

Collagen Cell Carrier (CCC)

Product Description

CCC scaffolds are sterile, compact non-porous (but permeable for soluble factors) membranes made of pure, non-cross-linked bovine collagen type I that can be used for cell cultivation. Specially formatted discs are available for use in cell culture multi well plates or dishes. The 50 x 50 mm or 150 x 100 mm format can be cut by the customer according to his requirements with sterilized scissors or a scalpel for use in any cell culture vessel.

The CCC is delivered dry, sterile and individually packed. Before cell seeding it needs to be attached reversibly to the bottom of a cell culture-treated well plate without the need of any auxiliary compound. To ensure proper adhesion of the CCC to the well the recommended user protocol should be used.



Applications

The CCC is a robust, sterile CCC for the growth of various cell types, representing an *in vivo*-like collagen for use in conventional cell culture-treated well plates. It is produced with a standardized, industrial process. The CCC allows also the combination with additional matrix molecules and / or growth factors. It is best suited for cultivation of adherent primary cells, stem cells and cell lines. Also allowing directed differentiation, it represents an excellent scaffold for tissue engineering. Additionally, the high mechanical strength of the collagen membrane 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 CCC.

Immunofluorescence

The ultra-thin and translucent membrane exhibits a very low autofluorescence which makes the scaffold 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 scaffold in the well.

Histological analysis

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

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

Implantation

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

Metabolic analysis of cells with colorimetric methods

Cell viability on the CCC can be monitored by colorimetric methods (tetrazolium based) according to the manufacturer's recommendations.

Product Data Sheet

Storage

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

Shelf life: 60 months

Collagen Cell Carrier (CCC) is 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 Cell Carrier (CCC)
- Application Note - Detachment of cells cultured on Fibrous Collagen Surfaces
- Application Note - DiIC 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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