10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# COX6A2 Antibody (Center) Blocking Peptide

**Synthetic peptide**
**Catalog # BP9616c**

## Specification

### COX6A2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q02221

### COX6A2 Antibody (Center) Blocking Peptide - 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

**Format**
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### COX6A2 Antibody (Center) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/31155743" target="_blank">31155743</a>).

**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) Blocking Peptide - Protocols

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

- Blocking Peptides

## COX6A2 Antibody (Center) Blocking Peptide - Images

## COX6A2 Antibody (Center) Blocking Peptide - 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) Blocking Peptide - References

Bachman, N.J., et al. Genomics 42(1):146-151(1997)Lanfranchi, G., et al. Genome Res. 6(1):35-42(1996)