

Anti-Rad51 antibody - BSA and Azide free ab88572

★★★★☆ [13 Abreviews](#) [51 References](#) [8 Images](#)

Overview

Product name	Anti-Rad51 antibody - BSA and Azide free
Description	Mouse polyclonal to Rad51 - BSA and Azide free
Host species	Mouse
Tested applications	Suitable for: WB, IHC-P, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant full length protein within Human Rad51 aa 1-350. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please contact our Scientific Support team to discuss your requirements.
Positive control	WB: lysate from PC-12, Raw 264.7, Jurkat, NIH 3T3 cells or Human colon tissue. IHC: Human testis. ICC/IF: HeLa cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.4 Constituent: 100% PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab88572 in the following tested applications.

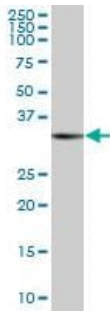
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (5)	Use a concentration of 1 µg/ml. Predicted molecular weight: 37 kDa.
IHC-P	★★★★★ (1)	Use a concentration of 3 µg/ml. Antigen retrieval is not essential but may optimise staining. The microwave method is recommended.
ICC/IF	★★★★★ (4)	Use a concentration of 10 µg/ml.

Target

Function	Plays an important role in homologous strand exchange, a key step in DNA repair through homologous recombination. 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.
Tissue specificity	Highly expressed in testis and thymus, followed by small intestine, placenta, colon, pancreas and ovary. Weakly expressed in breast.
Involvement in disease	Breast cancer Mirror movements 2 Defects in RAD51 are found in a patient with microcephaly, mental retardation without bone marrow failure and pediatric cancers.
Sequence similarities	Belongs to the RecA family. RAD51 subfamily. Contains 1 HhH domain.
Domain	The nuclear localization may reside in the C-terminus (between 259 and 339 AA).
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.
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.

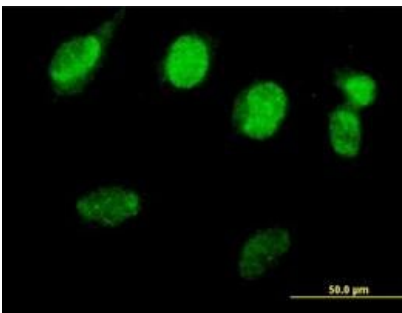
Images



Western blot - Anti-Rad51 antibody - BSA and Azide free (ab88572)

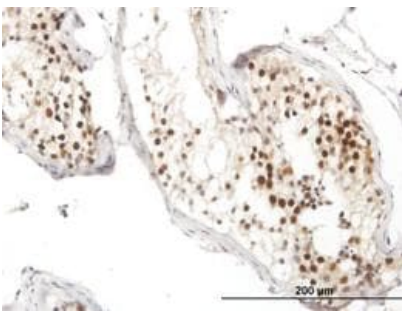
Anti-Rad51 antibody - BSA and Azide free (ab88572) at 1 $\mu\text{g}/\text{ml}$ +
Human colon lysate at 50 μg

Predicted band size: 37 kDa



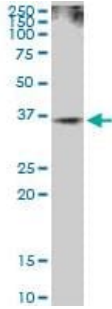
Immunocytochemistry/ Immunofluorescence - Anti-Rad51 antibody - BSA and Azide free (ab88572)

Immunofluorescent staining of Rad51 in HeLa cells using ab88572
at 10 $\mu\text{g}/\text{ml}$.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rad51 antibody - BSA and Azide free (ab88572)

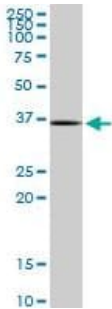
ab88572 at 3 $\mu\text{g}/\text{ml}$ staining Rad51 in formalin-fixed, paraffin-embedded Human testis tissue.



Western blot - Anti-Rad51 antibody - BSA and Azide free (ab88572)

Anti-Rad51 antibody - BSA and Azide free (ab88572) at 1 $\mu\text{g/ml}$ +
Rat PC-12 cell lysate at 50 μg

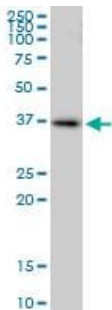
Predicted band size: 37 kDa



Western blot - Anti-Rad51 antibody - BSA and Azide free (ab88572)

Anti-Rad51 antibody - BSA and Azide free (ab88572) at 1 $\mu\text{g/ml}$ +
Raw 264.7 cell lysate (Mouse) at 50 μg

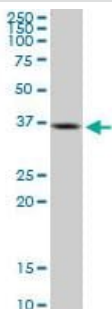
Predicted band size: 37 kDa



Western blot - Anti-Rad51 antibody - BSA and Azide free (ab88572)

Anti-Rad51 antibody - BSA and Azide free (ab88572) at 1 $\mu\text{g/ml}$ +
Human Jurkat cell lysate at 50 μg

Predicted band size: 37 kDa



Western blot - Anti-Rad51 antibody - BSA and Azide free (ab88572)

Anti-Rad51 antibody - BSA and Azide free (ab88572) at 1 $\mu\text{g/ml}$ +
NIH 3T3 cell lysate (Mouse) at 50 μg

Predicted band size: 37 kDa



All lanes : Anti-Rad51 antibody - BSA and Azide free (ab88572) at 1 µg/ml

Lane 1 : transfected 293T cell lysate

Lane 2 : non transfected lysate

Lysates/proteins at 25 µg per lane.

Predicted band size: 37 kDa

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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