Version Date: 2/26/2025

Product Information Sheet

Human Multipotent Unrestricted Somatic Stem Cell Expansion Media

Catalog Number: MR1006

Product Overview	
Product Name	**Human Multipotent Unrestricted Somatic Stem Cell Expansion Media**
Catalog #s	MR1006
Quantity	450 mL
Product Form	Liquid
Cell Type	Human Multipotent Induced Pluripotent Stem Cells (CR1002-500)
Reagents Needed	Customer choice of high grade or fully defined Fetal Bovine Serum (FBS) (not included) Penicillin/Streptomycin/Amphotericin B solution or Penicillin/Streptomycin solution, 100X (not included)[1]

Product Description

Human Multipotent Unrestricted Somatic Stem Cell Expansion Media

Human Multipotent Unrestricted Somatic Stem Cell Expansion Media is a high-performance basal medium designed to support the robust proliferation of multipotent unrestricted somatic stem cells derived from cord blood stem cells. This specialized formulation provides essential nutrients, growth factors, and optimized conditions to promote cell expansion while maintaining stemness for up to 10 passages. It is an ideal choice for regenerative medicine, cell therapy research, and stem cell-based disease modeling.

MR1006 is compatible with a range of animal-origin serums, allowing researchers to tailor supplementation according to their experimental needs. This flexibility ensures optimal cell performance while preserving the undifferentiated state of stem cells. By minimizing variability, our media enhances the reliability and reproducibility of experimental outcomes, making it a preferred choice for both basic and translational research.

Engineered for superior cell viability, attachment, and long-term expansion, this media supports high-density culture without compromising multi-potency. Whether used for differentiation studies, cell banking, or therapeutic development, our optimized formulation provides the precision and consistency required for advanced stem cell research.

By offering a stable and well-defined environment for somatic stem cell expansion, our media simplifies workflows and accelerates experimental timelines. Researchers can confidently use this formulation to explore stem cell biology, develop novel therapies, and advance stem cell-based medical applications.

Complete Medium Recipe:

- We recommend adding the following to create fully functional complete media
  - a high-quality or fully defined Fetal Bovine Serum (FBS)
  - antibiotic/antimycotic solution to enhance cell health and reduce contamination risks

Shipping & Storage:

- Shipping: We ship media with gel packs to maintain stability and preserve critical components.
- Storage: Store at the recommended temperature upon arrival to maximize shelf life and performance.

Note: This product is designed and tested to function with Cellular Engineering Technologies Inc. ("CET") product.. Although investigators are welcome to use this product with other cell products, CET cannot and will not guarantee this product's performance. Additionally, using third-party cell lines with this product will void CET's warranty should they not function as indicated. Please refer to CET's Terms & Conditions, available at www.cet.bio.

Product Image

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Media Formulation Instructions	
Defrosting / Preparation	Defrost the iPS Growth Supplement at 4°C (the day before the media is to be prepared) and 5mL of antibiotic/antimycotic solution (not included) in a 37°C water bath until ice in the tubes is no longer visible. Never defrost the iPS Growth Supplement in a 37°C water bath. It is normal for the iPS Growth Supplement to appear hazy or have suspended solutes. Gently mix by inversion. Immediately disinfect the tubes and the bottle containing the iPS Base Media with 70% isopropanol (not included).
Mixing	Working in a laminar flow hood, remove 12mL of iPS Base Media (not included with cells) from the bottle and discard. This and all other procedures must be done in a sterile manner. Add the complete contents of the iPS Growth Supplement to the iPS Base Media. Add 5mL of the antibiotic/antimycotic solution to the iPS Base Media[1]. Cap the bottle containing the mixed liquid solution and gently swirl a few times. This formulated media is now considered complete media and ready to use with cells.
Feeding	CET recommends that cells should be fed with fresh complete media every 24 hours and old media should be discarded before complete media is added.

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Cell Thawing and Plating Instructions (for CR1002-500 Human Multipotent iPSCs not included)	
Thawing	Before thawing the cells (CR1002-500), substrate-coated dishes should be prepared accordingly. 30 minutes before thawing the iPS cells, the coating solution on the plates must be fully replaced with complete media (see Media Formulation Instructions) containing 5 uM Y-27632 (not included) and equilibrated to room temperature. Remove the Human Multipotent iPS Cells vial from dry ice or a storage unit. Defrost the vial of cells in a 37°C water bath with constant, moderate agitation until ice in the ampoule is barely visible. DO NOT OVERTHAW. Immediately disinfect with 70% isopropanol (not included).
Plating	Working in a laminar flow hood, open the vial and transfer the contents to a sterile 15 mL tube. Very slowly, add approximately 9 mL of complete media (see Media Formulation Instructions) containing 5 uM Y-27632, pre-warmed to 37°C before use. Centrifuge suspended cells at 200 x g for 10 minutes. Decant the medium and gently resuspend the pellet in 6 mL of complete media containing 5 uM Y-27632. Do this gently to avoid shearing the colonies. Gently pipette the resuspended cells onto the previously coated dishes. One vial of iPS cells contains enough colonies to seed 6 wells of a standard 6-well tissue culture plate or 3-100 mm tissue culture dishes. Distribute the colonies evenly and gently rock the plate back and forth. Place the dish in an incubator at 37°C, 5% CO_2 and 95% humidity. After 24 hours, aspirate media from the dish and replenish with fresh complete media (WITHOUT 5uM Y-27632), pre-warmed to 37°C before use. Repeat media changes every 24 hours.
Observation/ Expansion	The cells should attach over a period of 24 hours. It is normal for Multipotent iPS Cells to grow slowly initially for one-week post-thaw and for some colonies to be shed during media changes. Subculture cells at a 1:6 split ratio using Versene (not included).

Storage and Stability		
	Storage Temperature	**Storage Time**
Multipotent Unrestricted Somatic Stem Cell Expansion Media	4°C	3 months
Human Multipotent iPS Cells	-80°C (preferably in the vapor phase of a liquid nitrogen storage unit)	12 months
complete media *(see Media Formulation Instructions)*	4°C	Not applicable
Avoid repeated exposure to room temperature and light.		

[1] These solutions should be portioned in 5mL aliquots, stored at -20C and never frozen/thawed. Although antimycotics are not necessary, CET highly recommends their usage for long-term cell culture. Antibiotics and antimycotics should not be used as an alternative to proper aseptic techniques.

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