qPCRBIO Probe 1-Step Virus Detect

- SARS-CoV-2 validated
- Ultra-sensitive
- Accurate

qPCRBIO Probe 1-Step Virus Detect is designed for ultra-sensitive detection of viral RNA using probe-based 1-step RT-qPCR. The kit has been optimised with a high-concentration 4x mix, enabling greater sample input and increasing sensitivity, even when working with small volume reactions.

Features

- Ultra-sensitive detection of RNA viruses
- Validated for qualitative detection of SARS-CoV-2 nucleic acid
- Concentrated 4x mix format, ideal for highthroughput, highly multiplexed assays
- Gives earlier detection of a wide range of template amounts
- Includes UltraScript RTase for thermostable reverse transcription up to 55°C
- Advanced RNase inhibitor
- Antibody-mediated hot start technology
- Compatible with all real-time PCR platforms standard and fast cycling conditions

Applications

- SARS-CoV-2 detection and research
- Diagnostic real-time PCR
- Detection of extremely low copy number targets
- High throughput assays
- Singleplex and multiplex
- TaqMan[®], Scorpions[®] and molecular beacon probes



Fig 1. Triplex detection of SARS-CoV-2 nucleic acid using CDC and WHO/Charité recommended sequences

Amplification of SARS-CoV-2 N, E, and RdRp genes according to CDC (N2) and WHO/Charité (E and RdRp-P2) recommended sequences, using qPCRBIO Probe 1-Step Virus Detect (purple) and SuperScript III Platinum OneStep qRT-PCR Kit (grey). Amplification curves are shown on the left and efficiency on the right. 5 serial dilutions of RNA template were used, corresponding to 40,000, 4,000, 400, 40 and 4 copies of the SARS-CoV-2 genome. Total reaction volume is 20µL. The N2 probe was labelled with Cy5, E probe with FAM, and RdRp-P2 probe with Texas Red. Cycling conditions were RT at 55°C 10 min, denaturation at 95°C 3 min and 50 cycles of amplification at 95°C 15s, 58°C 30s.

qPCRBIO Probe 1-Step Virus Detect can reliably and sensitively detect SARS-CoV-2 in triplex reactions, giving earlier or equal Ct and increased sensitivity at lower template dilutions compared to the competitor kit.





High sensitivity

Developed with a high-concentration 4x mix, qPCRBIO Probe 1-Step Virus Detect offers greater sensitivity, enabling more sample to be added, and for smaller reaction volumes to be used with confidence. The kit gives accurate and sensitive detection of viral sequences over a broad range of input RNA, down to 4 copies tested per reaction (0.8 copies per µL).

Robust and reproducible RT-qPCR

qPCRBIO Probe 1-Step Virus Detect uses UltraScript Reverse Transcriptase for fast and efficient cDNA synthesis up to 55°C. The PCR step is powered by PCRBIO HS Taq DNA Polymerase, which employs antibody-mediated hot start technology for specific amplification of virusderived cDNA, with improved tolerance to the common PCR inhibitors found in clinical samples.

Universal detection kit

qPCRBIO Probe 1-Step Virus Detect contains all the components needed for rapid and accurate RT-qPCR, requiring only the addition of primers, probes, template and water. The kit is compatible with all qPCR instruments and a wide range of probe technologies, including TaqMan[®], Scorpions[®] and molecular beacon probes.



qPCRBIO Probe 1-Step Virus Detect Kit
SuperScript III Platinum OneStep qRT-PCR Kit

Fig 2. Amplification of SARS-CoV-2 E gene using WHO/ Charité recommended sequences after different RT times

Ct values and efficiency plots obtained with amplification of SARS-CoV-2 E gene sequences after different reverse transcription (RT) times using qPCRBIO Probe 1-Step Virus Detect (purple) and SuperScript III Platinum OneStep qRT-PCR Kit (grey). 3 dilutions of RNA template were used, corresponding to 40,000, 40 and 4 copies of SARS-CoV-2 genome per reaction. Total reaction volume is 20µL. Cycling conditions were RT at 55°C, denaturation at 95°C 3 min and 50 cycles of amplification at 95°C 15s, 58°C 30s.

qPCRBIO Probe 1-Step Virus Detect enables sensitive detection of SARS-CoV-2 nucleic acid over a range of RT times, with earlier Ct and greater efficiency compared to the competitor kit. When using the qPCRBIO kit we recommend 5 min RT for singleplex reactions and 10 min RT for multiplex.

Cat. no.	Product name	Pack size	Presentation
PB25.51-01	qPCRBIO Probe 1-Step Virus Detect Lo-ROX	200 x 20µL rxns	[1 x 1mL mix] & [1 x 200µL UltraScript]
PB25.51-03		600 x 20µL rxns	[3 x 1mL mix] & [1 x 600µL UltraScript]
PB25.51-05		1000 x 20µL rxns	[1 x 5mL mix] & [1 x 1mL UltraScript]
PB25.51-50		10000 x 20µL rxns	[1 x 50mL mix] & [2 x 5mL UltraScript]
PB25.51-500		50000 x 20µL rxns	[1 x 500mL mix] & [1 x 100mL UltraScript]
PB25.52-01	qPCRBIO Probe 1-Step Virus Detect Hi-ROX	200 x 20µL rxns	[1 x 1mL mix] & [1 x 200µL UltraScript]
PB25.52-03		600 x 20µL rxns	[3 x 1mL mix] & [x 600µL UltraScript]
PB25.52-05		1000 x 20µL rxns	[1 x 5mL mix] & [1 x 1mL UltraScript]
PB25.52-50		10000 x 20µL rxns	[1 x 50mL mix] & [2 x 5mL UltraScript]
PB25.52-500		50000 x 20µL rxns	[1 x 500mL mix] & [1 x 100mL UltraScript]
PB25.53-01	qPCRBIO Probe 1-Step Virus Detect No-ROX	200 x 20µL rxns	[1 x 1mL mix] & [1 x 200µL UltraScript]
PB25.53-03		600 x 20µL rxns	[3 x 1mL mix] & [x 600µL UltraScript]
PB25.53-05		1000 x 20µL rxns	[1 x 5mL mix] & [1 x 1mL UltraScript]
PB25.53-50		10000 x 20µL rxns	[1 x 50mL mix] & [2 x 5mL UltraScript]
PB25.53-500		50000 x 20µL rxns	[1 x 500mL mix] & [1 x 100mL UltraScript]
PB25.54-01	qPCRBIO Probe 1-Step Virus Detect Separate-ROX	200 x 20µL rxns	[1 x 1mL mix] & [1 x 200µL ROX] & [1 x 200µL UltraScript]
PB25.54-03		600 x 20µL rxns	[3 x 1mL mix] & [1 x 200µL ROX] & [1 x 600µL UltraScript]
PB25.54-05		1000 x 20µL rxns	[1 x 5mL mix] & [1 x 200µL ROX] & [1 x 1mL UltraScript]

T: +44 (0) 203 930 8101 | E: info@pcrbio.com | Orders: sales@pcrbio.com

www.pcrbio.com