

# MagCore® Nucleic Acid Extraction Kits

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



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.

# 605

### MagCore® total RNA FFPE one-step kit



#### Features

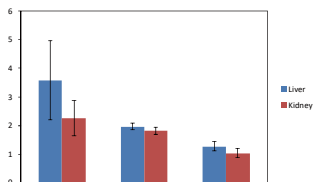
1. A full package for total RNA isolation from FFPE tissue samples. It starts from melting paraffin to the final RNA purification.
2. Highly user-friendly protocol with minimal pretreatment required.
3. Sula oil (Deparaffinization solution): no xylene or other organic solvents involved.
4. The most stable cap is especially designed to cover the reaction well for an optimal condition where lysis buffer and the FFPE samples can mix properly during the long processing period.
5. The total processing time is within approximately 160 mins.

#### Applications

The purified RNA can be directly used for downstream application such as:

1. cDNA synthesis
2. real-time PCR
3. RT-PCR
4. Microarray
5. Next-Generation Sequencing
6. cDNA synthesis

#### FFPERNA extraction efficiency

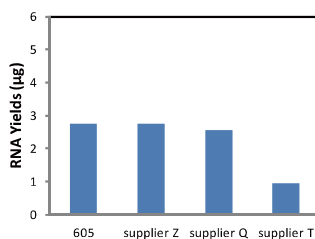


Rat tissue	Average Yields (µg)	Average A <sub>260/280</sub>	Average A <sub>260/230</sub>
Liver	3.57 ± 1.38	1.96 ± 0.11	1.26 ± 0.16
Kidney	2.25 ± 0.62	1.82 ± 0.12	1.03 ± 0.15

Total RNA was purified from various FFPE rat tissues stored at -80°C for 3 months. RNA yield and quality from one (liver, kidney) 50 µm tissue section per sample was determined by Nanodrop n-1000.

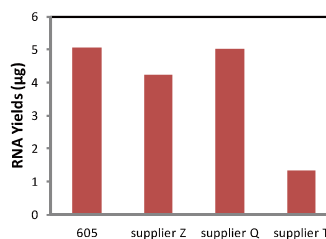
#### MagCore® 605 competitors

##### Tissue block A



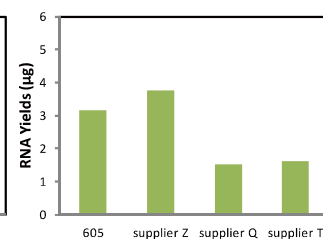
A <sub>260/280</sub>	2.01	2.01	1.98	1.91
A <sub>260/230</sub>	2.15	2.38	2.28	1.90

##### Tissue block B



A <sub>260/280</sub>	2.04	2.04	1.94	2.06
A <sub>260/230</sub>	2.08	2.3	2.17	1.89

##### Tissue block C



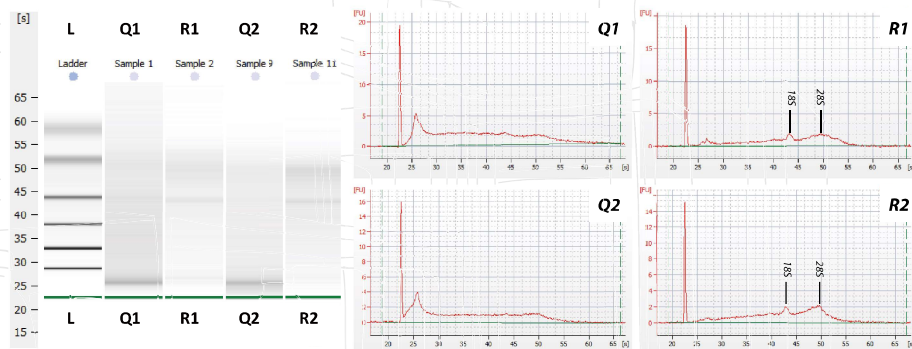
A <sub>260/280</sub>	1.99	2	1.91	2.13
A <sub>260/230</sub>	2.02	2.03	2.43	0.13

MagCore® 605 retains high RNA extraction efficiency in various rat liver tissue blocks compare to several FFPERNA purification kit suppliers. The RNA yield and quality was quantified by Nanodrop n-1000.



# Performance

## RNA integrity

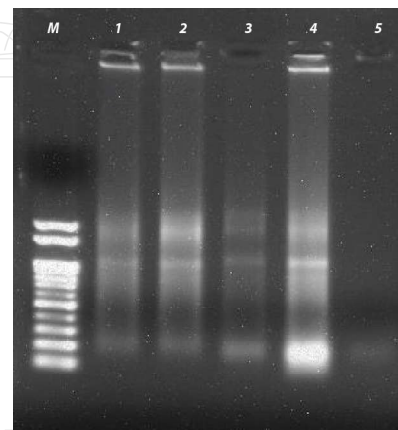


Tissue Block	Competitor Q		MagCore® 605			
	Sample	RNA yields (ng/μl)	RIN	Sample	RNA yields (ng/μl)	RIN
#1	Q1	97.37	2.2	R1	77.9	3.2
#2	Q2	58.7	2.2	R2	62.6	3.3

### RNA integrity assessment

Total RNA isolation from rat liver 50μm tissue sections of FFPE tissue blocks were measured on Agilent 2100 bioanalyzer. Isolated RNA from MagCore® 605 kit maintains its integrity (18S, 28S peaks).

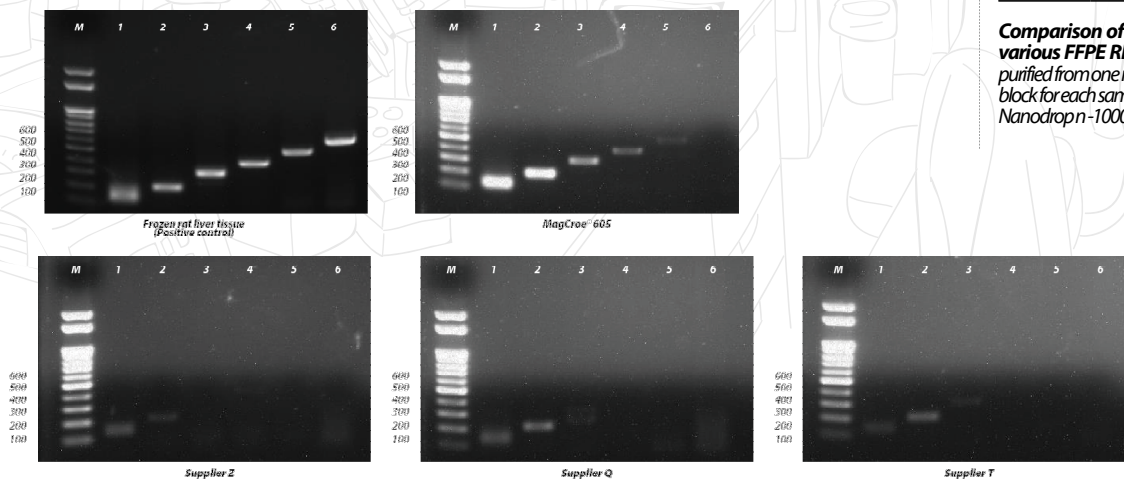
## MagCore® 605 competitors



Brand	Competitor Q	nanodrop (ng/μl)	A <sub>260</sub> /280	A <sub>260</sub> /230	Ct Value (GAPDH)
MagCore® 605	1	60.12	1.93	1.48	27.91
	2	74.79	1.89	1.52	26.99
Supplier Z	3	31.21	1.96	1.49	28.21
Supplier Q	4	117.54	1.93	2.17	30.16
Supplier T	5	5.89	1.46	0.15	28.93

**Comparison of total RNA extraction efficiency by using various FFPE RNA extraction kit suppliers.** Total RNA was purified from one rat liver 50μm tissue section of a single FFPE tissue block for each sample. The RNA yield and quality was quantified by Nanodrop -1000.

## RT-PCR performance



### Evaluation of RNA performance in RT-PCR

Five amplicons of different length (118, 206, 312, 400, 503, 613 bp amplicon size) of the gene Rpl4 performed using cDNA derived from FFPE rat liver samples purified by various suppliers.

## MagCore® Automated Nucleic Acid Kits Specification

Cartridge Code	MagCore® Super/HF16 Plus/Plus II			MagCore® HF16/Compact		
	Cat.No.	Cat.No.	Running Time	Cat.No.	Cat.No.	Running Time
	24preps	72preps		24preps	72preps	

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### MagCore® Total RNA FFPE One-step Kit

For extraction of total RNA from formalin-fixed paraffin-embedded (FFPE) tissue by using MagCore® System.  
Contents: Pre-Filled Cartridges, Disposable Tip & Holder Sets, Elution Tubes  
Shelf life: 12 months

MRF-01	MRF-03	140min (without DNase I treatment) 158min (with DNase I treatment)	MRF-01	MRF-03	147min (without DNase I treatment) 165min (with DNase I treatment)
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## Enzyme Selection Guide

Product	Contents	Cat. No.
DNase I Set	For 36 reactions RNase-Free DNase I (Lyophilized): 1500 Kunitz units x 1 vial, 1 ml RNase-Free Water x 1, 15 ml DNase I Reaction Buffer	DN036
	For 96 reactions RNase-Free DNase I (Lyophilized): 1500 Kunitz units x 2 vial, 1 ml RNase-Free Water x 2, 30 ml DNase I Reaction Buffer	DN096



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



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