TBG Biotechnology Corp.

EZbead™ Virus Extraction Kit

Instructions for Use

For DNA and RNA isolation from Virus

96 preps

REF 37900

REF 37900a

CE

Oct. 2017
Rev. 3.3

Intended use

The EZbead™ Virus Extraction Kit is a magnetic beads base method intended for DNA and RNA isolation from virus in serum, plasma, or cultured cells.

Kit Contents

37900 User-filled reagent

Contents	Qty.
Lysis Buffer	60 ml
Magnetic Beads	4 x 1 ml
Wash Buffer 1	80 ml
Wash Buffer 2	2 x 20 ml
Storage Buffer	80 ml
Elution Buffer	20 ml
Proteinase K	1 ml
Deep Well Plate	6 pcs.
Mixing Rod	12 pcs.

37900a Pre-filled reagent

Contents	Qty.
Reaction Plate	6 pcs.
Mixing Rod	12 pcs.
Proteinase K	1 ml
Elution Buffer	1.5 ml

NOTICE:

1. 96 preps per kit.
2. All steps of this protocol should be performed at room temperature (20-30^{o}C) promptly.
3. Guanidine salt contained. Not compatible with disinfectant containing bleach.

Storage Conditions

All components of EZbead™ Virus Extraction Kit can be stored dry at room temperature (20-30°C) for up to 1 year without showing any reduction in performance. Protease K should be stored at 2~8 °C after received.

Other Materials Not Provided

- Micropipettes
- 96 – 100% Ethanol
- Heating Strips (Only for EZbead™ System 32 v1.0)
- Magnetic Block

Preparing Reagents

- Add 80 ml ethanol (96-100%) to Wash Buffer 2 before using.

Important Notes

- If the room temperature is below 20 °C, it is recommend to pre-heat lysis buffer, binding buffer, wash buffer 1 and elution buffer at 37°C for 10 min.

Protocol

Isolation of Viral DNA/RNA from cells suspended in PBS or serum:

1. Each deep well plate can be used to a perform 1~16 preps. For the EZbead™ System-32, a maximum of 2 plates can be used at once totaling 32 preps.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Sample 1						Sample 9					
B	Sample 2						Sample 10					
C	Sample 3						Sample 11					
D	Sample 4						Sample 12					
E	Sample 5						Sample 13					
F	Sample 6						Sample 14					
G	Sample 7						Sample 15					
H	Sample 8						Sample 16					

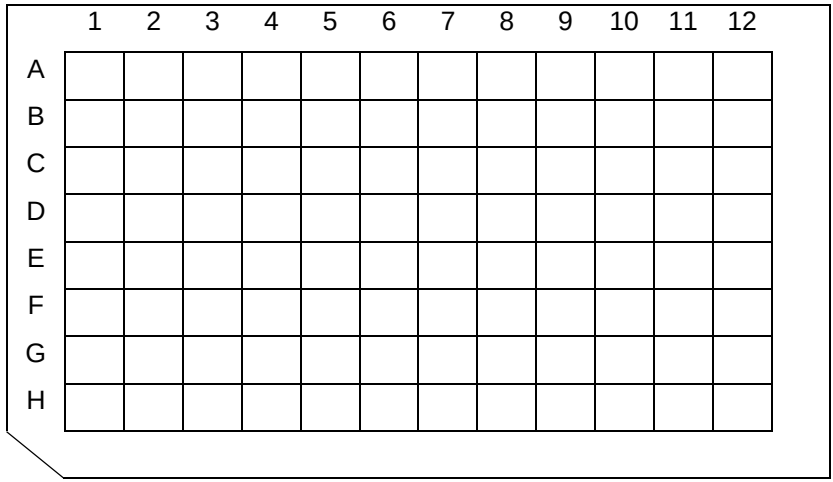
2. If you're using 37900a (prefilled reagent kit), skip to next step. If you're using 37900 (userfilled reagent kit), add the reagents for each well according to the following table.

Column No.	1 / 7	2 / 8	3 / 9	4 / 10	5 / 11	6 / 12
Reagent (Vol.)	Lysis Buffer (600 µL)	Wash Buffer 1 (800 µL)	Wash Buffer 2 (800 µL)	Wash Buffer 2 (800 µL)	Magnetic Beads (40 µL) & Storage Buffer (760 µL)	Elution Buffer (80 µL)

*Vortex the magnetic beads before use.

3. Add 300µL of serum, plasma, or 2 x 10^6 cells (in normal saline or PBS) and 10µL of Proteinase K into wells on columns 1 or 7 of the deep well plate.

4. If you're using the EZbead™ system 16, simply slide the plate fully into the chamber. If you're using EZbead™ System-32, please insert the plate with the heating strip underneath columns 6 and 12. In both EZbead™ systems, please ensure the bevel of the plate is positioned at the bottom left corner.



5. Slide the mixing rod fully into the EZbead™ System and close the cabin door.
6. Select the protocol "VIRUS-40-5". Press "Start" to start the protocol run.

Setup of protocol "VIRUS-40-5":

For the EZbead™ System-32:

Well	Mix Min	Coll. Sec	Heat Min	Rod	Speed	Volume	Pause
5	0	60	0	On	M	800	Off
1	10	60	0	On	L	800	Off
2	1	60	0	On	M	800	Off
3	1	60	0	On	M	800	Off
4	1	60	0	On	M	800	Off
6	5	60	10	On	M	150	Off
3	1	0	0	Off	M	800	Off
0	0	0	0	Off	M	0	Off

For the EZbead™ System-16:

Well	Mix Min	Coll. Sec	Rod	Speed	Volume	Pause	Vapor
5	0	60	On	M	800	Off	0
1	10	60	On	L	800	Off	0
2	1	60	On	M	800	Off	0
3	1	60	On	M	800	Off	0
4	1	60	On	M	800	Off	10
6	5	60	On	M	150	Off	0
3	1	0	Off	M	800	Off	0
0	0	0	Off	M	0	Off	0

7. After the protocol run ends, press "BZ stop" to stop buzzer and slide out the plate. Press "Start" again to return the robot arm to the starting position.
8. Place the plate on top of the magnetic block to magnetize any remnant magnetic beads to the bottom for 2 minutes. Transfer the elutant containing purified DNA/RNA in columns 6 and 12 to clean tubes for storage or continue to downstream applications.

WARNINGS AND PRECAUTIONS

1. Each laboratory has to perform the quality control test to ensure reliable results before running the specimen tests.

2. Please refer to the local legal requirements for waste management.

3. Please refer to the manufacturer‘s safety data sheet and the product labeling for information on potentially hazardous components. (MSDS could be obtained from local dealer.)

4. Do not use reagents past the expiration date printed on the label.

Troubleshooting

Issues	Suggestions
A_{260}/A_{280} ratio is low	1. Protein contamination: Decrease sample volume. 2. Increase homogenization time to ensure the sample is completely lysed. 3. Ensure washing steps are sufficient. 4. Repeat step 4 & 5 or increase the wash time.
Low amount of extracted RNA	1. Use a fresh and uncontaminated sample. 2. Extend the elution time. 3. Ensure the containers used are RNase-free.

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