MagicPure® Plant Genomic DNA Kit

Please read the datasheet carefully prior to use

Cat. No. EC102

Version No. Version 1.1

Storage: at 15°C-30°C for one year.

Description

This kit uses magnetic beads with a unique separation function and a unique buffer system, which is suitable for the efficient extraction of genomic DNA from a variety of plant tissues. The extracted DNA is suitable for various routine experiments in molecular biology, including enzyme digestion, PCR, Southern Blot and other experiments. The whole process is safe and convenient, and the extracted genomic DNA has high integrity, high purity, stable and reliable quality, and is suitable for high-throughput automated nucleic acid extractor adopting magnetic rod technology.

Highlights

• Simple operation and fast extraction.

• High yield and high purity.

Kit Contents

Component	EC102-01/11 (50 rxns)
Lysis Buffer 48 (LB48)	25 ml
Precipitation Buffer 48 (PB48)	15 ml
Clean Buffer 48 (CB48)	25 ml
Wash Buffer 48 (WB48)	12 ml
Elution Buffer (EB)	10 ml
RNase A (20 mg/ml)	1.2 ml
Magnetic Plant Beads	1.3 ml
Magnetic Stand (16 hole)	1 each/-

Sample Requirements

• Use fresh plant leaves.

• Plant leaves can be snap-frozen in liquid nitrogen and stored at -70°C for no more than 30 days.

• Avoid repeated freeze-thaw cycles.

Procedures

Before starting, add the corresponding volumes of 100% ethanol into CB43 and WB43.

Component	EC102
Clean Buffer 48 (CB48)	25 ml
Wash Buffer 48 (WB48)	48 ml

All magnetic separations should be performed at room temperature. Vortex the magnetic beads thoroughly before use.

1. Take about 100 mg of fresh plant tissue or about 30 mg of dry tissue. Add liquid nitrogen to fully grind.
2. Add 400 µl of LB48 and 20 µl of RNase A. Invert and mix quickly. Place the microcentrifuge tube in a 60°C water bath for 15 minutes. Invert the microcentrifuge tube during the water bath to mix the samples several times.
3. Centrifuge at 12,000 rpm (~13,400 x g) for 5 minutes and transfer supernatant to a new microcentrifuge tube.
4. Add 200 µl of PB48, mix quickly by inverting, and incubate on ice for 5 minutes. Centrifuge at 12,000 rpm (~13,400 × g) for 5 minutes. Transfer the supernatant to a new microcentrifuge tube, then add 450 µl of isopropanol and 25 µl of Magnetic Plant Beads (vortex the beads thoroughly before use).

5. Vortex the mixture for 1 minute, and stay still for 3 minutes.
6. Repeat step 5 three times.
7. Place the tube on a magnetic stand to perform magnetic separation. Carefully remove the supernatant without disturbing the beads. (Magnetic separation tip: After placing the tube on the magnetic stand, gently rotate it left and right. Once the beads gather against the tube wall near the magnet, gently invert the magnetic stand 2–3 times to ensure beads on the lid collect on the wall, and stay still for 30 seconds.)
8. Remove the tube from the magnetic stand and add 800 µl of CB48 (ensure absolute ethanol has been added before use). Vortex for 1 minute, perform magnetic separation and remove the supernatant without disturbing the beads.
9. Remove the tube from the magnetic stand and add 500 µl of WB48 (ensure absolute ethanol has been added before use). Vortex for 1 minute, perform magnetic separation and remove the supernatant without disturbing the beads.
10. Repeat step 9 once more. Remove the liquid as thoroughly as possible.
11. Place the tube on the magnetic stand and air-dry at room temperature for 10–15 minutes.
12. Remove the tube from the magnetic stand, add 50–100 µl of elution buffer (EB), and mix thoroughly by pipetting up and down. Incubate at 65°C for 5 minutes, mixing by pipetting up and down twice during incubation.
13. Place the tube on the magnetic stand for magnetic separation. Carefully transfer the supernatant (excluding the magnetic beads) to a sterile 1.5 ml microcentrifuge tube, avoiding aspiration of the beads. Store the DNA at -20°C.

Notes

- To ensure the quality of the extracted nucleic acids, avoid repeated freeze-thaw cycles of the samples.
- Use nuclease-free sterile microcentrifuge tubes and pipette tips to prevent degradation of plant genomic DNA.
- Isopropanol and absolute ethanol should be prepared by user.

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