

D-Glucose Isomerase, Recombinant

CATALOG NO:	P1307-100	100 mU
	P1307-500	500 mU
ALTERNATE NAMES:	D-Xylose Isomerase, fructose-isomerase, D-xylose aldose-ketose-isomerase, D-xylose ketoisomerase, D-xylose ketol-isomerase	
SOURCE:	<i>E. coli</i>	
SEQUENCE:	<i>S. rubiginosus</i>	
MOL. WEIGHT:	45.4 kDa (408 aa, 1-388 aa + His Tag)	
MOLAR EXT. COEFFICIENT:	46410 M ⁻¹ cm ⁻¹	
PURITY:	≥95% by SDS-PAGE	
FORM:	Ammonium sulfate suspension	
FORMULATION:	In 50 mM Tris-HCl buffer (pH 7.0) containing 30% (NH ₄) ₂ SO ₄ and 1 mM MgCl ₂	
RECONSTITUTION:	Spin at >300 x g for 10 minutes and remove the supernatant. Dissolve the pellets in PBS or appropriate buffer.	
STORAGE CONDITIONS:	Store the (NH ₄) ₂ SO ₄ suspension at 4°C (stable for 1 Year). Reconstituted enzyme can be stored at 4°C. Use within 1-2 weeks.	
DESCRIPTION:	Glucose Isomerase catalyzes the reversible isomerization of glucose to fructose and that of xylose to xylulose. The enzyme is widely used in the industrial production of high-fructose corn syrup (HFCS) as well as in bioethanol fermentation from hemicellulosic hydrolysates. Recombinant Glucose Isomerase protein (<i>S. rubiginosus</i>), fused to His-tag at N-terminus, was expressed <i>in E. coli</i> and purified using propriety chromatography techniques.	
SPECIFIC ACTIVITY:	> 5 mU/mg. The activity of D-Glucose isomerase is determined by using the D-Glucose Isomerase Activity Assay Kit (Cat. No. K177).	
UNIT DEFINITION:	One unit of Glucose Isomerase is the amount of enzyme that converts 1.0 μmol of Fructose to Glucose per min. at pH 8.0 at 37°C.	

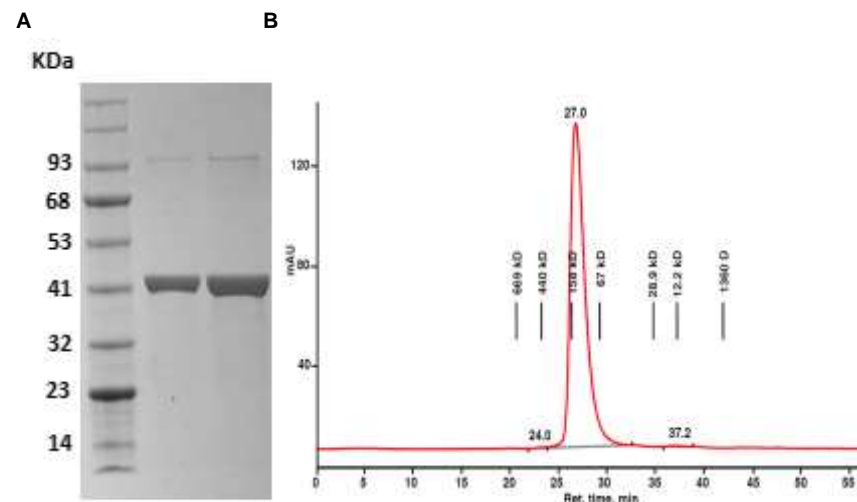


Fig. A. SDS-PAGE (4-20%) of D-Glucose Isomerase: Recombinant Protein loaded under reducing conditions and stained with Coomassie Blue. **Lane M:** MW marker, **Lane 1:** D-Glucose Isomerase (2 μg), **Lane 2:** D-Glucose Isomerase (4 μg)

Fig. B. SEC analysis of D-Glucose Isomerase: SEC analysis of D-Glucose Isomerase on Superdex™ 200 Increase 3.2/300 column at 0.05 ml/min in 50 mM Sodium phosphate; 0.3 M NaCl, pH 7.2.

RELATED PRODUCTS:

- 2-Deoxy-D-Glucose (**Cat. No. B1048**)
- Glucose Dehydrogenase Activity Colorimetric Assay Kit (**Cat. No. K786**)
- Glucose Oxidase Activity Colorimetric/Fluorometric Assay Kit (**Cat. No. K788**)
- Glucose-1-Phosphate Colorimetric Assay Kit (**Cat. No. K697**)
- Fructose Colorimetric/Fluorometric Assay Kit (**Cat. No. K619**)

FOR RESEARCH USE ONLY! Not to be used on humans.