

RAD9A monoclonal antibody

Catalog: MB66553

Host: Mouse

Reactivity: Human, Mouse, Rat, Monkey

BackGround:

DNA damage resulting from genotoxic stress activates cellular checkpoints that prevent or delay cell division until either damaged DNA is repaired or the cell follows an apoptotic pathway. The Rad9 homolog A (Rad9A, Rad9) protein is part of a checkpoint protein complex that acts as an early sensor of DNA damage. Together with the Hus1 and Rad1 checkpoint proteins, Rad9 forms a heterotrimeric 9-1-1 complex with a ring structure similar to the processivity factor PCNA. The 9-1-1 complex induces multiple signaling pathways, including the ATM and ATR-activated DNA repair pathways. A functional 9-1-1 complex is required for ATR-dependent S phase checkpoint signaling. The 9-1-1 complex interacts with DNA topoisomerase 2-binding protein 1 (TopBP1) in response to DNA damage, activating ATR and causing signal amplification through further recruitment of TopBP1. The 9-1-1 complex interacts with DNA mismatch repair proteins MSH2, MSH3, and MSH6 to play a role in mismatch repair. During an error-free DNA damage tolerance process, the 9-1-1 complex cooperates with polyubiquitinated PCNA and Exo1 nuclease to support switching of the replicative polymerase to the undamaged template. Research studies indicate that the two Rad9 paralogues (Rad9A and Rad9B) can both functionally complement one another and display distinct biological functions. Specifically, Rad9B senses nucleolar stress and causes a delay in the cell cycle at G1/S phase.

Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Molecular Weight:

~ 60 kDa

Swiss-Prot:

Q99638

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IP (1/10 - 1/50)

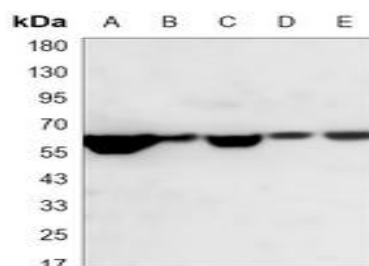
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of RAD9A protein.

DATA:



Western blot analysis of RAD9A expression in Hela (A), MCF7 (B), NIH3T3 (C), COS7 (D), rat testis (E) whole cell lysates.

Note:

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

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