



## Thunder™ RT

*An RNA-dependent DNA polymerase*

**Thunder reverse transcriptase** is an RNA-dependent DNA polymerase that can be used for complementary DNA (cDNA) synthesis from an RNA or DNA template and is ideal for use in PCR and isothermal amplification. Thunder RT is a robust enzyme that works in a broad range of temperatures (40-72 °C) and has RNase H activity.

### Properties

- **Optimal temperature:** 55 °C
- **Heat inactivation:** 75 °C for 20 minutes
- **10X Isothermal buffer** included. *Please use supplied buffer for optimal results.*
- **Storage temperature:** -20 °C
- **Can be supplied in a glycerol-free/custom buffer**

### Shipping & Storage

Thunder RT is stored at -20 °C in 50% glycerol, 10 mM Tris-HCl, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, pH 7.5.

Shipped on dry or blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided.

Varizymes also offers a variety of encapsulated RNA controls VariSafe™ for common targets, and we would love to work with you to develop a unique control to suit your needs. For more information visit [www.varizymes.com](http://www.varizymes.com) or email us at [info@varizymes.com](mailto:info@varizymes.com).

*\*These products are intended for research use only, not for diagnostic use. The safety and efficacy of these products in diagnostic or other clinical uses has not been established.*

## Thunder reverse transcriptase

Catalog No.: 7100

Expressed in: E. coli

### Contents

Thunder reverse transcriptase is provided at a concentration of 10 reactions/ $\mu$ L with 10X Isothermal buffer

### Background

Thunder reverse transcriptase is an RNA-dependent DNA polymerase that can be used for complementary DNA (cDNA) synthesis from an RNA or DNA template and is ideal PCR and isothermal amplification. Thunder RT is a robust enzyme that works in a broad range of temperatures (40-72 °C) and has RNase H activity.

### Application Notes

Thunder RT is a robust enzyme used for first-strand synthesis of complementary DNA (cDNA) from RNA or single-stranded DNA templates. It is ideally suited for PCR and isothermal amplification.

### Quality Control

- **Thunder RT Unit activity:** A known reverse transcriptase is used to create a standard curve with a real-time qRT-PCR assay against which the activity of this enzyme is measured.
- **Purity:** >95% as determined by SDS-PAGE analysis
- Thunder RT is free of detectable RNase and DNase (exo- and endonuclease).
- <0.05 ng contaminating host DNA per 12 U (1 rxn)

### 1X Isothermal Reaction Buffer

20 mM Tris-HCl (pH 8.3)

10 mM  $K_2SO_4$

50 mM KCl

2 mM  $MgSO_4$

0.1% Tween 20

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