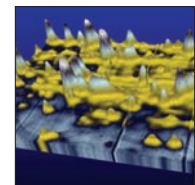
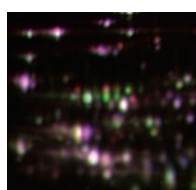
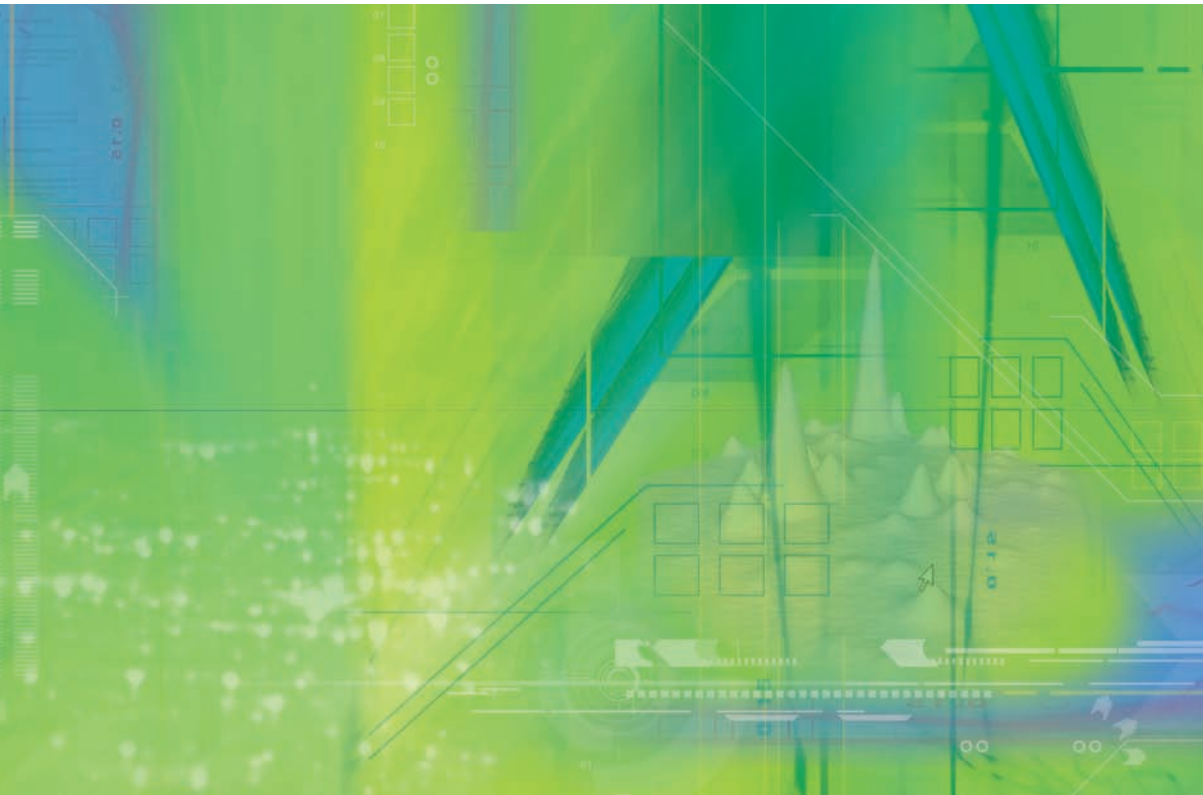
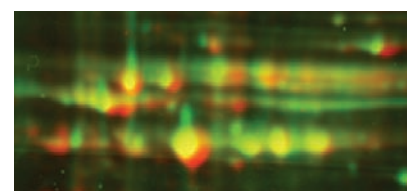


Imaging

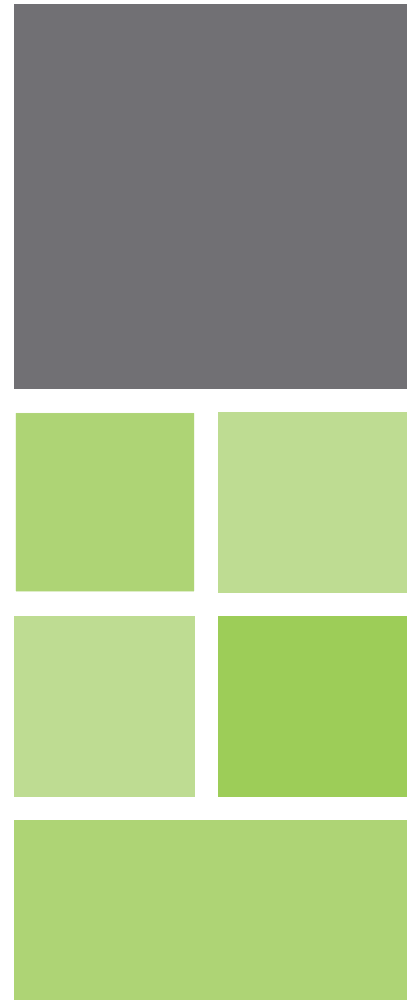


Proteomweaver™ 2-D Analysis Software



Advanced Intelligence for
Proteomics Research





Advanced Proteomics Research

From sample preparation to protein analysis, Bio-Rad's expression proteomics tools provide choices in methodology, protocols, and products. Expression proteomics focuses on three technologies: sample preparation, two-dimensional (2-D) electrophoresis, and imaging and analysis. Each technology is ideally suited to a 2-D gel electrophoresis approach to analysis of sample proteins.

A Total Solution for Expression Proteomics

High-quality sample preparation prior to 2-D electrophoresis is critical for producing meaningful, reproducible results. Bio-Rad offers the most comprehensive suite of products available for general-purpose sample cleanup to enhance resolution, and for sample fractionation to reduce sample complexity.

2-D electrophoresis is one of the most powerful protein separation techniques, separating thousands of proteins simultaneously in a single gel. Bio-Rad's first-dimension electrophoresis system, the PROTEAN® IEF cell and ReadyStrip™ IPG strips, offers the most complete range of pH and strip length for reproducible isoelectric focusing. Second-dimension separation options include a full line of mini, midi, and large format gels for reproducible protein separation. From power supplies to gel stains, Bio-Rad offers a complete workflow solution.

Bio-Rad also offers a broad range of software products for the latest gel analysis and bioinformatics technologies. The scientific expertise of Bio-Rad software engineers ensures reliability and workflow convenience in every product. Proteomweaver 2-D analysis software is an addition to Bio-Rad's portfolio of informatics software products and includes many new tools for advanced 2-D gel analysis and reporting.

Proteomweaver Software for 2-D Gel Analysis

Proteomweaver 2-D analysis software is a powerful software solution that accelerates the process of protein analysis in the area of 2-D gel electrophoresis. Proteomweaver contains leading-edge core algorithms for spot identification, spot quantitation, and spot matching. Proteomweaver is based on precision, speed of execution, and automation, and is able to handle large amounts of experimental data by utilizing advanced database technology.

Precision

- Recognizes and compensates for irregularities in gels
- Recognizes and filters out contamination in gels
- Analyzes and remedies local distortions in gels
- Includes built-in quality controls for spot detection and spot matching

Speed

- No need for precalculation time
- Calculations can be performed immediately upon loading gel images
- Bookmarks enable simple, quick navigation between previously marked locations on gel images

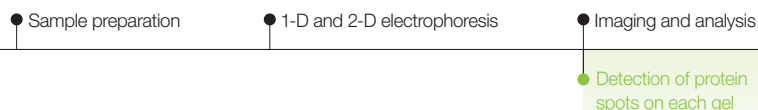
Automation

- Spot detection and matching can be carried out with a single click
- Overlays are calculated to visually inspect matching quality
- Spot detection includes the calculation of spot intensities
- Spot matching includes the calculation of regulation factors
- Spot quantitation is based on precise 3-D analysis

Support for Different Experiment Types

- Standard silver, Coomassie Blue, and SYPRO Ruby gel staining
- Multifluorescence experiments, including difference gel electrophoresis (DIGE)
- Gel puzzling for gels overlapping in pH
- Cross-experiment analysis
- Up to 500 gel images per experiment

Expression Proteomics Workflow



Flexible Image Visualization

- Zoom view
- Fully interactive 3-D view
- Color scheme control
- Filtered image view
- Contrast enhancement
- Overlay images
- Average gel images

Intelligent Spot Detection

- Automatic noise removal
- Extremely fast
- User-friendly and intuitive Spot Detection Parameter wizard
- Spot editing functions with “undo” functionality

Accurate Gel Matching

- Fast and reliable 2-pass algorithm allows matching of every gel with every gel
- Manual match editing
- Unique and editable multimatching with automatic match conflict resolution

Reliable Spot Quantitation

- Spot domain and spot gray value statistics
- Subtraction of local background
- Optional spot statistics in gel
- Optional matching information

Advanced Statistical Analysis

- Configurable spot table for reviewing individual spots
- Bar charts showing spot intensity
- Scatter plot showing average intensities
- Pie chart showing regulation factors
- Pie chart for frequency of spot occurrence
- Statistical functions: Student’s t-test, F test, Kolmogorov-Smirnov test, Mann-Whitney U test
- Analysis sets filter spots according to user-defined properties

DIGE Analysis

- Multifluorescence analysis (MFA) module
- Accurate and highly reproducible results in minutes

Additional Features

- Undo, operations history, and audit trails
- Easy creation of XML- and HTML-based reports for experimental documentation
- Laboratory and proteomic data management
- Cross-referencing to external sequence databases
- Powerful database search interfaces

Supported Databases

- Microsoft Access and SQL Server
- MySQL
- Oracle

Fully Flexible Gel Image Format Compatibility

- Standard 8- and 16-bit TIFF, JPEG, and PNG formats
- All Bio-Rad image formats from Molecular Imager® camera, laser, and densitometer systems
- Fuji FLA logarithmically scaled TIFF format
- GE Healthcare Typhoon square-root encoded gel image

Spot Cutter Integration

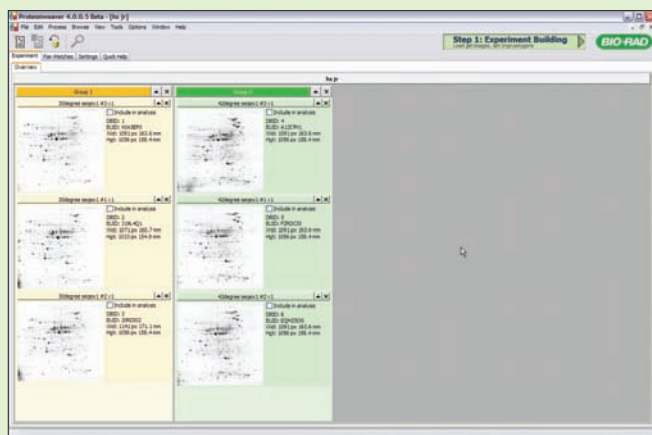
- Bio-Rad EXQuest™ spot cutter
- Bruker Daltonics PROTEINEER proteomics suite
- GE Healthcare Ettan spot picker
- Genetix GelPix system
- Genomic Solutions Investigator ProPic workstation

System Requirements

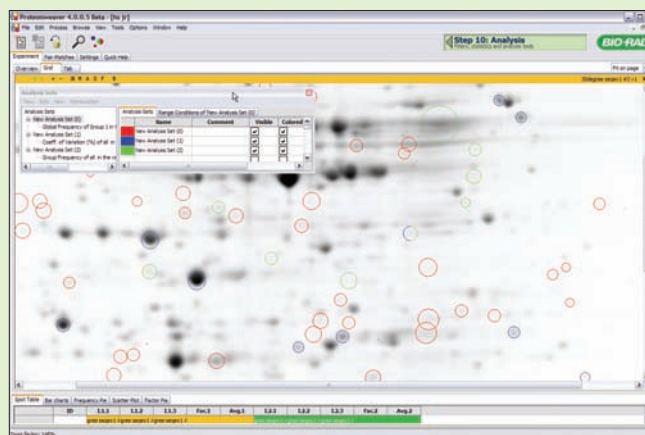
- AMD Athlon XP or Intel Pentium 4 2.4 GHz processor or better
- 1,024 MB RAM
- Graphics card with 3-D support
- Windows 2000 or Windows XP Professional operating system

From images to results in 6 easy steps

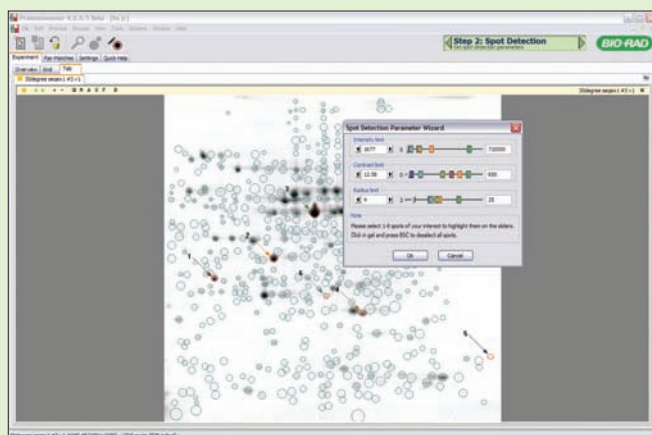
Intelligent 2-D Gel Analysis



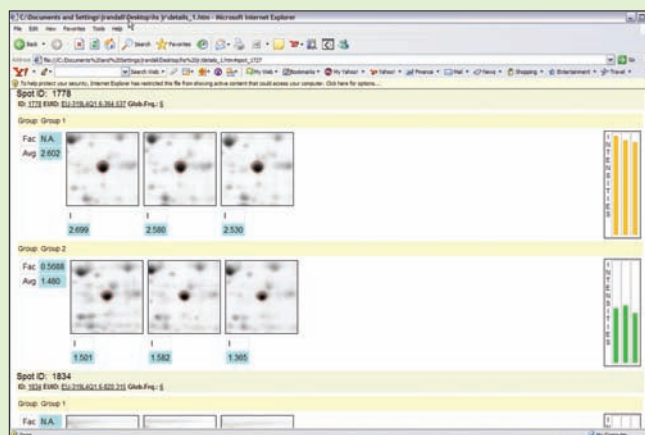
1. View gel images.



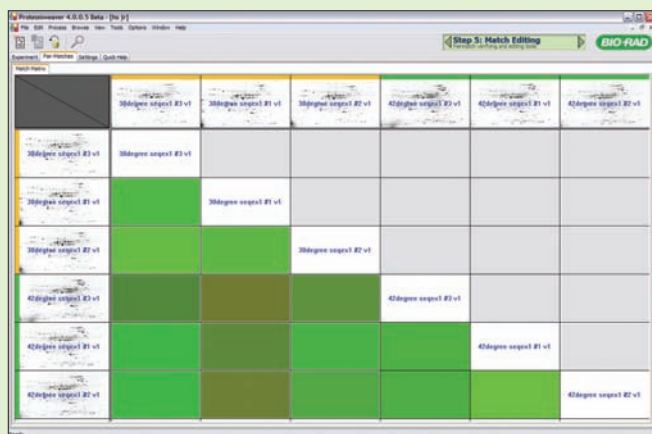
4. Use powerful statistical tools to filter out your spots of interest.



2. Run automatic spot detection and quantitation.



5. Document your results with the comprehensive HTML reporting tool.



3. Match all gels automatically and precisely.



6. Pick interesting spots with any spot cutter.

Proteomweaver 2-D Analysis Software Selection Guide

	Maximum Number of Gels Per Experiment	Concurrent Database Usage	Multifluorescence Analysis (MFA)	Gel Puzzling
Proteomweaver 4.0 Professional	50	Not available	Optional	Not available
Proteomweaver 4.0 Enterprise	100	Included	Optional	Not available
Proteomweaver 4.0 Enterprise Pro	Unlimited	Included	Included	Included

Ordering Information

Catalog # Description

Proteomweaver Professional Software

165-9770 Proteomweaver 4.0 Professional 2-D Analysis Software
165-9775 Proteomweaver 4.0 Professional 2-D Analysis Software, with multifluorescence analysis (MFA)

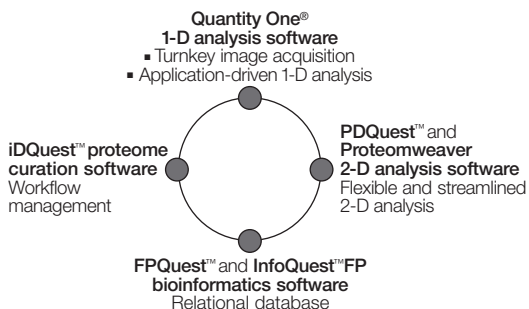
Proteomweaver Enterprise Software

165-9780 Proteomweaver 4.0 Enterprise 2-D Analysis Software
165-9790 Proteomweaver 4.0 Enterprise 2-D Analysis Software, with multifluorescence analysis (MFA)
165-9791 Proteomweaver 4.0 Enterprise With MFA Add 1 User to Network License
165-9782 Proteomweaver 4.0 Enterprise 2-D Analysis Software With MFA 1-User Network License
165-9783 Proteomweaver 4.0 Enterprise 2-D Analysis Software With MFA 2-User Network License
165-9784 Proteomweaver 4.0 Enterprise 2-D Analysis Software With MFA 3-User Network License
165-9785 Proteomweaver 4.0 Enterprise 2-D Analysis Software With MFA 4-User Network License
165-9786 Proteomweaver 4.0 Enterprise 2-D Analysis Software With MFA 5-User Network License
165-9787 Proteomweaver 4.0 Enterprise 2-D Analysis Software With MFA 10-User Network License

Proteomweaver Enterprise Pro Software

165-9798 Proteomweaver 4.0 Enterprise Pro 2-D Analysis Software
165-9799 Proteomweaver 4.0 Enterprise Pro Add 1 User to Network License
165-9792 Proteomweaver 4.0 Enterprise Pro 2-D Analysis Software 1-User Network License
165-9793 Proteomweaver 4.0 Enterprise Pro 2-D Analysis Software 2-User Network License
165-9794 Proteomweaver 4.0 Enterprise Pro 2-D Analysis Software 3-User Network License
165-9795 Proteomweaver 4.0 Enterprise Pro 2-D Analysis Software 4-User Network License
165-9796 Proteomweaver 4.0 Enterprise Pro 2-D Analysis Software 5-User Network License
165-9797 Proteomweaver 4.0 Enterprise Pro 2-D Analysis Software 10-User Network License

Bio-Rad's proteomics software portfolio — the complete and flexible solution.



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Germany 089 318 84 0 Greece 30 210 777 4396 Hong Kong 852 2789 3300 Hungary 36 1 455 8800 India 91 124 4029300/5013478 Israel 03 963 6050
Italy 39 02 216091 Japan 03 5811 6270 Korea 82 2 3473 4460 Mexico 55 5200 05 20 The Netherlands 0318 540666 New Zealand 64 9415 2280
Norway 23 38 41 30 Poland 48 22 331 99 99 Portugal 351 21 472 7700 Russia 7 095 721 14 04 Singapore 65 6415 3188 South Africa 27 0861 246 723
Spain 34 91 590 5200 Sweden 08 555 12700 Switzerland 061 717 95 55 Taiwan 886 2 2578 7189/2578 7241 United Kingdom 020 8328 2000