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COX6B1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12336b

Product Information

Application	WB, IHC-P, E
Primary Accession	P14854
Other Accession	Q4R374, NP_001854.1
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32248
Calculated MW	10192
Antigen Region	59-86

Additional Information

Gene ID	1340
Other Names	Cytochrome c oxidase subunit 6B1, Cytochrome c oxidase subunit VIb isoform 1, COX VIb-1, COX6B1, COX6B
Target/Specificity	This COX6B1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 59-86 amino acids from the C-terminal region of human COX6B1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	COX6B1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	COX6B1
Synonyms	COX6B

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; Intermembrane side

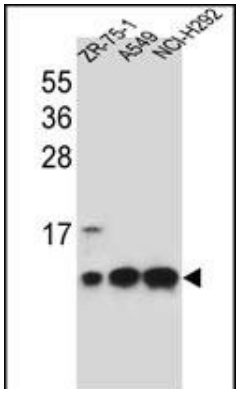
Background

Cytochrome c oxidase (COX), the terminal enzyme of the mitochondrial respiratory chain, catalyzes the electron transfer from reduced cytochrome c to oxygen. It is a heteromeric complex consisting of 3 catalytic subunits encoded by mitochondrial genes and multiple structural subunits encoded by nuclear genes. The mitochondrially-encoded subunits function in electron transfer, and the nuclear-encoded subunits may be involved in the regulation and assembly of the complex. This nuclear gene encodes subunit VIb. Mutations in this gene are associated with severe infantile encephalomyopathy. Three pseudogenes COX6BP-1, COX6BP-2 and COX6BP-3 have been found on chromosomes 7, 17 and 22q13.1-13.2, respectively.

References

Lazarou, M., et al. FEBS J. 276(22):6701-6713(2009)
Massa, V., et al. Am. J. Hum. Genet. 82(6):1281-1289(2008)
Sirchia, R., et al. Biol. Chem. 388(5):457-465(2007)
Schmidt, T.R., et al. Gene 286(1):13-19(2002)
Taanman, J.W., et al. Hum. Genet. 87(3):325-327(1991)

Images



COX6B1 Antibody (C-term) (Cat. #AP12336b) western blot analysis in ZR-75-1,A549,NCI-H292 cell line lysates (35ug/lane).This demonstrates the COX6B1 antibody detected the COX6B1 protein (arrow).

COX6B1 Antibody (C-term) (Cat. #AP12336b)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue

followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of COX6B1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- Brown adipocyte ATF4 activation improves thermoregulation and systemic metabolism