

TransScript® All-in-One First-Strand cDNA Synthesis SuperMix for PCR

Please read the manual carefully before use

Cat. No. AT321

Version No. Version 1.0

Storage: at -18°C or below for two years

Description

TransScript® All-in-One First-Strand cDNA Synthesis SuperMix for PCR provides all the necessary components for cDNA synthesis from total RNA or mRNA. The SuperMix is provided at 5× concentration and used at 1× concentration by adding RNA and H₂O.

The resulting cDNA are suitable for regular PCR, not for qPCR.

Highlights

- All-in-one SuperMix: Simply add RNA template and water to start the reaction.
- Optimal ratio of Oligo(dT)₁₈ Primer and Random Primer (N9) with an optimized SuperMix composition for high-efficiency long-chain cDNA synthesis.
- PCR ready cDNA in 30 minutes (unsuitable for qPCR).
- cDNA up to 12 kb.
- Highly compatible with PCR reagents.

Application

Multiple copy and low copy gene detection

Kit Contents

Component	AT321-01 (50 rxns)
5×TransScript® All-in-One SuperMix for PCR	200 µl
RNase-free Water	1 ml

Briefly spin each component before use.

First-Strand cDNA Synthesis

1. Reaction Components

Component	Volume
Total RNA/mRNA	0.1 ng-5 µg/10 pg-500 ng
5×TransScript® All-in-One SuperMix for PCR	4 µl
RNase-free Water	Variable
Total volume	20 µl

2. Incubation

- For RNA template with poly(A)⁺, incubate at 42°C for 30 minutes.
- For RNA template without poly(A)⁺, incubate at 25°C for 10 minutes, then at 42°C for 30 minutes.

3. Incubate at 85°C for 5 seconds to inactivate TransScript® RT/RI.



Recommended PCR system and conditions (taking 50 µl reaction system as an example)

Component	Volume	Final Concentration
Template	2 µl	as required
Forward Primer (10 µM)	1 µl	0.2 µM
Reverse Primer (10 µM)	1 µl	0.2 µM
2× <i>TransTaq</i> [®] HiFi PCR SuperMix II	25 µl	1×
Nuclease-free Water	Variable	-
Total volume	50 µl	-

Thermal cycling conditions

94°C	2-5 min	} 35-40 cycles
94°C	30 sec	
50-60°C	30 sec	
72°C	1-2 kb/min	
72°C	5-10 min	

Notes

- Avoid RNase contamination.
- Use high-quality RNA templates to ensure the success of reverse transcription.
- For complex RNA template, or to obtain higher synthesis efficiency, it is recommended to mix RNA template, primers, and RNase-free Water well, incubate at 65°C for 5 minutes, and put on ice for 2 minutes before adding other reaction components.
- Mixing all the reaction components in one step can complete most reverse transcription reactions. For complex RNA templates, or to obtain higher synthesis efficiency, it is recommended to add thermal incubation steps for the template and primers according to the instruction.

For research use only, not for clinical diagnosis.

Version number: V1-202008

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