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photos (2)

P6635 ▶ **Sigma-Aldrich.**

Phosphorylase b from rabbit muscle

★★★★★ (0)

lyophilized powder, ≥20 units/mg protein

Synonyme(s):

α-Glucan Phosphorylase, 1,4-α-D-Glucan:orthophosphate α-D-glucosyltransferase, Glycogen Phosphorylase

Documents



FDS



COO/COA



Fiche des
caractéristiques

Plus de
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Numéro CAS:

9012-69-5

Numéro de classification
(Commission des enzymes):

2.4.1.1 (BRENDA, IUBMB)

Numéro EC:

232-737-0

Numéro MDL:

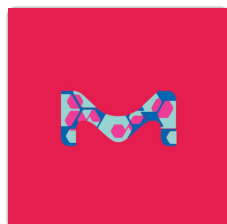
MFCD00131905

Référence	Conditionnement	Disponibilité	Prix	Quantité
P6635-5MG	5 MG	✓ Only 3 left in stock (more on the way) Détails...	80,90 €	− + 
P6635-10MG	10 MG	✓ Only 2 left in stock (more on the way) Détails...	141,00 €	− + 
P6635-25MG	25 MG	✓ Only 2 left in stock (more on the way) Détails...	380,00 €	− + 
P6635-100MG	100 MG	✓ Only 2 left in stock (more on the way) Détails...	700,00 €	− + 

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PRODUITS RECOMMANDÉS



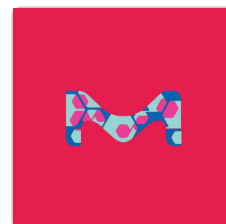
Sigma-Aldrich

P4649

Phosphorylase b from rabbit muscle

For use as a marker in SDS-PAGE

[Consulter le prix et la disponibilité](#)



Sigma-Aldrich

P2014

Phosphorylase Kinase from rabbit muscle

lyophilized powder, ≥60 units/mg protein

[Consulter le prix et la disponibilité](#)

PROPRIÉTÉS

Forme	lyophilized powder
Niveau de qualité	300
specific activity	≥20 units/mg protein
Poids mol.	97,200 Da by calculation
Purifié(e)s par	2× crystallization
Impuretés	~0.01 µmol/mg protein 5'-AMP (This low level will not interfere with phosphorylase and phosphorylase kinase assays.)

Activité étrangère	phosphoglucomutase $\leq 1.0\%$
	phosphorylase a $\leq 10\%$
	phosphorylase kinase $\leq 0.5\%$
	phosphorylase phosphatase, debrancher enzyme, AMPase and ATPase $\leq 0.1\%$

Temp. de stockage	-20°C
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Vous recherchez des produits similaires ? Visitez [Guide de comparaison des produits](#)

DESCRIPTION

Application

Phosphorylase b is used to study the conversion mechanism of inactive phosphorylase b to active phosphorylase in muscle. Phosphorylase b is used to study which factors influence the conversion of phosphorylase b to phosphorylase a such as temperature, AMP, fluoride and detergents. It is used to study phosphorylase b deficiency mutations.

The enzyme from Sigma has been used in the calibration of Sepharose C1-6B columns while studying the molecular weight of methylamine dehydrogenase subunits. It has been used in ion mobility-mass spectrometry studies of phosphorylase B ions that have been generated with supercharging reagents, in charge-reducing buffer. It has also been used for the preparation of p^{32} labeled phosphorylase A using phosphorylase kinase and [^{32}P]ATP.

Conditionnement

5 mg in glass bottle

10, 25, 100 mg in poly bottle

Package size based on protein content.

Actions biochimiques/physiologiques

Phosphorylase b is a non-active form and is present in resting muscle. Phosphorylase b kinase activity increases significantly when the Mg^{2+} :ATP ratio exceeds 1. The breakdown of ATP during muscle contraction is thought to trigger *in vivo* conversion of phosphorylase b into a. Phosphorylase b is activated by inosine monophosphate.

Définition de l'unité

One unit will form 1.0 μ mole of α -D-glucose 1-phosphate from glycogen and orthophosphate in the presence of 5'-AMP, per min at pH 6.8 at 30 °C measured in a system containing phosphoglucomutase, NADP, and glucose 6-phosphate dehydrogenase. (One μ molar unit is equivalent to approx. 45 Cori units.)

Forme physique

Lyophilized powder containing lactose, 5'-AMP, and $Mg(OAc)_2$ (10 μ mole per 100 mg protein)

INFORMATIONS SUR LA SÉCURITÉ

Code de la classe de stockage

13 - Non Combustible Solids

WGK

WGK 3

Flash Point(F)

Not applicable

Point d'éclair C

Not applicable

Équipement de protection individuelle

Eyeshields, Gloves, type N95 (US)

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

M8284**Maltose Phosphorylase from *Enterococcus* sp.**recombinant, expressed in *E. coli*, lyophilized powder[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

M1882**Myoglobin from equine heart**

≥90% (SDS-PAGE), essentially salt-free, lyophilized powder

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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.

How do I get lot-specific information or a Certificate of Analysis?

The lot specific COA document can be found by entering the lot number above under the "Documents" section.

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.

Has the amino acid sequence of phosphorylase from rabbit muscle been published?

The sequence has been published. The amino acid composition is: Asp51, Asn45, Thr35, Ser29, Glu64, Gln31, Pro36, Gly48, Ala63, Cys9, Val62, Met21, Ile49, Leu79, Tyr36, Phe38, Trp12, Lys48, His22, and Arg63. Reference for the sequence and amino acid composition: K. Titani et al., Proc. Nat. Acad. Sci., USA, 74, 4762-4766 (1977) (see attached pdf). Product P1261 is phosphorylase a, which is the tetrameric form. Products P4649 and P6635 are phosphorylase b, the dimeric form. The sequence information of the subunit would be the same for both forms.

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

Ask a Scientist [here](#).

ARTICLES REVUS PAR DES PAIRS

Conversion of glycogen phosphorylase b to a by non-activated phosphorylase b kinase: an in vitro model of the mechanism of increase in phosphorylase a activity with muscle contraction.

C Villar-Palasi et al.

Proceedings of the National Academy of Sciences of the United States of America, 67(1), 345-350 (1970-09-01)

Phosphorylase b kinase activity, as present in resting muscle in the non-activated form, appears to be ample to account for the fast appearance of phosphorylase a observed with muscle contraction. The kinase activity is repressed by free ATP and stimulated

Purification, crystallization and preliminary X-ray investigation of quinoprotein methylamine dehydrogenase from *Thiobacillus versutus*.

F M Vellieux et al.

European journal of biochemistry, 154(2), 383-386 (1986-01-15)

The enzyme methylamine dehydrogenase or primary-amine:(acceptor) oxidoreductase (deaminating) (EC 1.4.99.3) was purified from the bacterium *Thiobacillus versutus* to homogeneity, as judged by polyacrylamide gel electrophoresis. The native enzyme has a Mr of 123 500 and contains four subunits arranged in

Studies on the allosteric activation of glycogen phosphorylase b by Nucleotides. I. Activation of phosphorylase b by inosine monophosphate.

W J Black et al.

The Journal of biological chemistry, 243(22), 5892-5898 (1968-11-25)

Characterization of the phosphorylase b to a converting activity in skeletal muscle extracts of mice with the phosphorylase b kinase deficiency mutation.

S R Gross et al.

The Journal of biological chemistry, 249(21), 6710-6718 (1974-11-10)

The conversion of lobster muscle phosphorylase a to b and phosphorylase b to a.

R W COWGILL

The Journal of biological chemistry, 234, 3154-3157 (1959-12-01)

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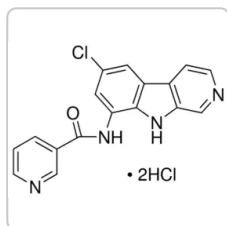
PROTOCOLES ET ARTICLES SCIENTIFIQUES

Articles

Insulin Signaling and Energy Homeostasis

Glucose metabolism is regulated by the opposing actions of insulin and glucagon. Insulin is released from pancreatic β cells in response to high blood glucose levels and regulates glucose metabolism through its actions on muscle, liver, and adipose tissue.

PRODUITS CONSULTÉS RÉCEMMENT



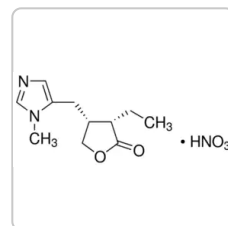
Sigma-Aldrich

P6624

PS-1145 dihydrochloride

≥98% (HPLC), solid

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Sigma-Aldrich

P6628

Pilocarpine nitrate salt

≥98% (HPLC)

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Évaluations



Soyez le premier à donner votre avis sur ce produit

Questions

Soyez le premier à poser une question

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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