

**ALDH2 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO2294a****Specification****ALDH2 Antibody - Product Information**

Application	WB, IHC, FC, ICC, E
Primary Accession	<a href="#">P05091</a>
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	56.3kDa KDa

**Description**

This protein belongs to the aldehyde dehydrogenase family of proteins. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. Two major liver isoforms of aldehyde dehydrogenase, cytosolic and mitochondrial, can be distinguished by their electrophoretic mobilities, kinetic properties, and subcellular localizations. Most Caucasians have two major isozymes, while approximately 50% of Orientals have the cytosolic isozyme but not the mitochondrial isozyme. A remarkably higher frequency of acute alcohol intoxication among Orientals than among Caucasians could be related to the absence of a catalytically active form of the mitochondrial isozyme. The increased exposure to acetaldehyde in individuals with the catalytically inactive form may also confer greater susceptibility to many types of cancer. This gene encodes a mitochondrial isoform, which has a low Km for acetaldehydes, and is localized in mitochondrial matrix. Alternative splicing results in multiple transcript variants encoding distinct isoforms.

**Immunogen**

Purified recombinant fragment of human ALDH2 (AA: 317-517) expressed in E. Coli.

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**ALDH2 Antibody - Additional Information****Gene ID 217****Other Names**

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

**Dilution**

WB~~1/500 - 1/2000

IHC~~1/200 - 1/1000

FC~~1/200 - 1/400

ICC~~N/A

E~~1/10000

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small

aliquots to prevent freeze-thaw cycles.

### Precautions

ALDH2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## ALDH2 Antibody - Protein Information

**Name** ALDH2

**Synonyms** ALDM

### Function

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

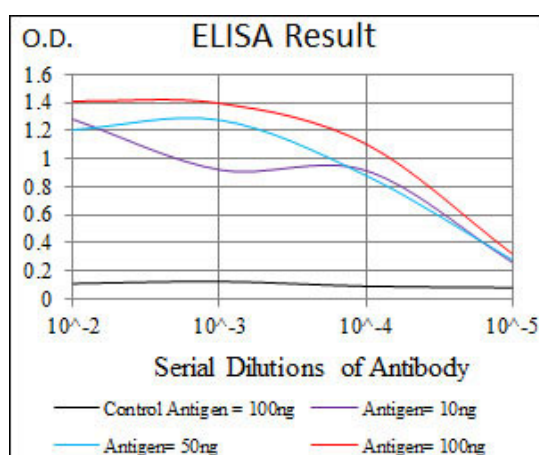
### Cellular Location

Mitochondrion matrix.

## 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](#)



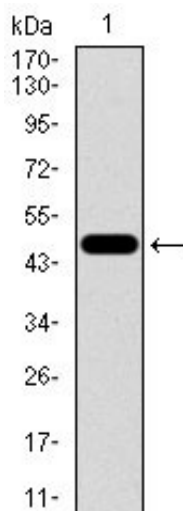


Figure 1: Western blot analysis using ALDH2 mAb against human ALDH2 recombinant protein. (Expected MW is 47.4 kDa)

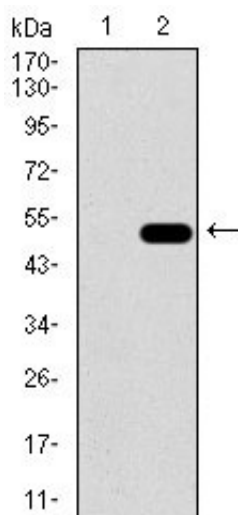


Figure 2: Western blot analysis using ALDH2 mAb against HEK293 (1) and ALDH2 (AA: 317-517)-hlgGFc transfected HEK293 (2) cell lysate.

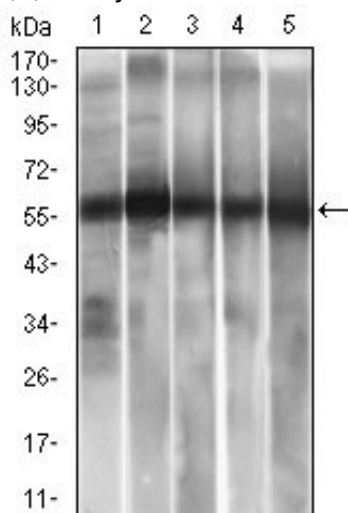


Figure 3: Western blot analysis using ALDH2 mouse mAb against HepG2 (1), A549 (2) cell lysate and Rat liver (3), Mouse liver (4), Mouse brain (5) tissue lysate.

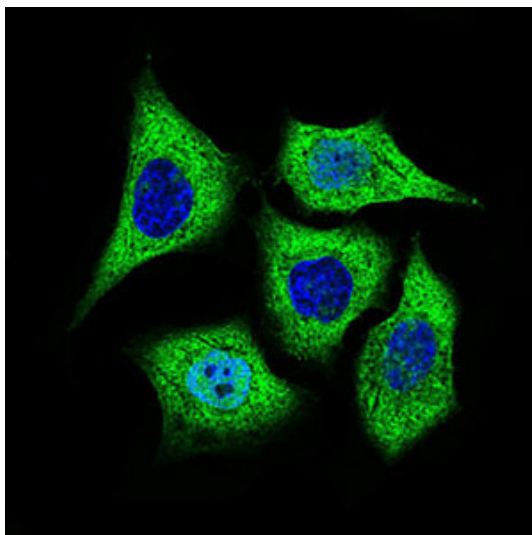


Figure 4: Immunofluorescence analysis of HepG2 cells using ALDH2 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

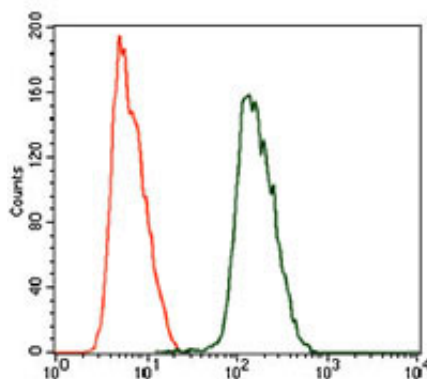


Figure 5: Flow cytometric analysis of HeLa cells using ALDH2 mouse mAb (green) and negative control (purple).

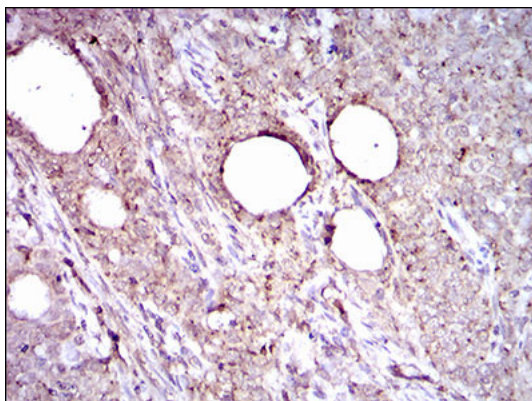


Figure 6: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using ALDH2 mouse mAb with DAB staining.

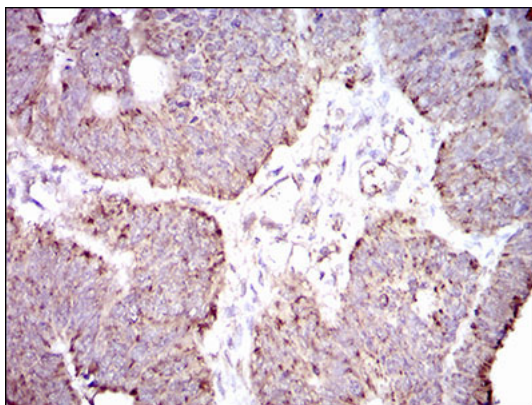


Figure 7: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using ALDH2 mouse mAb with DAB staining.

#### **ALDH2 Antibody - References**

1. Eur Heart J. 2012 Jul;33(13):1606-14.
2. Clin Toxicol (Phila). 2012 Apr;50(4):242-9.