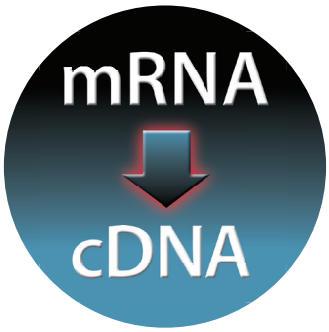
qScript XLT SuperMix

SUPERIOR cDNA SYNTHESIS

qScript XLT cDNA SuperMix is a next-generation tool for first-strand cDNA synthesis, providing a highly sensitive and easy-to-use solution for two step RT-PCR. qScript XLT is an engineered M-MLV reverse transcriptase with reduced RNase H activity and improved activity and stability at higher temperatures. Combined with precise mixture of reaction components, this SuperMix enables superior results over a wide dynamic range of input RNA, with detectable synthesis of up to 8-fold higher sensitivity than cDNA synthesis kits utilizing an RNase H(+) reverse transcriptase (RT).



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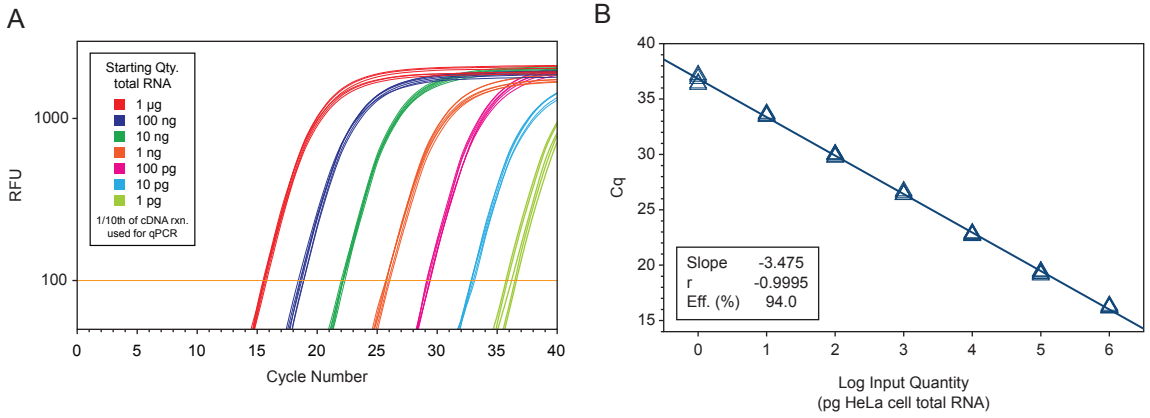
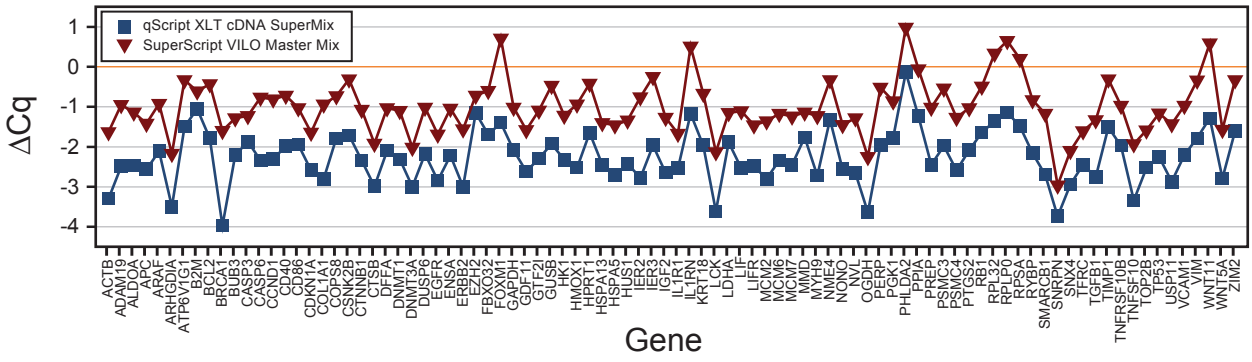
FEATURES AND BENEFITS

- Improved performance over traditional reverse transcriptases
- Broad linear dynamic range
- RNase H minus RT = higher yield = higher sensitivity
- Ability to reverse transcribe difficult sequences resulting in improved representation of problematic sequences and longer first-strand product
- Out performs ALL first-strand kits on the market



Two-step RT-qPCR with high reproducibility, sensitivity, and broad dynamic range. First-strand cDNA was synthesized using qScript XLT cDNA SuperMix from varying amounts of HeLa cell total RNA (1 µg to 1 pg) . Six replicate cDNA reactions (20-µL final vol.) were performed for each input amount of total RNA template. Following cDNA synthesis, 30 µL of 10 mM Tris (pH 8.0), 1 mM EDTA was added to each reaction and 5 µL of the diluted cDNA product (1/10th of each cDNA reaction) was used as template for qPCR s using PerfeCta qPCR ToughMix with 0.5X Human B2M (FAM/MGB) TaqMan® Endogenous Control Assay (Life Technologies). qPCR was performed on a CFX96 Real-Time PCR Detection System (Bio-Rad) . Following an initial activation step of 2 min. at 95 ˚C, the 20-µL reactions were cycled 45X: 95 ˚C, 5s; 60 ˚C, 30s



Comparison of cDNA synthesis from Brain tissue using qScript™ XLT cDNA SuperMix (Quanta BioSciences) and SuperScript® VILO (Life Technologies). Using Quanta's original qScript cDNA SuperMix as a control, the dCq (change in cycle threshold) is shown for each of 96 genes. The results indicate XLT beats VILO by at least a full cycle and the original SuperMix by more than 2 cycles on average.

This 5X concentrated master mix provides all necessary components (except RNA template) for first-strand synthesis including: buffer, dNTPs, MgC12, primers, RNase inhibitor protein, qScript XLT reverse transcriptase and stabilizers. The unique blend of oligo (dT) and random primers in the qScript XLT cDNA SuperMix works exceptionally well with a wide variety of targets and is optimized for the amplification of RT-PCR products up to 1kb in length, producing excellent results in both real-time and conventional RT-PCR.

Components

qScript XLT cDNA SuperMix

5X reaction buffer containing optimized concentrations of $MgCL_2$, dNTPs (dATP, dCTP, dGTP, dTTP). recombinant RNase inhibitor protein, qScript reverse transcriptase, random primers, oligo(dT) primer and stabilizers.

ORDERING INFORMATION

PRODUCT	Quanta Cat. No.	Pack Size
qScript XLT SuperMix	95161-025	25 x 20 ul reactions
	95161-100	100 x 20 ul reactions
	95161-500	500 x 20 ul reactions

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