

**Goat Anti-COX4I1 & COX4I2 Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1272a

## Specification

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### Goat Anti-COX4I1 & COX4I2 Antibody - Product Information

Application	WB, IHC
Primary Accession	<a href="#">P13073</a>
Other Accession	<a href="#">NP_001852</a> , <a href="#">1327</a> , <a href="#">84701</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	19577

### Goat Anti-COX4I1 & COX4I2 Antibody - Additional Information

**Gene ID** 1327

#### 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

#### Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

Goat Anti-COX4I1 & COX4I2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### Goat Anti-COX4I1 & COX4I2 Antibody - 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.

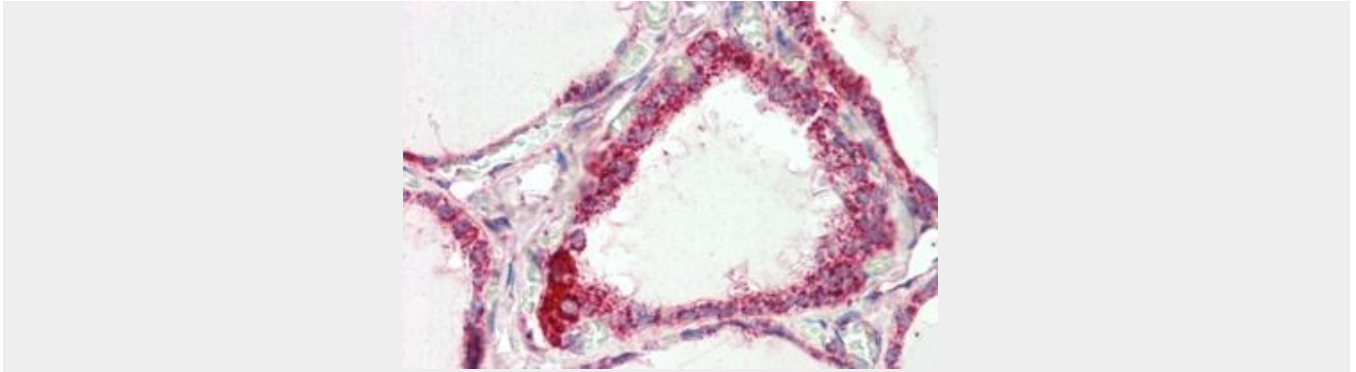
**Goat Anti-COX4I1 & COX4I2 Antibody - Protocols**

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](#)

**Goat Anti-COX4I1 & COX4I2 Antibody - Images**

AF1272a (0.01 µg/ml) staining of human muscle lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF1272a (2.5 µg/ml) staining of paraffin embedded Human Thyroid Gland. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

### **Goat Anti-COX4I1 & COX4I2 Antibody - Background**

Cytochrome c oxidase (COX) is the terminal enzyme of the mitochondrial respiratory chain. It is a multi-subunit enzyme complex that couples the transfer of electrons from cytochrome c to molecular oxygen and contributes to a proton electrochemical gradient across the inner mitochondrial membrane. The complex consists of 13 mitochondrial- and nuclear-encoded subunits. The mitochondrially-encoded subunits perform the electron transfer and proton pumping activities. The functions of the nuclear-encoded subunits are unknown but they may play a role in the regulation and assembly of the complex. This gene encodes the nuclear-encoded subunit IV isoform 1 of the human mitochondrial respiratory chain enzyme. It is located at the 3' of the NOC4 (neighbor of COX4) gene in a head-to-head orientation, and shares a promoter with it.

### **Goat Anti-COX4I1 & COX4I2 Antibody - References**

Novel insights into the assembly and function of human nuclear-encoded cytochrome c oxidase subunits 4, 5a, 6a, 7a and 7b. Fornuskova D, et al. *Biochem J*, 2010 May 27. PMID 20307258.  
Assembly of nuclear DNA-encoded subunits into mitochondrial complex IV, and their preferential integration into supercomplex forms in patient mitochondria. Lazarou M, et al. *FEBS J*, 2009 Nov. PMID 19843159.  
Toward a confocal subcellular atlas of the human proteome. Barbe L, et al. *Mol Cell Proteomics*, 2008 Mar. PMID 18029348.  
HIF-1 regulates cytochrome oxidase subunits to optimize efficiency of respiration in hypoxic cells. Fukuda R, et al. *Cell*, 2007 Apr 6. PMID 17418790.  
Large-scale mapping of human protein-protein interactions by mass spectrometry. Ewing RM, et al. *Mol Syst Biol*, 2007. PMID 17353931.