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Rad9 Antibody (S387)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP11518a

Specification

Rad9 Antibody (S387) - Product Information

Application	**IF, WB, IHC-P,E**
Primary Accession	Q99638
Other Accession	Q4R5X9, NP_004575.1
Reactivity	**Human**
Predicted	**Monkey**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**365-391**

Rad9 Antibody (S387) - 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 365-391 amino acids from human Rad9.

Dilution
IF~~1:10~50
WB~~1:1000
IHC-P~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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 (S387) is for research use only and not for use in diagnostic or therapeutic procedures.

Rad9 Antibody (S387) - 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).

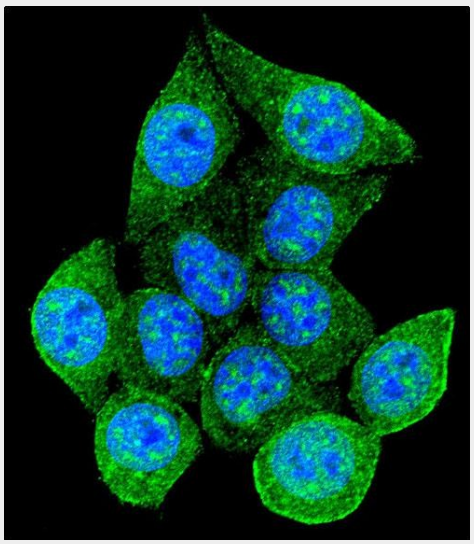
Cellular Location
Nucleus.

Rad9 Antibody (S387) - 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 (S387) - Images



Confocal immunofluorescent analysis of Rad9 Antibody (S387)(Cat#AP11518a) with 293 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).

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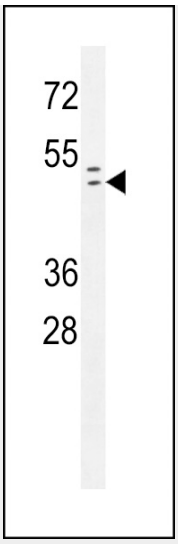
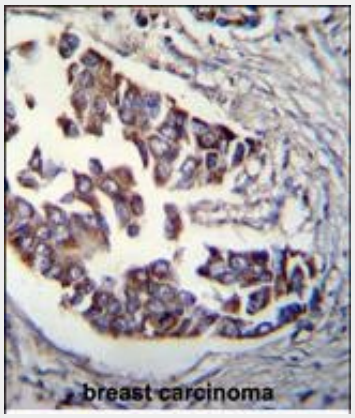


Rad9 Antibody (pS387) (Cat. #AP11518a) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the Rad9 antibody detected the Rad9 protein (arrow).



Rad9 Antibody (S387) (Cat. #AP11518a)immunohistochemistry analysis in formalin fixed and paraffin embedded human breast carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Rad9 Antibody (S387) for immunohistochemistry. Clinical relevance has not been evaluated.

Rad9 Antibody (S387) - 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 (S387) - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Takeishi, Y., et al. Genes Cells 15(7):761-771(2010)
Greer Card, D.A., et al. J. Biol. Chem. 285(20):15653-15661(2010)

Bai, H., et al. DNA Repair (Amst.) 9(5):478-487(2010)
Sierant, M.L., et al. Cell Cycle 9(3):548-556(2010)