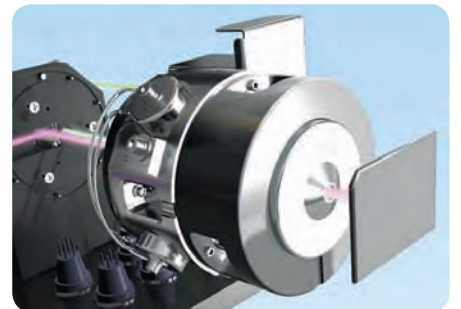




The speed and sensitivity to expand protein discovery

AB SCIEX TOF/TOF™ 5800 SYSTEM

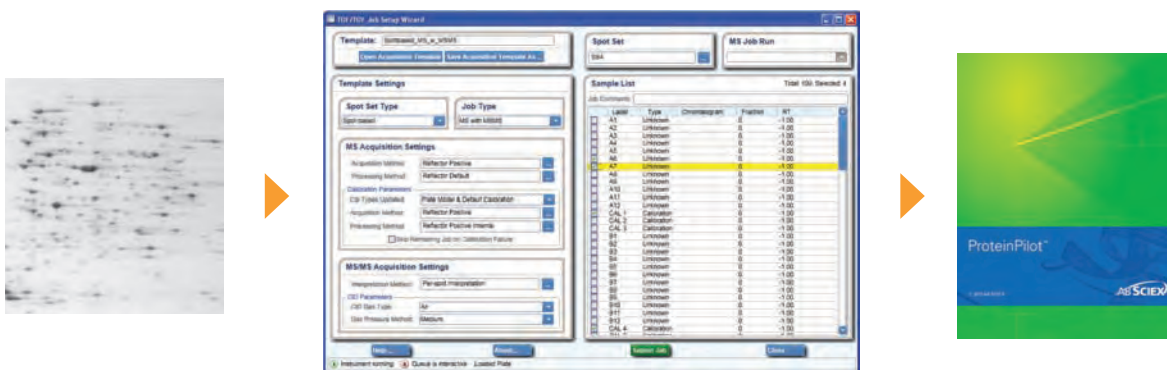
It's just what you expect from the industry leader. Sometimes it takes a leap in instrument performance to expand discovery. The technology that powers the AB SCIEX TOF/TOF™ 5800 System is such a leap. The MALDI speed is unprecedented. The sensitivity is unmatched. The combination is unbeatable. It's the ideal platform for gel spot analysis, protein biomarker discovery and MALDI mass spectrometry imaging.



Technical innovation and intelligent workflows take protein discovery to new levels of speed, sensitivity, and ease of use.

The speed and sensitivity to expand protein discovery

The AB SCIEX TOF/TOF™ 5800 System provides the fastest, most confident path to protein identification and relative quantitation. The system's unmatched speed and sensitivity make it the ideal platform for gel spot analysis, biomarker discovery, and MALDI mass spectrometry imaging.



Simplified workflows and unmatched peptide and protein coverage make the TOF/TOF™ 5800 System ideal for protein identification from gel spots – even in multi-user labs.

Expand your protein biomarker discovery

With more than 10X faster data acquisition and low-attomole sensitivity, the 5800 System maximizes the benefits of the LC MALDI workflow, allowing you to separate mass analysis from the time constraints of LC for more in-depth proteome discovery. The 5800 System has the highest sensitivity and greatest depth of sequence coverage for confident protein detection in complex mixtures and is the optimal solution for isobaric tagging-based, relative quantitation experiments.

Speed and depth of peptide coverage make the TOF/TOF 5800 System a perfect complement to electrospray MS/MS to give you the most complete picture of a given proteome.

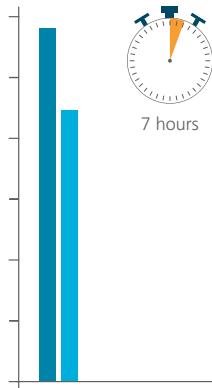
Highest sensitivity and speed for MALDI mass spectrometry imaging

The 5800 System is the fastest, most sensitive, and most flexible platform for MALDI mass spectrometry imaging (MSI) of tissue. It provides high-sensitivity MS and MS/MS data on small molecules as well as peptides and proteins – in any tissue. New MALDI source self-cleaning capabilities overcome the drawbacks of system contamination from tissue samples and significantly increase system up-time and productivity.

EasyAccess™ Protein Identification Wizard

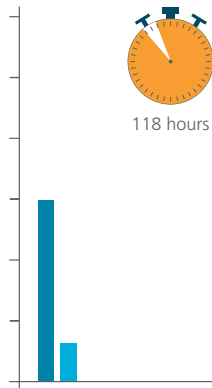
The 5800 System features a simplified workflow for fast, definitive protein identification that is ideal for multi-user environments and gel spot analysis. The EasyAccess Wizard simplifies the selection of parameters for acquisition, and ProteinPilot™ Software makes it easy for non-experts to achieve expert results. Using the QuanTIS™ Precursor Ion Selector prior to fragmentation produces clean, database-searchable MS/MS spectra for the unambiguous identification of peptides and proteins.

5800 System
(Average of 3 runs)



5800 distinct peptides
700 proteins ID'd

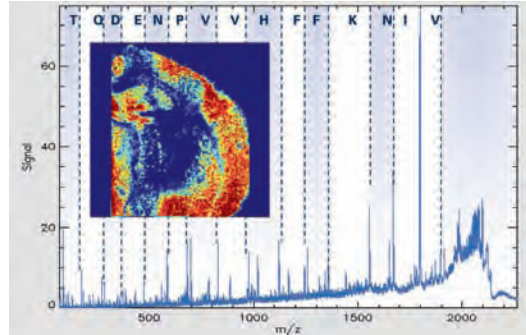
4800 System
(Average of 3 runs)



2975 distinct peptides
442 proteins ID'd

THE TOF/TOF™ 5800 SYSTEM IS MORE THAN 10X FASTER THAN PREVIOUS SYSTEMS, WITH IMPROVED PROTEIN AND PEPTIDE COVERAGE.

MS/MS of peptide m/z 2141.2
in rat brain



THE TOF/TOF™ 5800 SYSTEM HAS THE HIGHEST SENSITIVITY AND SPEED FOR MSI IMAGING, PLUS INCREASED ROBUSTNESS FOR MAXIMUM PRODUCTIVITY.



AB SCIEX TOF/TOF™ 5800 System



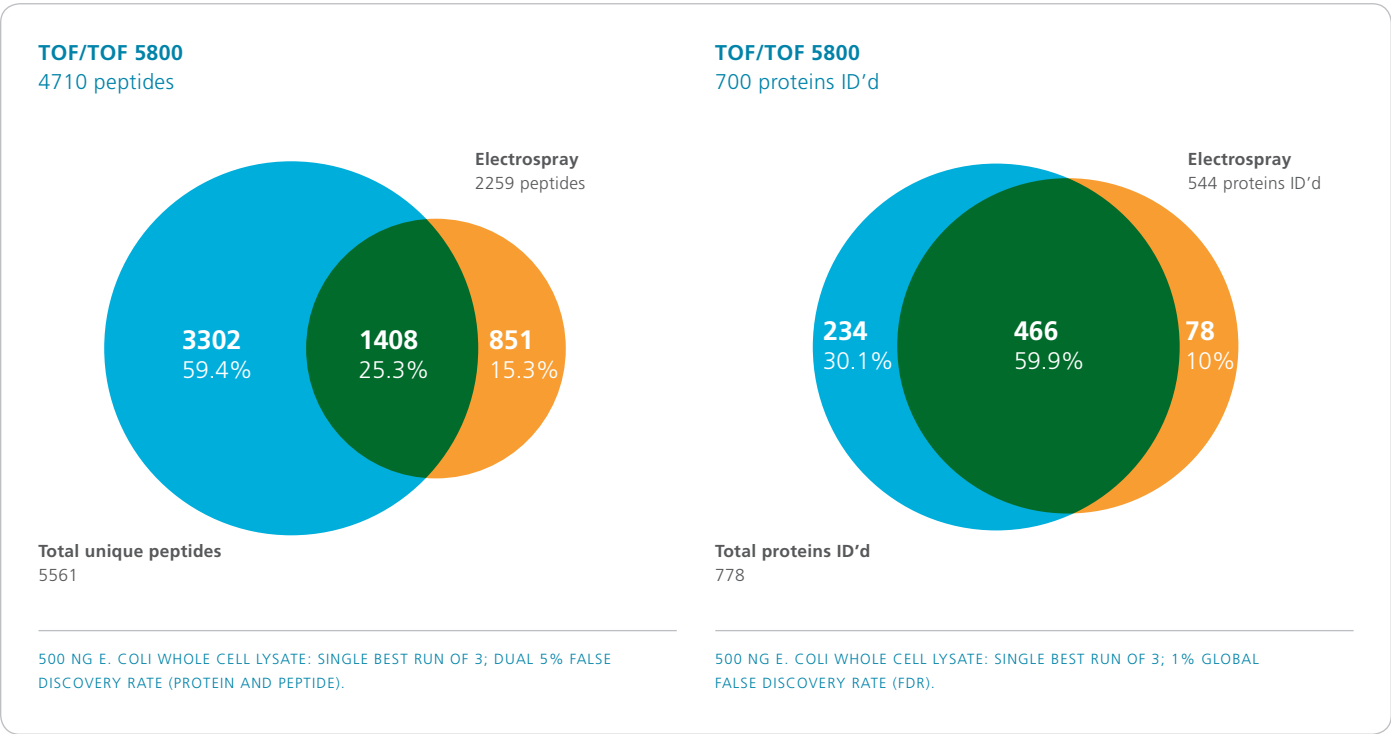
Eksigent nanoLC™-MALDI spotting system featuring the ekspot™ spotter

Performance, ease of use, and reliability help you discover more

The most advanced MALDI system ever, the AB SCIEX TOF/TOF™ 5800 System takes TOF/TOF performance to a new level, enabling you to get more answers, faster. All aspects of the system, including hardware, software, workflows, and support, are perfectly integrated into an optimized platform, so you can discover more from every sample.

See information that you've been missing

Electrospray mass spectrometers only give you part of the picture. TOF/TOF data perfectly complement ESI data for comprehensive, in-depth identification and relative quantitation of proteins in complex samples. Not only do you see more proteins, you see *different* proteins.



The TOF/TOF™ 5800 system provides more and different identifications at the peptide and protein level, making it a perfect complement to electrospray for maximum coverage.

More than 10X faster acquisition

The new 1 kHz OptiBeam™ On-Axis Laser provides lightning-fast ionization, and the innovative DynamicExit™ Algorithm provides higher ID confidence with fewer laser shots. Now, LC TOF/TOF analysis speed rivals that of LC ESI MS/MS.

Easier to use

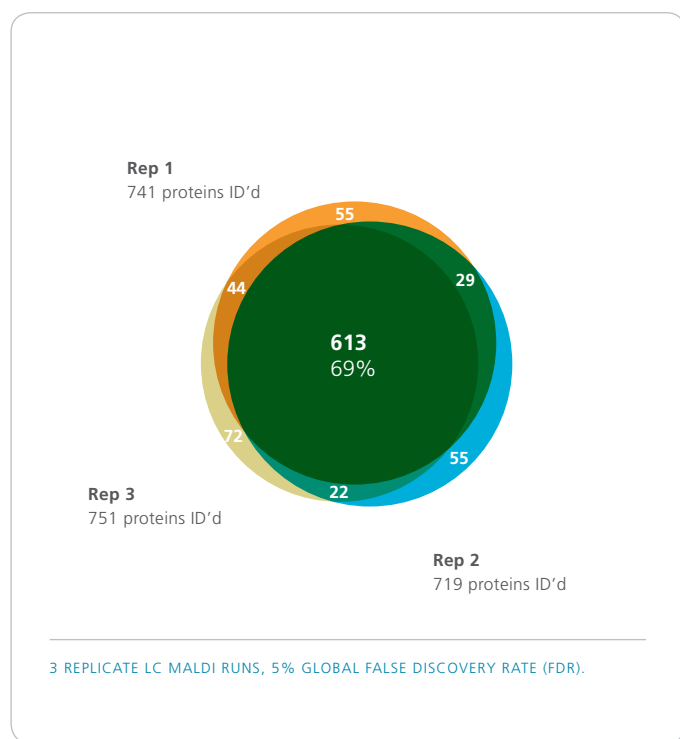
The new EasyAccess™ Wizard has a single-page interface that quickly guides you through set up of acquisition parameters. Powerful, yet simple-to-use ProteinPilot™ Software is complemented by application-specific software to ensure that getting meaningful results is fast and easy.

Longer continuous run times

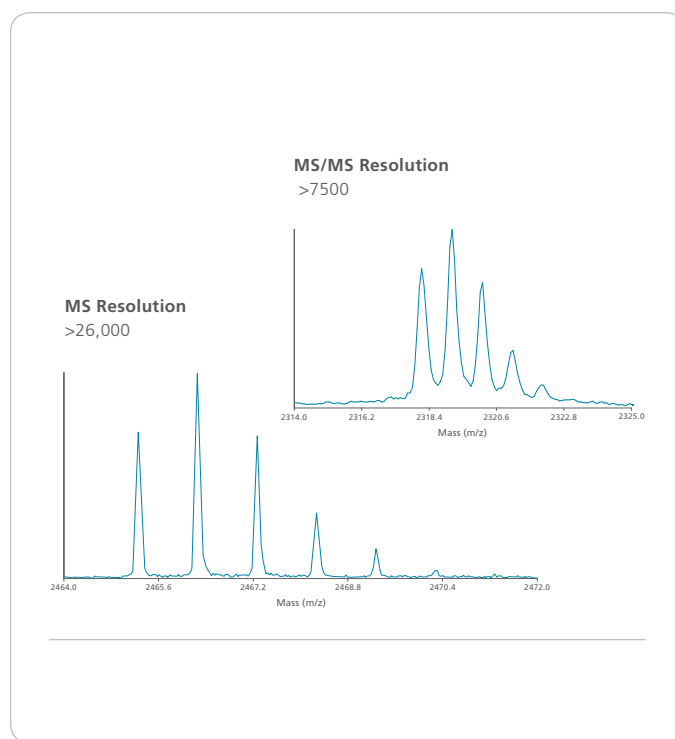
A user-programmable baking routine cleans the MALDI source when it's convenient for you, and the heated source mirror is continually cleaned. Interrupting your experimental sequence to keep the instrument running optimally is now a thing of the past.

Better performance

A new reflectron mirror design and a 1000 MHz digitizer provide higher resolution in MS and MS/MS modes. That translates into increased system performance and high-quality, high-confidence results.



Innovative technology and intelligent workflows combine to bring new levels of efficiency and reproducibility to the LC MALDI workflow.



The innovative system design results in higher performance, so you get better results.

Industry-leading TOF/TOF™ System technology – from the company that invented it

The AB SCIEX TOF/TOF 5800 System continues the legacy of innovation that made AB SCIEX the world leader in life science mass spectrometry. Our dedication to bringing you best-in-industry solutions is evident in our designs.

OptiBeam™ On-Axis Laser Irradiation

Unique on-axis laser irradiation increases sensitivity in both MS and MS/MS modes by 10X over systems without an on-axis laser.

New 1 kHz OptiBeam™ On-Axis Laser

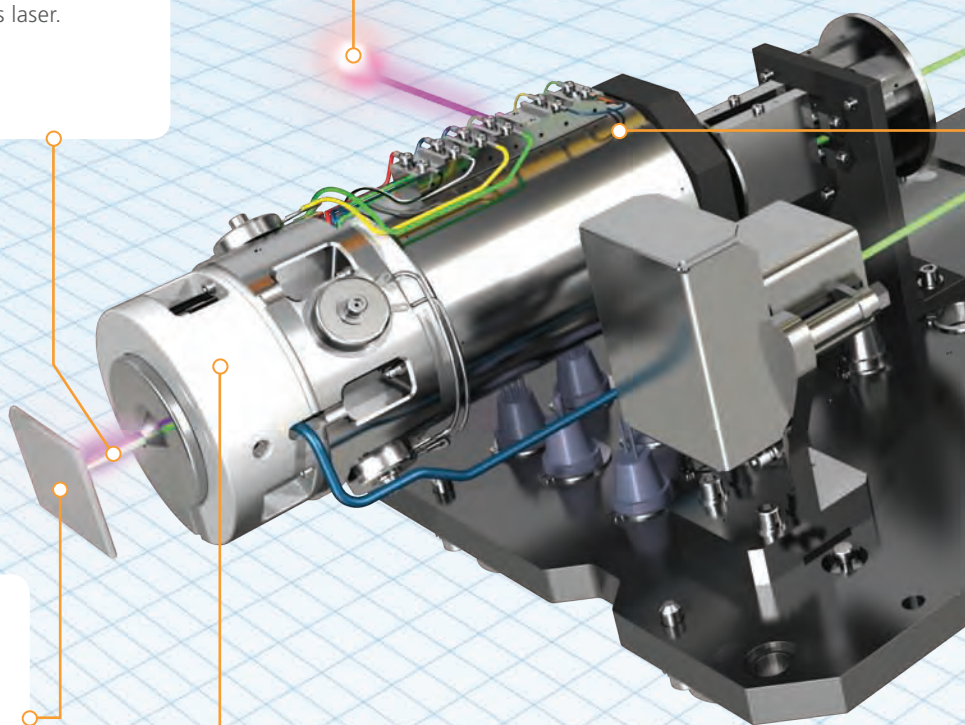
The newly designed 1000 Hz high-repetition laser speeds up acquisition and prolongs laser life. The repetition rate of the laser is tunable in MS and MS/MS modes for optimal results in all applications.

Continuous sample plate stage motion

This feature allows for continuous data acquisition during stage motion and computes the location of data acquisition based on a random array of vectors, further reducing acquisition time and improving throughput.

Self-cleaning MALDI source

A user-programmable heating procedure keeps the source clean from matrix effects. Programmed cleaning between experiments ensures maximum instrument up-time and productivity.



Quantis™ Precursor Ion Selector

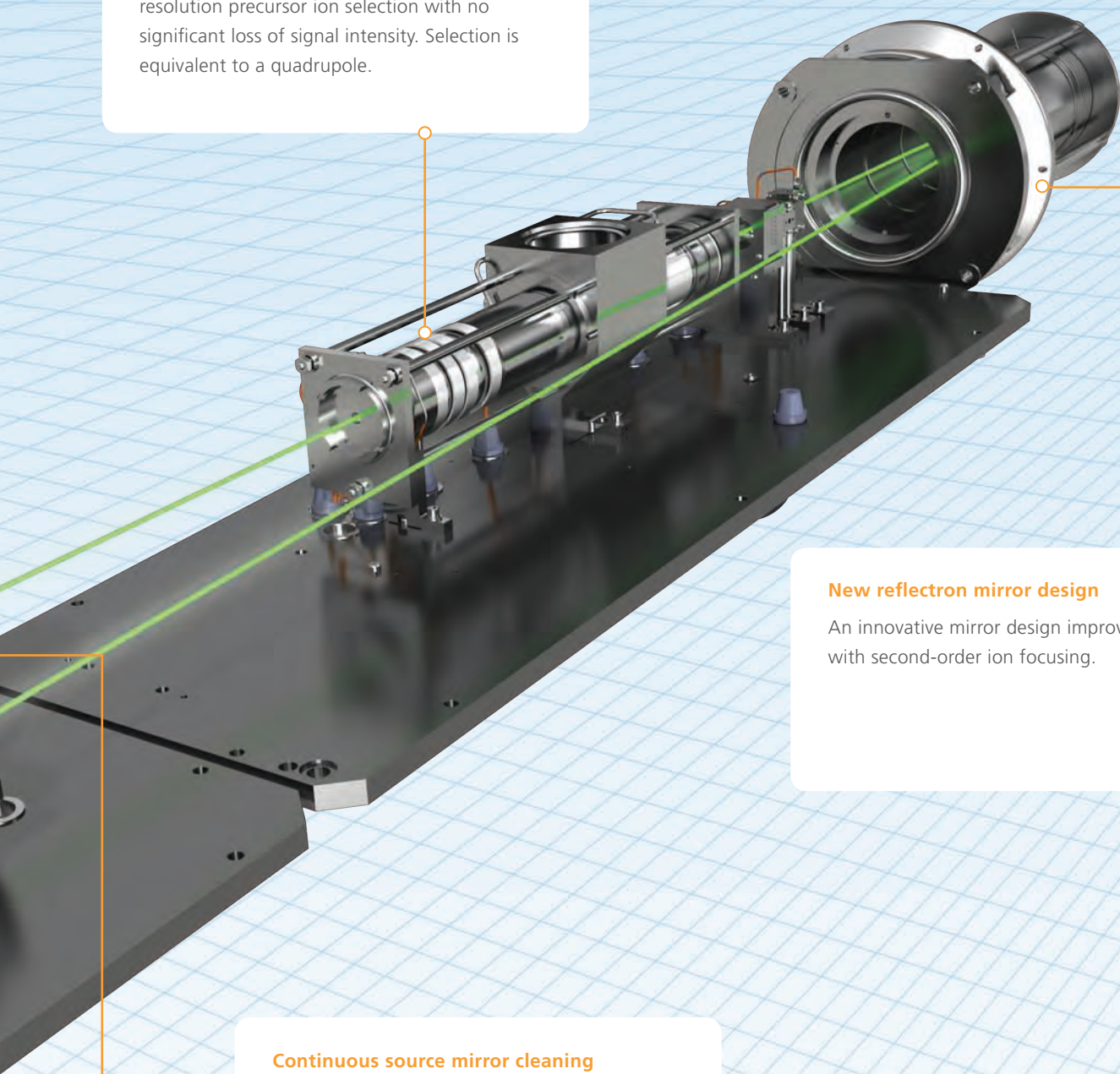
Novel timed-ion selector optics provide high-resolution precursor ion selection with no significant loss of signal intensity. Selection is equivalent to a quadrupole.

New reflectron mirror design

An innovative mirror design improves resolution with second-order ion focusing.

Continuous source mirror cleaning

Continuous heating of the source mirror ensures optimal day-to-day, week-to-week performance for maximum up-time and throughput.



Intelligent use of technology

The most advanced MALDI system ever, the AB SCIEX TOF/TOF™ 5800 System takes TOF/TOF performance to a new level to give you answers faster. All aspects of the system, including hardware, software, workflows, and support, are perfectly integrated into an optimized platform, so you can discover more from every sample.

Ideal for isobaric tagging reagents

The 5800 System is designed to provide the highest sensitivity and most reproducible results from isobaric tagging workflows. No additional hardware modifications or add-ons are required to achieve optimal results.

Get the greatest depth of proteome discovery with the LC MALDI workflow

The LC MALDI workflow separates the time constraints of LC from the mass analysis. With your chromatographic run “stored” on a MALDI plate, the 5800 System automatically spends the time required to get the maximum information from a given region or time point – and still gets the results faster than ever before.

DynamicExit™ Algorithm

The DynamicExit™ Algorithm speeds analysis by minimizing the number of laser shots. Once a protein has been confidently identified, the system selects the next precursor ion.

The LC MALDI workflow maximizes depth of peptide coverage by separating mass analysis from the time constraints of LC.

ADVANTAGE OF DYNAMICEXIT™ ALGORITHM

	5800 without DynamicExit™			5800 with DynamicExit™		
	PROTEIN GLOBAL FDR	PEPTIDES GLOBAL FDR (1%)	TIME (HR)	PROTEINS GLOBAL FDR (1%)	PEPTIDES GLOBAL FDR (1%)	TIME (HR)
RUN 1	632	5589	15.1	618	5797	7.0
RUN 2	560	4867	15.6	554	5425	8.0
RUN 3	544	4783	14.4	572	5684	6.6
AVERAGE OF 3 RUNS	579	5080	15	581	5635	7.2

One Touch Productivity

Powerful, easy-to-use software helps ensure that you will get meaningful results, not just data. Designed for efficiency and throughput, our software maximizes the speed and sensitivity of the AB SCIEX TOF/TOF™ System for unmatched productivity and performance.

Protein identification



ProteinPilot™ Software streamlines protein identification and quantitation, allowing non-experts to obtain confident protein identifications and accurate protein quantitation. The software combines the industry-standard Mascot search engine from Matrix Science and the revolutionary new Paragon™ Algorithm with the industry-leading Pro Group™ Algorithm. The software searches for hundreds of biological and other modifications and can distinguish protein isoforms.

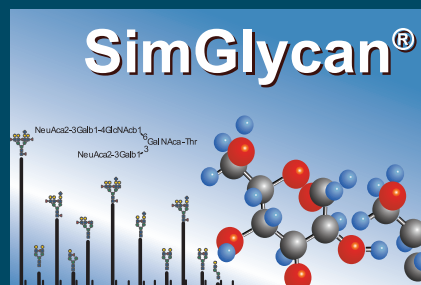
ProteinPilot™ Software is further optimized with improved quantitation algorithms for isobaric tagging reagents, fully integrated false discovery rate analysis, and new support for gel-based workflows. The software also extends speed and scalability, with hardware support for 8-core processing and 64-bit OS. ProteinPilot Software enables generic input for non-AB SCIEX instruments via .mgf format, allowing you to use ProteinPilot Software for all mass spectrometry instruments in your lab.

Tissue imaging



Easy-to-use TissueView™ Software displays the spatial location and intensity of proteins and small-molecule compounds in all tissue types. The software provides a seamless link between optical images, MS images, and MS and MS/MS spectra. TissueView Software also incorporates critical features such as co-registration of images, calculation of areas, creation of multiple and layered overlays, and 3D viewing.

Carbohydrate analysis



SimGlycan® Software (a product of PREMIER Biosoft International) predicts the structure of a glycan from the MS/MS data acquired by AB SCIEX mass spectrometers to facilitate the study of glycosylation and post-translational modifications. The software matches glycan MS/MS data with its own database of theoretical fragmentation spectra of over 8,000 glycans, using a proprietary ranking and scoring algorithm. You can search the database using ID, sequence, composition, or mass.

Polymer analysis



Sierra Analytics Polymerix™ Software provides sophisticated tools for homopolymer composition analysis and deconvolution of homopolymer mixtures. It calculates complete assignments of spectral features to individual series components and presents these results in complementary graphical and tabular forms. The software can import mass spectra file formats from the Data Explorer® Analysis Software and supports data from all AB SCIEX MALDI TOF and TOF/TOF™ Platforms.

You invest in our technology. We invest in your success.

As the world leader in mass spectrometry, AB SCIEX solutions are backed by the industry's most extensive service and support organization. With a network of service professionals, experienced compliance specialists, and over 150 PhD application scientists worldwide, we are dedicated to supporting your technical needs and helping you get the most out of your AB SCIEX systems.

AB SCIEX service professionals are recognized as the most highly qualified in the industry. They are certified on our instrument platforms through a rigorous 4-step certification program, with re-certification occurring every two years. This award-winning program helps to ensure that you receive the most efficient, highest-quality, and most up-to-date service available for AB SCIEX products and technology. Choose from flexible service plans and a variety of services for the right level of support for your laboratory's needs and budget.

Our customer support network is available to provide expert assistance in the use and application of AB SCIEX products through a comprehensive range of services, including application support, technical service, and training.

Whether you access our service and support team by phone, email, on-site visits, or through our innovative remote monitoring technology, you can be confident that the AB SCIEX organization will be there for you.

For more information, visit www.absciex.com

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