SuperRT III One-Step RT-PCR Kit – Instruction Manual

Catalogue Information

Catalogue No.	Product Name	Size / Tests
BL1022B	SuperRT III One-Step RT-PCR Kit	200 Tests

Product Description

This kit efficiently reverse-transcribes RNA into first-strand cDNA and amplifies it in a single-step (one-step) reaction. Using RNA as the template, first-strand cDNA is synthesised with gene-specific primers, SuperRT III One-Step RT Enzyme Mix and 2× SuperRT III One-Step RT Buffer; the target gene is then amplified and quantified by the action of Taqplus DNA Polymerase. The product contains all the enzymes and reaction components required for one-step RT-PCR. Together with an optimised buffer system, it minimises inhibition of the amplification reaction by the reverse transcriptase. The RT-PCR detection sensitivity reaches 1 pg of total RNA, and fragments up to 10 kb can be amplified.

Kit Contents

SuperRT III One-Step RT Enzyme Mix —BL1022B: 400 µL
2× SuperRT III One-Step RT Buffer — BL1022B: 1 mL × 2
Nuclease-free Water — BL1022B: 1.5 mL

Instructions for Use

1. Prepare the reaction system according to the table below:

Component	Volume
RNA template*	1 ng – 1 µg
Forward primer GSP (10 µM)	1 µL
Reverse primer GSP (10 µM)	1 µL
2× SuperRT III One-Step RT Buffer	10 µL
SuperRT III One-Step RT Enzyme Mix	2 µL
Nuclease-free Water	to 20 µL

2. Set up the thermal cycling programme:

Step	Temperature	Time	Cycles
Reverse transcription*	50 °C	15–30 min	1
Initial denaturation	95 °C	2 min	1
Denaturation	95 °C	15 s	30–40
Annealing	50–60 °C	30 s	30–40
Extension	72 °C	1 kb/30 s**	30–40
Final extension	72 °C	5 min	1

* Set the reverse-transcription time according to the size of the fragment to be amplified. Longer reverse-transcription times can be used for long fragments; 15 min is sufficient for

fragments < 1 kb. For complex templates, the reverse-transcription temperature can be raised to 55–60 °C to improve efficiency.

** Extension time is approximately 30 s per 1 kb of product.

3. This reaction system does not contain a dye. After the PCR programme is complete, add loading buffer before running electrophoresis.

Notes

All consumables used in the experiment, such as centrifuge tubes and pipette tips, must be RNase-free.
Before use, fully thaw and thoroughly mix each component to prevent uneven salt-ion concentrations from affecting the results.
If the amplified fragment is long or the RNA has a complex structure, the RNA may be heated separately at 65 °C for 5–10 min before being added to the reaction system.
This product is intended for professional scientific research use only. It must not be used for clinical diagnosis or treatment, nor for food or pharmaceutical purposes.
For your safety and health, wear a lab coat and disposable gloves when handling the reagents.

Storage and Stability

Store at –20 °C. Shelf life: 12 months when stored as directed.

Notice

For in vitro research use only, not for diagnostic or therapeutic use. This product is not a medical device.

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