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RAD1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP16013c

Specification

RAD1 Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	O60671
Other Accession	NP_002844.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**31827**
Antigen Region	**118-146**

RAD1 Antibody (Center) - Additional Information

Gene ID 5810

Other Names
Cell cycle checkpoint protein RAD1, hRAD1, DNA repair exonuclease rad1 homolog, Rad1-like DNA damage checkpoint protein, RAD1, REC1

Target/Specificity
This RAD1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 118-146 amino acids from the Central region of human RAD1.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

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
RAD1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

RAD1 Antibody (Center) - Protein Information

Name RAD1

Synonyms REC1

Function Component of the 9-1-1 cell-cycle checkpoint response complex that plays a major role in DNA repair (PubMed:10846170, PubMed:10884395). The 9-1-1 complex is recruited to DNA lesion upon damage by the RAD17-replication factor C (RFC) clamp loader complex (PubMed:12578958). Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair (LP-BER) (PubMed:15871698). 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:15314187, PubMed:15556996, PubMed:15871698). 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).

Cellular Location
Nucleus.

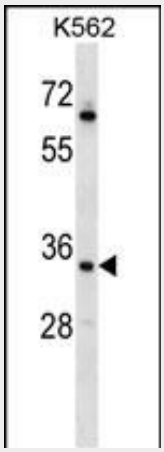
Tissue Location
Expressed in testis, uterus, bladder, spleen, ovaries, lung, brain and muscle (at protein level)

RAD1 Antibody (Center) - 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

RAD1 Antibody (Center) - Images



RAD1 Antibody (Center) (Cat. #AP16013c) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the RAD1 antibody detected the RAD1 protein (arrow).

RAD1 Antibody (Center) - Background

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This gene encodes a component of a heterotrimeric cell cycle checkpoint complex, known as the 9-1-1 complex, that is activated to stop cell cycle progression in response to DNA damage or incomplete DNA replication. The 9-1-1 complex is recruited by RAD17 to affected sites where it may attract specialized DNA polymerases and other DNA repair effectors. Alternatively spliced transcript variants of this gene have been described. [provided by RefSeq].

RAD1 Antibody (Center) - References

Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)
Takeishi, Y., et al. Genes Cells 15(7):761-771(2010)
Bai, H., et al. DNA Repair (Amst.) 9(5):478-487(2010)
Park, M.J., et al. DNA Repair (Amst.) 8(10):1190-1200(2009)
Xu, M., et al. J. Biol. Chem. 284(31):20457-20461(2009)