



## Rad5 (yC-16): sc-15548

### BACKGROUND

Considerable homology has recently been noted between the proteins encoded by the Rad5, Rad16 and Rad54 genes of *Saccharomyces cerevisiae*. These genes are members of the Rad6, Rad3 and Rad50 epistasis groups, respectively, which correspond to the three major DNA repair pathways in yeast. The Rad5 gene functions in postreplication repair of ultraviolet damaged DNA, and interestingly, it also has a role in increasing the instability of simple repetitive sequences in the genome. In contrast to DNA mismatch repair genes which function in maintaining constant length of repeat sequences, Rad5 promotes alterations in the length of repeat sequences.

### REFERENCES

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- Johnson, R.E., Henderson, S.T., Petes, T.D., Prakash, S., Bankmann, M., and Prakash, L. 1992. *Saccharomyces cerevisiae* RAD5-encoded DNA repair protein contains DNA helicase and zinc-binding sequence motifs and affects the stability of simple repetitive sequences in the genome. *Mol. Cell. Biol.* 12: 3807-3818.
- Glassner, B.J. and Mortimer, R.K. 1994. Synergistic interactions between Rad5, Rad16 and Rad54, three partially homologous yeast DNA repair genes each in a different repair pathway. *Radiat. Res.* 139: 24-33.
- Johnson, R.E., Prakash, S., and Prakash, L. 1994. Yeast DNA repair protein RAD5 that promotes instability of simple repetitive sequences is a DNA-dependent ATPase. *J. Biol. Chem.* 269: 28259-28262.
- Ulrich, H.D. and Jentsch, S. 2000. Two RING finger proteins mediate cooperation between ubiquitin-conjugating enzymes in DNA repair. *EMBO J.* 19: 3388-3397.
- Xiao, W., Chow, B.L., Broomfield, S., and Hanna, M. 2000. The *Saccharomyces cerevisiae* Rad6 group is composed of an error-prone and two error-free postreplication repair pathways. *Genetics* 155: 1633-1641.

### SOURCE

Rad5 (yC-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rad5 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-15548 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### APPLICATIONS

Rad5 (yC-16) is recommended for detection of Rad5 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### RESEARCH USE

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