

**COX7A1 Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP16006c**

**Specification**

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**COX7A1 Antibody (Center) - Product Information**

|                   |                             |
|-------------------|-----------------------------|
| Application       | WB,E                        |
| Primary Accession | <a href="#">P24310</a>      |
| Other Accession   | <a href="#">NP_001855.1</a> |
| Reactivity        | Human, Mouse                |
| Host              | Rabbit                      |
| Clonality         | Polyclonal                  |
| Isotype           | Rabbit IgG                  |
| Antigen Region    | 10-38                       |

**COX7A1 Antibody (Center) - Additional Information**

**Gene ID** 1346

**Other Names**

Cytochrome c oxidase subunit 7A1, mitochondrial, Cytochrome c oxidase subunit VIIa-heart, Cytochrome c oxidase subunit VIIa-H, Cytochrome c oxidase subunit VIIa-muscle, Cytochrome c oxidase subunit VIIa-M, COX7A1, COX7AH

**Target/Specificity**

This COX7A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 10-38 amino acids from the Central region of human COX7A1.

**Dilution**

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**

COX7A1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**COX7A1 Antibody (Center) - Protein Information**

**Name** COX7A1

**Synonyms** COX7AH

**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

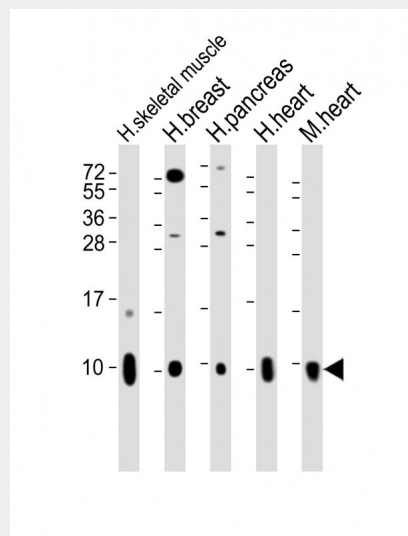
Mitochondrion inner membrane {ECO:0000250|UniProtKB:P07470}; Single-pass membrane protein {ECO:0000250|UniProtKB:P07470}

#### COX7A1 Antibody (Center) - Protocols

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

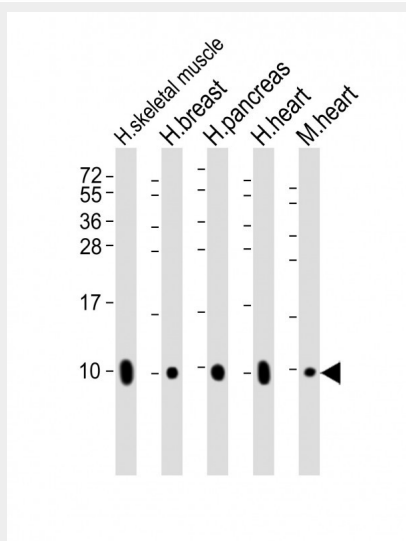
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### COX7A1 Antibody (Center) - Images

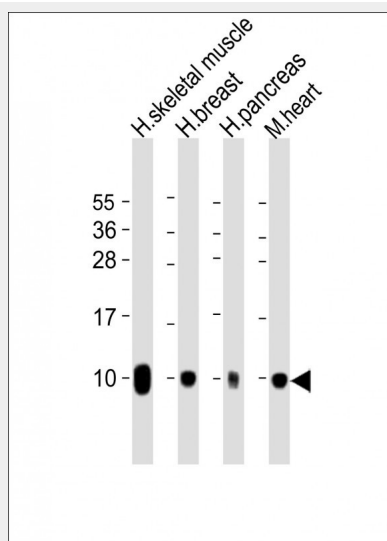


All lanes : Anti-COX7A1 Antibody (Center) at 1:2000 dilution Lane 1: human skeletal muscle lysate Lane 2: human breast lysate Lane 3: human pancreas lysate Lane 4: human heart lysate Lane 5: mouse heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 9 kDa Blocking/Dilution

buffer: 5% NFDM/TBST.



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### COX7A1 Antibody (Center) - Background

Cytochrome c oxidase (COX), the terminal component of the mitochondrial respiratory chain, catalyzes the electron transfer from reduced cytochrome c to oxygen. This component is a heteromeric complex consisting of 3 catalytic subunits encoded by mitochondrial genes and multiple structural subunits encoded by nuclear genes. The mitochondrially-encoded subunits function in electron transfer, and the nuclear-encoded subunits may function in the regulation and assembly of the complex. This nuclear gene

encodes polypeptide 1 (muscle isoform) of subunit VIIa and the polypeptide 1 is present only in muscle tissues. Other polypeptides of subunit VIIa are present in both muscle and nonmuscle tissues, and are encoded by different genes.

#### **COX7A1 Antibody (Center) - References**

Bailey, S.D., et al. Diabetes Care (2010) In press :  
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)  
Lazarou, M., et al. FEBS J. 276(22):6701-6713(2009)  
Ronn, T., et al. Diabetologia 51(7):1159-1168(2008)  
Grimwood, J., et al. Nature 428(6982):529-535(2004)