Magnetic Beads gDNA Kit (Plant)

For research use only

Catalogue Numbers	Quantity
MP048	48 rxns
MP096	96 rxns

CERTIFICATE NO. QAIC/TW/50077

ISO 9001:2008 QMS

Introduction

The Magnetic Beads Genomic DNA Extraction Kit Plant was designed specifically for efficient genomic DNA purification from various plant species. DNA is bound to the surface of the magnetic beads and released using a proprietary buffer system. The Magnetic Beads Genomic DNA Extraction Kit Plant can be easily adapted to automated magnetic bead separation instruments and workstations. The purified DNA can be used in qPCR and a variety of other downstream applications.

Quality Control

The quality of the The Magnetic Beads Genomic DNA Extraction Kit Plant is tested on a lot-to-lot basis according to Geneaid's ISO-certified quality management system by isolating genomic DNA from a 50 mg *Arabidopsis* sample.

Advantages

- High Yield: 1-20 µg of Genomic DNA
- High Quality DNA: A260/A280 = 1.8-1.9
- Easily adapted to automated magnetic bead separation instruments and workstations
- Sample: 10-50 mg of fresh or frozen plant tissue
- Operation time: within 30 minutes (manual)
- Storage: dry at room temperature (15-25ºC) for up to 1 year, RNase A should be stored at 2-8ºC for up to 6 months

Caution

During operation, always wear a lab coat, disposable gloves, protective goggles and (anti-fog) procedure mask.

Components and Storage

Item	Volume	Product	Shipping	Storage
MP1 Buffer	1.5 ml	MP004	room temperature	dry at room temperature (15-25ºC)
	15 ml	MP048		
	30 ml	MP096		
MP2 Buffer[1] (Add Isopropanol)	3 ml (0.5 ml)	MP004	room temperature	dry at room temperature (15-25ºC)
	34 ml (6 ml)	MP048		
	68 ml (12 ml)	MP096		
RNase A (10 mg/ml)	25 µl	MP004	room temperature	dry at 2-8ºC
	250 µl	MP048		
	550 µl	MP096		
MW1 Buffer	2 ml x 2	MP004	room temperature	dry at room temperature (15-25ºC)
	45 ml	MP048		
	60 ml	MP096		
MW2 Buffer[2] (Add Ethanol)	1 ml (4 ml)	MP004	room temperature	dry at room temperature (15-25ºC)
	12.5 ml (50 ml)	MP048		
	25 ml (100 ml)	MP096		
MP Magnetic Beads	220 µl	MP004	room temperature	dry at room temperature (15-25ºC)
	2.5 ml	MP048		
	5 ml	MP096		
Elution Buffer	1 ml	MP004	room temperature	dry at room temperature (15-25ºC)
	10 ml	MP048		
	20 ml	MP096		

[1]Add Isopropanol (see the bottle label for volume) to MP2 Buffer then mix by shaking for a few seconds. Check the box on the bottle. Be sure and close the bottle tightly after each use to avoid Isopropanol evaporation.

[2]Add absolute ethanol (see the bottle label for volume) to MW2 Buffer then mix by shaking for a few seconds. Check the box on the bottle. Be sure and close the bottle tightly after each use to avoid ethanol evaporation.

Magnetic Beads Genomic DNA Extraction Kit Plant Protocol Procedure

IMPORTANT BEFORE USE:

1. Vortex magnetic beads to ensure they are in suspension prior to initial use.
2. Be sure and allow magnetic beads to disperse completely during the binding, wash and elution steps.
3. Add Isopropanol (see the bottle label for volume) to MP2 Buffer then mix by shaking for a few seconds. Check the box on the bottle. Be sure and close the bottle tightly after each use to avoid Isopropanol evaporation.
4. Add absolute ethanol (see the bottle label for volume) to MW2 Buffer then mix by shaking for a few seconds. Check the box on the bottle. Be sure and close the bottle tightly after each use to avoid ethanol evaporation.

Additional requirements: absolute ethanol, microcentrifuge tubes, 2 ml centrifuge tube (optional), magnetic separator, isopropanol

1. Cut off **10-50 mg of fresh or frozen plant tissue**. Do not use more than 50 mg of plant tissue per reaction. Homogenize plant tissue samples using one of the following methods: A. Transfer plant tissue to a 2 ml centrifuge tube containing stainless steel beads then cool the tube in liquid nitrogen. Homogenize the sample with a TissueLyser, Disruptor Genie or similar. B. Add the plant sample and liquid nitrogen to a mortar and grind thoroughly using a pestle. Transfer the powder to a new 1.5 ml microcentrifuge tube.

2. Add **300 µl of MP1 Buffer and 5 µl of RNase A (10mg/ml)** and mix well by vortex. Incubate the lysate at 60°C for 10 minutes. During incubation, invert the tube occasionally. Centrifuge the sample at 3,000 x g for 2 minutes to remove cell debris. Transfer **200 µl of supernatant** to a new 1.5 ml microcentrifuge tube.

3. Add **500 µl of MP2 Buffer (make sure isopropanol was added)** then mix well by vortex. Vortex **MP Magnetic Beads** for 10 seconds to ensure they are kept in suspension. Add **50 µl of MP Magnetic Beads**. Gently shake the tube for 5 minutes to mix. Be sure **MP Magnetic Beads** disperse completely. Place the tube in a magnetic separator for 30 seconds or until **MP Magnetic beads** have pelleted. Remove and discard the supernatant.

4. **Add 600 µl of MW1 Buffer** and gently shake the tube for 1 minute. Place the tube in a magnetic separator for 30 seconds or until **MP Magnetic Beads** have pelleted. Remove and discard the supernatant. **Add 600 µl of MW2 Buffer (make sure ethanol was added)** and gently shake the tube for 1 minute. Place the tube in a magnetic separator for 30 seconds or until **MP Magnetic Beads** have pelleted. Remove and discard the supernatant. **Add 600 µl of MW2 Buffer (make sure ethanol was added)** and gently shake the tube for 1 minute. Place the tube in a magnetic separator for 30 seconds or until **MP Magnetic Beads** have pelleted. Remove and discard the supernatant.

5. Incubate the tube with the cap open at 60ºC for 3 minutes to dry the MP Magnetic Beads. **Add 50–200 µl of Elution Buffer**. Mix the sample by pipetting then incubate at room temperature for 3 minutes. During incubation, keep the **MP Magnetic Beads** in suspension by mixing. Place the tube in a magnetic separator for 30 seconds or until **MP Magnetic Beads** have pelleted. Carefully transfer the supernatant containing the purified DNA to a clean 1.5 ml microcentrifuge tube.