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

Anti-NDUFA1 Antibody

Catalog # ABO10976

Product Information

Application	WB, IHC-P, IHC-F, ICC
Primary Accession	O15239
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for NADH dehydrogenase[ubiquinone] 1 alpha subcomplex subunit 1(NDUFA1) detection. Tested with WB, IHC-P, IHC-F, ICC in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Calculated MW	8072
Application Details	Immunocytochemistry , 0.5-1 □g/ml, Human, Mouse, Rat Immunohistochemistry(Frozen Section), 0.5-1 □g/ml, Rat, Human, Mouse Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Mitochondrion inner membrane; Single-pass membrane protein; Matrix side.
Tissue Specificity	Primarily expressed in heart and skeletal muscle.
Source	Eukaryota
Protein Name	NADH dehydrogenase[ubiquinone] 1 alpha subcomplex subunit 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human NDUFA1(54-70aa ISGVDRYYVSKGLENID), different from the related rat and mouse sequences by one amino acid.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

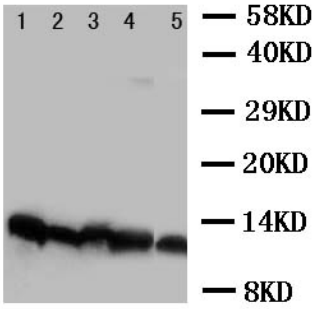
Protein Information

Name	NDUFA1
Function	Accessory subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I), that is believed not to be involved in 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.
Cellular Location	Mitochondrion inner membrane; Single-pass membrane protein; Matrix side
Tissue Location	Primarily expressed in heart and skeletal muscle.

Background

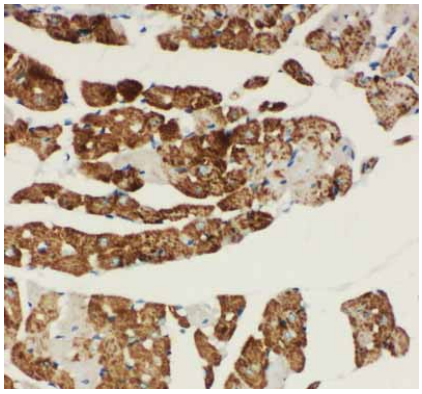
NDUFA1(NADH-UBIQUINONE OXIDOREDUCTASE 1 ALPHA SUBCOMPLEX, 1), also called MWFE, B. TAURUS, HOMOLOG OF, encodes a subunit of mitochondrial NADH: ubiquinone oxidoreductase, also known as mitochondrial complex I. The NDUFA1 gene is mapped to chromosome Xq24. The deduced polypeptide sequence of NDUFA1 was found to have an N-terminal hydrophobic domain, likely to be a transmembrane domain, and a C-terminal hydrophilic domain. And the NDUFA1 gene contains 3 exons and spans about 5.0 kb of genomic DNA. Complementation with hamster Ndufa1 cDNA restored the rotenone-sensitive complex I activity of these mutant cells to approximately 100% of the parent cell activity. The findings established that the MWFE polypeptide is absolutely essential for an active complex I in mammals. 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."

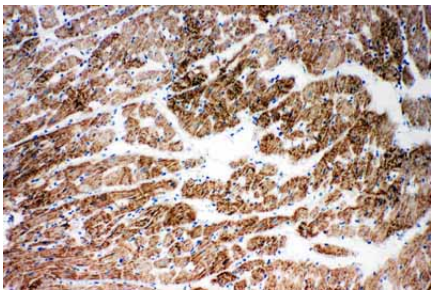
Images



Anti-NDUFA1 antibody, ABO10976, Western blottingLane 1: Rat Cardiac Muscle Tissue Lysate Lane 2: Rat Liver Tissue LysateLane 3: Rat Kidney Tissue LysateLane 4: Rat Brain Tissue LysateLane 5: HT1080 Cell Lysate

Anti-NDUFA1 antibody, ABO10976, IHC(P)IHC(P): Rat Cardiac Muscle Tissue





Anti-NDUFA1 antibody, ABO10976, IHC(F)IHC(F): Rat Cardiac Muscle Tissue