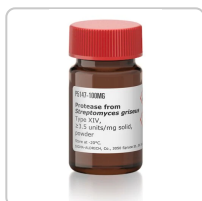


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photos (5)

P5147 ▶ **Sigma-Aldrich.**

Protease from *Streptomyces griseus*

★★★★★ (0)

Type XIV, ≥3.5 units/mg solid, powder

Synonyme(s):

Actinase E, Pronase E

Documents

↓ **FDS**

🔍 **COO/COA**

📄 **Fiche des
caractéristiques**

Numéro CAS:

9036-06-0

Numéro EC:

232-909-5

Numéro MDL:

MFCD00132092

eCl@ss:

32160410

Référence	Conditionnement	Disponibilité	Prix	Quantité
P5147-100MG	100 MG	✓ Disponible pour expédition le 10 octobre 2022 Détails...	43,00 €	- + i
P5147-1G	1 G	✓ Disponible pour expédition le 10 octobre 2022 Détails...	195,00 €	- + i
P5147-5G	5 G	✓ Only 2 left in stock (more on the way) Détails...	714,00 €	- + i

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PRODUITS RECOMMANDÉS



Sigma-Aldrich

P8811

Protease from *Streptomyces griseus*

powder, BioReagent, suitable for mouse embryo cell culture, ≥3.5 units/mg solid

Consulter le prix et la disponibilité



Roche

PRON-RO

Pronase

from *Streptomyces griseus*

Consulter le prix et la disponibilité

PROPRIÉTÉS

Source biologique	<i>Streptomyces griseus</i>
Niveau de qualité	200
Type	Type XIV
Forme	powder
specific activity	≥3.5 units/mg solid
Solubilité	10 mM NaAc (pH 7.5) and 5 mM CaAc: soluble 0.2 mg/mL at 37 °C, clear, colorless to tan
Expédié(e)s dans	wet ice

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Catégories apparentées

Proteases

DESCRIPTION

Spécificité

A mixture of at least three proteolytic activities including an extracellular serine protease. In general, serine proteases display a wide range of substrate specificities, which are believed to be mediated by an active site composed of one Asp, one His, and a Ser residue in the molecule. This enzyme prefers to hydrolyze peptide bonds on the carboxyl side of glutamic or aspartic acid.

Application

Protease from *Streptomyces griseus* has been used:

- for the digestion of nucleus pulposus (NP) tissue
- in the catalysis of asymmetric one pot Mannich reaction
- for deproteinization of starch
- digestion of brain slices for the cell dissociation

Protease is an enzyme used to break down proteins by hydrolyzing peptide bonds. Protease is used to degrade proteins, to study protease inhibitors and to study thermal inactivation kinetics. Protease is used in nucleic acid isolation procedures in incubations.

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dodecyl sulfate and 10 mM EDTA.

The enzyme from Sigma has been used for the digestion and analysis of antithrombin-heparin complexes. It has also been used for the isolation of enzyme-resistant starch.

This enzyme is more active at a higher pH range than the known alkaline protease, showing the proteolytic activity even in 0.2N NaOH solution. This enzyme is useful for proteolysis of insoluble protein and for structure investigation of protein.

Conditionnement

100 mg in glass bottle

1, 5 g in glass bottle

Actions biochimiques/physiologiques

Protease catabolizes proteins by hydrolysis of peptide bonds. Proteases are inactivated by serine active-site inhibitors, such as phenylmethylsulfonyl fluoride (PMSF) and diisopropylfluorophosphate. Protease from *Streptomyces griseus* is a mixture of at least three proteolytic activities including an extracellular serine protease. Serine proteases display a wide range of substrate specificities, which are believed to be mediated by an active site composed of one Asp, one His, and a Ser residue in the molecule. This enzyme prefers to hydrolyze peptide bonds on the carboxyl side of glutamic or aspartic acid.

This product is a mixture of at least three caseinolytic activities and one aminopeptidase activity. The caseinolytic enzymes were named as *Streptomyces griseus* Protease A, *Streptomyces griseus* Protease B and *Streptomyces griseus* Trypsin. This product may be used when extensive or complete degradation of protein is required. This protease mixture is highly nonspecific and can digest casein to the extent of >70% as mono-amino acids.

Caractéristiques et avantages

- highly stable in pH range of 5.0 to 9.0, with peak activity at pH 8.8
- compatible with many DNA and RNA isolation buffers

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Contains calcium acetate.

Propriétés physiques

Completely inactivated by heating above 80 °C for 15-20 minutes.

Définition de l'unité

One unit will hydrolyze casein to produce color equivalent to 1.0 μ mole (181 μ g) of tyrosine per min at pH 7.5 at 37 °C (color by Folin-Ciocalteu reagent).

Notes préparatoires

Collected from culture broth of *S. griseus*.

PRODUITS APPARENTÉS**Produit Apparenté****D8428**

Decorin from bovine articular cartilage, salt-free, lyophilized powder, sterile-filtered

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**Pictograms**
GHS07,GHS08
Mention d'avertissement

Danger

Mentions de danger
H315 - H319 - H334 - H335
Conseils de prudence
P302 + P352 - P305 + P351 + P338
Classification des risques
 Eye Irrit. 2 - Resp. Sens. 1 -
Skin Irrit. 2 - STOT SE 3
Organes cibles

Respiratory system

Code de la classe de stockage

11 - Combustible Solids

WGK

WGK 2

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

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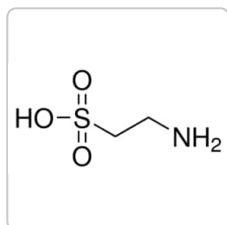
Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COO)

Rechercher

LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich

T8691

Taurine

suitable for cell culture, meets USP testing specifications

Consulter le prix et la disponibilité



Sigma-Aldrich

P0107

Protease from *Rhizopus* sp.

Consulter le prix et la disponibilité

QUESTIONS FRÉQUEMMENT POSÉES (FAQ)

Is Product P5147, Protease from *Streptomyces griseus*, also described as "Pronase"?

"Pronase E" is the name given to a group of proteolytic enzymes produced by *Streptomyces griseus* K-1. At least 10 proteases are in the mixture, five serine-type proteases, two zinc endopeptidases, two zinc leucine aminopeptidases, and one zinc carboxypeptidase.

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How should Product P5147, Protease from *Streptomyces griseus*, be reconstituted and how should a stock solution be prepared?

This product can be dissolved in 0.01 M sodium acetate with 0.005 M calcium acetate at pH 7.5 at 37°C; at 0.2 mg/mL, this yields a clear solution which ranges from colorless to light tan. Calcium ion is recommended for protection from autolysis. The activity of a dilute enzyme solution containing 0.01 to 0.1 M calcium ion was stable over 24 hours at neutral pH at 2-8°C. Pronase E is stable at 4°C for at least six months. Stock solutions of 5 to 20 mg/mL in water are usually stored at -20°C.

Under what conditions can Product P5147, Protease from *Streptomyces griseus*, be used to digest protein?

For DNA isolation, Pronase E is usually prepared as a stock solution, and prior to storage at -20°C, the solution is first heated to 56°C for about 15 minutes, then incubated at 37°C for 1 hour. This encourages self-digestion, to eliminate DNase and RNase contamination. The enzyme is added to a DNA sample (in the presence of 0.5-1%(w/v) SDS to disrupt DNA protein interactions) typically at 250-500 µg protein/mL, then incubated at 37°C for 1-4 hours. For protein hydrolysis, dissolve about 0.2 µmol of protein in 0.2 mL of 50 mM ammonium bicarbonate buffer at pH 8 (or phosphate buffer pH 7). Add Pronase to 1% (w/w) and incubate at 37°C for 24 hours. It may be necessary to add aminopeptidase M at 4% (w/w) and incubate at 37°C for another 18 hours.

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?

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ARTICLES REVUS PAR DES PAIRS

An improved fractionation system for pronase on CM-sephadex.

J Jurásek et al.

Canadian journal of biochemistry, 49(11), 1195-1201 (1971-11-01)

Covalent antithrombin-heparin complexes with high anticoagulant activity. Intravenous, subcutaneous, and intratracheal administration.

A Chan et al.

The Journal of biological chemistry, 272(35), 22111-22117 (1997-08-29)

Although heparin has been used clinically for prophylaxis and treatment of thrombosis, it has suffered from problems such as short duration within compartments in vivo that require long term anticoagulation. A covalent antithrombin-heparin complex has been produced with high anticoagulant

Enzyme-resistant starch. I. Quantitative and qualitative influence of incubation time and temperature of autoclaved starch on resistant starch formation

Eerlingen RC, et al.

Cereal Chem., 70(3), 339-344 (1993)

Notochordal conditioned media from tissue increases proteoglycan accumulation and promotes a healthy nucleus pulposus phenotype in human mesenchymal stem cells

Purmessur D, et al.

Arthritis Research & Therapy, 13(3), R81-R81 (2011)

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PRODUITS CONSULTÉS RÉCEMMENT



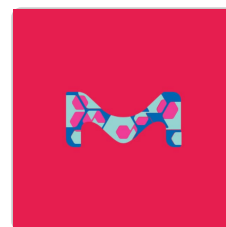
Sigma-Aldrich

P5136

Poly-γ-benzyl-L-glutamate

mol wt 150,000-350,000

[Consulter le prix et la disponibilité](#)



Sigma-Aldrich

P5119

Phosphate buffered saline

pH 7.2 (25 °C)

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Évaluations

★★★★★

[Soyez le premier à donner votre avis sur ce produit](#)

Questions

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