

**SPECIFICATION SHEET****Catalog #:** LCB001 **Lot #:L170301****Description:** **Rat tail tendon collagen type I , Collagen Solution**

Collagen is the major structural component of extracellular matrices found in connective tissues and internal organs, but is most prevalent in the dermis, tendons, and bones. It is classified into a number of structurally and genetically distinct types. Type I collagen is a heterodimer composed of two  $\alpha_1(I)$  chains and one  $\alpha_2(I)$  chain that spontaneously forms a triple helix scaffold at neutral pH and 37 °C. Collagen type I is an excellent substrate for the culture of hepatocytes, fibroblasts, spinal ganglion, muscle cells, Schwann cells, embryonic lung cells, epithelial cells, and a number of other cell lines. It has also been used in the study of growth, differentiation, migration of cell lines, and tissue morphogenesis during development. This product is prepared from rat tail tendons

**Source:** Rat tail  
**Purification:** >90% (SDS-PAGE) SDS-PAGE  
**Concentration:** 5mg/ml (OD230)

**Buffer:** 100 mM acetic acid

**Application and Procedure:**

Optimal conditions for attachment must be determined for each cell line and application.

1. An appropriate volume of the collagen solution should be diluted to a working concentration of 0.01% using sterile, tissue culture grade water.
2. Coat dishes with 6-10  $\mu\text{g}/\text{cm}^2$ . Allow the protein to bind for several hours at room temperature or 37 °C, or overnight at 2–8 °C.
3. Remove excess fluid from the coated surface and allow it to dry overnight. If sterility has been compromised, the dried, coated surface can be sterilized easily by overnight exposure to UV light in a sterile tissue culture hood.
4. Rinse with sterile tissue culture grade water or a balanced salt solution before introducing cells and medium..

**Storage:** Store at 2–8 °C, Do not freeze.

**Sterilization:** Sterilized by membrane filtration, sequentially through 0.45 and 0.22 micron filters. The product has been tested, and confirmed negative, for bacterial and fungal contamination.

**Warnings:** This product is for R&D use only, not for drug, household, or other uses. No test guarantees a product to be non-infectious. Therefore, all material derived from human fluids or tissues should be considered as potentially infectious.