

Recombinant Full Length Human MDH1 Protein, C-Flag-tagged

Cat. No. MDH1-1976HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human MDH1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
Description	This gene encodes an enzyme that catalyzes the NAD/NADH-dependent, reversible oxidation of malate to oxaloacetate in many metabolic pathways, including the citric acid cycle. Two main isozymes are known to exist in eukaryotic cells: one is found in the mitochondrial matrix and the other in the cytoplasm. This gene encodes the cytosolic isozyme, which plays a key role in the malate-aspartate shuttle that allows malate to pass through the mitochondrial membrane to be transformed into oxaloacetate for further cellular processes. Alternatively spliced transcript variants have been found for this gene. A recent study showed that a C-terminally extended isoform is produced by use of an alternative in-frame translation termination codon via a stop codon readthrough mechanism, and that this isoform is localized in the peroxisomes. Pseudogenes have been identified on chromosomes X and 6.
Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.
Molecular Mass	36.2 kDa
AA Sequence	MSEPIRVLVTGAAGQIAYSLLYSIGNGSVFGKDQPIILVLLDITPMMGVLDGVLMEQLD CALPLLKDVIATDKEDVAFKDLVDVAILVGSMPRREGMERKDLLKANVKIFKSQGAAL

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DKYAKKSVKVIVVGNPANTNCLTA SKSAPSIPKENFSCSLTRLDHNRKAQIALKLGVT
ANDVKNVVIWGNHSSTQYPDVNHAKVKLQGKEVGVY EALKDDSWLKGEFVTTVQQ
RGA AVIKARKLSSAMSAAKAICDHVRDIWFGTPEGEFVSMGVISDGNSYGV PDDL
YSFPVVIKNTWK FVEGLPINDFSREKMDLTAKELTEEKESAFEFLSSA TRTRPLEQ
KLISEEDLAANDILDYKDDDDKV

Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining.
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade.
Concentration	>50 ug/mL as determined by microplate BCA method.
Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	Druggable Genome
Protein Pathways	Citrate cycle (TCA cycle), Glyoxylate and dicarboxylate metabolism, Metabolic pathways, Pyruvate metabolism
Full Length	Full L.

GENE INFORMATION

Gene Name	MDH1 malate dehydrogenase 1 [Homo sapiens (human)]
Official Symbol	MDH1

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Synonyms	KAR; MDHA; MOR2; DEE88; MDH-s; EIEE88; HEL-S-32; MGC:1375
Gene ID	4190
mRNA Refseq	NM_005917.4
Protein Refseq	NP_005908.1
MIM	154200
UniProt ID	P40925



Coomassie blue staining of purified MDH1 protein.