Minute™ High Efficiency Protein Precipitation kit

Cat No. WA-006

Description

Protein precipitation is an obvious choice for concentrating proteins and removing interfering substances found in protein samples, such as salts, lipids, and other components that may interfere with downstream applications. One of the most commonly used methods is trichloroacetic acid (TCA) precipitation, a relatively simple and effective method. Protein precipitated by the TAC method is usually denatured, and in many cases, the solubility of protein is reduced. A major disadvantage of the traditional TCA/acetone precipitation method is its low efficiency for samples of low protein concentration. Samples with higher protein concentration are precipitated much more effectively than that with lower protein concentration. To overcome the shortcomings, we have developed this high-efficiency protein precipitation kit, which is a modification of the traditional TCA method. It is simple, rapid, and highly effective. Proteins at low concentrations can be effectively precipitated and concentrated in less than 30 min.

Major features: Simple, rapid and more straightforward to use than other similar products. All steps can be performed at room temperature. It is especially useful for precipitation of protein samples with low concentration.

Components:	Protein precipitation Solution	30 ml
	Solution P	6 ml
	Washing Solution	30 ml

Shipping and storage: The product is shipped at ambient temperature and stored at RT.

Protocol (read the entire protocol prior to use)

1. Transfer the protein sample solution to a test tube such as a 1.5 ml or 2.0 ml microfuge tube. The maximum volume for 1.5 ml and 2.0 ml tubes is 0.7 ml and 1.0 ml, respectively. A test tube with a larger volume can also be used, but a larger centrifuge may be required.

2. Add equal volume of protein precipitation solution to the protein sample (for example, if the sample volume is 0.5 ml, add 0.5 ml protein precipitation solution to the tube), followed by solution P. The amount of solution P added is 1/10 of the total volume (for example, if protein solution plus protein precipitation solution equals 1.0 ml, then 100 µl solution P should be added). Mix well by vortexing for 10 to 20 seconds, and incubate at RT for 5 to 10 min (It can also be set on ice if preferred).

Important: if the downstream experiments involve Mass spectrometry, don't add solution P to avoid interferences.

2605 Fernbrook Ln N Ste A, Plymouth, MN 55447 | p: (952)400-6898 | f: (952)400-6889
info@inventbiotech.com | www.inventbiotech.com

3. Centrifuge in a microcentrifuge at top speed (about 14,000-16,000 X g) for 10 min. Pour the supernatant completely and add 0.5 ml (assume the starting protein sample is 0.5 ml) of washing solution to the tube. Invert the tube a few times.

4. Centrifuge in a microfuge at top speed for 5 min. Pour the supernatant completely, and leave at RT with the cap open in an inverted position for a few min. Repeat the washing step once if needed. Resuspend the pellet in a buffer containing detergent (such as 0.5% SDS for SDS-PAGE and 2D gel rehydration buffer). The protein concentration can be determined by the BCA kit (Pierce).

   Note: The precipitated proteins could be denatured with lost biological activities.

2605 Fernbrook Ln N Ste A, Plymouth, MN 55447 | p: (952)400-6898 | f: (952)400-6889
info@inventbiotech.com | www.inventbiotech.com