CE IVDR

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AZUL FFPE DNA EXTRACTION KIT

DNA IN 3 HOURS | GOOD YIELDS FOR USE IN PCR /SEQUENCING

PRODUCT BROCHURE

Cat No-DE115

ISO 13485 CERTIFIED

PRODUCT DESCRIPTION

The AZUL FFPE DNA Extraction Kit offers a simple and efficient solution for isolating high-quality genomic DNA from archived FFPE (formalin-fixed, paraffin-embedded) tissue samples. Extracting DNA from FFPE tissues is challenging due to the formalin-induced cross-linking of DNA strands and proteins, which affects DNA quality and makes it less suitable for many downstream applications. The AZUL FFPE DNA Extraction Kit is specifically designed to overcome these challenges by partially reversing cross-links without the need for overnight digestion. The kit also includes a xylene-free deparaffinization method, providing a safer alternative to traditional approaches. Using silica-based spin column technology, the kit eliminates the need for toxic phenol-chloroform extractions. The purified DNA is suitable for sensitive downstream applications, including qPCR and Next-Generation Sequencing (NGS).

KIT COMPONENTS

Components	For 50 preps	For 25 preps
Deparaffinization Solvent	50mL	25mL
Lysis Buffer(LB)	20mL	10mL
Proteinase K	1mL	500µL
Binding buffer(BB)	20mL	10mL
Wash Buffer 1(WB1)	25mL	13mL
Wash Buffer 2(WB2)	25mL	13mL
Elution Buffer(EB)	4mL	2mL
Spin Column	50 (Pouch pack)	25 (Pouch pack)

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SPECIFICATIONS

Format	Spin column
Sample type	FFPE samples
Equipment	Microcentrifuge
Processing time	3 Hours
Sample amount	3-8 sections of 10 µm thickness
Type	Total DNA
Sample storage	Eluted DNA should be stored at ≤ -20°C
Yield	25 - 100 µg
Purity	A260/280 ≥ 1.8 - 2.1
Kit Storage	Room Temperature Proteinase K - At -20°C
Kit Validity	Viable for 1 year if stored at appropriate conditions

NOTE: *Check the Lysis Buffer and Binding 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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FFPE DNA EXTRACTION PROTOCOL

1.Trim off excess paraffin from the sides. Cut up to 3-8 sections of 10 µm thickness. Immediately transfer the sections to a clean 2mL vial and add 1mL of deparaffinization solvent vortex vigorously for 10 seconds.

2. Centrifuge the tube at 15,000 rpm for 2 mins.

3. Discard the supernatant without disturbing the pellet.

4. Add 1 mL of 100% ethanol to the pellet and vortex briefly.

5. Centrifuge at 15,000 rpm for 2 mins.

6. Discard the supernatant without disturbing the pellet.

7. Open the tube and incubate at room temperature or 37°C for 10 mins until ethanol has evaporated.

8. To the pellet add 400 µL of Lysis buffer (LB) and vortex for 10 seconds. Add 20 µL of Proteinase K, invert and mix the tubes well.

9. Incubate at 56°C for 1 hour.

10. Follow with an incubation at 80°C for 1 hour.

11. Allow the samples to cool down and briefly centrifuge the tubes to remove drops from inside the lid.

12. Transfer the clear lysate to a clean microfuge tube and add 400 µL Binding Buffer (BB) to the lysate and mix briefly by inverting the tube a few times.

13. Transfer the suspension to a spin column and centrifuge the tube at 14,000 rpm for 1 min at RT.

14. 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.

15. Wash the spin column with 500µL Wash Buffer 1 (WB1) at 14,000 rpm for 1 min and discard the flow through.

16. Add 500µL of Wash Buffer 2 (WB2) to the column and centrifuge at 14,000 rpm for 1 min to completely remove salts and impurities.

17. Centrifuge at 14,000 rpm for 1 min to prevent carryover of ethanol to the eluate.

18. Keep the purification column in a clean, sterile 1.5 mL microfuge tube and add 35µL- 50µL of Elution Buffer. Incubate at RT for 1 min.

19. Centrifuge the column for 14,000 rpm for 2 min.

20. Discard the purification column and store the eluted DNA at -20°C or -80°C until use.

Note: 100% Ethanol and RNase A are not provided with the kit.

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FLOW DIAGRAM OF FFPE DNA EXTRACTION PROTOCOL

Cut the tissues into 3-8 curls

+

1 mL of Deparaffinizing solvent, vortex

Centrifuge at 15,000 rpm for 2 mins

Remove supernatant and add 1 mL of ethanol (100%), vortex.

Centrifuge at 15,000 rpm for 2 mins

Add 400 µL of Lysis buffer

+

20 µL of Proteinase K

Incubate at 56°C for 1 hour

Incubate at 80°C for 1 hour

Transfer clear supernatant to new tube

Add 400 µL
Binding Buffer

Mix well
Transfer lysate to Spin column

Centrifuge at 14,000 rpm for 1 min

Add 500 µL wash buffer 1

Centrifuge at 14,000 rpm for 1 min

Add 500 µL wash buffer 2

Centrifuge at 14,000 rpm for 1 min

Add 30-50 µL elution buffer

Centrifuge at 15,000 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 sample input or significantly less sample used	Use less input material or increase the volume of the Extraction Buffer and grind thoroughly. Use of ≥ 200 mg or >200 µL of sample is recommended for good DNA yield.
	Incomplete paraffin Removal or incomplete lysis can cause debris to clog or overload the column and leech salts into DNA eluate.	Deparaffinization step can be repeated to ensure complete removal of paraffin to ensure complete depataffinzation. Be sure to centrifuge and pellet any debris and transfer the supernatant while avoiding any pellet debris.
Low DNA Purity(A260/A280)	Improper sample handling results in 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.
RNA Contamination	RNase treatment was not done.	**To remove RNA:** Perform RNase A treatment post incubation (not provided in the kit (2 µL of RNase A (100 mg/ml) can be added and incubated at RT for 2 mins).
DNA Degradation	Too much exposure to air or incubation at higher temperature for longer period.	**To prevent DNA degradation:** FFPE tissue sections should not be exposed to air. Immediately after sectioning, Deparaffinization solvent wash should be performed. Incubation at higher temperature for longer period of time should be avoided.

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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 Yeast 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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