PCRBIO **HS Taq DNA Polymerase**

- Hot start
- Fast and standard cycling
- Ultra sensitive

PCRBIO HS Taq DNA Polymerase uses advanced hot start technology for superior sensitivity. Whether you need a hot start option for a high specificity application, automated or room-temperature set up, or for detection of low abundance templates, this robust industry-leading enzyme will help you meet the challenge.

Features

- Hot start technology for unrivalled detection of low abundance templates
- Increased PCR success rates with amplicons up to 6kb
- Ultra low background DNA
- Advanced buffer chemistry including Mg and dNTPs
- High yields with standard or fast cycling
- Efficient and specific amplification of GC and AT-rich templates
- Increased inhibitor tolerance

Applications

- Genotyping
- TA cloning
- Colony PCR
- High throughput workflows
- Low abundance target detection
- Routine and multiplex PCR
- Direct PCR on blood and urine
- Methylated DNA amplification for bi-sulphite sequencing
- “Difficult” PCR on GC/AT-rich templates

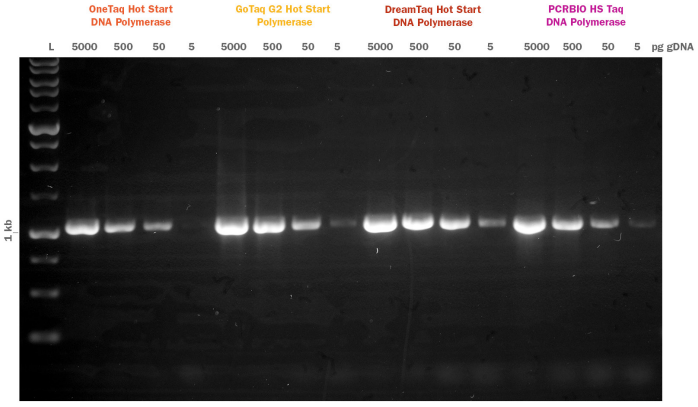

Figure 1. Sensitive amplification down to 5pg of target template

PCR amplification of a 1kb fragment (GAPDH gene) was carried out using a 1 in 10 serial dilution of mouse genomic DNA (5000, 500, 50 and 5pg) with PCRBIO HS Taq DNA Polymerase (purple) and matching hot start Taq polymerases from competitors. Reactions were set up using master mix formats and following manufacturers’ recommendations: NEB (orange), Promega (yellow) and Thermo (red). Cycling conditions were 95˚C 2min, then 40 cycles of 95˚C 15sec, 63˚C 15sec, 72˚C 30sec. 1/5 of the reaction volume was loaded in 1% agarose gel. L: PCRBIO Ladder II. PCRBIO Taq DNA Polymerase matches or outperforms the competitor products tested.

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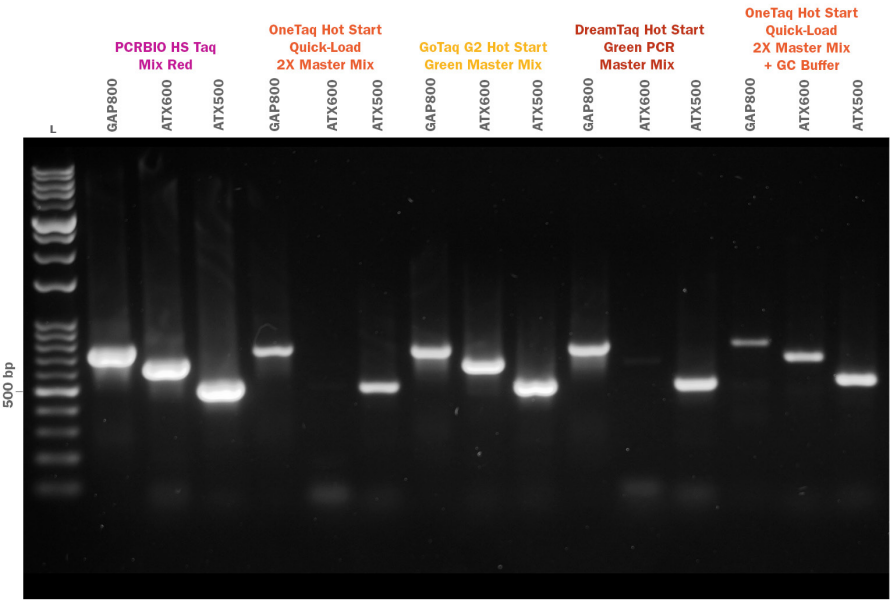

Figure 2. PCRBIO HS Taq Mix Red outperforms competitors at amplifying GC-rich fragments, without the requirement of a special buffer

The starting template amount was 5ng mouse genomic DNA. Amplified fragments belong to 3 different genes and have been chosen for their GC content (GAP800 bp with 49% GC, ATX500 bp with 69% GC and ATX600 bp with 71% GC). PCRBIO HS Taq Mix Red (purple) and matching hot start Taq mixes from competitors were used according to manufacturers' recommendations: NEB (orange, with both standard format and GC buffer format), Promega (yellow) and Thermo (red). Cycling conditions were 95˚C 5min, then 40 cycles of 95˚C 15sec, 60˚C 15sec, 72˚C 20sec. 2/5 of the reaction volume was loaded in 1.2% agarose gel. L: PCRBIO Ladder III.

"Hot start" is a term used to describe the inactivation of a DNA polymerase until the initial activation step at 95˚C. Inactivation below 65˚C prevents primer dimer formation and non-specific amplification allowing for specific amplification from low copy number target sequences. Our antibody-mediated hot start technology offers improved specificity and sensitivity compared to other methods.

PCRBIO HS Taq DNA Polymerase uses the latest developments in polymerase technology and buffer chemistry to enhance PCR speed, yield and specificity. The enzyme and buffer system give superior PCR performance on complex templates such has mammalian genomic DNA.

PCRBIO HS Taq DNA Polymerase performs consistently well on a broad range of templates (including both GC and AT-rich targets). PCRBIO HS Taq DNA Polymerase production uses an enhanced 12 step purification strategy which includes physical, chemical and enzymatic removal of host DNA.

For added convenience PCRBIO HS Taq DNA Polymerase is also available as a 2x ready mix for easy setup. While PCRBIO HS Taq Mix Red is a ready mix that contains a red dye suitable for direct loading and tracking during agarose gel electrophoresis. All enzyme versions perform well across the recomended applications.

Catalogue Number	Product Name	Pack Size	Presentation
PB10.21-02	PCRBIO HS Taq DNA Polymerase	250 Units	[1 x 0.05ml 5 units/µL] & [2 x 1mL buffer]
PB10.21-10		1000 Units	[4 x 0.05ml 5 units/µL] & [8 x 1mL buffer]
PB10.21-50		5000 Units	[20 x 0.05ml 5 units/µL] & [40 x 1mL buffer]
PB10.22-02	PCRBIO HS Taq Mix	200 Reactions	5 x 1mL
PB10.22-10		1000 Reactions	5 x (5 x 1mL)
PB10.23-02	PCRBIO HS Taq Mix Red	200 Reactions	5 x 1mL
PB10.23-10		1000 Reactions	5 x (5 x 1mL)

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