Ver. 2304-02

RealHelix™ qPCR Kit [Probe]

Kit Contents

RealHelix™ qPCR Kit [Probe]		
Cat. No.	**QP2-P200 (200rxns)**	**QP2-P500 (500rxns)**
2x Premix [Probe]	1ml x 2ea	1ml x 5ea
ROX Dye (25μM)	0.2ml	0.5ml
Instruction for Use	1ea	1ea

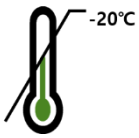
Description

RealHelix™ qPCR Kit [Probe] is designed to perform a rapid real-time quantification of target DNA using dual-labeled probes. The convenient 2x concentrated premix contains hot-start PCR enzyme, dNTPs, buffers, Mg^{2+}, and stabilizing agent. The hot-start PCR enzyme provides high specific amplification of target DNA and minimizes the non-specific reactions and production of primer dimers. The separately supplied ROX Dye could be used as a passive reference dye in real-time PCR instruments that are compatible with the evaluation of the ROX signal.

Application

Quantification of target DNA by real-time PCR

Storage



Store below -20℃

※ ROX Dye should be stored in the dark.

Shelf life

12 months

NanoHelix Co., Ltd.

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Quality Control

By Nanohelix's ISO 13485-certified quality management system, each lot of **RealHelix™ qPCR Kit [Probe]** was tested against predetermined specifications to ensure consistent product quality.

Protocol

1. **Program a real-time PCR instrument according to the recommendations below. Set up the excitation and emission maxima suitable to your fluorescent probe chemistry.**

<2-step cycling method>

Step	Condition		Cycle(s)
Enzyme Activation		95℃ for 15 min	1
PCR Amplification	Denaturation	95℃ for 20 sec	40
	Annealing & Extension	60℃ for 40 sec **Collect the fluorescence data**	

<3-step cycling method>

Step	Condition		Cycle(s)
Enzyme Activation		95℃ for 15 min	1
PCR Amplification	Denaturation	95℃ for 20 sec	40
	Annealing	[1)]**AT**℃ for 30 sec	
	Extension	72℃ for 1 min/kb **Collect the fluorescence data**	

[1)] **AT,** annealing temperature of primers used

Annealing Temperature = T_m – (6 ~ 8℃)

Where, T_m (Melting Temp.) = [4℃ x (G + C)] + [2℃ x (A + T)]

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2. Add following components for a single 20µl reaction volume.

Components	Volumes
DNA Template	X µl
2x Premix [Probe]	10µl
Forward primers (10µM)	0.5µl (final 0.25µM)[1)]
Reverse primers (10µM)	0.5µl (final 0.25µM)[1)]
Probes (10µM)	0.2 ~ 0.5µl (final 0.1 ~ 0.25µM)[1)]
ROX Dye (25µM)	Optional [2)]
RNase-free Water	Adjust to final 20µl

[1)] The amount of each primer and probe should be adjusted according to the efficiencies of target amplification and/or signal intensities.

[2)] Use the recommended amount or concentration of ROX Passive Reference Dye depending on the instrument.

3. Gently mix and immediately centrifuge the reaction mix.

4. Perform the Real-time PCR.

Products

Cat. No.	Products	Size
QP2-P200	RealHelix™ qPCR Kit [Probe]	200rxns
QP2-P500	RealHelix™ qPCR Kit [Probe]	500rxns

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