

Anti-CPT1B Picoband Antibody

Catalog # ABO12179

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	Q92523
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.

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
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.
Source	Eukaryota
Protein Name	Carnitine O-palmitoyltransferase 1, muscle isoform
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human CPT1B (197-226aa DDEEYYRMELLAKEFQDKTAPRLQKYLVLK), 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.

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

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.

Images

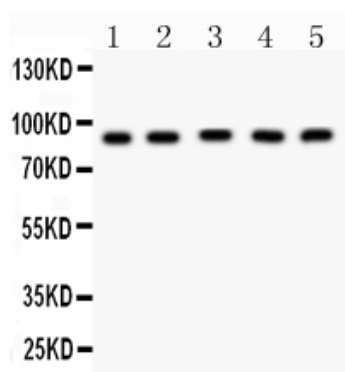


Figure 1. Western blot analysis of CPT1B using anti-CPT1B antibody (ABO12179). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Skeletal Muscle 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 µg/mL overnight at 4 °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.

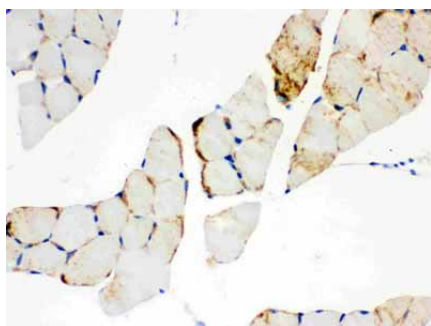


Figure 2. IHC analysis of CPT1B using anti-CPT1B antibody (ABO12179).CPT1B was detected in paraffin-embedded section of Mouse Skeletal Muscle Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% 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.

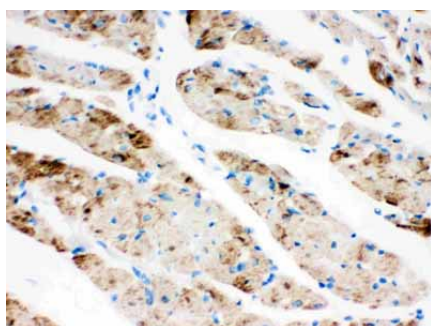


Figure 3. IHC analysis of CPT1B using anti-CPT1B antibody (ABO12179).CPT1B was detected in paraffin-embedded section of Rat Cardiac Muscle Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat 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.

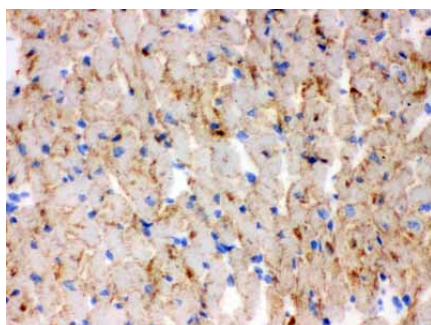


Figure 4. IHC analysis of CPT1B using anti-CPT1B antibody (ABO12179).CPT1B was detected in frozen section of mouse cardiac muscle tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. 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.

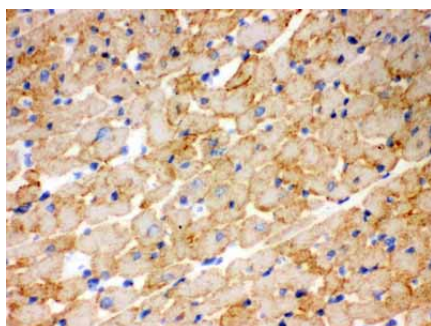


Figure 5. IHC analysis of CPT1B using anti-CPT1B antibody (ABO12179).CPT1B was detected in frozen section of rat cardiac muscle tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The 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.