abcam

ab241395

Anti-Rad21 antibody [EPR12647] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR12647
Purification technique	Affinity purification Protein A
Concentration	1.067 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information RAD21

Function	Double-strand-break repair protein rad21 homolog. As a member of the cohesin complex, involved in sister chromatid cohesion from the time of DNA replication in S phase to their segregation in mitosis, a function that is essential for proper chromosome segregation, post-replicative DNA repair, and the prevention of inappropriate recombination between repetitive regions (PubMed:11509732). The cohesin complex may also play a role in spindle pole assembly during mitosis (PubMed:11590136). In interphase, cohesins may function in the control of gene expression by binding to numerous sites within the genome (By similarity). May control RUNX1 gene expression (Probable). Binds to and represses APOB gene promoter (PubMed:25575569). May play a role in embryonic gut development, possibly through the regulation of enteric neuron development (By similarity). 64-kDa C-terminal product. May promote apoptosis.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab241395 is the carrier-free version of ab175215.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Rad21 also known as double-strand-break repair protein rad21 homolog serves as a component of the cohesin complex. This protein is approximately 123 kDa in size. Rad21 is expressed in a wide range of tissues and cell types particularly in those with high proliferative activity. The protein plays an essential mechanical role by facilitating the cohesion of sister chromatids during cell division ensuring successful chromosome segregation.
Biological function summary	Rad21 is essential in processes beyond chromatid cohesion. It forms part of the cohesin complex which also includes proteins like SMC1 SMC3 and SCC3/SA1 or SA2. This complex is central to maintaining genome stability by participating in DNA repair and regulating gene expression. Through these roles Rad21 contributes to cellular processes such as cell cycle progression and embryonic development.
Pathways	Rad21 integrates into the DNA damage response and cell cycle regulation pathways. The cohesin complex with Rad21 as an important factor acts alongside other proteins such as ATM and ATR in the DNA damage response ensuring the repair of double-strand breaks. Within the cell cycle Rad21 helps coordinate the timing and accuracy of cell division working with cyclin-dependent kinases.
Associated diseases and disorders	Rad21 has been linked to cancer and Cornelia de Lange syndrome. Mutations or dysregulation of Rad21 can result in tumorigenesis due to errors in chromosome segregation and compromised DNA repair. In Cornelia de Lange syndrome cohesin-related proteins like NIPBL and SMC1A also play a role indicating a disruption in the cohesin pathway's function. Understanding Rad21's involvement helps in developing targeted therapies for these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

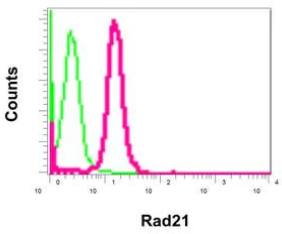
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Flow Cytometry (Intracellular) - Anti-Rad21 antibody [EPR12647] - BSA and Azide free (ab241395)

Rad21 Flow Cytometry (Intracellular) staining using rabbit Anti-Rad21 antibody

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).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab175215).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.