CREATIVE BIOMART®
Assay Kit

Mutant Isocitrate Dehydrogenase (Mutant IDH) Activity Assay Kit (Colorimetric)

Product Information

Cat

Kit-2212

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Product Overview

In eukaryotic cells, Isocitrate Dehydrogenase (IDH1, IDH2 and IDH3) is an enzyme that catalyzes the decarboxylation of Isocitrate producing a-Ketoglutarate and CO2. Mutations in both isoforms of IDH (IDH1 and IDH2) are commonly found in human cancers.The Mutant Isocitrate Dehydrogenase (Mutant IDH) causes a "gain-of-function", which reduces its affinity for isocitrate and favors the conversion of a-ketoglutarate to D-2-Hydroxyglutarate. D-2-Hydroxyglutarate (D2HG) is present at low level in normal cells and tissues, but is significantly elevated in metabolic diseases and various cancers. D2HG functions as an "oncometabolite" promoting cellular transformation. Recent studies show that increased Mutant IDH activity is associated with various cancers; therefore, detection of Mutant IDH activity is important for diagnosis and developing therapeutic strategies (e.g. Mutant IDH inhibitors). Mutant IDH assay kit provides a quick and simple assay to monitor the Mutant IDH activity in biological samples. In the assay, Mutant IDH oxidizes NADPH into an NADP+, which decreases the absorbance at 340 nm. The assay is simple, sensitive, and can detect Mutant Isocitrate Dehydrogenase activity lower than 2 mU/ml in a variety of cancer samples.

Applications

This assay has a detection sensitivity as low as 2 mU.

Storage

-20°C

Shipping

Gel Pack

Size

100 assays

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Kit Components

Mutant IDH Lysis Buffer; Mutant IDH Assay Buffer; Mutant IDH Substrate; NADPH; Mutant IDH Positive Control

Target Species

Mammalian

Detection method Absorbance (OD 340 nm)

Features & Benefits

Simple procedure;
Fast and convenient

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