



Data Sheet

Research Use Only

Product Name

OptiCol™ Rat Tail Collagen Type I (4 mg/ml)
80 mg

Catalog Number

M19S

Source

Rat Tail Tendon

Gelation time

< 60 mins

Purity

> 95%

Storage

4°C

Description

OptiCol™ Rat Tail Collagen Type I from Rat Tail is at a concentration of approximately 4 mg/mL in a 0.2 M acetic acid solution (pH 3.0). Rat Tail collagen is a soluble telo-collagen.

SDS PAGE

≥ 85% collagen contained within alpha, beta, and gamma bands, ≤ 15% collagen contained with bands traveling faster than alpha

Fibril Formation assay

0.35 Abs. Units

pH (prior to lyophilization)

approx 3

Concentration

3.8-4.2 mg/mL

Coating Procedure

Note: Employ aseptic practices to maintain the sterility of the product throughout the preparation and handling of the collagen and other solutions.

1. Transfer desired volume of OptiCol™ collagen solution from the bottle to a dilution vessel if required. Further dilute to desired concentration using sterile 0.1% acetic acid solution. A typical working concentration may range from 10 to 100 µg/mL. Note: Use these recommendations as guidelines to determine the optimal coating conditions for your culture system.
2. Add appropriate amount of diluted OptiCol™ Rat Tail collagen to the culture surface.
3. Incubate at room temperature or 37°C, covered, for 1-2 hours.
4. After incubation, aspirate any remaining material.
5. Rinse coated surfaces carefully with sterile medium or PBS, avoid scratching surfaces.
6. Coated surfaces are ready for use. They may also be stored at 2-8°C damp or air dried if sterility is maintained.

3-D Gel Preparation Procedure

Note: It is recommended that the OptiCol™ collagen and other working solutions be chilled and kept on ice during the preparation of the collagen.

1. Place the following reagents on ice: – OptiCol™ Type I Rat Tail collagen (4 mg/mL) – Sterile PBS (10x) – Sterile Cell Culture Water (dH2O) – Sterile 1 N NaOH.
2. Determine the final volume and concentration required of Rat Tail collagen required.
3. Determine the amounts of reagents required to yield Rat Tail collagen at the concentration and pH required:
 - a. Volume of OptiCol™ Collagen needed = Final Concentration x Total Volume / Initial Concentration of OptiCol™ Collagen
 - b. Volume of 10 x PBS needed = Total Volume x 10
 - c. Volume of 1N NaOH needed = Volume of OptiCol™ Collagen x 0.017
 - d. Volume of dH2O needed = Total Volume – (Sum of a + b+ c)
4. Mix the volumes calculated for 10x PBS, NaOH and dH2O in a sterile tube.
5. Add collagen to the tube with the reagents and pipet up and down to mix. Vortexing is not recommended.
6. Dispense the Rat Tail collagen mixture in the desired sterile plates or culture vessels.
7. Incubate at 37°C for 1 hour for gel formation.