

Mouse anti-Human ALDH1A1 Monoclonal Antibody | anti-ALDH1A1 antibody

Anti-ALDH1A1 Antibody Picoband (monoclonal, 4C3)

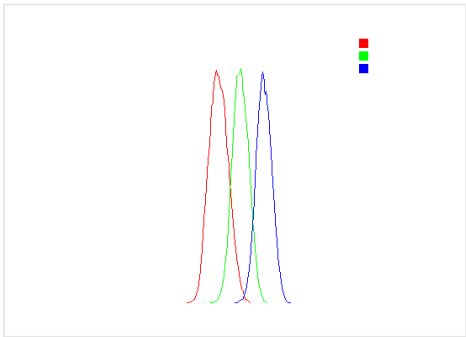
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA126891	Mouse	Human	Flow Cytometry, Functional Assay, Immunofluorescence, Immunocytochemistry, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

ALDH1A1; Monoclonal Antibody; Anti-ALDH1A1 Antibody Picoband (monoclonal; 4C3); anti-ALDH1A1 antibody

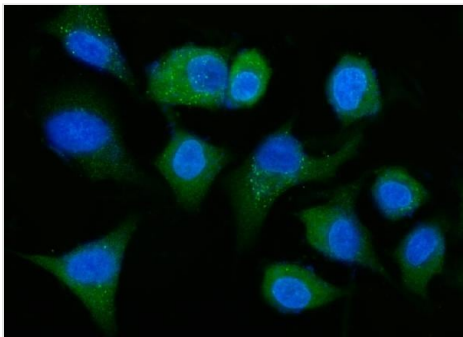
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG2a
Clone Number	4C3
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. (varies by lot)
Applicable Applications for anti-ALDH1A1 antibody	FCM/FACS (Flow Cytometry), IF (Immunofluorescence), ICC (Immunocytochemistry), IHC (Immunohistochemistry), WB (Western Blot)
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Immunogen	E Coli-derived human ALDH1A1 recombinant protein (Position: T6-Q342).
Preparation and Storage	Store at -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months. Avoid repeated freezing and thawing.



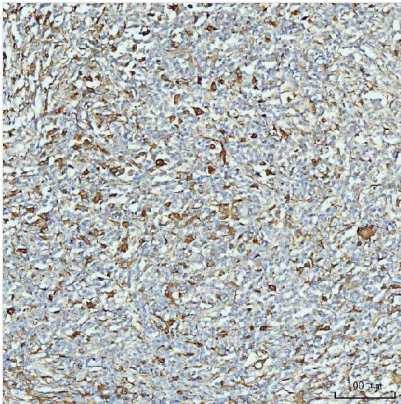
FCM/FACS (Flow Cytometry)

Figure 5. Flow Cytometry analysis of HepG2 cells using anti-ALDH1A1 antibody (AAA126891).Overlay histogram showing HepG2 cells stained with AAA126891 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-ALDH1A1 Antibody (AAA126891, 1 ug/1x10⁶ cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-mouse IgG was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



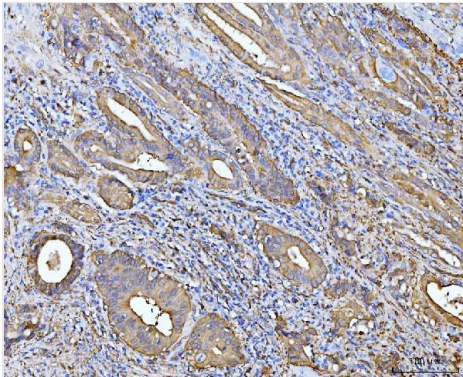
IF (Immunofluorescence)

Figure 4. IF analysis of ALDH1A1 using anti-ALDH1A1 antibody (AAA126891).ALDH1A1 was detected in an immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL mouse anti-ALDH1A1 Antibody (AAA126891) overnight at 4 degree C. DyLight488 Conjugated Goat Anti-Mouse IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



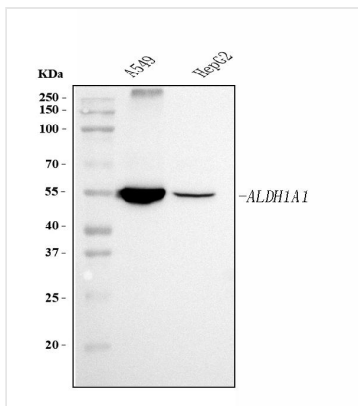
IHC (Immunohistochemisry)

Figure 3. IHC analysis of ALDH1A1 using anti-ALDH1A1 antibody (AAA126891).ALDH1A1 was detected in a paraffin-embedded section of human lymphadenoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-ALDH1A1 Antibody (AAA126891) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (#SA1021) with DAB as the chromogen.



IHC (Immunohiostchemistry)

Figure 2. IHC analysis of ALDH1A1 using anti-ALDH1A1 antibody (AAA126891).ALDH1A1 was detected in a paraffin-embedded section of human gall bladder adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-ALDH1A1 Antibody (AAA126891) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (#SA1021) with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of ALDH1A1 using anti-ALDH1A1 antibody (AAA126891). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human A549 whole cell lysates, Lane 2: human HepG2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-ALDH1A1 antigen affinity purified monoclonal antibody (#AAA126891) at 0.5 ug/mL overnight at 4 degree C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for ALDH1A1 at approximately 55 kDa. The expected band size for ALDH1A1 is at 55 kDa.

ADDITIONAL INFORMATION

Related Product Information for anti-ALDH1A1 antibody	Aldehyde dehydrogenase 1 family, member A1, also known as ALDH1A1 or retinaldehyde dehydrogenase 1 (RALDH1), is an enzyme that in humans is encoded by the ALDH1A1 gene. It is mapped to 9q21.13. The protein encoded by this gene belongs to the aldehyde dehydrogenase family. Aldehyde dehydrogenase is the next enzyme after alcohol dehydrogenase in the major pathway of alcohol metabolism. There are two major aldehyde dehydrogenase isozymes in the liver, cytosolic and mitochondrial, which are encoded by distinct genes, and can be distinguished by their electrophoretic mobility, kinetic properties, and subcellular localization. This gene encodes the cytosolic isozyme. Studies in mice show that through its role in retinol metabolism, this gene may also be involved in the regulation of the metabolic responses to high-fat diet.
Product Categories/Family for anti-ALDH1A1 antibody	Primary Antibodies , Mouse Monoclonal Antibodies

NCBI AND UNIPROT INFORMATION

NCBI GI #	118495
NCBI GeneID	216
UniProt Accession #	P00352 ; O00768 ; Q5SYR1
Molecular Weight	501
NCBI Official Full Name	Retinal dehydrogenase 1
NCBI Official Synonym Full Names	aldehyde dehydrogenase 1 family, member A1
NCBI Official Symbol	ALDH1A1
NCBI Official Synonym Symbols	ALDC; ALDH1; HEL-9; HEL12; PUMB1; ALDH11; RALDH1; ALDH-E1; HEL-S-53e
NCBI Protein Information	retinal dehydrogenase 1; ALHDII; RALDH 1; ALDH class 1; acetaldehyde dehydrogenase 1; epididymis luminal protein 9; epididymis luminal protein 12; retinaldehyde dehydrogenase 1; aldehyde dehydrogenase 1, soluble; aldehyde dehydrogenase, liver cytosolic; e
UniProt Protein Name	Retinal dehydrogenase 1

UniProt Gene Name	ALDH1A1
UniProt Synonym Gene Names	ALDC; ALDH1; PUMB1; RALDH 1; RaIDH1
UniProt Entry Name	AL1A1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/aldh1a1-antibody-clone-4c3-flow-cytometry-immunofluorescence-immunocytochemistry-immunohistochemistry-western-blot-elisa/126891>