LEADGENE
LEADGENE BIOMEDICAL, INC.

Datasheet

Glucose Dehydrogenase (GLD) (NAD(P)-Dependent)

Catalog Number	LDG0023RG
Package	1000 U / Customized package

For full product information, images and publications, please visit our website.

Overview

Description

Glucose dehydrogenase (GLD) (NAD(P)-dependent) is an enzyme that catalyzes the oxidation of glucose to gluconolactone while reducing the coenzymes NAD+ or NADP+ to NADH or NADPH. This enzyme is widely used in biosensors and diagnostic assays to measure blood glucose levels. Its high specificity and stability make it an essential tool in various biomedical applications.

Specifications

Expression system

Escherichia coli

Activity

≥ 300 U/mg

Unit Definition

One unit causes the formation of one micromole of NADH per minute under the conditions described below.
(85.25 mM Tris-HCl,147.54 mM D-Glucose, 3.66 mM NAD+)

Form

Lyophilized (White amorphous powder)

Instruction

Reconstitution

It is recommended to reconstitute the lyophilized powder in 1 mL double-distilled water directly (final activity is 20 U/ μL) and incubate the solution for at least 10 mins to ensure sufficient re-dissolved.

Shipping

The product is shipped with polar packs. Upon receipt, store it immediately at -20°C or lower for long term storage.

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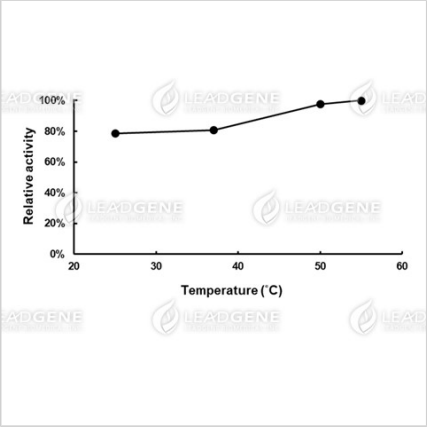
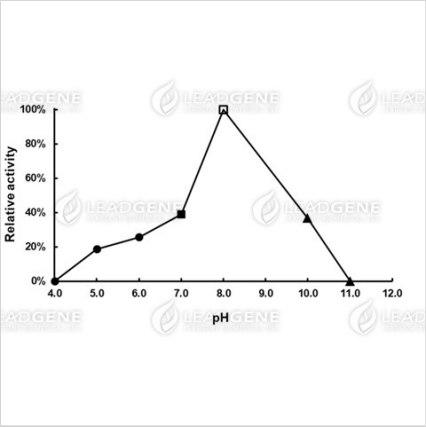
Stability & Storage

This product is stable at -20°C for long-term storage under sterile conditions.
Avoid repeated free-thaw cycles.

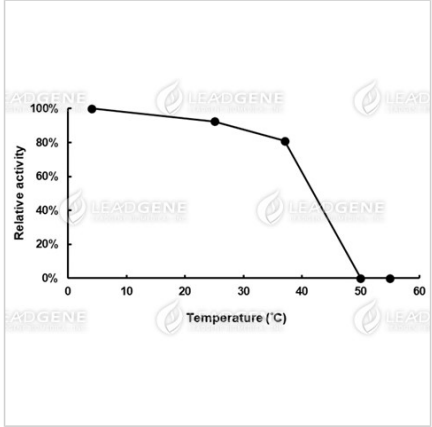
Image



Temperature activity of Glucose dehydrogenase. The enzyme reactions in 0.1 M Tris-HCl buffer, pH 8.0, were carried out under different temperature.



pH activity of Glucose dehydrogenase. The buffer conditions with various pH values were used in the reaction at 37°C. pH 4.0-6.0, 0.1 M Sodium citrate buffer; pH 7.0, 0.1 M Potassium phosphate buffer; pH 8.0, 0.1 M Tris-HCl buffer; pH 10.0-11.0, 0.1 M Carbonate-bicarbonate buffer.



Thermal stability of Glucose dehydrogenase. The enzyme powder was reconstituted by double-distilled water and treated with different temperature for 15 minutes. Final concentration: 23.5 U/ mL

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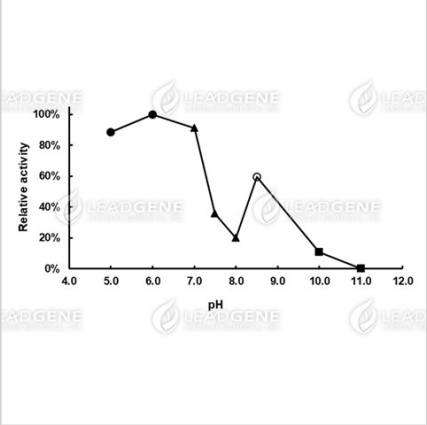

pH stability of Glucose dehydrogenase. The enzyme powder was reconstituted by double-distilled water and treated with different pH buffer condition for 20 hours. pH 4.0-6.0, 0.1 M Sodium citrate buffer; pH 7.0-8.0, 0.1 M Potassium phosphate buffer; pH 8.5, 0.1 M Tris-HCl buffer; pH 10.0-11.0, 0.1 M Carbonate-bicarbonate buffer.

Disclaimer : For Research Use or Further Manufacturing Only.

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