

LabKey Proteomics Solutions

Proteomics Solutions FAQ

Q: WHO IS LABKEY?

LabKey is a privately held software and professional services company based in Seattle, WA. The company provides LabKey Server, a powerful open source platform for processing and analyzing biomedical research data. To address specialized research requirements and unique workflows, LabKey software developers work hand-in-hand with scientists and statisticians alike to make enhancements to the platform. These enhancements become freely available to the broader scientific community, providing an ever-more powerful foundation for future research. The company's primary customers are biomedical researchers who need to integrate information from observational studies with large volumes of experimental data from modern, high-through technologies (mass spectrometry, flow cytometry, microarray, microplate, ELISpot, Luminex, etc.).

Q: WHICH TYPES OF LABS USE LABKEY'S PROTEOMICS SOLUTIONS?

LabKey's proteomics solutions are in full production today at many biomedical research labs that use tandem mass spec in their research, from biomarker research and metabolic disease screening to pharmaceutical and clinical research. Customers who benefit the most from LabKey Server often:

- ▶ Run hundreds of mass spec runs weekly
- ▶ Find organizing, retrieving and comparing a growing numbers of runs to be challenging
- ▶ Routinely encounter bottlenecks in data processing
- ▶ Have difficulty sharing data and results with collaborators

Q: CAN YOU GIVE ME EXAMPLES OF WHO THESE CUSTOMERS ARE?

LabKey Server is in full commercial production at Fred Hutchinson Cancer Research Center, Cedar Sinai Medical Center, National Institute of Health, Harvard Partners, University of British Columbia, University of California at Davis, Indiana University, University of Washington, the University of Michigan

and many other leading facilities involved in proteomics research.

Q: WHAT ARE SOME OF THE KEY FEATURES OF LABKEY'S PROTEOMICS SOLUTIONS?

LabKey's proteomics solutions provide web browser access to powerful tools for managing, analyzing, and sharing high volumes of tandem mass spectrometry data. LabKey Server leverages a fully automated, distributed processing pipeline. It searches for peptides against FASTA sequence databases using the free, open-source X! Tandem™ search engine or, optionally, the industry-leading SEQUEST™ or Mascot™ engines. The pipeline also handles the conversion of raw mass spec data into the formats required by tools that are typically run on search output, such as the Trans Proteomic Pipeline. Quantitization tools such as PeptideProphet™, ProteinProphet™ and XPRESS™ help enrich raw search results for human analysis and run comparison. Additionally, the configurable pipeline allows you to plug in your own custom analysis programs.

Q: WHAT ARE SOME OF THE OTHER FEATURES OF LABKEY'S PROTEOMICS SOLUTIONS?

LabKey Server displays processed results in your web browser, enabling you to filter, sort, customize, compare, and export analysis lists and runs from an entire experiment. You can share data securely with collaborators inside or outside your organization while exercising fine-grained control over access permissions.

Q: WHAT ARE THE PRIMARY BENEFITS OF LABKEY'S PROTEOMICS SOLUTIONS?

Research labs and institutes that need to automatically process, distribute, centralize and securely share terabytes of proteomics data are key beneficiaries of these solutions. Prior to LabKey Server, these labs typically spent inordinate amounts of time uploading data to FTP servers, loading data into internal

databases, processing and analyzing data using desktop tools, then finally distributing results. With LabKey Server, all data records are automatically imported into a relational database, making raw mass spec data quickly available for human analysis. LabKey Server can also distribute pipeline processing across vast arrays of computers, so you can start analyzing your data in hours instead of days for most large experiments. LabKey Server eliminates inefficiencies by automatically searching against FASTA sequence databases (using the X! Tandem, Sequest or Mascot search engines) and independently scoring the results (using PeptideProphet). The net result is less time wasted managing large volumes of data and more time available for performing the experiments and analyses that advance your research objectives.

Q: ARE THERE ANY OTHER IMPORTANT BENEFITS?

Absolutely. LabKey Server-based solutions are accessed through common web browsers on Windows, Macintosh and Linux devices. Authorized collaborators can securely access shared data and views whenever they want and wherever they are. This makes LabKey solutions ideal for multi-center studies or for core labs seeking to distribute data to customers in remote locations.

Q: DOES LABKEY OFFER PROFESSIONAL SERVICES IF WE NEED TO CUSTOMIZE THE SYSTEM?

Yes, LabKey's professional services team routinely engages with clients to add new features and capability to the software via custom development projects. LabKey also provides training, update assistance and software support and maintenance programs to help our clients get started rapidly with minimal disruption to their labs.

Q: HOW MUCH DO LABKEY SOLUTIONS AND SERVICES COST?

It really depends on what you are looking for. We have clients who have invested hundreds of thousands of dollars over multiple years to build out feature-rich solutions optimized for their exact workflows. In contrast, we have clients who invest tens of thousands of dollars to optimize a single specific workflow and accompanying report.

Q: WHAT PROGRAMMING LANGUAGE IS USED TO CREATE LABKEY SOLUTIONS?

LabKey Server is written in Java and runs on most modern operating systems, including Windows, Linux, Solaris, and Mac OSX. It can be customized and extended by skilled Java programmers, and has a Javascript API so that developers can quickly develop and deploy new functionality.

Q: WHAT TYPE OF COMPUTER INFRASTRUCTURE DO I NEED TO RUN LABKEY SERVER?

LabKey Server acts as a web server and relies on a relational database server. It can be installed and run on a stand-alone PC, but is most commonly deployed in production in a networked server environment. Single laboratory installations can be run on a single dedicated computer. Core proteomics facilities use LabKey Server to manage cluster pipelines with hundreds of machines.

Q: WHAT SKILLS DOES MY LAB NEED TO MANAGE ITS LABKEY SOLUTION?

LabKey's proteomic solutions are server-based software, so your installation will interact with other computers on your network. You should plan on identifying personnel to perform two roles: network administrator and system power-user.

Q: WHERE CAN I GET MORE INFORMATION?

More information about LabKey's solutions and services are available on the LabKey web site at www.labkey.com, by emailing info@labkey.com or by calling a LabKey solutions specialist at **+1 (206) 701-9975**. 