standardized + quantitative
WESTERN BLOTS
Product line WB
for modern gel based proteomics
**Classical approach for qWestern Blots**

1 target normalized to 1 reference protein

The total protein of the sample cannot be co-detected with the target. Therefore, the target protein is normalized to 1-2 endogenous protein(s) as reference that equal amounts of the total protein are present on the blot. No valid data if the endogenous reference protein is regulated.

**Smart Protein Layers Technology**

1 target normalized to 1000 reference proteins

The target is directly normalized to its corresponding total protein as present on the blot. 100% reliable quantitative data.

**Smart Protein Layers**

Stain-free, standard-based Western Blot analysis

Smart Protein Layers (SPL) is the new standard-based technology for stain-free, quantitative and standardized analysis of 1D gels and Western blots. Normalization of target protein signal is based on total protein and SPL standards, which can be fast and precisely visualized by fluorescence detection during every step of gel and blot analysis without additional staining.

- stain-free protein visualization from gel to target detection (sensitivity of silver)
- protein content & loading equalizer – no protein content determination required
- precise protein expression quantification (lane-to-lane, experiment-to-experiment)

**SPL technology for qWestern Blot analysis**

SPL Kit containing:

1a Smart Label for total protein visualization
1b Sample standard
1c Experiment standard + protein marker
2 Target detection by:
   - fluorescent antibodies
   - HRP antibody + Immuno Blue
   - HRP antibody + chemiluminescence

Co-detection of 1 endogenous protein (e.g. Actin, GAPDH) as reference for all endogenous proteins

Fluorescent SPL standard to control sample loading, protein content, labeling efficiency.
**Protein visualization**

Dependent on your way of target detection choose a SPL kit containing:
+ Smart labels for total protein visualization
+ sample standard
+ experiment standard

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**SPL Red**
Total protein visualization

The fluorescent Smart Label visualizes total protein in the gel and on the blot with high sensitivity. The bi-fluorescent Smartalyzer is a standard added to every sample prior to separation for precise normalization, standardization and quantification of total protein. The Calibrator, a tri-fluorescent standard/ molecular weight marker, allows for the comparison of protein expression between different gels or blots.

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**SPL Blue**
Total protein visualization

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**SPL Red-IR**
Total protein visualization

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**Fluorescent secondary antibodies**
Target protein detection

The detection of target proteins by fluorescent secondary antibodies is the most convenient way and becomes, once established, the usual way of detection.

- very easy handling
- signal stability of several months
- sensitivity in the higher pg range

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**Immuno Blue Fluorescent Substrate**
Target protein detection

Immuno Blue Fluorescent Substrate combines the high sensitivity of chemiluminescence with signal stability and short exposure time of fluorescent antibody conjugates.

HRP-conjugated 2nd antibodies transform Immuno Blue into a fluorescent compound which precipitates and remains stable on the blot.

- short exposure time (10 -100 x shorter than ECL)
- long signal stability of several months
- sensitivity in the lower pg range

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**Target detection**

Choose a way of detecting your target:
- Very low abundant targets: chemiluminescence
- Medium low abundant targets: fluorescent antibodies, Immuno Blue
- High abundant targets: fluorescent antibodies
Data evaluation
LabImage 1D SPL

The SPL software allows a fast and precise analysis of quantitative Western Blots and 1D gels. The total protein and sample standards of the samples are rapidly detected. Differences in protein content or amount of protein sample applied to the gel are monitored, calibrated and normalized. Target protein expression is automatically normalized to its corresponding sample total protein and sample standard.

- detection of protein bands and lanes including SPL standards
- rapid calculation and normalization of SPL standards
- rapid processing and output of data

Image acquisition
Octoplus QPLEX

The Octoplus QPLEX is the gold standard for LED powered CCD-camera based systems in terms of detection sensitivity and multi-color specificity.

Images of up to four different fluorophores can be specifically acquired within seconds. It also allows for highly sensitive chemiluminescence detection, optionally white light transmission for VIS-stains. Very robust design for daily usage.

- high power 4-color fluorescence detection
- 4-5 orders of magnitude linear range
- high sensitivity chemiluminescence detection
- robust system for daily use
Product information

For detailed product information please visit our website at www.dyeagnostics.com or send us an email at info@dyeagnostics.com.

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Contact

Information, quotes, orders

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