

B-Phosphoglucomutase

ORIGIN: Recombinant E.coli

CAT#: PHO-70-1181

EC#: 5.4.2.6

SPECIFICATIONS

Appearance: white lyophilizate **Activity:** ≥30 U/mg lyophilizate

ASSAY PRINCIPLE

B-phosphoglucomutase

glucose-6-phosphate dehydrogenase

D-Glucose-6-phosphate + NADP+ D-Glucono-1,5-lactone-6-phosphate + NADPH + H+

The appearance of NADPH is measured spectrophotometrically at 340 nm

APPLICATION

The enzyme is useful for the determination of α -amylase and inorganic phosphate in clinical analysis.

UNIT DEFINITION

One unit (U) is defined as the amount of enzyme which converts 1 μ mol of β -D-glucose-1-phosphate to β -D-glucose-6-phosphate per min at 37°C and pH 7.0 under the assay conditions.

CHARACTERISTICS

Molecular weight: ca. 34 kDa (gel filtration) **Structure:** monomer of ca. 25 kDa (SDS-PAGE)

Michaelis constant: 2.3×10⁻⁴ M (β-D-glucose-1-phosphate)

pH Optimum: ca. 7.0 pH Stability: 5.0-9.5

Optimum temperature: 40°C Thermal stability: below 45°C Activators: Mg²⁺, Mn²⁺, Co²⁺, Ni²⁺ Inhibitors: Hg²⁺, Zn²⁺, Cu²⁺, Cd²⁺

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Figure -1 pH Optimum

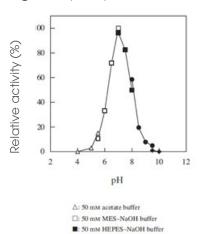


Figure -2 pH Stability

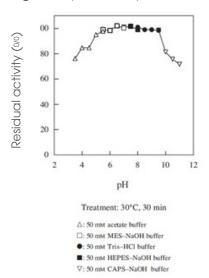
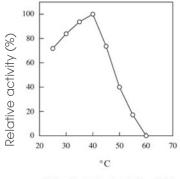


Figure -3 Optimum temperature

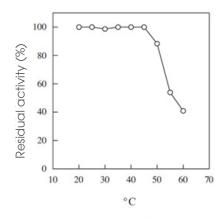
: 50 mM Tris-HCl buffer

♦: 50 mm CHES-NaOH buffer



Buffer: 50 mM phosphate buffer, pH 7.0

Figure -4 Thermal stability



Treatment: 50 mM phosphate buffer, pH 7.0, containing 2 mM EDTA, 15 min

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