

Product datasheet for **AP23412PU-N**

MTCO1 (COX1) (N-term) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	Western blot: 0.1 -0.5 µg/ml.
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	A synthetic peptide corresponding to a sequence at the N-terminal of human CO1 (2-14 aa, FADRWLFSTNHKD)
Specificity:	This antibody detects Complex IV subunit I (N-term).
Formulation:	5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg Na ₃ State: Aff - Purified State: Lyophilized Ig fraction
Reconstitution Method:	0.2ml of distilled water will yield a concentration of 500µg/ml.
Concentration:	lot specific
Purification:	Immunogen affinity purified
Conjugation:	Unconjugated
Storage:	Store at 2 - 8 °C for up to one month or (in aliquots) at -20 °C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	mitochondrially encoded cytochrome c oxidase I
Database Link:	P00395



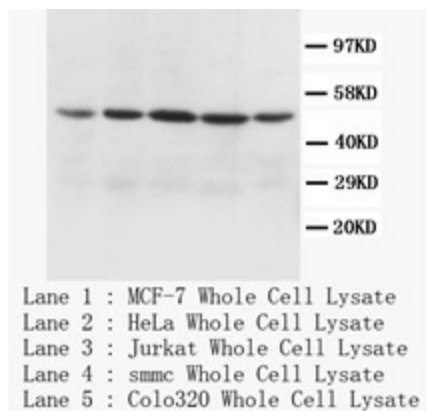
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Background:

Cytochrome c oxidase subunit I (CO1 or MTCO1) is 1 of 3 mitochondrial DNA (mtDNA) encoded subunits (MTCO1, MTCO2, MTCO3) of respiratory Complex IV. Complex IV is located within the mitochondrial inner membrane and is the third and final enzyme of the electron transport chain of mitochondrial oxidative phosphorylation. It is composed of 13 polypeptides. Subunits I, II, and III (MTCO1, MTCO2, MTCO3) are encoded by mtDNA while subunits IV, Va, Vb, VIa, VIb, VIc, VIIa, VIIb, VIIc, and VIII are nuclear encoded.^{1,2} The cytochrome c oxidase family of enzymes have 4 redox centers, 2 hemes and 2 copper centers. In mitochondrial Complex IV, the 2 hemes are a and a₃ and the 2 coppers are CuA and CuB. The 2 hemes and CuB are bound to subunit I.³ Acin-Perez et al. (2003) identified a cell line containing single and double missense mutations in the cytochrome c oxidase (COX) subunit I gene of mouse mitochondrial DNA. And they hypothesized that deleterious mutations can arise and become predominant; cultured cells can maintain several mtDNA haplotypes at stable frequencies; the respiratory chain has little spare COX capacity; and that the size of a cavity in the vicinity of val421 in MTCO1I of animal COX may affect the function of the enzyme.⁴

Synonyms:

Cytochrome c oxidase subunit 1, MT-CO1, COI, COXI, MTCO1, Mitochondria Complex IV (Cytochrome C Oxidase)

Product images:

Western blot with Cytochrome c Oxidase 1 Polyclonal Antibody