MyTaq™ DNA Polymerase and Mixes

A Quantum Leap For PCR

- **Sensitive:** exhibits increased affinity for DNA, thereby improving amplification of even limiting amounts of template
- **Efficient:** novel buffer system maximizes efficiency of PCR amplification, delivering improved yield of any PCR product
- **Robust:** reliable amplification in the presence of inhibitors and with even the most challenging DNA targets
- **Flexible:** ideal for amplifying any target up to 5 kb, including DNA extracted from human, animal and plant samples
- **Fast:** developed to give sensitive, reproducible and robust amplification of a broader range of targets under fast thermal cycling conditions
- **Convenient:** includes all the components necessary for high performance PCR amplification

A new generation of polymerase that delivers improved yield, sensitivity, speed and robustness when amplifying targets from any template.

MyTaq™ is recommended for all standard PCR applications. The MyTaq DNA Polymerase and MyTaq Reaction Buffer in this product, are a unique combination of next-generation polymerase and novel buffer system that deliver very high yield PCR amplification over a wide range of PCR templates. MyTaq has an increased affinity for DNA, enabling reliable amplification from very low amounts of template. MyTaq DNA Polymerase has been developed to give more robust amplification than other commonly-used polymerases allowing it to perform well with challenging templates in the presence of PCR inhibitors.

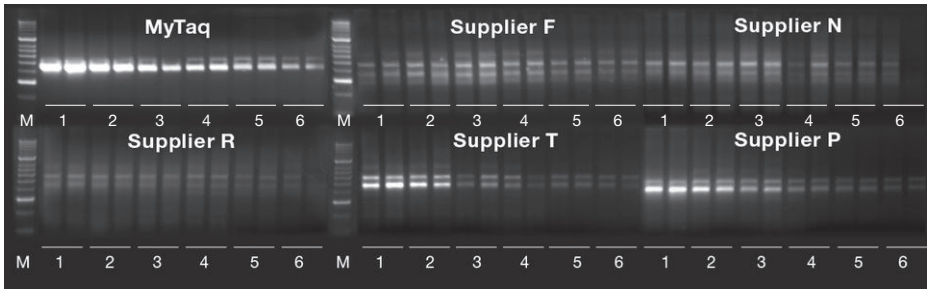

Fig. 1 Robust amplification of GC-rich human genomic DNA (61% GC content)
MyTaq was compared with DNA polymerases from other suppliers for the amplification of a 450 bp fragment of the human myc gene. Decreasing amounts of human genomic DNA were used as a template (1 µg, 200 ng, 100 ng, 50 ng, 25 ng and 12.5 ng, lanes 1-6 respectively, HyperLadder 1kb (M)). MyTaq delivers higher yield and sensitivity as compared with all five competing products.

INCREASED YIELD & SENSITIVITY

MyTaq DNA Polymerase is a high performance enzyme giving robust amplification, making it the perfect choice for complex templates (Fig. 1).

OPTIMIZED BUFFER SYSTEM

The composition of the buffer system is critical for efficient PCR. MyTaq reaction buffer contains dNTPs, $MgCl_2$ and enhancers at optimal concentrations, which helps eliminate the need for optimization, saving time, effort and the cost of performing unnecessary assay repeats.

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APPLICATIONS

MyTaq DNA Polymerase has been validated with a broad range of PCR templates including DNA extracted from human, animal and plant samples, making it the ideal choice for the following applications:

- Standard PCR
- High-yield PCR
- Fast PCR
- Colony PCR
- TA cloning

FAST PCR

The combination of MyTaq and optimized buffer system allow for faster PCR reactions compared with other polymerases, therefore reducing overall run time from approximately 1 hour to under 30 minutes. This is achieved without compromising specificity or yield (Fig. 2), reducing the reaction time allows for increased throughput and faster time to results.

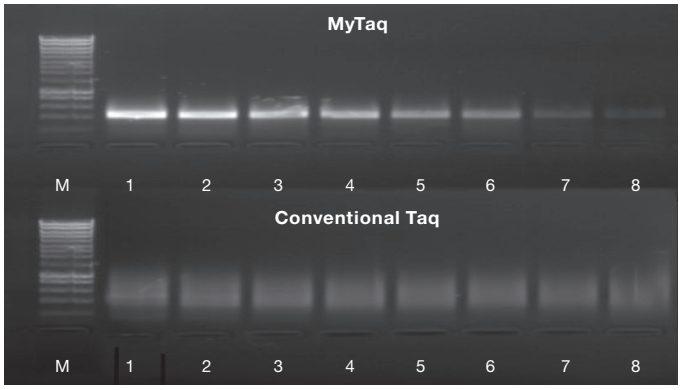

Fig. 2 Fast amplification of human genomic DNA (performed in 27.5 minutes)
Comparative amplification of a 450 bp fragment of the human myc gene (61% GC) was used to examine MyTaq with another polymerase. The PCR was performed using decreasing amounts of human genomic DNA as template (200 ng, 66 ng, 10 ng, 3 ng, 1 ng, 300 pg, 100 pg and 30 pg; lanes 1-8 respectively, HyperLadder 1kb (M)) and under fast cycling conditions. In contrast to other polymerases, MyTaq readily copes with faster reaction times, resulting in higher yield without the need for further optimization.

DIRECT GEL LOADING

MyTaq is also supplied as MyTaq Red DNA Polymerase and MyTaq Red Mix, which includes a 5x MyTaq Red Reaction Buffer that increases the visual contrast between the reagent and the reaction vessel for improved convenience and to improve pipetting accuracy. The red dye also enables samples to be loaded directly on to a gel after the PCR without the need to add loading buffer.

PREMIXES FOR EASY SET-UP

MyTaq Mix and MyTaq Red Mix contain all the reagents required for easy PCR set-up. Both MyTaq Mix and MyTaq Red Mix are conveniently supplied in one tube, reducing the number of pipetting steps required, facilitating greater efficiency, reproducibility and ease for automation.

> *"We use MyTaq DNA Polymerase for our mouse colony PCR screening. My established PCR protocols almost always work, and the run is shorter. Even new PCR protocols are much easier to establish since this polymerase is more robust than many others. We found that in several instances, if nothing works, this polymerase does."*
>
> Monica Kiela, University of Arizona, Tuscon, US

Ordering Information

MyTaq™ DNA Polymerase and Mixes	Size	Cat. #
MyTaq DNA Polymerase	500 Units	BIO-21105
	2500 Units	BIO-21106
	5000 Units	BIO-21107
MyTaq Red DNA Polymerase	500 Units	BIO-21108
	2500 Units	BIO-21109
	5000 Units	BIO-21110
MyTaq Mix, 2x	200 Reactions	BIO-25041
	1000 Reactions	BIO-25042
MyTaq Red Mix, 2x	200 Reactions	BIO-25043
	1000 Reactions	BIO-25044

Please contact us for institutional pricing, special price quotations and availability of bulk pack sizes.

For related products such as nucleotides, agarose and molecular weight markers visit www.bioline.com

Unravelling DNA To Enable Your Discovery

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