abcam

ab151708

Anti-PFDN1 antibody [EPR8547]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR8547
Purification technique	Affinity purification Protein A
Concentration	0.59 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Rat
Dilution info	1/100 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

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	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

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	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

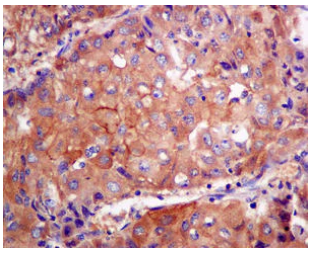
We do not recommend this combination. It is not covered by our product promise.

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.

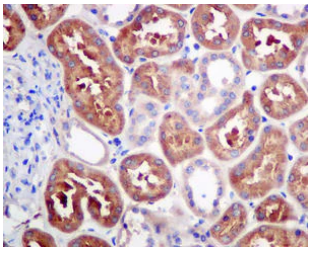
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PFDN1 antibody [EPR8547] (ab151708)

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

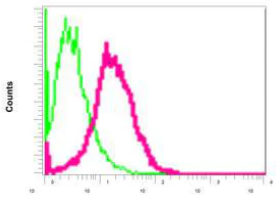
Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling PFDN1 with ab151708 at 1/100 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PFDN1 antibody [EPR8547] (ab151708)

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

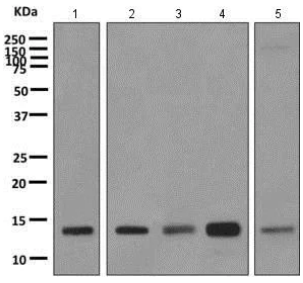
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling PFDN1 with ab151708 at 1/100 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-PFDN1 antibody [EPR8547] (ab151708)

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

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] (ab151708)

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

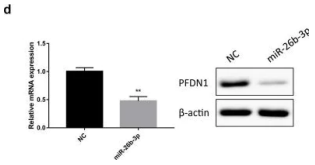


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Western blot - Anti-PFDN1 antibody [EPR8547] (ab151708)

PFDN1 Western blot staining using rabbit Anti-PFDN1 antibody

PFDN1 western blot using anti-PFDN1 antibody [EPR8547] ab151708. Publication image and figure legend from Gao, Q., Lei, F., et al., 2020, Int J Biol Sci, PubMed 32140072.

ab151708 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab151708 please see the product overview.

Direct targeting of miR-2277-3p and miR-26b-3p on NUPR1L and PFDN1. (a) Luciferase reporter vectors containing wild-type or mutated 3'-UTR of NUPR1L were constructed to test direct targeting of miR-2277-3p on NUPR1L mRNA. (b) Luciferase reporter vectors containing wild-type or mutated 3'-UTR of PFDN1 were const. Ructed to test direct targeting of miR-26b-3p on PFDN1 mRNA. (c) The effect of miR-2277-3p on mRNA and protein expression of NUPR1L was examined by qPCR and Western blot. (d) The effect of miR-26b-3p on mRNA and protein expression of PFDN1 was examined by qPCR and Western blot. Data are the means ± SD. of three independent experiments. *p < 0.05 and ** p<0.01 versus control.

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