abcam

ab200198

Anti-NDUFB9 antibody [EPR15955-78]

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	EPR15955-78
Purification technique	Affinity purification Protein A
Concentration	1.908 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/150
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/400
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

IHC-P

Tested

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

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

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
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

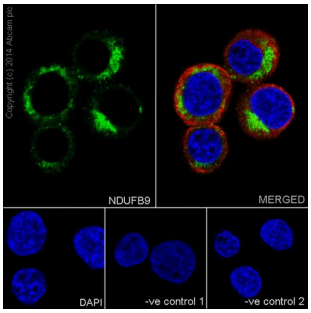
We do not recommend this combination. It is not covered by our product promise.

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:

9 product images



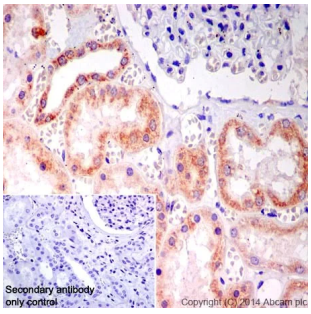
Immunocytochemistry/ Immunofluorescence - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

NDUFB9 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NDUFB9 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling NDUFB9 with ab200198 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green).
Cytoplasm staining on Jurkat cell line is observed.

The nuclear counter stain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows:
-ve control 1: ab200198 at 1/250 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

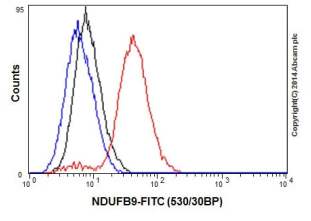
NDUFB9 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NDUFB9 antibody

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling NDUFB9 with ab200198 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Cytoplasm staining on Human kidney tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

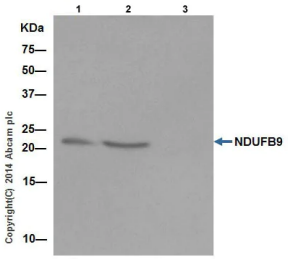


Flow Cytometry (Intracellular) - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

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

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling NDUFB9 with ab200198 at 1/400 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730;black) and an unlabelled

control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

NDUFB9 was immunoprecipitated from 1mg of Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate with ab200198 at 1/150 dilution.
Western blot was performed from the immunoprecipitate using ab200198 at 1/1000 dilution.

Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.

Lane 1: Jurkat whole cell lysate 10 µg (Input).

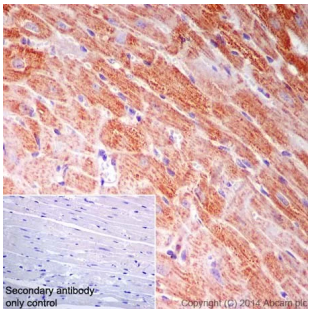
Lane 2: ab200198 IP in Jurkat whole cell elysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab200198 in Jurkat whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

Predicted band size: 21 kDa



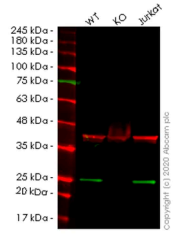
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

Immunohistochemical analysis of paraffin-embedded Mouse cardiac muscle tissue labeling NDUFB9 with ab200198 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Cytoplasm staining on mouse cardiac muscle tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

NDUFB9 Western blot staining using rabbit Anti-NDUFB9 antibody

Lanes 1-3: Merged signal (red and green). Green - ab200198 observed at 22 kDa. Red - loading control ab8245 observed at 36 kDa.
ab200198 Anti-NDUFB9 antibody [EPR15955-78] 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. ab200198 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 [EPR15955-78] (ab200198) 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)

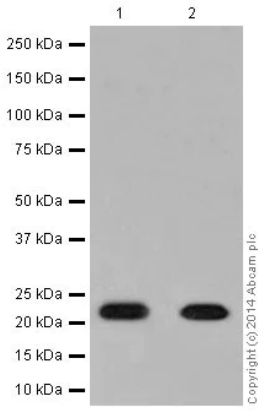
Lane 3:
Jurkat cell lysate at 20 µg

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 [EPR15955-78] (ab200198)

NDUFB9 Western blot staining using rabbit Anti-NDUFB9 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-NDUFB9 antibody [EPR15955-78] (ab200198) at 1/5000 dilution

Lane 1:
Jurkat (Human T cell leukemia cells from peripheral blood) cell lysate at 10 µg

Lane 2:
HEK293 (Human embryonic kidney) cell lysate at 10 µg

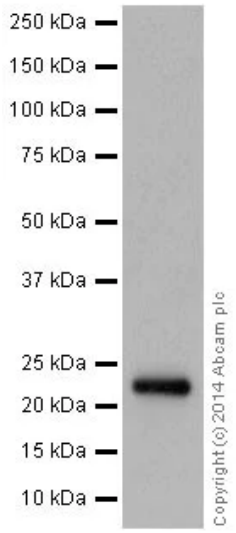
Secondary

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

Predicted band size: 21 kDa

Observed band size: 22 kDa

Exposure time: 3min



Western blot - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-NDUFB9 antibody [EPR15955-78] (ab200198) at 1/5000 dilution

All lanes:
Human fetal liver lysate at 10 µg

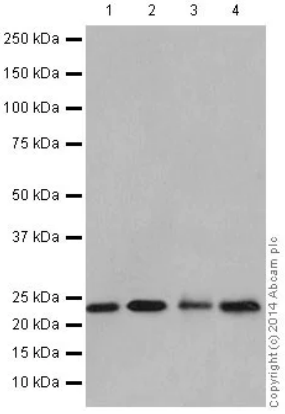
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 21 kDa

Observed band size: 22 kDa

Exposure time: 1min



Western blot - Anti-NDUFB9 antibody [EPR15955-78] (ab200198)

NDUFB9 Western blot staining using rabbit Anti-NDUFB9 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-NDUFB9 antibody [EPR15955-78] (ab200198) at 1/1000 dilution

Lane 1:
Mouse kidney lysate at 10 µg

Lane 2:
Mouse spleen lysate at 10 µg

Lane 3:
Rat heart lysate at 10 µg

Lane 4:
Rat spleen lysate at 10 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 21 kDa

Observed band size: 22 kDa

Exposure time: 1min

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