# simple solutions to everyday complexities

Life technologies"

Life Technologies<sup>®</sup> **benchtop devices** 

Life Technologies™ benchtop devices simple solutions for every application From end point PCR to protein analysis, Life Technologies offer a comprehensive range of benchtop devices to make your everyday complexities more simple.



**Veriti**® Thermal Cycler

**2720** Thermal Cycler



GeneAmp<sup>®</sup> PCR System 9700



**HulaMixer™** Sample Mixer



**E-Gel**® Imager System



**Qubit<sup>®</sup> 2.0** Quantification Platform



**Countess**<sup>®</sup> Automated Cell Counter



**Neon**® Transfection System



**Tali**™ Image-based cytometer



**iBlot**® Dry Blotting System



BenchPro<sup>®</sup> 4100 Western Processing System



MAGPIX® System



Life Technologies™ benchtop devices simple solutions to everyday complexities www.lifetechnologies.com/benchtop

End point PCR	<ul> <li>Veriti<sup>®</sup> Thermal Cycler: More control at your fingertips</li></ul>
Sample preparation	<ul> <li>HulaMixer<sup>™</sup> Sample Mixer: The versatile and flexible sample mixer</li></ul>
Quantification	Qubit <sup>®</sup> 2.0 Quantification Platform:
Cell imaging analysis	Countess <sup>®</sup> Automated Cell Counter: Automated cell counting at your fingertips
Transfection	<ul> <li>Neon<sup>®</sup> Transfection System: Efficiency in action</li></ul>
Protein analysis	<ul> <li>iBlot<sup>®</sup> Dry Blotting System: Western blotting in 7 minutes</li></ul>

For full details on Life Technologies' benchtop devices: www.lifetechnologies.com/benchtop

### **Veriti**® Thermal Cycler

#### more control at your fingertips

#### product description

The Veriti<sup>®</sup> 96-Well Thermal Cycler provides the flexibility to run fast or standard PCR as well as the capability to perform better-than-gradient PCR optimization with VeriFlex<sup>™</sup> Blocks.

#### features and benefits

- VeriFlex<sup>™</sup> technology better than gradient optimization feature & 6 independent blocks in one
- Graphical user interface intuitive & exceptionally easy to use
- Fast & standard PCR maximum protocol flexibility
- Transferable programs via USB stick
- Perform and monitor runs for up to 50+ networked Veriti<sup>®</sup> Thermal Cyclers using VeritiLink<sup>®</sup> Remote Management Software (VRMS)



#### protocols

Please refer to **www.lifetechnologies.com/veriti** for manuals and protocols.

#### tech tips

Please refer to **www.lifetechnologies.com/veriti** for customer application notes.

#### demo protocols

View the video at: www.lifetechnologies.com/veriti



I just love, love, love my Veriti<sup>®</sup>. What would I change about it? Nothing! ERIN | BAYLOR



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#### Veriti<sup>®</sup> Thermal Cycler

#### order information

Device	Quantity	Cat. No.
Veriti <sup>®</sup> Thermal Cycler with 96 x 0,2 mL wells	Each	4375786
Veriti <sup>®</sup> Thermal Cycler with 96 x 0.1 mL wells	Each	4375305
Veriti <sup>®</sup> Thermal Cycler with 384 x 0.02 mL wells	Each	4388444
Veriti <sup>®</sup> Thermal Cycler with 60 x 0.5 mL wells	Each	4384638
Veriti <sup>®</sup> Dx Thermal Cycler with 96 x 0.2 mL wells	Each	4452300





Figure 1. Screenshot from the Veriti® 96-well Thermal Cycler showing the annealing temperature being set for six different primers

Figure 2. VeriFlex<sup>™</sup> blocks. Six individual peltier blocks.



Figure 3. PCR results showing six primer sets run in a single PCR amplification cycle. Results indicate that the Veriti® 96-well Thermal Cycler can run six assays at six annealing temperatures during the same PCR run.



### **2720** Thermal Cycler

#### your **personal** thermal cycler

#### product description

The 2720 Thermal Cycler combines industry-standard technology from our GeneAmp® PCR System 9700 - but in a more compact package and at a lower price. And of course, it provides the same reliability and performance that customers around the world have come to expect from Applied Biosystems® thermal cyclers.

#### features and benefits

- Affordable price easy entry into PCR technology
- Graphical user interface simplifies use
- AB branded thermal cycler known for reliability and service
- Precise and uniform heating and cooling



#### protocols

Over 200 citations on the 2720 Thermal Cycler pages at: www.lifetechnologies.com/2720

#### tech tips

The 2720 thermal cycler can be used with a wide variety of different consumables.

For further protocols visit the 2720 Thermal Cycler pages at: www.lifetechnologies.com/2720





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#### 2720 Thermal Cycler

Device	Quantity	Cat. No.
2720 Thermal Cycler	Each	4359659



### GeneAmp® PCR System 9700

#### reliability you can **depend on**

#### product description

The GeneAmp<sup>®</sup> PCR System 9700 is a high-performance thermal cycler with built-in flexibility provided by different block temperature modes and a range of user interchangeable PCR block options.

#### features and benefits

- Interchangeable blocks flexible to change throughputs with various block offerings
- Graphical user interface easy to use
- Autolid option (on Dual 384 Well) compatible with robotics for high throughput use
- Small footprint compact size conserves valuable bench space
- Networking software allowing 31 blocks to be controlled from a single station



#### protocols

Find citations on the GeneAmp<sup>®</sup> PCR System 9700 pages on **www.lifetechnologies.com/9700** 

Recently used for HID from the Spanish Civil War (Ref: *Life Technologies Forensic News*, January 2011)

#### tech tips

Visit the GeneAmp<sup>®</sup> PCR System 9700 pages on **www.lifetechnologies.com/9700** for our PCR plastic-ware compatibility chart.

applied biosystems<sup>®</sup> by *life* technologies<sup>®</sup>

#### Which GeneAmp<sup>®</sup> PCR System 9700 Thermal Cycler is right for you?

Thermal cycler	60-Well	96-Well Aluminium	96-Well Gold 96-Well Silver	Dual 96-Well	Dual 384-Well
Block Description	0.5 mL aluminium	0.2 mL 96-well	0.2 mL 96-well	Dual block aluminium 0.2 mL 96-well blocks	2 aluminium 0.2 mL 384-well blocks
Features	Supports 0.5 mL thin walled tubes	Standard 0.2 mL format, more cost effective	Standard 0.2 mL format, faster ramp speeds	0.2 mL format, 192 samples per run	Dual blocks enable up to 768 samples per run, optional auto-lid
Temperature Accuracy		±0.25°C from 35.0°C-99.9°C			
Height		26 cm (10 in.)			
Width		30 cm (12 in.)			
Depth		40.6 cm (16 in.)		52 cr	m (20.5 in.)



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#### GeneAmp<sup>®</sup> PCR System 9700

Device	Quantity	Cat. No.
GeneAmp <sup>®</sup> 9700 PCR System Base Module	Each	N8050200
Aluminium 96-Well GeneAmp <sup>®</sup> 9700 PCR System	Each	4314879
Gold 96-Well GeneAmp <sup>®</sup> 9700 PCR System	Each	4314878
Silver 96-Well GeneAmp <sup>®</sup> 9700 PCR System	Each	N8050001
60-Well 0.5 mL GeneAmp <sup>®</sup> 9700 PCR System	Each	4310899
Dual 96-Well GeneAmp <sup>®</sup> 9700 PCR System	Each	4343176
Dual 384-Well GeneAmp <sup>®</sup> 9700 PCR System	Each	N8050002
Auto-Lid Dual 384-Well GeneAmp® 9700 PCR System	Each	4314487



### HulaMixer<sup>™</sup> Sample Mixer

#### the **versatile and flexible** sample mixer

#### product description

A lot of labs may not think about it much, but good mixing is important for optimal results. The HulaMixer™ Sample Mixer is perfect for sample preparation with Dynabeads<sup>®</sup> products and for any other application needing thorough mixing.

The HulaMixer<sup>™</sup> helps mix practically any sample. Speed is adjustable from 1 to 100 rpm, and it can rotate in 3 ways: end-over-end, tilting and vibrating. The mixer comes with 2 separate platforms, accommodating tubes ranging from 0.5 to 50 mL.

#### features and benefits

- Tilt, rotate, and/or vibrate your samples
- Continuous or timed operation
- All settings easily adjustable
- For use at 5°C to 40°C



#### protocols

Press the SELECT key to choose the parameter to change.

Use the  $\blacktriangle$  and  $\blacktriangledown$  keys to set the value.

Press the RUN/STOP key to start orbital rotation.

#### tech tips

Large tubes (blood collection tubes, 15 mL and 50 mL) must be placed in the centre rows of the platform and midway in the carousel to avoid hindering the orbital rotation.

- 1. Rotating motion: Simple even circular motion. Adjustable speed from 1 to 100 rpm.
- 2. Reciprocating rotating motion: Vertical rotation with changing direction of rotation. Adjustable turning angle (from 1° to 90°, increments of 1°). The speed ranges from 1 to 100 rpm.
- 3. Vibration mode: Intensive vibration motion with small amplitude (from 1° to 5°).



Life Technologies<sup>™</sup> benchtop devices simple solutions to everyday complexities www.lifetechnologies.com/benchtop HulaMixer<sup>™</sup> Sample Mixer

Device	Quantity	Cat. No.
HulaMixer™ Sample Mixer	Each	159-20D



### **E-Gel**® Imager System

#### your personal **gel imaging & analysis** system

#### product description

The E-Gel<sup>®</sup> Imager System is a personal imaging system for documenting and analyzing agarose gels and E-Gel<sup>®</sup> cassettes. Each E-Gel<sup>®</sup> Imager system includes a sleek and compact camera hood an interchangeable base along with two powerful software programs.

There are three bases to choose from: a UV Light Base, a Blue Light Base and an E-Gel® Adaptor Base. The bases are also available separately. In any of the three configurations, the E-Gel® Imager system provides a small and light imaging solution that utilizes a scientific grade camera. Plus, the E-Gel® Imager with the E-Gel® Adaptor Base is designed to work with the E-Gel® iBase™ power system to allow for real time documentation of electrophoresis runs using E-Gel® cassettes.



#### features and benefits

- Affordable—the least expensive imaging system available with a scientific grade camera
- Space-saving—a sleek footprint that fits on most benchtops and is light enough to be moved easily
- Easy- to-use —simple set up and intuitive software for analysis of E-Gel<sup>®</sup> or other agarose gels
- Quality images capture sharp, rich images even during a run – that can be analyzed using the powerful Gel Quant Express software
- Convenient—with a personal imager you can reduce your wait time and to the need to reprogram your settings like you would with other larger, shared systems

#### demo protocols

To view product video, visit: www.lifetechtechnologies.com/gelimager

#### tech tips

Do a quick check or more in-depth analysis. It's easy to quickly capture an image any time you run a gel. For many applications, estimating the size and quantity of nucleic acid in a certain band in a gel is important for downstream steps. The E-Gel<sup>®</sup> Imager Gel Quant Express software is designed for just this type of image analysis after capture. Use this full-featured yet uncomplicated software to document, quantitate and analyse your results.

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#### order information

Choose from three interchangeable base options, Blue-Light Transilluminator, UV Transilluminator, or E-Gel® Adaptor base for documentation and analysis of E-Gel® cassettes and other agarose gels. Three filter choices can be used for a range of stains; a universal orange, a green filter optimal for SYBR® Green stains, and a red-hued filter for use with Molecular Probes® Qdot® 625 products.



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#### E-Gel<sup>®</sup> Imager System

#### order information

Device	Quantity	Cat. No.
E-Gel <sup>®</sup> Imager with UV Light Base	Each	4466611
E-Gel <sup>®</sup> Imager with Blue Light Base	Each	4466612
E-Gel <sup>®</sup> Imager with E-Gel <sup>®</sup> Adaptor	Each	4466613
E-Gel <sup>®</sup> Imager UV Light Base	Each	4466602
E-Gel <sup>®</sup> Imager Blue Light Base	Each	4466603
E-Gel <sup>®</sup> Imager Adaptor Base	Each	4466604
E-Gel <sup>®</sup> Imager Band Excision Kit	Each	4466605
E-Gel <sup>®</sup> Imager Universal Filter	Each	4466606
E-Gel <sup>®</sup> Imager Qdot <sup>®</sup> 625 Filter	Each	4466607
E-Gel <sup>®</sup> Imager UV SYBR Filter	Each	4466608
E-Gel <sup>®</sup> Imager Quantification Dingle	Each	4466610

Related products	Quantity	Cat. No.
0.8% Agarose Starter Pak <sup>*</sup> (General Purpose)	1 kit	G600008EU (EU adaptor) G600008UK (UK adaptor)
1.2% Agarose Starter Pak* (General Purpose)	1 kit	G600001EU (EU adaptor) G600001UK (UK adaptor)
2% Agarose Starter Pak* (General Purpose)	1 kit	G600002EU (EU adaptor) G600002UK (UK adaptor)

\*E-Gel<sup>®</sup> Single Comb Starter Paks – include 6 E-Gels and the E-Gel<sup>®</sup> PowerBase™ v.4.



### **Qubit<sup>®</sup> 2.0** Quantification Platform

### designed for your precious samples& high investment applications

#### product description

The Qubit<sup>®</sup> 2.0 Quantification Platform is a revolutionary way to quantitate DNA, RNA and protein. It provides higher accuracy and sensitivity than UV absorbance readings, at a fraction of the cost. More accurate quantification leads to better results in any molecular biology workflow.

The Qubit<sup>®</sup> 2.0 Quantification Platform uses fluorescent dyes that can specifically quantitate DNA, RNA or protein, with no interference from other bio-molecules or contaminating nucleotides.

#### features and benefits

- The Qubit<sup>®</sup> 2.0 Quantification Platform provides SELECTIVE quantification that distinguishes between DNA, RNA, proteins and free nucleotides, making it much more accurate than UV absorbance readings, which are indiscriminate
- The Qubit<sup>®</sup> 2.0 Quantification Platform has much higher sensitivity than UV absorbance readings, making it possible to measure low abundance samples
- Higher accuracy and higher sensitivity mean that you get better results in a molecular biology workflow



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#### protocols

- 1. In the initial menu, select the desired assay.
- 2. Follow the instructions to enter each standard tube in the required order.
- 3. Measure your sample.
- The Qubit<sup>®</sup> 2.0 fluorometer can calculate concentrations for you. Just input the volume of sample used and the desired units of concentration

#### tech tips

It is important to have the Qubit<sup>®</sup> reagents at room temperature before beginning an analysis.

To ensure consistency of sample measurements do not excessively handle the tubes containing Qubit<sup>®</sup> reagents and sample; this handling causes the tubes to warm up and thus interfere with the measurement of the sample.

Quick and easy with excellent repeatability; more reliable than spec and more confidence in results. KEVIN BARR, UNIVERSITY OF WESTERN ONTARIO

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It gives me the possibility to measure very diluted samples. Good, quick and easy. SILVIA RODRIGUEZ, INSTITUT DE RECERCA BIOMEDICA DE BARCELONA (IRB)

Based on the Qubit<sup>®</sup> measurements, Nanodrop overestimated the amount of RNA in the blood spot samples about 10 times and this number would agree with the amount of cDNA and qPCR numbers that we are getting from the samples. JULIA BUSIK, ASST. PROFESSOR, MICHIGAN STATE UNIVERSITY

#### Qubit<sup>®</sup> 2.0 Quantification Platform

Device	Quantity	Cat. No.
Qubit <sup>®</sup> 2.0 fluorometer	Each	Q32866
Qubit <sup>®</sup> 2.0 Quantification Starter Kit 1 Qubit <sup>®</sup> 2.0 fluorometer, plus 1 of each 100-assay Quant-i™ Kit: DNA HS, DNA BR, RNA and Protein and set of 500 Qubit <sup>®</sup> assay tubes	1 kit	Q32871
Qubit <sup>®</sup> 2.0 Quantification Lab Starter Kit 5 Qubit <sup>®</sup> 2.0 fluorometer, plus 1 of each 100-assay Quant-iT™ Kit: DNA HS, DNA BR, RNA and Protein and set of 500 Qubit <sup>®</sup> assay tubes	1 kit	Q32872

Related products	Quantity	Cat. No.
Qubit <sup>®</sup> RNA BR Assay kit [100 assays *20-1000 ng*]	1 kit	Q10210
Qubit <sup>®</sup> RNA BR Assay kit [500 assays *20-1000 ng*]	1 kit	Q10211
Qubit <sup>®</sup> RNA Assay kit [100 assays *5-100 ng*]	1 kit	Q32852
Qubit <sup>®</sup> RNA Assay kit [500 assays *5-100 ng*]	1 kit	Q32855
Qubit <sup>®</sup> ssDNA Assay kit [100 assays *1-200 ng*]	1 kit	Q10212
Qubit <sup>®</sup> dsDNA BR Assay kit [100 assays *2-1000 ng*]	1 kit	Q32850
Qubit <sup>®</sup> dsDNA BR Assay kit [500 assays *2-1000 ng*]	1 kit	Q32853
Qubit <sup>®</sup> dsDNA HS Assay kit [100 assays *0.2-100 ng*]	1 kit	Q32851
Qubit <sup>®</sup> dsDNA HS Assay kit [500 assays *0.2-100 ng*]	1 kit	Q32854
Qubit® assay tubes	Set of 500	Q32856
Qubit® Protein Assay Kit [100 assays *0.25-5 µg*]	1 kit	Q33211
Qubit® Protein Assay Kit [500 assays *0.25-5 µg*]	1 kit	Q33212



### **Countess**® Automated Cell Counter

#### automated cell counting **at your fingertips**

#### product description

The Countess<sup>®</sup> automated cell counter provides fast, easy and accurate cell counting without using a hemocytometer, eliminating the tedium and subjectivity of manual cell counting forever.

The Countess<sup>®</sup> cell counter uses trypan blue staining and sophisticated image analysis to automate cell counting.

Using just 5 µL of sample, the Countess® device provides data on live and dead cell concentration, calculates % viability and measures cell size in just 30 seconds.

#### features and benefits

- Includes a handy dilution calculator and allows you to store data on a USB drive
- Fast, automated cell counting improves accuracy and makes is possible to count many more samples
- No set up, cleaning or maintenance



#### protocols

- Mix 10 μL of your cell sample with 10 μL of trypan blue (included). Add 10 μL of your stained sample to the Countess<sup>®</sup> cell counting chamber slide.
- 2. Insert slide into port of the instrument.
- 3. Adjust focus to obtain optimal cell images
- 4. Press "Count Cells".

#### tech tips

Count cells within 10 minutes of trypan blue staining as trypan blue can be toxic to cells. Mix sample and trypan blue well.

- The Countess<sup>®</sup> device is able to count white blood cells from lysed whole blood and Ficoll cell preparations.
- 2. The Countess<sup>®</sup> device can count whole blood cells containing non-lysed cells; however the samples need to be diluted by approximately 1:10,000 and count in "bead" mode. Note: the instrument cannot assess the viability of cells in a whole blood sample.
- 3. The Countess<sup>®</sup> device can count PBMCs. However, it cannot differentiate white blood cell types.





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#### Countess® Automated Cell Counter

Device	Quantity	Cat. No.
Countess® automated cell counter	Each	C10227
Countess® automated cell counter starter kit with 11 boxes of slides	1 kit	C10310
Countess® automated cell counter starter kit with 101 boxes of slides	1 kit	C10311

Related products	Quantity	Cat. No.
Countess® cell counting chamber slides - 50 slides (100 counts)	1 box	C10228
Countess® cell counting chamber slides - 500 slides (1000 counts)	10 boxes	C10312
Countess® cell counting chamber slides - 1250 slides (2500 counts)	25 boxes	C10313
Countess® cell counting chamber slides - 2500 slides (5000 counts)	50 boxes	C10314
Countess® cell counting chamber slides - 5000 slides (10000 counts)	100 boxes	C10315
Countess <sup>®</sup> test beads (1 x 10 $^{\circ}$ beads/mL ±10%)	1 mL	C10284
Countess <sup>®</sup> USB drive	each	C10286
Trypan blue stain 0.4%	2 x 1 mL	T10282





#### efficiency in **action**

#### product description

The Neon® Transfection System is the next-generation electroporation system, designed to efficiently deliver DNA, RNA and protein into all cell types, especially difficult to transfect cell types, like stem cells and primary cells.

This open and flexible benchtop device allows you to optimize and build your own protocols. Unlike a traditional electroporation device that uses cuvettes, the Neon® Transfection System uses a unique pipette chamber, allowing transfection of your cells plus DNA/ RNA directly in the Neon® pipette tip. This unique design also allows more uniform electrical current and pH, translating into higher transfection efficiencies and better cell viability. The Neon® system kits use one common buffer system for all cell types and offer a choice of two transfection volumes, 10 µL and 100 µL tips, allowing greater flexibility and less waste of precious cell samples.



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#### features and benefits

- Higher transfection efficiencies and viability in many cell types
- Greater flexibility two tip sizes allow to transfect from  $2 \times 10^4$  up to  $1 \times 10^7$  cells per reaction
- Single universal reagent kit for all cell types, with 12-month shelf life
- Open system tailor electroporation parameters to give the best results with your cells of interest
- Ease and speed of use thanks to the proprietary pipette chamber design

#### protocols

- 1. Prepare pipette station for transfection. Insert electrolytic tube with buffer into pipette station.
- 2. If working with adherent cells: re-suspend with trypsin or TrypLE<sup>™</sup> reagent.
- 3. Wash cells in PBS.
- 4. Add DNA or RNA (or other material to be transfected) to cell suspension.
- 5. Load Neon<sup>®</sup> pipette tip.
- 5. Take up cell mix into Neon® pipette tip.
- 6. Insert Neon<sup>®</sup> pipette into pipette station.
- 7. Select voltage, pulse time, and pulse number; press "start".
- 8. Remove pipette from station and eject transfected cells into culture plate.

#### tech tips

 Plasmid DNA quality is fundamental for successful electroporation. Life Technologies PureLink™ HiPure Kits with Precipitator give DNA which is low on both endotoxins and salt – ideal for use with the Neon<sup>®</sup> electroporator.

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- 2. Regular passage and media change of your cell culture will give more reproducible electroporation efficiencies.
- Most cell types show the best electroporation efficiencies when treated during the log phase of their growth curve.
- Join the Neon<sup>®</sup> online community for more tips, discussions and user protocols at: www.protocolexchange.com.

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#### Neon<sup>®</sup> Transfection System

Device	Quantity	Cat. No.
Neon <sup>®</sup> Transfection System	Each	MPK5000
Neon <sup>®</sup> Transfection System Starter Pack	1 pack	MPK5000S

Related products	Quantity	Cat. No.
Neon <sup>®</sup> Transfection System 100 µL Kit	192 reactions	MPK10096
Neon $^{\odot}$ Transfection System 10 $\mu L$ Kit	192 reactions	MPK1096
Neon <sup>®</sup> Transfection System 100 $\mu$ L Kit	50 reactions	MPK10025
Neon <sup>®</sup> Transfection System 10 $\mu L$ Kit	50 reactions	MPK1025
Neon <sup>®</sup> Transfection System Pipette	each	MPP100
Neon <sup>®</sup> Transfection System Pipette Station	each	MPS100
Neon <sup>®</sup> Transfection Tubes	1 pack (100 tubes)	MPT100



## **Tali**<sup>™</sup> Image-based Cytometer

#### GFP/RFP Transfection **quantified at your bench!**

#### product description

The Tali<sup>™</sup> Image-based Cytometer is a benchtop assay platform that produces highly accurate, statistically significant three-parameter population analysis and cell counting in typically less than 1 minute per sample. Using state-of-the-art optics and image analysis software, the Tali<sup>™</sup> Image-based Cytometer performs suspension cell-based assays, including cell counting, cell viability, fluorescent protein expression, and apoptosis assays. A box of 50 Cellular Analysis Slides is included with the Tali<sup>™</sup> Image-based Cytometer.

#### features and benefits

- Accuracy—Statistically significant three-parameter population analysis
- Speed—Analysis and cell counting in typically less than 1 minute per sample
- Versatility—Using the Tali<sup>™</sup> Image-based Cytometer and the optimized Tali<sup>™</sup> assays, with one touch you can generate visual and analytical data
- Convenience—Requires no cleaning or routine maintenance and minimal setup. The instrument utilizes disposable slides that eliminate washing steps and cross-contamination



Life Technologies™ benchtop devices simple solutions to everyday complexities www.lifetechnologies.com/benchtop • Flexibility—Green, red, and bright field channels allow quantitative analysis of a variety of cellular assays (GFP/ RFP transfection efficiencies, apoptosis, cell viability, and cell counting)

#### protocols

- 1. Select Assay.
- 2. Stain cell-Add 25 µL to slide.
- 3. Insert slide.
- 4. Focus cells on screen.
- 5. Press Run Sample.
- 6. Collect and analyse data.

#### www.lifetechnologies.com/tali

Typical processing times for the Tali<sup>™</sup> Image-based

Cytometer are between 10 and 120 seconds,

depending on the number of fields that are being captured and the complexity of the assay chosen.

Following analysis, both gualitative (.bmp) and

computer using a USB drive.

quantitative (.csv) data can be transferred to your



#### tech tips

After transportation align the cameras. If your alignment is off, your experiments will be off!

Calibrating the green and red fluorescent channels of the Tali™ Image-based Cytometer sets the dynamic range of the instrument. The calibration is most effective when performed after the alignment sequence. See Tali™ Image-based Cytometer User Manual for instructions.



#### 2. Add cells to the slide.



3. Insert the slide into the Tali<sup>™</sup> cytometer.



5. Press "Run Sample".





4. Focus the image of the cells.



6. Collect and analyze data





#### Tali<sup>™</sup> Image-based Cytometer

Device	Quantity	Cat. No.
Tali <sup>™</sup> Image-based Cytometer	1 each	T10796
Related products	Quantity	Cat. No.
Tali™ Cellular Analysis Slides – 1 box	50 slides	T10794
Tali™ Cellular Analysis Slides - 10 boxes	500 slides	T10795
Tali <sup>™</sup> Calibration Beads (includes 1 tube each of Tali™ Green Cali- bration Beads, Tali™ Red Calibration Beads, and Tali™ Alignment Beads)	1 kit	T10790
Tali <sup>™</sup> Image-based Cytometer USB Drive	1 each	T10792
Tali™ Image-based Cytometer power cords, pack of 4 for EU/UK	1 each	T10793
Tali™ Viability Kit – Dead Cell Red	100 assays	A10786
Tali™ Viability Kit – Dead Cell Green	100 assays	A10787
Tali™ Apoptosis Kit – Annexin V Alexa Fluor® 488 and Propidium Iodide	100 assays	A10788



### **iBlot**® Dry Blotting System

#### western blotting **in 7 minutes**

#### product description

The newest innovation in western blotting, the iBlot® Dry Blotting System quickly and efficiently transfers proteins from polyacrylamide gels in seven minutes. With dry blotting you don't need additional buffers or liquids as you do with wet or semi-dry blotting – which all adds up to less variability in your results.

iBlot<sup>®</sup> transfers are more efficient than wet or semi-dry methods, and show more sensitive detection. In the end, you get accurate detection results with fewer samples. No cumbersome blot assembly, and protein transfers are finished so fast, you can start running gels in the morning and have results by day's end.

#### features and benefits

- Fast complete protein transfer in seven minutes or less
- Reproducible reduces blot preparation and running variability
- Sensitive blots evenly with smaller samples
- Convenient self-contained unit; no added buffers or external power supply needed



#### protocols

See detailed protocol and application notes for the iBlot® at www.lifetechnologies.com/iblot

Can also be used for Western Detection using iBlot® Western Detection Kits (chromogenic and chemiluminescent kits available).

#### tech tips

To improve the transfer of high-molecular weight proteins:

- Equilibrate the gel in 100 mL Equilibration Buffer (2X NuPAGE® Transfer Buffer containing 10% methanol and 1:1000 NuPAGE® Antioxidant) for 20 minutes at room temperature on a shaker prior to transfer, or
- 2. Use NuPAGE® Tris-Acetate gels. Using these gels may enable the transfer of 400+ kDa proteins. Customers have reported the success transfer of 500+ kDa proteins from NuPAGE® Tris-Acetate 3-8% gels.

#### demo protocols

Please select the iBlot<sup>®</sup> video for a full demo at: www.lifetechnologies.com/iBlot



The iBlot<sup>®</sup> instrument is a terrific time saver, without sacrificing performance. Using the instrument saves the time required to set up and run a standard western transfer and also has a green component to it as it does not generate methanol-containing waste. DAVE | FIBROGEN

The iBlot<sup>®</sup> is a simple piece of equipment that does so much! It has a small footprint and the reagents have a long shelf life. It takes me no longer than 2 minutes to set things up. The transfer of the proteins is efficient and comparable from time-to-time. A great piece of equipment!

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#### iBlot<sup>®</sup> Dry Blotting System

#### order information

Device	Quantity	Cat. No.
iBlot <sup>®</sup> Gel Transfer Device	each	IB1001EU (EU adaptor) IB1001UK (UK adaptor)

Related products	Quantity	Cat. No.
iBlot® Gel Transfer Stack, Nitrocellulose, Regular	3 packs of 10	IB301031
iBlot® Gel Transfer Stack, PVDF, Regular	3 packs of 10	IB401031
iBlot® Gel Transfer Stack, Nitrocellulose,	3 packs of 10	IB301032
iBlot® Gel Transfer Stack, PVDF, Mini	3 packs of 10	IB401032
iBlot® Western Detection Stacks (Regular),	1 pack of 10	IB701001
iBlot® Western Detection Stacks (Mini), 10-pak	1 pack of 10	IB701002





Self-contained unit for faster, more convenient transfers

How iBlot<sup>®</sup> 7-minute blotting works. Instead of layered filter paper or buffer tanks, the top and bottom stacks contain the necessary buffers. The bottom stack includes an integrated 0.2 µm nitrocellulose or PVDF membrane

### **BenchPro®4100** Western Processing System

#### western detection without the fuss

#### product description

The BenchPro® 4100 Western Processing System is designed to eliminate manual processing of western blot membranes. By delivering consistent amounts of solution at precise times, the BenchPro® 4100 ensures reproducibility between experiments and eliminates possibility for errors. Finally, western processing made easy.

The system is programmable to execute any western protocol and each membrane can be processed with different set of reagents. The system is capable of processing from one to eight western membranes in parallel.

#### features and benefits

- Eliminates tedious hands-on work
- Provides more consistent results
- Eliminates possibility for errors
- Prevents contamination from one blot to the next
- Capable of executing any western detection protocol

#### protocols

- 1. Prepare reagents in the recommended vials and bottles and place them into the reagent tray.
- 2. Select the desired protocol or enter a custom protocol.
- 3. Insert the western card into the appropriate slot(s).
- 4. Insert the western membrane into the membrane holder.
- Insert the membrane holder containing the membrane into the western card and start the run.
- 6. After the run, remove the membrane from the card and continue with substrate addition and imaging.

#### tech tips

The BenchPro® 4100 Western Processing System means you do not need to change your protocols to achieve full automation. The BenchPro® 4100 Western Processing System is compatible with temperatures from 4°C to 40°C so the instrument can be operated in the cold room or incubator if needed.

#### demo protocols

Please select the BenchPro® video for a full demonstration at www.lifetechnologies.com/benchpro4100

We have had the BenchPro® 4100 system since November 2009 and it is a tremendous help! I love the fact that we can set it and forget it, this way you're not in and out, of the lab all day and can work on other things. It has given positive results with all different types of antibodies and types of blot. ONLINE REVIEWER JLB3

invitrogen" by *life* technologies"



Life Technologies™ benchtop devices simple solutions to everyday complexities www.lifetechnologies.com/benchtop

#### BenchPro<sup>®</sup> 4100 Western Processing System

#### order information

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Device	Quantity	Cat. No.
BenchPro <sup>®</sup> 4100 Card Processing Station	Each	WP0001
Related products	Quantity	Cat. No.
Related products BenchPro® 4100 Western Card	Quantity Box of 10	Cat. No. WP1001

#### Manual processing vs. BenchPro<sup>®</sup> 4100 System processing of western blots. [A]

Manual processing; [B] BenchPro<sup>®</sup> 4100 system processing. Lane: 1:8 uL of a 1:10 dilution of MagicMark<sup>™</sup> XP Standard; lane 2: 50 ng BSA; lane 3: 25 ng BSA; lane 4: 10 ng BSA. Proteins were detected using rabbit ant-BSA antibody and Western Breeze<sup>®</sup> Chemiluminescent Kit-Anti-Rabbit. Detection substrate was added to both membranes, and the blots were imaged at the same time.



### **MAGPIX**® System

#### transition to multiplexing at your own pace

#### product description

MAGPIX<sup>®</sup> is a versatile multiplexing platform capable of performing qualitative and quantitative analysis of proteins and nucleic acids in a variety of sample matrices. This affordable system can perform up to 50 tests in a single reaction volume, greatly reducing sample input, reagents and labor while improving productivity.

With the MAGPIX<sup>®</sup> system, now every researcher can reap the benefits of quantitative protein analysis in a personal, benchtop device with out of the box set-up and step by step guide to interactive software. The MAGPIX<sup>®</sup> system features an innovative design based on CCD imaging technology that allows for a more compact, robust system. It's also easy to operate and maintain with streamlined start-up and shutdown protocols and minimal maintenance requirements.

The simple, out of the box set-up allows researchers to begin using their MAGPIX<sup>®</sup> when they choose, with a simple workflow that is complementary to ELISA. MAGPIX<sup>®</sup> offers benefits over traditional singleplex quantification methods including higher throughput, increased flexibility, reduced sample volume, and low cost with the same workflow as ELISA. Bundled with the most up to date xPONENT-analysis software and used with the broad menu of Invitrogen<sup>™</sup> magnetic multiplex assays, this all-in-one system is ideal for researchers who want to move up to multiplexing experiments or simply complement their singleplex (ELISA and Western Blot) results with an affordable multiplexing solution.

#### features and benefits

- Efficient Simultaneous analysis of up to 50 proteins using only 25 µL of precious sample
- Accessible Use with the broad and expanding menu of Invitrogen<sup>™</sup> magnetic assay kits
- Economical Significantly reduce costs of comparable Western Blots and ELISA assays
- Simple Easy to operate and maintain with streamlined start-up and shutdown protocols
- Compact Save lab bench space while allowing easy portability between users
- Performance 3.5 logs of dynamic range and superior sensitivity

#### application/workflow

Magnetic multiplex assays based on xMAP<sup>®</sup> Technology are ideally suited for a wide range of applications throughout the drug-discovery and diagnostics fields, as well as basic research. Invitrogen<sup>™</sup> multiplex immunoassays provide a fast and reliable platform for the accurate quantification of cytokines, chemokines, phosphorylated proteins, growth factors, and receptors and other protein targets in a wide variety of sample types ranging from serum, plasma, tissue culture supernatants, cell lysates and others.

invitrogen" by life technologies"

#### tech tips

A full set of tools, including Multiplex Assay Handbook, Protocols, Assay Set up guide and References are available at: www.lifetechnologies.com/luminex

For more information about the MAGPIX® system, please visit www.lifetechnologies.com/magpix

For a complete list of available assay, please visit **www.lifetechnologies.com/luminex** 



Life Technologies<sup>™</sup> benchtop devices simple solutions to everyday complexities www.lifetechnologies.com/benchtop

#### **MAGPIX**<sup>®</sup> System

#### order information

Device	Quantity	Cat. No.
MAGPIX <sup>®</sup> System Instrument, xPONENT 4.1 software, PC, monitor, reagents and accessories	System	MPX0001
Related products	Quantity	Cat. No.

MAGPIX <sup>®</sup> Calibration Kit	Each	MPXCALK25
MAGPIX <sup>®</sup> Performance Verification Kit	Each	MPXPVERK25
MAGPIX <sup>®</sup> Drive Fluid	4 Pack	MPXDF4PK





Perform multiplex analysis of serum, plasma, tissue culture supernatant or cell lysate with xMAPbased assay and Luminex<sup>®</sup> Instrument

### For full details on Life Technologies™ benchtop devices: www.lifetechnologies.com/benchtop

Contact your LuBioSciences representative:

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