

cfPure® Cell Free DNA Extraction Kit

Liquid Biopsy Made Easy

Liquid Biopsy Product Series: cfPure® Cell Free DNA Extraction Kit

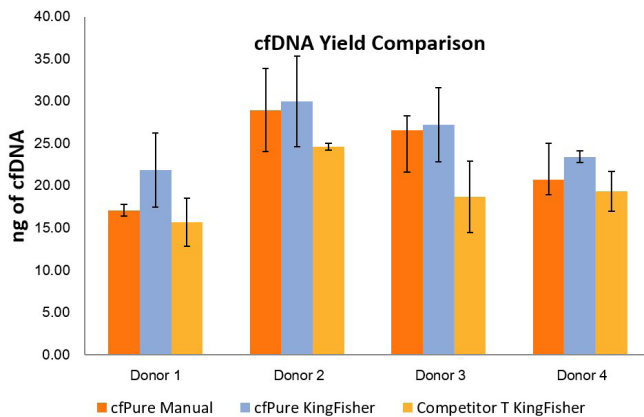


Fig. 1. cfDNA was purified from 4 mLs of EDTA plasma, using the KingFisher Flex automated purification system and either BioChain's cfPure® system (cfPure KingFisher), or a competitor's kit (Competitor T KingFisher). Both automated extraction methods were compared with extractions done manually with cfPure® (cfPure Manual). cfDNA recovery was assessed by qPCR, using primers complementary to ALU repeat sequences.

Efficient Recovery

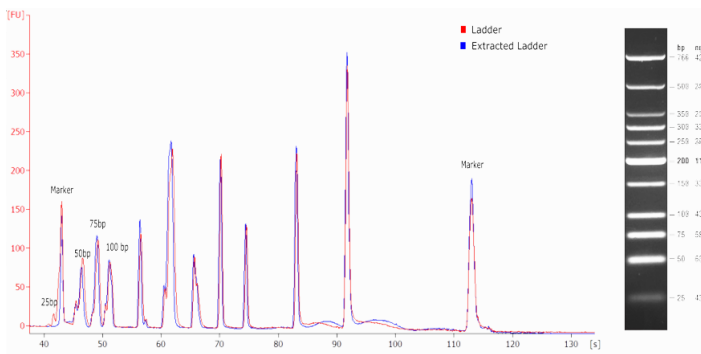


Fig. 2. Over 90% (virtually all) of a 25 bp to 766 bp DNA ladder that was spiked into simulated plasma, was recovered by cfPure® V2. A 25 bp fragment, that was present at very low concentration, was not recovered. All other fragments were covered with nearly 100% quantitative efficiency - especially the critical 150-200 bp size classes.

Advantages & Features

- Process 0.2 mL - >10 mL plasma or serum
- High yields, and excellent purity
- Reproducible results
- Low PCR inhibition
- Rapid protocol (~40 minutes)
- Automation ready, validated on Kingfisher Flex, Hamilton and Hudson instruments
- Competitive pricing
- ISO 9001 & 13485 certified

Applications:

- Next Generation Sequencing (NGS)
- Bisulfite Sequencing
- PCR, qPCR & ddPCR

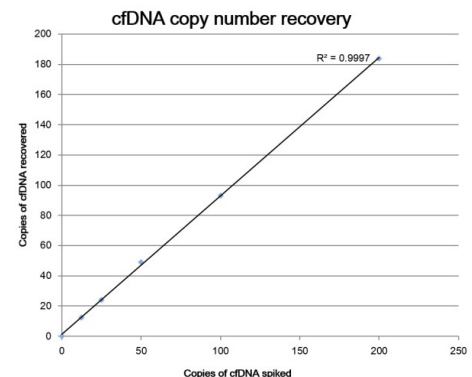


Fig. 3. Fragmented cfDNA control panel (Anchor Molecular) with 0, 12.5, 25, 100, and 100 copies of DNA per ml of plasma in a constant gDNA background (i.e. 3 ng/ml) was prepared with cfPure® kit. The recovered copies of DNA per ml was quantitated by qPCR. The result showed excellent linear range recovery. It also indicated there was minimum PCR inhibition from DNA isolated with cfPure® kit.

Efficient Recovery of cfDNA Relative to Competition

Extraction Kit	Sample ID	cfDNA recovered per ml of plasma (ng)	115 nt ALU sequence cfDNA per ml of plasma (ng) (by PCR)
Competitor T	1	4.99	1.97
BioChain's cfPure®	1	6.35	2.53
Competitor T	2	6.18	3.21
BioChain's cfPure®	2	8.28	3.93
Competitor T	3	6.93	3.79
BioChain's cfPure®	3	7.50	3.87

Table 1. cfDNA was purified from 2 mL of plasma from three different donors by either the cfPure® Cell Free DNA Extraction Kit or by a competitor's magnetic bead-based cell free DNA extraction kit. DNA recovery was assessed either by a fluorescent method or by qPCR using primers complimentary to ALU sequence DNA.

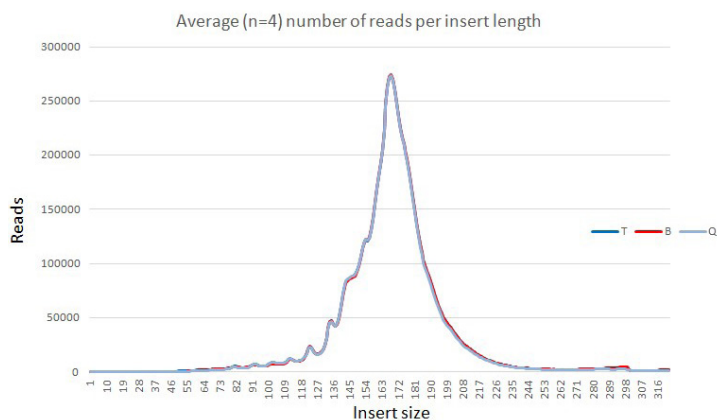


Fig. 5. Number of reads against the length of the inserts. Each curve represents average of 4 samples from the same extraction method.

High Purity

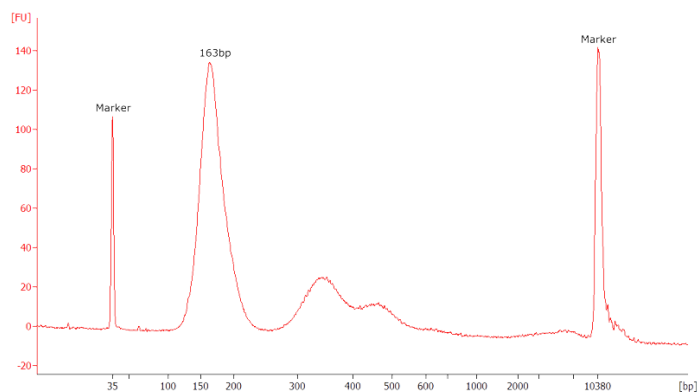


Fig. 4. cfPure® V2 cell free DNA extraction kit was used to produce high purity of cfDNA. Size specific for cfDNA and small fragment cfDNA (little gDNA interference).

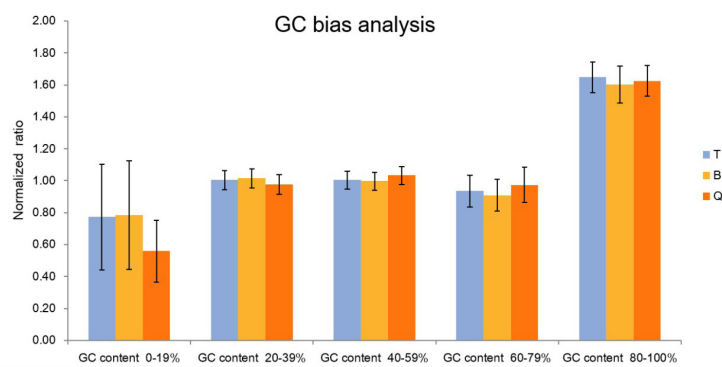


Fig. 6. The percentage of coverage in a GC bin is calculated by dividing the number of reads of a particular GC content by the mean number of reads of all GC bins.

Ordering Information

Catalog No.	Product	Kit Size
K5011610-V2	cfPure® V2 Cell Free DNA Extraction Kit	100 mL
K5011625-V2	cfPure® V2 Cell Free DNA Extraction Kit	250 mL
K5011625MA-V2	cfPure® MAX V2 Cell Free DNA Extraction Kit	250 mL

* For manual extraction, a magnetic rack or plate is required.

Please inquire about our other kits and applications.