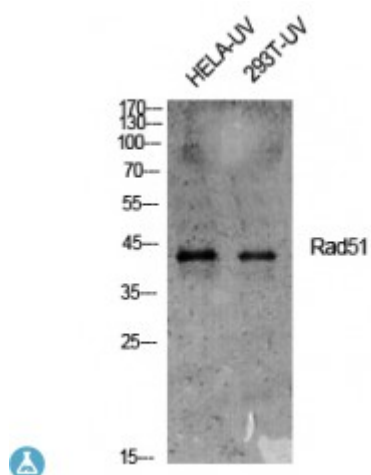


Anti-Rad51 antibody



Description	Rabbit polyclonal to Rad51.
Model	STJ95330
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human Rad51 around the non-phosphorylation site of Y315.
Immunogen Region	250-330 aa
Gene ID	5888
Gene Symbol	RAD51
Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:20000
Specificity	Rad51 Polyclonal Antibody detects endogenous levels of Rad51 protein.
Tissue Specificity	Highly expressed in testis and thymus, followed by small intestine, placenta, colon, pancreas and ovary. Weakly expressed in breast.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	DNA repair protein RAD51 homolog 1 HsRAD51 hRAD51 RAD51 homolog A
Molecular Weight	42 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:9817OMIM:114480
Alternative Names	DNA repair protein RAD51 homolog 1 HsRAD51 hRAD51 RAD51 homolog A
Function	Plays an important role in homologous strand exchange, a key step in DNA repair through homologous recombination (HR). 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 . 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 .
Sequence and Domain Family	The nuclear localization may reside in the C-terminus (between 259 and 339 AA).
Cellular 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.
Post-translational Modifications	Ubiquitinated by the SCF(FBXO18) E3 ubiquitin ligase complex, regulating RAD51 subcellular location and preventing its association with DNA. Phosphorylated. Phosphorylation of Thr-309 by CHEK1 may enhance association with chromatin at sites of DNA damage and promote DNA repair by homologous recombination. Phosphorylation by ABL1 inhibits function.