



smART Combo First Strand cDNA Synthesis Kit for RT-qPCR

Cat. No.	size
E0808-01	50 reactions
E0808-02	200 reactions

Storage Conditions: Store at -20°C.

Quality Control:

All preparations are assayed for contaminating endonucleases, exonucleases, nonspecific RNases, single- and double-stranded DNase activities.

smART Combo First Strand cDNA Synthesis Kit for RT-qPCR is a complete system for efficient synthesis of first strand cDNA for two step real time quantitative RT-PCR (RT-qPCR) applications. Kit consists of smART Reverse Transcriptase with increased thermostability and processivity and is able to synthesize cDNA from a wide range of starting total RNA (1 pg-5 µg) at elevated temperatures up to 65°C. All components of **smART Combo First Strand cDNA Synthesis Kit for RT-qPCR** are premixed to reduce the possibility of pipeting errors and save time of the experiment.

Combo Enzyme Mix contains unique smART reverse transcriptase and RNase Inhibitor effective against RNases A, B, C.

5 x Reaction Mix contains optimized reaction buffer, dNTPs, Anchored Oligo dT and random hexamers primers.

COMPONENT:	E0808-01	E0808-02
Combo Enzyme Mix	25 µl	100 µl
5 x Reaction Mix	200 µl	800 µl
RNase-free water	1 ml	4 ml

I First strand cDNA synthesis:

1. Place 5 x Reaction Mix at room temperature, thaw and vortex gently.
2. Assamby reaction in RNase-free tube as follows:

Component:	Amount:
5 x Reaction Mix	4 μ l
Combo Enzyme Mix	0.5 μ l
Template RNA 1 pg-5 μ g	x μ l
RNase free water	Up to 20 μ l
Total volume	20 μ l

3. Mix gently and spin down shortly.
4. Incubate for 10 min at 25°C followed by 15 min at 50°C.
5. Terminate the reaction by heating at 85°C for 5 min.

cDNA is ready to use in downstream manipulations. Use it directly in qPCR or store at -20°C up to one week, for longer storage -70°C is recommended, avoid freeze/thaw cycles of cDNA.

II qPCR

The product of the first strand cDNA synthesis can be used directly in qPCR. Usually, 1-2 μ l of cDNA is used as a template for subsequent qPCR in 25 μ l total reaction volume (less then 10% of PCR reaction volume).

smART Combo First Strand cDNA Synthesis Kit for RT-qPCR is optimized to use with a majority of EURx's qPCR kits.

cDNA obtained in the first strand synthesis reaction can be directly used in the qPCR reaction.

We strongly recommend using the following EURx's products:

SYBR Green I dye product Cat. No.: E0401, E0402, E0405, E0406, E0407, E0400, E0411, E0412, E0413.

Probe detection product Cat. No.: E0420, E0421, E0422, E0423.

Blank qPCR product Cat. No.: E0403, E0404.