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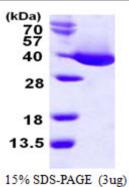
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## AR50312PU-S mdh (1-312, His-tag) - Purified

Alternate names:	ECK3225, JW3205, malate dehydrogenase
Quantity:	0.1 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:	<u>P61889</u>
NCBI:	<u>NP_417703.1</u>
GenelD:	<u>947854</u>
Source:	E. coli
Format:	<b>State:</b> Liquid purified protein <b>Purity:</b> >95% by SDS - PAGE <b>Buffer System:</b> 20 mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol, 50mM NaCl
Description:	<ul> <li>Recombinant E.coli mdh protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.</li> <li>AA Sequence: <ul> <li>MGSSHHHHHH SSGLVPRGSH MGSHMKVAVL GAAGGIGQAL ALLLKTQLPS GSELSLYDIA</li> <li>PVTPGVAVDL SHIPTAVKIK GFSGEDATPA LEGADVVLIS AGVARKPGMD RSDLFNVNAG</li> <li>IVKNLVQQVA KTCPKACIGI ITNPVNTTVA IAAEVLKKAG VYDKNKLFGV TTLDIIRSNT</li> <li>FVAELKGKQP GEVEVPVIGG HSGVTILPLL SQVPGVSFTE QEVADLTKRI QNAGTEVVEA</li> <li>KAGGGSATLS MGQAAARFGL SLVRALQGEQ GVVECAYVEG DGQYARFFSQ PLLLGKNGVE</li> <li>ERKSIGTLSA FEQNALEGML DTLKKDIALG EEFVNK</li> </ul> </li> <li>Specific Activity: &gt; 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.</li> <li>Activity Assay: <ul> <li>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.</li> <li>Add 50 µl of recombinant MDH protein with various concentrat ions (0. 015 µg, 0. 03 µg) in assay buffer.</li> <li>Mix by inversion and record the decrease at A340nm for approximately 5 minutes Molecular weight: 34.9 kDa (336aa), confirmed by MALDI-TOF</li> </ul> </li> </ul>
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.

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