Lymphocyte Cryopreservation Medium

Product Manual

Catalog#SN-06-1410 50 mL

Product Introduction

The Lymphocyte Cryopreservation Medium is a serum-free solution designed specifically for the cryopreservation of immune cells. This product minimizes cell damage during freezing, enhances post-thaw cell viability, and maintains the long-term functional characteristics of immune cells. The medium exhibits consistent batch-to-batch quality and has undergone safety evaluations as a cellular drug excipient, supporting the R&D and clinical translation of multiple drugs in the cell therapy field.

Product Information

Table 1. Product Description of Lymphocyte Cryopreservation Medium

Product	Cat.No.	Amount
Lymphocyte Cryopreservation Medium	SN-06-1410	50 mL

Storage Conditions

1. Storage temperature: 4 °C
2. Shelf life: 12 months

Cryopreservation of Immune Cells

1. Label the appropriate number of cryovials based on the cell count to be frozen. (Reference freezing density: NK cells: 1 × 10^9 cells / 20 mL / vial; PBMC (Peripheral Blood Mononuclear Cells): 1–1.5 × 10^7 cells / mL / vial).
2. Collect cells in the logarithmic growth phase using standard methods and transfer them to centrifuge tubes.
3. Centrifuge the cells (reference conditions: 300 × g for 10 minutes).
4. Aspirate the supernatant and add the **Lymphocyte Cryopreservation Medium** dropwise to the cell pellet. Mix gently to prepare a homogeneous cell suspension.
5. Aliquot the cell suspension into pre-labeled cryovials.
6. Perform controlled-rate freezing:
   6.1 Place the cryovials in a pre-cooled (4 °C) freezing container and transfer the container to a -80 °C freezer. After 24 hours, move the cryovials to a liquid nitrogen tank for long-term storage (temperature ≤ -135 °C).
   6.2 Use a programmable freezer to cool the cell suspension at a rate of -1 °C/min to -100 °C (refer to the instrument manual). Immediately transfer the cryovials to a liquid nitrogen tank for long-term storage (temperature ≤ -135 °C).

Thawing of Cryopreserved Cells (NK Cells as an Example)

1. Retrieve the cryovials from the liquid nitrogen tank and transport them on dry ice to the cell culture facility.
2. Thaw the cryovials rapidly in a 37 °C water bath with gentle agitation.
3. Once the cell suspension is mostly thawed (with only small ice crystals remaining), remove the cryovial, disinfect it, and

transfer the contents to a biosafety cabinet.

4. Resuspend the NK cells in an appropriate volume of complete medium. Seed the cells into vessels at the recommended density and add pre-warmed complete medium. (Note: For PBMC, wash the cells by centrifugation, remove the supernatant, resuspend in medium, and seed at a density of 1–2 × 10^6 cells/mL.)
5. Mix the cell suspension gently using a cross-shaking method and place the vessel in a 37 °C incubator with 5% CO_2. Maintain it under standard conditions.

Applications (NK Cells as an Example, Not Applicable to PBMC)

1. Retrieve the cryovials from the liquid nitrogen tank and transport them on dry ice to the cell culture facility.
2. Thaw the cryovials rapidly in a 37 °C water bath with gentle agitation.
3. After thawing, transfer the cell suspension to an appropriate solution to prepare a working suspension. The recommended cell density is 2.5–10 × 10^7 cells/mL. Use the cells for research purposes as required.