OXFORD
EXPRESSION
TECHNOLOGIES

Service and Contract work at OET

OET provides a wide range of services from concept to completion ausing the most up to date methods to ensure the highest quality throughout. OET understands every project is important which is why we offer our assistance throughout every step of the project. All our services are tailored to meet the individual needs and requirements of our clients.

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OET SERVICES

OET provides a wide range of services from concept to completion and all projects are performed using the most up to date methods to ensure the highest quality throughout. OET understands that every project is important which is why we offer our assistance throughout every step of the project. All our services are tailored to meet the individual needs and requirements of our clients..

Specialist project support

OET are always happy and keen to help out and offer advice when projects are not running smoothly.

Recombinant virus production

Construction of the recombinant baculovirus via homologous recombination relies on the success of the co-transfection. OET offers a cost-effective approach to customers who wish to ensure success with their baculovirus co-transfection(s) with the use of our pOET vectors and *flash*BAC™

Virus Titration

BaculoQUANT™ ALL-IN-ONE

OET has developed a rapid titration system based on quantitative PCR (qPCR) for the accurate titration of baculovirus stocks using the baculoQUANT™ ALL-IN_ONE qPCR.

Plaque Assay

The plaque assay, is the gold standard for quantifiying the virus titre and offers an alternative to the baculoQUANT™ ALL-IN_ONE qPCR

OET SERVICES

Virus Safe Deposit

Safe storage of valuable virus stocks for future use is often of paramount importance! A virus safe deposit can put your mind at rest.

Test and Optimisation of Expression

At OET we routinely provide optimisation of expression by varying five parameters.

Vector

We can compare flashBAC™, flashBACGOLD™ and flashBACULTRA™ to see if the gene deletions present in GOLD and ULTRA enhance yield and/or quality

Promoter

Although the polyhedrin and p10 promoters are inherently the strongest we can use, some more difficult to express proteins give better yields using an earlier promoter such as p6.9

Cell Line

Proteins yield and quality can vary considerably between cell lines, and we offer three cell lines: Sf21, Sf9, SuperSf9 and Tni.

Multiplicity of infection

Protein yield and quality can also vary with multiplicity of infection, and sometimes a lower MOI can yield higher quality protein.

Time to Harvest

Samples for analysis of protein synthesis are taken at 3 or 4-times points e.g., 0, 24, 48, 72 and 96 hours after infection to determine to best time to harvest

Protein production and purification

Following optimisation of expression and amplification of the required amount of virus, we can produce your protein in insect or mammalian cells.

OET SERVICES

Virus Like Particle

The field of VLP production is a very exciting area, and OET is ideally placed to maximise the potential of the baculovirus expression system for VLP production through our extensive expertise and our *flash*BAC technology

Mamalian services at OET

Like all Oxford Expression Technologies Ltd contract services, the baculovirus projects can cover every step from gene synthesis to protein optimisation, scale up and purification.

Gene synthesis and cloning

We can arrange the synthesis of any gene for you, and we'll also work with any plasmid you supply as a starting point.

Transient Expression

The plasmid containing the gene of interest is transfected into the target mammalian cell line and expression levels are determined by western blot.

Stable Cell Line

Stable cell line is produced following transfection of mammalian cells with the plasmid containing the gene of interest and a selectable antibiotic marker.

Expression

Following transient expression or generation of the stable cell line experiment, the protein produced can be purified or shipped direct as crude product.

Scale up

OET can scale up the production, all the way to 20L using a WAVE machine bioreactor.

BacMam services

BacMam viruses can be constructed by OET using the flashBAC™ expression system. This service includes complete optimisation of expression for your protein of interest. BacMam protein expression services offer high quality proteins at a competitive price.

OET SERVICES

OET provides a wide range of services from concept to completion and all projects are performed using the most up to date methods to ensure the highest quality throughout. OET understands that every project is important which is why we offer our assistance throughout every step of the project. All our services are tailored to meet the individual requirements of our clients.

Specialist Project Support

Here at OET, we are always happy and keen to help out and offer advice when designing/initiating projects, and provide any trouble shooting when required.

Recombinant Virus Production

Construction of the recombinant baculovirus via homologous recombination relies on the success of the co-transfection. OET offers a cost-effective approach to customers who wish to ensure success with their baculovirus co-transfection(s) with the use of our pOET vectors and *flash*BAC™

Virus Titration

BaculoQUANT™ ALL-IN-ONE

OET has developed a rapid titration system based on quantitative PCR (qPCR) for the accurate titration of baculovirus stocks using the baculoQUANT™ ALL-IN_ONE qPCR.

Plaque Assay

The plaque assay, is the gold standard for quantifying the virus titre and offers an alternative to the baculoQUANT™ ALL-IN_ONE qPCR. Plaque assay is also the most reliable method for accurate titration of older virus stocks (3+ months)

OET SERVICES

Virus Safe Deposit

Safe storage of valuable virus stocks for future use is often of paramount importance! A highly affordable virus safe deposit can put your mind at rest for years.

Test and Optimisation of Expression

At OET we routinely provide optimisation of expression by varying five key parameters.

Vector

We can compare *flash*BAC™, *flash*BACGOLD™ and *flash*BACULTRA™ to see if the gene deletions present in GOLD and ULTRA viral backbones enhance yield and/or quality of the target proteins

Promoter

Although the polyhedrin and p10 promoters are inherently the strongest we can use, some more difficult to express proteins give better yields using an earlier promoter such as p6.9

Cell Line

Protein yield and quality can vary considerably between cell lines, and we offer a number of cell lines: Sf21, Sf9, SuperSf9 and TniOne, TniHi5 and SfC1B5.

Multiplicity of Infection

Multiplicity of infection (amount of virus particles added to a cell culture) can also have a huge impact on protein yield. Higher is not always better and sometimes a lower MOI can yield higher quantities of protein.

Time to Harvest

Protein synthesis is analysed at are taken at 3 or 4-different times points over a period e.g., 0, 24, 48, 72 and 96 hours after infection to determine theo best time to harvest the target protein.

Protein Production and Purification

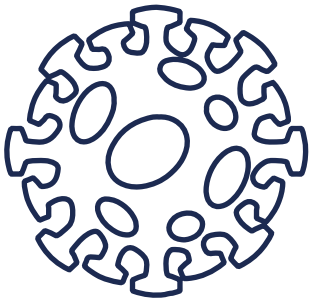
At OET we have over 15 years experience in the production and purification of a wide range of recombinant proteins, which has been used for a combination of R&D projects, diagnostic work, vaccine development and more!

As for all our contract service work we tailor our methods to your requirements to ensure the protein yield and purity profile can be maximised. to achieve this, we consider the scalability of the cultuere during production and the implementation of various chromatography techniques such as affinity, ion exchange and size exclusion.

OET SERVICES

Virus Like Particle

The field of VLP production is a very exciting area, and OET is ideally placed to maximise the potential of the baculovirus expression system for VLP production through our extensive expertise and our *flash*BAC technology. OET also has access to state of the art imaging techniques to visualise/image these exceptional particles!



Mammalian Services at OET

Like all Oxford Expression Technologies Ltd contract services, the mammalian projects can cover every step from gene synthesis to protein optimisation, scale up and purification.

Gene Synthesis and Cloning

We can arrange the synthesis of any gene for you, and we'll also work with any plasmid you supply as a starting point.

Transient Expression

The plasmid containing the gene of interest is transfected into the target mammalian cell line and expression levels are determined by SDS-PAGE/Western blot.

Stable Cell Line

Stable cell line is produced following transfection of mammalian cells with the plasmid containing the gene of interest and a selectable antibiotic marker.

Expression

Following transient expression or generation of the stable cell line, the produciton can be scaled up and the target protein can be purified or the generated cell line can be directly shipped to the client.

Scale up

OET can scale up the production, all the way to 20L using a WAVE machine bioreactor.

BacMam Services

BacMam viruses can be constructed by OET using the *flash*BAC™ platform. This service can offer complete optimisation of the transduction process and the expression of the protein of interest at a competitive price.