

DNA Methyltransferase Activity/Inhibition Assay Kit (Colorimetric)

Product Information

Cat.No.

Kit-0302

Product Overview

DNA Methyltransferase Activity/Inhibition Assay Kit (Colorimetric) is use for measuring Dnmt activity/inhibition.

Description

Epigenetic inactivation of genes plays 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-DNMT1, DNMT2, DNMT3A, and DNMT3B. The inhibition of DNMTs may lead to demethylation and expression of the silenced genes. DNMT inhibitors are currently being developed as potential anticancer agents. Currently, there are very narrow selections of methods to use for measuring DNMT activity or inhibition. These methods are time consuming, labor-intensive, have low throughput, or produce radioactive waste. The DNA Methyltransferase Activity/Inhibition Assay Kit (Colorimetric) by using a unique procedure to measure DNMT activity or inhibition.

Applications

DNA Methyltransferase Activity/Inhibition Assay Kit (Colorimetric) is suitable for non-radioactively measuring DNMT activity or inhibition from a broad range of species including mammals, plants, and bacteria.

Usage

For research use only (RUO)

Storage

Upon receipt, store M3, M4, and M6 at -20°C away from light; store all other components at 4°C away from light. Note: Check if wash buffer, M1, contains salt precipitates before using. If so, warm

DNA Methyltransferase Activity/Inhibition Assay Kit (Colorimetric)

(at room temperature or 37°C) and shake the buffer until the salts are re-dissolved.

Kit Components

M1 (10X Wash Buffer) 22 ml M2 (DNMT Assay Buffer) 3 ml M3 (Adomet, 8 mM)* 70 μ l M4 (DNMT Positive Control)* 10 μ l M5 (Capture Antibody)* 8 μ l M6 (Detection Antibody 200 μ g/ml)* 20 μ l M7 (Developing Solution) 12 ml M8 (Stop Solution) 6 ml 8 Well Sample Strips (With Frame) 12* For maximum recovery of the products, centrifuge the original vial prior to opening the cap.

Features & Benefits

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