SANTA CRUZ BIOTECHNOLOGY, INC.

Fob1 (yL-18): sc-26163

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The Power to Question

BACKGROUND

Fob1 is a 566 amino acid protein encoded by the yeast gene FOB1. DNA damage can result in a replication block that stalls replication forks. The recovery of such stalled replication forks plays a crucial role in the genomic maintenance. A pause in DNA replication can also promote double-strand breaks and mitotic recombination. In *Saccharomyces cerevisiae*, the ribosomal DNA (rDNA) locus serves as a model to study all stages of DNA replication. Yeast cells carry approximately 150 rDNA copies in tandem repeats, with each repeat consisting of the 35S rRNA gene, the NTS1 spacer, the 5S rRNA gene and the NTS2 spacer. Fob1 (fork blocking less) regulates replication fork block (RFB) activity at the RFB site in NTS1, recombination hot spot activity and rDNA repeat expansion and contraction. Mutations in the Fob1 gene slows production of circular species of rDNA produced by the tandem repeats, which extends the life span of yeast cells.

REFERENCES

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3. Kobayashi, T., Nomura, M. and Horiuchi, T. 2001. Identification of DNA *cis* elements essential for expansion of ribosomal DNA repeats in *Saccharomyces cerevisiae*. Mol. Cell. Biol. 21: 136-147.
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6. Ogrunc, M. and Sancar, A. 2003. Identification and characterization of human MUS81-MMS4 structure specific endonuclease. J. Biol. Chem. 278: 21715-21720.
7. Weitao, T., Budd, M., Mays Hoopes, L.L. and Campbell, J.L. 2003. Dna2 helicase/nuclease causes replicative fork stalling and double-strand breaks in the ribosomal DNA of *Saccharomyces cerevisiae*. J. Biol. Chem. 278: 22513-22522.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

SOURCE

Fob1 (yL-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Fob1 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-26163 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Fob1 (yL-18) is recommended for detection of Fob1 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.

RESEARCH USE

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