Verso cDNA Synthesis Kit

Catalog Number AB-1453/A, AB-1453/B

Pub. No. MAN0012822 **Rev.** B00

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from **thermofisher.com/support.**

Contents

Cat. No.	Contents	Amount	Storage
AB-1453/A 40 rxns of 20 µL	Verso Enzyme Mix	40 µL	-25 °C to -15 °C
	5X cDNA Synthesis Buffer	500 µL	
	Anchored Oligo dT (500 ng/µL)	40 µL	
	Random Hexamer (400 ng/µL)	40 µL	
	dNTP Mix (5 mM each)	200 µL	
	RT Enhancer	40 µL	
AB-1453/B 100 rxns of 20 µL	Verso Enzyme Mix	100 µL	
	5X cDNA Synthesis Buffer	500 µL	
	Anchored Oligo dT (500 ng/µL)	100 µL	
	Random Hexamer (400 ng/µL)	100 µL	
	dNTP Mix (5 mM each)	200 µL	
	RT Enhancer	100 µL	

Description

Thermo Scientific Verso cDNA Kit supplies all the reagents to generate high yields of full-length cDNA from all RNA types.

Verso™ Enzyme Mix includes Verso Reverse Transcriptase, which is active at high temperatures, is highly sensitive and can generate long cDNA strands. This mix also contains RNase inhibitor to protect RNA templates from degradation.

5X cDNA Synthesis Buffer, a proprietary reaction buffer which has been optimized to improve reverse transcription across a wide range of templates.

Anchored Oligo dT primers and **Random Hexamers** provide flexible RNA priming methods for cDNA synthesis.

RT Enhancer is included to remove contaminating DNA, eliminating the need for DNAse I treatment. It degrades double stranded DNA during the transcription of RNA and is inactivated after 2 minutes at 95 °C.

Verso Reverse Transcriptase

Verso is an RNA-dependent DNA polymerase with a significantly attenuated RNase H activity. Verso can synthesize long cDNA strands, up to 11 kb, at a temperature range of 42 °C to 57 °C. The recommended amount of total RNA to use is between 1 pg and 1 µg.

Storage Conditions

Store at -20 °C until ready for use. Avoid repeated freeze thawing.

Additional Info

The use of disposable gloves, RNase and DNase free filter tips and plastics is recommended.

If DNase I treatment has been performed, RT Enhancer is not required.

Tips before use

Thaw the reagents on ice. Mix and spin down the solutions before use to recover the maximum amount. Do not vortex the Verso Enzyme Mix.

Briefly centrifuge to avoid bubbles within the wells. Always include a no template control (NTC) and a no enzyme control (NEC).

Protocol

Example of reaction mix preparation.
The volume of each component is for a 20 µL final reaction.

Component	Volume	Final Concentration
5X cDNA Synthesis Buffer	4 µL	1X
dNTP Mix	2 µL	500 µM each
RNA Primer*	1 µL	
RT Enhancer	1 µL	
Verso Enzyme Mix	1 µL	
Template (RNA)	1-5 µL	1 ng
Water, nuclease-free (#R0581)	To 20 µL	
Total volume	**20 µL**	

*It is recommended that RNA primers be added to the final 1X reaction as follows: 1 µL of anchored oligo dT (orange cap) or 1 µL of random hexamers (blue cap) or 1 µL of a blend of random hexamers and anchored oligo-dT 3:1 (v/v) or gene-specific primer (to final concentration of 0.5 – 2 µM).
Anchored oligo dT is not suitable for use with most prokaryotic RNA. In these cases, random hexamers or gene-specific primers are recommended.

Example of reverse transcription cycling program:

Component	Temp.	Time	Number of cycles
cDNA synthesis*	42 °C	30 min	1 cycle
Inactivation	95 °C	2 min	1 cycle

*Depending on the length of template and degree of secondary structure, the efficiency of the first strand synthesis may be improved by optimizing temperature and time (42-57 °C for 5-60 minutes).

Revision history: Pub. No. MAN0012822

Revision	Date	Description
B00	2024-04-08	Revized user guide template and removed COA content

Limited product warranty

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