

Custom synthesis

Homogeneous glycopeptides

The increasing importance of glycans to life science has led to a greater need for glycopeptides and glycoproteins that have a homogeneous glycoform, for applications such as antibody development, biomarker analysis, and elucidation of structure-activity relationships. GlyTech has spent nearly 20 years developing a chemical glycosylation platform to meet this need, which conventional cellular expression cannot fulfill. We synthesize homogeneous glyco-conjugates with full glycoform control, including glycan position, number, and structure. Our highly flexible platform allows us to customize each compound towards the exact requirements of your project.

Benefits of chemical synthesis

- Well-defined glycoforms
- Homogeneous and high purity
- Compatible with various modifications, linkers, etc.

Our capabilities

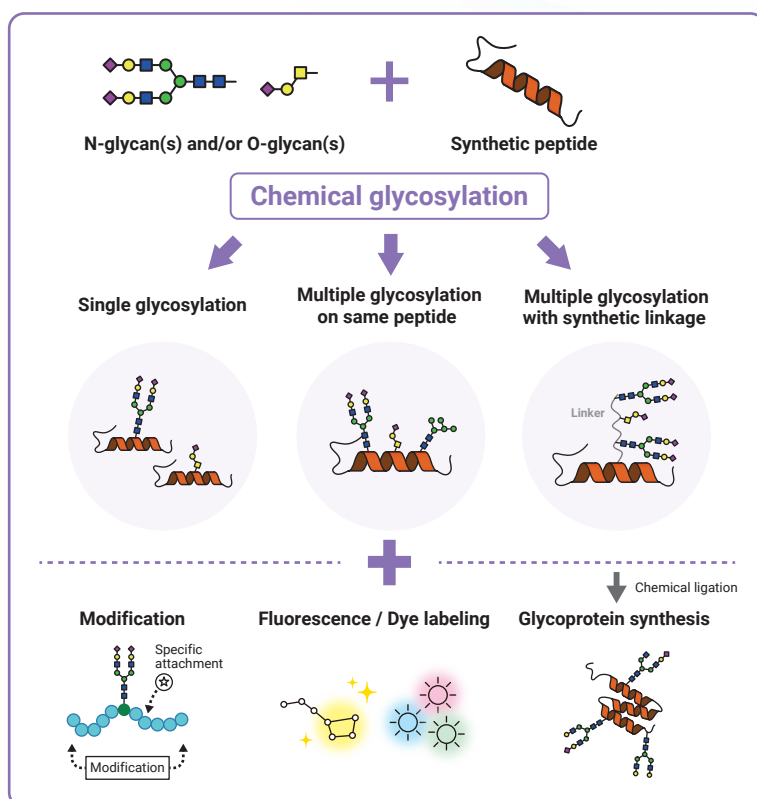
- More than 50 glycan structures available
- N-glycosylation and O-glycosylation
- Long peptide synthesis (up to ~200 A.A.)
- "Difficult" sequences
- Milligram to gram scale synthesis
- Non-GMP and GMP grades

Potential applications

Our high-quality synthetic glycopeptides and glycoproteins are suitable for a wide range of applications including:

- Glycosylated therapeutic development
 - Antigens for antibody development
 - Vaccine development
 - Reference standards for biomarker analysis
 - Glycoscience research
-and more

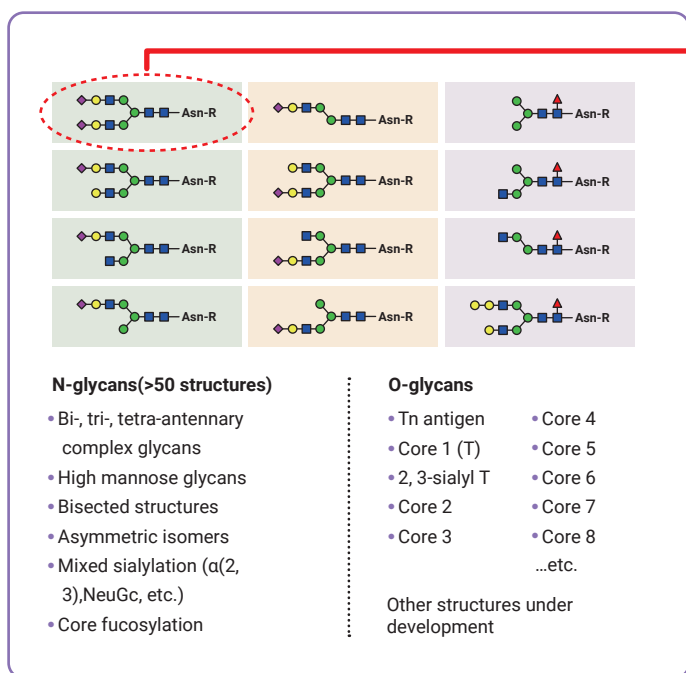
GlyTech's synthesis capabilities



Our synthetic strategies

Our key chemical glycosylation technologies allow our structurally well-defined glycans to be attached to any chosen position on a peptide or protein, enabling full glycoform control (glycan site, structure, and number). We help you select the best synthetic strategy to match the requirements of your project.

GlyTech glycan catalog

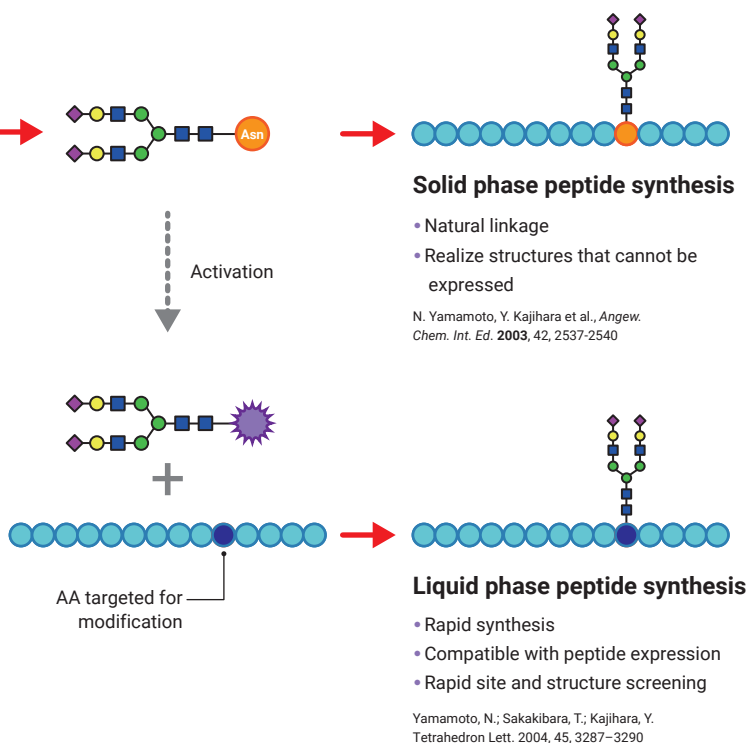


N-glycans (>50 structures)

- Bi-, tri-, tetra-antennary complex glycans
- High mannose glycans
- Bisected structures
- Asymmetric isomers
- Mixed sialylation ($\alpha(2,3)$, NeuGc, etc.)
- Core fucosylation

O-glycans

- Tn antigen
- Core 1 (T)
- 2, 3-sialyl T
- Core 2
- Core 3
- Core 4
- Core 5
- Core 6
- Core 7
- Core 8
- ...etc.
- Other structures under development



Solid phase peptide synthesis

- Natural linkage
- Realize structures that cannot be expressed

N. Yamamoto, Y. Kajihara et al., *Angew. Chem. Int. Ed.* **2003**, 42, 2537-2540

Liquid phase peptide synthesis

- Rapid synthesis
- Compatible with peptide expression
- Rapid site and structure screening

Yamamoto, N.; Sakakibara, T.; Kajihara, Y. *Tetrahedron Lett.* **2004**, 45, 3287-3290

Modification & conjugation

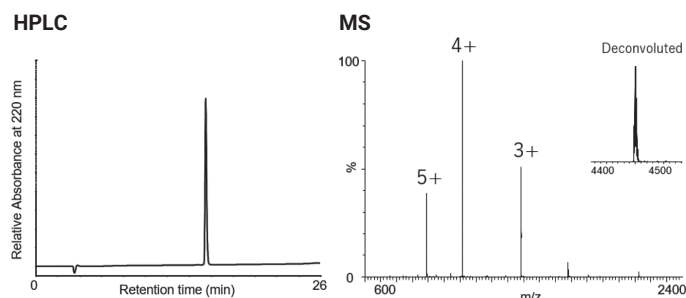
- Chemical ligation and folding to form small glycoproteins
 - Incorporation of D-enantiomers and unusual amino acids
 - Cyclization, head to tail and side chain
 - Branched peptides
 - Biotinylation
 - PEGylation
 - Labeling with stable isotopes, dye labels, fluorescent labels
 - Acetylation, formylation, acylation
 - Amidation
 - Lipidation
- ...and more

Reliable and dependable

We have developed our fully scalable platform to meet any need for homogeneous glycopeptide and glycoprotein synthesis from milligram to gram scale, and both non-GMP and GMP manufacturing. We provide high quality glyco-conjugates to pharmaceutical companies, analysis companies, antibody biotech companies, academia, and research institutions globally. GlyTech, Inc. is your reliable manufacturing partner for high quality glycosylated compounds.

GlyTech Quality Assured

Every custom glycopeptide/glycoprotein we synthesize is shipped with an LC/MS analysis report confirming its identity and purity.



The world leader in the chemical synthesis of glycopeptides and glycoproteins, we help advance our clients' projects with homogeneously glycosylated compounds that are unobtainable by traditional cell expression methods. With nearly 20 years experience, we offer full support from initial consultation to custom synthesis to commercial manufacturing. Contact us to discuss your project – our experts will be happy to help!