

## Active Recombinant Human ALDH1A1 Protein

Cat. No. ALDH1A1-111H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant human ALDH1A1 protein without tag was expressed in E. coli.

**Species** Human


**Source** E.coli

**Description** The protein encoded by this gene belongs to the aldehyde dehydrogenase family. Aldehyde dehydrogenase is the next enzyme after alcohol dehydrogenase in the major pathway of alcohol metabolism. There are two major aldehyde dehydrogenase isozymes in the liver, cytosolic and mitochondrial, which are encoded by distinct genes, and can be distinguished by their electrophoretic mobility, kinetic properties, and subcellular localization. This gene encodes the cytosolic isozyme. Studies in mice show that through its role in retinol metabolism, this gene may also be involved in the regulation of the metabolic responses to high-fat diet.

**Bio-activity** ALDH Activity Data(Unless otherwise stated, all assays are carried out at 37 centigrade in 50 mM Hepes buffer (pH 7.4) containing 1 mM EDTA and 1 mM NAD+)  
Substrate: 4-nitrobenzaldehyde  
Linear with time up to: 5 min(Determined at 2  $\mu$ M substrate, using a protein concentration of 0.1  $\mu$ g/ml)  
Linear with protein up to: 1  $\mu$ g/ml(Determined at 2  $\mu$ M substrate, using an incubation time of 4 min)  
Vmax: 0.54 nmol/min/ $\mu$ g protein  
Km: 1.2  $\mu$ M

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<b>Usage</b>	For laboratory (research) purposes only
<b>Storage</b>	Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice.
<b>Concentration</b>	Protein Concentration: 10.0 mg/ml
<b>Storage Buffer</b>	10 mM sodium phosphate (pH 7.4), 140 mM NaCl

## GENE INFORMATION

<b>Gene Name</b>	ALDH1A1 aldehyde dehydrogenase 1 family member A1 [ Homo sapiens (human) ]
<b>Official Symbol</b>	ALDH1A1
<b>Synonyms</b>	ALDH1A1; aldehyde dehydrogenase 1 family member A1; ALDC; ALDH1; HEL-9; HEL12; PUMB1; ALDH11; RALDH1; ALDH-E1; HEL-S-53e; retinal dehydrogenase 1; ALDH class 1; ALHDII; RALDH 1; acetaldehyde dehydrogenase 1; aldehyde dehydrogenase 1, soluble; aldehyde dehydrogenase, liver cytosolic; epididymis luminal protein 12; epididymis luminal protein 9; epididymis secretory sperm binding protein Li 53e; retinaldehyde dehydrogenase 1
<b>Gene ID</b>	216
<b>mRNA Refseq</b>	NM_000689
<b>Protein Refseq</b>	NP_000680
<b>MIM</b>	100640
<b>UniProt ID</b>	P00352

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