ENZYMES
CAT# TRT Range
EC# 2.7.7.7

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Reverse Transcriptase

ORIGIN ***E.coli*** **(Recombinant)**

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SPECIFICATION

Concentration/Activity*	100 U/µL
Ribonuclease Activity	None detected

*One unit is defined as the amount of enzyme required to incorporate 1 nmole of dTTP into an acid-insoluble material in 10 min at 42°C.

PRODUCT FORMAT

Formulated in 50 mM Tris-HCl (pH 7.5), 100 mM NaCl, 0.1 mM EDTA, 10 mM DTT, 0.01% Nonidet P-40, 50% Glycerol and store at -20°C.

PART #	DESCRIPTION	CONTENT/FORMAT
TRT-101	ReverTra Ace (Reverse Transcriptase) Kit	0.1mL (10,000U) Reverse Transcriptase 1mL 5x RTase Buffer
TRT-179	ReverTra Ace (Reverse transcriptase) 500KU	5mL (500KU) Reverse Transcriptase
TRT-1B	5x RTase Buffer 1mL	1mL 5x Reverse Transcriptase Buffer

DESCRIPTION AND APPLICATION

ReverTra Ace is a high efficient M-MLV (Moloney Murine Leukemia Virus) reverse transcriptase that has been genetically modified to remove RNase H activity and increase reaction efficiency. It is the preferred enzyme for applications requiring full-length cDNAs and high product yields from total RNA, mRNA, rRNA, etc.

CHARACTERISTICS

Features:

- RNase minus M-MLV RTase with improved performance.
- Enables the synthesis of longer cDNAs (≥14 kb) than the WT-enzyme.
- Exhibits excellent reaction efficiency at high temperatures.

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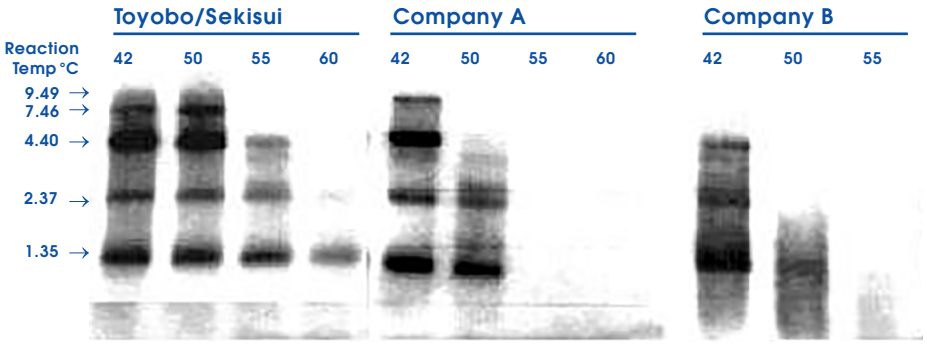
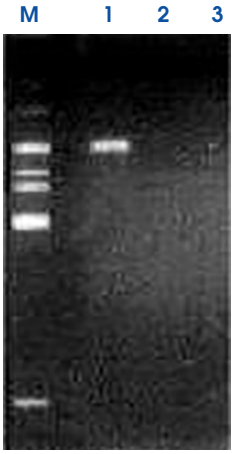
Application Data: cDNAs were synthesized with oligo (dT)30 primers and 100 U enzyme/poly (A)+ RNA mixture (1.35-9.49 kb, 0.4 mg) as templates for 30 min at various temperatures. cDNAs were labeled with (^{32}P-dCTP) during the reaction. The synthesized cDNAs were separated by 1% denatured agarose gel electrophoresis, and detected. The results suggested that our Reverse Transcriptase **can elongate efficiently at 42-55°C** compared to other RNase H minus RTases from other companies.



Application Data: G3PDH genes (500 bp) were amplified by PCR using cDNA templates that were synthesized with various RNase H minus RTases from G3PDH mRNA (10^2-10^5 copies/reaction). The RTase reaction was performed with specific reverse primers and 100 U enzyme at 42°C for 20 min. The results indicated that our Reverse Transcriptase is suitable for RT-PCR amplifications that require sensitivity.

Application Data: cDNA was synthesized by ReverTra Ace using a specific primer for the 3'-end of dystrophin mRNA at 42°C for 30 min. The 5' region at a distance of 14 kb from the 3' end of the dystrophin gene was amplified by PCR. The result indicated that ReverTra Ace can elongate cDNA of ≥14 kb.



M: Fx174/Hinc II Marker
1: ReverTra Ace
2: Company A
3: Company B

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