abcam

ab183715

Anti-NDUFV2 antibody [EPR15351(B)]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 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	EPR15351(B)
Purification technique	Affinity purification Protein A
Concentration	0.75 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/50 - 1/70
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/20000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/80
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information NADH dehydrogenase [ubiquinone] flavoprotein 2, mitochondrial

Function	Core subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I) which catalyzes electron transfer from NADH through the respiratory chain, using ubiquinone as an electron acceptor (Probable). Parts of the peripheral arm of the enzyme, where the electrons from NADH are accepted by flavin mononucleotide (FMN) and then passed along a chain of iron-sulfur clusters by electron tunnelling to the final acceptor ubiquinone (Probable). Contains one iron-sulfur cluster (Probable).

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	NDUFV2 also known as NADH dehydrogenase [ubiquinone] flavoprotein 2 functions as a core subunit of complex I in the mitochondrial electron transport chain. This protein has a mass of approximately 24 kDa and plays a pivotal role in electron transfer by linking flavin mononucleotide and iron-sulfur centers. It is expressed in various tissues but shows high levels in cells with elevated energy demands such as muscle and brain tissues.
Biological function summary	NDUFV2 contributes to energy production in the cell by facilitating the transfer of electrons from NADH to the ubiquinone pool. As part of complex I which is the first enzyme complex in the respiratory electron transport chain it helps in establishing the proton gradient across the inner mitochondrial membrane. The activity of NDUFV2 is essential for ATP synthesis and its proper function ensures efficient cellular respiration.

Pathways	NDUFV2 operates in the oxidative phosphorylation pathway an important energy production route. This protein is intricately linked with other complex I subunits including NDUFS1 which work together to initiate the process of oxidative phosphorylation. Another key component in this pathway is ubiquinone which serves as the electron transfer intermediary continuing the electron passage through the chain.
Associated diseases and disorders	Mutations in NDUFV2 have associations with neurodegenerative diseases and cardiac dysfunction. For instance patients with Leber Hereditary Optic Neuropathy often present alterations in complex I that involve NDUFV2. Additionally disruptions in its function can influence the onset of conditions such as cardiomyopathy where complex I perturbation including proteins like NDUFS1 can compromise mitochondrial energy production leading to heart muscle inefficiency.

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

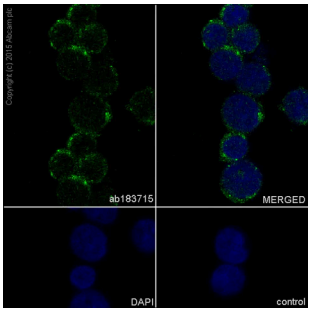
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images

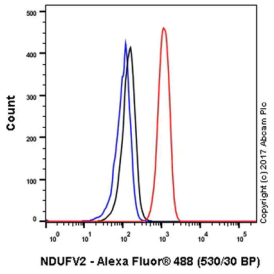


Immunocytochemistry/ Immunofluorescence - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715)

NDUFV2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NDUFV2 antibody

Immunocytochemistry/Immunofluorescence analysis of Jurkat cells labelling NDUFV2 with ab183715 at 1/1000. Cells were fixed with 100% Methanol. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody.

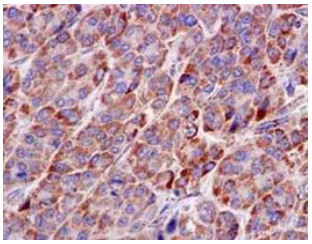
Control: PBS only.
Nuclear counter stain: DAPI.



Flow Cytometry (Intracellular) - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715)

NDUFV2 Flow Cytometry (Intracellular) staining using rabbit Anti-NDUFV2 antibody

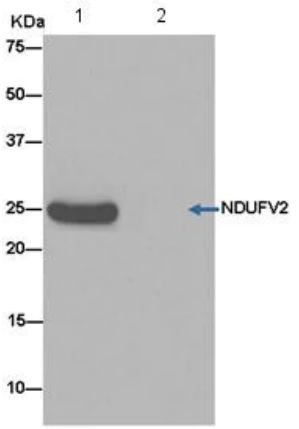
Intracellular Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling NDUFV2 with purified ab183715 at 1/80 dilution (10ug/mL) (red). Cells were fixed with 80% methanol and permeabilised using 0.1% Tween-20. A Goat anti rabbit IgG (Alexa Fluor®488) (ab150077) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black) (ab172730). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715)

NDUFV2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NDUFV2 antibody

Immunohistochemical analysis of paraffin-embedded, Human hepatocellular carcinoma tissue labeling NDUFV2 with ab183715 at a 1/500 dilution. Counter stained with hematoxylin.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



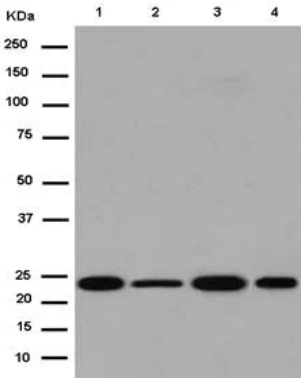
Immunoprecipitation - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715)

Western blot analysis on immunoprecipitation from 1) Human fetal heart lysate, or 2) TBS, labeling NDUFV2 using ab183715 at 1/50 dilution and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG at a 1/1500 dilution.
All lanes:
Immunoprecipitation - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715)

Developed using the ECL technique.

Predicted band size: 27 kDa

Observed band size: 24 kDa



Western blot - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715)

All lanes:
Western blot - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715) at 1/1000 dilution

Lane 1:
A549 cell lysate at 10 µg

Lane 2:
Jurkat cell lysate at 10 µg

Lane 3:
HeLa cell lysate at 10 µg

Lane 4:
Ramos cell lysate at 10 µg

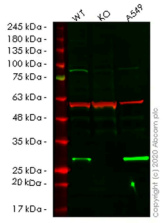
Secondary

All lanes:
goat anti-rabbit IgG, (H+L), peroxidase conjugated at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 27 kDa

Observed band size: 24 kDa



Western blot - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715)

NDUFV2 Western blot staining using rabbit Anti-NDUFV2 antibody

Lanes 1-3: Merged signal (red and green). Green - ab183715 observed at 27 kDa. Red - loading control ab7291 observed at 50 kDa.
ab183715 Anti-NDUFV2 antibody [EPR15351(B)] was shown to specifically react with NDUFV2 in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265619 (knockout cell lysate ab258068) was used. Wild-type and NDUFV2 knockout samples were subjected to SDS-PAGE. ab183715 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (ab7291) 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-NDUFV2 antibody [EPR15351(B)] (ab183715) at 1/1000 dilution

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

Lane 2:
NDUFV2 knockout HeLa cell lysate at 20 µg

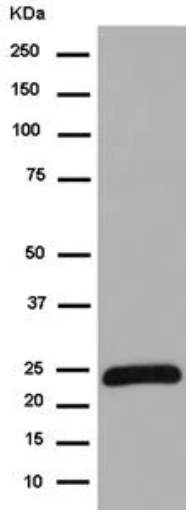
Lane 3:
A549 cell lysate at 20 µg

Secondary

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

Predicted band size: 27 kDa

Observed band size: 27 kDa



Western blot - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715)

All lanes:
Western blot - Anti-NDUFV2 antibody [EPR15351(B)] (ab183715) at 1/20000 dilution

All lanes:
Human fetal heart lysate at 20 µg

Secondary

All lanes:
goat anti-rabbit IgG, (H+L), peroxidase conjugated at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 27 kDa

Observed band size: 24 kDa

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