

SUPPLEMENTARY INFORMATION

Reproducible protein quantitation of 270 human proteins at increased depth using nanoparticle-based fractionation and multiple reaction monitoring mass spectrometry with stable isotope-labelled internal standards

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Running head: A novel strategy for an improved number of quantifiable plasma proteins by coupling fractionation methods with LC/MRM-MS
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	Protein	Peptide	Proteograph	Neat MRMP	Neat Seer
1	60 kDa heat shock protein mitochondrial	GIIDPTK	No	No	No
2	72 kDa type IV collagenase	IDAVYEAPQEEK	Yes	No	No
3	78 kDa glucose-regulated protein	ITPSYVAFTPEGER	Yes	No	No
4	A disintegrin and metalloproteinase with thrombospondin motifs 2	IILLSYGK	Yes	No	Yes
5	A disintegrin and metalloproteinase with thrombospondin motifs 20	IPAGATNVDIR	Yes	Yes	Yes
6	A disintegrin and metalloproteinase with thrombospondin motifs 9	LYNPDVR	No	No	No
7	Actin, aortic smooth muscle	SYELPDGQVITIGNER	Yes	No	No
8	Adhesion G protein-coupled receptor F5	DVIVHPLPLK	Yes	Yes	Yes
9	Adipocyte plasma membrane-associated protein	LLEYDTVTR	Yes	Yes	No
10	Adiponectin	IFYNQNHQHYDGSTGK	Yes	Yes	Yes
11	ADM	LDVASEFR	No	No	No
12	Afamin	DADPDTFFAK	No	Yes	No
13	Alpha-1-acid glycoprotein 1	NWGLSVYADKPETTK	Yes	Yes	Yes
14	Alpha-1-antichymotrypsin	EIGELYLPK	Yes	Yes	Yes
15	Alpha-1-antitrypsin	SVLGQLGITK	Yes	Yes	Yes
16	Alpha-1B-glycoprotein_VAR_018369	LETPDFQLFK	Yes	Yes	Yes
17	Alpha-2-antiplasmin	LGNEPQGGQTALK	Yes	Yes	Yes
18	Alpha-2-HS-glycoprotein	FSVVYAK	Yes	Yes	Yes
19	Alpha-2-macroglobulin	AIGYLNTGYQR	Yes	Yes	Yes
20	Angiogenin	DINTFIHGNK	Yes	No	Yes
21	Angiopoietin-related protein 3	DLVFSTWDHK	Yes	No	No
22	Angiotensinogen	ALQDQLVLVAAK	Yes	Yes	Yes
23	Antithrombin-III	DDLIVSDAFHK	Yes	Yes	Yes
24	Apolipoprotein A-I	ATEHLSTLSEK	Yes	Yes	Yes
25	Apolipoprotein A-II	SPELQAEAK	Yes	Yes	Yes
26	Apolipoprotein A-IV	LGEVNTYAGDLQK	Yes	Yes	Yes
27	Apolipoprotein B-100	FPEVDVLTK	Yes	Yes	Yes
28	Apolipoprotein C-I	EWFSETFQK	Yes	Yes	No
29	Apolipoprotein C-II	TYLPAVDEK	Yes	Yes	Yes
30	Apolipoprotein C-III	GWVTDGFSSLK	Yes	Yes	Yes
31	Apolipoprotein C-IV	ELLETVVNR	Yes	Yes	No
32	Apolipoprotein D	NILTSNNIDVK	Yes	Yes	Yes
33	Apolipoprotein E	LGPLVEQGR	Yes	Yes	Yes

34	Apolipoprotein F	SGVQQLIQYYQDQK	Yes	Yes	No
35	Apolipoprotein L1	VAQELEEK	Yes	Yes	Yes
36	Apolipoprotein M	AFLLTPT	Yes	Yes	Yes
37	Apolipoprotein(a)	GTYSTVTGR	Yes	Yes	Yes
38	Aromatase	NMLEMIFTPR	Yes	No	No
39	Atrial natriuretic peptide receptor 1	ITDYGLESFR	Yes	No	No
40	Attractin	SVNNVVVR	Yes	Yes	Yes
41	Autism susceptibility gene 2 protein	ALSLASSGSDK	Yes	No	Yes
42	B-cell scaffold protein with ankyrin repeats	LTIVHHPGGK	Yes	No	Yes
43	Beta-2-glycoprotein 1	ATVVYQGER	Yes	Yes	Yes
44	Beta-2-microglobulin	VNHVTLSPK	Yes	Yes	Yes
45	Beta-Ala-His dipeptidase	ALEQDLPVNIK	Yes	Yes	Yes
46	Beta-nerve growth factor	TTATDIK	Yes	No	No
47	Biotinidase	SHLIIAQVAK	Yes	Yes	Yes
48	C4b-binding protein alpha chain	EDVVVGTVLR	Yes	Yes	Yes
49	Cadherin-13	INENTGSVSVTR	Yes	No	No
50	Cadherin-5	ELDSTGTPTGK	Yes	No	No
51	Calcitonin gene-related peptide 1	NNFVPTNVGSK	Yes	No	Yes
52	Calcitonin	FHTFPQTAIGVGAPGK	Yes	No	No
53	Calponin-1	VNVGVK	Yes	Yes	Yes
54	Carbonic anhydrase 1	VLDALQAIK	Yes	No	Yes
55	Carboxypeptidase B2	IAWHVIR	Yes	Yes	Yes
56	Carboxypeptidase N catalytic chain	SIPQVSPVR	Yes	Yes	Yes
57	Carboxypeptidase N subunit 2	AGGSWDLAVQER	Yes	Yes	Yes
58	Cartilage acidic protein 1	GVASLFAGR	Yes	Yes	Yes
59	Cathelicidin antimicrobial peptide	AIDGINQR	Yes	Yes	Yes
60	Cation-independent mannose-6-phosphate receptor	GHQAFDVGQPR	Yes	No	Yes
61	CD40 ligand	SQFEGFVK	No	No	No
62	CD44 antigen	YGFIEGHVVIPR	Yes	No	No
63	CD5 antigen-like	LVGGLHR	Yes	Yes	Yes
64	cDNA FLJ53327, highly similar to Gelsolin (NOT REVIEWED)	EGGQTAPASTR	Yes	Yes	Yes
65	Ceruloplasmin	IYHSHIDAPK	Yes	Yes	Yes
66	Cholesteryl ester transfer protein	GVSLFDIINPEIITR	Yes	Yes	Yes
67	Cholinesterase	YLTNTSTR	Yes	Yes	Yes
68	Chromogranin-A	ELQDLALQGAK	Yes	No	Yes
69	Claudin-5	PDLSPVK	No	No	No
70	Clusterin	ELDESLQVAER	Yes	Yes	Yes
71	Coagulation factor IX	SALVLQYLR	Yes	No	No
72	Coagulation factor V	AEVDDVIQVR	Yes	No	Yes
73	Coagulation factor VII	VSQYIEWLQK	Yes	Yes	Yes
74	Coagulation factor VIII	LPHTHYSIR	Yes	No	No
75	Coagulation factor X	MLEVPYVDR	Yes	Yes	Yes

76	Coagulation factor XI	TSEGLPSTR	Yes	Yes	Yes
77	Coagulation factor XII	EQPPSLTR	Yes	Yes	Yes
78	Coagulation factor XIII A chain	GTYPVPVIVSELQSGK	Yes	Yes	Yes
79	Coagulation factor XIII B chain	IQTHSTTYR	Yes	Yes	Yes
80	Collagen alpha-1(I) chain	GVVGLPGQR	Yes	No	No
81	Collagen alpha-1(III) chain	GGAGPPGPEGGK	Yes	No	Yes
82	Collagen alpha-1(XVIII) chain	AVGLAGTFR	Yes	No	No
83	Collagen alpha-2(I) chain	GVVGPQGAR	Yes	Yes	No
84	Complement C1q subcomponent subunit A	PAFSAIR	Yes	Yes	Yes
85	Complement C1q subcomponent subunit B	IAFSATR	Yes	Yes	Yes
86	Complement C1q subcomponent subunit C	FQSFTVTR	Yes	Yes	Yes
87	Complement C1r subcomponent	GLTLHLK	Yes	Yes	Yes
88	Complement C1r subcomponent-like protein	VVVHPDYR	Yes	Yes	Yes
89	Complement C1s subcomponent	TNFDNDIALVR	Yes	Yes	Yes
90	Complement C2	HAFILQDTK	Yes	Yes	Yes
91	Complement C3	TGLQEVEVK	Yes	Yes	Yes
92	Complement C5	VFQFLEK	Yes	Yes	Yes
93	Complement component C6	DLHLSDVFLK	Yes	Yes	Yes
94	Complement component C7	AASGTQNNVLR	Yes	Yes	Yes
95	Complement component C8 alpha chain	MESLGITSR	Yes	Yes	Yes
96	Complement component C8 beta chain	SDLEVAHYK	Yes	Yes	Yes
97	Complement component C9	LSPIYNLVPVK	Yes	Yes	Yes
98	Complement factor B	EELLPAQDIK	Yes	Yes	Yes
99	Complement factor D	THHDGAITER	Yes	Yes	No
100	Complement factor H	SSQESYAHGTK	Yes	Yes	Yes
101	Complement factor I	VFSLQWGEVK	Yes	Yes	Yes
102	Complement_C4	VGDTLNLNLR	Yes	Yes	Yes
103	Complement_C4	VLSLAQEQVGGSPK	Yes	Yes	Yes
104	Corticosteroid-binding globulin	WSAGLTSSQVDLYIPK	Yes	No	No
105	C-reactive protein	AFVFPK	Yes	Yes	Yes
106	Creatine kinase B-type	DLFDPIEDR	Yes	No	No
107	Creatine kinase M-type	FEEILTR	Yes	Yes	Yes
108	Cystatin-C	ALDFAVGEYNK	Yes	Yes	Yes
109	Desmoplakin	AELIVQPELK	Yes	No	No
110	Dickkopf-related protein 1 and 2	GSHGLEIFQR	Yes	No	Yes
111	Di-N-acetylchitinase	ATYIQNYR	No	No	No
112	Elastin	LPGGYGLPYTTGK	No	No	No
113	Endothelial lipase	LVSA LHTR	Yes	No	No
114	Endothelial protein C receptor	TLAFPLTIR	No	No	No
115	Epidermal growth factor receptor	IPLNLQIIR	No	No	No
116	E-selectin	YTHLVAIQNK	Yes	No	No
117	Extracellular matrix protein 1	NVALVSGDTENAK	Yes	Yes	Yes
118	Fatty acid-binding protein heart	SLGVGFATR	Yes	No	No

119	Ferritin heavy chain	NVNQSLLELHK	Yes	No	No
120	Ferritin light chain	LGGPEAGLGEYLFER	Yes	No	No
121	Fetuin-B	LVVLPFPK	Yes	Yes	Yes
122	Fibrinogen alpha chain	VQHIQLLQK	Yes	Yes	Yes
123	Fibrinogen beta chain	HQLYIDETVNSNIPTNLR	Yes	Yes	Yes
124	Fibrinogen gamma chain	YEASILTHDSSIR	Yes	Yes	Yes
125	Fibronectin	HTSVQTTSSGSGPFTDVR	Yes	Yes	Yes
126	Fibulin-1	TGYFDFGISR	Yes	Yes	Yes
127	Ficolin-2	GTHGSFANGINWK	Yes	No	Yes
128	Ficolin-3	YAVSEAAAHK	Yes	No	No
129	Follistatin-related protein 1	YVQELQK	Yes	Yes	Yes
130	Fructose-bisphosphate aldolase B	ALQASALAAWGGK	Yes	Yes	Yes
131	Galectin-3	IALDFQR	Yes	No	Yes
132	Galectin-3-binding protein	SDLAVPSELALLK	Yes	No	No
133	Gamma-enolase	YITGDQLGALYQDFVR	Yes	No	Yes
134	Gelsolin	AGALNSNDAFVLK	Yes	Yes	Yes
135	Glial fibrillary acidic protein	LADVYQAE LR	Yes	Yes	Yes
136	Glutamate receptor ionotropic NMDA 2A	FSYIPEAK	Yes	No	No
137	Glutamate receptor ionotropic NMDA 2B	EPGGPSFTIGK	Yes	Yes	Yes
138	Glutathione peroxidase 3	QEPGENSEILPTLK	Yes	Yes	Yes
139	Glutathione S-transferase P	TLGLYGK	Yes	No	No
140	Haptoglobin	DIAPTLTYVGK	No	Yes	Yes
141	Heat shock protein beta-1	LFDQAFGLPR	Yes	No	No
142	Hemoglobin subunit alpha	VGAHAGEYGAEALER	Yes	Yes	Yes
143	Hemopexin	NFPSPVDAAFR	Yes	Yes	Yes
144	Heparin cofactor 2	TLEAQLTPR	Yes	Yes	Yes
145	Hepatocyte growth factor-like protein	SPLNDFQVLR	Yes	No	No
146	Histidine-rich glycoprotein	ADLFYDVEALDLESPK	Yes	No	No
147	Hornerin	GSGSGQSPSSGQHGTGFG R	No	No	No
148	Hyaluronan-binding protein 2	VVLGDQDLK	Yes	Yes	Yes
149	Ig gamma-1 chain C region	GPSVFPLAPSSK	Yes	Yes	Yes
150	Ig mu chain C region	GFPSVLR	Yes	Yes	Yes
151	Ig mu heavy chain disease protein and Ig mu chain C	VSVFVPPR	Yes	Yes	Yes
152	IgGFC-binding protein	GATTSPGVYELSSR	Yes	Yes	Yes
153	Immunoglobulin kappa variable 4-1	NYLAWYQQKPGQPPK	Yes	Yes	No
154	Insulin-like growth factor I	GFYFNKPTGYGSSSR	No	No	No
155	Insulin-like growth factor-binding protein 1	ALPGEQQPLHALTR	Yes	No	No
156	Insulin-like growth factor-binding protein 2	LIQGAPTIR	Yes	Yes	Yes
157	Insulin-like growth factor-binding protein 3	FLNVLSPR	Yes	Yes	Yes
158	Insulin-like growth factor-binding protein complex acid labile subunit	LAELPADALGPLQR	Yes	Yes	Yes
159	Insulin-like growth factor-binding protein complex acid labile subunit	NLIAAVAPGAFLGLK	Yes	No	No

160	Inter-alpha-trypsin inhibitor heavy chain H1	GSLVQASEANLQAAQDFV R	Yes	No	No
161	Inter-alpha-trypsin inhibitor heavy chain H2	SLAPTAAAK	Yes	Yes	Yes
162	Inter-alpha-trypsin inhibitor heavy chain H4	SPEQQETVLDGNLIIR	Yes	Yes	Yes
163	Intercellular adhesion molecule 1	LLGIETPLPK	Yes	No	Yes
164	Interleukin-10	AHVNSLGENLK	Yes	No	No
165	Interleukin-6	FESSEEQAR	Yes	No	No
166	Interstitial collagenase	AFQLWSNVPTLFTK	Yes	No	No
167	Kallistatin	VGSALFLSHNLK	Yes	Yes	Yes
168	Keratin type I cytoskeletal 10	SLLEGEGSSGGGGR	Yes	No	No
169	Keratin type I cytoskeletal 9	TLLDIDNTR	Yes	Yes	Yes
170	Keratin-type II cytoskeletal 2 epidermal	YEELQVTVGR	Yes	No	No
171	Kininogen-1	DIPTNSPEEETLTHTITK	Yes	Yes	Yes
172	Lactotransferrin	YLGPQYVAGITNLK	Yes	No	No
173	Leucine-rich alpha-2-glycoprotein	DLLLPPDLR	No	Yes	Yes
174	Lipopolysaccharide-binding protein	ITLPDFTGDLR	Yes	No	No
175	L-selectin	AEIEYLEK	Yes	Yes	Yes
176	Lumican	SLEDLQLTHNK	Yes	Yes	Yes
177	Lysozyme C	AWVAWR	Yes	Yes	Yes
178	Mannan-binding lectin serine protease 1	TGVITSPDFPNYPK	Yes	No	No
179	Mannan-binding lectin serine protease 2A	WPEPVFGR	Yes	No	Yes
180	Mannose-binding protein C	WLTFSLGK	Yes	No	Yes
181	Matrix Gla protein	NANTFISPQQR	Yes	No	Yes
182	Matrix metalloproteinase-9	AVIDDAFAR	Yes	No	No
183	Melanotransferrin	YYDYSGAFR	Yes	No	No
184	Metalloproteinase inhibitor 1	GFQALGDAADIR	Yes	No	No
185	Metalloproteinase inhibitor 2	EYLIAGK	Yes	Yes	No
186	Metalloproteinase inhibitor 4	VVPASADPADTEK	Yes	No	No
187	Microtubule-associated protein tau	EADLPEPEK	No	No	No
188	Mucin-16	ELGPYTLDR	Yes	Yes	No
189	Myelin basic protein	GVDAQGTLSK	Yes	No	No
190	Myeloblastin	LVNVVLGAHNVR	Yes	No	No
191	Myeloperoxidase	VFFASWR	Yes	No	No
192	N(G),N(G)-dimethylarginine dimethylaminohydrolase 1	TPEEYPESAK	No	No	No
193	N-acetylmuramoyl-L-alanine amidase	AGLLRPDYALLGHR	Yes	Yes	Yes
194	Natriuretic peptides B	EVATEGIR	Yes	No	No
195	Neuropilin-2	ALQVVR	Yes	Yes	Yes
196	Neutrophil gelatinase-associated lipocalin	ITLYGR	Yes	Yes	Yes
197	Nucleoside diphosphate kinase A, B	PFFAGLVK	Yes	No	No
198	Occludin	SLQSELDEINK	No	No	No
199	Osteopontin	GDSVVYGLR	Yes	No	No
200	Oxidized low-density lipoprotein receptor 1	LEGQISAR	Yes	No	Yes
201	Pappalysin-1	AYLDVNELK	Yes	No	No

202	Peroxiredoxin-1	ADEGISFR	Yes	No	Yes
203	Peroxiredoxin-2	GLFIIDGK	Yes	No	No
204	Phosphatidylcholine-sterol acyltransferase	SSGLVSNAPGVQIR	Yes	Yes	Yes
205	Phosphatidylinositol-glycan-specific phospholipase D	FGSSLITVR	Yes	Yes	Yes
206	Phospholipid transfer protein	AVEPQLQEEER	Yes	Yes	Yes
207	Pigment epithelium-derived factor	LQSLFDSPDFSK	Yes	Yes	Yes
208	Plasma protease C1 inhibitor	FQPTLLTLPR	Yes	Yes	Yes
209	Plasma serine protease inhibitor	GFQQLLQELNQPR	Yes	Yes	Yes
210	Plasminogen activator inhibitor 1	VFQQVAQASK	Yes	No	Yes
211	Plasminogen	EAQLPVIENK	Yes	Yes	Yes
212	Plastin-2	ISFDEFIK	No	No	No
213	Platelet endothelial cell adhesion molecule	SELVTVTESFSTPK	Yes	No	No
214	Platelet glycoprotein VI	EGDPAPYK	No	No	No
215	Platelet-activating factor acetylhydrolase	GSVHQNFADFTFATGK	No	No	No
216	Pregnancy zone protein	ISEITNIVSK	Yes	Yes	Yes
217	Proenkephalin-A	ELLETGDNR	Yes	No	No
218	Prolactin	IDNYLK	Yes	No	No
219	Protein AMBP	HHGPTITAK	Yes	Yes	Yes
220	Protein S100-A12	GHFDTLSK	Yes	No	Yes
221	Protein S100-A9	DLQNFLK	Yes	No	Yes
222	Protein S100-B	EQEVVDK	Yes	No	No
223	Protein Z-dependent protease inhibitor	ETSNFGFSLLR	Yes	No	No
224	Protein_deglycase_DJ-1	ALVILAK	Yes	Yes	Yes
225	Proteoglycan 4	DQYYNIDVPSR	Yes	Yes	Yes
226	Prothrombin	ELLESYIDGR	Yes	Yes	Yes
227	P-selectin	TWTWVGTK	Yes	Yes	No
228	Ras GTPase-activating protein nGAP	ETQSTPQSAPQVR	No	No	No
229	Resistin	IQEVAGSLIFR	Yes	Yes	No
230	Retinol-binding protein 4	YWGVASFLQK	Yes	Yes	Yes
231	Serotransferrin	DGAGDVAFVK	Yes	Yes	Yes
232	Serum albumin	LVNEVTEFAK	Yes	Yes	Yes
233	Serum amyloid A-1 and A-2 proteins	EANYIGSDK	Yes	Yes	Yes
234	Serum amyloid A-4 protein	GNYDAAQR	Yes	Yes	Yes
235	Serum amyloid P-component	IVLGQEQDSYGGK	Yes	Yes	Yes
236	Serum paraoxonase/arylesterase 1	IFFYDSENPPASEVLR	Yes	Yes	Yes
237	Serum paraoxonase/lactonase 3	ILIGTVFHK	Yes	Yes	Yes
238	Sex hormone-binding globulin	TSSSFEVR	Yes	Yes	Yes
239	SPARC	LEAGDHPVELLAR	Yes	No	No
240	Sperm oxidase	YYSTTHGALLSGQR	Yes	No	No
241	Sterile alpha motif domain-containing protein 9-like	ENVLDEVANAK	No	No	No
242	Stromelysin-1	TYFFVEDK	No	No	No
243	Target of Nesh-SH3	IYLSDSLTKG	Yes	No	No

244	TBC1 domain family member 10A	YLPGYSEK	No	No	No
245	Tenascin	FTTDLDSPR	Yes	Yes	Yes
246	Tenascin-X	ILISGLEPSTPYR	Yes	Yes	No
247	Tetranectin	NWETEITAQPDGGK	Yes	Yes	Yes
248	Thrombomodulin	SSVAADVISLLNGDGGVG R	Yes	No	No
249	Thrombospondin-1	GTLLALER	Yes	No	Yes
250	Thrombospondin-4	KPQDFLEELK	Yes	No	No
251	Thyroglobulin	FSPDDSAGASALLR	No	No	No
252	Thyroxine-binding globulin	AVLHIGEK	Yes	Yes	Yes
253	Tissue_factor_pathway_inhibitor	FYNSVIGK	Yes	No	No
254	Tissue-type plasminogen activator	VVPGEEQK	Yes	No	No
255	Transcription factor SOX-1	AAQSGDYGGAGDDYVLGS LR	Yes	No	No
256	Transferrin receptor protein 1	GFVEPDHYVVGAQR	No	No	No
257	Transthyretin	GSPAINVAVHVFR	Yes	Yes	No
258	Tumor necrosis factor receptor superfamily member 1A	EATLELLGR	Yes	Yes	Yes
259	Tumor necrosis factor receptor superfamily member 1A	LGLSDHEIDR	No	No	No
260	Tumor necrosis factor receptor superfamily member 1B	DEQVPFSK	No	No	No
261	Vascular cell adhesion protein 1	NTVISVNPSTK	No	No	No
262	Vascular endothelial growth factor B	VVSWIDVYTR	Yes	No	No
263	Vascular endothelial growth factor D	DLIQHPK	Yes	Yes	No
264	Vascular non-inflammatory molecule 3	TETPVSK	Yes	No	No
265	Vasorin	YLQGSSVQLR	Yes	Yes	Yes
266	Vitamin D-binding protein	VLEPTLK	Yes	Yes	Yes
267	Vitamin K-dependent protein C	LGEYDLR	Yes	Yes	Yes
268	Vitamin K-dependent protein S	VYFAGFPR	Yes	Yes	Yes
269	Vitamin K-dependent protein Z	DFAEHLIPR	Yes	No	Yes
270	Vitamin K-dependent protein Z	GLLSGWAR	Yes	Yes	Yes
271	Vitronectin	FEDGVLPDYPR	No	No	No
272	von Willebrand factor	ILAGPAGDSNVVK	Yes	No	Yes
273	Xaa-Pro dipeptidase	AVYEAVLR	Yes	Yes	Yes
274	Zinc-alpha-2-glycoprotein	EIPAWVPFDPAAQITK	Yes	Yes	Yes