10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NDUFA1 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a full length recombinant NDUFA1.
Catalog # AT2998a

Product Information

Application	WB
Primary Accession	O15239
Other Accession	BC000266
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG1 kappa
Clone Names	3B9-1A1
Calculated MW	8072

Additional Information

Gene ID	4694
Other Names	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 1, Complex I-MWFE, CI-MWFE, NADH-ubiquinone oxidoreductase MWFE subunit, NDUFA1
Target/Specificity	NDUFA1 (AAH00266, 24 a.a. ~ 70 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	NDUFA1 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

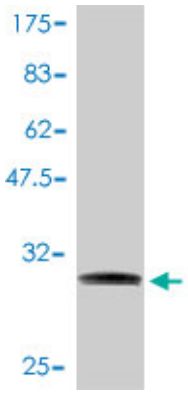
Background

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.

References

Mitochondrial bioenergetics and dynamics interplay in complex I-deficient fibroblasts. Mor?n M, et al. Biochim Biophys Acta, 2010 May. PMID 20153825.Association study between single-nucleotide polymorphisms in 199 drug-related genes and commonly measured quantitative traits of 752 healthy Japanese subjects. Saito A, et al. J Hum Genet, 2009 Jun. PMID 19343046.A novel NDUFA1 mutation leads to a progressive mitochondrial complex I-specific neurodegenerative disease. Potluri P, et al. Mol Genet Metab, 2009 Apr. PMID 19185523.X-linked NDUFA1 gene mutations associated with mitochondrial encephalomyopathy. Fernandez-Moreira D, et al. Ann Neurol, 2007 Jan. PMID 17262856.Identification of mitochondrial complex I assembly intermediates by tracing tagged NDUFS3 demonstrates the entry point of mitochondrial subunits. Vogel RO, et al. J Biol Chem, 2007 Mar 9. PMID 17209039.

Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (30.91 KDa) .