abcam

ab230540

Anti-ERO1LB antibody - C-terminal

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human ERO1B aa 250-300 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link Q86YB8
Purification technique	Affinity purification Protein A
Concentration	0.35 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

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 ERO1B

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. Other protein disulfide isomerase family members can also be reoxidized, but at lower rates compared to P4HB, including PDIA2 (50% of P4HB reoxidation rate), as well as PDIA3, PDIA4, PDIA6 and NXNDC12 (<10%). Following P4HB reoxidation, passes its electrons to molecular oxygen via FAD, leading to the production of reactive oxygen species (ROS) in the cell. May be involved in oxidative proinsulin folding in pancreatic cells, hence may play a role in glucose homeostasis.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	ERO1LB also known as Endoplasmic Reticulum Oxidoreductin 1 Beta or ERO1-like protein beta is an enzyme involved in oxidative protein folding. It is approximately 55 kDa in size. ERO1LB localizes mainly in the endoplasmic reticulum and is expressed in various tissues with higher expression in the pancreas and secretory tissues. This protein functions by reoxidizing PDI (protein disulfide isomerase) enzymes which assists in forming disulfide bonds essential for protein folding.
Biological function summary	ERO1LB plays a role in the cellular response to oxidative stress and regulation of the redox state. It acts as part of a complex that maintains the proper folding of secretory and membrane proteins. ERO1LB helps maintain the balance between reducing equivalents in the endoplasmic reticulum and cellular homeostasis. It contributes to efficient protein secretion which is critical for tissues with high secretory demands.
Pathways	ERO1LB is integral to the protein folding and secretory pathways. It participates in the oxidative folding pathway by regenerating the oxidized state of PDIs which directly impacts protein disulfide formation. ERO1LB interacts with proteins such as PDI and ERO1A to maintain redox homeostasis ensuring the efficacy of the

protein folding machinery. It helps regulate the unfolded protein response (UPR) a pathway important for preventing the accumulation of misfolded proteins.

Associated diseases and disorders

Oxidative stress-related conditions and pancreatic diseases involve the ERO1LB protein. Abnormal expression of ERO1LB can contribute to disorders like diabetes given its role in insulin biosynthesis. The protein interacts with insulin processing and secretion where a misbalance might result in disease. Additionally ERO1LB connects to oxidative stress mechanisms linking to the pathology of neurodegenerative diseases through shared pathways with other oxidoreductases.

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

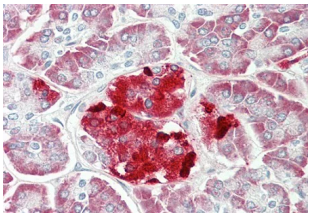
We do not recommend this combination. It is not covered by our product promise.

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.

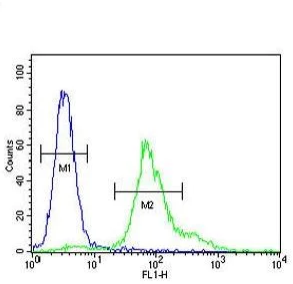
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ERO1LB antibody - C-terminal (ab230540)

ERO1LB Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ERO1LB antibody

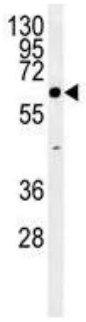
Formalin-fixed, paraffin-embedded human pancreas tissue stained for ERO1LB using ab230540 at 1/50 dilution in immunohistochemical analysis.



Flow Cytometry (Intracellular) - Anti-ERO1LB antibody - C-terminal (ab230540)

ERO1LB Flow Cytometry (Intracellular) staining using rabbit Anti-ERO1LB antibody

Intracellular flow cytometric analysis of MDA-MB-435 cell line labeling ERO1LB with ab230540 at 1/10 dilution (green) compared with a negative control (blue).



Western blot - Anti-ERO1LB antibody - C-terminal (ab230540)

All lanes:
Western blot - Anti-ERO1LB antibody - C-terminal (ab230540) at 1/1000 dilution

All lanes:
MDA-MB435 whole cell lysate at 35 µg

Predicted band size: 54 kDa

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