abcam

ab247690

Anti-hHR23A antibody [EPR4818] - 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	EPR4818
Purification technique	Affinity purification

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	-
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 UV excision repair protein RAD23 homolog A

Function	Multifunctional protein that participates in histone H4K20 demethylation, DNA repair, ubiquitin-dependent protein degradation, transcriptional regulation, and viral replication (PubMed:12643283, PubMed:14621999, PubMed:15321727, PubMed:20614012, PubMed:32209475, PubMed:9372924). Specifically demethylates mono-, di- and trimethylated 'Lys-20' of histone H4 (H4K20me1, H4K20me2, H4K20me3, respectively) into unmethylated forms. Activates the transcription of coding genes by demethylating H4K20me1 and the transcription of repetitive elements by demethylating H4K20me3 (PubMed:32209475). Involved in modulation of proteasomal degradation. Binds to 'Lys-48'-linked polyubiquitin chains in a length-dependent manner and with a lower affinity to 'Lys-63'-linked polyubiquitin chains. Proposed to be capable to bind simultaneously to the 26S proteasome and to polyubiquitinated substrates and to deliver ubiquitinated proteins to the proteasome (PubMed:12643283, PubMed:14621999, PubMed:15321727). Involved in nucleotide excision repair, is considered functionally equivalent to RAD23B in global genome nucleotide excision repair (GG-NER) through its association with XPC. In vitro, the XPC-RAD23A complex demonstrates NER activity (PubMed:9372924). Can stabilize XPC (By similarity). (Microbial infection) Involved in -dependent replication of HIV-1 in non-proliferating cells and primary macrophages. Required for the association of HIV-1 Vpr with the host proteasome.

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

ab247690 is the carrier-free version of ab108592.

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	The human homolog of Rad23A or hHR23A is an important player in protein maintenance and degradation pathways. This protein is known for its involvement in DNA repair mechanisms and proteasome function. hHR23A weighs approximately 43 kDa and expresses in many tissues reflecting its diverse roles throughout the body. Scientists also refer to it as RAD23A giving insight into its function by linking with the well-known RAD proteins.
Biological function summary	HHR23A contributes significantly to the protein ubiquitination process an essential cellular mechanism for targeting proteins for degradation. It forms part of a complex with ubiquitin aiding in the recognition and delivery of ubiquitinated proteins to the proteasome for degradation. The protein's ability to bind to both ubiquitin and the proteasome enables its dual function in proteolytic pathways positioning hHR23A as an intermediary that regulates protein turnover and stability.
Pathways	HHR23A engages in the ubiquitin-proteasome pathway and the nucleotide excision repair (NER) pathway. It cooperates with other proteins like Rad4 (XPC in humans) in NER where it functions in DNA damage recognition and repair. In the ubiquitin-proteasome pathway hHR23A interacts with the proteasomal subunit Rpn10 and other ubiquitin-like proteins. These interactions facilitate effective proteolysis of damaged or unnecessary proteins emphasizing its central role in controlling intracellular protein levels.

Associated diseases and disorders	HHR23A has implications in neurodegenerative diseases and cancer. Impaired ubiquitin-proteasome system function involving hHR23A associates with neurodegenerative diseases such as Alzheimer's where protein aggregates accumulate. hHR23A's interaction with proteins like p53 known for its role in tumor suppression ties this protein to cancer biology highlighting its potential involvement in tumor suppression failure when its pathways are disrupted.

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

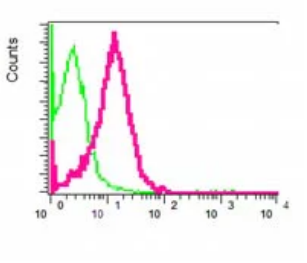
We do not recommend this combination. It is not covered by our product promise.

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.

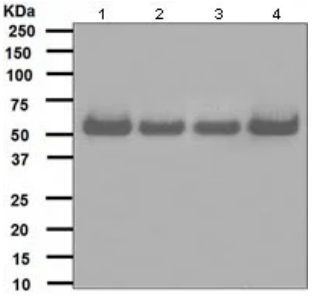
2 product images



Flow Cytometry (Intracellular) - Anti-hHR23A antibody [EPR4818] - BSA and Azide free (ab247690)

HHR23A Flow Cytometry (Intracellular) staining using rabbit Anti-hHR23A antibody

This data was developed using ab108592, the same antibody clone in a different buffer formulation.
ab108592 at 1/10 dilution staining hHR23A in permeabilized Jurkat cells by intracellular flow cytometry (shown in red). Rabbit IgG (negative) in green.



Western blot - Anti-hHR23A antibody [EPR4818] - BSA and Azide free (ab247690)

This data was developed using ab108592, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-hHR23A antibody [EPR4818] (ab108592) at 1/10000 dilution

Lane 1:
MCF7 cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
Raji cell lysate at 10 µg

Lane 4:
Jurkat cell lysate at 10 µg

Predicted band size: 40 kDa

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