abcam

Product datasheet

L-Carnitine Assay Kit ab83392

1 Abreviews 1 References 3 Images

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:** Mammals, Other species
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	This product is manufactured by BioVision, an Abcam company and was previously called K642 L-Carnitine Colorimetric/Fluorometric Assay Kit. K642-100 is the same size as the 100 test size of ab83392. 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.

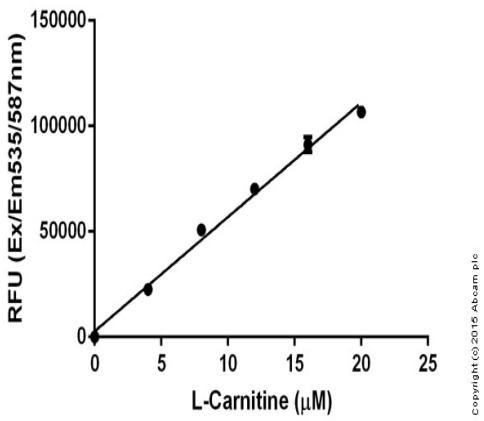
Components	100 tests
Carnitine Assay Buffer	1 x 25ml

Components	100 tests
Carnitine Converting Enzyme	1 vial
Carnitine Development Mix	1 vial
Carnitine Standard	1 vial
Carnitine Substrate Mix	1 x 400µl
OxiRed Probe	1 x 200µl

Relevance

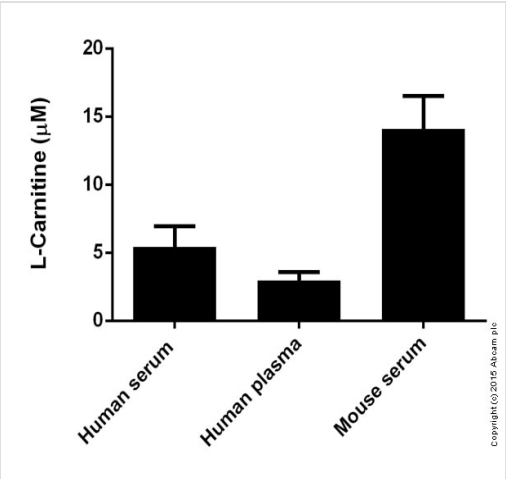
Carnitine is a quaternary ammonium compound biosynthesized from the amino acids lysine and methionine. It is required for transport of fatty acids into the mitochondrial matrix via the carnitine/acylcarnitine shuttle where beta oxidation occurs, acetate is generated and the acetate utilized in the TCA 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



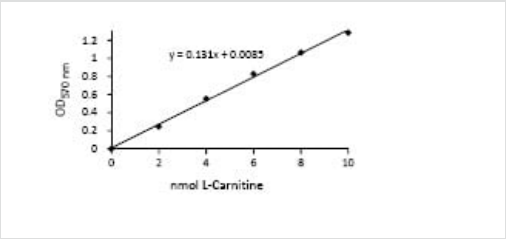
Functional assay - 83392 L-Carnitine Assay Kit

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



L-Carnitine measured in biologicals showing concentration (micromolar).

Functional assay - 83392 L-Carnitine Assay Kit



Example of L-Carnitine standard curve obtained using ab83392.

Functional Studies - L-Carnitine Assay Kit (ab83392)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors