PROTEIN EXPRESSION

clinisciences

Producing functional mammalian proteins often requires selecting the most suitable mammalian expression host to ensure proper post-translational modifications, such as disulfide bond formation, glycosylation, and phosphorylation, under conditions that optimize yield.

CliniSciences provide a wide range of adaptable solutions for mammalian protein expression, including plastic flasks, as well as a comprehensive selection of mammalian cell culture products.

Featured mammalian protein expression categories

Insect Cell Culture Medium

Protein-free insect cell culture medium

Widely recognized as the industry standard for BEVS applications, Expression Systems insect cell culture media are designed for maximum virus and protein expression. This serum-free, protein free insect cell culture medium provides unmatched cell growth and expression for a wide range of insect cells including Sf9, Sf21, Tni (High FiveTM) and Drosophila S2.

Features

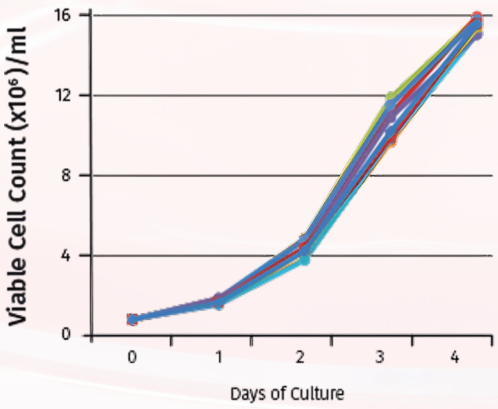
- Sf9 cell densities of 15 x 10^6 cells/ml or greater
- Produces high titer baculovirus vector yields of 5E8 to 3E9 infectious units/ml
- Available in 1L bottles and media transfer bags of 10, 20 and 50L volumes
- Complete, ready-to-use, contains L-glutamine
- Ideal for scale-up manufacturing
- Works with a wide variety of baculovirus and host cell platforms
- Adapted cells available

Specifications

Media Type	Ready-to-use serum-free liquid, 1X
Platform compatibility	Functions with BestBac™, Bacmid, Bac-to-Bac®, BacMam™, MultiBac™ and other BEVS platforms
Cell lines	Spodoptera frugiperda (Sf9, Sf21), Trichoplusia ni (Tni and High Five™) and Drosophila melanogaster (S2)
Shipping condition	Ambient
Storage condition	2-8°C, protect from light
Use-by date	One year from date of manufacture

Superior Growth and Reproducibility

Expression Systems' ESF 921TM Insect Cell Culture Medium is designed for maximum expression for applications such as; gene therapy drug substance, virus-like particles, virus vectors and proteins of interest. ESF 921TM is widely recognized as the industry standard for the baculovirus and insect host cell system. The line graph presents reproducible growth curves for Sf9 cell cultures in nine different lots of ESF 921TM medium manufactured over a period of 12 months.



*different randomly selected lots

The products can be packaged in convenient media transfer bags. Multiple connection options allow for media to be easily transferred into traditional bioreactors and single-use bag bioreactors. Tubing is appropriate for most tube welders and connections are compatible with both traditional and single-use bioreactor systems.

- Multiple tubing sizes for welding compatibility and flow rate flexibility (ID x OD)
- A variety of mechanical connection methods
- From the Right on the Tubing/Port Picture Above:
- 3-inch silicone tubing (1/8" ID x ¼" OD) with Needle Free Swabable Valve
- 66-inch C-Flex 082 tubing (3/16" ID x 3/8" OD) with Male MPC Connector and Female MPC Cap
- 42-inch C-Flex 082 tubing (1/8" ID x ¼" OD) with Y-connector to 8-inch C-Flex tubing terminating with either Male Luer with 1/8" barb or Female Luer (capped)
- Filling Port

Ordering information

Code	Description	Cond
96-001-01	ESF 921 Insect Cell Culture Medium, Protein Free	1L
96-001-10		10 L
96-001-20		20 L
96-001-50		50 L

Animal-free insect cell culture medium

The medium has been thoroughly tested on Sf9, Sf21, Tni (High Five™) and S2 cell lines and is comparable to ESF 921TM for growth and expression. ESF AF™ is the logical choice for further manufacturing under cGMP/FDA regulatory compliance and has a Drug Master File with the US FDA.

Features

• 100% animal component-free
• Comparable to ESF 921™ medium for robust cell growth and expression
• Sf9 cell densities of 20 x 10^6 cells/ml or greater
• Ideal for scale-up manufacturing
• Works with a wide variety of baculovirus and host cell platforms
• Optimized for applications such as production of sub-unit vaccines, virus-like particles and gene therapy vectors (rAAV — all serotypes)
• Available in 1L bottles and media transfer bags
• Complete, ready-to-use, contains L-glutamine
• In stock for immediate shipment
• Adapted cells available
• Inquire about custom formulations, packaging for bioreactors and master cell bank availability for licensing

Specifications

Media Type	Ready-to-use serum-free liquid, 1X
Platform compatibility	Functions with BestBac™, Bacmid, Bac-to-Bac®, BacMam™, MultiBac™ and other BEVS platforms
Cell lines	Spodoptera frugiperda (Sf9, Sf21), Trichoplusia ni (Tni and High Five™) and Drosophila melanogaster (S2)
Shipping condition	Ambient
Storage condition	2-8°C, protect from light
Use-by date	One year from date of manufacture

Ordering information

Code	Description	Cond
99-300-01	ESF AF Insect Cell Culture Medium, Animal Free	1L
99-300-10		10 L
99-300-20		20 L
99-300-50		50 L

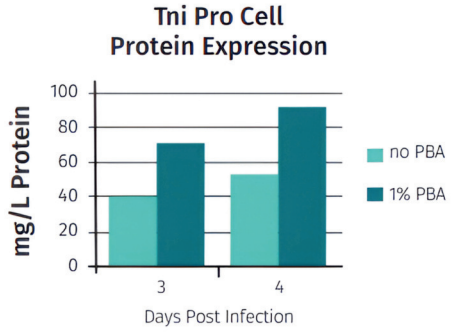
Production Boost Additive for insect cell culture

Production Boost Additive (PBA) is a nutrient boost designed to increase protein expression by supporting the increased needs of insect cells infected by recombinant baculovirus.
PBA is a serum-free, animal-free formulation that complements ESF 921 and ESF AF insect cell culture media and extends the late and very-late expression period of production by maintaining high culture viability. PBA is a cocktail of nutrients designed for supplementation at a rate of 1–10% at 6–36 hours post-infection.

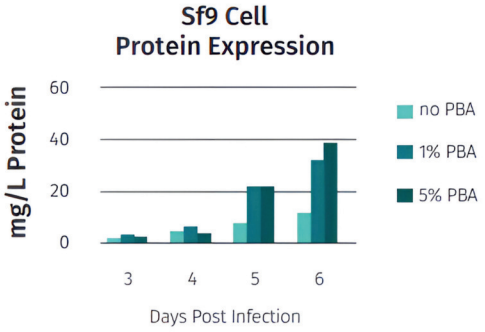
Features

- The serum-free, animal-free formulation works seamlessly with ESF 921 and ESF AF
- Extends culture period by maintaining cell viability
- Increases protein expression

Demonstrations of increased protein production using Sf9 and Tni Pro cell



(Fig. 1) Tni Pro cells were infected with a recombinant baculovirus at an MOI of 1. PBA was added at 1% of the culture volume 18 hours post infection. Sf9 cells



(Fig. 2) were infected at an MOI of 0.02. PBA was added at 1% or 5% of the culture volume 36 hours post infection. The recombinant protein was secreted into the culture supernatant and harvested daily. Protein expression levels were determined by protein specific ELISA.

Specifications

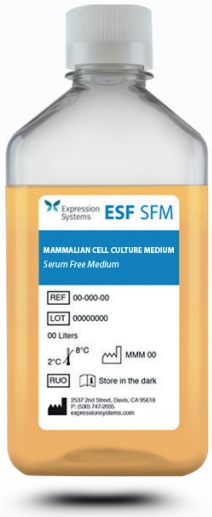
Media Type	Serum-free, animal-free liquid, 1X
Shipping condition	Ambient
Storage condition	2-8°C, protect from light
Use-by date	One year from date of manufacture

Ordering information

Code	Description	Cond
95-006-100	Production Boost Additive	100ml
95-006-01		1L

We also offer a complete, animal-free medium formulation for the culture of **HEK 293,** CHO, and hybridoma cell lines. Designed for use in suspension culture systems, ESF SFM supports robust growth and protein expression.

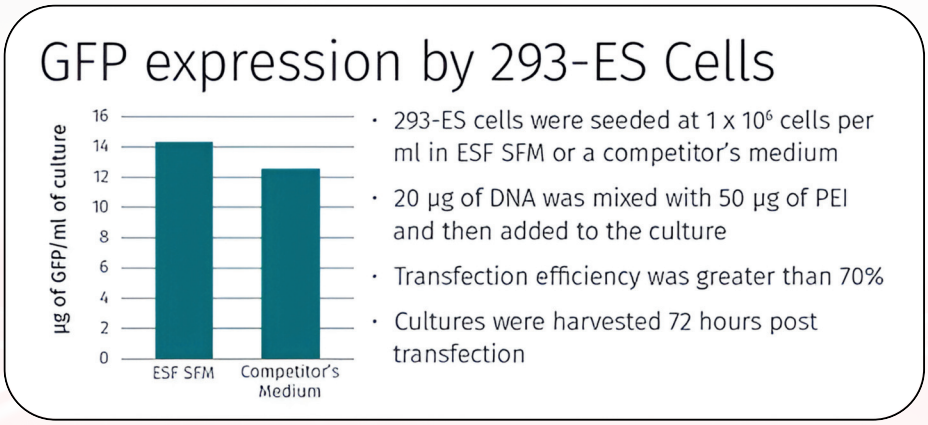
Animal-free mammalian cell culture medium



Mammalian cell culture medium is a serum-free, animal-free formulation designed for robust growth and expression of HEK 293, CHO, and hybridoma cells in suspension. It is a complete and ready-to-use medium, designed for use in shake flasks or bioreactors.

Features

- Serum-free, animal-free medium for HEK 293, CHO and hybridoma cells
- Complete, ready-to-use, contains L-glutamine
- Optimized for robust cell growth and protein expression
- Available in 1L bottles
- Appropriate for suspension and adherent cultures (contains surfactant)
- Ideal for scale-up manufacturing
- Inquire about custom formulations and packaging for bioreactors
- Adapted cells available in suspension



Specifications

Media Type	Serum-free, animal-free liquid, 1X
Cell Lines	HEK 293, CHO and hybridoma cells
Shipping condition	Ambient
Storage condition	2-8°C, protect from light
Use-by date	One year from date of manufacture

Ordering information

Code	Description	Cond
95-006-100	Production Boost Additive	100ml
95-006-01		1L

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Expre² TR Transfection Reagent is a cutting-edge solution formulated and optimized for insect cell culture applications. With a focus on increasing virus vector production and facilitating transient expression, this reagent is designed to meet the needs of scientists and researchers in the field.

Features

- **High Transfection Rates**: Achieve reliable and efficient delivery of genetic material into insect cells.
- **Increased Vector Production**: Boost your productivity with enhanced virus vector production.
- **Facilitates Transient Expression**: Efficiently produces desired proteins or gene products in insect cells.
- I**n Stock for Immediate Shipment**: Available and ready to be shipped promptly.

The advanced formulation and tailored design make the Expres² TR Transfection Reagent an invaluable tool for researchers and scientists engaged in insect cell culture and baculovirus vector production.

Specifications

Media Type	Cationic lipid
Shipping condition	Ambient
Storage condition	2-8°C, protect from light
Shelf life	One year from date of manufacture

Ordering information

Code	Description	Cond
95-055-07	Expres² TR Transfection Reagent 75 ul	100ml

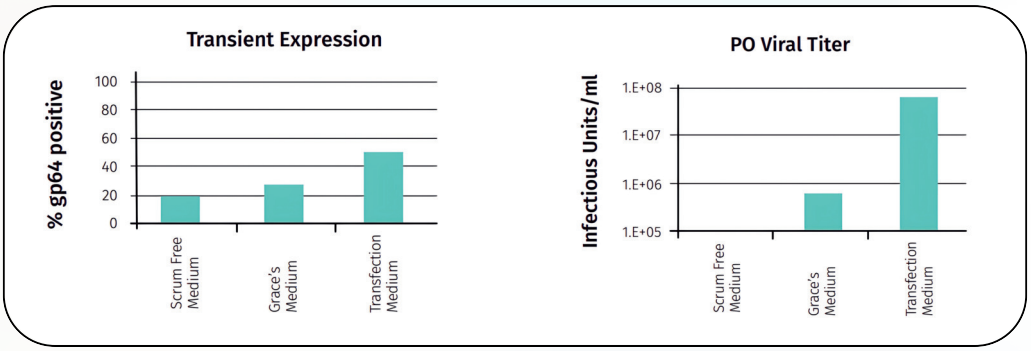
Transfection Medium

designed to complement ESF 921 and ESF AF insect cell culture media for the cotransfection or transfection step in baculovirus vector production. **Transfection Medium** is a serum-free and animal-free formulation that facilitates vector DNA uptake by the insect host cells. Realize higher titers by using a formulation designed to work with ESF 921 and ESF AF.

Features

Serum-free, animal-free formulation works seamlessly with ESF 921 and ESF AF
- Appropriate for PEI or lipofection mediated transfection
- Optimized for use with Expres² TR Transfection Reagent
- Increases virus vector production and transient expression
- Available in 20 mL or 100 mL bottles
- In stock for immediate shipment

Transfection Medium was compared to older technology that uses Grace's medium for the performance of cotransfection to produce baculovirus vectors. Serum Free Medium was included as a control. Resulting virus titers from the cotransfection were several logs higher using Transfection Medium as compared to other media. Transient expression was also determined as a measure of DNA uptake. Again, Transfection Medium resulted in significantly better results with the percentage of gp64 expressing cells being at least two-fold higher than other media.



Sf9 cells were grown in Serum Free Medium and plated into individual wells of a deep well block at a concentration of 2 x 106 cells per 100 µl per well. DNA and a lipofection reagent were incubated together in 200 µl of test media (either Serum Free Medium, Grace's Medium or Expression Systems' Transfection Medium) for 30 minutes. DNA mixture was added to cells and volume was brought up to 1 ml in test media. Cell suspension was incubated for four hours at 27° C while shaking. At the end of the incubation, the volume of each well was brought up to 4 ml with Serum Free Medium and cultured for four days. Determination of the P0 (i.e., product of the cotransfection) infectious units (IU) viral titer of the supernatant was performed using the gp64 flow cytometric method.Transient expression of gp64 was determined for the cultured cells by staining with gp64-PE.

Specifications

Media Type	Serum-free, animal-free liquid, 1X
Shipping condition	Ambient
Storage condition	2-8°C, protect from light
Shelf life	One year from date of manufacture

Ordering information

Code	Description	Cond
95-020-020	Transfection Medium	20ml
95-020-100		100ml

CliniSciences

CHO Cell Culture Medium

The new CHO|ONE Media System™

The innovative CHO|ONE Media System™ was designed for small- and large-scale protein production using Chinese Hamster Ovary (CHO) cells. These robust cells are used for the industrial production of a variety of recombinant proteins requiring complex post-translational modifications and correct protein folding.
The CHO|ONE Media System™ is highly suitable for fed-batch cultures. It improves the yield and concentration of recombinant proteins through optimization of a selection of essential nutrients and growth promoting factors. The CHO|ONE Media System™ was especially designed in close cooperation with our biopharmaceutical cooperation partner using CHO-S, CHO-DG44 and CHO-K1 cell lines.
The system keeps the production of stress-related metabolites such as lactate and ammonia at an absolute minimum during the entire procedure of your fed-batch culture.

Features

Complete & Scalable Media System

- CHO|ONE Media System™ – Integrated, scalable solution for CHO cell culture, from development to clinical production.
- Fully Scalable – Up to 1000 L – Consistent performance from lab scale to large-volume bioreactors.
- Liquid & Powder Formats – Available in both forms for flexible application.

Rapid & Simplified Cell Adaptation

- CHO|ONE A – One-Step Adaptation – Directly adapts recombinant CHO cells without stepwise protocols.
- No Stepwise Adaptation Required – Saves time and reduces labor during culture initiation.
- Simplified Seed & Inoculum Train – Accelerates early-stage production setup.

High Productivity with Quality Assurance

- High Expression & Product Consistency – Reliable protein yields with minimized variation.
- Reduced Malformed Proteins – Limits incomplete or misfolded protein formation, improving downstream results.
- Virus Safety Compliant – Chemically defined and compliant with regulatory standards.

Optimized Expression for Scale-Up

- CHO|ONE E – Optimized for Expression – Ideal for fed-batch cultures in both spinner flasks and bioreactors.
- Spinner Flask & Bioreactor Compatible – Suitable across different production scales.
- 100% Chemically Defined Composition – Ensures reproducibility and batch-to-batch consistency.

Advanced Nutrient Feed System

- CHO|ONE Feed 1 – Nutrient-Enriched – Delivers essential amino acids, vitamins, and trace elements.
- CHO|ONE Feed 2 – Amino Acid Boost – Balances amino acid profile for optimal expression.
- Custom Additives – Insulin, glucose, and L-glutamine available to support specific cell needs.

Performance for Fast-Growing CHO Lines

- Fast-Growing CHO Cell Support – Designed to meet the demands of high-metabolic activity.
- Tailored Supplementation Options – Adaptable to the unique requirements of various cell lines.
- Consistent Growth & Yield – Maintains superior growth kinetics across all scales.

Ordering information

Code	Description	Cond
CHO-K1	CHO|ONE Media System™, Starter Kit	500 ml CHO|ONE A 500 ml CHO|ONE E 200 ml CHO|ONE Feed 1 20 ml CHO|ONE Feed 2
CHOE-500ML	CHO|ONE E, Expression Medium, w/o Insulin, w/o L-Glutamine, with Pluronic™, sterile-filtered	500 ml
CHOE-1000ML		1000 ml
CHOF1-100ML	CHO|ONE Feed 1, Supplement for CHO cells, w/o Insulin, w/o L-Glutamine, sterile-filtered	100 ml
CHOF1-500ML		500 ml
CHOF2-10ML	CHO|ONE Feed 2 , Supplement for CHO cells, w/o L-Glutamine, sterile-filtered	10 ml
CHOF2-50ML		50 ml

CHO|ONE Media System™ Starter Kit

500 ml
CHO|ONE A
Medium for seeding and adaptation

500 ml
CHO|ONE E
Expression medium for high yield results

2 x 100 ml
CHO|ONE Feed 1
Highly concentrated amino acids

2 x 10 ml
CHO|ONE Feed 2
Formulation of selected amino acids

CliniSciences

CHOventure

CHOventure growth medium was developed for quick adaptation, and improved growth and production processes. It is ideal for batch and fed-batch cultivation when combined with our feeding supplements.
The chemically defined medium supports the cultivation of the most widely used CHO cell types for the recombinant production of biomolecules or biosimilars.

- Maximizes viability, cell growth, and productivity
- Balances product consistency by using the right ingredients
- Supports a broad range of CHO cell types
- Fully scalable and flexible system from bags to powder

Feeds for perfectly tailores nutrient supply

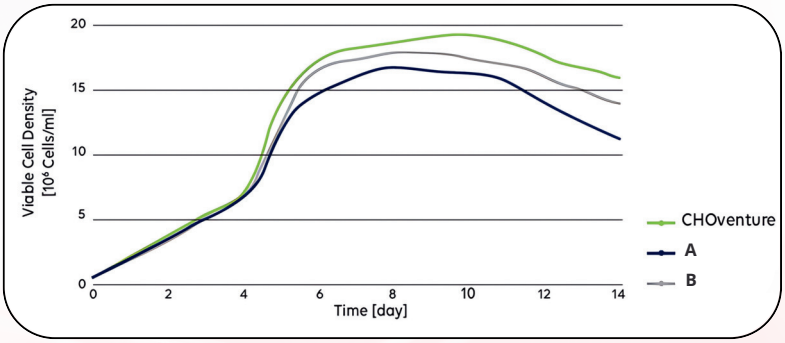
The CHOventure product line contains a growth medium and two feeding supplements. Our medium and feeds were designed and optimized for highdensity suspension cultures, maximizing production. The entire system is available in liquid form and is fully chemically defined in compliance with ICH guidelines and regulations.
Our feeding supplements, which complete the system, offer a seamlessly scalable solution that is applicable for each size of project in use especially for fed-batch cultivation.

- Delivers high yields through enriched formulation
- Secures consistent results from production to production
- Supports viable peak cell densities during entire process

Comparison to market Prominent Media

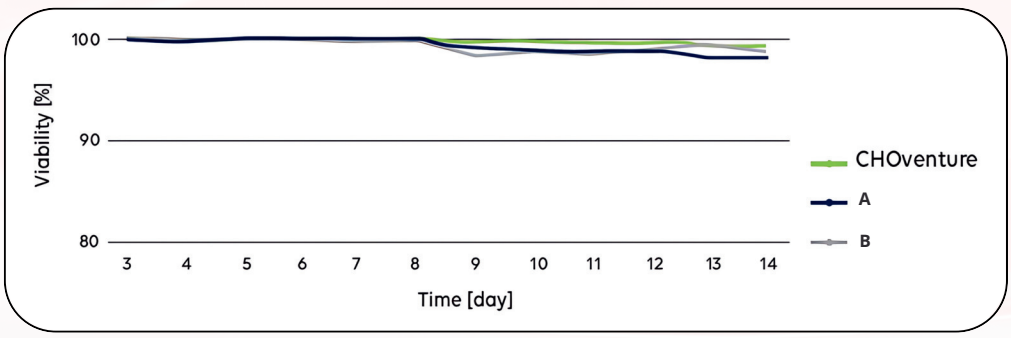
The comparison was established in a 14-day fed-batch production with a CHO cell line (CHOExpress®). Analyzing viable cell density, viability, and titer expression, the study showed that the performance of our medium was better or equal to that of competitors A and B.

Fed-Batch Production Over 14 Days



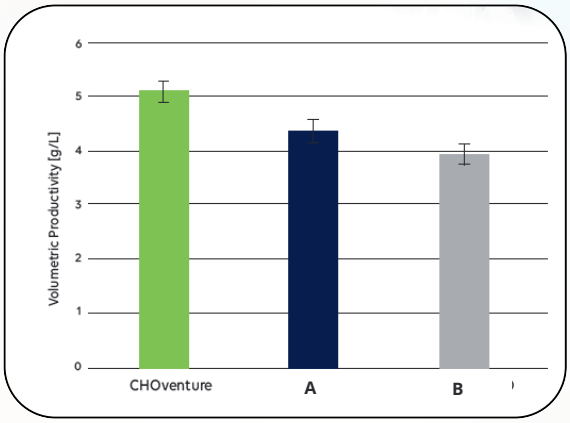
Analysis of cell growth and viable cell density over 14 days in a fed-batch experiment. Seeding density of 5 × 105 cells. Feeding strategy was the same in each system: 4.0% Feed A, 0.4% Feed B after day 3. The highest VCD levels were achieved with CHOventure.

Viabillity in Fed-Batch Over 14 Days



Viability analysis of CHO cells over 14 days in a fed-batch experiment. With CHOventure, a minimum of 98% cell viability was achieved for the entire run.

Titer After 14 Days of Fed-Batch Production

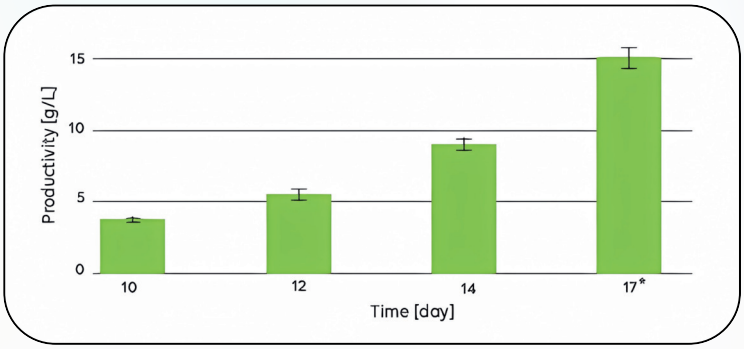


Comparison of product expression after 14 days in a fed-batch production. CHOventure shows the highest production yields. Error bars indicate standard deviation of 5%.

CHOventure – MAXIMIZED PERFORMANCE

Last but not least,The goal was to show the performance of CHOventure in a fully optimized process: 10 g/L was easily reached. We even managed 15 g/L!

CHOventure – Maximum Production



Expression yield using CHOventure and CHOExpress® cells. Production was performed for 17 days. With CHOventure, protein yields of up to 15 g/L could be achieved. Error bars indicate standard deviation of 5%.

*Unable to reach 15 g/L? We are happy to help you optimize your process. Contact our technical support team today!
tech@clinisciences.com

CHOventure IS THE FINAL RESULT OF AN INTENSIVE SCREENING, ADAPTION, AND IMPROVEMENT.

CHOventure
- Stabilizes the product quality throughout all production stages
- Secures product quality throughout the entire scale-up
- Saves time and money

CHOventure	versus	CHO|ONE
Batch & Fed-Batch	**Cultivation System**	Batch & Fed-Batch
Growth Medium & Two Feeds	**Components**	Growth Medium & Two Feeds
Optimized for most CHO Cell Types	**Cell Lines**	Optimized for DG44 Derived CHO Cells
No, with Hypoxanthine/ Thymidine	***dhfr*- Selection**	Yes, w/o Hypoxanthine/ Thymidine
Max. Titer Protein Production with Consistent Product Quality & High VCD	**Expression Features**	High Performance in Productivity, Growth, & Viability, Optimized for DG44
ExcellGene SA & Capricorn Scientific	**Technical Support**	Capricorn Scientific

CliniSciences

USEFUL Composition Overview

An optimal nutrient supply is key for successful CHO cultivation in small- to large-scale bioreactor systems. Hence, the formulation of CHOventure is specifically tailored to CHO expression cell lines (e.g., **CHO-K1 & more**).
It further supports viability at high cell densities and ultimately increases expression titer and overall product quality from recombinant proteins and biosimilars.
Besides, the nutrient supply, cell distribution, and buffering significantly affects viability and, therefore, a successful expression. CHOventure's components are precisely balanced, resulting in buffering effects on the cells, and also supporting uniform cell distribution as well as preventing cell lethality – even in large bioreactors combined with a robust cell host.

CHEMICALLY DEFINED
Yes, CHOventure is chemically defined for maximum reproducibility and performance.

GLUCOSE LEVEL
(7 g/L in growth medium)
CHOventure contains high levels of glucose for optimal growth maintenance.

L-GLUTAMINE/
STABLE GLUTAMINE No, it is not part of the formulation but is compatible when added

POLOXAMER 188
Yes, CHOventure contains Poloxamer 188 for shear protection.

TRACE ELEMENTS
Yes, CHOventure contains a well-balanced composition of trace elements.

LIPIDS
Yes, CHOventure contains essential lipids for cell protection and optimal nutrient supply.

PHENOL RED
No, CHOventure does not contain phenol red, as to not interfere with industrial purposes.

HYPOXANTHINE,
THYMIDINE & GLYCINE
Yes, CHOventure contains hypoxanthine, thymidine & glycine to support growth.

GROWTH FACTORS
No, CHOventure already contains all the necessary components for optimal growth.

Ordering information

Code	Description	Cond
VEN-KI	CHOventure, Starter Kit, Media System	1x CHOventure Growth Medium (500 ml) 2x CHOventure Feed A (100 ml) 2x CHOventure Feed B (10 ml)
VEN-500ML	CHOventure Growth Medium, with Hypoxanthine, with Thymidine, with PluronicTM, w/o Insulin, w/o L-Glutamine	500 ml
VENFA-100ML	CHOventure Feed A, Feeding Supplement for CHO cells, w/o Insulin, w/o L-Glutamine	100 ml
VENFA-500ML		500 ml
VENFB-10ML	CHOventure Feed B, Feeding Supplement for CHO cells, w/o Insulin, w/o L-Glutamine	10 ml
VENFB-50ML		50 ml

Vero Cell Culture Medium

Developed & Perfected for Vaccine Industry

Vero cells are obtained from the kidney of African green monkeys. This anchorage-dependent cell line has been licensed for the production of both live and inactivated viral vaccines.

The Vero cell line is a widely accepted cell line by regulatory authorities and has been used for decades to produce diverse viral vaccines. Virus propagation in cell culture systems has pushed the development of viral vaccines enormously.

The regulatory requirements discourage the use of animal products, such as serum in the process of vaccine production, and they should thereby be avoided.

Capricorn Scientific has developed serum-free and animal component-free media for the propagation of Vero cells. The media also support the growth of Vero cells on microcarriers in controlled environments. Therefore, our media are ideal for vaccine production.

Features

Vero cells are highly suitable for small- and large-scale vaccine production.
Our cell culture media have been optimized in cooperation with a variety of industrial partners.

- Optimized for cultivation with microcarriers
- Serum-free, animal origin-free and low protein formulation
- Ideal for virus and recombinant protein production
- Cost-effective for production
- Available in various formats such as bottles and bags

Scalability

What does our liquid scale up look like?

BOTTLES	2 D BAGS	3 D BAGS
From 1 ml to 1 L	2D pillow bags 10-50 L	from 50 L to 1000 L

AUTOMATIC AND SEMI-AUTOMATIC FILLING

>> Standard and customized products in various unit sizes

>> Large-scale Lot sizes of up to 1000 L

>> Single use components to exclude cross contamination packaging and deliver

QUALIFIED CONTACT LAYER

>> Cell culture approved
>> Optimized resins and additives
>> C-Flex tubing material available

SEVERAL DIFFERENT CONNECTORS

>> For individual production plans

SEVERAL QUALIFIED BAG SUPPLIERS

>> For secure supply
>> For just-in-time delivery

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Select the right connection for your process

We have the right connection for every process. We offer a large selection of connectors for sterile and less strictly controlled environments. With up to 100 different connection options, including weldable thermoplastic tubings, our fluid management systems are versatile and can be integrated into any existing process or application.

>> Standard MPC or MPX couplings
>> Sterile connectors like Opta® or AseptiQuik®
>> MPU couplings
>> Sanitary connections

Highest expression
Cell Densities & Infectivity

VeroVax

Our VeroVax is a serum-free, animal and human origin-free cell culture and production medium. It was especially designed for the cultivation of Vero cells. The medium enhances virus and recombinant protein production.

VeroPrime

Our Vero medium VeroPrime is a completely chemically defined cell culture and production medium. It was especially designed for production of viruses and recombinant proteins. The raw materials are free of animal and human origin to match the demands of the biopharmaceutical regulations.

Cost-efficient medium

Animal and human origin-free

Contains growth promoting hydrolysates

Fast and easy adaptation

Chemically defined

Optimized for small- and large- scale production and purification

Ordering information

Code	Description	Cond
VEV-500ML	VeroVax, Serum-Free Medium, w/o L-Glutamine	500ml
VEP-500ML	VeroPrime, Chemically Defined Medium, w/o L-Glutamine	500ml
VEP-XR-1000ML	VeroPrime, Chemically Defined Medium, w/o L-Glutamine, w/o Phenol Red	1000ml

HEK Cell Culture Medium

Improved Transfection and Production

HEK293 CELLS

Widely Approved Human Expression System

The human embryonic kidney cell line HEK293 has the biosynthetic potential for human-like production and is currently used for manufacturing of several therapeutic proteins and viral vectors.
While initially used for adenoviral vector production, HEK293 also became one of the preferred cell lines for transient or stable protein expression. The need for proper protein folding and humanized glycosylation of therapeutic proteins has promoted the production in HEK293 cells.

Features of HEK293 cells

>> Approved by EMA & FDA for human therapeutic production
>> Easily grown in serum-free suspension culture
>> Capable of producing post-translational modifications

What is the difference between HEK|ONE S and HEK|ONE T?

HEK|ONE S excellently supports the general growth and production of HEK293 cells in stable cell lines or post-transfection.

HEK|ONE T is specifically designed to support an efficient transfection in HEK293 cells for example with cationic transfection reagents like PEI.

HEK | ONE Media System

HEK|ONE S

HEK|ONE S is a chemically defined, animal component-free, and protein- free medium, supporting cell growth and production of HEK293 cells and other human cell lines. It was developed for high performance cultivation in suspension and expression of recombinant proteins, viruses, and antibodies in stable cell lines or post-transfection.

>> **Effective medium for stable growth**
>> **Highest viability and production**

Ordering information

Code	Description	Cond
HEKS-1000ML	HEK|ONE S, chemically defined medium for stable expression, w/o L-Glutamine, with Growth Hormones	1000ml ml

HEK|ONE T

HEK|ONE T is a chemically defined, animal component-free, and protein- free medium, designed for efficient transfection and high density suspension culture of HEK293 cells and other human cell lines. It is highly suitable for transient protein expression and viral vector production. HEK|ONE T is compatible with cationic transfection reagents, such as polyethylenimine (PEI). It can be used in research and further manufacturing.

>> **Perfect medium for transfection e.g. PEI**
>> **Optimized for growth and production processes**

Ordering information

Code	Description	Cond
HEKT-1000ML	HEK|ONE T, chemically defined medium for transient expression, w/o L-Glutamine, with Growth Hormones	1000ml ml

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HEK|ONE FEED

HEK|ONE Feed is a chemically defined, animal component-free, and protein-free feeding supplement with highly concentrated nutrients, increasing the productivity of HEK293 cells and other human cell lines. It supports superior production of recombinant proteins and antibodies in suspension culture by maintaining and extending cell growth and production capability. HEK|ONE Feed is compatible with HEK | ONE S as well as HEK|ONE T for stable and transient protein expression.

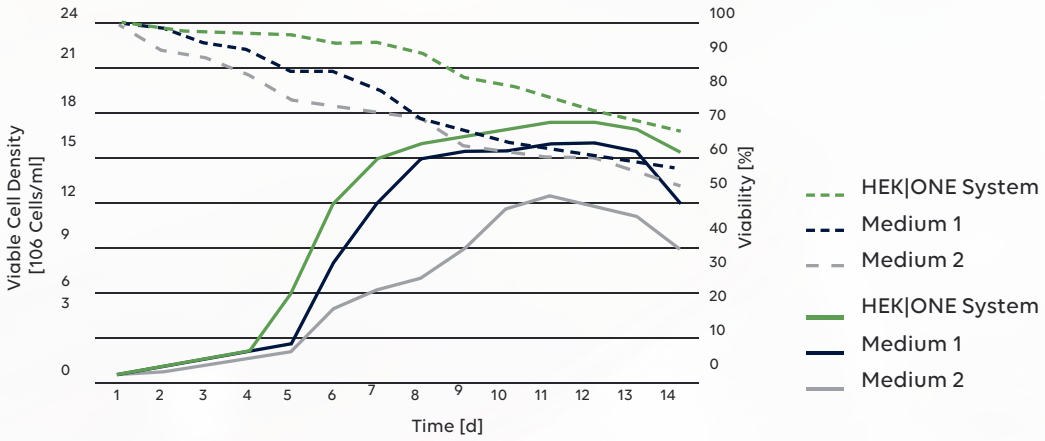
>> **Boosts fed-batch processes**

>> **Supports superior yields with human cell cultures**

Ordering information

Code	Description	Cond
HEKF-1000ML	HEK|ONE Feed, chemically defined feeding supplement, w/o L-Glutamine	1000ml

FEEDING PERFORMANCE



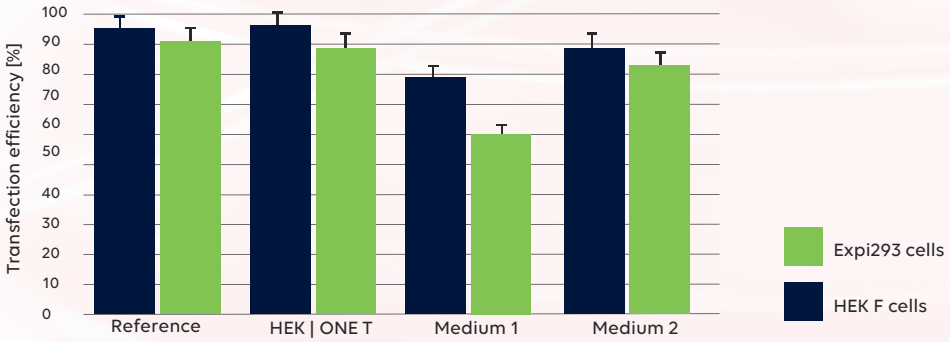
Graph 1: The Viable Cell Density and Viability were tested in a HEK293 feeding regime. The performance of our new HEK|ONE system were compared against two commercially available media.

Is a special feeding strategy for HEK|ONE Feed recommended?

The feeding strategy depends on the metabolic activity of your cells. Conventionally, the feeding starts at day 2 and can be continued as follows for low or high consuming cells:

DAYS	LOW	HIGH
0	0 %	0 %
1	0 %	0 %
2	3 %	3 %
3	4 %	6 %
4	6 %	10 %
5	10 %	10 %
6 until end	10 %	12 %

TRANSFECTION EFFICIENCY BY GFP EXPRESSION



Graph 2: We tested the transfection efficiency of our newly developed HEK|ONE T against two media on the market and a suitable reference in a GFP expression experimental outline using two different cell lines.

Hybridoma Expression

Accomplish the highest outcome during development and manufacturing of novel antibodies or equivalents

Hybridoma and monoclonal antibodies launched a multi-billion-dollar industry. This technology is based on the fusion of a B-lymphocyte cell and a tumor cell. The result of this fusion is known as a hybridoma, an immortal cell that produces specific antibodies.
Though other platforms have been developed, the hybridoma technology, which has enabled over 45 years of mAb research and even large-scale perfusion culture, is still broadly used. Our products are developed to meet the demands of our diagnostic and biopharmaceutical customers.

Features

- Animal origin-free, serum-free, protein-free, and ready-to-use formulation
- Easy scale-up to large volume cultures
- Supports suspension and stationary hybridoma and myelomas
- Customizable through supplementation and packaging by us

HybridomaPlus

HybridomaPlus provides the easiest and safest solution in the production of diverse antibodies with recombinant myeloma lines as well as traditional hybridoma. The ready-to-use medium HybridomaPlus is animal origin-free, serum-free, and protein-free. It is also free of any factors or mediators that may complicate downstream processing and final product purification, thereby facilitating a perfect environment for cell culture.
Developed to meet the needs of biotechnology manufacturing, this medium supports rapid initial cell growth and high levels of antibody expression.

Storage: +2°C to +8°C **Sterility: Sterile-filtered**

Ordering information

Code	Description	Cond
HY-A	HybridomaPlus, protein-free hybridoma medium, with L-Glutamine	500ml

Hybridoma Supplement

The Hybridoma Supplement is a growth-promoting supplement containing insulin, ethanolamine, hydrocortisone, retinoic acid, and other factors.
Hybridoma Supplement replaces formerly used feeder cells, thereby eliminating disadvantages such as the overgrowth of newly formed hybridoma, possible contamination, competition for nutrients, and variations in growth factor concentrations.
The Hybridoma Supplement can be used in culture media under serum-free conditions. The low protein content facilitates the isolation and purification of produced antibodies, thereby improving growth after fusion and the cloning efficiency of hybridoma.

Storage: ≤-15°C **Sterility: Sterile-filtered**

Ordering information

Code	Description	Cond
HCS-F	Hybridoma Supplement, Serum-free -	50 ml

CliniSciences

Flasks

Ultra Yield Flask is a specialized tool for researchers working with bacterial cells, specifically E. coli cells who require high yields of cells for their experiments. Its unique design and sterile nature make it a valuable tool for scientific research in the field of molecular biology.

Optimum Growth® Sample Flasks with one-way sampling valves that help reduce viable cell count sampling times, eliminate the need to remove flask caps & allow aseptic sampling on the benchtop

Stainless steel Clamp for Flask suitable for base plate

Ring only for Inverting Flasks

Erlenmeyer low-cost flasks

Introducing our exceptional Erlenmeyer flasks, tailored to meet your suspension cell culture and storage requirements flawlessly. Specially crafted to support the growth of bacteria, fungi, animal, and plant cells, these adaptable flasks offer a dependable and highly efficient solution for your research endeavors. Moreover, our disposable flasks not only offer superior convenience compared to conventional flasks, plates, and dishes but also deliver remarkable cost-effectiveness.

Size from 125mL to 1L

Size 2L, 3L

Size 5L

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