Yeastern Biotech Co., Ltd

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Ver. Q0125

Address: 6F-3, 23 Lane 169, Kang Ning St., Shijr, Taipei, 22180 Taiwan.
Tel: +886-2-2695-3922 **Fax:** +886-2-2695-3979
Email: yeastern@yeastern.com **Website:** www.yeastern.com

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Genomic DNA Extraction Kit (Tissue)2.0

Cat. No.
SYG111-001
FYG111-100
FYG111-300

Genomic DNA Extraction Kit (Tissue)2.0

(SYG111-001/ FYG111-100/ FYG111-300) Store at RT/4 ˚C Ver. Q0125

Sample：30 mg of fresh animal tissue
25 mg of paraffin-embedded tissue

Yield： Up to 50 µg

Contents

Item	SYG111-001 (4 preps)	FYG111-100 (100 preps)	FYG111-300 (300 preps)
T1 Buffer	1.5 ml	35 ml	95 ml
T2 Buffer	0.5 ml	12 ml	35 ml
W1 Buffer	2 ml	45 ml	125 ml
W2 Buffer	300 µl x 2	15 ml	25 ml x2
Elution Buffer	1 ml	10 ml	30 ml
GZ Column	4 pcs	100 pcs	300 pcs
Collection Tube	4 pcs	100 pcs	300 pcs
User Manual	1	1	1

Buffer Preparation

- **Add ethanol (96-100%) to the W2 Buffer prior to first use.**

Buffer	SYG111-001 (4 preps)	FYG111-100 (100 preps)	FYG111-300 (300 preps)
W2 Buffer Ethanol (96 - 100%)	300 µl x 2 1.2 ml x 2	15 ml 60 ml	25 ml x 2 100 ml x 2

Important Notes

1. Buffers provided in this system contain irritants. Wear gloves and lab coat when handling these buffers.
2. Add ethanol (96- 100 %) to W2 Buffer when first open.
3. Prepare dry bath or water bath before the operation.
4. Resolve any precipitate by warming at 37°C.

Description

The Genomic DNA Extraction Kit (Tissue)2.0 is designed for rapid extraction of pure genomic DNA from fresh animal tissue or paraffin-embedded tissue. Efficiently remove cellular debris and inhibitors, this kit using column-type tube in purification process through three simple steps of binding, washing and then elution for the safe and convenient extraction of high-purity genomic DNA. The entire process can be completed in less than 1 hour without phenol/chloroform, and the final product can be used in PCR or other downstream experiments.

Additional Requirements

For General procedure

a. Proteinase K (10 mg/ml)
b. Absolute ethanol

For Paraffin-Embedded Tissue:

a. Xylene

Purification Protocols

Step 1. Sample preparation

For Fresh Tissue

a. Cut off 30 mg of fresh animal tissue.
b. Grind the sample under liquid nitrogen to a fine powder with pestle and mortar.
c. Transfer to a 1.5 ml tube.

For Paraffin-Embedded Tissue

a. Slice up to 25 mg of paraffin-embedded tissue and transfer to a 1.5 ml tube.
b. Add 1 ml xylene (not provided) and vortex vigorously and incubate at room temperature for 10 minutes.
c. Vortex every 2 minutes during incubation.
d. Centrifuge 3 minutes at 14,000 x g. Remove the supernatant.
e. Add 1 ml absolute ethanol (not provided) and mix by vortexing.
f. Centrifuge 3 minutes at 14,000 x g. Remove the supernatant.
g. Repeat step (e-f) one more time.
h. Open the tube and incubate at the 37 °C for 15 minutes.

Step 2. Cell Lysis

a. Add 300 µl of T1 Buffer and 20 µl of proteinase K (10 mg/ml, not provided) to the sample.
b. Incubate the sample at 60 °C for 30 minutes until the sample lysate is clear. Invert the tube every 5 minutes during incubation.
c. Pre-heat the Elution Buffer at 75 °C.

Optional step:

a. Add 5 µl of RNase A (10 mg/ml, not provided) to sample lysate and mix by vortexing.
b. Incubate at room temperature for 5 minutes.

If RNA-free genomic DNA is required, perform this optional step.

Step 3. Protein Removal

a. Add 100 µl T2 Buffer to the sample and shake vigorously.
b. Centrifuge 14,000 x g for 3 minutes.
c. Add 300 µl absolute ethanol and shake vigorously.

Step 4. DNA Binding

a. Place GZ Column with a Collection Tube.
b. Transfer the sample mixture to the GZ Column and centrifuge at 14,000 x g for 30 seconds.
c. Discard the flow-through and place the GZ Column back in the Collection Tube.

Step 5. Wash

a. Add 400 µl of W1 Buffer to the GZ Column.
b. Centrifuge at 14,000 x g for 30 seconds.
c. Discard the flow-through and place the GZ Column back in the Collection Tube.
d. Add 600 µl of W2 Buffer (ethanol added) to the GZ Column.
e. Centrifuge at 14,000 x g for 30 seconds.
f. Discard the flow-through and return the GZ Column back to the Collection Tube.

Note: Make sure that ethanol (96-100%) has been added into W2 Buffer when first use.

Step 6. Dry column

a. Centrifuge at 14,000 x g for 3 minutes to dry the GZ column.

Step 7. Elution

a. Combine the GZ Column with a 1.5 ml eppendorf (not provided).
b. Add 50-90 µl of preheated Elution Buffer (75 °C) into the center of the column matrix.
c. Stand 75 °C for 3 minutes.
d. Centrifuge at 14,000 x g for 2 minutes to elute purified DNA.

Step 7. Store DNA

a. Store the DNA fragment at 4°C or -20°C.

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