【The automatic purification】

With automation machine, the kit is deeply suitable for several samples, which supply a really platform of automation or streamLine protocol and achieve high-throughput and high-speed but effective purification. An example for applying the kit on our product NPA-32P:

1. Reagent preparation

1) For BSC34S1 and BSC34M1

Join 500μL Lysis Buffer to the 2.2mL 96 Deep Well column 1、7, 600μL WB1 Buffer to the 96 Deep Well column 2、8, 600μL Wash Buffer to the 96 Deep Well column 3、9 and 4、10,50μL Elution Buffer to the 96 Deep Well column 5、11, 185μL pure water and 15μL MagaBio Reagent to the 96 Deep Well column 6、12.

2) For BSC34S1E

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. Put 3-6 pieces of Blood Spots sample to a 1.5 mL microcentrifuge tube. The area of each Blood Spots sample is up to 3×3mm.

3. Add 350μL TES Buffer.

4. Pipet 10μL of PK into the bottom of a 1.5 mL microcentrifuge tube. Mix by pulse-vortexing intensively for 10seconds.Put it in a 56℃ thermostat oscillator, Vortex 1400rpm for 45minutes.

5. Join 300μL sample to the 96 Deep Well column 1、7.

6. Place 96 Deep Well to the instrument, then plugs 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	Lysis	00 : 00	10 : 00	00 : 00	Normal	F	800
2	6	Beads	00 : 00	00 : 15	00 : 30	Normal	S	200
3	1	Binding	00 : 00	10 : 00	00 : 35	Strong	F	800
4	2	Wash I	00 : 00	03 : 00	00 : 30	Strong	F	600
5	3	Wash II	00 : 00	02 : 00	00 : 30	Strong	F	600
6	4	Wash II	00 : 00	02 : 00	00 : 30	Strong	F	600
7	5	Elution	01 : 30	05 : 00	00 : 30	Normal	S	50
8	6	Discard	00 : 00	00 : 30	00 : 00	Normal	S	200

Lysis temperature：65℃, lysis heating end step 2 ,

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

MagaBio Blood Spots Genomic DNA Purification Kit

【Kit Components】

Cat#	BSC34S1E	BSC34S1	BSC34M1
Components	**32 Tests**	**50 Tests**	**100 Tests**
TES Buffer	11.2 mL	17.5 mL	35 mL
Protease K (PK)	320 μL	500 μL	1000 μL
Lysis Buffer	96 well pre-packed plate 2 pieces	25 mL	50 mL
WB1 Buffer		14 mL (add 21 mL absolute ethanol before use)	14 mL×2 (add 21 mL absolute ethanol before use)
Wash Buffer		12.6 mL (add 50.4 mL absolute ethanol before use)	12.6 mL×2 (add 50.4 mL absolute ethanol before use)
Elution Buffer		10 mL	20 mL
MagaBio Reagent		0.75 mL	1.5 mL
Handbook	1	1	1

【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 Blood Spots. MagaBio sample processing is based on proprietary magnetizable particles--MagaBio. The pure DNA can be applied extensively in 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 Protease K (PK) and Lysis Buffer. Released DNA is bound exclusively and specifically to the Magnetic beads in presence of a Binding Buffer. The DNA bound to MagaBio particles is captured by a magnetic material; contaminants are removed by washing with Wash Buffer once or more. The DNA is then eluted from the particles with an 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 BSC34S1 and BSC34M1)

【Important notes】

1. This kit is for research use only.
2. Before you begin, you should read this user's manual carefully.
3. The use of nuclease-free lab ware (e.g. pipettes, pipette tips, reactions vials) as well as.
4. Wearing gloves when performing the assay.
5. To avoid cross-contamination of samples and reagents use fresh aerosol-preventive pipette tips for all pipetting steps.
6. After the experiment, please disinfect the workbench with 75% ethanol or 10% hypochlorous acid, and sterilize the workplace by UV lamp.

【Protocol】

Please add absolute ethanol to WB1 Buffer and Wash Buffer and mix thoroughly before the first use.

The manual purification

1. Sample processing

1) Equilibrate all reagents and samples to room temperature.
2) Put 3-6 pieces of Blood Spots sample to a 1.5 mL microcentrifuge tube. The area of each Blood Spots sample is up to 3×3mm.
3) Add 350μL TES Buffer.
4) Pipet 10μL of PK into the bottom of a 1.5 mL microcentrifuge tube. Mix by pulse-vortexing intensively for 10seconds.Put it in a 56℃ thermostat oscillator, Vortex 1400rpm for 45mins.
5) Add 300μL of sample to the microcentrifuge tube from the above.
6) Add 500μL of the Lysis Buffer to the sample from the above and mix by pulse-vortexing intensively for 15-20 seconds.

   Note: Mix the Lysis Buffer thoroughly before use, makes sure that no crystal in the Lysis Buffer.
7) Incubate at 56℃ for 10 minutes. Mixing every 5 minutes.
8) Remove the tube from 56℃.

2. MagaBio adsorption

1) Add 15μL of the **well-mixed** (particles are uniformLy suspended) MagaBio Reagent.
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) Sediment the MagaBio DNA bound particles using a magnetic rack. Aspirate the supernatant, remove the tube from the magnetic rack and wash the particles as described below.

3. Washing

1) Add 600 μL of WB1 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 aspirate the supernatant.
2) Add 600 μL of Wash 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 aspirate the supernatant.
3) Remove the tube from the magnetic rack and repeat washing once more following the above step.
4) Cover the cap, dry at room temperature for 5 minutes.

4. Elution

1) Add 50μL 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 ready for further analysis. If the isolated DNA sample is not going to be tested on the same day, freeze at -20℃ until the time of analysis.

【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

【Company Information】

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