abcam

ab157463

Anti-RAD18 antibody [EPR8942]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR8942
Purification technique	Affinity purification Protein A
Concentration	0.103 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

Tested

Species	Human
Dilution info	1/10000 - 1/50000
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	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information RAD18

Function	E3 ubiquitin-protein ligase involved in postreplication repair of UV-damaged DNA. Postreplication repair functions in gap-filling of a daughter strand on replication of damaged DNA. Associates to the E2 ubiquitin conjugating enzyme UBE2B to form the UBE2B-RAD18 ubiquitin ligase complex involved in mono-ubiquitination of DNA-associated PCNA on 'Lys-164'. Has ssDNA binding activity.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Notes

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.

Supplementary info

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

Activity summary	RAD18 also known as E3 ubiquitin-protein ligase RAD18 weighs approximately 56 kDa. It functions as a E3 ubiquitin ligase and is key to the post-replication repair (PRR) pathway. RAD18 is ubiquitously expressed across many tissues including the testis heart and thymus indicating its fundamental role in DNA repair processes. Its primary mechanical job involves the monoubiquitination of PCNA a process important for DNA damage bypass.
Biological function summary	The protein interacts with other repair proteins to ensure the stability of the genome. RAD18 forms part of the larger PRR pathway complex engaging with partner proteins like RAD6 to facilitate the repair of damaged DNA. It orchestrates the recruitment of translesion synthesis (TLS) polymerases at sites of damage playing an instrumental role in resolving stalled replication forks an important aspect of maintaining cellular health and replication fidelity.
Pathways	A significant role emerges for RAD18 in the DNA damage repair and cell cycle checkpoint pathways. Within these pathways RAD18 interacts closely with members of the RAD6 and FANCD2 proteins. It acts as a bridge connecting ubiquitin-mediated signaling and the activation of downstream proteins required for efficient DNA lesion bypass. This highlights its pivotal position in preserving genomic integrity and cellular division processes.
Associated diseases and disorders	RAD18's malfunction links to cancer development and Fanconi anemia. Its impaired function in the DNA damage repair cascade can lead to genomic instability a hallmark of cancer progression. Additionally through pathways that involve the FANCD2 protein RAD18 deficiencies have been associated with the symptoms of Fanconi anemia a disorder characterized by bone marrow failure and cancer predisposition. Understanding RAD18's role furthers insights into therapeutic strategies for such 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

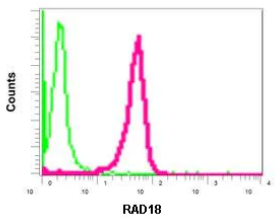
We do not recommend this combination. It is not covered by our product promise.

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.

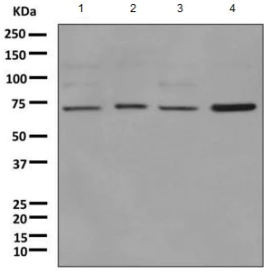
2 product images



Flow Cytometry (Intracellular) - Anti-RAD18 antibody [EPR8942] (ab157463)

RAD18 Flow Cytometry (Intracellular) staining using rabbit Anti-RAD18 antibody

Intracellular flow cytometric analysis of permeabilized K562 cells labeling RAD18 with ab157463 at 1/10 dilution (red) compared to a rabbit IgG negative control antibody (green).



Western blot - Anti-RAD18 antibody [EPR8942] (ab157463)

All lanes:
Western blot - Anti-RAD18 antibody [EPR8942] (ab157463) at 1/10000 dilution

Lane 1:
293T cell lysate at 10 µg

Lane 2:
HCT-116 cell lysate at 10 µg

Lane 3:
K562 cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 56 kDa

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