

Blood DNA Preparation Kit

Genomic DNA purification from whole blood

DNA Preparation Kit

Cat.-No.	Amount
PP-205	400 preparations

For *in vitro* use only
Quality guaranteed for 12 months
Store at room temperature

Kit contents

RBC Lysis Solution
Cell Lysis Solution
Protein Precipitation Solution
DNA Hydration Solution

To be provided by you

Isopropanol (2-propanol) >99%
Ethanol 80%
Microtubes 1.5 ml

Description

Blood DNA Preparation Kit is designed for convenient and fast isolation of genomic DNA from whole blood samples. The solution based system minimizes DNA fragmentation that may be problematic in other spin-column/filtration based method. Because phenol or chloroform is not used it is safe and does not produce any harmful waste.

Preparation procedure

Before start, provide >99% Isopropanol (2-propanol) and 80% Ethanol (both not included in the kit).

1. Cell Lysis

- Add 300 µl of whole blood (or bone marrow) to a 1.5 ml microtube containing 900 µl *RBC Lysis Solution*.
- Incubate for 3 min at room temperature with occasional inversion. (Please Note: For fresh blood collected within 1 hour before preparation increase the incubation time to 10 min to ensure complete red blood cell lysis.)

- Centrifuge for 20 sec at 15,000 g.
- Remove the supernatant with a pipet leaving behind the visible white cell pellet and about 10-20 µl of the residual liquid.
- Vortex the tube vigorously for 10 sec to resuspend the white cells in the residual liquid. (The white cell pellet should not be visible following vortexing.)
- Add 300µl *Cell Lysis Solution* to the resuspended cells and pipet up and down to lyse the cells. (Samples are stable in *Cell Lysis Solution* for at least 18 months at room temperature.)

2. Protein Precipitation

- Add 100 µl *Protein Precipitation Solution* to the cell lysate.
- Vortex vigorously for 20 seconds to mix well.
- Centrifuge at 15,000 g for 1 min.
- The precipitated proteins should form a tight, dark brown pellet. (If the protein pellet is not tight, repeat vortexing, followed by incubation on ice for 5 min and centrifuge again.)

3. DNA Precipitation

- Pour the supernatant into a clean 1.5 ml microtube containing 300 µl *Isopropanol >99%*.
- Mix the sample by inverting gently 50 times.
- Centrifuge at 15,000 g for 1 min. (DNA should be visible as a small white pellet.)
- Pour off supernatant and drain tube briefly on clean absorbent paper.
- Add 300 µl *Ethanol 80%* and invert the tube several times to wash the DNA pellet.
- Centrifuge at 15,000 g for 1 min.
- Carefully pour off the ethanol.
- Invert and drain the tube on clean absorbent paper for 5 sec.

4. DNA Hydration

- Add 100 µl *DNA Hydration Solution*.
- Vortex 5 sec at medium speed to mix.
- Incubate sample at 65°C for 5 min to accelerate rehydration.
- Vortex 5 sec at medium speed to mix and spin briefly to collect sample at the bottom of the tube.
- Store DNA at 4°C. For long time storage, place sample at -20°C or -80°C.