TransStem® Stem Cell Cryopreservation Medium—Protein Free (with DMSO)

Please read the manual carefully before use.

Cat. No. MC103

Storage: at 2-8°C in the dark for one year

Description

TransStem® Stem Cell Cryopreservation Medium—Protein Free is a chemically defined, serum-free, protein-free, ready-to-use cryopreservation medium designed for stem cells. This product is suitable for long-term stable cryopreservation of embryonic stem cells and mesenchymal stem cells derived from umbilical cord, bone marrow, adipose and other sources, which can protect cells from ice crystal damage during cryopreservation, while maintaining cell viability and multi-differentiation potential.

Features

- With 10% DMSO
- Completely using “pharmaceutical” grade materials
- Ultra-low endotoxin levels (< 0.1 EU/ml)
- Supports high-density cryopreservation of stem cells
- Supports programmed cryopreservation and direct cryopreservation at -80°C
- Validated cells frozen for 3 years with high cell recovery viability (> 90%)

Kit Content

Component	MC103-01
TransStem® Stem Cell Cryopreservation Medium—Protein Free	100 ml

Procedures

1. Cell cryopreservation

a. Cryopreservation of embryonic stem cells

(1) Digest and collect embryonic stem cells pellet in a centrifuge tube according to the routine method, centrifuge at 300×g for 5 minutes, and discard the supernatant.

(2) Add an appropriate amount of cryopreservation solution (Generally, 1ml cryopreservation medium can be used to freeze 1 well of a 6-well plate). Place cells into suspension.

(3) Dispense the cell suspension in the centrifuge tube into the cryogenic vial. Freeze samples at -80°C directly or in freezing containers for long-term storage. (Store samples at liquid nitrogen only after samples have been frozen overnight at -80°C)

b. Cryopreservation of mesenchymal stem cells

(1) Collect mesenchymal stem cells in a centrifuge tube according to the routine method, centrifuge at 300×g for 5 minutes, and discard the supernatant.

(2) Add an appropriate amount of cryopreservation solution to make the cell density 5×10^5 ~2×10^7 cells/ml. Place cells into suspension.

(3) Dispense the cell suspension in the centrifuge tube into the cryogenic vial. Freeze samples at -80°C directly or in freezing containers for long-term storage. (Store samples at liquid nitrogen only after samples have been frozen overnight at -80°C)

2. Cell recovery

(1) Add 5-10 ml of complete medium pre-warmed at 37°C into a 15 ml centrifuge tube.

(2) Take out the cryogenic vial from the -80°C or liquid nitrogen, and quickly thaw it in a 37°C water bath or cell resuscitation equipment until all visible ice has melted.

(3) Transfer the cell suspension in the cryogenic vial dropwise to the pre-prepared complete medium, mix gently, centrifuge at 300×g for 5 minutes, and discard the supernatant.

(4) Add an appropriate amount of preheated complete medium, pipet gently to mix, transfer to a culture vessel, and put it in an incubator (37°C, 5% CO_2).

Notes

- Please make sure that the cells grow well before cryopreservation, and the survival rate is greater than 90%, such as cells in the logarithmic growth phase.
- We recommend that users perform a pre-experiment on the frozen cells for at least 1 week before using this product, and then perform formal freezing after confirming the performance.
- This product is in sterile packaging and does not need to be filtered. Please be aware of using it under sterile conditions.
- Please ensure that the cell cryogenic vial is completely sealed to avoid bursting of the cryogenic vial during the resuscitation process.
- Please wear lab gown and wear antifreeze gloves for operation to avoid low temperature frostbite.

For research use only, not for clinical diagnosis

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