LEADGENE
LEADGENE BIOMEDICAL, INC.

Datasheet

Diaphorase

Catalog Number	LDG0021RG
Package	Customized package

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

Overview

Description

Diaphorase, also known as NADH dehydrogenase or NAD(P)H oxidoreductase, is an essential enzyme involved in cellular redox reactions. It facilitates electron transfer from NADH or NADPH to various acceptors, playing a crucial role in the electron transport chain. This enzyme helps mitigate oxidative stress by reducing harmful oxidants and is key in regulating metabolic pathways by maintaining NAD+/NADH and NADP+/NADPH ratios. Additionally, diaphorase contributes to cellular signaling processes, influencing cell proliferation, differentiation, and apoptosis.

Specifications

Expression System

Escherichia coli

Detection Method

Spectrophotometry

Concentration

500 U/ mg or more

Activity

Please refer to the manual for details.

Unit Definition

One unit is defined as the decrease of one unit absorbance of DCPIP per minute at 25°C under below conditions.
(27 mM Tris-HCl pH 7.5, 0.2 mM NADH, 40 μM DCPIP and 33 μg/ mL BSA).

Reaction Condition

27 mM Tris-HCl pH 7.5, 0.2 mM NADH, 40 μM DCPIP and 33 μg/ mL BSA

Form

Lyophilized

Instruction

Tainan Headquarter
+886-6-2536677
bd@leadgene.com.tw

Innovation & Research Center
+886-2-27065528

CLD Center
+886-6-2536677

Reconstitution

It is recommended to reconstitute the lyophilized powder (8820 U) in 300 µL double-distilled water directly (final activity is 29.4 U/ µL) and incubate the solution for at least 10 mins to ensure sufficient re-dissolved.

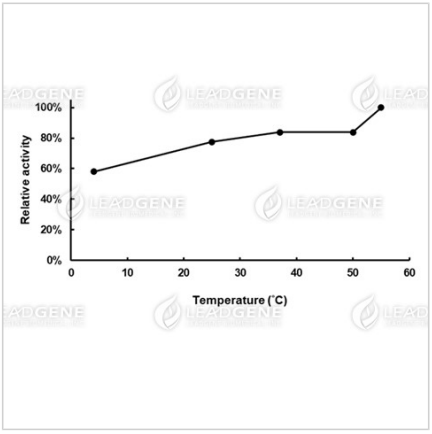
Stability & Storage

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

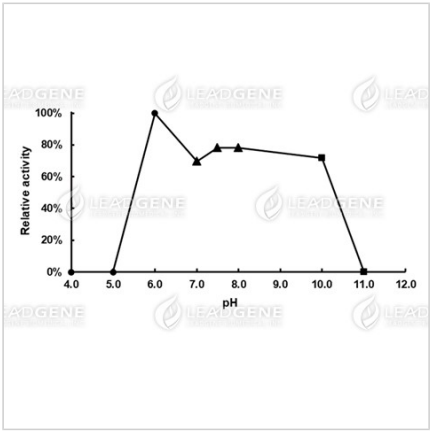
Shipping

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

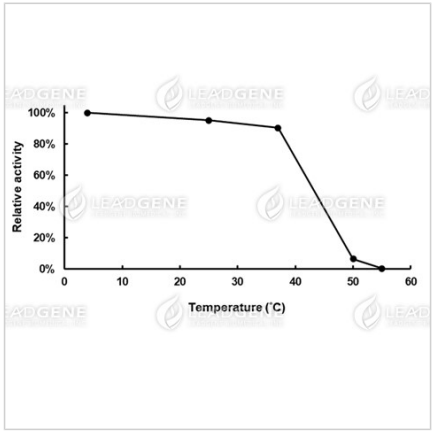
Image



Temperature activity of Diaphorase. The enzyme reactions in 0.2 M Tris-HCl buffer, pH 7.5, were carried out under different temperature.



pH activity of Diaphorase. The buffer conditions with various pH values were used in the reaction at 25°C. pH 4.0-6.0, 0.1 M Sodium citrate buffer; pH 7.0-8.0, 0.1 M Potassium phosphate buffer; pH 10.0-11.0, 0.1 M Carbonate-bicarbonate buffer.



Thermal stability of Diaphorase. The enzyme powder was reconstituted by double-distilled water and treated with different temperature for 30 minutes. Final concentration: 48 U/ mL.

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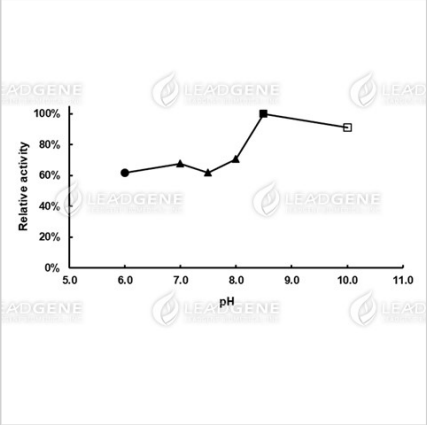

pH stability of Diaphorase. The enzyme powder was reconstituted by double-distilled water and treated with different pH buffer condition for 3 hours at 30°C. pH 6.0, 0.1 M Sodium citrate buffer; pH 7.0-8.0, 0.1 M Potassium phosphate buffer; pH 8.5, 0.1 M Tris-HCl buffer; pH 10.0, 0.1 M Carbonate-bicarbonate buffer.

Disclaimer : For Research Use or Further Manufacturing Only.

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