Supplementary Materials: Application of Lectin Array Technology for Biobetter Characterization: Its Correlation with FcγRIII Binding and ADCC

Markus Roucka, Klaus Zimmermann, Markus Fido and Andreas Nechansky

Table S1. Lectin recognition list.

No.	Lectin	Group	Glycan Structure (Major / Strong)	Glycan Structure (Minor / Weak)
Category: Fucose				
1	LTL	Fuc	Fuc a1-2 [H Antigen TypeII, Lewis y], Fuc a1-3 [Lewis x, sialyl Lewis x, Lewis y]	
2	PSA	Fuc N-type	mono/biantenary N-type with Core Fuc [Fuc a1-6]	Man (2 to high Man)
3	LCA	Fuc N-type	mono/biantenary N-type with Core Fuc [Fuc α1-6]	Man (6 to high Man), mono/biantenary agalactosylated N-type without Core Fuc
4	UEA I	Fuc	Fuc a1-2 [H Antigen TypeII]	Fuc a1-4 (Lewis y, Lewis a)
5	AOL	Fuc	Fuc a1-6 [Core Fuc in mono/bi/tri/tetraantenary N-type], Fuc a1-2 [H antigen TypeII] [1]	Fuc a1-3 [Lewis x, sialyl Lewis x, Lewis y], Fuc a1-4 [Lewis a], Fuc a1-2 [B antigen]
6	AAL	Fuc	Fuc a1-3 [sialyl Lewis x, Lewis x, Lewis y], Fuc a1-2 [H Antigen TypeII]	Fuc a1-6 [Core Fuc in mono/bi/tri/tetraantenary N-type]
Category: N-Acetylneuraminic acid				
7	MAL I (no data in DB)	NeuAc	NeuAc a2-3Gal [2,3]	
8	SNA	NeuAc	NeuAc a2-6Gal, NeuAc a2-6GalNAc [4]	
9	SSA	NeuAc	NeuAc a2-6Gal	
10	TJA-I	NeuAc	NeuAc a2-6Gal, (HSO3-)-6Gal b1-4GlcNAc [5]	galactosylated N-type
Category: Others(Gal, N-type bisecting)				
11	PHA(L)	N-type	GlcNAc b1-6Man [mainly tetraantenary N-type]	GlcNAc b1-6Man
12	ECA	Gal N-type	Galactosylated N-type, Gal b1-4GlcNAc	

13	RCA120	Gal N-type	Galactosylated N-type, Gal b1-4GlcNAc	
14	PHA(E)	Others N-type	Bisecting GlcNAc (GlcNAc b1-4Man) in galactosylated N-type	galactosylated N-type without bisecting GlcNAc
15	DSA	N-type	Galactosylated tetraantenary N-type	Galactosylated trianntenary N-type, polylactosamine [(Gal b1-4GlcNAc)n, n>=2]
Category: N-Acetylglucosamine				
16	GSL II	GlcNAc N-type	Agalactosylated tetra/trianntenary N-type [6]	Agalactoslylated biantenary N-type
Category: Mannose				
17	NPA	Man N-type	monoanntenary N-type (galacto & agalacto), Core Man	Bi/trianntenary N-type(galacto & agalacto), High Man
18	ConA (no data in DB)	Man, Glc	High Man with tetramannnosyl Core [Man a1 2Man a1-6(Man a1-3)Man b-]	Core Man [Man a1-6(Man a1-3)Man] [7] mono/biantenary agalactosylated N-type [8]
19	GNA	Man N-type	Core Man [Man a1-6(Man a1-3)Man], Man (3 to 6), monoanntenary N-type with Core Man (galacto & agalacto)	bi/trianntenary N-type
20	HHL	Man N-type	Core Man [Man a1-6(Man a1-3)Man], monoanntenary N-type	Man (~ High Man), bi/tri/tetraanntenary N-type
Category: Others(Gal, N-type bisecting)				
21	ACG	Gal N-type, Glycolipid	(Gal b1-3Gal)n, NeuAc a2-3Gal (sialylated N-type), *NueAc a2-3Gal b1-3GalNAc b1-4(NeuAc a2-8NeuAc a2-3)Gal b1-4Glc [GT1b], *NueAc a2-3Gal b1-3GalNAc b1-4(NeuAc a2-3)Gal b1-4Glc [GD1a]	Gal b1-4GlcNAc (galactosylated bi/tri/tetraanntenary N-type), Gal a1-3Gal
Category: Fucose				
22	TxLC I	N-type	bi/trianntenary N-type with Core Fuc (galacto & agaracto)	bi/trianntenary N-type without Core Fuc (galacto & agalacto), monoanntenary N-type with Core Fuc
Category: Others(Gal, N-type bisecting)				
23	BPL	Gal	Gal b1-4GlcNAc (galactosylated tri/tetraantenary N-type), Gal b1-4(Fuc a1-3)GlcNAc [Lewis x], *Gal b1-3GalNAc b1-4Gal b1-4Glc [GA1], T antigen	GalNAc a1-3(Fuc a1-2)Gal [A antigen], Gal b1-4GlcNAc (galactosylated biantenary N-type), Gal a1-3Gal, Tn antigen [9]
Category: Fucose				
24	TJA-II	Others	Fuc a1-2Gal [H Antigen, Lewis y]	GalNAc b1-3Gal
25	EEL (no data in DB)	Gal	Gal a1-3(Fuc a1-2)Gal b1-4GlcNAc [B antigen]	

			Fuc a1-2Gal [H antigen Type Ⅰ, Ⅱ] [10]	
Category: O-type (T, Tn, sialyl-T,disialyl-T)				
26	ABA	Gal, GlcNAc, O-type	Gal b1-3GalNAc a- [T antigen] [11]	mono/bi/triantenary agalactosylated N-type, disialyl T [9]
Category: N-Acetylglucosamine				
27	LEL	GlcNAc	Polylactosamine [(Gal b1-4GlcNAc)n, n>=3]	GlcNAc b1-4GlcNAc
28	STL	GlcNAc	GlcNAc b1-4GlcNAc	Gal b1-4GlcNAc, A antigen
29	UDA	GlcNAc, Man N-type	GlcNAc b1-4GlcNAc, Man (3 to High)	Gal b1-4GlcNAc
30	PWM	GlcNAc	GlcNAc b1-4GlcNAc	Gal b1-4GlcNAc, Man (N-type)
Category: O-type (T, Tn, sialyl-T,disialyl-T)				
31	Jacalin	Gal O-type	GlcNAc b1-3GalNAc a- [Core3], NeuAc a2-3Gal b1-3GalNAc a- [sialyl T] [12,13]	Gal b1-3GalNAc a- [T antigen (Core1)], GalNAc a- [Tn antigen]
32	PNA	Gal O-type, Glycolipid	Gal b1-3GalNAc a- [T antigen], *Gal b1-3GalNAc b1-4Gal b1-4Glc [GA1], Tn antigen, disialyl T [14,15]	*Gal b1-3GalNAc b1-4(NeuNAc a2-3)Gal b1-4Glc [GM1], *Gal b1-4Glc [GA3]
33	WFA	GalNAc, Gal O-type, Glycolipid	GalNAc b1-4GlcNAc, Gal b1-3(-6)GalNAc *GalNAc b1-4Gal b1-4Glc [GA2] , *GalNAc b1-4(NeuAc a2-3)Gal b1-4Glc [GM2]	*GalNAc a1-3GalNAc b1-3Gal a1-4Gal b1-4Glc [Forssman antigen], *GalNAc b1-3Gal a1-4Gal b1-4Glc [Gb4]
34	ACA (no data in DB)	Gal, GalNAc O-type	Gal b1-3GalNAc a- [T antigen], NeuAc a2-3Gal b1-3 GalNAc a- [sialyl T] [16]	
35	MPA (no data in DB)	Gal, GalNAc O-Type	GalNAc a- [Tn antigen] [17]	Gal b1-3GalNAc a- [T antigen] [18]
36	HPA	GalNAc O-type, Glycolipid	*GalNAc a1-3GalNAc b1-3Gal a1-4Gal b1-4Glc [Forssman antigen]	GalNAc a1-3(Fuc a1-2)Gal [A antigen]
37	VVA	GalNAc O-type, Glycolipid	GalNAc a- [Tn antigen], *GalNAc b1-4Gal b1-4Glc [GA2] [9,19]	*GalNAc b1-4(NeuAc a2-3)Gal b1-4Glc [GM2], *GalNAc b1-3Gal a1-4Gal b1-4Glc [Gb4], *GalNAc a1-3GalNAc b1-3Gal a1-4Gal b1-4Glc [Forssman antigen]
38	DBA	GalNAc O-type, Glycolipid	*GalNAc a1-3GalNAc b1-3Gal a1-4Gal b1-4Glc [Forssman antigen]	*GalNAc b1-4(NeuAc a2-3)Gal b1-4Glc [GM2]

39	SBA	GalNAc O-type, Glycolipid	*GalNAc a1-3GalNAc b1-3Gal a1-4Gal b1-4Glc [Forssman antigen], Tn antigen, GalNAc b1 4Gal [9]	Gal a1-4Gal, GalNAc b1-4Gal, GalNAc b1-3Gal, T antigen
Category: Mannose				
40	Calsepa	Man,Glc N-type	Galactosylated bianntenary N-type with bisecting GlcNAc	mono/bianntenary N-type, Man (3 to 8)
Category: O-type (T, Tn, sialyl-T,disialyl-T)				
41	PTL I	GalNAc O-type	Gal a1-3(Fuc a1-2)Gal [B antigen], GalNAc a1-3(Fuc a1-2)Gal [A antigen]	*GalNAc a1-3GalNAc b1-3Gal a1-4Gal b1-4Glc [Forssman antigen], Gal a1-3Gal
42	MAH (MAL II) (no data in DB)	Others O-type	disialyl-T [NeuAc a2-3Gal b1-3(NueAc a2 6)GalNAc] [20]	
Category: N-Acetylglucosamine				
43	WGA	GlcNAc	GlcNAc b1-4GlcNAc	Gal b1-4GlcNAc (N-type), Man & GlcNAc complex N-type
Category: O-type (T, Tn, sialyl-T,disialyl-T)				
44	GSL I A4	GalNAc, Gal O-type	GalNAc a- [Tn antigen], *GalNAc a1-3GalNAc b1-3Gal a1-4Gal b1-4Glc [Forssman antigen] [21]	Gal a1-3(Fuc a1-2)Gal [B antigen], sialyl Tn
45	GSL I B4	Gal, GalNAc O-type	Gal a1-3(Fuc a1-2)Gal [B antigen]	Gal a1-3Gal b1-4GlcNAc, *Gal a1-4Gal b1-4Glc [Gb3], Core Man N-type with Core Fuc

The categories in the table above shows large classification, which helps to make the lectin microarray more understandable. The glycan structures marked with an asterisk (*): are specific to glycolipids. In a conventional lectin microarray analysis (i.e., Cy3 labeling onto glycoproteins), refer to this information as a reference of glycan binding specificity of each lectin. The list is supported by references [1-21] and by referring to the lectin frontier database: LfDB [22]. It's not covering all of glycan binding specificities. without omission. Abbreviations: LTL (Lotus tetragonolobus); PSA (Pisum sativum); LCA (Lens culinaris); UEA-I (Ulex europaeus); AOL (Aspergillus oryzae); AAL (Aleuria aurantia; MAL_I (Maackia amurensis); SNA (Sambucus nigra); SSA (Sambucus sieboldiana); TJA-I (Trichosanthes japonica); PHAL (Phaseolus vulgaris); ECA (Erythrina cristagalli); RCA120 (Ricinus communis); PHAE (Phaseolus vulgaris); DSA (Datura stramonium); GSL-II (Griffonia simplicifolia); NPA (Narcissus pseudonarcissus); ConA (Canavalia ensiformis); GNA (Galanthus nivalis); HHL (Hippeastrum hybrid); ACG (mushroom, Agrocybe cylindracea); TxLCI (Tulipa gesneriana); BPL (Bauhinia purpurea); TJA-II (Tanthes japonica); EEL (Euonymus europaeus); ABA (fungus, Agaricus bisporus); LEL tomato, Lycopersicon esculentum); STL (potato, Solanum tuberosum); UDA (Urtica dioica); PWM (pokeweed, Phytolacca Americana); Jacalin (Artocarpus integrifolia); PNA (peanut, Arachis hypogaea); WFA (Wisteria floribunda); ACA (Amaranthus caudatus); MPA (Maclura pomifera); HPA (snail, Helix pomatia); VVA (Vicia villosa); DBA (Dolichos biflorus); SBA (soybean, Dolichos biflorus); Calsepa (Calystegia sepium); PTL-I (Psophocarpus tetragonolobus); MAH (Maackia amurensis); WGA (wheat germ, Triticum aestivum); GSL-I A4 (Griffonia simplicifolia); GSL-I B4 (Griffonia simplicifolia)

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