

Acetyl Histone H4K5 Quantification Kit (Colorimetric)

Cat. No. Kit-0026 Lot. No. (See product label)

SPECIFICATION

Product Overview

Acetyl Histone H4K5 Quantification Kit (Colorimetric) 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 the 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 (Colorimetric) provides a tool for measuring acetylation of histone H4K5.

Applications

Acetyl Histone H4K5 Quantification Kit (Colorimetric) is suitable for specifically measuring histone H4K5 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)

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Storage	Upon receipt, store C3 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 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 re-dissolved.
Kit Components	C1 (10X wash buffer) 10 ml C2 (antibody buffer) 6 ml C3 (detection antibody, 1 mg/ml)* 5 μl C4 (color developer) 5 ml C5 (stop solution) 3 ml Signal report solution* 5 μl Signal enhancer* 120 μl Standard control (100 $\mu\text{g/ml}$)* 10 μl 8 well sample strips (with frame) 48 well standard control strips 2 User 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 acetyl H4K5 with the detection limit as low as 2 ng/well and detection range from 20 ng-5 $\mu\text{g/well}$ 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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