MyTaq™ One-Step RT-PCR Kit

Superior Sensitivity and Specificity

MyTaq™ One-Step RT-PCR Kit

Storage -20°C | Shipped on Dry or Blue Ice

PACK SIZE	CAT NO.
25 Reactions	BIO-65048
100 Reactions	BIO-65049

Components	25 Reactions	100 Reactions
MyTaq One-Step Mix (2x)	1 x 625 µL	2 x 1.25 mL
RiboSafe Inhibitor (10 u/µL)	1 x 25 µL	1 x 100 µL
Reverse transcriptase	1 x 12.5 µL	1 x 50 µL
DEPC-treated Water	1 x 1.8 mL	1 x 1.8 mL

Features:

- **Extremely sensitive blend of RT and novel hot-start MyTaq**
- **Highly optimized for detection of low-copy genes**
- **Overcomes secondary structure in difficult and GC-rich targets**
- **High-quality, full-length cDNA from as little as 3 pg of total RNA**

Application:

- **Gene-expression analysis**
- **Transcription analysis**
- **cDNA cloning**
- **Multiplex RT-PCR**

Description: MyTaq™ One-Step RT-PCR Kit has been designed for extremely sensitive and highly reproducible first-stand cDNA synthesis and subsequent PCR in a single tube (fig. 1). The kit contains the latest advances in buffer chemistry, including Meridian´s ultra-pure dNTPs, together with reverse transcriptase (RT) and our new generation of very high performance, antibody-mediated hot-start DNA polymerase (MyTaq HS). This ensures that MyTaq One-Step RT-PCR Kit produces fast, highly-specific and ultrasensitive products for downstream applications.

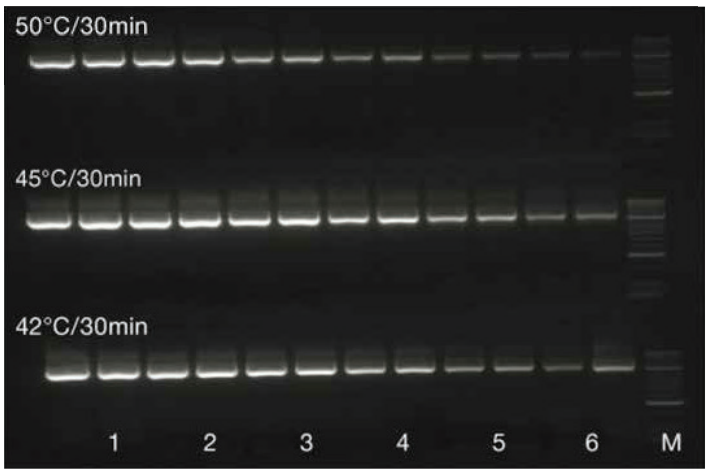

Fig. 1.
A 1 kb fragment was amplified in duplicate from a serial dilution of a mouse total RNA (10 ng, 2 ng, 400 pg, 80 pg, 16 pg and 3 pg; lanes 1-6 respectively) using RN18S-1000 primers and the MyTaq One-Step RT-PCR Kit. HyperLadder 50 bp (M). The reverse transcriptase in the MyTaq One-Step RT-PCR Kit was able to deliver high quality cDNA even at 50°C, over a broad dynamic range.

MyTaq One-Step Kit consists of reverse transcriptase, 2x MyTaq HS Mix and a potent RNase Inhibitor, RiboSafe, that are added together to create a simple to use all-in-one mix.

The kit is ideal for determining the presence or absence of RNA templates and quantifying expression through qualitative, semi-quantitative or quantitative analysis of RNA transcription levels, and the one-step format is also perfect for the synthesis of double-stranded cDNA products for subsequent gene-expression analysis.

The cDNA can be synthesized with starting amounts of RNA template from 3 pg to 1 µg, over a broad temperature range (up to 50°C (fig. 1) to overcome secondary structure and GC-rich sequences), prior to heating to 95°C to inactivate reverse transcriptase and simultaneously to activate the MyTaq™ HS.

SCAN HERE

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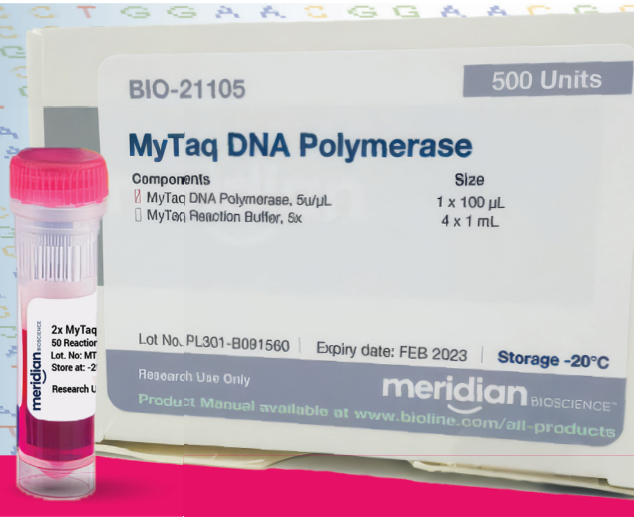
Amplify with Confidence Using

MyTaq™ HS Mix
MyTaq™ HS DNA Polymerase



MyTaq™ HS & MyTaq™ HS Red Mix

Storage -20°C | Shipped on Dry or Blue Ice

PACK SIZE	CONC.	CAT NO.
MyTaq HS Mix		
200 Reactions	2x	BIO-25045
1000 Reactions	2x	BIO-25046
MyTaq HS Red Mix		
200 Reactions	2x	BIO-25047
1000 Reactions	2x	BIO-25048

Components	200 Reactions	1000 Reactions
MyTaq HS Mix	4 x 1.25 mL	20 x 1.25 mL

Features:

- **Convenient all-in-one tube master mix**
- **New generation of antibody-based hot-start polymerase**
- **Highest specificity and superior performance**
- **Fast PCR reactions**
- **Red dye for direct gel loading**

Applications:

- **High-throughput PCR**
- **Assays with prolonged reaction setup on the bench or liquid handling**
- **Amplification of challenging targets susceptible to mispriming**
- **Colony PCR**
- **Multiplexing**
- **Specific amplification of difficult templates (GC rich)**
- **Genotyping**
- **TA cloning**

Description: MyTaq™ HS Mix is a ready-to-use 2x mix for fast, highly-specific hot-start PCR. MyTaq HS Mix is powered by antibody mediated hot-start and does not possess polymerase activity during the reaction set-up, thus reducing non-specific amplification. The advanced formulation of MyTaq HS Mix allows very fast cycling conditions to be used (fig. 1), greatly reducing the reaction time without compromising PCR specificity and yield (fig. 2).

MyTaq HS Mix contains all the reagents including MyTaq buffer, dNTPs, $MgCl_2$, enhancers and stabilizers necessary for trouble-free PCR reaction set up. The product is supplied conveniently all-in-one tube to reduce the number of pipetting steps and to facilitate increased efficiency, throughput and reproducibility.

The specially designed MyTaq Red formulation does not interfere with the PCR reaction and allows users to load samples directly onto a gel after the PCR without the need to add loading buffer.

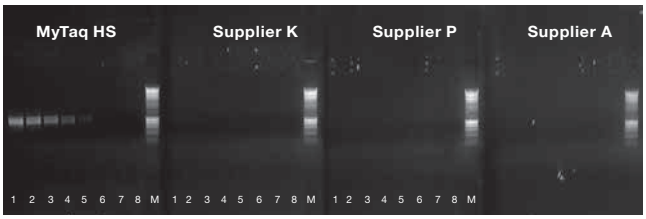
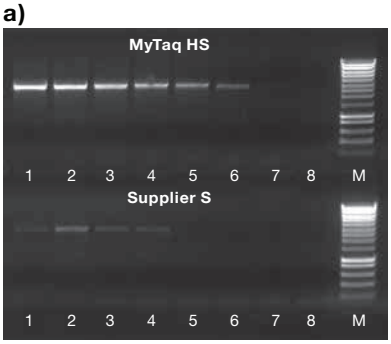


Fig. 1 Ultra-fast (12.3 minutes) amplification of the human AGFR1 gene
A 900 bp fragment of the AGTR1 gene was amplified with MyTaq HS Mix and hot-start *Taq* from other suppliers. A serial dilution of human genomic DNA (100 ng, 33 ng, 10 ng, 4 ng, 1 ng, 33 pg, 10 pg and 3 pg, lanes 1-8 respectively) was used and incubated at 95°C for 3 min, followed by 35 cycles of 95°C for 5s, 55°C for 1s and 72°C for 15s. Marker is HyperLadder 1 kb (M) (Cat No. BIO-33025). Only MyTaq HS was capable of amplifying a 900 bp fragment of human genomic DNA under such fast conditions.

a)



b)

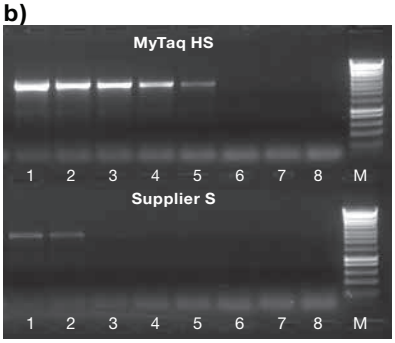


Fig. 2 Robustness of MyTaq HS in Colony PCR.
A 2.6 kb fragment of human genomic DNA was cloned into M13 vectors and transformed into *E. coli* cells. 1 µL of a 1:16 dilution of an overnight culture of these cells was used directly in a 50 µL PCR reaction.
A) 2 µL increments of agar were added (Lanes 1-8 respectively).
B) 2 µL increments of LB were added (Lanes 1-8 respectively).
Reaction conditions were 95°C for 3 min, followed by 35 cycles of 95°C for 15s, 60°C for 15s and 72°C for 2 mins. Marker is HyperLadder 1 kb (M). MyTaq HS DNA polymerase was more resistant to inhibition than that of supplier S, making it ideal for Colony PCR, even from liquid overnight cultures, offering improved workflows particularly for high-throughput assays.

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