MGIEasy FFPE DNA Extraction Prepacked Kit (MGISP-NE32) User Manual

Manual Version: 3.0 Model: FDP-32

【Product Name】

MGIEasy FFPE DNA Extraction Prepacked Kit (MGISP-NE32)

【Package】

Cat. No.	Model	Specification
940-000113-00	FDP-32	32 preps

【Intended Use】

MGIEasy FFPE DNA Extraction Prepacked Kit (MGISP-NE32) can efficiently purify the Genomic DNA from FFPE tissue sections. with non-toxic deparaffinization solution, high-performance lysis buffer to release DNA from FFPE efficiently. The extracted DNA can be applied extensively in PCR, sequencing and the others. This kit is suitable for automated extraction on MGISP-NE32 (Automated Nucleic Acid Extractor and purification system).

【Kit Components】

Table 1 Main Components and specifications

Components		Package and amount
Dewaxed solution		32 mL
Lysis Buffer		6.4 mL
Proteinase K		640 μL×1 bottle
96-well pre-packed plate	Binding Buffer	2 plates
	PW Buffer	
	Wash Buffer	
	Elution Buffer	
	Beads	
8-well tips comb		2 pieces/ bag * 2 bags

【Storage Conditions】

1. The kit can be shipped at room temperature.
2. All reagents should be stored at 2-8°C.

3. All reagents are stable for 12 months under correct storage condition.

【 Applicable Automation Instrument 】

Applicable automation instrument: Automated nucleic acid extractor

Model: MGISP-NE32.

【 Sample Conditions 】

FFPE sections, paraffin-embedded blocks or formalin fixed tissue samples can be extracted.

Note: 1. Sample size: Cut off the part of the surface in contact with air, up to 8 sections. 2. Formalin fixed tissue samples need to be pre-treated in accordance with the user manual.

【 Experimental Workflow 】

A. Sample Lysis

1. Sample treatment

a) FFPE sections: Less than 8 sections, each with 10 μm thickness. and 5×5 mm with area, placed in a 1.5 mL microcentrifuge tube.

b) Paraffin-embedded blocks: Use a sterile scalpel to cut off the paraffin surface, scrape less than 30mg of each sample. Avoid paraffin as possible, placed in a 1.5 mL microcentrifuge tube.

c) Formalin fixed tissue samples: Cut the sample to small pieces, placed in a 1.5 mL microcentrifuge tube. Add 1 mL 10 mM pH7.0~7.4 PBS or physiological saline, mixed by vortex, centrifuge at full speed for 1 min, Remove the supernatant by pipetting. Repeat this step one more time, and then go to step 5.

2. Add 1 mL Deparaffinization Solution to the 1.5 mL tube, close the tube and vortex 10 s, place the tube in heating block or water bath at 56°C for 3 min.

Note: If there is too much paraffin in the tissue, please use xylene for dewaxing, add 1 mL xylene into the 1.5 mL tube, close the tube and vortex 10 s, and then placed for 1 min.

3. Centrifuge at 14,000g for 2 min, and remove the supernatant by pipetting.

4. Add 1 mL ethanol to the tube, and mix 10s by vortex. Centrifuge at 14,000g for 2 min, Remove the supernatant by pipetting, Open the tube and incubate at room temperature or 37°C heating block for 10 min until all residual ethanol evaporated.

5. Add 200 μL Lysis Buffer I, 20 μL PK Solution to the tube. mix 10 s by vortex. Briefly centrifuge

the 1.5 mL tube. Then Incubate at 56°C for 1 h or overnight to completely lysed the sample. Mix the sample at a time can quicken the lysis

6. Incubate at 90°C for 1 h.
7. Optional step：If need to remove the RNA, please add 2 μL RNase A (100 mg/mL) mix completely and incubate for 2 min at room temperature, then start next step.
8. Centrifuge at 10,000g for 1 min, then take the supernatant into a new centrifugal tube for later use.

B. Read before use

1. Avoid repeatedly freezing and thawing samples, which may lead to low DNA quality.
2. All reagents and samples need to be equilibrated to room temperature (10°C ~30°C) before use.

C. Automated Extraction Standard Workflow

1. Invert 96-well plate for three times, then remove the plastic film, centrifuge in 96-well centrifuge for seconds. remove the aluminum foil film of 96 well plates; make sure the direction of the plate correct (magnetic beads in column 6^{th} & 12^{th}).
2. The sample lysis processing of samples are the same with the manual extraction（Protocol: 1-7）.
3. Add the lysis product to the 96 Deep Well column 1 and 7.
4. Place 96 Deep Well into the instrument, then install in 8-well tips comb and run the program.

Table 5. automated extraction program

Step	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
Hold	1	6	1	2	3	4	5	6
Name	Lysis	Beads	Bind	Wash I	Wash II	Wash III	Elute	Beads
Wait Time (min:ss)	00:00	00:00	00:00	00:00	00:00	00:00	02:00	00:00
Mix Time (min:ss)	00:30	00:15	10:00	02:00	01:00	01:00	05:00	00:30
Mag Time (min:ss)	00:00	00:30	00:35	00:30	00:30	00:30	00:30	00:00
Volum (μL)	650	200	650	500	700	700	100	200
Mixing Method	Fast	Slow	Fast	Fast	Fast	Fast	Fast	Slow
Collect Method	Normal	Normal	Strong	Strong	Strong	Strong	Normal	Normal

Lysis temperature: off.

Elution temperature: 60°C. Elution starts heating at Step 7.

5. After the procedure completed, transfer the eluted products in column #5 and # 11 to new nuclease-free centrifuge tubes; if the products will not be used immediately, store them in -20°C or below.

【Precautions】

1. This product is only used for scientific research, not for clinical diagnosis, please read this user manual carefully before use.
2. Please familiarize the operation and precautions of instruments to be used before testing.
3. The reagents should be mixed thoroughly before use.
4. Please use the micro-Pipette for sample addition.
5. Don't directly contact the samples and reagents, do not swallow, once happened, immediately rinse with plenty of water and go to hospital for treatment in time.
6. All samples and wastes should be treated in accordance with relevant regulations.

【 Production Company Information 】

Manufacturer: Wuhan MGI Tech Co., Ltd.

Address:

Site: Building 24, Stage 3.1, BioLake Accelerator No. 388 2nd Gaoxin Road, East Lake High-Tech Development Zone 430075 Wuhan P.R. China

Website: https://en.mgi-tech.com

Email: MGI-service@mgi-tech.com