

qScript[®] 1-Step Virus ToughMix

Superior sensitivity for viral RNA detection

FEATURES AND BENEFITS:

- Superior Sensitivity – higher amplification yields enable lower copy detection
- Tough Tested – tolerant to a wide range of PCR inhibitors
- Multiplexing – highly sensitive detection for up to four targets



DESCRIPTION:

qScript[®] 1-Step Virus ToughMix[®] is a 2x, ready-to-use, master mix for rapid detection of RNA viruses such as Flu-A, Flu-B, and SARS-CoV-2, using one-step, or single-tube reverse transcription quantitative PCR (RT-qPCR). The mix has been optimized for maximum sensitivity to enable reliable quantification of very low input quantities of RNA using dual-labeled hydrolysis probe detection chemistries such as TaqMan[®] probes in single or multiplexed assay formats. qScript 1-Step Virus ToughMix contains all required components for RT-qPCR except RNA template and primer/probe assays.

Higher Yields, Better Sensitivity:

qScript 1-step Virus ToughMix was benchmarked against the gold standard qScript XLT 1-Step RT-qPCR ToughMix for detection of varying amounts of SARS-CoV-2 RNA in a background of human total RNA. Multiplexed RT-qPCR of the E-gene (FAM), RdRp (HEX) and RNase P Internal Control (ROX) was carried out on the Q qPCR cycler: 10 min at 50°C; 1 min at 95°C; followed by 45 cycles of 5 sec at 95°C; 10 sec at 60°C. Both products generated excellent results. However, the qScript 1-Step Virus ToughMix demonstrated earlier detection and robust amplification curves (higher signal amplitude) for low copy E-gene detection.

Quantabio recommends both of these high performing products for RNA virus detection. While highly similar in composition, the improved specificity provided by the reverse transcription hot-start of the qScript 1-Step Virus ToughMix often translates to improved sensitivity and fewer false negative calls at or near the limit of detection (LOD), particularly in multiplexed assays.

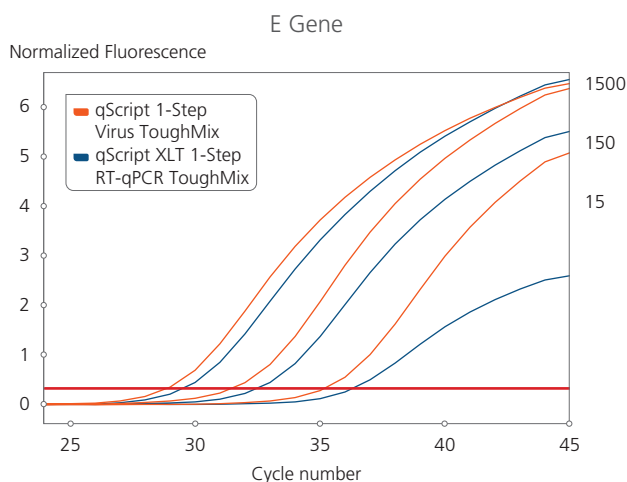


Figure 1 E Gene comparing qScript 1-Step Virus ToughMix vs. qScript XLT 1-Step RT-qPCR ToughMix. 15, 150 and 1500 copies of RNA were compared. qScript 1-Step Virus ToughMix improves low copy RT-qPCR performance at both 150 and 15 copies of RNA.

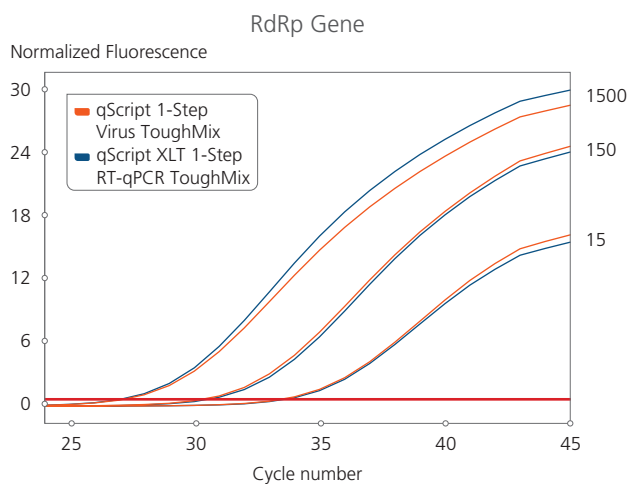


Figure 2 RdRp Gene comparing qScript 1-Step Virus ToughMix vs. qScript XLT 1-Step RT-qPCR ToughMix. 15, 150 and 1500 copies of RNA were compared. qScript 1-Step Virus ToughMix improves low copy RT-qPCR performance.

Features	qScript 1-Step Virus ToughMix	qScript XLT 1-Step RT-qPCR ToughMix
Formulation	2X Master Mix	2X Master Mix
Taq Hot Start	Yes	Yes
RT Hot Start	Yes	No
Chemistry	1 tube SuperMix	1 tube SuperMix
Performance	++++	++++
Cycling Conditions	Fast or Standard qPCR Cycling	Fast or Standard qPCR Cycling
Multiplex Capability	Up to 4 targets	Up to 4 targets
Sensitivity	++++	+++
Inhibitor Tolerance	Yes	Yes

ORDER INFO

Product Name	Quantabio Catalog Number	Size
qScript 1-Step Virus ToughMix - 100 R	95131-100	100 x 20 µl rxns
qScript 1-Step Virus ToughMix - 500 R	95131-500	500 x 20 µl rxns
qScript 1-Step Virus ToughMix - 2000 R	95131-02K	2000 x 20 µl rxns
qScript 1-Step Virus ToughMix Low ROX - 100 R	95212-100	100 x 20 µl rxns
qScript 1-Step Virus ToughMix Low ROX - 500 R	95212-500	500 x 20 µl rxns
qScript 1-Step Virus ToughMix Low ROX - 2000 R	95212-02K	2000 x 20 µl rxns

Trademarks: qScript® and ToughMix® are registered trademarks of Quantabio, LLC.; TaqMan® is a registered trademarks of Roche Molecular Systems, Inc. Quantabio products are intended for molecular biology applications. The products are not intended for the diagnosis, prevention or treatment of a disease. MK-SF-0036 REV 02 qScript 1-Step Virus TM 0121