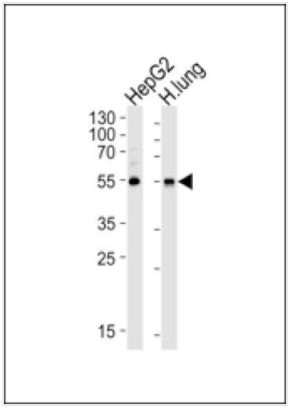
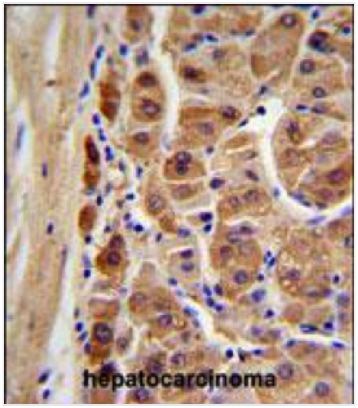
ALDH1A1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

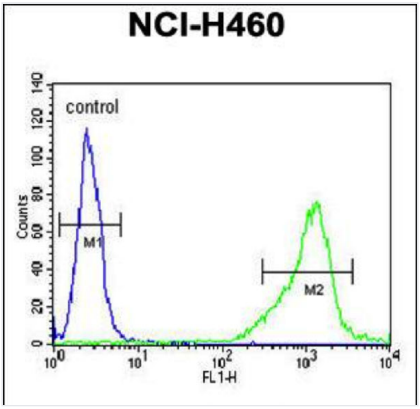
Product Name	ALDH1A1, Polyclonal Antibody
Full Product Name	ALDH1A1 (Retinal Dehydrogenase 1, RalDH1, RALDH 1, Aldehyde Dehydrogenase Family 1 Member A1, Aldehyde Dehydrogenase, Cytosolic, ALHDII, ALDH-E1, ALDH1A1, ALDC, ALDH1, PUMB1) (AP)
Product Gene Name	anti-ALDH1A1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase (AP).
Purity/Purification	Purified by Protein A Affinity Chromatography
Specificity	Recognizes human ALDH1A1.
Preparation and Storage	May be stored at 4 degree C for short-term only. Do not freeze alkaline phosphatase conjugates which could result in a substantial loss of enzymatic activity. Light sensitive. Aliquots are stable for at least 6 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	54.8 kDa (501aa), confirmed by MALDI-TOF.
OMIM	100640
3D Structure	ModBase 3D Structure for P00352
Immunogen	Recombinant protein corresponding to human ALDH1A1 (NP_000680; P00352)
Conjugate	AP
Note	Preservative Free
Product Categories/Family for anti-ALDH1A1 antibody	Antibodies; Enzymes; Dehydrogenase
Applications Tested/Suitable for anti-ALDH1A1 antibody	Western Blot (WB), ELISA (EIA), Immunohistochemistry (IHC)
Application Notes for anti-ALDH1A1 antibody	WB: 1:100-1:500 ELISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-ALDH1A1 antibody	MBS6462303 is an antibody targeting ALDH1A1. Also known as ALDH1A1 (Retinal Dehydrogenase 1, RalDH1, RALDH 1, Aldehyde Dehydrogenase Family 1 Member A1, Aldehyde Dehydrogenase, Cytosolic, ALHDII, ALDH-E1, ALDH1A1, ALDC, ALDH1, PUMB1) (AP). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-ALDH1A1 antibody	1. Moore, S., J Stud Alcohol Drugs 68(2), 192-196 (2007). 2. Collard, F., Biochimie 89(3), 369-373 (2007).
Other Notes	Small volumes of anti-ALDH1A1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



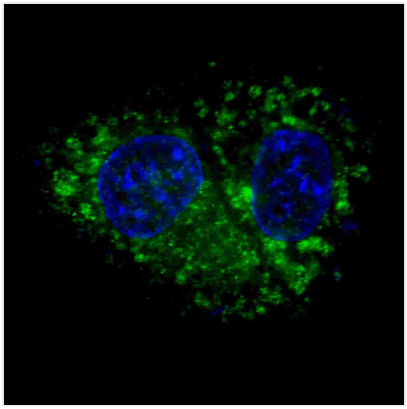
Western Blot (WB) of anti-ALDH1A1 antibody
Western Blot analysis of lysates from HepG2 cell line and human lung tissue lysate (from left to right), using MBS624608 (1:1000 at each lane). An IgG H&L (HRP) goat anti-rabbit (1:5000) was used as the secondary antibody. Lysates at 35ug per lane.



Immunohistochemistry (IHC) of anti-ALDH1A1 antibody
Immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma using MBS624608 followed by peroxidase conjugation of the secondary antibody and DAB staining.



Flow Cytometry (FC/FACS) of anti-ALDH1A1 antibody
Flow cytometric analysis of NCI-H460 cells (right histogram) using MBS624608 compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Immunofluorescence (IF) of anti-ALDH1A1 antibody
Fluorescent confocal image of HepG2 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with MBS624608 (1:100, 2 h at RT). For secondary antibody, Alexa Fluor 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10ug/ml, 5 min). ALDH1A1 immunoreactivity is localized to the cytoplasm of HepG2 cells.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ALDH1A1. It may not necessarily be applicable to this product.

NCBI GI #	21361176
NCBI GeneID	216
NCBI Accession #	NP_000680
UniProt Primary Accession #	P00352
UniProt Secondary Accession #	O00768; Q5SYR1
UniProt Related Accession #	P00352
GenBank Nucleotide #	NM_000689.4
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
UniProt Protein Name	Retinal dehydrogenase 1

UniProt Synonym Protein Names	ALDH-E1; ALHDII; Aldehyde dehydrogenase family 1 member A1; Aldehyde dehydrogenase, cytosolic
Protein Family	Retinal dehydrogenase
UniProt Gene Name	ALDH1A1
UniProt Synonym Gene Names	ALDC; ALDH1; PUMB1; RALDH 1; RalDH1
UniProt Entry Name	AL1A1_HUMAN
NCBI Protein Information	retinal dehydrogenase 1
NCBI Summary for ALDH1A1	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. [provided by RefSeq, Mar 2011]
UniProt Comments for ALDH1A1	ALDH1A1: Binds free retinal and cellular retinol-binding protein- bound retinal. Can convert/oxidize retinaldehyde to retinoic acid. Belongs to the aldehyde dehydrogenase family. Protein type: GAPs, Ras; EC 1.2.1.36; GAPs; Cofactor and Vitamin Metabolism - retinol; Apoptosis; Oxidoreductase Chromosomal Location of Human Ortholog: 9q21.13 Cellular Component: cytoplasm; cytosol Molecular Function: aldehyde dehydrogenase (NAD) activity; androgen binding; 3-chloroallyl aldehyde dehydrogenase activity; benzaldehyde dehydrogenase (NAD+) activity; retinal dehydrogenase activity Biological Process: retinol metabolic process; xenobiotic metabolic process; aldehyde metabolic process; ethanol oxidation
Research Articles on ALDH1A1	**1.** CD44 and ALDH are the most specific biomarkers to detect and isolate tumorigenic and chemoresistant gastric CSCs in noncardia gastric carcinomas independently of the histologic classification of the tumor.
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