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Anti-OTC Picoband Antibody

Catalog # ABO10104

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.

Additional Information

Gene ID	5009
Other Names	Ornithine carbamoyltransferase, mitochondrial, 2.1.3.3, Ornithine transcarbamylase, OTCase, OTC
Calculated MW	39935
Application Details	Western blot, 0.1-0.5 □g/ml, Mouse, Rat, Human
Subcellular Localization	Mitochondrion matrix.
Tissue Specificity	Mainly expressed in liver and intestinal mucosa.
Source	Eukaryota
Protein Name	Ornithine carbamoyltransferase, mitochondrial
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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 r˚Constitution, 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.

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, PubMed:6372096, PubMed:8112735). The urea cycle ensures the detoxification of ammonia by converting it to urea for excretion (PubMed:2556444).
Cellular Location	Mitochondrion matrix
Tissue Location	Mainly expressed in liver and intestinal mucosa.

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.

Images

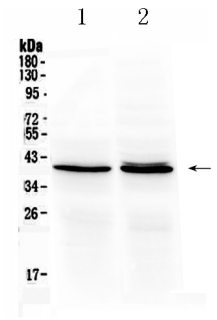

Figure 1. Western blot analysis of OTC using anti- OTC antibody (ABO10104). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat liver tissue 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 □¼g/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 OTC at approximately 40KD. The expected band size for OTC is at 40KD.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.