

Spo12 (yK-14): sc-30441

BACKGROUND

Meiotic cellular division is required for the production of haploid gametes from diploid cells. During meiosis, there are two rounds of chromosome segregation, designated meiosis I and meiosis II. Spo12 (sporulation-specific protein 12) is a 173 amino acid protein that is involved in the chromosome division during meiosis I. Localized to the nucleus, Spo12 is also a component of the FEAR (Cdc14 early anaphase release) network, responsible for the release of Cdc14 from the nucleolus during early anaphase. Spo12 is also thought to be a positive regulator of mitotic exit.

REFERENCES

1. Molero, G., Yuste-Rojas, M., Montesi, A., Vázquez, A., Nombela, C. and Sanchez, M. 1993. A Cdc-like autolytic *Saccharomyces cerevisiae* mutant altered in budding site selection is complemented by Spo12, a sporulation gene. *J. Bacteriol.* 175: 6562-6570.
2. Grether, M.E. and Herskowitz, I. 1999. Genetic and biochemical characterization of the yeast spo12 protein. *Mol. Biol. Cell.* 10: 3689-3703.
3. Gruneberg, U., Campbell, K., Simpson, C., Grindlay, J. and Schiebel, E. 2000. Nud1p links astral microtubule organization and the control of exit from mitosis. *EMBO J.* 19: 6475-6488.
4. Shah, R., Jensen, S., Frenz, L.M., Johnson and A.L., Johnston, L.H. 2001. The Spo12 protein of *Saccharomyces cerevisiae*: a regulator of mitotic exit whose cell cycle-dependent degradation is mediated by the anaphase-promoting complex. *Genetics* 159: 965-980.
5. Chaves, S.R. and Blobel, G. 2001. Nuclear import of Spo12p, a protein essential for meiosis. *J. Biol. Chem.* 276: 17712-17717.
6. Stegmeier, F., Visintin, R. and Amon, A. 2002. Separase, polo kinase, the kinetochore protein Slk19, and Spo12 function in a network that controls Cdc14 localization during early anaphase. *Cell* 108: 207-220.
7. D'Amours, D., Stegmeier, F. and Amon, A. 2004. Cdc14 and condensin control the dissolution of cohesin-independent chromosome linkages at repeated DNA. *Cell* 117: 455-469.
8. Höfken, T. and Schiebel, E. 2004. Novel regulation of mitotic exit by the Cdc42 effectors Gic1 and Gic2. *J. Cell Biol.* 164: 219-231.
9. Strome, E.D., Wu, X., Kimmel, M. and Plon, S.E. 2008. Heterozygous screen in *Saccharomyces cerevisiae* identifies dosage-sensitive genes that affect chromosome stability. *Genetics* 178: 1193-1207.

SOURCE

Spo12 (yK-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Spo12 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-30441 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Spo12 (yK-14) is recommended for detection of Spo12 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 Spo12: 20 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.

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.

PROTOCOLS

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