CREATIVE BIOMART®
Assay Kit

Histone H3-K9 Methylation Assay Kit

Product Information

Cat.No. Kit-0458

Product Overview

Histone H3-K9 Methylation Assay Kit is use for measuring methylation of histone H3-K9.

Description

Epigenetic activation or inactivation of genes plays a critical role in many important human diseases, especially in cancer. A major mechanism for epigenetic inactivation of the genes is methylation of CpG islands in genome DNA caused by DNA methyltransferases. Histone methyltransferases (HMTs) control or regulate DNA methylation through chromatin-dependent transcription repression or activation. HMTs transfer 1-3 methyl groups from S-adenosyl-L-methionine to the lysine and arginine residues of histone proteins. ESET, G9a, SUV39-h1, SUV39- h2, SETDB1, Dim-5 and Eu-HMTase are histone methyltransferases that catalyze methylation of histone H3 at lysine 9 (H3-K9) in mammalian cells. H3-K9 methylation mediates heterochromatin formation by forming a binding site for HP1 and also participates in silencing gene expression at euchromatic sites. Increased H3-K9 methylation is also found to be involved in some pathological processes such as cancer progress. There are only a couple of methods such as western blot used for measuring histone H3-K9 methylation. These methods available so far are time consuming and labor intensive, or have low throughput. The Histone H3-K9 Methylation Assay Kit addresses theses problems by using a unique procedure to measure methylation of histone H3-K9.

Applications

For specifically measuring histone H3-K9 methylation using a variety of mammalian cells including fresh and frozen tissues, cultured adherent and suspension cells.

Usage

For research use only (RUO)

Storage

Upon receipt, store GC8 and the methylated H3-K9 control at –20°C. Store GC3, GC5, GC7, GC9 and 8-Well Assay Strips at 4°C away from light. Store all other components at room temperature. The

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kit is stable for 6 months when stored properly.Note: Check if wash buffer, GC3, 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

GC1 (10X wash buffer) 10 mlGC2 (Extraction buffer) 16mlGC3 (10X wash buffer) 28 mlGC4 (Histone buffer) 1 mlGC5 (Blocking buffer) 20 mlGC6 (Antibody buffer) 12 mlGC7 (Capture antibody, 100 μg/ml)* 50 μlGC8 (Detection antibody, 400 μg/ml)* 20 μlGC9 (Developing solution) 10 mlGC10 (Stop solution) 6 mlMethylated H3-K9 control (60 μg/ml)* 20 μl8-Well Assay Strip (with frame) 12* For maximum recovery of the products, centrifuge the original vial after thawing prior to opening the cap.

Features & Benefits

Quick and efficient, which can be finished within 5 hours.Innovative colorimetric assay with no need for radioactivity, electrophoresis, and chromatography.Strip microplate format makes the assay flexible: manual or high throughput.

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