abcam

ab249028

Anti-PFDN1 antibody [EPR8547] - 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	EPR8547
Purification technique	Affinity purification Protein A

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Rat
Dilution info	-
Notes	-

Expected

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

Target data

See full target information PFDN1

Function	Binds specifically to cytosolic chaperonin (c-CPN) and transfers target proteins to it. Binds to nascent polypeptide chain and promotes folding in an environment in which there are many competing pathways for nonnative proteins.

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

ab249028 is the carrier-free version of ab151708.

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	The PFDN1 protein also known as prefoldin subunit 1 functions as part of the chaperone pathway in protein folding. It helps in the stabilization of nascent polypeptides facilitating their correct folding into functional structures. The molecular mass of PFDN1 is approximately 15 kDa. Expression of PFDN1 occurs in various tissues which include both highly proliferative and differentiated cells. The protein has a wider tissue distribution suggesting its fundamental role in several cellular processes.
Biological function summary	The prefoldin complex which includes PFDN1 assists in the proper folding of actin and tubulin proteins. This complex functions as a co-chaperone directing unfolded proteins to the cytosolic chaperonin TriC/CCT complex for further refolding. By interacting with actin and tubulin PFDN1 ensures that key structural proteins maintain their integrity and availability for cellular functions. This interaction plays a critical role in cytoskeleton dynamics affecting cellular shape and movement.
Pathways	PFDN1 plays a significant role in the protein folding pathway and the regulation of actin cytoskeleton pathway. Within these pathways PFDN1 helps coordinate with other proteins such as TCP1 part of the TriC/CCT complex. This cooperation ensures efficient protein maturation and structural arrangement within cells. The correct functioning of these pathways relies on well-folded actin and tubulin proteins impacting cellular architecture and intracellular transport mechanisms.
Associated diseases and disorders	Malfunction of PFDN1 can contribute to neurodegenerative diseases and cancer. The disruption of proper protein folding might result in aggregates characteristic of neurodegenerative conditions. Proteins like APOE have been studied in relation to how PFDN1 disruptions might contribute to neurodegenerative disease pathways. In cancer altered PFDN1 expression affects cell proliferation and survival. This alteration connects with oncogenes and tumor suppressor genes influencing tumor growth and progression. Understanding these associations provides insight into the therapeutic targeting of PFDN1 in disease contexts.

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

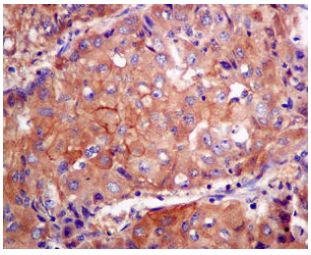
We do not recommend this combination. It is not covered by our product promise.

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

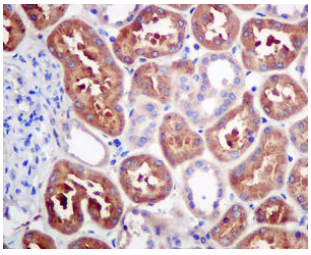


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PFDN1 antibody [EPR8547] - BSA and Azide free (ab249028)

PFDN1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PFDN1 antibody

This data was developed using ab151708, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling PFDN1 with ab151708 at 1/100 dilution.

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

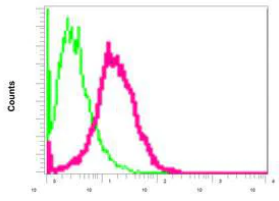


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PFDN1 antibody [EPR8547] - BSA and Azide free (ab249028)

PFDN1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PFDN1 antibody

This data was developed using ab151708, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling PFDN1 with ab151708 at 1/100 dilution.

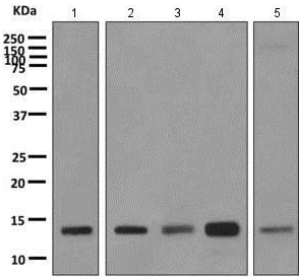
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-PFDN1 antibody [EPR8547] - BSA and Azide free (ab249028)

PFDN1 Flow Cytometry (Intracellular) staining using rabbit Anti-PFDN1 antibody

This data was developed using ab151708, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized PC12 cells labeling PFDN1 with ab151708 at 1/100 dilution (red). Rabbit IgG negative control (green).



Western blot - Anti-PFDN1 antibody [EPR8547] - BSA and Azide free (ab249028)

This data was developed using ab151708, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-PFDN1 antibody [EPR8547] (ab151708) at 1/1000 dilution

Lane 1:
Human fetal brain tissue lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
HT1080 cell lysate at 10 µg

Lane 4:
PC12 cell lysate at 10 µg

Lane 5:
NIH/3T3 cell lysate at 10 µg

Secondary

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

Predicted band size: 14 kDa

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