PCRBIO VeriFi Polymerase

- High fidelity
- Long range
- Superior sensitivity

PCRBIO VeriFi Polymerase is a versatile and robust high fidelity enzyme engineered for all PCR applications where greater sequence accuracy is required. Enhanced processivity combined with advanced buffer chemistry give significant improvements in speed, yield and sensitivity while also increasing PCR success rates of long and challenging templates.

Features

- 100x higher fidelity than Taq DNA polymerase
- Increased PCR success rates with complex genomic templates (17.5kb and over)
- High yields under standard and fast PCR conditions (10-30s/kb)
- High temperature cycling for reduced GC bias
- Efficient and specific amplification from challenging templates including GC and AT rich sequences
- Advanced buffer chemistry including Mg and dNTPs
- Generates blunt-end PCR products
- Available as a convenient 2x ready mix with the option of a red dye for direct gel loading

Applications

- High fidelity PCR
- Long range PCR
- Site-directed mutagenesis
- Cloning
- Sequencing

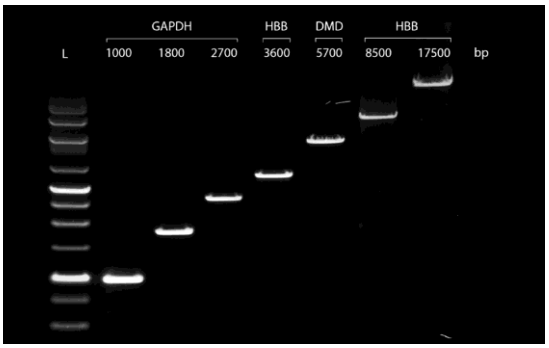

Figure 1. Versatility across a broad range of amplicon lengths

PCRBIO VeriFi Polymerase amplifies the range of fragment lengths indicated with high yield and specificity. The starting template amount is 4-30ng of mouse or human genomic DNA, diluted 1.5 to 3 fold. GC content ranges from 37-55%. L: PCRBIO Ladder II.

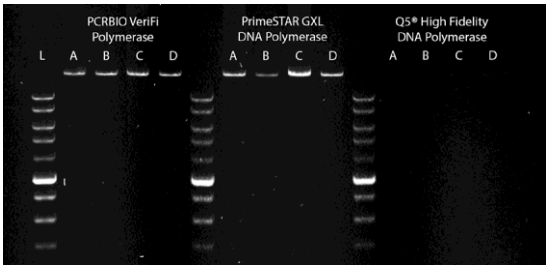

Figure 2. Increased success rates with complex templates

Amplification of a 17.5kb fragment of the HBB gene. The starting template amount is 150ng (A and C) and 30ng (B and D) of human genomic DNA, diluted 2 fold. A 2-step PCR protocol was used with amplification at 72˚C (A and B) or 68˚C (C and D). GC content is 37%. PCRBIO VeriFi Polymerase amplifies long fragments with yields comparable to Takara PrimeSTAR GXL DNA Polymerase. L: PCRBIO Ladder II.

PCRBIOSYSTEMS
simplifying research

PCRBIOSYSTEMS
simplifying research

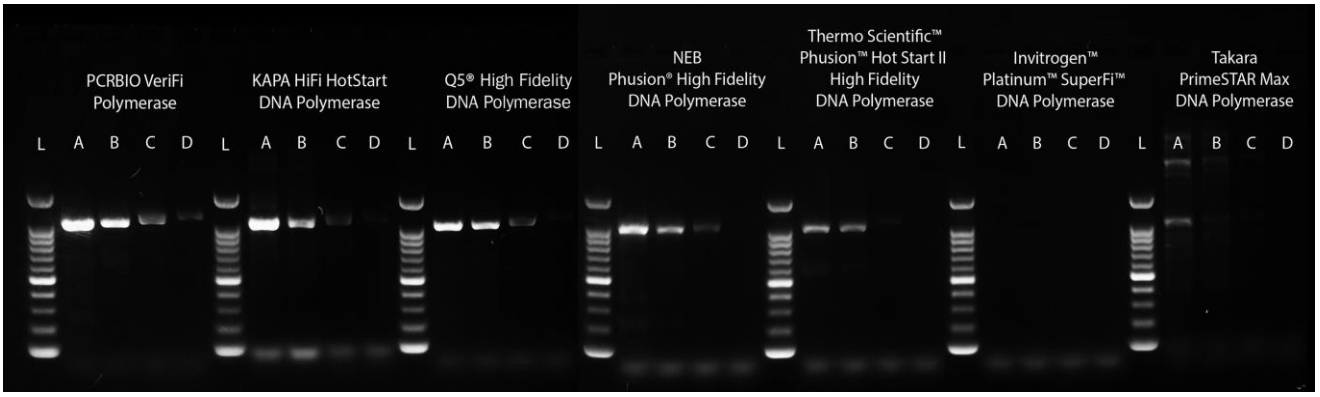

Figure 3. Amplification of targets with high sensitivity and specificity compared to leading competitors

Amplification of a 1.0kb fragment of the GAPDH gene with different starting template amounts of mouse genomic DNA. A: 20ng, B: 3.2ng, C: 0.5ng, D: 0.08ng. GC content is 51%. L: PCRBIO Ladder IV. The reactions were set up following manufacturers' recommendations. Cycling conditions were 95˚C 2 min, then 30 cycles of 98˚C 15 sec, 66˚C 15 sec and 72˚C 30 sec. PCRBIO VeriFi Polymerase displays greater sensitivity and specificity compared to leading competitors.

Increased processivity

PCRBIO VeriFi Polymerase is a single enzyme derived from Pfu DNA polymerase for its 3'-5' exonuclease (proofreading) activity. The enzyme is engineered with proprietary mutations that improve DNA binding and increase processivity when compared with its native form, resulting in shorter extension times (10-30 seconds per kb), higher yields and the ability to amplify longer and more difficult targets. PCRBIO VeriFi Polymerase is able to amplify eukaryotic genomic templates in excess of 17.5kb, and longer for simpler DNA templates.

High fidelity

The high accuracy and enhanced 3'-5' exonuclease activity of PCRBIO VeriFi Polymerase result in extremely low error rates and fidelity that is approximately 100 times higher than Taq DNA polymerase. The enzyme is ideal for applications where superior accuracy is required, such as cloning, site-directed mutagenesis and sequencing. PCR products generated with this range of products are blunt ended.

Convenient and versatile

PCRBIO VeriFi Polymerase is provided with an advanced buffer system including dNTPs, Mg and enhancers, enabling high fidelity PCR of a wide range of targets and fragment sizes with minimal or no optimisation required. The enzyme is also available as a convenient 2x ready mix with the option of a red dye for direct gel loading, saving time during reaction setup and analysis.

Catalogue Number	Product Name	Pack Size	Presentation
17-108	PCRBIO VeriFi Polymerase	100 Units	[1 x 0.05mL 2u/µL] & [1 x 1.7mL buffer]
17-108B		500 Units	[1 x 0.250mL 2u/µL] & [3 x 1.7mL buffer]
17-208	PCRBIO VeriFi Mix	100 x 50µL Reactions	2 x 1.25mL
17-208B		500 x 50µL Reactions	2 x (5 x 1.25mL)
17-308	PCRBIO VeriFi Mix Red	100 x 50µL Reactions	2 x 1.25mL
17-308B		500 x 50µL Reactions	2 x (5 x 1.25mL)

PCR Biosystems Ltd. | Aztec House | 397-405 Archway Road | London, N6 4ER
T: +44 (0) 203 930 8101 | E: info@pcrbio.com | Orders: sales@pcrbio.com
www.pcrbio.com