

Anti-ALDH1A2 Antibody Picoband®

Catalog Number: PB9981

About ALDH1A2

Aldehyde dehydrogenase 1 family, member A2, also known as ALDH1A2 or retinaldehyde dehydrogenase 2 (RALDH2), is an enzyme that in humans is encoded by the ALDH1A2 gene. This protein belongs to the aldehyde dehydrogenase family of proteins. The product of this gene is an enzyme that catalyzes the synthesis of retinoic acid (RA) from retinaldehyde. Retinoic acid, the active derivative of vitamin A (retinol), is a hormonal signaling molecule that functions in developing and adult tissues. The studies of a similar mouse gene suggest that this enzyme and the cytochrome CYP26A1, concurrently establish local embryonic retinoic acid levels which facilitate posterior organ development and prevent spina bifida. Four transcript variants encoding distinct isoforms have been identified for this gene.

Overview

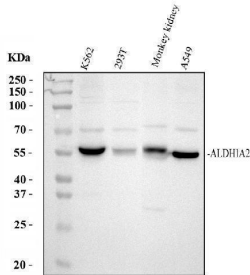
Product Name	Anti-ALDH1A2 Antibody Picoband®
Reactive Species	Human, Monkey
Description	Boster Bio Anti-ALDH1A2 Antibody Picoband® catalog # PB9981. Tested in ICC/IF, WB applications. This antibody reacts with Human, Monkey. The brand Picoband indicates this is a premium antibody that guarantees superior 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	IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
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	O94788

Technical Details

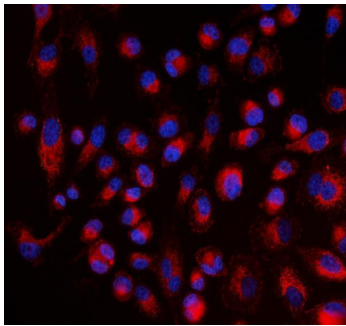
Immunogen	E.coli-derived human ALDH1A2 recombinant protein (Position: M1-A110). Human ALDH1A2 shares 95.5% amino acid (aa) sequence identity with both mouse and rat ALDH1A2.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and 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, 0.1-0.5ug/ml, Human, Monkey Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human

Anti-ALDH1A2 Antibody Picoband® (PB9981) Images



Western blot analysis of ALDH1A2 using anti-ALDH1A2 antibody (PB9981). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human K562 whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: monkey kidney tissue lysates, Lane 4: 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-ALDH1A2 antigen affinity purified polyclonal antibody (Catalog # PB9981) 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 ALDH1A2 at approximately 57 kDa. The expected band size for ALDH1A2 is at 57 kDa.



IF analysis of ALDH1A2 using anti-ALDH1A2 antibody (PB9981). ALDH1A2 was detected in immunocytochemical section of PC-3 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 5ug/mL rabbit anti-ALDH1A2 Antibody (PB9981) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 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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Anti-ALDH1A2 Antibody

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