CREATIVE BIOMART®
Assay Kit

Di-Methyl Histone H3-K36 Quantification Kit (Colorimetric)

Product Information

Cat.No. Kit-0281

Product Overview

Di-Methyl Histone H3-K36 Quantification Kit (Colorimetric) is use for measuring di-methylation of histone H3-K36.

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. SET2 is a histone methyltransferase that catalyzes methylation of histone H3 at lysine 36 (H3-K36) in mammalian cells. H3-K36 di-methylation is associated with transcriptionally active genes. Increased H3-K36 methylation is also found to be linked to the Sotos syndrome and leukemia-associated protein NSD1 and the Huntington"s disease protein HYPB. The H3-K36 di-methylation can be changed by inhibition or activation of HMTs. Thus quantitative detection of di-methyl histone H3-K36 would provide useful information for better understanding epigenetic regulation of gene activation and for developing HMT-targeted drugs. The Di-Methyl Histone H3-K36 Quantification Kit (Colorimetric) provides a tool for measuring di-methylation of histone H3-K36.

Applications

For specifically measuring histone H3-K36 dimethylation using a variety of mammalian cells (human, mouse, etc.) including fresh and frozen tissues, cultured adherent and suspension cells.

Usage

For research use only (RUO)

Storage

Upon receipt, store C3 and Standard control at –20°C. Store all other components at 4°C away from

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light. The components of the kit should be stable for 6 months when stored properly.Note: Check if buffers C1 and C2 contain salt precipitates before using. If so, warm (at room temperature or 37°C) and shake the buffers until the salts are redissolved.

Kit Components

C1 (10X wash buffer) 20 mlC2 (antibody buffer) 12 mlC3 (detection antibody, 1 mg/ml)* 10 µlC4 (color developer) 10 µlC5 (stop solution) 6 mlStandard control (100 µg/ml)* 20 µl8 well sample strips (with frame) 98 well standard control strips* 3* 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 2.5 hours.Innovative colorimetric assay with no need for radioactivity, electrophoresis, and chromatography.Specifically capturing di-methylated H3-K36 with the detection limit as low as 2 ng/well and detection range from 20 ng-5 µg/well of histone extracts.The control is conveniently included for quantification of the amount of di-methylated H3-K36.Strip microplate format makes the assay flexible: manual or high throughput.Simple, reliable, and consistent assay conditions.