

Supplement

Table S1. MS transitions and MRM parameters for proteolytic tryptic peptides of 16 adipokines and 10 apolipoproteins and corresponding stable isotope-labeled peptides used as standard (S). For each biomarker the final candidate peptide amino acid sequence and *m/z* is displayed. Furthermore, the transitions used for quantification and identification (fragment ions) and optimized declustering potential (DP) and collision energy (CE) are listed for each peptide. The same information is provided for the isotope-labeled peptide standards.

Protein	Proteolytic peptide	<i>m/z</i>	Quantifier		Qualifier 1 and 2		DP / V	CE / V
			Fragment ion	<i>m/z</i>	Fragment ion	<i>m/z</i>		
Adiponectin	GDIGETGVPGAEGPR	706.34	y ₇	683.35	y ₉ / b ₈	839.44 / 729.34	125 / 106.3 / 125	34 / 34.3 / 27
Adipsin	LYDVLR	389.73	y ₅	665.36	y ₄ / b ₄	502.30 / 246.13	73	16.9
Asprosin	EGISYLHFTK	398.88	y ₇ ⁺²	448.24	y ₅ ⁺² / y ₆ ⁺²	323.19 / 404.72	66.3 / 45.3 / 67.0	15.7 / 15.0 / 14.7
Chemerin	GLQVALEEFHK	424.23	b ₂	171.11	y ₂ ⁺² / y ₉ ⁺²	142.59 / 553.80	67.0 / 59.7 / 51.0	17.0 / 20.7 / 14.3
DLK-1	LPSGYGLAYR	548.79	y ₉ ⁺²	492.25	y ₅ / y ₈	579.32 / 886.44	118.0 / 89.3 / 78.7	26.3 / 31.7 / 30.7
GLP-1	HAEGTFTSDVSSYLEGQAAK	700.00	y ₇	716.40	y ₆ / y ₁₀	603.31 /	73	29.7 / 26.7 / 29.7
IL-6	EALAENLNLPK	663.36	y ₂	244.17	y ₈ / y ₉	941.51 /	114.0 / 79.7 / 127	30.7 / 31.0 / 30.3
IL-10	DQLDNLLLK	536.31	y ₇	828.52	y ₅ / y ₆	600.41 / 715.43	100.7 / 95.7 / 70.7	23.0 / 28.3 / 23.0
Leptin	DLLHVLAFSK	381.56	y ₈ ⁺²	457.78	y ₄ / y ₇ ⁺²	452.25 / 401.23	61.3 / 62.7 / 70.0	13.3 / 15.3 / 18.3
PAI-1	FIINDWVK	517.79	y ₆	774.41	y ₅ / b ₂	661.33 / 261.16	112.0 / 104.0 / 98.3	21.0 / 22.7 / 20.7
Progranulin	GSEIVAGLEK	501.78	y ₇	729.45	y ₅ / y ₆	517.30 / 616.37	95.0 / 49.3 / 48.3	22.3 / 21.3 / 23
RBP-4	YWGVASFLQK	599.82	y ₆	693.39	y ₈ / b ₂	849.48 / 350.15	83.0 / 79.0 / 91	26.3 / 27.0 / 27.0
Resistin	IQEVAGSLIFR	616.85	y ₇	763.45	y ₆ / y ₉	692.41 / 991.56	106.3 / 96.7 / 112.30	30.7 / 29.7 / 28.3
TNFα	ANALLANGVELR	620.85	y ₇	758.42	y ₆ / y ₈	687.38 / 871.50	60.7 / 85.3 / 96.3	29.0 / 26.7 / 31.0
Vaspin	VVDVSVPR	435.76	y ₄	458.27	y ₅ / y ₆	557.34 / 672.38	59.0 / 62.7 / 53.3	18.3 / 23.3 / 20.3
Visfatin	SYSFDEIR	508.74	y ₆	766.37	y ₅ / b ₂	679.34 / 251.10	95.0 / 86.3 / 68.3	20.7 / 21.3 / 20.0
Apo-A1	DYVSQFEGSALGK	700.84	y ₁₀	1023.51	y ₉ / y ₁₁	936.48 /	82.2	34.1
Apo-A2	EQLTPLIK	471.29	y ₄	470.33	y ₅ / y ₆	571.38 / 684.47	65.5	25.8
Apo-A4	LAPLAEDVR	492.28	y ₅	589.29	y ₆ / y ₇	702.38 / 799.43	67.0	26.6
Apo-B	EVYGFNPEGK	570.27	y ₇	748.36	y ₅ / y ₈	544.27 / 911.43	72.7	29.4
Apo-C1	EWFSETFQK	601.28	y ₄	523.29	y ₆ / y ₇	739.36 / 886.43	75.0	30.5
Apo-C2	TYLPAVDEK	518.27	y ₆	658.34	y ₅ / y ₇	561.29 / 771.42	68.9	27.5
Apo-C3	GWVTDGFSSLK	598.80	y ₉	953.49	y ₇ / y ₈	753.38 / 854.43	74.8	30.4

Protein	Proteolytic peptide	m/z	Quantifier		Qualifier 1 and 2		DP / V	CE / V
			Fragment ion	m/z	Fragment ion	m/z		
Apo-C4	ELLETVVNR	532.80	y ₅	588.35	y ₆ / y ₇	717.39 / 830.47	70.2	28.2
Apo-D	NILTSNNIDVK	615.84	y ₇	789.41	y ₈ / y ₉	890.46 /	76.0	31.0
Apo-E	AATVGSLAGQPLQER	749.40	y ₇	827.44	y ₅ / y ₈	642.36 / 898.47	85.7	35.8
Apo-A1	DYVSQFEGSALGK	700.84	y ₁₀	1023.51	y ₉ / y ₁₁	936.48 /	82.2	34.1
S Adiponectin	GDIGETGVPGAEGPR	709.35	y ₉	845.45	y ₇ / b ₈	683.35 / 735.36	125 / 106.3 / 125	34 / 34.3 / 27
S Adipsin	LYDVLR	392.73	y ₄	508.31	y ₅ / b ₄	671.38 / 249.14	73	16.9
S Asprosin	EGISYLHFTK	402.22	y ₇ ⁺²	453.25	y ₅ ⁺² / y ₆ ⁺²	328.20 / 409.73	66.3 / 45.3 / 67.0	15.7 / 15.0 / 14.7
S Chemerin	GLQVALEEFHK	426.24	b ₂	171.11	y ₂ ⁺² / y ₉ ⁺²	142.59 / 553.80	67.0 / 59.7 / 51.0	17.0 / 20.7 / 14.3
S DLK-1	LPSGYGLAYR	552.30	y ₉ ⁺²	495.76	y ₅ / y ₈	586.34 / 893.46	118.0 / 89.3 / 78.7	26.3 / 31.7 / 30.7
S GLP-1	HAEGTFTSDVSSYLEGQAAK	702.00	y ₇	716.40	y ₆ / y ₁₀	603.31 /	73	29.7 / 26.7 / 29.7
S IL-6	EALAENLNLPK	666.87	y ₂	244.17	y ₈ / y ₉	941.51 /	114.0 / 79.7 / 127	30.7 / 31.0 / 30.3
S IL-10	DQLDNLLLK	539.81	y ₇	835.54	y ₅ / y ₆	600.41 / 715.43	100.7 / 95.7 / 70.7	23.0 / 28.3 / 23.0
S Leptin	DLLHVLAFSK	383.56	y ₈ ⁺²	460.78	y ₄ / y ₇ ⁺²	452.25 / 404.24	61.3 / 62.7 / 70.0	13.3 / 15.3 / 18.3
S PAI-1	FIINDWVK	520.79	y ₆	780.43	y ₅ / b ₂	667.34 / 261.16	112.0 / 104.0 / 98.3	21.0 / 22.7 / 20.7
S Progranulin	GSEIVAGLEK	504.78	y ₇	735.46	y ₅ / y ₆	517.30 / 622.38	95.0 / 49.3 / 48.3	22.3 / 21.3 / 23
S RBP-4	YWGVASFLQK	602.82	y ₆	693.39	y ₈ / b ₂	855.50 / 350.15	83.0 / 79.0 / 91	26.3 / 27.0 / 27.0
S Resistin	IQEVAGSLIFR	619.86	y ₇	763.45	y ₆ / y ₉	692.41 / 997.57	106.3 / 96.7 / 112.30	30.7 / 29.7 / 28.3
S TNFa	ANALLANGVELR	623.86	y ₇	764.43	y ₆ / y ₈	693.39 / 877.51	60.7 / 85.3 / 96.3	29.0 / 26.7 / 31.0
S Vaspin	VVDVSVPR	438.76	y ₄	458.27	y ₅ / y ₆	563.35 / 678.38	59.0 / 62.7 / 53.3	18.3 / 23.3 / 20.3
S Visfatin	SYSFDEIR	512.25	y ₆	773.39	y ₅ / b ₂	686.36 / 251.10	95.0 / 86.3 / 68.3	20.7 / 21.3 / 20.0
S Apo-A1	DYVSQFEGSALGK	703.85	y ₁₀	1023.51	y ₉ / y ₁₁	936.48 /	82.2	34.1
S Apo-A2	EQLTPLIK	474.8	y ₄	470.33	y ₅ / y ₆	571.38 /	65.5	25.8
S Apo-A4	LAPLAEDVR	495.29	y ₅	595.31	y ₆ / y ₇	708.39 / 802.45	67.0	26.6
S Apo-B	EVYGFNPEGK	573.28	y ₇	748.36	y ₅ / y ₈	544.27 / 911.43	72.7	29.4
S Apo-C1	EWFSETFQK	606.29	y ₄	533.31	y ₆ / y ₇	749.39 / 896.46	75.0	30.5
S Apo-C2	TYLPAVDEK	521.28	y ₆	664.35	y ₅ / y ₇	567.30 / 777.44	68.9	27.5
S Apo-C3	GWVTDGFSSLK	601.81	y ₉	959.51	y ₇ / y ₈	753.38 / 854.43	74.8	30.4
S Apo-C4	ELLETVVNR	539.81	y ₅	594.36	y ₆ / y ₇	723.40 / 836.49	70.2	28.2
S Apo-D	NILTSNNIDVK	618.85	y ₇	795.42	y ₈ / y ₉	896.47 /	76.0	31.0
S Apo-E	AATVGSLAGQPLQER	752.41	y ₇	827.44	y ₅ / y ₈	642.36 / 898.47	85.7	35.8

Table S2. Calibration curve parameters, limits of detection (LOD) and lower limits of quantification (LLOQ) for the quantification of different adipokines and apolipoproteins in human serum.

Protein	external calibration curve			LOD		LLOQ	
	slope	intercept	R ²	peptide (ng/mL)	protein (ng/mL)	peptide (ng/mL)	protein (ng/mL)
Adipsin	3.11·10 ⁴	1.41·10 ⁶	0.97	0.63	21.63	1.88	64.88
Adiponectin	3.22·10 ⁴	-7.72·10 ⁴	0.99	0.71	13.21	2.13	39.62
Asprosin	2.11·10 ⁴	-4.50·10 ⁶	0.96	6.02	85.00	18.05	255.00
Chemerin	9.71·10 ⁴	-5.97·10 ⁵	0.99	1.91	27.93	5.74	83.78
DLK-1	6.30·10 ⁴	-6.30·10 ⁵	0.99	6.62	247.80	19.85	743.40
GLP-1	3.35·10 ³	-1.49·10 ⁶	0.98	105.21	208.35	315.63	625.05
IL-6	1.36·10 ⁴	-1.54·10 ⁵	0.99	5.33	94.87	15.98	284.62
IL-10	4.20·10 ⁴	-1.46·10 ⁶	0.98	10.78	205.17	32.33	615.51
Leptin	9.71·10 ⁴	-5.97·10 ⁵	0.99	2.30	37.28	6.89	111.85
PAI-1	3.78·10 ⁵	-1.29·10 ⁶	0.99	0.34	22.53	1.03	67.59
Progranulin	7.53·10 ⁴	2.08·10 ⁵	0.99	0.50	31.77	1.51	95.32
RBP-4	1.27·10 ⁵	-2.54·10 ⁶	0.99	30.09	575.25	90.27	1725.75
Resistin	9.25·10 ³	-2.56·10 ⁵	0.97	12.38	114.19	37.13	342.57
TNFα	1.23·10 ⁵	-3.13·10 ⁶	0.99	31.14	616.10	93.43	1848.30
Vaspin	1.20·10 ⁵	-9.41·10 ⁴	0.99	0.44	23.59	1.31	70.76
Visfatin	1.53·10 ⁵	5.94·10 ⁵	0.99	0.51	27.76	1.53	83.28
Apo-A1	7.32·10 ³	-6.99·10 ⁵	0.98	46.86	1025.93	140.57	3077.80
Apo-A2	5.08·10 ⁴	3.12·10 ⁵	0.99	1.58	18.63	4.74	55.88
Apo-A4	1.97·10 ⁴	3.55·10 ⁴	0.99	1.65	75.67	4.94	227.00
Apo-B	1.62·10 ⁴	8.44·10 ³	0.99	1.91	859.34	5.72	2578.03
Apo-C1	2.69·10 ³	-4.43·10 ⁴	0.99	4.04	31.11	12.11	93.32
Apo-C2	6.02·10 ⁴	5.98·10 ⁵	0.99	1.73	18.81	5.20	56.42
Apo-C3	5.00·10 ³	-1.19·10 ⁵	0.99	20.03	180.87	60.08	542.60
Apo-C4	3.65·10 ⁴	-7.26·10 ⁴	0.99	1.80	24.26	5.39	72.77
Apo-D	4.03·10 ⁴	2.40·10 ⁵	0.99	2.06	35.46	6.18	106.38
Apo-E	1.30·10 ⁴	-1.47·10 ⁵	0.99	5.01	120.51	15.03	361.54

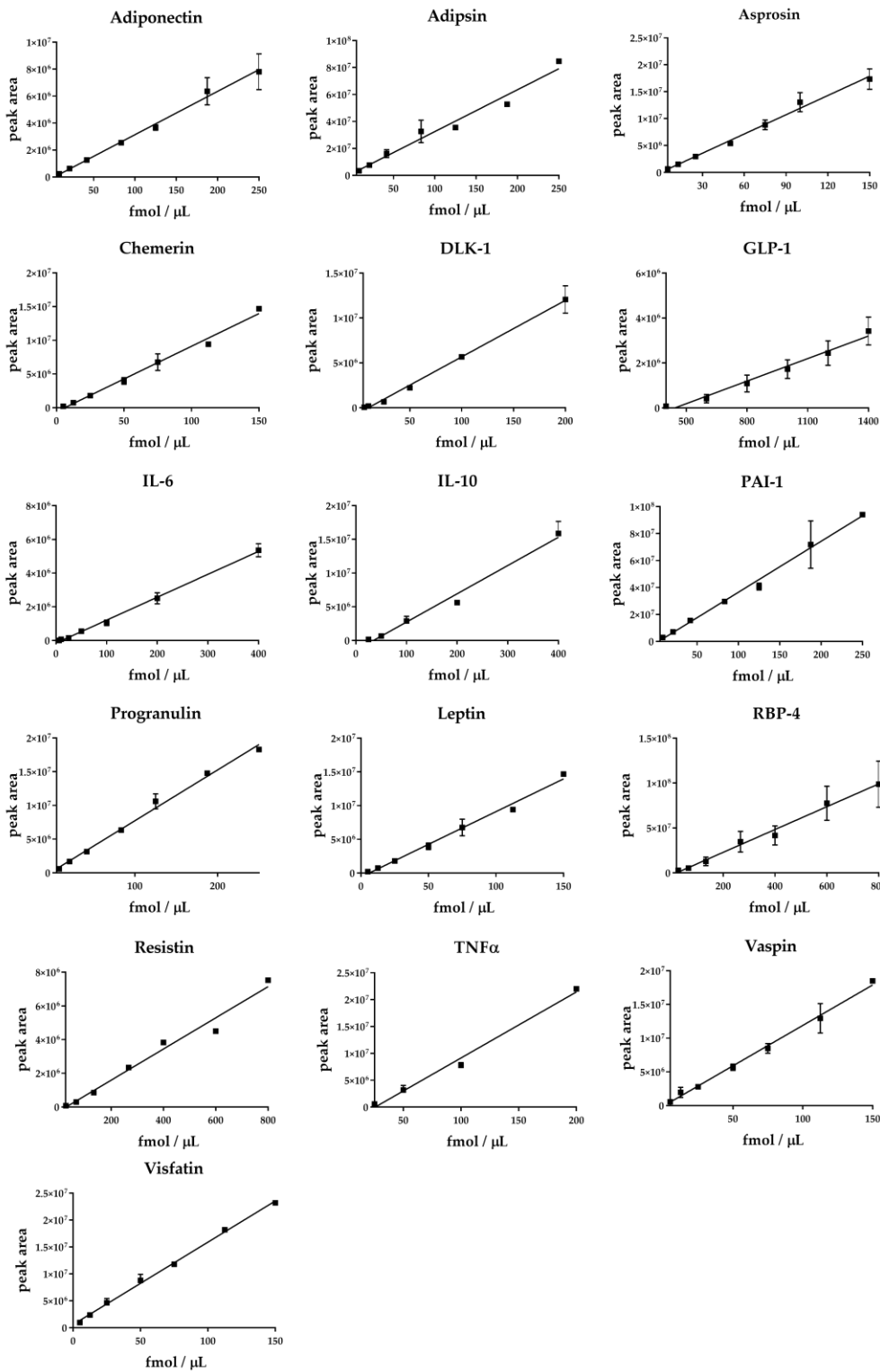


Figure S1. Calibration curves (n=5) of 16 adipokines. Isotope-labeled peptides were spiked in to HSA/IgG-depleted human serum and serially diluted.

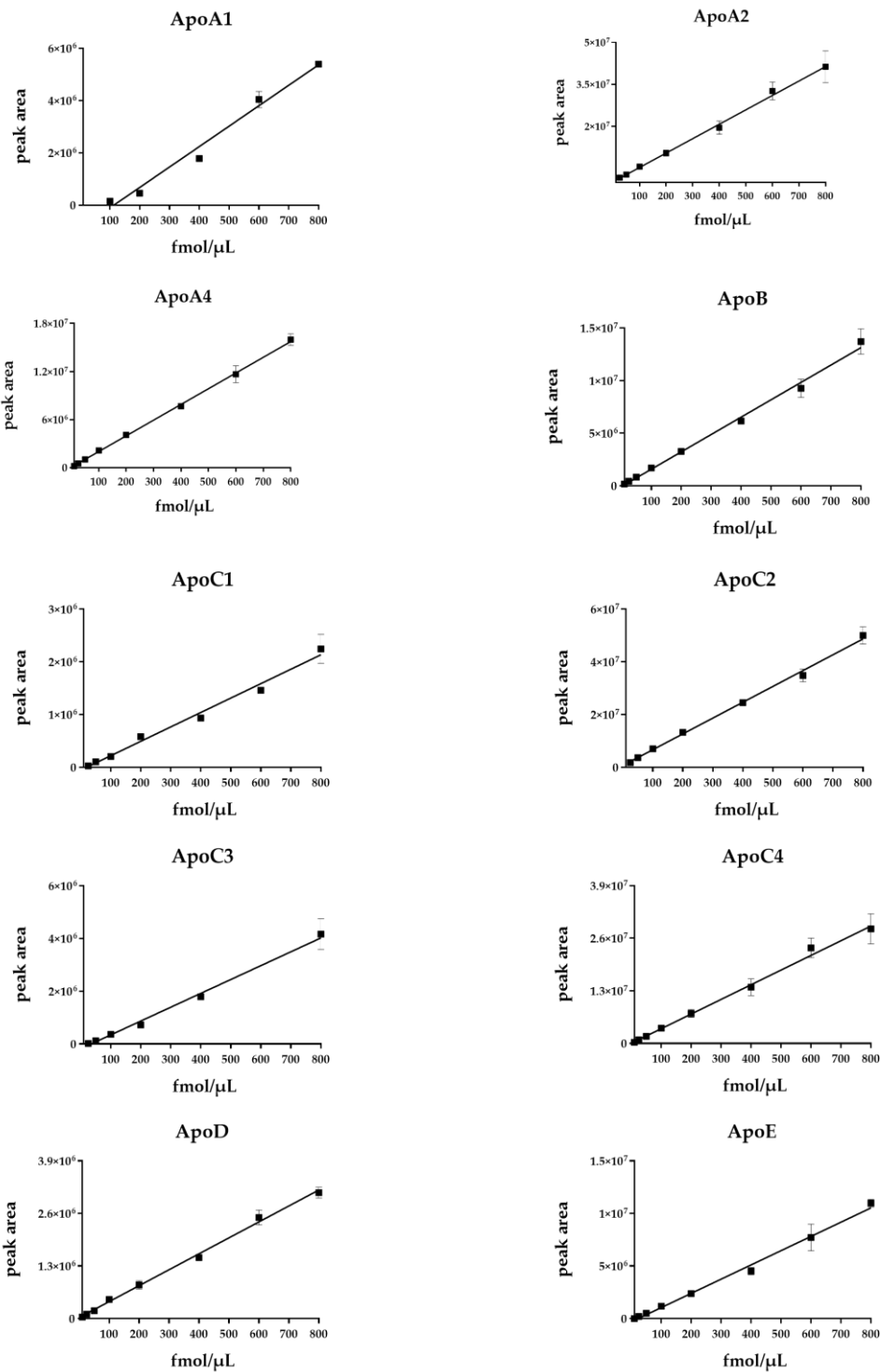


Figure S2. Calibration curves (n=5) of 10 apolipoprotein. Isotope-labeled peptides were spiked into HSA/IgG-depleted human serum and serially diluted.