PRODUCT INFORMATION SHEET

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PRO-2003 Atelocollagen, Ultrapure, Type I, Porcine

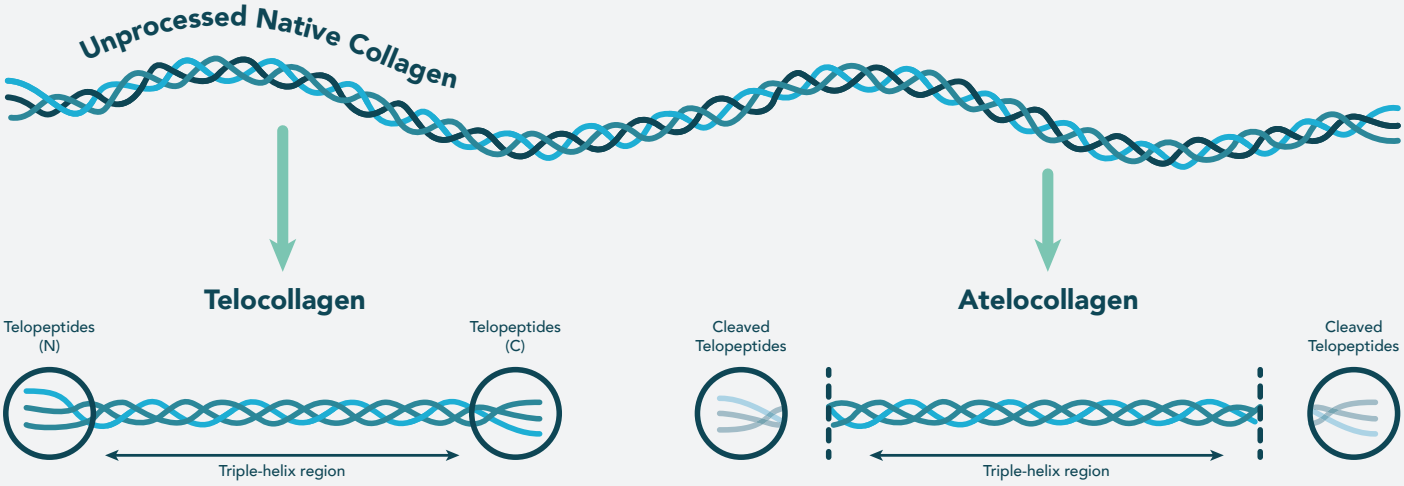
Enzymatic extraction, Dialyzed, Lyophilized

CAS: 9007-34-5

PRODUCT DESCRIPTION

Ultrapure atelocollagen (PRO-2003) is characterized by rich and **ultra purified Type I collagen** content in a regular fibril-like configuration that retains its superior functionality and **structural properties.** PRO-2003 is extracted from porcine tendon tissue sourced from **strictly controlled herds,** complying with all EU and national regulations.

The proprietary pepsin enzyme-based extraction removes telopeptides at the non-helical N and C termini, resulting in a triple helix configuration that exhibits **reduced immunogenicity.**



HIGHLY PURIFIED FORMS OF COLLAGEN

Figure 1. *Enzyme-based extraction process removes the telopeptides resulting in atelocollagen (PRO-2003) that exhibits reduced immunogenicity.*

PRODUCT SPECIFICATIONS

Package size	10 or 20 mg in vials
Appearance	White/Off-white powder
Source	Porcine tendon
Collagen purity	> 97% (by SDS/Western blotting)
Amino Acid Analysis	Typical/characteristic profile
Electrophoretic Pattern	Characteristic pattern, visible α, β, γ bands

Sterility / Microbiological testing	Pass (0 cfu/g)
Heavy metals analysis	< 1 ppm
Sterilization method	Produced under strict aseptic conditions
Cell Attachment Assay	Pass
Cell Toxicity Assay	Pass

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APPEARANCE

PRO-2003 is provided as freeze-dried atelocollagen (in vials of 10 or 20 mg), allowing for an extended shelf life, in a user-friendly packaging.

STERILITY

PRO-2003 can be filter-sterilized at a concentration of 0.5 – 2.0 mg/ml (Note: protein loss has been reported during filtration).

Alternatively, 0.1% atelocollagen solution can be sterilized in the presence of chloroform layering (10% v/v) overnight.

To avoid contamination, always use aseptic techniques during handling.

RECONSTITUTION

PRO-2003 may be reconstituted to a concentration of 0.5 – 2.0 mg/ml when used as a coating agent and as chemoattractant.

For the production of collagen gels, a concentration of 3.0 mg/ml may be used (slow gelation assays - cells will sink to the bottom of the gel).

To reconstitute, add 0.1M acetic acid or 0.01M HCl to the vial and let it stand without stirring. Warming up to 25˚C may be necessary for lyophilized atelocollagen to dissolve completely (clear solution).

STORAGE REQUIREMENTS

Long term: storage of lyophilized product at -20°C is recommended, with a storage life of 24 months from the date of manufacturing.

Short term: storage of reconstituted product at 2–8°C is recommended, for up to 6 months from the date of reconstitution.

APPLICATIONS

Extracted atelocollagen is biocompatible and biodegradable and thus suitable for a wide range of research applications.

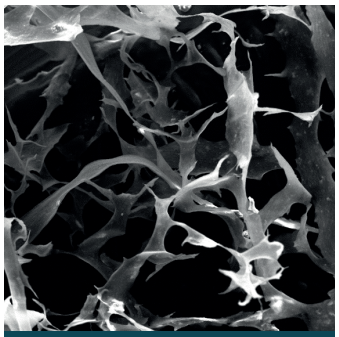
PRO-2003 is ideal for 3D bioprinting, cell cultures, functional assays and *in vitro/in vivo* applications such as wound healing, tissue regeneration, drug delivery.

INTENDED USE

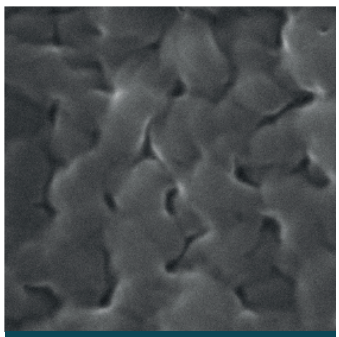
PRO-2003 is intended for research use only and for *in vitro* or *in vivo* R&D applications. It is not intended for diagnostic, therapeutic or any other clinical uses.

The expiration date is printed on the product label and is valid when product is used and stored as directed.

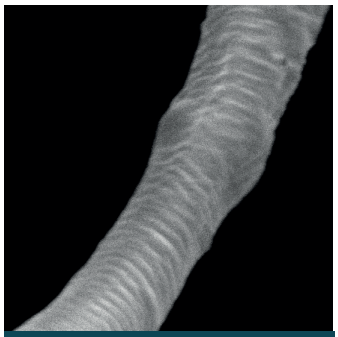
Optimal conditions must be determined for each application/assay.



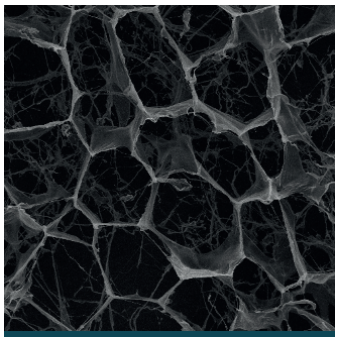
Lyophilized collagen – exhibits structural rigidity and stability



Collagen for gel formation, ideal for cell culture



Collagen fibrils retain mechanical strength and elasticity



Pore sizes ideal for tissue engineering and drug delivery

CONTACT DETAILS
23C Spyrou Kyprianou Avenue, 4001, Limassol, Cyprus | info@promedbioscience.com | www.promedbioscience.com