

Product Manual

Product Name	Poly(A) Polymerase (GMP-grade)
Source	Recombinant expression in Escherichia coli
Catalog Number	CSB-DEM084
Physical Form	Liquid
Enzyme activity	5 U/ μ L
Storage Conditions	-20 \pm 5 $^{\circ}$ C
Storage Buffer	20mM Tris-HCl pH 8.0, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 0.1% Triton X-100, 50% glycerol
Activity definition	In a 20 μ L system, the amount of enzyme required to allow 1 nmol of AMP to be incorporated into RNA for 10 min at 37 $^{\circ}$ C is 1 unit.
Shelf Life	24 months

Product Description

Poly(A) Polymerase, also known as Poly(A) Polymerase, is capable of catalyzing the addition of AMP, derived from ATP, to the 3' end of single-stranded RNA, forming a Poly(A) tail, in a template-independent manner. E. coli Poly(A) Polymerase can utilize various single-stranded RNAs as substrates, but DNA cannot be used as a substrate for this reaction. Double-stranded RNA and short oligonucleotides are not recommended as substrates for this reaction. The Poly(A) tail reaction catalyzed by Poly(A) Polymerase can only use ATP and not ADP or dATP. When using CTP and UTP, their incorporation is less than 5% of ATP. GTP, on the other hand, cannot be added to the 3' end of RNA.

Product Components

Label	Components	Specifications		
1	mRNA Cap 2' -O-Methyltransferase (GMP-grade)	10KU	50KU	250KU
2	10 \times Capping Reaction Buffer	0.4mL	2mL	10mL

Operating instructions

1. Reaction System Configuration:

Components	Volume (μ L)
10 \times Reaction Buffer	2
ATP (10 mM/ μ L)	2

RNase Inhibitor (40 U/uL)	0.5
RNA	0.5-10 ug
E.coli poly(A) Polymerase (5 U/ μ L)	1
ddH ₂ O	Up to 20

2. React at 37°C for 30 minutes, then add EDTA to a final concentration of 10mM or incubate at 65°C for 20 minutes to terminate the reaction.

Precautions:

1. DNA cannot be used as a substrate for this reaction. Double-stranded RNA and short oligonucleotides are not recommended as substrates for this reaction.
2. The Poly(A) tail reaction catalyzed by Poly(A) Polymerase can only use ATP and not ADP or dATP.