SANTA CRUZ BIOTECHNOLOGY, INC.

GIN4 (yK-16): sc-30416

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Saccharomyces cerevisiae utilize a variety of signaling molecules that regulate biochemical events at the cellular level, mediating proper response to developmental signals and environmental variables. The serine/threonine protein kinase, GIN4, plays a role in septin assembly. Septins are GTPases involved in cytokinesis. In yeast, they form a ring at the cleavage site. Gin4, designated one of the bud-neck proteins, is required in budding yeast for localization of the septins and for proper control of daughter cell growth during G2/M. Gin4 organizes the septin ring but not the basal septin band. Gin4 becomes hyperphosphorylated when cells enter mitosis, leading to activation of Gin4 kinase activity.

REFERENCES

1. Jacq, C., et al. 1997. The nucleotide sequence of *Saccharomyces cerevisiae* chromosome IV. Nature 387: 75-78 (1997)
2. Longtine, M.S., Fares, H. and Pringle, J.R. 1998. Role of the yeast Gin4p protein kinase in septin assembly and the relationship between septin assembly and septin function. J. Cell Biol. 143: 719-736
3. Longtine, M.S., et al. 2000. Septin-dependent assembly of a cell cycle-regulatory module in *Saccharomyces cerevisiae*. Mol. Cell. Biol. 20: 4049-61.
4. Mortensen, E.M., et al. 2002. Cell cycle-dependent assembly of a Gin4-septin complex. Mol. Biol. Cell. 13: 2091-2105.
5. Okuzaki, D., et al. 2003. The *Saccharomyces cerevisiae* bud-neck proteins Kcc4 and Gin4 have distinct but partially-overlapping cellular functions. Genes Genet. Syst. 78: 113-26.
6. Dobbelaere, J., et al. 2003. Phosphorylation-dependent regulation of septin dynamics during the cell cycle. Dev. Cell. 4: 345-57.
7. Wightman, R., et al. 2004. In Candida albicans, the Nim1 kinases Gin4 and Hsl1 negatively regulate pseudohypha formation and Gin4 also controls septin organization. J. Cell. Biol. 164: 581-91.

SOURCE

GIN4 (yK-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GIN4 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-30416 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.

RESEARCH USE

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

APPLICATIONS

GIN4 (yK-16) is recommended for detection of GIN4 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).

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.

PROTOCOLS

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