

# Monoclonal Antibody Characterization Workflows for Increasing Productivity and Throughput

Protein and monoclonal antibody (mAb) biopharmaceuticals form a major part of the growing biologics drug market. MAb treatment is amongst the most effective methods of diagnosis and treatment of a broad range of diseases. The need for innovative and efficient analytic tools during development and production of these products is essential to detect, characterize and quantify impurities structural variants and modifications, and to monitor product stability.

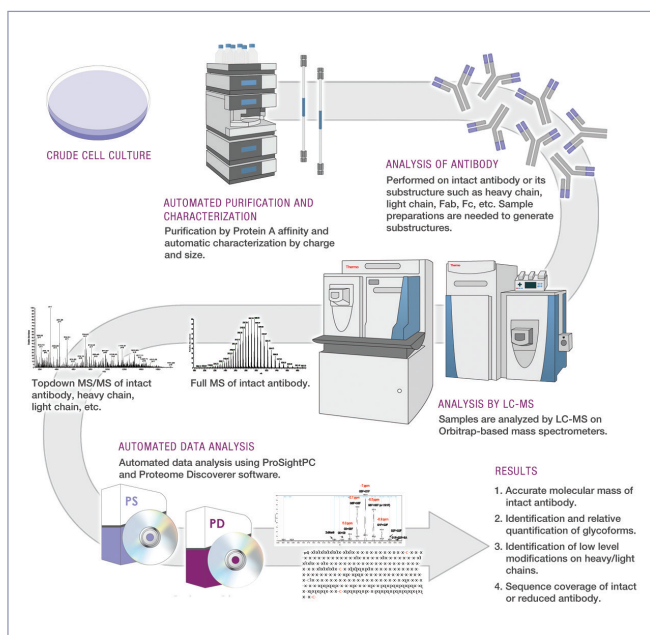
## Innovative Technologies

The challenge is achieving accurate, high resolution results quickly; more samples need to be processed and greater information needs to be obtained. The Thermo Scientific BioLC columns are designed with innovative packing materials to deliver the unique separation capabilities needed to meet the wide variety of separation needs.

Analytical tasks	BioLC HPLC Columns
Purity and titer check	Thermo Scientific™ MAbPac™ Protein A
Aggregation analysis	Thermo Scientific™ MAbPac™ SEC-1
Charge variant analysis	Thermo Scientific™ MAbPac™ SCX-10 & Thermo Scientific™ CX-1 pH Gradient Buffers
Fermentation monitoring	MAbPac Protein A
Clips and truncations	MAbPac SEC-1
Light chain/heavy chain analysis	MAbPac SEC-1
Peptide mapping	Thermo Scientific™ Accucore™ 150-C18, Thermo Scientific™ PepMap™ 100 C18
Glycan profiling	Thermo Scientific™ GlycanPac™ AXR-1, GlycanPac AXH-1, Thermo Scientific™ Accucore™ Amide-HILIC
Post-translational modification analysis (Amino acid substitutions/truncations, deamidation, phosphorylation, etc.)	MAbPac SCX-10 or ProPac HIC-10
Intact Proteins mass detection	Thermo Scientific™ ProSwift™ RP-4H or MAbPac SEC-1

The Thermo Scientific™ Dionex™ UltiMate™ 3000 BioRS HPLC system provides ease of use, with the reliability and robustness for mAb characterization analysis.

The Thermo Scientific™ Orbitrap™ - based LC-MS instrumentation designed for high-resolution and accurate-mass (HRAM) has become widely used in virtually all phases of protein drug development.



For more information on these Monoclonal Antibody Characterization tools, contact your Local Representative.

Alternatively, visit: [thermoscientific.com/Biocapabilities](http://thermoscientific.com/Biocapabilities) and request your copy of the Monoclonal Antibody Characterization brochure.

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