User Bulletin

VIOGENE
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VER.:20A

Viral RNA Extraction Magnetic-bead System

Catalog No. GVRMB1001 & GVRMB1002

For biological fluids containing RNA virus: **swab liquid sample, saliva,** serum, plasma, body fluids, and cell culture supernatant.

Downstream Application

- RT-PCR / RT-qPCR
- Poly A^+ RNA selection
- cDNA Synthesis/ Primer extension
- Array analysis
- *In vitro* translation
- NGS
- Gene editing

Product Contents

Cat. No	GVRMB1001	GVRMB1002
Preps	96 preps	4x 96 preps
RXVMB Buffer	100 ml	2x 200 ml
Wash 1 Buffer	2x 30 ml	2x 120 ml
Wash 2 Buffer	2x 20 ml	2x 80 ml
RNase-free ddH_2O	30 ml	100 ml
Proteinase K	20 mg	4x 20 mg
Magnetic-beads	2 ml	8 ml
Protocol	1	1

All buffers need to be mixed well before use.

Shipping & Storage

Viogene Viral RNA Extraction Magnetic-bead System is shipped at ambient temperature and stored for up to 6 months.

WARNING,

strong acids and oxidants (for instance, bleach) should not be used together with RXVMB buffer.

Important Notes

- Add 1 ml RNase-free ddH_2O to each 20 mg Proteinase K tube, vortex to reconstitute, and store the liquid Proteinase K solution at $4^{\circ}C$.
- Add 20 ml (GVRMB1001) or 80 ml (GVRMB1002) of isopropanol (98-100%) to the **Wash 1** Buffer bottle when first open the bottle.
- Add 30 ml (GVRMB1001) or 120 ml (GVRMB1002) of isopropanol (98-100%) to the **Wash 2** Buffer bottle when first open the bottle.

Viral RNA Extraction Magnetic-bead Manual Protocol

Perform all steps at room temperature.

1. Pipet 400 μl sample (swab liquid sample, saliva, serum, plasma, body fluids, and cell culture supernatant) into a 1.5 ml tube.

2. Add 800 μl of RXVMB Buffer to the sample, mix by pipetting or vortexing.
Through mixing is required for sample lysis. If the sample volume is larger or smaller than 400 μl, increase or decrease the amount of RXVMB buffer proportionally.

3. Add 10 μl Proteinase K to the RXVMB buffer mixed sample and incubate at 50°C for 10 minutes.

4. After Proteinase K incubation, add 20 μl Magnetic-beads (shake or vertex the Magnetic-beads-bottle before open) to the sample tube, mix by pipetting or vortexing.

5. Transfer the sample tube with Magnetic-beads to a magnetic stand, until the Magnetic-beads visibly pellet, then aspirate and discard the cleared supernatant.

Strong magnetic field magnetic stand or separator should be used.

6. Add 500 μl of isopropanol added Wash 1 buffer to the sample tube, mix by pipetting or vortexing, place the tube on the magnetic stand, until the Magnetic-beads visibly pellet, then aspirate and discard the cleared supernatant.

7. Add 500 μl of isopropanol added Wash 2 buffer to the sample tube, mix by pipetting or vortexing, place the tube on the magnetic stand, until the Magnetic-beads visibly pellet, then aspirate and discard the cleared supernatant.

8. Add 500 μl of ethanol (98-100%), mix by pipetting or vortexing, place the tube on the magnetic stand, until the Magnetic-beads visibly pellet, then aspirate and discard the cleared supernatant.

9. (Optional step) Add 500 μl of ethanol (98-100%), mix by pipetting or vortexing, place the tube on the magnetic stand, until the Magnetic-beads visibly pellet, then aspirate and discard the cleared supernatant.

10. Air dry the Magnetic-beads for 10 minutes.

11. Add 100 μl of RNase-free ddH_2O to dried Magnetic-beads, mix by pipetting or vortexing, place the tube on the magnetic stand, until the Magnetic-beads visibly pellet, then elute and pipet the eluted RNA into a new RNase-free (not provided) tube.

12. The eluted RNA can now be used for downstream purpose, such as RT-qPCR, and store at -70°C.

Automation

The content-reagents of the Viral RNA Extraction Magnetic-bead System is compatible with most of automatic systems as list:

KingFisher Flex:

KingFisher 96 deep-well plate, v-bottom, polypropylene (Thermo 95040450)

KingFisher 96 tip comb for deep-well magnets (Thermo 97002534)

KingFisher 96 microplate (200µL) (Thermo 97002540)

Tecan Fluent:

Plate Magnet 96 MAGNUM FLX ALPAQUA

BioShake D30-T elm (Tecan 30125516)

Block Adapter Plate Qinstr. Nunc 96 2ML (Tecan 30150449)

Nunc™ 96-Well Polypropylene DeepWellTM Storage Plates, 2 ml (Thermo. 278743)

Hard-Shell® Low-Profile, Thin-Wall, Skirted 96-Well PCR Plates (Bio-Rad HSP-9631)
1.5 ml reagent tubes (Eppendorf, 022363204)

DITI LIHA 50µL CONDU.FIL. 2304 PCE. SBS (Tecan 30057813)
DITI LIHA 200µL CONDU.FIL. 2304 PCE. SBS (Tecan 30057815)
DITI LIHA 1000µL CONDU.FIL. 2304 PCE. SBS (Tecan 30057817)
LIHA DITI SBS Box Refill Small 10PCE. (Tecan 30058506)
LIHA DITI SBS Box Refill Large 10PCE. (Tecan 30058507)
Trough Disposable 25ML PP 120PCE. (Tecan 30055743)
Trough Disposable100ML PP Grey 108 PCE. (Tecan 10613049)

Hamilton STAR:

Plate Magnet 96 Magnum FLX Alpaqua
Hamilton Heater Shaker
Nunc™ 96-Well Polypropylene DeepWell™ Storage Plates, 2 ml (Thermo. 278743)

Hard-Shell® Low-Profile, Thin-Wall, Skirted 96-Well PCR Plates (Bio-Rad HSP-9631)

50 µL CO-RE Tips with Filters (Hamilton 235979)
300 µL CO-RE Tips with Filters (Hamilton 235938)
1000 µL CO-RE Disposable Tips with Filters (Hamilton 235905)
60 mL Reagent Reservoir Self-Standing (Hamilton 194051)
250 mL Reagent Reservoir 96-well, SLAS-ANSI (Hamilton 56669-01)

For automation related technical support, please email to:
service@viogene.com