

## INTRODUCTION

The SiDirect Cell-free DNA Isolation Kit provides a simple and convenient method to isolate cell-free DNA (cfDNA) from plasma or serum samples. The system utilizes magnetic bead technology, enabling efficient, consistent, and scalable extraction of cfDNA from 500 µl to 10 ml of serum or plasma. The extracted cfDNA is free from protein and other contaminants, making it suitable for a variety of downstream applications, such as PCR and NGS sequencing. The magnetic bead technology features uniform size and slow sedimentation rate, which makes it an excellent choice for high-throughput sample preparation.

## HIGHLIGHTS

- **High yields** of high quality cfDNA compared to other magnetic bead-based methods
- **Scalable** for higher and lower input volumes from 500 µl to 10 ml
- **Automation-friendly** with proven adaptability to open-ended liquid handlers
- **Eco-friendly** with no costly columns required and minimal use of plastics.
- **Compatible** with Streck Cell-Free DNA BCT® Tubes and LBGard® Blood Tubes

## DOWNSTREAM APPLICATIONS

- PCR
- Real-time PCR
- NGS Sequencing
- DNA Methylation Analysis

## High Quality Purification with Excellent Scalability

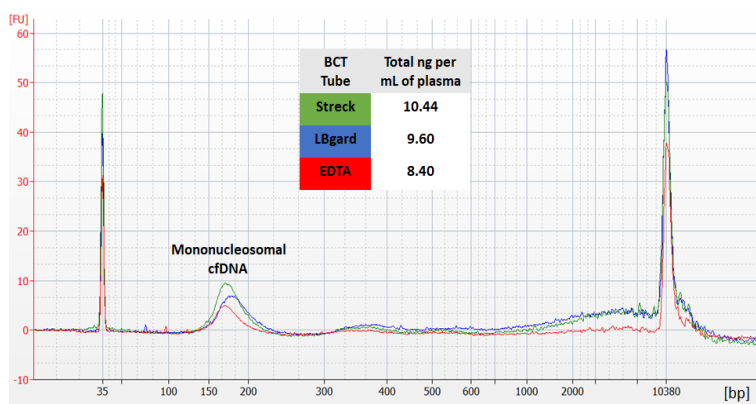


Figure 1. Cell-free DNA isolated from different BCT tubes using the SiDirect Cell-free DNA Isolation Kit

The SiDirect Cell-free DNA Isolation Kit is designed to selectively bind to cfDNA with high sensitivity with little genomic DNA carryover, allowing for a low detection limit.

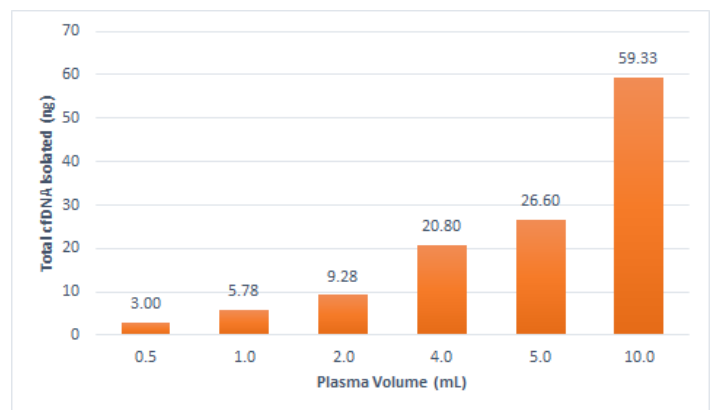


Figure 2. Linear yields relative to the volume of plasma using the SiDirect Cell-free DNA Isolation Kit.

The SiDirect Cell-free DNA Isolation Kit has been optimized to provide consistent results with scalability in mind, from 500 µl to 10 ml plasma input volumes.

## Simple and Quick Workflow

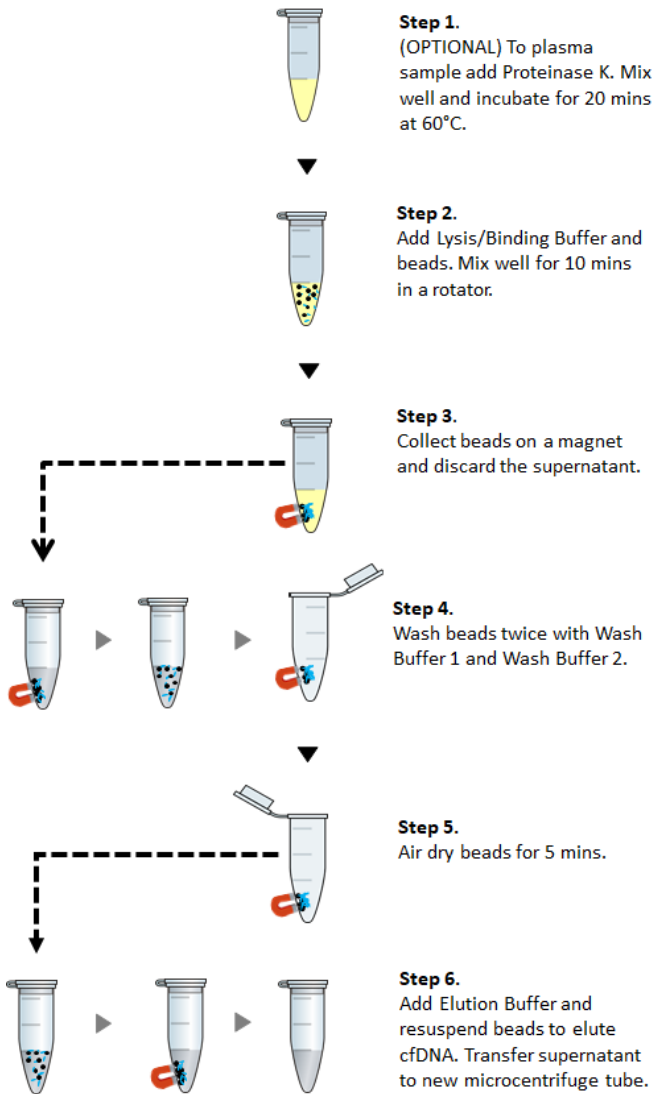


Figure 3. Illustration showing cfDNA isolation procedures using the SiDirect Cell-free DNA Isolation Kit

Plasma samples are first incubated with Lysis Buffer and SiDirect beads. The beads bind to cfDNA and are easily separated using a magnet. Magnetic separation facilitates efficient washing and elution of the isolated cf-DNA.

## Ordering Information

Product Name	Catalog No.
SiDirect Cell-free DNA Isolation Kit (48 preps)	C0411-048

Visit our website: [www.oceannanotech.com](http://www.oceannanotech.com) to view our complete line of products and innovative sample preparation kits.

## Higher Yields than Other Competitors

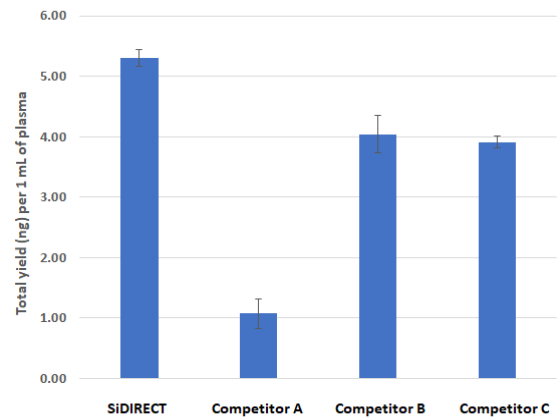


Figure 4. Higher cf-DNA yields than leading competitors from 1 mL of healthy human plasma

The SiDIRECT Cell-free DNA Isolation Kit provides higher yields of cfDNA from 1 mL of healthy human EDTA plasma sample known to have a low abundance of cfDNA (< 10 ng/mL).

## Automation Friendly



Figure 5. Examples of automated platforms compatible automated with the SiDirect Cell-free DNA Isolation Kit

The SiDirect Cell-free DNA Isolation Kit is applicable and compatible with the KingFisher Duo Prime System, KingFisher Flex System, Hamilton Microlab STAR Liquid Handling System.

## Related Products

Product Name	Catalog No.
SiDirect Beads (5 mL)	S0402-005
SiDirect Beads (50 mL)	S0402-050