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

Anti-COX4-2 Antibody

Rabbit polyclonal antibody to COX4-2
Catalog # AP60846

Product Information

Application	WB, IF/IC, IHC
Primary Accession	Q96KJ9
Other Accession	Q91W29
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	20010

Additional Information

Gene ID	84701
Other Names	COX4L2; Cytochrome c oxidase subunit 4 isoform 2 mitochondrial; Cytochrome c oxidase subunit IV isoform 2; COX IV-2
Target/Specificity	Recognizes endogenous levels of COX4-2 protein.
Dilution	WB~~WB (1/500 - 1/2000), IHC (1/50 - 1/200), IF/IC (1/50 - 1/100) IF/IC~~N/A IHC~~WB (1/500 - 1/2000), IHC (1/50 - 1/200), IF/IC (1/50 - 1/100)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

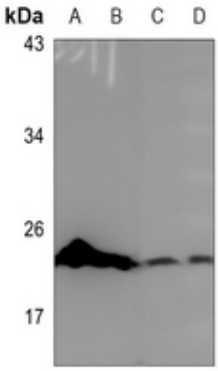
Name	COX4I2 (HGNC:16232)
Function	Component of the cytochrome c oxidase, the last enzyme in the mitochondrial electron transport chain which drives oxidative phosphorylation. The respiratory chain contains 3 multisubunit complexes succinate dehydrogenase (complex II, CII), ubiquinol- cytochrome c oxidoreductase (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 {ECO:0000250|UniProtKB:P00423}; Single-pass membrane protein {ECO:0000250|UniProtKB:P00423}
Tissue Location	Highly expressed in lung.

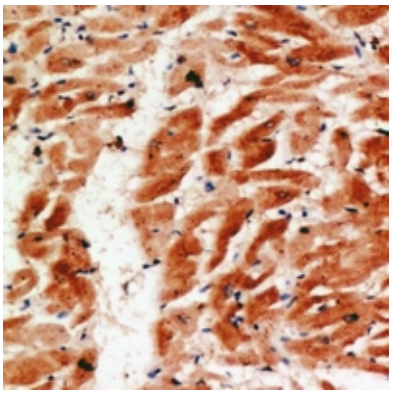
Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human COX4-2. The exact sequence is proprietary.

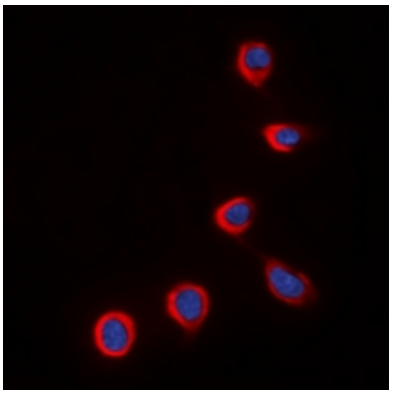
Images



Western blot analysis of COX4-2 expression in HEK293T (A), H446 (B), rat lung (C), rat heart (D) whole cell lysates.



Immunohistochemical analysis of COX4-2 staining in human heart 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 COX4-2 staining in K562 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 hidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).