

Product Description

The CCC is a native cell matrix designed as a mobile cell and tissue carrier. As such, the cell-seeded CCC may be removed from the well and transferred to various subsequent processes. It is a thin membrane made of highly pure collagen type I fibers without treatment of chemical cross-linkers. The compact fiber network is non-porous but permeable for most soluble factors. It allows the combination with additional matrix molecules and/or growth factors.

Available formats fit multiwell plates (6 – 96 wells) or 10-cm-dishes. Additionally, larger square formats of 50 x 50 mm or 150 x 100 mm can be cut according to need with a sterilized scalpel or scissors.

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 vessel. To ensure proper adhesion, follow our easy User Guide with no need for any auxiliary compound.



Transferrable CCC for multiwell plates

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PRODUCT SPECIFICATIONS

Parameter	Collagen Cell Carrier®
Main component	Collagen type I fibers
Source	Bovine dermis, animal age ≤ 30 months
Appearance	Thin, translucent collagen membrane
Thickness (µm)	20
Sterilization	✓ (gamma irradiation)
Cyto- and <i>in vivo</i> biocompatibility	✓

APPLICATIONS

The CCC is a biocompatible matrix for culturing of adherent cell types, representing an *in vivo*-like collagen for flexible R&D use:

- Universal culture of adherent cells, esp. primary cells
- tissue engineering & regenerative medicine
- Pinpoint implantation of cells
- Development of Advanced Therapy Medicinal Products (ATMPs)
- Co-culture of cells on both sides of the membrane
- Sectioning and histologic analysis
- Fluorescent imaging of adherent cells
- Development of cell-based assays

BENEFITS

- ✓ Collagen provides natural signals for cells
- ✓ Proven biocompatibility and biodegradability *in vivo*
- ✓ Thin, suturable, flexible and strong even in wet conditions
- ✓ Enables transfer and analysis of intact cell complexes grown on this nature-like matrix
- ✓ Enhances survival of implanted cells – ideal tool for cell and tissue implantation
- ✓ Semi-permeability allows cell supply and paracrine communication
- ✓ Research quality produced in a standardized, industrial process

PRODUCT USE

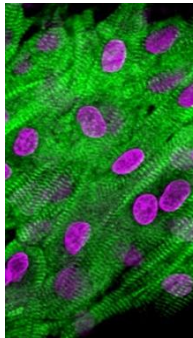
After attaching the CCC to a bottom of a cell culture vessel, cells can be seeded and cultured on top.

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. A respective Application Note is available for download.

Immunofluorescence

The ultrathin and translucent membrane exhibits a very low autofluorescence and is therefore suitable for fluorescent imaging of cultured cells. Fixation of cells and the staining procedure can be carried out directly on the cell seeded scaffold in the well. After staining the scaffold can be removed and transferred to a glass slide. A User Guide for transfer of the CCC is available.



Histological analysis

Fixation of cells on the CCC can be performed by standard fixation protocols using 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.

Metabolic analysis of cells with colorimetric methods

Metabolic activity of cells cultured on the CCC can be monitored directly by colorimetric methods (e.g. tetrazolium-based such as WST-1) according to the manufacturer's recommendations.

Implantation research & development

CCCs exhibited excellent *in vivo* biocompatibility in multiple animal studies and are degraded within a few to several weeks, depending on the target organ.



Intended use

The CCC is intended for research use only. It is neither intended for human nor animal diagnostic, therapeutic use nor any other clinical uses.

Certified quality

Produced under ISO 9001 quality management system.

Storage

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

Storage life

60 months from the date of manufacture.

Corresponding documents

- [User Guide](#)
attachment and detachment of CCC
- [Application Note](#)
Detachment of cells cultured on fibrous collagen surfaces
- [Application Note](#)
DiIC staining of cells grown on fibrous collagen surfaces
- [Product Information](#)
Primary cells tested on CCC

Technical support

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Disclaimer

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 her/his technical requirements. Please contact us for questions or support.

ORDERING INFORMATION

Catalog numbers vary with respect to CCC size & format.

USA & CANADA

Order comfortably through VWR:



OTHER REGIONS

Browse our website to find the right product for your needs or contact us



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