



Product Information				
PerfeCTa® Multiplex qPCR SuperMix				
Part Number	95063-200			
Number of Reactions	200 reactions			
Reaction Size	<b>ze</b> 50 μL			
Storage Temperature	-25°C to -15°C			
Lot Number	021945			
080817 010417 053117				
Expiration Date	01/31/2020			

# **Product Description:**

PerfeCTa Multiplex qPCR SuperMix is a 2X concentrated, ready-touse reaction cocktail that contains all the necessary components except: primers, probe(s), and DNA template for highlymultiplexed, real-time quantitative PCR. This reagent formulation pushes the boundary of multiplex qPCR by enabling unbiased amplification of up to 5 targets in a single amplification reaction. Suppression of low abundance targets by high abundance reference targets during co-amplification is a common problem in multiplex PCR in which individual assay sensitivity can be significantly compromised. PerfeCTa Multiplex qPCR SuperMix, Low ROX delivers assay performance with exceptionally broad, linear detection and limit-of-detection (LOD) sensitivity to multiplexed qPCR that is comparable single-plex assay performance without the need for rigorous titration of individual primer assays. A key component of this SuperMix is ultra-pure AccuStart™ hot start Taq DNA polymerase that is completely arrested prior to the initial PCR denaturation step. Upon heat activation at 95°C, the antibodies are rapidly and irreversibly denatured, releasing a fully active highyielding Taq DNA polymerase mutant. This enables specific and

efficient primer extension with the convenience of ambient room-temperature reaction assembly.

## **Component Part Numbers:**

84061 Multiplex qPCR SuperMix, 1.25 mL 84131 ROX Reference Dye 50X, 250  $\mu$ L 84132 Low ROX Reference Dye 50X, 250  $\mu$ L

Product Specifications					
95063					
Assay	Multiplex qPCR Functional Assay	High Biased, Multiplex qPCR	DNase	RNase	
Result	Pass	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.

**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 (10 copies to  $1 \times 10^7$  copies). Cq standard curve analysis for each targeted sequence must have a coefficient of determination ( $r^2$ )  $\geq$ 0.990 with a slope between -3.25 and -3.65. Control reactions lacking template DNA (NTC) must remain below fluorescence threshold through 45 PCR cycles.

**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 x  $10^7$  copies) in a fixed background of 3 different plasmid targets at  $1 \times 10^8$  copies (each) must have an LOD of 10 copies. Cq standard curve analysis must have a coefficient of determination ( $r^2$ ) ≥0.990 with a slope between −3.25 and −3.65. No

## **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.



# **Product Specifications** (Product Number) Rev (Number)

template controls (NTC) must be below threshold on at least 2 of the 4 copies. Each high copy target gene, ACTBD, IL1B, and TUBA is detected.

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