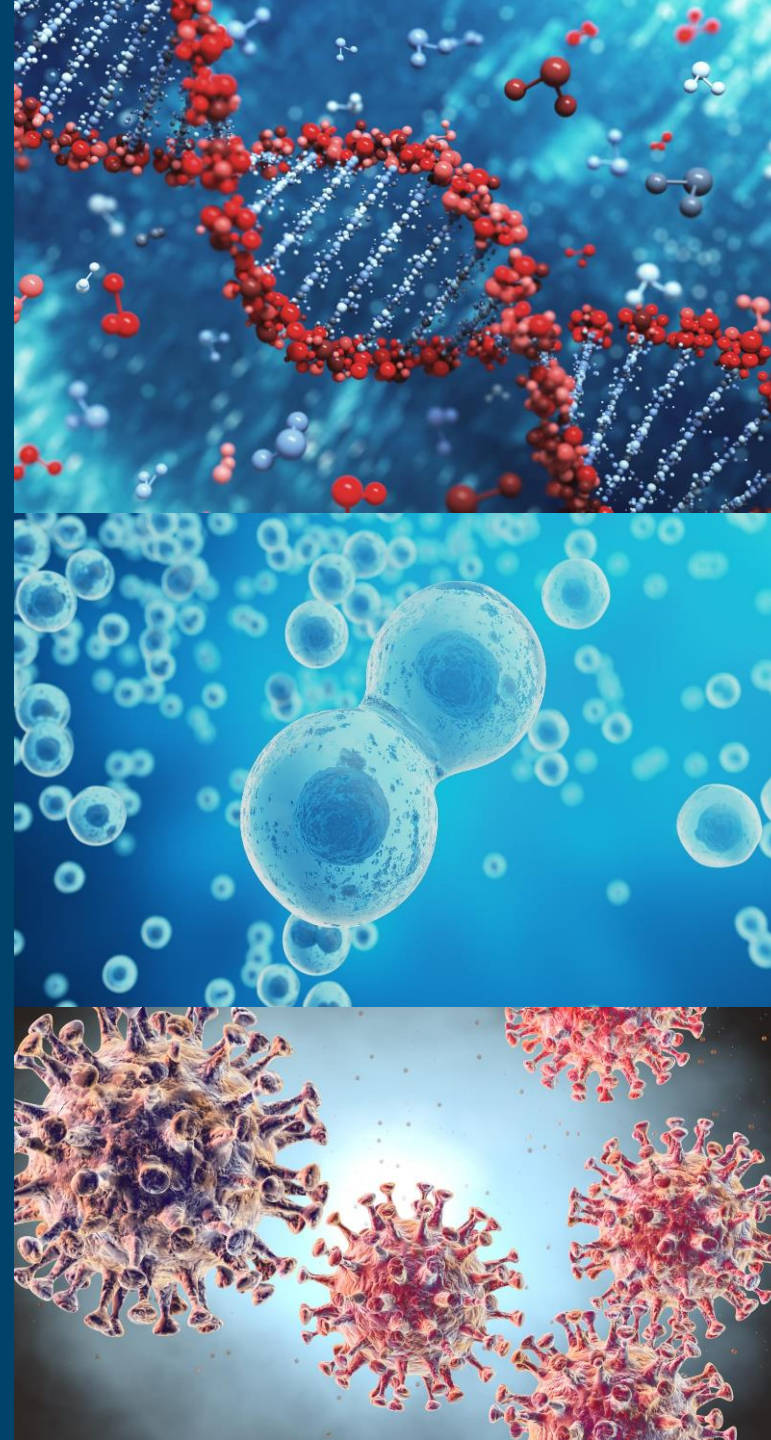


Analytical Tools for Characterizing Therapeutic Products

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Biopharma Business Development Manager
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Agilent Products and Services for Pharma and Biopharma


Instrumentation and software solutions for Discovery, Development and Manufacturing Labs




Services, support and financial solutions




Pharmaceutical




Protein Therapeutics



DNA/ RNA Therapeutics



Cell Therapeutics



Vaccines

Chromatography

Software Products

Agilent CrossLab

Mass Spectrometry

Compliance

Certified Pre-Owned Instruments

Spectroscopy

Alternative Buying Models

Sample Preparation and Quality Control

Cell Analysis

Automation

Genomic Analysis

Serving the **Entire Pharma and Biopharma Value Chain**

Research/Discovery

Development

Quality Assurance and
Compliance



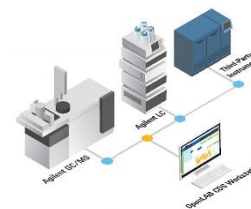
Sample preparation



Separation



Detection



Data analysis



Reporting

Agilent
CrossLab
From Insight to Outcome

- Instrument service
- Training, consulting and operational expertise
- Enterprise lab management
- Columns, supplies and chemical standards

Products for Sample Preparation, Separation and Analysis for Protein Therapeutics –Glycan Analysis



➔ Analytical Liquid Chromatography (LC) Solutions

LC/MS and GC/MS Based Solutions

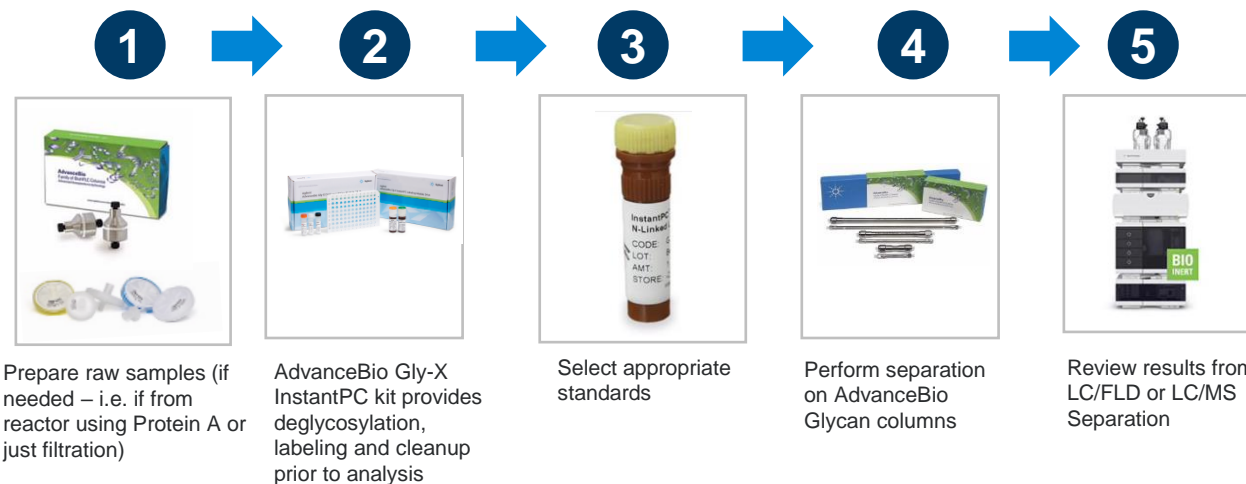
Automated Liquid Handling Solutions



AdvanceBio Gly-X InstantPC Glycan Analysis Kit

The AdvanceBio Gly-X InstantPC Glycan analysis kit provides fast, high sensitivity results for LC-FLD or LC-MS separations of labelled, released glycans. The Agilent AdvanceBio Gly-X technology is a new generation of N-glycan sample preparation. Be ready for sample analysis faster with rapid (5-minute) enzymatic release of N-glycans and labeling with the brightest in class InstantPC dye, or traditional reductive amination dyes. Innovative in-solution workflows combined with plate-based rapid cleanup enables sample prep in as little as 1 hour.

Workflow



Get insight into

- Accurate quantitation of individual N-glycan species, using LC/FLD
- The complete characterization of glycans of proteins, including monoclonal antibodies using LC/MS for the labelled glycans
- How the N-glycan profile can impact drug candidate toxicity
- Post translational modifications and glycan profiles of other types of proteins (some Fc fusions, blood factors, etc.)
- Glycan characterization for biosimilars and biobetters in comparison to innovator therapeutics
- Select aspects of vaccine development impacted by the glycan profile



Advantages

- High quality products that go through extensive QC testing to ensure consistent and reproducible results
- Stocked locally to ensure ready availability and quick delivery
- A range of glycan labelling reagents including traditional and express 2-AB for a range of choices
- A range of glycan standards including individual standards (labelled and unlabeled), glycan libraries and GU ladders.
- A broad portfolio of columns and sample preparation products for all stages of research and development
- BioInert columns and supplies for better sensitivity and higher quality results with proteins and antibodies.

Automated Workflow for Monoclonal Antibody N-Linked Glycan Analysis

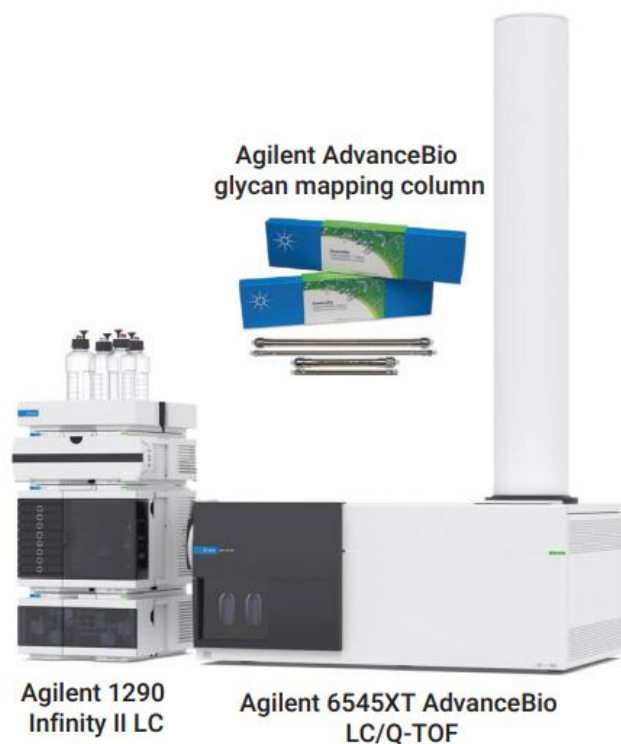


Figure 6. N-glycan analysis using an Agilent 1290 Infinity II LC and Agilent 6545XT AdvanceBio LC/Q-TOF with an Agilent AdvanceBio glycan mapping column.



Agilent AssayMAP Bravo



Agilent GlykoPrep InstantPC kit

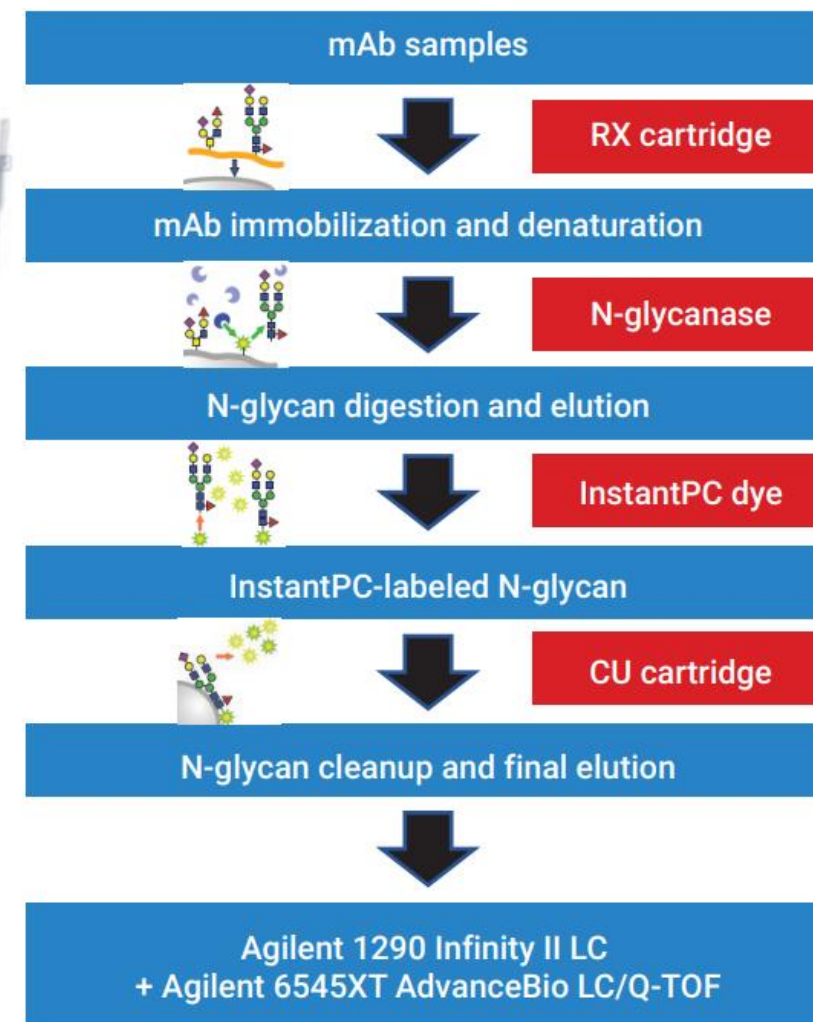
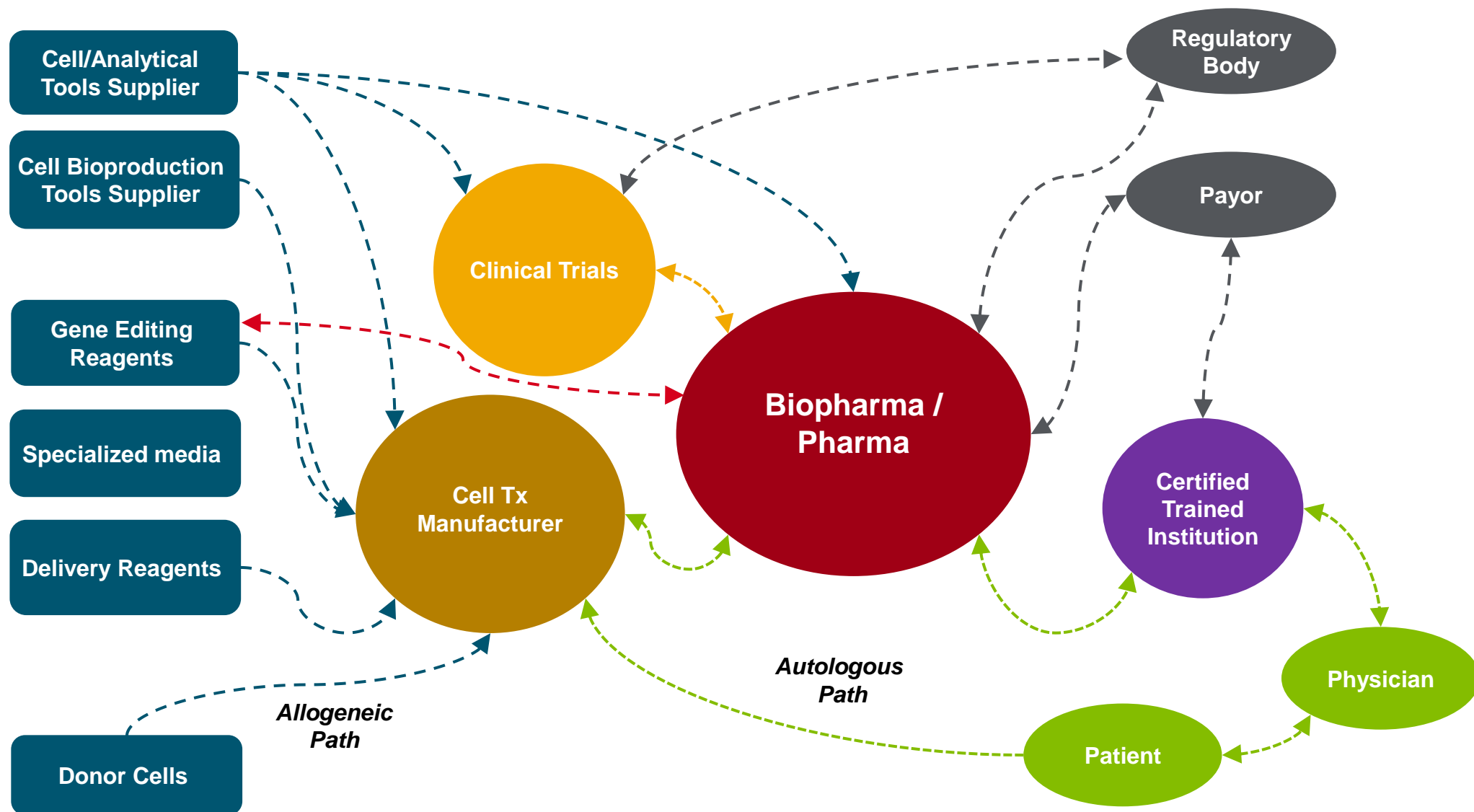
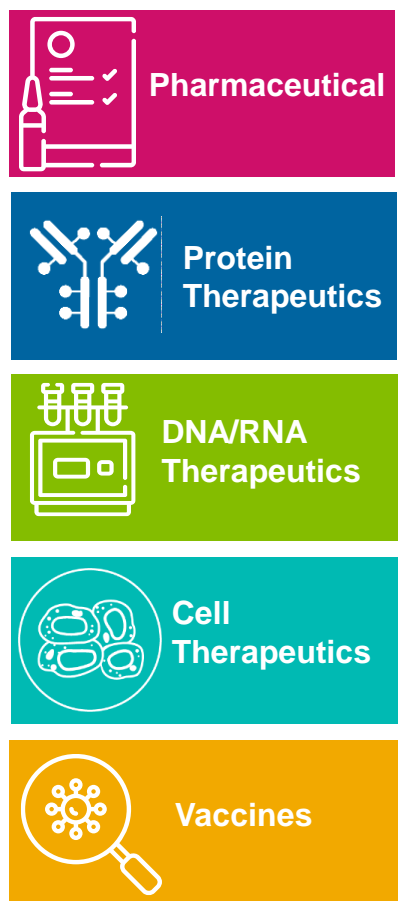


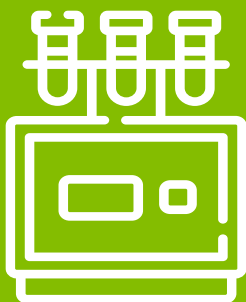
Figure 1. Automated N-glycan sample preparation using the Agilent AssayMAP Bravo and Agilent GlykoPrep InstantPC kit.

Cell and Gene Therapy Ecosystem





DNA / RNA Therapeutics



NovoCyte Flow Cytometer

Automated Electrophoresis – Nucleic
Acid Quality Control

Microarray Platform

xCELLigence Real Time Cell Analyzer

SureSelect Target Enrichment for
Next-Gen Sequencing (NGS)

Capillary Electrophoresis Solutions

BioTek Multi-Mode Microplate
Readers

qPCR Master Mix Reagents

CARY 3500 Spectrometer

Sample Preparation, Separation and
Analysis

Liquid Chromatography Solutions

Agilent CrossLab

AriaMx Real Time PCR System

LC/MS Based Solutions

Certified Pre-Owned Instruments

DNA and RNA Synthesis

Bravo Automated Liquid Handling
Solutions

Alternative Buying
Models

Flexible Spend

DNA/ RNA Therapeutics includes instruments, consumables, software and services, for development and manufacturing of biologic drugs defined as Oligonucleotides, DNA or RNA fragments. Oligonucleotides are short DNA or RNA molecules (oligomers) that have a wide range of therapeutic mechanisms of action, such as gene silencing or pre-programmed protein expression.



Agilent Products and Services for Cell Therapeutics



Cell Therapeutics



Seahorse XF Analyzer

DNA and RNA Synthesis

qPCR Master Mix Reagents

BioTek Cytation Cell Imaging Multi-Mode Reader

Microarray Platform

Liquid Chromatography Solutions

BioTek MultiFlo FX Multi-Mode Dispensers

Automated Electrophoresis – Nucleic Acid Quality Control

Agilent CrossLab

NovoCyte Flow Cytometer

SureSelect Target Enrichment for Next-Gen Sequencing (NGS)

Certified Pre-Owned Instruments

xCELLigence Real Time Cell Analyzer

BioTek Microplate Washer/Dispenser

Flexible Spend Plan

AriaMx Real Time PCR System

Bravo Automated Liquid Handling Solutions

Alternative Buying Models

Cell Therapeutics refers to life science tools, including instruments, consumables, software and services, for development and manufacturing of biologic drugs defined as Cell Therapies. These therapies to use patient's intact, live cells to lessen or cure a disease (Cell Therapy). Recent approvals and the growing number of clinical trials are accelerating the process from discovery through clinical to commercial manufacturing and delivery.



Vaccines



Seahorse XF Analyzer

Sample Preparation, Separation and Analysis

DNA and RNA Synthesis

BioTek Cytation Cell Imaging Multi-Mode Reader

Capillary Electrophoresis

Agilent CrossLab

NovoCyt Flow Cytometer

Liquid Chromatography Solutions

Certified Pre-Owned Instruments

xCELLigence Real Time Cell Analyzer

LC/MS Based Solutions

Flexible Spend Plan

Automated Electrophoresis – Nucleic Acid Quality Control

Bravo Automated Liquid Handling Solutions

Alternative Buying Models

Vaccines This application covers life science tools, including instruments, consumables, software and services, for development and manufacturing of Vaccines. A vaccine is a biological product designed to trigger immune response and build a long lasting acquired immunity to a particular pathogen.

LC/MS of Intact Adeno-Associated Virus Capsid Proteins for Rapid Confirmation of Product Identity

Characterization of Viral Vector Particles Using the Agilent 6545XT AdvanceBio LC/Q-TOF

Resolution of Adeno-Associated Viral Vector Aggregates and Fragments with Agilent Bio SEC-5

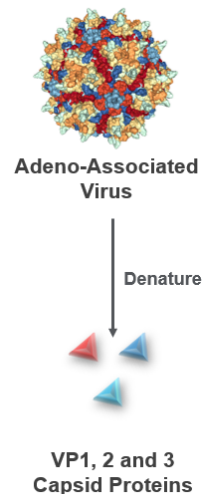
Agilent's LC/MS Analysis of AAV Subunits

Sample Prep

Liquid
Chromatography

Mass Spectrometry

Data Analysis




Zorbax RRHD 300Å
StableBond Columns



1290 Infinity II LC
with FLD

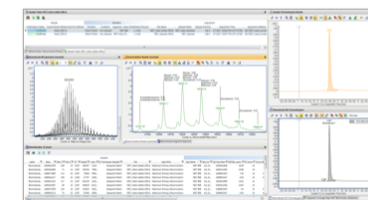

Bio SEC-5
Column 1000Å



1290 Infinity II
BioLC



6545XT AdvanceBio
LC/Q-TOF



MassHunter BioConfirm

Agilent. Trusted Answers.

We provide **comprehensive, integrated** workflow solutions

Scientific instruments, software, services, consultancy, consumables, and teams with deep market knowledge **helping laboratories achieve superior scientific and economic outcomes**



OUR FOCUS

Enabling scientists to improve the quality of life through reliable analysis and workflow solutions



OUR CUSTOMERS

The world's analytical, research, and diagnostics laboratories



OUR PASSION

Helping our customers solve their critical questions and challenges as they seek to optimize their labs and improve the world around us



Agilent

Trusted Answers