10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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 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.

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.

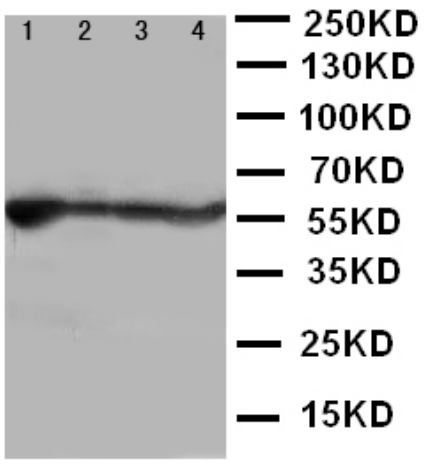
Anti-ALDH2 Antibody - Protocols

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

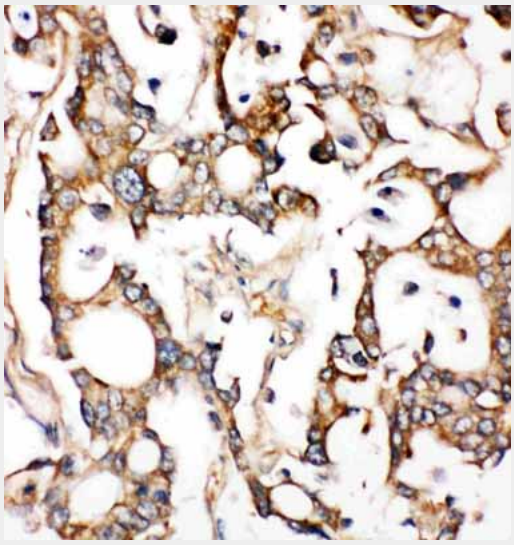
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-ALDH2 Antibody - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Anti-ALDH2 antibody, ABO11379, Western blottingLane 1: Rat Liver Tissue LysateLane 2: Rat Intestine Tissue LysateLane 3: Rat Lung Tissue LysateLane 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.