

Collagen Bio Tubes (CBT)

Product Description

CBT are sterile, compact non-porous tubes made of pure, non-cross-linked bovine collagen type I that can be used for cell cultivation. The CBT are available with a diameter of 4.5 mm or 2.5 mm and each with a length of 3 cm or 6 cm.

The CBT are delivered dry, sterile and individually packed and sterilized. Before cell seeding it needs to be rehydrated and equilibrated with medium. To ensure good performance the recommended user protocol should be used.



Applications

The CBT are robust and can be used for the growth and differentiation of various cell types, representing an *in-vivo*-like collagen for use in bioreactors or conventional cell culture-treated well plates. They are produced with a standardized, industrial process. The CBT allow also the combination with additional matrix molecules and / or growth factors. They are best suited for cultivation of adherent primary cells, stem cells and cell lines, whereat cells can grow inside and outside the tubes. Also allowing directed differentiation, they represent an excellent scaffold for complex tissues and tissue engineering. Additionally, the high mechanical strength of the CBT permits the easy and sterile translocation of the intact cell-scaffold complex e.g. for transplantation experiments or histological analyses.

Passaging

For cell passaging or preparation of cell suspensions (e.g. for flow cytometry) standard detachment procedures can be used to detach adherent cells from the CBT.

Immunofluorescence

The CBT exhibit a very low autofluorescence which makes them applicable for fluorescent imaging of cultured cells.

The cells can be fixed and the staining procedure can be carried out directly on the cell seeded tube.

Histological analysis

Fixation of cells on the CBT can be performed by all standard fixation protocols like e.g. paraformaldehyde, buffered formaldehyde, glutardialdehyde, acetone or methanol.

The CBT can be frozen or embedded in paraffin or epoxy resins (e.g. EPON) and sliced with a cryostat or microtome, respectively. The CBT is also suitable for electron microscopic investigations.

Implantation

CBT exhibit excellent biocompatibility *in vivo*. In various experiments resorption was observed several weeks post implantation, depending on the target organ, without notable immunoreaction.

Metabolic analysis of cells with colorimetric methods

Cell viability and growth of cells on and in the CBT can be monitored by colorimetric methods (tetrazolium based salts) according to the manufacturer's recommendations.

Product Data Sheet

Storage

The originally packed CBT should be stored dry and dark between +15°C and +25°C in closed packaging.

Shelf life: 24 months

CBT are intended for research use only. They are neither intended for human nor animal diagnostic, therapeutic use or any other clinical uses!

Corresponding documents:

- User Protocol - Collagen Bio Tubes (CBT)
- Application Note - Detachment of cells cultured on Fibrous Collagen Surfaces
- Application Note - Staining of cells grown on Fibrous Collagen Surfaces

All data and recommendations correspond to the present state of our knowledge; they are published without engagement. We reserve the right to make alterations and additions in line with technical developments without prior notice. The customer is obliged to check whether our products meet with his own technical requirements. We shall be glad to answer any queries.

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