

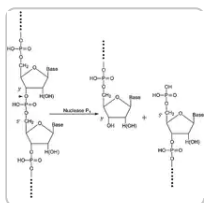
Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



GET YOURS HERE





Toutes les
photos (2)

Documents



FDS



COO/COA



Fiche des
caractéristiques

Plus de
documents »

N8630 ► Sigma-Aldrich.

Nuclease P₁ from *Penicillium citrinum*

★★★★★ (0)

lyophilized powder, ≥200 units/mg protein (E1%/280, 3'-5'-Phosphodiesterase)

Synonyme(s):

3'-Phosphohydrolase, Nuclease 5'-Nucleotidehydrolase, Endonuclease P₁

Numéro CAS: 54576-84-0

Numéro de classification (Commission des enzymes): 3.1.30.1 (BRENDA, IUBMB)

Numéro MDL: MFCD00131010

NACRES: NA.54

Référence	Conditionnement	Disponibilité	Prix	Quantité
N8630-1VL	1 VIAL	✓ Date d'expédition estimée le 10 octobre 2022	Détails... 644,00 €	− + i
N8630-5X1VL	5 X 1 VIAL	✓ Only 6 left in stock (more on the way)	Détails... 1880,00 €	− + i

Demander une commande en gros

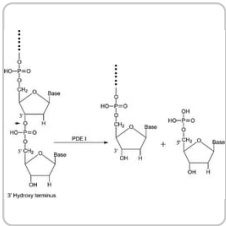
Ajouter au panier

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.

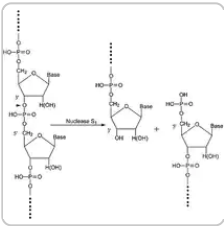


GET YOURS HERE



Sigma-Aldrich
P3243
Phosphodiesterase I from *Crotalus adamanteus* venom
vial of ≥100 units, Purified

Consulter le prix et la disponibilité



Sigma-Aldrich
N5661
Nuclease S₁ from *Aspergillus oryzae*
for single-strand DNA/RNA digestion

Consulter le prix et la disponibilité



PROPRIÉTÉS

Forme	lyophilized powder
Niveau de qualité	200
specific activity	≥200 units/mg protein (E1%/280, 3'-5'-Phosphodiesterase)
secondary activity	≥1,000 units/mg protein 3'-nucleotidase
Poids mol.	42-50 kDa
Conditionnement	vial of ≥250 units (using RNA substrate)
Temp. de stockage	2-8°C

Vous recherchez des produits similaires ? Visit [Guide de comparaison des produits](#)

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



GET YOURS HERE



Description générale

Nuclease P1 is one of the most commonly known single-strand specific nucleases in molecular biology; Nuclease P1 is a single stranded specific endonuclease (of ssDNA or ssRNA). Nuclease P1 can also cleave single-stranded regions in double-stranded nucleic acids.

Nuclease P1 from *Penicillium citrinum* is a zinc-dependent endonuclease that exhibits increased activity in the presence of low concentrations of urea. Nuclease P1 selective activity has found useful applications in studies on nucleic acid structure.

Application

- Nuclease P1 cleave of single stranded DNA or RNA to 5' mononucleotides
- Nuclease P1 supports DNA damage and modification research
- Nucleic acids base composition and structural analysis can be done by Nuclease P1
- Nuclease P1 has historically been used for the industrial production of 5'-mononucleotides from yeast RNA.
- Removal of nucleic acids through protein purification can be done by Nuclease P1
- Nuclease P1 is a key reagent for the development of methods for studies involving t-RNA dependent amino acid biosynthesis and t-RNA dependent trans-amidation
- Nuclease P1 from *Penicillium citrinum* has been used in a study to assess crystal structures using ammonium sulphate or polyethylene glycol 4000 as a precipitating agent.
- Nuclease P1 was used in a study to investigate a method for the direct sequence analysis 20-25 nucleotides from the terminus of 5' or 3' end group labeled RNA.
- Nuclease P1 is used to improve the sensitivity of a ^{32}P -labeling method for the detection of DNA adducts.

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



GET YOURS HERE



suitable. It is stable in the pH range of 5 - 8.

Actions biochimiques/physiologiques

Catalyzes the nonspecific endonucleolytic cleavage of single stranded DNA and RNA to yield nucleoside 5'-phosphates and 5'-phosphooligonucleotides. It does not appreciably degrade double-stranded nucleic acids, especially in the presence of more than 400 mM sodium chloride at pH 6.0.

Caractéristiques et avantages

Our highly active Nuclease P1 is tested for its 3'-5'-Phosphodiesterase Activity and 3'-Nucleotidase Activity and is the most active Nuclease P1 in the market

Propriétés physiques

A zinc dependent glycoprotein consisting of 270 amino acid residues. Molecular mass: 42-50 kDa.

Définition de l'unité

3'-5'-Phosphodiesterase: One unit will liberate 1.0 μ mole of acid soluble nucleotides from RNA per min at pH 5.3 at 37 °C.

3'-Nucleotidase: One unit will hydrolyze 1.0 μ mole of orthophosphate from 3'-AMP per min at pH 7.2 at 37 °C.

INFORMATIONS SUR LA SÉCURITÉ**Pictograms****Mention d'avertissement**

Danger

Mentions de danger

H334

Conseils de prudence

P261 - P284 - P501

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



GET YOURS HERE



Not applicable

Not applicable

Not applicable

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

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



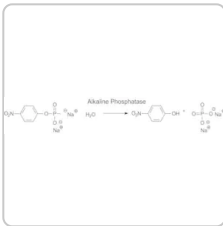
GET YOURS HERE



Plus De Documents

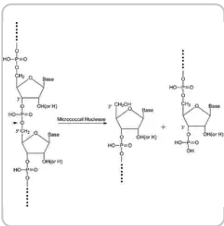
Enzyme Explorer
FDS

LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich
P0114
Phosphatase, Alkaline from bovine intestinal mucosa
BioUltra, buffered aqueous glycerol solution, ≥5,700 DEA units/mg protein

Consulter le prix et la disponibilité



Sigma-Aldrich
N5386
Nuclease micrococcal from *Staphylococcus aureus*
100-300 units/mg protein

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.

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

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



GET YOURS HERE



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.

Product N8630 (Nuclease P1 from *Penicillium citrinum*) is a lyophilized powder. How should I store solutions of this enzyme?

A solution of Nuclease P1 that has been reconstituted in 20 mM sodium acetate buffer (pH 5.3), 5 mM ZnCl₂, and 50 mM sodium chloride can be stored for the short term at 2-8 °C for 2-3 weeks. For longer term storage, at -20 °C, one suggestion is to add 40-50% glycerol after reconstitution in the aqueous buffer. Such solutions (with glycerol added) may be stored for 3-6 months at -20 °C.

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

Ask a Scientist [here](#).

ARTICLES REVUS PAR DES PAIRS

Crystallisation and preliminary crystallographic analysis of P1 nuclease from *Penicillium citrinum*.

A Lahm et al.

Journal of molecular biology, 215(2), 207-210 (1990-09-20)

P1 nuclease, a zinc-dependent single-strand specific endonuclease from *Penicillium citrinum*, has been crystallized in three different space groups using either ammonium sulphate or polyethylene glycol 4000 as the precipitating agent. The crystals diffract to between 3 Å and 2.2 Å.

Structural basis for DNA 3'-end processing by human tyrosyl-DNA phosphodiesterase 1.

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



GET YOURS HERE



phenylalanine (F259) of Tdp1, required

AtTrm5a catalyses 1-methylguanosine and 1-methylinosine formation on tRNAs and is important for vegetative and reproductive growth in Arabidopsis thaliana.

Xiaohuan Jin et al.

Nucleic acids research, 47(2), 883-898 (2018-12-07)

Modified nucleosides on tRNA are critical for decoding processes and protein translation. tRNAs can be modified through 1-methylguanosine (m1G) on position 37; a function mediated by Trm5 homologs. We show that AtTRM5a (At3g56120) is a Trm5 ortholog in Arabidopsis thaliana.

Oxidative DNA damage induced by ROS-modulating agents with the ability to target DNA: A comparison of the biological characteristics of citrus pectin and apple pectin.

Fahimeh Salehi et al.

Scientific reports, 8(1), 13902-13902 (2018-09-19)

DNA targeting anticancer agents have been very successful in clinic, especially, when used in combinatorial therapy. But unfortunately, they often exhibit high levels of toxicity towards normal cells. Hence, much effort has been put into finding agents with more selectivity

Nuclease P1-mediated enhancement of sensitivity of 32P-postlabeling test for structurally diverse DNA adducts.

M V Reddy et al.

Carcinogenesis, 7(9), 1543-1551 (1986-09-01)

Exceedingly sensitive procedures are required to detect the presence of covalent DNA adducts in humans exposed to environmental genotoxins because of low levels of such derivatives (1 adduct in 10(8)-10(10) DNA nucleotides). A 32P-postlabeling assay for detection and quantitation of

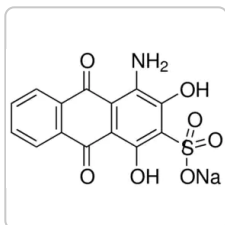
Afficher tous les articles scientifiques apparentés

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



GET YOURS HERE

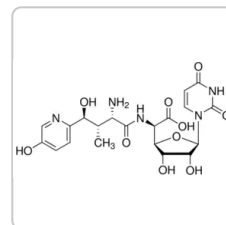


Sigma-Aldrich

N8002

Nuclear Fast Red

[Consulter le prix et la disponibilité](#)



Sigma-Aldrich

N8028

Nikkomycin Z from *Streptomyces tendae*

≥90% (HPLC)

[Consulter le prix et la disponibilité](#)

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,

Brighten up your lab coat!

Subscribe to our scientific newsletters and make your lab mates jealous with a shiny 'Magical Flask' pin.



GET YOURS HERE



Le contenu de cette page vous a-t-il été utile ?*



Que pouvons-nous faire pour améliorer cette page spécifique de notre site Internet ?

Envoyer

© 2022 Merck KGaA, Darmstadt, Allemagne et/ou ses sociétés affiliées. Tous droits réservés.

La reproduction d'une quelconque partie du contenu de ce site est strictement interdite sans autorisation.

[Conditions d'utilisation du site](#) | [Politique de confidentialité](#) | [Conditions générales de vente](#) | [Consentement relatif au copyright](#) | [Paramètres des cookies](#)