abcam

ab188575

Anti-NDUFB7 antibody [EPR15903]

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	EPR15903
Purification technique	Affinity purification Protein A
Concentration	1.906 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/100
Notes	For the unpurified format use 1/40

Flow Cyt

Tested

Species	Human
Dilution info	1/2000
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/550
Notes	For the unpurified format use 1/50 - 1/100

Target data

See full target information NDUFB7

Function	Accessory subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I), that is believed not to be involved in catalysis. Complex I functions in the transfer of electrons from NADH to the respiratory chain. The immediate electron acceptor for the enzyme is believed to be ubiquinone.

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	NDUFB7 also known as NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 7 plays a significant mechanical role in the mitochondrial electron transport chain. It is a small protein with a molecular mass of approximately 11.5 kDa. This protein is found in the mitochondria and is expressed across various

	tissues throughout the human body. As part of a larger complex it contributes to the function of Complex I in the respiratory chain.
Biological function summary	NDUFB7 is an integral component of Complex I (NADH: ubiquinone oxidoreductase) which is an important player in cellular respiration. Complex I forms part of the mitochondrial inner membrane and is important for the biochemical process of converting NADH-derived electrons and protons into a proton gradient across the membrane. Although not directly involved in the catalytic process NDUFB7 is essential for the proper assembly and stability of Complex I influencing its overall performance.
Pathways	NDUFB7 is deeply involved in the oxidative phosphorylation pathway which is critical for ATP production in aerobic respiration. It also plays a role in the mitochondrial dysfunction pathway often associated with neurodegenerative diseases. Other proteins such as NDUFS1 and NDUFV1 also belong to Complex I and work alongside NDUFB7 in these pathways to maintain energy homeostasis in cells.
Associated diseases and disorders	Mutations or dysfunctions in NDUFB7 have been linked to mitochondrial diseases particularly Leigh syndrome which is a severe neurological disorder. The protein's malfunction negatively impacts energy production in neurons leading to their degeneration. Additionally NDUFB7's involvement in oxidative phosphorylation connects it to myopathies characterized by mitochondrial defects. Proteins related to these conditions include other core subunits of Complex I like NDUFA9 which also exhibit alterations in such disease states.

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

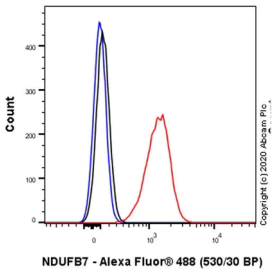
We do not recommend this combination. It is not covered by our product promise.

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.

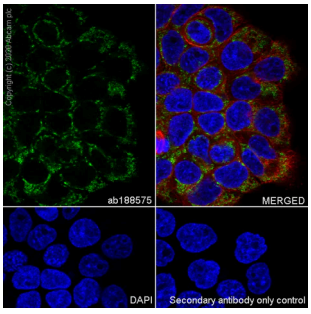
5 product images



Flow Cytometry - Anti-NDUFB7 antibody [EPR15903] (ab188575)

NDUFB7 Flow Cytometry staining using rabbit Anti-NDUFB7 antibody

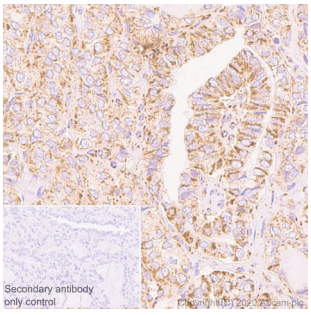
Flow Cytometry analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labelling NDUFB7 with Purified ab188575 at 1:2000 dilution (1 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-NDUFB7 antibody [EPR15903] (ab188575)

NDUFB7 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NDUFB7 antibody

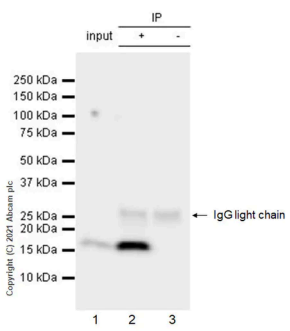
Immunocytochemistry analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling NDUFB7 with Purified ab188575 at 1:250 dilution (7.6 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDUFB7 antibody [EPR15903] (ab188575)

NDUFB7 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NDUFB7 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human thyroid carcinoma tissue sections labeling NDUFB7 with Purified ab188575 at 1:550 dilution (3.47 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.



Immunoprecipitation - Anti-NDUFB7 antibody [EPR15903] (ab188575)

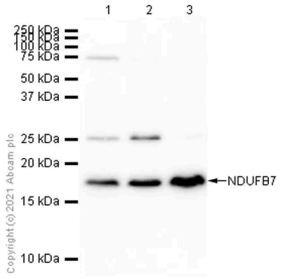
Purified ab188575 at 1:100 dilution (2µg) immunoprecipitating NDUFB7 in A431 whole cell lysate.

Lane 1 (input): A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate 10µg.
Lane 2 (+): ab188575 + A431 whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab188575 in A431 whole cell lysate.
VeriBlot for IP Detection Reagent (HRP)(ab131366) (1:1000 dilution) was used for Western blotting.

Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 16 kDa

All lanes:
Immunoprecipitation - Anti-NDUFB7 antibody [EPR15903] (ab188575)

Predicted band size: 16 kDa



Western blot - Anti-NDUFB7 antibody [EPR15903] (ab188575)

NDUFB7 Western blot staining using rabbit Anti-NDUFB7 antibody

We are unsure about the nature of the extra bands.
All lanes:
Western blot - Anti-NDUFB7 antibody [EPR15903] (ab188575) at 1/1000 dilution

Lane 1:
HL-60 (uman acute promyelocytic leukemia promyeloblast) whole cell lysate at 20 µg

Lane 2:
PC-3 (Human prostate adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 16 kDa

Observed band size: 16 kDa

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