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# RAD9A Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52778

## Product Information

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| **Application** | WB, IP |
| **Primary Accession** | Q99638 |
| **Reactivity** | Human, Mouse |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2b |
| **Calculated MW** | 42547 |

## Additional Information

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| **Gene ID** | 5883 |
| **Other Names** | Cell cycle checkpoint control protein;Cell cycle checkpoint control protein RAD9A;DNA repair exonuclease rad9 homolog A;hRAD 9;hRAD9;Rad 9;RAD 9A;RAD9 (S pombe) homolog;RAD9 homolog A;RAD9 homolog;RAD9A;RAD9A_HUMAN. |
| **Dilution** | WB~~1:500 IP~~1:500 |
| **Format** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3. |
| **Storage** | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

## Protein Information

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|---|---|
| **Name** | RAD9A |
| **Function** | Component of the 9-1-1 cell-cycle checkpoint response complex that plays a major role in DNA repair (PubMed:10713044, PubMed:17575048, PubMed:20545769, PubMed:21659603, PubMed:31135337). The 9-1-1 complex is recruited to DNA lesion upon damage by the RAD17- replication factor C (RFC) clamp loader complex (PubMed:21659603). Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair (LP-BER) (PubMed:21659603). The 9-1- 1 complex stimulates DNA polymerase beta (POLB) activity by increasing its affinity for the 3'-OH end of the primer-template and stabilizes POLB to those sites where LP-BER proceeds; endonuclease FEN1 cleavage activity on substrates with double, nick, or gap flaps of distinct sequences and lengths; and DNA ligase I (LIG1) on long-patch base excision repair substrates (PubMed:21659603). The 9-1-1 complex is necessary for the recruitment of RHNO1 to sites of |

double-stranded breaks (DSB) occurring during the S phase (PubMed:21659603). RAD9A possesses 3'->5' double stranded DNA exonuclease activity (PubMed:10713044).

**Cellular Location** Nucleus.

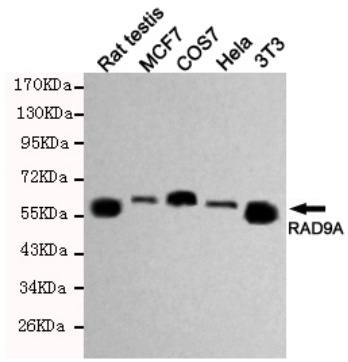
## Background

Component of the 9-1-1 cell-cycle checkpoint response complex that plays a major role in DNA repair. The 9-1-1 complex is recruited to DNA lesion upon damage by the RAD17-replication factor C (RFC) clamp loader complex. Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair (LP-BER). The 9-1-1 complex stimulates DNA polymerase beta (POLB) activity by increasing its affinity for the 3'-OH end of the primer-template and stabilizes POLB to those sites where LP-BER proceeds; endonuclease FEN1 cleavage activity on substrates with double, nick, or gap flaps of distinct sequences and lengths; and DNA ligase I (LIG1) on long-patch base excision repair substrates. The 9-1-1 complex is necessary for the recruitment of RHNO1 to sites of double-stranded breaks (DSB) occurring during the S phase. RAD9A possesses 3'->5' double stranded DNA exonuclease activity. Its phosphorylation by PRKCD may be required for the formation of the 9-1-1 complex.

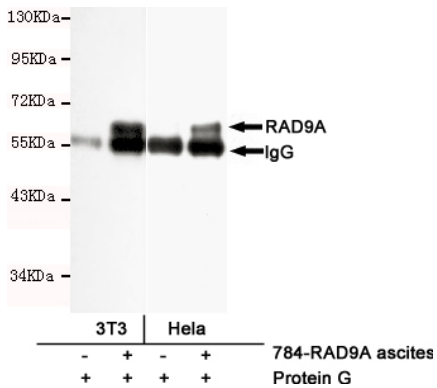
## References


Lieberman H.B.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:13890-13895(1996).
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Roos-Mattjus P.,et al.J. Biol. Chem. 278:24428-24437(2003).


## Images




Western blot detection of RAD9A in Hela,MCF7,3T3,COS7 and Rat testis cell lysates using RAD9A mouse mAb (1:500 diluted).Predicted band size:43KDa.Observed band size:55KDa.




Immunoprecipitation analysis of Hela and 3T3 cell lysates using RAD9A mouse mAb.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.