

Anti-CPT1B Picoband Antibody
Catalog # ABO12179**Specification****Anti-CPT1B Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	O92523
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Carnitine O-palmitoyltransferase 1, muscle isoform (CPT1B) detection. Tested with WB, IHC-P, IHC-F in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-CPT1B Picoband Antibody - Additional Information

Gene ID 1375

Other Names

Carnitine O-palmitoyltransferase 1, muscle isoform, CPT1-M, 2.3.1.21, Carnitine O-palmitoyltransferase I, muscle isoform, CPT I, CPTI-M, Carnitine palmitoyltransferase 1B, Carnitine palmitoyltransferase I-like protein, CPT1B, KIAA1670

Calculated MW

87801 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, By Heat
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml
Western blot, 0.1-0.5 µg/ml

Subcellular Localization

Mitochondrion outer membrane; Multi-pass membrane protein.

Tissue Specificity

Strong expression in heart and skeletal muscle. No expression in liver and kidney.

Protein Name

Carnitine O-palmitoyltransferase 1, muscle isoform

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human CPT1B (197-226aa

DDEEYRMELLAKEFQDKTAPRLQKYLVLK), different from the related mouse sequence by two amino acids, and from the related rat sequence by four amino acids.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the carnitine/choline acetyltransferase family.

Anti-CPT1B Picoband Antibody - Protein Information

Name CPT1B

Synonyms KIAA1670

Function

Catalyzes the transfer of the acyl group of long-chain fatty acid-CoA conjugates onto carnitine, an essential step for the mitochondrial uptake of long-chain fatty acids and their subsequent beta-oxidation in the mitochondrion.

Cellular Location

Mitochondrion outer membrane; Multi-pass membrane protein

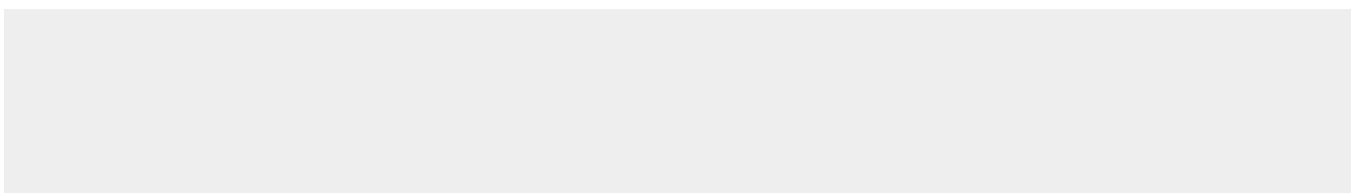
Tissue Location

Strong expression in heart and skeletal muscle. No expression in liver and kidney

Anti-CPT1B Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-CPT1B Picoband Antibody - Images

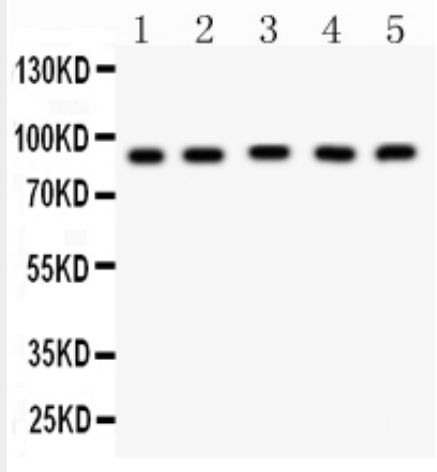


Figure 1. Western blot analysis of CPT1B using anti-CPT1B antibody (ABO12179). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Skeletal Muscle Tissue Lysate, Lane 2: Rat Cardiac Muscle Tissue Lysate, Lane 3: Mouse Skeletal Muscle Tissue Lysate, Lane 4: Mouse Cardiac Muscle Tissue Lysate, Lane 5: HELA Whole Cell Lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CPT1B antigen affinity purified polyclonal antibody (Catalog # ABO12179) at 0.5 μ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CPT1B at approximately 88KD. The expected band size for CPT1B is at 88KD.

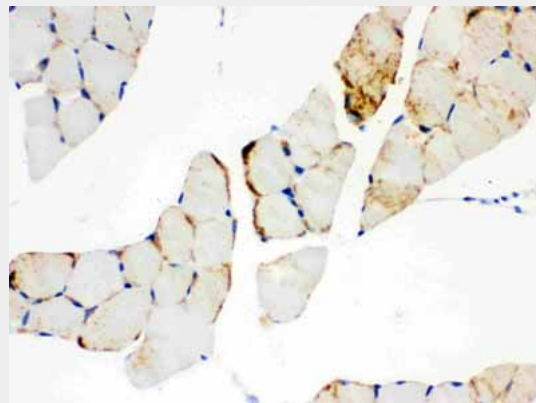


Figure 2. IHC analysis of CPT1B using anti-CPT1B antibody (ABO12179). CPT1B was detected in paraffin-embedded section of Mouse Skeletal Muscle Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-CPT1B Antibody (ABO12179) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

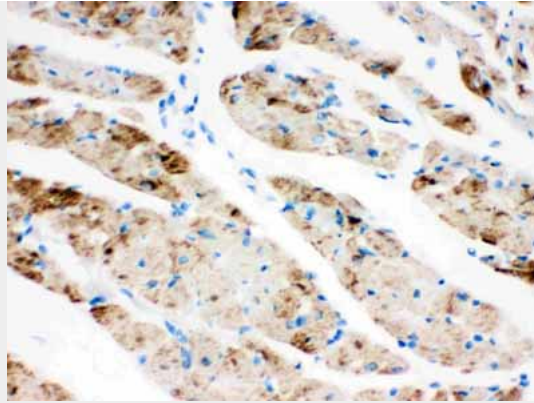


Figure 3. IHC analysis of CPT1B using anti-CPT1B antibody (ABO12179).CPT1B was detected in paraffin-embedded section of Rat Cardiac Muscle Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-CPT1B Antibody (ABO12179) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

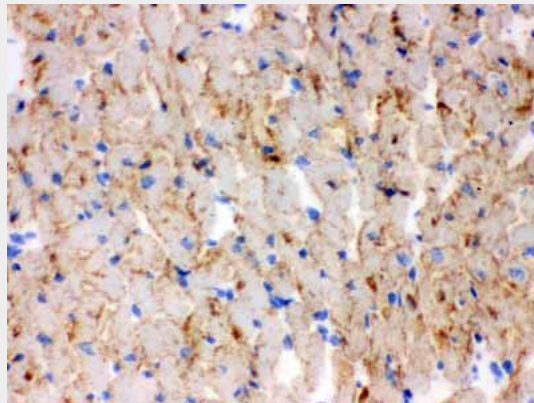


Figure 4. IHC analysis of CPT1B using anti-CPT1B antibody (ABO12179).CPT1B was detected in frozen section of mouse cardiac muscle tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-CPT1B Antibody (ABO12179) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

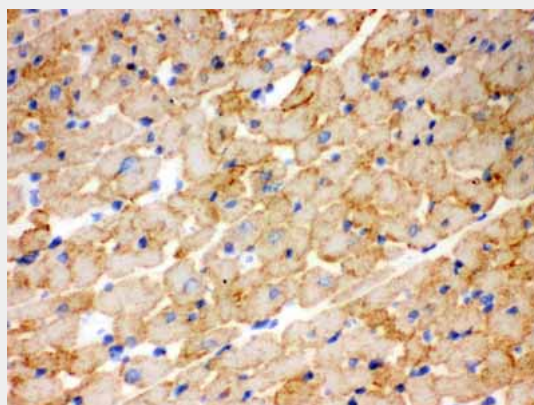


Figure 5. IHC analysis of CPT1B using anti-CPT1B antibody (ABO12179).CPT1B was detected in

frozen section of rat cardiac muscle tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-CPT1B Antibody (ABO12179) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Anti-CPT1B Picoband Antibody - Background

CPT1B is located on 22q13.33. The protein encoded by this gene, a member of the carnitine/choline acetyltransferase family, is the rate-controlling enzyme of the long-chain fatty acid beta-oxidation pathway in muscle mitochondria. This enzyme is required for the net transport of long-chain fatty acyl-CoAs from the cytoplasm into the mitochondria. Multiple transcript variants encoding different isoforms have been found for this gene, and read-through transcripts are expressed from the upstream locus that include exons from this gene.