PRODUCT CATALOGUE

V3-072014

Glucose-6-Phosphate Dehydrogenase from Leuconostoc mesenteroides

G6D-311

SPECIFICATIONS

Name	D-Glucose-6-phosphate:$NADP^+$ 1-oxydoreductase
EC	1.1.1.49
Appearance	white amorphous powder, lyophilized
Activity	Grade III, 400 U/mg-solid or more (NAD^+)
Contaminants	Creatine phosphokinase ≤ 1×10^{-3}%, Phosphoglucomutase ≤ 1×10^{-3}%
	6-Phosphogluconate dehydrogenase ≤ 5×10^{-3}%
	Phosphoglucose isomerase ≤ 1×10^{-2}%, Glutathione reductase ≤ 1×10^{-3}
	Hexokinase ≤ 1×10^{-2}%, Myokinase ≤ 1×10^{-2}%
	NADH oxidase ≤ 1×10^{-2}%, NADPH oxidase ≤ 1×10^{-2}%
Stability	Stable at -20°C for at least 12 months
Molecular weight	104,000 (Gel filtration)
Isoelectric point	4.6
Michaelis constants	NAD^+ linked: 1.06×10^{-4}M (NAD^+), 5.27×10^{-4}M (G6P)
	$NADP^+$ linked: 5.69×10^{-6}M ($NADP^+$), 8.1×10^{-5}M (G6P)
Inhibitors	Acyl-CoA, ATP, metal ions
Optimum pH	7.8
Optimum temperature	50°C
pH Stability	pH 5.5 - 7.5 (30°C, 17hr)
Thermal stability	below 37°C (pH 8.0, 30min)

ENZYMES

Glucose-6-Phosphate Dehydrogenase from Leuconostoc mesenteroides

G6D-311

SPECIFICATIONS

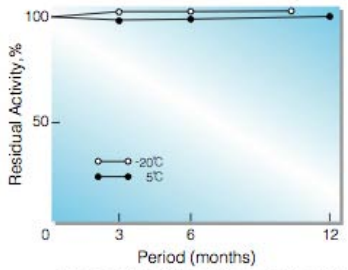

Fig.1. Stability (Powder form)

(kept under dry conditions)

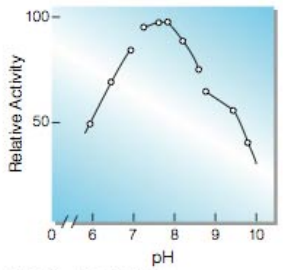

Fig.3. pH-Activity

(30℃ in the following buffer solution: pH5.7-6.8, 15mM Veronal-CH_3COONa-HCl;pH6.8-8.5,50mM Tris-HCl; pH8.5-9.5, 50mM glycine-NaOH)

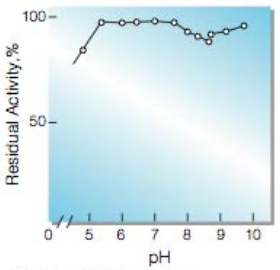

Fig.5. pH-Stability

(30℃, 17hr-treatment with the following buffer solution: pH5.0-7.8, 30mM Veronal-CH_3COONa-HCl;pH7.5-8.5, 0.1M Tris-HCl; pH8.5-9.5,0.1M glycine-NaOH)

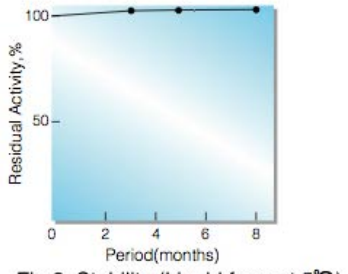

Fig.2. Stability (Liquid form at 5℃)

(enzyme concentration:5,000U/ml composition:3.2M ammonium sulfate,pH6.0)

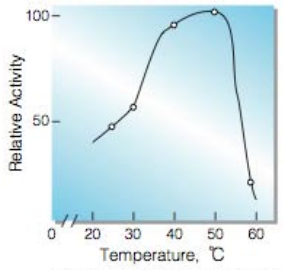

Fig.4. Temperature activity

(in 50mM Tris-HCl buffer, pH7.8)

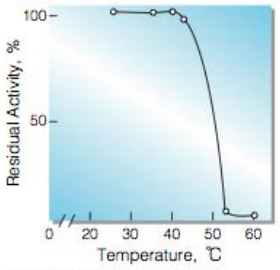

Fig.6. Thermal stability

(30min-treatment with 5.0mM glycine-NaOH buffer, pH8.0, containing 0.1% of bovine serum albumin)