

## A Proven Combination for AAV Production

### Transfection Reagent & Chemically Defined HEK Media Bundle

#### Overview

Viral vector-based therapeutics address a broader spectrum of indications, moving away from ultrarare diseases. Therefore, drug developers and manufacturers increasingly seek robust, scalable, and standardized platforms.

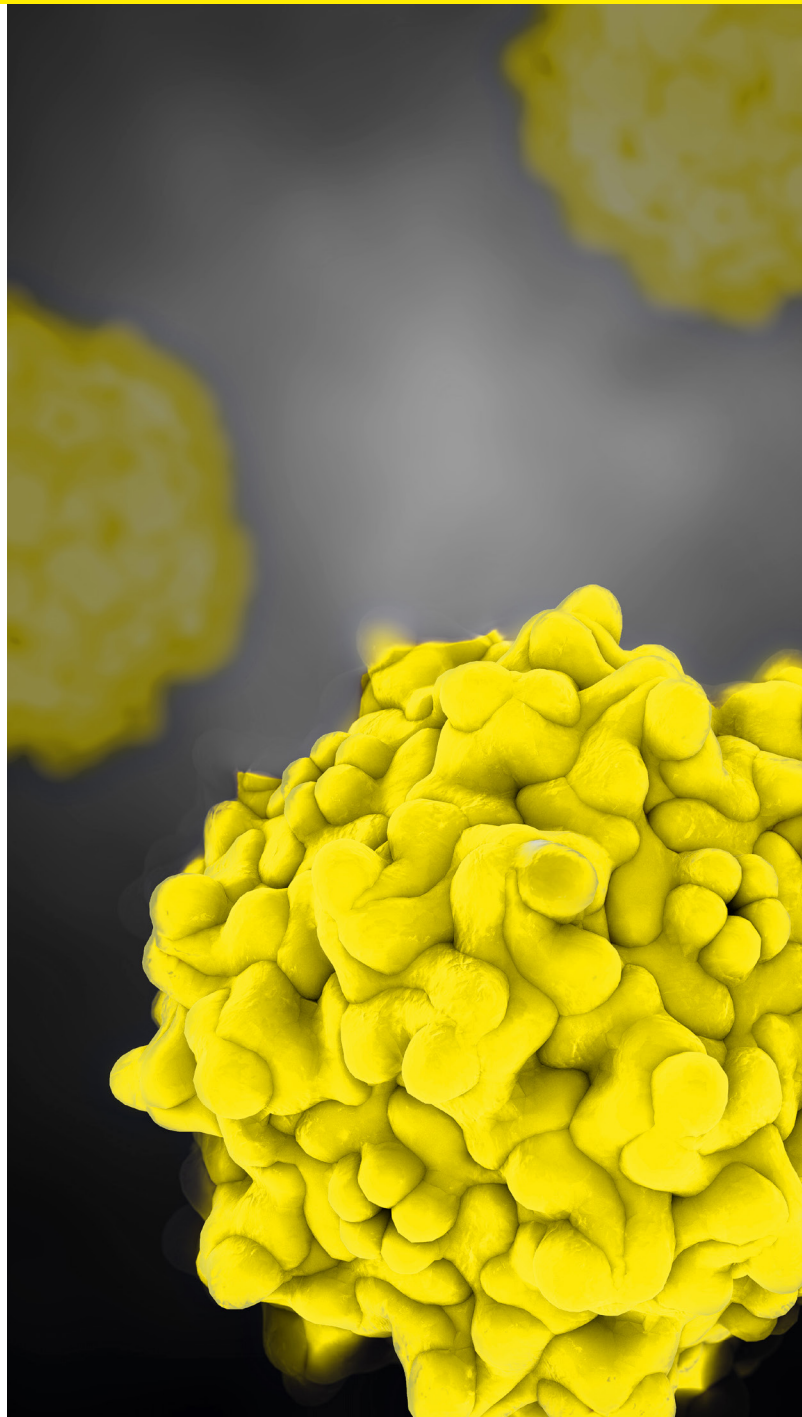
Combining key and high performing raw materials such as FectoVIR®-AAV, a novel generation of synthetic transfection reagents, and chemically defined HEK media address commercial scale challenges including reproducibility and cost optimization.

### Key Viral Vectors Production Challenges

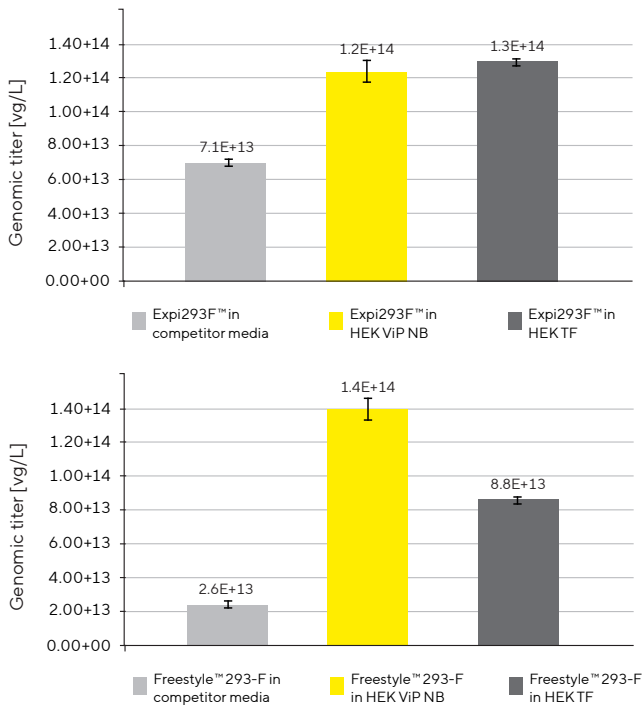
- High manufacturing process variability
- Media and transfection reagent combination must be optimized
- Selecting the right formulations is time and cost intensive

### Standard, Matching Formulations From Transient Transfection up to Infection

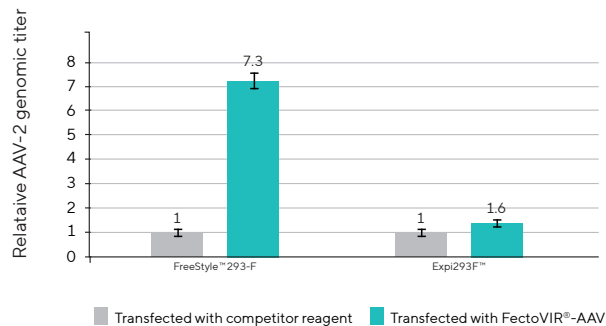
- HEKTF | Most established medium
- HEKViP NB | Leanest transfection medium
- HEKViP NX | Highest nutrient-containing medium
- HEK-FS\_2 | Unique feeding solution
- FectoVIR®-AAV | Transfection reagent designed for improved AAV titers



## Comparison of AAV Yields Using FectoVIR®-AAV and HEK Media



**Figure 1:** Genomic titers in a shake flask process. AAV-2 production in Expi293F™ and Freestyle™ 293-F cells using HEK ViP NB and HEK TF compared with a commercially available competitor medium. Transfection (TF) was done using FectoVIR®-AAV and a two-plasmid system



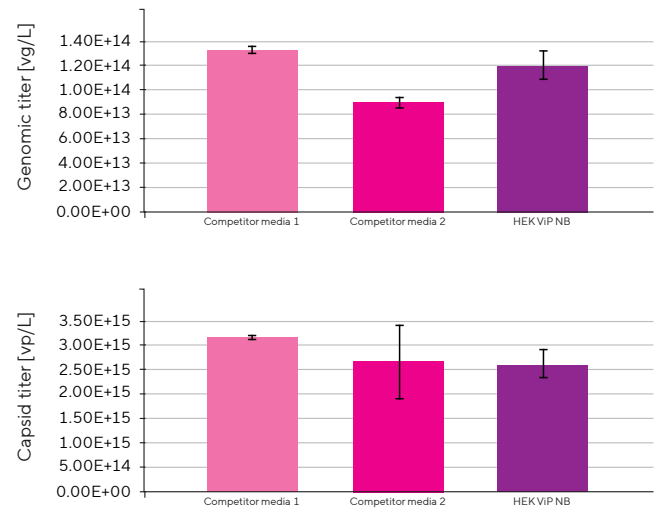
**Figure 2:** Comparison of AAV-2 titers in cell lysate for commercial suspension HEK cell lines in HEK ViP NX medium using different transfection reagents according to manufacturer's protocols. Titers were measured via qPCR

## Order Information

Item	Description	Details	Order Number
HEK293 Media and Feed FS_2 Kit <sup>1</sup>	Select the best fit media and feed for the application	5 × 1 L bottle	CFV3FB4001   Sartorius
FectoVIR®-AAV <sup>2</sup>	Transfection reagent for rAAV production in both suspension and adherent HEK293 cells	1 mL vial	101000044   Polyplus
FectoVIR®-AAV <sup>2</sup>		10 mL bottle	101000022   Polyplus

<sup>1</sup> Other volumes, formats, and packaging available <sup>2</sup> Other volumes, packaging, and GMP grade available

## AAV-2 Production in VPC 2.0 HEK Cells in Ambr® 15 Bioreactors With FectoVIR®-AAV Reagent



**Figure 3:** HEK ViP NB media achieves comparable AAV-2 genomic titers and as reproducible capsid titers than industry reference media

## Summary

Compared to typical media development or benchmarking, our customers have reportedly cut media selection time by half, from 12+ months to less than 6 months thanks to our off-the-shelf HEK media kit.

AAV-2 titers increased by 2 to 5-fold when coupling FectoVIR®-AAV transfection reagent with HEK ViP NB media in both Expi293F™ and FreeStyle™ 293-F reference cell lines [Figure 1]. Similarly, the combination of FectoVIR®-AAV and HEK ViP NX media resulted in a 7-fold rise in AAV-2 titers [Figure 2] versus the industry standard transfection reagent.

Bundled together, our chemically defined HEK media, manufactured under ISO9001 and ISO13485 referential, and FectoVIR®-AAV transfection reagent, manufactured in compliance with ICH Q7 GMP guidelines, set a benchmark towards a robust and reproducible approach for viral-vector processes.

Order your media sample kit here:  
[www.sartorius.com/cell-culture-media-sample](http://www.sartorius.com/cell-culture-media-sample)