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Anti-Rad9 pS1129 Yeast (RABBIT) Antibody

Rad9 phospho S1129 Antibody
Catalog # ASR5189

Specification

Anti-Rad9 pS1129 Yeast (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Yeast**
Reactivity	**Saccharomyces cerevisiae**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**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. 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) code # TMBE-100 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 non-phosphorylated form (S1129) of the immunizing peptide. This antibody appears to be specific for the active form (phosphorylated) of the protein. Researchers should determine optimal titers for other applications.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region near aa 1120-1145 from the aa1309 yeast Rad9 protein conjugated to KLH.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Rad9 pS1129 Yeast (RABBIT) Antibody - Additional Information

Gene ID 851803

Other Names
851803

Purity
This affinity purified antibody is directed against the phosphorylated form of yeast Rad9 at the pS1129 residue. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was purified against the immunizing peptide. This phosphor polyclonal antibody reacts with the phosphorylated Rad9 pS1129 and minimally with non-phosphorylated yeast Rad9 at S1129. No reactivity is expected against human and mouse homologs. Reactivity to Rad9 from others sources is unknown.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Rad9 pS1129 Yeast (RABBIT) Antibody - Protein Information

Name RAD9

Function
Essential for cell cycle arrest at the G2 stage following DNA damage by X-irradiation or inactivation of DNA ligase.

Cellular Location
Nucleus.

Anti-Rad9 pS1129 Yeast (RABBIT) Antibody - 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

Anti-Rad9 pS1129 Yeast (RABBIT) Antibody - Images

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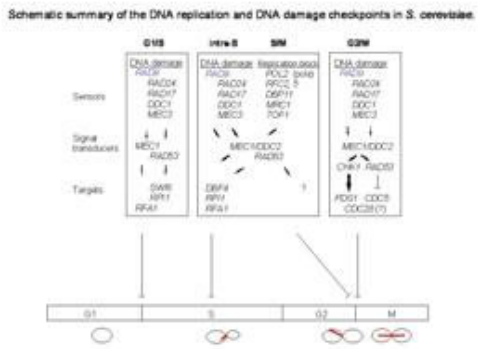

Checkpoints are mechanisms that impose delays in the cell cycle in response to DNA damage or defects in DNA replication, to ensure that mitotic transmission is error-free. Failure to delay the cell cycle in the presence of damage converts an easily reparable DNA lesion into one far more deleterious, provoking genomic instability or cell death. This figure shows a summary of our current knowledge about the DNA damage checkpoints in yeast. Genetic analysis of the pathway has allowed classification of its components into Sensors, which detect different sorts of damage, Signal transducers which are signal-integrating kinases, and Targets which carry out the essential functions of suppressing progress through the cell cycle (i.e. inducing repair genes and preventing late origin firing or sister chromatid segregation. Contributed by C. Frei and K. Shimada, laboratory of S. Gasser, U. Geneva.

Anti-Rad9 pS1129 Yeast (RABBIT) Antibody - 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.