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NDUA4 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5303

Product Information

Application	IHC-P, IF, WB
Primary Accession	O00483
Reactivity	Mouse, Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	9370
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	4697
Antigen Region	56-80
Other Names	NDUFA4;NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 4
Dilution	IHC-P~~1:100~500 IF~~1:25 WB~~1:1000
Target/Specificity	This NDUA4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 56-80 amino acids from the C-terminal region of human NDUA4.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NDUA4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NDUFA4
Function	Component of the cytochrome c oxidase, the last enzyme in the mitochondrial electron transport chain which drives oxidative phosphorylation. The respiratory chain contains 3 multisubunit complexes

succinate dehydrogenase (complex II, CII), ubiquinol- cytochrome c oxidoreductase (cytochrome b-c1 complex, complex III, CIII) and cytochrome c oxidase (complex IV, CIV), that cooperate to transfer electrons derived from NADH and succinate to molecular oxygen, creating an electrochemical gradient over the inner membrane that drives transmembrane transport and the ATP synthase. Cytochrome c oxidase is the component of the respiratory chain that catalyzes the reduction of oxygen to water. Electrons originating from reduced cytochrome c in the intermembrane space (IMS) are transferred via the dinuclear copper A center (CU(A)) of subunit 2 and heme A of subunit 1 to the active site in subunit 1, a binuclear center (BNC) formed by heme A3 and copper B (CU(B)). The BNC reduces molecular oxygen to 2 water molecules unsing 4 electrons from cytochrome c in the IMS and 4 protons from the mitochondrial matrix (PubMed:22902835). NDUFA4 is required for complex IV maintenance (PubMed:22902835).

Cellular Location Mitochondrion inner membrane; Single-pass membrane protein

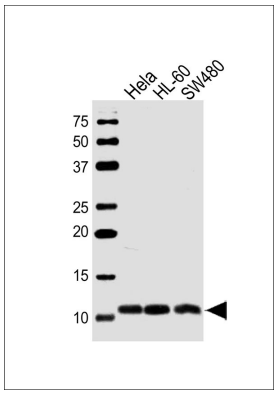
Background

Accessory subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (Complex I), that is believed to be not 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.

References

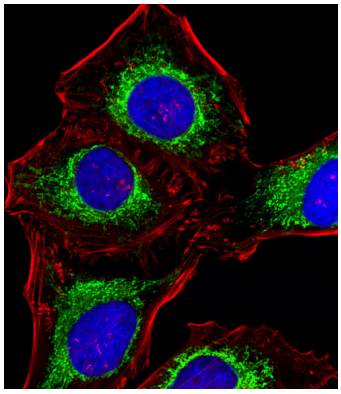
Kim J.W., et al. Biochem. Mol. Biol. Int. 43:669-675(1997).
Kanagarajah D., et al. Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
Ebert L., et al. Submitted (MAY-2004) to the EMBL/GenBank/DDBJ databases.
Halleck A., et al. Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Scherer S.W., et al. Science 300:767-772(2003).

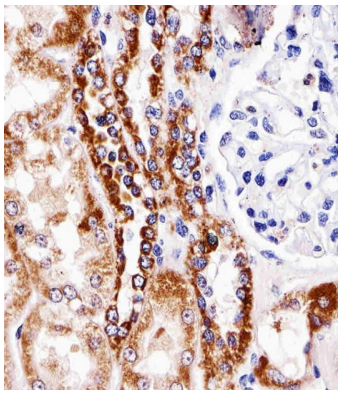
Images



Western blot analysis of lysates from Hela,HL-60,SW480 cell line (from left to right), using NDUA4 Antibody (C-term)(Cat. #AW5303). AW5303 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.

Fluorescent image of Hela cells stained with NDUA4 Antibody (C-term)(Cat#AW5303). AW5303 was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody (green). DAPI was used to stain the cell nuclear (blue). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).





Immunohistochemical analysis of paraffin-embedded H. kidney section using NDUA4 Antibody (C-term)(Cat#AW5303). AW5303 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.