MDH1 Protein, Rat (His)

Cat. No.:	HY-P74757
Synonyms:	Malate Dehydrogenase Cytoplasmic; Cytosolic Malate Dehydrogenase; MDH1; MDHA
Species:	Rat
Source:	E. coli
Accession:	O88989 (M1-A334)
Gene ID:	24551
Molecular Weight:	Approximately 39 kDa

PROPERTIES

AA Sequence	MSEPIRVLVT GAAGQIAYSL LYSIGNGSVF GKDQPIILVL LDITPMMGVL DGVLMELQDC ALPLLQDVIA TDKEEVAFKD LDVAVLVGSM PRREGMERKD LLKANVKIFK SQGAALEKYA KKSVKVIVVG NPANTNCLTA SKSAPSIPKE NFSCLTRLDH NRAKSQIALK LGVTADDVKN VIIWGNHSST QYPDVNHAKV KLQGKEVGVY EALKDDSWLK GEFITTVQQR GAAVIKARKL SSAMSAAKAI SDHIRDIWFG TPEGEFVSMG VISDGNSYGV PDDLLYSFPV VIKNKTWKFV EGLPINDFSR EKMDLTAKEL TEEKETAFEF LSSA
Biological Activity	Specific activity is 2524.23 units/mg, and is defined as the amount of enzyme that cleaves 1.0 μmole of oxalacetate and beta-NADH to L-malate and beta-NAD per minute at pH 8.0 at 37°C.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris-HCL, 300 mM NaCl, pH 7.4, 10% Glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The MDH1 protein, an important enzyme, is responsible for catalyzing the reduction of aromatic alpha-keto acids when NADH is present. It serves critical functions in both the malate-aspartate shuttle and the tricarboxylic acid cycle, which are crucial for providing mitochondrial NADH supply needed for oxidative phosphorylation. Additionally, MDH1 catalyzes the reduction of 2-oxoglutarate to 2-hydroxyglutarate, a process that can result in increased levels of reactive oxygen species (ROS).

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA