

## ChemiDoc™ MP Imaging System

Fluorescence and chemiluminescence detection  
without compromises

**BIO-RAD**

# Imagine No Compromises

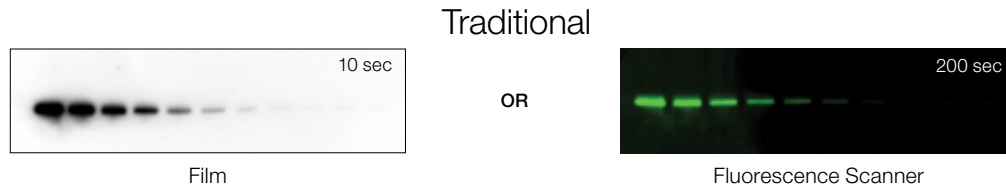
- Unmatched fluorescence and chemiluminescence performance
- Ultra-intense StarBright™ Secondary Antibodies
- Proprietary stain-free technology
- Total protein normalization
- Powerful and intuitive software



# MORE THAN TRADITIONAL WESTERN BLOTTING

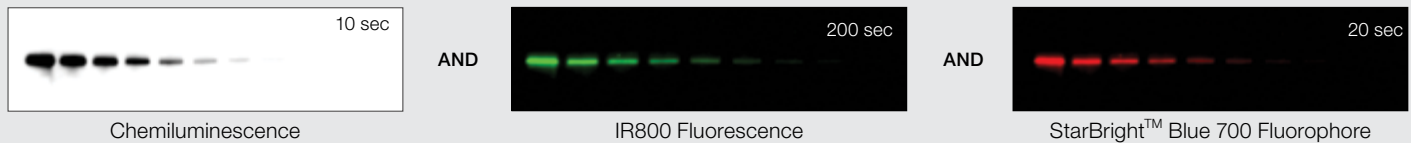
## One instrument. Many options.

Why compromise when a single imaging system can do it all?



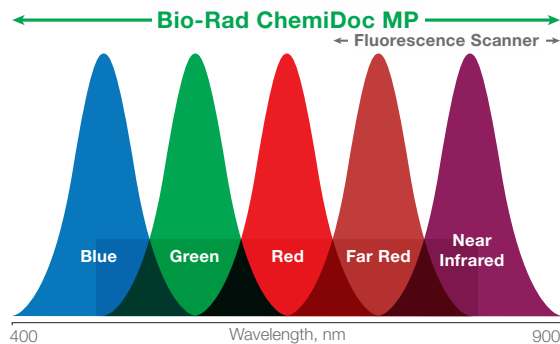
## ChemiDoc MP System

The superior quantitation of digital meets the sensitivity of film and delivers the best fluorescence performance with the brightest new fluorophore.



## More flexibility in dye selection.

Detect up to three proteins in a single experiment with a wide range of supported fluorophore options.



DyLight 488  
Alexa Fluor 488  
Cy2

DyLight 650  
Alexa Fluor 647  
Cy5  
SYPRO Ruby

DyLight 800  
Alexa Fluor 790  
Cy7  
IRDye 800

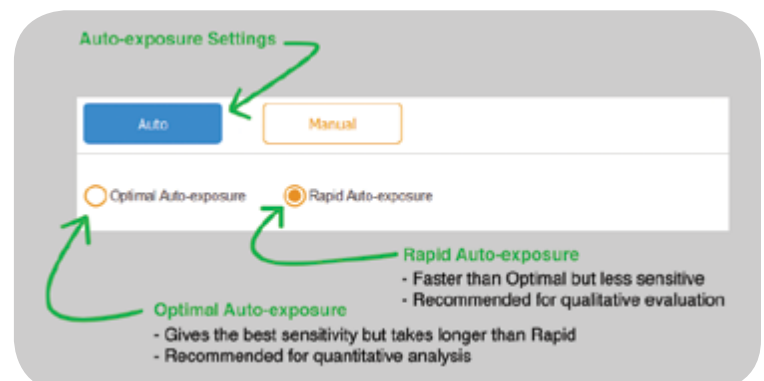
DyLight 550  
Alexa Fluor 546  
Cy3  
Rhodamine

StarBright  
DyLight 680  
Alexa Fluor 680  
Cy5.5  
IRDye 680

## Not your traditional software.

Image Lab™ Touch Software:

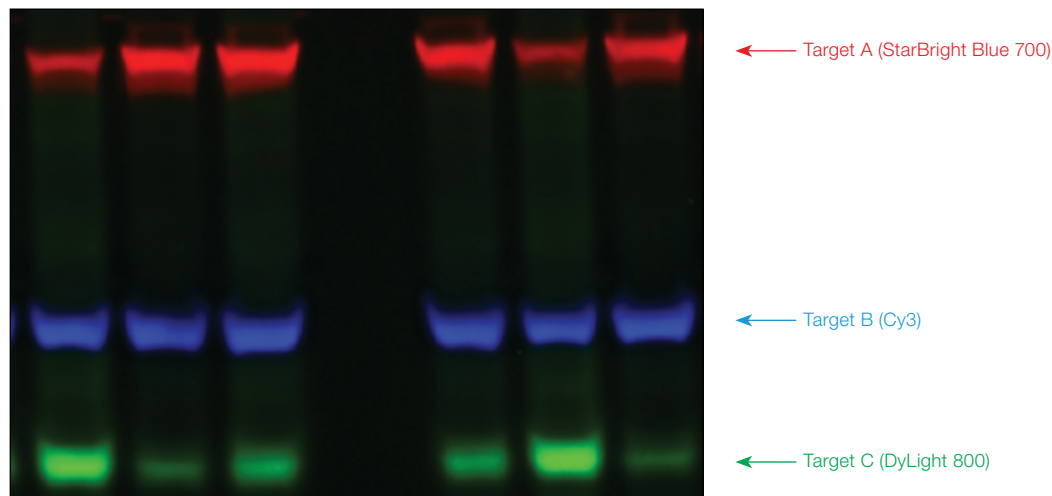
- Teaches as you tap and explore
- Picks optimal light source and filters
- Suggests exposure times



## A BETTER WAY TO WESTERN BLOT

### One blot. Three results.

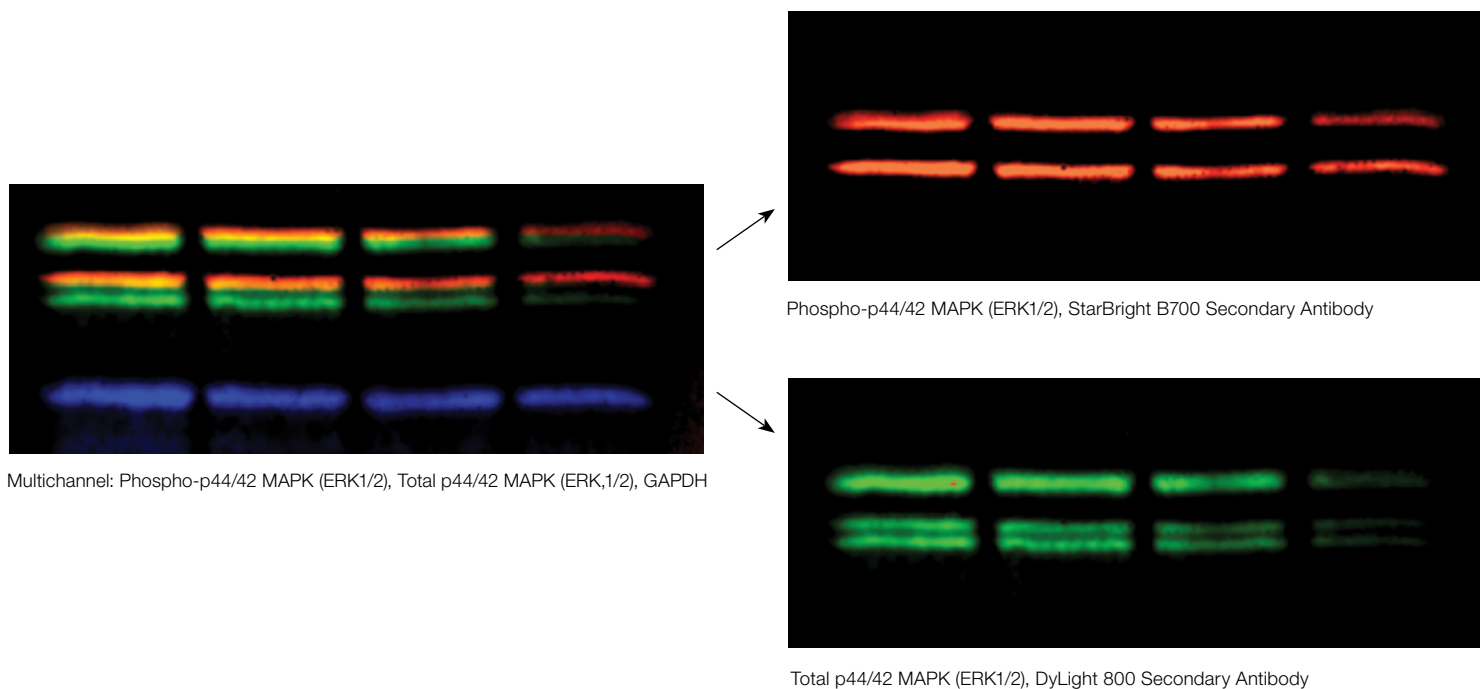
Why strip and reprobe, potentially losing some of your protein and biasing results? Or face the data presentation challenges of cut blots? The ChemiDoc MP System now allows you to visualize three proteins on a single blot.



Triplex immunodetection blot of three unique target proteins. Image courtesy Dr. James Smyth, Virginia Tech Carilion Research Institute.

### Quantify even smaller post-translational modifications.

Resolving small changes in molecular weight due to phosphorylation can be challenging using traditional western blotting techniques. With fluorescent western blotting, signals that overlap, such as phosphorylated and unphosphorylated proteins, can be easily distinguished and quantified.



## StarBright Labels — A new standard for fluorescence sensitivity.

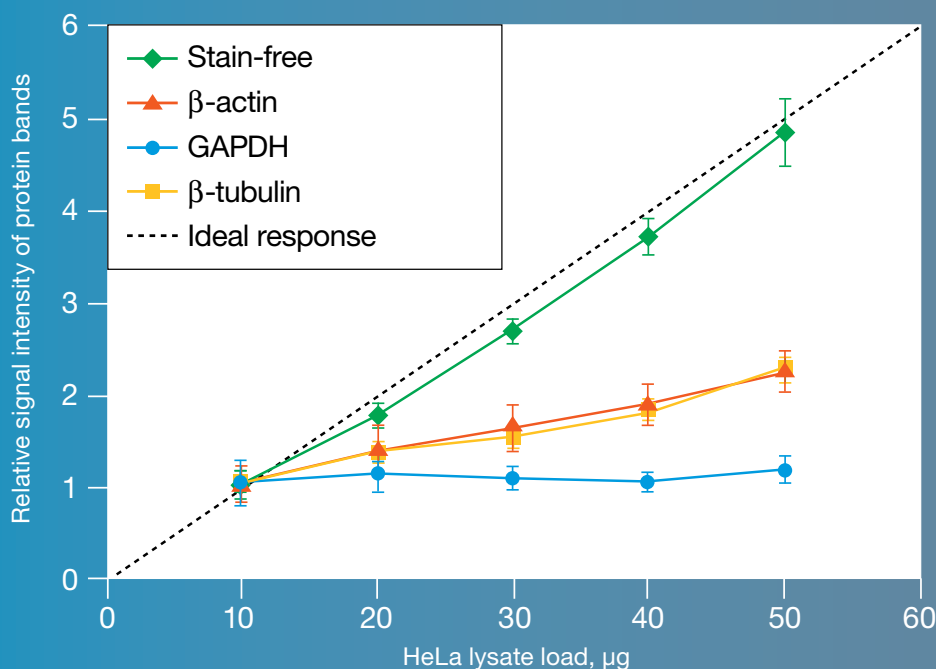
StarBright is Bio-Rad's new ultra-sensitive fluorophore, ideal for multiplex fluorescent western blotting. StarBright consists of a polymer containing a large number of paired light-absorbing and light-emitting units. This structure is highly efficient at harvesting and emitting light, making StarBright exceptionally bright compared to traditional fluorophores.



## A better way to normalize quantitative western blots.

Normalizing blots with housekeeping proteins (HKPs) requires time, money, and additional sample to validate HKP expression and linearity. Total protein normalization using stain-free technology and the ChemiDoc MP System allows normalization across a wide dynamic range. Get better, more publishable data without lengthy optimization.

Stain-free total protein versus housekeeping proteins



Linearity comparison of stain-free total protein measurement and immunodetection of three housekeeping proteins in 10–50 µg of HeLa cell lysate.



## POWERFUL SOFTWARE THAT IS EASY TO USE

### Learn in minutes.

Select your application and Image Lab Touch Software does the rest:



- Automatic fluorophore-based excitation and filter selection
- Automatic focus and exposure settings
- Quick Help feature with answers to common questions

### Advanced security options and regulatory compliance features.

Image Lab Touch Software can support a single user or a whole department with:



- Multiple user accounts
- Optional password protection
- Advanced administrative account features
- Advanced data analysis/annotation software for U.S. FDA CFR 21 part 11 compliance



More than an imaging system. A fully supported western blotting workflow.



**Sample Prep:**

SureBeads™ Protein A/G-Conjugated Beads

*Easy, fast, and cost-effective for better immunoprecipitation.*

**Electrophoresis:**

Stain-Free Gels

*Rapid protein separation and normalization without the hassles of staining.*

**Transfer:**

Trans-Blot® Turbo™ Transfer System

*Get to the finish line faster with transfers as short as 3 minutes.*

**Immunodetection:**

PrecisionAb™ Validated Western Blotting Antibodies

*Sensitivity, specificity, reproducibility — antibodies you can rely on.*

**Image Acquisition:**

ChemiDoc MP Imaging System

*Fluorescence and chemiluminescence detection without compromises.*

**Image Analysis:**

Image Lab Software Family

*Easy to use, automated, and powerful.*

Visit [bio-rad.com/web/gowestern](http://bio-rad.com/web/gowestern) to see our complete workflow.

## Specifications

### Automation Capabilities

Smart Tray Technology™	ChemiDoc MP Imaging System automatically recognizes your application-specific tray and adjusts imaging parameters and software options accordingly
Autofocus	Precalibrated focus for any zoom setting or sample height
Auto-exposure	Two predesigned auto-exposure algorithms (rapid or optimal)
Image flat fielding	Dynamic; precalibrated and optimized for every application

### Hardware Specifications

Touch-screen functionality	Multitouch capable (2 points) 12.1" display
Maximum image area (W x H)	21 x 16.8 cm
Detector	Cooled CCD, 6 megapixels
Dynamic range	>4 orders of magnitude
Illumination source	Trans-UV, 302 nm Epi-white Trans-white (requires White Sample Tray) Trans-blue, 450–490 nm (requires Blue Sample Tray) Epi-blue, 460–490 nm excitation* Epi-green, 520–545 nm excitation* Epi-red, 625–650 nm excitation* Epi-far red, 650–675 nm excitation* Epi-near IR, 755–777 nm excitation*
Filters	590/110 nm standard filter to perform protein and DNA gel and blot imaging Chemiluminescence filter 518–546 nm filter for blue emitting fluorophores and stains* 577–613 nm filter for green emitting fluorophores and stains* 675–725 nm for red emitting fluorophores and stains* 700–730 nm filter for far red emitting fluorophores and stains* 813–860 nm for near IR emitting fluorophores and stains*
Data output	16-bit or 8-bit: SCN, TIFF, JPEG image files
Instrument weight	35 kg (78 lbs)
Instrument size (L x W x H)	61 x 51 x 53 cm
Operating voltage	100–250 V
Operating temperature	10–28°C
Operating humidity	10–85% relative humidity (noncondensing)

\* Only with ChemiDoc MP System.

## Ordering Information

Catalog #	Description
17001402	<b>ChemiDoc MP Imaging System</b> , includes internal computer, 12" touch-screen display, camera, Image Lab Touch Software, Image Lab Desktop Software, blot/UV/stain-free sample tray, 500 µl Precision Plus Protein™ All Blue Standards, 1 ml Precision Plus Protein Unstained Standards, 200 ml Clarity™ Western ECL Substrate, 100 ml Clarity Max™ Western ECL Substrate
17001395	<b>ChemiDoc™ MP V3 Western Workflow™ for Mini Gels</b> , includes ChemiDoc MP Imaging System, Image Lab Touch Software, Image Lab Desktop Software, blot/UV/stain-free sample tray, ten 4–20% Mini-PROTEAN® TGX Stain-Free™ Protein Gels, SDS-PAGE accessories, Precision Plus Protein All Blue and Unstained Standards, Mini-PROTEAN Tetra Cell, PowerPac™ Basic Power Supply, Trans-Blot Turbo Transfer System, 10 PVDF transfer packs for mini gels, and Clarity and Clarity Max Substrates
17001389	<b>ChemiDoc MP V3 Western Workflow for Midi Gels</b> , includes ChemiDoc MP Imaging System, Image Lab Touch Software, Image Lab Desktop Software, blot/UV/stain-free sample tray, ten 4–20% Criterion™ TGX Stain-Free™ Protein Gels, SDS-PAGE accessories, Precision Plus Protein All Blue and Unstained Standards, Criterion Cell, PowerPac Basic Power Supply, Trans-Blot Turbo Transfer System, 10 PVDF transfer packs for midi gels, and Clarity and Clarity Max Substrates
17001401	<b>ChemiDoc Imaging System</b> , includes internal computer, 12" touch-screen display, camera, Image Lab Touch Software, optional upgrade path to ChemiDoc MP for fluorescence detection, and all of the consumables and software included with ChemiDoc MP Imaging System
<b>Accessories</b>	
12003026	<b>White Sample Tray for ChemiDoc MP/ChemiDoc Imaging Systems</b> , for gels stained with Coomassie Blue, copper, silver, or zinc stains
12003027	<b>Blue Sample Tray for ChemiDoc MP/ChemiDoc Imaging Systems</b> , for gels stained with GelGreen or any SYBR® stains
12003028	<b>Blot/UV/Stain-Free Sample Tray for ChemiDoc MP/ChemiDoc Imaging Systems</b> , for chemiluminescent and fluorescent blots, stain-free gels/blots, and gels stained with ethidium bromide, SYPRO Ruby, Oriole™, and SYBR® Stains
1708377	<b>Holder for ChemiDoc MP/ChemiDoc Sample Trays and UV Shield</b>
12003914	<b>UV Safety Shield for ChemiDoc MP/ChemiDoc Imaging Systems</b>
12003915	<b>Gel Alignment Templates for ChemiDoc MP/ChemiDoc Imaging Systems</b>
1708089	<b>Mitsubishi Thermal Printer</b>
1707581	<b>Mitsubishi Thermal Printer Paper</b> , 4 rolls
12005137	<b>IQ/OQ Kit for ChemiDoc MP/ChemiDoc Imaging Systems</b> , for installation qualification/operational qualification
12003263	<b>Upgrade Kit</b> , ChemiDoc to ChemiDoc MP Upgrade Kit, includes all illumination and filters for RBG and near-IR/IR fluorescence imaging
<b>Software</b>	
1709690	<b>Image Lab Software</b> , stand-alone version, PC or Mac, for viewing images and 1-D analysis

Visit [bio-rad.com/web/ChemiDocMP](http://bio-rad.com/web/ChemiDocMP) to learn more about the ChemiDoc MP Imaging System.

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Clarity Max Western ECL Substrate is manufactured by Cyanagen Srl and is the subject of patent application numbers US7855287, EP1950207, US9040252, AU2011202658, CA2742025, US8129136, and EP1962095, together with other equivalent granted patents and patent applications in other countries like CN102313732.



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Laboratories, Inc.**

Life Science  
Group

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