Toutes les photos (4)

Documents

FDS

COO/COA

Fiche des caractéristiques

C9879 ▶ Sigma-Aldrich®

Collagen from bovine achilles tendon

(0)

powder, suitable for substrate for collagenase

Synonyme(s):
Collagen powder

Numéro CAS:	9007-34-5	**Numéro EC:**	232-697-4
Numéro MDL:	MFCD00130825	**NACRES:**	NA.61

Référence	Conditionnement	Disponibilité		Prix	Quantité
C9879-1G	1 G	Only 3 left in stock (more on the way)	Détails...	60,40 €	− +
C9879-5G	5 G	Date d'expédition estimée le 10 octobre 2022	Détails...	219,00 €	− +
C9879-10G	10 G	Only 2 left in stock (more on the way)	Détails...	371,00 €	− +
C9879-25G	25 G	Only 5 left in stock (more on the way)	Détails...	739,00 €	− +

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Ajouter au panier

PRODUITS RECOMMANDÉS

Sigma-Aldrich

5162

Collagen

from bovine flexor tendon

Consulter le prix et la disponibilité

Sigma-Aldrich

C9791

Collagen from calf skin

Bornstein and Traub Type I, solid, BioReagent, suitable for cell culture

Consulter le prix et la disponibilité

PROPRIÉTÉS

Source biologique	bovine Achilles tendon
Niveau de qualité	200
Forme	powder
technique(s)	ELISA: suitable activity assay: suitable
Adéquation	suitable for substrate for collagenase
N° d'accession UniProt	**P02459**

Temp. de stockage	2-8°C
Gene Information	bovine ... **COL2A1(407142)**

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

DESCRIPTION

Description générale

Collagen is a widely expressed protein in the body. There are 20 different types of collagen in human tissue. Type I collagen is the abundant bone protein. It constitutes ~90% of bone organic matter.

Collagen is classified into a number of structurally and genetically distinct types. We use the nomenclature proposed by Bornstein and Traub. Do not confuse Sigma type designations with recognized collagen classification types.

Collagen terminology using the Bornstein and Traub designation originates from the reference; Bornstein, P. and Traub, W. *The Proteins*, (1979) 4, 411-605

Application

Bovine achilles tendon collagen was used in a study of plant extracts as inhibitors of MMP-collagenases, the putative active agents in the breakdown of cartilage in osteoarthritis and rheumatoid arthritis.

Collagen from bovine achilles tendon is suitable for use in:

- the detection of collagenase activity
- as a reference sample in the thermal analysis study of human bone using differential scanning calorimetry, thermogravimetry, gas chromatography and Fourier transform infrared spectroscopy
- as a substrate for developing a simple assay for determining collagen degradation *in vitro*

- a study to examine the binding activity of the integral glycoprotein dipeptidyl peptidase IV to insoluble type I collagen by solid-phase enzyme-linked immunosorbent assay

Collagen from bovine Achilles tendon is a naturally occurring protein in the form of elongated fibrils. It may be used in studies of the fibrocartilaginous zone, which the collagen must first pass through before inserting into the calcaneus. It may also be used in studies of growth factor effects on collagen content and cross-linking during Achilles tendon healing.

Conditionnement

1, 5, 10, 25 g in poly bottle

Actions biochimiques/physiologiques

Collagen from bovine Achilles tendon is a naturally occurring protein in the form of elongated fibrils. It may be used in studies of the fibrocartilaginous zone, which the collagen must first pass through before inserting into the calcaneus. It may also be used in studies of growth factor effects on collagen content and cross-linking during Achilles tendon healing.

Collagen is an insoluble fibrous protein that is part of the extracellular matrix and the connective tissue. It is responsible for the ability of the tissues to withstand stretching. The long precursors called procollagens are synthesized and assembled in the ER, secreted into the extracellular space and processed to form collagen fibres. The different types of collagen are composed of molecules containing three polypeptide chains arranged in a triple helical conformation varying slightly in the amino acid sequence. The primary structure is a repeating motif with glycine in every third position preceded frequently with a proline or 4-hydroxyproline residue.

Notes préparatoires

Prepared by the method of Einbinder, J. and Schubert, M., *J. Biol. Chem.*, **188**, 335 (1951).

Reconstitution

This product is an insoluble collagen preparation. It is insoluble in water, aqueous buffers, dilute acid, and organic solvents. For use as a substrate in collagenase assays, this collagen can be prepared as a suspension in 50 mM TES buffer, pH 7.4 with 0.36 mM calcium chloride.

INFORMATIONS SUR LA SÉCURITÉ

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
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

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

LES CLIENTS ONT ÉGALEMENT CONSULTÉ

Sigma-Aldrich

900723

Bovine tendon powder

neutral, type I collagen, suitable for biomedical research

Consulter le prix et la disponibilité

Sigma-Aldrich

C7661

Collagen from rat tail

Bornstein and Traub Type I, powder, BioReagent, suitable for cell culture

Consulter le prix et la disponibilité

QUESTIONS FRÉQUEMMENT POSÉES (FAQ)

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.

How should Product No. C9879, Collagen from bovine, be reconstituted?

This product is an insoluble collagen preparation. It is insoluble in water, aqueous buffers, dilute acid, and organic solvents. A suspension can be prepared in 50 mM TES buffer, pH 7.4 with 0.36 mM calcium chloride, but not a clear solution.

What application can Product No. C9879, Collagen from bovine, be used in?

This product is suitable for use as a substrate for collagenase. It is not suitable for use as an attachment factor in coating glassware.

What is the structure of the Collagen from bovine - C9879?

The amino acid sequence of the primary structure is mainly a repeating motif with glycine in every third position, and a proline or 4-hydroxyproline frequently preceding the glycine residue.

What is the molecular weight of product C9879, Collagen from bovine achilles tendon?

Since product C9879 is an insoluble collagen preparation, it is difficult to make any kind of molecular weight determination. However, based on the reported structure of this collagen, the expected molecular weight would be approximately 300 kDa.

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

Ask a Scientist **here**.

ARTICLES REVUS PAR DES PAIRS

Extraction and partial characterization of collagen from different animal skins

Quereshi S, et al.
Recent Research in Science and Technology, 2(9) (2010)

Cross-linking of collagen.

M L Tanzer
Science (New York, N.Y.), 180(4086), 561-566 (1973-05-11)

The formation of collagen cross-links is attributable to the presence of two aldehyde-containing amino acids which react with other amino acids in collagen to generate difunctional, trifunctional, and tetrafunctional cross-links. A necessary prerequisite for the development of these cross-links is

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Thermal analysis study of human bone

Lozano L F, et al.
J. Mater. Sci., 38, 4777-4782 (2003)

Structurally distinct collagen types.

P Bornstein et al.
Annual review of biochemistry, 49, 957-1003 (1980-01-01)

Molecular mechanism for connective tissue destruction by dipeptidyl aminopeptidase IV produced by the periodontal pathogen Porphyromonas gingivalis.

Yumi Kumagai et al.
Infection and immunity, 73(5), 2655-2664 (2005-04-23)

Porphyromonas gingivalis is a pathogen associated with adult periodontitis. It produces dipeptidyl aminopeptidase IV (DPPIV), which may act as a virulence factor by contributing to the degradation of connective tissue. We investigated the molecular mechanism by which DPPIV contributes to

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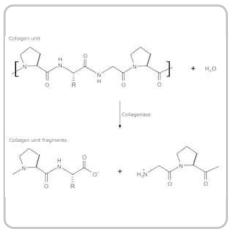
PRODUITS CONSULTÉS RÉCEMMENT



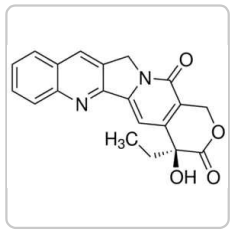
Sigma-Aldrich

C9891

Collagenase from *Clostridium histolyticum*

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

Consulter le prix et la disponibilité



Sigma-Aldrich

C9911

(*S*)-(+)-Camptothecin

≥90% (HPLC), powder

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

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..

Contacter notre Service technique

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