

Datasheet for 600-401-467**Rad9 S1260 Antibody****Overview**

Description:	Anti-Yeast Rad9 S1260 (pan reactive) (RABBIT) Antibody - 600-401-467
Item No.:	600-401-467
Size:	100 µg
Applications:	ELISA
Reactivity:	<i>S. cerevisiae</i>
Host Species:	Rabbit

Product Details**Background:**

Cells respond to DNA damage by activating a network of signaling pathways that control cell cycle progression and DNA repair. Cell cycle checkpoints are mechanisms that transiently delay cell cycle progression when DNA is damaged or DNA replication is incomplete. In the fission yeast *Schizosaccharomyces pombe*, a group of six such checkpoint control genes have been identified and include *rad1+*, *rad3+*, *rad9+*, *rad17+*, *rad26+* and *hus1+*. Mutations in any one of these genes render cells sensitive to gamma-rays, UV light or the DNA synthesis inhibitor hydroxyurea (HU) and eliminate the ability of cells to delay entry into mitosis after treatment with these agents. All of these genes apparently link abnormal DNA structures to cell cycle control. As for cell cycle-related genes in general, these checkpoint control genes are highly conserved throughout evolution. Human and mouse versions of several of the *S.pombe* genes have been isolated, providing strong evidence that checkpoint control mechanisms are also highly conserved. In mammals, these genes are thought to maintain genomic stability, especially in the presence of DNA damage. Therefore, when these genes are altered, genomic instability may occur and lead to cancer. The biochemical activities of most of the checkpoint control gene products are not well established, although progress has been made towards learning more about their function. For example, examination of the structure of the protein encoded by human or *S.pombe* *rad9* reveals a BH3-like domain in the N-terminal region that can bind the anti-apoptotic proteins Bcl-2 and Bcl-X_L. Furthermore, overexpression of the gene from either organism in human cells can cause apoptosis in a BH3 domain-dependent manner. Both *S.pombe* and human versions of the protein can bind two other checkpoint control proteins, Hus1p (HUS1p) and Rad1p (RAD1p). Human RAD9 protein binds HUS1 and RAD1 proteins at its C-terminal region, suggesting that RAD9 has at least two functional domains, one involved in apoptosis and the other in cell cycle checkpoint control. Rad9 conveys the checkpoint signal by activating Rad53p and Chk1p; is hyperphosphorylated by Mec1p and Tel1p; and is a potential Cdc28p substrate.

Synonyms:	Rabbit anti-Rad9 antibody, Rabbit anti-Rad9 S1260 antibody, Rad 9, Rad-9, Cell cycle checkpoint control protein antibody, Cell cycle checkpoint control protein RAD9A antibody, DNA repair exonuclease rad9 homolog A antibody, DNA repair protein RAD9, YDR217C, YD9934.02C
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	RAD9
Reactivity:	<i>S. cerevisiae</i>
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to phosphorylated form of an internal region near aa 1225-1275 from the aa1309 yeast Rad9 protein conjugated to KLH.
Purity/Specificity:	This is an affinity purified antibody directed against yeast Rad9 produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. No reactivity is expected against the human analog of RAD9. Reactivity against RAD9 from other sources is unknown.
Relevant Links:	• UniProtKB - P14737 • NCBI - NP_010503.1 • GeneID - 851803

Application Details

Tested Applications:	ELISA
Application Note:	This affinity purified antibody has been tested for use in ELISA against the immunizing peptide. Reactivity in other immunoassays is unknown. Mature RAD9 is reported to have an apparent molecular weight of ~140kDa.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:50,000
WB:	1:500- 1:2,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.1 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
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.
Expiration:	Expiration date is one (1) year from date of receipt.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.