

# qPCRBIO SyGreen 1-Step Detect | 1-Step Go

- Thermostable reverse transcription
- Sensitive
- Early Ct

qPCRBIO SyGreen 1-Step Kits have been designed for fast, highly specific and ultra-sensitive real-time RT-PCR. We use the latest developments in reverse transcriptase technology and buffer chemistry to give efficient cDNA synthesis and real-time PCR in a single tube.

## Features

- Thermostable reverse transcriptase 45°C to 55°C
- Advanced RNase inhibitor
- Non-PCR inhibiting intercalating dye
- Rapid extension rate for early Ct values
- Market-leading sensitivity - increased limit of detection
- Antibody-mediated hot start PCR
- Compatible on all real-time PCR platforms - standard and fast cycling conditions

## Applications

- Absolute quantification
- Relative gene expression analysis
- Detection of extremely low copy number targets
- qPCRBIO SyGreen 1-Step Detect recommended for template amounts of 1pg - 10ng total RNA or >0.01pg mRNA per reaction
- qPCRBIO SyGreen 1-Step Go recommended for template amounts of 10pg - 100ng total RNA or >0.01pg mRNA per reaction

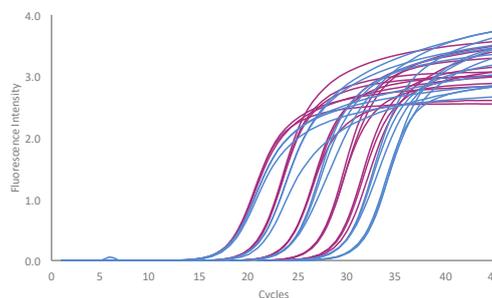


Figure 1. Comparison of qPCRBIO SyGreen 1-Step Go (purple) against competitor Bioline (blue)

Shows amplification traces of the ACT1 gene from a dilution series of total RNA extracted from mouse liver. Total RNA concentration varied from 25pg to 250ng per 20µl reaction. Cycling conditions were 45°C 10 minutes for cDNA synthesis, followed by 95°C 2 minutes hot start, then 45 cycles of 95°C 10sec, 60°C 10sec on Roche LC480. qPCRBIO SyGreen 1-Step Go had equal performance at high RNA concentrations and superior performance at lower RNA concentrations, displaying linear spacing between amplification curves, earlier amplification by 3-4 cycles, and lower prevalence of primer dimer.

## Fast and Sensitive

qPCR BIO SyGreen 1-Step Kits can be used to quantify any RNA template including mRNA, total RNA and viral RNA sequences. qPCR BIO SyGreen 1-Step Detect is designed for sensitivity and is ideally suited to the detection of extremely low copy number targets. qPCR BIO SyGreen 1-Step Go gives the earliest Ct and is formulated for rapid and accurate results from high template concentrations.

## Thermostable

The kits include a thermostable and extremely active modified MMLV reverse transcriptase and advanced RNase inhibitor that prevents degradation of RNA by contaminating RNase. PCR amplification is powered by antibody-mediated hot start technology, preventing the formation of primer dimers and non-specific products leading to improved reaction sensitivity and specificity. Combining the latest developments in polymerase technology and advanced buffer chemistry we offer market-leading performance with minimal or no optimisation.

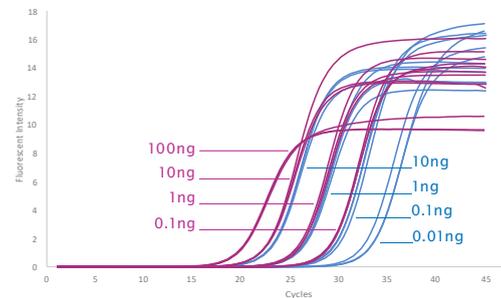


Figure 2a.

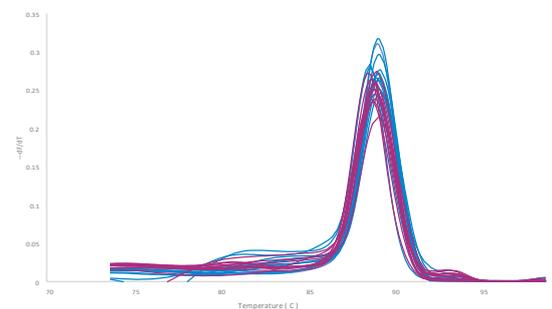


Figure 2b.

Comparison of qPCR BIO SyGreen 1-Step Detect (blue) and qPCR BIO SyGreen 1-Step Go (purple), showing ideal template ranges for each product

The ACTG1 gene was amplified from a dilution series of total RNA extracted from mouse liver. qPCR BIO SyGreen 1-Step Go (purple) shows efficient amplification of total RNA in the range 100pg to 100ng per reaction. qPCR BIO SyGreen 1-Step Detect (blue) shows efficient amplification of total RNA in the range 10pg to 10ng per reaction (figure 2a). Cycling conditions were 45°C 10min for cDNA synthesis, followed by 95°C 2min hot start, then 45 cycles of 95°C 10sec, 60°C 30sec, concluding with a melt analysis (figure 2b) on a Roche LC480.

| Catalogue Number | Product Name                          | Pack Size        | Presentation                           |
|------------------|---------------------------------------|------------------|--|
| 17-600           | qPCR BIO SyGreen 1-Step Detect Lo-ROX | 100 x 20µl rxns  | [1 x 1ml mix] & [1 x 200µl RTase]      |
| 17-600B          |                                       | 300 x 20µl rxns  | [3 x 1ml mix] & [3 x 200µl RTase]      |
| 17-600C          |                                       | 1200 x 20µl rxns | [12 x 1ml mix] & [12 x 200µl RTase]    |
| 17-601           | qPCR BIO SyGreen 1-Step Detect Hi-ROX | 100 x 20µl rxns  | [1 x 1ml mix] & [1 x 200µl RTase]      |
| 17-601B          |                                       | 300 x 20µl rxns  | [3 x 1ml mix] & [3 x 200µl RTase]      |
| 17-601C          |                                       | 1200 x 20µl rxns | [12 x 1ml mix] & [12 x 200µl RTase]    |
| 17-602           | qPCR BIO SyGreen 1-Step Go Lo-ROX     | 100 x 20µl rxns  | [1 x 1ml mix] & [1 x 100µl RTase Go]   |
| 17-602B          |                                       | 300 x 20µl rxns  | [3 x 1ml mix] & [3 x 100µl RTase Go]   |
| 17-602C          |                                       | 1200 x 20µl rxns | [12 x 1ml mix] & [12 x 100µl RTase Go] |
| 17-603           | qPCR BIO SyGreen 1-Step Go Hi-ROX     | 100 x 20µl rxns  | [1 x 1ml mix] & [1 x 100µl RTase Go]   |
| 17-603B          |                                       | 300 x 20µl rxns  | [3 x 1ml mix] & [3 x 100µl RTase Go]   |
| 17-603C          |                                       | 1200 x 20µl rxns | [12 x 1ml mix] & [12 x 100µl RTase Go] |

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