

## HelixCRIPT™ One-Step RT-PCR Kit [*Speed-Pfu*]

### Kit Contents

HelixCRIPT™ One-Step RT-PCR Kit [ <i>Speed-Pfu</i> ]		
Cat. No.	ORTS100 (100 rxns)	ORTS500 (500 rxns)
Enzyme Mix [ <i>Speed-Pfu</i> ]	0.2 ml	0.2 ml x 5ea
2x Reaction Mix [ <i>Speed-Pfu</i> ] (containing dNTP mix, MgCl <sub>2</sub> )	1.25 ml x 2ea	1.25 ml x 10ea
Instruction for Use	1ea	1ea

\* Store at -20°C

### Description

**HelixCRIPT™ One-Step RT-PCR Kit** is designed for sensitive amplification of the target gene in one-tube reaction from total transcripts. A reverse transcriptase, HelixCRIPT™ *Thermo* Reverse Transcriptase, and a thermostable DNA polymerase, HelixAmp™ *Speed-Pfu* polymerase are supplied as an enzyme mixture.

### HelixCRIPT™ One-Step RT-PCR Kit [*Speed-Pfu*] : Fast and high fidelity RT-PCR

One-step RT-PCR system provide the several advantages.

- Synthesis of cDNA and PCR amplification corresponding to target gene in one-tube reaction
- Obtain the reproductive data in the repetitive experiment(s)
- Can save the time and cost for preparation of RT-PCR
- Amplification of low-copy transcripts by RT-PCR

### Application

Detection of target gene transcript from RNA

Cloning of target cDNA products

Semi-quantitative, quantitative analysis of RNA transcription level

### Quality control assay data

#### Functional analysis

The activity for cDNA synthesis and PCR amplification of target gene transcript using HelixCRIPT™ One-Step RT-PCR Kit was evaluated by Limit-of Detection (LOD) assay and long range of gene constitutively-expressed in human total transcripts.

Quality authorized by Yountaek Go



### NanoHelix Co., Ltd.

43-15, Techno 5-ro, Yuseong-Gu, Daejeon, 34014, South Korea. TEL : 82-42-867-9055, FAX : 82-42-867-9057

E-mail : info@nanohelix.net < [www.nanohelix.net](http://www.nanohelix.net) [www.nanohelix.co.kr/KOR](http://www.nanohelix.co.kr/KOR) >

## Protocol

1. Program the thermal cycler as follows in order to synthesize cDNA using HelixCript™ One-Step RT-PCR Kit with HelixCript™ *Speed-Pfu*.

Step	Condition		Cycle(s)
cDNA Synthesis		42 ~ 55°C for 30 ~ 50 min	1
Pre-denaturation		95°C for 2 min	1
PCR Amplification	Denaturation	95°C for 20 sec	30 ~ 40
	Annealing	<sup>1)</sup> AT°C for 40 sec	
	Extension	72°C for 30 sec/kb <b>Collect the fluorescence data</b>	
Post extension		72°C for 5 min	1

<sup>1)</sup> AT, annealing temperature of primers used

$$\text{Annealing Temperature} = T_m - (4 \sim 6^\circ\text{C})$$

$$\text{Where, } T_m (\text{Melting Temp.}) = [4^\circ\text{C} \times (\text{G} + \text{C})] + [2^\circ\text{C} \times (\text{A} + \text{T})]$$

2. Mix following components in a tube.

Components	Volumes
2x Reaction Mix [ <i>Speed-Pfu</i> ]	25 $\mu\text{l}$
RNA Template (1 ng ~ 5 $\mu\text{g}$ )	X $\mu\text{l}$
Forward primer (10 pmoles/ $\mu\text{l}$ )	2 $\mu\text{l}$
Reverse primer (10 pmoles/ $\mu\text{l}$ )	2 $\mu\text{l}$
Enzyme Mix [ <i>Speed-Pfu</i> ]	2 $\mu\text{l}$
RNase-free water	to 50 $\mu\text{l}$

3. Gently mix and immediately centrifuge the reaction mix.
4. Perform the one-step RT-PCR.

## Products

Cat. No.	Products	Size
<b>ORTS100</b>	HelixCript™ One-Step RT-PCR Kit [ <i>Speed-Pfu</i> ]	100 rxns
<b>ORTS500</b>	HelixCript™ One-Step RT-PCR Kit [ <i>Speed-Pfu</i> ]	500 rxns

## NanoHelix Co., Ltd.

43-15, Techno 5-ro, Yuseong-Gu, Daejeon, 34014, South Korea. TEL : 82-42-867-9055, FAX : 82-42-867-9057

E-mail : info@nanohelix.net < [www.nanohelix.net](http://www.nanohelix.net) [www.nanohelix.co.kr/KOR](http://www.nanohelix.co.kr/KOR) >