

## Anti-ALDH1B1 Antibody Picoband™

Catalog Number: PB10037

### About ALDH1B1

Aldehyde dehydrogenase X, mitochondrial is an enzyme that in humans is encoded by the ALDH1B1 gene. This protein belongs to the aldehyde dehydrogenases family of proteins. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. This gene does not contain introns in the coding sequence. The variation of this locus may affect the development of alcohol-related problems.

### Overview

Product Name	Anti-ALDH1B1 Antibody Picoband™
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-ALDH1B1 Antibody Picoband™ catalog # PB10037. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
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	P30837

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ALDH1B1, different from the related mouse sequence by one amino acid, and from the related rat sequence by two amino acids.
Predicted Reactive Species	Hamster
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) and ICC.
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	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human, Monkey, Mouse, Rat</p> <p>Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat, By Heat</p> <p>Immunocytochemistry/Immunofluorescence, 5ug/ml, Human</p> <p>Flow Cytometry, 1-3ug/1x10<sup>6</sup> cells, Human</p>

## Anti-ALDH1B1 Antibody Picoband™ (PB10037) Images

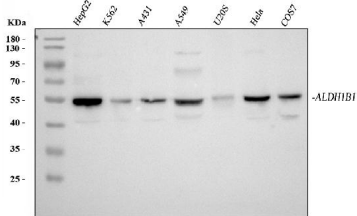


Figure 1. Western blot analysis of ALDH1B1 using anti-ALDH1B1 antibody (PB10037).

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 HepG2 whole cell lysates,  
Lane 2: human K562 whole cell lysates,  
Lane 3: human A431 whole cell lysates,  
Lane 4: human A549 whole cell lysates,  
Lane 5: human U20S whole cell lysates,  
Lane 6: human Hela whole cell lysates,  
Lane 7: monkey COS-7 whole cell lysates.

red 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-ALDH1B1 antigen affinity purified polyclonal antibody (Catalog # PB10037) 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 ALDH1B1 at approximately 55 kDa. The expected band size for ALDH1B1 is at 57 kDa.

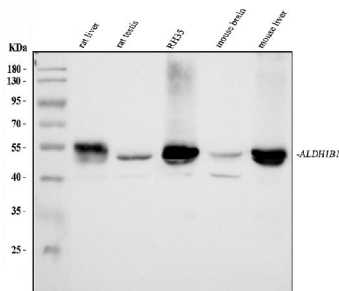


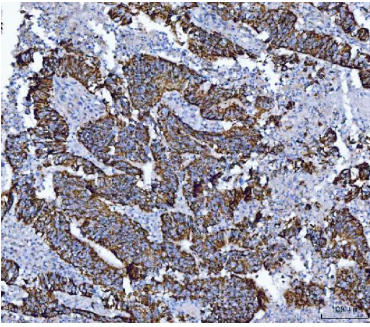
Figure 2. Western blot analysis of ALDH1B1 using anti-ALDH1B1 antibody (PB10037).

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: rat liver tissue lysates,  
Lane 2: rat testis tissue lysates,  
Lane 3: rat RH35 whole cell lysates,  
Lane 4: mouse brain tissue lysates,  
Lane 5: mouse liver tissue lysates.

red 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-ALDH1B1 antigen affinity purified polyclonal antibody (Catalog # PB10037) 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 ALDH1B1 at approximately 55 kDa. The expected band size for ALDH1B1 is at 57 kDa.

Figure 3. IHC analysis of ALDH1B1 using anti-ALDH1B1



antibody (PB10037). ALDH1B1 was detected in a paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH1B1 Antibody (PB10037) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

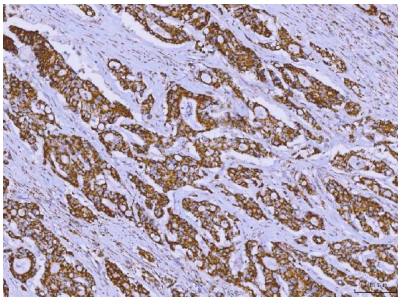


Figure 4. IHC analysis of ALDH1B1 using anti-ALDH1B1 antibody (PB10037). ALDH1B1 was detected in a paraffin-embedded section of human colonic adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH1B1 Antibody (PB10037) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

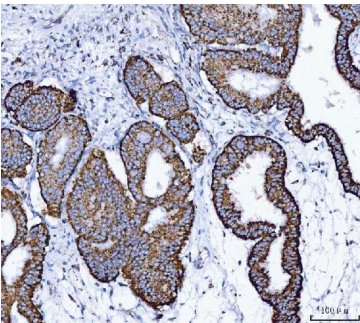


Figure 5. IHC analysis of ALDH1B1 using anti-ALDH1B1 antibody (PB10037). ALDH1B1 was detected in a paraffin-embedded section of human endometrial adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH1B1 Antibody (PB10037) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

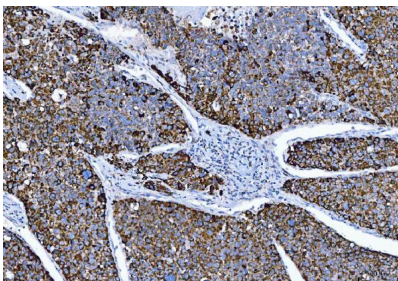
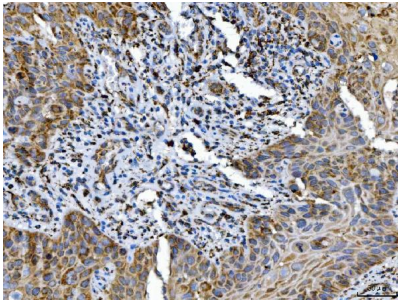


Figure 6. IHC analysis of ALDH1B1 using anti-ALDH1B1 antibody (PB10037). ALDH1B1 was detected in a paraffin-embedded section of human hepatocellular carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH1B1 Antibody (PB10037) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Figure 7. IHC analysis of ALDH1B1 using anti-ALDH1B1





antibody (PB10037). ALDH1B1 was detected in a paraffin-embedded section of human laryngeal squamous cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH1B1 Antibody (PB10037) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

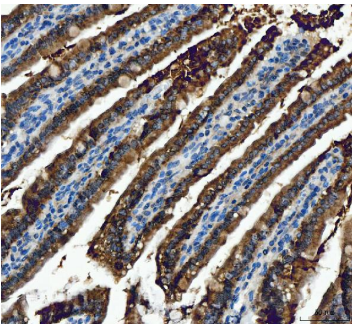


Figure 8. IHC analysis of ALDH1B1 using anti-ALDH1B1 antibody (PB10037). ALDH1B1 was detected in a paraffin-embedded section of mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH1B1 Antibody (PB10037) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

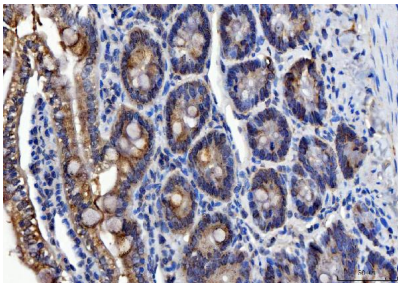


Figure 9. IHC analysis of ALDH1B1 using anti-ALDH1B1 antibody (PB10037). ALDH1B1 was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH1B1 Antibody (PB10037) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

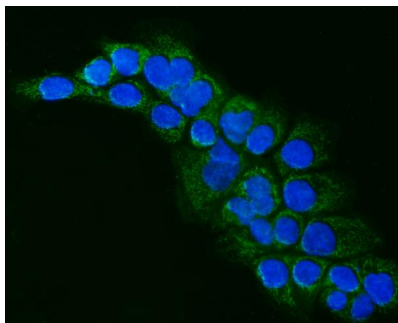
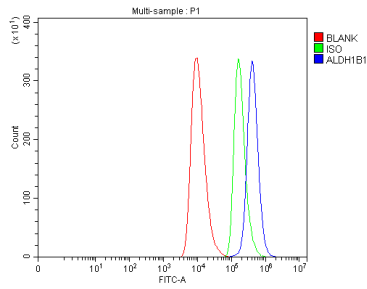


Figure 10. IF analysis of ALDH1B1 using anti-ALDH1B1 antibody (PB10037). ALDH1B1 was detected in an immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-ALDH1B1 Antibody (PB10037) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Figure 11. Flow Cytometry analysis of HEL cells using anti-



ALDH1B1 antibody (PB10037).  
Overlay histogram showing HEL cells stained with PB10037 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ALDH1B1 Antibody (PB10037, 1 ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

## 1 Publications Citing This Product

1. PubMed ID: 29416787, Wang X, Yu Y, He Y, Cai Q, Gao S, Yao W, Liu Z, Tian Z, Han Q, Wang W, Sun R, Luo Y, Li C. Oncotarget. 2017 Dec 20;9(2):2502-2514. doi: 10.18632/oncotarget.23506. eCollection 2018 Jan 5. Upregulation of ALDH1B1 promotes tumor progression in osteosarcoma.

Visit [bosterbio.com/anti-aldh1b1-picoband-trade-antibody-pb10037-boster.html](http://bosterbio.com/anti-aldh1b1-picoband-trade-antibody-pb10037-boster.html) to see all 1 publications.

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