cyagen | OriCell™

User Manual

OriCell™ NCR DMSO-free And Protein-free Cryopreservation Medium For General Use

Catalog No. NDPF-10001

We help you discover life

Introduction

Cell cryopreservation refers to placing cells in a low temperature environment for long-term storage. Throughout long-term cell research, our R&D team has continuously optimized the conditions for cell cryopreservation and recovery, developing products suitable for a variety of cell types.

OriCell™ NCR DMSO-Free And Protein-Free Cryopreservation Medium For General Use can significantly reduce ice crystal damage to cells during cryopreservation, effectively improving cell recovery rates and viability. At the same time, it does not contain any exogenous protein components or DMSO, which minimizes the risk of cell contamination and toxic effects. A substantial amount of cell cryopreservation data has confirmed that this product causes minimal damage to cryopreserved cells, resulting in a high cell survival rate after resuscitation, thereby maximizing cell viability. Compared to traditional cryopreservation solutions, this product eliminates the need for time-consuming programmed cooling processes. The cells can be directly resuspended and placed at -80°C, and then transferred to liquid nitrogen the next day to complete the entire cryopreservation process.

OriCell™ NCR DMSO-Free And Protein-Free Cryopreservation Medium For General Use is suitable for most common cell lines, stem cells, somatic cells, etc. (The recovery viability may vary among different cell types). It is also suitable for cells that are sensitive to DMSO.

Note: **This product is exclusively for further scientific research purposes. It is not intended for diagnostic, therapeutic, clinical, household, or any other applications.**

When citing our products in academic journals, please indicate " OriCell™ + Catalog Number, from Cyagen Biosciences (Guangzhou) Inc. "

Product Advantages

- Stable product performance, easy to use.
- The chemical composition is clear, without any foreign protein components or DMSO.
- With a cell recovery rate up to 90%, it is suitable for the cryopreservation of a wide range of mammalian cells.
- It effectively preserves the multi-directional differentiation potential of stem cells.
- No need for a programmed freezing step or specialized cooling device. Simply store in an -80°C freezer, saving significant time and energy.

QC

- Pass the detection of bacteria, fungi, mycoplasma, and endotoxins.
- Pass the detection of osmotic pressure and pH.
- Pass the detection of product quality.

Please reference "COA" for details.

General Handing Principles

1. Ensure that all equipment is kept clean and tidy.
2. Follow the standard operating procedure as described in the product manual. Strictly control variables and conduct controlled experiments.
3. Store ingredients properly according to the specified storage conditions and use them as soon as possible.

Product Stability and Storage Conditions

- Store at 4°C, protected from light, for up to 1 year.
- Use this product within its specified shelf life. Discard immediately if the shelf life has expired.

Cell Cryopreservation

Materials Required

- OriCell™ NCR DMSO-Free And Protein-Free Cryopreservation Medium For General Use (Cat. No.: NDPF-10001)
- Clean, sterile and high-quality disposable consumables (pipettes, pipette tips, centrifuge tubes, etc.)
- Clean sealing film

Steps

1. Select cells in the logarithmic growth phase, collect them in centrifuge tubes using standard methods, and calculate the number of cells required for cryopreservation based on the density of cultured cells and the size of the cell cryopreservation tube used (reference number: 5×10^5 to 5×10^6 cells/mL).
2. Transfer an amount of cell suspension equivalent to the required number of cells into a centrifuge tube, and collect the cultured cells by centrifugation (reference centrifugation conditions: 250xg for 3-5 minutes).
3. Aspirate the supernatant.
4. Add an appropriate amount of OriCell™ NCR DMSO-Free And Protein-Free Cryopreservation Medium For General Use (Cat. No.: NDPF-10001) to a centrifuge tube, mix thoroughly, and prepare a cell mixture.
5. Dispense the cell mixture from the centrifuge tube into fully labeled cryopreservation tubes.

6. Store the cryopreservation tubes at -80°C for 24 hours, then transfer them to liquid nitrogen for long-term storage.

Cell Recovery

Materials Required

- Complete medium corresponding to cells

Steps

1. Preheat the water bath to 37°C.
2. Warm the complete medium to 37°C.
3. Add more than 8 mL of complete medium to a 15 mL centrifuge tube for use.
4. Remove the cells from the -80°C freezer, place them in a 37°C water bath and shake them quickly to thaw the cryopreservation solution.

   Note: **During the thawing process, the cryotube must be shaken to ensure that the solution thaws quickly and evenly.**
5. When shaking, avoid water immersing the pipe cap to prevent contamination.
6. Once the cryopreservation solution has thawed to ice crystals with a diameter of about 2 mm, remove it from the water bath. Continue to shake the cryotube until the ice crystals have completely thawed.
7. Wipe the outer surface of the cryotube with 75% ethanol.
8. Open the cryopreservation tube in the ultraclean bench, use a Pasteur pipette to aspirate the cell suspension, and transfer it to the prepared centrifuge tube.
9. Rinse the cryotube once with 1 mL of complete medium to collect residual cells to minimize loss.
10. Centrifuge the cell suspension at 250×g for 4 minutes.
11. After centrifugation, discard the supernatant. Add 2 mL of complete medium, gently pipette the cell

pellet, blow and mix thoroughly.

12. Shake the cells well and incubate them in a CO_2 incubator at saturated humidity, 37°C, 5% CO_2 inside.