GeneMATRIX Quick Blood DNA Purification Kit

Kit for isolation of total DNA from fresh and frozen blood
Cat. No. E3565
Version 1.2
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**Note 1:** The kit gives good results in isolation of DNA from blood, serum, plasma and other biological fluids.

**Note 2:** Blood can be store in anticoagulants at 4ºC (up to several days) or freeze at -70ºC.

**Note 3:** Once the kit is unpacked, store components at room temperature, with the exception of RNase A and Proteinase K. RNase A should be kept at 2÷8ºC and Proteinase K at -20ºC.

**Note 4:** All solutions should be kept tightly closed to avoid evaporation and resulting components concentration changes.

**Note 5:** The kit does not contain 96 % ethanol and PBS. To prepare sterile PBS, dissolve 8 g NaCl, 0.2 g KCl, 1.44 g $Na_2HPO_4$ and 0.24 g $KH_2PO_4$ in 800 ml $H_2O$. Adjust pH to 7.4 with HCl. Add $H_2O$ to 1 liter.

## PROTOCOL

1. Apply 40 µl of activation **Buffer QB** onto the spin-column (do not spin) and keep it at room temperature till transferring lysate to the spin-column.

   Note 1: Addition of Buffer QB onto the center of the resin enables complete wetting of membranes and maximal binding of DNA.

   Note 2: The membrane activation should be done before starting isolation procedure.

2. Add to new Eppendorf tube 200 µl of liquid sample.

   Note 1: For sample volumes less than 200 µl, add PBS to adjust the volume to 200 µl.

3. Add 10 µl **Proteinase K** and 200 µl **Sol QB buffer.**

4. Mix thoroughly by vortexing.

5. Incubate for 10 min at 70º C.

6. Add 200 µl of **96 % ethanol**

7. Mix thoroughly by vortexing

8. Centrifuge for 1 min at 12000 rpm.

9. Transfer the whole lysate to the spin-column, placed in the collection tube.

10. Centrifuge for 2 min at 12000 rpm.

    Note 1: Continue centrifugation, if not all of the lysate passed through the column.

11. Take out the spin-column, discard flow-through and place back the spin-column in the collection tube.

12. Add 500 µl of buffer **Wash QBX1** to spin-column and centrifuge for 1 min at 12000 rpm.

13. Take out spin-column, discard flow-through and place back spin-column in the collection tube.

14. Add 500 µl of buffer **Wash QBX2** to spin-column and centrifuge for 2 min at 12000 rpm.

15. Place spin-column in a **new collection tube** (1.5-2 ml) and add 50-200 µl of **Elution buffer** (10 mM Tris-HCl, pH 8.5) heated to 70ºC to elute bound DNA.

    Note 1: Addition of eluting buffer directly onto the center of the resin improves DNA yield. To avoid transfering traces of DNA between the spin-columns do not touch the spin-column walls with the micropippete.

16. Incubate spin-column/collection tube assembly for 3 min at room temperature.

17. Centrifuge for 1 min at 12000 rpm.

18. Discard spin-column, cap the collection tube. Genomic DNA is ready for analysis/manipulation. It can be stored either at 2÷8º C or at -20ºC.