abcam

ab247799

Anti-UBA52 antibody [EPR4546] - 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	EPR4546
Purification technique	Affinity purification
Concentration	1.049 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	Perform antigen retrieval before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information UBA52

Function

Ubiquitin. Exists either covalently attached to another protein, or free (unanchored). When covalently bound, it is conjugated to target proteins via an isopeptide bond either as a monomer (monoubiquitin), a polymer linked via different Lys residues of the ubiquitin (polyubiquitin chains) or a linear polymer linked via the initiator Met of the ubiquitin (linear polyubiquitin chains). Polyubiquitin chains, when attached to a target protein, have different functions depending on the Lys residue of the ubiquitin that is linked: Lys-6-linked may be involved in DNA repair; Lys-11-linked is involved in ERAD (endoplasmic reticulum-associated degradation) and in cell-cycle regulation; Lys-29-linked is involved in proteotoxic stress response and cell cycle; Lys-33-linked is involved in kinase modification; Lys-48-linked is involved in protein degradation via the proteasome; Lys-63-linked is involved in endocytosis, DNA-damage responses as well as in signaling processes leading to activation of the transcription factor NF-kappa-B. Linear polymer chains formed via attachment by the initiator Met lead to cell signaling. Ubiquitin is usually conjugated to Lys residues of target proteins, however, in rare cases, conjugation to Cys or Ser residues has been observed. When polyubiquitin is free (unanchored-polyubiquitin), it also has distinct roles, such as in activation of protein kinases, and in signaling. Large ribosomal subunit protein eL40. Component of the 60S subunit of the ribosome (PubMed:23169626, PubMed:23636399, PubMed:32669547, PubMed:39048817, PubMed:39103523). Ribosomal protein L40 is essential for translation of a subset of cellular transcripts, and especially for cap-dependent translation of vesicular stomatitis virus mRNAs (PubMed:23169626, PubMed:23636399, PubMed:32669547, PubMed:39048817, PubMed:39103523).

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

ab247799 is the carrier-free version of ab109227.

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	UBA52 also known as Ubiquitin A-52 Residue Ribosomal Protein Fusion Product 1 is a protein fusion of ubiquitin and ribosomal protein L40. It has a mass of approximately 15 kDa. UBA52 expresses widely in various tissues including the liver brain and heart playing a role in protein synthesis and ubiquitination. The ubiquitin domain of UBA52 gets translated and cleaved to participate in the ubiquitin-proteasome system while the ribosomal component integrates into the 60S subunit of the ribosome.

Biological function summary	UBA52 functions as both a ribosomal protein and a source of ubiquitin. This dual role enables it to participate in protein synthesis as part of the ribosome. Additionally it provides ubiquitin required for post-translational modification of proteins affecting protein stability and degradation. UBA52 is part of the ribosome complex and contributes to efficient protein translation while its ubiquitin segment influences protein turnover and cellular response to stress.
Pathways	UBA52 plays roles in protein translation and ubiquitin-mediated proteolysis. These pathways are essential for maintaining cellular homeostasis. In the context of protein synthesis UBA52 associates with other ribosomal proteins and supports the assembly of the ribosome facilitating mRNA translation. In the ubiquitin-proteasome pathway UBA52 contributes ubiquitin moieties used to tag proteins for degradation working with E2 and E3 ligases such as UBE2K and HUWE1 important for regulated proteolysis.
Associated diseases and disorders	UBA52 is linked to conditions involving protein synthesis defects and improper protein degradation including cancer and neurodegenerative disorders. Changes in UBA52 expression or mutations can disrupt ribosome function affecting cellular proliferation and survival in cancers. Additionally impaired ubiquitin signaling has implications in neurodegenerative diseases where protein aggregates form due to faulty degradation. UBA52's connection to pathways with proteins like p53 in cancer and Parkin in neurodegeneration further illustrates its relevance across different pathologies.

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

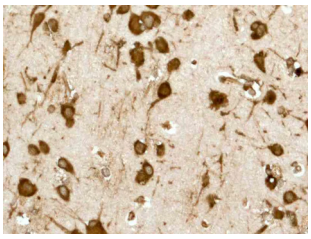
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

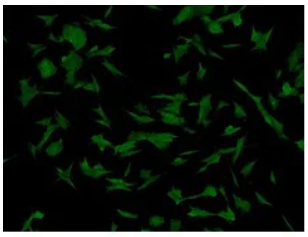


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UBA52 antibody [EPR4546] - BSA and Azide free (ab247799)

UBA52 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UBA52 antibody

This data was developed using ab109227, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human brain tissue using 1/500 ab109227.

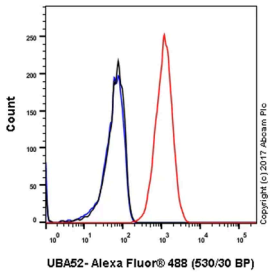
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-UBA52 antibody [EPR4546] - BSA and Azide free (ab247799)

UBA52 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-UBA52 antibody

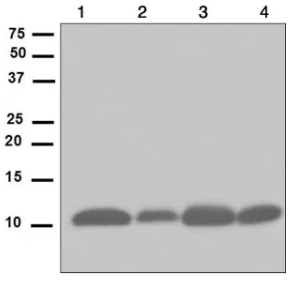
This data was developed using ab109227, the same antibody clone in a different buffer formulation.Immunofluorescent staining of SH-SY-5Y cells using ab109227 at 1/250



Flow Cytometry (Intracellular) - Anti-UBA52 antibody [EPR4546] - BSA and Azide free (ab247799)

UBA52 Flow Cytometry (Intracellular) staining using rabbit Anti-UBA52 antibody

This data was developed using ab109227, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling UBA52 (red) with purified ab109227 at a 1/2500 dilution (1ug/mL). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (Black) (ab172730). Blue (unlabeled control) - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-UBA52 antibody [EPR4546] - BSA and Azide free (ab247799)

This data was developed using ab109227, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-UBA52 antibody [EPR4546] (ab109227) at 1/1000 dilution

Lane 1:
Fetal kidney tissue lysate at 10 µg

Lane 2:
Human placenta tissue lysate at 10 µg

Lane 3:
293T cell lysate at 10 µg

Lane 4:
JAR cell lysate at 10 µg

Predicted band size: 15 kDa

Observed band size: 10 kDa

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