CREATIVE BIOMART®
Assay Kit

DNA Methyltransferase 3B Activity/Inhibitor Screening Assay Core Kit

Product Information

Cat.No. Kit-0301

Product Overview

DNA Methyltransferase 3B Activity/Inhibitor Screening Assay Core Kit is use for screening DNA methyltransferase 3B inhibitors.

Description

Epigenetic inactivation of genes play a critical role in many important human diseases, especially in cancer. A core mechanism for epigenetic inactivation of the genes is methylation of CpG islands in genome DNA. Methylation of CpG islands involves the course in which DNA methyltransferases (Dnmts) transfer a methyl group from S-adenosyl-L-methionine to the fifth carbon position of the cytosines. Four active Dnmts have been identified in mammals. They are named Dnmt1, Dnmt2, Dnmt3A, and Dnmt3B. Dnmt3B has been demonstrated to methylate both unmethylated and hemimethylated DNA equally and is supposed to mediate de novo methylation together with Dnmt1. Increased activation or amount of Dnmt3B is believed to be involved in carcinogenesis, and other genetic and epigenetic diseases. The selective inhibition of Dnmt3B may lead to demethylation and expression of the silenced tumor suppressor genes. Thus, the selective Dnmt3B inhibitors could be a new addition to cancer therapeutic agents.

Usage

For research use only (RUO)

Storage

The kit is shipped in two parts: one part at ambient room temperature, and the second part on frozen ice packs at 4°C.Upon receipt: (1) Store MT3, MT4, and MT6 at –20°C away from light; (2) Store MT1, MT2, MT5, MT7, and the 88-Well Substrate-Coated Strips at 4°C away from light; (3) Store MT8 at room temperature. The kit is stable for up to 6 months from the shipment date, when stored properly.Note: Check if wash buffer, MT1, contains salt precipitates before using. If so, warm (at room temperature or 37°C) and shake the buffer until the salts are re-dissolved.

Kit Components

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MT1 (10X Wash Buffer) 11 mlMT2 (Dnmt Assay Buffer) 2 mlMT3 (Adomet, 8 mM)* 35 µlMT4 (Active Dnmt3B, 2 KU/ml)* 25 µlMT5 (Capture Antibody)* 5 µlMT6 (Detection Antibody)* 10 µlMT7 (Developing Solution) 6 mlMT8 (Stop Solution) 3 ml8-Well Substrate-Coated Strip (with frame) 6User Guide 1* For maximum recovery of the products, centrifuge the original vial prior to opening the cap.

Detection method Colorimetric

Features & Benefits

Extremely fast procedure, which can be completed within 3 hours.Innovative colorimetric assay without radioactivity, extraction and chromatography.Strip microplate format makes the assay flexible: manual or high throughput analysis.Simple, reliable, and consistent assay conditions.

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