

| Product Information | |
|--|------------------------|
| PerfeCTa® Multiplex qPCR SuperMix | |
| Part Number | 95063-200 |
| Number of Reactions | 200 reactions |
| Reaction Size | 50 µL |
| Storage Temperature | -25°C to -15°C |
| Lot Number | 66221878 |
| Reference Number | 101722, 111022, 111022 |
| Expiration Date | 10/31/2025 |

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:

84061 Multiplex qPCR SuperMix, 1.25 mL

84131 ROX Reference Dye 50X, 250 µL

84132 Low ROX Reference Dye 50X, 250 µL

| 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 x 10⁷ copies). Cq standard curve analysis for each targeted sequence must have a coefficient of determination (r²) ≥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 10⁷ copies) in a fixed background of 3 different plasmid targets at 1x10⁸ copies (each) must have an LOD of 10 copies. Cq standard curve analysis must have a coefficient of determination (r²) ≥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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