Recombinant Human Lactate dehydrogenase A, His-tagged

Cat. No. LDHA-1944H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant LDHA protein fused to his-tag was expressed in E.coli and purified by using conventional chromatography techniques, 38.8 kDa (352aa).
Species	Human
Source	E.coli
Description	LDHA, also known as L-lactate dehydrogenase A chain, is an enzyme that catalyzes the conversion of L-lactate and NAD+ to pyruvate and NADH in the final step of anaerobic glycolysis. This protein is found predominantly in muscle tissue and belongs to the lactate dehydrogenase family. Mutations in LDHA have been linked to exertional myoglobinuria.
Sequences Of Amino Acids	MGSSHHHHHH SSGLVPRGSH MATLKDQLIY NLLKEEQTPQ NKITVVGVGA VGMACAISIL MKDLADELAL VDVIEDKLKG EMMDLQHGSL FLRTPKIVSG KDYNVTANSK LVIITAGARQ QEGESRLNLV QRNVNIFKFI IPNVVKYSPN CKLLIVSNPV DILTYVAWKI SGFPKNRVIG SGCNLDSARF RYLMGERLGV HPLSCHGWVL GEHGDSSVPV WSGMNVAGVS LKTLHPDLGT DKDKEQWKEV HKQVVESAYE VIKLKGYTSW AIGLSVADLA ESIMKNLRRV HPVSTMIKGL YGIKDDVFLS VPCILGQNGI SDLVKVTLTS EEEARLKKSA DTLWGIQKEL QF
Formulation	20mM Tris-HCl buffer (pH8.0) containing 20% glycerol 0.1M NaCl.
Molecular Weight	38.8 kDa (352aa), confirmed by MALDI-TOF

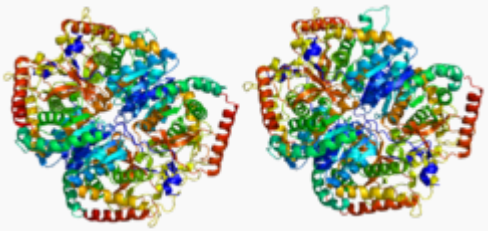
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Purity	> 95% by SDS – PAGE.
Concentration	0.5 mg/ml (determined by Bradford assay)
Biological Activity	Specific activity is > 20 units/mg. in which one unit will convert 1.0 umole of pyruvate to L-lactate and beta-NAD per minute at pH 7.5 at 37°C.
Activity Assay	1. Prepare a 1.5 ml reaction mix into a suitable container, adjust to pH7.5 at 37C and pre-chill on ice before use: The final concentrations are 100mM Sodium phosphate, 0.12 mM beta-nicotinamide adenine dinucleotide, reduced form, 2.3mM Pyruvate, 0.033% (w/v) bovine serum albumin. 2. Equilibrate to 37C and monitor at A340nm until the value is constant using a spectrophotometer3. Add 50ul of recombinant LDHA protein in various concentrations (0.1ug, 0.5ug) in assay buffer. 4. Mix by inversion and record the increase at A340nm for 5 minutes.
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name	LDHA lactate dehydrogenase A [Homo sapiens]
Synonyms	LDHA; lactate dehydrogenase A; LDH1; LDHM; GSD11; PIG19; L-lactate dehydrogenase A chain; LDH-A; LDH-M; LDH muscle subunit; lactate dehydrogenase M; proliferation-inducing gene 19; renal carcinoma antigen NY-REN-59; cell proliferation-inducing gene 19 protein; EC 1.1.1.27
Gene ID	3939
mRNA Refseq	NM_001135239

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Protein Refseq	NP_001128711
MIM	150000
UniProt ID	B4DKQ2
Chromosome Location	11p15.4
Function	L-lactate dehydrogenase activity; oxidoreductase activity; protein binding
PDB rendering based on 1i10.	

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