

| Product Information                          |                |
|----------------------------------------------|----------------|
| PerfeCTa® Multiplex qPCR SuperMix<br>Low ROX |                |
| Part Number                                  | 95108-01K      |
| Number of Reactions                          | 1000 reactions |
| Reaction Size                                | 50 µL          |
| Storage Temperature                          | -25°C to -15°C |
| Lot Number                                   | 66293397       |
| Reference Number                             | 101725         |
| Expiration Date                              | 11/30/2026     |

**Product Description:**

PerfeCTa Multiplex qPCR SuperMix is a 2X concentrated, ready-to-use reaction cocktail that contains all the necessary components except: primers, probe(s), and DNA template for highly-multiplexed, 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 high-

yielding Taq DNA polymerase mutant. This enables specific and efficient primer extension with the convenience of ambient room-temperature reaction assembly.

**Component Part Numbers:**

**84187 Multiplex qPCR S-Mix, Low ROX 25mL (FV-25.5ml)**

| Product Specifications |                                 |                             |       |       |
|------------------------|---------------------------------|-----------------------------|-------|-------|
| 95108                  |                                 |                             |       |       |
| 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  $1 \times 10^7$  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 ( $r^2$ )  $\geq 0.990$  with a slope between -3.25 and -3.65. No 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.

**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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