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G2P Blood DNA Purification Kit (Spin Column Based)

Cat # ☐ PUR18-50 ☐PUR18-250 ☐ PUR18-50-S
Pack Size: ☐ 50 Preps , ☐ 250 Preps, ☐ 5 Preps
Storage: Room temperature*

Introduction

A high quality DNA may be extracted from whole blood, plasma, serum, and other bodily fluids using G2P Blood DNA Purification Kit. The kits are made to accommodate samples with 250 µl of fresh or frozen human whole blood. Processing G2P Blood DNA Purification Kit spin columns in a centrifuge or on vacuum manifolds is simple. The purified DNA is useful for paternity testing applications such as long-range PCR amplification and restriction fragment length polymorphism and various different molecular biology applications. Depending on the initial cell densities, the G2P Blood DNA Purification Kit can produce up to 94.5% recovery of pure DNA.

There is no need for phenol-chloroform extraction. While impurities pass through, DNA particularly attaches to the silica-gel membrane of the G2P Blood DNA Purification Kit spin columns. In two effective wash phases, PCR inhibitors such divalent cations and proteins are entirely eliminated, leaving only pure nucleic acid to be eluted in either water or a kit-supplied buffer.

Kit Content

* Store at 4°C

S.No	Components	PUR18-50	PUR18-250	PUR18-50-S
1	Buffer AL	30mL	150mL	3mL
2	Proteinase K(10mg/mL)*	500 µL	2.5mL	50 µL
4	Buffer D (Wash Buffer)	10mL	50mL	2mL
5	Buffer E (Elution Buffer)	5mL	25mL	500 µL
6	Spin Columns and Collection Tubes	50	250	5

Reagents required but Not Provided

100% Ethanol/Isopropanol (Molecular Biology Grade)

Protocol

Add 40 ml 100% ethanol/Isopropanol to wash buffer before starting the protocol

1. Take 10µl Proteinase K into a 1.5ml microcentrifuge tube
2. Take 250 µl blood from EDTA Vacutainer and add into above microcentrifuge tube and invert mix

Note: It is recommended to use fresh blood or currently thawed blood.

Clotted blood should be avoided because it will clog the spin column and drastically reduce the yield

3. Add 250 µl of Buffer AL invert mix and incubate at 56°C for 10 min

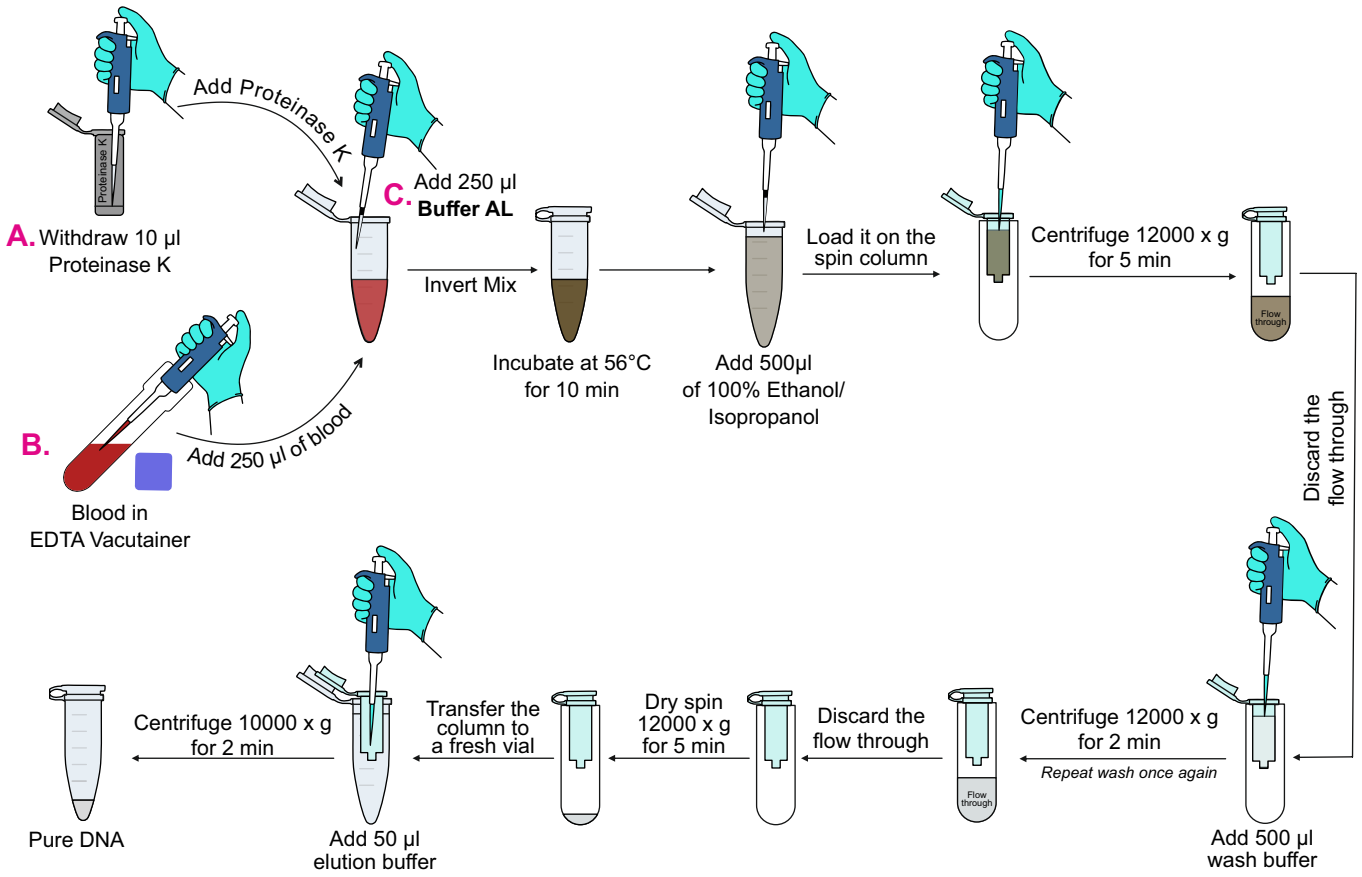
Note: The solution turns greenish which is normal

4. Add 1 volume (~500 µl) 100% Ethanol or Isopropanol invert mix and load it on the column and wait for 2 min
5. Centrifuge at 12000 x g for 5 min at 4°C

Note: If the entire volume has not passed through the column then increase the centrifugation time

6. Discard the flow through which is collected in the collection tube
7. Add 500 µl of wash buffer on the spin column and centrifuge at 12000 x g for 2 min at 4°C
8. Discard the flow through which is collected in the collection tube
9. Repeat step 7-8 once again
10. Dry spin the spin column by centrifuge at 12000 x g for 5 min at 4°C
11. Put the spin column into a fresh 1.5 ml microcentrifuge tube and add 50 µl of Buffer E
12. Centrifuge at 10000 x g for 2 min to collect the pure DNA

Graphical Protocol



Result

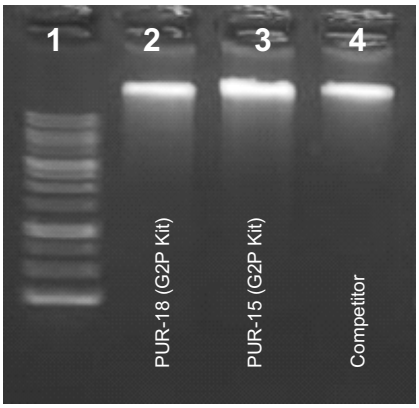


Fig: Blood DNA was isolated using PUR18 (lane 2) and PUR15 (lane 3) and compared with various other brands (lane 4). 100ng of DNA sample from each kit was loaded on 0.8% agarose gel.