L-Carnitine Assay Kit

Cat. No. Kit-0506 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	L-Carnitine Assay Kit is used for measuring free L-carnitine.
Description	Carnitine is a quaternary ammonium compound biosynthesized from lysine and methionine. It is required for fatty acid transport into the mitochondrial matrix via the carnitine/acylcarnitine shuttle where β-oxidation occurs, acetate is generated and the acetate utilized in the TCA cycle for the generation of energy. Carnitine exists in two stereoisomers. Only L-carnitine is biologically active. The 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 Oxi-Red probe to give fluorescence (Ex/Em = 535/587 nm) and absorbance (570 nm). The normal range for serum L-Carnitine is ~10-70 μM. The detection sensitivity is ~1 μM (fluorometric) and ~10 μM (colorimetric).
Target Species	Mammals
Usage	For research use only (RUO)
Storage	Store the kit at -20°C, protect from light. Allow Assay Buffer to warm to room temperature before use. Briefly centrifuge vials prior to opening. Read the entire protocol before performing the assay.
Kit Components	Components 100 Assays Cap CodeCarnitine Assay Buffer 25 mL WMCarnitine Probe (in DMSO) 0.2 mL RedCarnitine Converting Enzyme lyophilized PurpleCarnitine

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	Substrate Mix 400 µ BlueCarnitine Development Mix lyophilized GreenCarnitine Standard (10 µmol) lyophilized Yellow
Detection method	Colorimetric, Fluorometric
Compatible Sample Types	Biological Fluid, Cell Culture Supernatant, Plasma, Serum, Tissue Culture Supernatant, Urine

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