Native Human Collagen Type I

Cat. No. Collagen Type I-04H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human Collagen Type I is isolated from human neo-natal fibroblast cells. Gelation Time: <90 mins Fibril Formation: >0.5 abs. units pH: approx 2 Telo vs. Atelo: Atelo-collagen
Species	Human
Source	Neo-Natal Fibroblast Cells
Description	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.
Endotoxin	≤1.00 EU/mL as measured by kinetic LAL
Purity	>99.9%
Applications	3D Gels, Tissue engineering research, Wound healing constructs, Coatings, Solid free-form fabrications, Electrospinning, in-vitro research, Nerve Repair, Hemostats, Sealants, Coils, Sponges, Spheres/Beads, Ligaments, Strings, Tubes/Cylinders, Films
Usage	Coating Procedure

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	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 centigrade, 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 centigrade damp or air dried if sterility is maintained. 3-D Gel Preparation Procedure 1. Slowly add 1 part of chilled 10× PBS or 10× 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 centigrade. 5. To form gel, warm to 37 centigrade. Allow approximately 120 minutes for gel formation.
Storage	4 centigrade
Concentration	2.9-3.2 mg/mL
Storage Buffer	0.01 N HCl (pH 2)

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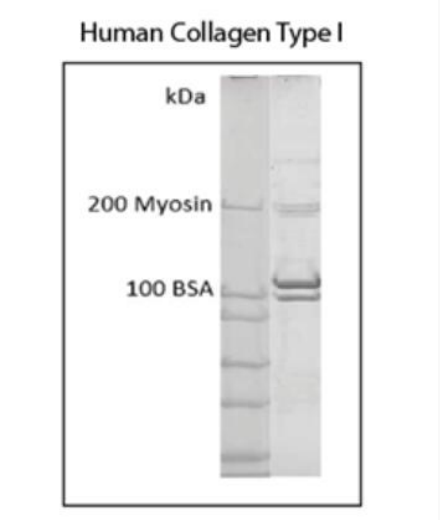
GENE INFORMATION

Official Symbol	Collagen Type I
Synonyms	Collagen Type I
SDS-PAGE	 ≥ 85% collagen contained within α, β, and γ bands; ≤ 15% collagen contained with bands traveling faster than α

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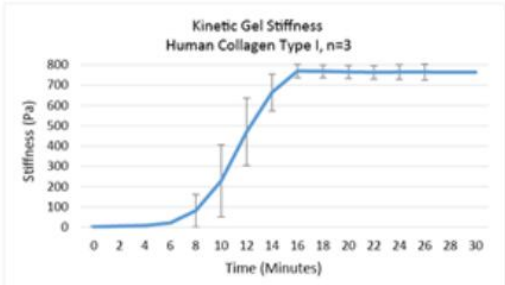
Kinetic Gel Stiffness	

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