HiScript IV All-in-One Ultra RT SuperMix for qPCR

R433

Version 24.3

Product Description

HiScript IV All-in-One Ultra RT SuperMix for qPCR is a next-generation of reverse transcription kit specifically designed for qPCR applications. This product integrates both genomic DNA elimination and RNA reverse transcription components in a single tube, requiring only the addition of template and water to initiate the reaction. Using our new generation of reverse transcriptase and heat liable DNase (HL-DNase), along with a specially optimized buffer, the kit can complete genomic DNA elimination and reverse transcription in as fast as 5 min. The reverse transcription product (cDNA) is compatible with both dye-based and probe-based qPCR methods.

Components

	Components	R433-01 100 rxns (20 μl/rxn)
☐	RNase-free ddH_2O	2 × 1 ml
■	4 × All-in-One Ultra qRT SuperMix*	500 μl

* It contains Reverse Transcriptase, HL-DNase, RNase Inhibitor, dNTP Mix and Random Primers/Oligo $(dT)_{20}$VN Primer Mix, etc.

Storage

Store at -30 ~ -15°C and ship at ≤0°C.

Applications

It is applicable for reverse transcription reaction of animal, plant and microbial RNA. The obtained cDNA is compatible with dye-based and probe-based qPCR.

Self-prepared Materials

Materials

RNase-free centrifuge tube (1.5 ml), RNase-free PCR tube (0.2 ml), RNase-free tips.

Pipette, PCR instrument, ice or ice box.

qPCR Reagents Selection Guide

Dye-based qPCR reagent (e.g., Taq Pro Universal SYBR qPCR Master Mix, Vazyme #Q712) or probe-based qPCR reagent (e.g.,AceQ Universal Probe Master Mix V2, Vazyme #Q513)can be selected as the qPCR reagent.

Notes

1. It is recommended to add no more than 1 μg of total RNA to a 20 μl reverse transcription reaction system. If target genes with low expression levels, the amount of total RNA can be up to 5 μg. Excess RNA will cause C_T values to deviate from the linear range in qPCR assays.
2. Extend reverse transcription time to 15 min to obtain cDNA up to 5 kb in size. For downstream experiments requiring long fragment PCR amplification, the HiScript IV 1st Strand cDNA Synthesis Kit (+gDNA wiper) (Vazyme #R412) can be used for operation.
3. The obtained cDNA can be directly used for qPCR detection.The volume of undiluted cDNA template should be ≤1/10 of qPCR reaction system.

Experiment Process

1. Reaction System

Mix the following components in an RNase-free centrifuge tube:

Components	Volume	
RNase-free ddH_2O	to 20 μl	☐
4 × All-in-One Ultra qRT SuperMix	5 μl	■
Template RNA	Total RNA: 1 pg - 1 μg	

Gently pipette up and down several times to mix thoroughly.

2. Reaction program

Temperature	Time
50℃	5 min*
85℃	5 sec

* If more cDNA products are required, the reaction time can be extended to 10 min.

The products can be used for qPCR immediately or be stored at -20°C for 6 months. It is recommended to store in aliquots at -70°C for long term storage. cDNA should avoid repeated freezing and thawing.