10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-RAD9(S277) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3224a

Specification

Phospho-RAD9(S277) Antibody Blocking peptide - Product Information

Primary Accession Q99638

Phospho-RAD9(S277) Antibody Blocking peptide - Additional Information

Gene ID 5883

Other Names
Cell cycle checkpoint control protein RAD9A, hRAD9, DNA repair exonuclease rad9 homolog A, RAD9A

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3224a was selected from the region of human Phospho-Rad9-S277. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-RAD9(S277) Antibody Blocking peptide - Protein Information

Name RAD9A

Function
Component of the 9-1-1 cell-cycle checkpoint response complex that plays a major role in DNA repair (PubMed:10713044, PubMed:17575048, PubMed:20545769, PubMed:21659603, PubMed:31135337). The 9-1-1 complex is recruited to DNA lesion upon damage by the RAD17- replication factor C (RFC) clamp loader complex (PubMed:21659603). Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair (LP-BER) (PubMed:<a href="http://www.uniprot.org/citations/21659603"

target="_blank">21659603). 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:21659603). 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). RAD9A possesses 3'->5' double stranded DNA exonuclease activity (PubMed:10713044).

Cellular Location
Nucleus.

Phospho-RAD9(S277) Antibody Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Phospho-RAD9(S277) Antibody Blocking peptide - Images

Phospho-RAD9(S277) Antibody Blocking peptide - Background

Rad9 is highly similar to Schizosaccharomyces pombe rad9, a cell cycle checkpoint protein required for cell cycle arrest and DNA damage repair in response to DNA damage. This protein is found to possess 3' to 5' exonuclease activity, which may contribute to its role in sensing and repairing DNA damage. It forms a checkpoint protein complex with RAD1 and HUS1. This complex is recruited by checkpoint protein RAD17 to the sites of DNA damage, which is thought to be important for triggering the checkpoint-signaling cascade.

Phospho-RAD9(S277) Antibody Blocking peptide - References

Maniwa, Y., et al., Cancer 103(1):126-132 (2005).Wang, W., et al., Proc. Natl. Acad. Sci. U.S.A. 101(48):16762-16767 (2004).Lindsey-Boltz, L.A., et al., (er) Nucleic Acids Res. 32(15):4524-4530 (2004).Toueille, M., et al., (er) Nucleic Acids Res. 32(11):3316-3324 (2004).Loegering, D., et al., J. Biol. Chem. 279(18):18641-18647 (2004).