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Quick Oligo Purification Kit

Product Number: DRK0401

Shipping and Storage

To avoid volatilization, oxidation, and pH changes caused by prolonged exposure of reagents to the air, each solution should be covered tightly in a timely manner after use.

Components

Component	Storage	DRK0401 50 Preps
Balance Buffer	RT	5ml
Buffer OB	RT	30 ml
Buffer RW	RT	10 ml
RNase-free H_2O	RT	10 ml
RNase free adsorption column RA	RT	50
Collection tube (2ml)	RT	50

Description

This reagent kit uses a special binding buffer to efficiently purify single or double stranded DNA and RNA with>15 nt. Especially suitable for recovering small fragment labeled probes from mixtures of labeled reactions (digoxin labeling, isotope labeling, biotin labeling, etc.), removing unreacted nucleotides, short oligos, dyes, enzymes, salt ions, etc. The typical recovery rate is as high as 80-90%, and each centrifugal adsorption column can adsorb 10μg of DNA each time. The RNA or DNA recovered using this kit can be used for experiments such as in Situ Hybridization, Northern blot, RNAi, Gel shift assay, Ligation, Sequencing, Microarray analysis, etc.

Features

1. The silicon matrix membrane inside the centrifugal adsorption column is entirely made of specially designed adsorption membranes from world-renowned imported companies, with minimal differences in adsorption capacity between columns and good repeatability.
2. High quality Buffer OB was used, which does not contain traditional Buffer OB's sodium iodide and perchlorate, and does not inhibit downstream reactions such as enzyme digestion and cloning after recovery.
3. The unique formula ensures that the recovery efficiency of this reagent kit is greatly improved compared to ordinary reagent kits. And it is suitable for recycling single or double stranded DNA and RNA.
4. Fast and convenient, without the need for toxic reagents such as phenol and chloroform, and without the need for ethanol precipitation.

Note

1. All centrifugation steps are completed at room temperature using a traditional desktop centrifuge with a speed of up to 13000rpm.
2. Buffer OB contains irritating compounds, and latex gloves should be worn during operation to avoid contact with skin, eyes, and clothing. If it gets on the skin or eyes, immediately rinse with plenty of water or physiological saline.
3. This reagent kit is suitable for non-selective recovery of all nucleic acid fragments in the solution. If you need to selectively recover specific fragments while removing other fragments of different sizes, please choose the gel recovery reagent kit.
4. Although this kit is recommended for the recovery of small fragments or oligonucleotides (>15nt), it can also efficiently recover larger fragments of DNA or RNA<10kb.

5. The recovered RNA should be eluted with RNase free H_2O from this reagent cartridge. And store at -70℃. DNA fragments can also be eluted with TE buffer as needed (10mM Tris HCl, 1mM EDTA, pH 8.0). If there is concern that EDTA may affect downstream reactions, appropriate dilution can be used. Alternatively, it can be eluted directly with (10mM Tris HCl pH 8.0).

About the use of Balance Buffer

1. **Description**

During the long-term storage of nucleic acid adsorption silica gel membrane columns, they react with charges/dust in the air and affect their nucleic acid binding ability. After pre-treatment with equilibrium solution, the silica gel column can greatly reduce the hydrophobic groups of the silica gel membrane in the column and improve the binding ability of nucleic acids. Thus improving the recovery efficiency or yield of silicone columns. The equilibrium solution is a strong alkaline solution. If accidentally touched, please clean it with a large amount of tap water. After use, the bottle cap needs to be tightly closed to avoid contact with air. Store at room temperature. During storage, there may be precipitation formation. Please heat to 37℃ to completely eliminate the precipitation.

2. **Protocol**

Take a new silica gel membrane adsorption column and install it in a collection tube, and suck 100μl of equilibrium solution into the column. Centrifuge at 13000rpm for 1 minute, discard the waste liquid from the collection tube, and reposition the adsorption column in the collection tube. At this point, the balance liquid pre-treatment column is completed. Follow the subsequent operating steps.

Protocol

Tip: Before the first use, please add the specified amount of anhydrous ethanol to the Buffer RW. After adding, please mark the ethanol added in a timely manner to avoid adding it multiple times!

1. Estimate the sample volume (minimum volume of 50μl, insufficient to be supplemented with sterilized water; RNase free H2O is required to recover RNA), add 10 times the volume of Buffer OB to it, and mix gently and thoroughly (PCR reaction system does not require removal of paraffin oil or mineral oil).

   When recycling fragments>100bp, only 5 times the volume of Buffer OB needs to be added.
2. Add the solution obtained from the previous step to the adsorption column EC (the adsorption column is placed in the collection tube), let it stand at room temperature for 1 minute, centrifuge at 12000 rpm for 30-60 seconds, and discard the waste liquid in the collection tube.

   The maximum volume of the adsorption column is 720μl. If the solution volume is greater than 720μl, it can be added in batches.
3. Add 500μl of Buffer RW (please check if anhydrous ethanol has been added first!), centrifuge at 12000rpm for 30 seconds, and discard the waste liquid.
4. Add 500μl Buffer RW, centrifuge at 12000rpm for 30 seconds, and discard the waste liquid.
5. Put the adsorption column EC back into the empty collection tube, centrifuge at 13000rpm for 2 minutes, and try to remove Buffer RW as much as possible to avoid residual ethanol in Buffer RW inhibiting downstream reactions.
6. Take out the adsorption column EC and place it in a clean centrifuge tube. Add 30-50μl of RNase free H2O to the middle of the adsorption membrane, let it sit at room temperature for 2 minutes, and centrifuge at 12000 rpm for 1 minute. If a higher concentration of nucleic acid is required, the obtained solution can be re added to the adsorption column and centrifuged for 1 minute.

   The larger the elution volume, the higher the elution efficiency. If a high nucleic acid concentration is required, the elution volume can be appropriately reduced, but the minimum volume should not be less than 25μl. If the volume is too small, it will reduce the efficiency of nucleic acid elution and reduce production.