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## Product Specification

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**Product Name:** Oligo(dT)<sub>25</sub> Magpoly Beads

**Product Code:** MAGP013 / MAGP014 / MAGP015 / MAGP016

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### PRODUCT DESCRIPTION:

Oligo(dT)<sub>25</sub> Magpoly Beads are formed by combining biotinylated Oligo(dT)<sub>25</sub> with Streptavidin MagPoly Beads. By using the interaction principle of Oligo(dT)<sub>25</sub> and mRNA(poly(A)+RNA), mRNA can be directly extracted from Total RNA, cultured cells, tissues, etc. It can be used as a template for downstream molecular biology experiments, including RT-PCR, Northern blot, cDNA library construction, in vitro Translation, etc.

### Features & Advantages:

- Uniform particle size and good monodispersity.
  - Low non-specific adsorption, with a high specificity and purity of the extracted mRNA.
  - Super Paramagnetism and high magnetic content, can ensure the rapid separation of magnetic beads.
  - The magnetic beads in the extracted products can directly enter downstream experimental operations without elution.
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| Product Code | Size   |
|--------------|--------|
| MAGP013      | 1 ml   |
| MAGP014      | 5 ml   |
| MAGP015      | 20 ml  |
| MAGP016      | 100 ml |

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**IMPORTANT NOTE**

- 1) Please read the product manual carefully before use.
- 2) Avoid freezing/drying and high-speed centrifugation during the preservation of the magnetic beads. Otherwise, it will damage the structure of the magnetic beads and affect its protein binding ability.
- 3) Please gently oscillate the magnetic beads to keep them in a uniform suspension state before use.
- 4) It is recommended to purify only the same RNA sample when reusing the beads, and to use new beads when purifying different RNA samples to avoid cross-contamination.

**PURIFICATION PROCEDURE**

**1. Buffer Preparation**

Different buffer systems other than the following recommended buffers formulas in the table below, can be configured and used, where necessary. However, the basic principle that should be adhered to is high salt binding and low salt eluting. The buffers should be prepared with DEPC or RNase-free water.

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

## 2. Sample Preparation

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

## 3. mRNA Capture

### 1) Preparation

Remove the Oligo(dT)<sub>25</sub> Magpoly Beads from the 2-8°C freezer, then invert the vial for 5-10 minutes to thoroughly re-suspend the beads. Pipette out an appropriate amount of the magnetic bead suspension as needed into clean centrifuge tubes (20µl of magnetic beads can capture up to 1000ng of Total RNA). Place the tubes on a Magnetic Separation Rack for 1 minute, then once the solution becomes clear, remove the supernatant with a pipette.

### 2) Balance

Remove the centrifuge tubes from the Magnetic Separation Rack, then re-suspend the magnetic beads well with 200µl of the Binding Buffer. Place the tubes back on the Magnetic Rack and remove the supernatant with a pipette after the solution becomes clear. Repeat this washing step with the Binding Buffer twice, then re-suspend the magnetic beads again in 50µl of Binding Buffer. (Adjust the re-suspension volume of the Binding Buffer resuspension based on the volume of the sample, ensuring that the total reaction volume amounts to 100µl.)

### 3) Binding

Add the sample to the magnetic beads and carefully mix the suspension 5-10 times with a pipette. Place the centrifuge tube on a PCR apparatus at 65°C for 5 min, 25°C for 5 min, and 4°C for 5 min.

### 4) Wash

Place the centrifuge tube on a Magnetic Separation Rack, and once the solution becomes clear, aspirate the supernatant with a pipette. Add 200µl of Wash Buffer to the tube, then pipette 5-10 times repeatedly to mix the suspension. Place the tube on the Magnetic Rack, and when the solution turns clear, aspirate the supernatant with a pipette. Repeat the above steps 2 times.

### 5) Secondary Binding

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

### 6) Secondary Wash

Place the centrifuge tube on a Magnetic Separation Rack, and once the solution becomes clear, aspirate the supernatant with a pipette. Add 200µl of Wash Buffer to the tube, then pipette 5-10 times repeatedly to mix the suspension. Place the tube on the Magnetic Rack, 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, then gently pipette 3-5 times to mix well. Place the centrifuge tube on a PCR apparatus and incubate at 80°C for 2 min. Place the tube on a Magnetic Separation Rack, and when the solution becomes clear, pipette and retain the supernatant, i.e. mRNA.

*Rev 0*