



**3500 Series  
Genetic Analyzer**

## Efficiency Expert.

### Every lab needs one.

Are you that type? Always looking for ways to simplify and streamline lab processes—like, for example, the cumbersome and imprecise chores of handling and tracking consumables? Well, with a revolutionary new suite pre-formulated, ready-to-use, RFID-trackable consumables, the 3500 Series Genetic Analyzer *is* that type, too. Just snap in and run.

Make it Yours.



**Easy-to-Use  
Consumables**



**Control at Your  
Fingertips**



**Quality-Assured  
Data**

[www.appliedbiosystems.com/3500Series](http://www.appliedbiosystems.com/3500Series)

**AB** applied  
biosystems™  
by *life* technologies™

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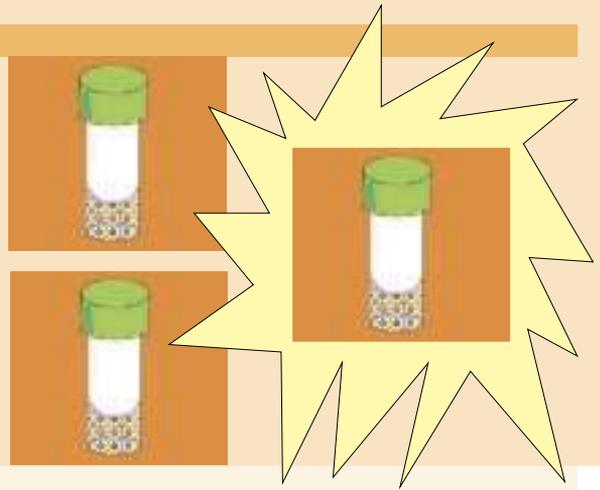
For those who require IVD-marked devices, the 3500 Dx and the 3500xL Dx Genetic Analyzers and system accessories meet the requirements of the In Vitro Diagnostics Medical Devices Directive (98/79/EC). The 3500 Dx and 3500xL Dx systems are for distribution and use in selected countries only, and are not for sale in the United States of America.



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Buy two recombinant proteins and get an additional protein free for a limited time on any of our popular items listed below. Mention offer code RP342 when ordering. Visit [www.cellsciences.com](http://www.cellsciences.com) for details.



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### Recombinant human proteins

BD1 (47 aa)	IL6
BD2	IL8 (72 aa)
BD3	IL8 (77 aa)
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BLC/BCA1/CXCL13	IL11
BMP2	IL12
BMP4	IL13
CCL14	IL15
CD40 Ligand	IL17
CNTF	IL21
CXCL1	IL31
CXCL10/IP10	IL33
CXCL11/I-TAC	LEC
CXCL2	MCP1
CXCL3/MIP2 beta	MCP2
EGF	MCP4
ENA78/CXCL5	M-CSF
Eotaxin	MEC/CCL28
Eotaxin-2	MIA-2
Exodus-2	MICA
FGF1 (aa 141)	MIF
FGF7	MIG
FGF10/KGF2	MIP-1 alpha
FLT3 Ligand	MIP-1 beta
Fractalkine	MIP-3 alpha/CCL20
GCSF	MIP-3/CCL23
GH1	MIP-4/CCL18
GM-CSF	MIP-5/CCL15
IFN alpha 2b	NAP-2/CXCL7
IFN beta 1b	Noggin
IFN gamma	NRG1
IGF1	NT4
IGFBP3	RANTES
IL1 alpha	SCF
IL1 beta	SDF-1 alpha
IL1RA	TARC/CCL17
IL2	TNF alpha
IL3	TPO
IL4	VEGF

### Recombinant mouse proteins

CXCL2  
 CXCL16  
 EGF  
 FGF2  
 GM-CSF  
 IFN gamma  
 IL2  
 IL3  
 IL4  
 IL11  
 IL33  
 LIX/CXCL5  
 MCP2  
 Noggin  
 SDF-1 beta  
 SF20  
 TNF alpha  
 VEGF

### Recombinant rat proteins

EGF  
 FGF2  
 IFN gamma  
 SDF-1a/CXCL12  
 SDF-1b/CXCL12

### Other recombinant proteins

Protein A/G  
 Staphylokinase  
 Streptokinase

Offer good for any combination of three items on the list above. Products are for research use only. Not for human use. Not for use in diagnostic or therapeutic procedures.

Submission  
deadline  
**August 1**

# Your name here.



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\* For the purpose of this prize, molecular biology is defined as "that part of biology which attempts to interpret biological events in terms of the physico-chemical properties of molecules in a cell".

(*McGraw-Hill Dictionary of Scientific and Technical Terms, 4th Edition*).

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28-9402-06AB

# Rotor-Gene Q — pure detection



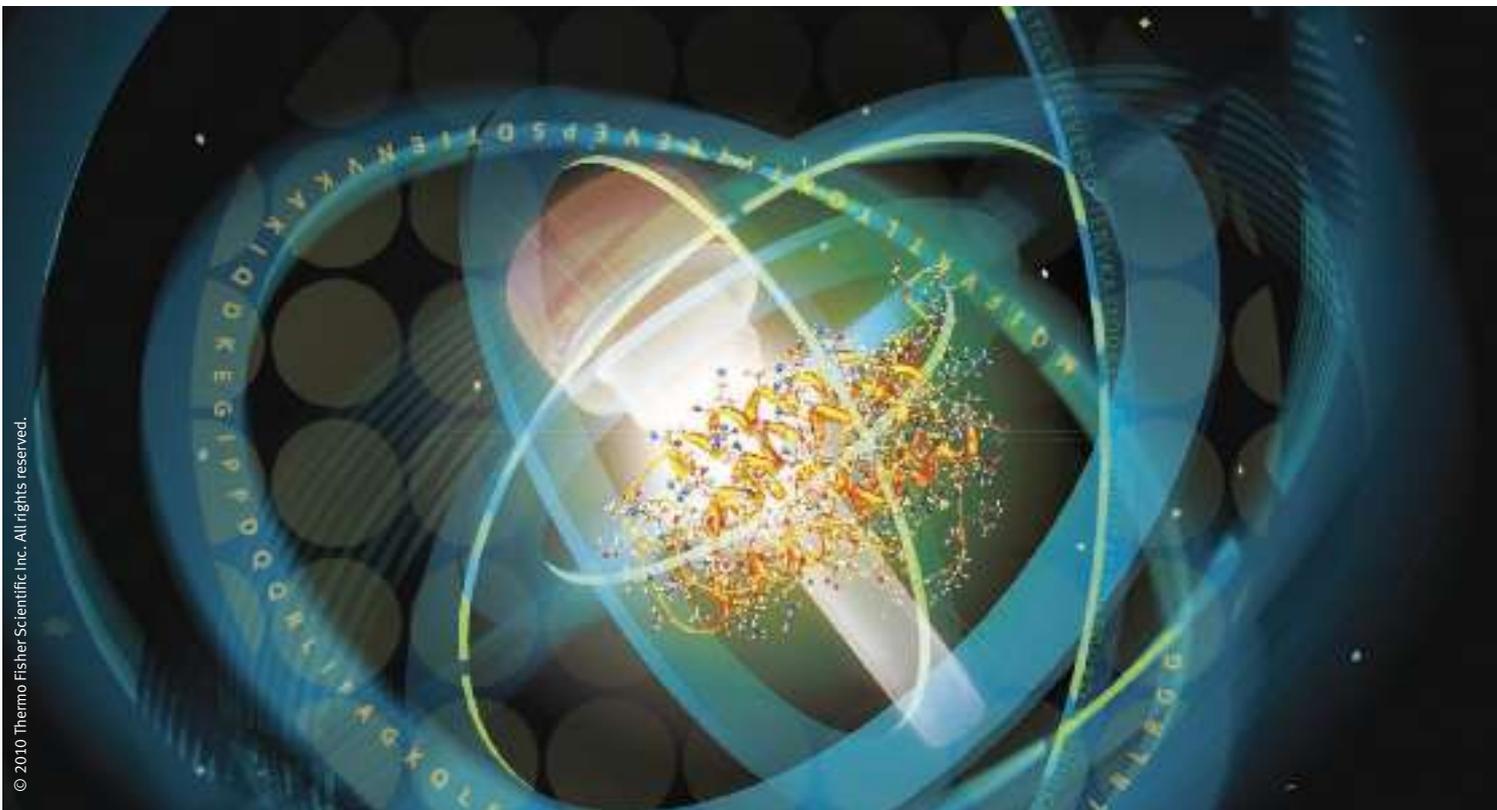
- Enjoy a real-time PCR cycler with outstanding thermal and optical performance
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## An exceptional spin on high-performance desalting.

Thermo Scientific Zeba Desalting Products provide a flexible platform for desalting multiple samples across a range of protein concentrations and sample volumes. The high-performance Zeba™ Resin offers exceptional desalting and protein recovery results, requiring no chromatographic system, cumbersome column preparation or equilibration.

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- Wide product offering meeting your sample needs – 0.5, 2, 5 and 10 ml spin columns and 96-well spin plates
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For more information, visit [www.thermoscientific.com/pierce](http://www.thermoscientific.com/pierce)



### **Quick desalting with exceptional recovery.**

Easy-to-use spin column format, 96-well spin plates and chromatography cartridges dramatically improve results over standard drip-column methodologies.



re:responsibility

# Toward a smaller footprint: extending “reduce, reuse, and recycle”

Reduce, reuse, and recycle—three basic principles that help guide responsible actions toward our environment. These principles are as relevant today as ever, and at Life Technologies, we put them to work at all levels of our business operations. However, with the serious environmental threats we now face, reaching toward a state of genuine sustainability will challenge us to step outside our comfort zone in search of truly innovative ways to lessen our impact.

We’re up to the challenge. In addition to continuing to get the most we can out of “reduce, reuse, and recycle,” Life Technologies is further committed to:

- re:think** Take a fresh look at what we do, why we do it, and how it impacts the environment
- re:search** Find better materials, more efficient processes, and greener partnerships
- re:solve** Make the decisions that bring sustainable solutions into practice and offer greener product alternatives

**Life Technologies—looking for new ways to tread lightly in our world.**

To learn more, visit [www.lifetechnologies.com/responsibility](http://www.lifetechnologies.com/responsibility)

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## AAAS is here – bringing educational infrastructure to the developing world.

AAAS is helping the Rwandan government rebuild its educational infrastructure as a way to help drive economic growth and development. By providing materials such as the Project 2061 *Atlas of Science Literacy*, lesson plans from Science NetLinks, and access to *Science* digital libraries, AAAS is helping the people of Rwanda work toward a future built around science and technology. As a AAAS member your dues support these efforts. If you're not yet a AAAS member, join us. Together we can make a difference.

To learn more, visit [aaas.org/plusyou/rwanda](https://www.aaas.org/plusyou/rwanda)





## **AAAS is here – connecting government to the scientific community.**

As a part of its efforts to introduce fully open government, the White House is reaching out to the scientific community for a conversation around America's national scientific and technological priorities.

To enable the White House's dialogue with scientists, AAAS launched Expert Labs, under the direction of blogger and tech guru Anil Dash. Expert Labs is building online tools that allow government agencies to ask questions of the scientific community and then sort and rank the answers they receive.

On April 12, 2010, AAAS asked scientists everywhere to submit their ideas to the Obama administration and at the same time launched the first of Expert Labs tools, Think Tank, to help policy makers collect the subsequent responses. The result was thousands of responses to the White House's request, many of which are already under consideration by the Office of Science and Technology Policy.

As a AAAS member, your dues support our efforts to help government base policy on direct feedback from the scientific community. If you are not already a member, join us. Together we can make a difference.

To learn more, visit [aaas.org/plusyou/expertlabs](http://aaas.org/plusyou/expertlabs)





## AAAS is here – helping scientists achieve career success.

Every month, over 400,000 students and scientists visit ScienceCareers.org in search of the information, advice, and opportunities they need to take the next step in their careers.

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As a AAAS member, your dues help AAAS make this service freely available to the scientific community. If you're not a member, join us. Together we can make a difference.

To learn more, visit [aaas.org/plusyou/sciencecareers](http://aaas.org/plusyou/sciencecareers)



## NEW PRODUCTS



## VARIABLE-SPEED MIXER

The variable-speed VX-200 Vortex Mixer offers smooth, fast, and efficient mixing with minimal vibration across all speeds. Unlike vortex mixers that use elliptical orbits, the VX-200 deploys a true circular orbit mixing technique that facilitates uniform sample vortexing, even at low speeds. The standard CombiCup head accepts many different tube sizes, while the unique technology used in its manufacture provides a robust, sturdy core that fits optional heads for microplates, polymerase chain reaction strip tubes, 15-ml tubes, 30-ml tubes, and blood vials. The VX-200 can be used in “touch” or “continuous” mode. Touch mode is activated by depressing the sample head and stopped by releasing the pressure. Other features include an optimized counter-balance system that minimizes vibration and movement of the mixer during operation.

Cleaver Scientific

For info: +44-1788-565-300 | [www.cleaverscientific.com](http://www.cleaverscientific.com)

## ELECTROPHORESIS GELS

The Mini-Protean TGX precast gels provide researchers with fast-running, long-shelf-life precast gels for protein electrophoresis using the standard Laemmli buffer system. The TGX gels can be run to completion in as little as 12 minutes. The gels are based on a modification of the Laemmli buffer system that significantly increases gel matrix stability and performance over time. The modification extends the gel shelf life to more than 12 months and offers consistent, superior resolution and reproducibility while delivering unprecedented electrophoresis run speeds. Compared with other long-shelf-life products, these gels have the advantage of using the standard and inexpensive tris/glycine/sodium dodecylsulfate buffers that researchers have preferred over other buffer systems for more than 30 years.

Bio-Rad

For info: 800-424-6723 | [www.bio-rad.com](http://www.bio-rad.com)

## ENVIRONMENTAL SAMPLE CONCENTRATION

The proprietary SampleGenie flask technology helps scientists eliminate handling of samples by concentrating them, without loss of volatile components, directly into a small gas chromatography or high-performance liquid chromatography vial. SampleGenie technology enables samples in Genevac Rocket series, EZ-2 series, or HT series centrifugal evaporators to be concentrated directly into a single vial, eliminating the need for reformatting of samples after drying. Along with the automation featured in Genevac evaporators, this concentration helps deliver uniform results every time, thereby increasing productivity in environmental analysis.

Genevac

For info: +44-1473-240-000 | [www.genevac.co.uk](http://www.genevac.co.uk)

## WATER FOR ION CHROMATOGRAPHY

The ICW-3000 water purification system produces a constant and reliable source of ultrapure water for Dionex IC (ion chromatography) systems. Ultrapure water from the ICW-3000 can increase the precision of IC analyses. The system provides a continual flow of ultrapure water to the eluent generator and regenerant lines of the suppressor. This reduces the carbonate content in the water, which

sharply decreases contamination risks and improves experiment reproducibility, while also eliminating the need for helium. The water system also eliminates the need for eluent preparation and the instrument downtime that occurs when filling eluent bottles.

Millipore

For info: 978-762-5170 | [www.millipore.com/icw3000](http://www.millipore.com/icw3000)

## PEPTIDE LIBRARY SYNTHESIZER

The Overture Robotic Peptide Library Synthesizer can run syntheses from 0.005 to 24 mmol scales. It features six reaction blocks capable of holding 96 (10 ml) or 24 (40 ml or 45 ml) reaction vessels, 49 amino acid positions, six solvent bottle positions, variable-speed vortex mixing, automatic robotic arm calibration, and a full-color, chemical-resistant touchscreen. Amino acid deliveries are performed from individual dispensers, which do not require rinsing in between deliveries, saving the user time and money. These dispensers are capable of infinitely variable delivery volumes accurate to 50  $\mu$ l. The Overture's flexible, easy-to-use software features easy sequence importing, automatic sequence placement, automatic library generation, automated cleaning routines, and report and log-file generation.

Protein Technologies

For info: 520-629-9626 | [www.peptideinstruments.com](http://www.peptideinstruments.com)

## LABORATORY INFORMATION MANAGEMENT

A new laboratory information management system (LIMS), the LIMS-on-Demand allows organizations of varying types and sizes to leverage all the benefits of an industry-leading LIMS solution without the time and cost associated with on-premise software installation. LIMS-on-Demand can reduce the capital investment associated with traditional LIMS implementation and validation by eliminating the need for extensive software testing and installation. For the cost of a monthly subscription fee, a laboratory can easily, affordably, and securely access a fully functional, validated solution through a standard web browser. This on-demand access provides a flexible alternative to conventional LIMS that allows organizations to cost-effectively adapt technology as needs change.

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# Evolutionary qRT-PCR begins with One-Step

## One-Step SYBR<sup>®</sup> Ex Taq<sup>™</sup> qRT-PCR Kit

**Takara's One Step SYBR<sup>®</sup> Ex Taq<sup>™</sup> qRT-PCR Kit** combines a new RTase with increased speed and exceptional elongation capability with Takara's high-specificity, high-sensitivity *Ex Taq<sup>™</sup>* Hot Start DNA Polymerase. This combination provides excellent amplification rates and reaction specificity for detection of even low abundance samples like RNA viruses. The one-step, single tube format is simple to assemble, reduces user error and minimizes risk of contamination. Takara's One-Step SYBR<sup>®</sup> *Ex Taq<sup>™</sup>* qRT-PCR Kit provides a superior solution for any qPCR application.

### One Step SYBR<sup>®</sup> qRT-PCR Kit

#### Three easy steps!

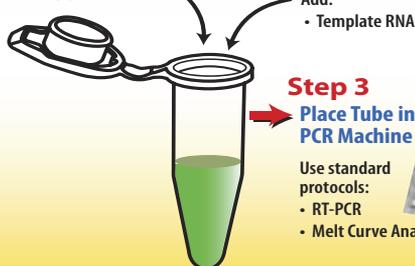
#### Step 1

##### Create a MasterMix with

- 2X One Step SYBR RT-PCR buffer
- *Ex Taq HS*
- RTase Enzyme Mix

##### Add:

- RNase free dH<sub>2</sub>O
- Primers



#### Step 2

- Add:
- Template RNA

#### Step 3

##### Place Tube in Real Time PCR Machine

##### Use standard protocols:

- RT-PCR
- Melt Curve Analysis

- **Efficient:** Uses new RT with strong elongation activity and high-performance *Ex Taq<sup>™</sup>* Polymerase.
- **High Specificity:** Optimized buffer system and antibody mediated hot start.
- **Highly Sensitive:** Accurate quantification of low abundance samples such as RNA viruses.
- **Simple Protocol:** One step qRT-PCR reduces pipetting steps and risk of contamination.



Also available without SYBR<sup>®</sup>, see our website for details.

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Cancer

Development

Endocrinology

Glycobiology

Immunology

Neuroscience

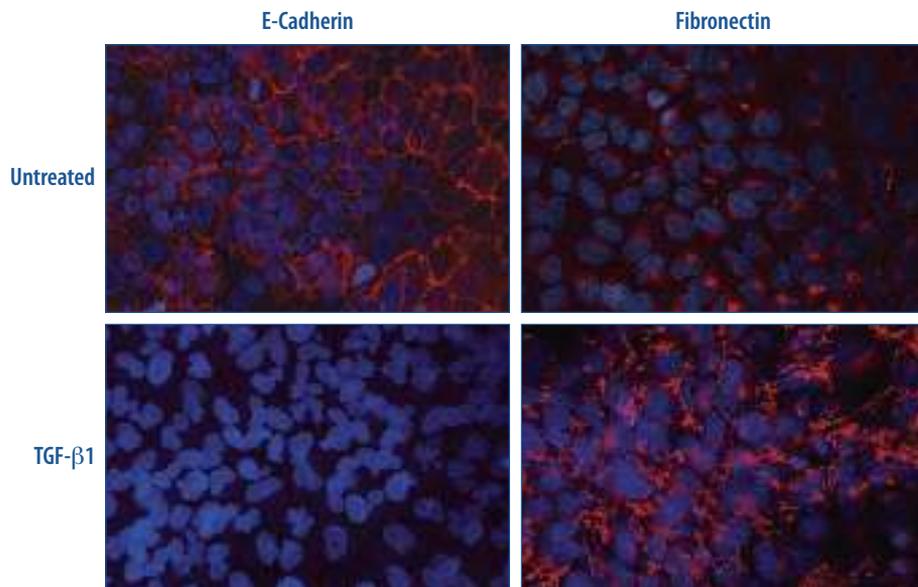
Proteases

Signal Transduction

Stem Cells

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R&D Systems offers a wide range of high quality products for developmental biology research. We are proud to offer premium quality active cytokines, growth factors, and morphogens. Our high performance antibodies and ELISA kits can be used for the study of axon guidance, angiogenesis, pattern formation, and cell fate. Our catalog also includes primary cells, culture media, and kits for the expansion and differentiation of embryonic, neural, mesenchymal, and hematopoietic stem cells.



**Induction of Epithelial to Mesenchymal Transition by TGF- $\beta$ 1.** A549 human lung carcinoma cells were treated with 10 ng/mL TGF- $\beta$ 1 (Catalog # 240-B) for 24 hours to induce epithelial to mesenchymal transition (EMT), a process which is essential for gastrulation and neural crest cell migration. R&D Systems antibodies reveal downregulation of the epithelial marker E-Cadherin (Catalog # AF648) and concurrent upregulation of the mesenchymal marker Fibronectin (Catalog # AF1918).

For more information visit our website at [www.RnDSystems.com/go/Development](http://www.RnDSystems.com/go/Development)

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