abcam

ab180931

Anti-PDIA2/PDIP antibody [EPR12212]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12212
Purity	Tissue culture supernatant

Reactivity data

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Mouse, Rat

Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PDIA2

Function	Acts as an intracellular estrogen-binding protein. May be involved in modulating cellular levels and biological functions of estrogens in the pancreas. May act as a chaperone that inhibits aggregation of misfolded proteins.

Storage

Shipped at conditions	Conditional Ambient
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

Notes

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.

Supplementary info

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

Activity summary	PDIA2 also known as PDIP is a protein disulfide isomerase with a prominent role in catalyzing protein folding through the isomerization of disulfide bonds. It is part of the broader family known as PDI proteins. PDIA2 has a mass of approximately 57 kDa and expression occurs mainly in the endoplasmic reticulum. Its enzymatic activity contributes to the maintenance of cellular homeostasis by ensuring proper protein conformation. Researchers have identified PDIA2 as a target for potential PDI inhibitors due to its critical function in protein folding.
Biological function summary	PDIA2 facilitates the correct formation of disulfide bonds which is essential for protein maturation and stability. This protein operates within a multi-component complex involved in oxidative protein folding regulating the redox state in the endoplasmic reticulum environment. By assisting in proper protein assembly PDIA2 maintains the equilibrium of protein synthesis folding and degradation suggesting its importance in cellular protein metabolism.
Pathways	Studies show that PDIA2 plays a role in the oxidative protein folding pathway which is part of the larger cellular response network to oxidative stress. The interaction of PDIA2 with other protein disulfide isomerases such as PDI and ERP57 highlights its role in this critical pathway. Furthermore PDIA2 is linked to the unfolded protein response pathway indicating its involvement in cell stress conditions where misfolded proteins accumulate.
Associated diseases and disorders	PDIA2 has associations with metabolic disorders and neurodegenerative diseases. Its role in the proper folding of insulin and other secreted proteins links PDIA2 to diabetes-related conditions. Additionally research suggests connections between PDIA2 and neurodegenerative diseases like Alzheimer's where protein misfolding and aggregation play pivotal roles. PDIA2's relationship with proteins like amyloid precursor protein further corroborates its involvement in the pathological processes of such disorders.

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

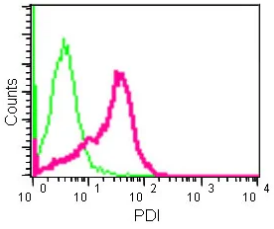
We do not recommend this combination. It is not covered by our product promise.

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.

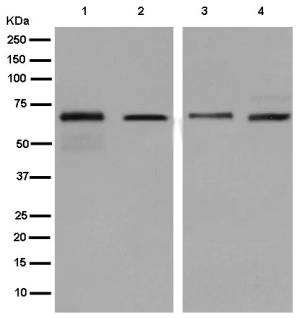
2 product images



Flow Cytometry (Intracellular) - Anti-PDIA2/PDIP antibody [EPR12212] (ab180931)

PDIA2/PDIP Flow Cytometry (Intracellular) staining using rabbit Anti-PDIA2/PDIP antibody

Intracellular flow cytometric analysis of HeLa cells (2% paraformaldehyde-fixed)labeling PDIA2/PDIP with ab180931 at 1/100 dilution (green) or Rabbit monoclonal IgG (red), followed with Goat anti rabbit IgG (FITC) secondary antibody at 1/150 dilution.



Western blot - Anti-PDIA2/PDIP antibody [EPR12212] (ab180931)

All lanes:
Western blot - Anti-PDIA2/PDIP antibody [EPR12212] (ab180931) at 1/20000 dilution

Lane 1:
Human pancreas lysate at 20 µg

Lane 2:
HeLa cell lysate at 20 µg

Lane 3:
BxPC-3 cell lysate at 20 µg

Lane 4:
HepG2 cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 58 kDa

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