Invitrogen™
life technologies

Get high-fidelity PCR with high yield and specificity

When your PCR applications demand lower error rates, look to Platinum® *Pfx* DNA Polymerase. This novel enzyme combines the performance advantages of Platinum® hot-start technology—high yield, specificity, and sensitivity—with a high-fidelity recombinant DNA polymerase from *Pyrococcus* species. You'll achieve superior PCR results compared with other high-fidelity enzymes. Platinum® *Pfx* offers:

- Up to 20 times greater yield than *PfuTurbo*® DNA polymerase
- Better fidelity than *PfuTurbo* DNA polymerase
- Higher sensitivity than other proofreading enzymes

Sensitivity, Specificity, and Fidelity

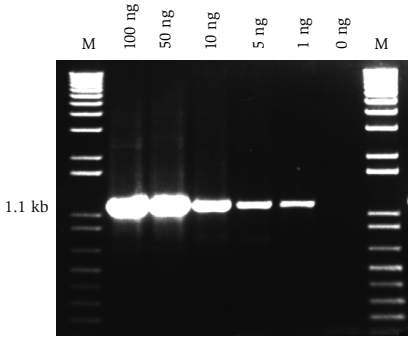
Fewer errors, superior performance

Platinum® *Pfx* DNA Polymerase is precomplexed with specific monoclonal antibodies to inhibit DNA polymerase and 3´ exonuclease activities during PCR assembly and the initial denaturation step. This configuration significantly reduces or eliminates pre-PCR misprimings, primer-dimers, artifacts, and any other non-specific amplification. Besides providing high specificity, Platinum® *Pfx* offers the benefit of proofreading activity. Its 3´→ 5´exonuclease activity eradicates mismatched base pairings, so you'll get fewer errors in your PCR product. Moreover, Platinum® *Pfx* offers higher sensitivity than other high-fidelity PCR enzymes (Figure 1). You'll use less template and fewer units of enzyme, conserving material for additional experiments and saving reagents.

Meet the demand of your applications

Platinum® *Pfx* DNA Polymerase amplifies genomic templates up to 12 kb and plasmid templates up to 20 kb. It is ideal for demanding PCR applications such as site-directed mutagenesis and expression cloning. In addition, Platinum® *Pfx* DNA Polymerase comes supplied with PCR_x Enhancer Solution, a novel PCR co-solvent, to facilitate amplification of GC-rich sequences and problematic templates. For high-fidelity RT-PCR, combine *Pfx* DNA Polymerase with the ThermoScript™ RT-PCR System or SuperScript® First-Strand Synthesis System for RT-PCR.

Figure 1 - High sensitivity with Platinum® *Pfx* DNA Polymerase

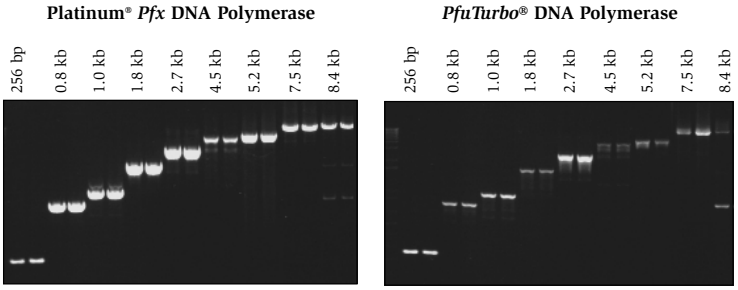


Human genomic DNA (0 to 100 ng) was amplified with 0.3 µM each primer (for thrombospondin), 0.3 mM dNTPs, 1X *Pfx* Buffer, 1 mM $MgSO_4$, and 1.25 units Platinum® *Pfx* DNA Polymerase for 35 cycles.

The fidelity of high fidelity

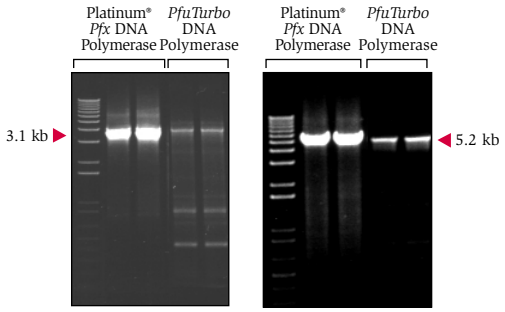
Some proofreading enzymes are difficult to optimize and often generate low yields. By contrast, Platinum® *Pfx* provides the high yield and specificity you need without non-specific amplification (Figures 2 and 3). With Platinum® *Pfx*, you get better results than the competition. No compromise required. Call and order today.

Figure 2 - Better fidelity and yield over a wide range of target sizes



A sample of 200 ng K562 genomic DNA was amplified in duplicate with 1.25 units of Platinum® *Pfx* DNA Polymerase or 2.5 units of *PfuTurbo* DNA Polymerase. Platinum® *Pfx* DNA Polymerase reactions were assembled at room temperature; *PfuTurbo* reactions were assembled on ice. Targets were a 256 bp human beta globin (HBG); 1.0 kb, 1.8 kb, 5.2 kb, and 8.4 kb human myosin heavy chain (HMY HC); 2.7 kb, 4.5 kb, and 7.5 kb myelin ologodendrocyte glycoprotein (MOG); and 802 bp thrombospondin (TS) heavy chain gene.

Figure 3 - High yield without the extra bands



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Product	Quantity	Cat. no.
Platinum® *Pfx* DNA Polymerase	100 units	11708-013
	250 units	11708-021
	500 units	11708-039
ThermoScript™ RT-PCR System for First Strand cDNA Synthesis		
	25 rxns	11146-024
	100 rxns	11146-016
SuperScript™ First-Strand Synthesis System for RT-PCR		
	50 rxns	11904-018

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