

ALDH1A1 Antibody - C-terminal region
Rabbit Polyclonal Antibody
Catalog # AI16094**Specification**

ALDH1A1 Antibody - C-terminal region - Product Information

Application	WB
Primary Accession	P00352
Other Accession	XP_005251857
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55kDa KDa

ALDH1A1 Antibody - C-terminal region - Additional Information**Gene ID 216**

Alias Symbol **ALDH1A1, ALDC, ALDH1, PUMB1,**
Other Names

Retinal dehydrogenase 1, RALDH 1, RaLDH1, 1.2.1.36, ALDH-E1, ALHDII, Aldehyde dehydrogenase family 1 member A1, Aldehyde dehydrogenase, cytosolic, ALDH1A1, ALDC, ALDH1, PUMB1

Format

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage

Add 50 µl of distilled water. Final Anti-ALDH1A1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.

Precautions

ALDH1A1 Antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

ALDH1A1 Antibody - C-terminal region - 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, PubMed:15623782, PubMed: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). 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

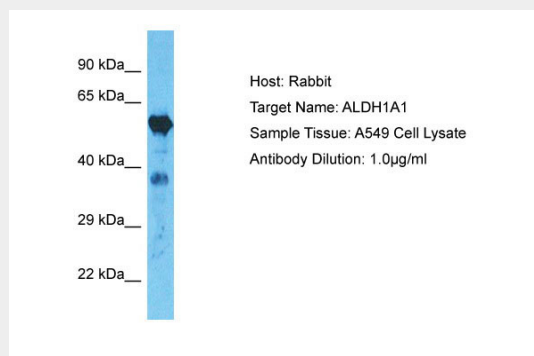
Expressed by erythrocytes (at protein level).

ALDH1A1 Antibody - C-terminal region - 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](#)

ALDH1A1 Antibody - C-terminal region - Images



Host: Rabbit
Target Name: ALDH1A1
Sample Tissue: A549 Whole cell lysate

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Antibody Dilution: 1.0µg/ml

ALDH1A1 Antibody - C-terminal region - Background

Binds free retinal and cellular retinol-binding protein- bound retinal. Can convert/oxidize retinaldehyde to retinoic acid (By similarity).

ALDH1A1 Antibody - C-terminal region - References

Hsu L.C.,et al.Genomics 5:857-865(1989).
Zheng C.F.,et al.Alcohol. Clin. Exp. Res. 17:828-831(1993).
Ramana K.V.,et al.Submitted (SEP-2003) to the EMBL/GenBank/DDBJ databases.
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Humphray S.J.,et al.Nature 429:369-374(2004).