

# Recombinant E.coli D-lactate dehydrogenase/LDHA protein

Catalog Number: ATGP3236

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-329aa

### UniProt No.

P52643

### NCBI Accession No.

NP\_415898.1

### Alternative Names

NAD-dependent, JW1375, htpH, hslI, hslF, Fermentative D-lactate dehydrogenase, ECK1377

## PRODUCT SPECIFICATION

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### Molecular Weight

39.1 kDa (353aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 100mM NaCl

### Purity

> 95% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Specific activity is > 200unit/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 37C.

### Tag

His-Tag

### Application

SDS-PAGE, Enzyme Activity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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# Recombinant E.coli D-lactate dehydrogenase/LDHA protein

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## Description

Idha, also known as D-lactate dehydrogenase, belongs to the D-isomer specific 2-hydroxyacid dehydrogenase family. In enzymology, a D-lactate dehydrogenase (cytochrome) is an enzyme that catalyzes the chemical reaction. Thus, the two substrates of this enzyme are (D) -lactate and ferricytochrome c, whereas its two products are pyruvate and ferrocycytochrome c. Recombinant E. coli IdhA protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

## Amino acid Sequence

<MGSSHHHHHH SSGLVPRGSH MGSH>MKLAVY STKQYDKKYL QQVNESFGFE LEFFDFLLTE KTAKTANGCE  
AVCIFVNDG SRPVLEELKK HGVKYIALRC AGFNNVDLDA AKELGLKVVR VPAYDPEAVA EHAIGMMMTL NRRIHAYQR  
TRDANFSLEG LTGFTMYGKT AGVIGTGKIG VAMLRILKGF GMRLLAFFPY PSAAAELGV EYVDLPTLFS ESDVISLHCP  
LTPENYHLLN EAAFEQMKNV VMIVNTSRGA LIDSQAAIEA LKNQKIGSLG MDVYENERDL FFEDKSNDVI QDDVFRRLSA  
CHNVLFTHGQ AFLTAEALTS ISQTTLQNLN NLEKGETCPN ELV

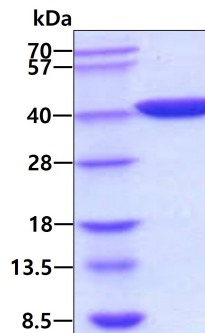
## General References

Atlante, A., et al. (2005) *Biochim. Biophys. Acta* 1708 (1): 13-22.

Martin Engqvist, et al. (2009) *J Biol Chem.* 284 (September 11): 25026-25037.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.