CREATIVE BIOMART®
Assay Kit

Intestinal Permeability Assay Kit

Product Information

Cat.No. Kit-2077

Product Overview

The intestinal permeability assay kit is based on measuring the ratio of the absorption of two non-metabolized sugars to through the intestines. Test subjects drink a prescribed amount of lactulose and mannitol and the % absorption of these sugars is determined by the amount of excreted lactulose and mannitol measured during the first 6 hours after ingestion. The degree of intestinal permeability is reflected by the ratio of the % absorption of lactulose to % absorption of mannitol. An increase in this ratio indicates increased intestinal permeability since lactulose is only absorbed though intercellular spaces. Lactulose and mannitol are measured in separate assays using the included Lactulose Assay Kit and Mannitol Assay Kit, respectively.

Size

100 tests

Description

INTESTINAL PERMEABILITY is a phenomenon of the gut wall in which leakage of molecules and ions below ~0.4 nm occurs from the gut lumen into blood circulation. This paracellular leakage occurs through tight junctions between epithelial cells. Elevated paracellular leakage has been implicated in many disorders including type 1 and type 2 diabetes, obesity, inflammatory bowel disease, celiac disease, Parkinson"s disease and cancer.

Applications

Determination of intestinal permeability (leaky gut syndrome) through measuring lactulose/mannitol ratio.

Target Species

Human

Storage

The kit is shipped on ice. Store all components at -20°C upon receiving. Shelf life: 6 months after

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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receipt.

Kit Components

LACTULOSE ASSAY KITAssay Buffer: 6 mL Standard: 400 µL 15 mM LactuloseEnzyme A: Dried Enzyme B: 120 µLEnzyme Buffer: 150 µL PMS Solution: 1.5 mLMANNITOL ASSAY KITAssay Buffer: 10 mL Standard: 0.5 mL 20 mM D-MannitolEnzyme: 120 µL

Detection method OD565nm

Compatible Sample Types

Urine

Features & Benefits

• Simple and convenient. Both assays require addition of single working reagent and can be completed within 60 minutes. Both assays are performed at room temperature. No 37°C heater is needed.• High-throughput. "Add-mix-read" type assay. Can be readily automated as a high-throughput 96-well plate assay for thousands of samples per day.

Assay time

60 and 30 min

Sensitivity

Detection Limit: D-Mannitol: 7 μM; Lactulose: 3 μM

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