



+1 678 691 3660

info@glycogene.com

www.glycogene.com



v1.0

PRODUCT CATALOG

Glycoscience Products



[ABOUT US >>](#)

Glycogene INC is an advanced biotechnology company founded in Wuhan with a site in Atlanta, GA. Our business spans from R&D all the way to the manufacturing stage to serve our customers in their evolving needs for high and consistent quality reagents.

Here at Glycogene, using our chemo-enzymatic and fermentation techniques, our scientific experts are more than happy to offer our expert service with high quality and competitively priced products such as nucleosides, nucleotides, phosphoramidites and carbohydrates. We also provide custom synthesis services for unique structures designed by you.

Over the years, with constant collaboration and innovation, we have enriched our product list to cover our customer's essential needs and we continue to conduct research and expand our product line to help our customers to achieve their goal. We are always looking for new and innovative ways to expand our product line to meet our customers' essential needs.

CONTENTS

Technical service

Antibody in vitro glycosylation modification technology	02
Monoclonal antibody conjugation technology	04
Recombinant Protein Expression Service	06

Glycoscience Products

Monosaccharide	10
Sugar nucleotide	12
Chemically modified sugar	49
Glycolipids and derivatives	65
SGP and derivatives	189
Glycoenzymes	199

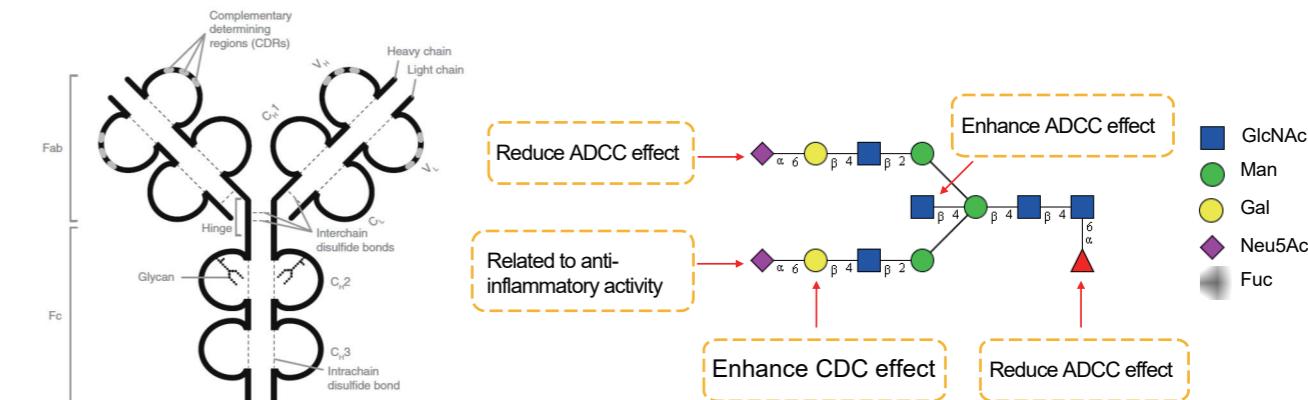
Introduction to Classification of Carbohydrates

Monosaccharide	.....	GD-0001
Sugar nucleotide	.....	SN-1001
Disaccharide	.....	GO-0001
Malt oligosaccharide	.....	GO-0001
Human milk oligosaccharides	.....	GO-2001
Blood type oligosaccharides	.....	GO-4001
Sugar containing azide groups	.....	GS-0001
Sugar containing alkynyl group	.....	GS-1001
Sialic acid derivative	.....	GS-2001
Phosphorus containing sugar	.....	GS-3001
Other human milk oligosaccharides	.....	GS-4001
Modified oligosaccharides	.....	GSO-5001
Glycolipid precursors (including - pH)	.....	GL-0001
Monosaccharide lipid	.....	GL-1001
Lac+nLac	.....	GL-2001
Globo+iGlobo	.....	GL-2301
Gangi	.....	GL-2101
Sulfatide	.....	GSLA-0001
Biotin modified glycolipids	.....	GSLA-1001
Glycopeptide	.....	GP-1001
Sugar amino acid	.....	GNP-0001; GPO-0001
N-sugar	.....	GN-3001
Oxazoline modified N-sugar	.....	GNA-0001

Antibody in vitro glycosylation modification technology ➤

Background Introduction

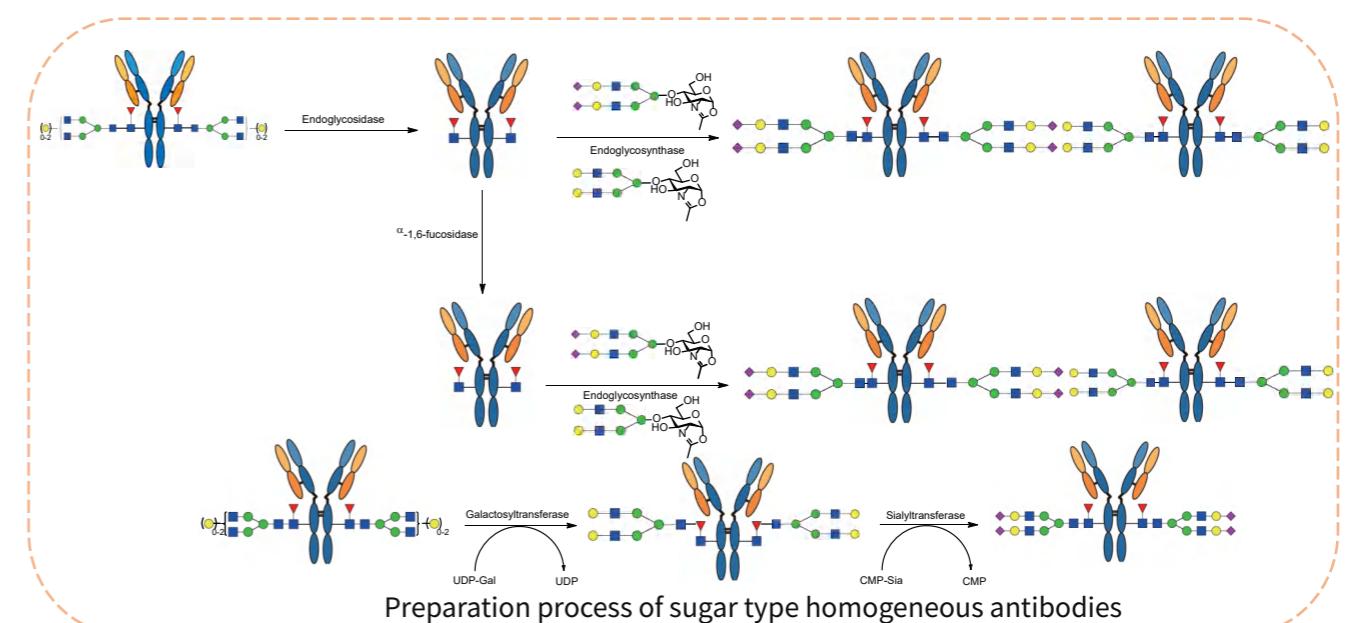
So far, the monoclonal antibody drugs sold on the market are mainly IgG type. The Fc position of the Fc region of IgG is glycosylated with asparagine, and the different sugar chains connected result in the antibodies having different sugar types. The different sugar types of antibodies can lead to differences in the immunogenicity, biological activity, pharmacokinetics, and other aspects of monoclonal antibodies.



Structure of IgG antibodies

Cell Mol Life Sci, 2017, 74, 837–847 Sci Rep, 2016, 6, 36964

GLYCOGENE Technology Platform



GLYCOGENE Pharmaceutical can quickly and efficiently obtain monoclonal antibodies with better homogeneity by modifying specific glycosidases and transferases.

PNAS, 2017, 114, 3485–3490 Bioconjugate Chem, 2014, 25, 510-520

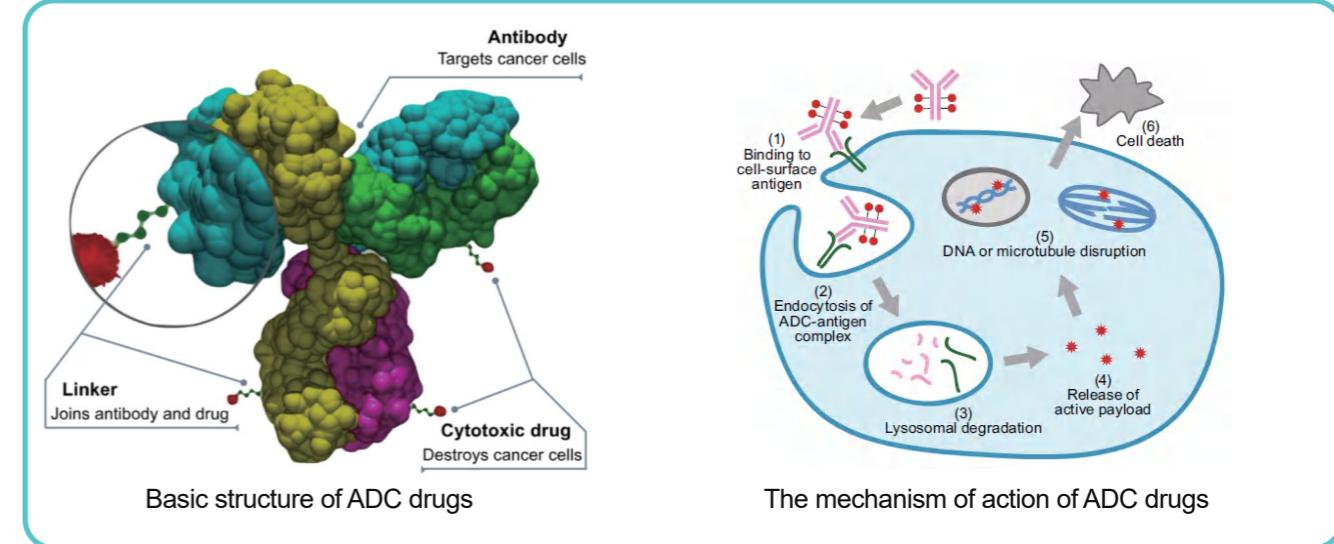
Our products

Endoglycosidase	Sugar modifying enzyme	Activated glycosyl donor
Endo-A	α 2-3, 6, 8 Neuraminidase	GDP-Fuc
Endo-M	PNGase F	UDP-Gal
Endo-S	GalT	CMP-Neu5Ac
Endo-S mutant	SiaT	SGP
Endo-S2 mutant	FucT	Customized glycosyl donors
Antibody Fc glycan remodeling kit		

Monoclonal Antibody Drug Coupling Technology »

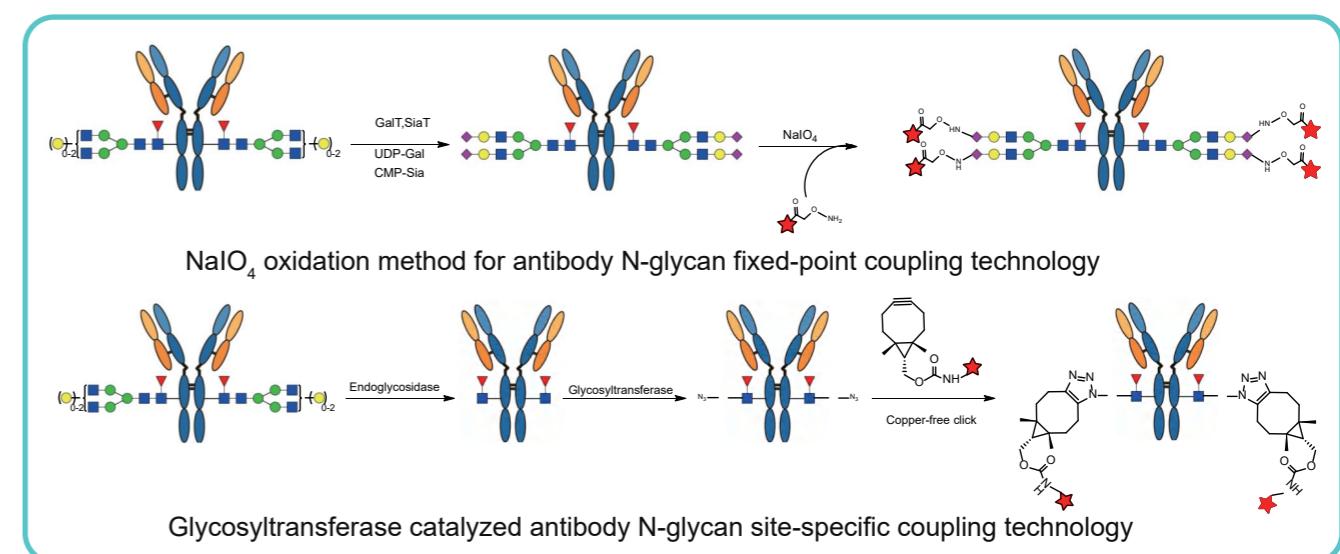
Background Introduction

Monoclonal antibody drug conjugate (ADC) is a complex formed by coupling cytotoxic drugs with monoclonal antibodies through linkers. ADC drugs consist of three parts: antibodies, linkers, and chemical drugs. The selection of targets and the quality of antibodies determine the affinity of ADC to tumor cells; The type of linker determines the stability of the drug; The choice of chemical drugs determines the lethality and side effects of ADC.



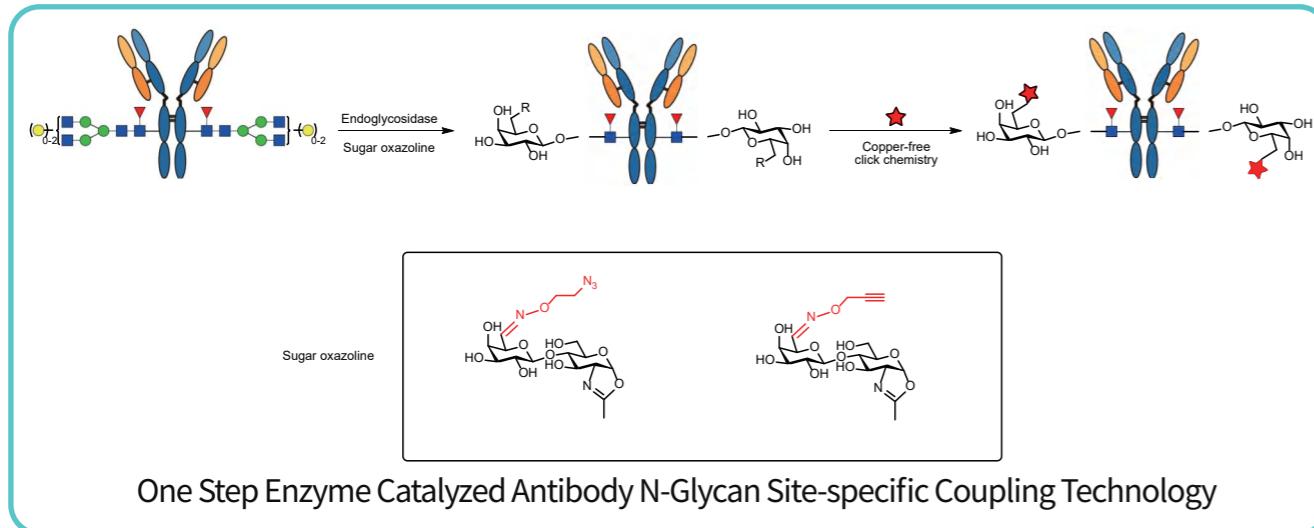
Protein Cell, 2018, 9, 33–46

GLYCOGENE Technology Platform



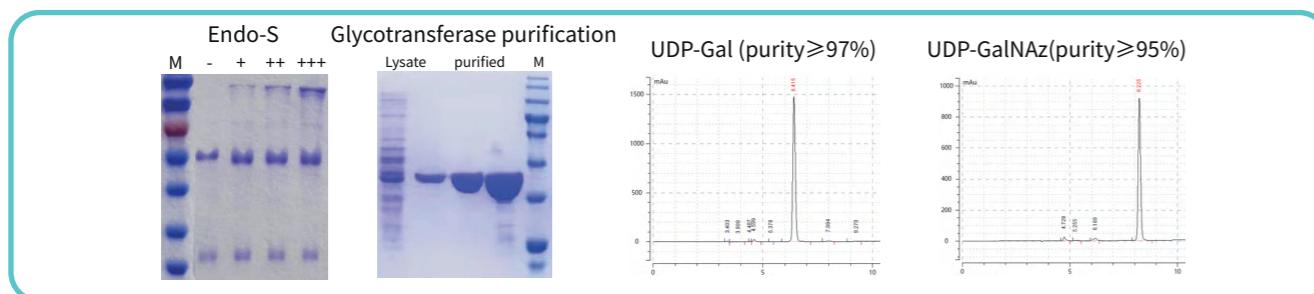
The NaIO₄ oxidation method is to add galactose and sialic acid to the sugar chain successively through galactose and sialyl glycosyltransferase, and NaIO₄ oxidizes sialic acid to form aldehyde groups, which can be coupled with drugs with amino groups; Glycotransferase catalyzed method uses endoglycosidase to cut off the sugar chain, then add azide modified N-acetylaminogalactose through glycosyltransferase, and finally couple with drugs through click chemistry reaction.

Bioconjugate Chem, 2014, 25, 510-520
Antibody Ther, 2020, 3, 271-284



Our products

Endoglycosidase	Glycosyltransferase	Activated glycosyl donor
Endo-S	GaIT	UDP-Gal
Endo-S2 mutant	SiaT	CMP-Neu5Ac
Endo-S mutant	GalT1 (Y289L)	UDP- GalNAz
Fc glycan conjugating ADC kit		



GLYCOGENE Recombinant Protein Expression Service »»

- E. coli Expression System
- Yeast Expression System
- Insect Baculovirus Expression System
- Mammalian Cell Expression System

Why choose us?

- GLYCOGENE has a prokaryotic and eukaryotic protein expression technology service platform for E. coli, Pichia pastoris, baculovirus vector - insect cells, mammalian cells, etc. In terms of recombinant protein expression and purification, we have a strong R & D production team and advanced purification and detection equipment.
- Now using prokaryotic and eukaryotic expression system, we have got a variety of purification methods for hundreds of high quality recombinant proteins. Our proteins have been successfully used in many fields such as enzyme synthesis, vaccine research and development, antibody drug development, immune detection, diagnostic reagent development and so on.

Service advantage

- Strict quality control system, short delivery cycle.
- Rich experience in inclusion body proteins, secretory proteins and transmembrane proteins.
- Has a variety of specifications of fermentation equipment: from 5 L to 500 L, satisfying the customer with different fermentation volume.
- Has GMP-like production workshop.
- Can provide the downstream process for enlarging service.
- Can provide one-stop technology services from genetic optimization synthesis, protein expression, fermentation and purification to quality control, saving the customer's valuable time and cost.
- Has GMP-like production workshop.

E. coli Expression System

- Clear genetic background, high expression level of target genes, short culture cycle and strong anti-contamination ability.
- Soluble proteins, inclusion body proteins, fusion proteins, etc.
- His, GST, MBP and other tagged fusion protein.
- Detailed expression purification conditions, and experimental data by SDS-PAGE, Western Blot detection.
- Eight days fastest delivery.

Services Available	Lead Time	Deliverables
Gene synthesis and expression vector construction	5-8 working days (800-1000 bp), sequences larger than 1kb depending on the time of gene synthesis	Gene sequencing report
Protein expression, purification and detection	3-7 working days	Recombinant plasmid, 1mg purified protein and technical service report provided for each project.

Yeast Expression System

- Obvious advantages in processing, exocrine and post-translational modification of expression products.
- Economic efficiency, suitable for industrial amplification.
- 5-6 weeks delivery cycle.

Services Available	Process	Deliverables	Lead Time
Gene cloning	Gene synthesis and expression vector construction	Gene synthesis and sequencing report	2 weeks
Screening of yeast expression strains	Plasmid extraction and linearization	Nucleic acid electrophoresis images, Western Blot test results	2-3 weeks
	Electrical conversion to a suitable yeast host		
	Positive strain screening		
Protein expression, purification and detection	Protein expression, purification and SDS-PAGE detection	Recombinant plasmid, 1mg purified protein and technical service report provided for each project.	1 week

Insect Baculovirus Expression System

- Efficient expression ability.
- Safe and easy to operate.
- Able to accommodate large exogenous genes.
- Complete modification after translation system to contain higher activity.
- 6 to 7 weeks delivery cycle.

Services Available	Process	Deliverables	Lead Time
Gene cloning	Gene synthesis and expression vector construction	Gene synthesis and sequencing report	2 weeks
High titer venom acquisition	1. Transfect recombinant Bacmid DNA into insect cells to obtain baculovirus. 2. A high titer virus reservoir was obtained.	Western Blot test results	2 weeks
Protein expression, purification and detection	1. The high titer viral reservoir re-infects the insect cells. 2. The expression products were detected by SDS-PAGE and Western Blot. 3. Protein purification and SDS-PAGE detection.	Recombinant plasmid, high titer venom, 100 µg purified protein and technical service report provided for each project.	1 week

Mammalian Cell Expression System

- The molecular structure, physicochemical properties and biological functions of the expressed products were closest to those of natural protein molecules.
- Mammalian cells in suspension culture are cultured in serum free medium to high density.
- To the correct guidance of protein folding, with complex of N-glycosylation and O-glycosylation modification after translation.
- 4-5 weeks fastest delivery.

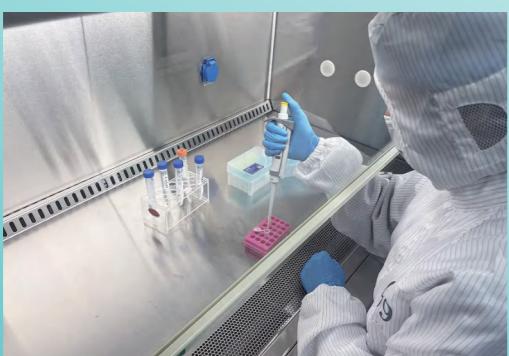
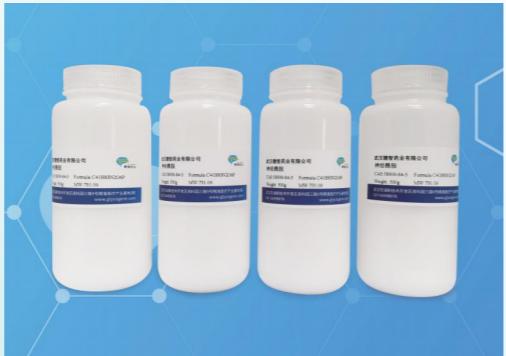
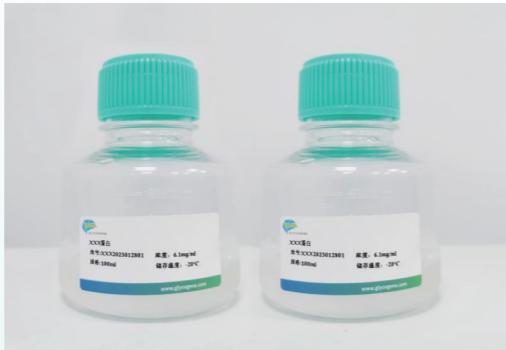
Services Available	Process	Deliverables	Lead Time
Gene cloning	Gene synthesis and expression vector construction	Gene synthesis and sequencing report	2 weeks
Transient transfect Mammalian cells; protein expression, purification and detection	1. Transient transfect HEK293, CHO and other cells; 2. The expression products were detected by SDS-PAGE and Western Blot; 3. Protein purification and SDS-PAGE detection.	Recombinant plasmid, 100 µg purified protein and technical service report provided for each project.	2-3 weeks
Cell stable transfection; protein expression, purification and detection	1. Transient transfect CHO and other cells; 2. Establish stable expression cell lines; 3. Protein purification and SDS-PAGE detection.	Recombinant plasmid, Stable expression of cell lines, 100 µg purified protein and technical service report provided for each project.	3-5 months

Large-scale protein preparation

- GLYCOGENE has mature protein fermentation and expression technology and protein purification technology, with 5L, 15L, 50L, 100L and 500L fermenters, which can meet different production requirements.
- High density fermentation of recombinant strains includes prokaryotic expression system and yeast expression system.
- GLYCOGENE can also achieve large-scale protein purification, including affinity chromatography, ion exchange, molecular sieve and hydrophobic chromatography, with a complete AKTA purification system, efficient control of the purification process.
- With perfect quality system, it can realize the production of GMP grade protein.

Services	Prokaryotic recombinant expression system	Yeast expression system
High density fermentation technology services	5L, 100L, 500L various fermentation scale, yield up to 150g bacteria mud /L	5L, 15L, 100L, 500L and other fermentation scale, secretion or intracellular expression
Large scale protein purification service	1. The purified recombinant proteins are provided; 2. The purified proteins are at the grade of 100 grams.	Provide recombinant protein (purity ≥95%) and partially purified recombinant protein (purity ≥70%).
Full set of CDMO technical services from seed establishment to pilot scale-up	1. Seed bank construction under GMP conditions; 2. Test technology research and development, pilot amplification process optimization; 3. Protein production under the condition of GMP; 4. Methodology development and validation.	1. Screening of engineering strains of yeast and optimization of fermentation conditions; 2. Seed bank construction; 3. The pilot production and magnified; 4. Methodology development and validation.

Monosaccharide »»



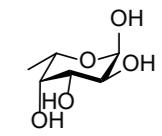
GD-0001 L-fucose

M.F.: $C_6H_{12}O_5$

M.W.: 164.16

CAS No.: 6696-41-9

Package: mg to kg



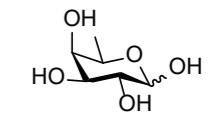
GD-0002 D-fucose

M.F.: $C_6H_{12}O_5$

M.W.: 164.16

CAS No.: 3615-37-0

Package: mg to kg



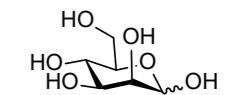
GD-0003 D-mannose

M.F.: $C_6H_{12}O_6$

M.W.: 180.16

CAS No.: 3458-28-4

Package: mg to kg



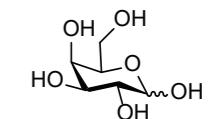
GD-0004 D-galactose

M.F.: $C_6H_{12}O_6$

M.W.: 180.16

CAS No.: 59-23-4

Package: mg to kg



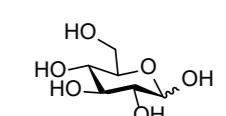
GD-0005 D-glucose

M.F.: $C_6H_{12}O_6$

M.W.: 180.16

CAS No.: 50-99-7

Package: mg to kg



Monosaccharide

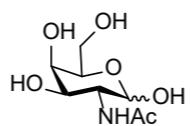
GD-0006 GalNAc

M.F.: C₈H₁₅NO₆

M.W.: 221.21

CAS No.: 1811-31-0

Package: mg to kg



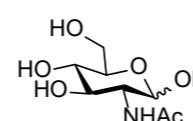
GD-0007 GlcNAc

M.F.: C₈H₁₅NO₆

M.W.: 221.21

CAS No.: 10036-64-3

Package: mg to kg



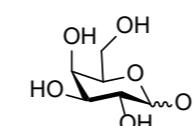
GD-0008 D-galactose

M.F.: C₆H₁₂O₆

M.W.: 180.16

CAS No.: 59-23-4

Package: mg to kg



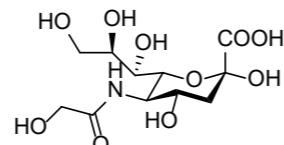
GD-0009 Neu5Gc

M.F.: C₁₁H₁₉NO₁₀

M.W.: 325.27

CAS No.: 26230-28-4

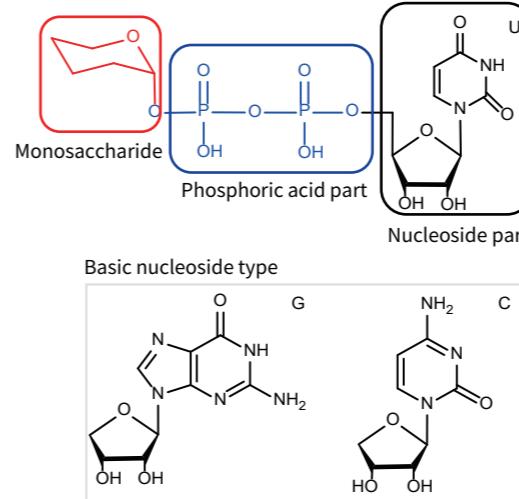
Package: mg to kg



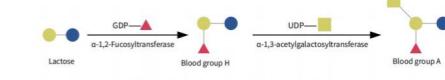
Sugar nucleotide »»

Background Introduction

Sugar nucleotides, also known as sugar nucleoside diphosphate or nucleoside monophosphate, are derivatives formed by reacting different monosaccharide with hydroxyl groups. Its structure is composed of three parts (i.e., sugar, phosphate and nucleoside). Sugar nucleotides are activated forms during the synthesis of glycans, such as UDP-Gal, GDP-Fuc and CMP-Sia.

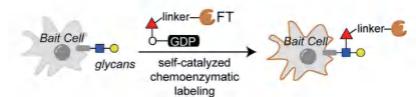


Donors for the synthesis of oligosaccharides and glycoconjugates



One of the important tools for studying the structure and function of glycosyltransferases

Target molecular markers



Liu et al., 2020, Cell 183, 1–17

Application

Antibiotic metabolism pathways

Antibiotics have important applications in the fields of biomedicine and pharmacy. Many antibiotics have one or more sugar groups, which play an important role in their biological activity. Therefore, antibiotic glycosylation is one of the main research area in antibiotic metabolism.

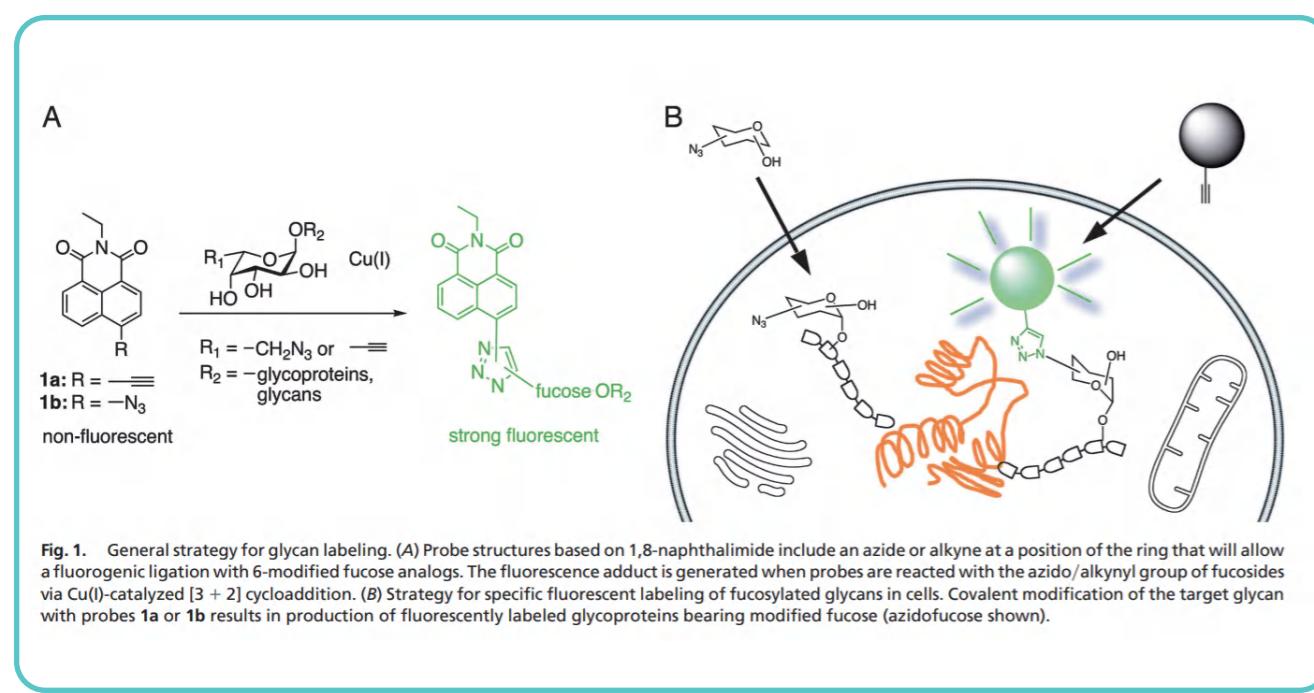
Most of the sugar groups in natural products are synthesized from D-glucose 1-phosphate which act as the starting material. The compound is utilized to synthesize NDP-glucose, and then catalyzed by a series of enzymes to obtain the target NDP-sugar, which is finally transferred to the antibiotic backbone by diverse glycosyltransferases. Throughout the process, the enzyme substrates are sugar nucleotide. In summary, sugar nucleotides play a significant role in antibiotic metabolism.

Biochemical property study of glycosyltransferases

Sugar nucleotides, the natural substrates of glycosyltransferases, are one of the important tools for studying the structure and function of glycosyltransferases. Traditionally, the catalytic activity of glycosyltransferases is only considered to transfer the activated sugar donor to acceptor substrates. However, it was found that glycosyltransferase can hydrolyse the sugar moiety on the antibiotics in the presence of corresponding nucleotides (i.e., reverse reaction). Moreover, some glycosyltransferases have relaxed substrate specificity and can catalyze the transfer of various sugar nucleotides to the antibiotic backbone. Based on the above two points, the replacement reaction between sugar and antibiotic backbone has been successfully discovered, thus providing a strategy for replacing antibiotics with new sugar groups and exchanging the existing sugar groups among various antibiotics.

Biological mechanism study

The application of click chemistry in glycobiology is becoming more and more important. This kind of method is mainly to modify biochemical molecules by modified sugars, and then label the target molecules *in situ* by click chemistry, so as to conduct mechanism study^[*]. Sugar nucleotides play an increasingly important role in chemical glycobiology as natural substrates for a variety of enzymes.



Reference:

[*] Sawa M, et al. Proceedings of the National Academy of Sciences, 2006, 103(33):12371-12376.

[*] Marchesan S, et al. Chemical Communications, 2008, 36(36):4321-4323.

Sugar nucleotide

SN-1001 **CMP-Neu5Ac.2Na**

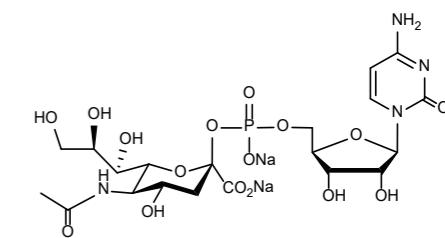
Purity: 80%

M.F.: $C_{20}H_{29}N_4Na_2O_{16}P$

M.W.: 658.42

CAS No.: 3063-71-6

Package: 50 mg, 100 mg, 200 mg, 500 mg, 1 g



SN-1002 **CMP-Neu5Gc.2Na**

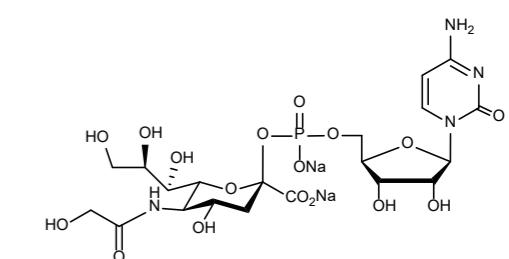
Purity: 80%

M.F.: $C_{20}H_{29}N_4Na_2O_{17}P$

M.W.: 674.42

CAS No.: 98300-80-2

Package: 50 mg, 100 mg, 200 mg, 500 mg, 1 g



SN-1003 **UDP-Glc.2Na**

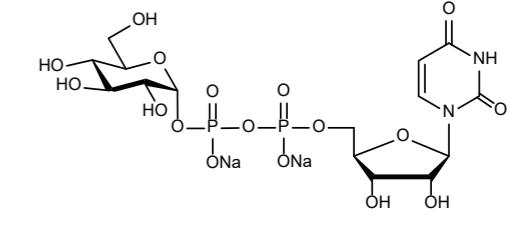
Purity: 98%

M.F.: $C_{15}H_{22}N_2Na_2O_{17}P_2$

M.W.: 610.27

CAS No.: 117756-22-6

Package: mg to kg



SN-1004 **UDP-Gal.2Na**

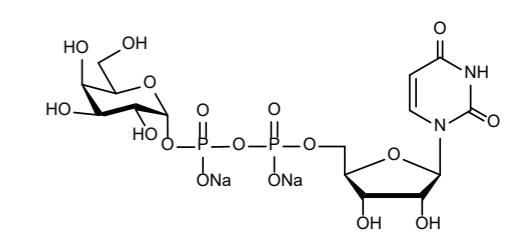
Purity: 98%

M.F.: $C_{15}H_{22}N_2Na_2O_{17}P_2$

M.W.: 610.27

CAS No.: 137868-52-1

Package: mg to kg



Sugar nucleotide

SN-1005 UDP-GlcNAc.2Na

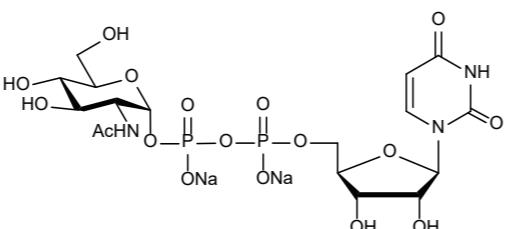
Purity: 98%

M.F.: $C_{17}H_{25}N_3Na_2O_{17}P_2$

M.W.: 651.32

CAS No.: 91183-98-1

Package: mg to kg



SN-1006 UDP-GalNAc.2Na

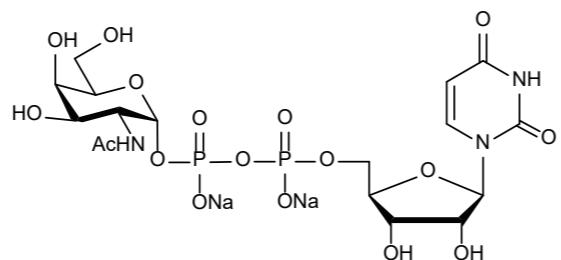
Purity: 98%

M.F.: $C_{17}H_{25}N_3Na_2O_{17}P_2$

M.W.: 651.32

CAS No.: 108320-87-2

Package: mg to kg



SN-1007 UDP-GlcA.3Na

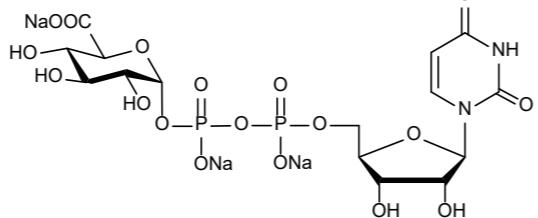
Purity: 98%

M.F.: $C_{15}H_{19}N_2Na_3O_{18}P_2$

M.W.: 646.23

CAS No.: 67300-19-6

Package: mg to kg



SN-1008 UDP-GalA.3Na

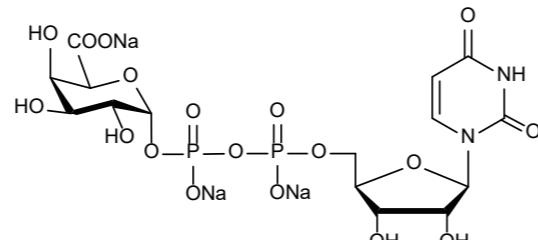
Purity: 98%

M.F.: $C_{15}H_{19}N_2Na_3O_{18}P_2$

M.W.: 646.23

CAS No.: 148407-07-2

Package: mg to kg



Sugar nucleotide

SN-1009 GDP-L-Fuc.2Na

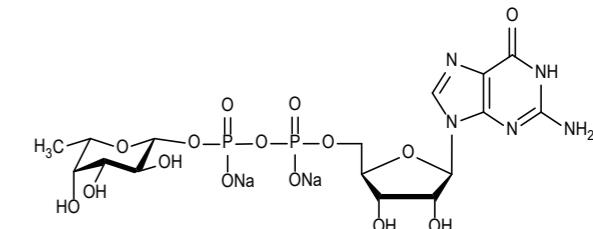
Purity: 98%

M.F.: $C_{16}H_{23}N_5Na_2O_{15}P_2$

M.W.: 633.31

CAS No.: 15839-70-0

Package: mg to kg



SN-1010 GDP-D-Man.2Na

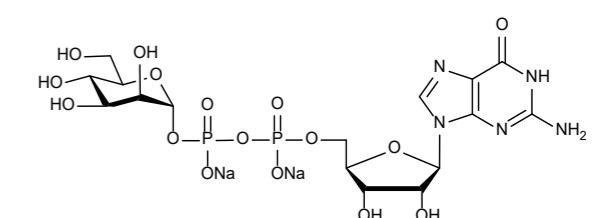
Purity: 98%

M.F.: $C_{16}H_{23}N_5Na_2O_{16}P_2$

M.W.: 649.31

CAS No.: 103301-73-1

Package: mg to kg



SN-1011 UDP-Xyl.2Na

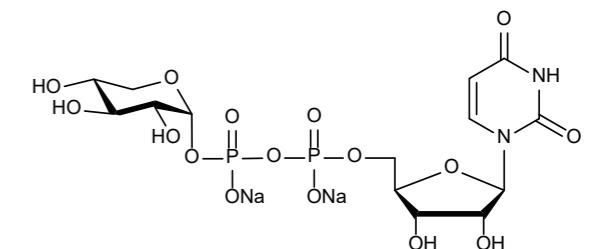
Purity: 98%

M.F.: $C_{14}H_{21}N_2NaO_{16}P_2$

M.W.: 558.26

CAS No.: 108320-89-4

Package: mg to kg



SN-1012 UDP- β -L-Rhamnose

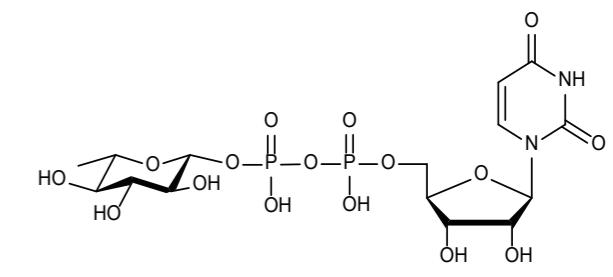
Purity: 98%

M.F.: $C_{15}H_{24}N_2O_{16}P_2$

M.W.: 550.30

CAS No.: 1955-26-6

Package: mg to kg



Sugar nucleotide

SN-1013 UDP- β -L-Ara.2Na

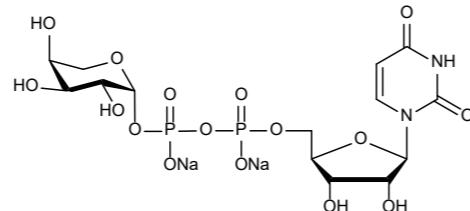
Purity: 95%

M.F.: $C_{14}H_{20}N_2Na_2O_{16}P_2$

M.W.: 580.24

CAS No.: 15839-78-8

Package: 10 mg, 20 mg, 50 mg, 1 g



SN-1014 GDP-6-deoxy- α -D-talose.2Na

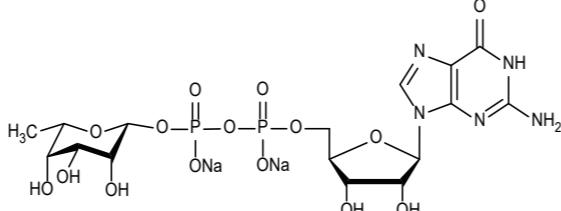
Purity: 98%

M.F.: $C_{16}H_{23}N_5Na_2O_{15}P_2$

M.W.: 633.31

CAS No.: N/A

Package: 100 mg, 200 mg, 500 mg, 1 g



SN-1015 UDP-GlcNAz.2Na

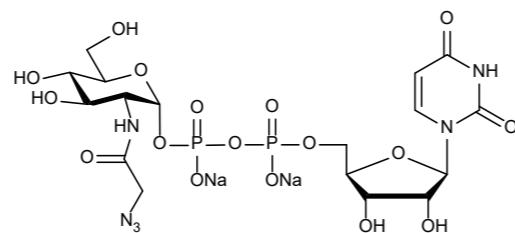
Purity: 98%

M.F.: $C_{17}H_{24}N_6Na_2O_{17}P_2$

M.W.: 692.33

CAS No.: 1611490-64-2

Package: mg to kg



SN-1016 UDP-GalNAz.2Na

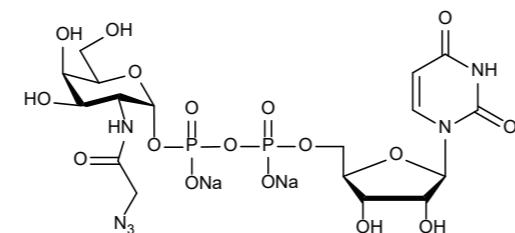
Purity: 98%

M.F.: $C_{17}H_{24}N_6Na_2O_{17}P_2$

M.W.: 692.33

CAS No.: 653600-61-4

Package: mg to kg



Sugar nucleotide

SN-1017 UDP-6-azido-6-deoxy-D-Glc.2Na

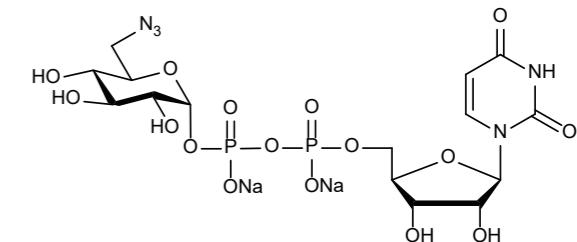
Purity: 95%; 98%

M.F.: $C_{15}H_{21}N_5Na_2O_{16}P_2$

M.W.: 635.28

CAS No.: 537039-67-1

Package: 10 mg, 50 mg, 100 mg, 200 mg, 500 mg, 1 g



SN-1018 UDP-6-azido-6-deoxy-D-Gal.2Na

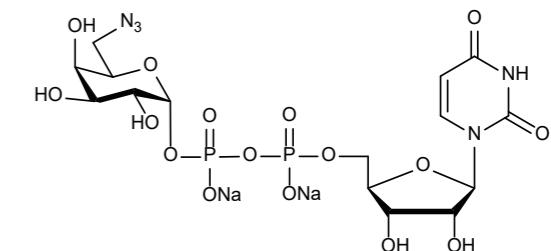
Purity: 95%; 98%

M.F.: $C_{15}H_{21}N_5Na_2O_{16}P_2$

M.W.: 635.28

CAS No.: 868208-96-2

Package: 10 mg, 50 mg, 100 mg, 200 mg, 500 mg, 1 g



SN-1019 UDP-GlcNTFA.2Na

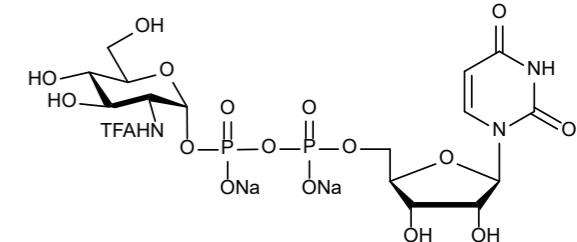
Purity: 95%; 98%

M.F.: $C_{17}H_{22}F_3N_3Na_2O_{17}P_2$

M.W.: 705.02

CAS No.: 1355005-47-8

Package: mg to kg



SN-1020 UDP-GalNTFA.2Na

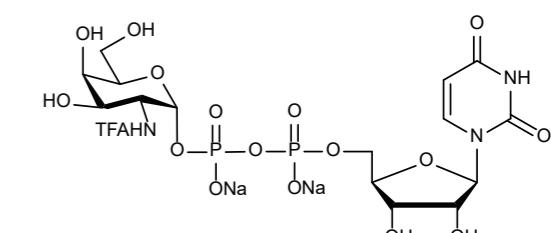
Purity: 95%; 98%

M.F.: $C_{17}H_{22}F_3N_3Na_2O_{17}P_2$

M.W.: 705.29

CAS No.: N/A

Package: mg to kg



Sugar nucleotide

SN-1021 UDP-2-deoxy-Glucose.2Na

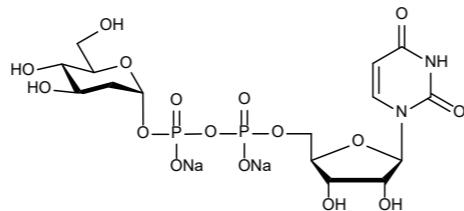
Purity: 95%; 98%

M.F.: $C_{15}H_{22}N_2Na_2O_{16}P_2$

M.W.: 594.27

CAS No.: N/A

Package: 10 mg, 50 mg, 100 mg, 200 mg, 500 mg, 1 g



SN-1022 UDP-2-F-Glc.2Na

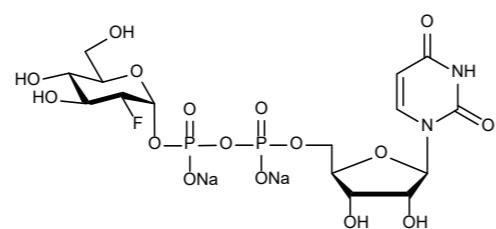
Purity: 95%; 98%

M.F.: $C_{15}H_{21}FN_2Na_2O_{16}P_2$

M.W.: 612.26

CAS No.: N/A

Package: 10 mg, 20 mg, 50 mg, 100 mg



SN-1023 GDP-6-N3-Fuc.2Na

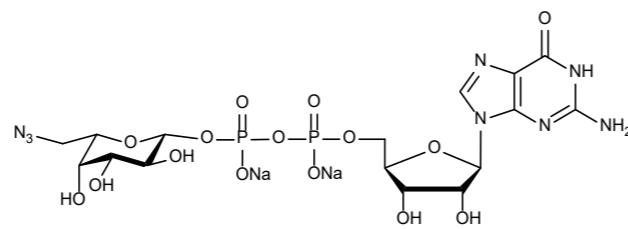
Purity: 98%

M.F.: $C_{16}H_{22}N_8Na_2O_{15}P_2$

M.W.: 674.32

CAS No.: N/A

Package: mg to kg



SN-1024 GDP-6-AI-Fuc.2Na

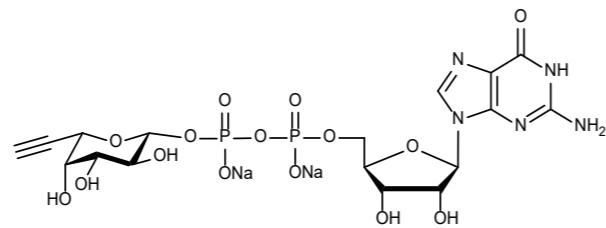
Purity: 98%

M.F.: $C_{17}H_{21}N_5Na_2O_{15}P_2$

M.W.: 643.30

CAS No.: N/A

Package: mg to kg



Sugar nucleotide

SN-1025 ADP-D-Glucose

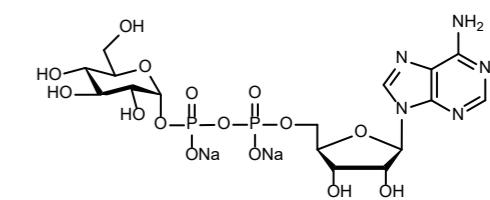
Purity: 95%; 98%

M.F.: $C_{16}H_{25}N_5O_{15}P_2$

M.W.: 589.34

CAS No.: N/A

Package: 10 mg, 50 mg, 100 mg, 200 mg, 500 mg, 1 g



SN-1026 ADP-D-Man

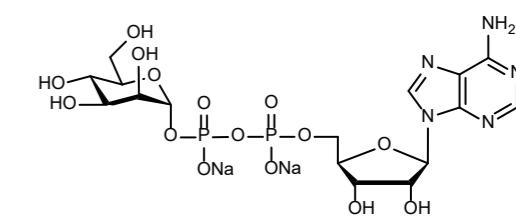
Purity: 95%; 98%

M.F.: $C_{16}H_{25}N_5O_{15}P_2$

M.W.: 589.34

CAS No.: N/A

Package: 10 mg, 50 mg, 100 mg, 200 mg, 500 mg, 1 g



SN-1027 dTDP-a-D-Glucose

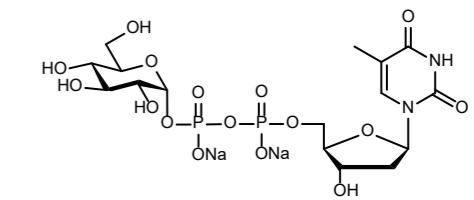
Purity: 95%; 98%

M.F.: $C_{16}H_{26}N_2O_{16}P_2$

M.W.: 564.33

CAS No.: N/A

Package: 10 mg, 50 mg, 100 mg, 200 mg, 500 mg, 1 g



Oligosaccharides »»

Background Introduction

Oligosaccharides are usually carbohydrates composed of 2 to 10 sugar units linked by glycosidic bonds. The most common oligosaccharides are disaccharides, which are formed by combining two monosaccharides through glycosidic bonds.

Application area

There are a few naturally occurring oligosaccharides, and most oligosaccharides are obtained by chemical or enzymatic hydrolysis of polysaccharides. The research and application of functional oligosaccharides (e.g. human milk oligosaccharides) in the field of public health are becoming more and more popular.

Many oligosaccharides form specific antigens with proteins and lipids in living organism, participate in various biological processes, and play important functions. Nearly 200 different kinds of biologically active oligosaccharides are involved in tumor immune pathways (cell adhesion, immune recognition, embryogenesis, tumorigenesis and infection, etc.). This family includes a large number of biologically active oligosaccharides, such as human blood group antigen (ABH, Lewis, P) and carbohydrate moieties of major glycolipids (gangliosides, globulines), etc..

Glycogene has multiple platforms containing chemistry, enzyme, and synthetic biology, and has extensive experience in the synthesis and separation of functional oligosaccharides, providing sugar products from milligrams to kilograms.

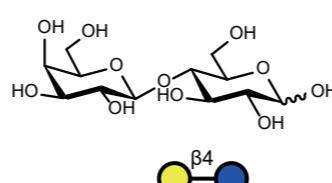
Reference:

- P. Kosma. Anticarbohydrate Antibodies(9).
- M. Speir1, et al. Scientific Reports, 2017, 7(1):14273.

Miscellaneous glycans

GO-0001 Galb1, 4Glc

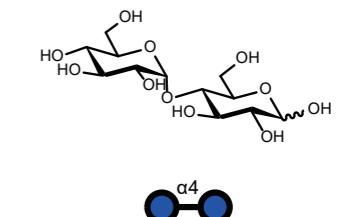
M.F.: $C_{12}H_{22}O_{11}$
M.W.: 342.30
CAS No.: 63-42-3
Package: g to kg



Miscellaneous glycans

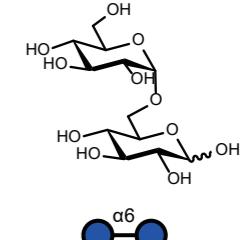
GO-0002 Glcb1, 4Glc

M.F.: $C_{12}H_{24}O_{12}$
M.W.: 360.31
CAS No.: 6363-53-7
Package: g to kg



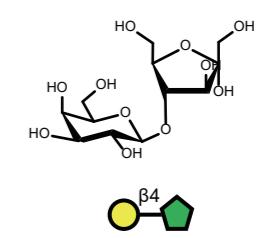
GO-0003 Glcb1, 6Glc

M.F.: $C_{12}H_{22}O_{11}$
M.W.: 342.30
CAS No.: 499-40-1
Package: g to kg



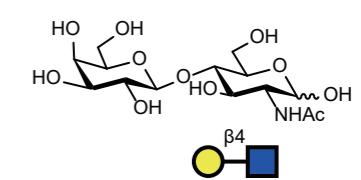
GO-0004 Galb1, 4Fru

M.F.: $C_{12}H_{22}O_{11}$
M.W.: 342.30
CAS No.: 4618-18-2
Package: g to kg



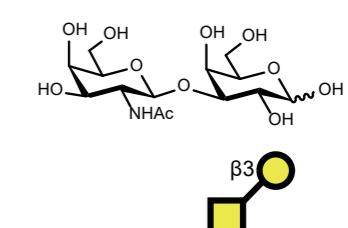
GO-0005 Galb1, 4GlcNAc

M.F.: $C_{14}H_{25}NO_{11}$
M.W.: 383.35
CAS No.: 32181-59-2
Package: mg to kg



GO-0006 GalNAcb1, 3Gal

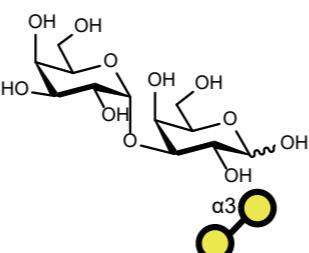
M.F.: $C_{14}H_{25}NO_{11}$
M.W.: 383.35
CAS No.: N/A
Package: mg to g



Miscellaneous glycans

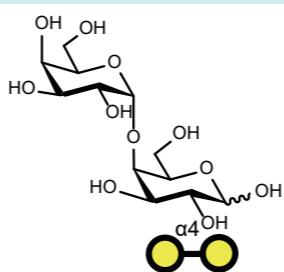
GO-0007 Gala1, 3Gal

M.F.: $C_{12}H_{22}O_{11}$
 M.W.: 342.30
 CAS No.: 13168-24-6
 Package: mg to g



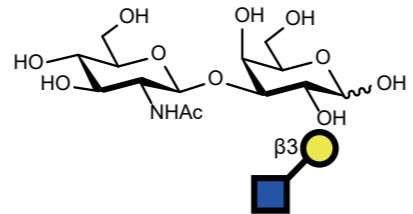
GO-0008 Gala1, 4Gal

M.F.: $C_{12}H_{22}O_{11}$
 M.W.: 342.30
 CAS No.: 80446-85-1
 Package: mg to g



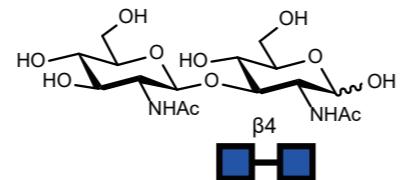
GO-0009 GlcNAcb1, 3Gal

M.F.: $C_{14}H_{25}NO_{11}$
 M.W.: 383.35
 CAS No.: N/A
 Package: mg to g



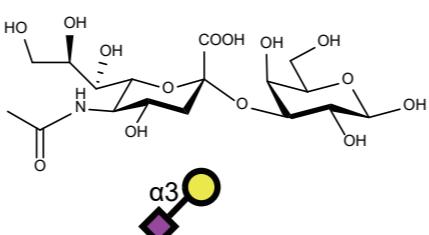
GO-0010 GlcNAcb1, 4GlcNAc

M.F.: $C_{16}H_{28}N_2O_{11}$
 M.W.: 424.40
 CAS No.: 35061-50-8
 Package: mg to g



GO-0011 Neu5Aca2, 3Gal

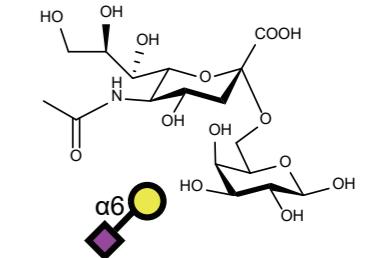
M.F.: $C_{17}H_{29}NO_{14}$
 M.W.: 471.41
 CAS No.: N/A
 Package: mg to g



Miscellaneous glycans

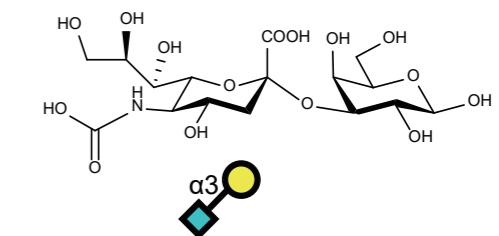
GO-0012 Neu5Aca2, 6Gal

M.F.: $C_{17}H_{29}NO_{14}$
 M.W.: 471.41
 CAS No.: N/A
 Package: mg to g



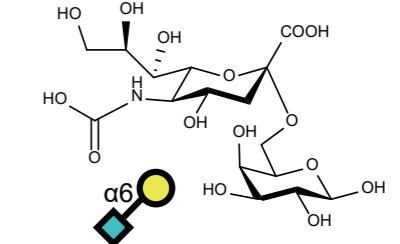
GO-0013 Neu5Gca2, 3Gal

M.F.: $C_{16}H_{27}NO_{15}$
 M.W.: 473.38
 CAS No.: 499-40-1
 Package: mg to g



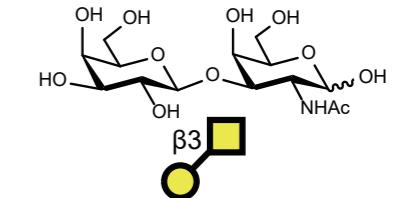
GO-0014 Neu5Gca2, 6Gal

M.F.: $C_{16}H_{27}NO_{15}$
 M.W.: 473.38
 CAS No.: N/A
 Package: mg to g



GO-0015 GalNAca1, 3Gal

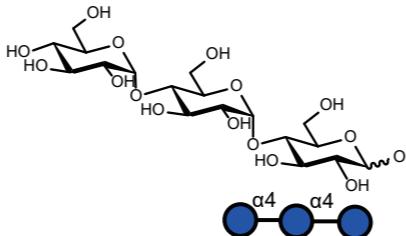
M.F.: $C_{14}H_{25}NO_{11}$
 M.W.: 383.35
 CAS No.: N/A
 Package: mg to g



Malt oligosaccharides

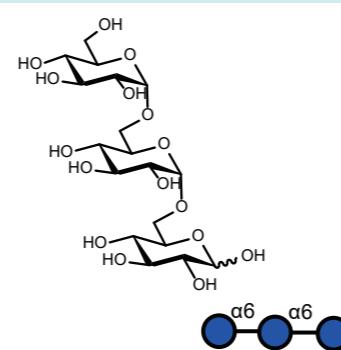
GO-0101 Glc_{a1,4}Glc_{a1,4}Glc

M.F.: C₁₈H₃₂O₁₆
 M.W.: 504.44
 CAS No.: 1109-28-0
 Package: g to kg



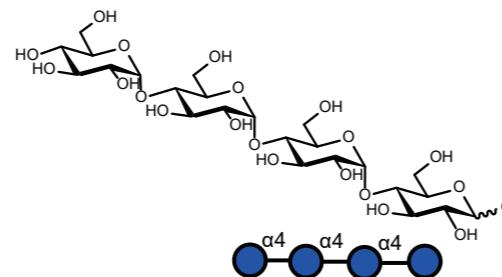
GO-0102 Glc_{a1,6}Glc_{a1,6}Glc

M.F.: C₁₈H₃₂O₁₆
 M.W.: 504.44
 CAS No.: 3371-50-4
 Package: mg to g



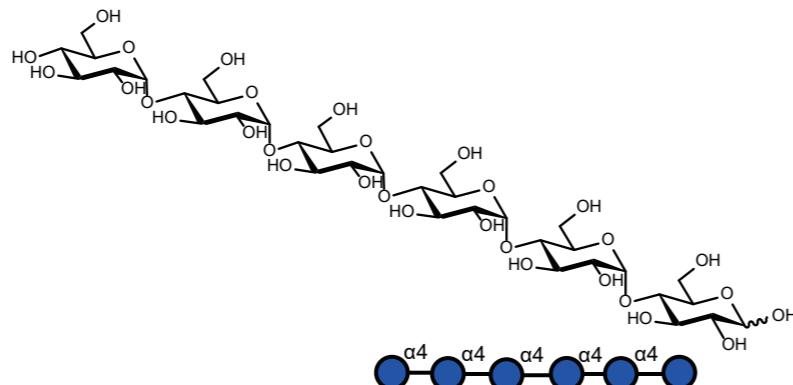
GO-0103 (Glc_{a1,4})₃Glc

M.F.: C₂₄H₄₂O₂₁
 M.W.: 666.58
 CAS No.: 34612-38-9
 Package: mg to g



GO-0104 (Glc_{a1,4})₅Glc

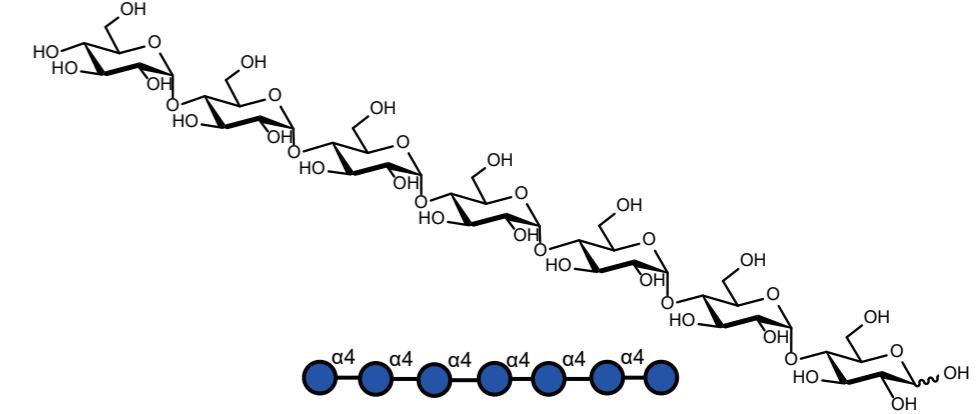
M.F.: C₃₆H₆₂NO₃₁
 M.W.: 990.86
 CAS No.: 34620-77-4
 Package: g to kg



Malt oligosaccharides

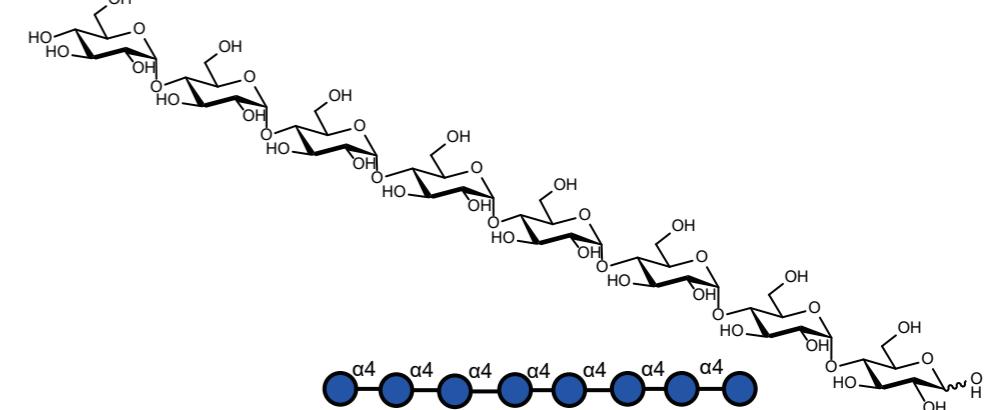
GO-0105 (Glc_{a1,4})₆Glc

M.F.: C₄₂H₇₂O₃₆
 M.W.: 1153.00
 CAS No.: 34620-78-5
 Package: g to kg



GO-0106 (Glc_{a1,4})₇Glc

M.F.: C₄₈H₈₂O₄₁
 M.W.: 1315.14
 CAS No.: 6156-84-9
 Package: g to kg

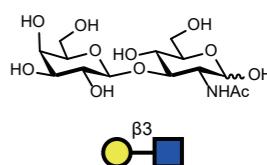
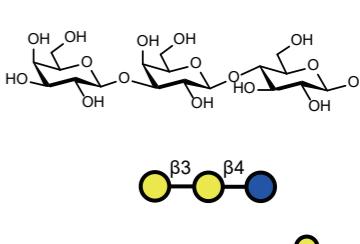
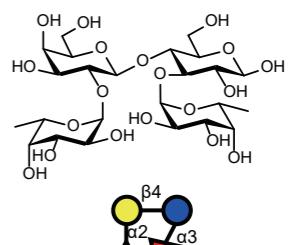
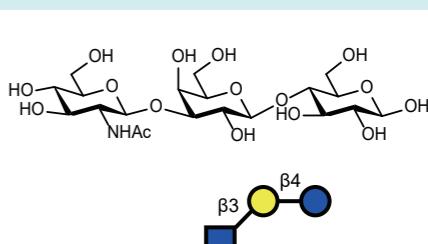
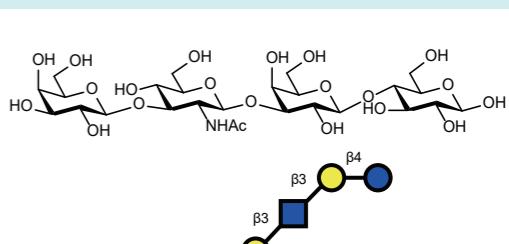


Human milk oligosaccharides

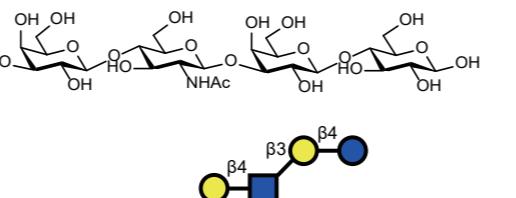
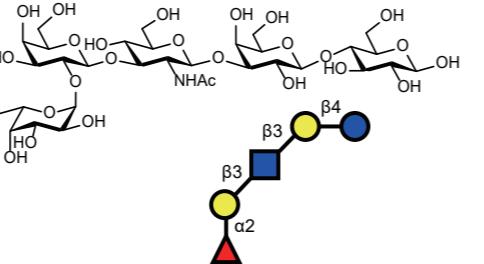
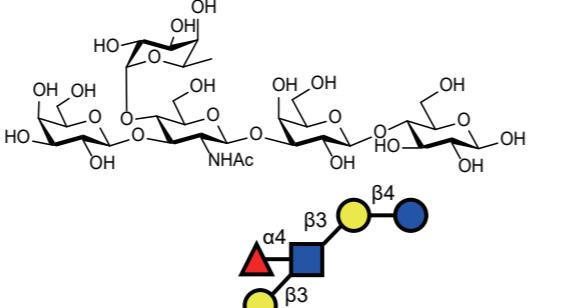
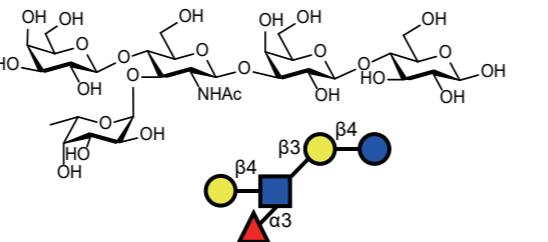
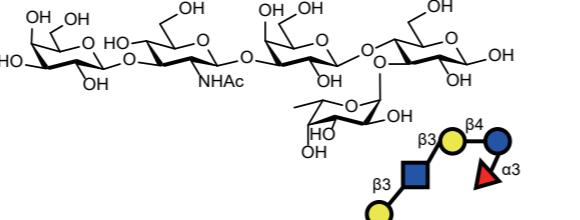
There are more than 200 different human milk oligosaccharides, and more than 30 have been determined structurally. Each human milk oligosaccharide has unique function. It is beneficial to the development of the neonatal brain, acting as a prebiotic, supporting the development of the immune system and the intestinal tract, preventing pathogens from adhering to the cell surface, acting as an epithelial cell response regulator, immune cell regulator, and triggering cell protection. Currently, 2'-FL, LNnT, DFL, LNT, 3'-SL, 6'-SL, etc have passed the new food or GRAS certification and can be used in formula milk powder, functional drinks, functional foods, nutritional supplements and special medical food.

GO-2001	2' FL	M.F.: C ₁₈ H ₃₂ O ₁₅ M.W.: 488.44 CAS No.: 41263-94-9 Package: g to kg	
GO-2002	3' FL	M.F.: C ₁₈ H ₃₂ O ₁₅ M.W.: 488.44 CAS No.: 41312-47-4 Package: g to kg	
GO-2003	3' SL	M.F.: C ₂₃ H ₃₉ NO ₁₉ M.W.: 633.55 CAS No.: 128596-80-5/35890-38-1 Package: g to kg	
GO-2004	6' SL (GM3)		

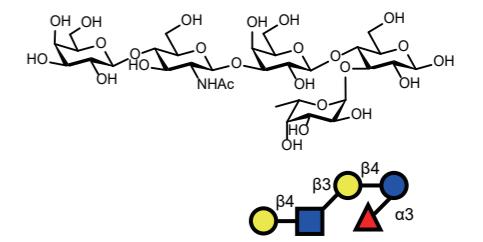
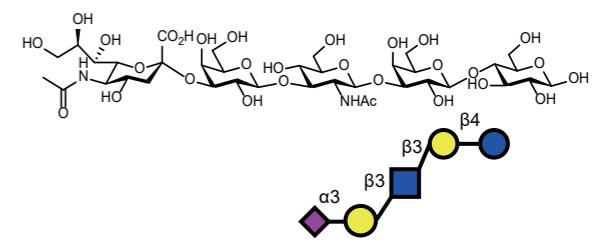
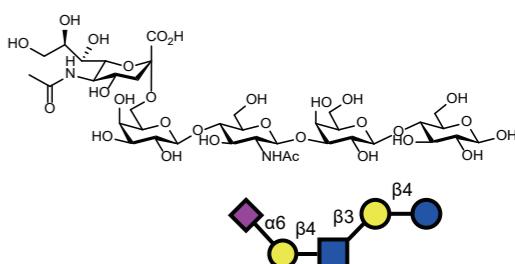
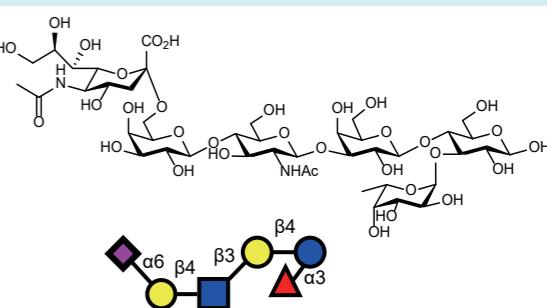
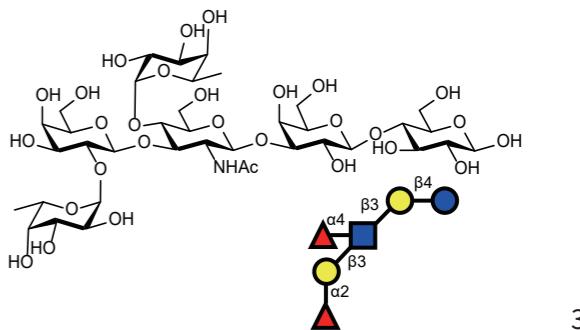
Human milk oligosaccharides

GO-2005	LNB
M.F.: C ₁₄ H ₂₅ NO ₁₁	
M.W.: 383.35	
CAS No.: 50787-09-2	
Package: mg to kg	
GO-2006	3'GL
M.F.: C ₁₈ H ₃₂ O ₁₆	
M.W.: 504.44	
CAS No.: 32694-82-9	
Package: mg to kg	
GO-2007	DFL
M.F.: C ₂₄ H ₄₂ O ₁₉	
M.W.: 634.58	
CAS No.: 20768-11-0	
Package: mg to kg	
GO-2008	LNT II
M.F.: C ₂₀ H ₃₅ NO ₁₆	
M.W.: 545.49	
CAS No.: 75645-27-1	
Package: mg to kg	
GO-2009	LNT
M.F.: C ₂₆ H ₄₆ NO ₂₁	
M.W.: 707.63	
CAS No.: 14116-68-8	
Package: mg to kg	

Human milk oligosaccharides

GO-2010	LNnT
M.F.: C ₂₆ H ₄₅ NO ₂₁	
M.W.: 707.63	
CAS No.: 13007-32-4	
Package: mg to kg	
GO-2011	LNFP I
M.F.: C ₃₂ H ₅₅ NO ₂₅	
M.W.: 853.77	
CAS No.: 7578-25-8	
Package: mg to g	
GO-2012	LNFP II
M.F.: C ₃₂ H ₅₅ NO ₂₅	
M.W.: 853.77	
CAS No.: 21973-23-9	
Package: mg to g	
GO-2013	LNFP III
M.F.: C ₃₂ H ₅₅ NO ₂₅	
M.W.: 853.77	
CAS No.: 25541-09-7	
Package: mg to g	
GO-2014	LNFP V
M.F.: C ₃₂ H ₅₅ NO ₂₅	
M.W.: 853.77	
CAS No.: 60254-64-0	
Package: mg to g	

Human milk oligosaccharides

GO-2015	LNFP VI
M.F.: C ₃₂ H ₅₅ NO ₂₅	
M.W.: 853.77	
CAS No.: 145876-86-4	
Package: mg to g	
GO-2016	LSTa
M.F.: C ₃₇ H ₆₂ N ₂ O ₂₉	
M.W.: 998.89	
CAS No.: 64003-53-8	
Package: mg to g	
GO-2017	LSTc
M.F.: C ₃₇ H ₆₂ N ₂ O ₂₉	
M.W.: 998.89	
CAS No.: 64003-55-0	
Package: mg to g	
GO-2018	F-LSTc
M.F.: C ₄₃ H ₇₂ N ₂ O ₃₃	
M.W.: 1145.03	
CAS No.: N/A	
Package: mg to g	
GO-2019	LNDFH I
M.F.: C ₃₈ H ₆₅ NO ₂₉	
M.W.: 999.92	
CAS No.: 16789-38-1	
Package: mg to g	

Human milk oligosaccharides

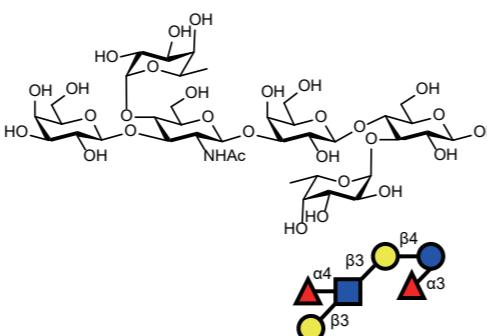
GO-2020 LNDFH II

M.F.: $C_{38}H_{65}NO_{29}$

M.W.: 999.92

CAS No.: 62258-12-2

Package: mg to g



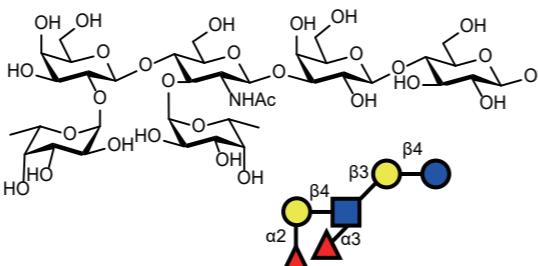
GO-2021 LNnDFH I

M.F.: $C_{38}H_{65}NO_{29}$

M.W.: 999.92

CAS No.: 62469-99-2

Package: mg to g



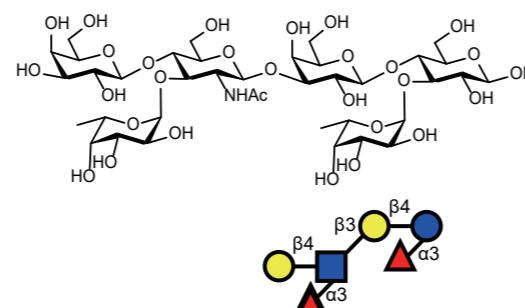
GO-2022 LNnDFH II

M.F.: $C_{38}H_{65}NO_{29}$

M.W.: 999.92

CAS No.: N/A

Package: mg to g



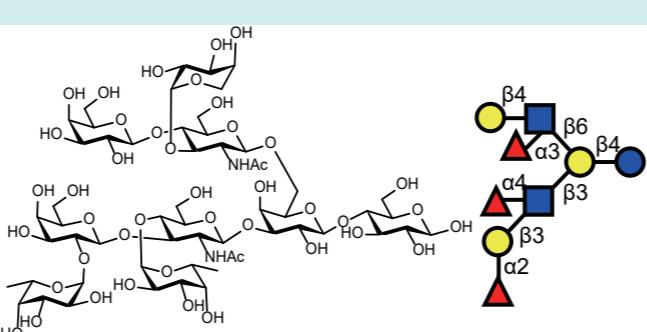
GO-2023 TF-LNH(TFLNH I)

M.F.: $C_{57}H_{96}N_2O_{43}$

M.W.: 1497.37

CAS No.: 11688-09-1

Package: mg to g



Human milk oligosaccharides

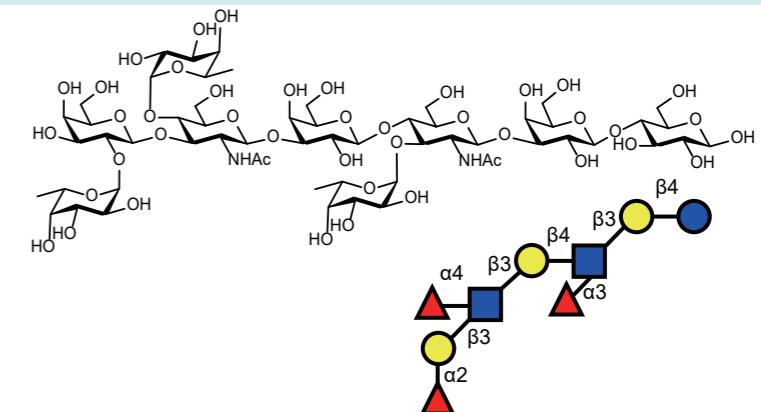
GO-2024 TF-pLNH I

M.F.: $C_{58}H_{98}N_2O_{43}$

M.W.: 1511.39

CAS No.: 120864-60-0

Package: mg to g



Other human milk oligosaccharides

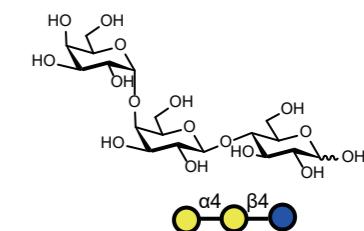
GO-3001 Gala1, 4Gala1, 4Glc

M.F.: $C_{18}H_{32}O_{16}$

M.W.: 504.44

CAS No.: N/A

Package: mg to hg



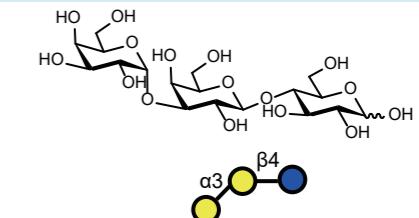
GO-3002 Gala1, 3Galb1, 4Glc

M.F.: $C_{18}H_{32}O_{16}$

M.W.: 504.44

CAS No.: N/A

规格: mg to hg



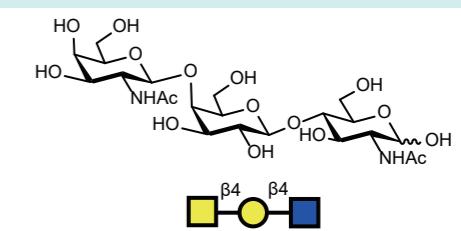
GO-3003 GlcNAcb1, 4Galb1, 4GlcNAc

M.F.: $C_{22}H_{38}N_2O_{16}$

M.W.: 586.54

CAS No.: N/A

Package: mg to hg



Other human milk oligosaccharides

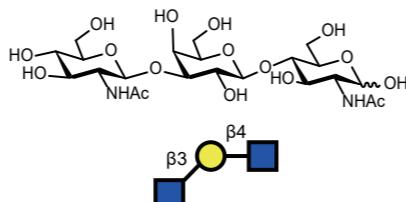
GO-3004 GlcNAcb1, 3Galb1, 4GlcNAc

M.F.: $C_{22}H_{38}N_2O_{16}$

M.W.: 586.54

CAS No.: N/A

Package: mg , g



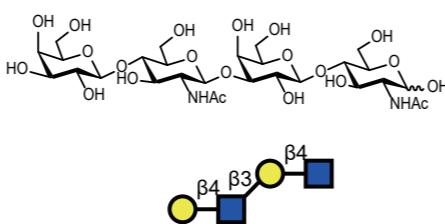
GO-3005 Galb1, 4GlcNAcb1, 3Galb1, 4GlcNAc

M.F.: $C_{28}H_{48}N_2O_{21}$

M.W.: 748.69

CAS No.: N/A

Package: mg , g



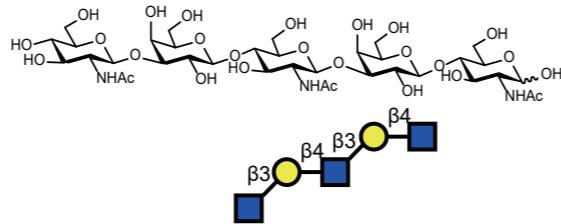
GO-3006 GlcNAcb1, 3Galb1, 4GlcNAcb1, 4Galb1, 4GlcNAc

M.F.: $C_{36}H_{61}N_3O_{26}$

M.W.: 951.88

CAS No.: N/A

Package: mg , g



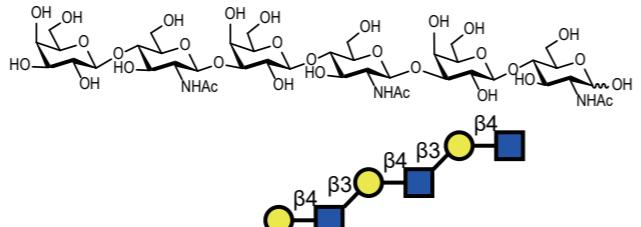
GO-3007 Galb1, 4GlcNAcb1, 3Galb1, 4GlcNAcb1, 3Galb1, 4GlcNAc

M.F.: $C_{42}H_{71}N_3O_{31}$

M.W.: 1114.02

CAS No.: N/A

Package: mg , g



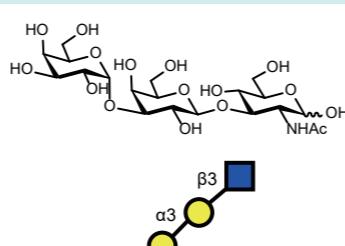
GO-3008 Gal1, 3Glcb1, 3GlcNAc

M.F.: $C_{20}H_{35}NO_{16}$

M.W.: 545.49

CAS No.: N/A

Package: mg , g



Other human milk oligosaccharides

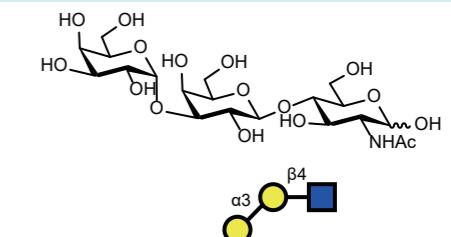
GO-3009 α -Gal Gal1,3Glc1,4GlcNAc

M.F.: $C_{20}H_{35}NO_{16}$

M.W.: 545.49

CAS No.: N/A

Package: mg , g



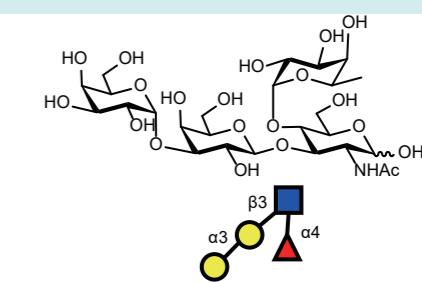
GO-3010 α -Gal LewisA Gal1, 3Glc1, 3(Fuca1, 4)GlcNAc

M.F.: $C_{26}H_{45}NO_{20}$

M.W.: 691.63

CAS No.: N/A

Package: mg , g



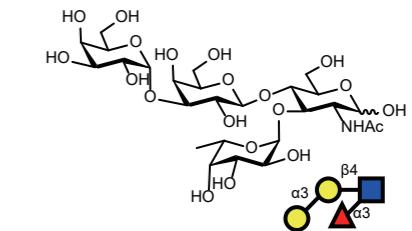
GO-3011 α -Gal LewisX Gal1,3Glc1,4(Fuca1,3)GlcNAc

M.F.: $C_{26}H_{45}NO_{20}$

M.W.: 691.63

CAS No.: N/A

Package: mg , g



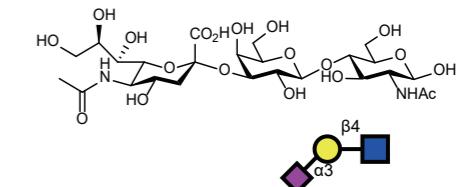
GO-3012 NeuAca2,3Galb1,4GlcNAc

M.F.: $C_{25}H_{42}N_2O_{19}$

M.W.: 674.61

CAS No.: N/A

Package: mg , g



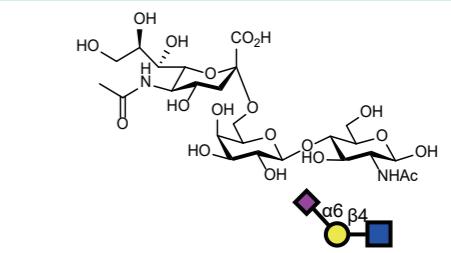
GO-3013 NeuAca2,6Galb1,4GlcNAc

M.F.: $C_{25}H_{42}N_2O_{19}$

M.W.: 674.61

CAS No.: N/A

Package: mg , g



Other human milk oligosaccharides

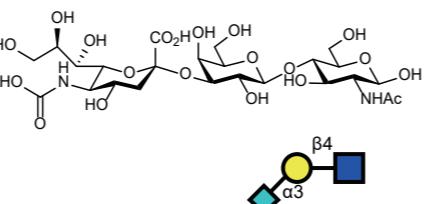
GO-3014 NeuAca2, 3Galb1, 4GlcNAc

M.F.: $C_{24}H_{40}N_2O_{20}$

M.W.: 676.58

CAS No.: N/A

Package: mg , g



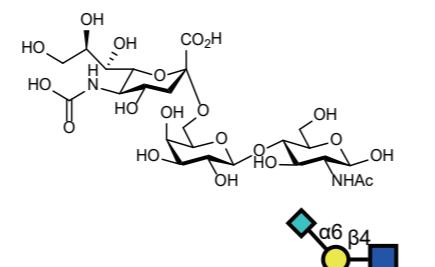
GO-3015 NeuAca2, 6Galb1, 4GlcNAc

M.F.: $C_{24}H_{40}N_2O_{20}$

M.W.: 676.58

CAS No.: N/A

Package: mg , g



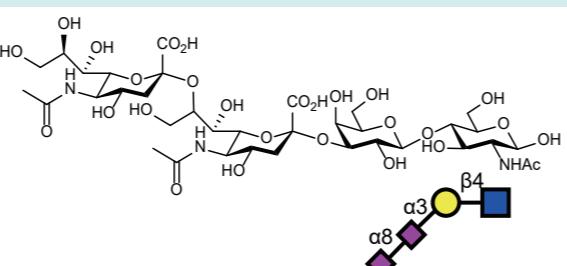
GO-3016 NeuAca2, 8NeuAca2, 3Galb1, 4GlcNAc

M.F.: $C_{36}H_{59}N_3O_{27}$

M.W.: 965.86

CAS No.: N/A

Package: mg , g



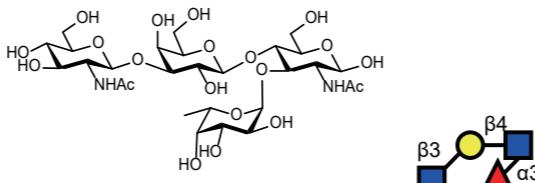
GO-3017 GlcNAcb1, 3Galb1, 4(Fuca1, 2)GlcNAc

M.F.: $C_{28}H_{48}N_2O_{20}$

M.W.: 732.69

CAS No.: N/A

Package: mg , g



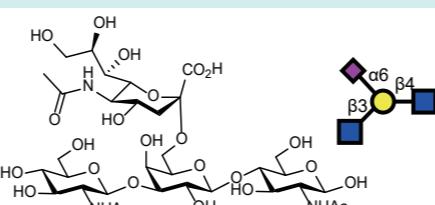
GO-3018 GlcNAcb1, 3(Neu5Ac2, 6)Galb1, 4GlcNAc

M.F.: $C_{33}H_{55}N_3O_{24}$

M.W.: 877.80

CAS No.: N/A

Package: mg , g



Blood type oligosaccharides

Many oligosaccharides linked to proteins and lipids in cell participate in many different biological processes. Various complex sugar chains with terminal Lewis epitopes can be covalently linked with proteins and lipids to form glycoconjugates or solely exist as free glycans. Those free glycans and glycoconjugates mediate the interaction between cells and the extracellular environment, which plays a vital role in many physiological and pathological processes, and has broad application in biomedicine. For example, Lex, sLex, Ley, and sLea are common tumor-associated carbohydrate antigens (TACAs), which have been used as biomarkers for clinical diagnosis of tumors and targets for immunotherapy. Furthermore, the Pk antigen is a receptor of Shiga toxin and E. coli-associated hemolytic uremic syndrome (HUS), as well as a receptor of *Streptococcus suis*.

Blood group antigen (ABH)

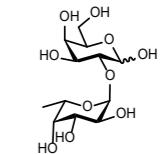
GO-4001 Blood type disaccharide H

M.F.: $C_{12}H_{22}O_{10}$

M.W.: 326.30

CAS No.: 16741-18-7

Package: mg , g



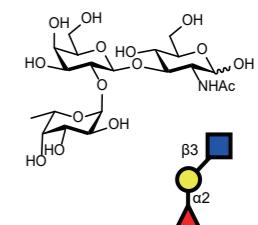
GO-4002 Blood type trisaccharide H Type I

M.F.: $C_{20}H_{35}NO_{15}$

M.W.: 529.49

CAS No.: N/A

Package: mg , g



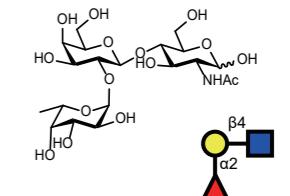
GO-4003 Blood type trisaccharide H Type II

M.F.: $C_{20}H_{35}NO_{15}$

M.W.: 529.49

CAS No.: N/A

Package: mg , g



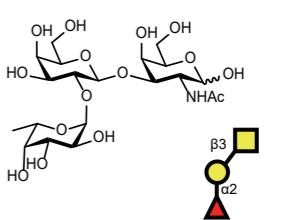
GO-4004 Blood type trisaccharide H Type III/IV

M.F.: $C_{20}H_{35}NO_{15}$

M.W.: 529.49

CAS No.: N/A

Package: mg , g



Blood group antigen (ABH)

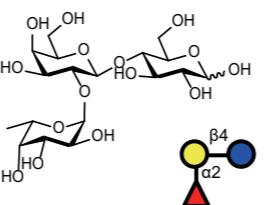
GO-4005 Blood type trisaccharide H Type VI (2'FL)

M.F.: $C_{18}H_{32}O_{15}$

M.W.: 488.44

CAS No.: N/A

Package: mg , g



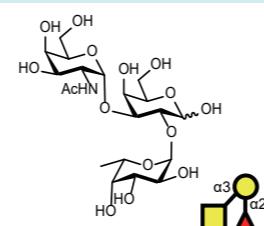
GO-4006 Blood type trisaccharide A

M.F.: $C_{20}H_{35}NO_{15}$

M.W.: 529.49

CAS No.: 49777-13-1

Package: mg , g



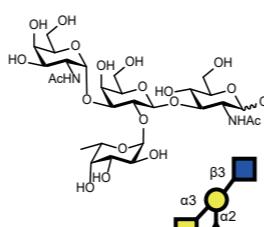
GO-4007 Blood type tetrasaccharide A Type I

M.F.: $C_{28}H_{48}N_2O_{20}$

M.W.: 732.69

CAS No.: N/A

Package: mg , g



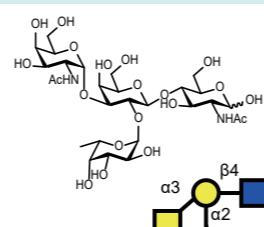
GO-4008 Blood type tetrasaccharide A Type II

M.F.: $C_{28}H_{48}N_2O_{20}$

M.W.: 732.69

CAS No.: N/A

Package: mg , g



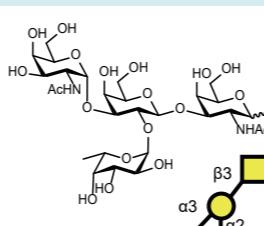
GO-4009 Blood type tetrasaccharide A Type III/IV

M.F.: $C_{28}H_{48}N_2O_{20}$

M.W.: 732.69

CAS No.: N/A

Package: mg , g



Blood group antigen (ABH)

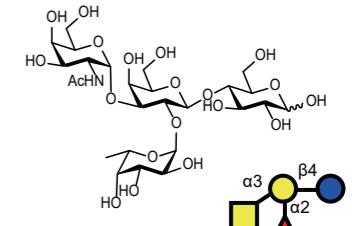
GO-4010 Blood type tetrasaccharide A Type VI

M.F.: $C_{26}H_{45}NO_{20}$

M.W.: 691.63

CAS No.: 59957-92-5

Package: mg , g



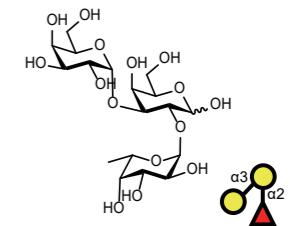
GO-4011 Blood type trisaccharide B

M.F.: $C_{18}H_{32}O_{15}$

M.W.: 488.44

CAS No.: 49777-14-2

Package: mg , g



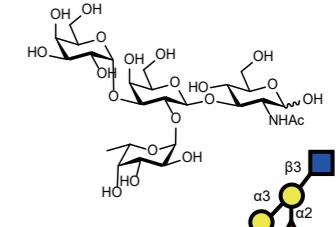
GO-4012 Blood type tetrasaccharide B Type I

M.F.: $C_{26}H_{45}NO_{20}$

M.W.: 691.63

CAS No.: N/A

Package: mg , g



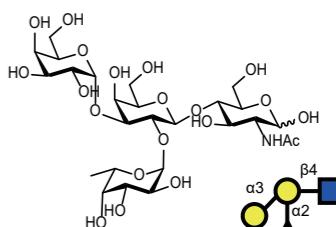
GO-4013 Blood type tetrasaccharide B Type II

M.F.: $C_{26}H_{45}NO_{20}$

M.W.: 691.63

CAS No.: N/A

Package: mg , g



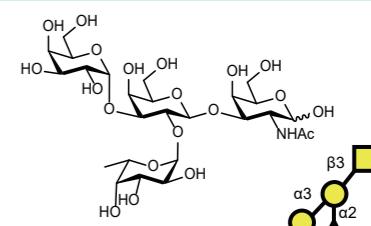
GO-4014 Blood type tetrasaccharide B Type III/IV

M.F.: $C_{26}H_{45}NO_{20}$

M.W.: 691.63

CAS No.: N/A

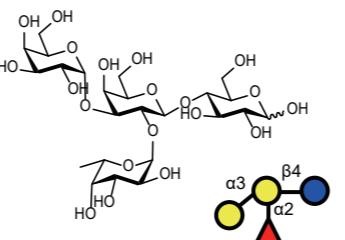
Package: mg , g



Blood group antigen (ABH)

GO-4015 Blood type tetrasaccharide B Type VI

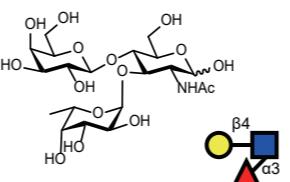
M.F.: $C_{24}H_{42}O_{20}$
 M.W.: 650.58
 CAS No.: N/A
 Package: mg , g



Lwise antigen

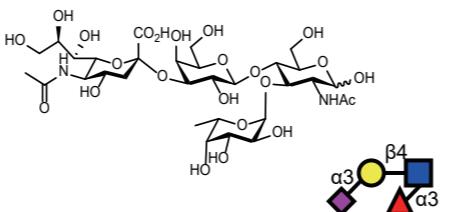
GO-4201 Lewis X (Le^x) SSEA-1/CD15

M.F.: $C_{20}H_{35}NO_{15}$
 M.W.: 529.49
 CAS No.: 71208-06-5
 Package: mg , g



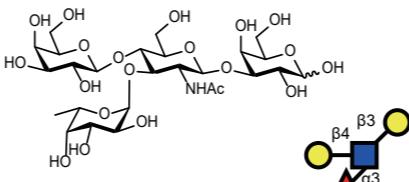
GO-4202 Sialyl Lewis X (sLe^x)

M.F.: $C_{31}H_{52}N_2O_{23}$
 M.W.: 820.75
 CAS No.: N/A
 Package: mg , g



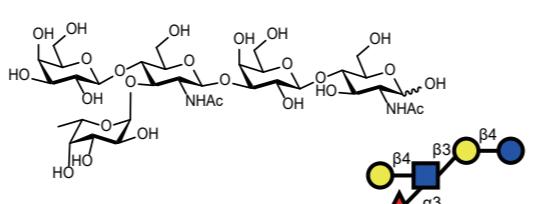
GO-4203 Lewis X (Le^x) 四糖

M.F.: $C_{26}H_{45}NO_{20}$
 M.W.: 691.63
 CAS No.: N/A
 Package: mg , g



GO-4204 Lewis X (Le^x) 五糖

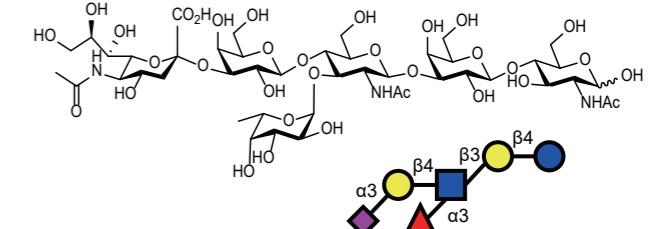
M.F.: $C_{34}H_{58}N_2O_{25}$
 M.W.: 894.83
 CAS No.: N/A
 Package: mg , g



Lwise antigen

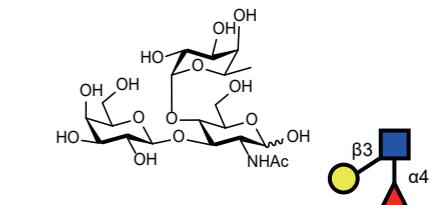
GO-4205 Sialyl Lewis X (sLe^x)-Hexasaccharide

M.F.: $C_{45}H_{75}N_3O_{33}$
 M.W.: 1186.08
 CAS No.: N/A
 Package: mg , g



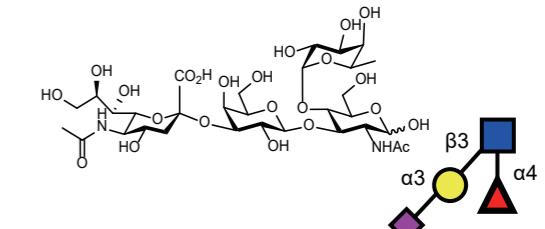
GO-4206 Lewis A (Le^a)

M.F.: $C_{20}H_{35}NO_{15}$
 M.W.: 529.49
 CAS No.: N/A
 Package: mg , g



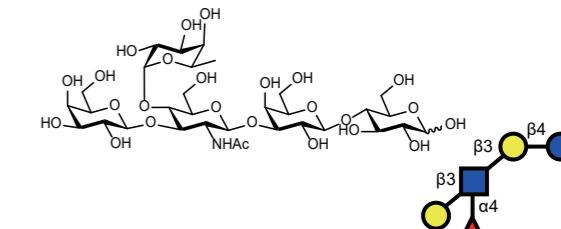
GO-4207 Sialyl Lewis A (sLe^a)

M.F.: $C_{31}H_{52}N_2O_{23}$
 M.W.: 820.75
 CAS No.: N/A
 Package: mg , g



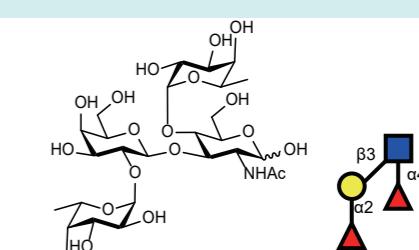
GO-4208 Lewis A (Le^a) pentasaccharide

M.F.: $C_{32}H_{55}NO_{25}$
 M.W.: 853.77
 CAS No.: N/A
 Package: mg , g



GO-4209 Lewis B (Le^b)

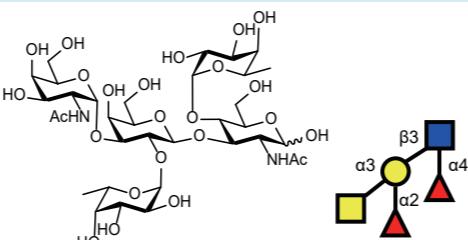
M.F.: $C_{26}H_{45}NO_{19}$
 M.W.: 675.63
 CAS No.: N/A
 Package: mg , g



Lwise antigen

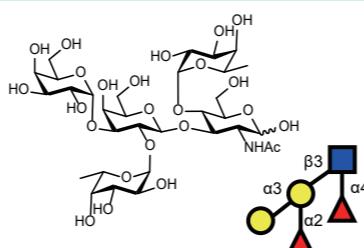
GO-4210	ALewis B (ALe ^b)
---------	------------------------------

M.F.: C₃₄H₅₈N₂O₂₄
M.W.: 878.83
CAS No.: N/A
Package: mg , g



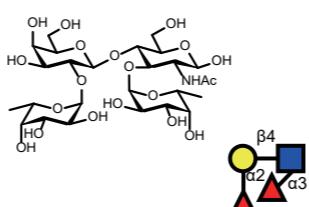
GO-4211	BLewis B (ALe ^b)
---------	------------------------------

M.F.: C₃₂H₅₅NO₂₄
M.W.: 837.78
CAS No.: N/A
Package: mg , g



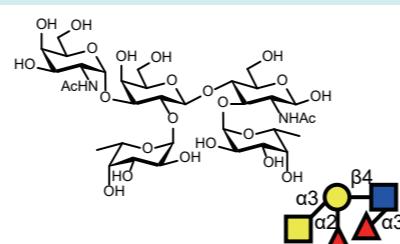
GO-4212	Lewis Y (Le ^y)
---------	----------------------------

M.F.: C₂₆H₄₅NO₁₉
M.W.: 675.63
CAS No.: N/A
Package: mg , g



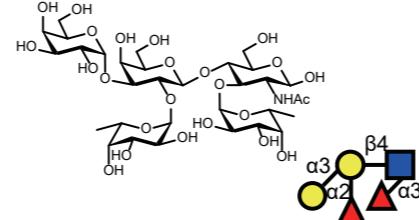
GO-4213	ALewis Y (ALe ^y)
---------	------------------------------

M.F.: C₃₄H₅₈N₂O₂₄
M.W.: 878.83
CAS No.: N/A
Package: mg , g



GO-4214	BLewis Y (ALe ^y)
---------	------------------------------

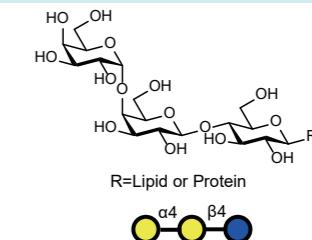
M.F.: C₃₂H₅₅NO₂₄
M.W.: 837.78
CAS No.: N/A



Carbohydrate antigen-P system antigen

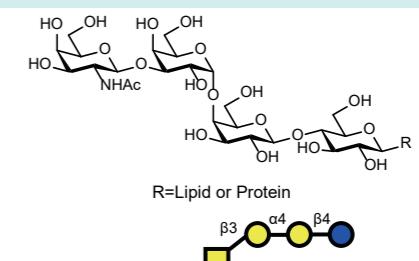
GO-4301	P ^k (Galactosyl-1,4-Galactosyl-1,4-Glucosidase Receptor)
---------	---

CAS No.: N/A
Package: mg , g



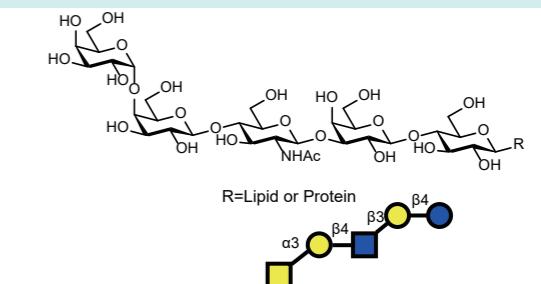
GO-4302	P (Galactosyl-1,3-Galactosyl-1,4-Glucosidase Receptor)
---------	--

CAS No.: N/A
Package: mg , g



GO-4208	P1 (Galactosyl-1,4-Galactosyl-1,4-N-Acetylglucosaminyl-1,3-Galactosyl-1,4-Glucosidase Receptor)
---------	---

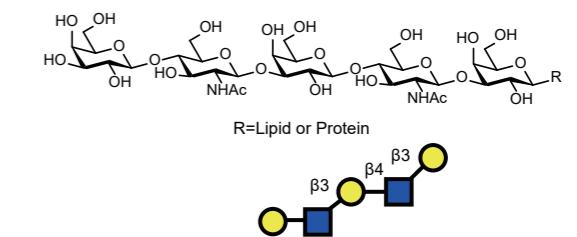
CAS No.: N/A
Package: mg , g



Carbohydrate antigen-i system antigen

GO-4351	i (Galactosyl-1,4-N-Acetylglucosaminyl-1,3-Galactosyl-1,4-N-Acetylglucosaminyl-1,3-Galactosidase Receptor)
---------	--

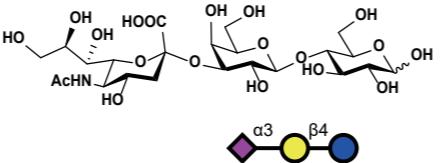
CAS No.: N/A
Package: mg , g



Glycolipid oligosaccharides

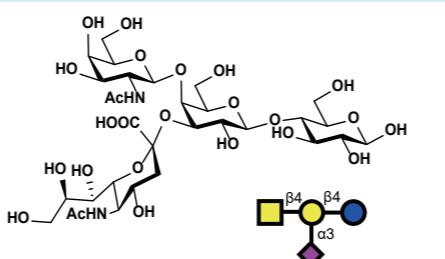
GO-4401 GM3 (3SL)

M.F.: $C_{23}H_{39}NO_{19}$
M.W.: 633.55
CAS No.: N/A
Package: mg , g



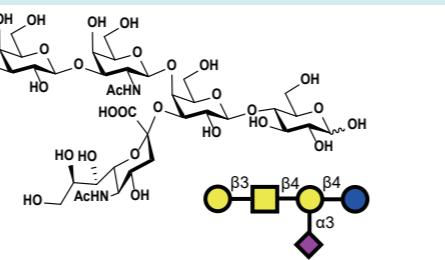
GO-4402 GM2

M.F.: $C_{31}H_{52}N_2O_{24}$
M.W.: 836.75
CAS No.: N/A
Package: mg , g



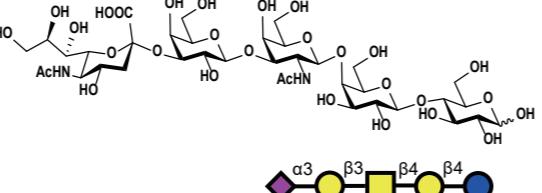
GO-4403 GM1a

M.F.: $C_{37}H_{62}N_2O_{29}$
M.W.: 998.89
CAS No.: N/A
Package: mg , g



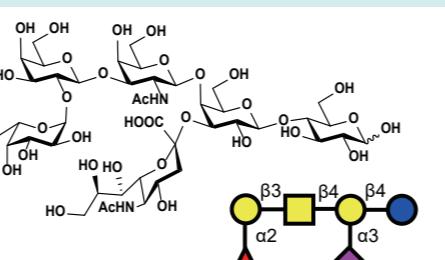
GO-4404 GM1b

M.F.: $C_{37}H_{62}N_2O_{29}$
M.W.: 998.89
CAS No.: N/A
Package: mg , g



GO-4405 Fuc-GM1

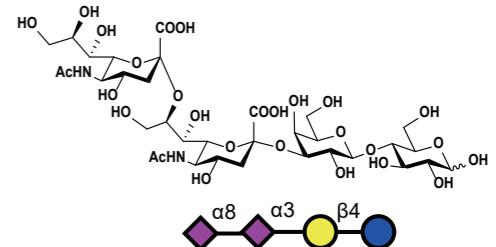
M.F.: $C_{43}H_{72}N_2O_{33}$
M.W.: 1145.03
CAS No.: N/A
Package: mg , g



Glycolipid oligosaccharides

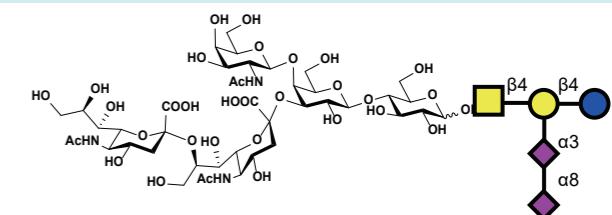
GO-4406 GD3

M.F.: $C_{34}H_{56}N_2O_{27}$
M.W.: 924.81
CAS No.: N/A
Package: mg , g



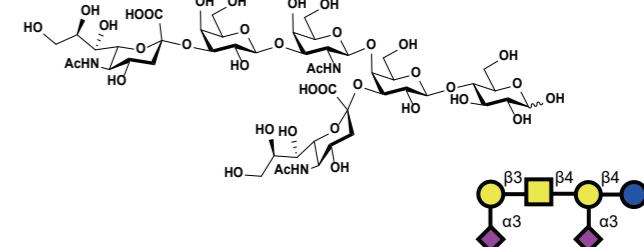
GO-4407 GD2

M.F.: $C_{42}H_{69}N_3O_{32}$
M.W.: 1128.00
CAS No.: N/A
Package: mg , g



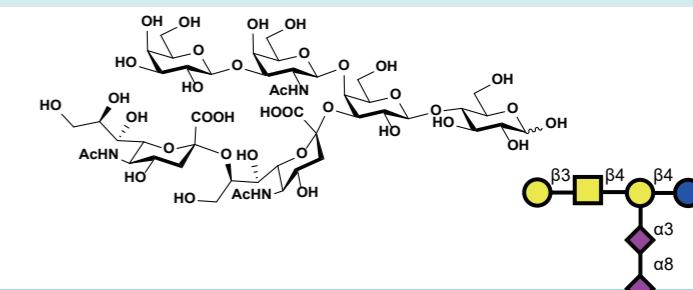
GO-4408 GD1a

M.F.: $C_{48}H_{79}N_3O_{37}$
M.W.: 1290.14
CAS No.: N/A
Package: mg , g



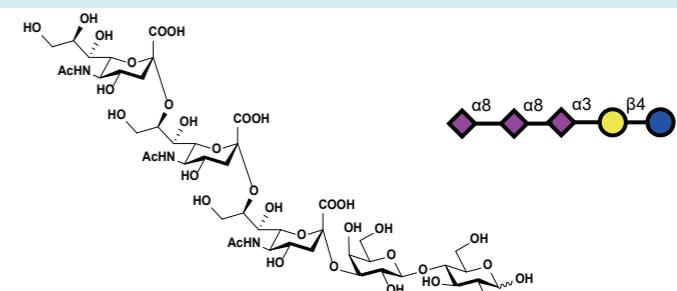
GO-4409 GD1b

M.F.: $C_{48}H_{79}N_3O_{37}$
M.W.: 1290.14
CAS No.: N/A
Package: mg , g



GO-4410 GT3

M.F.: $C_{45}H_{73}N_3O_{35}$
M.W.: 1216.07
CAS No.: N/A
Package: mg , g



Glycolipid oligosaccharides

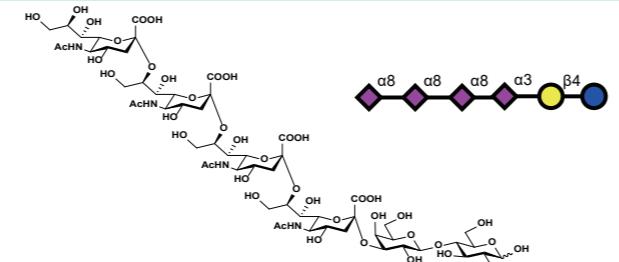
GO-4411 GQ3

M.F.: $C_{56}H_{90}N_4O_{43}$

M.W.: 1507.32

CAS No.: N/A

Package: mg , g



Glycolipid oligosaccharides

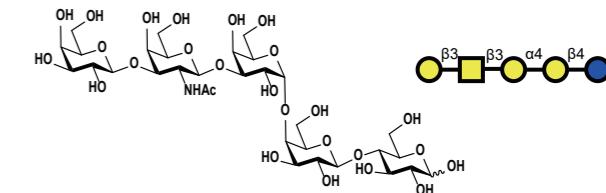
GO-4416 Gb5

M.F.: $C_{32}H_{55}NO_{26}$

M.W.: 869.77

CAS No.: N/A

Package: mg , g



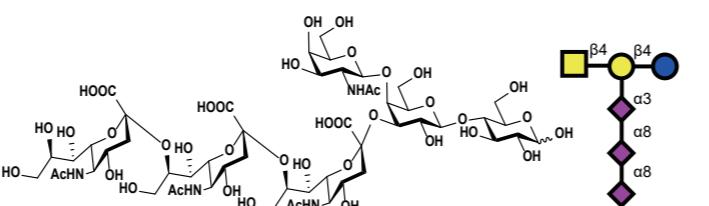
GO-4412 GT2

M.F.: $C_{53}H_{85}N_4O_{40}$

M.W.: 1418.25

CAS No.: N/A

Package: mg , g



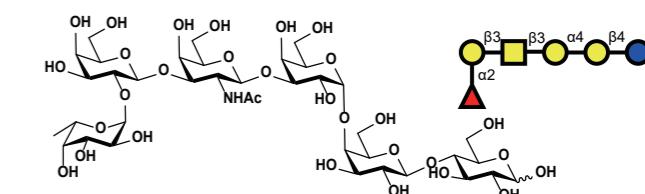
GO-4417 GloboH

M.F.: $C_{38}H_{65}NO_{30}$

M.W.: 1015.92

CAS No.: N/A

Package: mg , g



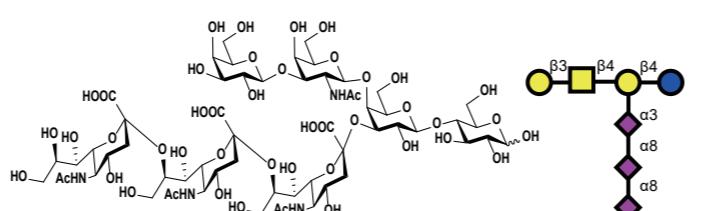
GO-4413 GT1c

M.F.: $C_{59}H_{96}N_4O_{45}$

M.W.: 1581.40

CAS No.: N/A

Package: mg , g



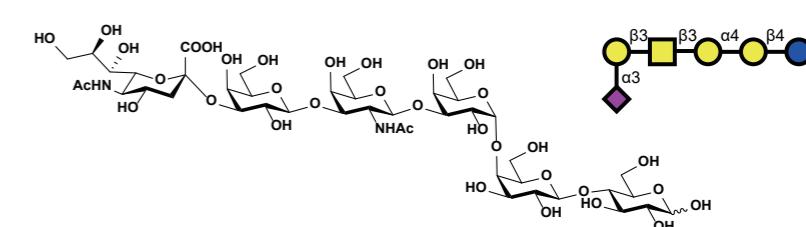
GO-4418 SSEA-4

M.F.: $C_{48}H_{79}N_3O_{37}$

M.W.: 1290.14

CAS No.: N/A

Package: mg , g



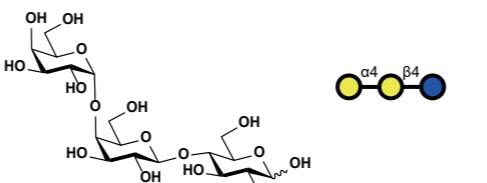
GO-4414 Gb3

M.F.: $C_{18}H_{32}O_{16}$

M.W.: 504.44

CAS No.: N/A

Package: mg , g



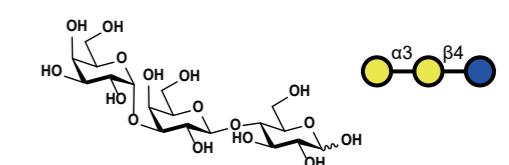
GO-4419 iGb3

M.F.: $C_{18}H_{32}O_{16}$

M.W.: 504.44

CAS No.: N/A

Package: mg , g



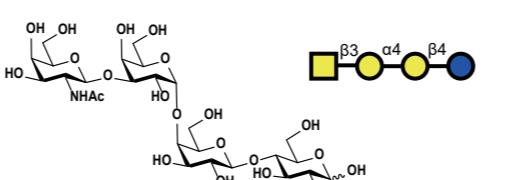
GO-4415 Gb4

M.F.: $C_{26}H_{45}NO_{21}$

M.W.: 707.63

CAS No.: N/A

Package: mg , g



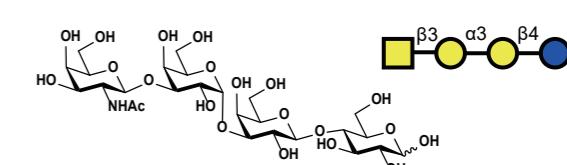
GO-4420 iGb4

M.F.: $C_{26}H_{45}NO_{21}$

M.W.: 707.63

CAS No.: N/A

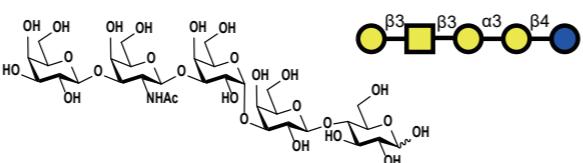
Package: mg , g



Glycolipid oligosaccharides

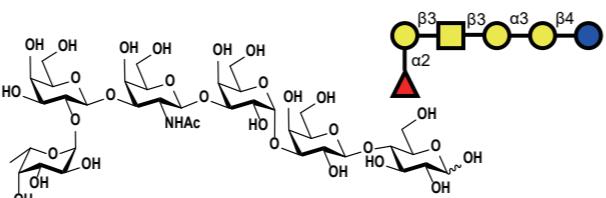
GO-4421 iGb5

M.F.: $C_{32}H_{55}NO_{26}$
M.W.: 869.77
CAS No.: N/A
Package: mg , g



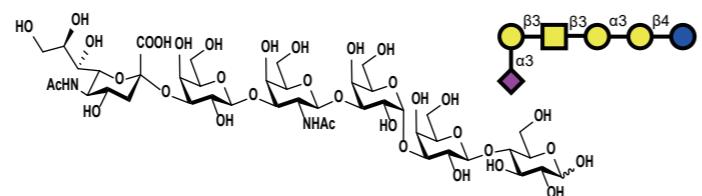
GO-4422 iGloboH

M.F.: $C_{38}H_{65}NO_{30}$
M.W.: 1015.92
CAS No.: N/A
Package: mg , g



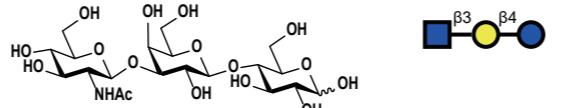
GO-4423 Sialyl-iGb5

M.F.: $C_{43}H_{72}N_2O_{34}$
M.W.: 1161.03
CAS No.: N/A
Package: mg , g



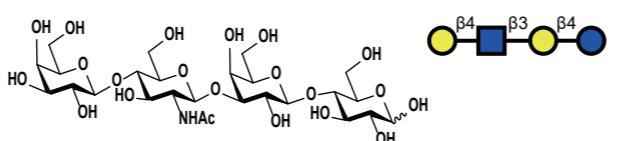
GO-4424 Lc3

M.F.: $C_{20}H_{35}NO_{16}$
M.W.: 545.49
CAS No.: N/A
Package: mg , g



GO-4425 nLc4

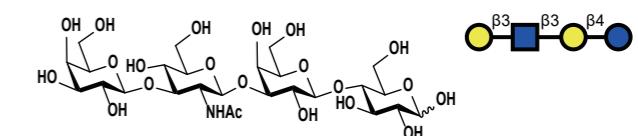
M.F.: $C_{26}H_{45}NO_{21}$
M.W.: 707.63
CAS No.: N/A



Glycolipid oligosaccharides

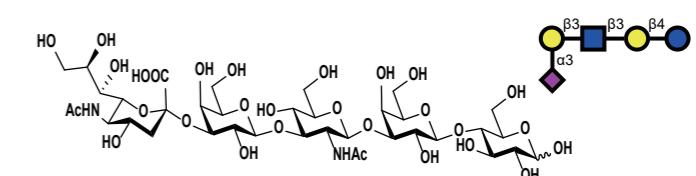
GO-4426 Lc4

M.F.: $C_{26}H_{45}NO_{21}$
M.W.: 707.63
CAS No.: N/A
Package: mg , g



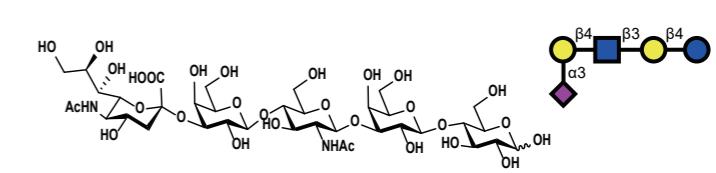
GO-4427 Sialyl-Lc4

M.F.: $C_{37}H_{62}N_2O_{29}$
M.W.: 998.89
CAS No.: N/A
Package: mg , g



GO-4428 Sialyl-nLc4

M.F.: $C_{37}H_{62}N_2O_{29}$
M.W.: 998.89
CAS No.: N/A
Package: mg , g



Chemically modified sugar »»

Azidosaccharide analogues

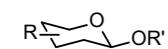
Azido sugars can be introduced into glycoproteins through the intracellular glycan biosynthesis pathway, and then covalently labeled with imaging probes or affinity probes by click chemistry. Since the majority of secreted proteins are glycoproteins, this glucose metabolism marker has been used for labeling and enrichment of secreted proteins.

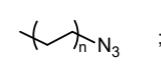
Azido sugars have the following characteristics:

- Bioorthogonality—the azide group is small, non-reactive and not present in living organisms. Therefore, azido sugars do not interfere with endogenous cellular pathways and replace their naturally occurring analogues.
- Compatibility—under normal buffer conditions, azido sugar can be effectively reacted with phosphate compounds without auxiliary reagents such as copper or reducing agents.
- Chemo-selectivity—azido sugar and phosphines do not react with or interfere with components of biological samples, but are efficiently coupled to each other.
- Versatility—Azido sugar labels can be used for detection, immobilization, conjugation, and bioaffinity purification.

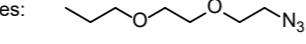
Among them, *N*-azidoacetylgalactosamine (GalNAz), *N*-azidoacetylglucosamine (GlcNAz) and *N*-azidoacetylmannosamine (ManNAz) are the most commonly used azido sugars. The obtained Ac_4ManNAz , Ac_4GlcNAz and Ac_4GalNAz can increase the solubility of azido sugars in organic solvents and are easier to handle.

Modified oligosaccharides



$\text{R}' =$ (1) Azide modified alkyl : 

β -D-glycoside

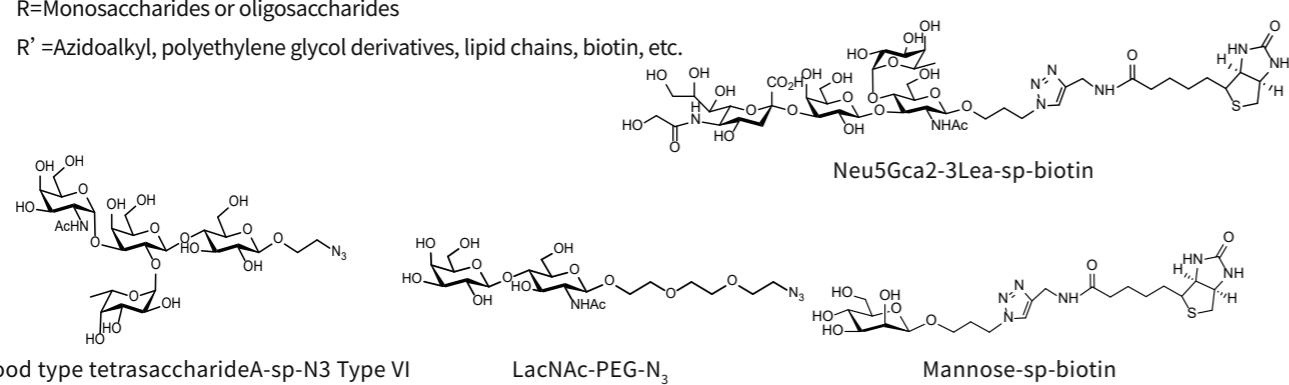
(2) PEG derivatives: 

(3) Biotin

(4) Lipid

R=Monosaccharides or oligosaccharides

R' =Azidoalkyl, polyethylene glycol derivatives, lipid chains, biotin, etc.



Azido-containing glycans

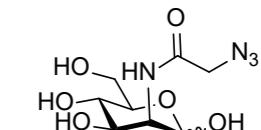
GS-0001 ManNAz

M.F.: $\text{C}_8\text{H}_{14}\text{N}_4\text{O}_6$

M.W.: 262.22

CAS No.: 361154-23-6

Package: mg to kg



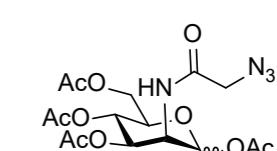
GS-0002 Ac_4ManNAz

M.F.: $\text{C}_{16}\text{H}_{22}\text{N}_4\text{O}_{10}$

M.W.: 430.37

CAS No.: 361154-30-5

Package: mg to kg



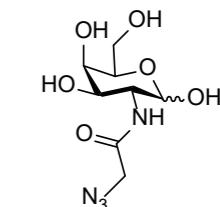
GS-0003 GalNAz

M.F.: $\text{C}_8\text{H}_{14}\text{N}_4\text{O}_6$

M.W.: 262.22

CAS No.: 869186-83-4

Package: mg to kg



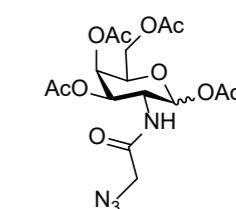
GS-0004 Ac_4GalNAz

M.F.: $\text{C}_{16}\text{H}_{22}\text{N}_4\text{O}_{10}$

M.W.: 430.37

CAS No.: 653600-56-7

Package: mg to kg



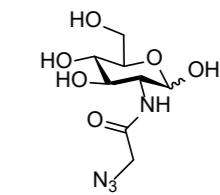
GS-0005 GlcNAz

M.F.: $\text{C}_8\text{H}_{14}\text{N}_4\text{O}_6$

M.W.: 262.22

CAS No.: 92659-90-0

Package: mg to kg



Azido-containing glycans

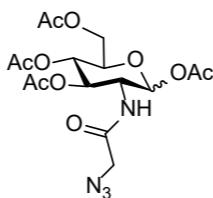
GS-0006	Ac_4GlcNAz
---------	----------------------------

M.F.: $\text{C}_{16}\text{H}_{22}\text{N}_4\text{O}_{10}$

M.W.: 430.37

CAS No.: 98924-81-3

Package: mg to kg



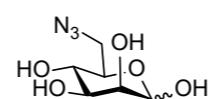
GS-0007	6-azido-6-deoxy-D-mannose
---------	---------------------------

M.F.: $\text{C}_6\text{H}_{11}\text{N}_3\text{O}_5$

M.W.: 205.17

CAS No.: 316379-15-4

Package: mg to kg



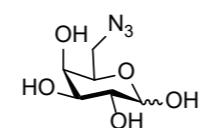
GS-0008	6-azido-6-deoxy-D-galactose
---------	-----------------------------

M.F.: $\text{C}_6\text{H}_{11}\text{N}_3\text{O}_5$

M.W.: 205.17

CAS No.: 66927-03-5

Package: mg to kg



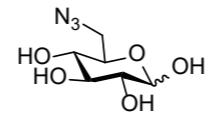
GS-0009	6-azido-6-deoxy-D-glucose
---------	---------------------------

M.F.: $\text{C}_6\text{H}_{11}\text{N}_3\text{O}_5$

M.W.: 205.17

CAS No.: 20847-05-6

Package: mg to kg



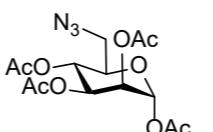
GS-0010	1,2,3,4-tetra-O-acetyl-6-azido-6-deoxy-a-D-mannose
---------	--

M.F.: $\text{C}_{14}\text{H}_{19}\text{N}_3\text{O}_9$

M.W.: 373.32

CAS No.: 210170-40-4

Package: mg to kg



Azido-containing glycans

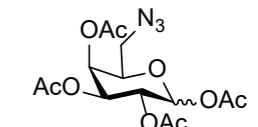
GS-0011	1,2,3,4-tetra-O-acetyl-6-azido-6-deoxy-D-galactose
---------	--

M.F.: $\text{C}_{14}\text{H}_{19}\text{N}_3\text{O}_9$

M.W.: 373.32

CAS No.: 629620-22-0

Package: mg to kg



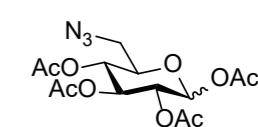
GS-0012	1,2,3,4-tetra-O-acetyl-6-azido-6-deoxy-D-glucopyranose
---------	--

M.F.: $\text{C}_{14}\text{H}_{19}\text{N}_3\text{O}_9$

M.W.: 373.32

CAS No.: 189618-61-9

Package: mg to kg



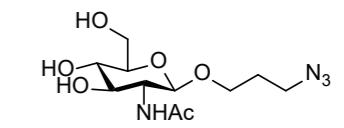
GS-0013	GlcNAcproN ₃
---------	-------------------------

M.F.: $\text{C}_{11}\text{H}_{20}\text{N}_4\text{O}_6$

M.W.: 304.30

CAS No.: 595568-99-3

Package: mg to kg



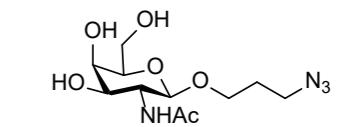
GS-0014	GalNAcproN ₃
---------	-------------------------

M.F.: $\text{C}_{11}\text{H}_{20}\text{N}_4\text{O}_6$

M.W.: 304.30

CAS No.: 874120-65-7

Package: mg to kg



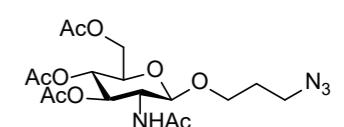
GS-0015	Ac ₃ GlcNAcproN ₃
---------	---

M.F.: $\text{C}_{17}\text{H}_{26}\text{N}_4\text{O}_9$

M.W.: 430.41

CAS No.: 595568-98-2

Package: mg to kg



Azido-containing glycans

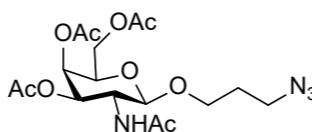
GS-0016 Ac₃GalNAcproN₃

M.F.: C₁₇H₂₆N₄O₉

M.W.: 430.41

CAS No.: 874120-66-8

Package: mg to kg



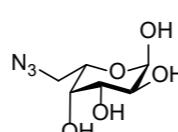
GS-0017 6-azido-6-deoxy-L-galactose

M.F.: C₆H₁₁N₃O₅

M.W.: 205.17

CAS No.: 70932-63-7

Package: mg to kg



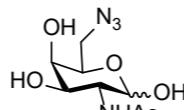
GS-0018 6-AzGalNAc

M.F.: C₈H₁₄N₄O₅

M.W.: 246.22

CAS No.: N/A

Package: mg to kg



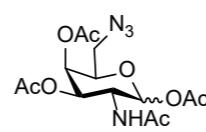
GS-0019 Ac₃6AzGalNAc

M.F.: C₁₄H₂₀N₄O₈

M.W.: 372.33

CAS No.: 657363-19-4

Package: mg to kg



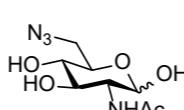
GS-0020 6-AzGlcNAc

M.F.: C₈H₁₄N₄O₅

M.W.: 246.22

CAS No.: 1611491-03-2

Package: mg to kg



Azido-containing glycans

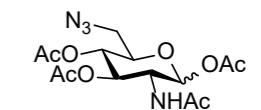
GS-0021 Ac₃6AzGlcNAc

M.F.: C₁₄H₂₀N₄O₈

M.W.: 372.33

CAS No.: 487027-19-0

Package: mg to kg



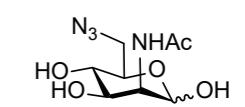
GS-0022 6-AzManNAc

M.F.: C₈H₁₄N₄O₅

M.W.: 246.22

CAS No.: 2555160-60-4

Package: mg to kg



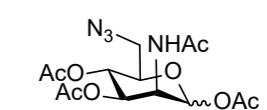
GS-0023 Ac₃6-AzManNAc

M.F.: C₁₄H₂₀N₄O₈

M.W.: 372.33

CAS No.: 487027-18-9

Package: mg to kg



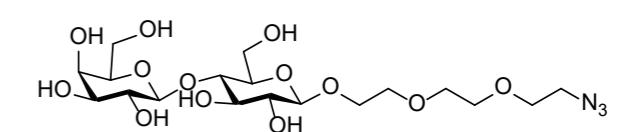
GS-0024 Lactose-PEG-N₃

M.F.: C₁₈H₃₃N₃O₁₃

M.W.: 499.47

CAS No.: 246855-74-3

Package: mg to kg



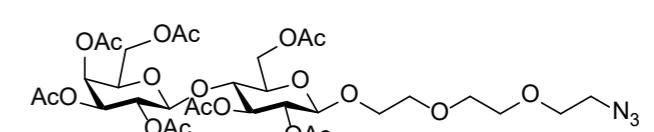
GS-0025 Ac₇Lactose-PEG-N₃

M.F.: C₃₂H₄₇N₃O₂₀

M.W.: 793.73

CAS No.: 153253-42-0

Package: mg to kg



Azido-containing glycans

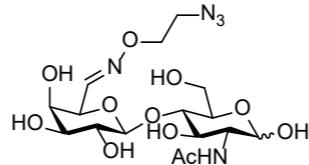
GS-0026	N ₃ -LacNAc
---------	------------------------

M.F.: C₁₆H₂₇N₅O₁₁

M.W.: 465.42

CAS No.: N/A

Package: mg to kg



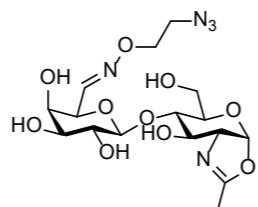
GS-0027	N ₃ -LacNAc-Oxa
---------	----------------------------

M.F.: C₁₆H₂₅N₅O₁₀

M.W.: 447.16

CAS No.: N/A

Package: mg to kg



Alkynyl-containing glycans

Alkynyl sugar have small functional groups and are not reactive with endogenous molecules. When delivered to cells, these alkynyl sugars are incorporated by glycosylation events, and then the alkynyl sugar are specifically covalently labeled with imaging probes or affinity probes by click chemistry.

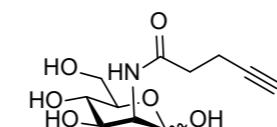
GS-1001	ManNAI
---------	--------

M.F.: C₁₁H₁₇NO₆

M.W.: 259.26

CAS No.: 935658-94-9

Package: mg to kg



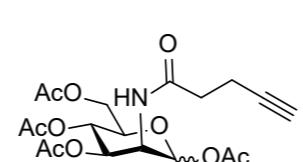
GS-1002	Ac ₄ ManNAI
---------	------------------------

M.F.: C₁₉H₂₅NO₁₀

M.W.: 427.41

CAS No.: 935658-93-8

Package: mg to kg



Alkynyl-containing glycans

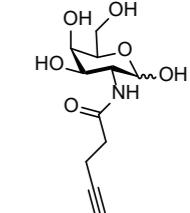
GS-1003	GalNAI
---------	--------

M.F.: C₁₁H₁₇NO₆

M.W.: 259.26

CAS No.: 2244888-87-5

Package: mg to kg



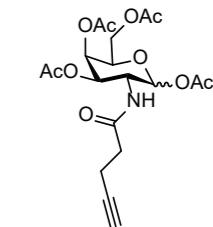
GS-1004	Ac ₄ GalNAI
---------	------------------------

M.F.: C₁₉H₂₅NO₁₀

M.W.: 427.41

CAS No.: 1810852-60-8

Package: mg to kg



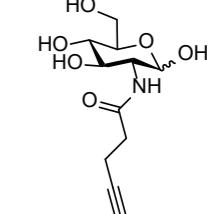
GS-1005	GlcNAI
---------	--------

M.F.: C₁₁H₁₇NO₆

M.W.: 259.26

CAS No.: 1030262-99-7

Package: mg to kg



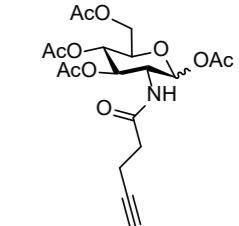
GS-1006	Ac ₄ GlcNAI
---------	------------------------

M.F.: C₁₉H₂₅NO₁₀

M.W.: 427.41

CAS No.: 1361993-37-4

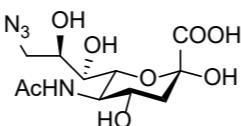
Package: mg to kg



Sialic acid derivatives

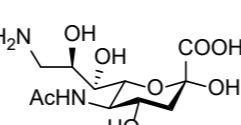
GS-2001 9-AzSiaNAc

M.F.: $C_{11}H_{18}N_4O_8$
M.W.: 334.29
CAS No.: 160555-88-4
Package: mg to kg



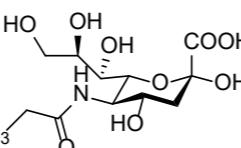
GS-2002 9-NH₂SiaNAc

M.F.: $C_{11}H_{20}N_2O_8$
M.W.: 308.29
CAS No.: 160555-89-5
Package: mg to kg



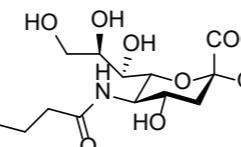
GS-2003 SiaNAz

M.F.: $C_{11}H_{18}N_4O_9$
M.W.: 350.28
CAS No.: 756823-87-7
Package: mg to kg



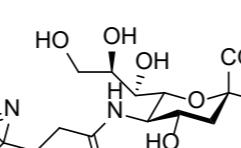
GS-2004 SiaNAL

M.F.: $C_{14}H_{21}NO_9$
M.W.: 347.32
CAS No.: 1639411-94-1
Package: mg to kg



GS-2005 SiaDAz

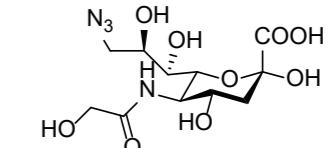
M.F.: $C_{14}H_{23}N_3O_9$
M.W.: 377.35
CAS No.: N/A
Package: mg to kg



Sialic acid derivatives

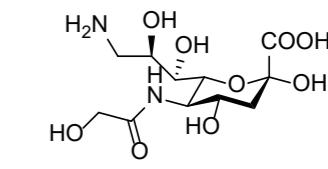
GS-2007 9-AzNeu5Gc

M.F.: $C_{11}H_{18}N_4O_9$
M.W.: 350.28
CAS No.: N/A
Package: mg to kg



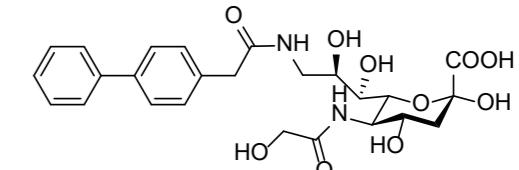
GS-2008 9-NH₂Neu5Gc

M.F.: $C_{11}H_{20}N_2O_9$
M.W.: 324.29
CAS No.: N/A
Package: mg to kg



GS-2009 BPA-Neu5Gc

M.F.: $C_{25}H_{30}N_2O_{10}$
M.W.: 518.52
CAS No.: 2803296-78-6
Package: mg to kg



Phosphate glycans

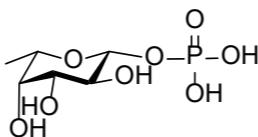
GS-3001 Fucose 1-phosphate

M.F.: $C_6H_{13}O_8P$

M.W.: 244.14

CAS No.: 16562-58-6

Package: mg to kg



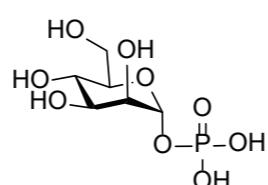
GS-3002 Mannose 1-phosphate

M.F.: $C_6H_{13}O_9P$

M.W.: 260.13

CAS No.: 27251-84-9

Package: mg to kg



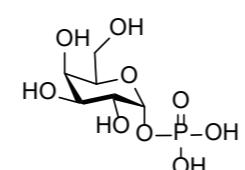
GS-3003 Galactose 1-phosphate

M.F.: $C_6H_{13}O_9P$

M.W.: 260.13

CAS No.: 2255-14-3

Package: mg to kg



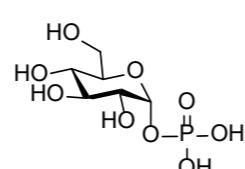
GS-3004 Glucose 1-phosphate

M.F.: $C_6H_{13}O_9P$

M.W.: 260.13

CAS No.: 59-56-3

Package: mg to kg



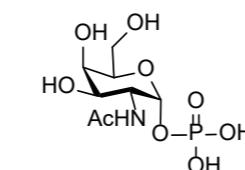
GS-3005 2-Acetamido-2-deoxyhexopyranose 1-phosphate (GalNAc-1-P)

M.F.: $C_8H_{16}NO_9P$

M.W.: 301.19

CAS No.: N/A

Package: mg to kg



Phosphate glycans

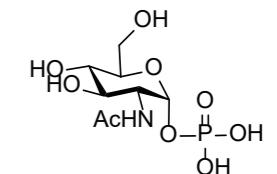
GS-3006 GlcNAc-1-P

M.F.: $C_8H_{16}NO_9P$

M.W.: 301.19

CAS No.: 901851-43-2

Package: mg to kg



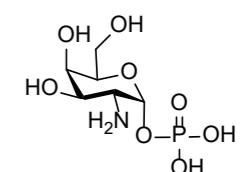
GS-3007 α -D-neneneba galactose amine 1-phosphate

M.F.: $C_6H_{14}NO_8P$

M.W.: 259.15

CAS No.: 75656-33-6

Package: mg to kg



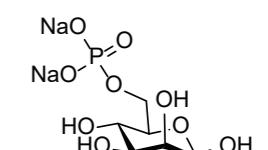
GS-3008 D-mannose 6-phosphate disodium salt

M.F.: $C_6H_{13}Na_2O_{10}P$

M.W.: 322.11

CAS No.: 33068-18-7

Package: mg to kg



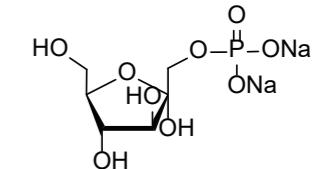
GS-3009 D-fructose-1-phosphate sodium salt

M.F.: $C_6H_{11}Na_2O_9P$

M.W.: 304.10

CAS No.: 71662-09-4

Package: mg to kg



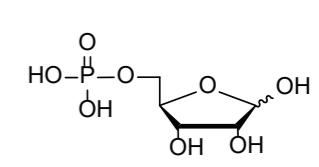
GS-3010 α -D-Ribose-5-phosphate

M.F.: $C_5H_{11}O_8P$

M.W.: 230.11

CAS No.: 34980-65-9

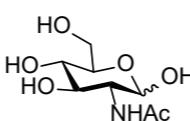
Package: mg to kg



Miscellaneous glycans

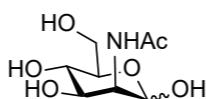
GS-4006 GlcNAc

M.F.: $C_8H_{15}NO_6$
 M.W.: 221.21
 CAS No.: 10036-64-3
 Package: mg to kg



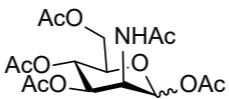
GS-4007 ManNAc

M.F.: $C_8H_{15}NO_6$
 M.W.: 221.21
 CAS No.: 4773-29-9
 Package: mg to kg



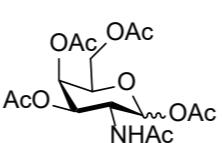
GS-4008 Ac₄ManNAc

M.F.: $C_{16}H_{23}NO_{10}$
 M.W.: 389.36
 CAS No.: 76375-61-6
 Package: mg to kg



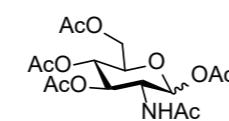
GS-4009 Ac₄GalNAc

M.F.: $C_{16}H_{23}NO_{10}$
 M.W.: 389.36
 CAS No.: 76375-60-5
 Package: mg to kg



GS-4010 Ac₄GlcNAc

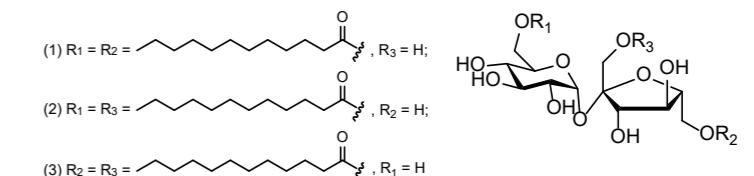
M.F.: $C_{16}H_{23}NO_{10}$
 M.W.: 389.36
 CAS No.: 14086-90-9
 Package: mg to kg



Miscellaneous glycans

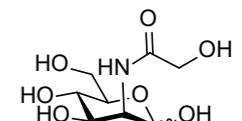
GS-4011 Sucrose dilaurate

M.F.: $C_6H_{12}O_5$
 M.W.: 164.16
 CAS No.: 25915-57-5
 Package: mg to kg



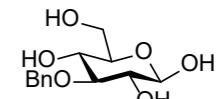
GS-4012 ManNGc

M.F.: $C_8H_{15}NO_7$
 M.W.: 237.21
 CAS No.: 119943-65-6
 Package: mg to kg



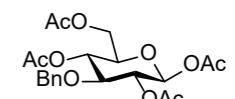
GS-4013 3-OBnGlc

M.F.: $C_{13}H_{18}O_6$
 M.W.: 270.28
 CAS No.: 97590-76-6
 Package: mg to kg



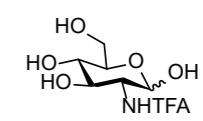
GS-4014 3-OBnAc₄Glc

M.F.: $C_{21}H_{26}O_{10}$
 M.W.: 438.43
 CAS No.: 39686-94-7
 Package: mg to kg



GS-4016 GlcNTFA

M.F.: $C_8H_{12}F_3NO_6$
 M.W.: 275.18
 CAS No.: 36875-26-0
 Package: mg to kg



Modified oligosaccharides

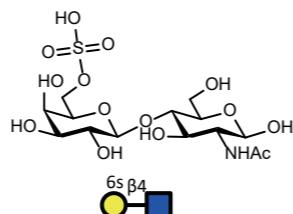
GSO-5001	(HSO ₄ -6-)Galb1,4GlcNAc
----------	-------------------------------------

M.F.: C₁₄H₂₅NO₁₄S

M.W.: 463.41

CAS No.: N/A

Package: mg to kg



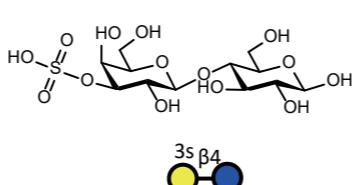
GSO-5002	(HSO ₄ -3-)Galb1,4Glc
----------	----------------------------------

M.F.: C₁₂H₂₂O₁₄S

M.W.: 422.35

CAS No.: N/A

Package: mg to kg



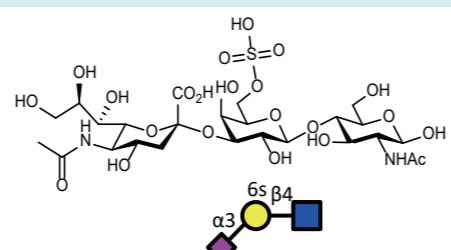
GSO-5003	Neu5Aca2,3(HSO ₄ -6-)Galb1,4GlcNAc
----------	---

M.F.: C₂₅H₄₂N₂O₂₂S

M.W.: 754.66

CAS No.: N/A

Package: mg to kg



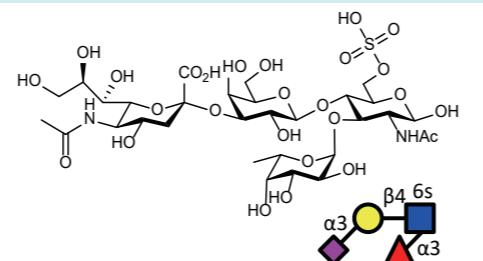
GSO-5004	Neu5Aca2,3Galb1,4(Fuca1,3)(HSO4-6-)GlcNAc
----------	---

M.F.: C₃₁H₅₂N₂O₂₆S

M.W.: 900.81

CAS No.: N/A

Package: mg to kg



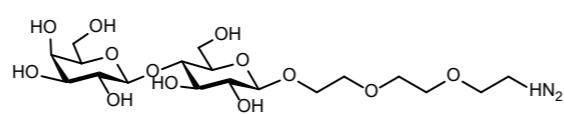
GSO-5005	Lactose PEG-NH ₂
----------	-----------------------------

M.F.: C₁₈H₃₄N₂O₁₃

M.W.: 486.47

CAS No.: N/A

Package: mg to kg



Modified oligosaccharides

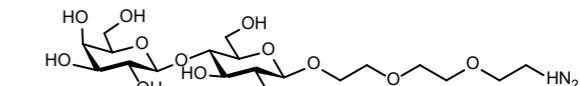
GSO-5008	LacNAc PEG-NH ₂
----------	----------------------------

M.F.: C₂₀H₃₇N₃O₁₃

M.W.: 527.52

CAS No.: N/A

Package: mg to kg



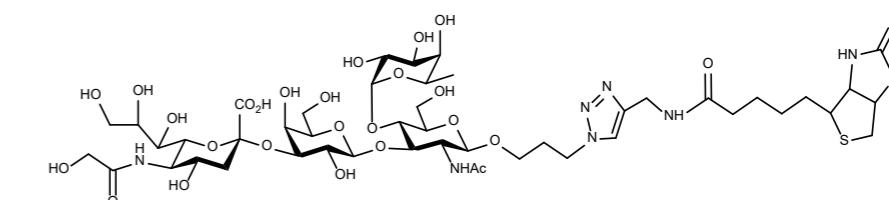
GSO-5009	Neu5Gca2-3Le ^a -sp-biotin
----------	--------------------------------------

M.F.: C₄₇H₇₆N₈O₂₆S

M.W.: 1201.22

CAS No.: N/A

Package: mg to kg



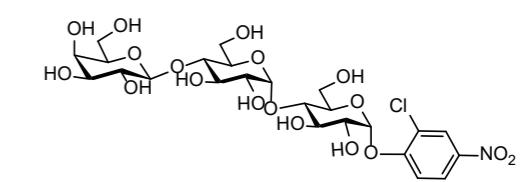
GY-001	Gal-G2-CNP
--------	------------

M.F.: C₂₄H₃₄CINO₁₈

M.W.: 659.98

CAS No.: 157381-11-8

Package: 10 g, 100 g, 1 kg



GY-002	G3-CNP
--------	--------

M.F.: C₂₄H₃₄CINO₁₈

M.W.: 659.98

CAS No.: 118291-90-0

Package: 10 g, 100 g, 1 kg

