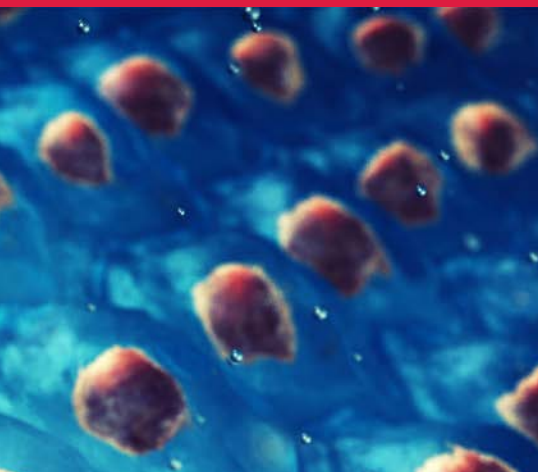


# Stem Cell Synergy Solution

From Culture to Cryopreservation



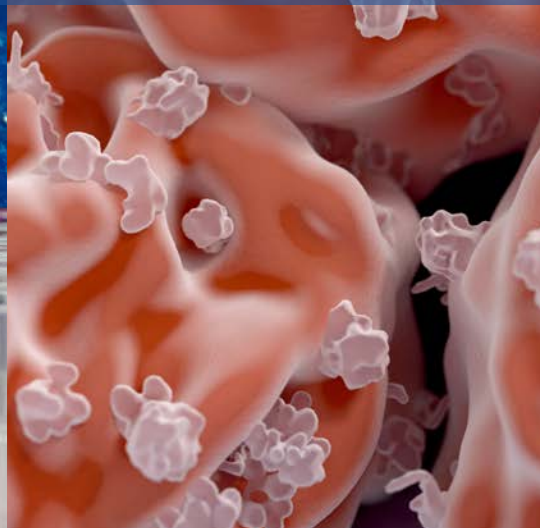
## iMatrix Laminin 511

The innovative stem cell culture substrate



## StemFit®

The superior feeder free stem cell culture medium



## STEM-CELLBANKER®

Cryopreservation media optimized for stem cells



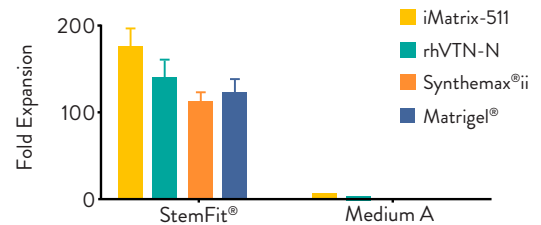
# iMATRIX RECOMBINANT LAMININ-511 E8 FRAGMENTS

## Recombinant Laminin-511 E8 Fragments

iMatrix-511 is a cell culture matrix compatible with a wide variety of cell types, and exceptionally well suited for pluripotent stem cells. This product is comprised of recombinant Laminin-511 E8 protein fragments which enable bulk proliferation and single-cell passaging of ESCs and iPSCs, and provide greater adhesion than full-length Laminin, Vitronectin or Matrigel®.

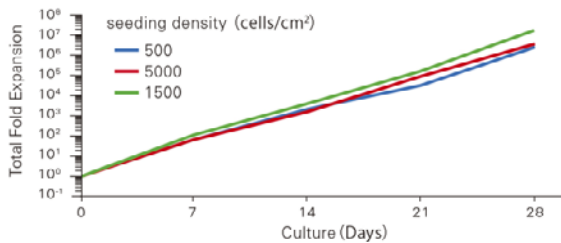
- Ideal for Feeder-Free Cell Culture
- Proven to provide superior adhesion of human ES and iPS cells
- Enables the passaging of single cells
- Eliminate need to coat plates
- Makes it easy to achieve extended cultures of hES/hiPS cells

**By using iMatrix-511 and StemFit® together, you don't need to coat your plates! Just follow our pre-mix method to save time!**



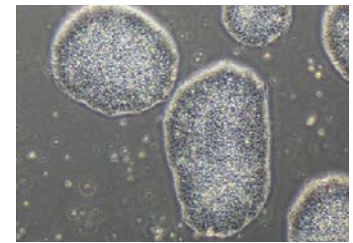
Human 201B7 iPSCs grown on MEFs (feeder-dependent) were transitioned to feeder-free conditions with StemFit® or commercially available medium A on respective ECMs (1000 cells/cm<sup>2</sup>), and cultured for one week on pre-coated plates.

### TOTAL FOLD EXPANSION



Human 201B7 iPSCs were cultured on iMatrix-511 with StemFit® for 4 weeks without weekend feeding. Cell colonies were dissociated into single cells and seeded at the listed densities.

### COLONY MORPHOLOGY



## StemFit®

### Feeder-Free Stem Cell Culture Media

StemFit® is a xeno-free, defined medium proven to effectively maintain iPSC and ES cells under feeder-free conditions during the reprogramming, expansion and differentiation phases of stem cell culture. StemFit® combines high colony forming efficiency with lower than standard media volume consumption to offer cost effective colony expansion when compared to leading competitors.



- Highly stable and reproducible feeder-free culture system
- Easy transition from on-feeder to feeder-free culture
- High affinity to commercially available coating matrices
- Weekend-Free Cell Culture
- Superior colony forming efficiency from a single cell clone enables high quality and cost effective genome-edited clone generation



# STEM-CELLBANKER®

## Stem Cell Cryopreservation Media

STEM-CELLBANKER® is a chemically defined cryopreservation media optimized for stem cells and iPS cells storage, as well as fragile primary cells. Furthermore, recent data supports its ability to cryopreserve organoids and tissues to allow the recovery of viable cells.

Available in both DMSO containing and DMSO-Free formulations, STEM-CELLBANKER® is an optimal freezing solution for basic research and clinical application of cell therapy products. It is ready-to-use and requires no special technical skills or devices, such as controlled rate freezers. It is animal component free and contains only chemically defined European and US Pharmacopoeia grade ingredients. Pluripotency, normal karyotype, high cell viability and proliferation following resuscitation from cryopreservation can be consistently achieved after long-term storage.

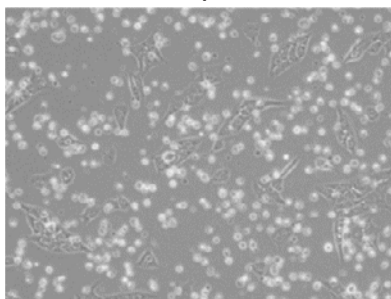


- Chemically defined and animal product free
- FDA Drug Masterfile registered
- Manufactured in compliance with US, EU and PIC/S GMP guidelines
- Maintains pluripotency post thaw
- Enables long term cell storage at -80°C or -196°C
- No programmed freezer or liquid nitrogen required

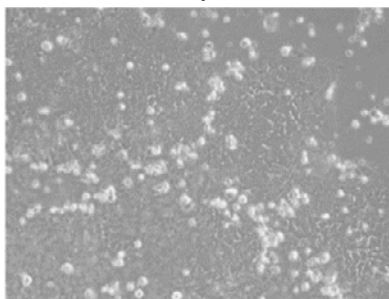
### CELLBANKER® SERIES

STEM-CELLBANKER® is part of the CELLBANKER® cryopreservation series, which also includes HSC-BANKER, an optimized GMP grade freezing medium for hematopoietic stem cells.

Day 1



Day 2



hiPSCs 201B7	Viability (%)
STEM-CELLBANKER® GMP grade	98.1



hiPSCs 201B7 were cultured in StemFit® culture media on iMatrix Laminin-511 and frozen with STEM-CELLBANKER® GMP grade. Post-thaw cells gave 98.1% cell viability, demonstrating higher attachment rate (Day 1) and growth (Day 5).



## Featured References

- Nature Protocols 12, 195–207 (2017)  
Morizane, R. & Bonventre, J. V. (2017) Generation of nephron progenitor cells and kidney organoids from human pluripotent stem cells.
- Scientific Reports 7: 41165  
Miyazaki, T. et al. (2017) Efficient Adhesion Culture of Human Pluripotent Stem Cells Using Laminin Fragments in an Uncoated Manner.
- Nature 2017 Jun 22;546(7659):533-538.  
Camp, J. G. et al. (2017) Multilineage communication regulates human liver bud development from pluripotency.
- Stem Cell Research & Therapy 2016 Jan 12;7:8  
Miki T et al. (2016) Biological impact of xeno-free chemically defined cryopreservation medium on amniotic epithelial cells.
- Scientific Reports. 4, Article number: 3594.  
Nakagawa, M. et al.(2014) A novel efficient feeder-free culture system for the derivation of human induced pluripotent stem cells.

### iMatrix Recombinant Laminin-511 E8 Fragments

Description	Pack Size	Catalogue No.
Laminin iMatrix-511 E8	350 µg: 175µg × 2 tubes	AMS.892 011
Laminin iMatrix-511 E8	1050 µg: 175µg × 6 tubes	AMS.892 012
Laminin iMatrix-511silk E8	1050 µg: 175µg × 6 tubes	AMS.892 021
Laminin iMatrix-411 E8	350 µg: 175µg × 2 tubes	AMS.892 042
Laminin iMatrix-411 E8	1050 µg: 175µg × 6 tubes	AMS.892 041

### StemFit®

Description	Pack Size	Catalogue No.
StemFit® Basic02 - Feeder Free Stem Cell Culture Media	400ml + 100ml	SFB-500
StemFit® Basic03 - Clinical Grade Stem Cell Culture Media	400ml + 100ml	SFB-503

### CELLBANKER®

Description	Pack Size	Catalogue No.
STEM-CELLBANKER® - GMP Grade	20ml	11897
STEM-CELLBANKER® - GMP Grade	100ml	11890
STEM-CELLBANKER® - GMP Grade - DMSO Free	20ml	11897F
STEM-CELLBANKER® - GMP Grade - DMSO Free	100ml	11890F
HSC-BANKER® - GMP Grade	15ml	11900