Version No.: FDL1608

FinePure Blood DNA Mini Kit (0.1-1ml)

(Spin Column)

Catalog No.: D102

Product content:

Contents	D102 (50 preps)
Buffer FL	60 ml
Buffer DP	15 ml
Buffer DLT plus	25 ml
Buffer DW1	13 ml
Buffer MWE2	12 ml
Buffer EB	15 ml
Proteinase K	1.2 ml
Spin Columns GH4	50 pcs
2 ml Collection Tubes	50 pcs
1.5 ml Microcentrifuge Tubes	50 pcs

Storage:

All the buffers can be stored dry at room temperature (15-25°C) for up to 12 months. Please check whether any crystallization or precipitate forms in Buffer DLTplus before use. If any, please re-dissolve Buffer DLTplus in a 37°C water bath.

Product introduction:

This kit is suitable for quick and simple extraction of genomic DNA from blood. The extracted genomic DNA has large fragments, high purity and good stability, and can be directly used in PCR, restriction enzyme digestion and hybridization experiments. The extraction process does not require phenol-chloroform extraction. The blood is lysed and digested with Proteinase K, and then can be combined with Spin Columns GH4 under the adjustment of absolute ethanol. After rapid and sufficient washing removes residual protein and salt and other impurities, the DNA is finally dissolved in Buffer EB.

Important notes:

1. Samples should not be frozen and thawed repeatedly.

2. If precipitate has formed in Buffer GB, dissolve them by incubating at 37°C and mix.

3. All centrifugation steps should be carried out in a conventional bench microcentrifuge at room temperature (15-25°C).

4. If RNA removal is required, RNase A (100 mg/ml) should be prepared by user.

Operation Steps:

Before use, add anhydrous ethanol to Buffer DW2 and Buffer MWE2 specified on the bottle labels.

1. **Processing the blood sample** (This kit is designed for 0.1-1 ml blood sample)**:**

a. If fresh or anticoagulated mammalian blood is 200 ul, proceed the next steps directly.

b. When the blood is less than 200μl, fill Buffer DP to 200ul;

Note: Protocol a and b could be applied for extraction of most 100- 200 μl blood sample, but some blood samples with high content of protein, saccharides and lipid or poor storage condition may result in the low ratio of OD260/OD230. Add 1-2.5 times sample volume of Buffer FL could raise OD260/OD230.

c. If more than 200 μl blood will be processed, add 1-2.5 times the volume of Buffer FL to the blood sample, mix well by inverting the tube, centrifuge at 12,000 rpm for 1 min, discard the supernatant (if incomplete lysis, add 2.5 volumes of Buffer FL to the precipitates and repeat the lysis steps once), add 200 μl Buffer DP and mix well by vortex.

d. If the sample is blood from poultry, birds or amphibians, of which red blood cells have nucleolus, the sample amount should be reduced to 5-20 μl and adjust the volume to 200 μl by adding Buffer GS.

2. **Optional step:** If RNA-free genomic DNA is required, add 4 μl RNase A (100 mg/ml) solution, shake it for 15 sec, and stay at room temperature for 5 min.
3. Add 20 μl Proteinase K and 400 μl Buffer DLTplus, mix thoroughly by inverting, and incubate at 56°C for 10 min. The solution will be clear. If the solution is not completely clear, please extend the incubation time until the solution is clear.

Note: after the addition of Buffer DLTplus, the solution may produce white precipitate, which generally disappear during incubation at 56°C and does not affect subsequent experiments. If the blood sample has been

processed by Buffer FL, add Buffer DLTplus, mix well by inverting the tube, stay at room temperature for 5 minutes (invert 1-2 times during this time) and finally obtain high-quality genomic DNA.

4. Add 200 µl of absolute ethanol, mix thoroughly by inversion (precipitation may appear at this point), transfer all the solution with the precipitate to Spin Columns GH4 (the adsorption column is placed in the collection tube), and centrifuge at 12,000 rpm for 30 sec, discard the filtrate, and put the adsorption column back into the collection tube.
5. Add 500 µl Buffer DW1 (**please add absolute ethanol before use**) to the adsorption column, centrifuge at 12,000 rpm for 30 sec, discard the flow-through, and put the adsorption column back into the collection tube.
6. Add 600 µl Buffer MWE2 (**please add absolute ethanol before use**) to the adsorption column, centrifuge at 12,000 rpm for 30 sec, discard the flow-through, and put the adsorption column back into the collection tube
7. Repeat step 6 once.
8. Centrifuge at 12,000 rpm for 3 minutes, discard the flow-through.
9. Transfer the adsorption column to a new 1.5 ml microcentrifuge tube, and add 60~200 µl BufferEB into the center area of the adsorption membrane. Stay at room temperature for 2 minutes, centrifuge at 12,000 rpm for 2 minutes, and collect the DNA solution in the microcentrifuge tube.

Note: The volume of Buffer EB should not be less than 60µl, or it will affect the recovery efficiency. If ddH2O is used as elution, make sure its pH value is between 7.0 and 8.5 (NaOH can be used to adjust the pH value of

ddH2O to this range). Genomic DNA should be stored at -20°C to avoid degradation.

Symbols	Meanings
	Manufacturer
	Authorized representative in the European Community
	This product fulfills the requirements of the European Directive 98/79 EC for in vitro diagnostic medical devices.
	Catalogue number
	Batch code
	Date of manufacture
	Use-by date
	Temperature limite
	Consult instructions for use
	Keep dry
	Keep away from sunlight
	Contains sufficient for <n> tests
	Do not re-use
	Do not use if package is damaged

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