

PureCol®-S, Collagen Standard Solution

ECM Protein

Cat. # CC300

FOR RESEARCH USE ONLY.
NOT FOR USE IN DIAGNOSTIC PROCEDURES.
NOT FOR HUMAN OR ANIMAL CONSUMPTION.

pack size: 20 mL

Store at 2-8°C



Data Sheet

page 1 of 2

Background

Collagen is the main structural protein of the extracellular matrix found within various connective tissues of the body. Type I collagen is a major structural component of skin, bone, tendon, and other fibrous connective tissues. In order to provide the most *in vivo*-like environment for cells, researchers have historically cultured cells inside collagen hydrogels or on top of collagen coated plasticware.

PureCol® is an ultrapure bovine skin derived collagen that is approximately 97% Type I collagen with the remainder being comprised of Type III collagen. It contains a high monomer content as measured by gel permeation chromatography providing product consistency, reproducibility and is cited in over 2000 publications.

PureCol®-S is a soluble atelocollagen in 0.01 N HCl with a pH of 1.9-2.3. PureCol®-S is sterile filtered and is supplied as a ready-to-use solution for cell culture. This product is supplied at 3 mg/mL and can be used as a standard in cell culture applications such as cell adhesion and expansion.

Storage

Store the PureCol®-S, Collagen Standard Solution at 2-8°C. Aliquot into smaller working aliquots before use to ensure product integrity and performance.

Quality Control

Collagen Concentration: 2.9-3.2 mg/mL

Collagen Concentration - AAA FIO: 2.9-3.2 mg/mL

Sterility (USP modified): No Growth

Endotoxin LAL: ≤ 1.0 EU/mL

Gel Formation Tube Test: ≤ 40 minutes

Kinetic Gel Test: ≤ 40 minutes

Purity – SDS Page Silver Stain: $\geq 99.9\%$

pH: 1.9-2.3

Osmolality: ≤ 35 mOsm/Kg H₂O

Fibrillogenesis: ≥ 0.5 Absorbance Units

Electrophoretic Pattern: Characteristic

Instructions For Use

Coating Procedure

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

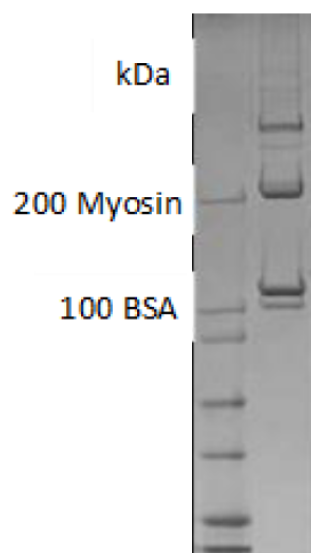
1. Remove required quantity of PureCol®-S from the bottle and dispense into a dilution vessel.
2. Dilute PureCol®-S in water to ~ 50 to $100 \mu\text{g/mL}$ ($\sim 1:30$). A 0.01 N HCl solution may also be used.
3. Swirl contents gently until material is completely mixed.
4. Add appropriate amount of diluted PureCol®-S material to the culture surface ensuring that the entire surface is coated.
5. Incubate at room temperature, covered, for 1-2 hours. Aspirate any remaining material. Alternatively, incubate at room temperature until surface is dry.
6. Rinse coated surfaces carefully with sterile medium or PBS, avoid scratching surfaces.
7. Coated surfaces are ready for use. They may also be stored at 2-8°C damp or air dried if sterility is maintained.

3D 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 90 to 120 minutes for gel formation.

Please visit www.milliporesigma.com for additional product information and references.

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SDS-Page Coomassie Blue:

Lane 1: Standard

Lane 2: PureCol-S

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

Figure 1. SDS-Page/Coomassie Blue staining of the PureCol®-S Collagen Standard Solution displays ≥ 85% pure collagen contained within alpha, beta and gamma bands.

PureCol® is a registered trademark of Advanced BioMatrix, Inc.

antibodies Multiplex products biotools cell culture enzymes kits proteins/peptides siRNA/cDNA products

Please visit www.milliporesigma.com for additional product information, test data and references

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