

Anti-ALDH2 Antibody

Catalog # ABO11379

Product Information

Application	WB, IHC-P
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.

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
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.
Source	Eukaryota
Protein Name	Aldehyde dehydrogenase, mitochondrial
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .
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.

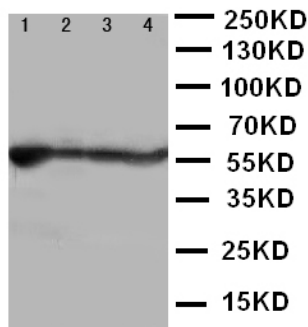
Protein Information

Name	ALDH2
Synonyms	ALDM
Function	Required for clearance of cellular formaldehyde, a cytotoxic and carcinogenic metabolite that induces DNA damage.
Cellular Location	Mitochondrion matrix.

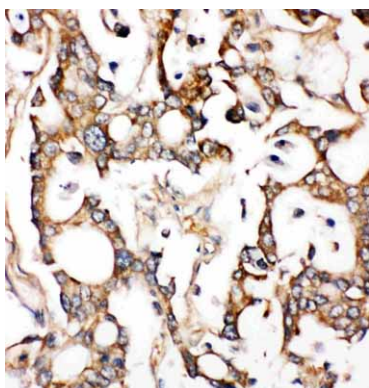
Background

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.

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

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