**Overview**

**Product name**
LDH Assay Kit / Lactate Dehydrogenase Assay Kit (Colorimetric) ab102526

**Detection method**
Colorimetric

**Sample type**
Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids, Tissue Extracts

**Assay type**
Enzyme activity (quantitative)

**Sensitivity**
> 1 mU/ml

**Range**
1 mU/ml - 100 mU/ml

**Assay time**
0h 30m

**Product overview**
Lactate Dehydrogenase (LDH) Assay Kit (Colorimetric) ab102526 quantifies LDH activity in a variety of samples such as serum or plasma, tissue, cells, and culture medium.

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**

To measure LDH release into cell culture medium from cultured cells in a cytotoxicity experiment, we recommend LDH assay kit ab65393, which is designed specifically as a cytotoxicity assay.

This LDH assay kit ab102526 is designed in a more flexible format for use with a variety of sample types (this includes cell culture medium, and this kit may be used in cytotoxicity assays). This flexible format LDH assay kit is also available as a fluorometric LDH assay kit ab197000.

**How other researchers have used LDH Assay Kit ab102526**

This LDH assay kit has been used in publications in a variety of sample types, including:
- Human: serum¹
- Mouse: kidney tissue², kidney epithelial cell line lysates³, muscle tissue⁴, serum²,⁵, vaginal lavage fluid⁵, liver tissue⁷
- Rat: H8C2 cell lysates⁸
It has also been used in LDH release cytotoxicity cell culture assays including in human hippocampal neuronal cultures\textsuperscript{9}, THP-1 cells\textsuperscript{10}, primary chondrocyte cells on a membrane scaffold\textsuperscript{11}, primary lymphocytes\textsuperscript{12}, ovarian cancer cells co-cultured with mouse splenocytes in a cytotoxic T lymphocyte assay\textsuperscript{13}.


**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>
<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>

**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**

LDH assay on mouse skeletal muscle

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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.

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.

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