

**COX5A Antibody (Center) Blocking Peptide**  
Synthetic peptide  
Catalog # BP9154c**Specification****COX5A Antibody (Center) Blocking Peptide -  
Product Information**Primary Accession [P20674](#)**COX5A Antibody (Center) 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 [AP9154c](/products/AP9154c) was selected from the Center region of human 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 (Center) Blocking Peptide -  
Protein Information**

Name COX5A

**COX5A Antibody (Center) Blocking Peptide  
- Background**

This is the heme A-containing chain of cytochrome c oxidase, the terminal oxidase in mitochondrial electron transport.

**COX5A Antibody (Center) Blocking Peptide  
- References**

Colinge J., et.al., Submitted (OCT-2008) to UniProtKB.

**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 (Center) Blocking Peptide  
- Protocols**

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

- [Blocking Peptides](#)