BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
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Anti-CYP7A1 Antibody Picoband®

Catalog Number: RP1079

About CYP7A1

CYP7A1 (Cytochrome P450 Subfamily VIIA Polypeptide 1), also called CYP7 or CHOLESTEROL 7-ALPHA -HYDROXYLASE, is an enzyme that in humans is encoded by the CYP7A1 gene. Using both mouse-human somatic cell hybrids and in situ chromosomal hybridization, Cohen et al. (1992) mapped the CYP7 gene to 8q11-q12. By transfection of reporter constructs, mutation analysis, and DNase footprinting, Molowa et al. (1992) identified areas of the CYP7A1 promoter region that showed hepatocyte-specific activation. They found HNF3 to be an activator of CYP7A1 activity. Agellon et al. (2002) found that wildtype mice and mice transgenic for human CYP7A1 respond differently to cholesterol feeding. Cholesterol feeding stimulated Cyp7a1 mRNA abundance and enzymatic activity in wildtype mice, but repressed human CYP7A1 mRNA and activity in transgenic mice.

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Overview

Product Name	Anti-CYP7A1 Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-CYP7A1 Antibody catalog # RP1079. Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P22680

Technical Details

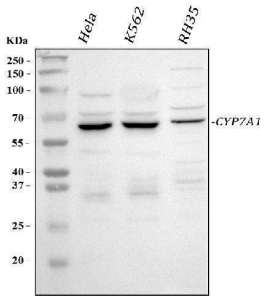
Immunogen	E.coli-derived human CYP7A1 recombinant protein (Position: M301-L504). Human CYP7A1 shares

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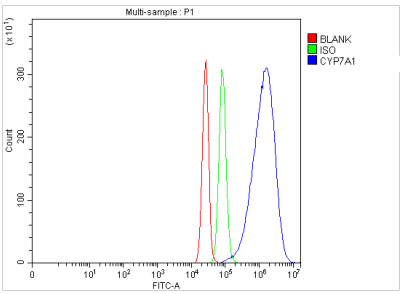
	85.2 % and 83.3% amino acid (aa) sequence identity with mouse and rat CYP7A1, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Rat Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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Anti-CYP7A1 Antibody Picoband® (RP1079) Images



Western blot analysis of CYP7A1 using anti-CYP7A1 antibody (RP1079). 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 Hela whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: rat RH35 whole clel 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-CYP7A1 antigen affinity purified polyclonal antibody (Catalog # RP1079) 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 CYP7A1 at approximately 58 kDa. The expected band size for CYP7A1 is at 58 kDa.



Flow Cytometry analysis of SiHa cells using anti-CYP7A1 antibody (RP1079). Overlay histogram showing SiHa cells stained with RP1079 (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-CYP7A1 Antibody (RP1079, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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