MS-based Analytics

Precise Protein & Glycan Characterization of Your Biotherapeutic Drug

FyoniBio is your reliable partner to elucidate the precise characteristics of your molecule in line with regulatory requirements. We are skilled in state-of-the-art and advanced high-resolution mass spectrometric (UPLC-MS) methods, which can address most of the critical quality attributes (CQA) of drugs.

The intact mass analysis often serves as an initial assessment of the integrity of a molecule. Additionally, we provide in-depth analyses for all types of biotherapeutics. Our specialized N-glycoprofiling, employing GlycoFiler®, reliably analyzes N-glycan moieties, while additional post-translational modifications are investigated using UPLC-MS peptide mapping.

Our competence and experience in UPLC-MS methods ensure a critical revision and discussion of your data. Results are communicated promptly in a short report or as detailed scientific reports.

Be assured that we place strong emphasis on the transparency of methods and clear data presentation. We are committed to satisfying our customers' expectations by adding valuable knowledge about their products.

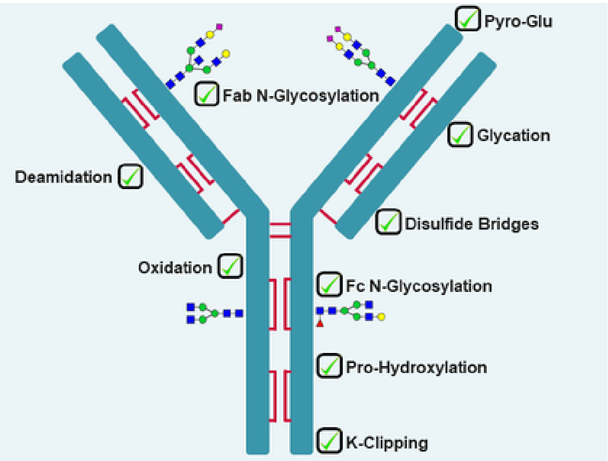
Our Core Competencies

- Full coverage of IND/IMPD biochemical characterization chapter
- Analysis of intact and reduced protein mass
- N-glycan profiling with RapiFluor or 2-AB
- O-glycan profiling with 2-AB
- Protein degradation with oxidation and deamidation sites
- Glycopeptide profiling
- Analysis of disulfide linkages
- Antibody-drug conjugates (DAR and linkage sites)
- Fab/Fc analysis for antibodies

MS-based Analytics

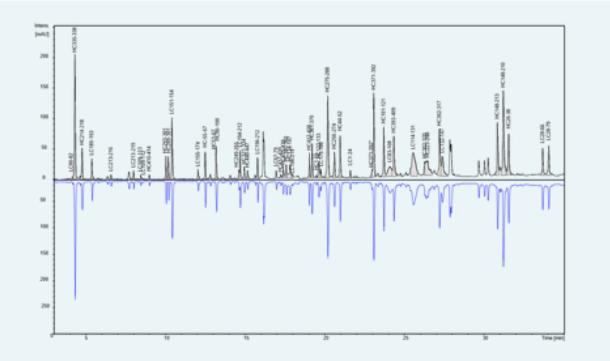
Mass Spectrometric Analysis of Proteins and PTMs

With high-resolution UPLC-MS, we are able to analyze a wide spectrum of posttranslational modifications:



The described PTMs can be addressed using different top-down, middle-up and bottom-up approaches:

- Molecular mass
- Truncations and fragment analysis
- Drug-Antibody-Ratio (DAR)
- Fab/Fc analysis of antibodies and glycoforms
- Antibody heavy and light chain
- Peptide mapping
- Sequence verification
- Glycopeptide profiling and site occupancy
- N-/C-terminal integrity



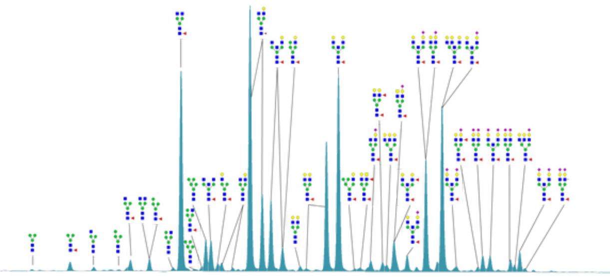
Peptide fingerprint for batch-to-batch comparison of IgG

N- and O-Glycoprofiling

- Precise relative quantification of glycans based on fluorescence
- Structure identification with high resolution
- Assessment of more than 20 N-glycan parameters, e.g., sialylation, fucosylation, antennary, galactosylation, high-mannose, α-1,3-Gal, etc.
- Identification of N- and O-glycosylation sites
- Evaluation of O-glycosylation, e.g., (sialyl)Tn/TF
- 2,3- and 2,6-linked sialic acid

GLYCOFILER

- Automated workflow for N-glycan profiling
- Fluorescence and mass spec data hybridization
- High-resolution HILIC-UPLC-FLR-QTOF-MSMS
- MS and MS/MS spectra library of over 350 N-glycans
- Two different fluorescent tags available to align with your previous data
- Starting from small amounts (10 µg sufficient)



GlycoFiler™ automated workflow for fluorescence-based N-glycan profiling with reliable MS structure identification

The FyoniBio Team Is All Set to Bring Your CMC Project to the Next Level!

FyoniBio offers high quality ISO-9001 compliant services. For more information please contact us.

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