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Chemistry beyond the ordinary

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BioMag® Oligo (dT)$_{20}$

Catalog Number 8MB4803

Description

BioMag Oligo (dT)$_{20}$ is a nuclease-free suspension of BioMag particles approximately 1µm in size which are linked to Oligo (dT)$_{20}$. The suspension is supplied in a buffer containing 20mM Tris, 0.5M sodium chloride, and 0.1% sodium azide, pH 8.0. *Shake vigorously before use. Magnetically separate the BioMag particles, aspirate the supernatant and resuspend in an appropriate buffer for your application.*

Storage and Stability

Freezing, drying or centrifuging BioMag results in extensive aggregation and loss of binding activity. DO NOT FREEZE OR DRY THIS PRODUCT. **NOTE:** BioMag Oligo (dT)$_{20}$ must be stored in the buffer in which it is supplied to ensure stability. Store at 4°C.

BioMag Concentration: 5mg/ml

Binding Capacity

100µl of BioMag Oligo (dT)$_{20}$ is sufficient to isolate approximately 1-2µg of polyadenylated RNA from approximately 100µg of total RNA.

Researchers are advised to optimize the use of BioMag in any application as procedures designed by other manufacturers may not be ideal.

For research use only, not intended for use in humans or *in vitro* diagnostics use.

Suggested Procedure for the Purification of mRNA

The following procedure is for the isolation of 1-2µg of polyadenylated RNA from approximately 100µg of total RNA. The 2ml of BioMag Oligo (dT)$_{20}$ supplied is sufficient for 20 isolations of 1-2µg of mRNA. (More or less mRNA can be isolated by modifying the procedure). The total isolation time is approximately 15 minutes.

1. Dispense 100µl of BioMag Oligo (dT)$_{20}$ into a nuclease-free microcentrifuge tube. Using a magnetic separation unit (Cat.# 8MB4111S or similar rare earth magnetic separator), pull the magnetic particles to the side of the microcentrifuge tube for 30 seconds. Remove and discard the supernatant. Wash the BioMag Oligo (dT)$_{20}$ once with 200µl of a binding buffer containing 20mM Tris and 0.5M NaCl at pH 8.0. Magnetically separate, discard the supernatant and resuspend in 100µl of binding buffer.

2. Bring up the total RNA sample in DEPC-treated water to a total volume of 90µl.

3. Incubate the RNA sample at 55°C for 5 minutes to disrupt secondary structures.

4. Add 10µl of 5M NaCl to achieve a final concentration of 0.5M NaCl.

5. Add the total RNA to the BioMag Oligo (dT)$_{20}$ from Step 1. Mix gently and hybridize at room temperature for 3 minutes.

6. Magnetically separate and wash the particles 2 times with 100µl of a wash buffer containing 7mM Tris and 0.17M NaCl at pH 8.0.

7. Elute the bound polyadenylated RNA with 25-50µl of DEPC-treated water at 55°C for 2 minutes. Greater than 90% of polyadenylated RNA is eluted in this step.

8. Magnetically separate and transfer the supernatant to a nuclease-free microcentrifuge tube.

9. Repeat elution of polyadenylated RNA with 25-50µl of DEPC-treated water at 55°C for another 2 minutes in order to completely elute the bound mRNA from the particles. Magnetically separate and transfer the supernatant to the tube containing the first elution of mRNA from Step 7.

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Ordering Information:

Cat. #	Description	Size
8MB4803-2	BioMag® Oligo $(dT)_{20}$ Molecular Biology Grade	2ml

To Order:

In The U.S. Call: 1-800-523-2575 • 215-343-6484
In The U.S. FAX: 1-800-343-3291 • 215-343-0214

In Germany Call: (49) 6221-765767
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References:

1. Hornes E., K.S. Jakobsen, O.S. Gabrielsen, L.S. Korsnes, E.B. Jansen and M. Espelund. 1991. Purification of mRNA and DNA binding proteins using magnetic beads. In: Kemshead J.T., ed. Magnetic separation techniques applied to cellular and molecular biology. Somerset, Wordsmiths' conference publications. 197-205.

2. Morrisey, David V., Massimo. Lombardo, John K. Eldredge, Kevin R. Kearney, E. Patrick Groody and Mark K. Collins. 1989. Nucleic Acid Hybridization Assays Employing dA-Tailed Capture Probes. Anal. Biochem. 181:345-359.

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