

PerfeCta® MultiPlex qPCR ToughMix®

Advanced 1-tube SuperMix optimized to support highly multiplexed DNA amplifications in miniaturized reaction volumes and withstand a broad spectrum of PCR inhibitors

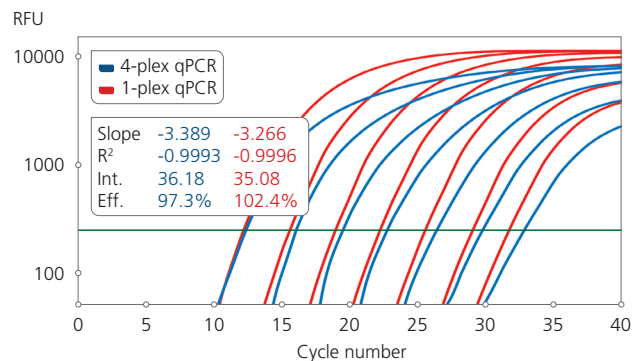
FEATURES AND BENEFITS:

- 1-tube SuperMix minimizes pipetting steps, simplifying reaction assembly and improving accuracy
- 5x concentrated reagent provides more flexibility with dilute DNA samples sensitivity
- ToughMix reagent technology neutralizes a broad spectrum of PCR inhibitors common in plant and animal tissues, environmental sources, clinical specimens and complex food matrices
- Superior assay sensitivity and specificity with ultrapure AccuStart II enzyme technology – maximum-yielding Taq DNA polymerase mutant controlled by stringent, multi-epitope antibody hotstart
- Supports efficient vortex mixing with proprietary anti-foaming additives

DESCRIPTION:

Suppression of low copy amplicons by high copy reference targets during multiplex co-amplification skews the apparent representation and quantification of low copy target sequences. PerfeCta MultiPlex qPCR ToughMix transcends these limitations by enabling sensitive, broad linear dynamic detection range with co-amplification of four abundant (10^6) targets. PerfeCta MultiPlex qPCR ToughMix enables multiplex qPCR assay performance comparable to single-plex qPCR probe assays without the need to rigorously titrate primer concentration.

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 matrices. A key component of the kit is an ultrapure, highly-processive thermostable DNA polymerase that is free of detectable *E. coli* DNA. PerfeCta MultiPlex qPCR ToughMix is ideal for demanding qPCR applications such as bacterial pathogen detection where residual host DNA in typical recombinant enzyme preparations can limit assay sensitivity and obscure detection of low copy samples.



High efficiency, high sensitivity multiplex qPCR results with PerfeCta MultiPlex qPCR ToughMix. Log-fold serial dilutions (10 to 10^7 copies) of a plasmid containing the GAPDH gene, as well as no template controls, were amplified with PerfeCta MultiPlex qPCR ToughMix as either a single-plex qPCR, or a 4-target multiplexed qPCR that contained 10^8 copies of 3 additional plasmid DNAs (ACTB, IL1beta, and TUBA). Quadruplicate reactions for each input quantity were carried out in 25 μ l volumes with 300 nM each primer and 150 nM each probe. Dual-labeled probes with non-fluorescent quenchers were from Biosearch Technologies. GAPDH was detected using a FAM-BHQ1 probe. ACTB; CAL Fluor Orange 560-BHQ1; IL1beta: CAL Fluor Red 610-BHQ2; TUBA: Quasar 670 – BHQ3. Single-plex qPCRs only contained the GAPDH primers and probe. Cycling was performed on a Bio-Rad CFX with the following protocol. 95°C, 2 min; followed by 40 cycles of 95°C, 10 s; 58°C, 90 s. RFU data were exported to Excel, averaged for each replicate reaction series, and plotted.

ORDER INFO

Product Name	Quantabio Catalog Number	Size
PerfeCta MultiPlex qPCR ToughMix - 250 R	95147-250	250 x 25 µl rxns (1 x 1.25 ml)
PerfeCta MultiPlex qPCR ToughMix - 1000 R	95147-01K	1000 x 25 µl rxns (4 x 1.25 ml)
PerfeCta MultiPlex qPCR ToughMix - 5000 R	95147-05K	5000 x 25 µl rxns (1 x 25 ml)
PerfeCta MultiPlex qPCR ToughMix, ROX - 250 R	95148-250	250 x 25 µl rxns (1 x 1.25 ml)
PerfeCta MultiPlex qPCR ToughMix, ROX - 1000 R	95148-01K	1000 x 25 µl rxns (4 x 1.25 ml)
PerfeCta MultiPlex qPCR ToughMix, ROX - 5000 R	95148-05K	5000 x 25 µl rxns (1 x 25 ml)
PerfeCta MultiPlex qPCR ToughMix, Low ROX - 250 R	95149-250	250 x 25 µl rxns (1 x 1.25 ml)
PerfeCta MultiPlex qPCR ToughMix, Low ROX - 1000 R	95149-01K	1000 x 25 µl rxns (4 x 1.25 ml)
PerfeCta MultiPlex qPCR ToughMix, Low ROX - 5000 R	95149-05K	5000 x 25 µl rxns (1 x 25 ml)

Trademarks: PerfeCta® and ToughMix® are registered trademark of QIAGEN Beverly, Inc.

Quantabio products are intended for molecular biology applications. The products are not intended for the diagnosis, prevention or treatment of a disease.

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