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## Product Data Sheet

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Product Name: MDH1 Human  
 Cat. No.: GP21906  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	MDH-s; MDHA; MOR2.		
Amino Acid Sequence	MSEPIRVLVT GAAGQIAYSL LYSIGNGSVF GKDQPIILVL LDITPMMGVL DGVLMELQDC ALPLLKDVIA TDKEDVAFKD LDVAILV GSM PRREGMERKD LLKANVKIFK SQGAALDKYA KKS VKVIVVG NPANTNCLTA SKSAPSIPKE NFSCLTRLDH NRAKAQIALK LGVTANDVKN VIIWGNHSST QYPDVNHAKV KLQGKEVGVY EALKDDSWLK GEFVTTVQQR GAAVIKARKL SSAMSAAKAI CDHVRDIWFG TPEGEFVSMG VISDGNSYGV PDDL LYSFPV VIKNKTWK FV EGLPINDFSR EKMDLTAKEL TEEKESAFEF LSSALEHHHH HH.		
Formulation	The MDH1 1mg/ml protein solution contains 20mM Tris-HCl pH-8, and 10% glycerol.		

### Introduction

MDH1 catalyzes the reversible oxidation of malate to oxaloacetate, using the NAD/NADH cofactor system in the citric acid cycle. MDH1 is abundantly found in the cytoplasm and is involved in the malate-aspartate shuttle that functions in the metabolic coordination between cytosol and mitochondria. MDH1 regulates p53-dependent cell-cycle arrest and apoptosis in response to glucose deprivation.

### Biological Activity

Specific activity is > 8 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 .

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer

**Caution: Product has not been fully validated for medical applications. For research use only.**

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periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

MDH1 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 342 amino acids (1-334 a.a.) and having a molecular mass of 37.4 kDa. The MDH1 is fused to an 8 amino acid His tag at C-terminus and purified by conventional chromatography.

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