


Anti-Rad21 antibody ab992

★★★★☆ [20 Abreviews](#) [186 References](#) [2 Images](#)

Overview

Product name	Anti-Rad21 antibody
Description	Rabbit polyclonal to Rad21
Host species	Rabbit
Specificity	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).
Tested applications	Suitable for: IP, WB
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat, Rabbit, Horse, Chicken, Guinea pig, Cow, Dog, Turkey, Chimpanzee, Gorilla, Chinese hamster, Orangutan, Elephant 
Immunogen	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).
Positive control	WB: HeLa, Jurkat, HEK293T, RKO, GaMG, MCF-7, A-549, U2OS, NIH/3T3, and TCMK-1 whole cell lysates.
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. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7 Preservative: 0.1% Sodium azide Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee 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
IP	★★★★★ (1)	Use at an assay dependent concentration. ab992 used for IP at 6 µg per reaction.
WB	★★★★★ (7)	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.

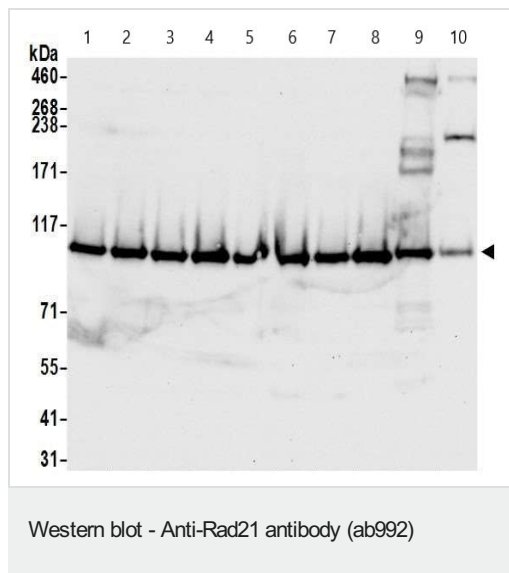
Sequence similarities Belongs to the rad21 family.

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



All lanes : Anti-Rad21 antibody (ab992) at 0.04 µg/ml

Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 2 : Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate

Lane 3 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate

Lane 4 : RKO (human cell line from colon carcinoma) whole cell lysate

Lane 5 : GaMG (human cell line from glioblastoma) whole cell lysate

Lane 6 : MCF7 (human breast adenocarcinoma cell line) whole cell lysate

Lane 7 : A549 (human lung carcinoma cell line) whole cell lysate

Lane 8 : U-2 OS (human bone osteosarcoma epithelial cell line) whole cell lysate

Lane 9 : NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate

Lane 10 : TCMK-1 (mouse epithelial kidney cell line transformed with SV40) whole cell lysate

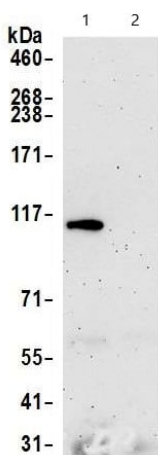
Lysates/proteins at 50 µg per lane.

Developed using the ECL technique.

Predicted band size: 72 kDa

Exposure time: 10 seconds

Lysates prepared using NETN lysis buffer.



Immunoprecipitation - Anti-Rad21 antibody (ab992)

Immunoprecipitation analysis of whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from HeLa (human epithelial cell line from cervix adenocarcinoma) cells prepared using NETN lysis buffer.

Lane 1: ab992 used for IP at 6 µg per reaction

Lane 2: Control IgG

For blotting immunoprecipitated Rad21, a rabbit anti-Rad21 recombinant monoclonal antibody was used at 1/1000. Detected using chemiluminescence with an exposure time of 3 minutes.

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