Product Profile

UCP HiFidelity PCR Kit

Ultra-fast, high-fidelity PCR with no misleading background contamination

Unquestionable results begin with ultra-clean reagents. Contaminant DNA in PCR reagents is a significant source of background and false positives. Our Ultra Clean Production and testing of the new UCP HiFidelity PCR Kit, give you absolute certainty in your PCR. Get the assurance of ultra-clean reagents, combined with our unsurpassed inhibitor resistance and sensitivity of our proprietary, proof-reading polymerase. The UCP HiFidelity PCR Kit is the best choice for your most rigorous PCR applications from even the most challenging samples, like blood and microbial samples.

The UCP Multiplex PCR Kit enables:

- No more background from residual DNA: Ultra Clean, DNA-depleted PCR reagents
- Robust, inhibitor-resistant amplification: ideal for PCR from blood and microbial samples
- Exceptionally fast PCR with fidelity 70x higher than Taq
- The best choice for amplicon sequencing and gene editing, like site directed mutagenesis
- Superior specificity: Stringent, antibody-mediated hot start of polymerase and exonuclease
- Integrated visual pipetting control and gel tracking dyes
- Automation ready: stable, room-temperature reaction setup

Most accurate proof reading compared to competitors

70x greater fidelity than Taq.

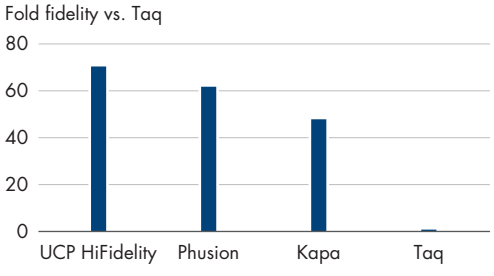

Figure 1. Premium fidelity compared to competitors for the most reliable gene editing and sequencing. The UCP HiFidelity PCR Kit outperformed the competition with fidelity, 70x greater than Taq, in the rigorous LacI Fidelity test.

Unsurpassed reliability and inhibitor resistance compared to competitors

The combination of our highly robust, inhibitor-resistant PCR buffer with our Ultra-Clean reagents ensure reliable results with your challenging samples, including blood and microbial samples.

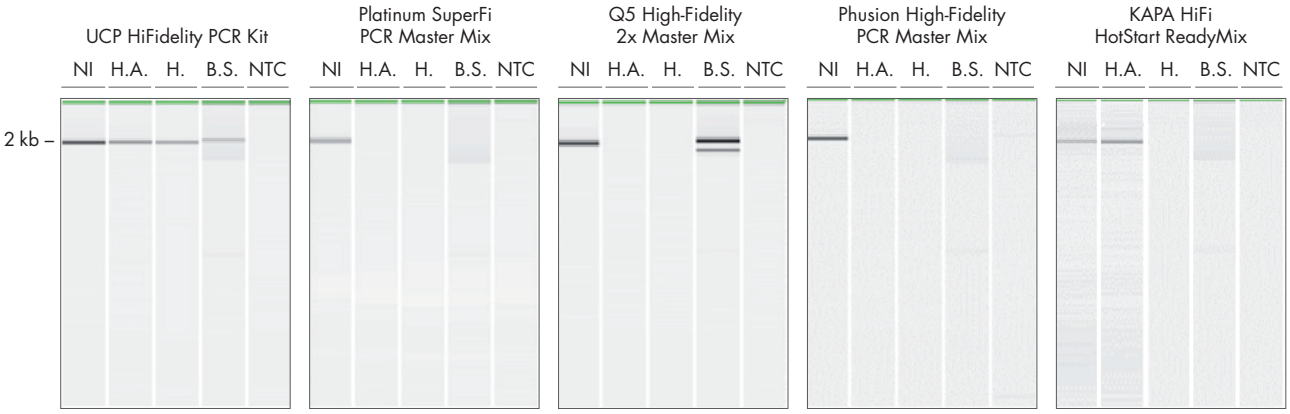

Figure 2. Superior inhibitor resistance compared to competitors. A 2 kb fragment of human HRPT1 was amplified using the UCP HiFidelity PCR Kit and competitor master mixes, following the recommended protocols and using a 25 µl final reaction volume. Reactions were amplified using 10 ng human gDNA. Parallel reactions were run, with no inhibitor (N.I.), with 25 ng Humic acid (H.A.), 25 µM Heparin (H), 25 ng Bile salt (B.S.) and with a no template control (NTC). Analysis was performed using the QIAXcel. Only the UCP HiFidelity PCR Kit amplified the specific product in the presence of all inhibitors.

Sensitive and specific amplification directly from whole blood

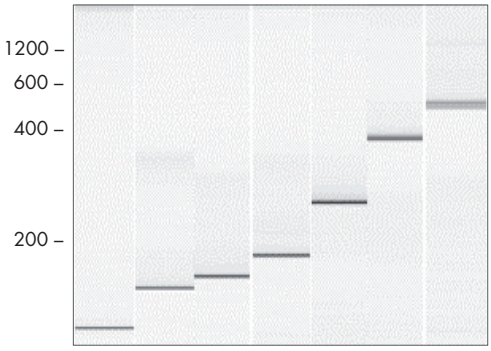

Figure 3. Exceptional inhibitor robustness enabling successful amplification of various targets directly from whole blood. Seven targets, of varying size and composition, were amplified directly from 1uL whole blood with no reaction optimization.

Reliable amplification over a wide range of GC content with no optimization

Simplify your high-fidelity PCR, using the same robust protocol for all of your samples, regardless of GC content.

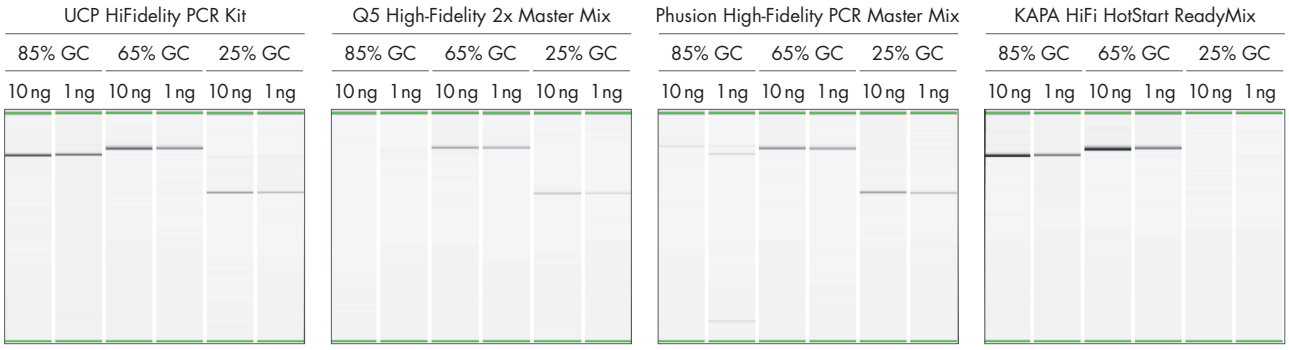

Figure 4. Amplify high and low GC-content templates with no protocol or buffer optimization. Templates with high, medium and low GC contents: 85% (MCART), 65% (PROM1) and 25% (PROM-410), were successfully amplified using the same standard protocol and buffer conditions. The UCP HiFidelity PCR Kit prevents amplification bias due to GC content with no optimization required.

Superior sensitivity in bacterial and fungal detection – ideal for low biomass, microbial samples

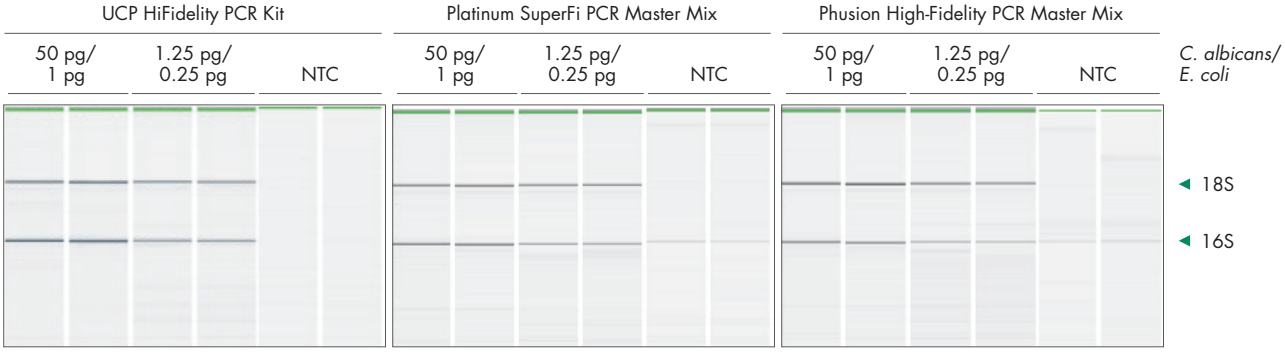

Figure 5. The most reliable microbial detection with no background. The UCP HiFidelity PCR Kit gives reliable microbial detection (16S and 18S) with no detectable background contamination.

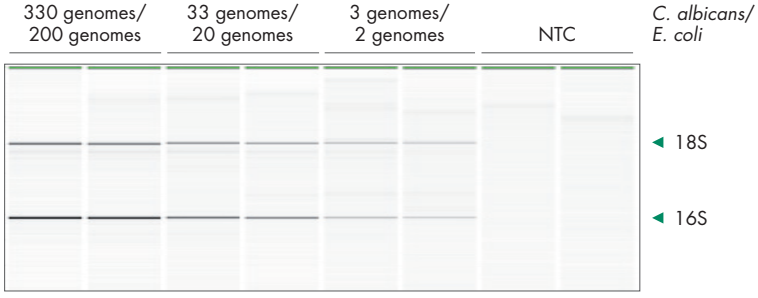

Figure 6. Sensitive bacterial and fungal amplification with no background ideal for low biomass microbial samples. As little as 0.01 pg *E. coli* and 0.05 pg *Candida* were successfully detected and NTC showed no background.

Versatile and convenient protocol – sensitive PCR over a wide range of annealing temperatures

Our unique UCP HiFidelity PCR buffer promotes stable and efficient annealing over a wide range of annealing temperatures with no reaction optimization.

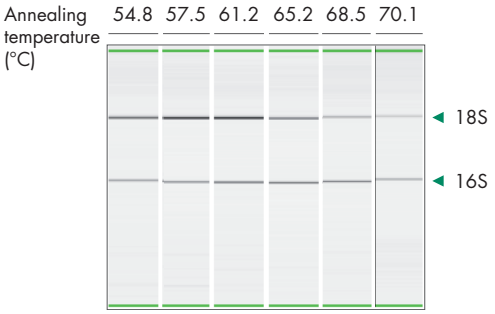

Figure 7. Versatile detection of various templates with amplification over a wide range of annealing temperatures. 18S and 16S fragments were successfully amplified with annealing temperatures ranging from 55-72°C, using constant denaturation (98°C) and extension temperatures (72°C) over 35 cycles. The UCP HiFidelity PCR Kit demonstrates the tremendous flexibility of its reaction buffer.

Sensitive, robust and highly accurate PCR with even your most challenging samples

The UCP HiFidelity PCR Kit delivers the most accurate and reliable amplification available for your most sensitive applications, like site directed mutagenesis or accurate amplicon sequencing. Our unique Ultra Clean reagents combined with our unsurpassed, inhibitor-resistant amplification give you unquestionable results from even your most challenging samples.

Ordering Information

Product	Contents	Cat. no.
UCP HiFidelity PCR Kit (100)	1 x 1.3 ml UCP HiFidelity MasterMix (2x); 1 x 200 µl UCP Template Tracer, 25x; 1 x 50 µl UCP Master MixTracer, 125x; 1 x 1.9 ml UCP PCR Water	202742
UCP HiFidelity PCR Kit (500)	5 x 1.3 ml UCP HiFidelity MasterMix (2x); 2 x 200 µl UCP Template Tracer, 25x; 1 x 50 µl UCP Master MixTracer, 125x; 4 x 1.9 ml UCP PCR Water	202744

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