EXPISF™: A chemically-defined baculovirus-based expression system for vaccine production in Sf9 cells

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Baculovirus-insect cell expression system is one of the major platforms for recombinant protein production and a robust and versatile platform for vaccine production. Currently, eight commercially-available vaccine products and multiple vaccine candidates in development are produced in insect cells. Unlike mammalian expression systems that have long since transitioned to chemically defined culture media, relatively little innovation has taken place in insect expression systems. Insect cells continue to rely on undefined, yeastolate-containing culture media that can exhibit significant lot-to-lot performance variability and, therefore, negatively impact productivity. Here, we describe the ExpiSf™ Expression System, the first chemically defined insect expression system that enables high-yield production of proteins and viral particles with consistent performance run after run using a fast, streamlined workflow. This multi-component, optimized system delivers scalable yields from shake flask to bioreactor scale, thus facilitating vaccine development. The superior performance of ExpiSf provides researchers with the simplicity of obtaining high-titer recombinant baculovirus in one simple step and going from transfection to product harvest in 6-10 days.

Biography

Natasha is a Product Manager at Thermo Fisher Scientific managing the insect and CHO protein expression product portfolios. Prior to joining Thermo Fisher, Natasha has completed postdoctoral research training in early-stage drug discovery at the California Institute for Biomedical Research in La Jolla, CA, USA and received a PhD in Cell & Molecular Biology from the Georgia Institute of Technology in Atlanta, GA, USA.

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