

Ultra-TM Thermo-resistant H Minus M-MuLV Reverse Transcriptase

(50 μ L, 200 U/ μ L, Total 10000 U)

Store at -20 °C

Component	Volume
Ultra-TM Thermo-resistant RT	50 μ l
5X RT Buffer	500 μ l

Description: This is a genetically modified RNA-dependent DNA polymerase requiring a DNA primer and an RNA template to synthesize a complementary DNA strand. Ultra-TM Thermo-resistant H Minus M-MuLV Reverse Transcriptase has no RNase H activity. Therefore, degradation of RNA does not occur during first strand cDNA synthesis, resulting in higher yields of full-length cDNA from long templates compared to other reverse transcriptases. Ultra-TM Thermo-resistant H Minus M-MuLV Reverse Transcriptase maintains activity over a wide temperature range (50-60 °C) which makes it an ideal tool for reverse transcription of RNAs having a high degree of secondary structure.

Kit storage:

This kit should be stored at -20°C. Under this condition reagents are stable for one year from the date of production.

Protocol (first strand cDNA synthesis):

1- Mix the template RNA (total RNA or Poly(A)mRNA) and the primer in RNase-free tube as below table. Optimal reaction conditions, such as amount of RNA and primers, may vary and must be individually determined. Random hexamer or oligo (dT)16 or specific primers could be used as primer.

* If you use RNase inhibitor

Concentration of template RNA and primer		
Template RNA	Total RNA	10 ng~1 μ g
	or Poly(A)+ mRNA	5 ng~0.5 μ g
Primer	Oligo (dT)16	1-2 μ L
	or Random hexamer	1 μ L
DEPC-treated water	Up to 12 μ L (11 μ L*)	

2- Incubate the mixture at 65 °C for 5 min and chill on crash ice and add the reagent as follow:

3- Mix by pipetting gently up and down (total reaction volume 20 μ L).

4- Incubate 10 min at 25 °C (omit this for Oligo dt).

5. Incubate 30 min at **55 °C**.

6. Stop the reaction by heating at 80 °C for 5 minutes. Chill on ice.

Concentration of template RNA and primer	
5X RT Buffer	4
RNase Inhibitor 20 U/ μ L (optional)	1
10 mM dNTP Mix	2
Ultra-TM Thermo-Resistant RT	1

Disclaimers and Addresses

This product is for research use only and should only be used by trained professionals.

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