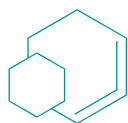




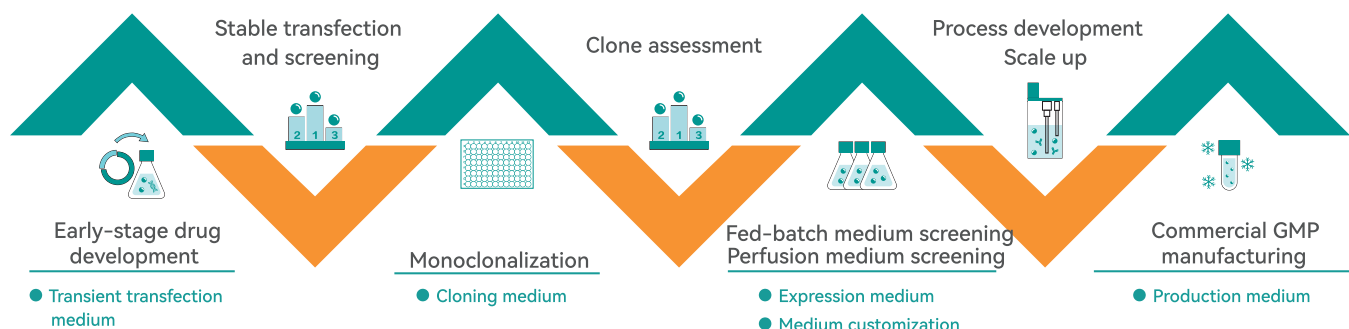
Biopharmaceutical Culture Media Products Products and Services

Dedicated to reducing costs and enhancing
efficiency for antibody drug development
while expediting application





Comprehensive culture medium supply services for antibody drug development



Catalogue Products

Excellent performance

- High-density cell culture
- High-level expression of recombinant protein

Full range

- Early development to commercial manufacturing

Qualification

- DMF filed
- Support for client audits and clinical application

- Full-process culture medium supply

Contract Manufacturing Service

Comprehensive qualification

- ISO9001
- GMP standard manufacturing management

Consistent quality

- Conemilling manufacturing process
- Intra-batch/inter-batch consistency

Stable supply

- Guarantee of raw material sourcing

BIO-PHARMACEUTICAL

Products & Services

01

Biopharmaceutical Commercial Culture Medium

- CHO serum-free basal medium
- CHO serum-free feed medium
- CHO serum-free cloning medium
- CHO serum-free transient transfection medium
- 293 serum-free transient transfection medium

02

Contract Manufacturing Services

- Liquid culture media GMP/Non-GMP manufacturing
- Powder culture media GMP/Non-GMP manufacturing

Biopharmaceutical Commercial Culture Medium



CHO cells and 293 cells are commonly used engineered cell lines for the production of protein and antibody drugs. ExCell Bio has established a comprehensive media development platform specifically for this purpose, covering all stages of biopharmaceutical production from early-stage R&D, cell line construction, process transfer, to commercial-scale manufacturing, providing a full spectrum of cell culture media required for biopharmaceutical manufacturing;

Stable Transfection Medium Catalogue Products

Product Features

- Serum-free, animal origin free(AOF), and chemically defined
- Supports high-density, high-viability growth of various CHO cell types
- Facilitates high yield and high-quality protein production in CHO cells
- Fully proprietary development, stable supply
- GMP grade, DMF filed (039066)
- Supports clinical application and commercialization



Applicable cells

CHO-K1
CHOZN
CHO-DG44
CHO-S, etc.

Usage

Efficient expansion of CHO cells and high-quality expression of recombinant proteins



Basal medium

OptiVibro®CHO Basal Medium CE01
OptiVibro®CHO Basal Medium CE02



Feed medium

OptiVibro®Feed Medium CA01α
OptiVibro®Feed Medium CA01β

Basal

CHO cell cryopreservation, seed expansion, batch culture, and fed-batch culture

Feed

Fed-batch culture

Product Data

CE01 data

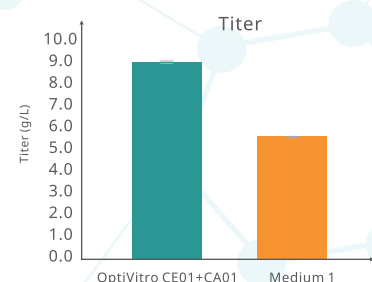
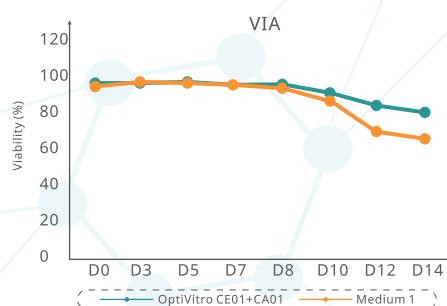
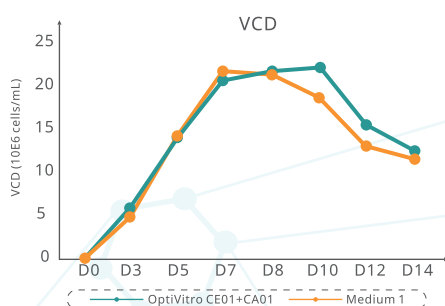


Figure 1. OptiVibro® CHO CE01 supplemented with feed medium CA01 achieves performance comparable to leading culture medium, resulting in a 57% increase in protein expression compared to competitor medium.

Cell line: CHO-K1, expressing a monoclonal antibody.

Stable Transfection Medium Catalogue Products

CE02 data

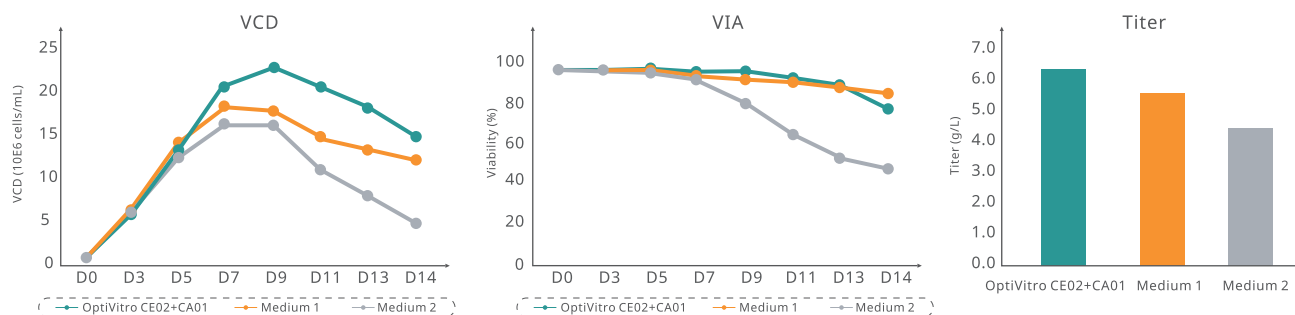


Figure 2. OptiVibro® CHO CE02 supplemented with feed CA01 demonstrates outstanding performance, supporting robust cell growth and enabling higher protein expression yields.

Cell line: CHO-K1, expressing a monoclonal antibody.

OptiVibro® Serum-Free Cloning Medium



- Animal origin free(AOF), protein-free, and chemically defined
- Supports monoclonalization of different types of CHO cells and 293 cells
- Significantly increases monoclonal proliferation rate
- Supports robust clone growth with stable proliferation in later stages
- Perfect alternative to medium containing hydrolysates for cloning

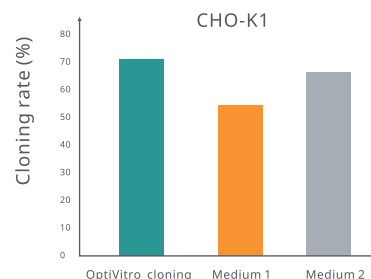


Figure 3. OptiVibro® cloning medium significantly enhances monoclonal proliferation rates under identical culture conditions. Cell line: CHO-K1, clone rate determined on D14.

Product Information

Name	Cat no.	Specification
OptiVibro® CHO Serum-Free Basal Medium Ce01	CE000-N031/N032	Liquid: 500 mL/1000 mL
	CE000-N033/N034/N035	Powder: 1 L/10 L/100 L
OptiVibro® CHO Serum-Free Basal Medium CE02	CE000-N041/N042	Liquid: 500 mL/1000 mL
	CE000-N043/N044/N045	Powder: 1 L/10 L/100 L
OptiVibro® Serum-Free Feed Medium CA01α	CA000-N011/N012/N013	Powder: 1 L/10 L/100 L
OptiVibro® Serum-Free Feed Medium CA01β	CA000-N021/N022/N023/N024	Powder: 0.5 L/1 L/5 L/10 L
OptiVibro® Serum-Free Cloning Medium	UE000-N092	Liquid: 500 mL

Transient transfection medium Catalogue Products

- Animal origin free(AOF) and chemically defined
- Significantly enhancing post transfection protein expression
- Only feed once,easy to operate,saving time
- High viability over extended periods when transfecting suspended CHO-S cells
- Maintains high-density cell growth and proliferation
- Offers a complete set of transient transfection experiment protocols

CHO Transient Transfection

293 Transient Transfection

- Animal origin free(AOF) and chemically defined
- Supports high-density growth of various suspended 293 cells
- High viability over extended periods when transfecting suspended 293 cells
- Supports efficient transfection and high-level protein expression
- DMF registered (038830), supports clinical applications

Product Data

CHO Transient Transfection Medium

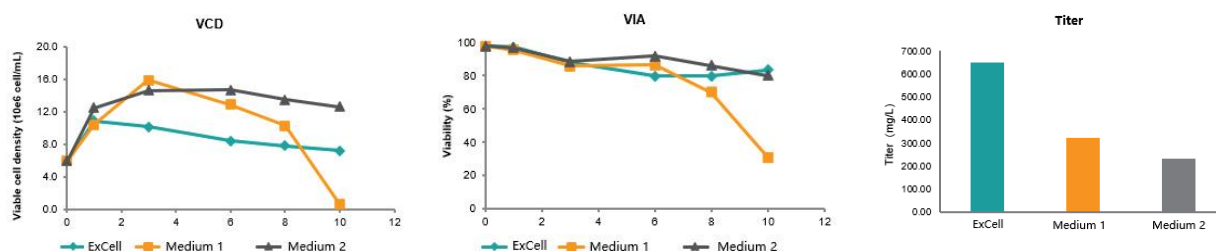


Figure 4. OptiVibro[®] CHO Serum-Free Transient Transfection Medium maintains cell growth for a longer duration under equivalent transfection conditions, resulting in a final yield that is 50%-65% higher than competing products
Cell line: Cell line: EXpi-CHOS

293 Transient Transfection Medium

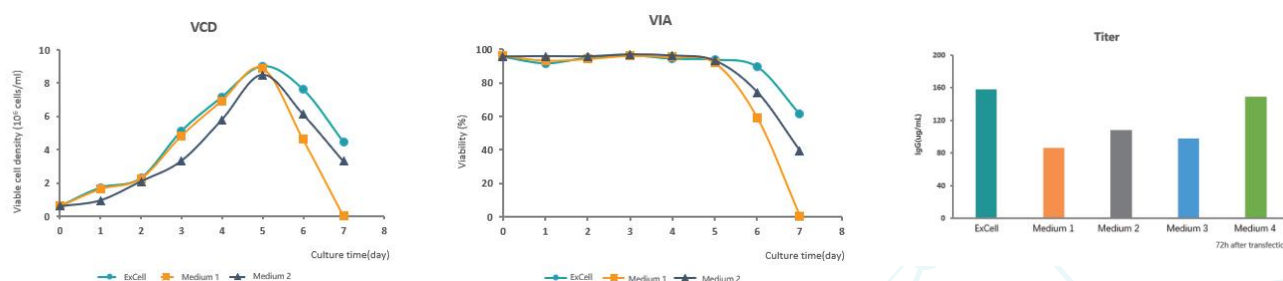


Figure 5. OptiVibro[®] 293 Serum-Free Medium HE02 achieves higher protein expression compared to competing products under equivalent transfection conditions
Cell line: 293F

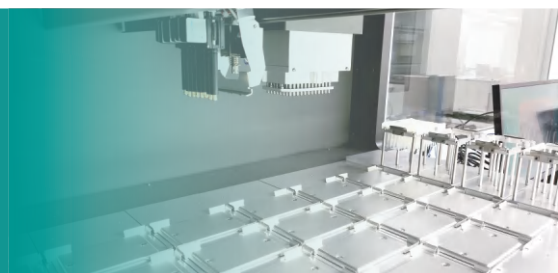
Product Information

Product	Cat no.	Specifications
OptiVibro [®] CHO Serum-Free Transient Transfection Basal Medium CE06	CE000-N051/N052 CE000-N053/N054/N055	Liquid: 500 mL/1000 mL Powder: 1 L/10 L/100 L
OptiVibro [®] CHO Serum-Free Transient Transfection Feed Medium CA06	CA000-N031/N032/N033 CA000-N034/N035	Liquid: 50 mL/100 mL/1000 mL Powder: 1 L/10 L
OptiVibro [®] 293 Cells Serum-Free Medium HE02	HE000-N011/N012 HE000-N021/N022/N023/N024	Liquid: 500 mL/1000 mL Powder: 1 L/10 L/50 L/100 L

Stable Transfection Medium Catalogue Products



ExCell Bio Shanghai R&D Center is dedicated to offering a comprehensive interactive service platform, encompassing services, customization, analysis, and training. This platform is designed to provide our partners with **superior, cost-effective** biopharmaceutical cell culture medium formulation development and optimization services, as well as related services including medium analysis, testing, and cell line construction.



Service Advantages

Quick Delivery: Formula samples can be delivered in as fast as 2 months

High-throughput screening: Tailored rapid screening and confirmation of formula libraries based on specific client needs and cell line characteristics

Yield improvement: Doubling low yields and further increasing high yields (above 10 g/L)

Quality assurance: Diverse formula combinations are adjusted to meet various client quality parameter requirements

Service Process



Case Studies

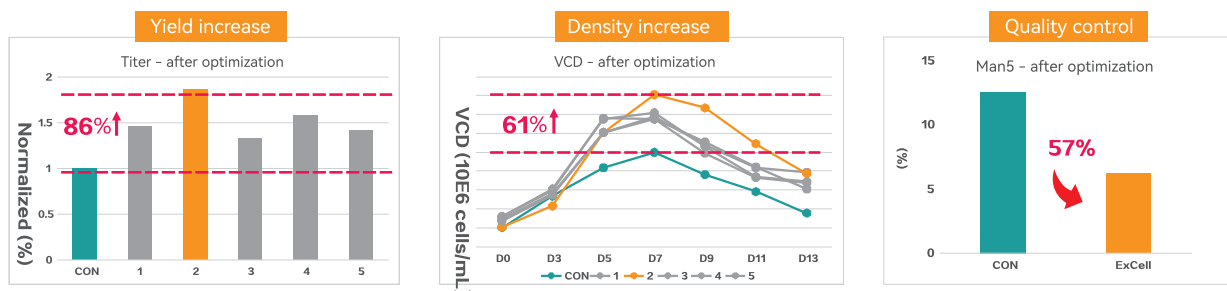


Figure 6: Compared with the original process of the client, the yield has seen a significant increase of 86% through the advantages of the culture medium formulation, exceeding 10 g/L; effective regulation was achieved by optimizing the glycan ratio, meeting the client's requirements.

Cell Line Development Services

ExCell Bio Shanghai R&D Center provides CHO cell line construction and development services, covering early R&D and production applications, delivering high-quality, stable, and high-yield cell lines quickly;

- Delivery in as fast as 11 weeks
- Full-process development services for cell line construction
- Providing supporting reports for IND application at various stages
- Seamless integration of culture medium usage and supply

Culture Medium Analysis and Testing Services

ExCell Bio Shanghai R&D Center provides culture medium analysis services, including but not limited to biochemical analysis, amino acid analysis, trace element analysis, etc.

- Rapid single-item analysis
- Streamlined service process
- Quick delivery of results
- Targeted adjustment of protein quality

Contract manufacturing services for culture medium



Relying on strong facilities and equipment and strict quality control management, we provide efficient production, long-term stability, and consistent quality culture medium contract manufacturing services for our partners.



Service Advantages



Qualification

- ISO9001 quality system certification
- Compliant with GMP standards
- FDA DMF registered



IP protection

- Corporate natural person is the sole recipient of client's formulas
- Formula transcoding and encryption



Consistent quality

- International standard powder manufacturing process with cone milling
- Inter-batch/intra-batch RSD < 5%



Highly efficient manufacturing process

- Two liquid medium manufacturing lines of 200 L & 1000 L
- Two powder medium manufacturing lines of 60 kg & 850 kg



Stable raw material supply

- Domestic and international supplier
- Strict supplier audits to ensure stable and controllable quality



Digitalized factory

- Integrated with MES and SCADA systems, digitalizing manufacturing and material management
- Implementation of electronic batch records ensures traceability of information

Service Process

1

Requirement Confirmation

Formulation source
Product form
· Liquid: Bottled
· bagged
· Powder: Bucket
Quality requirements
Others

2

Confidentiality Process

Confidentiality Process
· CDA signing
· Dedicated personnel liaison
· Formula codification

3

Sample test

Small sample test
· Flexible specifications
· Short-term delivery
· Quality inspection confirmation

4

Manufacture Scheduling

Non-GMP manufacturing
· Liquid: 5 L- 1000 L/batch
· Dry powder:
2 kg-850 kg/batch
GMP manufacturing
· Liquid: 60 L- 1000 L/batch
· Dry powder:
2 kg-850 kg/batch

5

Quality test

Routine quality inspection
· Appearance · Turbidity
· PH · Osmolality
· Endotoxin · Sterility
Customized quality inspection services
· More quality inspection needs

6

Logistics and Delivery

Packaging method
· A wide range of product specifications
· Diverse packaging and transportation methods
· Professional third-party cold-chain logistics services

Process capacity

Type	Batch size	Features	Grade
Liquid	200L	Automatic filling in grade B + A filling room Cleaning in place (CIP) + sterilization in place (SIP)	GMP
Liquid	1000L		GMP
Powder	60kg	Cone milling process Low temperature nitrogen protection throughout	GMP
Powder	850kg		GMP



Your Cell, Our Culture

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