

Basic Information

Product Name	Anti-ALDH2 Antibody	
Gene Name	ALDH2	
Source	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Species Reactivity	human, rat	
Tested Application	WB, IHC	
Contents	500 ug/ml antibody with PBS, 0.02% NaN ₃ , 1 mg/ml BSA and 50% glycerol.	
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ALDH2, different from the related mouse sequence by two amino acids, and from the related rat sequence by one amino acid.	
Concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	56 kDa	
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

Storage

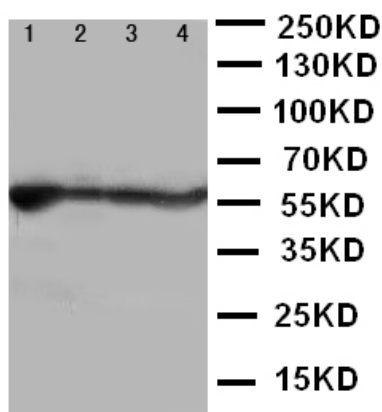
12 months from date of receipt, -20°C as supplied.

Background Information

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.

Selected Validation Data



Western blot analysis of ALDH2 using anti-ALDH2 antibody

(BA3673-2). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: Rat Liver tissue lysates,

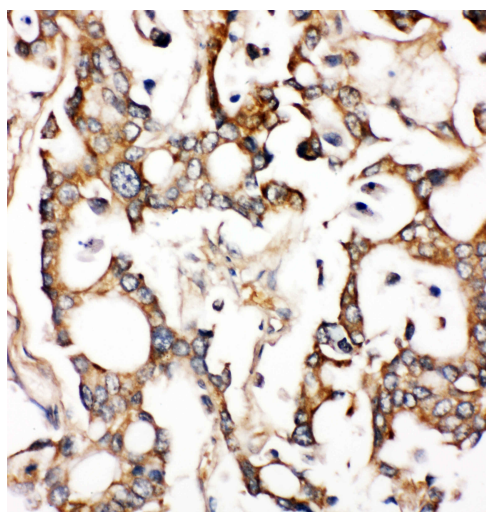
Lane 2: Rat Intestine tissue lysates,

Lane 3: Rat Lung tissue lysates,

Lane 4: Rat Kidney tissue lysates.

After electrophoresis, proteins were transferred to a membrane.

Then the membrane was incubated with rabbit anti-ALDH2 antigen affinity purified polyclonal antibody (BA3673-2) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for ALDH2 at approximately 56 kDa. The expected band size for ALDH2 is at 56 kDa.



IHC analysis of ALDH2 using anti-ALDH2 antibody (BA3673-2).

ALDH2 was detected in a paraffin-embedded section of human liver cancer tissue. The tissue section was incubated with rabbit anti-ALDH2 Antibody (BA3673-2) at a dilution of 1:200 and developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB (Catalog # AR1027) as the chromogen.