Primary Cell Cryopreservation Solution（SFC1）

Cat. No. : PB180439

Size: 10mL×5/100mL

General Information

Product Form	Liquid
Concentration	Ready-to-use
pH	7.4-7.6
Bacterial detection	Negative
Fungal detection	Negative
Mycoplasma detection	Negative
Endotoxin level	< 3 EU/mL
Shipping Conditions	Ice bag
Storage	2-8℃
Expiry date	12 months

Introduction

In vitro cell culture, in order to preserve the biological activity of cells for a long time, the cells must be cryopreserved,and resuscitated when necessary.At present, the most commonly used method for cell cryopreservation is liquid nitrogen method, which mainly uses the addition of an appropriate amount of protective agent to slowly cool the cells to a specified temperature range, so as to achieve the purpose of protecting cells.

The Primary Cell Cryopreservation Solution (SFC1) Medium is a special cryopreservation product developed by Pricella for primary cells, mainly for the cryopreservation of mesenchymal stem cells, smooth muscle cells, fibroblasts and chondrocytes derived from a variety of tissue species.

The product formula contains a self-developed cryoprotectant and a dual cryoprotectant of 10% DMSO. The product formula is clear , does not contain serum or animal-derived proteins, which can reduce contamination risk from bacteria, viruses, and mycoplasma, ensuring the safety of frozen cells.

Compared with traditional cryopreservation media, there is no need for cumbersome and time-consuming procedural cryopreservation steps or expensive procedural coolers, and the cells can be directly resuspended and placed in an ultra-low temperature freezer at -80℃ to ensure that the ultra-low temperature temperature is stable and frozen for 1 year. If you want to store liquid nitrogen for a medium and long term, you need to put it in a -80°C ultra-low temperature freezer for 24 h before moving it to a liquid nitrogen tank for long-term storage.

Special Advantages

1. Ready-to-use cell cryopreservation solution, ready to use, stable storage at 2-8 °C for more than 1 year;
2. No need for cumbersome program cryopreservation steps or expensive program coolers, directly put into the -80°C ultra-low temperature freezer, saving a lot of time and energy;
3. No serum, small batch-to-batch variation;
4. The chemical composition is clear, no exogenous protein is added, which reduces the probability of cell pollution and reduces the impact of exogenous protein on the normal proliferation and differentiation of cells;

5. It is suitable for cryopreservation of a variety of primary cells, and has strong versatility.

Instructions for use

1. Select cells in the logarithmic growth phase (cell confluence is about 90%), and ensure that the solution is changed once within 24 h before cryopreservation, the cells are collected, and the cells are prepared into a single cell suspension (adherent cells may need to be trypsinized), count and ensure that the cell viability is >90%;
2. Centrifuge the cell suspension at 1000 rpm for 5 min and discard the supernatant;
3. Add cell cryopreservation solution to the cell pellet to resuspend the cells, gently pipette and mix well, so that the cell density reaches 2-5×10^6 cells/mL;
4. Aliquot the above cell suspension into sterile cell cryovials in the amount of 0.5 mL or 1.0 mL, tighten the cap, and mark it;
5. Directly place the divided cell cryopreservation tubes in the -80°C ultra-low temperature freezer to ensure that the ultra-low temperature temperature is stable and cryostore for 1 year;
6. If you want to store liquid nitrogen for a medium and long term, you need to put it in a -80°C ultra-low temperature freezer for 24 h before moving it to a liquid nitrogen tank for long-term storage.

Illustration of Operating with Serum-Free Non-Programmable Freezing

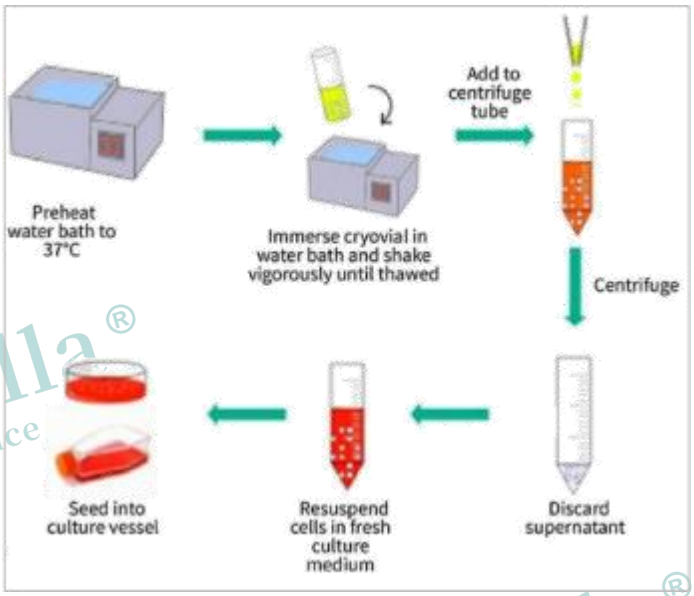


Cell Resuscitation Section

1. Preheat the water bath to 37°C, prepare clean disposable PE gloves, and add 9ml of sterile culture medium to a sterile centrifuge tube (preheat in advance).
2. Take out the cells from the liquid nitrogen tank and put them in PE gloves, quickly sink them into the water bath pot, shake the frozen storage tube to accelerate dissolution, and dissolve them all within 1 minute.

   Note:If the refrigerator or liquid nitrogen is far away from the water bath pot (more than 1 min walk), put the cells on dry ice first and then send them to the water bath pot. If the cell freezing tube is placed directly in the hand or in the pocket, it may cause the temperature to gradually rise and cause ice crystals to damage the cells. The cell freezing ducts are placed in PE gloves to prevent contamination. The faster this step, the better it is. It is best to put the timer next to it. If it does not melt within 1 minute, it may be that the frozen liquid is too high or the shaking force is not enough.
3. Add the resuscited cell solution in biological safety cabinet to a centrifuge tube filled with fresh culture medium, centrifuge at 1200 rpm/min for 3 minutes, and remove the supernatant after centrifugation.
4. Resuspend the cells with an appropriate amount of complete culture medium corresponding to the cells, insert them into a sterile container (culture bottle or culture dish), supplement the culture medium to the appropriate one, and put it in the incubator for cultivation.

Illustration of Cell Resuscitation Operation



Notes

1. After the cryopreserved cells are aliquoted into cryopreservation tubes, the storage time at room temperature/4 °C should be minimized, and they should be moved to the -80 °C ultra-low temperature freezer as soon as possible;
2. When using this product to cryopreserve primary cells, please ensure that the cryopreserved cells are in the previous generation, the morphology is good, the cell viability is >90%, and the number of cryosurviable cells is 2-5×10^6/mL/tube, and the amount of cells in each tube is 0.5-1 mL;
3. It is suitable for cryopreservation of a variety of primary cells, some tissue species derived from primary cells may have cell recovery viability of less than 90% due to the sensitivity of cell cryopreservation, it is recommended that you conduct at least 1 week of cell cryopreservation test experiment on the cells to be frozen before use, and then carry out formal cryopreservation after confirming that there is no problem;
4. At present, the product has been verified to be suitable for cells, including: mesenchymal stem cells from a variety of tissue species, smooth muscle cells, and fibroblasts cells and chondrocytes; If you are cryopserving these types of cells for the first time, it is recommended that you perform at least 1 week of cell cryopreservation test experiments on the cells to be frozen before use, and confirm that there is no problem before formal cryopreservation;
5. This product has been filtered and sterilized by 0.22 μm for 3 times, and aseptic operation should be paid attention to when using this product to avoid contamination;
6. For your safety and health, please wear a lab coat and disposable gloves to operate;
7. This product is only for scientific research purposes and should not be used for diagnostic, therapeutic, clinical and other purposes.