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G2P Blood DNA Purification Kit (Solution Based)

Cat # ☐PUR15-50 ☐PUR15-250 ☐PUR15-50-S
Pack Size: ☐ 50 reactions, ☐ 250 reactions, ☐ 5 reactions
Storage: Room Temperature*

Introduction

The Whole Blood DNA Isolation Kit by Gene to Protein Pvt. Ltd is a complete DNA isolation kit that enables to isolate high-quality DNA from whole blood samples. The kit comes with all the necessary reagents and components required for DNA extraction, including lysis buffer, proteinase K, and spin columns. The reagents supplied in the kit are sufficient to purify DNA from up to 50 samples, and the protocol provided in the product literature is easy to follow. Unlike traditional DNA isolation methods that involve hazardous chemicals/solutions like phenol or chloroform, the DNA isolation process used in this kit is unique and safe.

The kit can be used for various downstream applications, including PCR, qPCR, SNP analysis, sequencing, and gene expression analysis. The isolated DNA is of high quality, with high yields and purity, making it suitable for various molecular biology-based applications.

Overall, the Whole Blood DNA Isolation Kit provided by Gene to Protein Pvt. Ltd is a reliable and convenient solution for researchers looking to isolate DNA from whole blood samples without using hazardous chemicals/solutions.

Kit Content

- BD-01- 45mL
- BD-02-15mL
- BD-03 -7.5mL
- Buffer E

Reagents required but Not Provided

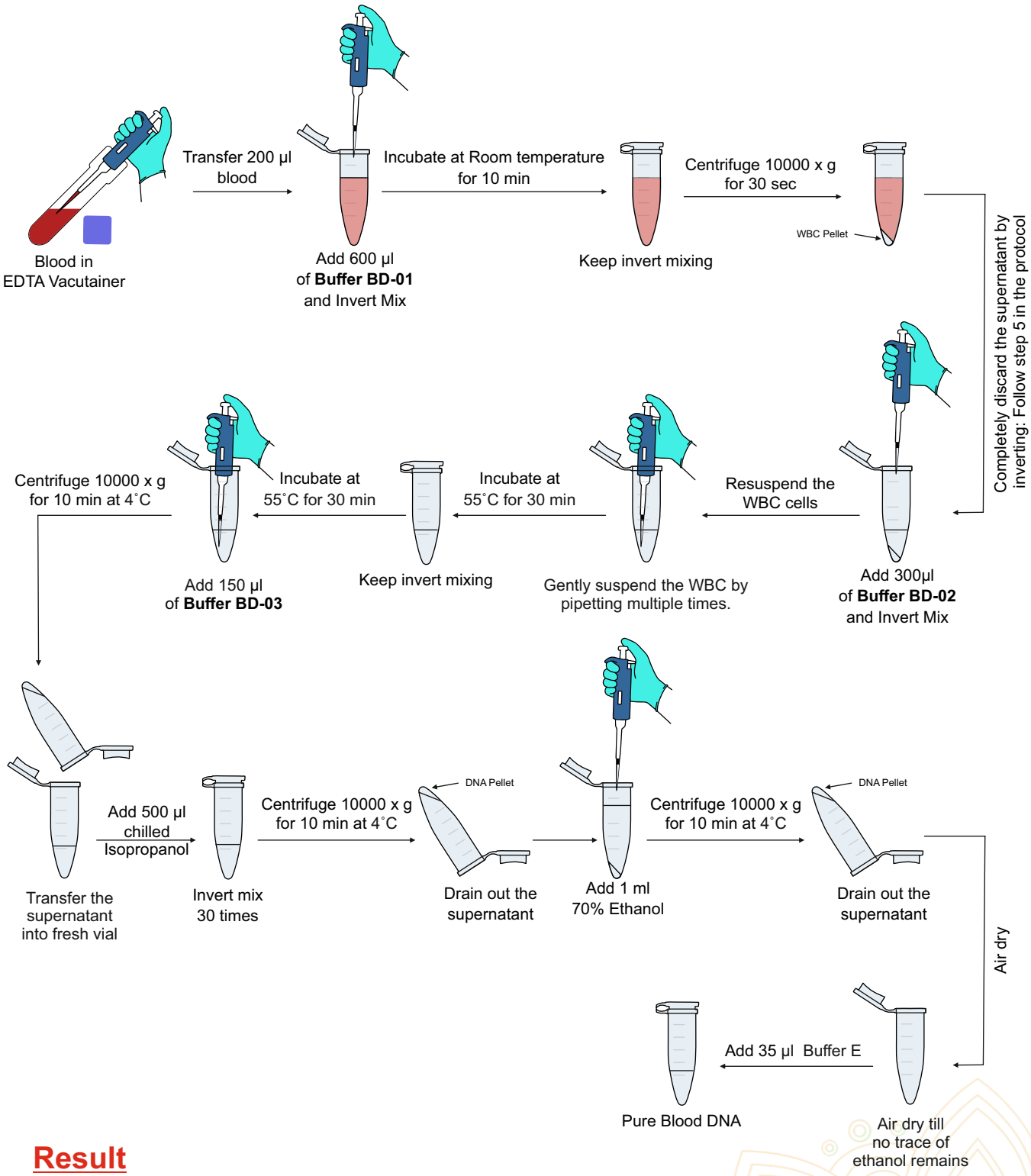
70% Ethanol (Molecular Biology Grade)
100% Ethanol

Protocol

1. Collect 200 µl of blood from an EDTA vacutainer into a 1.5ml microcentrifuge tube
2. Add 600 µl of BD-01 solution to the tube and invert mix the microcentrifuge tube three times
3. Incubate the mixture for 5 minutes at room temperature, briefly vortex, and continue incubating at room temperature for an additional 5 minutes
4. Centrifuge the tube at 10000 x g for 30 seconds to obtain a pellet of white blood cells (WBC)
5. Invert and tap the tube on a tissue paper to completely discard the supernatant, ensuring no or very few red blood cells (RBCs) are left in the vial. If necessary, add 300 µl of BD-01 to the WBC pellet and spin at 10,000 x g for 30 seconds and discard the supernatant
6. Add 300 µl of BD-02 and gently suspend the WBC by pipetting the cells multiple times. Note: This is a critical step. If the suspension is incomplete, the yield may decrease significantly
7. Incubate the mixture at 55 ˚C for 30 min, with inversion mixing in between for better results
8. Add 150 µl of BD-03 to the mixture and vortex aggressively for 10 seconds
9. Centrifuge the tube at 10,000 x g for 10 minutes at 4 °C
10. Transfer the supernatant, which contains the DNA, to a fresh microcentrifuge tube and add 500 µl of chilled isopropanol (not included in the kit). Gently invert the tube 30 times
11. Centrifuge the tube at 10,000 x g for 10 minutes at 4 °C
12. Carefully drain the isopropanol without disturbing the pellet at the bottom
13. Add 1 ml of 70% ethanol (not included in the kit) while taking care not to knock the pellet loose
14. Centrifuge the tube at 10,000 x g for 10 minutes at 4 °C
15. Carefully drain the 70% ethanol without disturbing the pellet at the bottom
16. Repeat steps 12-15 one more time for better desalting
17. Air dry the centrifuge tube for 30 min
18. Re-suspend the entire nucleic acid mixture in 35 µl of Buffer E.

Graphical Protocol

PUR-15



Result

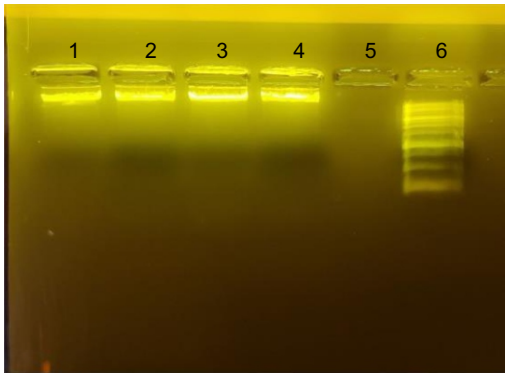


Fig: Blood DNA was isolated using PUR15 (lane 1-4). 100ng of DNA sample was loaded on 0.8% agarose gel.