

Recombinant Human ALDH4A1 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. ALDH4A1-2033H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

ALDH4A1 MS Standard C13 and N15-labeled recombinant protein (NP_003739) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.

Species

Human

Source

HEK293

Description

This protein belongs to the aldehyde dehydrogenase family of proteins. This enzyme is a mitochondrial matrix NAD-dependent dehydrogenase which catalyzes the second step of the proline degradation pathway, converting pyrroline-5-carboxylate to glutamate. Deficiency of this enzyme is associated with type II hyperprolinemia, an autosomal recessive disorder characterized by accumulation of delta-1-pyrroline-5-carboxylate (P5C) and proline. Alternatively spliced transcript variants encoding different isoforms have been identified for this gene.

Molecular Mass

61.7 kDa

AA Sequence

MLLPAPALRRALLSRPWTGAGLRWKHTSSLKVANEPVLAFTQGSPERDALQKALKD
LKGRMEAIPC VVGDEEVWTS DVQYQVSPFNHGHKVAKFCYADKSLLNKAIEAALAA
RKEWDLKPIADRAQIFLKAADMLSGPRRAEILAKTMVGGQKTVIQAEIDAAAELIDFFR
FNAKYAVELEGQQPISVPPSTNSTVYRGLEGFVAAISPFNFTAIGGNLAGAPALMGN
VVLWKPSDTAMLASYAVYRILREAGLPPNIIQFVPADGPLFGDVTTSSEHLGINFTG
SVPTFKHLWKQVAQNLD RFHTFPRLAGECGGKNFHFVHRSADVESVVS GTLRSAF

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EYGGQKCSACSRLYVPHSLWPQIKGRLLLEHSRIKVGDP AEDFGTFFSAVIDAKSFA
 RIKKWLEHARSSPSLTILAGGKCDDSVGYFVEPCIVESKDPQEPIMKEEIFGPVLSVY
 VYPDDKYKETLQLVDSTTSYGLTGAVFSQDKDVVQEATKVL RNAAGNFYINDKSTG
 SIVGQQPFGGARASGTNDKPGGPHYILRWTS PQVIKETHKPLGDWSYAYMQSGPT
 RTRPLEQKLISEEDLAANDILDYKDDDDKV

Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

Storage Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

Concentration 50 µg/mL as determined by BCA

Storage Buffer 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name [ALDH4A1 aldehyde dehydrogenase 4 family member A1 \[Homo sapiens \(human\) \]](#)

Official Symbol [ALDH4A1](#)

Synonyms ALDH4A1; aldehyde dehydrogenase 4 family, member A1; ALDH4; delta-1-pyrroline-5-carboxylate dehydrogenase, mitochondrial; P5CDh; P5C dehydrogenase; aldehyde dehydrogenase family 4 member A1; mitochondrial delta-1-pyrroline 5-carboxylate dehydrogenase; P5CD; DKFZp779M035;

Gene ID [8659](#)

mRNA Refseq [NM_003748](#)

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Protein Refseq [NP_003739](#)

MIM [606811](#)

UniProt ID [P30038](#)

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