Product Manual
Cat. No: #4501

RT-qPCR Lyo-Ready Mix

Description

RT-qPCR Lyo-Ready Mix is a universal one-step probe mix that is ready to be lyophilized to produce stable reagents at room temperature. Upon addition of target specific primers/probes and reverse transcriptase (RTase Lyo) to the master mix, the mixture is lyophilized directly, without the need to add additional excipients.

RT-qPCR Lyo-Ready Mix allows robust, sensitive, and fast RT-qPCR. The mix uses state-of-the-art technologies with an antibody-regulated hot-start Taq polymerase and reverse transcriptase for efficient cDNA synthesis and real-time PCR amplification in a single reaction chamber or tube. The optimized excipients, buffer chemistry, PCR enhancers, RNase inhibitor, and stabilizers enable rapid and sensitive RT-qPCR.

RT-qPCR Lyo-Ready Mix is compatible with several probes such as TaqMan® and Scorpions®. This allows rapid detection and quantification of a variety of RNA templates, such as mRNA, viral RNA, and total RNA. The kit includes an efficient thermostable reverse transcriptase and an RNase inhibitor to prevent degradation of RNA templates by RNases.

Kit Components

Component	S pack*	M pack*
RT-qPCR Lyo-Ready Mix (2x)	4 x 1.25 mL	100 mL
RTase Lyo (10,000x)	2 µL	0.02 mL
Glycerol-free RTase Dilution buffer (1x)	1 x 1 mL	2 x 1 mL
RTase Dilution buffer (1x)	1 x 1 mL	2 x 1 mL

*Other pack sizes and bulk orders are available upon request.

Storage and Shipment

Transport with an ice pack. The reagents should be stored at -20°C upon arrival. The reagents are stable until the expiration date if stored correctly.

Reaction Master Mix Set-Up

The recommended master mix set-up for a 20 µL reaction volume is shown in the table below.

Reagent	Volume (µL)	Final concentration
RT-qPCR Lyo-Ready Mix (2x)	10	1x
∞Forward primer (10µM)	X	100–500 nM
∞Reverse primer (10µM)	X	100–500 nM
∞Probe (10µM)	X	50–250 nM
ΔRTase Lyo (10,000x)	0.002	1x
RNA template	2-8	Variable
Nuclease-free Water	Up to 20 µL final volume	

∞Primers and probes should be specific to the target DNA/RNA of interest. The recommended Tm for primers is between 56°C and 60°C, and the Tm for probes should be between 65°C and 70°C.

ΔA 100x working stock of 10,000x RTase Lyo enzyme can be prepared using the Glycerol-free Dilution buffer. For non-lyophilization applications, use RTase Dilution buffer which is suitable for storage at -20 °C.

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Instrument and Program Set-Up

Cycles	Steps	Temperature	Time
1	Reverse transcription	50°C	10 min
1	Polymerase activation	95°C	1–2 min
40	Denaturation	95°C	5 sec
	**Annealing/ Extension	60°C	30 sec

**The annealing/extension step can be reduced to 20 seconds.