Optimization
Makes Differences

StarInsect™

Serum-free Cell Culture Medium

—— For Vaccine Production

StarInsect™ is a serum-free, protein-free medium designed for suspension culture of insect cells such as Sf9, High Five, Sf21, and high-efficiency protein expression of baculovirus and other insect expression systems. StarInsect™ supports the production of COVID-19 vaccines, influenza vaccines, rabies vaccines, herpes virus vaccines, tumor vaccines and other vaccines. This medium contains L-Glutamine.

Application

StarInsect™ is intended for large scale manufacturing of therapeutic biomolecules, as well as for research purposes, but not for human or any therapeutic use.

Storage & Transportation

Store at 2~8℃, dark and dry
Ship at Room temperature (Liquid), Blue ice (Dry powder)

Shelf Life

StarInsect™ Medium Liquid: 12 months
StarInsect™ Dry Powder: 24 months

Cell Culture Conditions

Temperature 27℃
Shaker speed 90 ~ 110 rpm (amplitude: 50mm), 120 ~ 140 rpm (amplitude: 25mm)

Cell Recovery

1. Rapidly thaw (<2 min) a vial of frozen cells in a 37 ℃ water bath.
2. Transfer the entire contents aseptically into a 125 mL shake flask containing 30 mL prewarmed StarInsect™ cell culture medium.
3. Incubate at 27℃ in a humidified atmosphere with shaker speed 90 ~ 110 rpm (amplitude: 50mm).
4. Passage cells at least three times until the cells are fully recovered and the doubling time (Population Doubling Time, PDT) is stable.

Cell Culture Passaging

1. Prewarm StarInsect™ cell culture medium at 27 ℃ for 20~30min.
2. Proceed if viability≥85%. Determine the correct volume of cell culture to inoculate a new flask at a starting cell density of 0.5~1.0×10^6 cells/L.
3. Aseptically transfer the required amount of seed to a shake flask and add the required volume of StarInsect™ Medium.
4. Incubate the flask at 27℃ in a humidified atmosphere with shaker speed 90 ~ 110 rpm (amplitude: 50mm).
5. Passage cells by repeating above steps every 2~4 days with fresh medium.

Medium Adaptation

Most insect cells can be directly inoculated into StarInsect™ meidum without sequential medium adaptation. Sequential medium adaptation can be used for some cells with poor status in direct medium adaptation.

Direct Medium Adaptation
Inoculate the cells directly into StarInsect™ Medium at a density of 0.5 ~ 1.0×10^6 cells/mL. Passage cells

every 2~4 days, at least 3 times. Adaptation is completed when the PDT is stable and viability≥85%.

Sequential Medium Adaptation
Inoculate the cells into a gradient ratio of 25:75, 50:50, 75:25, 100:0 (StarInsect™ vs current medium) at a density of 0.5 ~ 1.0×10^6 cells/mL. Adaptation is completed when the PDT is stable and viability≥85% with 100% StarInsect™ Medium.

Cryopreservation

1. Harvest the desired quantity of cells in log phase of growth with viability over 90%.
2. Determine VCD to ensure that the final cell density is 1.0×10^7 ~ 2.0×10^7 cells/mL.
3. Prepare the freezing medium consisting of 90% StarInsect™ Medium+10% DMSO, and let the freezing medium cool down to 4℃.
4. Harvest cells and centrifuge at 200×g for 5 minutes. Resuspend the cell pellet in the pre-determined volume of 4°C freezing medium.
5.Dispense aliquots of this suspension into cryo-vials ((1.5~2 mL per vial).
6. Place the vials in a cryo-box or a controlled rate freezing apparatus following standard procedures (1°C decrease per minute).
7. For long-term storage, transfer the vials to liquid nitrogen.

Order Information

Cell Culture Media

Name	Cat No.	Type	Volume
StarInsect™ DPM	P225606	Dry powder	50L/100L
StarInsect™ Medium	P161528	Liquid	1000mL

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