GET™ Plant DNA Template-Mag

Genomic Efficient Technology for Plant DNA Template based on purification with silica magnetic beads

(Cat. # 786-1728, 786-1729)

INTRODUCTION

GET™ Plant DNA Template-Mag is the kit belonging to our series of kits based on our Genomic Efficient Technology (GET) for purification of DNA templates.

GET™ is based on a highly efficient Genomic lysis buffer that liberates nucleic acid from cellular protein complexes, making nucleic acids free and available for purification in pure form. Free nucleic acids, DNA templates, are immobilized, in the presence of high concentration of chaotropic agents, on silica surface. Following the capture of DNA template on the silica membrane or beads, a series of washing steps removes interfering impurities. In the final step, pure DNA template is eluted in concentrated form with GET Elution Buffer.

The GET™ Plant DNA Template-Mag is based upon the principle of binding of nucleic acids on silica beads with magnetic core in presence of chaotropic salts. Nucleic acids are bound to the silica magnetic beads under high concentrations of chaotropic salts and the impurities are removed during the wash steps (Fig:1). The DNA extraction is rapid with less than 15-30 minutes hands- on time.

The eluted DNA template is highly pure and does not require any further processing, making it suitable for a wide variety of applications including PCR, library construction, southern blotting, SNP analysis and molecular diagnostic assays.

The kit is suitable for 50 preps (Cat. # 786-1728) or 100 preps (Cat. # 786-1729) of 10-50mg plant tissue.

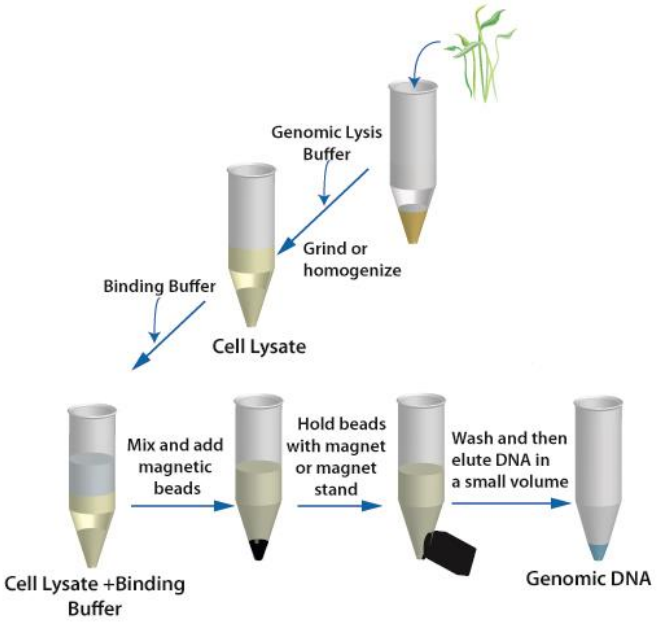


Fig:1

ITEM(S) SUPPLIED

Description	Cat. # 786-1728 50 preps	Cat. # 786-1729 100 preps
Genomic Lysis Buffer	30 ml	2 x 30 ml
GET Binding Buffer	50 ml	2 x 50 ml
Longlife™ Proteinase K	0.5 ml	0.5 ml
GET Silica Magnetic Beads	2.5 ml	2 x 2.5 ml
GET Wash I	30 ml	2 x 30ml
GET Wash II	20ml	2 x 20ml
GET Elution Buffer	10ml	10ml

STORAGE CONDITION

The kit is shipped at ambient temperature. Upon arrival, store the kit components as recommended on the label. The kit components are stable for 1 year, if stored as recommended.

ADDITIONAL ITEMS REQUIRED

- Magnetic stand (Cat. # 786-888) or a magnet

- Ethanol, >90% and 70%
- Nuclease free 1.5 ml microfuge tubes
- **Optional**: LongLife™ RNase (Cat. # 786-040)

PREPARATION BEFORE USE

1. Add 18 ml of molecular grade ethanol to 30 ml GET Wash I bottle and check the box on the bottle label to indicate ethanol has been added.
2. Add 80ml molecular grade ethanol to the GET Wash II bottle (20 ml) and check the box on the bottle label to indicate ethanol has been added.
3. Equilibrate GET Elution Buffer to 70°C.

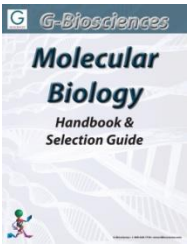
PROTOCOL

1. Transfer 10-50mg finely ground dried tissue, frozen tissue or fresh leave tissue to a microcentrifuge tube.
   NOTE: *Most plant tissues are best prepared by freezing in liquid nitrogen. Grinding samples in liquid nitrogen to a fine powder and quickly add to an appropriate volume of Genomic Lysis Buffer.*
2. Add 200µl Genomic Lysis Buffer.
3. If ground, vortex for 5 seconds; if unground, homogenize the sample with a microfuge pestle until a homogenous suspension is acquired, approximately 15-30 strokes.
4. Add 5µl Longlife™ Proteinase K suspension into the sample and incubate at 55°C-60°C for 1 hr.
   NOTE: *Before use, Invert the Longlife™ Proteinase K tube 3-4 times to mix the enzyme suspension, then remove an aliquot for use.*
5. Centrifuge the tube for 5 minutes at 5000 x g and transfer the clear supernatant to a clean tube. Add 400 µl of GET Binding Buffer and vortex to mix.
6. Add 50 µl of Silica Magnetic Beads to sample tube and gently invert 4-5 times to mix. Incubate the sample for 5 minutes with gentle mixing on rotor at room temperature.
   NOTE: *Do not vortex or shake the sample containing silica magnetic beads vigorously.*
7. Place the sample tube on magnetic stand or use magnet to immobilize the beads at one end of the tube.
8. Gently remove and discard the supernatant without disturbing the beads.
9. Remove the tube from magnetic stand or magnet and add 0.5ml GET Wash I to the sample tube and invert the tube gently 4-5 times to mix.
10. Place the sample tube on magnetic stand or use magnet to immobilize the beads at one end of the tube.
11. Gently remove and discard the supernatant without disturbing the beads.
12. Remove the tube from magnetic stand or magnet and add 0.5ml GET Wash II to the tube and invert the tube gently 4-5 times to mix.

13. Place the sample tube on magnetic stand or use magnet to immobilize the beads at one end of the tube.
14. Gently remove and discard the supernatant without disturbing the beads.
15. Repeat step 12-14.
16. Ensure all the liquid is removed from the magnetic beads. Air dry the beads for 5-20 minutes.
17. Add 50 µl of prewarmed GET Elution Buffer to the magnetic beads and resuspend the beads complex by brief vortex or shaking. Incubate for 15 minutes with gentle mixing on rotor at room temperature.
18. Place the sample tube on magnetic stand or use magnet to immobilize the beads at one end of the tube. Transfer the supernatant in a 1.5 ml nuclease free tube.
***NOTE**: Check the DNA eluted for recovery. If recovery is poor, add 25-50µl prewarmed (50-60°C) GET Elution Buffer to the magnetic beads and repeat steps 17-18. Combine with previous elution.*
19. ***Optional***: Removal of RNA. Invert the LongLife™ RNase vial 3-4 times to uniformly suspend the enzyme mix. Add 1µl LongLife™ RNase per 50 µl of eluted DNA. Incubate at room temperature for 15 minutes. Store the DNA at 4°C or -20°C until use.

RELATED PRODUCTS

Download our Molecular Biology Handbook.



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