

Basic Information

Product Name	Anti-ALDH1A1 Antibody (Clone#4C3)	
Gene Name	ALDH1A1	
Source	Mouse	
Clonality	Monoclonal	
Isotype	IgG2a	
Species Reactivity	human	
Tested Application	WB, IHC, ICC/IF	
Contents	500 ug/ml antibody with PBS, 0.02% NaN ₃ , 1 mg/ml BSA and 50% glycerol.	
Immunogen	E.coli-derived human ALDH1A1 recombinant protein (Position: T6-Q342).	
Concentration	500 ug/ml	
Purification	protein G purified.	
Observed MW	55 kDa	
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (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.	

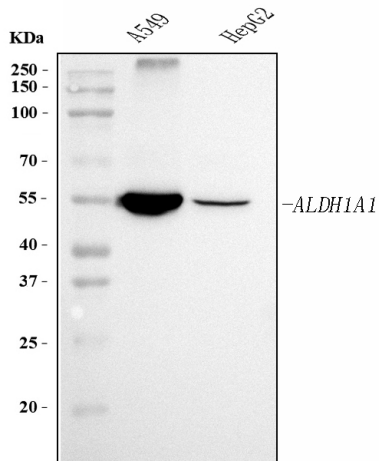
Storage

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

Background Information

Aldehyde dehydrogenase 1 family, member A1, also known as ALDH1A1 or retinaldehyde dehydrogenase 1 (RALDH1), is an enzyme that in humans is encoded by the ALDH1A1 gene. It is mapped to 9q21.13. The protein encoded by this gene belongs to the aldehyde dehydrogenase family. Aldehyde dehydrogenase is the next enzyme after alcohol dehydrogenase in the major pathway of alcohol metabolism. There are two major aldehyde dehydrogenase isozymes in the liver, cytosolic and mitochondrial, which are encoded by distinct genes, and can be distinguished by their electrophoretic mobility, kinetic properties, and subcellular localization. This gene encodes the cytosolic isozyme. Studies in mice show that through its role in retinol metabolism, this gene may also be involved in the regulation of the metabolic responses to high-fat diet.

Selected Validation Data

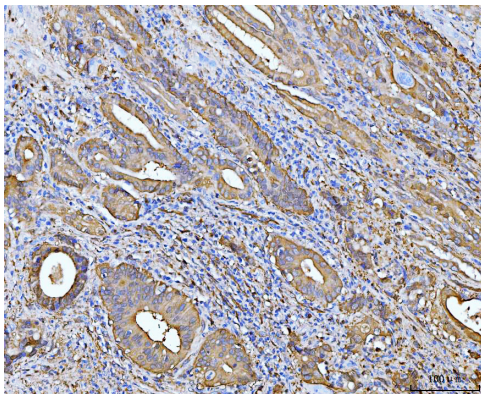


Western blot analysis of ALDH1A1 using anti-ALDH1A1 antibody (M01392-2). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: A549 whole cell lysates,

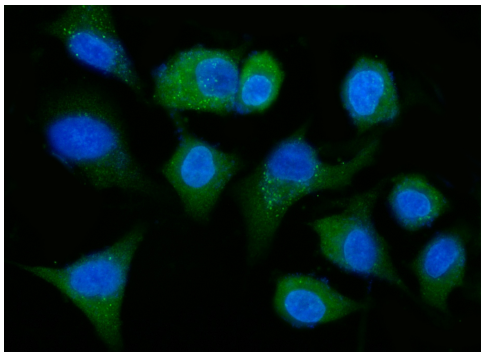
Lane 2: HepG2 whole cell lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-ALDH1A1 antigen affinity purified monoclonal antibody (M01392-2) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for ALDH1A1 at approximately 55 kDa. The expected band size for ALDH1A1 is at 55 kDa.



IHC analysis of ALDH1A1 using anti-ALDH1A1 antibody (M01392-2).

ALDH1A1 was detected in a paraffin-embedded section of human Gall bladder adenosquamous carcinoma tissue. Biotinylated goat anti-mouse IgG was used as secondary antibody. The tissue section was incubated with mouse anti-ALDH1A1 Antibody (M01392-2) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB (Catalog # AR1027) as the chromogen.



IF analysis of ALDH1A1 using anti-ALDH1A1 antibody (M01392-2).

ALDH1A1 was detected in an immunocytochemical section of A549 cells. The section was incubated with mouse anti-ALDH1A1 Antibody (M01392-2) at a dilution of 1:100. Dylight488-conjugated Anti-mouse IgG Secondary Antibody (green)(Catalog#BA1126) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).