



## Fob1 (y-300): sc-98575

### 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 slow 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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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.

### SOURCE

Fob1 (y-300) is a rabbit polyclonal antibody raised against amino acids 267-566 mapping at 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.

### APPLICATIONS

Fob1 (y-300) is recommended for detection of Fob1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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](http://www.scbt.com) or our catalog for detailed protocols and support products.