Histone H3-K9 Methylation Assay Kit

Cat. No. Kit-0458 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Histone H3-K9 Methylation Assay Kit is use for measuring methylation of histone H3-K9.
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 transcription repression or activation. HMTs transfer 1-3 methyl groups from S-adenosyl-L-methionine to the lysine and arginine residues of histone proteins. ESET, G9a, SUV39-h1, SUV39- h2, SETDB1, Dim-5 and Eu-HMTase are histone methyltransferases that catalyze methylation of histone H3 at lysine 9 (H3-K9) in mammalian cells. H3-K9 methylation mediates heterochromatin formation by forming a binding site for HP1 and also participates in silencing gene expression at euchromatic sites. Increased H3-K9 methylation is also found to be involved in some pathological processes such as cancer progress. There are only a couple of methods such as western blot used for measuring histone H3-K9 methylation. These methods available so far are time consuming and labor intensive, or have low throughput. The Histone H3-K9 Methylation Assay Kit addresses theses problems by using a unique procedure to measure methylation of histone H3-K9.
Applications	For specifically measuring histone H3-K9 methylation using a variety of mammalian cells including fresh and frozen tissues, cultured adherent and suspension cells.
Usage	For research use only (RUO)

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Storage	Upon receipt, store GC8 and the methylated H3-K9 control at –20°C. Store GC3, GC5, GC7, GC9 and 8-Well Assay Strips at 4°C away from light. Store all other components at room temperature. The kit is stable for 6 months when stored properly.Note: Check if wash buffer, GC3, contains salt precipitates before using. If so, warm (at room temperature or 37°C) and shake the buffer until the salts are re-dissolved.
Kit Components	GC1 (10X wash buffer) 10 mlGC2 (Extraction buffer) 16mlGC3 (10X wash buffer) 28 mlGC4 (Histone buffer) 1 mlGC5 (Blocking buffer) 20 mlGC6 (Antibody buffer) 12 mlGC7 (Capture antibody, 100 µg/ml)* 50 µlGC8 (Detection antibody, 400 µg/ml)* 20 µlGC9 (Developing solution) 10 mlGC10 (Stop solution) 6 mlMethylated H3-K9 control (60 µg/ml)* 20 µl8-Well Assay Strip (with frame) 12* For maximum recovery of the products, centrifuge the original vial after thawing prior to opening the cap.
Features & Benefits	Quick and efficient, which can be finished within 5 hours.Innovative colorimetric assay with no need for radioactivity, electrophoresis, and chromatography.Strip microplate format makes the assay flexible: manual or high throughput.

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