abcam

ab251216

Anti-NDUFB10 antibody [EPR16230-47] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR16230-47
Concentration	1.03 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 10

Function	Accessory subunit that is involved in the functional assembly of the mitochondrial respiratory chain complex I. Complex I has an NADH dehydrogenase activity with ubiquinone as an immediate electron acceptor and mediates the transfer of electrons from NADH to the respiratory chain.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251216 is the carrier-free version of ab196019.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The NDUFB10 protein also known as NADH dehydrogenase [ubiquinone] 1 beta subcomplex 10 is a component of the mitochondrial respiratory chain complex I. This protein has an approximate mass of 20 kDa. It is expressed mainly in the mitochondria of eukaryotic cells where it plays an important role in the process of oxidative phosphorylation. NDUFB10 is integral to the inner mitochondrial membrane where it acts as part of the machinery that facilitates electron transfer from NADH to ubiquinone.

Biological function summary	NDUFB10 plays a significant role in cellular energy production by being a subunit of complex I in the mitochondrial electron transport chain. As part of this large enzyme complex NDUFB10 contributes to the overall stability and function of complex I facilitating ATP production by driving the conversion of energy derived from nutrients into a usable form. Its presence in the mitochondrial inner membrane highlights its essential role in maintaining efficient energy metabolism and cellular respiration.
Pathways	The electron transport chain pathway incorporates NDUFB10 as a vital component. This pathway plays a major role in oxidative phosphorylation where NDUFB10 interacts closely with other mitochondrial proteins like NDUFS1 and NDUFA1 within complex I. Besides serving in ATP synthesis these interactions help in maintaining overall cellular bioenergetics and proper mitochondrial function demonstrating the integrated role NDUFB10 plays alongside other proteins in energy metabolism.
Associated diseases and disorders	Malfunction or mutations in NDUFB10 have been linked to mitochondrial disorders including mitochondrial encephalomyopathy and Leber's hereditary optic neuropathy. These conditions often involve disrupted energy metabolism which is critical for tissues with high energy demands. Associated proteins like NDUFS2 and NDUFV1 which also contribute to the function of complex I can compound the severity of these disorders if mutated underlining the importance of NDUFB10 within the broader context of mitochondrial health and disease.

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

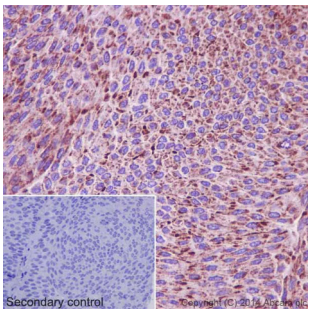
We do not recommend this combination. It is not covered by our product promise.

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



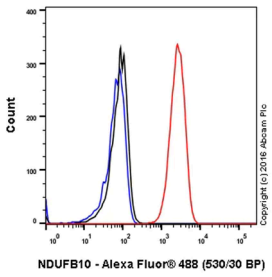
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDUFB10 antibody [EPR16230-47] - BSA and Azide free (ab251216)

NDUFB10 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NDUFB10 antibody

This data was developed using ab196019, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human transitional cell carcinoma of bladder tissue labeling NDUFB10 with ab196019 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Cytoplasm staining on Human transitional cell carcinoma of bladder tissue is observed. Counter stained with Hematoxylin.

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

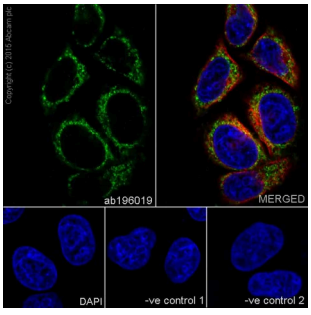
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-NDUFB10 antibody [EPR16230-47] - BSA and Azide free (ab251216)

NDUFB10 Flow Cytometry (Intracellular) staining using rabbit Anti-NDUFB10 antibody

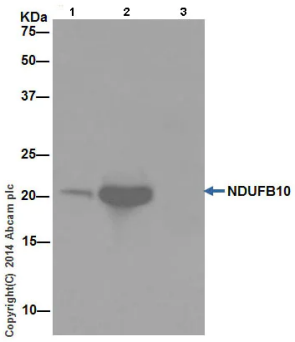
This data was developed using ab196019, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labelling NDUFB10 (red) with purified ab196019 at a dilution of 1/800. The secondary antibody used was Alexa Fluor® 488 goat-anti-rabbit IgG (1/2000). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Isotype control antibody was rabbit monoclonal IgG (black). The blue line shows cells without incubation with primary and secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-NDUFB10 antibody [EPR16230-47] - BSA and Azide free (ab251216)

NDUFB10 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NDUFB10 antibody

This data was developed using ab196019, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling NDUFB10 with ab196019 at 1/350 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green). Cytoplasm staining on HeLa cell line is observed. The nuclear counter stain is DAPI (blue).



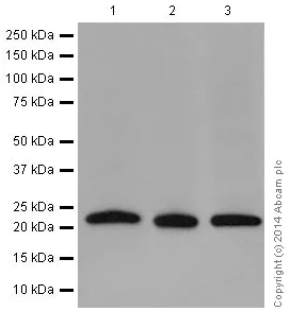
Immunoprecipitation - Anti-NDUFB10 antibody [EPR16230-47] - BSA and Azide free (ab251216)

This data was developed using ab196019, the same antibody clone in a different buffer formulation.
NDUFB10 was immunoprecipitated from HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell extract with ab196019 at 1/50 dilution. Western blot was performed from the immunoprecipitate using ab196019 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: HeLa whole cell extract 10 µg (Input). Lane 2: ab196019 IP in HeLa whole cell extract. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab196019 in HeLa whole cell extract.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-NDUFB10 antibody [EPR16230-47] (ab196019)

Predicted band size: 21 kDa



Western blot - Anti-NDUFB10 antibody [EPR16230-47] - BSA and Azide free (ab251216)

This data was developed using ab196019, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-NDUFB10 antibody [EPR16230-47] (ab196019) at 1/10000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) cell lysate at 20 µg

Lane 2:
HepG2 (Human liver hepatocellular carcinoma) cell lysate at 20 µg

Lane 3:
Jurkat (Human T cell leukemia cells from peripheral blood) cell lysate at 20 µg

Secondary

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

Predicted band size: 21 kDa

Observed band size: 21 kDa

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