CREATIVE BIOMART®
Assay Kit

D-Mannitol Colorimetric Assay Kit

Product Information

Cat.No. Kit-0293

Product Overview

D-Mannitol Assay Kit (Colorimetric) is a quantitative colormetric determination of D-mannitol at 450 nm.

Description

D-Mannitol is one of the most abundant sugar alcohols in nature. It can be produced in the biosphere by a range of organisms such as bacteria, yeast, fungi and almost all plants. Mannitol functions as a carbohydrate storage depot, as a scavenger for reactive oxygen species and as an osmoprotectant. Recent studies have shown that increased mannitol content in plants protects them against fungal infections and improves resistance to drought and high salinity. The mannitol pathway reversibly converts fructose to mannitol and serves as the main carbohydrate cycle for fungi survival. Measurement of mannitol level is important for evaluating mannitol metabolic pathways and commercially, in developing fungi and drought resistant plants. In D-Mannitol Assay Kit (Colorimetric), D-mannitol is converted to D- fructose by mannitol dehydrogenase in the presence of NAD to form NADH, which reduces a colorless probe to a chromogen with strong absorbance at 450 nm. L-Arabitol, another sugar alcohol, also acts as substrate for mannitol dehydrogenase & undergoes similar reaction; therefore, this kit can also be used to measure L-arabitol. The D-mannitol assay kit is fast (~20 minutes), sensitive & easy to use. This assay kit can detect mannitol level less than 1 nmol/reaction (< 10 µM) & can be used for a variety of sample types.

Applications

Measurement of D-Mannitol/L-Arabitol in various plant tissues/cells and food products.Analysis of mannitol metabolic pathways and cell signaling in various organisms.

Usage

For research use only (RUO)

Storage

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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Store kit at -20°C, protected from light. Warm all Buffers to room temperature before use. Briefly centrifuge all small vials prior to opening.

Kit Components

Mannitol Assay Buffer. Cap code: WM. 25 mlMannitol Enzyme Mix (Lyophilized). Cap code: green. 1 vialMannitol Substrate Mix (Lyophilized). Cap code: red. 1 vialMannitol Standard (Lyophilized). Cap code: yellow. 1 vial

Detection method Colorimetric

Compatible Sample Types

Bacteria, Beverage, Food, Fungi, Plant Tissue

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