



Rabbit Anti-Rad51 antibody

SL20297R

Product Name:	Rad51
Chinese Name:	Rad51抗体
Alias:	BRCA1/BRCA2 containing complex, subunit 5; BRCC 5; BRCC5; DNA repair protein RAD51 homolog 1; DNA repair protein rhp51; E coli RecA homolog; HGNC:9817; Homolog of E coli RecA; homolog of S cerevisiae RAD51; HRAD51; HsRad51; HsT16930; Rad 51; RAD51 homolog (RecA homolog, E. coli) (S. cerevisiae); RAD51 homolog; RAD51 homolog S. cerevisiae; RAD51 S cerevisiae homolog; RAD51A; RECA; RecA homolog E. coli; RecA like protein; RecA, E. coli, homolog of; recombination protein A.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,Horse,Rabbit,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	37kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Rad51:81-180/339
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	Preservative: 15mM Sodium Azide, Constituents: 1% BSA, 0.01M PBS, pH 7.4
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The protein encoded by this gene is a member of the RAD51 protein family. RAD51

family members are highly similar to bacterial RecA and *Saccharomyces cerevisiae* Rad51, and are known to be involved in the homologous recombination and repair of DNA. This protein can interact with the ssDNA-binding protein RPA and RAD52, and it is thought to play roles in homologous pairing and strand transfer of DNA. This protein is also found to interact with BRCA1 and BRCA2, which may be important for the cellular response to DNA damage. BRCA2 is shown to regulate both the intracellular localization and DNA-binding ability of this protein. Loss of these controls following BRCA2 inactivation may be a key event leading to genomic instability and tumorigenesis. Two alternatively spliced transcript variants of this gene, which encode distinct proteins, have been reported. Transcript variants utilizing alternative polyA signals exist.

Function:

Participates in a common DNA damage response pathway associated with the activation of homologous recombination and double-strand break repair. Binds to single and double stranded DNA and exhibits DNA-dependent ATPase activity. Underwinds duplex DNA and forms helical nucleoprotein filaments. Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51C and XRCC3.

Subcellular Location:

Nucleus. Cytoplasm. Cytoplasm, perinuclear region. Mitochondrion matrix. Colocalizes with RAD51AP1 and RPA2 to multiple nuclear foci upon induction of DNA damage. DNA damage induces an increase in nuclear levels.

Tissue Specificity:

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

Post-translational modifications:

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.

DISEASE:

Defects in RAD51 are a cause of susceptibility to breast cancer (BC) [MIM:114480]. A common malignancy originating from breast epithelial tissue. Breast neoplasms can be distinguished by their histologic pattern. Invasive ductal carcinoma is by far the most common type. Breast cancer is etiologically and genetically heterogeneous. Important genetic factors have been indicated by familial occurrence and bilateral involvement. Mutations at more than one locus can be involved in different families or even in the same case.

Similarity:

Belongs to the RecA family. RAD51 subfamily.
Contains 1 HhH domain.

SWISS:
Q06609

Gene ID:
5888

Database links:

[Entrez Gene: 5888](#)Human

[Entrez Gene: 19361](#)Mouse

[Entrez Gene: 499870](#)Rat

[Oimim: 179617](#)Human

[SwissProt: Q06609](#)Human

[SwissProt: Q08297](#)Mouse

[Unigene: 631709](#)Human

[Unigene: 330492](#)Mouse

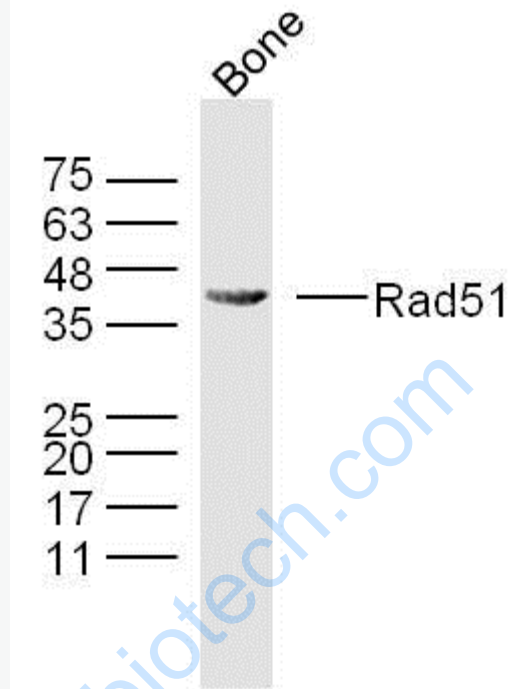
[Unigene: 20474](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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Picture:



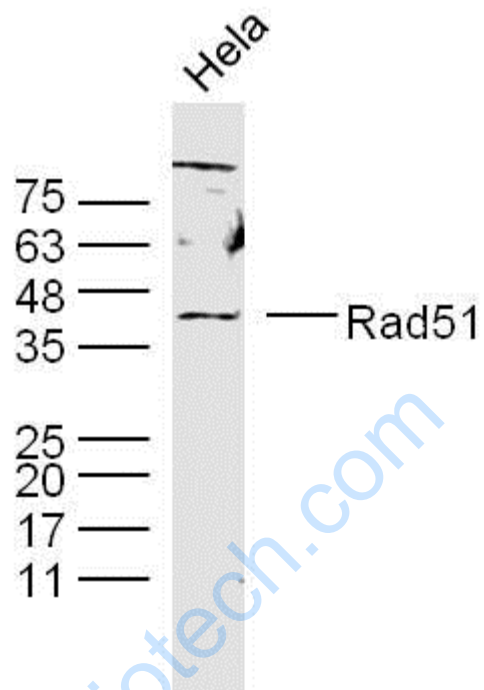
Sample:bone(mouse) Lysate at 40 ug

Primary: Anti-Rad51(SL20297R)at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 37kD

Observed band size: 37kD



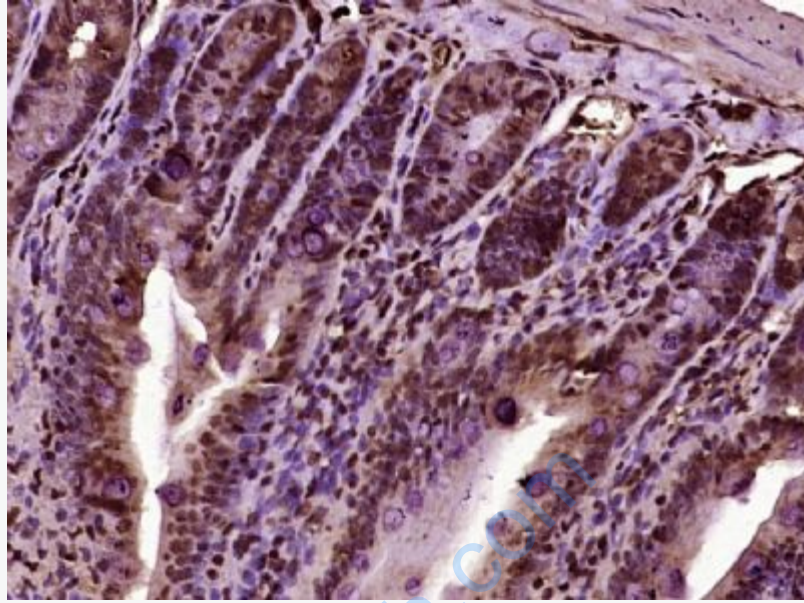
Sample: HeLa (human) cell Lysate at 40 ug

Primary: Anti-Rad51 (SL20297R) at 1/300 dilution

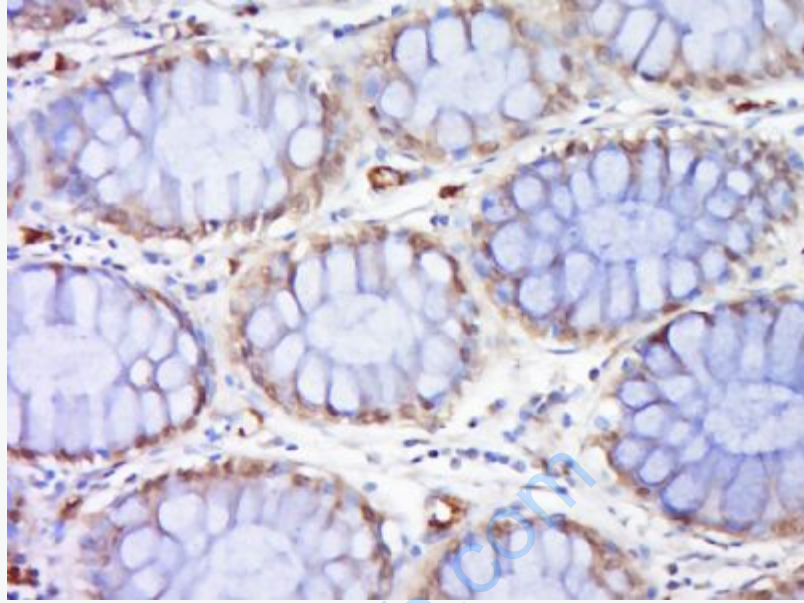
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 37kD

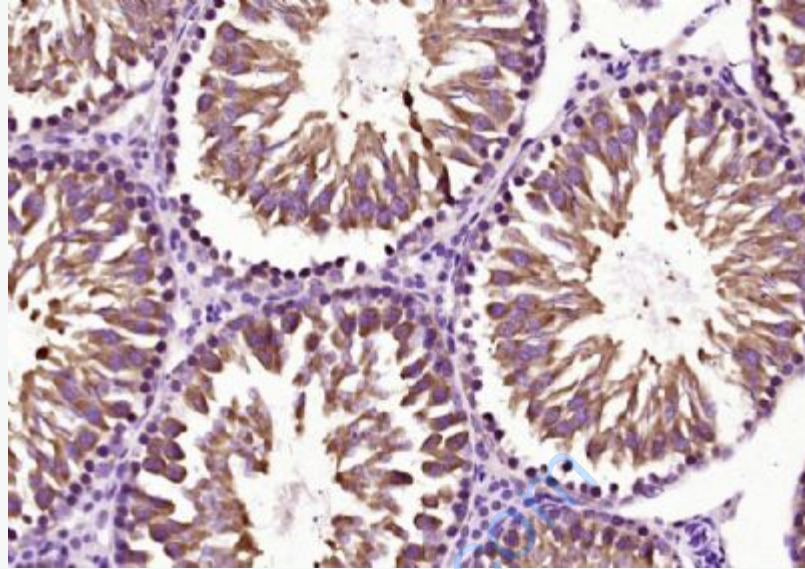
Observed band size: 37kD



Paraformaldehyde-fixed, paraffin embedded (mouse intestine tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Rad51) Polyclonal Antibody, Unconjugated (SL20297R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (human colon cancer); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Rad51) Polyclonal Antibody, Unconjugated (SL20297R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Rad51) Polyclonal Antibody, Unconjugated (SL20297R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.