T-Pro Plant Genomic DNA Mini Kit (100)

Store at RT

(RB94-PGS100) 100 preps

T-Pro Biotechnology

This product is for laboratory research ONLY and not for diagnostic use.

Description	T-Pro Plant Genomic DNA Mini Kit provides a fast and simple method to isolate total DNA (genomic DNA, mitochondrial and chloroplast) from a wide variety of plant species and tissue types. Sample are distrusted by grinding in liquid nitrogen and lysed by lysis buffer incubation. Since different plant species contain different metabolites, such as polysaccharides, polyphenolics and proteins. The protocol does not require DNA phenol extraction and alcohol precipitation. The entire procedure can be completed in 60 minutes.
Properties	- High quality total DNA in 1 hour. - No phenol, chloroform. - Ready-to-use in downstream applications.
Applications	Purified DNA are ready for direct use in PCR, Southern Blotting, Real-Time PCR, AFLP, RFLP, PADP.
Quality Control	The quality of T-Pro Plant Genomic DNA Mini Kit is tested on a lot –to-lot basis. The kit is tested by isolation of genomic DNA from 50 mg young leaves. More than 20 µg of genomic DNA could be quantified with spectrophotometer and checked by agarose gel.
Storage	T-Pro Plant Genomic DNA Mini Kit is stable for RT

T-Pro Plant Genomic DNA Mini Kit	
	RB94-PGS100
PG1 Buffer	45 ml
PGX1 Buffer	45 ml
PG2 Buffer	15 ml
PG3 Buffer *	25 ml
W1 Buffer	45 ml
W2 Buffer **	25 ml
Elution Buffer	30 ml
RNase A (10 mg/ml)	550 µl
Proteinase K ***	2 x 11 mg
GS Columns	100 pcs
Collection Tube	100 pcs

Sample size: 100 mg Plant Tissue

Yield: Up to 50 µg

Format: Spin Columns

Operation: Centrifuge or Vacuum

Operation Time: 60 Minutes

*Add 50 ml Isopropanol (96-100%) to PG3 Buffer prior to the initial use.

**Add 100 ml ethanol (96-100%) to W2 Buffer prior to the initial use.

***Add 1.1 ml ddH2O to a Proteinase K tube, vortex to dissolve. Store prepared Proteinase K at 4℃.

T-Pro Plant Genomic DNA Mini Kit

Plant Protocol

Tissue Dissociation

- **Cut off 50 mg(up to 100 mg) of fresh or frozen plant tissue or 5 mg (up to 100 mg) of dried sample.**
- **Grind the sample under liquid nitrogen to a fine powder with pestle and mortar.**
- **Transfer it into a microcentrifuge tube (not provided). For some plant samples, liquid nitrogen may not benecessary for homogenization.**

Fungal

1. Grind cell pellets collected from 0.5~1 ml fungi culture by centrifugation or 100 mg (wet weight) mycelia/spores in liquid nitrogen using a pestle.
2. Transfer grinded sample to a clean 1.5 ml microcentrifuge tube (not provided).
3. Proceed to Cell Lysis Step.

Lysis	1	Add 400 µl PG1 Buffer (if plant sample with a lot of polysaccharides, recommend use PGX1 Buffer) and 5 µl RNase A (10 mg/ml) into the sample tube and mix by vortexing. Do not mix PG1 Buffer (or PGX1) and RNase A before use.
	2	Incubate at 60°C for 15 minutes. During incubation, invert the tube every 3 minutes.
	3	Add 20 µl Proteinase K(10mg/ml) and mix by vortex, incubate at 60°C for 15 minutes. During incubation, invert the tube every 3 minutes. *At the same time, preheat required Elution Buffer (200 µl per sample) at 60°C.
	4	Add 100 µl PG2 Buffer and mix by vortexing. Incubate on ice for 5 minutes.
	5	Centrifuge for 5 minutes at full speed (13,000 rpm).
	6	Carefully transfer clarified supernatant to a new microcentrifuge tube (not provided).
DNA Binding	7	Add 1.5 volumes of PG3 Buffer (isopropanol added) to the cleared lysate and mix immediately by vortexing for 5 seconds. For example, add 750 µl PG3 Buffer to 500 µl lysate.
	8	Place a GS Column in a Collection Tube.
	9	Apply 700 µl of the mixture (including any precipitate) from previous step to the GS Column.
	10	Centrifuge at full speed (approx. 13,000 rpm) for 1 minute.
	11	Discard flow-through in the Collection Tube and apply remaining mixture to GS Column.
	12	Centrifuge at full speed (13,000 rpm) for 1 minute.
	13	Discard flow-through in the Collection Tube.
Wash	14	Add 400 µl of W1 Buffer in the GS column.
	15	Centrifuge at full speed (approx. 13,000 rpm) for 1 minute.
	16	Discard the flow-through and place the GS Column back into the Collection Tube.
	17	Add 600 µl of W2 Buffer (ethanol added) in the GS column.
	18	Centrifuge at full speed (approx. 13,000 rpm) for 1 minute.
	19	Discard the flow-through and place the GS Column back into the Collection Tube. Optional Step: Remove residue pigment If a few pigment remain on the column matrix, perform this optional step. ・After W2 Buffer wash step, add 600 µl of ethanol (96-100%) in the GS column. ・Centrifuge at 13,000 rpm for 1 minute. ・Discard the flow-through and place the GS Column back in the Collection Tube.
	20	Centrifuge again for 3 minutes at full speed to dry the column matrix.
DNA Elution	21	Transfer dried GS Column to a clean microcentrifuge tube (Not provided).
	22	Add preheated 100 µl of Elution Buffer or distilled water into the center of the column matrix. If less sample to be used, reduce the elution volume (50 µl) to increase DNA concentration.
	23	Stand for 3 minutes until Elution Buffer or distilled water is absorbed by the matrix.
	24	Centrifuge for 2 minutes at 13,000rpm to elute purified DNA.
	25	If higher DNA yield is required, repeat the DNA Elution step to increase DNA recovery and the total elution volume is about 200 µl.