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#3425

Rad52 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IF-IC	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 40	Source/Isotype: Rabbit	UniProt ID: #P43351	Entrez-Gene Id: 5893
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Product Usage Information

Application

Western Blotting
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Rad52 Antibody detects endogenous levels of total Rad52 protein.

Species predicted to react based on 100% sequence homology

Hamster

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the central sequence of human Rad52. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Repair of DNA double-stranded breaks (DSBs) can occur via nonhomologous end joining (NHEJ), homologous recombination (HR), or other DSB repair pathways (1). In yeast, one family of proteins involved in HR is the Rad52 group, which includes Rad52 itself, Rad51, and Rad54 (1). Vertebrate cells lacking Rad51, Rad52, or Rad54 often show enhanced sensitivity to ionizing radiation (IR) or chromosomal abnormalities (2-4). In response to IR-induced DNA damage, ATM activates the kinase c-Abl, which phosphorylates Rad51 at Tyr54 and Tyr315, and Rad52 at Tyr104, causing translocation of these proteins to sites of DNA strand breaks/subnuclear foci (5-7).

Background References

- Paques, F. and Haber, J.E. (1999) *Microbiol. Mol. Biol. Rev.* 63, 349-404.
- Bezzubova, O. et al. (1997) *Cell* 89, 185-193.
- Takata, M. et al. (2000) *Mol. Cell. Biol.* 20, 6476-6482.
- Fujimori, A. et al. (2001) *EMBO J.* 20, 5513-5520.
- Chen, G. et al. (1999) *J. Biol. Chem.* 274, 12748-12752.
- Yuan, Z. M. et al. (1998) *J. Biol. Chem.* 273, 3799-3802.
- Kitao, H. and Yuan, Z.M. (2002) *J. Biol. Chem.* 277, 48944-48948.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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