

ID	Structure	Ply	SLO	PFO	VLY	LLY
MONOSACCHARIDES						
1	Fuc α -sp3	0.26056	0.66896	0.29339	0.15438	0.53859
2	Gal α -sp3	0.67175	1.68 \pm 0.51	0.55364	0.25644	0.24464
3	Gal β -sp3	0.92553	11.25 \pm 8.23	0.55445	0.31731	0.56914
4	GalNAc α -sp0	0.33927	0.79527	0.27962	0.18352	0.46900
5	GalNAc α -sp3	0.31756	0.71522	0.19024	0.16505	0.32340
6	GalNAc β -sp3	0.54826	0.59352	0.32844	0.18260	0.28470
7	Glc α -sp3	0.21170	1.86 \pm 0.36	0.87017	0.29248	0.58881
9	Glc β -sp3	0.22256	1.92 \pm 0.81	0.12682	0.12918	0.49183
10	GlcNAc β -sp3	0.08685	0.48683	0.13333	0.14978	0.43120
14	GlcN(Gc) β -sp4	0.53876	1.22 \pm 0.16	0.09780	0.10949	0.41044
15	HOCH ₂ (HOCH) ₄ CH ₂ NH ₂	0.50755	1.18 \pm 0.03	0.44403	0.24795	0.55764
16	Man α -sp3	0.34334	0.69241	0.41831	0.21303	0.56110
18	Man β -sp4	0.49669	0.75439	0.38660	0.23210	0.63482
19	ManNAc β -sp4	0.42205	0.79265	0.40936	0.24387	0.55418
20	Rha α -sp3	0.26192	0.45322	0.47523	0.13944	0.14373
22	GlcNAc β -sp4	0.60933	0.44624	0.21586	0.13729	0.15110
37	3-O-Su-Gal β -sp3	0.50212	0.58115	0.50219	0.17880	0.11084
38	3-O-Su-GalNAc α -sp3	0.47633	0.72474	0.41383	0.22297	0.50323
43	6-O-Su-GlcNAc β -sp3	0.41934	0.66970	0.28535	0.20604	0.47407
44	GlcA α -sp3	-0.04614	1.38 \pm 0.67	0.25121	0.14026	0.43815
45	GlcA β -sp3	0.38541	0.49788	0.51955	0.15318	0.46393
46	6-H ₂ PO ₃ Glc β -sp4	0.63511	0.65242	0.43397	0.20072	0.33251
47	6-H ₂ PO ₃ Man α -sp3	0.32163	0.78625	0.38047	0.24190	0.62745
48	Neu5Aca-sp3	0.43698	0.72792	0.36215	0.22395	0.62837
49	Neu5Aca-sp9	0.43969	2.51 \pm 0.97	0.49204	1.19 \pm 0.11	0.31689
52	Neu5Gca-sp3	0.93503	2.33 \pm 0.97	0.49510	0.22086	0.21560
54	9-Nac-Neu5Aca-sp3	0.43427	1.53 \pm 0.67	0.56014	0.23803	0.37223
55	3-O-Su-GlcNAc β -sp3	0.70161	0.60449	0.48898	0.32548	0.98618
Terminal Galactose						
75	Gal α 1-2Gal β -sp3	0.39627	0.96529	0.56229	0.49897	0.53248
76	Gal α 1-3Gal β -sp3	0.93774	1.97 \pm 0.39	0.91412	0.79022	0.85658
77	Gal α 1-3GalNAc β -sp3	0.40305	1.27 \pm 0.13	0.66031	0.58595	0.62531
78	Gal α 1-3GalNAc α -sp3	0.77761	0.63794	0.60873	0.54018	0.57646
80	Gal α 1-3GlcNAc β -sp3	0.50755	1.19 \pm 0.16	0.80236	0.69361	0.75185
81	Gal α 1-4GlcNAc β -sp3	0.56862	0.70028	1.91 \pm 0.46	0.60537	0.65620
83	Gal α 1-6Glc β -sp4	0.61069	0.65755	0.73948	0.58350	0.62269

84	Galβ1-2Galβ-sp3	0.48312	0.56027	0.68910	0.49717	0.53057
85	Galβ1-3GlcNAcβ-sp3	0.28770	1.58±0.22	1.46±0.43	0.69132	0.74937
87	Galβ1-3Galβ-sp3	0.37591	0.79971	1.97±0.42	0.48267	0.51509
88	Galβ1-3GalNAcβ-sp3	0.25513	1.08±0.07	1.62±0.69	0.58871	0.63815
89	Galβ1-3GalNAcα-sp3	0.92553	1.54±0.51	1.58±0.11	0.85805	0.93010
93	Galβ1-4Glcβ-sp4	0.45191	1.07±0.12	1.57±0.17	0.43247	0.46152
94	Galβ1-4Galβ-sp4	0.77625	0.74081	1.48±0.58	0.65738	0.70154
97	Galβ1-4GlcNAcβ-sp3	0.48041	0.66641	1.85±0.29	0.59136	0.63108
100	Galβ1-6Galβ-sp4	0.39491	0.63901	1.28±0.19	0.56705	0.60514
145	Galβ1-3(6-O-Su)GlcNAcβ-sp3	0.54826	0.60669	1.84±0.65	0.53837	0.57453
146	Galβ1-4(6-O-Su)Glcβ-sp2	0.82103	0.85311	1.92±0.33	0.75704	0.80789
147	Galβ1-4(6-O-Su)GlcNAcβ-sp3	0.27684	0.48111	1.18±0.12	0.42693	0.45561
150	3-O-Su-Galβ1-3GalNAcα-sp3	0.42748	0.57916	1.59±0.32	0.51393	0.54846
151	6-O-Su-Galβ1-3GalNAcα-sp3	0.42069	0.51591	1.48±0.46	0.45780	0.48856
152	3-O-Su-Galβ1-4Glcβ-sp2	0.41934	0.64954	1.31±0.32	0.57639	0.61511
153	6-O-Su-Galβ1-4Glcβ-sp2	0.55233	0.58201	1.84±0.24	0.51647	0.55116
155	3-O-Su-Galβ1-3GlcNAcβ-sp3	0.27549	0.52738	1.57±0.18	0.46798	0.49942
157	3-O-Su-Galβ1-4GlcNAcβ-sp3	0.36370	0.48521	1.51±0.30	0.43056	0.45948
159	4-O-Su-Galβ1-4GlcNAcβ-sp3	0.51433	0.46248	1.18±0.41	0.41040	0.43796
161	6-O-Su-Galβ1-3GlcNAcβ-sp3	0.57812	0.62738	1.85±0.82	0.55673	0.59412
163	6-O-Su-Galβ1-4GlcNAcβ-sp3	0.37863	0.42978	1.68±0.35	0.38138	0.40700
176	3-O-Su-Galβ1-4(6-O-Su)Glcβ-sp2	0.14792	0.32599	1.79±0.33	0.26687	0.28928
177	3-O-Su-Galβ1-4(6-O-Su)GlcNAcβ-sp2	0.35555	0.57600	1.30±0.03	0.47154	0.51113
178	6-O-Su-Galβ1-4(6-O-Su)Glcβ-sp2	0.35284	0.61066	1.40±0.23	0.49991	0.54189
179	6-O-Su-Galβ1-3(6-O-Su)GlcNAcβ-sp2	0.34877	0.49240	1.64±0.14	0.40310	0.43694
180	6-O-Su-Galβ1-4(6-O-Su)GlcNAcβ-sp2	0.09907	0.16315	1.94±0.79	0.13356	0.14478
181	3,4-O-Su ₂ -Galβ1-4GlcNAcβ-sp3	0.42205	0.53666	1.38±0.27	0.43933	0.47622
182	3,6-O-Su ₂ -Galβ1-4GlcNAcβ-sp2	0.42612	0.53830	1.14±0.13	0.44067	0.47767
183	4,6-O-Su ₂ -Galβ1-4GlcNAcβ-sp2	0.34877	0.47518	1.79±0.43	0.38900	0.42166
184	4,6-O-Su ₂ -Galβ1-4GlcNAcβ-sp3	0.71382	0.87245	1.97±0.42	1.12745	0.22213
189	3,6-O-Su ₂ -Galβ1-4(6-O-Su)GlcNAcβ-sp2	0.08685	0.12538	1.94±0.18	0.10264	0.11126
201	3,4-O-Su ₂ -Galβ1-4GlcNAcβ-sp3	0.33927	0.50998	1.68±0.78	0.41749	0.45255
203	Galβ1-4(6-O-Su)GlcNAcβ-sp2	0.27142	0.45902	0.35273	0.37577	0.40733
220	Galα1-3Galβ1-4Glcβ-sp2	0.18728	0.32984	0.31432	0.28513	0.30908
222	Galα1-3Galβ1-4GlcNAcβ-sp3	0.04071	0.42020	1.38±0.55	0.36325	0.39375
224	Galα1-4Galβ1-4Glcβ-sp3	0.68532	0.55731	1.59±0.39	0.48178	0.52223
225	Galα1-4Galβ1-4GlcNAc-sp2	0.50755	0.56293	1.67±0.15	0.48663	0.52749
228	Galβ1-2Galα1-4GlcNAcβ-sp4	0.24970	1.09±0.04	0.92600	0.28876	0.31300

229	Galβ1-3Galβ1-4GlcNAcβ-sp4	0.24427	0.28403	1.39±0.23	0.24554	0.26615
231	Galβ1-4GlcNAcβ1-3GalNAcα-sp3	0.44105	0.35037	1.92±0.66	0.30289	0.32832
232	Galβ1-4GlcNAcβ1-6GalNAcα-sp3	0.62154	0.83676	1.49±0.43	0.72335	0.78409
254	Galβ1-3(GlcNAcβ1-6)GalNAcα-sp3	0.77896	1.01±0.03	1.56±0.46	0.74065	0.80284
262	Galβ1-3GalNAcβ1-3Gal-sp4	0.33248	1.10±0.11	1.29±0.18	0.33175	0.35960
264	Galβ1-4Galβ1-4GlcNAc-sp3	0.68125	0.57174	1.39±0.33	0.55349	0.59997
373	Galα1-3Galβ1-4GlcNAcβ1-3Galβ-sp3	0.95674	6.05±1.89	0.95271	0.82359	0.89274
375	Galα1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-sp3	0.27142	1.75±0.98	0.54143	0.46805	0.50735
376	Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-sp4	0.54555	1.92±0.73	1.57±0.32	0.68821	0.76526
377	Galβ1-3GlcNAcβ1-3Galβ1-3GlcNAcβ-sp2	0.32570	0.96012	1.39±0.26	0.41087	0.45687
378	Galβ1-3GlcNAcα1-3Galβ1-4GlcNAcβ-sp3	0.62154	0.34133	1.29±0.38	0.78408	0.87187
379	Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ-sp3	0.59169	0.69146	1.60±0.28	0.74642	0.82999
380	Galβ1-3GlcNAcα1-6Galβ1-4GlcNAcβ-sp2	0.21035	2.29±0.38	1.20±0.16	0.26536	0.29506
381	Galβ1-3GlcNAcβ1-6Galβ1-4GlcNAcβ-sp2	0.42612	3.62±1.23	1.42±0.12	0.53756	0.59774
382	Galβ1-3GalNAcβ1-4Galβ1-4Glcβ-sp3	0.32298	0.90177	1.32±0.24	0.43147	0.50393
383	Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-sp2	0.93503	0.70993	1.97±0.48	0.96918	0.05057
385	Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-sp3	0.65954	0.75438	1.54±0.47	0.58118	0.62998
387	Galβ1-4GlcNAcβ1-6Galβ1-4GlcNAcβ-sp2	0.46005	0.81839	1.04±0.08	0.61756	0.66942
388	Galβ1-4GlcNAcβ1-6(Galβ1-3)GalNAcα-sp3	0.33927	0.48280	1.39±0.21	0.66997	0.72622
504	(A-GN-M) ₂ -3,6-M-GN-GNβ-sp4	0.41527	0.55053	1.68±0.88	0.39524	0.42843
1A	Galβ1-3GlcNAc	0.62833	0.74647	0.63331	2.79±0.26	0.88139
1B	Galβ1-4GlcNAc	0.33927	0.78395	0.75666	0.42799	0.47591
1C	Galβ1-4Gal	0.54962	0.61218	0.85607	2.61±0.89	0.66240
1D	Galβ1-6GlcNAc	0.48312	0.91076	0.60478	0.60946	0.67770
1E	Galβ1-3GalNAc	0.37727	0.42501	0.90536	0.47593	0.52921
1F	Galβ1-3GalNAcβ1-4Galβ1-4Glc	0.74097	0.66158	0.42501	0.98984	0.15607
1G	Galβ1-3GlcNAcβ1-3Galβ1-4Glc	0.26192	1.72±0.69	0.72890	0.33041	0.36740
1H	Galβ1-4GlcNAcβ1-3Galβ1-4Glc	0.44919	1.35±0.39	0.70694	0.56666	0.63011
1I	Galβ1-4GlcNAcβ1-6(Galβ1-4GlcNAcβ1-3)Galβ1-4Glc	0.40034	0.68301	1.53±0.17	0.50503	0.56157
1J	Galβ1-4GlcNAcβ1-6(Galβ1-3GlcNAcβ1-3)Galβ1-4Glc	0.38134	0.60873	1.46±0.29	0.48106	0.53492
1K	Galα1-4Galβ1-4Glc	0.59576	0.57984	1.36±0.31	0.53695	0.58204
1L	GalNAcα1-O-Ser	0.33113	0.62114	0.62651	0.50645	0.54898
1M	Galβ1-3GalNAcα1-O-Ser	0.32570	0.58586	0.60170	0.48886	0.52991
1N	Galα1-3Gal	0.14792	0.56551	0.31337	0.19446	0.21079
1O	Galα1-3Galβ1-4GlcNAc	0.72061	0.22495	0.69082	0.66467	0.72048
1P	Galα1-3Galβ1-4Glc	0.40848	0.76888	0.57146	0.41523	0.45009
2A	Galα1-3Galβ1-4Galα1-3Gal	0.57133	0.48033	0.88677	0.80897	0.87689
2B	Galβ1-6Gal	0.48855	0.93580	0.81146	3.62±0.56	0.67818

2C	GalNAcβ1-3Gal	0.43155	0.72373	0.63810	0.49478	0.53633
2D	GalNAcβ1-4Gal	0.37727	0.57236	0.51577	0.40284	0.43667
2E	Galα1-4Galβ1-4GlcNAc	0.64461	0.46600	0.69243	0.61067	0.66195
2F	GalNAcα1-3Galβ1-4Glc	0.25513	0.69243	0.61459	0.46078	0.49947
2G	Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ1-6(Galβ1-3GlcNAcβ1-3)Galβ1-4Glc	0.27549	1.95±0.36	1.26±0.42	0.33738	0.36571
2H	Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ1-3Galβ1-4Glc	0.35827	0.56676	1.96±0.25	0.48995	0.53109
18B	Galβ1-3GalNAcβ1-3Galα1-4Galβ1-4Glc	0.17642	0.39515	1.78±0.33	0.34159	0.37027
18C	Galβ1-3GalNAcβ1-3Gal	0.69754	0.72503	0.76562	0.62677	0.67939
18L	Galβ1-4Glc	0.55912	0.82071	0.86665	0.70948	0.76905
18M	Galβ1-4Gal	0.31891	0.38033	0.40162	0.32878	0.35639
18N	Galβ1-6Gal	0.43834	0.57148	0.60347	0.49402	0.53550

Terminal N-Acetylgalactosamine

101	GalNAcα1-3GalNAcβ-sp3	0.53469	1.80±0.28	0.72022	0.53137	0.56827
102	GalNAcα1-3Galβ-sp3	0.51433	0.52630	1.65±0.18	0.51963	0.54994
103	GalNAcα1-3GalNAcα-sp3	0.46276	0.79689	1.57±0.33	0.78679	0.83269
104	GalNAcβ1-3Galβ-sp3	0.09092	3.48±1.66	1.87±0.26	0.57557	0.61555
106	GalNAcβ1-4GlcNAcβ-sp3	0.07328	0.65770	1.65±0.74	0.64936	0.68724
192	GalNAcβ1-4(6-O-Su)GlcNAcβ-sp3	0.40984	0.67055	0.70068	0.66205	0.73430
193	3-O-Su-GalNAcβ1-4GlcNAcβ-sp3	0.82239	0.86363	0.90242	0.85268	0.94572
194	6-O-Su-GalNAcβ1-4GlcNAcβ-sp3	0.62697	0.77556	0.81040	0.76573	0.84928
195	6-O-Su-GalNAcβ1-4(3-O-Su)GlcNAcβ-sp3	0.31484	0.36160	0.37785	0.35702	0.39598
196	3-O-Su-GalNAcβ1-4(3-O-Su)-GlcNAcβ-sp3	0.67447	0.75493	0.78884	0.74536	0.82669
197	3,6-O-Su ₂ -GalNAcβ1-4GlcNAcβ-sp3	0.87124	0.31078	0.89969	0.85010	0.94286
198	4,6-O-Su ₂ -GalNAcβ1-4GlcNAcβ-sp3	0.59169	0.80454	0.84068	0.79434	0.88102
199	4,6-O-Su ₂ -GalNAcβ1-4(3-O-Ac)GlcNAcβ-sp3	0.23342	0.49947	0.52191	0.49314	0.54695
200	4-O-Su-GalNAcβ1-4GlcNAcβ-sp3	0.34877	0.56281	0.58809	0.55568	0.61631
202	6-O-Su-GalNAcβ1-4(6-O-Su)GlcNAcβ-sp3	0.55369	0.50716	0.52994	0.50073	0.55537
204	4-O-Su-GalNAcβ1-4GlcNAcβ-sp2	0.69618	0.61305	0.64059	0.60528	0.67133
238	GalNAcβ1-4Galβ1-4Glcβ-sp3	0.44105	0.60648	0.63373	0.59879	0.66413
389	GalNAcβ1-3Galα1-4Galβ1-4Glcβ-sp3	0.13299	0.60226	0.62931	0.59462	0.65951
1L	GalNAcα1-O-Ser	0.44648	0.74123	0.77453	0.73183	0.81169
2C	GalNAcβ1-3Gal	0.46819	0.57166	1.62±0.59	0.56441	0.59734
2D	GalNAcβ1-4Gal	0.32706	0.67211	0.68720	0.66359	0.70231
2F	GalNAcα1-3Galβ1-4Glc	0.30534	0.77246	0.84577	0.76267	0.80716

Fucosylated

71	Fucα1-2Galβ-sp3	0.30670	2.77±0.77	0.69939	0.52020	0.60871
72	Fucα1-3GlcNAcβ-sp3	0.28092	0.68633	0.35728	0.21366	0.25002
73	Fucα1-4GlcNAcβ-sp3	0.31349	0.93498	0.72785	0.51875	0.60701

215	Fuca1-2Galβ1-3GlcNAcβ-sp3	0.28363	0.43109	0.62890	0.51612	0.60393
216	Fuca1-2Galβ1-4GlcNAcβ-sp3	0.56590	0.50560	0.66232	0.53424	0.62514
217	Fuca1-2Galβ1-3GalNAcα-sp3	0.55097	11.4±4.78	0.78527	0.60792	0.71135
219	Fuca1-2Galβ1-4Glcβ-sp4	0.65818	0.88030	0.74269	0.54261	0.63494
226	Fuca1-2(Galα1-3)Galβ-sp3	0.40984	2.22±0.96	0.55382	0.44820	0.52446
233	Galβ1-3(Fuca1-4)GlcNAcβ-sp3	0.35827	3.02±1.66	0.48923	0.39593	0.46330
234	Fuca1-3(Galβ1-4)GlcNAcβ-sp3	0.36913	1.83±0.79	0.50227	0.40648	0.47564
235	Fuca1-2(GalNAcα1-3)Galβ-sp3	0.36913	6.37±1.73	0.70175	0.55116	0.62943
287	3-O-Su-Galβ1-3(Fuca1-4)GlcNAcβ-sp3	0.32977	0.66013	0.55404	0.40416	0.47293
288	Fuca1-3(3-O-Su-Galβ1-4)GlcNAcβ-sp3	0.51976	0.75117	0.67874	0.50549	0.59150
359	Fuca1-2(Galα1-3)Galβ1-3GlcNAcβ-sp3	0.51569	2.01±0.87	0.74099	0.59968	0.70171
360	Fuca1-2(Galα1-3)Galβ1-4GlcNAcβ-sp3	0.64597	0.77728	0.88030	0.69110	0.80869
362	Fuca1-2(Galα1-3)Galβ1-3GalNAcα-sp3	0.05428	69.2±28.3	0.20377	0.16491	0.19297
363	Fuca1-2(Galα1-3)Galβ1-3GalNAcβ-sp3	0.63376	8.09±0.67	0.85576	0.68695	0.80383
364	Fuca1-3(Galα1-3Galβ1-4)GlcNAcβ-sp3	0.66904	0.49940	0.51458	0.39587	0.46323
366	Fuca1-2(GalNAcα1-3)Galβ1-3GlcNAcβ-sp3	0.32163	0.62461	1.89±0.16	0.34963	0.39927
368	Fuca1-2(GalNAcα1-3)Galβ1-4GlcNAcβ-sp3	0.49262	0.74099	1.77±0.72	0.60289	0.68851
371	Fuca1-2Galβ1-3(Fuca1-4)GlcNAcβ-sp3	0.21306	0.85396	1.39±0.60	0.21492	0.25149
372	Fuca1-3(Fuca1-2Galβ1-4)GlcNAcβ-sp3	0.35827	1.68±0.94	1.41±0.46	0.33554	0.39263
392	Fuca1-2(GalNAcα1-3)Galβ1-3GalNAcα-sp3	0.32163	33.9±12.0	1.77±0.42	0.52701	0.74216
479	Fuca1-2Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-sp4	0.32841	0.62019	1.68±0.63	0.46506	0.65491
480	Fuca1-2Galβ1-3GlcNAcβ1-3Galβ1-4GlcNAcβ-sp2	0.62426	0.93841	1.93±0.49	0.77866	0.07427
483	Fuca1-3(Fuca1-2(Galα1-3)Galβ1-4)GlcNAcβ-sp3	0.37727	0.38955	1.43±0.10	0.29211	0.41135
496	Fuca1-2Galβ1-3(Fuca1-4)GlcNAcβ1-3Galβ1-4Glcβ-sp4	0.32570	0.45688	1.50±0.56	0.34260	0.48246
497	Fuca1-3(Fuca1-2Galβ1-4)GlcNAcβ1-3Galβ1-4Glcβ-sp4	0.52383	0.57868	1.64±0.39	0.43393	0.61108
538	Le ^x 1-6'(Le ^c 1-3')Lac-sp4	0.53333	0.56812	1.62±0.12	0.42601	0.59992
539	LacNAc1-6'(Le ^d 1-3')Lac-sp4	0.26327	0.44180	1.48±0.53	0.33129	0.46653
541	Le ^x 1-6'(Le ^d 1-3')Lac-sp4	0.54147	0.66314	1.73±0.38	0.49727	0.70027
542	Le ^c Le ^x 1-6'(Le ^c 1-3')Lac-sp4	-0.10178	0.16632	1.18±0.21	0.12472	0.17563
543	Le ^x 1-6'(Le ^b 1-3')Lac-sp4	0.27684	0.40868	1.45±0.22	0.30645	0.43155
7A	Fuca1-2Galβ1-3GlcNAcβ1-3Galβ1-4Glc	0.56183	0.71529	0.79157	0.53636	0.75533
7B	Galβ1-3(Fuca1-4)GlcNAcβ1-3Galβ1-4Glc	0.14928	0.35902	0.39730	0.26921	0.37911
7C	Galβ1-4(Fuca1-3)GlcNAcβ1-3Galβ1-4Glc	0.19813	0.40722	0.45065	0.30536	0.43001
7D	Fuca1-2Galβ1-3(Fuca1-4)GlcNAcβ1-3Galβ1-4Glc	0.86853	0.86334	0.95541	0.64738	0.91167
7E	Galβ1-3(Fuca1-4)GlcNAcβ1-3Galβ1-4(Fuca1-3)Glc	0.70568	0.74768	0.82742	0.56066	0.78953
7F	Fuca1-2Gal	0.21035	0.25922	0.28687	0.19438	0.27373
7G	Fuca1-2Galβ1-4Glc	0.40577	0.56445	0.62464	0.42326	0.59605
7H	Galβ1-4(Fuca1-3)Glc	0.36234	0.50343	0.55712	0.37751	0.53162

7I	Galβ1-4(Fuca1-3)GlcNAc	0.32977	0.44891	0.49679	0.33662	0.47404
7J	Galβ1-3(Fuca1-4)GlcNAc	0.46276	0.56752	0.62804	0.42556	0.59929
7K	GalNAcα1-3(Fuca1-2)Gal	0.49533	0.42933	0.47511	0.32194	0.45336
7L	Fuca1-2Galβ1-4(Fuca1-3)Glc	0.44784	0.37774	0.41802	0.28325	0.39889
7M	Galβ1-3(Fuca1-2)Gal	0.38270	0.47309	0.52354	0.35475	0.49957
7N	Fuca1-2Galβ1-4(Fuca1-3)GlcNAc	0.56454	0.76326	0.84466	0.57234	0.80599
7O	Fuca1-2Galβ1-3GlcNAc	0.46412	0.66779	0.73901	0.50075	0.70517
7P	Fuca1-2Galβ1-3(Fuca1-4)GlcNAc	0.48719	0.59125	0.65431	0.44336	0.62435
8A	SO ₃ -3Galβ1-3(Fuca1-4)GlcNAc	0.42205	0.55886	0.61846	0.41907	0.59014
8B	SO ₃ -3Galβ1-4(Fuca1-3)GlcNAc	0.42884	0.54193	0.59973	0.40637	0.57227
8C	Galβ1-3GlcNAcβ1-3Galβ1-4(Fuca1-3)GlcNAcβ1-3Galβ1-4Glc	0.19542	0.28844	0.31920	0.21629	0.30458
8D	Galβ1-4(Fuca1-3)GlcNAcβ1-6(Galβ1-3GlcNAcβ1-3)Galβ1-4Glc	0.49669	0.59237	0.65555	0.44420	0.62554
8E	Galβ1-4(Fuca1-3)GlcNAcβ1-6(Fuca1-2Galβ1-3GlcNAcβ1-3)Galβ1-4Glc	0.44241	0.54166	0.59942	0.40617	0.57198
8F	Galβ1-4(Fuca1-3)GlcNAcβ1-6(Fuca1-2Galβ1-3(Fuca1-4)GlcNAcβ1-3)Galβ1-4Glc	0.38541	0.46340	0.51282	0.34748	0.48934
8G	Galβ1-4GlcNAcβ1-3Galβ1-4(Fuca1-3)Glc	0.42477	0.56358	0.63510	0.32192	0.60144
8H	Fuca1-2Galβ1-4(Fuca1-3)GlcNAcβ1-3Galβ1-4Glc	0.12349	0.27881	0.30854	0.20907	0.29442
8I	Fuca1-3Galβ1-4GlcNAcβ1-3Galβ1-4(Fuca1-3)Glc	0.09228	0.62822	0.69522	0.47108	0.66339
8J	Fuca1-2Galβ1-4(Fuca1-3)GlcNAcβ1-3(Fuca1-2)Galβ1-4Glc	0.35827	0.31577	0.34945	0.23678	0.33345
8K	Galβ1-4(Fuca1-3)GlcNAcβ1-6(Galβ1-4GlcNAcβ1-3)Galβ1-4Glc	0.65004	0.77261	0.85501	0.57935	0.81586
8L	Galβ1-4(Fuca1-3)GlcNAcβ1-6(Galβ1-4(Fuca1-3)GlcNAcβ1-3)Galβ1-4Glc	1.94±0.32	0.40188	0.45288	0.22955	0.42887
8M	Fuca1-2Galβ1-4(Fuca1-3)GlcNAcβ1-6(Galβ1-4GlcNAcβ1-3)Galβ1-4Glc	0.43155	0.54830	0.60678	0.41115	0.57899
8N	Galβ1-3GlcNAcβ1-3Galβ1-4(Fuca1-3)GlcNAcβ1-6(Galβ1-3GlcNAcβ1-3)Galβ1-4Glc	0.14656	0.18622	0.20607	0.13964	0.19664
8O	Fuca1-2Galβ1-3GlcNAcβ1-3Galβ1-4(Fuca1-3)GlcNAcβ1-6(Galβ1-3GlcNAcβ1-3)Galβ1-4Glc	0.39220	0.49830	0.55144	0.37365	0.52619
8P	GalNAcβ1-3(Fuca1-2)Galβ1-4Glc	0.44241	0.55371	0.62398	0.42149	0.59090
9A	Galβ1-3(Fuca1-2)Galβ1-4(Fuca1-3)Glc	0.85225	0.82807	0.94801	0.81196	0.08671
9B	Galβ1-4GlcNAcβ1-6(Fuca1-2Galβ1-3GlcNAcβ1-3)Galβ1-4Glc	0.28227	0.35864	0.39688	0.26893	0.37871
18D	Galα1-3(Fuca1-2)Galβ1-4Glc	0.41527	0.52761	0.58388	0.39563	0.55715
18E	GalNAcα1-3(Fuca1-2)Galβ1-4(Fuca1-3)Glc	0.33113	0.42071	0.46558	0.31547	0.44426
19J	Galβ1-4(Fuca1-3)GlcNAcβ1-3Gal	0.47091	0.59830	0.66211	0.44864	0.63180
19L	Fuca1-2Galβ1-4(Fuca1-3)GlcNAcβ1-3Gal	0.38541	0.48968	0.54190	0.36719	0.51709
19M	Galβ1-3(Fuca1-4)GlcNAcβ1-3Gal	0.33248	0.42243	0.46748	0.31677	0.44608
19N	Fuca1-2Galβ1-3(Fuca1-4)GlcNAcβ1-3Gal	0.18456	0.23449	0.25950	0.17584	0.24762
Sialylated						
169	Neu5Acα2-3Galβ-sp3	0.34877	0.39189	1.46±0.17	0.47649	0.21397
170	Neu5Acα2-6Galβ-sp3	0.29991	0.33700	1.40±0.25	0.40974	0.18400
171	Neu5Acα2-3GalNAcα-sp3	0.36234	0.40714	1.48±0.38	0.49503	0.22230
172	Neu5Acα2-6GalNAcα-sp3	0.41934	0.47119	1.56±0.28	0.57290	0.25727
174	Neu5Gcα2-6GalNAcα-sp3	0.09635	0.10827	0.12934	0.13164	0.05911

186	Neu5Aca2-8Neu5Aca2-sp3	0.34334	0.38579	0.46088	0.46907	0.21064
205	Neu5Aca2-6GalNAcβ-sp3	0.39627	0.44526	0.53193	3.54±1.38	0.24311
206	Neu5Gca2-3Gal-sp3	0.33248	0.37359	0.44631	0.45424	0.20398
289	Galα1-3(Neu5Aca2-6)GalNAca-sp3	0.43562	0.48949	1.58±0.47	0.59515	0.26726
290	Galβ1-3(Neu5Aca2-6) GalNAca-sp3	0.23206	0.26075	1.31±0.15	3.31±0.70	0.14237
292	Neu5Aca2-3Galβ1-3GalNAca-sp3	0.48650	0.81394	1.85±0.19	0.47562	0.39383
293	Neu5Aca2-3Galβ1-4Glcβ-sp3	0.42748	0.70822	1.84±0.60	0.86111	0.38669
294	Neu5Aca2-3Galβ1-4Glcβ-sp4	0.72468	1.54±0.45	1.79±0.46	0.48957	0.36469
295	Neu5Aca2-6Galβ1-4Glcβ-sp2	0.57676	0.72619	1.86±0.75	0.88295	0.39649
298	Neu5Aca2-3Galβ1-4GlcNAcβ-sp3	0.24292	0.31479	1.39±0.68	1.40±0.47	0.18347
299	Neu5Aca2-3Galβ1-3GlcNAcβ-sp3	0.31484	0.40800	1.51±0.43	1.52±0.46	0.23779
300	Neu5Aca2-6Galβ1-4GlcNAcβ-sp3	0.31620	0.44697	1.53±0.39	1.54±0.34	0.24404
303	Neu5Gca2-3Galβ1-4GlcNAcβ-sp3	0.45326	0.52028	1.62±0.15	1.63±0.25	0.28407
304	Neu5Gca2-6Galβ1-4GlcNAcβ-sp3	0.45055	0.54112	1.64±0.44	0.65793	0.29545
306	9-Nac-Neu5Aca2-6Galβ1-4GlcNAcβ-sp3	0.29449	0.64077	0.76549	0.77910	0.34986
315	Neu5Aca2-3Galβ1-4-(6-O-Su)GlcNAcβ-sp3	0.84275	2.35±1.00	0.79389	0.21965	0.36284
317	Neu5Aca2-3Galβ1-3-(6-O-Su)GalNAcβ-sp3	0.56590	0.95156	0.81576	0.56968	0.37283
318	Neu5Aca2-6Galβ1-4-(6-O-Su)GlcNAcβ-sp3	0.51705	0.87407	0.91707	0.62750	0.41914
319	Neu5Aca2-3-(6-O-Su)Galβ1-4GlcNAcβ-sp3	0.05293	0.51331	0.61322	0.62411	0.28026
321	(Neu5Aca2-8) ₃ -sp3	0.38405	0.66459	0.79395	0.80806	0.36286
323	Neu5Aca2-6Galβ1-3GlcNAc-sp3	0.19813	0.57124	1.68±0.24	2.69±0.87	0.31190
324	Neu5Aca2-6Galβ1-3(6-O-Su)GlcNAc-sp3	0.31620	0.60965	1.72±0.83	0.74126	0.33287
331	Neu5Gca2-3Galβ1-3GlcNAcβ-sp3	0.47633	0.83284	1.79±0.27	0.01262	0.36230
421	Neu5Aca2-3(GalNAcβ1-4)Galβ1-4Glcβ-sp2	0.26192	0.67196	1.80±0.27	0.81702	0.36689
422	Neu5Aca2-3Galβ1-4GlcNAcβ1-3Galβ-sp3	0.33248	0.78353	1.93±0.60	0.95267	0.42781
423	Fuca1-3(Neu5Aca2-3Galβ1-4)GlcNAcβ-sp3	6.92±0.61	0.73983	1.93±0.69	0.95128	0.43119
426	Neu5Aca2-3Galβ1-3(Fuca1-4)GlcNAcβ-sp3	0.27549	0.69108	1.82±0.55	0.84027	0.37733
428	Fuca1-3(Neu5Aca2-3Galβ1-4)6-O-Su-GlcNAcβ-sp3	0.39762	0.66887	1.79±0.90	0.81325	0.36520
429	Fuca1-3(Neu5Aca2-3(6-O-Su)Galβ1-4)GlcNAcβ-sp3	0.39491	0.80720	1.96±0.43	0.98144	0.44073
433	Neu5Aca2-3Galβ1-3(Neu5Aca2-6)GalNAca-sp3	0.30670	0.54991	1.65±0.69	0.66862	0.30025
434	Neu5Aca2-8Neu5Aca2-3Galβ1-4Glcβ-sp4	0.22256	0.65098	1.77±0.76	0.79151	0.35543
527	Neu5Aca2-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-sp2	0.33791	0.73734	1.88±0.85	0.89651	0.40258
528	Fuca1-3(Neu5Aca2-3 Galβ1-4)GlcNAcβ1-3Galβ-sp3	4.33±1.12	0.65590	1.82±0.69	0.84337	0.38228
529	Neu5Aca2-6(Galβ1-3)GlcNAcβ1-3Galβ1-4Glcβ-sp4	0.45734	0.80181	1.95±0.78	0.97489	0.43778
531	GalNAcβ1-4(Neu5Aca2-8Neu5Aca2-3)Galβ1-4Glc-sp2	0.28906	0.73022	1.87±0.23	0.88785	0.39870
532	Neu5Aca2-8Neu5Aca2-8Neu5Aca2-3Galβ1-4Glc-sp2	0.48041	0.83031	1.98±0.92	0.95513	0.44832
533	(Neu5Aca2-8) ₂ Neu5Aca2-3(GalNAcβ1-4)Galβ1-4Glc-sp2	0.55097	0.93801	1.85±0.58	0.14050	0.39116
534	Neu5Aca2-3Galβ1-4GlcNAcβ1-3Galβ1-4GlcNAcβ-sp3	0.47498	0.72221	1.86±0.27	1.87±0.81	0.39433

536	Neu5Aca2-3Galβ1-3GlcNAcβ1-3Galβ1-4Glcβ-sp4	0.29856	0.38689	1.48±0.13	1.49±0.74	0.22549
537	Neu5Aca2-3Galβ1-4GlcNAcβ1-3Galβ1-4Glcβ-sp4	0.23477	0.37549	1.44±0.57	2.45±1.65	0.20501
540	Le ^x 1-6'(6'SLN1-3')Lac-sp4	0.55640	0.60712	1.72±0.52	0.73818	0.33149
10A	Neu5Aca2-3Galβ1-3(Fuca1-4)GlcNAc	0.36234	0.50850	0.60747	0.61826	0.27764
10B	Neu5Aca2-3Galβ1-4(Fuca1-3)GlcNAc	3.99±1.36	0.32408	0.40860	0.41670	0.18888
10C	Neu5Aca2-3Galβ1-3GlcNAcβ1-3Galβ1-4Glc	0.41527	0.42078	0.50268	0.51161	0.22974
10D	Galβ1-4(Fuca1-3)GlcNAcβ1-6(Neu5Aca2-6Galβ1-4GlcNAcβ1-3)Galβ1-4Glc	0.44784	0.49546	0.59190	0.60242	0.27052
10E	Neu5Aca2-3Galβ1-3(Neu5Aca2-6)GalNAc	0.32977	0.26725	0.31927	0.32494	0.14592
10H	Neu5Aca2-6Galβ1-3GlcNAcβ1-3Galβ1-4(Fuca1-3)Glc	0.08414	0.55419	1.66±0.58	1.67±0.38	0.30259
10I	Galβ1-3GlcNAcβ1-3(Neu5Aca2-6Galβ1-4GlcNAcβ1-6)Galβ1-4Glc	0.51162	0.73434	0.87727	0.89285	0.40094
10J	Neu5Aca2-6Galβ1-3GlcNAcβ1-3(Galβ1-4GlcNAcβ1-6)Galβ1-4Glc	0.58762	0.93141	0.83419	0.13247	0.38126
10K	Neu5Aca2-3Galβ1-4GlcNAc	0.18456	0.23917	0.30154	1.30±0.26	0.13940
10L	Neu5Aca2-6Galβ1-4GlcNAc	0.14385	0.37403	0.44683	1.45±0.47	0.20422
10M	Neu5Aca2-3Galβ1-3GlcNAcβ1-3Galβ1-4Glc	0.49262	0.62132	0.74225	0.75544	0.33923
10N	Galβ1-3(Neu5Aca2-6)GlcNAcβ1-3Galβ1-4Glc	0.31756	0.42977	1.51±0.34	0.52254	0.23465
10O	Neu5Aca2-6Galβ1-4GlcNAcβ1-3Galβ1-4Glc	0.59711	0.52827	0.63110	0.64231	0.28843
10P	Neu5Aca2-3Galβ1-3(Neu5Aca2-6)GlcNAcβ1-3Galβ1-4Glc	0.79661	0.79891	0.95441	0.97137	0.43620
11A	Neu5Aca2-3Galβ1-4Glc	0.67175	0.77224	0.92255	0.93895	0.42164
11B	Neu5Aca2-6Galβ1-4Glc	0.31620	0.47796	0.57098	0.58113	0.26096
11C	(Neu5Aca2-8Neu5Ac) _n (n<50)	0.28634	0.50316	0.60109	0.61177	0.27472
11D	Neu5Aca2-6Galβ1-4GlcNAcβ1-2Manα1-6(Neu5Aca2-6Galβ1-4GlcNAcβ1-2Manα1-6)Manβ1-4GlcNAcβ1-4GlcNAc-Asn	0.21849	0.28314	1.35±0.69	4.36±0.40	2.16±0.50
18A	Neu5Aca2-3Galβ1-4GlcNAcβ1-3Galβ1-4Glc	0.92553	0.81982	1.97±0.93	1.99±0.67	0.44762
18K	9-NAc-Neu5Ac	0.62833	0.92035	0.79785	0.11902	0.36465
18O	Neu5Gc	0.31891	0.40547	0.48439	0.49300	0.22139
19K	Neu5Aca2-3Galβ1-4(Fuca1-3)GlcNAcβ1-3Gal	0.24020	0.41968	1.50±0.13	0.51027	0.22914
Mannose						
119	Manα1-2Manβ-sp4	0.28770	0.18535	1.50±0.51	0.53542	0.52048
120	Manα1-3Manβ-sp4	0.56726	0.19088	1.53±0.84	0.52019	0.53602
121	Manα1-4Manβ-sp4	0.43834	0.23846	1.65±0.44	0.50718	0.66963
122	Manα1-6Manβ-sp4	0.74232	0.20969	1.59±0.49	0.37594	0.58884
123	Manβ1-4GlcNAcβ-sp4	0.38134	0.08410	1.24±0.19	0.57537	0.23616
124	Manα1-2Manα-sp4	0.22799	0.04426	1.13±0.13	0.36668	0.12429
258	Manα1-3(Manα1-6)Manβ-sp4	0.58762	1.13±0.09	1.66±0.45	0.29092	0.66963
495	Manα1-3(Manα1-3(Manα1-6)Manα1-6)Manβ-sp4	0.41798	0.26004	1.73±0.78	0.83642	0.73023
5A	GlcNAcβ1-2Man	0.18592	0.36626	0.21646	0.79941	1.02853
5B	GlcNAcβ1-2Manα1-6(GlcNAcβ1-2Manα1-3)Man	0.38948	0.21467	0.23072	0.73783	0.60283
5C	Manα1-2Man	0.41798	0.19807	0.28045	0.52857	0.55622
5D	Manα1-3Man	0.53197	0.17926	1.25±0.27	0.87680	0.50339

5E	Man α 1-4Man	0.44919	0.13444	0.10543	0.57592	0.37754
5F	Man α 1-6Man	0.98253	0.14108	0.94204	0.40122	0.39619
5G	Man α 1-6(Man α 1-3)Man	0.48176	0.10789	0.50726	1.37 \pm 0.21	0.30297
5H	Man α 1-6(Man α 1-3)Man α 1-6(Man α 1-3)Man	0.43427	0.07912	0.28782	0.25929	0.22218
Terminal N-Acetylglucosamine						
113	GlcNAc β 1-3GalNAc α -sp3	0.34198	0.61492	1.63 \pm 0.48	0.29381	0.62004
114	GlcNAc β 1-3Man β -sp4	0.53876	1.63 \pm 0.87	0.61535	0.28479	0.65267
115	GlcNAc β 1-4GlcNAc β -Asn	0.33656	1.65 \pm 0.73	1.77 \pm 0.67	0.35678	0.73330
117	GlcNAc β 1-4GlcNAc β -sp4	0.44376	1.44 \pm 0.60	1.59 \pm 0.51	0.27580	0.61262
118	GlcNAc β 1-6GalNAc α -sp3	0.33384	0.50034	0.50223	0.22981	0.50772
149	GlcNAc β 1-4(6-O-Su)GlcNAc β -sp2	0.35148	2.64 \pm 0.29	0.66105	0.30248	0.65012
167	GlcNAc β 1-4-[HOOC(CH ₃)CH]-3-O-GlcNAc β -sp4	0.54555	1.50 \pm 0.70	0.46702	0.21370	0.52068
168	GlcNAc β 1--[HOOC(CH ₃)CH]-3-O-GlcNAc β -L-alanyl-D-i-glutaminy-L-lysine	0.42069	0.57623	0.57108	0.26131	0.58581
246	GlcNAc β 1-2Gal β 1-3GalNAc α -sp3	0.37184	0.45605	0.44411	0.20322	0.46479
247	GlcNAc β 1-3Gal β 1-3GalNAc α -sp3	0.32298	0.55268	0.56402	0.25809	0.55946
248	GlcNAc β 1-3Gal β 1-4Glc β -sp2	0.42884	0.39574	0.36390	0.16651	0.40649
250	GlcNAc β 1-3Gal β 1-4GlcNAc β -sp3	0.46412	0.40503	0.36735	0.16809	0.41679
251	GlcNAc β 1-4Gal β 1-4GlcNAc β -sp2	0.58490	0.46882	0.41556	0.19015	0.48385
252	GlcNAc β 1-4GlcNAc β 1-4GlcNAc β -sp4	0.30806	0.28155	0.25830	0.11819	0.28928
253	GlcNAc β 1-6Gal β 1-4GlcNAc β -sp2	0.20492	0.48727	0.51342	0.23493	0.49087
255	GlcNAc β 1-3(GlcNAc β 1-6)GalNAc α -sp3	0.52926	2.59 \pm 0.65	0.57229	0.26187	0.60929
395	GlcNAc β 1-3(GlcNAc β 1-6)Gal β 1-4GlcNAc β -sp3	0.63918	0.41736	0.34598	0.15831	0.43428
493	(GlcNAc β 1-4) ₃ β -sp4	0.54283	0.35457	0.29397	0.13451	0.36894
503	(GlcNAc β 1-4) ₆ β -sp4	0.58762	0.42262	0.36240	0.16583	0.43797
505	(GN-M) ₂ -3,6-M-GN-GN β -sp4	0.70704	0.63913	0.58479	0.26759	0.65693
4A	GlcNAc β 1-4GlcNAc	0.55505	0.47174	0.42493	0.19444	0.48587
4B	GlcNAc β 1-4GlcNAc β 1-4GlcNAc	0.42884	0.30823	0.26425	0.12092	0.31943
4C	GlcNAc β 1-4GlcNAc β 1-4GlcNAc β 1-4GlcNAc	0.23885	0.33275	0.33061	0.15128	0.33816
4D	GlcNAc β 1-4GlcNAc β 1-4GlcNAc β 1-4GlcNAc β 1-4GlcNAc β 1-4GlcNAc	0.45191	0.35387	0.31155	0.14256	0.36552
4E	Bacterial cell wall muramyl disaccharide	0.39491	0.34145	0.30894	0.14137	0.35147
4F	GlcNAc β 1-4GlcNAc β 1-4GlcNAc β 1-4GlcNAc β 1-4GlcNAc	0.46548	0.57091	0.55596	1.25 \pm 0.21	0.58185
18G	6-O-Su-GlcNAc	0.23342	0.69096	0.73960	0.33843	0.69436
18H	GlcNAc	0.55505	0.72490	0.71321	0.32635	0.73773
Glucose						
110	Glc α 1-4Glc β -sp3	0.74097	0.12876	1.37 \pm 0.35	0.18876	0.28369
111	Glc β 1-4Glc β -sp4	0.52519	0.15179	1.37 \pm 0.34	0.25603	0.33443
112	Glc β 1-6Glc β -sp4	0.46276	0.19057	0.43862	0.34038	0.41989
164	GlcA β 1-3GlcNAc β -sp3	0.43155	0.29299	0.62251	0.55022	0.64554

165	GlcA β 1-3Gal β -sp3	0.34877	0.23685	0.50321	0.44480	0.52184
166	GlcA β 1-6Gal β -sp3	0.34606	0.02245	0.10564	0.01205	0.04946
240	(Glc α 1-4) $_3\beta$ -sp4	0.47362	1.81 \pm 0.64	1.42 \pm 0.40	0.32130	0.40022
241	(Glc α 1-6) $_3\beta$ -sp4	0.40170	2.13 \pm 0.51	0.46980	0.39259	0.47044
390	(Glc α 1-4) $_4\beta$ -sp4	0.26192	0.14173	1.31 \pm 0.09	0.26106	0.31228
391	(Glc α 1-6) $_4\beta$ -sp4	0.36913	0.11602	0.28320	0.19880	0.25562
492	(Glc α 1-6) $_5\beta$ -sp4	0.37184	0.10919	0.27105	0.18475	0.24057
502	(Glc α 1-6) $_6\beta$ -sp4	0.15878	0.12141	0.25424	0.22993	0.26750
18I	GlcA	0.33791	0.06382	0.18076	0.09639	0.14062
18J	6-O-(H ₂ PO ₄)-Glc	0.57947	0.16780	0.41804	0.28314	0.36970
19O	Glc α 1-4Glc α 1-4	0.33791	0.39044	1.78 \pm 0.56	0.75606	0.86025
19P	Glc α 1-4Glc α 1-4Glc α 1-4	0.34470	0.41612	1.83 \pm 0.44	0.80726	0.91683
Low molecular weight Carageenan and Glycoaminoglycans (GAGS)						
12A	Neocarratetraose-41, 3-di-O-sulphate (Na ⁺)	0.42748	0.47478	0.43484	0.42364	0.20870
12B	Neocarratetraose-41-O-sulphate (Na ⁺)	0.88482	0.81344	0.69783	1.67 \pm 0.47	0.34064
12C	Neocarrahexaose-24,41, 3, 5-tetra-O-sulphate (Na ⁺)	0.57812	0.62062	0.56243	0.54795	0.27066
12D	Neocarrahexaose-41, 3, 5-tri-O-sulphate (Na ⁺)	0.35148	1.26 \pm 0.44	0.42052	0.40969	0.20004
12E	Neocarraoctaose-41, 3, 5, 7-tetra-O-sulphate (Na ⁺)	0.23070	0.41070	0.41922	0.40842	0.19598
12F	Neocarradecaose-41, 3, 5, 7, 9-penta-O-sulphate (Na ⁺)	0.52926	0.67552	0.64315	0.62659	0.30571
12G	Δ UA-2S-GlcNS-6S	0.54826	0.83955	0.83323	0.81177	0.39211
12H	Δ UA-GlcNS-6S	0.45734	0.38770	0.32158	0.31329	0.15840
12I	Δ UA-2S-GlcNS	0.35555	0.34062	0.29684	0.28919	0.14430
12J	Δ UA-2S-GlcNAc-6S	0.42612	0.45372	0.41011	0.39954	0.19749
12K	Δ UA-GlcNAc-6S	0.42612	0.91796	0.96473	0.93988	0.44798
12L	Δ UA-2S-GlcNAc	0.45055	0.84801	0.87359	0.85109	0.40752
12M	Δ UA-GlcNAc	0.66497	0.40882	0.28252	0.27524	0.14674
12N	Δ UA-GalNAc-4S (Delta Di-4S)	0.76811	0.43229	0.27861	0.27144	0.14794
12O	Δ UA-GalNAc-6S (Delta Di-6S)	0.28227	0.49163	0.49994	0.48706	0.23392
12P	Δ UA-GalNAc-4S,6S (Delta Di-disE)	0.18456	0.46195	0.49473	0.48199	0.22876
13A	Δ UA-2S-GalNAc-4S (Delta Di-disB)	0.40170	2.30 \pm 0.35	0.54420	0.53019	0.25735
13B	Δ UA-2S-GalNAc-6S (Delta Di-disD)	0.35963	0.49206	0.47650	0.46423	0.22556
13C	Δ UA-2S-GalNAc-4S-6S (Delta Di-tisS)	0.22663	0.23201	0.20701	0.20168	0.10002
13D	Δ UA-2S-GalNAc-6S (Delta Di-UA2S)	0.36641	0.49273	0.47520	0.46296	0.22517
13E	Δ UA-GlcNAc (Delta Di-HA)	0.31213	0.83816	0.69235	0.88139	0.41758
14M	Δ UA \rightarrow 2S-GlcN-6S	0.71789	0.86608	0.81240	0.79148	0.38758
14N	Δ UA \rightarrow GlcN-6S	0.39491	0.69301	0.70564	0.68747	0.33007
14O	Δ UA \rightarrow 2S-GlcN	0.44512	0.86949	0.90093	0.87773	0.41971
14P	Δ UA \rightarrow GlcN	0.41798	0.47449	0.43745	0.42618	0.20960

High molecular weight Carageenan and Glycoaminoglycans (GAGS)						
625	(GlcA β 1-4GlcNAc β 1-3) ₈ -NH ₂ -ol	0.51976	0.29118	0.17889	0.40965	0.54804
13F	(GlcA β 1-3GlcNAc β 1-4) _n (n=4)	0.52112	0.18475	0.11350	0.26884	0.34772
13G	(GlcA β 1-3GlcNAc β 1-4) _n (n=8)	0.60933	1.30 \pm 0.42	0.18691	0.43110	0.57260
13H	(GlcA β 1-3GlcNAc β 1-4) _n (n=10)	0.57404	0.16667	0.10240	1.24 \pm 0.38	0.31370
13I	(GlcA β 1-3GlcNAc β 1-4) _n (n=12)	0.46141	0.20483	0.12584	0.29263	0.38552
13J	(GlcA/IdoA α / β 1-4GlcNAc α 1-4) _n (n=200)	0.37727	0.29218	1.17 \pm 0.05	0.40433	0.54993
13K	(GlcA/IdoA β 1-3(\pm 4/6S)GalNAc β 1-4) _n (n<250)	0.57540	0.29017	0.17827	0.41091	0.54615
13L	((\pm 2S)GlcA/IdoA α /b1-3(\pm 4S)GalNAc β 1-4) _n (n<250)	0.27684	0.46488	0.28561	0.62823	0.87497
13M	(GlcA/IdoA β 1-3(\pm 6S)GalNAc β 1-4) _n (n<250)	0.60661	0.23897	0.14681	0.18296	0.44977
13N	HA - 4	0.82239	0.26608	0.16347	0.12007	0.50079
13O	HA - 6	0.89703	0.33435	0.20541	0.19254	0.62930
13P	HA - 8	0.47226	0.57031	0.31690	0.11049	0.83224
14A	HA 10	-0.20492	0.36548	0.22454	0.13070	0.68788
14B	HA-12	0.32706	0.56428	0.31355	0.18058	0.82345
14C	HA-14	0.87396	0.18675	0.11474	0.18352	0.35150
14D	HA-16	0.93096	0.47291	0.29054	0.28058	0.89009
14E	HA 30000 da	0.85089	0.41468	0.25476	0.35698	0.78048
14F	HA 107000 da	0.28227	0.21888	0.13448	0.45084	0.41197
14G	HA 190000 da	0.09907	0.62954	0.34981	0.62453	0.91869
14H	HA 220000 da	0.20628	0.58336	0.32415	1.43 \pm 0.64	0.85129
14I	HA 1600000 da	0.35691	0.75003	0.36334	0.62552	0.70971
14J	Heparin sulfate	0.33656	0.59039	0.32806	0.28079	0.86155
14K	β 1-3Glucan	0.51298	0.48094	0.29547	0.66051	0.90521
Complex N-glycans						
627	(Sia2-6A-GN-M) ₂ -3,6-M-GN-GN β -sp4	0.40441	0.70792	8.67 \pm 2.2	0.37802	0.40258
19A	Gal β 1-4GlcNAc β 1-2Man α 1-3(Gal β 1-4GlcNAc β 1-2Man α 1-6Man) β 1-4GlcNAc β 1-4(Fuca1-6)GlcNAc	0.69211	0.86497	2.54 \pm 0.93	0.45878	0.48859
19B	Gal β 1-4GlcNAc β 1-2(Gal β 1-4GlcNAc β 1-4)Man α 1-3(Gal β 1-4GlcNAc β 1-2(Gal β 1-4GlcNAc β 1-6)Man α 1-6Man) β 1-4GlcNAc β 1-4GlcNAc	0.46955	0.05538	1.97 \pm 0.68	0.26071	0.27765
19C	Neu5Aca2-6Gal β 1-4GlcNAc β 1-2Man α 1-3(Gal β 1-4GlcNAc β 1-2Man α 1-6)Man β 1-4GlcNAc β 1-4GlcNAc	0.51840	0.63043	9.08 \pm 2.3	0.35573	0.37884
19D	Neu5Aca2-6Gal β 1-4GlcNAc β 1-2Man α 1-3(Neu5Aca2-6Gal β 1-4GlcNAc β 1-2Man α 1-6)Man β 1-4GlcNAc β 1-4GlcNAc	0.57540	0.89345	8.44 \pm 3.7	0.45469	0.48424
19E	Gal β 1-4GlcNAc β 1-2Man α 1-3(Gal β 1-4GlcNAc β 1-2Man α 1-6)Man β 1-4GlcNAc β 1-4GlcNAc	0.34063	0.55614	1.45 \pm 0.37	0.31774	0.33839
19F	Neu5Aca2-6Gal β 1-4GlcNAc β 1-2Man α 1-3(Neu5Aca2-6Gal β 1-4GlcNAc β 1-2Man α 1-6)Man β 1-4GlcNAc β 1-4(Fuca1-6)GlcNAc	0.31891	0.52203	6.76 \pm 0.91	1.42 \pm 0.29	0.32393
19G	Neu5Aca2-6Gal β 1-4GlcNAc β 1-2(Neu5Aca2-6Gal β 1-4GlcNAc β 1-4)Man α 1-3(Neu5Aca2-6Gal β 1-4GlcNAc β 1-2Man α 1-6)Man β 1-4GlcNAc β 1-4GlcNAc	0.43155	0.35243	5.89 \pm 0.71	0.35938	0.38273
19H	GlcNAc β 1-2(GlcNAc β 1-4)Man α 1-3(GlcNAc β 1-2Man α 1-6)GlcNAc β 1-4Man β 1-4GlcNAc β 1-4GlcNAc	0.11264	0.29244	1.12 \pm 0.11	0.25249	0.26890

Red/blue indicates binding. Binding is determined by positive interaction in three replicate array experiments.

Blue is binding previously observed in previous published data of Ply and SLO, red indicates new binding observed using larger array.

Positive interactions are determined by a background subtracted fluorescence value significantly above background subtracted fluorescence of negative control spots

LLO	SLY	ILY
0.27202	0.29664	0.19130
0.60113	1.20±0.29	0.49319
0.85746	0.22162	0.67951
0.29395	0.57135	0.24909
0.12908	0.78720	0.23315
0.33871	0.28856	0.40253
0.79388	0.27009	0.77516
0.08725	0.46632	0.15543
0.08454	0.89800	0.16340
0.02303	0.18006	0.06377
0.88137	0.18930	0.39555
0.78706	0.07387	0.37264
0.55672	0.45824	0.25208
0.74445	0.43169	0.36467
0.19047	0.29202	0.30987
0.05644	0.42245	0.19230
0.22407	0.35897	0.44736
0.69086	0.22277	0.36865
0.42573	0.51826	0.34972
0.30494	0.42707	0.30787
0.09797	0.40514	-0.03388
0.36744	0.35666	0.28296
0.77909	0.32781	0.46629
0.48357	0.54019	0.23614
0.45017	0.27356	0.32083
0.31008	0.37167	0.32282
0.42923	0.37398	0.68649
0.61482	0.79528	0.31883
0.34143	0.24124	0.51511
0.54594	1.38±0.39	0.29094
0.40095	0.26201	0.68848
0.36963	0.17429	0.29592
0.47920	1.39±0.71	0.57091
0.41823	1.81±0.18	0.37264
0.39927	0.31973	0.41747

0.34021	0.21700	0.44836
0.47761	0.78720	1.26±0.25
0.33028	0.38436	0.35470
0.40673	0.66023	1.98±0.41
0.59280	0.40860	2.42±0.23
0.29593	0.33589	0.21123
0.44983	0.46632	0.27599
0.40465	0.69832	0.18731
0.38802	0.23547	0.67951
0.36839	0.36359	0.33179
0.51802	0.35782	0.56991
0.29214	0.35666	0.35271
0.35168	0.46978	0.28994
0.31327	0.23431	0.40253
0.39441	0.30934	0.60279
0.35341	0.43746	0.20326
0.32023	0.49171	0.31385
0.29462	0.32203	0.30887
0.28083	0.12581	0.30787
0.38096	0.30241	0.40552
0.26097	0.30010	0.20226
0.18437	0.30871	0.26702
0.32577	0.54547	0.37762
0.34538	0.57829	0.42445
0.27849	0.46629	0.27798
0.09227	0.15450	0.10860
0.30352	0.50821	0.26104
0.30445	0.50976	0.25905
0.26875	0.44999	0.25606
0.77893	0.03705	1.03920
0.07091	0.11873	0.07273
0.28843	0.48295	0.30987
0.25961	0.43469	0.31285
0.19699	2.68±1.11	0.25606
0.25096	3.32±1.27	0.52408
0.33285	3.61±1.59	0.06377
0.33620	2.22±0.31	0.24909
0.19949	0.33403	0.19927

0.16963	0.29993	0.13750
0.20926	0.36999	0.02989
0.49974	0.88360	0.50316
0.51170	0.85677	0.37264
0.22919	0.38376	0.18333
0.38239	0.64027	0.17934
0.56900	1.60±0.46	0.32381
0.32336	1.86±0.73	0.45633
0.48481	0.82952	1.18±0.03
0.28944	0.49524	1.32±0.24
0.55235	0.94508	1.29±0.19
0.52581	0.89968	1.37±0.29
0.18693	0.31984	1.28±0.16
0.37868	0.64794	1.31±0.21
3.29±1.02	0.56034	1.96±0.62
0.66958	0.85396	0.57191
0.40152	0.67230	0.24411
0.42666	0.71439	0.50017
0.46286	0.77501	0.70243
0.27306	0.45721	0.19927
0.55838	0.95539	1.13±0.12
0.30150	0.51587	1.02±0.04
0.42219	0.70690	0.40053
0.42933	0.73460	1.05±0.03
0.33527	0.57365	1.89±0.22
2.78±0.88	0.84021	1.78±0.17
0.23276	0.39825	1.11±0.08
0.39918	0.68301	1.04±0.06
0.35577	0.66947	1.12±0.17
0.33888	0.62651	1.21±0.19
0.37097	0.64672	0.23912
0.34989	0.65657	0.45633
0.33774	0.63057	0.43441
0.13435	0.32840	0.15443
0.45920	0.72397	0.31285
0.28687	0.59888	0.23713
0.55889	2.54±0.61	0.68649
0.43224	0.85040	0.48423

0.34183	0.66872	0.33776
0.27831	0.54051	0.24909
0.42189	2.65±0.98	0.30488
0.31834	0.53302	0.46131
0.23309	0.39028	0.24909
0.33849	0.59849	0.40352
0.23600	0.41727	0.35470
0.43302	0.80235	0.27699
0.49016	0.90824	0.54401
0.22715	0.42089	0.19230
0.34131	0.63242	0.32979

0.35446	0.44341	0.26304
0.34663	0.43362	0.12953
0.52484	0.65656	0.51213
0.38395	0.48031	0.77317
0.43317	0.54188	0.73132
0.44164	0.55247	0.41050
0.56880	0.71154	0.23414
0.51079	0.63898	0.32182
0.23816	0.29793	0.12753
0.49721	0.62199	0.24909
0.56707	0.70939	0.73232
0.52988	0.66286	0.39256
0.32896	0.41151	0.37762
0.37068	0.46370	0.33976
0.33402	0.41785	0.06676
0.40376	0.50509	0.05380
0.39944	0.49968	0.30090
0.39666	0.49620	0.60379
0.48818	0.61070	0.46032
0.37650	0.47099	0.23115
0.44266	0.55376	0.49519
0.50875	0.63643	0.63966

0.47766	0.49950	0.47426
0.19619	0.20516	0.03985
0.47633	0.49810	0.46530

0.47391	0.49557	0.49120
0.49055	0.51298	0.23614
0.55820	0.58372	0.36168
0.49824	0.52102	0.15643
0.41155	0.43036	0.26304
0.36356	0.38018	0.23614
0.37324	0.39031	0.24112
0.50609	6.90±1.21	0.45832
0.37111	0.38808	0.27699
0.46416	0.48538	0.23912
0.55064	0.57581	0.38459
0.63459	0.66360	0.39157
0.15142	0.15835	0.19329
0.63077	0.65961	0.39754
0.36350	0.38012	-0.07473
0.32103	4.53±1.61	0.20326
0.55359	3.59±1.37	0.41249
0.19735	0.20637	0.10960
0.30810	0.32218	0.14547
0.58673	0.55751	0.63767
0.51775	0.49196	0.51810
0.86690	0.82371	0.79310
0.32521	0.30901	0.15443
0.38142	0.36242	0.29791
0.48310	0.45904	0.26603
0.47429	0.45066	0.24211
0.36883	0.35046	0.33976
0.55361	0.52604	0.36367
0.13885	0.13193	0.32880
0.34118	0.32418	0.28097
0.59714	0.56740	0.41448
0.29972	0.28479	0.34075
0.33996	0.32302	0.35769
0.72074	0.68484	0.30987
0.62419	0.59309	0.31485
0.21641	0.20563	0.14347
0.47122	0.44775	0.36467
0.42028	0.39935	0.32481

0.37477	0.35610	0.28296
0.47378	0.45018	0.31186
0.35842	0.34056	0.09067
0.31535	0.29964	0.06775
0.39495	0.37528	0.26304
0.63719	0.60545	0.47725
0.55749	0.52972	0.44736
0.49360	0.46901	0.31983
0.46655	0.44331	0.34075
0.45242	0.42989	0.31086
0.24079	0.22880	0.19827
0.49453	0.46990	0.31186
0.45219	0.42967	0.29691
0.38686	0.36759	0.24710
0.51960	0.42124	1.75±0.31
0.23276	0.22116	0.25706
0.52446	0.49834	0.76520
0.26361	0.25048	0.07273
0.64500	0.61287	0.40452
0.37051	0.30037	0.30289
0.45774	0.43494	0.31684
0.15546	0.14771	0.10761
0.41599	0.39527	0.28795
0.46925	1.58±0.32	0.32481
0.90396	0.85893	0.62571
0.29940	0.28449	0.20724
0.44047	0.41852	0.30488
0.35122	0.33373	0.24311
0.49948	0.47460	0.34573
0.40880	0.38843	0.28296
0.35266	0.33509	0.24411
0.19576	0.18601	0.13550
0.39189	0.44987	0.25606
0.33700	0.38685	0.22019
0.40714	0.46737	0.26603
0.47119	0.54089	0.30787
0.10827	0.12428	0.07074

0.38579	0.44287	0.25208
0.44526	0.51113	0.29094
0.37359	0.42886	0.24411
0.48949	0.56190	0.31983
0.26075	0.29933	0.17038
0.81394	0.96074	3.81±0.98
0.70822	0.81300	0.66556
0.94985	0.09037	0.74129
0.72619	0.83362	0.54401
0.31479	0.37688	1.82±0.18
0.40800	0.48847	2.61±0.38
0.44697	0.51309	0.37363
0.52028	0.59725	0.34972
0.54112	0.62117	0.38459
0.64077	0.73557	0.69446
1.00311	0.15151	0.70542
0.95156	0.09233	0.90270
0.87407	0.81003	0.83196
0.51331	0.58925	0.73929
0.66459	0.76291	0.64165
0.57124	0.65575	0.68350
0.60965	0.69984	0.62471
0.83284	0.95605	0.80904
0.67196	0.77137	0.77516
0.78353	0.89945	0.87679
0.73983	0.88576	0.57091
0.69108	0.79332	0.79110
0.66887	0.76782	0.63468
0.80720	0.92661	0.85089
0.54991	0.63127	0.54202
0.65098	0.74729	0.78214
0.73734	0.84642	0.80007
0.65590	0.78528	0.50615
0.80181	0.92043	0.78014
0.73022	0.83825	0.83793
4.83±1.31	0.95315	0.80107
5.93±0.80	0.76780	0.89672
0.72221	0.82906	0.63966

0.38689	0.46321	1.73±0.26
0.37549	0.43104	0.34474
0.60712	1.69±0.69	0.38061
0.50850	0.58372	0.42245
0.32408	0.38800	0.25008
0.42078	0.48302	0.23414
0.49546	0.56876	0.31684
0.26725	0.30679	0.08270
0.55419	0.63618	0.77118
0.73434	0.84297	0.62172
0.93141	0.69203	0.84989
0.23917	0.28635	2.20±0.42
0.37403	0.42936	0.43341
0.62132	0.71323	0.46629
0.42977	0.49335	0.34573
0.52827	0.60642	0.21820
0.79891	0.91710	0.43640
0.77224	0.88649	0.52010
0.47796	0.54866	0.42146
0.50316	0.57759	0.49021
0.28314	0.33898	1.18±0.14
0.81982	0.94111	0.33976
0.92035	0.56502	0.79210
0.40547	0.46546	0.30688
0.41968	0.48176	0.40751

0.44907	0.46039	0.33378
0.46247	0.54436	0.34374
0.57775	0.61000	0.42943
0.50805	0.62889	0.37762
0.20376	0.27389	0.15145
0.10724	0.15123	0.07971
0.57775	0.64869	0.42943
0.63003	0.64964	0.46829
0.88741	0.81062	0.65959
0.52011	0.54781	0.38659
0.47990	0.52065	0.35669
0.43432	0.51103	0.32282

0.32574	0.39629	0.24211
0.34183	0.54833	0.25407
0.26140	0.34945	0.19429
0.19169	0.27725	0.14248

0.61717	0.31716	0.47626
0.54874	0.30076	0.42345
0.76823	0.38766	0.59283
0.55003	0.29377	0.42445
0.48493	0.24170	0.37463
0.65081	0.32004	0.47327
0.41742	0.21967	0.38160
0.54555	0.27395	0.42146
0.41789	0.21207	0.30389
0.55200	0.27257	0.42644
0.32472	0.17108	0.23614
0.32335	0.17203	0.23514
0.35725	0.19331	0.27599
0.22996	0.12135	0.21023
0.51517	0.25004	0.37463
0.53136	0.27220	0.41050
0.27574	0.15765	0.25208
0.23432	0.13395	0.21422
0.30050	0.16690	0.23215
0.51928	0.27454	0.37762
0.37144	0.19860	0.28695
0.21907	0.12169	0.20027
0.31650	0.15869	0.23016
0.26593	0.14464	0.24311
0.27129	0.14458	0.19728
0.52314	0.26549	0.47825
0.75093	0.36153	0.68649
0.67710	0.34148	0.52309

0.10401	0.39558	0.18731
0.14108	0.38111	0.25407
0.18756	0.43038	0.33776
0.30319	0.59318	0.54600

0.24510	0.47949	0.44138
0.00664	0.12204	0.01196
0.17705	0.41818	0.31883
0.21633	0.45362	0.38957
0.14385	0.29995	0.25905
0.10955	0.28339	0.19728
0.10180	0.27269	0.18333
0.12670	0.24089	0.22816
0.05311	0.18890	0.09565
0.15602	0.42103	0.28097
0.41661	0.73244	0.75025
0.44483	0.77683	0.80107

0.21313	0.45094	0.33278
0.34203	0.73602	0.53405
0.27566	0.58482	0.43042
0.20611	0.43223	0.32182
0.20547	0.42345	0.32083
0.31523	0.66055	0.49220
0.40839	0.84722	0.63767
0.15761	0.34226	0.24610
0.14549	0.31179	0.22717
0.20100	0.42671	0.31385
0.47284	0.96795	0.73830
0.42817	0.88053	0.66855
0.13847	0.31706	0.21621
0.13656	0.31966	0.21322
0.24503	0.50543	0.38260
0.24248	0.49427	0.37861
0.26673	0.55606	0.41648
0.23355	0.48737	0.36467
0.10146	0.21611	0.15842
0.23291	0.48652	0.36367
0.44341	0.90227	0.90469
0.39818	0.83745	0.62172
0.34586	0.71318	0.54002
0.44157	0.90688	0.68948
0.21441	0.45289	0.33477

0.16045	0.42921	0.28894
0.10180	0.31365	0.18333
0.16764	0.46276	0.30190
0.09184	0.30541	0.16539
0.11287	0.32261	0.20326
0.16100	1.39±0.36	0.28994
0.15989	0.44013	0.28795
0.25616	0.56582	0.46131
0.13168	0.39113	0.23713
0.14662	0.46724	0.26403
0.18424	0.55768	0.33179
0.31426	0.66347	0.56593
0.20139	0.35357	0.36267
0.31094	0.62617	0.55995
0.10291	0.39204	0.18532
0.26059	0.71583	0.46928
0.22850	0.63515	0.41149
0.12061	0.29922	0.21721
0.34690	0.64118	0.62471
0.32145	0.61887	0.57888
0.41329	0.72084	0.74428
0.32532	0.65393	0.58586
0.26502	0.63430	0.47725
0.48609	0.80070	0.41448
0.58994	0.97176	0.29592
0.33524	0.55222	0.52807
0.45743	0.75348	0.28795
0.58469	0.96311	0.36765
0.40858	0.67302	0.38659
0.39113	0.64427	0.38758
0.46213	0.76122	0.66756
0.32468	0.53482	0.61475