

Table S2. LC-MS Values detected for 2-AB labelled N-glycans for normal human serum and two representative examples

Glycan Peak	GU	Glycan Structure	Monosaccharide composition	Monoisotopic mass	Theoretical mass (m/z)	Ion	Normal human serum control	Example 0001	Example 0002
							Experimental mass (m/z)	Experimental mass (m/z)	Experimental mass (m/z)
1	4.80	A1	HexNAc ₃ Hex ₃	1233.4759	615.7307	[M-2H] ⁻²	-	615.7347	615.7307
		M4	Hex ₄	1192.4494	595.2174	[M-2H] ⁻²	-	-	595.2174
2	5.09	FA1	dHex ₁ HexNAc ₃ Hex ₃	1379.5338	688.7596	[M-2H] ⁻²	-	688.7495	688.7596
		A2	HexNAc ₄ Hex ₃	1436.5553	717.2704	[M-2H] ⁻²	-	717.2668	717.2704
3	5.33	A1G1	HexNAc ₃ Hex ₄	1395.5287	696.7571	[M-2H] ⁻²	-	-	696.7571
		A2B	HexNAc ₅ Hex ₃	1639.6346	818.8100	[M-2H] ⁻²	-	688.7495	818.8100
4	5.46	A1G1	HexNAc ₃ Hex ₄	1395.5287	696.7571	[M-2H] ⁻²	-	-	696.7571
5	5.80	FA2	dHex ₁ HexNAc ₄ Hex ₃	1582.6132	790.2993	[M-2H] ⁻²	790.2950	790.2993	790.2950
		M5	Hex ₅	1354.5022	676.2438	[M-2H] ⁻²	676.2430	676.2537	676.2430
		FA2B	dHex ₁ HexNAc ₅ Hex ₃	1785.6926	891.8390	[M-2H] ⁻²	891.8362	891.8362	891.8424
6	6.17	FA1G1	dHex ₁ HexNAc ₃ Hex ₄	1541.5866	769.7860	[M-2H] ⁻²	769.7758	769.7814	769.7928
		A2G1	HexNAc ₄ Hex ₄	1598.6081	798.2968	[M-2H] ⁻²	798.2897	798.2995	798.3013
7	6.51	A2BG1	HexNAc ₅ Hex ₄	1801.6875	899.8365	[M-2H] ⁻²	899.8354	899.8354	899.8478
		FA2G1	dHex ₁ HexNAc ₄ Hex ₄	1744.6660	871.3257	[M-2H] ⁻²	871.3254	871.3254	871.3132
8	6.64	A2BG1	HexNAc ₅ Hex ₄	1801.6875	899.8365	[M-2H] ⁻²	899.8354	899.8416	899.8478
		M4A1G1	HexNAc ₃ Hex ₅	1557.5815	777.7835	[M-2H] ⁻²	777.7748	777.7806	777.7977
9	6.76	FA2G1	dHex ₁ HexNAc ₄ Hex ₄	1744.6660	871.3257	[M-2H] ⁻²	871.3375	871.3132	871.3314
10	6.91	FA2BG1	dHex ₁ HexNAc ₅ Hex ₄	1947.7454	972.8654	[M-2H] ⁻²	972.8658	972.8658	972.8530
11	7.05	FA2BG1	dHex ₁ HexNAc ₅ Hex ₄	1947.7454	972.8654	[M-2H] ⁻²	972.8787	972.8658	972.8723
		M6	Hex ₆	1516.5550	757.2702	[M-2H] ⁻²	757.2675	757.2787	757.2731
12	7.13	A1G1S1	HexNAc ₃ Neu5Ac ₁ Hex ₄	1686.6241	842.3048	[M-2H] ⁻²	842.3096	842.3036	842.3036
		A2G2	HexNAc ₄ Hex ₅	1760.6609	879.3232	[M-2H] ⁻²	879.3235	879.3356	879.3113
13	7.20	A1G1S1	HexNAc ₃ Neu5Ac ₁ Hex ₄	1686.6241	842.3048	[M-2H] ⁻²	-	-	842.3036
		A2BG2	HexNAc ₅ Hex ₅	1963.7403	980.8629	[M-2H] ⁻²	-	-	980.8536
		M5A1G1	HexNAc ₃ Hex ₆	1719.6344	858.8099	[M-2H] ⁻²	-	858.8076	858.7955
		FA2G2	dHex ₁ HexNAc ₄ Hex ₅	1906.7188	952.3521	[M-2H] ⁻²	952.3431	952.3367	952.3367
14	7.53	A2G1S1	HexNAc ₄ Neu5Ac ₂ Hex ₄	1889.7036	943.8445	[M-2H] ⁻²	943.8297	943.8423	943.8171
		FA1G1S1	dHex ₁ HexNAc ₃ Neu5Ac ₂ Hex ₄	1832.6820	915.3337	[M-2H] ⁻²	-	915.3328	915.3328
		FA2BG2	dHex ₁ HexNAc ₅ Hex ₅	2109.7982	1053.8918	[M-2H] ⁻²	1053.8861	1053.8728	1053.8662
15	7.70	M7	Hex ₇	1678.6078	838.2966	[M-2H] ⁻²	-	838.3022	-
		A2BG1S1	HexNAc ₅ Neu5Ac ₁ Hex ₄	2092.7829	1045.3842	[M-2H] ⁻²	-	-	1045.3936
		A2BG1S1	HexNAc ₅ Neu5Ac ₁ Hex ₄	2092.7829	1045.3842	[M-2H] ⁻²	1045.3737	1045.4003	1045.3737
16	7.85	FA2G1S1	dHex ₁ HexNAc ₄ Neu5Ac ₁ Hex ₄	2035.7614	1016.8734	[M-2H] ⁻²	-	-	1016.8688
		M4A1G1S1	HexNAc ₃ Neu5Ac ₁ Hex ₅	1848.6770	923.3312	[M-2H] ⁻²	923.3304	923.3367	923.3367
		M7	Hex ₇	1678.6078	838.2966	[M-2H] ⁻²	838.3081	838.3081	838.3081
		FA2G1S1	dHex ₁ HexNAc ₄ Neu5Ac ₁ Hex ₄	2035.7614	1016.8734	[M-2H] ⁻²	1016.8753	1016.8622	1016.8557
17	7.93	FA2BG1S1	dHex ₁ HexNAc ₅ Neu5Ac ₁ Hex ₄	2238.8408	1118.4131	[M-2H] ⁻²	1118.4148	1118.4080	1118.4080

18	8.06	FA2BG1S1	dHex ₁ HexNAc ₅ Neu5Ac ₁ Hex ₄	2238.8408	1118.4131	[M-2H] ⁻²	1118.3943	1118.4148	1118.4011
19	8.27	A2G2S1	HexNAc ₄ Neu5Ac ₁ Hex ₅	2051.7563	1024.8709	[M-2H] ⁻²	1024.8574	1024.8771	1024.8640
		A3G3	HexNAc ₅ Hex ₆	2125.7931	1061.8893	[M-2H] ⁻²	-	1061.8716	1061.8783
20	8.39	A2BG2S1	HexNAc ₅ Neu5Ac ₁ Hex ₅	2254.8357	1126.4106	[M-2H] ⁻²	-	1126.4204	-
		M5A1G1S1	HexNAc ₃ Neu5Ac ₁ Hex ₆	2010.7298	1004.3576	[M-2H] ⁻²	-	-	-
21	8.55	FA3G3	dHex ₁ HexNAc ₅ Hex ₆	2271.8510	1134.9182	[M-2H] ⁻²	-	-	-
		M8	Hex ₈	1840.6606	919.3230	[M-2H] ⁻²	-	-	-
		A2G2S1	HexNAc ₄ Neu5Ac ₁ Hex ₅	2051.7563	1024.8709	[M-2H] ⁻²	-	-	-
22	8.67	FA2G2S1	dHex ₁ HexNAc ₄ Neu5Ac ₁ Hex ₅	2197.8142	1097.8998	[M-2H] ⁻²	1097.8971	1097.9039	1097.8971
		M8	Hex ₈	1840.6606	919.3230	[M-2H] ⁻²	-	919.3272	919.3334
23	8.92	FA2BG2S1	dHex ₁ HexNAc ₅ Neu5Ac ₁ Hex ₅	2400.8936	1199.4395	[M-2H] ⁻²	1199.4496	1199.4211	1199.4282
		A2F1G2S1	dHex ₁ HexNAc ₄ Neu5Ac ₁ Hex ₅	2197.8142	1097.8998	[M-2H] ⁻²	1097.9106	-	1097.8835
24	9.08	A2G2S2	HexNAc ₄ Neu5Ac ₂ Hex ₅	2342.8518	1170.4186	[M-2H] ⁻²	1170.4243	1170.4314	1170.4103
		FA2G2S2	dHex ₁ HexNAc ₄ Neu5Ac ₂ Hex ₅	2488.9097	1243.4476	[M-2H] ⁻²	1243.4333	1243.4333	1243.4261
		A2G2S2	HexNAc ₄ Neu5Ac ₂ Hex ₅	2342.8518	1170.4186	[M-2H] ⁻²	1170.4172	1170.4103	1170.4103
25	9.50	M9	Hex ₉	2002.7135	1000.3495	[M-2H] ⁻²	1000.3363	1000.3428	1000.3493
		A3G3S1	HexNAc ₅ Neu5Ac ₁ Hex ₆	2416.8885	1207.4370	[M-2H] ⁻²	1207.4473	1207.4145	1207.4045
		A3BG3S1	HexNAc ₆ Neu5Ac ₁ Hex ₆	2619.9679	1308.9767	[M-2H] ⁻²	-	-	1308.9713
		FA3G3S1	dHex ₁ HexNAc ₅ Neu5Ac ₁ Hex ₆	2562.9464	1280.4659	[M-2H] ⁻²	-	1280.4542	1280.4689
26	9.67	FA3BG3S1	dHex ₁ HexNAc ₅ Neu5Ac ₁ Hex ₆	2766.0258	1382.0056	[M-2H] ⁻²	-	-	-
		A2BG2S2	HexNAc ₅ Neu5Ac ₂ Hex ₅	2545.9311	1271.9583	[M-2H] ⁻²	-	1271.9691	1271.9691
		A3F1G3S1	dHex ₁ HexNAc ₅ Neu5Ac ₁ Hex ₆	2562.9464	1280.4659	[M-2H] ⁻²	-	-	1280.4542
27	9.91	FA2G2S2	dHex ₁ HexNAc ₄ Neu5Ac ₂ Hex ₅	2488.9097	1243.4476	[M-2H] ⁻²	1243.4333	1243.4406	1243.4333
		FA2BG2S2	dHex ₁ HexNAc ₅ Neu5Ac ₂ Hex ₅	2691.9890	1344.9872	[M-2H] ⁻²	1344.9617	1344.9841	1344.9767
28	10.07	A2F1G2S2	dHex ₁ HexNAc ₄ Neu5Ac ₂ Hex ₅	2488.9097	1243.4476	[M-2H] ⁻²	1243.4623	1243.4406	1243.4551
		M9Glc	HexNAc ₁ Hex ₉	2205.7928	1101.8891	[M-2H] ⁻²	-	-	-
29	10.19	A3G3S2	HexNAc ₅ Neu5Ac ₂ Hex ₆	2707.9839	1352.9847	[M-2H] ⁻²	1352.9846	1352.9846	1352.9620
		A3BG3S2	HexNAc ₆ Neu5Ac ₂ Hex ₆	2911.0633	1454.5244	[M-2H] ⁻²	-	-	-
30	10.47	A4G4S1	HexNAc ₆ Neu5Ac ₁ Hex ₇	3655.3070	1826.6462	[M-2H] ⁻²	-	-	-
31	10.67	FA3G3S2	dHex ₁ HexNAc ₅ Neu5Ac ₂ Hex ₆	2854.0419	1426.0137	[M-2H] ⁻²	-	1426.0101	1426.0333
		A3G3S2	HexNAc ₅ Neu5Ac ₂ Hex ₆	2707.9839	1352.9847	[M-2H] ⁻²	1352.9998	1352.9696	1352.9620
		A3G3S3	HexNAc ₅ Neu5Ac ₃ Hex ₆	2999.0794	1498.5324	[M-2H] ⁻²	-	-	-
32	10.83	A3F1G3S2	dHex ₁ HexNAc ₅ Neu5Ac ₂ Hex ₆	2854.0419	1426.0137	[M-2H] ⁻²	-	-	1426.0178
		A4G4S1	HexNAc ₆ Neu5Ac ₁ Hex ₇	3655.3070	1826.6462	[M-2H] ⁻²	-	-	-
33	11.02	A3G3S3	HexNAc ₅ Neu5Ac ₃ Hex ₆	2999.0794	1498.5324	[M-2H] ⁻²	-	1498.5243	1498.5162
		A3BG3S3	HexNAc ₆ Neu5Ac ₃ Hex ₆	3202.1587	1600.0721	[M-2H] ⁻²	-	-	-
34	11.43	FA3G3S3	dHex ₁ HexNAc ₅ Neu5Ac ₃ Hex ₆	3145.1373	1571.5614	[M-2H] ⁻²	-	-	1571.5516

		FA3BG3S3	dHex ₁ HexNAc ₆ Neu5Ac ₃ Hex ₆	3348.2166	1673.1010	[M-2H] ⁻²	-	-	-
		A4G4S2	HexNAc ₆ Neu5Ac ₂ Hex ₇	3073.1161	1535.5508	[M-2H] ⁻²	-	-	-
		A3G3S3	HexNAc ₅ Neu5Ac ₃ Hex ₆	2999.0794	1498.5324	[M-2H] ⁻²	1498.5560	1498.5243	1498.5322
35	11.57	A3BG3S3	HexNAc ₆ Neu5Ac ₃ Hex ₆	3202.1587	1600.0721	[M-2H] ⁻²	-	-	-
36	11.77	FA3G3S3	dHex ₁ HexNAc ₅ Neu5Ac ₃ Hex ₆	3145.1373	1571.5614	[M-2H] ⁻²	-	-	1571.5516
		A3G3S3	HexNAc ₅ Neu5Ac ₃ Hex ₆	2999.0794	1498.5324	[M-2H] ⁻²	1498.5560	1498.5162	1498.5243
37	11.93	A3F1G3S3	dHex ₁ HexNAc ₅ Neu5Ac ₃ Hex ₆	3145.1373	1571.5614	[M-2H] ⁻²	1571.5516	1571.5516	1571.5435
		FA3BG3S3	dHex ₁ HexNAc ₆ Neu5Ac ₃ Hex ₆	3348.2166	1673.1010	[M-2H] ⁻²	-	-	-
		A4G4S3	HexNAc ₆ Neu5Ac ₃ Hex ₇	3364.2116	1681.0985	[M-2H] ⁻²	1681.1193	1681.0941	-
38	12.00	A3F1G3S3	dHex ₁ HexNAc ₅ Neu5Ac ₃ Hex ₆	3145.1373	1571.5614	[M-2H] ⁻²	1571.5435	1571.5516	1571.5110
39	12.21	A4G4S3	HexNAc ₆ Neu5Ac ₃ Hex ₇	3364.2116	1681.0985	[M-2H] ⁻²	1681.1193	-	-
40	12.32	A4F1G3S3	dHex ₁ HexNAc ₆ Neu5Ac ₃ Hex ₆	3348.2166	1673.1010	[M-2H] ⁻²	-	-	-
		A3F2G3S3	dHex ₂ HexNAc ₅ Neu5Ac ₃ Hex ₆	3291.1952	1644.5903	[M-2H] ⁻²	-	1644.5774	-
		A4G4S4	HexNAc ₆ Neu5Ac ₄ Hex ₇	3655.3070	1826.6462	[M-2H] ⁻²	-	-	-
41	23.57	A3F2G3S3	dHex ₂ HexNAc ₅ Neu5Ac ₃ Hex ₆	3291.1952	1644.5903	[M-2H] ⁻²	-	-	-
		A4F2G3S3	dHex ₂ HexNAc ₆ Neu5Ac ₃ Hex ₆	3494.2746	1746.1300	[M-2H] ⁻²	-	-	-
42	12.82	A4G4S4	HexNAc ₆ Neu5Ac ₄ Hex ₇	3655.3070	1826.6462	[M-2H] ⁻²	-	-	-
43	13.14	A4G4S4	HexNAc ₆ Neu5Ac ₄ Hex ₇	3655.3070	1826.6462	[M-2H] ⁻²	-	-	-
		A4G4S4	HexNAc ₆ Neu5Ac ₄ Hex ₇	3655.3070	1826.6462	[M-2H] ⁻²	-	-	-
44	13.27	FA4G4S4	dHex ₁ HexNAc ₆ Neu5Ac ₄ Hex ₇	3801.3649	1899.6752	[M-2H] ⁻²	-	-	-
		A4BG4S4	HexNAc ₇ Neu5Ac ₄ Hex ₇	3858.3864	1928.1859	[M-2H] ⁻²	-	-	-
45	13.63	A4F1G4S4	dHex ₁ HexNAc ₆ Neu5Ac ₄ Hex ₇	3801.3649	1899.6752	[M-2H] ⁻²	-	-	-
		A4F2G4S4	dHex ₂ HexNAc ₆ Neu5Ac ₄ Hex ₇	3947.4228	1972.7041	[M-2H] ⁻²	-	-	-
46	14.22	A4F3G4S4	dHex ₃ HexNAc ₆ Neu5Ac ₄ Hex ₇	4093.4807	2045.7331	[M-2H] ⁻²	-	-	-
		A4G4Lac1S4	HexNAc ₇ Neu5Ac ₄ Hex ₈	4020.4392	2009.2123	[M-2H] ⁻²	-	-	-