

Active Recombinant Human ALDH2 protein

Cat. No. ALDH2-139H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ALDH2(18-517aa) was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	18-517 a.a.
Description	ALDH2 (Aldehyde dehydrogenase 2 family) belongs to the aldehyde dehydrogenase family which catalyze the chemical transformation from acetaldehyde to acetic acid and is the second enzyme of the major oxidative pathway of alcohol metabolism. There are two major liver isoforms of this enzyme, cytosolic and mitochondrial, and they can be also distinguished by their electrophoretic mobilities, kinetic properties, and subcellular localizations.
Form	Liquid. In 20 mM Tris-HCl buffer (pH 7.5) containing 1mM DTT, 1 mM EDTA, 10% glycerol
Bio-activity	Specific activity is > 250pmol/min/ug, and was obtained by measuring the increase of NADH in absorbance at 340 nm resulting from the reduction of NAD at pH 8.0 at 25 centigrade.
Molecular Mass	54.5 kDa (501aa), confirmed by MALDI-TOF.
AA Sequence	MSAAATQAVP APNQQPEVFC NQIFINNEWH DAVSRKTFPT VNPSTGEVIC

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QVAEGDKEDV DKAVKAARAA FQLGSPWRRM DASHRGRLNRLADLIERDR
 TYLAALETLD NGKPYVISYL VDLDMLVKCL RYYAGWADKY HGKTIPIDGD
 FFSYTRHEPV GVCQGIIIPWN FPLLMQAWKLGPALATGNVV VMKVAEQTPL
 TALYVANLIK EAGFPPGVVN IVPFGGPTAG AAIASHEDVD KVAFTGSTEI
 GRVIQVAAGS SNLKRVTLLEGGKSPNIIMS DADMDWAVEQ AHFALFFNQG
 QCCCAGSRTE VQEDIYDEFV ERSVARAKSR VVGPNFDSKT EQGPQVDETQ
 FKKILGYINTGKQEGAKLLC GGGIAADRGY FIQPTVFGDV QDGMTIAKEE
 IFGPVMQILK FKTIEEVVGR ANNSTYGLAA AVFTKDLDKA
 NYLSQALQAGTVWVNCYDVF GAQSPFGGYK MSGSGRELGE YGLQAYTEVK
 TVTVKVPQKN S

Endotoxin < 1.0 Eu per 1 microgram of protein (determined by LAL method)

Purity > 90% by SDS - PAGE

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

Concentration 1 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name ALDH2 aldehyde dehydrogenase 2 family (mitochondrial) [Homo sapiens]

Official Symbol ALDH2

Synonyms ALDH2; aldehyde dehydrogenase 2 family (mitochondrial); aldehyde dehydrogenase, mitochondrial; ALDH class 2; liver mitochondrial ALDH; acetaldehyde dehydrogenase 2; nucleus-encoded mitochondrial aldehyde dehydrogenase 2; ALDM; ALDHI; ALDH-E2; MGC1806;

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Gene ID	217
mRNA Refseq	NM_000690
Protein Refseq	NP_000681
MIM	100650
UniProt ID	P05091
Chromosome Location	12q24.12
Pathway	Arginine and proline metabolism, organism-specific biosystem; Arginine and proline metabolism, conserved biosystem; Ascorbate and aldarate metabolism, organism-specific biosystem; Ascorbate and aldarate metabolism, conserved biosystem; Biological oxidations, organism-specific biosystem; Ethanol oxidation, organism-specific biosystem; Fatty Acid Omega Oxidation, organism-specific biosystem;
Function	aldehyde dehydrogenase (NAD) activity; aldehyde dehydrogenase [NAD(P)+] activity; electron carrier activity; oxidoreductase activity;