

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 Table 1.

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.

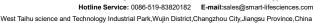
2.3 mRNA Capture

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° C 5min, 4° C 5min, 4° C 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 50μ l DEPC water to the centrifuge tube and mix 5-10 times by pipetting. Place the centrifuge tube on the PCR apparatus, 80° C 2min, 20° C 5min. After the reaction, add 50μ l 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 |