



PHOSPHOGLUCOSE ISOMERASE from *E. coli* (Lot 150107a)

Recombinant

E-PGIEC-50KU

07/15

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

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW = 62,595)
- Single major band on isoelectric focusing (pI ~ 6.0); several minor bands pI 5.3-5.5.

2. SPECIFIC ACTIVITY:

550 U/mg protein at pH 7.6 and 25°C.

One Unit of phosphoglucose isomerase (PGI) is defined as the amount of enzyme required to produce one μ mole of NADH from NAD^+ under the following assay conditions:

Tris.HCl buffer	89 mM
MgCl ₂	4.5 mM
BSA	0.44 mg/mL
NAD ⁺	0.52 mM
D-Fructose 6-phosphate	1.5 mM
Glucose 6-phosphate dehydrogenase	2.3 U/mL

3. OTHER ACTIVITIES (as a percentage of PGI activity; 7.6, 40°C.):

Enzyme Measured	Substrate	Activity, %
PGI	D-fructose 6-phosphate	100
α -Glucosidase	<i>p</i> -Nitrophenyl α -D-glucose	< 0.00001
β -Glucosidase	<i>p</i> -Nitrophenyl β -D-glucose	< 0.00001
Glucose 6-Phosphate Dehydrogenase	D-glucose 6-phosphate	< 0.0002
Hexokinase	D-glucose	< 0.0001
Phosphomannose Isomerase	D-mannose 6-Phosphate	< 0.003
NADH oxidase	NADH	< 0.0003

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 and should be stored at 4°C. For assay, this enzyme should be diluted in 100 mM Tris.HCl buffer, pH 7.6 containing 5 mM MgCl₂ and 0.5 mg/mL BSA. **Swirl to mix the enzyme suspension immediately prior to use.**

For the measurement of D-fructose 6-phosphate, refer to the [Fructose/Glucose Assay Kit booklet at www.megazyme.com](http://www.megazyme.com).