

Mesenchymal Stem Cell Culture Media

As the cornerstone of cell therapy manufacturing, MSC culture media is pivotal to ensuring the safety, consistency, and regulatory alignment of cell and exosome-based products.

MediumBank's new **MSC Culture Series** delivers a comprehensive solution meticulously designed for scalable expansion and optimized exosome recovery. We enable biopharma innovators to break through technical bottlenecks, streamlining the path from research to high-quality manufacturing.

MSC MaxA

Ready-to-Use High-Expansion Medium



- Rapid proliferation
- High cloning efficiency
- Ease of use

Large-Scale Cell Expansion & Recovery

CD MSC MaxB

Chemically Defined Medium



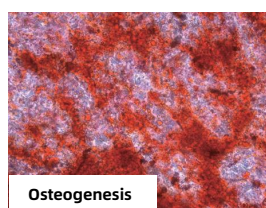
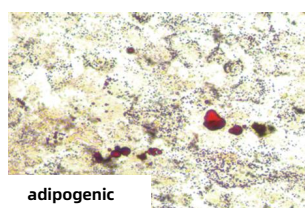
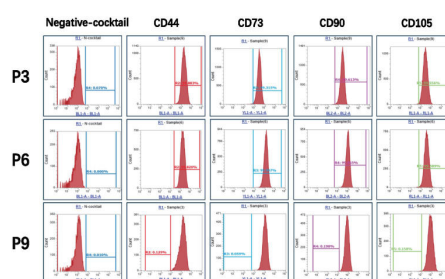
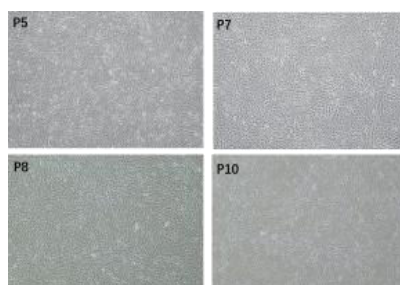
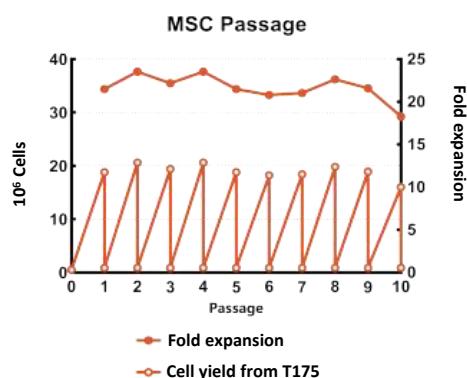
- Animal-component free (ACF)
- Exosome-free
- Supports 3D culture
- Consistent quality control

Exosome Production & Secretome Harvest

Difference	MSC MaxA	CD MSC MaxB
Inoculation density	4000~8000 cells/ cm ²	8000~12000 cells/ cm ²
Training time	4 days	3 days
Expansion fold	20~25	8~12
Human platelet lysate	++++	-
Exosome content	++++	-
Application scenarios	Large-scale stem cell culture, suitable for cell recovery	Exosome production, secretion harvest, high-end research

Case Study (MSC MaxA)

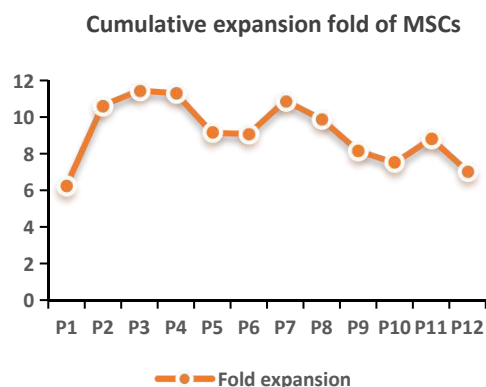
Cell Line	Umbilical Cord-Derived MSC
Culture Duration	96 h
Culture Vessel	T175



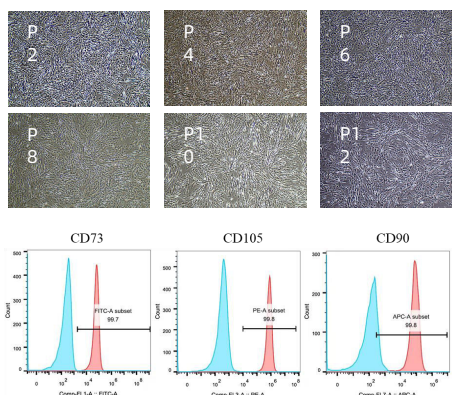
Result: MSCs cultured in MSC MaxA support primary culture. Through subsequent passages, cells maintained high expansion efficiency, normal phenotype, and robust tri-lineage differentiation potential.

■ Case Study (CD MSC MaxB)

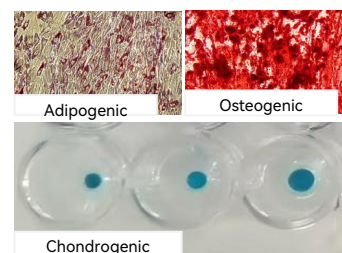
Cell Expansion Performance



Cell Morphology and Phenotype Analysis



Tri-Lineage Differentiation Potential

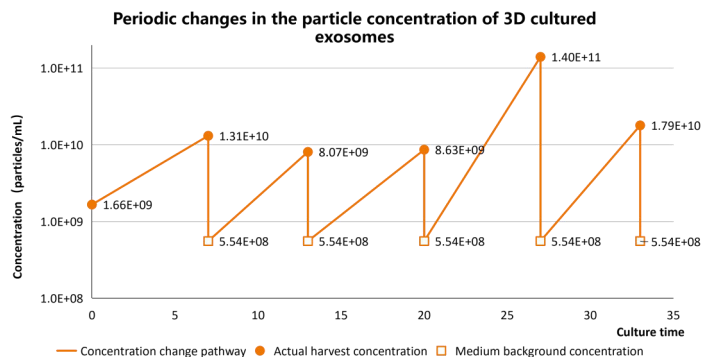
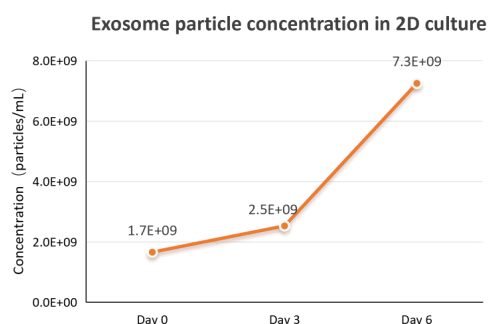


Result: The cells expanded approximately **11- fold** at P3. Cells maintained the characteristic spindle-shaped morphology of MSCs, with healthy growth, well-defined cell boundaries, and no signs of spontaneous differentiation.

■ 3D Culture Performance Comparison

2D culture	
Day 0	CD MSC MaxB culture at 0 hours
Day 3	CD MSC MaxB cultured for 72 hours
Day 6	The culture medium (CD MSC MaxB) was changed at 72 hours and incubate for another 72 hours.

3D culture	
Day 0~6	Cells and microcarriers were seeded with CD MSC MaxB medium, and 50% fresh medium was supplemented at day 4
Day 7~33	Exosomes were harvested every 4 to 5 days, and the production medium was replaced with fresh medium.



Results: Compared with traditional 2D culture, 3D perfusion culture can maintain the good secretion state of MSCs for a long time, achieve continuous and efficient harvesting of exosomes, and is more suitable for large-scale production applications.

■ Ordering Information

Cell Line	Name	Volume	Cat No.	Form
MSC MaxA	MSC MaxA Basal	475 mL	MB6104.101	Liquid
	MSC MaxA Supplement	25 mL	MB6105.101	Liquid
CD MSC MaxB	CD MSC MaxB Basal	500 mL	MB6106.101	Liquid
	CD MSC MaxB Supplement	5 mL	MB6107.101	Liquid

Immune Cells Culture Solutions

NK Cell Culture Medium

NK MaxA (Basal Medium)

- Chemically defined and ADCF
- long-term NK cell growth and expansion

NK Expander Kit (Expander Kit)

- Optimized cytokine activation system
- High-fold expansion

NK Purification Cocktail Kit (Purification Cocktail Kit)

- High enrichment & high activity
- Simple operation without magnetic cell sorting equipment



Expansion Solution

NK MaxA+ NK Expander Kit

Optimized cytokine activation system without feeder cells

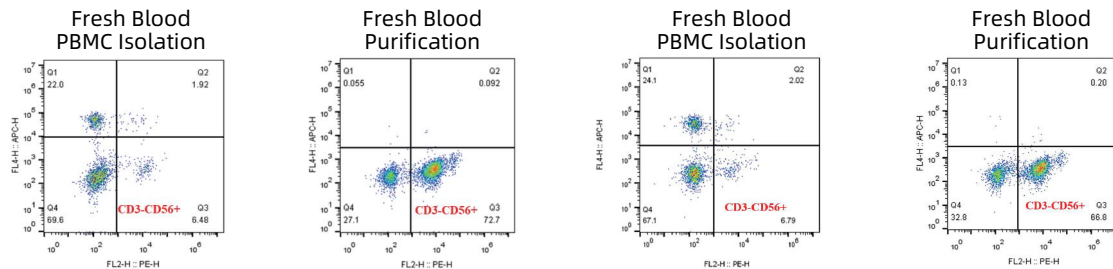
Purification-to-Expansion Solution

NK MaxA+ NK Expander Kit + NK Purification Cocktail Kit

Standardized workflow from peripheral blood to highly active NK cells

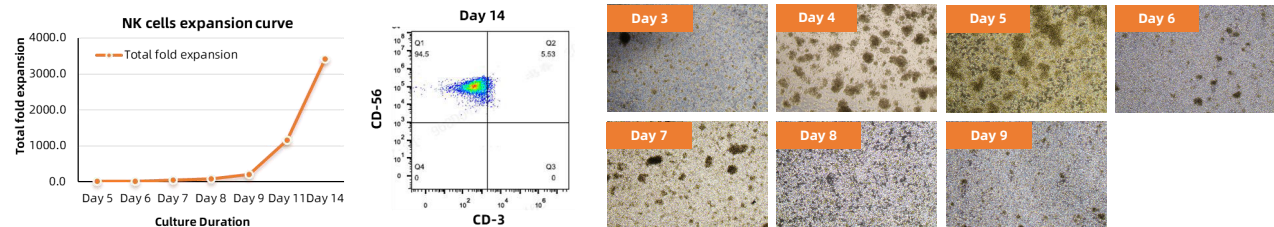
Case Study

Purification Performance (Flow Cytometric Analysis of CD3⁻CD56⁺ NK Cell Purity)



NK Cell Purity Assessment: NK cell purity increased from 6.48% to 72.7% in human whole blood samples and from 6.79% to 66.8% in human umbilical cord blood samples following purification.

Expansion Performance (NK MaxA + NK Expander Kit)



Results: Following 14 days of culture using unpurified PBMCs, NK cells achieved greater than **3,000-fold expansion**. The purity of CD3⁻CD56⁺ NK cells reached 94.5%, with vigorous proliferation and uniform cell morphology.

Ordering Information

Name	Component	Form	Volume	Qty	Cat No.	Description
NK MaxA	--	LM	1000 mL	2	MB6113.101	Basal Medium
NK Expander Kit (MB6114.2)	NK Expander A	DPM	--	1	MB6114-1.201	Activation Factor
	NK Expander B	DPM	--	1	MB6114-2.201	Activation Factor
	NK Expander C	DPM	--	2	MB6114-3.201	Activation Factor
	NK Expander D	DPM	--	1	MB6114-4.201	Activation Factor
NK Purification Cocktail Kit	--	LM	--	1	MB6122.2	Purification Factor

Immune Cells Culture Solutions

T&Car-T Cell Culture Medium

T Cell MaxA streamlines T/CAR-T cell culture from research and development to production—boosting expansion efficiency, shortening cycle times, and simplifying scale-up with a clean formulation, flexible process fit, and stable supply.

Applications:

- T cell research
- CAR-T process development
- large-scale culture
- customized formulation



Safe & compliant

Chemically defined, Animal-component free, with precisely controlled components; pathogen-free; meets FDA/EMA standards.

High expansion

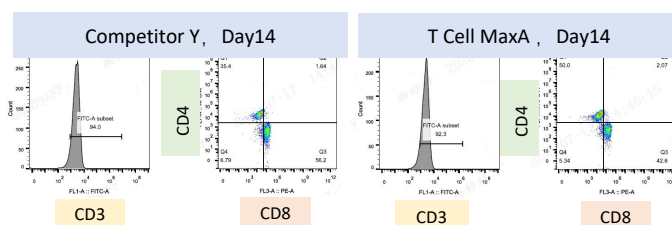
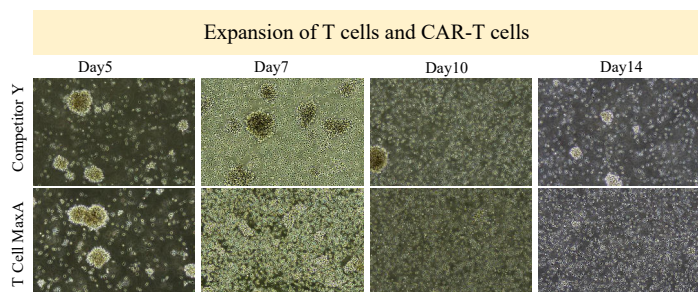
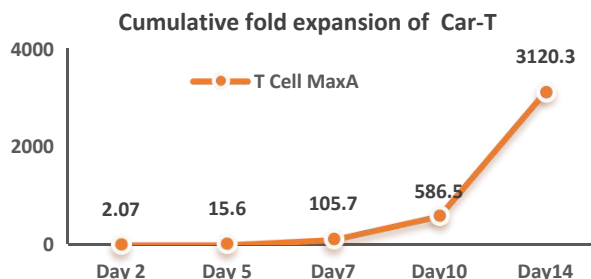
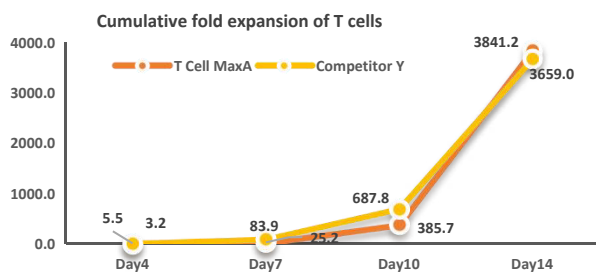
Achieves >3,800-fold cumulative expansion in 14 days; optimized lipid supply sustains energy for dense, long-term culture.

Quality cells

Maintains balanced CD4⁺/CD8⁺ and enriches memory T cells; cells are plump, aggregate well, and show minimal apoptosis or debris.

Case Study

Day	Day4	Day7	Day10	Day14	Cumulative fold expansion
Competitor Y	5.54	15.14	8.20	5.32	3658.99
T Cell MaxA	3.24	7.79	15.28	9.96	3841.18



Robust proliferation: surpasses Competitor Y by Days 8-10; **3,841.2x** expansion at Day 14.

High cell quality: plump morphology, excellent aggregation, low apoptosis, balanced CD4⁺/CD8⁺.

Ordering Information

Name	Component	Form	Volume	Qty	Cat No.	Description
T Cell MaxA	--	LM	1000 mL	1	MB6123.101	Basal Medium
T Cell Expander Kit (MB6118.2)	T Cell Expander A	DPM	N/A	1	MB6118-1.201	Activation Factor
	T Cell Expander B	DPM	N/A	1	MB6118-2.201	Activation Factor
	T Cell Expander C	DPM	N/A	1	MB6118-3.201	Stimulation Factor

| Cell Cryopreservation Media

Cell Freezing Max series is a portfolio of ready-to-use cryopreservation media for both DMSO-containing and DMSO-free formulations, utilizing optimized intracellular and extracellular protection systems to minimize cryoinjury and ensure high post-thaw recovery and viability.



■ Key Features

- ◆ **Safe and Compliant:** Chemically defined, ADCF, and GMP-grade manufactured.
- ◆ **Broad Cell Compatibility:** Suitable for cryopreservation of various mammalian cell lines and primary cells, including CHO, HEK293, HeLa, BHK, SP2/0, MSCs, T cells, NK cells, and CIK cells.
- ◆ **Easy-to-Use:** No controlled-rate freezing required. Cells can be directly resuspended and stored at -80°C for long-term preservation or transferred to liquid nitrogen the following day.
- ◆ **High-Density & Viability:** Supports high-density cell freezing with post-thaw viability exceeding 90% while maintaining cellular functionality.

Cell Freezing MaxA

Contains 7.5% DMSO | Broad Cell Compatibility | high post-thaw viability

Cell Freezing MaxC

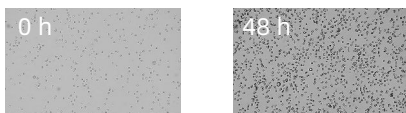
DMSO-free | Injectable-grade raw materials for cell therapy and clinical applications

■ Case Studies

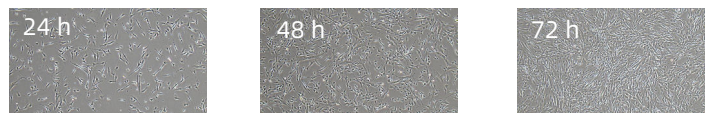
● Cell Freezing Max A (7.5%DMSO)

Performance Metrics	HEK 293	MSC	LMH 002	Vero
Cryopreservation Density (cells/mL)	$5 \times 10^6 - 2 \times 10^7$	$1 \times 10^6 - 1 \times 10^7$	$5 \times 10^6 - 3 \times 10^7$	$1 \times 10^6 - 1 \times 10^7$
Post-Thaw Viability	> 92%	> 95%	> 95%	> 98%

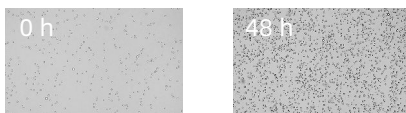
HEK293 Cell: 3.6-Fold Expansion in 48 h



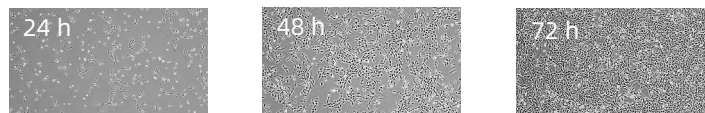
MSC: 8.7-Fold Expansion in 72 h



LMH-002 Cell: 6.22-Fold Expansion in 48 h



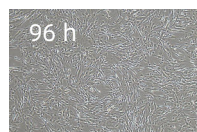
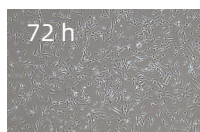
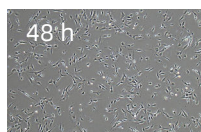
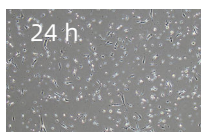
Vero Cell: 11.85-Fold Expansion in 72 h



● Cell Freezing Max C (DMSO-Free)

Name	Cryopreservation Density	Fresh Cell Viability	Post-Thaw Viability	Viable Cell Recovery	96h Expansion
Cell Freezing MaxC	1×10 ⁶ -1×10 ⁷	~97%	> 93%	> 85%	> 5.5

Result: Following cryopreservation in Cell Freezing MaxC, umbilical cord-derived MSCs achieved post-thaw viabilities above 93%, outperforming the benchmark medium (Control-S).



Post-Thaw MSC Morphology : MSCs cryopreserved in Cell Freezing MaxC maintained normal morphology, stable attachment, and robust growth after thawing, achieving a 5.62-fold expansion within 4 days.

■ Ordering Information

Name	Cat No.	Volume	Form	DMSO	Protein	Serum	Cytokines
Cell Freezing MaxA	MB7136.101	100 mL	Liquid	√	×	×	×
Cell Freezing MaxC*	MB7166.101	100 mL	Liquid	×	×	×	×

** All components in Cell Freezing MaxC are injectable-grade raw materials and excipients.*