Ethachinmate

Research use only

Code No.	Package Size
318-01793	0.02 ml
312-01791	0.2 ml

"Ethachinmate" is a carrier solution for alcohol precipitation of DNA and RNA, which contains a high molecular weight acrylamidic polymer. Ethacinmate improves alcohol precipitation drastically using salt, (e. g., >0.1 mol/l Sodium Acetate).

< Advantages >

1. Recovery of tenuous nucleotide

It is possible to recover nearly all of the DNA (> 100 base pairs) and RNA (> 120 bases). (If concentration of nucleotide is less than 20 ng/ml, efficiency may lower.)

2. Rapid

There is no need to incubate at -20˚C or -80˚C when using Ethchinmate. Immediate centrifugation may be performed after the addition of alcohol.

3. No inhibition

It is easy to dissolve the nucleotide pellet into the buffer. Ethachinmate once added to the solution does not inhibit enzyme reactions like PCR, restriction enzyme digestion, etc.

4. Visible

Once the ethanol is added, Etachinmate itself forms a visible pellet. The risk of losing the pellet by washing is therefore reduced.

< Protocol >

1) Add 3.3 µl of 3mol/l Sodium Acetate (attached with Ethachinmate) into 100 µl of DNA solution.

Final salt concentration must be more than 0.1 mol/l.

2) Add 1 µl of Ethachinmate.

Add 1 µl of Ethachinmate per 100 µl of DNA solution. If the amount of DNA solution is less than 100 µl, add 1 µl of Ethachinmate. If the amount of DNA solution is more than 300 µl, 3 µl of Ethachinmate is the correct amount to be added.

Once Ethachinmate is added into DNA solution there is no need to add Ethachinmate again if performing more centrifugations. Adding to much Ethachinmate may make the solution viscous, causing the following processes to be difficult.

3) Vortex.

Vortexing improves the efficiency to recover subtle DNA.

4) Add ethanol, 200～250µl

5) Vortex.

Vortexing improves the efficiency to recover subtle DNA.

6) Centrifuge at 12000 x g for 5 minutes.

Cooling is not necessary.

7) Precipitation.

Pellet is visible. Pellet may then be dissolved in buffer and used as a template for enzyme reactions. Wash with 70% ethanol, if needed.

< Q & A >

Q1. What is Ethachinmate?

A1, "Ethachinmate" is a carrier solution for ethanol or isopropanol precipitation of DNA and RNA, which contains high a molecular weight acrylamidic polymer.

Q2. Is it OK to use for RNA precipitation?

A2, It is OK. We perform QC for DNase and RNase.

Q3. Which length and concentration of DNA and RNA are recovered?

A3, It is possible to recover almost all of the DNA (> 100 base pairs) and RNA (> 120 bases). If the concentration of nucleotide is less than 20 ng/ml, efficiency may lower.

Q4. Does it have any effect on quantization of nucleotide using absorbance at 260 nm?

A4, No, it has no affect.

Q5. My DNA solution is less than 100 µl. How much Ethachinmate should I use?

A5, Add 1 µl of Ethachinmate. Making the DNA pellet visible requires 1 µl of Ethachinmate. Calculate the amount of 3 mol/l Sodium Acetate to add into your DNA solution based on its volume. (e. g., for 50 µl of DNA solution, add 1 µl of Ethachinmate and 1.7 µl of 3 mol/l Sodium Acetate).

Q6. My DNA solution is more than 300 µl. How much Ethachinmate should I use?

A6, Add 3 µl of Ethachinmate. There is no need to add more Ethachinmate. Be sure to calculate amount of 3 mol/l Sodium Acetate to add into your DNA solution based on its volume. (e. g., for 600 µl of DNA solution, add 3 µl of Ethachinmate and 19.8 µl of 3 mol/l Sodium Acetate).

Q7. I want to perform ethanol precipitation two or more times. Should I add Ethachinmate for each precipitation?

A7, No, once you add Ethachinmate into DNA solution there is no need to add Ethachinmate again. Multiple additions of Ethachinmate may make the solution viscous, causing subsequent processes to become more difficult.

Q8. Does freezing affect quality of Ethachinmate?

A8, No, it doesn't affect the quality.

Q9. Does autoclave freeze affect quality of Ethachinmate?

A9, No, it doesn't affect the quality.

Q10. Does phenol / chloroform treatment of DNA solution containing Ethachinmate bring any effect on the quality of Ethachinmate?

A10, No, it doesn't affect the quality.

Q11. Does using Ethachinmate affect band pattern of gel electrophoresis?

A11, In some cases bands larger than 10kbp may become slightly broader.

Q12. Does Ethachinmate affect digestion using restriction enzyme?

A12, No, it doesn't affect digestion.

Q13. Does Ethachinmate affect ligation using T4 DNA ligase?

A13, No, it doesn't affect ligation.

Q14. Does Ethachinmate affect cDNA synthesis using AMV reverse transcriptase?

A14, No, it doesn't affect cDNA synthesis.

Q15. Does Ethachinmate affect PCR using Taq DNA polymerase?

A15, No, it doesn't affect PCR.

Q16. Does Ethachinmate affect reaction of Klenow Fragment?

A16, No, it doesn't affect.

Q17. Does Ethachinmate affect transformation of E. coli?

A17, No, it does not, there are also no affects on electroporation.

Q18. Does Ethachinmate affect in vitro Packaging?

A18, It slightly decreases the efficiency of lambda packaging.

Q19. Does ethanol precipitation with Ethachinmate precipitate mono nucleotide?

A19, Experiments using 8 and 17 base nucleotides did not show significant differences between the presence or the absence of Ethachinmate.

Q20. Does Ethachinmate get denatured in hybridization solution containing formamide?

A20, No. It is not become denatured.

Q21. Does Ethachinmate affect blotting?

A21, No, it doesn't affect blotting

Q22. Does Ethachinmate affect sequencing?

A22, It does not affect cycle sequencing with ABI Prism® 377, or sequencing by dideoxy method.

Q23. Does the addition of Ethachinmate make the pellet detach from the wall of the tube?

A23, It depends on the type of material of the tube. (e. g., "Safe-Lock tube" from Eppendorf tends to show this.)

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