

# ALDH2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP1432a

## Product Information

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<b>Application</b>	WB, IF, E
<b>Primary Accession</b>	<a href="#">P05091</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Calculated MW</b>	56381
<b>Antigen Region</b>	52-81

## Additional Information

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<b>Gene ID</b>	217
<b>Other Names</b>	Aldehyde dehydrogenase, mitochondrial, ALDH class 2, ALDH-E2, ALDHI, ALDH2, ALDM
<b>Target/Specificity</b>	This ALDH2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 52-81 amino acids from the N-terminal region of human ALDH2.
<b>Dilution</b>	WB~~1:1000 IF~~1:10~50 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	ALDH2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	ALDH2
<b>Synonyms</b>	ALDM
<b>Function</b>	Required for clearance of cellular formaldehyde, a cytotoxic and carcinogenic metabolite that induces DNA damage.

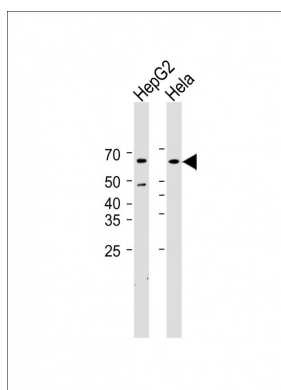
## Background

ALDH2 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 this enzyme, 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 Asians have only the cytosolic isozyme, missing the mitochondrial isozyme. A remarkably higher frequency of acute alcohol intoxication among Asians than among Caucasians could be related to the absence of the mitochondrial isozyme.

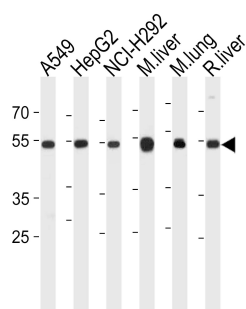
## References

Guo,Y.M., World J. Gastroenterol. 14 (9), 1444-1449 (2008) Chen,L., PLoS Med. 5 (3), E52 (2008)  
Teeguarden,J.G., Inhal Toxicol 20 (4), 375-390 (2008) Yoshida,A., Pharmacogenetics 2 (4), 139-147 (1992)

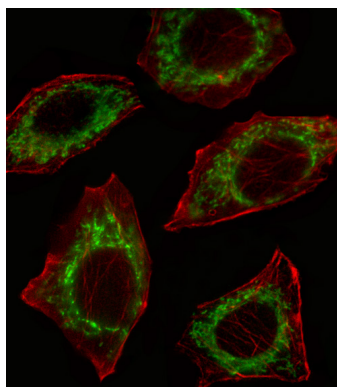
## Images



All lanes: Anti-ALDH2 Antibody (N-term) at 1:1000 dilution  
Lane 1: HepG2 whole cell lysate Lane 2: HeLa whole cell lysate  
Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 56 kDa  
Blocking/Dilution buffer: 5% NFDM/TBST.



ALDH2 Antibody (N-term) (Cat. #AP1432a) western blot analysis in A549,HepG2,NCI-H292 cell line,mouse liver,lung and rat liver tissue lysates (35ug/lane).This demonstrates the ALDH2 antibody detected the ALDH2 protein (arrow).



Fluorescent confocal image of A549 cell stained with ALDH2 Antibody (N-term)(Cat#AP1432a).A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with ALDH2 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min).ALDH2 immunoreactivity is localized to Mitochondrion significantly.

## Citations

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- [Mitochondrial aldehyde dehydrogenase 2 protects gastric mucosa cells against DNA damage caused by oxidative stress.](#)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.