



## APPLICATION NOTE

### TrusPure Plasma Cell-Free DNA Extraction Kit

Cat. RE004001 / RE004002

#### High-Efficient & High-Reproducibility in Plasma sample

##### Abstract

Using qPCR detection kit, capillary electrophoresis and Fluorometric Quantification (Qubit) to analysis nucleic acids product from TrusPure Plasma Cell-Free DNA Extraction Kit. Extraction and analysis of cfDNA was suitable and also successful from plasma sample.

The results show that TrusPure Plasma Cell-Free DNA Extraction Kit offers efficient nucleic acids for downstream analysis or research applications.

##### Introduction

TrusPure Plasma Cell-free DNA Extraction Kit is used for manual sample preparation to isolate circulating cell-free DNA (cfDNA) from plasma samples. This kit is designed for extraction of cell-free DNA (cfDNA) from 1 mL to 10 mL of plasma/serum. The procedure upon sample loading until completes in about <1 hour. The exceptional purity is suitable for PCR and RT-PCR, Genotyping or Sequencing (NGS) assays.

##### Materials and methods

- Sample type:

- a. Plasma sample from pregnant volunteer

All of peripheral venous blood samples were collected using EDTA blood collection tubes. Centrifuge the blood samples 2 times to get plasma sample in supernatant.

- Sample volume: 2mL

- Elution volume: 100uL

Refer from TrusPure Plasma Cell-Free DNA Extraction Kit Instructions for Use (Handbook)

##### Result

Circulating cell-free DNA (cfDNA) was isolated by the TrusPure Plasma Cell-Free DNA Extraction Kit and the kit from brand Q (kit Q) using plasma samples from three pregnant volunteers (S1, S2 and S3) which can define Y-Chromosome cfDNA from plasma sample. Extraction products were analyzed by capillary electrophoresis (CE) to examine the separation [Figure A], qPCR assay to determine the presence of Y-Chromosome DNA [Figure B], and Fluorometric Quantification (Qubit) to confirm the concentration (ng/mL) [Table 1].



Those result shown that TrusPure Plasma Cell-Free DNA Extraction Kit get high performance for downstream qPCR analysis, and lower genomic DNA residual in capillary electrophoresis.

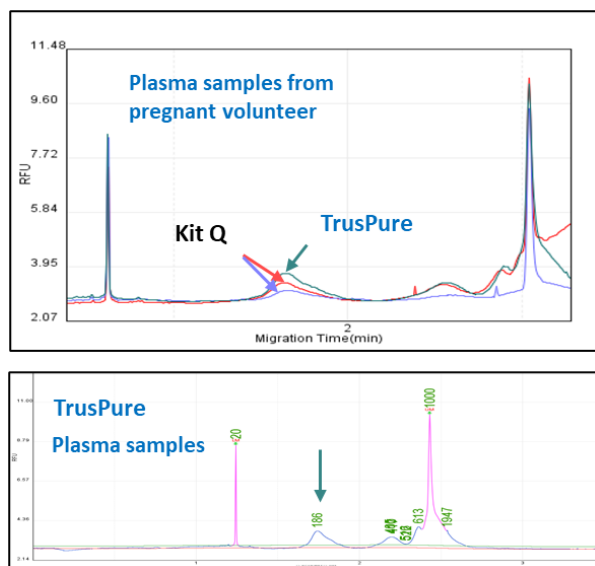


Figure A

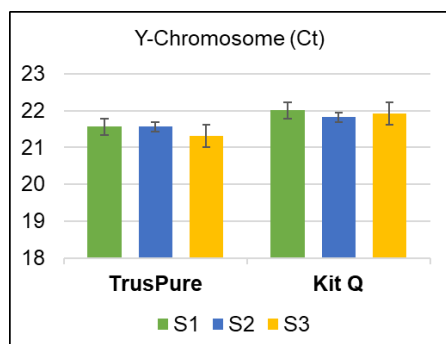


Figure B

Brand	S1	S2	S3
TrusPure	18.39	18.61	19.45
Kit Q	14.21	15.32	16.20

Table 1

## Discussion and Conclusion

In our data, cfDNA was extracted from plasma samples using TrusPure Plasma Cell-free DNA Extraction Kit from pregnant plasma sample.

The results indicate that Plasma Cell-free DNA Extraction Kit offers efficient nucleic acids for downstream molecular biology applications such as PCR, qPCR, Fluorometric Quantification (Qubit), capillary electrophoresis or research applications.

cfDNA was extracted from plasma samples using TrusPure Plasma Cell-free DNA Extraction Kit are ideal for use in a variety of downstream applications.