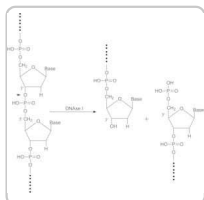


Saisir le nom du produit, le numéro de lot, etc.



Toutes les
photos (5)

Documents

FDS

COO/COA

 Fiche des
caractéristiques

Plus de
documents »

D5025 ► Sigma-Aldrich.

Deoxyribonuclease I from bovine pancreas

★★★★★ (0)

Type IV, lyophilized powder, ≥2,000 Kunitz units/mg protein

Synonyme(s):

DNase I, Deoxyribonuclease 5'-oligonucleotide-hydrolase

Numéro CAS: 9003-98-9

Numéro EC: 232-667-0

NACRES: NA.54

Numéro de classification
(Commission des enzymes):

3.1.21.1 (BRENDA, IUBMB)

Numéro MDL:

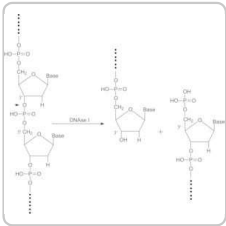
MFCD00130918

Référence	Conditionnement	Disponibilité		Prix	Quantité
D5025-15KU	15000 UNITS	✓ Disponible pour expédition le 06 octobre 2022	Détails...	101,00 €	– +
D5025-150KU	150000 UNITS	✓ Disponible pour expédition le 06 octobre 2022	Détails...	464,00 €	– +
D5025-375KU	375000 UNITS	✓ Only 1 left in stock (more on the way)	Détails...	983,00 €	– +
D5025-750KU	750000 UNITS	✓ Only 3 left in stock (more on the way)	Détails...	1 190,00 €	– +

Demander une commande en gros

Ajouter au panier

PRODUITS RECOMMANDÉS



Sigma-Aldrich

DN25

Deoxyribonuclease I from bovine pancreas

lyophilized powder, Protein $\geq 85\%$, ≥ 400 Kunitz units/mg protein

[Consulter le prix et la disponibilité](#)



Roche

10104159001

DNase I

grade II, from bovine pancreas

[Consulter le prix et la disponibilité](#)

PROPRIÉTÉS

Source biologique	bovine pancreas
Niveau de qualité	300
Type	Type IV
Forme	lyophilized powder
specific activity	$\geq 2,000$ Kunitz units/mg protein
Poids mol.	~ 31 kDa

Purifié(e)(s) par	chromatography
Composition	Protein, ≥80%
Solubilité	0.15 M NaCl: soluble 5.0 mg/mL, clear, colorless
application(s)	diagnostic assay manufacturing diagnostic assay manufacturing
Activité étrangère	Chymotrypsin ≤0.5% Protease ≤0.05% RNase ≤0.02%
Expédié(e)(s) dans	wet ice
Temp. de stockage	−20°C

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

Catégories apparentées

[Nucleases \(DNases and RNases\)](#)

DESCRIPTION

Application

DNase I is used to nick DNA as a first step to incorporate labeled bases into DNA. The enzyme from Sigma has been used in the processing of rat brain tissue. This study showed that axonal growth on astrocytes is not inhibited by oligodendrocytes. In another

study, thawed fixed samples of *E. coli* were digested with DNase I from Sigma along with other enzymes. The digestion was done before permeabilization and staining of the nucleic acids.

Deoxyribonuclease I from bovine pancreas has been used in a study to investigate a two-dimensional zymogram analysis of nucleases in *Bacillus subtilis*. Deoxyribonuclease I from bovine pancreas has also been used in a study to investigate the effects of minor and major groove-binding drugs and intercalators on the DNA association of minor groove-binding proteins RecA and deoxyribonuclease I.

Used for the removal of DNA from protein samples.

Conditionnement

15000 units in glass bottle

150000, 375000, 750000 units in poly bottle

Actions biochimiques/physiologiques

DNase I is an endonuclease that acts on phosphodiester bonds adjacent to pyrimidines to produce polynucleotides with terminal 5'-phosphates. In the presence of Mg^{2+} , DNase I cleaves each strand of DNA independently and the cleavage sites are random. Both DNA strands are cleaved at approximately the same site in the presence of Mn^{2+} . The pH optimum is found to be between 7 and 8. Divalent cations such as Mn^{2+} , Ca^{2+} , Co^{2+} , and Zn^{2+} are activators of the enzyme. A concentration of 5 mM Ca^{2+} stabilizes the enzyme against proteolytic digestion. DNase I from bovine pancreas consists of four chromatographically distinguishable components, A, B, C, and D, with their molar ratios being 4:1:1. Only minor amounts of D are found. 2-Mercaptoethanol, chelators, sodium dodecyl sulfate (SDS) and actin are known to inhibit the enzyme activity.

Définition de l'unité

One Kunitz unit will produce a ΔA_{260} of 0.001 per min per mL at pH 5.0 at 25 °C, using DNA, Type I or III as substrate.

Forme physique

Lyophilized powder containing calcium chloride

Notes préparatoires

10 mg/mL solution of DNase I in 0.15 M NaCl may lose <10% of its activity when stored for a week in aliquots at -20 °C. The same solutions stored in aliquots at 2-8 °C can lose approximately 20% activity. It remains active for up to five hours at 60 °C between pH 5 and 7, and loses activity in <10 minutes at 68 °C. It loses activity at the rate of 6%/hour in acetate buffer (pH 5.0) and tris buffer ((pH 7.2) at 1 mg/mL concentration.

Remarque sur l'analyse

Protein determined by biuret.

PRODUITS APPARENTÉS

Inhibiteur

N9653

Netropsin dihydrochloride, from *Streptomyces netropsis*, ≥98% (HPLC and TLC), powder

[View Pricing](#)

D6518

Diethylenetriaminepentaacetic acid, ≥99% (titration)

[View Pricing](#)

P9375

1,10-Phenanthroline monohydrate, reagent grade

[View Pricing](#)

E4378Ethylene glycol-bis(2-aminoethylether)-*N,N,N',N'*-tetraacetic acid, ≥97.0%[View Pricing](#)**ED2SS**

Ethylenediaminetetraacetic acid disodium salt dihydrate, reagent grade, 98.5-101.5% (titration)

[View Pricing](#)**INFORMATIONS SUR LA SÉCURITÉ****Pictograms****GHS08****Mention d'avertissement**

Danger

Mentions de danger**H334****Conseils de prudence****P261 - P284 - P501****Classification des risques**

Resp. Sens. 1

**Code de la classe de
stockage**

11 - Combustible Solids

WGK

WGK 3

Flash Point(F)

Not applicable

Point d'éclair C

Not applicable

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)

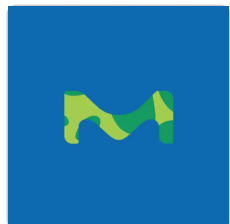
Rechercher

Plus De Documents

[Enzyme Explorer](#)

[FDS](#)

LES CLIENTS ONT ÉGALEMENT CONSULTÉ



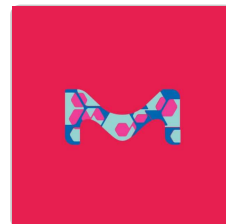
Millipore

260913

DNase I, Bovine Pancreas

Native DNase I from bovine pancreas.

[Consulter le prix et la disponibilité](#)



Sigma-Aldrich

D7291

Deoxyribonuclease I RNase-free solution from bovine pancreas

[Consulter le prix et la disponibilité](#)

QUESTIONS FRÉQUEMMENT POSÉES (FAQ)

How should I prepare a solution of Product D5025, DNase I?

This enzyme can be reconstituted in 0.15 M NaCl at a concentration of 10 mg/ml.

Are stock solutions of Product D5025, Deoxyribonuclease I (DNase I), stable?

Solutions of DNase I (10 mg/ml) in 0.15 M NaCl may lose 10% of its activity when stored for a week in aliquots at -20°C. The same solutions stored in aliquots at 2 - 8°C. lose approximately 20% activity.

How do Deoxyribonuclease I (DNase I), products D5025 and D4527 differ from each other?

Both of these products have the same specific activity (>2000 units/mg protein) for Dnase I. The enzyme impurity levels for each, however, are different. D5025 has the following impurity specification: Chymotrypsin (<0.5%), Protease (<0.05%), and RNase (<0.02%). The impurity specifications for D4527 are: Chymotrypsin (<0.01%), Protease (<0.005%), and RNase (<0.01%).

How can I convert units of Product D5025, Deoxyribonuclease I (DNase I), to mass?

The mg of solid for each unit package size will be indicated on the label of the package. For a particular lot, you can calculate the specific activity in units per mg solid by multiplying the specific activity in units per mg protein by the percent protein divided by 100.

What concentration of Product D5025, Deoxyribonuclease I (DNase I), is required to remove DNA from solutions?

DNA can be removed from preparations by incubation with 20 - 50 ug DNase I in the presence of 50 mM Tris-HCl buffer, pH 7.5, 10 mM magnesium chloride, at 37°C. for 60 min.

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.

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

Ask a Scientist [here](#).

ARTICLES REVUS PAR DES PAIRS

[Use of nucleic acid dyes SYTO-13, TOTO-1, and YOYO-1 in the study of Escherichia coli and marine prokaryotic populations by flow cytometry.](#)

T Guindulain et al.

Applied and environmental microbiology, 63(11), 4608-4611 (1997-11-15)

Three nucleic acid dyes (SYTO-13, TOTO-1, and YOYO-1) were tested on cultures of Escherichia coli and marine prokaryote populations. These dyes stain the RNA and DNA in E. coli but only respond to DNA in marine populations, according to the

Axonal growth on astrocytes is not inhibited by oligodendrocytes.

J W Fawcett et al.

Journal of cell science, 103 (Pt 2), 571-579 (1992-10-01)

Axon growth in vitro may be inhibited by contact with oligodendrocytes, but most axons grow readily on the surface of astrocyte monolayers. Since both cell types are in close contact with one another in the damaged nervous system, we have

Enzymes of Molecular Biology

Weir, A. F.

Methods in Molecular Biology, 16 (1993)

Functional importance of palmitoyl protein thioesterase 1 (PPT1) expression by Sertoli cells in mediating cholesterol metabolism and maintenance of sperm quality.

Wenzhen Zhao et al.

Molecular reproduction and development, 86(8), 984-998 (2019-05-28)

Sertoli cells are a type of nurse cell in the seminiferous epithelium that are crucial for sustaining spermatogenesis by extending nutritional and energy support to the developing germ cells. Dysfunction of Sertoli cells could cause disordered spermatogenesis and reduced fertility

Actin is the naturally occurring inhibitor of deoxyribonuclease I.

E Lazarides et al.

Proceedings of the National Academy of Sciences of the United States of America, 71(12), 4742-4746 (1974-12-01)

Various tissues and cells in culture contain a specific inhibitor of DNase I (EC 3.1.4.5). In this paper evidence is presented that this inhibitor is actin, one of the major structural proteins of muscle and nonmuscle cells. (a) The inhibitor

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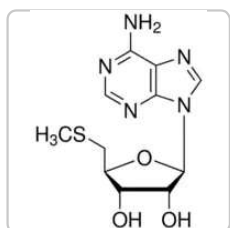
PROTOCOLES ET ARTICLES SCIENTIFIQUES

Protocoles

Enzymatic Assay of Deoxyribonuclease I (EC 3.1.21.1)

To standardize a procedure for the enzymatic assay of Deoxyribonuclease I.

PRODUITS CONSULTÉS RÉCEMMENT

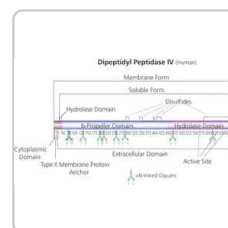


Sigma-Aldrich

D5011

5'-Deoxy-5'-(methylthio)adenosine

[Consulter le prix et la disponibilité](#)



Sigma-Aldrich

D4943

Dipeptidyl Peptidase IV human

recombinant, expressed in baculovirus infected Sf9 cells,
pkg of ≥1.0 units/vial, ≥10 units/mg protein

[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

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