Megazyme

PHOSPHOGLUCOSE ISOMERASE from *Bacillus subtilis* (Lot 101101a)

Recombinant

E-PGIBSB **07/14**

(EC 5.3.1.9) D-glucose-6-phosphate aldose-ketose-isomerase

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW = ~ 50,500)
- Single major band on isoelectric focusing (pI = ~ 5.0)

2. SPECIFIC ACTIVITY AND LEVEL OF OTHER ACTIVITIES:

254 U/mg protein at pH 7.6 and 25°C.

One Unit of PGI enzyme activity is the amount of enzyme required to produce one µmole of NADH from NAD^+ under the following assay conditions:

Tris.HCl buffer, pH 7.6	88 mM
Glucose 6-phosphate dehydrogenase	6.4 U/assay
Fructose 6-phosphate	3.14 mM
NAD^+	0.51 mM
BSA	0.4 mg/ml
$MgCl_2$	4.4 mM

3. CONTAMINATING ACTIVITIES (as a percentage of PGI activity):

Enzyme Measured	Substrate	Activity, %
Hexokinase	Glucose	< 0.002
Glucose 6-Phosphate Dehydrogenase	Glucose 6-phosphate	< 0.0001
Phosphomannose Isomerase	Mannose 6-Phosphate	< 0.02
α-Glucosidase	*p*-Nitrophenyl α-D-glucose	< 0.0001
β-Glucosidase	*p*-Nitrophenyl β-D-glucose	< 0.0001
NADH Oxidase	NADH	< 0.001

All activities were measured at 340 nm in 88 mM Tris.HCl buffer (pH 7.6) at 40°C.

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 7.6 and up to 40°C.

5. STORAGE AND USE CONDITIONS/RECOMMENDATIONS:

The enzyme is supplied as an ammonium sulphate suspension (approx. 1,000 U/mL) and should be stored at 4°C. For use in the measurement of fructose 6-phosphate, refer to the **D-Glucose/D-Fructose Assay Kit data sheet (Megazyme)** for details of required concentrations, aliquots and incubation times. Swirl the vial to ensure that the enzyme is uniformly suspended before removing aliquots.