CREATIVE BIOMART®
Assay Kit

Methylated DNA Quantification Kit

Product Information

Cat.No. Kit-0552

Product Overview

Methylated DNA Quantification Kit is use for measuring methylated DNA using small amount of DNA samples.

Description

Epigenetic alterations of genomic DNA play a critical role in many important human diseases, especially in cancer. A core mechanism for epigenetic alterations of genomic DNA is hypermethylation of CpG islands in specific genes and DNA hypomethylation. 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. Region-specific DNA methylation is mainly found in 5"-CpG-3" dinucleotides within the promoters or in the first exon of genes, which is an important pathway for the repression of gene transcription in diseased cells. DNA hypomethylation is likely caused by methyl-deficiency due to a variety of environmental influences, and has been proposed as a molecular marker in multiple biological processes such as cancer. It has been well demonstrated that the decrease in DNA methylation is one of the most important characteristics of cancer. Thus the quantification of methylation in cancer cells could provide very useful information for detection and analysis of this disease.

Applications

Methylated DNA Quantification Kit is suitable for detecting DNA methylation status using genomic DNA isolated from any species such as mammal, plant, fungus, bacteria and virus in a variety of forms including cultured cells, fresh and frozen tissues, paraffin-embedded tissues, plasma/serum samples, and body fluid samples, etc.

Usage

For research use only (RUO)

Storage

Store SA3, SA6 SA7 and Negative Control DNA at –20°C away from light; Store SA1, SA4, SA5, SA8

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Methylated DNA Quantification Kit

and 8-Well Assay Strips at 4°C away from light; Store all other components at room temperature. The kit is stable for up 6 months from date of shipment when stored properly.Note: Check if wash buffer, SA1, 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

SA1 (10X wash buffer) 30 mlSA2 (DNA binding solution) 3 mlSA3 (positive control, 100 μg/ml)** 20 μlSA4 (block solution) 20 mlSA5 (capture antibody, 1000 μg/ml)* 8 μlSA6 (labeling solution)* 20 μlSA7 (fluoro developer)* 24 μlSA8 (fluoro enhancer)* 24 μlSA9 (fluoro dilution) 8 mlNegative control DNA (20 ng/μl) 20 μl8 well assay strips (with frame) 12* For maximum recovery of the products, centrifuge the original vial after thawing prior to opening the cap.** This control is synthesized polynucleotide methylated at every 5-cytosine.

Features & Benefits

Fluorescence-based assay with easy to follow steps for convenience and speed. The whole procedure can be finished within 2 hours and 30 minutes.High sensitivity, of which detection limit can be as low as 50 pg of methylated DNA with the input DNA being as low as 2 ng.Universal positive control, which is suitable for quantifying methylated DNA from any species.