Product datasheet

Anti-MT-CO1 Antibody

Catalog Number: *BA4150*

BOSTER
antibody and ELISA experts
BOSTER BIOLOGICAL TECHNOLOGY
Building C21, 3rd to 5th Floors, Optics Valley Biopharmaceutical Accelerator,
East Lake High-Tech Development Zone, Wuhan.
Web: www.boster.com ***Phone:*** 027-67845390/1/2 ***Email:*** boster@boster.com

Basic Information

Product Name	Anti-MT-CO1 Antibody
Gene Name	MT-CO1
Source	Rabbit
Clonality	Polyclonal
Isotype	IgG
Species Reactivity	mouse, rat
Tested Application	WB, IHC
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human MTCO1.
Concentration	500 ug/ml
Purification	Immunogen affinity purified.
Observed MW	37 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied.

Background Information

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. 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. 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.

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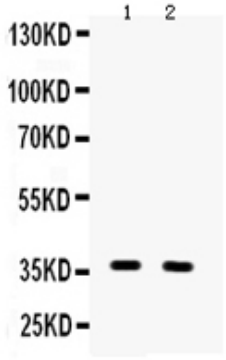
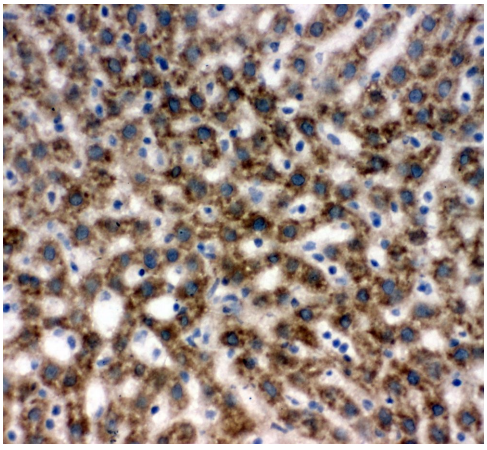
Selected Validation Data



Western blot analysis of MT-CO1 using anti-MT-CO1 antibody (BA4150). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: rat cardiac muscle tissue lysates,
Lane 2: mouse cardiac muscle tissue lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-MT-CO1 antigen affinity purified polyclonal antibody (BA4150) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for MT-CO1 at approximately 37 kDa. The expected band size for MT-CO1 is at 57 kDa.



IHC analysis of MT-CO1 using anti-MT-CO1 antibody (BA4150).
MT-CO1 was detected in frozen section of rat liver tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-MT-CO1 Antibody (BA4150) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.