

QIAGEN® OneStep RT-PCR Kit

For fast and successful one-step RT-PCR

The QIAGEN® OneStep RT-PCR Kit is designed for easy and sensitive one-step RT-PCR using any RNA template. A unique enzyme combination and specially developed reaction buffer ensure efficient, highly specific reverse transcription and PCR in one tube, without the need for optimization.

The QIAGEN OneStep RT-PCR Kit provides:

- Fast and easy one-tube setup
- Efficient reverse transcription with minimal optimization
- A unique blend of two high-affinity reverse transcriptases and a hot-start PCR enzyme
- An optimized one-step RT-PCR buffer with a balanced mixture of enzymes

One step, one tube — the simplest RT-PCR

The QIAGEN OneStep RT-PCR Kit allows fast and easy RT-PCR setup. Whatever your application — virus detection, molecular diagnostics research or gene expression — just mix all components together in one tube and start your thermal-cycler program. The reaction mixture contains all of the reagents required for both reverse transcription and PCR; nothing needs to be added once the reaction has been started.

Superior sensitivity and higher yield — the winning enzyme combination

The QIAGEN OneStep RT-PCR Enzyme Mix contains a specially formulated enzyme blend for both reverse transcription and PCR. The unique combination of Omniscript® and Sensiscript® Reverse Transcriptases, with their high affinity for RNA templates, ensures highly efficient and sensitive transcription of RNA amounts from as little as 1 pg up to 2 µg. After reverse transcription, reactions are heated to 95°C for 15 minutes to activate HotStarTaq® DNA Polymerase and simultaneously inactivate ▷

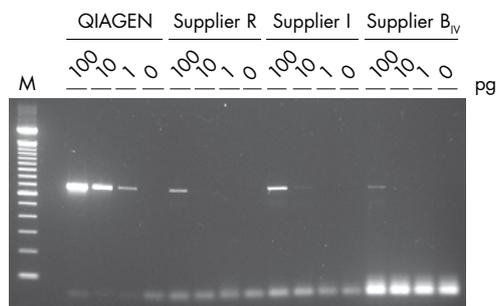


Figure 1. Highly specific RT-PCR using low amounts of template. One-step RT-PCR was carried out using the indicated amounts of total RNA from HeLa cells and primers specific for α -catenin, amplifying a 690 bp product. All reactions were carried out following suppliers' instructions. **M:** 100 bp ladder.

the reverse transcriptases. This hot start to the PCR eliminates any nonspecific amplification products such as primer–dimers and reduces background smear, ensuring highly sensitive and reproducible RT-PCR (Figures 1 and 2).

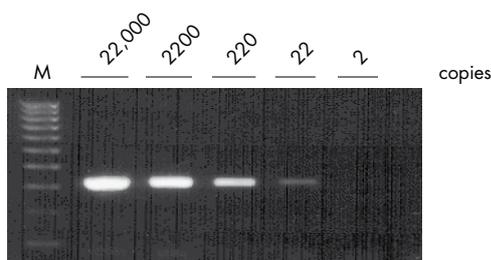


Figure 2. Efficient detection of viral RNA. A 336 bp fragment of F-gene mRNA was reverse-transcribed and amplified from Sendai virus RNA isolated from persistently infected Vero cells. Reactions were prepared using the QIAGEN OneStep RT-PCR Kit and the indicated number of viral genome copies.*
M: markers.

* Data kindly provided by H. Rausch, Max Planck Institute for Biochemistry, Martinsried, Germany as part of the project “Experimental control of virological work at safety levels 2 and 3 in Bavaria,” supported by the Bavarian Ministry of the Environment.

Minimal optimization for robust and efficient RT-PCR

QIAGEN OneStep RT-PCR Buffer has been specially developed to allow both efficient reverse transcription and PCR amplification. The buffer contains novel additives that prevent inhibition of PCR amplification by reverse transcriptases, a problem often encountered in one-step RT-PCR. The buffer ensures specific primer annealing over a wide range of temperatures and Mg^{2+} concentrations; providing robust and highly efficient RT-PCR from any RNA template. The QIAGEN OneStep RT-PCR Kit includes Q-Solution®, an innovative additive that modifies the melting behavior of nucleic acids. Q-Solution facilitates reverse transcription and amplification of templates with a high GC content or a high degree of secondary structure. Using Q-Solution simplifies optimization of RT-PCR for difficult templates. The QIAGEN OneStep RT-PCR Kit comes with everything you need for faster and easier RT-PCR for your most sensitive applications.

Ordering Information

Product	Contents	Cat. no.
QIAGEN OneStep RT-PCR Kit (25)	For 25 reactions: QIAGEN OneStep RT-PCR Enzyme Mix, 5x QIAGEN OneStep RT-PCR Buffer,* dNTP Mix,† 5x Q-Solution, RNase-free water	210210
QIAGEN OneStep RT-PCR Kit (100)	For 100 reactions: QIAGEN OneStep RT-PCR Enzyme Mix, 5x QIAGEN OneStep RT-PCR Buffer,* dNTP Mix,† 5x Q-Solution, RNase-free water	210212

* Contains 12.5 mM $MgCl_2$ † Contains 10 mM of each dNTP

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

Visit www.qiagen.com or contact QIAGEN today to discover how fast and efficient your one-step RT-PCR can be!

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