



► Scc1 (yC-12): sc-26722

BACKGROUND

S-phase produces duplicate sister chromatids that are held together by a cohesion complex. Scc1/Mcd1 is a component of this cohesin complex (Smc1, Smc3, Scc1, Scc3) that is essential for normal mitotic division in eukaryotic cells. Scc1 helps establish the spindle-kinetochore (SK) interaction and inhibit sister chromatid separation prior to anaphase. Maintaining cohesin of the SK interaction is necessary for proper bipolar orientation and alignment of sister chromatids on the metaphase spindle. Anaphase polo/Cdc5 kinase phosphorylates serine residues adjacent to Scc1 which enhances separase-mediated Scc1/Mcd1 proteolytic cleavage and subsequent sister-chromatid segregation.

REFERENCES

1. Amon, A. 2001. Together until separin do us part. *Nat. Cell Biol.* 3: 12-14.
2. Alexandru, G., Uhlmann, F., Mechtler, K., Poupart, M.A., and Nasmyth, K. 2001. Phosphorylation of the cohesin subunit Scc1 by Polo/Cdc5 kinase regulates sister chromatid separation in yeast. *Cell* 105: 459-472.
3. Hoque, M.T. and Ishikawa, F. 2002. Cohesin defects lead to premature sister chromatid separation, kinetochore dysfunction, and spindle-assembly checkpoint activation. *J. Biol. Chem.* 277: 42306-42314.
4. Haering, C.H., Lowe, J., Hochwagen, A., and Nasmyth, K. 2002. Molecular architecture of SMC proteins and the yeast cohesin complex. *Mol. Cell* 9: 773-788.
5. Toyoda, Y., Furuya, K., Goshima, G., Nagao, K., Takahashi, K., and Yanagida, M. 2002. Requirement of chromatid cohesion proteins rad21/scc1 and mis4/scc2 for normal spindle-kinetochore interaction in fission yeast. *Curr. Biol.* 12: 347-358.

SOURCE

Scc1 (yC-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Scc1 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-26722 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.

PROTOCOLS

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

APPLICATIONS

Scc1 (yC-12) is recommended for detection of Scc1 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.