Acetyl Histone H3-K56 Quantification Kit (Fluorometric)

Cat. No. Kit-0019 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Acetyl Histone H3-K56 Quantification Kit (Fluorometric) is use for measuring acetylation of histone H3-K56.
Description	Acetylation of histones including histone H3 has been involved in the regulation of chromatin structure and recruitment of transcription factors to the gene promoters. Histone acetyltransfeases (HAT) and histone deacetylases (HDACs) play a critical role in control of histone H3 acetylation at multiple sites. Acetylation of histone H3 at lysine 56 (H3-K56) is cell cycle regulated, maintained upon replicative damage in a check-point dependent manner and is essential for surviving DNA damage. H3 K56 acetylation occurs normally during S phase. In the absence of this modification, cellular survival following DNA damage is impaired. Histone H3-K56 acetylation may be increased by inhibition of HDACs and decreased by HAT inhibition. Thus quantitative detection of acetyl histone H3-K56 would provide useful information for better understanding epigenetic regulation of gene activation and for developing HAT or HDAC-targeted drugs. The Acetyl Histone H3-K56 Quantification Kit (Colorimetric) provides a tool for measuring acetylation of histone H3-K56.
Applications	For specifically measuring histone H3-K56 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)
Storage	Upon receipt, store F3, F4 and standard control at –20°C. Store all other components

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	at 4°C away from light.The components of the kit should be 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 redissolved.
Kit Components	F1 (10X wash buffer) 20 mlF2 (antibody buffer) 12 mlF3 (detection antibody, 1 mg/ml)* 10 µlF4 (fluoro developer)* 24 µlF5 (fluoro enhancer)* 24 µlF6 (fluoro dilution) 8 mlStandard control (100 ng/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 procedure, which can be finished within 2.5 hours.Innovative fluorometric assay with no need for radioactivity, electrophoresis, and chromatography.Specifically capturing acetyl H3-K56 with the detection limit as low as 0.4 ng/well and detection range from 5 ng-2 ng/well of histone extracts.The control is conveniently included for quantification of the amount of acetyl H3-K56.Strip microplate format makes the assay flexible: manual or high throughput.Simple, reliable, and consistent assay conditions.

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