abcam

ab247823

Anti-Ube2N / Ubc13 antibody [EPR5163] - 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	EPR5163
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information UBE2N

Function	The UBE2V1-UBE2N and UBE2V2-UBE2N heterodimers catalyze the synthesis of non-canonical 'Lys-63'-linked polyubiquitin chains. This type of polyubiquitination does not lead to protein degradation by the proteasome. Mediates transcriptional activation of target genes. Plays a role in the control of progress through the cell cycle and differentiation. Plays a role in the error-free DNA repair pathway and contributes to the survival of cells after DNA damage. Acts together with the E3 ligases, HLTF and SHPRH, in the 'Lys-63'-linked poly-ubiquitination of PCNA upon genotoxic stress, which is required for DNA repair. Appears to act together with E3 ligase RNF5 in the 'Lys-63'-linked polyubiquitination of JKAMP thereby regulating JKAMP function by decreasing its association with components of the proteasome and ERAD. Promotes TRIM5 capsid-specific restriction activity and the UBE2V1-UBE2N heterodimer acts in concert with TRIM5 to generate 'Lys-63'-linked polyubiquitin chains which activate the MAP3K7/TAK1 complex which in turn results in the induction and expression of NF-kappa-B and MAPK-responsive inflammatory genes. Together with RNF135 and UB2V1, catalyzes the viral RNA-dependent 'Lys-63'-linked polyubiquitination of RIGI to activate the downstream signaling pathway that leads to interferon beta production (PubMed:28469175, PubMed:31006531). UBE2V1-UBE2N together with TRAF3IP2 E3 ubiquitin ligase mediate 'Lys-63'-linked polyubiquitination of TRAF6, a component of IL17A-mediated signaling pathway.

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

ab247823 is the carrier-free version of ab109294.

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.

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

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	Ube2N also known as Ubc13 is a ubiquitin-conjugating enzyme with a molecular mass of around 17 kDa. It plays an important role in the ubiquitination process by forming a complex with Uev1A which assists in catalyzing the attachment of ubiquitin to substrate proteins. Expression of Ube2N is found in various tissues particularly in those with high rates of protein modification and signal regulation. Mechanically Ube2N works by forming polyubiquitin chains linked through lysine 63 on ubiquitin molecules a step essential for signaling rather than protein degradation.
Biological function summary	Ube2N has a significant role in DNA repair and immune response. It teams up with other proteins as part of larger complexes like the E2/E3 ligase complexes facilitating non-degradative polyubiquitin chains that activate signaling pathways. These chains contribute to the repair of DNA double-strand breaks by involving in the activation of DNA repair proteins and maintaining genomic integrity. Furthermore Ube2N is pivotal in modulating the immune response by activating NF-kB a transcription factor important for immune and inflammatory responses.

Pathways	Ube2N's activities impact the important signaling pathways such as NF-kB and DNA damage response pathways. In the NF-kB pathway K63-linked polyubiquitination by Ube2N leads to the activation of IKK complex subsequently mobilizing NF-kB to the nucleus to initiate transcription of immune genes. In DNA damage response Ube2N interacts with proteins like Ubc13 and Rnf8 to enhance DNA repair processes. These interactions highlight Ube2N's connection within a network of proteins maintaining cell health.
Associated diseases and disorders	Ube2N is linked to cancer progression and immune system dysfunctions. Abnormal activity or expression of Ube2N can lead to unchecked cellular proliferation seen in various types of cancer. Additionally Ube2N associates with immune disorders where deregulated NF-kB activity contributes to chronic inflammation and auto-immune conditions. Its interaction partners like Uev1A can also play a role in the dysregulated pathways contributing to these diseases.

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

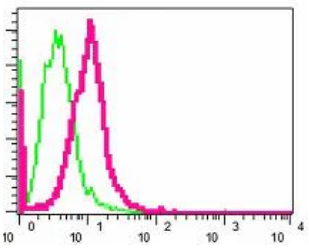
We do not recommend this combination. It is not covered by our product promise.

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.

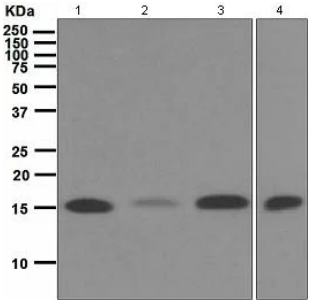
2 product images



Flow Cytometry (Intracellular) - Anti-Ube2N / Ubc13 antibody [EPR5163] - BSA and Azide free (ab247823)

Ube2N / Ubc13 Flow Cytometry (Intracellular) staining using rabbit Anti-Ube2N / Ubc13 antibody

This data was developed using ab109294, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of Ube2N / Ubc13 in permeabilized Jurkat cells, using ab109294 at a dilution of 1/250 (red) or a rabbit IgG (negative) (green).



Western blot - Anti-Ube2N / Ubc13 antibody [EPR5163] - BSA and Azide free (ab247823)

This data was developed using ab109294, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Ube2N / Ubc13 antibody [EPR5163] (ab109294) at 1/10000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
Raji cell lysate at 10 µg

Lane 4:
293T cell lysate at 10 µg

Predicted band size: 17 kDa

Observed band size: 17 kDa

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