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antibody and ELISA experts

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Anti-ALDH3A1 Antibody Picoband™

Catalog Number: A01121-5

About ALDH3A1

Aldehyde dehydrogenase, dimeric NADP-preferring is an enzyme that in humans is encoded by the ALDH3A1 gene. Aldehyde dehydrogenases oxidize various aldehydes to the corresponding acids. They are involved in the detoxification of alcohol-derived acetaldehyde and in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation. The enzyme encoded by this gene forms a cytoplasmic homodimer that preferentially oxidizes aromatic and medium-chain (6 carbons or more) saturated and unsaturated aldehyde substrates. It is thought to promote resistance to UV and 4-hydroxy-2-nonenal-induced oxidative damage in the cornea. The gene is located within the Smith-Magenis syndrome region on chromosome 17. Multiple alternatively spliced variants, encoding the same protein, have been identified.

Overview

Product Name	Anti-ALDH3A1 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-ALDH3A1 Antibody Picoband™ catalog # A01121-5. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human.
Application	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
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: E62-H101).
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).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

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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, 0.1-0.25 ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 1-2 ug/ml, Human Flow Cytometry, 1-3 ug/1x10^6 cells, Human Direct ELISA, 0.1-0.5 ug/ml, Human

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Anti-ALDH3A1 Antibody Picoband™ (A01121-5) Images

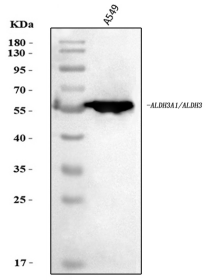

Figure 1. Western blot analysis of ALDH3A1 using anti-ALDH3A1 antibody (A01121-5).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human A549 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 # A01121-5) at 0.25 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 50 kDa.

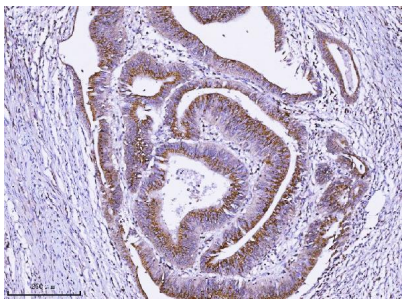

Figure 2. IHC analysis of ALDH3A1 using anti-ALDH3A1 antibody (A01121-5).
ALDH3A1 was detected in a paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALDH3A1 Antibody (A01121-5) 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.

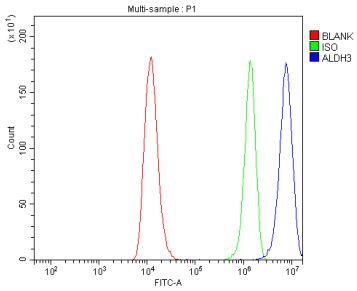

Figure 3. Flow Cytometry analysis of RT4 cells using anti-ALDH3A1 antibody (A01121-5).
Overlay histogram showing RT4 cells stained with A01121-5 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ALDH3A1 Antibody (A01121-5, 1 ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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