

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

Cat. No. AH321

Storage: at -20°C for two years

## Description

TransScript® II 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 H<sub>2</sub>O. **The resulting cDNA is suitable for regular PCR, not for qPCR.**

## Highlights

- One-tube format for simple and fast setup and reduced pipetting variability.
- The optimal ratio of oligo(dT)<sub>20</sub> primer to random primer(N9) for PCR ready cDNA.
- PCR-ready cDNA in 30 minutes (unsuitable for qPCR).
- cDNA up to 15 kb.

## Applications

- cDNA library construction, 3' and 5' RACE
- Multiple copy and low copy gene detection
- GC-rich or complex secondary structure RNA template

## Kit Contents

Components	AH321-01 (50 rxns )
5×TransScript® II All-in-One SuperMix for PCR	200 µl
RNase-free Water	1 ml

## Procedures

### First-Strand cDNA synthesis

#### 1. Reaction Components

Components	Volume
Total RNA/mRNA	50 ng-5 µg/5-500 ng
5×TransScript® II All-in -One SuperMix for PCR	4 µl
RNase-free Water	to 20 µl

Optional: for higher efficiency, suggest to mix RNA and water first. Incubate the mixture at 65°C for 5 minutes, on ice for 2 minutes. Then add other components.

#### 2. Incubation

- For RNA template with poly(A)<sup>+</sup>, incubate at 50°C for 30 minutes.
- For RNA template without poly(A)<sup>+</sup>, incubate at 25°C for 10 minutes, then at 50°C for 30 minutes.
- For GC-rich or complex secondary structure RNA template, incubate at 55°C for 30 minutes.

3. Incubate at 85°C for 5 seconds to inactivate enzymes.

### Reaction Components

Component	Volume	Final Concentration
Template	2 $\mu$ l	as required
Forward Primer (10 $\mu$ M)	1 $\mu$ l	0.2 $\mu$ M
Reverse Primer (10 $\mu$ M)	1 $\mu$ l	0.2 $\mu$ M
2 $\times$ TransTaq <sup>®</sup> HiFi PCR SuperMix II	25 $\mu$ l	1 $\times$
Nuclease-free Water	Variable	-
Total volume	50 $\mu$ l	-

### 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	

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