



Polyclonal Anti- Cytochrome c oxidase subunit I, CO1 (Sephacose Bead Conjugate)

Catalogue No. PA1317-S

Lot No. 05F01

Ig type: rabbit IgG

Size: 100µg/vial

Specificity

Human. No cross reactivity with other proteins.

Recommended application

(Immunoprecipitation(IP))

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminal of human CO1, identical to the related rat and mouse sequence.

Purification

Immunogen affinity purified.

Formulation

50% slurry in PBS pH 7.2 with 0.01mg NaN₃a₃ preservative.

Storage

Store at 4°C for frequent use.

Description:

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sephacose beads. It is useful for immunoprecipitation assays

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 MTCO1 of animal COX may affect the function of the enzyme.⁴

REFERENCE

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