

# Rat Collagen I (Rat tail tendons)

## Product Description

|                               |                                       |
|-------------------------------|---------------------------------------|
| <b>Name :</b>                 | <b>Type-I Rat Tail Collagen</b>       |
| <b>Catalog Number :</b>       | UPFX720A, 20 ml      UPFX720A, 100 ml |
| <b>Buffer :</b>               | 0,2M Acetic Acid                      |
| <b>Concentration :</b>        | 3 mg/ml Sircol Assay                  |
| <b>Purity :</b>               | >95% SDS PAGE                         |
| <b>Product pH:</b>            | 3.0                                   |
| <b>Product Conductivity :</b> | 0.8 ms/cm                             |
| <b>Shelf life :</b>           | 12 months                             |

**Storage:** +4°C

## Introduction

Collagen is a fibrous protein found in the extracellular matrix and connective tissue. Type I collagen is the most common form of collagen prevalent in bones, tendons and skin. It consists of three intertwined coiled subunits: two  $\alpha 1$  (I) chains and one  $\alpha 2$  (I) chain. Each chain contains precisely 1050 amino acids wound tightly around one another in a characteristic right-handed triple helix. The triple-helical structure of collagen arises from its unusual abundance of three amino acids: glycine, proline, and hydroxyproline. These amino acids in collagen appear in a characteristic repeating motif Gly-X-Y, where X is usually proline and Y is usually hydroxyproline.

## Quality Assurance

This product is prepared from rat tail tendons. It is stored in aqueous 0.2M acetic acid with a protein concentration of ~3 mg/ml. Protein concentration was estimated by Sircol™ collagen assay kit.

This product has been tested after 14 days incubation in a 37 ° C incubator. It is free of bacterial and fungal contamination. Product has shown to be negative with respect to mycoplasma contamination by Real-Time PCR.

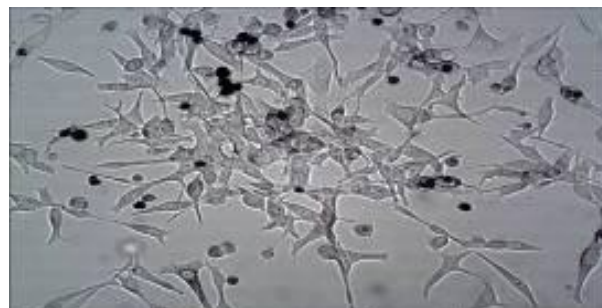
## Gel formation

Collagen form a very firm gel  
At neutral pH with a 1 hour 37 ° C incubation time



## Cell Attachment Assays

LNCaP prostate carcinoma cells show strong attachment to collagen



## Directions for use

### Handling and Storage

Collagen storage condition: is 2 to 8 degrees Celsius. The product should never be frozen. Collagen type I is 95% in purity, other non-collagen proteins below 0.5%. Type I, Rat Tail Collagen.

### Gel formation

This procedure should be performed under a Laminar Flow Hood.

- Removed desired amount of collagen from the bottle, place it into a sterile beaker.
- Place a magnetic stir bar in the beaker.
- Begin mixing very slowly in order to avoid air bubbles in your gel.
- Monitor the pH
- Slowly add NaOH buffer solution into the beaker, until the collagen solution reaches a pH of 6.7
- Add your cell culture media into the beaker
- After adding your media monitor the pH and allow it to stabilize at 7.3
- When the collagen solution reaches a pH 7.3, pour it into your wanted vessel, place it in a 37 ° C incubator for 1 hour to help promote gel formation.

### Collagen Coating

- Add sufficient collagen solution to coat dishes, plates, or inserts. 1-2 ml of solution is sufficient to cover a 35mm dish. Incubate at room temperature in a biological safety cabinet partially covered for one hour.
- Carefully aspirate remaining solution.
- Rinse with proper volume of serum-free media to remove acid.
- Plates may be used immediately or air dried stored unused plates at 2-8 ° C for up to one week under sterile conditions.

| Well         | Area (cm <sup>2</sup> ) | Coating Volume (ml) | Wash volume (ml) |
|--------------|-------------------------|---------------------|------------------|
| 96 well      | 0.143                   | 0.025               | 0.05             |
| 24 well      | 0.33                    | 0.05                | 0.1              |
| 12 well      | 1.12                    | 0.25                | 0.4              |
| 6 well       | 4.67                    | 0.6                 | 1                |
| 75 mm insert | 44                      | 5                   | 8                |

### Related / associated products and documents

- Accutase, cell detachment solution, [UPN68081](#)
- Accumax, [UPN68091](#)
- Human Mesenchymal Stem Cell (hMSC), [EV9230](#)

## Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>. Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06

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