



# PCR Enzymes for Diagnostics

Our expertise in enzyme engineering has produced one of the broadest portfolios of PCR enzymes available today. Whether you need high-fidelity or an economic, robust enzyme for routine PCR, trust our high-performance enzymes to address your amplification challenges.

Designed especially for molecular diagnostic applications, the enzymes below contain a reformulated buffer system for increased economy and our own Hot Start technology with the same high performance as our original *Pfu* family of enzymes.

Product	Application	Target Length	Accuracy vs <i>Taq</i>	Blunt or 3'-A ends
<i>PfuUltra</i> ™ High-Fidelity DNA Polymerase AD <i>PfuUltra</i> Hotstart DNA Polymerase AD	High Fidelity PCR	0-17 kb (genomic) 0-20kb(vector) 0-9.6kb (cDNA)	*****	Blunt
Cloned <i>Pfu</i> DNA Polymerase AD	High Fidelity PCR	0-10 kb	***	Blunt
<i>PfuTurbo</i> DNA Polymerase AD	High Fidelity PCR	0-19 kb (genomic) 0-20 kb (vector) 0-9.6 kb (cDNA)	***	Blunt
Paq5000 OEM Hot Start DNA Polymerase	Routine PCR	0-6 kb	*	Mixed

## Customized for your application

We have multiple, large-volume fermenters to handle gram to kilogram scale projects, and our 84,000 square feet manufacturing facility in Cedar Creek, Texas, is ISO 13485 registered and compliant. We are an excellent resource for your stringent documentation needs, required quality assurance steps, and the peace of mind that comes from working with a qualified supplier.

Our Custom Services team will work with you to package the enzymes in the most efficient way for your application, from multi-vial dispensing to bulk containers in whatever buffer formulation you require. Need a Master Mix? We can do that too.

**Visit us online at [www.stratagene.com/custom](http://www.stratagene.com/custom) to find out more.**

# STRATAGENE

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### **Breakthrough Hot Start technology**

Our novel hot start method utilizes a heat-sensitive blocking polymerase protein that has been mutated to inactivate catalytic activity while retaining DNA binding activity. At room temperature, this protein binds to primed templates in the PCR reaction and prevents extension by the polymerase. The blocking protein is inactivated during the initial PCR denaturation step, allowing the polymerase to access the templates properly primed during the annealing step and proceed with extension.

Unlike traditional chemical or antibody methods, our method achieves true hot start without any modification to the DNA polymerase. Since we utilize the concept of competitive binding to block the DNA polymerase from extending at room temperature, the DNA polymerase is not modified to prevent extension. This allows the full activity of the DNA polymerase once the blocking protein is inactivated, leading to higher PCR yields.

In addition, our method does not require a lengthy heat inactivation step that can compromise the polymerase and template DNA, nor an expensive antibody that must be used in vast excess and can interfere with the PCR reaction.

- Provides comparable hot start performance to both antibody and chemical methods
- Hot start is inactivated in as little as 30 seconds at 95°C
- Universal Hot Start technology that will work with any PCR enzyme
- A low cost, highly effective hot start solution.

**Please visit [www.stratagene.com/custom](http://www.stratagene.com/custom) for more information or to request a quote.**

**Stratagene. The way to quality custom manufacturing.**

This information is subject to change without notice.

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