Agilent 6545XT AdvanceBio LC/Q-TOF System

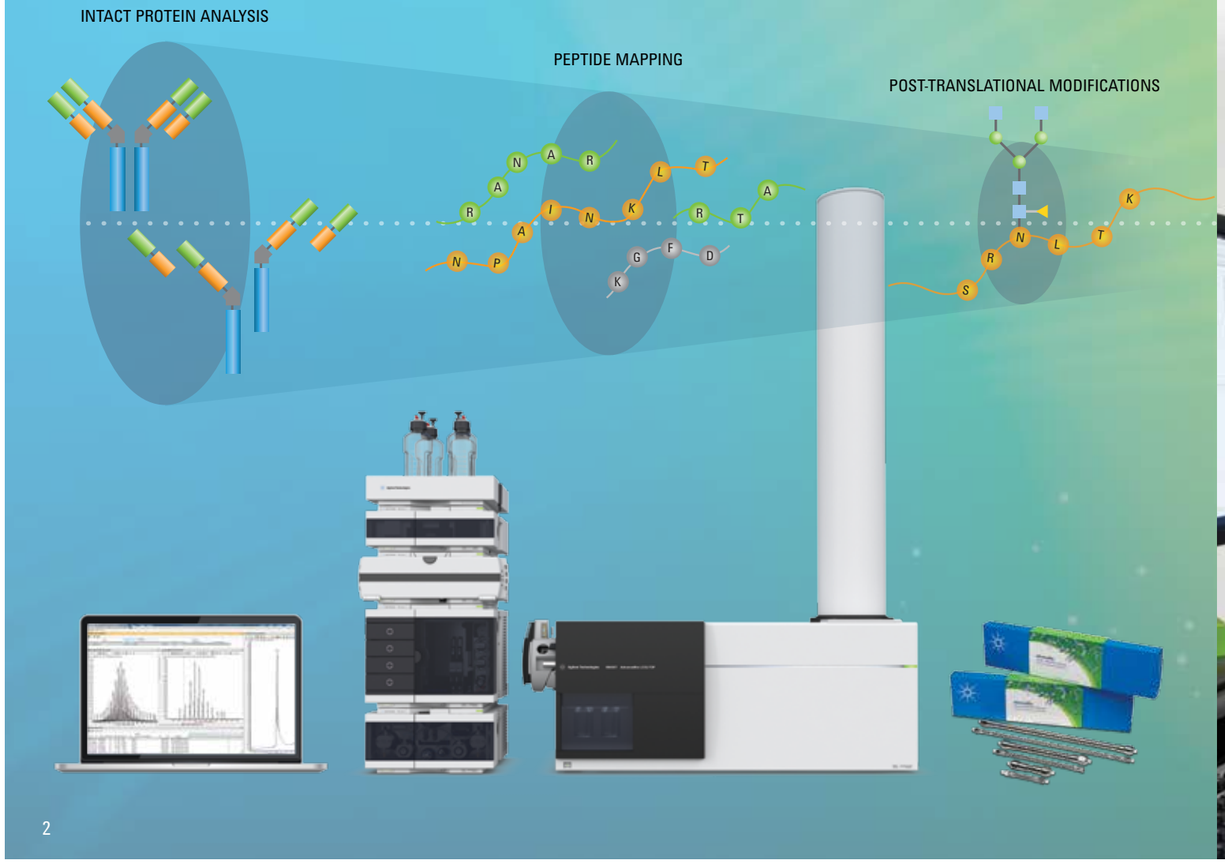
DESIGNED FOR BIOPHARMA

Agilent Technologies

ONE INSTRUMENT, MULTIPLE WORKFLOWS

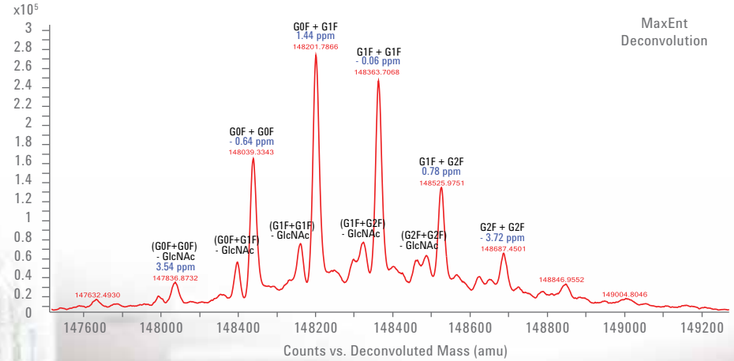
Characterizing proteins requires multiple approaches to access multiple levels of information; you can examine intact proteins, map peptide sequences, or analyze post-translational modifications. Each workflow presents unique challenges, but now you can tackle them with one instrument: the Agilent 6545XT AdvanceBio LC/Q-TOF system. In fact, Agilent has everything you need to prepare, separate, detect, and analyze biomolecules—with dedicated reports to share your results.

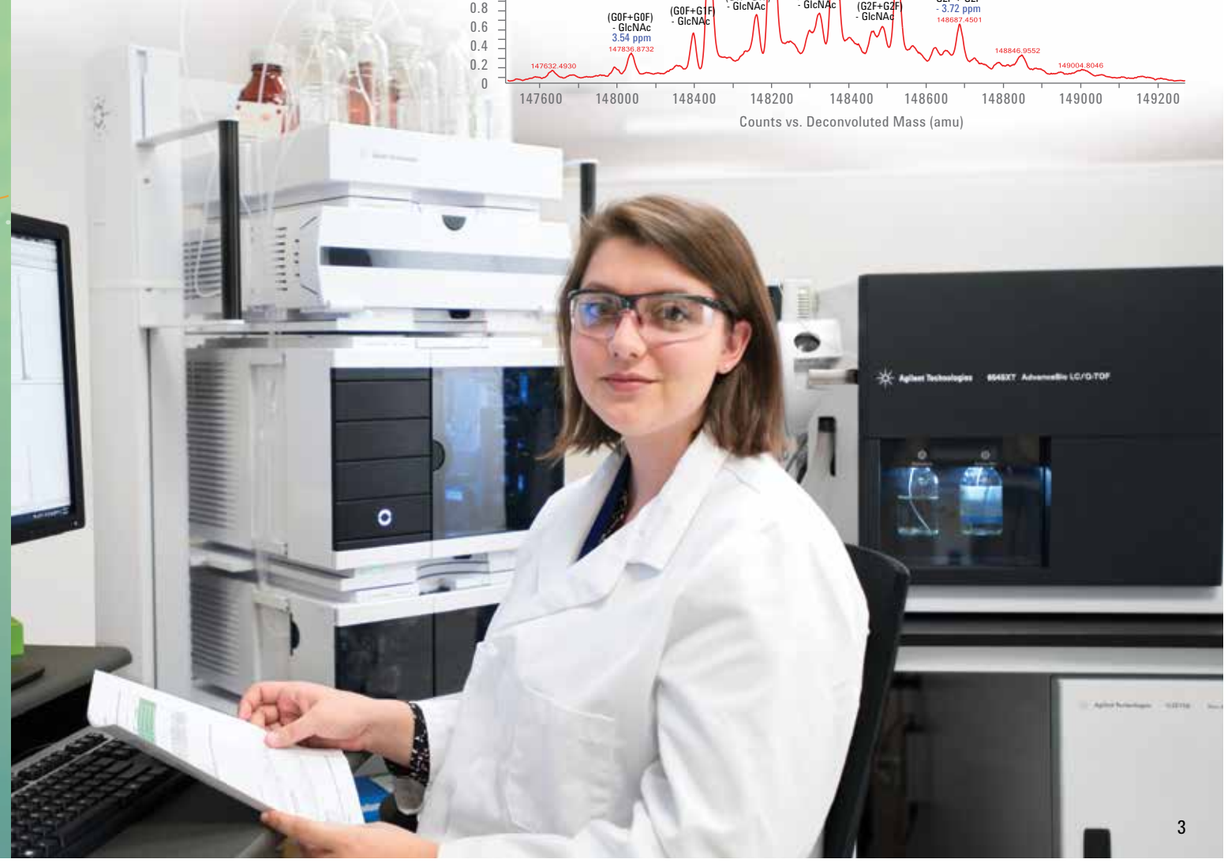
Full characterization means you need a workflow to analyze your protein at every level. Every bit of information is critical to push your project forward. Whether you are analyzing a single sample or freezer full of plates, the 6545XT provides methods for each level of analysis to get you up and running fast.



INTACT PROTEIN ANALYSIS

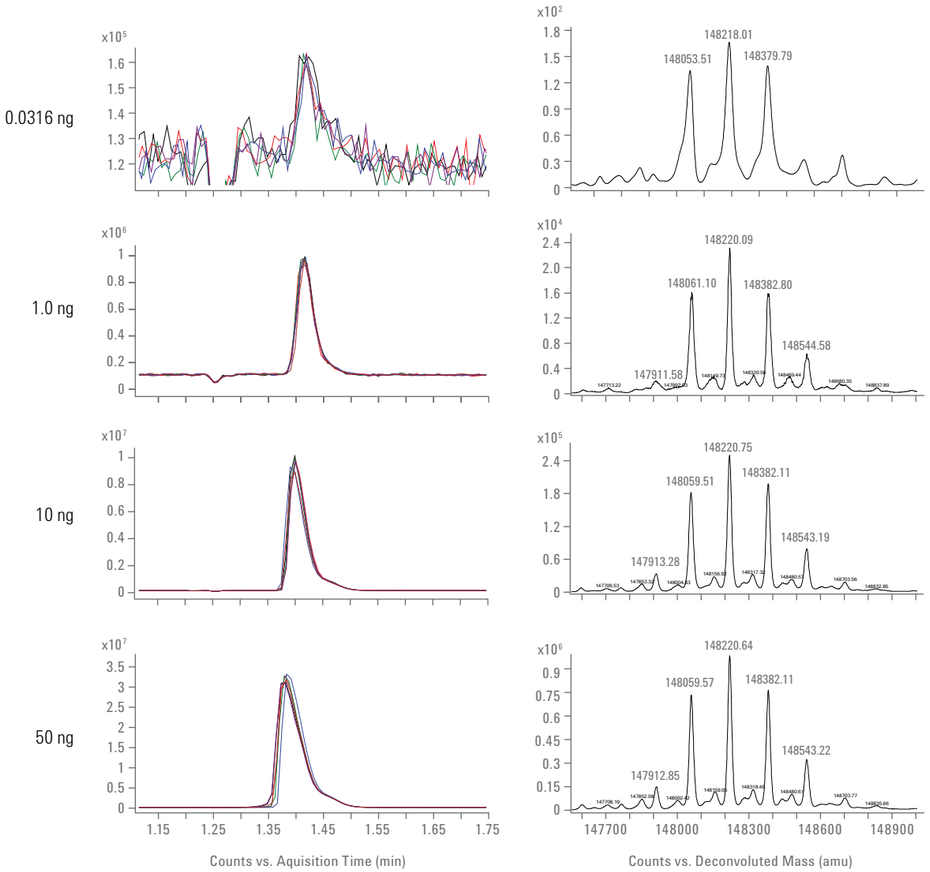
With design innovation specifically for large molecule analysis, the 6545XT LC/Q-TOF gives you accurate mass measurements down to low ppm levels. Excellent mass sensitivity and data processing that preserves fine detail allows you to detect and monitor low-level isoforms at the intact level. Need to analyze noncovalent protein complexes? The 6545XT LC/Q-TOF has a mass range that extends up to 30,000 m/z. Optimizing your system for intact proteins is easy with SWARM autotune.





ANALYTICAL SENSITIVITY

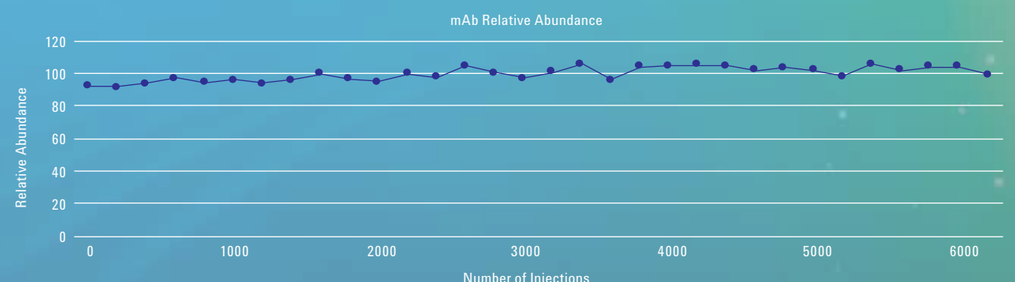
We engineered the 6545XT LC/Q-TOF hardware and software to ensure you can provide confident answers to your team, even when faced with low nanogram quantities of protein.



Replicate injections of trastuzumab from 50ng down to 0.0316ng on column.

REPRODUCIBILITY

Every sample you have to reanalyze, every minute you have to spend maintaining your analytical laboratory, is time you aren't moving forward on your lab's goals. With the 6545XT LC/Q-TOF, you can be sure that your instrument is going to be ready for your samples, and the data you report is accurate.



Over 6,000 replicate injections of 1ug trastuzumab showed no degradation in response.

PEPTIDE MAPPING

Whether you are performing routine sequence confirmation, or faced with the challenge of hard-to-detect peptides, the 6545XT LC/Q-TOF along with Agilent MassHunter software is ready to help. With MassHunter BioConfirm, you can quickly confirm sequence coverage—automatically—and with MassHunter Walkup, users of any experience level can get LC/MS protein sequence data. Useful acquisition tools such as iterative MS/MS and automatic sequence matching can help you pull out low-level peptides and improve identification for hard-to-detect peptides.

Every molecule presents different challenges. The 6545XT gives you the flexibility to fit your approach to each challenge with the same set of software tools.

SAMPLE PREP:
AssayMAP Bravo

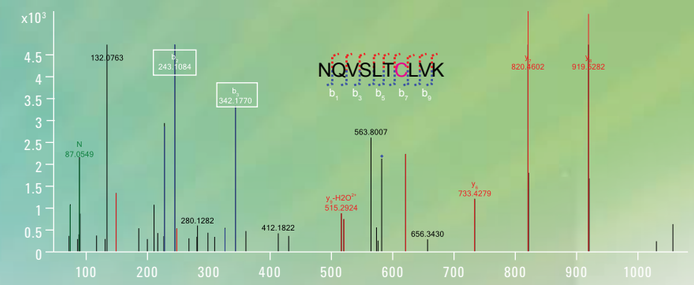
SEPARATION:
1290 Infinity II UHPLC and AdvanceBio columns

ANALYZE:
BioConfirm Software

DETECT:
6545XT AdvanceBio LC/Q-TOF

POST-TRANSLATIONAL MODIFICATIONS

To fully understand the precise composition of your protein, you need to see more than just the backbone structure. You need to know what modifications and variations are occurring during expression. Whether that means characterizing levels of oxidation, localizing deamidation sites, or profiling glycan structures, the 6545XT LC/Q-TOF was designed to help. Autotune unlocks the full potential of the system by flexibly optimizing for large proteins or small labile structures such as glycans.



Counts vs. Mass-to-Charge (m/z)

Confirming location of deamidation by MS/MS information.

AGILENT MASSHUNTER SOFTWARE

BioConfirm software

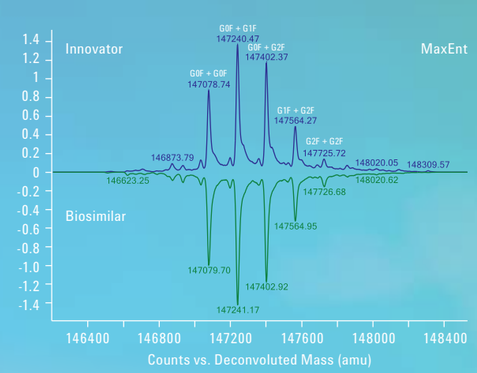
- Automatic data processing for intact protein and peptide digests
- Review at a glance with green-yellow-red color coding of mass and sequence match results
- Optional method control by authorized administrator

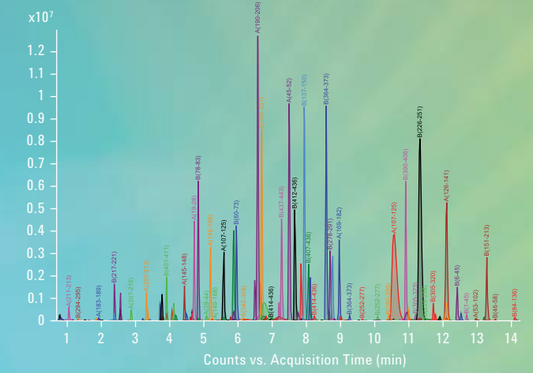
Walkup software

The MassHunter Walkup environment provides sample submitters access to expert LC/MS capabilities without requiring them to be LC/MS experts. Biologists and Protein Scientists can automatically receive an annotated report with results for intact protein analysis, PTMs, peptide mapping and DAR values while having complete control of the sample's preparation, treatment and storage prior to analysis.

BIOLC COLUMNS

Agilent BioLC columns, part of the InfinityLab family, address the need for accurate data and innovative chemistries. They provide the flexibility to use mobile phases compatible with mass spectrometry as well as other detection platforms.





More details on Agilent's complete portfolio of reverse phase columns for biomolecule separations can be found in publication number 5991-0625EN.

COMPREHENSIVE SOLUTIONS

Automated protein sample preparation

With the Agilent AssayMAP Bravo automated liquid handling platform, you are just one click away from your protein sample preparation with workflows that include:

- Affinity purification
- Enzymatic digestion
- Reversed-phase cleanup
- Phosphopeptide enrichment
- Peptide fractionation

Agilent AssayMAP Bravo platform

Agilent 1290 Infinity II LC system

Agilent offers the most comprehensive portfolio of analytical LC systems optimized for unparalleled performance when interfaced to a mass spectrometer. The 1290 Infinity II LC system represents the next generation LC for ultrahigh-performance liquid chromatography with superior reliability. Each 1290 Infinity II module is optimized to deliver the highest level of efficiency, making it the perfect match for the 6545XT AdvanceBio LC/Q-TOF system.

Agilent 1290 Infinity II LC system

Agilent CrossLab

AGILENT CROSSLAB SERVICES

Installation and maintenance may be the first thing you think of when it comes to service, but that is just the beginning. Agilent CrossLab Method & Application Services give you access to a network of biopharma experts who confidently deploy the latest productivity enhancements and ensure the best outcomes—from sample preparation to final report. Our team delivers an on-site curriculum for intact protein or peptide mapping workflows to help labs like yours achieve their analytical objectives, save money, and increase productivity.

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Printed in the USA April 25, 2017
5991-7915EN

Agilent Technologies