

OligoTech®

Tumor-associated carbohydrate antigens - TACAs

Elicityl is developing a unique offer of TACAs available at quantities and cost not seen before

18 major TACAs are offered in prepacks of 5 mg, 25 mg, 100 mg, 1 g and 5 g. Bulk quantities also available upon request such as 100's g scale.

- Each oligosaccharide results from a specific biological process of production developed by Elicityl
- Compounds available in Reagent Grade (purity >95%) or Technical Grade

Common expression patterns of carbohydrate antigens on tumor tissues

Tumor-associated carbohydrate antigens		Tumor tissues										References	
Code	Glycan name	Blood	Breast	Gastro-intestinal	Kidney	Lung	Neurogenic	Ovary	Pancreas	Prostate	Skin		Testis
GLY010	LNT			x					x				12
GLY049 GLY050	Le^x (SSEA-1)		x	x	x			x					12
GLY053	sLe^x*	x	x						x				1,4
GLY052	Le^y /CD174	x	x		x			x	x	x			1,4
GLY127 GLY123	Globo H	x	x		x			x	x	x			1,2
GLY094	GD2						x				x		1
GLY091	GD3				x		x				x		1,2,3,4
GLY103	Fucosyl GM1				x								1
GLY093	GM2	x	x	x	x	x	x	x	x	x	x		1,3
GLY090	GM3	x			x		x						2,4
GLY133 GLY132	Forsman antigen		x		x								5
GLY120	Globotriaose /Gb3/CD77	x	x					x					6, 12
GLY122	SSEA-3	x		x	x	x		x					7
GLY130 GLY131	SSEA-4			x		x		x				x	8,9

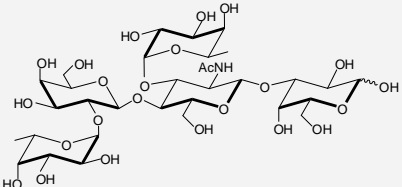
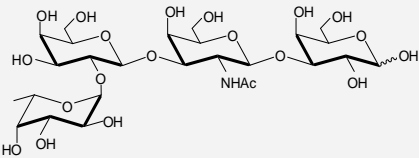
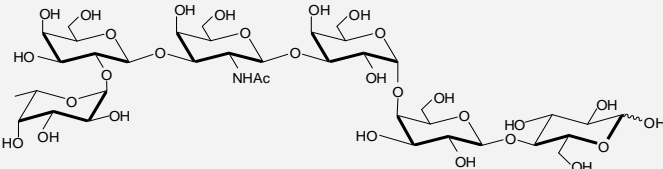
* Involved in cancer cell metastasis thru interaction with P-selectin expressed on platelets and endothelial cells and L-selectin expressed by leucocytes (11).

The loss of normal AB blood group antigen expression (accompanied by increased expression of H and Le^y structures) is associated with a poorer clinical prognosis of carcinomas in several studies 10

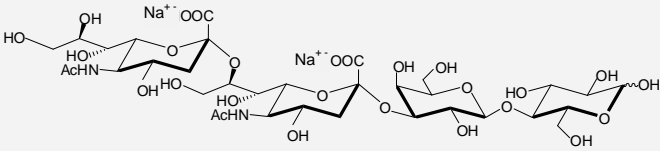
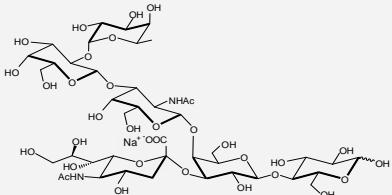
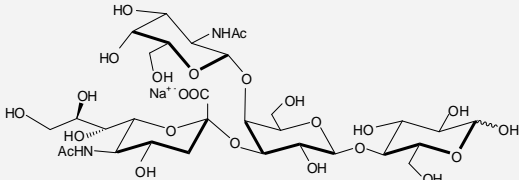
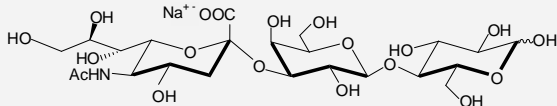
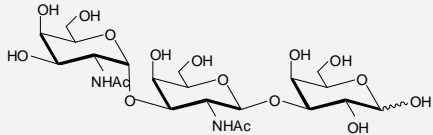
ABH antigens also available. This table is not exhaustive.

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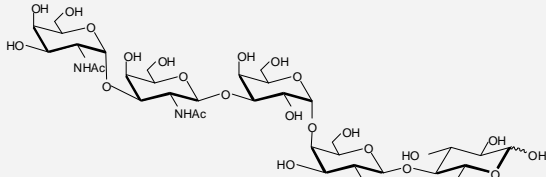
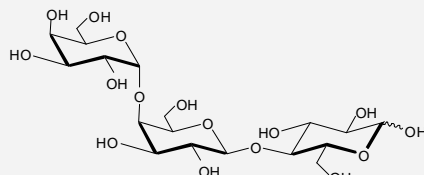
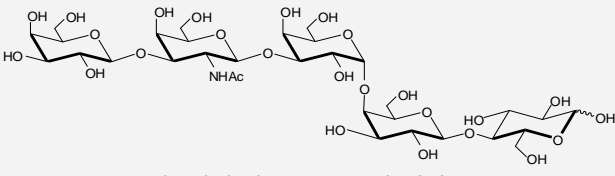
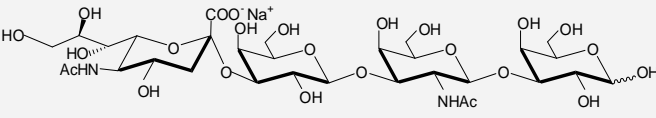
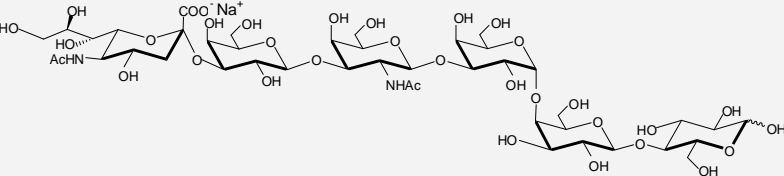
Tumor-associated carbohydrate antigens

GLY053	Sialyl Lewis^X (sLe^X) pentaose	Sodium salt
Neu5Acα2-3Galβ1-4(Fuca1-3)GlcNAcβ1-3Gal		C ₃₇ H ₆₁ N ₂ O ₂₈ Na FW 1004.86
		
Tumor-associated carbohydrate antigen (Ref 1,4) Ligand of selectin-dependant leucocyte adhesion (Ref 11)		5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY052	Lewis^Y (Le^Y) pentaose	
Fuca1-2Galβ1-4(Fuca1-3)GlcNAcβ1-3Gal		C ₃₂ H ₅₅ NO ₂₄ FW 837.77
		
Tumor-associated carbohydrate antigen (Ref 1,4)		5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY127	Globo H tetraose	
Fuca1-2Galβ1-3GalNAcβ1-3Gal		C ₂₆ H ₄₅ NO ₂₀ FW 691.62
		
Tumor-associated carbohydrate antigen (Ref 1,2)		5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY123	Globo H hexaose / SSEA-3b	
Fuca1-2Galβ1-3GalNAcβ1-3Galα1-4Galβ1-4Glc		C ₃₈ H ₆₅ NO ₃₀ FW 1015.90
		
Tumor-associated carbohydrate antigen (Ref 1,2)		5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY094	GD2 Ganglioside sugar	Sodium salt
GalNAcβ1-4(Neu5Acα2-8Neu5Acα2-3)Galβ1-4Glc		C ₄₂ H ₆₇ N ₃ O ₃₂ Na ₂ FW 1173.95
		
Tumor-associated carbohydrate antigen (Ref 1)		5 mg, 25 mg, 100 mg, 1 g, 5 g

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GLY091	GD3 Ganglioside sugar / Disialyllactose / DS-L	Sodium salt
	Neu5Acα2-8Neu5Acα2-3Galβ1-4Glc	$C_{34}H_{54}N_2O_{27}Na_2$ FW 968.76
		
	Tumor-associated carbohydrate antigen (Ref 1, 2, 3, 4)	5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY103	Fucosyl GM1 Ganglioside sugar	Sodium salt
	Fuca1-2Galβ1-3GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc	$C_{43}H_{71}N_2O_{33}Na$ FW 1168.00
		
	Tumor-associated carbohydrate antigen (Ref 1, 2, 3, 4)	5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY093	GM2 Ganglioside sugar	Sodium salt
	GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glc	$C_{31}H_{52}N_2O_{24}Na$ FW 858.72
		
	Tumor-associated carbohydrate antigen (Ref 1, 3)	5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY090	GM3 Ganglioside sugar / 3'Sialyllactose	Sodium salt
	Neu5Acα2-3Galβ1-4Glc	$C_{23}H_{38}NO_{19}Na$ FW 655.53
		
	Tumor-associated carbohydrate antigen (Ref 2, 4)	100 mg, 1 g, 5 g
GLY133	Forssman antigen triaose	
	GalNAcα1-3GalNAcβ1-3Gal	$C_{22}H_{38}N_2O_{16}$ FW 586.54
		
	Tumor-associated carbohydrate antigen (Ref 5)	5 mg, 25 mg, 100 mg, 1 g, 5 g

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GLY132	Forsman antigen pentaose	GalNAc α 1-3GalNAc β 1-3Gal α 1-4Gal β 1-4Glc	C ₃₄ H ₅₈ N ₂ O ₂₆ FW 910.82
			
		Tumor-associated carbohydrate antigen (Ref 5)	5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY120	Globotriaose / Gb₃ / CD77 / P^k antigen	Gal α 1-4Gal β 1-4Glc	C ₁₈ H ₃₂ O ₁₆ FW 504.43 CAS [66580-68-5]
			
		Tumor-associated carbohydrate antigen (Ref 6, 12)	5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY122	Stage Specific Embryonic Antigen 3 (SSEA-3a) / Globopentaose / Gb₅	Gal β 1-3GalNAc β 1-3Gal α 1-4Gal β 1-4Glc	C ₃₂ H ₅₅ NO ₂₆ FW 869.76 CAS [71937-76-3]
			
		Tumor-associated carbohydrate antigen (Ref 7)	5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY130	Stage Specific Embryonic Antigen 4 tetraose (SSEA-4)	Neu5Ac α 2-3Gal β 1-3GalNAc β 1-3Gal	Sodium salt
			C ₃₁ H ₅₁ N ₂ O ₂₄ Na FW 858.72
		Tumor-associated carbohydrate antigen (Ref 8, 9)	5 mg, 25 mg, 100 mg, 1 g, 5 g
GLY131	Stage Specific Embryonic Antigen 4 hexaose (SSEA-4)	Neu5Ac α 2-3Gal β 1-3GalNAc β 1-3Gal α 1-4Gal β 1-4Glc	Sodium salt
			C ₄₃ H ₇₁ N ₂ O ₃₄ Na FW 1183.00
		Tumor-associated carbohydrate antigen (Ref 8, 9)	5 mg, 25 mg, 100 mg, 1 g, 5 g

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GlycoBricks®: Functionalized oligosaccharides

- TACAs can be produced with a terminal reactive group
- A choice of reactive groups is proposed at the reducing end of the Glycobricks®:



Spacer+Propargyl

AminoPropyl

Spacer is to be defined following the request and can be an O, an N-Acetyl, or an aliphatic group

- Any customized Glycobrick® is evaluated

Quality control

All of the HMOs are analyzed by Nuclear Mass Spectrometry (NMR) and High Performance Anion Exchange Chromatography (HPAEC) for structure validation and determination of their level of purity.

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This selection of TACAs is extracted from the OligoTech® catalogue, Elicityl offer of oligosaccharides and polysaccharides.

Full catalogue can be downloaded from www.elicityl-oligotech.com.

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