Cell Guidance Systems Ltd, Babraham Research Park, Cambridge CB22 3AT, UK

Data Sheet

Research Use Only

Product Name

OptiCol™ Human Collagen Type I (3 mg/mL)
60 mg

Catalog Number

M16S

Description

OptiCol™ Human Collagen Type I is isolated from human neo-natal fibroblast cells. These cells are cultured in optimal conditions allowing these cells to naturally and efficiently secrete extracellular matrix which is processed and purified to produce human collagen. Manufactured under stringent quality standards with high lot-to-lot consistency. Made up of 97% Type I human collagen and 3% Type III collagen. Exhibits high monomer content (as measured by gel permeation chromatography).

Source

Human Neo-Natal Fibroblast Cells

SDS PAGE

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

Gelation time

< 90 mins

Fibril Formation assay

> 0.5 Abs. Units

Purity

> 99.9%

pH (prior to lyophliization)

approx 2

Storage

4°C

Concentration

2.9-3.2 mg/ml

Coating Procedure

Note: Use these recommendations as guidelines to determine the optimal coating conditions for your culture system.

1. Remove required quantity of collagen from the bottle and dispense into a dilution vessel.
2. Dilute in water to ~50 to 100 µg/ml (~1:30). A 0.01 N HCl solution may also be used.
3. Swirl contents gently until material is completely mixed.
4. Add appropriate amount of diluted collagen material to the culture surface ensuring that the entire surface is coated.
5. Incubate at room temperature or 37°C, covered, for 1-2 hours.
6. After incubation, aspirate any remaining material.
7. Rinse coated surfaces carefully with sterile medium or PBS, avoid scratching surfaces.
8. 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

1. Slowly add 1 part of chilled 10x PBS or 10x culture media to 8 parts of chilled collagen solution with gentle swirling.
2. Adjust pH of mixture to 7.2–7.6 using sterile 0.1 M NaOH. Monitor pH adjustment carefully (pH meter, phenol red, or pH paper).
3. Adjust final volume to a total of 10 parts with sterile water.
4. To prevent gelation, maintain temperature of mixture at 2–10°C.
5. To form gel, warm to 37°C. Allow approximately 120 minutes for gel formation.