SuPure Blood DNA Isolation Kit

Catalog No	Size
• NA02R200	50 preps
• NA02R201	200 preps

Description: The SuPure Blood DNA Isolation Kit is designed for the simple, rapid isolation of inhibitor-free, Next-Generation Sequencing (NGS) and PCR-quality DNA from blood samples treated with EDTA, ACD or heparin. The procedure is easy and can be completed in as little as 25 minutes. Blood samples such as non-nucleated erythrocytes are added directly into a 2 ml microcentrifuge tube and mixed with an SPS solution. The SuPure Blood DNA Isolation Kit is then used to isolate the DNA, which is subsequently filtered to remove coagulants that inhibit PCR. The DNA is ideal for downstream molecular-based applications including PCR, NGS, arrays, genotyping, etc.

Kit Components:

Component	Amount	Storage
SPS Buffer	25-50 ml	RT
SLB Buffer	25-50 ml	RT
Wash Buffer	25-50 ml	RT
Elution Buffer	5-10 ml	RT
Spin Column	50-200 pcs	RT
Collection Tubes	50-200 pcs	RT
Instruction Manual	1 pc	RT
Proteinase K	1-4 ml	4 °C
RNAse A	1-4 ml	4 °C

Storage Conditions:
Store all contents at room temperature.

Kit Protocol:

1) Collect 100 µl blood into 2.0 ml centrifuge tube and add 100 µl SPS buffer. Vortex gently and let the tube stand for 1 minute at room temperature. If >100ul of blood is used, add 2 volumes of SPS buffer. Mix thoroughly and let the tube stand for 1 min until red cells lyse completely. Spin at 4,000 Xg (8,000 rpm) for 1 minute. Discard the supernatant carefully. Wash the precipitate with 500ul TE Buffer 2 volumes. Spin at 4,000 X g (8,000 rpm) for 1 minute during each wash. The final precipitate should appear white. Proceed with step 2

2) Add 20 µl of Proteinase K. Mix well. Add 200 ul of SLB buffer. Vortex Gently. Incubate at 56°C for 10 minutes.
   a. The solution should appear clear after complete lysis. If solution still appears cloudy, please extend incubation time until lysis is complete and solution is clear.
   b. If RNA-free genomic DNA is required, add 20 µl RNase A (10 mg/ml, not provided with kit), mix by vortexing, and incubate for 5 minutes at room temperature before continuing with step 3.

3) Add 200 µl of 100% ethanol to the mixture and mix thoroughly.

4) Transfer the mixture from step 3 (including any precipitates) into an spin column that is in a 2.0 ml Collection Tube. Let it stand at Room Temperature for 1-2 minutes. Spin at 8,000 x g (10,000 rpm) for 2 minutes. Discard the flowthrough in the collection tube.

5) Add 500 µl of Wash Buffer, and spin at 8,000 x g (10,000 rpm) for 1 minute.

6) Repeat the step 5.

7) After the liquid passing through the column was discarded, the Spin column was centrifuged empty at 8,000 x g (10,000 rpm) for 2 minute.

8) After centrifugation, after the silica column was transferred to a clean 1.5 ml microcentrifuge tube, 40-50 µl of DNA Elution Buffer was added to the column matrix and centrifuged at 15000×g for 2 minutes.

The obtained DNA is now suitable for PCR, NGS, arrays, genotyping, etc. applications.

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