



PCR

in just 25 minutes.



9800
Fast PCR System

Applied Biosystems 9800 Fast PCR System

Reproducible and reliable 25-minute PCR results.

Applied Biosystems, the most trusted name in PCR, introduces a new level of performance. The Applied Biosystems 9800 Fast PCR System is the first fully-integrated fast PCR solution designed to significantly shorten your time-to-result. The 9800 Fast PCR System reduces PCR reaction time from 2 hours to 25 minutes or less, getting you on to the next step of your research more quickly than ever before.

The system is optimal for service labs looking for faster turnaround times, or for researchers sharing a single system where time-savings can be especially beneficial. The 9800 Fast PCR System is ideal for speeding up the PCR process.

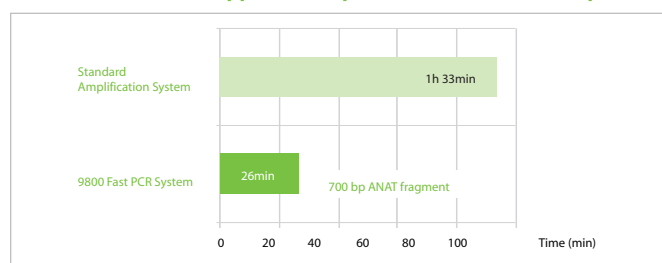


The 9800 Fast PCR System is the first integrated system optimized for trouble-free, fast PCR performance.

Applied Biosystems 9800 Fast Thermal Cycler. Speed with trusted performance.

Based on the proven engineering of the GeneAmp® PCR System 9700, the 9800 Fast Thermal Cycler is designed to considerably reduce PCR reaction time. Often, 500 bp fragments can be amplified from a genomic DNA background in 25 minutes (Figure 1). Using the Fast PCR Protocol, you still achieve the same level of performance and reproducibility that make Applied Biosystems instruments the standard for reliable thermal cycling (Figure 2). In addition, the system includes a Standard Mode for traditional protocols.

Save time with the Applied Biosystems 9800 Fast PCR System



GeneAmp® Fast PCR Master Mix

GeneAmp Fast PCR Master Mix is optimized to generate amplicons in under 25 minutes*. Conversion of your existing PCR protocols from traditional to fast is easy. By following simple guidelines, you can achieve results for a variety of templates that are comparable in quality to standard amplification systems.

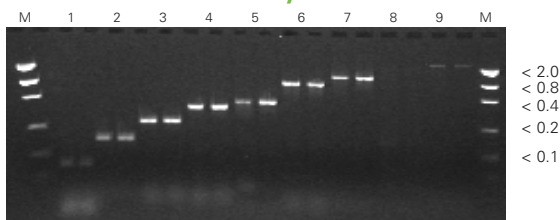
PCR amplicons generated by the Fast PCR Master Mix have been tested for their ability to be used as a template for standard-speed DNA sequencing reactions. The templates sequenced resulted in equal or higher quality compared to templates generated using a standard amplification system.

96-Well Format

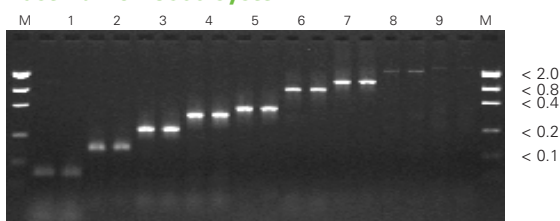
The 96-Well Fast Thermal Cycling Plate is an integral component of the 9800 Fast PCR System. For fewer samples, use individual Fast Reaction Tubes on a Fast 96-Well Retainer Tray. These plates and tubes have been optimized for 20 µL fast PCR reactions and are designed to fit the 9800 system sample block.

*Typical results indicate that fragments under 500 bp can be amplified from genomic backgrounds in less than 25 minutes and even as little as 10 minutes (Figure 3). Larger fragments, up to 2 kb can easily be amplified in approximately 40-50 minutes.

Standard Run on 9700 system



Fast Run on 9800 system



Targets (Size)	Standard	Fast
1. S11 (140 bp)	1h 18 min	18 min
2. D2-94 (291 bp)	1h 25 min	20 min
3. c-myc (445 bp)	1h 19 min	22 min
4. KAI1 (620 bp)	1h 22 min	24 min
5. ANAT (700 bp)	1h 33 min	26 min
6. CRIM (1.0 kb)	1h 42 min	30 min
7. P53 (1.4 kb)	1h 57 min	36 min
8. USP36 (2 kb)	2h 26 min	45 min
9. TPA (2.3 kb)	2h 37 min	50 min

Figure 1. Different amplicons generated using a GeneAmp® PCR System 9700 with a standard amplification system (top panel) and the Applied Biosystems 9800 Fast Thermal Cycler with GeneAmp® Fast PCR Master Mix (bottom panel). Amplicons are amplified from 10 ng human genomic DNA. Each amplicon was generated using different PCR thermal cycling protocols to achieve the recommended annealing/extension times. The samples were combined into one gel for presentation.

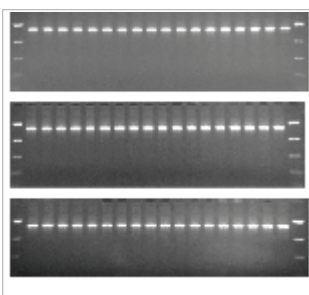


Figure 2. Amplification results of a 1.4 kb p53 fragment after a 36 minute thermal cycling protocol on a 9800 Fast PCR System. Each sample from a 96-well plate is loaded into a separate well on the gel. The consistent intensity and low background of each sample indicates high reproducibility across the entire 96-well block.

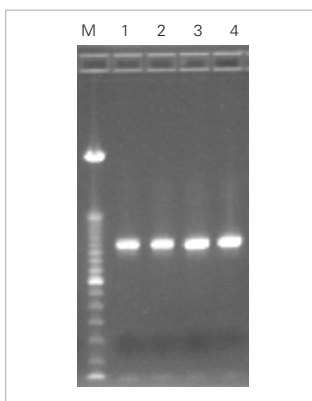


Figure 3. Amplification of 500 bp LacZ target in 10 minutes on a 9800 Fast PCR System (on left of ladder). The LacZ fragment is amplified from lambda phage DNA with a starting concentration of 0.25 pg/μL and using 25 cycles.

Applied Biosystems PCR. The world's most trusted PCR solutions.

Around the world, in labs of all sizes, more researchers count on Applied Biosystems for the quality and consistency of their PCR results. All that experience—millions of reactions a day—adds up to confidence, whether you're processing a few samples, or thousands.

Unmatched speed and performance.

- PCR reaction times reduced from 2 hours to 25 minutes or less
- Superior reproducibility with uniform heating and cooling
- Specificity and sensitivity with hot start chemistry

Optimized for convenience.

- Integrated 96-well system designed for fast results
- Convenient master mix delivers consistent performance
- Superior quality 96-well plates validated for fast PCR

Results you can count on.

- Extending the family of proven PCR solutions
- Authorized Thermal Cycler for PCR**
- Fast and Standard Modes to address your current and future PCR needs

Faster PCR results. Proven PCR performance.

For more information on the Applied Biosystems 9800 Fast PCR System, or any of our PCR and real-time PCR products, contact your local Applied Biosystems representative or check the Applied Biosystems Web site at www.appliedbiosystems.com

Specifications

Applied Biosystems 9800 Fast Thermal Cycler

Format: 96-well

Thermal Non-Uniformity (95°C, 10 seconds after clock start): < 0.5°C; (55°C, 10 seconds after clock start): < 0.5°C

Block Temperature Accuracy: ± 0.25°C, over the temperature range 35–100°C

Temperature Range: 4.0–99.9°C

Ramp Speeds: Heating: 5.0°C/seconds; Cooling: 4.1°C/seconds

Choice of Ramp Modes: Fast and Standard Mode

Sample Temperature Control: Included

Temperature Verification Kit: Optional

Cycle Speed: < 10 minutes to uniformly cycle samples from 94°C, 0 seconds to 64°C, 0 seconds, 25 times

Dimensions: Height: 26 cm (10.5 in.) Depth: 52 cm (20.5 in.)
Width: 30 cm (12 in.) Weight: 12 kg (26.5 lbs)

Portable Memory: PCMCIA card

UL and CE Approved: UL 3101-1 and EN 61010-1

Warranty: 2 years

GeneAmp Fast PCR Master Mix (2X)

- Amplifies standard 500 bp targets from a genomic DNA background in under 25 minutes
- Contains hot start chemistry
- Generates > 90% "A" overhangs for easy cloning
- Detects single copy gene in 10 ng of human genomic DNA
- Detects as low as 10 copies of HIV target
- Supports annealing/extension temperatures > 62°C
- Amplifies up to 2 kb

96-Well Fast Thermal Cycling Plate and Tubes

Format: 96-well SBS standard

Fast Reaction Tubes (individual or strips) are also available for use with Fast Retainer Tray on instrument. Seal strips with MicroAmp® Caps.

PCR Volume Range: 20 µL recommended (10 µL min., 30 µL max.)

Total Well Liquid Capacity: 100 µL (max.)

Ordering Information

Description	Quantity	P/N
Applied Biosystems 9800 Fast Thermal Cycler		4352604
GeneAmp Fast PCR Master Mix (2X) with Protocol	2 x 1.25 mL	4362070
GeneAmp Fast PCR Master Mix (2X) without Protocol	2 x 1.25 mL	4359187
96-Well Fast Thermal Cycling Plate	10 plates	4346907
Fast Reaction Tubes (8 tubes/strip)	125 strips	4358293
Fast Reaction Tube w/Cap	1,000 tubes	4358297
Fast Retainer Tray	10 trays	4358305
9800 Fast Thermal Cycler Temperature Verification Kit (0.1 mL)		4351630

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iScience. To better understand the complex interaction of biological processes, life scientists are developing revolutionary approaches to discovery that unite technology, informatics, and traditional laboratory research. In partnership with our customers, Applied Biosystems provides the innovative products, services, and knowledge resources that make this new, **Integrated Science** possible.

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Not for use in diagnostic procedures.

Authorized Thermal Cycler

**This Applied Biosystems 9800 Fast PCR System in combination with its immediately attached sample block modules, comprise an instrument that is an Authorized Thermal Cycler. The purchase price of this Base Unit includes the up-front fee component of a license under the non-U.S. counterparts of U.S. Patents Nos. 4,683,202, 4,683,195 and 4,965,188 owned by F. Hoffmann-La Roche Ltd. (Roche) covering the Polymerase Chain Reaction (PCR) process to practice the PCR process for internal research and development using this instrument. The running royalty component of that license may be purchased from Applied Biosystems or obtained by purchasing Authorized Reagents. This instrument is also an Authorized Thermal Cycler for use with applications licenses available from Applied Biosystems. Its use with Authorized Reagents also provides a limited PCR license in accordance with the label rights accompanying such reagents. Purchase of this product does not itself convey to the purchaser a complete license or right to perform the PCR process. Further information on purchasing licenses to practice the PCR process may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404 or Roche Molecular Systems, Inc. 1145 Atlantic Avenue, Alameda, California 94501, USA.

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