

101Bio High Efficiency Protein Precipitation kit

Cat. #: P5W6 (30 ml)

Shipping and Storage: Ship and store at RT.

Shelf Life: 24 months

Product Description:

Protein precipitation is an option 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 relatively simple and effective. However, proteins precipitated by TCA method is usually denatured and in many cases the solubility of protein is reduced. Another major disadvantage of traditional TCA/acetone precipitation method is its low efficiency for the samples of low protein concentration. The higher protein concentration sample can be precipitated much more effectively than the lower protein concentration samples. In order to overcome these 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 minutes. The precipitated protein can be re-dissolved readily in detergent containing buffers.

Major Features: Simple, rapid and easier to use than other kits. 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 25 minutes.

This product is for research use only.

Product Contents (store at RT)

Component	Amount
Protein Precipitation Solution	30 ml
Washing Solution	30 ml

Protocol:

Prior to each use shake protein precipitation solution vigorously for 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 starting volume for 1.5 ml and 2.0 ml tube is 0.7 ml and 1.0 ml respectively. Larger tubes can also be used, but a bigger centrifuge is needed too (floor model centrifuge).
2. Add an 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). Mix by vortex for 10 to 20 second. Incubate at RT for **5 to 10 minutes** (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 minutes**. Pour out the supernatant completely and add an equal volume of **Washing Solution** (eg. if the starting

protein sample is 0.5 ml, add 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 volume of the protein sample is sufficient.

4. Centrifuge in a microfuge at top speed for **5 minutes**. Pour out the supernatant completely and leave the tube at RT with cap open for a few minutes. 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 method.

Note: The precipitated protein could be denatured and lost its biological activity.

Related products

Cat.#	Kit Name	Application	Protein Status	Minute
P501	Total protein kit	cells → total protein	denatured / native	1 ~ 8
P502	Total protein kit	tissues → total protein	denatured / native	1 ~ 8
P503	Membrane protein kit	cells / tissues → membrane protein	native , detergent-free	20 ~ 45
P504	Nuclear protein kit	cells / tissues → nuclear & cytosol protein	native	6 ~ 8
P505	Detergent-free kit	cells → total protein	denatured / native	5 ~ 8
P506	Detergent-free kit	Tissues → total protein	denatured / native	5 ~ 8
P507	Mitochondria kit	cells / tissues → mitochondria	native, detergent-free	25 ~ 30
P508	Plant total protein	plant tissues → total protein	denatured/native	5 ~ 8
P510	Plant detergent-free	plant tissues → total protein	native	6 ~ 8
P511	Plant chloroplast kit	plant tissues → intact chloroplast		5
P518	Plant Microsomal Membrane	plant tissues → microsomal membrane	native	1 hr
P512	Bacteria total protein	bacteria → total protein	denatured	2 ~ 3
P513	Nuclear envelope kit	cells → nuclear envelope	native	< 45
P514	Histone/DNA binding protein	cells → histone & dna binding protein	denatured	< 10
P515	Thick cell wall microbes	microbes → total protein	denatured / native	< 10
P516	Detergent-free thick cell wall	microbes → total protein	denatured / native	10
P517	Yeast Mitochondria	yeast → mitochondria	native	60
P518	Plant Microsomal Membrane	plant → microsomal membrane	native	60
P519	Gel slice recovery kit	PAGE gel → protein	denatured / native	10 ~ 20
P521	Hair & nail protein kit	hair, nail → protein	denatured	5 min. hands on
P522	Adipose protein kit	adipose → total protein	denatured / native	20
P523	Adipose fractionation	adipose → water soluble/insoluble protein	native	40
P524	Nuclei isolation kit	cells / tissues → intact nuclei	native, detergent-free	20
P525	FFPE protein kit	FFPE tissues → protein	denatured	60
P528	Endosome isolation kit	cells / tissues → endosome	denatured	20 min. hands on
P529	Adipose nuclei isolation kit	adipose tissues → nuclei & cytosol	native	30

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