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MagaBio plus Plant Genomic DNA Purification Kit

Kit Components

Cat#	BSC10S1E	BSC10S1B	BSC10M1B
Components	**32 Tests**	**50 Tests**	**100 Tests**
RNase A Solution	32μL	50μL	100μL
LP Buffer	14.4 mL	22.5mL	45mL
LP plus Buffer	14.4 mL	22.5mL	45mL
DA Buffer	4.8 mL	7.5mL	15mL
Binding Buffer	96 well pre-packed plate 2 pieces	26.25mL	52.5mL
G Binding Buffer		25mL	50mL
Wash Buffer		6.4mLx 2 (add 25.6mL absolute ethanol before use)	12.8mLx 2 (add 51.2mL absolute ethanol before use)
Elution Buffer		10 mL	20 mL
MagaBio Reagent		0.75 mL	1.5 mL
Handbook V1.0	1	1	1

Storage

1. The kit can be transported at room temperature.
2. All reagents are stored at 2-8 ℃.
3. All reagents are valid for 12 months if stored properly.

Introduction

The kit provides a very simple, fast and cost effective technique to isolate high quality DNA. Using one simple protocol, high yield of purified DNA can be isolated from plant. MagaBio sample processing is based on proprietary magnetizable particles--MagaBio Reagent. The pure DNA can be applied extensively in PCR, Real-time PCR,sequencing, Southern hybridization, mutant analysis, SNP and the others.

According to the special interaction, use MagaBio nucleic acid separation system with a general protocol---sample processing, MagaBio adsorption, washing and elution, and can go high-throughput.

MagaBio plus Plant Genomic DNA Purification Kit use manual

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Principle and Advantage

DNA in the sample is released by LP Buffer or LP plus Buffer. Released DNA is bound exclusively and specifically to the MagaBio Reagent. DNA bound to Magnetic particles are captured by a magnetic tool and contaminants are removed by Wash Buffer once or more. The DNA is then eluted from particles by Elution Buffer or molecular grade water.

Apparatus and materials to be prepared by the user

1. Magnetic Rack or Bioer NPA-32P purification instrument
2. Water bath or Dry bath
3. Vortex mixer
4. Absolute alcohol (For BSC10S1B and BSC10M1B)

Important notes

1. The automatic procedures are suitable for the NPA-32P nucleic acid purification machine. If other nucleic acid purifiers are used, the operating procedures should be adjusted according to the performance of different instruments.
2. If the room temperature is too low, it is necessary to preheat the LP buffer in 56 ℃ water bath for 10 minutes so that there is no crystal in the buffer.

Protocol

The manual purification

Please add absolute ethanol to Wash Buffer and mix thoroughly before the first use.

1. Sample processing

1) Grind the plant tissue into powder under the liquid nitrogen.

2) Transfer up to 100mg tissue to a 1.5 or 2.0mL microcentrifuge tube. Note: grinded degree of sample will affect cell lysis.

3) Add 450μL LP Buffer（Optional :add 1μL of RNase A）, Mix thoroughly.

Note: If the plant tissues are rich in polysaccharides and polyphenols, please use the LP plus buffer.

4) Incubate at 65°C for 10 minutes (you can vortex the tube 2~3 times during the incubation). Then remove the tube from 65°C. If the sample is difficult to lysis， please extend the incubation time.

5) Remove the tube from 65°C.

6) Add 150μL DA Buffer and mix thoroughly， incubate for 5 minutes at room temperature.

7) Centrifuge the lysate at 14,000 x g for 5 minutes, transfer 350μL supernatant to a new 1.5mL microcentrifuge tube.

2. MagaBio adsorption

1) Add 15μL of the **well-mixed** (particles should be suspended) MagaBio Reagent and 525μL Binding Buffer.

2) Mix the tube gently and incubate for 10 minutes at room temperature while mixing.
Note: Using an end-over-end rotator or manual mixing every 2-3 minutes.
3) Aggregate MagaBio particles bound with DNA by using a magnetic rack. Discard the supernatant, remove the tube from the magnetic rack and wash particles as described below.

3. Washing

1) Add 500μL of G Binding Buffer to the tube from the above. Mix well by inverting the tube several times to ensure the particles are completely dispersed. Sediment the particles on the magnetic rack and discard the supernatant.

2) Add 600μL of Wash Buffer to the tube from the above. Mix well by inverting the tube several times to ensure the particles are completely dispersed. Aggregate the particles on the magnetic rack and discard the supernatant.

3) Remove the tube from the magnetic rack and repeat washing step 2） one more time follow the above step.

4) Open the cap, dry at room temperature for 5 minutes.

4. Elution

1) Add 100μL of Elution Buffer and mix; incubate at room temperature for 10 minutes.
Note: Vortex gently every 2-3 minutes.
2) Aggregate the particles on the magnetic rack and transfer the supernatant contained the isolated DNA carefully into a clean tube. The product is ready for further analysis. If the isolated DNA sample is not going to be tested on the same day, freeze at -20°C.

Analysis of Nucleic Acid

Get some DNA,diluted in a advisable factor with Elution Buffer.

Survey the OD260, OD280 and OD320.

Concentration（ng/μL）＝50×OD260×dilution fact

1.7≤OD260-320/ OD280-320≤2.1

Notice: 0.1≤OD260≤1.0, the result of ratio is much reliable.

Company Information

Manufacturer: Hangzhou Bioer Technology Co., Ltd

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Aftersales Service Provider: Hangzhou Bioer Technology Co.,Ltd

The automatic purification

With automatic machine, the kit is highly suitable for various samples, which provide a convenient platform to achieve high-throughput and fast and effective purification.

1. Reagent preparation

1) **For BSC10S1B and BSC10M1B**

Add 525μL Binding Buffer to the 2.2mL 96 Deep Well column 1 and 7; 500μL G Binding Buffer to column 2 and 8; 600μL Wash Buffer to column 3,4 and 9, 10; 100μL Elution Buffer to column 5 and 11; 185μL Pure Water and 15μL MagaBio Reagent to column 6 and 12.

2) **For BSC10S1E**

Turn the 96-well plate upside down three times after placed at room temperature, then rip off plastic film, centrifuge in 96-well centrifuge for seconds (or swing by hand) to avoid adhered liquid. Rip off aluminum foil film of 96-well plate; make sure the direction of the plate (magnetic beads in column 6th&12th).

2. Sample processing is the same with the manual purification.

3. Add 350μL lysis product to the 96-Deep Well column 1 and 7.

4. Put 96-Deep Well plate into the instrument, then plugs in 8-strip Tip and start the program.

Step	Well	Name	Waiting Time (min : ss)	Mixing Time (min : ss)	Magnet Time (min : ss)	Adsorption	Speed	Volume (μL)
1	1	Mixing	0 : 0	1 : 00	0 : 0		F	875
2	6	Beads	0 : 0	0 : 20	0 : 35		S	200
3	1	Binding	0 : 0	10 : 0	0 : 35	√	F	875
4	2	Wash 1	0 : 0	3: 0	0 : 35	√	F	500
5	3	Wash 2	0 : 0	2: 0	0 : 35	√	F	600
6	4	Wash 3	0 : 0	2: 0	0 : 35	√	F	600
7	5	Elution	3 : 0	5 : 0	0 : 35		S	100
8	6	Discard	0 : 0	0 : 30	0 : 0		S	200

Elution temperature: 65 ℃, Elution start heating step: 7.

5. When the run finished, pipet the elution buffer in column 5、11 into nuclease-free tubes. If not used immediately, please store at -20 ℃.