



Rad23 (yG-20): sc-15556

BACKGROUND

The Rad23 gene of *Saccharomyces cerevisiae* is required for excision-repair of UV damaged DNA. Rad23 resembles the other DNA repair genes, Rad2, Rad6, Rad7, Rad18 and Rad54, all of which also exhibit increased transcription in response to DNA damage and during meiosis. Rad23 encodes a nuclear protein containing a ubiquitin-like domain required for biological function. Rad23 bears a ubiquitin-like domain at its amino terminus and this ubiquitin-like domain affects protein function in a nonproteolytic manner. Rad23 is a highly conserved protein involved in nucleotide excision repair (NER) that associates with the proteasome via its amino-terminus. Its carboxy-terminal ubiquitin-associated domain is evolutionarily conserved from yeast to humans. In addition to a role in DNA repair events in yeast, several lines of evidence indicate that the Rad23 protein may regulate the activity of the 26 S proteasome.

REFERENCES

1. Madura, K. and Prakash, S. 1990. Transcript levels of the *Saccharomyces cerevisiae* DNA repair gene RAD23 increase in response to UV light and in meiosis but remain constant in the mitotic cell cycle. *Nucleic Acids Res.* 18: 4737-4742.
2. Jones, J.S. and Prakash, L. 1991. Transcript levels of the *Saccharomyces cerevisiae* DNA repair gene Rad18 increase in UV irradiated cells and during meiosis but not during the mitotic cell cycle. *Nucleic Acids Res.* 19: 893-898.
3. Watkins, J.F., Sung, P., Prakash, L. and Prakash, S. 1993. The *Saccharomyces cerevisiae* DNA repair gene Rad23 encodes a nuclear protein containing a ubiquitin-like domain required for biological function. *Mol. Cell. Biol.* 13: 7757-7765.
4. Suzuki, T., Park, H., Kwofie, M.A. and Lennarz, W.J. 2001. Rad23 provides a link between the Png1 deglycosylating enzyme and the 26 S proteasome in yeast. Rad23 provides a link between the Png1 deglycosylating enzyme and the 26 S proteasome in yeast. *J. Biol. Chem.* 276: 21601-21607.

CHROMOSOMAL LOCATION

Genetic locus: RAD23A (human) mapping to 19p13.2; Rad23a (mouse) mapping to 8 C3.

SOURCE

Rad23 (yG-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rad23 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-15556 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

Rad23 (yG-20) is recommended for detection of Rad23 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.

PROTOCOLS

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