



- High-Fidelity** 100x higher than Taq
- Fast** Amplify at a speed of 20 seconds/kb or less
- Efficient** Optimised for difficult or high-GC templates
- Robust** Across a broad range of sample types
- Sensitive** Excels in low-concentration DNA templates

Your Ideal Solution for Achieving Both **High-Fidelity** and **Fast PCR Results**



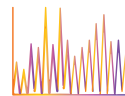
Applications



PCR for Cloning



DNA Labelling



Sanger Sequencing



Next-generation Sequencing (NGS)

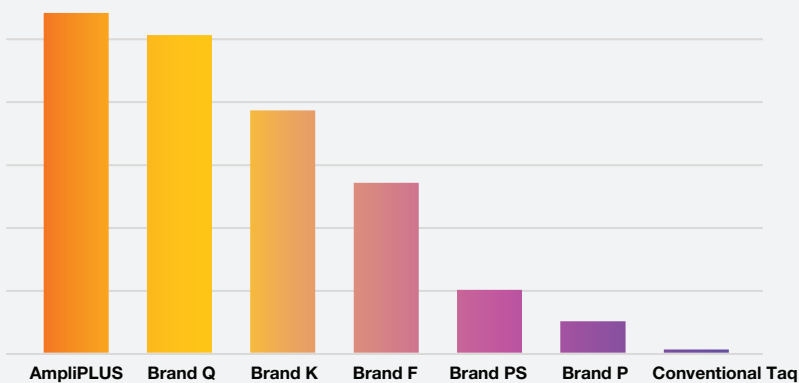


Fig 1. Fidelity comparison across commercially available products.

High-Fidelity

AmpliPLUS ensures the precise replication of genetic material, boasting an accuracy level approximately 100 times greater than Taq DNA polymerase. This makes it a preferred choice for applications requiring heightened accuracy without a substantial rise in the cost per reaction.

Optimised for High GC DNA Templates

PCR efficiency can be affected by DNA templates with high GC content (>65%) due to the tendency of these templates to fold into complex secondary structures. **AmpliPLUS** is specifically designed to excel in amplifying regions characterised by high GC content.

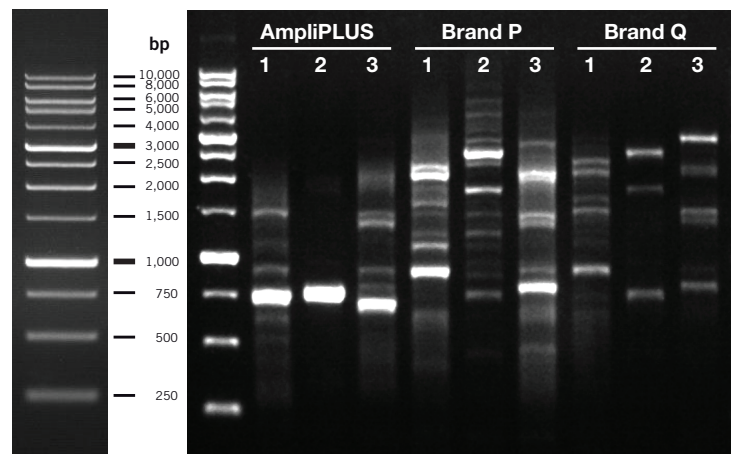
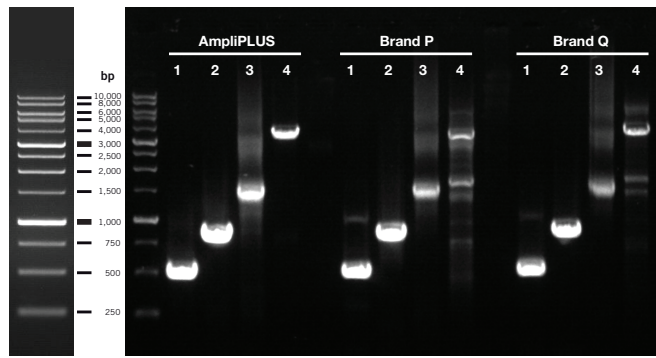


Fig 2. Nucleic acids extracted from human cell pellet with high GC regions:

1. Amplicon: 752bp, GC content: 64.0%
2. Amplicon: 771bp, GC content: 69.5%
3. Amplicon: 714bp, GC content: 75.9%

Robust Amplification



AmpliPLUS offers robust amplification, providing high yields for different sample types and templates of varying length. It is compatible with DNA templates from various sample types, including human cells, yeast, leaves, or stool samples.

Fig 3. Nucleic acids were extracted from various sample types of different length using AmpliPLUS and other competing brands:

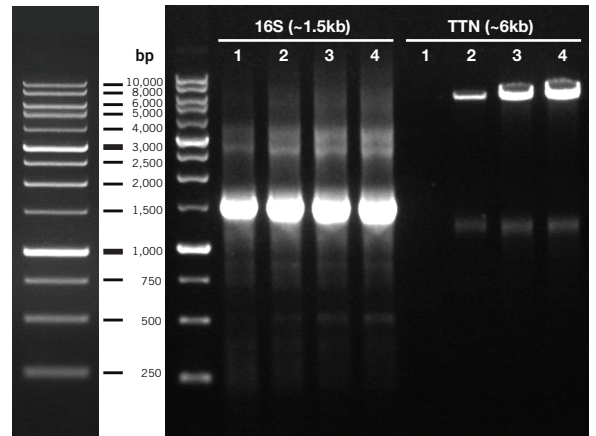
1. Yeast pellet, ~500bp
2. Leaf, ~800bp
3. Mouse stool, ~1400bp
4. Human cell pellet. ~3500bp

Fast Amplification

The combination of fast amplification and high fidelity in a PCR master mix is essential for achieving reliable and timely results. **AmpliPLUS** is capable of amplifying DNA template with an extension speed of 20 seconds/kb or less.

Fig 4. Different DNA templates were amplified using AmpliPLUS with different extension speed:

1. 5 seconds/kb
2. 10 seconds/kb
3. 15 seconds/kb
4. 20 seconds/kb



Sensitivity

The sensitivity of a high-fidelity PCR master mix is necessary for the precise detection and quantification of low-abundance targets. **AmpliPLUS** demonstrates superior sensitivity, even when working with low concentrations of DNA templates.

Fig 5a. Amplification of 16S, Mouse stool, on different amount of DNA templates starting from 10.0ng to 0.1ng in 50ul reaction volume.

- Lane 1 - 1kb Marker
 Lane 2 - 0.1ng input 16S in Mouse Stool ~1400bp
 Lane 3 - 1.0ng input 16S in Mouse Stool ~1400bp
 Lane 4 - 2.5ng input 16S in Mouse Stool ~1400bp
 Lane 5 - 10.0ng input 16S in Mouse Stool ~1400bp

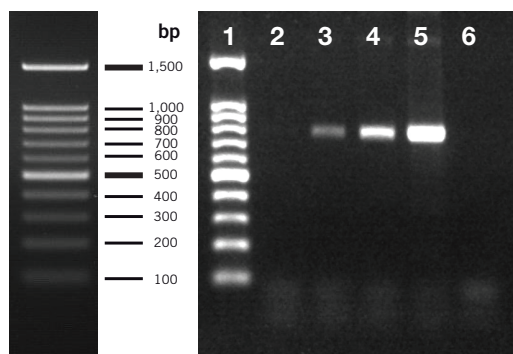
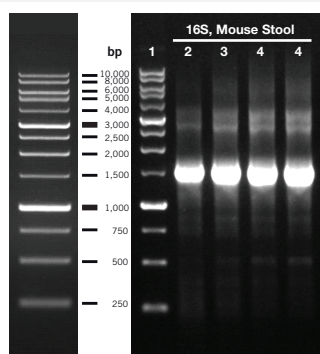


Fig 5b. Nucleic acid extracted from human gDNA and amplified with CECR6 (high GC target) with varying amount (in ng) of input nucleic acid in 20ul reaction volume.

- Lane 1 - 100bp Marker
 Lane 2 - 0.1ng input DNA
 Lane 3 - 1.0ng input DNA
 Lane 4 - 2.5ng input DNA
 Lane 5 - 10.0ng input DNA
 Lane 6 - Negative Control

Product Information

Product	Product Size	Product No.
AmpliPLUS HiFi PCR Master Mix (2x)	10 Reactions	BIO-5189-10
	200 Reactions	BIO-5189-200
	1000 Reactions	BIO-5189-1000



Sample Request