One-Step TaqProbe RT-qPCR Master Mix, 4x (TPRTMM)
Catalog #MB802
1.5 mL

Product Description

ScienCell's One-Step TaqProbe RT-qPCR Master Mix, 4x (TPRTMM) is designed for sensitive RNA detection and quantification by probe-based reverse transcription quantitative PCR (RT-qPCR). It contains optimized components that enable cDNA synthesis and PCR amplification to be performed and quantified in a single tube. The ready-to-use 4x master mix contains UNG/dUTP (to eliminate PCR carryover contamination), engineered M-MLV reverse transcriptase, Taq polymerase, dNTPs, and a buffer system for robust reverse transcription and qPCR.

Note: ROX reference dye is NOT included in TPRTMM.

Kit Components

Cat #	Item	Quantity	Storage
MB802a	One-Step TaqProbe RT-qPCR Master Mix, 4x	1.5 mL	-20 ºC
MB802b	Nuclease-free water	4 mL	4 ºC

Quality Control

The linear dynamic performance of TPRTMM is verified with serially diluted RNA samples. DNase or RNase activity was NOT detected by incubating each component of TPRTMM with single-stranded DNA and human total RNA samples at 37℃ for 4 hours.

Product Use

TPRTMM is for research use only. It is not approved for human or animal use, or for application in clinical or *in vitro* diagnostic procedures.

Shipping and Storage

Dry ice. Upon receipt, store One-Step TaqProbe RT-qPCR Master Mix, 4x (Cat #MB802a) at -20 ºC in a manual defrost freezer and nuclease-free H_2O (Cat #MB802b) at 4ºC. Aliquot after the first thawing. Please avoid repeated freeze/thaw cycles.

Procedures

Important: *Only use nuclease-free reagents in PCR amplification.*

1. Thaw RNA samples, primer/probe sets, and 4x One-Step TaqProbe RT-qPCR Master Mix and place on ice. Protect probes from light until ready to use. Prepare RT-qPCR reactions as shown in Table 1.

Table 1.

Component	Volume	Final concentration
One-Step TaqProbe RT-qPCR Mater Mix, 4x	5 µl	1x
Forward and reverse primers	variable	100-900 nM each
Fluorogenic probe(s)	variable	150-250 nM each
Template RNA	variable	1 pg – 1 µg
Nuclease-free water	variable	-
Total volume per reaction	20 µl	-

2. Seal the RT-qPCR reaction wells. Centrifuge the plates or tubes at 1,500x g for 15 seconds. For maximum reliability, replicates are recommended (minimum of 3).

3. Refer to Table 2 for RT-qPCR program setup, load the PCR plate into the qPCR instrument, and start the program.

Table 2.

Step	Cycles	Temperature	Time
UNG incubation	1	25 °C	2 min
Reverse transcription	1	50 °C	15 min
Denaturation	1	95 °C	2 min
Amplification and plate reading	40-45	95 °C	15 sec
		55- 60 °C	30-60 sec

4. Refer to your qPCR instrument's data analysis software for data analysis.