

**Anti-ALDH2 Picoband Antibody**  
**Catalog # ABO12160****Specification**

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**Anti-ALDH2 Picoband Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">P05091</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Aldehyde dehydrogenase, mitochondrial (ALDH2) 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-ALDH2 Picoband Antibody - Additional Information**

**Gene ID** 217

**Other Names**

Aldehyde dehydrogenase, mitochondrial, 1.2.1.3, ALDH class 2, ALDH-E2, ALDH1, ALDH2, ALDM

**Calculated MW**

56381 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, By Heat<br>Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human<br>

**Subcellular Localization**

Mitochondrion matrix.

**Protein Name**

Aldehyde dehydrogenase, mitochondrial

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human ALDH2 (18-48aa SAAATQAVPAPNQQPEVFCNQIFINNEWHDA), different from the related mouse sequence by two amino acids, and from the related rat sequence by one amino acid.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, 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.**

**Sequence Similarities**

Belongs to the aldehyde dehydrogenase family.

**Anti-ALDH2 Picoband Antibody - Protein Information**

**Name** ALDH2

**Synonyms** ALDM

**Function**

Required for clearance of cellular formaldehyde, a cytotoxic and carcinogenic metabolite that induces DNA damage.

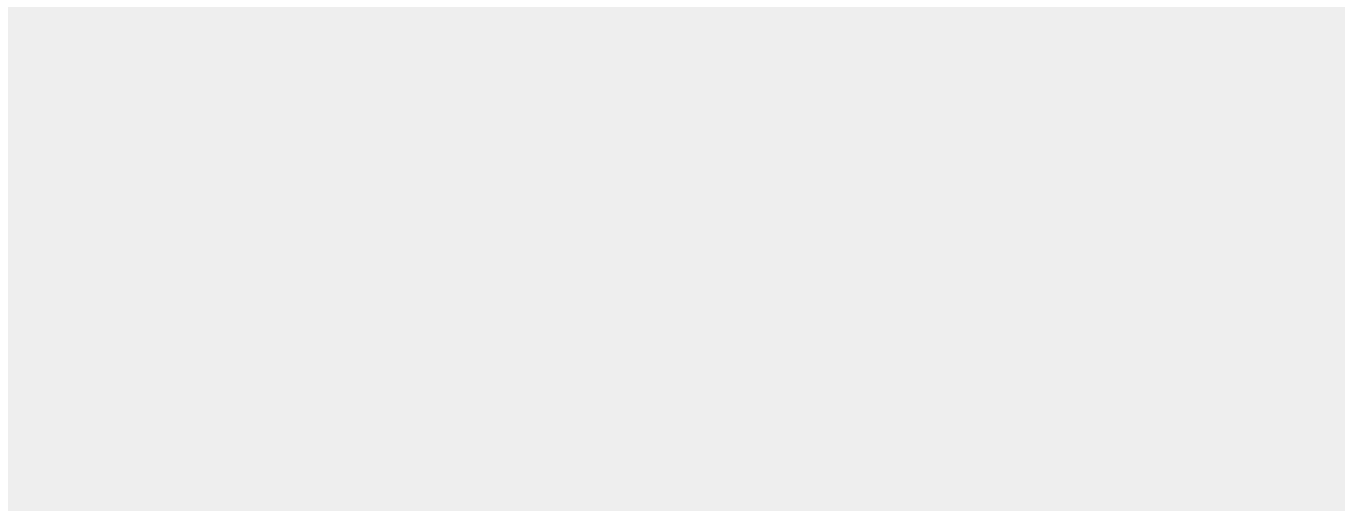
**Cellular Location**

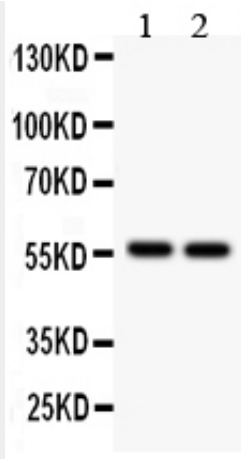
Mitochondrion matrix.

**Anti-ALDH2 Picoband Antibody - Protocols**

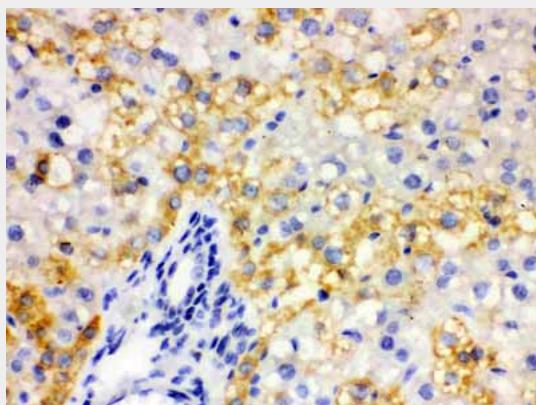
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

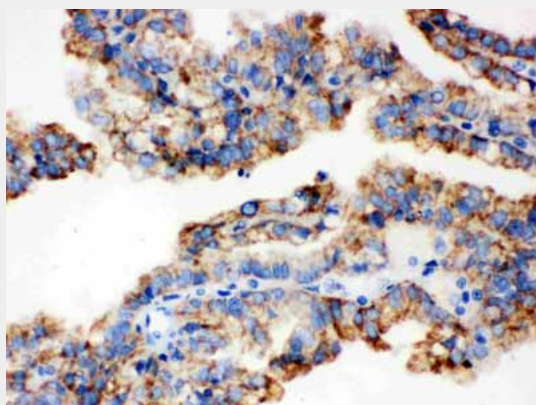
**Anti-ALDH2 Picoband Antibody - Images**



Anti- ALDH2 Picoband antibody, ABO12160, Western blotting All lanes: Anti ALDH2 (ABO12160) at 0.5ug/ml  
Lane 1: Rat Kidney Tissue Lysate at 50ug  
Lane 2: Mouse Kidney Tissue Lysate at 50ug  
Predicted bind size: 56KD  
Observed bind size: 56KD



Anti- ALDH2 Picoband antibody, ABO12160, IHC(P) IHC(P): Rat Liver Tissue



Anti- ALDH2 Picoband antibody, ABO12160, IHC(P) IHC(P): Human Kidney Cancer Tissue

#### **Anti-ALDH2 Picoband Antibody - Background**

ALDH2 (Aldehyde Dehydrogenase 2 Family) is a human gene. The enzyme encoded by this gene belongs to the aldehyde dehydrogenase family of enzymes that catalyze the chemical transformation from acetaldehyde to acetic acid. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. Hsu et al. (1985) assigned the ALDH2 locus to chromosome 12 by means of a cDNA probe and Southern blot analysis of somatic cell hybrids. Using an unbiased proteomic search, Chen et al. (2008) identified mitochondrial ALDH2 as an

enzyme whose activation correlated with reduced ischemic heart damage in rodent models. A high-throughput screen identified a small molecule activator of ALDH2, which they called Alda-1, that, when administered to rats before an ischemic event, reduced infarct size by 60%, most likely through its inhibitory effect on the formation of cytotoxic aldehydes.