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Magbead Viral DNA/RNA Kit

Product Number: DRK2509

Shipping and Storage

Room temperature (15-30°C)

Components

Component	DRK2509 (96preps)
Buffer LB	60 mL
Buffer WB1	60 mL
Buffer WB2	60 mL
RNase-Free water	10 mL
Proteinase K	25 mg ×2
Proteinase K Storage Buffer	1.25 mL ×2
Magbeads PN	1.5 mL

Description

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

Self provided instruments and reagents

1. Manual single tube extraction:
   - 1.1. Constant temperature mixer
   - 1.2. 2/15 mL magnetic rack
2. Matching with fully automatic nucleic acid extractor:
   - 2.1. Fully automatic nucleic acid extractor
   - 2.2. 96 hole deep hole plate
   - 2.3. 8-pin deep hole magnetic sleeve
3. Matching with fully automatic nucleic acid extractor:
   - 3.1. Fully automatic nucleic acid extractor
   - 3.2. 96 hole deep hole plate
   - 3.3. 96 deep hole plate magnetic sleeve

User Preparation before the experiment and important notes

1. Read this manual carefully before the experiment.
2. Before the first use, add 1.25mL Proteinase K Storage Buffer into 25mg Proteinase K to dissolve it Keep warm. If long-term storage is required, place it at - 20℃.
3. Before use, please check whether the Buffer LB is crystallized or precipitated. If it is crystallized or precipitated, please place the Buffer LB at 56℃The water bath dissolves again.

Protocol

1. Manual single tube operation

1.1. Sample lysis:

Take a 1.5mL centrifuge tube (self prepared), add 20μL protease K (optional), 200μL sample (sample needs to be balanced to room temperature), 500μL buffer LB, vortex shake for 5 seconds, and then place it on a constant temperature mixer at 80℃ and 1200 rpm to shake and mix for 4 minutes.

Note: After thoroughly shaking and mixing the wet swab sample, take 200μL for extraction. Soak the dry swab sample in 400μL of physiological saline, thoroughly shake and mix, let it stand for 5 minutes, centrifuge at 12000 rpm for 1 minute, and extract 200μL.

1.2. Nucleic acid adsorption:

1.2.1. Add 10μL Magheads PN to the centrifuge tube, vortex shake for 10s, and place at room temperature on a constant temperature mixer at 1200rpm for shaking and mixing for 4 minutes.

1.2.2. Place the centrifuge tube on a magnetic frame, fully adsorb the magnetic beads, and carefully discard all liquids.

1.3. Sample rinsing 1:

1.3.1. Add 500μL Buffer WB1 to the centrifuge tube, vortex shake, and place it on a constant temperature mixer at room temperature and 1200rpm, shaking and mixing for 2 minutes.

1.3.2. Place the centrifuge tube on a magnetic frame, fully adsorb the magnetic beads, and carefully discard all liquids.

1.4. Sample rinsing 2:

1.4.1. Add 500μL Buffer WB2 to the centrifuge tube, vortex shake, and place it on a constant temperature mixer at room temperature and 1200rpm, shaking and mixing for 2 minutes.

1.4.2. Place the centrifuge tube on a magnetic frame, fully adsorb the magnetic beads, and carefully discard all liquids.

1.5. Nucleic acid elution:

1.5.1. Dry the centrifuge tube for 2-5 minutes to ensure no ethanol residue.

1.5.2. Add 100μL RNase Free water to the centrifuge tube, vortex shake, and mix on a constant temperature mixer at 56℃ and 1200rpm for 5 minutes.

1.5.3. The centrifuge tube is placed on a magnetic frame, and after the magnetic beads are adsorbed, the nucleic acid solution is collected in a new centrifuge tube and stored at -80℃ for a long time.Compatible with automated nucleic acid extractor

2. Matching with fully automatic nucleic acid extractor:

2.1. Add the corresponding reagents to the 96 well deep well plate according to the table below (the sample needs to be balanced to room temperature):

2.2. Put the sample into the fully automatic nucleic acid extractor, edit and run the extraction program according to the table below:

Position	Regents & Volume
1&7column	Protease K: 20μL Sample:200μL Buffer LB: 500μL
2&8column	Buffer WB1: 500μL
3&9column	Buffer WB2: 500μL Magbeads PN: 10μL
6&12column	RNase-Free water:100μL

Number	Location	Name	Waiting time (min)	Mixing time (min)	Magnetization time (sec)	Blend speed	System (μL)	Temperature (℃)
1	3	Collect	0	0	5		500	0
2	1	Blend	0	4	0	Fast	700	80
3	1	Blend	0	4	10	Fast	700	0

4	2	Blend	0	1	5	Fast	500	0
5	3	Blend	0	1	5	Fast	500	0
6	3	Desiccation	2	0	0		500	0
7	6	Elution	0	4	10	Fast	100	56
8	2	Release					500	0

2.3. After the program runs, remove the 96 well plate and transfer the eluent from columns 6 and 12 to a new centrifuge tube for long-term storage at -80℃.

3. Matching with fully automatic nucleic acid extractor:

3.1. Add the corresponding reagents to the 96 well deep well plate according to the table below (the sample needs to be balanced to room temperature):

3.2. Put the sample into the fully automatic nucleic acid extractor, edit and run the extraction program according to the table below:

Position	Reagent and dosage
Magnetic sleeve plate	96 deep hole plate magnetic sleeve
Sample board	Proteinase K : 20 μL Sample: 200 μL Buffer LB: 500μL
Rinsing board	1 Buffer WB1: 500 μL
Rinsing board	2 Buffer WB2: 500 μL Magbeads PN: 10 μL
Elution plate	RNase-Free water:100μL

Drawer	Temperature1	Temperature2	Temperature3	4	5	Temperature6	7	8
Volume μL	700	500	500			100		
Constant Temperature	0	0	0	0	0	56		
Action	Foreward	Foreward	Foreward			Foreward		
Name	LB	WB1	WB2			EB		TIP

Step	Drawer	Temperature (℃)	Mixing time (min)	Mixing Speed (rpm)	Magnetic Attraction Time	Air drying time (min)	Stop
1	3	0	0	0	60	0	off
2	1	80	4	3000	0	0	off
3	1	0	4	3000	60	0	off
4	2	0	1	3000	60	0	off
5	3	0	1	3000	60	2	off
6	6	56	4	3000	60	0	off

3.3. After the program runs, remove the 96 well plate and transfer the eluent to a new centrifuge tube for long-term storage at -80℃.

4. Matching with fully automatic nucleic acid extractor:

4.1. Add the corresponding reagents to the 96 well deep well plate according to the table below (the sample needs to be balanced to room temperature):

Position	Regents & Volume
Sample Plate	Protease K: 20μL Sample:200μL

	Buffer LB: 500μL
Washing Plate 1	Buffer WB1: 500μL
Washing Plate 2	Buffer WB2: 500μL Magbeads PN: 10μL
Elution Plate	RNase-Free water:100 μL

4.2. Put the sample plate into the fully automatic nucleic acid extraction instrument, edit and run the extraction program according to the table below:

Number	Hole	Name	Wait Time (min)	Mixing Time (min)	Magnetic Bead Time (sec)	Mixing Speed	System (μL)	Temperature (℃)
1	3	Installing magnetic sleeve						
2	3	Collect	0	0	5		500	0
3	1	Splitting	0	4	0	Fast	700	80
4	1	Mix	0	4	10	Fast	700	0
5	2	Wash	0	1	5	Fast	500	0
6	3	Wash	0	1	5	Fast	500	0
7	3	Dry	2	0	0		500	0
8	6	Elution	0	5	10	Fast	100	56
9	2	Installing magnetic sleeve						

4.3. After the program runs, remove the 96 well plate and transfer the eluent to a new centrifuge tube for long-term storage at -80℃.