PBMC Cryopreservation Media

CellStore

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CELLSTORE | Ice Controlling Technology For a Better Life

CS-PM-D1 (10% DMSO, 100mL/bottle)

For peripheral blood– and cord blood–derived mononuclear cells and buffy coats.

Product Advantages

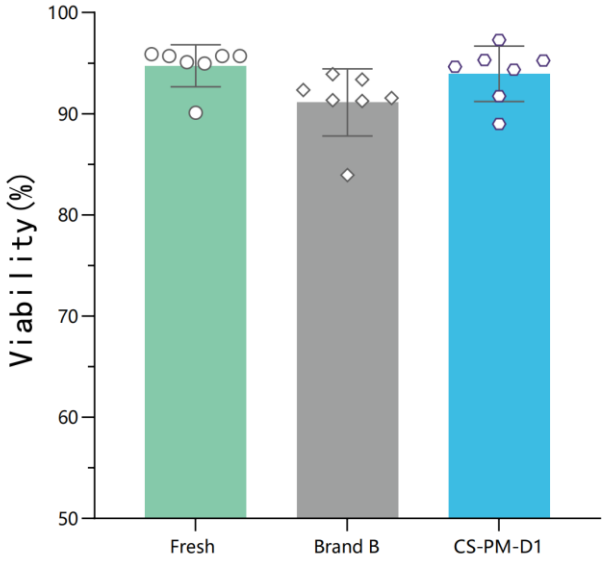
- Ready-to-use
- cGMP-manufactured with pharmacopeia ingredients
- Chemically Defined
- Animal component-free
- High-density, high-viability

Recommended Cell Density and Post-Thaw Performance

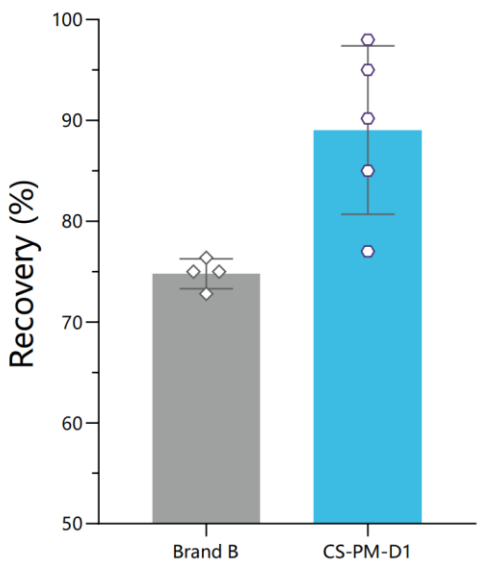
Density	Post-Thaw Viability		Viable Cell Recovery Rate
	3 Days	6 Months	
$1 \times 10^6 – 1 \times 10^8$ cells/mL	> 90%	> 90%	> 85%

Post-Thaw Viability and Recovery After Long-Term Cryostorage of PBMCs

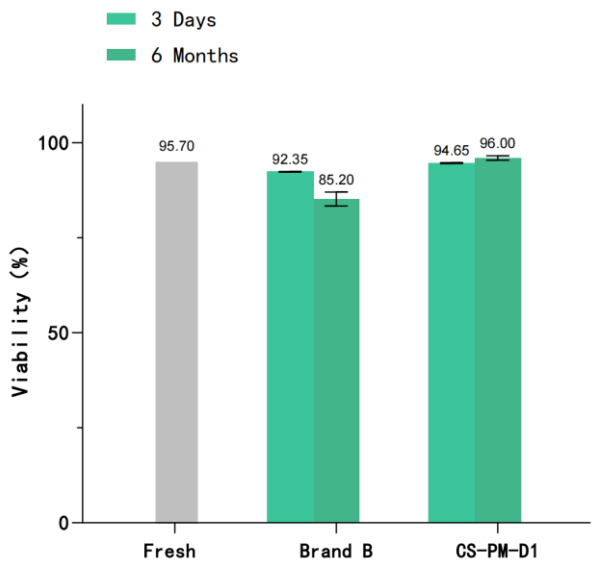
Post-Thaw Viability



Viable Cell Recovery Rate



Post-Thaw Viability After 6-Month Liquid Nitrogen Storage



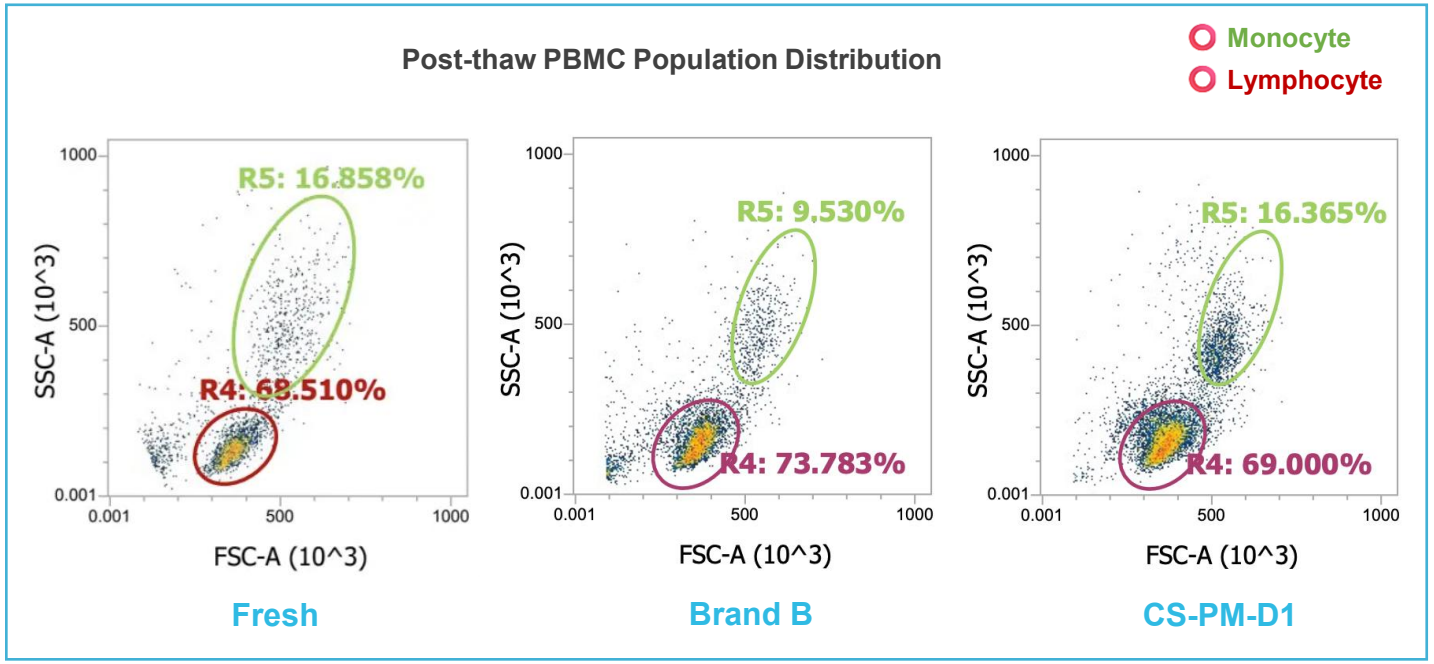
Preservation Density: 5 × 10^7 cells/mL; PBMCs from seven donors across multiple lots.

Note: Brand B refers to CryoStor® CS10 (BioLife Solutions).

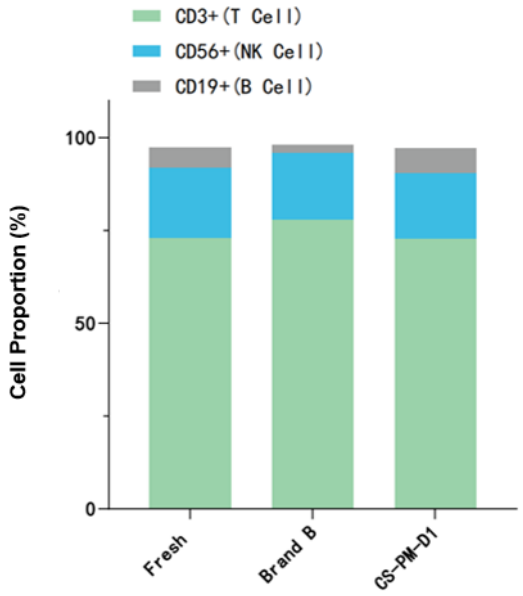
- CS-PM-D1 delivers post-thaw cell viability comparable to fresh cells and higher than Brand B, with improved live cell recovery.
- These performance advantages are maintained over six months of liquid nitrogen storage.

Flow Cytometry Variability Starts with Cryopreservation

Flow Cytometry Variability Often Starts before Analysis



Post-thaw Immune Cell Subset Distribution



Preservation Density: 5 × 10^7 cells/mL; immunophenotype analyzed by flow cytometry.

Note: Brand B refers to CryoStor® CS10 (BioLife Solutions).

- After thawing, both PBMC population structure and immune subset proportions ($CD3^+$, $CD19^+$, $CD56^+$) in the CS-PM-D1 group were comparable to Fresh samples and more consistent than Brand B.

Whole Blood: A Workflow Advantage

Preserved Immune Cell Proportions Across Volumes

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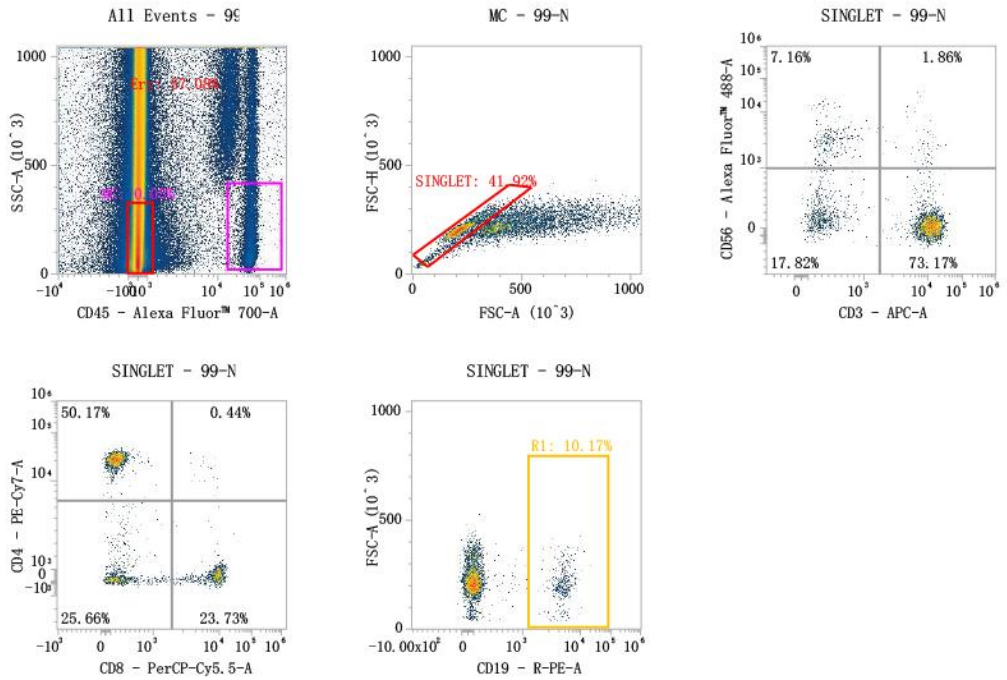
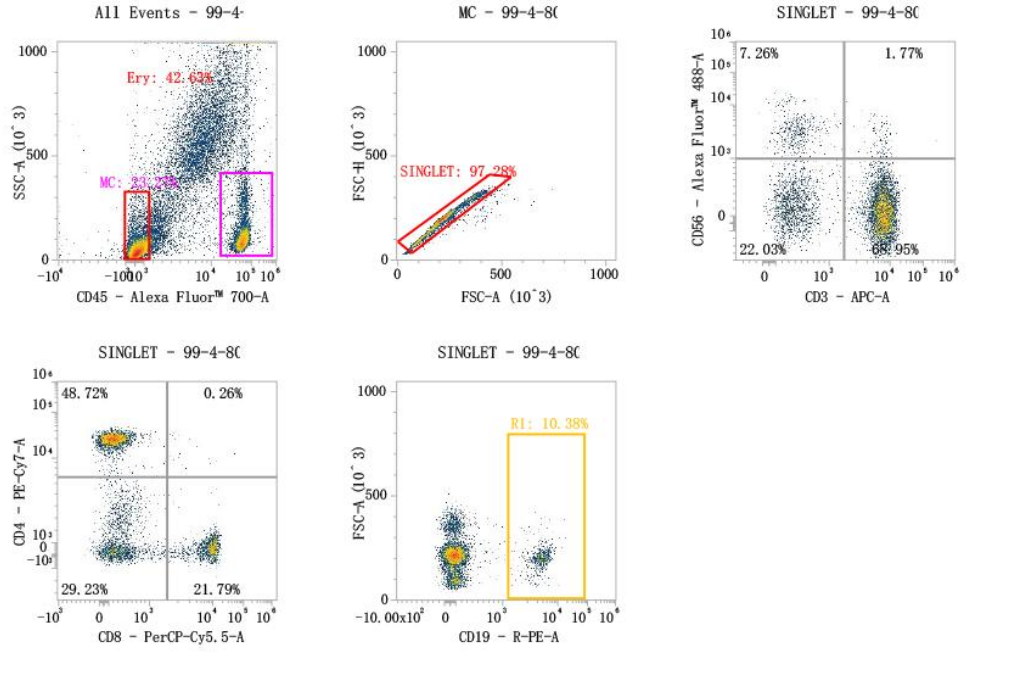
Whole Blood Frozen Directly with CS-PM-D1 (1:1) / No PBMC Isolation before Freezing / Stable Post-thaw Immune Profiles



Fresh



Post-thaw

- CS-PM-D1 enables direct whole blood cryopreservation without PBMC isolation, while maintaining stable post-thaw immune cell profiles.

Whole Blood: A Workflow Advantage

Consistent Flow Cytometry Readouts After Thawing

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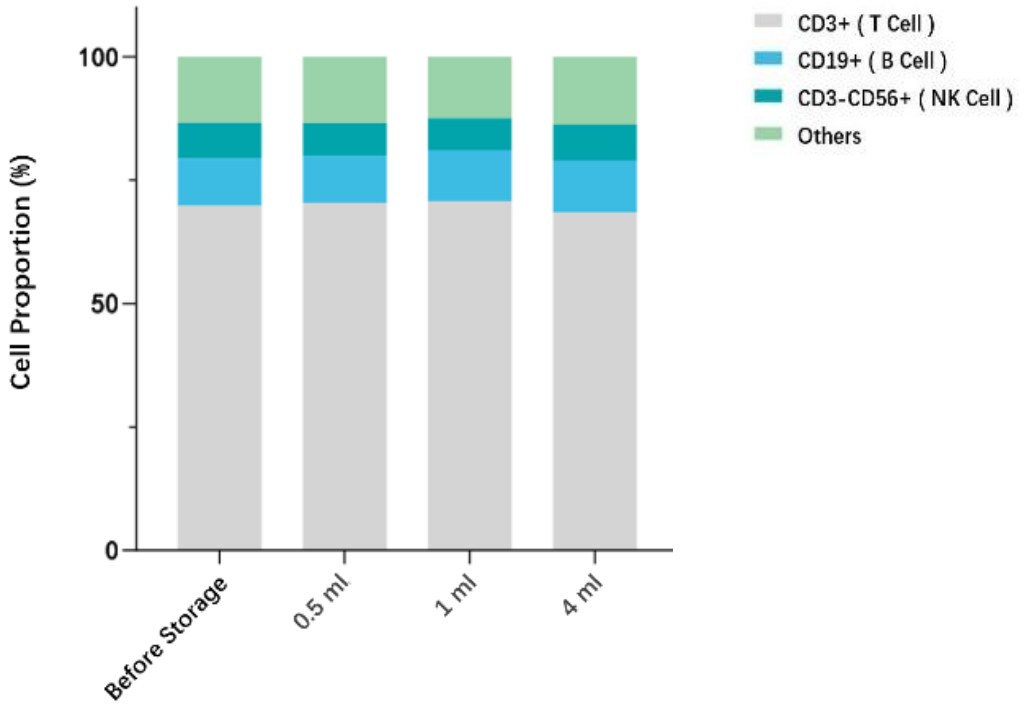
Immune Cell Proportions Remain Stable



Why This Matters for Flow Labs

✓ Eliminates PBMC isolation before freezing

✓ Reduces handling-induced variability

✓ Enables consistent flow readouts across sample volumes

Particularly suitable for decentralized sample collection and centralized flow cytometry analysis.

- **After thawing, the relative proportions of T cells ($CD3^+$), B cells ($CD19^+$), and NK cells ($CD3^-CD56^+$) remain consistent across storage volumes, supporting reliable downstream flow cytometry analysis.**

CS-PM-D1 has been validated in flow cytometry–based workflows across research labs, biobanking, and clinical research settings.

Thanks