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COX5B Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17385c

Product Information

Application	WB, E
Primary Accession	P10606
Other Accession	P12075, Q5S3G4, P19536, P00428, NP_001853.2
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Mouse, Pig, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31979
Calculated MW	13696
Antigen Region	21-49

Additional Information

Gene ID	1329
Other Names	Cytochrome c oxidase subunit 5B, mitochondrial, Cytochrome c oxidase polypeptide Vb, COX5B
Target/Specificity	This COX5B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 21-49 amino acids from the Central region of human COX5B.
Dilution	WB~~1:2000 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	COX5B Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	COX5B
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

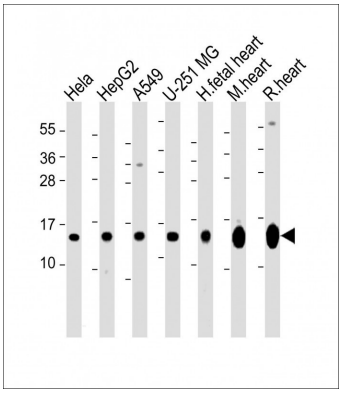
Background

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 and 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 Vb of the human mitochondrial respiratory chain enzyme.

References

Yoshida, T., et al. Int. J. Mol. Med. 25(4):649-656(2010)
Chen, Z.X., et al. Cell Death Differ. 17(3):408-420(2010)
Oguri, M., et al. Am. J. Hypertens. 23(1):70-77(2010)
Beauchemin, A.M., et al. Brain Res. Bull. 56 (3-4), 285-297 (2001) :
Wu, H., et al. J. Biol. Chem. 275(42):32491-32498(2000)

Images



All lanes : Anti-COX5B Antibody (Center) at 1:2000 dilution Lane 1: Hela whole cell lysate Lane 2: HepG2 whole cell lysate Lane 3: A549 whole cell lysate Lane 4: U-251 MG whole cell lysate Lane 5: human fetal heart lysate Lane 5: mouse heart lysate Lane 5: rat heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 14 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Air-liquid interface enhances oxidative phosphorylation in intestinal epithelial cell line IPEC-J2.

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