



PHOSPHOMANNOSE ISOMERASE from *E. coli* (Lot I50702a)

Recombinant

E-PMIEC

(EC 5.3.1.8) mannose-6-phosphate isomerase; D-mannose-6-phosphate aldose-ketose-isomerase
CAS: 9023-88-5

01/20

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 43,900)
- One major band on isoelectric focusing (pI ~ 5.2)

2. SPECIFIC ACTIVITY:

89 U/mg protein (on mannose 6-phosphate) at pH 7.6 and 25°C

One Unit of phosphomannose isomerase activity is defined as the amount of enzyme required to release one μ mole of fructose 6-phosphate per minute from mannose 6-phosphate (3.14 mM) in the presence of NAD⁺ in Tris.HCl buffer (88 mM), pH 7.6 and 25°C

3. SPECIFICITY:

Catalyses the following reaction:

D-Mannose 6-phosphate = D-fructose 6-phosphate.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Mannose 6-phosphate	100
Fructose 6-phosphate	0.02
Glucose	0.02
Glucose 6-phosphate	<0.0001

All activities were measured at 25°C in 88 mM Tris.HCl buffer (pH 7.6) containing 4.4 mM MgCl₂.

5. PHYSICOCHEMICAL PROPERTIES:

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

6. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension containing 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in Tris.HCl buffer (88 mM), pH 7.6 containing 4.4 mM MgCl₂ and 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**