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Not for use in diagnostic procedures.



Phosphoglucose Isomerase (PGI) from yeast D-Glucose-6-phosphate ketol-isomerase

 **Version: 07**

Content Version: November 2021

Cat. No. 10 127 396 001	2 mg 1 ml
Cat. No. 10 128 139 001	10 mg 1 ml

Store the product at +2 to +8°C.

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1. General Information

1.1. Contents

Vial / bottle	Label	Function / description	Catalog number	Content
1	Phosphoglucose Isomerase (PGI)	Suspension in 3.2 M ammonium sulfate solution, pH approximately 6.	10 127 396 001	1 vial, 2 mg, 1 ml
			10 128 139 001	1 vial, 10 mg, 1 ml

1.2. Storage and Stability

Storage Conditions (Product)

When stored at +2 to +8°C, the product is stable through the expiry date printed on the label.

Vial / bottle	Label	Storage
1	Phosphoglucose Isomerase (PGI)	Store at +2 to +8°C.

1.3. Application

Use Phosphoglucose Isomerase (PGI) for the isomerization of ketoses to aldoses.

2. How to Use this Product

2.1. Before you Begin

General Considerations

Additional information

- In reactions involving PGI and G6P-DH, avoid using phosphate buffer since phosphate concentrations >0.1 M greatly inhibit G6P-DH. Suitable buffers are triethanolamine and glycylglycine.
- High concentrations of glucose may interfere with assays of fructose since both are substrates for hexokinase. Glucose may be removed from samples with glucose oxidase.

2.2. Parameters

Contaminants

- <0.01% F6P-K, GR, 6-PGDH, and PGIuM, each
- <0.2% β-fructosidase

EC-Number

EC 5.3.1.9

3. Additional Information on this Product

Inhibition

Pyridoxal-5'-phosphate

Molecular Weight

145 kDa

pH Optimum

pH 7.0 to 7.6

Specific Activity

Approximately 350 U/mg at +25°C with fructose-6-phosphate as the substrate.

Specificity

Phosphoglucose Isomerase (PGI) is specific for glucose-6-phosphate (G6P) ($K_m = 0.7$ mM) and fructose-6-phosphate (F6P).

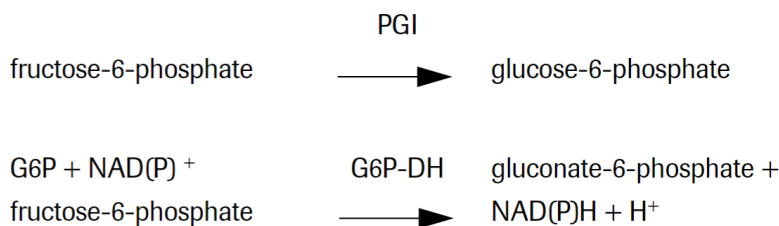
Unit Definition

One unit Phosphoglucose Isomerase will produce 1 μ mol of glucose-6-phosphate from fructose-6-phosphate in 1 minute at +25°C and pH 7.6 (triethanolamine buffer).

3. Additional Information on this Product

3.1. Test Principle

Control assay



The above assay produces 1 μ mol of NAD(P)H per μ mol of glucose-6-phosphate formed.

Equilibrium constant

0.298, pH 8.0 at +30°C. The equilibrium slightly favors glucose-6-phosphate (G6P) formation.

4. Supplementary Information

4.1. Conventions

To make information consistent and easier to read, the following text conventions and symbols are used in this document to highlight important information:

Text convention and symbols

i *Information Note: Additional information about the current topic or procedure.*

⚠ Important Note: Information critical to the success of the current procedure or use of the product.

① ② ③ etc. Stages in a process that usually occur in the order listed.

1 2 3 etc. Steps in a procedure that must be performed in the order listed.

* (Asterisk) The Asterisk denotes a product available from Roche Diagnostics.

4.2. Changes to previous version

Layout changes.

Editorial changes.

4.3. Trademarks

All product names and trademarks are the property of their respective owners.

4.4. License Disclaimer

For patent license limitations for individual products please refer to:

List of biochemical reagent products.

4.5. Regulatory Disclaimer

For life science research only. Not for use in diagnostic procedures.

4.6. Safety Data Sheet

Please follow the instructions in the Safety Data Sheet (SDS).

4.7. Contact and Support

To ask questions, solve problems, suggest enhancements or report new applications, please visit our **Online Technical Support Site.**

To call, write, fax, or email us, visit **sigma-aldrich.com**, and select your home country. Country-specific contact information will be displayed.

