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A Geno Technology, Inc. (USA) brand name

OmniPrep™ for Plant

For High Quality Genomic DNA Extraction From Fresh or Frozen Plant Tissue

(Cat. # 786-397)

INTRODUCTION

The OmniPrep™ for Plant kit isolates high quality genomic DNA from plant samples, including fresh and frozen tissue. The kit isolates high purity (A_{260}/A_{280} ratios of 1.7 to 2) DNA between 100-200kbp and the yield is 0.5-3µg/mg plant tissue. If used according to the protocols this kit purifies DNA from 20gm plant tissue.

ITEM(S) SUPPLIED (Cat. # 786-397)

Description	Size
Genomic Lysis Buffer	100ml
DNA Stripping Solution	10ml
Precipitation Solution	30ml
Mussel Glycogen (10mg/ml)	1ml
TE Buffer	20ml
Longlife™ RNase (5mg/ml; >60U/mg)	0.5ml
Longlife™ Proteinase K (5mg/ml)	2 x 0.5ml

STORAGE CONDITIONS

The kit is shipped at ambient temperature. Upon arrival, store the kit components as recommended on the label.

ADDITIONAL ITEMS REQUIRED

- Chloroform
- Isopropanol
- 70% Ethanol

PREPARATION BEFORE USE

Proteinase K Solution

To avoid repeated freezing-thaw, dispense the Proteinase K solution into aliquots of 30µl/tube and freeze at -20°C.

Genomic Lysis Buffer & DNA Stripping Solution

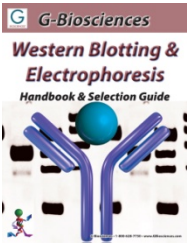
If a precipitate forms due to cold storage allow to warm to room temperature until precipitate dissolves.

PROTOCOL FOR PLANT TISSUE (FRESH OR FROZEN)

1. 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 Lysis Buffer.
2. Add 50-100mg finely ground dried tissue, frozen tissue or fresh leave tissue to a microcentrifuge tube containing 500µl 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 30-60 strokes.
4. Incubate the sample at 65°C for 60 minutes with periodic inversions.
   OPTIONAL: *For maximum DNA recovery, add 1µl Proteinase K solution for every 100µl Lysis Buffer and incubate at 60°C for 1-2 hours. Invert the tube periodically each hour. This step will digest hard to handle tissues and significantly improve the yield.*
5. Allow the sample to cool to room temperature and add 200µl chloroform and mix by inverting the tube several times.
6. Centrifuge for 10 minutes at 14,000xg and carefully remove the upper phase to a clean microcentrifuge tube.
7. Add 50µl DNA Stripping Solution to the sample and invert several times to mix. Incubate the sample for 5-10 minutes at 60°C.
8. Add 100µl Precipitation Solution and mix by vortexing at maximum speed for 20 seconds. A white precipitate should be produced, if not add 50µl aliquots of Precipitation Solution until a white precipitate forms.
   NOTE: *For high polysaccharide samples incubate sample on ice for 15 minutes.*
9. Centrifuge the sample at 14,000xg for 5 minutes.
10. Transfer the supernatant to a clean tube and precipitate the genomic DNA with 500µl isopropanol. Invert the tubes 10 times to precipitate the DNA.
    OPTIONAL: *For increased DNA recovery, add 2µl Mussel Glycogen as a DNA carrier.*
11. Centrifuge at 14,000xg for 5 minutes to pellet genomic DNA. Remove the supernatant.
12. Add 700µl 70% ethanol to the tube and invert several times to wash the DNA pellet. Centrifuge for 1 minute at 14,000xg. *In some samples, the pellet may be hard to see at this point and will be loosely attached to the tube.*
13. Decant or pipette off the ethanol wash. Invert the tube on a clean absorbent surface for several minutes to allow any excess ethanol to drain away. Do not let the pellet dry completely or it will be difficult to rehydrate.
14. Add 50µl TE Buffer to the pellet. Incubate at room temperature for at least 15 minutes to rehydrate. Incubating the tube at 55-60°C will speed up rehydration. Incubate for 5-60minutes.
    OPTIONAL: *1µl LongLife™ RNase for every 100µl TE Buffer can be added at this stage.*
15. Store DNA at 4°C, for long-term storage store at -20°C or -80°C.

RELATED PRODUCTS

Download our Western Blotting Handbook.



http://info.gbiosciences.com/complete-western-blot-handbook--selection-guide

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