Product Information	
qScript® 1-Step RT-PCR Kit	
Part Number	95143-200
Number of Reactions	200 reactions
Reaction Size	25 µL
Storage Temperature	-25ºC to -15ºC
Lot Number	66214732
Reference Number	041122, 010923, 111122
Expiration Date	04/30/2025

Product Description:

The qScript® XLT One-Step RT-PCR Kit is a convenient and highly sensitive system for amplification of RNA templates up to 2 kb. cDNA synthesis and PCR amplification are carried out in the same tube without opening between incubation steps. This system has been optimized to deliver maximum RT-PCR efficiency, sensitivity, and specificity. qScript XLT is an engineered M-MLV reverse transcriptase with reduced RNase H activity and improved activity and stability at higher temperatures. The use of higher temperatures (48 to 55°C) for the cDNA synthesis step of one-step RT-PCR provides higher specificity for primer annealing and disruption of RNA secondary structure that can interfere with cDNA synthesis. The enzyme is supplied as a mixture with ribonuclease inhibitor protein to protect the integrity of RNA templates in crude lysates or samples where RNase contamination may limit assay sensitivity. This reagent leverages PCR-inhibitor neutralizing ToughMix® technology and is highly resistant to template impurities commonly encountered with clinical, environmental or plant specimens. Ultra pure AccuStart® II antibody hotstart is blended with a highly processive Taq DNA polymerase and 3' exonuclease proof-reading Taq DNA polymerase for improved PCR fidelity and maximum amplifiable length. High-avidity monoclonal antibodies provide an extremely stringent automatic hot-start that minimizes the potential for primer-dimer and other non-specific PCR artifacts without compromising polymerase activities. Highly specific amplification is crucial to successful RT-PCR as non-specific product(s) can compete with amplification of the target sequence and impair PCR efficiency. The proprietary reaction buffer has been specifically formulated to maximize activities of both the reverse transcriptase and thermostable DNA polymerase while minimizing the potential for primer-dimer and other non-specific PCR artifacts.

Component Part Numbers:

84258 qScript XLT 1-Step RT, 0.20 mL
84260 1-Step ToughMix (2X), 1.25 mL
84255 50X Loading Dye, 0.40mL
84007 Nuclease Free Water, 1.50 mL

Product Specifications			
95143			
Assay	**1-Step End Point RT-PCR Functional Assay**	**DNase**	**RNase**
Result	Pass	Pass	Pass

Quality Control Analysis and Specifications:

Nuclease Assay

DNase: DNase activity must be below the detectable limits of 100 pg DNase I equivalent as assayed using a fluorogenic substrate following a 1 hour incubation at 37°C with each kit component at 1X concentration.

RNase: RNase activity must be below the detectable limits of 1 pg RNase A equivalent as assayed using a fluorogenic substrate following a 1 hour incubation at 37°C with each kit component at 1X concentration.

1-Step End Point RT-PCR Functional Assay: Must have single bands at ~2kb that is visible from 35 cycles of PCR using 100 ng to 1 ng total Universal RNA with DYE MasterMix and without DYE MasterMix. No bands should be at ~2kb from 35 cycles of PCR in the NTC samples with DYE MasterMix and without DYE MasterMix. The intensity of the 2kb band for all samples at the 100 ng concentration must be comparable.

Limitations of Use

Quantabio and Ultraplex are registered trademarks of QIAGEN Beverly, Inc. Quanta Biosciences, qScript, Geltrack, ToughMix, PerfeCta, and Fastmix are registered trademarks of Quanta BioSciences Inc. Extracta, AccuStart, AccuMelt, and Accuvue are trademarks of Quanta BioSciences Inc. Applied Biosystems, StepOne, StepOnePlus and ROX are trademarks of Thermo Fisher Scientific and or its subsidiaries. Please contact QIAGEN-Beverly for more information.

This product was developed, manufactured, and sold for *in vitro* use only. The product is not suitable for administration to humans or animals. SDS sheets relevant to this product are available upon request.