【Product Name】MagPure Pathogen DNA/RNA Kit

【Product specifications】200 Preps/Kit

【Intended Use】

This product is suitable for extracting total pathogen nucleic acid from biological samples with no/low cell content such as body fluid, serum, plasma, soaking solution, tissue homogenate supernatant, culture medium supernatant, etc. The purified DNA/RNA can be used for clinical in vitro detection.

【Principle】

This product is based on the purification method of high binding magnetic particles. The sample is lysed and digested under the action of lysate and Protease. After adding magnetic particles and binding solution, DNA/RNA will be adsorbed on the surface of magnetic particles, and impurities such as proteins will be removed without adsorption. The adsorbed particles were washed with washing solution to remove proteins and impurities, washed with ethanol to remove salts, and finally DNA/RNA was eluted by Buffer NFW.

【Main Composition】

Cat.No	IVD6672-50	IVD6672	Contents
Bead Tube C	50	4 x 50	Glass beads
MagPure Particle	1.6 ml	7.0 ml	Magnetic beads
Proteinase K	24 mg	100 mg	Protease K/Poly A
Protease Dissolve Buffer	1.8 ml	6 ml	Glycerol
Buffer MLBN	30 ml	120 ml	Tween-20/Guanidine Salt
Buffer MW1*	22 ml	53 ml	Guanidine Salt
Buffer MW2*	20 ml	50 ml	Tris/NaCl
Buffer NFW	10 ml	30 ml	DEPC treated water

【Storage conditions and validity】

MagPure Particles and Proteinase K Solution should be stored at 2–8°C upon arrival. However, short-term storage (up to 8 weeks) at room temperature (15–25°C) does not affect their performance. The remaining kit components can be stored at room temperature (15–25°C) and are stable for 18 months under these conditions.

【Preparation before Use】

- Add 28ml (50 Preps) or 67ml (200 Preps) absolute ethanol to the bottle of Buffer MW1.
- Add 80ml (50 Preps) or 200ml (200 Preps) absolute ethanol to the bottle of Buffer MW2.
- Add 1.2ml (50 Preps) or 2.5mL (200 Preps) Protease Dissolve Buffer and store at -20-8°C.

【 Protocol 】

A: Manual operation

1. **Add ~0.5ml samples and 20μl Proteinase K into Bead tube C.** Close the lid and vortex at maximum speed for 10 minutes or place on a bead beater machine (such as FastPrep-24) grind for 60~90 seconds.
   - It is recommended to use MagMix A for vortex, which can process 24 samples at the same time.
   - For samples rich in somatic cells (whole blood, blood water, fluid accumulation, sputum liquefaction, tissue homogenate, saliva, etc.): Centrifuge at 1,000~1,500 x g for 10 minutes to remove excess somatic cells, then transfer the supernatant for next process.
   - Sputum samples shall be fully liquefied with DTT before operation.
   - For dry swab/solid tissue samples, transfer the samples directly to the bead tube, then add 500~1000μl buffer PBS or normal saline.
2. **Incubate at 55°C for 10 minutes, Briefly centrifuge to collect the droplets on the tube.**
   - For tissue samples, centrifuge at 13,000 x g for 5 minutes to remove cell debris.
3. **Transfer 200~300μl of the sample into a new centrifuge tube, add 30μl MagPure Particles and 500μl Buffer MLBN.** Mix by upside down for 10-15 times. Incubate at room temperature for 6 minutes, during which mix by upside down several times. Place on the magnetic rack for 2 minutes, discard the supernatant.
4. **Add 500μl Buffer MW1 and vortex for 15 seconds.** Place on the magnetic rack for ~1 minutes, discard the supernatant.
5. **Add 500μl Buffer MW2 and vortex for 15 seconds.** Place on the magnetic rack for ~1 minutes, discard the supernatant.
6. Repeat Step 5 again.

7. Briefly centrifuge, discard the supernatant, air dry for ~10 minutes.

8. **Add 50~100μl buffer NFW, vortex to disperse the magnetic beads.** Place for 5-10 minutes, during which vortex for several times to dissolve the nucleic acid. Place on the magnetic rack for 3 minutes.

9. **Transfer the purified DNA/RNA to a new 1.5 ml centrifuge tube. Store at -20~8°C.**

B: Process of 32/48-channel nucleic acid extractor

1. Add the buffer to the deep well plate according to the following table.

2. Add 200-300μl of the sample (following manual operation step 1~2) to Row 1/7.

Row of hole	Pre-loaded reagents	Addition before use
Row 1/7	500 μl Buffer MLBN	200~300μl of the samples
Row 2/8	500μl Buffer MW1	
Row 3/9	500μl Buffer MW2,30μl MagPure Particles	
Row 4/10	500μl Buffer MW2	
Row 5/11	/	
Row 6/12	50~100μl Buffer NFW	

3. Turn on the machine, insert the magnetic tip, put the 96-well plate into the instrument.

4. Start the program. It takes about 35 minutes. Take out the 96-well plate and magnetic tip.

5. Transfer DNA/RNA to 1.5 ml centrifuge tube. Store at -20~8°C.

C: Process of 96-channel nucleic acid extractor

1. Add the buffer to the deep well plate according to the following table.

Name of Plate	Pre-loaded reagents	Addition before use
Sample Plate	500 μl Buffer MLBN	200~300μl homogenate mixture
Washing Plate1	500μl Buffer MW1，place 96 tip comb	
Washing Plate2	500μl Buffer MW2, 30μl MagPure Particles	
Washing Plate3	500μl Buffer MW2	
Elution plate	50~100μl Buffer NFW	

2. Add 200-300μl of the sample (following manual operation step 1~2) to sample plate.

3. Turn on the machine, start the program, place the 96-well plate in to the instrument.

4. It takes about 20 minutes on machine running.

5. Take out the 96-well plate and tip comb when finish.

6. Store DNA/RNA at -20~8°C.

Step	Name	Well	Volume	Mix		Wait		Magnet			HEAT	
				Time	Speed	Time	Pos	Up& Down	Up	Bottom	Well	Tem.
1	Collect	3	500	20s	8	0	0	60s	0	0	/	/
2	Bind	1	700	300s	8	0	0	90s	30	30	1	65
3	W1	2	500	90s	8	0	0	90s	0	0	/	/
4	W2	3	500	60s	8	0	0	90s	0	0	/	/
5	W3	4	500	60s	8	0	0	60s	0	0	/	/
6	Dry	4	500	0	8	5	0	0	0	0	/	/
7	Elute	6	100	300s	9	0	0	60s	0	50	6	55
8	Drop	4	500	30s	9	0	0	0	0	0	/	/

【Basic Information】

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