

MagCore® Nucleic Acid Extraction Kits



MagCore® Automated Nucleic Acid Kits Selection Guide



		Cat.No. 24preps	Cat.No. 36preps	Cat.No. 72preps	Cat.No. 96preps	Whole Blood	Buffy Coat	Plasma/Serum	Cell-free body fluids	Urine	Free circulating DNA	Cultured Cells	Animal Tissue	Plant Tissue	Bacterial Sputum	Swab	FFPE	Stool	Forensic Specimens
Genomic DNA	101 MagCore® Genomic DNA Whole Blood Kit (Speedy installation)		MGB400-01 MGB400-01SP		MGB400-02 MGB400-02SP	■	■												
	102 MagCore® Genomic DNA Whole Blood Kit		MGB400-03 MGB400-03SP		MGB400-04 MGB400-04SP	■	■												
	104 MagCore® Genomic DNA Large Volume Whole Blood Kit (1.2 ml)				MGB1200 MGB1200SP	■													
	105 MagCore® Plasma DNA Extraction Kit (1.2 ml)				MPD1200 MPD1200SP			■	■		■								
	115 MagCore® Plasma DNA Extraction Kit (4 ml)				Coming Soon			■	■		■								
	106 MagCore® Genomic DNA Whole Blood Kit (For Genotyping)		MGB400-07 MGB400-07SP		MGB400-08 MGB400-08SP	■													
	110 MagCore® Cultured Cells DNA Kit		MCC-01 MCC-01SP		MCC-02 MCC-02SP							■							
	301 MagCore® Genomic DNA Plant Kit		MGP-01 MGP-01SP		MGP-02 MGP-02SP									■					
	401 MagCore® Genomic DNA Tissue Kit		MGT-01 MGT-01SP		MGT-02 MGT-02SP								■			■	■	■	■
	405 MagCore® Genomic DNA FFPE One-Step Kit		MGF-01 MGF-01SP	MGF-03 MGF-03SP													■		
Viral Nucleic Acids	201 MagCore® Viral Nucleic Acid Extraction Kit		MVN400-01 MVN400-01SP		MVN400-02 MVN400-02SP			■	■	■									
	202 MagCore® Viral Nucleic Acid Extraction Kit (Low PCR Inhibition)		MVN400-03 MVN400-03SP		MVN400-04 MVN400-04SP			■	■	■									
	210 MagCore® Viral Nucleic Acid Large Volume Extraction Kit (2.4 ml)				MVN2400			■	■	■									
	211 MagCore® Viral Nucleic Acid Large Volume Extraction Kit (1.2 ml)				MVN1200 MVN1200SP			■	■	■									
Total RNA	601 MagCore® Total RNA Whole Blood Kit		MRN-01 MRN-01SP		MRN-02 MRN-02SP	■													
	610 MagCore® Total RNA Cultured Cells Kit		MRC-01 MRC-01SP		MRC-02 MRC-02SP								■						
	631 MagCore® triXact RNA Kit	MRX-01 MRX-01SP		MRX-03 MRX-03SP		■							■	■					

MagCore® Cartridge Design and Extraction Principle

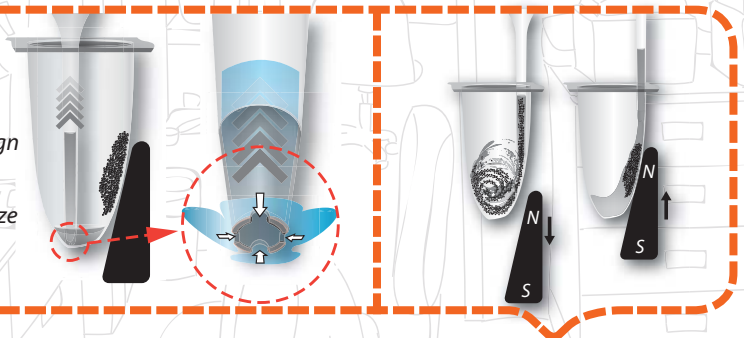


MagCore® cartridges include all reagents needed for purifications, no additional handling is necessary. We minimize any possible contamination and spillage with an automated piercing step for our pre-sealed cartridges. RBC patented Heating Well and Separation Well in the cartridge provide a strong circular force to ensure efficient binding and washing during the extraction procedure.

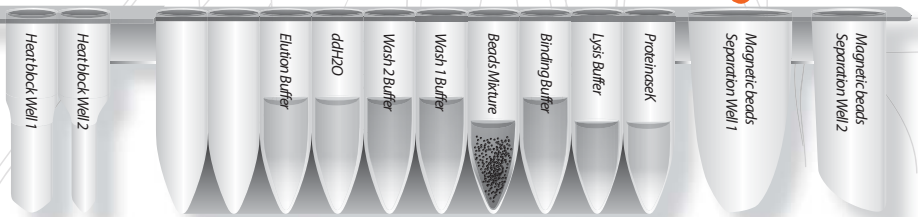
MagCore® Nucleic Acid Extraction Kits contain all reagents and consumables needed for 36, 72 or 96 nucleic acid isolation reactions. The consumables consist of reagent cartridges, individually packaged tip sets, sample tubes and elution tubes.

Tip Design

The unique cross-notch design at the end of the tips allows the instrument to pipette precise volumes and minimize liquid retention.

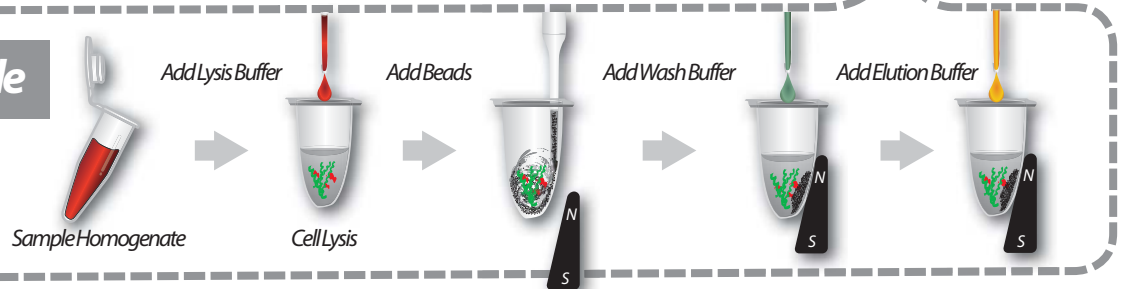


RBC Cartridge



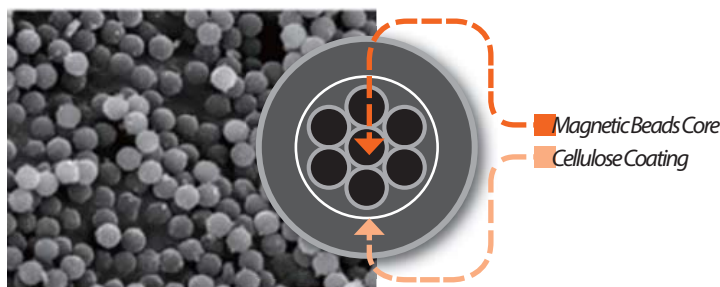
Each cartridge has 14 positions available with 10 sealed wells and 2 heating chambers.

Extraction Principle



MagCore® Worldwide Patented Magnetic Beads

Our design: multiple core inside, cellulose coating.



Particle range	~20µm (in water)
VSM	~40emu/g
Cellulose w%	~50%
Core size	~150nm
Core VSM	~80emu/g
Core material	Fe ₃ O ₄
Bead Binding capacity	1 mg beads bind ~300µg <i>Cal</i> thymus DNA ~350µg human placenta DNA



FDA (10055336) registered and CE-IVD certified (Instruments & Reagents)
Manufactured in accordance with quality system requirements that comply with ISO 13485 standards and QSR



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MagCore® Nucleic Acid Extraction Kits

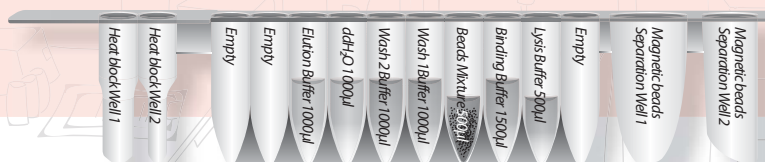


For genomic DNA extraction from cultured cells and amniotic fluid

MagCore® Cultured Cells DNA Kit is designed to extract genomic DNA from up to 5×10^6 cultured cells using MagCore® automated extraction systems. The kit contains all required reagents and labware for automated extraction using magnetic-particle technology. Reagents are supplied in prefilled cartridges, which can be easily loaded into the MagCore® instrument.

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MagCore® Cultured cells DNA Kit



Features

1. High performance of purified DNA in downstream applications such as qPCR.
2. Efficient isolation of DNA from up to 5×10^6 cells.
3. Cartridges are pre-filled and sealed to prevent contamination.
4. No phenol or chloroform extraction.
5. Efficient removal of contaminants and inhibitors.

Applications

High quality DNA available for various downstream applications, including:

1. PCR and real-time PCR
2. Next Generation Sequencing (NGS)



Performance

DNA quality analysis by Spectrophotometer

DNA of three different cultured cells were extracted by the employment of MagCore® HF16 and MagCore® Cultured Cells DNA Kit (200µl sample volume). The following data show the yield and purity of DNA of three samples.

Sample 1: COS7 (1.2x10⁷)
Sample 2: Junkat (1x10⁶)
Sample 3: HEK293 (1x10⁶)

	1	2	3
Yield (mg)	16.44	13.08	24.42
DNA purity (A ₂₆₀ /A ₂₈₀)	1.93	1.87	1.92



Amniotic fluid DNA extraction

Result

DNA quality is checked by the NanoDrop spectrophotometer and agarose gel electrophoresis after DNA purification from amniotic fluid cells. Cells were harvested from 10~15 ml amniotic fluid samples at pregnancy weeks 16-18 by centrifugation for 10 minutes at 3000 rpm.

Sample ID	Conc. (pg/µl)	A ₂₆₀ /A ₂₈₀	A ₂₆₀ /A ₂₃₀	Yield (µg)
(1) GPT2967P	22.68	1.84	1.07	1.36
(2) GPT2952P	33.98	1.92	1.57	2.04
(3) NP679P	33.65	1.80	1.34	2.02
(4) NP777P	39.22	1.86	1.20	2.35
(5) MP795P	22.05	1.79	0.97	1.32

by NanoDrop ND-1000

Table 1. DNA quality analysis by NanoDrop.

Sample ID (1) to (5) are different amniotic fluid samples. It is shown that MagCore® HF16 system can purify 1~2 µg DNA from 10~15 ml amniotic fluid samples and DNA purity is with the A₂₆₀/A₂₈₀ ratio of around 1.8±0.1.

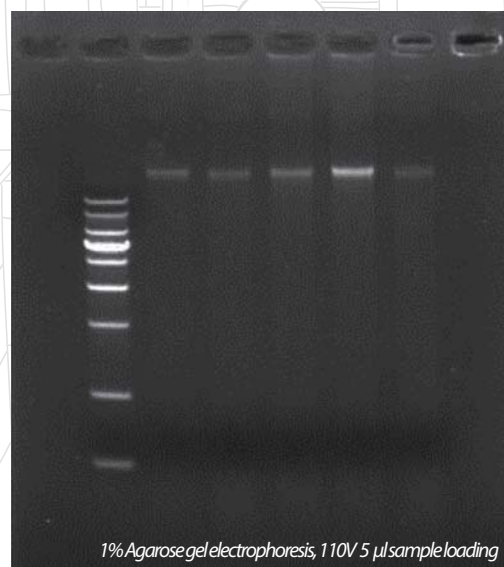


Figure 1. Genomic DNA isolations were run by gel electrophoresis on 1% agarose gel.

Lane M: RBC 1 kb ladder marker

Lane 1: GPT2967P

Lane 2: GPT2952P

Lane 3: NP679P

Lane 4: NP777P

Lane 5: NP795P

MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super/HF16 Plus/Plus II				MagCore® HF16/Compact/HF48			
	Cat No.	Cat No.	Cat No.	Running Time	Cat No.	Cat No.	Cat No.	Running Time
	36 preps	72 preps	96 preps		36 preps	72 preps	96 preps	
110	MagCore® Cultured Cells DNA Kit For 200µl sample volumes (up to 5x10 ⁶ cells) Contents: Pre-Filled Cartridges, Proteinase K, PK Storage Buffer, Disposable Tip & Holder Sets, Sample Tubes, Elution Tubes Shelf life: 18 months							
	MCC-01SP	MCC-02SP		39 min (sample volume: 200 µl, up to 5x10 ⁶ cells) *optical detection is not provided	MCC-01	MCC-02		44 min (sample volume: 200 µl, up to 5x10 ⁶ cells)

Enzyme Selection Guide

Product	Contents	Cat. No.
Proteinase K Set	11 mg Proteinase K, 1.25 ml PK Storage Buffer	PK011
RNase A	50 µl RNase A (50mg/ml)	RN050
	130 µl RNase A (50mg/ml)	RN130



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