**Overview**

**Product name**  L-Lactate Assay Kit (Colorimetric)

**Tests**  100 x 1 assay

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

**Assay type**  Quantitative

**Sensitivity**  0.02 mM

**Range**  0.02 mM - 10 mM

**Assay time**  0h 40m

**Product overview**

L-Lactate Assay Kit (Colorimetric) (ab65331) is an assay where lactate is oxidized by lactate dehydrogenase to generate a product which interacts with a probe to produce a color (λmax = 450 nm). The kit detects L(+)-Lactate in biological samples such as serum or plasma, cells, culture and fermentation media. There is no need for pretreatment or purification of samples.

Visit our FAQs page for tips and troubleshooting.

**Notes**

L(+)-Lactate is the major stereo-isomer of lactate formed in human intermediary metabolism and is present in blood. D(-)-Lactate is also present but only at about 1-5% of the concentration of L(+)-Lactate.

**Properties**

**Storage instructions**  Store at -20°C. Please refer to protocols.

**Components**

<table>
<thead>
<tr>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>L(+)-Lactate Standard (100 nmol/µl)</td>
<td>Yellow 1 x 100µl</td>
</tr>
<tr>
<td>Lactate Assay Buffer</td>
<td>WM 1 x 25ml</td>
</tr>
<tr>
<td>Lactate Enzyme Mix (lyophilized)</td>
<td>Green 1 vial</td>
</tr>
<tr>
<td>Lactate Substrate Mix</td>
<td>Red 1 vial</td>
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</tbody>
</table>

**Relevance**

Lactate (CH$_2$CH(OH)COO$^-$) plays important roles in many biological processes. Abnormal high concentration of lactate has been related to disease states such as diabetes and lactate acidosis, etc. L(+)-Lactate is the major stereoisomer of lactate formed in human intermediary metabolism and is present in blood. The lactate to pyruvate ratio reflects the redox state of the cell and describes the balance between NAD$^+$ and NADH, which is dependent on the interconversion of lactate and pyruvate via lactate dehydrogenase (LDH).

**Applications**

Our Abpromise guarantee covers the use of ab65331 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Studies</td>
<td>Abreviews</td>
<td>Use at an assay dependent dilution.</td>
</tr>
</tbody>
</table>

**L-Lactate Assay Kit (Colorimetric) images**
Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Functional Assay: L-Lactate Assay Kit (Colorimetric) (ab65331)

Relative signal (RFU) in unfiltered human plasma (dilution 1:8), comparing L-lactate signals with background reading (no enzyme) after 10 minutes of incubation (duplicates +/- SD).

Standard curve with background signal subtracted (duplicates; +/- SD).

Lactate Standard Curve. The assay is performed following the kit (ab65331) protocol.

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