

Anti-ALDH3A1 Antibody Picoband™

Catalog Number: A01121-4

About ALDH3A1

ALDH3A1(Aldehyde Dehydrogenase, Family 3, Subfamily A, Member 1), also known as ALDH3, is an enzyme that in humans is encoded by the ALDH3A1 gene. By in situ hybridization, Hiraoka et al.(1995) mapped the ALDH3 gene to 17p11.2. ALDHs play a major role in the detoxification of alcohol-derived acetaldehyde. They are involved in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation. This protein preferentially oxidizes aromatic aldehyde substrates. It may play a role in the oxidation of toxic aldehydes.

Overview

Product Name	Anti-ALDH3A1 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-ALDH3A1 Antibody Picoband™ catalog # A01121-4. Tested in ELISA, IF, IHC, ICC, WB applications. This antibody reacts with Human.
Application	ELISA, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
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	P30838

Technical Details

Immunogen	E.coli-derived human ALDH3A1 recombinant protein (Position: Y413-H453).
Predicted Reactive Species	Human
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

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 ug/ml, Human

Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human

Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human

Direct ELISA, 0.1-0.5 ug/ml, Human

Anti-ALDH3A1 Antibody Picoband™ (A01121-4) Images

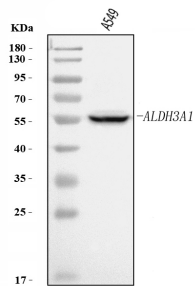


Figure 1. Western blot analysis of ALDH3A1 using anti-ALDH3A1 antibody (A01121-4).

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 A549 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-ALDH3A1 antigen affinity purified polyclonal antibody (Catalog # A01121-4) 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 ALDH3A1 at approximately 55 kDa. The expected band size for ALDH3A1 is at 55 kDa.

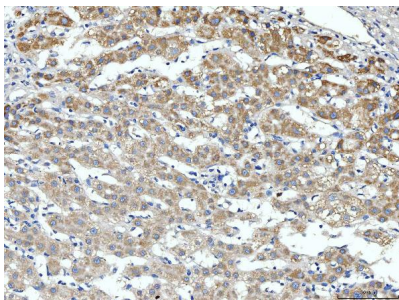


Figure 2. IHC analysis of ALDH3A1 using anti-ALDH3A1 antibody (A01121-4).

ALDH3A1 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% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH3A1 Antibody (A01121-4) 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.

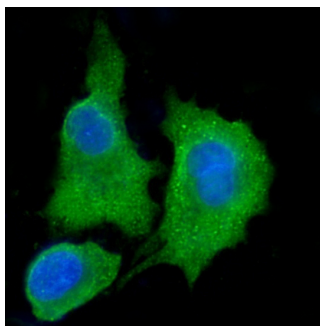


Figure 3. IF analysis of ALDH3A1 using anti-ALDH3A1 antibody (A01121-4).

ALDH3A1 was detected in an immunocytochemical section of A549 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-ALDH3A1 Antibody (A01121-4) 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.

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