

Alanine Colorimetric/Fluorometric Assay Kit

Cat. No. Kit-1056 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Description

Alanine is the 2nd most abundant of the 20 proteinogenic amino acids. Nonessential, being available from dietary sources, it plays a key role in the glucose-alanine cycle between tissues and liver. In muscle and other tissues that degrade amino acids, amino groups are pooled as glutamate by transamination. Glutamate then transfers the amino group to pyruvate via alanine aminotransferase, forming alanine and α -ketoglutarate. The alanine is passed into the blood and transported to the liver. A reverse of the alanine aminotransferase reaction takes place in liver. Pyruvate can be used in gluconeogenesis, to form glucose which may return to other tissues through the circulatory system. There appears to be a correlation between alanine levels and higher blood pressure, energy intake, cholesterol levels, and body mass index. Alanine Assay Kit provides a sensitive detection method of alanine. In the kit, alanine is converted to pyruvate which is specifically detected leading to proportional color ($\lambda=570\text{nm}$: 0-10 nmol) or fluorescence (Ex/Em 535/587nm: 0-1 nmol) development. Serum concentration: ~24-76 $\mu\text{g/ml}$ (~3-9 nmol/10 μl).

Applications The assay can detect serum concentration: ~24-76 $\mu\text{g/ml}$ (~3-9 nmol/10 μl).

Storage -20°C

Shipping Gel Pack

Size 100 assays

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Kit Components	Alanine Assay Buffer; Alanine probe (in DMSO); Alanine Converting Enzyme; Alanine Development Mix; Alanine Standard (10 µmol)
Target Species	Mammalian
Detection method	Absorbance (570 nm) or Fluorescence (Ex/Em 535/587 nm)
Features & Benefits	Simple procedure; takes ~ 40 minutes; Fast and convenient; Kit contains all necessary reagents for accurate measurement of alanine levels

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