *Saccharomyces cerevisiae* encodes a protein-serine/threonine kinase that is required for derepression of gene expression in response to glucose limitation. Snf1 kinase complexes contain the α (catalytic) subunit Snf1, one of the three related β subunits Gal83, Sip1, or Sip2, and the γ subunit Snf4. Snf1 is known to associate with several proteins. One is Sip1, a protein that becomes phosphorylated in the presence of Snf1 and thus is a candidate Snf1 kinase substrate. Additionally, Snf1 is essential for the derepression of Suc, which encodes invertase and the Snf4 protein is physically associated with Snf1 and positively affects the kinase activity.

REFERENCES

1. Celenza, J.L. and Carlson, M. 1989. Mutational analysis of the *Saccharomyces cerevisiae* Snf1 protein kinase and evidence for functional interaction with the Snf4 protein. *Mol. Cell. Biol.* 9: 5034-5044.
2. Celenza, J.L., Eng, F.J. and Carlson, M. 1989. Molecular analysis of the SNF4 gene of *Saccharomyces cerevisiae*: evidence for physical association of the Snf4 protein with the Snf1 protein kinase. *Mol. Cell. Biol.* 9: 5045-5054.
3. Le Guen, L., Thomas, M., Bianchi, M., Halford, N.G. and Kreis, M. 1992. Structure and expression of a gene from *Arabidopsis thaliana* encoding a protein related to Snf1 protein kinase. *Gene* 120: 249-254.
4. Estruch, F., Treitel, M.A., Yang, X. and Carlson, M. 1992. N-terminal mutations modulate yeast Snf1 protein kinase function. *Genetics* 132: 639-650.
5. Mylin, L.M., Bushman, V.L., Long, R.M., Yu, X., Lebo, C.M., Blank, T.E. and Hopper, J.E. 1994. Sip1 is a catabolite repression-specific negative regulator of GAL gene expression. *Genetics* 137: 689-700.
6. Vincent, O., Townley, R., Kuchin, S. and Carlson, M. 2001. Subcellular localization of the Snf1 kinase is regulated by specific β subunits and a novel glucose signaling mechanism. *Genes Dev.* 15: 1104-1114.

SOURCE

Snf1 (yK-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Snf1 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-15622 P, (100 μ 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

Snf1 (yK-16) is recommended for detection of Snf1 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.

SELECT PRODUCT CITATIONS

1. Sutherland, C.M., et al. 2003. Elm1p is one of three upstream kinases for the *Saccharomyces cerevisiae* Snf1 complex. *Curr. Biol.* 13: 1299-1305.
2. Puig, S., et al. 2008. Cooperation of two mRNA-binding proteins drives metabolic adaptation to iron deficiency. *Cell Metab.* 7: 555-564.

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.