CE IVDR

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AZUL TISSUE DNA EXTRACTION KIT

DNA IN 60 MINS | GOOD YIELDS FOR USE IN PCR/SEQUENCING

PRODUCT BROCHURE

Cat No-DE101

ISO 13485 CERTIFIED

PRODUCT DESCRIPTION

AZUL Tissue DNA Extraction Kit is an easy and efficient system for the isolation of total DNA from animal tissues. 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
Lysis Buffer(LB)	50mL	25mL
Binding buffer(BB)	30mL	15mL
Wash Buffer 1(WB1)	30mL	15mL
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	Animal tissue
Equipment	Microcentrifuge
Processing time	<60 mins
Sample amount	≥ 30 mg
Type	Total DNA
Sample storage	Eluted DNA should be stored at ≤ -20°C
Yield	25-50 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. Collect tissue (may be fresh, frozen or stored) and, weigh ≥30 mg of tissue, place it in a pre-chilled mortar and pestle.
2. Add 600µL- 1mL of Lysis Buffer to the tissue samples and grind thoroughly.
3. Transfer this tissue lysate into a clean 1.5 mL microfuge tube and incubate at RT for 10 min. Mix briefly by vortexing for 30 seconds.
4. Centrifuge at 15,000 rpm for 15 minutes at room temperature.
5. Carefully transfer the clear supernatant to a new 1.5 mL microfuge tube. Add 500µL-600µL of Binding Buffer and mix the tube briefly by inverting it a few times.
6. Place the tubes at -20°C for 15 minutes.
7. Transfer 800µL lysate to the spin column inserted in a collection tube. Centrifuge at 15,000 rpm for 2 min.
8. Discard the flow-through and place the purification column back into the collection tube. Repeat this step until the entire lysate has been transferred into the column and centrifuged.
9. Add 600µL of Wash Buffer 1 (WB1) to the column and centrifuge at 15,000 rpm for 1 min.
10. Add 500µL of Wash Buffer 2 (WB2)to the column and centrifuge at 15,000 rpm for 1 min to completely remove salts and impurities.
11. Transfer the purification column to a clean, sterile microfuge tube and add 30µL -50µL of Elution Buffer or DNase/RNase-free water to the centre of the column.
12. Centrifuge the column at 15,000 rpm for 2 minutes.
13. Discard the purification column and store the eluted DNA at -20°C or -80°C until use.

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DNA EXTRACTION PROTOCOL

For Tissue Samples:

1. Collect tissue (may be fresh, frozen, or stored) and, weigh ≥30 mg of tissue, place it in a mortar and pestle.
2. Add 600 µL- 1 mL of Lysis Buffer 1 to the tissue samples and grind thoroughly.
3. Transfer this tissue lysate into a clean 1.5 mL microfuge tube. Mix briefly by vortexing for 30 seconds.

For Sputum Samples:

1. Take 500 µL-1 mL sample into a fresh 1.5mL tube, add 1 mL stabilization buffer and 50 µL Lysis Buffer 2, vortex slightly, and incubate at 37°C for 15 mins. Centrifuge at 2000 rpm for 5 mins, discard the supernatant and to the pellet add 600 µL Lysis Buffer 1, add 0.5g of AZUL Bashing Beads and vortex briefly for 30 seconds.

To proceed further, follow the steps mentioned below:

1. Add 20 µL of Proteinase K and incubate at 56°C for 20 mins.
2. Centrifuge at 15,000 rpm for 15 minutes at room temperature.
3. Carefully transfer the clear supernatant to a new 1.5 mL microfuge tube. Add 500 µL-600 µL of Binding Buffer and mix the tube briefly by inverting it a few times.
4. Incubate the tubes at -20°C for 15 minutes.
5. Transfer 800 µL lysate to the spin column inserted in a collection tube. Centrifuge at 15,000 rpm for 2 min.
6. Discard the flow-through and place the purification column back into the collection tube. Repeat this step until the entire lysate has been transferred into the column and centrifuged.
7. Add 600 µL of Wash Buffer 1 (WB1) to the column and centrifuge at 15,000 rpm for 1 min.
8. Add 500 µL of Wash Buffer 2 (WB2) to the column and centrifuge at 15,000 rpm for 1 min to completely remove salts and impurities.
9. Transfer the purification column to a clean, sterile microfuge tube and add 30µL - 50µL of Elution Buffer or DNase/RNase-free water to the centre of the column.
10. Centrifuge the column at 15,000 rpm for 2 minutes.
11. Discard the purification column and store the eluted DNA at -20°C or -80°C until use.

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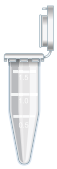
FLOW DIAGRAM OF DNA EXTRACTION PROTOCOL

Weigh ≥30 mg of tissue

Homogenize thoroughly

Transfer the lysate

Add 600µL - 1ml Lysis Buffer



Vortex for 30 seconds

Centrifuge at 15,000 rpm for 15 mins

Transfer clear supernatant to new tube

Add 500-600 µL Binding Buffer

Keep at -20°C for 15 mins

Mix well

Transfer lysate to Spin column

Centrifuge at 15,000 rpm for 2 mins

Repeat until complete lysate transfer

Add 600 µL wash buffer

Centrifuge at 15,000 rpm for 1 min

Repeat this step with Wash Buffer 2

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	**Tissue input:** Too much input or incomplete lysis/ homogenization can cause cellular debris to clog or overload the column and leech salts into DNA eluate.	Use less input material or increase the volume of the Lysis Buffer and grind thoroughly.
	Incomplete Debris Removal or incomplete lysis.	Increase the volume of Lysis Buffer to ensure complete lysis/ homogenisation. Be sure to centrifuge and pellet any cellular 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	Too much tissue 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	Use of old tissue samples not stored at appropriate conditions.	**To prevent DNA degradation:** Immediately collect and lyse fresh samples into a Lysis Buffer. Collect and store the fresh tissues in RNA WRAPR Solution to ensure 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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