PreCap Oligo(dT) Phmac Beads

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1. Product Description

PreCap Oligo(dT) Phmac Beads is a polymer microspheres with Oligo(dT)25 ligands covalently bound on its surface. The average particle size of **PreCap Oligo(dT) Phmac Beads** is 60μm. The surface is functionalized with poly(dT) and allows capture of mRNA though base pairing with the mRNA polyA tail, mRNA can be purified directly from the sample, which greatly simplifies the process of mRNA capture. The product withstands high salt, pH and temperature, is simple to use, and does not require the use of any flammable, toxic reagents.

Table 1. Characteristics of **PreCap Desalting**

Item	Description
Matrix	polymeric microsphere
Particle size	~60μm
Binding Capacity	2mg mRNA /ml
Storage buffer	20% ethanol
Storage Temperature	2℃- 8℃

2. Purification Procedure

2.1 Buffer Preparation

Buffer can be used with the following recommended Buffer, or you can configure different buffer liquid system according to your habits, the basic principle is high salt binding, low salt elution.Buffer should be prepared with DEPC water or RNase-free water.
We recommend using the following buffers:
Binding Buffer:20 mM Tris-HCl, 1 M NaCl, 2 mM EDTA, pH7.5
Wash Buffer:20 mM Tris-HCl, 0.15 M NaCl, 1 mM EDTA, pH7.5
Elution Buffer:10 mM Tris, 1 mM EDTA, pH7.5
Disinfection Buffer:0.1M NaOH

2.2 Sample Preparation

1) Adjust the mRNA sample mix to approximately 0.5mg/ml with DEPC water.
2) If denaturing is required, heat the sample at 65°C in a water bath for 3 minutes, then immediately place the sample on wet ice.

2.3 Sample Purification

PreCap Oligo(dT) Phmac Beads can be used in various conventional medium and low pressure chromatography systems. The application of the AKTA is used as an example to introduce the application method.
1) Fill the pump tubing with binding buffer. Connect the column to purification system, “drop to drop” to avoid introducing air into the column.
2) Wash the column using 3-5 CVs of deionized water.
3) Clean the column using 5 CVs of Disinfection Buffer and then rinsed with 10 column volume of deionized water until the effluent is neutral.
4) Equilibrate the column using 5 CVs of Binding Buffer.
5) Load the sample onto the column at 50–150 cm/h.
6) Wash the column with an additional 10–15 CVs of Binding Buffer ,or until no material appears in the effluent.
7) Wash with 10-15 column volume Wash Buffer, observe the change of UV absorption value, and collect the effluent.
8) Elute the bound mRNA using 5–10 CVs of elution buffer. Other volumes may be required if the interaction is difficult to break.

3. Clean-in-Place

PreCap Oligo(dT) Phmac Beads need to be clean-in-place after each purification. The detailed procedures are as follows:

- Regenerate the column with 5 CVs water;
- Sanitize column with 5 CVs of 0.1 M NaOH for 10min;
- Sanitize column with 5 CVs of deionized water,until neutral pH.
- Sanitize column with 3 CVs 20% ethanol and store the column in storage solution at 2–8°C

4. Related Products

Product	Cat. No.	Size
PreCap Oligo(dT) Phmac Beads	SA099C11	1X1mL
	SA099C51	5X1mL
	SA099C15	1X5mL
	SA099C55	5X5mL
	SA099CS	3x1mL+1X5mL