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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, lipid and other components that may interfere with downstream applications. One of the most commonly used methods is trichloroacetic acid (TCA) precipitation. This is a relatively simple and effective method. Protein precipitated by TAC method is usually denatured and in many cases the solubility of protein is reduced. A major disadvantage of traditional TCA/acetone precipitation method is its low efficiency for the samples of low protein concentration. The higher protein concentration sample precipitate much more effectively than the lower protein concentration samples. In order to overcome the shortcomings, we have developed this high efficiency protein precipitation kit, which is a modification of traditional TCA method. It is simple, rapid and highly effective. Low protein concentration samples can be effectively precipitated and concentrated in about 25-30 min. The precipitated protein can be re-dissolved readily in detergent containing buffers.

Major features: Simple, rapid and easier to use than other kit. All steps can be performed at room temperature. It is especially useful for precipitation of low protein concentration samples. The whole process can be done in about 20 min.

Components:	Protein precipitation Solution	30 ml
	Washing Solution	30 ml

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

Protocol

Prior to each use shake protein precipitation solution vigorously for about 30 seconds to mix the contents well. The solution should look white-grey in color.

1. Add protein solution that needs to be precipitated in a test tube such as 1.5 ml or 2.0 ml microfuge tube. The maximum volume for 1.5 ml and 2.0 ml tube is 0.7 ml and 1.0 ml respectively. Test tube with larger volume can also be used but a floor model of centrifuge need to be used.

2. Add equal amounts 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). Mix by vortexing for 10 to 20 second. Incubate at RT for 5 to 10 min (It can also be incubated on ice if preferred).

3. Invert the tube a few times and centrifuge in a microcentrifuge at top speed (about 14,000-16,000 X g) for 10 min. Pour out the supernatant completely and add 0.5 ml (assume the starting protein sample is 0.5 ml) washing solution to the tube. Invert the tube a few times. The amount of washing solution used depends on the volume of the protein sample. Usually 1-2 volume of the protein sample is sufficient.

4. Centrifuge in a microfuge at top speed for 5 min. Pour out the supernatant completely and leave the tube at RT with cap open for a few min. Resuspend the pellet in detergent-containing buffer such as 0.5% SDS for SDS-PAGE and 2D gel rehydration buffer. The protein concentration can be determined by BCA kit (Pierce). Note: The precipitated protein could be denatured and lost its biological activity.