CE IVDR

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AZUL PLASMID DNA EXTRACTION KIT

DNA IN 40 MINS | GOOD YIELDS FOR USE IN PCR/SEQUENCING

PRODUCT BROCHURE

Cat No-DE104

ISO 13485 CERTIFIED

PRODUCT DESCRIPTION

AZUL Plasmid DNA Extraction Kit is an easy and efficient system for the isolation of plasmid DNA from bacterial cells. This kit uses a silica-based spin column technology for isolating total DNA from biological samples. The eluted plasmid DNA is suitable for Cloning, transfection, transformation, restriction endonuclease digestion in vitro transcription/translation, qPCR, and Next-Generation sequencing.

KIT COMPONENTS

Components	For 50 preps	For 25 preps
P1 Buffer	15mL	8mL
P2 Buffer	15mL	8mL
P3 Buffer	20mL	10mL
Binding buffer(BB)	25mL	13mL
Wash Buffer (WB)	50mL	25mL
Elution Buffer(EB)	4mL	2mL
Spin Column	50 (Pouch pack)	25 (Pouch pack)

SPECIFICATIONS

Format	Spin column
Sample type	Bacterial cells
Equipment	Microcentrifuge
Processing time	<40 mins
Processing volume	1mL
Type	Plasmid DNA
Sample storage	Eluted DNA should be stored at ≤ -20°C
Yield	80 ng - 700ng/µL
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.*

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DNA EXTRACTION PROTOCOL

1. In a 1.5mL microfuge tube, transfer up to 1mL of the bacterial culture and centrifuge at 15,000 rpm for 2 mins to pellet the cells.
2. To the pellet, add 200µL-300µL of P1 Buffer. Mix briefly by vortexing for 30 seconds.
3. Add 200µL-300µL of P2 Buffer to the same tube and mix by inverting gently until the solution turns transparent. Do not vortex. Incubate at RT for 5 min.
4. Add 350µL of P3 Buffer and mix by inverting 3-4 times. Centrifuge at 15,000 rpm for 10 min.
5. Carefully transfer the clear supernatant to the new 1.5 mL microfuge tube. 500µL of Binding Buffer is added to this tube and mixed slowly by inverting the tube 5 times. Incubate at -20°C for 15 min.
6. Transfer up to 800µL lysate to the spin column inserted in a collection tube. Centrifuge at 13,000 rpm for 3 min. 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 500µL of Wash Buffer (WB) to the column and centrifuge at 15,000 rpm for 1 min. Discard the flow-through and place the purification column back into the collection tube.
8. Repeat step 7 once again to remove salts and impurities completely.
9. Spin the column at 15,000 rpm for 1 min to dry the column. Place the tube at RT for 2 mins.
10. Transfer the purification column to a clean, sterile microfuge tube and add 50µL of Elution Buffer or DNase/RNase-free water to the centre of the column. Centrifuge the column for 15,000 rpm for 1 min.
11. Discard the purification column and store the eluted Plasmid DNA at -20°C or -80°C until use.

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FLOW DIAGRAM OF DNA EXTRACTION PROTOCOL

Bacterial cell suspension

Pellet the cells by centrifugation
At 15,000 rpm for 2 mins

200-300µL P1 Buffer & Vortex 30 sec
+
200-300µL P2 Buffer & Mix by inverting
+
350µL P3 Buffer & Mix by inverting

Centrifuge at 15,000 rpm for 10 mins

Transfer clear supernatant to new tube

Add 500 µL
Binding Buffer

Keep at -20°C for 15 mins

Mix well
Transfer lysate to Spin column

Centrifuge at 13,000 rpm for 3 mins

Add 500 µL wash buffer

Centrifuge at 15,000 rpm for 1 min

Repeat this step

Add 30-50 µL elution buffer

Centrifuge at 15,000 rpm for 1 min

Eluted DNA

Store at -20°C or -80°C
until use

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	SUGGESTED SOLUTIONS
Low DNA Yield	**Too much culture used:** Incomplete lysis and neutralization are two of the most common causes of failed plasmid preps, and both are caused by too much culture being used.	Use less input material or increase the volume of the Lysis Buffer and neutralization buffer accordingly.
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.
Genomic DNA Contamination	Improper Sample Handling: Sample was vortexed or handled too roughly.	Slightly invert the tubes for mixing.
	Genomic DNA contamination is usually caused by excessive mechanical shearing during the lysis and neutralization steps.	Avoid vortexing after adding lysis and neutralization buffer.
	Prolonged or Incomplete lysis or neutralization may contribute to genomic DNA contamination.	Follow protocol to avoid such mistakes.
	Overgrown or Old culture: May contain more genomic DNA. contamination than fresh cultures.	Use fresh culture for optimal performance.
RNA Contamination	Too much culture used.	Reduce the volume of culture being processed.
	Incorrect column washing.	Use the wash volume mentioned in the protocol.

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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:

CONTACT US

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