

Rad17 (C-19): sc-12416

BACKGROUND

DNA damage results in the arrest of cell cycle progression, allowing the damaged DNA to be repaired prior to replication. Checkpoints exist at several cell cycle phase transitions to maintain this genetic integrity. Rad9, Rad17, Rad24 and Mec3 are involved in activating the G₁ and G₂ checkpoints. Pol2 (also known as Dun2), encoding the catalytic subunit of DNA polymerase epsilon, plays a role in activating the S phase checkpoint. The protein kinase Rad53 (also designated Spk1, Mec2 or Sad1) is essential for both G₂ and S phase arrest. Activation of Rad53 is regulated by Mec1 (also known as Esr1 and Sad3), a homolog of the human ATM protein. Pds1 and Mad2 both regulate checkpoints associated with incomplete spindle replication. Dun1, another protein kinase, plays a role in transducing the DNA damage signal.

REFERENCES

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- Siede, W., et al. 1996. Cloning and characterization of RAD17, a gene controlling cell cycle responses to DNA damage in *Saccharomyces cerevisiae*. *Nucleic Acids Res.* 24: 1669-1675.
- Lydall, D., et al. 1996. A meiotic recombination checkpoint controlled by mitotic checkpoint genes. *Nature* 383: 840-843.
- Longhese, M.P., et al. 1996. Yeast pep3/mec3 mutants fail to delay entry into S phase and to slow DNA replication in response to DNA damage, and they define a functional link between Mec3 and DNA primase. *Mol. Cell. Biol.* 16: 3235-3244.
- Navas, T.A., et al. 1996. RAD9 and DNA polymerase epsilon form parallel sensory branches for transducing the DNA damage checkpoint signal in *Saccharomyces cerevisiae*. *Genes Dev.* 10: 2632-2643.

CHROMOSOMAL LOCATION

Genetic locus: RAD17 (human) mapping to 5q13.2.

SOURCE

Rad17 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rad17 of human 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-12416 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

Rad17 (C-19) is recommended for detection of Rad17 of human 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).

Suitable for use as control antibody for Rad17 siRNA (h): sc-36358, Rad17 shRNA Plasmid (h): sc-36358-SH and Rad17 shRNA (h) Lentiviral Particles: sc-36358-V.

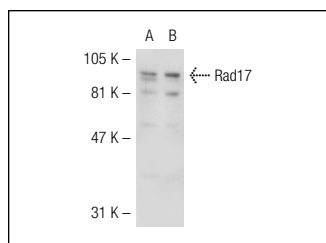
Molecular Weight of Rad17: 75 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Rad17 (h): 293T Lysate: sc-114889 or K-562 nuclear extract: sc-2130.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Rad17 (C-19): sc-12416. Western blot analysis of Rad17 expression in non-transfected: sc-117752 (A) and human Rad17 transfected: sc-114889 (B) 293T whole cell lysates.

RESEARCH USE

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

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Try **Rad17 (H-3): sc-17761**, our highly recommended monoclonal alternative to Rad17 (C-19).