

MediumBank

CHO Cell Culture Solutions Product Brochure

| MediumBank CHO Cell Culture Solutions

CHO cells are the industry's preferred host for the production of recombinant therapeutic proteins due to their proven safety profile, adaptability, and ability to support high levels of protein expression. Medium selection and optimization play a critical role in cell density, viability, protein productivity, product quality, and process scalability, enabling successful biologics commercial manufacturing.



MediumBank provides integrated CHO cell culture solutions backed by deep expertise in cellular nutrition and metabolism. Our platform helps biopharmaceutical companies achieve higher productivity, greater process consistency, and efficient scale-up, enabling a seamless transition from process development to commercial manufacturing.

■ Key Features



Chemically Defined

Reduced Contamination Risk
Enhanced Product Safety and Consistency
Regulatory Support



GMP-Compliant Development

Seamless Scale-Up
Reduced Commercialization Risk



Superior Performance & Productivity

Optimized Nutrition & Feeding Strategies
Higher Cell Density & Titer
Built for High Producers



Balanced Productivity & Cost Efficiency

Efficient Process Development
Higher Titers with Lower Manufacturing Costs
Accelerated Clinical Trials and Commercialization

■ CHO Cell Culture Solutions



Molecular Screening

- CHO Transient Transfection Kit
- CHO Transfection Media
- CHO Transfection Reagent

Cloning Screening

- CHO Cloning Media
- CHO Cloning Enhancer
- CHO Subculture Media

Process Development

- CHO Basal Media
- CHO Feed Enhancer
- CHO Perfusion Media

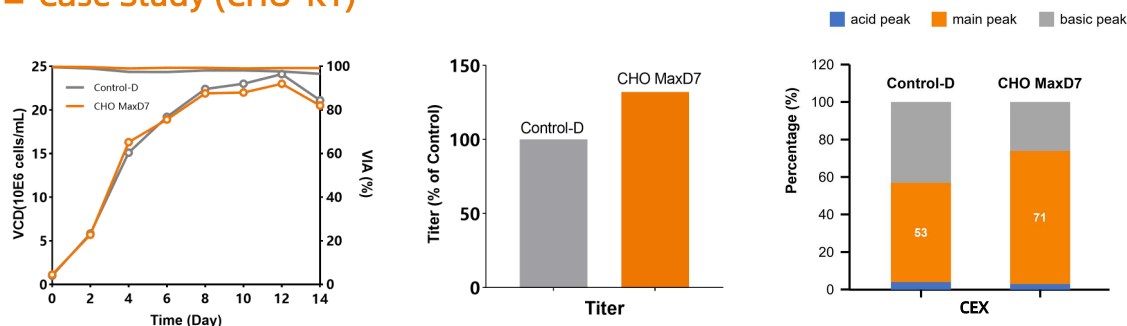
- Glycosylation Modulator
- Charge Modulator
- Aggregate/Fragment Modulator

Clinical & Commercialization

- Antifoam
- Anti-aggregation Agent
- GMP-Grade Bioprocess Reagents

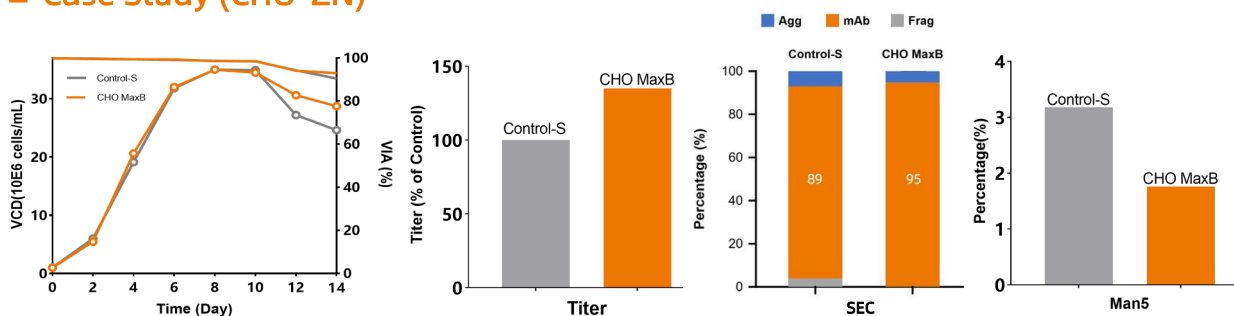
| CHO Serum-Free Cell Culture Media

■ Case Study (CHO-K1)



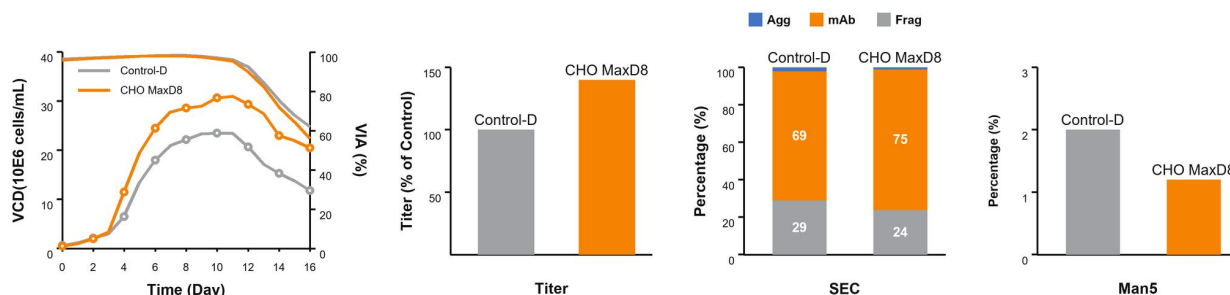
Result: In a CHO-K1 fed-batch mAb process, CHO MaxD7 increased antibody titer by ~30% versus the benchmark medium (Control-D) while maintaining robust cell growth and viability. CEX analysis showed an increased main peak proportion.

■ Case Study (CHO-ZN)



Result: In a CHO-ZN fed-batch mAb process, CHO MaxB increased antibody titer by ~35% versus the benchmark medium. SEC analysis showed a higher mAb main peak proportion, while Man5 levels were reduced, indicating improved antibody integrity and glycosylation quality.

■ Case Study (CHO-S)



Result: In a CHO-S fed-batch mAb process, CHO MaxD8 increased antibody titer by ~40% versus the benchmark medium while maintaining robust cell growth and viability. SEC analysis showed reduced fragment levels and an increased mAb main peak proportion, while lower Man5 levels indicated improved glycan quality.

■ Ordering Information

Name	Volume	Cat No.	Form	Unit	Shelf Life
CHO MaxA	1000 mL	MB1101.102	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1101.201 / MB1101.202 / MB1101.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxA5 Plus	1000 mL	MB1156.102	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1156.201 / MB1156.202 / MB1156.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxB	1000 mL	MB1102.101	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1102.201 / MB1102.202 / MB1102.203	Dry Powder	Barrel	24 months
CHO MaxC	1000 mL	MB1103.102	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1103.201 / MB1103.202 / MB1103.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxD	1000 mL	MB1104.102	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1104.201 / MB1104.202 / MB1104.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxD7	1000 mL	MB1164.101	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1164.201 / MB1164.202 / MB1164.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxD8	1000 mL	MB1165.101	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1165.201 / MB1165.202 / MB1165.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxD9	1000 mL	MB1173.101	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1173.201 / MB1173.202 / MB1173.203	Dry Powder	Barrel	24 months
CHO MaxE	1000 mL	MB1159.101	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1159.201 / MB1159.202 / MB1159.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxE1	1000 mL	MB1172.101	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1172.201 / MB1172.202 / MB1172.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxH1	1000 mL	MB1128.102	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1128.201 / MB1128.202 / MB1128.203	Dry Powder	Bottle/Barrel	18 months
CHO MaxX	1000 mL	MB1113.102	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1113.201 / MB1113.202 / MB1113.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxY	1000 mL	MB1114.102	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1114.201 / MB1114.202 / MB1114.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxY2	1000 mL	MB1166.101	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1166.201 / MB1166.202 / MB1166.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxY3	1000 mL	MB1169.101	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1169.201 / MB1169.202 / MB1169.203	Dry Powder	Bottle/Barrel	24 months
CHO MaxZ	1000 mL	MB1115.102	Liquid	Bottle	12 months
	10 L / 100 L / 500 L	MB1115.201 / MB1115.202 / MB1115.203	Dry Powder	Bottle/Barrel	24 months

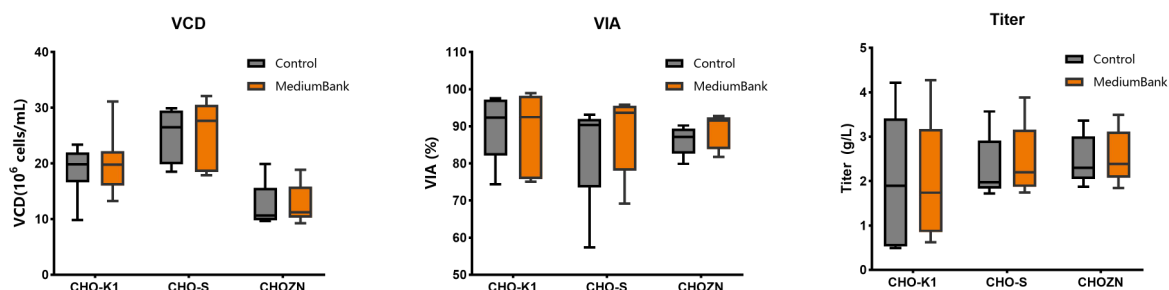
CHO Feed Media

Conventional Feed Media - MaxFA and MaxFB

- DMF-backed dual feed media platform
- Chemically defined
- Support high protein productivity



Case Study

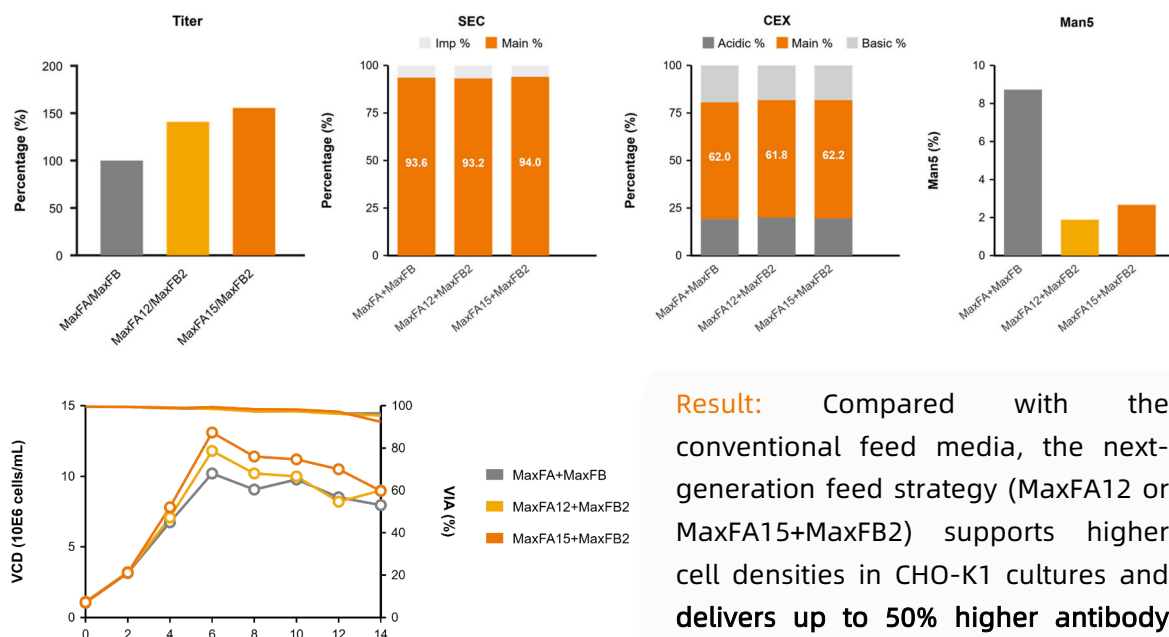


Result: Across 19 development programs, replacement of commercial feed media with MaxFA and MaxFB resulted in comparable cell density, viability, and protein titers.

Next-Generation Feed Media - MaxFA12, MaxFA15 and MaxFB2

- Chemically defined
- Support high protein productivity
- Consistent CQAs

Case Study



Result: Compared with the conventional feed media, the next-generation feed strategy (MaxFA12 or MaxFA15+MaxFB2) supports higher cell densities in CHO-K1 cultures and delivers up to 50% higher antibody titers.

■ Ordering Information

Name	Volume	Cat No.	Form	Unit	Shelf Life
MaxFA	300 mL / 1000 mL	MB1201.101 / MB1201.102	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1201.201 / MB1201.202 / MB1201.206	Dry Powder	Bottle/Barrel	24 months
MaxFA5	300 mL / 1000 mL	MB1230.101 / MB1230.102	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1230.201 / MB1230.202 / MB1230.203	Dry Powder	Bottle/Barrel	24 months
MaxFA6	300 mL	MB1213.101	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1213.201 / MB1213.202 / MB1213.206	Dry Powder	Barrel	18 months
MaxFA9	300 mL / 1000 mL	MB1232.101 / MB1232.102	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1232.201 / MB1232.202 / MB1232.203	Dry Powder	Bottle/Barrel	24 months
MaxFA10	300 mL / 1000 mL	MB1236.101 / MB1236.102	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1236.201 / MB1236.202 / MB1236.203	Dry Powder	Bottle/Barrel	24 months
MaxFA12	500 mL	MB1238.101	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1238.201 / MB1238.202 / MB1238.203	Dry Powder	Barrel	24 months
MaxFA15	500 mL	MB1239.102	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1239.201 / MB1239.202 / MB1239.203	Dry Powder	Barrel	24 months
MaxFC	300 mL	MB1203.103	Liquid	Bottle	6 months
	10 L / 50 L	MB1203.202 / MB1203.203	Dry Powder	Bottle/Barrel	24 months
MaxFC3	500 mL	MB1240.101	Liquid	Bottle	6 months
	10 L / 100 L	MB1240.201 / MB1240.202	Dry Powder	Barrel	24 months
MaxFE	300 mL / 1000 mL	MB1235.101 / MB1235.102	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1235.201 / MB1235.202 / MB1235.203	Dry Powder	Bottle/Barrel	24 months
MaxFX	300 mL / 1000 mL	MB1220.101 / MB1220.102	Liquid	Bottle	6 months
	3 L / 10 L / 50 L	MB1220.201 / MB1220.202 / MB1220.203	Dry Powder	Barrel	24 months
MaxFB	100 mL	MB1202.102	Liquid	Bottle	6 months
	1 L / 5 L / 25 L	MB1202.201 / MB1202.202 / MB1202.203	Dry Powder	Bottle/Barrel	24 months
MaxFB2	100 mL	MB1234.101	Liquid	Bottle	6 months
	1 L / 5 L / 25 L	MB1234.201 / MB1234.202 / MB1234.203	Dry Powder	Bottle/Barrel	24 months

■ Media and Feed Solutions

Cell lines	Basal	Feed
CHO-K1 (ATCC, ECACC)	CHO MaxD7	MaxFA15+MaxFB2
	CHO MaxD8	MaxFA15+MaxFB2
	CHO MaxB	MaxFA12 + MaxFB2
	CHO MaxE	MaxFA15 + MaxFB2
	CHO MaxA	MaxFA+MaxFB
	CHO MaxA5 Plus/CHO MaxY2	MaxFA+MaxFB
CHO-K1 SV(Lonza)	CHO MaxD7	MaxFA15+MaxFB2
CHO-K1 (Horizon)	CHO MaxD4	MaxFA+MaxFB
	CHO MaxD7	MaxFA15+MaxFB2
CHO-ZN	CHO MaxB	MaxFA12 + MaxFB2
	CHO MaxA5 Plus/CHO MaxY2	MaxFA+MaxFB
CHO-DG44	CHO MaxE1	MaxFA+MaxFB
CHO-S	CHO MaxD7	MaxFA+MaxFB
	CHO MaxE	MaxFA15 + MaxFB2
CHO-M	CHO MaxA5 Plus/CHO MaxY2	MaxFA+MaxFB

For reference only. Final selection should be based on project-specific requirements.

CHO Transient Transfection Solutions

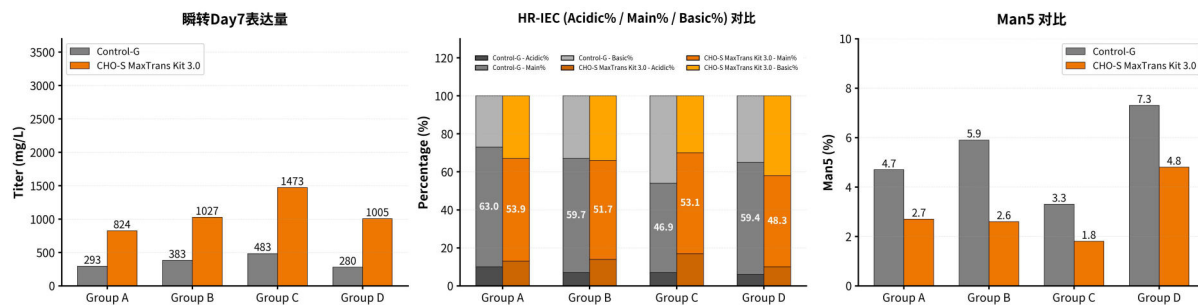
CHO-S MaxTrans Kit 3.0

CHO-S MaxTrans Kit 3.0 is a high-performance transient transfection solution for CHO-S cells, enabling rapid gram-scale production of antibodies and recombinant proteins with **high titers, robust performance, and simplified workflows**



- High protein productivity
- Maintains consistent CQAs
- Compatible with both 7-day and 14-day transient expression workflows.

Case Study



Result: In a 7-day transient transfection process using CHO-S cells, CHO-S MaxTrans Kit 3.0 achieved **200-300% higher titers than the benchmark control (Control-G)** while maintaining comparable product quality attributes.

Ordering Information

Kit	Component	Volume	Cat No.	Description
CHO-S MaxTrans Kit 3.0 (Cat No.: MB7169.1)	Trans MaxC2	1000 mL	MB1171.101	Basal Medium
	TransBuffer A5	100 mL	MB7139.101	Transfection Diluent
	Titer MaxerA	100 mL	MB7107.101	Transfection Enhancer
	TransFeed B	300 mL	MB7168.102	Feed Medium

Transfection Reagent - TransFect A

TransFect A is a transfection reagent developed for transient protein expression in CHO cells. Based on a novel cationic polymer technology, it enables efficient nucleic acid delivery and robust recombinant protein production.

- 90% Lower Reagent Usage vs. PEI
- 70-120% Higher Protein Titers vs. PEI



Ordering Information

Name	Volume	Cat No.	Description
TransFect A	1mL	MB7138.101	Transfection Reagent

| CHO Single-Cell Cloning Media

CHO Single-cell cloning Media delivers clone growth speed, cloning efficiency and viability rates comparable to or exceeding leading commercial cloning media to accelerate of high-producing, high-quality production clones.

■ Product Overview

CHO Cloning MaxA



Cloning Medium

- Rapid Cell Outgrowth
- High Clone Efficiency
- Easy to use

CHO Cloning MaxB



Cloning Medium

- High Cell Viability
- High Clone Efficiency
- Enhanced cell attachment

CHO Cloning MaxerA



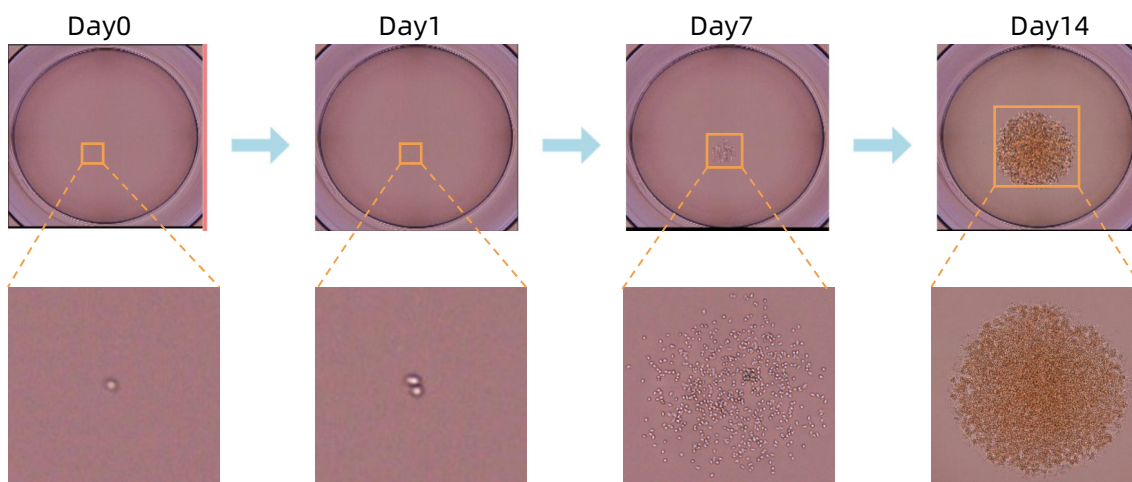
Cloning Growth Enhancer

- Accelerates Cell Growth
- Improves Single-Cell Survival
- Simplified Workflow

■ Case Study (CHO Cloning MaxB)

Cell Line	Seeding Density	Number of Wells	Assessment Time	Clone Formation Number(CFN)	Clone Formation Rate(CFR%)
CHO-K1	0.5 Cells/well	60 Wells	Day 14	25	83.3%

$$\text{Cloning Efficiency (\%)} = \text{CFN} / (\text{Number of Wells} \times \text{Seeding Density}) \times 100$$



Result: Using CHO Cloning MaxB with CHO-K1 recombinant cell pools, cloning efficiency reached 83.3% on Day 14 at a seeding density of 0.5 cells/well. Time-lapse imaging demonstrated the progression from a single cell to a compact, well-defined colony with uniform morphology.

■ Ordering Information

Name	Volume	Cat No.	Form	Notes
CHO Cloning MaxA	500ml	MB1147.101	Liquid	non-GMP
CHO Cloning MaxB	500 mL	MB1167.101	Liquid	non-GMP
CHO Cloning MaxerA	2.5 mL	MB7127.101	Liquid	non-GMP

CHO Subculture Media

CHO MaxK and CHO MaxK2 are CD media developed for CHO cell subculture applications. The formulations are free of animal-derived components, hydrolysates, and phenol red. The media support consistent expansion of multiple CHO cell lines, including CHO-S, CHO-K1, and CHO-ZN.



Key Features



Reliable Seed-Train Expansion

Specifically optimized for seed-train applications, supporting efficient post-thaw recovery and sustained expansion with viability consistently above 95%.



Seamless Process Adaptation

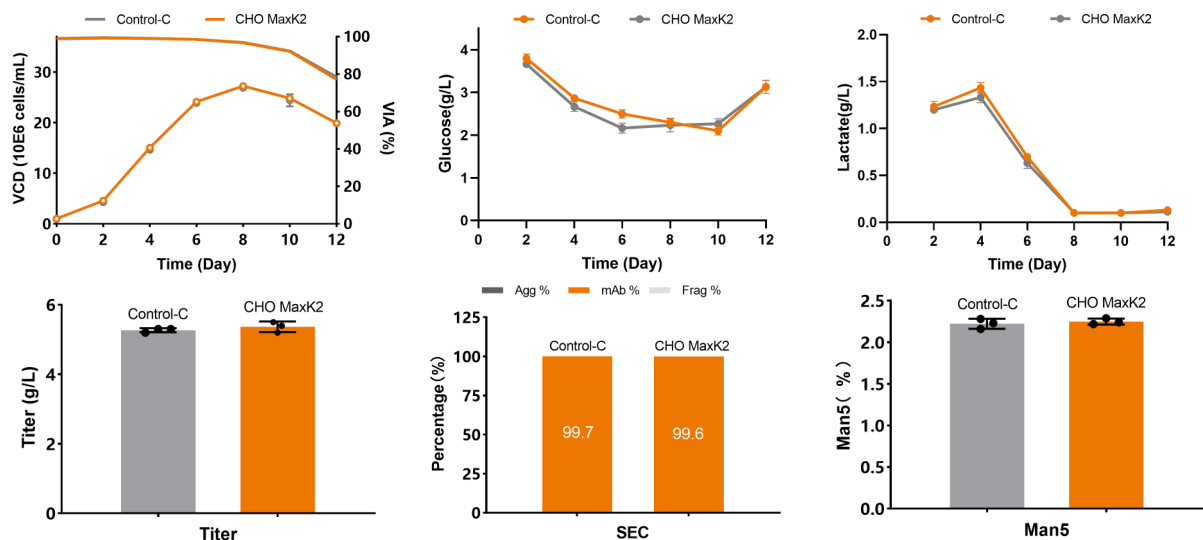
Facilitates robust cell adaptation during medium transition while maintaining consistent recombinant protein expression and CQAs.



Regulatory-Ready

A fully chemically defined formulation free from animal-derived components, hydrolysates and phenol red, ensuring batch-to-batch consistency.

Case Study (CHO MaxK2)



Results: In a CHO-K1 monoclonal antibody process, seed cultures expanded with CHO MaxK2 delivered comparable cell growth, productivity, and product quality comparable to the international commercial medium, supporting a seamless medium replacement strategy.

Ordering Information

Name	Volume	Cat No.	Form
CHO MaxK	1000ml	MB1168.102	Liquid
	10L / 100L / 500L	MB1168.201 / MB1168.202 / MB1168.203	Dry Powder
CHO MaxK2	1000ml	MB1175.102	Liquid
	10L / 100L / 500L	MB1175.201 / MB1175.202 / MB1175.203	Dry Powder

CHO Perfusion Media

CHO Perfusion Medium MaxE is a CD medium specifically developed for CHO cell lines and optimized for a broad range of high-density perfusion culture processes. The medium provides robust nutritional support and exceptional lot-to-lot consistency, enabling higher productivity and lower production costs.

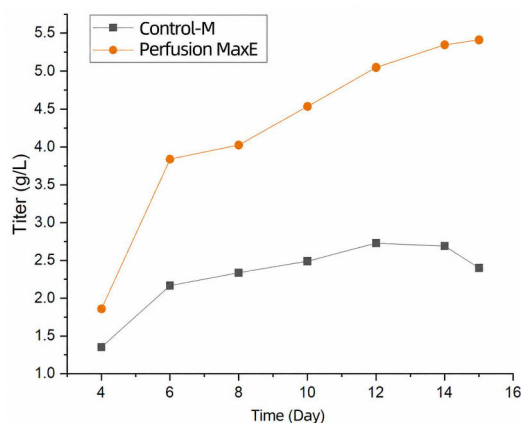


Key Features

- Chemically Defined, Animal-Derived Component-Free
- Broad CHO Cell Line Compatibility (including CHO-K1, CHO-S, DG44, and CHO-ZN)
- Enhanced Productivity

Case Study

Goal	Increase Productivity While Maintaining Product Quality
Cell Line	CHO-K1SV
Type / Stage	mAb / Pre-IND
Process Mode	Perfusion
Seeding Density/ Perfusion Rate	20M/1VVD
Scale	Shake Tube
Control Group	Control-M
MediumBank Group	Perfusion MaxE



Results : In perfusion culture of CHO-K1SV cells, Perfusion MaxE achieved **more than a 200% increase** in productivity while maintaining comparable final product quality relative to the benchmark medium.

Ordering Information

Name	Volume	Cat No.	Form
Perfusion MaxE	1000ml	MB1157.101	Liquid
	10L/100L	MB1157.201/MB1157.202	Dry Powder



**Medium
Bank**

Making bioprocesses simpler and more efficient!

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