

Product datasheet

Anti-Rad51 (phospho T309) antibody ab31769

2 Images

Overview

Product name	Anti-Rad51 (phospho T309) antibody
Description	Rabbit polyclonal to Rad51 (phospho T309)
	<div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 10px;"> <p> This product is a fast track antibody. It has been affinity purified and shows high titre values against the immunizing peptide by ELISA. Read the terms of use »</p> </div>
Host species	Rabbit
Species reactivity	<p>Predicted to work with: Mouse, Rat, Rabbit, Chicken, Cow, Human, Xenopus laevis, Zebrafish</p> <p></p>
Immunogen	<p>Synthetic peptide corresponding to Human Rad51 aa 300 to the C-terminus (internal sequence) conjugated to Keyhole Limpet Haemocyanin (KLH).</p> <p>(Peptide available as ab33130, ab33130, ab33130, ab33130)</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	<p>Preservative: 0.02% Sodium Azide</p> <p>Constituents: 1% BSA, PBS, pH 7.4</p>
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Fast track antibodies constitute a diverse group of products that have been released to accelerate your research, but are not yet fully characterized. They have all been affinity purified and show high titre values against the immunizing peptide (by ELISA).

[Fast track terms of use](#)

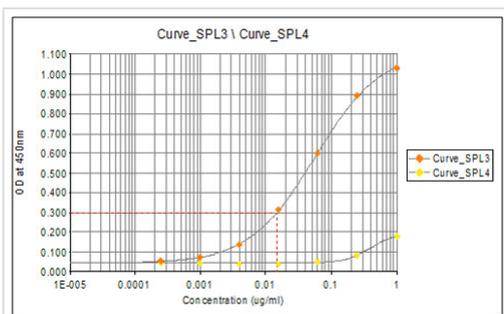
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 36 kDa.
ELISA		Use at an assay dependent concentration. This antibody gave a positive result in ELISA against the immunizing peptide (ab33130). Optimal dilutions/concentrations should be determined by the end user.

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 FIGL1, 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.

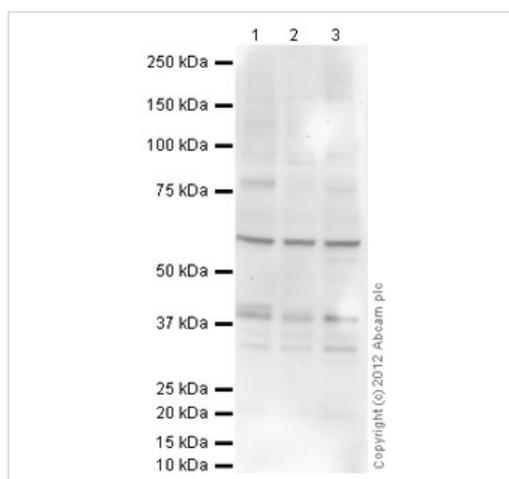
Images

This Fast-Track antibody is not yet fully characterised. These images represent **inconclusive preliminary data**.



ELISA - Anti-Rad51 (phospho T309) antibody (ab31769)

Elisa using ab31769 at varying antibody concentrations. Curve_SPL3 indicates binding to the Rad51 (phospho T309) peptide. Curve_SPL4 indicates <2% crossreactivity with the unmodified Rad51 control peptide.



Western blot - Anti-Rad51 (phospho T309) antibody (ab31769)

All lanes : Anti-Rad51 (phospho T309) antibody (ab31769) at 1 µg/ml

Lane 1 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate

Lane 2 : Ramos (Human Burkitt's lymphoma cell line) Whole Cell Lysate

Lane 3 : Y79 (Human retinoblastoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 36 kDa

Observed band size: 39 kDa

[why is the actual band size different from the predicted?](#)

Additional bands at: 34 kDa, 60 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 20 minutes

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors