

# Media by Design Services

Cell culture

## Freedom cell line development kits

Licensing simplicity. Workflow scalability.  
Superior technical support.

### Discover cell line development freedom and advance your process

Cell line development involves multiple complex processes requiring consistency and reproducible results. That's why Gibco™ Freedom™ cell line development kits are designed to provide you with integrated, stable cell line development solutions to simplify your development workflow and accelerate your journey to commercial manufacturing.

#### Freedom kits contain the components for beginning-to-end cloning and expression

##### Benefits include:

- Regulatory-friendly, cGMP-banked cell lines
- Fast and efficient workflow for the creation of stable clones
- Proven for IgG production

#### Collaboration options and flexible licensing

Choose to work internally using our Freedom kit solutions; work with dedicated technical assistance from the Gibco™ Media by Design™ Services team; or work in collaboration with a contracted vendor of your choice. Freedom cell line development kits also provide you with simplified, royalty-free licensing options. (See Table 1 on page 3.)



The new Gibco™ Freedom™ ExpI CHO-S Kit joins the other kits, including the Gibco™ Freedom™ CHO-S™ and Gibco™ Freedom™ DG44 kits.

ProBioGen  
Intelligent Biopharmaceutical Solutions

Gibco Freedom ExpI CHO-S and CHO-S kits were developed in collaboration with ProBioGen AG.

## Consultative, experienced support

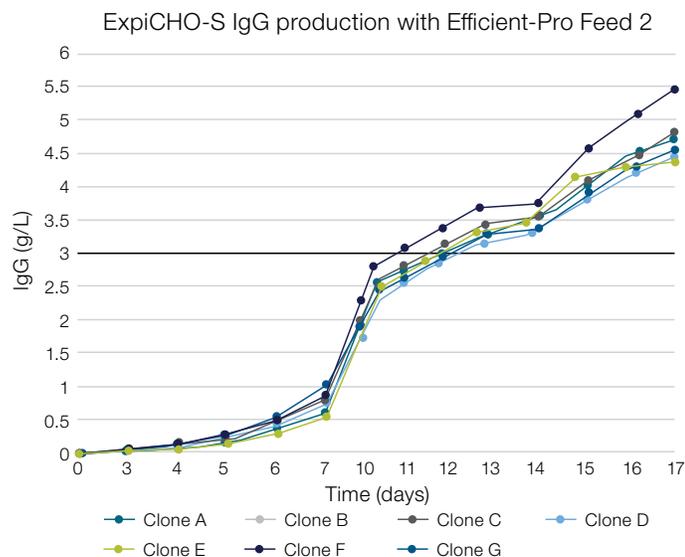
Freedom kits include support from the Gibco™ team of field application scientists (FAS) who are experienced in biopharmaceutical processes and in the use and applications of Gibco™ products and services. The FAS team has broad experience in cell culture, process characterization, scale-up, analytics, product development, process optimization, and tech transfer—a skill set that can help shorten your time to market and save you money. We provide the guidance and step-by-step support you need for successful cell line development.

## Consistently high performance and stability

The Freedom ExpiCHO-S Kit delivered high IgG titers of 3–5 g/L in fed-batch cultures and maintained consistent high cell densities—all in a short development time of fewer than 6 months from transfection to stable clone.

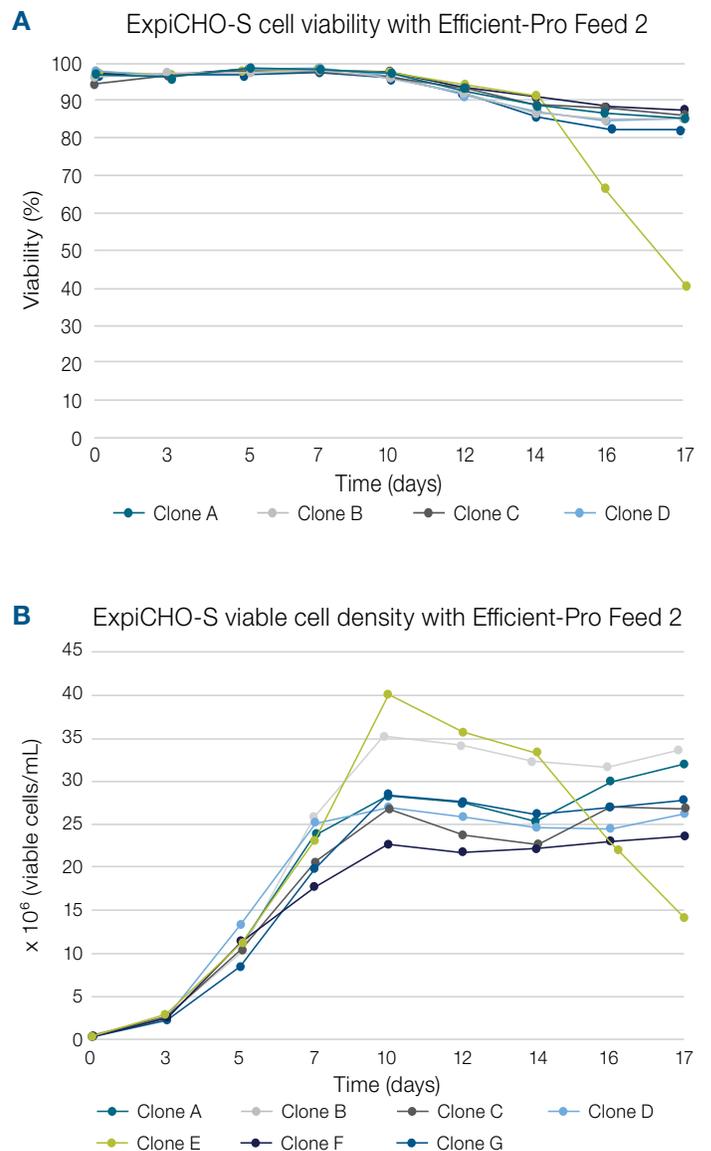
When used with the new Gibco™ Efficient-Pro Feed 2 supplement (sold separately), the Freedom ExpiCHO-S Kit offers high-performing titers and consistent protein quality demonstrated across multiple clones.

### Delivers high titers



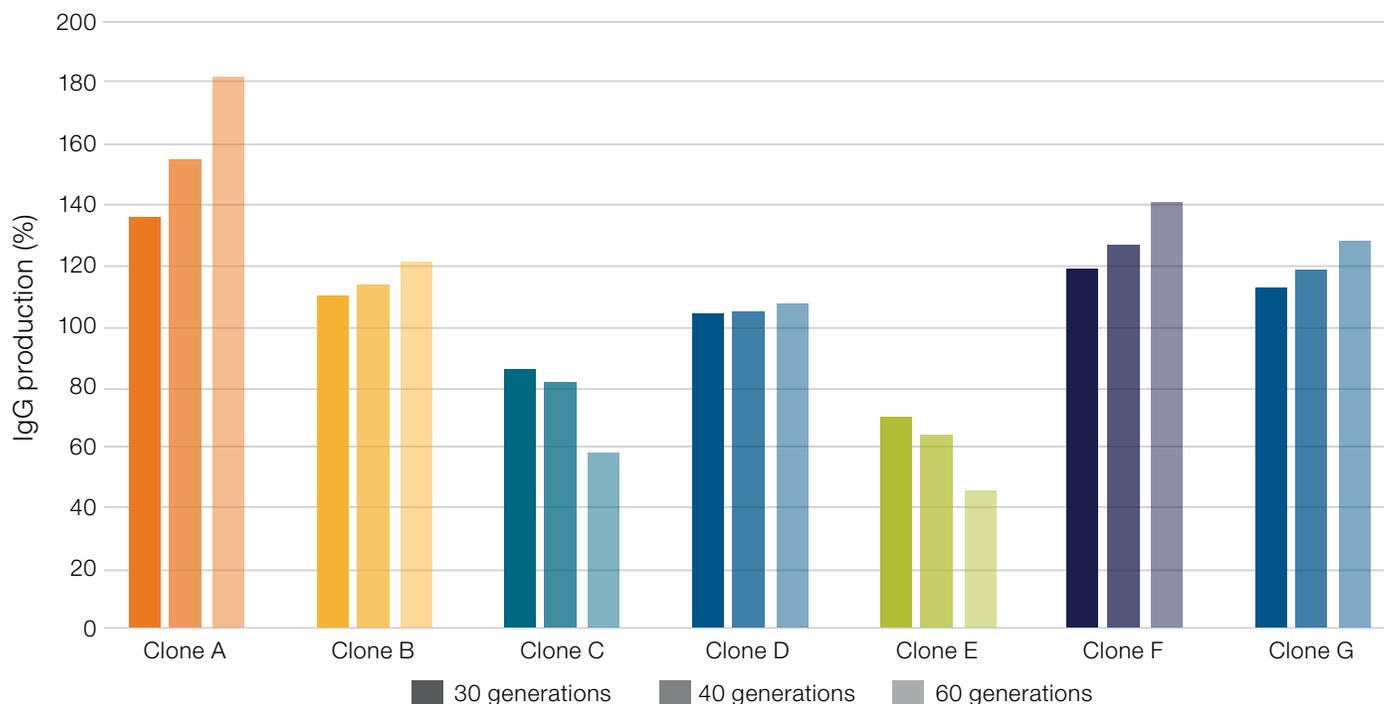
**Figure 1. Protein production per day with the Freedom ExpiCHO-S Kit.** Increasing productivity of more than 3 g/L beyond typical 14 day fed-batch cultures demonstrates robustness of the cell line.

## Viabilities and viable cell density



**Figure 2. Cell viability (A) and viable cell density (B) with the Freedom ExpiCHO-S Kit.** High cell densities maintained viability (above 85%) throughout the cell culture experiment.

## ExpiCHO-S IgG production over generations



**Figure 3. Clone stability with the Freedom ExpiCHO-S Kit.** Clones were stable through 40 generations, with 5 out of the 7 demonstrating stability over 60 generations.

### Simplified commercial licensing options

The Freedom ExpiCHO-S Kit provides the licensing flexibility you need throughout development of the process. With purchase of the kit, you are granted the research-use rights that you or your CRO need to develop a stable cell line. When ready to move into the clinic, a simple licensing structure is available without the burden of royalties or multiple milestone payments. For more information regarding licensing, email [outlicensing@thermofisher.com](mailto:outlicensing@thermofisher.com).

**Table 1. Flexible commercial-use licensing with Freedom kits**

Features	Answer
Freedom from royalties?	Yes
Freedom from annual maintenance fees?	Yes
Freedom to use multiple contract manufacturers?	Yes
Freedom to use host cell line for multiple projects?*	Yes
Freedom to modify the host cell line?	Yes
Freedom to modify the purchased vector?	Yes
Freedom to conduct process optimization?	Yes
Freedom to request support when desired?	Yes
Freedom to work with others within field of use?*	Yes

\* Some sale and distribution restrictions may apply.

## Product information

Feature	Freedom CHO-S Kit	Freedom DG44 Kit	Freedom ExpiCHO-S Kit
Cat. No.	<a href="#">A1369601</a>	<a href="#">A1373701</a>	<a href="#">A46847</a>
Parental cell line	cGMP CHO-S cells	cGMP CHO-DG44 cells	cGMP ExpiCHO-S cells
Medium	CD FortiCHO	CD DG44 and CD OptiCHO	ExpiCHO expression medium and ExpiCHO stable production medium
Growth rate	<24 hours	>30 hours	<24 hours
Vector	Freedom pCHO 1.0	pcDNA 3.3-TOPO and pOptiVEC-TOPO	Freedom pCHOm 3.1 and Freedom pCHOp 3.2
Primary application	mAb (IgG)	mAb and recombinant protein	mAb and recombinant protein
Amplification (with Methotrexate)	No	Yes	No
Timeline: transfection to stable clone	~24 weeks	~36 weeks	~24–36 weeks
Complete manual	Yes	Yes	Yes
Support	Yes	Yes	Yes
Commercial licensing	Yes	Yes	Yes

## Unique goals. Customized solutions. Success by design.

Cell line development services are part of the comprehensive Media by Design Services portfolio.

Let us help you meet your early-phase needs and advance your goals.

Find out more at [thermofisher.com/mediabydesign](https://thermofisher.com/mediabydesign)



**Cell line development**



**Catalog media evaluations**



**Media and feed panel evaluations**



**Media development solutions**



**Bioproduction analytics**



**Media manufacturing**

Your collaboration with Gibco Media by Design Services provides unmatched cell culture knowledge and capabilities to meet your unique bioproduction needs. Our dedicated teams and state-of-the-art facilities are equipped to support a wide range of biological platforms, including antibodies, viruses, recombinant proteins, and cell therapies.

### Contact us today for help to:

- Accelerate time to market
- Enhance productivity
- Improve product quality
- Decrease potential risk
- Reduce costs
- Improve reliability



### Multimedia resources

Podcast: Inside Bioprocessing: Optimizing stable clone development

Learn more at [thermofisher.com/freedom](https://thermofisher.com/freedom)

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