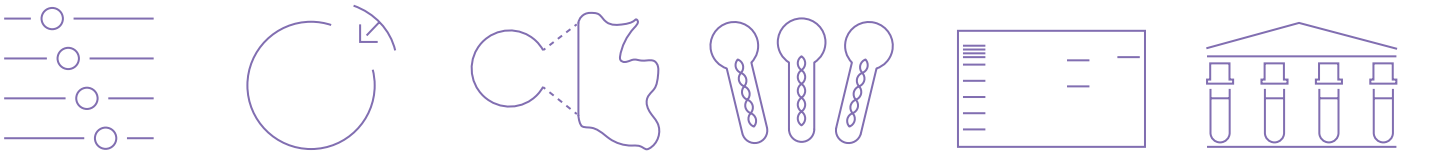
Gene-to-Baculovirus Solutions

Azenta Life Sciences now offers an expanded solution for a gene-to-baculovirus synthesis and expression. The updated gene-to-virus workflow, combined with Azenta Life Sciences sample management services, provides a complete end-to-end solution designed with speed and convenience in mind. To achieve high gene delivery efficacy and yield reproducible co-transduction and expression of multi-component complexes at the right stoichiometry, we also offer these services in the BacMam system. Customers can choose their preferred deliverables (plasmids, baculovirus/BacMam stocks, BIICs, expression reports, etc.) based on their projects' need.

In addition, as part of the Azenta Life Sciences family of companies, our sample management services provide sample storage options for your valuable assets to help maximize their utility, now and in the future.

Azenta Life Sciences Gene-to-Virus Workflow



Step 1
Protein or DNA sequence design

Step 2
Gene synthesis, cloning, plasmid prep

Step 3
Recombinant baculovirus DNA generation

Step 4
Baculovirus amplification

Step 5
Protein expression verification

Step 6
Sample storage and management

Pick Your Expression System:

DNA Synthesis Services

- Azenta Life Sciences proprietary **codon optimization**
- **DNA synthesis** of any length or complexity
- **Custom cloning** into your choice of vector
- **Plasmid prep** from mini to giga scale

Gene-to-Baculovirus for Insect Expression System

- **Baculovirus generation** and preparation of high-titer virus stock
- Infection of **insect cells** for protein expression
- **Protein expression verification** by Western Blot
- **Sample storage and management** by Azenta Life Sciences

Gene-to-BacMam for Mammalian Expression System

- **BacMam baculovirus** high-titer stock generation
- **Protein expression verification** by Western Blot
- **Sample storage and management** by Azenta Life Sciences

Gene-to-Baculovirus Solutions

Azenta Life Sciences Gene-to-Virus Expression Sysems

Gene-to-Baculovirus for Insect Expression System

Recombinantly-modified baculovirus containing a gene of interest is transfected in insect cells.

Deliverables:

- Recombinant bacmid with synthetic gene of interest
- High-titer baculovirus stock
- BIICs (TIPS) – baculovirus infected insect cells
- Insect cells pellet or superannuant harboring target protein
- Expression verification report

Advantages:

- Accommodate large or multiple genes
- Ability to provide post-translational modifications
- Not dependent on large-scale DNA prep

Gene-to-BacMam for Mammalian Expression System

BacMams are baculoviruses containing a mammalian expression cassette for gene delivery and expression in mammalian cells.

Deliverables:

- Expression construct in enhanced BacMam vector
- High-titer BacMam baculovirus stock
- Expression verification report

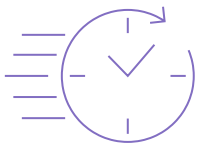
Advantages:

- High gene delivery efficiency, even for large DNA cargo
- Reproducible co-transduction and expression of multi-component complexes at desired stoichiometry
- Mammalian expression, but not dependent on large-scale DNA prep

Features and Benefits

Reliable Partner

Top priority of the intellectual property security and trustworthy supply chain



Rapid Turnaround

Multiple QC checkpoints, including protein concentration, aggregation, and purity

Technical Support

Ph. D.-level consultation and support at every step of your project

Unique Solutions

Sample biobanking for long-term storage and cloning for optimized BacMam vector available

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