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Saisir le nom du produit, le numéro de lot, etc.

**Toutes les photos** (2)**Documents** **FDS** **COO/COA** **Fiche des caractéristiques****Plus de documents** »**P5381** ▶ **Sigma-Aldrich.**

Phosphoglucose Isomerase from baker's yeast (*S. cerevisiae*)

★★★★★ (0)

Type III, ammonium sulfate suspension, ≥400 units/mg protein (biuret)

Synonyme(s):

D-Glucose-6-phosphate ketol-isomerase, PGI, Phosphosaccharomutase

Numéro CAS: **9001-41-6**Numéro de classification (Commission des enzymes): **5.3.1.9 (BRENDA, IUBMB)**Numéro EC: **232-603-1**Numéro MDL: **MFCD00131887**

NACRES: NA.54

Référence	Conditionnement	Disponibilité	Prix	Quantité
P5381-1KU	1000 UNITS	✓ Disponible pour expédition le 10 octobre 2022 Détails...	106,00 €	— +
P5381-5KU	5000 UNITS	✓ Only 2 left in stock (more on the way) Détails...	382,00 €	— +
P5381-50KU	50000 UNITS	✓ Date d'expédition estimée le 24 novembre 2022	2090,00 €	— +

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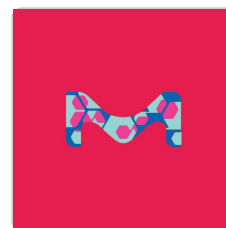
PRODUITS RECOMMANDÉS



Roche

PGI-RO

Phosphoglucose Isomerase (PGI)
from yeast

[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

P9544

Phosphoglucose Isomerase from rabbit muscle
Type XI, lyophilized powder, ≥ 200 units/mg protein

[Consulter le prix et la disponibilité](#)

PROPRIÉTÉS

Source biologique	bakers yeast
Niveau de qualité	200
Type	Type III
Forme	ammonium sulfate suspension
specific activity	≥ 400 units/mg protein (biuret)

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DESCRIPTION

Application

Phosphoglucose Isomerase is an enzyme crucial for the interconversion of D-glucose 6-phosphate and D-fructose 6-phosphate. PGI is responsible for the second step of glycolysis and is involved in gluconeogenesis. It is highly conserved in bacteria and eukaryotes. It is used in sugar assays to convert fructose to glucose.

The enzyme has been used to convert fructose to glucose while evaluating fructose content in kudzu roots.

Actions biochimiques/physiologiques

Phosphoglucose Isomerase functions as an isomerase, neuroleukin, autocrine motility factor, and a differentiation and maturation mediator. The protein has a molecular weight of approximately $119,500 \pm 600$ and is composed of four subunits that are nearly identical.

Définition de l'unité

One unit will convert 1.0 μ mole of D-fructose 6-phosphate to D-glucose 6-phosphate per min at pH 7.4 at 25 °C.

Forme physique

Crystalline suspension in 2.6 M $(\text{NH}_4)_2\text{SO}_4$ containing 0.1 mM magnesium acetate, pH 7.0

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12 - Non Combustible Liquids

WGK

WGK 3

Flash Point(F)

Not applicable

Point d'éclair C

Not applicable

Équipement de protection individuelle

Eyeshields, Gloves

DOCUMENTATION

Certificat d'analyse

Saisir un numéro de lot pour rechercher un certificat d'analyse (COA).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COA)**Rechercher****Certificat d'origine**

Saisir un numéro de lot pour rechercher un certificat d'origine (COO).

Numéro de lot

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Rechercher

Plus De Documents

Enzyme Explorer

FDS

LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich

G4166

Glucose Isomerase from *Streptomyces murinus*

≥350 U/g

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Sigma-Aldrich

H4502

Hexokinase from *Saccharomyces cerevisiae*

Type F-300, lyophilized powder, ≥130 units/mg protein (biuret)

Consulter le prix et la disponibilité



QUESTIONS FRÉQUEMMENT POSÉES (FAQ)

Which document(s) contains shelf-life or expiration date information for a given product?

If available for a given product, the recommended re-test date or the expiration date can be found on the Certificate of Analysis.

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How do I find price and availability:

There are several ways to find pricing and availability for our products. Once you log onto our website, you will find the price and availability displayed on the product detail page. You can contact any of our Customer Sales and Service offices to receive a quote. USA customers: 1-800-325-3010 or view [local office numbers](#).

What is the Department of Transportation shipping information for this product?

Transportation information can be found in Section 14 of the product's (M)SDS. To access the shipping information for this material, use the link on the product detail page for the product.

What is the substrate for Phosphoglucose Isomerase from baker's yeast (e.g., Product No. P5381)?

The substrate for PGI is D-fructose-6-phosphate, according to our Enzyme Assay procedure.

What is the typical protein concentration for Product No. P5381 (PGI)?

The protein concentration of Product No. P5381 (PGI) can vary from lot-to-lot. It is typically in the range of 5-20 mg protein per mL. The lot-specific concentration will be given on the certificate of analysis.

What is the pH optimum of Phosphoglucose Isomerase from baker's yeast (e.g., Product No. P5381)?

The pH optimum for yeast PGI (Product No. P5381) is 7, according to Marchand, M. et al., Eur. J. Biochem., 184, 455-464 (1989).

What is the KM value for yeast PGI (Product No. P5381) with D-Fructose-6-phosphate as substrate, and what does that mean?

KM is the concentration of substrate that leads to half-maximal velocity. The KM value for yeast PGI (Product No. P5381) with D-Fructose-6-phosphate as substrate is 0.167, according to Marchand, M. et al., Eur. J. Biochem., 184, 455-464 (1989).

My question is not addressed here, how can I contact Technical Service for assistance?

Ask a Scientist [here](#).

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Kudzu [*Pueraria montana* (Lour.) Merr. Variety *lobata*: A new source of carbohydrate for bioethanol production

Sage RF, et al.

Biomass and Bioenergy, 33, 57-61 (2009)

The subunit structure of phosphoglucose isomerase from bakers' yeast.

S L Lowe et al.

The Journal of biological chemistry, 250(1), 94-99 (1975-01-10)

Bakers' yeast phosphoglucose isomerase was studied by both chemical and physical methods to determine its subunit structure. Gel filtration in 6 M guanidine HCl as well as acrylamide gel electrophoresis of sodium dodecyl sulfated denatured phosphoglucose isomerase showed two species corresponding

ADPG formation by the ADP-specific cleavage of sucrose-reassessment of sucrose synthase.

J Pozueta-Romero et al.

FEBS letters, 291(2), 233-237 (1991-10-21)

The standardized enzyme coupling method for assaying sucrose synthase activities in the direction of sucrose cleavage was reexamined using enzyme preparations from cultured cells of sycamore (*Acer pseudoplatanus* L.) and spinach leaves (*Spinacea oleracea*). Both ATP and Tris, commonly utilized

The effect of systemic and ovarian infusion of glucose, galactose and fructose on ovarian function in sheep.

B K Campbell et al.

Reproduction (Cambridge, England), 140(5), 721-732 (2010-08-19)

Glucose is a critical metabolic fuel in most mammals although many foodstuffs also contain high levels of the monosaccharides, galactose and fructose. The aims of this work were to determine the insulin response to challenges of these sugars (experiment 1)

Laboratory Evolution and Reverse Engineering of *Clostridium thermocellum* for Growth on Glucose and Fructose.

Johannes Yayo et al.

Applied and environmental microbiology, 87(9) (2021-02-21)

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PROTOCOLES ET ARTICLES SCIENTIFIQUES

Articles

[How to Work with Enzymes Supplied as Ammonium Sulfate Suspensions](#)

Instructions for working with enzymes supplied as ammonium sulfate suspensions

PRODUITS CONSULTÉS RÉCEMMENT

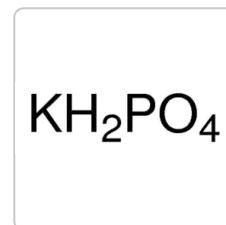


Sigma-Aldrich

P5380

Protease from *Bacillus licheniformis*

Type VIII, lyophilized powder, 7-15 units/mg solid

[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

P5379

Potassium phosphate monobasic

ReagentPlus®

[Consulter le prix et la disponibilité](#)

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Questions

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Notre équipe de scientifiques dispose d'une expérience dans tous les secteurs de la recherche, notamment en sciences de la vie, science des matériaux, synthèse chimique, chromatographie, analyse et dans de nombreux autres domaines..

[Contacter notre Service technique](#)

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