

RAD50 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51464**Specification**

RAD50 Antibody - Product Information

Application	WB, IP, IHC-P, E
Primary Accession	Q92878
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	153 KDa

RAD50 Antibody - Additional Information**Gene ID** 10111**Other Names**

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

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

RAD50 Antibody - Protein Information**Name** RAD50**Function**

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 - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

RAD50 Antibody - Images**RAD50 Antibody - Background**

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 MRE11A. 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 MRE11A to prevent nucleolytic degradation past a given point. The complex may also be required for DNA damage signaling via activation of the ATM kinase. In telomeres the MRN complex may modulate t-loop formation.

RAD50 Antibody - References

Dolganov G.M.,et al.Mol. Cell. Biol. 16:4832-4841(1996).
Kim K.K.,et al.Gene 235:59-67(1999).
Offenberg H.H.,et al.Submitted (JUL-1996) to the EMBL/GenBank/DDBJ databases.
Schmutz J.,et al.Nature 431:268-274(2004).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.