SANTA CRUZ BIOTECHNOLOGY, INC.

Rad27 (F-12): sc-26718

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cells utilize mechanisms of mismatch repair (MMR) to maintain the integrity of the genome. DNA single-base mismatches include misincorporation of nucleotides by DNA polymerase, deamination of cytosine to uracil thereby forming U/G mispairs, or recombination between homeologous sequences. The Saccharomyces cerevisiae RAD27 gene encodes the yeast homologue of the mammalian FEN-1 nuclease, which processes Okazaki fragments during DNA lagging-strand synthesis. Rad27 (FEN-1) protein is a single-stranded DNA endonuclease and 5'-3' exonuclease that functions in the msh2-mlh1-pms1-dependent MMR system. The endonuclease activity of Rad27 (FEN-1) reduces recombination events between short sequences.

REFERENCES

1. Kaur, B., Fraser, J.L., Freyer, G.A., Davey, S. and Doetsch, P.W. 1999. A Uve1p-mediated mismatch repair pathway in *Schizosaccharomyces pombe*. Mol. Cell. Biol. 19: 4703-4710.
2. Modrich, P. 1997. Strand-specific mismatch repair in mammalian cells. J. Biol. Chem. 272: 24727-24730.
3. Parenteau, J. and Wellinger, R.J. 1999. Accumulation of single-stranded DNA and destabilization of telomeric repeats in yeast mutant strains carrying a deletion of RAD27. Mol. Cell. Biol. 19: 4143-4152.
4. Crouse, G. F. 1998. Mismatch repair systems in *Saccharomyces cerevisiae*. In Nickoloff, J.A. and Hoekstra M.F. ed., DNA repair in prokaryotes and lower eukaryotes, vol. 1. DNA damage and repair. New Jersey: Humana Press, Inc., 411-448.
5. Negritto, M.C., Qiu, J., Ratay, D.O., Shen, B. and Bailis, A.M. 2001. Novel function of Rad27 (FEN-1) in restricting short-sequence recombination. Mol. Cell. Biol. 21: 2349-2358.

SOURCE

Rad27 (F-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Rad27 of yeast 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-26718 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

Rad27 (F-12) is recommended for detection of Rad27 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.