

# Recombinant human Malate dehydrogenase 2/MDH2 protein

Catalog Number: ATGP0679

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

25-338aa

### UniProt No.

P40926

### NCBI Accession No.

NP\_005909

### Alternative Names

Malate dehydrogenase 2 NAD (mitochondrial), M-MDH, MDH, MOR1

## PRODUCT SPECIFICATION

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### Molecular Weight

35.2 kDa (335aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 7.5) containing 10% glycerol

### Purity

> 95% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Specific activity is > 700unit/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 pH8.0 at 37C.

### Tag

His-Tag

### Application

SDS-PAGE, Enzyme Activity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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# Recombinant human Malate dehydrogenase 2/MDH2 protein

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## 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. Recombinant human MDH2 protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography.

## Amino acid Sequence

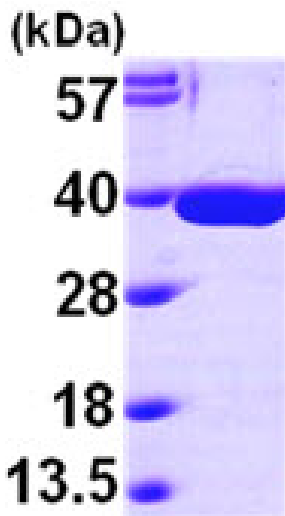
<MGSSHHHHHH SSGLVPRGSH M>AKVAVLGAS GGIGQPLSLL LKNSPLVSRL TLYDIAHTPG VAADLSHIET KAAVKGYLGP EQLPDCLKGC DVVVIPAGVP RKPGMTRDDL FNTNATIVAT LTAACAQHCP EAMICVIANP VNSTIPITAE VFKKHGVYNP NKIFGVTTLD IVRANTFVAE LKGLDPA RVN VPVIGGHAGK TIIP LISQCT PKVDFPQDQL TALTGRIQEA GTEVVKAKAG AGSATLSMAY AGARFVFSLV DAMNGKEGVV ECSFVKSQET ECTYFSTPLL LGKKGIEKNL GIGKVSSFEE KMISDAIPEL KASIKKGEDF VKTLK

## General References

Thummel CS., et al. (2010) *Dev Dyn.* 239(3):954-64  
Lee JS., et al (2002) *J Basic Microbiol.* 42(4):238-45.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)