CE IVDR

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AZUL BLOOD RNA EXTRACTION KIT

RNA IN 90 MINS | GOOD YIELDS FOR USE IN PCR/SEQUENCING

PRODUCT BROCHURE

Cat No-RE107

ISO 13485 CERTIFIED

PRODUCT DESCRIPTION

AZUL Blood RNA Extraction Kit is an easy and efficient system for the isolation of total RNA from whole blood. This kit uses a silica-based spin column technology for isolating RNA from biological samples, thereby eliminating toxic phenol-chloroform extractions. The eluted RNA is suitable for all sensitive downstream applications such as qPCR and Next-Generation sequencing.

KIT COMPONENTS

Components	For 50 preps	For 25 preps
Stabilization Buffer (STB)	100 mL	50 mL
Lysis Buffer 1 (LB1)	200 mL	100 mL
Lysis Buffer 2 (LB2)	25 mL	15 mL
Binding Buffer (BB)	25 mL	15 mL
Proteinase K	1.5 mL	1 mL
Wash Buffer 1 (WB1)	30 mL	15 mL
Wash Buffer 2 (WB2)	25 mL	15 mL
Elution Buffer (EB)	4 mL	2 mL
Spin Column	50 (Pouch pack)	25 (Pouch pack)

SPECIFICATIONS

Format	Spin Column
Sample type	Whole blood
Equipment	Microcentrifuge
Processing time	<90 mins
Processing volume	200 µL- 1 mL
Type	Total RNA
Sample storage	Eluted RNA should be stored at ≤ -20°C
Yield	20-70 ng/µL
Purity	A260/280 ≥ 2.0
Kit Storage	Room Temperature
Kit Validity	Viable for 1 year if stored at appropriate conditions

NOTE: *Check the Binding Buffer and Lysis Buffer for any salt precipitation before every use. Re-dissolve any precipitate by warming the solution to 37°C, then cool it back to room temperature before use.*

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RNA EXTRACTION PROTOCOL

1. Take 200 µL- 1 mL of Blood (stored in EDTA/Citrate/mWRAPR Blood RNA Collection Tubes) in a clean 2.0 mL microfuge tube and centrifuge at 3,000 rpm for 10 mins.
2. To the pellet obtained, add Lysis Buffer 1 up to 2 mL, invert, and mix well. Centrifuge the tube at 3,000 rpm for 10 mins and discard the red supernatant. Repeat this step once again.
3. Add up to 2 mL of stabilization buffer (STB) to the pellet and briefly mix the contents in the tube. Centrifuge at 3,000 rpm for 10 mins. Discard the supernatant.
4. Add 500 µL of Lysis Buffer 2 to the pellet obtained and mix briefly by vortexing the tubes. Add 20 µL of Proteinase K invert and mix, incubate the tubes at 56°C for 30 mins.
5. Centrifuge at 13,000 rpm for 10 mins. Transfer the supernatant to a fresh tube, add 500 µL Binding buffer, invert, and mix the contents of the tube.
6. Transfer the lysate to the spin column inserted in a collection tube. centrifuge the tube at 13,000 rpm for 2 mins, discard the flow through, and place the purification column back into the collection tube. Repeat this step until complete lysate has been transferred into the column and centrifuged.
7. Wash the spin column with 600 µL Wash Buffer 1 (WB1) at 13,000 rpm for 1 min and discard the flow through.
8. Wash the spin column with 500 µL Wash Buffer 2 (WB2) at 13,000 rpm for 1 min to completely remove salts and impurities.
9. Keep the purification column in a clean, sterile 1.5 mL microfuge tube and add 35 µL - 50 µL of Elution Buffer or DNase/RNase-free water to the centre of the column.
10. Centrifuge the column for 13,000 rpm for 2 mins.
11. Discard the purification column and store the eluted RNA at -20°C or -80°C until use.

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FLOW DIAGRAM OF RNA EXTRACTION PROTOCOL

Whole blood

Centrifuge at 3,000 rpm for 10 min

Add Lysis Buffer 1

Centrifuge at 3,000 rpm for 10 min

Add Stabilization Buffer

Centrifuge at 3,000 rpm for 10 min

Add Lysis Buffer 2 + Proteinase K

Incubate at 56°C for 30 mins

Centrifuge at 13,000 rpm for 10 min

Add Binding Buffer

Mix well

Transfer lysate to Spin column

Centrifuge at 13,000 rpm for 2 mins

Add 600 µL Wash Buffer 1

Centrifuge at 13,000 rpm for 1 min

Repeat this step with Wash Buffer 2

Add 30-50 µL Elution Buffer

Centrifuge at 13,000 rpm for 2 mins

Eluted RNA

Store at -20°C or -80°C until use

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
Low RNA Yield	**Sample input:** Too much input or incomplete lysis/ homogenization can cause cellular debris to clog or overload the column, resulting in compromised RNA recovery.	Use less input material or increase the volume of the Lysis Buffer.
	High-protein content (blood, plasma/serum, etc.)	Perform Proteinase K treatment for a longer time to the sample prior to purification.
Low RNA Purity(A260/A280)	Improper Sample handling causes ethanol or Salt contamination.	Make sure lysate and wash buffers have passed entirely through the matrix of the column. This may require centrifuging at a higher speed or longer time.
	Incomplete lysis or cellular debris	Increase the volume of Lysis Buffer to ensure complete lysis/ homogenisation. Be sure to centrifuge and pellet any cellular debris, then process the cleared lysate.
DNA Contamination	Too much blood used	**To remove DNA:** Perform in-column DNase I treatment or perform DNase I treatment post-purification (not provided in the kit), then re-purify the treated sample.
RNA Degradation	Usage of Old Blood Samples not stored at appropriate conditions	**To prevent RNA degradation:** Immediately collect and lyse fresh blood samples into a Lysis Buffer. Collect and store the fresh blood samples in mWRAPR Blood RNA Collection Tubes to ensure the stability & integrity of RNA and process later.

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ORDERING INFO

CATALOG NO	PRODUCT	PREP
RE101	AZUL SARS- CoV-2 Kit RNA Extraction Kit	25/50 preps
RE102	AZUL Tissue RNA Extraction Kit	25/50 preps
RE103	AZUL Bacterial RNA Extraction Kit	25/50 preps
RE104	AZUL Plant RNA Extraction Kit	25/50 preps
RE105	AZUL Soil RNA Extraction Kit	25/50 preps
RE106	AZUL Animal Cell Culture RNA Extraction Kit	25/50 preps
RE107	AZUL Blood RNA Extraction Kit	25/50 preps
RE108	AZUL Stool RNA Extraction Kit	25/50 preps
RE109	AZUL Saliva RNA Extraction Kit	25/50 preps
RE113	AZUL Microbiome RNA Extraction Kit	25/50 preps
RE114	AZUL Fungal RNA Extraction Kit	25/50 preps
RE115	AZUL FFPE RNA Extraction Kit	25/50 preps

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FEEDBACK

How did this kit perform?

Did AZUL Extraction Kit fulfill expectations required for your research?
Let us know by filling out the feedback form here

Or scan the QR code:

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