

**ALDH4A1 Antibody (monoclonal) (M01)****Mouse monoclonal antibody raised against a full length recombinant ALDH4A1.****Catalog # AT1114a****Specification**

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**ALDH4A1 Antibody (monoclonal) (M01) - Product Information**

Application	<b>WB, IHC, E</b>
Primary Accession	<a href="#">P30038</a>
Other Accession	<a href="#">BC007581</a>
Reactivity	<b>Human</b>
Host	<b>mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1 kappa</b>
Calculated MW	<b>61719</b>

**ALDH4A1 Antibody (monoclonal) (M01) - Additional Information****Gene ID** 8659**Other Names**

Delta-1-pyrroline-5-carboxylate dehydrogenase, mitochondrial, P5C dehydrogenase, Aldehyde dehydrogenase family 4 member A1, L-glutamate gamma-semialdehyde dehydrogenase, ALDH4A1, ALDH4, P5CDH

**Target/Specificity**

ALDH4A1 (AAH07581, 1 a.a. ~ 563 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

**Dilution**

WB~~1:500~1000

**Format**

Clear, colorless solution in phosphate buffered saline, pH 7.2 .

**Storage**

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

**Precautions**

ALDH4A1 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

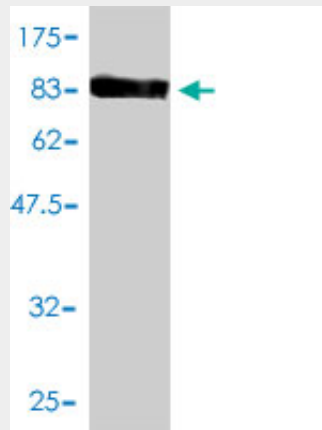
**ALDH4A1 Antibody (monoclonal) (M01) - Protocols**

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

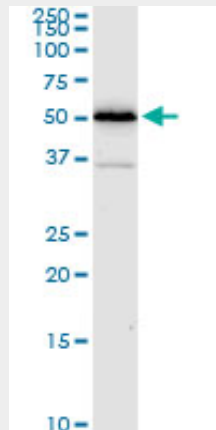
- [Western Blot](#)
- [Blocking Peptides](#)

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

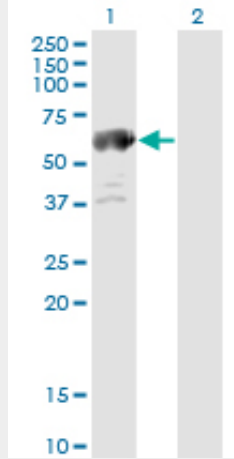
### ALDH4A1 Antibody (monoclonal) (M01) - Images



Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (87.67 KDa) .

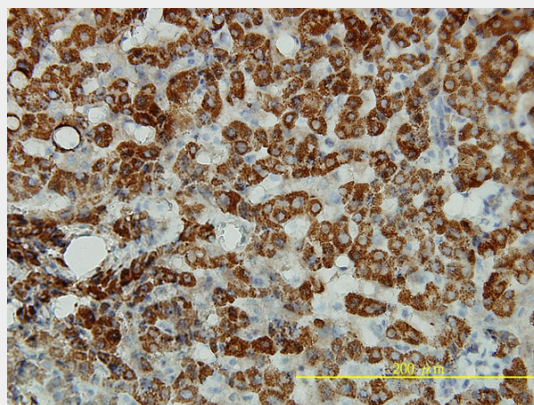


ALDH4A1 monoclonal antibody (M01), clone 1A12-A5. Western Blot analysis of ALDH4A1 expression in A-431 (Cat # AT1114a )

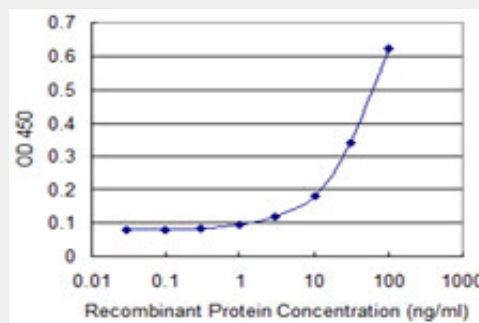


Western Blot analysis of ALDH4A1 expression in transfected 293T cell line by ALDH4A1 monoclonal antibody (M01), clone 1A12-A5.

Lane 1: ALDH4A1 transfected lysate(61.7 KDa).  
 Lane 2: Non-transfected lysate.



Immunoperoxidase of monoclonal antibody to ALDH4A1 on formalin-fixed paraffin-embedded human liver tissue.[antibody concentration 5 ug/ml]



Detection limit for recombinant GST tagged ALDH4A1 is approximately 0.1ng/ml as a capture antibody.

### ALDH4A1 Antibody (monoclonal) (M01) - Background

This protein belongs to the aldehyde dehydrogenase family of proteins. This enzyme is a mitochondrial matrix NAD-dependent dehydrogenase which catalyzes the second step of the proline degradation pathway, converting pyrroline-5-carboxylate to glutamate. Deficiency of this enzyme is associated with type II hyperprolinemia, an autosomal recessive disorder characterized by

accumulation of delta-1-pyrroline-5-carboxylate (P5C) and proline. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene.

#### **ALDH4A1 Antibody (monoclonal) (M01) - References**

A Large-scale genetic association study of esophageal adenocarcinoma risk. Liu CY, et al. *Carcinogenesis*, 2010 Jul. PMID 20453000. Genetic variants in TPMT and COMT are associated with hearing loss in children receiving cisplatin chemotherapy. Ross CJ, et al. *Nat Genet*, 2009 Dec. PMID 19898482. The DNA sequence and biological annotation of human chromosome 1. Gregory SG, et al. *Nature*, 2006 May 18. PMID 16710414. Transcriptome analysis of human gastric cancer. Oh JH, et al. *Mamm Genome*, 2005 Dec. PMID 16341674. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Gerhard DS, et al. *Genome Res*, 2004 Oct. PMID 15489334.