Microzone Product Datasheet

Product code: 2MMP-RTU-10 Lot Number:

MegaMix Platinum 2X One-Step RT-qPCR Kit, with UNG

P. Code	Size in 200 Rxn	Size in 1000 Rxn	Component	Description	Lot Number	Expiry
2MMPU-1	2 x 1 mL	10 x 1 mL	2X MegaMix Platinum qPCR Mastermix with UNG	Hot start Taq, dUTPs, UNG in optimised buffer.		
2EM-1	1 x 200 µL	5 x 200 µL	20X RT/RI Enzyme Mix	Concentrated combination of RT and RNase inhibitor		
5JWA-1	2 x 1 mL	10 x 1 mL	Just Water (Molecular grade water)	Aliquoted, Quality controlled, nuclease free, molecular grade water.		
ROX-0.1	1 x 100 µL	5 x 100 µL	25 µM ROX Reference Dye	Passive ROX reference dye		

Applications

- Multiplexed RT-qPCR probe based assays including TaqMan molecular beacons, Scorpions™ probes.
- Quantification of any RNA template (mRNA, total RNA, viral RNA), low copy number genes.

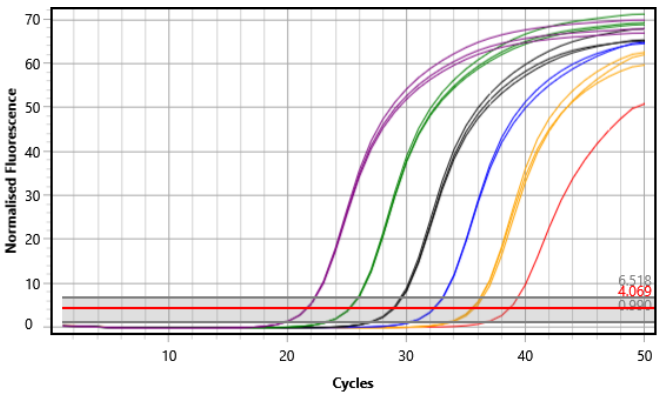
Product Description

Containing all the components needed to perform multiplex RT-qPCR swiftly and reliably in one reaction. The kit consists of 2X MMP One-Step RT-qPCR mastermix, containing chemically modified Hot Start Taq DNA polymerase, dUTP and UNG in enhancing buffer; 20X RTase/RI enzyme mix, optimised for amplifying low copy RNA targets; and Just Water, our molecular biology grade water. The presence of thermolabile UNG and dUTP eliminates carryo-ver contamination at room temperature. Unlike other UNG enzymes it is totally and irreversibly inactivated during thermocycling allowing post PCR analysis. This mix has been optimised for multiplex assays utilising dual la-belled hydrolysis probes and is compatible with both standard and fast cy-cling conditions.

Key Features

- Multiplexing—excellent for multiplexed reactions consisting of 4 or 5 targets without compromising performance.
- Eliminate carry over contamination—incorporation thermolabile UNG and dUTP prevent amplicon contamination from previous runs.
- Versatile— compatible with standard and fast cycling conditions, GC/ AT rich templates.

Performance



MegaMix Platinum 2X One-step RT-qPCR with UNG kit shows excellent linearity and reproducibility with 6X 1 in 10 dilution series of a high concentration samples. SARS-CoV-2 E gene, BMS MIC.

Protocol

Thaw all reagents completely and mix well before use.

Prepare a master mix as described in the table below. This reaction can be scaled according to the quantity of reactions required.

Mix gently, avoiding bubbles, centrifuge if necessary.

Include a no template control, positive control and no RT control as required.

Components	Volume
2X MegaMix Platinum qPCR Mastermix with UNG	10 µL
20X RT/RI Enzyme Mix	1 µL
25 µM ROX Reference Dye (Optional)	Low 0.04 µL / High 0.4 µL
Primers and Probe Mix	x µL
Template	y µlL
Just Water (Molecular grade water)	make up to 20 µL

The ROX concentration required will depend on the qPCR instrument in use.

Thermocycling

Transfer the reactions to the thermal cycler and set as follows:

Cycles	Temperature	Time
1	50°C	10 min
1	95°C	2 min
40	95°C	3 sec
	60°C	20 sec

Annealing temperature (60°C) may require optimisation depending on the specific primers in use.

The run time can be shortened by optimising the steps of the thermocycling pro-file.

Note: Low ROX instruments require a ROX final concentration of 50 nM and high ROX instruments require a ROX final concentration of 500 nM.

For research use only

Product Handling

Storage

To ensure the quality of the product until the expiry date keep at the recommended storage temperature and limit exposure to light.

Contamination Control

To prevent erroneous results ensure work environment is free of contamination by cleaning your workstation and equipment with a DNA decontaminant daily, wear gloves, use sterile tubes and filter pipet tips.

Simple | Effective | Efficient

Version 2.01

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