TIANGEN®

TGuide Smart Viral DNA/RNA Kit

(Prefilled 96-Deepwell plate)

For purification viral DNA/RNA from blood, tissue, serum, plasma, body fluid, swab, tissue sputum, etc.

TECHNICAL MANUAL

Cat. no. 4995207

Note: To use the TGuide Smart Viral DNA/RNA Kit, you must have the TGuide Smart Viral DNA/RNA(program no. DP604-01) installed on the TGuide S16/S32 pro Nucleic Acid Extractor.

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This product is for scientific research use only. Do not use in medicine, clinical treatment, food or cosmetic

Table Contents

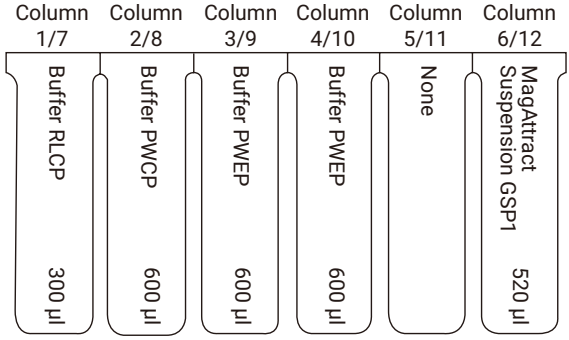
TGuide Smart Viral DNA/RNA Kit

Cat. no. 4995207

Kit Contents

Contents	4995207 (96 preps)
Virus DNA/RNA Reagents	6 plates
Proteinase K	1 ml
RNase-Free ddH_2O	15 ml
TGuide Smart Tip Comb	12

Virus DNA/RNA reagent composition



Storage condition

The kit can be stored in dry conditions at room temperature (15~30°C) for 12 months.

Product

The kit adopts magnetic beads and a unique buffer system, to isolate and purify viral DNA/RNA with high quality from blood, tissue, serum, plasma, lymph, cell-free body fluid, cell culture supernatant, urine, or various viral preservation solutions. The uniquely embedded magnetic beads have a strong affinity for nucleic acid under certain conditions. When the conditions are changed, the magnetic beads can release the absorbed nucleic acid to rapidly separate and purify it. The extracted viral DNA/RNA has high yield, high purity, stable and reliable quality. It can perfectly fit with TGuide S16 Nucleic Acid Extractor of TIANGEN for automated extraction.

Nucleic acid purified by this kit is suitable for downstream experiments including RT-PCR, PCR, and qPCR.

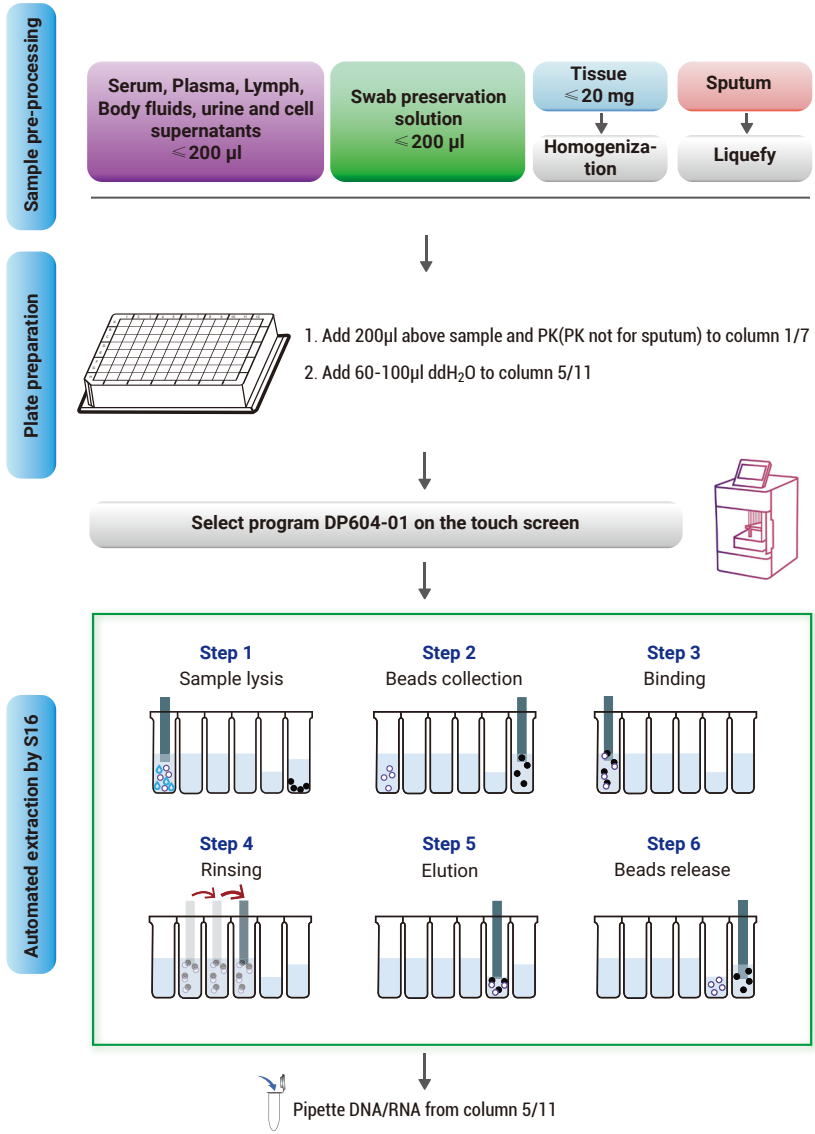
Features

- **Simple and fast:** High-quality viral DNA/RNA can be obtained by running TGuide S16 within half an hour.
- **Flexible throughput:** It is a perfect fit for TGuide S16 Nucleic Acid Extractor to extract 1~16 samples.
- **Wide use:** It is applicable to various cell-free body fluid samples, blood and tissue suspensions.

Notes

1. The sample should be avoided repeated freeze-thaw, otherwise it will lead to reduced nucleic acid extraction. The sample can be extracted immediately or stored at 4°C for less than 24 hr. For long-term storage, it can be stored at -20°C or -80°C.
2. When extracting viral DNA/RNA by the kit, special attention should be paid to prevent nucleic acid degradation. The utensils, sample injectors, etc. used should be dedicated, and disposable consumables such as centrifuge tubes and pipette tips should go through autoclaved sterilization. Operators should wear powderfree gloves, masks, etc.
3. There may be magnetic beads residual in the column 5/11 at elution step, so try to avoid touching magnetic beads during final sample transfer. If magnetic particles are present in user's storage tube, centrifuge at 10,000 × g for 2 minutes, and transfer the supernatant to a clean tube (not provided).
4. The samples and reagent materials used should be disposed properly, and the operating table should be cleaned and disinfected thoroughly.
5. It is necessary to take an appropriate amount of the processed sample and add it to column 1/7 of the prefilled 96-deepwell plate.
6. The elution buffer (RNase-Free ddH_2O) is not prefilled, so you need to add the elution buffer (RNase-Free ddH_2O) to the column 5/11 of the prefilled 96-deepwell plate before performing on the instrument. The recommended range of elution buffer is 60~100 μl. The smaller the elution volume, the higher the nucleic acid concentration, but the lower the total yield may be. On the contrary, the larger the elution volume, the lower the nucleic acid concentration, and the higher the total yield may be. You can adjust it in the range of 60~100 μl as needed.

Operational steps



1. Preparation of virus DNA/RNA reagent

1.1 Take out a prefilled 96-deepwell plate and invert it to re-suspend the magnetic beads; Gently shake to concentrate the reagent and magnetic beads to the bottom of the plate. Before use, remove the sealing film carefully to avoid liquid spatter or spills.

1.2 Add an appropriate volume (60~100 μl) of elution buffer (RNase Free ddH_2O, included in the kit) to column 5/11 of the prefilled 96-deepwell plate.

2. Sample pre-processing

2.1 Take out the blood, serum, plasma, urine, pleural effusion and ascites, alveolar lavage fluid, cerebrospinal fluid, saliva and other samples and balance them to room temperature before loading to the plate, proceed to 3.1.

2.2 Swab samples

If it is a dry swab sample, add a particular volume of normal saline (preferably immersing the swab), vortex it for 15~30 sec to mix well, and proceed to 3.1. If the sample contains a swab and preservation solution, after vortex and mixing well, and proceed to 3.1.

2.3 Tissue samples

Take the tissue blocks, add an appropriate amount of PBS buffer or normal saline, homogenize the tissue, centrifuge it at 12,000 rpm for 2 min, and proceed to 3.1.

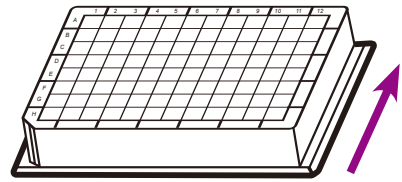
2.4 Sputum samples

If the sputum is thick, add twice the volume of the normal saline for diluting, and then add 20 μl Proteinase K and mix well, settle for 5~10 min to liquefy the sample (Proteinase K is not needed in the next step), and proceed to 3.1.

3. Operation steps of TGuide S16 Nucleic Acid Extractor

3.1 Add 200 μl supernatant of the sample (the sample should be balanced to room temperature) and 20 μl of Proteinase K into the column 1/7 of the prefilled 96-deepwell plate.

3.2 Place the reagent plate on the base in the TGuide S16 Nucleic Acid Extractor. Insert the Tip Combs into the slots to ensure they are well connected and firmed.



3.3 If you use the TGuide S16 Nucleic Acid Extractor, select the corresponding program DP604-01 file on the touch screen, click the icon ▶ in the lower right corner of the screen and click the "RUN" button at the bottom of the screen to start the experiment.

3.4 At the end of the automated extraction process, take the DNA/RNA out of the column 5/11 of the prefilled 96-deepwell plate and store it under appropriate conditions. Prefilled 96-deepwell plate and tip comb are for single use only.

Appendix

1.Program

The automated extraction process of virus DNA/RNA is shown in the following table:

Step	Hole site	Step name	Mix time (min)	Mix speed	Dry time (min)	Volume (μl)	Temp. (°C)	Segments	Every time (sec)	Magnetization time(sec)	Cycle	Magnet speed (mm/s)
1	6	Transfer beads	0.5	8	0	520	—	5	3	0	2	2.5
2	1	bind	5	8	0	500	—	5	4	0	2	2.5
3	2	Wash1	2	8	0	500	—	5	3	0	2	2.5
4	3	Wash2	1.5	8	0	600	—	5	3	0	2	2.5
5	4	Wash3	1.5	8	5	600	—	5	3	0	2	2.5
6	5	Elution	5	8	0	100	75	5	5	0	2	2.5
7	6	Discard	0.5	8	0	520	—	1	0	0	0	—

2. Related Products

Instrument and Accessories

Product name	Packing Size	Cat.No
TGuide S16 Nucleic Acid Extractor	1 set	OSE-S16-AM
TGuide Smart Magnetic Tip Comb	200 pieces/box	4968939
TGuide Single Sample Tank Bracket	5 pieces/box	4993270

TGuide Smart Reagent Kits

Product name	Packing Size (preps) cartridge/plate	Cat.No
TGuide Smart Magnetic Plant DNA Kit	48	4993548
TGuide Smart Soil /Stool DNA Kit	48	4993549
TGuide Smart Magnetic Tissue DNA Kit	48/96	4993547/4995038
TGuide Smart Magnetic Plant RNA Kit	48	4993552
TGuide Smart DNA Purification Kit	48	4993550
TGuide Smart Blood/Cell/Tissue RNA Kit	48/96	4993551/4995039
TGuide Smart Blood Genomic DNA Kit	48/96	4993703/4995206
TGuide Smart Viral DNA/RNA Kit	48/96	4993702/4995207
TGuide Smart Universal DNA Kit	48/96	4993704/4995040