



APPLICATION NOTE

TrusPure Urine Cell-Free DNA Extraction Kit

Cat. RE004003

High-Efficient & High-Reproducibility in Urine sample

Abstract

Using qPCR detection kit to analysis nucleic acids product from TrusPure Urine Cell-Free DNA Extraction Kit. Extraction and analysis of cfDNA was suitable and also successful from urine sample.

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

Introduction

TrusPure Urine Cell-free DNA Extraction Kit is designed for extraction of cell-free DNA (cfDNA) from 5 mL to 30 mL of urine. The procedure upon sample loading until completes in about ~30 minutes (excluded lysis/binding ; <1 hour for specificity selection). Extra purified procedure could obtain pure urine cfDNA which can be directly used for downstream molecular biology applications. The exceptional purity is suitable for PCR and RT-PCR, Genotyping or Sequencing (NGS) assays.

Materials and methods

- Sample type:

- a. Urine sample from pregnant volunteer

Preserved cfDNA in urine, all urine sample need to add EDTA buffer to final concentration in 40mM while urine collection and can be kept at 4°C for up to 4hrs. But recommend to store at -20C right away for long-term storage.

- Sample volume: 30mL

- Elution volume: 50uL

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

Result

Circulating cell-free DNA (cfDNA) was isolated by the TrusPure Urine Cell-Free DNA Extraction Kit and the kit from brand Q (kit Q) using urine samples from three pregnant volunteers (S1, S2 and S3) which can define Y-Chromosome cfDNA from urine sample. Extraction products were analyzed by qPCR assay to determine the presence of Y-Chromosome DNA [Figure A]. This result was the amplification plot of Y-Chromosome DNA showed the integrity of isolated cfDNA from the triplicates [Figure B].

Those result shown that TrusPure Urine Cell-Free DNA Extraction Kit get high performance for downstream qPCR analysis.

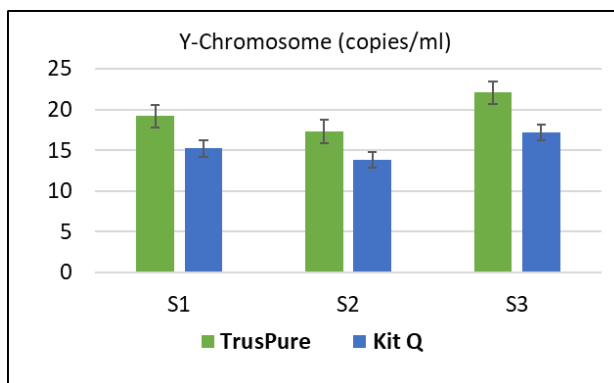


Figure A

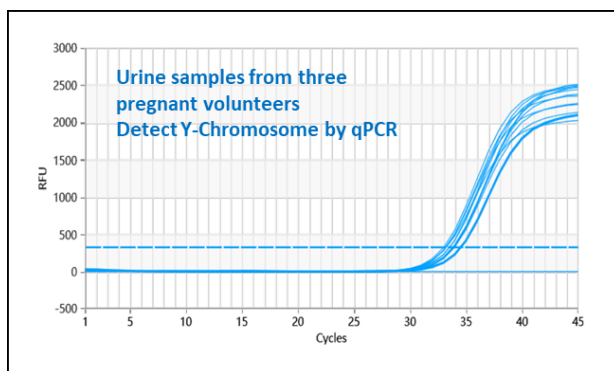


Figure B

Discussion and Conclusion

In our data, cfDNA was extracted from urine sample using TrusPure Urine Cell-free DNA Extraction Kit. Those results indicate that Urine Cell-free DNA Extraction Kit offers efficient nucleic acids for downstream molecular biology applications such as PCR, qPCR or research applications.

In particular, starting volume of cell-free DNA (cfDNA) from 5 mL to 30 mL of urine. And the results indicate that extra purified procedure could obtain pure urine cfDNA which is ideal for use in a variety of downstream applications.