

Recombinant Human ALDH6A1, His-tagged

Cat. No. ALDH6A1-67H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human ALDH6A1, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
Description	ALDH6A1 also known as Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial. ALDH6A1 is a mitochondrial methylmalonate semialdehyde dehydrogenase that plays a role in the valine and pyrimidine catabolic pathways. This protein catalyzes the irreversible oxidative decarboxylation of malonate and methylmalonate semialdehydes to acetyl- and propionyl-CoA. ALDH6A1 deficiency is characterized by elevated beta-alanine, 3-hydroxypropionic acid, and both isomers of 3-amino and 3-hydroxyisobutyric acids in urine organic acids.
Form	Liquid, In Phosphate buffered saline (pH7.4) containing 10% glycerol, 1mM DTT
Molecular Mass	56.8kDa (525aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MGSSSSVPTV KFIGGKFVE SKSDKWIDIH NPATNEVIGR VPQATKAEMD AAIASCKRAF PAWADTSVLS RQQVLLRYQQ LIKENLKEIA KLITLEQGKT LADAEGDVFR GLQVVEHACS VTSLMMGETM PSITKDMDLY SYRLPLGVCA GIAPFNFPAM IPLWMFPMAM VCGNTFLMKP SERVPGATML LAKLLQDSGA PDGTLNIIHG QHEAVNFICD HPDIKAISFV GSNKAGEYIF ERGSRHGKRV QANMGAKNHG VVMPDANKEN TLNQLVGAAF

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GAAGQRCMAL STAVLVGEAK KWLPELVEHA KNLRVNAGDQ PGADLGPLIT
PQAKERVCNL IDSGTKEGAS ILLDGRKIKV KGYENGNFVG PTIISNVKPN
MTCYKEEIFG PVLVVLETET LDEAIQIVNN NPYGNGTAIF TTNGATARKY
AHLVDVGQVG VNVPIPVPLP MFSFTGSRSS FRGDTNFYVK QGIQFYTQLK
TITSQWKEED ATLSSPAVVM PTMGR

Purity >85% 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 0.25mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name [ALDH6A1 aldehyde dehydrogenase 6 family, member A1 \[Homo sapiens \]](#)

Official Symbol ALDH6A1

Synonyms ALDH6A1; aldehyde dehydrogenase 6 family, member A1; MMSDH; methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial; malonate-semialdehyde dehydrogenase; aldehyde dehydrogenase family 6 member A1; mitochondrial acylating methylmalonate-semialdehyde dehydrogenase; MMSADHA; MGC40271;

Gene ID [4329](#)

mRNA Refseq [NM_005589](#)

Protein Refseq [NP_005580](#)

MIM [603178](#)

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UniProt ID	Q02252
Chromosome Location	14q24
Pathway	Branched-chain amino acid catabolism, organism-specific biosystem; Inositol phosphate metabolism, organism-specific biosystem; Inositol phosphate metabolism, conserved biosystem; Malonate semialdehyde pathway, propanoyl-CoA =>Acetyl-CoA, organism-specific biosystem; Malonate semialdehyde pathway, propanoyl-CoA => Acetyl-CoA, conserved biosystem;
Function	fatty-acyl-CoA binding; malonate-semialdehyde dehydrogenase (acetylating) activity; methylmalonate-semialdehyde dehydrogenase (acylating) activity; oxidoreductase activity;