Magnetic Fast Blood DNA Kit

Cat.No.: HYC227

Product Description

This kit is specially designed for blood DNA extraction, adopting superparamagnetic magnetic particle purification technology. The workflow eliminates toxic phenol-chloroform extraction and time-consuming ethanol precipitation, and the whole extraction procedure takes only 40 minutes. DNA purified by this method covers genomic DNA, mitochondrial DNA, viral DNA (e.g., Hepatitis B virus DNA), as well as DNA from other parasitic microorganisms. The recovered DNA can be directly applied to PCR, viral DNA detection and other downstream assays.

Components

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Proteinase K Solution	1.2 mL	2.5 mL
Magnetic Microspheres	1.7 mL	3.5 mL
Buffer MLA	30 mL	60 mL
Buffer MWX1	30 mL	70 mL
Buffer DW1	30 mL	70 mL
Buffer EW	60 mL	120 mL
Elution Buffer	10 mL	20 mL

Storage

Proteinase K Solution and Magnetic Microspheres shall be stored at 2–8 °C; all other reagents are stored at room temperature. The shelf life is 18 months.

Instructions

Procedure

1. Add 20 µL Proteinase K Solution and 30 µL Magnetic Microspheres into a 1.5 mL centrifuge tube.
2. Load sample into the tube containing magnetic beads: 200–300 µL whole blood, 200 µL concentrated blood, 200 µL buffy coat, 300 µL saliva, 300 µL swab eluate, 200–300 µL homogenate, 300 µL digested lysate, or 200 µL cell suspension.
3. Add 500 µL Buffer MLA, vortex for 10–15 sec, and incubate at ambient temperature for 10 min with several inversions during incubation. Place the tube on a magnetic rack for 1 min to capture beads, then pour out or aspirate all liquid.
4. Add 500 µL Buffer MWX1 and vortex for 15 sec. Set on the magnetic rack for 1 min to capture beads, then discard all liquid.
5. Add 500 µL Buffer DW1 and vortex for 15 sec. Set on the magnetic rack for 1 min to capture beads, then discard all liquid.
6. Add 500 µL Buffer EW and vortex for 15 sec. Set on the magnetic rack for 1 min to capture beads, then discard all liquid.
7. Add another 500 µL Buffer EW and vortex for 15 sec. Set on the magnetic rack for 1 min to capture beads, then discard all liquid.
8. Perform brief centrifugation to collect liquid droplets on tube walls, place the tube on the magnetic rack, and aspirate all residual liquid completely. Air-dry magnetic beads for 10 min.
9. Add 100 µL Elution Buffer and vortex thoroughly to resuspend beads. Incubate with high-speed shaking (>1000 rpm) at 55 °C for 10 min.
10. Place the tube on the magnetic rack for 2 min to separate beads, then transfer purified DNA supernatant to a new centrifuge tube.