Version Date: 02/26/2024

Product Information Sheet

Human Chondrogenic Differentiation Media

Catalog Number: MR1008

Product Overview	
Product Name	**Human Chondrogenic Differentiation Media**
Catalog #s	MR1008
Quantity	450 mL
Product Form	Liquid
Cell Type	Human Bone Marrow-Derived MSCs (CR1005-500)
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 Chondrogenic Differentiation Media

Human Chondrogenic Differentiation Media is a high-performance, specialized formulation designed to support the efficient differentiation of mesenchymal stem cells (MSCs) into chondrocytes. This complete media system provides the essential nutrients, growth factors, and signaling molecules required to drive robust and reproducible chondrogenic differentiation. MR1008 is ideal for applications in cartilage tissue engineering, regenerative medicine, osteoarthritis research, and drug discovery.

Our Human Chondrogenic Differentiation Media is optimized for use with MSCs, ensuring high efficiency in generating functional cartilage-producing cells. Designed for superior cell viability and functionality, this media enhances the formation of extracellular matrix components, such as collagen type II and glycosaminoglycans, critical for proper cartilage function. Its carefully balanced formulation minimizes batch-to-batch variability, improving data reproducibility and streamlining experimental workflows.

Whether used for orthopedic research, tissue engineering, or disease modeling, MR1008 provides the reliability, consistency, and high performance required for advanced stem cell research. Researchers can confidently use this media to study chondrogenesis, cartilage repair, and potential therapeutics for degenerative joint diseases.

Recommended Uses:

- For use with the following cell types
  - Human Adipose-Derived Mesenchymal Stem Cells (CR1004-500)
  - Human Bone Marrow-Drived Mesenchymal Stem Cells (CR1005-500)

Shipping & Storage:

- Our Media ships with gel packs to maintain stability and preserve essential components.
- Upon arrival, store at the recommended temperature to ensure maximum shelf life and peak performance.

Note: This product is designed and tested to function with Cellular Engineering Technologies Inc. ("CET") product CR1005-500 Human Bone Marrow-Derived Mesenchymal Stem Cells (MSCs) (not included). Although investigators are welcome to use this product with other human mesenchymal stem cells, CET cannot guarantee this product's performance with an unknown cell type. Additionally, such use of 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, which are available on www.cet.bio.

Product Image

Media Formulation Instructions

FOR RESEARCH APPLICATIONS ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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Defrosting / Preparation	Defrost 50mL of FBS (not included) and 5mL of antibiotic/antimycotic solution (not included) in a 37°C water bath until ice in the tubes are no longer visible. Immediately disinfect the tubes and the bottle containing this base media with 70% isopropanol (not included).
Mixing	Working in a laminar flow hood, remove 5mL of the base media from the bottle and discard. This and all other procedures must be done in a sterile manner. Add 50mL of FBS to this base media. Add 5mL of the antibiotic/antimycotic solution to the 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.

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Cell Thawing Instructions	
Thawing	Remove vial of Cells from dry ice. 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 the vial with 70% isopropanol (not included).
Mixing	Working in a laminar flow hood, open the vial and transfer the contents to a sterile 15 mL tube. Very slowly, add approximately 10mL of complete media (see Media Formulation Instructions), pre-warmed to 37°C. Centrifuge the suspended cells at 200 x g for 5 minutes. Decant the medium and gently resuspend the pellet in 10mL of complete media (see Media Formulation Instructions), then transfer into a T-25 (25 cm^2) cell culture flask (not included).
Observation	Observe the cells microscopically to estimate cell viability and then place flask in an incubator at 37°C, 5% CO_2 and 90% humidity. Cells will be ready to pass between 3-7 days. Cells should be sub-cultured at a density of 5,000 to 10,000 cells/cm or desired plating density.

Storage and Stability		
	Storage Temperature	**Storage Time**
Chondrogenic Differentiation Media	4°C	3 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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