Product Data Sheet

K2091 Glucose Colorimetric/Fluorometric Assay Kit

Kit Contents

Components	K2091-100 100 assays	Part Number
Assay Buffer	1 x 50 mL	K2091-C-1
DMSO	1 x 200 µL	K2091-C-2
Glucose standard	1 x 1 Vial	K2091-C-3
AbRed Indicator	1 x 1 Vial	K2091-C-4
Glucose oxidase	1 x 1 Vial	K2091-C-5
Horseradish Peroxidase	1 x 1 Vial	K2091-C-6

Introduction

Glucose ($C_6H_{12}O_6$) is an important fuel source to produce energy molecule ATP. Glucose level is a key diagnostic parameter for many metabolic disorders. Measurement of glucose is very important in both drug discovery and research processes.

The Glucose Colorimetric/Fluorometric Assay Kit provides a sensitive, simple and convenient way for detection of glucose in various biological samples (serum, plasma, body fluid, growth medium, food, etc.) based on colorimetric and fluorometric method. In the assay, Glucose Enzyme Mix specifically oxidizes glucose to yield a product which reacts with a dye to produce fluorescence (Ex/Em = 535/587 nm) and color (λ = 570 nm). The color and fluorescence generated is proportionally to the amount of glucose. The assay is suited for high throughput screening and is also suited for monitoring glucose feeding in protein expression processes and

glucose level during fermentation. The kit uses a quick and sensitive fl uorometric assay for the measurement of glucose oxidase activity

Key facts

Detection method

Colorimetric/Fluorometric

Sample types

Urine, Plasma, Other biological fluids

Assay type

Enzyme activity

Reactive species

Mammals

Assay Platform

Microplate reader

Sensitivity

= 0.05 mU/Ml

Storage

Shipped at conditions

Blue Ice

Appropriate short-term storage conditions

-20°C

Appropriate long-term storage conditions

-20°C

Storage information

-20°C

Notes

Glucose Oxidase Assay Kit uses a quick and sensitive fluorometric assay for the measurement of glucose oxidase activity. It can be performed in a 96-well or 384-well microtiter plate format and is readily adapted to automation without a separation step.

The glucose oxidase assay protocol uses a red dye which enables a dual recordable mode. The fluorescent signal can be easily read by either a fluorescence microplate reader at Ex/Em = 540/590 nm or an absorbance microplate reader at 576 nm.

Glucose oxidase assay protocol summary:

- add standards and samples to wells
- add reaction mix to wells and incubate for 10-30 min at 37°C
- analyze with a microplate reader

Glucose oxidase is a dimeric protein that catalyzes the oxidation of beta-D-glucose into hydrogen peroxide and D-glucono-1,5-lactone, which is hydrolyzed to gluconic acid. It is widely used for the determination of glucose in body fluids and in removing residual glucose and oxygen from beverages, food and other agricultural products.

Furthermore, Glucose oxidase is commonly used in biosensors to detect glucose.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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