

Isocitrate Assay Kit

Cat. No. Kit-0482 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Isocitrate Assay Kit is used for quantifying isocitrate.
Description	Isocitric acid ($\text{HOOC-CHOH-CH}(-\text{COOH})\text{-CH}_2\text{-COOH}$) is an intermediate of the Krebs TCA cycle, positioned between citrate and α-keto-glutarate. It is the branch point from which the glyoxylate shunt operates in plants and lower organisms. Isocitrate is found in substantial concentrations in many fruits and vegetables as well as in foods produced from these raw materials. In the TCA cycle, isocitrate is oxidized by isocitrate dehydrogenase (IDH) to α-ketoglutarate with the generation of NAD(P)H. Loss of NAD-IDH has been implicated as a potential causative factor in retinitis pigmentosa. The Isocitrate Assay Kit provides a simple, sensitive and rapid means of quantifying isocitrate in a variety of samples. In the assay, isocitrate is oxidized with the generation of NADPH which converts a nearly colorless probe to an intensely colored species with a λ_{max} of 450nm. The Isocitrate Assay Kit can detect 1 to 20 nmoles ($\sim 0.2\text{-}5\text{ }\mu\text{g}$) of isocitrate.
Target Species	Mammals
Usage	For research use only (RUO)
Storage	Store kit at -20°C , protect from light. Warm Isocitrate Assay Buffer to room temperature before use. Briefly centrifuge all small vials prior to opening.
Kit Components	1. Isocitrate Assay Buffer: 25 ml. 2. Isocitrate Enzyme Mix: 200 μl . 3. Substrate Mix: lyophilized. 4. Isocitrate Standard (10 μmol): lyophilized.

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Detection method	Colorimetric
Compatible Sample Types	Biological Fluid, Cell Culture Supernatant, Plasma, Serum, Tissue Culture Supernatant, Urine