For Research Use Only

ALDH1A1-specific Polyclonal antibody

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Catalog Number:22109-1-AP Featured Product 7 Publications

Basic Information

Catalog Number:
22109-1-AP

Size:
500 μg/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG17358

GenBank Accession Number:
BC001505

GeneID (NCBI):
216

UNIPROT ID:
P00352

Full Name:
aldehyde dehydrogenase 1 family, member A1

Calculated MW:
501 aa, 55 kDa

Observed MW:
55 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:2000
IHC 1:20-1:200
IF 1:50-1:500

Applications

Tested Applications:
FC, IF/ICC, IHC, WB,ELISA

Cited Applications:
WB, IP, IF

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse

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

Positive Controls:

WB : human liver tissue, mouse liver tissue, human adrenal gland tissue, K-562 cells

IHC : human liver tissue, human hepatocirrhosis tissue

IF : A549 cells,

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 ALDH1 in relatively restricted or limited levels such as breast, lung, ovarian or colon cancer(PMID: 20422001). This antibody can also recognize some other membranes of the aldehyde dehydrogenase family. This antibody is specific to ALDH1A1.

Notable Publications

Author	Pubmed ID	Journal	Application
Dandan Liu	33367934	Int J Oncol	WB
L Yang	28895409	Neoplasma	WB
Junlong Zhuang	28839463	Theranostics	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

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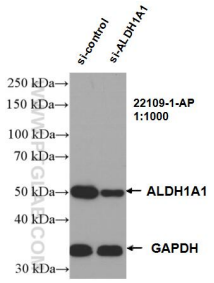
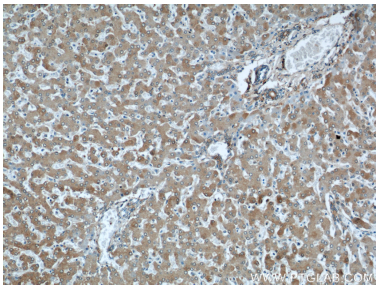
Selected Validation Data

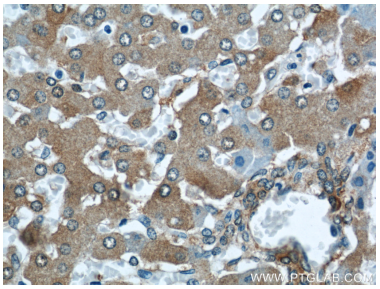
human liver tissue were subjected to SDS PAGE followed by western blot with 22109-1-AP (ALDH1A1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



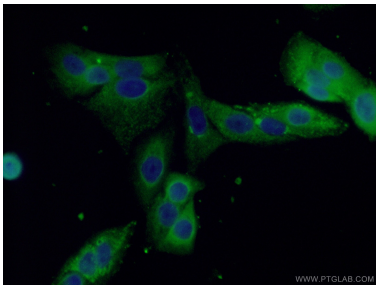
WB result of ALDH1A1 antibody (22109-1-AP; 1:1000; incubated at room temperature for 1.5 hours) with sh-Control and sh-ALDH1A1 transfected K-562 cells.



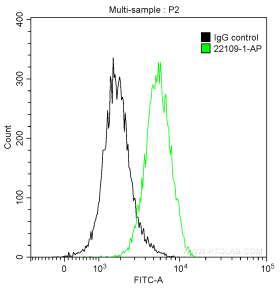
Immunohistochemical analysis of paraffin-embedded human liver using 22109-1-AP (ALDH1A1 antibody) at dilution of 1:50 (under 10x lens).



Immunohistochemical analysis of paraffin-embedded human liver using 22109-1-AP (ALDH1A1 antibody) at dilution of 1:50 (under 40x lens).



Immunofluorescent analysis of (-20°C Ethanol) fixed A549 cells using 22109-1-AP (ALDH1A1 antibody) at dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



1X10^6 HeLa cells were intracellularly stained with 0.2 ug Anti-Human ALDH1A1-specific (22109-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (green), and 0.2 ug Control Antibody. Cells were fixed with 90% MeOH.