CREATIVE BIOMART®
Assay Kit

Histone H3-K27 Tri-Methylation Assay Kit

Product Information

Cat.No. Kit-0456

Product Overview

Histone H3-K27 Tri-Methylation Assay Kit is use for measuring tri-methylation of histone H3-K27.

Description

Epigenetic activation or inactivation of genes play 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. Tri-methylation of H3-K27 is a facultative heterochromatin mark which promotes the recruitment of polycomb group proteins for gene silencing. Increased H3-K27 tri-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 tri-methylation. The methods available so far are time consuming and labor intensive, or have low throughput. The H3-K27 Tri-Methylation Assay Kit addresses these problems by using a unique procedure to measure tri-methylation of histone H3-K27.

Applications

For specifically measuring histone H3-K27 tri-methylation using a variety of mammalian cells including fresh and frozen tissues, cultured adherent and suspension cells.

Usage

For research use only (RUO)

Storage

Upon receipt: (1) Store GT8 and the Tri-methyl H3-K27 control at - 20°C; (2) Store GT3, GT5, GT7, GT9 and 8 well assay strips at 4°C away from light; (3) Store all other components at room temperature.

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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The kit is stable for up to 6 months from the shipment date, when stored properly.Note: Check if wash buffer, GT3, 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

GT1 (10X Lysis Buffer) 10 mlGT2 (Extraction Buffer) 16 mlGT3 (10X Wash Buffer) 28 mlGT4 (Histone Buffer) 1 mlGT5 (Blocking Buffer) 20 mlGT6 (Antibody Buffer) 12 mlGT7 (Capture Antibody, 100 µg/ml)* 50 µlGT8 (Detection Antibody, 400 µg/ml)* 20 µlGT9 (Developing Solution) 10 mlGT10 (Stop Solution) 6 mlTri-methyl 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, can be finished within 5 hours.Innovative colorimetric assay without the need for radioactivity, electrophoresis, or chromatography.Strip microplate format makes the assay flexible: manual or high throughput.Simple, reliable, and consistent assay conditions.

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