

# cfKapture™ 21 Kit

## Circulating Cell-Free DNA Isolation from Stabilized Plasma and Serum

The cfKapture™ 21 kit is a system for purification of circulating, cell free nucleic acids from maternal and cancer patient's plasma. The cfKapture 21 kit includes all necessary reagents from the stabilization of separated plasma to the purification of ccfDNA.

The long term room temperature stabilization of plasma during storage or transport is achieved by mixing the plasma sample with our SE buffer allowing for up to 21 day room temperature stabilization of plasma samples. This functionality offers processing laboratories, time flexibility for optimizing their operational efficiency as well as outreach for receiving samples at local and international levels. The isolated cfDNA can be directly used for real time-PCR and DNA library preparation suitable for next generation sequencing.

### ccfDNA integrity

Blood Collection Tubes	ccfDNA extraction kit	ccfDNA Integrity Index (ALU 247/115)*
EDTA	<b>cfKapture 21</b>	<b>0.19</b>
	QIAamp CNA Kit	0.15
Blood STASIS 21-ccfDNA	<b>cfKapture 21</b>	<b>0.19</b>
	QIAamp CNA Kit	0.13
PAXgene ccfDNA	<b>cfKapture 21</b>	<b>0.26</b>
	QIAamp CNA Kit	0.12
Streck BCT	<b>cfKapture 21</b>	<b>0.18</b>
	QIAamp CNA Kit	0.14

\*ALU115-qPCR, and ALU247-qPCR results have been used to accurately quantitate the total quantity of cfDNA in plasma sample, and high molecular weight cellular gDNA contamination respectively. ALU247/ALU115 ratio therefore indicates the cfDNA integrity index of the sample. According to Hao et al., expected cfDNA integrity indices follows the rational below.

Samples	DNA integrity index
ccfDNA from healthy donor	0.38 (0.29-0.49)
gDNA	1

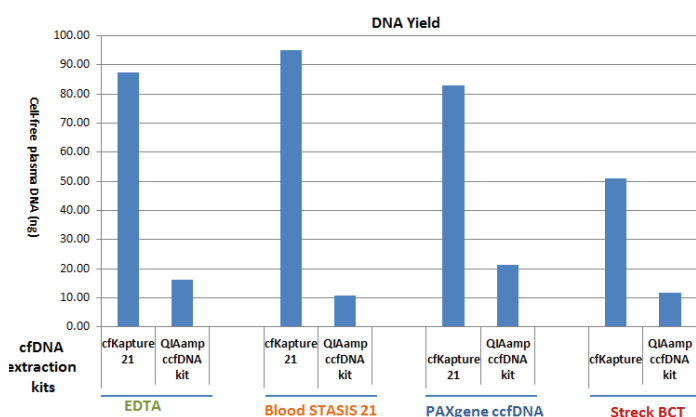
**Concluding Remarks:** Regardless of blood collection method, MagBio's cfKapture 21 Kit performs at least 3 times better than QIAamp Circulating Nucleic Acid Kit.

### Overall Benefits

- Allows plasma sample storage at room temperature for 21 days before processing
- Ideal system for plasma processing in High-Throughput settings
- Efficient cfDNA isolation - No carrier RNA
- Low sample volume processing (200 µL-5 mL)



**Performance Comparison**  
MagBio cfKapture 21 vs. Qiagen QIAamp Circulating Nucleic Acid Kit



### Yield and cfDNA integrity

cfDNA purified from 400 µL of plasma using MagBio's cfKapture 21 Kit, and QIAamp Circulating Nucleic Acid Kit. Plasma samples were separated from 1 mL healthy male donor's whole blood. These samples were collected in EDTA, MagBio's Blood STASIS 21-ccfDNA, PAXgene ccfDNA, and Streck BCT tubes. All samples were stored at room temperature for 1 hour and yield was assessed by Qubit.

**Note:** Carrier RNA recommended by the manufacture of QIAamp Circulating Nucleic Acid Kit was purposely not added during the extraction procedure to avoid skewed outcome numbers.

### Ordering Information

For research use only. Not intended for use in diagnostic procedures.

Cat No.	Product	Description
CFK-D50-5ML	cfKapture 21 Kit (3-5 mL, 50 preps)	For 50 preps: Purification of cell-free DNA (cfDNA) from 3-5 mL STABILIZED plasma
CFK-D50-2ML	cfKapture 21 Kit (1-2 mL, 50 preps)	For 50 preps: Purification of cell-free DNA (cfDNA) from 1-2 mL STABILIZED plasma
CFK-D50-400ML	cfKapture 21 Kit (200-400 µL, 50 preps)	For 50 preps: Purification of cell-free DNA (cfDNA) from 200-400 µL STABILIZED plasma



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