



MagCore® Super/HF16 Plus

Nucleic Acid Extraction Kit

User's Manual

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Running Time List



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Ver. 2014-2

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Precautions

I) Before Using

- Do not operate MagCore® without qualified operation training.
- Read user's manual carefully before operation.

II) Handling Requirements

- Do not use a kit after its expiration date.
- Do not touch the reagents with bare hands. Keep away from your skin, eyes, or mucous membranes. If contact does occur, wash the affected area immediately with large amounts of water. If you spill the reagents, dilute the spill with water before wiping it up.
- Do not allow reagents to mix with sodium hypochlorite solution or strong acids. This mixture can produce a highly toxic gas.

III) Laboratory Procedures

- Handle all samples and the resulting waste as if potentially infectious, using safe laboratory procedures. As the sensitivity and titer of potential pathogens in the sample material varies, the operator has to optimize pathogen inactivation by the Lysis Buffer or take appropriate measures according to local safety regulations. RBC Bioscience does not warrant that samples treated with Lysis Buffer are completely inactivated and noninfectious. After sample processing is completed, remove and autoclave all disposable plastics.
- Do not eat, drink or smoke in the laboratory working area.
- Wear protective disposable gloves, laboratory coats and goggles when handling samples and kit reagents.
- Do not use sharp or pointed objects when working with the reagent cartridges, this is to prevent damage of the sealing foil and loss of reagent.
- Do not contaminate the reagents with bacteria, virus, or ribonuclease. Use disposable Pipettes and RNase-free Pipette tips only to remove aliquots from reagent bottles. Use the general precautions described in the literature.
- Wash hands thoroughly after handling samples and test reagents.

IV) Waste Handling

- Discard unused reagents and waste complied with country, federal, state and local regulations.

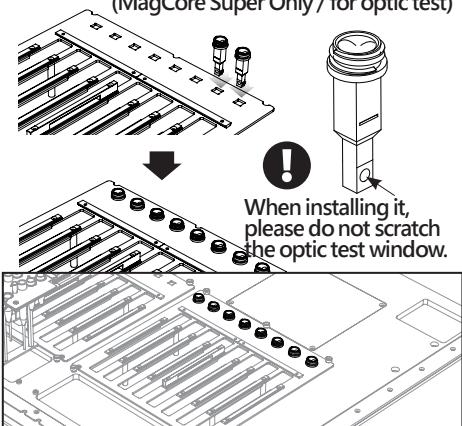
Product selection guide

MagCore® Super/HF16Plus Nucleic Acid Extraction Kits:			
		Cat. No.	Cat. No.
		36 preps	72 preps 96 preps
101	<i>MagCore® Genomic DNA Whole Blood Kit (Speedy Installation)</i>	MGB400-01SP	✓ ✓
102	<i>MagCore® Genomic DNA Whole Blood Kit</i>	MGB400-03SP	✓ ✓
104	<i>MagCore® Genomic DNA Large Volume Whole Blood Kit (1.2 ml)</i>	MGB120SP	✓
105	<i>MagCore® Plasma DNA Extraction Kit (1.2 ml)</i>	MPD120SP	✓ ✓
106	<i>MagCore® Genomic DNA Whole Blood Kit (For Genotyping)</i>	MGB400-08SP	✓
110	<i>MagCore® Cultured Cells DNA Kit</i>	MCC-02SP	✓
301	<i>MagCore® Genomic DNA Plant Kit</i>	MGP-01SP	✓
401	<i>MagCore® Genomic DNA Tissue Kit</i>	MGT-01SP	✓ ✓
405	<i>MagCore® Genomic DNA FFPE One-Step Kit</i>	MGF-01SP	✓
502	<i>MagCore® Genomic DNA Bacterial Kit</i>	MBB-01SP	✓
201	<i>MagCore® Viral Nucleic Acid Extraction Kit</i>	MVN400-01SP	✓ ✓
202	<i>MagCore® Viral Nucleic Acid Extraction Kit (Low PCR Inhibition)</i>	MVN400-03SP	✓ ✓
211	<i>MagCore® Viral Nucleic Acid Large Volume Extraction Kit (1.2 ml)</i>	MVN200SP	✓ ✓ ✓
G01	<i>MagCore® Total RNA Cultured Cells Kit</i>	MRN-01SP	◇
G10	<i>MagCore® Total RNA Whole Blood Kit</i>	MRN-01SP	◇ * ◇ *

Will be developed for the extraction of RNA from animal tissue and FFP samples.

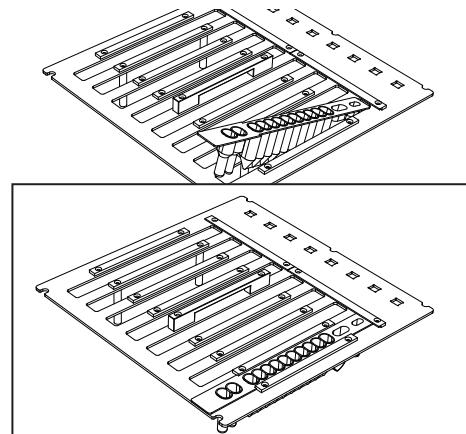
– Install MagCore® Cuvette

(MagCore Super Only / for optic test)



1. Please put MagCore® Cuvette into the corresponding sample's well. The installation of Cuvette is directional. It is impossible to put it into the well if the direction is not correct.
2. Put the 200 µl SP tip into the W4 of the T-Rack.

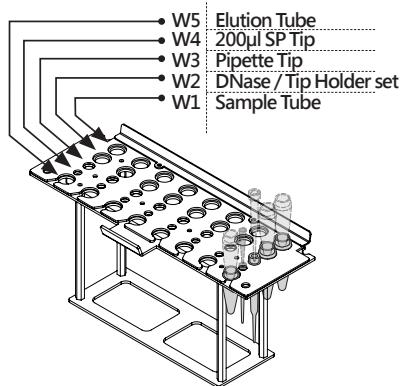
– Install reagent cartridge



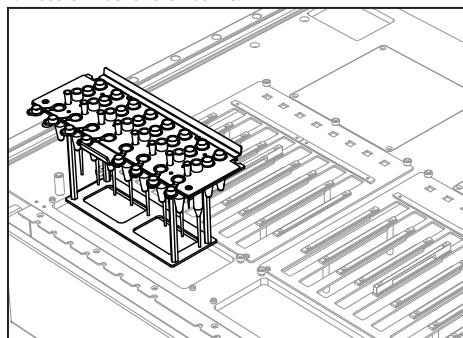
Please insert the front end of the cartridge into the space below the fixing plate of the Cartridge Rack.

- ! Please insert the Cartridge Rack before the T-Rack.

– Install Tube, Tip



1. Put the tip into the corresponding well according to the left figure.
2. Put the T-Rack on the machine.



! Please install the Tip and Tube according to the instructions of extraction kit user manual.

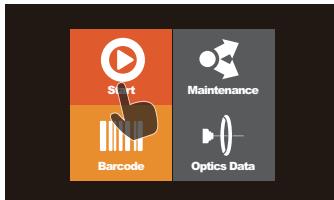


Warning :

Please do not use the Tips and Tubes which are not provided by the original manufacturer. The test result may be not correct and the machine may be damaged due to different Tips and Tubes.

– Start Programs

- 1 Please pretreat the sample according to the instructions of the user manual of the MagCore® Kit and put consumables into the machine.

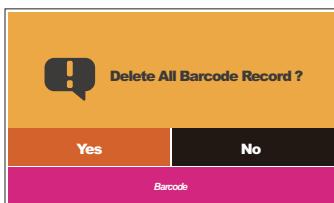


Press Start to go to the next step.

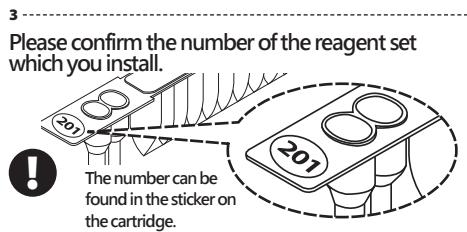
2

Start Barcode Scanning? <input type="button" value="Yes"/> <input type="button" value="No"/> <input type="button" value="Barcode"/>	
---	--

System will ask you whether or not to scan the barcode.



If there is a barcode record from previous test processes, the system will ask you whether or not to delete previous barcode record. If there is no barcode record, the system will not ask you. (MagCore Super only; HF16 Plus optional)



D	101	201
	102	202
<input type="button" value="▲ Prev"/>	<input type="button" value="▼ Next"/>	<input type="button" value="Cancel"/>
<input type="button" value="Select Cartridge Code"/>		

Select the number of the cartridge.

4

D	Program Code : 610	
<input type="button" value="Yes"/>	<input type="button" value="No"/>	<input type="button" value="Back"/>
<input type="button" value="DNase Treatment"/>		

Select DNase Treatment. (Only for RNA kit.)

5

D	Program Code : 201	
<input type="button" value="200"/>	<input type="button" value="400"/>	<input type="button" value="Back"/>
<input type="button" value="Select Sample Volume"/>		

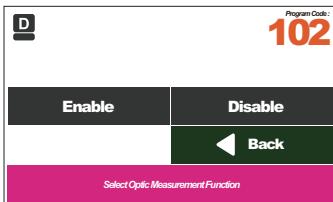
Select Sample Volume.

6

D	Program Code : 401	
<input type="button" value="Water"/>	<input type="button" value="Tris"/>	<input type="button" value="Back"/>
<input type="button" value="Select Elution Buffer"/>		

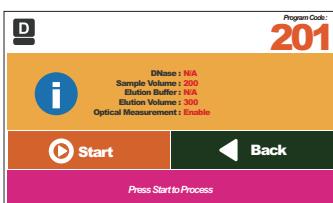
Select Elution Buffer. (Only for tissue kit.)

7



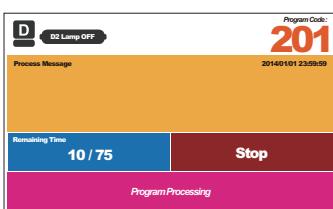
Select to enable or disable the optic measurement function. (MagCore Super Only)
(201, 202, 211, 105 without the function)

8



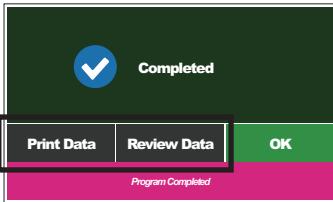
Please confirm the parameters and press the Start button to execute the program.

9



Automatic extraction process.

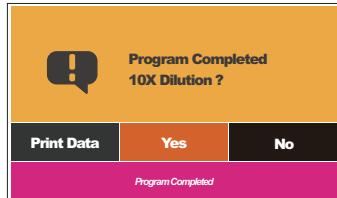
10



The extraction process is completed.

If you select the optic measurement function, you can browse, print or output the test result to a USB Flash Drive (please refer to the optic data chapter).

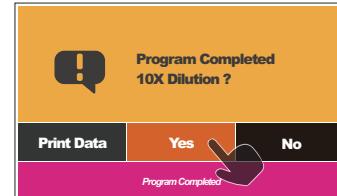
- If the test result of the optic measurement is over detection
(MagCore Super Only)



If the test result of the optic test shows the concentration is over detection (DNA >300ng/ μ l / RNA > 240 ng/ μ l), the system will ask you to dilute.



A. Please record and save the current measured data.



Please select YES.

Barcode		Slot	Date
472945678900		1	2014/01/30 09:19:59
VG 1L (DNA)	> 300	2	
		3	
		4	
		5	
		6	
		7	
		8	
		9	
		10	
		11	
		12	
		13	
		14	
		15	
		16	
		▲ Prev	▼ Next
		Save	Next Step
Note the samples which need dilution			

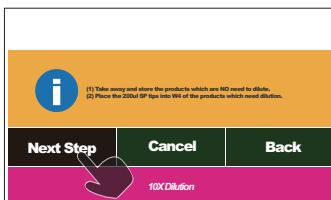
The values are DNA >300 ng/ μ l / RNA > 240 ng/ μ l

Please check the value of each sample. If there is a value showing DNA >300 ng/ μ l or RNA > 240 ng/ μ l, please record the number of the sample. It means the sample needs to be diluted. After recording the number of the slot, please insert the USB Flash Drive and press the Save button to save to current measured data. After finishing the above steps, please press Next Step.



Please save the data in the USB Flash Drive and transfer to computer, or the data in the USB Flash Drive may be overwritten later.

File name: OpticsSampleData.csv



B. Prepare to dilute

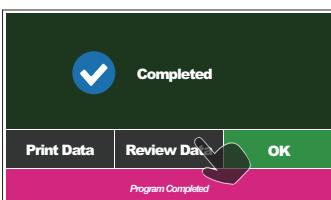
1. Please take out the elution products which are no need to be diluted.
2. Please put a new 200μl SP Tip in the W4 corresponding to the sample to be diluted.
3. Press Next Step to continue the process.



Please confirm and press Start to dilute it.



Diluting.



The diluting process is completed; please press Review Data to show the measured value after dilution.



C. Record and save the measured values.

1. Insert the USB Flash Drive and then press the Save button to save the current measured values after the USB icon shows in the status bar. Please take out the USB Flash Drive and then you can perform other operations after the icon of USB Flash Drive disappears.
2. The file saved last time and this file are all data obtained from this test. If the file saved last time is lost, you can retrieve this file according to the instructions of optic test data chapter.



Please save the data in the USB Flash Drive and transfer to computer, or the data in the USB Flash Drive may be overwritten later.

File name:
OpticsSampleData.csv

Previous file name:
Pre_OpticsSampleData.csv

MagCore® Genomic DNA Whole Blood Kit (Speedy installation)

For purification of genomic DNA from human whole blood

Cartridge Code 101

Cat.No.MGB400-01SP//MGB400-02SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MGB400-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.

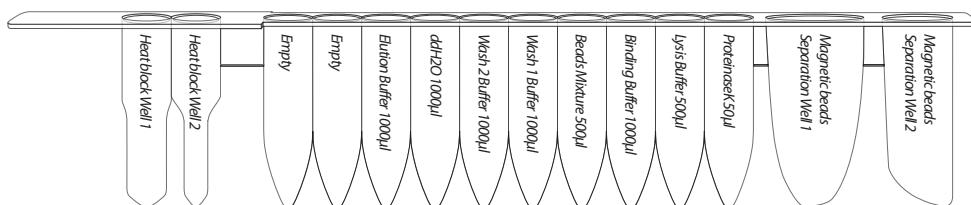
Cat.No. MGB400-02SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Shelf life 6 months.

Cartrige Contents:



Description

MagCore® Genomic DNA Whole Blood Kit is designed for purification of total DNA (including genomic, mitochondrial and viral DNA) from whole blood, plasma, serum, buffy coat by using MagCore® auto-extraction instrument. The method uses pre-filled cartridge contains proteinase K and chaotropic salt to lysis cells and degrade protein.

DNA will bind to cellulose coated magnetic beads. After washing off the contaminants, the purified DNA is eluted by low salt elution buffer. Purified DNA of approximately 20-30 kb in length is suitable for PCR or other enzymatic reactions.

Applications

Using magnetic-particle technology to purify genomic DNA from fresh whole blood. The purified genomic DNA can be directly used for downstream application such as quantitative PCR, restriction enzyme digestion, southern blotting... etc.

Running Time : 39 min (sample volume:200 μ l ; without optical detection)
50 min (sample volume:400 μ l ; without optical detection)

Whole Blood Protocol

1. Pipette 200/400 μ l of equilibrated whole blood sample to MagCore® Sample Tube.
2. Put the prepared Sample Tube into well 1 of T-Rack.
3. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
4. Run Code.101 program at MagCore®.

Optional Step: RNA Degradation

If RNA-Free genomic DNA is required, perform these optional steps.

1. Add 4 μ l RNase A(50mg/ml) into the sample lysate.
2. Incubate the sample at room temperature for 20min.

Buffy Coat modify Protocol

RBC Lysis Buffer:

150 mM NH₄Cl, 10mM KHCO₃, 0.1mM EDTA.

Buffy Coat Preparation by RBC Lysis

1. Take 600 ~ 700 μ l whole blood into 2ml microcentrifuge tube.
Don't take more than 700 μ l whole blood sample; it will cause the leakage situation during process.
2. Add 1ml RBC Lysis Buffer and mix the buffer and whole blood sample by upside down.
3. Shake the mixture, 100rpm 5mins.
4. Centrifuge the mixture 13,000rpm 1 min.
5. Discard supernatant.
6. Repeat step 2 ~ step 5 to wash the sample again.
7. Add 400 μ l RBC Lysis Buffer and 20 μ l proteinase K to resuspend the pellet and transfer into MagCore® Sample Tube.
8. Put the prepared Sample Tube into well 1 of T-Rack.
9. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
10. Run Code.101 program at MagCore®.

Buffy Coat Preparation by Centrifugation

1. Take 2 ~ 5ml whole blood sample and centrifuge at 1,500rpm 10mins.
2. Use plastic drop to take white buffy coat layer in the middle of whole blood sample.
3. Move the buffy coat into new microcentrifuge tube.
4. Take 80 ~ 100 μ l buffy coat sample into MagCore® Sample Tube and add RBC Lysis Buffer or PBS until 400 μ l, then add 20 μ l of proteinase K.
5. Put the prepared Sample Tube into well 1 of T-Rack.
6. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
7. Run Code.101 program at MagCore®.

Note : We suggest to select 150 ~200 μ l elution buffer, it can get better elution efficiency in both of these methods. Normally the concentration is higher than 150ng/ μ l under such elution volume.

MagCore® Genomic DNA Whole Blood Kit

For purification of genomic DNA from human whole blood

Cartridge Code 102

Cat.No.MGB400-03SP // MGB-400-04SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MGB400-03SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
Proteinase K(11mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.

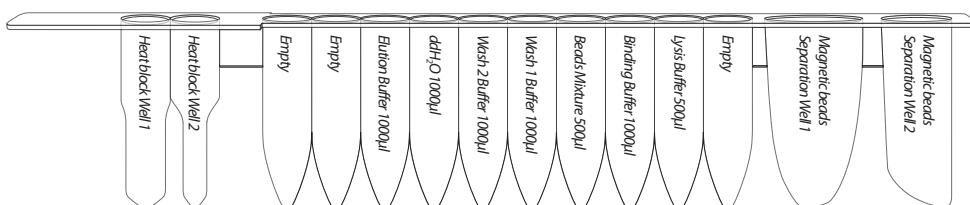
Cat.No. MGB400-04SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Proteinase K(11mg).....	4 pcs.
PK Storage Buffer.....	4 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
3. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Genomic DNA Whole Blood Kit is designed for purification of total DNA (including genomic, mitochondrial and viral DNA) from whole blood, plasma, serum, buffy coat by using MagCore® auto-extraction instrument. The method uses pre-filled cartridge contains chaotropic salt to lysis cells and degrade protein. DNA will bind to cellulose coated magnetic beads. After washing off the contaminants, the purified DNA is eluted by low salt elution buffer. Purified DNA of approximately 20-30 kb in length is suitable for PCR or other enzymatic reactions.

Applications

Using magnetic-particle technology to purify genomic DNA from fresh whole blood. The purified genomic DNA can be directly used for downstream application such as quantitative PCR, restriction enzyme digestion, southern blotting... etc.

Running Time: 39 min (sample volume:200 μ l; without optical detection)

50 min (sample volume:400 μ l; without optical detection)

Preparation before using

1. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K(10mg/ml) at -20°C.

Whole Blood Protocol

1. Take a new Sample Tube and add 20 μ l of Proteinase K (10mg/ml) to 200 μ l of equilibrated whole blood sample. (40 μ l Proteinase K to 400 μ l whole blood).
2. Place the prepared Sample Tube into well 1 of T-Rack.
3. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
4. Run Code.102 program at MagCore®.

Optional Step: RNA Degradation

If RNA-Free genomic DNA is required, perform these optional steps before adding Proteinase K.

1. Add 4 μ l RNase A(50mg/ml) into the sample lysate.
2. Incubate the sample at room temperature for 20min

Buffy Coat modify Protocol

RBC Lysis Buffer:

150mM NH₄Cl, 10mM KHCO₃, 0.1mM EDTA.

Buffy Coat Preparation by RBC Lysis

1. Take 600 ~ 700 μ l whole blood into 2ml microcentrifuge tube.
Don't take more than 700 μ l whole blood sample; it will cause the leakage situation during process.
2. Add 1ml RBC Lysis Buffer and mix the buffer and whole blood sample by upside down.
3. Shake the mixture, 100rpm 5mins.
4. Centrifuge the mixture 13,000rpm 1 min.
5. Discard supernatant.
6. Repeat step 2 ~ step 5 to wash the sample again.
7. Add 400 μ l RBC Lysis Buffer and 20 μ l proteinase K to resuspend the pellet and transfer into MagCore® Sample Tube.
8. Place the prepared Sample Tube into well 1 of T-Rack.
9. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
10. Run Code.102 program at MagCore®.

Buffy Coat Preparation by Centrifugation

1. Take 2 ~ 5ml whole blood sample and centrifuge at 1,500rpm 10mins.
2. Use plastic drop to take white buffy coat layer in the middle of whole blood sample.
3. Move the buffy coat into new microcentrifuge tube.
4. Take 80 ~ 100 μ l buffy coat sample into MagCore Sample Tube and add RBC Lysis Buffer or PBS until 400 μ l then add 20 μ l of proteinase K.
5. Place the prepared Sample Tube into well 1 of T-Rack.
6. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
7. Run Code.102 program at MagCore®.

Note : We suggest to select 150 ~200 μ l elution buffer, it can get better elution efficiency in both of these methods. Normally the concentration is higher than 150ng/ μ l under such elution volume.

MagCore® Genomic DNA Large Volume Whole Blood Kit

For purification of genomic DNA from human whole blood (1.2 ml)

Cartridge Code 104

Cat.No.MGB1200SP

Kit Contents

Check that the following parts are included in addition to the main unit:

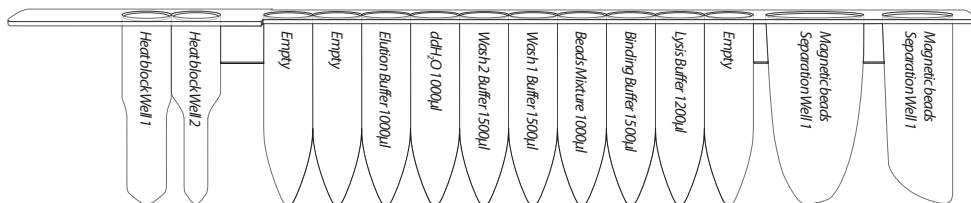
Cart.No. MGB1200SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 Pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Proteinase K(11mg).....	8 pcs.
PK Storage Buffer.....	8 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
3. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Genomic DNA Large Volume Whole Blood kit is designed to extract genomic DNA from 1.2ml fresh whole blood via MagCore® auto-extraction instrument. The kit contains all required reagent and labware for automated purification using magnetic-particle technology. Easy select program code number 104 in MagCore® and combine using MagCore® Genomic DNA Large Volume Whole Blood Kit can extract high quality genomic DNA.

Applications

Using magnetic-particle technology to purify genomic DNA from 1.2ml fresh whole blood. The purified genomic DNA can be directly used for downstream application such as quantitative PCR, restriction enzyme digestion, southern blotting... etc.

Running Time: 83 min (sample volume: 1200 µl; without optical detection)

Preparation before using

1. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K(10mg/ml) at -20°C.

Protocol

1. Pipette Proteinase K 80 µl into the MagCore Sample Tubes.
2. Add 1200 µl whole blood into the prepared Sample Tube.
3. Place the prepared Sample Tube into well 1 of T-rack.
4. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
5. Run Code.104 program at MagCore®.

Note : Beads or precipitate in eluent might be happened in viscous samples. This situation will not affect the yield, purity and downstream applications. Reduce volume of viscous sample or simply centrifuge will remove the residual beads.

MagCore® PlasmaDNA Extraction Kit (1.2ml)

For extraction of free circulating DNA from human plasma or serum.

Cartridge Code 105

Cat.No.MPD1200SP

Kit Contents

Check that the following parts are included in addition to the main unit:

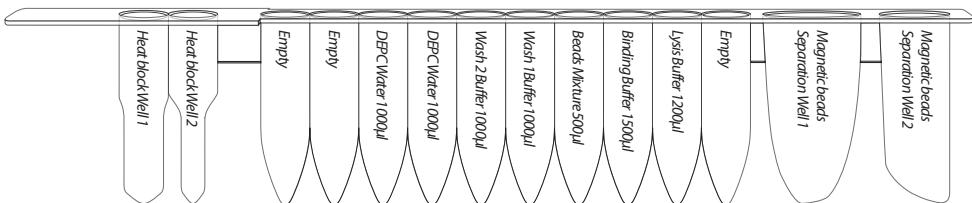
Cat.No. MPD1200SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 Pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Proteinase K(11mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
3. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Plasma DNA Extraction Kit is designed for purification of DNA from 1.2 ml of serum, plasma, cell-free body fluids by using MagCore® auto-extraction instrument. With all the kit components of plastic consumables are DNase/ RNase -Free pretreated, and individual processing track for each loaded samples, this system eliminates all possible cross contamination between samples. Built-in protocol with flexibility in sample source volumes, plasma DNA can be extracted using this kit in a fast and economical way.

Applications

The purified total nucleic acid is suitable for highly sensitive and quantitative PCR. MagCore Plasma DNA Extraction Kit has been proven with various genomic analyses as downstream applications.

Running Time: 74 min (sample volume:1200 µl) *optical detection is not provided

Preparation before using

1. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K (10mg/ml) at -20°C.

Protocol

1. Pipette 20 µl proteinase K(10mg/ml) into the MagCore Sample Tubes.
2. Add 1200µl of serum, plasma, cell-free body fluids into the prepared Sample Tube.
3. Place the prepared Sample Tube into well 1 of T-rack.
4. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
5. Run Code.105 program at MagCore®.

MagCore® Genomic DNA Whole Blood Kit (For Genotyping)

Purify genomic DNA from human whole blood for genotyping.

Cartridge Code 106

Cat.No.MGB400-07SP//MGB-400-08SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MGB400-07SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
Proteinase K(11mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.

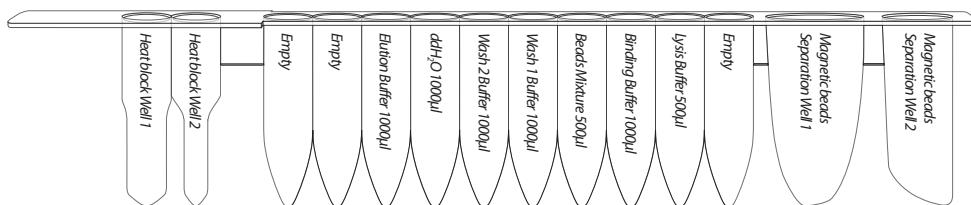
Cat.No. MGB400-08SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Proteinase K(11mg).....	4 pcs.
PK Storage Buffer.....	4 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
3. Shelf life 12 months.

Cartridge Contents:



Description

This kit is designed for genotyping application, you can get completed gDNA from eluent. We modify the reagent components and machine operation to make kit more suitable for genotyping. The pre-filled cartridge contains chaotropic salt and guanidine hydrochloride for cell lysis and protein degradation. The chaotropic salt helps the strong binding of DNA and cellulose coated magnetic beads . After the removal of contaminants, the high quality DNA is eluted by low salt elution buffer or water. Purified DNA of approximately 20-30 kb in length is suitable for genotyping or other applications.

Applications

Use magnetic-particle technology to purify genomic DNA from whole blood and buffy coat. The purified genomic DNA can be directly used for downstream application such as genotyping, PCR, real-time PCR, restriction enzyme digestion, southern blotting...etc.

Running Time: 41 min (sample volume:200 μ l; without optical detection)

53 min (sample volume:400 μ l; without optical detection)

Preparation before using

1. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K (10mg/ml) at -20°C.

Whole Blood Protocol

1. Take a new Sample Tube and add 20 μ l of Proteinase K (10mg/ml) to 200 μ l of equilibrated whole blood sample. (40 μ l Proteinase K to 400 μ l whole blood).

2. Place the prepared Sample Tube into well 1 of T-Rack.
3. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
4. Run Code.106 program at MagCore®.

Optional Step: RNA Degradation

If RNA-Free genomic DNA is required, perform these optional steps before adding Proteinase K.

1. Add 4 μ l RNase A(50mg/ml) into the sample lysate.
2. Incubate the sample at room temperature for 20min

Buffy Coat modify Protocol

RBC Lysis Buffer:

150mM NH₄Cl, 10mM KHCO₃, 0.1mM EDTA.

Buffy Coat Preparation by RBC Lysis

1. Take 600 ~ 700 μ l whole blood into 2ml microcentrifuge tube.
Don't take more than 700 μ l whole blood sample; it will cause the leakage situation during process.
2. Add 1ml RBC Lysis Buffer and mix the buffer and whole blood sample by upside down.
3. Shake the mixture, 100rpm 5mins.
4. Centrifuge the mixture 13,000rpm 1 min.
5. Discard supernatant.
6. Repeat step 2 ~ step 5 to wash the sample again.
7. Add 400 μ l RBC Lysis Buffer and 20 μ l proteinase K to resuspend the pellet and transfer into MagCore Sample Tube.
8. Place the prepared Sample Tube into well 1 of T-Rack.
9. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
10. Run Code.106 program at MagCore®.

Buffy Coat Preparation by Centrifugation

1. Take 2 ~ 5ml whole blood sample and centrifuge at 1,500rpm 10mins.
2. Use plastic drop to take white buffy coat layer in the middle of whole blood sample.
3. Move the buffy coat into new microcentrifuge tube.
4. Take 80 ~ 100 μ l buffy coat sample into MagCore Sample Tube and add RBC Lysis Buffer or PBS until 400 μ l then add 20 μ l of proteinase K.
5. Place the prepared Sample Tube into well 1 of T-Rack.
6. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
7. Run Code.106 program at MagCore®.

Note : We suggest to select 150 ~200 μ l elution buffer, it can get better elution efficiency in both of these methods. Normally the concentration is higher than 150ng/ μ l under such elution volume.

MagCore® Cultured Cells DNA Kit

For extraction of genomic DNA from cultured cells and amniotic fluid.

Cartridge Code 110

Cat.No.MCC-01SP // MCC-02SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MCC-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
Proteinase K(1mg).....	1 pcs.
PK Storage Buffer.....	1 pcs.

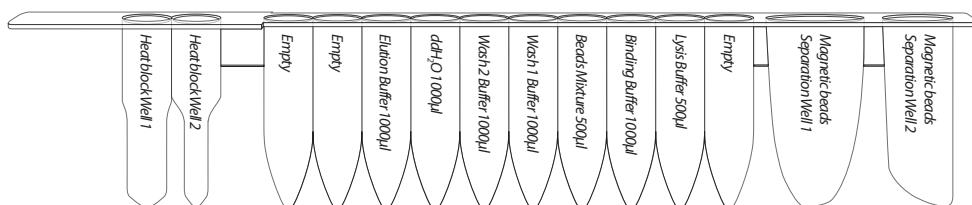
Cat.No. MCC-02SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Proteinase K(11mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
3. Shelflife 12 months.

Cartrige Contents:



Description

MagCore® Cultured cells DNA Kit is designed to extract genomic DNA from up to 5×10^6 cultured cells via MagCore® auto-extraction instrument. The kit contains all required reagent and labware for automated purification using magnetic-particle technology. Easy select program code number 110 in MagCore® and combine using MagCore® Cultured cells DNA Kit can extract high quality genomic DNA.

Applications

Using magnetic-particle technology to purify genomic DNA from 5×10^6 cultured cells. The purified genomic DNA can be directly used for downstream application such as quantitative PCR, restriction enzyme digestion, southern blotting... etc.

Running Time: 39 min (sample volume:200 μ l, up to 5×10^6 cells; without optical detection)

Preparation before using

1. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K(10mg/ml) at -20°C.
2. Ensure PBS buffer have been prepared for resuspend cell pellet.

Protocol

Sample Preparation

A. Cells grown in suspension

Cells grown in suspension(up to 5×10^6 cells). Determine the number of cells. Centrifuge the appropriate number of cells for 5 min. at 300 x g in a 1.5 ml microcentrifuge tube (not provided). Remove the supernatant completely and discard, Continue with MagCore® Operation step 1.

B. Cells grown in a monolayer

Cells grown in a monolayer(up to 5×10^6 cells). Cells grown in a monolayer can be detached from the culture flask by either trypsinization or using a cell scraper.

To trypsinize cells:

Determine the number of cells. Aspirate the medium and wash cells with PBS (not provided). Aspirate the PBS, and add 0.10–0.25% trypsin. After cells have detached from the dish or flask, collect them in medium, and transfer the appropriate number of cells(up to 5×10^6 cells) to a 1.5 ml microcentrifuge tube (not provided). Centrifuge for 5 min. at 300 x g. Remove the supernatant completely and discard, taking care not to disturb the cell pellet. Continue with MagCore® Operation step 1.

Using a cell scraper:

Detach cells from the dish or flask. Transfer the appropriate number of cells(up to 5×10^6 cells) to a 1.5 ml microcentrifuge tube and centrifuge for 5 min. at 300 x g. Remove the supernatant completely and discard, taking care not to disturb the cell pellet. Continue with MagCore® Operation step 1.

MagCore® Operation

1. Resuspend cell pellet with PBS Buffer to a final volume of 200 μ l.
2. Transfer cell mixture 200 μ l and add 20 μ l Proteinase K into the MagCore Sample Tubes.
3. Place the prepared Sample Tube into well 1 of T-rack.
4. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
5. Run Code.110 program at MagCore®.

Amniotic Fluid Protocol

Sample preparation

1. Harvest cells from 10~15 ml amniotic fluid of 16~18 weeks by centrifugation for 10 minutes at 3000 rpm and discard the supernatant.
2. Add 200 μ l GT Buffer (not provided) to the tube and resuspend the cell pellet, then transfer mixture to new microcentrifuge tube.
3. Add 5~10 μ l Proteinase K(10mg/ml) to the sample. Vortex for 5 seconds to mix sample.
4. Incubate at 56°C for 10 minutes until the sample lysate is clear. During incubation, invert the tube every 3 minutes.
5. Spin down the sample and apply for MagCore®.

MagCore® Viral Nucleic Acid Extraction Kit

For extraction of viral DNA/RNA from serum, plasma and cell-free body fluids.

Cartridge Code 201

Cat.No.MVN400-01SP//MVN-400-02SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MVN400-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
Carrier RNA(1mg).....	1 pcs.
RNase Free Water.....	1 pcs.
Proteinase K(1mg).....	1 pcs.
PK Storage Buffer.....	1 pcs.

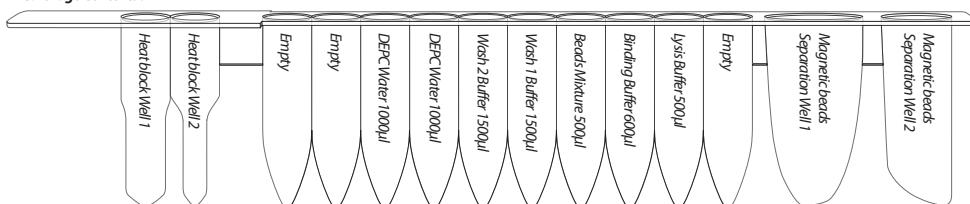
Cat.No. MVN400-02SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Carrier RNA(1mg).....	1 pcs.
RNase Free Water.....	1 pcs.
Proteinase K(1mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Carrier RNA should be stored at -20°C when mixing with RNase Free Water.
3. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
4. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Viral Nucleic Acid Extraction kit is designed to extract viral DNA and RNA via MagCore® auto-extraction instrument. With all the kit components of plastic consumables are DNase/RNase-Free pretreated, and individual processing track for each loaded samples, this system eliminates all possible cross contamination between samples. Built-in protocol with flexibility in sample source volumes, both DNA and RNA virus can be extracted using the same kit in a fast and economical way.

Applications

Using magnetic-particle technology to purify viral nucleic acid from serum, plasma, or cell-free body fluids. The purified viral nucleic acid is suitable for highly sensitive and quantitative PCR. MagCore Viral Nucleic Acid Extraction Kit has been proven with HBV, HCV, HIV and influenza viruses for downstream applications.

Running Time: 44 min (sample volume:200 μ l)

55 min (sample volume:400 μ l) *optical detection is not provided

Preparation before using

1. Add 1.0 ml RNase Free Water to the Carrier RNA tube and mix by vortexing. Store prepared Carrier RNA (1mg/ml) at -20°C.
2. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K(10mg/ml) at -20°C.

Protocol

1. Pipette 10 μ l Carrier RNA(1mg/ml) and 20 μ l proteinase K(10mg/ml) into the MagCore Sample Tubes.
2. Add 200 μ l or 400 μ l of serum, plasma, or cell-free body fluids into the prepared Sample Tube.
3. Place the prepared Sample Tube into well 1 of T-rack.
4. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
5. Run Code.201 program at MagCore®.

Urine Protocol

Sample preparation

1. Harvest cells from up to 3.5 ml urine by centrifugation for 10 minutes at 3000 rpm and concentrate the sample to 400 μ l
2. Add 5~10 μ l ProteinaseK (10mg/ml) to the sample. Vortex for 5 seconds to mix sample.
3. Incubate at 56°C for 10 minutes until the sample lysate is clear. During incubation, invert the tube every 3 minutes.
4. Pipette 10 μ l Carrier RNA(1mg/ml) into the MagCore Sample Tubes.
5. Place the prepared Sample Tube into well 1 of T-rack.
6. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
7. Run Code.201 program at MagCore®.

MagCore® Viral Nucleic Acid Extraction Kit

For extraction of viral DNA/RNA from serum, plasma and cell-free body fluids

Cartridge Code 202

Cat.No.MVN400-03SP//MVN-400-04SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MVN400-03SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
Carrier RNA(1mg).....	1 pcs.
RNase Free Water.....	1 pcs.
Proteinase K(11mg).....	1 pcs.
PK Storage Buffer.....	1 pcs.

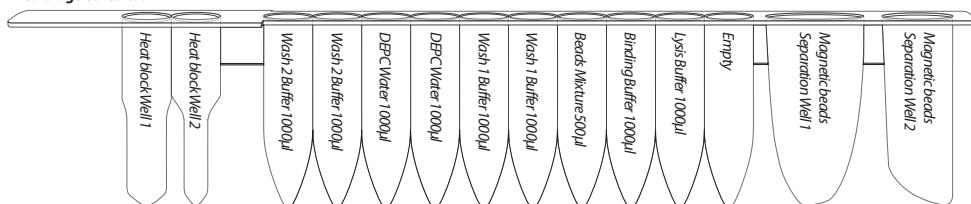
Cat.No. MVN400-04SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Carrier RNA(1mg).....	1 pcs.
RNase Free Water.....	1 pcs.
Proteinase K(11mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Carrier RNA should be stored at -20°C when mixing with RNase Free Water.
3. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
4. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Viral Nucleic Acid Extraction kit is designed to extract viral DNA and RNA via MagCore® auto-extraction instrument. With all the kit components of plastic consumables are DNase/RNase-Free pretreated, and individual processing track for each loaded samples, this system eliminates all possible cross contamination between samples. Built-in protocol with flexibility in sample source volumes, both DNA and RNA virus can be extracted using the same kit in a fast and economical way.

Applications

Using magnetic-particle technology to purify viral nucleic acid from serum, plasma, or cell-free body fluids. The purified viral nucleic acid is suitable for highly sensitive and quantitative PCR. MagCore Viral Nucleic Acid Extraction Kit has been proven with HBV, HCV, HIV and influenza viruses for downstream applications.

Running Time: 62 min (sample volume:200 μ l)

73 min (sample volume:400 μ l) *optical detection is not provided

Preparation before using

1. Add 1.0 ml RNase Free Water to the Carrier RNA tube and mix by vortexing. Store prepared Carrier RNA (1mg/ml) at -20°C.
2. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K (10mg/ml) at -20°C.

Protocol

1. Pipette 10 μ l Carrier RNA(1mg/ml) and 20 μ l proteinase K(10mg/ml) into the MagCore Sample Tubes.
2. Add 200 μ l or 400 μ l of serum, plasma, or cell-free body fluids into the prepared Sample Tube.
3. Place the prepared Sample Tube into well 1 of T-rack.
4. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
5. Run Code.202 program at MagCore®.

Urine Protocol

Sample preparation

1. Harvest cells from up to 3.5 ml urine by centrifugation for 10 minutes at 3000 rpm and concentrate the sample to 400 μ l
2. Add 5~10 μ l ProteinaseK(10mg/ml) to the sample. Vortex for 5 seconds to mix sample.
3. Incubate at 56°C for 10 minutes until the sample lysate is clear. During incubation, invert the tube every 3 minutes.
4. Pipette 10 μ l Carrier RNA(1mg/ml) into the MagCore Sample Tubes.
5. Place the prepared Sample Tube into well 1 of T-rack.
6. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
7. Run Code 202 program at MagCore®.

MagCore® Viral Nucleic Acid Large Volume Extraction Kit(1.2 ml)

For extraction of viral DNA/RNA from large volume (1.2 ml) serum, plasma and cell-free body fluids.

Cartridge Code 211

Cat.No.MVN1200SP

Kit Contents

Check that the following parts are included in addition to the main unit:

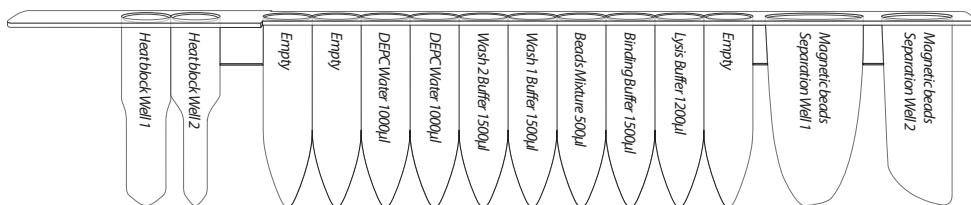
Cat.No. MVN1200SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Carrier RNA(1mg).....	1 pcs.
RNase Free Water.....	1 pcs.
Proteinase K(11mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Carrier RNA should be stored at -20°C when mixing with RNase Free Water.
3. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
4. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Viral Nucleic Acid Large Volume Extraction Kit(1.2ml) is designed for purification of DNA and RNA from 1.2 ml serum, plasma, cell-free body fluids by MagCore® auto-extraction instrument. With all the kit components of plastic consumables are DNase/ RNase-Free pretreated, and individual processing track for each loaded samples, this system eliminates all possible cross contamination between samples. Built-in protocol with flexibility in sample source volumes, both DNA and RNA virus can be extracted using the same kit in a fast and economical way.

Applications

Using magnetic-particle technology to purify viral nucleic acid from serum, plasma, or cell-free body fluids. The purified viral nucleic acid is suitable for highly sensitive and quantitative PCR. MagCore® Viral Nucleic Acid Large Volume Extraction Kit has been proven with HBV, HCV, HIV and influenza viruses for downstream applications.

Running Time: 80 min (sample volume:1200 μ l; without optical detection)

Preparation before using

1. Add 1.0 ml RNase Free Water to the Carrier RNA tube and mix by vortexing. Store prepared Carrier RNA (1mg/ml) at -20°C.
2. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K (10mg/ml) at -20°C.

Protocol

1. Pipette 10 μ l Carrier RNA(1mg/ml) and 20 μ l proteinase K(10mg/ml) into the MagCore Sample Tubes(provided).
2. Add 1200 μ l of serum, plasma, or cell-free body fluids into the prepared Sample Tube.
3. Place the prepared Sample Tube into well 1 of T-rack.
4. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
5. Run Code.211 program at MagCore®.

MagCore® Genomic DNA Plant Kit

For extraction of genomic DNA from plant and fungal tissues.

Cartridge Code 301

Cat.No.MGP-01SP // MGP-02SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MGP-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
Filter Column Set.....	36 pcs.
RNase A(10mg/ml, 275µl).....	1 pcs.
GP1 Buffer(25ml).....	1 pcs.
GP2 Buffer(6ml).....	1 pcs.

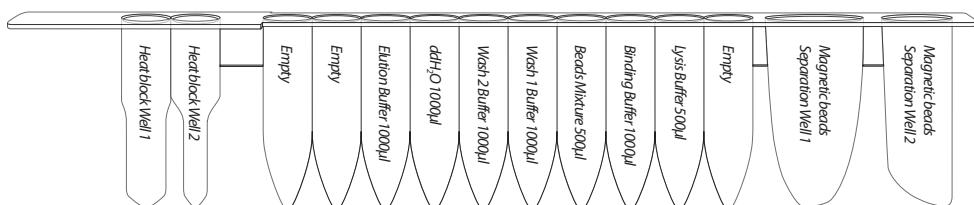
Cat.No. MGP-02SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Filter Column Set.....	100 pcs.
RNase A(10mg/ml, 550µl).....	1 pcs.
GP1 Buffer(50ml).....	1 pcs.
GP2 Buffer(15ml).....	1 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. For long term storage, RNase A should be stored at 4°C.
3. Shelf life 12 months.

Cartridge Contents:



Description

MagCore Genomic DNA Plant Kit is designed for purification of DNA from plant tissues and cells by using MagCore® auto-extraction instrument. The provided Filter Column Set can filtrate hard tissue sample and prevent tissue residues to obstruct Pipette tip during the process of MagCore®. The kit contains all required reagent and labware for automated purification using magnetic-particle technology. Easy select program code number 301 in MagCore® and combine using kit can perform high quality genomic DNA.

Applications

Using magnetic-particle technology to purify genomic DNA up to 100mg of fresh tissue. The purified genomic DNA can be directly used for downstream application such as quantitative PCR, PCR, southern blotting, RADP / AFLP.. etc.

Running Time: 33 min (sample volume:400 µl; without optical detection)

Preparation before using

The kit procedures are optimized for a maximum of 100 mg of wet-weight or 20 mg of dried starting material.

Exceeding the recommended maximum amount of starting material will result in inefficient lysis, resulting in low yield and purity.

Tissue Dissociation Protocol

1. Cut 50 mg (up to 100 mg) of fresh or frozen plant tissue or 5 mg (up to 20 mg) of dried sample.
2. Grind the sample with mortar and pestle under liquid nitrogen to a fine powder. For some plant samples, liquid nitrogen may be unnecessary for homogenization.
3. Transfer it into a microcentrifuge tube (not provided).

Lysis Step:

1. Add 400µl GP1 Buffer and 5µl RNase A (10mg/ml) into the microcentrifuge tube and mix by vortexing. Do not mix GP1 Buffer with RNase A before use.
2. Incubate at 65°C for 10 minutes. During incubation, invert the tube every 5 minutes.
3. Add 100µl GP2 Buffer and mix by vortexing.
4. Incubate on ice for 3 minutes. Place a Filter Column into a 2 ml Collection Tube and apply the entire lysate from previous step to the Filter Column.
5. Centrifuge for 3 minutes at full speed (13,000 rpm).
6. Discard the Filter Column and carefully transfer clarified lysate(about 400µl) in the collection Tube to the MagCore Sample Tubes.
7. Place the prepared Sample Tube into well 1 of T-rack.
8. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
9. Run Code.301 program at MagCore®.

Fungal Tissue Protocol

Sample preparation

1. Collect the fungal tissue up to 20 mg.
2. Grind the sample with mortar and pestle under liquid nitrogen to a fine powder.
3. Transfer it into a microcentrifuge tube (not provided). Do not allow the sample to thaw.

Cell Lysis

1. Add 400µl GP1 Buffer and 5µl RNase A (10mg/ml) into the microcentrifuge tube and mix by vortexing. Do not mix GP1 Buffer with RNase A before use.
2. Incubate at 65°C for 10 minutes. During incubation, invert the tube every 5 minutes.
3. Add 100µl GP2 Buffer and mix by vortexing.
4. Incubate on ice for 3 minutes. Place a Filter Column into a 2 ml Collection Tube and apply the entire lysate from previous step to the Filter Column.
5. Centrifuge for 3 minutes at full speed (13,000 rpm).
6. Discard the Filter Column and carefully transfer clarified lysate(about 400µl) in the collection Tube to the MagCore Sample Tubes.
7. Place the prepared Sample Tube into well 1 of T-rack.
8. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
9. Run Code.301 program at MagCore®.

MagCore® Genomic DNA Tissue Kit

For extraction of genomic DNA from a variety to animal tissues, paraffin-embedded tissue, swab, blood stain, forensic specimens and cultured yeast.

Cartridge Code 401

Cat.No.MGT-01SP//MGT-02SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MGT-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
GT Buffer(30ml).....	1 pcs.
Filter Column Set.....	36 pcs.
Proteinase K(11mg).....	1 pcs.
PK Storage Buffer.....	1 pcs.

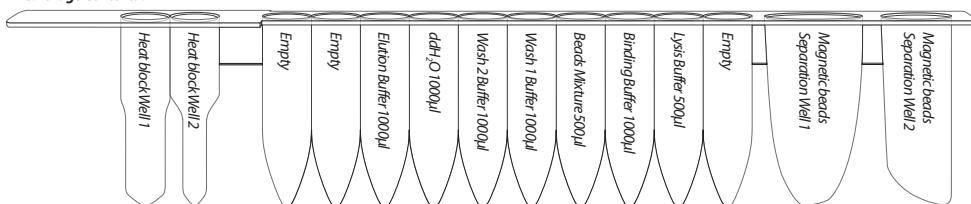
Cat.No. MGT-02SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
GT Buffer(30ml).....	2 pcs.
Filter Column Set.....	100 pcs.
Proteinase K(11mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
3. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Genomic DNA Tissue Kit is designed for purification of total DNA (including genomic, mitochondrial and viral DNA) from a variety of animal tissues or cells by using MagCore® auto-extraction instrument. The provided Filter Column can filtrate hard tissue sample or swab sample to prevent tissue residues to obstruct Pipette tip during the process of MagCore®. The method uses pre-filled cartridge contains proteinase K and a chaotropic salt to lysis cells and degrade protein. DNA will bind to cellulose coated magnetic beads . After washing off the contaminants, the purified DNA is eluted by low salt elution buffer. Purified DNA of approximately 20-30 kb in length is suitable for PCR or other enzymatic reactions.

Applications

Using magnetic-particle technology to purify genomic DNA from animal tissues, paraffin embedded tissue, swab and blood stain. The purified genomic DNA can be directly used for downstream application such as quantitative PCR, restriction enzyme digestion, southern blotting... etc.

Running Time: 33 min (sample volume:400 µl; without optical detection)

Preparation before using

1. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K(10mg/ml) at -20°C.

For Paraffin-Embedded Tissue

Sample Preparation:

Additional Requirements: Xylene(or Substitutes), Ethanol (96-100%), Microcentrifuge Tube.

Suggested Xylene Substitute: A5597(Sigma), Neo-Clear(Merck), CitiSolv(Fisher).

1. Slice small section (5-10 µm) of paraffin-embedded tissue and transfer to a microcentrifuge tube.
Discard the first 2-3 sections, if the surface of paraffin sample has been exposed to air.
2. Add 1ml xylene(or substitute) to the tube and vortex vigorously for 10sec. Then incubate at 60°C for 10min.
3. Centrifuge at full speed for 3min at room temperature.
4. Remove the supernatant carefully by Pipetteting, then add 1ml ethanol (96-100%) to the pellet and mix by vortexing for 10sec.
5. Centrifuge at full speed for 5min at room temperature.
6. Remove the supernatant carefully by Pipetteting, then add again of 1ml ethanol (96-100%) to the pellet and mix by vortexing for 10sec to wash again.
7. Centrifuge at full speed for 5min.
8. Remove residual ethanol with a fine Pipette tip, then open the tube and incubate at 55°C for 5min until all residual ethanol has been evaporated.
9. Add 400µl GT Buffer and 20µl Proteinase K(10mg/ml) to the tube and mix by vortexing.
10. Incubate at 55°C for 90min until the sample has been completely lysed.
11. If there are any insoluble residues in the tube, transfer the supernatant to Filter Column and centrifuge at full speed for 5min to get clear tissue solution in the Collection Tube.
12. Pipette 400µl of clear tissue solution to the MagCore Sample Tube.
13. Place the prepared Sample Tube into well 1 of T-rack.
14. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
15. Run Code.401 program at MagCore®.

For Swab Sample

Additional Requirements: PBS, Microcentrifuge Tube.

1. Separate the swab cotton form the stick. Place the swab into a 2ml microcentrifuge tube, add 500µl or more of GT Buffer and 20µl Proteinase K(10mg/ml).
2. Incubate the sample lyaste at 55°C for 30min.
For Buccal Swab sample, donor should not ingest anything for at least 30min prior to sample collection.
3. If there are any insoluble residues in the tube, transfer the supernatant to Filter Column and centrifuge at full speed for 5min to get clear tissue solution in the Collection Tube.
4. Pipette 400µl of clear tissue solution to the MagCore Sample Tube.
5. Place the prepared Sample Tube into well 1 of T-rack.
6. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
7. Run Code.401 program at MagCore®.

For Solid Animal Tissue

Additional Requirements: Microcentrifuge Tube.

1. Cut the solid tissue up to 30 mg to small pieces and put into a microcentrifuge tube.
2. Add 400 μ l GT Buffer and 20 μ l Proteinase K(10mg/ml) to the tube and mix by vortexing.
3. Incubate at 55°C for 90min until the sample has been completely lysed.
4. If there are any insoluble residues in the tube, transfer the supernatant to Filter Column and centrifuge at full speed for 5min to get clear tissue solution in the Collection Tube.
5. Pipette 400 μ l of clear tissue solution to the MagCore Sample Tube.
6. Place the prepared Sample Tube into well 1 of T-rack.
7. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
8. Run Code.401 program at MagCore®.

For Stool Sample

Additional Requirements: Microcentrifuge Tube.

1. Weight 180-200mg stool in a 2ml microcentrifuge tube and place on ice. If the sample is liquid, Pipette 200 μ l into microcentrifuge tube. Cut the end of Pipette tip to make Pipetting easier. If the sample is frozen, use a scalpel or spatula to scrape bits of stool into microcentrifuge tube on ice.
2. Add 1.5ml GT Buffer to sample. Vortex continuously for 1 min or until the stool sample is thoroughly homogenized. This is very important to vortex sample thoroughly to ensure maximum DNA concentration in the final elutes.
3. Incubate the suspension for 5 min at 70°C. This step can increase DNA recovery 3-5 fold, if the sample target is Gram-positive bacteria, please increase to 95°C for cells lysis.
4. Vortex for 15 seconds and centrifuge sample at full speed (13,000rpm) for 1 min to pellet stool particles.
5. Pipette 400 μ l of the supernatant into a new 1.5ml microcentrifuge tube.
6. Add 20 μ l Proteinase K(10mg/ml) to the sample mixture and vortex to mix. Incubate at 60°C for 2~3 hours to lyse the sample.
7. If there are any insoluble residues in the tube, transfer the supernatant to Filter Column and centrifuge at full speed for 5min to get clear tissue solution in the Collection Tube.
8. Pipette 400 μ l of clear tissue solution to the MagCore Sample Tube.
9. Place the prepared Sample Tube into well 1 of T-rack.
10. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
11. Run Code.401 program at MagCore®.

For Feed-soil Sample

1. Apply 30~40mg feed or soil samples into a 1.5 ml microcentrifuge tube.
2. Add 20μl (10mg/ml) Proteinase K and followed by adding 500μl of GT Buffer. Vortex gently until the powder suspend in GT buffer.
3. Incubate the mixture at 56°C for 15mins. Invert the tube every 2~3mins during incubation.
Typically 15mins incubation can lysis more than 90% cells. Extend incubation time to 20mins can increase 10% of yield.
4. Centrifuge the mixture for 3 min at full speed.
5. If there are any insoluble residues in the tube, transfer the supernatant to Filter Column and centrifuge at full speed for 5min to get clear tissue solution in the Collection Tube.
6. Pipette 400μl of clear tissue solution to the MagCore Sample Tube.
7. Place the prepared Sample Tube into well 1 of T-rack.
8. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
9. Run Code.401 program at MagCore®.

For Dried Blood Spot

1. Cut 3mm diameter punches from a dried blood spot with a single-hole paper punch. Place up to 3 blood card into a 1.5ml microcentrifuge tube.
2. Add 400~500μl GT buffer into the microcentrifuge tube and continue to homogenize the sample tissue with grinding.
3. Add 20μl Proteinase K(10mg/ml) to the sample mixture and vortex to mix. Incubate at 60°C for 1 hour to lyse the sample.
4. Pipette 400μl of sample mixture to the MagCore Sample Tube.
5. If there are any insoluble residues in the tube, transfer the supernatant to Filter Column and centrifuge at full speed for 5min to get clear tissue solution in the Collection Tube.
6. Place the prepared Sample Tube into well 1 of T-rack.
7. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
8. Run Code.401 program at MagCore®.

Optional Step: RNA Degradation

If RNA-Free genomic DNA is required, perform these optional steps before adding Proteinase K.

1. Add 4μl RNase A(not provided, 50mg/ml) into the sample lysate.
2. Incubate the sample at room temperature for 20min.

Cigarette Butts Protocol

Sample preparation

1. Cut 1 cm² piece of outer paper from the end of the cigarette or filter. Cut this piece into 6 smaller pieces. Transfer the pieces to a 1.5 ml microcentrifuge tube.

Cell Lysis

1. Add 500µl GT buffer and 20µl Proteinase K, close the lid, and mix for 10 sec. Incubate at 60°C for 1 hour to lyse the sample.
2. Briefly centrifuge the tube to remove drops from the inside of the lid.
3. Pipette 400µl of clear tissue solution to the MagCore Sample Tube.
4. Place the prepared Sample Tube into well 1 of T-rack.
5. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
6. Run Code.401 program at MagCore®.

Hair roots Protocol

Sample preparation

1. Cut the hair roots into 0.5–1 cm pieces, and transfer them to the 1.5 ml microcentrifuge tube.

Cell Lysis

1. Add 500µl GT buffer and 20µl Proteinase K, close the lid, and mix for 10 sec. Incubate at 60°C for 1 hour to lyse the sample.
2. Briefly centrifuge the tube to remove drops from the inside of the lid.
3. Pipette 400µl of clear tissue solution to the MagCore Sample Tube.
4. Place the prepared Sample Tube into well 1 of T-rack.
5. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
6. Run Code.401 program at MagCore®.

Chewing Gum Protocol

Sample preparation

1. Cut up to 30 mg of chewing gum into small pieces and transfer them to a 1.5 ml microcentrifuge tube.

Cell Lysis

1. Add 500 μ l GT buffer and 20 μ l Proteinase K, close the lid, and mix for 10 sec. Incubate at 60°C for 1~3 hours to lyse the sample.
2. Briefly centrifuge the tube to remove drops from the inside of the lid.
3. Pipette 400 μ l of clear tissue solution to the MagCore Sample Tube.
4. Place the prepared Sample Tube into well 1 of T-rack.
5. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
6. Run Code.401 program at MagCore®.

Betel Nut Residue Protocol

Sample preparation

1. Cut up to 30 mg of betel nut residue into small pieces and transfer them to a 1.5 ml microcentrifuge tube.

Cell Lysis

1. Add 500 μ l GT buffer and 20 μ l Proteinase K, close the lid, and mix for 10 sec. Incubate at 60°C for 1~3 hours to lyse the sample.
2. Briefly centrifuge the tube to remove drops from the inside of the lid.
3. Pipette 400 μ l of clear tissue solution to the MagCore Sample Tube.
4. Place the prepared Sample Tube into well 1 of T-rack.
5. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
6. Run Code.401 program at MagCore®.

Saliva Protocol

Sample preparation

1. For saliva sample, donor should not ingest anything for at least 30min prior to sample collection.
2. Prepare PBS Buffer and 15 ml tube.

Cell Lysis

1. Apply the 1 ml saliva and add 4 ml PBS buffer (not provided).
2. Centrifuge at 1800 x g for 5 min, and then carefully discard the supernatant.
3. Resuspend the pellet in 400 µl GT buffer.
4. Add 20 µl Proteinase K, close the lid, and mix for 10 sec. Incubate at 70°C for 10 minutes to lyse the sample.
5. If there are any insoluble residues in the tube, transfer the supernatant to Filter Column and centrifuge at full speed for 5 min to get clear tissue solution in the Collection Tube.
6. Pipette 400 µl of clear tissue solution to the MagCore Sample Tube.
7. Place the prepared Sample Tube into well 1 of T-rack.
8. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
9. Run Code.401 program at MagCore®.

Cultured Yeast Protocol

- **Additional requirements:** Sorbitol Buffer, Lyticase or Zymolase, Microcentrifuge tube.
- **Preparation of Sorbitol Buffer:** 1.2M sorbitol, 10mM CaCl₂, 0.1M Tris-Cl pH 7.5. Sterilize by filtration and store at 4°C

Sample preparation

1. Harvest 3ml yeast cells (up to 5x10⁷ cells) by centrifugation at 5000 x g for 10 minutes. Discard the supernatant and carefully remove any remaining media by aspiration.
2. Resuspend the cell pellet in 600μl sorbitol buffer (not provided).

Cell Lysis

1. Add 200U Lyticase or Zymolase (not provided). Incubate at 30°C for 30 minutes. Centrifuge the mixture for 10 min at 2,000 x g to harvest Spheroplast.
2. Remove the supernatant and add 400μl of GT Buffer to the tube and vortex or Pipette to resuspend the cell pellet.
3. Incubate at 55°C for 90min until the sample has been completely lysed.
4. If there are any insoluble residues in the tube, transfer the supernatant to Filter Column and centrifuge at full speed for 5 min to get clear tissue solution in the collection tube.
5. Pipette 400μl of clear tissue solution to the MagCore Sample Tube.
6. Place the Sample Tube into well 1 of T-rack.
7. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
8. Run Code.401 program at MagCore®.

MagCore® Genomic DNA FFPE One-Step Kit

For extraction of total DNA from formalin-fixed paraffin-embedded (FFPE) tissue by using MagCore® System.

Cartridge Code 405

Cat. No. MGF-01SP // MGF-03SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MGF-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36pcs.
Tip and Holder Set.....	36set.
Elution Tube.....	36 pcs.
Sula Oil.....	25 ml
Proteinase K(11mg).....	1 pcs.
PK Storage Buffer.....	1 pcs.
Thermostable cap.....	36 pcs.

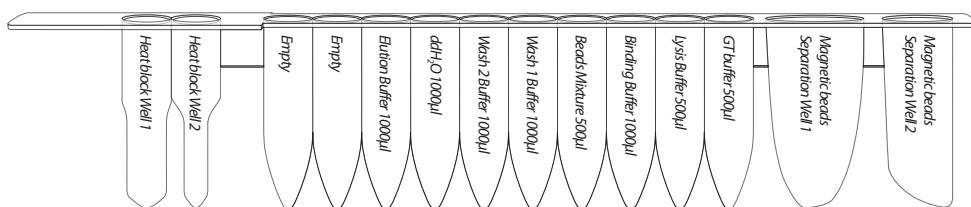
Cat.No. MGF-03SP Contents:

Pre-filled Cartridge Reagent.....	72 pcs.
Pipette Tip.....	75pcs.
Tip and Holder Set.....	75set.
Elution Tube.....	75 pcs.
Sula Oil.....	50 ml
Proteinase K(11mg).....	2pcs.
PK Storage Buffer.....	2pcs.
Thermostable cap.....	75 pcs.

Storage and Stability vvv

1. This kit should be stored at room temperature.
2. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
3. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Genomic DNA FFPE One-Step Kit is designed for purification of total DNA from FFPE tissues by using MagCore® instruments. It features the method, One-Step Heating, to melt paraffin and lyse tissue samples at the same time without harmful reagents involved such as xylene. Two protocols are designed and optimized for different sizes of tissues: 2 hrs for small samples/ 16 hrs for large samples (Please see "important notes"). DNA will be extracted fast and economically based on the cellulose coated magnetic bead technology.

Applications

Use magnetic-particle technology to purify genomic DNA from FFPE tissue. The purified genomic DNA can be directly used for downstream application such as PCR, real-time PCR, restriction enzyme digestion, southern blotting...etc.

Running Time: 159 min ((2-hour heating)-Standard; without optical detection)
998 min ((16-hour heating)-High Yield; without optical detection)

Preparation before using

1. Add 1.1 ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K (10 mg/ml) at -20°C.

For needle-like FFPE tissue slices

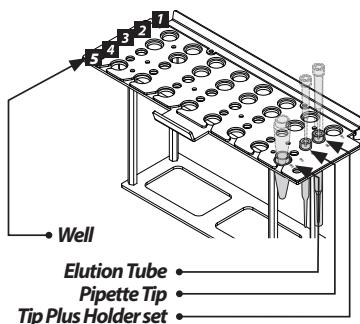
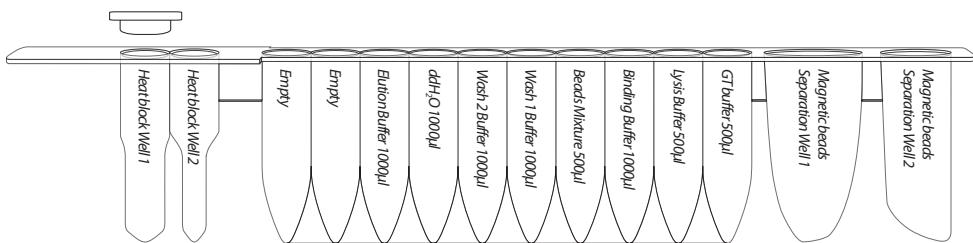
1. Add 500 µl Sula Oil, 20 µl PK and the FFPE tissue sample to the bottom of **Heat Block well 1** of cartridge, and then cover it up with the Thermostable cap.

Note: If the tissue is too large to lyse (the surface area over 300 mm²), cut it in 4 sections (Please see "important notes step 3") before adding in the heat block well 1 would be suggested. Make sure the tissue is at the bottom of the well to avoid clipping it by Thermostable cap.

2. Place the Elution Tube into **well 5**, the Tip Plus Holder Set into **well 2** of T-Rack and Pipette Tip into **well 3**.
3. Run Code 405 program at MagCore®.

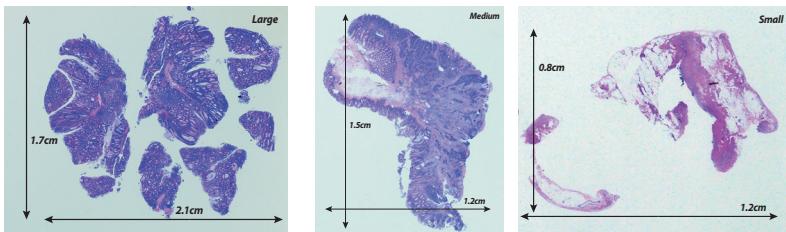
For glass-slide samples

1. Drop several Sula Oil on the glass slide and scrape them from the slide carefully, then put in the bottom of **Heat Block well 1**.
2. Add 500 µl Sula Oil and 20 µl PK into **Heat Block well 1**, rinse remaining sample on the wall and blade, then cover it up with the Thermostable cap.
3. Place the Elution Tube into **well 5**, the Tip Plus Holder Set into **well 2** of T-Rack and Pipette Tip into **well 3**.
4. Run Code 405 program at MagCore®.



Important Notes

1. The surface area of the FFPE tissue sample could be measured as following examples:



2. Sample amount of preparation can be 1-5 scrolls, each with a thickness up to 5 μ m. One FFPE scroll could be enough to analyze if the surface area is over 200 mm².

Surface area (mm ²)	Sample scroll
200 ↑	1
100-200	1-2
50-100	2-3
50 ↓	3-5 (do not over Sula Oil's capacity: 20mg)

*Overload the sample or paraffin will clog the tip and decrease the yield.

3. If the tissue sample is over 300 mm², we recommend cutting it into 4 sections as following examples:



4. If you have no information about the sample, we recommend starting with no more than 1 scroll and cutting it into 4 sections per preparation.
5. Sula Oil is a deparaffin buffer. The capacity of the Sula Oil (500 μ l) is about 20 mg paraffin per preparation.
6. In MagCore 405 program, two different lyse time are provided: 2hr and 16hr.

Recommend

1. Both 2hr and 16hr program can extract DNA from FFPE sample.
Choose 2hr program for saving time; choose 16hr for higher yield.
2. If you want to increase DNA yield, an overnight incubation(16hr program) can be performed, but it may result in greater DNA fragmentation.

Troubleshooting

Symptoms	Comments and suggestions
Low or NO DNA product	<ol style="list-style-type: none">1. The sample was lysed insufficiently. Make sure the proteinase K was stored at -20 °C, and repeat the procedure using fresh PK.2. The sample was too large to lyse completely. The large FFPE tissue was suggested cutting into 4 sections, and one scroll was enough for extraction. Clogging tip will affect the extraction process.
Poor PCR results	<ol style="list-style-type: none">1. Poor quality FFPE samples. Fixation condition can affect PCR performance, such as long-time storage in fixative.2. DNA fragments. DNA purified from FFPE samples may be fragmented due to formalin fixation, so we suggest keeping amplicons as short as possible for PCR.
Clogging tip or liquid up to the tip filter	<ol style="list-style-type: none">1. The sample was too large to Pipetteting. Large tissue clogged the tip would result the liquid up to the tip filter or the extraction cannot finish. We suggest cutting the tissue before adding in the Heat Block well 1.2. The sample was too much to Pipetteting. Do not extract too much scrolls at a time. For large tissue, one scroll is enough for extraction; for small tissue, we suggest not over 20mg of FFPE.

MagCore® Genomic DNA Bacterial Kit

For extraction of genomic DNA from bacteria.

Cartridge Code 502

Cat.No.MBB-01SP // MBB-02SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MBB-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
Lysozyme Reaction Buffer(15ml).....	1 pcs.
Proteinase K(1mg).....	2 pcs.
PK Storage Buffer.....	2 pcs.
RNase A(50mg/ml, 160µl).....	1 pcs.

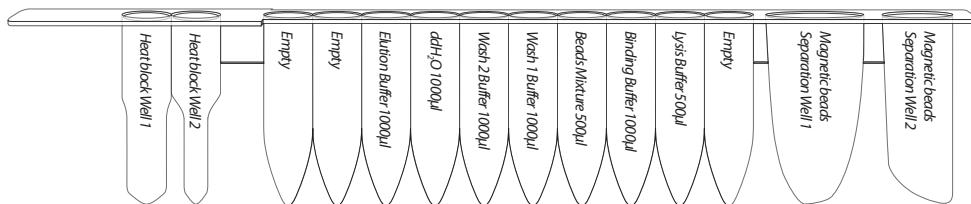
Cat.No. MBB-02SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
Lysozyme Reaction Buffer(30ml).....	1 pcs.
Proteinase K(1mg).....	4 pcs.
PK Storage Buffer.....	4 pcs.
RNase A(50mg/ml, 400µl).....	1 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Proteinase K should be stored at -20°C when mixing with PK Storage Buffer.
3. For long term storage, RNase A should be stored at 4°C.
4. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Genomic DNA Bacterial kit is designed to extract genomic DNA from both Gram+ and Gram- bacteria via MagCore® auto-extraction instrument. The kit contains all required reagent and labware for automated purification using magnetic-particle technology. Easy select program code number 502 in MagCore® and combine using MagCore® Genomic DNA Bacterial Kit can extract high quality genomic DNA.

Applications

Using magnetic-particle technology to purify genomic DNA from both Gram+ and Gram- bacteria. The purified genomic DNA can be directly used for downstream application such as quantitative PCR, restriction enzyme digestion, southern blotting... etc.

Running Time: 39 min (sample volume:200 μ l; without optical detection)

Preparation before using

1. Add 1.1ml PK Storage Buffer to the Proteinase K tube and mix by vortexing. Store prepared Proteinase K(10mg/ml) at -20°C.
2. Freshly prepared 20mg/ml Lysozyme solution (not provided) with Lysozyme Reaction Buffer before use.

For Sputum Specimens

Specimens Decontamination

1. Fresh prepare 0.5% NALC in 2% NaOH, 1.5% Na-Citrate solution.
(Ex: 0.25g NALC in 50mL NALC-NaOH solution)
2. Mix 10mL specimen with 10mL NALC-NaOH sol'n, RT°C for 15 min.
3. Add 25mL PBS, mix and centrifuge 3000 x g for 15 min.
4. Discard supernatant, resuspend pellet with 200 μ l Lysozyme solution and transfer to the MagCore Sample Tube.
5. Incubate for at least 30min at 37°C. During incubation, vortex the tube every 5min.

Cell Lysis

1. Add 4 μ l RNase A(50mg/ml) to sample mixture(including any precipitate) and vortex to mix sample.
2. Incubate at room temperature for 10min.
3. Resuspend sample mixture by Pipetteting.
4. Adding 40 μ l Proteinase K(10mg/ml) to sample mixture and vortex to mix sample.
5. Place the prepared Sample Tube into well 1 of T-rack.
6. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
7. Run Code.502 program at MagCore®.

General Protocol

1. Harvest bacteria(maximum 2×10^9 cells) into the MagCore Sample Tube by centrifuging at 5000 x g(8000rpm) for 3min. Discard supernatant.
2. Resuspend bacterial pellet in 200 μ l Lysozyme solution by vortexing or Pipetteting.
3. Incubate for at least 30min at 37°C. During incubation, vortex the tube every 5min.
4. Add 4 μ l RNase A(50mg/ml) to sample mixture(including any precipitate) and vortex to mix sample.
5. Incubate at room temperature for 10min.
6. Resuspend sample mixture by Pipetteting.
7. Adding 40 μ l Proteinase K(10mg/ml) to sample mixture and vortex to mix sample.
8. Place the prepared Sample Tube into well 1 of T-rack.
9. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
10. Run Code.502 program at MagCore®.

MagCore® Total RNA Whole Blood Kit

For total RNA extraction from human whole blood.

Cartridge Code 601

Cat.No.MRN-01SP//MRN-02SP

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MRN-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
RBC Lysis Buffer(100ml).....	1 pcs.
RB Buffer(15ml).....	1 pcs.

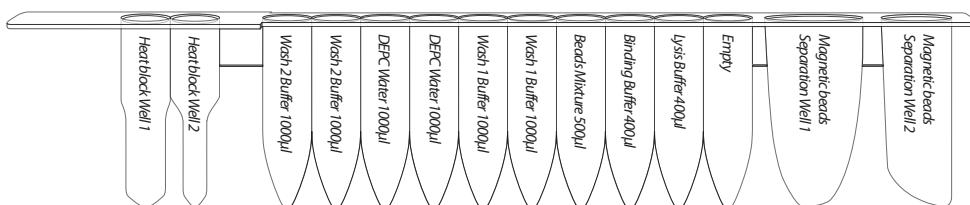
Cat.No. MRN-02SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
RBC Lysis Buffer(200ml).....	1 pcs.
RB Buffer(30ml).....	1 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Shelf life 12 months.

Cartridge Contents:



Description

MagCore® Total RNA Whole Blood Kit is specially designed for total RNA purification from up to 400μl human whole blood by using MagCore® auto-extraction instrument. The program provides optional protocol for contaminated genomic DNA remove. Combine RBC high quality RNase-free DNase I with MagCore® Total RNA Whole Blood Kit can provide high quality DNA-free total RNA.

Applications

Using magnetic-particle technology to purify total RNA. The purified RNA can be directly used for downstream application such as real-time PCR, RT-PCR, cDNA synthesis... etc.

Running Time: 50min (without DNase I treatment; starting volume: 200 µl; without optical detection)
75min (with DNase I treatment; starting volume: 200 µl; without optical detection)

Preparation before using

1. β -Mercaptoethanol (β -ME; not provided) must be added to RB Buffer before use. Add 10µl of β -ME per 1 ml of RB Buffer.
2. Recommended Step: DNA residue degradation. Prepare DNase I (RNase-free) working solution according to the table below. Add 10µl DNase I with 190µl DNase reaction buffer (1X) in the 1.5 ml screw tube (not provided) and place it into well 2 of T-Rack.

Healthy Whole blood	DNase I	DNase buffer 1X
Up to 400 µl	10 µl	190 µl

3. RNase-free DNase I is not including in MagCore total RNA Whole Blood Kit, we recommend to use RBC RNase-free DNase I (Cat#DN036 or Cat#DN096) for genomic DNA treatment. For product information, please contact RBC Bioscience distributor. We also recommend to use RNase-free DNase I enzyme(1U/µl) of Novagen (Cat#69182-3). Please contact local Merck branch office or distributor for product information. 1X DNase Buffer can be prepared as following:

1X DNase I reaction buffer

10mM Tris, pH7.6; 2.5mM MgCl₂; 0.1 mM CaCl₂; in DEPC water, autoclave.

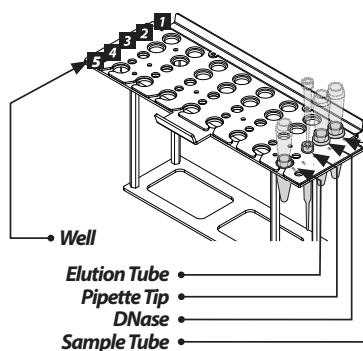
Fresh Whole Blood Protocol

Without DNase I treatment

1. Add 1 volume of human whole blood with 3 volumes of RBC lysis Buffer in an appropriately sized tube (not provided) and mix by inversion. Do not vortex. (For example, add 1200µl of RBC lysis Buffer to 400µl of whole blood.)
2. Incubate the tube for 10 minutes on ice and invert 2~3 times during incubation.
3. Centrifuge for 3 minutes at 500 x g (2,500rpm) at 4°C and completely discard the supernatant.
4. Add 500µl RBC lysis Buffer to the cell pellet. Resuspend cells by vortex briefly.
5. Transfer the suspended cells to the MagCore Sample Tube.
6. Centrifuge for 3 minutes at 500 x g (2,500rpm) at 4 °C and completely discard the supernatant.
7. Add 200µl RB buffer (contain β -ME) to the white pellet and mix by vortexing. (can storage up to 1 month at -80°C)
8. Place the prepared Sample Tube into well 1 of T-rack.
9. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
10. Run Code.601 program at MagCore® and select Remove Genomic DNA (2)NO.

With DNase I treatment

1. Follow step 1~9 of without DNase I treatment protocol to prepare whole blood cell sample.
2. Be sure to place the 200µl DNase I mixture (in 1.5 ml screw tube) into the well 2 of T-Rack.
3. Run Code.601 program at MagCore® and select Remove Genomic DNA (1)YES.



MagCore® Total RNA Cultured Cells Kit

For total RNA extraction from cultured cells.

Cartridge Code 610

Cat.No.MRC-01SP//MRC-02SP

* For isolation of total RNA from animal tissues and FFPE samples, the MagCore total RNA Cultured Cells Kit is a relatively suitable choice and functions with a special protocol. In the near future, a more unique and convenient reagent will be developed for the extraction of RNA from animal tissue and FFPE samples.

Kit Contents

Check that the following parts are included in addition to the main unit:

Cat.No. MRC-01SP Contents:

Pre-filled Cartridge Reagent.....	36 pcs.
Pipette Tip.....	36 pcs.
Sample Tube.....	36 pcs.
Elution Tube.....	36 pcs.
RB Buffer(15ml).....	1 pcs.

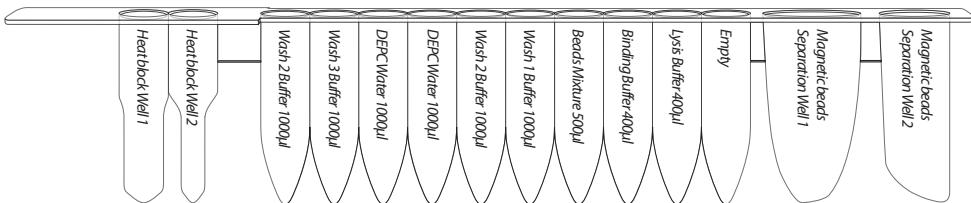
Cat.No. MRC-02SP Contents:

Pre-filled Cartridge Reagent.....	96 pcs.
Pipette Tip.....	100 pcs.
Sample Tube.....	100 pcs.
Elution Tube.....	100 pcs.
RB Buffer(30ml).....	1 pcs.

Storage and Stability:

1. This kit should be stored at room temperature.
2. Shelf life 12 months.

Cartridge Contents:

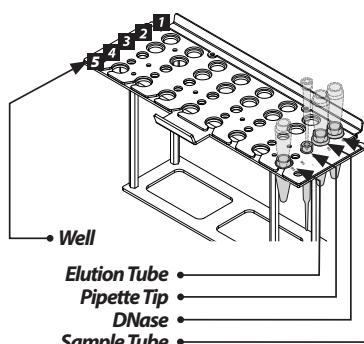


Description

MagCore® Total RNA Cultured Cells Kit is specially designed for total RNA purification from up to 1x10⁶ cultured cells by using MagCore® auto-extraction instrument. The program provides optional protocol for contaminated genomic DNA remove. Combine RBC high quality RNase-free DNase I with MagCore® Total RNA Cultured Cells Kit can provide high quality DNA-free total RNA.

Applications

Using magnetic-particle technology to purify total RNA. The purified RNA can be directly used for downstream application such as real-time PCR, RT-PCR, cDNA synthesis... etc.



Running Time: 52min (without DNase I treatment; starting volume:200 μ l; without optical detection)
79min (with DNase I treatment; starting volume:200 μ l; without optical detection)

Preparation before using

1. β -Mercaptoethanol (β -ME; not provided) must be added to RB Buffer before use. Add 10 μ l of β -ME per 1 ml of RB Buffer.
 2. Recommended Step: DNA residue degradation. Prepare DNase I (RNase-free) working solution according to the table below. Add 10 μ l DNase I with 190 μ l DNase reaction buffer (1X) in the 1.5 ml screw tube (not provided) and place it into well 3 of T-Rack.
- | Cultured Cells | DNase I | 1X DNase Buffer |
|-----------------------|------------|-----------------|
| Up to 1×10^6 | 10 μ l | 190 μ l |
3. RNase-free DNase I is not including in MagCore total RNA Cultured Cells Kit, we recommend to use RBC RNase-free DNase I (Cat#DN036 or Cat#DN096) for genomic DNA treatment. For product information, please contact RBC Bioscience distributor. We also recommend to use RNase-free DNase I enzyme(1U/ μ l) of Novagen (Cat#69182-3). Please contact local Merck branch office or distributor for product information. 1X DNase Buffer can be prepared as following:

1X DNase I reaction buffer

10 mM Tris, pH7.6 ; 2.5 mM MgCl₂; 0.1 mM CaCl₂; in DEPC water, autoclave.

Cultured Cells Protocol

Sample Preparation

A. Cells grown in suspension

Cells grown in suspension(up to 1×10^6 cells). Determine the number of cells. Transfer appropriate number of cells to the MagCore Sample Tube(provided) and centrifuge for 5 min. at 300 x g. Remove the supernatant completely and discard, Continue with MagCore® Operation step.

B. Cells grown in a monolayer

Cells grown in a monolayer(up to 1×10^6 cells). Cells grown in a monolayer can be detached from the culture flask by either trypsinization or using a cell scraper.

To trypsinize cells:

Determine the number of cells. Aspirate the medium and wash cells with PBS (not provided). Aspirate the PBS, and add 0.10–0.25% trypsin. After cells have detached from the dish or flask, collect them in medium, and transfer the appropriate number of cells(up to 1×10^6 cells) to the MagCore Sample Tube(provided). Centrifuge for 5 min. at 300 x g. Remove the supernatant completely and discard, taking care not to disturb the cell pellet. Continue with MagCore® Operation step.

Using a cell scraper:

Detach cells from the dish or flask. Transfer the appropriate number of cells(up to 1×10^6 cells) to the MagCore Sample Tube(provided) and centrifuge for 5 min. at 300 x g. Remove the supernatant completely and discard, taking care not to disturb the cell pellet. Continue with MagCore® Operation step.

MagCore Operation

Without DNase I treatment

1. Add 200 μ l RB buffer (contain β -ME) to the cells pellet and mix by vortexing (can storage up to 1 month at -80°C).
2. Place the prepared Sample Tube into well 1 of T-rack.
3. Put the Elution Tube into well 5 of T-Rack and the Pipette Tip into well 3 of T-Rack.
4. Run Code.610 program at MagCore® and select Remove Genomic DNA "NO".

With DNase I treatment

1. Follow step 1~3 of without DNase I treatment protocol to prepare culture cell sample.
2. Be sure to place the 200 μ l DNase I mixture (in 1.5 ml screw tube) into the well 2 of T-Rack.
3. Run Code.610 program at MagCore® and select Remove Genomic DNA "YES".

Running Time List

Cat. Number	Product	Reactions	Code No.	Running Time without optical detection
MGB400-01SP	MagCore® Genomic DNA Whole Blood Kit (Speedy Installation)	36	101	39 min (sample volume :200 µl) 50 min (sample volume :400 µl)
MGB400-02SP		96		
MGB400-03SP	MagCore® Genomic DNA Whole Blood Kit	36	102	39min (sample volume :200 µl) 50min (sample volume :400 µl)
MGB400-04SP		96		
MGB1200SP	MagCore® Genomic DNA Large Volume Whole Blood Kit	96	104	83 min (sample volume :1200 µl)
MPD1200SP	MagCore® Plasma DNA Extraction Kit	96	105	74 min (sample volume :1200 µl)
MGB400-07SP	MagCore® Genomic DNA Whole Blood Kit (For Genotyping)	36	106	41min (sample volume :200 µl) 53min (sample volume :400 µl)
MGB400-08SP		96		
MCC-01SP	MagCore® Cultured cells DNA Kit	36	110	39 min (sample volume: 200 µl, up to 5 x 10 ⁶ cells)
MCC-02SP		96		
MVN400-01SP	MagCore® Viral Nucleic Acid Extraction Kit	36	201	44 min (sample volume :200 µl) 55 min (sample volume :400 µl)
MVN400-02SP		96		
MVN400-03SP	MagCore® Viral Nucleic Acid Extraction Kit	36	202	62 min (sample volume :200 µl) 73 min (sample volume :400 µl)
MVN400-04SP		96		
MVN1200SP	MagCore® Viral Nucleic Acid Extraction Kit (1.2ml)	96	211	80 min (sample volume :1200 µl)
MGP-01SP	MagCore® Genomic DNA Plant Kit	36	301	33 min (sample volume :400 µl)
MGP-02SP		96		
MGT-01SP	MagCore® Genomic DNA Tissue Kit	36	401	33 min (sample volume :400 µl)
MGT-02SP		96		
MGF-01SP	MagCore® Genomic DNA FFPE One-Step Kit	36	405	159 min (2-hour heating) - Standard 998 min (16-hour heating) - High Yield
MGF-02SP		72		
MBB-01SP	MagCore® Genomic DNA Bacterial Kit	36	502	39 min (sample volume :200 µl)
MBB-02SP		96		
MRN-01SP	MagCore® Total RNA Whole Blood Kit	36	601	50 min (without DNase I treatment) 75 min (with DNase I treatment) (sample volume :200 µl)
MRN-02SP		96		
MRC-01SP	MagCore® Total RNA Cultured cells Kit	36	610	52 min (without DNase I treatment) 79 min (with DNase I treatment) (sample volume :200 µl)
MRC-02SP		96		

*Optical detection tact time: 15 min



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