Genomic DNA extraction with GenEx™ Blood from human whole blood and buffy coat (PBMC) isolated from human whole blood

Experimental Conditions

Materials Required

- GenEx™ Blood Sx (100 prep : 220-101 / 500 prep : 220-105)
- Isopropanol (C_3H_8O, CAS : 67-63-0)
- 70% ethanol (C_2H_5OH, CAS : 64-17-5)
- 15 ml centrifuge tube
- EDTA vacuum tube (for human whole blood)
- Microcentrifuge (≤14,000 x g)
- Vortex mixer
- Pipette & sterilized pipette tips
- Suitable protector (e.g., lab coat, disposable gloves, goggles, etc.)

Sample Information

- Extraction conditions

Sample	Amount	Elutoin volume
Human whole blood	3 ml	250 µl
Buffy coat (PBMC)	150 µl	

Protocol

GenEx™ Blood Sx Protocol

*** For more details and methods, please refer to the handbook of GenEx™ Blood/Cell/Tissue.**

Sample Preparation

- **Human whole blood**

1. Transfer 9 ml of Buffer RL to a fresh 15 ml centrifuge tube.
2. Add 3 ml of whole blood to the tube containing Buffer RL. Invert the tube 5~6 times to mix. Incubate the mixture for 10 min at room temperature.
3. The subsequent protocol follows step 3 on page 18 of B. Protocol for 3 ml Whole Blood in the GenEx™ Blood/Cell/Tissue handbook.

- **Buffy coat (PBMC)**

1. Centrifuge the 3 ml of human whole blood in EDTA vacuum tube at 2,000 x g above for 10 min at 15~25°C.
2. After separating the plasma layer, carefully separate the intermediate buffy coat to a new tube and transfer the 150 µl of buffy coat to 15 ml centrifuge tube.
3. Add the 450 µl of Buffer RL to 15 ml centrifuge tube and mix by inverting 5~6 times.
4. Incubate the mixture for 10 min at room temperature. Invert 4~5 times during the incubation.
5. The subsequent protocol follows step 3 on page 18 of B. Protocol for 3 ml Whole Blood in the GenEx™ Blood/Cell/Tissue handbook.

Result

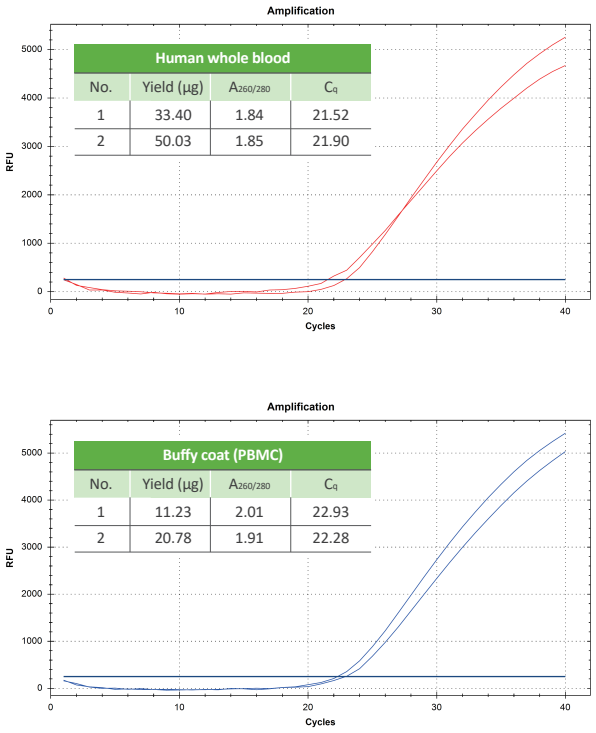

Figure 1. Genomic DNA extraction and quality assessment from human blood and buffy coat.
Genomic DNA was extracted from human whole blood and buffy coat using GenEx™ Blood Sx (220-101) in duplicate. The quantification of DNA was carried out using NanoDrop™ 2000 (ND-2000, Supplier : T) spectrophotometer. To assess the quality of the extracted DNA, real-time PCR was performed using Human GAPDH primers with the RealAmp™ 2X qPCR Master Mix (801-020) on the CFX96™ System (1855201, Supplier : B).