Whole Blood DNA Purification Kit

(Catalog #K2804-100; 100 preparations; Store at 4˚C)

I. Introduction:

BioVision's whole blood genomic DNA extraction and purification kit uses a unique system of magnetic beads and buffers to extract highly pure genomic DNA from both fresh or cryopreserved blood cells. This kit does not involve the use of any toxic substances. It is safe, convenient, and suitable for high-throughput automated platforms. DNA purified by this kit can be used for a variety of downstream molecular biology applications such as cloning, PCR, genotyping and more.

II. Kit Contents:

Component	K2804-100 100 preparations	Part Number
Buffer A	30 ml	K2804-100-1
Buffer B	1 ml	K2804-100-2
Magnetic beads	1 ml	K2804-100-3
Wash solution 1	80 ml	K2804-100-4
Wash solution 2	30 ml	K2804-100-5
Elution Buffer	10 ml	K2804-100-6

III. General Considerations and Reagent Preparation:

- Read the entire protocol before beginning the procedure.
- Incubate Buffer B in a 37˚C water bath before use until any white precipitate dissolves. Mix gently. If precipitation persists, use the buffer as is. This does not affect the extraction or yield.
- Mix the magnetic beads to make a homogeneous suspension before use.
- Add 80 ml absolute ethyl alcohol (user-provided) to wash solution 2 and mix before use.
- Using the same starting material, more DNA can be obtained by increasing elution time (maximum 3 mins.).
- Cryopreserved blood (containing anticoagulant) should be thawed slowly at room temperature, 4˚C (overnight) or 37˚C. Warming to higher temperature might lead to blood clot formation.

IV. Bacterial DNA Extraction Protocol:

A. Lysis:

1. Take 150 µl whole blood (containing anticoagulant) in a tube. Add 300 µl Buffer A and 10 µl Buffer B. Mix thoroughly by vortexing.
2. Incubate in a 65˚C water bath for 25-30 mins.

B. Binding:

1. Add 10 µl re-suspended magnetic beads and 300 µl Isopropanol (user-provided) to the tube. Mix by inverting/rocking the tube for 5 mins. DO NOT Vortex.
2. Separate the beads by the magnetic separator (BioVision, Cat. 1999-1) and remove the clear supernatant (residual liquid).

C. Washing:

1. Add 800 µl wash solution 1, mix thoroughly by vortexing for 10 secs. Repeat magnetic separation and remove supernatant.
2. Add 500 µl wash solution 2, mix thoroughly by vortexing for 10 secs. Repeat magnetic separation and remove supernatant.
3. Repeat step 2 and dry the beads at RT for 5 mins.

D. Elution:

1. Add 50-100 µl Elution buffer, pipette up and down slowly to mix, incubate at 65˚C for 10 mins. Rock the tube gently every 2-3 min.
2. Repeat magnetic separation and transfer the supernatant to a fresh tube carefully for downstream experiments.
3. Store the extracted DNA at –20˚C for future use. (Note: Generally, OD260 - OD320)/(OD280 - OD320) is between 1.7 ~ 2.0)

RELATED PRODUCTS:

Ethidium Bromide (1203-10)
Plant Genomic DNA Extraction Kit (K2800-100)
Bacterial Genomic DNA Extraction Kit (K2801-100)
Viral DNA/RNA Extraction Kit (K2803-100)
Plasmid DNA Purification Kit (K2802-200)
Mitochondrial DNA Isolation Kit (K280-50)
Genomic DNA Isolation Kit (K281-50)

FOR RESEARCH USE ONLY! Not to be used on humans.

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