CREATIVE BIOMART®
Assay Kit

Tri-Methyl Histone H4K20 Quantification Kit (Colorimetric)

Product Information

Cat.No. Kit-0828

Product Overview

Tri-Methyl Histone H4K20 Quantification Kit (Colorimetric) is used for measuring tri-methylation of histone H4K20.

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 transcriptional repression or activation. HMTs transfer 1-3 methyl groups from S-adenosyl-L-methionine to the lysine and arginine residues of histone proteins. PR-SET7, SET9, SUV4.20h, and ASH1are histone methyltransferases that catalyze methylation of histone H4 at lysine 20 (H4K20) in mammalian cells. Tri-methylation of H4K20 acts as a passive feature or structure determinant for chromatin degradation and release, as well as being an Epigenetic marker of early apoptosis. Tri-methylation of H4K20 is also considered as a common hallmark of human cancer. The H4K20 tri-methylation can be changed by inhibition or activation of HMTs. Therefore, quantitative detection of tri-methyl histone H4K20 would pro-vide useful information for better understanding Epigenetic regulation of tumori-genesis and apoptosis, as well as for developing HMT-targeted drugs. Tri-Methyl Histone H4K20 Quantification Kit (Colorimetric) provides a tool for measuring tri-methylation of histone H4K20.

Applications

Tri-Methyl Histone H4K20 Quantification Kit (Colorimetric) is suitable for specifically measuring histone H4K20 tri-methylation 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)

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Storage

Upon receipt: (1) Store the Standard control at –20°C; (2) Store all other components at 4°C away from light.The kit is stable for up to 6 months from the shipment date, 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) 10 mlC2 (Antibody Buffer) 6 mlC3 (Detecting Antibody, 1 mg/ml)* 5 µlC4 (Color Developer) 5 mlC5 (Stop Solution) 3 mlStandard Control (100 µg/ml)* 10 µlSignal Report Solution* 5 µlSignal Enhancer* 120 µl8-Well Sample Strips (with Frame) 48-Well Standard Control Strips 2User Guide 1* For maximum recovery of the products, centrifuge the original vial prior to opening the cap.

Detection method Colorimetric

Compatible Sample Types

Histone Extract

Features & Benefits

Quick and efficient procedure, which can be finished within 2.5 hours.Innovative colorimetric assay without the need for radioactivity, electrophoresis, or chromatography.Specifically captures tri-methylated H4K20 with the detection limit as low as 5 ng/well and detection range from 20 ng-2 µg/well of histone extracts.The control is conveniently included for the quantification of tri-methylated H4K20.Strip microplate format makes the assay flexible: manual or high throughput.Simple, reliable, and consistent assay conditions.

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