MyFi™ DNA Polymerase and Mix

Perfectly Sound Results

- **Robust:** enzyme blend and buffer system promotes reliable amplification of the most challenging and complex targets, even in the presence of inhibitors
- **Sensitive:** improved target affinity and high processivity ensure successful amplification in low-copy number assays
- **Efficient:** high-yield amplification of a broad range of targets up to 10 kb including complex DNA extracted from human, animal and plant samples
- **Specific:** an antibody-mediated hot-start blend that remains completely inactive during PCR set-up to prevent non-specific amplification
- **Convenient:** advanced buffer system minimizes the requirements for PCR optimization thereby reducing time to results and eliminating the cost of unnecessary repeats
- **Accurate:** proofreading component delivers 3.5x higher fidelity than Taq DNA Polymerase, enabling cloning of PCR products

A unique blend of highly-efficient MyTaq™ HS DNA Polymerase and a proprietary proofreading enzyme that combine to give increased target affinity for use with challenging templates and inhibitor-rich samples.

MyFi™ has been developed to give reliable amplification of targets up to 10 kb from challenging and complex targets. MyFi shows improved tolerance to PCR inhibitors, thereby enabling reliable detection from samples from which DNA is difficult to purify. Furthermore, a unique buffer system and enzyme blend promote highly sensitive amplification, ideal for low-copy number targets.

The inclusion of MyTaq HS means MyFi generates PCR products with 3'-A overhangs making it suitable for TA cloning. MyFi has the added convenience of room temperature reaction assembly, to avoid non-specific amplification and primer-dimer formation.

APPLICATIONS

MyFi has been validated with a full range of templates and is perfectly suited to the following applications:

- Amplification of challenging and complex templates
- Inhibitor-tolerant PCR
- Longer PCR (up to 10 kb)
- Robust PCR
- Low-copy PCR
- Higher-fidelity PCR (NGS library amplification)
- TA cloning

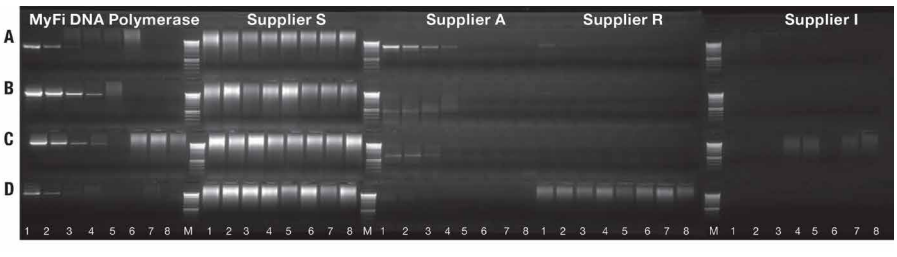

Fig. 1 Amplification of complex DNA up to 10 kb
A 3.9 kb (A) fragment of α-1-antitrypsin (AT-R3) gene, a 7 kb (B), a 9 kb (C) and a 10 kb (D) fragment (respectively) of human (ß-globin) HbG gene, were amplified using MyFi DNA Polymerase and the results were compared with amplifications using other high-fidelity hot-start DNA polymerases. A 5-fold serial dilution of human genomic DNA (5 ng, - 0.32 pg, lanes 1-8 respectively, HyperLadder 1kb (M)), was amplified according to the manufacturers' protocol. The results illustrate that MyFi can be used to amplify products up to 10 kb, in contrast to competing high-fidelity hot-start DNA polymerases

meridian BIOSCIENCE®
LIFE DISCOVERED. LIFE DIAGNOSED.

ROBUST AMPLIFICATION OF COMPLEX TEMPLATES

An advanced buffer system and enzyme blend combine to give increased target affinity, ideal for amplification of cDNA libraries, complex genomic fragments (Fig.1) and GC-rich targets (Fig. 2).

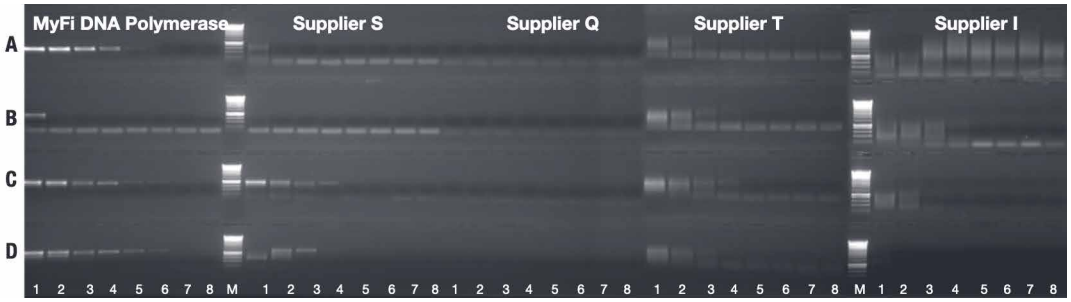

Fig. 2 Greater reliability with GC-rich DNA
A 3.9 kb (A) fragment of α-1-antitrypsin (AT-R3) gene, a 7 kb (B), a 9 kb (C) and a 10 kb (D) fragment (respectively) of human (ß-globin) HbG gene, were amplified using MyFi DNA Polymerase and the results were compared with amplifications using high-fidelity hot-start DNA Polymerases from other suppliers. A 5-fold serial dilution of human genomic DNA (5 ng - 0.32 pg, lanes 1-8 respectively, HyperLadder 1kb (M)), was amplified according to the manufacturers' protocol. The results illustrate that MyFi out-performed high-fidelity polymerases for complex human genomic DNA assays.

MASTER MIX

MyFi™ Mix is supplied as a master mix that requires the addition of only template and primers, thereby reducing the number of pipetting steps during PCR set-up, for improved speed, throughput and assay reproducibility (Fig. 3). The inclusion of dNTPs, $MgCl_2$ and enhancers at optimal concentrations, helps eliminate the need for optimization, thereby saving on time, cost and making MyFi Mix well suited to automation.

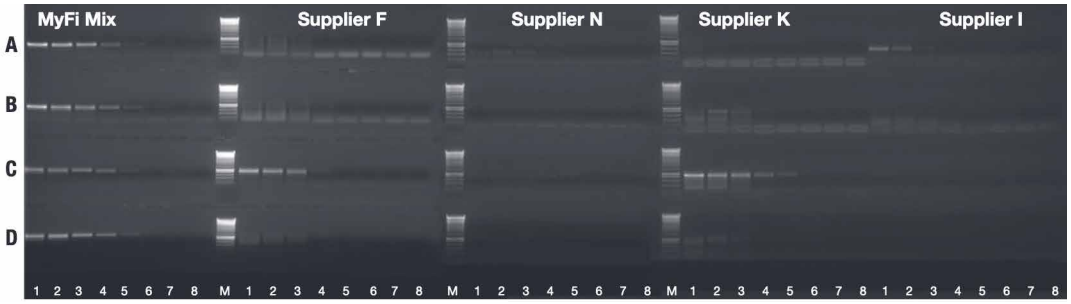

Fig. 3 Efficiency and sensitivity of high-fidelity polymerase mixes
A 525 bp (A) fragment of human epidermal growth factor receptor (EGFR) gene, a 750 bp (B) fragment of translation factor p64 (myc)gene, a 900 bp (C) fragment of angiotensin II receptor type I (AGTR1) gene, a 1.2 kb (D) fragment of EGFR gene, were amplified using MyFi Mix and the results were compared with amplifications using high-fidelity hot-start mixes from other suppliers. A serial dilution of human genomic DNA (5 ng - 0.32 pg, lanes 1-8 respectively, HyperLadder 1kb (M)), was amplified according to the manufacturers' protocol. The results illustrate that MyFi Mix out-performed alternative high-fidelity mixes giving higher efficiency and sensitivity over a wide range of sizes.

> "We commonly use the Meridian MyFi polymerase and it works better than any other polymerase. MyFi polymerase could amplify complicated short tandem repeat sequences (STR or SSR/ microsatellite) better than any other kit."
>
> **HIROSHI SHINOZUKA, AGRIBIO, BUNDOORA, AUSTRALIA**

Ordering Information

MyFi™ DNA Polymerase and Mix	Size	Cat. #
MyFi DNA Polymerase	250 Units	BIO-21117
	500 Units	BIO-21118
	2500 Units	BIO-21119
MyFi Mix	100 Reactions	BIO-25049
	500 Reactions	BIO-25050

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

Contact information:

Meridian
E: info@meridianlifescience.com
Toll free: +1 800 327 6299

meridian BIOSCIENCE®
LIFE DISCOVERED. LIFE DIAGNOSED.