

Anti-ALDH2 Antibody [E4-D10]

M1509-1



Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, FC
Molecular Wt:	Predicted band size: 56 kDa
Clone number:	E4-D10

Description: Aldehyde dehydrogenases (ALDHs) mediate NADP⁺-dependent oxidation of aldehydes into acids during detoxification of alcohol-derived acetaldehyde; lipid peroxidation; and metabolism of corticosteroids, biogenic amines and neurotransmitters. 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). The major liver isoform ALDH1 localizes to cytosolic space, while ALDH2 localizes to the mitochondria. The ALDH1A2 (RALDH2, RALDH2-T) gene produces three different transcripts and also catalyzes the synthesis of RA from retinaldehyde. ALDH2 is present in most Caucasians, yet is absent in 50% of Asians. The absence of this enzyme has been linked to alcohol intolerance; and thusly, a reduced risk for alcoholism-related liver disease.

Immunogen: Synthetic peptide within Human ALDH2 aa 468-517 / 517.

Positive control: HepG2 cell lysate, A549 cell lysate, NIH/3T3 cell lysate, SK-Br-3, human lung cancer tissue, human liver cancer tissue, human colon cancer tissue, human gastric cancer tissue, mouse colon tissue, mouse stomach tissue.

Subcellular location: Mitochondrion matrix.

Database links: SwissProt: P05091 Human | P47738 Mouse | P11884 Rat

Recommended Dilutions:

WB	1:1,000-1:5,000
IF-Cell	1:50-1:200
IF-Tissue	1:50-1:200
IHC-P	1:50-1:200
FC	1:50-1:100

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

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

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Images

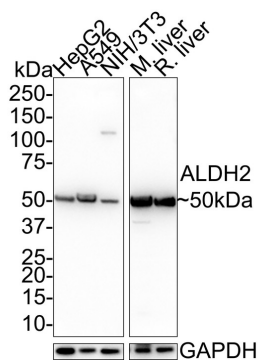


Fig1: Western blot analysis of ALDH2 on different lysates with Mouse anti-ALDH2 antibody (M1509-1) at 1/1,000 dilution.

Lane 1: HepG2 cell lysate (20 µg/Lane)

Lane 2: A549 cell lysate (20 µg/Lane)

Lane 3: NIH/3T3 cell lysate (20 µg/Lane)

Lane 4: Mouse liver tissue lysate (40 µg/Lane)

Lane 5: Rat liver tissue lysate (40 µg/Lane)

Predicted band size: 56 kDa

Observed band size: 50 kDa

Exposure time: 40 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (M1509-1) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/100,000 dilution was used for 1 hour at room temperature.

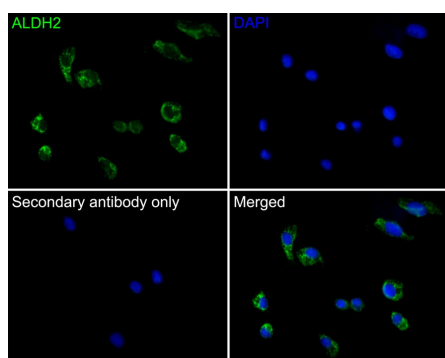


Fig2: Immunocytochemistry analysis of SK-Br-3 cells labeling ALDH2 with Mouse anti-ALDH2 antibody (M1509-1) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes, and then blocked with 2% BSA for 30 minutes at room temperature. Cells were then incubated with Mouse anti-ALDH2 antibody (M1509-1) at 1/50 dilution in 2% BSA overnight at 4 °C. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

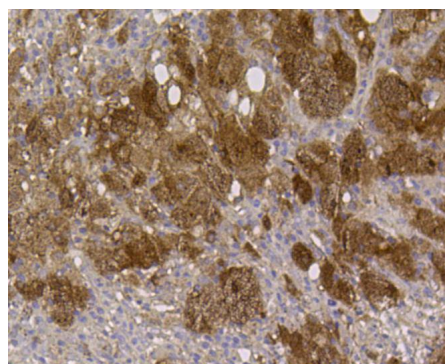


Fig3: Immunohistochemical analysis of paraffin- embedded human lung cancer tissue using anti-ALDH2 Mouse mAb.

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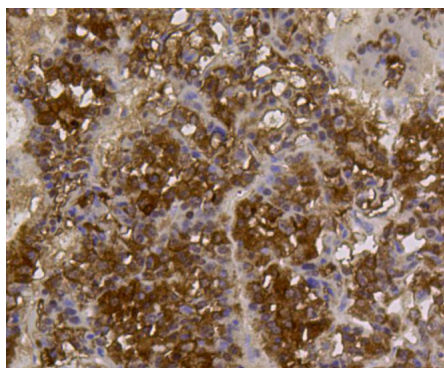


Fig4: Immunohistochemical analysis of paraffin- embedded human liver cancer tissue using anti-ALDH2 Mouse mAb.

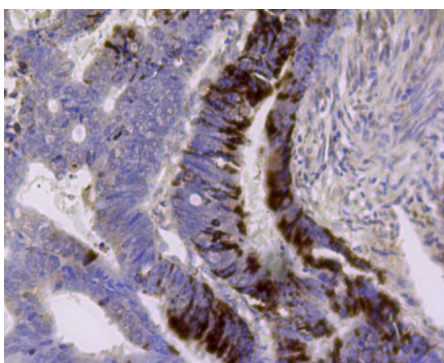


Fig5: Immunohistochemical analysis of paraffin- embedded human colon cancer tissue using anti-ALDH2 Mouse mAb.

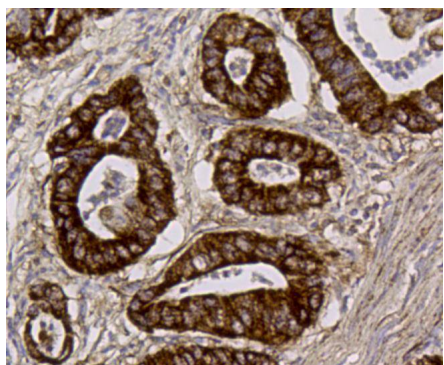


Fig6: Immunohistochemical analysis of paraffin- embedded human gastric cancer tissue using anti-ALDH2 Mouse mAb.

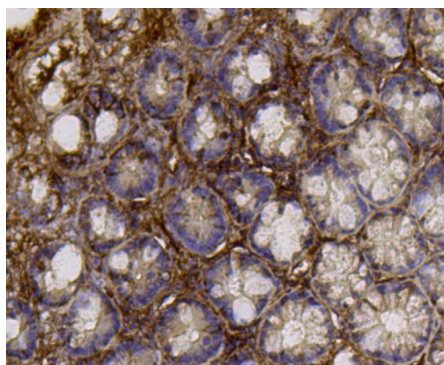


Fig7: Immunohistochemical analysis of paraffin- embedded mouse colon tissue using anti-ALDH2 Mouse mAb.

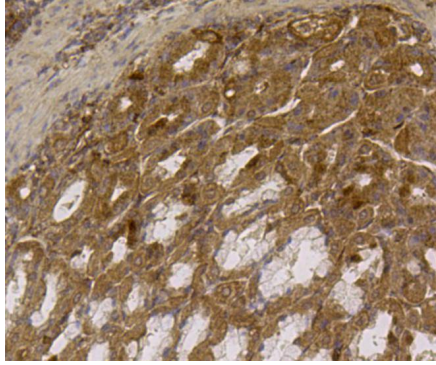


Fig8: Immunohistochemical analysis of paraffin- embedded mouse stomach tissue using anti-ALDH2 Mouse mAb.

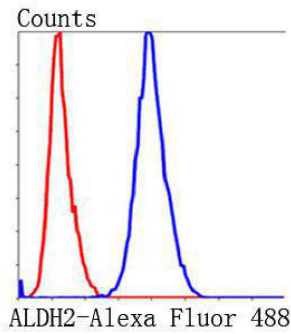


Fig9: Flow cytometric analysis of HepG2 cells with ALDH2 antibody at 1/100 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody; red). Alexa Fluor 488-conjugated Goat anti mouse IgG was used as the secondary antibody.

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

Background References

1. Yu YH et al. PKC-ALDH2 Pathway Plays a Novel Role in Adipocyte Differentiation. PLoS One 11:e0161993 (2016).
2. Ferrand N et al. Loss of WISP2/CCN5 in estrogen-dependent MCF7 human breast cancer cells promotes a stem-like cell phenotype. PLoS One 9:e87878 (2014).

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