



## Fluorescent stains for expression and post-translational modification analysis



The Molecular Probes Multiplexed Proteomics™ Kits enable you to confidently identify and quantify total protein, phosphorylated proteins, and glycosylated proteins from the same sample in the same gel. You'll get highly accurate and reproducible results, save time, and use less of your precious samples.

### Multiplexing increases the accuracy of your results

Changes in protein phosphorylation and glycosylation can be misleading in the absence of total protein quantitation. By using stains for post-translational modification detection together with a total-protein stain, on the same gel, you can increase the accuracy of your results. Taking the ratio of the

signals from each stain allows you to estimate the number of phosphates or glycans on the protein. This enables you to distinguish between an abundant protein with few post-translational modifications and a rare protein with many post-translational modifications.

### Three stains, one gel

The Multiplexed Proteomics™ Kits use a combination of three compatible fluorescent in-gel stains: SYPRO® Ruby Protein Gel Stain, Pro-Q® Diamond Phosphoprotein Gel Stain, Pro-Q® Emerald 300 Glycoprotein Gel Stain-UV (Table 1). Through imaging the protein patterns generated by each stain, you create three unique maps of your sample from

one gel. Directly superimposing phosphorylation and glycosylation images with the total-protein stain image allows you to unambiguously match proteins bands or spots, so you can quantitate changes in expression and post-translational modification per protein.

**Table 1 - Characteristics of the fluorescent stains used in the Multiplexed Proteomics™ Kits**

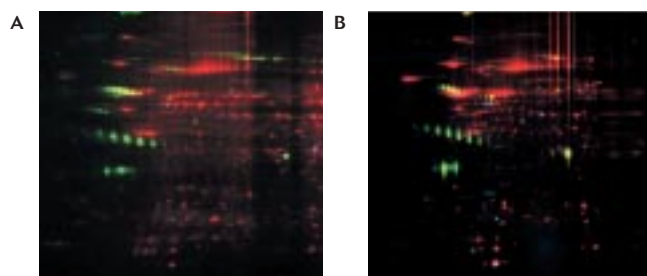
Stain	Detection Target	Characteristics
SYPRO® Ruby Protein Gel Stain	Total protein	Sensitive—1 ng/band Quantitative—signal linear over three orders of magnitude and little protein-to-protein variability Simple, in-gel staining—ready-to-use, no fixing, washing, or destaining Compatible with mass spectrometry and microsequencing
Pro-Q® Diamond Phosphoprotein Gel Stain	Phosphoproteins	Sensitive—1-16 ng/band Quantitative—signal linear over three orders of magnitude and correlates with number of phosphates Simple, in-gel staining—no blotting, antibodies, or radioisotopes required Compatible with mass spectrometry
Pro-Q® Emerald 300 Glycoprotein Gel Stain-UV	Glycoproteins	Sensitive—1-2 ng/band Quantitative—signal linear between 2-3 orders of magnitude and correlates with number of glycans Simple, in-gel staining—no blotting, antibodies, or lectins required Compatible with mass spectrometry

## Versatile—results from a single protein or an entire proteome

Using the Multiplexed Proteomics™ Kits, you can analyze expression and post-translational modifications of a single protein or an entire proteome. Distinguish differences in complex samples by two-dimensional electrophoresis gel analysis (Figure 1) or screen multiple sample fractions

in order to locate proteins of interest. Multiplexed Proteomics™ Kits include either phosphoprotein and glycoprotein standards serving as molecular weight standards, and as positive and negative controls for staining.

Figure 1 - Quantitative differential expression analysis through multiplexing



Proteins from normal liver cells (A) or liver tumor cells (B) stained with Pro-Q® Diamond Phosphate Gel Stain (blue), Pro-Q® Emerald 300 Glycoprotein Stain (green), and then SYPRO® Ruby Protein Gel Stain (red). The 2D gel was imaged after each staining and the digital images were overlaid and pseudo-colored.

Figure 2 - Pro-Q® Phosphoprotein and Pro-Q® Glycoprotein Standards

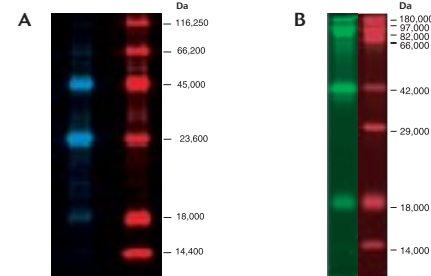


Figure 2A shows phosphorylated proteins (blue) and total proteins (red) in the Pro-Q® Phosphoprotein Standard. Figure 2B shows glycosylated proteins (green) and total proteins (red) in the Pro-Q® Glycoprotein Standard.

## Ordering information

Increase accuracy and use less sample for expression and post-translational modification analysis. Order your Multiplexed Proteomics™ Kit today.

### Product\*

Multiplexed Proteomics™ Phosphoprotein Gel Staining Kit (contains 1 L each of Pro-Q® Diamond and SYPRO® Ruby Gel Stains, and Pro-Q® Phosphoprotein Standard

Multiplexed Proteomics™ Phosphoprotein Gel Staining Kit (contains 200 mL each of Pro-Q® Diamond and SYPRO® Ruby Gel Stains, and Pro-Q® Phosphoprotein Standard

Multiplexed Proteomics™ Glycoprotein Gel Staining Kit-UV (contains 1 L each of Pro-Q® Emerald 300 and SYPRO® Ruby Gel Stains, and Pro-Q® Glycoprotein Standard)

Pro-Q® Phosphoprotein Standard

Pro-Q® Glycoprotein Standard

Qty.	No. of Gels Stained	Cat. no.
1 kit	~ 20 mini-gels or 2 large-format** gels	MPM-33305
1 kit	~ 4 mini-gels	MPM-33306
1 kit	~ 20 mini-gels or 2 large-format** gels	MPM-33307
400 µl		P33350
400 µl		C21852

\*All kit components are available individually. For more information visit [www.invitrogen.com](http://www.invitrogen.com)

\*\*Large-format gel: 20cm x 20cm x 1mm gel



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713-038174 121503 xxM

### Corporate headquarters:

1600 Faraday Avenue • Carlsbad, CA 92008 USA • Tel: 760 603 7200 • Fax: 760 602 6500 • Toll Free Tel: 800 955 6288 • E-mail: [tech\\_service@invitrogen.com](mailto:tech_service@invitrogen.com) • [www.invitrogen.com](http://www.invitrogen.com)

### European headquarters:

Invitrogen Ltd • Inchinnan Business Park • 3 Fountain Drive • Paisley PA4 9RF, UK • Tel: +44 (0) 141 814 6100 • Fax: +44 (0) 141 814 6260 • E-mail: [eurotech@invitrogen.com](mailto:eurotech@invitrogen.com)