

Supplementary Table 4a Biotinylated Con A at 0.01, and 0.001 µg/ml binding to v4.0 of the CFG glycan array detected with Cy5-labeled Streptavidin and sorted according to Rank based on percent of maximum RFU.

anomeric configuration of monosaccharides indicated as α and β, highlighted structures defined as binding glycans by z-score with p-values <0.15

Chart Number	Structure	Maximum RFU	Con A 0.01 µg/ml 26599		Con A 0.001 µg/ml 2989		AVG. RANK	p value
			RFU	RANK	RFU	RANK		
206	Mana1-6(Mana1-3)Mana1-6[Mana1-2Mana1-3]Manb1-4GlcNAcb1-4GlcNAcb-Sp12		25552	96	2989	100	98	1.05E-10
199	Mana1-2Mana1-3(Mana1-2Mana1-6)Mana-Sp9		23490	88	2857	96	92	2.56E-09
309	Mana1-2Mana1-2Mana1-3(Mana1-2Mana1-6(Mana1-2Mana1-3)Mana1-6)Mana-Sp9		22295	84	2786	93	89	1.44E-08
204	Mana1-3(Mana1-6)Mana-Sp9		26599	100	2274	76	88	6.34E-11
202	Mana1-2Mana1-6(Mana1-3)Mana1-6[Mana1-2Mana1-2Mana1-3]Manb1-4GlcNAcb1-4GlcNAcb-Sp12		23567	89	2245	75	82	5.36E-09
308	Mana1-2Mana1-2Mana1-3(Mana1-2Mana1-6(Mana1-3)Mana1-6)Mana-Sp9		19646	74	2510	84	79	5.63E-07
205	Mana1-3(Mana1-2Mana1-2Mana1-6)Mana-Sp9		24990	94	1836	61	78	1.30E-09
201	Mana1-6[Mana1-2Mana1-3]Mana1-6[Mana1-2Mana1-3]Manb1-4GlcNAcb1-4GlcNAcb-Sp12		23313	88	1993	67	77	1.06E-08
307	Mana1-6(Mana1-3)Mana1-6(Mana1-3)Manb-Sp10		20309	76	2105	70	73	4.15E-07
207	Mana1-6(Mana1-3)Mana1-6(Mana1-3)Manb1-4GlcNAcb1-4 GlcNAcb-Sp12		22076	83	1686	56	70	7.94E-08
48	Mana1-3(Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp13		20824	78	1600	54	66	4.10E-07
200	Mana1-2Mana1-3Mana-Sp9		16160	61	1639	55	58	5.79E-05
47	Mana1-3(Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		16941	64	1254	42	53	3.96E-05
203	Mana1-2Mana1-2Mana1-3(Mana1-2Mana1-3(Mana1-2Mana1-6)Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		12290	46	1381	46	46	0.0018984
198	Mana1-2Mana1-2Mana1-3Mana-Sp9		13421	50	1247	42	46	0.0008845
346	Galb1-4GlcNAcb1-2Mana1-3(Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		10072	38	926	31	34	0.0115203
341	Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-3(Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		11144	42	786	26	34	6.39E-03
360	Mana1-3(Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		7696	29	694	23	26	0.0478491
340	Mana1-3(Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		7312	27	390	13	20	0.0660296
319	Galb1-3GlcNAcb1-2Mana1-3(Galb1-3GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp19		5167	19	630	21	20	0.1439176
388	Neu5Aca2-3(GalNAcb1-4)Galb1-4GlcNAcb1-3GalNAca-Sp14		2468	9	914	31	20	0.3081518
49	GlcNAcb1-2Mana1-3(GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp13		5961	22	384	13	18	0.1169523
349	Galb1-3GlcNAcb1-2Mana1-3(Galb1-3GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp22		3576	13	639	21	17	0.2435678
315	Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-3(GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		5136	19	302	10	15	1.64E-01
393	Galb1-4GlcNAcb1-2Mana1-3(GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		4106	15	348	12	14	0.2264862
399	Gala1-4Galb1-3GlcNAcb1-2Mana1-3(Gala1-4Galb1-3GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp19		4832	18	258	9	13	0.1844815
361	Galb1-3(Fuca1-4)GlcNAcb1-2Mana1-3(Galb1-3(Fuca1-4)GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4(Fuca1-6)GlcNAcb-Sp22		3841	14	307	10	12	0.2484784
347	GlcNAcb1-2Mana1-3(GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4(Fuca1-6)GlcNAcb-Sp22		3812	14	278	9	12	0.2527715
193	GlcAb-Sp8		1707	6	506	17	12	0.4093728
216	Neu5Aca2-8Neu5Aca2-8Neu5Aca2-3(GalNAcb1-4)Galb1-4Glc-Sp0		860	3	466	16	9	0.4908964
359	Gala1-3Galb1-4GlcNAcb1-2Mana1-3(Gala1-3Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp20		2931	11	200	7	9	0.3289887
321	Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-3(Neu5Aca2-3Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		1649	6	334	11	9	0.4302824
299	GlcAb1-3GlcNAcb-Sp8		632	2	448	15	9	0.5137226
331	GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb1-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0		886	3	412	14	9	0.4934944
348	Galb1-4GlcNAcb1-2Mana1-3(Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4(Fuca1-6)GlcNAcb-Sp22		2201	8	221	7	8	0.3905917
394	GlcNAcb1-2Mana1-3(Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		2998	11	104	3	7	0.3314324
413	Fuca1-2Galb1-4(Fuca1-3)GlcNAcb1-3GalNAca-Sp14		570	2	326	11	7	0.5307705
314	Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-3(Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		2033	8	151	5	6	4.12E-01
301	GlcNAcb1-2Mana1-3(GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		1841	7	170	6	6	0.4277252
391	Gala1-3Galb1-3(Fuca1-4)GlcNAcb1-2Mana1-3(Gala1-3Galb1-3(Fuca1-4)GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp19		1806	7	172	6	6	0.4307394
311	Neu5Aca2-3Galb1-3(Neu5Aca2-6)GalNAca-Sp14		1695	6	155	5	6	0.4424674
428	GlcNAcb1-2Mana1-3(GlcNAcb1-4)(GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp21		1828	7	136	5	6	0.4320193
228	Neu5Aca2-3Galb1-3[6OSO3]GlcNAcb-Sp8		909	3	228	8	6	0.5084348
350	Galb1-3(Fuca1-4)GlcNAcb1-2Mana1-3(Galb1-3(Fuca1-4)GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp19		1814	7	120	4	5	0.4347645
320	Neu5Aca2-3Galb1-4GlcNAcb1-2Mana1-3(Neu5Aca2-3Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12		1082	4	193	6	5	0.4956287
282	Galb1-4(Fuca1-3)GlcNAcb1-3Galb1-3(Fuca1-4)GlcNAcb-Sp0		489	2	258	9	5	0.5445359
323	Neu5Ac(9Ac)a2-3Galb1-4GlcNAcb-Sp0		859	3	216	7	5	0.5141863

128	Galb1-3(Neu5Aca2-6)GalNAca-Sp14	618	2	238	8	5	0.5344702
383	Galb1-4GlcNacb1-2(Galb1-4GlcNacb1-4)Mana1-3(Galb1-4GlcNacb1-2(Galb1-4GlcNacb1-6)Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp21	1695	6	117	4	5	0.4459594
51	Neu5Aca2-6Galb1-4GlcNacb1-2Mana1-3(Neu5Aca2-6Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-N(LT)AVL	1220	5	166	6	5	4.85E-01
99	Gala1-3(Fuca1-2)Galb1-4(Fuca1-3)GlcNacb-Sp0	432	2	251	8	5	0.5504332
371	Fuca1-2Galb1-3(Fuca1-4)GlcNacb1-2Mana1-3(Fuca1-2Galb1-3(Fuca1-4)GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp19	456	2	239	8	5	0.5493282
427	Galb1-4GlcNacb1-3Galb1-4(Fuca1-3GlcNacb1-6)Galb1-4Glc-Sp21	612	2	218	7	5	0.5368735
390	Galb1-3Galb1-3GlcNacb1-2Mana1-3(Gala1-3Galb1-3GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp19	980	4	174	6	5	0.5068575
52	Neu5Aca2-6Galb1-4GlcNacb1-2Mana1-3(Neu5Aca2-6Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp8	1422	5	120	4	5	4.71E-01
80	GalNAca1-3(Fuca1-2)Galb1-4(Fuca1-3)GlcNacb-Sp0	585	2	207	7	5	0.5403835
337	GlcNAca1-4Galb1-4GlcNacb1-3Galb1-4(Fuca1-3)GlcNacb1-3Galb1-4(Fuca1-3)GlcNacb-Sp0	1378	5	116	4	5	0.4753204
105	Gala1-3GalNAca-Sp16	936	4	161	5	4	0.5121457
300	GlcNacb1-2Mana1-3(Neu5Aca2-6Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp12	1143	4	137	5	4	0.4951647
23	[3OSO3]Galb1-4Glc-Sp8	465	2	209	7	4	0.5512616
423	Fuca1-2Galb1-3GlcNacb1-2Mana1-3(Fuca1-2Galb1-3GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4(Fuca1-6)GlcNacb-Sp22	1169	4	126	4	4	0.4937728
400	Gala1-4Galb1-4GlcNacb1-2Mana1-3(Gala1-4Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-LVaNKT	1370	5	103	3	4	0.4772658
181	GlcNacb1-4GlcNacb1-4GlcNacb-Sp8	490	2	191	6	4	0.5506173
374	Neu5Aca2-3Galb1-4(Fuca1-3)GlcNacb1-3GalNAca-Sp14	292	1	205	7	4	0.5675043
50	Galb1-4GlcNacb1-2Mana1-3(Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp12	1434	5	74	2	4	0.4740237
424	Gala1-3(Fuca1-2)Galb1-4GlcNacb1-2Mana1-3(Gala1-3(Fuca1-2)Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4(Fuca1-6)GlcNacb-Sp22	1165	4	103	3	4	0.4962783
235	Neu5Aca2-3Galb1-3GalNAcb1-3Gala1-4Galb1-4Glc-Sp0	462	2	161	5	4	0.5559518
87	GalNAca1-3(Fuca1-2)Galb-Sp18	361	1	172	6	4	0.564209
395	Neu5Aca2-3Galb1-3GlcNacb1-3GalNAca-Sp14	467	2	158	5	4	0.555768
54	Neu5Aca2-6Galb1-4GlcNacb1-2Mana1-3(Neu5Aca2-6Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp13	1202	5	65	2	3	4.96E-01
370	Gala1-3(Fuca1-2)Galb1-3GlcNacb1-2Mana1-3(Gala1-3(Fuca1-2)Galb1-3GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp20	703	3	120	4	3	0.5375203
392	Neu5Aca2-3Galb1-3GlcNacb1-2Mana1-3(Neu5Aca2-3Galb1-3GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp19	1652	6	12	0	3	0.4595973
358	Fuca1-2Galb1-4(Fuca1-3)GlcNacb1-2Mana1-3(Fuca1-2Galb1-4(Fuca1-3)GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNab-Sp20	288	1	162	5	3	0.5717994
415	GalNAca1-3(Fuca1-2)Galb1-4(Fuca1-3)GlcNacb1-3GalNAc-Sp14	170	1	175	6	3	0.5813634
20	[3OSO3][6OSO3]Galb1-4[6OSO3]GlcNacb-Sp0	273	1	163	5	3	0.5730772
356	Fuca1-2Galb1-3GlcNacb1-2Mana1-3(Fuca1-2Galb1-3GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp20	815	3	97	3	3	0.5292899
7	Rha-Sp8	569	2	118	4	3	0.5500649
396	Fuca1-2Galb1-4GlcNacb1-3GalNAca-Sp14	141	1	163	5	3	0.5850853
351	[6OSO3]GlcNacb1-3Gal b1-4GlcNac-b-Sp0	191	1	155	5	3	0.5812726
375	(GalNAcb1-4GlcNacb1-2Mana1-6)GalNAcb1-4GlcNacb1-2Mana1-3Manb1-4GlcNacb1-4GlcNac-Sp12	457	2	125	4	3	0.5597166
292	Galb1-4GlcNacb1-2Mana1-3(Neu5Aca2-6Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp12	1043	4	50	2	3	0.5125168
430	GlcNacb1-2Mana1-3(GlcNacb1-4)(GlcNacb1-6)(GlcNacb1-2)Mana1-6)Manb1-4GlcNacb1-4GlcNac-Sp21	549	2	103	3	3	0.5532857
365	Galb1-4GlcNacb1-2(Galb1-4GlcNacb1-4)Mana1-3(Galb1-4GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNac-Sp21	437	2	114	4	3	0.5625597
269	Neu5Gca2-3Galb1-3(Fuca1-4)GlcNacb-Sp0	338	1	124	4	3	0.5707036
221	Neu5Aca2-3(GalNAcb1-4)Galb1-4GlcNacb-Sp0	271	1	129	4	3	0.5763593
334	GlcNAca1-4Galb1-4GlcNacb-Sp0	250	1	131	4	3	0.5780894
155	Galb1-4GlcNacb1-3Galb1-4Glc-Sp0	307	1	123	4	3	0.5736246
107	Gala1-3Galb1-4(Fuca1-3)GlcNacb-Sp8	256	1	127	4	3	0.5779074
271	Neu5Gca2-3Galb1-4(Fuca1-3)GlcNacb-Sp0	150	1	139	5	3	0.586445
322	Fuca1-3(Galb1-4)GlcNacb1-2Mana1-3(Fuca1-3(Galb1-4)GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNacb-Sp20	580	2	90	3	3	0.5516297
384	GlcNacb1-2(GlcNacb1-4)Mana1-3(GlcNacb1-2Mana1-6)Manb1-4GlcNacb1-4GlcNac-Sp21	593	2	87	3	3	0.5507093
43	Neu5Aca2-3[6OSO3]Galb1-4GlcNacb-Sp8	211	1	128	4	3	0.5819085
150	Galb1-4GlcNacb1-3GalNAca-Sp8	443	2	102	3	3	0.5631096
30	[3OSO3]Galb1-4(Fuca1-3)GlcNacb-Sp8	209	1	126	4	3	0.5822719
179	(GlcNacb1-4)6b-Sp8	240	1	121	4	2	0.579909
273	Neu5Gca2-3Galb1-4Glc-Sp0	251	1	120	4	2	0.5789994
421	GalNAca1-3(Fuca1-2)Galb1-3GlcNacb1-3GalNAc-Sp14	163	1	129	4	2	0.5861731
67	Fuca1-2Galb1-4(Fuca1-3)GlcNacb1-3Galb1-4(Fuca1-3)GlcNacb1-3Galb1-4(Fuca1-3)GlcNacb-Sp0	264	1	118	4	2	0.5779984

303	GlcNAcb1-4GlcNAcb-Sp10	116	0	132	4	2	0.5901564
215	Neu5Aca2-8Neu5Aca2-8Neu5Aca2-8Neu5Aca2-3(GalNAcb1-4)Galb1-4Glc-Sp0	499	2	88	3	2	0.5592578
98	Gala1-3(Fuca1-2)Galb1-3GlcNAcb-Sp0	249	1	115	4	2	0.5796362
275	Neu5Gca2-6Galb1-4GlcNAcb-Sp0	194	1	119	4	2	0.5842689
367	Gala1-3(Fuca1-2)Galb1-4GlcNAcb1-2Mana1-3(Gala1-3(Fuca1-2)Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp20	532	2	80	3	2	0.5569624
397	Galb1-4(Fuca1-3)GlcNAcb1-3GalNaca-Sp14	204	1	116	4	2	0.5836337
338	GlcNAca1-4Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	144	1	122	4	2	0.588528
16	GlcNAcb-Sp8	253	1	109	4	2	0.5798181
439	[6OSO3]Galb1-3GlcNAcb-Sp0	248	1	109	4	2	0.5802727
42	[6OSO3]Galb1-4[6OSO3]Glc-Sp8	185	1	114	4	2	0.5855386
253	Neu5Aca2-3Galb1-4Glc-Sp8	264	1	105	4	2	0.5791814
229	Neu5Aca2-3Galb1-3(Fuca1-4)GlcNAcb-Sp8	313	1	98	3	2	0.575357
246	Neu5Aca2-3Galb1-4(Fuca1-3)GlcNAcb1-3Galb1-4GlcNAcb-Sp8	201	1	110	4	2	0.5844503
70	Fuca1-2Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	152	1	115	4	2	0.5884374
22	[3OSO3]Galb1-4(Fuca1-3)[6OSO3]Glc-Sp0	132	0	115	4	2	0.5902468
78	Fucb1-3GlcNAcb-Sp8	256	1	101	3	2	0.5802727
442	Fuca1-2Galb1-4(Fuca1-3)GlcNAcb1-2(Fuca1-2Galb1-4(Fuca1-3)GlcNAcb1-4)Mana1-3(Fuca1-2Galb1-4(Fuca1-3)GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-N	153	1	111	4	2	0.588709
369	GalNAca1-3(Fuca1-2)Galb1-3GlcNAcb1-2Mana1-3(GalNAca1-3(Fuca1-2)Galb1-3GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp20	352	1	89	3	2	0.5726209
313	Neu5Aca2-3Galb1-4GlcNAcb1-2Mana1-3(Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12	998	4	16	1	2	0.5198421
332	(Neu5Aca2-3-Galb1-3)((Neu5Aca2-3-Galb1-4(Fuca1-3))GlcNAcb1-6)GalNAc-Sp14	106	0	116	4	2	0.5925057
53	Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-3(Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp12	884	3	28	1	2	0.5292899
158	Galb1-3(Galb1-4GlcNAcb1-6)GalNAca-Sp8	186	1	105	4	2	0.5862638
183	GlcNAcb1-6GalNAca-Sp8	182	1	106	4	2	0.5865356
343	Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-3Manb1-4GlcNAcb1-4GlcNAc-Sp12	218	1	102	3	2	5.84E-01
222	Neu5Aca2-3(GalNAcb1-4)Galb1-4GlcNAcb-Sp8	151	1	106	4	2	0.5893423
157	Galb1-4GlcNAcb1-6(Galb1-3)GalNAca-Sp8	239	1	94	3	2	0.5824535
373	Neu5Aca2-6Galb1-4GlcNAcb1-3GalNAc-Sp14	190	1	98	3	2	0.5865356
441	Fuca1-2Galb1-4GlcNAcb1-2(Fuca1-2Galb1-4GlcNAcb1-4)Mana1-3(Fuca1-2Galb1-4 GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-N	227	1	92	3	2	0.5837245
333	GlcNAca1-4Galb1-4GlcNAcb1-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	200	1	94	3	2	0.5859919
419	Fuca1-2Galb1-3GlcNAcb1-3GalNAc-Sp14	170	1	97	3	2	0.5884374
133	Galb1-3GalNAcb-Sp8	233	1	90	3	2	0.5833614
90	GalNAca1-4(Fuca1-2)Galb1-4GlcNAcb-Sp8	122	0	102	3	2	0.5923251
406	Gala1-3(Fuca1-2)Galb1-4(Fuca1-3)Glc-Sp21	124	0	101	3	2	0.5922348
284	Neu5Aca2-3Galb1-3GlcNAcb1-3Galb1-3GlcNAcb-Sp0	240	1	88	3	2	0.5829075
63	Fuca1-2Galb1-3GlcNAcb1-3Galb1-4Glc-Sp10	406	2	67	2	2	0.5696986
46	Neu5Ac(9Ac)a2-6Galb1-4GlcNAcb-Sp8	184	1	92	3	2	5.88E-01
422	Gala1-3Galb1-3GlcNAcb1-3GalNAc-Sp14	143	1	95	3	2	0.5910603
39	[6OSO3]Galb1-4Glc-Sp0	199	1	89	3	2	0.5865356
418	GlcNAcb1-2Mana1-3(GlcNAcb1-2(GlcNAcb1-6)Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp19	425	2	63	2	2	0.5683274
18	Galb1-4GlcNAcb1-3(Galb1-4GlcNAcb1-6)GalNAca-Sp8	206	1	83	3	2	0.586445
68	Fuca1-2Galb1-4(Fuca1-3)GlcNAcb-Sp0	93	0	96	3	2	0.5954828
135	Galb1-3GalNAcb1-4(Neu5Aca2-3)Galb1-4Glc-Sp0	152	1	89	3	2	0.5907892
109	Gala1-3Galb1-4GlcNAcb-Sp8	187	1	85	3	2	0.5879848
122	Galb1-3(Fuca1-4)GlcNAc-Sp8	188	1	84	3	2	0.5879848
146	Galb1-4[6OSO3]Glc-Sp0	287	1	72	2	2	0.5800909
306	Mana1-6Manb-Sp10	388	1	61	2	2	0.5718907
379	Galb1-3GlcNAcb1-3(Galb1-4(Fuca1-3)GlcNAcb1-6)Galb1-4Glc-Sp21	92	0	93	3	2	0.5958433
231	Neu5Aca2-3Galb1-3(Neu5Aca2-3Galb1-4)GlcNAcb-Sp8	229	1	77	3	2	0.5849039
385	Fuca1-2Galb1-3GalNAca1-3(Fuca1-2)Galb1-4Glc-Sp0	140	1	87	3	2	0.5920542
378	Galb1-3GlcNAcb1-3(Galb1-3GlcNAcb1-3Galb1-4GlcNAcb1-6)Galb1-4Glc-Sp0	48	0	97	3	2	0.5994437
81	[3OSO3]Galb1-4(Fuca1-3)Glc-Sp0	304	1	67	2	2	0.5789994

111	Gala1-3Galb-Sp8	221	1	76	3	2	0.5857199
437	Neu5Aca2-3Galb1-4GlcNAcb1-3Galb-Sp8	263	1	71	2	2	0.5823627
153	Galb1-4GlcNAcb1-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	278	1	69	2	2	0.5811817
24	[3OSO3]Galb1-4[6OSO3]Glc-Sp0	97	0	88	3	2	0.5958433
317	Neu5Aca2-8Neu5Aca2-8Neu5Acb-Sp8	111	0	85	3	2	0.5948518
65	Fuca1-2Galb1-3GlcNAcb-Sp8	306	1	63	2	2	0.5791814
295	Galb1-4GlcNAca1-6Galb1-4GlcNAcb-Sp0	151	1	80	3	2	0.5916929
363	Neu5Aca2-6GlcNAcb1-4GlcNAcb1-4GlcNAc-Sp21	133	0	81	3	2	0.593228
258	Neu5Aca2-6Galb1-4GlcNAcb-Sp8	122	0	82	3	2	5.94E-01
382	Galb1-3GlcNAcb1-3(Galb1-3GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb1-6)Galb1-4Glc-Sp21	103	0	83	3	2	0.5957532
357	Fuca1-2Galb1-4GlcNAcb1-2Mana1-3(Fuca1-2Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp20	552	2	32	1	2	0.5595331
255	Neu5Aca2-6GalNAcb1-4GlcNAcb-Sp0	237	1	67	2	2	0.5850853
380	Fuca1-2Galb1-3(Fuca1-4)GlcNAcb1-3(Galb1-4GlcNAcb1-6)Galb1-4Glc-Sp21	383	1	50	2	2	0.5733509
345	Galb1-4GlcNAcb1-2Mana1-6Manb1-4GlcNAcb1-4GlcNAc-Sp12	150	1	75	3	2	0.5922348
251	Fuca1-2Galb1-4[6OSO3]Glc-Sp0	67	0	84	3	2	0.5989042
245	Neu5Aca2-3Galb1-4(Fuca1-3)GlcNAcb1-3Galb-Sp8	107	0	79	3	2	0.5957532
164	GlcNAca1-3Galb1-4GlcNAcb-Sp8	169	1	72	2	2	0.5907892
131	Galb1-3GalNAca-Sp8	263	1	61	2	2	0.5832707
126	Galb1-3(GlcNAcb1-6)GalNAc-Sp14	177	1	71	2	2	0.5901564
102	Gala1-3(Fuca1-2)Galb-Sp8	62	0	83	3	2	0.5994437
83	GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb-Sp8	220	1	65	2	2	0.5868074
69	Fuca1-2Galb1-4(Fuca1-3)GlcNAcb-Sp8	214	1	66	2	2	0.5872604
197	KDNa2-3Galb1-4GlcNAcb-Sp0	139	1	74	2	1	0.5933182
129	Galb1-3(Neu5Acb2-6)GalNAca-Sp8	290	1	56	2	1	0.5812726
96	GalNAcb1-4GlcNAcb-Sp8	85	0	78	3	1	0.5978246
180	(GlcNAcb1-4)5b-Sp8	201	1	65	2	1	0.588528
412	GalNAca1-3GalNAcb1-3Gala1-4Galb1-4Glc-Sp0	199	1	65	2	1	0.588709
425	Galb1-3GlcNAcb1-2Mana1-3(Galb1-3GlcNAcb1-2(Galb1-3GlcNAcb1-6)Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp19	660	2	13	0	1	0.5513536
279	Galb1-3GlcNAcb1-3Galb1-3GlcNAcb-Sp0	117	0	74	2	1	0.5953026
41	[6OSO3]Galb1-4GlcNAcb-Sp8	179	1	67	2	1	0.5903372
344	Galb1-4GlcNAcb1-2Mana1-3Manb1-4GlcNAcb1-4GlcNAc-Sp12	96	0	76	3	1	0.5970144
293	Galb1-4GlcNAcb1-3(Galb1-4GlcNAcb1-6)Galb1-4GlcNAc-Sp0	194	1	65	2	1	0.5891614
352	KDNa2-3Galb1-4(Fuca1-3)GlcNAc-Sp0	86	0	76	3	1	0.5979146
330	GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	91	0	76	3	1	0.5974645
173	GlcNAcb1-3Galb1-4GlcNAcb-Sp8	60	0	78	3	1	0.6000729
106	Gala1-3GalNAcb-Sp8	108	0	72	2	1	0.5962938
85	GlcNAcb1-3Galb1-3GalNAca-Sp8	124	0	69	2	1	0.5951223
366	GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb1-2Mana1-3(GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp20	231	1	57	2	1	0.5865356
176	GlcNAcb1-4-MDPLys	-10	0	83	3	1	0.6059029
37	[4OSO3]Galb1-4GlcNAcb-Sp8	278	1	50	2	1	0.5829075
152	Galb1-4GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb-Sp0	161	1	63	2	1	0.5923251
290	Galb1-3(Neu5Aca2-3Galb1-4(Fuca1-3)GlcNAcb1-6)GalNAca-Sp14	124	0	67	2	1	0.5953026
61	Fuca1-2Galb1-3GalNAcb1-4(Neu5Aca2-3)Galb1-4Glc-Sp9	391	1	36	1	1	0.5738982
398	GalNAca1-3GalNAcb1-3Gala1-4Galb1-4GlcNAcb-Sp0	150	1	62	2	1	0.5934085
223	Neu5Aca2-3(GalNAcb1-4)Galb1-4Glc-Sp0	92	0	69	2	1	0.5980045
45	Neu5Ac(9Ac)a-Sp8	90	0	68	2	1	0.5982745
71	Fuca1-2Galb1-4GlcNAcb1-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	143	1	61	2	1	0.5941303
259	Neu5Aca2-6Galb1-4GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb-Sp0	277	1	44	1	1	5.84E-01
389	GalNAca1-3(Fuca1-2)Galb1-3GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb-Sp0	358	1	34	1	1	0.577088
326	Neu5Aca2-3Galb1-3(Fuca1-4)GlcNAcb1-3Galb1-3(Fuca1-4)GlcNAcb-Sp0	269	1	44	1	1	0.5842689
110	Gala1-3Galb1-4Glc-Sp0	74	0	64	2	1	0.6000729

296	Galb1-4GlcNAcb1-6Galb1-4GlcNAcb-Sp0	45	0	67	2	1	0.6024077
19	GlcNAcb1-3(GlcNAcb1-4)(GlcNAcb1-6)GlcNAc-Sp8	121	0	58	2	1	0.5963839
372	Neu5Aca2-3Galb1-4GlcNAcb1-3GalNAc-Sp14	146	1	55	2	1	0.5944009
270	Neu5Gca2-3Galb1-3GlcNAcb-Sp0	107	0	58	2	1	0.5976445
124	Galb1-4GlcNAcb1-6GalNAc-Sp8	-68	0	78	3	1	0.611531
174	GlcNAcb1-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	183	1	49	2	1	0.5916025
336	GlcNAca1-4Galb1-4GlcNAcb1-3Galb1-4Glc-Sp0	168	1	51	2	1	0.5927766
414	Gala1-3(Fuca1-2)Galb1-4(Fuca1-3)GlcNAcb1-3GalNAc-Sp14	60	0	63	2	1	0.6014203
386	Fuca1-2Galb1-3GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb-Sp0	96	0	58	2	1	0.5986343
66	Fuca1-2Galb1-4(Fuca1-3)GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb-Sp0	84	0	59	2	1	0.5996235
435	Galb1-4Galb-Sp10	97	0	58	2	1	0.5985444
272	Neu5Gca2-3Galb1-4GlcNAcb-Sp0	53	0	63	2	1	0.6020487
15	GlcNAcb-Sp0	76	0	60	2	1	0.6002526
266	Galb1-3(Fuca1-4)GlcNAcb1-3Galb1-3(Fuca1-4)GlcNAcb-Sp0	99	0	57	2	1	0.5984544
381	Fuca1-2Galb1-3(Fuca1-4)GlcNAcb1-3(Galb1-4(Fuca1-3)GlcNAcb1-6)Galb1-4Glc-Sp21	103	0	56	2	1	0.5981845
433	Galb1-4GlcNAcb1-4(Galb1-4GlcNAcb1-2)Mana1-3(GlcNAcb1-4)(Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAc-Sp21	24	0	65	2	1	0.60447
151	Galb1-4GlcNAcb1-3GalNAc-Sp14	89	0	57	2	1	0.5993538
417	Fuca1-2Galb1-4GlcNAcb1-2Mana1-3(Fuca1-2Galb1-4GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4(Fuca1-6)GlcNAcb-Sp22	57	0	58	2	1	0.6021385
58	Fuca1-2Galb1-3GalNAca-Sp8	113	0	52	2	1	0.5976445
130	Galb1-3(Neu5Aca2-6)GlcNAcb1-4Galb1-4Glc-Sp10	89	0	54	2	1	0.5996235
280	Galb1-4(Fuca1-3)[6OSO3]GlcNAc-Sp0	102	0	52	2	1	0.5986343
163	Galb1-4Glc-Sp8	38	0	58	2	1	0.6038426
247	Neu5Aca2-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	154	1	45	1	1	0.5945813
432	Galb1-4GlcNAcb1-2Mana1-3(GlcNAcb1-4)(Galb1-4GlcNAcb1-2)Manb1-4GlcNAcb1-4GlcNAc-Sp21	122	0	48	2	1	0.5971944
175	GlcNAcb1-3Galb1-4Glc-Sp0	80	0	52	2	1	0.600612
88	GalNAca1-3GalNAcb-Sp8	57	0	55	2	1	0.6024077
287	[6OSO3]Galb1-4[6OSO3]GlcNAcb-Sp0	32	0	58	2	1	0.6043804
276	Neu5Gca-Sp8	-9	0	61	2	1	0.6077815
186	Glc1-4Glc-Sp8	56	0	53	2	1	0.6026768
411	GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb1-3GalNAc-Sp14	298	1	25	1	1	0.5833614
257	Neu5Aca2-6Galb1-4GlcNAcb-Sp0	61	0	52	2	1	0.6023179
327	Neu5Aca2-6Galb1-4GlcNAcb1-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	41	0	54	2	1	6.04E-01
144	Galb1-4(Fuca1-3)GlcNAcb1-4Galb1-4(Fuca1-3)GlcNAcb-Sp0	101	0	47	2	1	0.599174
25	[3OSO3]Galb1-4[6OSO3]Glc-Sp8	106	0	46	2	1	0.5988142
408	Galb1-3GalNAcb1-4(Neu5Aca2-8Neu5Aca2-3)Galb1-4Glc-Sp0	75	0	49	2	1	0.6013305
407	Neu5Aca2-6Galb1-3GlcNAcb1-3(Galb1-4GlcNAcb1-6)Galb1-4Glc-Sp21	73	0	49	2	1	0.6015101
298	GalNAcb1-3Galb-Sp8	100	0	46	2	1	0.5993538
339	GlcNAca1-4Galb1-3GalNAc-Sp14	124	0	43	1	1	0.5974645
134	Galb1-3GalNAcb1-3Gala1-4Galb1-4Glc-Sp0	79	0	48	2	1	0.6010611
304	GlcNAcb1-4GlcNAcb-Sp12	116	0	44	1	1	0.5980945
76	Fuca1-3GlcNAcb-Sp8	39	0	52	2	1	0.6042908
196	KDNa2-3Galb1-3GlcNAcb-Sp0	61	0	50	2	1	0.6024974
297	GalNAca-Sp15	122	0	43	1	1	0.5976445
172	GlcNAcb1-3Galb1-4GlcNAcb-Sp0	58	0	50	2	1	0.6027665
208	Manb1-4GlcNAcb-Sp0	49	0	51	2	1	0.603484
230	Neu5Aca2-3Galb1-3(Fuca1-4)GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb-Sp0	198	1	33	1	1	0.5916929
335	GlcNAca1-4Galb1-3GlcNAcb-Sp0	67	0	48	2	1	0.6021385
62	Fuca1-2Galb1-3GlcNAcb1-3Galb1-4Glc-Sp8	82	0	46	2	1	0.6009713
239	Neu5Aca2-3Galb1-3GlcNAcb-Sp8	48	0	49	2	1	0.603753
362	Neu5Aca2-6GlcNAcb1-4GlcNAc-Sp21	82	0	45	2	1	0.6010611
28	[3OSO3]Galb1-3GlcNAcb-Sp8	34	0	50	2	1	0.6049179

438	GalNAcb1-6GalNAcb-Sp8	109	0	41	1	1	0.5989941
154	Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	91	0	43	1	1	0.6004323
171	GlcNAcb1-3Galb-Sp8	30	0	50	2	1	0.6052762
31	[3OSO3]Galb1-4[6OSO3]GlcNAcb-Sp0	63	0	46	2	1	0.6026768
136	Galb1-3GalNAcb1-4Galb1-4Glc-Sp8	124	0	39	1	1	0.5978246
387	Galb1-3GlcNAcb1-3GalNAca-Sp14	109	0	40	1	1	0.599084
243	Neu5Aca2-3Galb1-4(Fuca1-3)GlcNAcb-Sp0	23	0	49	2	1	0.6059924
431	GlcNAcb1-4(GlcNAcb1-2)Mana1-3(GlcNAcb1-4)(GlcNAcb1-6(GlcNAcb1-2)Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp21	73	0	44	1	1	0.601959
178	GlcNAcb1-4Galb1-4GlcNAcb-Sp8	20	0	49	2	1	0.6062609
113	Gala1-4Galb1-4GlcNAcb-Sp0	136	1	36	1	1	0.5970144
44	[6OSO3]GlcNAcb-Sp8	14	0	49	2	1	0.6067978
404	GalNAcb1-3Gala1-6Galb1-4Glc-Sp8	72	0	42	1	1	0.6022282
159	Galb1-3(Galb1-4GlcNAcb1-6)GalNAcb-Sp14	57	0	43	1	1	0.603484
86	GalNAca1-3(Fuca1-2)Galb-Sp8	111	0	37	1	1	0.599174
182	GlcNAcb1-6(Galb1-3)GalNAca-Sp8	59	0	43	1	1	0.6033047
95	GalNAcb1-4GlcNAcb-Sp0	68	0	41	1	1	0.6026768
274	Neu5Gca2-6GalNAca-Sp0	78	0	40	1	1	0.6018692
89	GalNAca1-3Galb-Sp8	132	0	34	1	1	0.5975545
254	Neu5Aca2-6GalNAca-Sp8	42	0	43	1	1	0.6048284
29	[3OSO3]Galb1-4(Fuca1-3)GlcNAcb-Sp0	114	0	35	1	1	0.599084
209	Neu5Aca2-3Galb1-4GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb-Sp0	64	0	40	1	1	0.6031253
75	Fuca1-2Galb-Sp8	7	0	46	2	1	0.6076921
305	HOOC(CH3)CH-3-O-GlcNAcb1-4GlcNAcb-Sp10	114	0	34	1	1	0.599174
127	Galb1-3(Neu5Aca2-6)GalNAca-Sp8	61	0	40	1	1	0.6033944
79	GalNAca1-3(Fuca1-2)Galb1-3GlcNAcb-Sp0	121	0	33	1	1	0.5986343
252	Neu5Aca2-3Galb1-4Glc-Sp0	81	0	37	1	1	0.6018692
210	[3OSO3]Galb1-4(Fuca1-3)[6OSO3]GlcNAcb-Sp8	79	0	37	1	1	0.6020487
60	Fuca1-2Galb1-3GalNAcb1-4(Neu5Aca2-3)Galb1-4Glc-Sp0	99	0	34	1	1	0.6005222
143	Galb1-4(Fuca1-3)GlcNAcb-Sp8	6	0	45	2	1	0.6078709
420	Gala1-3(Fuca1-2)Galb1-3GlcNAcb1-3GalNAcb-Sp14	44	0	40	1	1	0.6049179
281	Galb1-4(Fuca1-3)[6OSO3]Glc-Sp0	146	1	29	1	1	0.5967442
12	Glc-Sp8	50	0	40	1	1	0.6043804
4	GalNAca-Sp8	125	0	31	1	1	0.5984544
149	Galb1-4GalNAcb1-3(Fuca1-2)Galb1-4GlcNAcb-Sp8	-139	-1	61	2	1	0.6193532
220	Neu5Aca2-3(6-O-Su)Galb1-4(Fuca1-3)GlcNAcb-Sp8	27	0	42	1	1	0.6062609
244	Neu5Aca2-3Galb1-4(Fuca1-3)GlcNAcb-Sp8	-6	0	45	2	1	0.6089432
8	Neu5Aca-Sp8	88	0	34	1	1	0.6015101
38	6-H2PO3Mana-Sp8	80	0	35	1	1	0.6021385
256	Neu5Aca2-6Galb1-4[6OSO3]GlcNAcb-Sp8	54	0	38	1	1	6.04E-01
294	Galb1-4GlcNAcb1-3(GlcNAcb1-6)Galb1-4GlcNAcb-Sp0	36	0	40	1	1	0.6056344
402	Galb1-3GlcNAcb1-6Galb1-4GlcNAcb-Sp0	-11	0	45	2	1	0.6093897
261	Neu5Aca2-6Galb1-4Glc-Sp0	15	0	42	1	1	0.6073344
232	Neu5Aca2-3Galb1-3[6OSO3]GalNAca-Sp8	21	0	41	1	1	0.6068873
103	Gala1-3(Gala1-4)Galb1-4GlcNAcb-Sp8	57	0	36	1	1	0.6041115
177	GlcNAcb1-4(GlcNAcb1-6)GalNAca-Sp8	-127	0	57	2	1	0.6186441
14	GalNAcb-Sp8	194	1	20	1	1	0.593228
138	Galb1-3GlcNAcb1-3Galb1-4GlcNAcb-Sp0	-4	0	42	1	1	0.6090325
368	Gala1-3Galb1-4(Fuca1-3)GlcNAcb1-2Mana1-3(Gala1-3Galb1-4(Fuca1-3)GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAcb-Sp20	74	0	33	1	1	0.6028563
403	Galb1-3GlcNAca1-6Galb1-4GlcNAcb-Sp0	56	0	35	1	1	0.6042908
224	Neu5Aca2-3(Neu5Aca2-3Galb1-3GalNAcb1-4)Galb1-4Glc-Sp0	-33	0	45	2	1	0.6113527
364	Fuca1-2Galb1-3GlcNAcb1-3(Galb1-4(Fuca1-3)GlcNAcb1-6)Galb1-4Glc-Sp21	60	0	34	1	1	0.6040219

168	GlcNAcb1-3(GlcNAcb1-6)Galb1-4GlcNAcb-Sp8	54	0	34	1	1	0.6045596
125	Galb1-3(GlcNAcb1-6)GalNAca-Sp8	-85	0	50	2	1	0.6155369
318	Neu5Gcb2-6Galb1-4GlcNAc-Sp8	61	0	33	1	1	0.6040219
13	Manb-Sp8	128	0	25	1	1	0.5987243
263	Neu5Aca2-6Galb-Sp8	21	0	37	1	1	0.607245
212	Fuca1-2Galb1-4[6OSO3]GlcNAc-Sp8	33	0	36	1	1	0.6062609
91	GalNAcb1-3GalNAca-Sp8	50	0	34	1	1	0.6049179
214	Neu5Aca2-3Galb1-3GalNAca-Sp8	41	0	34	1	1	0.6057239
187	Glca1-4Glca-Sp8	32	0	35	1	1	0.6064399
97	Gala1-2Galb-Sp8	46	0	33	1	1	0.6053658
190	Glcb1-6Glcb-Sp8	61	0	31	1	1	0.6042012
234	Neu5Aca2-3Galb-Sp8	23	0	35	1	1	0.607245
211	Fuca1-2[6OSO3]Galb1-4GlcNAc-Sp0	24	0	35	1	1	0.6071556
377	Galb1-3GalNAca1-3(Fuca1-2)Galb1-4GlcNAc-Sp0	79	0	29	1	1	0.6027665
376	Galb1-3GalNAca1-3(Fuca1-2)Galb1-4Glc-Sp0	40	0	33	1	1	0.6059029
11	Galb-Sp8	-48	0	43	1	1	0.6128677
10	Neu5Acb-Sp8	8	0	37	1	1	0.6084071
137	Galb1-3Galb-Sp8	64	0	30	1	1	0.6040219
237	Fuca1-2[6OSO3]Galb1-4Glc-Sp0	51	0	31	1	1	0.6050971
405	GlcNAcb1-6(GlcNAcb1-3)GalNAca-Sp14	21	0	35	1	1	0.6074239
120	Galb1-3(Fuca1-4)GlcNAcb1-3Galb1-4GlcNAcb-Sp0	57	0	30	1	1	0.6046492
240	Neu5Aca2-3Galb1-4[6OSO3]GlcNAcb-Sp8	44	0	31	1	1	0.6057239
5	Fuca-Sp8	51	0	30	1	1	0.6051866
9	Neu5Aca-Sp11	-4	0	36	1	1	0.6095683
104	Gala1-3GalNAca-Sp8	65	0	28	1	1	0.6041115
242	Neu5Aca2-3Galb1-4(Fuca1-3)GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb-Sp0	-69	0	43	1	1	0.6147367
121	Galb1-3(Fuca1-4)GlcNAcb-Sp0	20	0	33	1	1	0.6076921
409	Neu5Aca2-3Galb1-3GalNAcb1-4(Neu5Aca2-8Neu5Aca2-3)Galb1-4Glcb-Sp0	81	0	26	1	1	0.6028563
267	Neu5Acb2-6GalNAca-Sp8	80	0	26	1	1	0.602946
262	Neu5Aca2-6Galb1-4Glcb-Sp8	13	0	33	1	1	0.6083178
82	GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb-Sp0	125	0	20	1	1	0.5994437
1	Gala-Sp8	80	0	25	1	1	0.6030356
260	Neu5Aca2-6Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	-27	0	37	1	1	6.12E-01
213	Fuca1-2[6OSO3]Galb1-4[6OSO3]Glc-Sp0	99	0	23	1	1	0.6015101
238	Neu5Aca2-3Galb1-3GlcNAcb-Sp0	10	0	31	1	1	0.6087645
436	Galb1-6Galb-Sp10	71	0	24	1	1	0.6039323
355	KDNa2-3Galb1-3GalNAca-Sp14	71	0	24	1	1	0.6039323
21	[3OSO3][6OSO3]Galb1-4GlcNAcb-Sp0	10	0	31	1	1	0.6087645
325	Neu5Aca2-6Galb1-4GlcNAcb1-3Galb1-3GlcNAcb-Sp0	-222	-1	57	2	1	6.27E-01
166	GlcNAcb1-2Galb1-3GalNAca-Sp8	47	0	26	1	1	0.6059029
148	Galb1-4GalNAca1-3(Fuca1-2)Galb1-4GlcNAcb-Sp8	-17	0	34	1	1	0.6109068
219	Neu5Aca2-8Neu5Aca2-8Neu5Aca-Sp8	57	0	25	1	1	0.6050971
34	[3OSO3]Galb1-4GlcNAcb-Sp8	4	0	31	1	1	0.6093004
329	GalNAcb1-3Gala1-4Galb1-4GlcNAcb1-3Galb1-4Glcb-Sp0	11	0	30	1	1	0.6087645
218	Neu5Aca2-8Neu5Aca2-3(GalNAcb1-4)Galb1-4Glcb-Sp0	-29	0	34	1	1	0.6119767
184	GlcNAcb1-6GalNAca-Sp14	20	0	28	1	1	0.608139
185	GlcNAcb1-6Galb1-4GlcNAcb-Sp8	61	0	23	1	1	0.6049179
32	[3OSO3]Galb1-4[6OSO3]GlcNAcb-Sp8	-2	0	30	1	0	0.6099253
142	Galb1-4(Fuca1-3)GlcNAcb-Sp0	15	0	28	1	0	0.6085858
227	Neu5Aca2-3GalNAcb1-4GlcNAcb-Sp0	-1	0	30	1	0	0.6098361
342	Neu5Aca2-6Galb1-4GlcNAcb1-2Mana1-6Manb1-4GlcNAcb1-4GlcNAc-Sp12	54	0	23	1	0	0.6055448

236	Neu5Aca2-3Galb1-3GlcNAcb1-3Galb1-4GlcNAcb-Sp0	41	0	24	1	0	0.6066189
114	Gala1-4Galb1-4GlcNAcb-Sp8	13	0	27	1	0	0.6088538
93	GalNAcb1-3Gala1-4Galb1-4GlcNAcb-Sp0	-18	0	31	1	0	0.6112636
147	Galb1-4[6OSO3]Glc-Sp8	55	0	23	1	0	0.6054553
328	Gala1-4Galb1-4GlcNAcb1-3Galb1-4Glc-Sp0	62	0	22	1	0	0.6049179
123	Galb1-3(Fuca1-4)GlcNAcb-Sp8	66	0	21	1	0	0.6046492
115	Gala1-4Galb1-4Glc-Sp0	53	0	22	1	0	0.6057239
36	[4OSO3][6OSO3]Galb1-4GlcNAcb-Sp0	57	0	21	1	0	0.6054553
353	KDNa2-6Galb1-4GlcNAc-Sp0	102	0	16	1	0	6.02E-01
100	Gala1-3(Fuca1-2)Galb1-4GlcNAc-Sp0	-132	0	41	1	0	0.6205047
191	G-ol-Sp8	35	0	22	1	0	0.6073344
140	Galb1-3GlcNAcb-Sp0	47	0	20	1	0	0.6064399
59	Fuca1-2Galb1-3GalNAca-Sp14	7	0	24	1	0	0.6096575
27	[3OSO3]Galb1-3GalNAca-Sp8	-23	0	27	1	0	0.6120658
434	Galb1-4GlcNAcb1-2Mana1-3(GlcNAcb1-4)(Galb1-4GlcNAcb1-6(Galb1-4GlcNAcb1-2)Mana1-6)Manb1-4GlcNAcb1-4GlcNAc-Sp21	-42	0	29	1	0	0.61358
101	Gala1-3(Fuca1-2)Galb1-4Glc-Sp0	-129	0	39	1	0	0.6204162
56	Fuca1-2Galb1-3GalNAcb1-3Gala1-4Galb1-4Glc-Sp9	-16	0	26	1	0	0.611531
291	Galb1-3Galb1-4GlcNAcb-Sp8	68	0	16	1	0	0.6049179
288	6-H2PO3Glc-Sp10	83	0	14	0	0	0.603753
416	Galb1-4(Fuca1-3)GlcNAcb1-2Mana1-3(Galb1-4(Fuca1-3)GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4(Fuca1-6)GlcNAcb-Sp22	-44	0	28	1	0	0.613847
283	Galb1-4GlcNAcb1-3Galb1-3GlcNAcb-Sp0	72	0	15	1	0	0.6046492
265	Neu5Aca2-8Neu5Aca2-3Galb1-4Glc-Sp0	32	0	18	1	0	0.6079603
112	Gala1-4(Fuca1-2)Galb1-4GlcNAcb-Sp8	39	0	17	1	0	0.6074239
162	Galb1-4Glc-Sp0	113	0	9	0	0	0.6015101
35	[3OSO3]Galb-Sp8	25	0	18	1	0	0.6085858
278	Galb1-3GalNAca-Sp14	21	0	18	1	0	0.6089432
302	GlcNAcb1-3Man-Sp10	6	0	20	1	0	0.6101038
426	Fuca1-2Galb1-3GlcNAcb1-3(Galb1-4GlcNAcb1-6)Galb1-4Glc-Sp21	-13	0	22	1	0	0.6116202
141	Galb1-3GlcNAcb-Sp8	44	0	15	1	0	0.6071556
248	Neu5Aca2-3Galb1-4GlcNAcb-Sp0	-58	0	27	1	0	0.6151813
189	Glc1-4Glc-Sp8	73	0	11	0	0	0.6049179
264	Neu5Aca2-8Neu5Aca-Sp8	28	0	16	1	0	0.6084965
160	Galb1-4GlcNAcb-Sp0	55	0	13	0	0	0.6063504
55	Fuca1-2Galb1-3GalNAcb1-3Gala-Sp9	50	0	13	0	0	0.6067978
108	Gala1-3Galb1-3GlcNAcb-Sp0	-31	0	22	1	0	0.6132239
77	Fuca1-4GlcNAcb-Sp8	92	0	7	0	0	0.6035737
285	Neu5Aca2-3Galb1-4GlcNAcb1-3Galb1-3GlcNAcb-Sp0	22	0	15	1	0	0.6091218
429	GlcNAcb1-4(GlcNAcb1-2)Mana1-3(GlcNAcb1-4)(GlcNAcb1-2Mana1-6)Manb1-4GlcNAcb1-4GlcNAc-Sp21	84	0	8	0	0	0.6042012
316	Neu5Aca2-8Neu5Acb-Sp17	-55	0	24	1	0	0.6151813
194	GlcAb1-3Galb-Sp8	-2	0	17	1	0	0.6110852
92	GalNAcb1-3(Fuca1-2)Galb-Sp8	11	0	16	1	0	0.6100146
310	Neu5Aca2-3Galb1-3(Neu5Aca2-3Galb1-4GlcNAcb1-6)GalNAca-Sp14	-102	0	29	1	0	0.6189101
117	Gala1-6Glc-Sp8	20	0	14	0	0	0.6093897
165	GlcNAca1-6Galb1-4GlcNAcb-Sp8	34	0	12	0	0	0.6083178
161	Galb1-4GlcNAcb-Sp8	38	0	11	0	0	0.6080497
116	Gala1-4GlcNAcb-Sp8	37	0	11	0	0	0.6081139
139	Galb1-3GlcNAcb1-3Galb1-4Glc-Sp10	64	0	8	0	0	0.6059924
226	Neu5Aca2-3GalNAca-Sp8	-135	-1	30	1	0	0.6217436
241	Neu5Aca2-3Galb1-4(Fuca1-3)[6OSO3]GlcNAcb-Sp8	6	0	14	0	0	0.6106392
192	GlcAa-Sp8	-15	0	16	1	0	0.6123332
169	GlcNAcb1-3GalNAca-Sp8	38	0	10	0	0	0.6081139

94	GalNAcb1-4(Fuca1-3)GlcNAcb-Sp0	-3	0	15	0	0	0.6113527
118	Galb1-2Galb-Sp8	-40	0	18	1	0	0.6143809
440	[6OSO3]Galb1-3[6OSO3]GlcNAc-Sp0	-31	0	16	1	0	0.613758
233	Neu5Aca2-3Galb1-3(Neu5Aca2-6)GalNAca-Sp8	-11	0	14	0	0	0.612155
6	Fuca-Sp9	30	0	8	0	0	0.6090325
401	Gala1-3Galb1-4GlcNAcb1-3GalNAca-Sp14	26	0	9	0	0	0.6093004
74	Fuca1-2Galb1-4Glc-Sp0	2	0	11	0	0	0.6112636
289	Gala1-3(Fuca1-2)Galb-Sp18	30	0	8	0	0	0.6090325
312	Neu5Aca2-3Galb1-3GalNAca-Sp14	5	0	10	0	0	0.6110852
188	Glc1-6Glc1-6Glc-Sp8	16	0	9	0	0	0.6101931
57	Fuca1-2Galb1-3(Fuca1-4)GlcNAcb-Sp8	10	0	8	0	0	0.6108176
72	Fuca1-2Galb1-4GlcNAcb-Sp0	7	0	8	0	0	0.6110852
195	GlcAb1-6Galb-Sp8	25	0	6	0	0	0.6096575
286	[3OSO3][4OSO3]Galb1-4GlcNAcb-Sp0	-62	0	15	1	0	0.6166031
26	[3OSO3]Galb1-3(Fuca1-4)GlcNAcb-Sp8	29	0	5	0	0	0.6093897
167	GlcNAcb1-3(GlcNAcb1-6)GalNAca-Sp8	53	0	1	0	0	0.6076027
119	Galb1-3(Fuca1-4)GlcNAcb1-3Galb1-4(Fuca1-3)GlcNAcb-Sp0	25	0	5	0	0	0.6097468
3	Mana-Sp8	-48	0	12	0	0	0.6156258
225	Neu5Aca2-3(Neu5Aca2-6)GalNAca-Sp8	-187	-1	27	1	0	0.6265985
73	Fuca1-2Galb1-4GlcNAcb-Sp8	-21	0	6	0	0	0.613758
145	Galb1-4(Fuca1-3)GlcNAcb1-4Galb1-4(Fuca1-3)GlcNAcb1-4Galb1-4(Fuca1-3)GlcNAcb-Sp0	13	0	2	0	0	0.6110852
354	KDNa2-3Galb1-4Glc-Sp0	-32	0	6	0	0	0.6147367
33	[3OSO3]Galb1-4GlcNAcb-Sp0	3	0	1	0	0	0.6120658
170	GlcNAcb1-3GalNAca-Sp14	34	0	-4	0	0	0.6097468
410	Gala1-3(Fuca1-2)Galb1-4GlcNAcb1-3GalNAca-Sp14	14	0	-2	0	0	0.6113527
250	Neu5Aca2-3Galb1-4GlcNAcb1-3Galb1-4GlcNAcb-Sp0	-97	0	10	0	0	0.6201505
217	Neu5Aca2-8Neu5Aca2-8Neu5Aca2-3Galb1-4Glc-Sp0	-10	0	-4	0	0	0.613669
2	Glc-Sp8	5	0	-6	0	0	0.6125114
277	Galb1-3(Neu5Aca2-3Galb1-4GlcNAcb1-6)GalNAca-Sp14	-188	-1	14	0	0	0.6278311
249	Neu5Aca2-3Galb1-4GlcNAcb-Sp8	-165	-1	8	0	0	0.6263342
84	GalNAca1-3(Fuca1-2)Galb1-4Glc-Sp0	-77	0	-5	0	0	0.6197077
132	Galb1-3GalNAca-Sp16	-91	0	-5	0	0	0.6209473
324	Neu5Ac(9Ac)a2-3Galb1-3GlcNAcb-Sp0	-80	0	-12	0	0	0.6205933
17	GlcN(Gc)b-Sp8	-136	-1	-9	0	0	0.6252764
40	[6OSO3]Galb1-4Glc-Sp8	-137	-1	-28	-1	-1	0.6270389
64	Fuca1-2Galb1-3GlcNAcb-Sp0	-106	0	-35	-1	-1	0.6249236
268	Neu5Acb2-6Galb1-4GlcNAcb-Sp8	-131	0	-35	-1	-1	0.6271269
156	Galb1-4GlcNAcb1-3Galb1-4Glc-Sp8	-157	-1	-35	-1	-1	0.629414

Spacer Abbreviation	Chemical Structure
Sp0	CH ₂ CH ₂ NH ₂
Sp8	CH ₂ CH ₂ CH ₂ NH ₂
Sp9	CH ₂ CH ₂ CH ₂ CH ₂ CH ₂ NH ₂
Sp10	NHCOCH ₂ NH
Sp11	OCH ₂ C ₆ H ₄ -p-NHCOCH ₂ NH
Sp12	Asparagine
Sp13	Glycine
Sp14	Threonine
Sp15	Serine
Sp16	PNP (OC ₆ H ₄ NH ₂)
Sp17	OCH ₂ C ₆ H ₄ NH ₂

Sp18	$O(CH_2)_3NHCO(CH_2)_6NH_2$
Sp19	EN or NK
Sp20	GENR
Sp21	$N(CH_3)-O-(CH_2)_2-NH_2$
Sp22	NST
MDPLys	Mur-L-Ala-D-iGlnb-(CH ₂) ₄ NH ₂