

## Supplementary Information

### Quantitative Glycoproteomics of High-Density Lipoproteins

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#### Table of Contents

<b>1. Supplemental Tables.....</b>	<b>1</b>
<b>2. Supplemental Figures .....</b>	<b>6</b>

#### 1. Supplemental Tables

**Table S1:** *The comparison between current HDL glycopeptide quantification method to previous methods*

	J.Huang et al.	Current method
HDL proteins (n)	8	33
HDL peptides (n)	NA	47
HDL glycopeptides (n)	23	170
Absolute quantified proteins (n)	0	5

**Table S2: List of proteins measured in the optimized MRM method.**

Abbrev	Common Name	Uniprot code
APOA	Apolipoprotein(A)	Q9UIR5
APOA2	Apolipoprotein A-II	P02652
APOA4	Apolipoprotein A-IV	P06727
APOA5	Apolipoprotein A-V	Q6Q788
APOC2	Apolipoprotein C-II	P02655
APOC4	Apolipoprotein C-IV	P55056
APOF	Apolipoprotein F	Q13790
APOL1	Apolipoprotein L1	O14791
HPTR	Haptoglobin-related protein	P00739
LCAT	Phosphatidylcholine-sterol acyltransferase	P04180
PLTP	Phospholipid transfer protein	P55058
A1AT	Alpha-1-antitrypsin	P01009
A1BG	Alpha-1B-glycoprotein	P04217
AACT	Alpha-1-antichymotrypsin	P01011
APOA1	Apolipoprotein A-I	P02647
APOB	Apolipoprotein B-100	P04114
APOC1	Apolipoprotein C-I	P02654
APOC3	Apolipoprotein C-III	P02656
APOD	Apolipoprotein D	P05090
APOE	Apolipoprotein E	P02649
APOH	Beta-2-glycoprotein 1	P02749
APOM	Apolipoprotein M	O95445
C1S	Complement C1s subcomponent	P09871
CLUS	Clusterin	P10909
CO3	Complement C3	P01024
FETUA	Alpha-2-HS-glycoprotein	P02765
HEMO	Hemopexin	P02790
HEP2	Heparin cofactor 2	P05546
KNG1	Kininogen-1	P01042
PON1	Serum paraoxonase/arylesterase 1	P27169
SAA	Serum amyloid A protein (SAA4 variant)	B2R5G8
SAA1	Serum amyloid A-1 protein	PODJ18
SAA2	Serum amyloid A-2 protein	PODJ19

**Table S3: MRM Transitions and (glyco)peptide details.**

Protein Group	Compound	Precursor Ion	Product Ion (Quant)	Product Ion (Qual)	Ret Time (min)	Delta Ret Time	Collision Energy	Peptide Sequence	Charge State	Glycan Position <sup>1</sup>	Glycan Composition (Hex_HexNAc_Fuc_NeuAc)
ISTD	ISTD_RPAIANNPVPR	494.3	631.4	534.3	16.3	1.5	12	RPAIANNPVPR	3		
ISTD	ISTD_RPAIANNPVPR_z2	740.9	1324.8	631.4	16.3	1.5	15	RPAIANNPVPR	2		
ISTD	ISTD_RPAIANNPVPR_z4	371	534.3	631.4	16.3	1.5	10	RPAIANNPVPR	4		
A1AT	A1AT_AVLTIDEK	444.8	718.4	605.3	12.2	1.5	11	AVLTIDEK	2		
A1AT	A1AT_70_5402	1078.5	366.1	274.1	46.6	1.5	26	QLAHQSN <sup>70</sup> STNIFFSPVSIATAFAMLSLGTK	5	70	5402
A1AT	A1AT_70_5412	1107.7	366.1		45.3	1.5	27	QLAHQSN <sup>70</sup> STNIFFSPVSIATAFAMLSLGTK	5	70	5412
A1AT	A1AT_107_5401	1122.4	366.1		43.2	1.5	30	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	5401
A1AT	A1AT_107_5402	1180.6	366.1		43.2	1.5	29	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	5402
A1AT	A1AT_107_5411	1151.6	366.1		42.9	1.5	28	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	5411
A1AT	A1AT_107_5412	1209.8	366.1		43.2	1.5	30	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	5412
A1AT	A1AT_107_6503	1311.8	366.1		43.6	1.5	33	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	6503
A1AT	A1AT_107_6512	1282.9	366.1		43.5	1.5	30	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	6512
A1AT	A1AT_107_6513	1341	366.1		43.5	1.5	34	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	6513
A1AT	A1AT_107_6501/6520	1195.4	366.1	274.1	43.2	1.5	30	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	6501/6520
A1AT	A1AT_107_6502/6521	1253.6	366.1		43.1	1.5	30	ADTHDEILEGLNFN <sup>107</sup> LTEIPEAQIHGEGFQELLR	5	107	6502/6521
A1AT	A1AT_271_5401	1223.9	366.1		29.6	1.5	30	YLGN <sup>271</sup> ATAIFFLPDEGK	3	271	5401
A1AT	A1AT_271_5402	991.2	366.1		29.6	1.5	24	YLGN <sup>271</sup> ATAIFFLPDEGK	4	271	5402
A1AT	A1AT_271MC_5402	1149.9	366.1		42.9	1.5	28	YLGN <sup>271</sup> ATAIFFLPDEGKQLHLENELTHDIITK	5	271	5402
A1AT	A1AT_271_5412	1027.7	366.1		29.6	1.5	25	YLGN <sup>271</sup> ATAIFFLPDEGK	4	271	5412
A1AT	A1AT_271MC_5412	1179.1	366.1		42.9	1.5	29	YLGN <sup>271</sup> ATAIFFLPDEGKQLHLENELTHDIITK	5	271	5412
A1AT	A1AT_271_55110_z3	1339.9	366.1	274.1	29.5	1.5	22	YLGN <sup>271</sup> ATAIFFLPDEGK	3	271	5511
A1AT	A1AT_271_6503	1155	274.1	366.1	29.8	1.5	30	YLGN <sup>271</sup> ATAIFFLPDEGK	4	271	6503
A1BG	A1BG_LLELTGPK	435.8	644.4	757.4	15.5	1.5	11	LLELTGPK	2		

<sup>1</sup> Denotes the position in the protein sequence that includes the signal peptide

Protein Group	Compound	Precursor Ion	Product Ion (Quant)	Product Ion (Qual)	Ret Time (min)	Delta Ret Time	Collision Energy	Peptide Sequence	Charge State	Glycan Position <sup>1</sup>	Glycan Composition (Hex, HexNAc, Fuc, NeuAc)
A18G	A18G_179_5421/5402	1209.5	366.1		24.4	1.5	36	EGDHEFLVPEAQEDVEATFPVHQPGN <sup>177</sup> YSCYSR	5	179	5421/5402
AACT	AACT_ADLSGITGAR	480.8	661.4	404.2	11.8	1.5	13	ADLSGITGAR	2		
AACT	AACT_106_7603	1407.3	366.1		20.6	1.5	35	FN <sup>106</sup> LETSEAEIHQSFQHLR	4	106	7603
AACT	AACT_106_7604	1480.1	366.1		24.1	1.5	35	FN <sup>106</sup> LETSEAEIHQSFQHLR	4	106	7604
AACT	AACT_127_5401	1020.4	366.1		25.1	1.5	32	TLN <sup>127</sup> QSSDELQLSMGNAMFVK	4	127	5401
AACT	AACT_127_8500	1120.2	366.1		25.3	1.5	34	TLN <sup>127</sup> QSSDELQLSMGNAMFVK	4	127	8500
AACT	AACT_271_6502	1441.6	366.1		19.6	1.5	35	YTG <sup>271</sup> N <sup>271</sup> ASALFILPDQDK	3	271	6502
AACT	AACT_271_6512	1118.2	366.1		19.5	1.5	35	YTG <sup>271</sup> N <sup>271</sup> ASALFILPDQDK	4	271	6512
AACT	AACT_271_7602	1172.7	366.1		19.2	1.5	35	YTG <sup>271</sup> N <sup>271</sup> ASALFILPDQDK	4	271	7602
AACT	AACT_271_7603	1245.8	366.1		19.7	1.5	35	YTG <sup>271</sup> N <sup>271</sup> ASALFILPDQDK	4	271	7603
APOA	APOA_NPDAAVAPCYTR_z2	749.3	398.2	859.4	20.8	1.5	22	NPDAAVAPCYTR	2		
APOA1	APOA1_DLATVYVDVVK	618.3	736.4	936.5	26.5	1.5	17	DLATVYVDVVK	2		
APOA1	APOA1_LAEYHAK	416.2	647.3	718.4	3.9	1.5	10	LAEYHAK	2		
APOA2	APOA2_AGTELVNFLSYFVELGTQPATQ_z2	1193.1	416.2	815.4, 945.5	47	1.5	38	AGTELVNFLSYFVELGTQPATQ	2		
APOA2	APOA2_SKEQLTPLIK_z2	578.9	941.6	470.3, 571.4	13	1.5	16	SKEQLTPLIK	2		
APOA2	APOA2_35_11010_z2	1503.7	274.1		33.9	3	49	EPCVESLV <sup>35</sup> QYFQVTDYDGK	2	35	1101
APOA2	APOA2_35_11020_z3	1099.8	274.1		33.2	1.5	35	EPCVESLV <sup>35</sup> QYFQVTDYDGK	3	35	1102
APOA2	APOA2_88_11010_z2	1457.2	274.1		45.5	1.5	48	AGTELVNFLSYFVELGTQPATQ	2	88/95	1101
APOA2	APOA2_95_11010_z2	1521.2	274.1		45.3	1.5	50	AGTELVNFLSYFVELGTQPATQ	2	88/95	1101
APOA4	APOA4_LAPLAEDVR_z2	492.3	274.2	589.3, 702.4	13.8	1.5	13	LAPLAEDVR	2		
APOA4	APOA4_LGEVNTYAGDLQK_z2	704.4	300.2	631.3, 1009.5	14.4	1.5	21	LGEVNTYAGDLQK	2		
APOA5	APOA5_AQLLGGVDEAWALLQGLQSR_z3	709.1	801.5	200.1, 560.3	43.3	1.5	21	AQLLGGVDEAWALLQGLQSR	3		
APOB	APOB_AHLDIAGSLEGLHR_z3	496.9	209.1	482.3, 611.3	17.6	1.5	13	AHLDIAGSLEGLHR	3		
APOB	APOB_GFEPTLEALFGK	654.8	975.6	488.5	32.2	1.5	14	GFEPTLEALFGK	2		
APOB	APOB_185_52000_z3	1149.2	366.1		23.1	1.5	18	QVLFDTVYGN <sup>185</sup> CSTHFTVK	3	185	5200
APOB	APOB_983_5401	1366.6	366.1		24.2	1.5	35	QVFPGLNYCTSGAYSN <sup>983</sup> ASSTDSASYPLTGDR	4	983	5401
APOB	APOB_983_54020_z4	1439.6	366.1	274.1	24.6	1.5	24	QVFPGLNYCTSGAYSN <sup>983</sup> ASSTDSASYPLTGDR	4	983	5402
APOB	APOB_3224_54020_z3	982.7	274.1	366.1	3	1.5	15	SYN <sup>3224</sup> ETK	3	3224	5402
APOB	APOB_3411_5401	1174.2	366.1		10.4	1.5	30	FVEGSHN <sup>3411</sup> STVSLTTK	3	3411	5401
APOC1	APOC1_OSELSAK	381.7	305.2	418.3	3.6	1.5	9	OSELSAK	2		
APOC2	APOC2_STAAMSTYTGIFTDQVLSVK_z3	745.1	446.3	1002.6, 1149.7	42.2	1.5	22	STAAMSTYTGIFTDQVLSVK	3		
APOC2	APOC2_TYLPVAVDEK_z2	518.3	237.1	265.1, 658.3	13.4	1.5	14	TYLPVAVDEK	2		
APOC3	APOC3_DALSSVQESQVAQQAR	858.9	502.3	887.5	13.6	1.5	26	DALSSVQESQVAQQAR	2		
APOC3	APOC3_GWVTDGFSSLK	598.8	244.1	854.4	21.4	1.5	17	GWVTDGFSSLK	2		
APOC3	APOC3_94_0300	916.1	204.1		28.4	1.5	22	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	0300
APOC3	APOC3_94_0310	975.4	204.1		28.5	1.5	24	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	0310
APOC3	APOC3_94A_11000_z2	1251.6	366.1		29.4	1.5	40	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	2	94	1100
APOC3	APOC3_94AMC_11000_z3	915.8	366.1		28.4	1.5	28	DKFSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1100
APOC3	APOC3_94_1101	931.8	274.1		29.4	1.5	22	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1101
APOC3	APOC3_94A_11010_z2	1397.1	274.1		29.4	1.5	45	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	2	94	1101
APOC3	APOC3_94Aoff_1101	908.1	274.1		29.4	1.5	22	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1101
APOC3	APOC3_94MC_1101	989.1	274.1		28.4	1.5	24	DKFSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1101
APOC3	APOC3_94_1102	1028.8	274.1		30	1.5	25	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	2	94	1102
APOC3	APOC3_94A_11020_z2	1542.7	274.1		30	1.5	51	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	2	94	1102
APOC3	APOC3_94Aoff_1102	1005.1	274.1		30	1.5	24	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1102
APOC3	APOC3_94MC_1102	1109.8	274.1		29.2	1.5	27	DKFSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1102
APOC3	APOC3_94MC_11020_z3	1086.2	274.1		29	1.5	34	DKFSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1102
APOC3	APOC3_94_1111	980.4	274.1		30.1	1.5	24	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1111
APOC3	APOC3_94_1202	1096.5	274.1		29.9	1.5	27	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1202
APOC3	APOC3_94AMC_12020_z3	1177.5	274.1		26.3	1.5	38	DKFSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1202
APOC3	APOC3_94_1210	951.1	366.1		26.9	1.5	23	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1210
APOC3	APOC3_94_1300	970.1	366.1		29.6	1.5	23	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	1300
APOC3	APOC3_94_2110	937.4	366.1		29.3	1.5	22	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	2110
APOC3	APOC3_94AMC_22100_z3	1086.2	366.1		25.4	1.5	34	DKFSEFWLDLPEVRPT <sup>94</sup> SAVAA	3	94	2210
APOC3	APOC3_94A_ungly_z2	1069	1097.6		28.5	2	17	FSEFWLDLPEVRPT <sup>94</sup> SAVAA	2	94	Unglycosylated
APOC4	APOC4_GFMQTYDDHLR_z3	515.9	177.1	425.3, 818.4	17.4	1.5	14	GFMQTYDDHLR	3		
APOD	APOD_VLNQELR	436.3	659.4	545.3	8.9	1.5	11	VLNQELR	2		
APOD	APOD_65_54010_z3	1148.1	366.1	274.1	17.4	1.5	18	CIQAN <sup>65</sup> YSLMENGK	3	65	5401
APOD	APOD_65_54020_z3	1239.1	366.1	274.1	17	1.5	20	CIQAN <sup>65</sup> YSLMENGK	3	65	5402
APOD	APOD_65_54200_z3	1148.5	366.1		17.7	1.5	18	CIQAN <sup>65</sup> YSLMENGK	3	65	5420
APOD	APOD_65_65010_z3	1269.5	366.1	274.1	17.4	2	20	CIQAN <sup>65</sup> YSLMENGK	3	65	6501
APOD	APOD_65_65020_z3	1366.5	366.1	274.1	17.4	2	22	CIQAN <sup>65</sup> YSLMENGK	3	65	6502
APOD	APOD_65_65020_z3_deamidated	1360.9	366.1	274.1	17.2	1.5	22	CIQAN <sup>65</sup> YSLMENGK	3	65	6502
APOD	APOD_65_65030_z3	1463.6	366.1	274.1	16.5	1.5	24	CIQAN <sup>65</sup> YSLMENGK	3	65	6503
APOD	APOD_65_65030_z3_deamidated	1457.9	366.1	274.1	20	1.5	24	CIQAN <sup>65</sup> YSLMENGK	3	65	6503
APOD	APOD_65_65210_z3	1366.9	366.1	274.1	16.3	1.5	22	CIQAN <sup>65</sup> YSLMENGK	3	65	6521
APOD	APOD_65_76020_z3	1488.6	366.1	274.1	18	1.5	24	CIQAN <sup>65</sup> YSLMENGK	3	65	7602
APOD	APOD_65_76210_z3	1488.9	366.1	274.1	18	1.5	24	CIQAN <sup>65</sup> YSLMENGK	3	65	7621
APOD	APOD_98_54000_z3	1292.9	366.1		17	1.5	21	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	5400
APOD	APOD_98_54010_z3	1389.9	366.1	274.1	17.6	1.5	23	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	5401
APOD	APOD_98_5402_z3	1115.7	366.1	274.1	18	1.5	34	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	4	98	5402
APOD	APOD_98_54020_z3	1487	366.1	274.1	18	1.5	24	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	5402
APOD	APOD_98_5410_z3	1341.6	366.1		16.8	1.5	35	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	5410
APOD	APOD_98_54100_z3	1341.6	366.1		16.8	1.5	22	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	5410
APOD	APOD_98_54110_z3	1438.6	366.1	274.1	17.5	1.5	23	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	5411
APOD	APOD_98_54120_z3	1535.7	366.1	274.1	17.8	1.5	25	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	5412
APOD	APOD_98_65010_z3	1511.6	366.1	274.1	17.7	1.5	25	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	6501
APOD	APOD_98_6510_z3	1098	366.1		21.7	1.5	34	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	4	98	6510
APOD	APOD_98_65110_z3	1560.3	366.1	274.1	17.1	1.5	26	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	6511
APOD	APOD_98_65130_z3	1754.1	366.1	274.1	17.6	1.5	29	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	6513
APOD	APOD_98_6520_z3	1134.5	366.1		20.7	1.5	35	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	4	98	6520
APOD	APOD_98_6530_z3	1171	366.1		22.3	1.5	35	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	4	98	6530
APOD	APOD_98_65320_z3	1754.4	366.1	274.1	17.2	2	29	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	3	98	6532
APOD	APOD_98_7600_z3	1152.7	366.1		22.1	1.5	35	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	4	98	7600
APOD	APOD_98_9800_z3	1335.3	366.1		21.8	1.5	39	ADGTVNQIEGATPVN <sup>98</sup> LTEPAK	4	98	9800
APOE	APOE_AATVGLSAGLQQLER_z2	749.4	642.4	898.5	14.9	1.5	22	AATVGLSAGLQQLER	2		

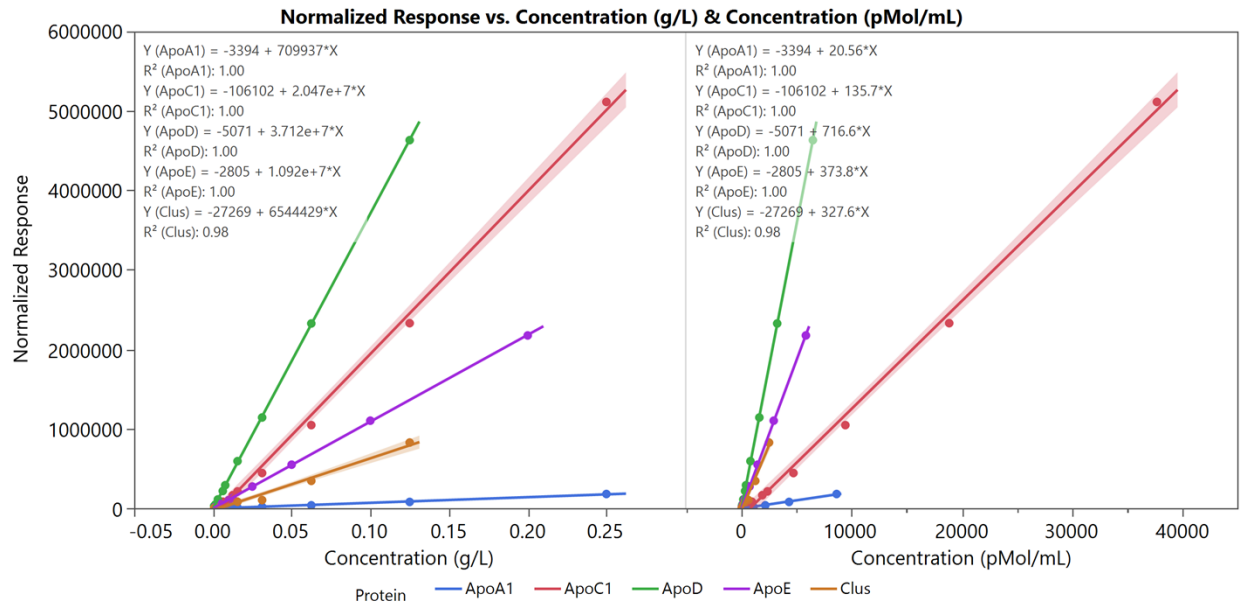


Protein Group	Compound	Precursor Ion	Product Ion (Quant)	Product Ion (Qual)	Ret Time (min)	Delta Ret Time	Collision Energy	Peptide Sequence	Charge State	Glycan Position <sup>1</sup>	Glycan Composition (Hex, HexNAc, Fuc, NeuAc)
PON1	PON1_253_5402/5421	847.4	366.1		16.8	1.5	28	HAN <sup>23</sup> WLTPLK	4	253	5402/5421
PON1	PON1_324_5420	1057.7	366.1		25.5	1.5	33	VTQVYAEN <sup>24</sup> GTVLQGGTVASVYK	4	324	5420
PON1	PON1_324_6501	1149.3	366.1		25.4	1.5	35	VTQVYAEN <sup>24</sup> GTVLQGGTVASVYK	4	324	6501
PON1	PON1_324_6502	1221.5	366.1		24.1	1.5	37	VTQVYAEN <sup>24</sup> GTVLQGGTVASVYK	4	324	6502
PON1	PON1_324_65030_z3	1725.7	366.1	274.1	24	3	29	VTQVYAEN <sup>24</sup> GTVLQGGTVASVYK	3	324	6503
PON3	PON3_IFLMDLNEQNPR_z2	745.4	261.2	514.3, 985.5	42.2	1.5	22	IFLMDLNEQNPR	2		
PON3	PON3_LLNYNPEDPPGSEVLR_z2	907	854.5	618.3, 1195.6	20.6	1.5	28	LLNYNPEDPPGSEVLR	2		
PON3	PON3_29_75310_z3	1142.4	366.1	274.1	19.5	3	18	VN <sup>29</sup> ASR	3	29	7531
PON3	PON3_29_76210_z3	1161.5	366.1	274.1	19.5	3	19	VN <sup>29</sup> ASR	3	29	7621
PON3	PON3_29_76030/76220_z3	1258.2	366.1	274.1	16.5	4	20	VN <sup>29</sup> ASR	3	29	76030/76220
SAA	SAA_94_43010_z3	1391.6	366.1	274.1	43.2	3	23	VYLQGLIDYYLFGN <sup>24</sup> SSTVLEDSK	3	94	4301
SAA	SAA_94_44010_z3	1459.3	366.1	274.1	43.2	3	24	VYLQGLIDYYLFGN <sup>24</sup> SSTVLEDSK	3	94	4401
SAA	SAA_94_53010_z3	1445.6	366.1	274.1	43.2	3	24	VYLQGLIDYYLFGN <sup>24</sup> SSTVLEDSK	3	94	5301
SAA	SAA_94_54010_z3	1513.3	366.1	274.1	43.2	3	25	VYLQGLIDYYLFGN <sup>24</sup> SSTVLEDSK	3	94	5401
SAA	SAA_94_54020_z3	1610.4	366.1	274.1	43.2	3	27	VYLQGLIDYYLFGN <sup>24</sup> SSTVLEDSK	3	94	5402
SAA	SAA_94_54210_z3	1610.4	366.1	274.1	43.2	3	27	VYLQGLIDYYLFGN <sup>24</sup> SSTVLEDSK	3	94	5421
SAA	SAA_94_55100_z3	1532.3	366.1		43.2	3	25	VYLQGLIDYYLFGN <sup>24</sup> SSTVLEDSK	3	94	5510
SAA1	SAA1_FFGHGAEDSLADQAANEWGR_z3	726.7	732.3	418.2, 948.4	20.2	1.5	21	FFGHGAEDSLADQAANEWGR	3		
SAA1	SAA1_GPGGVWAAEAISDAR_z3	486.2	448.2	561.3	19.8	1.5	13	GPGGVWAAEAISDAR	3		
SAA2	SAA2_GPGGAWAAEIVSNAR_z3	485.9	447.2	560.3	19.8	1.5	13	GPGGAWAAEIVSNAR	3		
SAA/SAA4	SAA4_FRPDGLPK_z2	465.3	244.2	516.3, 658.4	10.3	1.5	12	FRPDGLPK	2		

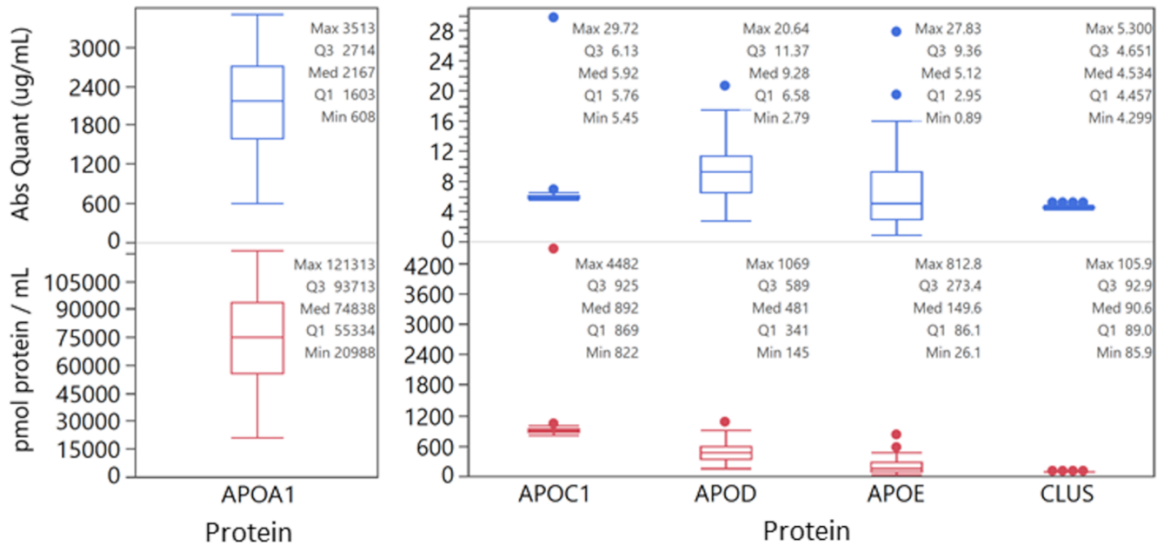
**Table S4:** Baseline characteristics of subjects in each experimental arm.

Characteristics	Placebo	N-AG	<i>Spirulina</i>	Galactose	P value
n	4	6	6	6	
Sex = Male/Female	2/2	3/3	3/3	3/3	
Age (yrs) (median[IQR])	26[24-29]	27[25-28]	34[26-39]	28[27-31]	0.37
Ethnicity = Asian/Biracial/Caucasian/Hispanic	2/0/2/0	3/1/2/0	3/0/2/1	3/0/3/0	
Height (median[IQR])	65[62-68]	70[66-71]	66[64-69]	68[67-69]	0.5
Weight (lbs) (median[IQR])	137[125-152]	143[125-154]	148[137-160]	152[139-161]	0.81
BMI (kg/m <sup>2</sup> ) (median[IQR])	24[23-24]	20[20-22]	24[22-25]	24[23-24]	0.07
Systolic Blood Pressure (median[IQR])	108[102-113]	117[102-120]	104[98-116]	115[109-117]	0.68
Diastolic Blood Pressure (median[IQR])	66[64-70]	73[71-77]	72[66-83]	70[68-76]	0.76

## 2. Supplemental Figures



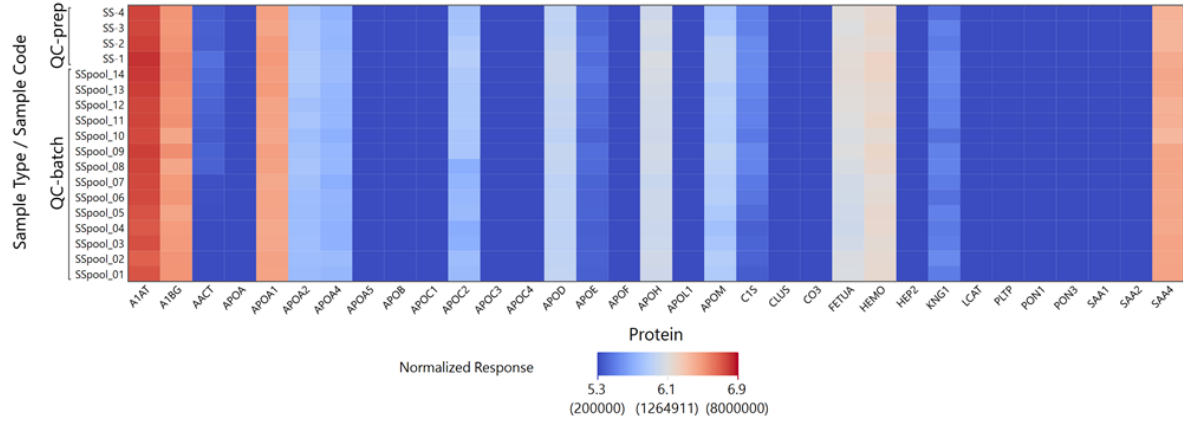
**Figure S1:** Linear calibration curve plots for ApoA1, ApoC1, ApoD, ApoE, and Clus based on (left) mass per volume concentration and (right) molar concentration.



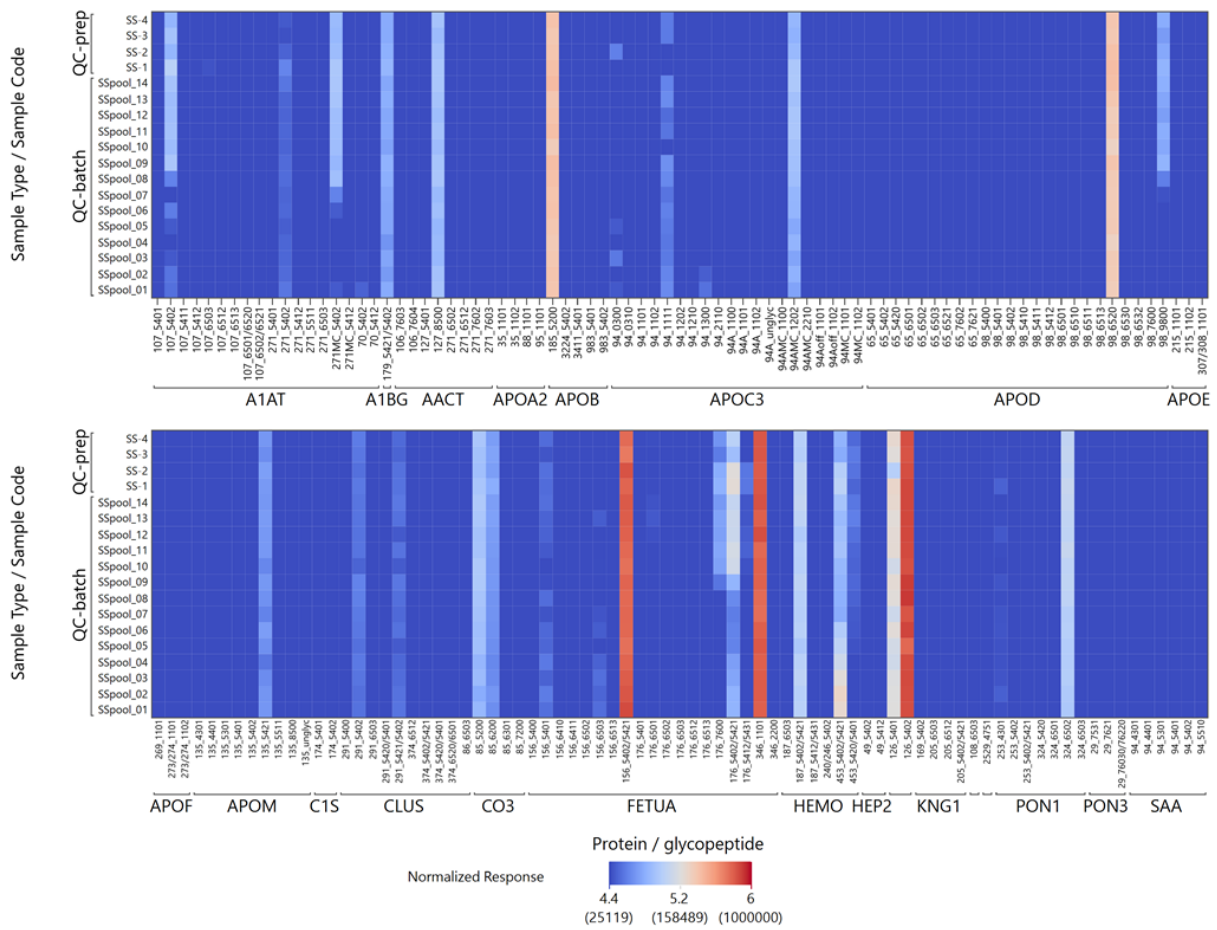
Protein	w/v Concentration ( $\mu\text{g}$ protein / mL purified HDL)		Molar Concentration (nM)		Coefficient of Variation (%)
	Median	Mean	Median	Mean	
APOA1	2167	2154	74838	74370	33.9
APOC1	5.92	6.24	892	941	42.9
APOD	9.28	9.27	481	480	38.1
APOE	5.12	6.45	150	189	76.3
CLUS	4.53	4.57	90.6	91.4	4.0

**Figure S2:** Box plots of the absolute quantities of APOA1, APOC1, APOD, APOE, and Clus. The plots show the natural variability of the protein concentrations from 80 individuals.

### A) Peptides

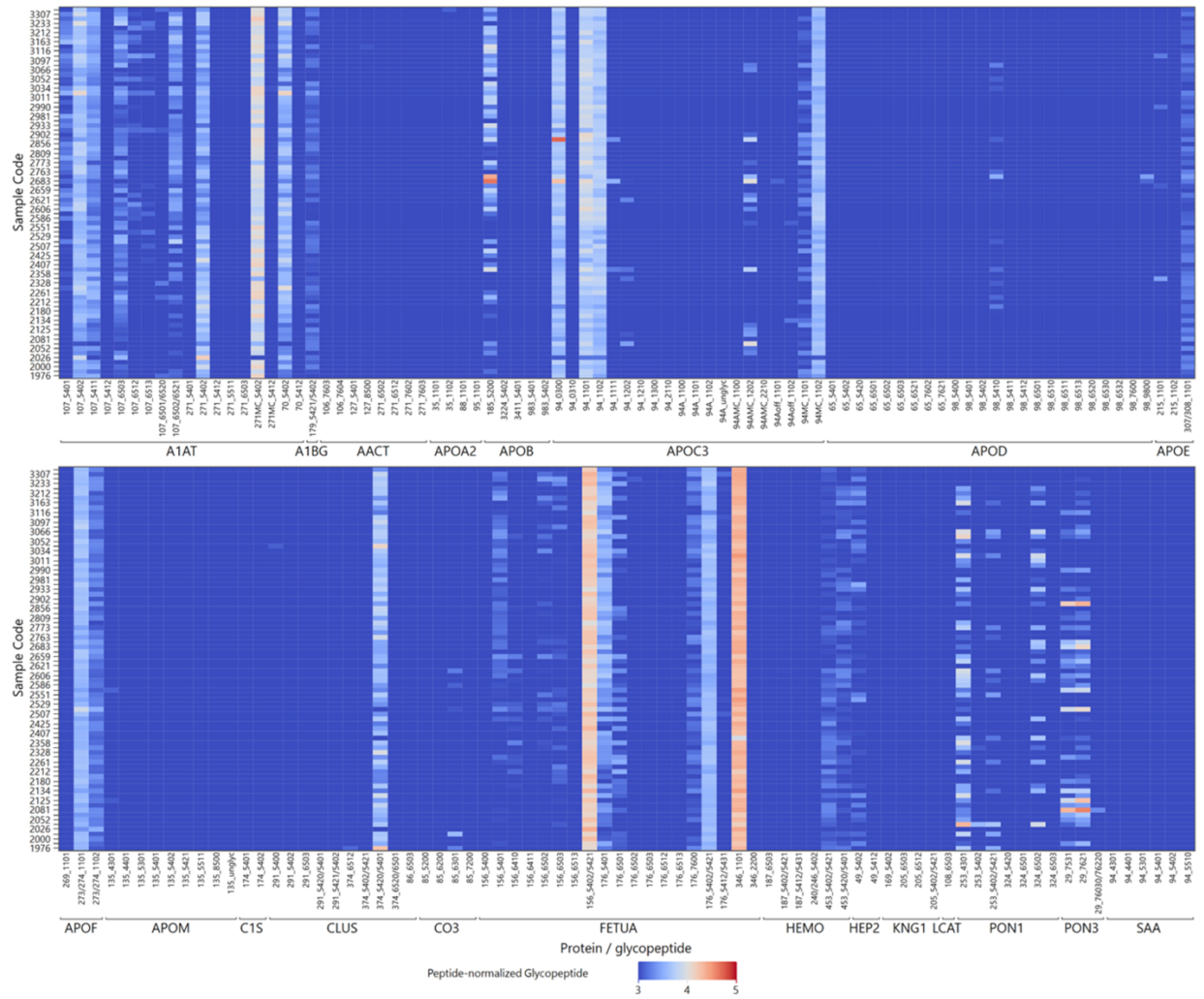


### B) Glycopeptides



**Figure S3:** Heatmaps of the ISTD-normalized responses for (A) peptides and (B) glycopeptides in quality control samples.





**Figure S4:** Heatmap of glycopeptide expression showing the peptide-normalized response for 168 glycoforms in each of the 80 samples. The color scaling is in the log<sub>10</sub> scale.