BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

# Anti-Alcohol Dehydrogenase/ADH1A Antibody Picoband®

**Catalog Number:** PB10029

## About ADH1A

Alcohol dehydrogenase 1A is an enzyme that in humans is encoded by the ADH1A gene. This gene encodes a member of the alcohol dehydrogenase family. The encoded protein is the alpha subunit of class I alcohol dehydrogenase, which consists of several homo- and heterodimers of alpha, beta and gamma subunits. Alcohol dehydrogenases catalyze the oxidation of alcohols to aldehydes. This gene is active in the liver in early fetal life but only weakly active in adult liver. And this gene is found in a cluster with six additional alcohol dehydrogenase genes, including those encoding the beta and gamma subunits, on the long arm of chromosome 4. Mutations in this gene may contribute to variation in certain personality traits and substance dependence.

## Submit a product review to Biocompare.com







Submit a review of this product to Biocompare.com to receive a $20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.

## Overview

| | |
|---|---|
| Product Name | Anti-Alcohol Dehydrogenase/ADH1A Antibody Picoband® |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-Alcohol Dehydrogenase/ADH1A Antibody Picoband® catalog # PB10029. Tested in Flow Cytometry, IF, IHC, ICC, 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 | Flow Cytometry, IF, IHC, ICC, 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 | P07327 |

## Technical Details

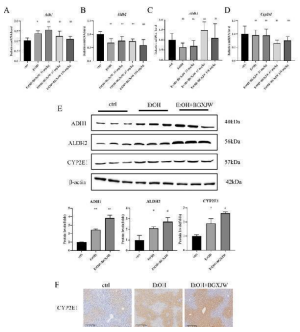
| | |
|---|---|
| Immunogen | E. coli-derived human ADH1A recombinant protein (Position: K213-F375). Human ADH1A shares 87.1% and 82.8% amino acid (aa) sequence identity with mouse and rat ADH1A, respectively. |

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

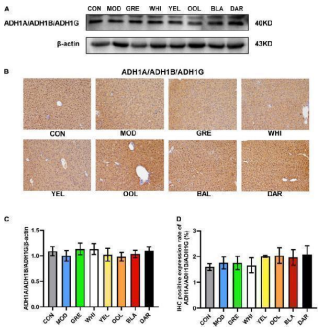
| | |
|---|---|
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC. |
| Cross Reactivity | No cross-reactivity with other proteins |
| 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 | Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat<br>Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat<br>Immunocytochemistry/Immunofluorescence, 5ug/ml, Human<br>Flow Cytometry (Fixed), 1-3ug/1x$10^6$ cells, Human<br>Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells. |

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

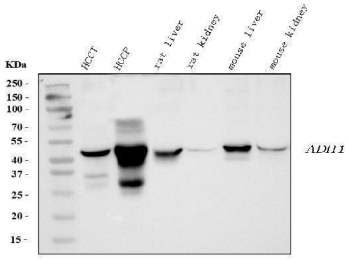
# Anti-Alcohol Dehydrogenase/ADH1A Antibody Picoband® (PB10029) Images



The metabolic enzymes ADH1, ALDH2 and CYP2E1 are significantly up-regulated by alcohol, and further up-regulated by BGXJW administration. A – E The mRNA levels of ADH1, ALDH2, ALDH1, CYP2E1 in liver tissues were subjected to RT-qPCR analysis. E Levels of ADH1, ALDH2, CYP2E1 in liver lysates after indicated treatment were determined by western blot, F Liver tissue sections were subjected to immunohistochemistry analysis of CYP2E1. All data are expressed as the mean ± SEM (n = 3). nsP > 0.05, *P < 0.05 vs ctrl group; nsP > 0.05 vs EtOH group. Crtl contrl, EtOH ethanol model, BGXJW Bao-Gan-Xing-Jiu-Wan Index in PubMed under a CC BY license. PMID: 37127639



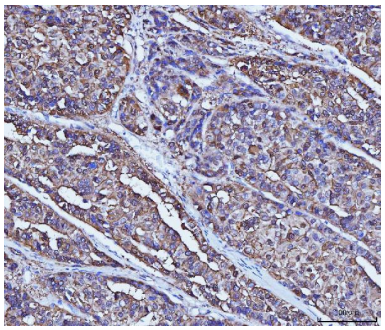
Effects of WEATs on ADH1A/ADH1B/ADH1G expression in the liver of mice. Representative immunoblots (A) and IHC images (B) of ADH1A/ADH1B/ADH1G expression in the liver. Quantification of ADH1A/ADH1B/ADH1G expression by western blotting (C) and IHC (D) . Each value represents the mean ± SEM ( n = 10).Index in PubMed under a CC BY license. PMID: 35677547



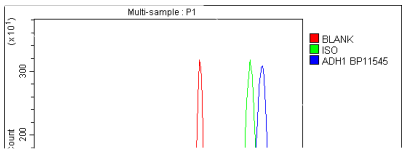
Western blot analysis of ADH1A using anti-ADH1A antibody (PB10029). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HCCT tissue lysates, Lane 2: human HCCP tissue lysates, Lane 3: rat liver tissue lysates. Lane 4: rat kidney tissue lysates. Lane 5: mouse liver tissue lysates. Lane 6: mouse kidney tissue 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-ADH1A antigen affinity purified polyclonal antibody (Catalog # PB10029) 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 ADH1A at approximately 40 kDa. The expected band size for ADH1A is at 40 kDa.

IHC analysis of ADH1A using anti-ADH1A antibody (PB10029). ADH1A was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10%

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



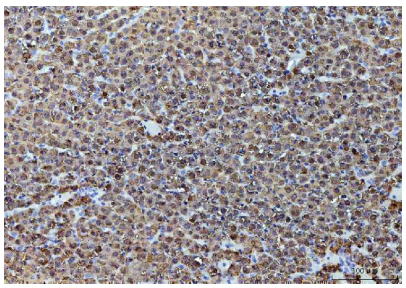
goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ADH1A Antibody (PB10029) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.




Flow Cytometry analysis of U20S cells using anti-ADH1A antibody (PB10029). Overlay histogram showing U20S cells stained with PB10029 (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-ADH1A Antibody (PB10029, 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 without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



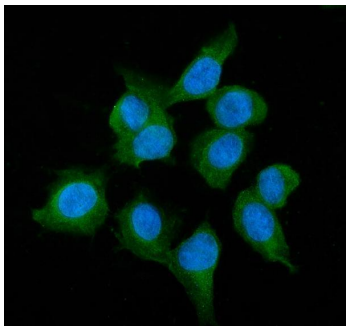
IHC analysis of ADH1A using anti-ADH1A antibody (PB10029). ADH1A was detected in a paraffin-embedded section of mouse liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ADH1A Antibody (PB10029) 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.



IHC analysis of ADH1A using anti-ADH1A antibody (PB10029). ADH1A was detected in a paraffin-embedded section of rat liver 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-ADH1A Antibody (PB10029) 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.

IF analysis of ADH1A using anti-ADH1A antibody (PB10029). ADH1A was detected in immunocytochemical section of U20S cells. Enzyme antigen retrieval was performed using

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



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-ADH1A Antibody (PB10029) 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.

## Anti-Alcohol Dehydrogenase/ADH1A Antibody

For Research Use Only. Not for use in diagnostic procedures.