

# Recombinant Human Aldehyde Dehydrogenase 1 Family, Member A1

**Cat. No.** ALDH1A1-484H    **Lot. No.** (See product label)

## SPECIFICATION

### Product Overview

Recombinant human ALDH1A1 protein was expressed in *E.coli* and purified by using conventional chromatography techniques. MW = 54.8 kDa (501aa).

### Species

Human

### Source

*E.coli*

### Description

Aldehyde dehydrogenase 1A1 (ALDH1A1), also known as retinal dehydrogenase 1, is the second enzyme of the major oxidative pathway of alcohol metabolism. Two major liver isoforms of this enzyme, cytosolic and mitochondrial, can be distinguished by their electrophoretic mobilities, kinetic properties, and subcellular localizations. ALDH1A1 also belongs to the group of corneal crystallins that help maintain the transparency of the cornea. (Retinal + NAD<sup>+</sup> + H<sub>2</sub>O = retinoate + NADH).

### Amino Acid Sequence

MSSSGTPDLP VLLTDLKIY TKIFINNEWH DSVSGKKFPV FNPATEEELC  
 QVEEGDKEDV DKAVKAARQA FQIGSPWRTM DASERGRLLY KLADLIERDR  
 LLLATMESMN GGKLYSNAYL NDLAGCIKTL RYCAGWADKI QGRTIPIDGN  
 FFTYTRHEPI GVCGQIIPWN FPLVMLIWKI GPALSCGNTV VVKPAEQTPL  
 TALHVASLIK EAGFPPGVVN IVPGYGPTAG AAISSHMDID KVAFTGSTEV  
 GKLIKEAAGK SNLKRVTLLEL GKGSPCIVLA DADLDNAVEF AHHG VFYHQG  
 QCCIAASRIF VEESIYDEFV RRSVERAKKY ILGNPLTPGV TQGPQIDKEQ  
 YDKILD LIES GKKEGAKLEC GGGPWGNKGY FVQPTVFSNV TDEMRIAKEE  
 IFGPVQQIMK FKSLDDVIKR ANNTFYGLSA GVFTKIDIDKA ITISSALQAG

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TVWVNCYGVV SAQCPFGGFK MSGNGRELGE YGFHEYTEVK TVTVKISQKN S

**Form** Liquid. In 50mM Tris-HCl buffer (pH7.5) containing 10% glycerol.

**Purity** > 90% by SDS – PAGE.

**Concentration** 1 mg/ml (determined by Bradford assay).

**Storage** Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

## GENE INFORMATION

**Gene Name** [ALDH1A1 aldehyde dehydrogenase 1 family, member A1 \[ Homo sapiens \]](#)

**Synonyms** ALDH1A1; aldehyde dehydrogenase 1 family, member A1; ALDC; ALDH1; PUMB1; ALDH11; RALDH1; ALDH-E1; MGC2318; aldehyde dehydrogenase 1A1; ALDH class 1; retinal dehydrogenase 1; acetaldehyde dehydrogenase 1; retinaldehyde dehydrogenase 1; aldehyde dehydrogenase 1, soluble; aldehyde dehydrogenase, liver cytosolic

**Gene ID** [216](#)

**mRNA Refseq** [NM\\_000689](#)

**Protein Refseq** [NP\\_000680](#)

**MIM** [100640](#)

**UniProt ID** [P00352](#)

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<b>Chromosome Location</b>	9q21.13
<b>Pathway</b>	Retinol metabolism; Biological oxidations
<b>Function</b>	Ras GTPase activator activity; aldehyde dehydrogenase (NAD) activity; androgen binding; oxidoreductase activity; retinal dehydrogenase activity

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