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E1250 ▶ **Sigma-Aldrich.**

Elastase from porcine pancreas

★★★★★ (0)

Type I, ≥4.0 units/mg protein

Synonyme(s):

Elastase from hog pancreas, Pancreatopeptidase E

Numéro CAS: **39445-21-1**

Numéro EC: **254-453-6**

NACRES: NA.54

Numéro de classification
(Commission des enzymes): **3.4.21.36 (BRENDA, IUBMB)**

Numéro MDL: **MFCD00130998**

Référence	Conditionnement	Disponibilité	Prix	Quantité
E1250-10MG	10 MG	✓ Date d'expédition estimée le 12 décembre 2022	80,10 €	- +
E1250-25MG	25 MG	✓ Date d'expédition estimée le 12 décembre 2022	147,00 €	- +
E1250-50MG	50 MG	✓ Only 2 left in stock (more on the way) Détails...	282,00 €	- +
E1250-100MG	100 MG	✓ Date d'expédition estimée le 08 décembre 2022	482,00 €	- +
E1250-500MG	500 MG	✓ Date d'expédition estimée le 01 décembre 2022	1 170,00 €	- +

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PRODUITS RECOMMANDÉS



Sigma-Aldrich
E7885
Elastase from porcine pancreas
lyophilized powder, suitable for cell culture

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Sigma-Aldrich
E0258
Elastase from porcine pancreas
Type IV, Protein 50-90 %, lyophilized powder,
≥4.0 units/mg protein (biuret)

[Consulter le prix et la disponibilité](#)



PROPRIÉTÉS

Source biologique	Porcine pancreas
Niveau de qualité	200
Type	Type I
Forme	suspension
specific activity	≥4.0 units/mg protein

Poids mol.	25.9 kDa
Contient	0.1% thymol
Concentration	0.5-15.0 mg/mL in water
Activité étrangère	trypsin ≤50 BAEE units/mg protein
Temp. de stockage	2-8°C

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

Catégories apparentées

Proteases

DESCRIPTION

Application

Elastase from porcine pancreas has been used in a study to investigate the design, synthesis and evaluation of biomimetic affinity ligands for elastases. Elastase from porcine pancreas has also been used in a study to investigate the purification and partial characterization of the pancreatic proteolytic enzymes trypsin, chymotrypsin, and elastase.

Elastase from porcine pancreas has been used:

- to induce abdominal aortic aneurysm (AAA)
- to study the impact of indoleamine 2-3 dioxygenase 1 (IDO) in mice
- to digest aortas for aortic smooth muscle cells (SMC) isolation

- as a positive control of proteolytic digestion

The enzyme from Sigma has been used in the development of elastase-perfused animal model . This study determined if tobacco exposure could lower the threshold of aortic injury necessary for AAA (abdominal aortic aneurysm) development. It has also been used during the isolation of type II pneumocytes from human lungs.

Actions biochimiques/physiologiques

Elastase is a single polypeptide chain of 240 amino acid residues and contains four disulfide bridges. The molecular mass is approximately 25.9 kDa. The enzyme is synthesized as an inactive zymogen, proelastase, which is converted to the active form by limited proteolysis at the N-terminal by trypsin. It is a serine protease with broad specificity. It cleaves protein at the carboxyl side of small hydrophobic amino acids such as Ile, Gly, Ala, Ser, Val, and Leu. The enzyme also hydrolyzes amides and esters such as N-Benzoyl-L-alanine methyl ester. The pH optimum is found to be 8.0-8.5. It does not require any activator, but it is inhibited by diisopropyl fluorophosphate, phenylmethanesulfonyl fluoride, α 2-macroglobulin, α 1-antitrypsin, sulfonyl fluorides and p-dinitrophenyl diethylphosphate and high salt concentrations. It is extensively used in tissue and cell dissociation procedures. Elastase is effective in the isolation of Type II lung cells.

Elastase hydrolyses elastin, the specific protein of elastic fibers, and digests hemoglobin, casein and fibrin.

Conditionnement

Package size based on protein content

Définition de l'unité

One unit will hydrolyze 1.0 μ mole of N-succinyl-L-Ala-Ala-Ala-p-nitroanilide per min, pH 8.0 at 25 °C.

Notes préparatoires

2× crystallized

PRODUITS APPARENTÉS

Application

G001833

HPLC Analysis of Elastase on Discovery® BIO PolyMA-SCX, Ion Exchange, application for HPLC

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Inhibiteur

M6159

α 2-Macroglobulin from human plasma, BioUltra, $\geq 98\%$ (SDS-PAGE)

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D7910

3,4-Dichloroisocoumarin, serine protease inhibitor

[View Pricing](#)

D0879

Diisopropylfluorophosphate

[View Pricing](#)

A9024

α 1-Antitrypsin from human plasma, salt-free, lyophilized powder

[View Pricing](#)

A6150

α 1-Antitrypsin from human plasma, salt-free, lyophilized powder

[View Pricing](#)

Substrat

M9771

N-Methoxysuccinyl-Ala-Ala-Pro-Val-7-amido-4-methylcoumarin, elastase substrate

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S4760

N-Succinyl-Ala-Ala-Ala-*p*-nitroanilide, elastase substrate

[View Pricing](#)

S8511

N-Succinyl-Ala-Ala-Pro-Leu *p*-nitroanilide, protease substrate

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INFORMATIONS SUR LA SÉCURITÉ

Pictograms



GHS07,GHS08

Mention d'avertissement

Danger

Mentions de danger

H315 - H319 - H334 - H335

Conseils de prudence

P261 - P264 - P271 - P280 -
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 3

Flash Point(F)

Not applicable

Point d'éclair C

Not applicable

Équipement de protection individuelle

dust mask type N95 (US),
Eyeshields, Faceshields,
Gloves

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

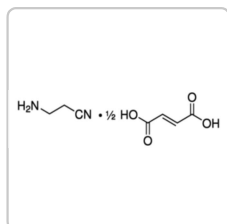
Comment saisir un numéro de lot (COO)

[Rechercher](#)

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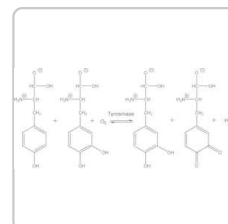
LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich

A3134

3-Aminopropionitrile fumarate salt
metabolite

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Sigma-Aldrich

T3824

Tyrosinase from mushroom
lyophilized powder, ≥1000 unit/mg solid

[Consulter le prix et la disponibilité](#)

ARTICLES REVUS PAR DES PAIRS

Constitutive expression of MHC and adhesion molecules by alveolar epithelial cells (type II pneumocytes) isolated from human lung and comparison with immunocytochemical findings.

A C Cunningham et al.

Journal of cell science, 107 (Pt 2), 443-449 (1994-02-01)

Highly purified populations of alveolar epithelial cells (type II pneumocytes) were isolated from human lung specimens. These cells were characterised histochemically, by demonstrating the presence of intracellular alkaline phosphatase, and morphologically, by electron microscopic demonstration of lamellar bodies and microvilli.

Serum Calprotectin as a Novel Biomarker in Abdominal Aortic Aneurysm Pathogenesis and Progression: Preliminary Data from Experimental Model in Rats.

Demetrios Moris et al.

Current vascular pharmacology, 16(2), 168-178 (2017-02-06)

Abdominal aortic aneurysm (AAA) formation is associated with by inflammation and matrix degradation. This study tested the hypothesis that calprotectin, a novel biomarker for inflammation, as well as established biomarkers such as C-reactive protein (CRP) and matrix metalloproteinase- 9 (MMP-9)

Microenvironmental stimuli induce different macrophage polarizations in experimental models of emphysema.

Júlia Benini Kohler et al.

Biology open, 8(4) (2019-04-12)

Macrophages play a pivotal role in the development of emphysema and depending on the microenvironment stimuli can be polarized into M1- or M2-like macrophage phenotypes. We compared macrophage polarizations in cigarette smoke (CS)- and porcine pancreatic elastase (PPE)-induced emphysema models.

Cigarette smoking increases aortic dilatation without affecting matrix metalloproteinase-9 and -12 expression in a modified mouse model of aneurysm formation.

Michel P Bergoeing et al.

Journal of vascular surgery, 45(6), 1217-1227 (2007-04-03)

The development of abdominal aortic aneurysms (AAA) is presumed to result from multiple genetic and environmental factors, with exposure to tobacco smoke the single largest known factor predisposing to aneurysm growth. We have attempted to adapt the elastase-perfused animal model

Gingival fibroblasts protect against experimental abdominal aortic aneurysm development and rupture through tissue inhibitor of metalloproteinase-1 production.

Andreas Giraud et al.

Cardiovascular research, 113(11), 1364-1375 (2017-06-06)

Abdominal aortic aneurysm (AAA), frequently diagnosed in old patients, is characterized by chronic inflammation, vascular cell apoptosis and metalloproteinase-mediated extracellular matrix destruction. Despite improvement in the understanding of the pathophysiology of aortic aneurysm, no pharmacological treatment is yet available to

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PROTOCOLES ET ARTICLES SCIENTIFIQUES

Protocoles

[Enzymatic Assay of Elastase \(EC 3.4.21.36\)](#)

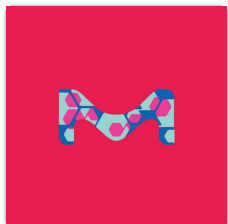
Enzymatic Assay of Elastase (EC 3.4.21.36), a continuous spectrophotometric rate determination.

Chromatograms

[HPLC Analysis of Elastase on Discovery® BIO PolyMA-SCX, Ion Exchange](#)

application for HPLC

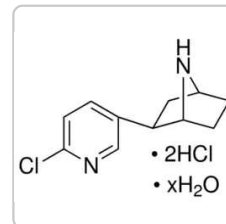
PRODUITS CONSULTÉS RÉCEMMENT



Sigma-Aldrich

E1161

EDTA Buffer, pH 8.5, 10×, Antigen Retriever

[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

E1145**(±)-Epibatidine dihydrochloride hydrate**
≥98% (HPLC), powder[Consulter le prix et la disponibilité](#)

Évaluations

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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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