SANTA CRUZ BIOTECHNOLOGY, INC.

Mps1 (yK-12): sc-25956

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The Power to Question

BACKGROUND

Mps1 kinase plays an evolutionary conserved role in the mitotic spindle checkpoint. Mps1 is required for centrosome duplication and the spindle checkpoint. This system precludes anaphase onset until all chromosomes have successfully attached to spindle microtubules via their kinetochores. Mps1 overexpression in budding yeast is sufficient to trigger a mitotic arrest, which is dependent on the other mitotic checkpoint components, Bub1, Bub3, Mad1, Mad2, and Mad3. Mitotic arrest induced by excess Mps1p expression is due to the action of the MAD2 branch of the spindle checkpoint pathway and excess Mps1p acts downstream of the kinetochore.

REFERENCES

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3. Castillo, A.R., et al. 2002. The yeast protein kinase Mps1p is required for assembly of the integral spindle pole body component Spc42p. J. Cell. Biol. 156: 453-465.
4. Kitagawa, K., et al. 2003. Requirement of Skp1-Bub1 interaction for kinetochore-mediated activation of the spindle checkpoint. Mol. Cell. 11: 1201-1213.
5. Fisk, H.A., et al. 2003. Human Mps1 protein kinase is required for centrosome duplication and normal mitotic progression. Proc. Natl. Acad. Sci. USA. 100: 14875-14880.
6. Poddar, A., et al. 2004. Differential kinetochore requirements for establishment and maintenance of the spindle checkpoint are dependent on the mechanism of checkpoint activation in *Saccharomyces cerevisiae*. Cell. Cycle. 3: 197-204.
7. Fisk, H.A., et al. 2004. A field guide to the Mps1 family of protein kinases. Cell. Cycle. 3: 439-442.
8. Jaspersen, S.L., et al. 2004. Cdc28/Cdk1 regulates spindle pole body duplication through phosphorylation of Spc42 and Mps1. Dev. Cell. 7: 263-274.
9. Fischer, M.G., et al. 2004. The mitotic arrest in response to hypoxia and of polar bodies during early embryogenesis requires *Drosophila* Mps1. Curr. Biol. 14: 2019-2024.

SOURCE

Mps1 (yK-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Mps1 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-25956 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mps1 (yK-12) is recommended for detection of Mps1 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.

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.