

Anti-COX4-1 Antibody

Catalog # AP96139

Product Information

Application	WB, IHC, FC, IP, IF/IC
Primary Accession	P13073
Reactivity	Human, Mouse, Rat, Hamster, Goat, Mk
Host	Mouse
Clonality	Monoclonal
Calculated MW	19577

Additional Information

Gene ID	1327
Other Names	COX4; Cytochrome c oxidase subunit 4 isoform 1 mitochondrial; Cytochrome c oxidase polypeptide IV; Cytochrome c oxidase subunit IV isoform 1; COX IV-1
Target/Specificity	A synthetic peptide corresponding to carboxyl terminal residues of human COX IV
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~FC (1/50 - 1/100) IP~~N/A IF/IC~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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.

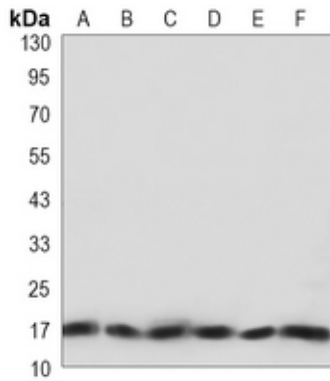
Cellular Location

Mitochondrion inner membrane; Single-pass membrane protein

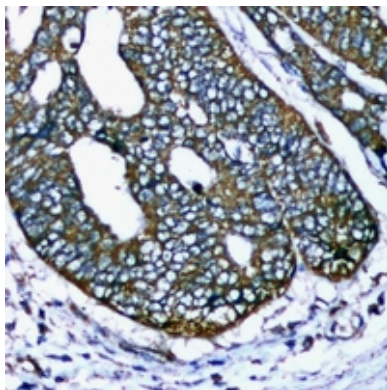
Tissue Location

Ubiquitous.

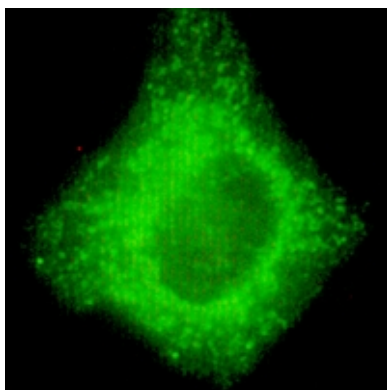
Images



Western blot analysis of COX4-1 expression in CHOk1 (A), COS7 (B), NIH3T3 (C), Hela (D), C6 (E), mouse skeletal muscle (F) whole cell lysates. (Predicted band size: 20 kD; Observed band size: 17 kD)

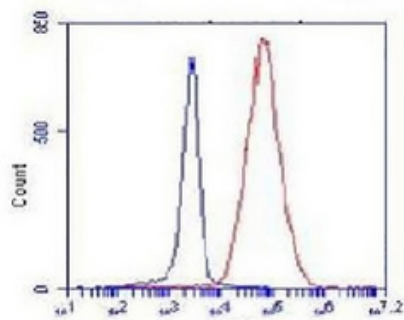


Immunohistochemical analysis of COX4-1 staining in human colon cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of COX4-1 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

Flow cytometric analysis of COX4-1 in K562 (red). Blue line histogram represents the isotype control.



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