

# Azure Biosystems Western Blotting Workflow



# ① PLAN

## Plan your experiment and choose your detection method

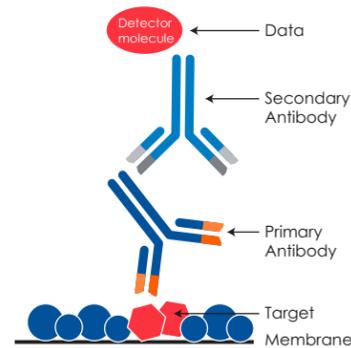
### Chemiluminescent Western Blotting

The most common method for Western blot detection is chemiluminescence. Detection by chemiluminescence is relatively sensitive and works well for detecting individual or low abundance proteins.



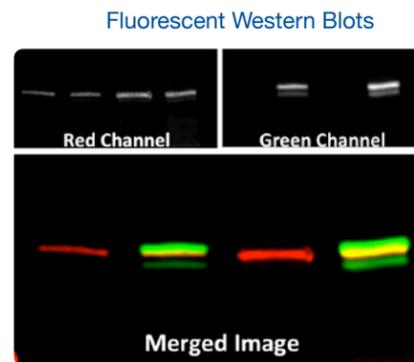
#### HOW IT WORKS

In chemiluminescent Western blots, a primary antibody is used to detect your protein of interest, followed by a species-specific secondary antibody to detect the primary antibody. The secondary antibody is conjugated to horseradish peroxidase (HRP), which catalyzes the oxidation of luminol to produce a product that emits light (luminescence). The light given off can be captured by film and developed in a darkroom, or it can be detected by a CCD camera using a digital imager.



### Fluorescent Western Blotting

Fluorescence Western blotting is beneficial when your experiment requires quantitation, particularly between different proteins in the same sample. Fluorescent methods are especially useful for detection of post-translationally modified versions of proteins, since the difference in molecular weight is often not enough for clear resolution on an average gel.



#### HOW IT WORKS

In fluorescent Western blots, the secondary antibody is conjugated to a dye molecule that can undergo fluorescence – meaning, it will give off light of a specific wavelength when excited with light of a shorter wavelength. Fluorophores are available in the visible or infrared (IR) spectrum.

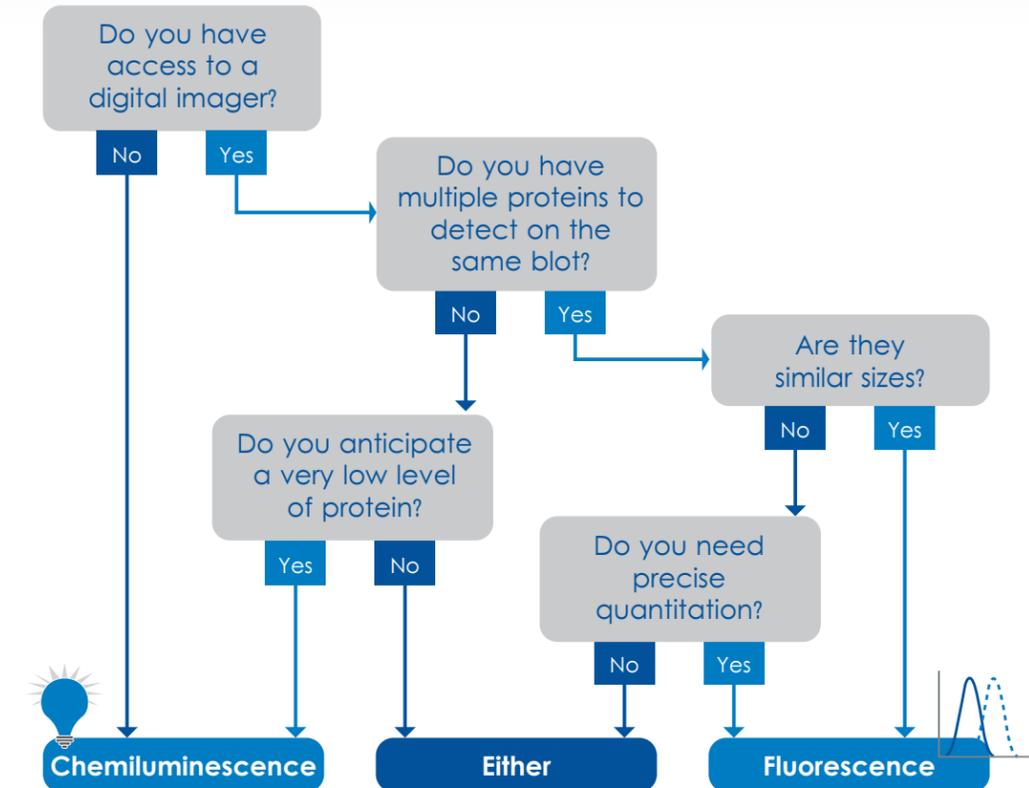
Because different fluorophores can give off light in different ranges, fluorescent Western blotting can be used to multiplex – meaning, different target proteins can be visualized on the same blot at the same time.

With fluorescence, you have the option of using secondary antibodies conjugated to fluorophores, or you can label your primary antibodies with fluorophores of your choice to perform direct Westerns.

# PLAN ①

## Plan your experiment and choose your detection method

### Chemiluminescent or Fluorescent Western Blotting?



### COMMON APPLICATIONS

#### Chemiluminescence

- Checking protein purification
- Presence or absence of one protein in a lysate
- Detecting low abundance proteins

#### Fluorescence

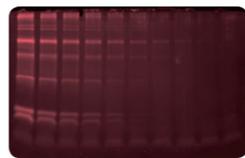
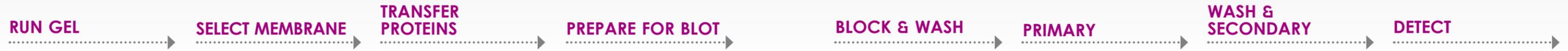
- Analyzing multiple proteins
- Posttranslational modifications
- Quantitative comparisons

## ② SEPARATE

Resolve your proteins by electrophoresis and transfer to a membrane

## PROBE③

Block membrane and probe for proteins of interest with optimized antibodies



### Is Western blotting required?

Some applications don't require western blotting and can be done by directly staining proteins in the gel after separation.

#### Applications

Checking for a single band after protein purification.

#### AzureRed Fluorescent Protein Stain (AC2124)

qualitatively stains gels for fluorescent imaging systems.

### SELECT MEMBRANE



### Choosing your membrane

The membrane provides a material that binds proteins as they move out of the gel matrix. The two common materials are nitrocellulose and PVDF.

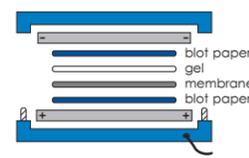
#### Nitrocellulose (AC2106–AC2107)

- For low molecular weight proteins
- Typically used for chemi-applications
- Not ideal for stripping

#### PVDF (AC2105, AC2108–AC2109)

- High binding capacity is great for low-expression proteins
- Typically used for fluorescence (less background autofluorescence)
- High protein retention for stripping and reprobing

### TRANSFER PROTEINS



### Setting up a good transfer

Proper transfer set-up involves a “sandwich” where gel and membrane are laid in direct contact between blotting paper, flanked by electrode plates. The transfer buffer allows current to flow between electrodes to carry proteins from gel to membrane.

Blotting paper (filter paper) provides consistent pressure so no gaps appear between membrane and gel while remaining absorbent enough for transfer buffer to penetrate the layers.

#### Azure Pre-cut Blotting Paper (AC2110–AC2111)

adds efficiency to this sandwich set-up.

#### Azure Transfer Buffer (AC2127)

is a proprietary formula designed for quick, high quality wet transfer and sensitive western blotting.

### PREPARE FOR BLOT



### Before blotting

Verifying that total protein was sufficiently transferred from gel to the membrane is important when optimizing a transfer setup, condition, or experiment.

Ponceau staining can be used to visualize all protein on the membrane. After, the membrane can be destined for immediate western blotting.

#### Azure Ponceau Stain (AC2125)

can ensure efficient transfer of proteins onto nitrocellulose or PVDF membranes.

#### Azure Opaque Incubation Trays (AC2120–AC2123)

offer protection for light-sensitive membrane incubation. The surface is smoothed to prevent scratches and damage to membranes.

#### Azure Clear Incubation Trays (AC2150–AC2153)

allow protection of your blots, with a smoothed surface to prevent membrane damage and transparency for easy monitoring.

### BLOCK & WASH



### Blocking the membrane

Blocking is important to prevent nonspecific background signals from interfering with your data.

#### Protein Free Blocking Buffer (AC2112)

works best for purified proteins & antibodies with high cross reactivity with protein based blockers.

#### Fluorescent Blocking Buffer (AC2190)

works best for cell lysates and low quality primary antibodies that require protein blockers.

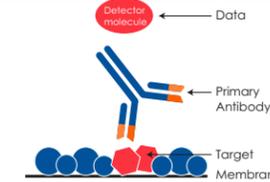
#### Chemi Blot Blocking Buffer (AC2148)

works best for chemiluminescent Western blots.

Need help getting started with fluorescent Western blotting? Check out the demo kit, page 8.

**AzureSpectra Demo Kit (AC2172–AC2179)**

### PRIMARY



### Probe with antibody

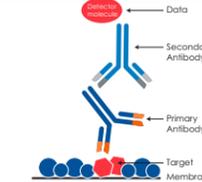
Make sure concentrations for new antibodies are optimized.

Have a validated primary antibody? Try a direct Western by labeling your primary antibody with fluorescent dye.

#### AzureSpectra Labeling Kit (AC2185–AC2189)

allows quick and easy labeling of primary antibodies – see more on page 7.

### WASH & SECONDARY



### Washing after incubations

It is essential to wash excess antibody off the membrane after each incubation to prevent background signal. For fluorescent blots, make sure to rinse off excess wash buffer containing detergent, since it can fluoresce.

#### Blot Washing Buffer (AC2113)

works well for chemiluminescent HRP substrates and visible fluorescent blots.

#### Fluorescent Blot Washing Buffer (AC2145)

works best with NIR fluorescent blots.

#### Azure HRP secondary antibodies (AC2114–AC2119, AC2149)

offer a range of species specificities.

#### Fluorescent secondary antibodies (AC2128–AC2139, AC2156–71)

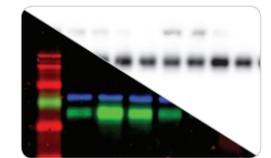
come in visible and near IR fluorophores.

### NEED TO REPROBE?

#### HRP Stripping buffer (AC2154)

efficiently removes antibodies from your blot.

### DETECT



### Chemiluminescence detection

Choose your HRP substrate:

#### Radiance (AC2101)

produces a strong, long-lasting signal with extremely low background.

#### Radiance Plus (AC2103)

is the most sensitive HRP substrate and allows you to detect bands not visualized with other substrates.

#### ChemiWriter ECL (AC2146)

adsorbs to nitrocellulose and PVDF membranes, and reacts with HRP substrates to produce chemiluminescence.

#### Blot Development Folders (AC2126)

protect your blot during imaging and keep it wet for longer lasting signal.

### Fluorescence detection

#### Background Quenching Sheets (AC2144, AC2147)

reduce background autofluorescence when imaging your fluorescent (or chemi) blot.

# ④ VISUALIZE

Detect your proteins of interest by chemiluminescence or fluorescence

## Azure Biosystems cSeries

The Azure Biosystems cSeries offers 4 unique Western blot imaging systems. Select which one fits your applications now, and learn more about upgrading later when your needs change.



# ANALYZE ⑤

Analyze your data with easy-to-use software to get the answers you need

## AzureSpot Analysis Software

Providing tools for the analysis of gels and blots, AzureSpot software makes complex analysis a simple process. Designed to be either fully automated or manual, AzureSpot provides flexibility and accuracy for data analysis.

### Workflows to suit your analysis requirements

#### Fully automated or semi automated

1. Lay lane grid over your sample
2. Set threshold values, detect bands
3. Correct for background, choose from a wide variety of options
4. View results and make modification or edits to band boundaries

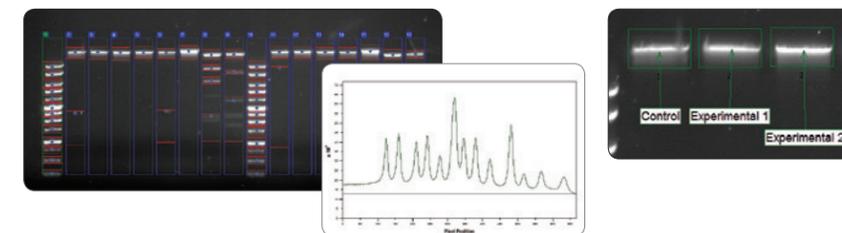
5. Use calibrated molecular weight markers to determine weight or use calibrated standards to determine relative concentrations

#### Freehand draw for fast analysis

1. Draw regions of interest
2. Detect background
3. Annotate image

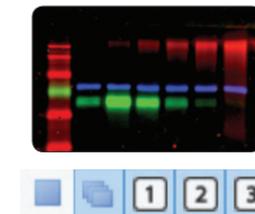


| Chemiluminescence   |  |  |   |
|---|--|--|---|
| Fluorescence  |  |  |   |
| c600  | c500   | c400   | c300  |
| <b>Ultimate Western System</b><br>IR Fluorescence<br>Visible Fluorescence<br>Chemiluminescence<br>UV Fluorescence<br>Visible Imaging<br>Blue Excited DNA Dyes | <b>Infrared Imaging System</b><br>IR Fluorescence<br>Chemiluminescence<br>UV Fluorescence<br>Visible Imaging<br>Blue Excited DNA Dyes<br>Upgradeable to c600 | <b>Visible Fluorescent Western System</b><br>Visible Fluorescence<br>Chemiluminescence<br>UV Fluorescence<br>Visible Imaging<br>Blue Excited DNA Dyes<br>Upgradeable to c600 | <b>Darkroom Eliminator</b><br>Chemiluminescence<br>UV Fluorescence<br>Visible Imaging<br>Blue Excited DNA Dyes<br>Upgradeable to c600, c500, and c400 |
|   |  |  |   |
| (AC6001)  | (AC5001)   | (AC4001)   | (AC3001)  |



### Tools for multichannel analysis

Easily switch views on multicolor images to ensure the best analysis from channel to channel.



### Tools to streamline analysis

#### Automatic PDF report generator

Save your findings in a detailed report.

#### Integrated tutorial

Software includes an integrated tutorial to guide you through analyzing your image.

### AzureSpot includes the tools for:

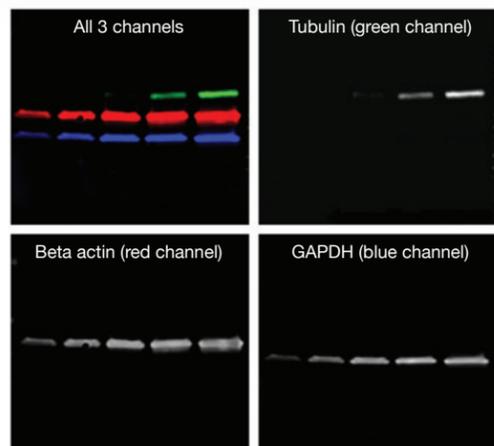
- Automatic Lane creation
- Band detection
- Background subtraction
- Molecular size/pI calibration
- Quantity calibration
- Annotation for comments and highlighting the image

# LABELING KITS

## AzureSpectra Labeling Kits

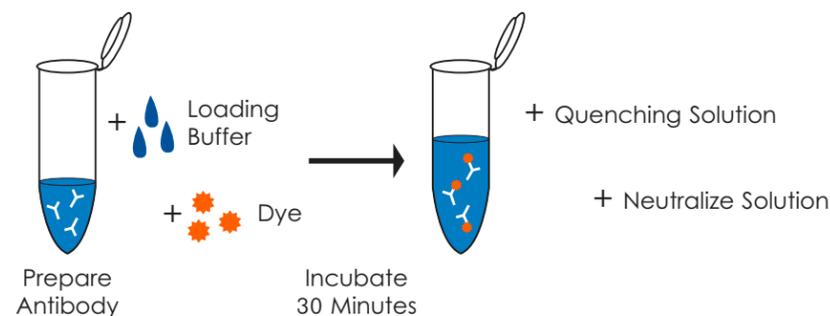
Label your primary or secondary antibody with a fluorescent dye

Perform multiplexing assays quickly and easily



**Fluorescent Western blot imaged with Azure c600.** Secondary antibodies were labeled with the AzureSpectra labeling kit: anti-rabbit with AzureSpectra 700, anti-mouse with AzureSpectra 550, and anti-rat with AzureSpectra 800. Primary antibodies used were rat anti-tubulin, rabbit anti-beta actin, and mouse anti-GAPDH.

Simple labeling protocol



- Includes:**
- Labeling Buffer
  - Dye solution
  - Quenching solution
  - Neutralization buffer
  - Two G-25 columns

*Each kit includes sufficient reagents for labeling of 2 x 50 µg of antibody.*

### Products

|        |                                 |
|--------|---------------------------------|
| AC2185 | AzureSpectra Labeling Kit – 490 |
| AC2186 | AzureSpectra Labeling Kit – 550 |
| AC2187 | AzureSpectra Labeling Kit – 650 |
| AC2188 | AzureSpectra Labeling Kit – 700 |
| AC2189 | AzureSpectra Labeling Kit – 800 |

### Easy and fast

The fluorescent antibody labeling kit provides the materials necessary to fluorescently label the antibody of your choice in less than 1 hour.

### Label primary antibodies

Use antibodies that your lab has already validated and optimized. Labeled primary antibodies can then be used for direct Westerns.

### Label secondary antibodies

Secondary antibodies can be labeled for traditional indirect Western blot applications.

### Choose from 5 dyes

The non-overlapping emission spectra of the fluorophores available for labeling means you can easily perform multiplexing.

|             | Excitation max. (nm) | Emission max. (nm) |
|-------------|----------------------|--------------------|
| ○ Dye-490   | 491                  | 515                |
| ● Dye-550   | 551                  | 565                |
| ● Dye-650   | 653                  | 672                |
| ● Dye-IR700 | 690                  | 709                |
| ● Dye-IR800 | 783                  | 800                |

# DEMO KITS

## AzureSpectra Demo Kit

New to fluorescent Western blotting?

Let us help you get started.

Azure's Fluorescent Western blotting Demo Kit contains everything you need to perform single color fluorescent Westerns using your samples and primary antibodies.

### What you need:

- Your protein sample, resolved by SDS PAGE
- Primary antibody against protein of interest



### Each kit includes:

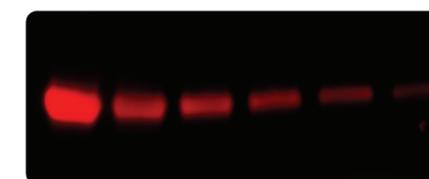
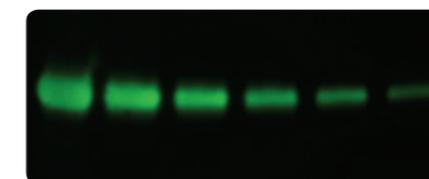
- 1 PVDF Membrane
- Fluorescent Blot Wash Buffer
- Fluorescent Blot Blocking Buffer
- Secondary Antibody
- 2 Background Quenching Sheets

### Products

|        |  |
|--------|--|
| AC2172 | Demo Kit AzureSpectra Goat-anti-mouse 700  |
| AC2173 | Demo Kit AzureSpectra Goat-anti-rabbit 700 |
| AC2174 | Demo Kit AzureSpectra Goat-anti-mouse 800  |
| AC2175 | Demo Kit AzureSpectra Goat-anti-rabbit 800 |
| AC2176 | Demo Kit AzureSpectra Goat-anti-mouse 650  |
| AC2177 | Demo Kit AzureSpectra Goat-anti-rabbit 650 |
| AC2178 | Demo Kit AzureSpectra Goat-anti-mouse 550  |
| AC2179 | Demo Kit AzureSpectra Goat-anti-rabbit 550 |

### HOW TO USE

1. Run a gel of your sample and transfer to the provided PVDF membrane
2. Block using Fluorescent Blot Blocking Buffer
3. Probe using your chosen primary antibody
4. Wash with Fluorescent Blot Wash Buffer
5. Incubate with the provided secondary antibody
6. Wash again with Fluorescent Blot Wash Buffer
7. Rinse with PBS
8. Take an image of your fluorescent blot using the provided background quenching sheets



**Blots probed with AzureSpectra secondary antibodies and imaged using NIR with an Azure c600.** Top: probed with AzureSpectra 800 secondary (green). Bottom: probed with AzureSpectra 700 (red).



| Part no.                           | Description   |
|------------------------------------|---|
| <b>Protein Gel Electrophoresis</b> |   |
| AC2124                             | <b>AzureRed Fluorescent Protein Stain</b> —fluorescent total protein stain for 1D and 2D gels, sufficient for 20 minigels, 5 ml                         |
| <b>Transfer</b>                    |   |
| AC2105                             | <b>Low Fluorescence Western Membrane (PVDF) –0.45 µm</b> —pre-cut PVDF membrane, 9x7cm vertical gels, 10 sheets   |
| AC2106                             | <b>Nitrocellulose Transfer Membrane–0.45 µm</b> —pre-cut membrane, 8x10 cm mini vertical gels, ideal for larger proteins, 10 sheets                     |
| AC2107                             | <b>Nitrocellulose Transfer Membrane–0.22 µm</b> —pre-cut membrane, 8x10 cm mini vertical gels, ideal for smaller proteins, 10 sheets                    |
| AC2108                             | <b>Low Fluorescence Western Membrane (PVDF)–0.45 µm</b> —pre-cut PVDF membrane, 10x15 cm vertical gels, 10 sheets                                       |
| AC2109                             | <b>Low Fluorescence Western Membrane (PVDF)–0.45 µm</b> —pre-cut PVDF membrane, 13x18 cm vertical gels, 10 sheets                                       |
| AC2110                             | <b>Blotting Paper for Western Blotting</b> —pre-cut blotting paper for Western blot transfer, 7x9 cm vertical gels, 60 sheets                           |
| AC2127                             | <b>Azure Transfer Buffer</b> —50x concentrated solution sufficient for 50-100 blots   |
| AC2125                             | <b>Azure Ponceau Stain</b> —visible reversible total protein stain for proteins transferred to membrane, sufficient for staining 50 blots 9x7cm, 500 ml |
| <b>Blocking</b>                    |   |
| AC2112                             | <b>Azure Protein Free Blot Blocking Buffer</b> —protein-free blocking solution (5x concentrate) for immunoblots - 200 ml                                |
| AC2190                             | <b>Azure Fluorescent Blot Blocking Buffer</b> —blocking solution (1X) for fluorescent immunoblots, 500 ml   |
| AC2148                             | <b>Azure Chemi Blot Blocking Buffer</b> —blocking solution (1X) for chemiluminescent immunoblots, 500 ml  |
| <b>Washing</b>                     |   |
| AC2113                             | <b>Azure Blot Washing Buffer</b> —immunoblot washing solution 10x concentrate, 500ml  |
| AC2145                             | <b>Azure Fluorescent Blot Washing Buffer</b> —immunoblot washing solution 10x concentrate, for use with fluorescent secondaries, 500 ml                 |
| <b>Blot Accessories</b>            |   |
| AC2126                             | <b>Blot Development Folder</b> —transparent plastic sheets to hold blots for imaging (alternative to plastic wrap), 100 pcs                             |
| AC2144                             | <b>Quenching Sheets, small</b> —10 background quenching sheets, for use with fluorescent or chemiluminescent samples (9x12.5 cm)                        |
| AC2147                             | <b>Quenching Sheets, large</b> —10 background quenching sheets, for use with fluorescent or chemiluminescent samples (16x22 cm)                         |

| Part no.                    | Description   |
|-----------------------------|---|
| <b>Detection Substrates</b> |   |
| AC2101                      | <b>Radiance</b> —HRP Substrate for CCD 150 ml kit, contains substrate for 1500cm <sup>2</sup> membrane  |
| AC2103                      | <b>Radiance Plus</b> —femtogram HRP Substrate 150 ml kit, contains substrate for 1500cm <sup>2</sup> membrane   |
| AC2146                      | <b>Azure ChemiWriter ECL</b> —a chemiluminescent marker that enables you to write or draw on your transfer membranes, resulting in a chemiluminescent signal on your markings once substrate is added                       |
| <b>Kits</b>                 |   |
| AC2140                      | <b>AzureSpectra rb700/ms800 Western Kit, with Protein Free Block</b> —kit contains materials for 10 Western Blots: PVDF membranes, wash buffer, protein free blocking buffer, secondary antibodies AzureSpectra rb700/ms800 |
| AC2141                      | <b>AzureSpectra ms700/rb800 Western Kit, with Protein Free Block</b> —kit contains materials for 10 Western Blots: PVDF membranes, wash buffer, protein free blocking buffer, secondary antibodies AzureSpectra ms700/rb800 |
| AC2104                      | <b>AzureSpectra rb650/ms550 Western Kit, with Protein Free Block</b> —kit contains materials for 10 Western Blots: PVDF membranes, wash buffer, protein free blocking buffer, secondary antibodies rb650/ms550              |
| AC2191                      | <b>AzureSpectra rb700/ms800 Western Kit, with Fluorescent Block</b> —kit contains materials for 10 Western Blots: PVDF membranes, wash buffer, fluorescent blocking buffer, secondary antibodies AzureSpectra rb700/ms800   |
| AC2192                      | <b>AzureSpectra ms700/rb800 Western Kit, with Fluorescent Block</b> —kit contains materials for 10 Western Blots: PVDF membranes, wash buffer, fluorescent blocking buffer, secondary antibodies AzureSpectra ms700/rb800   |
| AC2193                      | <b>AzureSpectra rb650/ms550 Western Kit, with Fluorescent Block</b> —kit contains materials for 10 Western Blots: PVDF membranes, wash buffer, fluorescent blocking buffer, secondary antibodies AzureSpectra rb650/ms550   |
| <b>Stripping Buffer</b>     |   |
| AC2154                      | <b>HRP Stripping Buffer</b> —uniformly removes antibodies from developed HRP Western blots so the blot can be reprobed with another set of antibodies   |
| <b>Incubation Trays</b>     |   |
| AC2120                      | <b>7x5 cm, opaque black top and bottom</b> —for staining and washing light sensitive gels and membranes, includes 5 trays   |
| AC2121                      | <b>9x6 cm, opaque black top and bottom</b> —for staining and washing light sensitive gels and membranes, includes 4 trays   |
| AC2122                      | <b>11x9 cm, opaque black top and bottom</b> —for staining and washing light sensitive gels and membranes, includes 3 trays  |

| Part no.                                     | Description   |
|--|---|
| <b>Incubation Trays, continued</b>           |   |
| AC2123                                       | <b>15.5x10.5 cm, opaque black top and bottom</b> —for staining and washing light sensitive gels and membranes, includes 2 trays |
| AC2150                                       | <b>7x5 cm, clear</b> —for staining and washing gels and membranes, includes 5 trays   |
| AC2151                                       | <b>9x6 cm, clear</b> —for staining and washing gels and membranes, includes 4 trays   |
| AC2152                                       | <b>11x9 cm, clear</b> —for staining and washing gels and membranes, includes 3 trays  |
| AC2153                                       | <b>15.5x10.5 cm, clear</b> —for staining and washing gels and membranes, includes 2 trays                                       |
| <b>AzureSpectra 800 secondary antibodies</b> |   |
| AC2134                                       | <b>Goat-anti-rabbit</b> —AzureSpectra 800 conjugated secondary antibody for fluorescent Westerns, 250 µl                        |
| AC2135                                       | <b>Goat-anti-mouse</b> —AzureSpectra 800 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |
| AC2136                                       | <b>Goat-anti-human</b> —AzureSpectra 800 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |
| AC2137                                       | <b>Goat-anti-chicken</b> —AzureSpectra 800 conjugated secondary antibody for fluorescent Westerns, 250 µl                       |
| AC2138                                       | <b>Goat-anti-rat</b> —AzureSpectra 800 conjugated secondary antibody for fluorescent Westerns, 250 µl                           |
| AC2139                                       | <b>Goat-anti-guinea pig</b> —AzureSpectra 800 conjugated secondary antibody for fluorescent Westerns, 250 µl                    |
| AC2157                                       | <b>Donkey-anti-goat</b> —AzureSpectra 800 conjugated secondary antibody for fluorescent Westerns, 250 µl                        |
| <b>AzureSpectra 700 secondary antibodies</b> |   |
| AC2128                                       | <b>Goat-anti-rabbit</b> —AzureSpectra 700 conjugated secondary antibody for fluorescent Westerns, 250 µl                        |
| AC2129                                       | <b>Goat-anti-mouse</b> —AzureSpectra 700 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |
| AC2130                                       | <b>Goat-anti-human</b> —AzureSpectra 700 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |
| AC2131                                       | <b>Goat-anti-chicken</b> —AzureSpectra 700 conjugated secondary antibody for fluorescent Westerns, 250 µl                       |
| AC2132                                       | <b>Goat-anti-rat</b> —AzureSpectra 700 conjugated secondary antibody for fluorescent Westerns, 250 µl                           |
| AC2133                                       | <b>Goat-anti-guinea pig</b> —AzureSpectra 700 conjugated secondary antibody for fluorescent Westerns, 250 µl                    |
| AC2156                                       | <b>Donkey-anti-goat</b> —AzureSpectra 700 conjugated secondary antibody for fluorescent Westerns, 250 µl                        |
| <b>AzureSpectra 650 secondary antibodies</b> |   |
| AC2165                                       | <b>Goat-anti-rabbit</b> —AzureSpectra 650 conjugated secondary antibody for fluorescent Westerns, 250 µl                        |
| AC2166                                       | <b>Goat-anti-mouse</b> —AzureSpectra 650 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |
| AC2167                                       | <b>Goat-anti-human</b> —AzureSpectra 650 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |

| Part no.  | Description  |
|---|--|
| <b>AzureSpectra 650 secondary antibodies, continued</b> |  |
| AC2168  | <b>Goat-anti-chicken</b> —AzureSpectra 650 conjugated secondary antibody for fluorescent Westerns, 250 µl                        |
| AC2169  | <b>Goat-anti-rat</b> —AzureSpectra 650 conjugated secondary antibody for fluorescent Westerns, 250 µl                            |
| AC2170  | <b>Goat-anti-guinea pig</b> —AzureSpectra 650 conjugated secondary antibody for fluorescent Westerns, 250 µl                     |
| AC2171  | <b>Donkey-anti-goat</b> —AzureSpectra 650 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |
| <b>AzureSpectra 550 secondary antibodies</b>            |  |
| AC2158  | <b>Goat-anti-rabbit</b> —AzureSpectra 550 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |
| AC2159  | <b>Goat-anti-mouse</b> —AzureSpectra 550 conjugated secondary antibody for fluorescent Westerns, 250 µl                          |
| AC2160  | <b>Goat-anti-human</b> —AzureSpectra 550 conjugated secondary antibody for fluorescent Westerns, 250 µl                          |
| AC2161  | <b>Goat-anti-chicken</b> —AzureSpectra 550 conjugated secondary antibody for fluorescent Westerns, 250 µl                        |
| AC2162  | <b>Goat-anti-rat</b> —AzureSpectra 550 conjugated secondary antibody for fluorescent Westerns, 250 µl                            |
| AC2163  | <b>Goat-anti-guinea pig</b> —AzureSpectra 550 conjugated secondary antibody for fluorescent Westerns, 250 µl                     |
| AC2164  | <b>Donkey-anti-goat</b> —AzureSpectra 550 conjugated secondary antibody for fluorescent Westerns, 250 µl                         |
| <b>HRP secondary antibodies</b>                         |  |
| AC2114  | <b>Goat-anti-rabbit</b> —HRP conjugated secondary antibody for chemi Westerns, 500 µl  |
| AC2115  | <b>Goat-anti-mouse</b> —HRP conjugated secondary antibody for chemi Westerns, 500 µl   |
| AC2116  | <b>Goat-anti-human</b> —HRP conjugated secondary antibody for chemi Westerns, 500 µl   |
| AC2117  | <b>Goat-anti-chicken</b> —HRP conjugated secondary antibody for chemi Westerns, 500 µl   |
| AC2118  | <b>Goat-anti-rat</b> —HRP conjugated secondary antibody for chemi Westerns, 500 µl   |
| AC2119  | <b>Goat-anti-guinea pig</b> —HRP conjugated secondary antibody for chemi Westerns, 500 µl  |
| AC2149  | <b>Donkey-anti-goat</b> —HRP conjugated secondary antibody for chemi Westerns, 500 µl  |
| <b>AzureSpectra Demo Kits</b>                           |  |
| AC2172  | <b>Goat-anti-mouse 700</b> —kit contains 1 PVDF membrane, blocking buffer, wash buffer, goat anti-mouse 700 secondary antibody   |
| AC2173  | <b>Goat-anti-rabbit 700</b> —kit contains 1 PVDF membrane, blocking buffer, wash buffer, goat anti-rabbit 700 secondary antibody |
| AC2174  | <b>Goat-anti-mouse 800</b> —kit contains 1 PVDF membrane, blocking buffer, wash buffer, goat anti-mouse 800 secondary antibody   |

# PRODUCTS

## Ordering information

**Part no. Description**

### AzureSpectra Demo Kits, *continued*

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|--------|--|
| AC2175 | <b>Goat-anti-rabbit 800</b> —kit contains 1 PVDF membrane, blocking buffer, wash buffer, goat anti-rabbit 800 secondary antibody |
| AC2176 | <b>Goat-anti-mouse 650</b> —kit contains 1 PVDF membrane, blocking buffer, wash buffer, goat anti-mouse 650 secondary antibody   |
| AC2177 | <b>Goat-anti-rabbit 650</b> —kit contains 1 PVDF membrane, blocking buffer, wash buffer, goat anti-rabbit 650 secondary antibody |
| AC2178 | <b>Goat-anti-mouse 550</b> —kit contains 1 PVDF membrane, blocking buffer, wash buffer, goat anti-mouse 550 secondary antibody   |
| AC2179 | <b>Goat-anti-rabbit 550</b> —kit contains 1 PVDF membrane, blocking buffer, wash buffer, goat anti-rabbit 550 secondary antibody |

### AzureSpectra Labeling Kits

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|--------|---|
| AC2185 | <b>For Westerns – 490</b> —for covalently labeling antibodies with a fluorescent dye. Includes labeling buffer, dye solution, quenching solution, neutralization buffer and two G-25 columns. Each kit includes sufficient reagents to perform two labellings of 50 micrograms of antibody. |
| AC2186 | <b>For Westerns – 550</b> —for covalently labeling antibodies with a fluorescent dye. Includes labeling buffer, dye solution, quenching solution, neutralization buffer and two G-25 columns. Each kit includes sufficient reagents to perform two labellings of 50 micrograms of antibody. |
| AC2187 | <b>For Westerns – 650</b> —for covalently labeling antibodies with a fluorescent dye. Includes labeling buffer, dye solution, quenching solution, neutralization buffer and two G-25 columns. Each kit includes sufficient reagents to perform two labellings of 50 micrograms of antibody. |
| AC2188 | <b>For Westerns – 700</b> —for covalently labeling antibodies with a fluorescent dye. Includes labeling buffer, dye solution, quenching solution, neutralization buffer and two G-25 columns. Each kit includes sufficient reagents to perform two labellings of 50 micrograms of antibody. |
| AC2189 | <b>For Westerns – 800</b> —for covalently labeling antibodies with a fluorescent dye. Includes labeling buffer, dye solution, quenching solution, neutralization buffer and two G-25 columns. Each kit includes sufficient reagents to perform two labellings of 50 micrograms of antibody. |

**Part no. Description**

### Azure cSeries

|        |   |
|--------|---|
| AC6001 | <b>c600</b> —includes 8.3 MP CCD camera cooled -50°C below ambient, 0.95 motorized fixed lens, Win 8 tablet computer, dual wavelength UV transilluminator at 302 and 365 nm, Orange Tray, Blot Tray, EPI blue LEDs (470 nm) for gel applications, EPI Red, Green, Blue LEDs (628 nm, 530 nm and 457 nm) for multiplex Western applications, laser diodes at 660 nm and 785 nm for NIR multiplex Western applications, 7 position motorized filter wheel with 6 filters standard, cSeries touch screen capture software, AzureSpot N3 analysis software (3 network floating licenses) or AzureSpot Standalone (2 standalone licenses). |
| AC5001 | <b>c500</b> —includes 8.3 MP CCD camera cooled -50°C below ambient, 0.95 motorized fixed lens, Win 8 tablet computer, dual wavelength UV transilluminator at 302 and 365 nm, Orange Tray, Blot Tray, EPI blue LEDs (470 nm) for gel applications, laser diodes at 660 nm and 785 nm for NIR multiplex Western applications, 7 position motorized filter wheel with 3 filters standard, cSeries touch screen capture software, AzureSpot N3 analysis software (3 network floating licenses) or AzureSpot Standalone (2 standalone licenses).   |
| AC4001 | <b>c400</b> —includes 8.3 MP CCD camera cooled -50°C below ambient, 0.95 motorized fixed lens, Win 8 tablet computer, dual wavelength UV transilluminator at 302 and 365 nm, Orange Tray, Blot Tray, EPI blue LEDs (470 nm) for gel applications, EPI Red, Green, Blue LEDs (628 nm, 530 nm and 457 nm) for multiplex Western applications, 7 position motorize filter wheel with 4 filters standard, cSeries touch screen capture software, AzureSpot N3 analysis software (3 network floating licenses) or AzureSpot Standalone (2 standalone licenses).  |
| AC3001 | <b>c300</b> —includes 8.3 MP CCD camera cooled -50°C below ambient, 0.95 motorized fixed lens, Win 8 tablet computer, dual wavelength UV transilluminator at 302 and 365 nm, Orange Tray, Blot Tray, EPI blue LEDs (470 nm) for gel applications, 7 position motorized filter wheel with 1 filter standard, cSeries touch screen capture software, AzureSpot N3 analysis software (3 network floating licenses) or AzureSpot Standalone (2 standalone licenses).  |
| AC2001 | <b>c200</b> —includes system with 5.4 MP image resolution, F 1.8 fixed lens, Win 8 tablet computer, dual wavelength UV transilluminator at 302 and 365 nm, Orange Tray, EPI blue LEDs (470 nm) for gel applications, 7 position filter wheel with 1 filter standard, cSeries touch screen capture software, AzureSpot Standalone (1 standalone license).  |
| AC1501 | <b>c150</b> —includes system with 5.4 MP image resolution, F 1.8 fixed lens, Win 8 tablet computer, dual wavelength UV transilluminator at 302 and 365 nm, Orange Tray, EPI blue LEDs (470 nm) for gel applications, 3 position filter slider with 1 filter standard, cSeries touch screen capture software. System is not upgradable. Does not include AzureSpot analysis software.  |



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