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RAD50 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP7360a

Specification

RAD50 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q92878

RAD50 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 10111

Other Names
DNA repair protein RAD50, hRAD50, 36--, RAD50

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7360a was selected from the N-term region of human RAD50. 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.

RAD50 Antibody (N-term) Blocking Peptide - Protein Information

Name RAD50

Function

RAD50 Antibody (N-term) Blocking Peptide - Background

The protein is highly similar to Saccharomyces cerevisiae Rad50, a protein involved in DNA double-strand break repair. This protein forms a complex with MRE11 and NBS1. The protein complex binds to DNA and displays numerous enzymatic activities that are required for nonhomologous joining of DNA ends. This protein, cooperating with its partners, is important for DNA double-strand break repair, cell cycle checkpoint activation, telomere maintenance, and meiotic recombination. Knockout studies of the mouse homolog suggest RAD50 gene is essential for cell growth and viability.

RAD50 Antibody (N-term) Blocking Peptide - References

Pugh,T.J., Clin. Cancer Res. 15 (15), 5008-5016 (2009)Karen,K.A., J. Virol. 83 (9), 4565-4573 (2009)

Component of the MRN complex, which plays a central role in double-strand break (DSB) repair, DNA recombination, maintenance of telomere integrity and meiosis. The complex possesses single-strand endonuclease activity and double-strand-specific 3'-5' exonuclease activity, which are provided by MRE11. RAD50 may be required to bind DNA ends and hold them in close proximity. This could facilitate searches for short or long regions of sequence homology in the recombining DNA templates, and may also stimulate the activity of DNA ligases and/or restrict the nuclease activity of MRE11 to prevent nucleolytic degradation past a given point (PubMed:11741547, PubMed:9590181, PubMed:9705271, PubMed:9651580). The complex may also be required for DNA damage signaling via activation of the ATM kinase (PubMed:15064416). In telomeres the MRN complex may modulate t-loop formation (PubMed:10888888).

Cellular Location

Nucleus. Chromosome, telomere. Chromosome. Note=Localizes to discrete nuclear foci after treatment with genotoxic agents.

Tissue Location

Expressed at very low level in most tissues, except in testis where it is expressed at higher level. Expressed in fibroblasts.

RAD50 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides