Cell Culture Medium Selection Guide

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DRIVE YOUR SUCCESS IN CELL CULTURE

Shanghai BioEngine Sci-Tech Co., Ltd.

To Be
the Most Reliable Cell Culture Partner
in the World

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BioEngine

Shanghai BioEngine Sci-Tech Co., Ltd. was founded in 2014, by Professor Wen-Song Tan and his team from the State Key Laboratory of Bioreactor Engineering of East China University of Science and Technology.

BioEngine is dedicated to be the most reliable cell culture partner in the world. Our headquarter and manufacturing site are located in Shanghai.

We specialize in providing high-quality & cost effective serum-free culture media and related technical services for biopharmaceutical companies in the antibody, vaccine, and cell & gene therapy fields.

With nearly 40 years of experience and expertise in cell culture, we have independently developed a series of serum-free cell culture media with IP rights for numerous cell lines, such as CHO cells, insect cells, HEK293 cells, Vero cells, MDCK cells, BHK cells, immune cells, etc.

ISO13485

- Excellent Performance: Supports high cell density, rapid cell proliferation, and high product yields (antibody/protein, vaccine, CGT).
- High Cost-Effectiveness: Production capacity scales up to 100,000 L/batch, significantly reducing manufacturing costs and offering competitive pricing.
- Reliable and Consistent Quality: Advanced CMPM manufacturing process maintains excellent batch-to-batch consistency. (RSD*<10%, Cpk**≥1.33).
- Timely and Stable Supply: Strictly selected "2 local + 1 imported" raw material suppliers ensures a stable and flexible supply chain, and reducing manufacturing costs.
- Regulatory Compliance Support: ISO13485:2016 and MDSAP certified, operating in accordance with GMP requirements. Full data traceability and supporting documentation for clinical applications.
- Professional Technical Service: Extensive expertise in cell culture technology, offering comprehensive support and solutions based on project experience.

ISO13485:2016

MDSAP(FDA)

*RSD refers to relative standard deviation, lower RSD indicates reduced variability in the production process.
**Cpk is a standard index to state the capability of one process. Cpk ≥ 1.33 indicates the process is capable and meets specification limits.

BioEngine believes that the "Intelligent Manufacturing in China" ideology has three important components: qualified and stable local raw material supply, continuous independent R&D capabilities, and leading manufacturing technology and quality management.

Continuous R&D Team

With nearly 40 years of expertise and experience in cell culture and bioreactor engineering, our R&D team has built up pioneering technical and innovative capabilities, achieving comprehensive coverage of cell culture technologies and accomplishing multiple innovative breakthroughs.

40 years of expertise and experience

100+ clinical trial projects

150+ serum-free media

100+ cell culture tech services

- Cutting-edge **MDCK** cell serum-free suspension culture technology used in avian **influenza vaccine** production in 2016
- The first Chinese **CHO** culture media and process used for the commercial production of **antibody fusion protein** drug in 2016
- The first Chinese culture medium for high-density suspension cell-based **FMD vaccine** production in 2019
- The ground-breaking Chinese serum-free medium used in **cell therapy** clinical trial in 2019
- Innovative serum-free suspension culture of **LMH** cells for industrial production of **avian adenovirus** in 2020
- The first Chinese serum-free culture medium for **Vero** cell-based **rabies vaccine** production in 2021
- The first serum-free suspension cell culture process for **human influenza vaccine** production in China in 2023
- Established the 1st two **group standards of serum-free cell culture media in** China in 2022

Reliable Supply Chain Management

Shanghai Beijin Biotech Co., Ltd. is BioEngine's wholly-owned subsidiary and supply chain center. It is an upscaled, informatized, and internationalized world-class culture medium factory, "In Shanghai, For Global".

Sufficient Capacity

BioEngine's annual production capacity can reach **55,000,000 L** (**1,300 tons**) of powder medium (4 production lines) and **250,000 L** of liquid medium (2 production lines), with a maximum batch capacity of **100,000 L** of powder medium.

Leading Production Technology

Scaling up an automatic low-temperature **CMPM** (Cone Mix and Pin Mill) process from **1,000 L/batch to 100,000 L/batch**, ensuring high-quality cell culture media products with excellent batch-to-batch consistency.

Multiple International QMS

ISO13485:2016 and **MDSAP** certifications, meeting the requirements of accreditation for cell culture media in **Europe** and **the US**.

Integrated Information Management

Quick responses to customers' technical and supply needs through our **5 information systems (PLM, QMS, ERP, MES, LIMS)**.

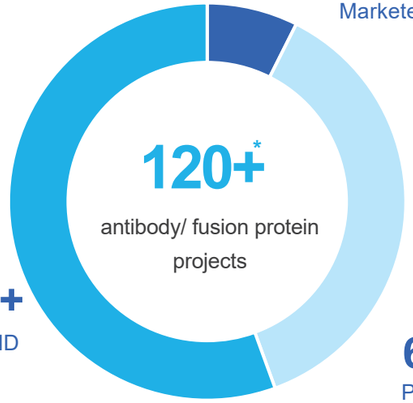
Drive Your Success in Cell Culture

Contents

Antibody Field

For a variety of antibody/protein drugs, such as monoclonal antibodies, multi-specific antibodies, antibody-drug conjugates (ADCs), and fusion proteins, and different cell culture processes, including batch, regular fed-batch, concentrated fed-batch, and perfusion cultures.

Eden and *EasZN* CHO CD media are specifically designed to support high cell density and high antibody/protein yield and have been applied in over 70 antibody/protein projects.



Projects:

- Monoclonal antibodies,Multi-specific antibodies, and fusion proteins
- Traditional targets (CD20/HER2/PD1 etc.) and new targets (CD38/IL6 etc.)

* Data as of December 2024

Typical Cases

1	2	3	4	5
Marketed	**BLA**	**Clinical Trial Phase III**	**IND**	**IND (China and the US)**
Antibody fusion protein	Monoclonal antibody	Monoclonal antibody	Tetra-specific antibody	Bispecific antibody
Fed-batch	Fed-batch	Concentrated fed-batch	Fed-batch	Perfusion
6-fold titer increase, CQAs comparable with the original drug	**3**-fold titer increase, CQAs comparable with the original drug	**2**-fold titer increase, manufacturing process change after being marketed	**3**-fold titer increase, meeting CQA requirements	**12**-fold increase in yield compared to traditional fed-batch

CHO Cell CD Media

Eden and *EasZN* CHO CD media contains no cytokines, antibiotics, hormones, or animal-derived components, and are suitable for fed-batch, concentrated fed-batch, and perfusion cultures of different CHO cell lines such as CHO-K1, CHO-ZN, HORIZON, CHO-S, CHO-DG44, etc.

Performance

In a Specific Cell Line

Among **65%*** of projects, the *Eden* CHO CD media outperformed or was comparable to the other brands of cell culture media.

In Specific Projects

Among **86%*** of projects, the *Eden* CHO CD media outperformed or was comparable to original cell culture media.

* Based on data from more than 100 external trials

Advantages

High Antibody/Protein Yields

Eden and *EasZN* media increase antibody/protein yield by an average of **30%**, achieving impressive yields of up to **14 g/L** in fed-batch culture, and reducing production costs.

Flexible glycosylation control

Optimized medium components allow for fine-tuning of glycosylation, with various modulators available.

Regulatory compliance

ISO13485:2016 and **MDSAP** certified, meeting compliance requirements in **Europe** and **the US**. Traceable data supports IND and BLA applications.

Stable and reliable quality

"2 local + 1 imported" raw material supplier model ensures stability. Advanced CMPM process maintains excellent batch consistency.

Professional technical support

Expert team provides comprehensive support and solutions.

Best Combo	Product	Cat. No.	Form	Size	Packaging	Notes
Eden 601 Kit 🔥	*Eden* B601S Basal Medium	*EXP0115604*	Powder	200L	Barrel	• SF, PF, ADCF, CD • Recommended for culturing CHO-K1, HORIZON,CHO-S, CHO-DG44 cells
		EXP0115603	Powder	10L	Bag	
	Eden F602aS Feed Medium	*EXP0115704*	Powder	30L	Barrel	
		EXP0115702	Powder	1L	Bag	
	Eden F600bS Feed Medium	*EXP0108804*	Powder	10L	Barrel	
		EXP0108802	Powder	1L	Bag	
Eden 100 Kit 🔥	*Eden* B100S Basal Medium	*EXP0116405*	Powder	200L	Barrel	• SF, PF, ADCF, CD • Recommended for culturing CHO-K1, HORIZON,CHO-S, CHO-DG44 cells
		EXP0116402	Powder	10L	Bag	
	Eden F100aS Feed Medium	*EXP0116504*	Powder	30L	Barrel	
		EXP0116502	Powder	1L	Bag	
	Eden F100bS Feed Medium	*EXP0116603*	Powder	10L	Barrel	
		EXP0116602	Powder	1L	Bag	
Eden 101 Kit 🔥	*Eden* B101S Basal Medium	*EXP0118303*	Powder	200L	Barrel	• SF, ADCF, CD • Recommended for cytokine-dependent CHO cell line culture
		EXP0118302	Powder	10L	Bag	
	Eden F101aS Feed Medium	*EXP0122103*	Powder	30L	Barrel	
		EXP0122102	Powder	1L	Bag	
	Eden F100bS Feed Medium	*EXP0116603*	Powder	10L	Barrel	
		EXP0116602	Powder	1L	Bag	
NEW *EasZN* CHO Kit	*EasZN* Basal Medium	*EXP0122201*	Powder	200L	Bag	• SF, ADCF, CD • Recommended for CHOZN and cytokine -dependent CHO cell line culture
		EXP0122202	Powder	10L	Bag	
	EasZN Feed Medium a	*EXP0122301*	Powder	30L	Bag	
		EXP0122302	Powder	1L	Bag	
	EasZN Feed Medium b	*EXP0122401*	Powder	10L	Bag	
		EXP0122402	Powder	1L	Bag	

- For specific CHO cell line or culture process, we could provide the best media kits and samples for you.
- Due to the variety of CHO cell lines and culture processes, it is recommended to test multiple media kits to determine the optimal one.
- For any media customization service, please consult our sales representative.
- Stay tuned for more upcoming CHO cell media!

Tuner for Protein Quality Adjustment

BioEngine provides a range of serum-free culture media for the large-scale production of proteins. Additionally, we offer various tuning reagents and methods to achieve your desired glycosylation profile, including G0F, G1F, G1F', Man5, fucosylation, sialylation, etc.

Product	Cat. No.	Form	Size	Packaging	Notes
Tuner-Sia	*EXP0119101*	Powder	100g	Bag	For modulating sialylation of antibody
Tuner-Gal	*EXP0119201*	Liquid	1L	Bottle	For modulating galactosylation of antibody
	EXP0119202	Liquid	100mL	Bottle	

CHO Cell CD Media for Cell Line Development

Eden B100 and *B101* basal medium are suitable for the cell pool expansion and clone expansion, supporting rapid growth of CHO cells and accelerating your cell line development. If *Eden* or *EasZN* series media are used in the subsequent large-scale cell culture process, it can significantly reduce the time needed for media screening, while also providing better cell growth and protein yield.

Product	Cat. No.	Form	Size	Packaging	Notes
Eden B100 Basal Medium	*TP0105301E*	Liquid	1L	Bottle	Suitable for non-cytokine dependent CHO cells
	TP0105302E	Liquid	500mL	Bottle	
Eden B101 Basal Medium	*TP0106702E*	Liquid	1L	Bottle	Suitable for cytokine-dependent CHO cells
	TP0106701E	Liquid	500mL	Bottle	

RapidTrans CHO Kit NEW

The *RapidTrans* CHO Kit is designed for high transfection efficiency and protein expression in CHO cells. It includes basal and feed media, along with an optimized enhancer and PEI transfection reagent. This kit supports rapid high-yield expression, with protein titer reaching over 200 mg/L (day 5) and approaching 800 mg/L (day 9). Whether in the R&D stage or large-scale production, the *RapidTrans* CHO Kit can provide high yields and reliable results.

Product	Component	Cat. No.	Form	Size	Packaging	Notes
RapidTrans CHO Kit (+PEI) Cat.No.: *TP0300301E*	*RapidTrans* CHO Basal Medium	*TP0107001E*	Liquid	500mL	Bottle	• SF, PF, ADCF, CD
	RapidTrans CHO Feed Medium a	*TP0107101E*	Liquid	250mL	Bottle	
	RapidTrans CHO Feed Medium b	*TP0107201E*	Liquid	25mL	Bottle	
	RapidTrans CHO Enhancer	*TP0200701E*	Liquid	10mL	Bottle	• Significantly enhances protein expression
	RapidTrans Transfection Reagent PEI	*TP0200901E*	Liquid	1.5mL*3	Vial	• Optimal with *RapidTrans* CHO Media
RapidTrans CHO Kit Cat.No.: *TP0300401E*	*RapidTrans* CHO Basal Medium	*TP0107001E*	Liquid	500mL	Bottle	• SF, PF, ADCF, CD
	RapidTrans CHO Feed Medium a	*TP0107101E*	Liquid	250mL	Bottle	
	RapidTrans CHO Feed Medium b	*TP0107201E*	Liquid	25mL	Bottle	
	RapidTrans CHO Enhancer	*TP0200701E*	Liquid	10mL	Bottle	• Significantly enhances protein expression

RapidTrans 293 Kit NEW

The *RapidTrans* 293 Kit is suitable for the transfection and protein expression of various 293 cells, such as HEK293, 293T, and 293F. It includes basal and feed media, an optimized enhancer and PEI transfection reagent. The kit enables transient protein expression titer of 200–1000 mg/L within 5 to 7 days, making it suitable for the R&D and production of biological products, including antibody drugs, recombinant protein vaccines, and IVD raw materials.

Product	Component	Cat. No.	Form	Size	Packaging	Notes
RapidTrans 293 Kit (+PEI) Cat. No. : *TP0300202E*	*RapidTrans* 293 Basal Medium	*TP0108701E*	Liquid	500mL*2	Bottle	• SF, PF, ADCF, CD
	RapidTrans 293 Feed Medium a	*TP0108802E*	Liquid	50mL	Bottle	
	RapidTrans 293 Feed Medium b	*TP0108902E*	Liquid	5mL	Bottle	
	RapidTrans 293 Enhancer	*TP0201001E*	Liquid	10mL	Bottle	• Significantly enhances protein expression
	RapidTrans Transfection Reagent PEI	*TP0200901E*	Liquid	1.5mL*3	Vial	• Optimal with *RapidTrans* 293 media
RapidTrans 293 Kit Cat. No. : *TP0300102E*	*RapidTrans* 293 Basal Medium	*TP0108701E*	Liquid	500mL*2	Bottle	• SF, PF, ADCF, CD
	RapidTrans 293 Feed Medium a	*TP0108802E*	Liquid	50mL	Bottle	
	RapidTrans 293 Feed Medium b	*TP0108902E*	Liquid	5mL	Bottle	
	RapidTrans 293 Enhancer	*TP0201001E*	Liquid	10mL	Bottle	• Significantly enhances protein expression

Hyber Series Serum-free Media for Hybridoma Cells

Hyber Series hybridoma cell serum-free media are suitable for high-density suspension cultures and rapid proliferation of hybridoma cells, supporting high antibody yields (~0.6 g/L in batch cultures).

	Product	Cat. No.	Form	Size	Packaging	Notes
Basal media	*Hyber-B100S* Hybridoma Cell Serum-free Medium	*EXP0111205*	Powder	200L	Barrel	• SF, PF, ADCF • Suitable for high-density hybridoma cell suspension cultures and supports high protein expression • The additive is added to powder medium at a ratio of 1:1,000
		EXP0111202	Powder	10L	Bag	
	Hyber-B100S Additive	*EXP0120901*	Liquid	100mL	Bottle	
		EXP0111902	Liquid	50mL	Tube	
Feeds	*Hyber-F100S* Hybridoma Cell Serum-free Feed Medium	*EXP0111303*	Powder	30L	Barrel	• SF, PF, ADCF • Used with *Hyber-B100S* in fed-batch culture
		EXP0120302	Powder	2L	Bag	

Celer Series Serum-free Media for 293 Cells

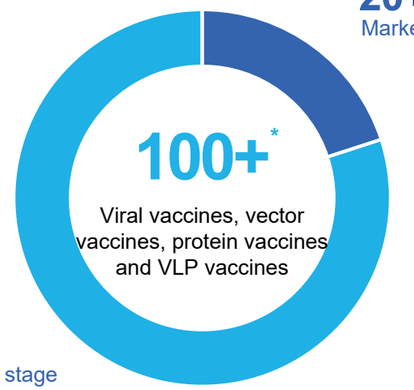
Celer Series 293 cell serum-free media are suitable for high-density and rapid proliferation of various 293 cells like HEK293, 293T, 293F cells, and support transient and stable expression with high transfection efficiency and protein yield.

	Product	Cat. No.	Form	Size	Packaging	Notes
Basal media	*Celer-S201S* 293 Serum-free Medium 🔥	*EXP0103005*	Powder	200L	Barrel	• SF, PF, ADCF, CD • Supports transient & stable protein expression of 293 cells
		EXP0103002	Powder	10L	Bag	
	Celer-S201 293 Serum-free Medium	*EXP0103001*	Liquid	1L	Bottle	
Feeds	*Celer-F001aS* 293 Serum-free Feed Medium	*EXP0117304*	Powder	20L	Barrel	• SF, PF, ADCF • Used with *Celer-S101S or Celer-S201S* in fed-batch culture
		EXP0117301	Powder	10L	Bag	
		EXP0117302	Powder	1L	Bag	
	Celer-F001bS 293 Serum-free Feed Medium	*EXP0117403*	Powder	10L	Barrel	
		EXP0117402	Powder	1L	Bag	

Vaccine Field

With nearly 40 years, we independently developed serum-free media for large scale suspension cultures of various cells (including insect cells, CHO cells, 293 cells, hybridoma cells, MDCK cells, BHK cells, MDBK cells, PK15 cells, etc.), covering all the culture media required in the R&D and production of human and veterinary vaccines.

Our products stand out from hundreds cell culture trials (both internal and external), demonstrating better performance in cell proliferation rate, maximum cell density and vaccine yields. With remarkable market recognition, our products have served more than 100 vaccine production projects.



- Applied in human and veterinary vaccine projects.
- Focus on serum-free suspension cell culture process.
- Applied in a bioreactor with a capacity of up to 6,000 L.
- Improve vaccine yields and significantly reduce production costs.

* Data as of December 2024

Typical Cases

Insect Cells Serum-Free Media	BHK Cells Serum-Free Media	Vero Cells Serum-Free Media	MDCK Cells Serum-Free Media
Marketed	**Marketed**	**Phase III**	**Phase II Clinical Trials**
VLP	Foot-and-Mouth Disease	Rabies virus	Human Influenza
Diluted fed-batch culture	High-density cell culture with medium exchange process	Traditional perfusion culture	Diluted fed-batch culture
Insect cell-based VLP vaccine production replaced adherent cell-based production for higher yield	First high-density, cell-based vaccine production process for foot-and-mouth disease in China	First serum-free cell-based vaccine production process for rabies in China	First serum-free suspension cell-based vaccine production process for human influenza in China

Human Vaccines

Vigor Series Serum-free Media for Insect Cells

Suitable for high-density cell cultures of both Sf9 and High five cells. Supports efficient recombinant protein production based on baculovirus expression vector system. *Vigor* series has been widely used in the large-scale production of subunit vaccines, VLP vaccines and recombinant proteins.

Product	Cat. No.	Form	Size	Packaging	Notes
Vigor-S101 Insect Cell Serum-free Medium	*EXP0118601*	Liquid	1L	Bottle	• SF, PF, ADCF • Suitable for both Sf9 & High five cells • Supports **subunit vaccine** (e.g. COVID-19, Influenza) or **VLP** production • The additive is added to powder medium at a ratio of 1:1,000
Vigor-S101S Insect Cell Serum-free Medium 🔥	*EXP0107404*	Powder	100L	Barrel	
	EXP0107403	Powder	5L	Bag	
Vigor-S101S Additive	*EXP0107501*	Liquid	100mL	Bottle	
	EXP0107504	Liquid	50mL	Bottle	

Celer Series Serum-free Media for 293 Cells

Suitable for high-density cultures of 293 cells like HEK293, 293T, 293F cells, etc. Supports rapid cell proliferation, efficient adenovirus amplification and high protein expression. Suitable for use in virology research, adenovirus vector vaccine production (e.g. COVID-19' s vaccine), protein production, and exosome production. *Celer* series media has been applied to projects with bioreactors at kilo-liter production scales and IND projects.

	Product	Cat. No.	Form	Size	Packaging	Notes
Basal media	*Celer-S001S* HEK293 Serum-free Medium 🔥	*EXP0108405*	Powder	200L	Barrel	• SF, PF, ADCF • Supports adenovirus amplification
		EXP0108403	Powder	10L	Bag	
	Celer-S001 HEK293 Serum-free Medium	*EXP0104003*	Liquid	1L	Bottle	
	Celer-S201S 293 Serum-free Medium 🔥	*EXP0103005*	Powder	200L	Barrel	• SF, PF, ADCF, CD • Supports protein expression
		EXP0103002	Powder	10L	Bag	
	Celer-S201 293 Serum-free Medium	*EXP0103001*	Liquid	1L	Bottle	
Feeds	*Celer-F001aS* 293 Serum-free Feed Medium	*EXP0117304*	Powder	20L	Barrel	• SF, PF, ADCF • To be used with *Celer-S101S or Celer-S201S* in fed-batch culture
		EXP0117301	Powder	10L	Bag	
		EXP0117302	Powder	1L	Bag	
	Celer-F001bS 293 Serum-free Feed Medium	*EXP0117403*	Powder	10L	Barrel	
		EXP0117402	Powder	1L	Bag	

Xeno Series Serum-free Media for MDCK Cells

Suitable for high-density suspension cultures of MDCK cells under serum-free and protein-free conditions. Supports rapid cell proliferation and efficient production of influenza virus vaccine. *Xeno* series medium was the first Chinese serum-free medium applied in suspension cell-based production of the human influenza vaccine, which has obtained IND approval and is currently in clinical trials stage.

Product	Cat. No.	Form	Size	Packaging	Notes
Xeno-S001S MDCK Serum-free Medium	*EXP0100407*	Powder	200L	Barrel	• SF, PF, ADCF • Supports efficient proliferation of the **human influenza virus**
	EXP0100403	Powder	10L	Bag	

ACgro Series Serum-free Media for Adherent Cells NEW

Suitable for high-density cultures and continuous cell passage of adherent cells such as Vero cells under serum-free conditions. Supports the production of various vaccines, including rabies, rotavirus, COVID-19, etc.BioEngine's serum-free medium supports China's first Vero cell-based rabies vaccine project, currently in the BLA stage.

Product	Cat. No.	Form	Size	Packaging	Notes
ACgro CD Medium	*TP0112901E*	Powder	10L	Bag	• SF, ADCF, CD • Ultra-low protein • Support the vaccine production of **rabies**, **rotavirus**, **COVID-19**, etc.
ACgro Additive	*TP0202101E*	Liquid	50mL	Bottle	

Diploid Series Serum-reduced Media for Diploid Cells NEW

Suitable for the adherent culture of diploid cells such as MRC-5, 2BS, etc. The serum concentration can be reduced from the traditional 10% to 3%. *Diploid B100* medium has been appiled in production of rabies virus vaccine using perfusion process.

Product	Cat. No.	Form	Size	Packaging	Notes
Diploid B100 Serum-reduced Medium	*EXP0119403*	Powder	200L	Barrel	• ADCF, CD • Supports diploid cell culture with reduced serum of 3% • Supports efficient production of **rabies vaccine** and other **human vaccines**
	EXP0119401	Powder	10L	Bag	
Diploid B100 Additive	*EXP0119502*	Liquid	240mL	Bottle	
	EXP0119501	Liquid	12mL	Tube	

LS902 Serum-reduced Media for Adherent Cells

LS902 medium is desgined for efficient culture of a wide variety of adherent cells, like Vero, 293, ST, Marc145, PK15 cells under reduced-serum conditions.

Product	Cat. No.	Form	Size	Packaging	Notes
LS902 Adherent Cell Low-serum Medium	*EXP0112704*	Powder	200L	Barrel	• No adaptation required for medium transfer from 10% serum culture • Supports long-term passage in 3-5% serum culture • Supports virus production in 1-2% serum or serum-free culture
	EXP0112703	Powder	10L	Bag	

Veterinary Vaccines

Vigor Series Serum-free Media for Insect Cells

Suitable for high-density cell cultures of Sf9 and High five cells. Supports efficient recombinant protein production based on baculovirus expression vector system. *Vigor* series has been widely used in the large-scale production of subunit vaccines, VLP vaccines and recombinant proteins.

Product	Cat. No.	Form	Size	Packaging	Notes
Vigor-S100S Insect Cell Serum-free Medium	*EXP0109403*	Powder	100L	Barrel	• SF, PF • Suitable for both Sf9 and High five cells • Support the production of subunit or VLP vaccines such as **Porcine circovirus**, **Classical Swine Fever virus**, and **Porcine parvovirus** • The additve is added to the powder medium at a ratio of 1:1,000
	EXP0109402	Powder	5L	Bag	
Vigor-S100S Additive	*EXP0109501*	Liquid	100mL	Bottle	

Celer Series Serum-free Media for 293 Cells

Suitable for high-density cultures of 293 cells like HEK293, 293T, 293F cells, etc. Supports rapid cell proliferation, efficient adenovirus amplification and high protein expression. Suitable for use in virology research, adenovirus vector vaccine production (e.g. COVID-19' s vaccine), protein production, and exosome production. *Celer* series media has been applied to projects with bioreactors at kilo-liter production scales and IND projects.

	Product	Cat. No.	Form	Size	Packaging	Notes
Basal media	*Celer-S001S* HEK293 Serum-free Medium	*EXP0108405*	Powder	200L	Barrel	• SF, PF, ADCF • Supports **adenovirus** amplification
		EXP0108403	Powder	10L	Bag	
	Celer-S001 HEK293 Serum-free Medium	*EXP0104003*	Liquid	1L	Bottle	
	Celer-S201S 293 Serum-free Medium	*EXP0103005*	Powder	200L	Barrel	• SF, PF, ADCF, CD • Supports protein expression
		EXP0103002	Powder	10L	Bag	
	Celer-S201 293 Serum-free Medium	*EXP0103001*	Liquid	1L	Bottle	
Feeds	*Celer-F001aS* 293 Serum-free Feed Medium	*EXP0117304*	Powder	20L	Barrel	• SF, PF, ADCF • To be used with *Celer-S101S or Celer-S201S* in fed-batch culture
		EXP0117301	Powder	10L	Bag	
		EXP0117302	Powder	1L	Bag	
	Celer-F001bS 293 Serum-free Feed Medium	*EXP0117403*	Powder	10L	Barrel	
		EXP0117402	Powder	1L	Bag	

Tac Series, *SF201*, *SF206* Serum-free Media for BHK Cells

Suitable for high-density cultures of BHK cells, under serum-free, protein-free, and animal-derived component free conditions. Supports efficient production of vaccines like pseudorabies, newcastle disease, Japanese encephalitis, rabies viruses and foot-and-mouth disease virus. BioEngine's BHK serum-free media supported the first high-density cell culture process in China for the production of FMD vaccine and has been applied in multiple commercial production projects for veterinary vaccines.

Product	Cat. No.	Form	Size	Packaging	Notes
Tac-S101S BHK Serum-free Medium 🔥	*EXP0102006*	Powder	200L	Barrel	• SF, PF, ADCF • Supports efficient vaccine production of **pseudorabies**, **newcastle disease**,**Japanese encephalitis**, rabies viruses, etc.
	EXP0102003	Powder	10L	Bag	
SF201 BHK Serum-free Medium	*EXP0101202*	Powder	200L	Barrel	• SF, PF, ADCF • Supports efficient production of the **foot-and-mouth disease virus**
	EXP0120002	Powder	10L	Bag	
Tac-S201S BHK Serum-free Medium	*EXP0119903*	Powder	200L	Bag	• SF, PF, ADCF • Support efficient vaccine production of **rabies viurs**
	EXP0119902	Powder	10L	Bag	
SF206 BHK Serum-free Feed Medium	*EXP0105104*	Powder	20L	Barrel	• SF, PF, ADCF • To be used with *Tac-S101S* or *SF201* in fed-batch culture
	EXP0105101	Powder	1L	Bag	

SF003 Serum-free Media for MDCK Cells

Suitable for high-density suspension cultures of MDCK cells under serum-free and protein-free conditions. Supports rapid cell proliferation and efficient production of influenza virus vaccine. In 2016, *SF003* medium supported the world' s first serum-free suspension cell culture process for large-scale production of avain influenza vaccine (6,000 L).

Product	Cat. No.	Form	Size	Packaging	Notes
SF003 MDCK Serum-free Medium 🔥	*EXP0116704*	Powder	200L	Barrel	• SF, PF, ADCF • Supports efficient proliferation of the **avian and swine influenza virus**
	EXP0116703	Powder	10L	Bag	

CatVax Series Serum-free Media for Feline Kidney Cells NEW

The *CatVaX* series media are designed for the serum-free suspension culture of feline kidney cells. They are suitable for rapid suspension adaptation of adherent cells and large-scale high-density culture of feline kidney cells, and support the efficient amplification of feline herpesvirus, calicivirus, and panleukopenia virus.

Product	Cat. No.	Form	Size	Packaging	Notes
CatVax-S100S Felis Kidney Cell Serum-free Medium	*EXP0121104*	Powder	200L	Barrel	• SF, PF, ADCF • Support efficient vaccine production of **feline herpesvirus**, **calicivirus**, and **panleukopenia virus**
	EXP0121102	Powder	10L	Bag	

SF501 Serum-free Media for LMH Cells

Suitable for suspension adaptation of adhenrent cells and high-density cultures of LMH cells under serum-free conditions. The *SF501* medium supports high yield of avian adenovirus vaccine, and has been successfully used in multiple large-scale avian adenovirus production projects.

Product	Cat. No.	Form	Size	Packaging	Notes
SF501 LMH Serum-free Medium 🔥	*EXP0105704*	Powder	200L	Barrel	• SF, PF, ADCF • Supports high production of **avian adenovirus** vaccine
	EXP0105702	Powder	10L	Bag	

Bofit Series Serum-free Media for MDBK Cells

Suitable for high-density suspension cultures of MDBK cells under serum-free, and supports efficient production of the bovine virus.

Product	Cat. No.	Form	Size	Packaging	Notes
Bofit-100S MDBK Serum-free Medium 🔥	*TP0110802E*	Powder	10L	Bag	• SF, PF, ADCF • Supports efficient production of the **bovine virus**

Hyber Series Serum-free Media for Hybridoma Cells

Hyber Series hybridoma cell serum-free media are suitable for high-density suspension cultures and rapid proliferation of hybridoma cells, supporting high antibody yields (~0.6 g/L in batch cultures).

	Product	Cat. No.	Form	Size	Packaging	Notes
Basal media	*Hyber-B100S* Hybridoma Cell Serum-free Medium	*EXP0111205*	Powder	200L	Barrel	• SF, PF, ADCF • Suitable for high-density hybridoma cell suspension cultures and supports high protein expression • The additive is added to powder medium at a ratio of 1:1,000
		EXP0111202	Powder	10L	Bag	
	Hyber-B100S Additive	*EXP0120901*	Liquid	100mL	Bottle	
		EXP0120902	Liquid	50mL	Tube	
Feeds	*Hyber-F100S* Hybridoma Cell Serum-free Feed Medium	*EXP0111303*	Powder	30L	Barrel	• SF, PF, ADCF • Used with Hyber-B100S in fed-batch culture
		EXP0111302	Powder	2L	Bag	

Proli Series Serum-free Media for PK15 Cells

Suitable for high-density suspension cultures of PK15 cells under serum-free and protein-free conditions. Support rapid suspension adaption of adherent cells and efficient production of the porcine circovirus.

Product	Cat. No.	Form	Size	Packaging	Notes
Proli-S001S PK15 Serum-free Medium 🔥	*EXP0111104*	Powder	200L	Barrel	• SF, PF, ADCF • Supports efficient production of the **porcine circovirus**
	EXP0111103	Powder	10L	Bag	

LS902 Serum-reduced Media for Adherent Cells

LS902 medium is designed for efficient cultures of a wide variety of adherent cells, like Vero, 293, ST, Marc145, PK15 cells under reduced-serum conditions.

Product	Cat. No.	Form	Size	Packaging	Notes
LS902 Adherent Cell Low-serum Medium	*EXP0112704*	Powder	200L	Barrel	• No adaptation required for medium transfer from 10% serum culture • Supports long-term passage in 3-5% serum cultures • Supports virus production in 1-2% serum or serum-free culture
	EXP0112703	Powder	10L	Bag	

Cell and Gene Therapy (CGT) Field

To empower the development of CGT field, BioEngine also has independently developed many serum-free media, including the *HIPP* series for immune cell culture, the *Celer* series 293 media and *Vigor* series insect cell media for viral vector packaging (AAV, LV, RV, etc.), and a variety of serum-free media to produce oncolytic viruses including HSV, adenovirus, etc. These products have supported many IND and BLA applications for CGT companies.

HIPP Series Serum-free Media for Lymphocytes

Suitable for various immune cell culture: T cells, NK cells, CAR-T, CIK, CAR-NK-92, hematopoietic stem cells (CD34+) and other cell lines (NK-92, NK-92MI, K562, Jurkat, etc.).

- **Excellent Performance:**
  Under completely serum-free culture conditions, *HIPP* series media support efficient cell expansion and high-density culture, maintaining high cell viability and positive cells ratios.
- **High Safety:**
  The serum-free, chemically defined and xeno-free media ensure safety of cell products, avoiding the risk of serum contamination and instability.
- **Flexible Ultilization:**
  No growth factors and activating factors provides flexibility of cytokine combination for different immune cells and applications, and also extend the expiration date. *HIPP* series products are suitable for various culture format, including plates, flasks, dishes, bags, and wave bioreactors.

The *HIPP* series serum-free media has been applied in multiple clinical stage cell therapy projects.

Case 1: In 2019, *HIPP-T009* was successfully applied in the clinical trial application for a cell therapy project and approved by the CDE.

Case 2: In 2024, *HIPP-T009* was applied in a cell therapy project that has entered the BLA stage.

Product		Cat. No.	Form	Size	Packaging	Notes
HIPP-X100 Kit NEW	*HIPP-X100* Lymphocyte Serum-free Medium (Without phenol red, GMP Grade)	*EXP0122701*	Liquid	1L	Bottle	Support the immune cells culture under completely serum-free conditions, maintaining high growth rates, cell viability and positive cell ratios.
	HIPP-X100 Lymphocyte Serum-free Medium Supplement	*EXP0122801*	Liquid	5mL	Vial	
HIPP-T009 Lymphocyte Serum-free Medium (Without phenol red, GMP Grade)		*EXP0103801*	Liquid	1L	Bottle	Support cultures of immune cells in completely serum-free condition
HIPP-T009 Lymphocyte Serum-free Medium (With phenol red, Research Grade)		*EXP0118701*	Liquid	1L	Bottle	
HIPP-T006 Lymphocyte Serum-free Medium (Without phenol red, GMP Grade)		*EXP0105301*	Liquid	1L	Bottle	Excellent performance with serum
HIPP-T006 Lymphocyte Serum-free Medium (With phenol red, Research Grade)		*EXP0118801*	Liquid	1L	Bottle	

Vigor Series Serum-free Media for Insect Cells

Suitable for high-density cultures of both Sf9 and High five cells, supporting efficient AAV production.

Product	Cat. No.	Form	Size	Packaging	Notes
Vigor-S101 Insect Cell Serum-free Medium	*EXP0118601*	Liquid	1L	Bottle	• SF, PF, ADCF • Support AAV production • Add additives to powder media at a ratio of 1:1,000
Vigor-S101S Insect Cell Serum-free Medium	*EXP0107404*	Powder	100L	Barrel	
	EXP0107403	Powder	5L	Bag	
Vigor-S101S Additive	*EXP0107501*	Liquid	100ml	Bottle	
	EXP0107503	Liquid	5ml	Tube	

Celer Series Serum-free Media for 293 Cells

Suitable for high-density cultures of 293 cells like HEK293, 293T, 293F cells. Support rapid cell proliferation, efficient adenovirus amplification, exosome production, and viral packaging (AAV, LV, RV, etc).

	Product	Cat. No.	Form	Size	Packaging	Notes
Basal media	*Celer-S001S* HEK293 Serum-free Medium	*EXP0108405*	Powder	200L	Barrel	• SF, PF, ADCF • Support adenovirus amplification • Support exosome production
		EXP0108403	Powder	10L	Bag	
	Celer-S001 HEK293 Serum-free Medium	*EXP0104003*	Liquid	1L	Bottle	
	Celer-S101S 293 Serum-free Medium	*EXP0112005*	Powder	200L	Barrel	• SF, PF, ADCF, CD • Support viral vector packaging like AAV, LV and RV
		EXP0112003	Powder	10L	Bag	
	Celer-S101 293 Serum-free Medium	*EXP0119601*	Liquid	1L	Bottle	
Feeds	*Celer-F001aS* 293 Serum-free Feed Medium	*EXP0117304*	Powder	20L	Barrel	• SF, PF, ADCF • To be used with *Celer-S101S* or *Celer-S201S* in fed-batch culture
		EXP0117301	Powder	10L	Bag	
		EXP0117302	Powder	1L	Bag	
	Celer-F001bS 293 Serum-free Feed Medium	*EXP0117403*	Powder	10L	Barrel	
		EXP0117402	Powder	1L	Bag	

Serum-free Media for Mesenchymal Stem Cells NEW

The *Omni* series serum-free media are designed for the efficient culture of MSC. They are serum-free, xeno-free, and chemically defined, providing an efficient and stable growth condition for MSCs. The media support the isolation and culture of MSC derived from a variety of tissue sources (such as umbilical cord, adipose tissue, amniotic membrane, and bone marrow), while maintaining trilineage mesoderm differentiation potential (osteoblasts, chondrocytes, and adipocytes). The *Omni* series includes multiple products suitable for various applications, meeting the needs of both research and production.

Product	Component	Cat. No.	Form	Size	Packaging	Notes
Omni MSC Xeno-free Kit (with phenol red) Cat. No.: *TP0300601E*	*Omni* MSC CD Basal Medium (with phenol red)	*TP0111601E*	Liquid	500mL	Bottle	• SF, Xeno-free • Suitable for the isolation and subculture of primary MSCs • Suitable for 2D and scale-up 3D culture
	Omni MSC Xeno-free Additive (with phenol red)	*TP0201301E*	Liquid	25mL	Bottle	
Omni MSC Xeno-free Kit (without phenol red) Cat. No.: *TP0300701E*	*Omni* MSC CD Basal Medium (without phenol red)	*TP0111901E*	Liquid	500mL	Bottle	
	Omni MSC Xeno-free Additive (without phenol red)	*TP0201901E*	Liquid	25mL	Bottle	
Exo MSC CD Kit (with phenol red) Cat. No.: *TP0301001E* (1L)	*Exo* MSC CD Basal Medium (with phenol red)	*TP0111801E*	Liquid	1000mL	Bottle	• SF, Xeno-free, CD • Support the expansion of MSCs under CD culture conditions • Support high production of exosomes in MSC under CD conditions, significantly simplifying downstream purification steps • Suitable for 2D and scale-up 3D culture
	Exo MSC CD Additive	*TP0202001E*	Liquid	1mL	Vial	
Exo MSC CD Kit (without phenol red) Cat. No.: *TP0301101E* (1L)	*Exo* MSC CD Basal Medium (without phenol red)	*TP0112201E*	Liquid	1000mL	Bottle	
	Exo MSC CD Additive	*TP0202001E*	Liquid	1mL	Vial	
Exo MSC CD Kit (with phenol red) Cat. No.: *TP0301002E* (500mL)	*Exo* MSC CD Basal Medium (with phenol red)	*TP0111802E*	Liquid	500mL	Bottle	
	Exo MSC CD Additive	*TP0202002E*	Liquid	0.5mL	Vial	
Exo MSC CD Kit (without phenol red) Cat. No.: *TP0301102E* (500mL)	*Exo* MSC CD Basal Medium (without phenol red)	*TP0112202E*	Liquid	500mL	Bottle	
	Exo MSC CD Additive	*TP0202002E*	Liquid	0.5mL	Vial	

Classical Media

With a large-scale, informatized and internationalized world-class culture medium manufacturing site, BioEngine obtains leading capabilities in producing high performance and quality serum-free culture media.

We provide a wide range of classical culture media, including RPMI 1640, MEM, DMEM, Ham's F12, IMDM, M199, etc.

Stable Supply Chain

Strictly selected “2 local + 1 imported” raw material supply mode provides a flexible and stable supply during raw material market fluctuations

High Cost-effectiveness

The production capacity scales up to 100,000L/batch, significantly reducing manufacturing cost.

Adjustable Components

Adjustment of components in classical media formulations is supported.

Product	Cat. No.	Form	Size	Glucose	L-Gln	Sodium Pyruvate	HEPES	Phenol Red	Sodium Bicarbonate
DMEM, High Glucose (With sodium pyruvate)	*EXP0110105*	Powder	200L	4.5g/L	4mM	1mM	-	+	-
	EXP0110102	Powder	10L						
	EXP0110103	Liquid	1,000mL	4.5g/L	4mM	1mM	-	+	3.7g/L
	EXP0110104	Liquid	500mL						
DMEM, High Glucose (Without sodium pyruvate)	*EXP0101905*	Powder	200L	4.5g/L	4mM	-	-	+	-
	EXP0101901	Powder	10L						
	EXP0101903	Liquid	1,000mL	4.5g/L	4mM	-	-	+	3.7g/L
	EXP0101904	Liquid	500mL						
DMEM, Low Glucose	*EXP0103505*	Powder	200L	1.0g/L	4mM	1mM	-	+	-
	EXP0103502	Powder	10L						
	EXP0103503	Liquid	1,000mL	1.0g/L	4mM	1mM	-	+	3.7g/L
	EXP0103504	Liquid	500mL						
DMEM/F-12 (With HEPES)	*EXP0103405*	Powder	200L	3.15g/L	2.5mM	0.5mM	3.57g/L	+	-
	EXP0103402	Powder	10L						
	EXP0103403	Liquid	1,000mL	3.15g/L	2.5mM	0.5mM	3.57g/L	+	1.2g/L
	EXP0103404	Liquid	500mL						
DMEM/F-12 (Without HEPES)	*EXP0112205*	Powder	200L	3.15g/L	2.5mM	0.5mM	-	+	-
	EXP0112202	Powder	10L						
	EXP0112203	Liquid	1,000mL	3.15g/L	2.5mM	0.5mM	-	+	2.44g/L
	EXP0112204	Liquid	500mL						

Product	Cat. No.	Form	Size	Glucose	L-Gln	Sodium Pyruvate	HEPES	Phenol Red	Sodium Bicarbonate
MEM	*EXP0112905*	Powder	200L	1.0g/L	2mM	-	-	+	-
	EXP0112902	Powder	10L						
	EXP0112903	Liquid	1,000mL	1.0g/L	2mM	-	-	+	2.2g/L
	EXP0112904	Liquid	500mL						
RPMI 1640	*EXP0116305*	Powder	200L	2.0g/L	2.05mM	-	-	+	-
	EXP0116302	Powder	10L						
	EXP0116303	Liquid	1,000mL	2.0g/L	2.05mM	-	-	+	2g/L
	EXP0116304	Liquid	500mL						
Ham's F-12	*EXP0102805*	Powder	200L	1.8g/L	1mM	1mM	-	+	-
	EXP0102802	Powder	10L						
	EXP0102803	Liquid	1,000mL	1.8g/L	1mM	1mM	-	+	1.18g/L
	EXP0102804	Liquid	500mL						
IMDM (Without α-thioglycerin, 2-mercaptoethanol)	*EXP0103105*	Powder	200L	4.5g/L	4mM	1mM	5.96g/L	+	-
	EXP0103102	Powder	10L						
	EXP0103103	Liquid	1,000mL	4.5g/L	4mM	1mM	5.96g/L	+	3.02g/L
	EXP0103104	Liquid	500mL						
M199	*EXP0102906*	Powder	200L	1.0g/L	0.68mM	-	-	+	-
	EXP0102902	Powder	10L						
	EXP0102903	Liquid	1,000mL	1.0g/L	0.68mM	-	-	+	2.2g/L
	EXP0102904	Liquid	500mL						
MEMα, nucleosides (With ribonucleosides, deoxyribonucleosides)	*EXP0103305*	Powder	200L	1.0g/L	2mM	1mM	-	+	-
	EXP0103302	Powder	10L						
	EXP0103303	Liquid	1,000mL	1.0g/L	2mM	1mM	-	+	2.2g/L
	EXP0103304	Liquid	500mL						
Leibovitz's L-15 (With galactose)	*EXP0112305*	Powder	200L	Galactose 0.9g/L	2.05mM	5mM	-	+	-
	EXP0112302	Powder	10L						
	EXP0112303	Liquid	1,000mL	Galactose 0.9g/L	2.05mM	5mM	-	+	-
	EXP0112304	Liquid	500mL						
McCoy's 5A (With high glucose, bacto- peptone)	*EXP0112405*	Powder	200L	3.0g/L	1.5mM	-	-	+	-
	EXP0112402	Powder	10L						
	EXP0112403	Liquid	1,000mL	3.0g/L	1.5mM	-	-	+	2.2g/L
	EXP0112404	Liquid	500mL						

Buffers

Product	Cat. No.	Form	Size	Notes
DPBS	*EXP0113005*	Powder	200L	without Ca^{2+}, Mg^{2+}, phenol red
	EXP0113002	Powder	10L	
	EXP0113003	Liquid	10,00mL	without Ca^{2+}, Mg^{2+}, phenol red
	EXP0113004	Liquid	500mL	

Customization Services

With state-of-the-art research and development capabilities, a vast library of media formulations and innovative high-throughput media screening iBioG platform, we provide medium development and customization services for cell culture media. These services aim to improve product expression, regulate protein/antibody quality, and significantly reduce production costs.

Advantages

40 years of expertise and experience in cell culture technology research

A vast library of media formulations

Innovative iBioG platform for media development

Extensive project experience since 2008

Workflow

With iBioG platform, we could quickly obtain efficient culture media formulations. The average R&D duration is 3-6 months. We have completed over 80 media customization and development projects, and the customized media have been applied in 40+ clinical trial projects.

One-Stop Development Service		Self-Service Development Service
Project negotiation, requirements definition, and project establishment		Project negotiation, requirements definition, and project establishment
Execute confidentiality agreements and technical service contracts, and formally exchange experimental data, detection methods, reference standards, cell lines, and all relevant information		Execute confidentiality agreements and technical service contracts.
Preliminary experiments to characterize cell features	3-6 months	Experimental design based on client's preliminary data and medium preparation
Experimental design and analysis based on the iBioG Platform		Analysis of client's experimental results using iBioG. Subsequent experimental design and media preparation
Confirmation of cell culture medium formulas		Confirmation of cell culture medium formula
Development of powder medium production processes	2 months	Development of powder medium production processes
Validation of powder medium production processes	2-3 months	Validation of powder medium production processes
Verification and quality inspection of final medium	2 months	Verification and quality inspection of final medium

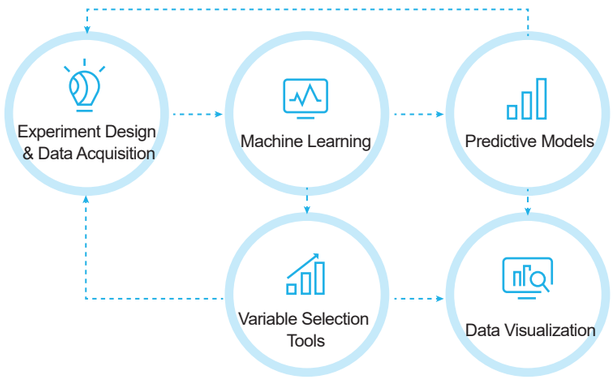
Innovative iBioG Platform

Conventional serum-free medium design and development processes commonly encounter challenges such as lengthy experimental cycles, over-reliance on experience, unpredictable results, and issues including information gaps and resource inefficiency. To effectively counteract these limitations, BioEngine has established the iBioG Platform, an AI-assisted cell culture process and serum-free medium design and development platform, which employs artificial intelligence, statistical frameworks, big data analytics, and machine learning models.

The iBioG Platform integrates advanced functionalities, including comprehensive analysis of cell culture process data, AI-assisted experimental design, discovery of key components in formulations, and predictive modeling. It effectively guides the development of serum-free medium formulations, optimizes cell culture processes, and assists in identifying critical quality control parameters during production.

Centered on data-driven insights, the iBioG Platform minimizes dependence on historical experience, enabling more precise, scientific, and tailored formulation design. It also enhances intelligent and precise control over production processes, ensuring consistent, stable, and high-quality media production.

Key Methods



Advantages of iBioG

- Quickly obtain media formulations (3-6 months)
- Identify the key components and concentration ranges of media formulation
- Assess the stability of culture media

3 Learning Models

I-SCR
Variable Selection Model

- High accuracy, able to handle nonlinear relationships
- Used to guide the subsequent optimization process
- Identify key components that affect media products

I-FIT
Prediction Model based on Data Distribution

- Effectively make predictions from experimental data, and is more accurate than traditional prediction models
- Iterative data reduces the prediction model' s error rate to only 10%-20%
- Determine the concentration range of key components of the formulation, whilst providing warnings of the formulation' s possible risks
- Guarantee intellectual property protection as I-GEN is a self-learning model

I-GEN
Learning Models based on Genetic Algorithms

- ~300,000 formulations/day
- 20-40 formulations will be validated and confirmed
- 80%-90% accessibility
- Significantly reduce workload and increase efficiency for formulation development

OEM Services

BioEngine has constructed a leading culture media manufacturing site compliant with multiple quality management systems, including ISO13485:2016, MDSAP and GMP. We have a consistent scale-up production process, from 1,000L to 100,000L using an automatic low-temperature CMPM (Cone Mix and Pin Mill) process, ensuring a stable supply of high-quality media products with excellent batch-to-batch consistency.

Our facility implements comprehensive information management to ensure accurate and reliable data, meeting requirements of quality management systems. We use 5 main information systems: PLM, QMS, ERP, MES, and LIMS. With the “2 local +1 imported” raw material suppliers model for cell culture media, stable and quick media production is guaranteed.

Supply Chain

- Facility Area / Clean Room Area: 10,000 m^2 / 3,000 m^2
- Production Capacity: Powder Medium: 55,000,000 L/a(1,300 tons/a), up to 100,000 L/batch
  4 powder media lines (100,000, 10,000, 1,000, 100) L/batch
  Liquid Medium: 250,000 L/a,up to 1,000 L/batch
  2 liquid media lines (1,000, 100) L/batch
- Production Process: Automatic, low-temperature CMPM (Cone Mix and Pin Mill) process
- International Quality Management Systems: ISO13485:2016, MDSAP(FDA), GMP
- Integrated Information Systems: 5 systems (PLM, QMS, ERP, MES, LIMS) collaborate

Advantages of OEM

Rapid Response

- Samples available within 2 weeks (when raw materials are ready)
- Final product supplied earliest after 1 month

Excellent Batch-to-Batch Consistency

- Scale-up CMPM process from 1,000 L/batch to 100,000 L/batch,ensuring high-quality media products with excellent batch-to-batch consistency (RSD<10%; CPK>1.33)

IP Protection

- Refined, strict medium formulation protection, with internal system to ensure security

Exceptional Cost-Effectiveness

- Production scale of up to 100,000 L/batch, and stable supply of premium raw materials, support the competitive prices of medium products

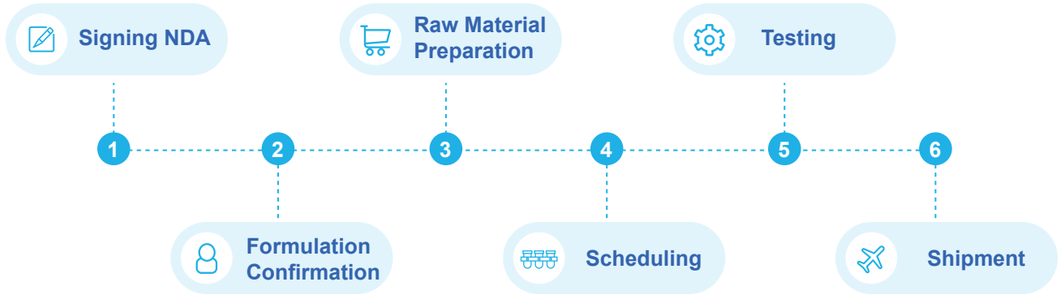
Stable Supply of Raw Materials

- “2 local+1 imported” model of selecting raw material suppliers, insulated from market fluctuations of raw materials
- More than 95% of raw materials are supplied from at least 2 local suppliers and 1 imported supplier

Dedicated Product Engineers

- Coordinate communications and technical support of OEM projects
- Supervise full product life cycles, from product design to manufacturing and application
- Can provide full set of audit documentations, guaranteeing full traceability for design and standards of products

Rapid Sample Preparation



Media Customization & Development Procedure

01 Project Definitions

- Confirm customer requirements (VOC)
- Project planning

02 Development

- Convert customer requirements into project development specifications (PDS/SPC)
- Determine raw material specifications (RMS)
- Determine product testing methods (TM)
- House of Quality Management (HOQ)
- Design Failure Mode and Effect Analysis (d-FMEA)

03 Process Analysis

- Process Capability Analysis (PPU)
- Confirm process specifications (PS)
- House of Quality Management (HOQ)
- Process Failure Mode and Effect Analysis (p-FMEA)

04 Process Validation

- Process Qualification (PQ)
- Field testing
- Process Failure Mode and Effect Analysis (p-FMEA)
- Value Stream Mapping (VSM)
- Determine critical process parameters and process capability index (CTQ, CPK)
- Preparation of documents for product to be marketed