

Basic Information

Product Name	Anti-ALDH1A1 Antibody	
Gene Name	ALDH1A1	
Source	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Species Reactivity	human, mouse, rat	
Tested Application	WB, IHC, ICC/IF, FCM	
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.	
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human ALDH1A1, different from the related rat and mouse sequences by one amino acid.	
Concentration	500 ug/ml	
Purification	Immunogen affinity 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

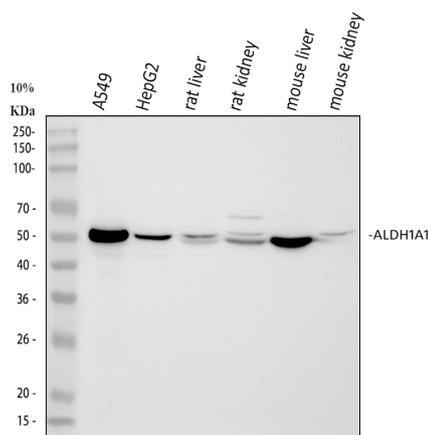
12 months from date of receipt, -20°C as supplied.

Background Information

ALDH1A1(Aldehyde dehydrogenase 1 family, member A1), also called ALDH1, RALDH1 or ALDH, LIVER CYTOSOLIC, is an enzyme that in humans is encoded by the ALDH1A1 gene. And this protein belongs to the aldehyde dehydrogenases family of proteins. The ALDH1A1 gene is mapped on 9q21.13. ALDH1A1 also belongs to the group of corneal crystallins that help maintain the transparency of the cornea.ALDH1A1 is associated with a low Km for NAD, a high Km for acetaldehyde, and is strongly inactivated by disulfiram. The ALDH1 gene is about 53 kb long and is divided into 13 exons. Retinaldehyde is generated by ADH1 from retinol, and its concentration is determined in large part by its

subsequent catabolism by RALDH1 to retinoic acid.

Selected Validation Data



Western blot analysis of ALDH1A1 using anti-ALDH1A1 antibody (BA3672). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human A549 whole cell lysates,

Lane 2: human HepG2 whole cell lysates,

Lane 3: rat liver tissue lysates,

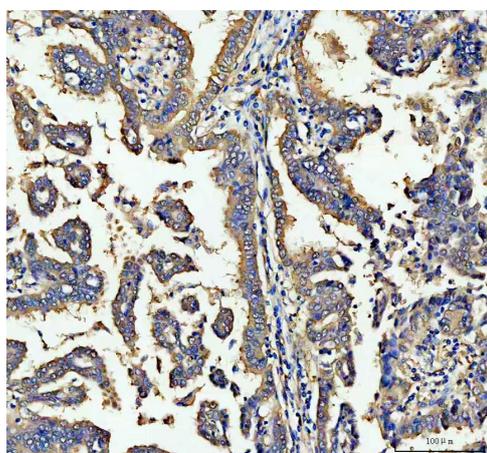
Lane 4: rat kidney tissue lysates,

Lane 5: mouse liver tissue lysates,

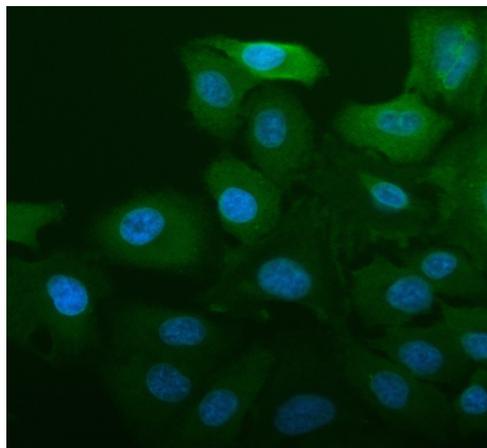
Lane 6: mouse kidney tissue lysates.

After electrophoresis, proteins were transferred to a membrane.

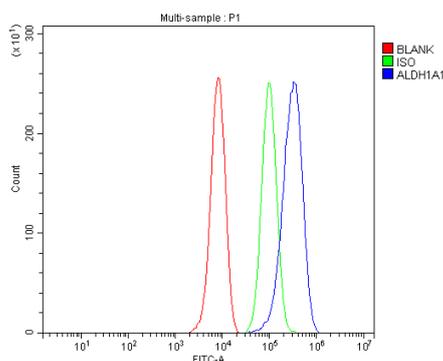
Then the membrane was incubated with rabbit anti-ALDH1A1 antigen affinity purified polyclonal antibody (BA3672) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for ALDH1A1 at approximately 55 kDa. The expected band size for ALDH1A1 is at 55 kDa.



IHC analysis of ALDH1A1 using anti-ALDH1A1 antibody (BA3672). ALDH1A1 was detected in a paraffin-embedded section of human lung cancer tissue. The tissue section was incubated with rabbit anti-ALDH1A1 Antibody (BA3672) 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.



ICC/IF analysis of ALDH1A1 using anti-ALDH1A1 antibody (BA3672). ALDH1A1 was detected in an immunocytochemical section of A549 cells. The section was incubated with rabbit anti-ALDH1A1 Antibody (BA3672) at a dilution of 1:100. Fluoro488 Conjugated Goat Anti-Rabbit IgG (Green) (Catalog # BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



Flow Cytometry analysis of HepG2 cells using anti-ALDH1A1 antibody (BA3672).

Overlay histogram showing HepG2 cells stained with BA3672 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ALDH1A1 Antibody (BA3672) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.