

# We Focus on Cell Culture

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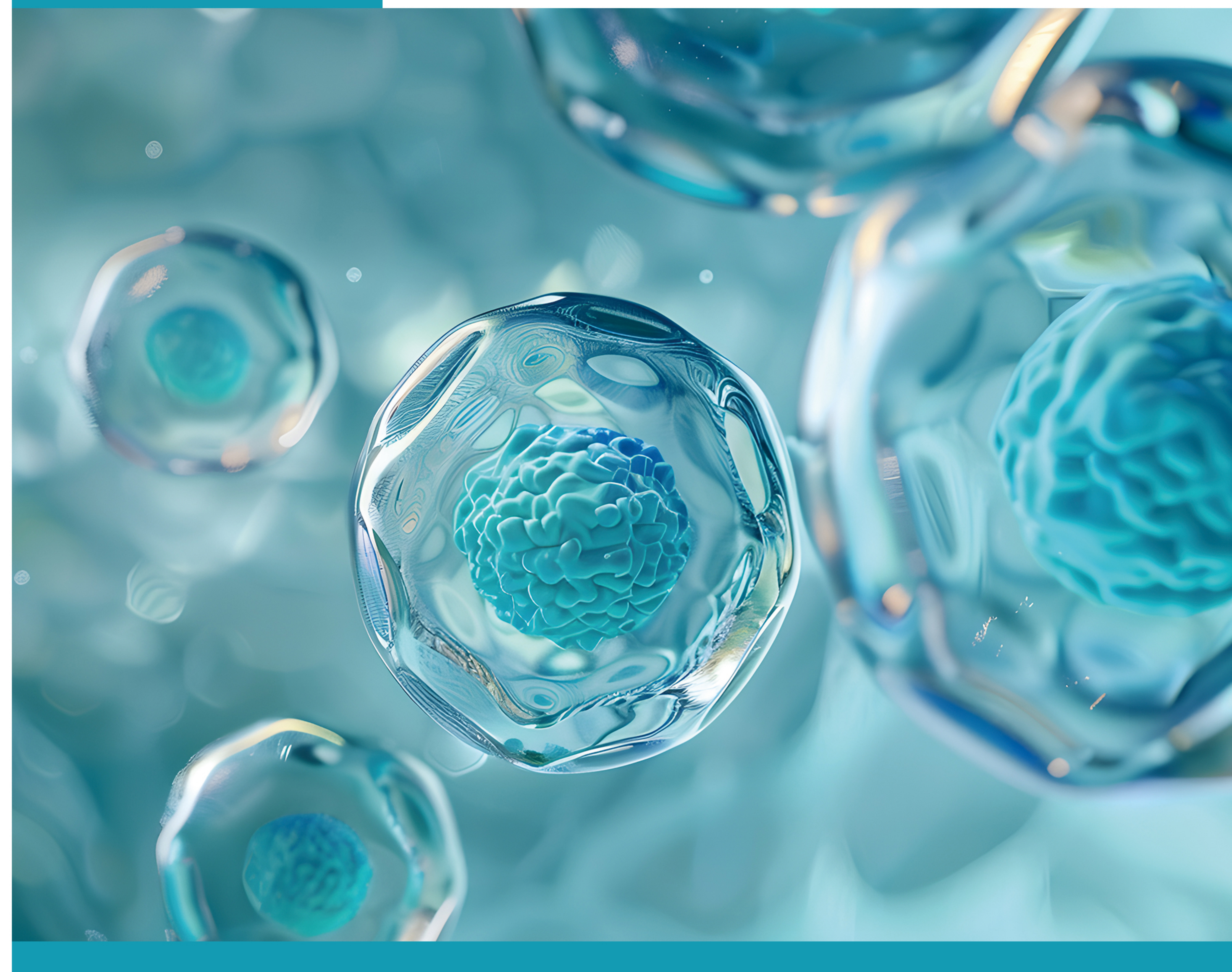


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**BASALMEDIA**



## Cell and Gene Therapy Products and Solutions

Shanghai BasalMedia Technologies Co., Ltd.



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BasalMedia

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## About Basalmedia

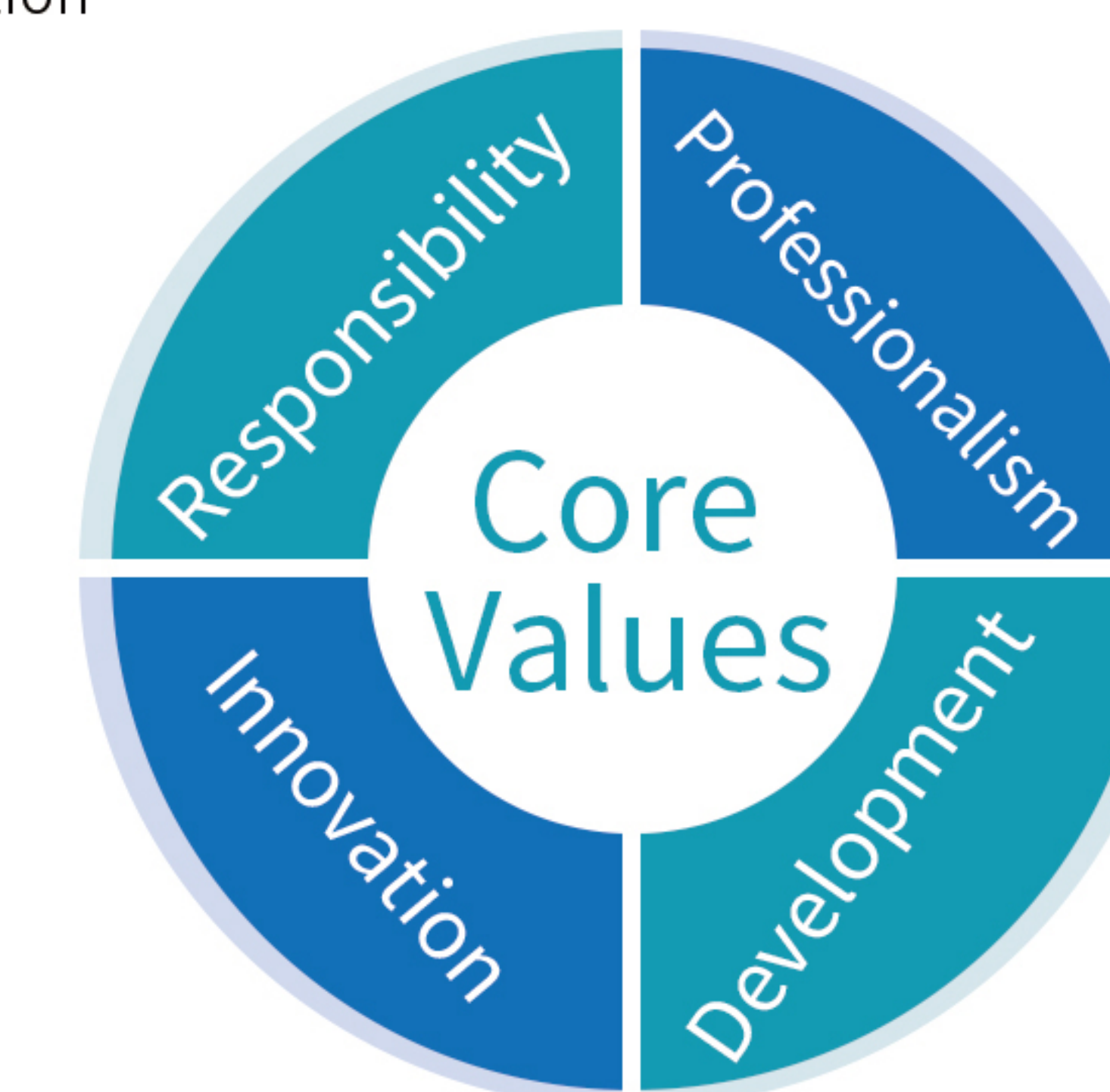
BasalMedia (Stock Code: 833783) founded in 2012 and headquartered in Shanghai, is a high-tech enterprise dedicated to the research, development, and manufacturing of cell and microbial culture media, along with related reagents. Deeply engaged in the biotechnology segment, the company leverages its independent R&D, technical services, and robust production capabilities to deliver precision products and technical solutions for fields such as biopharmaceuticals, vaccines, and cell and gene therapy.

**ISO45001:** 2018 Occupational Health and Safety Management System Certification (Certification No.: 11722S00019-01R0M)

**ISO14001:** 2015 Environmental Management System Certification (Certification No.: 11722E00020-01R0M)

**ISO13485:** 2016 Medical Devices Quality Management System Certification (Certification No.: 11719Q0M0046R0M)

**ISO9001:** 2015 Quality Management System Certification (Certification No.: 11719Q00039-05R0M)



Proprietary formulations: **60+**  
 Patent applications: **50+**  
 Registered trademarks: **20+**  
 Registered DMFs: **2+**

GMP facility area: **8,000+ sqm**  
 Liquid culture media: **1,000,000+ liters**  
 Powdered culture media: **50,000,000+ liters**  
 Microbiological assay plates: **10,000,000+ plates**  
 Bottled microbiological culture media: **1,500,000+ bottles**

## Product Portfolio

### Cell Culture Media Product Lines



#### Science & Basic Research

- Classical Media
- Primary Cell Culture Media
- Serum and Serum Substitutes



#### Cell & Gene Therapy (CGT)

- Immune Cell Therapy
- Stem Cell Therapy
- Neural Cell Research



#### Vaccines & Biopharmaceuticals

- Recombinant Protein and Antibody Production
- Viral Expression



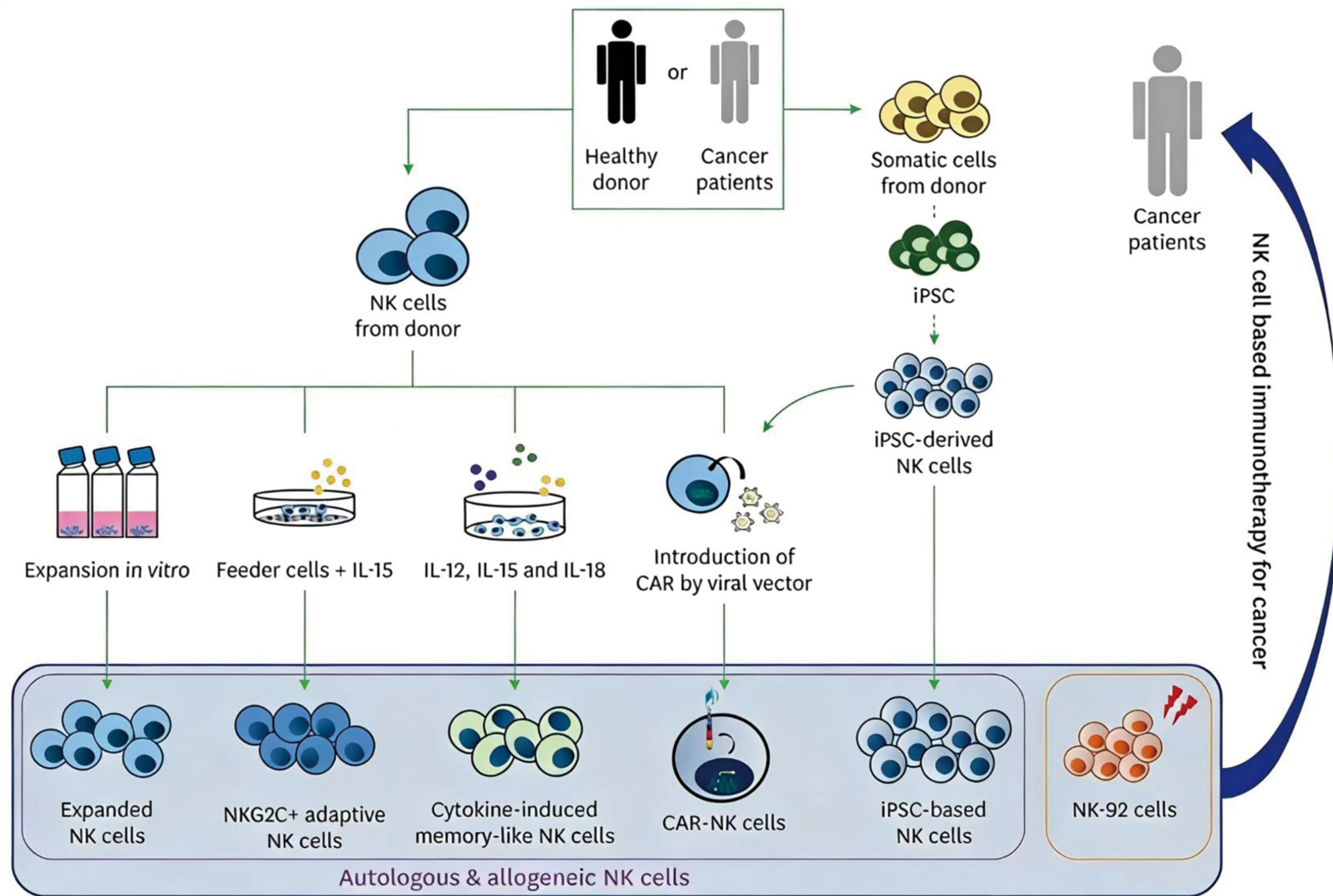
#### Cell Culture Related Reagents

- Balanced Salt Solutions
- Cell Digestion and Dissociation Reagents
- Antibiotic and Antimicrobial Reagents
- Cell Culture Supplements

# Immune Cell Culture

## About Immune Cell Therapy

Immune cell therapy is an advanced treatment method that utilizes a patient's own immune cells to combat diseases. Its therapeutic process primarily consists of three core steps: cell collection, in vitro expansion, and cell reinfusion.



## LymGro® OptiT Lymphocyte SFM

### Key Features

- Universal for immune cells: Supports T cells (including CAR-T), DC cells, CIK cells, NK cells, and TIL cells
- Supports high-density culture: up to  $3 \times 10^6$  cells/mL

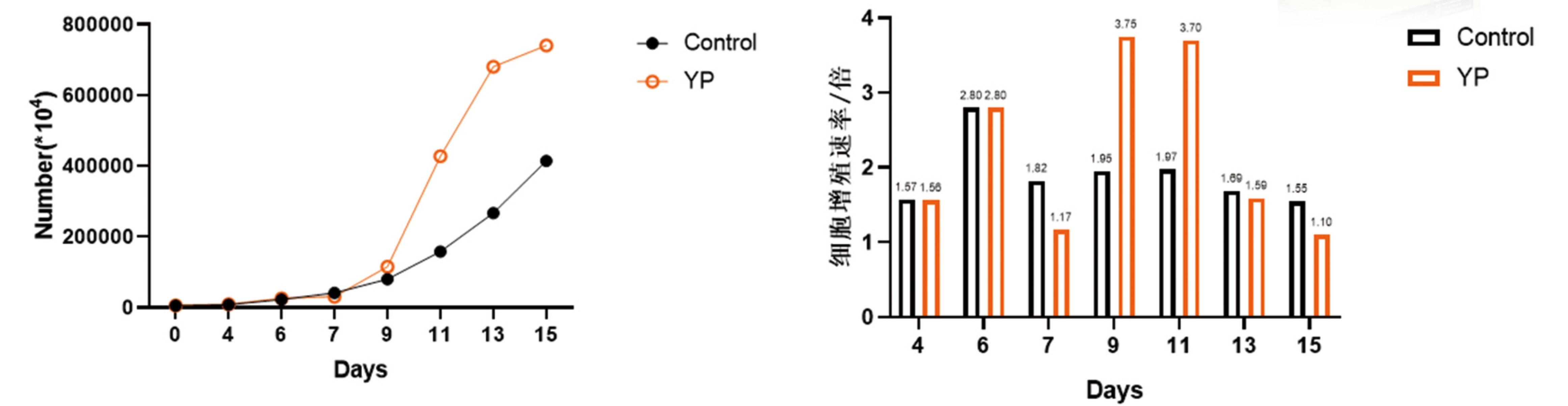
## LymGro® NK SFM

### Key Features

- Optimized specifically for NK cells: Supports NK cells derived from peripheral blood, umbilical cord blood, iPSCs, and NK cell lines
- Supports high-density culture: up to  $3 \times 10^4$  cells/mL
- Animal component-free formulation

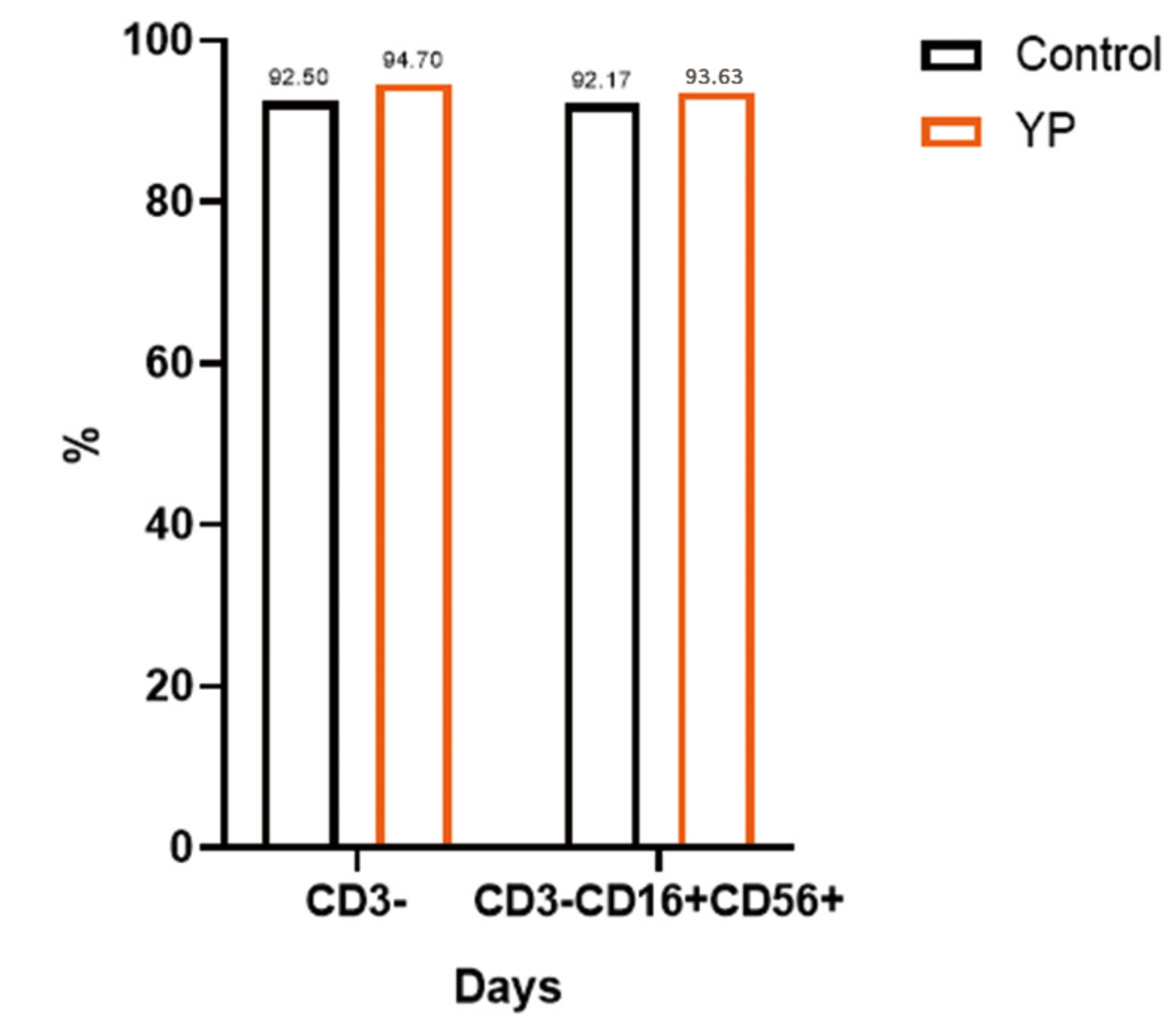
### Performance Testing

- Growth curve and doubling efficiency analysis



LymGro® NK SFM: Initial cell count on D0: 120 million; final cell count on D15: 7.4 billion. Total expansion fold: 61.67× Competitor: Initial cell count on D0: 120 million; final cell count on D15: 4.14 billion. Total expansion fold: 34.5× Doubling efficiency comparison: The doubling efficiency of the LymGro® NK SFM group was significantly higher than that of the control group from D7 to D11, indicating a notable advantage in promoting cell proliferation.

- Cell Purity Analysis



LymGro® NK SFM: On D15, the proportion of CD3- cells was 94.7%; the proportion of CD16+CD56+ CD3- cells was 93.63%. Competitor: On D15, the proportion of CD3- cells was 92.5%; the proportion of CD16+CD56+CD3- cells was 92.17%. Purity Comparison: The purity of CD16+CD56+CD3- cells in the LymGro® NK SFM was slightly higher than that in the control group.

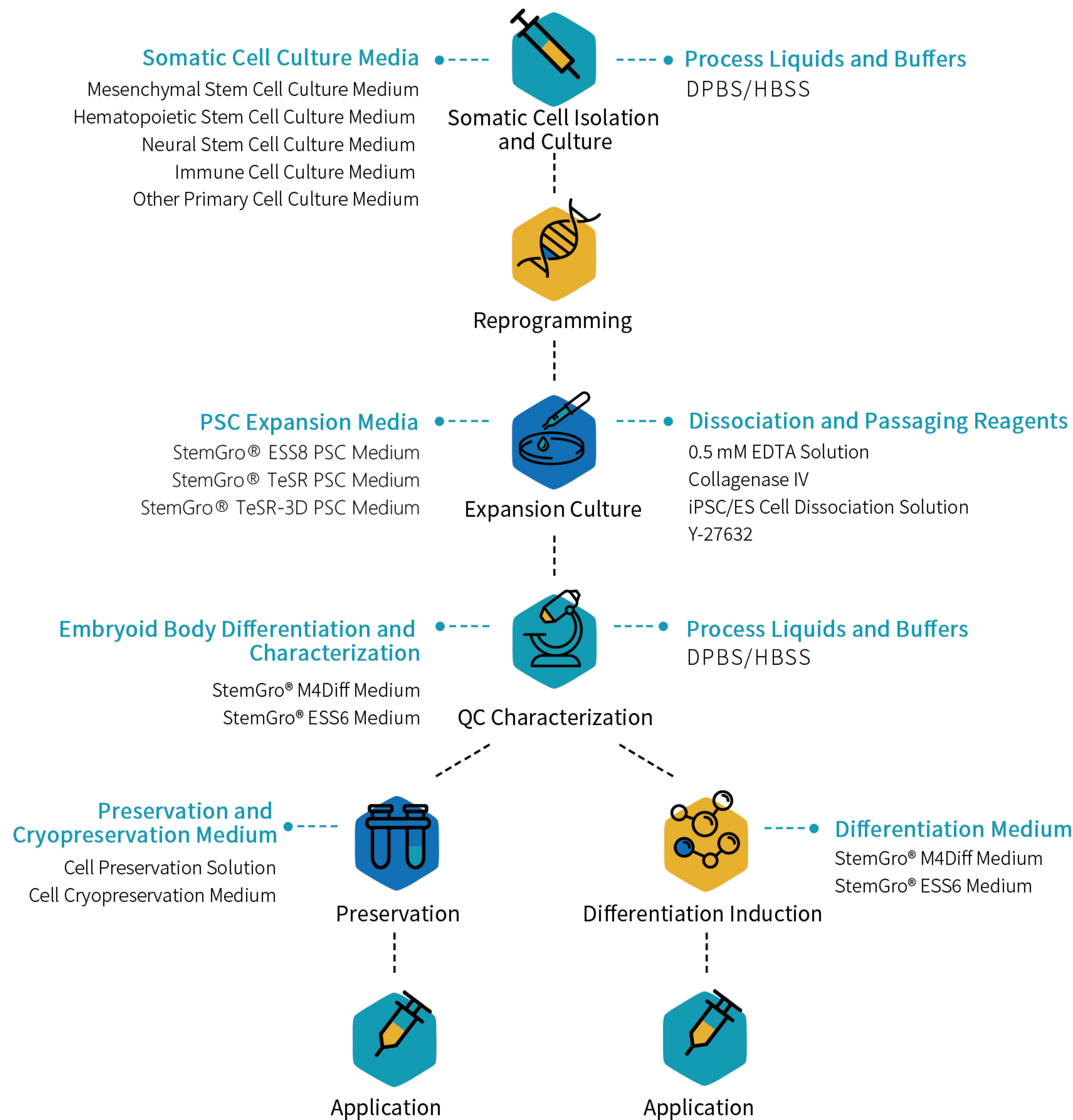


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# Pluripotent Stem Cell Culture

## ➤ Induced Pluripotent Stem Cell (iPSC) Research Total Solution



## Pluripotent Stem Cell (PSC) Expansion Media

The StemGro® series of pluripotent stem cell expansion media are specialized culture systems developed for human pluripotent stem cells (hPSC, including hiPSC and hESC). They support mainstream culture formats such as 3D suspension culture, 3D scaffold culture, and 2D adherent culture. All products in the series feature animal component-free formulations and chemically defined compositions, meeting the core requirements for stability, safety, and efficiency in stem cell culture for both research and CGT applications.

### StemGro® TeSR-3D PSC Medium

#### Product Components

- Universal Basal Medium: StemGro® ESS8/TeSR Basal Medium
- Specialized Supplement: StemGro® TeSR-3D Supplement

#### Key Features

- Optimized specifically for 3D suspension culture and precisely supports EB culture
- Animal component-free, chemically defined
- Long-acting cytokine formulation; a single feeding maintains nutritional support for over 48 hours, eliminating the need for weekend medium changes



### StemGro® TeSR PSC Medium

#### Product Components

- Universal Basal Medium: StemGro® ESS8/TeSR Basal Medium
- Specialized Supplement: StemGro® TeSR-2D Supplement

#### Key Features

- Designed specifically for planar adherent culture or microcarrier-based 3D culture
- Animal component-free, chemically defined
- Long-acting cytokine formulation; a single feeding provides nutritional support for over 48 hours, eliminating the need for weekend medium changes



### StemGro® ESS8 PSC Medium

#### Product Components

- Universal Basal Medium: StemGro® ESS8/TeSR Basal Medium
- Specialized Supplement: StemGro® ESS8 Supplement

#### Key Features

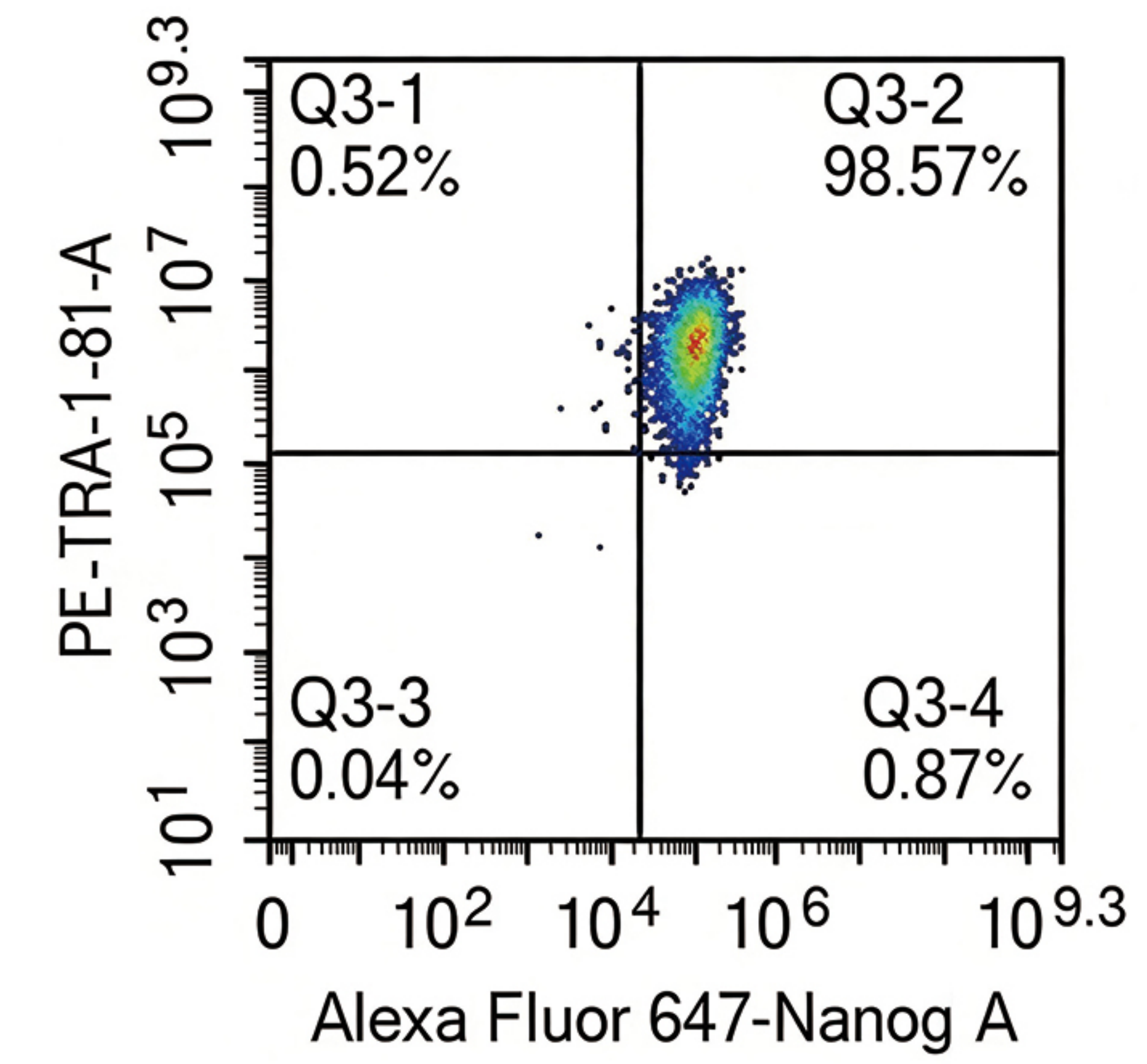
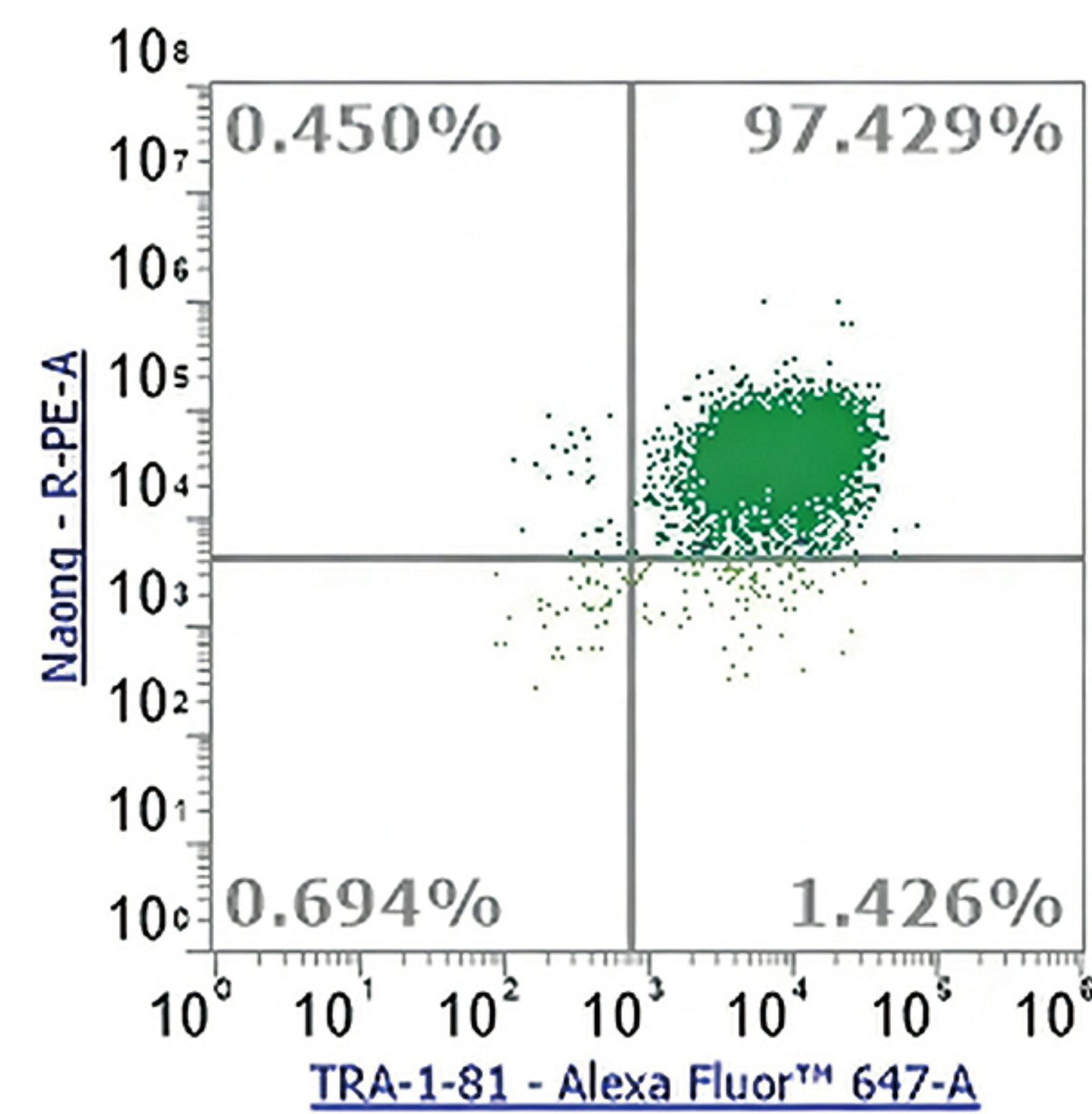
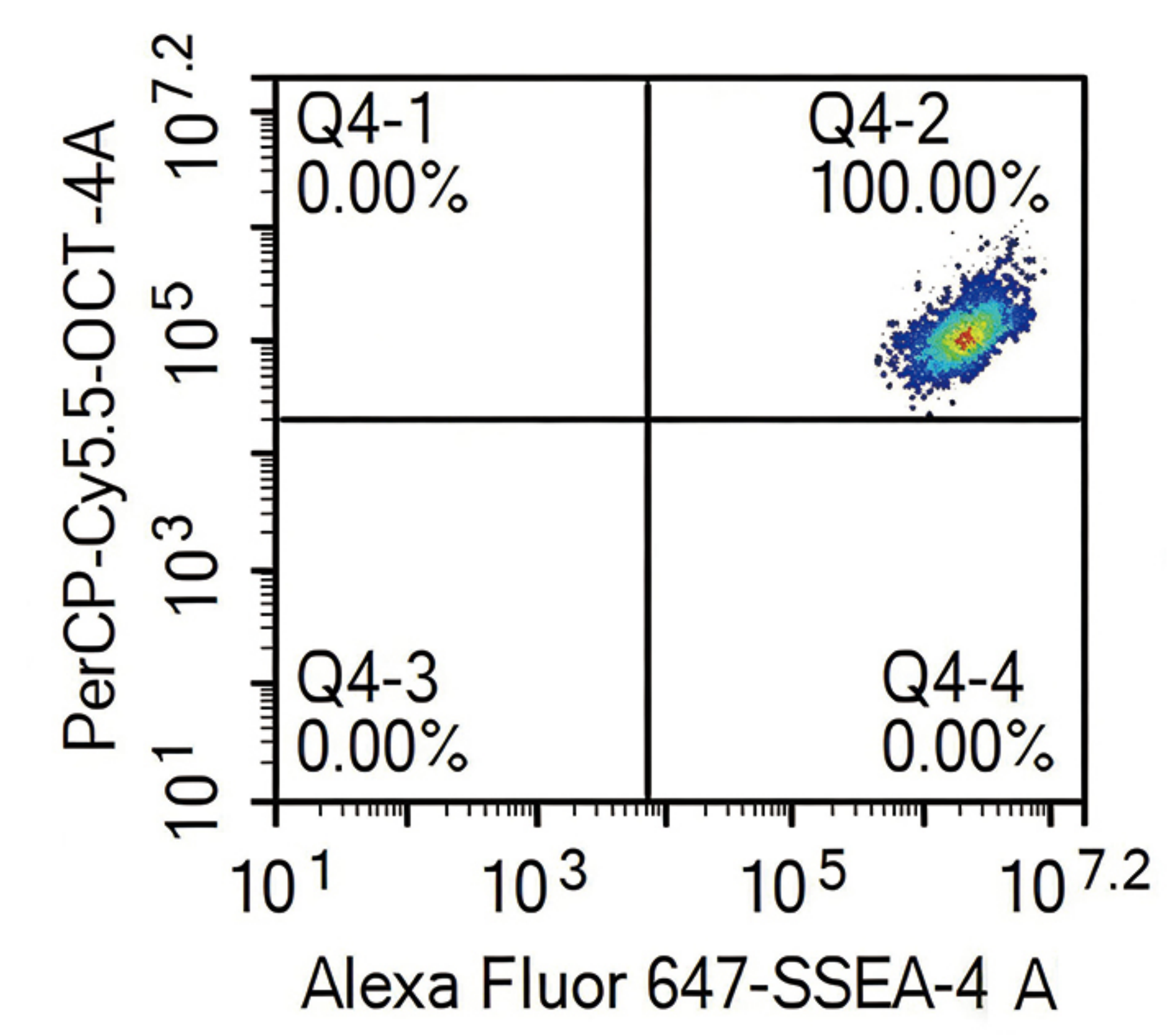
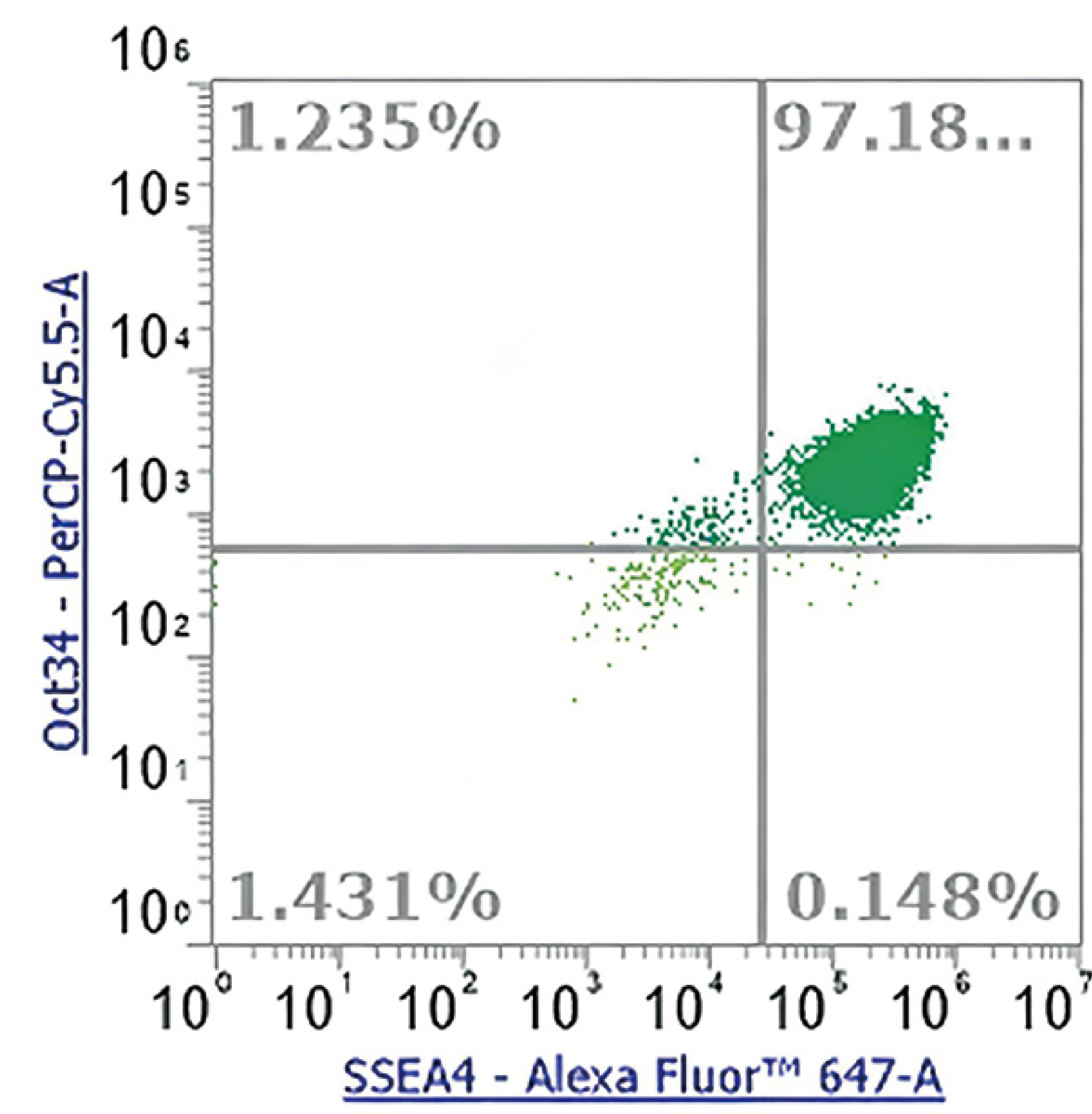
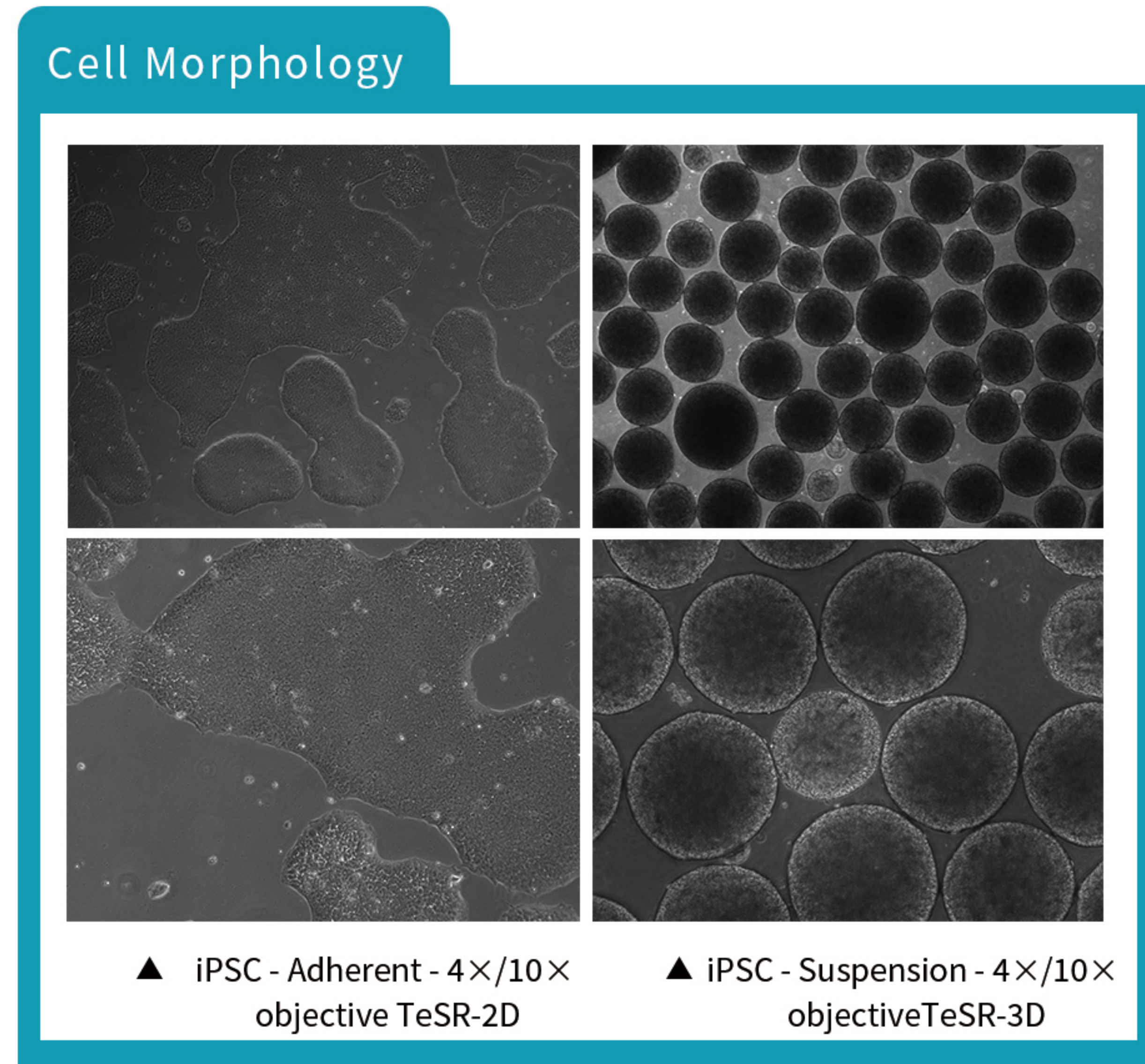
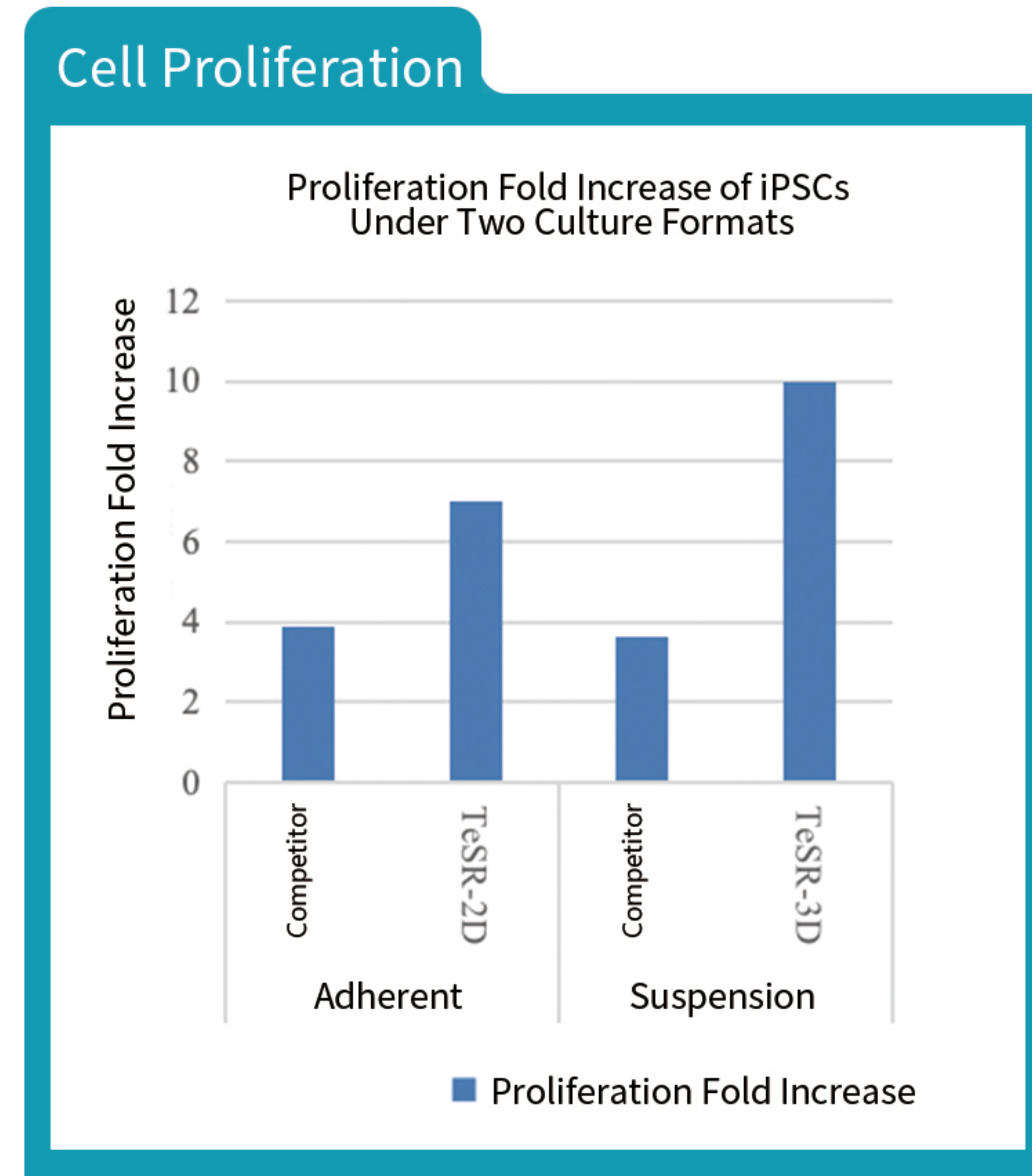
- Streamlined and controllable composition: only 8 essential stem cell components are added to the basal formulation, minimizing spontaneous differentiation
- Animal component-free, chemically defined
- Long-acting cytokine formulation; a single feeding provides nutritional support for over 48 hours, eliminating the need for weekend medium changes



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StemGro® TeSR Series Performance Testing



▲ Competitor's flow cytometry plot

▲ StemGro® TeSR flow cytometry plot

Pluripotent Stem Cell (PSC) Differentiation Medium

StemGro® M4Diff Medium

Key Features

- Compatible with both adherent differentiation and embryoid body (EB) differentiation workflows, offering flexible application scenarios
- Can be used with a variety of inducing agents or cytokines to support differentiation into the three germ layers: ectoderm, mesoderm, and endoderm
- Animal component-free, chemically defined



StemGro® ESS6 Medium

Key Features

- Precisely controlled composition: only 6 essential stem cell components are added to the basal formulation, minimizing batch-to-batch variation
- Compatible with both adherent differentiation and embryoid body (EB) differentiation workflows, offering flexible application scenarios
- Can be used with a variety of inducing agents or cytokines to support differentiation into the three germ layers: ectoderm, mesoderm, and endoderm
- Animal component-free, chemically defined

PSC Culture Related Products

Passaging and Digestion

Trpzyme® iPSC/ESCell Dissociation Solution

Key Features

- Animal component-free, specifically developed for 2D/3D culture of PSC
- Derived from natural microorganisms; completely replaces animal-derived trypsin
- Combines mildness, convenience, and high biosafety

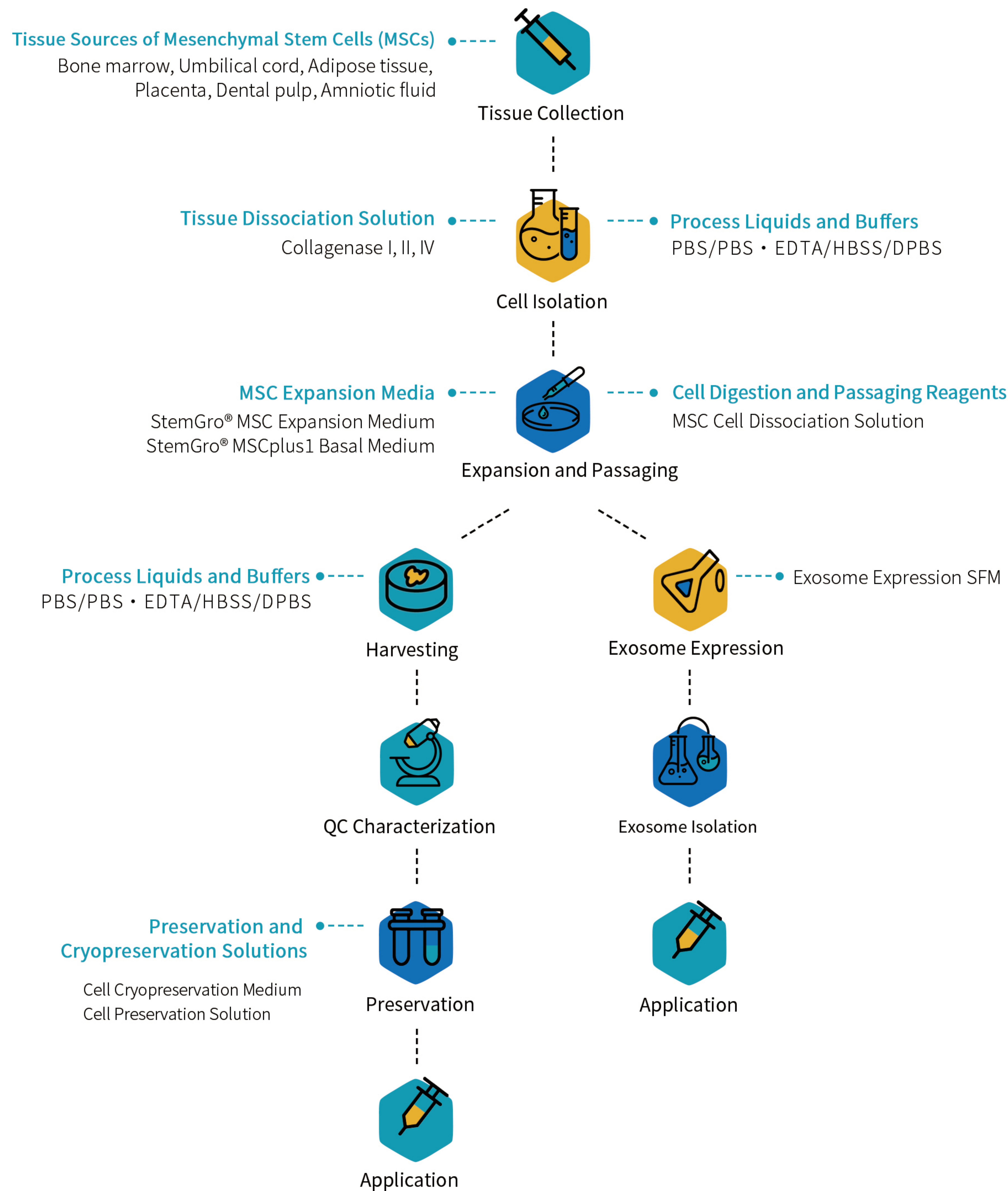


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# Mesenchymal Stem Cell Culture

## Mesenchymal Stem Cell (MSC) Research Total Solution



# Mesenchymal Stem Cell (MSC) Culture Media

The StemGro® series of mesenchymal stem cell culture media are specialized culture systems developed by Basalmedia for human mesenchymal stem cells (including those derived from umbilical cord, bone marrow, adipose tissue, and umbilical cord blood). Basalmedia offers expansion media and basal media for users to choose flexibly. Through formulation optimization, the series reduces the required supplementation level of serum substitutes while ensuring high proliferative activity and differentiation potential of MSCs, thereby meeting the demands for stability and cost-effectiveness in both research and CGT applications.

## StemGro® MSC Expansion Medium

### Key Features

- Broad applicability: Supports MSCs derived from bone marrow, umbilical cord, adipose tissue, placenta, dental pulp, amniotic fluid, and others
- Safety assurance: Xeno-free formulation eliminates the risk of cross-contamination
- Convenient use: Pre-supplemented with serum substitutes; ready-to-use and easy to operate
- Stable maintenance: Preserves typical spindle-shaped morphology and normal chromosome karyotype
- Stemness maintenance: Supports high proliferation rate while maintaining trilineage differentiation potential toward osteogenic, adipogenic, and chondrogenic lineages



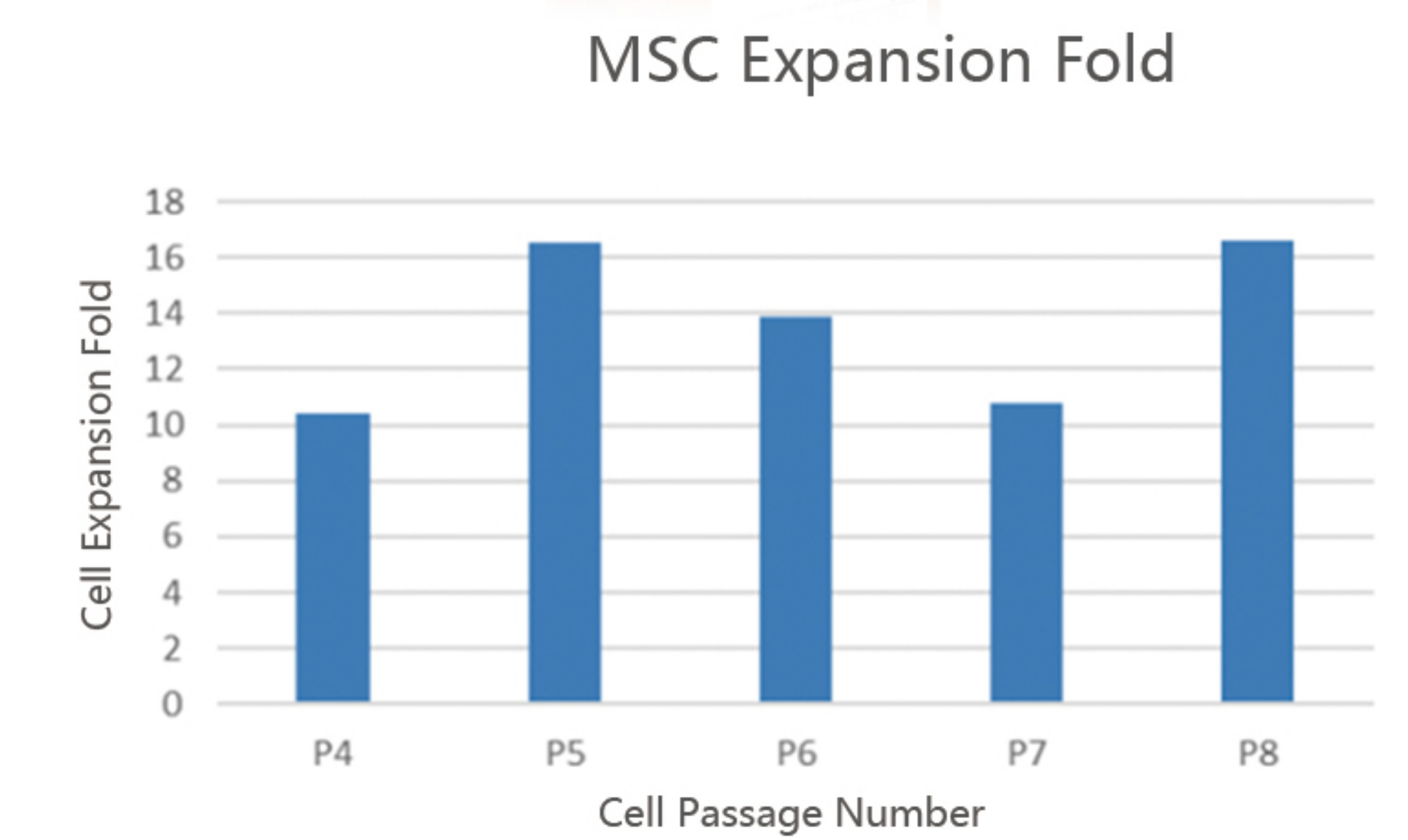
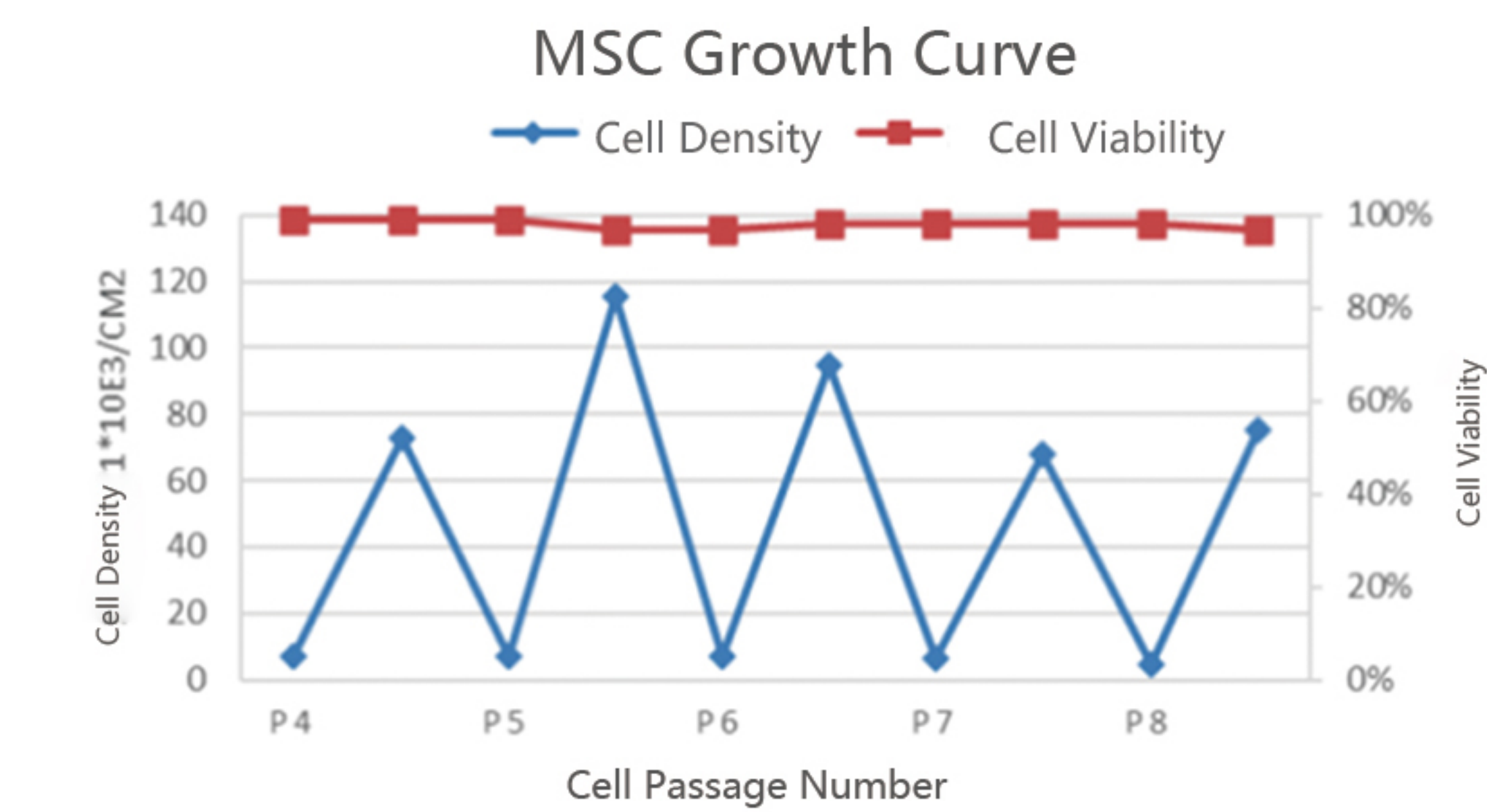
## StemGro® MSCplus1 Basal Medium

### Key Features

- Revolutionary low serum supplementation: Formulation optimized to require only 2% platelet lysate (PLT), significantly lower than other brands (5% PLT), substantially reducing culture costs
- Broad applicability: Supports MSCs derived from bone marrow, umbilical cord, adipose tissue, placenta, dental pulp, amniotic fluid, and others
- Safety assurance: Animal origin-free (AOF) formulation eliminates the risk of cross-contamination
- Flexible application: Compatible with various serum substitutes and can also be used for xeno-free/chemical-defined culture systems

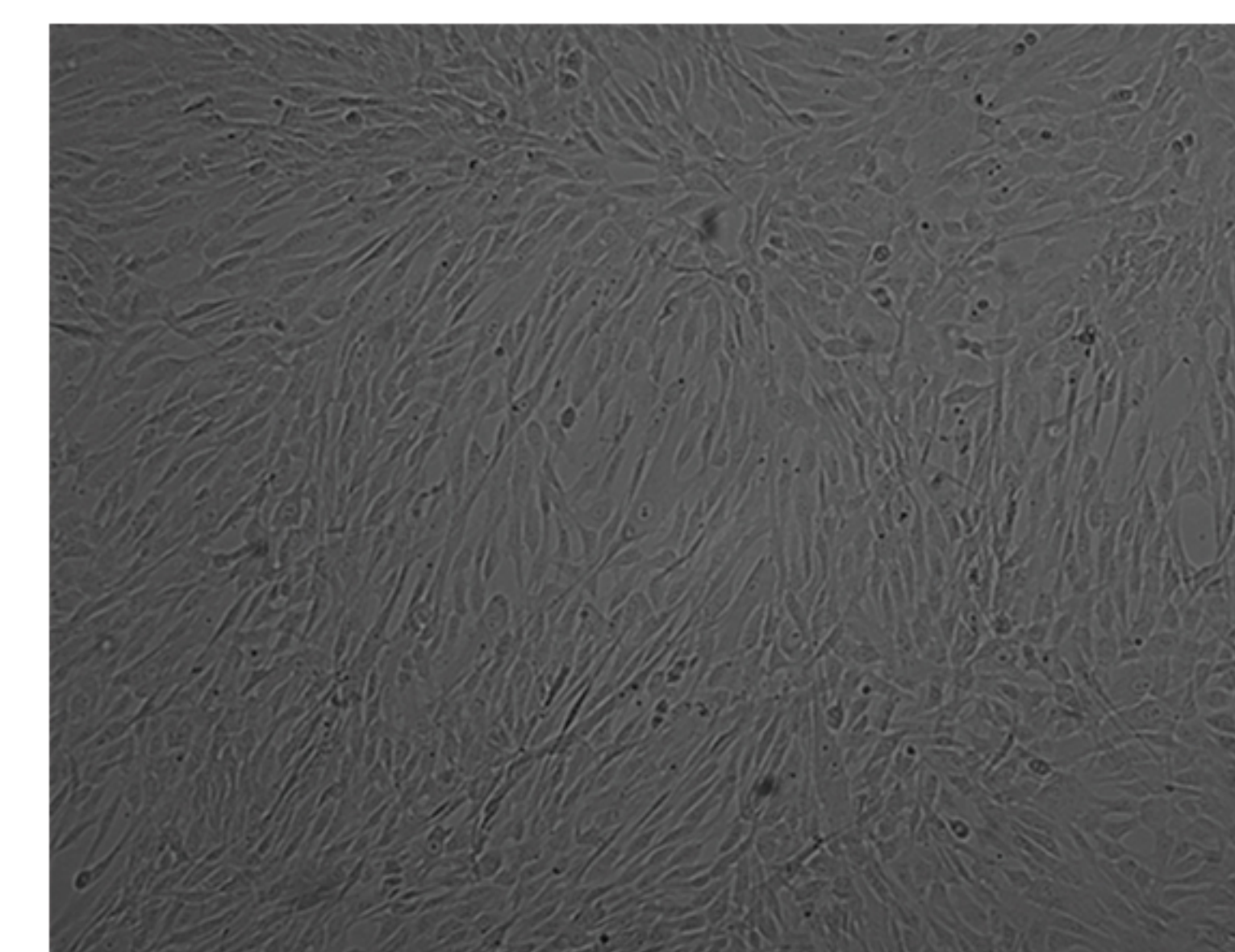


### Performance Testing



▲ MSCplus1+2%PLT

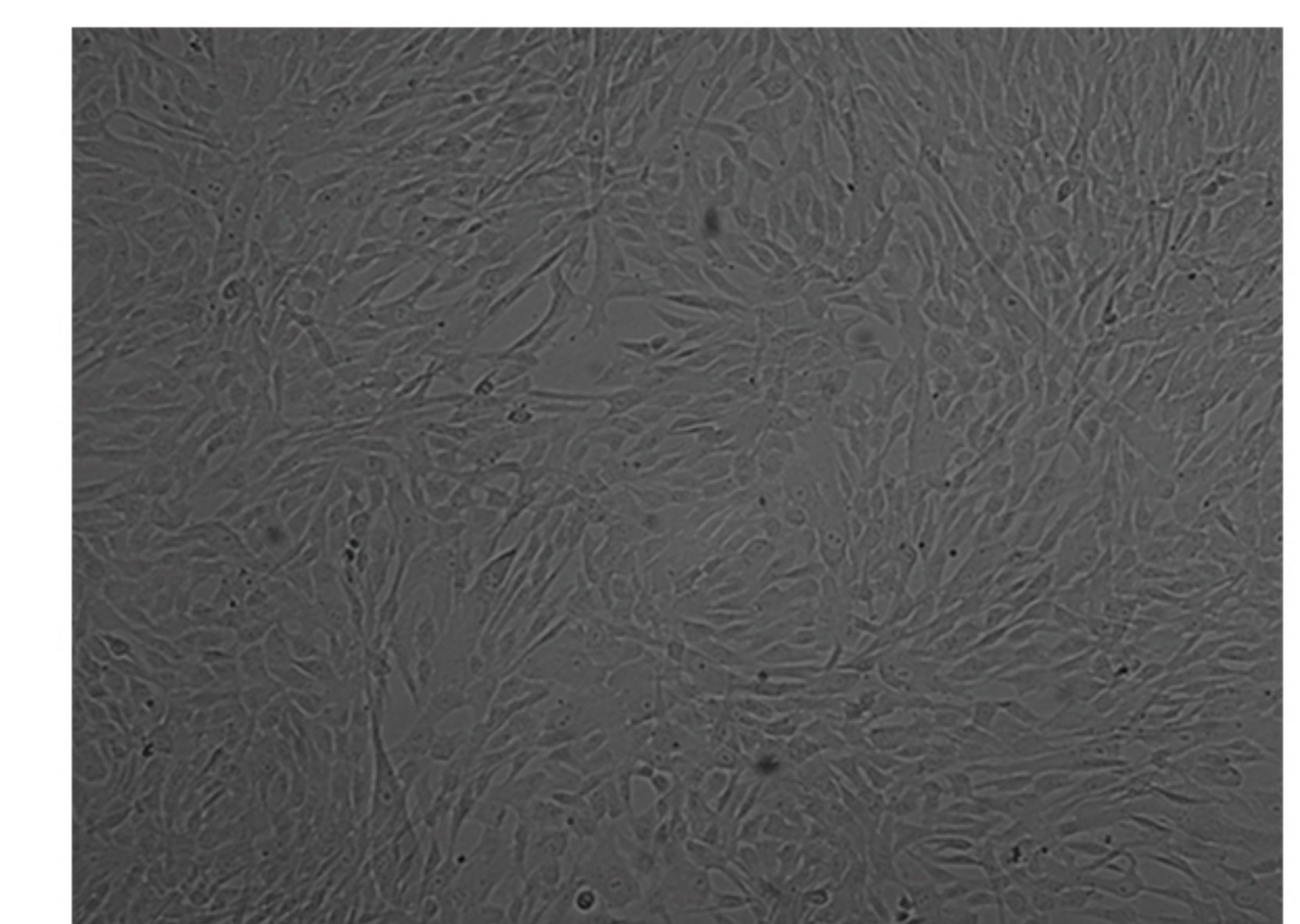
MSC-P4 Morphology



▲ MSCplus1+2%PLT

▲ MSCplus1+2%PLT

MSC-P6 Morphology



▲ MSCplus1+2%PLT

Scan the QR code for more details



## Mesenchymal Stem Cell (MSC) Culture Related Products

### Passaging and Digestion

#### Trpzyme® MSC Cell Dissociation Solution

##### Key Features

- Animal component-free, specifically developed for MSC dissociation
- Active ingredients derived from natural microorganisms; completely replaces animal-derived trypsin
- Combines mildness, convenience, and high biosafety



### Exosome Research (Specifically for MSC)

#### StemGro® (MSC) Serum-Free Basal Medium II

##### Key Features

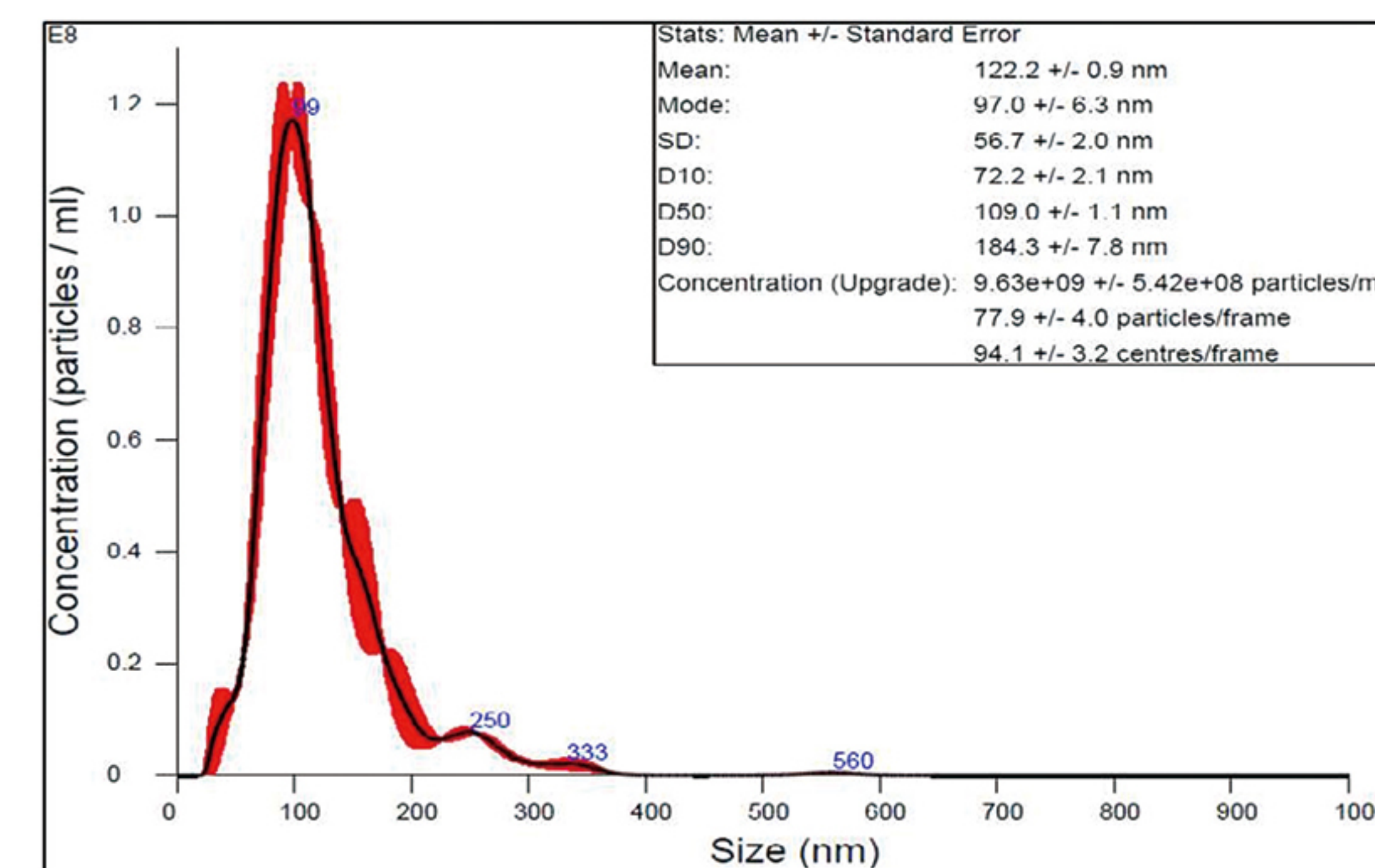
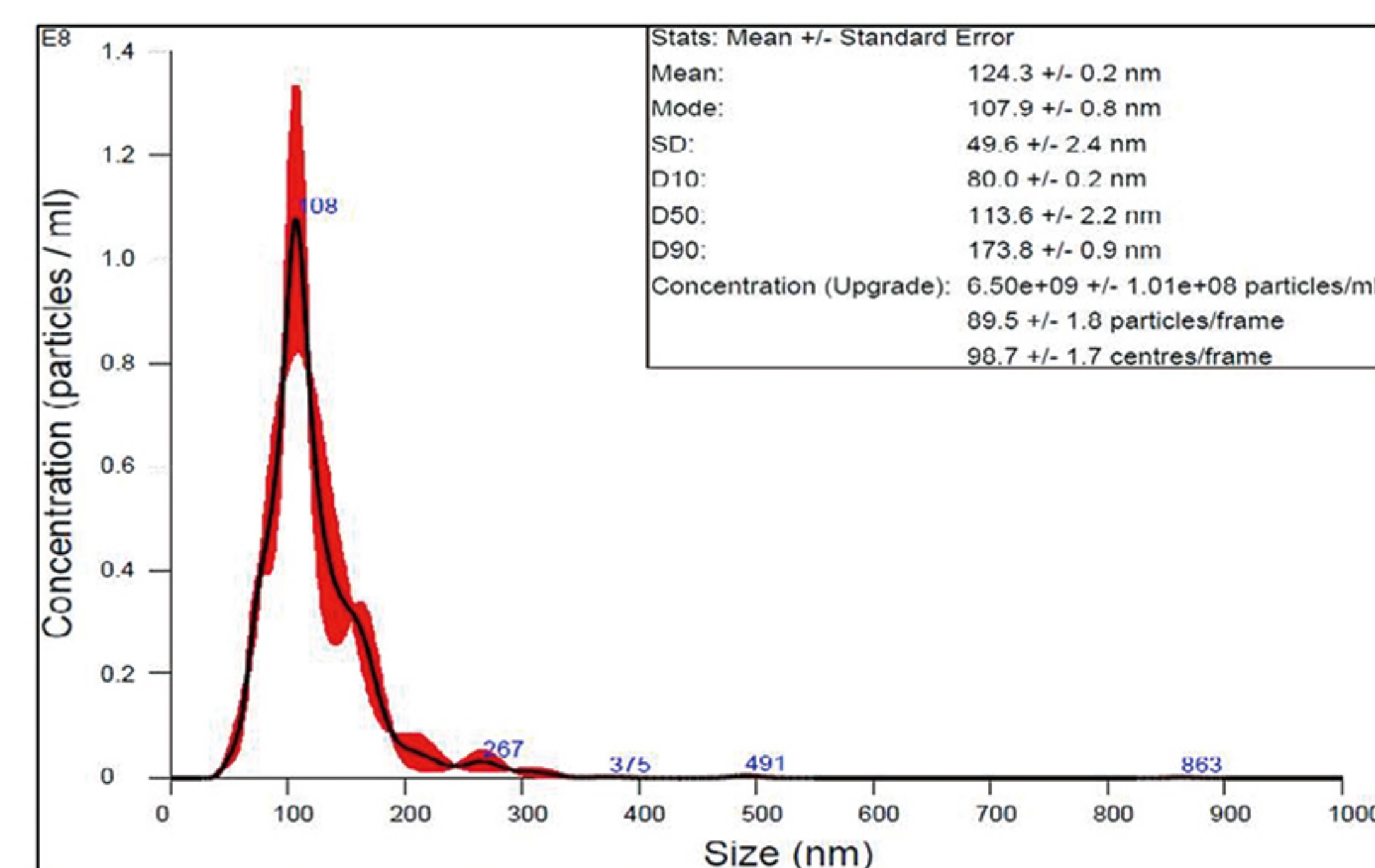
- Animal origin-free; can be used as a collection medium for MSC-derived exosomes
- Procedure: When MSC confluence reaches approximately 80–90%, remove the original culture medium and add StemGro® (MSC) Serum-Free Basal Medium II. Incubate for 24–48 hours, then perform medium change. Replace the medium at regular intervals until cells enter the apoptosis phase. Collect the cell culture supernatant, which can be used to extract endogenous MSC exosomes while excluding exogenous exosomes.



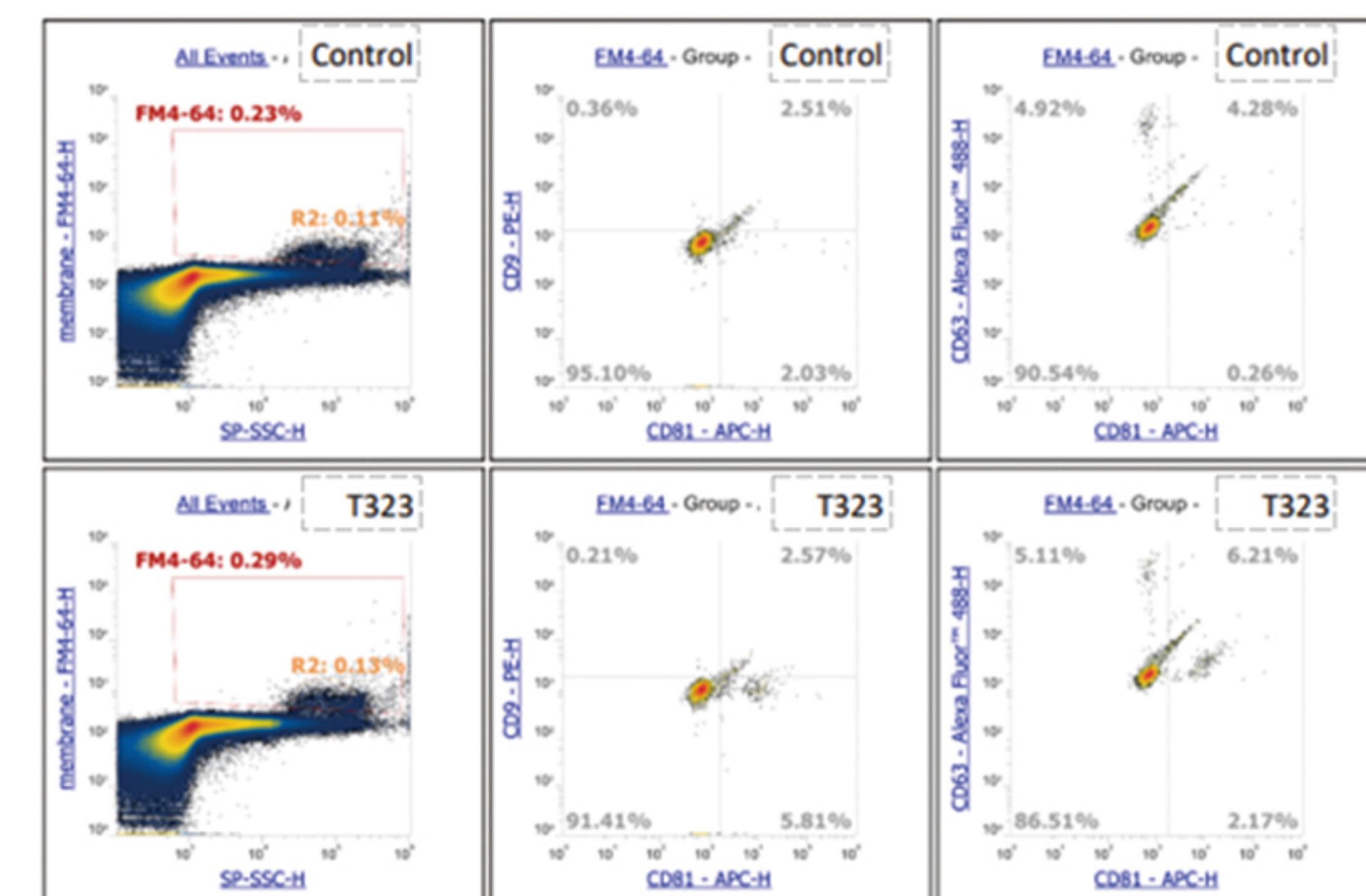
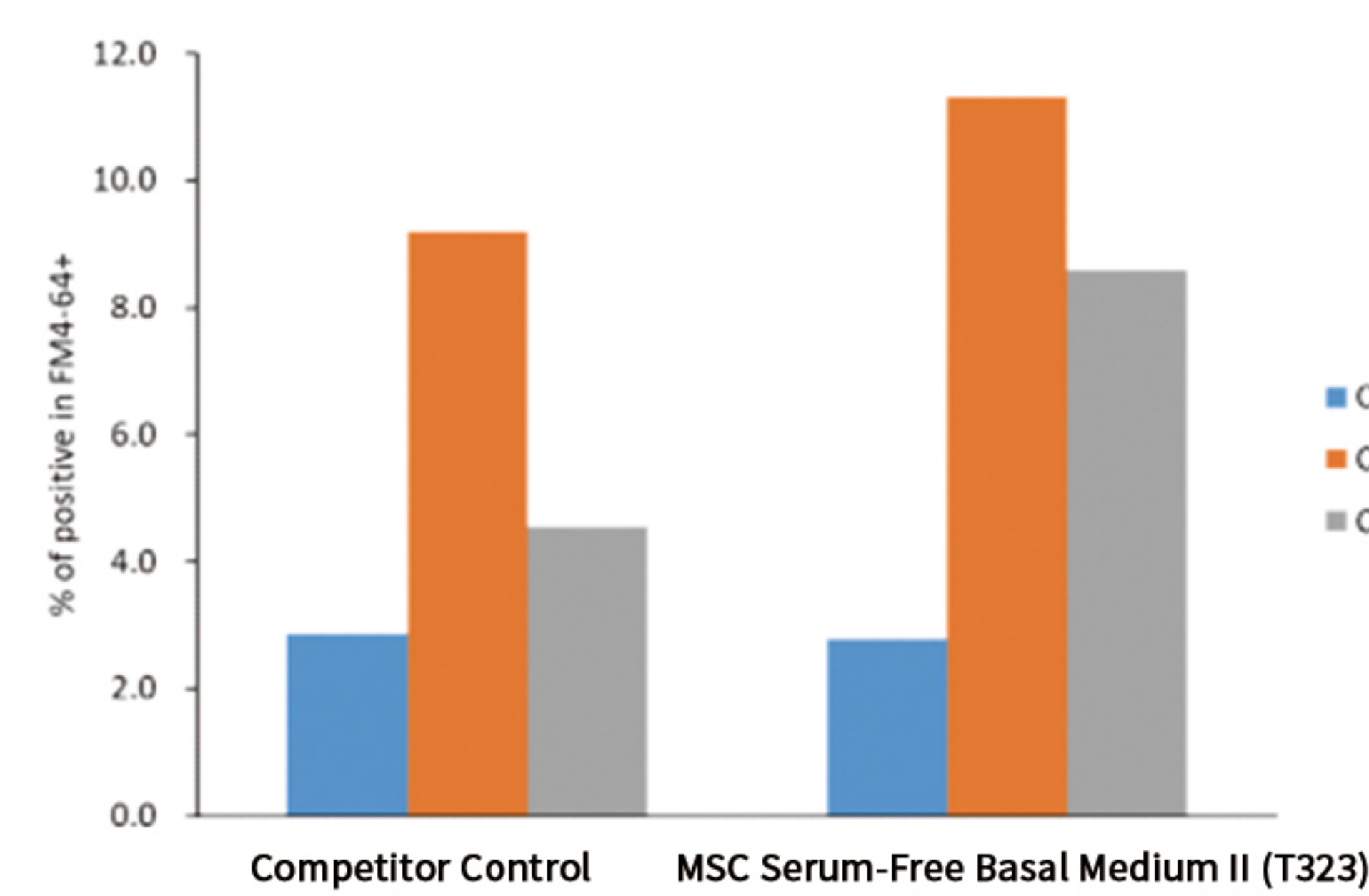
##### Performance Testing

#### MSC Exosome Expression Level Analysis

	MSC Expansion Protocol	Exosome Expression Protocol	50–200 nm Particle Concentration (particles/mL)
Control Protocol	Competitor's MSC Expansion Medium	Competitor's Exosome Expression Medium	6.12e+09 +/- 4.00e+07
Basalmedia Protocol	MSCplus1+2%PLT	MSC Serum-Free Basal Medium II (without serum substitute)	8.65e+09 +/- 3.35e+08



#### Flow Cytometry Analysis of MSC Exosome Surface Markers



## Exosome Research

Exosomes are nanoscale (approximately 30–150 nm in diameter) extracellular vesicles secreted by cells. They are enclosed by a lipid bilayer and contain bioactive molecules such as proteins, nucleic acids (miRNA, mRNA, lncRNA, etc.), and lipids. Nearly all cell types can secrete exosomes, which transmit information between cells through body fluids (blood, urine, saliva, etc.) and participate in various physiological and pathological processes, including immune regulation, tissue repair, and tumorigenesis.

#### Exosome Expression SFM

##### Key Features

- Animal origin-free, chemically defined
- Intended only for maintaining cell viability and exosome collection, not for cell expansion or passaging
- Optimized to promote exosome expression in stem cells, tumor cells, and other cell types
- Free of exogenous exosomes; all collected exosomes are produced by the target cells



## Other Basal Culture Media and Reagents

### Preservation and Cryopreservation

#### CD-Freezer® Cell Cryopreservation Medium CD-Freezer® Cell Cryopreservation Medium (HD)

##### Key Features

- Suitable for a variety of mammalian cells, including stem cells and immune cells
- Standard cryopreservation density up to 5E7 cells/mL with post-thaw viability above 95%
- HD formulation supports cryopreservation density up to 5E8 cells/mL with post-thaw viability above 95%
- Chemically defined
- DMSO used is of injectable grade pharmaceutical excipient



### Other Basal Culture Media and Ancillary Reagents

- StemGro® High Glucose DMEM Medium
- StemGro® DMEM/F-12 (1:1) Medium
- DPBS
- Collagenase I, II, IV
- 0.5 mM PBS-EDTA Solution
- 1 mM PBS-EDTA Solution
- Y-27632



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## Ordering Information

Cat. No.	Product Name	Size
T110KJ	LymGro® Lymphocytes SFM	500mL
T120KJ	LymGro® Lymphocytes SFM, W/O Phenol Red	500mL
T150L0	LymGro® OptiT Lymphocytes SFM	1 L
T520L0	LymGro® NK Cells SFM, W/O Phenol Red, AOF	1 L
T521L0	LymGro® NK Cells SFM, AOF	1 L
T310KJ	StemGro® Mesenchymal Stem Cell (MSC) Expansion Medium	500mL
T311KJ	StemGro® Mesenchymal Stem Cell (MSC) Expansion Medium, W/O Phenol Red	500mL
T320KJ	StemGro® Mesenchymal Stem Cell (MSC) Serum-Free Basal Medium	500mL
T321KJ	StemGro® Mesenchymal Stem Cell (MSC) Serum-Free Basal Medium, W/O Phenol Red	500mL
T322KJ	StemGro® Mesenchymal Stem Cell (MSC) Serum-Free Basal Medium II	500mL
T323KJ	StemGro® Mesenchymal Stem Cell (MSC) Serum-Free Basal Medium III, W/O Phenol Red	500mL
T324KJ	StemGro® MSCplus1 Basal Medium	500mL
T325KJ	StemGro® MSCplus1 Basal Medium, W/O Phenol Red	500mL
T430KJ	StemGro® ESS8 Pluripotent Stem Cell Medium	450 mL + 50 mL
T440KJ	StemGro® TeSR Pluripotent Stem Cell Medium	450 mL + 50 mL
T441KJ	StemGro® TeSR-3D Pluripotent Stem Cell Medium	450 mL + 50 mL
T912KJ	Exosome Expression Serum-Free Medium II	500 mL
L190KJ	StemGro® High Glucose DMEM Medium (Knockout)	500 mL
L390KJ	StemGro® DMEM/F-12 (1:1) Medium (Knockout)	500 mL
L570KJ	MEM α Medium	500 mL
B210KJ	Dulbecco's Phosphate Buffered Saline (DPBS), without Calcium, Magnesium, and Phenol Red	500 mL
S342JV	Trpzyme® Recombinant Trypsin Dissociation Solution, Phenol Red-Free	100 mL
X342JV	Trpzyme® Recombinant Trypsin Dissociation Solution, Phenol Red-Free	100 mL
S361RV	Collagenase Type I, Powder	100 mg
S362RV	Collagenase Type II, Powder	100 mg
S364RV	Collagenase Type IV, Powder	100 mg
S369J7	Dispase Solution, 10 mg/mL	10 mL
S504J0	10 mM Y-27632 Solution (1000X), Animal Component-Free	1 mL
B390KJ	PBS-EDTA Buffer	500 mL
B391KJ	0.5 mM EDTA Solution	500 mL
S917JV	CD-Freeze® Cell Preservation Solution, DMSO-Free	100 mL
S919JV	CD-Freeze® Cell Cryopreservation Medium with 7.5% DMSO	100 mL
S924JV	CD-Freeze® Cell Cryopreservation Medium (HD)	100 mL
R710JV	p1.077 Density Gradient Separation Medium	100 mL
R714JV	OptiDensity® Iodixanol Solution 60% (W/V)	100 mL

## Media Customization Service

Various culture media can be customized according to your requirements. Our custom product development team will work with you to confirm the formulation composition, processing method, packaging, labeling, transportation and storage conditions, as well as pricing for the media you need.

Basalmedia's powdered and liquid culture media are manufactured in GMP-compliant cleanroom facilities. The powdered media production area meets Class D cleanroom standards, while the liquid media and pre-filled plate media production areas are filled under Class A with a Class B background. The company has established 40 independent HVAC systems, 26 of which are used for production — 11 meet Class D requirements, 12 meet Class C requirements, and 3 meet Class B environmental requirements. Each system has been validated and is regularly monitored.

Liquid culture media are prepared using water for injection (WFI) with extremely low endotoxin levels. The liquid batching tanks are equipped with online temperature and pH monitoring functions. The media are filtered through 0.45 µm and 0.22 µm membranes prior to filling.

### Custom Batch Specifications

Format	Packaging	Minimum Order Quantity	Maximum per Batch
Liquid Medium	Bottle	5 L (10 bottles of 500 mL)	2,500 L
Powdered Medium	Bag	20 kg (approximately prepares 1,000 L of solution)	2,000 kg

### Testing Items

Format	Clarity	Appearance	Fill Volume	Bacterial Endotoxins	pH	Osmolality	Mycoplasma
Liquid Medium	✓		✓	✓	✓	✓	✓
Powdered Medium		✓	✓	✓	✓	✓	✓

### Custom Pricing Gradient for Liquid Basal Media (GLP/GMP)

Single Custom Quantity	Level	Unit Price/500mL	Total Price
5L	GLP	400	4,000
10L	GLP	250	5,000
20L	GLP	225	9,000
50L	GLP	200	20,000
100L	GLP	150	30,000
200L	GLP	120	48,000
500L	GMP	100	100,000
1,000L	GMP	80	160,000

**Remarks:** The standard packaging for custom products is 500 mL/bottle. Customers may also choose larger packaging formats, and different specifications of bagged media are available according to actual customer usage requirements.