

Product Information	
UltraPlex 1-Step ToughMix®	
Part Number	95166
Unit Size	500 mL
Reaction Size	20 µL
Storage Temperature	-80°C to -60°C
Lot Number	66197691
Reference Number	120921
Expiration Date	12/31/2024

**Product Description:**

UltraPlex 1-Step ToughMix is a ready-to-use, 4X concentrated master mix 1-step reverse transcription and real-time quantitative PCR (RT-qPCR) of RNA templates using probe-based detection methods. First-strand cDNA synthesis and PCR amplification are carried out in the same tube without opening between steps. Optimized to deliver highly sensitive quantification of RNA viruses or low abundance RNA targets in uni- or highly multiplexed RNA detection assays, this reagent chemistry is optimized to deliver maximum assay sensitivity, precision and reproducibility with miniaturized reaction volumes and either conventional or accelerated thermal cycling protocols. UltraPlex 1-Step ToughMix contains all required components for RT-qPCR except RNA template and probe and is compatible with all dual-labeled probe chemistries.

Product Specifications			
95166			
Assay	UltraPlex 1-Step ToughMix 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.

**UltraPlex 1-Step ToughMix Functional Assay:** Must have detection of β actin, PPIA, GAPDH, and TUBA from 1 pg to 100,000 pg of UHR total RNA. Cq standard curve analysis for each targeted sequence must have a coefficient of determination ( $R^2$ ) ≥0.990 with a slope between -3.20 and -3.65.

**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.