

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

<b>Alternate names:</b>	ECK3225, JW3205, malate dehydrogenase
<b>Quantity:</b>	0.1 mg
<b>Concentration:</b>	1mg/ml (determined by Bradford assay)
<b>Background:</b>	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 <sup>+</sup> ) and vice versa (this is a reversible reaction). Malate dehydrogenase is also involved in gluconeogenesis, the synthesis of glucose from smaller molecules.
<b>Uniprot ID:</b>	<a href="#">P61889</a>
<b>NCBI:</b>	<a href="#">NP_417703.1</a>
<b>GeneID:</b>	<a href="#">947854</a>
<b>Source:</b>	E. coli
<b>Format:</b>	<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
<b>Description:</b>	Recombinant E.coli mdh protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques. <b>AA Sequence:</b> <u>MGSSHHHHHH</u> SSGLVPRGSH MGSHEMKVAVL GAAGGIGQAL ALLLKTQLPS GSELSLYDIA PVTPGVAVDL SHIPTAVKIK GFSGEDATPA LEGADVVLIS AGVARKPGMD RSDLFVNAG IVKNLVQQVA KTCPKACIGI ITNPVNTTVA IAAEVLKAG VYDKNKLFV TLDIIRSNT FVAELKQKQP GEVEVPVIGG HSGVTILPLL SQVPGVSFTE QEVADLTKRI QNAGTEVVEA KAGGGSATLS MGQAAARFGL SLVRALQGEQ GVVECAVVEG DGQYARFFSQ PLLLGKNGVE ERKSIGTSLA FEQNALEGML DTLKKDIALG EEFVVK <b>Specific Activity:</b> > 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. <b>Activity Assay :</b> 1. Prepare a 1.45 ml assay buffer. 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 concentrations (0.015 µg, 0.03 µg) in assay buffer. 3. Mix by inversion and record the decrease at A340nm for approximately 5 minutes <b>Molecular weight:</b> 34.9 kDa (336aa), confirmed by MALDI-TOF
<b>Storage:</b>	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.
<b>General Readings:</b>	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:

