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COX5A Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13154a

Product Information

Application	WB, E
Primary Accession	P20674
Other Accession	NP_004246.2
Reactivity	Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32615
Calculated MW	16762
Antigen Region	27-55

Additional Information

Gene ID	9377
Other Names	Cytochrome c oxidase subunit 5A, mitochondrial, Cytochrome c oxidase polypeptide Va, COX5A
Target/Specificity	This COX5A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 27-55 amino acids from the N-terminal region of human COX5A.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	COX5A Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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

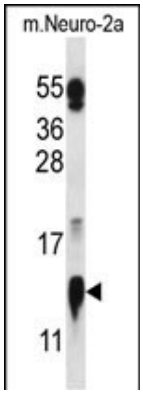
Background

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].

References

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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) :

Images



COX5A Antibody (N-term) (Cat. #AP13154a) western blot analysis in mouse Neuro-2a cell line lysates (35ug/lane).This demonstrates the COX5A antibody detected the COX5A protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.