



The infographic above provides a general overview of the contract services offered by Expression Systems. There is a wide degree of flexibility regarding where a contract service project may start and end as dictated by the needs of the customer.

As Expression Systems contract services offerings are so flexible (e.g., the starting material provided by the customer, the project deliverables to be provided to the customer, the steps to be included in the process, the consideration of cGMP in the work performance), we request that you complete this form. **To ensure that your project is completed in a timely fashion and meets your expectations, please provide as much non-confidential information as possible.**

### Customer Information

Name:

Institution:

Project ID (Your Gene or a unique identifier):

Date:

Phone:

Email:

How did you hear of our contract services?

### Project Summary

Please provide a general overview of your project including what starting materials will be sent to Expression Systems and the deliverables that will be expected at project completion.

Institution:

Project ID:

Please provide information regarding your project in Sections I through XI below. If you require a particular service, select "Yes" in the "Service Requested" box.

## I. Project Initiation

What material will be sent to Expression Systems?	
Gene sequence to be synthesized by Expression Systems *	
Plasmid containing your gene of interest *	
Baculovirus transfer vector containing your gene of interest Name of parent vector:	
Bacmid DNA	
Recombinant Baculovirus Volume:                      Titer:	

*\*See Guidelines for Submission of DNA and DNA Sequences at the end of this document.*

Global Project Considerations	
Do you have a preferred cell line for this project?	
Do you require work to be done in animal-free medium?	
Do you have a maximum endotoxin specification for the final material?	
Do you require any specific data or documentation related to the project?	
Might the project deliverable(s) be used further in a manner in which regulatory requirements should be considered?	

Please provide further details regarding any questions that you answered "yes" to above or mark as N/A.

## II. Cloning

Service Requested:

Please describe in detail the DNA material that you will be sending to Expression Systems for cloning.

Customer Initials/Date: \_\_\_\_\_

Institution:

Project ID:

Expression Systems offers two options for cloning. Please read both options mark a selection.

☐ Expression Systems to synthesize the gene as it is delivered without modification.

☐ Expression Systems to review the gene and propose improvements to be made. Note that there is an additional charge associated if this option is chosen. Proposed changes to the gene sequence will require customer signature before execution.

### III. Virus Generation

Service Requested:

Co-transfection with:	
BestBac 1.0	<input type="checkbox"/>
BestBac 2.0	<input type="checkbox"/>

Scale of high titer stock required	
30-50 ml	<input type="checkbox"/>
500 ml	<input type="checkbox"/>
> 500 ml (enter volume)	

### IV. Virus Purification

Service Requested:

Number of rounds of end point dilution purification required:

An antibody to your protein suitable for western blot is required to screen virus isolates for expression. Please indicate below if the antibody for the protein of interest will be supplied or provide the catalog number corresponding to an appropriate antibody for purchase by Expression Systems.

### V. Expression Screening

Service Requested:

Following production of your recombinant virus, Expression Systems can screen for expression of your recombinant protein. Select your preferred method and indicate if you will supply the required reagents (verified antibody, ELISA kit, etc.) or if Expression Systems is to acquire the reagents.

Expression Screening Method
Western Blot:
ELISA:
Coomassie Gel:

Customer Initials/Date: \_\_\_\_\_

Institution:

Project ID:

## VI. Expression Optimization

Service Requested:

The standard expression optimization service includes testing in two insect cell lines, Sf9 and T.ni. 50mL cultures of both cell lines are infected with the recombinant virus at an MOI of 0.1 and 3.0 at an approximate infection density of  $2 \times 10^6$  cells/ml. Cell counts and samples are taken at 48 and 72 hours post infection (hpi). The customer is provided with 10mL supernatant and pellet (a pellet from 10 mL culture) for the 48 hpi time point and the supernatant and pellet from the remainder of the culture harvested at 72 hpi. If you wish to try other cell lines or culture conditions, please note your specific request below. Alternate infection densities and supplementation with Production Boost Additive may be investigated in an expanded expression study. Supernatant and pellets are stored at -80°C and shipped on dry ice. If you prefer that Expression Systems analyze the optimization samples, please indicate this below and the method by which we are to analyze the samples.

## VII. Protein Expression Run

Service Requested:

Culture Volume Required:

### Culture Conditions

Customer to provide specific expression protocol (describe below)

Expression Systems is to determine expression protocol

Culture conditions to be set pending expression optimization results

Please provide any specified culture conditions below. If there are none specified, mark as N/A.

Customer Initials/Date: \_\_\_\_\_

Institution:

Project ID:

### VIII. Protein Purification

Service Requested:

#### Purification

Is Expression Systems to develop the purification strategy for your protein? <sup>1</sup>

Do you have a specific protocol for purification of your protein? <sup>2</sup>

Do you have literature references for purification of your protein? <sup>3</sup>

<sup>1</sup> Please indicate below if your protein has an affinity tag

<sup>2</sup> A detailed protocol, not a literature reference. If yes, please attach the protocol with this request for service so that we may accurately assess the scope of the project

<sup>3</sup> If yes, please attach the literature references with this request for service

### IX. Packaging and Labeling

If you have any specific labeling or packaging requirements, please describe them below.

### X. Deliverables

☐ Recombinant Baculovirus Stock

☐ Supernatant

☐ Cell Culture Process Intermediate

☐ Master Virus Seed Stock (MVSS)

☐ Cell Pellet

☐ Purified Protein

☐ Other:

Customer Initials/Date: \_\_\_\_\_

Institution:

Project ID:

## **XI. Shipping and Billing**

Upon completion of the project described in this Request for Service, Expression Systems will ship all deliverables, remaining intermediate materials used in production, and remaining starting materials sent by the customer. Expression Systems will not store any project related materials beyond the date of project completion unless arrangements have been made for banking of customer material. If you wish that certain intermediate materials be shipped before completion of the project - or for any materials to be retained for future work - please note your request below.

Virus supernatants will be shipped on blue ice. Expression cell pellets will be shipped on dry ice, while expression supernatants will be shipped on blue ice or dry ice as requested by the customer. Please indicate below if your expression supernatant is to be shipped on blue ice or dry ice. If you require any specific packaging configuration or aliquoting of material, please note this below. In the absence of specific instructions, Expression Systems will package material in the most efficient and cost-effective manner.

### **Shipping Contact**

Name:

Email:

Phone:

Shipping Address:

### **Billing Contact**

Name:

Email:

Phone:

Shipping Address:

Customer Initials/Date: \_\_\_\_\_

Institution: \_\_\_\_\_

Project ID: \_\_\_\_\_

**Acknowledge and Agree to the Project Scope Outlined in the Following Document**

**Expression Systems**

By: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

**Customer**

By: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Institution:

Project ID:

#### Guidelines for Submission DNA Sequence Data

Please provide your sequence in a Microsoft Word .doc file or Vector NTI file. If you will be sending Expression Systems a sequence to be synthesized, provide the exact sequence that you would like cloned into the transfer vector, do not include any extraneous flanking sequence that you don't intend to be synthesized with the Gene of Interest (GOI). We will add the appropriate cloning restriction sites to the sequence before synthesis.

If you are supplying a DNA fragment or plasmid containing a GOI to be cloned into a Baculovirus transfer vector by Expression Systems, please provide the complete sequence of the DNA fragment or plasmid, not just the sequence of your gene of interest. We need to know the size, antibiotic resistance, and any other sequence features that might impact our cloning strategy. Highlight and annotate the precise beginning and end of the sequence that needs to be cloned

If you are sending your gene of interest in a transfer vector that is compatible with BestBac, or in a Bacmid ready for transfection, submission of DNA sequence information is not required.

#### Guidelines for Submission of DNA for Contract Work

**Plasmids:** For plasmids to be transfected for recombinant baculovirus generation or for cloning into Expression Systems transfer vectors, please provide a minimum of 5 µg plasmid at a minimum concentration of 200 ng/µl.

**Bacmids:** For bacmids to be transfected for recombinant baculovirus generation, please provide a minimum of 5ug bacmid at a minimum concentration of 100 ng/µl.

#### Shipping

**Ship all project related material to:** Expression Systems  
Contract Manufacturing  
2537 2<sup>nd</sup> Street  
Davis, CA 95618