

Recombinant Human ALDH18A1 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. ALDH18A1-2882H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	ALDH18A1 MS Standard C13 and N15-labeled recombinant protein (NP_002851) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	This gene is a member of the aldehyde dehydrogenase family and encodes a bifunctional ATP- and NADPH-dependent mitochondrial enzyme with both gamma-glutamyl kinase and gamma-glutamyl phosphate reductase activities. The encoded protein catalyzes the reduction of glutamate to delta1-pyrroline-5-carboxylate, a critical step in the de novo biosynthesis of proline, ornithine and arginine. Mutations in this gene lead to hyperammonemia, hypoonithinemia, hypocitrullinemia, hypoargininemia and hypoproline and may be associated with neurodegeneration, cataracts and connective tissue diseases. Alternatively spliced transcript variants, encoding different isoforms, have been described for this gene.
Molecular Mass	87.3 kDa
AA Sequence	MLSQVYRCGFQPFNQHLLPWVKCTTVFRSHCIQPSVIRHVRWSNIPFITVPLSRTH GKSFHRSELKHAKRIVVKLGSAVVTRGDECGLALGRLASIVEQVSVLQNQGEMM LVTSGAVAFGKQRLRHEILLSQSVRQALHSGQNQLKEMAIPVLEARACAAAGQSGL MALYEAMFTQYSICAAQILVTNLDFHDEQKRRNLNGTLHELLRMNIVPIVNTNDAVVP

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PAEPNSDLQGVNVISVKDNDLSAARLAVEMKTDLLIVLSDVEGLFDSPPGSDDAKLID
 IFYPGDQQSVTFGIKSRVGMGGMEAKVKAALWALQGGTSVVIANGTHPKVSGHVIT
 DIVEGKKVGTFFSEVKPAGPTVEQQGEMARSGGRMLATLEPEQRAEIIHHLADLLTD
 QRDEILLANKKDLEEAEGRLAAPLLKRLSLSTSKLNSLAIGLRQIAASSQDSVGRVLR
 RTRIAKNLELEQVTVPIGVLLVIFESRPDCLPQVAALAIASGNGLLLKGGKEAAHSNRI
 LHLLTQEALSIHGVKEAVQLVNTREEVEDLCRLDKMIDLIIPRGSSQLVRDIQKAAKGI
 PVMGHSEGICHMYVDSEASVDKVRTLVRSKCEYPAACNALETLLIHRDLLRTPLFD
 QIIDMLRVEQVKIHAGPKFASYLTFSPSEVKSLRTEYGDLELCIEVVDNVQDAIDHIHK
 YGSSHTDVIVTEDENTAEFFLQHVD SACVFWNASTRFSDGYRFG LGAEVGISTSRIH
 ARGPVGLEGLLTTKWLLRGKDHVVSD FSEHGSLKYLHENLPIPQRNTNTRTRPLEQ
 KLISEEDLAANDILDYKDDDDKV

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 ALDH18A1 aldehyde dehydrogenase 18 family member A1 [Homo sapiens (human)]

Official Symbol ALDH18A1

Synonyms ALDH18A1; aldehyde dehydrogenase 18 family, member A1; GSAS, PYCS, pyrroline

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5 carboxylate synthetase (glutamate gamma semialdehyde synthetase); delta-1-pyrroline-5-carboxylate synthase; P5CS; delta1-pyrroline-5-carboxlate synthetase; aldehyde dehydrogenase family 18 member A1; delta-1-pyrroline-5-carboxylate synthetase; pyrroline-5-carboxylate synthetase (glutamate gamma-semialdehyde synthetase); GSAS; PYCS; ARCL3A; MGC117316;

Gene ID [5832](#)

mRNA Refseq [NM_002860](#)

Protein Refseq [NP_002851](#)

MIM [138250](#)

UniProt ID [P54886](#)

SDS-PAGE

