abcam

ab240971

Anti-NDUFAF5 antibody [EPR15870] - 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	EPR15870
Purification technique	Affinity purification Protein A

Reactivity data

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

Species	Human

Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information NDUFAF5

Function	Arginine hydroxylase that mediates hydroxylation of 'Arg-111' of NDUFS7 and is involved in the assembly of mitochondrial NADH:ubiquinone oxidoreductase complex (complex I, MT-ND1) at early stages (PubMed:18940309, PubMed:27226634). May also have methyltransferase activity (Probable).

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

ab240971 is the carrier-free version of ab192235.

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	NDUFAF5 also known as NADH:ubiquinone oxidoreductase complex assembly factor 5 is a mitochondrial protein with a mass of approximately 34 kDa. The protein plays a mechanical role in the assembly of the mitochondrial complex I also termed NADH dehydrogenase. It's necessary for the assembly of this critical component of the electron transport chain which is fundamental for cellular energy production. NDUFAF5 is expressed in various tissues with significant expression in energy-demanding organs such as the heart and brain.
Biological function summary	NDUFAF5 participates in the assembly of complex I an essential part of mitochondrial oxidative phosphorylation. This complex is a multi-subunit structure where NDUFAF5 functions as an important assembly factor interacting with precursor subunits to help build the complex properly. It coordinates the junction of early-stage assembly intermediates working closely with assembly proteins like NDUFAF1 to ensure the formation and maintenance of efficient electron transport.
Pathways	NDUFAF5 is an important player in the mitochondrial oxidative phosphorylation pathway and the electron transport chain. These pathways are responsible for ATP production through the transfer of electrons from NADH to oxygen. NDUFAF5 ensures that complex I integrates correctly into the pathway assisting with proper electron and proton flow. Mitochondrial proteins such as NDUFS1 and CYCS interact closely with NDUFAF5 within these pathways contributing to normal cellular respiration and energy metabolism.
Associated diseases and disorders	Dysfunctions in NDUFAF5 are linked with complex I deficiency and mitochondrial disorders such as Leigh syndrome. These conditions can result in severe energy production impairments leading to neurological symptoms and muscle weakness. Mutations in NDUFAF5 can alter interactions with assembly proteins such as NDUFAF1 affecting the stability and function of the entire complex I. Observing the

involvement of NDUFAF5 could provide insights into the pathological mechanisms of mitochondrial-related diseases and aid in therapeutic development.

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

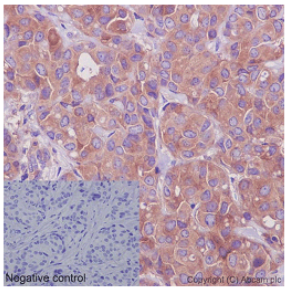
We do not recommend this combination. It is not covered by our product promise.

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

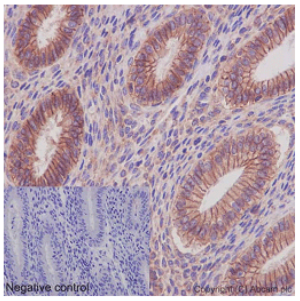


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDUFAF5 antibody [EPR15870] - BSA and Azide free (ab240971)

NDUFAF5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NDUFAF5 antibody

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling NDUFAF5 with ab192235 at 1/1000 dilution, followed by pre-diluted HRP Polymer for Rabbit/Mouse IgG secondary antibody and counter-stained with Hematoxylin. (inset: negative control).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab192235).

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

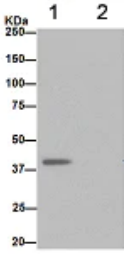


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NDUFAF5 antibody [EPR15870] - BSA and Azide free (ab240971)

NDUFAF5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-NDUFAF5 antibody

Immunohistochemical analysis of paraffin-embedded Human endometrium tissue labeling NDUFAF5 with ab192235 at 1/1000 dilution, followed by pre-diluted HRP Polymer for Rabbit/Mouse IgG secondary antibody and counter-stained with Hematoxylin. (inset: negative control).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab192235).

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



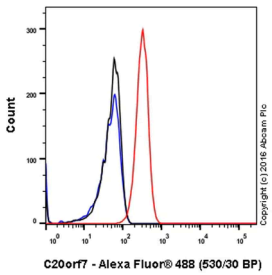
Immunoprecipitation - Anti-NDUFAF5 antibody [EPR15870] - BSA and Azide free (ab240971)

Western blot analysis of pellet from 293 cell lysate immunoprecipitated using ab192235 at 1/100 dilution (lane 1) or PBS control (lane 2).
Secondary antibody: Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, at 1/1500 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab192235).

All lanes:
Immunoprecipitation - Anti-NDUFAF5 antibody [EPR15870] - C-terminal (ab192235)

Predicted band size: 38 kDa

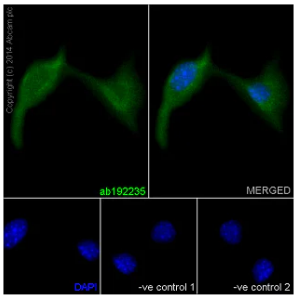
Observed band size: 38 kDa



Flow Cytometry (Intracellular) - Anti-NDUFAF5 antibody [EPR15870] - BSA and Azide free (ab240971)

NDUFAF5 Flow Cytometry (Intracellular) staining using rabbit Anti-NDUFAF5 antibody

Intracellular Flow Cytometry analysis of NIH/3T3 (mouse embryo) cells labelling NDUFAF5 (red) with purified ab192235 at dilution of 1/200. 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 used was Rabbit Monoclonal IgG (black). The blue line shows cells without incubation with primary antibody and secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab192235).



Immunocytochemistry/ Immunofluorescence - Anti-NDUFAF5 antibody [EPR15870] - BSA and Azide free (ab240971)

NDUFAF5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NDUFAF5 antibody

Immunofluorescent analysis of NIH 3T3 cells (4% Paraformaldehyde-fixed, 0.1% tritonX-100 permeabilized) labeling NDUFAF5 with ab192235 at 1/400 dilution (5µg/mL) followed by Goat anti rabbit IgG (AlexaFluor® 488) (ab150077) secondary at 1/200 dilution and counter-stained with DAPI (blue).
Negative controls: anti-NDUFAF5 at 1/400 dilution, Secondary ab (Goat anti mouse IgG (Alexa Fluor®594)) at 1/400 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab192235).

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