EcoSpin Bacterial Genomic DNA Kit

50 rxns

Cat No: E1050

Shipping : Ship at ambient temperature.
Storage : Store the Kit between 15°C and 25°C.
Store Proteinase K at -20°C

General Information

EcoSpin Bacterial Genomic DNA Kit is designed as a simple and convenient purification of high quality genomic DNA from Gram (-) negative and Gram (+) positive bacterial cells. This kit utilizes chaotropic ions and silica-based membrane technology, eliminating the need for expensive resins, hazardous phenol-chloroform extractions, or time-consuming alcohol precipitation. The standard protocol lasts less than 25 minutes and purified DNA can be used directly in PCR, qPCR, sequencing and enzymatic reactions.

Kit Contents

EcoSpin Resuspension Buffer	(15 ml)
EcoSpin Lysis Buffer	(15 ml)
EcoSpin Binding Buffer	(22 ml)
EcoSpin Wash Buffer*	(8 ml concentrate)
EcoSpin Elution Buffer	(10 ml)
EcoSpin Proteinase K#	(lyophilized)
EcoSpin Columns	(50)
EcoSpin Collection Tubes	(50)

*Add 32 ml absolute ethanol

#Reconstitute Proteinase K in 1.1 ml Proteinase K storage buffer. Proteinase K solution is stable for 1 year when stored at 4ºC. For long-term storage (>1 year) store Proteinase K solution at -20ºC.

Protocol for Bacterial Genomic DNA

Each isolation procedure is suitable for isolation of genomic DNA from 1 mL of overnight bacterial culture. If extraction of genomic DNA from higher volumes of bacterial culture is required, scale up the amounts of reagents used in the entire protocol proportionally.

For most gram-positive bacteria, the kit must be used in conjunction with the optional lysozyme enzyme (not provided), to effectively lyse the thick peptidoglycan cell walls.

1. Transfer 1 mL of overnight bacterial culture into a 1.5 mL tube and harvest the bacterial culture by centrifugation at 6000 rpm in a tabletop microcentrifuge for 3 minutes at room temperature. Discard the supernatant using a micropipette.

2. Resuspend the bacterial pellet in 200 µl of the *EcoSpin* Resuspension Buffer by vortexing or pipetting up and down until no cell clumps remain.

3. Add 200 µl *EcoSpin* Lysis Buffer and mix thoroughly.

Optional: Add 20 µl of *EcoSpin* RNase A (not provided) to the mixture. Incubate at room temperature for 3 minutes.

4. Add 20 µl *EcoSpin* Proteinase K and mix well. Incubate for 10 minutes at 55°C. Extending incubation time to 30 minutes can help increasing the yield.

5. Add 400 µl *EcoSpin* Binding Buffer and mix well.

6. Insert an *EcoSpin* Column into a Collection Tube and transfer the sample from step 5 to the *EcoSpin* Columns. Centrifuge at maximum speed in a tabletop microcentrifuge 1 minute at room temperature.

7. Discard the flow through and add 500 µl *EcoSpin* Wash Buffer to the *EcoSpin* Column. Centrifuge at maximum speed in a tabletop microcentrifuge 30 seconds at room temperature.

8. Discard the flow through and add 200 µl *EcoSpin* Wash Buffer to the *EcoSpin* Column at maximum speed for 2 minutes to completely remove any residual wash buffer.

9. Transfer the *EcoSpin* Column to a clean 1.5 mL microcentrifuge tube (not included).

10. Add 30-50 µL of *EcoSpin* Elution Buffer to the center of the *EcoSpin* Column membrane and incubate the column at room temperature for 5 minutes.

11. Centrifuge at maximum speed in a tabletop microcentrifuge 30 seconds at room temperature.

12. Discard the *EcoSpin* Column and store the purified DNA at -20°C.

For further information;
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