https://www.creative-proteomics.com/

Creative Proteomics

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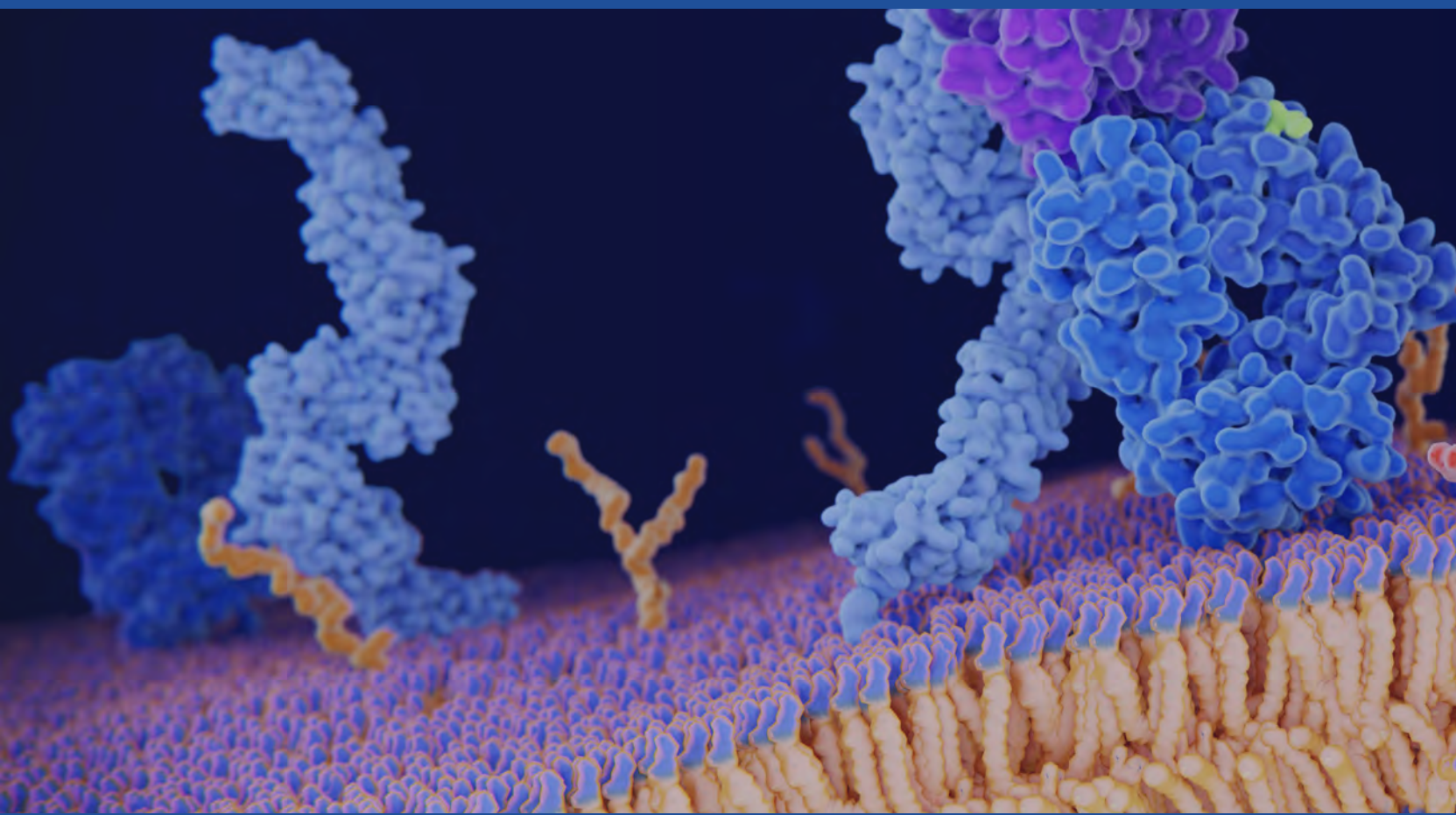
Glycomics Solutions



Glycomics Solutions

- Unlock the complexity of glycans with our cutting-edge glycomics services and gain deeper insights into your samples

Glycomics is the study of complex carbohydrates (also called glycans) and their role in biological systems. Polysaccharides are involved in a wide range of biological processes, including cell signaling, immune responses, and protein folding. The study of glycans is critical to understanding the molecular mechanisms underlying human health and disease.

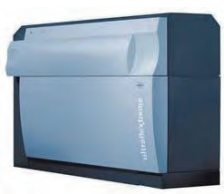
Glycomics research involves the comprehensive analysis of glycan structures, their functions, and their interactions with other biomolecules such as proteins and lipids. Creative Proteomics offers platforms for glycomics analysis, including mass spectrometry, glycan microarrays, and glycoproteomics.

The field of glycomics has the potential to revolutionize the development of new therapies and vaccines against a variety of diseases, such as cancer, infectious diseases, and autoimmune diseases. Through a deeper understanding of the role of glycans in biological systems, targeted therapies can be developed to improve human health and well-being

Comprehensive Glycomics Services

GLYCAN ANALYSIS	GLYCOPROTEOMICS ANALYSIS
Glycan Profiling • N-Glycan Profiling • O-Glycan Profiling Glycan Linkage Analysis	• Search for sites where glycosylation modifications occur • Dissecting the structure of glycan chains • Identify intact glycopeptides

Thermo Q Exactive™ series



Bruker UltraFlex II MALDI-TOF

Thermo Orbitrap Fusion Lumos

Our Advanced Analytics Platform

UltiMate™ 3000 Fluorescence Detectors

Agilent 6495 Triple Quadrupole LC/MS Coupled with the Agilent 1290 Infinity II LC System

Glycan Analysis

Glycan Profiling

Glycan profiling is a powerful technique in glycomics for identifying and characterizing the glycans attached to proteins. There are two main types of glycan profiling analysis: N-glycan analysis and O-glycan analysis. N-glycan analysis involves the study of N-linked glycans, which are attached to asparagine residues in proteins through a specific glycosidic bond. O-glycan analysis involves the study of O-linked glycans, which are attached to serine or threonine residues in proteins through a different glycosidic bond.

	N-GLYCAN ANALYSIS	O-GLYCAN ANALYSIS
GLYCAN RELEASE	PNGase F	O-glycosidase or sialidase / β-elimination
CHROMATOGRAPHIC SEPARATION	Hydrophilic interaction chromatography (HILIC) or reverse-phase chromatography (RPC)	Weak anion exchange chromatography (WAX) or HILIC
MASS SPECTROMETRY	MALDI MS or ESI MS	ESI MS or negative

Glycan Linkage Analysis

Glycan linkage analysis is performed to identify linkage position, monitor the specific glycan species, and determine the relative amounts of specific glycan groups. This procedure of the analysis includes glycan release, derivatization of released glycans, monosaccharide release, reduction and derivatization of free hydroxyl groups, and mass spectrometric detection.

Glycoproteomics Analysis

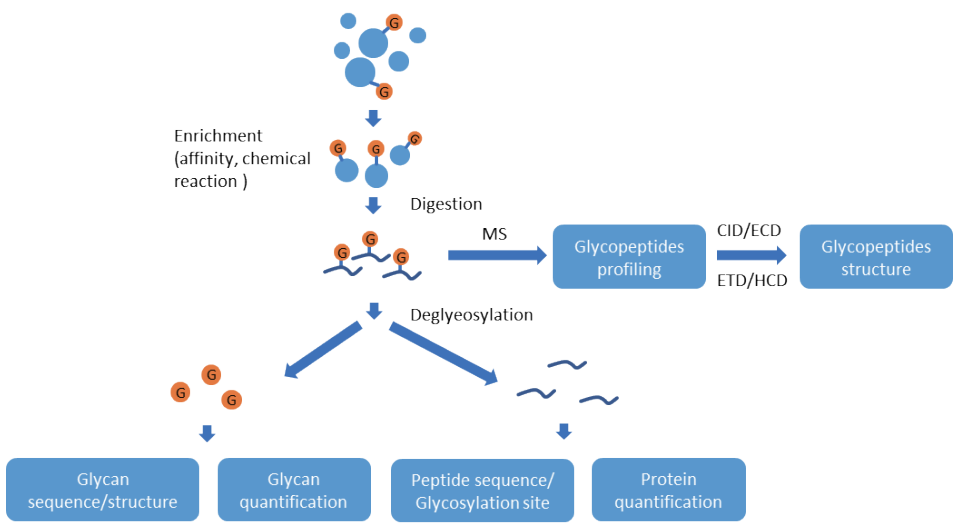
From a global perspective, we can search for glycosylation modification sites, analyze sugar chain structures, identify complete glycopeptides, and explore the role and biological functions of glycoproteins in life activities.

Technical features

- Hydrophilic interaction chromatography is used to improve the enrichment efficiency of intact N-glycopeptides at the peptide level.
- Dimethyl labeling technique to improve the accuracy of quantification

Scope of application

- Structural analysis of N-glycosylated modified glycopeptide chains (for mannose-type, complex-type, and heterogeneous N- glycopeptide chains)
- Searching for patterns of glycosylation modification of disease-related proteins
- Analyzing the correlation between glycoprotein chains and glycobinding protein interactions
- Exploring the regulatory mechanisms of glycan-related genes and glycobinding protein genes
- Facilitate the quality evaluation of antibody drugs



CONTACT US

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