

MagCore® Total RNA FFPE One-Step Kit

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

Applicable Models : HF16, Compact, HF48, Super, HF16 Plus, Plus II

Cartridge Code 605

Cat No.MRF-01 // MRF-03

Kit Contents

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

Cat.No. MRF-01 Contents:

Pre-filled Cartridge Reagent.....	24 pcs.
Pipet Tip plus Holder Set.....	50 sets.
Elution Tube.....	25 pcs.
Sula Oil (25 ml).....	1 pcs.
Thermostable Cap.....	25 pcs.

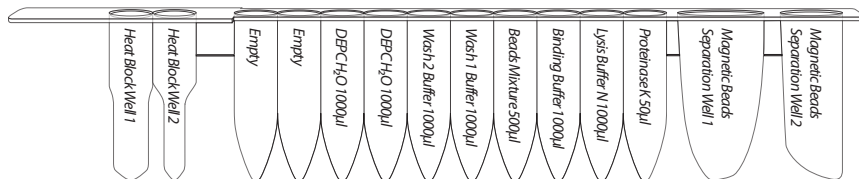
Cat.No. MRF-03 Contents:

Pre-filled Cartridge Reagent.....	72 pcs.
Pipet Tip plus Holder Set.....	150 sets.
Elution Tube.....	75 pcs.
Sula Oil (50ml).....	1 pcs.
Thermostable Cap.....	75 pcs.

Storage and Stability:

1. This kit should be stored at room temperature (15-25°C).
2. Shelf Life: 12 Months.

Cartridge Contents :



Description

MagCore® total RNA FFPE One-Step Kit is specially designed for total RNA purification from FFPE tissues by MagCore® instruments. It features the method, one-step heating, to melt paraffin without harmful reagents involved such as xylene or other organic solvents, and lyse tissues at the same time. The MagCore® total RNA FFPE One-Step Kit System optimizes the lysis conditions to reverse the formalin fixation without the need for overnight digestion and retain both large and small RNAs. The program provides optional DNase I treatment to remove contaminated DNA.

Applications

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

Preparation before using

- 1. Recommended Step: DNase I Treatment.** Prepare DNase I (RNase-free) working solution: add 10 µl DNase I with 16 µl DNase reaction buffer (1X) in 1.5 ml screw tube (not provided) and place it into the W4 (HF-16, Compact)/W1 (Super, Plus) of T-Rack.
- RNase-free DNase I is not included in MagCore® Total RNA FFPE One-Step Kit, we recommend using RBC RNase-free DNase I (Cat#DN036 or Cat#DN096) for reducing the possibility of genomic DNA carryover. For more product information, please contact your local distributor.
- 3. It is not available for optics measurement when you set up the elution volume is 40µl.**

RNase Precautions

- Before working with RNA, it is a good idea to use RNA decontamination solution to clean the lab bench, pipettors, and microtome.
- When performing extraction with MagCore® Total RNA FFPE One-step Kit, always wear a suitable lab coat, disposable gloves, and protective mask. Do not talk during the experiment to avoid contamination.
- Ensure that the experimental environment is suitable for operating RNA experiments.

Needle-Like FFPE Tissue Sections Protocol

- Cut 5-50µm sections from FFPE tissue blocks by using a microtome.
- Take the equivalent of ≤50µm tissue sections into 1.5ml microcentrifuge tube. (See Important notes)
- Trim the excess paraffin from the tissue sections.
- Use a RNase-free pipette tip to put the tissue sections from step 3. into the bottom of **Heat Block well 1** of the cartridge.
- Add 500µl of **Sula oil**, ensure the tissue sections can totally immerse in Sula oil*, and cover it up with the **Thermostable cap**.
- *If samples are too long to immerse in Sula oil, use a RNase-free pipet tip to cut and push the samples into the solution.

MagCore® Operation

Without DNase I Treatment

- Follow the **Needle-like FFPE sections Protocol step 1-4.**
- Put Elution Tube and 2 set of Tip Plus Holder Set (HF16, Compact) / Pipette Tip and Tip Plus Holder Set (Super, Plus) into the correct wells of T-Rack. (see below graphs- Well Position of T-Rack)
- Run Code 605 program at MagCore® and select "Select DNase treatment" (2) NO.

Important Notes for needle-like FFPE tissue sections

Tissue section (µm)	Sample scroll
50	1-3
20	1-4
10	1-5 (Don't over load 5 scrolls)

Glass-slide FFPE tissue samples Protocol

1. Put a few drops of Sula Oil on the glass slide and scrape them from the slide carefully, then put in the bottom of **Heat Block well 1**. (See *Important notes*)
2. Add 500µl Sula Oil into **Heat Block well 1**, rinse remaining sample on the wall and blade, then cover it up with the *Thermostable cap*.

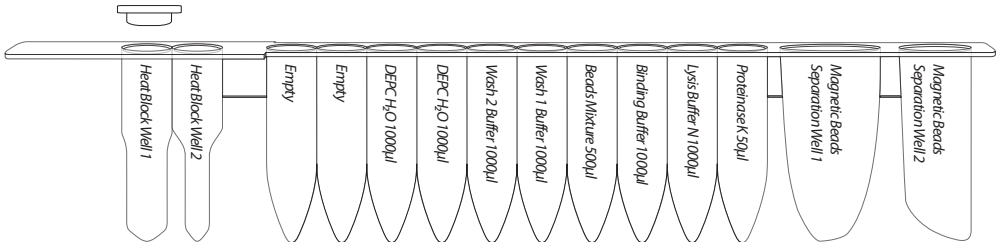
MagCore® Operation

Without DNase I Treatment

1. Follow the **Glass-slide FFPE tissue samples Protocol step 1-2**.
2. Put Elution Tube and 2 set of Tip Plus Holder Set (HF16, Compact) / Pipette Tip and Tip Plus Holder Set (Super, Plus) into the correct wells of T-Rack; (see below graphs- Well Position of T-Rack)
3. Run Code 605 program at MagCore® and select "Select DNase treatment" (2) NO.

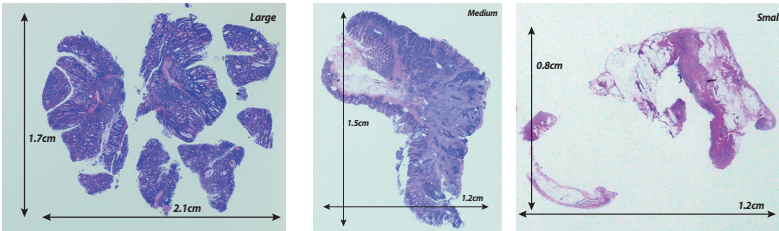
With DNase I Treatment

1. Follow the **Needle-like FFPE samples Protocol step 1-2**.
2. Be sure to place the 26µl DNase I mixture (in 1.5 ml screw tube) into the W4 (HF-16, Compact)/W1 (Super, Plus) of T-Rack. (see below graphs- Well Position of T-Rack)
3. Put Elution Tube and 2 set of Tip Plus Holder Set (HF16, Compact) / Pipette Tip and Tip Plus Holder Set (Super, Plus) into the correct wells of T-Rack. (see below graphs- Well Position of T-Rack)
4. Run Code 605 program at MagCore® and select "Select DNase treatment" (1) YES.



Important Notes for glass-slide FFPE tissue samples

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



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

Surface area (mm ²)	Sample scroll
200 ↑	1
100-200	1-2
50-100	2-3
50 ↓	3-5

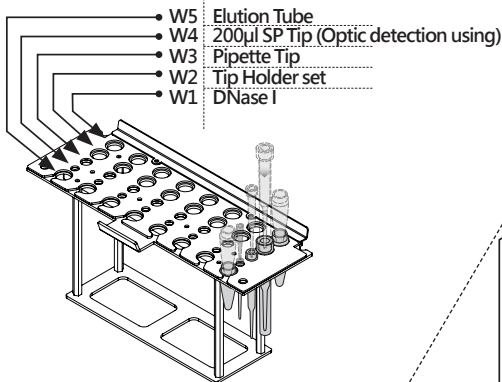
(Don't over load 5 scrolls)

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

- If you have no information about the sample, we recommend starting with 1-2 scrolls.
- Sula Oil is a deparaffin solution. The capacity of the Sula Oil (500µl) is about 20mg paraffin per preparation.

Well Position of T-Rack

MagCore® Super/MagCore® HF16 Plus



MagCore® HF16/MagCore® Compact

