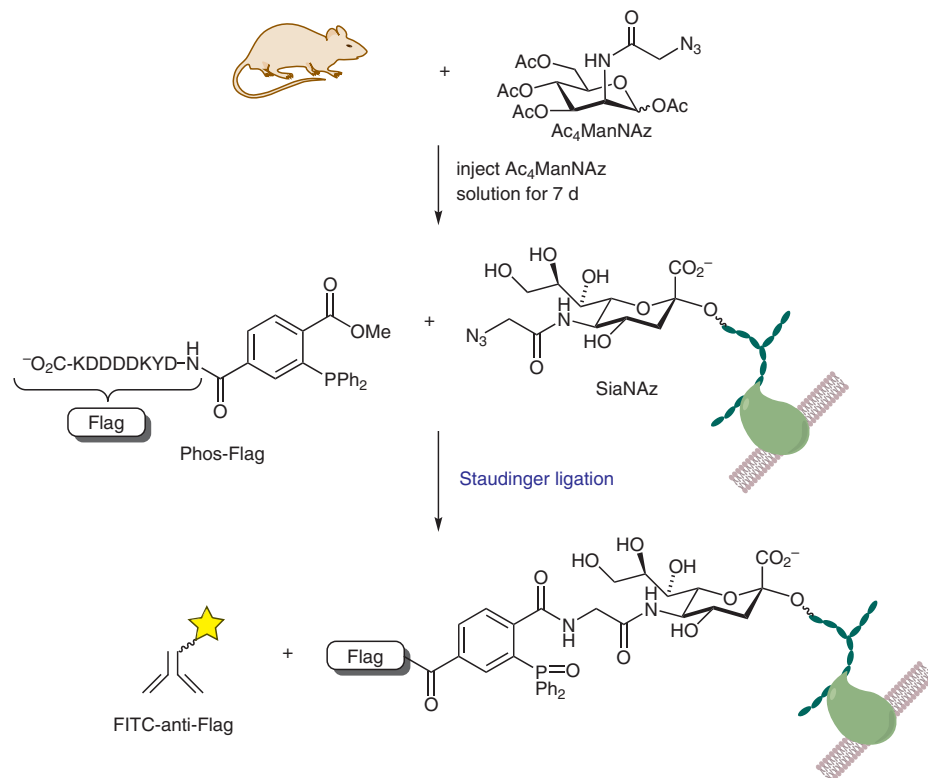


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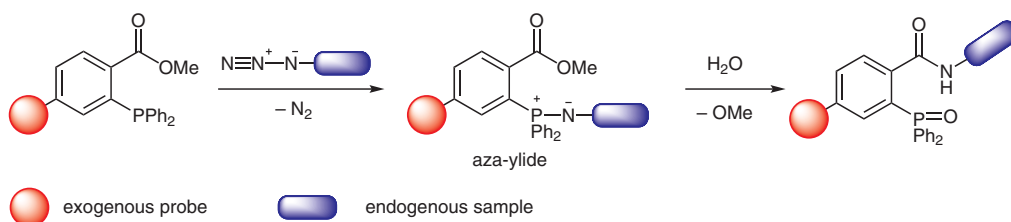
Chemical Remodelling of Cell Surfaces in Living Animals

Nature 2004, 430, 873–877.

Staudinger Ligation in Living Animals



Staudinger ligation:



Significance: Chemical modification of cell-surface glycans in living animals provides a means to study these biopolymers within their native environment. The Staudinger ligation is a bioorthogonal reaction that can be carried out in the whole organism. This reaction is frequently used for the study of lipids, steroids, and cofactors.

Comment: Bertozzi and co-workers demonstrated the Staudinger ligation of an azide (SiaNAz) and a functionalized phosphine (Phos-Flag) in living mice. The azide was delivered to cell-surface glycoconjugates by metabolism of ManNAz to SiaNAz. The ligation in mice tissue was detected using fluorescein isothiocyanate-labelled anti-Flag antibodies followed by flow cytometry analysis.

Category

Chemistry in
Medicine and
Biology

Key words

Staudinger ligation

metabolic
oligosaccharide
engineering

bioorthogonal
reaction

azides

phosphines

Synfact
Classic

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