

Anti-ALDH1A1 Antibody

R1706-9



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	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 full length protein of human Aldh1A1.

Positive control: Mouse liver tissue lysate, human liver tissue lysate, A549, HepG2, rat epididymis tissue, human pancreas tissue.

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

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% 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

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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

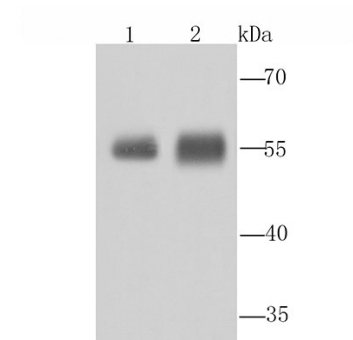


Fig1: Western blot analysis of Aldh1A1 on different tissue lysate using anti-Aldh1A1 antibody at 1/1,000 dilution.

Positive control:

Lane 1: Mouse liver Lane 2: Human liver

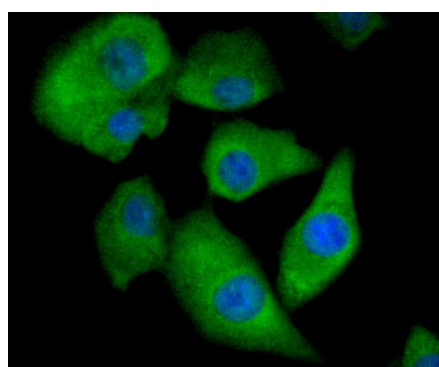


Fig2: ICC staining Aldh1A1 in A549 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

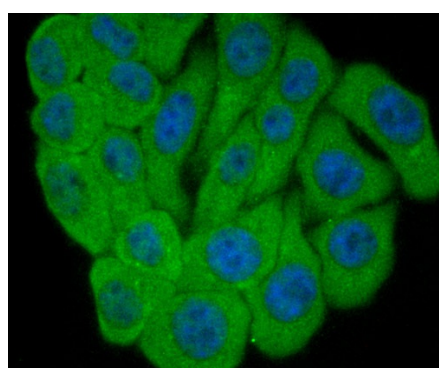


Fig3: ICC staining Aldh1A1 in HepG2 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

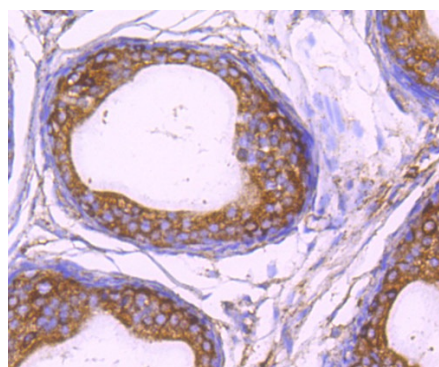


Fig4: Immunohistochemical analysis of paraffin-embedded rat epididymis tissue using anti-Aldh1A1 antibody. Counter stained with hematoxylin.

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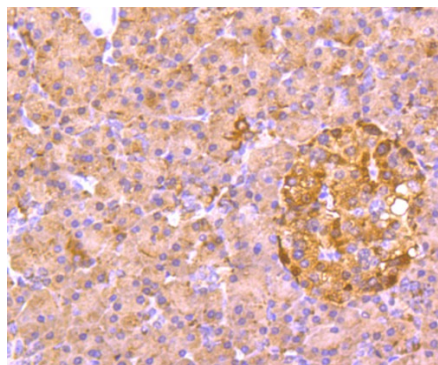


Fig5: Immunohistochemical analysis of paraffin-embedded human pancreas tissue using anti-Aldh1A1 antibody. Counter stained with hematoxylin.

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

Background References

1. Wang W et al. MiR-23b controls ALDH1A1 expression in cervical cancer stem cells. BMC Cancer 17:292 (2017).
2. Saunders JH et al. Individual patient oesophageal cancer 3D models for tailored treatment. Oncotarget 8:24224-24236 (2017).

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