



SMOBIO

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Product Information

ExcelRT One-Step RT-PCR Kit

RP1100 50 Rxn

2X Reaction Premix

750 μ l x 2

ExcelRT One-Step

50 μ l

RT-PCR Kit Enzyme Mix

Storage

-20°C \geq 24 months

Description

The ExcelRT One-Step RT-PCR Kit is designed for the reverse transcription and PCR amplification of a specific target gene from either total RNA or mRNA. The ExcelRT One-Step RT-PCR Kit provides users an alternative to two lengthy steps (first strand generation and amplification) by using a single mixture in a single tube for the one-step reaction. The ExcelRT One-Step RT-PCR Kit contains a 2X reaction premix consisting of an optimized buffer, dNTPs, Mg^{2+} , enzyme stabilizer, and a blend of recombinant reverse transcriptase and *Taq* DNA polymerase. The ExcelRT One-Step RT-PCR Kit allows users to complete the RT-PCR process using a thermocycler in a single reaction setting and is ideal for target RNA amplification. This product is capable of detecting even trace amounts of target RNA.

Features

- High sensitivity and yield
- Generates dsDNA directly from RNA sample
- High reproducibility, reduced pipetting errors
- High throughput
- Reduced RNase H ribonuclease activity

General Procedure:

1) Prepare the reaction mix by combining the indicated volume of components of One-Step RT-PCR:

2)

Component	Volume /50 μ l
2X Reaction Premix	25 μ l
Upstream primer (10 μ M)*	1 μ l
Downstream primer (10 μ M)*	1 μ l
Enzyme Mix	1 μ l
RNA template**	X μ l (10pg~1 μ g)
DEPC water	Up to 50 μ l

3) Place reaction tubes directly into thermocycler and initiate first strand synthesis – amplification reaction.

* RP1100 is optimized for sequence specific primers.

** Adding RNA template last is recommended.

4) Thermal cycler program

Reaction Steps	Temperature and Time	
Preheat	until block temperature reaches 42~50°C	
<u>cDNA synthesis</u>		
Reverse transcription	42~55°C	30 min
Denature	94°C	2 min
<u>Amplification</u>		
Denature	94°C	20 sec
Annealing***	55°C	30 sec
Extension	72°C	1 min/kb
<u>Final extension cycle</u>		
Extension	72°C	1 min

} 30~35
Cycles

***Optimal PCR condition varies according to primers' thermodynamic properties.

Note: RP1100 is not designed for multiplexing DNA with internal control, due to the competition of highly abundance housekeeping gene mRNA.

Other Information

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Caution: Not intended for human or animal diagnostic or therapeutic uses.

Related Products

RP1000	ExcelRT Reverse Transcriptase, 20,000 units, 50 μ l X 2
TF1000	ExcelTaq SMO-HiFi DNA Polymerase, 1 U/ μ l, 100 U \times 1
TP1000	ExcelTaq DNA Polymerase, 500 U \times 1
TP1200	ExcelTaq 5 \times PCR Master Dye Mix, 200 RXN
TP1260	ExcelTaq 5 \times Fluorescent PCR Master Mix Kit, 200 RXN
TP2000	ExcelTaq Blood Direct DNA Polymerase, 5 U/ μ l, 500 U \times 1
TP2100	ExcelTaq Blood Direct PCR Master Mix Kit, 200 RXN
DM1100	ExcelBand 50 bp DNA Ladder, 500 μ l
DM2100	ExcelBand 100 bp DNA Ladder, 500 μ l
DM2300	ExcelBand 100 bp+3K DNA Ladder, 500 μ l
DM3100	ExcelBand 1 KB (0.25-10 kb) DNA Ladder, 500 μ l
DM3200	ExcelBand 1 KB Plus (0.1-10 kb) DNA Ladder, 500 μ l
DM4100	ExcelBand XL 25 kb DNA Ladder, Broad Range (up to 25 kb), 500 μ l
DL5000	FluoroDye DNA Fluorescent Loading Dye (Green, 6 \times), 1 ml
DS1000	FluoroStain DNA Fluorescent Staining Dye (Green, 10,000 \times), 500 μ l



VE0100 B-BOX™ Blue Light LED epi-illuminator



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