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HiYield™ 96-Well Genomic DNA Isolation Kit (Plant)

Cat. No.:	YGL96B-2	YGL96B-4	YGL96B-10
Product Name:	HiYield™ 96-Well Genomic DNA Isolation Kit (Plant)		
Reactions:	2	4	10
Sample:	Fresh or dry plant tissue		
Yield:	Up to 80ug for 100mg of fresh plant tissue		
Format:	96-Well Plate & Reagent Format		
Operation:	Centrifuge		
Operation Time:	Within 90 Minutes		

Description

HiYield™ 96-Well Genomic DNA Isolation Kit (Plant) enables 3-steps operations to isolate total DNA (including genomic, mitochondrial and chloroplast DNA) from plant tissue and cells. Samples are initially disrupted by grinding in liquid nitrogen, followed by lysis treatment with RNase A. The unique GL Buffer is able to lyse most common plant samples and also samples high in polysaccharides. DNA phenol extraction is not required and the entire procedure can be completed in 1.5 hours. The extracted total DNA is ready for use in PCR, Real-time PCR, Southern Blotting, Mapping and RFLP.

Features

1. Convenient, scalable purification procedure.
2. Reproducible recoveries for constant results.
3. Complete removal of all contaminants for reliable downstream applications.

Contents

ITEM	YGL96B-2	YGL96B-4	YGL96B-10
GL Buffer*	80 ml	160 ml	400 ml
RNase A (50mg/ml)**	50 ul	100 ul	250 ul
2ml Collection Plate***	4 pcs	8 pcs	20 pcs

*If GL Buffer contains sediment, incubate at 65ºC for 10 minutes to dissolve.
**Add RNase A to GL Buffer prior to use. Add 0.5 µl of RNase A to 1 ml of GL Buffer.
***Each preparation requires 2 collection plates.

Applications

The extracted total DNA is ready for use in PCR, Real-time PCR, Southern Blotting, Mapping and RFLP.

Quality Control

The quality of HiYield™ 96-Well Genomic DNA Isolation Kit (Plant) is tested on a lot-to-lot basis by isolation of Genomic DNA from 100 mg of fresh plant leaf. Genomic DNA is quantified with a spectrophotometer and the yield of Genomic DNA is more than 20 ug. The purified DNA is checked by electrophoresis.

Caution

The components contain irritants. During operation, always wear a lab coat, disposable gloves, and protective goggles.

Protocol

Additional Requirements:
Centrifugation system for 96-well plates, Absolute Ethanol for preparing 70% Ethanol in water, Isopropanol, TE buffer, Mortar and Pestle.

Optional requirements:
If a larger sample volume is required, scale the GL Buffer proportionately.

Things to do before starting:
Add RNase A to GL Buffer immediately prior to use. Add 0.5 µl of RNase A to 1 ml of GL Buffer.

Step 1 Tissue Dissociation	★Cut off 100 mg of fresh plant issue or 50 mg of dry plant tissue. Process the samples and freeze in liquid nitrogen. ★Grind the sample under liquid nitrogen to a fine powder using a mortar and pestle. ★Add 50 mg of the plant powder to each well of a **2 ml Collection Plate**.
Step 2 Lysis	★Add RNase A to GL Buffer immediately prior to use. Add 0.5 µl of RNase A to 1 ml of GL Buffer. ★Add **400 µl of GL Buffer** to each well. Mix and let float in a water bath at 65ºC for 50 minutes. ★Centrifuge at full speed for 15 minutes at 2,000 x g. During centrifugation, add 300 µl of Isopropanol to each well of a new **2 ml Collection Plate**. ★Following centrifugation, transfer 300 µl of the supernatant to the new **2 ml Collection plate** containing 300 µl of Isopropanol/well.
Step 3 Nucleic Acid Precipitation	★Mix the sample gently and let stand for at least 5 minutes at room temperature (standing time can be increased to improve DNA precipitation). ★Centrifuge at full speed for 45 minutes. ★Pour off the supernatant and wash the pellet with 200-300 µl of 70% ethanol. ★Remove the 70% ethanol by pipetting and let air dry to allow the 70% ethanol to evaporate completely. ★Resuspend the pellets in 50-100 µl of 1 x TE buffer or water.

Troubleshooting

Problem	Possible Reasons/Solution
Low Yield	**Too much sample was used** ★Reduce sample volume in each well and make sure to grind the sample completely.
	Incomplete Lysis ★Extend water bath incubation time in the Lysis Step.
	Incomplete DNA Precipitation ★Increase standing time to improve DNA precipitation.