



Rad54 (yC-16): sc-30570

BACKGROUND

During meiotic prophase, homologous chromosomes pair with one another, undergo genetic recombination, and engage in synaptonemal complex formation. These interhomologue interactions are necessary to establish chiasmata. If homologues fail to interact, or if crossing over takes place between non-homologous chromosomes, homologues undergo nondisjunction at meiosis I, and inviable meiotic products occur. Interactions between Rad51 and Rad52 are essential for DNA homologous recombination as well as for DNA double-strand break repair in *Saccharomyces cerevisiae*. Rad54, which is inducible by X-rays, is also involved in DNA repair and recombination in *S. cerevisiae*. Hop2 is expressed during meiosis and may function to prevent synapsis between nonhomologous chromosomes. Hop2 is localized to chromosomes prior to and during synapsis.

REFERENCES

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4. Tsukamoto, Y., Kato, J. and Ikeda, H. 1996. Effects of mutations of RAD50, RAD51, RAD52, and related genes on illegitimate recombination in *Saccharomyces cerevisiae*. *Genetics* 142: 383-391.
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6. Petukhova, G., Stratton, S. and Sung, P. 1998. Catalysis of homologous DNA pairing by yeast Rad51 and Rad54 proteins. *Nature* 393: 91-94.
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SOURCE

Rad54 (yE-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rad54 of *Saccharomyces cerevisiae* origin.

STORAGE

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

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-30569 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rad54 (yE-21) is recommended for detection of Rad54 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Molecular Weight of Rad54: 85 kDa.

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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.