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AviRT™

Cat. No.: A11010 10’000 Units
Cat. No.: A11011 50’000 Units

Store at -20 °C

Component	A11010	A11011
Enzyme	100 µl	500 µl
5x Buffer	0.5 ml	3 x 1 ml

Description:

This a genetically modified RNA-dependent DNA polymerase requiring a DNA primer and an RNA template to synthesize a complementary DNA strand.

AviRT™ 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 transcriptase.

AviRT™ maintains activity over a wide temperature range **(42-52°C)** which makes it an ideal tool for reverse transcription of RNAs having a high degree of secondary structure.

Kit storage:

AviRT™ 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.

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

* If you use RNase inhibitor

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

Components	Volume (μl)
5x RT Buffer	4
RNase Inhibitor 20 U/μl (optional)	1
10 mM dNTP Mix	2
AviRT™	2

3. Mix by pipetting gently up and down (total reaction volume 20 μl).
4. Incubate 10 min at 25 °C. Omit this for Oligo (dt).
5. Incubate 60 min at 47 °C.
6. Stop the reaction by heating at 70 °C for 10 minutes. Chill on ice.

Disclaimers and Addresses:

AviRT™is for **Research Use Only** and should only be used by trained professionals.