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# RAD9(S277)Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22478a

## Product Information

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|---|---|
| **Application** | WB, E |
| **Primary Accession** | Q99638 |
| **Reactivity** | Human |
| **Host** | Rabbit |
| **Clonality** | polyclonal |
| **Isotype** | Rabbit Ig |
| **Clone Names** | R04540NP |
| **Calculated MW** | 42547 |

## Additional Information

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| **Gene ID** | 5883 |
| **Other Names** | Cell cycle checkpoint control protein RAD9A, hRAD9, 3.1.11.2, DNA repair exonuclease rad9 homolog A, RAD9A |
| **Target/Specificity** | This RAD9(S277) antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between amino acids from the human region of human RAD9(S277). |
| **Dilution** | WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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(S277)Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## 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 (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).

## References


Lieberman H.B.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:13890-13895(1996).
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Ota T.,et al.Nat. Genet. 36:40-45(2004).
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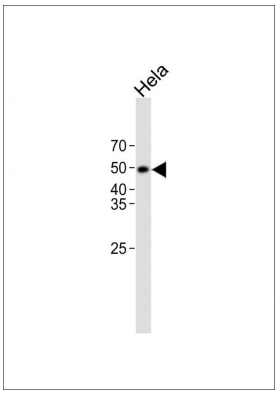
Roos-Mattjus P.,et al.J. Biol. Chem. 278:24428-24437(2003).


## Images




All lanes: Anti-RAD9(S277)Antibody at 1:1000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 49 KDa Blocking/Dilution buffer: 5% NFDM/TBST.