



**GMP-Grade** 

# OptiVitro® Serum-free Cell Cryopreservation Medium UC04

DMF Registered

Protein-free

Low DMSO (7.5%)

Preferred for cellular therapy

**Efficient Cryopreservation Ensures Safety and Reliability** 



# **R** PRODUCT OVERVIEW

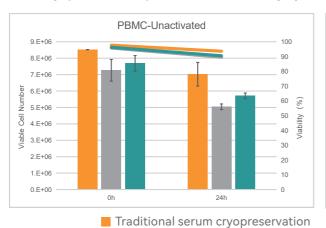
OptiVitro® Serum-Free Cell Cryopreservation Medium is a ready-to-use solution designed for the low-temperature cryopreservation of mammalian cells. It eliminates the need for additional preparation, ensures high cell recovery and viability post-thawing, and serves as an ideal replacement for traditional serum-containing cryopreservation media.

# **PRODUCT FEATURES**

- Safe: Serum-free, free of xenogeneic animal components, and chemically defined.
- Efficient: High cell recovery rates (>90% for multiple cell types).
- Wide-use: Suitable for cryopreserving various human and animal cells.
- Convenient: Ready-to-use, no additional preparation required.
- Simple: Compatible with both non-programmable freezing and -80°C storage.

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#### 1. The cryopreservation protects PBMC from injury after thawing, while keeping cells viability and function



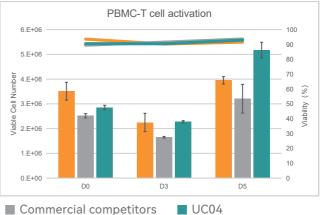


Figure A: Recovery Cell Count and Viability of PBMCs Cryopreserved with Optivitro® Serum-free Cell Cryopreservation Medium UC04 and Activated as T Cells.

\*PBMCs were stored in liquid nitrogen for over 72 hours and then thawed. The initial cell count was 8×10<sup>6</sup>. Cells were counted at 0h, 24h, Day 3 (D3), and Day 5 (D5) to assess cell proliferation and viability.

#### 2.UC04 is suitable for peripheral blood mononuclear cells (PBMCs) from different donors

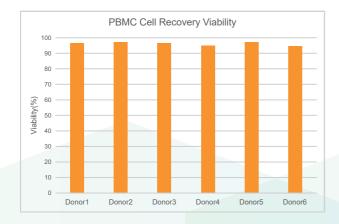


Figure B: Viability of PBMCs from Different Donors Thawed after Cryopreservation with Optivitro® Serum-free Cell Cryopreservation Medium UC04.

\*PBMCs were stored in liquid nitrogen for over 72 hours and then thawed. The initial cell count was 8×10<sup>6</sup>, and cell viability was assessed at 0 hours post-thaw.

#### 3.UC04 cryopreserved and recovered T cells maintain high viability and rapid proliferation capacity

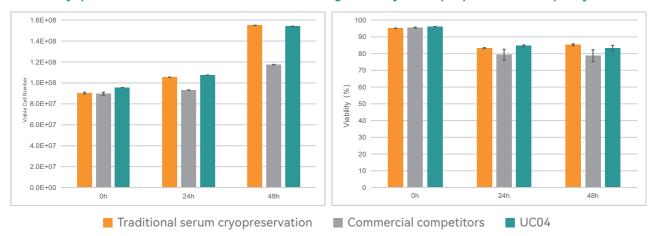


Figure C: Recovery Cell Count and Viability of T Cells Cryopreserved at High Density with Optivitro® Serum-free Cell Cryopreservation Medium UC04.

 $^*$ T cells were stored in liquid nitrogen at a concentration of  $1\times10^8$  cells/mL for over 72 hours and then thawed. Cell counts and viability were assessed at 0h, 24h, and 48h post-thaw to determine the total viable cell count and cell viability.

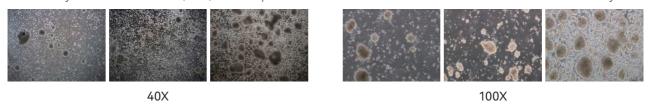


Figure D. Morphological characteristics of PBMC cells activated into T cells on D5 after cryopreservation \*A. Traditional serum-containing cryopreservation solution; B. Commercial competitor III (three\*); C. OptiVitro® serum-free cell cryopreservation solution UC04

#### 4. High-density cryopreservation of immune cells (density: 1×10<sup>8</sup> cells/mL) maintains high viability after thawing

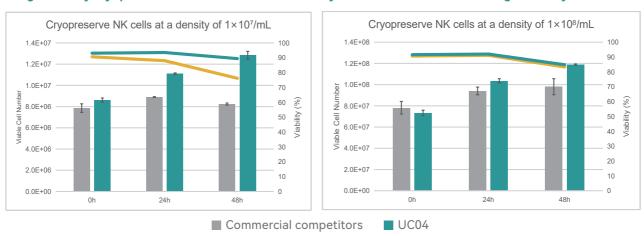


Figure E. Cryopreservation of Natural Killer (NK) Cells at High Density Using OptiVitro® Serum-Free Cell Cryopreservation Solution UC04: Post-Thaw Cell Recovery and Viability Rate.

\*NK cells were cryopreserved in liquid nitrogen for over 72 hours, then subjected to cryopreservation recovery. The total number of viable cells and viability rate were enumerated and calculated at 0 hours, 24 hours, and 48 hours post-recovery, respectively.

# $\mathcal{B}$ Product Information

Catalog Number	Specification	Product Name	Storage Conditions
UC000-N056	100mL	OptiVitro® Serum-Free Cell Cryopreservation Medium Uc04	2-8°C, 24 months



Your Cell, Our Culture

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