Glucose Dehydrogenase (PQQ-dependent) from Microorganism

GLD-321

SPECIFICATIONS

Name	D-Glucose:(pyrroloquinoline-quinone) 1-oxidoreductase
EC	1.1.5.2
Appearance	Purple amorphous powder lyophilized
Activity	Grade III, 500U/mg-solid or more
Contaminants	Hexokinase ≤ 1.0×10^{-3}%
	Glucose dehydrogenase (NAD-dependent) ≤ 1.0×10^{-3}%
Stabilizers	Ca^{++}, BSA
Stability	Stable at -20°C for at least 12 months
Molecular weight	approx. 100,000 (Gel filtration)
Michaelis constants	4.8mM (D-Glucose)
Inhibitors	Ag^{+}, Cu^{++}, Pb^{++}
Optimum pH	7.0
Optimum temperature	37 °C
pH Stability	pH 3.5 - 8.5 (25°C, 16hr)
Temperature stability	Below 50 °C (pH 7.5, 30min)

ENZYMES

BY

SORACHIM

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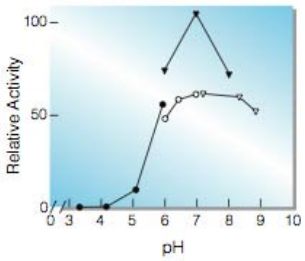

Fig.1. pH-Activity

[25℃, in 50mM buffer solution; ●—●, acetate; ▼—▼, phosphate; ○—○, PIPES; ▽—▽, Tris-HCl.]

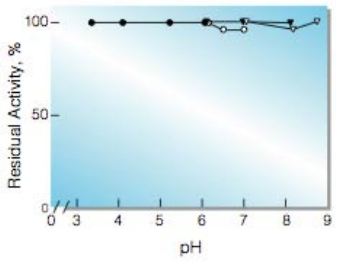

Fig.3. pH-Stability

[25℃, 16 hr-treatment with 50mM buffer solution contg. 1mM $CaCl_2$; ●—●, acetate; ▼—▼, phosphate; ○—○, PIPES; ▽—▽, Tris-HCl.]

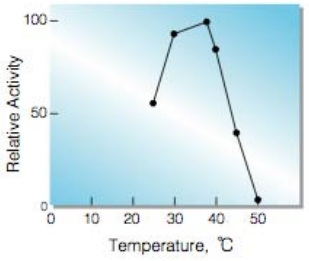

Fig.2. Temperature Activity

[in 42mM PIPES-NaOH buffer, pH 6.5]

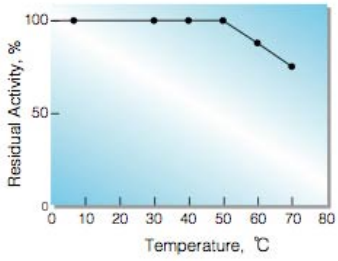

Fig.4. Thermal stability

[30min.-treatment with 50mM PIPES-NaOH buffer, pH 6.5 contg. 1mM $CaCl_2$ enzyme concentration: 5.0 U/ml]