MGIEasy Circulating DNA Isolation Kit User Manual

Cat. No.: 1000017017 Kit Version: V1.0 Manual Version: A0

【Product Information】

Name: Circulating DNA Isolation Kit

【Package】

192 Samples/Kit

【Application】

This kit is designed to isolate high purity DNA from Plasma, using superparamagnetic bead technology. It avoids using the toxic phenol chloroform during extraction. and has a turn-around-time of less than 45 minutes. The DNA product can be used for real time PCR, Arrays and NGS.

【Components】

Table 1. Components

Reagents	Volume
Lysis Buffer	120 mL/bottle×1 bottle
Proteinase K	100 mg/bottle×1 bottle
Protease Dissolve Buffer	5 mL/bottle×1 bottle
MGIPure Particle G	5 mL/bottle×1 bottle
Wash Buffer 1	150 mL/bottle×1 bottle
Wash Buffer 2	35 mL/bottle×2 bottles
Elution Buffer	23 mL /bottle×1 bottle

Note: Do not mix components from different batches of kit.

【Shipment Conditions】

Room temperature (15℃ to 30℃).

【Storage Conditions】

Different reagents in this kit have different storage conditions. Please store them respectively according to the following conditions:

Proteinase K: 2°C to 8 °C

MGIPure Particle G: 2°C to 8 °C.

Others Reagents: Room temperature (15°C to 25°C).

【 Validity Period 】

Refer to the label

【 Sample Requirements 】

1. Sample collection, shipment, and storage must follow relevant national standards.
2. The plasma must be straw color, and transparent without sediments.
3. Avoid more than 2 freeze-thaw cycles.

【 Important notes 】

Preparation of Buffers and reagents

1. For the first use, transfer 5 mL Protease Dissolve Buffer into the bottle of Proteinase K powder. Invert 10-15 times to dissolve thoroughly, place on ice.
2. The Proteinase K solution should be stored at -20°C for long term.
3. For the first use, add 200 mL absolute ethanol (analytical grade) into a bottle of Wash Buffer 2. Mix and place at room temperature.

【 Instructions 】

1. Transfer 20 μL proteinase K solution and 25 μL MGIPure particle G into a new 1.5mL tube.
   Note: Resuspend the MGIPure particle G thoroughly before pipetting.
2. Transfer 300μL plasma into the tube prepared at STEP 1.
3. Add 550ul Lysis Buffer into the tube and mix thoroughly by pipetting. Place the tube at room temperature for 10-15 minutes. During the incubation, mixed thoroughly 3 times by inverting. After that, Briefly centrifuge and place the tube onto Magnetic Separation Rack for 3-5minutes, then discard the supernatant carefully.
   Note: If the input of plasma is 600μL, double the volume of proteinase K solution, MGIPure particle G, and Lysis Buffer. The wash buffer volume of following steps remains unchanged.
   Note: Please keep the tube on the Magnetic Separation Rack when pipette the supernatant.
4. Remove the tube from the Magnetic Separation Rack, add 700ul Wash Buffer 1 into the tube, mix thoroughly and place onto the Magnetic Separation Rack for 1min. Discard the supernatant carefully.

5. Remove the tube from the Magnetic Separation Rack, add 700ul Wash Buffer 2 into the tube, mix thoroughly and place onto the Magnetic Separation Rack for 1min. Discard the supernatant carefully.
6. Repeat STEP 5.
7. Briefly centrifuge, place the tube onto the Magnetic Separation Rack, and discard the remaining supernatant carefully.
8. Keep the tube on the Magnetic Separation Rack. Dry at room temperature for 10-15 minutes.
9. Remove the tube from the Magnetic Separation Rack, add 30-50ul Elution Buffer and resuspend the beads. Place the tube at room temperature for 5-10 minutes. During the incubation, vortex once or twice to mix.
10. Placed the tube onto Magnetic Separation Rack for 3min. Transfer the supernatant DNA solution into a new 1.5mL tube.

【 Quality Control 】

Qubit ds DNA HS Assay kit is recommended to qualify the extracted cfDNA, 2100 High Sensitivity Chip is recommended to detect the extracted cfDNA size, and please refer to the following figure.

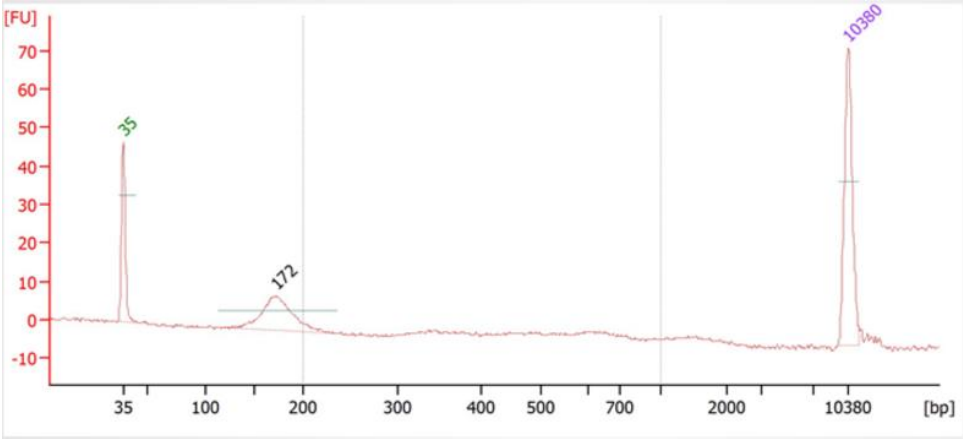

Figure 1 Extracted cfDNA 2100 reference

【 Announcements 】

1. This kit is for research use only.
2. Please read the product manual carefully before use. Please be familiar with the operation method and precautions.
3. All samples and waste should be treated as pollutants and treated according to relevant regulations.
4. If Wash Buffer 1 and Wash Buffer 2 are stored at 2℃ to 8 ℃, please be equilibrated to

room temperature before use.

【Production company information】

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