CE IVDR

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AZUL BLOOD DNA EXTRACTION KIT

DNA IN 75 MINS | GOOD YIELDS FOR USE IN PCR/SEQUENCING

PRODUCT BROCHURE

Cat No-DE107

ISO 13485 CERTIFIED

PRODUCT DESCRIPTION

AZUL Blood DNA Extraction Kit is an easy and efficient system for the isolation of total DNA from whole blood samples. This kit uses a silica-based spin column technology for isolating DNA from biological samples, thereby eliminating toxic phenol-chloroform extractions. The eluted DNA 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)

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SPECIFICATIONS

Format	Spin Column
Sample type	Whole blood
Equipment	Microcentrifuge
Processing time	<75 mins
Processing volume	200 µL- 1mL
Type	Total DNA
Sample storage	Eluted DNA should be stored at ≤ -20°C
Yield	1-5 µg
Purity	A260/280 ≥ 1.8
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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DNA EXTRACTION PROTOCOL

1. Take 200 µL- 1 mL of Blood (stored in EDTA/Citrate/mWRAPR Blood DNA 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 15 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 30 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 DNA at -20°C or -80°C until use.

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FLOW DIAGRAM OF DNA 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 15 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 DNA

Store at -20°C or -80°C until use

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
Low DNA Yield	**Sample input:** Too much input or incomplete lysis/ homogenization can cause cellular debris to clog or overload the column, resulting in compromised DNA recovery.	Use less input material or increase the volume of the Lysis Buffer.
Low DNA 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.
RNA Contamination	Too much blood used	**To remove RNA:** Perform in-column RNase I treatment or perform RNase I treatment post-purification (not provided in the kit), then re-purify the treated sample.
DNA Degradation	Usage of Old Blood Samples not stored at appropriate conditions	**To prevent DNA degradation:** Immediately collect and lyse fresh blood samples into a Lysis Buffer. Collect and store the fresh blood samples in mWRAPR Blood DNA Collection Tubes to ensure the stability & integrity of DNA and process later.

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ORDERING INFO

CATALOG NO	PRODUCT	PREP
DE101	AZUL Tissue DNA Extraction Kit	25/50 preps
DE102	AZUL Animal Cell Culture DNA Extraction Kit	25/50 preps
DE103	AZUL Bacterial DNA Extraction Kit	25/50 preps
DE104	AZUL Plasmid DNA Extraction Kit	25/50 preps
DE105	AZUL Plant DNA Extraction Kit	25/50 preps
DE106	AZUL Soil DNA Extraction Kit	25/50 preps
DE107	AZUL Blood DNA Extraction Kit	25/50 preps
DE108	AZUL Cell-free DNA Extraction Kit	25/50 preps
DE109	AZUL DNA Extraction Kit- Difficult samples	25/50 preps
DE110	AZUL Saliva DNA Extraction Kit	25/50 preps
DE111	AZUL Stool DNA Extraction Kit	25/50 preps
DE112	Quick AZUL Bacterial/Fungal DNA Extraction Kit	25/50 preps
DE113	AZUL Microbiome DNA Extraction Kit	25/50 preps
DE114	AZUL Gel DNA Extraction Kit	25/50 preps
DE115	AZUL FFPE DNA Extraction Kit	25/50 preps
DE116	AZUL Chloroplast DNA Extraction Kit	25/50 preps
DE117	AZUL Mitochondrial DNA Extraction Kit	25/50 preps
DE118	AZUL Pollen DNA Extraction Kit	25/50 preps
DE119	AZUL Fungal DNA Extraction Kit	25/50 preps
DE120	AZUL Sperm DNA Extraction Kit	25/50 preps
DE121	AZUL Skin DNA 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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