

# ChargeSwitch® gDNA 1 ml Blood Kit

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Follow the steps below to purify up to 20 µg of genomic DNA from 1 ml of human blood. For more detailed protocols and additional information, refer to the kit manual.

## 1. Before Starting

- 1. For a new kit, mix 10X RBC Lysis Buffer (L8) with 225 ml of water
- 2. Set water bath at 60°C.
- 3. Shake the WBC Lysis Buffer (L12) to mix.

## 2. Preparing the Sample

- 1. In a ~15 ml microcentrifuge tube, add 10 ml of 1x RBC Lysis Buffer (prepared as above) to 1 ml of blood.
- 2. Cap the tube and invert 5 times to mix, then incubate at room temperature for 5 minutes.
- 3. Centrifuge at 2,000 x g for 5 minutes, then carefully pour away the supernatant.
- 4. Add 1 ml of Wash Buffer (W11), taking care not to dislodge the pellet, then carefully pour away the supernatant.
- 5. Add 0.5 ml of WBC Lysis Buffer (L12), and gently pipet up and down 10 times.
- 6. Transfer the volume to a 2 ml tube, and add 1 ml of WBC Lysis Buffer (L12) and 20 µl of Proteinase K.
- 7. Gently pipet up and down twice.
- 8. Incubate at 60°C for 10–30 minutes, mixing occasionally by pipetting or vortexing.
- 9. Remove from water bath, and gently pipet up and down 10 times.

## 3. Binding the DNA

- 1. Vortex the ChargeSwitch® Magnetic Beads to resuspend.
- 2. Add 100 µl of ChargeSwitch® Magnetic Beads to the sample, and gently pipet up and down twice.
- 3. Add 100 µl of Purification Buffer (N5), and gently pipet up and down 5 times.
- 4. Incubate at room temperature for 1 minute, then place the tube in the MagnaRack™ for 1 minute.
- 5. Remove and discard the supernatant, then remove the tube from the rack.

## 4. Washing the Beads

- 1. Add 1 ml of Wash Buffer (W12), and place the tube in the MagnaRack™ for 1 minute.
- 2. Remove and discard the supernatant, then remove the tube from the rack.
- 3. Repeat steps 1–2 one more time.

## 5. Eluting the DNA

- 1. Add 300 µl of Elution Buffer (E5), and gently pipet up and down 10 times.
- 2. Incubate at room temperature for 5 minutes.
- 3. Place the tube in the MagnaRack™ for 5 minutes.
- 4. Remove the eluate containing the purified DNA.