

Anti-MTCO1/mt-Co1 Antibody Picoband®

Catalog Number: PA1317-2

About Mtco1

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.

Overview

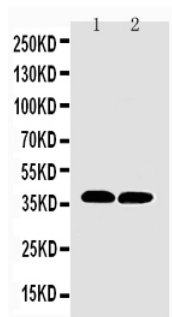
Product Name	Anti-MTCO1/mt-Co1 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-MTCO1/mt-Co1 Antibody catalog # PA1317-2. Tested in IHC, ICC, WB applications. This antibody reacts with Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P00397

Technical Details

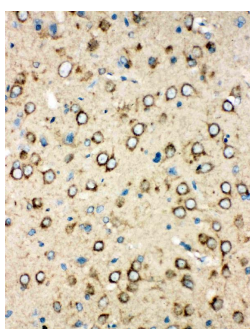
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of mouse MTCO1, different from the related rat sequence by one amino acid.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat Immunocytochemistry , 0.5-1ug/ml, Mouse, Rat Western blot, 0.1-0.5ug/ml, Mouse, Rat

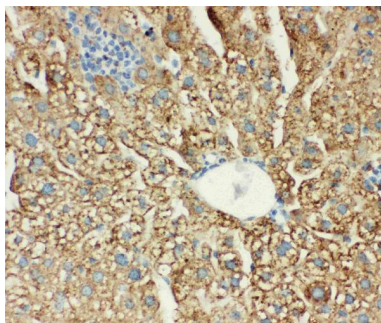
Anti-MTCO1/mt-Co1 Antibody Picoband® (PA1317-2) Images



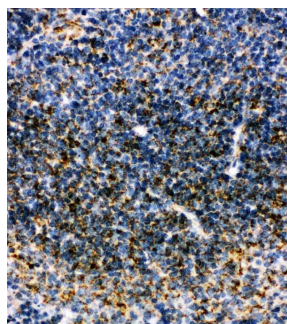
Anti-MTCO1 antibody, PA1317-2, Western blotting
Lane 1: Rat Heart Tissue Lysate
Lane 2: Mouse Heart Tissue Lysate



Anti-MTCO1 antibody, PA1317-2, IHC(P)
IHC(P): Rat Brain Tissue

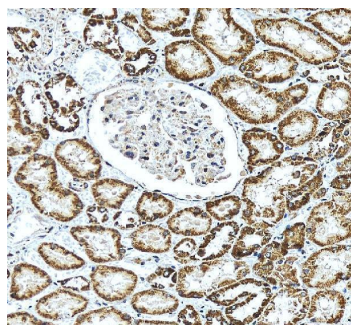
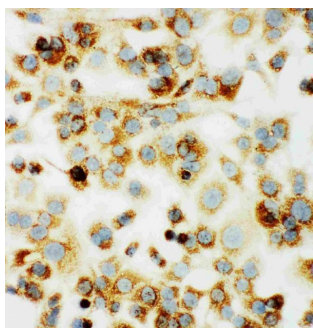


Anti-MTCO1 antibody, PA1317-2, IHC(P)
IHC(P): Mouse Liver Tissue



Anti-MTCO1 antibody, PA1317-2, IHC(P)
IHC(P): Mouse Spleen Tissue

Anti-MTCO1 antibody, PA1317-2, ICCICC: HEPA Cell



IHC analysis of MT-CO1 using anti-MT-CO1 antibody (PA1317-2). MT-CO1 was detected in a paraffin-embedded section of human kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MT-CO1 Antibody (PA1317-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

1 Publications Citing This Product

1. PubMed ID: 25834054, Deletion of Mitochondrial Anchoring Protects Dysmyelinating Shiverer: Implications for Progressive MS

Visit bosterbio.com/anti-mtco1-antibody-pa1317-2-boster.html to see all 1 publications.

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Anti-MTCO1/mt-Co1 Antibody

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