

Herculase® II Fusion DNA Polymerase

The Herculase® II Fusion DNA Polymerase^a produces unmatched superior PCR yield and speed, even on the most difficult templates.

- + Enhanced processivity
- + Fidelity comparable to *Pfu* DNA Polymerase
- + Robust yield and excellent reliability
- + Fast cycling times with extension time as short as 15-30 sec/kb
- + Amplify DNA targets up to 12 kb
- + Exclusive ArchaeMaxx® PCR enhancing factor¹ prevents uracil poisoning
- + Ideal for both routine PCR applications and difficult/GC-rich targets with a universal buffer

Feature	Herculase® II Enzyme	Platinum® Pfx/ KOD HiFi	Expand™ HiFi	Phusion™/ iProof™	Vent®/ Deep Vent®
Fidelity	√√√√√	√√	√	√√√√√	√√√
Speed	√√√√	√	√	√√√√	√
Yield	√√√√√	√	√	√	√
ArchaeMaxx® Factor Included	+	-	-	-	-
Routine PCR Application	+	+	+	+	+
Difficult/GC Targets Amplification	+	-	-	+	-

(2 separate buffers)

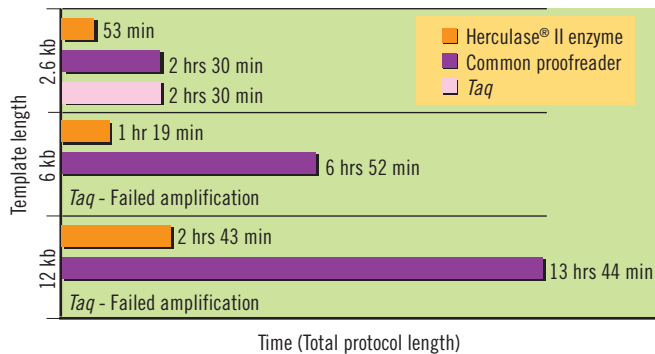


Figure 1
70 - 80% Quicker Time-to-Result

The reaction protocol for the Herculanase® II enzyme was compared to another proofreader and Taq DNA polymerases. Each protocol was designed to amplify 2.6, 6, and 12 kb products in 30 cycles of 3-step protocol with the recommended extension times for each enzyme.

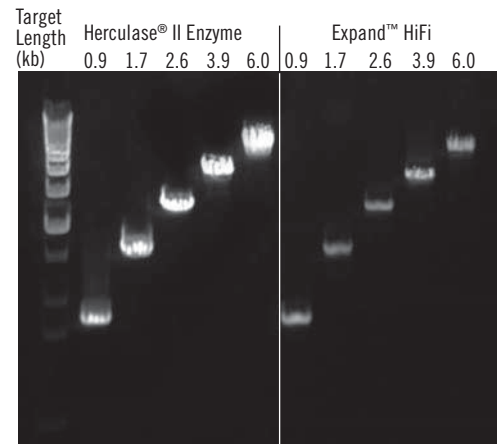


Figure 2
Robust Yield

The Herculanase® II Fusion DNA Polymerase produced high yield of fragments (0.9-6 kb) in amplification employing human genomic DNA and extension times of 30 sec/kb. All reactions were conducted under manufacturers' recommended conditions.

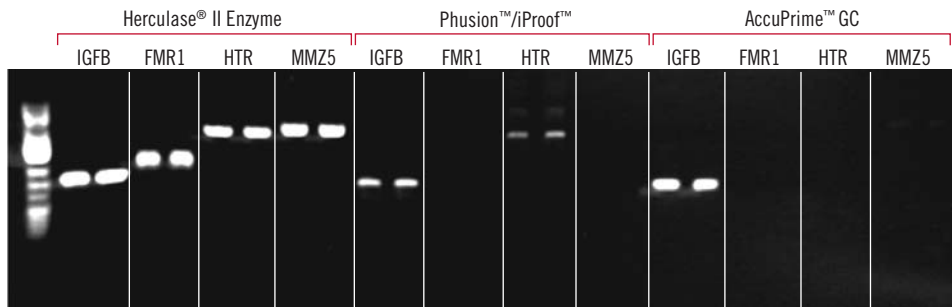


Figure 3
Successful Amplification of GC-Rich Targets

Our Herculanase® II Fusion DNA Polymerase easily amplifies targets that contain as high as 84% GC content while other competitors' enzymes failed or produced low yield. Human genomic DNA targets were as follows: IGFB, human insulin-like growth factor (79% GC, 250 bp); FMR1, fragile X mental retardation syndrome protein (84% GC, 300 bp); HTR, hydroxytryptomine receptor C2 fragment (65% GC, 540 bp); MMZ5, ZIC5, zinc family member 5 protein (68% GC, 562 bp). All reactions were conducted using manufacturer's recommended buffer and cycling conditions for GC-rich targets.

Herculanase® II Products	Pack Size (rxn)	Catalog No.	Price*
Herculanase® II Fusion DNA Polymerase	40	600675	\$60
	200	600677	\$275
	400	600679	\$500

For more information, please visit www.stratagene.com/Herculanase2

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Oy. iProof™ is a trademark of BioRad Laboratories. Vent® and Deep Vent® are registered trademarks of New England Biolabs.
a. U.S. Patent Nos. 6,734,293, 6,489,150, 6,444,428, 6,183,997, 5,948,663, 5,866,395, 5,545,552 and patents pending.
1. Hogrefe, H. et al. (2002), *PNAS* USA 99:596-601