CREATIVE BIOMART®
Assay Kit

Methyltransferase Fluorometric Assay Kit

Product Information

Cat.No. Kit-0610

Product Overview

Methyltransferase Fluorometric Assay Kit is a continuous enzyme-coupled assay that can continuously monitor SAM-dependent methyltransferases. The removal of the methyl group from SAM generates S-adenosylhomocysteine (AdoHcy), which is rapidly converted to S-ribosylhomocysteine and adenine by AdoHcy nucleosidase. This rapid conversion prevents the buildup of AdoHcy and its feedback inhibition on the methylation reaction. Finally, the adenine is converted to hypoxanthine, by adenine deaminase, which in turn is converted to urate and hydrogen peroxide (H2O2). The reaction between H2O2 and ADHP (10-acetyl-3,7,-dihydroxyphenoxazine) produces the highly fluorescent compound resorufin. Resorufin fluorescence can be easily analyzed with an excitation wavelength of 530-540 nm and an emission wavelength of 585-595 nm. The assay is supplied with AdoHcy as a positive control. The assay can be used with any purified SAM-dependent methyltransferase.

Description

Methylation of key biological molecules and proteins play important roles in numerous biological systems, including signal transduction, biosynthesis, protein repair, gene silencing, and chromatin regulation.The S-adenosylmethionine (SAM) dependent methyltransferases use SAM, the second most commonly used enzymatic cofactor after ATP. SAM, also known as AdoMet, acts as a donor of a methyl group that is required for the modification of proteins and DNA. Aberrant levels of SAM have been linked to many abnormalities, including Alzheimer''s Disease, depression, Parkinson''s Disease, Multiple Sclerosis, liver failure, and cancer.

Usage

Please read these instructions carefully before beginning this assay.For research use only. Not for human or diagnostic use.

Storage

Stability; 6 months;Storage: -80°C;This kit will perform as specified if stored as specified in the Materials Supplied section, and used before the expiration date indicated on the outside of the

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Methyltransferase Fluorometric Assay Kit

box.

Kit Components

Kit will arrive packaged as a -80°C kit. For best results, store kit as supplied or remove components and store as stated below.MT Assay Buffer: 1 vial/20 ml, -20°C;MT Assay Buffer Additive: 1 vial/200 µl, -20°C;MT Enzyme Mixture: 3 vials/300 µl, -80°C;MT Fluorometric Mixture: 3 vials, -20°C;MT Assay AdoHcy Positive Control: 1 vial/200 µl, -80°C;MT Assay S-Adenosylmethionine: 3 vials, -80°C;Resorufin Standard: 1 vial/500 µl, -20°C;DMSO Assay Reagent: 1 vial/1 ml, Room temperature;HCl Assay Reagent: (20 mM) 1 vial/1 ml, -20°C;MT Resorufin Buffer (10X): 1 vial/5 ml, -80°C;Half Volume 96-Well Solid Plate (black): 1 plate, Room temperature;96-Well Cover Sheet: 1 cover, Room temperature

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