

ADDITIONAL INFORMATION

Related Product Information for LDHD elisa kit

Introduction: Lactate dehydrogenase (LDH) is an enzyme present in a wide variety of organisms, including plants and animals. LDH is found in the liver, kidneys, striated muscle, and heart muscle that catalyze the reversible conversion of pyruvate and lactate. It catalyses the interconversion of pyruvate and lactate with concomitant interconversion of NADH and NAD⁺. It converts pyruvate, the final product of glycolysis to lactic acid when oxygen is absent or in short supply, and it performs the reverse reaction during the cori cycle in the liver. At high concentrations of lactate, the enzyme exhibits feedback inhibition and the rate of conversion of pyruvate to lactate is decreased. Tissue breakdown elevates levels of LDH, and therefore a measure of it indicates e.g. hemolysis. Other disorders indicated by elevated LDH include cancer, meningitis, encephalitis, acute pancreatitis and HIV. Two forms of lactate dehydrogenase with different substrate specificities have been found; L-lactate dehydrogenase and D-lactate dehydrogenase. Whereas the enzyme from vertebrates and plants only forms L-lactate, invertebrates, lower fungi, and prokaryotic organisms possess either a D- or L-lactate specific dehydrogenase, depending on the species. Some prokaryotes even possess both enzymes within the same cell. On the other hand, eukaryotes have several isozyme forms, but all have a single stereospecificity.

Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to D-LDH. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific for D-LDH and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well 4 and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain D-LDH, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of D-LDH in the samples is then determined by comparing the O.D. of the samples to the standard curve.

NCBI AND UNIPROT INFORMATION

NCBI GI #	37595754
NCBI GeneID	197257
NCBI Accession #	NP_705690.2
NCBI GenBank Nucleotide #	NM_153486.3
UniProt Accession #	Q86WU2 ; Q8IZK5
Molecular Weight	54,871 Da
NCBI Official Full Name	probable D-lactate dehydrogenase, mitochondrial isoform 1
NCBI Official Synonym Full Names	lactate dehydrogenase D
NCBI Official Symbol	LDHD
NCBI Official Synonym Symbols	DLD
NCBI Protein Information	probable D-lactate dehydrogenase, mitochondrial
UniProt Protein Name	Probable D-lactate dehydrogenase, mitochondrial
UniProt Gene Name	LDHD
UniProt Synonym Gene Names	DLD; Lactate dehydrogenase D
UniProt Entry Name	LDHD_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/ldhd-human-elisa-kits/lactate-dehydrogenase-d/79662>