

## RealHelix™ qRT-PCR Lyo-Cake [Probe] [UDG System]

### Kit Contents

RealHelix™ qRT-PCR Lyo-Cake [Probe] [UDG System]		
Cat. No.	LDFQRU-C96 (96rxns)	LDFQRU-C480 (480rxns)
qRT-PCR Lyo-Cake [Probe] [UDG]	8-strip x 12ea	8-strip x 60ea
RNase-free Water	1.0ml x 2ea	1.0ml x 10ea
8-Cap Strip	12ea	60ea
Instructions for Use	1ea	1ea

### Description

**RealHelix™ qRT-PCR Lyo-Cake [Probe] [UDG System]**, a lyophilized qRT-PCR reagent, provides a probe-based rapid qRT-PCR amplification of RNA targets. Through the lyophilization method, moisture is removed from the product to facilitate the storage or transportation of products at room temperature. The Lyophilized qRT-PCR premix can be rehydrated simply by adding RNase-free Water along with primers and templates.

RealHelix™ qRT-PCR Lyo-Cake [Probe] [UDG System], contains antibody-inhibited hot-start Taq DNA polymerase, heat-labile Uracil-DNA glycosylase(HL-UDG), reverse transcriptase, RNase inhibitor, dUTP and dNTPs, Mg<sup>2+</sup>, salts, and stabilizing agents. The applied HL-UDG/dUTP system eliminates the carryover contamination of PCR products from previous reactions.

### Application

Quantitative real-time RT-PCR

### Storage

- Store at room temperature for a maximum of 6 months.
- For extended storage, maintain the product at or below 4°C for up to 12 months.
- Please protect it from direct light exposure.
- After opening the pouch, we suggest promptly resealing it and storing it in a freezer until the next use.

## Quality control

Each lot of **RealHelix™ qRT-PCR Lyo-Cake [Probe][UDG System]** was tested against predetermined specifications to ensure consistent product quality.

## Protocol

### 1. Reaction Mixture

- (1) Remove the seal of the lyophilized cake tube.
- (2) Add the reaction components to the lyophilized qRT-PCR cake tube as in the following table.

Components	Volumes
RNA Template	1 ~ 5 $\mu$ l
Forward primer (10 $\mu$ M)	0.5 ~ 1.0 $\mu$ l
Reverse primer (10 $\mu$ M)	0.5 ~ 1.0 $\mu$ l
Probe (10 $\mu$ M)	0.5 ~ 1.0 $\mu$ l
ROX Dye <sup>1)</sup>	Optional
RNase-free Water	Adjust to final 20 $\mu$ l

- <sup>1)</sup> Use the recommended amount of ROX Dye (Passive Reference) depending on the instrument. ROX Dye (Passive Reference) is not included in this kit.

- (3) Seal the tube with a cap strip. Gently tap the reaction mix and centrifuge briefly.
- (4) Perform the real-time PCR.

### 2. PCR Condition

Program a real-time PCR instrument according to the recommendations below.

3. Step	Condition	Cycle(s)
[Optional] UDG reaction*	20°C ~ 25°C for 5min*	1
cDNA Synthesis	50°C for 10~40 min	1
Enzyme Activation	95°C for 2 ~ 5 min	1
PCR Amplification	Denaturation 95°C for 5 ~ 15 sec**	45
	Annealing & extension <b>55 ~ 60°C for 10 ~ 30 sec**</b> <b>Collect the fluorescence data</b>	

\* The UDG reaction step is not essential. The UDG will efficiently remove carryover contaminant DNA during the reaction mix setup and cyler ramping.

\*\* The reaction time for each step should be optimized on the applied thermocycler.

## Products

	Products	Cat. No.	Size
Cake type	RealHelix™ qPCR Lyo-Cake [Probe]	LDFQP-C96	96rxns
		LDFQP-C480	480rxns
	RealHelix™ qPCR Lyo-Cake [Probe] [UDG System]	LDFQPU-C96	96rxns
		LDFQPU-C480	480rxns
	RealHelix™ qRT-PCR Lyo-Cake [Probe]	LDFQR-C96	96rxns
		LDFQR-C480	480rxns
	RealHelix™ qRT-PCR Lyo-Cake [Probe] [UDG System]	LDFQRU-C96	96rxns
		LDFQRU-C480	480rxns
Bead type	RealHelix™ qPCR Lyo-Dot [Probe]	LDFQP-B96	96rxns
	RealHelix™ qPCR Lyo-Dot [Probe] [UDG System]	LDFQPU-B96	96rxns
	RealHelix™ qRT-PCR Lyo-Dot [Probe]	LDFQR-B96	96rxns
	RealHelix™ qRT-PCR Lyo-Dot [Probe] [UDG System]	LDFQRU-B96	96rxns