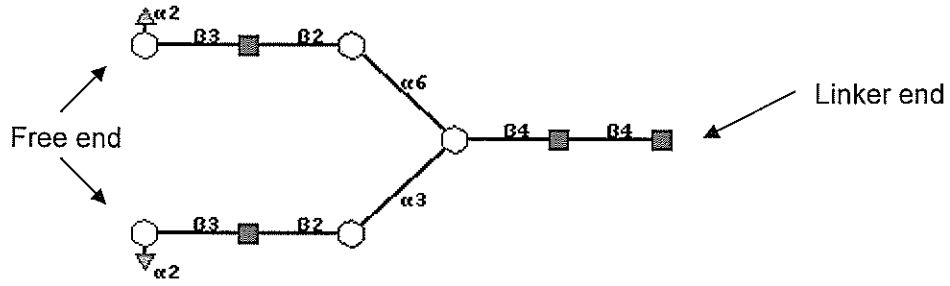
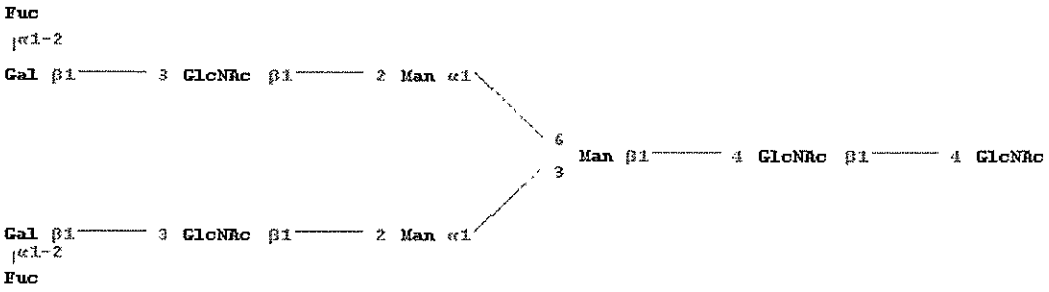
IUPAC symbol code



Key for IUPAC symbols.
Red triangle=Fuc
Yellow circle= Gal
Blue square=GlcNAc
Green circle=Man
Blue circle = Glc

Figure 1A

2D IUPAC text code



Linear IUPAC text code:

Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ

Figure 1B

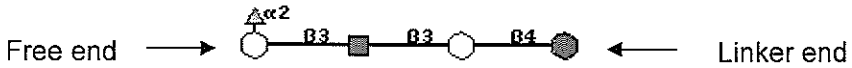


Figure 2A

IUPAC 2D text code



The linear text code for this glycan is Fucα1-2Galβ1-3GlcNAcβ1-3-Galβ1-4-Glcβ.

Figure 2B

Glycan number on array	Glycan Structure	Average	StDEV	SEM	% CV
65	Fucα1-2Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-Sp8	28216	7695	3848	27
458	Neu5Acα2-6Galβ1-4GlcNAcβ1-6(Fucα1-2Galβ1-3GlcNAcβ1-3)Galβ-4Glc-Sp21	27746	1940	970	7
67	Fucα1-2Galβ1-3GlcNAcβ-Sp0	26640	3034	1517	11
66	Fucα1-2Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-Sp10	25696	2256	1128	9
421	Fucα1-2Galβ1-3GlcNAcβ1-3GalNAc-Sp14	25670	2579	1289	10
428	Fucα1-2Galβ1-3GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4Glc-Sp21	24411	1909	954	8
367	Fucα1-2Galβ1-3GlcNAcβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	22081	3784	1892	17
68	Fucα1-2Galβ1-3GlcNAcβ-Sp8	21144	1104	552	5
359	Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	18744	11882	5941	63
25	[3OSO3]Galβ1-4[6OSO3]Glcβ-Sp0	92	37	18	40
341	GlcNAcα1-4Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	44	15	8	34
377	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAcα-Sp14	35	15	7	43
401	Galα1-4Galβ1-3GlcNAcβ1-2Manα1-3(Galα1-4Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	35	22	11	63
353	Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-3(Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	30	19	9	62
364	Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-3(Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	27	13	6	47
425	Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	25	7	4	29
297	Galβ1-3(Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-6)GalNAcα-Sp14	23	20	10	88
336	GlcNAcα1-4Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	21	16	8	76
88	GlcNAcβ1-3Galβ1-3GalNAcα-Sp8	21	4	2	22
370	Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-3(Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	20	8	4	39
190	GlcNAcβ1-6GalNAcα-Sp8	18	11	5	60

Figure 3A

192	GlcNAcβ1-6Galβ1-4GlcNAcβ-Sp8	18	14	7	81
463	Galα1-3(Fucα1-2)Galβ1-3GalNAcb-Sp8	17	17	9	98
427	Galβ1-3GlcNAcβ1-2Manα1-3(Galβ1-3GlcNAcβ1-2(Galβ1-3GlcNAcβ1-6)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	17	16	8	93
460	Galβ1-4GlcNAcβ1-6(Galβ1-4GlcNAcβ1-2)Manα1-6(Galβ1-4GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	17	3	1	16
284	Neu5Gcα2-6Galβ1-4GlcNAcβ-Sp0	17	11	6	68
53	Galβ1-4GlcNAcβ1-2Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	17	17	8	100
417	GalNAcα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAc-Sp14	17	8	4	48
340	GlcNAcα1-4Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	17	8	4	47
57	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp13	16	5	3	32
23	[3OSO3]Galβ1-4(Fucα1-3)[6OSO3]Glc-Sp0	16	13	6	77
424	Galα1-3Galβ1-3GlcNAcβ1-3GalNAc-Sp14	16	22	11	135
50	Manα1-3(Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp13	16	12	6	75
415	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAcα-Sp14	16	6	3	39
255	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp8	16	6	3	36
390	Galβ1-3GlcNAcβ1-3GalNAcα-Sp14	15	7	3	44
405	Galβ1-3GlcNAcα1-6Galβ1-4GlcNAcβ-Sp0	15	5	3	35
454	Neu5Aca2-8Neu5Aca2-3Galb1-3GalNAcb1-4(Neu5Aca2-8Neu5Aca2-3)Galb1-4Glcb-sp0	15	12	6	76
448	Galβ1-4GlcNAcβ1-6GalNAc-Sp14	15	4	2	30
249	Neu5Acα2-3Galβ1-4[6OSO3]GlcNAcβ-Sp8	14	8	4	55
420	GlcNAcβ1-2Manα1-3(GlcNAcβ1-2(GlcNAcβ1-6)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	14	5	3	36
161	Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	14	9	5	68
82	GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ-Sp0	14	16	8	115
274	Neu5Acα2-8Neu5Acα2-3Galβ1-4Glcβ-Sp0	14	12	6	89
73	Fucα1-2Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	14	9	4	63
465	Glcα1-4Glcα1-4Glcα1-4Glcβ-Sp10	14	12	6	86
94	GalNAcβ1-3GalNAcα-Sp8	13	13	7	99

Figure 3A Cont...

426	Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-3(Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	13	4	2	33
168	Galβ1-4GlcNAcβ-Sp8	13	4	2	30
250	Neu5Acα2-3Galβ1-4(Fucα1-3)[6OSO3]GlcNAcβ-Sp8	13	9	5	71
248	Neu5Acα2-3Galβ1-3GlcNAcβ-Sp8	13	6	3	47
349	Galβ1-4GlcNAcβ1-2Manα1-3(Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	13	6	3	48
288	Galβ1-4(Fucα1-3)[6OSO3]GlcNAc-Sp0	13	14	7	112
175	GlcNAcβ1-3(GlcNAcβ1-6)Galβ1-4GlcNAcβ-Sp8	12	7	4	60
2	Glcα-Sp8	12	17	8	134
360	Fucα1-2Galβ1-4GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	12	2	1	16
393	Galα1-3Galβ1-3GlcNAcβ1-2Manα1-3(Galα1-3Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp19	12	3	1	24
295	[6OSO3]Galβ1-4[6OSO3]GlcNAcβ-Sp0	12	3	1	25
185	GlcNAcβ1-4Galβ1-4GlcNAcβ-Sp8	12	9	4	71
445	Fucα1-2Galβ1-4GlcNAcβ1-2(Fucα1-2Galβ1-4GlcNAcβ1-4)Manα1-3(Fucα1-2Galβ1-4 GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	12	6	3	47
409	Neu5Acα2-6Galβ1-3GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4Glc-Sp21	12	8	4	64
344	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	12	4	2	33
83	GalNAcα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	12	5	2	40
20	GlcNAcβ1-3(GlcNAcβ1-4)(GlcNAcβ1-6)GlcNAc-Sp8	12	4	2	34
158	Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	11	4	2	34
77	Fucα1-2Galβ1-4Glcβ-Sp0	11	5	3	46
55	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp8	11	9	4	77
112	Galα1-3GalNAcβ-Sp8	11	5	2	43
444	[6OSO3]Galβ1-3[6OSO3]GlcNAc-Sp0	11	8	4	72
446	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-2(Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-4)Manα1-3(Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	11	11	5	97
69	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	11	7	4	65

Figure 3A Cont...

282	Neu5Gcα2-3Galβ1-4Glcβ-Sp0	11	11	5	100
111	Galα1-3GalNAcα-Sp16	11	5	2	44
49	Manα1-3(Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	11	12	6	114
204	KDNα2-3Galβ1-4GlcNAcβ-Sp0	11	16	8	148
237	Neu5Acα2-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp8	11	5	3	48
303	Galβ1-4GlcNAcβ1-6Galβ1-4GlcNAcβ-Sp0	11	4	2	37
51	GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	11	7	4	68
1	Galα-Sp8	11	9	4	82
378	(GalNAcβ1-4GlcNAcβ1-2Manα1-6)GalNAcβ1-4GlcNAcβ1-2Manα1-3Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	10	6	3	54
40	6-H2PO3Manα-Sp8	10	13	7	129
280	Neu5Gcα2-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	10	6	3	63
388	Fucα1-2Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4Glcβ-Sp0	10	10	5	95
351	Galβ1-4GlcNAcβ1-2Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	10	7	4	74
59	Fucα1-2Galβ1-3GalNAcβ1-3Galα1-4Galβ1-4Glcβ-Sp9	10	11	6	110
231	Neu5Acα2-3(GalNAcβ1-4)Galβ1-4Glcβ-Sp0	10	6	3	60
435	Galβ1-4GlcNAcβ1-4(Galβ1-4GlcNAcβ1-2)Manα1-3(GlcNAcβ1-4)(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	10	9	4	87
407	GlcNAcβ1-6(GlcNAcβ1-3)GalNAcα-Sp14	10	9	5	93
350	GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	10	3	1	30
285	Neu5Gcα-Sp8	10	5	2	51
406	GalNAcβ1-3Galα1-6Galβ1-4Glcβ-Sp8	10	1	1	16
78	Fucα1-2Galβ-Sp8	10	10	5	102
186	GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4β-Sp8	9	3	2	34
306	GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	9	6	3	67
155	Galβ1-4GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	9	7	3	76
376	Neu5Acα2-6Galβ1-4GlcNAcβ1-3GalNAc-Sp14	9	11	5	120
212	Manα1-3(Manα1-2Manα1-2Manα1-6)Manα-Sp9	9	2	1	20

Figure 3A Cont...

252	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	9	6	3	71
321	Neu5Gcβ2-6Galβ1-4GlcNAc-Sp8	9	7	4	83
418	Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	9	5	2	53
361	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAβ-Sp20	9	3	1	28
269	Neu5Acα2-6Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	9	2	1	26
330	Neu5Acα2-6Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	9	4	2	42
348	Galβ1-4GlcNAcβ1-2Manα1-6Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	9	2	1	25
318	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	9	6	3	64
352	Galβ1-3GlcNAcβ1-2Manα1-3(Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	9	14	7	161
307	GlcNAcβ1-3Man-Sp10	9	1	1	17
337	GlcNAcα1-4Galβ1-4GlcNAcβ-Sp0	9	6	3	73
441	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ-Sp8	9	4	2	46
81	Fucβ1-3GlcNAcβ-Sp8	9	15	7	175
392	GalNAcα1-3(Fucα1-2)Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp0	8	6	3	76
179	GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	8	9	5	107
217	[3OSO3]Galβ1-4(Fucα1-3)[6OSO3]GlcNAc-Sp8	8	7	3	79
385	Galβ1-3GlcNAcβ1-3(Galβ1-3GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	8	9	4	102
432	GlcNAcβ1-2Manα1-3(GlcNAcβ1-4)(GlcNAcβ1-6(GlcNAcβ1-2)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	8	10	5	119
58	Fucα1-2Galβ1-3GalNAcβ1-3Galα-Sp9	8	5	3	64
105	Galα1-3(Fucα1-2)Galβ1-4GlcNAc-Sp0	8	3	2	36
195	Glcα1-6Glcα1-6Glcβ-Sp8	8	9	4	102
54	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-N(LT)AVL	8	9	4	105
260	Fucα1-2Galβ1-4[6OSO3]Glc-Sp0	8	7	4	84
224	Neu5Acα2-8Neu5Acα2-8Neu5Acα2-3(GalNAcβ1-4)Galβ1-4Glcβ-Sp0	8	7	3	83
342	GlcNAcα1-4Galβ1-3GalNAc-Sp14	8	2	1	25

Figure 3A Cont...

334	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	8	4	2	54
273	Neu5Acα2-8Neu5Acα-Sp8	8	6	3	80
262	Neu5Acα2-3Galβ1-4Glcβ-Sp8	8	5	3	65
39	[4OSO3]Galβ1-4GlcNAcβ-Sp8	8	3	1	32
384	Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	8	5	3	69
382	Galβ1-3GlcNAcβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	8	5	3	69
19	Galβ1-4GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)GalNAcα-Sp8	8	5	3	70
363	Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	8	4	2	54
3	Manα-Sp8	8	7	4	95
176	GlcNAcβ1-3GalNAcα-Sp8	8	6	3	82
411	Neu5Acα2-3Galβ1-3GalNAcβ1-4(Neu5Acα2-8Neu5Acα2-3)Galβ1-4Glcβ-Sp0	8	5	2	63
261	Neu5Acα2-3Galβ1-4Glcβ-Sp0	8	4	2	50
270	Neu5Acα2-6Galβ1-4Glcβ-Sp0	8	5	2	58
89	GalNAcα1-3(Fucα1-2)Galβ-Sp8	8	6	3	81
371	Galα1-3Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-3(Galα1-3Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	8	4	2	57
10	Neu5Acα-Sp11	8	3	2	45
214	Manα1-6(Manα1-3)Manα1-6(Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	8	15	8	198
263	Neu5Acα2-6GalNAcα-Sp8	8	6	3	85
399	Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAcα-Sp14	8	9	5	123
86	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	8	6	3	79
233	Neu5Acα2-3(Neu5Acα2-6)GalNAcα-Sp8	8	7	4	95
400	GalNAcα1-3GalNAcβ1-3Galα1-4Galβ1-4GlcNAcβ-Sp0	8	10	5	126
419	Fucα1-2Galβ1-4GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	7	7	4	101
92	GalNAcα1-3Galβ-Sp8	7	3	2	44
135	Galβ1-3(Neu5Acβ2-6)GalNAcα-Sp8	7	6	3	84
373	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-3(Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	7	6	3	82

Figure 3A Cont...

166	Galβ1-3(Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	7	4	2	60
134	Galβ1-3(Neu5Acα2-6)GalNAcα-Sp14	7	1	1	20
283	Neu5Gcα2-6GalNAcα-Sp0	7	9	4	118
146	Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-Sp10	7	3	2	45
459	GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-6(GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	7	5	3	75
160	Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	7	2	1	31
298	Galβ1-3Galβ1-4GlcNAcβ-Sp8	7	12	6	169
319	Neu5Acα2-8Neu5Acβ-Sp17	7	12	6	167
423	GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-3GalNAc-Sp14	7	6	3	81
452	Galα1-3Fucα1-2Galβ1-4GlcNAcβ1-3(Galα1-3Fucα1-2Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	7	2	1	26
397	Neu5Acα2-3Galβ1-3GlcNAcβ1-3GalNAcα-Sp14	7	8	4	108
128	Galβ1-3(Fucα1-4)GlcNAcβ-Sp8	7	6	3	83
5	GalNAcα-Sp15	7	12	6	165
129	Galβ1-3(Fucα1-4)GlcNAc-Sp8	7	6	3	91
275	Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	7	6	3	81
326	Neu5Ac(9Ac)a2-3Galβ1-4GlcNAcβ-Sp0	7	8	4	108
338	GlcNAcα1-4Galβ1-3GlcNAcβ-Sp0	7	7	4	108
97	GalNAcβ1-4(Fucα1-3)GlcNAcβ-Sp0	7	1	0	7
254	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ-Sp8	7	1	0	10
110	Galα1-3GalNAcα-Sp8	7	5	3	80
216	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAc-Sp0	7	6	3	86
317	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	7	7	3	100
438	Galα1-3Galβ1-4Glc-Sp10	7	6	3	86
149	Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	7	2	1	34
268	Neu5Acα2-6Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	7	2	1	24
240	Neu5Acα2-3Galβ1-3[6OSO3]GalNAcα-Sp8	7	2	1	30

Figure 3A Cont...

183	GlcNAcβ1-4-MDPLys	7	3	2	48
368	Galβ1-4GlcNAcβ1-2(Galβ1-4GlcNAcβ1-4)Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	7	8	4	122
140	Galβ1-3GalNAcβ-Sp8	7	3	1	43
325	Fucα1-3(Galβ1-4)GlcNAcβ1-2Manα1-3(Fucα1-3(Galβ1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	7	8	4	115
413	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	7	9	5	140
395	Galβ1-4GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	7	7	3	103
173	GlcNAcβ1-2Galβ1-3GalNAcα-Sp8	6	5	2	74
209	Manα1-2Manα1-6(Manα1-3)Manα1-6(Manα1-2Manα1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	6	8	4	122
28	[3OSO3]Galβ1-3GalNAcα-Sp8	6	8	4	125
436	Galβ1-4GlcNAcβ1-2Manα1-3(GlcNAcβ1-4)(Galβ1-4GlcNAcβ1-6(Galβ1-4GlcNAcβ1-2)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	6	3	1	40
333	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	6	3	2	48
450	Galβ1-4GlcNAcβ1-2Manα-Sp0	6	5	2	71
345	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	6	5	3	81
229	Neu5Acα2-3(GalNAcβ1-4)Galβ1-4GlcNAcβ-Sp0	6	2	1	25
244	Neu5Acα2-3Galβ1-3GalNAcβ1-3Galα1-4Galβ1-4Glcβ-Sp0	6	8	4	120
178	GlcNAcβ1-3Galβ-Sp8	6	4	2	64
8	Rhaα-Sp8	6	8	4	130
310	HOOC(CH3)CH-3-O-GlcNAcβ1-4GlcNAcβ-Sp10	6	8	4	127
238	Neu5Acα2-3Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	6	4	2	69
381	Galβ1-3GlcNAcβ1-3(Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ1-6)Galβ1-4Glcβ-Sp0	6	7	4	121
356	KDNα2-6Galβ1-4GlcNAc-Sp0	6	5	2	81
258	Neu5Acα2-3Galβ1-4GlcNAcβ-Sp8	6	4	2	63
109	Galα1-3(Galα1-4)Galβ1-4GlcNAcβ-Sp8	6	8	4	125
207	Manα1-2Manα1-3Manα-Sp9	6	1	1	17
44	[6OSO3]Galβ1-4[6OSO3]Glcβ-Sp8	6	4	2	62

Figure 3A Cont...

301	Galβ1-4GlcNAcβ1-3(GlcNAcβ1-6)Galβ1-4GlcNAc-Sp0	6	4	2	73
151	Galβ1-4(Fucα1-3)GlcNAcβ1-4Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	6	7	4	122
165	Galβ1-3(Galβ1-4GlcNAcβ1-6)GalNAcα-Sp8	6	6	3	93
302	Galβ1-4GlcNAcα1-6Galβ1-4GlcNAcβ-Sp0	6	8	4	125
63	Fucα1-2Galβ1-3GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glcβ-Sp0	6	4	2	61
383	Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4Glc-Sp21	6	8	4	139
102	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ-Sp8	6	8	4	140
143	Galβ1-3GalNAcβ1-4Galβ1-4Glcβ-Sp8	6	4	2	66
27	[3OSO3]Galβ1-3(Fucα1-4)GlcNAcβ-Sp8	6	5	3	91
449	Galβ1-4(Fucα1-3)GlcNAcβ1-6GalNAc-Sp14	6	6	3	101
443	[6OSO3]Galβ1-3GlcNAcβ-Sp0	6	5	3	92
246	Fucα1-2[6OSO3]Galβ1-4Glc-Sp0	6	6	3	104
299	Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	6	5	2	84
391	Neu5Acα2-3(GalNAcβ1-4)Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	6	11	6	196
7	Fucα-Sp9	6	5	3	93
36	[3OSO3]Galβ1-4GlcNAcβ-Sp8	6	7	3	118
322	Galβ1-3GlcNAcβ1-2Manα1-3(Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	6	4	2	65
309	GlcNAcβ1-4GlcNAcβ-Sp12	6	3	2	57
447	Galβ1-4GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	6	2	1	28
85	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp0	6	6	3	107
354	[6OSO3]GlcNAcβ1-3Galβ1-4GlcNAc-β-Sp0	6	6	3	115
202	GlcAβ1-6Galβ-Sp8	6	8	4	140
130	Galβ1-4GlcNAcβ1-6GalNAcα-Sp8	6	9	5	168
32	[3OSO3]Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	6	6	3	107
223	Neu5Acα2-8Neu5Acα2-8Neu5Acα2-8Neu5Acα2-3(GalNAcβ1-4)Galβ1-4Glcβ-Sp0	5	3	1	52
95	GalNAcβ1-3(Fucα1-2)Galβ-Sp8	5	5	3	93
84	[3OSO3]Galβ1-4(Fucα1-3)Glc-Sp0	5	6	3	113

Figure 3A Cont...

362	Galα1-3Galβ1-4GlcNAcβ1-2Manα1-3(Galα1-3Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	5	5	2	91
153	Galβ1-4[6OSO3]Glcβ-Sp0	5	3	2	57
96	GalNAcβ1-3Galα1-4Galβ1-4GlcNAcβ-Sp0	5	2	1	32
335	Neu5Acα2-3-Galβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)GalNAc-Sp14	5	5	3	103
343	Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	5	3	2	67
104	Galα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	5	4	2	79
357	KDNα2-3Galβ1-4Glc-Sp0	5	9	4	167
264	Neu5Acα2-6GalNAcβ1-4GlcNAcβ-Sp0	5	11	5	212
208	Manα1-6(Manα1-2Manα1-3)Manα1-6(Manα1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	5	2	1	30
410	Galβ1-3GalNAcβ1-4(Neu5Acα2-8Neu5Acα2-3)Galβ1-4Glcβ-Sp0	5	3	2	61
107	Galα1-3(Fucα1-2)Galβ-Sp8	5	5	3	106
339	GlcNAcα1-4Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp0	5	5	2	91
259	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	5	12	6	228
251	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	5	7	4	145
194	Glcα1-4Glcα-Sp8	5	6	3	119
293	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	5	5	2	97
93	GalNAcα1-4(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	5	4	2	80
464	Glcα1-6Glcα1-6Glcα1-6Glcβ-Sp10	5	3	2	70
136	Galβ1-3(Neu5Acα2-6)GlcNAcβ1-4Galβ1-4Glcβ-Sp10	5	7	4	144
164	Galβ1-4GlcNAcβ1-6(Galβ1-3)GalNAcα-Sp8	5	3	1	55
396	GlcNAcβ1-2Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	5	7	4	144
453	GalNAcα1-3Fucα1-2Galβ1-4GlcNAcβ1-3(GalNAcα1-3Fucα1-2Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	5	3	2	70
457	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-6(Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	5	6	3	122
289	Galβ1-4(Fucα1-3)[6OSO3]Glc-Sp0	5	3	1	58
152	Galβ1-4(Fucα1-3)GlcNAcβ1-4Galβ1-4(Fucα1-3)GlcNAcβ1-4Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	5	5	3	112
123	Galα1-6Glcβ-Sp8	5	4	2	92

Figure 3A Cont...

386	Galβ1-4GlcNAcβ1-2(Galβ1-4GlcNAcβ1-4)Manα1-3(Galβ1-4GlcNAcβ1-2(Galβ1-4GlcNAcβ1-6)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp21	5	5	3	110
121	Galα1-4Galβ1-4Glcβ-Sp0	5	3	2	70
374	Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	5	3	2	74
56	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	5	4	2	94
290	Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	5	8	4	183
272	Neu5Acα2-6Galβ-Sp8	5	9	5	204
87	GalNAcα1-3(Fucα1-2)Galβ1-4Glcβ-Sp0	5	4	2	83
394	Galα1-3Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-3(Galα1-3Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp19	5	4	2	86
429	Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3GlcNAcβ1-6)Galβ1-4Glc-Sp21	5	7	4	164
456	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-6(GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	5	8	4	167
196	Glcβ1-4Glcβ-Sp8	4	5	3	116
193	Glcα1-4Glcβ-Sp8	4	6	3	127
34	[3OSO3]Galβ1-4[6OSO3]GlcNAcβ-Sp8	4	9	4	199
118	Galα1-4(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	4	4	2	99
369	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-3(GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	4	4	2	98
221	Neu5Acα2-3Galβ1-3GalNAcα-Sp8	4	6	3	141
22	[3OSO3][6OSO3]Galβ1-4GlcNAcβ-Sp0	4	8	4	190
43	[6OSO3]Galβ1-4GlcNAcβ-Sp8	4	6	3	145
215	Manβ1-4GlcNAcβ-Sp0	4	4	2	105
124	Galβ1-2Galβ-Sp8	4	4	2	92
30	[3OSO3]Galβ1-3GlcNAcβ-Sp8	4	5	3	133
294	[3OSO3][4OSO3]Galβ1-4GlcNAcβ-Sp0	4	6	3	137
300	Galβ1-4GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4GlcNAc-Sp0	4	4	2	109
99	GalNAcβ1-4GlcNAcβ-Sp8	4	4	2	109

Figure 3A Cont...

379	Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4Glc-Sp0	4	5	2	122
198	G-ol-Sp8	4	5	3	135
42	[6OSO3]Galβ1-4Glcβ-Sp8	4	4	2	100
328	Neu5Acα2-6Galβ1-4GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	4	2	1	52
218	Fucα1-2[6OSO3]Galβ1-4GlcNAc-Sp0	4	5	2	129
159	Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	4	10	5	281
120	Galα1-4Galβ1-4GlcNAcβ-Sp8	4	5	3	147
239	Neu5Acα2-3Galβ1-3(Neu5Acα2-3Galβ1-4)GlcNAcβ-Sp8	4	4	2	108
402	Galα1-4Galβ1-4GlcNAcβ1-2Manα1-3(Galα1-4Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-LVANKT	4	9	4	247
70	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	4	7	3	182
296	6-H2PO3Glcβ-Sp10	4	3	2	85
80	Fucα1-4GlcNAcβ-Sp8	4	3	2	87
205	Manα1-2Manα1-2Manα1-3Manα-Sp9	3	6	3	176
242	Neu5Acα2-3Galβ1-3(Neu5Acα2-6)GalNAcα-Sp14	3	3	1	79
276	Neu5Acβ2-6GalNAcα-Sp8	3	7	3	197
147	Galβ1-3GlcNAcβ-Sp0	3	3	1	75
219	Fucα1-2Galβ1-4[6OSO3]GlcNAc-Sp8	3	10	5	288
331	Galα1-4Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp0	3	7	3	201
315	Neu5Acα2-3Galβ1-3(Neu5Acα2-3Galβ1-4GlcNAcβ1-6)GalNAcα-Sp14	3	3	1	75
256	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	3	5	3	163
355	KDNα2-3Galβ1-4(Fucα1-3)GlcNAc-Sp0	3	5	2	144
162	Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp0	3	5	2	137
230	Neu5Acα2-3(GalNAcβ1-4)Galβ1-4GlcNAcβ-Sp8	3	7	3	211
243	Neu5Acα2-3Galβ-Sp8	3	6	3	195
101	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ-Sp0	3	6	3	201
177	GlcNAcβ1-3GalNAcα-Sp14	3	2	1	72
98	GalNAcβ1-4GlcNAcβ-Sp0	3	4	2	124

Figure 3A Cont...

433	GlcNAcβ1-4(GlcNAcβ1-2)Manα1-3(GlcNAcβ1-4)(GlcNAcβ1-6(GlcNAcβ1-2)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	3	5	3	176
286	Galβ1-3(Neu5Acα2-3Galβ1-4GlcNAcβ1-6)GalNAcα-Sp14	3	2	1	53
227	Neu5Acα2-8Neu5Acα2-8Neu5Acα-Sp8	3	3	1	85
188	GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ-Sp8	3	7	3	223
372	GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-3(GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	3	8	4	264
327	Neu5Ac(9Ac)a2-3Galβ1-3GlcNAcβ-Sp0	3	6	3	203
79	Fucα1-3GlcNAcβ-Sp8	3	5	2	157
12	Galβ-Sp8	3	5	2	160
13	Glcβ-Sp8	3	4	2	128
181	GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	3	4	2	124
304	GalNAcβ1-3Galβ-Sp8	3	6	3	211
61	Fucα1-2Galβ1-3GalNAcα-Sp8	3	3	1	109
279	Neu5Gcα2-3Galβ1-3GlcNAcβ-Sp0	3	5	3	192
211	Manα1-3(Manα1-6)Manα-Sp9	3	4	2	147
29	[3OSO3]Galβ1-3GlcNAcβ-Sp0	3	6	3	214
15	GalNAcβ-Sp8	3	5	2	185
9	Neu5Acα-Sp8	3	1	1	47
320	Neu5Acα2-8Neu5Acα2-8Neu5Acβ-Sp8	3	3	1	114
133	Galβ1-3(Neu5Acα2-6)GalNAcα-Sp8	3	3	2	123
312	Manα1-6(Manα1-3)Manα1-6(Manα1-3)Manβ-Sp10	3	5	3	212
235	Neu5Acα2-3GalNAcβ1-4GlcNAcβ-Sp0	3	1	1	41
31	[3OSO3]Galβ1-4(Fucα1-3)GlcNAc-Sp0	3	9	5	371
106	Galα1-3(Fucα1-2)Galβ1-4Glcβ-Sp0	3	4	2	171
389	Fucα1-2Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp0	2	5	3	220
346	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	2	3	2	130
347	Galβ1-4GlcNAcβ1-2Manα1-3Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	2	3	2	142

Figure 3A Cont...

187	GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ-Sp8	2	2	1	85
305	GlcAβ1-3GlcNAcβ-Sp8	2	6	3	262
103	Galα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	2	3	2	128
72	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	2	5	3	213
170	Galβ1-4Glcβ-Sp8	2	7	3	277
6	Fucα-Sp8	2	6	3	267
292	Neu5Acα2-3Galβ1-3GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	2	6	3	274
184	GlcNAcβ1-4(GlcNAcβ1-6)GalNAcα-Sp8	2	5	2	209
416	Galα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAc-Sp14	2	3	1	130
257	Neu5Acα2-3Galβ1-4GlcNAcβ-Sp0	2	2	1	107
169	Galβ1-4Glcβ-Sp0	2	4	2	186
245	Neu5Acα2-3Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	2	6	3	285
375	Neu5Acα2-3Galβ1-4GlcNAcβ1-3GalNAc-Sp14	2	4	2	181
52	GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp13	2	11	6	542
316	Neu5Acα2-3Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	2	6	3	304
404	Galβ1-3GlcNAcβ1-6Galβ1-4GlcNAcβ-Sp0	2	7	4	347
210	Manα1-2Manα1-2Manα1-3(Manα1-2Manα1-3(Manα1-2Manα1-6)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	2	5	3	275
100	Galα1-2Galβ-Sp8	2	6	3	298
74	Fucα1-2Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	2	3	1	141
266	Neu5Acα2-6Galβ1-4GlcNAcβ-Sp0	2	1	0	38
236	Neu5Acα2-3Galβ1-3[6OSO3]GlcNAc-Sp8	2	7	4	393
414	GalNAcα1-3GalNAcβ1-3Galα1-4Galβ1-4Glcβ-Sp0	2	5	2	266
430	GlcNAcβ1-2Manα1-3(GlcNAcβ1-4)(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNacβ1-4GlcNAc-Sp21	2	3	1	159
64	Fucα1-2Galβ1-3GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glcβ-Sp9	2	3	2	182
17	GlcNAcβ-Sp8	2	4	2	227
408	Galα1-3(Fucα1-2)Galβ1-4(Fucα1-3)Glcβ-Sp21	2	2	1	112

Figure 3A Cont...

48	[9NAc]Neu5Acα2-6Galβ1-4GlcNAcβ-Sp8	2	8	4	511
189	GlcNAcβ1-6(Galβ1-3)GalNAcα-Sp8	2	4	2	241
144	Galβ1-3Galβ-Sp8	2	7	4	440
225	Neu5Acα2-8Neu5Acα2-8Neu5Acα2-3Galβ1-4Glcβ-Sp0	2	1	1	90
154	Galβ1-4[6OSO3]Glcβ-Sp8	2	2	1	113
126	Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	1	3	2	235
119	Galα1-4Galβ1-4GlcNAcβ-Sp0	1	4	2	315
226	Neu5Acα2-8Neu5Acα2-3(GalNAcβ1-4)Galβ1-4Glcβ-Sp0	1	8	4	545
182	GlcNAcβ1-3Galβ1-4Glcβ-Sp0	1	4	2	259
21	[3OSO3][6OSO3]Galβ1-4[6OSO3]GlcNAcβ-Sp0	1	8	4	557
403	Galα1-3Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	1	1	1	83
437	Galβ1-4GlcNAcβ1-4(Galβ1-4GlcNAcβ1-2)Manα1-3(GlcNAcβ1-4)(Galβ1-4GlcNAcβ1-6(Galβ1-4-GlcNAcβ1-2)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	1	3	2	264
139	Galβ1-3GalNAcα-Sp16	1	2	1	148
329	Neu5Acα2-3Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	1	5	2	394
199	GlcAα-Sp8	1	2	1	126
131	Galβ1-3(GlcNAcβ1-6)GalNAcα-Sp8	1	4	2	309
145	Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	1	1	1	125
142	Galβ1-3GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glcβ-Sp0	1	8	4	693
380	Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAc-Sp0	1	6	3	505
137	Galβ1-3GalNAcα-Sp8	1	9	4	785
422	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-3GalNAc-Sp14	1	3	1	271
41	[6OSO3]Galβ1-4Glcβ-Sp0	1	6	3	534
332	GalNAcβ1-3Galα1-4Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp0	1	3	2	339
365	Neu5Acα2-6GlcNAcβ1-4GlcNAc-Sp21	1	7	4	700
18	GlcN(Gc)β-Sp8	1	8	4	767
461	Galβ1-4GlcNAcβ-(OCH2CH2)6NH2	1	8	4	827
241	Neu5Acα2-3Galβ1-3(Neu5Acα2-6)GalNAcα-Sp8	1	5	3	542

Figure 3A Cont...

172	GlcNAcα1-6Galβ1-4GlcNAcβ-Sp8	1	6	3	632
324	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-3Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	1	3	2	369
277	Neu5Acβ2-6Galβ1-4GlcNAcβ-Sp8	1	2	1	212
60	Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ-Sp8	1	6	3	723
127	Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	1	12	6	1331
220	Fucα1-2[6OSO3]Galβ1-4[6OSO3]Glc-Sp0	1	6	3	693
271	Neu5Acα2-6Galβ1-4Glcβ-Sp8	1	5	2	579
232	Neu5Acα2-3(Neu5Acα2-3Galβ1-3GalNAcβ1-4)Galβ1-4Glcβ-Sp0	1	4	2	461
313	Manα1-2Manα1-2Manα1-3(Manα1-2Manα1-6(Manα1-3)Manα1-6)Manα-Sp9	1	5	3	704
33	[3OSO3]Galβ1-4[6OSO3]GlcNAcβ-Sp0	1	1	0	97
206	Manα1-2Manα1-3(Manα1-2Manα1-6)Manα-Sp9	1	7	3	1001
125	Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	1	7	4	1094
281	Neu5Gcα2-3Galβ1-4GlcNAcβ-Sp0	1	4	2	623
323	Neu5Acα2-3Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-3Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	1	2	1	334
308	GlcNAcβ1-4GlcNAcβ-Sp10	1	6	3	1080
91	GalNAcα1-3GalNAcβ-Sp8	1	8	4	1474
358	KDNα2-3Galβ1-3GalNAcα-Sp14	1	3	2	618
148	Galβ1-3GlcNAcβ-Sp8	1	2	1	349
213	Manα1-6(Manα1-3)Manα1-6(Manα1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	0	5	3	1005
234	Neu5Acα2-3GalNAcα-Sp8	0	4	2	729
434	Galβ1-4GlcNAcβ1-2Manα1-3(GlcNAcβ1-4)(Galβ1-4GlcNAcβ1-2)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	0	4	2	928
451	Fucα1-2Galβ1-4GlcNAcβ1-3(Fucα1-2Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	0	6	3	1455
455	GalNAcβ1-4Galβ1-4Glc-b-sp0	0	5	2	1586
191	GlcNAcβ1-6GalNAcα-Sp14	0	6	3	2681
76	Fucα1-2Galβ1-4GlcNAcβ-Sp8	0	3	2	2272
398	Fucα1-2Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	0	3	2	-16541

Figure 3A Cont...

314	Manα1-2Manα1-2Manα1-3(Manα1-2Manα1-6(Manα1-2Manα1-3)Manα1-6)Manα-Sp9	0	2	1	-1269
117	Galα1-3Galβ-Sp8	0	3	2	-1951
442	GalNAcβ1-6GalNAcβ-Sp8	0	5	2	-2797
278	Neu5Gcα2-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	0	1	1	-736
291	Galβ1-4GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	0	4	2	-1839
16	GlcNAcβ-Sp0	0	2	1	-875
387	GlcNAcβ1-2(GlcNAcβ1-4)Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	0	7	3	-2359
132	Galβ1-3(GlcNAcβ1-6)GalNAc-Sp14	0	4	2	-1221
62	Fucα1-2Galβ1-3GalNAcα-Sp14	0	2	1	-555
38	[4OSO3][6OSO3]Galβ1-4GlcNAcβ-Sp0	0	3	1	-726
37	[3OSO3]Galβ-Sp8	0	4	2	-919
113	Galα1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	0	1	1	-234
108	Galα1-3(Fucα1-2)Galβ-Sp18	-1	3	1	-473
412	Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	-1	5	3	-1008
222	Neu5Acα2-3Galβ1-3GalNAcα-Sp14	-1	4	2	-793
253	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	-1	2	1	-273
228	Neu5Acα2-3(6-O-Su)Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	-1	4	2	-489
200	GlcAβ-Sp8	-1	5	2	-595
247	Neu5Acα2-3Galβ1-3GlcNAcβ-Sp0	-1	4	2	-512
141	Galβ1-3GalNAcβ1-3Galα1-4Galβ1-4Glcβ-Sp0	-1	6	3	-701
439	Galβ1-4Galβ-Sp10	-1	3	1	-282
431	GlcNAcβ1-4(GlcNAcβ1-2)Manα1-3(GlcNAcβ1-4)(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	-1	3	1	-283
163	Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp8	-1	4	2	-353
114	Galα1-3Galβ1-3GlcNAcβ-Sp0	-1	2	1	-149
35	[3OSO3]Galβ1-4GlcNAcβ-Sp0	-1	5	2	-414
265	Neu5Acα2-6Galβ1-4[6OSO3]GlcNAcβ-Sp8	-1	4	2	-298
156	Galβ1-4GalNAcβ1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	-1	3	1	-199

Figure 3A Cont...

167	Galβ1-4GlcNAcβ-Sp0	-1	5	2	-390
138	Galβ1-3GalNAcα-Sp14	-1	4	2	-257
71	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	-1	4	2	-261
75	Fucα1-2Galβ1-4GlcNAcβ-Sp0	-1	2	1	-144
157	Galβ1-4GlcNAcβ1-3GalNAcα-Sp8	-2	4	2	-263
4	GalNAcα-Sp8	-2	6	3	-339
366	Neu5Acα2-6GlcNAcβ1-4GlcNAcβ1-4GlcNAc-Sp21	-2	2	1	-131
116	Galα1-3Galβ1-4Glcβ-Sp0	-2	5	3	-301
174	GlcNAcβ1-3(GlcNAcβ1-6)GalNAcα-Sp8	-2	5	2	-251
26	[3OSO3]Galβ1-4[6OSO3]Glcβ-Sp8	-2	3	2	-173
115	Galα1-3Galβ1-4GlcNAcβ-Sp8	-2	6	3	-268
197	Glcβ1-6Glcβ-Sp8	-2	1	1	-66
180	GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp8	-2	3	1	-119
14	Manβ-Sp8	-2	3	1	-127
24	[3OSO3]Galβ1-4Glcβ-Sp8	-3	2	1	-60
201	GlcAβ1-3Galβ-Sp8	-3	3	1	-110
440	Galβ1-6Galβ-Sp10	-3	3	1	-104
203	KDNα2-3Galβ1-3GlcNAcβ-Sp0	-3	3	1	-98
46	[6OSO3]GlcNAcβ-Sp8	-3	5	3	-170
45	Neu5Acα2-3[6OSO3]Galβ1-4GlcNAcβ-Sp8	-3	4	2	-129
150	Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	-3	7	4	-220
90	GalNAcα1-3(Fucα1-2)Galβ-Sp18	-3	8	4	-253
462	Galα1-3(Fucα1-2)Galβ1-3GalNAcα-Sp8	-4	5	3	-147
122	Galα1-4GlcNAcβ-Sp8	-4	4	2	-113
287	Galβ1-3GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	-4	4	2	-117
311	Manα1-6Manβ-Sp10	-4	5	3	-121
171	GlcNAcα1-3Galβ1-4GlcNAcβ-Sp8	-5	3	1	-55
47	[9NAc]Neu5Acα-Sp8	-5	5	2	-93

Figure 3A Cont...

11	Neu5Acβ-Sp8	-7	6	3	-86
267	Neu5Acα2-6Galβ1-4GlcNAcβ-Sp8	-7	2	1	-24

Figure 3A Cont...

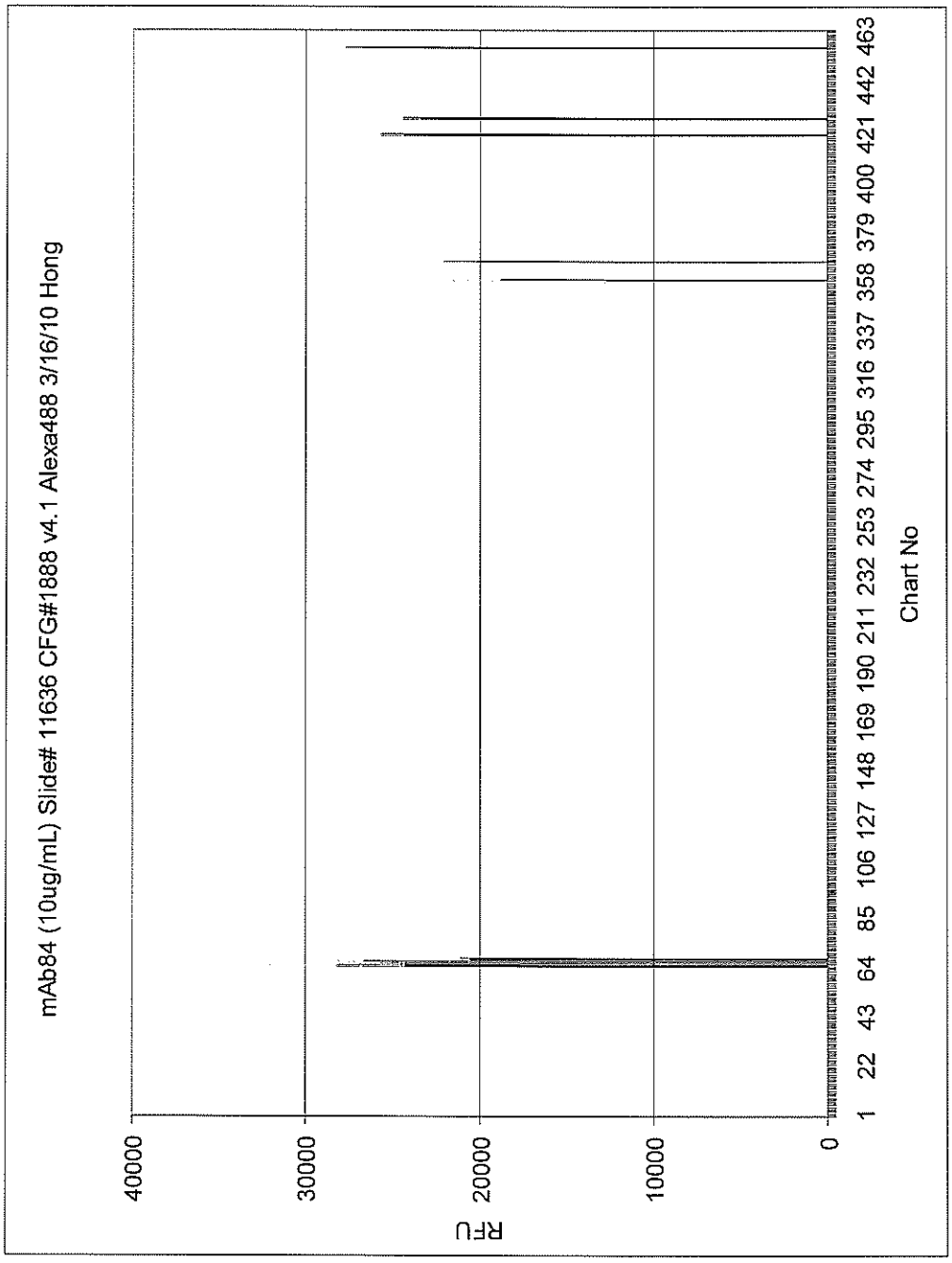

mAb84 (10ug/mL) Slide# 11636 CFG#1888 v4.1 Alexa488 3/16/10 Hong
RFU
40000
30000
20000
10000
0
1 22 43 64 85 106 127 148 169 190 211 232 253 274 295 316 337 358 379 400 421 442 463
Chart No

Figure 3B

Chart Number	Glycan Structure	Average	StDEV	SEM	% CV
66	Fucα1-2Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-Sp10	758	92	46	12
68	Fucα1-2Galβ1-3GlcNAcβ-Sp8	585	221	111	38
67	Fucα1-2Galβ1-3GlcNAcβ-Sp0	482	64	32	13
421	Fucα1-2Galβ1-3GlcNAcβ1-3GalNAc-Sp14	446	49	24	11
65	Fucα1-2Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-Sp8	193	80	40	41
25	[3OSO3]Galβ1-4[6OSO3]Glcβ-Sp0	129	32	16	25
341	GlcNAcα1-4Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	43	27	13	62
353	Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-3(Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	35	10	5	27
415	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAcα-Sp14	29	21	11	72
54	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-N(LT)AVL	21	7	4	33
377	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAcα-Sp14	17	17	9	100
374	Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	16	8	4	48
358	KDNα2-3Galβ1-3GalNAcα-Sp14	16	12	6	72
327	Neu5Ac(9Ac)a2-3Galβ1-3GlcNAcβ-Sp0	15	13	7	86
417	GalNAcα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAc-Sp14	15	4	2	28
449	Galβ1-4(Fucα1-3)GlcNAcβ1-6GalNAc-Sp14	14	12	6	84
139	Galβ1-3GalNAcα-Sp16	14	7	3	49
47	[9NAc]Neu5Acα-Sp8	14	11	5	76
319	Neu5Acα2-8Neu5Acβ-Sp17	13	7	4	58
386	Galβ1-4GlcNAcβ1-2(Galβ1-4GlcNAcβ1-4)Manα1-3(Galβ1-4GlcNAcβ1-2(Galβ1-4GlcNAcβ1-6)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp21	13	11	6	89
297	Galβ1-3(Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-6)GalNAcα-Sp14	13	11	5	84
197	Glcβ1-6Glcβ-Sp8	13	4	2	30
384	Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	12	10	5	81
339	GlcNAcα1-4Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp0	12	9	4	72

Figure 4a

88	GlcNAcβ1-3Galβ1-3GalNAcα-Sp8	12	10	5	84
10	Neu5Acα-Sp11	12	11	6	94
83	GalNAcα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	12	5	2	41
136	Galβ1-3(Neu5Acα2-6)GlcNAcβ1-4Galβ1-4Glcβ-Sp10	12	9	4	76
401	Galα1-4Galβ1-3GlcNAcβ1-2Manα1-3(Galα1-4Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	12	3	2	30
252	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	11	4	2	31
344	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	11	5	2	44
305	GlcAβ1-3GlcNAcβ-Sp8	11	10	5	89
213	Manα1-6(Manα1-3)Manα1-6(Manα1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	11	13	6	117
362	Galα1-3Galβ1-4GlcNAcβ1-2Manα1-3(Galα1-3Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	11	8	4	71
434	Galβ1-4GlcNAcβ1-2Manα1-3(GlcNAcβ1-4)(Galβ1-4GlcNAcβ1-2)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	11	5	3	51
338	GlcNAcα1-4Galβ1-3GlcNAcβ-Sp0	11	5	3	47
289	Galβ1-4(Fucα1-3)[6OSO3]Glc-Sp0	11	3	1	28
336	GlcNAcα1-4Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	11	13	6	119
387	GlcNAcβ1-2(GlcNAcβ1-4)Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	10	4	2	37
286	Galβ1-3(Neu5Acα2-3Galβ1-4GlcNAcβ1-6)GalNAcα-Sp14	10	7	3	65
254	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ-Sp8	10	6	3	59
180	GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp8	10	19	10	189
394	Galα1-3Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-3(Galα1-3Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp19	10	1	1	12
397	Neu5Acα2-3Galβ1-3GlcNAcβ1-3GalNAcα-Sp14	10	6	3	62
84	[3OSO3]Galβ1-4(Fucα1-3)Glc-Sp0	10	8	4	86
335	Neu5Acα2-3-Galβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)GalNAc-Sp14	10	5	3	55
445	Fucα1-2Galβ1-4GlcNAcβ1-2(Fucα1-2Galβ1-4GlcNAcβ1-4)Manα1-3(Fucα1-2Galβ1-4 GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	10	8	4	79
418	Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	9	8	4	91
281	Neu5Gcα2-3Galβ1-4GlcNAcβ-Sp0	9	2	1	17

Figure 4a Cont...

20	GlcNAcβ1-3(GlcNAcβ1-4)(GlcNAcβ1-6)GlcNAc-Sp8	9	5	3	56
371	Galα1-3Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-3(Galα1-3Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	9	2	1	16
334	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	9	5	3	60
234	Neu5Acα2-3GalNAcα-Sp8	9	4	2	46
455	GalNAcβ1-4Galβ1-4Glc-b-sp0	9	7	4	78
64	Fucα1-2Galβ1-3GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glcβ-Sp9	9	7	3	76
55	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp8	9	6	3	63
378	(GalNAcβ1-4GlcNAcβ1-2Manα1-6)GalNAcβ1-4GlcNAcβ1-2Manα1-3Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	9	2	1	21
195	Glcα1-6Glcα1-6Glcβ-Sp8	9	3	2	37
268	Neu5Acα2-6Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	8	7	4	83
51	GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	8	5	3	65
258	Neu5Acα2-3Galβ1-4GlcNAcβ-Sp8	8	8	4	98
422	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-3GalNAc-Sp14	8	4	2	51
201	GlcAβ1-3Galβ-Sp8	8	3	1	34
411	Neu5Acα2-3Galβ1-3GalNAcβ1-4(Neu5Acα2-8Neu5Acα2-3)Galβ1-4Glcβ-Sp0	8	4	2	55
74	Fucα1-2Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	8	10	5	126
255	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp8	8	4	2	55
283	Neu5Gcα2-6GalNAcα-Sp0	8	6	3	80
14	Manβ-Sp8	8	8	4	111
231	Neu5Acα2-3(GalNAcβ1-4)Galβ1-4Glcβ-Sp0	8	8	4	105
381	Galβ1-3GlcNAcβ1-3(Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ1-6)Galβ1-4Glcβ-Sp0	8	4	2	48
379	Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4Glc-Sp0	7	7	4	97
183	GlcNAcβ1-4-MDPLys	7	3	1	35
217	[3OSO3]Galβ1-4(Fucα1-3)[6OSO3]GlcNAc-Sp8	7	5	2	66
238	Neu5Acα2-3Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	7	4	2	51
237	Neu5Acα2-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp8	7	5	3	69

Figure 4a Cont...

357	KDNα2-3Galβ1-4Glc-Sp0	7	5	2	64
409	Neu5Acα2-6Galβ1-3GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4Glc-Sp21	7	2	1	32
222	Neu5Acα2-3Galβ1-3GalNAcα-Sp14	7	4	2	59
348	Galβ1-4GlcNAcβ1-2Manα1-6Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	7	11	5	149
100	Galα1-2Galβ-Sp8	7	5	3	72
437	Galβ1-4GlcNAcβ1-4(Galβ1-4GlcNAcβ1-2)Manα1-3(GlcNAcβ1-4)(Galβ1-4GlcNAcβ1-6(Galβ1-4-GlcNAcβ1-2)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	7	4	2	60
30	[3OSO3]Galβ1-3GlcNAcβ-Sp8	7	5	3	74
423	GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-3GalNAc-Sp14	7	2	1	31
313	Manα1-2Manα1-2Manα1-3(Manα1-2Manα1-6(Manα1-3)Manα1-6)Manα-Sp9	7	7	3	95
369	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-3(GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	7	3	2	48
39	[4OSO3]Galβ1-4GlcNAcβ-Sp8	7	2	1	31
96	GalNAcβ1-3Galα1-4Galβ1-4GlcNAcβ-Sp0	7	9	4	126
367	Fucα1-2Galβ1-3GlcNAcβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	7	6	3	85
444	[6OSO3]Galβ1-3[6OSO3]GlcNAc-Sp0	7	5	2	74
128	Galβ1-3(Fucα1-4)GlcNAcβ-Sp8	7	13	6	191
193	Glcα1-4Glcβ-Sp8	7	13	6	191
314	Manα1-2Manα1-2Manα1-3(Manα1-2Manα1-6(Manα1-2Manα1-3)Manα1-6)Manα-Sp9	7	7	4	107
229	Neu5Acα2-3(GalNAcβ1-4)Galβ1-4GlcNAcβ-Sp0	7	4	2	58
156	Galβ1-4GalNAcβ1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	7	5	3	77
291	Galβ1-4GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	7	3	2	49
86	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	7	1	0	15
158	Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	7	5	2	72
408	Galα1-3(Fucα1-2)Galβ1-4(Fucα1-3)Glcβ-Sp21	7	5	2	70
157	Galβ1-4GlcNAcβ1-3GalNAcα-Sp8	6	7	4	114
453	GalNAcα1-3Fucα1-2Galβ1-4GlcNAcβ1-3(GalNAcα1-3Fucα1-2Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	6	3	1	40
108	Galα1-3(Fucα1-2)Galβ-Sp18	6	6	3	100

Figure 4a Cont...

270	Neu5Acα2-6Galβ1-4Glcβ-Sp0	6	4	2	66
278	Neu5Gcα2-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	6	4	2	65
458	Neu5Acα2-6Galβ1-4GlcNAcβ1-6(Fucα1-2Galβ1-3GlcNAcβ1-3)Galβ-4Glc-Sp21	6	5	2	80
166	Galβ1-3(Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	6	5	3	88
363	Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	6	4	2	61
115	Galα1-3Galβ1-4GlcNAcβ-Sp8	6	6	3	96
245	Neu5Acα2-3Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	6	7	4	121
219	Fucα1-2Galβ1-4[6OSO3]GlcNAc-Sp8	6	15	8	255
112	Galα1-3GalNAcβ-Sp8	6	4	2	59
93	GalNAcα1-4(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	6	2	1	37
429	Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3GlcNAcβ1-6)Galβ1-4Glc-Sp21	6	10	5	165
290	Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	6	2	1	31
134	Galβ1-3(Neu5Acα2-6)GalNAcα-Sp14	6	6	3	101
4	GalNAcα-Sp8	6	4	2	59
226	Neu5Acα2-8Neu5Acα2-3(GalNAcβ1-4)Galβ1-4Glcβ-Sp0	6	8	4	135
146	Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-Sp10	6	2	1	41
91	GalNAcα1-3GalNAcβ-Sp8	6	4	2	68
138	Galβ1-3GalNAcα-Sp14	6	8	4	138
103	Galα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	6	1	1	24
405	Galβ1-3GlcNAcα1-6Galβ1-4GlcNAcβ-Sp0	6	6	3	102
31	[3OSO3]Galβ1-4(Fucα1-3)GlcNAc-Sp0	6	2	1	43
57	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp13	6	5	2	82
174	GlcNAcβ1-3(GlcNAcβ1-6)GalNAcα-Sp8	6	4	2	75
299	Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	6	6	3	112
310	HOOC(CH3)CH-3-O-GlcNAcβ1-4GlcNAcβ-Sp10	6	6	3	99
463	Galα1-3(Fucα1-2)Galβ1-3GalNAcb-Sp8	6	7	4	131

Figure 4a Cont...

241	Neu5Acα2-3Galβ1-3(Neu5Acα2-6)GalNAcα-Sp8	6	5	3	92
82	GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ-Sp0	6	4	2	69
149	Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	6	4	2	68
337	GlcNAcα1-4Galβ1-4GlcNAcβ-Sp0	6	3	2	63
282	Neu5Gcα2-3Galβ1-4Glcβ-Sp0	6	7	3	123
8	Rhaα-Sp8	5	5	2	90
459	GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-6(GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	5	6	3	101
432	GlcNAcβ1-2Manα1-3(GlcNAcβ1-4)(GlcNAcβ1-6(GlcNAcβ1-2)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	5	4	2	68
420	GlcNAcβ1-2Manα1-3(GlcNAcβ1-2(GlcNAcβ1-6)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	5	4	2	64
446	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-2(Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-4)Manα1-3(Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	5	2	1	44
428	Fucα1-2Galβ1-3GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4Glc-Sp21	5	2	1	44
412	Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	5	6	3	116
390	Galβ1-3GlcNAcβ1-3GalNAcα-Sp14	5	4	2	74
406	GalNAcβ1-3Galα1-6Galβ1-4Glcβ-Sp8	5	7	3	129
366	Neu5Acα2-6GlcNAcβ1-4GlcNAcβ1-4GlcNAc-Sp21	5	6	3	113
38	[4OSO3][6OSO3]Galβ1-4GlcNAcβ-Sp0	5	6	3	111
361	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAβ-Sp20	5	5	2	88
132	Galβ1-3(GlcNAcβ1-6)GalNAc-Sp14	5	5	3	104
346	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	5	6	3	110
451	Fucα1-2Galβ1-4GlcNAcβ1-3(Fucα1-2Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	5	5	3	97
16	GlcNAcβ-Sp0	5	5	3	104
165	Galβ1-3(Galβ1-4GlcNAcβ1-6)GalNAcα-Sp8	5	7	4	141
302	Galβ1-4GlcNAcα1-6Galβ1-4GlcNAcβ-Sp0	5	7	3	134
76	Fucα1-2Galβ1-4GlcNAcβ-Sp8	5	13	7	256
456	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-6(GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	5	3	2	67

Figure 4a Cont...

116	Galα1-3Galβ1-4Glcβ-Sp0	5	12	6	239
232	Neu5Acα2-3(Neu5Acα2-3Galβ1-3GalNAcβ1-4)Galβ1-4Glcβ-Sp0	5	3	2	65
121	Galα1-4Galβ1-4Glcβ-Sp0	5	7	3	133
240	Neu5Acα2-3Galβ1-3[6OSO3]GalNAcα-Sp8	5	4	2	83
443	[6OSO3]Galβ1-3GlcNAcβ-Sp0	5	3	1	58
312	Manα1-6(Manα1-3)Manα1-6(Manα1-3)Manβ-Sp10	5	3	1	55
430	GlcNAcβ1-2Manα1-3(GlcNAcβ1-4)(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNacβ1-4GlcNAc-Sp21	5	3	2	61
436	Galβ1-4GlcNAcβ1-2Manα1-3(GlcNAcβ1-4)(Galβ1-4GlcNAcβ1-6(Galβ1-4GlcNAcβ1-2)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	5	6	3	117
191	GlcNAcβ1-6GalNAcα-Sp14	5	6	3	115
389	Fucα1-2Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp0	5	5	2	92
199	GlcAα-Sp8	5	6	3	120
372	GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-3(GalNAcα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	5	5	3	108
242	Neu5Acα2-3Galβ1-3(Neu5Acα2-6)GalNAcα-Sp14	5	9	5	193
21	[3OSO3][6OSO3]Galβ1-4[6OSO3]GlcNAcβ-Sp0	5	7	4	144
419	Fucα1-2Galβ1-4GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	5	4	2	74
388	Fucα1-2Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4Glcβ-Sp0	5	3	2	71
164	Galβ1-4GlcNAcβ1-6(Galβ1-3)GalNAcα-Sp8	5	7	3	146
129	Galβ1-3(Fucα1-4)GlcNAc-Sp8	5	1	1	24
285	Neu5Gcα-Sp8	5	2	1	45
178	GlcNAcβ1-3Galβ-Sp8	5	7	3	143
321	Neu5Gcβ2-6Galβ1-4GlcNAc-Sp8	5	5	2	104
280	Neu5Gcα2-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	5	10	5	213
332	GalNAcβ1-3Galα1-4Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp0	5	7	4	152
404	Galβ1-3GlcNAcβ1-6Galβ1-4GlcNAcβ-Sp0	5	5	2	106
182	GlcNAcβ1-3Galβ1-4Glcβ-Sp0	5	3	1	54
92	GalNAcα1-3Galβ-Sp8	5	10	5	214

Figure 4a Cont...

60	Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ-Sp8	5	4	2	85
27	[3OSO3]Galβ1-3(Fucα1-4)GlcNAcβ-Sp8	5	5	2	108
73	Fucα1-2Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	5	4	2	77
155	Galβ1-4GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	5	3	1	56
160	Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	5	4	2	90
176	GlcNAcβ1-3GalNAcα-Sp8	4	3	2	75
133	Galβ1-3(Neu5Acα2-6)GalNAcα-Sp8	4	4	2	93
107	Galα1-3(Fucα1-2)Galβ-Sp8	4	3	1	59
249	Neu5Acα2-3Galβ1-4[6OSO3]GlcNAcβ-Sp8	4	5	2	111
288	Galβ1-4(Fucα1-3)[6OSO3]GlcNAc-Sp0	4	3	2	76
43	[6OSO3]Galβ1-4GlcNAcβ-Sp8	4	6	3	149
391	Neu5Acα2-3(GalNAcβ1-4)Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	4	11	5	246
207	Manα1-2Manα1-3Manα-Sp9	4	8	4	174
80	Fucα1-4GlcNAcβ-Sp8	4	7	4	172
114	Galα1-3Galβ1-3GlcNAcβ-Sp0	4	4	2	102
26	[3OSO3]Galβ1-4[6OSO3]Glcβ-Sp8	4	1	1	27
130	Galβ1-4GlcNAcβ1-6GalNAcα-Sp8	4	2	1	37
306	GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	4	4	2	99
131	Galβ1-3(GlcNAcβ1-6)GalNAcα-Sp8	4	3	1	71
179	GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	4	4	2	88
63	Fucα1-2Galβ1-3GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glcβ-Sp0	4	3	1	67
97	GalNAcβ1-4(Fucα1-3)GlcNAcβ-Sp0	4	7	4	184
208	Manα1-6(Manα1-2Manα1-3)Manα1-6(Manα1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	4	2	1	49
244	Neu5Acα2-3Galβ1-3GalNAcβ1-3Galα1-4Galβ1-4Glcβ-Sp0	4	4	2	101
151	Galβ1-4(Fucα1-3)GlcNAcβ1-4Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	4	7	4	185
3	Manα-Sp8	4	8	4	201
309	GlcNAcβ1-4GlcNAcβ-Sp12	4	1	0	26
323	Neu5Acα2-3Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-3Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-	4	10	5	274

Figure 4a Cont...

	4GlcNAcβ-Sp12				
425	Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	4	4	2	92
236	Neu5Acα2-3Galβ1-3[6OSO3]GlcNAc-Sp8	4	3	1	67
5	GalNAcα-Sp15	4	5	2	128
393	Galα1-3Galβ1-3GlcNAcβ1-2Manα1-3(Galα1-3Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp19	4	3	1	76
296	6-H2PO3Glcβ-Sp10	4	2	1	52
343	Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	4	4	2	98
403	Galα1-3Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	4	5	3	142
340	GlcNAcα1-4Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	4	3	1	83
205	Manα1-2Manα1-2Manα1-3Manα-Sp9	4	3	1	82
198	G-ol-Sp8	4	5	2	134
53	Galβ1-4GlcNAcβ1-2Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	4	8	4	232
105	Galα1-3(Fucα1-2)Galβ1-4GlcNAc-Sp0	4	3	1	73
235	Neu5Acα2-3GalNAcβ1-4GlcNAcβ-Sp0	3	6	3	182
35	[3OSO3]Galβ1-4GlcNAcβ-Sp0	3	8	4	225
117	Galα1-3Galβ-Sp8	3	6	3	166
37	[3OSO3]Galβ-Sp8	3	6	3	168
40	6-H2PO3Manα-Sp8	3	4	2	125
318	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	3	2	1	72
45	Neu5Acα2-3[6OSO3]Galβ1-4GlcNAcβ-Sp8	3	4	2	109
256	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	3	4	2	120
410	Galβ1-3GalNAcβ1-4(Neu5Acα2-8Neu5Acα2-3)Galβ1-4Glcβ-Sp0	3	4	2	127
77	Fucα1-2Galβ1-4Glcβ-Sp0	3	3	1	84
188	GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ-Sp8	3	10	5	305
230	Neu5Acα2-3(GalNAcβ1-4)Galβ1-4GlcNAcβ-Sp8	3	4	2	118
276	Neu5Acβ2-6GalNAcα-Sp8	3	6	3	181

Figure 4a Cont...

102	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ-Sp8	3	6	3	184
150	Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	3	8	4	255
349	Galβ1-4GlcNAcβ1-2Manα1-3(Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	3	7	3	205
246	Fucα1-2[6OSO3]Galβ1-4Glc-Sp0	3	4	2	132
203	KDNα2-3Galβ1-3GlcNAcβ-Sp0	3	3	1	93
69	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	3	3	1	80
324	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-3Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	3	4	2	136
431	GlcNAcβ1-4(GlcNAcβ1-2)Manα1-3(GlcNAcβ1-4)(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	3	3	1	83
464	Glcα1-6Glcα1-6Glcα1-6Glcβ-Sp10	3	5	2	147
311	Manα1-6Manβ-Sp10	3	10	5	311
7	Fucα-Sp9	3	4	2	114
49	Manα1-3(Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	3	5	2	156
118	Galα1-4(Fucα1-2)Galβ1-4GlcNAcβ-Sp8	3	3	1	91
247	Neu5Acα2-3Galβ1-3GlcNAcβ-Sp0	3	1	1	40
365	Neu5Acα2-6GlcNAcβ1-4GlcNAc-Sp21	3	4	2	135
342	GlcNAcα1-4Galβ1-3GalNAc-Sp14	3	2	1	77
330	Neu5Acα2-6Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	3	6	3	196
56	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	3	5	3	172
359	Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	3	5	2	151
113	Galα1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	3	7	3	221
448	Galβ1-4GlcNAcβ1-6GalNAc-Sp14	3	2	1	65
32	[3OSO3]Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	3	4	2	121
360	Fucα1-2Galβ1-4GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	3	5	2	167
266	Neu5Acα2-6Galβ1-4GlcNAcβ-Sp0	3	1	1	47
239	Neu5Acα2-3Galβ1-3(Neu5Acα2-3Galβ1-4)GlcNAcβ-Sp8	3	4	2	153

Figure 4a Cont...

398	Fucα1-2Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	3	5	2	173
373	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-3(Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	3	8	4	281
48	[9NAc]Neu5Acα2-6Galβ1-4GlcNAcβ-Sp8	3	7	3	239
303	Galβ1-4GlcNAcβ1-6Galβ1-4GlcNAcβ-Sp0	3	6	3	211
72	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	3	6	3	211
454	Neu5Aca2-8Neu5Aca2-3Galb1-3GalNAcb1-4(Neu5Aca2-8Neu5Aca2-3)Galb1-4Glcb-sp0	3	2	1	67
212	Manα1-3(Manα1-2Manα1-2Manα1-6)Manα-Sp9	3	5	2	168
106	Galα1-3(Fucα1-2)Galβ1-4Glcβ-Sp0	3	6	3	225
214	Manα1-6(Manα1-3)Manα1-6(Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	3	4	2	141
204	KDNα2-3Galβ1-4GlcNAcβ-Sp0	3	6	3	223
382	Galβ1-3GlcNAcβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	3	6	3	228
135	Galβ1-3(Neu5Acβ2-6)GalNAcα-Sp8	3	2	1	90
375	Neu5Acα2-3Galβ1-4GlcNAcβ1-3GalNAc-Sp14	3	4	2	173
261	Neu5Acα2-3Galβ1-4Glcβ-Sp0	3	5	3	198
34	[3OSO3]Galβ1-4[6OSO3]GlcNAcβ-Sp8	3	7	3	260
427	Galβ1-3GlcNAcβ1-2Manα1-3(Galβ1-3GlcNAcβ1-2(Galβ1-3GlcNAcβ1-6)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	3	4	2	170
94	GalNAcβ1-3GalNAcα-Sp8	2	7	3	279
23	[3OSO3]Galβ1-4(Fucα1-3)[6OSO3]Glc-Sp0	2	4	2	153
124	Galβ1-2Galβ-Sp8	2	7	3	283
269	Neu5Acα2-6Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	2	4	2	162
175	GlcNAcβ1-3(GlcNAcβ1-6)Galβ1-4GlcNAcβ-Sp8	2	8	4	319
89	GalNAcα1-3(Fucα1-2)Galβ-Sp8	2	4	2	185
413	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-3GalNAcα-Sp14	2	2	1	65
262	Neu5Acα2-3Galβ1-4Glcβ-Sp8	2	5	3	227
400	GalNAcα1-3GalNAcβ1-3Galα1-4Galβ1-4GlcNAcβ-Sp0	2	4	2	152
42	[6OSO3]Galβ1-4Glcβ-Sp8	2	4	2	169

Figure 4a Cont...

228	Neu5Acα2-3(6-O-Su)Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	2	4	2	197
209	Manα1-2Manα1-6(Manα1-3)Manα1-6(Manα1-2Manα1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	2	3	1	132
298	Galβ1-3Galβ1-4GlcNAcβ-Sp8	2	2	1	105
2	Glcα-Sp8	2	2	1	109
168	Galβ1-4GlcNAcβ-Sp8	2	6	3	265
153	Galβ1-4[6OSO3]Glcβ-Sp0	2	1	0	34
154	Galβ1-4[6OSO3]Glcβ-Sp8	2	4	2	198
186	GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4β-Sp8	2	3	1	129
452	Galα1-3Fucα1-2Galβ1-4GlcNAcβ1-3(Galα1-3Fucα1-2Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	2	6	3	296
211	Manα1-3(Manα1-6)Manα-Sp9	2	4	2	190
442	GalNAcβ1-6GalNAcβ-Sp8	2	3	2	157
221	Neu5Acα2-3Galβ1-3GalNAcα-Sp8	2	3	2	160
50	Manα1-3(Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp13	2	3	1	141
402	Galα1-4Galβ1-4GlcNAcβ1-2Manα1-3(Galα1-4Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-LVANKT	2	4	2	202
322	Galβ1-3GlcNAcβ1-2Manα1-3(Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	2	3	2	173
465	Glcα1-4Glcα1-4Glcα1-4Glcβ-Sp10	2	3	1	139
104	Galα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	2	6	3	323
70	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	2	4	2	227
320	Neu5Acα2-8Neu5Acα2-8Neu5Acβ-Sp8	2	4	2	236
46	[6OSO3]GlcNAcβ-Sp8	2	2	1	111
457	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-6(Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	2	2	1	88
127	Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	2	5	3	279
233	Neu5Acα2-3(Neu5Acα2-6)GalNAcα-Sp8	2	1	1	67
161	Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	2	4	2	245
17	GlcNAcβ-Sp8	2	3	1	146
120	Galα1-4Galβ1-4GlcNAcβ-Sp8	2	6	3	311

Figure 4a Cont...

144	Galβ1-3Galβ-Sp8	2	2	1	113
142	Galβ1-3GalNAcβ1-4(Neu5Acα2-3)Galβ1-4Glcβ-Sp0	2	5	3	307
220	Fucα1-2[6OSO3]Galβ1-4[6OSO3]Glc-Sp0	2	2	1	93
62	Fucα1-2Galβ1-3GalNAcα-Sp14	2	3	1	178
440	Galβ1-6Galβ-Sp10	2	2	1	107
78	Fucα1-2Galβ-Sp8	2	3	2	216
460	Galβ1-4GlcNAcβ1-6(Galβ1-4GlcNAcβ1-2)Manα1-6(Galβ1-4GlcNAcβ1-2Manα1-3)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp19	2	4	2	229
145	Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	2	3	2	193
426	Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-3(Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	2	3	2	211
11	Neu5Acβ-Sp8	2	6	3	369
216	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAc-Sp0	2	2	1	159
163	Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp8	1	2	1	141
28	[3OSO3]Galβ1-3GalNAcα-Sp8	1	3	2	236
24	[3OSO3]Galβ1-4Glcβ-Sp8	1	1	1	104
206	Manα1-2Manα1-3(Manα1-2Manα1-6)Manα-Sp9	1	4	2	314
218	Fucα1-2[6OSO3]Galβ1-4GlcNAc-Sp0	1	2	1	128
196	Glcβ1-4Glcβ-Sp8	1	1	0	65
36	[3OSO3]Galβ1-4GlcNAcβ-Sp8	1	2	1	174
110	Galα1-3GalNAcα-Sp8	1	4	2	278
141	Galβ1-3GalNAcβ1-3Galα1-4Galβ1-4Glcβ-Sp0	1	3	1	195
265	Neu5Acα2-6Galβ1-4[6OSO3]GlcNAcβ-Sp8	1	6	3	473
396	GlcNAcβ1-2Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	1	2	1	140
1	Galα-Sp8	1	1	1	86
368	Galβ1-4GlcNAcβ1-2(Galβ1-4GlcNAcβ1-4)Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	1	2	1	185
354	[6OSO3]GlcNAcβ1-3Galβ1-4GlcNAc-β-Sp0	1	2	1	163
162	Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp0	1	2	1	190

Figure 4a Cont...

170	Galβ1-4Glcβ-Sp8	1	3	2	277
52	GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp13	1	6	3	513
223	Neu5Acα2-8Neu5Acα2-8Neu5Acα2-8Neu5Acα2-3(GalNAcβ1-4)Galβ1-4Glcβ-Sp0	1	4	2	325
194	Glcα1-4Glcα-Sp8	1	4	2	385
181	GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	1	4	2	305
438	Galα1-3Galβ1-4Glc-Sp10	1	1	1	121
95	GalNAcβ1-3(Fucα1-2)Galβ-Sp8	1	2	1	185
123	Galα1-6Glcβ-Sp8	1	8	4	711
345	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	1	2	1	230
414	GalNAcα1-3GalNAcβ1-3Galα1-4Galβ1-4Glcβ-Sp0	1	2	1	227
395	Galβ1-4GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	1	6	3	570
58	Fucα1-2Galβ1-3GalNAcβ1-3Galα-Sp9	1	5	2	474
172	GlcNAcα1-6Galβ1-4GlcNAcβ-Sp8	1	1	1	108
416	Galα1-3(Fucα1-2)Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAc-Sp14	1	3	1	280
294	[3OSO3][4OSO3]Galβ1-4GlcNAcβ-Sp0	1	2	1	201
148	Galβ1-3GlcNAcβ-Sp8	1	6	3	645
284	Neu5Gcα2-6Galβ1-4GlcNAcβ-Sp0	1	2	1	185
364	Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-3(Galβ1-3(Fucα1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	1	4	2	395
407	GlcNAcβ1-6(GlcNAcβ1-3)GalNAcα-Sp14	1	7	3	754
267	Neu5Acα2-6Galβ1-4GlcNAcβ-Sp8	1	4	2	453
424	Galα1-3Galβ1-3GlcNAcβ1-3GalNAc-Sp14	1	5	2	583
279	Neu5Gcα2-3Galβ1-3GlcNAcβ-Sp0	1	3	1	344
271	Neu5Acα2-6Galβ1-4Glcβ-Sp8	1	7	3	814
75	Fucα1-2Galβ1-4GlcNAcβ-Sp0	1	3	1	337
333	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	1	3	1	372
292	Neu5Acα2-3Galβ1-3GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	1	1	1	152
326	Neu5Ac(9Ac)a2-3Galβ1-4GlcNAcβ-Sp0	1	4	2	556

Figure 4a Cont...

111	Galα1-3GalNAcα-Sp16	1	10	5	1654
441	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ-Sp8	1	5	2	799
433	GlcNAcβ1-4(GlcNAcβ1-2)Manα1-3(GlcNAcβ1-4)(GlcNAcβ1-6(GlcNAcβ1-2)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	1	2	1	428
71	Fucα1-2Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	1	2	1	370
33	[3OSO3]Galβ1-4[6OSO3]GlcNAcβ-Sp0	1	8	4	1366
79	Fucα1-3GlcNAcβ-Sp8	1	5	2	909
122	Galα1-4GlcNAcβ-Sp8	0	5	3	1065
171	GlcNAcα1-3Galβ1-4GlcNAcβ-Sp8	0	4	2	782
200	GlcAβ-Sp8	0	5	3	1121
461	Galβ1-4GlcNAcβ-(OCH2CH2)6NH2	0	3	1	667
399	Galβ1-4(Fucα1-3)GlcNAcβ1-3GalNAcα-Sp14	0	5	3	1204
202	GlcAβ1-6Galβ-Sp8	0	3	1	744
44	[6OSO3]Galβ1-4[6OSO3]Glcβ-Sp8	0	2	1	480
325	Fucα1-3(Galβ1-4)GlcNAcβ1-2Manα1-3(Fucα1-3(Galβ1-4)GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	0	5	3	1717
243	Neu5Acα2-3Galβ-Sp8	0	2	1	739
295	[6OSO3]Galβ1-4[6OSO3]GlcNAcβ-Sp0	0	4	2	1675
119	Galα1-4Galβ1-4GlcNAcβ-Sp0	0	1	0	399
385	Galβ1-3GlcNAcβ1-3(Galβ1-3GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	0	8	4	3806
12	Galβ-Sp8	0	4	2	1840
225	Neu5Acα2-8Neu5Acα2-8Neu5Acα2-3Galβ1-4Glcβ-Sp0	0	2	1	997
447	Galβ1-4GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)GalNAc-Sp14	0	9	5	4305
351	Galβ1-4GlcNAcβ1-2Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	0	2	1	1164
315	Neu5Acα2-3Galβ1-3(Neu5Acα2-3Galβ1-4GlcNAcβ1-6)GalNAcα-Sp14	0	5	2	2496
81	Fucβ1-3GlcNAcβ-Sp8	0	2	1	2130
192	GlcNAcβ1-6Galβ1-4GlcNAcβ-Sp8	0	1	1	1088
317	Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-3(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	0	3	1	-8349

Figure 4a Cont...

355	KDNα2-3Galβ1-4(Fucα1-3)GlcNAc-Sp0	0	4	2	-10277
376	Neu5Acα2-6Galβ1-4GlcNAcβ1-3GalNAc-Sp14	0	5	2	-8083
300	Galβ1-4GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4GlcNAc-Sp0	0	6	3	-9369
307	GlcNAcβ1-3Man-Sp10	0	1	1	-1653
301	Galβ1-4GlcNAcβ1-3(GlcNAcβ1-6)Galβ1-4GlcNAc-Sp0	0	2	1	-2459
439	Galβ1-4Galβ-Sp10	0	4	2	-2717
316	Neu5Acα2-3Galβ1-4GlcNAcβ1-2Manα1-3(Neu5Acα2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	0	4	2	-3188
126	Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	0	2	1	-1422
159	Galβ1-4GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	0	3	2	-1277
101	Galα1-3(Fucα1-2)Galβ1-3GlcNAcβ-Sp0	0	7	3	-2492
140	Galβ1-3GalNAcβ-Sp8	0	4	2	-1225
462	Galα1-3(Fucα1-2)Galβ1-3GalNAcα-Sp8	0	4	2	-1343
227	Neu5Acα2-8Neu5Acα2-8Neu5Acα-Sp8	0	4	2	-1247
190	GlcNAcβ1-6GalNAcα-Sp8	0	2	1	-594
275	Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	0	2	1	-483
277	Neu5Acβ2-6Galβ1-4GlcNAcβ-Sp8	0	2	1	-430
137	Galβ1-3GalNAcα-Sp8	0	11	5	-2173
331	Galα1-4Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-Sp0	-1	6	3	-1243
380	Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAc-Sp0	-1	1	0	-186
329	Neu5Acα2-3Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-3(Fucα1-4)GlcNAcβ-Sp0	-1	7	3	-1171
143	Galβ1-3GalNAcβ1-4Galβ1-4Glcβ-Sp8	-1	4	2	-626
185	GlcNAcβ1-4Galβ1-4GlcNAcβ-Sp8	-1	2	1	-381
167	Galβ1-4GlcNAcβ-Sp0	-1	3	1	-444
274	Neu5Acα2-8Neu5Acα2-3Galβ1-4Glcβ-Sp0	-1	6	3	-888
251	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	-1	3	1	-326
109	Galα1-3(Galα1-4)Galβ1-4GlcNAcβ-Sp8	-1	6	3	-641
260	Fucα1-2Galβ1-4[6OSO3]Glc-Sp0	-1	1	0	-113

Figure 4a Cont...

173	GlcNAcβ1-2Galβ1-3GalNAcα-Sp8	-1	2	1	-204
6	Fucα-Sp8	-1	6	3	-621
263	Neu5Acα2-6GalNAcα-Sp8	-1	6	3	-620
99	GalNAcβ1-4GlcNAcβ-Sp8	-1	1	1	-115
41	[6OSO3]Galβ1-4Glcβ-Sp0	-1	3	1	-262
370	Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-3(Galα1-3(Fucα1-2)Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	-1	4	2	-345
90	GalNAcα1-3(Fucα1-2)Galβ-Sp18	-1	5	3	-496
264	Neu5Acα2-6GalNAcβ1-4GlcNAcβ-Sp0	-1	4	2	-349
19	Galβ1-4GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)GalNAcα-Sp8	-1	4	2	-356
383	Fucα1-2Galβ1-3(Fucα1-4)GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4Glc-Sp21	-1	5	2	-399
257	Neu5Acα2-3Galβ1-4GlcNAcβ-Sp0	-1	4	2	-328
215	Manβ1-4GlcNAcβ-Sp0	-1	2	1	-147
293	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	-1	3	1	-208
184	GlcNAcβ1-4(GlcNAcβ1-6)GalNAcα-Sp8	-1	1	0	-66
248	Neu5Acα2-3Galβ1-3GlcNAcβ-Sp8	-1	3	2	-212
273	Neu5Acα2-8Neu5Acα-Sp8	-1	3	2	-209
152	Galβ1-4(Fucα1-3)GlcNAcβ1-4Galβ1-4(Fucα1-3)GlcNAcβ1-4Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	-2	4	2	-280
272	Neu5Acα2-6Galβ-Sp8	-2	3	2	-215
328	Neu5Acα2-6Galβ1-4GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	-2	3	1	-168
253	Neu5Acα2-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp8	-2	4	2	-201
210	Manα1-2Manα1-2Manα1-3(Manα1-2Manα1-3(Manα1-2Manα1-6)Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp12	-2	5	2	-263
259	Neu5Acα2-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-Sp0	-2	1	1	-76
15	GalNAcβ-Sp8	-2	6	3	-336
304	GalNAcβ1-3Galβ-Sp8	-2	3	1	-140
169	Galβ1-4Glcβ-Sp0	-2	2	1	-104
87	GalNAcα1-3(Fucα1-2)Galβ1-4Glcβ-Sp0	-2	2	1	-117

Figure 4a Cont...

352	Galβ1-3GlcNAcβ1-2Manα1-3(Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	-2	5	3	-239
350	GlcNAcβ1-2Manα1-3(GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4(Fucα1-6)GlcNAcβ-Sp22	-2	2	1	-96
98	GalNAcβ1-4GlcNAcβ-Sp0	-2	2	1	-91
147	Galβ1-3GlcNAcβ-Sp0	-2	0	0	-21
224	Neu5Acα2-8Neu5Acα2-8Neu5Acα2-3(GalNAcβ1-4)Galβ1-4Glcβ-Sp0	-2	3	1	-115
347	Galβ1-4GlcNAcβ1-2Manα1-3Manβ1-4GlcNAcβ1-4GlcNAc-Sp12	-3	5	3	-198
13	Glcβ-Sp8	-3	3	1	-96
61	Fucα1-2Galβ1-3GalNAcα-Sp8	-3	2	1	-83
187	GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ1-4GlcNAcβ-Sp8	-3	4	2	-128
29	[3OSO3]Galβ1-3GlcNAcβ-Sp0	-3	4	2	-142
189	GlcNAcβ1-6(Galβ1-3)GalNAcα-Sp8	-3	7	4	-221
450	Galβ1-4GlcNAcβ1-2Manα-Sp0	-3	6	3	-169
308	GlcNAcβ1-4GlcNAcβ-Sp10	-3	2	1	-53
177	GlcNAcβ1-3GalNAcα-Sp14	-4	1	0	-14
356	KDNα2-6Galβ1-4GlcNAc-Sp0	-4	4	2	-107
85	GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp0	-4	7	3	-176
392	GalNAcα1-3(Fucα1-2)Galβ1-3GalNAcα1-3(Fucα1-2)Galβ1-4GlcNAcβ-Sp0	-4	0	0	-7
22	[3OSO3][6OSO3]Galβ1-4GlcNAcβ-Sp0	-5	6	3	-135
59	Fucα1-2Galβ1-3GalNAcβ1-3Galα1-4Galβ1-4Glcβ-Sp9	-5	4	2	-81
18	GlcN(Gc)β-Sp8	-5	2	1	-36
435	Galβ1-4GlcNAcβ1-4(Galβ1-4GlcNAcβ1-2)Manα1-3(GlcNAcβ1-4)(Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Sp21	-5	9	4	-175
125	Galβ1-3(Fucα1-4)GlcNAcβ1-3Galβ1-4(Fucα1-3)GlcNAcβ-Sp0	-5	2	1	-37
250	Neu5Acα2-3Galβ1-4(Fucα1-3)[6OSO3]GlcNAcβ-Sp8	-6	2	1	-43
287	Galβ1-3GlcNAcβ1-3Galβ1-3GlcNAcβ-Sp0	-6	4	2	-58
9	Neu5Acα-Sp8	-7	2	1	-32

Figure 4a Cont...

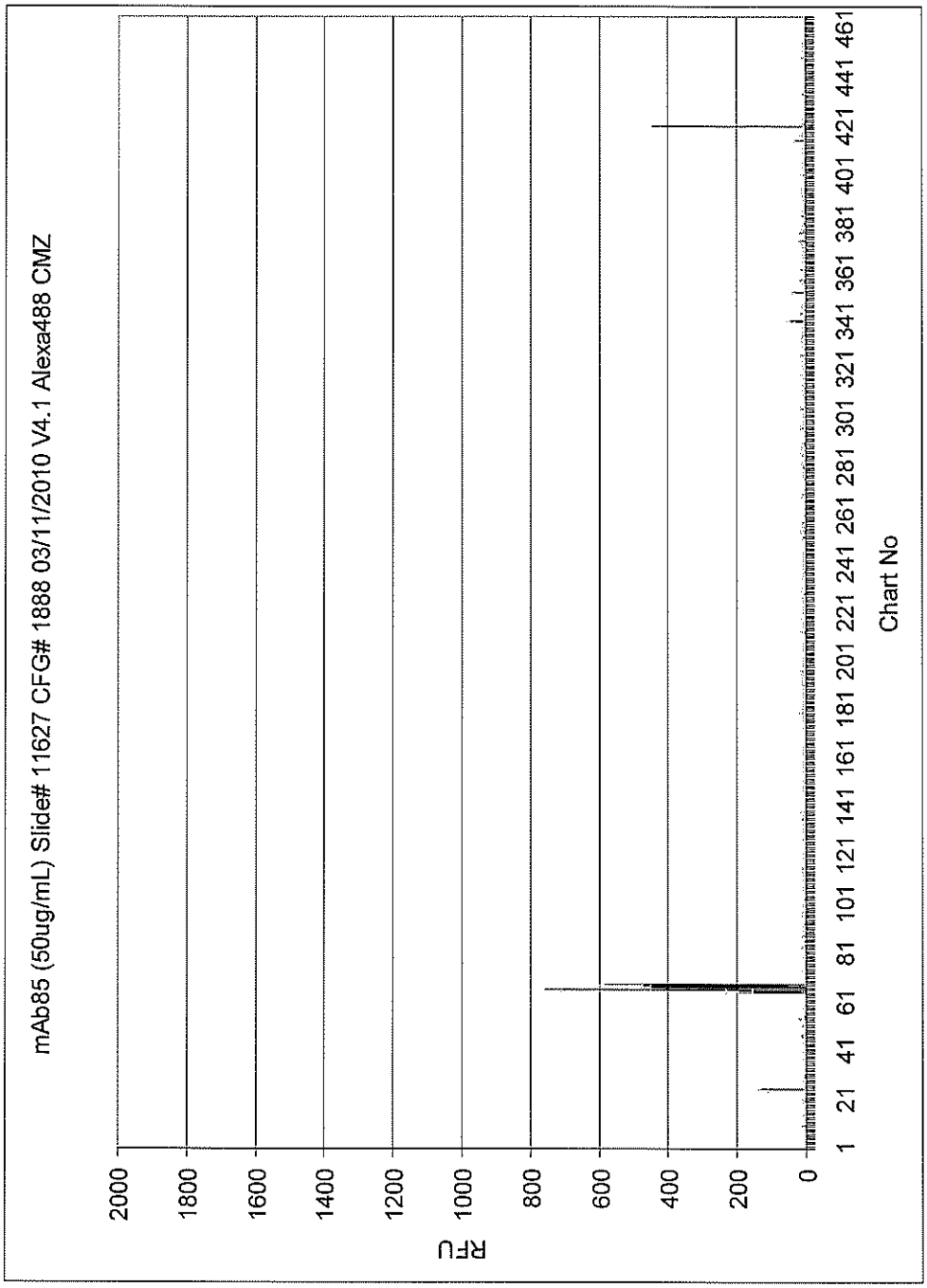

mAb85 (50ug/mL) Slide# 11627 CFG# 1888 03/11/2010 V4.1 Alexa488 CMZ
RFU
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1 21 41 61 81 101 121 141 161 181 201 221 241 261 281 301 321 341 361 381 401 421 441 461
Chart No

Figure 4B

Glycan number on array	Glycan Structure	Average binding mAb84	Average binding mAb85	Relative binding
65	Fucα1-2Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-Sp8	28216	758	37.22
458	Neu5Acα2-6Galβ1-4GlcNAcβ1-6(Fucα1-2Galβ1-3GlcNAcβ1-3)Galβ-4Glc-Sp21	27746	585	47.42
67	Fucα1-2Galβ1-3GlcNAcβ-Sp0	26640	482	55.26
66	Fucα1-2Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-Sp10	25696	446	57.61
421	Fucα1-2Galβ1-3GlcNAcβ1-3GalNAc-Sp14	25670	193	133.00
428	Fucα1-2Galβ1-3GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4Glc-Sp21	24411	129	189.23
367	Fucα1-2Galβ1-3GlcNAcβ1-3(Galβ1-4(Fucα1-3)GlcNAcβ1-6)Galβ1-4Glc-Sp21	22081	43	513.51
68	Fucα1-2Galβ1-3GlcNAcβ-Sp8	21144	35	604.11
359	Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-3(Fucα1-2Galβ1-3GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAcβ-Sp20	18744	29	646.34

Figure 5

```
  1  MRCALALSAL LLLLSTPPLL PSSPSPSPSP SPSQNATQTT TDSSNKTAPT
 51  PASSVTIMAT DTAQQSTVPT SKANEILASV KATTLGVSSD SPGTTTLAQQ
101  VSGPVNTTVA RGGGSGNPTT TIESPKSTKS ADTTTVATST ATAKPNTTSS
151  QNGAEDTTNS GGKSSHSVTT DLTSTKAEHL TTPHPTSPLS PRQPTLTHPV
201  ATPTSSGHDH LMKISSSSST VAIPGYTFTS PGMTTTLPSS VISQRTQQTS
251  SQMPASSTAP SSQETVQPTS PATALRTPTL PETMSSSPTA ASTTHRYPKT
301  PSPTVAHESN WAKCEDLETQ TQSEKQLVLN LTGNTLCAGG ASDEKLISLI
351  CRAVKATFNP AQDKCGIRLA SVPGSQTVVV KEITIHTKLP AKDVYERLKD
401  KWDELKEAGV SDMKLGDQGP PEEAEDRFSM PLITTIVCMA SFLLLVAALY
451  GCCHQRLSQR KDQQRLTEEL QTVENGYHDN PTLEVMETSS EMQEKKVVSL
501  NGELGDSWIV PLDNLTKDDL DEEEDTHL
```

SEQ ID NO: 1

Figure 6

```
      1  MRCALALSAL LLLLSTPPLL PSSPSPSPSP SQNATQTTTD SSNKTAPTPA SSVTIMATDT
61    AQQSTVPTSK ANEILASVKA TTLGVSSDSP GTTTLAQQVS GPVNTTVARG GGSGNPTTTI
121   ESPKSTKSAD TTTVATSTAT AKPNTTSSQN GAEDTTNSGG KSSHSVTTDL TSTKAEHLTT
181   PHPTSPLSPR QPTSTHPVAT PTSSGHDHLM KISSSSSTVA IPGYTFTSPG MTTTLLETVF
241   HHVSQAGLEL LTSGDLPTLA SQSAGITASS VISQRTQQTS SQMPASSTAP SSQETVQPTS
301   PATALRTPTL PETMSSSPTA ASTTHRYPKT PSPTVAHESN WAKCEDLETQ TQSEKQLVLN
361   LTGNTLCAGG ASDEKLISLI CRAVKATFNP AQDKCGIRLA SVPGSQTVVV KEITIHTKLP
421   AKDVYERLKD KWDELKEAGV SDMKLGDQGP PEEAEDRFSM PLIITIVCMA SFLLLVAALY
481   GCCHQRLSQR KDQQRLTEEL QTVENGYHDN PTLEVMETSS EMQEKKVVSL NGELGDSWIV
541   PLDNLTKDDL DEEEDTHL
      [O00592.2  GI:229462740; SEQ ID NO:2]
```

Figure 7


```
1     MRCALALSAL LLLLSTPPLL PSSPSPSPSP SPSQNATQTT TDSSNKTAPT PASSVTIMAT
61    DTAQQSTVPT SKANEILASV KATTLGVSSD SPGTTTLAQQ VSGPVNTTVA RGGSSGNPTT
121   TIESPKSTKS ADTTTVATST ATAKPNTTSS QNGAEDTTNS GGKSSHSVTT DLTSTKAEHL
181   TTPHPTSPLS PRQPTLTHPV ATPTSSGHDH LMKISSSSST VAIPGYTFTS PGMTTTLLET
241   VFHHVSQAGL ELLTSGDLPT LASQSAGITA SSVISQRTQQ TSSQMPASST APSSQETVQP
301   TSPATALRTP TLPETMSSSP TAASTTHRYP KTPSPTVAHE SNWAKCEDLE TQTQSEKQLV
361   LNLTGNTLCA GGASDEKLIS LICRAVKATF NPAQDKCGIR LASVPGSQTV VVKEITIHTK
421   LPAKDVYERL KDKWDELKEA GVSDMKLGDQ GPPEEAEDRF SMPLIITIVC MASFLLLVAA
481   LYGCCHQRLS QRKDQQRLTE ELQTVENGYH DNPTLEVMET SSEMQEKKVV SLNGELGDSW
541   IVPLDNLTKD DLDEEEDTHL
      [AAI43319.1  GI:219520307; SEQ ID NO: 3]
```

Figure 8

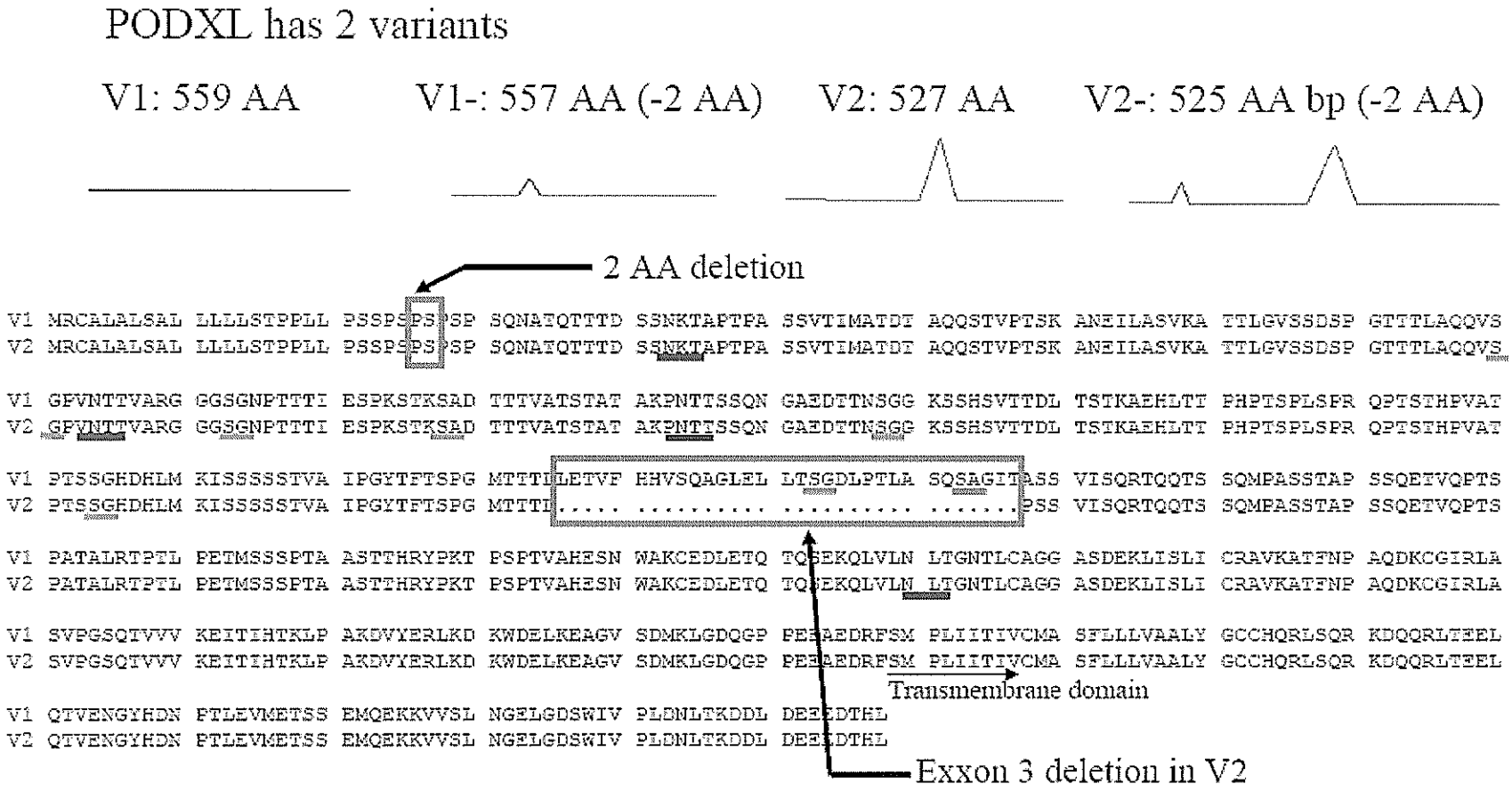

PODXL has 2 variants
V1: 559 AA
V1-: 557 AA (-2 AA)
V2: 527 AA
V2-: 525 AA bp (-2 AA)
2 AA deletion
V1 MRCALALSAL LLLLSTPPLL PSSPSPSPSP SQNATQTTTD SSNKTAPTPA SSVTIMATDI AQQSTVPTSK ANEILASVKA TTLGVSSDSP GTTTLAQQVS
V2 MRCALALSAL LLLLSTPPLL PSSPSPSPSP SQNATQTTTD SSNKTAPTPA SSVTIMATDI AQQSTVPTSK ANEILASVKA TTLGVSSDSP GTTTLAQQVS
V1 GPVNTTVARG GGSGNPTTTI ESPKSTKSAD TTTVATSTAT AKPNTTSSQN GAEDTTNSGG KSSHSVTTDL TSTKAEHLTT PHPTSPLSPR QPTSTHPVAT
V2 GPVNTTVARG GGSGNPTTTI ESPKSTKSAD TTTVATSTAT AKPNTTSSQN GAEDTTNSGG KSSHSVTTDL TSTKAEHLTT PHPTSPLSPR QPTSTHPVAT
V1 PTSSGHDHLM KISSSSSTVA IPGYTFTSPG MTTTLETVF HHVSQAGLEL LTSGDLPTLA SQSAGITGSS VISQRTQQTS SQMPASSTAP SSQETVQPTS
V2 PTSSGHDHLM KISSSSSTVA IPGYTFTSPG MTTTL..... ....PSS VISQRTQQTS SQMPASSTAP SSQETVQPTS
V1 PATALRTPIL PETMSSSPTA ASTTHRYPKT PSPTVAHESN WAKCEDLETQ TQSEKQLVLN LTGNTLCAGG ASDEKLISLI CRAVKATFNP AQDKCGIRLA
V2 PATALRTPIL PETMSSSPTA ASTTHRYPKT PSPTVAHESN WAKCEDLETQ TQSEKQLVLN LTGNTLCAGG ASDEKLISLI CRAVKATFNP AQDKCGIRLA
V1 SVPGSQTVVV KEITIHTKLP AKDVYERLKD KWDELKEAGV SDMKLGDQGP PEEAEDRFSM PLIITIVCMA SFLLLVAALY GCCHQRLSQR KDQQRLTEEL
V2 SVPGSQTVVV KEITIHTKLP AKDVYERLKD KWDELKEAGV SDMKLGDQGP PEEAEDRFSM PLIITIVCMA SFLLLVAALY GCCHQRLSQR KDQQRLTEEL
Transmembrane domain
V1 QTVENGYHDN PTLEVMETSS EMQEKKVVSL NGELGDSWIV PLDNLTKDDL DEEEDTHL
V2 QTVENGYHDN PTLEVMETSS EMQEKKVVSL NGELGDSWIV PLDNLTKDDL DEEEDTHL
Exxon 3 deletion in V2
4 N-linked glycosylation site
7 O-linked glycosylation site

Figure 9

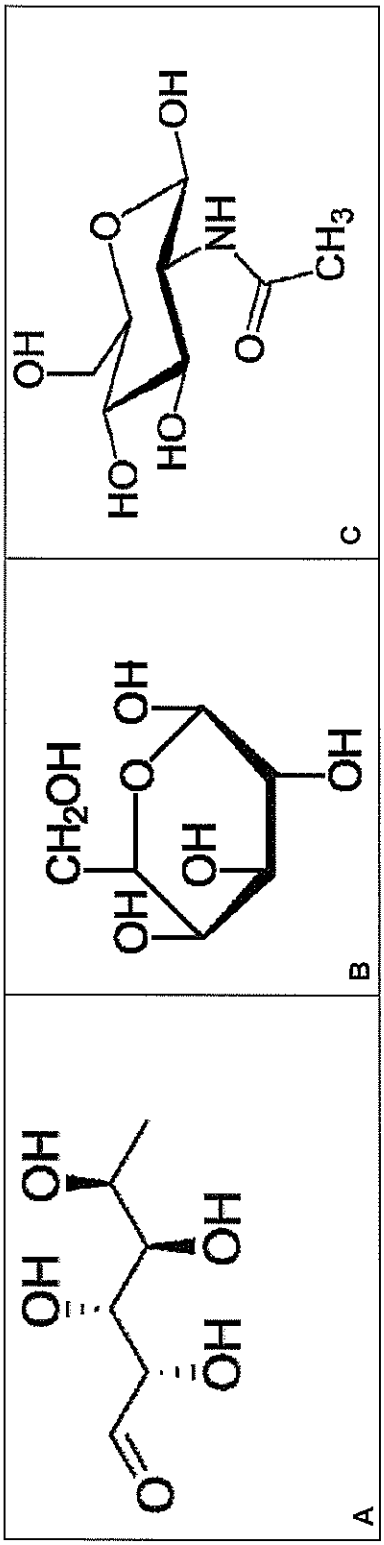


Figure 10

mAb 84 VL

The amino acids not underlined correspond to framework regions and underlined corresponds to CDRs.

```
1          ACGCCAGCTATTTAGGTGACACTATAGAATACTCAAGCTATGCATCCAACGCGTTGGGAG

61         CTCTCCCATATGGTCGACCTGCAGGCGGCCGCACTAGTGATTGACATTGAGCTCACCCAG
1                                                    D  I  E  L  T  Q

121        TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGC
7           S  P  A  I  M  S  A  S  P  G  E  K  V  T  M  T  C  S  A  S

181        TCAAGTGTAAATTACATGTACTGGTACCAGCAGAAGCCAGGATCCTCCCCCAGACTCCTG
27          S  S  V  N  Y  M  Y  W  Y  Q  Q  K  P  G  S  S  P  R  L  L

241        ATTTATGACACATCCAACCTGGCTTCTGGAGTCCCTGTTCGCTTCAGTGGCAGTGGGTCT
47          I  Y  D  T  S  N  L  A  S  G  V  P  V  R  F  S  G  S  G  S

301        GGGACCTCTTACTCTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCCACTTATTAC
67          G  T  S  Y  S  L  T  I  S  R  M  E  A  E  D  A  A  T  Y  Y

361        TGCCAGCAGTGGAGTAGTTACCCGTACACGTTCGGAGGGGGGACCAAGCTGGAAATAAAA
87          C  Q  Q  W  S  S  Y  P  Y  T  F  G  G  G  T  K  L  E  I  K

421        CGGAATCCCGCGGCCATGGCGGCCGGGAGCATGCGACGTCGGGCCCAATTCGCCCTATAG
107         R

481        TGAGTCGTATTACAATTCACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGG
541        CGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGA
601        AGAGGCGCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATAGCGAATAGACGCG
661        CCCTGTAGCGGCGCATTATGCGCGGCCGGGGTGTGGTGGTTACGCGCAGCGTGACCGCTAC
721        ACTTGTCAGCGCCCTAGCGCCGCTCCTTTCGCTTTCTTCCCTTCCTTTCTCGCCACGTTC
781        GCCGGCTTGCTCGTCAGG
```

Based on V Base and Kabat Numbering
NOT UNDERLINED: Framework
underlined: CDR

Figure 11

mAb 84 VH

The amino acids not underlined correspond to framework regions and underlined corresponds to CDRs.

```
1        AGACGGCCAGTGATTGTATACGACTCACTATAGGGCGAATTGGGCCCGACGTCGCATGCT

61       CCCGGCCGCCATGGCCGCGGGATTCAGGTGCAGCTGCAGCAGTCAGGAGGAGGCTTGGTG
1                                 Q  V  Q  L  Q  Q  S  G  G  G  L  V

121      CAACCTGGAGGATCCATGAAACTCTCCTGTGTTGCCTCTGGATTCACTTTCAGTAACTAC
13        Q  P  G  G  S  M  K  L  S  C  V  A  S  G  F  T  F  S  N  Y

181      TGGATGAACTGGGTCCGCCAGTCTCCAGAGAAGGGGCTTGAGTGGGTTGCTGAAATTAGA
33        W  M  N  W  V  R  Q  S  P  E  K  G  L  E  W  V  A  E  I  R

241      TTGAAATCTAATAATTATGCAACACATTATGCGGAGTCTGTGAAAGGGAGGTTCACCATC
53        L  K  S  N  N  Y  A  T  H  Y  A  E  S  V  K  G  R  F  T  I

301      TCAAGAGATGATTCCAAAAGTAGTGTCTACCTGCAAATGAACAACTTAAGAGCTGAAGAC
73        S  R  D  D  S  K  S  S  V  Y  L  Q  M  N  N  L  R  A  E  D

361      ACTGGCATTTATTACTGTACGGGGGAGAGGGCCTGGGGCCAAGGGACCACGGTCACCGTC
93        T  G  I  Y  Y  C  T  G  E  R  A  W  G  Q  G  T  T  V  T  V

421      TCCTCAAATCACTAGTGCGGCCGCCTGCAGGTCGACCATATGGGAGAGCTCCCAACGCGT
113       S  S

481      TGGATGCATAGCTTGAGTATTCTATAGTGTCACCTAAATAGCTTGGCGTAATCATGGTCA
541      TAGCTGTTTCCTGTGTGAAATTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGA
601      AGCATAAAGTGTAAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTG
661      CGCTCACTGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGC
721      CAACGCGCGGGGAGAGGCGGTTTGCGTATTGGGCGCTCTTCGCTTCT
```

Based on V Base and Kabat Numbering
Not Underlined: Framework
Underlined: CDR

Figure 12

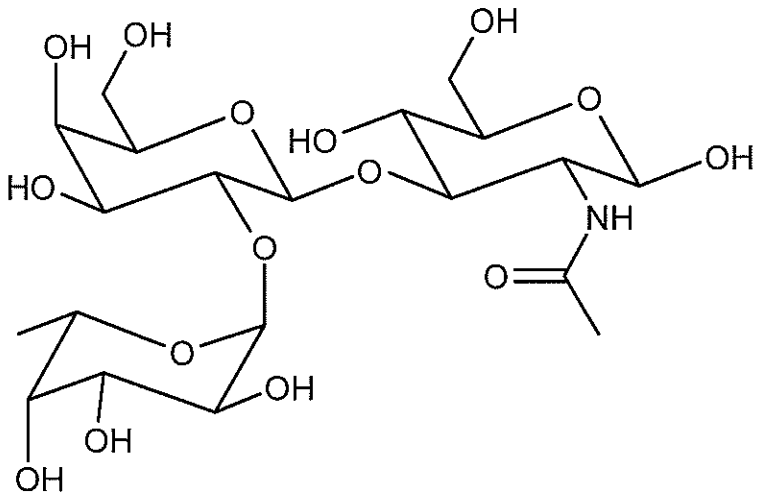


Figure 13

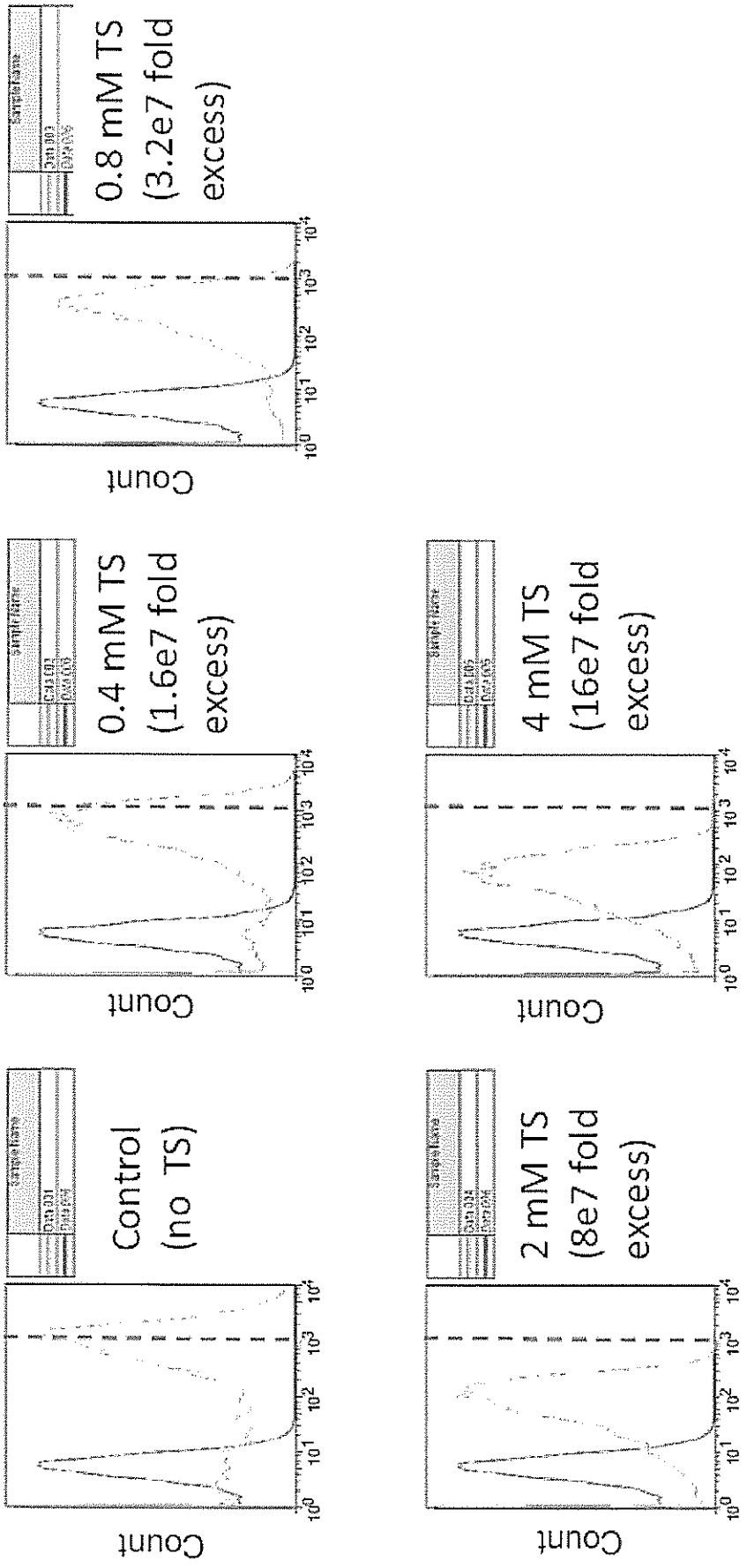

Control
(no TS)
0.4 mM TS
(1.6e7 fold
excess)
0.8 mM TS
(3.2e7 fold
excess)
2 mM TS
(8e7 fold
excess)
4 mM TS
(16e7 fold
excess)
Count

Figure 14

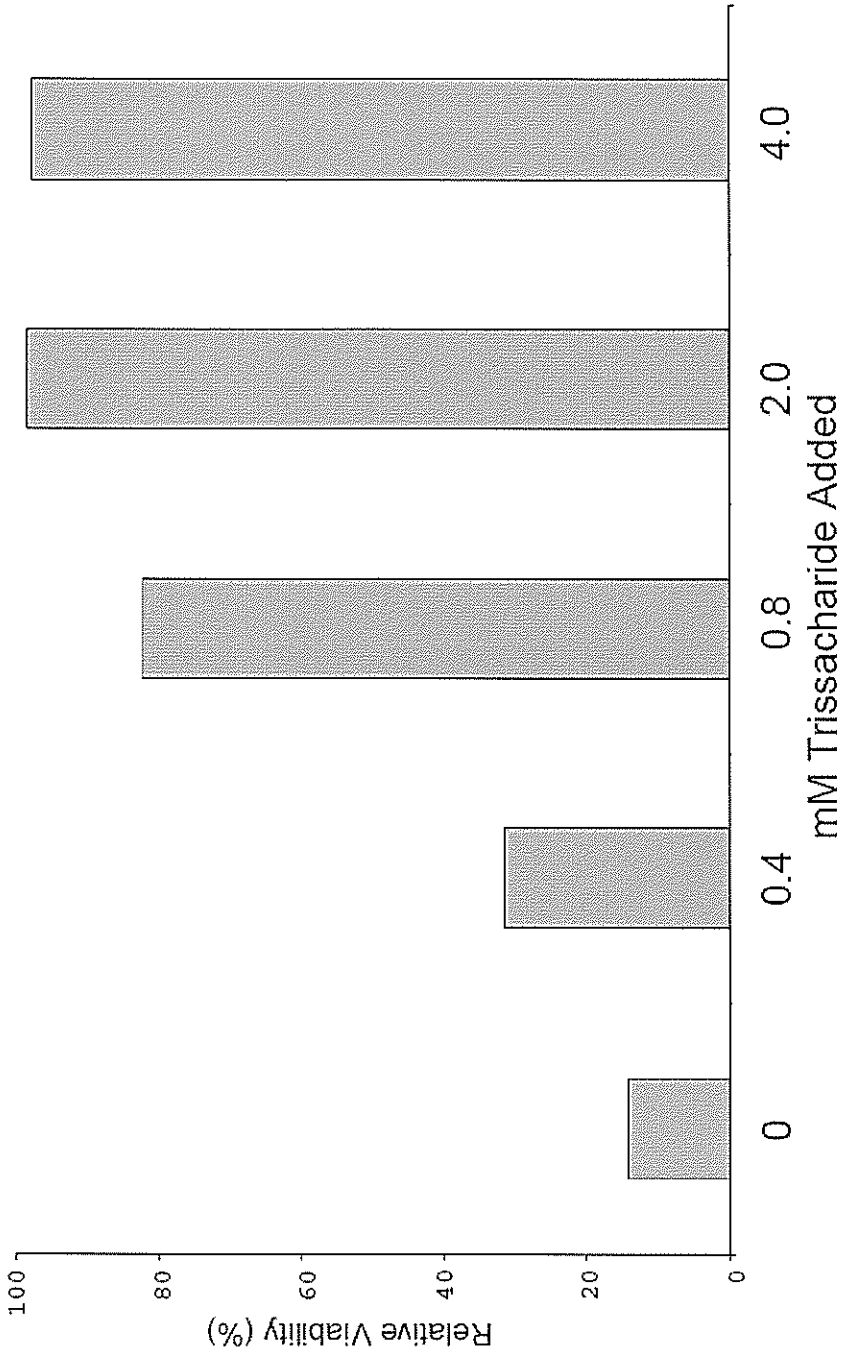

Relative Viability (%)
100
80
60
40
20
0
0
0.4
0.8
2.0
4.0
mM Trissachariide Added

Figure 15