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extracellular platform technology
The Human Touch

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# PRODUCT DATA SHEET

## Native HUMAN PLACENTA Collagen-I (COL1), solution

Comprising gamma-sterilized human atelocollagen type 1 (COL1) prepared from human placenta tissue. Transferring placenta over to THT Biomaterials is based on an informed consent from the newborn's mother.

**Catalog number** #THT0101001-1/5/10 mL; #THT0102001-1/5/10 mL

## Product description

Collagen type 1 is the most abundant protein in mammals. COL1 is a pepsin-solubilized atelocollagen isolated from human placenta tissue formulated in acetic acid. COL1 allows cultivation and growth of different cell types. Please refer to certificate of analysis of the product for detailed information.

## Precautions and Disclaimer

This product is for R&D use only. Please consult the Safety Data Sheet for information regarding hazards and safe handling procedures.

## Storage

Store COL1 stock solutions at 4-8°C for up to 6 months or at -20 °C for up to 12 months. Avoid multiple freeze thaw cycles.

## Application note

The optimal concentration for cell attachment and culture may differ for different cell types, and experimentation may be required to determine the optimal conditions for your cell culture experiments.

## Guidelines for use

1. Prepare COL1 in your desired coating concentration. If necessary, dilute your COL1 stock with PBS buffer, distilled water, or cell culture medium. A coating concentration of at least 2 µg/mL is recommended.
2. Add sufficient volume of COL1 to each well. It is important that the volume added to the dish is sufficient to cover the growth surface.
3. Keep the plate completely covered and incubate for 60 min at 37°C.
4. Tilt the plate to allow excess COL1 to drain to the lowest point and remove the remaining excess material with a sterile pipette.
5. Air dry the plate and use it for your experiments.

## References

1. Hackethal J, Mühleder S, Hofer A, Schneider KH, Prüller J, Hennerbichler S, Redl H, Teuschl A. Tissue Eng Part C Methods. 2017 May;23(5):274-285.
2. Hackethal J, Dungel P, Teuschl AH. Tissue Eng Part C Methods. 2021 Dec;27(12):649-660.

## Citations

1. Chen YX, Xie GC, Pan D, Du YR, Pang LL, Song JD, Duan ZJ, Hu B. *Three-dimensional Culture of Human Airway Epithelium in Matrigel for Evaluation of Human Rhinovirus C and Bocavirus Infections.* Biomedical and Environmental Sciences. 2018 Feb; 31(2):136-145.
2. Mühleder S, Fuchs C, Basilio J, Szwarc D, Pill K, Labuda K, Slezak P, Siehs C, Pröll J, Priplinger E, Hoffmann C, Junger WG, Redl H, Holnthoner W. *Purinergic P2Y2 receptors modulate endothelial sprouting.* Cellular and Molecular Life Sciences. July 2019; CMLS 77(5).
3. Schneider KH. *MUW researcher of the month.* Wien Klin Wochenschr. May 2019.
4. Hsieh DJ, Periasamy S. *Protocols for accelerated production and purification of collagen scaffold and atelocollagen from animal tissues.* BioTechniques. July 2020; DOI: 10.2144/btn-2020-0070.