Immune Cell Cryopreservation Solution

Cat. No. : PB180440
Size: 10mL / 10mL×5

General Information

Product Form	Liquid
Concentration	1 ×
Bacterial detection	Negative
Fungal detection	Negative
Mycoplasmal detection	Negative
Endotoxin level	< 3 EU/mL
Storage	2-8°C
Shipping	Ice bag
Expiration date	12 months

Background

For in vitro cell culture, to preserve the biological activity of cells for long-term storage, cells must be cryopreserved, then revived and cultured as needed. Currently, the most commonly used technique for cell freezing is liquid nitrogen cryopreservation. This method primarily involves adding an appropriate protective agent and gradually cooling the cells to a specified temperature range to achieve cell protection. This product is a colorless to light-yellow transparent solution with viscosity, containing 5% DMSO. It is suitable for immune cells such as PBMCs, NK cells, unactivated T lymphocytes, and B cells.

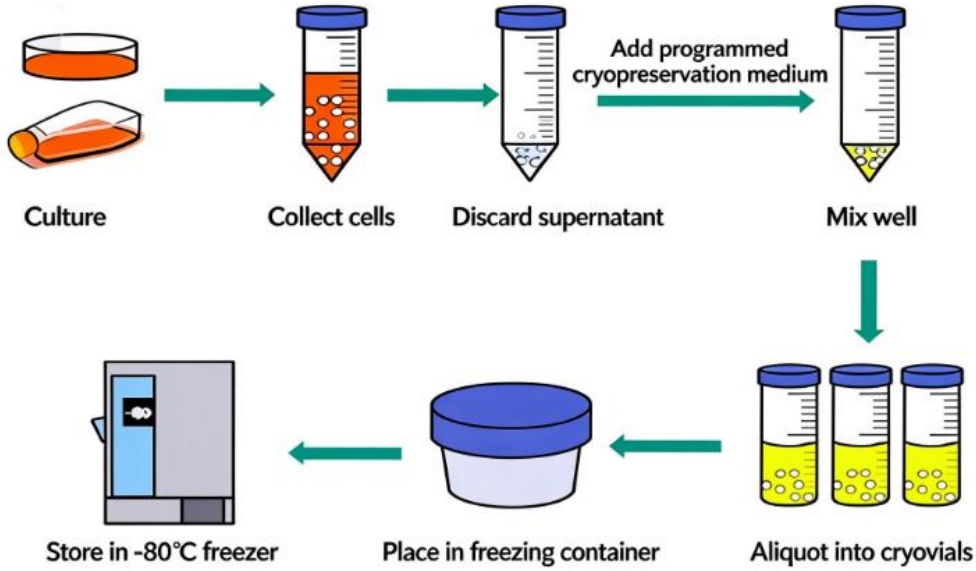
Special Advantages

1. Ready to use cell cryopreservation solution, stable storage at 2-8°C for more than 1 year.
2. Already contains DMSO, no additional supplements required.
3. Serum-free, with minimal batch-to-batch variation.
4. Requires gradient (programmed) freezing.

Instructions

(1) Cell Cryopreservation

1. Prepare the cells to be frozen into a cell suspension.
2. Centrifuge the cell suspension at 1,200 rpm for 5 min, and discard the supernatant (remove as much supernatant as possible).
3. Add an appropriate volume of pre-cooled cell cryopreservation medium to the cell pellet to resuspend the cells, and mix gently by pipetting.
4. Dispense the cell suspension into sterile cell cryovials at 0.5 mL or 1.0 mL per tube, tighten the caps, and label the tubes.
5. Place the cryovials into a controlled-rate freezing container, and place the container in a −80 °C ultra-low-temperature freezer for cryopreservation.
6. For long-term, stable storage of cells, transfer the cells frozen overnight at −80 °C in the ultra-low-temperature freezer to a liquid nitrogen tank for long-term storage.



(2) Cell Thawing

1. Pre-heat the water bath to 37°C. Prepare clean disposable PE gloves, and add 9 mL of sterile culture medium (pre-warmed in advance) into a sterile centrifuge tube.
2. Remove the cells from the liquid nitrogen tank and place them into a PE glove. Quickly immerse the glove into the 37°C water bath, and shake the cryovial continuously to accelerate thawing. Complete thawing within 1 minute is recommended.
   Tip: If the freezer or liquid nitrogen tank is far from the water bath (more than a 1-minute walk), place the cells on dry ice first before transporting them to the water bath. Holding or carrying the cryovial directly in your hand or pocket may cause the temperature to rise gradually, leading to ice crystal formation that damages the cells. Placing the cryovial in a PE glove is to prevent contamination. The faster the thawing, the better — it is best to keep a timer nearby. If the contents do not thaw within 1 minute, it may be due to excessive cryopreservation medium volume or insufficient shaking force.
3. In the laminar flow hood (clean bench), transfer the thawed cell suspension into the centrifuge tube containing fresh medium, centrifuge at 1,200 rpm for 5 min, and discard the supernatant after centrifugation.
4. Resuspend the cells with an appropriate volume of complete medium corresponding to the cell type, transfer into a sterile vessel (culture flask or culture dish), and add medium to a suitable volume. Place in the incubator for culture.

Product Stability and Storage Conditions

1. This product should be stored at 2-8 °C away from light; shelf life is 1 year. To ensure product quality, please avoid freezing and thawing this product.
2. Please use this product within the shelf life. Once expired, dispose of it to avoid affecting the cell recovery viability.

Notes

1. This product is only used for scientific research or further research, not for diagnosis and treatment.

2. Sterile operation should be maintained when using this product to avoid contamination.
3. For your safety and health, wear a laboratory coat and disposable gloves during operation.
4. After dispensing cells into cryovials, minimize the time stored at room temperature or 4°C, and transfer to a -80°C ultra-low-temperature freezer as soon as possible, ensuring that the temperature of the ultra-low-temperature freezer remains stable.
5. When cryopreserving cells, tighten the cap of the cryovial to prevent liquid nitrogen from seeping in, which could otherwise cause the cryovial to crack/explode during cell recovery.

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