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Anti-ALDH1A3 Picoband Antibody

Catalog # ABO10276

Specification

Anti-ALDH1A3 Picoband Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	P47895
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Aldehyde dehydrogenase family 1 member A3(ALDH1A3) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-ALDH1A3 Picoband Antibody - Additional Information

Gene ID 220

Other Names
Aldehyde dehydrogenase family 1 member A3, 1.2.1.5, Aldehyde dehydrogenase 6, Retinaldehyde dehydrogenase 3, RALDH-3, RalDH3, ALDH1A3, ALDH6

Calculated MW
56108 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Cytoplasm .

Tissue Specificity
Expressed at low levels in many tissues and at higher levels in salivary gland, stomach, and kidney.

Protein Name
Aldehyde dehydrogenase family 1 member A3

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human ALDH1A3 recombinant protein (Position: N37-K154). Human ALDH1A3 shares 89% and 87.3% amino acid (aa) sequence identity with mouse and rat ALDH1A3, respectively.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-ALDH1A3 Picoband Antibody - Protein Information

Name ALDH1A3

Synonyms ALDH6 {ECO:0000303|PubMed:7698756}

Function
Catalyzes the NAD-dependent oxidation of aldehyde substrates, such as all-trans-retinal and all-trans-13,14-dihydroretinal, to their corresponding carboxylic acids, all-trans-retinoate and all-trans- 13,14-dihydroretinoate, respectively (By similarity) (PubMed:27759097). High specificity for all-trans-retinal as substrate, can also accept acetaldehyde as substrate in vitro but with lower affinity (PubMed:27759097). Required for the biosynthesis of normal levels of retinoate in the embryonic ocular and nasal regions; a critical lipid in the embryonic development of the eye and the nasal region (By similarity).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:Q9JHW9}.

Tissue Location
Expressed at low levels in many tissues and at higher levels in salivary gland, stomach, and kidney

Anti-ALDH1A3 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-ALDH1A3 Picoband Antibody - Images

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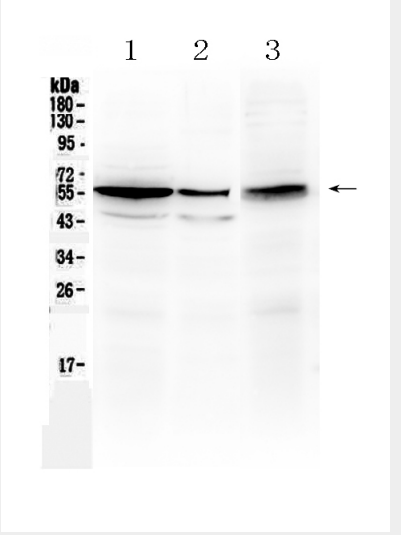

Figure 1. Western blot analysis of ALDH1A3 using anti- ALDH1A3 antibody (ABO10276). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat kidney tissue lysates, Lane 2: mouse gaster tissue lysates, Lane 3: HEPG2 whole Cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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- ALDH1A3 antigen affinity purified polyclonal antibody (Catalog # ABO10276) at 0.5 Î¼g/mL overnight at 4Â°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 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for ALDH1A3 at approximately 56KD. The expected band size for ALDH1A3 is at 56KD.

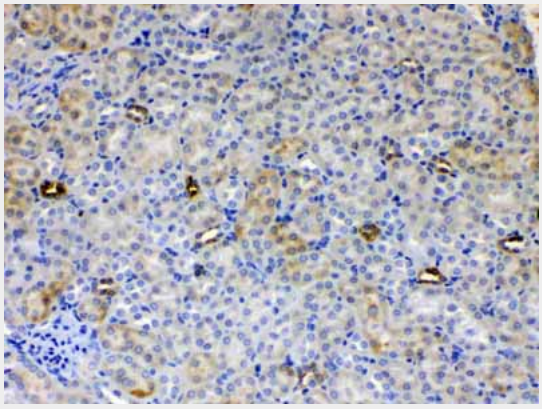

Figure 2. IHC analysis of ALDH1A3 using anti- ALDH1A3 antibody (ABO10276).ALDH1A3 was detected in paraffin-embedded section of mouse kidney tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti- ALDH1A3 Antibody (ABO10276) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

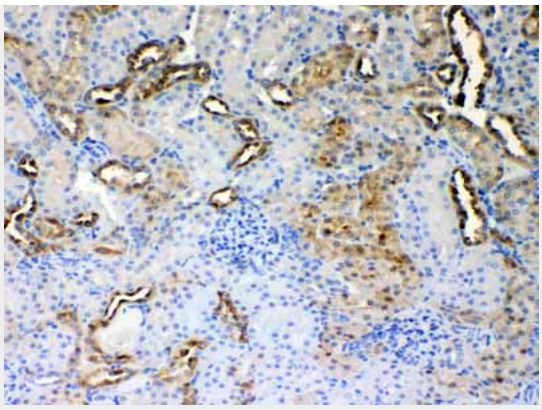

Figure 3. IHC analysis of ALDH1A3 using anti- ALDH1A3 antibody (ABO10276).ALDH1A3 was detected in paraffin-embedded section of rat kidney tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-ALDH1A3 Antibody (ABO10276) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

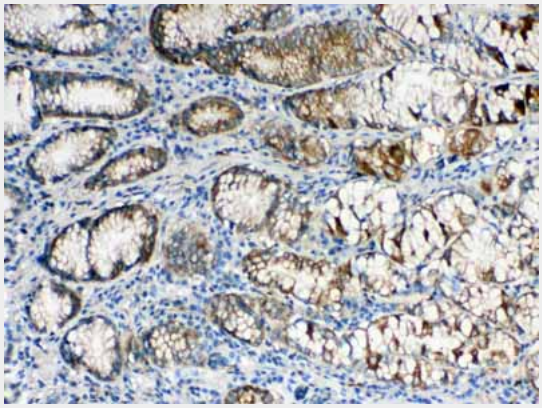

Figure 4. IHC analysis of ALDH1A3 using anti- ALDH1A3 antibody (ABO10276).ALDH1A3 was detected in paraffin-embedded section of human gastric cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti- ALDH1A3 Antibody (ABO10276) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Anti-ALDH1A3 Picoband Antibody - Background

Aldehyde dehydrogenase 1 family, member A3, also known as ALDH1A3 or retinaldehyde dehydrogenase 3 (RALDH3), is an enzyme that in humans is encoded by the ALDH1A3 gene. Aldehyde dehydrogenase isozymes are thought to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. The enzyme encoded by this gene uses retinal as a substrate, either in a free or a cellular retinol-binding protein form. Mutations in this gene have been associated with microphthalmia, isolated 8, and expression changes have also been detected in tumor cells. Alternative splicing results in multiple transcript variants.