

Product Description

The freeze-dried sponge made of pure collagen type I fibers from bovine dermis is an easy-to-handle, **non-crosslinked** 3D scaffold specially designed for cell culture. The pure and native collagen fibers form **laminar-shaped pores** of 200 - 500 μm size. This optimized internal structure facilitates penetration of cells and nutrients for best performance.

The unique proprietary manufacturing process ensures optimal mechanical stability even without crosslinking treatment. This makes the collagen sponge easy to handle in dry and wet conditions while exhibiting high biocompatibility *in vitro* and *in vivo*.

The collagen sponge is available in different sizes and is delivered sterile. To ensure optimal results please follow our User Guide.



Firm and flexible collagen sponge for 3D cell culture use

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PRODUCT SPECIFICATIONS

Parameter	Collagen Sponge
Main component	collagen type I fibers
Source	bovine dermis
Appearance	firm and flexible 3D scaffold
Thickness	approx. 1 mm
Pore size	200-500 μm
Sterilization	✓ (ethylene oxide)
pH	neutral

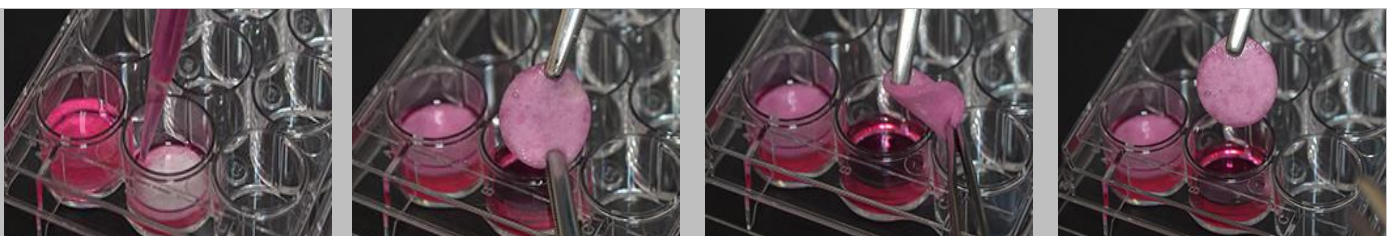
APPLICATIONS

The collagen sponge is a universal 3D scaffold for R&D, e.g. in:

- Complex three-dimensional cell cultures
- Tissue engineering & regenerative medicine
- Cell implantation studies
- Cell based assays (e.g. drug metabolism)

BENEFITS

- ✓ Native type I collagen fibers provide natural signals for cells
- ✓ Production without chemical crosslinkers ensures highest biocompatibility *in vitro* & *in vivo*
- ✓ Pure and intact collagen fibers create a robust and flexible 3D scaffold that can be easily handled in dry & wet conditions
- ✓ Porous structure with long-term stability enables cell migration as well as nutrient and factor ex-change, optimizing cell performance
- ✓ Externally validated for culture of cell lines and primary cells



PRODUCT FEATURES

Collagen porous structure as ideal 3D-scaffold

The natural collagen type I fibers form laminar-shaped pores sized to enable migration of cells and exchange of nutrients and factors. They provide the optimal scaffold for complex 3D cell cultures.

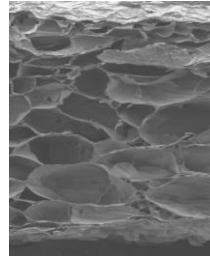


Image: SEM image of collagen sponge internal structure (image courtesy of the Basque Country University)

Cell penetration & immunofluorescence staining

Within a few days of culture, adherent cells spread inside the sponge. Growth and differentiation can be monitored by standard immunofluorescence microscopy.

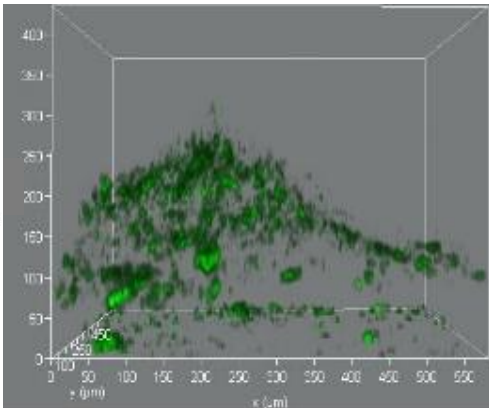


Image: Distribution of GFP-expressing HEK cells in collagen sponge (x-, y-, and z-axis) after 7 weeks of culture

(image courtesy of the center for molecular biology (ZMBH), University of Heidelberg)

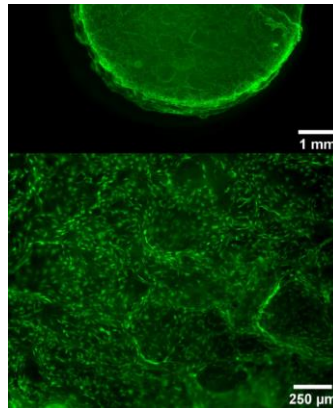
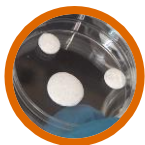


Image: CCK8 stained osteoblasts after 96 hours cultured in collagen sponge

(image courtesy of the University of Malaga)



PRODUCT VARIANTS

The collagen sponge is available in two different diameters.

Sponge disc size	Units/ package
20 mm diameter	6
6 mm diameter	24



Intended use

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

Quality

Produced under ISO 9001 quality management system.

Storage

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

Storage life

12 months from the date of manufacture.

Corresponding documents

- User Guide: Cell culture in collagen sponge

Technical support & ordering information

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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.