Yeastern Biotech Co., Ltd

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Ver. Q0125

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Genomic DNA Extraction Kit (Plant)2.0

Cat. No.
SYG112-001
FYG112-100
FYG112-300

Genomic DNA Extraction Kit (Plant)2.0

(SYG112-001/ FYG112-100/ FYG112-300) Store at RT/4 ˚C Ver. Q0125

Sample：100 mg of fresh plant tissue
50 mg of dry plant tissue

Yield： Up to 50 µg

Contents

Item	SYG112-001 (4 preps)	FYG112-100 (100 preps)	FYG112-300 (300 preps)
PZ Buffer	2 ml	55 ml	125 ml, 30 ml
W1 Buffer	2 ml	45 ml	125 ml
W2 Buffer	300 µl x2	15 ml	25 ml x2
Elution Buffer	1 ml	10 ml	30 ml
GZ Column	4 pcs	100 pcs	300 pcs
Collection Tube	4 pcs	100 pcs	300 pcs
User Manual	1	1	1

Buffer Preparation

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

Buffer	SYG112-001 (4 preps)	FYG112-100 (100 preps)	FYG112-300 (300 preps)
W2 Buffer	300 µl x2	15 ml	25 ml x 2
Ethanol (96 - 100%)	1.2 ml x2	60 ml	100 ml x 2

Important Notes

1. Buffers provided in this system contain irritants. Wear gloves and lab coat when handling these buffers.
2. Add ethanol (96- 100 %) to W2 Buffer when first open.
3. Prepare dry bath or water bath before the operation.
4. Resolve any precipitate by warming at 37°C.

Description

The Genomic DNA Extraction Kit (Plant)2.0 is designed for rapid extraction of pure genomic DNA from fresh plant tissue or dry plant tissue. Efficiently remove cellular debris and inhibitors, this kit using column-type tube in purification process through three simple steps of binding, washing and then elution for the safe and convenient extraction of high-purity genomic DNA. The entire process can be completed in less than 1 hour without phenol/chloroform, and the final product can be used in PCR or other downstream experiments.

Additional Requirements

a. RNase A (10 mg/ml)
b. isopropanol

Purification Protocols

Step 1. Sample preparation

a. Cut off 50 mg of fresh plant tissue or dried sample.
b. Grind the sample under liquid nitrogen to a fine powder with pestle and mortar.

Step 2. Cell Lysis

a. Add 500 µl of PZ Buffer and 2.5 µl of RNase A (10 mg/ml, not provided) to the sample with pestle and mortar until it is completely dissolved.
b. Transfer the grinded sample to a clean 1.5 microcentrifuge tube (not provided).
c. Incubate the sample at 75 °C for 30 minutes. Invert the tube every 10 minutes during incubation.
d. Pre-heat the Elution Buffer or ddH_2O to 75 °C for elution step.

Step 3. Protein Removal

a. Centrifuge 14,000 x g for 5 minutes.
b. Transfer the supernatant to a clean 1.5 microcentrifuge tube (not provided).

Step 4. DNA Binding

a. Add the same volume of isopropanol to the cleared supernatant and mix immediately by vortexing for 5 seconds.
   Note : For example, add 500 µl isopropanol to 500 µl supernatant.
b. Place GZ Column with a Collection Tube.
c. Apply 700 µl of the sample mixture (including any precipitate) from step 4-a to the GZ column.
d. Centrifuge 14,000 x g for 30 seconds.
e. Discard the flow-through and place the GZ Column back in the Collection Tube.

Step 5. Wash

a. Add 400 µl of W1 Buffer to the GZ Column.
b. Centrifuge at 14,000 x g for 30 seconds.
c. Discard the flow-through and place the GZ Column back in the Collection Tube.
d. Add 600 µl of W2 Buffer (ethanol added) to the GZ Column.
e. Centrifuge at 14,000 x g for 30 seconds.
f. Discard the flow-through and return the GZ Column back to the Collection Tube.
   Note: Make sure that ethanol (96-100%) has been added into W2 Buffer when first use.

Step 6. Dry column

a. Centrifuge at 14,000 x g for 3 minutes to dry the GZ column.

Step 7. Elution

a. Combine the GZ Column with a 1.5 ml eppendorf (not provided)
b. Add 50-90 µl of preheated Elution Buffer (75 °C) into the center of the column matrix.
c. Stand 75 °C for 3 minutes.
d. Centrifuge at 14,000 x g for 2 minutes to elute purified DNA.

Step 7. Store DNA

a. Store the DNA fragment at 4°C or -20°C.

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