

COX6A2 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9616c

Specification

COX6A2 Antibody (Center) - Product Information

Application	WB, IHC-P,E
Primary Accession	O02221
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	37-66

COX6A2 Antibody (Center) - Additional Information

Gene ID 1339

Other Names

Cytochrome c oxidase subunit 6A2, mitochondrial, Cytochrome c oxidase polypeptide VIa-heart, COXVIAH, Cytochrome c oxidase subunit VIA-muscle, COX VIa-M, COX6A2, COX6A, COX6AH

Target/Specificity

This COX6A2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 37-66 amino acids from the Central region of human COX6A2.

Dilution

WB~~1:1000

IHC-P~~1:25

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

COX6A2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

COX6A2 Antibody (Center) - Protein Information

Name COX6A2

Synonyms COX6A, COX6AH

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. Plays a role in the assembly and stabilization of complex IV (PubMed:[31155743](#)).

Cellular Location

Mitochondrion inner membrane {ECO:0000250|UniProtKB:P07471}; Single-pass membrane protein {ECO:0000250|UniProtKB:P07471}

Tissue Location

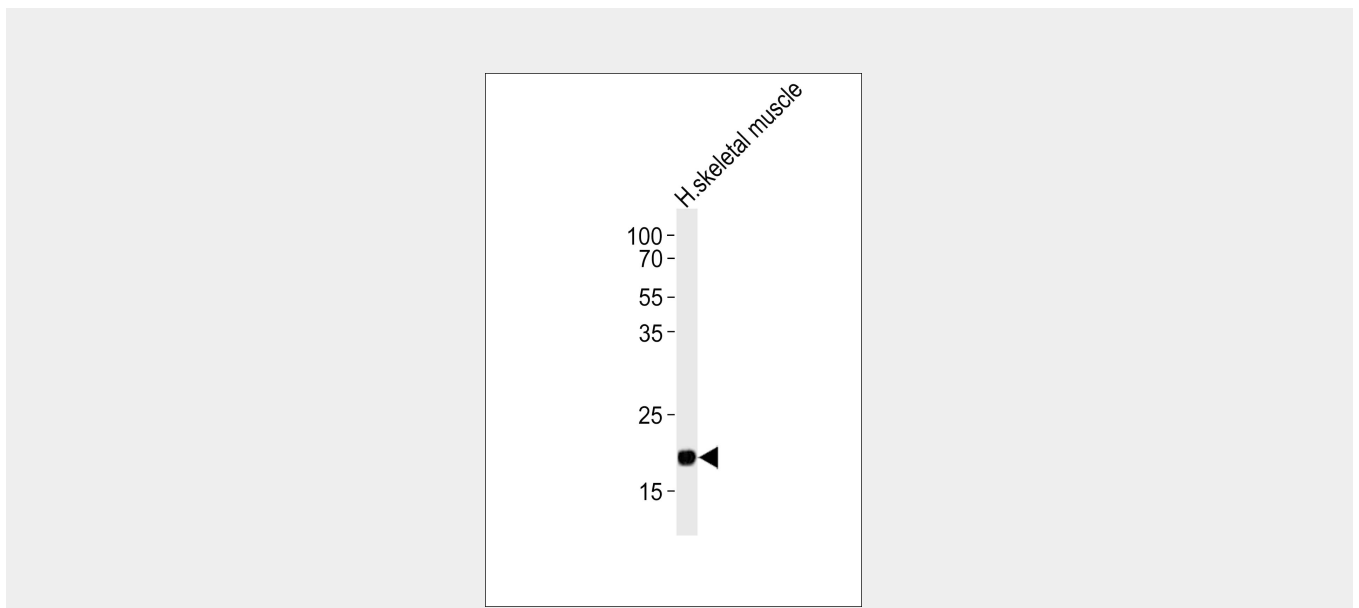
Expressed specifically in heart and muscle (PubMed:31155743). Not detected in brain, colon, spleen, kidney, liver, lung and pancreas (PubMed:31155743).

COX6A2 Antibody (Center) - Protocols

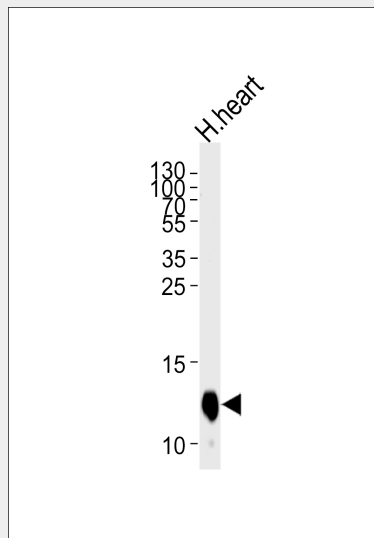
Provided below are standard protocols that you may find useful for product applications.

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

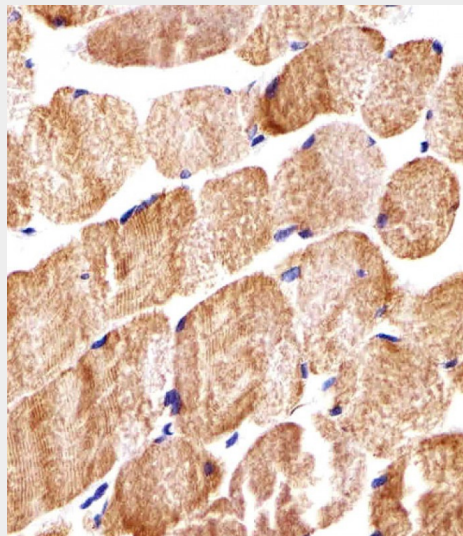
COX6A2 Antibody (Center) - Images



Western blot analysis of lysate from human skeletal muscle tissue lysate, using COX6A2 Antibody (Center)(Cat. #AP9616c). AP9616c was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.



Western blot analysis of lysate from human heart tissue lysate, using COX6A2 Antibody (Center)(Cat. #AP9616c). AP9616c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.



Immunohistochemical analysis of paraffin-embedded H. skeletal muscle section using COX6A2 Antibody (Center)(Cat#AP9616c). AP9616c was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

COX6A2 Antibody (Center) - Background

Cytochrome c oxidase (COX), the terminal enzyme of the mitochondrial respiratory chain, catalyzes the electron transfer from reduced cytochrome c to oxygen. It 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 be involved in the regulation and assembly of the complex. This nuclear gene encodes polypeptide 2 (heart/muscle isoform) of subunit VIa, and polypeptide 2 is present only in striated muscles. Polypeptide 1 (liver isoform) of subunit VIa is encoded by a different gene, and is found in all non-muscle tissues. These two polypeptides share 66% amino

acid sequence identity.

COX6A2 Antibody (Center) - References

Bachman, N.J., et al. Genomics 42(1):146-151(1997)

Lanfranchi, G., et al. Genome Res. 6(1):35-42(1996)

COX6A2 Antibody (Center) - Citations

- [Investigating the role of the physiological isoform switch of cytochrome c oxidase subunits in reversible mitochondrial disease.](#)