

Synthetic surface cultureware for stem,  
primary and ECM-dependent cells



Seed. Proceed. Reproduce.

Ready-to-use Eppendorf CCCadvanced™ FN1 motifs cultureware

# Natural Performance.

Synthetic and ready-to-use cultureware for stem, primary and ECM-dependent cells

## Main advantages vs. self-coating

- > No tedious preparation with possible vessel/coating media dissipation: ready-to-use
- > Fully defined surface supports predictable expansion and differentiation: synthetic fibronectin-derived motifs with optimized steric configuration
- > No expensive lot-specific performance verification of coating media: lot-to-lot production consistency
- > Reduced contamination risk: no preparation needed and individually packed

## Main applications

- Expansion and differentiation of:
- > Stem cells (e.g., hiPSCs, hMSCs)
  - > Primary cells
  - > Other ECM-sensitive eukaryotic cells
  - > Feeder-free cell culture
  - > Restrictive culture conditions (serum-and xeno-free)

## Other advantages

- > High experimental flexibility: suitable for many cell types, culture media and detachment media
- > Easy logistics: shelf-life of 36 months at room temperature
- > Quality Management System (QMS): compliant to the standard QMS requirements (e.g. ISO 13485)

Optimized to protect your precious cells and experiments: plates and flasks

**Optimized temperature stability during handling outside the incubator** with inter-well space filling

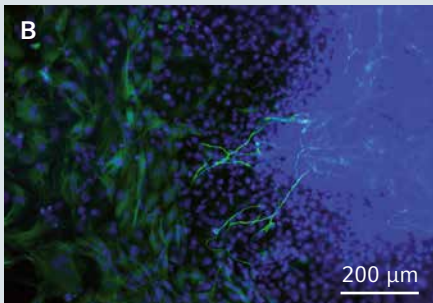
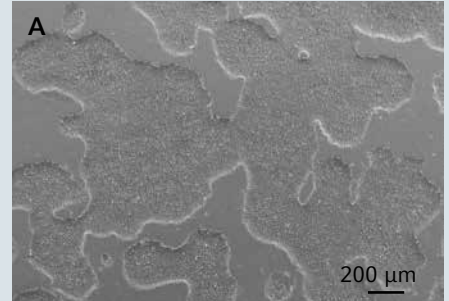


**Safer transport in stacks** with stacking aid on the lid

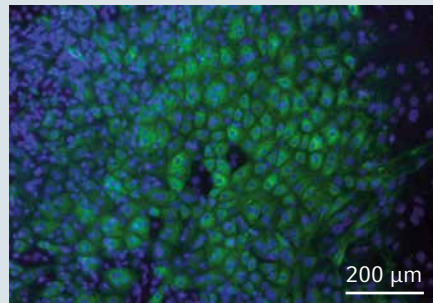
**Increased handling safety** with easy differentiation of lid and plate

### hiPSCs: Efficient long-term expansion of hiPSCs in a completely synthetic culture system

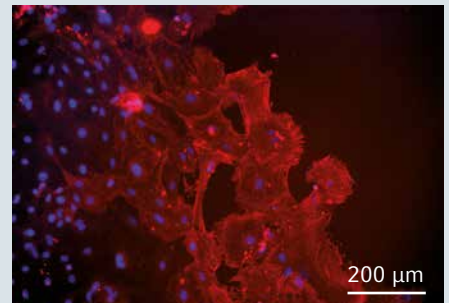
- > Supports efficient long-term hiPSC expansion in a completely defined, animal- and human-component-free culture system for 25 passages
- > Consistent and robust growth rate
- > Typical morphology remains stable (Fig. 1A)
- > hiPSCs remain undifferentiated and maintain functional pluripotency
- > Maintenance of trilineage differentiation potential after long-term expansion (Fig. 1B) while exhibiting normal genomic integrity



**Ectoderm**  
TUJ1/DAPI



**Endoderm**  
AFP/DAPI

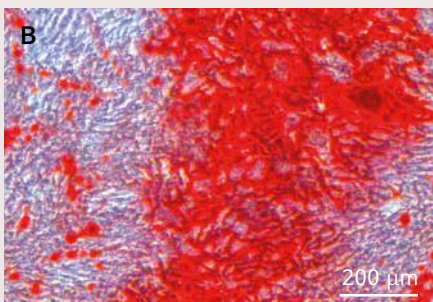
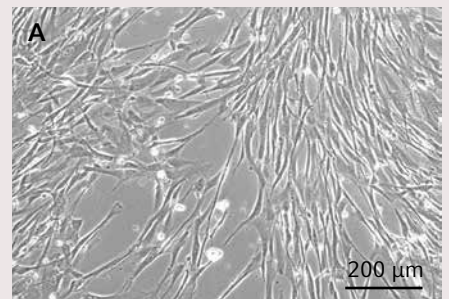


**Mesoderm**  
SMA/DAPI

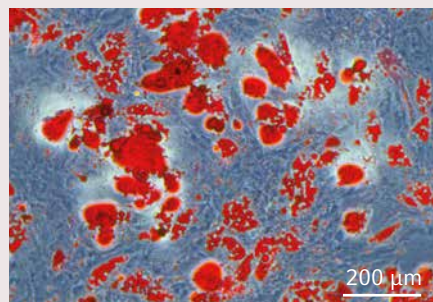
**Fig. 1:** Cell morphology (Fig. A) and trilineage differentiation potential (Fig. B) after long-term expansion of hiPSCs on the CCCadvanced™ FN1 motifs surface

### hMSCs: Animal-component-free expansion of human mesenchymal stem cells

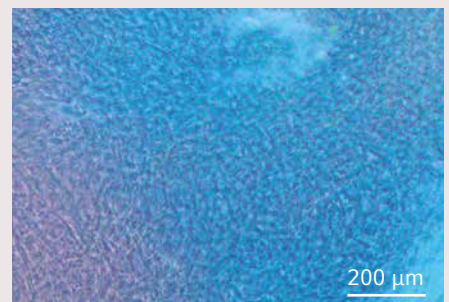
- > Supports efficient hMSC proliferation in a completely animal-component-free environment even on long term (up to 10 passages)
- > Characteristic morphology (Fig. 2A) remains stable for 10 successive passages without signs of replicative senescence
- > Stable and robust proliferation rate
- > Validated with hMSC from different tissue origins
- > Undifferentiated hMSCs retain their multi-lineage differentiation potential after expansion (Fig. 2B)



Osteogenic differentiation



Adipogenic differentiation



Chondrogenic differentiation

**Fig. 2:** Cell morphology (A) and multi-lineage differentiation potential (B) of hMSC-BM after long-term expansion on the CCCadvanced™ FN1 motifs surface in an animal-component-free environment

# High Performance Cultureware.

Protect your precious cell cultures from contamination with advanced depth filter technology

Ensure stability when transporting in stacks with the stacking aid



**Cross section of filter cap** Effective contamination protection by increased particle traveling distance (labyrinth pore structure and filter thickness)



Safe and effective access to the growth area with ConvexAccess™ neck

Also available: High-performance cultureware for self-coating



> More information about cultureware for self-coating?  
Click or scan to follow: [www.eppendorf.com/ccc](http://www.eppendorf.com/ccc)

# Eppendorf CCCadvanced™ FN1 Motifs Cultureware

## Materials

Material	<ul style="list-style-type: none"> <li>Polystyrene, meets requirements of USP Class VI</li> </ul>
Quality Management System (QMS)	<ul style="list-style-type: none"> <li>Manufactured in compliance to the standard QMS requirements (e.g. ISO 13485)</li> </ul>
Surface	<ul style="list-style-type: none"> <li>Coated with synthetic fibronectin-derived motifs (optimized steric configuration to mimic ECM proteins)</li> </ul>
Xeno-free	<ul style="list-style-type: none"> <li>Manufactured by using animal- and human-component-free materials</li> </ul>
Compatibility	<ul style="list-style-type: none"> <li>Compatible with a broad range of cell dissociation reagents as well as serum-, animal- and human component-free media. More information on: <a href="http://www.eppendorf.com/ccc-advanced-shop">www.eppendorf.com/ccc-advanced-shop</a></li> </ul>

## Ambient Conditions

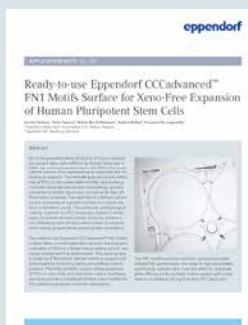
Working Temperature	<ul style="list-style-type: none"> <li>15 °C to 37 °C</li> </ul>
Storage and shelf life	<ul style="list-style-type: none"> <li>Shelf life of 36 months from date of manufacture (stored dry at 15 °C to 30 °C)</li> </ul>

## Certificates

General	<ul style="list-style-type: none"> <li>Leachables</li> <li>Trace metal release</li> <li>Production conditions</li> <li>Purity and cytotoxicity</li> </ul>
Lot-specific	<ul style="list-style-type: none"> <li>Free from RNase/DNase, human DNA, bacterial DNA, endotoxins</li> <li>Sterility assurance level (SAL 10<sup>-3</sup>)</li> <li>Cell growth test</li> </ul>



## Papers on Detailed Expansion Analysis



### hiPSCs - Long-term expansion

Analysis of growth rate, morphology and differentiation potential during 20 successive passages + comparison to Corning® Matrigel®

Click or transfer to follow:  
[www.eppendorf.com/appnote389](http://www.eppendorf.com/appnote389)



### hMSCs-BM - Long-term expansion

Analysis of growth rate, morphology and differentiation potential during 10 successive passages + comparison to competitors

Click or transfer to follow:  
[www.eppendorf.com/appnote390](http://www.eppendorf.com/appnote390)

## Website Cell Handling Solutions - Support for your needs

- > Tips and Tricks for daily routine
- > Teaching Support
- > Info Posters
- > Tool guidelines
- > Large-scale cell culture (Bioreactors)
- > Webinars and Trainings



> Click or scan to follow:  
[www.eppendorf.com/cellexperts](http://www.eppendorf.com/cellexperts)

### Ordering information

#### Description

**Eppendorf CCCadvanced™ FN1 motifs Cell Culture Plates, 6-well,**  
 with lid, flat bottom, sterile, free of detectable pyrogens, RNase, DNase, DNA  
 Non-cytotoxic, 5 plates, individually wrapped

#### International Order no.

0038 110.010

**Eppendorf CCCadvanced™ FN1 motifs Cell Culture Plates, 24-well,**  
 with lid, flat bottom, sterile, free of detectable pyrogens, RNase, DNase, DNA  
 Non-cytotoxic, 5 plates, individually wrapped

0038 110.030

**Eppendorf CCCadvanced™ FN1 motifs Cell Culture Flasks, T-75,**  
 with filter cap, sterile, free of detectable pyrogens, RNase, DNase, DNA  
 Non-cytotoxic, 5 flasks, individually wrapped

0038 120.020

**Eppendorf CCCadvanced™ FN1 motifs Cell Culture Flasks, T-175,**  
 with filter cap, sterile, free of detectable pyrogens, RNase, DNase, DNA  
 Non-cytotoxic, 5 flasks, individually wrapped

0038 120.030

### Test for yourself:

- > Request a sample or further support:  
[www.eppendorf.com/ccc-advanced-shop](http://www.eppendorf.com/ccc-advanced-shop)

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[eppendorf@eppendorf.com](mailto:eppendorf@eppendorf.com) · [www.eppendorf.com](http://www.eppendorf.com)

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