Product Information

UEIris II RT-PCR System for First-Strand cDNA Synthesis (with dsDNase)

Catalog Number: R2028

Product Size: 20 μL×50T, 20 μL×100T

Contents:

Component	50T	100T
UEIris II RT MasterMix (5×)	200 μL	2×200 μL
dsDNase (1 U/μL)	50 μL	100 μL
RNase-free water	1 mL	2×1 mL

* UEIris II RT MasterMix contains the following components: Reverse transcriptase, RNase inhibitor, dNTPs, buffer, Oligo $(dT)_{20}$ and random primers.

Storage

Store at -20°C. When stored as directed, product is stable for at least 12 months.

Description

UEIris II RT-PCR System for First-Strand cDNA Synthesis is a simpler system for synthesizing RNA from cDNA. It contains all the reagents required for the first-strand cDNA synthesis, and only needs to add RNA template and water for reverse transcription. The synthesized first-strand cDNA can be widely used in second-strand synthesis, hybridization, PCR amplification, and qRT-PCR.

The reverse transcriptase of UEIris II master mix is a new generation of reverse transcriptase. The enzyme has a faster reaction speed and can complete the reverse transcription reaction in only 10 minutes. The reverse transcriptase also has the characteristics of higher product yield, longer cDNA fragments, and wider use of templates.

The dsDNase specifically digests double-stranded DNA, but does not digest single-stranded DNA and RNA, and is thermally sensitive. It can be rapidly and irreversibly inactivated at 55 °C to achieve the removal of genomic contamination and the reverse transcription reaction simultaneously.

Protocol

1. Mix the following components in a nuclease-free, thin-walled PCR tube on ice:

Component	Volume
UEIris II RT MasterMix (5×)	4 μL
dsDNase	1 μL
Template RNA	50 ng - 1 μg
RNase-free water	to 20 μL

2. Mix gently and ensure all the components are at the bottom of the amplifcation tube;

3. Place the reaction in the PCR instrument and run program following the procedure below:

37℃, 2 min. Remove genomic DNA contamination;

55℃, 10 min (If the RNA is less than 3 KB, the reaction time can be appropriately shortened to 5 min);

85℃, 10 sec.

4. The obtained product quickly placed on ice or immediately

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stored at -20 ° C for subsequent experiments.

Notes

1. The purity and integrity of the RNA template is an important factor affecting the reverse transcription.

2. If the subsequent experiment is PCR, the amount of reverse transcription product should not exceed 1/10 of the volume of the PCR system. For a 20 μL PCR system, the amount of reverse transcription product should not exceed 2 μL.

3. The mix contains Oligo (dT) $_{20}$VN and random primers. It is not only suitable for eukaryotic mRNAs containing Poly (A) structure, but also for prokaryotic RNA without Poly (A) structure, eukaryotic rRNA, and tRNAs. The master mix is not suitable for small RNA templates such as miRNA.

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