【Product Name】 MagPure Tissue & Blood DNA Kit

【Product specifications】 48 Preps/Kit , 96 Preps/Kit , 5 x 96 Preps/Kit

【Intended Use】

This product provides a simple and fast solution for DNA extraction from biological samples such as dried blood slices, swabs, anticoagulant blood, serum, plasma, saliva, cultured cells, small amounts of tissue, and paraffin sections. The DNA purified by this method includes genomic DNA, mitochondrial DNA, viral DNA (such as hepatitis B), or DNA of other parasitic microorganisms. The obtained DNA can be directly used for experiments such as PCR, chip analysis, second-generation sequencing, virus DNA detection, etc.

【Main Composition】

Cat.No.	D631400	D631401	D631402	D631403
Purification Times	24 Preps	48 Preps	96 Preps	5 x 96 Preps
MagPure Particles N	0.6 ml	1.1 ml	2 x 1.1 ml	11 ml
Buffer ATL	10 ml	20 ml	35 ml	160 ml
Buffer AL	10 ml	20 ml	35 ml	160 ml
Buffer BD*	5 ml	5 ml	15 ml	50 ml
Proteinase K	12 mg	24 mg	48 mg	240 mg
Protease Dissolve Buffer	1.8 ml	1.8 ml	5 ml	15 ml
Buffer BW1*	22 ml	44 ml	66 ml	2 x 110 ml
Elution Buffer	10 ml	10 ml	30 ml	100 ml

Components		D6314-TL-06	D6314-S-48
Proteinase K + Protease Dissolve Buffer		48 mg+5 ml	24 mg+1.8 ml
Buffer ATL		35 ml	20 ml
Buffer AL		35 ml	20 ml
DA-Tip		12	24
V bottom plate/ Reagent strip	Row 1/7: 450μl Buffer BD	6 plates	48 strips
	Row 2/8: 450μl Buffer BW1		
	Row 3/9: 450μl Buffer BW1		
	Row 4/10: 450μl Buffer GW2 20μl MagPure Particles N		
	Row 5/11: 500μl Buffer GW2		
	Row 6/12: 100μl Elution Buffer		

【Storage conditions and Validity】

Proteinase K and MagPure Particles N should be stored at 2–8°C upon arrival. However, short-term storage (up to 24 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 at least 24 months under these conditions.

【Preparation before Use】

- Add 0.6ml (24Preps), 1.2ml (48 Preps), 2.4ml (96 Preps), or 12ml (5 x 96 Preps) Protease Dissolve Buffer to the Proteinase K, and store at -20~8℃ after dissolve.
- Dilute Buffer BD with 20ml (24 Preps/48 Preps), 60ml (96 Preps) or 200 ml(2005 x 96 Preps) 100% ethanol and store at room temperature
- Dilute Buffer BW1with 28ml (24 Preps), 56ml (48 Preps), 84ml (96 Preps) or 2 x 170ml (5 x 96 Preps) 100% ethanol and store at room temperature
- Prepare 75% Ethanol using Absolute Ethanol and store at room temperature.

【 Protocol Part 1: Sample Preparation 】

A. Liquid samples (blood, serum, plasma, cell suspensions, etc.)

- Add 20μl Proteinase K and 200μl blood, plasma, serum, cell suspension or other liquid samples into a 1.5ml centrifuge tube. Add 200μl Buffer AL, mix by inverting for 3 times and incubate with shaking at 70°C for 10 minutes.

B. Animal tissue (<10mg animal tissue)

- Transfer <10mg tissue sample to a 1.5ml centrifuge tube. Add 20μl Proteinase K and 200μl Buffer ATL, incubate with shaking at 55°C for 30-120 minutes or until the sample is completely digested. Add 200μl Buffer AL and vortex for 5 seconds. 70°C water bath for 10 minutes.

C. Dry blood spot (FTA Card or other dry blood spot)

- Transfer 1-5 blood spots with a diameter of 3mm into a 2.0ml centrifuge tube. Add 20μl Proteinase K and 300μl Buffer ATL, incubate with shaking (1200~1500rpm) at 55°C for 60 minutes. Add 150μl Buffer AL and incubate with shaking (1200~1500rpm) at 65°C for 20 minutes.

D. Dry swab sample

- Transfer the dry swab to a 2.0ml centrifuge tube, add 500μl Buffer ATL and 20μl Proteinase K to the sample, and incubate with shaking at 65°C for 30 minutes.

E. Wet swab (containing cell preservation solution)

- Centrifuge at 10,000 x g for 1 minute to collect cells, discard excess preservation solution with a remaining of 250μl. Add 150μl Buffer AL and 20μl Protease K, incubate with shaking

(900~1200rpm) at 65℃ for 30 minutes.

F. Saliva sample

- Add 20μl Proteinase K and 450μl saliva or swab soaking solution to a 1.5ml centrifuge tube, and incubate with shaking at 55~65℃ for 30 minutes.

G. Cultivate cells (<1x10^6 cells), exfoliated cell

- Take an appropriate amount of culture medium, urine, amniotic fluid, ascites and other liquid samples into a centrifuge tube, centrifuge at 2,000 x g for 10 minutes to collect cells, remove the supernatant, with a remaining of 50μl residual liquid and sediment. Vortex to resuspend the cells. Add 150μl Buffer ATL and 20μl Protease K, incubate with shaking at 55℃ for 20 minutes, then add 200μl Buffer AL and mix well.

H. FFPE sample

- Transfer paraffin sections into a 1.5ml centrifuge tube. Centrifuge at 14,000 x g for 1 minute to make the sample completely precipitate to the bottom of the tube. Add 20μl Proteinase K and 350μl Buffer ATL to the sample. Incubate with gently shaking at 65℃ for 60 minutes. Then incubate at 90℃ for 60 minutes. Centrifuge at 14,000 x g for 1 minute. Carefully use a pipette to pass through the paraffin layer and transfer 200μl of the lower digestive fluid into a new centrifuge tube. Add 150μl Buffer AL to the sample, vortex to mix for 5 seconds.

【 Part 2A: Manual Purify by Single tube 】

1. Transfer 400-450μl of lysis solution (from Part 1Sample preparation) into a 1.5ml centrifuge tube.
2. Add 20μl MagPure Particles N and 450 μl Buffer BD to the samples. Mix thoroughly by inverting for 10~15 times. Place at room temperature for 5 minutes, during which invert to mix several times.
3. Place the tube to the magnetic stand for 3 minutes. Then remove the supernatant.
4. Add 500μl Buffer BW1 and vortex for 15 seconds. Place the tube to the magnetic stand for 2 minutes. Then remove the supernatant.
5. Add 500μl Buffer BW1 and vortex for 15 seconds. Place the tube to the magnetic stand for 2 minute. Then remove the supernatant.
6. Add 500μl 75% ethanol, and vortex for 15 seconds. Place the tube to the magnetic stand for 1 minute. Then remove the supernatant.
7. Add 500μl 75% ethanol, and vortex for 15 seconds. Place the tube to the magnetic stand for 1 minute. Then remove the supernatant.
8. Centrifuge shortly to collect liquid on the tube. Remove all the liquid carefully. Dry in air for 5 minutes.
9. Add 30~100μl Elution Buffer to the sample, re-suspend the beads by vortex. Incubate with shaking at 55℃ for 10 minutes.
10. Place the tube to the magnetic rack for 2 minutes. Transfer the supernatant containing the purified DNA to a new centrifuge tube.

【 Part 2B: Auto Purify by 32/48 channel nucleic acid extractor 】

1. Bottled reagents: add the reagents to the 96 well plate following the above table of prefilled kit contents.

   Prefilled reagents: invert the 96 well plate to suspend the magnetic beads completely. Pat the plate to make reagents fall back to the bottom of plate. Stay the plate at table for 1 minute, remove the sealing pack and sealing film.
2. Add 400-450μl of supernatant (from Part 1 Sample preparation) to each well of row 1/7.
3. Insert the magnetic tip (DA-Tip) and 96-well plate in to the machine (hole A1 is placed at the left inner corner). Turn on the machine and start the program.
4. About 30 minutes, extraction finish.
5. Take out the 96 well plate and magnetic tip comb.
6. Transfer DNA into a 1.5ml centrifuge tube and store at -20~8℃.

【 Program recommendation for Magen MagMix 32/48 extractor 】

No.	Name	Well	Volume	Mix		Wait		Magnet			Magnet	Heat	
				Time	Speed	Time	Position	Up/ Down	Surface	Bottom		Plate	Temp
1	Magnet	4	500	30s	8	0	0	60s	0	0	Auto	/	/
2	Bind	1	800	300s	8	0	0	90s	20	20	Auto	/	/
3	Wash1	2	500	90s	9	0	0	90s	0	0	Auto	/	/
4	Wash2	3	500	90s	9	0	0	90s	0	0	Auto	/	/
5	Wash3	4	500	60s	9	0	0	60s	0	0	Auto	/	/
6	Wash4	5	500	60s	9	0	0	60s	0	0	Auto	/	/
7	Dry	5	500	0	9	3min/Dry		0	0	0	Auto	/	/
8	Elute	6	100	600s	9	0	0	90s	0	40	Auto	6	55
9	Remove	3	500	30s	9	0	0	0	0	0	Auto	/	/