dNEAT™ Blood DNA Extraction Kit

PURK-BLD-100

Description

The dNEAT™ Blood DNA Extraction kit is a simple and rapid method for high-quality genomic DNA purification from various sources, including whole blood, buffy coat and cultured cells. The procedure includes lysis, protein removal, DNA precipitation, washing and hydration.

Features

- ✓ **Safe**. No phenol-chloroform extraction
- ✓ **Efficient**. 100-250 µg of genomic DNA from a 5ml blood sample (150-500 µg of genomic DNA from a 10 ml).
- ✓ **Ready to use**. genomic DNA, in all molecular biology applications

Quality Certifications

This kit is tested on a lotto-lot basis by isolating total DNA from 5 ml of whole human blood. DNA purified is analysed by spectrophotometer (Ratio 260/ 280 (1.6-1.8)) and agarose gel electrophoresis.

Kit Storage

Store the kit at room temperature. If any kit reagent forms a precipitate, warm at 55–65 °C until the precipitate dissolves, and allow to cool to room temperature before use.

Kit Components	
S1 Buffer	3 x 100 ml
S2 Buffer	100 ml
S3 Buffer	50 ml
Proteinase K*	100 mg
EB Buffer	15 ml

Note

*Dissolve Proteinase K in water (5 ml) to obtain a 20 mg/mL stock solution. The Proteinase K solution can be stored for several days at 2–8 °C. For longer-term storage, the unused portion of the solution may be stored in aliquots at –20 °C until needed. This product as supplied is stable at room temperature.

Product use limitation

This product is developed, designed and sold exclusively for research purposes and use only. The product is not intended for diagnostics or drug development, nor is it suitable for administration to humans or animals.

Protocol

Follow ■ for 5 ml blood samples and for ▲ 10 ml blood samples

1. Transfer up to ■ **5 ml /▲ 10 ml** of sample to a 50 ml tube.
2. Add **■15 ml/▲30 ml buffer S1** to the sample and vortex gently or invert tube 6-8 times and leave to incubate for 5-8 minutes at room temperature
3. Centrifuge at 2500 rpm for 2 minutes. Remove the supernatant using a pipette and avoiding damaging the cell visible pellet and leaving 200 µl of residual liquid.
4. Vortex the tube vigorously until the white blood cells are resuspended (10–15 seconds). **This process will help to optimize the cell lysis in the following step.**
5. Add ■ **250 µl /▲500 µl proteinase K** and ■ **5 ml /▲10 ml buffer S2** and mixing by pipetting. Transfer all the mix into a new 50 ml tube.
6. Incubate in a water bath at 55 °C for 0.5-1 hour, and then cool to room temperature.
7. Add **■1.67 mL/▲3.33 ml buffer S3** and mixing with vortex vigorously for 20 seconds.
8. Centrifuge at 2500 rpm for 5 minutes. A dark brown pellet should be visible. If no pellet is observed, incubate on ice for 5 minutes and centrifuge again.
9. Transfer the supernatant to a new 50 ml tube containing ■ **5 ml/▲10 ml isopropanol**. Mix by gentle inversion 50 times.
10. Centrifuge at 2500 rpm for 3 minutes and remove the supernatant. The DNA will be visible as a small white pellet.
11. Wash with ■ **5 ml/▲10 ml 70% ethanol** and centrifuge at 2500 rpm for 1 minutes.
12. Remove the supernatant using a pipette and dry the pellet with the tube inverted on absorbent paper for 5-10 minutes.
13. Add **■500 µL /▲1 ml** of **Buffer EB** and vortex for 5 seconds at medium speed to mix. Close the cap and incubate for 1 hour.
14. Resuspend the DNA and store at -20 ° C.

