2 × HS Taq PreMix

Description

2×HS Taq Premixisa hot-start Taq DNA polymerase-based 2× master mix, which contains all components, except for the primerand template DNA. Hot Start technology with anti-Taq DNA polymeraseantibodies enables high specificity and reproducible amplification. The specially optimized PCR buffer make the mix more efficient amplification of GC-rich templatesand more stable at room temperature. The premix can perform colony PCR and blood direct PCR.

Feature

- **High specificity**
  Hot Start technology with anti-Taq DNA polymerase antibodies enables high specificity and reproducible amplification.
- **High sensitivity**
  This premixcan achieve highly sensitive amplification of DNA template at a low level.
- **GC-rich DNA amplification**
  The specially optimized PCR buffer give the mix robust performance for amplicons up to 70%GC.
- **Direct PCR**
  the premix can perform colony PCR and blood direct PCR.

High specificity

2×HS Taq Premixisa hot-start Taq DNA polymerase-based 2× master mix, enables high specificity amplification. As is shown in figure.1, Different length amplicons were amplified from E.coli genome with the 2 × HS Taq Premix and nonspecific amplification was observed.

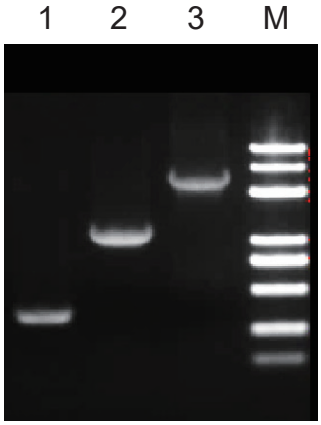

Figure 1. High specificity. Different length amplicons were amplified from E.coli genome with the 2 × HS Taq Premix (TAO-201). Line 1: 350bp; Line 2: 1100bp; Line 3: 2700bp; M: 5kb DNA Ladder.

High sensitivity

PCR of 10-fold serial dilutions (10~0.1ng) of pET-28a plasmid were performed using primers specific to different DNA region with 2 × HS Taq Premix (TAO-201). 2×HS Taq Premix can achieve highly sensitive amplification of DNA template down to 0.1 ng (Figure 2).

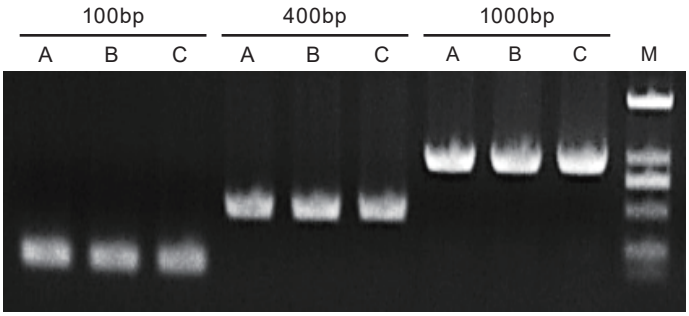

Figure 2. High sensitvity. PCR of 10-fold serial dilutions (10~0.1ng) of pET-28a plasmid were performed using primers specific to different DNA region with 2 × HS Taq Premix (TAO-201). Line A: 0. 1ng; Line B: 1ng; Line C: 10ng; M: 2kb DNA Ladder.

Direct PCR

The specially optimized PCR buffer make 2×HS Taq Premix can perform colony PCR and direct PCR without nucleic acid extraction, which is shown by DNA fragments amplified from E.coli and Pichia pastoris colony (Figure 3).

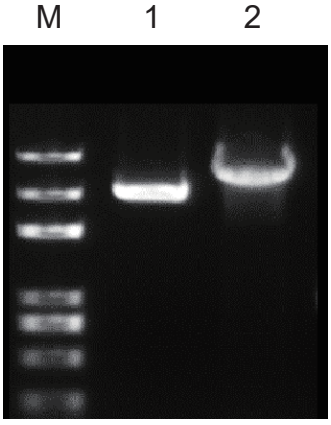

Figure 3. Direct PCR. DNA fragments from E.coli and Pichia pastoris colony were amplified with the 2 × HS Taq Premix (TAO -201). Line 1: 3367bp; Line 2: 4369bp; M: 5kb DNA Ladder.

GC-rich DNA amplification

Although many DNA sequences can be easily analyzed using PCR-based methods, the amplification of challenging targets like sequences with high GC content is still a difficult task. The specially optimized PCR buffer make 2×HS Taq Premix enables successful amplification with samples of GC content up to 68% (Figure 4).

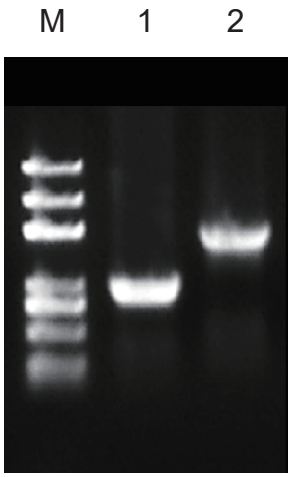

Figure 4. GC-rich DNA amplification. Different length amplicons (GC%=68%) were amplified from Mycobacterium neoaurum ATCC25795 genome with 2 × HS Taq Premix (TAO-201). Line 1: 1000bp; Line 2: 2000bp; M: 5kb DNA Ladder.

Ordering information

Catalog Number	Product Name	Unit Size
TAO-201	2×HS Taq PreMix	1 mL ×5 tubes

References
[1] Flávio Azevedo, Humberto Pereira, Björn Johansson. Colony PCR.Methods Mol Biol.2017;1620:129-139.doi: 10.1007/978-1-4939-7060 -5_8.

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