G-Biosciences ♦ 1-800-628-7730 ♦ 1-314-991-6034 ♦ technical@GBiosciences.com

A Geno Technology, Inc. (USA) brand name

XIT™ Genomic DNA from Plant Tissue

For the Isolation of Genomic DNA From Fresh or Frozen Tissue

(Cat. # 786-297, 786-298)

INTRODUCTION

The XIT™ Genomic DNA from Plant Tissue kit is designed for the isolation of genomic DNA from fresh or frozen plant tissue. The XIT™ kit uses the principle of cell lysis, protein digestion and precipitation and finally DNA precipitation to isolate high quality genomic DNA.

XIT™ Genomic DNA from Plant Tissue kit protocol is designed to use 10-100mg plant tissue, however the protocol can be easily adapted for larger tissue sample sizes. The purified DNA has an A_{260}/A_{280} ratio between 1.8-2 and has yields ranging between 1-5µg/mg depending on plant species.

ITEM(S) SUPPLIED

Description	Cat # 786-297 For 2.5g tissue	Cat # 786-298 For 25g tissue
XIT™ Lysis Buffer	10ml	100ml
LongLife™ Proteinase K	0.5ml	12.5ml
XIT™ Protein Precipitation Buffer	2.5ml	25ml
TE Buffer	1.5ml	20ml
LongLife™ RNase	0.5ml	0.5ml

STORAGE CONDITIONS

The kit is shipped at ambient temperature. Upon arrival, store the LongLife™ Proteinase K and LongLife™ RNase at -20°C, store all other kit components at room temperature. The kit components are stable for 1 year, if stored properly.

ADDITIONAL ITEMS REQUIRED

Isopropanol, 70% ethanol

PREPARATION BEFORE USE

1. Preheat a waterbath or heating block to 55°C.
2. Equilibrate TE Buffer to 50-60°C.

PROTOCOL

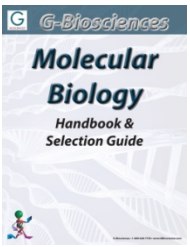
1. For optimal yield, freeze 10-100mg plant tissue in liquid nitrogen and quickly grind in liquid nitrogen with a pestle and mortar. Keep the tissue on ice at all times.
   NOTE: *If liquid nitrogen is not available, freeze the tissue and rapidly grind or homogenize on ice.*
   NOTE: *For efficient grinding, we recommend G-Biosciences' EZ-Grind™ (Cat. # 786-139), a high efficient grinding resin with matching pestle and tubes.*

2. Transfer the ground or homogenized tissue to a 1.5ml microfuge tube and add 400µl XIT™ Lysis Buffer. If large clumps are visible grind the tissue further in the presence of the lysis buffer.
3. Add 20µl LongLife™ Proteinase K to the tube and mix by inverting the tube 10-20 times. Incubate at 55°C overnight for maximal yield. Invert the tube periodically during the incubation.
4. Add 90µl XIT™ Protein Precipitation Buffer to the sample and mix by inverting the tube 10-20 times.
5. Centrifuge at 16,000g for 5 minutes. Carefully, transfer the supernatant to a fresh tube.

   NOTE: *The supernatant should be clear. If not, repeat the centrifugation.*
6. Add 400µl isopropanol to the supernatant and mix by gently inverting the sample at least 20-25 times.
7. Centrifuge at 14,000rpm for 5 minutes.
8. Discard the supernatant and use a pipette to carefully remove remaining liquid without disturbing the pellet.
9. Add 200µl 70% ethanol and invert the tube twice to wash the pellet.
10. Centrifuge at 14,000rpm for 10 minutes.
11. Discard the supernatant and drain the tube on a piece of clean absorbent paper. Allow to air dry for 15 minutes.
12. Add 50µl prewarmed TE buffer and 1µl LongLife™ RNase to remove the RNA (if required).
13. Rehydrate the genomic DNA by incubating at 55-65°C for one hour, followed by an overnight incubation at room temperature to ensure complete genomic DNA hydration.
14. Store DNA at 4°C, for long term storage store at -20 or -80°C.

RELATED PRODUCTS

Download our Molecular Biology Handbook.



http://info.gbiosciences.com/complete-molecular-biology-handbook/

For other related products, visit our website at www.GBiosciences.com or contact us.

Last saved: 8/1/2012 CMH

www.GBiosciences.com