Magbead Viral DNA/RNA Kit

Product: Magbead Viral DNA/RNA Kit

Size: 96 tests/Box，800 tests/Box

Applications

It is used for nucleic acids isolation, enrichment and purification. The processed products can be used for clinical diagnosis in vitro.

Principle

Magbead Viral DNA/RNA Kit provides a simple, rapid and efficient method to extract DNA/RNA from swab, serum, plasma, bronchoalveolar lavage fluid and other cell-free body fluids. The unique buffer system enables the nucleic acid in the lysate to be efficiently and specifically binded to the magbeads. The obtained nucleic acid has high purity, stable quality, and is free of protein, nuclease and other contaminants and inhibitors. It can be applied to various conventional operations, including PCR, fluorescence quantitative PCR and other experiments.

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Kit Components

Component	96 tests/Box		800 tests/Box	
	Size	Quantity	Size	Quantity
Lysis Buffer	25 ml/bottle	1	200 ml/bottle	1
Washing Buffer 1 (concentrate)	30 ml/bottle	1	120 ml/bottle	2
Washing Buffer 2 (concentrate)	15 ml/bottle	1	60 ml/bottle	2
RNase-Free Water	10 ml/bottle	1	100 ml/bottle	1
Magbeads Suspension Solution	1.5 ml/tube	1	10 ml/bottle	1

Storage Condition and Valid Period

Store at 4-30°C up to 12 months.

We suggest products transportation at 4-37°C for no more than 7 days.

Sample Requirements

Applicable Samples: swab, serum, plasma, bronchoalveolar lavage fluid and other cell-free body fluids.

Equipment and Reagents to Be Supplied by User

1. Manual extraction
   1) Constant temperature mixer (CWBIO, CW2593 is recommended)
   2) 2/15ml Magnetic device (CWBIO, CW2594 is recommended)
   3) Isopropanol, 100% ethanol
2. Automated extraction
   (Compatible with CWBIO's automated nucleic acid extractor, CWE2100)
   1) Automated nucleic acid extractor (CWE2100)
   2) Isopropanol, 100% ethanol
   3) 96 DW Plate(CW2523); 8 channel Comb(CW2524)
3. Automated extraction
   (Compatible with CWBIO's automated nucleic acid extractor, CWE9600)
   1) Automated nucleic acid extractor (CWE9600)
   2) Isopropanol, 100% ethanol
   3) 96 DW Plate(CW2523); Spin tips pack (CW2532)

3. Compatible with CWBIO's automated nucleic acid extractor CW9600.
   DNA / RNA can be extracted from 96 samples at one time using CWE9600.

3.1 General purification procedure

3.1.1 Add the reagents to each well of the 96 DW plate according to the table below (the sample needs to be balanced to room temperature).

Position	Regents & Volume
Spin tips pack	96 DW Plate Spin tips pack
Sample plate	Sample: 200 µl Lysis Buffer: 200 µl Isopropanol: 300 µl
Washing Plate 1	Washing Buffer 1: 500 µl
Washing Plate 2	Washing Buffer 2: 500 µl Magbeads Suspension Solution: 10 µl
Elution plate	RNase-Free Water: 100 µl

3.1.2 Put the plates into CW9600 according to equipment tips, and run CWE9600 program. After 20 minutes, take out the Plates, and the samples of elution plate were transferred to the centrifuge tube for long-term preservation at -80°C.

3.2 Rapid purification procedure (swab sample only)

3.2.1 Add the reagents to 96 DW plate according to the table below (the sample needs to be balanced to room temperature).

Position	Regents & Volume
Spin tips pack	96 DW Plate Spin tips pack
Sample plate	**Sample: 300 µl** Lysis Buffer: 200 µl Isopropanol: 300 µl
Washing plate	Washing Buffer 2: 500 µl Magbeads Suspension Solution: 10 µl
Elution plate	RNase-Free Water: 100 µl

3.2.2 Put the plates into CW9600 according to equipment tips, and run CWE9600 program. After 11 minutes, take out the Plates, and the samples of elution plate were transferred to the centrifuge tube for long-term preservation at -80°C.

Procedure

Things to do before starting:

a. Add isopropanol to Washing Buffer 1 (concentrate) and 100% ethanol to Washing Buffer 2 (concentrate) according to the label of the reagent bottle , then mark them.
b. Mix all the reagents and gently invert 3-5 times before use. Shake the bottle containing Magbeads Suspension Solution and vortex for 2 minutes (before first use) or 1 minute (before subsequent use) to ensure that the magbeads are fully resuspended before use.

1. Manual extraction

1.1 General purification procedure

1.1.1 Take 1.5 ml centrifugal tube (supplied by user), add 200 µl sample (the sample needs to be balanced to room temperature), 200 µl lysis buffer, 300 µl isopropanol. Vortex for 5 seconds, then shake 10 minutes with a constant temperature mixer of 1200 rpm at room temperature.

Note: For wet swab sample, mix it thoroughly and take 200 µl. For dry swab sample, soak it in 400 µl normal saline and mix well, let stand for 5 minutes, centrifugate at 12000 rpm for 1 minute, and take 200 µl.

1.1.2 Add 10 µl magbeads Suspension solution into the centrifuge tube, vortex for 10 seconds, and shake 5 minutes with a constant temperature mixer of 1200 rpm at room temperature.

1.1.3 Place the centrifuge tube on the magnetic device. After the magbeads is completely absorbed, discard all the liquid.

1.1.4 Add 500 µl washing buffer 1 (confirm that isopropanol has been added) to the centrifuge tube, vortex for short seconds, and shake 2 minutes with a constant temperature mixer of 1200 rpm at room temperature.

1.1.5 Place the centrifuge tube on the magnetic device. After the magbeads is completely absorbed, discard all the liquid.

1.1.6 Add 500 µl washing buffer 2 (confirm that 100% ethanol has been added) to the centrifuge tube, vortex for short seconds, and shake 2 minutes with a constant temperature mixer of 1200 rpm at room temperature.

1.1.7 Place the centrifuge tube on the magnetic device. After the magbeads is completely collected, discard all the liquid.

1.1.8 Let it dry for 2-5 minutes to remove residual ethanol.

1.1.9 Add 40-100 µl RNase-Free water to the centrifuge tube, vortex for short seconds, and shake 5 minutes with a constant temperature mixer of 1200 rpm at 56℃.

1.1.10 Keep the centrifuge tube on the magnetic device, after the magbeads are absorbed, transfer the nucleic acid solution into a new centrifuge tube, and store it at -80°C for prolonged preservation.

1.2 Rapid purification procedure (swab sample only)

1.2.1 Take 1.5 ml centrifugal tube (supplied by user), add **300 µl sample** (the sample needs to be balanced to room temperature), 200 µl lysis buffer, 300 µl isopropanol. Vortex for 5 seconds, and centrifugate for a second to ensure no liquid residue on the lid and wall of the tube.

Note: For wet swab sample, mix it thoroughly and take 300 µl. For dry swab sample, soak it in 500 µl normal saline and mix well, let stand for 5 minutes, centrifugate at 12000 rpm for 1 minute, and take 300 µl.

1.2.2 Add 10 µl magbeads Suspension solution into the centrifuge tube, vortex for 5 seconds, and shake 2 minutes with a constant temperature mixer of 1200 rpm at room temperature.

1.2.3 Place the centrifuge tube on the magnetic device. After the magbeads is completely absorbed, discard all the liquid.

1.2.4 Add 500 µl washing buffer 2 (confirm that 100% ethanol has been added) to the centrifuge tube, vortex for 10 seconds.

1.2.5 Place the centrifuge tube on the magnetic device. After the magbeads is completely collected, discard all the liquid and ensure that no ethanol remains.

1.2.6 Add 40-100 µl RNase-Free water to the centrifuge tube, vortex for 5 seconds, and shake 3 minutes with a constant temperature mixer of 1200 rpm at 56℃.

1.2.7 Keep the centrifuge tube on the magnetic device, after the magbeads are absorbed, transfer the nucleic acid solution into a new centrifuge tube, and store it at -80°C for prolonged preservation.

2. Compatible with CWBIO's automated nucleic acid extractor CWE2100
DNA / RNA can be extracted from 1-32 samples at one time using CWE2100.

2.1 General purification procedure.

2.1.1 Add the reagents to 96 DW plate according to the table below (the sample needs to be balanced to room temperature).

Position	Regents & Volume
1&7 column	Sample: 200 µl Lysis Buffer: 200 µl Isopropanol: 300 µl
2&8 column	Washing Buffer 1: 500 µl
3&9 column	Washing Buffer 2: 500 µl Magbeads Suspension Solution: 10 µl
6&12 column	RNase-Free Water: 100 µl

2.1.2 Put the plates into CWE2100 equipment, fix the 8 Channel Comb, and run CWE2100 program. After 17 minutes, take out the plates, and the samples of the 6th and 12th columns were transferred to the centrifuge tube for long-term.

2.2 Rapid purification procedure (swab sample only)

2.2.1 Add the reagents to 96 DW plate according to the table below (the sample needs to be balanced to room temperature).

Position	Regents & Volume
1&7 column	**Sample: 300 µl** Lysis Buffer: 200 µl Isopropanol: 300 µl
3&9 column	Washing Buffer 2: 500 µl Magbeads Suspension Solution: 10 µl
6&12 column	RNase-Free Water: 100 µl

2.2.2 Put the plates into CWE2100 equipment, fix the 8 Channel Comb, and run CWE2100 program. After 7 minutes, take out the plates, and the samples of the 6th and 12th columns were transferred to the centrifuge tube for long-term.