CREATIVE BIOMART®
Assay Kit

Acetyl Histone H4K5 Quantification Kit (Fluorometric)

Product Information

Cat.No. Kit-0027

Product Overview

Acetyl Histone H4K5 Quantification Kit (Fluorometric) is used for measuring acetylation of histone H4K5.

Description

Acetylation of histones, including histone H3 and H4, has been involved in the regulation of chromatin structure and recruitment of transcription factors to the gene promoters. Histone acetyltransferases (HATs) and histone deacetylases (HDACs) play a critical role in the control of histone H4 acetylation at multiple sites. Acetylation of histone H4 at lysine 5 (H4K5) reflects the hyperacetylated state in histone H4 and is strongly correlated with active states of genes. H4K5 acetylation is considered to be a marker of dexamethasone transactivation and change of H4K5 acetylation is observed in cancer and inflammatory diseases. Histone H4K5 acetylation may be increased by inhibition of HDACs and decreased by HAT inhibition; thus, quantitative detection of acetyl histone H4K5 would provide useful information for better understanding epigenetic regulation of gene activation and for developing HAT or HDAC-targeted drugs. Acetyl Histone H4K5 Quantification Kit (Fluorometric) provides a tool for measuring acetylation of histone H4K5.

Applications

For specifically measuring histone H4-K5 acetylation using a variety of mammalian cells (human, mouse, etc.) including fresh and frozen tissues, and cultured adherent and suspension cells.

Usage

For research use only (RUO)

Storage

Upon receipt, store F4 and standard control at -20°C. Store all other components at 4°C away from light. The components of the kit are stable for 6 months 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.

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Kit Components

F1 (10X wash buffer) 10 mlF2 (antibody buffer) 6 mlF3 (detecting antibody, 1 mg/ml)* 5 µlF4 (fluoro developer)* 12 µlF5 (fluoro enhancer)* 12 µlF6 (fluoro dilution) 4 mlStandard control (100 µg/ml)* 10 µlSignal report solution* 5 µlSignal enhancer* 120 µl8 well sample strips (with frame) 48 well standard control strips 2* For maximum recovery of the products, centrifuge the original vial prior to opening the cap.

Detection method Fluorometric

Compatible Sample Types

Histone Extract

Features & Benefits

Quick and efficient procedure, which can be finished within 2.5 hours.Innovative fluorometric assay without the need for radioactivity, electrophoresis, or chromatography.Specifically captures acetyl H4K5 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 acetyl H4K5.Strip microplate format makes the assay flexible: manual or high throughput.Simple, reliable, and consistent assay conditions.

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