PrimeSTAR® HS DNA Polymerase (Cat.# R010A)

Application: Comparing the Amplification Efficiency of PrimeSTAR® HS DNA Polymerase with a Competitor's High-Fidelity PCR Enzyme

PrimeSTAR HS DNA Polymerase (Cat.# R010A) is a high-fidelity, highly efficient DNA polymerase that can be used on a wide variety of DNA templates.

Methods:

PCR was performed on cDNA that was generated from human heart total RNA using M-MLV reverse transcriptase.

Sample:	Reverse transcription cDNA products from human heart total RNA template
Target Length:	2 kb
Template:	5 µl of the 20 µl reverse transcription reaction (corresponding to a range of input RNA, from 50 pg RNA to 250 ng RNA)
Thermal Cycler:	TaKaRa PCR Thermal Cycler Dice*
PCR Reaction Conditions:**	30 cycles of: 98°C, 10 sec.; 55°C, 15 sec.; 72°C, 2 min.

* Not available in all geographic locations. Check for availability in your region.

** The indicated thermal cycling conditions were used for PrimeSTAR HS reactions. For reactions amplified with the other supplier's high-fidelity PCR enzyme, the manufacturer's recommended reaction conditions were used.

Results:

(A) PrimeSTAR HS DNA Polymerase (B) Other company's High-Fidelity PCR enzyme

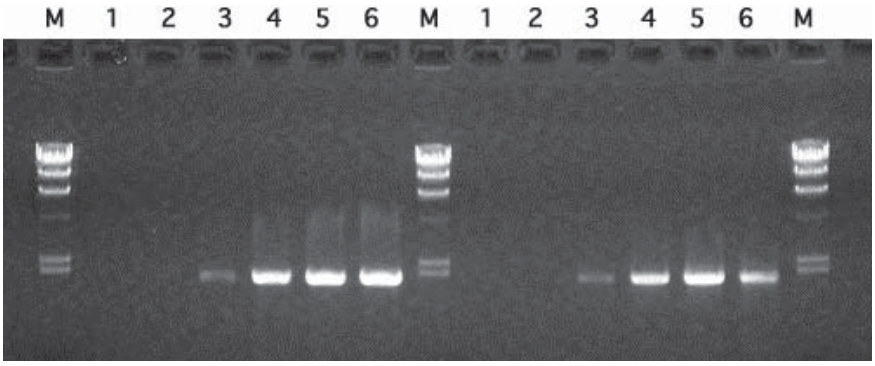

Figure 1. Comparison of the amplification efficiency of PrimeSTAR HS DNA Polymerase versus another company's High-Fidelity PCR Enzyme. Lanes: M, marker (λ DNA- *Hin*d III digest); 1, cDNA from 50 pg RNA; 2, cDNA from 500 pg RNA; 3, cDNA from 5 ng RNA; 4, cDNA from 50 ng RNA; 5, cDNA from 100 ng RNA; 6, cDNA from 250 ng RNA.

Conclusion:

In side-by-side comparison, PrimeSTAR HS DNA Polymerase (Cat.# R010A) was able to amplify a 2 kb target from human heart cDNA more efficiently than a competitor's high-fidelity PCR enzyme.