CREATIVE BIOMART®
Assay Kit

Multi-Drug Resistance Assay Kit (Green)

Product Information

Cat.No. Kit-0546

Product Overview

Multi-Drug Resistance Assay Kit use a fluorescent MDR indicator for assaying two ATP-dependent drug-efflux pump activities.

Description

Multi Drug Resistance (MDR) is a major factor in the failure of many forms of chemotherapy. In the past few years it has become widely accepted that the resistance to chemotherapy correlates with the overexpression of at least two ATP- dependent drug-efflux pumps. These cell membrane proteins, called P-glycoprotein (Pgp, MDR1), and multidrug- resistance-associated protein (MRP1) are members of the ABC transporter family. Our Multi-Drug Resistance Assay Kit (Green) uses a fluorescent MDR indicator for assaying these two MDR pump activities. This hydrophobic fluorescent dye molecule rapidly penetrates cell membranes and becomes trapped in cells. Following a short incubation, the intracellular free dye concentration can increase significantly. In the MDR1 and/or MRP1-expressing cells this dye is extruded by the MDR transporters, thus decreasing the cellular fluorescence intensity. However, when its extrusion is blocked by an agent that interferes with the MDR1 and/or MRP1 pump-activity, its cellular fluorescence intensity increases significantly. Multi-Drug Resistance Assay Kit (Green) are ideal for high throughput screening of MDR pump inhibitors or identifying the cells that have high level of MDR pump activities.

Usage

For research use only (RUO)

Storage

Store the kit at -20°C and avoid exposure to light.

Kit Components

Component A: MDR Sensor 1 vialComponent B: DMSO 1 vial (100 μl)Component C: Assay Buffer 1 bottle (10 ml)

Detection method 490/525 nm

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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Compatible Sample Types

Cell Culture

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