

**RAD9 Antibody (BH3 Domain Specific) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP1318a****Specification**

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**RAD9 Antibody (BH3 Domain Specific) Blocking peptide - Product Information**

Primary Accession [O99638](#)  
Other Accession [NP\\_004575](#)

**RAD9 Antibody (BH3 Domain Specific) Blocking peptide - Additional Information**

**Gene ID** 5883

**Other Names**

Cell cycle checkpoint control protein RAD9A, hRAD9, DNA repair exonuclease rad9 homolog A, RAD9A

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP1318a](/product/products/AP1318a) was selected from the region of human Rad9 BH3 Domain. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**RAD9 Antibody (BH3 Domain Specific) Blocking peptide - 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](http://www.uniprot.org/citations/10713044), PubMed: [17575048](http://www.uniprot.org/citations/17575048), PubMed: [20545769](http://www.uniprot.org/citations/20545769), PubMed: [21659603](http://www.uniprot.org/citations/21659603), PubMed: [31135337](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/21659603)). Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair

(LP-BER) (PubMed:<a href="http://www.uniprot.org/citations/21659603" target="\_blank">21659603</a>). 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:<a href="http://www.uniprot.org/citations/21659603" target="\_blank">21659603</a>). The 9-1-1 complex is necessary for the recruitment of RHN01 to sites of double-stranded breaks (DSB) occurring during the S phase (PubMed:<a href="http://www.uniprot.org/citations/21659603" target="\_blank">21659603</a>). RAD9A possesses 3'->5' double stranded DNA exonuclease activity (PubMed:<a href="http://www.uniprot.org/citations/10713044" target="\_blank">10713044</a>).

### **Cellular Location**

Nucleus.

### **RAD9 Antibody (BH3 Domain Specific) Blocking peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

### **RAD9 Antibody (BH3 Domain Specific) Blocking peptide - Images**

### **RAD9 Antibody (BH3 Domain Specific) Blocking peptide - Background**

This gene product is highly similar to *Schizosaccharomyces pombe* rad9, a cell cycle checkpoint protein required for cell cycle arrest and DNA damage repair in response to DNA damage. This protein is found to possess 3' to 5' exonuclease activity, which may contribute to its role in sensing and repairing DNA damage. It forms a checkpoint protein complex with RAD1 and HUS1. This complex is recruited by checkpoint protein RAD17 to the sites of DNA damage, which is thought to be important for triggering the checkpoint-signaling cascade. Use of alternative polyA sites has been noted for this gene.

### **RAD9 Antibody (BH3 Domain Specific) Blocking peptide - References**

Hopkins, K.M., et al., Cancer Res. 63(17):5291-5298 (2003). Greer, D.A., et al., Cancer Res. 63(16):4829-4835 (2003). St Onge, R.P., et al., J. Biol. Chem. 278(29):26620-26628 (2003). Roos-Mattjus, P., et al., J. Biol. Chem. 278(27):24428-24437 (2003). Yoshida, K., et al., EMBO J. 22(6):1431-1441 (2003).