abcam

ab249041

Anti-UBXN1 antibody [EPR9136] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR9136
Purification technique	Affinity purification
Concentration	1.057 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information UBXN1

Function

Ubiquitin-binding protein that plays a role in the modulation of innate immune response. Blocks both the RIG-I-like receptors (RLR) and NF-kappa-B pathways. Following viral infection, UBXN1 is induced and recruited to the RLR component MAVS. In turn, interferes with MAVS oligomerization, and disrupts the MAVS/TRAF3/TRAF6 signalosome. This function probably serves as a brake to prevent excessive RLR signaling (PubMed:23545497). Interferes with the TNFalpha-triggered NF-kappa-B pathway by interacting with cellular inhibitors of apoptosis proteins (cIAPs) and thereby inhibiting their recruitment to TNFR1 (PubMed:25681446). Also prevents the activation of NF-kappa-B by associating with CUL1 and thus inhibiting NF-kappa-B inhibitor alpha/NFKBIA degradation that remains bound to NF-kappa-B (PubMed:28152074). Interacts with the BRCA1-BARD1 heterodimer and regulates its activity. Specifically binds 'Lys-6'-linked polyubiquitin chains. Interaction with autoubiquitinated BRCA1 leads to the inhibition of the E3 ubiquitin-protein ligase activity of the BRCA1-BARD1 heterodimer (PubMed:20351172). Component of a complex required to couple deglycosylation and proteasome-mediated degradation of misfolded proteins in the endoplasmic reticulum that are retrotranslocated in the cytosol.

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

ab249041 is the carrier-free version of ab151723.

Species reactivity
Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

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	UBXN1 also known as UBX domain-containing protein 1 has a major role in regulating protein degradation through the ubiquitin-proteasome system. This protein weighs approximately 38 kDa. UBXN1 is expressed ubiquitously with higher levels reported in tissues such as kidney liver and brain. It interacts with the p97/VCP ATPase modulating its activity in protein degradation. By binding to ubiquitin chains UBXN1 influences the fate of many substrates targeted for degradation.
Biological function summary	UBXN1 serves as a regulator in processes such as protein homeostasis and stress response. It functions as part of a large protein complex that includes elements like p97/VCP which are central to maintaining cellular protein balance. UBXN1 modulates processes involving endoplasmic reticulum-associated degradation (ERAD). It therefore plays a role in the quality control of misfolded proteins preventing their accumulation and potential toxicity in cells.
Pathways	UBXN1 is closely associated with the ubiquitin-proteasome pathway a critical system for protein turnover. It acts along with proteins such as p97/VCP and works in tandem with ubiquitin enzymes to regulate protein substrates. Additionally

	UBXN1 has a role in autophagy-related pathways where it assists in removing damaged proteins and organelles cooperating with signalling proteins like LC3 which are essential for autophagic vesicle formation.
Associated diseases and disorders	UBXN1 has connections with neurodegenerative diseases and cancer. Its involvement in protein homeostasis and degradation pathways links UBXN1 to neurodegenerative conditions where mismanagement of protein quality control is a hallmark. The dysregulation of UBXN1 alongside proteins p97/VCP has been associated with inclusion body myopathy and other degenerative diseases. Moreover alterations in UBXN1 expression or function relate to cancer progression as its imbalance can lead to uncontrolled cell growth through disrupted protein degradation mechanisms.

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

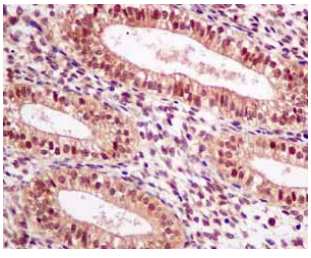
We do not recommend this combination. It is not covered by our product promise.

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.

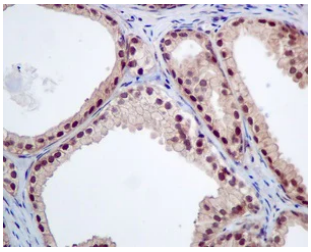
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBXN1 antibody [EPR9136] - BSA and Azide free (ab249041)

UBXN1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UBXN1 antibody

This data was developed using ab151723, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin embedded normal Human uterus tissue using ab151723 showing +ve staining. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

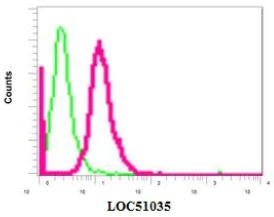


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBXN1 antibody [EPR9136] - BSA and Azide free (ab249041)

UBXN1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UBXN1 antibody

This data was developed using ab151723, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human prostate tissue labeling UBXN1 with ab151723 at 1/50 dilution.

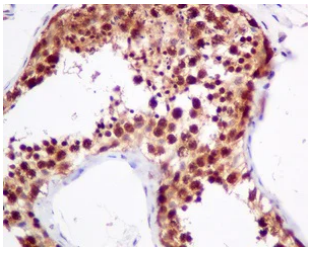
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-UBXN1 antibody [EPR9136] - BSA and Azide free (ab249041)

UBXN1 Flow Cytometry (Intracellular) staining using rabbit Anti-UBXN1 antibody

This data was developed using ab151723, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of permeabilized 293T cells labeling UBXN1 with ab151723 at 1/10 dilution (red) compared to a nonspecific control antibody (green).

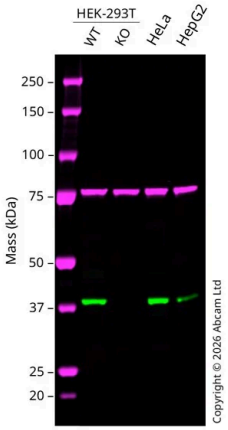


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBXN1 antibody [EPR9136] - BSA and Azide free (ab249041)

UBXN1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UBXN1 antibody

This data was developed using ab151723, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human testis tissue labeling UBXN1 with ab151723 at 1/50 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-UBXN1 antibody [EPR9136] - BSA and Azide free (ab249041)

UBXN1 Western blot staining using rabbit Anti-UBXN1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab151723).

Western blot: Anti-UBXN1 antibody [EPR9136] ab151723 staining at 1/10000 dilution, shown in green; Mouse anti-CANX ab238078 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 39 kDa in Wild-type HEK-293T cell lysates with no signal observed at this size in UBXN1 knockout HEK-293T cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5% Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-UBXN1 antibody [EPR9136] (ab151723) at 1/10000 dilution

Lane 1:
Wild-type HEK-293T cell lysates at 20 µg

Lane 2:
Western blot - Human UBXN1 knockout HEK-293T cell line (ab266197) at 20 µg

Lane 3:
HeLa cell lysates at 20 µg

Lane 4:
HepG2 cell lysates at 20 µg

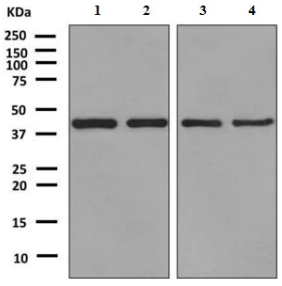
Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 39 kDa

Observed band size: 39 kDa



Western blot - Anti-UBXN1 antibody [EPR9136] - BSA and Azide free (ab249041)

UBXN1 Western blot staining using rabbit Anti-UBXN1 antibody

This data was developed using ab151723, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-UBXN1 antibody [EPR9136] (ab151723) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:

293T cell lysate at 10 µg

Lane 4:
Ramos cell lysate at 10 µg

Secondary

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

Predicted band size: 33 kDa

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