

Anti-ALDH2 Antibody
Catalog # ABO11379**Specification**

Anti-ALDH2 Antibody - Product Information

Application	WB, IHC
Primary Accession	P05091
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Aldehyde dehydrogenase, mitochondrial(ALDH2) detection. Tested with WB, IHC-P in Human;Rat.

Reconstitution

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

Anti-ALDH2 Antibody - Additional Information

Gene ID 217

Other Names

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

Calculated MW

56381 MW KDa

Application Details

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

Subcellular Localization

Mitochondrion matrix.

Protein Name

Aldehyde dehydrogenase, mitochondrial

Contents

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

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human ALDH2(18-33aa SAAATQAVPAPNQQPE), 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 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

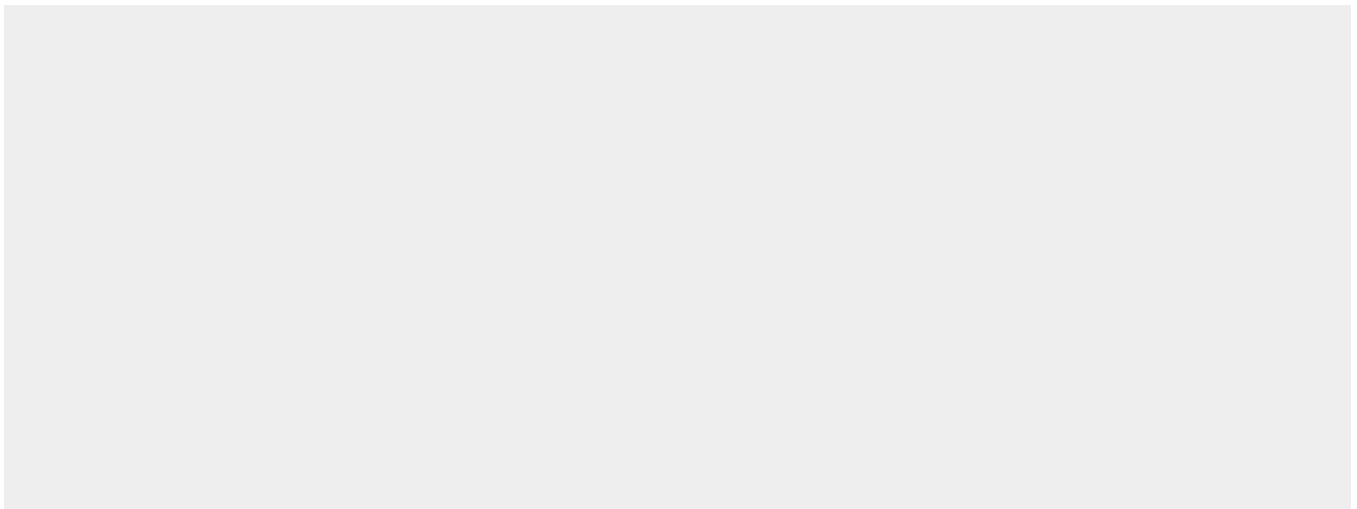
Mitochondrion matrix.

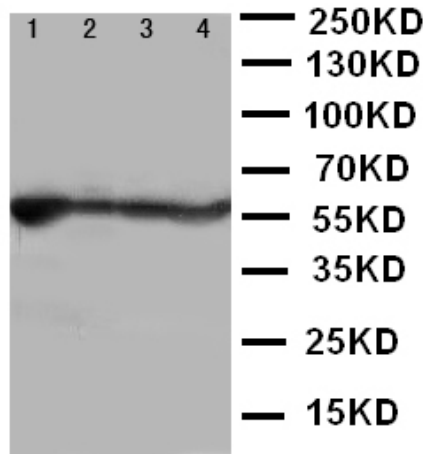
Anti-ALDH2 Antibody - Protocols

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

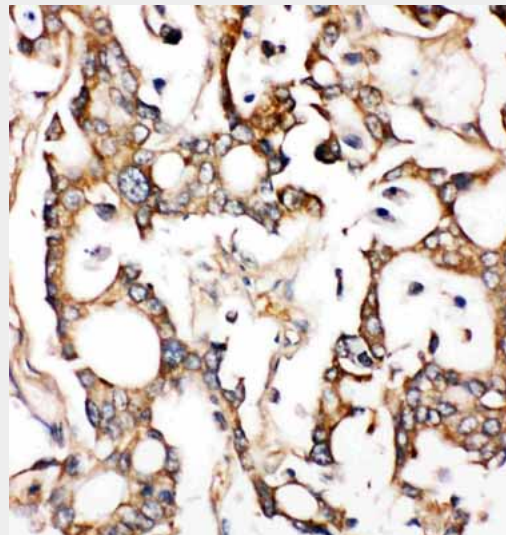
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-ALDH2 Antibody - Images





Anti-ALDH2 antibody, ABO11379, Western blotting
 Lane 1: Rat Liver Tissue Lysate
 Lane 2: Rat Intestine Tissue Lysate
 Lane 3: Rat Lung Tissue Lysate
 Lane 4: Rat Kidney Tissue Lysate



Anti-ALDH2 antibody, ABO11379, IHC(P)
 IHC(P): Human Liver Cancer Tissue

Anti-ALDH2 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.