

Anti-ALDH1A1 Rabbit Monoclonal Antibody
Catalog # ABO13884**Specification****Anti-ALDH1A1 Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	P00352
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-ALDH1A1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry, IP applications. This antibody reacts with Human, Mouse, Rat.

Anti-ALDH1A1 Rabbit Monoclonal Antibody - Additional Information

Gene ID 216

Other Names

Aldehyde dehydrogenase 1A1, 1.2.1.19, ALDH1A1 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=402)
HGNC:402

Calculated MW

54862 MW KDa

Application Details

WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200
IP 1:50
FC 1:50

Subcellular Localization

Cytoplasm.

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human ALDH1A1

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-ALDH1A1 Rabbit Monoclonal Antibody - Protein Information

Name ALDH1A1 ([HGNC:402](#))

Function

Cytosolic dehydrogenase that catalyzes the irreversible oxidation of a wide range of aldehydes to their corresponding carboxylic acid (PubMed:[12941160](http://www.uniprot.org/citations/12941160), PubMed:[15623782](http://www.uniprot.org/citations/15623782), PubMed:[17175089](http://www.uniprot.org/citations/17175089), PubMed:[19296407](http://www.uniprot.org/citations/19296407), PubMed:[25450233](http://www.uniprot.org/citations/25450233), PubMed:[26373694](http://www.uniprot.org/citations/26373694)). Functions downstream of retinol dehydrogenases and catalyzes the oxidation of retinaldehyde into retinoic acid, the second step in the oxidation of retinol/vitamin A into retinoic acid (By similarity). This pathway is crucial to control the levels of retinol and retinoic acid, two important molecules which excess can be teratogenic and cytotoxic (By similarity). Also oxidizes aldehydes resulting from lipid peroxidation like (E)-4-hydroxynon-2-enal/HNE, malonaldehyde and hexanal that form protein adducts and are highly cytotoxic. By participating for instance to the clearance of (E)-4-hydroxynon-2-enal/HNE in the lens epithelium prevents the formation of HNE-protein adducts and lens opacification (PubMed:[12941160](http://www.uniprot.org/citations/12941160), PubMed:[15623782](http://www.uniprot.org/citations/15623782), PubMed:[19296407](http://www.uniprot.org/citations/19296407)). Also functions downstream of fructosamine-3-kinase in the fructosamine degradation pathway by catalyzing the oxidation of 3-deoxyglucosone, the carbohydrate product of fructosamine 3-phosphate decomposition, which is itself a potent glycating agent that may react with lysine and arginine side-chains of proteins (PubMed:[17175089](http://www.uniprot.org/citations/17175089)). Also has an aminobutyraldehyde dehydrogenase activity and is probably part of an alternative pathway for the biosynthesis of GABA/4-aminobutanoate in midbrain, thereby playing a role in GABAergic synaptic transmission (By similarity).

Cellular Location

Cytoplasm, cytosol. Cell projection, axon {ECO:0000250|UniProtKB:P24549}

Tissue Location

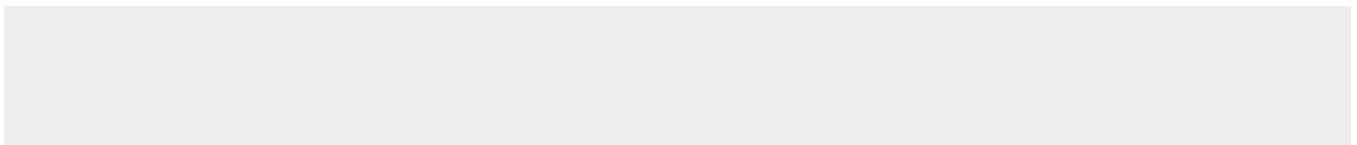
Expressed by erythrocytes (at protein level).

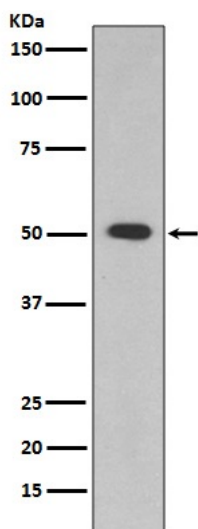
Anti-ALDH1A1 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

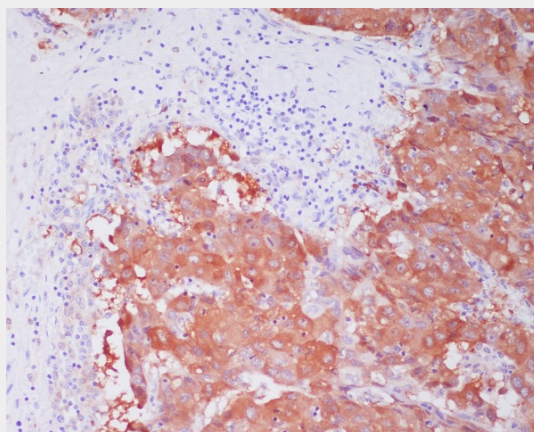
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-ALDH1A1 Rabbit Monoclonal Antibody - Images





Western blot analysis of ALDH1A1 expression in HepG2 cell lysate.



Immunohistochemical analysis of paraffin-embedded human liver cancer, using ALDH1A1 Antibody.