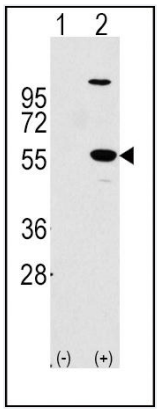
ALDH1A1 Antibody – Rabbit Polyclonal

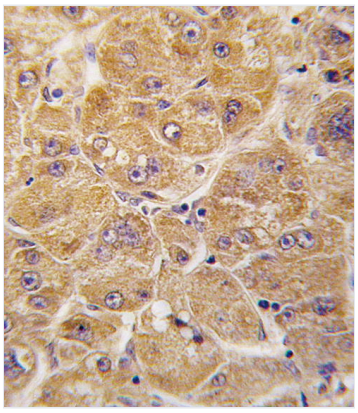
PRODUCT OVERVIEW

Product Name	ALDH1A1, Polyclonal Antibody
Full Product Name	ALDH1A1, ID (Retinal Dehydrogenase 1, RalDH1, RALDH 1, Aldehyde Dehydrogenase Family 1 Member A1, Aldehyde Dehydrogenase, Cytosolic, ALHDII, ALDH-E1, ALDH1A1, ALDC, ALDH1, PUMB1) (PE)
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 R-Phycoerythrin (PE).
Purity/Purification	Purified by Protein A/G Affinity Chromatography.
Specificity	Recognizes human ALDH1A1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: PE conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial 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	KLH-conjugated synthetic peptide mapping to a fragment of residues within amino acids 302-331 in the central region of human ALDH1A1, UniProt Accession #P00352. Species sequence homology: monkey, mouse
Conjugate	PE
Note	Preservative Free
Special Handling	Light sensitive
Product Categories/Family for anti-ALDH1A1 antibody	Antibodies; Enzymes; Dehydrogenase
Applications Tested/Suitable for anti-ALDH1A1 antibody	Immunofluorescence (IF), FLISA, Immunohistochemistry (IHC), Western Blot (WB)
Application Notes for anti-ALDH1A1 antibody	IF: 1:10-1:50 FLISA: 1:1,000 IHC: 1:50 WB: 1:50-1:100 Applications are based on unconjugated antibody.
Related Product Information for anti-ALDH1A1 antibody	MBS6462280 is an antibody targeting ALDH1A1. Also known as ALDH1A1, ID (Retinal Dehydrogenase 1, RalDH1, RALDH 1, Aldehyde Dehydrogenase Family 1 Member A1, Aldehyde Dehydrogenase, Cytosolic, ALHDII, ALDH-E1, ALDH1A1, ALDC, ALDH1, PUMB1) (PE). 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).

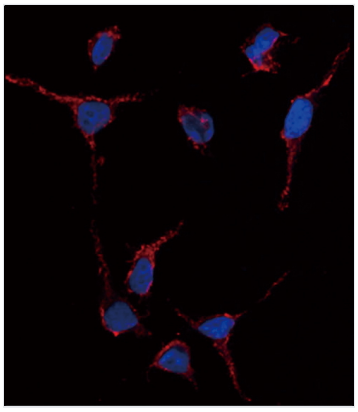
Other Notes	Small volumes of anti-ALDH1A1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



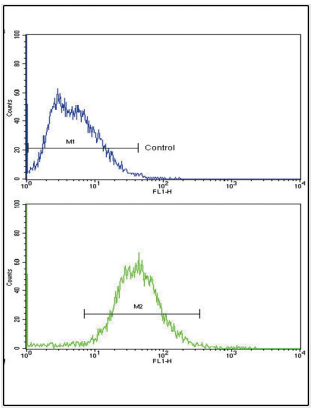
Western Blot (WB) of anti-ALDH1A1 antibody
Western blot analysis of ALDH1A1 (arrow) usingMBS627327. 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the ALDH1A1 gene (Lane 2) (Origene Technologies).



Immunohistochemistry (IHC) of anti-ALDH1A1 antibody
Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted usingMBS627327, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.



Immunofluorescence (IF) of anti-ALDH1A1 antibody
Immunofluorescence analysis of in HeLa cells usingMBS627327. 0.025 mg/ml primary antibody was followed by Alexa-Fluor-546-conjugated donkey anti-rabbit IgG (H+L). Alexa-Fluor-546 emits orange fluorescence. Blue counterstaining is DAPI.



Flow Cytometry (FC/FACS) of anti-ALDH1A1 antibody
Flow cytometric analysis of HepG2 cells using MBS627327 (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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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