

SP6 RNA Polymerase (20 U/μL)

Product description

SP6 Bacteriophage RNA Polymerase is a DNA-dependent RNA polymerase that exhibits high specificity for the SP6 bacteriophage promoter. It catalyzes the incorporation of NTPs downstream of the SP6 promoter on single- or double-stranded DNA templates, synthesizing RNA complementary to the DNA template downstream of the SP6 promoter. This enzyme not only performs conventional RNA synthesis but also recognizes modified NTPs, such as biotin-, digoxigenin-, or fluorescein-labeled NTPs, making it suitable for a wide range of research applications and biotechnological uses.

Specifications

Cat NO.	14810ES84 / 14810ES92
Size	2,000 U/ 10,000 U
Concentration	20 U/μL
Source	Recombinant <i>E.coli</i> strain carrying the Salmonella typhimurium SP6 RNA gene
Consensus Promoter Sequence	SP6: ATTTAGGTGACACTATAGAAGNG

Components

Components No.	Name	14810ES84	14810ES92
14810-A	SP6 RNA Polymerase (20 U/μL)	100 μL	500 μL
14810-B	10×SP6 Reaction Buffer	500 μL	2×1 mL

Storage

This product should be stored at -25~-15°C for 2 years.

Instructions

1. Prepare the following reaction mixture and mix thoroughly:

Component	Volume
10× SP6 Reaction Buffer	5 μL
NTP Mixture (25 mM each)	1 μL
Linear DNA Template (containing SP6 promoter sequence)	0.1–1 μg
RNase Inhibitor (40 U/μL)	0.3 μL
SP6 RNA Polymerase (20 U/μL)	2 μL
DEPC H ₂ O	to 50 μL

[Note]: Transcription should be performed under RNase-free conditions. The reaction system can be scaled up or down proportionally as needed.

2. After mixing, incubate at 37°C for 1–2 hours.

3. Terminate the reaction by adding 5 μ L of 0.5 M EDTA (pH 8.0) or by cooling at -20°C , followed by electrophoretic analysis of the products.

Notes

1. Avoid repeated freeze-thaw cycles. Use nuclease-free pipette tips and microcentrifuge tubes during experiments.
2. This product is intended for research use only.
3. For your safety and health, wear a lab coat and disposable gloves when handling this product.