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COXIV Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22351a

Specification

COXIV Antibody - Product Information

Application	**IF, WB,E**
Primary Accession	P19783
Other Accession	P10888
Reactivity	**Mouse**
Predicted	**Rat**
Host	**Rabbit**
Clonality	**polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**19530**
Antigen Region	**49-83**

COXIV Antibody - Additional Information

Gene ID 12857

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, Cox4a

Target/Specificity
This COXIV antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 49-83 amino acids from the mouse region of mouse COXIV.

Dilution
IF~~1:25
WB~~1:2000
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
COXIV Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

COXIV Antibody - Protein Information

Name Cox4i1

Synonyms Cox4, Cox4a, Coxiv {ECO:0000303|PubMed:3

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.

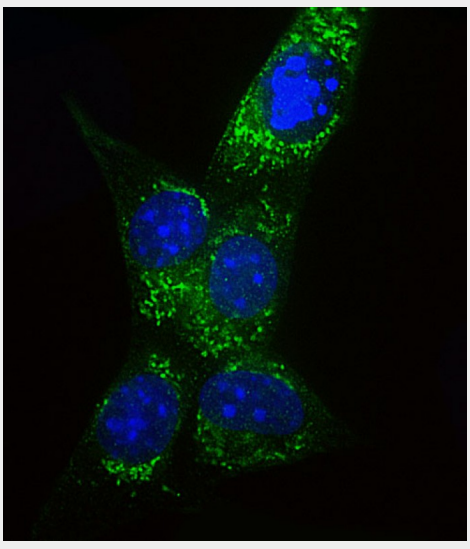
Cellular Location
Mitochondrion inner membrane; Single-pass membrane protein

COXIV 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 Cytomety
- Cell Culture

COXIV Antibody - Images



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0. 1% Triton X-100 permeabilized NIH/3T3 cells labeling Cox4i1 with AP22351a at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-Rabbit IgG secondary antibody at 1/200 dilution (green).

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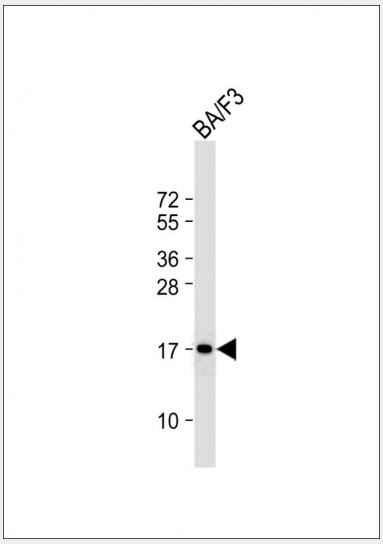
Immunofluorescence image showing Cytoplasm staining on NIH/3T3 cell line. The nuclear counter stain is DAPI (blue).



Anti-COXIV Antibody at 1:2000 dilution + BA/F3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 17 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

COXIV Antibody - Background

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

COXIV Antibody - References

Grossman L.I.,et al.Nucleic Acids Res. 18:6454-6454(1990).
Carter R.S.,et al.Arch. Biochem. Biophys. 288:97-106(1991).
Carninci P.,et al.Science 309:1559-1563(2005).
Lubec G.,et al.Submitted (APR-2007) to UniProtKB.
Park J.,et al.Mol. Cell 50:919-930(2013).