ExKine™ Pro Total Protein Extraction Kit for Plant Tissues

Cat #: KTP3008 Size: 5 T/50 T

	Total Protein Extraction Kit for Plant Tissues		
REF	**Cat:** KTP3008	LOT	**Lot number:** Refer to product label
	Protein yield: 2-8 mg/mL		**Applicable samples:** Plant tissues (leaves, seeds, soft stems and roots)
	Storage: Stored at room temperature for 12 months		

Assay Principle

ExKine™ Pro Plant Tissue Total Protein Extraction Kit (column method) is a new generation of ultra-fast protein extraction tool. More and more evidences show that the most commonly used RIPA buffer may lead to random loss of protein, resulting in many difficult data that are difficult to explain. ExKine™ Pro Total Protein Extraction Kit uses centrifugal column extraction technology combined with optimized lysis buffer to extract total protein more quickly and effectively, without grinding in liquid nitrogen, making WB results more accurate. It takes only 2-8 min to extract the total protein from 50-200 mg plant tissues by using a centrifuge tube column. The yield can reach 2-8 mg/mL. This kit is suitable for other applications such as SDS-PAGE and WB.

Materials Supplied and Storage Conditions

Kit components	Size		Storage conditions
	5 T	50 T	
Denaturing Cell Lysis Buffer	2.5 mL	25 mL	RT
Protein Extraction Filter Cartridge	5	50	RT
Collection Tube with Cap	5	50	RT
Plastic Rod	1	2	RT

Materials Required but Not Supplied

- Freezing centrifuge
- Centrifugal tube
- Precision pipettes, disposable pipette tips
- Phosphate buffer (PBS)
- Vortex mixer
- Protease inhibitor

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Reagent Preparation

Denaturing Cell Lysis Buffer: Ready to use as supplied; Store at room temperature.

Assay Procedure

Note: The following steps are extracted from 50-200 mg plant tissues (leaves, seeds, soft stems and roots). The dried seed samples need to be soaked in water for 1-2 days. If the starting amount is large or small, the amount of the Denaturing Cell Lysis Buffer needs to be adjusted proportionally.

1. Filter cartridge in collection tube preparation: place Protein Extraction Filter Cartridge on Collection Tube with Cap on ice.
2. For plant leaf sample, take 50-200 mg fresh tissue, cut it, roll it up or fold to reduce the volume and put it into the filter cartridge in collection tube; for seed sample (fresh or frozen), soft stem and roots, cut it with a sharp blade put into small pieces into the filter cartridge in collection tube, grind the tissue with Plastic Rod for 50-60 times with twisting force, add 50-100 µL Denaturing Cell Lysis Buffer to the filter and continue to grind for 50-60 times.
3. Cap the filter cartridge and incubate in the ice for 1-2 min. Centrifuge at 14,000 g for 2-5 min. The supernatant of Collection Tube with Cap contains denatured total protein extract. The protein extraction is complete and can be used in downstream experiments.

Precaution

1. Protease inhibitors are not necessarily added, but if downstream experiments take longer or are preserved for longer periods after protein extraction, it is advisable to add protease inhibitors. Protein concentration was determined by BCA method, but not by Bradford method. To study protein phosphorylation, phosphatase inhibitors should be added to the lysis buffer before use.
2. Before WB, still mix the sample and loading buffer to boiling.
3. The Plastic Rod is reusable, rinse thoroughly with deionized water, and dry it with paper towel.
4. If the protein concentration is low, increase the weight of tissues or reduce the volume of Denaturing Cell Lysis Buffer.
5. Partial tissues that is not completely lysed will not affect the quality of the sample.

Recommended Products

Catalog No.	Product Name
KTD3001	Protein Quantification Kit (BCA Assay)
BMP1001	Protease Inhibitor Cocktail (100×)
BMU103-EN	SuperKine™ Enhanced Antibody Dilution Buffer
BMU102-EN	SuperKine™ West Femto Maximum Sensitivity Substrate
BMU101-EN	SuperKine™ West Pico PLUS Chemiluminescent Substrate

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.

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