abcam

Product datasheet

Anti-Rad21 antibody [EPR12647] ab175215

Recombinant RabMAb

3 Images

Overview

Product name	Anti-Rad21 antibody [EPR12647]
Description	Rabbit monoclonal [EPR12647] to Rad21
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB **Unsuitable for:** ICC/IF,IHC-P or IP
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	THP-1, 293T, K562 and HeLa whole cell lysate (**ab150035**); K562 cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR12647
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab175215 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
Flow Cyt (Intra)		1/10 - 1/100. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/1000 - 1/5000. Predicted molecular weight: 72 kDa.

Application notes Is unsuitable for ICC/IF,IHC-P or IP.

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.

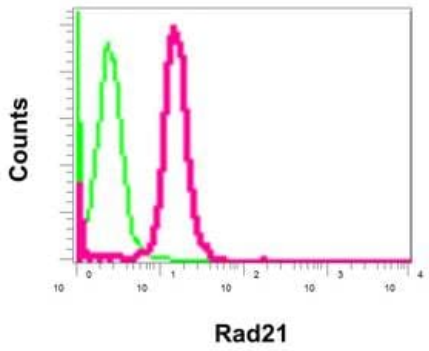
Sequence similarities Belongs to the rad21 family.

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.

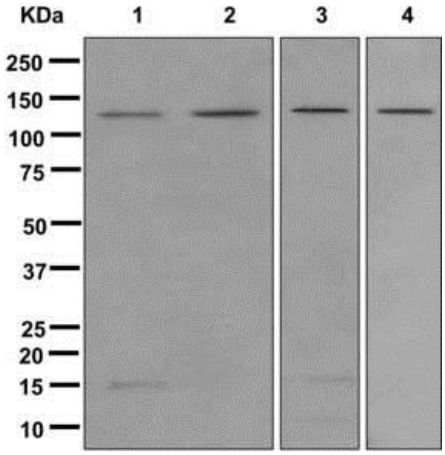
Cellular localization Nucleus. Chromosome. Chromosome > centromere. Associates with chromatin. Before prophase it is scattered along chromosome arms. During prophase, most of cohesin complexes dissociate from chromatin probably because of phosphorylation by PLK, except at centromeres, where cohesin complexes 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



Flow Cytometry (Intracellular) - Anti-Rad21 antibody [EPR12647] (ab175215)

Intracellular flow cytometric analysis of permeabilized K562 cells labeling Rad21 with ab175215 at 1/10 dilution (red) compared to a rabbit IgG negative control (green).



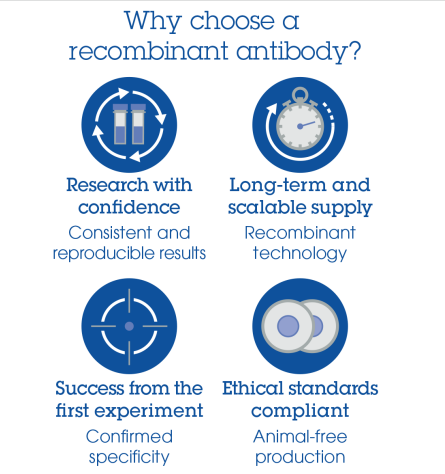
Western blot - Anti-Rad21 antibody [EPR12647] (ab175215)

All lanes : Anti-Rad21 antibody [EPR12647] (ab175215) at 1/1000 dilution

Lane 1 : THP-1 cell lysate
Lane 2 : 293T cell lysate
Lane 3 : K562 cell lysate
Lane 4 : Hela cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 72 kDa



Anti-Rad21 antibody [EPR12647] (ab175215)

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