MagaBio Plasma Circulating DNA Purification Kit

【**Product Name**】MagaBio Plasma Circulating DNA Purification Kit

【**Packing Size**】48 Tests/box; 96 Tests/box

【**Usage**】Used for nucleic acid extraction, enrichment, purification and other steps. The processed product can be used for clinical in vitro detection.

【**Principle and Advantage**】

Proteins in plasma samples are digested by Lysis Buffer, and free DNA is specifically bound to magnetic beads 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 Elution Buffer or molecular grade water.

【**Kit Components**】

Cat#	**BSC40M1E**	**BSC34L1E**
Components	**48 Tests**	**96 Tests**
Lysis Buffer	14.4 mL	28.8 mL
Proteinase K	480 μL	960 μL
Carrier RNA (1μg/μL)	48 μL	96 μL
Lysis Buffer	1 piece	1 piece
WB1 Buffer	1 piece	1 piece
Wash Buffer	2 pieces	2 pieces
Elution Buffer	1 piece	1 piece
MagaBio Reagent	1 piece	1 piece
Handbook	1 copy	1 copy

【Storage and Transportation】

1．Except for PK Solution and Carrier RNA which need to be transported at 2~8℃, the other components of kit can be transported at room temperature.

2．Storage conditions: PK Solution stored at 2~8℃, Carrier RNA at -20℃ and other components stored at room temperature.

3．The period of validity: 12 months, please use in the period of validity.

【Applicable Instrument】

Bioer NPA-96 Purification Instrument.

【Sample Requirements】

1. Repeated freezing and thawing of samples should be avoided, otherwise the extracted nucleic acid fragments will be smaller and the extraction yield will be reduced.
2. Extract cell-free DNA from 0.3 mL of human serum, plasma, or other cell-free liquid samples.

【Reagents to be Prepared by User】

1．Bioer NPA-96 Purification Instrument
2．Water bath or heating block
3．Vortex mixer

【Procedure】

1. Centrifuge the EDTA-K2 anticoagulant whole blood at 18~20℃, 800×g for 20 min, then transfer the plasma (don't touch the white film). Centrifuge the plasma at 18~20℃, 12000×g for 10 min, pipet the supernatant out carefully.
2. Pipet 300 μL isolated plasma into a 1.5 mL centrifuge tube.
3. Add 300 μL Lysis Buffer (Note: the Lysis Buffer and Carrier RNA should be premixed before use; the amount of Carrier RNA in each sample is 1 μL) and 10 μL PK Solution, then vortex for 30 s.
4. Incubate at 56℃ for 20 minutes. Mixing several times during.
5. Remove the tube from 56℃. Add 300μL Isopropanol, vortex for 30s.
6. Add 900 μL of the lysate obtained above to the Lysis Buffer pre-packed plate and avoid cross-contamination.
7.Shake 96-well plate upside down for three times, then 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 and identify the direction of the plate.

8. Put the 96-well reagent plate into the NPA-96 Purification Instrument. The order of the 96-well reagent plate from left to right is Lysis Buffer plate, MagaBio Reagent plate, WB1 Buffer plate, Wash Buffer plate, Wash Buffer plate, and Elution Buffer plate. Install the 96 tip comb onto the instruments and run the following program.

Step	Well	Name	Waiting Time (min : ss)	Mixing Time (min : ss)	Magnet Time (min : ss)	Adsorption	Speed	Volume (μL)
1	1	Lysis	0 : 0	2 : 0	0 : 0	Normal	F	900
2	2	Beads	0 : 0	0 : 15	0 : 30	Normal	S	200
3	1	Bind	0 : 0	10 : 0	0 : 35	Strong	F	900
4	3	Wash 1	0 : 0	3: 0	0 :30	Strong	F	700
5	4	Wash 2	0 : 0	2: 0	0 :30	Strong	F	700
6	5	Wash 3	0 : 0	2: 0	0 :30	Strong	F	700
7	6	Elution	1 : 0	10 : 0	0 :30	Normal	S	50
8	2	Discard	0 : 0	0 : 30	0 : 0	Normal	S	200

Temperature settings:

Lysis temperature: 65℃, Elution start heating step: 2th.

Elution temperature: 60℃, Elution start heating step: 7th.

9. After the program, the purified nucleic acid is in the Elution Buffer plate. If not used immediately, please store at -80℃.

【Explanation of test results】

Purified DNA can be widely used in quantitative PCR, liquid or solid-phase chip analysis, hybridization and SNP detection.

【Limitations of methods】

Sample volume: serum and plasma should not exceed 300μL; the extraction of nucleic acid purification instrument should be adjusted according to the performance of different instruments.

【Cautions】

Pay attention to the direction of the orifice plate and its placement on the instrument.

【Basic Information】

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