



# Next Generation Supplements

Enhancing cell line development workflows

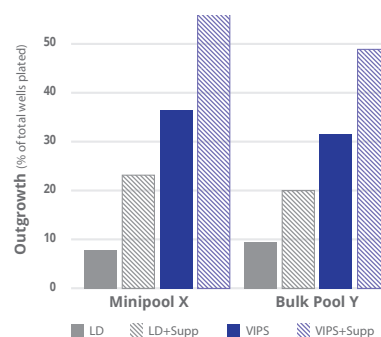
# Enhance cell growth for accelerated cell line development

In the search for high-value cells, growth conditions must be optimized to support early growth conditions. Cell growth and viability can be impaired in defined, animal component-free media, especially when subjected to stress. High producer cells are more sensitive to media conditions and are likely to be at a growth disadvantage when compared to non-producers. This creates significant difficulties when screening biopharmaceutical producer cell lines.

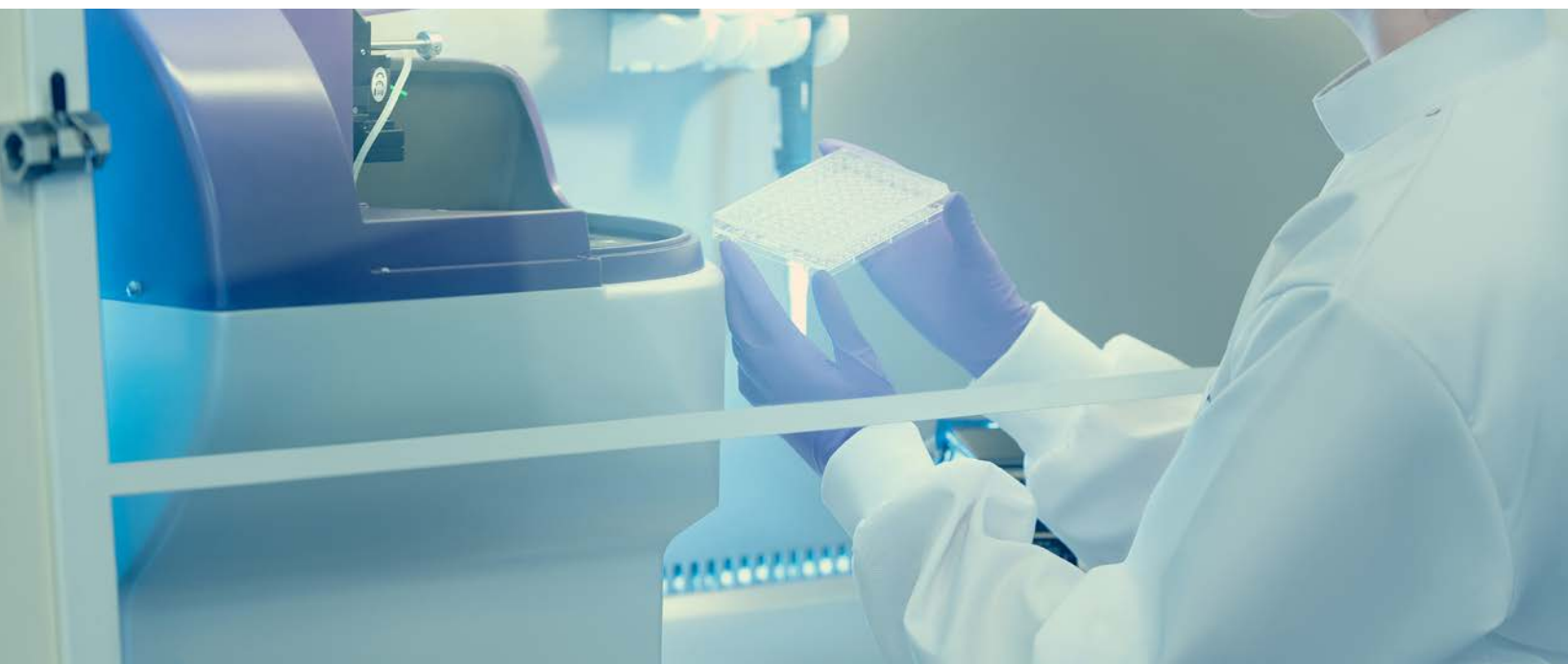
## VIPS™ + InstiGRO™: a powerful combination

Verified In-situ Plate Screening (VIPS™) is our high-efficiency, single-cell seeder. This low-pressure system demonstrates higher seeding efficiency and outgrowth when compared to limiting dilution methods and provides a double-lock of assurance with enhanced in-well imaging to track seeding and clonal growth. Complementing our VIPS technology, cell outgrowth is further enhanced with the use of InstiGRO™ and InstiGRO™ PLUS cell growth supplements.

Solentim offers a range of advanced cell growth supplements for use with Chinese hamster ovary (CHO) and human embryonic kidney (HEK) cells. The Insti range of supplements is designed to enhance growth at different stages of cell line development for accelerated workflows: InstiGRO™ to assist with early cell growth and single cell survival, InstiSHAKE™ to boost cell survival in deep well plates and InstiTHAW™ to protect cells during freezing and thawing.



When comparing outgrowth of CHOZN® cells selected through manual limiting dilution versus the VIPS +/- InstiGRO CHO PLUS method, VIPS + InstiGRO CHOPLUS shows an approximate seven-fold improvement in total outgrowth per plate.



# Single-cell seeding conditions for improved colony outgrowth

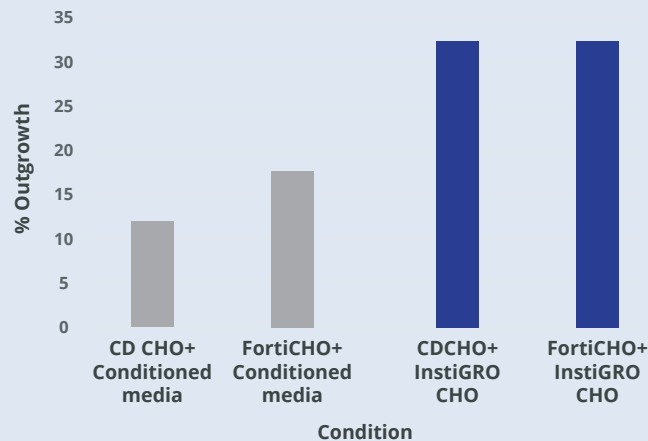
## Case Study

“Cloning efficiency (colony outgrowth) is often overlooked in cell line development workflows, with processes concentrating more on the single-cell isolation step. However, the recovery and growth of single cells are widely recognized as challenging steps in the process.

“For this experiment, four main factors were considered as key features of high cloning efficiency: the single-cell seeding method, base cell culture media, media supplements and inherent pool differences.

“Combining VIPS and InstiGRO CHO products dramatically and consistently increased the percentage of clonal outgrowth achieved in these experiments.”

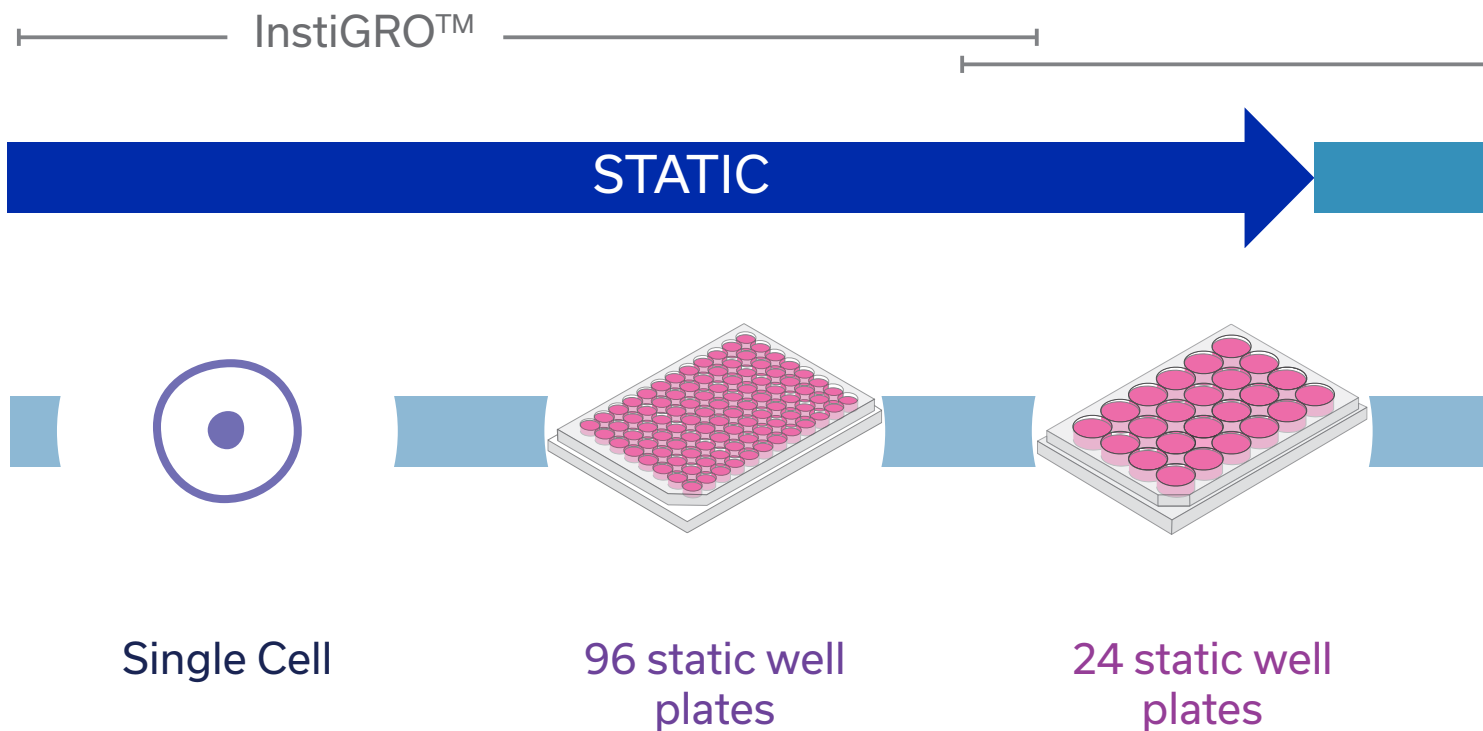
The screenshot shows the top portion of a document. At the top left is the 'ADVANCED INSTRUMENTS' logo. To the right is the text 'Application Note'. Below this is a blue header with the title 'Single Cell Seeding Conditions for improved colony outgrowth' and a subtitle 'Optimising for HD-BIOP3 with the VIPS™ and InstiGRO™ supplements'. To the right of the text are four small grayscale images showing cell colonies in a grid. Below the header is a paragraph of text starting with 'Cloning efficiency (colony outgrowth) is often overlooked...'. Further down, there are sections for 'Introduction', 'Materials and Methods', and a numbered footnote '1 Advanced Instruments'.



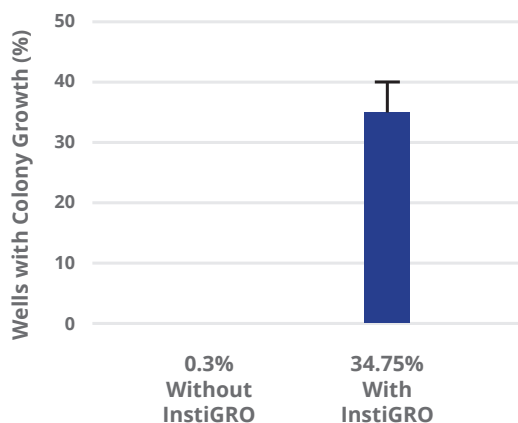
**Figure 3** – Graph to show the average clonal outgrowth achieved when comparing CD CHO to FortiCHO with conditioned media added and when comparing CD CHO to FortiCHO with InstiGRO CHO added to the media.

To learn more or for a copy of the full case study:  
[www.aicompanies.com](http://www.aicompanies.com)

# Growth supplements for each stage of the cell line development workflow

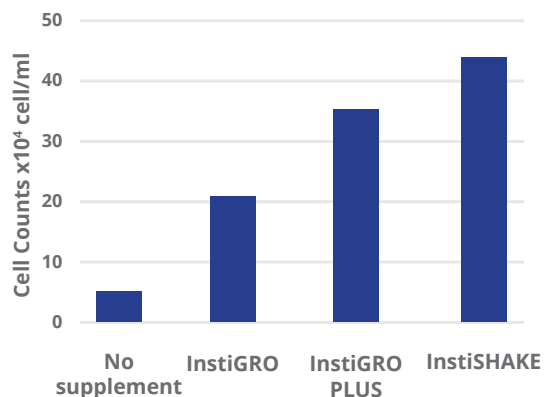


## Improvements in limiting dilutions with InstiGRO CHO



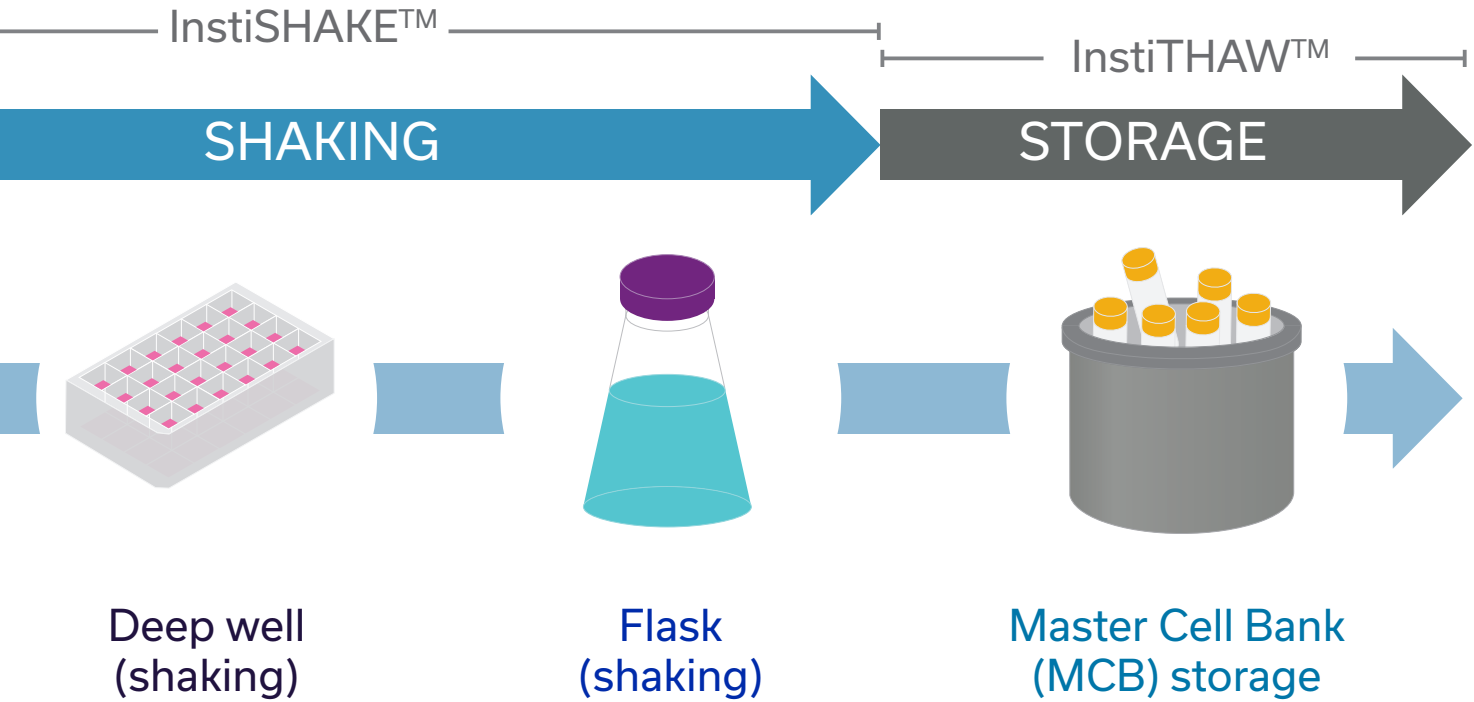
CHO cells plated at 0.7 cells per well in 96 well plates ± InstiGRO supplement. The percentage of wells with colony outgrowth is shown after 15 days.

## InstiSHAKE™ provides a 'follow on' supplement

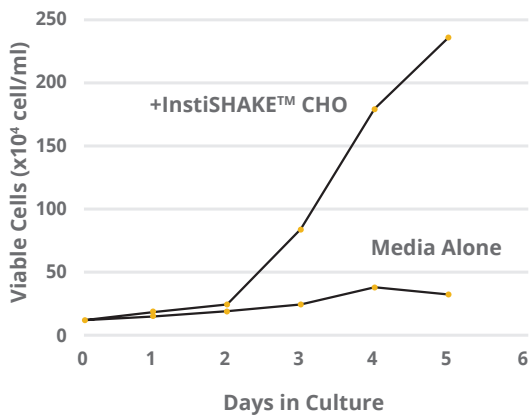


Impact of supplements when moving from 96 to 24 static wells at the day 15 cell count.

# Animal Component Free

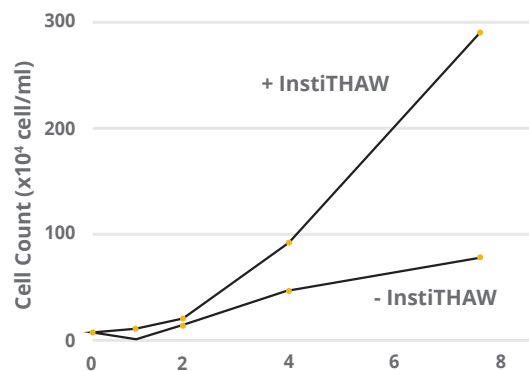


**InstiSHAKE™ boosts viable cell numbers in deep well plates**



Impact of InstiSHAKE supplement on the growth of CHO Cells in EX-CELL® CHO medium.

**InstiTHAW™ used before freezing and during thawing aids cell survival and recovery**



CHO cell recovery shown from storage in liquid nitrogen vapor with and without InstiTHAW. Viable cell growth is shown over a period of seven days.

# Products

Product Code	Product Name	Product Size (mL)
<b>InstiGRO™</b>		
RS-1105	InstiGRO CHO	5
RS-1125	InstiGRO CHO	25
RS-1205	InstiGRO CHO PLUS	5
RS-1225	InstiGRO CHO PLUS	25
RS-1305	InstiGRO HEK	25
RS-1325	InstiGRO HEK	25
<b>InstiSHAKE™</b>		
RS-2125	InstiSHAKE CHO	Sol A - 20 & Sol B - 5
RS-2325	InstiSHAKE HEK	25
<b>InstiTHAW™</b>		
RS-3105	InstiTHAW CHO	5
RS-3305	InstiTHAW HEK	5



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ML-002 Rev:001



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