ABI PrISM® 7000 Sequence Detection System

- Multicolor detection provides flexibility for multiplex quantitation assays, allelic discrimination assays, and plus/minus assays utilizing an internal positive control (IPC)

- Precision optics, combined with a sophisticated multicomponenting algorithm, provide accurate, highly-reproducible results

- Small footprint facilitates easy placement in any laboratory (notebook computer may be placed on top of 7000 system when space is very limited

- Peltier-based, 96-well block thermal cycling system is easy to use with standard 96-well plates or 0.2 mL tubes

- Proven assay development guidelines save time and money

Introduction

The ABI PrISM® 7000 Sequence Detection System is a complete, real-time PCR system that detects and quantitates nucleic acid sequences. In real-time PCR, cycle-by-cycle detection of accumulated PCR product is made possible by combining thermal cycling, fluorescence detection, and application-specific software in a single instrument. Quantitative results are available immediately after PCR without additional purification or analysis.

Real-time, quantitative PCR applications include gene expression and pathogen detection. Post-PCR detection is also available for non-quantitative assays such as allelic discrimination (SNP detection) and plus/minus assays.

Fluorescence Detection

All sample wells are illuminated using a tungsten-halogen lamp. Fluorescence emission is optimized for use with: FAM™/SYBR® Green 1, VIC®/JOE™, TAMRA™, and ROX™ dyes on a charge-coupled device (CCD) camera.

Assay Chemistry

Rapid assay development guidelines are provided to ensure success when using the fluorogenic 5’ nuclease assay or the SYBR® Green 1 double-stranded DNA binding dye assay. Rapid assay development guidelines consist of the following steps:

- Automatically design primers and probes using Primer Express® Software (included with the 7000 system)

- Use TaqMan® Universal PCR Master Mix or SYBR® Green PCR Master Mix to provide standardized component concentrations and simplify assay set-up

- Use universal thermal cycling parameters so that multiple assays can be run on the same 96-well plate

- Use default primer and probe concentrations to eliminate assay optimization

Default primer and probe concentrations are valid for multicolor SNP assays using TaqMan® MGB (minor groove binder) probes, and single color quantitation assays using TaqMan® probes or SYBR® Green 1 dye detection. Assay optimization is recommended for multiplex quantitation assays to minimize PCR competition.
TaqMan® Genomic Assays
Applied Biosystems provides preformulated, ready-to-use, quality-tested, 5′ nuclease TaqMan® probe-based assays for use with the 7000 system.

System Components
7000 Sequence Detector
• Peltier-based, 96-well block thermal cycling system
• Tungsten-halogen excitation source
• Fluorescence detection via a CCD camera

Computer Specifications
Applied Biosystems supplies a Dell™ Business Line computer (notebook or tower) for use with the 7000 system. For the latest computer specifications, please visit the Applied Biosystems Web site at www.appliedbiosystems.com

Sequence Detection Software
The software runs on the Windows® 2000 Operating System and is used for instrument control, data collection, and data analysis. Software features include:
• Real-time monitoring during data collection
• Intuitive multiplex assay set-up and analysis
• Simple dissociation curve data collection and viewing
• Intuitive allelic discrimination viewer, enabling simple allele calling of all samples on a plate
• Automatic identification of samples containing a PCR inhibitor when performing plus/minus assays with an IPC

Installation Specifications
Using the TaqMan® RNase P Instrument Verification Plate, the ABI PRISM® 7000 Sequence Detection System can distinguish between samples containing 5,000 and 10,000 template copies with a 99.7% confidence level.

Reagents and Disposables
A complete line of reagents and disposables is available for use with the ABI PRISM® 7000 Sequence Detection System.

Dimensions
ABI PRISM® 7000 Sequence Detection System
<table>
<thead>
<tr>
<th></th>
<th>Notebook Computer</th>
<th>Tower Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>33 cm (13 in)</td>
<td>43 cm (17 in)</td>
</tr>
<tr>
<td>Depth</td>
<td>28 cm (11 in)</td>
<td>59 cm (23 in)</td>
</tr>
<tr>
<td>Height</td>
<td>31 cm (12.25 in)</td>
<td>46 cm (18 in)</td>
</tr>
<tr>
<td></td>
<td>5 cm (2 in) (closed)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>3.6 kg (8 lbs)</td>
<td>32 kg (70 lbs)</td>
</tr>
</tbody>
</table>

Service and Warranty
The purchase price includes installation and training by service representatives plus a one-year warranty on parts and labor.

Support
Applied Biosystems technical specialists and scientists provide worldwide applications support and service.

Ordering Information
<table>
<thead>
<tr>
<th>Description</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABI PRISM® HD 7000 Sequence Detection System for Human Identification with Notebook Computer</td>
<td>4349132</td>
</tr>
<tr>
<td>ABI PRISM® HD 7000 Sequence Detection System for Human Identification with Tower Computer</td>
<td>4349117</td>
</tr>
<tr>
<td>ABI PRISM® 7000 Sequence Detection System with Notebook Computer</td>
<td>4330087</td>
</tr>
<tr>
<td>ABI PRISM® 7000 Sequence Detection System with Tower Computer</td>
<td>4339940</td>
</tr>
</tbody>
</table>

iScience. To better understand the complex interaction of biological systems, 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.

Worldwide Sales Offices
Applied Biosystems’ distribution and service network, composed of highly trained support and applications personnel, reaches 150 countries on six continents. For international office locations, please call the division headquarters or refer to our Web site at www.appliedbiosystems.com

Applied Biosystems pledges to conduct all operations consistent with the highest ethical and legal standards. Applied Biosystems is committed to providing the world’s leading technology and information for life scientists. Applied Biosystems consists of the Applied Biosystems and Celera Genomics businesses.

Headquarters
850 Lincoln Centre Drive
Foster City, CA 94404 USA
Phone: 650.638.5800
Toll Free: 800.345.5224
Fax: 650.638.5884
For Research Use Only.
Not for use in diagnostic procedures.

Authorized Thermal Cycler
This instrument is an Authorized Thermal Cycler. Its purchase price includes the up-front fee component of a license under United States Patent Nos. 4,683,195, 4,683,202 and 4,965,188, owned by Roche Molecular Systems, Inc., and under corresponding claims in patents outside the United States, owned by F. Hoffmann-La Roche Ltd. covering the Polymers 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 at Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404.

DISCLAIMER OF LICENSE: No rights for any application, including any in vitro diagnostic application, are conveyed expressly, by implication or by estoppel under any patent or patent applications claiming homogeneous or real-time amplification and detection methods, including patents covering such methods used in conjunction with the PCR process or other amplification processes. The 5′ nuclease detection assay and certain other homogeneous or real-time amplification and detection methods are covered by United States Patent Nos. 5,210,015, 5,487,972, 5,804,375 and 5,994,056, owned by Roche Molecular Systems, Inc.; by corresponding patents and patent applications outside the United States, owned by F. Hoffmann-La Roche Ltd; and by United States Patent Nos. 5,588,848 and 6,030,787 and corresponding patents and patent applications outside the United States, owned by Applied Biosystems Corporation. Purchase of this instrument conveys no license or right under the foregoing patents. Use of these and other patented processes in conjunction with the PCR process requires a license. For information on obtaining licenses, contact the Director of Licensing at Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, or the Licensing Department, Roche Molecular Systems, Inc.,1145 Atlantic Avenue, Alameda, California, 94501, USA.

ABI Prodx and its design, Applied Biosystems, Primer Express, and VIC are registered trademarks and ABI (Design), Applied, FAM, JOE, ROX, TAMRA, iScience, and iScience (Design) are trademarks of Applied Biosystems Corporation or its subsidiaries in the US and/or certain other countries. TaqMan is a registered trademark of Roche Molecular Systems, Inc. SYBR is a registered trademark of Molecular Probes, Inc. All other trademarks are the properties of their respective owners.

©2004 Applied Biosystems. All rights reserved.
Information subject to change without notice.
Printed in the USA, 09/04
P+V, Publication 117SP03-04