Oligo(dT)$_{25}$ Magpoly Beads

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1. Product Description

Oligo(dT)$_{25}$ Magpoly Beads are formed by combining biotinylated Oligo(dT)$_{25}$ with Streptavidin MagPoly Beads. By using the interaction principle of Oligo(dT)$_{25}$ and mRNA(poly(A)+RNA), we can extract mRNA from Total RNA, cultured cells, tissues and so on directly. And use it as a template for downstream molecular biology experiments, including RT-PCR, Northern blot, cDNA library construction, in vitro translation and so on.

Features & Advantages:

- Uniform particle size, good monodispersity.
- Low non-specific adsorption, high specificity, high purity of the extracted mRNA;
- Super paramagnetism, high magnetic content, can ensure the rapid separation of magnetic beads;
- The magnetic beads in the extracted products can directly enter into the downstream experimental operation without elution.

2. Purification Procedure

2.1 Buffer Preparation

The buffer can use the following recommended buffers, or you can configure different buffer systems according to your own usage habits, the basic principle is high salt binding, low salt eluting. You shall prepare buffers with DEPC water or RNase-free water. For more information, see Table1.

Table1. Buffer and formula for capturing mRNA

Name	Volume	Formula
Binding Buffer	1L	20mM Tris 2.4228g 1.25M LiCl 52.9875g 2mM EDTA 0.5844g Use HCl solution to adjust pH to 7.5
Wash Buffer	1L	10mM Tris 1.2114g 0.15M LiCl 6.3585g 1mM EDTA 0.2922g Use HCl solution to adjust pH to 7.5
Elution Buffer	1L	10mM Tris 1.2114g 1mM EDTA 0.2922g Use HCl solution to adjust pH to 7.5

2.2 Sample Preparation

Dilute 5~15μg Total RNA to 50μl with DEPC water. Adjust the dilution volume according to the RNA concentration. The recommended volume is 50~90μl.

2.3 mRNA Capture

1) Preparation

Remove Oligo(dT)$_{25}$ Magpoly Beads from the 2~8 °C freezer, invert equilibration for 5~10min, suspend the beads thoroughly, pipette an appropriate amount of magnetic bead suspension (20μl of magnetic beads can capture up to 1000ng of Total RNA), place in centrifuge tubes, place the centrifuge tubes on the magnetic separator for 1min, and when the solution becomes clear, aspirate the supernatant with a pipette.

2) Balance

Then remove the centrifuge tube magnetic separator, add 200μl Binding Buffer as the suspension, mix well, place the centrifuge tube on the magnetic separator, after the solution becomes clear, suck away the supernatant with a pipette, repeat the wash twice, remove the centrifuge tube magnetic separator, and resuspend the magnetic beads with 50μl Binding Buffer.(Adjust the Binding Buffer resuspension volume by sample volume, control the total reaction volume to 100μl.)

3) Binding

Add the sample to the processed beads and mix 5-10 times by pipetting carefully. Place the centrifuge tube on the PCR apparatus, 65℃ 5min, 25℃ 5min, 4℃ 5min.

4) Wash

Place the centrifuge tube in a magnetic separator, and after the solution becomes clear, aspirate the supernatant with a pipette. Add 200μl of Wash Buffer to the centrifuge tube, pipette 5-10 times repeatedly, place the centrifuge tube on the magnetic separator, and when the solution becomes clear, aspirate the supernatant with a pipette. Repeat the above steps 2 times.

5) Secondary Binding

Add 50μl DEPC water to the centrifuge tube and mix 5-10 times by pipetting. Place the centrifuge tube on the PCR apparatus, 80℃ 2min, 20℃ 5min. After the reaction, add 50μl Binding Buffer to the centrifuge tube and mix 5-10 times by pipetting. Stand at room temperature for 5min.

6) Secondary Wash

Place the centrifuge tube in a magnetic separator, and after the solution becomes clear, aspirate the supernatant with a pipette. Add 200μl of Wash Buffer to the centrifuge tube, pipette 5-10 times repeatedly, place the centrifuge tube on the magnetic separator, and when the solution becomes clear, aspirate the supernatant with a pipette.

7) Elution

The elution volume can be changed as needed to adjust the mRNA concentration. It is recommended to add 10-20μl of Elution Buffer to the centrifuge tube, gently pipette 3-5 times, mix well. Place the centrifuge tube on the PCR apparatus, incubate at 80°C for 2min. Place the centrifuge tube on the magnetic separator, and when the solution becomes clear, pipette and retain the supernatant, i.e. mRNA.

3. Important Note

1) Before use, please read the product manual carefully.

2) Avoid freezing/drying and high-speed centrifugation during the preservation of magnetic beads. Otherwise, It will damage the structure of magnetic beads and affect the protein binding ability seriously.

3) Before use, please gently and fully oscillate the magnetic bead to keep it in uniform suspension state.

4) It is recommended to purify the same RNA sample when using the beads reused, and to use new beads when purifying different RNA samples to avoid cross-contamination.

4. Related Products

Product	Cat. No.	Size
Oligo(dT)$_{25}$ Magpoly Beads	SM080001	1ml
	SM080005	5ml
	SM080010	10ml
	SM080050	50ml
	SM080100	100ml
	SM080500	500ml
	SM08001L	1L