abcam

ab87399

Anti-Ndufs4 antibody [2C7CD4AG3]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.5 Preservative: 0.02% Sodium azide Constituents: HEPES, Sodium chloride
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	2C7CD4AG3
Purity	IgG fraction
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Near homogeneity as judged by SDS-PAGE. The antibody was produced in vitro using hybridomas grown in serum-free medium, and then purified by biochemical fractionation.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

WB

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Species	Cow
Dilution info	1 µg/mL
Notes	-

Species	Rat
Dilution info	1 µg/mL
Notes	-

Species	Mouse
Dilution info	1 µg/mL
Notes	-

Target data

See full target information NDUFS4

Function	Accessory subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I), that is believed not to be 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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

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

Activity summary	Ndufs4 also known as NADH:Ubiquinone Oxidoreductase Subunit S4 is an important component of mitochondrial complex I which is part of the electron transport chain. It has a molecular mass of approximately 18 kDa. The protein is mainly found in the inner mitochondrial membrane where it plays an essential role in cellular respiration by transferring electrons from NADH to ubiquinone. Ndufs4 is widely expressed in tissues with high energy demands such as the brain and heart.
Biological function summary	Ndufs4 functions as a part of mitochondrial complex I a large protein enzyme complex critical for oxidative phosphorylation. The complex comprises multiple subunits of which Ndufs4 is a small but essential part. By participating in electron transfer and proton pumping Ndufs4 supports ATP synthesis which is the main energy currency of the cell. Deficiency in Ndufs4 leads to dysfunctional energy production linked with metabolic disorders.
Pathways	The protein is an integral part of the respiratory chain pathway where it supports oxidative phosphorylation enabling effective ATP production. Within these pathways Ndufs4 interacts with other complex I subunits including Ndufs1 and Ndufa9 which stabilize electron transport. Disruptions in this chain can affect cellular energy metabolism and have downstream effects on various cellular processes.
Associated diseases and disorders	Mutations in the Ndufs4 gene are associated with Leigh syndrome and mitochondrial complex I deficiency. Leigh syndrome is a severe neurological disorder characterized by progressive loss of mental and movement abilities. Ndufs4 mutations also lead to complex I deficiency causing diverse symptoms ranging from neurological impairments to muscle weakness. These disorders

highlight the critical link between Ndufs4 and proper mitochondrial function. The protein's connection to other complex I subunits such as Ndufs1 emphasizes its importance in maintaining regular cellular functions and preventing mitochondrial diseases.

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

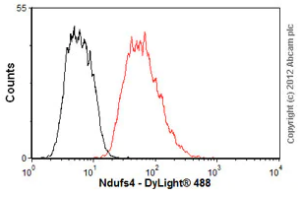
We do not recommend this combination. It is not covered by our product promise.

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:
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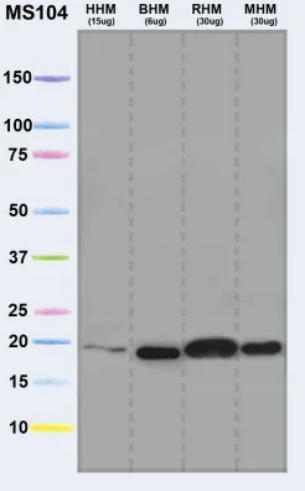
2 product images



Flow Cytometry - Anti-Ndufs4 antibody [2C7CD4AG3] (ab87399)

Ndufs4 Flow Cytometry staining using mouse Anti-Ndufs4 antibody

Overlay histogram showing HepG2 cells stained with ab87399 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab87399, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was Mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Western blot - Anti-Ndufs4 antibody [2C7CD4AG3] (ab87399)

All lanes:
Western blot - Anti-Ndufs4 antibody [2C7CD4AG3] (ab87399)

Lane 1:
Isolated mitochondria from human heart at 15 µg

Lane 2:
Isolated mitochondria from bovine heart at 6 µg

Lane 3:
Isolated mitochondria from rat heart at 30 µg

Lane 4:
Isolated mitochondria from mouse heart at 30 µg

Predicted band size: 20 kDa

Observed band size: 20 kDa

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