

**Product Name**

Name: Cryopreservation Solution 3, without phenol red

Cat. No.: C3525-0100, C3525-0050

Size: 100 mL, 50 mL

**Product Description**

Cryopreservation Solution 3 is a ready-to-use cryopreservation solution suitable for various mammalian cell lines, including tumor cells, conventional cells, and stem cells. This product is chemically defined (CD), animal component-free (ACF), and protein-free. It is ready to use without additional preparation, with minimal batch-to-batch variation, significantly reducing the risk of contamination by bacteria, viruses, and mycoplasma, thereby enhancing the safety and reproducibility of cell cryopreservation. The solution contains glucose and other components beneficial for cell survival, making it suitable for both serum-containing and serum-free culture systems as well as protein expression cells. After cryopreservation, it offers high recovery and survival rates. This cryopreservation solution contains DMSO.

Product features:

- **High Efficiency:** High cell recovery and survival rates, with minimal batch-to-batch variation and excellent stability. When used with the CryoFreeze cryopreservation box, it can achieve a cooling rate of 1°C/min.
- **Safety:** Serum-free, animal-origin-free, protein-free and with extremely low endotoxin levels, minimizing the risk of contamination.
- **Broad Spectrum:** Applicable to various cell lines (such as 293T, Jurkat, MSC, CHO, Vero, Sp2/0 cells, etc.).
- **Convenience:** Ready-to-use, no additional configuration required.
- **High Density:** Supports high-density cryopreservation, maintaining extremely high recovery and survival rates even when the cell cryopreservation density reaches  $1 \times 10^7$  cells/mL.

**Applications**

Designed for:

- Cryopreservation of cells from serum-free culture systems.

- Cryopreservation of cells cultured in conventional animal serum-containing systems.

**Procedure****To freeze cells:**

1. Harvest adherent or suspension cells in the logarithmic growth phase.
2. Determine the required cell number based on cell density and cryovial size.
3. Transfer cells to a centrifuge tube and spin at  $200 \times g$  for 5 minutes. Discard the supernatant.
4. Resuspend the cell pellet in the cryopreservation medium to achieve a final concentration of  $5 \times 10^5$  to  $1 \times 10^7$  cells/mL. Mix gently.
5. Aliquot 1.0–1.5 mL of the cell suspension into labeled cryogenic vials.
6. Transfer these cryogenic vials to a controlled-rate cooling device such as VivaCell Freezing Container (H2025-0018). (Steps 4-6 should be completed within 5-10 minutes. If multiple samples are involved, separate them into two or more groups.)
7. Keep the box at  $-80^\circ\text{C}$  (in a freezer) overnight. Then transfer the vials to liquid nitrogen for long-term storage.

**To thaw cells:**

1. Remove the cryovials from liquid nitrogen and immediately place in a  $37^\circ\text{C}$  water bath with gentle shaking.
2. Once mostly thawed (with a small ice crystal remaining), add 1 mL of a complete medium to the cryovial and mix gently.
3. Transfer contents to a centrifuge tube with 5 mL of the complete medium, spin at  $200 \times g$  for 5 minutes, and discard the supernatant. Caution: Do not disturb the cell pellet.
4. Gently resuspend the cell pellet in fresh culture medium.
5. Examine under a microscope and continue with routine culturing based on your experimental needs.

**Storage and Stability**

- Store at 2–8 °C, protected from light.
- Do not freeze the product itself.
- Shelf life: 12 months from the manufacturing date (see product label).

**Note:**

- Long-term storage of cryopreserved cells is best achieved by putting in liquid nitrogen following programmed cooling.
- For stem cells or DMSO-sensitive cells, a trial freeze–thaw experiment for at least 1 week is recommended to verify performance before bulk cryopreservation.
- Contains 10% DMSO – handle with appropriate PPE and protocols.
- Do not use after the product expiration date.

**Quality Control**

Each lot is tested for sterility, pH, osmolality, endotoxin, cell viability and recovery.

**Precaution and Disclaimer**

For research use only, not for clinical diagnosis, and treatment.