Histone H3-K27 Methylation Assay Kit

Cat. No. Kit-0455 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Histone H3-K27 Methylation Assay Kit is use for measuring methylation of histone H3-K27.
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. G9a and polycomb group enzyme such as EZH2 are histone methyltransferases that catalyze Methylation of histone H3 at lysine 27 (H3-K27) in mammalian cells. H3-K27 methylation mediates heterochromatin formation by forming a binding site for polycomb and also participates in silencing gene expression at euchromatic sites. Increased H3-K27 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-K27 methylation. The methods available so far are time consuming and labor intensive, or have low throughput. The H3-K27 Methylation Assay Kit addresses theses problems by using a unique procedure to measure methylation of histone H3-K27.
Applications	For specifically measuring histone H3-K27 methylation using 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 GG8 and methylated H3-K27 control at –20°C away from light. Store GG5, GG7, GG9 and 8 well assay strips at 4°C away from light. Store all other components at room temperature. The components of the kit should be stable for 6 months when stored properly.
Kit Components	GG1 (10X lysis buffer) 10 mlGG2 (Extraction buffer) 16 mlGG3 (10X wash buffer) 28 mlGG4 (Histone buffer) 1 mlGG5 (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-K27 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 3 hours.Innovative colorimetric assay with no need for radioactivity, electrophoresis, and chromatography.Strip microplate format makes the assay flexible: manual or high throughput analysis.Simple, reliable, and consistent assay conditions.

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