CHANGYU Viral RNA Mini Kit

Cat#: CYRN2701 (50 Preps)

Kit Contents	Storage	50 Preps (CYRN2701)
Buffer RLB	RT	20 ml
Wash Buffer RE	RT	25 ml
Wash Buffer RW	RT	10 ml *Add indicated ethanol before first use*
RNase-free H_2O	RT	6 ml
RNA Bind Columns	RT	50

Note: All reagents, when stored at the indicated temperature, are stable for 9 months

❖ Description

CHANGYU Viral RNA Mini Kits provide the fastest and easiest way to purify viral RNA for reliable use in amplification technologies. Viral RNA can be purified from plasma (treated with anticoagulants other than heparin), serum, and other cell-free body fluids. Samples may be fresh or frozen, but if frozen, should not be thawed more than once. Repeated freeze–thawing of plasma samples will lead to reduced viral titers and should be avoided for optimal sensitivity. Cryoprecipitates accumulate when samples are subjected to repeated freeze–thaw cycles. This may lead to clogging of the membrane when using the vacuum protocol. CY Viral RNA Mini Kits are for general use and can be used for isolation of viral RNA from a wide variety of viruses, but the performance cannot be guaranteed for every virus. CY Viral RNA Mini Kits represent a well-established technology for general-use viral RNA preparation.

The kit combines the selective binding properties of a silica based membrane with the speed of microspin or vacuum technology and is highly suited for simultaneous processing of multiple samples. The sample is first lysed under highly denaturing conditions to inactivate RNases and to ensure isolation of intact viral RNA. Buffering conditions are then adjusted to provide optimum binding of the RNA to the silica membrane, and the sample is loaded onto the Mini spin column. The RNA binds to the membrane, and contaminants are efficiently washed away in two steps using two

different wash buffers. High-quality RNA is eluted in RNase-free water. The purified RNA is free of protein, nucleases, and other contaminants and inhibitors.

❖ **Features**

1. Rapid isolation of high-quality, ready-to-use RNA
2. No organic extraction or alcohol precipitation
3. Consistent, reproducible results
4. Complete removal of contaminants and inhibitors

❖ **Procedure**

Note:

⇨ **Before the first use, add the indicated amount of ethanol into Wash Buffer RW bottles, mix well, and mark the bottle with a check.**

1. Pipet 400 µl of Buffer RLB into a 1.5 ml micro tube.
2. Add 200 µl plasma, serum, urine, cell-culture supernatant, or cell-free body fluid to the Buffer RLB in the micro tube. Mix by pulse-vortexing.

   Note: If the prepared sample is less than 200 µl, adjust the sample volume to 200 µl with PBS buffer.
3. Incubate at room temperature (15–25°C) for 10 min.

   Note: Viral particle lysis is complete after lysis for 10 min at room temperature. Longer incubation times have no effect on the yield or quality of the purified RNA. Potentially infectious agents and RNases are inactivated in Buffer RLB.
4. Briefly centrifuge the tube to remove drops from the inside of the lid.
5. Add 450 µl of ethanol (96–100%) to the sample, and mix by pulse-vortexing for 15 s. After mixing, briefly centrifuge the tube to remove drops from inside the lid.
6. Transfer up to 700 µl mixture into an RNA binding column placed in a 2 ml collection tube (provided). Centrifuge at 13,000 rpm for 30 s, and discard the flow-through. Repeat this step if the sample volume exceeds 700 µl.
7. Add 500 µl Wash Buffer RE, and centrifuge at 12,000 rpm for 30 s. Discard the flow-through.
8. Add 500 µl Wash Buffer RW (with ethanol added), and centrifuge at 12,000 rpm for 30 s. Discard the flow-through. Repeat Step 8 with another 500 µl Wash Buffer RW.
9. Place the RNA binding column back into the same collection tube. Centrifuge the empty column at 13,000 rpm for 2 min to completely remove ethanol from the column.
10. Place the column in a RNase free microcentrifuge tube. Add 30-50 µl of RNase free water (Optional: pre-warm the water to 70–90°C will increase the RNA yield) to the

center of the column membrane. Incubate at room temperature for 1 min, and centrifuge at 12,000 rpm for 1 min to elute the RNA.

Note: If you want a higher concentration, repeat step 10 using the eluate from step 10. Reuse the centrifuge tube from step 10.

11. Store the purified RNA on ice if used within a few hours. For long-term storage, store the purified RNA at –80°C.

This product is furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.