

Active Recombinant Human ALDH3A1 protein, His-tagged

Cat. No. ALDH3A1-497H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ALDH3A1(1-453aa) fused with His tag was expressed in E. coli, Bioactivity Validated.
Species	Human
Source	E.coli
ProteinLength	1-453 a.a.
Description	ALDH3A1, also known as Aldehyde dehydrogenase 3 family memberA1, is involved in the detoxification of alcohol-derived acetaldehyde and in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation. This protein forms a cytoplasmic homodimer that preferentially oxidizes aromatic and medium-chain (6 carbons or more) saturated and unsaturated aldehyde substrates. It is thought to promote resistance to uV and 4-hydroxy-2-nonenal-induced oxidative damage in the cornea. Recombinant ALDH3A1 protein was expressed in E.coli and purified by using conventional chromatography techniques.
Form	Liquid. 20mM Tris-HCl buffer (pH8.0) containing 10% glycerol 0.1M NaCl
Bio-activity	Specific activity is > 5,000pmol/min/ug, and is defined as the amount of enzyme that catalyze the oxidation of 1.0 pmole 4-nitrobenzaldehyde by NADP per minute at pH 9.0 at 37°C.
Molecular Mass	52.5 kDa (473aa)

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AA Sequence	MGSSHHHHHH SSGLVPRGSH MSKISEAVKR ARAAFSSGRT RPLQFRIQQL EALQRLIQEQ EQELVGALAA DLHKNEWNAY YEEVVVYLEE IEYMIQKLPE WAADEPVEKT PQTQQDELYI HSEPLGVVLV IGTWNYPFNL TIQPMVGAIA AGNAVVLKPS ELSENMASLL ATIIPQYLDK DLYPVINGGV PETTELLKER FDHILYTGST GVGKIIMTAA AKHLTPVTLE LGGKSPCYVD KNCDLDVACR RIAWGKFMNS GQTCVAPDYI LCDPSIQNQI VEKLKKSLE FYGEDAKKSR DYGRIISARH FQRVMGLIEG QKVAYGGTGD AATRYIAPTI LTDVDPQSPV MQEEIFGPVLPVIVCVRSLEE AIQFINQREK PLALYMFSSN DKVIKKMIAE TSSGGVAAND VIVHITLHSL PFGGVGNSSGM GSYHGKKSFE TFSHRRSCLV RPLMNDEGLK VRYPPSPAKM TQH
Purity	> 95% 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	0.5 mg/ml (determined by Bradford assay)
GENE INFORMATION	
Gene Name	ALDH3A1 aldehyde dehydrogenase 3 family, member A1 [Homo sapiens]
Official Symbol	ALDH3A1
Synonyms	ALDH3A1; aldehyde dehydrogenase 3 family, member A1; ALDH3; aldehyde dehydrogenase, dimeric NADP-preferring; aldehyde dehydrogenase; dimeric NADP preferring; stomach aldehyde dehydrogenase; aldehyde dehydrogenase type III; aldehyde dehydrogenase isozyme 3; ALDHIII; MGC10406;
Gene ID	218

mRNA Refseq	NM_000691
Protein Refseq	NP_000682
MIM	100660
UniProt ID	P30838
Chromosome Location	17p11.2
Pathway	Drug metabolism - cytochrome P450, organism-specific biosystem; Drug metabolism - cytochrome P450, conserved biosystem; Glycolysis / Gluconeogenesis, organism-specific biosystem; Glycolysis / Gluconeogenesis, conserved biosystem; Histidine metabolism, organism-specific biosystem; Histidine metabolism, conserved biosystem; Metabolic pathways, organism-specific biosystem;
Function	3-chloroallyl aldehyde dehydrogenase activity; alcohol dehydrogenase (NADP+) activity; aldehyde dehydrogenase (NAD) activity; aldehyde dehydrogenase [NAD(P)+] activity; oxidoreductase activity;

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