10165875001 **Roche**

Glucose-6-Phosphate Dehydrogenase (G6P-DH)

from *Leuconostoc mesenteroides*

Synonyme(s):
G6P-DH, Glucose-6-Phosephate Dehydrogenase

Numéro de classification (Commission des enzymes): 1.1.1.49 (BRENDA, IUBMB)

Toutes les photos (1)

Documents

FDS

COO/COA

Plus de documents »

Référence	Conditionnement	Disponibilité		Prix	Quantité
10165875001	1 ML	Only 2 left in stock (more on the way)	Détails...	155,00 €	− +

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PRODUITS RECOMMANDÉS

Roche

G6PDHII-RO

Glucose-6-Phosphate Dehydrogenase (G6P-DH)

Sigma-Aldrich

G6378

Glucose-6-phosphate Dehydrogenase from baker's yeast (*S. cerevisiae*)

grade II, from yeast

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Type XV, lyophilized powder, 200-400 units/mg protein (modified Warburg-Christian)

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PROPRIÉTÉS

Niveau de qualité	100
Forme	solution suspension
specific activity	~550 units/mg protein (At 25 °C (650 U/mg at 30 °C) with glucose-6-P and NAD as the substrates.)
Conditionnement	pkg of 1 mL (1,000 U)
manufacturer/tradename	Roche
pH optimal	7.0-8.5(maximal activity at 7.8)
Expédié(e)(s) dans	wet ice
Temp. de stockage	2-8°C

Catégories apparentées

Roche® Life Science Products

DESCRIPTION

Description générale

Glucose-6-Phosphate Dehydrogenase (G6PD) is a ubiquitous enzyme which acts as a catalyst in producing pentose. It also produces NADPH for various biosynthetic and detoxification reactions. Sometimes G6PD provides an alternative to main glycolytic pathway for glucose utilization. It also has its application as DNA markers on X-chromosome.1

Spécificité

Specificity: At pH 7.8, 25 °C: G6P-DH from *Leuconostoc* (LG6PDH) is highly specific for D-glucose-6-phosphate (K_m = 36 µM, NADP as coenzyme; 64 µM, NAD as coenzyme), but will use either NADP (K_m = 7.4 µM; relative rate 1.0) or NAD (K_m = 115 µM; relative rate 1.8) as coenzyme.
LG6P-DH does not react with fructose-6-phosphate, fructose-1,6-biphosphate, glucose-1-phosphate or ribose-1-phosphate.
LG6P-DG will oxidize 2-deoxy-glucose-6-phosphate with NADP, but not with NAD as coenzyme. There is a slow reaction with D-glucose.
Heat inactivation: The ammonium sulfate suspension is not inactivated when heated to temperatures ≤ 50 °C for 10 minutes. At temperatures > 60 °C the enzyme is rapidly inactivated.

Application

Component of cofactor recycling systems for NADPH.

It was used in enzymatic determination of C6 phosphorylation of glycogen.

Qualité

Contaminants: <0.001% CK, <0.01% GR and PGI each, <0.02% “NADH oxidase”, <0.05% HK, <0.001% 6-PGDH

Définition de l'unité

Unit Conversion: One unit (U) [+25 °C] ≈ 1.18 U [+30 °C] ≈ 1.45 U [+37 °C], all with NAD as coenzyme

Unit Definition: One unit (U) LG6P-DH oxidizes 1 mol of glucose-6-phosphate and reduces 1 mol of NAD in 1 minute at +25 °C and pH 7.8.

Forme physique

Solution of 1,000 U in 1 ml 3.2 M ammonium sulfate, pH approximately 6

Notes préparatoires

Activator: HCO^{3-} (≤ 0.3 M) activates slightly.

Remarque sur l'analyse

Absorbance of purified enzyme: 1.15 (1 mg enzyme/ml, 280.5 nm)

Autres remarques

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

INFORMATIONS SUR LA SÉCURITÉ

Code de la classe de stockage	WGK	Flash Point(F)	Point d'éclair C
12 - Non Combustible Liquids	WGK 1	does not flash	does not flash

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

e.g. 023J5431

Comment saisir un numéro de lot (COO)

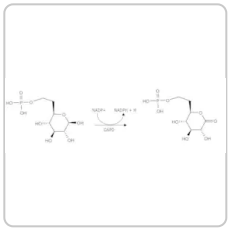
Rechercher

Plus De Documents

Enzyme Explorer

FDS

LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich

G8529

Glucose-6-phosphate Dehydrogenase from *Leuconostoc mesenteroides*

recombinant, expressed in *E. coli*, lyophilized powder, ≥550 units/mg protein (biuret)

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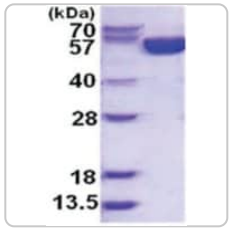

Sigma-Aldrich

SRP6505

G6PD human

recombinant, expressed in *E. coli*, ≥95% (SDS-PAGE)

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ARTICLES REVUS PAR DES PAIRS

Targeted Inhibition of Anti-Inflammatory Regulator Nrf2 Results in Breast Cancer Retardation In Vitro and In Vivo.

Venugopal R Bovilla et al.
Biomedicines, 9(9) (2021-09-29)

Nuclear factor erythroid-2 related factor-2 (Nrf2) is an oxidative stress-response transcriptional activator that promotes carcinogenesis through metabolic reprogramming, tumor promoting inflammation, and therapeutic resistance. However, the extension of Nrf2 expression and its involvement in regulation of breast cancer (BC) responses

Glycogen phosphomonoester distribution in mouse models of the progressive myoclonic epilepsy, Lafora disease.

Anna A DePaoli-Roach et al.
The Journal of biological chemistry, 290(2), 841-850 (2014-11-25)

Glycogen is a branched polymer of glucose that acts as an energy reserve in many cell types. Glycogen contains trace amounts of covalent phosphate, in the range of 1 phosphate per 500-2000 glucose residues depending on the source. The function

PRODUITS CONSULTÉS RÉCEMMENT

Roche

PK-RO

Pyruvate Kinase (PK)

from rabbit muscle

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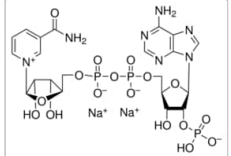

Roche

NADP-RO

NADP

Disodium salt

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SERVICE TECHNIQUE

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..

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