abcam

ab249941

Anti-ERO1L antibody [EPR12474] - 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	EPR12474
Purification technique	Affinity purification
Concentration	1.039 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	Mouse
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	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 ERO1A

Function Oxidoreductase involved in disulfide bond formation in the endoplasmic reticulum. Efficiently reoxidizes P4HB/PDI, the enzyme catalyzing protein disulfide formation, in order to allow P4HB to sustain additional rounds of disulfide formation. Following P4HB reoxidation, passes its electrons to molecular oxygen via FAD, leading to the production of reactive oxygen species (ROS) in the cell. Required for the proper folding of immunoglobulins (PubMed:29858230). Plays an important role in ER stress-induced, CHOP-dependent apoptosis by activating the inositol 1,4,5-trisphosphate receptor IP3R1. Involved in the release of the unfolded cholera toxin from reduced P4HB/PDI in case of infection by V.cholerae, thereby playing a role in retrotranslocation of the toxin.

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

ab249941 is the carrier-free version of ab177156.

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	ERO1L also known as ERO1-alpha is a protein involved in the formation of disulfide bonds in the endoplasmic reticulum important for protein folding. The molecular mass of ERO1L is approximately 54 kDa. ERO1L primarily expresses in tissues with high secretory activities such as the liver and pancreas. It plays a vital role in maintaining redox homeostasis within the cell by transferring electrons from protein disulfide isomerase to molecular oxygen.
Biological function summary	ERO1L contributes to oxidative protein folding within the endoplasmic reticulum. As part of a complex it interacts with protein disulfide isomerases to facilitate the introduction of disulfide bonds into nascent proteins. This function is essential for the proper maturation of secreted proteins influencing cellular protein management processes. ERO1L activity impacts cellular responses to stress and influences the capacity of cells to handle unfolded proteins.
Pathways	ERO1L significantly influences the protein folding and endoplasmic reticulum-associated degradation pathway. It has strong associations with protein disulfide isomerase and interacts within the unfolded protein response to manage cellular

	stress caused by misfolded proteins. The protein contributes to the maintenance of a stable internal environment during conditions where protein folding demands increase.
Associated diseases and disorders	ERO1L shows connections to cancer and neurodegenerative disorders. Aberrant expression of ERO1L can influence tumor growth due to its role in modulating cellular stress responses and managing protein folding in cancer cells. The protein also shows a relationship with neurodegenerative conditions through its involvement in protein misfolding pathways which are critical in diseases like Alzheimer's. ERO1L collaborates with proteins like protein disulfide isomerase and participates in cellular mechanisms underlying these conditions.

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

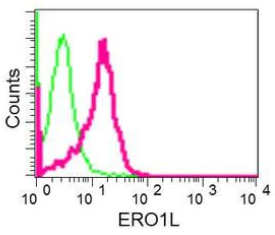
We do not recommend this combination. It is not covered by our product promise.

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

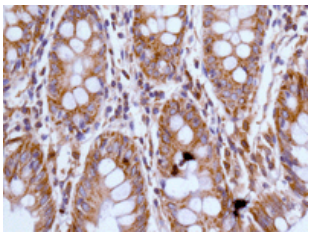


Flow Cytometry (Intracellular) - Anti-ERO1L antibody [EPR12474] - BSA and Azide free (ab249941)

ERO1L Flow Cytometry (Intracellular) staining using rabbit Anti-ERO1L antibody

This data was developed using ab177156, the same antibody clone in a different buffer formulation.

Intracellular flow cytometric analysis of permeabilized HeLa cells labeling ERO1L with ab177156 at 1/10 dilution (red), or a rabbit IgG (negative) (green).

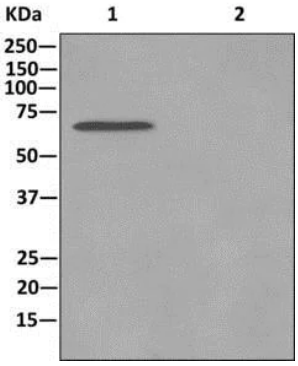


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ERO1L antibody [EPR12474] - BSA and Azide free (ab249941)

ERO1L Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ERO1L antibody

This data was developed using ab177156, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling ERO1L with ab177156 at 1/100 dilution.

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

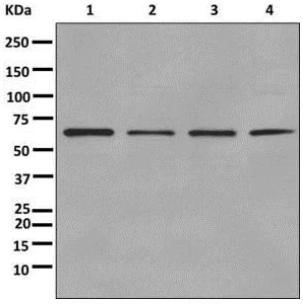


Immunoprecipitation - Anti-ERO1L antibody [EPR12474] - BSA and Azide free (ab249941)

This data was developed using ab177156, the same antibody clone in a different buffer formulation.
Western blot analysis on immunoprecipitation pellet from (Lane 1) HepG2 cell lysate or (Lane 2) 1 X PBS (negative control) using ab177156 and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.

All lanes:
Immunoprecipitation - Anti-ERO1L antibody [EPR12474] (ab177156)

Predicted band size: 54 kDa



Western blot - Anti-ERO1L antibody [EPR12474] - BSA and Azide free (ab249941)

ERO1L Western blot staining using rabbit Anti-ERO1L antibody

This data was developed using ab177156, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-ERO1L antibody [EPR12474] (ab177156) at 1/1000 dilution

Lane 1:
HepG2 cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
MCF-7 cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

Secondary

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

Predicted band size: 54 kDa

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