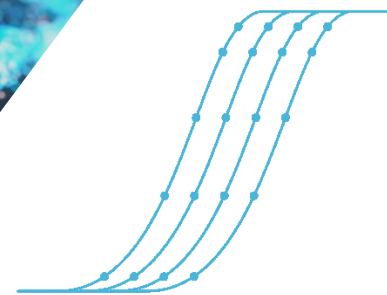


HighTherm™ Reverse Transcriptase



Increased Processivity and High Temperature cDNA Synthesis

HighTherm™ Reverse Transcriptase is an engineered mutant of MMLV providing increased processivity and high cDNA yields even with complex RNA templates such as viral targets. The 200 U/μL enzyme can be used efficiently in a wide range of applications including cDNA Synthesis and RT-qPCR applications.

This novel enzyme is fully functional across a wide temperature range up to 55°C which enables excellent assay flexibility and high temperature cDNA synthesis for complex RNA secondary structures.

HighTherm™ Reverse Transcriptase efficiently synthesizes a complementary DNA strand from ssRNA, ssDNA, or RNA:DNA hybrids with significantly reduced Ribonuclease H activity.

HighTherm™ RT generates cDNA from 100 bp to >12 kb. The enzyme is supplied with a 5x reaction buffer which includes optimized concentrations of MgCl₂ and dNTPs for convenience and consistent performance.

Applications

- 2-step RT-qPCR
- End Point RT-PCR
- Array Labeling
- cDNA Libraries
- 3' and 5' RACE

Yield

More representative full-length cDNA due to reduced RNase H activity (100 bp to >12 kb)

Sensitivity

Reproducible cDNA synthesis from a wide range of templates (1 pg to 5 μg of total RNA template)

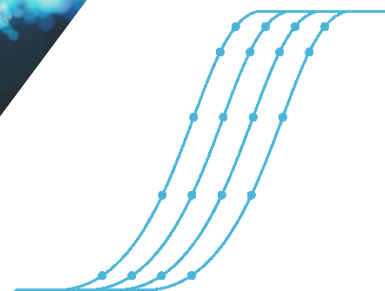
Thermostability

Retains greater than 90% of enzymatic activity following 50° C incubation for 60 minutes

Broad Dynamic Range

High-yield cDNA synthesis across a wide range of RNA concentrations

HighTherm™ Reverse Transcriptase



Increased Processivity and High Temperature cDNA Synthesis

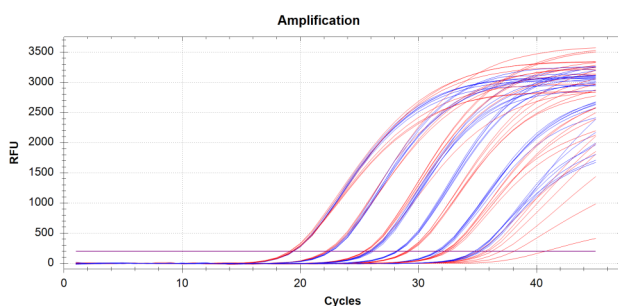


Fig 1. HighTherm™ Reverse Transcriptase (blue) vs. Competitor T (red) in RT-qPCR over a broad dynamic range of input RNA.

cDNA synthesis performed at 50°C and qPCR step performed using AzuraView™ Probe Fast qPCR Mix Blue.

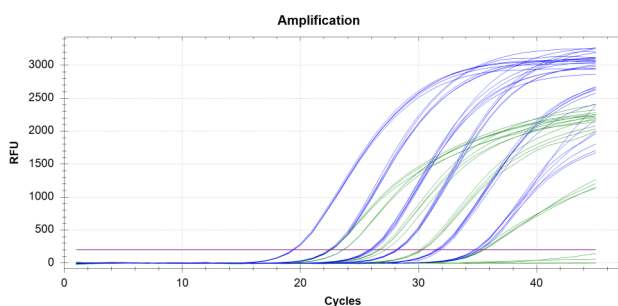


Fig 2. HighTherm™ Reverse Transcriptase (blue) vs. Competitor B (green) in RT-qPCR over a broad dynamic range of input RNA.

cDNA synthesis performed at 50°C and qPCR step performed using AzuraView™ Probe Fast qPCR Mix Blue.

Products	Pack Size	Catalog No.
HighTherm™ Reverse Transcriptase	10,000 U (200 U/μL)	AZ-1991
HighTherm™ Reverse Transcriptase	40,000 U (200 U/μL)	AZ-1994