

Anti-Rad51 Rabbit Monoclonal Antibody Catalog # ABO13618

Specification

Anti-Rad51 Rabbit Monoclonal Antibody - Product Information

Application	WB, IP, FC
Primary Accession	Q06609
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-Rad51 Rabbit Monoclonal Antibody . Tested in WB, Flow Cytometry, IP applications. This antibody reacts with Human, Mouse, Rat.

Anti-Rad51 Rabbit Monoclonal Antibody - Additional Information

Gene ID 5888

Other Names

DNA repair protein RAD51 homolog 1, HsRAD51, hRAD51, RAD51 homolog A, RAD51 (HGNC:9817), RAD51A, RECA

Calculated MW

36966 MW KDa

Application Details

WB 1:500-1:2000
IP 1:50
FC 1:50

Subcellular Localization

Nucleus. Cytoplasm. Cytoplasm, perinuclear region. Mitochondrion matrix. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Colocalizes with RAD51AP1 and RPA2 to multiple nuclear foci upon induction of DNA damage. DNA damage induces an increase in nuclear levels. Together with FIGNL1, redistributed in discrete nuclear DNA damage-induced foci after ionizing radiation (IR) or camptothecin (CPT) treatment. Accumulated at sites of DNA damage in a SPIDR-dependent manner.

Tissue Specificity

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

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human Rad51

Purification

Affinity-chromatography

Storage

Store at **-20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

Anti-Rad51 Rabbit Monoclonal Antibody - Protein Information

Name 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) target="_blank">12205100, PubMed: [18417535](http://www.uniprot.org/citations/18417535) target="_blank">18417535, PubMed: [20231364](http://www.uniprot.org/citations/20231364) target="_blank">20231364, PubMed: [20348101](http://www.uniprot.org/citations/20348101) target="_blank">20348101, PubMed: [22325354](http://www.uniprot.org/citations/22325354) target="_blank">22325354, PubMed: [23509288](http://www.uniprot.org/citations/23509288) target="_blank">23509288, PubMed: [23754376](http://www.uniprot.org/citations/23754376) target="_blank">23754376, PubMed: [26681308](http://www.uniprot.org/citations/26681308) target="_blank">26681308, PubMed: [28575658](http://www.uniprot.org/citations/28575658) target="_blank">28575658, PubMed: [32640219](http://www.uniprot.org/citations/32640219) target="_blank">32640219). Binds to single-stranded DNA in an ATP-dependent manner to form nucleoprotein filaments which are essential for the homologous search and strand exchange (PubMed: [12205100](http://www.uniprot.org/citations/12205100) target="_blank">12205100, PubMed: [18417535](http://www.uniprot.org/citations/18417535) target="_blank">18417535, PubMed: [20231364](http://www.uniprot.org/citations/20231364) target="_blank">20231364, PubMed: [20348101](http://www.uniprot.org/citations/20348101) target="_blank">20348101, PubMed: [23509288](http://www.uniprot.org/citations/23509288) target="_blank">23509288, PubMed: [23754376](http://www.uniprot.org/citations/23754376) target="_blank">23754376, PubMed: [26681308](http://www.uniprot.org/citations/26681308) target="_blank">26681308, PubMed: [28575658](http://www.uniprot.org/citations/28575658) target="_blank">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](http://www.uniprot.org/citations/12205100) target="_blank">12205100, PubMed: [18417535](http://www.uniprot.org/citations/18417535) target="_blank">18417535, PubMed: [20231364](http://www.uniprot.org/citations/20231364) target="_blank">20231364, PubMed: [20348101](http://www.uniprot.org/citations/20348101) target="_blank">20348101, PubMed: [23509288](http://www.uniprot.org/citations/23509288) target="_blank">23509288, PubMed: [23754376](http://www.uniprot.org/citations/23754376) target="_blank">23754376, PubMed: [26681308](http://www.uniprot.org/citations/26681308) target="_blank">26681308, PubMed: [28575658](http://www.uniprot.org/citations/28575658) target="_blank">28575658). Recruited to resolve stalled replication forks during replication stress (PubMed: [27797818](http://www.uniprot.org/citations/27797818) target="_blank">27797818, PubMed: [31844045](http://www.uniprot.org/citations/31844045) target="_blank">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](http://www.uniprot.org/citations/12442171) target="_blank">12442171, PubMed: [24141787](http://www.uniprot.org/citations/24141787) target="_blank">24141787). Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51C and XRCC3 (PubMed: [20413593](http://www.uniprot.org/citations/20413593) target="_blank">20413593). Also involved in interstrand cross-link repair (PubMed: [26253028](http://www.uniprot.org/citations/26253028) target="_blank">26253028).

target="_blank">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

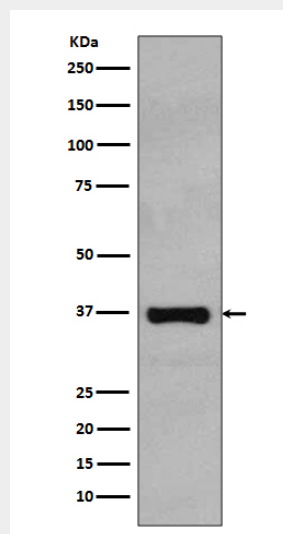
Highly expressed in testis and thymus, followed by small intestine, placenta, colon, pancreas and ovary. Weakly expressed in breast

Anti-Rad51 Rabbit Monoclonal 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](#)

Anti-Rad51 Rabbit Monoclonal Antibody - Images



Western blot analysis of Rad51 expression in HeLa cell lysate.