

RAD51A monoclonal antibody

Catalog: MB67078

Host: Mouse

Reactivity: Human, Mouse, Rat

BackGround:

DNA double-strand breaks (DSBs) are potentially hazardous lesions that can be induced by ionizing radiation (IR), radiomimetic chemicals, or DNA replication inhibitors. Cells sense and repair DSBs via two distinct but partly overlapping signaling pathways, nonhomologous end joining (NHEJ) and homologous recombination (HR). Research studies have shown that defects in both pathways are associated with human disease, including cancer (reviewed in 1).

DSBs that arise during S or G2 phase are repaired via homologous recombination (HR), using the replicated sister chromatid as a repair template. Rad51 recombinase, a eukaryotic homologue of E. coli RecA, polymerizes and forms a filament along single-stranded DNA, mediating HR with the help of auxiliary proteins, including Rad54 and BRCA2 (reviewed in 2,3). BRCA2 binds Rad51 and targets it to single-stranded DNA, allowing it to displace replication protein A (RPA). Five Rad51 paralogs exist in vertebrates (XRCC2, XRCC3, Rad51B, Rad51C, and Rad51D) and they all appear to be required for efficient HR.

Researchers have found that mutations in the Rad51 gene may be related to breast cancer risk. Some studies have implicated Rad51 as a potential marker for pancreatic cancer.

Product:

Mouse IgG1 kappa. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 37 kDa

Swiss-Prot:

Q06609

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/500 - 1/1000)

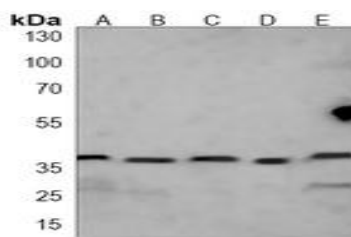
Storage&Stability:

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

Specificity:

Recognizes endogenous levels of RAD51A protein.

DATA:



Western blot analysis of RAD51A expression in Jurkat (A), HeLa (B), NIH3T3 (C), C6 (D), PC12 (E) whole cell lysates.

Note:

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

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