

ThermoStable RT Enzyme (100U/μl)

Reference Guide

Catalog	Description
HL - TSRT - 5KU	5000Units
HL - TSRT - 10KU	10000Units

Store at -20°C
PI/HL - TSRT - 01

Product description

ThermoStable RT Enzyme is an RNA-dependent DNA polymerase that uses single-stranded DNA or RNA as a template and it can work efficiently at higher temperatures. The enzyme has minimal RNase - H activity and functions optimally at 53 - 56°C. The mutations in the enzyme confer a better inhibitor resistance compared to the normal MMLV - Reverse Transcriptase. The Reverse Transcriptase enzyme lacks 5' → 3' exonuclease activity and is ideal for long length cDNA synthesis.

Source

Modified synthetic Reverse transcriptase gene from Moloney Murine Leukemia Virus is expressed and purified in *E. coli* strain.

Reagents Supplied

- ThermoStable RT Enzyme (100U/ μl)
- 100mM DTT (200μl)
- 5X ThermoStable RT Buffer (1ml)

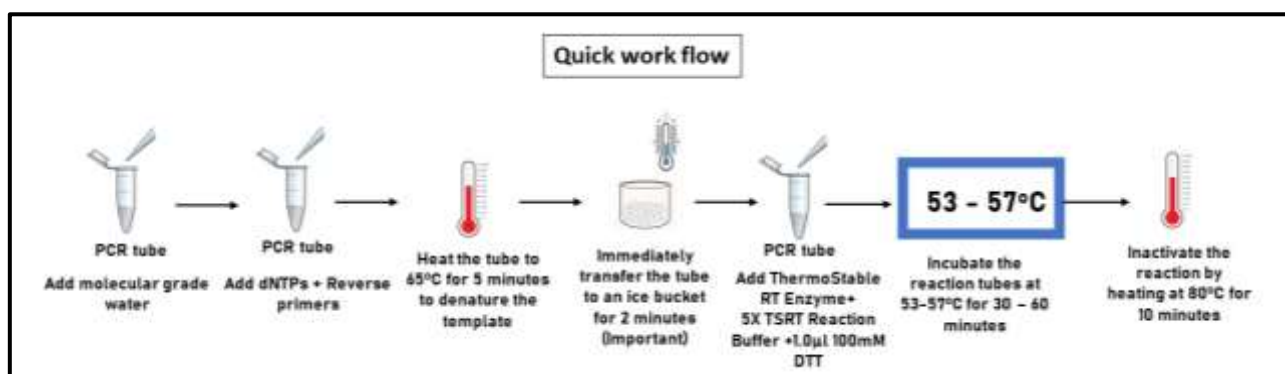
Storage conditions

The recommended storage condition is -20°C for the supplied components

Assay Conditions

First-Strand cDNA Synthesis

Add the following components to a nuclease-free microcentrifuge tube




Reaction set up

Step-1

Components	Volume (μL)
Extracted RNA (1 ng-5 μg of RNA or 1-500 ng of mRNA)	Variable
50-250 ng Random primers/10 pMol Specific primer/200-500 ng oligo-dT	Variable
dNTP Mix (10Mm each)	1.0
Molecular Grade Water	Make up to 14μl

Heat the mixture to 65°C for 5 min on the heating block and quick chill on ice for 2 min

 Make sure the vial is not very hot while adding the next step of components. Quick spin the assay tube and add the following components to the tube

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Step-2

Components	Volume (µL)
5X ThermoStable RT Buffer	4.0
ThermoStable RT Enzyme	1.0
100mM DTT	1.0
Total volume	20.0µl

Incubate for 30-60 min at 53 - 57°C.

Inactivate the reaction by heating at 80°C for 10min.

The cDNA can now be used as a template for amplification with End Point or real-time PCR.

Applications

- cDNA libraries generation for cloning
- End-point and quantitative RT-polymerase chain reaction (PCR)
- RACE PCR
- Microarray analysis
- Amplification of RNA

Other PCR products from Huwel LifeSciences that you may be interested

S.No.	Product description	Catalogue No.
1.	Rcore qPCR Mix (2X)	HL-RCqPM2X
2.	Rcore qPCR Mix (4X)	HL-RCqPM4X
3.	MMLV RT Enzyme (100U/µl)	HL - RTE - 5KU - 5000Units HL - RTE - 10KU - 10000Units HL - RTE - 20KU - 20000Units

Our Product References

- Shivangi Harankhedkar, Gaurav Chatterjee, Sweta Rajpal, (2022) medRxiv, 1 - 11

For further information on protocols and details, please contact our technical support:

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