Supplemental Table 1. Optimized MRM parameters for 41 peptides (corresponding to 41 plasma proteins) targeted on Agilent's 6490 standard-flow UHPLC-MRM/MS platform.

Protein	Peptide	Product Ion	SIS MRM Transitions		NAT MRM Transitions		CE (V)
			Q1 *m/z*	Q3 *m/z*	Q1 *m/z*	Q3 *m/z*	
Afamin	DADPDTFFAK	b_3^+	567.77	302.10	563.77	302.10	9
Albumin, serum	LVNEVTEFAK	y_8^+	579.32	945.48	575.32	937.48	17
α_1-Acid glycoprotein 1	NWGLSVYADKPETTK	y_{13}^{2+}	572.96	708.88	570.29	704.88	13
α_1-Antichymotrypsin	EIGELYLPK	y_7^+	535.31	827.48	531.30	819.48	13
α_{1B}-Glycoprotein	LETPDFQLFK	y_7^+	623.34	902.49	619.34	894.49	17
α_2-Antiplasmin	LGNQEPGGQTALK	y_8^+	660.86	779.46	656.86	771.46	21
α_2-Macroglobulin	LLIYAVLPTGDVIGDSAK	y_{12}^{2+}	618.36	590.82	615.69	586.82	5
Angiotensinogen	ALQDQLVLVAAK	y_{10}^{2+}	638.89	546.83	634.89	542.83	17
Antithrombin-III	DDLYVSDAFHK	y_9^{2+}	439.87	544.29	437.21	540.29	5
Apolipoprotein A-I	ATEHLSTLSEK	y_{10}^{2+}	408.55	576.80	405.88	572.80	9
Apolipoprotein A-II	SPELQAEAK	y_8^{2+}	490.76	447.24	486.76	443.24	17
Apolipoprotein A-IV	SLAPYAQDTQEK	y_9^{2+}	679.84	544.26	675.84	540.26	17
Apolipoprotein B-100	GWVTDGFSSLK	y_7^+	528.30	811.47	524.30	803.47	17
Apolipoprotein C-I	FPEVDVLTK	y_9^+	520.77	470.25	516.77	466.25	17

Apolipoprotein C-III	TPDVSSALDK	y_8^+	602.81	862.44	598.81	854.44	13
Apolipoprotein E	LGPLVEQGR	y_7^{2+}	489.78	404.73	484.78	399.73	13
β_2-Glycoprotein 1	ATVVYQGER	y_6^+	516.77	761.38	511.77	751.38	17
Ceruloplasmin	EYTDASFTNR	y_8^+	607.27	921.43	602.27	911.43	21
Clusterin	ELDESLQVAER	y_3^+	649.83	385.21	644.83	375.21	17
Coagulation factor XIIa LC	VVGGLVALR	y_7^+	447.30	695.46	442.30	685.46	13
Complement C3	TGLQEVEVK	y_6^+	505.79	739.41	501.79	731.41	17
Complement C4-B (γ chain)	ITQVLHFTK	y_8^{2+}	365.55	491.28	362.89	487.28	5
Complement C9	TEHYEEQIEAFK	y_5^+	511.24	615.36	508.58	607.36	9
Complement factor B	EELLPAQDIK	y_6^+	581.33	677.39	578.33	671.39	9
Complement factor H	SPDVINGSPISQK	b_3^+	674.36	300.12	671.36	300.12	29
Fibrinogen α chain	GSESGIFTNTK	y_5^+	574.79	618.34	570.79	610.34	13
Fibrinogen β chain	QGFGNVATNTDGK	y_7^+	658.82	714.35	654.82	706.35	25
Fibrinogen γ chain	DTVQIHDITGK	y_9^{2+}	412.22	509.79	409.56	505.79	5
Gelsolin, isoform 1	TGAQELLR	y_4^+	447.26	536.35	444.26	530.35	13
Haptoglobin	VGYVSGWGR	y_5^+	495.76	572.28	490.76	562.28	13
Hemopexin	NFPSPVDAAFR	y_9^{2+}	615.82	485.26	610.82	480.26	17

Heparin cofactor 2	TLEAQLTPR	y_7^+	519.79	824.45	514.79	814.45	17
Inter-alpha-trypsin inhibitor HC	AAISGENAGLVR	y_9^+	584.33	912.49	579.33	902.49	17
Kininogen-1	TVGSDTFYSFK	y_9^+	630.31	1059.49	626.31	1051.49	13
L-selectin	AEIEYLEK	y_6^+	501.77	802.45	497.77	794.45	13
Plasminogen	LFLEPTR	y_5^+	443.26	625.35	438.26	615.35	13
Prothrombin	ETAASLLQAGYK	y_6^+	630.34	687.39	626.34	679.39	17
Transferrin	EDPQTFYYAVAVVK	y_{12}^{2+}	819.42	697.38	815.42	693.38	17
Transthyretin	AADDTWEPFASGK	y_6^+	701.82	614.34	697.82	606.34	29
Vitamin D-binding protein	THLPEVFLSK	y_4^+	392.89	500.32	390.89	494.32	5
Vitronectin	FEDGVLDPDYPR	y_7^+	716.84	885.45	711.84	875.45	21

Supplemental Table 2. Analytical reproducibility, sensitivity, linearity, and plasma protein concentration for a 40-protein panel obtained from per-peptide calibration curves (n = 5 for each of the 7 concentration levels) measured on Agilent's 6490 standard-flow UHPLC-MRM/MS platform. The listed values represent the reference values for the target proteins for the kits.

Protein	Protein MW (Da)	Precision (%CV)[1]		Protein LLOQ (ng/mL)	Dynamic Range	Determined Plasma Protein Concentration (ng/mL)
		RT Stability	Signal Stability			
Afamin	66577.02	0.09	2.84	3200	100	34930
Albumin, serum	66472.21	0.18	1.61	1861	10000	41981211
α_1-Acid glycoprotein 1	21560.12	0.13	4.53	416	100	4540
α_1-Antichymotrypsin	45265.82	0.04	1.85	865	1000	137475
α_{1B}-Glycoprotein	51921.66	0.02	1.70	36375	20	132849
α_2-Antiplasmin	50450.85	0.27	1.87	48	1000	7361
Angiotensinogen	49761.11	0.03	3.47	1526	100	47655
Antithrombin-III	49039.14	0.13	1.02	160	1000	35812
Apolipoprotein A-I	28078.62	0.25	1.68	457	10000	900822
Apolipoprotein A-II	8707.91	0.19	5.90	89	10000	88672
Apolipoprotein A-IV	43402.53	0.23	2.53	189	1000	35836

Apolipoprotein B-100	512858.30	0.05	2.79	1772	1000	298926
Apolipoprotein C-I	6630.58	0.20	4.88	14	1000	2403
Apolipoprotein C-III	8764.67	0.04	4.58	242	100	751
Apolipoprotein E	34236.68	0.16	2.34	226	1000	27082
β_2-Glycoprotein 1	36254.60	0.24	5.04	106	10000	72544
Ceruloplasmin	120085.50	0.25	4.53	506	1000	64900
Clusterin	50062.56	0.16	2.82	711	1000	91407
Coagulation factor XIIa LC	39647.11	0.12	1.53	124	1000	12641
Complement C3	184951.30	0.18	4.52	1695	1000	667757
Complement C4-B (γ chain)	71678.89	0.21	1.48	612	1000	103975
Complement C9	60978.68	0.16	2.93	3054	100	13937
Complement factor B	83000.80	0.23	0.80	11	10000	1264
Complement factor H	137052.60	0.15	3.15	10738	100	28685
Fibrinogen α chain	91358.87	0.32	2.03	19597	1000	1501062
Fibrinogen β chain	50762.93	0.27	2.03	283	10000	706013
Fibrinogen γ chain	48483.03	0.21	2.52	51	1000	23315
Gelsolin, isoform 1	82959.11	0.15	3.42	182	1000	884

Haptoglobin	43349.01	0.34	1.29	942	10000	1071473
Hemopexin	49295.43	0.03	1.90	2521	1000	476165
Heparin cofactor 2	54960.02	0.19	1.26	267	1000	38649
Inter-alpha-trypsin inhibitor HC	71415.01	0.22	1.25	220	1000	53261
Kininogen-1	69896.70	0.09	2.72	3007	100	133068
L-selectin	37571.67	0.16	3.18	757	100	1246
Plasminogen	88432.36	0.06	3.07	3125	20	6805
Prothrombin	65308.20	0.07	4.88	2178	100	9408
Transferrin	75195.46	0.02	3.45	126535	20	1496522
Transthyretin	13761.41	0.09	2.41	2831	100	109644
Vitamin D-binding protein	51243.46	0.11	2.30	502	1000	62366
Virtonectin	52277.96	0.10	1.72	5365	100	153550

[1] Precision was measured for standard sample E, where the standard concentration approximates the endogenous concentration in human plasma.