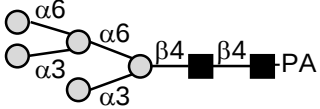
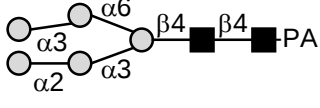
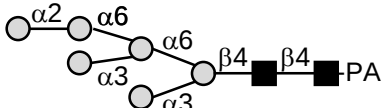
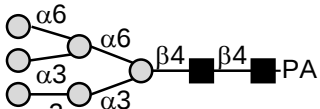
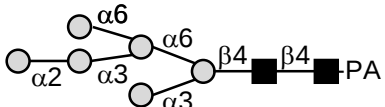
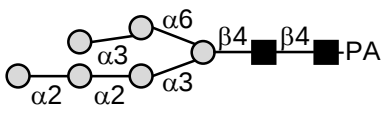
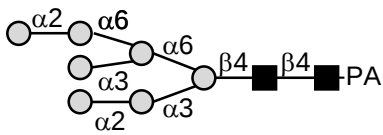
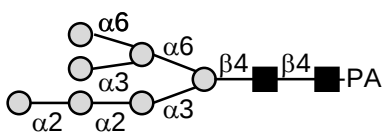
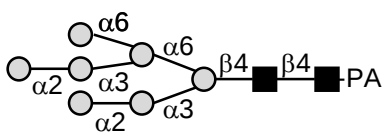
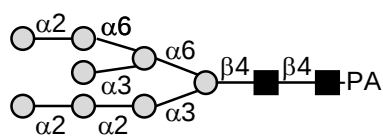
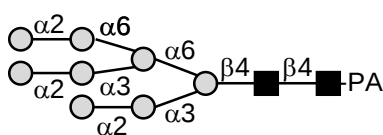
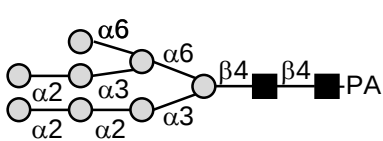
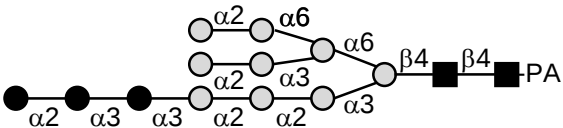
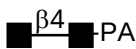
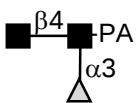
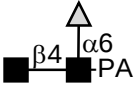
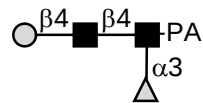
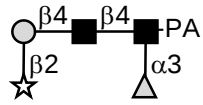


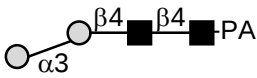
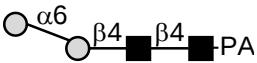
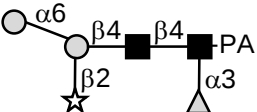
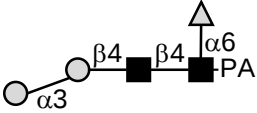
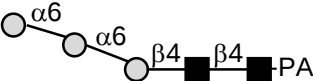
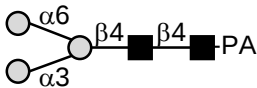
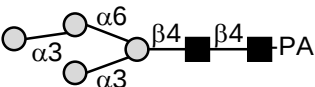
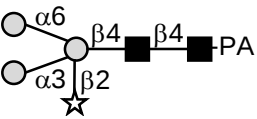
Table S1. Glycan structures and their mapping data.

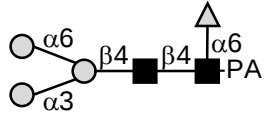
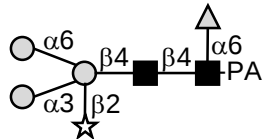
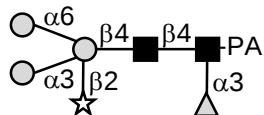
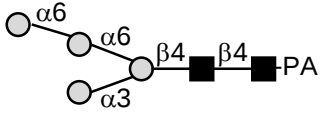
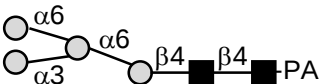
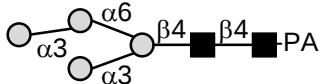
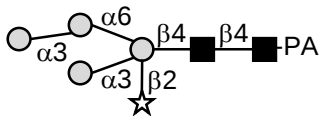
No.	Structure ¹	Abbreviation	S value measured ²	R value measured ²	S value calculated ³	R value calculated ³
1		M5A	5.8	46.2	5.8	44.9
2		M5C	5.7	40.4	5.6	40.9
3		M6A	6.7	38.8	6.7	37.5
4		M6B	6.6	41.2	6.6	40.4
5		M6C	6.5	51.0	6.5	49.6

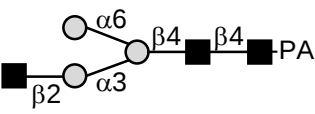
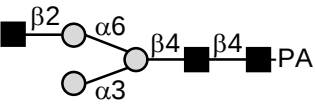
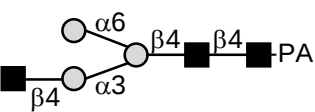
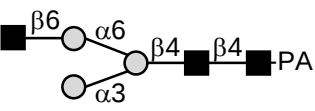
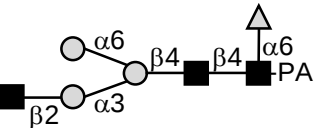
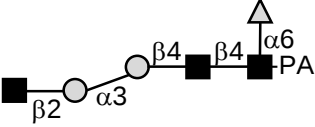
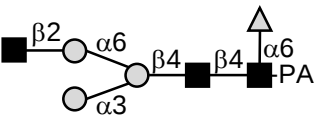
6		M6E	6.5	38.6	6.5	38.9
7		M7A	7.5	34.4	7.5	33.0
8		M7B	7.5	39.4	7.5	38.4
9		M7D	7.3	47.0	7.3	45.1
10		M8A	8.4	32.7	8.4	31.0
11		M8B	8.2	38.7	8.2	37.7
12		M8C	8.2	44.9	8.2	43.1

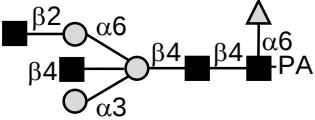
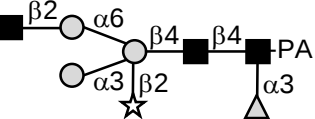
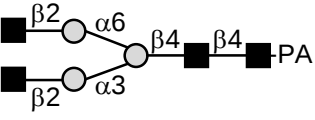
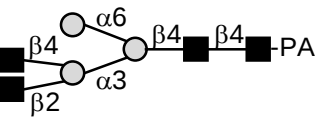
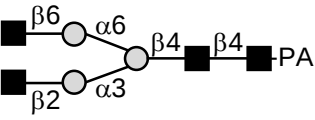
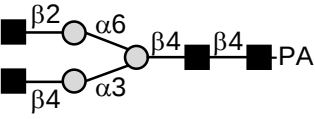
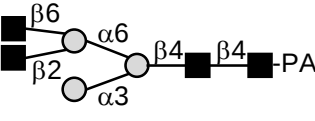
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14		G1M4E	5.5	39.6	5.6	39.0
15		G1M5B	6.4	47.2	6.5	47.2
16		G1M7B	8.2	49.4	8.2	48.1
17		G1M8C	8.8	53.5	8.9	52.8
18		G1M9A	9.8	47.0	9.8	45.4
19		G2M9A	10.3	51.7	10.4	50.1

20		G3M9A	11.3	48.8	11.4	47.2
21		GN	0.9	16.4	0.9	16.4
22		GNF6	1.6	25.9	1.1	24.7
23		GN2	1.8	28.3	1.6	28.3
24		GN2F3	2.3	19.3	2.2	20.0
25		GN2F6	2.1	37.7	1.8	36.6
26		M1A	2.4	35.0	2.3	35.0
27		M1AF3	3.1	27.3	2.9	26.7
28		M1AF3X	3.4	32.0	3.2	31.4

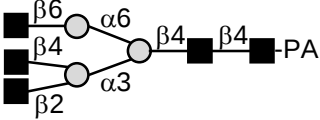
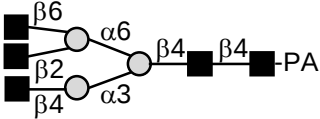
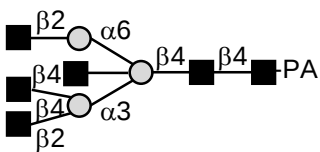
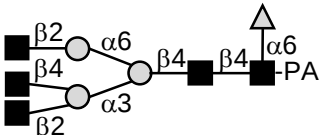
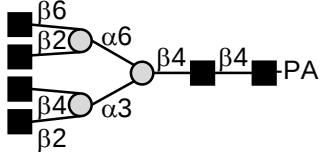
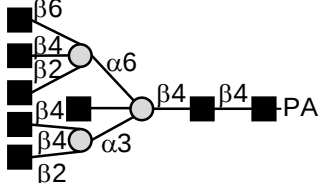
29		M2A	3.2	34.8	3.2	35.8
30		M2B	3.2	43.1	3.2	43.2
31		M2BF3X	4.2	37.2	4.1	39.6
32		M2AF6	3.6	43.8	3.4	44.1
33		M3A	4.2	43.0	4.2	42.7
34		M3B	4.1	44.5	4.1	44.0
35		M3C	4.1	43.1	3.9	44.6
36		M3BX	4.6	43.7	4.4	43.5

37		M3BF6	4.4	54.0	4.3	52.3
38		M3BF6X	4.8	53.3	4.7	51.8
39		M3BF3X	5.4	32.0	5.2	31.8
40		M4A	5.0	43.7	5.1	43.5
41		M4B	5.0	45.0	4.9	44.1
42		M4C	4.8	45.5	4.8	45.4
43		M4CX	5.3	45.4	5.2	44.9

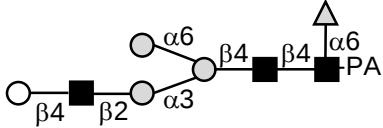
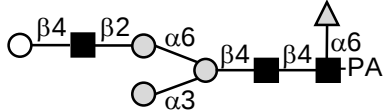
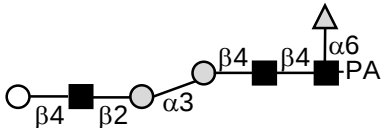
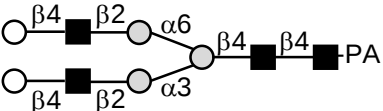
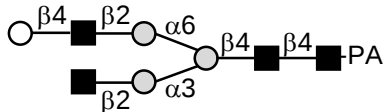
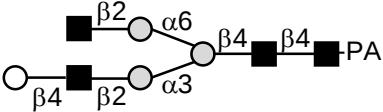
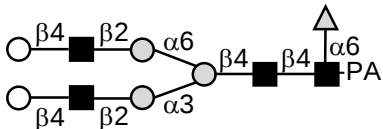
44		AG1	4.5	42.4	4.4	41.4
45		AG2	4.5	55.2	4.4	52.6
46		AG3	4.5	50.2	4.4	49.5
47		AG4	4.7	47.4	4.7	46.4
48		AG1F6	4.8	52.3	4.6	49.7
49		AG1F6-M3	4.1	48.7	4.2	41.5
50		AG2F6	4.8	63.4	4.9	60.9

51		AG2BSF6	5.2	64.7	5.3	62.3
52		AG2F3X	5.7	38.9	5.5	40.4
53		AG12	4.9	52.3	4.7	50.0
54		AG13	4.8	52.2	4.7	51.4
55		AG14	5.0	44.9	5.0	43.8
56		AG23	4.8	60.1	4.7	58.1
57		AG24	5.2	43.0	5.0	41.7

58		AG34	5.0	52.4	5.0	51.9
59		AG12BS	5.2	66.6	4.9	66.1
60		AG12F6	5.1	60.3	4.9	58.3
61		AG12BSF6	5.4	76.1	5.1	74.4
62		AG12F3X	5.9	35.3	5.8	37.8
63		AG123	5.1	60.2	5.0	60.0
64		AG124	5.4	41.5	5.3	39.1

65		AG134	5.4	54.2	5.3	53.8
66		AG234	5.4	49.5	5.3	47.2
67		AG123BS	5.3	79.8	5.3	76.1
68		AG123F6	5.3	68.6	5.2	68.3
69		AG1234	5.7	52.8	5.6	49.1
70		AG12345BS	6.2	69.1	- ⁴	- ⁴

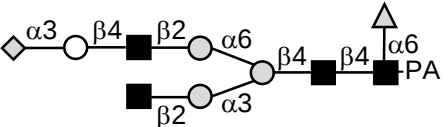
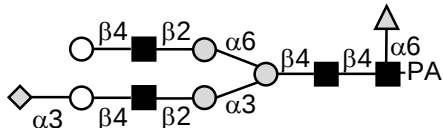
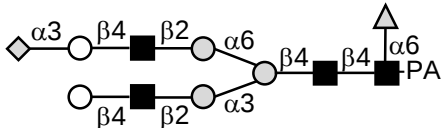
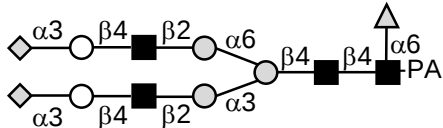
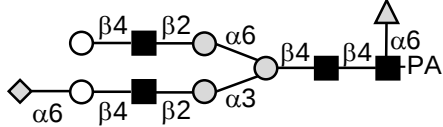
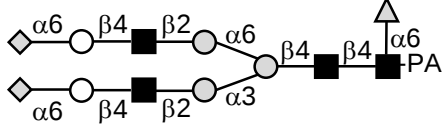
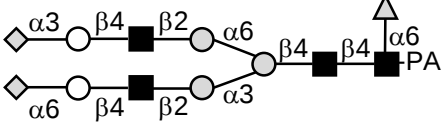
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72		GNM4CBS	5.6	53.7	5.6	50.4
73		GNM5ABS	6.5	52.1	6.6	49.9
74		GalGNM5A	6.9	47.9	6.9	44.7
75		MO1	5.4	46.4	5.2	43.8
76		MO2	5.3	57.1	5.1	54.1
77		MO1-M3	4.6	40.3	4.3	35.6
78		MO2-M2	4.6	54.9	4.2	53.3

79		MO1F6	5.6	54.9	5.4	52.1
80		MO2F6	5.5	64.8	5.3	62.4
81		MO1F6-M3	4.8	51.1	4.5	43.9
82		BI	6.4	56.3	6.2	53.9
83		BI-G1	5.6	54.1	5.4	51.5
84		BI-G2	5.7	54.8	5.5	52.4
85		BIF6	6.6	64.0	6.4	62.2

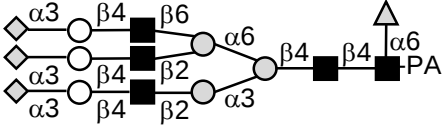
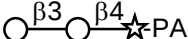
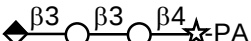
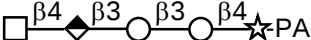
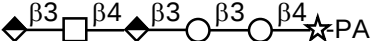
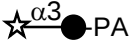
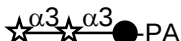
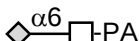
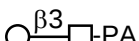
92		TR123	7.4	65.3	-	-
93		TR123F6	7.6	73.2	-	-
94		F3(3)TR123	8.2	63.6	-	-
95		TR124	7.7	46.2	-	-
96		TR124F6	7.9	54.6	-	-
97		TE	8.7	55.8	-	-

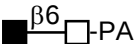
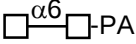
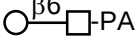
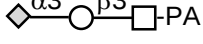
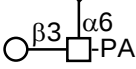
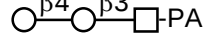
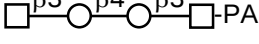
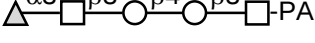
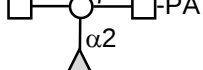
98		TEF6	8.9	63.7	-	-
99		F3(3)TE	9.4	54.2	-	-
100		3N-MO1F6	5.7	68.8	5.5	65.1
101		3N-MO2F6	5.6	77.7	5.3	74.7
102		03N-BI	6.4	69.7	6.3	66.9
103		30N-BI	6.4	68.9	6.2	66.2

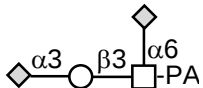
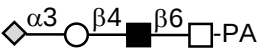
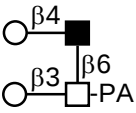
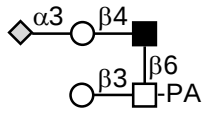
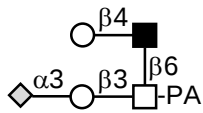
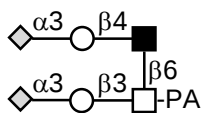
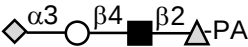
104		33N-BI	6.4	81.9	6.3	79.2
105		06N-BI	6.8	64.3	6.7	61.9
106		60N-BI	6.8	68.1	6.7	64.6
107		66N-BI	7.3	75.2	7.2	72.6
108		36N-BI	6.9	76.5	6.7	74.2
109		63N-BI	6.9	80.5	6.8	77.6
110		03N-BIF6-G2	6.0	75.9	5.8	73.7

111		30N-BIF6-G1	5.8	74.6	5.6	72.1
112		03N-BIF6	6.6	77.1	6.5	75.2
113		30N-BIF6	6.6	76.4	6.4	74.5
114		33N-BIF6	6.7	89.0	6.5	87.5
115		06N-BIF6	7.1	72.5	6.9	70.2
116		66N-BIF6	7.5	81.4	7.4	80.9
117		36N-BIF6	7.1	84.2	6.9	82.5

118		063N-TR123	7.7	79.8	-	-
119		663N-TR123	8.2	89.4	-	-
120		666N-TR123	8.6	93.7	-	-
121		63(6)6N-TR123	8.4	99.6	-	-
122		333N-TR124	7.5	79.7	-	-
123		303N-TR124	7.5	68.3	-	-

124		333N-TR124F6	7.7	87.2	-	-
125		Linkage3	2.6	15.1	-	-
126		Linkage4	4.1	25.1	-	-
127		Linkage5	4.5	31.3	-	-
128		Linkage6	6.1	32.3	-	-
129		XG	1.7	15.1	-	-
130		X2G	2.1	20.7	-	-
131		Tn	0.6	20.3	-	-
132		6N-Tn	1.9	21.8	-	-
133		core1	1.7	14.0	-	-

134		core3	1.4	22.9	-	-
135		core6	1.8	22.6	-	-
136		core7	1.7	24.1	-	-
137		core8	2.0	18.3	-	-
138		03N-core1	2.5	30.5	-	-
139		60N-core1	2.7	24.8	-	-
140		Gb4core1	2.4	18.6	-	-
141		GaNb3Gb4core1	2.9	21.4	-	-
142		F3GaNb3Gb4core1	3.3	27.7	-	-
143		GaNa3(F2)core1	2.4	23.8	-	-

144		36N-core1	3.5	40.0	-	-
145		3N-Gb4core6	3.0	41.5	-	-
146		Gb4core2	3.1	17.0	-	-
147		30N-Gb4core2	3.6	31.8	-	-
148		03N-Gb4core2	3.8	34.0	-	-
149		33N-Gb4core2	4.2	51.6	-	-
150		3N-Gb4GNb2F	3.1	39.0	-	-

¹ Monosaccharide symbols are indicated as follows: white circle, Gal; white square, GalNAc; gray circle, Man; gray triangle, Fuc; black circle, Glc; black square, GlcNAc; star, Xyl; gray diamond, NeuAc; black and white diamond, GlcA.

² Converted values from actual measurements by elution times of standard glycans.

³ Calculated values as the sum of partial elution times shown in Figures 2 and 3.

⁴ Not calculated. Because the glycan included residue(s) of which partial elution time was not determined.