

Rad51 Rabbit mAb
Catalog # AP76876**Specification**

Rad51 Rabbit mAb - Product Information

Application	WB, IF
Primary Accession	Q06609
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	36966

Rad51 Rabbit mAb - Additional Information

Gene ID 5888

Other Names

RAD51

Dilution

WB~~1/500-1/1000

IF~~1/50-1/200

Format

Liquid

Rad51 Rabbit mAb - Protein InformationName RAD51 ([HGNC:9817](#))

Synonyms RAD51A, RECA

Function

Plays an important role in homologous strand exchange, a key step in DNA repair through homologous recombination (HR) (PubMed: [12205100](http://www.uniprot.org/citations/12205100) , PubMed: [18417535](http://www.uniprot.org/citations/18417535) , PubMed: [20231364](http://www.uniprot.org/citations/20231364) , PubMed: [20348101](http://www.uniprot.org/citations/20348101) , PubMed: [22325354](http://www.uniprot.org/citations/22325354) , PubMed: [23509288](http://www.uniprot.org/citations/23509288) , PubMed: [23754376](http://www.uniprot.org/citations/23754376) , PubMed: [26681308](http://www.uniprot.org/citations/26681308) , PubMed: [28575658](http://www.uniprot.org/citations/28575658) , PubMed: [32640219](http://www.uniprot.org/citations/32640219)). Binds to single-stranded DNA in an ATP-dependent manner to form nucleoprotein filaments which are essential for the homology search and strand exchange (PubMed: [12205100](http://www.uniprot.org/citations/12205100) , PubMed: [18417535](http://www.uniprot.org/citations/18417535)).

PubMed:20231364, PubMed:20348101, PubMed:23509288, PubMed:23754376, PubMed:26681308, PubMed:28575658). Catalyzes the recognition of homology and strand exchange between homologous DNA partners to form a joint molecule between a processed DNA break and the repair template (PubMed:12205100, PubMed:18417535, PubMed:20231364, PubMed:20348101, PubMed:23509288, PubMed:23754376, PubMed:26681308, PubMed:28575658, PubMed:38459011). Recruited to resolve stalled replication forks during replication stress (PubMed:27797818, PubMed:31844045). Part of a PALB2-scaffolded HR complex containing BRCA2 and RAD51C and which is thought to play a role in DNA repair by HR (PubMed:12442171, PubMed:24141787). Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51C and XRCC3 (PubMed:20413593). Also involved in interstrand cross-link repair (PubMed:26253028).

Cellular Location

Nucleus. Cytoplasm. Cytoplasm, perinuclear region. Mitochondrion matrix Chromosome. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Note=Colocalizes with RAD51AP1 and RPA2 to multiple nuclear foci upon induction of DNA damage (PubMed:20154705). DNA damage induces an increase in nuclear levels (PubMed:20154705). Together with FIGNL1, redistributed in discrete nuclear DNA damage-induced foci after ionizing radiation (IR) or camptothecin (CPT) treatment (PubMed:23754376). Accumulated at sites of DNA damage in a SPIDR- dependent manner (PubMed:23509288). Recruited at sites of DNA damage in a MCM9-MCM8-dependent manner (PubMed:23401855). Recruited at sites of DNA damage following interaction with TOPBP1 in S-phase (PubMed:26811421). Colocalizes with ERCC5/XPG to nuclear foci in S phase (PubMed:26833090). Recruited to stalled replication forks during replication stress by the TONSL-MMS22L complex, as well as ATAD5 and WDR48 in an ATR-dependent manner (PubMed:27797818, PubMed:31844045)

Tissue Location

Highly expressed in testis and thymus, followed by small intestine, placenta, colon, pancreas and ovary. Weakly expressed in breast

Rad51 Rabbit mAb - 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](#)

Rad51 Rabbit mAb - Images

