

Polyadenylic Acid, Poly (A), Carrier RNA

Introduction

Poly A, polyadenylate, is a mixture of 100 ~ 10000 polyadenylates, which is polymerized by polynucleotide phosphorylase in vitro. In vivo, poly (a) is added to the 3-terminal of mRNA by enzyme to improve the stability of mRNA. In the application of nucleic acid extraction, adding poly A to the lysate or binding solution can improve the yield of DNA and RNA. The mechanism of poly A improving the yield of nucleic acid is as follows:

1. **Saturated contact with the surface adsorption of articles.** Most polypropylene articles have static electricity on the surface, which will adsorb nucleic acids. Carrier RNA can saturate these adsorption effects and reduce the loss of target nucleic acids.
2. **Inactivate trace nucleases:** There are various nucleases in biological samples and environment. Poly A can inactivate trace nucleases in the extraction or preservation steps to improve the yield and stability of target nucleic acids.
3. **Coprecipitation:** In the nucleic acid purification step of alcohol mediated precipitation or binding, poly A can coprecipitate with the target nucleic acid or form polymer particles to improve the recovery.

Ordering information

CAT.No.	Product Name	Package
C12110	Carrier RNA, Poly A (Lyophilized Powder)	310ug/Tube
C12111		2g/Bottle
C12112		100-1000ug/Tube, customized

Specification

CAS Number	26763-19-9
Appearance	White lyophilized powder
Purity	99%
Molecular Weight	700-3500 KDa
Transportation conditions	Room Temperature
Storage conditions	-20-8°C, dry storage, long-term storage should be placed at - 20° C.
Usage method	Take an appropriate amount of lyophilized powder, add DEPC treated water or guanidine salt solution to dissolve it into 0.1-1ug/ul, and then sub pack it and store it at - 20°C.
Application	<ol style="list-style-type: none"> 1. Virus DNA/RNA extraction: adding 1-5ug Carrier RNA to the lysate can improve the yield of RNA/DNA, stabilize the target nucleic acid and avoid the degradation of the purified nucleic acid during storage. 2. In the micro DNA/RNA extraction by column membrane method (<1ug), adding carrier RNA to 1-5ug is conducive to improve the yield of nucleic acid. 3. In the alcohol mediated nucleic acid precipitation and concentration step, the addition of 1-2ug carrier RNA is helpful to improve the recovery of short segment RNA. 4. In the quantitative probe PCR reaction solution, adding 10-100ng carrier RNA to the reaction solution is helpful to improve the sensitivity and reduce the CT value.