



Phosphoglucose Isomerase from *Saccharomyces cerevisiae* (Lot 30903)

E-PGISC

09/03

Recombinant

PROPERTIES

1. ELECTROPHORETIC PURITY

- Single band on SDS-gel electrophoresis (MW = 62,400)
- Single major band on isoelectric focusing (pI = 6.1); minor band pI 6.9.

2. SPECIFIC ACTIVITY AND LEVEL OF OTHER ACTIVITIES

508 U/mg protein at pH 7.6 and 25°C (or **680** U/mg protein at pH 7.6 and 40°C). One Unit of PGI enzyme activity is the amount of enzyme required to produce one μ mole of NADH from NAD⁺ under the following assay conditions:

Tris-HCl buffer	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	< 0.0083
Glucose 6-Phosphate Dehydrogenase	Glucose 6-phosphate	< 0.0002
Phosphomannose Isomerase	Mannose 6-Phosphate	0.002
-Glucosidase	p-Nitrophenyl -D-glucose	< 0.00003
-Glucosidase	p-Nitrophenyl -D-glucose	< 0.00002
NADH Oxidase	NADH	< 0.0005

All activities were measured at 340 nm in 88 mM Tris-HCl buffer (pH 7.6) at 25°C.

3. PHYSICOCHEMICAL PROPERTIES

Recommended conditions of use are at pH 7.6 and up to 25-40°C.

4. STORAGE AND USE CONDITIONS/RECOMMENDATIONS

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