

Anti-CYP1B1 Antibody Picoband™

Catalog Number: A00515

About CYP1B1

Cytochrome P450 1B1 is an enzyme that in humans is encoded by the CYP1B1 gene. CYP1B1 belongs to the the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. The enzyme encoded by this gene localizes to the endoplasmic reticulum and metabolizes procarcinogens such as polycyclic aromatic hydrocarbons and 17beta-estradiol. Mutations in this gene have been associated with primary congenital glaucoma; therefore it is thought that the enzyme also metabolizes a signaling molecule involved in eye development, possibly a steroid.

Overview

Product Name	Anti-CYP1B1 Antibody Picoband™
Reactive Species	Human, Mouse
Description	Boster Bio Anti-CYP1B1 Antibody Picoband™ catalog # A00515. Tested in WB, FCM, ELISA applications. This antibody reacts with Human, Mouse.
Application	ELISA, Flow Cytometry, WB
Clonality	Polyclonal 1B9
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	Q16678

Technical Details

Immunogen	E.coli-derived human CYP1B1 recombinant protein (Position: R255-E540). Human CYP1B1 shares 82.9% amino acid (aa) sequence identity with mouse and rat CYP1B1.
Predicted Reactive Species	Bovine, Canine, Chicken, Primate, Sheep, Xenopus, Zebrafish
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross reactivity with other proteins.
Isotype	IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.25-0.5 µg/ml, Human, Mouse Flow Cytometry (Fixed), 1-3 µg/1x10⁶ cells, Human ELISA, 0.1-0.5 µg/ml, Human

Anti-CYP1B1 Antibody Picoband™ (A00515) Images

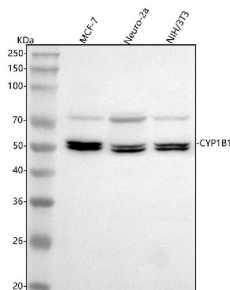


Figure 1. Western blot analysis of CYP1B1 using anti-CYP1B1 antibody (A00515).

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 30 ug of sample under reducing conditions.

Lane 1: human MCF-7 whole cell lysates,
Lane 2: mouse Neuro-2a whole cell lysates,
Lane 3: mouse NIH/3T3 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-CYP1B1 antigen affinity purified polyclonal antibody (Catalog # A00515) at 0.5 ug/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 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CYP1B1 at approximately 52 kDa. The expected band size for CYP1B1 is at 61 kDa.

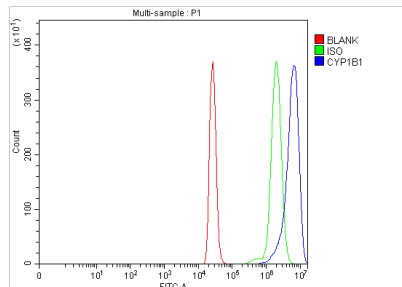


Figure 2. Flow Cytometry analysis of THP-1 cells using anti-CYP1B1 antibody (A00515).

Overlay histogram showing THP-1 cells stained with A00515 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CYP1B1 Antibody (A00515, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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