Product datasheet

LDH Assay Kit / Lactate Dehydrogenase Assay Kit (Colorimetric) ab102526

Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>LDH Assay Kit / Lactate Dehydrogenase Assay Kit (Colorimetric)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Colorimetric</td>
</tr>
<tr>
<td>Sample type</td>
<td>Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids, Tissue Extracts</td>
</tr>
<tr>
<td>Assay type</td>
<td>Enzyme activity (quantitative)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>&gt; 1 mU/ml</td>
</tr>
<tr>
<td>Range</td>
<td>1 mU/ml - 100 mU/ml</td>
</tr>
<tr>
<td>Assay time</td>
<td>0h 30m</td>
</tr>
<tr>
<td>Product overview</td>
<td>Lactate Dehydrogenase (LDH) Assay Kit (Colorimetric) ab102526 quantifies LDH activity in a variety of samples such as serum or plasma, cells, and culture medium.</td>
</tr>
</tbody>
</table>

In the LDH assay protocol, LDH reduces NAD to NADH, which then interacts with a specific probe to produce a color (OD max = 450 nm). The kit can detect 1 - 100 mU/mL of LDH directly in samples. The assay is quick, convenient, and sensitive.

LDH assay protocol summary:
- add samples and standards to wells
- add reaction mix
- analyze every 2-3 min for at least 30 min with microplate reader in kinetic mode at 37°C

Notes

As LDH is a fairly stable enzyme, the LDH assay is widely used as a marker for damage to cells and tissues, i.e. to measure damage that is severe enough to allow LDH to leak from the cell.

Platform

Microplate reader

Properties

Storage instructions

Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>500 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDH Assay Buffer</td>
<td>NM</td>
<td>1 x 50ml</td>
</tr>
<tr>
<td>LDH Positive Control (lyophilized)</td>
<td>Red</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
Cellular necrosis was measured as LDH release after cisplatin treatment for 24 h and 48 h using ab102526. The release of LDH was apparently increased at 24 and 48 h after cisplatin treatment.

Kinetic profiles of approx 0.5 mU of a sample of pure LDH (Positive Control) and 2 μL frozen human serum using buffer as a background control.

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<tr>
<th>Components</th>
<th>Identifier</th>
<th>500 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDH Substrate Mix</td>
<td>Amber</td>
<td>1 vial</td>
</tr>
<tr>
<td>NADH Standard</td>
<td>Yellow</td>
<td>1 vial</td>
</tr>
</tbody>
</table>

Functional Studies - Lactate Dehydrogenase Colorimetric Assay Kit (ab102526)
Image from Xu Y et al., PLoS One, 2014;9(6):e100127. Fig 2(B); doi: 10.1371/journal.pone.0100127.
Functional Studies - Lactate Dehydrogenase

Colorimetric Assay Kit (ab102526)

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