



# Hieff NGS™ RNA Cleaner

## Product description

Hieff NGS™ RNA Cleaner combines efficient magnetic beads and a unique buffer system, which can specifically bind RNA and effectively remove proteins, salt ions and other impurities. It is often used to purify total RNA samples after rRNA removal, in vitro transcribed RNA products, RNA-labeled products, and synthetic RNAs. And the purified RNA is suitable for RNA library construction, RT-PCR, qRT-PCR, chip analysis, Northern Blot and RNAi experiments.

## Components

Components No.	Name	12602ES08	12602ES56	12602ES75
12602	Hieff NGS™ RNA Cleaner	5 mL	60 mL	450 mL

## Specifications

Product Line	RNA clean
Starting Material	RNA
Compatibility	RNA
Isolation Technology	Magnetic Bead
Final Product Type	RNA
For Use With (Application)	RNA cleans up

## Storage

2°C ~ 8°C storage , valid for one year. **Avoid freezing!**

## Instructions

### 1. Additional reagents required:

100% ethanol, Nuclease-free water, magnetic stand, Nuclease-free centrifuge tubes.

### 2. Experiment preparation

2.1 Take out the RNA clean beads from 4°C and equilibrate at room temperature for about 30 min before use.

2.2 Dilute 0.5-5 μg total RNA to final volume of 50 μL with Nuclease-free water in a Nuclease free PCR tube and keep the tube on ice .

### 3. RNA purification

3.1 Invert or vortex to mix the magnetic beads thoroughly, pipette 2×magnetic beads (100 μL) into the total RNA sample (50 μL), and mix well by pipetting up and down 6 times.

3.2 Incubate for 5 min at room temperature to allow RNA to bind to the magnetic beads.

3.3 Place the tube on a magnetic stand for 5 min. After the solution is clear, carefully remove the supernatant.



3.4 Keep the tube on the magnetic stand, add 200  $\mu\text{L}$  of freshly prepared 80% ethanol to rinse the beads, incubate at room temperature for 30 s, and carefully remove the supernatant.

[Note] The 80% ethanol used for rinsing needs to be freshly prepared with Nuclease-free water to prevent RNA degradation caused by the introduction of RNase enzymes.

3.5 Repeat step 4 for a total of 2 rinses.

3.6 Keep the tube on the magnetic stand, open the lid and air dry the magnetic beads for 5 min.

[Note] Do not over-dry the selection beads. When the magnetic beads start to crack, it indicates that they are too dry, which may result in lower recovery RNA target.

3.7 Add 12  $\mu\text{L}$  of Nuclease-free water, pipette 6 times to mix well, and incubate at room temperature for 5 min.

3.8 Place the tube on a magnetic stand for 5 min. After the solution is clear, carefully transfer 10  $\mu\text{L}$  of the supernatant to a new Nuclease-free PCR tube.

[Note] It is recommended to leave 2-3  $\mu\text{L}$  of liquid when transferring the supernatant, in case absorb the magnetic beads and affect the subsequent experiments. The obtained RNA is extremely unstable, and it is recommended to proceed to the next step or store the obtained RNA at  $-80^{\circ}\text{C}$  as soon as possible.

## Notes

1. The magnetic beads must be equilibrated to room temperature and mixed well before use, otherwise the recovery efficiency of the sample may be affected.
2. The operation process should strictly ensure that there is no RNase enzyme and nucleic acid contamination.
3. When using this kit together with other reagents, please follow the specific experimental instructions.
4. For research use only!

## Results

qRT-PCR Ct values of RNA samples before and after using the total RNA purification kit

RNA Sample	Human		Mouse		Arabidopsis	
	GAPDH	$\beta$ -Actin	GAPDH	$\beta$ -Actin	PP2A	TUB2
Ct before purification	12.92	12.36	18.74	18.53	24.33	22.2
Ct after purification	12.32	11.89	17.62	17.91	23.38	21.35

[Note] Using Hieff NGS™ RNA Cleaner can effectively remove inhibitors of RT-PCR, making the results of the experiments more accurate.