

RAD9 Blocking Peptide (Center S270)
Synthetic peptide
Catalog # BP6357e**Specification**

RAD9 Blocking Peptide (Center S270) - Product Information

Primary Accession [O99638](#)
Other Accession [Q4R5X9](#)

RAD9 Blocking Peptide (Center S270) - 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 is selected from aa 270-284 of HUMAN RAD9A

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.

RAD9 Blocking Peptide (Center S270) - 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: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 RHN01 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.

RAD9 Blocking Peptide (Center S270) - Protocols

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

- [Blocking Peptides](#)

RAD9 Blocking Peptide (Center S270) - Images

RAD9 Blocking Peptide (Center S270) - 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.

RAD9 Blocking Peptide (Center S270) - 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).
Touelle, M., et al., (er) Nucleic Acids Res. 32(11):3316-3324 (2004).
Loeering, D., et al., J. Biol. Chem. 279(18):18641-18647 (2004).