

# CELL ST<sub>TM</sub>

Cell culture media For better lives



Supplement



Keeping pace with the growth of the Korean biopharmaceutical market, we will continue to grow as a company that contributes to the development of high-quality, high-value-added medicines by providing solutions with high satisfaction based on state-of-the-art technology.



lives by providing cell culture media



## VISION

We will become the most preferred and trusted cell culture media supplier in Asia.

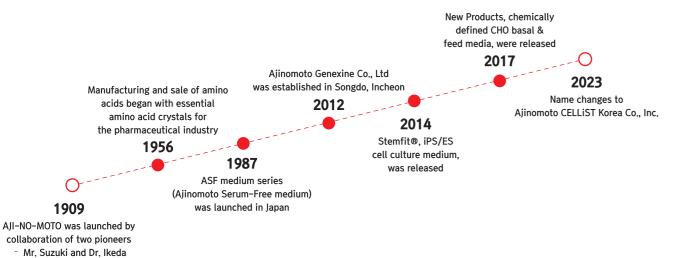


#### **VALUE**

Customer-centered culture,
Operational Excellence,
Stable-Speedy-Superb quality

# ■ **History** Cell Culture Media Business History of Ajinomoto

As a leader in amino acid research, we have a long history of over 100 years and with over 30 years of experience in the research and development of cell culture media, we provide high-quality media to our customers.



# ■CELLIST<sub>TM</sub> SUPPLEMENTS FOR CHO CELLS

#### Overview

CELLIST provides an 'all in one' solution for all your biologics manufacturing needs.

CELLIST is a completely chemically-defined, animal origin-free medium.

CELLIST provides high yield and productivity in all CHO cell lines.

CELLIST incorporates Ajinomoto's long history of know-how in the development and manufacturing of amino acids and amino acids-related products.



#### ■ Product Line

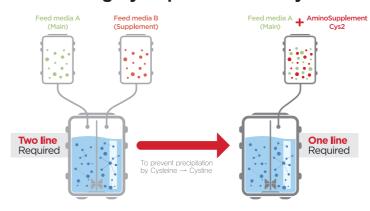
#### CELLiST<sub>™</sub> AminoSupplement

| Model # | Format | Catalog # | Package type      | Qty.  |
|---------|--------|-----------|-------------------|-------|
| Cys1    | Powder | 225SP1-1L | 1L Aluminum Pouch | 6.61g |
| Cys2    | Powder | 225SP2-1L | 1L Aluminum Pouch | 17.0g |

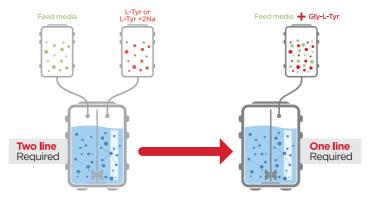
#### CELLiST™ Supplement

| Model #                           | Format | Catalog #       | Package type      | Qty. | Main Target  |
|-----------------------------------|--------|-----------------|-------------------|------|--|
| Glycyl<br>L-Tyrosine<br>Dihydrate | Powder | 215GLT-<br>20KG | 20kg Plastic Drum | 20kg | Using this in place of L-Tyr orTyr-2Na allows a single agent with higher solubility of Tyr, leading to process simplification. |

## Cost-cutting by improved stability



# ■ Cost-cutting and high solubility



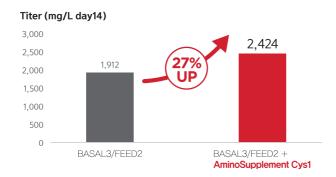
# **■**CELLiST<sub>TM</sub> AminoSupplement Cys1/Cys2

#### Overview

CELLIST AminoSupplement Cys1/Cys2 can help customers improve titer and reduce initial & running costs for cell culture by just adding AminoSupplement Cys1/Cys2 into feed media. Our proprietary formulation inhibits cystine formation / precipitation and enhances the Cys source concentration in the media

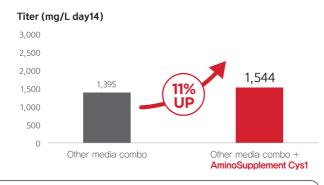
## ■ Titer improvement

III CHO-DG44/ambr®



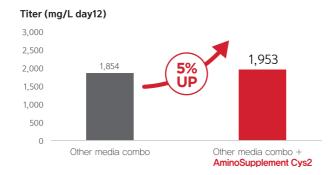
Fed-batch cultures were compared using cells of CHO-DG44. FEED2 was added 5.25% on days 4, 6, 8, 10, and 12 of culture.

II CHO-S/ambr®



Fed-batch cultures were compared using cells of CHO-S. Feed media from other companies was added 6% to the basic media from other companies on culture days 4, 6, 8, 10, and 12.

II CHO-S/ambr®



Fed-batch cultures were compared using cells of CHO-S. Feed media from other companies was added 4.5% to the basic media from other companies on cultures 4, 6, 8, 10, and 12 days.

# **■**CELLiST<sub>TM</sub> Glycyl-L-Tyrosine Dihydrate

#### Overview

CELLIST<sub>TM</sub> offers a comprehensive solution for all your biologics manufacturing requirements. CELLIST<sub>TM</sub> Glycyl-L-Tyrosine Dihydrate (Gly-L-Tyr) provides exceptional solubility, enhancing the overall available tyrosine source, which is a critical component for cell growth and productivity. Gly-L-Tyr solubility surpasses that of traditional L-Tyrosine. Incorporating CELLIST<sub>TM</sub> Gly-L-Tyr into the manufacturing processes removes the need for two separate feeding lines, resulting in a simple, robust and cost-effective workflow. This product was developed by Ajinomoto Group, leveraging years of experience in amino acids science and bioprocess design, as well as high-quality raw materials production capabilities.

## Advantages

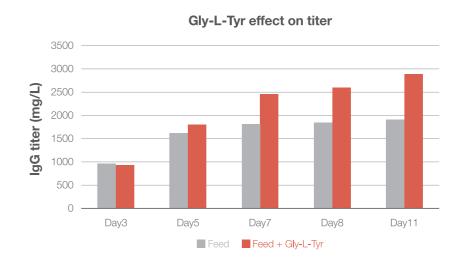
#### Gly-L-Tyr is an effective tyrosine source with high solubility

CELLiST<sub>TM</sub> Glycyl-L-Tyrosine Dihydrate is a highly-soluble and effective tyrosine source, which is an essential ingredient for biologics manufacturing. Unlike other tyrosine sources, such as L-Tyrosine disodium salt dihydrate (L-Tyr+2Na), which requires an alkaline pH and presents challenges during dissolution, Gly-L-Tyr provides optimal solubility without compromising pH conditions.

|                    | L-Tyrosine | Gly-L-Tyr |
|--------------------|------------|-----------|
| Solubility at 25°C | 0.479g/L   | 36.9g/L   |

#### Optimized tyrosine source for improved productivity

The addition of Gly-L-Tyr to the process optimizes tyrosine source supply to the cell culture and results in significant improvement to the performance and productivity of the feb-batch process. The graph below shows the increase in productivity (titer) for a fed-batch CHO cell culture.







# **■CELLiST**<sub>TM</sub> AAV Production Supplement 1

# ■ Unlock the Future of Gene Therapy with CELLiST™

#### **Boosts Genome Titer**

Our supplement significantly enhances VG titer, leading to superior AAV production efficiency.

#### **Streamlined Supplement Strategy**

Designed for versatility CELLiST™ AAV Production Supplement 1 seamlessly integrates with various commercial media and offers a simple and effective supplmentation approach, ensuring enhanced performance.

#### **Proven Track Record of Success**

Endorsed by industry leaders such as Forge Biologics, CELLiST<sub>TM</sub> consistently delivers reliable results in gene therapy programs, demonstrating its effectiveness and trushworthiness in the field.

## ■ Quality & Reliability : Our Commitment to Excellence

#### Animal Origin Free (AOF) Assurance

CELLiST™ ensures top quality and safety. Our AAV Production Supplement 1 is Chemically-defined and guaranteed to be Animal Origin Free (AOF), to ensure consistent quality.

#### Rapid Delivery: Short Lead Times & Stable Supply

We respect your time and needs. Enjoy rapid delivery with a 2-week lead time for in-stock items and 6 months for out-of-stock products.

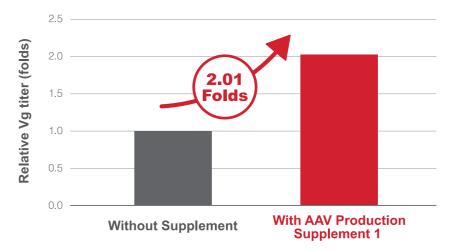
#### **GMP-compliant manufacturing**

CELLIST™ guarantees excellence through GMP-compliant manufacturing, ensuring consistent quality and minimizing contamination risks for reliable gene therapy production.

# ■ Specifications

| Product               | AAV Production Supplement 1   |  |
|-----------------------|---|--|
| Catalog No.           | 225SP3-0.2L   |  |
| Packaging Information | 0.2L  |  |
| Storage Condition     | Store refrigerated (2°C-8°C).<br>After reconstitution, store in a light-protected, sealed container |  |
| Shelf Life            | 24 months   |  |
| Item Description      | Powder, Does not contaion glucose   |  |

### ■ Data-Driven Success: Viral Production Performance



**Figure 1.** The addition of CELLiST<sub>TM</sub> AAV Production Supplement 1 resulted in more than a two-fold increase in VG titer, confirming its effectiveness in viral production. CELLiST<sub>TM</sub> AAV Production Supplement 1 was added to designated groups, while control groups were cultured without the supplement.

#### ■ Related Products

| Products                                 | Туре         | Features  |
|--|--------------|---|
| CELLiST™ HEK293<br>AAV Production Medium | Basal Medium | Chemically defined, Animal Origin Free medium tailored to HEK293-based AAV production, supporting optimal cellular energy metabolism to enhance cell proliferation, virus genome production, and improve full capsid proportion |







# Sales Support

For quoting, ordering, product sample request

## **■CELLiST™** Sales Team

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