

Recombinant human Malate dehydrogenase 1/MDH1 protein

Catalog Number: ATGP0665

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-334aa

UniProt No.

P40925

NCBI Accession No.

NP_005908.1

Alternative Names

Malate dehydrogenase cytoplasmic, MDH-s, MDHA, MOR2, Diiodophenylpyruvate reductase

PRODUCT SPECIFICATION

Molecular Weight

37.4 kDa (342aa) confirmed by MALDI-TOF

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) 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 > 250unit/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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Description

MDH1 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, MDH1 is localized to the cytoplasm and may play pivotal roles in the malate-aspartate shuttle that operates in the metabolic coordination between cytosol and mitochondria. This protein also regulates p53-dependent cell-cycle arrest and apoptosis in response to glucose deprivation. Recombinant human MDH1 protein, fused to His-tag at C-terminus, was expressed in *E. coli* and purified by using conventional chromatography.

Amino acid Sequence

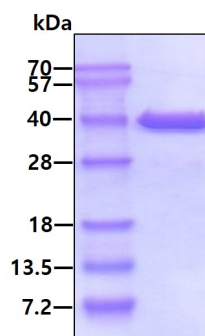
MSEPIRVLT GAAGQIAYSL LYSIGNGSVF GKDQPIILVL LDITPMMGVL DGVLMEQDC ALPLLKDVIATDKEDVAFKD
LDVAILVGSM PRREGMERKD LLKANVKIFK SQGAALDKYA KKS VKVIVVG NPANTNCLTA SKSAPSIPKE NFSCLTRLDH
NRAKAQIALK LGVTANDVKN VIIWGNHSST QYPDVNHAV KLQGKEVG VY EALKDDSWLK GEFVTTVQQR GAAVIKARKL
SSAMSAAKAI CDHVRDIWFG TPEGEFVSMG VISDGNSYGV PDDL LYSFPV VIKNKTWK FV EGLPINDFSR EKMDLTAKEL
TEEKESAFEF LSSA<LEHHHH HH>

General References

Youn HD., et al. (2009) *Cell Death Differ.* 16(5):738-48
Waye MM., et al (2005) *J Cell Biochem.* 94(4):763-73.

DATA

SDS-PAGE



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