RNA Clean Beads

Product Description:

The kit uses magnetic bead purification method, which is suitable for high-throughput and rapid recovery of RNA fragments of 100 bp ~ 50 kb in samples digested by DNase, with a recovery efficiency of up to 80%. It can effectively remove DNA fragments, primer dimers, salts, proteins and other contamination after DNenzymatic hydrolysis. The system is simple to operate and can be used with most nucleic acid purifiers, and the entire operation process can be fully automated. The transfer enzyme hydrolysis reaction solution is added to the 96-well plate, the binding solution/magnetic bead mixture is added, the nucleic acid is adsorbed to the surface of the magnetic beads, separated by the action of the magnetic field, the solution is aspirated to remove impurities, and after a quick wash, the RNA can be eluted with sterilized water or Elution Buffer, and the recovered RNA can be directly used for subsequent operations such as enzyme digestion, sequencing, hybridization, and PCR reaction.

This product can be used in exactly the same way as the widely used Agencourt RNACLEAN XP, which can be used seamlessly to replace Agencourt RNACLEAN XP and effectively reduce the cost of your experiments.

Experimental manipulation

1. Preparation before the experiment

- Washing solution: 85% ethanol in water.
- Eluent: Buffer EB (10 mM Tris-HCl, pH 8.0) or deionized water (pH between 7.0 ~ 8.0).
- Magnetic stand

2. Experimental manipulation

a. The magnetic bead liquid was taken out from 2 ~ 8 °C 30 min in advance and fully mixed and shaken to make the magnetic beads in the tube completely and evenly suspended.

b. Add the digested sample reaction to the sample tube (200 μL PCR tubes or 96-well plates can be used).

c. 1.8× sample volume of magnetic bead solution was added to the sample tube, vortex and shaken for 5 seconds, and then combined at room temperature for 5 min. *Note: If the magnetic beads settle*

during the placement period, they should be reversed or mixed in time to ensure that the beads are in a suspended state.

d. Place the sample tube on the magnetic stand for about 2 min or wait for the beads to be completely adsorbed by the magnetic stand device, keep the sample tube stationary on the magnetic stand, use a pipette gun to aspirate the supernatant and discard it, and avoid touching the magnetic bead cluster during operation.

e. Keep the sample tube on the magnetic stand, slowly add 300 μL of 85% ethanol to the tube, keep the sample tube from leaving the magnetic stand, and the bead cluster is always adsorbed on the tube wall, and do not disperse.

f. Place the sample tube on the magnetic stand for about 2 min or wait for the beads to be completely adsorbed by the magnetic stand, keep the sample tube stationary on the magnetic stand, use a pipette to aspirate the supernatant and discard, and avoid touching the magnetic beads during operation.

g. Repeat steps E~F to remove all the liquid in the tube.

h. Take the sample tube out of the magnetic stand and place it at room temperature for 3 ~ 5 min to allow the residual ethanol to fully volatilize. *Note: Avoid vacuum drying, too much drying of the beads will reduce the DNA/RNA elution efficiency.*

i. Add 20~100 μL of eluent to the tube, and gently pipette 5-10 times to resuspend the beads and mix well and avoid bubbles during operation.

j. Place at room temperature for 5 minutes to fully elute. *Note: To improve the elution efficiency, if the magnetic beads settle during placement, they should be reversed or swirled in time to ensure that the beads are in a suspended state.*

k. Return the elution tube to the magnet for 2 minutes or allow all beads to be fully adsorbed by the magnet device.

l. Carefully transfer the eluting supernatant to a new sterilized tube, do not touch the beads during the transfer process, and repeat steps k~l if the beads are suspended.

m. The purified product is RNA, which is less stable and can be stored at -20°C for a short period of time, and it is recommended to proceed to the next step of the reaction immediately.

Precautions

1. This product is suitable for a wide range of DNA fragments of 100 bp ~ 50 kb, with a recovery rate of more than 80%, which can be applied to automated and high-throughput RNA purification.
2. Be sure to mix and equilibrate to room temperature before using the beads, as this may affect the recovery efficiency of the sample.

3. The operation process should be strictly guaranteed to be free of RNase and nucleic acid contamination.
4. Washes and eluents need to be prepared with Nuclease-free H_2O to prevent RNA degradation due to the introduction of RNases.
5. Avoid over-drying when opening the lid of the beads, as cracking of the beads indicates that the beads are over-drying, and the RNA elution efficiency will be reduced.
6. It is recommended to leave 2 - 3 μL of liquid for the last step of transferring the supernatant to avoid aspirating the beads and affecting subsequent experiments.
7. This product is for scientific use only.

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