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THT Biomaterials GmbH
extracellular platform technology
The Human Touch

PRODUCT DATA SHEET

Native HUMAN PLACENTA Collagen-I (COL1), lyophilized
Comprising freeze-dried, 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 #THT0100002-25/50/100 mg

Product description
Collagen type 1 is the most abundant protein in mammals. COL1 is a pepsin-solubilized atelocollagen isolated from human placenta tissue. 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 (SDS) for information regarding hazards and safe handling procedures.

Reconstitution & Storage
COL1 can be reconstituted in acid, buffers, or cell culture media. Following reconstitution, aliquot and freeze COL1 stock solutions. Store at 4-8°C for up to 6 month or at -20 °C for up to 12 months. Avoid multiple freeze thaw cycles.

Application notes
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.

Guideline for 2D coating
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.

Guideline for 3D gels
1. Prepare COL1 to your desired gel concentration using cold buffer (e.g. 1x PBS pH 7.4) or culture media on ice until fully dissolved. Avoid air bubbles.
2. Adjust pH to 7.4.
3. If desired, add cells to the solution according to your experimental settings.
4. Incubate the plate for 2 h at 37°C for gel formation. Gelation time will depend on the type of gel, protein concentration and pH. Note: gels must be handled carefully. Never touch the gel with the pipette tip.

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.