BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Cytochrome P450 2E1/CYP2E1 Antibody Picoband®

Catalog Number: A00672

About CYP2E1

Cytochrome P450 2E1 (abbreviated CYP2E1), a member of the cytochrome P450 mixed-function oxidase system, is involved in the metabolism of xenobiotics in the body. In humans, the CYP2E1 enzyme is encoded by the CYP2E1 gene. It is mapped to 10q26.3. While it is involved in the oxidative metabolism of a small range of substrates (mostly small polar molecules), there are many important drug interactions mediated by CYP2E1. Most drugs undergo deactivation by CYP2E1, either directly or by facilitated excretion from the body. Also, many substances are bioactivated by CYP2E1 to form their active compounds. In addition, CYP2E1 is an important enzyme for the conversion of ethanol to acetaldehyde and to acetate in humans. In the conversion sequence of acetyl-CoA to glucose, CYP2E1 transforms acetone via acetol into propylene glycol and methylglyoxal, the precursors of pyruvate, acetate and lactate.

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Overview

Product Name	Anti-Cytochrome P450 2E1/CYP2E1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Cytochrome P450 2E1/CYP2E1 Antibody Picoband® catalog # A00672. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, 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	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	P05181

Technical Details

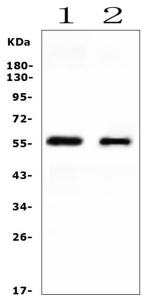
Immunogen	E.coli-derived human Cytochrome P450 2E1/CYP2E1 recombinant protein (Position: H355-S493).

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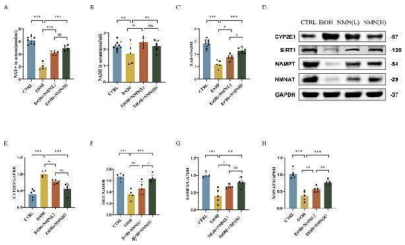
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, - 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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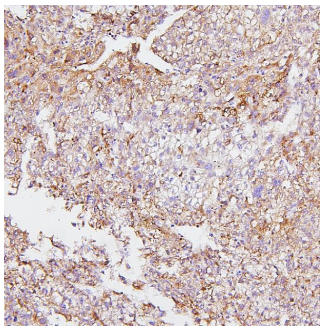
Anti-Cytochrome P450 2E1/CYP2E1 Antibody Picoband® (A00672) Images



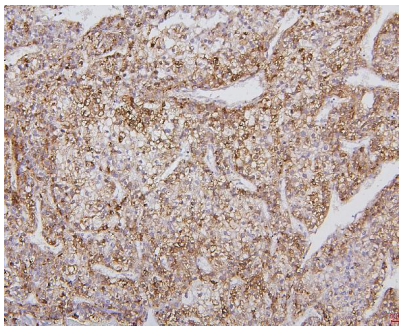
Western blot analysis of CYP2E1 using anti-CYP2E1 antibody (A00672). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, 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-CYP2E1 antigen affinity purified polyclonal antibody (Catalog # A00672) 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 1:10000 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 CYP2E1 at approximately 56KD. The expected band size for CYP2E1 is at 56KD.



(A) Serum NAD + levels. (B) Serum NADH levels. C) The NAD + /NADH ratio. (D - H) Western blots of CYP2E1, SIRT1, NAMPT, and NMNAT, with GAPDH as an internal control (n = 5). (E - H) Image J was used to quantify the proteins CYP2E1, SIRT1, NAMPT, and NMNAT Index in PubMed under a CC BY license. PMID: 40819082



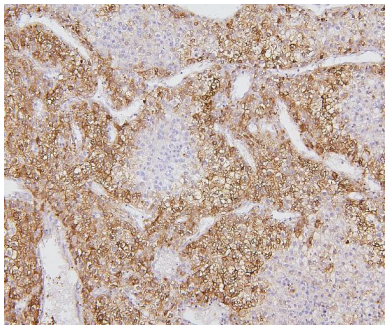
IHC analysis of CYP2E1 using anti-CYP2E1 antibody (A00672). CYP2E1 was detected in paraffin-embedded section of human liver cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CYP2E1 Antibody (A00672) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



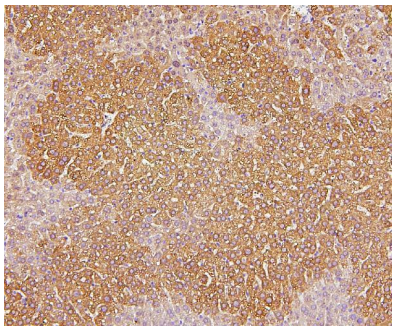
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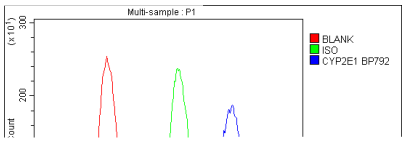
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IHC analysis of CYP2E1 using anti-CYP2E1 antibody (A00672). CYP2E1 was detected in paraffin-embedded section of human liver cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CYP2E1 Antibody (A00672) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of CYP2E1 using anti-CYP2E1 antibody (A00672). CYP2E1 was detected in paraffin-embedded section of mouse liver tissues. 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 1ug/ml rabbit anti-CYP2E1 Antibody (A00672) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



Flow Cytometry analysis of SiHa cells using anti-CYP2E1 antibody (A00672). Overlay histogram showing SiHa cells stained with A00672 (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-CYP2E1 Antibody (A00672,1ug/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.

9 Publications Citing This Product

1. PubMed ID: 10.3748/wjg.15.1829, Protective effect of tea polyphenols against paracetamol-induced hepatotoxicity in mice is significanly correlated with cytochrome P450 suppression

2. PubMed ID: 10.1016/j.biopha.2017.04.056, Total sesquiterpene glycosides from Loquat (Eriobotrya japonica) leaf alleviate high-fat diet induced non-alcoholic fatty liver disease through cytochrome P450 2E1 inhibition

3. PubMed ID: 10.1016/j.ejphar.2017.09.034, Fructose 1, 6-diphosphate prevents alcohol-induced liver injury through inhibiting oxidative stress and promoting alcohol metabolism in mice

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