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COX IV Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52659

Product Information

Application	WB, IHC-P, IHC-F, IF, FC, ICC, IP
Primary Accession	P13073
Reactivity	Rat, Human, Mouse, Hamster, Monkey, Goat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Conjugate	Unconjugated
Immunogen	A synthetic peptide corresponding to carboxyl terminal residues of human COX IV
Purification	Affinity Purified
Calculated MW	19577

Additional Information

Gene ID	1327
Other Names	AL024441;COX 4;COX IV 1;COX IV;COX IV-1;Cox4;COX41_HUMAN;Cox4a;COX4B;COX4I1;COX4I2; COX4L2;COXIV;Cytochrome c oxidase polypeptide IV;Cytochrome c oxidase subunit 4 isoform 1 mitochondrial;Cytochrome c oxidase subunit 4 isoform 1, mitochondrial;Cytochrome C Oxidase subunit IV;Cytochrome c oxidase subunit IV isoform 1;Cytochrome c oxidase subunit IV isoform 2 (lung);Cytochrome c oxydase subunit;dJ857M17.2;MGC105470;MGC72016.
Dilution	WB~~1:1000 IHC-P~~N/A IHC-F~~N/A IF~~1:50~200 FC~~1:100 ICC~~1:150 IP~~1:500
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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.

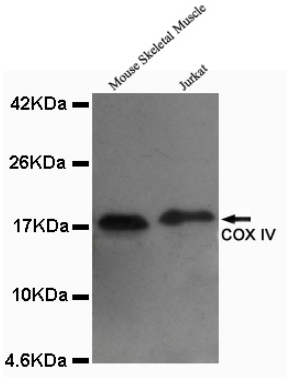
Background

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

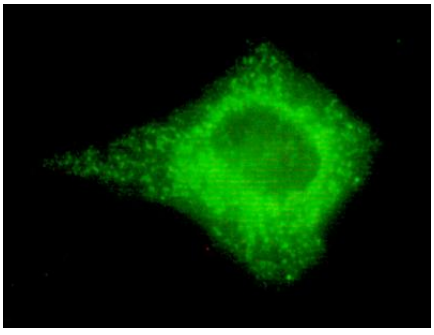
References

Zeviani M.,et al.Gene 55:205-217(1987).
Lomax M.I.,et al.Gene 86:209-216(1990).
Park S.J.,et al.Submitted (OCT-1990) to the EMBL/GenBank/DDBJ databases.
Yu W.,et al.Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
Bachman N.J.,et al.Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.

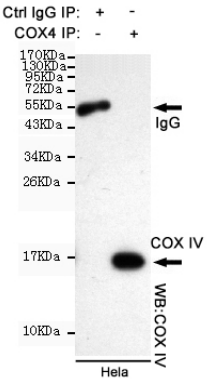
Images



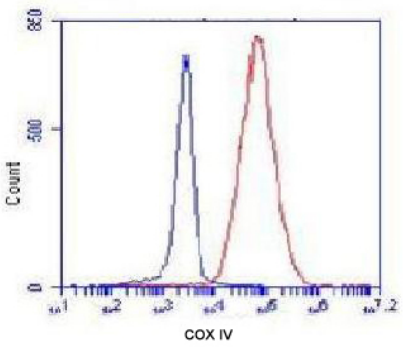
Western blot detection of COX IV in Mouse skeletal muscel and Jurkat lysates using COX IV mouse mAb (1:1000 diluted). Predicted band size: 17KDa.Observed band size: 17KDa.



Immunocytochemistry of HeLa cells using anti-COX IV mouse mAb diluted 1:150.



Immunoprecipitation analysis of Hela cell lysates using COX IV mouse mAb.



Flow Cytometry analysis of K562 cells stained with COX4 (red, 1/100 dilution), followed by FITC-conjugated goat anti-mouse IgG. Blue line histogram represents the isotype control, normal mouse IgG.

Citations

- Mechanistic characterization of nitrite-mediated neuroprotection after experimental cardiac arrest.