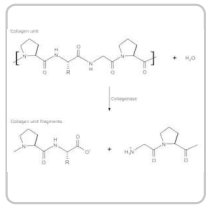
Saisir le nom du produit, le numéro de lot, etc.



Toutes les photos (2)

Documents

FDS

COO/COA

Fiche des caractéristiques

Plus de documents

C9891 ▶ Sigma-Aldrich

Collagenase from *Clostridium histolyticum*

(0)

Type IA, 0.5-5.0 FALGPA units/mg solid, ≥125 CDU/mg solid, For general use

Synonyme(s):
Clostridiopeptidase A

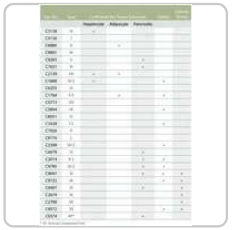
Numéro CAS:	9001-12-1	**Numéro de classification (Commission des enzymes):**	3.4.24.3 (BRENDA, IUBMB)
Numéro EC:	232-582-9	**Numéro MDL:**	MFCD00130830
NACRES:	NA.54		

Référence	Conditionnement	Disponibilité		Prix	Quantité
C9891-25MG	25 MG	Date d'expédition estimée le 10 octobre 2022	Détails...	50,50 €	− +
C9891-100MG	100 MG	Date d'expédition estimée le 10 octobre 2022	Détails...	154,00 €	− +
C9891-500MG	500 MG	Only 3 left in stock (more on the way)	Détails...	471,00 €	− +
C9891-1G	1 G	Date d'expédition estimée le 10 octobre 2022	Détails...	800,00 €	− +
C9891-5G	5 G	Only 2 left in stock (more on the way)	Détails...	3 230,00 €	− +

Demander une commande en gros

Ajouter au panier

PRODUITS RECOMMANDÉS



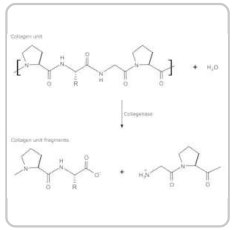
Sigma-Aldrich

C0130

Collagenase from *Clostridium histolyticum*

for general use, Type I, 0.25-1.0 FALGPA units/mg solid, ≥125 CDU/mg solid

Consulter le prix et la disponibilité



Sigma-Aldrich

C5138

Collagenase from *Clostridium histolyticum*

suitable for release of physiologically active rat hepatocytes, Type IV, 0.5-5.0 FALGPA units/mg solid,...

Consulter le prix et la disponibilité

PROPRIÉTÉS

Niveau de qualité	200
Forme	essentially salt-free, lyophilized powder
specific activity	≥125 CDU/mg solid 0.5-5.0 FALGPA units/mg solid
Poids mol.	68-130 kDa

Solubilité	TESCA buffer (50 mM TES, 0.36 mM Calcium chloride, pH 7.4): soluble
application(s)	diagnostic assay manufacturing
Expédié(e)(s) dans	wet ice
Temp. de stockage	−20°C

Vous recherchez des produits similaires ? Visit **Guide de comparaison des produits**

Catégories apparentées

Tissue Dissociation

DESCRIPTION

Application

The enzyme has also been used along with other proteases for the disaggregation of human tumor, mouse kidney, human brain, and lung epithelial tissues. It is also useful in liver and kidney perfusion studies, digestion of pancreas, isolation of nonparenchymal rat liver cells and hepatocytes. The enzyme from Sigma has been used for the digestion of type I collagen from bovine trabecular and cortical bones. It has also been used as a positive control in FALGPA assay on Group B *Streptococci* cells.

Actions biochimiques/physiologiques

Effective release of cells from tissue requires the action of both collagenase enzymes and the neutral protease. Collagenase is activated by four gram atom calcium (Ca^{2+}) per mole enzyme. The culture filtrate is thought to contain at least 7 different proteases ranging in molecular weight from 68-130 kDa. The pH optimum ranges from 6.3-8.8. The enzyme is typically used to digest the connective components in tissue samples to liberate individual cells. Collagenase treatment can cause some cells to die. Typically, concentrations varying from 0.1 to 5 mg/mL are used for digestion. The duration of reaction varies from 15 minutes to

several hours for a satisfactory efficiency of cell dissociation without causing too much cell death. Krebs Ringer buffer with calcium and BSA is preffered and Zn^{2+} is required for activity. The enzyme recognizes the sequence -R-Pro-8-X-Gly-Pro-R-, where X is most often a neutral amino acid. Ethylene glycol-bis(β-aminoethyl ether)-N,N,N′,N′-tetraacetic acid (EGTA)4; β-mercaptoethanol; glutathione (reduced); thioglycolic acid, sodium; 2,2′-dipyridyl; 8-hydroxyquinoline, cysteine are known to inhibit the enzyme activity.

Collagenase is activated by four gram atom calcium per mole enzyme. It is inhibited by ethylene glycol-bis(beta-aminoethyl ether) - N, N, N′,N′-tetraacetic acid, beta-mercaptoethanol, glutathione, thioglycolic acid and 8-hydroxyquinoline.

Attention

As supplied, this product is stable for one year at -20°C. There is no loss in FALGPA or protease activity in 30 days at 37°C, 50°C and -20°C. Solutions of crude collagenase are stable if frozen quickly in aliquots (at 10 mg/mL) and kept frozen at -20°C. Further freeze-thaw cycles will damage the solution. The product retains 100% activity over 7 hours when held on ice.

Définition de l'unité

One collagen digestion unit (CDU) liberates peptides from collagen from bovine achilles tendon equivalent in ninhydrin color to 1.0 µmole of leucine in 5 hours at pH 7.4 at 37 °C in the presence of calcium ions. One FALGPA hydrolysis unit hydrolyzes 1.0 µmole of furylacryloyl-Leu-Gly-Pro-Ala per min at 25°C. One Neutral Protease unit hydrolyzes casein to produce color equivalent to 1.0 µmole of tyrosine per 5 hr at pH 7.5 at 37°C. One Clostripain Unit hydrolyzes 1.0 µmole of BAEE per min at pH 7.6 at 25°C in the presence of DTT.

Notes préparatoires

This product is equivalent to first 40% ammonium sulfate fraction of Mandl, I., et al., *J. Clin. Invest.*, **32,** 1323 (1953). Solutions are typically prepared at 1-2 mg/mL in TESCA buffer (containing 50 mM TES, 0.36 mM Calcium chloride, pH 7.4 at 37°C.

PRODUITS APPARENTÉS

Substrat

F5135

N-[3-(2-Furyl)acryloyl]-Leu-Gly-Pro-Ala

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 1

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)

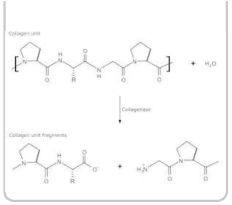
Rechercher

Plus De Documents

Enzyme Explorer

FDS

LES CLIENTS ONT ÉGALEMENT CONSULTÉ



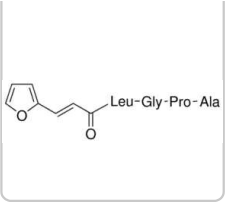
Sigma-Aldrich

C9407

Collagenase from *Clostridium histolyticum*

powder, Suitable for the digestion and isolation of physiologically active pancreatic islet cells, suitable for...

Consulter le prix et la disponibilité



Sigma-Aldrich

F5135

N-[3-(2-Furyl)acryloyl]-Leu-Gly-Pro-Ala

Consulter le prix et la disponibilité

ARTICLES REVUS PAR DES PAIRS

Characterization and population dynamics of germ cells in adult macaque testicular cultures.

Swati Sharma et al.
PloS one, 14(6), e0218194-e0218194 (2019-06-22)

From a biological and clinical perspective, it is imperative to establish primate spermatogonial cultures. Due to limited availability of human testicular tissues, the macaque (Macaca fascicularis) was employed as non-human primate model. The aim of this study was to characterize

Characterization of urinary degradation products derived from type I collagen. Identification of a beta-isomerized Asp-Gly sequence within the C-terminal telopeptide (alpha1) region.

C Fledelius et al.
The Journal of biological chemistry, 272(15), 9755-9763 (1997-04-11)

The heterogeneity of urinary degradation products of C-terminal telopeptides derived from the alpha1 chain of human type I collagen was investigated and characterized. The urinary fragments characterized in this study consisted of two cross-linked (X) amino acid sequences derived from

Mammary molecular portraits reveal lineage-specific features and progenitor cell vulnerabilities.

Alison E Casey et al.
The Journal of cell biology, 217(8), 2951-2974 (2018-06-21)

The mammary epithelium depends on specific lineages and their stem and progenitor function to accommodate hormone-triggered physiological demands in the adult female. Perturbations of these lineages underpin breast cancer risk, yet our understanding of normal mammary cell

composition is incomplete.

3T3-L1 cells and perivascular adipocytes are not equivalent in amine transporter expression.

Alex Ismail et al.
FEBS letters, 591(1), 137-144 (2016-12-08)

Rat perivascular adipose tissue (PVAT) stores, takes up, and releases norepinephrine (NE; Ayala-Lopez et al. (2014) Pharmacol Res Perspect 2, e00041). We hypothesized that 3T3-L1 adipocytes would exhibit similar behaviors and, thus, could serve as a model for PVAT adipocytes.

Cell-associated collagenolytic activity by group B streptococci.

R J Jackson et al.
Infection and immunity, 62(12), 5647-5651 (1994-12-01)

Group B streptococci (GBS) are important pathogens in neonatal sepsis, pneumonia, and meningitis. The ability of GBS to invade the collagen-rich amniotic membrane of the placenta has been shown in vitro. In the presence of GBS, the collagen fibrils of

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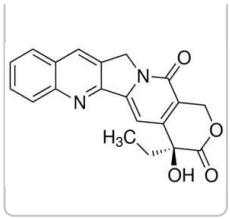
PROTOCOLES ET ARTICLES SCIENTIFIQUES

Protocoles

Enzymatic Assay of Collagenase (EC 3.4.24.3) using FALGPA (N-(3-[2-Furyl]acryloyl)-Leu-Gly-Pro-Ala)

This procedure may be used for Collagenase products.

PRODUITS CONSULTÉS RÉCEMMENT



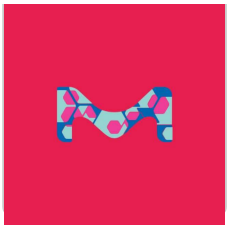
Sigma-Aldrich

C9911

(*S*)-(+)-Camptothecin

≥90% (HPLC), powder

Consulter le prix et la disponibilité



Sigma-Aldrich

C9999

Citrate Buffer, pH 6.0, 10×, Antigen Retriever

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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