

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

Anti-ALDH1A1 Antibody, Mouse Monoclonal

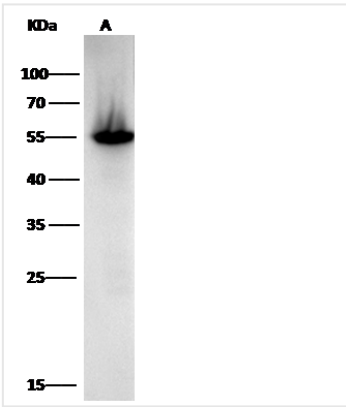
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA255410	Mouse	Human	Immunofluorescence, Immunocytochemistry, Flow Cytometry, Functional Assay, ELISA, Western Blot

PRODUCT SYNONYMS

ALDH1A1; Monoclonal Antibody; Anti-ALDH1A1 Antibody; Mouse Monoclonal; ALDH1/ALDH1A1/ALDC Antibody; Mouse MAb; aldehyde dehydrogenase 1 family; member A1; Anti-ALDC Antibody; Anti-ALDH-E1 Antibody; Anti-ALDH1 Antibody; Anti-ALDH11 Antibody; Anti-HEL-9 Antibody; Anti-HEL-S-53e Antibody; Anti-HEL12 Antibody; Anti-PUMB1 Antibody; Anti-RALDH1 Antibody; anti-ALDH1A1 antibody

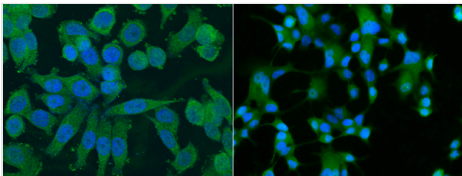
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Number	5G9E6C9
Specificity	Human ALDH1A1. No cross-reactivity in ELISA with E Coli cell lysate
Purity/Purification	Protein A
Form/Format	Liquid; 0.2um filtered solution in PBS
Applicable Applications for anti-ALDH1A1 antibody	IF (Immunofluorescence), ICC (Immunocytochemistry), FCM/FACS (Flow Cytometry), ELISA, WB (Western Blot)
Immunogen	Recombinant Human ALDH1 protein
Conjugation	Unconjugated
Preparation	This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant Human ALDH1 (rh ALDH1). The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography .
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.



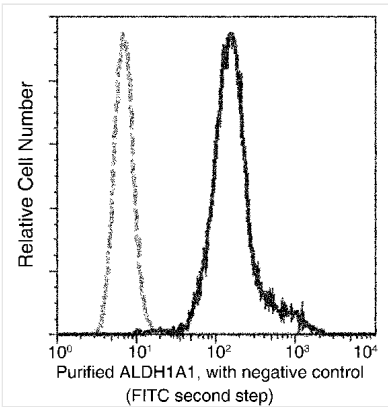
WB (Western Blot)

Anti-ALDH1A1 mouse monoclonal antibody at 1:500 dilutionLane A: HepG2 Whole Cell LysateLysates/proteins at 30 ug per lane.SecondaryRabbit Anti-Mouse IgG F(ab)2/HRP at 1/10000 dilution.Developed using the ECL technique.Performed under reducing conditions.Predicted band size:55 kDaObserved band size:55 kDa



IF (Immunofluorescence)

Immunofluorescence staining of Human ALDH1A1 in MCF7 or SKBR3 cells. Cells were fixed with 4% PFA, permeabilized with 1% Triton X-100 in PBS, blocked with 10% serum, and incubated with mouse anti-Human ALDH1A1 monoclonal antibody (1:60). Then cells were stained with the Alexa Fluor 488-conjugated Goat Anti-mouse IgG secondary antibody (left panel, captured by laser confocal scanning microscope; right panel, captured by fluorescence microscope), countstained with DAPI (blue). Positive staining was localized to cytoplasm.



FCM/FACS (Flow Cytometry)

Flow cytometric analysis of Human ALDH1A1 on A549 cells. Cells were treated according to manufacturer's manual (BD Pharmingen), stained with purified anti-Human ALDH1A1, then a FITC-conjugated second step antibody. The histogram were derived from gated events with the forward and side light-scatter characteristics of intact cells.

ADDITIONAL INFORMATION

Related Product Information for anti-ALDH1A1 antibody	Aldehyde dehydrogenase 1 family, member A1 (ALDH1A1), also known as Aldehyde dehydrogenase 1 (ALDH1), or Retinaldehyde Dehydrogenase 1 (RALDH1), is an enzyme that is expressed at high levels in stem cells and that has been suggested to regulate stem cell function. The retinaldehyde dehydrogenase (RALDH) subfamily of ALDHs, composed of ALDH1A1, ALDH1A2, ALDH1A3, and ALDH8A1, regulate development by catalyzing retinoic acid biosynthesis. The ALDH1A1 protein belongs to the aldehyde dehydrogenases family of proteins. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. ALDH1A1 also belongs to the group of corneal crystallins that help maintain the transparency of the cornea. Increased ALDH1A1 activity has been found in the stem cell populations of leukemia and some solid tumors. In tumor specimens, increased ALDH1A1 immunopositivity was found not only in secretory type cancer epithelial cells but also in neuroendocrine tumor populations. ALDH1 has been identified as a reliable marker of breast cancer stem cells. ALDH1 expression in primary cancer is an independent prognostic factor in node-positive breast cancer patients. ALDH1A1 plays a key role in normal hematopoiesis, and as a TLX1 transcriptional target, ALDH1A1 may contribute to the ability of this homeoprotein to alter cell fate and induce tumor growth.
References	Li T, et al. (2010). ALDH1A1 is a marker for malignant prostate stem cells and predictor of prostate cancer patients' outcome. Lab Invest. 90(2): 234-44.Levi BP, et al. (2009) Aldehyde dehydrogenase 1a1 is dispensable for stem cell function in the mouse hematopoietic and nervous systems. Blood. 113(8): 1670-80.Rahman FB, et al. (2006) Uncompetitive inhibition of Xenopus laevis aldehyde dehydrogenase 1A1 by divalent cations. Zoolog Sci. 23(3): 239-44.Jester JV, et al. (1999). The cellular basis of corneal transparency: evidence for corneal crystallins. J Cell Sci. 112 (Pt 5): 613-22.

NCBI AND UNIPROT INFORMATION

NCBI GI #	21361176
NCBI GeneID	216

NCBI Accession #	NP_000680.2
NCBI GenBank Nucleotide #	NM_000689.4
UniProt Accession #	P00352 ; O00768 ; Q5SYR1
Molecular Weight	54,862 Da
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; ALDH class 1; ALHDII; RALDH 1; acetaldehyde dehydrogenase 1; aldehyde dehydrogenase 1, soluble; aldehyde dehydrogenase, liver cytosolic; epididymis luminal protein 12; epididymis luminal protein 9; epididymis secretory sperm bindi
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-5g9e6c9-immunofluorescence-immunocytochemistry-flow-cytometry-western-blot-elisa/255410>