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RAD9 Antibody (BH3 Domain Specific)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1318a

Specification

RAD9 Antibody (BH3 Domain Specific) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	Q99638
Other Accession	Q4R5X9, NP_004575
Reactivity	**Human**
Predicted	**Monkey**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**42547**
Antigen Region	**1-30**

RAD9 Antibody (BH3 Domain Specific) - Additional Information

Gene ID 5883

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

Target/Specificity
This RAD9 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from human RAD9.

Dilution
IHC-P~~1:50~100
WB~~1:4000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
RAD9 Antibody (BH3 Domain Specific) is for research use only and not for use in diagnostic or therapeutic procedures.

RAD9 Antibody (BH3 Domain Specific) - 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).

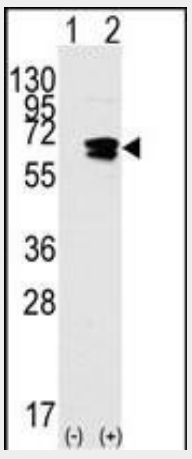
Cellular Location
Nucleus.

RAD9 Antibody (BH3 Domain Specific) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

RAD9 Antibody (BH3 Domain Specific) - Images



Western blot analysis of Rad9(arrow) using rabbit polyclonal Rad9 BH3 domain Pab (Cat. #AP1318a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the Rad9 gene (Lane 2) (Origene Technologies).

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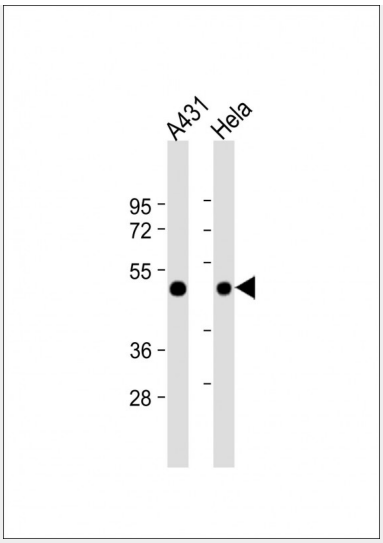
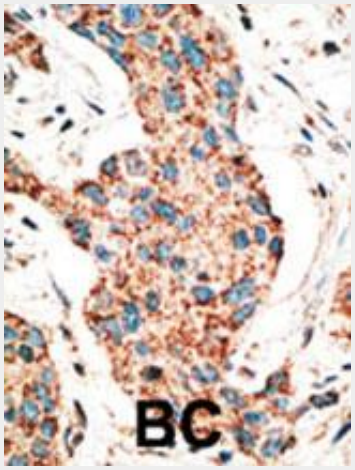


All lanes : Anti-RAD9 Antibody (BH3 Domain Specific) at 1:4000 dilution Lane 1: A431 whole cell lysate Lane 2: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 43 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

RAD9 Antibody (BH3 Domain Specific) - 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) - 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).