Mag Beads mRNA Purification Kit

【Product Name】

Mag Beads mRNA Purification Kit

【Package Specifications】

20T/box(Art.No.SP601-20)；48T/box(Art.No.SP601-48)；

96T/box(Art.No.SP601-96)

【Intended Use】

This product is suitable for easy binding of polyadenylated RNA (poly-A+ RNA) to oligo (dT) beads under standard hybridization conditions. Other RNA species (rRNA and tRNA) do not contain poly A+ sequences and therefore do not bind to oligo (dT) beads. The isolated mRNA can be directly used for cloning and expression analysis applications.

【Main Components】

Components	20T	48T	96T
Binding Buffer	4mL	10mL	20mL
Washing Buffer B	13 mL	31mL	62mL
Elution	1.2mL	3mL	6mL
Mag Oligo-dT	0.45mL	1mL	2mL

【Storage Conditions and Shelf Life】

Mag Oligo-dT should be stored at 2-8°C, while the remaining reagents should be stored at room temperature. The shelf life for all components is 12 months.

【User-provided Equipment and Reagents】

Equipment: Pipettor, Vortex mixer, Magnetic rack (Rebece 12-well magnetic rack), Centrifuge tubes, Heating mixer, etc.

【Precautions】

1. This reagent is a magnetic bead suspension. It should not be frozen or centrifuged, and it must be thoroughly vortexed before the first use.
2. When using the buffer solution, only use clean RNase-free disposable tips.
3. Do not overdry the magnetic beads, as it may reduce the elution efficiency.

【Operating Procedure】

Magnetic Bead Washing

1. Resuspend the magnetic beads in the vial by vortexing for at least 30 seconds or by rotating mixing for over 5 minutes.
2. Pipette 20μL of the magnetic beads into a new EP tube. Place the EP tube on a magnetic rack and let it sit for 1 minute until the solution clears, then discard the supernatant.
3. Add 50μL of Binding Buffer to the tube containing the magnetic beads, and vortex thoroughly.
4. Place the EP tube on a magnetic rack and let it sit for 1 minute until the solution clears, then discard the supernatant.
5. Remove the EP tube from the magnetic rack and add 20μL of Binding Buffer, then resuspend the magnetic beads.

Purification of mRNA from Total RNA

1. Adjust the volume of high-purity total RNA (0.01-25μg) to 50μL using Elution Buffer.
2. Add 50μL of Binding Buffer. If over-diluted, add an equal volume of Binding Buffer.
3. Add the prepared 100μL total RNA solution into the magnetic beads (prepared

according to "Magnetic Bead Washing" steps), and pipette up and down at least 6 times to mix thoroughly.

4．Place the sample in a PCR machine: 65°C for 5 minutes, 25°C for 5 minutes, then hold at 4°C to bind mRNA to the magnetic beads.

5．Place the sample on a magnetic rack for 1-2 minutes until the solution clears, then carefully discard the supernatant.

6．Remove the sample from the magnetic rack, add 200μL of Washing Buffer B, pipette up and down several times to mix, then place on a magnetic rack for 1-2 minutes until the solution clears. Carefully discard the supernatant.

7．Remove the sample from the magnetic rack, add 50μL of Elution Buffer, and resuspend the magnetic beads. Pipette up and down at least 6 times to mix thoroughly.

8．Place the sample in a PCR machine: 80°C for 2 minutes, then hold at 25°C to elute mRNA.

9．After completion, add 50μL of Binding Buffer to the sample, pipette up and down at least 6 times to mix thoroughly, and incubate at room temperature for 5 minutes.

10．Place the sample on a magnetic rack for 1-2 minutes until the solution clears, then carefully discard the supernatant.

11．Remove the sample from the magnetic rack, add 200μL of Washing Buffer B, and pipette up and down several times to mix thoroughly. Place on a magnetic rack for 1-2 minutes until the solution clears, then carefully discard the supernatant.

12．Repeat step 11 once.

13．Depending on the subsequent experimental procedure:

a. If the purified product is for reverse transcription, remove the sample from the magnetic rack, add 10-15μL of Elution Buffer, pipette up and down at least 6 times to mix thoroughly, perform elution at 80°C for 2 minutes, then place on a magnetic rack for 1-2 minutes until the solution clears, and carefully transfer the supernatant to a new Nuclease-free PCR tube.

b. If the purified product is for RNA library construction, follow the instructions of the relevant kit and add the appropriate volume of Frag/Prime Buffer.

14．The sample product can be kept on ice for further NGS library construction or other analytical applications. It is recommended to proceed with subsequent reactions immediately, or it can be stored at -80°C.

【Basic Information】

Version Number: 1.1

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