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AR50312PU-N mdh (1-312, His-tag) - Purified

Alternate names: ECK3225, JW3205, malate dehydrogenase

Quantity: 0.5 mg

Concentration: 1mg/ml (determined by Bradford assay)

Background: Malate dehydrogenase (mdh) belongs to the LDH/MDH superfamily and MDH type 1 family. This enzyme catalyzes the conversion of malate into oxaloacetate (using NAD+) and vice versa (this is a reversible reaction). Malate dehydrogenase is also involved in gluconeogenesis, the synthesis of glucose from smaller molecules.

Uniprot ID: P61889

NCBI: NP_417703.1

GeneID: 947854

Source: E. coli

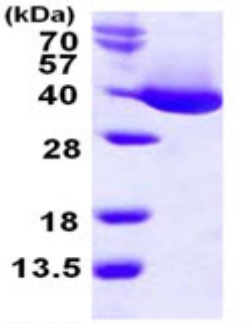
Format:
State: Liquid purified protein
Purity: >95% by SDS - PAGE
Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol, 50mM NaCl

Description: Recombinant E.coli mdh protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
AA Sequence:
MGSSHHHHHH SSGLVPRGSH MGSHMKVAVL GAAGGIGQAL ALLLKTQLPS GSELSLYDIA PVTPGVAVDL SHIPTAVKIK GFSGEDATPA LEGADVVLIS AGVARKPGMD RSDLFNVNAG IVKNLVQQVA KTCPKACIGI ITNPVNTTVA IAAEVLKKAG VYDKNKLFGV TTLDIIRSNT FVAELKGKQP GEVEVPVIGG HSGVTILPLL SQVPGVSFTE QEVADLTKRI QNAGTEVVEA KAGGGSATLS MGQAAARFGL SLVRALQGEQ GVVECAYVEG DGQYARFFSQ PLLLGKNGVE ERKSIGTLSA FEQNALEGML DTLKKDIALG EEFVNK
Specific Activity: > 450 units/mg. Defined as the amount of enzyme that cleaves 1 umole of oxalacetate and beta - NADH to L - malate and beta - NAD per minute at pH 7.5 at 25°C.
Activity Assay :
1. Prepare a 1.45 ml assay bu ffer . The final concentrations are 100 mM Potassium phosphate , 0.13mM beta - nicotinamide adenine dinucleotide, reduced form, 0.25mM oxalacetic acid.
2. Add 50 µl of recombinant MDH protein with various concentrat ions (0. 015 µg, 0. 03 µg) in assay buffer.
3. Mix by inversion and record the decrease at A340nm for approximately 5 minutes
Molecular weight: 34.9 kDa (336aa), confirmed by MALDI-TOF

Storage: Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer. Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:
Goward CR., et al. (1994). Protein Sci. 3 (10): 1883-8.
McAlister-Henn L., et al. (1988). Trends Biochem. Sci. 13 (5): 178-81.

Pictures:



15% SDS-PAGE (3ug)