

# Celer 293 Serum-Free Media

## Promote rapid growth and high productivity in 293 Cell Culture

293 cells are renowned for their high transfection efficiency, complex post-translational modifications typical of human cells, and ease of suspension culture, making them ideal for applications in recombinant protein, adenovirus-based vaccine, subunit vaccine and virus vector production. Leveraging nearly 40 years of expertise in cell culture research and technology, BioEngine has developed more than one hundred of serum-free medium products. Tailor to different applications of 293 cells, BioEngine's specific serum-free media support high protein recombinant proteins, expression, efficient packaging of virus vectors such as adeno-associated virus and lentivirus, and large-scale rapid production of adenovirus-based vaccines (such as COVID-19 vaccines).

### Features

- Serum-free, protein-free, and animal-derived component-free
- Suitable for various 293 cell lines such as HEK293, 293T, and 293F
- Supports rapid suspension adaptation and high-density culture of 293 cells
- Specific medium for a range of applications, including adenovirus amplification, protein expression, and virus vector production



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### Advantages

- Supports large-scale production of adenovirus-based vaccine, with a yield up to  $10^{10}$  TCID<sub>50</sub> /mL
- Facilitates efficient production of virus vectors, with yields of AAV and lentivirus reaching  $10^{11}$  vg/mL and  $10^7$  TU/mL respectively
- Achieves high protein expression, with a transient protein expression of 910 mg/L (Day 8) in fed-batch culture
- ISO13485:2016 and MDSAP certified manufacturing, meeting compliance requirements in Europe and the US. Completed data supports IND/CTA and BLA/NDA applications.
- Advanced CPM production process enables excellent batch-to-batch consistency (Cpk $\geq$ 1.33, RSD < 5%)\*
- Applied to kilo-liter scale bioreactor production and served many IND applications

\*Critical indicator Cpk  $\geq$  1.33. Cpk is a standard index to state the capability of one process. Cpk  $\geq$  1.33 indicates the process is capable and meets specification limits. PPM mixing uniformity RSD < 5%. RSD refers to relative standard deviation, lower RSD indicates reduced variability in the production process.

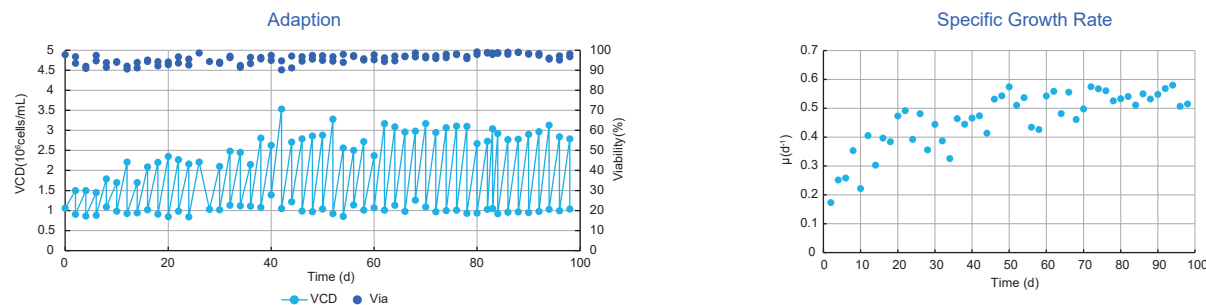
### Ordering Information

Product Name	Cat. No.	Form	Size	Packaging	Notes
Celer-S001S HEK293 Serum-Free Medium	EXP0108401	Powder	200L	Bag	<ul style="list-style-type: none"> <li>SF, PF, ADCF</li> <li>Supports adenovirus amplification</li> </ul>
	EXP0108402	Powder	100L	Bag	
	EXP0108403	Powder	10L	Bag	
Celer-S001 HEK293 Serum-Free Medium	EXP0104003 	Liquid	1L	Bottle	
Celer-S101S 293 Serum-Free Medium	EXP0112001	Powder	200L	Bag	<ul style="list-style-type: none"> <li>SF, PF, ADCF, CD</li> <li>Supports virus vector packaging (AAV, LV and RV)</li> </ul>
	EXP0112002	Powder	100L	Bag	
	EXP0112003	Powder	10L	Bag	
Celer-S101 293 Serum-Free Medium	EXP0102901 	Liquid	1L	Bottle	
Celer-S201S 293 Serum-Free Medium	EXP0103003	Powder	100L	Bag	<ul style="list-style-type: none"> <li>SF, PF, ADCF, CD</li> <li>Supports protein expression</li> </ul>
	EXP0103002	Powder	10L	Bag	
	EXP0103001 	Liquid	1L	Bottle	
Celer-F001aS 293 Serum-free Feed Medium	EXP0117301	Powder	10L	Bag	<ul style="list-style-type: none"> <li>SF, PF, ADCF</li> <li>To be used with Celer-S101S or Celer-S201S in fed-batch culture</li> </ul>
	EXP0117302	Powder	1L	Bag	
	EXP0117303	Powder	20L	Bag	
Celer-F001bS 293 Serum-free Feed Medium	EXP0117401	Powder	10L	Bag	
	EXP0117402	Powder	1L	Bag	

# Performance

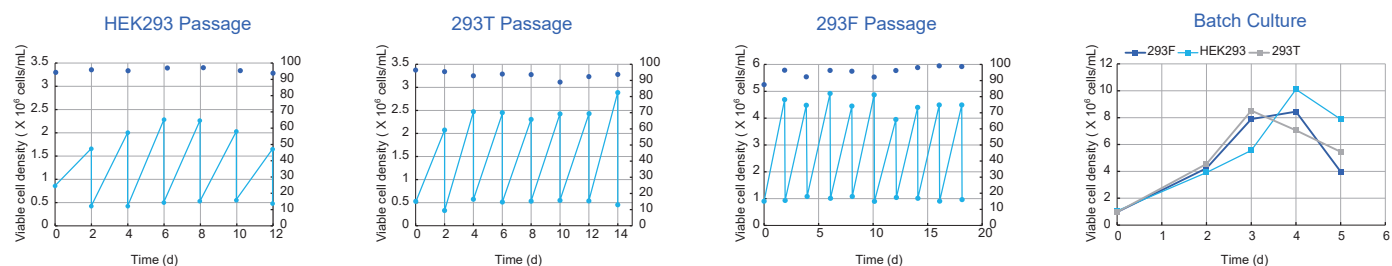
## Cell Adaption

Direct adaption in *Celer* media, cells can be easily adapted to suspension culture, and viability is higher than 90%.



## Cell Growth

*Celer* media support HEK293, 293T and 293F passage, doubling time is 22-24h, viability is higher than 90%. In batch culture, the maximum viable cell density (VCD) can reach  $10 \times 10^6$  cells/mL.



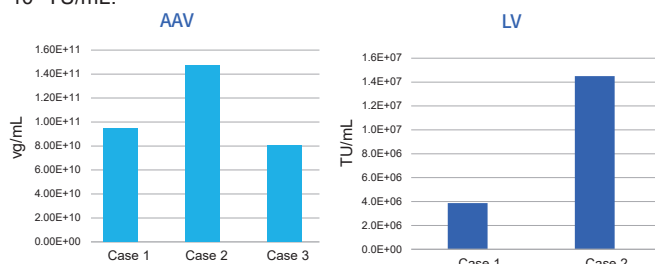
## Adenovirus Production

*Celer* media support adenovirus production, titer can reach  $10^{10}$  TICD<sub>50</sub>/mL. *Celer* media have been successfully applied in kiloliter-scale bioreactor production, and have served many clinical applications.



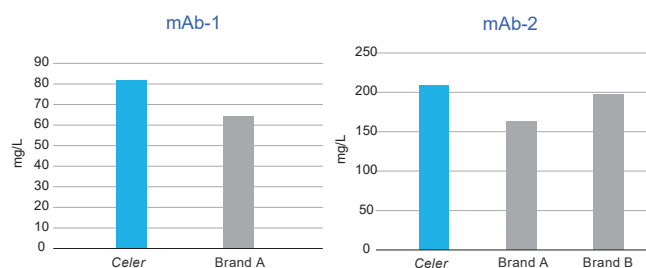
## Virus Packaging

*Celer* media support virus packaging, are simple to operate, and are easy to scale-up. AAV titer can reach  $10^{11}$  vg/mL. LV titer can reach  $10^7$  TU/mL.



## Protein Expression

*Celer* media support protein expression, and titer can reach hundreds of milligram per liter.



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Add  
Floor 4, Building 3, Lane 396, Lvzhou Ring Road,  
Minhang District, Shanghai, China

Tel  
(86) 21-68582660

Web  
www.bio-engine.com

E-mail  
marketing@bio-engine.com.cn

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