

Anti-OTC Picoband Antibody
Catalog # ABO10104

Specification

Anti-OTC Picoband Antibody - Product Information

Application	WB
Primary Accession	P00480
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Ornithine carbamoyltransferase, mitochondrial(OTC) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution

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

Anti-OTC Picoband Antibody - Additional Information

Gene ID 5009

Other Names

Ornithine carbamoyltransferase, mitochondrial, 2.1.3.3, Ornithine transcarbamylase, OTCase, OTC

Calculated MW

39935 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human

Subcellular Localization

Mitochondrion matrix.

Tissue Specificity

Mainly expressed in liver and intestinal mucosa.

Protein Name

Ornithine carbamoyltransferase, mitochondrial

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 OTC (33-70aa NKVQLKGRDLLTLKNFTGEEIKYMLWLSADLKFRIKQK), different from the related mouse and rat sequences by three 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.

Anti-OTC Picoband Antibody - Protein Information

Name OTC ([HGNC:8512](#))

Function

Catalyzes the second step of the urea cycle, the condensation of carbamoyl phosphate with L-ornithine to form L-citrulline (PubMed: [2556444](http://www.uniprot.org/citations/2556444), PubMed: [6372096](http://www.uniprot.org/citations/6372096), PubMed: [8112735](http://www.uniprot.org/citations/8112735)). The urea cycle ensures the detoxification of ammonia by converting it to urea for excretion (PubMed: [2556444](http://www.uniprot.org/citations/2556444)).

Cellular Location

Mitochondrion matrix

Tissue Location

Mainly expressed in liver and intestinal mucosa.

Anti-OTC 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-OTC Picoband Antibody - Images

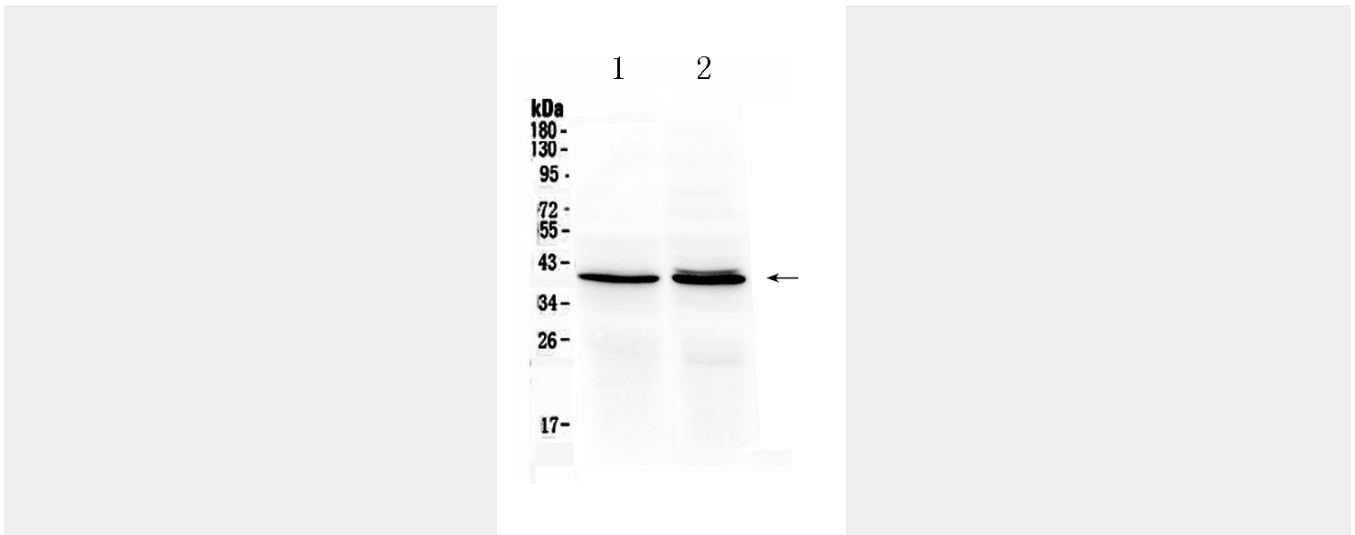


Figure 1. Western blot analysis of OTC using anti- OTC antibody (ABO10104). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: mouse liver tissue lysates. 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- OTC antigen affinity purified polyclonal antibody (Catalog # ABO10104) 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 OTC at approximately 40KD. The expected band size for OTC is at 40KD.

Anti-OTC Picoband Antibody - Background

Ornithine transcarbamylase (OTC) (also called ornithine carbamoyltransferase) is an enzyme that catalyzes the reaction between carbamoyl phosphate (CP) and ornithine (Orn) to form citrulline (Cit) and phosphate (Pi). This nuclear gene encodes a mitochondrial matrix enzyme. Missense, nonsense, and frameshift mutations in this enzyme lead to ornithine transcarbamylase deficiency, which causes hyperammonemia. Since the gene for this enzyme maps close to that for Duchenne muscular dystrophy, it may also play a role in that disease.