

Insectagro™

Insect cell culture has become an increasingly important tool for the production of biologicals. Their flexible growth characteristics provide advantages over both bacterial and mammalian cell lines, making insect cells ideal for the Baculovirus Expression Systems (BEVS).

Conventional insect culture media rely heavily on animal sera and other components such as yeast hydrolysate, lactalbumin hydrolysate, tryptose phosphate broth, and hemolymph as the nutritional, chemical, and physiological support systems. The production of purified recombinant proteins has created a demand for media capable of supporting growth without relying on these additives.

Serum-free growth media poses numerous advantages over the use of serum, including:

- reduced foaming
- elimination of exogenous agents
- simpler downstream processing
- supports high cell yield
- fewer regulatory obstacles

Insectagro DS2™

Insectagro DS2™ was developed for growth and maintenance of DS2 cells intended for use in heterologous protein expression. The *Drosophila Schneider 2 (S2)* cell line was originally derived from a primary culture of late-stage *Drosophila melanogaster* embryos in 1969. DS2 cells grow as a loose monolayer, with

optimal growth between 22-24°C, and are readily adaptable to growth in suspension. They require minimal adaptation to serum-free media.

Insectagro FIVE™

Insectagro FIVE™ supports the growth of High-Five™ cells intended to produce baculoviruses for the production of recombinant proteins. High-Five™ cells (BTI-TN-5BI-4) are derived from *Trichoplusia ni* (cabbage looper) egg cell homogenates and have been shown capable of expressing significantly higher levels of secreted recombinant proteins compared to other insect cells. With a doubling time of less than 24 hours at room temperature (27°C), High-Five™ cells are easily grown as suspension cultures in serum-free media enabling large-scale recombinant protein production.

Insectagro Sf9™

Insectagro Sf9™ satisfies the demands of Sf9 and Sf21 cultures. The Sf9 cell line originated at the USDA Insect Pathology Laboratory from IPLBSF-21 cell line, derived from the pupal ovarian tissue of the fall army worm. Sf9 cells are cultured in non-humidified, non-CO₂ incubators at 27°C and display both monolayer and suspension culture qualities. With their fast doubling times of 18-22 hours, Sf9 cells are easily scaled up to large cultures using bioreactors. Sf9 is capable of expressing full-length proteins and have been reported to produce certain proteins up to 20% of the total protein.

| Product Description | Catalog No. | Size |
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| Insectagro DS2™ Serum-Free/Protein-Free Medium, 1X without L-glutamine | 13-402-CV | 6 x 500 mL |
| Insectagro FIVE™ Serum-Free/Protein-Free Medium, 1X with L-glutamine | 13-415-CV | 6 x 500 mL |
| Insectagro Sf9™ Serum-Free/Protein-Free Medium, 1X with L-glutamine | 13-410-CV | 6 x 500 mL |