

MegaMix Gold One-step RT-PCR Kit

P. Code	Size in 200 Rxn	Size in 1000 Rxn	Component	Description	Lot Number	Expiry
2MMG-1	2 x 1 mL	10 x 1 mL	MegaMix Gold	2X Concentrated, Hot start Taq, 200µM dNTPs, 3 mM MgCl ₂ in optimised buffer (final concentrations).		
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.		

Applications

- Hot Start RT-PCR up to 6 kb
- Amplification of any RNA template (mRNA, total RNA, viral RNA), low copy number genes
- RT-qPCR (probe or dye based)
- Endpoint RT-PCR
- Pathogen Detection
- Gene expression analysis.
- Amplification of GC and AT rich templates

Product Description

Containing all the components needed to perform RT-PCR swiftly and reliably. The kit consists of 2X MegaMix Gold containing Hot Start Taq DNA polymerase, 200 µM dNTP and 3 mM MgCl₂ (final concentrations) in Microzone’s proprietary enhancing buffer; 20X RTase/RI enzyme mix, optimised for amplifying low copy RNA targets; and Just Water, our molecular biology grade water. MegaMix Gold uses a superior sensitive hot start DNA polymerase. The Taq polymerase becomes active upon heating at 95°C. This ensures a highly specific

and sensitive amplification, removing background and primer dimer formation. MegaMix Gold boasts excellent accuracy and produces A-tailed products suitable for ligating into TA cloning vectors.

Key Features

- Hot Start polymerase in Microzone’s proprietary buffer gives unrivalled confidence in RT-PCR amplifications.
- 2X concentrated format.
- Broad range of templates and conditions.
- Extremely stable—can be freeze thawed many times.
- Easy set up and RT-PCR optimisation.

Protocol

This products is to be used as follows.

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 and positive control as required.

Components	Volume
MegaMix Gold	10µL
20X RT/RI Enzyme Mix	1 µL
Primers	x µL
Template	y µL
Just Water (Molecular grade water)	z µL (up to 20 µL)

Thermocycling

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

Annealing temperature (55-65°C) may require optimisation depending on the specific primers in use.

Cycles	Temperature	Time
1	50°C	10 mins
1	95°C	5 min
25-40	95°C	15 sec
	55-65°C	15 sec
	72°C	15 sec

The run time can be shortened by optimising the steps of the thermocycling profile. The extension time is to be increased depending on amplicon length, use 15 sec/kb.

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