

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

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**COXIV Antibody - Product Information**

Application	IF, WB,E
Primary Accession	<a href="#">P19783</a>
Other Accession	<a href="#">P10888</a>
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

**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**

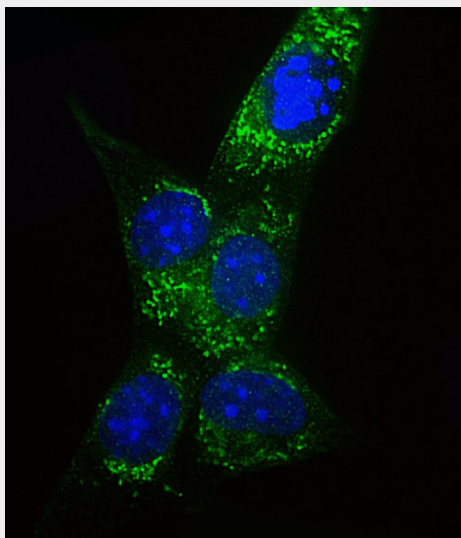
Mitochondrion inner membrane; Single-pass membrane protein {ECO:0000250|UniProtKB:P00423}

#### **COXIV Antibody - Protocols**

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

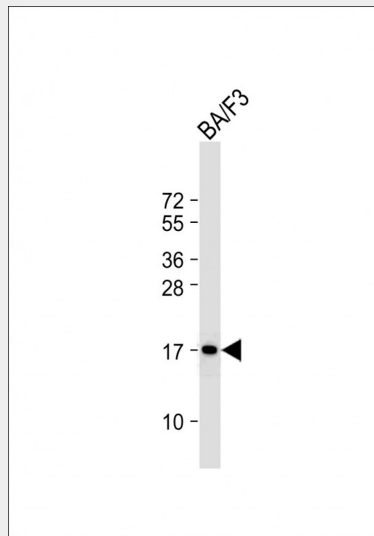
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **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).

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  $\mu$ g 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).