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Product datasheet for R1482P

RAD9A pSer1129 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	This phospho specific polyclonal antibody was tested by ELISA. Data from ELISA indicates the antibody is reactive with the phosphorylated form of the immunizing peptide and minimally reactive with the non-phosphorylated form of the immunizing peptide. No reactivity is expected against the human or mouse analogs of RAD9. Reactivity against RAD9 from other sources is unknown. Although not tested, this antibody is likely functional by WB, IHC and IP. Recommended Dilution(s): This product has been assayed against 0.1 µg of phosphorylated peptide (pS1129) 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. Minimal reactivity was detected against the nonphosphorylated form (S1129) of the immunizing peptide. This antibody appears to be specific for the active form (phosphorylated) of the protein.
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 phosphorylated form of aa 1125-1139 of 1309 of yeast Rad9 protein conjugated to KLH.
Specificity:	This affinity purified antibody is directed against the phosphorylated form of yeast Rad9 at the pS1260 residue. The product was affinity purified from monospecific antiserum by Immunoaffinity purification. Antiserum was first purified against the phosphorylated form of the immunizing peptide. The resultant affinity purified antibody was then cross-adsorbed against the non-phosphorylated form of the immunizing peptide. This phospho specific polyclonal antibody reacts with phosphorylated pS1260 of yeast Rad9. Reactivity with non-phosphorylated yeast Rad9 is minimal by ELISA and immunoblotting. No reactivity is expected against the human or mouse analogs of RAD9. Reactivity against RAD9 from other sources is unknown. Cross reactivity may occur with auto-phosphorylated Rad53 kinase.

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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 Xrays. 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
841 fdgneyvvvg lecrshdlni ircirgydtv hlkkknasgl lgkrtlikal ssisldlsew
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1141 giiksnnifs fytqflrgsn lrdqicgvkk mlndyivivw grseldsfvk fafaclsagr
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1261 qislkfkkfn yifhteskew liqtiinedt gfhdditdnd iyntisevr

Product images:

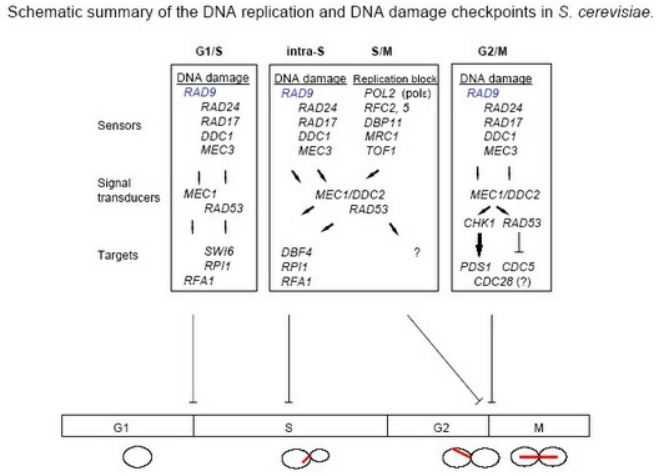

Figure 1. Summary Table. Checkpoints are mechanisms that impose delays in the cell cycle in response to DNA damage or defects in DNA replication, to ensure that mitotic transmission is error-free. Failure to delay the cell cycle in the presence of damage c