

Recombinant Human MDH2, His-tagged

Cat. No. MDH2-2797H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human MDH2 protein (25-338aa), fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.
Species	Human
Source	E.coli
ProteinLength	25-338 a.a.
Description	MDH2 is one of the two malate dehydrogenases. Malate dehydrogenase catalyzes the reversible oxidation of malate to oxaloacetate, utilizing the NAD/NADH cofactor system in the citric acid cycle. In particular, MDH2 is localized to the mitochondria and may play pivotal roles in the malate-aspartate shuttle that operates in the metabolic coordination between cytosol and mitochondria. It is widely expressed with high expression levels found in adrenal, small intestine, heart and pancreas.
Sequences	MGSSHHHHHH SSGLVPRGSH MAKVAVLGAS GGIGQPLSLL LKNSPLVSRL TLYDIAHTPG VAADLSHIET KAAVKGYLGP EQLPDCLKGC DVVVIPAGVP RKPGMTRDDL FNTNATIVAT LTAACAQHCP EAMICVIANP VNSTIPITAE VFKKHGVYNP NKIFGVTTLD IVRANTFVAE LKGLDPARVN VPVIGGHAGK TIIP LISQCT PKVDFPQDQL TALTGRIQEA GTEVVKAKAG AGSATLSMAY AGARFVFSLV DAMNGKEGVV ECSFVKSQET ECTYFSTPLL LGKKGIEKNL GIGKVSSFEE KMISDAIPEL KASIKKGEDF VKTLK.
Form	Liquid. In 20 mM Tris-HCl Buffer (pH 7.5) containing 10% Glycerol

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Molecular Weight	35.2 kDa(335aa),confirmed by MALDI-TOF.
Purity	> 95% by SDS – PAGE.
Concentration	1 mg/ml (determined by Bradford assay).
Biological Activity	Specific activity is > 30 units/mg, and is defined as the amount of enzyme that cleaves 1umole of oxalacetate and beta-NADH to L-malate and beta-NAD per minute at pH7.5 at 25°C.
Activity Assay	1. Prepare assay buffer into a suitable container and pre-chill on ice before use: The final concentrations are 100 mM Potassium phosphate, 0.13mM beta-nicotinamide adenine dinucleotide, reduced form, 0.25mM oxalacetic acid. 2. Add recombinant MDH protein with various concentrations (0.1ug, 0.5ug, 1ug) in assay buffer.3. Mix by inversion and equilibrate to 1C and monitor at A340nm until the value is constant using a spectrophotometer. 4. Record the increase at A340nm for approximately 2minutes
Storage	

GENE INFORMATION

Gene Name	MDH2 malate dehydrogenase 2, NAD (mitochondrial) [Homo sapiens]
Synonyms	MDH2; malate dehydrogenase 2, NAD (mitochondrial); OTTHUMP00000210118; malate dehydrogenase, mitochondrial; MDH; MOR1; M-MDH; MGC:3559; EC 1.1.1.37
Gene ID	4191
mRNA Refseq	NM_005918

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Protein Refseq	NP_005909
MIM	154100
UniProt ID	P40926
Chromosome Location	7cen-q22
Function	L-malate dehydrogenase activity; malate dehydrogenase (NADP+) activity; oxidoreductase activity; protein self-association
PDB rendering based on 1mld.	