

For Research Use Only

# ALDH1A1 Monoclonal antibody

Catalog Number: 60171-1-Ig

Featured Product

21 Publications



## Basic Information

**Catalog Number:**

60171-1-Ig

**GenBank Accession Number:**

BC001505

**Purification Method:**

Protein G purification

**Size:**

150ul , Concentration: 1000 ug/ml by 216

**GeneID (NCBI):**

216

**CloneNo.:**

1A10A2

Nanodrop;

**UNIPROT ID:**

P00352

**Recommended Dilutions:**

WB: 1:5000-1:50000

**Source:**

Mouse

**Full Name:**

aldehyde dehydrogenase 1 family, member A1

IHC: 1:50-1:500

**Isotype:**

IgG1

IF/ICC: 1:400-1:1600

FC (Intra): 0.20 ug per 10<sup>6</sup> cells in a 100 µl suspension

**Immunogen Catalog Number:**

AG8551

**Calculated MW:**

501 aa, 55 kDa

**Observed MW:**

52 kDa

## Applications

**Tested Applications:**

WB, IHC, IF/ICC, FC (Intra), ELISA

**Positive Controls:**

WB: A549 cells, K-562 cells, pig liver tissue, rat liver tissue, HepG2 cells, HuH-7 cells

**Cited Applications:**

WB, IHC, IF, IP, CoIP

IHC: human brain tissue,

**Species Specificity:**

human, mouse, rat, pig

IF/ICC: HeLa cells,

**Cited Species:**

human, mouse

FC (Intra): HepG2 cells,

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Background Information

ALDH1A1 (Aldehyde dehydrogenase family 1 member A1), also named as ALDC, ALDH1 and PUMB1, belongs to the aldehyde dehydrogenase family. The ALDH1A1 gene encodes a liver cytosolic isoform of acetaldehyde dehydrogenase, an enzyme involved in the major pathway of alcohol metabolism after alcohol dehydrogenase. ALDH1A1 plays a critical role in protection against oxidative stress-induced cytotoxicity in lens epithelial cells (PMID:19296407). And it is important for multiple biological activities including drug resistance, cell differentiation, and oxidative stress response (PMID:19025616). As a novel cancer stem cell marker, ALDH1A1 can be used for tumors whose corresponding normal tissues express ALDH1A1 in relatively restricted or limited levels such as breast, lung, ovarian or colon cancer (PMID: 20422001).

## Notable Publications

Author	Pubmed ID	Journal	Application
Ting Tang	33173989	Mol Med Rep	WB
Haihua Wang	36484016	J Cancer	WB, IHC
Rui-Qi Wang	31139022	Cancer Cell Int	WB

## Storage

**Storage:**

Store at -20°C. Stable for one year after shipment.

**Storage Buffer:**

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

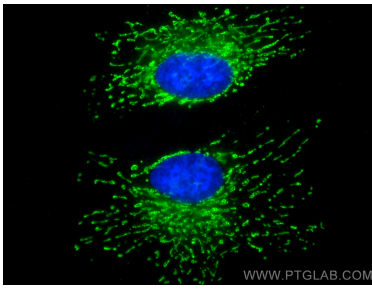
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

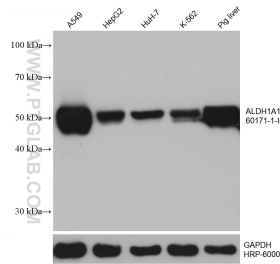
E: proteintech@ptglab.com  
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

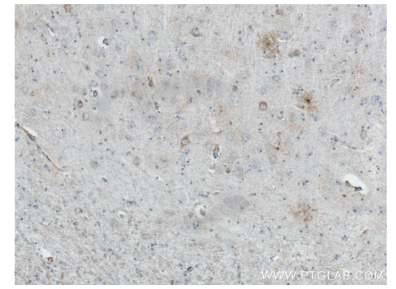
## Selected Validation Data



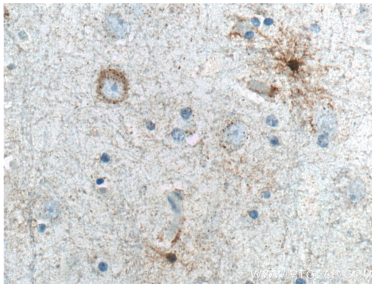
Immunofluorescent analysis of (4% PFA) fixed HeLa cells using ALDH1A1 antibody (60171-1-Ig, Clone: 1A10A2) at dilution of 1:800 and CoraLite@488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



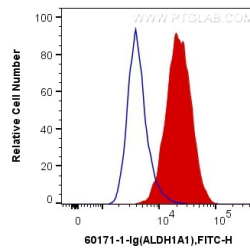
Various lysates were subjected to SDS PAGE followed by western blot with 60171-1-Ig (ALDH1A1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated GAPDH Monoclonal antibody (HRP-60004) as loading control.



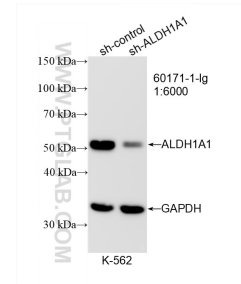
Immunohistochemical analysis of paraffin-embedded human brain tissue slide using 60171-1-Ig (ALDH1A1 Antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieved with Sodium Citrate buffer (pH 6.0).



Immunohistochemical analysis of paraffin-embedded human brain tissue slide using 60171-1-Ig (ALDH1A1 Antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieved with Sodium Citrate buffer (pH 6.0).



1X10<sup>6</sup> HepG2 cells were intracellularly stained with 0.2 ug Anti-Human ALDH1A1 (60171-1-Ig, Clone:1A10A2) and CoraLite@488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000 (red), or 0.2 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer.



WB result of ALDH1A1 antibody (60171-1-Ig; 1:6000; incubated at room temperature for 1.5 hours) with sh-Control and sh-ALDH1A1 transfected K-562 cells.