

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** MLTERKILGYQLRKGPNVVGPYGLLQPFADAIKLFTKEPLKPATSTITL  
 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 -80°C. 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 heterogeneous 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).

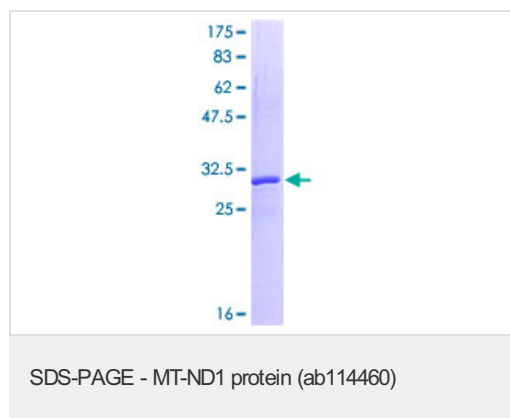
### Sequence similarities

Belongs to the complex I subunit 1 family.

### Cellular localization

Mitochondrion inner membrane.

## Images



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

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

**Our Abpromise to you: Quality guaranteed and expert technical support**

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
  
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <http://www.abcam.com/abpromise> or contact our technical team.

### **Terms and conditions**

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors