

Rat Tail Type-I Collagen-based Hydrogel
Order Information

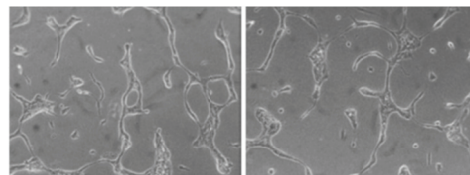
Product Name:	Rat Tail Type-I Collagen-based Hydrogel
Catalogue Number:	cAP-07
Concentration:	1x Hydrogel (Ready to use)
Size:	50.0ml (For minimum of 50 assays using 24-well plate)
Storage:	< -20°C

General Information

Collagen based Hydrogel is a biocompatible and injectable complex of Type I Collagen biopolymers that can accelerate the pace of biomedical and cell/tissue engineering applications. Collagen-based Hydrogel contains high quality, sterile Type I Rat Tendon Collagen, which has been specially formulated for ease of gel formation.

Product Specifications

Source:	Rat tendons
Celsius Shelf life:	12 months
Storage:	< -20°C
Purity:	> 95% SDS PAGE
Concentration:	1 x Collagen based hydrogel (Ready to use)
Product pH:	7.2-7.4
Sterility:	Pass
Endotoxin Level :	< =1EU/ml
Cell Culture Testing:	Pass



Human capillary tube formation (Sandwich) assay using Collagen-based Hydrogel (cAP-07): Two representative images at 24 hours after Endo-Basal media was added on top layer of Hydrogel.

Sterility Testing: This product has been tested after 14 days after incubation in a 37°C CO2 incubator. It is free of bacterial and fungal contamination. Product has shown to be negative with respect to mycoplasma contamination by Real-Time PCR.

Shelf Life: 60-months when stored at -20°C. Once thawed, 1-month at 4°C

Application: Endothelial cell tube formation (sandwich assay):
Material and reagents needed:

- One flask (T25) of endothelial cells
- 1x Hydrogel (cAP-07, ~1.0ml for one well when using 24-well plate)
- Endo-Growth media (cAP-02)
- Endo-Basal media (cAP-03)
- 24-well cell culture plate

Protocol (Using 24-well cell culture plate as an example):

- 1) Thaw 1x Hydrogel at 2-4°C (on ice in a refrigerator) one night before the day of experiment;
- 2) Keep both 1x Hydrogel and culture media on ice before experiment;
- 3) Gently add 0.5ml ice-cold 1x Hydrogel in one well of 24-well plate (avoid generating air bubbles) and allow Hydrogel to be solidified by leaving the plate in a 37°C CO2 incubator for a minimum of 15 minutes;
- 4) While waiting, prepare endothelial cell suspension (2-4 x10⁵cells/ml: dissociation of cells from T25 flask with trypsin-EDTA and then re-suspend endothelial cells in Endo-Growth media;
- 5) Gently add 0.5ml (1-2 x 10⁵cells/well) of ice-cold cell suspension in one well of 24-well plate and allow endothelial cells to be attached to bottom layer of Hydrogel by culturing endothelial cells in a 37°C CO2 incubator;
- 6) When endothelial cells reach 95% confluent, gently but thoroughly aspirate off the Endo-Growth media from each well before adding 0.3-0.5ml ice cold 1x Hydrogel to form top layer of Hydrogel (avoid generating air bubbles);
- 7) 1 hour after top layer of Hydrogel is solidified in a 37°C CO2 incubator, 0.5ml of Endo-basal media or Endo-basal media containing variable concentration of Fetal bovine serum (FBS) or experimental reagents is added gently on top layer of Hydrogel, according to user's experimental goal;
- 8) Endothelial tubes formation can normally be observed after overnight incubation of the cells in a 37°C CO2 incubator.

Suggested volume of Hydrogel used for variable culture wares:

Culture wares	Area (cm ²)	Hydrogel Volume (ml)
96 well	0.143	0.1
24 well	0.33	0.5
12 well	1.12	1.0
6 well	4.67	2.0

Related Products

Quick Coating Solution	cAP-01	240ml	Angio-Proteomie
Cell Freezing Solution (FBS)	cAP-22	50ml	Angio-Proteomie
Cell Freezing Solution (Non-FBS)	cAP-22B	50ml	Angio-Proteomie
HBSS w/o Ca ²⁺ , Mg ²⁺	cAP-11	100ml	Angio-Proteomie
Trypsin/EDTA Solution	cAP-23	100ml	Angio-Proteomie
Trypsin Neutralization Solution	cAP-28	100ml	Angio-Proteomie
ITS (100x)	cAP-26	10ml	Angio-Proteomie
L-Glutamine-MAXIMUM (100x)	cAP-27	100ml	Angio-Proteomie
Human Plasma Fibronectin Solution	cAP-42	1mg/ml	Angio-Proteomie
Bovine Type I Collagen Solution	cAP-17	100mg	Angio-Proteomie

THESE PRODUCTS ARE FOR RESEARCH USE ONLY

Caution: Handling human and animal tissue derived products is potentially bio-hazardous. Although each cell strain is tested negative for HIV, HBV and HCV DNA, or pathogens, diagnostic tests are not necessarily 100% accurate; therefore proper precautions must be taken to avoid inadvertent exposure. Always wear gloves and safety glasses when working with these materials. Never mouth pipette. We recommend following the universal procedures for handling products of human origin as the minimum precaution against contamination.