

# Blood DNA Preparation Kit

## Genomic DNA purification from whole blood

DNA Preparation Kit

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Cat.-No.	Amount
PP-205S	100 preparations
PP-205L	400 preparations

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

### 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 spin-column / filtration based methods. Because phenol or chloroform is not used it is safe and does not produce any harmful waste.

### Expected yield

Yields of genomic DNA will vary from sample to sample depending on the amount, quality and type of material processed. An amount of approx. 30-50 µg purified DNA can be expected per preparation of 300 µl whole blood.

### Kit contents

RBC Lysis Solution  
Cell Lysis Solution 2%  
Protein Precipitation Solution  
DNA Hydration Solution

### To be provided by you

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

**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 30 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 be completely resuspended.)
- Add 300µl *Cell Lysis Solution* to the resuspended cells and pipet up and down to lyse the cells.

**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.)
- Discard the 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 discard the ethanol and dry at room temperature for about 10 to 15 min.

**4. DNA Hydration**

- Add 50-100 µl *DNA Hydration Solution*.
- Vortex 5 sec at medium speed to mix.
- Incubate the sample at 65°C for 10-30 min to accelerate rehydration.
- Store DNA at 4°C. For long time storage, place sample at -20°C or -80°C.