

Recombinant Human ALDH1A1 protein

Cat. No. ALDH1A1-27035TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ALDH1A1(1-501aa) was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	1-501 a.a.
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 ⁺ + H ₂ O = retinoate + NADH).
Form	Liquid. In 50mM Tris-HCl buffer (pH7.5) containing 10% glycerol
Molecular Mass	54.8 kDa (501aa), confirmed by MALDI-TOF.
AA Sequence	MSSSGTPDLP VLLTDLKIY TKIFINNEWH DSVSGKKFPV FNPATEEELC QVEEGDKEDV DKAVKAARQA FQIGSPWRM DASERGRLLYKLADLIERDR LLLATMESMN GGKLYSNAYL NDLAGCIKTL RYCAGWADKI QGRTIPIDGN FFTYTRHEPI GVCQGIIIPWN FPLVMLIWKIGPALSCGNTV VVKPAEQTPL TALHVASLIK EAGFPPGVVN IVPGYGPTAG AAISSHMDID KVAFTGSTEV GKLIKEAAGK SNLKRVTLLEGGKSPCIVLA DADLDNAVEF AHHGVFYHQG

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QCCIAASRIF VEESYDEFV RRSVERAKKY ILGNPLTPGV TQGPQIDKEQ
 YDKILDRIESGKKEGAKLEC GGGPWGNKGY FVQPTVFSNV TDEMRIAKEE
 IFGPVQQIMK FKSLDDVIKR ANNTFYGLSA GVFTKDIDKA
 ITISSALQAGTVWVNCYGVV SAQCPCFGGFK MSGNGRELGE YGFHEYTEVK
 TVTVKISQKN S

Purity > 90% by SDS - PAGE

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

Concentration 1 mg/ml (determined by Bradford assay)

GENE INFORMATION

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

Official Symbol [ALDH1A1](#)

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

Gene ID [216](#)

mRNA Refseq [NM_000689](#)

Protein Refseq [NP_000680](#)

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MIM	100640
UniProt ID	P00352
Chromosome Location	9q21.13
Pathway	Biological oxidations, organism-specific biosystem; Ethanol oxidation, organism-specific biosystem; Fatty Acid Omega Oxidation, organism-specific biosystem; Metabolic pathways, organism-specific biosystem; Metabolism, organism-specific biosystem; Phase 1 - Functionalization of compounds, organism-specific biosystem; Retinol metabolism, organism-specific biosystem;
Function	Ras GTPase activator activity; aldehyde dehydrogenase (NAD) activity; androgen binding; oxidoreductase activity; retinal dehydrogenase activity;

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