

Product Information	
<b>PerfeCTa Multiplex qPCR ToughMix</b>	
Part Number	172-5568
Reaction Size	20 $\mu$ L
Storage Temperature	-25°C to -15°C
Lot Number	029562
Reference Number	022619
Expiration Date	02/28/2021

**Product Description:**

PerfeCTa MultiPlex qPCR ToughMix is a 5X concentrated, ready-to-use reaction cocktail for real-time quantitative PCR (qPCR) with ToughMix reagent technology that neutralizes a broad spectrum of PCR inhibitors that compromise assay performance with crude extracts, clinical specimens, plant, soil environmental or complex food matrix. The only necessary user-supplied materials are probe assays and DNA samples. The Extra-concentrated reagent provides more flexibility with dilute DNA samples sensitivity. PerfeCTa MultiPlex qPCR ToughMix has been rigorously optimized to deliver maximum assay precision, sensitivity and PCR efficiency in miniaturized reaction volumes with either conventional or accelerated thermal cycling conditions.

Product Specifications				
172-5568				
Assay	Multiplex qPCR Functional Assay	High Biased, Multiplex qPCR	DNase	RNase
Result	Pass	Pass	Pass	Pass



Director of Quality Control

**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.

**Multiplex qPCR:** 4-color multiplex qPCR is performed in triplicate reactions on 10-fold serial dilutions of an equal copy mixture of four plasmid DNAs (1 x10<sup>7</sup> copies to 10 copies). Cq standard curve analysis for each targeted sequence must have a coefficient of determination (R<sup>2</sup>)  $\geq$ 0.990 with a slope between -3.25 and -3.65. No Template controls below the threshold for at least two replicates.

**High Biased, Multiplex qPCR:** 4-color multiplex qPCR of a 10-fold serial dilution of a FAM probe specific plasmid DNA (10 copies to 1 x10<sup>7</sup> copies) in a fixed background of 3 different plasmid targets at 1x10<sup>8</sup> copies (each). 10 copies of GAPDH target sequence is detected. Cq standard curve analysis must have a coefficient of determination (R<sup>2</sup>)  $\geq$ 0.990 with a slope between -3.25 and -3.65. Control reactions lacking template DNA (NTC) must remain below fluorescence threshold for at least 2 replicates. Each high copy target gene, ACTBD, IL1B, and TUBA is detected.

**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.