abcam

Product datasheet

Recombinant Human MT-ND1 protein ab114460

1 Image

Overview

Product name	Recombinant Human MT-ND1 protein
Protein length	Protein fragment

Description

Nature	Recombinant
Source	Wheat germ
Amino Acid Sequence	
Accession	P03886
Species	Human
Sequence	MLTERKILGYIQLRKGPNVVGPYGLLQPFADAIKLFTKE PLKPATSTITL Y
Molecular weight	31 kDa including tags
Amino acids	21 to 71

Specifications

Our Abpromise guarantee covers the use of **ab114460** in the following tested applications.

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

Applications	Western blot SDS-PAGE ELISA
Form	Liquid
Additional notes	Protein concentration is above or equal to 0.05 mg/ml. ab114460 is best used within three months from the date of receipt.

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles. pH: 8.00 Constituents: 0.79% Tris HCl, 0.3% Glutathione

General Info

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-ND1 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-ND1 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.
Defects in MT-ND1 may be associated with susceptibility to Alzheimer disease mitochondrial (AD-MT) [MIM:502500]. Alzheimer disease is a neurodegenerative disorder characterized by progressive dementia, loss of cognitive abilities, and deposition of fibrillar amyloid proteins as intraneuronal neurofibrillary tangles, extracellular amyloid plaques and vascular amyloid deposits. The major constituent of these plaques is the neurotoxic amyloid-beta-APP 40-42 peptide (s), derived proteolytically from the transmembrane precursor protein APP by sequential secretase processing. The cytotoxic C-terminal fragments (CTFs) and the caspase-cleaved products such as C31 derived from APP, are also implicated in neuronal death.
Defects in MT-ND1 may be associated with non-insulin-dependent diabetes mellitus (NIDDM).

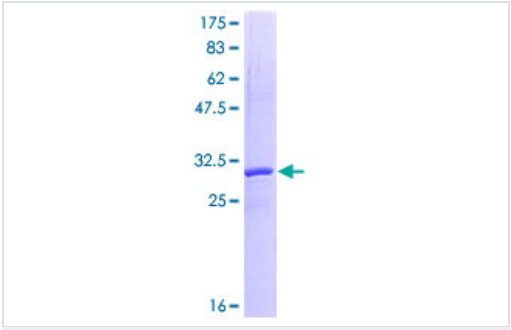
Sequence similarities

Belongs to the complex I subunit 1 family.

Cellular localization

Mitochondrion inner membrane.

Images



SDS-PAGE - Recombinant Human MT-ND1 protein (ab114460)

ab114460 analysed on a 12.5% SDS-PAGE stained with Coomassie Blue.

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