



## Phosphomannose Isomerase (From *E. coli*) (Lot 30901)

**Recombinant**

09/03

E-PMIEC

### PROPERTIES

#### 1. ELECTROPHORETIC PURITY

- Single major band on SDS-gel electrophoresis (MW = 43,915 )
- Single major band on isoelectric focusing (pI = 5.2)

#### 2. SPECIFIC ACTIVITY AND LEVEL OF OTHER ACTIVITIES

SUBSTRATE	ENZYME MEASURED	SPECIFIC ACTIVITY (U/mg protein)
Mannose 6-Phosphate	Phosphomannose Isomerase	98.0 *
Fructose 6-Phosphate	Phosphoglucose Isomerase	0.020
Glucose 6-Phosphate	Glucose 6-Phosphate Dehydrogenase	< 0.001
Glucose	Hexokinase	0.024

All activities were measured at 25°C in 88 mM Tris/HCl buffer (pH 7.6) containing 4.4 mM MgCl<sub>2</sub>. (NOTE: Activity at 40°C is 167 U/mg).

Phosphomannose Isomerase was assayed in the presence of :  
Phosphoglucose Isomerase (8 Units/assay).  
Glucose 6-phosphate Dehydrogenase (6.4 Units/assay).  
Mannose 6-phosphate (3.14 mM).  
NAD<sup>+</sup> (0.51 mM).  
BSA (0.5 mg/ml).

One Unit of PMI enzyme activity is the amount of enzyme required to produce one µmole of NADH from NAD<sup>+</sup> under the assay conditions described.

#### 3. STORAGE AND USE CONDITIONS/RECOMMENDATIONS

The enzyme is supplied as an ammonium sulphate suspension at approx. 510 units/ml and should be stored at 4°C. Recommended conditions of use are pH 7.6 and at 25- 40°C. Before removing aliquots, swirl the vial to ensure that the enzyme is uniformly suspended. Buffers used for dilution should contain BSA (1 mg/ml).

When used as recommended for the measurement of mannose, 15-20 µlitres are added to each assay cuvette (see Glucose/Fructose Assay Kit booklet).

**Figure 1. SDS-PAGE analysis of phosphomannose Isomerase (*E. coli*)**

Electrophoresis was performed using a 10% acrylamide gel. Lane 1, high molecular weight markers (Sigma cat. no. M-3788); lane 2, 5 $\mu$ g phosphomannose isomerase; lane 3, low molecular weight markers (Sigma cat. no. M-3918).

