

Rad53 (yC-19): sc-6749

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 ϵ , 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.

SOURCE

Rad53 (yC-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rad53 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6749 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rad53 (yC-19) is recommended for detection of Rad53 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of Rad53: 92 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.

STORAGE

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

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.

SELECT PRODUCT CITATIONS

- Pike, B.L., et al. 2001. Role of the N-terminal forkhead-associated domain in the cell cycle checkpoint function of the Rad53 kinase. *J. Biol. Chem.* 276: 14019-14026.
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 MONOS
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Try **Rad53 (A-9): sc-74427** or **Rad53 (B-6): sc-74426**, our highly recommended monoclonal alternatives to Rad53 (yC-19).