

RAD54 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP9449a**Specification**

RAD54 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q92698](#)**RAD54 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 8438**Other Names**

DNA repair and recombination protein RAD54-like, 364-, RAD54 homolog, hHR54, hRAD54, RAD54L, RAD54A

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.

RAD54 Antibody (N-term) Blocking Peptide - Protein Information**Name** RAD54L**Synonyms** RAD54A**Function**

Plays an essential role in homologous recombination (HR) which is a major pathway for repairing DNA double-strand breaks (DSBs), single-stranded DNA (ssDNA) gaps, and stalled or collapsed replication forks (PubMed: [9774452](http://www.uniprot.org/citations/9774452), PubMed: [24798879](http://www.uniprot.org/citations/24798879), PubMed: [32457312](http://www.uniprot.org/citations/32457312), PubMed: [11459989](http://www.uniprot.org/citations/11459989), PubMed: [12205100](http://www.uniprot.org/citations/12205100), PubMed: [27264870](http://www.uniprot.org/citations/27264870)). Acts as a molecular motor during the homology search and guides RAD51 ssDNA along a donor dsDNA thereby changing the homology search from the diffusion-based mechanism to a motor-guided mechanism. Also plays an essential role in RAD51-mediated synaptic complex formation which consists of three strands encased in a protein filament formed once homology is recognized. Once DNA strand exchange occurred, dissociates RAD51 from nucleoprotein filaments formed on dsDNA (By similarity).

Cellular Location

Nucleus.

RAD54 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

RAD54 Antibody (N-term) Blocking Peptide - Images**RAD54 Antibody (N-term) Blocking Peptide - Background**

RAD54 belongs to the DEAD-like helicase superfamily, and shares similarity with *Saccharomyces cerevisiae* Rad54, a protein known to be involved in the homologous recombination and repair of DNA. This protein has been shown to play a role in homologous recombination related repair of DNA double-strand breaks. The binding of this protein to double-strand DNA induces a DNA topological change, which is thought to facilitate homologous DNA paring, and stimulate DNA recombination.

RAD54 Antibody (N-term) Blocking Peptide - References

Guey, L.T., et al. Eur. Urol. 57(2):283-292(2010)Hosgood, H.D. III, et al. Occup Environ Med 66(12):848-853(2009)Hosgood, H.D. III, et al. Respir Med 103(12):1866-1870(2009)Liang, X.S., et al. Br. J. Haematol. 146(4):418-423(2009)Shen, M., et al. Environ. Mol. Mutagen. 50(4):285-290(2009)