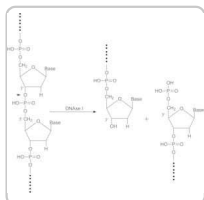


Saisir le nom du produit, le numéro de lot, etc.



Toutes les
photos (4)

Documents

FDS

COO/COA

 Fiche des
caractéristiques

Plus de
documents »

D4527 ► Sigma-Aldrich.

Deoxyribonuclease I from bovine pancreas

★★★★★ (0)

Type II, lyophilized powder, Protein ≥80 %, ≥2,000 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

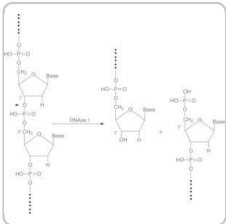
Référence	Conditionnement	Disponibilité	Prix	Quantité
D4527-10KU	10000 UNITS	Only 3 left in stock (more on the way) Détails...	161,00 €	– +
D4527-20KU	20000 UNITS	Only 3 left in stock (more on the way) Détails...	290,00 €	– +
D4527-40KU	40000 UNITS	Only 5 left in stock (more on the way) Détails...	481,00 €	– +
D4527-500KU	500000 UNITS	Only 1 left in stock (more on the way) Détails...	1 630,00 €	– +
D4527-200KU	200000 UNITS	Disponible pour expédition le 06 octobre 2022 Détails...	1 830,00 €	– +

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[Ajouter au panier](#)

PRODUITS RECOMMANDÉS



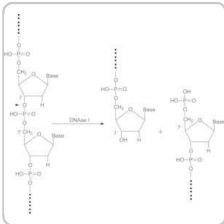
Sigma-Aldrich

DN25

Deoxyribonuclease I from bovine pancreas

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

[Consulter le prix et la disponibilité](#)



Sigma-Aldrich

D5025

Deoxyribonuclease I from bovine pancreas

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

[Consulter le prix et la disponibilité](#)



PROPRIÉTÉS

Type	Type II
Niveau de qualité	300
Forme	lyophilized powder
specific activity	≥2,000 units/mg protein
Poids mol.	~31 kDa

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Purifié(e)s par	chromatography
Composition	Protein, ≥80%
Solubilité	0.15 M NaCl: soluble 5.0 mg/mL, clear
application(s)	diagnostic assay manufacturing diagnostic assay manufacturing
Activité étrangère	Chymotrypsin ≤0.01% Protease ≤0.005% RNase ≤0.01%
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

[^
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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 nuclease stock along with RNase during cell lysate preparation of Madin-Darby canine kidney (MDCK) II cell lines. It has also been

used during RNA extraction from *Sindbis* virus.

Deoxyribonuclease I from bovine pancreas has been used for the identification, localization and expression of two novel human genes similar to deoxyribonuclease I. Deoxyribonuclease I from bovine pancreas has also been used in a study to investigate a new approach to obtaining high-activity RNase, DNase, cholesterolesterase, and trypsin from cattle pancreas.

Used for the removal of DNA from protein samples.

Conditionnement

10000 units in glass bottle

20000, 40000, 200000, 500000 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 respectively. 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 change in A_{260} of 0.001 per minute per ml at pH 5.0 at 25 °C using DNA, Type I or III, as the substrate.


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Forme physique

Contains calcium chloride

Notes préparatoires

The enzyme powder may be reconstituted in water or any buffer at pH 4.0-9.0, except phosphate buffer. Calcium chelators should be avoided. 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 P](#)



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 - P304 + P340 +
P312 - 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


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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

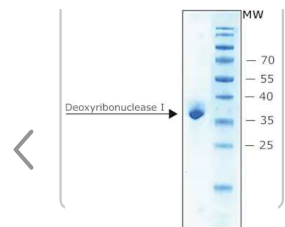
Plus De Documents

[Enzyme Explorer](#)

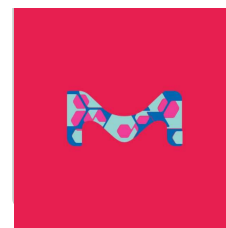
[FDS](#)

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LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich

D2821**Deoxyribonuclease I bovine**recombinant, expressed in *Pichia pastoris*, lyophilized powder, RNase and protease, free[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

D7291**Deoxyribonuclease I RNase-free solution from bovine pancreas**[Consulter le prix et la disponibilité](#)

ARTICLES REVUS PAR DES PAIRS

Enzymes of Molecular Biology

Weir, A. F.*Methods in Molecular Biology*, 16 (1993)

Regulation of Sindbis virus RNA replication: uncleaved P123 and nsP4 function in minus-strand RNA synthesis, whereas cleaved products from P123 are required for efficient plus-strand RNA synthesis.

Y Shirako et al.*Journal of virology*, 68(3), 1874-1885 (1994-03-01)

Nonstructural proteins of Sindbis virus, nsP1, nsP2, nsP3, and nsP4, as well as intermediate polyproteins, are produced from two precursor polyproteins, P123 and P1234, by a proteolytic enzyme encoded in the C-terminal half of nsP2. We studied the requirements for

Annexin A2 heterotetramer: role in tight junction assembly.

David B N Lee et al.*American journal of physiology. Renal physiology*, 287(3), F481-F491 (2004-04-29)

The tight junction has been characterized as a domain of focal fusions of the exoplasmic leaflets of the lipid bilayers from adjacent epithelial cells. Approximating membranes to within fusion distance is a thermodynamically unfavorable process and requires the participation of

Identification of novel genes and networks governing hematopoietic stem cell development.

Tianxu Han et al.*EMBO reports*, 17(12), 1814-1828 (2016-11-01)

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Hematopoietic stem cells (HSCs) are capable of giving rise to all blood cell lineages throughout adulthood, and the generation of engraftable HSCs from human pluripotent stem cells is a major goal for regenerative medicine. Here, we describe a functional genome-wide

The application of CRISPR technology to high content screening in primary neurons.

Ben L Callif et al.

Molecular and cellular neurosciences, 80, 170-179 (2017-01-23)

Axon growth is coordinated by multiple interacting proteins that remain incompletely characterized. High content screening (HCS), in which manipulation of candidate genes is combined with rapid image analysis of phenotypic effects, has emerged as a powerful technique to identify key

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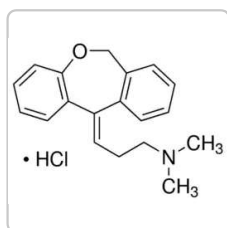
PROTOCOLES ET ARTICLES SCIENTIFIQUES

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

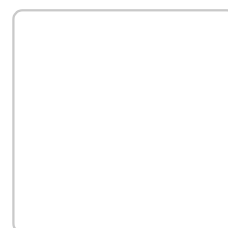


Sigma-Aldrich

D4526

Doxepin hydrochloride

~85% *E*-isomer basis, ≥98% (GC), 15% *Z*-isomer basis, powder



Sigma-Aldrich

D4522

Deoxyribonucleic acid from calf thymus

Type XV, Activated, lyophilized powder



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Évaluations

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