abcam

ab249321

Anti-Ndufs1 antibody [EPR11522(B)] - 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	EPR11522(B)
Purification technique	Affinity purification Protein A
Concentration	1.013 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

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	-

Target data

See full target information NDUFS1

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 (PubMed:30879903, PubMed:31557978). Essential for catalysing the entry and efficient transfer of electrons within complex I (PubMed:31557978). Plays a key role in the assembly and stability of complex I and participates in the association of complex I with ubiquinol-cytochrome reductase complex (Complex III) to form supercomplexes (PubMed:30879903, PubMed:31557978).

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

ab249321 is the carrier-free version of ab157221.

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	Ndufs1 known as NADH:ubiquinone oxidoreductase core subunit S1 or complex I 75 kDa subunit forms a significant part of the mitochondrial electron transport chain. This protein shows a mass of 75 kDa and is primarily found in mitochondria among various tissues. Ndufs1 plays an important role in transferring electrons from NADH to ubiquinone facilitating proton translocation across the inner mitochondrial membrane. With its function it contributes to the creation of a proton gradient essential for ATP synthesis.
Biological function summary	Ndufs1 facilitates the primary catalytic activity of the NADH dehydrogenase complex also found within the mitochondrial complex I. By being part of this large multi-subunit complex it helps in electron flow which essential for cellular respiration. Proper functioning of Ndufs1 becomes necessary for maintaining

	adequate energy production through ATP synthesis in cells impacting energy-dependent processes significantly.
Pathways	Ndufs1 acts mainly within the oxidative phosphorylation pathway. This pathway is indispensable for energy conversion in cells prominently featuring NADH dehydrogenase (ubiquinone). It relates closely with other critical proteins like Ndufa9 and Ndufb8 as these proteins also integrate into the mitochondrial complex I ensuring effective electron transport and energy yield in cells. The pathway links metabolic flux to energy production keeping cellular operations efficient.
Associated diseases and disorders	Ndufs1 mutations correlate with mitochondrial diseases such as Leigh syndrome and mitochondrial complex I deficiency. These conditions often manifest neurological and muscular symptoms due to impaired mitochondrial function. Ndufs1 connections with proteins like Ndufv1 and additional complex I subunits emphasize its role in regular mitochondrial activity making its study relevant for understanding the pathological basis of these disorders. Researchers focus on Ndufs1 to unravel its impact on cellular metabolism and potential therapeutic targets.

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

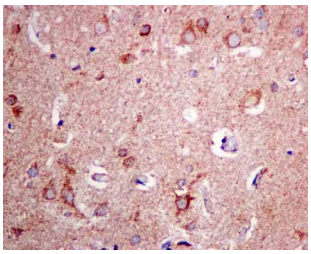
We do not recommend this combination. It is not covered by our product promise.

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.

9 product images

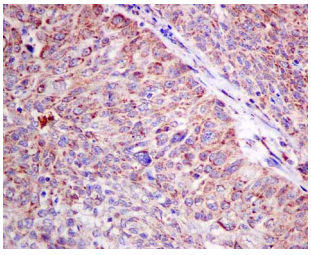


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

Ndufs1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Ndufs1 antibody

This data was developed using ab157221, the same antibody clone in a different buffer formulation.
ab157221 showing +ve staining in Human normal brain.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

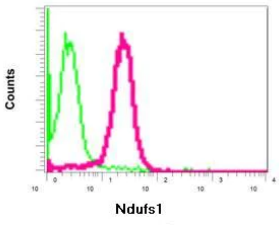


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

Ndufs1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Ndufs1 antibody

This data was developed using ab157221, the same antibody clone in a different buffer formulation.
ab157221 showing +ve staining in Human cervical carcinoma.

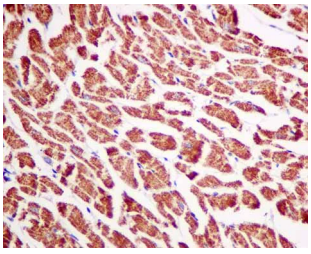
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

Ndufs1 Flow Cytometry (Intracellular) staining using rabbit Anti-Ndufs1 antibody

This data was developed using ab157221, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling Ndufs1 with ab157221 at 1/10 dilution (red) or a rabbit IgG (negative) (green).

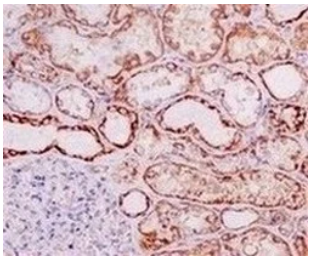


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

Ndufs1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Ndufs1 antibody

This data was developed using ab157221, the same antibody clone in a different buffer formulation.
ab157221 showing +ve staining in Human heart.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

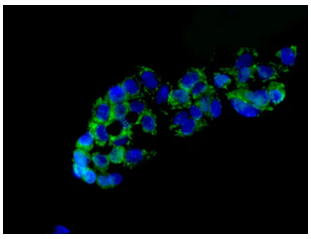


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

Ndufs1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Ndufs1 antibody

This data was developed using ab157221, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Ndufs1 with ab157221 at 1/100 dilution.

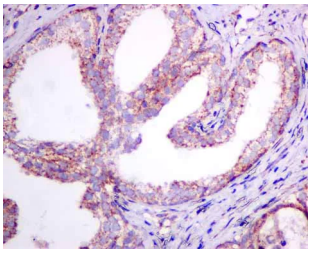
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

Ndufs1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Ndufs1 antibody

This data was developed using ab157221, the same antibody clone in a different buffer formulation.Immunofluorescent analysis of HepG2 cells labeling Ndufs1 with ab157221 at 1/50 dilution.

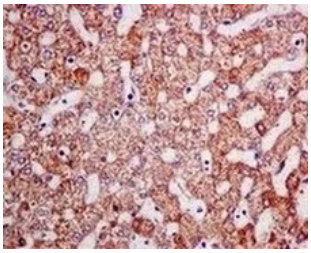


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

Ndufs1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Ndufs1 antibody

This data was developed using ab157221, the same antibody clone in a different buffer formulation.
ab157221 showing +ve staining in Human normal prostate.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

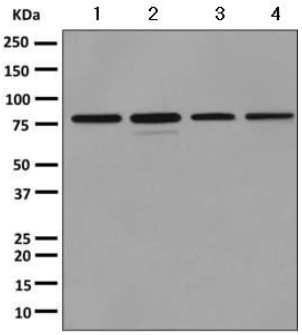


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

Ndufs1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Ndufs1 antibody

This data was developed using ab157221, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Ndufs1 with ab157221 at 1/100 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-Ndufs1 antibody [EPR11522(B)] - BSA and Azide free (ab249321)

This data was developed using ab157221, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Ndufs1 antibody [EPR11522(B)] (ab157221) at 1/10000 dilution

Lane 1:
Raji cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
MOLT4 cell lysate at 10 µg

Lane 4:
Jurkat cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated antibody at 1/2000 dilution

Predicted band size: 79 kDa

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