



Rat L-Lactate Dehydrogenase,L-LDH ELISA Kit

Product Code	CSB-E11324r
Protein Biological Process 2	glyconeogenesis and glycometabolism
Abbreviation	LDHA
Protein Biological Process 1	Biosynthesis/Metabolism
Target Name	lactate dehydrogenase A
Uniprot No.	P04642
Alias	GSD11, LDH1, LDHM, PIG19, LDH muscle subunit lactate dehydrogenase M proliferation-inducing gene 19 renal carcinoma antigen NY-REN-59
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Protein Biological Process 3	Glycolysis
Sample Types	serum, plasma, tissue homogenates
Detection Range	39 mU/mL-2500 mU/mL
Sensitivity	9.77 mU/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Metabolism
Gene Names	Ldha
Tag Info	quantitative
Protein Description	Sandwich

Description

The rat LDHA ELISA Kit is engineered for accurate measurement of rat LDHA levels from samples including serum, plasma, or tissue homogenates. It uses the Sandwich-ELISA mechanism in combination with the enzyme-substrate chromogenic reaction to measure the LDHA content in the sample. The color intensity is positively correlated with LDHA content in the sample. This kit has been validated against standards of sensitivity, specificity, precision, linearity, recovery, and lot-to-lot consistency.

LDHA is a cytosolic enzyme that catalyzes the conversion of pyruvate to lactate



under anaerobic conditions. It is primarily found in skeletal muscle. LDHA is necessary to maintain glycolysis and ATP synthesis in the absence of sufficient oxygen by recycling NAD^+ from NADH. LDHA also participates in the modulation of transcription by regulating the cellular redox state. During the differentiation of thymocytes, LDHA also functions as a molecular chaperone or as an association molecule. Even when oxygen is available, cancer cells employ LDHA to boost glycolysis, ATP, and lactate synthesis. Overexpression of LDHA has been associated with a number of additional unfavorable prognostic variables, including tumor hypoxia, angiogenesis, proliferation, and glucose uptake, as well as chemotherapy and radiotherapy resistance.

Target Details

This protein catalyzes the conversion of L-lactate and NAD to pyruvate and NADH in the final step of anaerobic glycolysis. The protein is found predominantly in muscle tissue and belongs to the lactate dehydrogenase family. Mutations in this gene have been linked to exertional myoglobinuria. Multiple transcript variants encoding different isoforms have been found for this gene. The human genome contains several non-transcribed pseudogenes of this gene.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%
Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%
Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of rat L-LDH in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	92
	Range %	80-97
1:2	Average %	92
	Range %	88-105
1:4	Average %	97
	Range %	92-104
1:8	Average %	94
	Range %	86-98

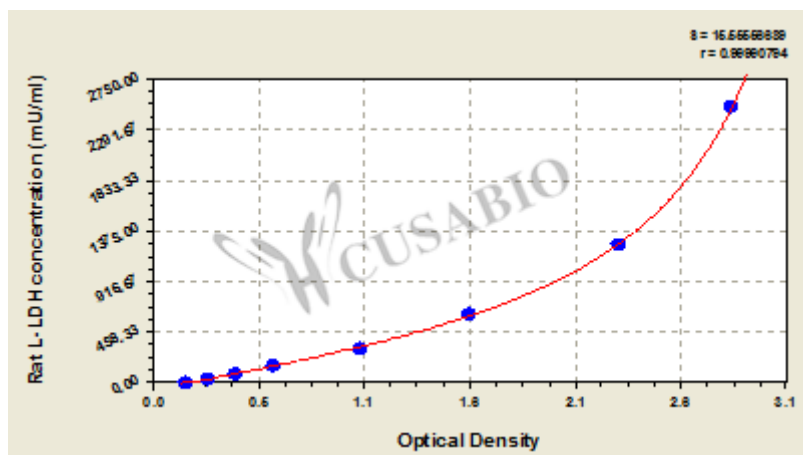
Recovery

The recovery of rat L-LDH spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	93	89-100
EDTA plasma (n=4)	90	85-95

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



mU/ml OD1 OD2 Average Corrected

2500	2.754	2.952	2.853	2.679
1250	2.218	2.376	2.297	2.123
625	1.534	1.584	1.559	1.385
312.5	1.022	1.039	1.031	0.857
156	0.587	0.624	0.606	0.432
78	0.412	0.430	0.421	0.247
39	0.286	0.279	0.283	0.109
0	0.173	0.175	0.174	?

Msds

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