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COX4I1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9153a

Product Information

Application	WB, IHC-P, E
Primary Accession	P13073
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23257
Calculated MW	19577
Antigen Region	25-54

Additional Information

Gene ID	1327
Other Names	Cytochrome c oxidase subunit 4 isoform 1, mitochondrial, Cytochrome c oxidase polypeptide IV, Cytochrome c oxidase subunit IV isoform 1, COX IV-1, COX4I1, COX4
Target/Specificity	This COX4I1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 25-54 amino acids from the N-terminal region of human COX4I1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
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	COX4I1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	COX4I1 (HGNC:2265)
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 using 4 electrons from cytochrome c in the IMS and 4 protons from the mitochondrial matrix.

Cellular Location Mitochondrion inner membrane; Single-pass membrane protein

Tissue Location Ubiquitous.

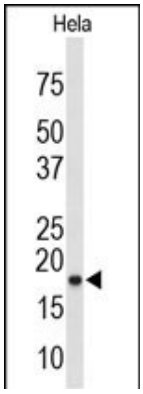
Background

COX4I1 is one of the nuclear-coded polypeptide chains of cytochrome c oxidase, the terminal oxidase in mitochondrial electron transport.

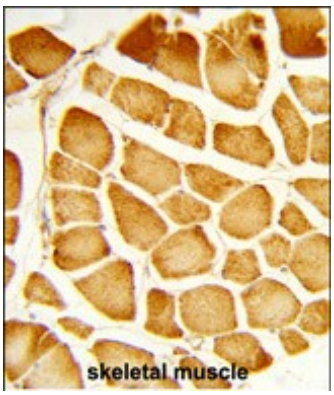
References

Choudhary C., et.al., Science 325:834-840(2009).
van Kuilenburg A.B.P.,et.al., Biochim. Biophys. Acta 1119:218-224(1992).

Images



Western blot analysis of COX4I1 Antibody (N-term) (Cat. #AP9153a) in Hela cell line lysates (35ug/lane). COX4I1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human skeletal muscle reacted with COX4I1 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Increased mtDNA copy number promotes cancer progression by enhancing mitochondrial oxidative phosphorylation in microsatellite-stable colorectal cancer.
- Increased mitochondrial fission promotes autophagy and hepatocellular carcinoma cell survival through the ROS-modulated coordinated regulation of the NFKB and TP53 pathways.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.