

Anti-ALDH1A1 Antibody

R1706-2



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 55 kDa

Description: Aldehyde dehydrogenases (ALDHs) mediate NADP⁺-dependent oxidation of aldehydes into acids during the detoxification of alcohol-derived acetaldehyde; metabolism of corticosteroids, biogenic amines and neurotransmitters; and lipid peroxidation. ALDH1A1, also designated retinal dehydrogenase 1 (RALDH1 or RALDH1), aldehyde dehydrogenase family 1 member A1, aldehyde dehydrogenase cytosolic, ALDHII, ALDH-E1 or ALDH E1, is a retinal dehydrogenase that participates in the biosynthesis of retinoic acid (RA). There are two major liver isoforms of ALDH1 that can localize to cytosolic or mitochondrial space. The ALDH1A2 (RALDH2, RALDH2-T) gene produces three different transcripts and also catalyzes the synthesis of RA from retinaldehyde. ALDH1A3 (ALDH6, RALDH3, ALDH1A6) is a 37 kb gene that consists of 13 exons and produces a major transcript of approximately 3.5 kb most abundant in salivary gland, stomach and kidney. ALDH3A1 (stomach type, ALDH3, ALDHIII) forms a cytoplasmic homodimer that preferentially oxidizes aromatic aldehyde substrates. ALDH genes upregulate as a part of the oxidative stress response, and appear to be abundant in certain tumors that have an accelerated metabolism toward chemotherapy agents.

Immunogen: Recombinant protein within human Aldh1A1 aa 1-160/501.

Positive control: 2 liver tissue lysate, 2 kidney tissue lysate, 293T, A431, HepG2, human liver tissue, human lung tissue, human kidney tissue, 2 colon tissue, A549.

Subcellular location: Cytoplasm.

Database links: SwissProt: P00352 Human | P24549 Mouse | P51647 Rat

Recommended Dilutions:

WB	1:500-1:1000
IF-Cell	1:50-1:200
IHC-P	1:50-1:200
FC	1:50-1:200

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

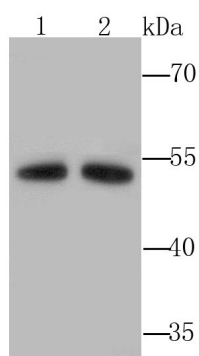


Fig1: Western blot analysis of Aldh1A1 on 2 liver (1) and 2 kidney (2) tissue lysates using anti-Aldh1A1 antibody at 1/1,000 dilution.

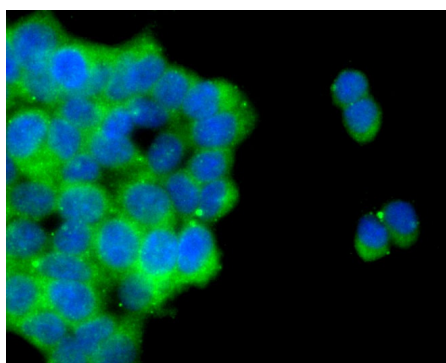


Fig2: ICC staining Aldh1A1 in 293T cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

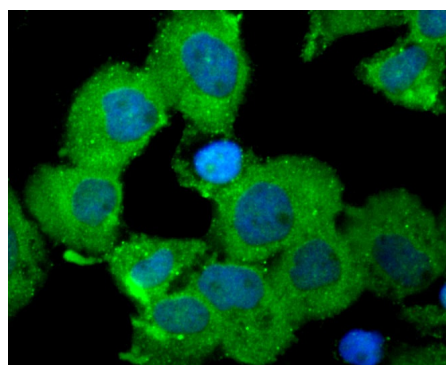


Fig3: ICC staining Aldh1A1 in A431 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

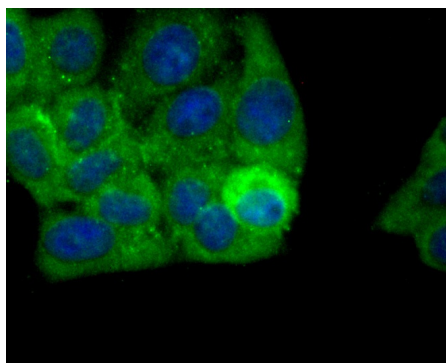


Fig4: ICC staining Aldh1A1 in HepG2 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

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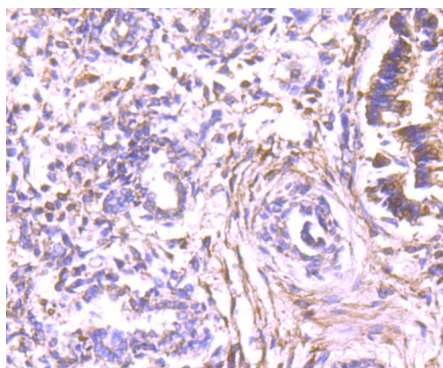


Fig5: Immunohistochemical analysis of paraffin-embedded human lung tissue using anti-Aldh1A1 antibody. Counter stained with hematoxylin.

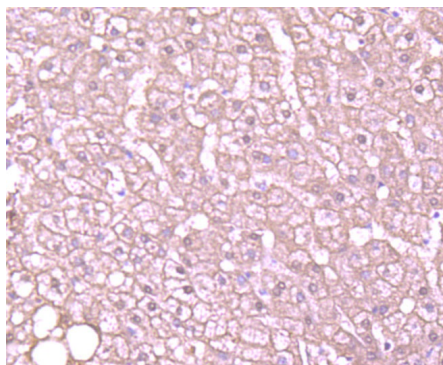


Fig6: Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-Aldh1A1 antibody. Counter stained with hematoxylin.

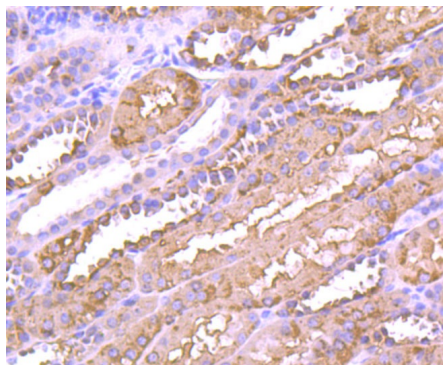


Fig7: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-Aldh1A1 antibody. Counter stained with hematoxylin.

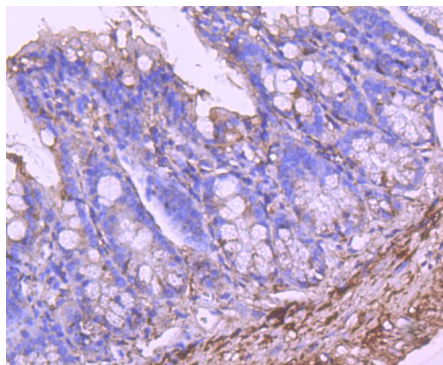


Fig8: Immunohistochemical analysis of paraffin-embedded 2 colon tissue using anti-Aldh1A1 antibody. Counter stained with hematoxylin.

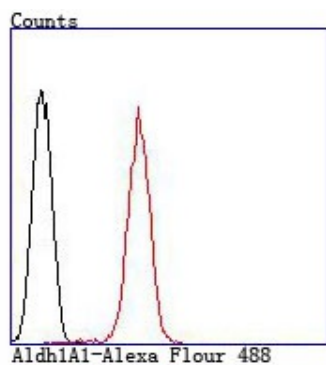


Fig9: Flow cytometric analysis of A549 cells with Aldh1A1 antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody;black).

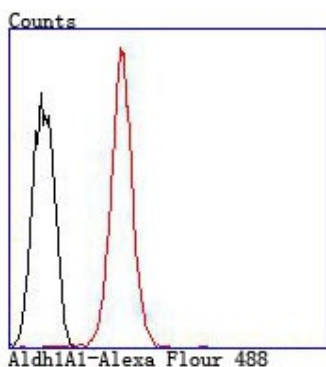


Fig10: Flow cytometric analysis of HepG2 cells with Aldh1A1 antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Dylla SJ et al. Colorectal cancer stem cells are enriched in xenogeneic tumors following chemotherapy. PLoS ONE 3:e2428 (2008).
2. Yoon M et al. Developmental expression of aldehyde dehydrogenase in rat: a comparison of liver and lung development. Toxicol Sci 89:386-98 (2006).

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