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COX7A1 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP16006c

Specification

COX7A1 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P24310

COX7A1 Antibody (Center) Blocking Peptide - 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

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.

COX7A1 Antibody (Center) Blocking Peptide - 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) Blocking Peptide - Protocols

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

- Blocking Peptides

COX7A1 Antibody (Center) Blocking Peptide - Images

COX7A1 Antibody (Center) Blocking Peptide - Background

Cytochrome c oxidase (COX), the terminal component of themitochondrial respiratory chain, catalyzes the electron transferfrom reduced cytochrome c to oxygen. This component is aheteromeric complex consisting of 3 catalytic subunits encoded bymitochondrial genes and multiple structural subunits encoded bynuclear genes. The mitochondrially-encoded subunits function inelectron transfer, and the nuclear-encoded subunits may function inthe regulation and assembly of the complex. This nuclear geneencodes polypeptide 1 (muscle isoform) of subunit VIIa and thepolypeptide 1 is present only in muscle tissues. Other polypeptidesof subunit VIIa are present in both muscle and nonmuscle tissues,and are encoded by different genes.

COX7A1 Antibody (Center) Blocking Peptide - 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)