

Guild BioSciences: Sample Preparation and Shipping

Before requesting a quote from GBS, taking the following steps will reduce costs, maximize protein yields, shorten turnover time, and generally streamline procedures.

Consider the protein of interest:

- Carefully consider the **method of detection** for your protein of interest, as the detection procedure is often the most expensive part of the purification. For example, Western blots are commonly utilized; however, if an ELISA can be used, it is often cheaper.
 - Indicate whether your protein of interest is a **major** or **minor** component of the starting material. Such information is not required, but it will expedite the process if known.
 - Estimate the amount of **total protein** in your starting material, if possible. It does not necessarily need to be for the specific sample that you will send (although this would be ideal). It may be an estimate from a typical batch of your starting material.
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Consider the starting material:

- If possible, indicate some **measure of the complexity** of your starting material, such as an SDS PAGE gel stained with a general protein stain like Coomassie or silver stain. The measure may be derived from the actual sample sent or a typical sample.
 - If the starting tissue will be an intact tissue or unlysed cell pellet, be able to provide the **starting culture volume**, the **cell density** of the culture before it is pelleted, and an anticipated **protein yield** after lysis. Also see next point.
 - If **GBS** will conduct cell lysis/tissue disruption, provide a **specific protocol** for conducting the cell lysis/tissue disruption for your sample, including the **specific composition of the lysis solution**. (You know your starting material best; if we must develop the methods, you may accrue additional costs as we determine effective methods.)
 - Describe the **reagent composition** of your starting material.
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Provide prior knowledge and procedures:

- Supplying any **publications** that provide **protocols** for purifying your protein of interest, or a closely related protein, is to your advantage. Sending either a PDF or a literature citation will allow **GBS** researchers to quickly determine how others have attempted to purify your protein and anticipate potential problems.
 - Provide data from any **preliminary experimentation** you may have conducted. It is to your benefit to provide as much data as possible (especially regarding **yield**) as this will reduce the need for **GBS** to repeat that work to characterize the system. Reducing the time required for the initial workup will decrease the cost of your purification.
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Consider sample transportation:

- Know the appropriate **federal and international regulations** for shipping the material you will be sending to us and follow them. In addition, customers are required to inform us if source material contains biological toxins or potentially infectious material, and if there are any special handling requirements.
- Be aware that the federal government holds shippers directly responsible for the correct and legal transport of dangerous goods by surface or air. To be able to ship dangerous goods, you must be trained.