



Duoning Cell Culture Medium

Effortless Preparation. Exceptional Quality.
Unlock Limitless Productivity.

ONE-STOP
BIOPROCESSING PLATFORM

www.duoningbio.com



About Duoning Cell Culture Medium

Duoning operates a fully independent culture medium development and manufacturing platform with proprietary intellectual property rights. Guided by in-depth research into cell metabolism and physiology, and driven by the needs of the bioprocessing industry, Duoning has developed a comprehensive portfolio of serum-free animal cell culture medium for the biopharmaceutical industry.

Amid the rapid growth of global biopharmaceutical industry, we remain focused on improving the efficiency of biopharmaceutical research, development, and manufacturing by continuously enhancing cell culture performance, thereby empowering both biopharmaceutical R&D and industrialization. Adhering to a customer-centric, win-win collaboration philosophy, Duoning also provides customized, high-quality, and tailored animal cell culture medium to help clients optimize their cell culture processes. In response to the widespread application of single-use products, bioreactors, and filters in biopharmaceutical manufacturing, Duoning develops and manufactures single-use bioprocess equipment and consumables. In addition, we offer professional GMP-compliant testing and validation services—including biosafety testing, instrument and equipment validation, and on-site support—to pharmaceutical R&D organizations, biotechnology developers, healthcare institutions, and related companies.



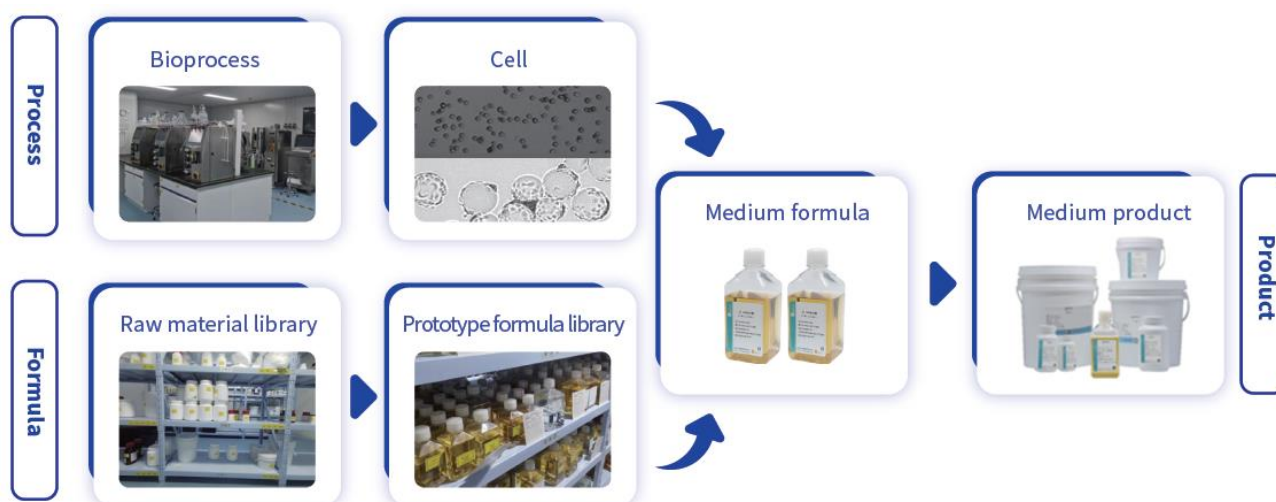
Duoning is consistently committed to the goal of “providing one-stop services for customers,” striving to become an integrated service provider delivering comprehensive solutions to the biopharmaceutical industry. Duoning will continue to work alongside and support biopharmaceutical companies worldwide, enabling efficient, stable, high-quality, and cost-controlled drug development and manufacturing processes.

Duoning’s cell culture medium operations are divided into medium R&D (Duoning headquarters in Shanghai) and medium manufacturing (Duoning Wuxi). Duoning Wuxi serves as the Group’s GMP manufacturing base for cell culture medium. The facility operates under an ISO 9001 quality management system certified by authoritative bodies, implements full product quality lifecycle management, and ensures complete traceability. Medium manufacturing services include the production and contract manufacturing of powdered medium, as well as the filling and contract filling of liquid medium. The facility is designed with an annual production capacity of 1,800 tons of powdered medium and 2 million liters of liquid medium.

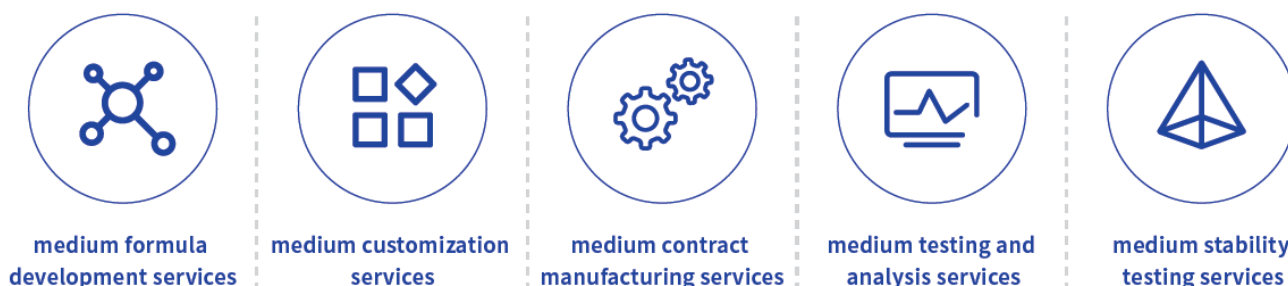
Cell Culture Medium Product Platform

Over nearly 20 years of technological exploration and accumulation, Duoning Biotech has been driven by bioprocessing needs and centered on the mechanistic understanding of cell culture medium, taking the lead in establishing an independent, end-to-end integrated platform for medium formulation and product development. Based on the characteristics and requirements of biopharmaceutical manufacturing processes, our medium development team focuses on medium formulation mechanisms, animal cell metabolic mechanisms, and medium stability studies. Through scientifically designed experimental analyses, including cell metabolism models and big data-driven intelligent modeling, the team has successfully designed and developed multiple serum-free medium products suitable for different types of animal cells.

Duoning medium products are widely applicable across various bioprocessing fields, including recombinant proteins, antibodies, cell therapy, gene therapy, vaccines, and in vitro diagnostics, and can meet the needs of diverse bioprocessing modes such as batch, fed-batch, and perfusion cultures. Leveraging its extensive formulation library comprising hundreds of formulations and an advanced formulation development platform, Duoning has successfully developed serum-free medium that support the suspension culture of cell lines across multiple domains, including CHO cells, HEK293 cells, insect cells, vaccine-producing cells, hybridoma cells, and immune cells. To date, Duoning Biotech's medium products have served hundreds of biopharmaceutical companies and institutions, and have been applied in more than 10 commercialized biopharmaceutical products as well as multiple clinical Phase I–III programs.



To meet the needs of biopharmaceutical companies worldwide for independently developed, customized, high-performance, and high-quality culture medium, Duoning Biotech offers medium solution services across multiple dimensions. These include medium formulation development services, non-GMP customized medium preparation services, contract manufacturing services for culture medium, medium testing and analytical services, and medium stability verification services. Through these offerings, Duoning Biotech provides customers with a one-stop culture medium solution integrating “formulation + platform + technology + services.”



Cell Culture Platform for Antibody and Recombinant Protein Production

Media C & DN feed® Series Cell Culture Medium

Chinese hamster ovary (CHO) cells are one of the most important host cell lines for the expression of antibodies and recombinant proteins. Duoning's cell culture medium products are developed based on the manufacturing process characteristics of the monoclonal antibody and recombinant protein industries. Centered on media formulation principles, CHO cell metabolic mechanisms, and medium stability studies, and supported by CHO cell metabolic modeling and scientifically designed experiments, Duoning has successfully developed the Media C Series and DN Feed Series media kits.

These medium are designed to meet the growth, metabolic, and expression requirements of various CHO cell lines, including CHO-K1, CHO-S, and DG44. Combining high performance with consistent high quality, the Media C Series and DN Feed® Series—together with Duoning's upstream and downstream biopharmaceutical process products—enable the delivery of comprehensive, end-to-end solutions for diverse bioprocessing applications.



Features:

- Animal component-free and fully chemically defined
- Supports high-density suspension culture and high-yield production
- Compatible with a wide range of CHO cell lines (including CHO-K1, CHO-K1SV, CHO-ZN, CHO-S, DG44, DUKB11, and CHO-M)
- Available with GMP manufacturing and convenient preparation options
- Products are protected by independently owned intellectual property rights

Media C Series Basal Medium	Compatible Cell Lines
Media C-01	CHO-K1, CHO-S
Media C-02	CHO-K1, CHO-S, DG44
Media C-03	CHO-K1, CHO-ZN, CHO-M
Media C-04	CHO-K1
Media C-05	CHO-K1, DG44
Media C-06	CHO-K1, CHO-S, CHO-K1SV

DN Feed® Series Feed Medium	Compatible Cell Lines
DN Feed® 3 + DN Feed® B3	CHO-K1, CHO-S, DG44, etc.
DN Feed® 4 + DN Feed® B4	CHO-K1, CHO-S, DG44, etc.
DN Feed® 5 (can be used in combination with DN Feed® B3)	CHO-K1, CHO-S, DG44, etc.

Advantages:

- Platform compatibility: The Media C Series, when paired with the DN Feed® Series, offers excellent versatility and is well suited to customers' platform-based process requirements.
- High productivity: Compared with competing products, antibody titers can be significantly increased; titers of up to 12 g/L have been achieved in fed-batch cultures.
- Quality control: When used together with Duoning quality modulators, the system effectively supports control of critical antibody quality attributes, including glycosylation profiles, charge variants, and purity.
- Ease of use: Media preparation can be completed using a simple three-step process, with no need for pH or osmolality adjustment.
- Professional support: Comprehensive, ongoing technical support is provided by a dedicated media application team that has supported hundreds of customers.

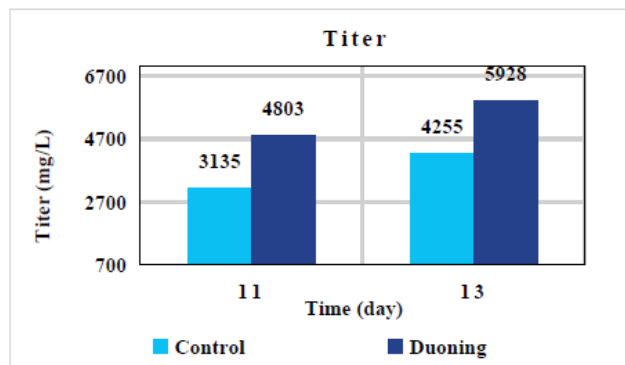
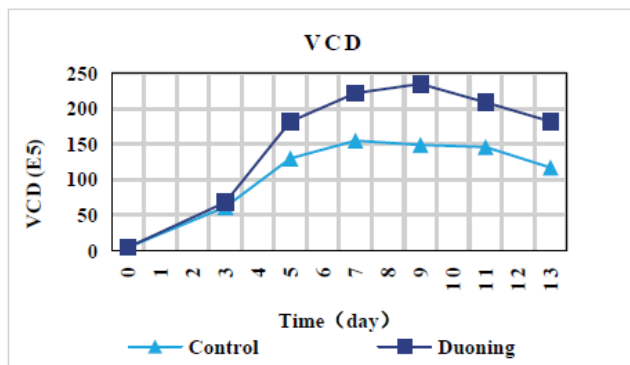
Media C & DN feed® Series Cell Culture Medium

Case Studies

Case 1:

Media C-01 + DN feed® 3 / DN feed® 4 combinations

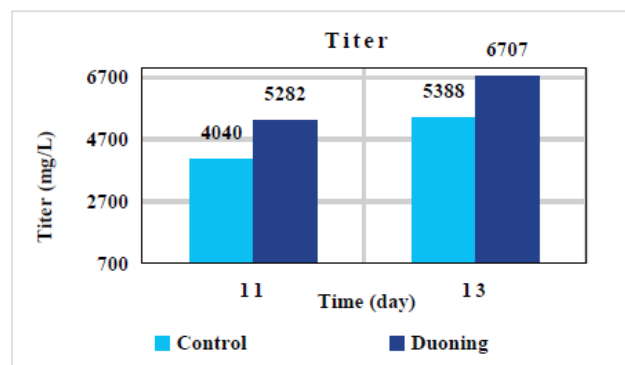
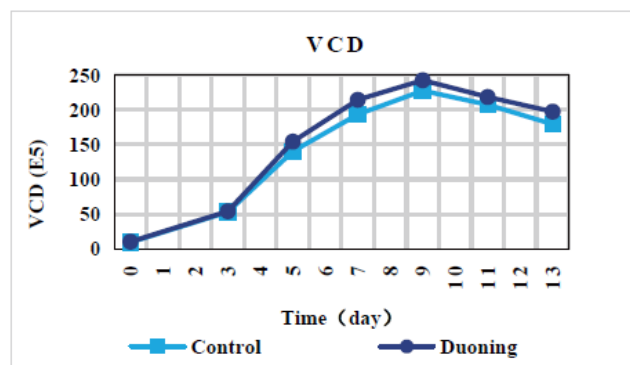
Recommended cells: CHOK1 (ATCC)



Case 2:

Media C-03 + DN feed® 3 / DN feed® 4 combinations

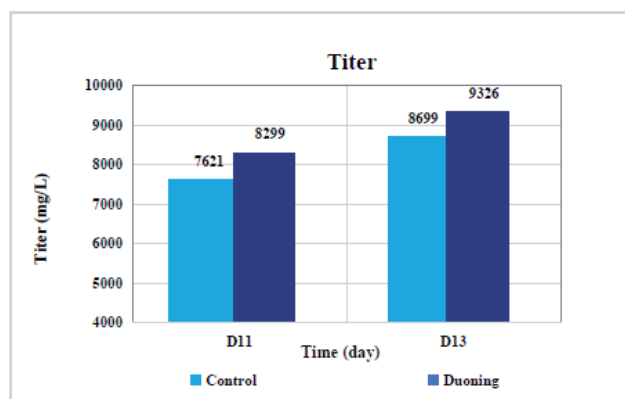
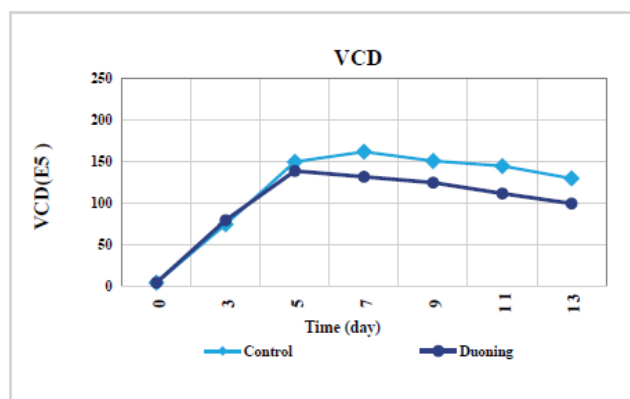
Recommended cells: CHOZN



Case 3:

Media C-04 + DN feed® 3 / DN feed® 4 combinations

Recommended cells: CHOK1 (ECACC)



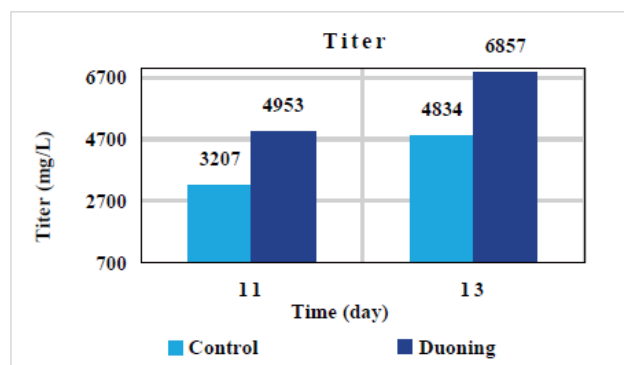
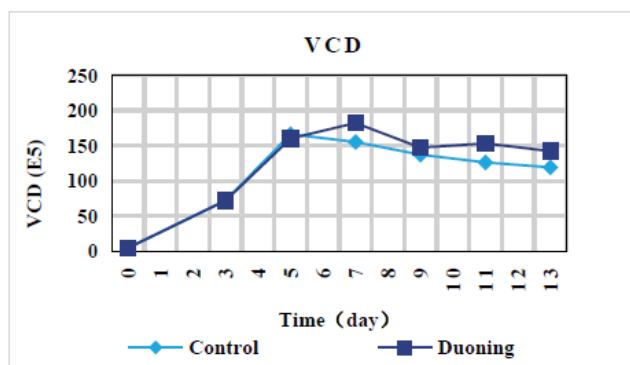
Media C & DN feed® Series Cell Culture Medium

Case Studies

Case 4:

Media C-05+DN feed® 3/DN feed® 4 combinations

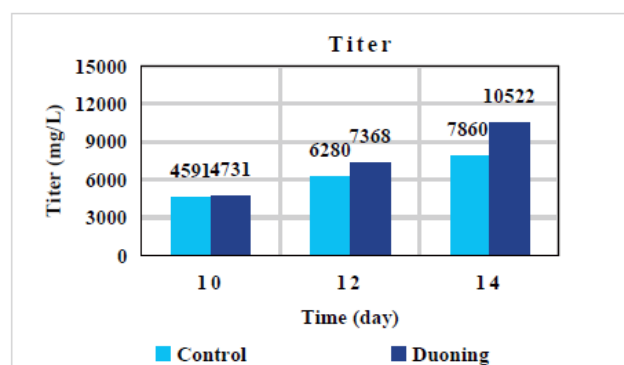
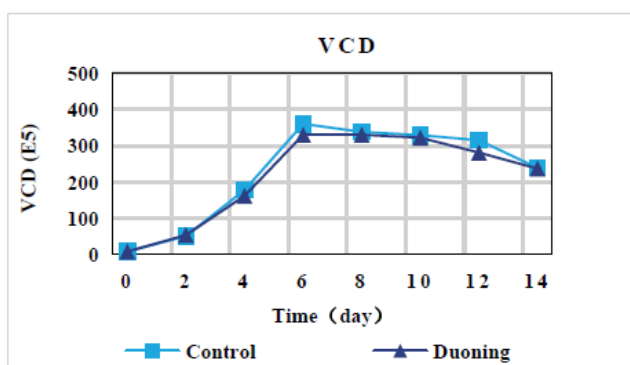
Recommended cells: CHOK1 (ATCC)



Case 5:

Media C-06+DN feed® 3/DN feed® 4 combinations

Recommended cells: CHOK1SV



Case 6:

Product quality regulation

Glycosylation (Galactosylation)							
	Titer	G0	G0F	Man5	G1	G1F	G2F
Original Drug	/	0.76	85.04	0.41	0.38	8.65	0.62
Commercial Medium	1 g/L	0.09	55.32	0.76	0.61	33.79	5.22
Duoning Medium	2.5 g/L	0.81	86.12	0.39	0.41	9.11	0.52

Media C & DN feed® Series Cell Culture Medium

Ordering Information

Product Type	Product Name	Product Form	Packaging Specification	Catalog Number
Basal Medium	Media C-01 Medium	Dry Powder	100 g	MP011-100g-02
			1 kg	MP011-1kg-02
			5 kg	MP011-5kg-02
			10 kg	MP011-10kg-02
			25 kg	MP011-25kg-02
	Media C-02 Medium		100 g	MP012-100g-02
			1 kg	MP012-1kg-02
			5 kg	MP012-5kg-02
			10 kg	MP012-10kg-02
			25 kg	MP012-25kg-02
	Media C-03 Medium		100 g	MP014-100g-02
			1 kg	MP014-1kg-02
			5 kg	MP014-5kg-02
			10 kg	MP014-10kg-02
			25 kg	MP014-25kg-02
	Media C-04 Medium		100 g	MP015-100g-02
			1 kg	MP015-1kg-02
			5 kg	MP015-5kg-02
			10 kg	MP015-10kg-02
			25 kg	MP015-25kg-02
	Media C-05 Medium		100 g	MP038-100g-02
			1 kg	MP038-1kg-02
			5 kg	MP038-5kg-02
			10 kg	MP038-10kg-02
			25 kg	MP038-25kg-02
	Media C-06 Medium		100 g	MP039-100g-02
			1 kg	MP039-1kg-02
			5 kg	MP039-5kg-02
			10 kg	MP039-10kg-02
			25 kg	MP039-25kg-02

Media C & DN feed® Series Cell Culture Medium

Ordering Information

Product Type	Product Name	Product Form	Packaging Specification	Catalog Number
Basal Medium	Media C-01	Liquid	500 mL 1 L	LB003-500ml-02 LB003-1L-02
	Media C-02		500 mL 1 L	LB021-500ml-02 LB021-1L-02
	Media C-03		500 mL 1 L	LB005-500ml-02 LB005-1L-02
	Media C-04		500 mL 1 L	LB006-500ml-02 LB006-1L-02
	Media C-05		500 mL 1 L	LB007-500ml-02 LB007-1L-02
	Media C-06		500 mL 1 L	LB008-500ml-02 LB008-1L-02
Feed Medium	DN feed® 3		100 mL 500 mL 1 L	FT004-100ml-02 FT004-500ml-02 FT004-1L-02
	DN feed® B3		100 mL 500 mL 1 L	FT005-100ml-02 FT005-500ml-02 FT005-1L-02
	DN feed® 4		100 mL 500 mL 1 L	FT006-100ml-02 FT006-500ml-02 FT006-1L-02
	DN feed® B4		100 mL 500 mL 1 L	LF001-100ml-02
		LF001-500ml-02 LF001-1L-02		
	DN feed® 5	100 mL		LF008-100ml-02
		500 mL		LF008-500ml-02
		1 L		LF008-1L-02

Media C & DN feed® Series Cell Culture Medium

Ordering Information

Product Type	Product Name	Product Form	Packaging Specification	Catalog Number
Feed Medium	DN feed® 3 Feed Medium	Dry Powder	100 g	FP015-100g-02
			1 kg	FP015-1kg-02
			5 kg	FP015-5kg-02
			10 kg	FP015-10kg-02
			25 kg	FP015-25kg-02
	DN feed® B3 Feed Medium		100 g	FP016-100g-02
			1 kg	FP016-1kg-02
			5 kg	FP016-5kg-02
			10 kg	FP016-10kg-02
			25kg	FP016-25kg-02
	DN feed® 4 Feed Medium		100 g	FP021-100g-02
			1 kg	FP021-1kg-02
			5 kg	FP021-5kg-02
			10 kg	FP021-10kg-02
			25 kg	FP021-25kg-02
	DN feed® B4 Feed Medium		100 g	PF001-100g-02
			1 kg	PF001-1kg-02
			5 kg	PF001-5kg-02
			10 kg	PF001-10kg-02
			25 kg	PF001-25kg-02
DN feed® 5 Feed Medium		100 g	PF009-100g-02	
		1 kg	PF009-1kg-02	
		5 kg	PF009-5kg-02	
		10 kg	PF009-10kg-02	
		25 kg	PF009-25kg-02	

MediaD Series Cell Culture Medium

The MediaD series media are animal component-free, chemically defined basal media designed for the development and production of antibodies and recombinant protein products using CHO cells, and are suitable for multiple bioprocessing modes, including batch, fed-batch, and perfusion cultures. The MediaD series contains no L-glutamine and is specifically formulated to enhance CHO cell growth and productivity.

When culturing engineered cells using the GS selection system, hypoxanthine and thymidine should be supplemented as required. When culturing engineered cells using the DHFR selection system, L-glutamine at 2–8 mM should be added as needed.

Applicable cell lines: Suitable for the cultivation of various CHO cell lines using GS and DHFR selection systems, including CHOK1, CHOK1SV, CHOS, CHOZN, and DG44.

Key advantages:

- Animal component-free and fully chemically defined
- Supports high-density suspension culture and high productivity
- Compatible with multiple CHO cell types
- Manufactured in compliance with GMP standards with convenient preparation
- Products with independent intellectual property rights

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
MeidaD01 Medium	Liquid	500 mL	LB027-500mL-02
		1 L	LB027-1L-02
	Dry Powder	100 g	PB020-100g-02
		1 kg	PB020-1kg-02
		5 kg	PB020-5kg-02
		10 kg	PB020-10kg-02
		25 kg	PB020-25kg-02
MeidaD02 Medium	Liquid	500 mL	LB028-500mL-02
		1 L	LB028-1L-02
	Dry Powder	100 g	PB021-100g-02

DM/DF Series Cell Culture Medium

This series of medium represents an excellent product line carefully screened by Duoning Bio during product development. It is particularly well suited for specific projects, where it can meet the requirements of cell growth, protein expression, and quality modulation for antibodies and recombinant proteins throughout both R&D and manufacturing processes. To learn more about the full medium portfolio, please contact our sales or technical team.

DM35-2 Medium

DM35-2 is an animal component-free, fully chemically defined basal medium suitable for batch, fed-batch, and perfusion cultures using Chinese hamster ovary (CHO) cells in the development and production of recombinant protein products. DM35-2 contains no L-glutamine and is specifically designed to enhance CHO cell growth and productivity.

When culturing engineered cells using the GS selection system, hypoxanthine and thymidine should be supplemented as required. When culturing engineered cells using the DHFR selection system, L-glutamine at 2–8 mM should be added as needed.

Applicable cell lines: Suitable for the cultivation of various CHO cell lines using GS and DHFR selection systems, including CHOK1 and CHOS.

Key advantages:

- Animal component-free and fully chemically defined
- Supports high-density suspension culture and high productivity
- Manufactured in compliance with GMP standards with convenient preparation
- Products with independent intellectual property rights

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
DM35-2 Medium	Dry Powder	100 g	PB010-100g-02
		1 kg	PB010-1kg-02
		5 kg	PB010-5kg-02
		10 kg	PB010-10kg-02
		25 kg	PB010-25kg-02

DM/DF Series Cell Culture Medium

This series of medium represents an excellent product line carefully screened by Duoning Bio during product development. It is particularly well suited for specific projects, where it can meet the requirements of cell growth, protein expression, and quality modulation for antibodies and recombinant proteins throughout both R&D and manufacturing processes. To learn more about the full medium portfolio, please contact our sales or technical team.

DM38-2 Medium

DM38-2 Medium is an animal component-free, fully chemically defined basal medium designed for seed expansion and passaging cultures using Chinese hamster ovary (CHO) cells in the development and production of recombinant protein products. DM38-2 Medium contains no L-glutamine and is specifically formulated to enhance CHO cell growth and productivity during subculture.

This product contains hypoxanthine and thymidine. When culturing engineered cells using the DHFR selection system, L-glutamine at 2–8 mM should be supplemented as required.

Applicable cell lines: Suitable for the cultivation of various CHO cell lines using GS and DHFR selection systems, including CHOK1, CHOS, and DG44.

Key advantages:

- Animal component-free and fully chemically defined
- Supports high-density suspension culture and high productivity
- Compatible with multiple CHO cell types
- Manufactured in compliance with GMP standards with convenient preparation
- Products with independent intellectual property rights

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
DM38-2 Medium	Liquid	500 mL	LB023-500mL-02
		1 L	LB023-1L-02
	Dry Powder	100 g	PB014-100g-02
		1 kg	PB014-1kg-02
		5 kg	PB014-5kg-02
		10 kg	PB014-10kg-02
		25 kg	PB014-25kg-02

DM/DF Series Cell Culture Medium

This series of medium represents an excellent product line carefully screened by Duoning Bio during product development. It is particularly well suited for specific projects, where it can meet the requirements of cell growth, protein expression, and quality modulation for antibodies and recombinant proteins throughout both R&D and manufacturing processes. To learn more about the full medium portfolio, please contact our sales or technical team.

DM57 Medium

DM57 is an animal component-free, fully chemically defined basal medium designed for batch, fed-batch, and perfusion cultures using Chinese hamster ovary (CHO) cells in the development and production of recombinant protein products. DM57 contains no L-glutamine and is specifically formulated to enhance CHO cell growth and productivity.

When culturing engineered cells using the GS selection system, hypoxanthine and thymidine should be supplemented as required. When culturing engineered cells using the DHFR selection system, L-glutamine at 2–8 mM should be added as needed.

Applicable cell lines: Suitable for the cultivation of various CHO cell lines using GS and DHFR selection systems, including CHOK1 and CHOK1SV.

Key advantages:

- Animal component-free and fully chemically defined
- Supports high-density suspension culture and high productivity
- Manufactured in compliance with GMP standards with convenient preparation
- Products with independent intellectual property rights

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
DM57 Medium	Dry Powder	100 g	PB011-100g-02
		1 kg	PB011-1kg-02
		5 kg	PB011-5kg-02
		10 kg	PB011-10kg-02
		25 kg	PB011-25kg-02

DM/DF Series Cell Culture Medium

This series of medium represents an excellent product line carefully screened by Duoning Bio during product development. It is particularly well suited for specific projects, where it can meet the requirements of cell growth, protein expression, and quality modulation for antibodies and recombinant proteins throughout both R&D and manufacturing processes. To learn more about the full medium portfolio, please contact our sales or technical team.

DM70 Medium

DM70 is an animal component-free, fully chemically defined basal medium suitable for batch, fed-batch, and perfusion cultures using Chinese hamster ovary (CHO) cells in the development and production of recombinant protein products. DM70 contains no L-glutamine. DM46-2 is a basal medium specifically designed to enhance CHO cell growth and productivity.

When culturing engineered cells using the GS selection system, hypoxanthine and thymidine should be supplemented as required. When culturing engineered cells using the DHFR selection system, L-glutamine at 2–8 mM should be added as needed.

Applicable cell lines: Suitable for the cultivation of various CHOK1-derived cell lines using GS and DHFR selection systems.

Key advantages:

- Animal component-free and fully chemically defined
- Supports high-density suspension culture and high productivity
- Manufactured in compliance with GMP standards with convenient preparation
- Products with independent intellectual property rights

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
DM70 Medium	Dry Powder	100 g	PB019-100g-02
		1 kg	PB019-1kg-02
		5 kg	PB019-5kg-02
		10 kg	PB019-10kg-02
		25 kg	PB019-25kg-02

DM/DF Series Cell Culture Medium

This series of medium represents an excellent product line carefully screened by Duoning Bio during product development. It is particularly well suited for specific projects, where it can meet the requirements of cell growth, protein expression, and quality modulation for antibodies and recombinant proteins throughout both R&D and manufacturing processes. To learn more about the full medium portfolio, please contact our sales or technical team.

DF26 Feed Medium

DF26 is an animal component-free, chemically defined feed medium. It contains no L-glutamine and is designed for fed-batch culture using Chinese hamster ovary (CHO) cells in the development and production of recombinant protein products.

Applicable cell lines: Suitable for the cultivation of various CHO cell lines using GS and DHFR selection systems, including CHOK1, CHOK1SV, CHOS, CHOZN, and DG44.

Key advantages:

- Animal component-free and fully chemically defined
- Supports high-density suspension culture and high productivity
- Manufactured in compliance with GMP standards with convenient preparation
- Products with independent intellectual property rights

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
DF26 Feed Medium	Liquid	100 mL	LF007-100ml-02
		500 mL	LF007-500ml-02
		1 L	LF007-1L-02
	Dry Powder	100 g	PF011-100g-02
		1 kg	PF011-1kg-02
		5 kg	PF011-5kg-02
		10 kg	PF011-10kg-02
		25 kg	PF011-25kg-02

Max Series Cell Culture Medium

Maxpro® 304 Medium

Maxpro® 304 Medium is an animal component–free, fully chemically defined basal medium designed for batch, fed-batch, and perfusion cultures using Chinese hamster ovary (CHO) cells in the development and production of therapeutic protein products. Maxpro® 304 Medium contains no growth factors and no L-glutamine.

Applicable cell lines: Suitable for the cultivation of various CHO cell lines, including CHOK1, CHOK1SV, CHOS, and DG44.

Key advantages:

- Animal component–free and fully chemically defined
- Supports high-density suspension culture and high productivity
- Manufactured in compliance with GMP standards with convenient preparation
- Products with independent intellectual property rights

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
Maxpro® 304 Medium	Dry Powder	100 g	PB018-100g-02
		1 kg	PB018-1kg-02
		5 kg	PB018-5kg-02
		10 kg	PB018-10kg-02
		25 kg	PB018-25kg-02

Max Series Cell Culture Medium

Maxfeed® 404A & 404B Feed Medium

Maxfeed® 404A and Maxfeed® 404B are animal component-free, protein-free, chemically defined high-performance feed medium designed for fed-batch cultivation using Chinese hamster ovary (CHO) cells in the development and production of therapeutic protein products. These products contain no growth factors and no L-glutamine. Maxfeed® 404A and Maxfeed® 404B are intended to be used in combination and supplemented simultaneously.

Applicable cell lines: Suitable for the culture of various CHO cell lines using GS and DHFR selection systems, including CHO-K1, CHO-S, DG44, and CHOZN.

Key advantages:

- Animal component-free and fully chemically defined
- Supports high-density suspension culture and high productivity
- Manufactured in compliance with GMP standards with convenient preparation
- Products with independent intellectual property rights

Ordering Information

Ordering Information			
Product Name	Product Form	Packaging Specification	Catalog Number
Maxfeed® 404A Feed Medium	Dry Powder	100 g	PF007-100g-02
		1 kg	PF007-1kg-02
		5 kg	PF007-5kg-02
		10 kg	PF007-10kg-02
		25 kg	PF007-25kg-02
Maxfeed® 404B Feed Medium		100 g	PF008-100g-02
		1 kg	PF008-1kg-02
		5 kg	PF008-5kg-02
		10 kg	PF008-10kg-02
		25 kg	PF008-25kg-02

CHO Cell Transient Transfection Culture Medium

Duoning CHO transient transfection medium includes the Transpro® series and their matching feed supplements. Based on the specific process characteristics of transient protein expression, Duoning Biotech's medium development team focused on medium formulation principles, CHO cell metabolic mechanisms, and transient transfection mechanisms, and successfully designed and developed the Transpro® series and DN feed® series medium kits through scientifically designed experimental studies.

These medium kits are suitable for transient transfection expression of antibodies and recombinant proteins in CHO cell lines such as ExpiCHO-S, CHO-S, and CHO-K1 during life science research.



Key features:

- Animal component-free, fully chemically defined (CD) medium
- Support high-density suspension culture, transient transfection, and high productivity
- Compatible with multiple CHO cell types (ExpiCHO-S, CHO-S, CHO-K1, etc.)
- Manufactured under GMP conditions with convenient preparation
- Products with independent intellectual property rights

Advantages:

- Compatible with high-density growth and transient transfection of both HEK293 and CHO cells
- Simple workflow: no centrifugation or medium exchange required; transfection can be performed by direct dilution. Post-transfection feeding is straightforward—only two feed additions are required for CHO cultures exceeding a 7-day process
- When used with the dedicated feed series, protein expression efficiency is significantly improved, enabling g/L-level expression in transient transfection and reducing protein production costs
- Supports adaptation of adherent cells to suspension culture, typically requiring ~3 passages when transitioning from other suspension medium
- Provides end-to-end technical support, including transient transfection parameter optimization and culture process optimization tailored to customer needs

Case Study

Case 1:

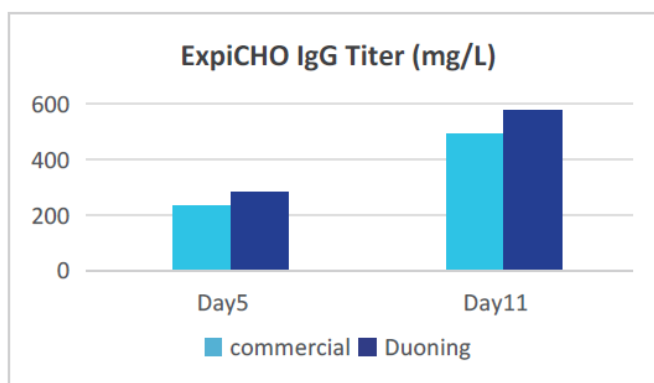
Protein Expression by Transient Transfection

Transient transfection medium combination for CHO cells:

Transpro® CD 01 Plus / Transpro® CD 02 + DN feed® 2A + DN feed® B2 + Transient Transfection Supplement-02

Recommended cell lines:

ExpiCHO-S, CHO-S, CHO-K1, etc.



CHO Cell Transient Transfection Culture Medium

Ordering Information

Product Type	Product Name	Product Form	Packaging Specification	Catalog Number
Basal Medium	Transpro® CD 01 Medium	Dry Powder	100 g	MP004-100g-02
			1 kg	MP004-1kg-02
			5 kg	MP004-5kg-02
			10 kg	MP004-10kg-02
			25 kg	MP004-25kg-02
	Transpro® CD 01 plus Medium		100 g	MP027-100g-02
			1 kg	MP027-1kg-02
			5 kg	MP027-5kg-02
			10 kg	MP027-10kg-02
			25 kg	MP027-25kg-02
	Transpro® CD 02 Medium		100 g	PB007-100g-02
			1 kg	PB007-1kg-02
			5 kg	PB007-5kg-02
			10 kg	PB007-10kg-02
			25 kg	PB007-25kg-02

Product Type	Product Name	Product Form	Packaging Specification	Catalog Number
Basel Medium	Transpro® CD 01	Liquid	500 mL	MS002-500mL-02
	Transpro® CD 01 plus		1 L	MS002-1L-02
			Transpro® CD 02	500 mL
	DN feed® 2A			1 L
			DN feed® B2	500 mL
	Supplement			1 L
Feed Medium			100 mL	LF006-100mL-02
	500 mL		LF006-500mL-02	
			1 L	LF006-1L-02
Supplement			100 mL	FT003-100mL-02
	500 mL		FT003-500mL-02	
			1 L	FT003-1L-02
Supplement		100ml	Q011-100ml-02	
	500ml	Q011-500ml-02		
		1L	Q011-1L-02	

CHO Cell Transient Transfection Kit

The Duoning CHO Transient Transfection Kit consists of the basal medium Transpro® CD01 Plus, feed medium DN feed® 2 and DN feed® B2, the supplement Transient Transfection Supplement-02, a Transfection Reagent, and a Buffer for Mixing used for transfection dilution.

Transpro® CD01 Plus is a general-purpose transient transfection medium suitable for HEK293 and CHO cells for passaging culture, high-density culture, and transient transfection. During transient transfection, no centrifugation or medium exchange is required. During protein expression, the use of the corresponding feed medium can further enhance transient expression levels.

This system is fully chemically defined, animal component-free, protein-free, and contains no animal- or plant-derived protein hydrolysates and no growth factors.



Main reagents and consumables included in the CHO transient transfection kit

Item	Product Type	Content	Qty	Volume	Storage
1	Baseal Medium	Transpro CD 01plus	1	1 L	2~8℃
2	Feed Medium	DN feed 2A	1	100 ml	2~8℃
3	Feed Medium	DN feed B2	1	100 ml	2~8℃
4	Supplement	Transient Transfection Supplement-02	1	100 ml	2~8℃
5	Transient Transfection Reagent	Transfection Reagent	1	0.5 ml	-20℃
6	Dilution Solution	Buffer For mixing	1	100 ml	2~8℃

Note: The cells and positive control plasmids are provided as complimentary items and are **not included** in this kit. The basal medium **Transpro® CD 01 Plus** contains **no L-glutamine**; therefore, an additional **6 mM L-glutamine** should be supplemented prior to use.

Ordering Information

Product Name	Catalog Number
CHO Cell Transient Transfection Kit	DNRGO30501

Cell and Gene Therapy Cell Culture Platform

HEK293 Cell Culture Medium

Duoning HEK293 medium includes the Transpro® Series basal medium, and the Transpro® Feed Series feed medium. Based on the specific process characteristics of transient protein expression and viral vector packaging, Duoning's medium product development team focuses on medium formulation mechanisms, HEK293 cell metabolic mechanisms, and transient transfection mechanisms. Through scientifically designed experimental analyses, the team has successfully designed and developed the Transpro® Series and Transpro® Feed Series medium kits. These medium kits are suitable for protein expression and viral packaging using various HEK293 cell types, including Expi293F, HEK293, and 293F cells.

Key Features:

- Animal component-free, fully chemically defined medium
- Support high-density suspension culture, transient transfection, and high-yield production
- Compatible with multiple HEK293 cell types (e.g., Expi293F, HEK293, and 293F)
- Available in GMP manufacturing grade with convenient preparation options
- Products with independent proprietary intellectual property
- Suitable for use as growth medium for HEK293 cells as well as production medium for transient protein expression, adeno-associated virus (AAV), and lentiviral (LV) vector packaging

Advantages:

- Simple process with no need for centrifugation or medium exchange; transfection can be performed directly by dilution
- Use in combination with the matching feed series can significantly improve expression efficiency and reduce costs
- Supports adaptation of adherent cells to suspension culture, typically requiring around three passages when adapted from other suspension mediums
- Provides continuous, follow-up technical support, including optimization of transient transfection parameters and culture process optimization tailored to customer needs

Case Studies

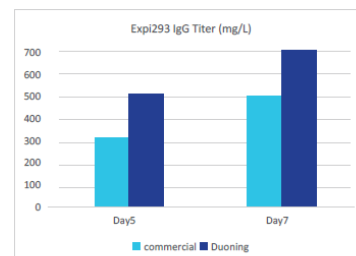
Case 1:

Transient Protein Expression

Transient protein expression medium portfolio for HEK293 cells:

Transpro® CD 01 plus / Transpro® CD 02 + Transpro® Feed 1A

Recommended cells: Expi293, 293F, etc.



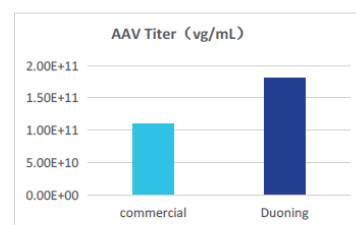
Case 2:

AAV Production

AAV production medium portfolio for HEK293 cells:

Transpro® CD 01 / Transpro® CD 01 plus + Transpro® Feed 1A

Recommended cells: HEK293, 293T, etc.



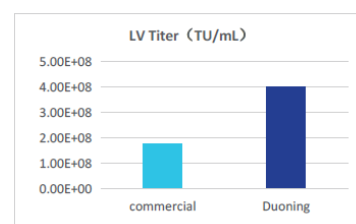
Case 3:

LV Production

LV production medium portfolio for HEK293 cells:

Transpro® CD 01 / Transpro® CD 01 plus + Transpro® Feed 1A

Recommended cells: HEK293, 293T, etc.



Cell and Gene Therapy Cell Culture Platform

HEK293 Cell Culture Medium

Ordering Information

Product Type	Product Name	Product Form	Packaging Specification	Catalog Number
Basal Medium	Transpro® CD 01 Medium	Dry Powder	100 g	MP004-100g-02
			1 kg	MP004-1kg-02
			5 kg	MP004-5kg-02
			10 kg	MP004-10kg-02
			25 kg	MP004-25kg-02
	Transpro® CD 01 plus Medium		100 g	MP027-100g-02
			1 kg	MP027-1kg-02
			5 kg	MP027-5kg-02
			10 kg	MP027-10kg-02
			25 kg	MP027-25kg-02
	Transpro® CD 02 Medium		100 g	PB007-100g-02
			1 kg	PB007-1kg-02
			5 kg	PB007-5kg-02
			10 kg	PB007-10kg-02
			25 kg	PB007-25kg-02

Product Type	Product Name	Product Form	Packaging Specification	Catalog Number
Basal Medium	Transpro® CD 01	Liquid	500 mL	MS002-500ml-02
			1 L	MS002-1L-02
	Transpro® CD 01 plus		500 mL	M021-500ml-02
			1 L	M021-1L-02
	Transpro® CD 02		500 mL	LB014-500ml-02
			1 L	LB014-1L-02
Feed Medium	Transpro® feed 1A		100 mL	LF005-100ml-02
			500 mL	LF005-500ml-02
			1 L	LF005-1L-02

HEK293 Cell Transient Transfection Kit

The Duoning HEK293 Transient Transfection Kit consists of the basal medium Transpro® CD01 Plus, the feed medium Transpro® Feed 1A, a Transfection Reagent, and a Buffer for Mixing used for transfection dilution. Transpro® CD01 Plus is a general-purpose transient transfection medium suitable for HEK293 cells for passaging, high-density culture, and transient transfection. During transient transfection, no centrifugation or medium exchange is required.

During protein expression, the use of the corresponding feed medium can further enhance transient expression levels.

This system is fully chemically defined, animal component-free, protein-free, contains no plant-derived protein hydrolysates, and no growth factors.

The Duoning HEK293 Transient Transfection Kit offers the following advantages:

- High expression efficiency: Through optimized transfection complex ratios and feeding strategies, some customers have achieved monoclonal antibody yields of up to 2 g/L within 12 days.
- Flexibility: Supports multiple HEK293 cell lines and a wide range of culture volumes, meeting end-to-end needs from R&D to production.
- Serum-free / animal component-free: Reduces batch-to-batch variability and contamination risks, and complies with GMP manufacturing requirements.
- Operational robustness: The transfection reagent allows a broad operating window (2–120 minutes) and does not require gentle handling, significantly reducing operator-induced variability and making it suitable for large-scale industrial production.



Main reagents and consumables included in the HEK293 transient transfection kit

Item	Product Type	Content	Qty	Volume	Storage
1	Baseal Medium	Transpro CD 01plus	1	1L	2-8°C
2	Feed Medium	Transpro feed 1A	1	100 ml	2-8°C
3	Transient Transfection Reagent	Transfection Reagent	1	0.5 ml	-20°C
4	Dilution Solution	Buffer For mixing	1	100 ml	2-8°C

Note: The cells and positive control plasmids are complimentary items and are not included in this kit. The basal medium Transpro® CD 01 Plus does not contain L-glutamine; therefore, 6 mM L-glutamine should be supplemented prior to use.

Ordering Information

Product Name	Catalog Number
HEK293 Cell Transient Transfection Kit	DNRG030401

Vaccine Cell Culture Platform

With the rapid development of the vaccine field, traditional adherent cell-based vaccine production processes are gradually being replaced by high-density, scalable suspension culture processes, which has greatly promoted the application of serum-free medium in vaccine development and manufacturing. Duoning has developed multiple serum-free cell culture medium to support vaccine R&D and production, including medium for the culture of Sf9, BHK21, LMH, MDCK, ST, PK15 cells, and others.

TransInsect-02 Insect Cell Culture Medium

Duoning's insect cell culture medium are designed for serum-free suspension culture of insect cells and are used in new drug discovery, subunit vaccine production, and AAV manufacturing. These mediums demonstrate broad applicability and can simultaneously support the passaging and growth of Sf9, Sf21, Expi Sf9, and High Five cells. They are suitable for large-scale recombinant protein expression using the baculovirus expression system with insect cells such as Sf9 and High Five, for the production of veterinary subunit vaccines or VLPs including porcine circovirus, classical swine fever, and porcine parvovirus, as well as for human subunit vaccines or VLPs such as COVID-19 and influenza. In addition, they can be used for large-scale AAV production.



Applicable Cells: Suitable for the passaging and growth of Sf9, Sf21, Expi Sf9, and High Five cells

Advantages:

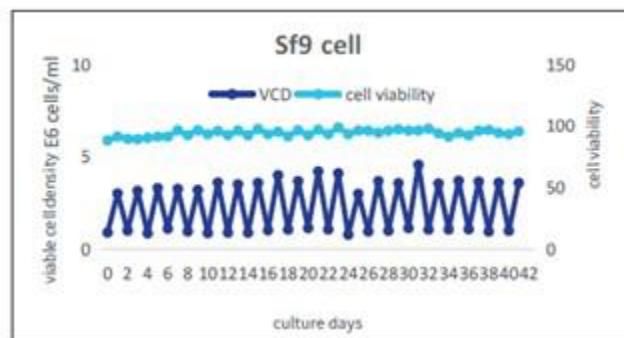
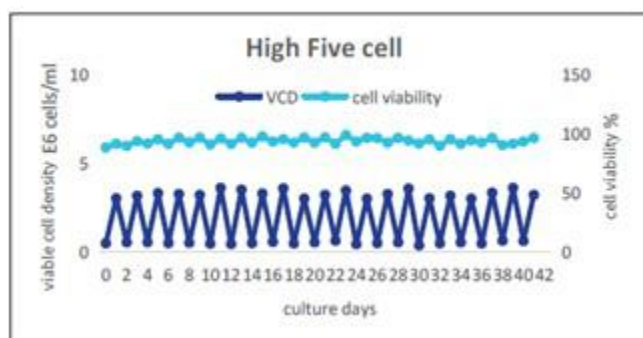
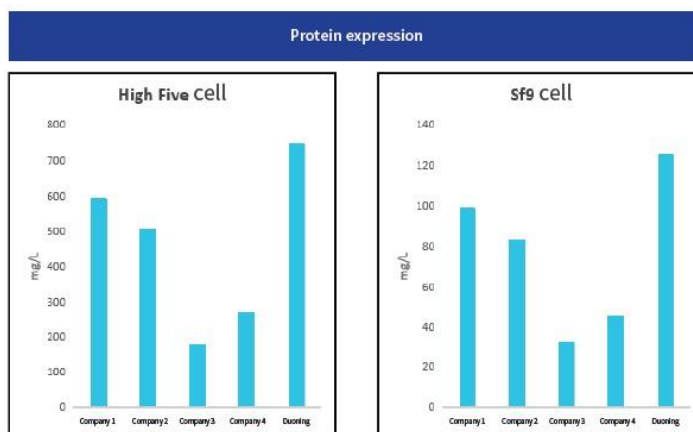
- Free of animal-derived components, meeting relevant compliance and regulatory requirements
- Broad compatibility with multiple insect cell lines
- GMP manufacturing with full traceability throughout the process
- Supports both routine cell passaging and high-density culture
- Suitable for protein expression and AAV packaging in insect cells

Case Study

TransInsect-02

Recommended cells: Sf9, Sf21, Expi Sf9, and High Five

Applications: Growth and passaging for the production of AAV, porcine circovirus, classical swine fever, porcine parvovirus, and other subunit vaccines or VLPs





TransInsect-02 Insect Cell Culture Medium

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
TransInsect-02 Medium	Liquid	500 mL	LB017-500ml-02
		1 L	LB017-1L-02
	Dry Powder	100 g	PB009-100g-02
		1 kg	PB009-1kg-02
		5 kg	PB009-5kg-02
		10 kg	PB009-10kg-02
		25 kg	PB009-25kg-02



Vaccine Cell Culture Platform

With the rapid development of the vaccine field, traditional adherent cell-based vaccine production processes are gradually being replaced by high-density, scalable suspension culture processes, which has greatly promoted the application of serum-free medium in vaccine development and manufacturing. Duoning has developed multiple serum-free cell culture medium to support vaccine R&D and production, including medium for the culture of SF9, BHK21, LMH, MDCK, ST, PK15 cells, and others.

TransVA® Series Vaccine Platform Medium

The TransVA® series is designed for the production of live attenuated vaccines, inactivated vaccines, or subunit vaccines using suspension cell culture. Following the principles of customer convenience, process simplification, and cost reduction, Duoning has developed a range of TransVA® medium products tailored to different suspension cell lines: TransVA®-02: For suspension-adapted BHK21 cells, used in the production of veterinary vaccines such as foot-and-mouth disease virus, Newcastle disease virus, and rabies virus; TransVA®-03: For suspension-adapted LMH cells, used in the production of animal vaccines such as avian adenovirus and reovirus; TransVA®-04: For suspension-adapted MDCK cells, used in the production of animal influenza virus vaccines; TransVA®-05: For suspension-adapted ST cells; TransVA®-06: For suspension-adapted PK15 cells, used in the production of veterinary vaccines such as classical swine fever virus, porcine parvovirus, porcine epidemic diarrhea virus, and pseudorabies virus

Key Features:

- Serum-free, avoiding the introduction of animal-derived components
- Can be directly used as suspension adaptation medium for cell culture
- Can be directly used for routine cell passaging and virus production

Advantages:

- Broad applicability: each product demonstrates good compatibility across different clones of the same cell type
- Simple culture process: all TransVA® series products require no additional glucose or feed supplementation and are suitable for the amplification of multiple virus types, offering excellent viral universality
- Continuous, follow-up technical support, providing process optimization solutions for seed culture, scale-up, and infection/virus production based on vaccine customer needs
- Safe and compliant, meeting relevant regulatory and compliance requirements
- Manufactured under an ISO 9001 quality management system certified by authoritative organizations, with full traceability throughout the production process



TransVA® Series Vaccine Cell Culture Medium

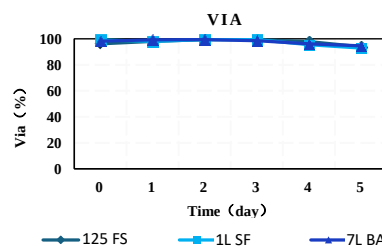
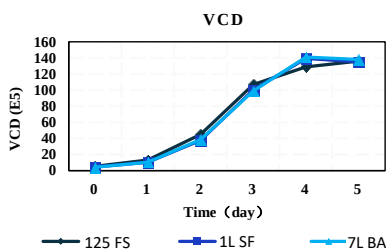
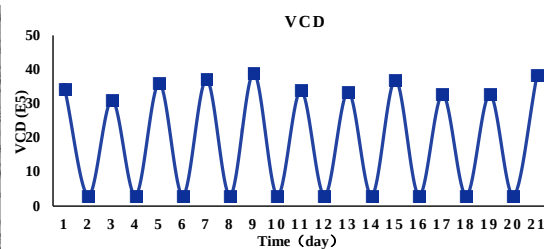
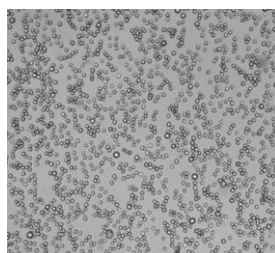
Case Study

Case study 1:

TransVA®-02

Recommended cells: BHK21

Recommended viruses: Foot-and-mouth disease virus, Newcastle disease virus, Rabies virus, etc.

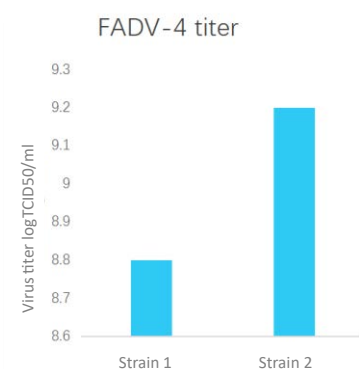
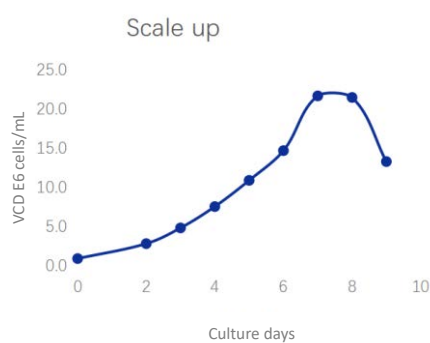
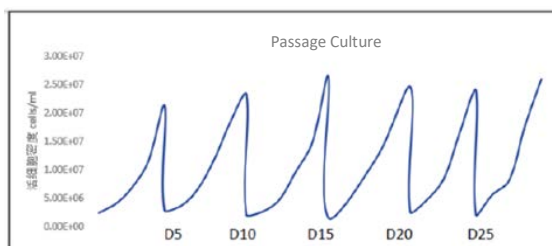
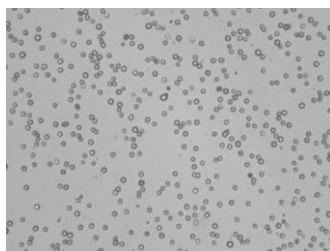


Case study 2:

TransVA®-03

Recommended cells: LMH / DEF

Recommended viruses: Avian adenovirus, Rotavirus



TransVA® Series Vaccine Cell Culture Medium

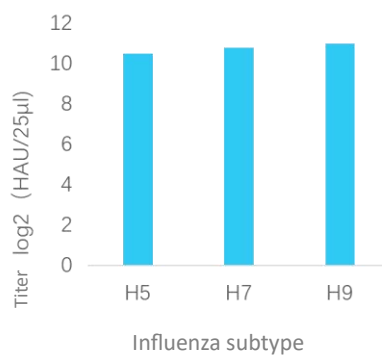
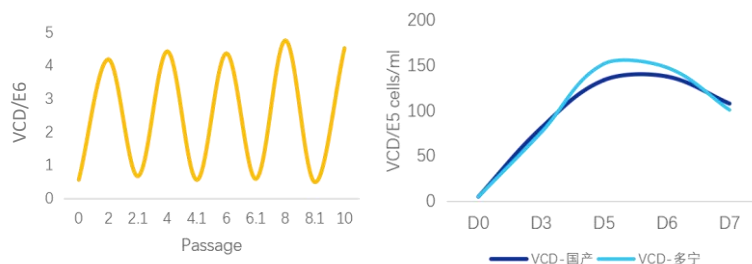
Case Study

Case study 3:

TransVA®-04

Recommended cells: MDCK

Recommended viruses: Influenza virus,
Avian influenza virus

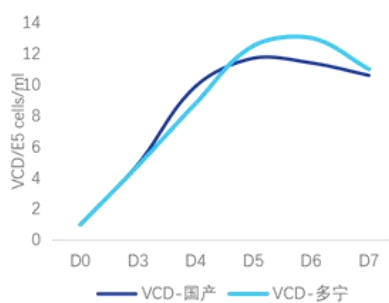


Case study 4:

TransVA®-05

Recommended cells: ST

Recommended viruses: Classical swine
fever virus, Porcine parvovirus, Porcine
epidemic diarrhea virus

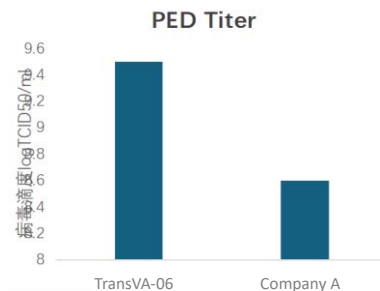
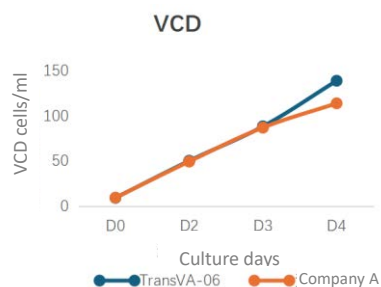
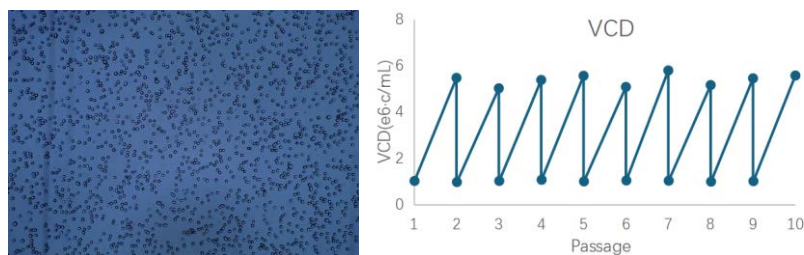


Case study 5:

TransVA®-06

Recommended cells: PK15

Recommended viruses: Porcine circovirus,
Porcine diarrhea virus



TransVA® Series Vaccine Cell Culture Medium

Ordering Information

Product Type	Product Name	Product Form	Packaging Specification	Catalog Number
Basal Medium	TransVA®-02 Medium	Dry Powder	100 g	MP042-100g-02
			1 kg	MP042-1kg-02
			5 kg	MP042-5kg-02
			10 kg	MP042-10kg-02
			25 kg	MP042-25kg-02
	TransVA®-03 Medium		100 g	PB004-100g-02
			1 kg	PB004-1kg-02
			5 kg	PB004-5kg-02
			10 kg	PB004-10kg-02
			25 kg	PB004-25kg-02
	TransVA®-04 Medium		100 g	PB005-100g-02
			1 kg	PB005-1kg-02
			5 kg	PB005-5kg-02
			10 kg	PB005-10kg-02
			25 kg	PB005-25kg-02
	TransVA®-05 Medium		100 g	PB006-100g-02
			1 kg	PB006-1kg-02
			5 kg	PB006-5kg-02
			10 kg	PB006-10kg-02
			25 kg	PB006-25kg-02
	TransVA®-06 Medium		100 g	PB027-100g-02
			1 kg	PB027-1kg-02
			5 kg	PB027-5kg-02
			10 kg	PB027-10kg-02
			25 kg	PB027-25kg-02
TransVA®-02	Liquid	500 mL	MT002-500ml-02	
		1 L	MT002-1L-02	
TransVA®-03		500 mL	LB013-500ml-02	
		1 L	LB013-1L-02	
TransVA®-04		500 mL	LB012-500ml-02	
		1 L	LB012-1L-02	
TransVA®-05		500 mL	LB015-500ml-02	
		1 L	LB015-1L-02	
TransVA®-06		500 mL	LB034-500ml-02	
		1 L	LB034-1L-02	

Cell Culture Reagent

Duoning provides a comprehensive range of reagents for cell culture applications to meet diverse cell culture needs.

200× Anti-Cell Clumping Agent

The anti-cell clumping agent is primarily used during cell culture to reduce cell aggregation, thereby enabling higher viable cell densities in suspension culture and increased antibody production. It is an animal component-free, chemically defined supplement that contains no proteins, enzymes, hydrolysates, or other undefined components.

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
200x Anti-Cell Clumping Agent	Liquid	100 mL	Q004-100ml-02
		500 mL	Q004-100ml-03
		1 L	Q004-100ml-04

200 mM DuoGlnMax – L-Glutamine Analog

200 mM DuoGlnMax is an innovative alternative to L-glutamine, with its key advantage being significantly improved chemical stability. This dipeptide additive does not spontaneously degrade to generate ammonia or other ammonium byproducts. Cells can precisely cleave the dipeptide bond in DuoGlnMax through specific enzymatic mechanisms, enabling the on-demand release of L-glutamine.

This dynamic supply mode effectively avoids the metabolic burden caused by ammonia accumulation commonly observed in conventional culture systems, while ensuring a continuous and stable supply of active L-glutamine throughout extended culture processes. The product is based on L-alanyl-L-glutamine (molecular formula: $C_8H_{15}N_3O_4$; molecular weight: 217.22), is prepared as a ready-to-use sterile solution, and is recommended to be stored frozen at $-20\text{ }^{\circ}\text{C}$.

Ordering Information

Product Name	Product Form	Packaging Specification	Catalog Number
200 mM DuoGlnMax – L-Glutamine Analog	Liquid	100 mL	A001-100ml-02
		500 mL	A001-500ml-02
		1 L	A001-1L-02

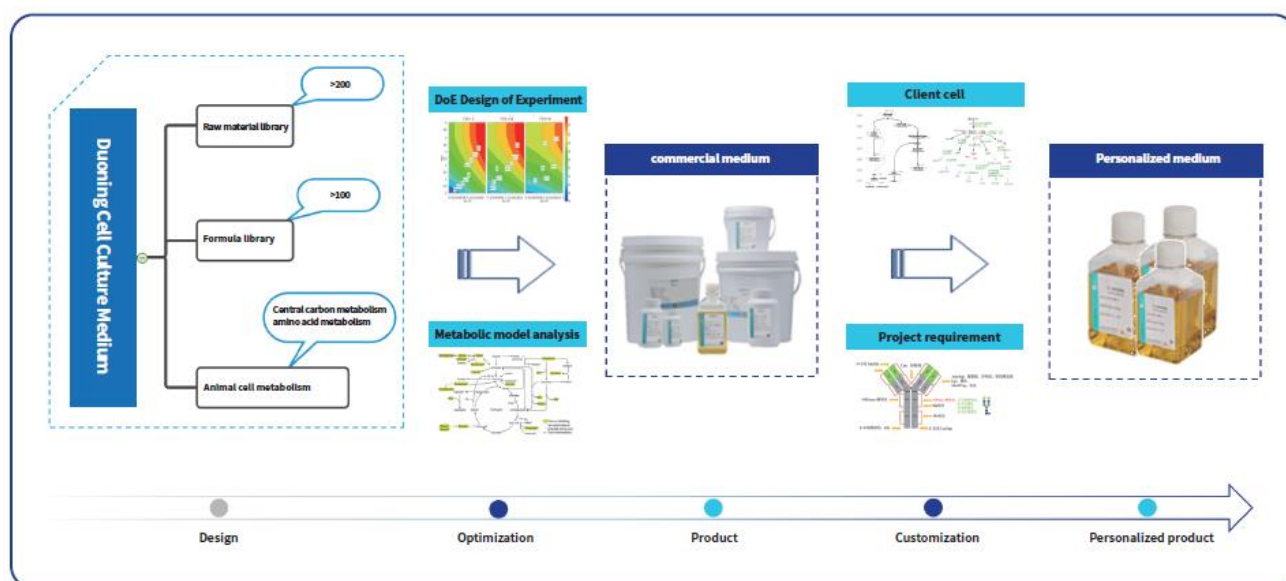
Cell Culture Medium Solutions

Medium Formulation Development Services

Duoning's cell culture medium is developed on an integrated platform that combines medium formulation and product development. To date, 276 medium raw materials have been tested and evaluated, and a proprietary library of more than 100 core prototype formulations with independently owned intellectual property has been established. In parallel, Duoning has built four mature bioprocess platforms in-house: Monoclonal antibody & recombinant protein production platform; Cell therapy & gene therapy culture process platform; In vitro diagnostics (IVD) & novel drug discovery culture platform; Human & veterinary vaccine culture platform.

Leveraging the requirements of these four bioprocess platforms, Duoning provides customized medium formulation development for customers' CHO cells, HEK293 cells, insect cells, vaccine production cell lines, hybridoma/myeloma cells, and immune cells. These solutions are designed to support high-density cell growth and high product expression within platform-based processes.

In addition, based on a critical quality attribute (CQA) modulation platform for recombinant proteins, Duoning enables tailored optimization of recombinant protein and antibody quality to meet critical biopharmaceutical project requirements. This includes control of purity (e.g., Agg (-), Frag (-)), charge variants (e.g., Acidic (-), Basic (-)), and glycosylation profiles (e.g., Man5 (-), Gal (+/-), Fuc (+/-), Sial (+/-)).



Non-GMP Customized Medium Preparation Services

To meet customers' specific cell culture medium requirements, Duoning offers Non-GMP customized medium preparation services. These services include small-scale liquid medium preparation (from 100 mL to 100 L) and small-scale powdered medium preparation, supporting customers in the independent development and design of medium formulations.

In addition, Duoning can optimize formulations based on special customer requirements and target culture objectives, assisting in the development of suitable medium formulations and manufacturing processes (such as changes in product format and improvements in solubility). After customers complete optimization and screening of their medium formulations, they may independently choose contract medium manufacturing services and medium stability validation services.

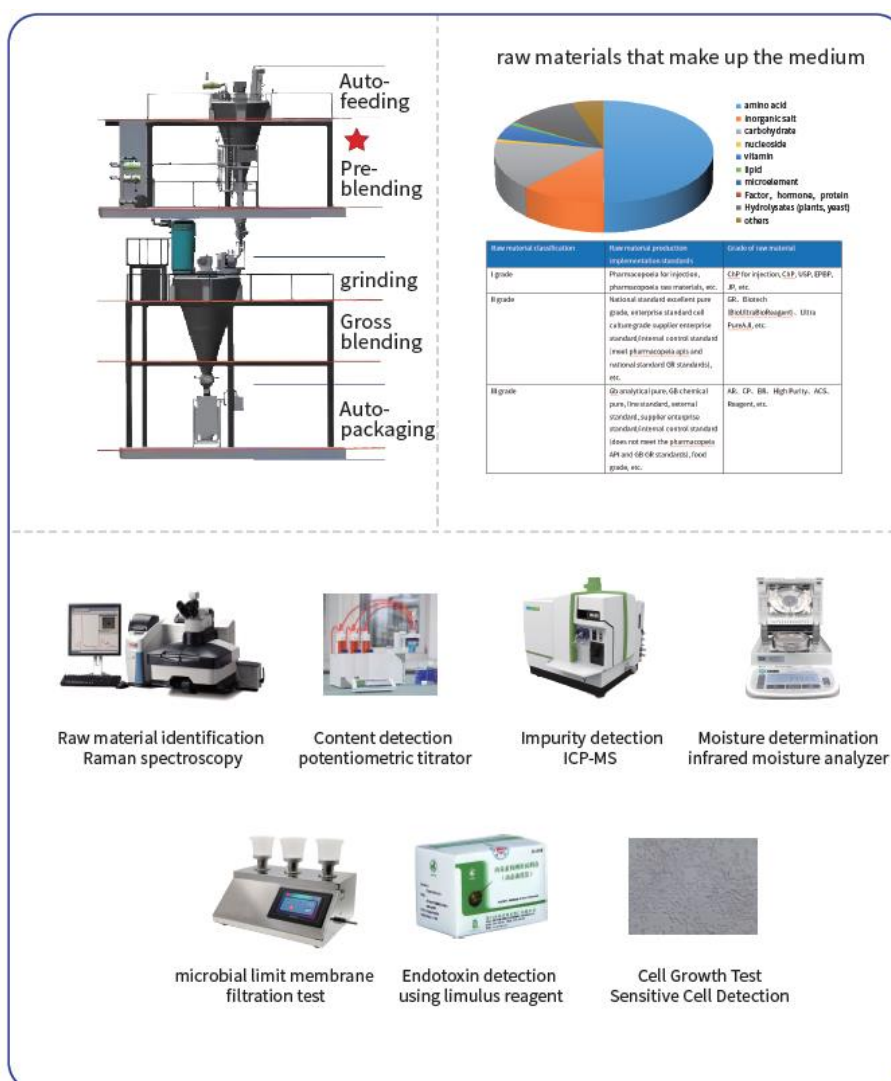
Cell Culture Medium Solutions

Contract Manufacturing Services for Cell Culture Medium

Duoning's Wuxi facility provides comprehensive cell culture medium services, including the manufacturing and contract manufacturing of powdered medium, as well as the filling and contract filling of liquid medium. The site is designed with an annual production capacity of 1,800 tons of powdered medium and 2 million liters of liquid medium. For powdered medium processing, the facility utilizes pin milling and mixing equipment from Hosokawa Micron (Germany).

The Wuxi facility operates in full compliance with GMP manufacturing requirements and an ISO 9001 quality management system certified by authoritative bodies. It implements end-to-end product quality lifecycle management with complete traceability. We adhere to the medium development philosophy of "Process + Formulation + Raw Materials + Stability = Product." Medium stability is fundamentally dependent on rigorous raw material quality control. All raw materials used in medium formulations are sourced from qualified suppliers strictly selected in accordance with the Pharmacopoeia standards. To ensure supply chain robustness, at least three qualified suppliers are approved for each critical raw material, supported by stringent evaluation, validation, and change management systems.

From raw materials and formulations to processes and final products, a comprehensive product quality lifecycle management framework is implemented to ensure consistent medium quality, reliable manufacturing, and secure supply.



Cell Culture Medium Solutions

Medium Testing and Analysis Services

In 2021, Duoning entered into a strategic partnership with CTI (Centre Testing International Group Co., Ltd), a pioneer and leading third-party testing and certification service provider in China, to establish the Joint Laboratory for Bioprocess Consumables Testing and Validation. Together, the two parties developed a comprehensive medium testing and analytical service platform.

This platform enables quantitative analysis of 30 common inorganic salts and trace elements in cell culture medium, with extended capabilities covering ICH Q3D Class 1, 2A, 2B, and Class 3 elemental impurities. In addition, it supports quantitative detection of major organic components in medium—such as amino acids, vitamins, organic acids, and nucleosides—with the analytical panel expandable to up to 200 components, depending on sample and testing requirements.

The platform is widely applicable to raw material testing, medium manufacturing process validation, quality control and release testing of finished medium, as well as nutrient consumption and metabolic analysis during cell culture processes.



Detection equipment	Detection number	Category	Symbol of element	LOQ
ICP-OES	6	Salt	Na, K, Ca, Mg, Si, P	0.5 ppm
ICP-MS	24	TE	Ge, Sr, Rb, Zr, Fe, Se, Ba, Li, Cu, Sn, Zn, Mo, Cr, V, Ag, As, Ni, Co, Cd, Pb, B, Al, Mn, Ti	0.4 ppb (Fe:4 ppb)

Medium raw material testing

Medium production process validation

Medium finished product quality control release

Detection equipment	Detection number	Category	Symbol of element	LOQ
LC-MS/MS	23	AA	Ala; Arg; Asp; Cy2; Glu; Gly; His; Leu; Ile; Lys; Met; Phe; Pro; Ser; Thr; Trp; Tyr; Val; Asn; GSH; Taurine; Hydroxyproline; Orn	0.05 nM
	14	Vit	VB1; VB2; VB3; VB5; VB6; VB7; VB8; VB9; VB12; VC; PAPB; Choline Chloride; Pyridoxal; Lipoic Acid	0.05 nM
	23	Other	Pyr; Fum; Cit; Mal; Lac; Suc; AKG; OAA; H; T; A; G; U; C; 2'-Deoxyuridine; Linoleic Acid; Linolenic acid; Stearic acid; VE; BPG; Spermine; Putrescine; Ethanolamine	ppb grade

Cell culture nutrient consumption analysis and metabolic analysis

Cell Culture Medium Solutions

Medium Stability Validation Services

Duoning's medium stability validation services cover comprehensive evaluations of both liquid and powdered medium, including long-term stability, accelerated stability, stress/extreme condition stability, and transportation stability studies. All studies are conducted in accordance with the Chinese Pharmacopoeia (2020 Edition), PDA guidelines, and ICH Q1A (R2) regulatory guidance.

1 Stability Study Requirements & Reference Guide



Chinese Pharmacopoeia
(2020 edition) 9001
Guiding Principles for
Stability testing of API and
final drug products



American Injectable
Association (PDA) TR53
"Stability Studies of New
Drugs in Support of
Distribution" guidelines



2 Study on stability of medium products

- **Long term stability test**
In order to confirm appropriate storage conditions and provide a basis for formulating product expiry date or retest period
- **Accelerated Stability Test**
When short-term storage conditions during transportation are not consistent with those specified on the label, product quality may be affected.
- **Influencing factors test**
Investigate the inherent stability of the product, understand the factors affecting its stability and possible degradation pathways and degradation products.
- **Transportation stability test**
Examine the influence of the quality of culture medium product (physical and chemical, potency, etc.) when away from the cold chain during simulated transportation and the circulation environment.

Stability study provides data support and improvement suggestions for the production process development, packaging, storage conditions, transportation and distribution of culture medium products.

Duoning Biotechnology Group

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