

## Product datasheet

# Anti-Rad21 antibody ab992

★★★★☆ 19 Abreviews 124 References 3 Images

### Overview

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<b>Product name</b>	Anti-Rad21 antibody
<b>Description</b>	Rabbit polyclonal to Rad21
<b>Host species</b>	Rabbit
<b>Specificity</b>	The epitope recognized by Anti-Rad21 antibody (ab992) maps to a region between residue 575 and the C-terminus (residue 631) human Rad21 homolog using the numbering given in entry NP_006256.1 (GeneID 5885).
<b>Tested applications</b>	<b>Suitable for:</b> WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human <b>Predicted to work with:</b> Rat, Rabbit, Horse, Chicken, Guinea pig, Cow, Dog, Turkey, Chimpanzee, Gorilla, Chinese hamster, Orangutan, Elephant ▲
<b>Immunogen</b>	Synthetic peptide corresponding to Human Rad21 (C terminal) conjugated to keyhole limpet haemocyanin. Represented a portion of human Rad21 encoded within exon 14 (LocusLink ID 5885).
<b>General notes</b>	

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7 Preservative: 0.1% Sodium azide Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

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Our [Abpromise guarantee](#) covers the use of **ab992** 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	★★★★☆	1/500 - 1/5000. Predicted molecular weight: 72 kDa. Band observed at ~130 kDa.

## Target

### Function

Cleavable component of the cohesin complex, involved in chromosome cohesion during cell cycle, in DNA repair, and in apoptosis. The cohesin complex is required for the cohesion of sister chromatids after DNA replication. The cohesin complex apparently forms a large proteinaceous ring within which sister chromatids can be trapped. At metaphase-anaphase transition, this protein is cleaved by separase/ESPL1 and dissociates from chromatin, allowing sister chromatids to segregate. The cohesin complex may also play a role in spindle pole assembly during mitosis. Also plays a role in apoptosis, via its cleavage by caspase-3/CASP3 or caspase-7/CASP7 during early steps of apoptosis: the C-terminal 64 kDa cleavage product may act as a nuclear signal to initiate cytoplasmic events involved in the apoptotic pathway.

### Sequence similarities

Belongs to the rad21 family.

### Domain

The C-terminal part associates with the head of SMC1A, while the N-terminal part binds to the head of SMC3.

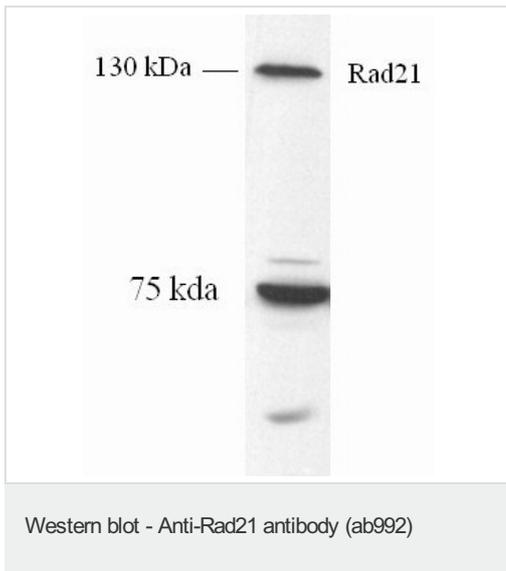
### Post-translational modifications

Cleaved by separase/ESPL1 at the onset of anaphase. Cleaved by caspase-3 and caspase-7 at the beginning of apoptosis. The cleavage by ESPL1 and caspase-3 take place at different sites. Phosphorylated; becomes hyperphosphorylated in M phase of cell cycle. The large dissociation of cohesin from chromosome arms during prophase may be partly due to its phosphorylation by PLK.

### Cellular localization

Nucleus. Chromosome. Chromosome > centromere. Associates with chromatin. Before prophase it is scattered along chromosome arms. During prophase, most of cohesin complexes dissociate from chromatin probably because of phosphorylation by PLK, except at centromeres, where cohesin complexes remain. At anaphase, it is cleaved by separase/ESPL1, leading to the dissociation of the complex from chromosomes, allowing chromosome separation. Once cleaved by caspase-3, the C-terminal 64 kDa cleavage product translocates to the cytoplasm, where it may trigger apoptosis.

## Images



Anti-Rad21 antibody (ab992) at 1/1000 dilution + HeLa whole cell lysate

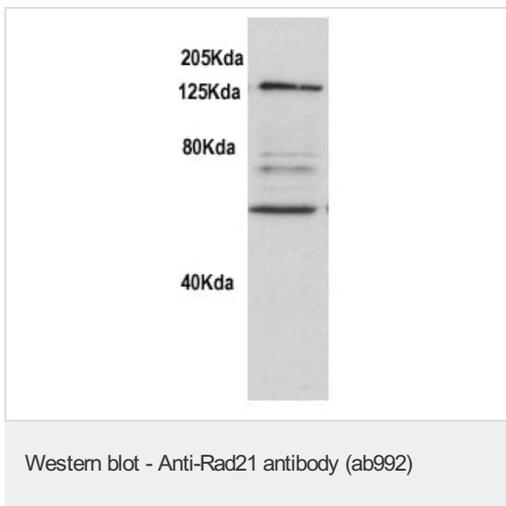
Developed using the ECL technique.

**Predicted band size:** 72 kDa

**Observed band size:** 75 kDa

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

**Additional bands at:** 130 kDa (possible cross reactivity)



Anti-Rad21 antibody (ab992) at 1/2000 dilution + HeLa whole cell extract (extraction was achieved using RIPA buffer and 1% SDS) at 25 µg/ml

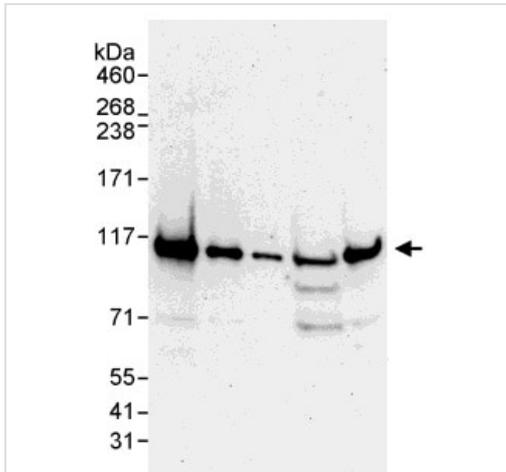
#### Secondary

Goat Anti-Rabbit IgG H&L (HRP) ([ab6721](#)) at 1/1500 dilution

**Predicted band size:** 72 kDa

A rad21 knock down negative control was employed.

This image is courtesy of an Abreview submitted on **9 September 2005**. We do not have any further information relating to this image.



Western blot - Anti-Rad21 antibody (ab992)

**All lanes** : Anti-Rad21 antibody (ab992) at 2 µg/ml

**Lane 1** : HeLa at 50 µg

**Lane 2** : HeLa at 15 µg

**Lane 3** : HeLa at 5 µg

**Lane 4** : 293T at 50 µg

**Lane 5** : NIH3T3 at 50 µg

**Predicted band size:** 72 kDa

**Exposure time:** 30 seconds

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

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