ATP Biotech Inc.

ATP™ Viral Nucleic Acid Extraction Kit
Catalog No. AVR050/AVR100

ATP™ Viral Nucleic Acid Extraction Kit

Store at room temperature (15~25℃)

Contents

ATP™ Viral Nucleic Acid Extraction Kit

Introduction

Format ： Spin column
Sample ： 200 μl of serum, plasma, body fluid and cell culture supernatant
Operation ： Centrifuge / vacuum manifold
Operation time ： 40 minutes
Elution volume ： 50 μl
Application ： RT-PCR, PCR, Real-Time PCR, Real-Time RT-PCR, Automated Fluorescent DNA Sequencing

ATP™ Viral Nucleic Acid Extraction Kit is specially designed for high-throughput purification of viral RNA or DNA from cell-free samples as serum, plasma, body fluids, and the supernatant of viral infected cell culture. With the extraction method, DNA/RNA viruses are lysed quickly and efficiently by lysis buffer which is a highly concentrated solution of chaotropic salt. Nucleic acid in chaotropic salt and methanol are bond to the glass-fiber matrix of viral DNA/RNA Binding Column. Contaminations like salts, metabolites and soluble macromolecular components are removed in Washing Steps. The nucleic acids can be eluted by low-salt buffer or water and are ready-to-use in subsequent reactions. The detection limit for certain viruses depends on the sensitivity of individual PCR or RT-PCR assay. This protocol is recommended for parallel purification of viral RNA including HCV, HIV, HTLV and viral DNA including HBV and CMV.

Kit Contents：Cat.No. / Kit Contents

AVR050 (50 preps/kit)		AVR100 (100 preps/kit)	
VB Lysis Buffer	：30 ml	VB Lysis Buffer	：60 ml
AD Buffer (concentrated)*	：4 ml	AD Buffer (concentrated)***	：8 ml
W1 Buffer	：30 ml	W1 Buffer	：50 ml
Wash Buffer (concentrated)**	：12.5 ml	Wash Buffer (concentrated)****	：25 ml
RNase-free water	：6 ml	RNase-free water	：6 ml
VB Columns：50 pcs (yellow/white filter)		VB Columns：100 pcs (yellow/white filter)	
2ml Collection Tubes：100 pcs		2ml Collection Tubes：200 pcs	

* Add 30 ml ethanol (96~100%) to AD Buffer prior to initial use.(see bottle label for volume)
** Add 50 ml ethanol (96~100%) to Wash Buffer prior to initial use.
*** Add 60 ml ethanol (96~100%) to AD Buffer prior to initial use. (see bottle label for volume)
**** Add 100 ml ethanol (96~100%) to Wash Buffer prior to initial use.

Caution：VB Lysis Buffer contain guanidine hydrochloride which is a harmful and irritant agent. During operation, always wear a lab coat, disposable gloves, and protective goggles.

Product Intended Use：Research / Clinical Application

ATP™ Viral Nucleic Acid Extraction Kit is a research purpose device. ATP™ Biotech Inc. has not validated in clinical application for any organism or association, and therefore offer no specific claims for uses in diagnostics or prognostics. This device can serve as a means for molecular assays in clinical diagnostics labratory systems after the laborartory has certified their systems according to the CLIA'88 regulation in the USA or local equivalents in other contries. Exercise all necessary care and attention when handling this product.

Notice：

ATP™ Viral Nucleic Acid Extraction Kit could extract both DNA and RNA from samples containing DNA and RNA based viruses. When user do RNA virus extraction, it is essential to use **cell free** samples to reduce DNA contamination.

Equipments and Reagents are provided by User

- ☐ 1.5 ml (RNase-free) microcentrifuge tubes
- ☐ Microcentrifuge with rotor for 2 ml tubes
- ☐ Ethanol (96-100%)
- ☐ PBS (phosphate-buffered saline)

Viral Nucleic Acid Extraction Kit Protocol

- ☐ AVR050 : Add 30 ml ethanol (96-100%) to AD Buffer prior to the initial use. Add 50 ml ethanol (96-100%) to Wash Buffer prior to the initial use.
- ☐ AVR100 : Add 60 ml ethanol (96-100%) to AD Buffer prior to the initial use. Add 100 ml ethanol (96-100%) to Wash Buffer prior to the initial use.
- ☐ Additionally required : PBS、Ethanol(96-100%)、1.5 ml microcentrifuge tube (RNase-free)

Lysis

1. Transfer 200 µl of sample (serum, plasma, body fluids and the supernatant of viral infected cell culture) into a microcentrifuge tube (provided by user). If prepared sample is less than 200 µl, adjust sample volume to 200 µl with PBS (provided by user).
2. Add 400 µl of VB Lysis Buffer to the sample, mix by vortexing.
3. Incubate at room temperature for 10 minutes.

Nucleic Acid Binding

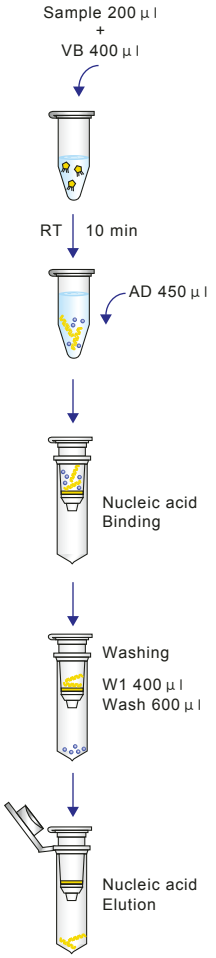
4. Place a VB Column in a 2 ml Collection Tube.
5. Add 450 µl of AD Buffer (ethanol added) to the sample lysate and mix immediately by vortexing.
6. Apply 600 µl of lysate mixture from previous step into the VB column.
7. Centrifuge at 13,000 rpm for 1 minute.
8. Discard the flow-through waste and apply the rest of lysate mixture into the same Column.
9. Centrifuge at 13,000 rpm for 1 minute.
10. Discard the Collection tube containing the flow-through waste and transfer the VB column in a new 2 ml Collection tube.

Washing

11. Add 400 µl of W1 Buffer into the VB Column.
12. Centrifuge at 10,000 xg (13,000 rpm) for 30 seconds.
13. Discard the flow-through and place the VB Column back in Collection Tube.
14. Add 600 µl of Wash Buffer (ethanol added) into the VB Column
15. Centrifuge at 10,000 xg (13,000 rpm) for 30 seconds.
16. Discard the flow-through and place the VB Column back in the Collection Tube.
17. Centrifuge again for 3 minutes at full speed (13,000 rpm) to dry the column matrix.

Nucleic Acid Elution

18. Place dried VB column in a clean microcentrifuge tube (RNase-free, provided by user).
19. Apply 50 µl of RNase-free water onto the center of the VB column matrix, and close the cap of VB Column.
20. Stand for 2 minutes until water is absorbed by the matrix.
21. Centrifuge at full speed for 1 minute to elute purified nucleic acid.



Note

Catalog

Product Name	Package	Cat. No.
ATP™ Plasmid Mini Kit	100/300 prep	APD100/APD300
ATP™ Plasmid Midi Kit (Ultra Pure)	25 prep	API25
ATP™ Plasmid Maxi Kit (Ultra Pure)	10/25 prep	APM10/APM25
ATP™ 96-Well Plasmid Mini Kit	4/10 plates	APD9604/APD9610
ATP™ Plasmid Mini Binding Column	50 pcs	PDC50
ATP™ Plasmid Midi Resin Column	10 pcs	PIC10
ATP™ Plasmid Maxi Resin Column	10 pcs	PMC10
ATP™ Gel/PCR DNA Fragments Extraction Kit	100/300 prep	ADF100/ADF300
ATP™ 96-Well Gel/PCR DAN Extraction Kit	4/10 plates	ADF9604/ADF9610
ATP™ 96-Well SEQ Dye Clean Up Kit	4/10 plates	ADC9604/ADC9610
ATP™ Fragment DNA Binding Column	50 pcs	DFC50
ATP™ Genomic DNA Mini Kit (Blood/Culture Cell/Bacteria)	100/300 preps	AGB100/AGB300
ATP™ Genomic DNA Mini Kit (Tissue)	50/300 preps	AGT050/AGT300
ATP™ Genomic DNA Mini Kit (Plant)	100 preps	AGP100
ATP™ Genomic DNA Maxi Kit (Fresh Blood)	25 prep	AGBM25
ATP™™ Genomic DNA Maxi Kit (Frozen Blood)	25 prep	AGDM25
ATP™ Plant Genomic DNA Maxi Kit	25 prep	AGPM25
ATP™ 96-Well Genomic DNA Kit	4/10 plates	AGB9604/AGB9610
ATP™ Reagent Genomic DNA Kit	For 100ml blood	AGE100
ATP™ Genomic DNA Binding Column	50 pcs	GDC50
ATP™ RNA Mini Kit (Blood/Culture Cell/Bacteria)	50 prep	ARB050
ATP™ RNA Mini Kit (Tissue)	50 prep	ART050
ATP™ RNA Mini Kit (Plant)	50 prep	ARP050
ATP™ Viral Nucleic Acid Mini Kit	50 prep	AVR050
ATP™ 96-Well Viral Nucleic Acid Kit	4/10 plates	AVR9604/AVR9610
ATP™ RNA Maxi Kit	10 prep	ARTM10
ATP™ Plant RNA Maxi Kit	10 prep	ARPM10
ATP™ RNA Binding Column	50 pcs	RBC50
Proteinase K	11 mg/kit	APK000011
RNase A	0.2 ml (50 mg/ml)	ARA500200
RNase A	1.5 ml (50 mg/ml)	ARA501500

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