HyClone™ peak expression medium

HYCLONE™ MEDIA AND SUPPLEMENTS

HyClone™ peak expression medium is a medium is an animal-derived component-free (ADCF), chemically defined (CD), hydrolysate-free, and regulatory-friendly cell culture medium. It is available in liquid and powder formats in user-friendly packaging (Fig 1).

HyClone™ peak expression medium supports high transfection efficiency, consistent cell growth, high viable cell density, and excellent viral titers across multiple human embryonic kidney (HEK293) cell lines for expression of adeno-associated virus (AAV). HyClone™ peak expression medium supports seamless transition from growth to production phases and shows outstanding performance in small to large scale manufacturing processes.

A comparison of HyClone™ peak expression medium to HyCell™ TransFx-H medium show improved viability and higher peak viable cell density in three HEK293 cell lines (Fig 2).

Key features of HyClone™ peak expression medium

- Hydrolysate-free, ADCF and CD formulation
- Ready-to-use medium containing stable L-glutamine and poloxamer 188
- Supports high transfection efficiency
- Designed for high cell yield and robust virus production
- Allows for direct adaptation
- Designed for small- to large-scale transfection and production applications
- Compatible with polyethyleneimine (PEI) and other lipid-based transfection reagents on the market



Fig 1. HyClone™ peak expression medium is available in liquid or powder form in pack sizes suitable for small-volume cell culture as well as large-scale bioprocessing applications.

cytiva

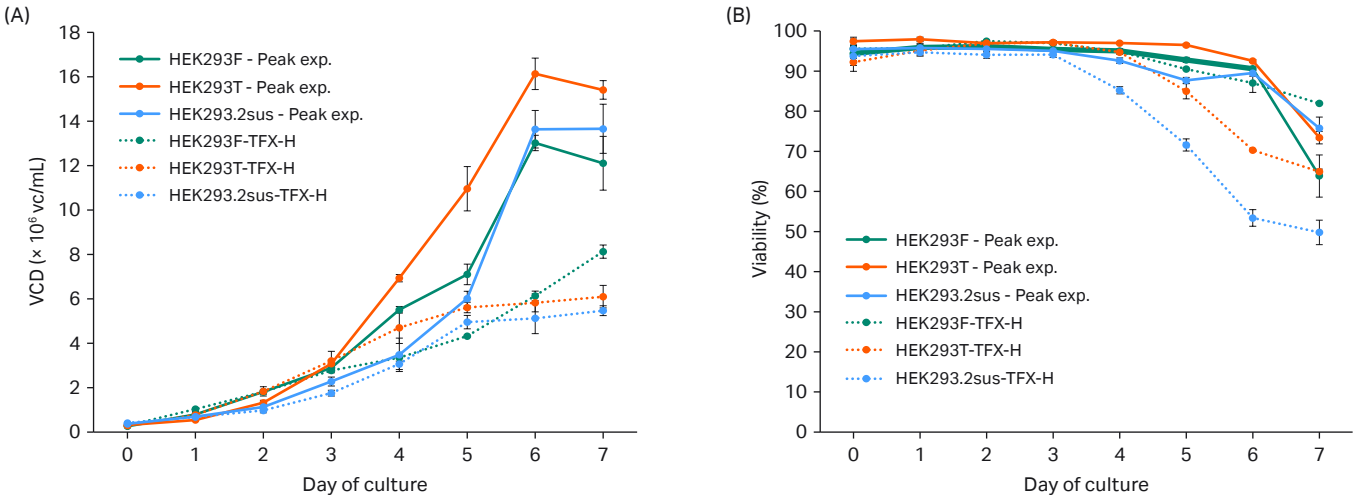


Fig 2. Comparison of HyClone™ peak expression medium with HyCell™ TransFx-H medium. (A) Viable cell densities (VCD) and (B) cell viability for three HEK293 cells lines cultured in HyClone™ peak expression medium (Peak exp.) or HyCell™ TransFx-H (TFX-H) medium.

HyClone™ peak expression medium supports high viral titers using multiple commercially available PEI and lipid-based transfection reagents (Fig 3). In addition, transfection efficiency studies using PEI MAX in three HEK293 cell lines showed transfection efficiencies of ≥ 80% in all three cell lines (Fig 4).

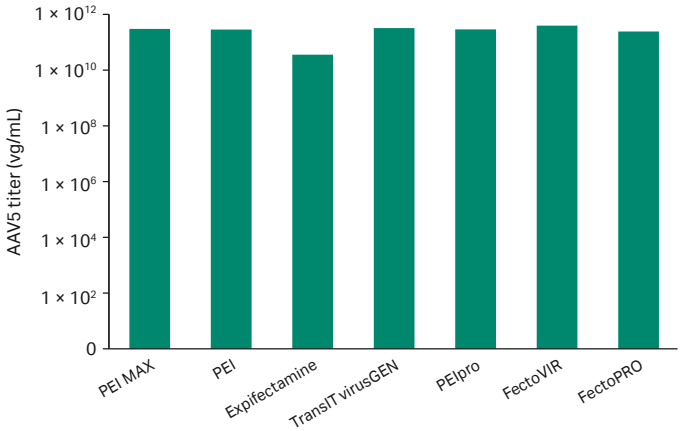


Fig 3. AAV5 titers produced using different PEI or lipid-based transfection reagents in HEK293F cells.

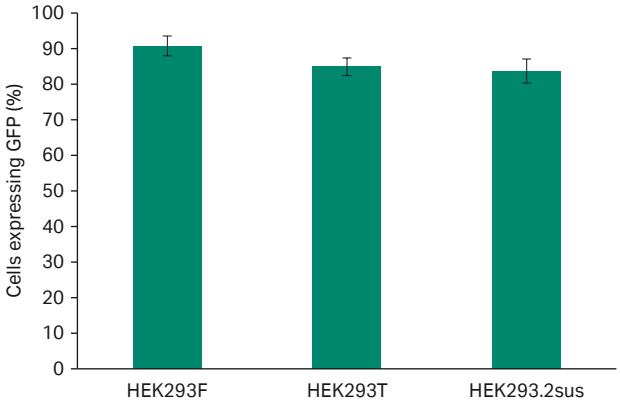


Fig 4. Percentage of cells expressing GFP after transfection with PEI and HyClone™ peak expression medium.

HyClone™ peak expression medium provides consistent virus expression across many types of HEK293 cell lines and AAV serotypes. Two examples are shown in Figure 5. In HEK293 cells growing in peak expression medium transfected to produce AAV5, we observed titers greater than 1 × 10^{11} vg/mL. A separate experiment using HEK293 cells to produce AAV8 resulted in yields approaching 1 ×10^{11} vg/mL, without additional feeds, boosters, or enhancers.

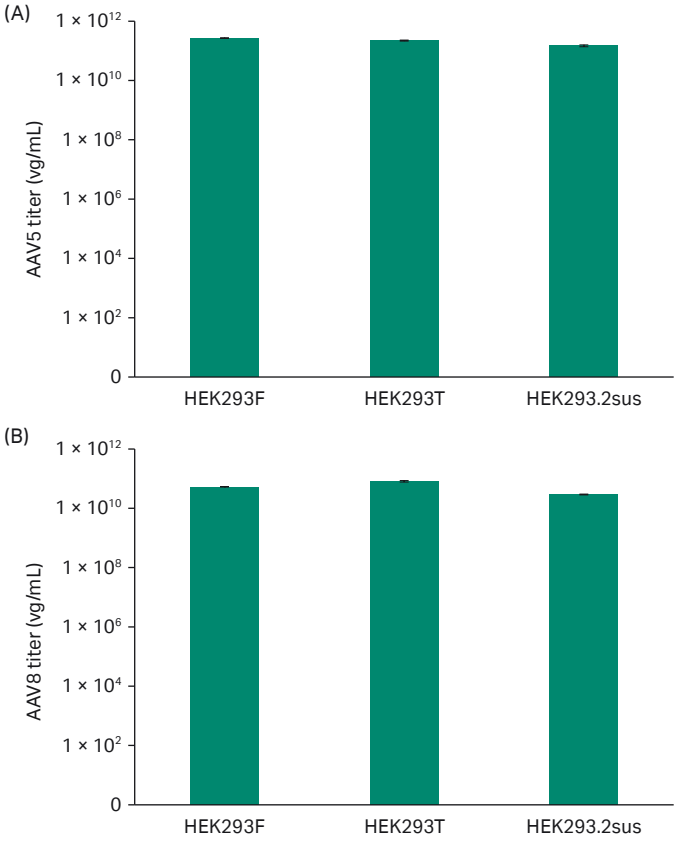


Fig 5. Viral titers in three HEK293 cell lines using HyClone™ peak expression medium for (A) AAV5 production or (B) AAV8 production.

As Figure 6 shows, HyClone™ peak expression medium supports applications from small-scale to large-scale bioreactor production, with consistent cell growth and virus titers exceeding 1×10^{11} vg/mL.

In addition to component traceability and regulatory-friendly characteristics, ISO 13485-certified manufacturing is maintained to provide a quality product for cell culture and bioprocessing applications.

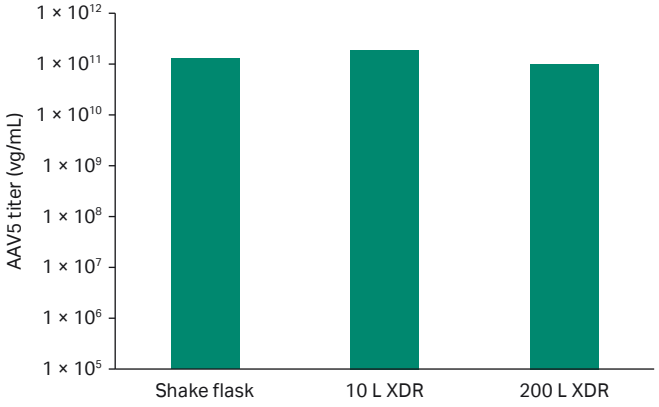


Fig 6. Expression of AAV5 viral titers from shake flask to 200 L bioreactor (XDR).

Specifications

HyClone™ peak expression liquid medium

- ADCF, CD
- With sodium bicarbonate, poloxamer 188 and stable L-glutamine

HyClone™ peak expression dry powder medium

- ADCF, CD
- With poloxamer 188 and stable L-glutamine
- Without sodium bicarbonate

Product handling

Store medium at 2°C to 8°C, away from light. In addition, powder medium should be stored protected from moisture in a tightly sealed container. Liquid media product is stable up to 12 months, and powdered medium is stable up to 24 months at 2°C to 8°C.

Custom production

Formulations and delivery systems can be customized to your specific process requirements or optimized to maximize process yields.

Rapid response production (RRP)

Our RRP program manufactures up to 200 L of your custom prototype formulation within seven working days of your request. Use our RRP service to expedite the development and testing of custom buffers and process liquids for your biopharmaceutical manufacturing process.

Ordering information

Product	Size	Packaging	Product code
HyClone™ peak expression medium, dry powder	5 L	HDPE bottle	SH31192.01
	10 L	HDPE bottle	SH31192.02
	50 L	HDPE bottle	SH31192.03
	100 L	Poly bag/pail	SH31192.04
	500 L	Poly bag/pail	SH31192.05
	1000 L	Poly bag/pail	SH31192.06
HyClone™ peak expression medium, liquid	1000 mL	Bottle	SH31193.02
	1 L	Bag	SH31193.08
	5 L	Bag	SH31193.09
	100 L	Bag	SH31193.10
	200 L	Bag	SH31193.11
	10 L	Bag	SH31193.12
	20 L	Bag	SH31193.13
	50 L	Bag	SH31193.14

cytiva.com/hyclone

For local office contact information, visit cytiva.com/contact

Cytiva and the Drop logo are trademarks of Life Sciences IP Holdings Corp. or an affiliate doing business as Cytiva. HyClone, and HyCell are trademarks of Global Life Sciences Solutions USA LLC or an affiliate doing business as Cytiva.

PEI MAX is a trademark of Polysciences, Inc. Any other third-party trademarks are the property of their respective owners.

© 2023-2025 Cytiva

CY32167-08Sep25-DF GL-23-00081