CREATIVE BIOMART®
Assay Kit

Histone Methyltransferase Activity/Inhibition Assay Kit (H3-K27)

Product Information

Cat.No. Kit-0461

Product Overview

Histone Methyltransferase Activity/Inhibition Assay Kit (H3-K27) is use for measuring HMT activity/inhibition.

Description

Epigenetic 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. Inhibition of HMTs may lead to expression of the silenced genes and HMT inhibitors are currently developed for various therapeutic or experimental applications. G9a and polycomb group enzyme such as EZH2 are histone methyltransferases that catalyze methylation of histone H3 at lysine 27 (H3-K27) in mammalian cells. H3-K27 methylation mediates heterochromatin formation by forming a binding site for polycomb and also participates in silencing gene expression at euchromatic sites. Increased H3- K27 methylation is also found to be involved in some pathological processes such as cancer progression. There is no method currently used for measuring HMT activity/ inhibition (H3-K27). The Histone Methyltransferase Activity/ Inhibition Assay Kit (H3-K27) addresses this problem by using a unique procedure to measure HMT activity/inhibition (H3-K27).

Applications

For specifically measuring the activity/inhibition of individual histone methyltransferase targeting to lysine residues at different sites.

Usage

For research use only (RUO)

Storage

Upon receipt, store HE3, HE4, HE5, HE7, and control enzyme at –20°C away from light. Store all other

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

Histone Methyltransferase Activity/Inhibition Assay Kit (H3-K27)

components at 4°C away from light. The components of the kit should be stable for 6 months when stored properly.

Kit Components

HE1 (10X wash buffer) 22 mlHE2 (histone assay buffer) 3 mlHE3 (Adomet)* 50 µlHE4 (biotinylated substrate, 25 µg/ml)* 200 µlHE5 (HMT standard, 10 µg/ml)* 20 µlHE6 (capture antibody, 100 µg/ml)* 50 µlHE7 (detection antibody, 100 µg/ml)* 20 µlHE8 (developing solution) 12 mlHE9 (stop solution) 6 mlControl enzyme (150 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 3 hours.Innovative colorimetric assay with no need for radioactivity, electrophoresis, and chromatography.Specific measurement of activity/inhibition of H3-K27 histone methyltransferases.Strip microplate format makes the assay flexible: manual or high throughput analysis.Simple, reliable, and consistent assay conditions.