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Poly Carrier

Product Number: RNK1701

Shipping and Storage

Room temperature for 6 months

Description

Ethanol low-temperature precipitation is the most commonly used method for recovering DNA and RNA from liquid samples. However, ethanol precipitation cannot completely recover the nucleic acid in the sample, at least about 30% of the nucleic acid is lost. If the nucleic acid concentration in the liquid sample is very low or the DNA is less than 200bp, ethanol precipitation can only recover 50% of DNA and RNA. Poly Carrier is a molecular biology grade poly polymer solution. Adding 5-10μl of Poly Carrier during ethanol precipitation can significantly improve the yield of nucleic acid precipitation and achieve a trace DNA recovery rate of 95-98%. At the same time, it can selectively remove short primer (<22bp) fragments and dNTP for precipitation recovery of labeled probes and removal of unlabeled dNTP. Compared with biologically derived nucleic acid precipitation aids such as glycogen and tRNA, Poly Carrier itself has no nucleic acid contamination, no DNase and RNA enzyme activity, and does not affect enzyme digestion, ligation, transcription, PCR, transformation transfection, etc., nor does it affect nucleic acid electrophoresis and DNA protein interaction. Poly Carrier has become the most commonly used nucleic acid precipitant.

Feature

1. Significantly increase the yield of DNA or RNA precipitation.
2. The recovery of trace amounts of DNA and RNA (20pg) reached 95-98%.
3. It does not affect enzyme digestion, ligation, transcription, PCR and other reactions.
4. Does not affect electrophoresis and DNA protein interactions.

Note

Poly Carrier can increase the optical density value of RNA or DNA. Therefore, when measuring the optical density value, in order to eliminate the influence of Poly Carrier, a blank control sample should be made using the same experimental process (using the same reagents and Poly Carrier, but without RNA or DNA samples, dissolve the final Poly Carrier precipitate in the same solution as the sample). Measure the optical density values of the sample and blank control at 260 and 280nm. The actual optical density value of the sample can be obtained by subtracting the optical density value of the blank control from the optical density value of the sample. If quantification does not require precision, it can also be estimated.

Protocol

1. Methods for improving the efficiency of DNA or RNA precipitation recovery:
   1.1. Add 4-8μl Poly Carrier to 1ml RNA or DNA solution, invert and mix well.
   1.2. Follow the standard ethanol precipitation method to precipitate RNA or DNA. For example, add a 3M pH 5.2 sodium acetate solution (a solution without RNA enzyme treatment should be used for RNA precipitation) to a final concentration of 0.3 moles (about 1/10 volume), then add 2 times the volume of anhydrous ethanol, mix well, and let it sit at room temperature or refrigerator for 10-30 minutes. Centrifuge at 12000 rpm for 10 minutes, discard the supernatant, rinse with 70% ethanol, remove the supernatant, dry the precipitate, and dissolve the precipitate again in an appropriate amount of DEPC treated water (RNA precipitation) or other buffer such as TE buffer.
2. Methods for improving DNA or RNA yield:
   Add 4-8μl Poly Carrier to each milliliter of total RNA extraction reagent TRIpure (TRIzol) or DNA extraction reagent DNAzol, and then proceed with the subsequent steps according to the instructions of these products.