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Product datasheet

Anti-ND4 antibody [9E4-2D8] - N-terminal ab219822

1 References 1 Image

Overview

Product name	Anti-ND4 antibody [9E4-2D8] - N-terminal
Description	Mouse monoclonal [9E4-2D8] to ND4 - N-terminal
Host species	Mouse
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human ND4 (N terminal). Database link: P03905
Positive control	WB: Mitochondria from cultured normal control human dermal fibroblasts neonatal (HDFn).
General notes	**Western blot advice**: Hydrophobic intrinsic membrane proteins such as the core mtDNA-encoded proteins of the mitochondrial OXPHOS complexes tend to run faster in SDS-PAGE than predicted by their amino acid composition. This is likely due to incomplete unfolding of the protein and a more negative charge:mass ratio. This product was previously labelled as NADH dehydrogenase subunit 4 Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough. Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility. We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee. In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for. We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee. Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team

ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.02% Sodium azide Constituents: 0.36% HEPES, 0.87% Sodium chloride
Purity	Protein L purified
Purification notes	Purified from hybridoma cell culture supernatant by Protein L affinity chromatography from fetal bovine serum containing medium (Protein L does not bind bovine IgG).
Clonality	Monoclonal
Clone number	9E4-2D8
Isotype	IgG2a
Light chain type	kappa

Applications

Our Abpromise guarantee covers the use of **ab219822** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 4 µg/ml. Detects a band of approximately 37 kDa (predicted molecular weight: 52 kDa). Western blot using whole cell extracts is not recommended.

Target

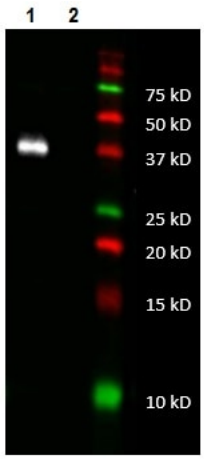
Function	Core subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I) that is believed to belong to the minimal assembly required for catalysis. Complex I functions in the transfer of electrons from NADH to the respiratory chain. The immediate electron acceptor for the enzyme is believed to be ubiquinone.
Involvement in disease	Defects in MT-ND4 are a cause of Leber hereditary optic neuropathy (LHON) [MIM:535000]. LHON is a maternally inherited disease resulting in acute or subacute loss of central vision, due to optic nerve dysfunction. Cardiac conduction defects and neurological defects have also been described in some patients. LHON results from primary mitochondrial DNA mutations affecting the respiratory chain complexes. Defects in MT-ND4 are a cause of Leber hereditary optic neuropathy with dystonia (LDYT) [MIM:500001]; also called familial dystonia with visual failure and striatal lucencies. LDYT is part of a spectrum of Leber hereditary optic neuropathy. It is characterized by the association of optic

atrophy and central vision loss with dystonia.
Defects in MT-ND4 are a cause of mitochondrial encephalomyopathy with lactic acidosis and stroke-like episodes syndrome (MELAS) [MIM:540000]. MELAS is a genetically heterogenious disorder, characterized by episodic vomiting, seizures, and recurrent cerebral insults resembling strokes and causing hemiparesis, hemianopsia, or cortical blindness.

Sequence similarities Belongs to the complex I subunit 4 family.

Cellular localization Mitochondrion membrane.

Images



Western blot - Anti-ND4 antibody [9E4-2D8] - N-terminal (ab219822)

All lanes : Anti-ND4 antibody [9E4-2D8] - N-terminal (ab219822) at 4 µg/ml

Lane 1 : Mitochondria from cultured normal control human dermal fibroblasts neonatal (HDFn)
Lane 2 : Mitochondria from HDFn cells depleted of mtDNA by long-term proliferation in the presence of ethidium bromide

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP-labeled Goat-anti-mouse IgG

Developed using the ECL technique.

Predicted band size: 52 kDa
Observed band size: 37 kDa
why is the actual band size different from the predicted?

Mitochondrial proteins solubilized in 2% SDS were separated by SDS-PAGE and then transferred to PVDF membranes in CAPS buffer.

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