**Product Datasheet**

**L-Carnitine Assay Kit ab83392**

**Overview**

- **Product name**: L-Carnitine Assay Kit
- **Detection method**: Colorimetric/Fluorometric
- **Sample type**: Urine, Serum, Plasma, Other biological fluids, Cell Lysate, Tissue Lysate
- **Assay type**: Quantitative
- **Range**: 1 µM - 200 µM
- **Assay time**: 0h 30m
- **Species reactivity**: Reacts with: Other species, Mammals

**Product overview**

Abcam’s L-Carnitine Assay Kit is a simple convenient means of measuring free L-Carnitine in biological samples such as serum. The assay transfers an acetyl group from CoA to carnitine and the free CoA formed is further processed with subsequent oxidation of the OxiRed probe to give fluorescence (Ex/Em 535 nm 587 nm) and absorbance (570 nm). The normal range for serum L-Carnitine is ~20-100 µM. The detection sensitivity is ~1 µM for the fluorometric assay and ~10 µM for the colorimetric assay.

Visit our [FAQs page](#) for tips and troubleshooting.

**Notes**

Carnitine is a quaternary ammonium compound biosynthesized from the amino acids lysine and methionine. It is required for transport of fatty acids into the mitochondrial matrix via the carnitine/acylcarnitine shuttle where beta-oxidation occurs, acetate is generated and the acetate utilized in the TCA cycle for the generation of energy. L-Carnitine is often sold as a nutritional supplement. Carnitine exists in two stereoisomers. Only L-carnitine is biologically active.

**Platform**

Microplate reader

**Properties**

**Storage instructions**

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

**Components**

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carnitine Assay Buffer</td>
<td>WM</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>Carnitine Converting Enzyme (lyophilized)</td>
<td>Purple</td>
<td>1 vial</td>
</tr>
<tr>
<td>Carnitine Development Mix (lyophilized)</td>
<td>Green</td>
<td>1 vial</td>
</tr>
</tbody>
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Relevance

Carnitine is a quaternary ammonium compound biosynthesized from the amino acids lysine and methionine. It is required for transport of fatty acids into the mitochondrial matrix via the carnitine/acylcarnitine shuttle where beta oxidation occurs, acetate is generated and the acetate utilized in the TCA cycle for the generation of energy. L Carnitine is often sold as an antioxidant in nutritional supplements. Carnitine exists in two stereoisomers. Only L carnitine is biologically active.

Images

Fluorimetric standard curve: mean of duplicates (+/- SD) with background readings subtracted.

L-Carnitine measured in biologicals showing concentration (micromolar).
Example of L-Carnitine standard curve obtained using ab83392.

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

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