

Supplemental Table 1. Identified HR O-glycopeptides of IgA1 (Ale) myeloma protein

Glycan structure	<i>m/z</i>	Relative abundance (%) ^a	Mass error (ppm)
C-terminal fragments			
Peptide Sequence: ²²² VPSTPPTPSPSTPPTPSPSCCHPR ²⁴⁵ (released by AK183 + trypsin)			
GalNAc ₆ Gal ₄	1431.9515	0.73	2.073
GalNAc ₆ Gal ₃	1377.9324	1.28	1.113
GalNAc ₅ Gal ₅	1418.2766	4.60	1.928
GalNAc ₅ Gal ₄	1364.2567	24.24	0.367
GalNAc ₅ Gal ₄ NeuAc ₁	1461.2893	0.20	1.429
GalNAc ₅ Gal ₃	1310.2415	12.19	2.265
GalNAc ₅ Gal ₂	1256.2238	1.27	2.867
GalNAc ₄ Gal ₄	1296.5641	34.02	1.466
GalNAc ₄ Gal ₄ NeuAc ₁	1393.5904	0.59	-2.488
GalNAc ₄ Gal ₃	1242.5404	17.96	-1.556
GalNAc ₄ Gal ₂	1188.5268	2.29	-0.055
GalNAc ₃ Gal ₃	1174.8495	0.63	-1.742
Peptide Sequence: ²²⁸ TPSPSTPPTPSPSCCHPR ²⁴⁵ (released by TIGR4 + trypsin)			
GalNAc ₅ Gal ₃	1117.4706	0.95	1.671
GalNAc ₅ Gal ₂	1063.4525	1.10	1.035
GalNAc ₄ Gal ₄	1103.7929	5.42	-0.452
GalNAc ₄ Gal ₃	1049.7754	25.07	-0.317
GalNAc ₄ Gal ₃ NeuAc ₁	1146.8092	0.40	1.570
GalNAc ₄ Gal ₂	995.7592	10.13	1.139
GalNAc ₄ Gal ₁	941.7413	0.91	0.956
GalNAc ₃ Gal ₃	982.0826	34.63	-0.135
GalNAc ₃ Gal ₃ NeuAc ₁	1079.1162	0.55	1.669
GalNAc ₃ Gal ₂	928.0656	18.28	0.575
GalNAc ₃ Gal ₁	874.0488	2.22	1.603
GalNAc ₂ Gal ₂	860.3724	0.35	0.775
Peptide Sequence: ²³² STPPTPSPSCCHPR ²⁴⁵ (released by HK50 + trypsin)			
GalNAc ₃ Gal ₁	746.6536	1.81	1.711
GalNAc ₂ Gal ₂	732.9774	5.79	1.015
GalNAc ₂ Gal ₁	678.9592	34.73	-0.181
GalNAc ₂	624.9426	0.74	1.511
GalNAc ₁ Gal ₁	611.266	56.34	0.016
GalNAc ₁	557.2492	0.58	1.575
N-terminal fragments			
Peptide Sequence: ²⁰⁸ HYTNPSQDVTVPCVPSTPP ²²⁷ (released by TIGR4 + trypsin)			
GalNAc ₁ Gal ₁	1251.0752 ^b	97.88	1.731
GalNAc ₁	1170.0487 ^b	0.22	1.766
Naked peptide	1068.5088 ^b	1.76	1.746
Peptide Sequence: ²⁰⁸ HYTNPSQDVTVPCVPSTPPTPSP ²³¹ (released by HK50 + trypsin)			
GalNAc ₃ Gal ₃	1205.2054	62.42	0.493
GalNAc ₃ Gal ₃ NeuAc ₁	1302.2375	1.84	3.621
GalNAc ₃ Gal ₂	1151.187	28.14	1.53
GalNAc ₃ Gal ₂ NeuAc ₁	1248.2175	0.63	1.908
GalNAc ₃ Gal ₁	1097.1686	2.07	2.578
GalNAc ₂ Gal ₂	1083.4928	4.18	2.475
GalNAc ₂ Gal ₁	1029.4734	0.72	0.609

^aRelative abundance of each glycopeptides is shown as mean value from two independent on-line LC FT ICR mass spectra of glycopeptides with or without alkylation.

^bGlycopeptides are ionized as 2+ charged ions.