



THT Biomaterials GmbH
extracellular platform technology
The Human Touch

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Product information

HUMAN PLACENTA Collagen-I (COL1), freeze dried

Comprising highly purified human atelocollagen type 1 in 20 mM acetic acid (HAc), prepared from placenta tissue of individuals that have been shown by certified tests to be negative for antibodies to HIV, HEP-B and THPA (syphilis).

Catalog number THT0102

Product description

Pepsin-solubilized atelocollagen allows growth and cultivation of many cell types. COL1 is derived from human origin and freeze dried (> 95% purity by SDS-PAGE).

Precautions and Disclaimer

This product is only for R&D use. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling procedures.

Storage/Stability

Delivery in cool packs. Following reconstitution, aliquot and freeze. Store COL1 stock solutions at -20 °C for up to 12 months.

Procedure

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 personal cell culture settings.

Guideline for 2D coating tissue culture plates

1. Dilute your COL1 stock with 20 mM HAc. Add sufficient volume of COL1 to provide your desired coating concentration.

A coating concentration of at least 0.2 µg/cm² is recommended, depending on the cell type used and your experimental settings.

It is important that the volume added to the well is sufficient to cover the whole growth surface.

2. Keep the plate completely covered and incubate for 60 min at 37°C.
3. Tilt the plate to allow excess COL1 to drain to the lowest point and remove the remaining excess material with a sterile pipette.
4. Air dry the plate, and use.

Guidelines for 3D gelling

1. Dilute COL1 to your desired gel concentration using buffer or culture media on ice.
2. Add cells according to your experimental needs (cell number, protein concentration) and resuspend solution.
3. Add the mixture to your tissue culture plate.
4. Incubate the plate for 60 min at 37°C, and use (add media). 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. *An Effective Method of Atelocollagen Type 1/3 Isolation from Human Placenta and Its In Vitro Characterization in Two-Dimensional and Three-Dimensional Cell Culture Applications.* Tissue Eng Part C Methods. 2017 May;23(5):274-285
2. Hackethal J, Hofer A, Hennerbichler S, Redl H, Teuschl A. *A comparison of enzymatic and non-enzymatic strategies to isolate extracellular matrix (ECM) proteins from human placenta and liposuction fat.* ALTEX Proceedings 8(1), p65, 2019.