SANTA CRUZ BIOTECHNOLOGY, INC.

Mms4 (yN-17): sc-26612

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The Power to Question

BACKGROUND

DNA nucleases catalyze the cleavage of phosphodiester bonds. These enzymes play crucial roles in various DNA repair processes, which involve DNA replication, base excision repair, nucleotide excision repair, mismatch repair, and double strand break repair. Mms4 and Mus81 form a heterodimeric structure-specific endonuclease that cleaves branched DNA during the meiotic phase. The Mms4 and Mus81 endonuclease has been implicated in the processing of aberrant DNA junctions formed at stalled replication forks. The Mms4 gene of *Saccharomyces cerevisiae* was originally identified as the gene responsible for Mms4, one of the methyl methanesulfonate (MMS)-sensitive mutants. Mms4 is a transcriptional (co)activator that protects *Saccharomyces cerevisiae* cells from endogenous and environmental DNA damage. Budding yeast Mms4 is epistatic with Rad52 and the function of Mms4 can be replaced by a bacterial Holliday junction resolvase. The MMS4 gene encodes a 691-amino acid, 78.7-kDa protein.

REFERENCES

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2. de los Santos, T., Loidl, J., Larkin, B., and Hollingsworth, N.M. 2001. A role for MMS4 in the processing of recombination intermediates during meiosis in *Saccharomyces cerevisiae*. Genetics. 159: 1511-1525.
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6. Odagiri, N., Seki, M., Onoda, F., Yoshimura, A., Watanabe, S., and Enomoto, T. 2003. Budding yeast Mms4 is epistatic with Rad52 and the function of Mms4 can be replaced by a bacterial Holliday junction resolvase. DNA Repair (Amst). 2: 347-358.

SOURCE

Mms4 (yN-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Mms4 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-26612 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mms4 (yN-17) is recommended for detection of Mms4 of *Saccaromyces 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.