10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MT-CO2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21628b

Product Information

Application	WB, E
Primary Accession	P00403
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB48612
Calculated MW	25565

Additional Information

Gene ID	4513
Other Names	Cytochrome c oxidase subunit 2, Cytochrome c oxidase polypeptide II, MT-CO2, COII, COXII, MTCO2
Target/Specificity	This MT-CO2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 169-201 amino acids from the C-terminal region of human MT-CO2.
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	MT-CO2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MT-CO2
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; Multi-pass membrane protein

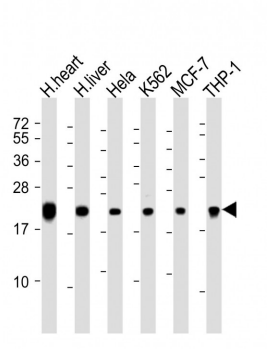
Background

Cytochrome c oxidase is the component of the respiratory chain that catalyzes the reduction of oxygen to water. Subunits 1- 3 form the functional core of the enzyme complex. Subunit 2 transfers the electrons from cytochrome c via its binuclear copper A center to the bimetallic center of the catalytic subunit 1.

References

Anderson S.,et al.Nature 290:457-465(1981).
Power M.D.,et al.Nucleic Acids Res. 17:6734-6734(1989).
Barrell B.G.,et al.Nature 282:189-194(1979).
Horai S.,et al.Proc. Natl. Acad. Sci. U.S.A. 92:532-536(1995).
Ruvolo M.,et al.Mol. Biol. Evol. 10:1115-1135(1993).

Images



All lanes : Anti-MTCO2 Antibody (Cterm) at 1:2000 dilution Lane 1: human heart lysate Lane 2: human liver lysate Lane 3: Hela whole cell lysate Lane 4: K562 whole cell lysate Lane 5: MCF-7 whole cell lysate Lane 6: THP-1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 26 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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