



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



11426362001 Roche

Hexokinase (HK)

suspension, suitable for detection

Toutes les photos (1)

Synonyme(s):
HK, Hexokinase

Numéro de classification (Commission des enzymes): 2.7.1.1 (BRENDA, IUBMB)

Documents

FDS

COO/COA

Plus de documents >>

Référence	Conditionnement	Disponibilité	Prix	Quantité
11426362001	1 ML	Only 3 left in stock (more on the way) Détails...	93,90 €	- +

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PRODUITS RECOMMANDÉS



Sigma-Aldrich

H4502

Hexokinase from *Saccharomyces cerevisiae*

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



Roche

HKG6PDH-RO

Hexokinase/Glucose-6-Phosphate
Dehydrogenase (HK/G6P-DH)



(biuret)

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PROPRIÉTÉS

Forme	suspension
Niveau de qualité	100
specific activity	~450 units/mg protein (At 25 °C and pH 7.6 with D-glucose and ATP as the substrates.)
Conditionnement	pkg of 1 mL (1,500 U)
manufacturer/tradename	Roche
pH range	6.0-8.0
application(s)	detection
Expédié(e)s dans	wet ice
Temp. de stockage	2-8°C

Catégories apparentées

[Roche® Life Science Products](#)

DESCRIPTION

Description générale

ATP:D-hexose 6-phosphotransferase

Hexokinase consists of 486 amino acids and has a molecular weight of 57,000 D (SDS-PAGE) in citrate/phosphate buffer. It may form dimers under other buffer conditions.

Hexokinase exists in three isozymes, namely type I, type II and type III that differ in subcellular localization, catalytic and regulatory properties. The type I isozyme serves a catabolic function facilitating the entry of glucose into glycolytic metabolism for energy production. The type II and type III enzymes perform anabolic functions, such as generating G6P for glycogen synthesis or metabolism through the phosphogluconate pathway for lipid synthesis. Type I and type II isozymes have been found to be bound to mitochondria. The type III isozyme has been found to have perinuclear localization in several cell types.

Application

Hexokinase (HK) has been used in enzyme assays and chemiluminescence assay. It has also been used to determine ATP concentration.

Use Hexokinase for the determination of D-glucose, D-fructose, and D-sorbitol in food or biological research samples. Hexokinase may also be used for the assay of other saccharides, which are convertible to glucose or fructose, and is, therefore, useful in the assay of many glycosides.

Hexokinase has been used in the enzymatic detection of nitric oxide and in the measurement of ATP by luminescence method.

Actions biochimiques/physiologiques

Hexokinase catalyzes the conversion of hexoses to hexose-6-phosphate in an ATP-dependent manner. It is also called as the glycolytic enzyme as it catalyzes the first step in glucose metabolism with the formation of glucose-6-phosphate (G6P). In eukaryotes, it functions as a glucose sensor.

Qualité

Contaminants: <0.002% PGI, <0.0005% G6P-DH and GR, each, <0.001% CK, MK, 6-PGDH, and ADH, each, <0.05% GIDH and invertase (β -fructosidase), each, <30 $\mu\text{g/ml}$ glucose (enzymatically)

Définition de l'unité

Unit Assay: For measuring hexokinase activity 0.22 M glucose in 0.1 M triethanolamine buffer, pH 7.6, 6.5 mM MgCl_2 , 2.7 mM ATP, 0.83 mM NADP is incubated in the presence of 1.7 U glucose-6-phosphate dehydrogenase with an appropriate amount of hexokinase (10–20 mU) at +25 °C (total volume: 3.0 ml). The enzyme activity is calculated from the increase of absorbance at 340 nm ($= 6.3 [I \times \text{mmol/l}^{-1} \times \text{cm}^{-1}]$) or 365 nm ($= 3.5 [I \times \text{mmol/l}^{-1} \times \text{cm}^{-1}]$).

Forme physique

Suspension in 3.2 M ammonium sulfate solution, pH approximately 6.5

Notes préparatoires

Activator: Hexokinase requires Mg^{2+} ions ($K_m = 2.6 \text{ mM}$) for activity. Catecholamines too increase activity.

Stabilizers: Thiols

Autres remarques

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

INFORMATIONS SUR LA SÉCURITÉ

Code de la classe de stockage

12 - Non Combustible Liquids

WGK

WGK 1

Flash Point(F)

does not flash

Point d'éclair C

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

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Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COO)

Rechercher

Plus De Documents

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[FDS](#)

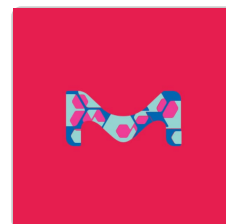
LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Roche

10127655001**Glucose-6-Phosphate Dehydrogenase (G6P-DH)**

grade I, from yeast

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Sigma-Aldrich

SRP6046**Glucokinase from human pancreas**recombinant, expressed in *E. coli*, ≥80% (SDS-PAGE)[Consulter le prix et la disponibilité](#)

ARTICLES REVUS PAR DES PAIRS

Is there a pace-of-life syndrome linking boldness and metabolic capacity for locomotion in bluegill sunfish?

Binder TR, et al.*Animal behaviour*, 121, 175-183 (2016)

Estrogen signaling prevents diet-induced hepatic insulin resistance in male mice with obesity

Zhu L, et al.*American Journal of Physiology. Endocrinology and Metabolism*, 306(10) (2014)

Isozymes of mammalian hexokinase: structure, subcellular localization and metabolic function.

John E Wilson*The Journal of experimental biology*, 206(Pt 12), 2049-2057 (2003-05-21)

The first step in metabolism of glucose (Glc) is usually phosphorylation, catalyzed by hexokinase. However, the Glc-6-P produced can then enter one or more of several alternative pathways. Selective expression of isozymic forms of hexokinase, differing in catalytic and regulatory

Similarities and differences in the biochemical and enzymological properties of the four isomaltases from *Saccharomyces cerevisiae*.

Xu Deng et al.*FEBS open bio*, 4, 200-212 (2014-03-22)

The yeast *Saccharomyces cerevisiae* IMA multigene family encodes four isomaltases sharing high sequence identity from 65% to 99%. Here, we explore their functional diversity, with exhaustive in-vitro characterization of their enzymological and biochemical properties. The four isoenzymes exhibited a preference

Hexokinase as a sugar sensor in higher plants.

JC Jang et al.*The Plant cell*, 9(1), 5-19 (1997-01-01)

The mechanisms by which higher plants recognize and respond to sugars are largely unknown. Here, we present evidence that the first enzyme in the hexose assimilation pathway, hexokinase (H XK), acts as a sensor for plant sugar responses. Transgenic *Arabidopsis* plants

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PRODUITS CONSULTÉS RÉCEMMENT



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ENDOLYSS-RO

Endoproteinase Lys-C Sequencing Grade
from *Lysobacter enzymogenes*

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Roche

ENDOGLUS-RO

Endoproteinase Glu-C Sequencing Grade
from *Staphylococcus aureus* V8

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