abcam

ab251013

Anti-ERp72 antibody [EPR14824(B)] - 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	EPR14824(B)
Purification technique	Affinity purification Protein A
Concentration	1.06 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	-

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information PDIA4

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

ab251013 is the carrier-free version of ab190348.

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	ERp72 also known as PDIA4 is a protein with a molecular weight of approximately 72 kDa. It belongs to the protein disulfide isomerase (PDI) family and functions as an enzyme within the endoplasmic reticulum (ER). The protein helps with folding by catalyzing the formation rearrangement and breakage of disulfide bonds in nascent proteins. ERp72 is expressed in a variety of tissues with high abundance in the liver pancreas and other secretory organs reflecting its role in protein synthesis and processing.
Biological function summary	The protein disulfide isomerase family member ERp72 plays a significant part in maintaining ER function. It participates in the unfolded protein response (UPR) which ensures proper protein folding and manages ER stress. ERp72 operates as part of a larger multiprotein complex that aids in the quality control of newly synthesized proteins. The protein interacts with calnexin and BiP to perform these functions. This makes ERp72 essential for cellular homeostasis and adaptation to changing physiological conditions.
Pathways	ERp72 is closely involved in the protein folding and ER stress response pathways. The unfolded protein response pathway recognizes misfolded proteins in the ER and initiates mechanisms to restore normal function. It connects with other proteins such as ATF6 and IRE1 to modulate gene expression and improve protein folding capacity. Additionally ERp72 participates in the pathway related to oxidative protein folding working alongside proteins like ERO1. This confirms its key contribution to cellular function by maintaining the balance between protein folding and degradation.

Associated diseases and disorders	Alterations in ERp72 expression or function link to conditions such as neurodegenerative diseases and cancer. Alzheimer's disease shows aberrant ER stress and misfolded protein accumulation where ERp72's interaction with amyloid precursor protein might play a role. In the case of cancer ER stress and UPR pathway alterations contribute to cancer cell survival associating ERp72 with this adaptation process particularly its interaction with BiP and other PDIs. These connections highlight the relevance of ERp72 in disease progression and as a potential therapeutic target.

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

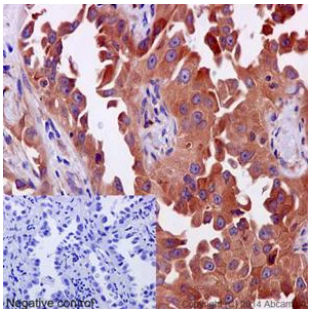
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images



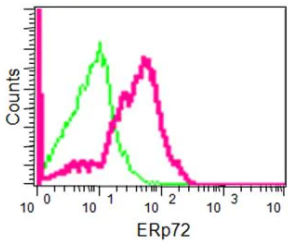
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ERp72 antibody [EPR14824(B)] - BSA and Azide free (ab251013)

ERp72 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ERp72 antibody

This data was developed using ab190348, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded, Human lung carcinoma tissue labeling ERp72 with ab190348 at a 1/100 dilution. Counter stained with hematoxylin. Negative control also shown.

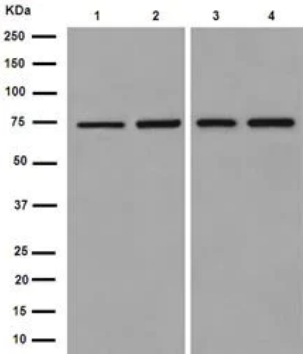
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-ERp72 antibody [EPR14824(B)] - BSA and Azide free (ab251013)

ERp72 Flow Cytometry (Intracellular) staining using rabbit Anti-ERp72 antibody

This data was developed using ab190348, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of 2% paraformaldehyde-fixed MCF7 cells labeling ERp72 with ab190348 at a 1/50 dilution (pink) or a rabbit IgG isotype control (green), followed by secondary Goat anti rabbit IgG (FITC) at 1/150 dilution.



Western blot - Anti-ERp72 antibody [EPR14824(B)] - BSA and Azide free (ab251013)

ERp72 Western blot staining using rabbit Anti-ERp72 antibody

This data was developed using ab190348, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-ERp72 antibody [EPR14824(B)] (ab190348) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 20 µg

Lane 2:
JAR cell lysate at 20 µg

Lane 3:
Human fetal liver tissue lysate at 20 µg

Lane 4:
MCF7 cell lysate at 20 µg

Secondary

All lanes:
goat anti-rabbit IgG, (H+L), peroxidase conjugated at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 73 kDa

Observed band size: 73 kDa

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