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

MT-CO2 Blocking Peptide (C-term)

Synthetic peptide
Catalog # BP21628b

Specification

MT-CO2 Blocking Peptide (C-term) - Product Information

Primary Accession P00403

MT-CO2 Blocking Peptide (C-term) - Additional Information

Gene ID 4513

Other Names
Cytochrome c oxidase subunit 2, Cytochrome c oxidase polypeptide II, MT-CO2, COII, COXII, MTCO2

Target/Specificity
The synthetic peptide sequence is selected from aa 169-181 of HUMAN MT-CO2

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.

MT-CO2 Blocking Peptide (C-term) - Protein Information

Name MT-CO2

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; Multi-pass membrane protein

MT-CO2 Blocking Peptide (C-term) - Protocols

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

- Blocking Peptides

MT-CO2 Blocking Peptide (C-term) - Images

MT-CO2 Blocking Peptide (C-term) - Background

Cytochrome c oxidase is the component of the respiratory chain that catalyzes the reduction of oxygen to water. Subunits 1- 3 form the functional core of the enzyme complex. Subunit 2 transfers the electrons from cytochrome c via its binuclear copper A center to the bimetallic center of the catalytic subunit 1.

MT-CO2 Blocking Peptide (C-term) - References

Anderson S.,et al.Nature 290:457-465(1981).
Power M.D.,et al.Nucleic Acids Res. 17:6734-6734(1989).
Barrell B.G.,et al.Nature 282:189-194(1979).
Horai S.,et al.Proc. Natl. Acad. Sci. U.S.A. 92:532-536(1995).
Ruvolo M.,et al.Mol. Biol. Evol. 10:1115-1135(1993).