CE IVDR

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AZUL CF-DNA EXTRACTION KIT

cf-DNA IN 120 MINS | GOOD YIELDS FOR USE IN PCR/SEQUENCING

PRODUCT BROCHURE

Cat No-DE108

ISO 13485 CERTIFIED

PRODUCT DESCRIPTION

AZUL cf-DNA Extraction Kit is an easy and efficient system for the isolation of cf-DNA from plasma and serum. This kit uses a spin column based extraction for isolating cf-DNA from plasma and serum samples. The eluted cf-DNA is suitable for all sensitive downstream applications such as qPCR and Next-Generation sequencing.

KIT COMPONENTS

Components	For 50 preps	For 25 preps
Lysis Buffer (LB)	4 mL	2 mL
Binding Buffer (BB)	40 mL	20 mL
Proteinase K	1.5 mL	1 mL
Wash Buffer 1 (WB1)	25 mL	15 mL
Wash Buffer 2 (WB2)	15 mL	8 mL
Elution Buffer(EB)	4 mL	2 mL
Spin Column	50 (Pouch Pack)	25 (Pouch Pack)

SPECIFICATIONS

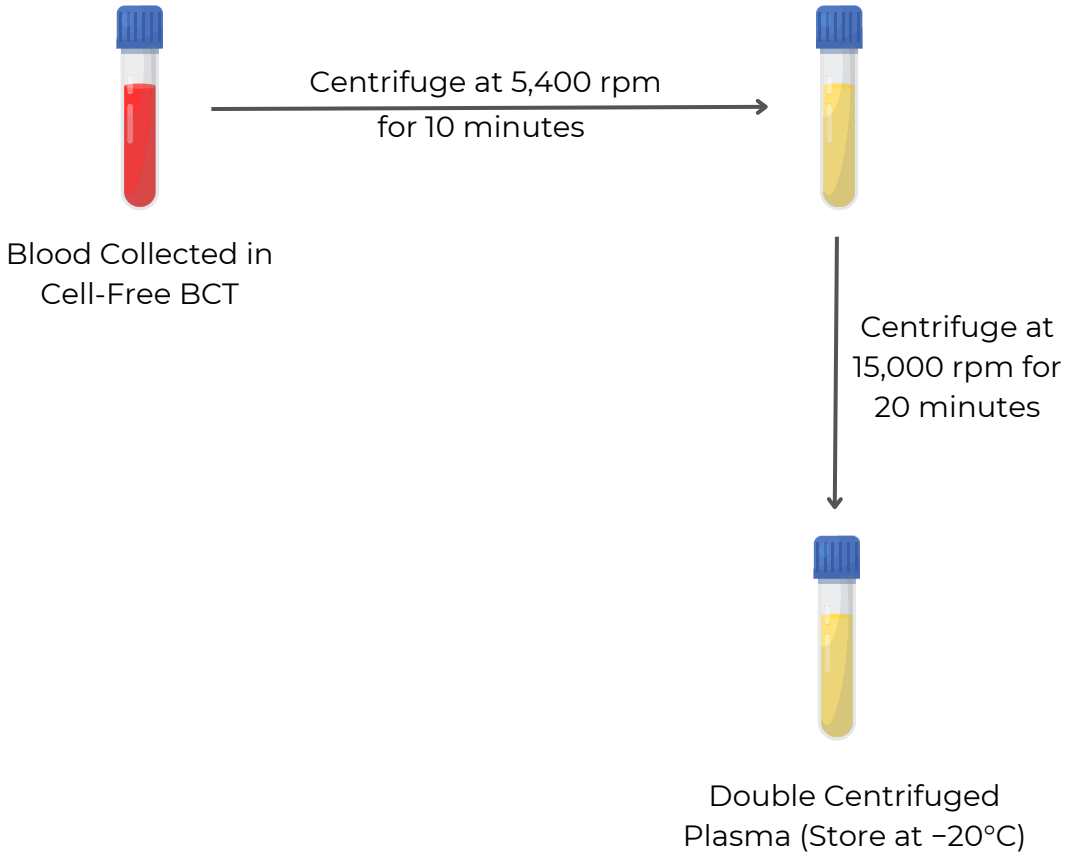
Format	Spin Column
Sample type	Plasma and Serum
Equipment	Microcentrifuge
Processing time	<120 mins
Processing volume	500 µL- 1mL
Type	cf-DNA
Sample storage	Eluted cf-DNA should be stored at ≤ -20°C
Yield	1-100 ng/mL (Depends on Sample Variability)
Purity	A260/280 ≥ 1.8
Kit Storage	Room Temperature
Kit Validity	Viable for 1 year if stored at appropriate conditions

NOTE: *Check the buffers 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.*

PLASMA SEPARATION FROM BLOOD

1. Take the whole blood samples and centrifuge at 5,400 rpm for 10 mins, and transfer the plasma into a new microfuge tube.
2. Centrifuge the separated plasma at 15,000 rpm for 20 mins to separate any remaining cells or particulate matter & transfer it into a new microfuge tube.
3. The plasma samples can be stored at −20°C until further use.

FLOW DIAGRAM OF DOUBLE CENTRIFUGATION PROTCOL



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cf-DNA EXTRACTION PROTOCOL

1. Add 50 µL of Lysis Buffer (LB) to 500 µL of Plasma and vortex the mixture for 15 sec.
2. Add 20 µL of Proteinase K to the sample and mix well by inverting the tube 4-5 times.
3. Incubate the mixture for 1 hour at 56°C.
4. Add 750 µL of Binding Buffer (BB) to the mixture. Mix briefly by inverting the tube a few times.
5. Transfer the lysate to a spin column and centrifuge the tube at 2000xg for 30 sec. Without removing the spin column, centrifuge again at the speed of 11,000xg for 5 sec.
6. 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 500 µL Wash Buffer 1 (WB1) at 11,000xg for 30 sec and discard the flow through.
8. Wash the spin column with 250 µL Wash Buffer 2 (WB2) at 11,000xg for 2 mins and discard the flow through.
9. Centrifuge the spin column again for 1 min at 11,000xg to remove any excess wash buffer.
10. Keep the purification column in a clean, sterile 1.5 mL microfuge tube and add 20 µL- 30 µL of Elution Buffer or DNase/RNase-free water to the center of the column.
11. Centrifuge the column for 11,000xg for 30 sec.
12. Discard the purification column and store the eluted cf-DNA at -20°C or -80°C until use.

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FLOW DIAGRAM OF CF-DNA EXTRACTION PROTOCOL

Double Centrifuged Plasma

If cryoprecipitate present, vortex it briefly

Plasma

Add 50µL of Lysis Buffer & Vortex for 15s

Add 20µL of Proteinase K and Invert tube to mix

Incubate at 56°C for 1 hr

Add 750µL of Binding Buffer

Mix well
Transfer lysate to Spin column

Centrifuge at 2,000 xg for 30 sec

Centrifuge at 11,000 xg for 5 sec

Add 500µL Wash Buffer 1

Centrifuge at 11,000 xg for 30 sec

Add 250µL Wash Buffer 2

Centrifuge at 11,000 xg for 2 min

Additional Spin

Centrifuge at 11,000 xg for 1 min

Add 20-30 µL Elution Buffer

Centrifuge at 11,000 xg for 30 sec

Eluted cf-DNA

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
Low cf-DNA Yield	**Plasma input:** significantly less plasma used	Increase the volume of the Plasma for better yield.
Low cf-DNA Purity (A260/A280)	Improper sample handling results in ethanol contamination	Make sure the column is completely dried to remove the ethanol contamination.
cf-DNA Degradation	Use of Old blood samples not stored at appropriate conditions.	**To prevent cf-DNA degradation:** Immediately collect and store the blood samples or separate the plasma from blood samples and store at appropriate conditions. Collect and store the fresh blood samples in mWRAPR Blood CF DNA Collection Tubes to ensure stability & integrity of cf-DNA and process later.

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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