CREATIVE BIOMART®
Assay Kit

Total Histone H4 Acetylation Detection Fast Kit (Fluorometric)

Product Information

Cat.No. Kit-0444

Product Overview

Total Histone H4 Acetylation Detection Fast Kit (Fluorometric) is used for measuring total acetylation of histone H4.

Description

Acetylation of histones, including histone H4, have been involved in the regulation of chromatin structure and the recruitment of transcription factors to gene promoters. Histone acetyl transferases (HATs) and histone deacetylases (HDACs) play critical roles in controlling histone acetylation. Histone acetylation is tightly involved in cell cycle regulation, cell proliferation, and apoptosis. Reversible acetylation of nucleosomal histones H4 generally is believed to be correlated with potential transcriptional activity of eukaryotic chromatin domains. Histone H4 acetylation may be increased by inhibition of HDACs and decreased by HAT inhibition. The reversible lysine acetylation of histone H4 may play a vital role in the regulation of many cellular processes including chromatin dynamics and transcription, gene silencing, cell cycle progression, apoptosis, differentiation, DNA replica-tion, DNA repair, nuclear import, and neuronal repression. Detecting if histone H4 is acetylated at its lysine residue would provide useful information for further characterizing the acetylation patterns or sites, thereby leading to a better understanding of epigenetic regulation of gene activation, and development of HAT or HDAC-targeted drugs. Total Histone H4 Acetylation Detection Fast Kit (Colorimetric) provides a tool that allows to detect if histone H4 is acetylated and quantify the amount of the acetylated histone H4.

Applications

Total Histone H4 Acetylation Detection Fast Kit (Fluorometric) is suitable for specifically measuring total histone H4 acetylation 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, store F3, F4 and Standard Control at –20°C away from light. 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, F1 and F2 contain salt precipitates before using. If so, warm (at room temperature or 37°C) and shake the buffers until the salts are re-dissolved.

Kit Components

F1 (10X Wash Buffer) 10 mlF2 (Antibody Buffer) 6 mlF3 (Detection Antibody, 1 mg/ml)* 5 µlF4 (Fluoro Developer)* 12 µlF5 (Fluoro Enhancer)* 12 µlF6 (Fluoro Dilution) 4 mlStandard Control (100 µg/ml)* 10 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 Fluorometric

Features & Benefits

Quick and efficient procedure, which can be finished within 2.5 hours.Innovative fluorometric assay without the need for radioactivity, electrophoresis, and chromatography.Captures histone H4 acetylated at any lysine site with the detection limit as low as 0.4 ng/well and detection range from 5 ng-2 µg/well of histone extracts.The control is conveniently included for the quantification of the amount of acetylated histone H4.Strip microplate format makes the assay flexible: manual or high throughput.Simple, reliable, and consistent assay conditions.

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