FOR RESEARCH USE ONLY!

Evo™ cDNA synthesis MasterMix

01/21

(Catalog # M1511-100; 100 Rxns; Store at -20 °C)

I. Introduction:

Biovision's Evo™ cDNA synthesis MasterMix is a convenient and ready-to-use formulation for first-strand cDNA synthesis, including genomic DNA (gDNA) removal. Genomic DNA contamination is a common problem for accurate RNA detection and this MasterMix solves that problem without affecting reverse transcription and first-strand cDNA synthesis. cDNA synthesis will be simple, reliable, and reproducible. Evo™ cDNA synthesis 5X MasterMix contains BioVision's proprietary Reverse Transcriptase, RNaseOFF Ribonuclease Inhibitor, temperature-sensitive DNase, dNTPs, and a finely-balanced ratio of Oligo (dT)s and Random Primers. The high-quality cDNA synthesized from this kit can be used for a wide range of downstream applications.

II. Key Features:

- High processivity and sensitivity
- Superior Performance
- Simple set-up for any RNA template
- Removes genomic DNA contamination

III. Applications:

- Generation of templates for use in RT-PCR and qRT-PCR, cDNA synthesis from ssRNA, cDNA library construction, DNA primer extension

IV. Contents:

Components	M1511-100 (100 Rxns)	Part Number
Evo™ cDNA synthesis MasterMix	400 µl	M1511-100-1
Nuclease-free water	1.0 ml	M1511-100-2

V. User Supplied Reagents and Equipment:

- Pipettes, Pipette tips
- PCR tubes
- Nuclease free water
- Total RNA or poly(A) + mRNA

VI. Shipping and Storage Conditions:

The MasterMix is shipped in dry ice. All the components should be stored at -20 °C.

VII. Protocol:

RT reactions should be assembled in an RNase-free environment. The use of "clean" pipettors designated for PCR and aerosol-resistant barrier tips are recommended.

1. Thorougly thaw and mix the individual components before use and **assemble the reaction** on ice.

Component	Volume
Evo™ cDNA synthesis MasterMix	4 µl
Total RNA or poly(A) + mRNA	Variable (1 ng - 2 µg/rxn)
Nuclease-free water	up to 20 µl

2. Gently mix the reaction components and briefly centrifuge.
3. Incubate the mixture at 37 °C for 15 min, followed by 60 °C for 10 min.
4. Optional: Stop the reaction by heating at 95 °C for 3 min. Chill on ice. The newly synthesized first-strand cDNA is ready for immediate downstream applications, or for long-term storage at -20 °C.
5. Both poly(A) + mRNA and total RNA can be used for first-strand cDNA synthesis, but poly(A) + mRNA may give higher yields and improved purity of final products.
6. For more efficient gDNA removal, increase the length of the 37 °C incubation from the recommended 15 min to 30 min.
7. To remove RNA complementary to the cDNA, add 1 µl of E. coli RNase H and incubate at 37 °C for 20 min.

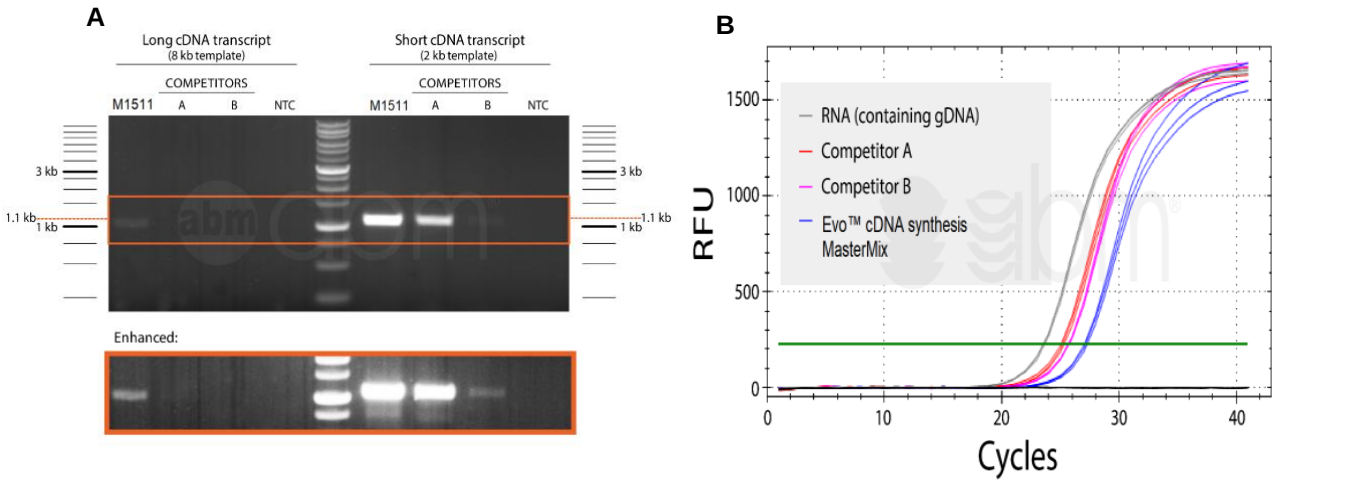

Fig. A. BioVision's Evo™ cDNA synthesis MasterMix successfully transcribes both long and short transcripts for use in downstream applications. RNA samples were reverse-transcribed into cDNA for 15 min using M1511, Competitor A or Competitor B. 1 µl of CDNA was then used directly in a PCR to assay 1.1 kb amplicons from longer and shorter transcripts. **Fig. B. BioVision's Evo™ cDNA synthesis MasterMix ensures accurate qPCR results** when contaminating gDNA would otherwise result in artificially-early Ct values. RNA samples contaminated with gDNA were reverse transcribed for 15 min with M1511, Competitor A or Competitor B. 1 µl of RT product was then used in qPCR to assay amplification of a GAPDH target.

VIII. Related Products:

BioVision Product Name	Cat. No.	Sizes
HiFidelity™ 2X PCR MasterMix	M1507	800 Rxns
ExpressTaq™ DNA Polymerase	M1504	400 Rxns
HiFidelity™ DNA Polymerase	M1505	400 Rxns
FireTaq™ DNA Polymerase	M1506	400 Rxns
ExpressTaq™ 2X PCR MasterMix	M1508	800 Rxns
HiFidelity™ One Step RT Kit	M1503	100 Rxns
ExpressTaq™ qPCR MasterMix	M1509	500 Rxns

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