

COX5A Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP13154a**Specification**

COX5A Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P20674](#)**COX5A Antibody (N-term) Blocking Peptide - Additional Information**

Gene ID 9377

Other Names

Cytochrome c oxidase subunit 5A, mitochondrial, Cytochrome c oxidase polypeptide Va, COX5A

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP13154a was selected from the N-term region of COX5A. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

COX5A Antibody (N-term) Blocking Peptide - Protein Information

Name COX5A

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; Peripheral membrane protein; Matrix side

COX5A Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

COX5A Antibody (N-term) Blocking Peptide - Images**COX5A Antibody (N-term) Blocking Peptide - Background**

Cytochrome c oxidase (COX) is the terminal enzyme of the mitochondrial respiratory chain. It is a multi-subunit enzyme complex that couples the transfer of electrons from cytochrome c to molecular oxygen and contributes to a proton electrochemical gradient across the inner mitochondrial membrane. The complex consists of 13 mitochondrial- and nuclear-encoded subunits. The mitochondrially-encoded subunits perform the electron transfer of proton pumping activities. The functions of the nuclear-encoded subunits are unknown but they may play a role in the regulation and assembly of the complex. This gene encodes the nuclear-encoded subunit Va of the human mitochondrial respiratory chain enzyme. A pseudogene COX5AP1 has been found in chromosome 14q22. [provided by RefSeq].

COX5A Antibody (N-term) Blocking Peptide - References

Chen, Z.X., et al. Cell Death Differ. 17(3):408-420(2010) Fornuskova, D., et al. Biochem. J. 428(3):363-374(2010) Uddin, M., et al. BMC Evol. Biol. 8, 8 (2008) :Williams, S.L., et al. J. Biol. Chem. 279(9):7462-7469(2004) Hofmann, S., et al. Cytogenet. Cell Genet. 83 (3-4), 226-227 (1998) :