**Product Specifications 95161-100 Rev 01**

**Product Description:**
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 and RT-qPCR. qScript XLT is an engineered M-MLV reverse transcriptase mutant with reduced RNase H activity and improved yield and stability at higher temperatures. Combined with a precise mixture of reaction components, this SuperMix enables superior results over a wide dynamic range of input RNA, with up to 8-fold higher sensitivity than our previous qScript cDNA SuperMix cDNA synthesis kits, which utilize an engineered RNase H(+) reverse transcriptase mutant.

**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.

**qScript XLT cDNA SuperMix Functional Assay:** Real-time One-Step RT-PCR of a reference gene (ACTB) in triplicate reactions is performed on a 10 fold serial dilution over 6 orders of dynamic range (100 ng to 100 fg) using a Universal Reference total RNA preparation. Slope from Ct standard curve analysis between -3.20 and -3.65. No Template Control below the threshold for at least two replicates.

**Limitations of Use**
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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.

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