

# Product Information

## **MemDX™ Membrane Protein Human NDUFA1 (NADH:ubiquinone oxidoreductase subunit**

### **A1) Expressed *in vitro* E.coli expression system, Full Length**

Cat. No.: **MPX3668K**

This product is for research use only and is not intended for diagnostic use.

This product is a Human NDUFA1 membrane protein expressed *in vitro* E.coli expression system. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

### Product Specifications

#### **Host Species**

Human

#### **Target Protein**

NDUFA1

#### **Protein Length**

Full Length

#### **Protein Class**

Transport

#### **TMD**

1

#### **Sequence**

MWFEILPGLSVMGVCLIPGLATAYIHRFTNGGKEKRVAFHFGYHWSLMERDRRISGVDRYYVSKGLENID

### Product Description

#### **Expression Systems**

*in vitro* E.coli expression system

#### **Tag**

10xHis tag at the N-terminus

#### **Protein Format**

Soluble

#### **Form**

Liquid or Lyophilized powder

#### **Buffer**

Tris/PBS-based buffer, 6% Trehalose, pH 8.0

### Storage

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -70°C or lower. Avoid freeze/thaw cycles.

### Target

#### Target Protein

NDUFA1

#### Full Name

NADH:ubiquinone oxidoreductase subunit A1

#### Introduction

The human NDUFA1 gene codes for an essential component of complex I of the respiratory chain, which transfers electrons from NADH to ubiquinone. It has been noted that the N-terminal hydrophobic domain has the potential to be folded into an alpha-helix spanning the inner mitochondrial membrane with a C-terminal hydrophilic domain interacting with globular subunits of complex I. The highly conserved two-domain structure suggests that this feature is critical for the protein function and might act as an anchor for the NADH:ubiquinone oxidoreductase complex at the inner mitochondrial membrane. However, the NDUFA1 peptide is one of about 31 components of the "hydrophobic protein" (HP) fraction of complex I which is involved in proton translocation. Thus the NDUFA1 peptide may also participate in that function.

#### Alternative Names

NDUFA1; MWFE; ZNF183; CI-MWFE; MC1DN12; NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 1; NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 1, 7.5kDa; NADH-ubiquinone oxidoreductase MWFE subunit; NADH:ubiquinone oxidoreductase (complex 1); complex I MWFE subunit; type I dehydrogenase; NADH:ubiquinone oxidoreductase subunit A1

#### Gene ID

[4694](#)

#### UniProt ID

[Q15239](#)