



JSBio

Your Reliable Cell Culture Media Provider

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Content

Our cell culture media are applicable to the following cell lines:

- **Mammalian Cell**

CHO Cell

BHK-21 Cell

Hybridoma Cell

Marc-145 Cell

Vero Cell

PK-15 Cell

ST Cell

MDBK Cell

MDCK Cell

F81 Cell

- **Insect Cell**

- **LMH Cell**

- **Human Cell**

HEK-293 Cell

Human Diploid Cell

T/NK Cell

Stem Cell



CHO Cell Culture Media

Chinese Hamster Ovary (CHO) cells are the preferred bioproduction platform for monoclonal antibody manufacturing, owing to advantages such as low human viral transmission risk, human-like post-translational modification, scalability in serum-free systems, and minimal endogenous protein expression. For fed-batch and perfusion processes, JSBio could provide CHO media formulations tailored to address diverse cell clone requirements. JSBio's CHO media are chemically defined, animal-component-free, GMP-manufactured, and engineered for high-density cell growth with enhanced recombinant protein expression.

Product Catalog

1. CHO Cell Culture Media Portfolio for Fed-batch

Product	Catalog No.	Form	Package Size	Description
CD CHO 031	88031-585	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium, for CHO-S, DG44, CHO-K1, CHOZN cells
	88031-20090	Liquid	500 mL, 1000 mL	
CD CHO 041	88041-1330	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium, for CHO cells adapted to Dynamis media
	88041-23011	Liquid	500 mL, 1000 mL	
CD CHO 043	88043-1332	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium, for fed-batch (CHO-K1) and electroporation (CHO-S/CHO-K1)
	88043-23013	Liquid	500 mL, 1000 mL	
CD CHO 045	88045-1633	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium, for CHO-K1Q, CHOZN, and other cells
	88045-23053	Liquid	500 mL, 1000 mL	
CD CHO 047	88047-1694	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium, for fed-batch culture of LONZA, CHO-DG44, CHO-DXB11, CHO-S
	88047-24036	Liquid	500 mL, 1000 mL	
ALLY CHO 100a	99169-1512	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Feed medium, requires ALLY CHO 100b and basal medium
ALLY CHO 100b	99169-1473	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Feed medium, requires ALLY CHO 100a and basal medium
CD Feed 018	99155-1333	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Feed media a, for fed-batch (compatible with CD CHO 041/043/045/047 and CD Feed 017)
CD Feed 017	99035-1250	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Feed media b, for fed-batch (compatible with CD CHO 041/043/045/047 and CD Feed 018)

2. CHO Cell Culture Media Portfolio for Perfusion

Product	Catalog No.	Form	Package Size	Description
APEX CHO 100	88100-1497	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal/feed medium for perfusion processes

Case Studies

1. Protein Expression

Case 1

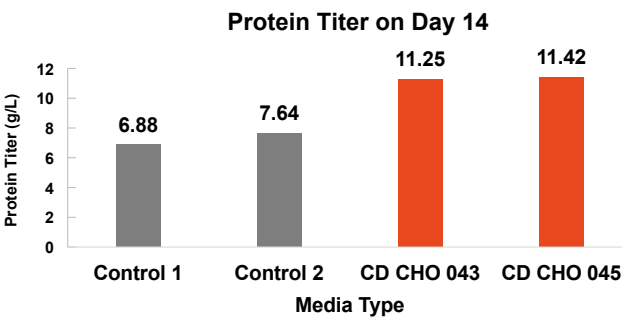


Figure 1. Comparison of protein yields on Day 14 across different projects using JSBio's basal media CD CHO 043, CD CHO 045, and MNC media (Control group).

Case 2

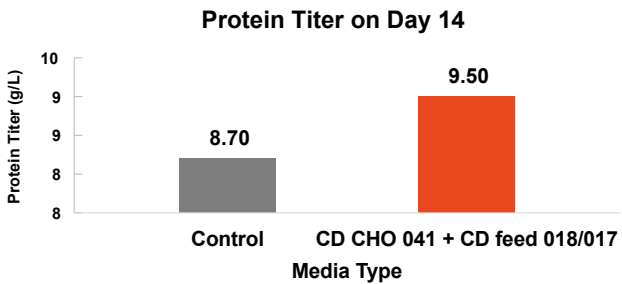


Figure 2. Comparison of protein yields on Day 14 using JSBio's medium CD CHO 041 (basal medium) supplemented with CD Feed 018/017 (feed media) versus MNC media (Control group).

Case 3

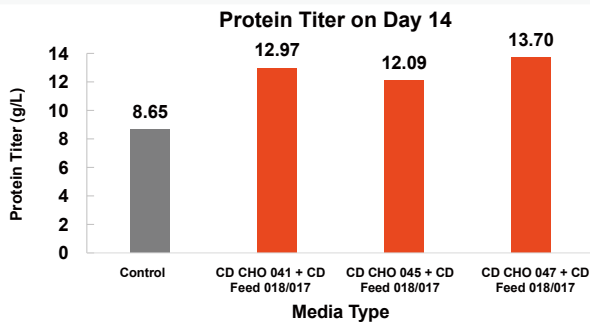


Figure 3. Comparison of protein yields on Day 14 using JSBio's commercial basal media supplemented with feed media versus MNC media (Control group).

2. Cell Growth

Case 1

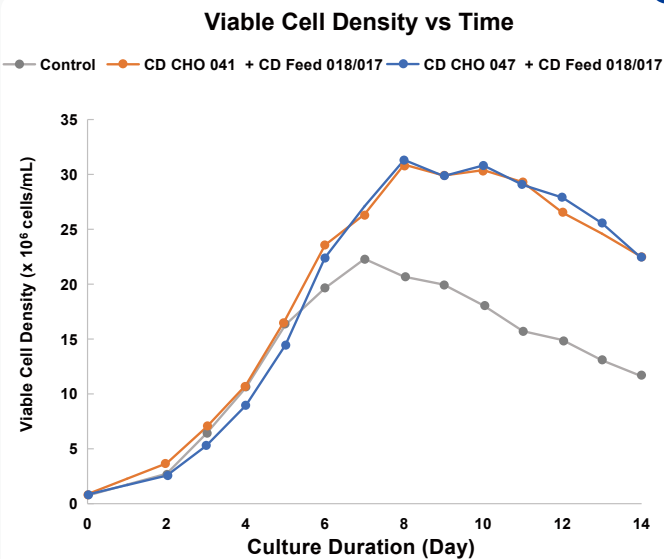
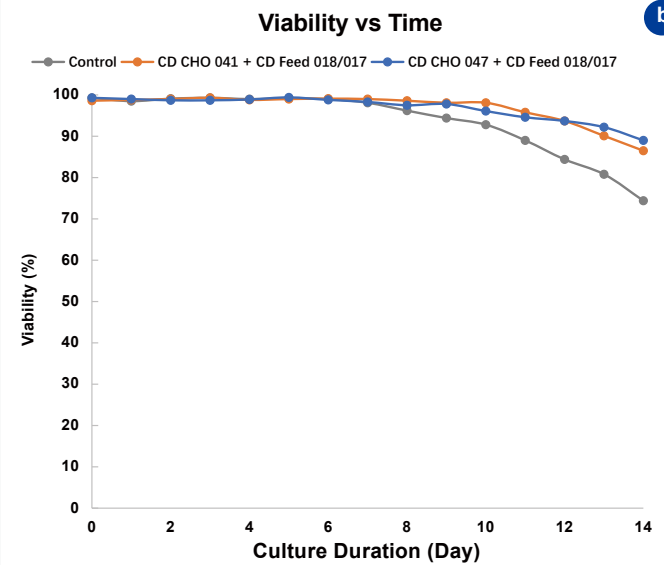


Figure 4. Comparative analysis of JSBio's commercial basal medium combined with fed-batch media versus an imported commercial media (Control group) over a 14-day cultivation period a) VCD; b) VIA

3. Analytical Characterization Tests

Table 1. Analytical characterization comparison between CD CHO 041 + CD feed 018/017 media with focus on SEC, CE-NR, and CEX

Group	SEC (%)	CE-NR (%)	CEX (%)		
			AV	MP	BV
Control	98.71	98.46	14.73	69.49	15.78
CD CHO 041 + CD feed 018/017	98.62	98.60	12.54	62.01	25.44

Table 2. Performance comparison between CD CHO 031 + ALLY CHO 100a/100b media on Day14, including VIA, Titer, and Qp

Group	Day 14		Qp (pg/cell/day)
	VIA (%)	Titer (g/L)	
Control	93.90	5.90	25.10
CD CHO 031+ALLY CHO 100a/100b	98.50	7.44	36.50

4. Perfusion Process Cases

APEX CHO 100 perfusion culture medium is capable of sustaining high cell density and viability over an extended period, leading to elevated antibody production at approximately 2.5 g/L/day. Additionally, this culture medium aids in reducing product accumulation in the reactor and enhances process operability.

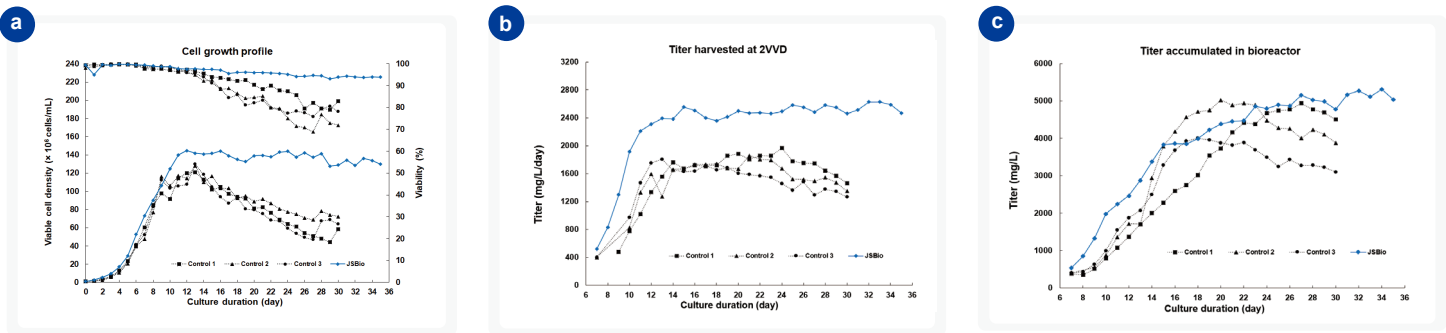


Figure 5. Preparation of monoclonal antibodies using different culture media through perfusion process, VVD=2. (a) The growth curve of cells. (b) The daily production of antibodies harvested outside the reactor. (c) Accumulated antibody production in the reactor

BHK-21 Cell Culture Media

Designed for BHK-21 cells, JSBio BHK-21 cell culture media support high-density suspension culture of BHK-21 cells and enable efficient production of viruses such as foot-and-mouth disease and pseudorabies, including low-serum media, serum-free media, and virus production enhancers.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
BHK SFM 03	10306-1795	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Serum-free cell medium
BHK LSM 361	77020-361	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Low-serum medium, used in combination with 0.5%-1% serum
BHK PM 835	10304-835.1	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Maintenance medium
Feed F (10000X)	99154-23010	Liquid	100 mL, 500 mL	Virus enhancer

Case Studies

1. Cell Growth in Passage Culture

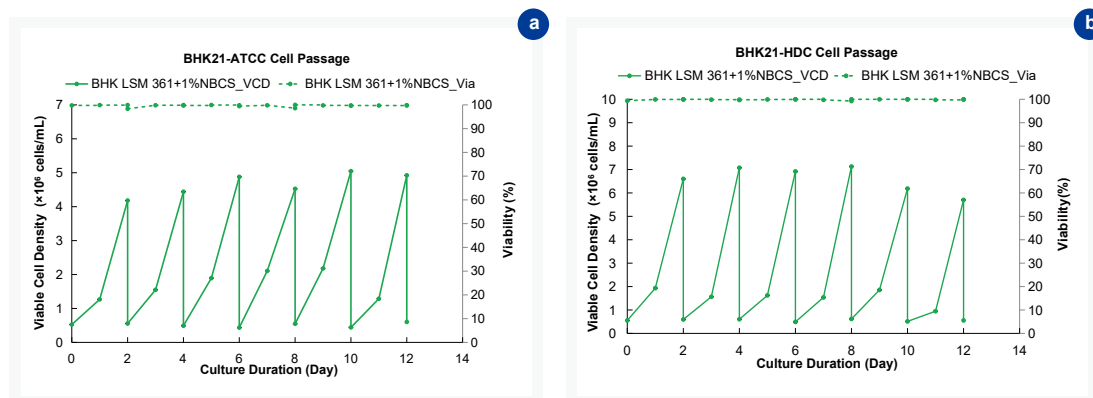


Figure 1. Passage culture of a) BHK21-ATCC and b) BHK21-HDC in BHK LSM 361 (seeding density: 0.5×10^6 cells/mL, passaged every 2 days).

2. Cell Growth in Batch Culture

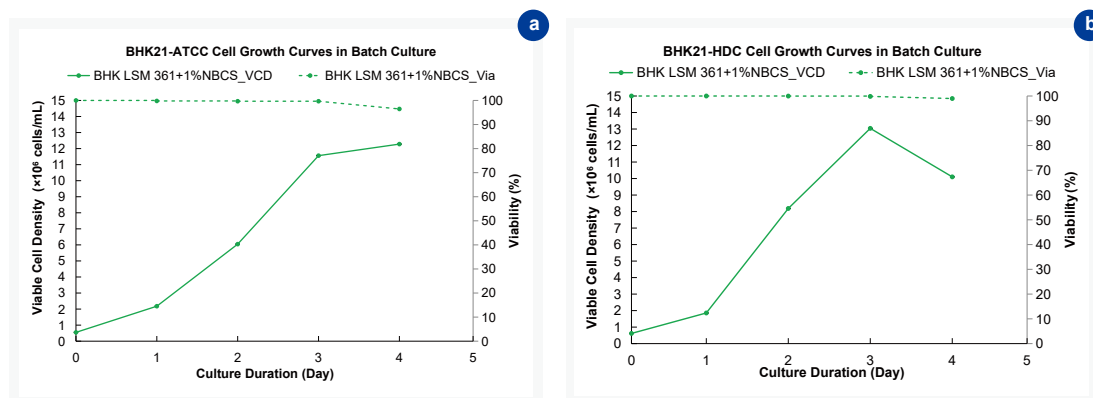


Figure 2. Batch culture of a) BHK21-ATCC and b) BHK21-HDC in BHK LSM 361 (seeding density: 0.5×10^6 cells/mL).

3. Virus Production

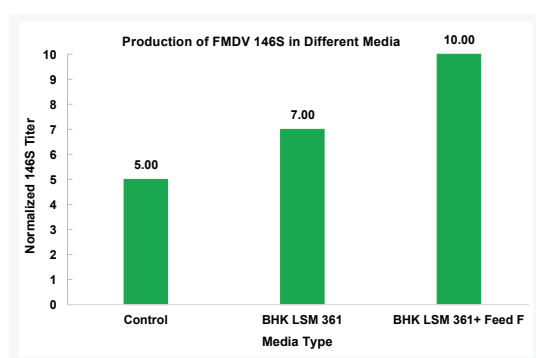


Figure 3. Compared to the control medium, the use of the JSBio's BHK LSM 361 medium alone increased the virus titer. The highest production was achieved by supplementing the BHK LSM 361 medium with Feed F.

Hybridoma Cell Culture Media

Hybridoma technology is a well-established method for generating monoclonal antibody sequences. JSBio's hybridoma cell culture media are chemically defined and animal component-free, engineered to support high-yield antibody production under GMP conditions.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
HY01	22318-1429	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium; when used with feed media CD 293 FA/FB, higher yields can be achieved.

Case Studies

1. Cell Growth

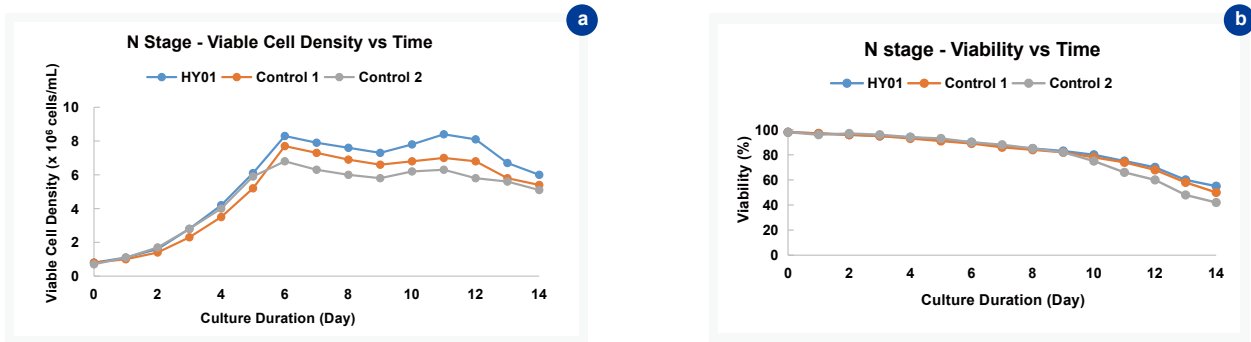


Figure 1. a) Hybridoma cells at the Nth passage were cultured in HY01 medium and control media (competitors), seeded at 1.0×10^6 cells/mL. The HY01 group achieved a maximum cell density of 8.5×10^6 cells/mL. b) Hybridoma cells at the Nth passage were cultured in HY01 medium and two control media. HY01 medium significantly delayed the decline in cell viability compared to both control media (competitors).

2. Protein Expression

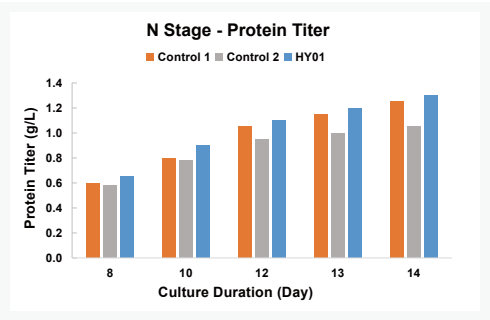


Figure 2. During the Nth subculture of hybridoma cells, the protein yield obtained using HY01 medium over 14 days was significantly higher than that achieved with two control media.

Marc-145 Cell Culture Medium

Marc-145 cells are derived from embryonic kidney cells of the African green monkey. Due to their high susceptibility to porcine reproductive and respiratory syndrome virus (PRRSV), they are widely applied in virus culture and vaccine production. JSBio has developed the AM LSM 598 low-serum medium for Marc-145 cells. This medium reduces serum supplementation to below 5% while maintaining rapid cell growth and high viral production titers.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
AM LSM 598	22108-598	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium

Case Studies

1. Cell Growth

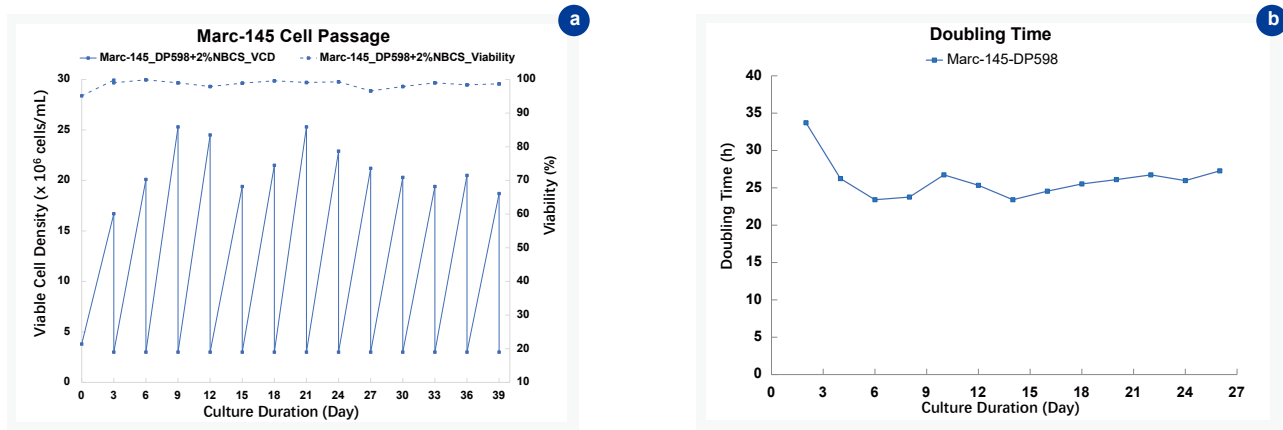


Figure 1. a) Serial passaging of Marc-145 cells in AM LSM 598 medium at a seeding density of 3.8×10^6 cells/mL, subcultured every 3 days; b) Doubling time of Marc-145 cells was approximately 26 ± 1 hours.

Vero Cell Culture Medium

Vero cells are derived from the kidney tissue of health adult African green monkeys. Due to their susceptibility to a broad range of viruses and their adaptability to microcarrier-based growth, Vero cells are widely used in viral vaccine production. CD VM 01 is a serum-free, animal-origin-free medium that ensures batch-to-batch consistency. It supports serum-free adherent culture of Vero cells and enables efficient viral production.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
CD VM 01	11501-1253	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Serum-free medium for adherent growth

Case Studies

1. Cell Growth

Compared with the control medium, CD VM 01 promoted higher-density growth of Vero cells and maintained superior viability.

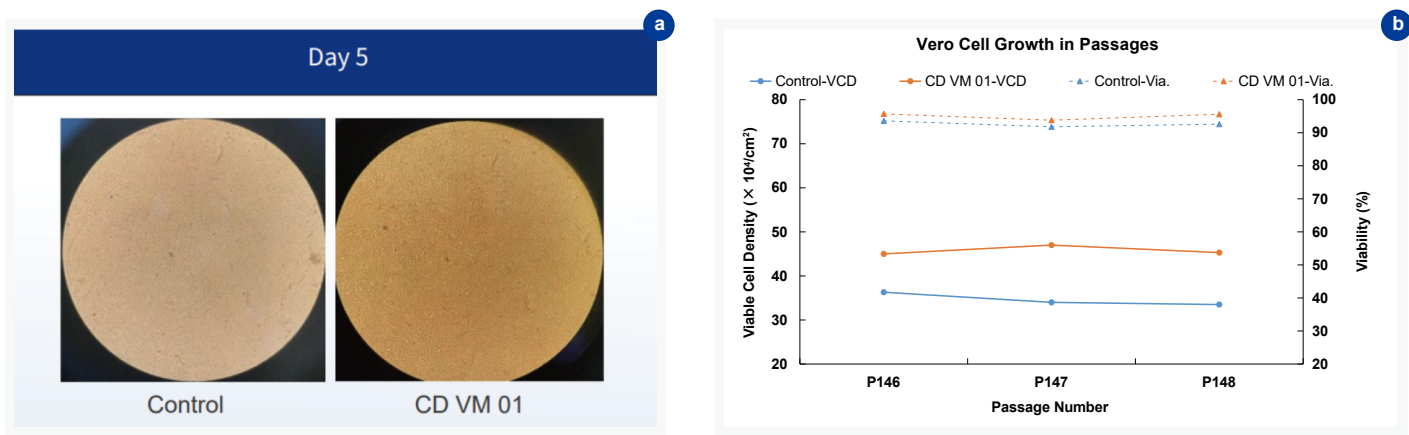


Figure 1. a) Inverted microscopy images showing the growth status of Vero cells cultured in control medium and CD VM 01 medium. b) Serial passaging of Vero cells in control medium versus CD VM 01 medium.

PK-15 Cell Culture Medium

PK-15 cells are derived from porcine kidney cells. CD PK15 259 medium is a chemically defined formulation designed specifically for the high-density suspension culture of porcine kidney (PK-15) cells. With defined chemical composition and no animal-origin components, it supports robust growth of PK-15 suspension cell.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
CD PK15 259	10701-259	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium

Case Studies

1. Cell Growth and Virus Production

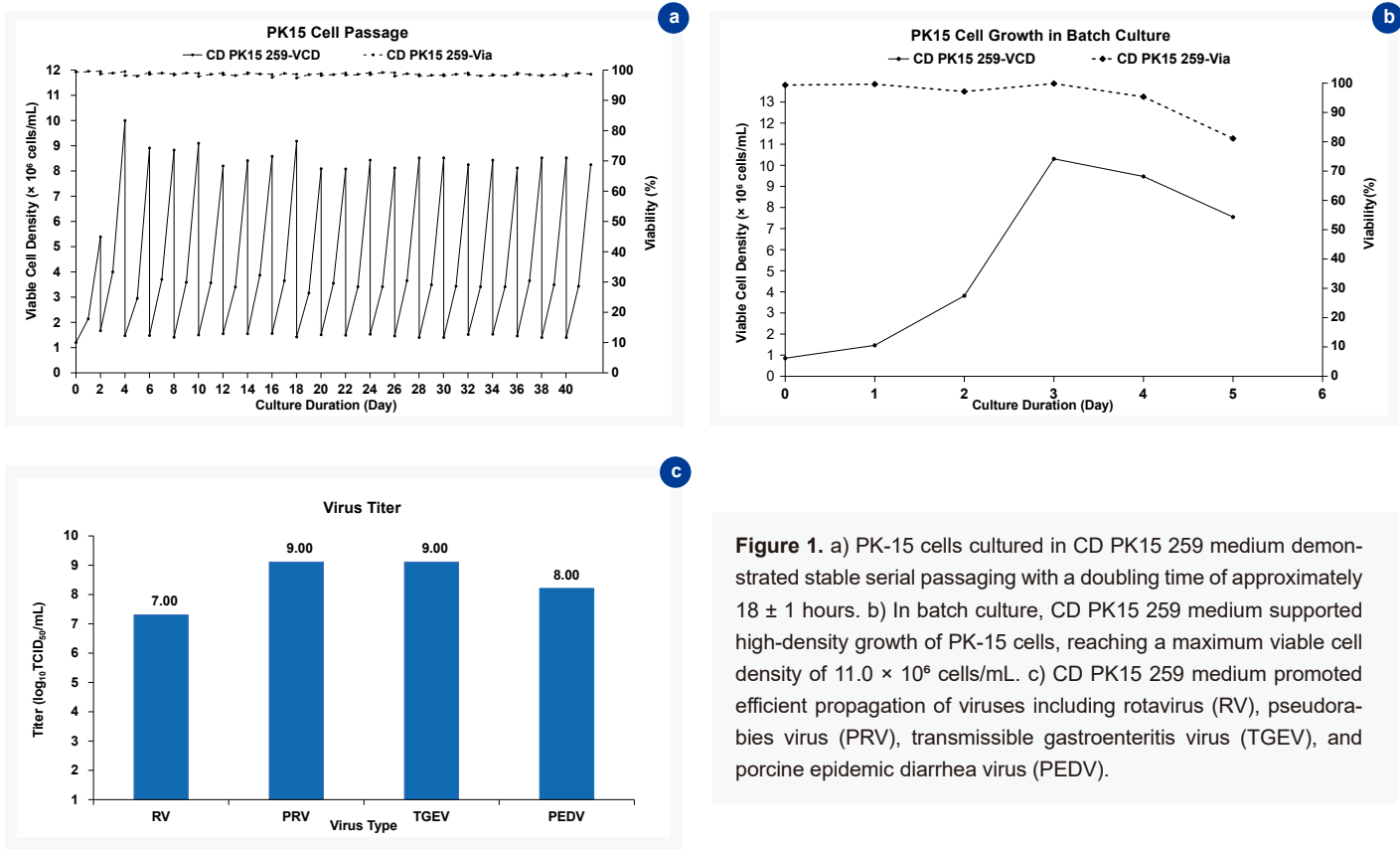


Figure 1. a) PK-15 cells cultured in CD PK15 259 medium demonstrated stable serial passaging with a doubling time of approximately 18 ± 1 hours. b) In batch culture, CD PK15 259 medium supported high-density growth of PK-15 cells, reaching a maximum viable cell density of 11.0×10^6 cells/mL. c) CD PK15 259 medium promoted efficient propagation of viruses including rotavirus (RV), pseudorabies virus (PRV), transmissible gastroenteritis virus (TGEV), and porcine epidemic diarrhea virus (PEDV).

ST Cell Culture Medium

CD ST 258 medium is a chemically defined formulation specifically developed for the high-density suspension culture of swine testis (ST) cells. With fully defined chemical composition and no animal-derived components, this medium supports robust suspension growth of ST cells. It also facilitates efficient propagation of viruses such as pseudorabies virus, transmissible gastroenteritis virus, and porcine epidemic diarrhea virus.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
CD ST 258	10604-258	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium

Case Studies

1. Cell Growth and Virus Production

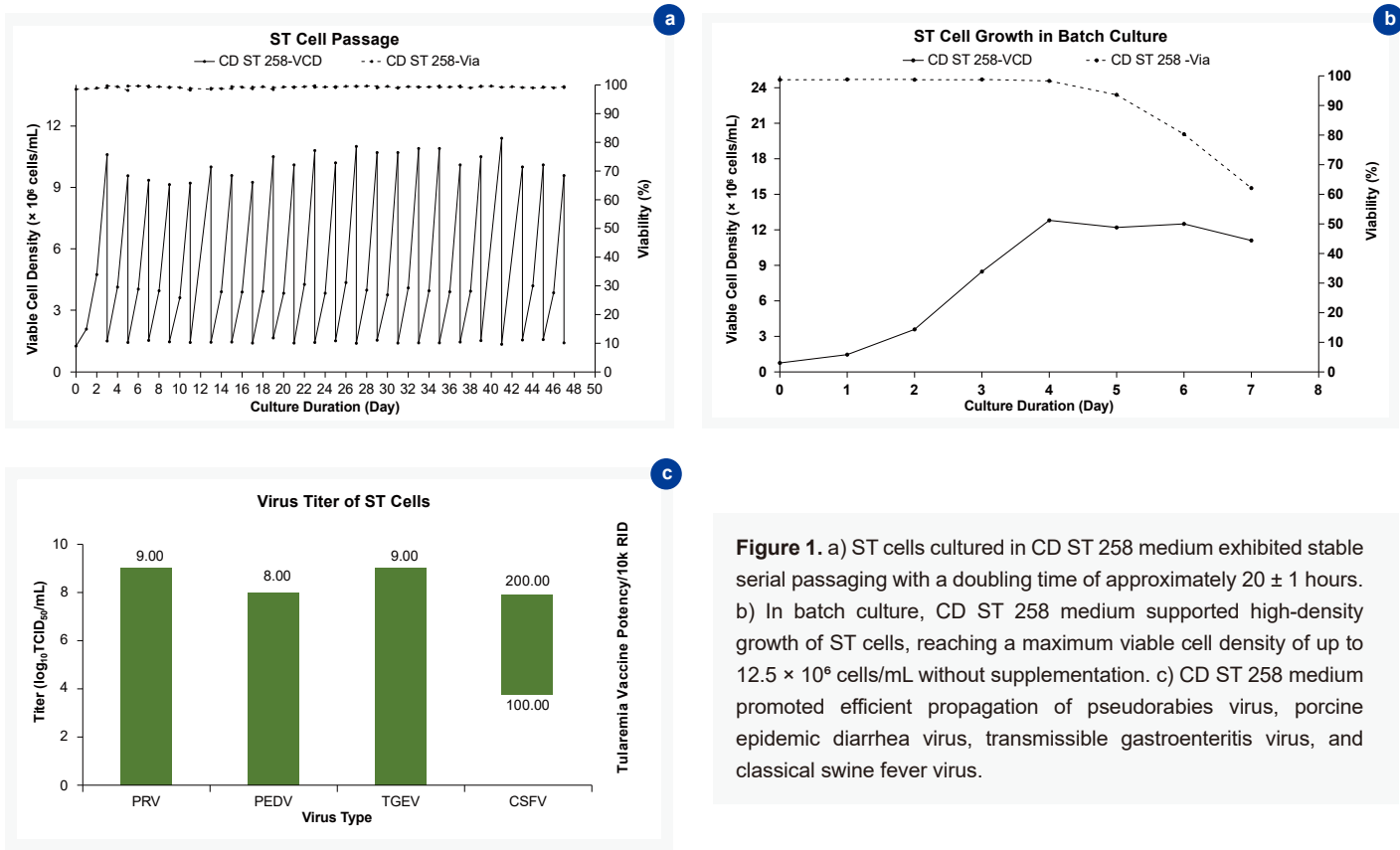


Figure 1. a) ST cells cultured in CD ST 258 medium exhibited stable serial passaging with a doubling time of approximately 20 ± 1 hours. b) In batch culture, CD ST 258 medium supported high-density growth of ST cells, reaching a maximum viable cell density of up to 12.5 × 10⁶ cells/mL without supplementation. c) CD ST 258 medium promoted efficient propagation of pseudorabies virus, porcine epidemic diarrhea virus, transmissible gastroenteritis virus, and classical swine fever virus.

MDBK Cell Culture Medium

MDBK cells are derived from the kidneys of adult cattle and are used in virology, cell biology, and animal vaccine research. They are commonly employed in the production of veterinary vaccines such as bovine infectious rhinotracheitis virus and bovine viral diarrhea virus, and JSBio has suspension-adapted MDBK cells and developed a corresponding serum-free culture medium—CD MDBK 211. This medium supports high-density suspension culture of MDBK cells and enables high-titer virus production.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
CD MDBK 211	10501-211	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium

Case Studies

1. Cell Growth

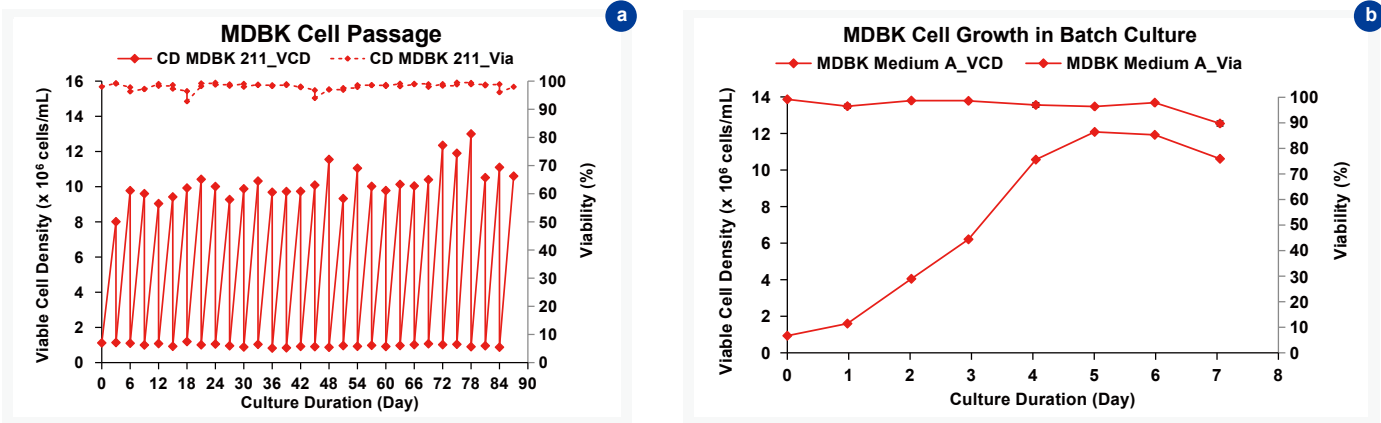


Figure 1. a) Serial passaging of MDBK cells in CD MDBK 211 medium at a seeding density of 1.0×10^6 cells/mL, with a doubling time of approximately 22 ± 1 hours; cells were passaged every 3 days. b) MDBK cells inoculated at a density of 1.5×10^6 cells/mL in CD MDBK 211 medium reached a peak viable cell density of around 13.0×10^6 cells/mL.

MDCK Cell Culture Medium

MDCK cells are derived from Madin-Darby canine kidney cells. MDCK SFM 1607 medium supports the rapid adaptation of MDCK adherent cells to suspension culture, enabling serum-free, high-density growth of MDCK suspension cells. It also promotes efficient expression of influenza viruses across multiple subtypes (human, avian, and swine). This serum-free, animal-origin-free medium substantially reduces downstream purification costs.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
MDCK SFM 1607	10405-1607	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium

Case Studies

1. Cell Growth and Virus Production

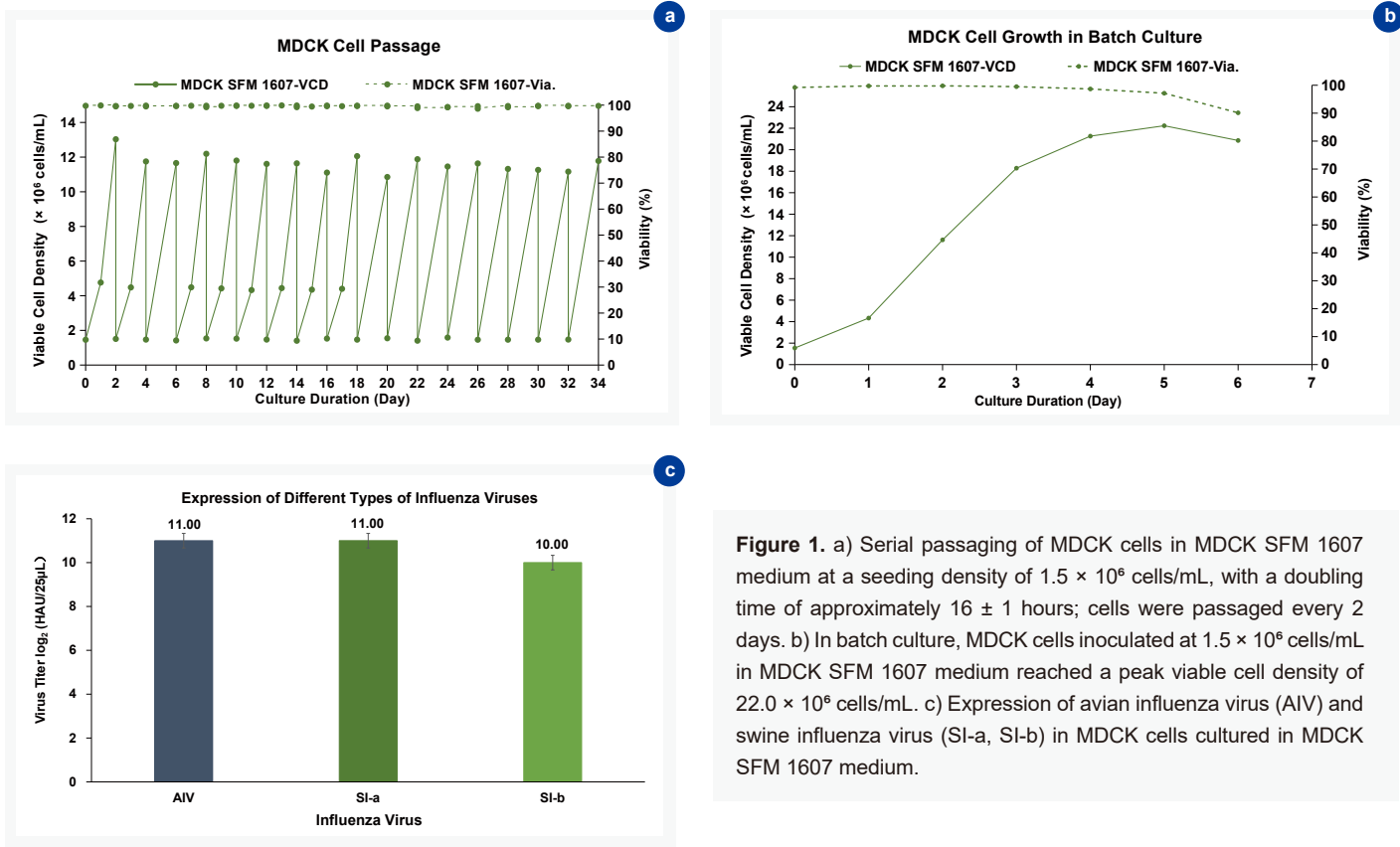


Figure 1. a) Serial passaging of MDCK cells in MDCK SFM 1607 medium at a seeding density of 1.5×10^6 cells/mL, with a doubling time of approximately 16 ± 1 hours; cells were passaged every 2 days. b) In batch culture, MDCK cells inoculated at 1.5×10^6 cells/mL in MDCK SFM 1607 medium reached a peak viable cell density of 22.0×10^6 cells/mL. c) Expression of avian influenza virus (AIV) and swine influenza virus (SI-a, SI-b) in MDCK cells cultured in MDCK SFM 1607 medium.

F81 Cell Culture Media

F81 cells are derived from feline kidney cells. F81 LSM 801 is a low-serum medium formulated to support the suspension growth of F81 cells. During the cell expansion phase, serum supplementation is limited to 2–3%. This medium is suitable for serial passaging, scale-up, and virus production using F81 cells.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
F81 LSM 801	11401-801	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Low-serum cell culture medium
ExpVirus A	99166-22039	Liquid	500 mL, 1000 mL	Feed
ExpVirus B	99167-22040	Liquid	500 mL, 1000 mL	Feed

Case Studies

1. Adherent cell suspension adaptation

F81 LSM 801 medium enables stable serial passaging of F81 cells, with a doubling time of approximately 35 hours. In batch culture, the medium maintained high-density F81 cell growth, with cell viability consistently above 98% during the first 9 days.

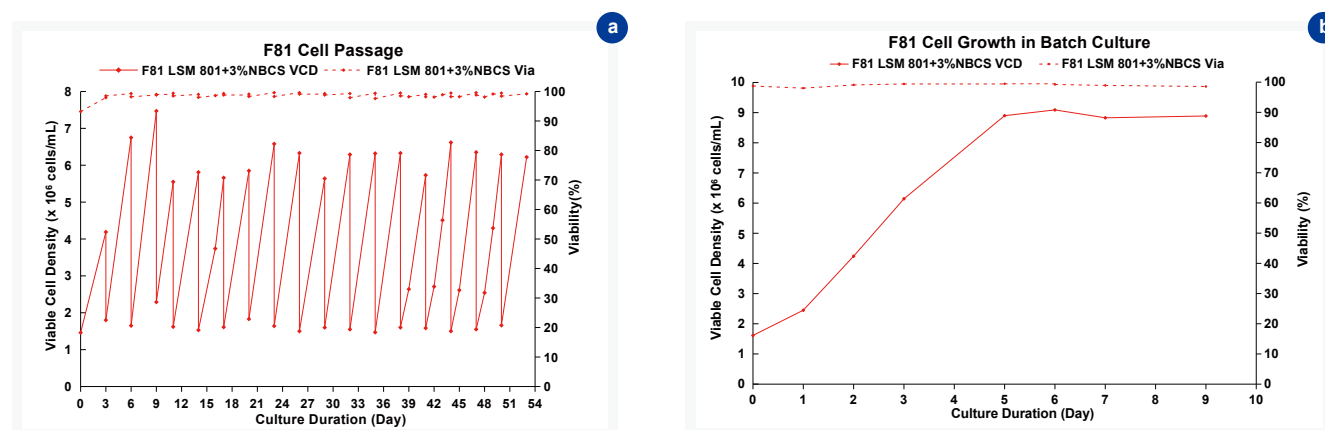


Figure 1. a) Serial passaging of F81 cells in F81 LSM 801 + 3% NBCS medium at a seeding density of 1.5×10^6 cells/mL, subcultured every 3 days. b) Batch culture of F81 cells in F81 LSM 801 + 3% NBCS medium at a seeding density of 1.5×10^6 cells/mL.

2. Virus Production

The virus production system developed by JSBio using F81 cells has achieved higher viral titers.

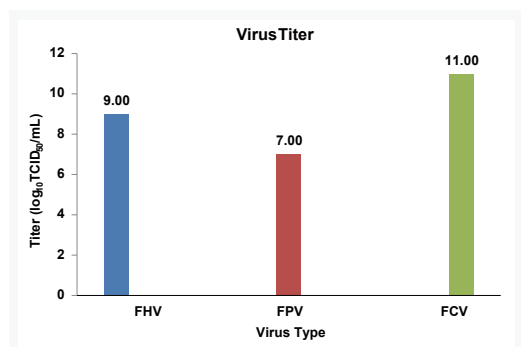


Figure 2. Production of the feline trivalent vaccine viruses—feline herpesvirus (FHV), feline parvovirus (FPV), and feline calicivirus (FCV)—using F81 LSM 801 + 3% NBCS medium, ExpVirus A and ExpVirus B supplements, and suspension-adapted F81 cells.

Insect Cell Culture Media

Insect cells (e.g., Sf9, Sf21, H5) are widely adopted for recombinant protein production due to their post-translational modification capability, high expression yields, scalability, and safety for vertebrate applications. JSBio's insect cell culture media are manufactured under GMP conditions, formulated as serum-free, animal component-free media that support high-density cell growth and enhanced recombinant protein expression.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
IT SFM 03	11009-1353	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Serum-Free Medium
	11009-23027	Liquid	500 mL, 1000 mL	
Insect SFM 1407	11003-1407	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Serum-Free Medium

Case Studies

1. Cell Growth

Growth of Sf9 Cells

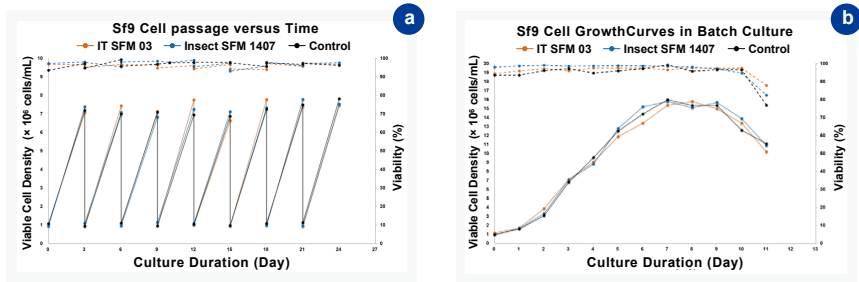


Figure 1. a) Passage culture of Sf9 cells using JSBio media and control medium, seeded at 1.0×10^6 cells/mL; the cell density reaches $7.0\text{--}8.0 \times 10^6$ cells/mL after 72 h. b) Batch culture of Sf9 cells using JSBio media and control medium, seeded at 1.0×10^6 cells/mL; the peak viable cell density reaches $15.0\text{--}16.0 \times 10^6$ cells/mL.

Growth of H5 Cells

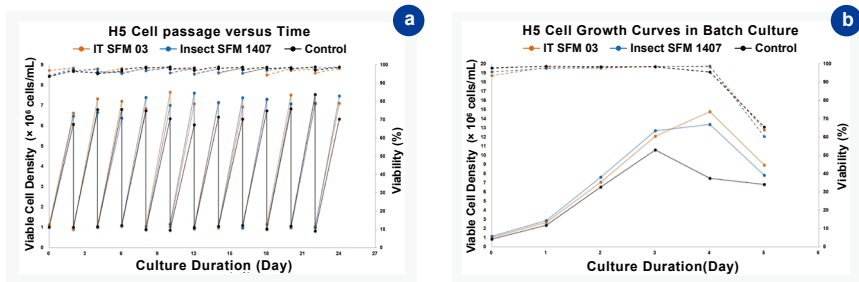


Figure 2. a) Passage culture of H5 cells using JSBio media and control medium, seeded at 1.0×10^6 cells/mL; the cell density reaches $6.0\text{--}7.0 \times 10^6$ cells/mL after 48 h. b) Batch culture of H5 cells using JSBio media and control medium, seeded at 1.0×10^6 cells/mL; the peak viable cell density reaches $13.0\text{--}15.0 \times 10^6$ cells/mL.

2. Viral Seed Preparation and Recombinant Protein Expression in Insect Cells

Insect cell culture media series enable higher infection efficiency.

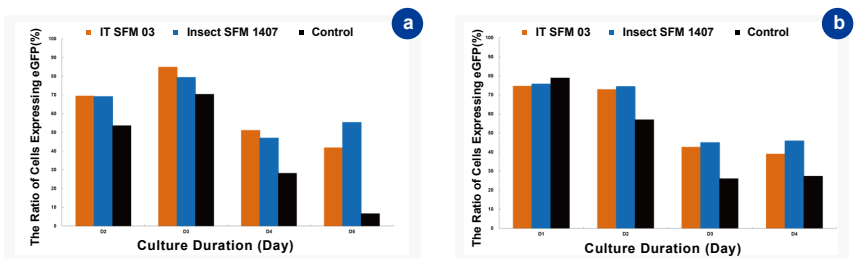


Figure 3. a) Infection of Sf9 cells with viral seeds in different media; the proportion of eGFP-expressing cells was detected after infection, showing an advantage over competitor media. b) Infection of H5 cells with viral seeds in different media; the proportion of eGFP-expressing cells was detected after infection, showing an advantage over competitor media.

Higher viral seed titers

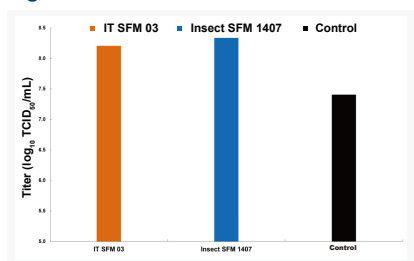


Figure 4. Superior viral seed titers in Sf9 cells cultured with JSBio's media compared to that of competitor media.

Higher recombinant protein expression.

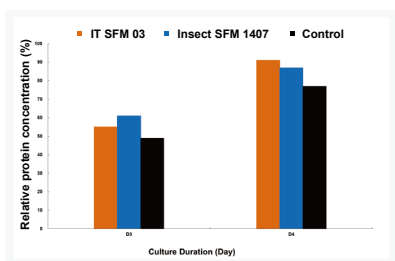


Figure 5. Superior protein expression level of classical swine fever E2 in H5 cells cultured with JSBio's media compared to that of competitor media.

LMH Cell Culture Medium

LMH cells are derived from chicken hepatocytes. LMH SFM 777 medium supports the rapid adaptation of LMH adherent cells to suspension culture, enabling stable high-density proliferation and enhancing the intracellular expression efficiency of avian adenovirus. LMH SFM 777 is a serum-free, protein-free, and animal-origin-free medium, significantly reducing downstream purification costs. It has been applied into multiple large-scale production projects of avian adenovirus vaccines.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
LMH SFM 777	11301-777	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Serum-free cell culture medium

Case Studies

1. Cell Growth

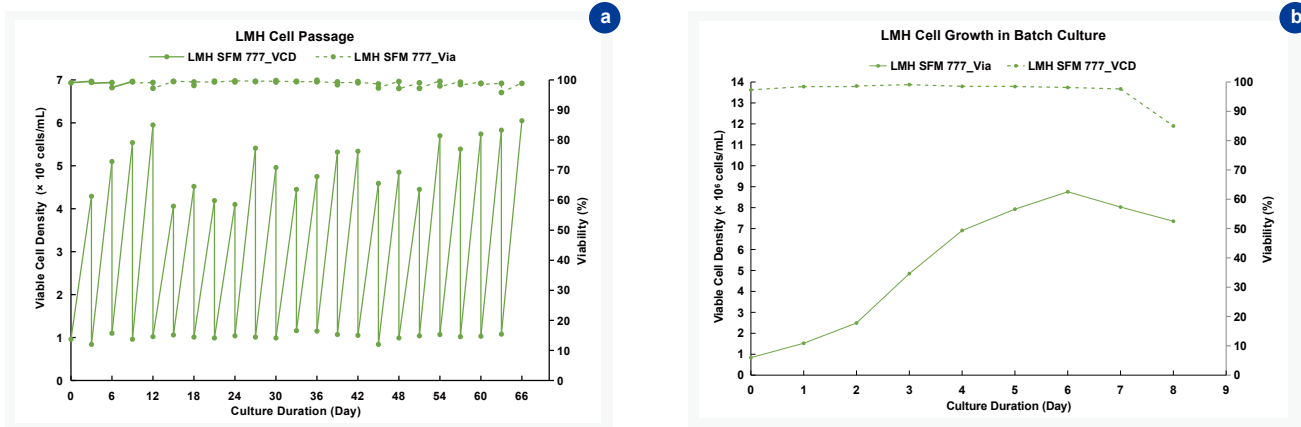


Figure 1. a) Suspension-adapted LMH cells passaged in LMH SFM 777 medium at a seeding density of 1.0×10^6 cells/mL, subcultured every 3 days. b) LMH suspension cells inoculated at 1.0×10^6 cells/mL in LMH SFM 777 medium reached a peak viable cell density of nearly 9.0×10^6 cells/mL, with cell viability consistently maintained above 95%, which is conducive to subsequent virus inoculation and expression processes.

2. Virus Production

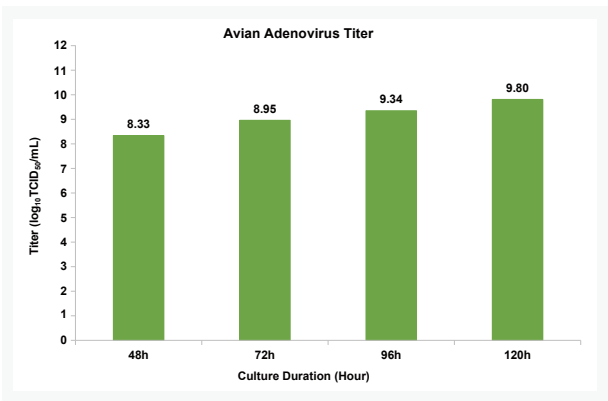


Figure 2. Avian adenovirus (serotype 4) infection of LMH cells cultured in LMH SFM 777 medium resulted in a maximum viral titer of approximately 10^{10} TCID₅₀/mL. Compared with adherent serum-containing cultures (about 10^8 TCID₅₀/mL), the serum-free suspension system achieved substantially higher viral yields and markedly improved production efficiency.

HEK-293 Cell Culture Media (Recombinant Protein & Viral Vectors Production)

HEK-293 cells (Human Embryonic Kidney cells) are widely utilized for recombinant protein production and viral vector production (e.g., Adeno-Associated Virus AAV, Adenovirus AdV, Lentivirus LV). To meet their culture requirements, the CD 293 series products are manufactured under GMP conditions. These are chemically defined, animal component-free media that effectively support high-density growth and efficient transfection/expression in various HEK-293 cell lines.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
CD 293 01	11203-1238	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium
	11203-22052	Liquid	500 mL, 1000 mL	
CD 293 06	11207-1652	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium
	11207-24018	Liquid	500 mL, 1000 mL	
CD 293 FA	99151-1241	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Feed, used with CD 293 FB mainly for stable transfection expression of HEK-293 cells
	99151-22055	Liquid	500 mL, 1000 mL	
CD 293 FC	99151-1327	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Feed, used with CD 293 FB mainly for transient transfection expression of HEK-293 cells
	99151-23016	Liquid	500 mL, 1000 mL	
CD 293 FB	99035-1242	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Feed, used with CD 293 FA or FC, the dosage is 1/10 of CD 293 FA or FC
	99035-23004	Liquid	500 mL, 1000 mL	

Case Studies

1. Cell Growth

CD 293 01 medium enables robust growth of HEK-293 cells, with a doubling time of approximately 21-24 hours and cell viability exceeding 90%. In batch culture, the maximum cell density can reach 14.0×10^6 cells/mL.

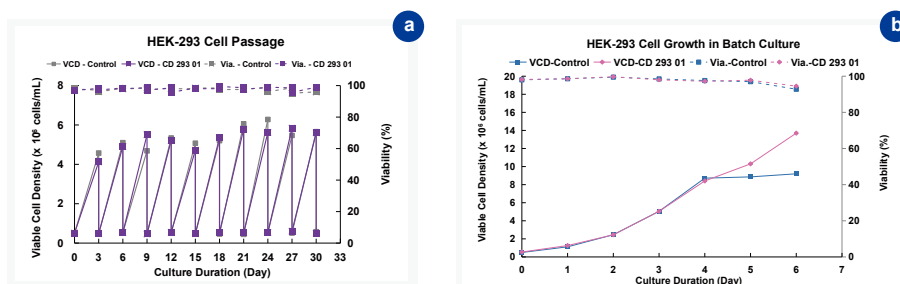


Figure 1. a) Passage culture of HEK-293 cells using different media, with a seeding density of 0.5×10^6 cells/mL and passage once every 3 days; b) Batch culture of HEK-293 cells using different media, with a seeding density of 0.5×10^6 cells/mL.

2. Protein Expression

CD 293 01 medium significantly enhances transient protein expression in HEK-293 cells. Depending on the molecule and experimental conditions, expression levels range from 50 to 400 mg/L.

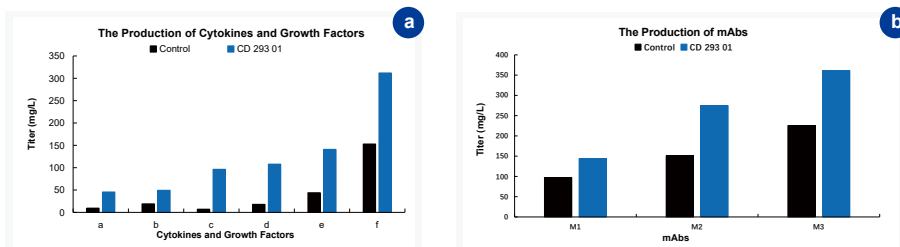


Figure 2. Transient expression of various protein molecules by HEK-293 cells using different media. a) Cytokines and growth factors; b) Monoclonal antibodies.

3. Transfection Efficiency of HEK-293 Cells

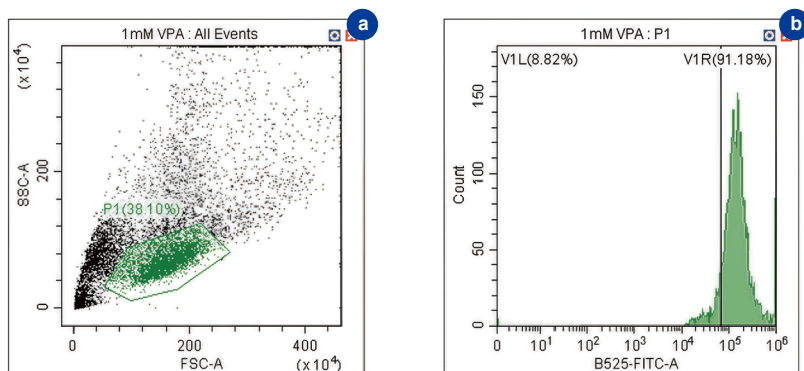


Figure 3. a) FSC-A (cell size)/SSC-A (cell granularity) scatter plot, gating to select P1 cell population; b) Distribution of fluorescently labeled positive cells in P1 population (positive rate 91.18%).

4. Viral Vector Production of HEK-293 Cells

Case 1

Sample No.	Titer (vg/mL)	Purity	% Full Capsids
Competitor 1	2.36E11	95	6
Competitor 2	2.44E11	95	7
CD 293 06	3.00E11	95	10

Table 1. CD 293 06 demonstrated superior performance in viral vector titer (3.00E11 vg/mL) and full capsid percentage (10) compared to competitors, while all exhibited 95% purity.

Case 2

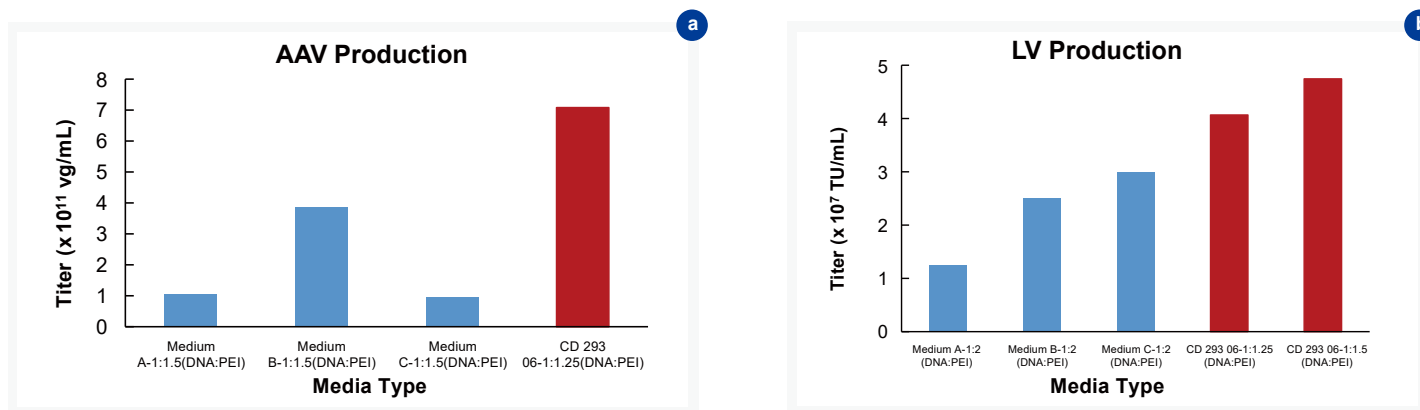


Figure 4. Preparation of viral vectors by HEK-293 cells using different media. a) AAV; b) LV. CD 293 06 medium can significantly increase the yield of viral vectors. The yield of AAV can reach 10¹¹ vg/mL, and that of LV can reach 10⁷ TU/mL, and the yield of CD 293 06 medium is significantly higher than that of competitors.

Human Diploid Cell Culture Medium

MCDB 201 is a low-serum medium suitable for the culture of diploid adherent cells. It enhances cell density, extends cell viability, improves cell morphology, shortens doubling time, and reduces production and purification costs. MCDB 201 is widely applicable to the large-scale industrial production of human vaccines such as rabies, Japanese encephalitis, varicella, and live attenuated hepatitis A.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
MCDB201	66021-233	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Low-serum medium

Case Studies

1. Adherent cell suspension adaptation

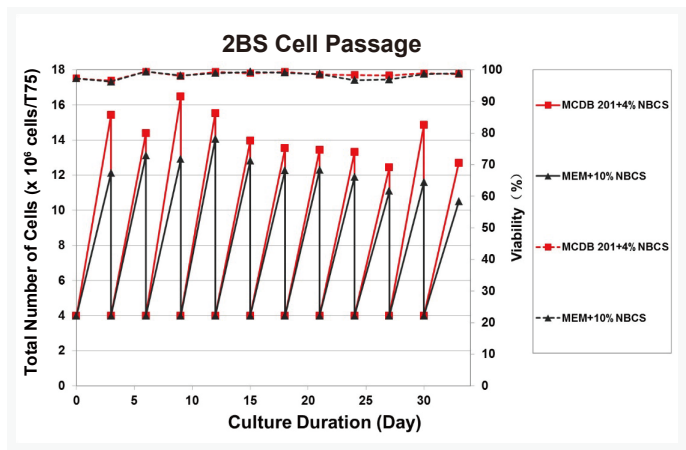


Figure 1. Comparison of serial passaging of diploid adherent cells cultured in MCDB 201 medium versus MEM.

Diploid adherent cells grew robustly in MCDB 201 medium and were stably passaged. With a seeding density of 4.0×10^6 cells/T75, cell density reached $12.0\text{--}14.0 \times 10^6$ cells/T75 on the third day post-passaging, while viability consistently exceeded 95%. The doubling time was approximately 40 hours. Compared with MEM + 10% NBS, MCDB 201 achieved significantly higher total cell density with comparable viability, demonstrating its suitability for supporting low-serum, high-density growth of diploid adherent cells.

T/NK Cell Culture Media

T cells and NK cells hold significant value for research and clinical application. T Cell 01 is a universal serum-free medium suitable for the culture of both T cells and NK cells. With the exception of human serum albumin, this medium contains no animal-derived components. T Cell 01 is manufactured under GMP conditions, ensuring compliance with the stringent quality requirements for cell therapy products.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
T Cell 01	11902-1533	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium for T and NK cell culture and expansion
	11902-23064	Liquid	500 mL, 1000 mL	

*Liquid bag sizes from 1–100 L can be provided upon request.

Case Studies

1. Cell Growth

Expansion of T Cells in T Cell 01 Medium

T Cell 01 supports massive expansion of T cells, achieving > 1000-fold expansion while maintaining high viability (> 90%) and a high positive selection rate (> 70%).

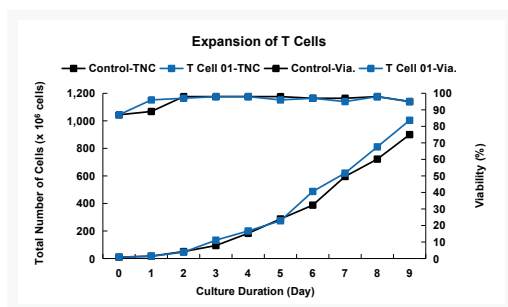


Figure 1. Peripheral blood-derived T cells cultured in T Cell 01 and a control medium, with total nucleated cell count (TNC) and viability measured daily.

Expansion of NK Cells in T Cell 01 Medium

Case 1:

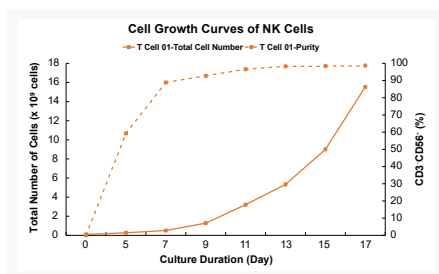


Figure 2. T Cell 01 supported >1000-fold expansion of NK cells derived from PBMCs while preserving potent cytotoxic activity. The expanded NK cells exhibited exceptionally high purity.

Case 2:

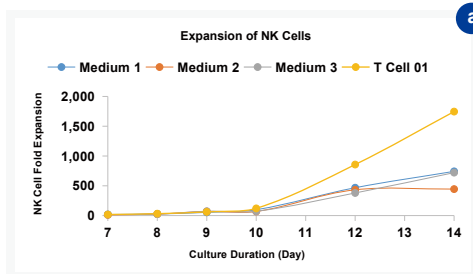
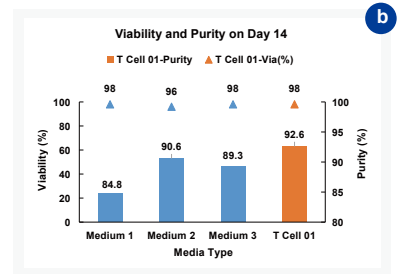


Figure 3. a) NK cells cultured in T Cell 01 achieved >1700-fold expansion after 14 days, significantly outperforming three competitor media. b) NK cell viability remained at 98%, comparable to competitor media, while purity reached 92.6%, substantially higher than that of competitors.

Stem Cell Culture Media

Stem cells are characterized by self-renewal and multi-lineage differentiation potential. Under appropriate conditions, they can differentiate into various functional cell types. Mesenchymal stem cells (MSCs), in particular, do not elicit rejection in allogeneic transplantation, making them widely used in basic medical research and drug development. JSBio's stem cell media are produced under GMP conditions, ensuring quality standards suitable for stem cell-based products. These formulations support efficient in vitro expansion of MSCs while maintaining multipotency.

Product Catalog

Product	Catalog No.	Form	Package Size	Description
Stem Cell 1	11901-1492	Dry Powder	2 L, 10 L, 50 L, 100 L, Customized	Basal medium for stem cell culture and multipotency maintenance
	11901-23049	Liquid	500 mL, 1000 mL	
Stem SFM 01	11903-25018	Liquid	500 mL	Basal medium
Stem cell supplement1	99215-25021	Liquid	15 mL	Supplement to Stem SFM 01 (with serum substitute)
Stem cell supplement2	99216-25022	Liquid	15 mL	Supplement to Stem SFM 01 (growth factors only)

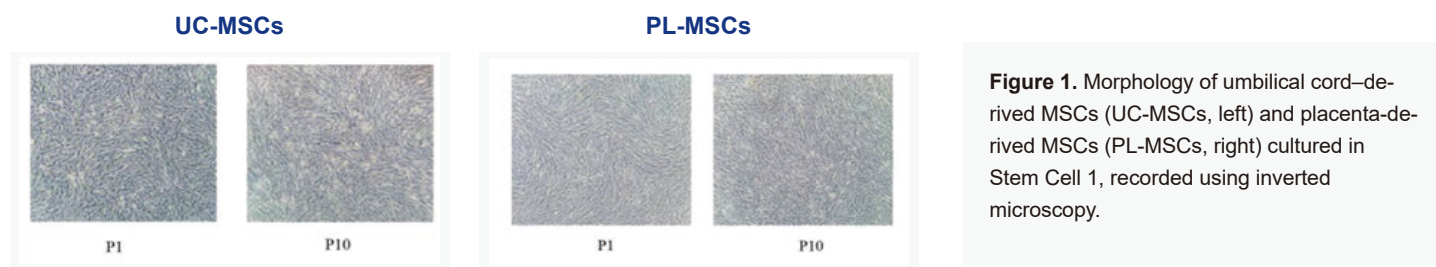
*Liquid bag sizes from 1–100 L can be provided upon request.

Case Studies

1. Cell Growth

Stem Cell 1

This medium promotes rapid MSC proliferation while maintaining stable morphology.



Stem SFM 01

When culturing adipose-derived stem cells, Stem SFM 01 supplemented with only 1.5% fetal bovine serum produced cell morphology (Figure 2) and density (Figure 3) comparable to alpha-MEM supplemented with high concentrations of serum substitute, significantly reducing serum dependence and improving cost-effectiveness.

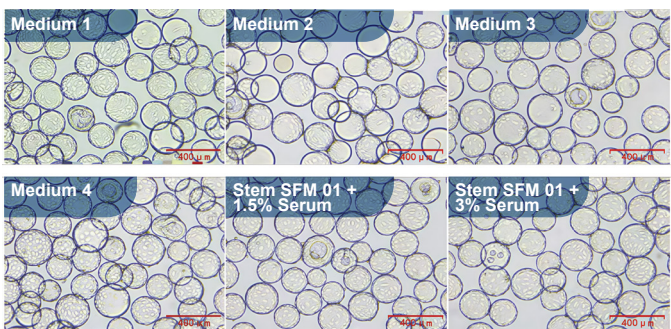


Figure 2. Morphology of adipose-derived stem cells on microcarriers.

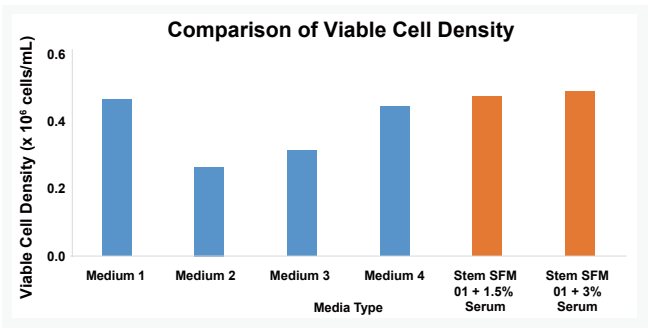


Figure 3. Comparison of viable cell densities of adipose-derived stem cells.

Culture Passage	Seeding Density	Seeding Cell Count	Seeding Viability	Culture Vessel	Medium	Replication	Culture Duration	Total Cell Density	Viable Cell Density	Viability	Volume (mL)	Expansion Fold	
P7	1E+4 cells/mL	7.50E+05	98.70%	T75	Stem SFM 01	2	3 days	1.67E+06	1.59E+06	95.52%	2	4.2	
					Competitor Media	1		1.54E+06	1.47E+06	95.82%	2	3.9	
		6.30E+07		10-layer cell factory	Stem SFM 01	1		1.16E+06	1.12E+06	96.55%	2	3.0	
					Stem SFM 01	1		5.77E+06	5.49E+06	94.54%	63	5.5	

Table 1. Comparison of stem cell growth in Stem SFM 01 versus competitor media at passage 7. Stem SFM 01 showed superior viable cell density and fold expansion.

2. Surface Marker Analysis

Stem Cell 1

MSCs expanded in Stem Cell 1 while retaining high purity.

Cell Type	CD34 ⁺	CD45 ⁺	CD73 ⁺	CD90 ⁺	CD105 ⁺
UC-MSCs, P5	< 0.2%	< 0.2%	99.8%	99.5%	98.1%
PL-MSCs, P5	< 0.2%	< 0.2%	99.6%	99.1%	98.4%

Table 2. Flow cytometric detection of surface markers of MSCs cultured to passage 5 (P5) in Stem Cell 1.

Stem SFM 01

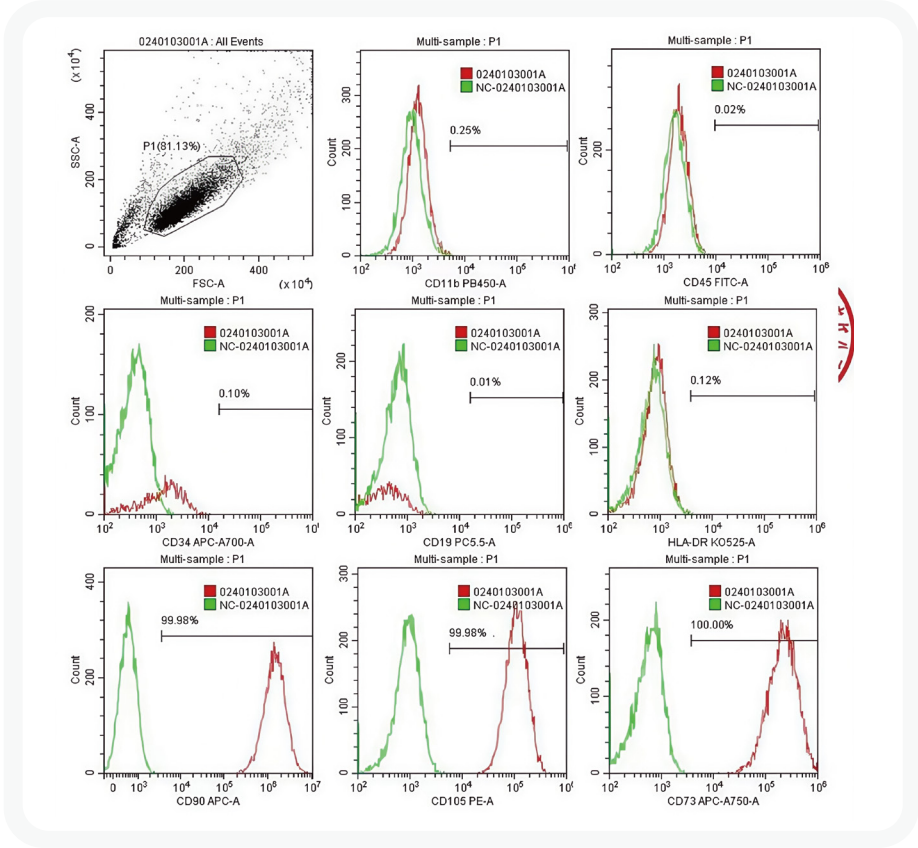


Figure 4. Positive marker expression exceeded 99% (CD73/CD90/CD105), while negative marker expression (CD34/CD45/HLA-DR) remained below 1%.

3. Multipotency Verification of MSCs

Stem Cell 1

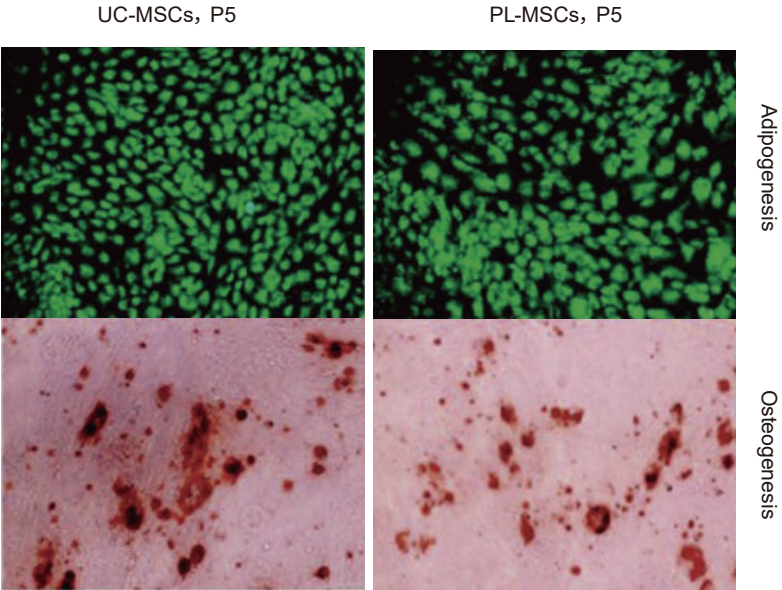


Figure 5. Adipogenic and osteogenic induction experiments were performed using P5 UC-MSCs and PL-MSCs. Adipocytes were stained with neutral lipid dye (green), and osteoblasts were stained with alizarin red (red). MSCs at passage 5 retained multi-lineage differentiation potential.

4. Exosome Production

Stem SFM 01

Total Cell Count	one cell factory, 3.5×10^8
Supernatant Volume	1L
TFF1	40 mL
Molecular Sieve Volume	~40 mL
TFF2	N/A
Content Detection (particles/mL)	5.6×10^{10}
Yield Per Liter	2.24×10^{12}

Table 3. The exosome yield of Stem SFM 01 medium is 2.24×10^{12} particles/L, higher than that of an MNC medium ($2\text{--}5 \times 10^{11}$ particles/L).

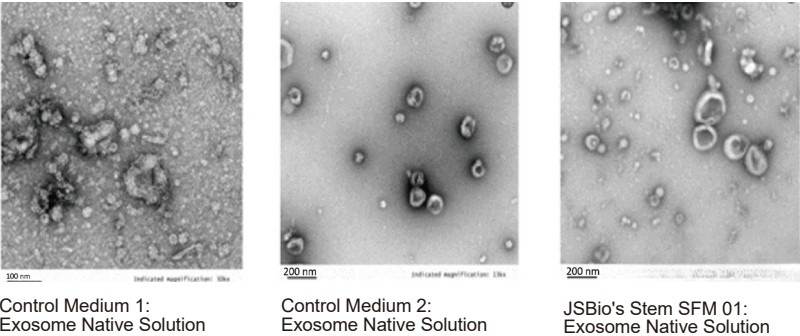


Figure 6. Comparison of exosome native solutions: exosomes produced in Stem SFM 01 exhibited superior productivity, along with uniform vesicle morphology and distinct structural features, indicating that Stem SFM 01 efficiently supports stem cells in secreting high-quality exosomes.