abcam

ab188581

Anti-NDUFB9 antibody [EPR15955]

Recombinant | RabMAb | KO Validated

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	EPR15955
Purification technique	Affinity purification Protein A
Concentration	2.219 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/50
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Tested

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

Predicted

Species	Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/440
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information NDUFB9

Function	Accessory subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I), that is believed to be not 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	The protein NDUFB9 also known as NADH:ubiquinone oxidoreductase subunit B9 is a part of the mitochondrial respiratory chain. This protein has a molecular mass of approximately 22 kDa. NDUFB9 is expressed in the mitochondria of many tissues serving as an accessory subunit of complex I the first enzyme in the electron transport chain. It does not participate in catalysis but assists in maintaining the integrity and stability of the complex.
Biological function summary	NDUFB9 plays a role in mitochondrial energy production. As a component of complex I which is the largest of the five mitochondrial complexes NDUFB9 contributes to the process of oxidative phosphorylation. This complex transfers electrons from NADH to ubiquinone facilitating the pumping of protons across the inner mitochondrial membrane. This proton gradient drives ATP production vital for energy metabolism in cells.

Pathways	The function of NDUFB9 is critical in cellular respiration and energy production pathways. It is integral to the pathway of oxidative phosphorylation closely associated with aerobic energy metabolism. Through its role in complex I NDUFB9 interacts with other mitochondrial proteins such as NDUFA1 and NDUFS1 which are also part of the same complex and contribute to electron transport and energy conservation.
Associated diseases and disorders	NDUFB9 mutations have been linked to mitochondrial disorders including Leigh syndrome a severe neurological disorder characterized by progressive loss of mental and movement abilities. NDUFB9 dysfunction can also contribute to Complex I deficiency which leads to a range of metabolic syndromes. This protein's interaction with other complex I proteins like NDUFS2 is important for maintaining proper mitochondrial function and disturbances can lead to broader mitochondrial pathologies.

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

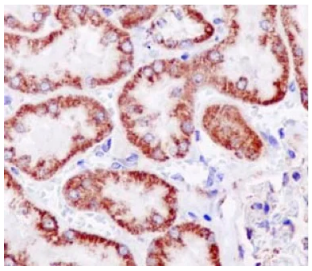
We do not recommend this combination. It is not covered by our product promise.

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.

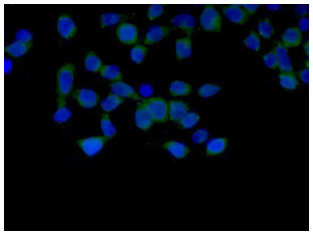
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDUFB9 antibody [EPR15955] (ab188581)

NDUFB9 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NDUFB9 antibody

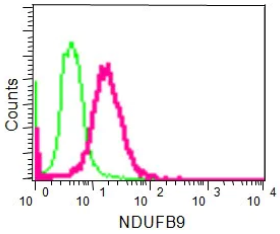
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling NDUFB9 with ab188581 at 1/500 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-NDUFB9 antibody [EPR15955] (ab188581)

NDUFB9 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NDUFB9 antibody

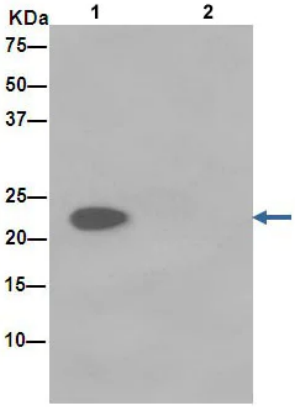
Immunofluorescent analysis of 4% paraformaldehyde-fixed 293 cells labeling NDUFB9 with ab188581 at 1/100 dilution followed by Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody at 1/200 dilution. Counter stained with Dapi.



Flow Cytometry (Intracellular) - Anti-NDUFB9 antibody [EPR15955] (ab188581)

NDUFB9 Flow Cytometry (Intracellular) staining using rabbit Anti-NDUFB9 antibody

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixedHeLa cells labeling NDUFB9 with ab188581 at 1/440 dilution compared to a Rabbit monoclonal IgG isotype control, followed by Goat anti rabbit IgG (FITC)secondary antibody at 1/150 dilution.

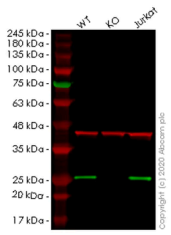


Immunoprecipitation - Anti-NDUFB9 antibody [EPR15955] (ab188581)

Western blot analysis of NDUFB9 immunoprecipitated from Human fetal liver lysate using ab188581 at 1/50 (Lane 1). Lane 2: PBS instead of Human fetal liver lysates.
Secondary antibody: Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1500 dilution.

All lanes:
Immunoprecipitation - Anti-NDUFB9 antibody [EPR15955] (ab188581)

Predicted band size: 21 kDa



Western blot - Anti-NDUFB9 antibody [EPR15955] (ab188581)

NDUFB9 Western blot staining using rabbit Anti-NDUFB9 antibody

Lanes 1-3: Merged signal (red and green). Green - ab188581 observed at 22 kDa. Red - loading control ab8245 observed at 36 kDa.
ab188581 Anti-NDUFB9 antibody [EPR15955] was shown to specifically react with NDUFB9 in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265946 (knockout cell lysate ab258065) was used. Wild-type and NDUFB9 knockout samples were subjected to SDS-PAGE. ab188581 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-NDUFB9 antibody [EPR15955] (ab188581) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
NDUFB9 knockout HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human NDUFB9 knockout HeLa cell line (ab265946)

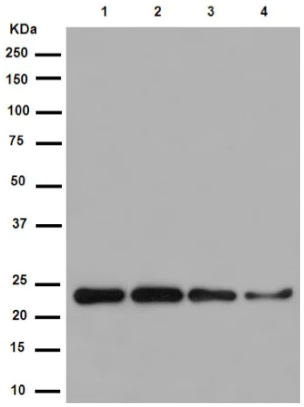
Lane 3:
Jurkat cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 21 kDa

Observed band size: 22 kDa



Western blot - Anti-NDUFB9 antibody [EPR15955] (ab188581)

All lanes:
Western blot - Anti-NDUFB9 antibody [EPR15955] (ab188581) at 1/10000 dilution

Lane 1:
Human fetal liver lysate at 20 µg

Lane 2:
HeLa cell lysate at 20 µg

Lane 3:
293 cell lysate at 20 µg

Lane 4:
Jurkat cell lysate at 20 µg

Secondary

All lanes:

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 21 kDa

Observed band size: 22 kDa

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