

## AQ97 HIGH FIDELITY DNA POLYMERASE



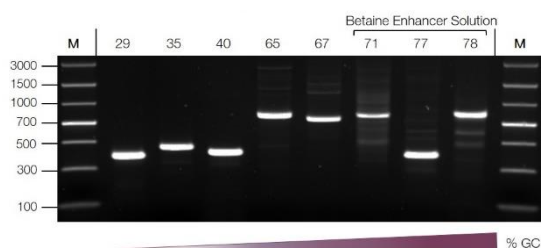
### AQ97 High Fidelity DNA Polymerase

- High Fidelity: > 60x *Taq* DNA Polymerase
- High elongation rate: 10 sec/kb
- 3' → 5' proofreading exonuclease activity
- Good coverage on difficult DNA templates with low to high GC content

Long range capability: 18 kb for gDNA and 25 kb for λDNA

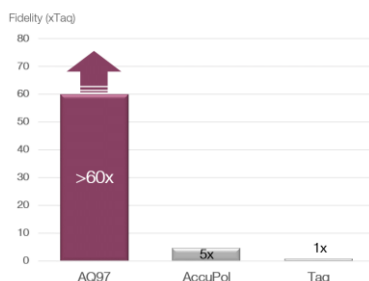
AQ97 High Fidelity DNA Polymerase is a proofreading DNA polymerase with the ability to perform robust amplification of a vast range of difficult targets, including those up to 17.5 kb (25 kb λDNA) and with high to low GC content. The fidelity of the polymerase has been measured to >60x *Taq* DNA Polymerase. This polymerase is highly re-commended for cloning, mutagenesis and NGS applications.

### Robust Amplification



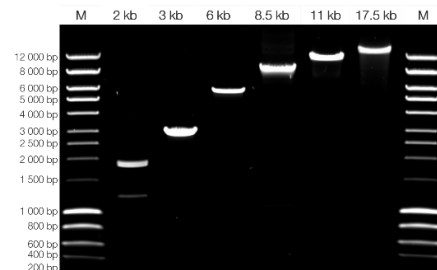
Robust amplification is observed using AQ97 High Fidelity DNA Polymerase on nine human gDNA targets with low to high GC content. Amplification of the targets with 71 – 78 % GC was only successful when Betaine Enhancer Solution was added to the master mix.

### Fidelity Study



Fidelity values of AQ97 High Fidelity DNA Polymerase, AccuPol DNA Polymerase and *Taq* DNA Polymerase were measured using a novel NGS-based technology. Due to method limitations it was not possible to estimate more than up to a 60-fold *Taq* fidelity.

### Long Range



Amplification of long DNA targets. Six different targets of human genomic DNA ranging from 2 kb and up to 17.5 kb was used for this study.

	Size*	Content	Cat #	
AQ97 High Fidelity DNA Polymerase 2 U/μl	100 Units	1 x 50 μl	A767501	
	500 Units	1 x 250 μl	A767503	
	With 5x AQ97 Buffer and MgCl <sub>2</sub>	1000 Units	2 x 250 μl	A767504
		2500 Units	5 x 250 μl	A767506
AQ97 High Fidelity DNA Polymerase 2x Master Mix 1.5 mM MgCl <sub>2</sub> final	100 Reactions	2 x 1.25 ml	A770101	
	500 Reactions	10 x 1.25 ml	A770103	
	2500 Reactions	50 x 1.25 ml	A770106	
	5000 Reactions	25 x 5 ml	A770107	
Betaine Enhancer Solution 5 M		5 x 1 ml	A351104	

\* AQ97 High Fidelity DNA Polymerase – reaction size is 25 μl (0.5 unit/reaction)  
AQ97 High Fidelity DNA Polymerase 2x Master Mix – reaction size is 50 μl