Whole Blood RNA Extraction Kit with Column method

Cat: R1220

Size: 50T/100T

Storage: Dry storage at room temperature (15℃-25℃), valid for 1 year.

Kit Components:

Kit Components	50T	100T
Lysis Buffer	15mL	30mL
RNA Elution Buffer	14.7mL	29.4mL
Washing Buffer I	15mL	30mL
Washing Buffer II	15mL	30mL
RNase-free ddH_2O	5mL	10mL
Adsorption column (including collection tube)	100 sets	200 sets
Collection tube	100 units	200 units

Note: Please add absolute ethanol to the RNA elution buffer and washing buffer before use. Please refer to the label on the bottle to add the volume.

Introduction:

The kit adopts column method to extract whole blood RNA without using red blood cell lysate to split red blood cells. The operation is simple, and the genomic DNA can be well adsorbed and removed without using DNase. The RNA extracted using this kit is free of protein and other impurities. It can be used in many downstream experiments such as RT-PCR, fluorescence quantitative PCR, in vitro translation and molecular cloning. The operation is simple and the time is short.

Protocols:

1. Add 300μL lysis buffer into 1.5mL centrifuge tube, add equal volume of blood into it, shake and mix well, put for 5min, and then centrifuge at 12000rpm at 4℃ for 10-15min.
2. Absorb the supernatant into a new 1.5mL centrifuge tube, add 0.5 times absolute ethanol, mix well and add it into the adsorption column, centrifuge at 12000rpm for 2min at 4℃, and discard the filtrate (leave the collection tube for step 4).
3. Put the adsorption column on a clean collection tube, add 300μL RNA elution buffer **(please confirm whether absolute ethanol has been added before use)** into the adsorption column, centrifuge at 12000rpm at 4℃ for 2min, and collect the filtrate.
4. Add 150μL absolute ethanol into the filtrate, mix well and add it into a new adsorption column (using the collection tube in Step 2), centrifuge at 12000rpm for 2min at 4℃, and discard the filtrate.
5. Add 500μL washing buffer I **(check whether absolute ethanol has been added)**, then put at room temperature for 1min, centrifuge at 12000rpm for 1min at 4℃, and discard the filtrate.
6. Add 600μL washing buffer II **(check whether absolute ethanol has been added)**, centrifuge at

12000rpm for 1min at 4℃, and discard the filtrate.

7. Repeat Step 6.

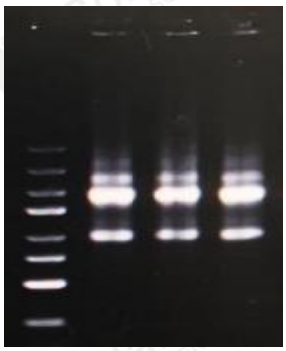
8. Centrifuge at 12000rpm at 4℃ for 2min and leave the adsorption column open at room temperature for 5min to remove excess ethanol.

9. Place the adsorption column on a clean centrifuge tube, and add 50-100μL RNase-free ddH_2O to the adsorption column. Put the adsorption column at room temperature for 2min, centrifuge at 12000rpm for 2min, it can get an RNA solution and RNA was stored at -80℃.

Notes：

1. All relevant utensil consumables should be RNase-free products and careful during operation. Wear masks and gloves to avoid contamination of samples with RNA enzymes in the environment.
2. In the process of RNA extraction, try to operate at low temperatures.
3. Avoid volatilization, oxidation, and pH value changes caused by long-term exposure to the air, and cover the solution tightly in time after use.
4. Try to use fresh blood for RNA extraction.
5. The volume of the elution buffer should not be less than 50μL, too little volume will affect the extraction efficiency, RNA products should be stored at -80℃ to prevent RNA degradation.
6. RNA concentration and purity detection: The extracted RNA fragments can be detected by agarose gel electrophoresis and ultraviolet spectrophotometer. The OD260/OD280 ratio should be 2.0-2.2.

Experimental data:



	Concentration（μg/mL）	A260/A280
1	212.9	2.09
2	195.9	2.09
3	200.6	2.08

Note: 300μL blood sample, eluted with 50μL RNase-free ddH_2O.

Related Products：

R1600	*DEPC treats water*
R1050	*5×RNA Loading Buffer*
M1010	*10×MOPS buffer*
R1210	*Gram-negative RNA extraction kit with column method*
R1230	*Plant RNA extraction kit with column method*
R1240	*Tissue RNA extraction kit with column method*
R1250	*Cell RNA extraction kit with column method*