



CHOgro® High Yield Expression System

The most advanced system for transient transfection and protein production in suspension CHO cells



To inquire about bulk pricing, please call 888-530-0801
International inquiries please call +1-608-441-2852
[Return Policy](#)

Choose a Product:

CHOgro® High Yield Expression System

(Kit includes: CHOgro® Expression Medium (2 x 1 L), CHOgro® Complex Formation Solution (100 ml), L-Glutamine (100 ml), Poloxamer 188 Solution (100 ml), *TransIT-PRO*® Transfection Reagent (1 ml), CHOgro® Titer Enhancer (20 ml))

CHOgro® Transfection and Titer Enhancer Kit

(Kit includes: *TransIT-PRO*® Transfection Reagent (1 ml), CHOgro® Titer Enhancer (20 ml))

CHOgro® Expression Medium

CHOgro® Complex Formation Solution

Poloxamer 188 Solution, 10%

L-Glutamine Solution, 200 mM

TransIT-PRO® Transfection Reagent

Select a Size:

1 Kit

MIR 6270

Catalog number selected: **MIR 6270**

\$837.00

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The **NEW CHOgro® High Yield Expression System** is the most advanced and cost-effective transient transfection system for high-yield protein production in suspension CHO cells. Our second-generation system features the CHOgro® Titer Enhancer, which provides rapid, industry-leading protein yields.

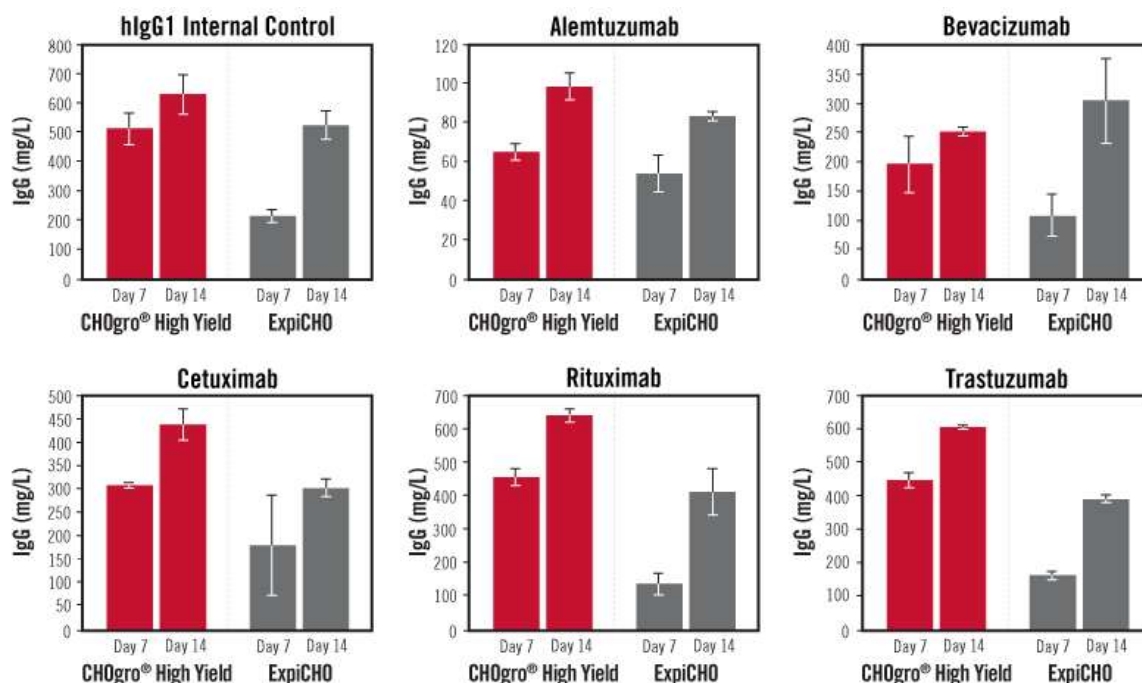
- **High Yield** - Reach higher antibody titers in seven days - faster than the ExpiCHO Expression System
- **Simple Workflow** - Same-day transfection, enhancer addition and temperature shift
- **Worry Free** - No commercial license required; animal origin-free

CHOgro® System-to-System Comparison

Click to expand

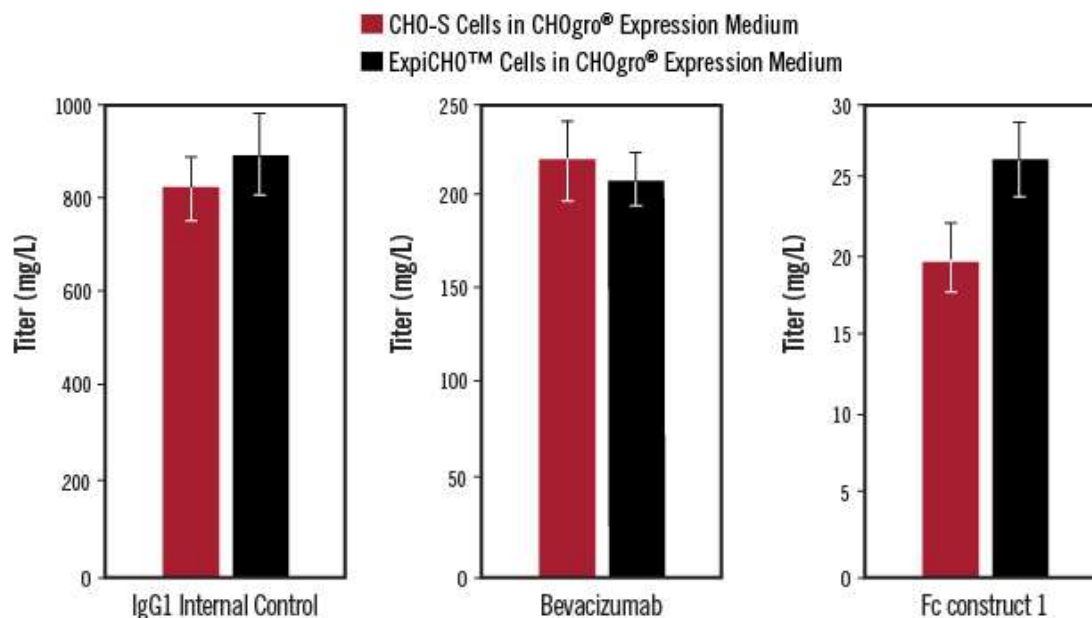
Figures and Data





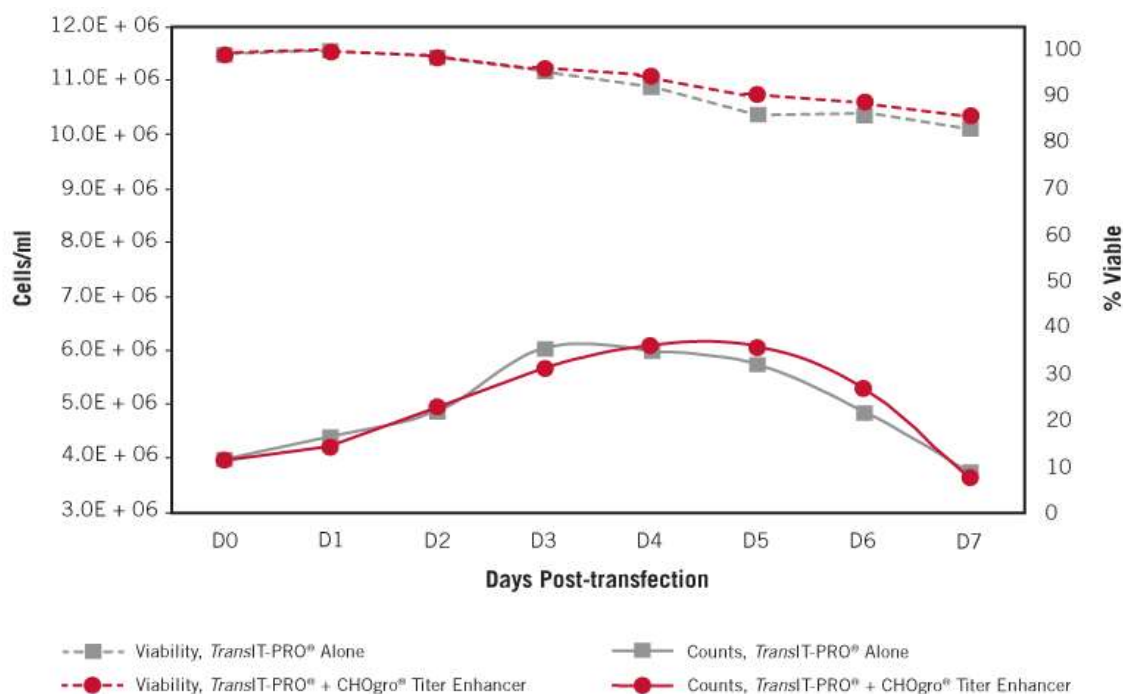
The CHOgro® High Yield Expression System Outperforms the ExpiCHO Expression System Using Multiple Antibody Constructs.

Six different IgG1 antibody constructs, including five therapeutically relevant constructs synthesized in the same vector backbone were produced by transient transfection using either the *TransIT-PRO*® Transfection Reagent (Mirus Bio) at a 1:1 reagent-to-DNA ratio (vol:wt) and 1 µg plasmid DNA per milliliter of culture in FreeStyle™ CHO-S cells (ThermoFisher Scientific) cultured in CHOgro® Expression Medium (Mirus Bio) at a cell density of 4×10^6 cells/ml, or the Expifectamine CHO Transfection Kit (ThermoFisher Scientific) at a 3.2:1 reagent-to-DNA (vol:wt) and 1 µg plasmid DNA per milliliter of culture in ExpiCHO-S cells (ThermoFisher Scientific) cultured in ExpiCHO Expression Medium (ThermoFisher Scientific) at a cell density of 6×10^6 cells/ml. All cells were split into 125 ml Optimum Growth flask (25 ml/flask, Thomson Instrument Company) at the time of transfection. The CHOgro® Titer Enhancer was added immediately post-addition of transfection complexes and the culture was incubated at 32°C shaking until harvest for the CHOgro® High Yield Expression System. The Max titer protocol was followed for the ExpiCHO Expression System (ThermoFisher Scientific): Expifectamine CHO Enhancer and Feed (ThermoFisher Scientific) were added at 24 hours post-transfection and cultures were shifted to 32°C. At Day 5 a second volume of the ExpiCHO Feed (ThermoFisher Scientific) was added to the flask. Day 7 and 14 supernatants were analyzed using a standard sandwich human IgG ELISA. Error bars represent the standard deviation of triplicate technical replicates.



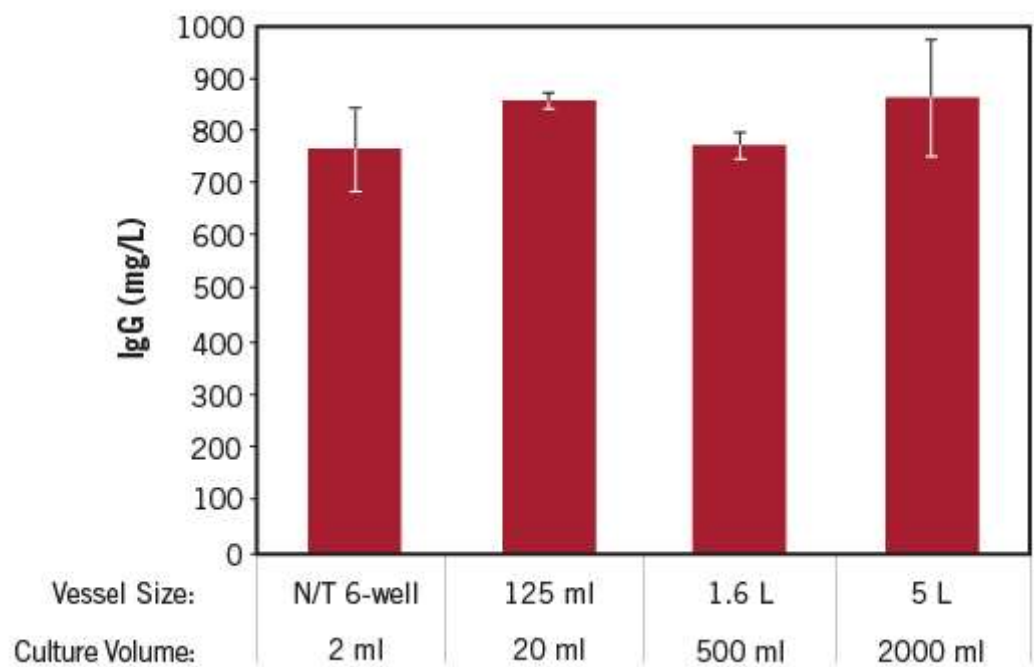
FreeStyle™ CHO-S and ExpiCHO Cells Grown in CHOgro® Expression Medium Yield Similar Titters.

FreeStyle™ CHO-S cells (ThermoFisher Scientific) or ExpiCHO-S cells (ThermoFisher Scientific) were cultured in CHOgro® Expression Medium (Mirus Bio). Both cell lines were transiently transfected with plasmid DNA encoding a human IgG1 internal control antibody, Bevacizumab or Fc-fusion construct using the *TransIT-PRO*® Transfection Reagent (Mirus Bio) at a 1:1 reagent-to-DNA ratio (vol:wt) and 1 µg plasmid DNA per milliliter of culture in a non-treated 6-well plate. All cultures were shifted to 32°C, shaking, immediately post-addition of the transfection complexes and the CHOgro® Titer Enhancer to the culture. Day 14 supernatants were analyzed using a standard sandwich human IgG ELISA. Error bars represent the standard deviation of triplicate technical replicates.



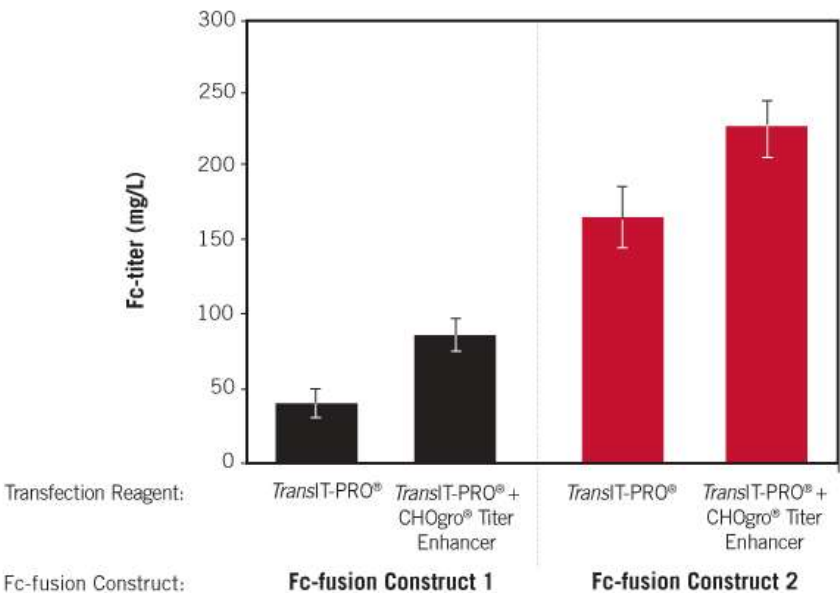
CHOgro[®] Titer Enhancer Does Not Adversely Affect Cell Growth and Viability Post-transfection.

Triplicate flasks of FreeStyle[™] CHO-S cells adapted to CHOgro[®] Expression Medium were transiently transfected with the *TransIT-PRO*[®] Transfection Reagent (Mirus Bio) at a 1:1 reagent-to-DNA ratio (vol:wt) and 1 µg plasmid DNA per milliliter of culture at 4 x 10⁶ cells/ml in 125 ml Optimum Growth flasks (25 ml/flask, Thomson Instrument Company). As indicated, CHOgro[®] Titer Enhancer was added and all of the cultures were shifted to 32°C immediately post-addition of the transfection complexes to the culture. Cell counts (solid line) and viability (propidium iodide staining, dotted line) were measured daily post-transfection using a Guava[®] easyCyte[™] 5HT flow cytometer (EMD Millipore).



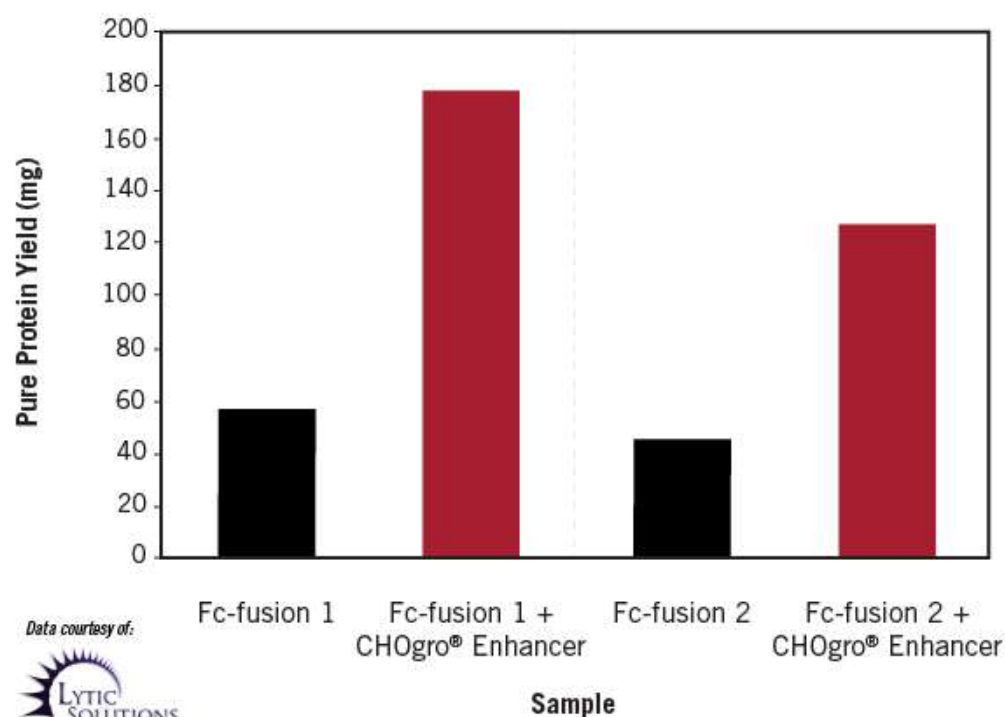
CHOgro® High Yield Expression System Enables 1000-fold Scalability. Human IgG1 was produced by transient transfection with the *TransIT-PRO*® Transfection Reagent (Mirus Bio) and 1 µg plasmid DNA per milliliter of culture at a 1:1 reagent:DNA ratio. Freestyle CHO cells (Thermo Fisher Scientific) were transfected at a density of 4 x 10⁶ cells/ml in CHOgro® Expression Medium (Mirus Bio) at the following volumes/culture vessels: 2 ml/non-tissue culture treated 6-well dish, 20 ml/125 ml Thomson flask, 500 ml/1.6 L Thomson flask, 2000 ml/5 L Thomson flask. All cultures were shifted to 32°C, shaking, immediately post-addition of the transfection complexes and the CHOgro® Titer Enhancer to the culture. Cultures were maintained at the appropriate shake speed for the remainder of the experiment. Day 14 supernatants were analyzed using a standard sandwich human IgG ELISA. Error bars represent the standard deviation of triplicate technical replicates.





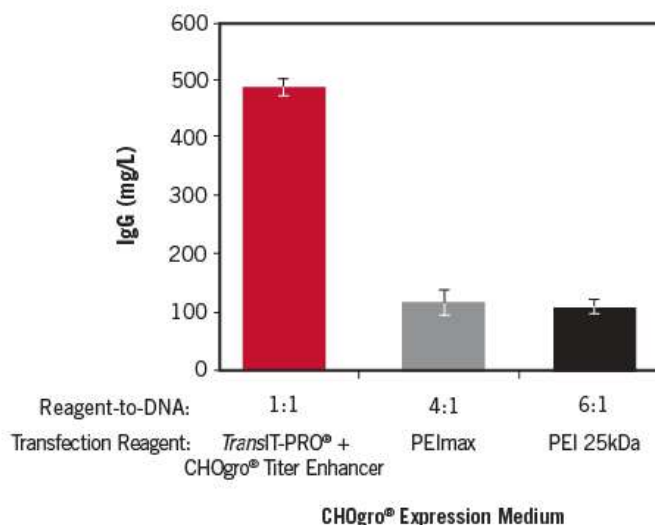
Titer Enhancement is Observed Using Multiple Fc-fusion Constructs. Two different Fc-fusion constructs were transiently transfected using the *TransIT-PRO*[®] Transfection Reagent (Mirus Bio) at a 1:1 reagent-to-DNA ratio (vol:wt) and 1 µg plasmid DNA per milliliter of culture. FreeStyle[™] CHO-S (ThermoFisher Scientific) cells were cultured in CHOgro[®] Expression Medium (Mirus Bio) and plated at 4 x 10⁶ cells/ml at the time of transfection in non-treated 6-well plates (2 ml/well). As indicated, CHOgro[®] Titer Enhancer was added and the culture was shifted to 32°C immediately post-addition of the transfection complexes to the culture. Day 10 supernatants were analyzed using a standard sandwich human IgG ELISA. Error bars represent the standard deviation of triplicate technical replicates.





Higher Titers Achieved by Third Party with CHOgro® High Yield Expression System

Plus CHOgro® Titer Enhancer. Fc-fusion proteins were produced by transient transfection of CHO-S cells in complete CHOgro® Media using *TransIT-PRO*® Transfection Reagent (1:1 reagent:DNA ratio, volume: weight). Cells were either 2×10^6 cells/ml (no CHOgro® Titer Enhancer) or 4×10^6 (with CHOgro® Titer Enhancer) for transfection. Cultures were shifted to 32°C either 24 hours (no CHOgro® Titer Enhancer) or immediately (with CHOgro® Titer Enhancer) following transfection. Yields represent final affinity-purified protein from 0.5 L culture, harvested at day 11 post-transfection.



TransIT-PRO® + CHOgro® Titer Enhancer Outperforms PEImax and linear 25 kDa PEI Transfection Reagents. An IgG1 antibody construct was produced by transient transfection using either the *TransIT-PRO*® Transfection Reagent (Mirus Bio) at a 1:1 reagent-to-DNA ratio (vol:wt), PEImax (4:1, Polysciences), or linear 25 kDa PEI (6:1, Polysciences) and 1 µg plasmid DNA per milliliter of culture in FreeStyle™ CHO-S cells (ThermoFisher Scientific) cultured in CHOgro® Expression Medium (Mirus Bio) at a cell density of 4×10^6 cells/ml. CHOgro® Titer Enhancer (Mirus Bio) was added immediately post-addition of transfection complexes and cultures were incubated at 32°C with shaking until harvest for all reagents. Day 14 supernatants were analyzed using a standard sandwich human IgG ELISA. Error bars represent the standard deviation of triplicate technical replicates.

Resources

Specifications

Storage Conditions:

CHOgro® High Yield Expression System: Multiple storage conditions - see individual bottles for specific recommendations

CHOgro® Transfection and Titer Enhancer Kit: Multiple storage conditions - see individual bottles for specific recommendations

CHOgro® Expression Medium: Store at 4°C

TransIT-PRO® Transfection Reagent: Store at -20°C

CHOgro® Complex Formation Solution: Store at 4°C

Poloxamer 188 Solution, 10%: Store at room temperature

Glutamine Solution, 200 mM: Store at -20°C

Product Guarantee:

CHOgro® High Yield Expression System: As labeled on the product components

CHOgro® Transfection and Titer Enhancer Kit: As labeled on the product components

CHOgro® Expression Medium: As labeled on the product

TransIT-PRO® Transfection Reagent: 1 year

CHOgro® Complex Formation Solution: As labeled on the product

Poloxamer 188 Solution, 10%: As labeled on the product

L-Glutamine Solution, 200 mM: As labeled on the product

Usage Statement:

All Configurations: For Research Use Only.

Animal Origin Statement:

All Configurations: This product is animal origin free.

Technical Product Literature**Full Protocols**

[CHOgro® High Yield Expression System Full Protocol \(PDF\)](#)

[TransIT-PRO® Full Transfection Protocol \(PDF\)](#)

Additional Protocols

[TransIT-PRO® for Expi293F™ Cells \(PDF\)](#)

Quick Reference Protocols

[CHOgro® Complex Formation Solution Quick Ref Protocol \(PDF\)](#)

[CHOgro® Medium Dry Powder Quick Ref Protocol \(PDF\)](#)

[CHOgro® Medium Quick Ref Protocol \(PDF\)](#)

[CHOgro® Transfection and Titer Enhancer Kit QRP \(PDF\)](#)

[TransIT-PRO® Quick Ref Protocol \(PDF\)](#)

Product Data Sheets

[L-Glutamine Solution Product Data Sheet \(PDF\)](#)

[Poloxamer 188 Product Data Sheet \(PDF\)](#)

SDS

[CHOgro® Complex Formation Solution SDS \(PDF\)](#)

[CHOgro® High Yield Expression System SDS \(PDF\)](#)

[CHOgro® Medium Dry Powder SDS \(PDF\)](#)

[CHOgro® Medium SDS \(PDF\)](#)

[CHOgro® Transfection and Titer Enhancer Kit SDS \(PDF\)](#)

[L-Glutamine Solution SDS \(PDF\)](#)

[Poloxamer 188 Solution SDS \(PDF\)](#)[TransIT-PRO® SDS \(PDF\)](#)

Additional Resources

Frequently Asked Questions

[CHOgro® High Yield Expression System FAQ](#)[TransIT-PRO Transfection Reagent FAQ](#)[CHOgro® Expression Medium FAQ](#)[VIEW RELATED CITATIONS](#)[REAGENT AGENT®](#)[TIPS FROM THE BENCH](#)[EMAIL TECHNICAL SUPPORT](#)

Testimonials

Excellent technical support, they are very knowledgeable.

He Song Sun

University of Toronto Scarborough - Cell and Molecular Biology

Related Products

CHOgro® Expression Medium

Human IgG1 Expression Control

TransIT-PRO® Transfection Reagent



Related Applications

Large Scale Protein Production

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