

Mag-Bind® cfDNA Kit

Rapid & efficient isolation of circulating cell-free DNA from up to 10 mL plasma or serum samples with minimal genomic DNA contamination



192 samples
in 2 hours*

* 1.0 mL sample on
liquid handler



Bead-Based

Scalable DNA purification

0.5 - 10 mL Input
50 µL elution volume



Quality

Minimal genomic DNA
contamination

High quality cfDNA
suitable for qPCR, NGS



Automatable

Scripts Available
Adaptable on most open-
ended liquid handlers

Cost Effective

50% less than the
competition
on average

Mag-Bind® cfDNA Kit is designed for the rapid and efficient isolation of circulating cell-free DNA from up to 10 mL plasma or serum samples. The Mag-Bind® cfDNA Kit can be processed manually or using automated platforms. The procedure eliminates the need for funnels and vacuum steps, providing hands-free operation in automated protocols.

The unique formulation of the lysis and binding buffers allow complete automation of the extraction process, up to 10 mL sample volumes, with minimal user intervention. The magnetic properties of the Mag-Bind® Particles CH enable fast magnetic separation, even when using large volumes. The high binding capacity of the beads allows for lower volume of magnetic particles needed, thus reducing the final elution volume required. 10 mL of serum or plasma can be eluted in as low as 50 µL.

The system combines the reversible nucleic acid-binding properties of Mag-Bind® paramagnetic particles with a unique binding system that targets smaller DNA fragments (150-400 bp) and minimizes the binding of larger fragments, such as gDNA.

Electropherogram Overlay of Purified DNA from 1 mL Serum

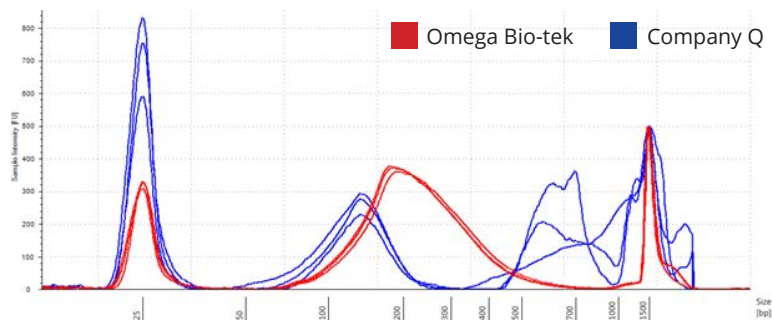
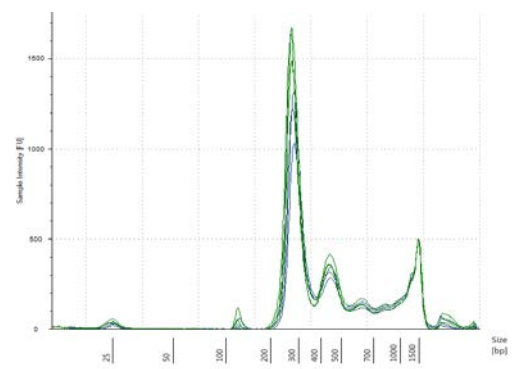


Figure 1. 100 ng of 200 bp sheared bacterial genomic DNA was spiked into 1 mL of serum and extracted using the Mag-Bind® cfDNA Kit and a comparable column-based kit from Company Q following manufacturer's recommended protocols. Purified DNA was analyzed on Agilent's TapeStation® 2200.

Next Generation Sequencing Library Preps from 1 mL Serum

Omega Bio-tek Company Q

Figure 2. 1 mL of unspiked serum was purified using kits from Omega Bio-tek and Company Q following the manufacturer's recommended protocols and eluted in 50 µL. Next-generation sequencing libraries were constructed using the KAPA Biosystems HyperPrep Library Construction Kit. 25 µL input DNA was used for each prep. Library construction products were analyzed on Agilent's TapeStation® 2200 after adaptor ligation.



innovations in nucleic acid isolation

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CAT NO: M3298

TapeStation® Analysis of Purified cfDNA from 10 mL Plasma Samples

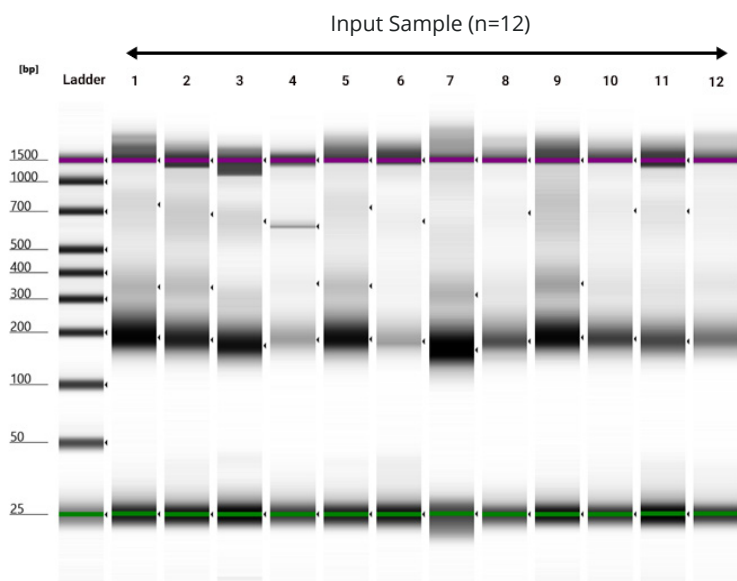
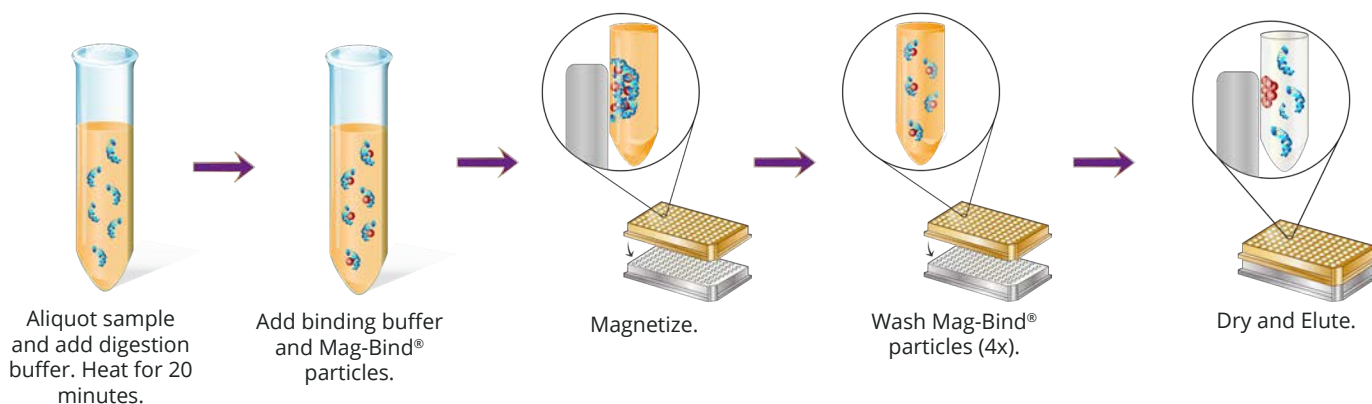


Figure 3. TapeStation® analysis of cfDNA purified from 10 mL of unspiked plasma samples (n = 12) using Omega Bio-tek's kit automated on Hamilton Microlab® STAR™ platform.

Magnetic bead-based extraction workflow



Product Description	Preps	Cat No.
Mag-Bind® cfDNA Kit	5	M3298-00
	50	M3298-01
	200	M3298-02

For free samples of any of our kits, visit www.omegabiotek.com

Important: If automating this procedure on a liquid handler or a magnetic processor, please contact your Omega Bio-tek representative for instrument-specific instructions.