Elution temperature：70℃, Elution start heating step：7th.

Important Notes

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

2．Typically, >85% of the DNA is recovered in the first elution. If desired, more DNA can be recovered by applying a second elution.

3．The procedure above is just suitable for the NPA-32 + nucleic acid purification instrument .Adjust the running programs according to the different instrument.

4．All reagents should be stored at 2-8℃.

Company Information

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MagaBio plus Tissue Genomic DNA Purification Kit

Kit Components

Cat#	BSC37S1C	BSC37S1	BSC37M1
Components	**32 Tests**	**50 Tests**	**100 Tests**
PK Solution	320 μl	0.5 ml	1 ml
RNaseA	64μl	100μl	200μl
Lysis Buffer	20.8 ml	32.5 ml	32.5 ml×2
Binding Buffer	96 Well pre-packed plate 2 pieces	20ml	40ml
PW Buffer		20ml （add 30ml ethanol before use）	20ml×2 （add 30ml ethanol before use）
Wash Buffer		15ml×2 （add 36ml ethanol before use）	15ml×4 （add 36ml ethanol before use）
Elution Buffer		20 ml	40 ml
MagaBio Reagent		1 ml	2 ml
Handbook	1 copy	1copy	1copy

Storage

1．The kit can be transported at room temperature.

2．All reagents are stored at 2-8℃.

3．All reagents, when stored properly, are stable for 12 months from the time of delivery.

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 from animal tissues. 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.

Principle and Advantage

DNA in the sample is released by PK Solution and Lysis Buffer. Released DNA is bound exclusively and specifically to the magnetic beads in presence of a Binding Buffer. The DNA bound to magnetic particles is captured by magnetic material; contaminants will be removed by washing with Wash Buffer once or more. The DNA is then eluted from the particles with Elution Buffer or molecular grade water.

MagaBio Magnetic technic has great advantages:

1. Mini sample, high purification
2. Simple and streamline separation procedure, used for auto-platform
3. First elution can acquire 85% or more
4. No high salt solution. no inhibitor
5. No spin column

Apparatus and materials to be prepared by the user

1．Magnetic Rack or Bioer NPA-32+ purification instrument

2．Water bath or Dry bath

3．Vortex mixer

4．Absolute alcohol (For BSC37S1 and BSC37M1)

Protocol

1. Sample lysis processing

1) Rewarm all reagents and samples to room temperature.
2) Grind the tissue into powder with liquid nitrogen or cut the tissue to pieces with scissor.
3) Add no more than 50mg sample to a microcentrifuge tube.
4) Add 650µl Lysis Buffer and 10µl PK Solution to the microcentrifuge tube and mix by pulse-vortexing for 15 seconds.
5) Incubate at 56℃for 1hours（The incubating time can be more longer for 1-4hours or overnight）.
6) Remove the tube from 56℃.Add 2µl RNaseA, mix thoroughly; incubate at room temperature for 2min.
7) Centrifuge for 5min at 12, 000g.Transfer 500µl supernatant to a new 1.5ml tube.

2. MagaBio adsorption

1) Add 400µl Binding Buffer followed by 20µl of the well-mixed (particles are thoroughly suspended) MagaBio Reagent.
2) Shake the tube gently and incubate for 10 minutes at room temperature, while mixing constantly.
   Note: an end-over-end rotator is recommended.
3) Aggregate MagaBio DNA bound particles by using a magnetic rack. Discard the supernatant, remove the tube from the magnetic rack and wash the particles as described below.

3. Washing

1) Add 800µl PW Buffer to the tube. Turn the tube upside down several times to ensure the particles are completely dispersed. Aggregate the particles on the magnetic rack and discard the supernatant.
2) Add 800µl Wash Buffer to the tube. Turn the tube upside down several times to ensure the particles are completely dispersed. Aggregate the particles on the magnetic rack and aspirate the supernatant.
3) Remove the tube from the magnetic rack and repeat washing step 2) once more.
4) Open the cap, dry at room temperature for 5 minutes.

4. Elution

1) Add 100-200µl of Elution Buffer and mix, Incubate at 70℃ for 5 minutes.
   Note: Vortex gently every 2-3 minutes.

2) Sediment the particles on the magnetic rack and carefully transfer the supernatant containing the isolated DNA into a clean tube. The material is now ready for further analysis. If the isolated DNA sample is not going to be tested on the same day, freeze at -20℃ until next analysis.

Analysis Nucleic Acid

Get some DNA,diluted in a advisable factor with elution buffer.

Survey the OD260, OD280 and OD320.

Concentration（μg/ml）＝50×OD260×dilution fact

2.1≥OD260-320/ OD280-320≥1.7

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

The automation purification

With the help of automation machine, the kit is suitable for various samples. It offers an automated platform and streamlines protocol, achieving not only high-throughput and high-speed, but also effective purification.

An example for applying the kit on our product NPA-32+:

1. Reagent prepare

1) For BSC37S1and BSC37M1

Join 400 μl Binding Buffer to the 2.2ml 96 Deep Well column 1、7; 800 μl PW Buffer to the 96 Deep Well column 2、8 ; 800 μl Wash Buffer to the 96 Deep Well column 3、9 and to the 96 Deep Well column 4、10 ; 100 μl Elution Buffer to the 96 Deep Well column 5、11;180 μl pure water and 20 μl MagaBio Reagent to the 96 Deep Well column 6、12.

2) For BSC37S1C

Shake 96-well plate upside down for three times after placing under room temperature, then rip off plastic film, centrifuge in 96-well centrifuge for a couple of seconds(or swing by hand) to avoid adhered liquid. Rip off aluminum foil film of 96 well plates; identify the direction of the plate (magnetic beads in column 6th&12th).

2. The sample lysis processing of samples are the same with the manual extraction.

3. Join the lysis product to the 96 Deep Well column 1、7.

4. Place 96 Deep Well to the instrument, then plug in 8-strip Tip and run 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	5 : 00	0 : 0		F	900
2	6	Beads	0 : 0	0 : 15	0 : 30		M	200
3	1	Binding	0 : 0	10 : 0	0 : 35	**Strong**	F	900
4	2	Wash 1	0 : 0	3 : 0	0 : 30	**Strong**	F	800
5	3	Wash 2	0 : 0	2 : 0	0 : 30	**Strong**	F	800
6	4	Wash 3	0 : 0	2 : 0	0 : 30	**Strong**	F	800
7	5	Elution	2 : 0	10 : 0	1 : 30	**Strong**	M	100
8	6	Beads	0 : 0	0 : 30	0 : 0		M	200