

## Product datasheet

# Anti-Rad51 antibody ab63801

★★★★☆ 5 Abreviews 40 References 5 图像

### 概述

产品名称	Anti-Rad51抗体
描述	兔多克隆抗体to Rad51
宿主	Rabbit
经测试应用	适用于: WB, IP, ICC/IF
种属反应性	与反应: Mouse, Chicken, Human, Xenopus laevis
免疫原	Purified recombinant full length protein (Human)
阳性对照	HeLa cell extract. Normal human diploid cells.
常规说明	Please click here for <a href="#">Instructions For Use/Protocol</a> .

### 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
存储溶液	Preservative: 0.09% Sodium Azide Constituents: Whole serum
纯度	Whole antiserum
克隆	多克隆
同种型	IgG

### 应用

Our [Abpromise guarantee](#) covers the use of **ab63801** in the following tested applications.

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

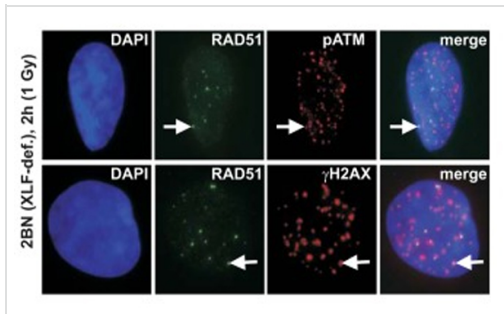
应用	Ab评论	说明
WB	★★★★☆	1/2000 - 1/10000. Detects a band of approximately 37 kDa (predicted molecular weight: 37 kDa).
IP		Use at an assay dependent dilution.

应用	Ab评论	说明
ICC/IF	★★★★☆	1/100.

## 靶标

<b>功能</b>	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.
<b>组织特异性</b>	Highly expressed in testis and thymus, followed by small intestine, placenta, colon, pancreas and ovary. Weakly expressed in breast.
<b>疾病相关</b>	Breast cancer Mirror movements 2 Defects in RAD51 are found in a patient with microcephaly, mental retardation without bone marrow failure and pediatric cancers.
<b>序列相似性</b>	Belongs to the RecA family. RAD51 subfamily. Contains 1 HhH domain.
<b>结构域</b>	The nuclear localization may reside in the C-terminus (between 259 and 339 AA).
<b>翻译后修饰</b>	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.
<b>细胞定位</b>	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.

## 图片

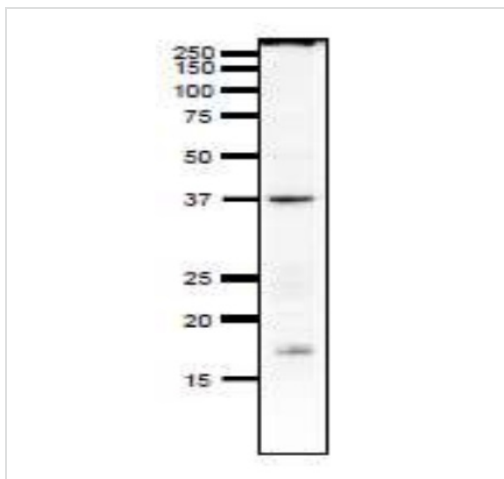


Immunocytochemistry - Anti-Rad51 antibody (ab63801)

Image from PLoS Genet. 2013 Aug; 9(8): e1003667. Fig 1B, doi: 10.1371/journal.pgen.1003667

2BN hTert (XLF-deficient) human fibroblasts were fixed for 30 min with methanol at  $-20^{\circ}\text{C}$ , dipped for 1 min in ice cold acetone for permeabilization and washed three times for 10 min with PBS/1% FCS. Non-specific antigens were blocked for 30 min in 5% BSA in PBS/1% FCS. Samples were incubated with ab63801 (1 : 15000) in PBS/1% FCS over night at  $4^{\circ}\text{C}$ , washed three times in PBS/1% FCS and incubated for 1 h at room temperature with AlexaFluor 488 conjugated secondary antibodies (1 : 500). After three times of washing in PBS, cells were DAPI stained.

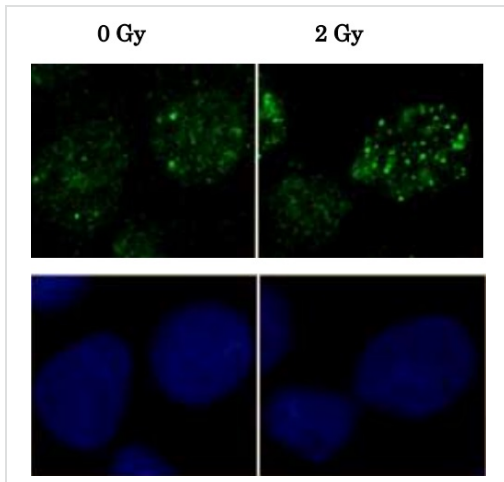
Image shows 2BN hTert (XLF-deficient) human fibroblasts analyzed 2 h post IR with 1 Gy.



Western blot - Anti-Rad51 antibody (ab63801)

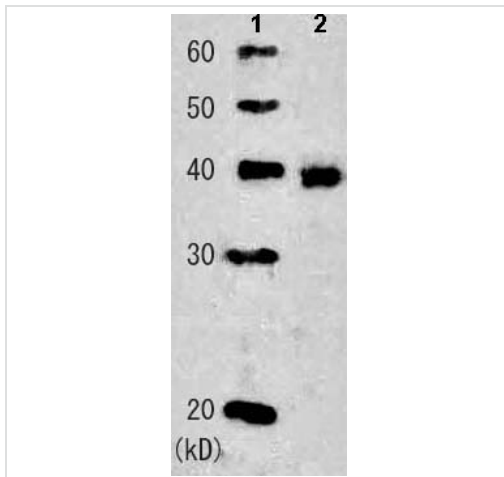
Anti-Rad51 antibody (ab63801) at 1/1000 dilution + Crude extract of Xenopus

**Predicted band size: 37 kDa**



Immunocytochemistry/ Immunofluorescence - Anti-Rad51 antibody (ab63801)

Immunocytochemistry/ Immunofluorescence analysis of human osteosarcoma U2OS cells X-ray irradiation before and 2h after, immunostained with Anti-Rad51 antibody (ab63801) at 1/6,000 dilution. The lower panels were the same cells with Hoechst.



Western blot - Anti-Rad51 antibody (ab63801)

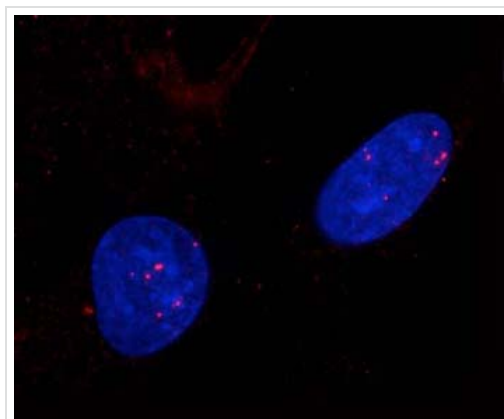
**All lanes :** Anti-Rad51 antibody (ab63801) at 1/2000 dilution

**Lane 1 :** Molecular weight markers

**Lane 2 :** HeLa cell extract

**Predicted band size:** 37 kDa

**Observed band size:** 37 kDa



Immunocytochemistry/ Immunofluorescence - Anti-Rad51 antibody (ab63801)

Immunofluorescent detection of Rad51 foci formation induced by DNA damage. Normal human diploid cells were irradiated by X-ray (0.5 Gy) and after incubation of 6 hr, the cells were fixed and immuno-stained by using ab63801 (x100 dilution) as the primary antibody and Alexa594 labeled anti-rabbit antibody as the secondary antibody.

## **Our Abpromise to you: Quality guaranteed and expert technical support**

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
  
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <http://www.abcam.cn/abpromise> or contact our technical team.

## **Terms and conditions**

---

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