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D4263 ▶ **Sigma-Aldrich.**

Deoxyribonuclease I from bovine pancreas

★★★★★ (0)

Standardized vial containing 2,000 Kunitz units of DNase I (D4527), vial of ≥0.25 mg total 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**

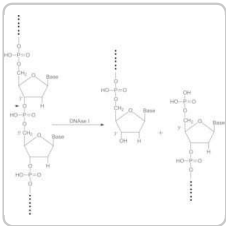
Référence	Conditionnement	Disponibilité	Prix	Quantité
D4263-1VL	1 VIAL	✓ Only 6 left in stock (more on the way) Détails...	73,60 €	− +
D4263-5VL	5 VIALS	✓ Disponible pour expédition le 06 octobre 2022 Détails...	253,00 €	− +

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PRODUITS RECOMMANDÉS



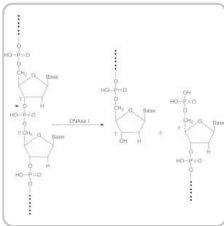
Sigma-Aldrich

D5025

Deoxyribonuclease I from bovine pancreas

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

Consulter le prix et la disponibilité



Sigma-Aldrich

DN25

Deoxyribonuclease I from bovine pancreas

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

Consulter le prix et la disponibilité

PROPRIÉTÉS

Niveau de qualité	200
Forme	powder
Poids mol.	~31 kDa
Purifié(e)s par	chromatography
Conditionnement	vial of ≥0.25 mg total protein
Solubilité	0.15 M NaCl: soluble 5.0 mg/mL, clear
application(s)	diagnostic assay manufacturing diagnostic assay manufacturing

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Temp. de stockage

-20°C

Vous recherchez des produits similaires ? Visitez [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. DNase I from Sigma has been used along with other enzymes for tumor harvest and dissociation, during the isolation and molecular characterization of cancer stem cells in MMTV-Wnt-1 murine breast tumors.

Deoxyribonuclease I from bovine pancreas has been used in a study to determine that mammalian deoxyribonucleases I are classified into three types based on differences in their tissue concentrations. Deoxyribonuclease I from bovine pancreas has also been used in a study to compare the three primary structures of deoxyribonuclease isolated from bovine, ovine, and porcine pancreas.

Used for the removal of DNA from protein samples.

Conditionnement

1 vial in serum bottle

5 vials in serum bottle

Actions biochimiques/physiologiques


HAUT

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

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 Pricing](#)

P9375

1,10-Phenanthroline monohydrate, reagent grade

[View Pricing](#)

E4378

Ethylene 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](#)[^
HAUT](#)

INFORMATIONS SUR LA SÉCURITÉ

Pictograms

Mention d'avertissement

Danger

Mentions de danger

H334

Conseils de prudence

P261 - P284 - P501



GHS08

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

**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****HAUT**

Certificat d'origine

Saisir un numéro de lot pour rechercher un certificat d'origine (COO).

Numéro de lot

Comment saisir un numéro de lot (COO)

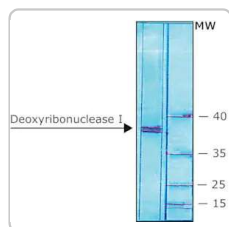
Rechercher

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[FDS](#)

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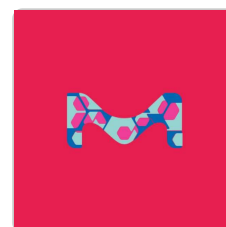
Sigma-Aldrich

D5319

Deoxyribonuclease I bovine

recombinant, expressed in *Pichia pastoris*, buffered aqueous glycerol solution, ≥5,000 units/mg protein

[Consulter le prix et la disponibilité](#)



Sigma-Aldrich

D7291

Deoxyribonuclease I RNase-free solution from bovine pancreas

[Consulter le prix et la disponibilité](#)

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ARTICLES REVUS PAR DES PAIRS

Phenotypic modulation of human articular chondrocytes by bistratene A.

B J Gargiulo et al.

European cells & materials, 3, 9-18 (2003-10-17)

Chondrocytes undergo phenotypic alterations following extended periods in monolayer culture, i.e., they become bipolar and flattened, proliferate, and synthesise type I as opposed to type II collagen. This process has been termed chondrocyte dedifferentiation. Bistratene A is a macrolide polyether

Intrahepatic and peripheral T-cell responses in genotype 1b hepatitis C virus-infected patients with persistently normal and elevated aminotransferase levels.

Filiz Akyüz et al.

World journal of gastroenterology, 11(45), 7188-7191 (2006-01-27)

To evaluate whether the cytokine responses in liver and serum differ in chronic hepatitis C patients with normal and high alanine aminotransferase (ALT) levels. Thirty-three (16 with normal ALT level as group 1 and 17 with elevated ALT level as

Organ site-dependent expression of basic fibroblast growth factor in human renal cell carcinoma cells.

R K Singh et al.

The American journal of pathology, 145(2), 365-374 (1994-08-01)

We investigated the influence of organ microenvironment on the angiogenic phenotype in human renal cell carcinoma (HRCC) cells. HRCC line SN12C was established in vitro from a surgical specimen, and metastatic line SN12PM6 was isolated from a lung metastasis produced

Procedures for the isolation and culture of Sertoli cells from the testes of infant, juvenile, and adult rhesus monkeys (Macaca mulatta).

S S Majumdar et al.

Biology of reproduction, 58(3), 633-640 (1998-03-25)

The purpose of the present study was to establish culture conditions for the in vitro study of the rhesus monkey Sertoli cell (Sc) at three major stages of development, namely infancy, adulthood, and the intervening prepubertal period. Conditions for the

Isolation and molecular characterization of cancer stem cells in MMTV-Wnt-1 murine breast tumors.

Robert W Cho et al.

Stem cells (Dayton, Ohio), 26(2), 364-371 (2007-11-03)

In human breast cancers, a phenotypically distinct minority population of tumorigenic (TG) cancer cells (sometimes referred to as cancer stem cells) drives tumor growth when transplanted into immunodeficient mice. Our objective was to identify a mouse model of breast cancer



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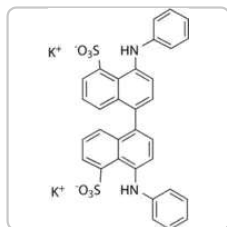
PROTOCOLES ET ARTICLES SCIENTIFIQUES

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

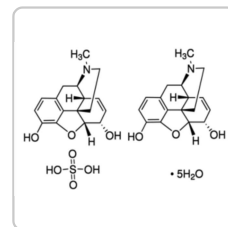


Sigma-Aldrich

D4162

4,4'-Dianilino-1,1'-binaphthyl-5,5'-disulfonic acid dipotassium salt

fluorescent probe

[Consulter le prix et la disponibilité](#)

Y0000452

Morphine sulfate

European Pharmacopoeia (EP) Reference Standard

[Consulter le prix et la disponibilité](#)

Évaluations

★★★★★

HAUT

Soyez le premier à donner votre avis sur ce produit

Questions

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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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