

## Supplementary Data

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# Alzheimer's Disease and Mild Cognitive Impairment are Associated with Elevated Levels of Isoaspartyl Residues in Blood Plasma Proteins

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Accepted 23 May 2011

### SUPPLEMENTARY MATERIALS

Supplementary Table S1  
Age of the subjects for eight pooled blood plasma samples from 218 individuals: healthy Control.

Group	No. of subjects	Age average	Age std
Control female	24	72	5.8
Control male	20	69	5.5
SMCI female	32	72	5.3
SMCI male	60	72	5.5
PMCI female	34	73	5.7
PMCI male	13	68	6.4
AD female	19	77	2.5
AD male	16	73	3.5

SMCI - stable mild cognitive impairment; PMCI - progressive mild cognitive impairment; AD - Alzheimer's disease

Supplementary Table S2  
Subject age information for 96 individual samples

Group	No. of samples	Age average	Age std
Control female	12	69	3.1
Control male	12	69	4.9
SMCI female	12	69	2.5
SMCI male	12	69	3.1
PMCI female	12	71	5.4
PMCI male	12	70	4.1
AD female	12	76	2.2
AD male	12	71	2.4

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Supplementary Table S3

Normalized numbers of hits (isoAsp containing peptides) for each sample: the absolute number of hits is normalized by the query number (total number of MS/MS dataset in a given LC/MS run)

	Female				Male			
	Control	S-MCI	P-MCI	AD	Control	S-MCI	P-MCI	AD
Pooled								
1	3.38	3.37	3.51	2.96	2.69	2.41	2.86	2.60
2	3.67	2.29	3.37	3.04	2.22	2.68	2.63	2.29
3	2.23	2.85	3.00	2.62	1.93	2.69	2.91	2.89
4	2.31	2.29	2.94	2.73	2.79	2.82	2.79	2.42
5	2.95	2.84	4.25	2.84	1.84	2.97	2.35	2.76
6	2.83	3.46	3.52	2.97	1.18	2.72	2.24	3.38
Individual								
1	4.59	5.85	5.14	4.66	2.70	4.74	6.81	5.89
2	3.95	5.78	4.85	3.94	5.75	4.73	4.47	5.57
3	4.26	5.88	4.93	5.43	4.54	4.90	4.46	4.77
4	4.37	7.26	3.95	4.21	4.28	3.72	4.70	4.56
5	4.29	5.08	4.88	4.58	4.46	4.48	4.05	5.89
6	4.42	4.47	2.28	4.38	2.84	3.49	5.12	4.48
7	4.61	3.34	3.34	5.03	5.31	6.25	3.61	6.43
8	2.89	4.57	4.31	4.37	4.12	3.34	3.29	2.85
9	5.26	4.93	4.25	4.55	3.99	6.24	3.45	3.37
10	3.41	6.05	5.92	4.22	4.48	4.95	5.03	4.70
11	2.88	4.92	4.13	4.62	3.50	2.93	2.91	4.18
12	4.51	5.29	4.46	3.22	4.58	3.69	4.80	4.01

Supplementary Table S4

Normalized decoy hit numbers from each sample

	Female				Male			
	Control	S-MCI	P-MCI	AD	Control	S-MCI	P-MCI	AD
Pooled								
1	2.46	1.58	1.43	1.80	1.29	1.10	1.91	1.66
2	1.43	1.14	1.74	1.15	1.90	1.00	1.58	1.67
3	2.02	1.37	1.66	1.46	1.29	1.51	1.18	1.92
4	1.37	1.87	1.20	1.57	1.39	1.30	1.18	2.11
5	1.58	1.26	0.89	1.16	1.52	1.32	1.18	1.81
6	1.89	0.84	1.43	1.27	0.96	1.42	1.28	1.16
Individual								
1	2.39	2.92	2.67	2.63	2.91	3.09	4.33	3.66
2	2.33	3.10	3.03	4.15	4.31	2.88	2.24	3.51
3	1.92	2.63	3.70	2.92	2.27	3.06	2.13	4.34
4	3.06	3.20	2.49	2.53	2.44	2.19	2.01	0.87
5	3.01	2.65	3.55	2.50	4.25	0.67	2.02	3.49
6	2.74	2.13	1.14	2.41	3.93	0.87	2.23	3.41
7	3.77	3.13	5.12	2.62	2.88	2.23	1.58	2.88
8	2.00	3.18	2.16	1.97	1.45	3.56	2.20	2.19
9	3.20	2.56	2.63	2.05	2.88	3.00	2.07	1.57
10	1.95	3.83	3.47	2.58	1.35	1.48	1.68	3.46
11	2.88	3.69	1.74	2.19	1.50	3.17	2.18	1.86
12	2.46	2.11	2.12	2.76	2.29	3.49	2.60	2.20

Supplementary Table S5  
 Proteins with at least two distinct isoAsp containing peptides for pooled and individual samples

IPI	Protein name	Pooled	Individual
IPI00022229	APOB Apolipoprotein B-100	17	16
IPI00745872	ALB Isoform 1 of Serum albumin	17	15
IPI00022463	TF Serotransferrin	15	15
IPI00783987	C3 Complement C3 (Fragment)	5	9
IPI00021885	FGA Isoform 1 of Fibrinogen alpha chain	7	6
IPI00021891	FGG Isoform Gamma-B of Fibrinogen gamma chain	7	6
IPI00478003	A2M Alpha-2-macroglobulin	5	7
IPI00017601	CP Ceruloplasmin	6	5
IPI00418163	C4B;C4A complement component 4B preproprotein	5	5
IPI00553177	SERPINA1 Isoform 1 of Alpha-1-antitrypsin	3	7
IPI00022488	HPX Hemopexin	5	4
IPI00305461	ITIH2 Inter-alpha (Globulin) inhibitor H2, isoform CRA_a	5	3
IPI00022371	HRG Histidine-rich glycoprotein	4	4
IPI00555812	GC vitamin D-binding protein precursor	4	4
IPI00021841	APOA1 Apolipoprotein A-I	3	5
IPI00550991	SERPINA3 cDNA FLJ35730 fis, clone TESTI2003131, highly similar to ALPHA-1-ANTICHYMOTRYPSIN	3	4
IPI00304273	APOA4 Apolipoprotein A-IV	4	2
IPI00032179	SERPINC1 Antithrombin-III	3	3
IPI00168728	IGHG3 FLJ00385 protein (Fragment)	2	4
IPI00477597	HPR Isoform 1 of Haptoglobin-related protein	5	0
IPI00029739	CFH Isoform 1 of Complement factor H	3	2
IPI00029863	-55 kDa protein	3	2
IPI00298497	FGB Fibrinogen beta chain	3	2
IPI00019943	AFM Afamin	4	0
IPI00019580	PLG Plasminogen	2	2
IPI00019591	CFB cDNA FLJ55673, highly similar to Complement factor B	2	2
IPI00022418	FN1 Isoform 1 of Fibronectin	2	2
IPI00291262	CLU Isoform 1 of Clusterin	2	2
IPI00020091	ORM2 Alpha-1-acid glycoprotein 2	3	0
IPI00022895	A1BG Alpha-1B-glycoprotein	3	0
IPI00032328	KNG1 Isoform HMW of Kininogen-1	0	3
IPI00218192	ITIH4 Isoform 2 of Inter-alpha-trypsin inhibitor heavy chain H4	0	3
IPI00641737	HP Haptoglobin	0	3
IPI00022429	ORM1 Alpha-1-acid glycoprotein 1	2	0
IPI00032291	C5 Complement C5	2	0
IPI00291866	SERPING1 Plasma protease C1 inhibitor	2	0
IPI00292530	ITIH1 Inter-alpha-trypsin inhibitor heavy chain H1	2	2
IPI00298971	VTN Vitronectin	2	0
IPI00739237	LOC653879 similar to complement component 3	2	0
IPI00021727	C4BPA C4b-binding protein alpha chain	0	2
IPI00022431	AHSG cDNA FLJ55606, highly similar to Alpha-2-HS-glycoprotein	0	2
IPI00022432	TTR Transthyretin	0	2
IPI00032220	AGT Angiotensinogen	0	2
IPI00178926	IGJ Immunoglobulin J chain	0	2
IPI00216773	ALB ALB protein	0	2
IPI00220327	KRT1 Keratin, type II cytoskeletal 1	0	2
IPI00292950	SERPIND1 Serpin peptidase inhibitor, clade D (Heparin cofactor), member 1	0	2
IPI00305457	SERPINA1 PRO2275	0	2
IPI00384938	IGHV4-31;IGHG1 Putative uncharacterized protein DKFZp686N02209	0	2
IPI00478493	HP haptoglobin isoform 2 preproprotein	0	2
IPI00930442	IGHG4 Putative uncharacterized protein DKFZp686M24218	0	2

Supplementary Table S6  
Sequence and detected isoAsp position for peptides found in the pooled samples listed in Table S5

Peptide sequence	Position	IPI number	Protein name
ALVDTLK	4	IPI00022229	APOB Apolipoprotein B-100
ASGSLPYTQTLQDHLNSLK	13	IPI00022229	
DKDQEVLLQTLDDASPGDKR	13&14	IPI00022229	
DNVFDGLVR	5	IPI00022229	
HIQNIDIQHLAKG	6	IPI00022229	
IDDIWNLEVK	2&3	IPI00022229	
ITENDIQIALDDAK	5	IPI00022229	
LDVTTSIGR	2	IPI00022229	
LTLDIQNK	4	IPI00022229	
NFVASHIANILNSEELDIQDLKK	17	IPI00022229	
NLTDFAEQYSIQDWAK	4	IPI00022229	
QIDDIDVR	3&4	IPI00022229	
QVFLYPEKDEPTYILNIK	9	IPI00022229	
SLWDFLK	4	IPI00022229	
SVSDGIAALDLNAVANK	4	IPI00022229	ALB Isoform 1 of Serum albumin
VLLDQLGTTISFER	4	IPI00022229	
VPLLSEPINIIDALEMR	13	IPI00022229	
AVMDDFAAFVEK	4&5	IPI00745872	
DDNPNLPR	2	IPI00745872	
EFNAETFTFHADICTLSEK	12	IPI00745872	
FKDLGEENFK	3	IPI00745872	
LVRPEVDVMCTAFHDNEETFLK	15	IPI00745872	
LVRPEVDVMCTAFHDNEETFLKK	15	IPI00745872	
LVTDLTK	4	IPI00745872	
NECFLQHKDDNPNLPR	10	IPI00745872	
RPCFSALEVDETYVPK	10	IPI00745872	
SHCIAEVENDEMPADLPSLAADFVESK	22	IPI00745872	
SLHTLFGDKLCTVATLR	8	IPI00745872	
TCVADESAENCDK	5	IPI00745872	
VFDEFKPLVEEPQNLIK	3	IPI00745872	
VHTECCHGDILLECADDR	9	IPI00745872	
YICENQDSISSK	7	IPI00745872	
ADDKETCFAEEGK	2&3	IPI00745872	
ADDKETCFAEEGKK	2&3	IPI00745872	
ADRDQYELLCLDNTR	2&4	IPI00022463	
ASYLDCIR	5	IPI00022463	
CLKDGAGDVAFVK	4	IPI00022463	
DDTVCLAK	2	IPI00022463	
DGAGDVAFVK	5	IPI00022463	
DLLFRDDTVCLAK	6&7	IPI00022463	
EDPQTFYAVAVVK	2	IPI00022463	
EGTCPEAPTDECKPVK	10	IPI00022463	
IMNGEADAMSLDGGFVYIAGK	7	IPI00022463	
KDSGFQMNQLR	2	IPI00022463	FGA Isoform 1 of Fibrinogen alpha chain
KSASDLTWDNLK	5	IPI00022463	
NLNEKDYELLCLDGTR	6	IPI00022463	
NPDPWAK	3	IPI00022463	
SDNCEDTPEAGYFAVAVVK	2	IPI00022463	
SVIPSDGPSVACVK	6	IPI00022463	
ALTDMPQMR	4	IPI00021885	
AQLVDMK	5	IPI00021885	
EVDLKDYEDQQK	3	IPI00021885	
HPDEAAFFDTASTGK	3	IPI00021885	
LEVVIDIK	6	IPI00021885	
MKPVPDLVPGNFK	6	IPI00021885	
VSEDLR	4	IPI00021885	
AIQLTYNPDESSKPNMIDAATLK	18	IPI00021891	
LDGSVDFK	2	IPI00021891	
LDGSVDFKK	2	IPI00021891	
RLDGSVDFK	3	IPI00021891	

Supplementary Table S6  
(continued)

Peptide sequence	Position	IPI number	Protein name
TSTADYAMFK	5	IPI00021891	
VELEDWNGR	5	IPI00021891	
VGPEADKYR	6	IPI00021891	
EYTDASFTNR	4	IPI00017601	CP Ceruloplasmin
GPEEEHLGILGPVIWAEVGDTR	20	IPI00017601	
HYIIAAEEIIWNYAPSGIDIFTK	19	IPI00017601	
HYIIGIIEITWDYASDHGEK	12	IPI00017601	
QKDVVDKEFYLFPTVFDENESLLEDNIR	25	IPI00017601	
QSEDSTFYLGER	4	IPI00017601	
DGWHSWPIAHQWPQGPSAVDAAFSWEEK	20	IPI00022488	HPX Hemopexin
FDPVR	2	IPI00022488	
FDPVRGEVPPR	2	IPI00022488	
LLQDEFPGIPSPLDAAVECHR	14	IPI00022488	
VDGALCMEK	2	IPI00022488	
DHAVDLIQK	5	IPI00418163	C4B; C4A complement component 4B preproprotein
GLQDEDEGYR	4	IPI00418163	
VDFTLSSER	2	IPI00418163	
VDVQAGACEGK	2	IPI00418163	
VFALDQK	5	IPI00418163	
AEDHFSVIDFNQNR	3&10	IPI00305461	ITIH2 Inter-alpha (Globulin) inhibitor H2, isoform CRA_a
HADPDFTR	3	IPI00305461	
IYGNQDTSSQLKK	6	IPI00305461	
TILDDL	4&5	IPI00305461	
TILDDLRAEDHFSVIDFNQNR	10	IPI00305461	
LRTEGDGVYTLNDKK	6	IPI00477597	HPR Isoform 1 of Haptoglobin-related protein
SDLGAVISLLWGR	2	IPI00477597	
TEGDGVYTLNDK	4	IPI00477597	
TEGDGVYTLNDKK	4	IPI00477597	
VVLHPNYHQVDIGLIK	11	IPI00477597	
DLTGFPGLNDQDNEDCINR	11&16	IPI00478003	A2M Alpha-2-macroglobulin
HYDGSYSTFGER	3	IPI00478003	
SDIAPVAR	2	IPI00478003	
VGFYESDVMGR	7	IPI00478003	
YSDASDCHGEDSQAFCEK	11	IPI00478003	
AGDFLEANYMNLQR	3	IPI00783987	C3 Complement C3 (Fragment)
DFDFVPPVVR	3	IPI00783987	
IWDVVEK	3	IPI00783987	
KVLLDGVQNPR	5	IPI00783987	
VFLDCCNYITELR	4	IPI00783987	
DADPDTFFAK	3	IPI00019943	AFM Afamin
FTDSENVQER	3	IPI00019943	
GQCIINSNKDDRPK	10	IPI00019943	
SDVGFLPPFPTLDPEEK	2	IPI00019943	
ADLFYDVEALDLESPK	2&11	IPI00022371	HRG Histidine-rich glycoprotein
ALDLINKR	3	IPI00022371	
KYWNDCEPPDSR	5	IPI00022371	
YKEENDDFASFR	7	IPI00022371	
IDQTVVELR	2	IPI00304273	APOA4 Apolipoprotein A-IV
LGPHAGDVEGHLFSLEK	7	IPI00304273	
SLAELGGHLDQQVEEFR	10	IPI00304273	
SLAPYAQDTQEK	8	IPI00304273	
ELSSFIDKQELCADYSENTFTTEYK	15	IPI00555812	GC vitamin D-binding protein precursor
LCDNLSTK	3	IPI00555812	
VMDKYTFELSR	3	IPI00555812	
VPTADLEDVPLAEDITNILSK	5	IPI00555812	
EQLGEFYALDCLCIPR	11	IPI00020091	ORM2 Alpha-1-acid glycoprotein 2
SDVMYTDWK	2	IPI00020091	
TEDTIFLR	3	IPI00020091	
LREQLGPVTQEFWDNLEK	14	IPI00021841	APOA1 Apolipoprotein A-I
QEMSKDLEEVK	6	IPI00021841	
VQPYLDDFQKK	6	IPI00021841	

(Continued)

Supplementary Table S6  
(continued)

Peptide sequence	Position	IPI number	Protein name
HQFLLTGDTQGR	8	IPI00022895	A1BG Alpha-1B-glycoprotein
IFFHFLNAVALGDGGHYTCR	12	IPI00022895	
NGVAQEPVHLDSPAIK	11	IPI00022895	
IDVHLPDR	2	IPI00029739	CFH Isoform 1 of Complement factor H
SPDVINGSPISQK	3	IPI00029739	
TKNDFTWFK	4	IPI00029739	
LFGPDLK	5	IPI00029863	-55 kDa protein
NKFDPSLTQR	4	IPI00029863	
QEDDLANINQWVK	4	IPI00029863	
EQLQDMGLVLDLFSPEK	5	IPI00032179	SERPINC1 Antithrombin-III
IEDGFSLK	3	IPI00032179	
NDNDNIFLSPLSISTAFAMTK	4	IPI00032179	
EDGGGWYR	2	IPI00298497	FGB Fibrinogen beta chain
KGGETSEMYLIQPDSSVKPYR	14	IPI00298497	
KWDPYK	3	IPI00298497	
ADLSGITGAR	2	IPI00550991	SERPINA3 cDNA FLJ35730 fis, clone TESTI2003131, highly similar to ALPHA-1-ANTITRYPSIN
FNRPFMIIVPTDTQNIFFMSK	13	IPI00550991	
ITDLIK	3	IPI00550991	
ELDRDVFALVNYIFFK	5	IPI00553177	SERPINA1 Isoform 1 of Alpha-1-antitrypsin
IVDLVK	3	IPI00553177	
TDTSHHDQDHPFNFK	7&9	IPI00553177	
ATTVTGTPCQDWAQEPHR	11	IPI00019580	PLG Plasminogen
NLDENYCR	3	IPI00019580	
LEDSVTYHCSR	3	IPI00019591	CFB cDNA FLJ55673, highly similar to Complement factor B
VKDISEVVTPR	3	IPI00019591	
SSPVVIDASTAIDAPSNLR	7	IPI00022418	FN1 Isoform 1 of Fibronectin
VTWAPPPSIDLTNFLVR	10	IPI00022418	
SDVYTDWKK	2	IPI00022429	ORM1 Alpha-1-acid glycoprotein 1
TYMLAFDVNDEKNWGLSVYADKPETTK	21	IPI00022429	
ALVEGVDQLFTDYQIK	7	IPI00032291	C5 Complement C5
YGGGFYSTQDTINAIEGLTEYSLVK	10	IPI00032291	
SCDTPPPCPR	3	IPI00168728	IGHG3 FLJ00385 protein (Fragment)
TPLGDTTHTCPR	5	IPI00168728	
ELDESLQVAER	3	IPI00291262	CLU Isoform 1 of Clusterin
IDSLENDR	2	IPI00291262	
LEDMEQALSPSVFK	3	IPI00291866	SERPING1 Plasma protease C1 inhibitor
LLDSLPSDTR	3	IPI00291866	
GFSLDEATNLNGLLR	5	IPI00292530	ITIH1 Inter-alpha-trypsin inhibitor heavy chain H1
ILGDMQPGDYFDLVLFGTR	4	IPI00292530	
DWHGVPGQVDAAMAGR	10	IPI00298971	VTN Vitronectin
FEDGVLDPDYPR	3	IPI00298971	
SDDKVTLEER	2&3	IPI00739237	LOC653879 similar to complement component 3
VQLSNDFDEYIMAIEQTIK	6	IPI00739237	

Supplementary Table S7  
Sequence and detected isoAsp position for peptides found in the individual samples listed in Table S5

Peptide sequence	Position	IPI number	Protein name
ALVDTLK	4	IPI00022229	APOB Apolipoprotein B-100
ASGSLPYTQLQDHLNSLK	13	IPI00022229	
DNVFDGLVR	5	IPI00022229	ALB Isoform 1 of Serum albumin
HINIDQFVR	5	IPI00022229	
IDDIWNLEVK	3	IPI00022229	
IEDGTLASK	3	IPI00022229	
ITENDIQIALDDAK	5	IPI00022229	
LDVTTSIGR	2	IPI00022229	
LPQQANDYLNNSFNWER	7	IPI00022229	
LSLPDFK	5	IPI00022229	
LTLDIQNK	4	IPI00022229	
LTLDIQNKK	4	IPI00022229	
NLTDFAEQYSIQDWAK	4	IPI00022229	
QIDIDVR	3&4	IPI00022229	
TLADLTLLDSPIK	4&9	IPI00022229	
VEDIPLAR	3	IPI00022229	
AVMDDFAAFVEK	5	IPI00745872	
DDNPNLPR	2	IPI00745872	
EFNAETFFHADICTLSEK	12	IPI00745872	
FKDLGEEFK	3	IPI00745872	
HPDYSVVLRLR	3	IPI00745872	
LVRPEVDMCTAFHDNEETFLK	15	IPI00745872	
LVRPEVDMCTAFHDNEETFLKK	15	IPI00745872	
LVTDLTK	4	IPI00745872	
NECFLQHKDDNPNLPR	9&10	IPI00745872	
RPCFSALEVEDETYVPK	10	IPI00745872	
SHCIAEVENDEMPADLPSLAADFVESK	22	IPI00745872	
TCVADESAENCDK	5	IPI00745872	
VFDEFKPLVEEPQNLK	3	IPI00745872	
VHTECCHGDLLECADDR	15&16	IPI00745872	
YICENQDSISSK	7	IPI00745872	
ADRDQYELLCLDNTR	4&12	IPI00022463	C3 Complement C3 (Fragment)
ASYLDCIR	5	IPI00022463	
DDTVCLAK	2	IPI00022463	
DGAGDVAFVK	5	IPI00022463	
DLLFRDDTVCLAK	6&7	IPI00022463	
DQYELLCLDNTR	12	IPI00022463	
DYELLCLDGTR	8&13	IPI00022463	
EGTCPEAPTDECKPKVK	10	IPI00022463	
GDVAFVK	2	IPI00022463	
KPVDEYK	4	IPI00022463	
KSASDLTWDNLK	5	IPI00022463	
NLNEKDYELLCLDGTR	13	IPI00022463	
NPDPWAK	3	IPI00022463	
SASDLTWDNLK	4&5	IPI00022463	
SVIPSDGPSVACVK	6	IPI00022463	
ADIGCTPGSGK	2	IPI00783987	A2M Alpha-2-macroglobulin
AEDLVGK	3	IPI00783987	
DFDFVPPVVR	3	IPI00783987	
EVVADSVWVDVK	5	IPI00783987	
KVLLDGVQNPR	5	IPI00783987	
LCRDELRCR	4	IPI00783987	
RIPIEDGSGEVVLSR	6	IPI00783987	
SNLDEDIIAENIVSR	4&6	IPI00783987	
VSHSEDDCLAFK	7	IPI00783987	
DLTGFPGLNDQDNEDCINR	16	IPI00478003	
FQVDNNNR	4	IPI00478003	
HYDGSYSTFGER	3	IPI00478003	
NEDSLVFVQTDK	3	IPI00478003	
SDIAPVAR	2	IPI00478003	

(Continued)

Supplementary Table S7  
(continued)

Peptide sequence	Position	IPI number	Protein name
YDVENCLANK	2	IPI00478003	
YSDASDCHGEDSQAFCEK	11	IPI00478003	
DTEEDFHVDQVTTVK	6	IPI00553177	SERPINA1 Isoform 1 of Alpha-1-antitrypsin
FLEDVKK	4	IPI00553177	
IVDLVK	3	IPI00553177	
KQINDYVEK	5	IPI00553177	
LQHLENELTHDIITK	11	IPI00553177	
LVDKFLEDVKK	8	IPI00553177	
QINDYVEK	4	IPI00553177	
EVDLKDYEDQQK	3	IPI00021885	FGA Isoform 1 of Fibrinogen alpha chain
GDFSSANNR	2	IPI00021885	
GLIDEVNQDFTNR	4	IPI00021885	
RLEVDIDIK	5	IPI00021885	
TVIGPDGHK	6	IPI00021885	
VSEDLR	4	IPI00021885	
AIQLTYNPDESSKPNMIDAATLK	9&18	IPI00021891	FGG Isoform Gamma-B of Fibrinogen gamma chain
DCQDIANK	4	IPI00021891	
LDGSVDFK	2&6	IPI00021891	
LDGSVDFK	2&6	IPI00021891	
LTYAYFAGGDAGDAFDGDFGDDPSDK	13	IPI00021891	
VELEDWNGR	5	IPI00021891	
ALYLQYTDFTFR	8	IPI00017601	CP Ceruloplasmin
EYTDASFTNR	4	IPI00017601	
GPEEEHLGILGPVIWAEVGDITR	20	IPI00017601	
QYTDSTFR	4	IPI00017601	
VNKDDEEFIESNK	5	IPI00017601	
AHVDALR	4	IPI00021841	APOA1 Apolipoprotein A-I
LLDNWDSVTSTFSK	3	IPI00021841	
LREQLGPVTQEFWDNLEK	14	IPI00021841	
VKDLATVYVDVLK	3	IPI00021841	
VQPYLDDFQKK	6	IPI00021841	
AEFQDALEK	5	IPI00418163	C4B:C4A complement component 4B preproprotein
FGLLDEDGKK	5	IPI00418163	
LTSLSDR	6	IPI00418163	
VDFTLSSER	2	IPI00418163	
VGDTLNLNLR	3	IPI00418163	
ADLFYDVEALDLESPK	11	IPI00022371	HRG Histidine-rich glycoprotein
ALDLINK	3	IPI00022371	
ALDLINKR	3	IPI00022371	
IADAHLLDR	3	IPI00022371	
EVGTPHGIILDSVDAAFICPGSSR	14	IPI00022488	HPX Hemopexin
FDPVR	2	IPI00022488	
LLQDEFPGIPSPLDAAVECHR	14	IPI00022488	
NFPSPVDAAFR	7	IPI00022488	
SCDTPPPCPR	3	IPI00168728	IGHM FLJ00385 protein (Fragment)
TPEVTCVVVDVSHEDPEVQFK	10	IPI00168728	
TPLGDTTHTCPR	5	IPI00168728	
WYVDGVEVHNAK	4	IPI00168728	
ADLSGITGAR	2	IPI00550991	SERPINA3 cDNA FLJ35730 fis, clone TESTI2003131, highly similar to ALPHA-1-ANTICHYMOTRYPSIN
AVLDVFEEGTEASAATAVK	4	IPI00550991	
ITDLIK	3	IPI00550991	
KLINDYVK	5	IPI00550991	
FEDCCQEK	3	IPI00555812	GC vitamin D-binding protein precursor
HQPQEFPTYVEPTNDEICEAFR	15	IPI00555812	
LCDNLSTK	3	IPI00555812	
VPTADLEDVPLAEDITNILSK	5	IPI00555812	
FDTISEK	2	IPI00032179	SERPINC1 Antithrombin-III
IEDGFSLK	3	IPI00032179	
LQPLDFK	5	IPI00032179	



Supplementary Table S7  
(continued)

Peptide sequence	Position	IPI number	Protein name
EGDCPVQSGK	3	IPI00032328	KNG1 Isoform HMW of Kininogen-1
TVGSDTFYSFK	5	IPI00032328	
YFIDFVAR	4	IPI00032328	
GPDVLTATVSGK	3	IPI00218192	ITIH4 Isoform 2 of Inter-alpha-trypsin inhibitor heavy chain H4
ILDDLSPR	4	IPI00218192	
YDVDR	4	IPI00218192	
NDLISATK	2	IPI00305461	ITIH2 Inter-alpha (Globulin) inhibitor H2, isoform CRA_a
TILDDLRL	4&5	IPI00305461	
TILDDLRAEDHFSVIDFNQIR	10	IPI00305461	
FTDHLK	3	IPI00641737	HP Haptoglobin
ILGGHLDK	7	IPI00641737	
YVMLPVAQDQCIR	8	IPI00641737	
NLDENYCR	3	IPI00019580	PLG Plasminogen
ATTVTGTPCQDWAAQEPHR	11	IPI00019580	
VSEADSSNADWVTK	5	IPI00019591	CFB cDNA FLJ55673, highly similar to Complement factor B
GDSGGPLVHK	2	IPI00019591	
QSTLDKEL	5	IPI00021727	C4BPA C4b-binding protein alpha chain
EDVYVVGTVLR	2	IPI00021727	
TIKPDVR	5	IPI00022418	FN1 Isoform 1 of Fibronectin
IGDTWR	3	IPI00022418	
CDSSPSAEDVVR	10	IPI00022431	AHSG cDNA FLJ55606, highly similar to Alpha-2-HS-glycoprotein
AHYDLR	4	IPI00022431	
KAADDTWEPFASGK	4	IPI00022432	TTR Transthyretin
AADDTWEPFASGK	3	IPI00022432	
SPDVINGSPISQK	3	IPI00029739	CFH Isoform 1 of Complement factor H
CFEGFGIDGPAIAK	8	IPI00029739	
QEDDLANINQWVK	4	IPI00029863	–55 kDa protein
LFGPDLK	5	IPI00029863	
SLDFTELDVAEEK	3	IPI00032220	AGT Angiotensinogen
ALQDQLVLVAAK	4	IPI00032220	
SSEDPNEDIVER	4	IPI00178926	IGJ Immunoglobulin J chain
IVLVDNK	5	IPI00178926	
ADDKETCFAEEGKK	2&3	IPI00216773	ALB ALB protein
ADDKETCFAEEGK	2&3	IPI00216773	
NKLNLEDALQQAQK	8	IPI00220327	KRT1 Keratin, type II cytoskeletal 1
LNDLEDALQQAQK	3&8	IPI00220327	
IDSLEENDR	2	IPI00291262	CLU Isoform 1 of Clusterin
ASSIIDELFQDR	6	IPI00291262	
VTYDVSR	4	IPI00292530	ITIH1 Inter-alpha-trypsin inhibitor heavy chain H1
QAVDTAVDGVFIR	4&8	IPI00292530	
SVNDLYIQK	4	IPI00292950	SERPIND1 Serpin peptidase inhibitor, clade D (Heparin cofactor), member 1
IAIDLFK	4	IPI00292950	
KWDPYK	3	IPI00298497	FGB Fibrinogen beta chain
EDGGGWYNR	2	IPI00298497	
SLAPYAQDTQEK	8	IPI00304273	APOA4 Apolipoprotein A-IV
IGDNLR	3	IPI00304273	
VFSNGADLSGVTEEAPLK	7	IPI00305457	SERPINA1 PRO2275
AVLTIDEK	6	IPI00305457	
TPEVTCVVVDVSHEDPEVK	10&15	IPI00384938	IGHV4–31; IGHG1 Putative uncharacterized protein DKFZp686N02209
FNWYVDGVEVHNAK	6	IPI00384938	
TEGDGVYTLNNEK	4	IPI00478493	HP haptoglobin isoform 2 preproprotein
LRTEGDGVYTLNNEK	6	IPI00478493	
TYTCNVDPKPSNTK	7	IPI00930442	IGHG4 Putative uncharacterized protein DKFZp686M24218
TPPVLDSDGSFFLYSR	7&9	IPI00930442	