

# **RAD9A Antibody**

Purified Mouse Monoclonal Antibody (Mab) Catalog # AP52778

#### **Product Information**

Application WB, IP
Primary Accession Q99638

**Reactivity** Human, Mouse

Host Mouse
Clonality Monoclonal
Isotype IgG2b
Calculated MW 42547

### **Additional Information**

**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**

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.

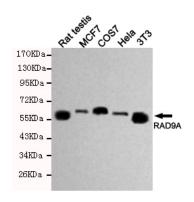
## **Background**

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.

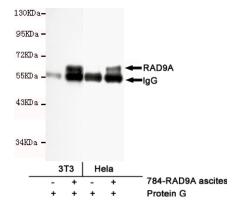
#### References

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'.