Viral Genomic DNA/RNA Extraction Kit

Cat: D2410
Size: 50T/100T
Storage: Room temperature(15℃-25℃) can be stored for 12 months under dry conditions, longer storage can be placed at 2℃-8℃.

Kit Components:

Kit Components	50T	100T
Proteinase K	1mL	1mL×2
Prewash Buffer	50mL	50mL×2
Binding Buffer	25mL	50mL
Washing Buffer	15mL	15mL×2
RNase free ddH_2O	15mL	15mL×2
RNase free Adsorption Column	50 units	100 units
RNase free Collecting Tubes(2mL)	50 units	100 units

Introduction:

This kit is suitable for extracting viral DNA/RNA from serum, cell supernatant and lymph fluid, but not suitable for extracting viral DNA/RNA in cells and other tissues. Genomic DNA/RNA extracted using this kit can be used for a variety of routine operations, including enzyme digestion, PCR, library construction, RT-PCR experiments, etc.

Procedure (for reference only) :

Before use, please add anhydrous ethanol to the washing buffer. Please refer to the label on the bottle to add the volume, cover and shake well. All centrifugation steps are carried out at 2-8°C.

1. Take 0.5mL virus supernatant and centrifuge at 12000rpm for 5min. The supernatant was sucked up as much as possible and used, and discard the precipitation(if there was no precipitation, this step could be omitted).
2. Add 20μL 10mg/mL protease K into the virus supernatant, mix thoroughly, and digest at 65℃ for 10min, during which time the centrifuge tube can be reversed and mixed several times.
3. Pre-treatment of the adsorption column: Remove the adsorption column from the package, put it into the collection tube, add 700μL of pre-washing solution, leave it at room temperature for 2min, centrifuge it at 2-8℃ at 12000rpm for 2min, discard the waste liquid, and put the adsorption column into the collection tube for use.
4. Add 500μL bonding solution to the virus supernatant and mix thoroughly. Then 400μL anhydrous ethanol was added into the tube and thoroughly mixed. Flocculation precipitation may occur at this time, which will not affect the extraction of DNA/RNA. Both the solution and flocculation precipitation can be added into the treated adsorption column and left for 2min. (The maximum volume of the adsorption column is 750μL, which can be added in two separate times. After one adsorption and centrifugation, the remaining mixed liquid is added to the column for static centrifugation.
5. Centrifuge at 12000rpm for 2min, discard the waste liquid, and put the adsorption column into the collection tube.
6. Add 700μL of washing buffer to the adsorption column**(please check whether anhydrous ethanol has been added before use)**, centrifuge at 12000rpm for 1min, discard the waste liquid, and put the adsorption column into the collection tube.

7. Add 500μL of washing buffer to the adsorption column, centrifuge at 12000rpm for 1min, discard the waste liquid, and put the adsorption column into the collection tube.
8. Centrifuge at 12000rpm for 2min, and place the adsorption column at room temperature or 50℃ in a temperature box for several minutes, in order to remove the residual bleach solution in the adsorption column. Otherwise, the ethanol in the bleach solution will affect the subsequent experiments such as enzyme digestion and PCR.
9. Put the adsorption column into a clean centrifuge tube, add 50μL-100μL RNase free ddH_2O preheated by 65℃ water bath to the center of the adsorption membrane, place at room temperature for 5min, centrifuge at 12000rpm for 2min. High quality viral genomic DNA/RNA can be obtained.

Notes:

1. Replace gloves often with new ones. Because skin often carries bacteria, RNase contamination can result. Use RNase-free plastic products and gun heads to avoid cross contamination. It is best to operate in an RNase free environment when extracting RNA.
2. The sample should avoid repeated freeze-thawing, which will cause the amount of DNA/RNA extracted to also decrease.
3. If there is precipitation in the binding solution, it can be redissolved in a 37℃ water bath.
4. If the sample is not thoroughly digested, the column may be blocked in the subsequent centrifugation step, and the centrifugation time can be appropriately extended.
5. The volume of eluting buffer should be no less than 50μL, too small volume will affect the recovery efficiency.
6. The extracted products should be kept at -70℃ to prevent genomic degradation.
7. RNA detection: The size of the obtained genomic RNA fragments is related to factors such as the preservation conditions and species of the virus. Since the virus does not contain ribosomal RNA, it cannot be detected by conventional electrophoresis and can only be detected by later experiments. OD260 value of 1 corresponds to about 40μg/mL of single-stranded RNA.
8. DNA testing: The size of the resulting genomic DNA fragment is related to factors such as the preservation conditions and species of the virus. OD260 value of 1 corresponds to about 50μg/mL of double-stranded DNA and 40μg/mL of single-stranded DNA. If the virus content is too low, the final genomic DNA extracted may not be detectable by electrophoresis, but other experiments such as PCR will have results.

Related Products:

R1600	*DEPC treats water*
SR0060	*Liquid phase RNase scavenger*
SR0040	*Solid phase RNase scavenger*
R1050	*5×RNA Loading Buffer*
SR0080	*RNAsaver RNA long-acting storage solution*
SR0020	*RNA wait(Non-Frozen Tissue RNA Preservation Solution)*
M1010	*10×MOPS buffer*
SY1040	*SYBR Green II RNA*
R1100	*TriQuick total RNA extraction reagent*
R1200	*Total RNA extraction kit*