



miRNA All-In-One cDNA Synthesis Kit

Cat. No. G898

Store at -20°C.

Product Description

miRNA All-In-One cDNA Synthesis Kit is a complete system for **efficient synthesis of first strand miRNA from total RNA templates**. This comprehensive kit comes with just two components: 2X miRNA cDNA Synthesis SuperMix and Enzyme Mix, enabling hassle-free set-ups with minimal potential for contamination due to significantly reduced pipetting. The kit contains all miRNA synthesis-required reagents including Poly(A) Polymerase and **abm's** OneScript® Plus Reverse Transcriptase, a unique miRNA Oligo d(T) adapter that anneals to the A-tailed miRNA template, and RNaseOFF Ribonuclease Inhibitor to protect RNA template from degradation.

Product Component	Quantity	Part No.
2X miRNA cDNA Synthesis SuperMix	20 rxn (200 µl)	P898-1
Enzyme Mix	20 rxn (40 µl)	P898-2
Nuclease-Free H ₂ O	1.0 ml	P100

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. Thoroughly thaw and mix individual components before use, and assemble reaction on ice.

Component	Volume
2X miRNA cDNA Synthesis SuperMix	10 µl
RNA template	Variable (200 ng small RNA or 2 µg total RNA)
Enzyme Mix	2 µl
Nuclease-free H ₂ O	up to 20 µl

2. Gently mix the reaction and briefly centrifuge.
3. Incubate the mixture at 37°C for 30 minutes, followed by 50°C for 15 minutes. Immediately stop the reaction by heating at 85°C for 5 minutes. Chill on ice.
4. Newly synthesized first-strand miRNA can be directly used as a template for immediate downstream applications, or stored long-term at -20°C.

General Notes

- Both small RNA and total RNA can be used for first-strand cDNA synthesis, small RNA may give higher yields and improved purity of final products.
- RNA samples must be free of genomic DNA contamination.
- To remove RNA complementary to the cDNA, add 1 µl of *E. coli* RNase H (Cat. No. **E018**) and incubate at 37°C for 20 minutes.
- miRNA Oligo d(T) adapter enables the use of **abm's** Universal 3' miRNA Reverse Primer (Cat. No. **MPH00000**), allowing for optimized qPCR amplification.