CREATIVE BIOMART®
Assay Kit

Gelatinase (Gelatin Degradation/Zymography) Assay Kit (Fluorometric)

Product Information

Cat

Kit-1042

Common Name

Gelatinase

Cat.No. Kit-1042

Description

Gelatinases are a type of matrix zinc-dependent metalloproteases (MMPs) that degrade gelatins and a variety of other extracellular matrix proteins. These enzymes are synthesized as latent zymogens that are activated by proteolysis and inhibited by tissue inhibitors of metalloproteases (TIMPs). Two mammalian gelatinases, Gelatinase A (MMP-2) and Gelatinase B (MMP-9), are critical for basement membrane degradation and are highly upregulated in variety of tumor cells. Gelatinase activity is usually detected by small peptide-based activity assays which may suffer from lack of substrate specificity. Other methods for gelatinase activity include gelatin Zymography where samples are electrophoresed on a gelatin-containing SDS-PAGE, and further renatured in a suitable buffer for 12-16 h. The zymogram is subsequently stained, and areas of digestion appear as clear bands against a darkly stained background where the substrate has been degraded by the enzyme. Such methods are laborious, time-consuming and may lead to the loss of enzymatic activity as renaturation may not be completely reversible. Gelatinase Activity Assay Kit utilizes a hybrid approach for the detection of gelatinase activity by employing a highly quenched gelatin substrate which upon cleavage by a suitable gelatinase releases a fluorophore, which can be easily quantified using a conventional microplate reader. This method is substrate-specific, simple, fast, high-throughput adaptable and amenable to the sensitive detection of gelatinase activity (as low as 0.06 mCDU for bacterial collagenase) in biological samples.

Applications

Measurement of gelatinase activity;
For screening/studying/characterizing gelatinase inhibitors

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Assay Kit

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Storage

-20°C

Shipping

Gel Pack

Size

100 assays

Kit Components

Gelatinase Assay Buffer; Cell Lysis Buffer; Enzyme Positive Control; Gelatinase (Substrate); FITC Standard (5 mM)

Target Species

Mammalian

Detection method Fluorescence (490/520 nm)

Features & Benefits

Rapid & sensitive;
Simple assay to measure gelatinase activity as well as to screen/study/characterize potential inhibitors of gelatinase;
Includes Fluorometric Gelatinase Substrate and Positive Control

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