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COX6A2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AW5300

Specification

COX6A2 Antibody (Center) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	Q02221
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**H=11 KDa**
Isotype	**Rabbit IgG**
Antigen Source	**HUMAN**

COX6A2 Antibody (Center) - Additional Information

Gene ID 1339

Antigen Region
37-66

Other Names
COX6A2; COX6A; COX6AH; Cytochrome c oxidase subunit 6A2, mitochondrial; Cytochrome c oxidase polypeptide VIa-heart; Cytochrome c oxidase subunit VIA-muscle

Dilution
IHC-P~~1:25
WB~~1:1000

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.

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 unsing 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 Cytomety
- Cell Culture

COX6A2 Antibody (Center) - Images

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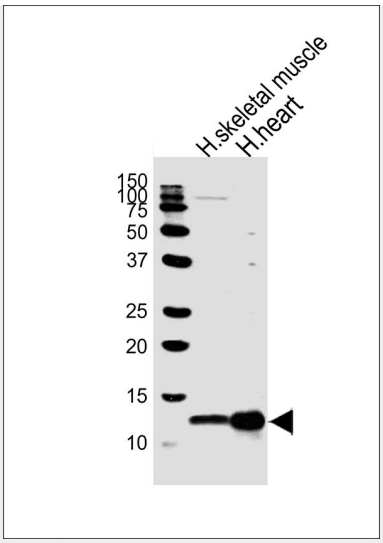
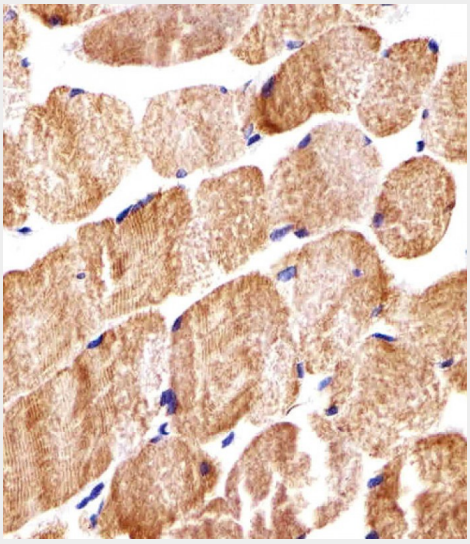


Western blot analysis of lysates from human skeletal muscle and huamn heart tissue lysate (from left to right), using COX6A2 Antibody (Center)(Cat. #AW5300). AW5300 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded H. skeletal muscle section using COX6A2 Antibody (Center)(Cat#AW5300). AW5300 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)