

COX4I1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1448a**Specification**

COX4I1 Antibody - Product Information

Application	WB, IF, FC
Primary Accession	P13073
Reactivity	Human, Mouse, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	19kDa KDa

Description

Cytochrome c oxidase (COX) functions as the terminal oxidase of the respiratory chain that uses cytochrome c as an electron donor to drive a proton gradient across the inner mitochondrial membrane. The mammalian COX apoenzyme is a heteromer consisting of three mitochondrial encoded catalytic subunits and several nuclear gene encoded structural subunits. COX contains two iron-coordination sites and two copper-coordination sites. Cytochrome c oxidase IV (COX4) is a nuclear-encoded subunit of COX that may play a role in regulating COX activity. COX4 is expressed ubiquitously in adult human tissue with the strongest levels of expression in the pancreas and moderate expression levels in heart, skeletal muscle and placenta.

Immunogen

Purified recombinant fragment of human COX4I1 expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

COX4I1 Antibody - 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

Dilution

WB~~1/500 - 1/2000

IF~~1/200 - 1/1000

FC~~1/200 - 1/400

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

COX4I1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

COX4I1 Antibody - 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

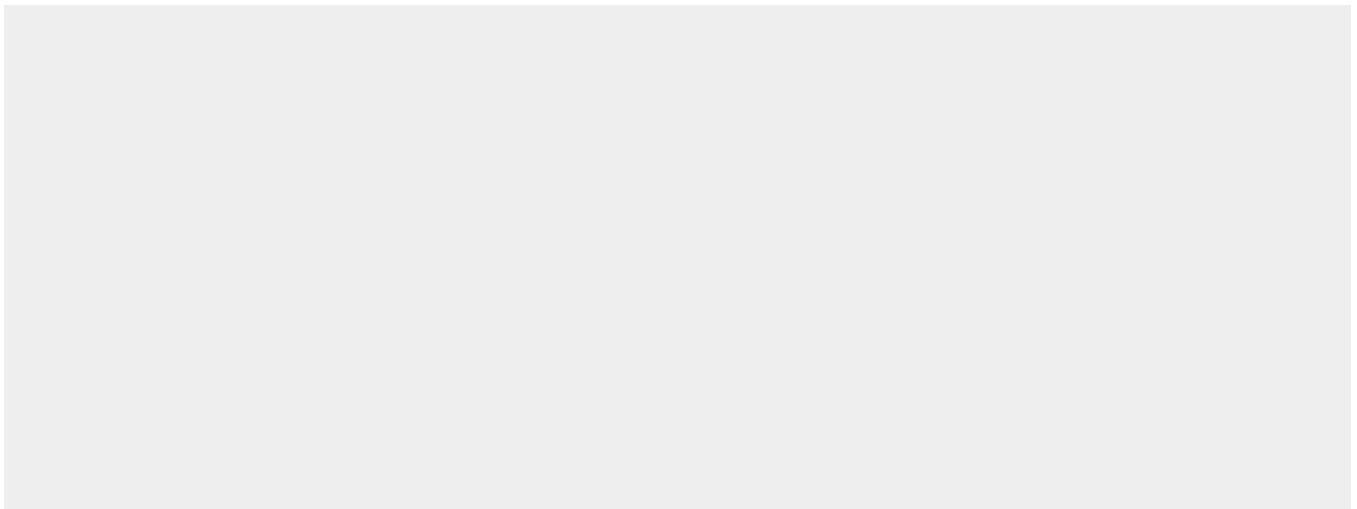
Ubiquitous.

COX4I1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

COX4I1 Antibody - Images



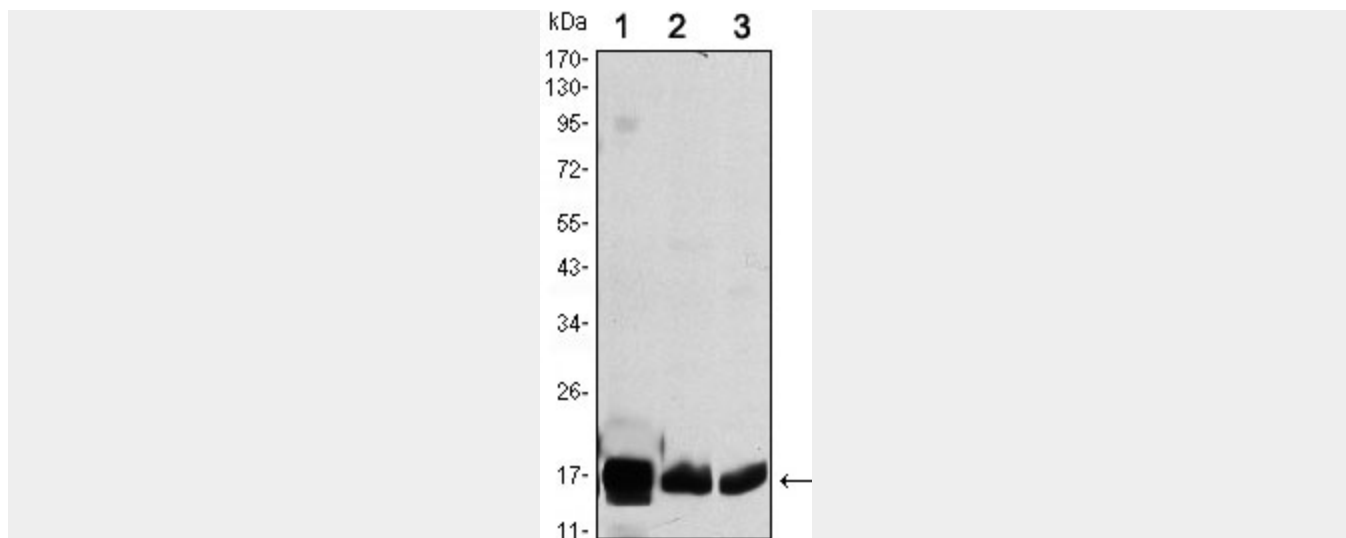


Figure 1: Western blot analysis using COX4I1 mouse mAb against HEK293 (1), A549 (2) and PC12 (3) cell lysate.

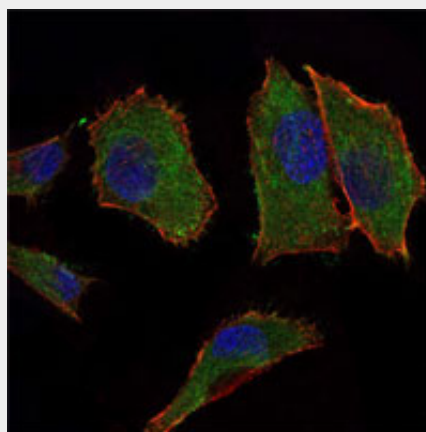


Figure 2: Immunofluorescence analysis of PANC-1 cells using COX4I1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

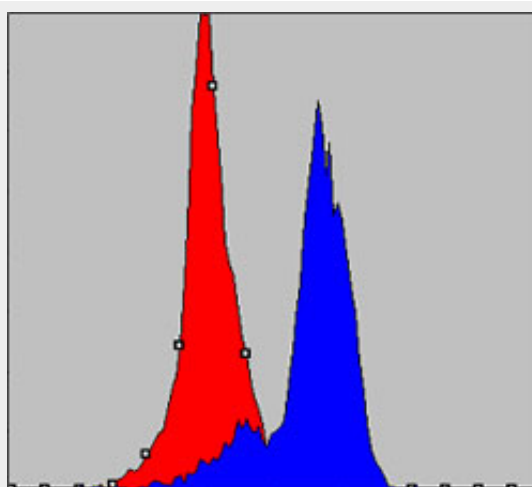


Figure 3: Flow cytometric analysis of K562 cells using COX4I1 mouse mAb (blue) and negative control (red).

COX4I1 Antibody - References

1. Biochim Biophys Acta. 1992 Feb 26;1119(2):218-24. 2. Histochemistry. 1990;94(2):211-5. 3. FEBS Lett. 2000 Jun 30;476(1-2):22-6.