

**Rad51 (phospho Thr309) Polyclonal Antibody**  
Catalog # AP68038**Specification****Rad51 (phospho Thr309) Polyclonal Antibody - Product Information**

Application	IHC
Primary Accession	<a href="#">Q06609</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal

**Rad51 (phospho Thr309) Polyclonal Antibody - Additional Information****Gene ID** 5888**Other Names**

RAD51; RAD51A; RECA; DNA repair protein RAD51 homolog 1; HsRAD51; hRAD51; RAD51 homolog A

**Dilution**

IHC~~Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications.

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**Rad51 (phospho Thr309) Polyclonal 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:<a href="http://www.uniprot.org/citations/12205100" target="\_blank">12205100</a>, PubMed:<a href="http://www.uniprot.org/citations/18417535" target="\_blank">18417535</a>, PubMed:<a href="http://www.uniprot.org/citations/20231364" target="\_blank">20231364</a>, PubMed:<a href="http://www.uniprot.org/citations/20348101" target="\_blank">20348101</a>, PubMed:<a href="http://www.uniprot.org/citations/22325354" target="\_blank">22325354</a>, PubMed:<a href="http://www.uniprot.org/citations/23509288" target="\_blank">23509288</a>, PubMed:<a href="http://www.uniprot.org/citations/23754376" target="\_blank">23754376</a>, PubMed:<a href="http://www.uniprot.org/citations/26681308" target="\_blank">26681308</a>, PubMed:<a href="http://www.uniprot.org/citations/28575658" target="\_blank">28575658</a>, PubMed:<a href="http://www.uniprot.org/citations/32640219" target="\_blank">32640219</a>). 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:<a href="http://www.uniprot.org/citations/12205100" target="\_blank">12205100</a>, PubMed:<a href="http://www.uniprot.org/citations/18417535" target="\_blank">18417535</a>, PubMed:<a href="http://www.uniprot.org/citations/20231364" target="\_blank">20231364</a>, PubMed:<a href="http://www.uniprot.org/citations/20348101" target="\_blank">20348101</a>, PubMed:<a href="http://www.uniprot.org/citations/23509288" target="\_blank">23509288</a>, PubMed:<a href="http://www.uniprot.org/citations/23754376" target="\_blank">23754376</a>, PubMed:<a href="http://www.uniprot.org/citations/26681308" target="\_blank">26681308</a>, PubMed:<a href="http://www.uniprot.org/citations/28575658" target="\_blank">28575658</a>). 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:<a href="http://www.uniprot.org/citations/12205100" target="\_blank">12205100</a>, PubMed:<a href="http://www.uniprot.org/citations/18417535" target="\_blank">18417535</a>, PubMed:<a href="http://www.uniprot.org/citations/20231364" target="\_blank">20231364</a>, PubMed:<a href="http://www.uniprot.org/citations/20348101" target="\_blank">20348101</a>, PubMed:<a href="http://www.uniprot.org/citations/23509288" target="\_blank">23509288</a>, PubMed:<a href="http://www.uniprot.org/citations/23754376" target="\_blank">23754376</a>, PubMed:<a href="http://www.uniprot.org/citations/26681308" target="\_blank">26681308</a>, PubMed:<a href="http://www.uniprot.org/citations/28575658" target="\_blank">28575658</a>). Recruited to resolve stalled replication forks during replication stress (PubMed:<a href="http://www.uniprot.org/citations/27797818" target="\_blank">27797818</a>, PubMed:<a href="http://www.uniprot.org/citations/31844045" target="\_blank">31844045</a>). 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:<a href="http://www.uniprot.org/citations/12442171" target="\_blank">12442171</a>, PubMed:<a href="http://www.uniprot.org/citations/24141787" target="\_blank">24141787</a>). Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51C and XRCC3 (PubMed:<a href="http://www.uniprot.org/citations/20413593" target="\_blank">20413593</a>). Also involved in interstrand cross-link repair (PubMed:<a href="http://www.uniprot.org/citations/26253028" target="\_blank">26253028</a>).

#### 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

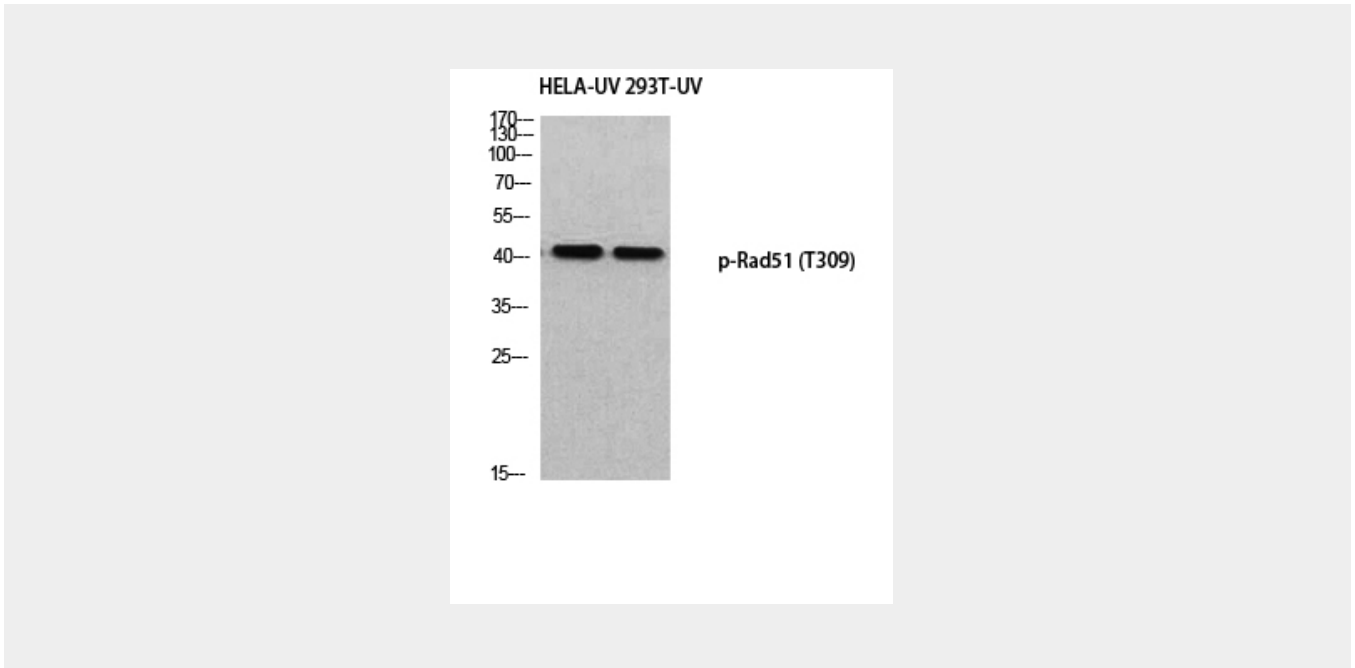
### Rad51 (phospho Thr309) Polyclonal Antibody - Protocols

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](#)

### Rad51 (phospho Thr309) Polyclonal Antibody - Images



### Rad51 (phospho Thr309) Polyclonal Antibody - Background

Plays an important role in homologous strand exchange, a key step in DNA repair through homologous recombination (HR) (PubMed:28575658). Binds to single and double-stranded DNA and exhibits DNA-dependent ATPase activity. 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. 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:26681308). Part of a PALB2-scaffolded HR complex containing BRCA2 and RAD51C and which is thought to play a role in DNA repair by HR. Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51C and XRCC3. Also involved in interstrand cross-link repair (PubMed:26253028).