



High fidelity *and* high specificity— AccuPrime™ Pfx DNA Polymerase gives you both

The best-performing proofreading polymerase. AccuPrime™ Pfx DNA Polymerase^{1,2,14,33,134,136} combines the high fidelity of Platinum® Pfx DNA Polymerase with the unmatched specificity of AccuPrime™ proteins to deliver extraordinary yields and unparalleled

accuracy. Surpassing the performance of Platinum® Pfx DNA Polymerase, AccuPrime™ Pfx also maintains extremely high fidelity for even the most demanding PCR application (Table 1).

Table 1 - Error Rates and Relative Fidelity of Various DNA Polymerases

Enzyme	Taq	Platinum® Taq	Platinum® Pfx		AccuPrime™ Pfx	
Buffer Strength	1x	1x	1x	2x	1x	2x
Error Rate*	4.4 x 10 ⁻⁵	4.4 x 10 ⁻⁵	3.2 x 10 ⁻⁶	2.7 x 10 ⁻⁶	2.9 x 10 ⁻⁶	3.7 x 10 ⁻⁶
Relative Fidelity	1	1	13.8	16.3	15.2	11.9

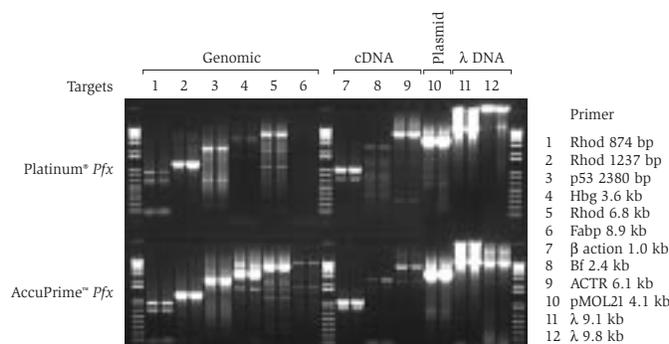
* Error rate for each enzyme has been measured only once, so that the difference between Platinum® Pfx and AccuPrime™ Pfx should be considered as experimental variation rather than a real difference until further evaluation.

Formulated for precision

AccuPrime™ Pfx DNA Polymerase incorporates:

- Pfx DNA Polymerase^{1,2,14,136}—a thermostable proofreading enzyme with extremely low error rate
- Platinum® “hot start” anti-Pfx antibodies—to prevent non-specific priming by inhibiting DNA polymerase and 3'→5' exonuclease activity at low temperatures
- AccuPrime™ accessory proteins—to ensure that throughout all PCR cycles, primers bind only to the specific template sequence, preventing mis-priming for improved yields

Figure 1 - Comparison of AccuPrime™ Pfx DNA Polymerase and Platinum® Pfx DNA Polymerase



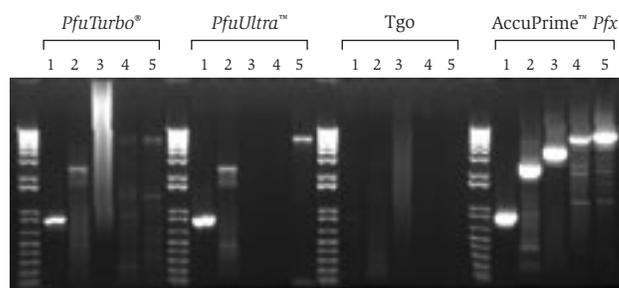
AccuPrime™ Pfx DNA Polymerase was compared to Platinum® Pfx DNA polymerase. All reactions were set up in 50µl reaction volumes containing 1X Pfx Amplification buffer with 1 mM MgSO₄, 0.3 mM of each primer, 0.3mM each dNTP, and 1 unit of enzyme. Template concentrations were 50 to 200 ng for genomic targets, 1 ng for plasmid, and 50 ng for λ DNA. The amount of cDNA per reaction was 2 µl out of a 20 µl cDNA synthesis reaction. Reactions were amplified for one cycle at: 95°C for 5 minutes, followed by 35 cycles of 95°C for 15 sec., 55-68°C for 30 sec., and 68°C for 1 min./kb. 20% of each reaction was analyzed on a 0.8% agarose gel.

Get your PCR products quickly and accurately

AccuPrime™ *Pfx* is ideal for high-fidelity amplification of DNA fragments for downstream applications such as cloning and mutagenesis. With specificity and yields greater than Platinum® *Pfx* (Figure 1), you get more of the product you want for cleaner, more reliable results. AccuPrime™ *Pfx* DNA Polymerase's unique formulation minimizes optimization, which means fewer repeat experiments, less reagent

utilized, and more time saved. AccuPrime™ *Pfx* DNA Polymerase amplifies only your target of interest, without generating non-specific PCR bands. When compared to other proofreading enzymes, AccuPrime™ *Pfx* clearly demonstrates its superiority in specificity and yield (Figure 2).

Figure 2 - Comparison of AccuPrime™ *Pfx* DNA Polymerase and other proofreading enzymes



AccuPrime™ *Pfx* DNA Polymerase was tested side by side with three other proofreading enzymes. Each reaction was set up according to the enzyme manufacturer's recommendations in 50 µl reaction volumes containing 1X buffer. 20% of each reaction was analyzed on a 0.8% agarose gel.

1. C-myc 822 bp
2. p53 2380 bp
3. Hbg 3.6 kb
4. Rhod 6.1 kb
5. Rhod 6.8 kb

Accomplish your PCR goals

AccuPrime™ *Pfx* DNA Polymerase provides the fidelity, specificity, and yield your work demands—the first time.

Order today by visiting our web site, www.invitrogen.com, or calling 800 955 6288.

Description	Reactions	Cat. no.
AccuPrime™ <i>Pfx</i> DNA Polymerase	200 rxns	12344-024
	1,000 rxns	12344-032

AccuPrime™ *Pfx* DNA Polymerase is provided with 10X AccuPrime™ reaction mix and a separate vial of 50 mM MgSO₄.

1,2,14,33,134,136 Products mentioned above are subject to the Limited Label Licenses indicated by the superscript numbers. Please refer to the Invitrogen web site or catalog for Limited Label Licenses corresponding to the numbers indicated

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