Product name: Lactate Dehydrogenase (LDH) Assay Kit (Fluorometric)  
Detection method: Fluorescent  
Sample type: Urine, Serum, Plasma, Other biological fluids, Adherent cells, Suspension cells, Tissue Extracts, Cell culture media  
Assay type: Enzyme activity  
Sensitivity: 1 uU/ml  
Assay time: 0h 20m  
Species reactivity: Reacts with: Mammals, Other species  

Overview

Lactate Dehydrogenase (LDH) Assay Kit (Fluorometric) (ab197000) provides a quick and easy method for monitoring Lactate Dehydrogenase (LDH) activity in a wide variety of samples. In this assay, LDH converts lactate into pyruvate and NADH, which reacts with the specific fluorescent probe to generate an intense fluorescent product (Ex/Em = 535/587 nm).

This kit is simple, highly sensitive and high-throughput adaptable and can detect LDH activity as low as 1 µU/mL.

LDH assay protocol summary:
- add samples and standards to wells
- add reaction mix
- analyze with microplate reader every 2-3 min for 10-30 min

Notes

This product is manufactured by BioVision, an Abcam company and was previously called K730 PicoProbe™ Lactate Dehydrogenase Activity Assay Kit. K730-500 is the same size as the 500 test size of ab197000.

Lactate dehydrogenase (LDH, L-Lactate NAD oxidoreductase, EC 1.1.1.27) is an ubiquitous enzymes among vertebrate organisms which catalyzes the reversible conversion of pyruvate to lactate, with concomitant conversion of NADH and NAD+. LDH is cytoplasmic in its cellular location and in any one tissue is composed of one or two of five possible isoenzymes. During tissue damage, LDH is released into the bloodstream; therefore it serves as a marker for various diseases and common injuries.
Storage instructions
Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>500 tests</th>
<th>500 tests</th>
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</thead>
<tbody>
<tr>
<td>LDH Assay Buffer</td>
<td>1 x 110ml</td>
<td>1 x 110ml</td>
</tr>
<tr>
<td>LDH Substrate Mix</td>
<td>1 vial</td>
<td>1 vial</td>
</tr>
<tr>
<td>NADH Standard</td>
<td>1 vial</td>
<td>1 vial</td>
</tr>
<tr>
<td>PicoProbe</td>
<td>1 x 1.4ml</td>
<td>1 x 1.4ml</td>
</tr>
<tr>
<td>Positive Control</td>
<td>1 vial</td>
<td>1 vial</td>
</tr>
</tbody>
</table>

Pathway
Fermentation; pyruvate fermentation to lactate; (S)-lactate from pyruvate: step 1/1.

Involvement in disease
Defects in LDHA are the cause of glycogen storage disease type 11 (GSD11) [MIM:612933]. A metabolic disorder that results in exertional myoglobinuria, pain, cramps and easy fatigue.

Sequence similarities
Belongs to the LDH/MDH superfamily. LDH family.

Post-translational modifications
ISGylated.

Cellular localization
Cytoplasm.

Images
Typical NADH Standard Curve obtained following assay protocol.
Functional Studies - Lactate Dehydrogenase (LDH) Assay Kit (Fluorometric) (ab197000)

Kinetic measurement of Lactate Dehydrogenase activity in a range of biological samples.

Relative LDH Activity was calculated in lysates prepared from rat liver (0.037 µg protein), Jurkat cells (0.053 µg protein), and Human serum (0.2 µg protein).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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