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Product datasheet for R1483P

RAD9A pSer1129 Rabbit Polyclonal Antibody

Product data:

Product Type: Primary Antibodies

Applications: ELISA, WB

Recommended Dilution: This pan reactive polyclonal antibody was tested by Immunoblotting and ELISA. Data from both Immunoblotting and ELISA indicate the antibody is pan reactive with both the phosphorylated and non-phosphorylated forms of the peptide and protein. Immunoblotting detects yeast Rad9 protein.
No reactivity is expected against human and mouse homologs. Reactivity to Rad9 from others sources is unknown. Although not tested, this antibody is likely functional by Immunohistochemistry and Immunoprecipitation.
Recommended Dilution(s): This product has been assayed against 0.1 µg of immunizing peptide (S1129) in a standard capture ELISA using TMB (3,3',5,5'-Tetramethylbenizidine) as a substrate for 30 minutes at room temperature. A working dilution of 1:5,000 is suggested for this product. Reactivity was detected against both the phosphorylated and non-phosphorylated form (S1129 and pS1129) of the immunizing peptide. This antibody appears to be pan reactive for both forms of the protein. Dilute the antibody 1:100 to 1:500 for immunoblotting.

Reactivity: Yeast

Host: Rabbit

Clonality: Polyclonal

Immunogen: This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to aa 1125-1139 of 1309 of yeast Rad9 protein conjugated to KLH.

Specificity: This affinity purified antibody is directed against an internal sequence of yeast Rad9 at the S1129 residue.
The product was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was purified against the immunizing peptide.
This pan reactive polyclonal antibody reacts equally with both phosphorylated and nonphosphorylated yeast Rad9 at S1129. No reactivity is expected against human and mouse homologs. Reactivity to Rad9 from others sources is unknown.

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Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 with 0.01% (w/v) Sodium Azide as preservative. State: Aff - Purified State: Liquid (sterile filtered) purified Ig fraction.
Concentration:	lot specific
Purification:	Immunoaffinity chromatography.
Conjugation:	Unconjugated
Storage:	Store vial at -20°C. For extended storage aliquot contents and freeze at -20°C or below. Dilute only prior to immediate use. Avoid cycles of freezing and thawing.
Stability:	Shelf life: One year from despatch.
Gene Name:	RAD9 checkpoint clamp component A
Database Link:	Q99638
Background:	Rad9 is required for the MEC1/TEL1-dependent activation of Saccharomyces cerevisiae DNA damage checkpoint pathways mediated by Rad53 and Chk1. DNA damage induces Rad9 phosphorylation, and Rad53 specifically associates with phosphorylated Rad9. Cells have evolved multiple strategies for tolerating genomic damage. The most important of these are numerous repair systems that remove or bypass potentially mutagenic DNA lesions. Another cellular strategy is to delay cell-cycle transitions at multiple points. The genetic control of these delays, termed 'checkpoints', was first established in budding yeast where it was shown that the RAD9 gene functions in G2/M arrest after irradiation with X-rays. Subsequently, it has become clear that Rad9 also functions at the G1/S, intra-S and mid-anaphase checkpoints. Defects in checkpoint regulation can lead to genome instability and, in higher eukaryotes, neoplastic transformation. Rad9 also controls the transcriptional induction of a DNA damage regulon (DDR). Rad9 may also have a pro-apoptotic function. This is suggested in that Rad9 from Schizosaccharomyces pombe (SpRad9) contains a group of amino acids with similarity to the Bcl-2 homology 3 death domain, which is required for SpRad9 interaction with human Bcl-2 and apoptosis induction in human cells. Overexpression of Bcl-2 in S. pombe inhibits cell growth independently of rad9, but enhances resistance of rad9-null cells to methyl methanesulfonate, ultraviolet and ionizing radiation. Rad9 conveys the checkpoint signal by activating Rad53p and Chk1p; is hyperphosphorylated by Mec1p and Tel1p; and is a potential Cdc28p substrate. Mature yeast Rad9 is reported to have an apparent molecular weight of ~148kDa. The human homolog is reported at 48.5 kDa.
Synonyms:	RAD-9A, Cell cycle checkpoint control protein RAD9A, EC=3.1.11.2, DNA repair exonuclease rad9 homolog A

Note:

Protein Sequence: Saccharomyces cerevisiae:

1 msgqlvqwks spdrvtqsai kealhsplad gdmnemnvpv dplenkvnst niiegspkan
61 pnpvkfmnts eifqkslgll desprhddel nievgdndrp nanilhnert pdldrianff
121 ksnrtpgken lltkyqssdl edtplmlrkk mtfqtptdpl eqktfkklks dtgfcyygeq
181 ndgeenasle vteadatfvq maersadnyd calegivtpk rykdelsksg gmqdervqkt
241 qimisaespn sissydknki tgngrttrnv nkvfnnnedn igaieeknpv kkksenyssd
301 dlrernnqii qsneseeine leknlnvsgr endvnnldid insavsgtps rnnaeeemys
361 sesvnnreps kkwifryskd ktennsnrst qivnnprtqe mpldsisidt qplsksfnte
421 tnneletqii vsslsqgisa qkgpvfhstg qteeiktqii nspeqnalna tfetpvtlsr
481 infepilevp etsspskntm skpsnsspip kekdtfnihe revetnnvfs ndiqnssnaa
541 trddiiiags sdfneqkeit driylqlsgk qisdsgsdet ermspneldt kkestimsev
601 eltqelpeve eqqdlqtspk klvveeetlm eikkskgnsl qlhddnkecn sdkqdgtesl
661 dvaliehesk gqsselqknl mqlfpsesqe iiqnrrtikr rqkdtieige eeenrstkts
721 ptkhlkrnsd ldaasikrep scsitiqtge tgsgkdskeq syvfpegirt adnsflskdd
781 iifgnavwcq ytwnykfypg illevdtnqd gcwiyfetgr sltkdediyy ldirigdavt
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1021 esqggtvies gfstlfnfth plakslvnkg ntdnirelal klawkphslf adcrfaclit
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1141 giiksnnifs fytqflrgsn lrdqicgvkk mlndyivivw grseldsfvk fafaclsagr
1201 mltidlpnid vddtepllna ldslvprigs elsnrklkfl iyanenngks qmkllerlrs
1261 qislkfkkfn yifhteskew liqtiinedt gfhdditdnd iyntisevr

Product images:

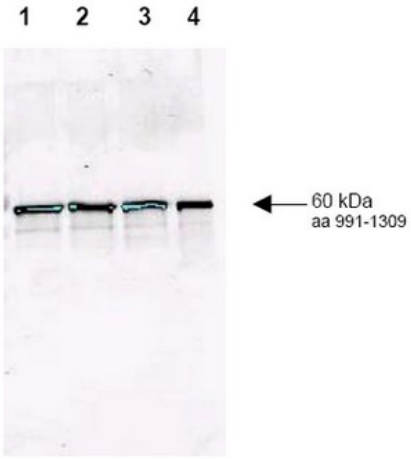

Figure 1. Immunoblotting. Affinity purified antibody to yeast Rad9 (pan reactive) was used at a 1:200 dilution incubated 8 h at room temperature to detect Rad9 by Western blot. Lanes were loaded with 50 ng each of recombinant GST fusion protein containing

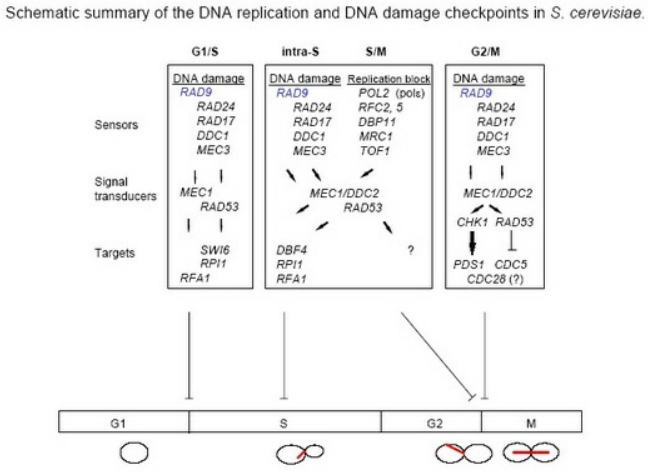

Figure 2. Summary Table. Checkpoints are mechanisms that impose delays in the cell cycle in response to DNA damage or defects in DNA replication, to ensure that mitotic transmission is error-free. Failure to delay the cell cycle in the presence of damage c