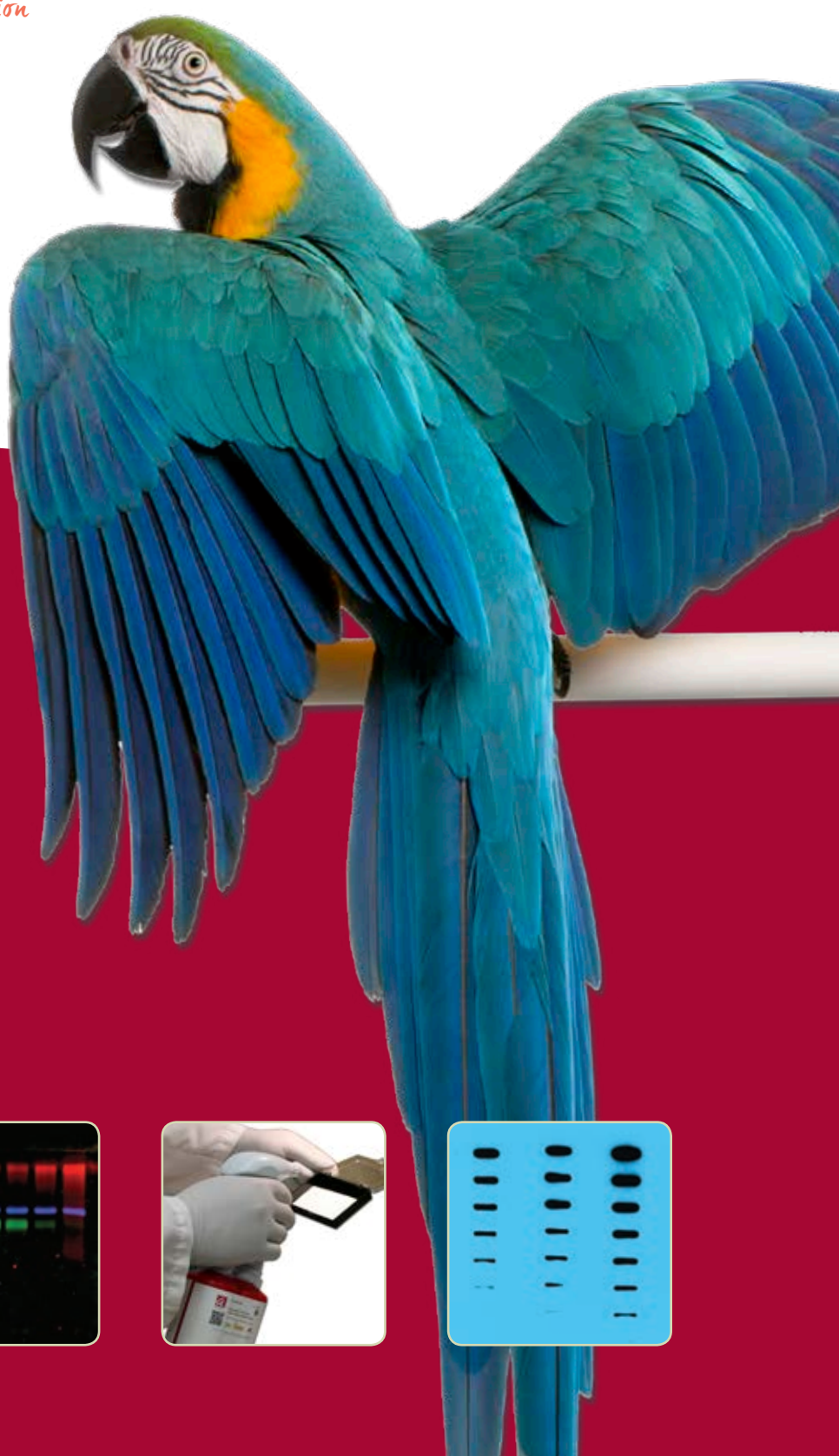
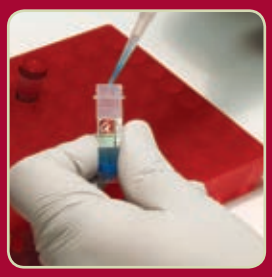
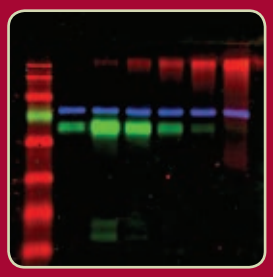
advansta

solutions for protein characterization



Product Catalog





Advansta, Inc.

Founded in 2005 and headquartered in Menlo Park, California, Advansta is an evolving international company, which develops, manufactures and markets a wide range of specialized bio-research reagents that simplify, accelerate and improve life sciences research.

Our mission is to be the leading developer and supplier of products to support research in understanding the dynamics of biological events.

Advansta's focus is developing solutions to precisely characterize molecular events that occur in cells. Our products are based on the following principles:

- Quantitation of cellular events that occur in parallel
- Real time, direct measurement of intracellular molecular dynamics
- Functional analysis of disease states and drug candidates.

We are building a portfolio of products that interrogate gene expression and protein activity in cellular systems. Our approach is to develop products that are robust and that measure molecular events.

Advansta's products are used by molecular biologists, proteomics researchers and other research scientists to perform test-assays and research in many fields from medical, biotechnology and marine biology to food and agriculture technology as well as forensic and environmental sciences, where life scientists have come to depend upon the outstanding quality and reliability of our reagents.

Our products are brought to market by sales representatives and distributors, who are highly knowledgeable regarding Advansta's products and their customer's applications. Advansta is committed to operational excellence in customer service—this includes product quality, delivery and technical support. In all aspects of our company, serving the customer is our top priority.

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ADVANSTA

Advansta's Commitment to Environmental Sustainability

At Advansta we acknowledge the importance of sustainable development and the environmental responsibility. Through responsible utilization of resources and waste management, we continuously strive to improve our work policies and practices to reduce our environmental impact.

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WesternBright™ ECL

Sensitive HRP substrate for chemiluminescent Western blots imaged using film

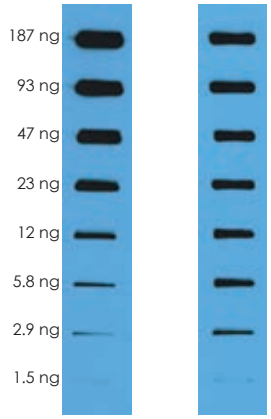
WesternBright ECL is a horseradish peroxidase substrate optimized for chemiluminescent Western blots imaged using X-ray film. WesternBright ECL requires as little as one-tenth the antibody as other substrates, allowing you to conserve precious antibodies and samples. Additionally, the WesternBright ECL signal is long-lasting, allowing multiple exposures to be carried out without substantial signal decay.

Advantages

- **Stronger signal** – use less antibody or shorter exposures than with Amersham™ or Pierce™ ECL
- **Sensitive** – detect low pg protein amounts
- **Conserve antibody** – use up to ten times less primary and/or secondary antibody

Save antibody, save money

WesternBright ECL detects equal amounts of protein with up to ten times less antibody. Duplicate slot blots containing serial dilutions of transferrin were probed with the antibody dilutions shown, and detected with either WesternBright ECL or Pierce ECL (Thermo Scientific) according to the manufacturers' instructions. The blots were imaged simultaneously on the same piece of film. WesternBright ECL produced the same sensitivity with ten times less primary and five times less secondary antibody.



	WesternBright ECL	Pierce® ECL
Primary Antibody	1:50,000	1:5,000
Secondary Antibody	1:50,000	1:10,000

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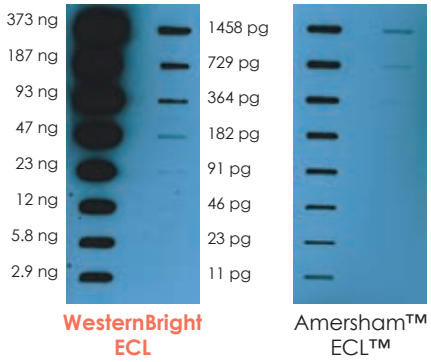
WesternBright™ ECL *continued*

Sensitive HRP substrate for chemiluminescent Western blots imaged using film

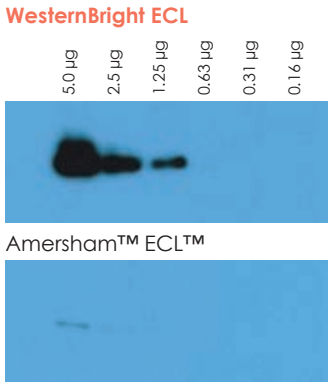
Enhanced chemiluminescence, optimized for film imaging

WesternBright ECL is specially formulated to produce a strong signal for sensitive film imaging. Duplicate slot blots containing serial dilutions of transferrin protein were detected using WesternBright ECL or Amersham™ ECL™ (GE Healthcare). Both blots were simultaneously exposed to the same sheet of film for 15 seconds. WesternBright ECL is several times more sensitive than Amersham ECL.



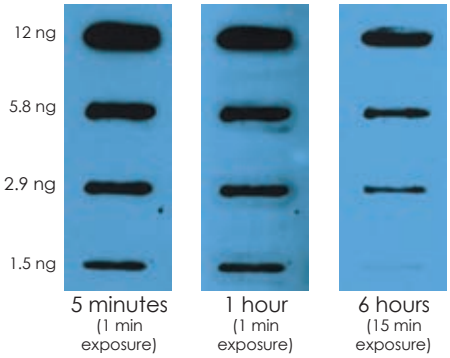
High sensitivity for detection of low abundance proteins

The higher sensitivity of WesternBright ECL is especially important when detecting low abundance proteins. Duplicate Western blots with serial dilutions of HeLa cell lysate were probed for ERK1 and detected using either WesternBright ECL or Amersham ECL HRP substrates. Each blot was exposed to film for 1 minute.



Signal that lasts, for flexible imaging

WesternBright ECL produces a long-lasting signal. A blot detected with WesternBright ECL can be imaged six hours after substrate incubation. There is no need to rush to the darkroom to image a blot.



Ordering Information

Catalog Number	Product	Size
K-12045-C20	WesternBright™ ECL Western Blotting HRP Substrate Trial kit size	20 ml
K-12045-D20	WesternBright™ ECL Western Blotting HRP Substrate (for 2000 cm^2 membrane)	200 ml
K-12045-D50	WesternBright™ ECL Western Blotting HRP Substrate (for 5000 cm^2 membrane)	500 ml

WesternBright™ Quantum™

Quantitative, sensitive chemiluminescent Western blotting for CCD imagers

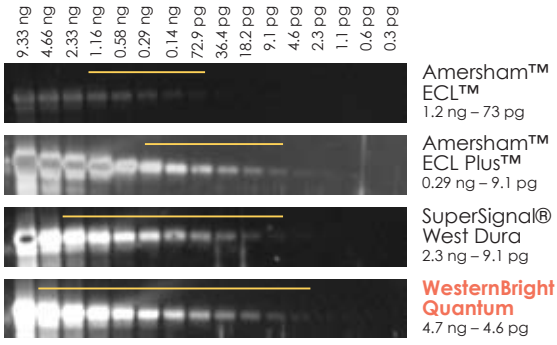
WesternBright Quantum chemiluminescent substrate sets the bar for both sensitivity and quantitative ability. Specially developed for CCD imaging, this novel horseradish peroxidase (HRP) substrate produces a strong, long-lasting signal with extremely low background, perfect for detecting low abundance proteins. Since it does not exhibit substrate depletion at high protein loads, WesternBright Quantum provides the largest dynamic range of any chemiluminescent substrate for the most quantitative chemiluminescent Western experiments.

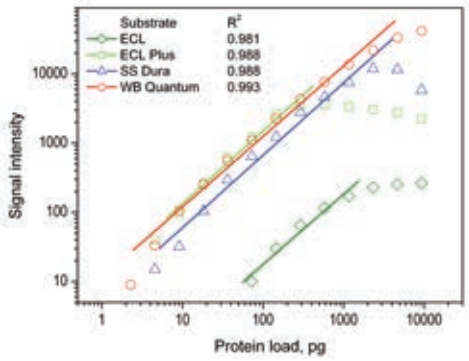
Advantages

- **Sensitive** – detect attomoles of protein per band
- **Quantitative** – linear range of signal with respect to protein amount exceeds 3 orders of magnitude
- **Low background** – for high signal to noise
- **Long lasting signal** – image blots hours after substrate incubation
- **Versatile** – optimized for CCD imaging, and compatible with film detection

Highest sensitivity, greatest linear range

Identical Western blots containing serial dilutions of transferrin were probed with a rabbit-anti-transferrin primary antibody, and a goat-anti-rabbit secondary antibody conjugated to horseradish peroxidase. The blots were incubated with chemiluminescent substrates as recommended by each manufacturer. All blots were simultaneously imaged for 2 minutes on a CCD imager; and display parameters are identical across all images shown. Band intensities were plotted and a best fit linear regression conducted for each substrate. WesternBright Quantum shows the largest dynamic range out of all four substrates with the highest R^2 value. Bands that fall on the linear part of the curve for each substrate are indicated on the image by a line over the bands.





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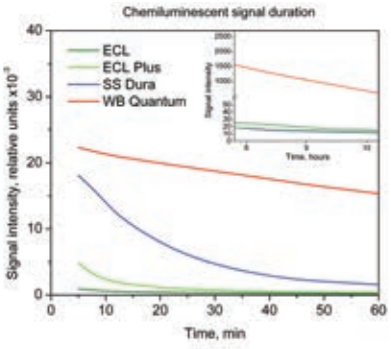
WesternBright™ Quantum™ *continued*

Quantitative, sensitive chemiluminescent Western blotting for CCD imagers

Signal that endures

WesternBright Quantum produces the most stable chemiluminescent signal. Blots detected using WesternBright Quantum or one of three other chemiluminescent substrates, were re-imaged at several times over a 10 hour period. The intensity of one band is plotted. 60 minutes after substrate incubation, WesternBright Quantum retains 70% of its initial signal strength, while the competition decays to 5% or less. Enjoy more flexibility in imaging blots, knowing the signal will not decay substantially over several hours. Also, long exposures can be conducted if needed to detect very low abundance bands.



Never rush to image a blot again

WesternBright Quantum allows blots to be imaged several hours after substrate incubation. Blots can be re-imaged to obtain the perfect exposure, without worrying about losing signal. A blot was imaged with 2 min exposures at 5 min, 60 min, and 10 hours after substrate incubation. The same band is clearly seen in each image, even after 10 hours.

5 min (2 min exposure) | 60 min (2 min exposure) | 10 hours (2 min exposure)

Ordering Information

Catalog Number	Product	Size
K-12042-C20	WesternBright™ Quantum™ Western Blotting HRP Substrate Trial kit size	20 ml
K-12042-D10	WesternBright™ Quantum™ Western Blotting HRP Substrate (for 1000 cm^2 membrane)	100 ml
K-12042-D20	WesternBright™ Quantum™ Western Blotting HRP Substrate (for 2000 cm^2 membrane)	200 ml

WesternBright™ Sirius™

Most sensitive substrate for chemiluminscent Western blotting

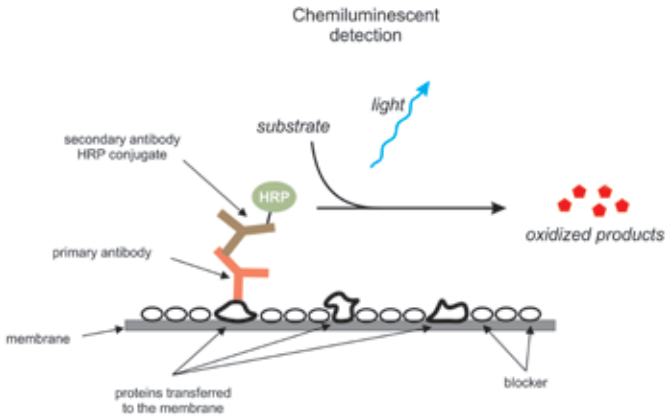
WesternBright Sirius is the most sensitive HRP substrate available from Advansta for chemiluminescent Western blotting. With attomole sensitivity and a long-lasting signal, WesternBright Sirius allows you to detect bands not visualized with other substrates. High signal-to-noise and a large dynamic range make it ideal for quantifying low-intensity bands. WesternBright Sirius is compatible with both CCD imagers and film.

Advantages

- **Detect** – low-abundance proteins
- **Low background** – for high signal-to-noise
- **Long-lasting signal** – for flexible imaging
- **Image chemiluminescence** – by CCD or film

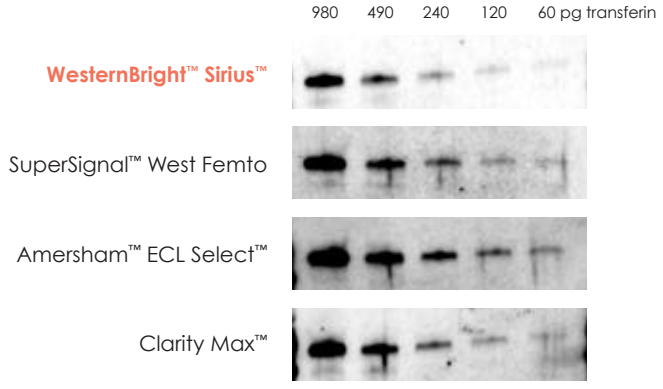
Chemiluminscent detection

WesternBright Sirius is the most sensitive chemiluminescent HRP substrate offered by Advansta, specially engineered to produce an extremely strong signal to detect low-abundance proteins and to work with very low antibody concentrations.



High sensitivity, low background

Sensitivity of chemiluminescent substrates from various suppliers. 2-fold serial dilutions of purified transferrin were electrophoresed by SDS-PAGE then transferred to a PVDF membrane. The blots were blocked then probed with a rabbit anti-transferrin primary antibody followed by an HRP- conjugated anti-rabbit secondary antibody. Various substrates were applied to the membranes then signal was measured with a CCD camera.



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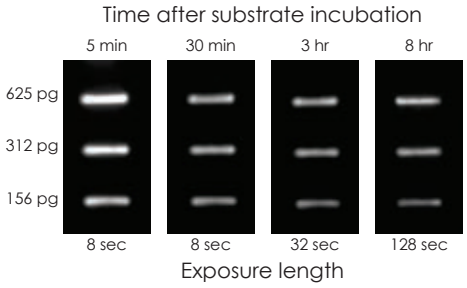
WesternBright™ Sirius™ *continued*

Most sensitive substrate for chemiluminscent Western blotting

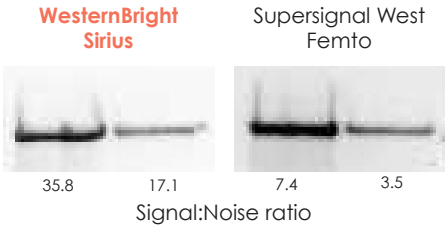
Image blots hours after substrate incubation

A slot blot containing a serial dilution of an HRP-conjugated antibody was incubated with WesternBright Sirius, and imaged at the times indicated. After 8 hours, the bands are still easily detected with only a 2 minute exposure.



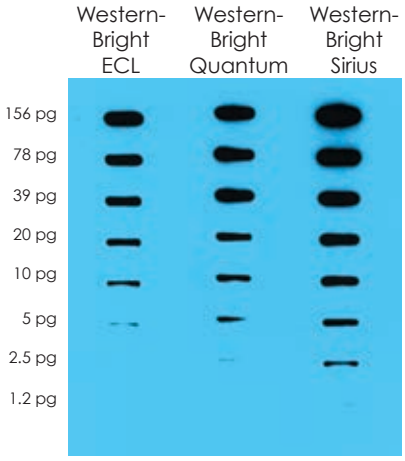
Low background for better band quantification

WesternBright Sirius provides sensitive detection combined with extremely low background. Duplicate Western blots were conducted to analyze samples of plasma, diluted either 1:100 (left lanes) or 1:600 (right lanes) in PBS. The blots were probed with a goat antisera primary antibody, and an HRP-conjugated secondary antibody. After detection with either WesternBright Sirius or SuperSignal® West Femto (Thermo Scientific), the blots were imaged for 8.3 minutes. The ratio of signal over background is shown for each band.



The highest sensitivity

Slot blots containing serial dilutions of an HRP conjugated antibody were incubated with WesternBright ECL, WesternBright Quantum or WesternBright Sirius and detected with a 2-minute exposure to film.



Ordering Information

Catalog Number	Product	Size
K-12043-C20	WesternBright™ Sirius™ Western Blotting HRP Substrate Trial kit size (for 200 cm2 membrane)	20 ml
K-12043-D10	WesternBright™ Sirius™ Western Blotting HRP Substrate (for 1000 cm^2 membrane)	100 ml
K-12043-D20	WesternBright™ Sirius™ Western Blotting HRP Substrate (for 2000 cm^2 membrane)	200 ml

WesternBright™ ECL Spray

The easiest way to develop your Western blots

WesternBright ECL substrate is optimized for chemiluminescent Western blots imaged using film. WesternBright ECL Spray gives you both components of WesternBright ECL in one convenient spray bottle. No measuring or mixing required – just spray the blot and image. WesternBright ECL's strong signal allows you to use up to ten times less antibody than with other substrates, so you can save precious antibodies and samples. Additionally, WesternBright ECL Spray allows you to conserve reagents by just using enough to cover your blot.

Advantages

- **Stronger signal** – use less antibody or shorter exposures than with Amersham™ or Pierce™ ECL
- **Sensitive** – detect low pg protein amounts
- **Conserve antibody** – use up to ten times less primary and/or secondary antibody

Just spray and image!

WesternBright ECL Spray dispenses both components of WesternBright ECL in the correct ratio, so no measuring or mixing is required.

Ordering Information

Catalog Number	Product	Size
K-12049-D50	WesternBright™ ECL Spray	500 ml

WesternBright™ ChemiPen™

Transform your protein standard into a chemiluminescent marker

Write or draw on your transfer membranes with the WesternBright ChemiPen. With the proprietary "ink" you can make pre-stained protein standards chemiluminescent, annotate your blot with a date or blot number, or check the quality of your HRP substrates. The reagent in the ChemiPen adsorbs to nitrocellulose and PVDF membranes, and reacts with HRP substrates to produce chemiluminescence that can be detected with X-ray film or CCD imaging.

Advantages

- **Improve accuracy** – transform your visible protein ladder standard into a chemiluminescent standard on your Western blot
- **Annotate** – permanently mark your blots with the date or blot ID
- **Confirm HRP substrate stability** – the ChemiPen reagent glows when incubated with an HRP substrate, so it can be used to test substrate stability
- **Compatible** – with both X-ray film and CCD imagers

Run your protein gel with visible protein ladder standard.

Transfer to membrane.

Annotate your blot. Mark the visible protein bands of the standard with WesternBright ChemiPen.

Perform standard Western blotting.

Visualize the protein ladder and protein of interest on film or with a CCD imager after Western blotting.

Ordering Information

Catalog Number	Product	Size
R-07055-001	WesternBright™ ChemiPen™	1 pen

LucentBlue™ X-ray film

High sensitivity X-ray film for chemiluminescent Western blots

LucentBlue is a sensitive film ideal for imaging chemiluminescent Western blots and is guaranteed to perform with WesternBright™ ECL, WesternBright™ Quantum™ and WesternBright™ Sirius™. LucentBlue is compatible with horseradish peroxidase and alkaline phosphatase detection reagents, as well as autoradiography. In addition to Western blots, LucentBlue can be used for Northern and Southern blot detection, and other techniques requiring film.

Advantages

- **Performance** – excellent images when used with WesternBright ECL, WesternBright Quantum, and WesternBright Sirius
- **Value** – sensitivity equal to more expensive films
- **Flexibility** – detect radioisotopes in addition to chemiluminescence

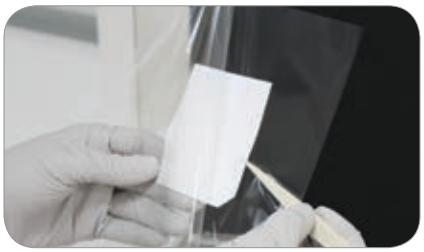
Ordering Information

Catalog Number	Product	Size
L-07014-100	LucentBlue™ X-ray film, 8 x 10" sheets	100 sheets
L-07013-100	LucentBlue™ X-ray film, 5 x 7" sheets	100 sheets

Blot Development Folders

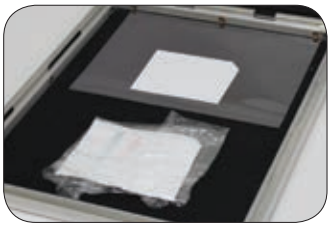
Transparent plastic supports for blot handling and imaging

Advansta's Blot Development Folders are transparent plastic folders that hold your blot while it is exposed to film or CCD. These folders keep your blot flat for perfect film exposures, avoiding the wrinkling or bunching that can occur with plastic wrap.

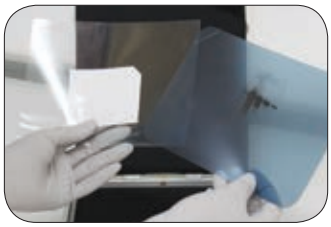


Advantages

- **Clear images** – avoid the wrinkling or bunching that can happen with plastic wrap
- **Suitable for all blots** – development folders are suitable for chemiluminescence and fluorescence imaging
- **Safe blot handling** – move your blot without scratching or putting pressure on the surface
- **Convenient size** – image up to 2 blots simultaneously in one folder



Blot Development Folders provide a clean, easy alternative to plastic wrap.



Ordering Information

Catalog Number	Product	Size
L-07020-025	Blot Development Folders, 5x7 inches (12.7x17.8 cm)	25/pack
L-07020-100	Blot Development Folders, 5x7 inches (12.7x17.8 cm)	100/pack

Film Cassette

X-ray film cassette 8 x 10 inches (20.3 x 25.4 cm)

Advansta's convenient x-ray film cassette is light weight, easy-to-open, and suitable for all your film needs.

Advantages

- **Convenient** – quickly load and unload with simple push-button latch
- **Light weight** – quality light-weight aluminum construction
- **Proven performance** – no light leaks even with overnight exposures

Ordering Information

Catalog Number	Product	Size
L-07019-001	Film Cassette, 8 x 10 inches (20.3 x 25.4 cm)	1 each

Western Blot Strip-It™ Buffer

Quickly strips Western blots for reprobing

Advansta's Western Blot Strip-It Buffer uniformly removes antibodies from developed Western blots so the blot can be reprobed with another set of antibodies. Stripping and reprobing saves precious samples and the entire stripping protocol takes only 25 minutes. The gentle, odor-free buffer removes bound antibodies without harsh reagents or elevated temperatures and will not damage antigens or membranes.

Advantages

- **Conserve valuable samples** – probe the same blot multiple times
- **Fast protocol** – blots stripped and ready for re-probing in 25 minutes
- **Gentle protocol** – antibodies removed without harsh reagents or elevated temperatures
- **Save time** – no need to re-run gels and perform duplicate blots
- **Versatile** – compatible with both PVDF and nitrocellulose membranes and with a variety of chemiluminescent detection reagents

Ordering Information

Catalog Number	Product	Size
R-03722-C20	Western Blot Strip-It™ Buffer	20 mL
R-03722-D50	Western Blot Strip-It™ Buffer	500 mL

WesternBright transfer membranes for immunoblotting

Convenient Nitrocellulose and PVDF membranes for Western blotting

Advansta offers a large selection of nitrocellulose and polyvinylidene difluoride (PVDF) transfer membranes for immunoblotting applications. Choose from convenient precut membranes sized for protein minigels and economical membrane rolls. All membranes are optimized for compatibility with a wide range of protein stains and enzyme-based detection systems, specifically with chemiluminescent substrates.

The WesternBright PVDF membranes provide durability and high tensile strength for ease of handling. Advansta offers PVDF membranes appropriate for chemiluminescent detection and low-autofluorescence PVDF membranes prefect for fluorescent detection.

The WesternBright nitrocellulose membranes are pure nitrocellulose media that has high binding capacity for proteins. These nitrocellulose membranes are stronger and more durable than other nitrocellulose membranes, and will not rip, tear, or crack during transfers. The nature of this material yields sharper images with little or no distortion.

Advantages

- **Performance** – quality controlled for background-free Western blots
- **Convenience** – membranes available pre-cut and as rolls
- **Flexibility** – choose the right membrane for your Western blotting application
- **High signal-to-noise ratios** – with low background levels

Ordering Information

Catalog Number	Product	Size
L-08001-010	Pre-cut WesternBright PVDF-FL, 7x9 cm	10 sheets
L-08012-010	Pre-cut WesternBright PVDF-FL, 10x15 cm	10 sheets
L-08014-010	Pre-cut WesternBright PVDF-FL, 13x18 cm	10 sheets
L-08007-001	WesternBright PVDF-FL membrane roll, 0.22 µm, 26 cm x 3.3 m	1 roll
L-08004-010	Pre-cut WesternBright PVDF-CL, 7x9 cm	10 sheets
L-08011-010	Pre-cut WesternBright PVDF-CL, 10x15 cm	10 sheets
L-08013-010	Pre-cut WesternBright PVDF-CL, 13x18 cm	10 sheets
L-08008-010	WesternBright PVDF-CL membrane roll, 0.22 µm, 26 cm x 3.3 m	1 roll
L-08002-010	Pre-cut WesternBright NC, 0.45 µm, 8x10 cm	10 sheets
L-08118-025	Pre-cut WesternBright NC, 0.45 µm, 6 x 8.5 cm	25 sheets
L-08009-001	WesternBright NC membrane roll, 0.45 µm, 30 cm x 3 m	1 roll
L-08003-010	Pre-cut WesternBright NC, 0.22 µm, 8 x 10 cm	10 sheets
L-08117-025	Pre-cut WesternBright NC, 0.22 µm, 6 x 8.5 cm	25 sheets
L-08006-010	WesternBright NC membrane roll, 0.22 µm, 30 cm x 3 m	1 roll

Blotting Papers

Pre-cut paper for gel to membrane electrophoretic transfers

Advansta's pre-cut Blotting Papers are ideal for use in transfer sandwiches and cassettes when proteins are transferred electrophoretically from a gel to a nitrocellulose, PVDF, or other membrane. The Advansta Blotting Papers are available in two sizes to work with multiple transfer setups and membrane sizes.

Advantages

- **Convenient** – pre-cut to save time; sized to work with most minigel transfer assemblies
- **Standardized** – uniform thickness for reproducible transfer assembly
- **Tested** – confirmed to perform consistently in protein transfers without introducing artifacts or background noise

Ordering Information

Catalog Number	Product	Size
L-07045-060	Pre-cut Blotting Paper 7x9cm, vertical gels	60 sheets
L-07046-060	Pre-cut Blotting Paper 8x10cm, vertical gels	60 sheets

Blotting Sponge Pads

More reproducible gel-to-membrane electrophoretic transfers

Advansta's Blotting Sponge Pads maintain secure contact between gel and membrane in transfer sandwiches and cassettes for consistent transfers. The Blotting Sponge Pads resist compression and are available in two sizes to work with multiple transfer setups and membrane sizes.

Advantages

- **Resist compression** – maintain proper pressure in transfer sandwiches without adding extra blotting papers
- **Retain thickness** – can be reused over multiple experiments
- **Convenient** – two sizes compatible with a variety of transfer apparatuses
- **Standardized** – uniform flat construction ensures reproducible and consistent transfers

Ordering Information

Catalog Number	Product	Size
L-07129-004	Blotting Sponge Pads, 8 x 11 cm	4 sponges
L-07130-004	Blotting Sponge Pads, 9 x 15 cm	4 sponges

Notes

Multicolor fluorescent detection for more data from every Western blot

~ WesternBright MCF

Fluorescent Western Blotting

WesternBright MCF and MCF-IR

Background Quenching Sheets

Fluorescent Western Standardization Blot

Incubation Trays

Multi-chamber Incubation Trays

WesternBright™ MCF and MCF-IR

Quantitative, multi-color fluorescent Western blotting kits

WesternBright MCF visible and near infrared (IR) fluorescent Western blotting kits allow the assay of two proteins at once, increasing the quality and quantity of information that can be gained from a single blot. Assay a control alongside a protein of interest. Assay phosphorylated and un-phosphorylated isoforms of a protein simultaneously. The fluorescent dyes provided with WesternBright MCF and WesternBright MCF-IR outperform Cy™ dyes and allow detection of low pg of protein. The WesternBright MCF protocols save time and money since there is no need for disposable film, and the blot can be imaged immediately, without drying.

WesternBright MCF and MCF-IR allow the assay of two or more proteins on one blot with the sensitivity of chemiluminescence. Save time and money relative to chemiluminescence detection by avoiding the need to run duplicate blots or to strip and re-probe a blot to study multiple targets. WesternBright MCF and MCF-IR are quick, easy to use kits that provide everything necessary to conduct two-color Westerns.

Advantages

- **Fluorescent detection** – of two proteins, with sensitivity 10x greater than Cy dyes
- **AdvanBlock™-PF** – blocking solution for fast, protein-free blocking and greater signal-to-noise ratios
- **High sensitivity** – detect picograms of protein
- **Fast results** – entire protocol can be completed in 3.5 hours
- **WesternBright MCF** – compatible with imaging systems that detect Cy3 and Cy5 or similar dyes
- **WesternBright MCF-IR** – compatible with near-IR imaging systems
- **AdvanWash and AdvanWash-IR** – compatible with imaging systems that detect Cy3 and Cy5 or similar dyes

WesternBright MCF and MCF-IR Western blotting kits provide all materials needed to conduct 2-color Western blots: fluorescent labeled secondary antibodies, blocking solution, washing solution, pre-cut low-autofluorescence PVDF membranes, and background quenching sheets.

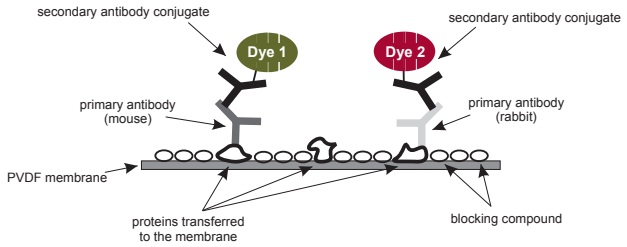
WesternBright™ MCF and MCF-IR *continued*

Quantitative, multi-color fluorescent Western blotting kits

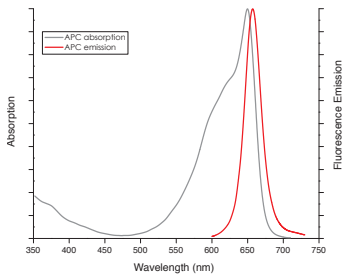
Two-Color Western Blotting

The principle of two-color Western blotting. Using secondary antibodies labeled with different fluorophores, two proteins can be detected on a single blot by controlling excitation and detection channels (a). WesternBright MCF conjugates incorporate the phycobiliproteins allophycocyanin (APC) and R-phycoerythrin (RPE), extremely bright fluorescent proteins from cyanobacteria and eukaryotic algae (b,c). WesternBright MCF-IR conjugates incorporate IR700 and IR800 fluorescent dyes with near-infrared excitation and emission wavelengths (d,e).

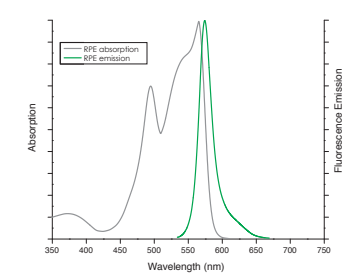
a



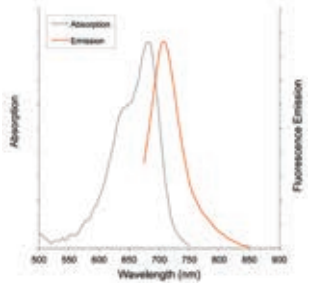
b



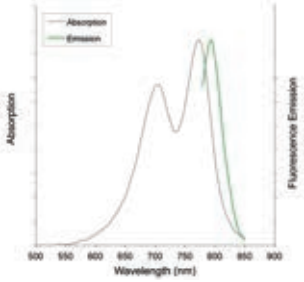
c



d

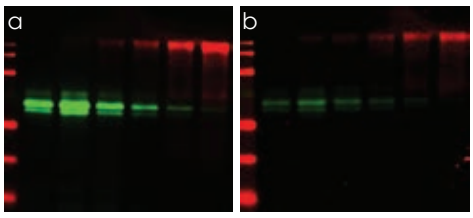


e



Brighter than Cy Dyes

WesternBright conjugates provide a brighter signal than the ECL Plex Western blotting system. Duplicate Western blots containing samples of AFP and CEA proteins were treated identically, and probed with the same mixture of mouse anti-AFP and rabbit anti-CEA primary antibodies. One blot was then stained with WesternBright conjugates and the other with an identical concentration of Cy3 anti-mouse and Cy5 anti-rabbit antibodies following the protocol recommended for ECL Plex. Under identical imaging conditions, WesternBright MCF provides a brighter signal, and 10x greater sensitivity.

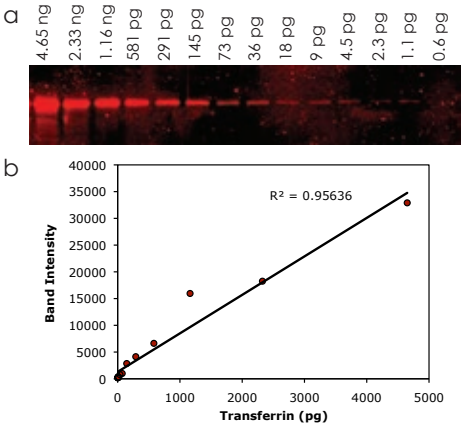


WesternBright™ MCF and MCF-IR *continued*

Quantitative, multi-color fluorescent Western blotting kits

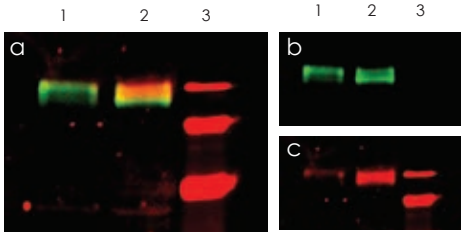
Picogram Detection Levels, Linear Data

Detect picograms of protein with WesternBright MCF and MCF-IR. WesternBright MCF and MCF-IR are as sensitive as chemiluminescence, while providing more quantitative data than chemiluminescence. The fluorescent signal is directly related to the amount of bound antibody, and not dependant on an enzymatic reaction as is a chemiluminescent signal. A blot containing a serial dilution of Transferrin was probed with rabbit-anti-transferrin primary antibody, and detected using WesternBright conjugate APC-goat-anti-rabbit IgG. As little as 1.1 pg of transferrin can be visualized in the resulting image (a). The signal is linear with respect to protein concentration over 3 orders of magnitude (b).



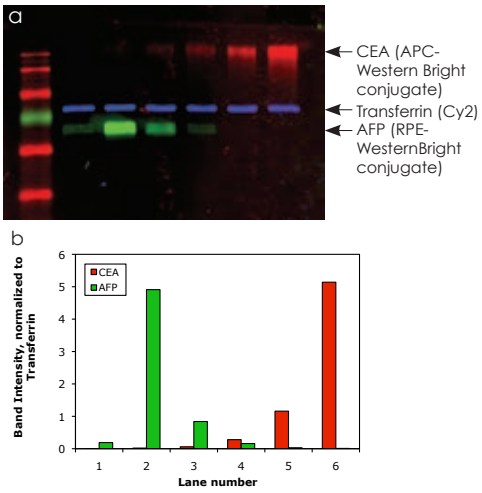
Simultaneously Detect Closely Migrating Proteins

Simultaneous detection of EGFR and phospho-EGFR with WesternBright MCF. The increase in phosphorylation of EGFR in response to EGF was detected. Chemiluminescence detection of the same experiment would require stripping and reprobing the blot, which can introduce errors due to protein loss, or incomplete stripping of primary antibody. Lysates from A431 cells (lane 1) and from A431 cells treated with EGF (lane 2) were blotted and EGFR detected in the green channel (b) or phospho-EGFR detected in the red channel (c). The two channels are superimposed in (a). Lane 3: molecular weight markers.



Get More Data from Every Blot

Multicolor fluorescent WesternBright blots provide quantitative data. With multicolor fluorescent Westerns, simultaneous detection of loading controls allows protein amounts to be accurately quantified, and different samples to be accurately compared. WesternBright conjugates are compatible with common blue dyes, allowing 3-color blots to be conducted. In the figure, a Cy2-labeled primary antibody was used to detect the loading control, transferrin, while WesternBright conjugates were used to detect CEA (red) and AFP (green) proteins. The intensities of the CEA and AFP bands, normalized to the loading control, are shown (b).



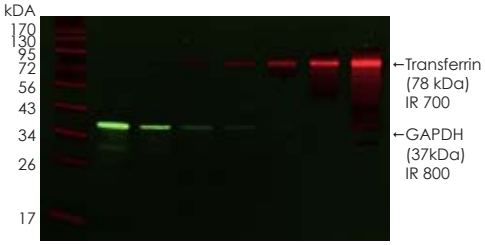
Tel: 650.325.1980 | Fax: 650.325.1904 | sales@advansta.com | www.advansta.com

WesternBright™ MCF and MCF-IR *continued*

Quantitative, multi-color fluorescent Western blotting kits

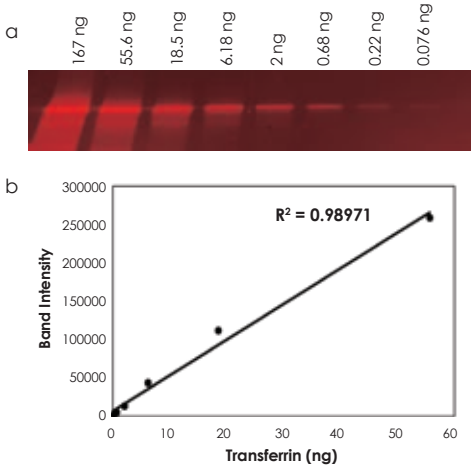
Two-Color Near Infrared Blots

Detect two proteins in one experiment with WesternBright MCF-IR. Near IR dyes are ideal for Western blot applications because autofluorescence from membranes decrease with wavelengths near-IR spectra giving you cleaner western blots. A blot of serial dilutions of transferrin and GAPDH was probed simultaneously with rabbit-anti-transferrin primary antibody and mouse-anti-GAPDH and detected with WesternBright goat-anti-rabbit IgG IR700 and WesternBright goat-anti-mouse IgG IR800.



Broad Linear Range

Choose WesternBright MCF and MCF-IR for quantitative blotting experiments. Both kits provide sensitive detection and a broad linear range. A blot containing a serial dilution of Transferrin was probed with rabbit-anti-transferrin primary antibody, and detected using WesternBright goat-antirabbit IgG IR700. As little as 25 pg of transferrin can be visualized in the resulting image without saturation of a high concentration band containing 55 ng of protein (a). The signal is linear with respect to protein concentration over 3 orders of magnitude (b).



Ordering Information

Catalog Number	Product	Size
K-12021-010	WesternBright™ MCF fluorescent Western blotting kit, Goat-anti-rabbit IgG APC/Goat-anti-mouse IgG RPE	10 blots
K-12022-010	WesternBright™ MCF-IR fluorescent Western blotting kit, Goat-anti-rabbit IgG IR700/Goat-anti-mouse IgG IR800	10 blots
K-12023-010	WesternBright™ MCF-IR fluorescent Western blotting kit, Goat-anti-mouse IgG IR700/Goat-anti-rabbit IgG IR800	10 blots

Background Quenching Sheets

For improved imaging of chemiluminescent blots, and fluorescent gels and blots

For Fluorescence

Use Advansta's Background Quenching Sheets to obtain the best images of fluorescent gels and Western blots. Placed under gels or blots during imaging with epi-illumination, these sheets absorb background fluorescence in the imaging environment such as that resulting from contamination of equipment. The sheets are compatible with UV and all visible light illumination, and can be used with a wide variety of fluorescent DNA- and protein-binding dyes and stains.

For Chemiluminescence

Placed under chemiluminescent blots during CCD imaging, the Background Quenching Sheets eliminate noise that occurs with plastic wrap. Stray light entering the imaging system, or emitted from extremely bright bands, can reflect off of the plastic wrap, increasing background that becomes especially apparent during long exposures.

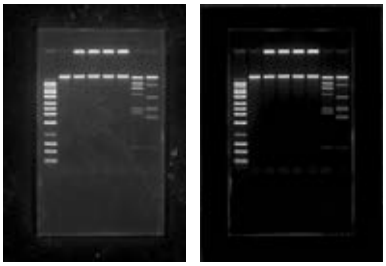


Figure 1. The use of a background quenching sheet greatly reduces the background fluorescence observed when imaging a DNA gel stained with SYBR® Safe.

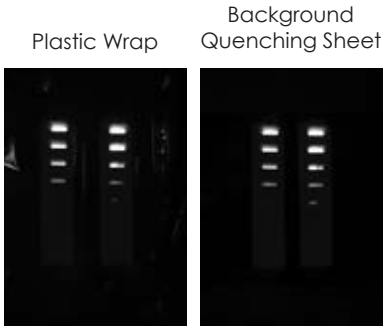


Figure 2. Use of a background quenching sheet under a chemiluminescent blot reduces noise that results when stray light scatters off plastic wrap.

Advantages

- **Improved images** – capture better images by removing background fluorescence and light noise from the environment
- **Flexibility** – sheets are compatible with chemiluminescent and fluorescent Western blots, as well as gels stained with DNA and protein stains including SYBR green, SYBR Gold, ethidium bromide, SYPRO® Orange, SYPRO Ruby and more
- **Increased sensitivity** – improve signal to noise ratios
- **Convenient** – simply place the sheet under the blot or gel while imaging

Ordering Information

Catalog Number	Product	Size
L-07001-010	Background Quenching Sheets	10 sheets

Fluorescent Western Standardization Blot

Ready-to-image three-color blot

This pre-processed blot was developed to demonstrate the performance of fluorescence imaging systems, including laser scanners and CCD-based instruments. Proteins are detected with antibodies that fluoresce in the red, green, and blue fluorescent channels.

When acquired with an imager equipped with LEDs or lasers to excite Cy2, Cy3, and Cy5 or equivalent dyes, the membrane produces a composite image similar to Figure 1. When placed on the surface with the long side vertical and the cut notch in the right upper corner, the working surface containing fluorescent samples is facing up towards the user.

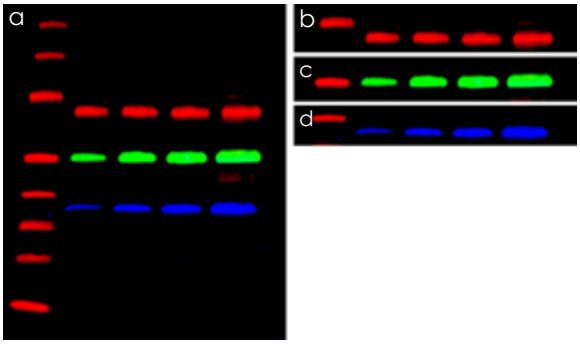


Figure 1. Simultaneous detection of three fluorescently labeled antibodies on one blot. The standardization blot is ready to use, bound with antibodies that can be detected in three fluorescent channels. The standardization blot contains HeLa cell lysate (1, 2, 3 and 5 µg) spiked with 200 ng of human transferrin per lane. Transferrin is detected in the red channel (b), tubulin is detected in the green channel (c) and GAPDH is detected in the blue channel (d). The three channels are superimposed in (a). The first lane contains molecular weight markers that may be detected in the red channel.

Advantages

- **Convenient** – the easiest way to evaluate the performance of your fluorescence imaging system
- **Reliable** – quality-controlled, with lot-specific statistics provided for every blot
- **Well-designed** – both fluorescently labeled primary and secondary antibodies are used, to demonstrate different experimental designs and the utility of loading controls

Ordering Information

Catalog Number	Product	Size
K-08001-001	Fluorescent Western Standardization Blot	1 each

Incubation Trays

Convenient, easy to use trays for staining and washing gels and membranes

These specially designed incubation trays are ideal for staining and washing electrophoresis gels and membranes.

Chose from three designs, all available in a range of sizes:

- **Opaque** – for light-sensitive applications
- **Transparent** – for easy monitoring of colorimetric staining
- **Traditional** – perfect for blot washes and incubations

Advantages

- **Smooth interior** – protects membranes and gels from scratches
- **Attached lid** – to protect experiments from dust or debris that can cause speckles on blot images
- **Convenient** – multiple sizes available for different sizes of gels and blots
- **Save** – minimize antibody and buffer usage by using appropriately sized trays

Ordering Information

Catalog Number	Product	Size
L-07034-005	Incubation Tray, Transparent body and lid, 5x7 cm	5/pack
L-07038-005	Incubation Tray, Opaque black body and lid, 5x7 cm	5/pack
L-07031-005	Incubation Tray, Traditional red body with clear lid, 5x7 cm	5/pack
L-07035-004	Incubation Tray, Transparent body and lid, 6x9 cm	4/pack
L-07039-004	Incubation Tray, Opaque black body and lid, 6x9 cm	4/pack
L-07032-005	Incubation Tray, Traditional black body with clear lid, 6x9 cm	5/pack
L-07036-003	Incubation Tray, Transparent body and lid, 9x11 cm	3/pack
L-07040-003	Incubation Tray, Opaque black body and lid, 9x11 cm	3/pack
L-07033-005	Incubation Tray, Traditional blue body with clear lid, 9x11 cm	5/pack
L-07037-002	Incubation Tray, Transparent body and lid, 10.5x15.5 cm	2/pack
L-07041-002	Incubation Tray, Opaque black body and lid, 10.5x15.5 cm	2/pack

Multi-chamber Incubation Trays

Convenient, easy to use partitioned trays for staining and washing gels and membranes

These specially designed incubation trays are ideal for staining and washing electrophoresis gels and membranes that have been partitioned. Each Multi-chamber incubation tray is partitioned into six chambers that measure 2.7 x 8.1 cm.

Advantages

- **Increase throughput** – process 6 blots simultaneously
- **Deep wells** – can be used on shakers without spillage
- **Economical** – greatly reduce reagent usage, each chamber requires as little as 3 mL of solution
- **Smooth interior** – protects membranes from scratches
- **Attached lid** – to protect experiments from dust or debris that can cause speckles on blot images

Ordering Information

Catalog Number	Product	Size
L-07080-002	Multi-chamber incubation trays, 17.15 x 8.10 x 3.02 cm	2/pack

Fast, convenient, phenol-free purification of DNA and RNA samples

~ RapidClean

Purification

RapidClean

Afyon SDS-PAGE Sample Preparation Kit

G-25 Desalting Spin Columns

RapidClean™

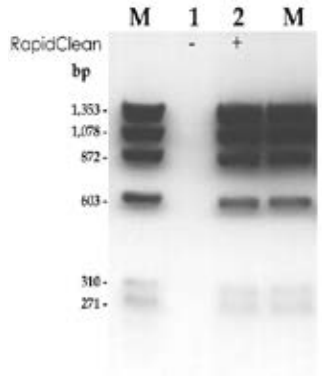
Fast, convenient, phenol-free purification of DNA and RNA samples

RapidClean™ is a novel affinity resin designed to remove all protein from aqueous solutions of single- or double- stranded nucleic acids, providing an alternative to hazardous and lengthy phenol-chloroform procedures. The RapidClean resin binds and removes protein in a 5-minute protocol that combines convenience, speed, and nucleic acid recovery rates in excess of 95%.

Advantages

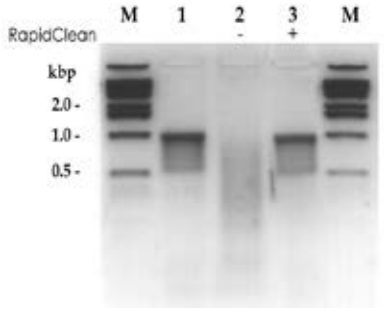
- **Complete removal** – of proteins from aqueous solutions of nucleic acids
- **Protocol less than 5 minutes** – start to finish
- **Non-toxic** – alternative to phenol-chloroform extraction
- **>95% Nucleic acid recovery rates**
- **Recovery of nucleic acids** – from 5 nucleotides to greater than 40kb
- **Suitable** – for DNA, RNA, cDNA, microRNA, oligonucleotides

Remove Exonuclease



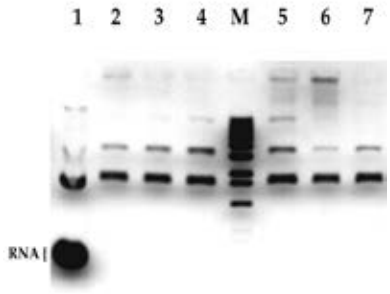
Extraction with RapidClean completely removes Exonuclease III. φX174/HaeIII DNA (lane M) is digested by a 40 min incubation at 37°C with 10 units of Exonuclease III (lane 1), but no digestion occurs when the incubation mix is extracted twice with RapidClean before addition of the φX174/HaeIII DNA target (lane 2).

Remove DNA Glycosylase



RapidClean completely removes Uracil DNA glycosylase. After two extractions with RapidClean, no UDG activity is detected after a 7 minute incubation at 95°C. Lane M: 1kb DNA ladder. Lane 1: dU-DNA fragment incubated without UDG. Lane 2: dU-DNA fragment incubated with UDG reaction mix. Lane 3: Identical to Lane 2, but the UDG reaction mix was extracted with RapidClean prior to the addition of the dU-DNA fragment.

Purification Equivalent to Phenol-Chloroform



RapidClean purifies plasmid DNA as efficiently as phenol-cholorform extractions. Crude plasmid pellet containing pUC119 plasmid DNA was ethanol precipitated, suspended in TE buffer (lane 1), treated with RNase (lanes 2 and 5), and extracted with RapidClean once (lane 3) or twice (lane 4), or extracted with phenol-chloroform once (lane 6) or twice (lane 7).

RapidClean™ *continued*

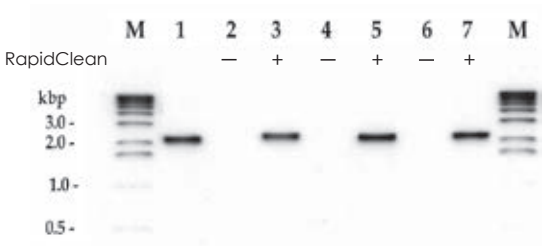
Fast, convenient, phenol-free purification of DNA and RNA samples

Remove DNA Ligase

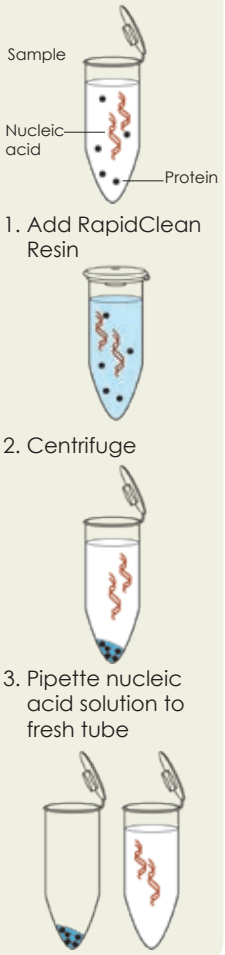
RapidClean completely removes T4 DNA ligase. No detectable ligase activity remains in a reaction mix after extraction with RapidClean (lane 2). EcoRI digested λ-DNA (lane C, Control) was incubated for 16 hours at room temperature with T4 DNA ligase (lane 1) or with the same mixture extracted with RapidClean (lane 2).

Completely removes DNase I, Mung Bean Nuclease, and S1 nuclease activity

Extraction with RapidClean completely removes DNase I, Mung Bean Nuclease, and S1 nuclease activity. M12mp18 ssDNA (lane 1) is completely digested by 30 minute incubations at 37°C with DNase 1 (lane 2), Mung Bean Nuclease (lane 4) or S1 nuclease (lane 6), but no residual nicking activity is observed if the reactions are first extracted twice with RapidClean (lanes 3, 5, and 7). Lane M: 1 kb DNA ladder.



RapidClean Resin



RapidClean Kit

Ordering Information

Catalog Number	Product	Size
K-01001-010	RapidClean Protein Removal Kit, 10 rxns	10 rxns
K-01001-025	RapidClean Protein Removal Kit, 25 rxns	25 rxns
R-14011-250	RapidClean Resin, 0.25 ml	250 µl
R-14011-B10	RapidClean Resin, 1 ml	1 ml

Afyon™

Fast, easy concentration and purification of samples for SDS-PAGE

Afyon SDS-PAGE sample preparation kit is a fast, efficient way to concentrate protein samples and to remove buffer components that may interfere with electrophoresis. In less than 10 minutes, samples are ready for SDS-PAGE. The Afyon protocol is easily scaled up and can be used for routine preparation of samples for electrophoresis and Western blotting.

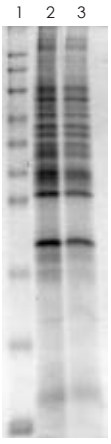
Afyon SDS-PAGE sample preparation kit includes everything needed to prepare protein samples for electrophoresis: Afyon resin, spin filters, and sample loading buffer.

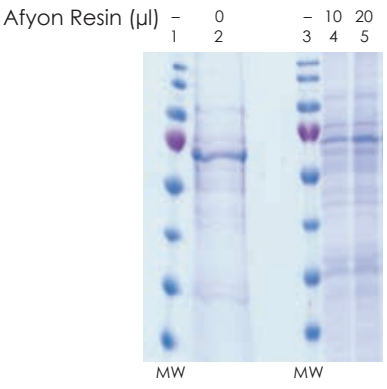
Advantages

- **Quickly remove contaminants** – that can interfere with electrophoresis (GuHCl, urea, ammonium sulfate, etc.)
- **In less than 10 minutes** – protein samples ready to load
- **Safe and non-toxic** – no DMSO, acetone or TCA required
- **Many time faster** – than concentration and buffer exchange via ultrafiltration or dialysis
- **Compatible** – with SDS-PAGE and downstream Western blotting

Concentrate samples faster than ultrafiltration

Concentrate samples 10 times faster than spin ultrafiltration. HeLa cell lysate was diluted to 20 µg/ml with 1M NaCL, 20 mM Tris pH 7.6. 1 ml diluted lysate was concentrated and buffer exchanged using an ultrafiltration spin filter (Milipore), or Afyon resin. Ultrafiltration took over one hour, while Afyon took less than 10 minutes. Lane 1: molecular weight markers. Lane 2: sample concentrated by ultrafiltration. Lane 3: sample concentrated using Afyon.





Remove contaminants that interfere with electrophoresis

Remove substances that interfere with electrophoresis in minutes. Afyon quickly removes buffer components such as guanidinium chloride, thiocyanate or urea that can cause samples to migrate irregularly during electrophoresis. A sample of K-561 cell lysate in 4 M guanidinium thiocyanate spreads and runs irregularly on a gel (lane 2). When the protein is recovered using Afyon resin (lanes 4-5), the salt is removed and the sample runs cleanly. 10 µl of Afyon recovers 2.5 µg protein (lane 4), while 20 µl of Afyon recovers 5 µg protein (lane 5). MW = molecular weight markers).

Afyon™ *continued*

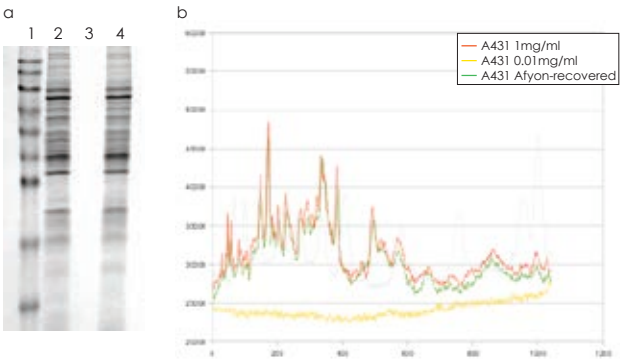
Fast, easy concentration and purification of samples for SDS-PAGE

Ready for electrophoresis in less than 10 minutes

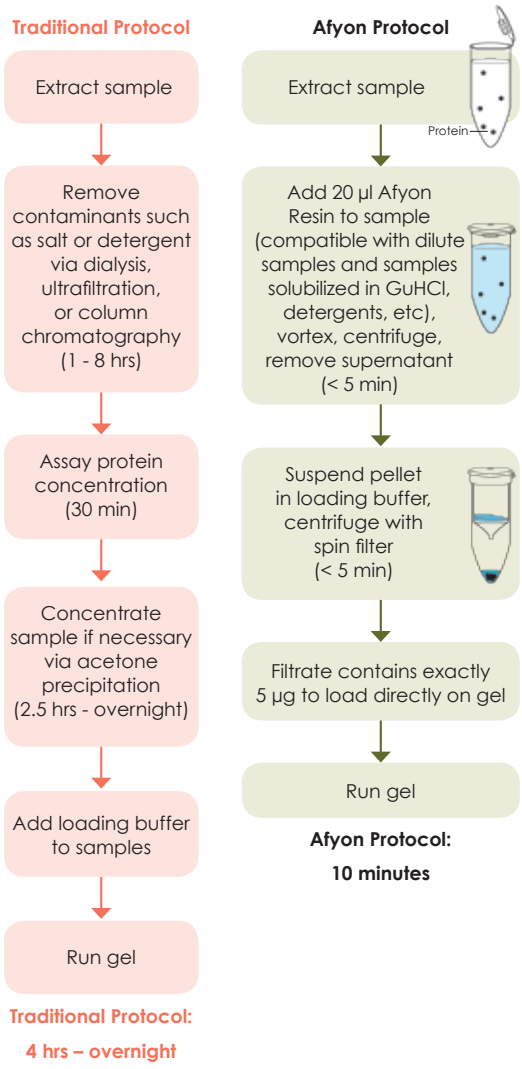
Afyon is a quick, easy protocol to concentrate protein samples and remove unwanted chemicals prior to electrophoresis. Simply add Afyon resin to the sample, vortex, spin to pellet resin, resuspend resin in gel loading buffer to elute protein, and remove resin with the spin filter provided with the Afyon kit. The resulting sample is ready to load on a gel in less than 10 minutes.

Maintain sample composition

Effective concentration of a protein sample using the Afyon kit. Panel a depicts a Coomassie R-250 stained gel comparing initial A431 cell extract (lane 2, 5 µg total protein), diluted cell extract (lane 3), and concentrated sample after the Afyon protocol using 20 µl resin slurry (lane 4). Lane 1 is molecular weight marker. Panel b shows the profiles of lanes on the stained gel, demonstrating that the banding patterns of the initial and Afyon-concentrated samples are identical.



Protein concentration with Afyon Kit



Ordering Information

Catalog Number	Product	Size
K-02101-010	Afyon SDS-PAGE Sample Preparation Kit	10 rxns
K-02101-025	Afyon SDS-PAGE Sample Preparation kit	25 rxns

G-25 Desalting Spin Columns

Rapid buffer exchange for protein samples

Advansta's G-25 Desalting Spin Columns are single-use columns for size-exclusion chromatography. Easily remove salts from protein samples or carry out buffer exchange. Quickly remove free dye or unbound radioactive label from labeling reactions. Each spin column has a 0.6-mL bed volume, capable of desalting a sample with a volume between 50 and 180 µL.

Advantages

- **Fast protocol** – buffer exchange or salt removal complete in less than 10 minutes
- **Convenient** – pre-made single-use columns
- **Performance** – high desalting capacity
- **Versatile** – may be used for multiple applications including desalting, buffer exchange, and removal of free dye or any compound with molecular weight below 5000

Ordering Information

Catalog Number	Product	Size
L-07131-005	G-25 Desalting Spin Columns (includes 5 spin columns and 5 collection tubes)	1 each

Notes

High Sensitivity, Quick and Easy Protocol, Environmentally Friendly

~ AdvanStain Scarlet

Protein Staining

AdvanStain Scarlet

AdvanStain Ponceau

Visio

AdvanStain™ Scarlet™

Fluorescent total protein stain for gels and blots

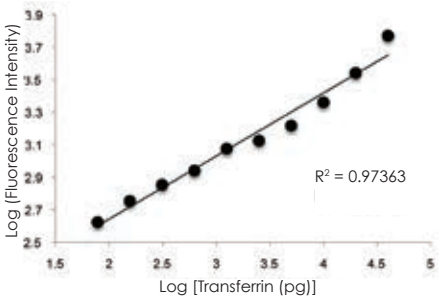
AdvanStain Scarlet is a fluorescent stain for gels and blots that allows sensitive and quantitative visualization of proteins. Gels and blots stained with AdvanStain Scarlet can be imaged on any fluorescent imaging system, including laser- and CCD-based systems, with a detection limit of less than 1 ng of protein per band or spot. Fully compatible with downstream Western blotting or mass spectrometry, AdvanStain Scarlet is non-toxic and biodegradable, for safe and simple disposal.

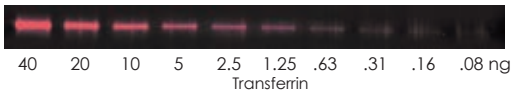
Advantages

- **Sensitive** – detect less than a nanogram of protein per spot
- **Convenient** – simple 3-hour protocol
- **Flexible** – stain gels or membranes
- **Reversible** – destain for downstream Western blotting or mass spectrometry
- **No speckling** – clean background and no speckling for better data
- **Safe** – biodegradable and contains no heavy metals for increased safety and simple disposal
- **Compatible** – image with any laser or CCD imaging system. Compatible excitation wavelengths include green (543, 532 nm), blue (488 nm), violet (405 nm) and UV (302, 365 nm). Maximum emission wavelength is 610 nm

High Sensitivity, Large Dynamic Range

Quantitative staining with AdvanStain Scarlet. A gel containing serial dilutions of transferrin protein was stained with AdvanStain Scarlet and imaged on a CCD imaging system (excitation 534 nm, emission 606 nm). Less than 1 ng of protein per band can be detected, and signal is linear more than 2 orders of magnitude.





Fast Protocol, Excellent Sensitivity

Fix 1 hour → **Stain** 1 hour → **Wash** 30 min → **Acidify** 30 min → **Image**

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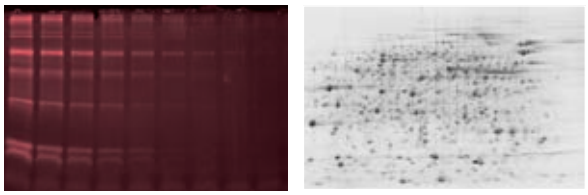
AdvanStain™ Scarlet™ *continued*

Fluorescent total protein stain for gels and blots

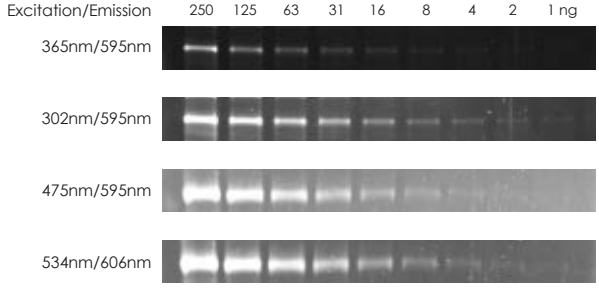
Stain 1D and 2D Gels

AdvanStain Scarlet stains 1D and 2D gels in less than 3 hours, with high sensitivity, low background, and no speckling.



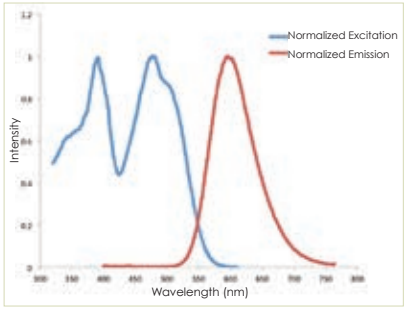
Compatible with Multiple Imaging Systems

Versatility in imaging. A gel containing a serial dilution of BSA protein was stained with AdvanStain Scarlet and imaged on a CCD imaging system using a variety of excitation and emission conditions.

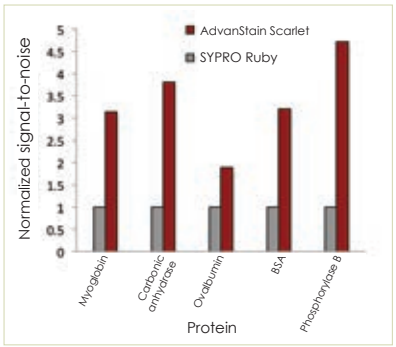


Superior Signal to Noise

AdvanStain Scarlet provides a higher signal-to-noise ratio than SYPRO Ruby. Serial dilutions of several proteins were separated on duplicate 1D gels stained with either AdvanStain Scarlet or SYPRO Ruby, according to each manufacturer's instructions. For each protein, signal-to-noise values were normalized to the value obtained for the protein on the SYPRO Ruby-stained gel. AdvanStain Scarlet provided a signal-to-noise ratio at least 2-times greater than SYPRO Ruby for each protein. The lower background observed with AdvanStain Scarlet is responsible for the higher signal-to-noise ratio, increasing confidence in quantitation of low-abundance bands and spots.



Excitation and Emission Spectra of AdvanStain Scarlet



Ordering Information

Catalog Number	Product	Size
K-11072-B50	AdvanStain™ Scarlet™ Kit (sufficient for staining 20 minigels)	5 ml
K-11072-C25	AdvanStain™ Scarlet™ Kit (sufficient for staining 100 minigels)	25 ml

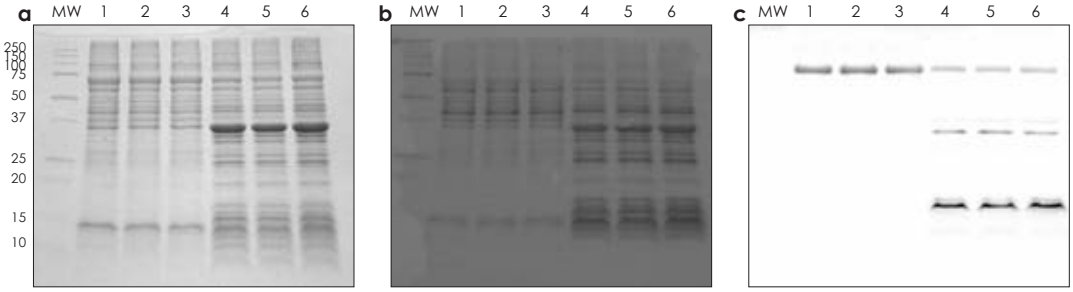
AdvanStain™ Ponceau

Quick protein stain for membranes

AdvanStain Ponceau rapidly detects proteins on nitrocellulose and PVDF membranes, allowing you to check the quality of protein transfer before proceeding to Western blotting. With AdvanStain Ponceau you can quickly make sure that protein transfer has been even across the entire blot, and that no signs of bubbles or other transfer artifacts are present. The staining is reversible and after destaining, membranes can immediately be used for Western blotting.

Advantages

- **Quick** – detect proteins in 5 minutes or less
- **Reversible** – destain in minutes
- **Compatible** – after destaining, PVDF and nitrocellulose membranes are ready for Western blotting



AdvanStain Ponceau was used to check protein transfer before Western blotting to detect solubilization of a protein of interest from inclusion bodies. Duplicate gels were run with the same set of protein samples and (a) one gel was stained with Commassie blue. The other gel was transfered to a PVDF membrane, and (b) transferred protein was detected by staining the membrane with AdvanStain Ponceau. (c) After destaining with water, the membrane in (b) was subjected to Western blotting to detect the 72-KDa protein of interest. Lanes 1-3, solubilized inclusion bodies. Lanes 4-6, insoluble pellets. The Western blot was detected using WesternBright Quantum HRP substrate.

Ordering Information

Catalog Number	Product	Size
R-03021-D50	AdvanStain™ Ponceau	500 ml

Visio™

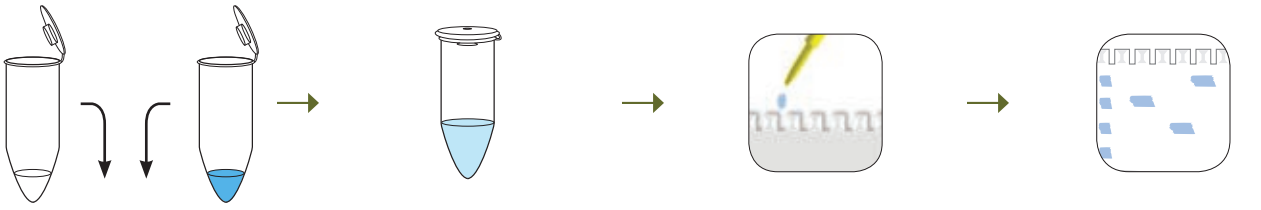
Real-time, visible, in-gel stain

Visio is a sample-loading buffer and protein stain in one. Visio quickly binds to the proteins in your sample before loading, resulting in visible bands that develop during gel electrophoresis. No staining or destaining steps are required. Visio makes it possible to monitor protein electrophoresis in real time, and is completely compatible with downstream mass spectrometry.

Advantages

- **Instant results** – see results immediately as electrophoresis proceeds
- **Fast protocol** – no different from standard electrophoresis protocols; samples labeled and ready to load after heating for 10 minutes
- **Flexible** – use with reducing and non-reducing gels
- **Compatible** – can be used with downstream mass spectrometry

Visio allows you to see your electrophoresis results instantly, with no post-electrophoresis staining or destaining steps.



Mix sample and Visio

Incubate 10 minutes at 98°C. For reducing gels: Add 1 µl reducing buffer and inbubate 1 minute at 98°C

Load gel

Visualize your bands during electrophoresis; instantly see your results in real time while the gel is running.

Ordering Information

Catalog Number	Product	Size
K-11053-300	Visio™ real-time stain for 100 lanes or 10 ten-well gels	300 µl
K-11053-B30	Visio™ real-time stain for 1,000 lanes or 100 ten-well gels	3 ml

Convenient, pure, fast buffer preparation

~ Avant buffer pouches

Buffers and Solutions

AdvanBlock-PF Blocking Solution

AdvanBlock-Chemi Blocking Solution

AdvanBlock-Fluor Blocking Solution

AdvanWash Washing Solution

Avant Buffer Pouches

Protein Sample Loading Buffers

FLASHBlot Transfer Buffer

AdvanBlock™-PF Blocking Solution

Non-protein blocking solution for fluorescent and chemiluminescent Western blots

AdvanBlock-PF is a protein-free blocking solution, optimized for use with the WesternBright MCF fluorescent Western blotting kit and also an excellent choice for chemiluminescent Western blot experiments. This fast-acting blocking solution stabilizes the fluorescence of the WesternBright MCF secondary antibody conjugates. AdvanBlock-PF can reduce background when used with primary antibodies that have a high degree of cross-reactivity with protein blockers such as BSA, casein, or milk protein. With low-quality primary antibodies that may require protein based blocking agents, BSA or non-fat dry milk can be dissolved directly in the AdvanBlock-PF solution used to dilute the antibody. Provided as a 5X concentrate.

Advantages

- **Protein-free** – for lower background with some antibodies
- **Versatile** – compatible with fluorescent and chemiluminescent detection
- **Optimized** – stabilizes fluorescence of WesternBright MCF fluorescent secondary antibodies

Ordering Information

Catalog Number	Product	Size
R-03023-D20	AdvanBlock™-PF Blocking Solution	200 ml

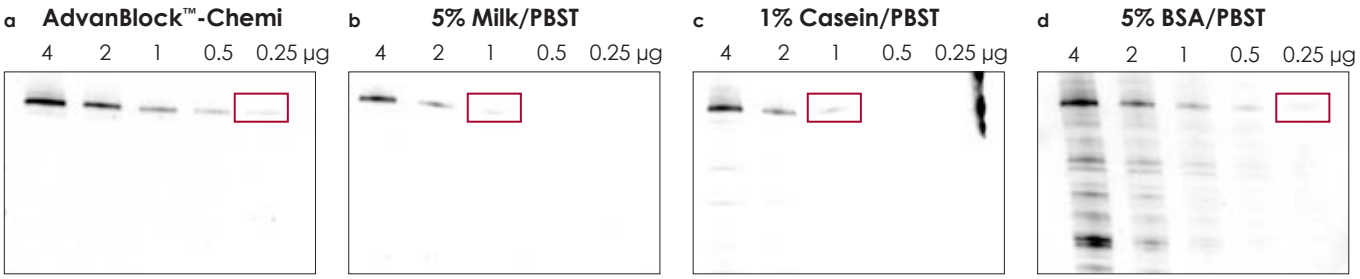
AdvanBlock™-Chemi Blocking Solution

Antibody-antigen signal enhancing and blocking solution for chemiluminescent Western Blots

AdvanBlock™-Chemi is a novel blocking solution, optimized to enhance specific antibody-antigen interactions for chemiluminescent Western Blots. This all-in-one blocking and antibody incubation solution is designed to improve sensitivity and decrease overall background. Non-specific binding caused by low quality antibodies is reduced while signal from the specific antibody-antigen complex is stabilized and enhanced. Provided as a convenient ready-to-use solution intended to directly replace other commonly used blocking buffers for Western Blotting.

Advantages

- **Enhances chemiluminescent signal**
- **Decreases background**
- **Decreases non-specific binding**
- **Ready-to-use solution**



Sensitivity and specificity of phospho-protein detection with various blocking buffers. 2-fold serial dilutions of IFNα-treated HeLa lysate were separated by SDS-PAGE and transferred to a nitrocellulose membrane. The blots were blocked with various blocking buffers before incubation with anti-phospho STAT-3 (Cell Signaling Technology #9145S). Signal was detected with WesternBright® ECL. AdvanBlock™-Chemi yields maximum sensitivity without increased non-specific binding.

Ordering Information

Catalog Number	Product	Size
R-03726-E10	AdvanBlock™-Chemi Blocking Solution	1 L

AdvanBlock™-Fluor Blocking Solution

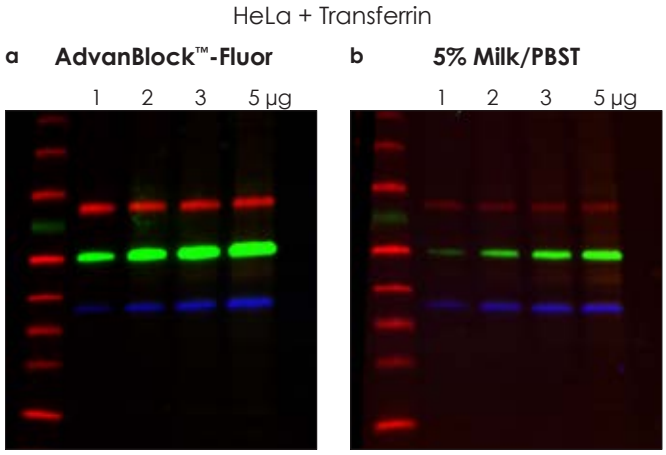
Antibody-antigen enhancing and blocking solution for fluorescent Western Blots

AdvanBlock™-Fluor is a novel blocking solution, optimized to enhance specific antibody-antigen interactions for fluorescent Western Blots. This all-in-one blocking and antibody incubation solution is designed to improve sensitivity and decrease overall background. Non-specific binding caused by low quality antibodies is reduced while signal from the specific antibody-antigen complex is stabilized and enhanced. Provided as a convenient ready-to-use solution intended to directly replace other commonly used blocking buffers for Western Blotting.

Advantages

- **Enhances fluorescent signal**
- **Decreases background**
- **Decreases non-specific binding**
- **Ready-to-use solution**

Comparison of AdvanBlock™-Fluor to 5% Milk/PBST. The 3-color RGB blot contains HeLa cell lysate (1, 2, 3 and 5 µg) spiked with 200 ng of human transferrin per lane. Transferrin is detected in the red channel, tubulin is detected in the green channel and GAPDH is detected in the blue channel. General background is reduced and antibody specificity and sensitivity is increased with AdvanBlock™-Fluor.



Ordering Information

Catalog Number	Product	Size
R-03729-E10	AdvanBlock™-Fluor Blocking Solution	1 L

AdvanWash™ Washing Solution

Washing solution for chemiluminescent and fluorescent Western blots

AdvanWash washing solution can be used with any Western blotting system, including all WesternBright chemiluminescent HRP substrates and the WesternBright MCF fluorescent Western blotting kit. Provided as a 10X concentrate.

Advantages

- **Reliable** – quality-controlled wash buffer for reproducible results
- **Versatile** – compatible with chemiluminescent and fluorescent Western blots
- **Convenient** – save time using pre-made puffers. No more weighing, mixing, or pH adjusting.

Ordering Information

Catalog Number	Product	Size
R-03024-D50	AdvanWash™ Washing Solution	500 ml
R-03100-D50	AdvanWash™–IR 10X Washing Solution	500 ml

Avant™ Buffer Pouches

Convenient, pure, fast buffer preparation

Advansta's Avant buffer pouches are perfect for standardizing your electrophoresis and Western blotting applications. Dissolve a pouch of premeasured molecular biology-grade chemicals in 500 ml of deionized water to obtain a ready-to-use 1x buffer without any further preparation. Save precious time in the laboratory and generate reproducible results with Avant buffers.

Advantages

- **Quality** – molecular biology-grade buffers of highest purity
- **Convenient** – pre-measured powder in sealed pouches
- **Fast** – dissolve and use right away
- **Standardized** – guaranteed reproducible results for your electrophoresis gels and Western blots

Ordering Information

Catalog Number	Product	Size
R-01038-020	PBS (concentration 1x at 500 ml)	20 pouches
R-01039-020	TBS (concentration 1x at 500 ml)	20 pouches
R-01037-020	Tris-Glycine PAGE running buffer (concentration 1x at 500 ml)	20 pouches
R-01036-020	Tris-Glycine SDS PAGE running buffer (concentration 1x at 500 ml)	20 pouches

Protein Sample Loading Buffers

Pre-mixed loading buffers for polyacrylamide electrophoresis

Advansta provides ready-to-use Laemmli loading buffers for the preparation of protein samples for SDS-polyacrylamide gel electrophoresis. Choose from reducing or non-reducing buffers; each contains Bromophenol blue, to enable visualization of the progress of electrophoresis by observing migration of the dye front. Both loading buffers are compatible with downstream Coomassie and silver staining and Western blotting applications.

Advantages

- **Convenient** – pre-mixed; just add an equal volume to your protein sample, boil and load
- **Quality controlled** – obtain reproducible results with standardized buffers
- **Flexibility** – choose from reducing or non-reducing loading buffers

Ordering Information

Catalog Number	Product	Size
R-03018-B10	Non-reducing protein sample loading buffer (2x)	1 ml
R-03018-B50	Non-reducing protein sample loading buffer (2x)	5 ml
R-03019-B10	Reducing protein sample loading buffer (2x)	1 ml
R-03019-B50	Reducing protein sample loading buffer (2x)	5 ml

FLASHBlot™ Transfer Buffer

Enhanced protein transfer for improved sensitivity

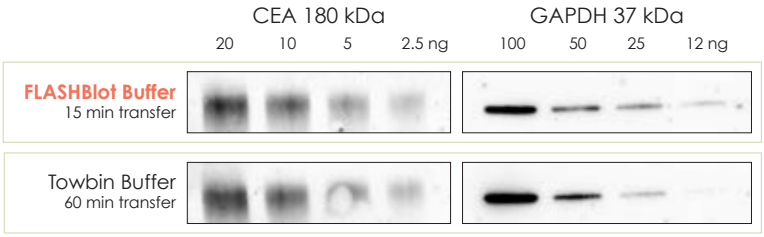
Achieve improved detection of low-abundance and posttranslationally modified proteins with Advansta's proprietary FLASHBlot Transfer Buffer. High-efficiency protein transfer and increased protein retention on the membrane add up to more sensitive Western blots.

Advantages

- **High Performance** – increased protein retention on the membrane results in more sensitive detection of lowabundance and post-translationally modified proteins
- **Efficient** – enhanced transfer efficiency for proteins of all sizes
- **Fast** – transfer proteins in less than 20 minutes vs. several hours required with traditional transfer buffers
- **Convenient** – use your existing wet transfer electrophoresis apparatus

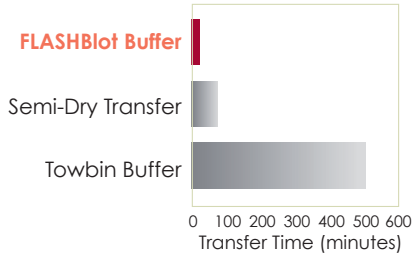
Complete transfer in less than 20 minutes!

Transfer of CEA (high MW) and GAPDH (low MW) proteins was compared using FLASHBlot and Towbin transfer buffers. Following Western blot analysis, the data show equivalent protein transfer in 15 min with FLASHBlot buffer vs. 60 min with Towbin buffer.



Shorter run times

FLASHBlot achieves complete protein transfer in less than 20 minutes.



Ordering Information

Catalog Number	Product	Size
R-03090-D25	FlashBlot™ Transfer Buffer, 50x concentrate, sufficient for up to 50 blots	250 ml
R-03090-D50	FlashBlot™ Transfer Buffer, 50x concentrate, sufficient for up to 100 blots	500 ml

Notes

Superior signal-to-noise ratio, fast detection, and broad linear range

~ ELISABright

ELISA

ELISABright

AdvanBlock-EIA Blocking Solution

10X EIA Coating Buffer

ELISABright™

Chemiluminescent substrate for ELISA applications

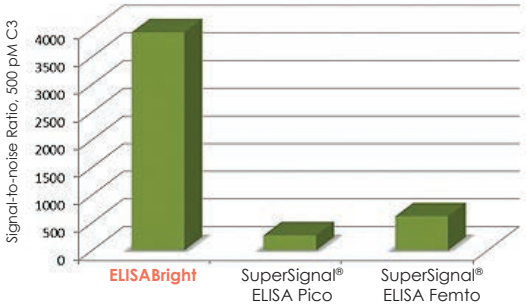
ELISABright™ is an enhanced and highly sensitive chemiluminescent HRP substrate optimized for ELISA applications. This luminol-based substrate demonstrates a wide linear dynamic range and a superior signal-to-noise ratio. ELISABright allows for enhanced detection of low abundance proteins and reduced consumption of antibodies.

Advantages

- **Highest signal-to-noise ratio** – for superior performance
- **Broad linear dynamic range** – for enhanced detection and precision
- **Immediate light generation** – for fast detection
- **Cost-effective** – reduced consumption of reagents

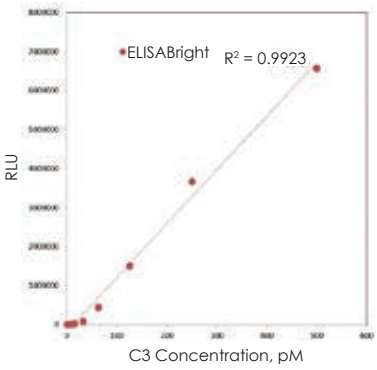
Best Signal-to-noise ratio

ELISABright provides the highest signal/noise ratio in chemiluminescent ELISA experiments. ELISABright, SuperSignal® ELISA Pico and SuperSignal ELISA Femto substrates (Thermo Fisher) were used to develop replicate wells of a chemiluminescent ELISA. Signal-to-noise ratios for a 500 pM solution of C3 protein were determined for each of the chemiluminescent substrates. ELISABright produced a signal-to-noise ratio over 6 times greater than that of SuperSignal ELISA Femto



Broad linear dynamic range for ELISA

Linear Dynamic Range of ELISABright. 96-well microtiter plates were coated with purified anti-C3 antibody. Serial dilutions of human C3 protein spanning from 7.81 to 500 pM were added to ELISA plate, followed by blocking and adding a monoclonal anti-huC3a detection antibody. Post-incubation the diluted (1:30,000) goat anti-mouse-HRP conjugate was added and plate was developed by using 100µL of ELISABright substrate (components mixed 1:1) per well. The luminescent signal was measured with the Perkin Elmer Envision 2104. ELISABright produces a signal linear with respect to the target protein concentration, with R^2 values approaching 1.



Ordering Information

Catalog Number	Product	Size
K-16025-C10	ELISABright™, sufficient for one (1) 96-well ELISA plate	10 ml
K-16025-D10	ELISABright™, sufficient for ten (10) 96-well ELISA plates	100 ml
K-16025-D25	ELISABright™, sufficient for twenty-five (25) 96-well ELISA plates	250 ml

AdvanBlock™-EIA Blocking Solution

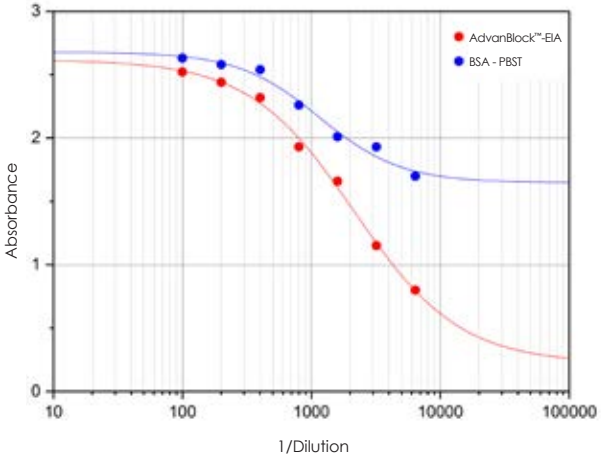
Immunoassay blocking and antibody incubation solution

AdvanBlock™-EIA is a novel blocking solution, optimized to enhance specific antibody-antigen interactions for ELISA. This all-in-one blocking solution and antibody incubation buffer is designed to decrease non-specific binding caused by low quality antibodies and serum matrix effects. Provided as a convenient ready-to-use solution intended to directly replace other commonly used blocking buffers.

Advantages

- **Decreases background**
- **Decreases well-to-well variability**
- **Decreases non-specific binding**
- **Ready-to-use solution**

Decreased serum matrix effect with AdvanBlock™-EIA compared to 1% BSA/PBST. The ELISA plate was coated with Extractable Nuclear Antigens extract diluted in 1X EIA Coating Buffer. The plate was blocked with AdvanBlock™-EIA or 1% BSA-PBST before serial dilutions of Systemic Lupus Erythematosus plasma prepared in AdvanBlock™-EIA or 1% BSA-PBST were applied to the plate. The wells were washed with 1X AdvanWash™ Buffer, then goat anti-human IgG/A/M-HRP diluted in AdvanBlock™-EIA or 1% BSA-PBST were added to the plate. The wells were washed and TMB substrate was added before stopping with sulfuric acid. Non-specific sample matrix effects and well-to-well variability that are observed with some patient samples are decreased with AdvanBlock™-EIA.



Ordering Information

Catalog Number	Product	Size
R-03728-E10	AdvanBlock™-EIA Blocking Solution	1 L

10X EIA Coating Buffer

Immunoassay plate coating solution

EIA coating buffer can be used with any EIA/ELISA system, including chemiluminescent and colorimetric. Provided as a 10X concentrate.

Advantages

- **Reliable** – quality-controlled coating buffer for reproducible results
- **Versatile** – compatible with chemiluminescent and colorimetric EIA/ELISA assays
- **Convenient** – save time using pre-made buffer. No more weighing, mixing or pH adjusting.

Ordering Information

Catalog Number	Product	Size
R-03730-D25	10X EIA Coating Buffer	250 ml

Notes

ADVANSTA

Unparalleled Sensitivity and Performance

~ HRP Conjugates

Labeled Antibodies and Conjugates

SpectraDye Antibody Labeling Kits

HRP-conjugated Secondary Antibodies

SpectraDye Secondary Antibodies

Fluorescent Streptavidin Anitbodies

SpectraDye™ Antibody Labeling Kits

Fluorescently label antibodies in one easy step

SpectraDye Antibody Labeling Kits contain everything you need to produce covalently labeled, fluorescent antibodies in only 30 minutes. Choose from commonly used fluorescent dyes and label your antibody in a single step. Labeled antibodies are compatible with immunofluorescence applications including flow cytometry, Western blotting, and immunofluorescence microscopy so you can validate your results across multiple platforms using the same antibody.

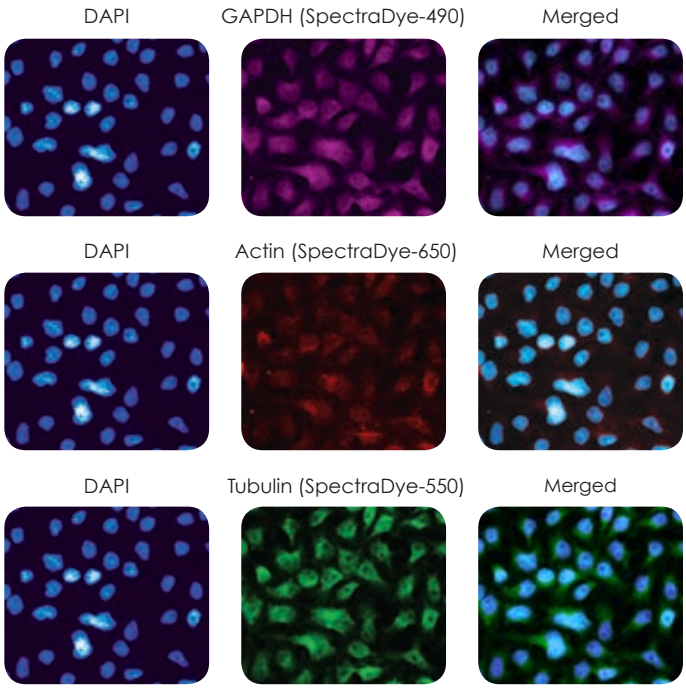
Advantages

- **Rapid** – one-step labeling is complete in 30 minutes
- **Versatile** – labeled antibody may be used in flow cytometry, Western blotting, or immunofluorescence microscopy
- **Flexible** – choose from a broad set of commonly used fluorescent dyes
- **Save time and money** – stop buying secondary antibodies; no more secondary antibody incubations and washes
- **Save antibody** – the labeling reaction requires as little as 10 µg of antibody

Microscopy

Decrease non-specific binding and eliminate species cross-reactivity when analyzing multiple antigens on the same slide.

Increase the specificity of multicolor stained slides by using high quality monoclonal antibodies. HeLa cells were fixed on a glass coverslip then blocked with neutral donkey serum. The cells were then stained simultaneously with a panel of high-affinity SpectraDye labeled mouse monoclonal antibodies. The anti-GAPDH antibody was labeled with SpectraDye-490 (shown in magenta), the anti-actin antibody was labeled with SpectraDye-650 (shown in red) and the anti-tubulin antibody was labeled with SpectraDye-550 (shown in green). The Nuclei were stained with DAPI (shown in blue).



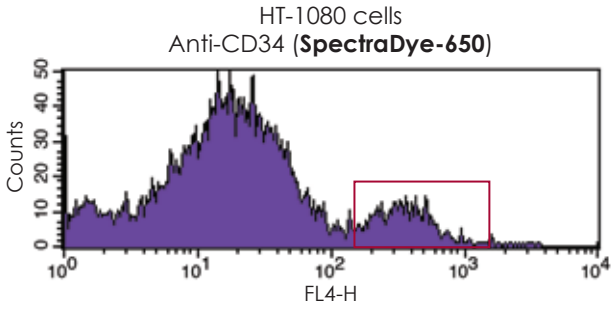
Tel: 650.325.1980 | Fax: 650.325.1904 | sales@advansta.com | www.advansta.com

SpectraDye™ Antibody Labeling Kits *continued*

Fluorescently label antibodies in one easy step

Flow cytometry

Simplify your assay to decrease variability and improve data quality.



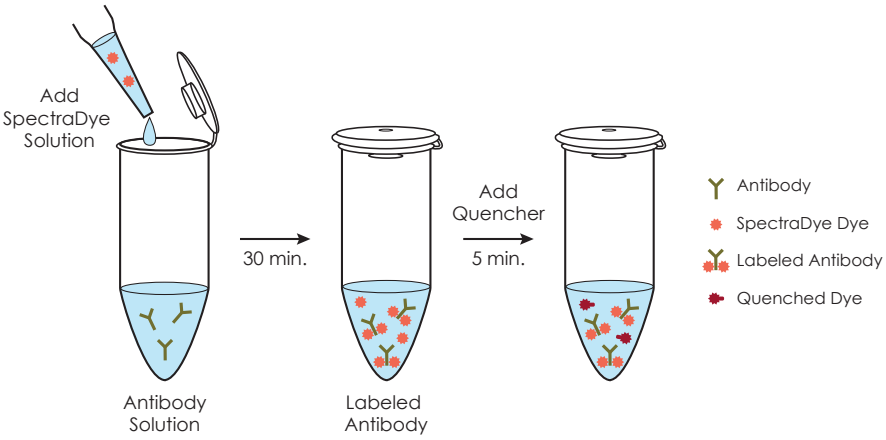
	Excitation maximum (nm)	Emission maximum (nm)
SpectraDye Antibody Labeling Kit-350	353	432
SpectraDye Antibody Labeling Kit-490	491	515
SpectraDye Antibody Labeling Kit-550	551	565
SpectraDye Antibody Labeling Kit-650	653	672
SpectraDye Antibody Labeling Kit-IR700	690	709
SpectraDye Antibody Labeling Kit-IR800	783	800

Each SpectraDye Antibody Labeling Kit includes:

- Antibody Labeling Buffer
- SpectraDye Dye Solution*
- Quenching Solution
- Neutralization Buffer

Each kit includes sufficient reagents to label up to 1 mg of antibody.

* Kit K-11060-010 (user-supplied dye) does not include SpectraDye Dye Solution.



Ordering Information

Catalog Number	Product	Size
K-11054-010	SpectraDye™ Antibody Labeling Kit-350	1 kit
K-11055-010	SpectraDye™ Antibody Labeling Kit-490	1 kit
K-11056-010	SpectraDye™ Antibody Labeling Kit-547	1 kit
K-11057-010	SpectraDye™ Antibody Labeling Kit-647	1 kit
K-11058-010	SpectraDye™ Antibody Labeling Kit-682	1 kit
K-11059-010	SpectraDye™ Antibody Labeling Kit-782	1 kit
K-11060-010	SpectraDye™ Antibody Labeling Kit, user-supplied dye	1 kit

Related Products

L-07131-005	G-25 Desalting Spin Columns (includes 5 spin columns and 5 collection tubes)	1 each

HRP-conjugated Secondary Antibodies

HRP-conjugated secondary antibodies for chemiluminescent immunodetection

Advansta's high-quality HRP-conjugated secondary antibodies offer unparalleled sensitivity and performance for immunoblotting and ELISA applications. These secondary HRP conjugated antibodies are optimized with Advansta's protein detection systems including WesternBright ECL, WesternBright Quantum, WesternBright Sirius and ElisaBright.

Advantages

- **Performance** – excellent signal in immunoblotting and ELISA applications
- **Convenience** – each antibody is demonstrated to provide optimal results with Advansta's protein detection systems
- **Purity** – each antibody is affinity purified to maximize specificity

Ordering Information

Catalog Number	Product	Size
R-05071-500	Goat anti-mouse HRP-conjugated secondary antibody	500 µl
R-05072-500	Goat anti-rabbit HRP-conjugated secondary antibody	500 µl
R-05073-500	Goat anti-human HRP-conjugated secondary antibody	500 µl
R-05074-500	Goat anti-chicken HRP-conjugated secondary antibody	500 µl
R-05075-500	Goat anti-rat HRP-conjugated secondary antibody	500 µl
R-05076-500	Goat anti-guinea pig HRP-conjugated secondary antibody	500 µl
R-05077-500	Donkey anti-goat HRP-conjugated secondary antibody	500 µl
R-05787-500	Donkey anti-mouse HRP-conjugated secondary antibody	500 µl
R-05788-500	Donkey anti-rabbit HRP-conjugated secondary antibody	500 µl

SpectraDye™ Secondary Antibodies

Fluorescently labeled antibodies

Advansta offers a broad selection of SpectraDye Secondary Antibodies with a variety of conjugate types, excitable with both visible and near infrared (NIR) light. Choose the label and species best suited for your application. Each high quality antibody offers unparalleled sensitivity and performance. Additionally, achieve fast and convenient workflow when using the dyes in conjunction with Advansta's WesternBright™ MCF system for multi-color fluorescent Westerns.

Advantages

- **Performance** – strong signal and no cross-reactivity
- **Convenience** – each antibody is demonstrated to provide optimal results with Advansta's Western blotting systems
- **Flexibility** – choose the label and target species best suited to your application

	Excitation maximum (nm)	Emission maximum (nm)
Dye-490	491	515
Dye-550	551	565
Dye-650	653	672
Dye-IR700	690	709
Dye-IR800	783	800

Product	Fluorescent label				
	490	550	650	IR700	IR800
Goat-anti-rabbit	R-05759-250	R-05760-250	R-05761-250	R-05054-250	R-05060-250
Goat-anti-mouse	R-05762-250	R-05763-250	R-05764-250	R-05055-250	R-05061-250
Goat-anti-human	R-05765-250	R-05766-250	R-05767-250	R-05056-250	R-05062-250
Goat-anti-rat	R-05768-250	R-05769-250	R-05770-250	R-05058-250	R-05064-250
Goat-anti-chicken	R-05771-250	R-05772-250	R-05773-250	R-05057-250	R-05063-250
Goat-anti-guinea pig	R-05774-250	R-05775-250	R-05776-250	R-05059-250	R-05065-250
Donkey-anti-goat	R-05777-250	R-05778-250	R-05779-250	R-05780-250	R-05781-250
Donkey-anti-mouse	R-05789-250	R-05790-250	R-05791-250	R-05783-250	R-05784-250
Donkey-anti-rabbit	R-05792-250	R-05793-250	R-05794-250	R-05785-250	R-05786-250

Related Products

R-05051-250	Goat-anti-rabbit IgG APC
R-05052-250	Goat-anti-mouse IgG RPE

*Size 250 µl for all products listed above.

Fluorescent Streptavidin Conjugates

Fluorescent streptavidin conjugates to detect biotinylated proteins

These streptavidin conjugates are prepared from phycobiliproteins, light-harvesting components of the photosynthetic apparatus found in certain types of algae and cyanobacteria. Phycobiliproteins harvest the light very efficiently; their molar extinction exceeds that of any known organic fluorescent dye by one or two orders of magnitude, and they fluoresce with extremely high quantum efficiency. Fluorescent streptavidin conjugates can be used to detect biotinylated proteins in Western blot experiments, protein arrays, and more.

Advantages

- **Extremely bright fluorescence** – for high sensitivity
- **Red or green** – choose from conjugates that fluoresce red or green
- **Compatible** – with imaging systems that detect Cy3 and Cy5 or similar dyes

Ordering Information

Catalog Number	Product	Size
R-05011-050	AdvanFluor APC-Streptavidin Conjugate	50 µl
R-05011-200	AdvanFluor APC-Streptavidin Conjugate	200 µl
R-05012-050	AdvanFluor BPE-Streptavidin Conjugate	50 µl
R-05012-200	AdvanFluor BPE-Streptavidin Conjugate	200 µl

Notes

ADVANSTA

Advansta provides innovative products for Western blotting,
from sample preparation to sensitive chemiluminescent detection.

Advansta. *Solutions for protein characterization.*

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