CryoSafe, Serum-free

Cryoprotective Medium

(Phenol red-free)

Catalog No.: ***CO103***

Pack Size: ***100 mL***

Storage: ***2-8ºC***

DESCRIPTION

MACGEN's CryoSafe Serum-free Cryoprotection Media is a cryopreservation medium containing fetal bovine serum (FBS). CryoSafe Serum-free Cryoprotection Media is packaged as a 1X concentrate.

We have created a new type of cryopreservation medium that can preserve almost any cell type at -80°C (or in liquid nitrogen if you prefer). The simple procedure allows your lab to avoid complicated freezing steps.

CryoSafe Serum-free Cryoprotection Media provides animal component-free (ACF) conditions during biopreservation, essential to maintaining consistency when culturing cells in ACF systems with proven reliability and consistency after cold freezing and thawing processes.

IMPORTANT FEATURES

- Complete and ready-to-use 1X cryo media.
- Optimized to protect a wide range of human and animal-derived cells including primary cells, lymphocytes and stem cells in temperatures as low as -196°C and -80°C for short-term storage.
- Enhanced cell viability and recovery.
- Simple: direct to the freezer, no programmed freezers required.

PROCEDURES

Freezing:

1. Examine the culture for the absence of contamination, sub-confluent growth.
2. For adherent cells, detach cells using 0.25% trypsin by following standart cell operation protocol.
3. Perform a cell count to determine the total number of viable cells. It is recommended that cell viability be no less than 90%.
4. Centrifuge cells at 500rpms for 5 minutes at room temperature. Remove supernatant.
5. Gently resuspend the cells in an appropriate volume of CryoSafe Cryoprotection Medium at a concentration of $1x10^6$ to $5x10^6$ cells/mL.
6. Dispense 1mL aliquots of cell suspension into cryovials.
7. Seal ampules and store at 4°C for 30 minutes.
8. Place vials in a container and store in a -20°C freezer for 1 hour. Transfer to -80°C for short-term storage (6 months or less).
9. Transer to liquid nitrogen for long-term storage.

Note: Some cells may require gradual cooling.

Recovery:

1. Remove freezing vials from freezer and rapidly thaw in a 37°C water bath.
2. Spray the vial with 70% ethanol.
3. Transfer cells to a 15mL centrifuge tube and add 4mL of complete growth medium.
4. Centrifuge at 500rpms for 5 minutes at room temperature.
5. Remove supernatant.
6. Add appropriate volume of growth medium and transfer cells to cell culture dishes or flasks.

PRECAUTIONARY NOTES

- Sterile Procedures: Ensure sterile conditions when handling cell freezing media. Utilize a sterile workbench and tools to prevent bacterial or other contamination that might compromise cell health and storage quality.
- Correct Temperature: Cell freezing media is usually stored at specific temperatures, such as -20°C or lower. Store and recover the media at the recommended temperature to maintain its integrity.
- Avoid Temperature Fluctuations: Minimize temperature fluctuations. If removal is necessary during use, limit exposure to room temperature for extended periods to prevent compromising the protective components in the freezing media.
- Pre-Use Inspection: Check the expiration date and condition of the freezing media before use. Expired or irregular-looking media might impact the effectiveness of cell preservation.
- Prevent Cross-Contamination: Avoid cross-contamination between different cell lines when using freezing media. Use properly labeled containers and employ appropriate sterile techniques to maintain the purity of the media and accuracy of cell samples.
- Ensuring compatibility between the selected freezing media and the specific type of cells is crucial. Some cell lines may be more sensitive or responsive to particular types of freezing media. Conducting compatibility tests is essential to confirm that the chosen freezing media can adequately protect the cells and maintain their vitality.

  Compatibility testing involves assessing the cell survival rate, growth performance, and other relevant characteristics when exposed to different types of freezing media. Typically, this test includes exposing the target cells to various freezing media and observing their growth, health status, and survival rates to determine the most suitable freezing media for a particular cell line.

  Therefore, conducting compatibility tests when selecting freezing media is a critical step to ensure optimal cell preservation and effectiveness.

Documentation and Labeling: Always document the type and date of freezing media used along with relevant cell information. Label containers clearly to facilitate tracing and record-keeping of each cell sample's usage.

These considerations will help ensure the effectiveness of cell freezing media and the quality of cell preservation.